LONGHORN ARMY AMMUNITION PLANT KARNACK, TEXAS

ADMINISTRATIVE RECORD

Volume 15

2023

Bate Stamp Numbers
01160141 – 01162142

Prepared for

Department of the Army
Longhorn Army Ammunition Plant

1976–2023

LONGHORN ARMY AMMUNITION PLANT
KARNACK, TEXAS
ADMINISTRATIVE RECORD – CHRONOLOGICAL INDEX

VOLUME 15

2023

A.	Title:	(Cont'd) Report—Appendix D, **File 1**—Level IV DoD, Draft Final Second Annual Remedial Action Operation Report, LHAAP-16 Landfill, Longhorn Army Ammunition Plant (LHAAP), Karnack, Texas, March 2023
	Author(s):	Department of the Army
	Recipient:	Environmental Protection Agency and Texas Commission on Environmental Quality
	Date:	March 17, 2023
	Bate Stamp:	01160141 – 01162142

The above Level IV DoD labs were omitted in the previous Admin Record, so that is why they are out of date sequence and added to this April thru June 2023 Admin Record.

10515 Research Drive
Knoxville, TN 37932
Phone: (865) 573-8188
Fax: (865) 573-8133

Client:	Vicki Graves APTIM 2410 Cherahala Blvd Knoxville, TN 37932 US	**Phone:**	865-560-7818 **Fax:**

Identifier: 052SD **Date Rec:** 04/14/2021 **Report Date:** 04/28/2021

Client Project #: 501032 **Client Project Name:** LHAAP 16 April 2021

Purchase Order #: 204818

Test results provided for: CENSUS

Reviewed By:



NOTICE: This report is intended only for the addressee shown above and may contain confidential or privileged information. If the recipient of this material is not the intended recipient or if you have received this in error, please notify Microbial Insights, Inc. immediately. The data and other information in this report represent only the sample(s) analyzed and are rendered upon condition that it is not to be reproduced without approval from Microbial Insights, Inc. Thank you for your cooperation.

Results relate only to the items tested and the sample(s) as received by the laboratory.

MICROBIAL INSIGHTS, INC.

10515 Research Dr., Knoxville, TN 37932
Tel. (865) 573-8188 Fax. (865) 573-8133

CENSUS

Client: **APTIM**
Project: LHAAP 16 April 2021

MI Project Number: **052SD**
Date Received: 04/14/2021

Sample Information

Client Sample ID:		**16WW58-210413**	**16WW57-210413**	**16WW35-210413**	**16WW36-210413**	**16WW16-210415**
Sample Date:		04/13/2021	04/13/2021	04/13/2021	04/13/2021	04/15/2021
Units:		cells/mL	cells/mL	cells/mL	cells/mL	cells/mL
Analyst/Reviewer:		HT/CB	HT/CB	HT/CB	HT/CB	HT/CB
Dechlorinating Bacteria						
Dehalococcoides	*DHC*	**1.30E+01**	**3.10E+00**	**3.00E+01**	**6.20E+02**	**9.80E-02 (J)**

Legend:
NA = Not Analyzed NS = Not Sampled J = Estimated gene copies below PQL but above LQL I = Inhibited
< = Result not detected

MICROBIAL INSIGHTS, INC.

10515 Research Dr., Knoxville, TN 37932
Tel. (865) 573-8188 Fax. (865) 573-8133

CENSUS

Client: **APTIM**
Project: LHAAP 16 April 2021

MI Project Number: **052SD**
Date Received: 04/14/2021

Sample Information

Client Sample ID:		**16WW56-210415**	**16WW22-210415**	**16WW41-210415**	**16WW25-210420**	**16WW26-210420**
Sample Date:		04/15/2021	04/15/2021	04/15/2021	04/20/2021	04/20/2021
Units:		cells/mL	cells/mL	cells/mL	cells/mL	cells/mL
Analyst/Reviewer:		HT/CB	HT/CB	HT/CB	HT/CB	HT/CB
Dechlorinating Bacteria						
Dehalococcoides	*DHC*	**2.19E+01**	**1.37E+01**	<5.00E-01	<5.00E-01	**2.90E+00**

Legend:
NA = Not Analyzed NS = Not Sampled J = Estimated gene copies below PQL but above LQL I = Inhibited
< = Result not detected

MICROBIAL INSIGHTS, INC.

10515 Research Dr., Knoxville, TN 37932
Tel. (865) 573-8188 Fax. (865) 573-8133

CENSUS

Client: **APTIM**
Project: LHAAP 16 April 2021

MI Project Number: **052SD**
Date Received: 04/14/2021

Sample Information

Client Sample ID:		**16WW29-210420**	**16WW55-210420**	**16WW48-210422**
Sample Date:		04/20/2021	04/20/2021	04/22/2021
Units:		cells/mL	cells/mL	cells/mL
Analyst/Reviewer:		HT/CB	HT/CB	HT/CB
Dechlorinating Bacteria				
Dehalococcoides	*DHC*	**1.99E+01**	**2.00E-01 (J)**	**1.92E+02**

Legend:
NA = Not Analyzed NS = Not Sampled J = Estimated gene copies below PQL but above LQL I = Inhibited
< = Result not detected

Quality Assurance/Quality Control Data

Samples Received **4/14/2021**

Component	Date Prepared	Date Analyzed	Arrival Temperature	Positive Control	Extraction Blank	Negative Control
DHC	04/14/2021	04/28/2021	0 °C	108%	non-detect	non-detect

Samples Received **4/19/2021**

Component	Date Prepared	Date Analyzed	Arrival Temperature	Positive Control	Extraction Blank	Negative Control
DHC	04/19/2021	04/28/2021	11 °C	100%	non-detect	non-detect

Samples Received **4/21/2021**

Component	Date Prepared	Date Analyzed	Arrival Temperature	Positive Control	Extraction Blank	Negative Control
DHC	04/21/2021	04/28/2021	0 °C	100%	non-detect	non-detect

Samples Received **4/23/2021**

Component	Date Prepared	Date Analyzed	Arrival Temperature	Positive Control	Extraction Blank	Negative Control
DHC	04/23/2021	04/28/2021	0 °C	100%	non-detect	non-detect

10450 Stancliff Rd. Suite 210
Houston, TX 77099
T: +1 281 530 5656
F: +1 281 530 5887
www.alsglobal.com

WorkOrder: HS21040695

Longhorn Army Ammunition Plant 16 April 2021

Aptim Environmental & Infrastucture, Inc.

Vicki Graves
10333 Richmond Ave Ste 1030
Houston TX 77042

20-May-2021

ALS Environmental
ALS Group USA, Corp
10450 Stancliff Road, Suite 210
Houston, TX 77099
T : +1 281 530 5656
F : +1 281 530 5887
www.alsglobal.com

Table of Contents

HS21040695 Cover Page
- CoverPage
- HS21040695 Longhorn Army Ammunition Plant 16 April 2021 Final
  - CoverLetter
  - Sample Summary
  - CaseNarrative
  - 16WW44-210412
  - 16WW38-210412
  - 16WW37-210412
  - 16WW14-210412
  - 16WW34-210412
  - 16WW34-210412-FD
  - 16WW33-210412
  - 16WW32-210412
  - 16WW31-210412
  - 16WW46-210412
  - 16WW58-210413
  - 16WW57-210413
  - 16WW35-210413
  - 16WW36-210413
  - 16PM09-210413
  - 16PM06-210413

Table of Contents (continued)

16PM14-210413
Trip Blank-210413
Dates Report
QC
Acronyms
Certifications
SampleReceiptCheckList
COC
HS21040695 - Sub Perch II (E2100412)
HS21040695 8260_W_DOD Raw Data
HS21040695 RSK175 Raw Data
HS21040695 Wet Chem Raw Data (ALK_W 2320B)
HS21040695 Wet Chem Raw Data (TOC_W 5310B)
HS21040695 Wet Chem Raw Data (9056_anions_W)
HS21040695 - Sub Perch IV (E2100412)
CoverLetter
Certificate of Analysis
Chain of Custody
Preparation Sheets
Analytical Results
Accuracy and Precision
Initial Calibration
Chromatogram

HS21040695 Longhorn Army Ammunition Plant
16 April 2021 Final

ALS WO# HS21040695

10450 Stancliff Rd. Suite 210
Houston, TX 77099
T: +1 281 530 5656
F: +1 281 530 5887

April 30, 2021

Vicki Graves
Aptim Environmental & Infrastucture, Inc.
2500 City West Blvd., Suite 1700
Houston, TX 77042

Work Order: **HS21040695**

Laboratory Results for: **Longhorn Army Ammunition Plant 16 April 2021**

Dear Vicki Graves ,

ALS Environmental received 18 sample(s) on Apr 14, 2021 for the analysis presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

Generated By: DAYNA.FISHER
RJ Modashia
Project Manager

ALS Houston, US Date: 30-Apr-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant 16 April 2021
Work Order: HS21040695

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS21040695-01	16WW44-210412	Groundwater		12-Apr-2021 07:40	14-Apr-2021 09:45	☐
HS21040695-02	16WW38-210412	Groundwater		12-Apr-2021 08:30	14-Apr-2021 09:45	☐
HS21040695-03	16WW37-210412	Groundwater		12-Apr-2021 09:15	14-Apr-2021 09:45	☐
HS21040695-04	16WW14-210412	Groundwater		12-Apr-2021 10:00	14-Apr-2021 09:45	☐
HS21040695-05	16WW34-210412	Groundwater		12-Apr-2021 10:45	14-Apr-2021 09:45	☐
HS21040695-06	16WW34-210412-FD	Groundwater		12-Apr-2021 10:45	14-Apr-2021 09:45	☐
HS21040695-07	16WW33-210412	Groundwater		12-Apr-2021 11:30	14-Apr-2021 09:45	☐
HS21040695-08	16WW32-210412	Groundwater		12-Apr-2021 12:15	14-Apr-2021 09:45	☐
HS21040695-09	16WW31-210412	Groundwater		12-Apr-2021 13:00	14-Apr-2021 09:45	☐
HS21040695-10	16WW46-210412	Groundwater		12-Apr-2021 13:45	14-Apr-2021 09:45	☐
HS21040695-11	16WW58-210413	Groundwater		13-Apr-2021 07:40	14-Apr-2021 09:45	☐
HS21040695-12	16WW57-210413	Groundwater		13-Apr-2021 08:30	14-Apr-2021 09:45	☐
HS21040695-13	16WW35-210413	Groundwater		13-Apr-2021 09:40	14-Apr-2021 09:45	☐
HS21040695-14	16WW36-210413	Groundwater		13-Apr-2021 10:30	14-Apr-2021 09:45	☐
HS21040695-15	16PM09-210413	Groundwater		13-Apr-2021 11:15	14-Apr-2021 09:45	☐
HS21040695-16	16PM06-210413	Groundwater		13-Apr-2021 12:05	14-Apr-2021 09:45	☐
HS21040695-17	16PM14-210413	Groundwater		13-Apr-2021 12:50	14-Apr-2021 09:45	☐
HS21040695-18	Trip Blank-210413	Water		13-Apr-2021 00:00	14-Apr-2021 09:45	☐

ALS Houston, US Date: 30-Apr-21

Client: Aptim Environmental & Infrastucture, Inc. **CASE NARRATIVE**
Project: Longhorn Army Ammunition Plant 16 April 2021
Work Order: HS21040695

Work Order Comments

- The analysis for Perchlorate was subcontracted to our ALS Houston TX, High Resolution Lab. Final report attached.
- Revision I - This report was revised to include the alkalinity raw data that was originally missing from the data package.

GC Semivolatiles by Method RSK-175

Batch ID: R382191

Sample ID: 16WW57-210413 (HS21040695-12)

- Preservation of VOA vials can only be verified after samples are analyzed. Based on the post-analytical screening, the following chemically-preserved samples were found to have a pH >2.

Sample ID: HS21040859-08MS

- MS and MSD are for an unrelated sample

GCMS Volatiles by Method SW8260

Batch ID: R381740,R381840

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

Batch ID: R381732

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

WetChemistry by Method SM5310B

Batch ID: R382301,R382505

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

WetChemistry by Method SM2320B

Batch ID: R381715

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

WetChemistry by Method SW9056

Batch ID: R382442

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

Batch ID: R381622

Sample ID: 16WW57-210413 (HS21040695-12), 16WW35-210413 (HS21040695-13) &16WW36-210413 (HS21040695-14)

- Samples ran at 5X due to high concentration of Sulfate
- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

ALS Houston, US Date: 30-Apr-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant 16 April 2021
Sample ID: 16WW44-210412
Collection Date: 12-Apr-2021 07:40

ANALYTICAL REPORT
WorkOrder:HS21040695
Lab ID:HS21040695-01
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
1,1,2-Trichloroethane	1.0	U	0.30	1.0	1.0	ug/L	1	15-Apr-2021 13:57
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	15-Apr-2021 13:57
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	15-Apr-2021 13:57
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	15-Apr-2021 13:57
Methylene chloride	2.0	U	0.40	2.0	2.0	ug/L	1	15-Apr-2021 13:57
Trichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	15-Apr-2021 13:57
Vinyl chloride	0.50	U	0.20	0.50	1.0	ug/L	1	15-Apr-2021 13:57
Surr: 1,2-Dichloroethane-d4	*97.0*			**0**	*81-118*	*%REC*	*1*	*15-Apr-2021 13:57*
Surr: 4-Bromofluorobenzene	*96.6*			**0**	*85-114*	*%REC*	*1*	*15-Apr-2021 13:57*
Surr: Dibromofluoromethane	*91.2*			**0**	*80-119*	*%REC*	*1*	*15-Apr-2021 13:57*
Surr: Toluene-d8	*106*			**0**	*89-112*	*%REC*	*1*	*15-Apr-2021 13:57*
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: GR
Subcontract Analysis	See Attached		0	0		NA	1	30-Apr-2021 15:53

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 30-Apr-21

Client: Aptim Environmental & Infrastucture, Inc. **ANALYTICAL REPORT**
Project: Longhorn Army Ammunition Plant 16 April 2021 WorkOrder:HS21040695
Sample ID: 16WW38-210412 Lab ID:HS21040695-02
Collection Date: 12-Apr-2021 08:30 Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
1,1,2-Trichloroethane	10	U	3.0	10	10	ug/L	10	16-Apr-2021 05:02
1,1-Dichloroethene	**11**		**2.0**	**5.0**	**10**	**ug/L**	10	16-Apr-2021 05:02
1,2-Dichloroethane	5.0	U	2.0	5.0	10	ug/L	10	16-Apr-2021 05:02
cis-1,2-Dichloroethene	**600**		**2.0**	**5.0**	**10**	**ug/L**	10	16-Apr-2021 05:02
Methylene chloride	**16**	J	**4.0**	**20**	**20**	**ug/L**	10	16-Apr-2021 05:02
Trichloroethene	**2,100**		**20**	**50**	**100**	**ug/L**	100	16-Apr-2021 05:23
Vinyl chloride	**39**		**2.0**	**5.0**	**10**	**ug/L**	10	16-Apr-2021 05:02
Surr: 1,2-Dichloroethane-d4	*98.0*			**0**	*81-118*	*%REC*	*10*	*16-Apr-2021 05:02*
Surr: 1,2-Dichloroethane-d4	*97.4*			**0**	*81-118*	*%REC*	*100*	*16-Apr-2021 05:23*
Surr: 4-Bromofluorobenzene	*101*			**0**	*85-114*	*%REC*	*10*	*16-Apr-2021 05:02*
Surr: 4-Bromofluorobenzene	*91.2*			**0**	*85-114*	*%REC*	*100*	*16-Apr-2021 05:23*
Surr: Dibromofluoromethane	*92.1*			**0**	*80-119*	*%REC*	*10*	*16-Apr-2021 05:02*
Surr: Dibromofluoromethane	*92.0*			**0**	*80-119*	*%REC*	*100*	*16-Apr-2021 05:23*
Surr: Toluene-d8	*106*			**0**	*89-112*	*%REC*	*10*	*16-Apr-2021 05:02*
Surr: Toluene-d8	*106*			**0**	*89-112*	*%REC*	*100*	*16-Apr-2021 05:23*
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: GR
Subcontract Analysis	See Attached		0	0		NA	1	30-Apr-2021 15:53

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 30-Apr-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant 16 April 2021
Sample ID: 16WW37-210412
Collection Date: 12-Apr-2021 09:15

ANALYTICAL REPORT
WorkOrder:HS21040695
Lab ID:HS21040695-03
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
1,1,2-Trichloroethane	1.0	U	0.30	1.0	1.0	ug/L	1	15-Apr-2021 14:18
1,1-Dichloroethene	**0.90**	J	**0.20**	**0.50**	**1.0**	**ug/L**	1	15-Apr-2021 14:18
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	15-Apr-2021 14:18
cis-1,2-Dichloroethene	**5.8**		**0.20**	**0.50**	**1.0**	**ug/L**	1	15-Apr-2021 14:18
Methylene chloride	2.0	U	0.40	2.0	2.0	ug/L	1	15-Apr-2021 14:18
Trichloroethene	**110**		**0.20**	**0.50**	**1.0**	**ug/L**	1	15-Apr-2021 14:18
Vinyl chloride	**2.2**		**0.20**	**0.50**	**1.0**	**ug/L**	1	15-Apr-2021 14:18
Surr: 1,2-Dichloroethane-d4	*93.9*			**0**	*81-118*	*%REC*	*1*	*15-Apr-2021 14:18*
Surr: 4-Bromofluorobenzene	*94.9*			**0**	*85-114*	*%REC*	*1*	*15-Apr-2021 14:18*
Surr: Dibromofluoromethane	*87.5*			**0**	*80-119*	*%REC*	*1*	*15-Apr-2021 14:18*
Surr: Toluene-d8	*108*			**0**	*89-112*	*%REC*	*1*	*15-Apr-2021 14:18*
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: GR
Subcontract Analysis	See Attached		0	0		NA	1	30-Apr-2021 15:53

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 30-Apr-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant 16 April 2021
Sample ID: 16WW14-210412
Collection Date: 12-Apr-2021 10:00

ANALYTICAL REPORT
WorkOrder:HS21040695
Lab ID:HS21040695-04
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
1,1,2-Trichloroethane	1.0	U	0.30	1.0	1.0	ug/L	1	15-Apr-2021 23:25
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	15-Apr-2021 23:25
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	15-Apr-2021 23:25
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	15-Apr-2021 23:25
Methylene chloride	2.0	U	0.40	2.0	2.0	ug/L	1	15-Apr-2021 23:25
Trichloroethene	**17**		**0.20**	**0.50**	**1.0**	**ug/L**	1	15-Apr-2021 23:25
Vinyl chloride	0.50	U	0.20	0.50	1.0	ug/L	1	15-Apr-2021 23:25
Surr: 1,2-Dichloroethane-d4	*95.5*			**0**	*81-118*	*%REC*	*1*	*15-Apr-2021 23:25*
Surr: 4-Bromofluorobenzene	*96.4*			**0**	*85-114*	*%REC*	*1*	*15-Apr-2021 23:25*
Surr: Dibromofluoromethane	*91.9*			**0**	*80-119*	*%REC*	*1*	*15-Apr-2021 23:25*
Surr: Toluene-d8	*108*			**0**	*89-112*	*%REC*	*1*	*15-Apr-2021 23:25*
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: GR
Subcontract Analysis	See Attached		0	0		NA	1	30-Apr-2021 15:53

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 30-Apr-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant 16 April 2021
Sample ID: 16WW34-210412
Collection Date: 12-Apr-2021 10:45

ANALYTICAL REPORT
WorkOrder:HS21040695
Lab ID:HS21040695-05
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
1,1,2-Trichloroethane	1.0	U	0.30	1.0	1.0	ug/L	1	16-Apr-2021 02:35
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	16-Apr-2021 02:35
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	16-Apr-2021 02:35
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	16-Apr-2021 02:35
Methylene chloride	2.0	U	0.40	2.0	2.0	ug/L	1	16-Apr-2021 02:35
Trichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	16-Apr-2021 02:35
Vinyl chloride	0.50	U	0.20	0.50	1.0	ug/L	1	16-Apr-2021 02:35
Surr: 1,2-Dichloroethane-d4	*97.1*			**0**	*81-118*	*%REC*	*1*	*16-Apr-2021 02:35*
Surr: 4-Bromofluorobenzene	*95.1*			**0**	*85-114*	*%REC*	*1*	*16-Apr-2021 02:35*
Surr: Dibromofluoromethane	*89.5*			**0**	*80-119*	*%REC*	*1*	*16-Apr-2021 02:35*
Surr: Toluene-d8	*108*			**0**	*89-112*	*%REC*	*1*	*16-Apr-2021 02:35*
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: GR
Subcontract Analysis	See Attached		0	0		NA	1	30-Apr-2021 15:53

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 30-Apr-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant 16 April 2021
Sample ID: 16WW34-210412-FD
Collection Date: 12-Apr-2021 10:45

ANALYTICAL REPORT
WorkOrder:HS21040695
Lab ID:HS21040695-06
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
1,1,2-Trichloroethane	1.0	U	0.30	1.0	1.0	ug/L	1	16-Apr-2021 02:56
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	16-Apr-2021 02:56
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	16-Apr-2021 02:56
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	16-Apr-2021 02:56
Methylene chloride	2.0	U	0.40	2.0	2.0	ug/L	1	16-Apr-2021 02:56
Trichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	16-Apr-2021 02:56
Vinyl chloride	0.50	U	0.20	0.50	1.0	ug/L	1	16-Apr-2021 02:56
Surr: 1,2-Dichloroethane-d4	*96.1*			**0**	*81-118*	*%REC*	*1*	*16-Apr-2021 02:56*
Surr: 4-Bromofluorobenzene	*98.3*			**0**	*85-114*	*%REC*	*1*	*16-Apr-2021 02:56*
Surr: Dibromofluoromethane	*92.2*			**0**	*80-119*	*%REC*	*1*	*16-Apr-2021 02:56*
Surr: Toluene-d8	*107*			**0**	*89-112*	*%REC*	*1*	*16-Apr-2021 02:56*
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: GR
Subcontract Analysis	See Attached		0	0		NA	1	30-Apr-2021 15:53

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 30-Apr-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant 16 April 2021
Sample ID: 16WW33-210412
Collection Date: 12-Apr-2021 11:30

ANALYTICAL REPORT
WorkOrder:HS21040695
Lab ID:HS21040695-07
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
1,1,2-Trichloroethane	1.0	U	0.30	1.0	1.0	ug/L	1	16-Apr-2021 03:17
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	16-Apr-2021 03:17
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	16-Apr-2021 03:17
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	16-Apr-2021 03:17
Methylene chloride	2.0	U	0.40	2.0	2.0	ug/L	1	16-Apr-2021 03:17
Trichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	16-Apr-2021 03:17
Vinyl chloride	0.50	U	0.20	0.50	1.0	ug/L	1	16-Apr-2021 03:17
Surr: 1,2-Dichloroethane-d4	*97.2*			**0**	*81-118*	*%REC*	*1*	*16-Apr-2021 03:17*
Surr: 4-Bromofluorobenzene	*94.4*			**0**	*85-114*	*%REC*	*1*	*16-Apr-2021 03:17*
Surr: Dibromofluoromethane	*92.4*			**0**	*80-119*	*%REC*	*1*	*16-Apr-2021 03:17*
Surr: Toluene-d8	*108*			**0**	*89-112*	*%REC*	*1*	*16-Apr-2021 03:17*
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: GR
Subcontract Analysis	See Attached		0	0		NA	1	30-Apr-2021 15:53

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 30-Apr-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant 16 April 2021
Sample ID: 16WW32-210412
Collection Date: 12-Apr-2021 12:15

ANALYTICAL REPORT
WorkOrder:HS21040695
Lab ID:HS21040695-08
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
1,1,2-Trichloroethane	1.0	U	0.30	1.0	1.0	ug/L	1	16-Apr-2021 03:38
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	16-Apr-2021 03:38
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	16-Apr-2021 03:38
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	16-Apr-2021 03:38
Methylene chloride	2.0	U	0.40	2.0	2.0	ug/L	1	16-Apr-2021 03:38
Trichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	16-Apr-2021 03:38
Vinyl chloride	0.50	U	0.20	0.50	1.0	ug/L	1	16-Apr-2021 03:38
Surr: 1,2-Dichloroethane-d4	*99.0*			**0**	*81-118*	*%REC*	*1*	*16-Apr-2021 03:38*
Surr: 4-Bromofluorobenzene	*94.3*			**0**	*85-114*	*%REC*	*1*	*16-Apr-2021 03:38*
Surr: Dibromofluoromethane	*89.6*			**0**	*80-119*	*%REC*	*1*	*16-Apr-2021 03:38*
Surr: Toluene-d8	*108*			**0**	*89-112*	*%REC*	*1*	*16-Apr-2021 03:38*
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: GR
Subcontract Analysis	See Attached		0	0		NA	1	30-Apr-2021 15:53

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 30-Apr-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant 16 April 2021
Sample ID: 16WW31-210412
Collection Date: 12-Apr-2021 13:00

ANALYTICAL REPORT
WorkOrder:HS21040695
Lab ID:HS21040695-09
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
1,1,2-Trichloroethane	1.0	U	0.30	1.0	1.0	ug/L	1	16-Apr-2021 03:59
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	16-Apr-2021 03:59
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	16-Apr-2021 03:59
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	16-Apr-2021 03:59
Methylene chloride	2.0	U	0.40	2.0	2.0	ug/L	1	16-Apr-2021 03:59
Trichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	16-Apr-2021 03:59
Vinyl chloride	0.50	U	0.20	0.50	1.0	ug/L	1	16-Apr-2021 03:59
Surr: 1,2-Dichloroethane-d4	*96.5*			**0**	*81-118*	*%REC*	*1*	*16-Apr-2021 03:59*
Surr: 4-Bromofluorobenzene	*93.7*			**0**	*85-114*	*%REC*	*1*	*16-Apr-2021 03:59*
Surr: Dibromofluoromethane	*92.7*			**0**	*80-119*	*%REC*	*1*	*16-Apr-2021 03:59*
Surr: Toluene-d8	*105*			**0**	*89-112*	*%REC*	*1*	*16-Apr-2021 03:59*
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: GR
Subcontract Analysis	See Attached		0	0		NA	1	30-Apr-2021 15:53

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 30-Apr-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant 16 April 2021
Sample ID: 16WW46-210412
Collection Date: 12-Apr-2021 13:45

ANALYTICAL REPORT
WorkOrder:HS21040695
Lab ID:HS21040695-10
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
1,1,2-Trichloroethane	1.0	U	0.30	1.0	1.0	ug/L	1	16-Apr-2021 04:20
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	16-Apr-2021 04:20
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	16-Apr-2021 04:20
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	16-Apr-2021 04:20
Methylene chloride	2.0	U	0.40	2.0	2.0	ug/L	1	16-Apr-2021 04:20
Trichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	16-Apr-2021 04:20
Vinyl chloride	0.50	U	0.20	0.50	1.0	ug/L	1	16-Apr-2021 04:20
Surr: 1,2-Dichloroethane-d4	*99.2*			**0**	*81-118*	*%REC*	*1*	*16-Apr-2021 04:20*
Surr: 4-Bromofluorobenzene	*96.1*			**0**	*85-114*	*%REC*	*1*	*16-Apr-2021 04:20*
Surr: Dibromofluoromethane	*92.0*			**0**	*80-119*	*%REC*	*1*	*16-Apr-2021 04:20*
Surr: Toluene-d8	*105*			**0**	*89-112*	*%REC*	*1*	*16-Apr-2021 04:20*
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: GR
Subcontract Analysis	See Attached		0	0		NA	1	30-Apr-2021 15:53

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 30-Apr-21

Client: Aptim Environmental & Infrastucture, Inc. **ANALYTICAL REPORT**
Project: Longhorn Army Ammunition Plant 16 April 2021 WorkOrder:HS21040695
Sample ID: 16WW58-210413 Lab ID:HS21040695-11
Collection Date: 13-Apr-2021 07:40 Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
1,1,2-Trichloroethane	1.0	U	0.30	1.0	1.0	ug/L	1	16-Apr-2021 16:40
1,1-Dichloroethene	**1.1**		**0.20**	**0.50**	**1.0**	**ug/L**	1	16-Apr-2021 16:40
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	16-Apr-2021 16:40
cis-1,2-Dichloroethene	**49**		**0.20**	**0.50**	**1.0**	**ug/L**	1	16-Apr-2021 16:40
Methylene chloride	2.0	U	0.40	2.0	2.0	ug/L	1	16-Apr-2021 16:40
Trichloroethene	**1,100**		**2.0**	**5.0**	**10**	**ug/L**	10	16-Apr-2021 17:01
Vinyl chloride	0.50	U	0.20	0.50	1.0	ug/L	1	16-Apr-2021 16:40
Surr: 1,2-Dichloroethane-d4	*98.9*			**0**	*81-118*	*%REC*	*1*	*16-Apr-2021 16:40*
Surr: 1,2-Dichloroethane-d4	*97.8*			**0**	*81-118*	*%REC*	*10*	*16-Apr-2021 17:01*
Surr: 4-Bromofluorobenzene	*97.6*			**0**	*85-114*	*%REC*	*1*	*16-Apr-2021 16:40*
Surr: 4-Bromofluorobenzene	*96.4*			**0**	*85-114*	*%REC*	*10*	*16-Apr-2021 17:01*
Surr: Dibromofluoromethane	*93.3*			**0**	*80-119*	*%REC*	*1*	*16-Apr-2021 16:40*
Surr: Dibromofluoromethane	*92.3*			**0**	*80-119*	*%REC*	*10*	*16-Apr-2021 17:01*
Surr: Toluene-d8	*105*			**0**	*89-112*	*%REC*	*10*	*16-Apr-2021 17:01*
Surr: Toluene-d8	*108*			**0**	*89-112*	*%REC*	*1*	*16-Apr-2021 16:40*
DISSOLVED GASES BY RSK-175		**Method:RSK-175**						Analyst: PPM
Ethane	0.000500	U	0.000144	0.000500	0.00100	mg/L	1	21-Apr-2021 10:49
Ethene	0.000500	U	0.000234	0.000500	0.00100	mg/L	1	21-Apr-2021 10:49
Methane	**0.00629**		**0.000107**	**0.000500**	**0.000500**	**mg/L**	1	21-Apr-2021 10:49
ALKALINITY BY SM2320B		**Method:SM2320B**						Analyst: TH
Alkalinity, Total (As CaCO3)	**98.4**		**5.00**	**5.00**	**5.00**	**mg/L**	1	15-Apr-2021 21:34
TOTAL ORGANIC CARBON - SM5310B		**Method:SM5310B**						Analyst: MZD
Organic Carbon, Total	**3.43**		**0.500**	**0.500**	**1.00**	**mg/L**	1	23-Apr-2021 17:26
ANIONS BY SW9056A		**Method:SW9056**						Analyst: YP
Bromide	**2.50**		**0.0300**	**0.100**	**0.100**	**mg/L**	1	14-Apr-2021 15:43
Nitrogen, Nitrate (As N)	0.100	U	0.0300	0.100	0.100	mg/L	1	14-Apr-2021 15:43
Sulfate	**282**		**2.00**	**5.00**	**5.00**	**mg/L**	10	26-Apr-2021 19:05
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: GR
Subcontract Analysis	See Attached		0	0		NA	1	30-Apr-2021 15:53

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 30-Apr-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant 16 April 2021
Sample ID: 16WW57-210413
Collection Date: 13-Apr-2021 08:30

ANALYTICAL REPORT
WorkOrder:HS21040695
Lab ID:HS21040695-12
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
1,1,2-Trichloroethane	1.0	U	0.30	1.0	1.0	ug/L	1	16-Apr-2021 04:41
1,1-Dichloroethene	**1.0**		**0.20**	**0.50**	**1.0**	**ug/L**	1	16-Apr-2021 04:41
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	16-Apr-2021 04:41
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	16-Apr-2021 04:41
Methylene chloride	2.0	U	0.40	2.0	2.0	ug/L	1	16-Apr-2021 04:41
Trichloroethene	**57**		**0.20**	**0.50**	**1.0**	**ug/L**	1	16-Apr-2021 04:41
Vinyl chloride	0.50	U	0.20	0.50	1.0	ug/L	1	16-Apr-2021 04:41
Surr: 1,2-Dichloroethane-d4	*99.2*			**0**	*81-118*	*%REC*	*1*	*16-Apr-2021 04:41*
Surr: 4-Bromofluorobenzene	*94.1*			**0**	*85-114*	*%REC*	*1*	*16-Apr-2021 04:41*
Surr: Dibromofluoromethane	*91.7*			**0**	*80-119*	*%REC*	*1*	*16-Apr-2021 04:41*
Surr: Toluene-d8	*109*			**0**	*89-112*	*%REC*	*1*	*16-Apr-2021 04:41*
DISSOLVED GASES BY RSK-175		**Method:RSK-175**						Analyst: PPM
Ethane	0.000500	U	0.000144	0.000500	0.00100	mg/L	1	21-Apr-2021 11:07
Ethene	0.000500	U	0.000234	0.000500	0.00100	mg/L	1	21-Apr-2021 11:07
Methane	**0.00141**		**0.000107**	**0.000500**	**0.000500**	**mg/L**	1	21-Apr-2021 11:07
ALKALINITY BY SM2320B		**Method:SM2320B**						Analyst: TH
Alkalinity, Total (As CaCO3)	**175**		**5.00**	**5.00**	**5.00**	**mg/L**	1	15-Apr-2021 21:56
TOTAL ORGANIC CARBON - SM5310B		**Method:SM5310B**						Analyst: MZD
Organic Carbon, Total	**16.8**		**0.500**	**0.500**	**1.00**	**mg/L**	1	23-Apr-2021 17:44
ANIONS BY SW9056A		**Method:SW9056**						Analyst: YP
Bromide	**4.78**		**0.150**	**0.500**	**0.500**	**mg/L**	5	14-Apr-2021 16:38
Nitrogen, Nitrate (As N)	0.500	U	0.150	0.500	0.500	mg/L	5	14-Apr-2021 16:38
Sulfate	**2,360**		**10.0**	**25.0**	**25.0**	**mg/L**	50	26-Apr-2021 19:24
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: GR
Subcontract Analysis	See Attached		0	0		NA	1	30-Apr-2021 15:53

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 30-Apr-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant 16 April 2021
Sample ID: 16WW35-210413
Collection Date: 13-Apr-2021 09:40

ANALYTICAL REPORT
WorkOrder:HS21040695
Lab ID:HS21040695-13
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
1,1,2-Trichloroethane	10	U	3.0	10	10	ug/L	10	16-Apr-2021 05:44
1,1-Dichloroethene	**85**		**2.0**	**5.0**	**10**	**ug/L**	10	16-Apr-2021 05:44
1,2-Dichloroethane	5.0	U	2.0	5.0	10	ug/L	10	16-Apr-2021 05:44
cis-1,2-Dichloroethene	**2,100**		**20**	**50**	**100**	**ug/L**	100	16-Apr-2021 06:05
Methylene chloride	**17**	J	**4.0**	**20**	**20**	**ug/L**	10	16-Apr-2021 05:44
Trichloroethene	**9,300**		**20**	**50**	**100**	**ug/L**	100	16-Apr-2021 06:05
Vinyl chloride	**90**		**2.0**	**5.0**	**10**	**ug/L**	10	16-Apr-2021 05:44
Surr: 1,2-Dichloroethane-d4	*98.0*			**0**	*81-118*	*%REC*	*10*	*16-Apr-2021 05:44*
Surr: 1,2-Dichloroethane-d4	*98.4*			**0**	*81-118*	*%REC*	*100*	*16-Apr-2021 06:05*
Surr: 4-Bromofluorobenzene	*93.8*			**0**	*85-114*	*%REC*	*10*	*16-Apr-2021 05:44*
Surr: 4-Bromofluorobenzene	*96.6*			**0**	*85-114*	*%REC*	*100*	*16-Apr-2021 06:05*
Surr: Dibromofluoromethane	*93.2*			**0**	*80-119*	*%REC*	*10*	*16-Apr-2021 05:44*
Surr: Dibromofluoromethane	*93.3*			**0**	*80-119*	*%REC*	*100*	*16-Apr-2021 06:05*
Surr: Toluene-d8	*108*			**0**	*89-112*	*%REC*	*10*	*16-Apr-2021 05:44*
Surr: Toluene-d8	*108*			**0**	*89-112*	*%REC*	*100*	*16-Apr-2021 06:05*
DISSOLVED GASES BY RSK-175		**Method:RSK-175**						Analyst: PPM
Ethane	0.000500	U	0.000144	0.000500	0.00100	mg/L	1	21-Apr-2021 11:20
Ethene	**0.00875**		**0.000234**	**0.000500**	**0.00100**	**mg/L**	1	21-Apr-2021 11:20
Methane	**0.102**		**0.00107**	**0.00500**	**0.00500**	**mg/L**	10	21-Apr-2021 11:43
ALKALINITY BY SM2320B		**Method:SM2320B**						Analyst: TH
Alkalinity, Total (As CaCO3)	**1,090**		**5.00**	**5.00**	**5.00**	**mg/L**	1	15-Apr-2021 22:05
TOTAL ORGANIC CARBON - SM5310B		**Method:SM5310B**						Analyst: MZD
Organic Carbon, Total	**59.1**		**5.00**	**5.00**	**10.0**	**mg/L**	10	27-Apr-2021 17:43
ANIONS BY SW9056A		**Method:SW9056**						Analyst: YP
Bromide	0.500	U	0.150	0.500	0.500	mg/L	5	14-Apr-2021 16:56
Nitrogen, Nitrate (As N)	0.500	U	0.150	0.500	0.500	mg/L	5	14-Apr-2021 16:56
Sulfate	**9,810**		**100**	**250**	**250**	**mg/L**	500	26-Apr-2021 19:42
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: GR
Subcontract Analysis	See Attached		0	0		NA	1	30-Apr-2021 15:53

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 30-Apr-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant 16 April 2021
Sample ID: 16WW36-210413
Collection Date: 13-Apr-2021 10:30

ANALYTICAL REPORT
WorkOrder:HS21040695
Lab ID:HS21040695-14
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
1,1,2-Trichloroethane	25	U	7.5	25	25	ug/L	25	16-Apr-2021 06:26
1,1-Dichloroethene	**74**		**5.0**	**12**	**25**	**ug/L**	25	16-Apr-2021 06:26
1,2-Dichloroethane	12	U	5.0	12	25	ug/L	25	16-Apr-2021 06:26
cis-1,2-Dichloroethene	**9,000**		**50**	**120**	**250**	**ug/L**	250	16-Apr-2021 06:47
Methylene chloride	**43**	J	**10**	**50**	**50**	**ug/L**	25	16-Apr-2021 06:26
Trichloroethene	**10,000**		**50**	**120**	**250**	**ug/L**	250	16-Apr-2021 06:47
Vinyl chloride	**78**		**5.0**	**12**	**25**	**ug/L**	25	16-Apr-2021 06:26
Surr: 1,2-Dichloroethane-d4	*100*			**0**	*81-118*	*%REC*	*25*	*16-Apr-2021 06:26*
Surr: 1,2-Dichloroethane-d4	*97.1*			**0**	*81-118*	*%REC*	*250*	*16-Apr-2021 06:47*
Surr: 4-Bromofluorobenzene	*96.5*			**0**	*85-114*	*%REC*	*25*	*16-Apr-2021 06:26*
Surr: 4-Bromofluorobenzene	*96.8*			**0**	*85-114*	*%REC*	*250*	*16-Apr-2021 06:47*
Surr: Dibromofluoromethane	*93.4*			**0**	*80-119*	*%REC*	*25*	*16-Apr-2021 06:26*
Surr: Dibromofluoromethane	*91.3*			**0**	*80-119*	*%REC*	*250*	*16-Apr-2021 06:47*
Surr: Toluene-d8	*109*			**0**	*89-112*	*%REC*	*250*	*16-Apr-2021 06:47*
Surr: Toluene-d8	*106*			**0**	*89-112*	*%REC*	*25*	*16-Apr-2021 06:26*
DISSOLVED GASES BY RSK-175		**Method:RSK-175**						Analyst: PPM
Ethane	0.000500	U	0.000144	0.000500	0.00100	mg/L	1	21-Apr-2021 11:30
Ethene	**0.00490**		**0.000234**	**0.000500**	**0.00100**	**mg/L**	1	21-Apr-2021 11:30
Methane	**0.151**		**0.00107**	**0.00500**	**0.00500**	**mg/L**	10	21-Apr-2021 11:52
ALKALINITY BY SM2320B		**Method:SM2320B**						Analyst: TH
Alkalinity, Total (As CaCO3)	**479**		**5.00**	**5.00**	**5.00**	**mg/L**	1	15-Apr-2021 22:12
TOTAL ORGANIC CARBON - SM5310B		**Method:SM5310B**						Analyst: MZD
Organic Carbon, Total	**15.1**		**0.500**	**0.500**	**1.00**	**mg/L**	1	23-Apr-2021 18:17
ANIONS BY SW9056A		**Method:SW9056**						Analyst: YP
Bromide	**1.96**		**0.150**	**0.500**	**0.500**	**mg/L**	5	14-Apr-2021 17:15
Nitrogen, Nitrate (As N)	0.500	U	0.150	0.500	0.500	mg/L	5	14-Apr-2021 17:15
Sulfate	**1,850**		**10.0**	**25.0**	**25.0**	**mg/L**	50	26-Apr-2021 20:00
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: GR
Subcontract Analysis	See Attached		0	0		NA	1	30-Apr-2021 15:53

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 30-Apr-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant 16 April 2021
Sample ID: 16PM09-210413
Collection Date: 13-Apr-2021 11:15

ANALYTICAL REPORT
WorkOrder:HS21040695
Lab ID:HS21040695-15
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
1,1,2-Trichloroethane	**0.82**	J	**0.30**	**1.0**	**1.0**	**ug/L**	1	15-Apr-2021 23:46
1,1-Dichloroethene	**13**		**0.20**	**0.50**	**1.0**	**ug/L**	1	15-Apr-2021 23:46
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	15-Apr-2021 23:46
cis-1,2-Dichloroethene	**210**		**2.0**	**5.0**	**10**	**ug/L**	10	16-Apr-2021 14:55
Methylene chloride	2.0	U	0.40	2.0	2.0	ug/L	1	15-Apr-2021 23:46
Trichloroethene	**640**		**2.0**	**5.0**	**10**	**ug/L**	10	16-Apr-2021 14:55
Vinyl chloride	**10**		**0.20**	**0.50**	**1.0**	**ug/L**	1	15-Apr-2021 23:46
Surr: 1,2-Dichloroethane-d4	*97.0*			**0**	*81-118*	*%REC*	*1*	*15-Apr-2021 23:46*
Surr: 1,2-Dichloroethane-d4	*94.6*			**0**	*81-118*	*%REC*	*10*	*16-Apr-2021 14:55*
Surr: 4-Bromofluorobenzene	*94.8*			**0**	*85-114*	*%REC*	*1*	*15-Apr-2021 23:46*
Surr: 4-Bromofluorobenzene	*94.1*			**0**	*85-114*	*%REC*	*10*	*16-Apr-2021 14:55*
Surr: Dibromofluoromethane	*92.0*			**0**	*80-119*	*%REC*	*1*	*15-Apr-2021 23:46*
Surr: Dibromofluoromethane	*91.0*			**0**	*80-119*	*%REC*	*10*	*16-Apr-2021 14:55*
Surr: Toluene-d8	*107*			**0**	*89-112*	*%REC*	*1*	*15-Apr-2021 23:46*
Surr: Toluene-d8	*107*			**0**	*89-112*	*%REC*	*10*	*16-Apr-2021 14:55*
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: GR
Subcontract Analysis	See Attached		0	0		NA	1	30-Apr-2021 15:53

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 30-Apr-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant 16 April 2021
Sample ID: 16PM06-210413
Collection Date: 13-Apr-2021 12:05

ANALYTICAL REPORT
WorkOrder:HS21040695
Lab ID:HS21040695-16
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
1,1,2-Trichloroethane	100	U	30	100	100	ug/L	100	16-Apr-2021 18:05
1,1-Dichloroethene	**120**		**20**	**50**	**100**	**ug/L**	100	16-Apr-2021 18:05
1,2-Dichloroethane	**54**	J	**20**	**50**	**100**	**ug/L**	100	16-Apr-2021 18:05
cis-1,2-Dichloroethene	**42,000**		**100**	**250**	**500**	**ug/L**	500	16-Apr-2021 18:26
Methylene chloride	200	U	40	200	200	ug/L	100	16-Apr-2021 18:05
Trichloroethene	**77,000**		**100**	**250**	**500**	**ug/L**	500	16-Apr-2021 18:26
Vinyl chloride	**1,800**		**20**	**50**	**100**	**ug/L**	100	16-Apr-2021 18:05
Surr: 1,2-Dichloroethane-d4	*98.5*			**0**	*81-118*	*%REC*	*100*	*16-Apr-2021 18:05*
Surr: 1,2-Dichloroethane-d4	*97.6*			**0**	*81-118*	*%REC*	*500*	*16-Apr-2021 18:26*
Surr: 4-Bromofluorobenzene	*96.4*			**0**	*85-114*	*%REC*	*100*	*16-Apr-2021 18:05*
Surr: 4-Bromofluorobenzene	*96.2*			**0**	*85-114*	*%REC*	*500*	*16-Apr-2021 18:26*
Surr: Dibromofluoromethane	*94.7*			**0**	*80-119*	*%REC*	*100*	*16-Apr-2021 18:05*
Surr: Dibromofluoromethane	*93.2*			**0**	*80-119*	*%REC*	*500*	*16-Apr-2021 18:26*
Surr: Toluene-d8	*106*			**0**	*89-112*	*%REC*	*100*	*16-Apr-2021 18:05*
Surr: Toluene-d8	*106*			**0**	*89-112*	*%REC*	*500*	*16-Apr-2021 18:26*
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: GR
Subcontract Analysis	See Attached		0	0		NA	1	30-Apr-2021 15:53

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 30-Apr-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant 16 April 2021
Sample ID: 16PM14-210413
Collection Date: 13-Apr-2021 12:50

ANALYTICAL REPORT
WorkOrder:HS21040695
Lab ID:HS21040695-17
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
1,1,2-Trichloroethane	20	U	6.0	20	20	ug/L	20	16-Apr-2021 17:22
1,1-Dichloroethene	**14**	J	**4.0**	**10**	**20**	**ug/L**	20	16-Apr-2021 17:22
1,2-Dichloroethane	**22**		**4.0**	**10**	**20**	**ug/L**	20	16-Apr-2021 17:22
cis-1,2-Dichloroethene	**2,900**		**4.0**	**10**	**20**	**ug/L**	20	16-Apr-2021 17:22
Methylene chloride	40	U	8.0	40	40	ug/L	20	16-Apr-2021 17:22
Trichloroethene	**4,300**		**50**	**120**	**250**	**ug/L**	250	16-Apr-2021 17:43
Vinyl chloride	**110**		**4.0**	**10**	**20**	**ug/L**	20	16-Apr-2021 17:22
Surr: 1,2-Dichloroethane-d4	*99.9*			**0**	*81-118*	*%REC*	*20*	*16-Apr-2021 17:22*
Surr: 1,2-Dichloroethane-d4	*97.8*			**0**	*81-118*	*%REC*	*250*	*16-Apr-2021 17:43*
Surr: 4-Bromofluorobenzene	*97.8*			**0**	*85-114*	*%REC*	*20*	*16-Apr-2021 17:22*
Surr: 4-Bromofluorobenzene	*93.0*			**0**	*85-114*	*%REC*	*250*	*16-Apr-2021 17:43*
Surr: Dibromofluoromethane	*92.6*			**0**	*80-119*	*%REC*	*20*	*16-Apr-2021 17:22*
Surr: Dibromofluoromethane	*93.7*			**0**	*80-119*	*%REC*	*250*	*16-Apr-2021 17:43*
Surr: Toluene-d8	*107*			**0**	*89-112*	*%REC*	*20*	*16-Apr-2021 17:22*
Surr: Toluene-d8	*106*			**0**	*89-112*	*%REC*	*250*	*16-Apr-2021 17:43*
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: GR
Subcontract Analysis	See Attached		0	0		NA	1	30-Apr-2021 15:53

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 30-Apr-21

Client: Aptim Environmental & Infrastucture, Inc. **ANALYTICAL REPORT**
Project: Longhorn Army Ammunition Plant 16 April 2021 WorkOrder:HS21040695
Sample ID: Trip Blank-210413 Lab ID:HS21040695-18
Collection Date: 13-Apr-2021 00:00 Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
1,1,2-Trichloroethane	1.0	U	0.30	1.0	1.0	ug/L	1	15-Apr-2021 13:36
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	15-Apr-2021 13:36
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	15-Apr-2021 13:36
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	15-Apr-2021 13:36
Methylene chloride	**1.7**	J	**0.40**	**2.0**	**2.0**	**ug/L**	1	15-Apr-2021 13:36
Trichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	15-Apr-2021 13:36
Vinyl chloride	0.50	U	0.20	0.50	1.0	ug/L	1	15-Apr-2021 13:36
Surr: 1,2-Dichloroethane-d4	*96.0*			**0**	*81-118*	*%REC*	*1*	*15-Apr-2021 13:36*
Surr: 4-Bromofluorobenzene	*94.5*			**0**	*85-114*	*%REC*	*1*	*15-Apr-2021 13:36*
Surr: Dibromofluoromethane	*91.4*			**0**	*80-119*	*%REC*	*1*	*15-Apr-2021 13:36*
Surr: Toluene-d8	*108*			**0**	*89-112*	*%REC*	*1*	*15-Apr-2021 13:36*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 30-Apr-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant 16 April 2021
WorkOrder: HS21040695

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: R381622 (0)	**Test Name :** ANIONS BY SW9056A				**Matrix:** Groundwater	
HS21040695-11	16WW58-210413	13 Apr 2021 07:40			14 Apr 2021 15:43	1
HS21040695-12	16WW57-210413	13 Apr 2021 08:30			14 Apr 2021 16:38	5
HS21040695-13	16WW35-210413	13 Apr 2021 09:40			14 Apr 2021 16:56	5
HS21040695-14	16WW36-210413	13 Apr 2021 10:30			14 Apr 2021 17:15	5
Batch ID: R381715 (0)	**Test Name :** ALKALINITY BY SM2320B				**Matrix:** Groundwater	
HS21040695-11	16WW58-210413	13 Apr 2021 07:40			15 Apr 2021 21:34	1
HS21040695-12	16WW57-210413	13 Apr 2021 08:30			15 Apr 2021 21:56	1
HS21040695-13	16WW35-210413	13 Apr 2021 09:40			15 Apr 2021 22:05	1
HS21040695-14	16WW36-210413	13 Apr 2021 10:30			15 Apr 2021 22:12	1
Batch ID: R381732 (0)	**Test Name :** VOLATILES ORGANICS BY METHOD 8260C				**Matrix:** Water	
HS21040695-18	Trip Blank-210413	13 Apr 2021 00:00			15 Apr 2021 13:36	1
Batch ID: R381732 (0)	**Test Name :** VOLATILES ORGANICS BY METHOD 8260C				**Matrix:** Groundwater	
HS21040695-01	16WW44-210412	12 Apr 2021 07:40			15 Apr 2021 13:57	1
HS21040695-03	16WW37-210412	12 Apr 2021 09:15			15 Apr 2021 14:18	1
Batch ID: R381740 (0)	**Test Name :** VOLATILES ORGANICS BY METHOD 8260C				**Matrix:** Groundwater	
HS21040695-02	16WW38-210412	12 Apr 2021 08:30			16 Apr 2021 05:23	100
HS21040695-02	16WW38-210412	12 Apr 2021 08:30			16 Apr 2021 05:02	10
HS21040695-04	16WW14-210412	12 Apr 2021 10:00			15 Apr 2021 23:25	1
HS21040695-05	16WW34-210412	12 Apr 2021 10:45			16 Apr 2021 02:35	1
HS21040695-06	16WW34-210412-FD	12 Apr 2021 10:45			16 Apr 2021 02:56	1
HS21040695-07	16WW33-210412	12 Apr 2021 11:30			16 Apr 2021 03:17	1
HS21040695-08	16WW32-210412	12 Apr 2021 12:15			16 Apr 2021 03:38	1
HS21040695-09	16WW31-210412	12 Apr 2021 13:00			16 Apr 2021 03:59	1
HS21040695-10	16WW46-210412	12 Apr 2021 13:45			16 Apr 2021 04:20	1
HS21040695-12	16WW57-210413	13 Apr 2021 08:30			16 Apr 2021 04:41	1
HS21040695-13	16WW35-210413	13 Apr 2021 09:40			16 Apr 2021 06:05	100
HS21040695-13	16WW35-210413	13 Apr 2021 09:40			16 Apr 2021 05:44	10
HS21040695-14	16WW36-210413	13 Apr 2021 10:30			16 Apr 2021 06:47	250
HS21040695-14	16WW36-210413	13 Apr 2021 10:30			16 Apr 2021 06:26	25
HS21040695-15	16PM09-210413	13 Apr 2021 11:15			15 Apr 2021 23:46	1

ALS Houston, US Date: 30-Apr-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant 16 April 2021
WorkOrder: HS21040695

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: R381840 (0)	**Test Name :** VOLATILES ORGANICS BY METHOD 8260C				**Matrix:** Groundwater	
HS21040695-11	16WW58-210413	13 Apr 2021 07:40			16 Apr 2021 17:01	10
HS21040695-11	16WW58-210413	13 Apr 2021 07:40			16 Apr 2021 16:40	1
HS21040695-15	16PM09-210413	13 Apr 2021 11:15			16 Apr 2021 14:55	10
HS21040695-16	16PM06-210413	13 Apr 2021 12:05			16 Apr 2021 18:26	500
HS21040695-16	16PM06-210413	13 Apr 2021 12:05			16 Apr 2021 18:05	100
HS21040695-17	16PM14-210413	13 Apr 2021 12:50			16 Apr 2021 17:43	250
HS21040695-17	16PM14-210413	13 Apr 2021 12:50			16 Apr 2021 17:22	20
Batch ID: R382191 (0)	**Test Name :** DISSOLVED GASES BY RSK-175				**Matrix:** Groundwater	
HS21040695-11	16WW58-210413	13 Apr 2021 07:40			21 Apr 2021 10:49	1
HS21040695-12	16WW57-210413	13 Apr 2021 08:30			21 Apr 2021 11:07	1
HS21040695-13	16WW35-210413	13 Apr 2021 09:40			21 Apr 2021 11:43	10
HS21040695-13	16WW35-210413	13 Apr 2021 09:40			21 Apr 2021 11:20	1
HS21040695-14	16WW36-210413	13 Apr 2021 10:30			21 Apr 2021 11:52	10
HS21040695-14	16WW36-210413	13 Apr 2021 10:30			21 Apr 2021 11:30	1
Batch ID: R382301 (0)	**Test Name :** TOTAL ORGANIC CARBON - SM5310B				**Matrix:** Groundwater	
HS21040695-11	16WW58-210413	13 Apr 2021 07:40			23 Apr 2021 17:26	1
HS21040695-12	16WW57-210413	13 Apr 2021 08:30			23 Apr 2021 17:44	1
HS21040695-14	16WW36-210413	13 Apr 2021 10:30			23 Apr 2021 18:17	1
Batch ID: R382442 (0)	**Test Name :** ANIONS BY SW9056A				**Matrix:** Groundwater	
HS21040695-11	16WW58-210413	13 Apr 2021 07:40			26 Apr 2021 19:05	10
HS21040695-12	16WW57-210413	13 Apr 2021 08:30			26 Apr 2021 19:24	50
HS21040695-13	16WW35-210413	13 Apr 2021 09:40			26 Apr 2021 19:42	500
HS21040695-14	16WW36-210413	13 Apr 2021 10:30			26 Apr 2021 20:00	50
Batch ID: R382505 (0)	**Test Name :** TOTAL ORGANIC CARBON - SM5310B				**Matrix:** Groundwater	
HS21040695-13	16WW35-210413	13 Apr 2021 09:40			27 Apr 2021 17:43	10

ALS Houston, US Date: 30-Apr-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant 16 April 2021
WorkOrder: HS21040695

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: R382774 (0)	**Test Name :** SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)				**Matrix:** Groundwater	
HS21040695-01	16WW44-210412	12 Apr 2021 07:40			30 Apr 2021 15:53	1
HS21040695-02	16WW38-210412	12 Apr 2021 08:30			30 Apr 2021 15:53	1
HS21040695-03	16WW37-210412	12 Apr 2021 09:15			30 Apr 2021 15:53	1
HS21040695-04	16WW14-210412	12 Apr 2021 10:00			30 Apr 2021 15:53	1
HS21040695-05	16WW34-210412	12 Apr 2021 10:45			30 Apr 2021 15:53	1
HS21040695-06	16WW34-210412-FD	12 Apr 2021 10:45			30 Apr 2021 15:53	1
HS21040695-07	16WW33-210412	12 Apr 2021 11:30			30 Apr 2021 15:53	1
HS21040695-08	16WW32-210412	12 Apr 2021 12:15			30 Apr 2021 15:53	1
HS21040695-09	16WW31-210412	12 Apr 2021 13:00			30 Apr 2021 15:53	1
HS21040695-10	16WW46-210412	12 Apr 2021 13:45			30 Apr 2021 15:53	1
HS21040695-11	16WW58-210413	13 Apr 2021 07:40			30 Apr 2021 15:53	1
HS21040695-12	16WW57-210413	13 Apr 2021 08:30			30 Apr 2021 15:53	1
HS21040695-13	16WW35-210413	13 Apr 2021 09:40			30 Apr 2021 15:53	1
HS21040695-14	16WW36-210413	13 Apr 2021 10:30			30 Apr 2021 15:53	1
HS21040695-15	16PM09-210413	13 Apr 2021 11:15			30 Apr 2021 15:53	1
HS21040695-16	16PM06-210413	13 Apr 2021 12:05			30 Apr 2021 15:53	1
HS21040695-17	16PM14-210413	13 Apr 2021 12:50			30 Apr 2021 15:53	1

ALS Houston, US Date: 30-Apr-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant 16 April 2021
WorkOrder: HS21040695

QC BATCH REPORT

Batch ID: R382191 (0) **Instrument: FID-4** **Method: DISSOLVED GASES BY RSK-175**

MBLK Sample ID: **MBLK-210421** Units: **mg/L** Analysis Date: **21-Apr-2021 10:29**
Client ID: Run ID: **FID-4_382191** SeqNo: **6056346** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ethane	0.000500	0.00100								U
Ethene	0.000500	0.00100								U
Methane	0.000500	0.000500								U

LCS Sample ID: **LCS-210421** Units: **mg/L** Analysis Date: **21-Apr-2021 10:40**
Client ID: Run ID: **FID-4_382191** SeqNo: **6056347** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ethane	0.0200	0.00100	0.01804	0	111	75 - 125				
Ethene	0.0182	0.00100	0.0168	0	109	75 - 125				
Methane	0.00918	0.000500	0.009647	0	95.2	75 - 125				

MS Sample ID: **HS21040859-08MS** Units: **mg/L** Analysis Date: **21-Apr-2021 13:01**
Client ID: Run ID: **FID-4_382191** SeqNo: **6056357** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ethane	0.0159	0.00100	0.01804	0	88.3	75 - 125				
Ethene	0.0157	0.00100	0.0168	0	93.6	75 - 125				
Methane	0.00746	0.000500	0.009647	0.001022	66.8	75 - 125				S

MSD Sample ID: **HS21040859-08MSD** Units: **mg/L** Analysis Date: **21-Apr-2021 13:46**
Client ID: Run ID: **FID-4_382191** SeqNo: **6056358** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ethane	0.0160	0.00100	0.01804	0	88.5	75 - 125	0.01594	0.166	30	
Ethene	0.0157	0.00100	0.0168	0	93.6	75 - 125	0.01573	0.0543	30	
Methane	0.00713	0.000500	0.009647	0.001022	63.3	75 - 125	0.007465	4.6	30	S

The following samples were analyzed in this batch: HS21040695-11 HS21040695-12 HS21040695-13 HS21040695-14

ALS Houston, US Date: 30-Apr-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant 16 April 2021
WorkOrder: HS21040695

QC BATCH REPORT

Batch ID: R381732 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MBLK Sample ID: **VBLKW-210415** Units: **ug/L** Analysis Date: **15-Apr-2021 12:33**
Client ID: Run ID: **VOA6_381732** SeqNo: **6044650** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,2-Trichloroethane	1.0	1.0								U
1,1-Dichloroethene	0.50	1.0								U
1,2-Dichloroethane	0.50	1.0								U
cis-1,2-Dichloroethene	0.50	1.0								U
Methylene chloride	2.0	2.0								U
Trichloroethene	0.50	1.0								U
Vinyl chloride	0.50	1.0								U
Surr: 1,2-Dichloroethane-d4	*47.58*	*1.0*	*50*	*0*	*95.2*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*48.47*	*1.0*	*50*	*0*	*96.9*	*85 - 114*				
Surr: Dibromofluoromethane	*45.89*	*1.0*	*50*	*0*	*91.8*	*80 - 119*				
Surr: Toluene-d8	*54.05*	*1.0*	*50*	*0*	*108*	*89 - 112*				

LCS Sample ID: **VLCSW-210415** Units: **ug/L** Analysis Date: **15-Apr-2021 11:46**
Client ID: Run ID: **VOA6_381732** SeqNo: **6044649** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,2-Trichloroethane	21.31	1.0	20	0	107	80 - 119				
1,1-Dichloroethene	19.27	1.0	20	0	96.3	71 - 131				
1,2-Dichloroethane	19.73	1.0	20	0	98.7	73 - 128				
cis-1,2-Dichloroethene	19.75	1.0	20	0	98.8	78 - 123				
Methylene chloride	20.27	2.0	20	0	101	74 - 124				
Trichloroethene	19.63	1.0	20	0	98.1	79 - 123				
Vinyl chloride	21.06	1.0	20	0	105	58 - 137				
Surr: 1,2-Dichloroethane-d4	*52.26*	*1.0*	*50*	*0*	*105*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*49.34*	*1.0*	*50*	*0*	*98.7*	*85 - 114*				
Surr: Dibromofluoromethane	*49.39*	*1.0*	*50*	*0*	*98.8*	*80 - 119*				
Surr: Toluene-d8	*48.99*	*1.0*	*50*	*0*	*98.0*	*89 - 112*				

ALS Houston, US Date: 30-Apr-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant 16 April 2021
WorkOrder: HS21040695

QC BATCH REPORT

Batch ID: R381732 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MS Sample ID: **HS21040695-01MS** Units: **ug/L** Analysis Date: **15-Apr-2021 16:03**
Client ID: **16WW44-210412** Run ID: **VOA6_381732** SeqNo: **6044722** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,2-Trichloroethane	19.95	1.0	20	0	99.8	80 - 119				
1,1-Dichloroethene	18.58	1.0	20	0	92.9	71 - 131				
1,2-Dichloroethane	19.61	1.0	20	0	98.1	73 - 128				
cis-1,2-Dichloroethene	17.87	1.0	20	0	89.4	78 - 123				
Methylene chloride	18.27	2.0	20	0	91.3	74 - 124				
Trichloroethene	20.35	1.0	20	0	102	79 - 123				
Vinyl chloride	19.82	1.0	20	0	99.1	58 - 137				
Surr: 1,2-Dichloroethane-d4	*47.48*	*1.0*	*50*	*0*	*95.0*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*50.54*	*1.0*	*50*	*0*	*101*	*85 - 114*				
Surr: Dibromofluoromethane	*46.01*	*1.0*	*50*	*0*	*92.0*	*80 - 119*				
Surr: Toluene-d8	*51.71*	*1.0*	*50*	*0*	*103*	*89 - 112*				

MSD Sample ID: **HS21040695-01MSD** Units: **ug/L** Analysis Date: **15-Apr-2021 16:24**
Client ID: **16WW44-210412** Run ID: **VOA6_381732** SeqNo: **6044723** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,2-Trichloroethane	20.24	1.0	20	0	101	80 - 119	19.95	1.41	20	
1,1-Dichloroethene	18.09	1.0	20	0	90.5	71 - 131	18.58	2.66	20	
1,2-Dichloroethane	19.14	1.0	20	0	95.7	73 - 128	19.61	2.46	20	
cis-1,2-Dichloroethene	18.01	1.0	20	0	90.0	78 - 123	17.87	0.763	20	
Methylene chloride	18.63	2.0	20	0	93.2	74 - 124	18.27	1.98	20	
Trichloroethene	19.92	1.0	20	0	99.6	79 - 123	20.35	2.12	20	
Vinyl chloride	18.53	1.0	20	0	92.7	58 - 137	19.82	6.72	20	
Surr: 1,2-Dichloroethane-d4	*49.91*	*1.0*	*50*	*0*	*99.8*	*81 - 118*	*47.48*	*4.99*	*20*	
Surr: 4-Bromofluorobenzene	*49.7*	*1.0*	*50*	*0*	*99.4*	*85 - 114*	*50.54*	*1.66*	*20*	
Surr: Dibromofluoromethane	*47.33*	*1.0*	*50*	*0*	*94.7*	*80 - 119*	*46.01*	*2.84*	*20*	
Surr: Toluene-d8	*52.29*	*1.0*	*50*	*0*	*105*	*89 - 112*	*51.71*	*1.1*	*20*	

The following samples were analyzed in this batch: HS21040695-01 HS21040695-03 HS21040695-18

ALS Houston, US Date: 30-Apr-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant 16 April 2021
WorkOrder: HS21040695

QC BATCH REPORT

Batch ID: R381740 (0) **Instrument: VOA6** **Method: VOLATILES ORGANICS BY METHOD 8260C**

MBLK Sample ID: **VBLKW-210415** Units: **ug/L** Analysis Date: **15-Apr-2021 23:04**
Client ID: Run ID: **VOA6_381740** SeqNo: **6044795** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,2-Trichloroethane	1.0	1.0								U
1,1-Dichloroethene	0.50	1.0								U
1,2-Dichloroethane	0.50	1.0								U
cis-1,2-Dichloroethene	0.50	1.0								U
Methylene chloride	2.0	2.0								U
Trichloroethene	0.50	1.0								U
Vinyl chloride	0.50	1.0								U
Surr: 1,2-Dichloroethane-d4	*50.13*	*1.0*	*50*	*0*	*100*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*48.78*	*1.0*	*50*	*0*	*97.6*	*85 - 114*				
Surr: Dibromofluoromethane	*47.28*	*1.0*	*50*	*0*	*94.6*	*80 - 119*				
Surr: Toluene-d8	*54.54*	*1.0*	*50*	*0*	*109*	*89 - 112*				

LCS Sample ID: **VLCSW-210415** Units: **ug/L** Analysis Date: **15-Apr-2021 22:22**
Client ID: Run ID: **VOA6_381740** SeqNo: **6044794** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,2-Trichloroethane	21.17	1.0	20	0	106	80 - 119				
1,1-Dichloroethene	20.55	1.0	20	0	103	71 - 131				
1,2-Dichloroethane	20.76	1.0	20	0	104	73 - 128				
cis-1,2-Dichloroethene	21.01	1.0	20	0	105	78 - 123				
Methylene chloride	22.15	2.0	20	0	111	74 - 124				
Trichloroethene	20.8	1.0	20	0	104	79 - 123				
Vinyl chloride	22.36	1.0	20	0	112	58 - 137				
Surr: 1,2-Dichloroethane-d4	*52.45*	*1.0*	*50*	*0*	*105*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*48.54*	*1.0*	*50*	*0*	*97.1*	*85 - 114*				
Surr: Dibromofluoromethane	*48*	*1.0*	*50*	*0*	*96.0*	*80 - 119*				
Surr: Toluene-d8	*47.54*	*1.0*	*50*	*0*	*95.1*	*89 - 112*				

ALS Houston, US Date: 30-Apr-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant 16 April 2021
WorkOrder: HS21040695

QC BATCH REPORT

Batch ID: R381740 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MS Sample ID: **HS21040695-04MS** Units: **ug/L** Analysis Date: **16-Apr-2021 00:07**
Client ID: **16WW14-210412** Run ID: **VOA6_381740** SeqNo: **6044798** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,2-Trichloroethane	21.53	1.0	20	0	108	80 - 119				
1,1-Dichloroethene	19.93	1.0	20	0	99.6	71 - 131				
1,2-Dichloroethane	19.94	1.0	20	0	99.7	73 - 128				
cis-1,2-Dichloroethene	20.79	1.0	20	0	104	78 - 123				
Methylene chloride	19.62	2.0	20	0	98.1	74 - 124				
Trichloroethene	40.1	1.0	20	16.8	116	79 - 123				
Vinyl chloride	19.87	1.0	20	0	99.4	58 - 137				
Surr: 1,2-Dichloroethane-d4	*49.68*	*1.0*	*50*	*0*	*99.4*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*50.47*	*1.0*	*50*	*0*	*101*	*85 - 114*				
Surr: Dibromofluoromethane	*46.31*	*1.0*	*50*	*0*	*92.6*	*80 - 119*				
Surr: Toluene-d8	*50.88*	*1.0*	*50*	*0*	*102*	*89 - 112*				

MSD Sample ID: **HS21040695-04MSD** Units: **ug/L** Analysis Date: **16-Apr-2021 00:28**
Client ID: **16WW14-210412** Run ID: **VOA6_381740** SeqNo: **6044799** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,2-Trichloroethane	19.92	1.0	20	0	99.6	80 - 119	21.53	7.78	20	
1,1-Dichloroethene	18.21	1.0	20	0	91.1	71 - 131	19.93	8.98	20	
1,2-Dichloroethane	19.34	1.0	20	0	96.7	73 - 128	19.94	3.09	20	
cis-1,2-Dichloroethene	19.43	1.0	20	0	97.1	78 - 123	20.79	6.78	20	
Methylene chloride	19.54	2.0	20	0	97.7	74 - 124	19.62	0.399	20	
Trichloroethene	36.64	1.0	20	16.8	99.2	79 - 123	40.1	9.01	20	
Vinyl chloride	17.78	1.0	20	0	88.9	58 - 137	19.87	11.1	20	
Surr: 1,2-Dichloroethane-d4	*48.33*	*1.0*	*50*	*0*	*96.7*	*81 - 118*	*49.68*	*2.75*	*20*	
Surr: 4-Bromofluorobenzene	*51.38*	*1.0*	*50*	*0*	*103*	*85 - 114*	*50.47*	*1.8*	*20*	
Surr: Dibromofluoromethane	*46.96*	*1.0*	*50*	*0*	*93.9*	*80 - 119*	*46.31*	*1.4*	*20*	
Surr: Toluene-d8	*52.48*	*1.0*	*50*	*0*	*105*	*89 - 112*	*50.88*	*3.1*	*20*	

The following samples were analyzed in this batch:

HS21040695-02	HS21040695-04	HS21040695-05	HS21040695-06
HS21040695-07	HS21040695-08	HS21040695-09	HS21040695-10
HS21040695-12	HS21040695-13	HS21040695-14	HS21040695-15

ALS Houston, US Date: 30-Apr-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant 16 April 2021
WorkOrder: HS21040695

QC BATCH REPORT

Batch ID: R381840 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MBLK Sample ID: **VBLKW-210416** Units: **ug/L** Analysis Date: **16-Apr-2021 12:28**
Client ID: Run ID: **VOA6_381840** SeqNo: **6047675** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,2-Trichloroethane	1.0	1.0								U
1,1-Dichloroethene	0.50	1.0								U
1,2-Dichloroethane	0.50	1.0								U
cis-1,2-Dichloroethene	0.50	1.0								U
Methylene chloride	2.0	2.0								U
Trichloroethene	0.50	1.0								U
Vinyl chloride	0.50	1.0								U
Surr: 1,2-Dichloroethane-d4	*48.72*	*1.0*	*50*	*0*	*97.4*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*47.23*	*1.0*	*50*	*0*	*94.5*	*85 - 114*				
Surr: Dibromofluoromethane	*45.6*	*1.0*	*50*	*0*	*91.2*	*80 - 119*				
Surr: Toluene-d8	*54.35*	*1.0*	*50*	*0*	*109*	*89 - 112*				

LCS Sample ID: **VLCSW-210416** Units: **ug/L** Analysis Date: **16-Apr-2021 11:45**
Client ID: Run ID: **VOA6_381840** SeqNo: **6047674** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,2-Trichloroethane	20.78	1.0	20	0	104	80 - 119				
1,1-Dichloroethene	18.83	1.0	20	0	94.2	71 - 131				
1,2-Dichloroethane	20.86	1.0	20	0	104	73 - 128				
cis-1,2-Dichloroethene	20.48	1.0	20	0	102	78 - 123				
Methylene chloride	22.5	2.0	20	0	112	74 - 124				
Trichloroethene	20.12	1.0	20	0	101	79 - 123				
Vinyl chloride	20.76	1.0	20	0	104	58 - 137				
Surr: 1,2-Dichloroethane-d4	*51.04*	*1.0*	*50*	*0*	*102*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*50.14*	*1.0*	*50*	*0*	*100*	*85 - 114*				
Surr: Dibromofluoromethane	*48.54*	*1.0*	*50*	*0*	*97.1*	*80 - 119*				
Surr: Toluene-d8	*46.71*	*1.0*	*50*	*0*	*93.4*	*89 - 112*				

ALS Houston, US Date: 30-Apr-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant 16 April 2021
WorkOrder: HS21040695

QC BATCH REPORT

Batch ID: R381840 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MS Sample ID: **HS21040768-09MS** Units: **ug/L** Analysis Date: **16-Apr-2021 15:37**
Client ID: Run ID: **VOA6_381840** SeqNo: **6047684** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,2-Trichloroethane	21.29	1.0	20	0	106	80 - 119				
1,1-Dichloroethene	20.21	1.0	20	0	101	71 - 131				
1,2-Dichloroethane	20.45	1.0	20	0	102	73 - 128				
cis-1,2-Dichloroethene	20.29	1.0	20	0	101	78 - 123				
Methylene chloride	20.7	2.0	20	0	104	74 - 124				
Trichloroethene	23.91	1.0	20	0.6216	116	79 - 123				
Vinyl chloride	20.32	1.0	20	0	102	58 - 137				
Surr: 1,2-Dichloroethane-d4	*50.4*	*1.0*	*50*	*0*	*101*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*52.08*	*1.0*	*50*	*0*	*104*	*85 - 114*				
Surr: Dibromofluoromethane	*46.89*	*1.0*	*50*	*0*	*93.8*	*80 - 119*				
Surr: Toluene-d8	*52.29*	*1.0*	*50*	*0*	*105*	*89 - 112*				

MSD Sample ID: **HS21040768-09MSD** Units: **ug/L** Analysis Date: **16-Apr-2021 15:58**
Client ID: Run ID: **VOA6_381840** SeqNo: **6047685** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,2-Trichloroethane	19.96	1.0	20	0	99.8	80 - 119	21.29	6.44	20	
1,1-Dichloroethene	20.01	1.0	20	0	100	71 - 131	20.21	0.98	20	
1,2-Dichloroethane	20.16	1.0	20	0	101	73 - 128	20.45	1.43	20	
cis-1,2-Dichloroethene	19	1.0	20	0	95.0	78 - 123	20.29	6.57	20	
Methylene chloride	20.22	2.0	20	0	101	74 - 124	20.7	2.32	20	
Trichloroethene	21.8	1.0	20	0.6216	106	79 - 123	23.91	9.22	20	
Vinyl chloride	19.92	1.0	20	0	99.6	58 - 137	20.32	1.99	20	
Surr: 1,2-Dichloroethane-d4	*49.49*	*1.0*	*50*	*0*	*99.0*	*81 - 118*	*50.4*	*1.82*	*20*	
Surr: 4-Bromofluorobenzene	*51.91*	*1.0*	*50*	*0*	*104*	*85 - 114*	*52.08*	*0.344*	*20*	
Surr: Dibromofluoromethane	*46.31*	*1.0*	*50*	*0*	*92.6*	*80 - 119*	*46.89*	*1.26*	*20*	
Surr: Toluene-d8	*50.98*	*1.0*	*50*	*0*	*102*	*89 - 112*	*52.29*	*2.54*	*20*	

The following samples were analyzed in this batch: HS21040695-11 HS21040695-15 HS21040695-16 HS21040695-17

ALS Houston, US Date: 30-Apr-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant 16 April 2021
WorkOrder: HS21040695

QC BATCH REPORT

Batch ID: R381622 (0) **Instrument: ICS-Integrion** **Method: ANIONS BY SW9056A**

MBLK Sample ID: **MBLK-** Units: **mg/L** Analysis Date: **14-Apr-2021 09:53**
Client ID: Run ID: **ICS-Integrion_381622** SeqNo: **6042101** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Bromide	0.100	0.100								U
Nitrogen, Nitrate (As N)	0.100	0.100								U

LCS Sample ID: **LCS-** Units: **mg/L** Analysis Date: **14-Apr-2021 10:11**
Client ID: Run ID: **ICS-Integrion_381622** SeqNo: **6042144** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Bromide	3.686	0.100	4	0	92.1	80 - 120				
Nitrogen, Nitrate (As N)	3.931	0.100	4	0	98.3	80 - 120				

MS Sample ID: **HS21040695-11MS** Units: **mg/L** Analysis Date: **14-Apr-2021 16:01**
Client ID: **16WW58-210413** Run ID: **ICS-Integrion_381622** SeqNo: **6042108** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Bromide	4.58	0.100	2	2.502	104	80 - 120				
Nitrogen, Nitrate (As N)	2.13	0.100	2	0	107	80 - 120				

MS Sample ID: **HS21040110-06MS** Units: **mg/L** Analysis Date: **15-Apr-2021 05:13**
Client ID: Run ID: **ICS-Integrion_381622** SeqNo: **6042132** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Bromide	8.478	0.100	2	6.484	99.7	80 - 120				
Nitrogen, Nitrate (As N)	2.163	0.100	2	0.1416	101	80 - 120				

MSD Sample ID: **HS21040695-11MSD** Units: **mg/L** Analysis Date: **14-Apr-2021 16:19**
Client ID: **16WW58-210413** Run ID: **ICS-Integrion_381622** SeqNo: **6042109** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Bromide	4.571	0.100	2	2.502	103	80 - 120	4.58	0.19	20	
Nitrogen, Nitrate (As N)	2.138	0.100	2	0	107	80 - 120	2.13	0.356	20	

ALS Houston, US Date: 30-Apr-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant 16 April 2021
WorkOrder: HS21040695

QC BATCH REPORT

Batch ID: R381622 (0) **Instrument: ICS-Integrion** **Method: ANIONS BY SW9056A**

MSD Sample ID: **HS21040110-06MSD** Units: **mg/L** Analysis Date: **15-Apr-2021 05:31**
Client ID: Run ID: **ICS-Integrion_381622** SeqNo: **6042133** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Bromide	8.466	0.100	2	6.484	99.1	80 - 120	8.478	0.145	20	
Nitrogen, Nitrate (As N)	2.155	0.100	2	0.1416	101	80 - 120	2.163	0.375	20	

The following samples were analyzed in this batch: HS21040695-11 HS21040695-12 HS21040695-13 HS21040695-14

ALS Houston, US Date: 30-Apr-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant 16 April 2021
WorkOrder: HS21040695

QC BATCH REPORT

Batch ID: R381715 (0) **Instrument: ManTech01** **Method: ALKALINITY BY SM2320B**

MBLK Sample ID: **WBLKW1-210415** Units: **mg/L** Analysis Date: **15-Apr-2021 18:58**
Client ID: Run ID: **ManTech01_381715** SeqNo: **6044112** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Alkalinity, Total (As CaCO3)	5.00	5.00								U

LCS Sample ID: **LCS1-210415** Units: **mg/L** Analysis Date: **15-Apr-2021 19:07**
Client ID: Run ID: **ManTech01_381715** SeqNo: **6044113** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Alkalinity, Total (As CaCO3)	1004	5.00	1000	0	100	85 - 115				

LCSD Sample ID: **LCSD1-210415** Units: **mg/L** Analysis Date: **15-Apr-2021 19:15**
Client ID: Run ID: **ManTech01_381715** SeqNo: **6044114** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Alkalinity, Total (As CaCO3)	1007	5.00	1000	0	101	85 - 115	1004	0.304	20	

DUP Sample ID: **HS21040756-02DUP** Units: **mg/L** Analysis Date: **15-Apr-2021 19:29**
Client ID: Run ID: **ManTech01_381715** SeqNo: **6044116** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Alkalinity, Total (As CaCO3)	131.1	5.00					130.7	0.29	20	

The following samples were analyzed in this batch: HS21040695-11 HS21040695-12 HS21040695-13 HS21040695-14

ALS Houston, US Date: 30-Apr-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant 16 April 2021
WorkOrder: HS21040695

QC BATCH REPORT

Batch ID: R382301 (0) **Instrument: TOC_04** **Method: TOTAL ORGANIC CARBON - SM5310B**

MBLK Sample ID: **MBLK-04232021** Units: **mg/L** Analysis Date: **23-Apr-2021 14:24**
Client ID: Run ID: **TOC_04_382301** SeqNo: **6059258** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Organic Carbon, Total	0.500	1.00								U

LCS Sample ID: **LCS-04232021** Units: **mg/L** Analysis Date: **23-Apr-2021 14:39**
Client ID: Run ID: **TOC_04_382301** SeqNo: **6059259** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Organic Carbon, Total	9.735	1.00	10	0	97.4	85 - 115				

LCSD Sample ID: **LCSD-04232021** Units: **mg/L** Analysis Date: **23-Apr-2021 14:55**
Client ID: Run ID: **TOC_04_382301** SeqNo: **6059260** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Organic Carbon, Total	10.11	1.00	10	0	101	85 - 115	9.735	3.78	20	

MS Sample ID: **HS21040940-01MS** Units: **mg/L** Analysis Date: **23-Apr-2021 15:56**
Client ID: Run ID: **TOC_04_382301** SeqNo: **6059264** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Organic Carbon, Total	17.19	1.00	10	6.891	103	80 - 120				

The following samples were analyzed in this batch: HS21040695-11 HS21040695-12 HS21040695-14

ALS Houston, US Date: 30-Apr-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant 16 April 2021
WorkOrder: HS21040695

QC BATCH REPORT

Batch ID: R382442 (0) **Instrument: ICS-Integrion** **Method: ANIONS BY SW9056A**

MBLK Sample ID: **MBLK-** Units: **mg/L** Analysis Date: **26-Apr-2021 13:29**
Client ID: Run ID: **ICS-Integrion_382442** SeqNo: **6062803** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfate	0.500	0.500								U

LCS Sample ID: **LCS-** Units: **mg/L** Analysis Date: **26-Apr-2021 13:47**
Client ID: Run ID: **ICS-Integrion_382442** SeqNo: **6062804** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfate	19.02	0.500	20	0	95.1	80 - 120				

MS Sample ID: **HS21040612-07MS** Units: **mg/L** Analysis Date: **26-Apr-2021 18:28**
Client ID: Run ID: **ICS-Integrion_382442** SeqNo: **6062809** PrepDate: DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfate	105.3	5.00	100	2.028	103	80 - 120				

MSD Sample ID: **HS21040612-07MSD** Units: **mg/L** Analysis Date: **26-Apr-2021 18:47**
Client ID: Run ID: **ICS-Integrion_382442** SeqNo: **6062810** PrepDate: DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfate	103.3	5.00	100	2.028	101	80 - 120	105.3	1.85	20	

The following samples were analyzed in this batch: HS21040695-11 HS21040695-12 HS21040695-13 HS21040695-14

ALS Houston, US Date: 30-Apr-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant 16 April 2021
WorkOrder: HS21040695

QC BATCH REPORT

Batch ID: R382505 (0) **Instrument: TOC_04** **Method: TOTAL ORGANIC CARBON - SM5310B**

MBLK Sample ID: **MBLK-04272021** Units: **mg/L** Analysis Date: **27-Apr-2021 16:58**
Client ID: Run ID: **TOC_04_382505** SeqNo: **6063982** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Organic Carbon, Total	0.500	1.00								U

LCS Sample ID: **LCS-04272021** Units: **mg/L** Analysis Date: **27-Apr-2021 17:14**
Client ID: Run ID: **TOC_04_382505** SeqNo: **6063983** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Organic Carbon, Total	9.152	1.00	10	0	91.5	85 - 115				

LCSD Sample ID: **LCSD-04272021** Units: **mg/L** Analysis Date: **27-Apr-2021 17:29**
Client ID: Run ID: **TOC_04_382505** SeqNo: **6063984** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Organic Carbon, Total	9.77	1.00	10	0	97.7	85 - 115	9.152	6.53	20	

MS Sample ID: **HS21040859-08MS** Units: **mg/L** Analysis Date: **27-Apr-2021 19:32**
Client ID: Run ID: **TOC_04_382505** SeqNo: **6063991** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Organic Carbon, Total	11.87	1.00	10	1.798	101	80 - 120				

The following samples were analyzed in this batch: HS21040695-13

ALS Houston, US Date: 30-Apr-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant 16 April 2021
WorkOrder: **HS21040695**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL/SDL

Acronym	Description
DCS	Detectability Check Study
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitaion Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

Unit Reported	Description
mg/L	Milligrams per Liter

CERTIFICATIONS,ACCREDITATIONS & LICENSES

Agency	Number	Expire Date
Arkansas	21-022-0	26-Mar-2022
California	2919, 2020-2021	01-May-2021
Dept of Defense	PJLA L20-507-R2	22-Dec-2021
Florida	E87611-30-07/01/2020	30-Jun-2021
Illinois	2000322020-4	09-May-2021
Kansas	E-10352 2020-2021	31-Jul-2021
Kentucky	123043, 2020-2021	01-May-2021
Kentucky	123043, 2021-2022	01-May-2022
Louisiana	03087, 2020-2021	30-Jun-2021
North Carolina	624-2021	31-Dec-2021
North Dakota	R-193 2020-2021	01-May-2021
Oklahoma	2020-165	31-Aug-2021
Texas	T104704231-21-27	30-Apr-2022

ALS Houston, US Date: 30-Apr-21

Sample Receipt Checklist

Work Order ID: HS21040695 **Date/Time Received:** **14-Apr-2021 09:45**

Client Name: CBI-Houston **Received by:** **Pablo Marinez**

Completed By:	/S/ Paresh M. Giga	14-Apr-2021 13:12	**Reviewed by:**	/S/ RJ Modashia	15-Apr-2021 08:58
	eSignature	Date/Time		eSignature	Date/Time

Matrices: **GW/Water** Carrier name: **FedEx**

Shipping container/cooler in good condition?	Yes	☑	No	☐	Not Present	☐
Custody seals intact on shipping container/cooler?	Yes	☑	No	☐	Not Present	☐
Custody seals intact on sample bottles?	Yes	☐	No	☐	Not Present	☑
VOA/TX1005/TX1006 Solids in hermetically sealed vials?	Yes	☐	No	☐	Not Present	☑
Chain of custody present?	Yes	☑	No	☐	3 Page(s)	
Chain of custody signed when relinquished and received?	Yes	☑	No	☐	COC IDs:None	
Samplers name present on COC?	Yes	☑	No	☐		
Chain of custody agrees with sample labels?	Yes	☑	No	☐		
Samples in proper container/bottle?	Yes	☑	No	☐		
Sample containers intact?	Yes	☑	No	☐		
Sufficient sample volume for indicated test?	Yes	☑	No	☐		
All samples received within holding time?	Yes	☑	No	☐		
Container/Temp Blank temperature in compliance?	Yes	☑	No	☐		

Temperature(s)/Thermometer(s):	0.9C U/C		IR31			
Cooler(s)/Kit(s):	46489					
Date/Time sample(s) sent to storage:	4/14/2021 13:45					
Water - VOA vials have zero headspace?	Yes	☑	No	☐	No VOA vials submitted	☐
Water - pH acceptable upon receipt?	Yes	☐	No	☐	N/A	☑
pH adjusted?	Yes	☐	No	☑	N/A	☐
pH adjusted by:						

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

Corrective Action:

CHAIN OF CUSTODY

Name Of Lab Shipping To: ALS 10450 Stancliff Rd. Suite 210 Houston, TX. 77099 (281) 530-5656 ATTN: RJ Modashia

Project: APTIM
LONGHORN ARMY AMMN. PLANT (LHAAP)
GROUNDWATER TREATMENT PLANT (GWTP)
KARNACK, TEXAS

Project No.: 501032

Job: **LHAAP 16 April 2021**

Prepared By: Scott Beesinger

P.O. Number:

Field Sample I.D. / Time	Sample Matrix	Date / Time	MS / MSD	No. OF CONTAINERS	VOC by SW 8260B	TOC by SM5310C	MEE by RSK 175	Anions (bromide, sulfate, nitrate) by SW9056 and Alkalinity by SM2320	Bromide by SW9056	Perchlorate by SW6850	Metals (arsenic, chromium, manganese, nickel, thallium) by SW6020				Remarks (Preservatives, etc.)
16WW44-210412	WG	4/12/21/0740		4	X					X					
16WW38-210412	WG	4/12/21/0830		4	X					X					
16WW37-210412	WG	4/12/21/0915		4	X					X					
16WW14-210412	WG	4/12/21/1000		4	X					X					
16WW34-210412	WG	4/12/21/1045		4	X					X					
16WW34-210412-FD	WG	4/12/21/1045		4	X					X					
16WW33-210412	WG	4/12/21/1130		4	X					X					
16WW32-210412	WG	4/12/21/1215		4	X					X					

Additional Remarks: Standard TAT on all parameters. Please email results to Vicki.Graves@aptim.com and invoices to fedinvoices@aptim.com

Relinquished By:	Date	Time	Received By:	Date	Time	Relinquished By:	Date	Time	Received By:	Date	Time
Scott Beesinger	4/13/21	1430	Paul Mun	4/14/21	9:45						

For Lab Use Only

Received At Lab By:	Date	Time	Airbill No.	Opened By:	Date	Time	Temp of Container	Seal No.	Condition

Remarks:

4645A 0.9C IR31 CFO

HS21040695

Aptim Environmental & Infrastructure, Inc.
Longhorn Army Ammunition Plant 16 April 2021

(Word) S:\I-ces\Forms\Chain of Custody - BiWeekly

CHAIN OF CUSTODY

Name Of Lab Shipping To: ALS 10450 Stancliff Rd. Suite 210 Houston, TX. 77099 (281) 530-5656 ATTN: R.J Modashia

Project: APTIM
LONGHORN ARMY AMMN. PLANT (LHAAP)
GROUNDWATER TREATMENT PLANT (GWTP)
KARNACK, TEXAS

Project No. 501032

Job: **LHAAP 16 April 2021**

Prepared By: Scott Beesinger

P.O. Number

Field Sample I.D. / Time	Sample Matrix	Date /	MS / MSD	No. OF CONTAINERS	VOC by SW 8260B	TOC by SM5310C	MEE by RSK 175	Anions (bromide, sulfate, nitrate) by SW9056 and Alkalinity by SM2320	Bromide by SW9056	Perchlorate by SW6850	Metals (arsenic, chromium, manganese, nickel, thallium) by SW6020				Remarks (Preservatives, etc.)
16WW31-210412	WG	4/12/21/1300		4	X					X					
16WW46-210412	WG	4/12/21/1345		4	X					X					
16WW58-210413	WG	4/13/21/0740		10	X	X	X	X	X	X					
16WW57-210413	WG	4/13/21/0830		10	X	X	X	X	X	X					
16WW35-210413	WG	4/13/21/0940		10	X	X	X	X	X	X					
16WW36-210413	WG	4/13/21/1030		10	X	X	X	X	X	X					
16PM09-210413	WG	4/13/21/1115		4	X					X					
16PM06-210413	WG	4/13/21/1205		4	X					X					

Additional Remarks: Standard TAT on all parameters. Please email results to Vicki.Graves@aptim.com and invoices to fedinvoices@aptim.com

Relinquished By:	Date	Time	Received By:	Date	Time	Relinquished By:	Date	Time	Received By:	Date	Time
Scott Beesinger	4/13/21	1430	Pauli Mar	4/14/21	0745						

For Lab Use Only

Received At Lab By:	Date	Time	Airbill No.	Opened By:	Date	Time	Temp of Container	Seal No.	Condition

Remarks:

HS21040695

Aptim Environmental & Infrastructure, Inc.
Longhorn Army Ammunition Plant 16 April 2021

CHAIN OF CUSTODY

Name Of Lab Shipping To: ALS 10450 Stanciff Rd. Suite 210 Houston, TX, 77099 (281) 530-5656 ATTN: RJ Modashia

Page 1 of 1

Project: APTIM LONGHORN ARMY AMMN. PLANT (LHAAP) GROUNDWATER TREATMENT PLANT (GWTP) KARNACK, TEXAS	Project No. 501032
Job: **LHAAP 16 April 2021**	
Prepared By: Scott Beesinger	P.O. Number

Field Sample I.D.	Sample Matrix	Date / Time	MS / MSD	No. OF CONTAINERS	Analyses: VOC by SW 8260B	TOC by SM5310C	MEE by RSK 175	Anions (bromide, sulfate, nitrate) by SW9056 and Alkalinity by SM2320	Bromide by SW9056	Perchlorate by SW6850	Metals (arsenic, chromium, manganese, nickel, thallium) by SW6020				Remarks (Preservatives, etc.)
16PM14-210413	W6	4/13/21/1250		4	X					X					
TRIPBLANK-210413	W	4/13/21		2	X										

Additional Remarks: Standard TAT on all parameters. Please email results to Vicki.Graves@aptim.com and invoices to fedinvoices@aptim.com

Relinquished By:	Date	Time	Received By:	Date	Time	Relinquished By:	Date	Time	Received By:	Date	Time
Scott Beesinger	4/13/21	1430	Patti Mon	4.14.21	9:45						

For Lab Use Only

Received At Lab By:	Date	Time	Airbill No.	Opened By:	Date	Time	Temp of Container	Seal No.	Condition

Remarks:

HS21040695

Aptim Environmental & Infrastructure, Inc.
Longhorn Army Ammunition Plant 16 April 2021

ALS
10450 Stancliff Rd., Suite 210
Houston, Texas 77099
Tel. +1 281 530 5656
Fax. +1 281 530 5887

46489

CUSTODY SEAL

Date: 4/13/21 Time: 1430
Name: Scott Beesinger
Company: Bhmts

Seal Broken By:

Date: 04/14/21

46489 APR 14 2021

Next Business Day
and Tempature Sensitive!

46489

ORIGIN ID:SGRA (903) 930-6103
SCOTT BEESINGER
APTIM ENVIRONMENTAL & INFRASTRUCTURE
1203-B EAST GRAND AVE
PMB 203
MARSHALL, TX 75670
UNITED STATES US

SHIP DATE: 29MAR21
ACTWGT: 1.00 LB MAN
CAD: 0221242/CAFE3409
DIMS: 26x14x14 IN

TO CLIENT SERVICES
ALS LABORATORY GROUP
10450 STANCLIFF ROAD
SUITE 210
HOUSTON TX 77099
(281) 530-5666
REF: LHAAP-BO 77443-RJ

RMA:

FedEx Express

TRK# 0221 9473 0841 7465

WED - 14 APR AA
PRIORITY OVERNIGHT

AB SGRA

77099
TX-US
IAH

SGDC2/SEF2/05A2

April 30, 2021 Service Request No:E2100412

RJ Modashia
ALS Laboratory Group
10450 Stancliff Road
Suite 210
Houston, TX 77099-4338

Laboratory Results for: HS21040695

Dear RJ,

Enclosed are the results of the sample(s) submitted to our laboratory April 14, 2021
For your reference, these analyses have been assigned our service request number **E2100412.**

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current TNI standards, where applicable, and except as noted in the laboratory case narrative provided. All results are intended to be considered in their entirety and ALS Environmental is not responsible for use of less than the complete final report. Results apply only to the items submitted to the laboratory, as received for analysis. In accordance with the current TNI Standard, a statement on the estimated uncertainty of measurement of any quantitative analysis will be supplied upon request.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Corey Grandits
Project Manager

ADDRESS 10450 Stancliff Rd., Suite 210, Houston, TX 77099
PHONE +1 281 530 5656 | FAX +1 281 530 5887
ALS Group USA, Corp.
dba ALS Environmental

Certificate of Analysis

ALS Environmental - Houston HRMS
10450 Stancliff Rd, Suite 210, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

ALS Environmental

Client:	ALS Houston	**Service Request No.:**	E2100412
Project:	HS21040695	**Date Received:**	04/14/21
Sample Matrix:	W		

CASE NARRATIVE

All analyses were performed in adherence to the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier II. When appropriate to the method, method blank results have been reported with each analytical test.

Sample Receipt

Seventeen samples were received for analysis at ALS Environmental in Houston on 04/14/21.

The samples were received in good condition and are consistent with the accompanying chain of custody form. The samples were stored in a refrigerator at 4°C upon receipt at the laboratory.

Data Validation Notes and Discussion

Precision and Accuracy:

EQ2100213 & EQ2100244: Laboratory Control Spike/Duplicate Laboratory Control Spike recoveries are within QC limits. EQ2100244 MS/MSD was performed on an unrelated sample. EQ2100213 LCS/LCSD reported in lieu of MS/MSD.

DoD certification is held for the method/matrix/analytes provided in this report.

The results of analyses are given in the attached laboratory report. All results are intended to be considered in their entirety, and ALS Environmental (ALS) is not responsible for utilization of less than the complete report.

Use of ALS group USA Corp dba ALS Environmental (ALS)'s Name. Client shall not use ALS's name or trademark in any marketing or reporting materials, press releases or in any other manner ("Materials") whatsoever and shall not attribute to ALS any test result, tolerance or specification derived from ALS's data ("Attribution") without ALS's prior written consent, which may be withheld by ALS for any reason in its sole discretion. To request ALS's consent, Client shall provide copies of the proposed Materials or Attribution and describe in writing Client's proposed use of such Materials or Attribution. If ALS has not provided written approval of the Materials or Attribution within ten (10) days of receipt from Client, Client's request to use ALS's name or trademark in any Materials or Attribution shall be deemed denied. ALS may, in its discretion, reasonably charge Client for its time in reviewing Materials or Attribution requests. Client acknowledges and agrees that the unauthorized use of ALS's name or trademark may cause ALS to incur irreparable harm for which the recovery of money damages will be inadequate. Accordingly, Client acknowledges and agrees that a violation shall justify preliminary injunctive relief. For questions contact the laboratory.

Client: ALS Environmental - US **Service Request:**E2100412
Project: HS21040695

SAMPLE CROSS-REFERENCE

SAMPLE #	CLIENT SAMPLE ID	DATE	TIME
E2100412-001	16WW44-210412	4/12/2021	0740
E2100412-002	16WW38-210412	4/12/2021	0830
E2100412-003	16WW37-210412	4/12/2021	0915
E2100412-004	16WW14-210412	4/12/2021	1000
E2100412-005	16WW34-210412	4/12/2021	1045
E2100412-006	16WW34-210412-FD	4/12/2021	1045
E2100412-007	16WW33-210412	4/12/2021	1130
E2100412-008	16WW32-210412	4/12/2021	1215
E2100412-009	16WW31-210412	4/12/2021	1300
E2100412-010	16WW46-210412	4/12/2021	1345
E2100412-011	16WW58-210413	4/13/2021	0740
E2100412-012	16WW57-210413	4/13/2021	0830
E2100412-013	16WW35-210413	4/13/2021	0940
E2100412-014	16WW36-210413	4/13/2021	1030
E2100412-015	16PM09-210413	4/13/2021	1115
E2100412-016	16PM06-210413	4/13/2021	1205
E2100412-017	16PM14-210413	4/13/2021	1250

Service Request Summary

Folder #: **E2100412**
Client Name: ALS Environmental - US
Project Name: HS21040695
Project Number:

Report To: RJ Modashia
ALS Laboratory Group
10450 Stancliff Road
Houston, TX 77099-4338
USA
Phone Number: 281-530-5656
Cell Number:
Fax Number: 281-530-5887
E-mail: rj.modashia@alsglobal.com

Project Chemist: Corey Grandits
Originating Lab: HOUSTON
Logged By: CGRANDITS
Date Received: 04/14/21
Internal Due Date: 4/28/2021
QAP: LAB QAP
Qualifier Set: Lab Standard
Formset: Lab Standard
Merged?: Y
Report to MDL?: Y
P.O. Number: HS21040695
EDD: No EDD Specified

17 125 mL-Plastic Bottle Plastic
Location: EHRMS-WIC 3B
Pressure Gas:

Lab Samp No.	Client Samp No	Matrix	Collected	HOUSTON ClO4 DOD/6850
E2100412-001	16WW44-210412	Ground Water	04/12/21 0740	**IV**
E2100412-002	16WW38-210412	Ground Water	04/12/21 0830	**IV**
E2100412-003	16WW37-210412	Ground Water	04/12/21 0915	**IV**
E2100412-004	16WW14-210412	Ground Water	04/12/21 1000	**IV**
E2100412-005	16WW34-210412	Ground Water	04/12/21 1045	**IV**
E2100412-006	16WW34-210412-FD	Ground Water	04/12/21 1045	**IV**
E2100412-007	16WW33-210412	Ground Water	04/12/21 1130	**IV**
E2100412-008	16WW32-210412	Ground Water	04/12/21 1215	**IV**
E2100412-009	16WW31-210412	Ground Water	04/12/21 1300	**IV**
E2100412-010	16WW46-210412	Ground Water	04/12/21 1345	**IV**
E2100412-011	16WW58-210413	Ground Water	04/13/21 0740	**IV**
E2100412-012	16WW57-210413	Ground Water	04/13/21 0830	**IV**
E2100412-013	16WW35-210413	Ground Water	04/13/21 0940	**IV**
E2100412-014	16WW36-210413	Ground Water	04/13/21 1030	**IV**
E2100412-015	16PM09-210413	Ground Water	04/13/21 1115	**IV**
E2100412-016	16PM06-210413	Ground Water	04/13/21 1205	**IV**

Service Request Summary

Folder #: **E2100412**
Client Name: ALS Environmental - US
Project Name: HS21040695
Project Number:

Report To: RJ Modashia
ALS Laboratory Group
10450 Stancliff Road
Houston, TX 77099-4338
USA
Phone Number: 281-530-5656
Cell Number:
Fax Number: 281-530-5887
E-mail: rj.modashia@alsglobal.com

Project Chemist: Corey Grandits
Originating Lab: HOUSTON
Logged By: CGRANDITS
Date Received: 04/14/21
Internal Due Date: 4/28/2021
QAP: LAB QAP
Qualifier Set: Lab Standard
Formset: Lab Standard
Merged?: Y
Report to MDL?: Y
P.O. Number: HS21040695
EDD: No EDD Specified

17 125 mL-Plastic Bottle Plastic
Location: EHRMS-WIC 3B
Pressure Gas:

Service Request Summary

Folder #: **E2100412**
Client Name: ALS Environmental - US
Project Name: HS21040695
Project Number:

Report To: RJ Modashia
ALS Laboratory Group
10450 Stancliff Road
Houston, TX 77099-4338
USA
Phone Number: 281-530-5656
Cell Number:
Fax Number: 281-530-5887
E-mail: rj.modashia@alsglobal.com

Project Chemist: Corey Grandits
Originating Lab: HOUSTON
Logged By: CGRANDITS
Date Received: 04/14/21
Internal Due Date: 4/28/2021
QAP: LAB QAP
Qualifier Set: Lab Standard
Formset: Lab Standard
Merged?: Y
Report to MDL?: Y
P.O. Number: HS21040695
EDD: No EDD Specified

17 125 mL-Plastic Bottle Plastic
Location: EHRMS-WIC 3B
Pressure Gas:

Service Request Summary

Folder #:	**E2100412**
Client Name:	ALS Environmental - US
Project Name:	HS21040695
Project Number:	

Report To: RJ Modashia
ALS Laboratory Group
10450 Stancliff Road
Houston, TX 77099-4338
USA

Phone Number:	281-530-5656
Cell Number:	
Fax Number:	281-530-5887
E-mail:	rj.modashia@alsglobal.com

Project Chemist:	Corey Grandits
Originating Lab:	HOUSTON
Logged By:	CGRANDITS
Date Received:	04/14/21
Internal Due Date:	4/28/2021
QAP:	LAB QAP
Qualifier Set:	Lab Standard
Formset:	Lab Standard
Merged?:	Y
Report to MDL?:	Y
P.O. Number:	HS21040695
EDD:	No EDD Specified

17 125 mL-Plastic Bottle Plastic

Location: EHRMS-WIC 3B

Pressure Gas:

Test Comments:

Group	Test/Method	Samples	Comments
Semivoa GCMS	ClO4 DOD/6850	17	Level II due 4/28,IV due 5/5

Data Qualifiers

Lab Standard

+	Possible Tedlar bag artifact.
A	TIC is a suspected aldol-condensation product
B	Analyte found in the associated method blank as well as in the sample.
BC	Reported results are not blank corrected.
BH	The back section of the tube yielded higher results than the front.
BT	Results indicated possible breakthrough; back section >=10% front section.
C	Result identification confirmed.
D	Compound identified in an analysis at a secondary dilution factor
D	Spike was diluted out
DE	Reported results are corrected for desorption efficiency.
E	Estimated value. Concentration above calibration range
E	The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
F	The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
H	The chromatographic fingerprint of the sample resembles a petroleum product but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
H1	Sample analysis performed past holding time. See case narrative.
H2	Initial analysis within holding time. Reanalysis for the required dilution was past holding time.
H3	Sample was received and analyzed past holding time.
H4	Sample was extracted past required extraction holding time, but analyzed within analysis holding time. See case narrative.
I	Internal standard not within the specified limits. See case narrative.
J	Estimated Value. Concentration found below MRL.
K	A deflection in the QC ion may indicate interference with the quantitation of this ion. The concentration of this analyte should be considered as an estimate.
K	Analyte was detected above the method reporting limit prior to normalization.
K	The reference ion ratio was outside acceptance criteria, which may indicate a potential bias to this result.
L	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
L1	Laboratory control sample recovery outside the specified limits; results may be biased high.
L2	Laboratory control sample recovery outside the specified limits; results may be biased low.
L3	Laboratory control sample recovery outside the specified limits.
M	Matrix interference; results may be biased high.
M	The duplicate injection precision not met.
M1	Matrix interference due to coelution with a non-target compound; results may be biased high.
N	Presumptive evidence of a compound for TICs that have been identified based on a mass spectral library search.
N	The Matrix Spike sample recovery is not within control limits. See case narrative.

Data Qualifiers

Lab Standard

O	The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
P	Indicates chlorodiphenyl ether interference present at the retention time of the target compound.
P	Pesticide/Aroclor target analyte > 40% difference for detected concentrations between GC columns
Q	Indicates as estimated value because the P and P + 2 theoretical abundance ratio does not meet method criteria.
R	Duplicate Precision not met.
R1	Duplicate precision not within the specified limits; however, the results are below the MRL and considered estimated.
S	Surrogate recovery not within specified limits.
S	The reported value was determined by the Method of Standard Additions (MSA).
T	Analyte is a tentatively identified compound, result is estimated.
U	Compound was analyzed for, but was not detected (ND).
V1	The continuing calibration verification standard was outside (biased high) the specified limits for this compound.
V2	The continuing calibration verification standard was outside (biased low) the specified limits for this compound.
W	Result quantified, but the corresponding peak was detected outside the generated retention time window.
W	The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
X	See case narrative.
Y	Recovery outside limits
Y	The chromatogram resembles a petroleum product but does not match the calibration standard.
Z	The chromatogram does not resemble a petroleum product.
i	The MRL/MDL has been elevated due to a matrix interference.

ALS Laboratory Group

Acronyms

Cal	Calibration
Conc	CONCentration
Dioxin(s)	Polychlorinated dibenzo-p-dioxin(s)
EDL	Estimated Detection Limit
EMPC	Estimated Maximum Possible Concentration
Flags	Data qualifiers
Furan(s)	Polychlorinated dibenzofuran(s)
g	Grams
ICAL	Initial CALibration
ID	IDentifier
Ions	Masses monitored for the analyte during data acquisition
L	Liter (s)
LCS	Laboratory Control Sample
DLCS	Duplicate Laboratory Control Sample
MB	Method Blank
MCL	Method Calibration Limit
MDL	Method Detection Limit
mL	Milliliters
MS	Matrix Spiked sample
DMS	Duplicate Matrix Spiked sample
NO	Number of peaks meeting all identification criteria
PCDD(s)	Polychlorinated dibenzo-p-dioxin(s)
PCDF(s)	Polychlorinated dibenzofuran(s)
ppb	Parts per billion
ppm	Parts per million
ppq	Parts per quadrillion
ppt	Parts per trillion
QA	Quality Assurance
QC	Quality Control
Ratio	Ratio of areas from monitored ions for an analyte
% Rec.	Percent recovery
RPD	Relative Percent Difference
RRF	Relative Response Factor
RT	Retention Time
SDG	Sample Delivery Group
S/N	Signal-to-noise ratio
TEF	Toxicity Equivalence Factor
TEQ	Toxicity Equivalence Quotient

10450 Stancliff Rd, Houston, TX 77099 | 281-530-5656 | www.alsglobal.com

ALS Environmental

State Certifications, Accreditations, and Licenses

Agency	Number	Expire Date
American Association for Laboratory Accreditation	2897.01 2020	11/30/2021
Arizona Department of Health Services	AZ0793-2020	5/27/2021
Arkansas Department of Environmental Quality	21-022-0	3/26/2022
Department of Defense	A2LA 2897.01	11/30/2021
Florida Department of Health	E87611-2020	6/30/2021
Illinois Environmental Protection Agency	2000322020-4	5/9/2021
Kansas Department of Health and Environment	E-10352-2020	7/31/2021
Louisiana Department of Environmental Quality	03087-2020	6/30/2021
Louisiana Department of Health and Hospitals	LA028-2021	12/31/2021
Maine Department of Health and Human Services	2020016	6/5/2022
Maryland Department of the Environment	343-2020	6/30/2021
Nevada Department of Concervation and Natural Resources	TX026932021-1	7/31/2021
New Jersey Department of Environmental Protection	TX008	6/30/2021
Oklahoma Department of Environmental Quality	2020-123	8/31/2021
Pennsylvania Department of Environmental Protection	014	6/30/2021
United States Department of Agriculture	P330-19-00299	10/10/2022

Chain of Custody

ALS Environmental - Houston HRMS
10450 Stancliff Rd, Suite 210, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

10450 Stancliff Rd, Ste 210
Houston, TX 77099
T: +1 281 530 5656
F: +1 281 530 5887
www.alsglobal.com

Subcontract Chain of Custody

SAMPLING STATE: **Dept of Defense** **COC ID:** **15934**

SUBCONTRACT TO:

ALS Environmental
10450 Stancliff RoadSuite 210
Houston, TX 77084

Phone: +1 281 530 5656

CUSTOMER INFORMATION:

Company:	ALS Houston
Contact:	RJ Modashia
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Email:	RJ.Modashia@alsglobal.com
Alternate Contact:	
Email:	

INVOICE INFORMATION:

Company:	ALS Houston
Contact:	Accounts Payable
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Reference:	HS21040695
TSR:	Sonia West

	LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
	ANALYSIS REQUESTED			DUE DATE
1.	**HS21040695-01**	**16WW44-210412**	**Groundwater**	**12 Apr 2021 07:40**
	Level II and Level IV reports on a seperate pdf. Send WOA to Vicki Graves.			28 Apr 2021
2.	**HS21040695-02**	**16WW38-210412**	**Groundwater**	**12 Apr 2021 08:30**
	Level II and Level IV reports on a seperate pdf. Send WOA to Vicki Graves.			28 Apr 2021
3.	**HS21040695-03**	**16WW37-210412**	**Groundwater**	**12 Apr 2021 09:15**
	Level II and Level IV reports on a seperate pdf. Send WOA to Vicki Graves.			28 Apr 2021
4.	**HS21040695-04**	**16WW14-210412**	**Groundwater**	**12 Apr 2021 10:00**
	Level II and Level IV reports on a seperate pdf. Send WOA to Vicki Graves.			28 Apr 2021
5.	**HS21040695-05**	**16WW34-210412**	**Groundwater**	**12 Apr 2021 10:45**
	Level II and Level IV reports on a seperate pdf. Send WOA to Vicki Graves.			28 Apr 2021
6.	**HS21040695-06**	**16WW34-210412-FD**	**Groundwater**	**12 Apr 2021 10:45**
	Level II and Level IV reports on a seperate pdf. Send WOA to Vicki Graves.			28 Apr 2021
7.	**HS21040695-07**	**16WW33-210412**	**Groundwater**	**12 Apr 2021 11:30**
	Level II and Level IV reports on a seperate pdf. Send WOA to Vicki Graves.			28 Apr 2021
8.	**HS21040695-08**	**16WW32-210412**	**Groundwater**	**12 Apr 2021 12:15**

Subcontract Chain of Custody

SAMPLING STATE: **Dept of Defense** **COC ID: 15934**

	LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
	ANALYSIS REQUESTED			DUE DATE
	Level II and Level IV reports on a seperate pdf. Send WOA to Vicki Graves.			28 Apr 2021
9.	**HS21040695-09**	**16WW31-210412**	**Groundwater**	**12 Apr 2021 13:00**
	Level II and Level IV reports on a seperate pdf. Send WOA to Vicki Graves.			28 Apr 2021
10.	**HS21040695-10**	**16WW46-210412**	**Groundwater**	**12 Apr 2021 13:45**
	Level II and Level IV reports on a seperate pdf. Send WOA to Vicki Graves.			28 Apr 2021
11.	**HS21040695-11**	**16WW58-210413**	**Groundwater**	**13 Apr 2021 07:40**
	Level II and Level IV reports on a seperate pdf. Send WOA to Vicki Graves.			28 Apr 2021
12.	**HS21040695-12**	**16WW57-210413**	**Groundwater**	**13 Apr 2021 08:30**
	Level II and Level IV reports on a seperate pdf. Send WOA to Vicki Graves.			28 Apr 2021
13.	**HS21040695-13**	**16WW35-210413**	**Groundwater**	**13 Apr 2021 09:40**
	Level II and Level IV reports on a seperate pdf. Send WOA to Vicki Graves.			28 Apr 2021
14.	**HS21040695-14**	**16WW36-210413**	**Groundwater**	**13 Apr 2021 10:30**
	Level II and Level IV reports on a seperate pdf. Send WOA to Vicki Graves.			28 Apr 2021
15.	**HS21040695-15**	**16PM09-210413**	**Groundwater**	**13 Apr 2021 11:15**
	Level II and Level IV reports on a seperate pdf. Send WOA to Vicki Graves.			28 Apr 2021
16.	**HS21040695-16**	**16PM06-210413**	**Groundwater**	**13 Apr 2021 12:05**
	Level II and Level IV reports on a seperate pdf. Send WOA to Vicki Graves.			28 Apr 2021
17.	**HS21040695-17**	**16PM14-210413**	**Groundwater**	**13 Apr 2021 12:50**
	Level II and Level IV reports on a seperate pdf. Send WOA to Vicki Graves.			28 Apr 2021

Comments: Please analyze for the analysis listed above.
Send report to the emails shown above.

QC Level: DOD IV (DoD Data Package)

Relinquished By: _____ Date/Time: _____

Received By: [illegible] Date/Time: 4/14/21 1415

Cooler ID(s): _____ Temperature(s): _____

ALS Environmental

Cooler Receipt Form

Project Chemist: CG

Client/Project: ALS-H

Thermometer ID: IR21

Date/Time Received: 9/14/21 Initials: CG

Date/Time Logged in: 9/14/21 Initials: CG

1. Method of delivery: ○ US Mail ○ Fed Ex ○ UPS ○ DHL ✓ ALS Courier ○ Client

2. Samples received in: ✓ Cooler ○ Box ○ Envelope ○ Other

3. Were custody seals on coolers? ○ Yes ✓ No

Were they intact? ○ Yes ○ No ✓ N/A

Were they signed and dated? ○ Yes ○ No ✓ N/A

If yes, how many and where?

4. Packing Material: ○ Inserts ✓ Baggies ○ Bubble Wrap ○ Gel Packs ✓ Wet Ice ○ Sleeves ○ Other

5. Foreign or Regulated Soil? ○ Yes ○ No Location of Sampling:

Cooler Tracking Number	COC ID	Date Opened	Time Opened	Opened By	Temp. °C	Temp Blank?
NA		9/14/21	1915	CG	3.4	☑
						☐
						☐
						☐

6. Were custody papers properly filled out (ink, signed, dated, etc)? ✓ Yes ○ No

7. Did all bottles arrive in good condition (not broken, no signs of leakage)? ✓ Yes ○ No

8. Were all sample labels complete (i.e., sample ID, analysis, preservation, etc)? ✓ Yes ○ No

9. Were appropriate bottles/containers and volumes received for the requested tests? ✓ Yes ○ No

10. Did sample labels and tags agree with custody documents? ✓ Yes ○ No

Notes, Discrepancies, & Resolutions:

Service request Label:

HS-HRMSCoolerReceipt R1.0

ALS Environmental - Houston HRMS

10450 Stancliff Rd., Suite 210
Houston, TX 77099
T: +1 713 266 1599
F: +1 713 266 1599
www.alsglobal.com

SAMPLE ACCEPTANCE POLICY

This policy outlines the criteria samples must meet to be accepted by ALS Environmental – Houston HRMS.

Cooler Custody Seals (desirable, mandatory if specified in SAP):

- ✓ Intact on outside of cooler, signed and dated

Chain-of-Custody (COC) documentation (mandatory):

The following is required on each COC:

- ✓ Sample ID, the location, date and time of collection, collector's name, preservation type, sample type, and any other special remarks concerning the sampleThe COC must be completed in ink.
- ✓ Signature and date of relinquishing party.

In the absence of a COC at sample receipt, the COC will be requested from the client.

Sample Integrity (mandatory):

Samples are inspected upon arrival to ensure that sample integrity was not compromised during transfer to the laboratory.

- ✓ Sample containers must arrive in good condition (not broken or leaking).
- ✓ Samples must be labeled appropriately, including Sample IDs, and requested test using durable labels and indelible ink.
- ✓ The correct type of sample bottle must be used for the method requested.
- ✓ An appropriate sample volume, or weight, must be received.
- ✓ Sample IDs and number of containers must reconcile with the COC.
- ✓ Samples must be received within the method defined holding time.

Temperature Requirement (varies by sample matrix):

- ✓ Aqueous and Non-aqueous samples must be shipped and stored cold, at 0 to 6ºC.
- ✓ Tissue samples must be shipped and stored frozen, at -20 to -10ºC.
- ✓ Air samples are shipped and stored cold, at 0 to 6ºC
- ✓ The sample temperature must be recorded on the COC

All cooler inspections are documented on the Cooler Receipt Form (CRF). A separate CRF is completed for each service request. Any samples not meeting the above criteria are noted on the CRF and the Project Manager notified. The Project Manager must resolve any sample integrity issues with the client prior to proceeding with the analysis. Such resolutions are documented in writing and filed with the project folder. Data associated with samples received outside of this acceptance policy will be qualified on the case narrative of the final report

Preparation Information Benchsheets

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 210, Houston, TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

Preparation Information Benchsheet

Prep Run#: 377530 **Prep WorkFlow:** GenExt28Day **Status:** Prepped
Team: Semivoa GCMS/GRIVERA **Prep Method:** Method **Prep Date/Time:** 4/15/21 11:50

#	Lab Code	Client ID	B#	Method /Test	pH	Cl	Matrix	Amt. Ext.	Sample Description
1	E2100409-001	LH18/24-SP650_041321_BIX	.01	6850/ClO4 DOD			Ground Water	10mL	
2	E2100410-001	LH18/24-SP140_041321	.01	6850/ClO4 DOD			Ground Water	10mL	
3	E2100411-001	LH18/24-SP650_041321_BIX	.01	6850/ClO4 DOD			Ground Water	10mL	
4	E2100412-001	16WW44-210412	.01	6850/ClO4 DOD			Ground Water	10mL	
5	E2100412-002	16WW38-210412	.01	6850/ClO4 DOD			Ground Water	10mL	
6	E2100412-003	16WW37-210412	.01	6850/ClO4 DOD			Ground Water	10mL	
7	E2100412-004	16WW14-210412	.01	6850/ClO4 DOD			Ground Water	10mL	
8	E2100412-005	16WW34-210412	.01	6850/ClO4 DOD			Ground Water	10mL	
9	E2100412-006	16WW34-210412-FD	.01	6850/ClO4 DOD			Ground Water	10mL	
10	E2100412-007	16WW33-210412	.01	6850/ClO4 DOD			Ground Water	10mL	
11	E2100412-008	16WW32-210412	.01	6850/ClO4 DOD			Ground Water	10mL	
12	E2100412-009	16WW31-210412	.01	6850/ClO4 DOD			Ground Water	10mL	
13	E2100412-010	16WW46-210412	.01	6850/ClO4 DOD			Ground Water	10mL	
14	EQ2100213-01	MB		6850/ClO4 DOD			Liquid	10mL	
15	EQ2100213-02	LCS		6850/ClO4 DOD			Liquid	10mL	
16	EQ2100213-03	DLCS		6850/ClO4 DOD			Liquid	10mL	
17	R2103214-010	45MI20088	.14	6850/ClO4 DOD			Water	10mL	
18	R2103214-011	45MI30028	.06	6850/ClO4 DOD			Water	10mL	
19	R2103214-013	45MI30025	.06	6850/ClO4 DOD			Water	10mL	
20	R2103380-002	45MI30022	.05	6850/ClO4 DOD			Water	10mL	
21	R2103380-003	45MI30023	.05	6850/ClO4 DOD			Water	10mL	
22	R2103380-004	45MI30027	.05	6850/ClO4 DOD			Water	10mL	
23	R2103380-005	45MI30026	.05	6850/ClO4 DOD			Water	10mL	

Spiking Solutions

Name: Perchlorate Intermediate Stock1 Inventory ID 214035 Logbook Ref: Perchlorate Expires On: 05/23/2021

EQ2100213-02 1.00µL EQ2100213-03 1.00µL

Name: Perchlorate Internal Standard 1ug/mL Inventory ID 214820 Logbook Ref: Perchlorate Internal Standard Expires On: 07/03/2021

E2100409-001	100.00µL	E2100410-001	100.00µL	E2100411-001	100.00µL	E2100412-001	100.00µL	E2100412-002	100.00µL	E2100412-003	100.00µL
E2100412-004	100.00µL	E2100412-005	100.00µL	E2100412-006	100.00µL	E2100412-007	100.00µL	E2100412-008	100.00µL	E2100412-009	100.00µL
E2100412-010	100.00µL	EQ2100213-01	100.00µL	EQ2100213-02	100.00µL	EQ2100213-03	100.00µL	R2103214-010	100.00µL	R2103214-011	100.00µL
R2103214-013	100.00µL	R2103380-002	100.00µL	R2103380-003	100.00µL	R2103380-004	100.00µL	R2103380-005	100.00µL		

Preparation Information Benchsheet

Prep Run#: 377530 **Prep WorkFlow:** GenExt28Day **Status:** Prepped
Team: Semivoa GCMS/GRIVERA **Prep Method:** Method **Prep Date/Time:** 4/15/21 11:50

Preparation Steps

Step: Preparation
Started: 4/15/21 11:50
Finished: 4/15/21 13:00
By: GRIVERA
Comments

Comments: _____

Reviewed By: GR Date: 4/15/21

Chain of Custody

Relinquished By: _____ Date: _____ Extracts Examined

Received By: _____ Date: _____ Yes No

Preparation Information Benchsheet

Prep Run#: 378052 **Prep WorkFlow:** GenExt28Day **Status:** Prepped
Team: Semivoa GCMS/GRIVERA **Prep Method:** Method **Prep Date/Time:** 4/23/21 12:17

#	Lab Code	Client ID	B#	Method /Test	pH	Cl	Matrix	Amt. Ext.	Sample Description
1	E2100412-011	16WW58-210413	.01	6850/ClO4 DOD			Ground Water	10mL	
2	E2100412-012	16WW57-210413	.01	6850/ClO4 DOD			Ground Water	10mL	
3	E2100412-013	16WW35-210413	.01	6850/ClO4 DOD			Ground Water	10mL	
4	E2100412-014	16WW36-210413	.01	6850/ClO4 DOD			Ground Water	10mL	
5	E2100412-015	16PM09-210413	.01	6850/ClO4 DOD			Ground Water	10mL	
6	E2100412-016	16PM06-210413	.01	6850/ClO4 DOD			Ground Water	10mL	
7	E2100412-017	16PM14-210413	.01	6850/ClO4 DOD			Ground Water	10mL	
8	E2100485-001	16PM02-210414	.01	6850/ClO4 DOD			Ground Water	10mL	
9	E2100485-002	16PM03-210414	.01	6850/ClO4 DOD			Ground Water	10mL	
10	E2100485-003	16PM03-210414-FD	.01	6850/ClO4 DOD			Ground Water	10mL	
11	E2100485-004	16RW01-210414	.01	6850/ClO4 DOD			Ground Water	10mL	
12	E2100485-005	16RW04-210414	.01	6850/ClO4 DOD			Ground Water	10mL	
13	E2100485-006	16RW02-210414	.01	6850/ClO4 DOD			Ground Water	10mL	
14	E2100485-007	16WW16-210415	.01	6850/ClO4 DOD			Ground Water	10mL	
15	E2100485-008	16WW56-210415	.01	6850/ClO4 DOD			Ground Water	10mL	
16	E2100485-009	16WW22-210415	.01	6850/ClO4 DOD			Ground Water	10mL	
17	E2100485-010	16WW41-210415	.01	6850/ClO4 DOD			Ground Water	10mL	
18	E2100485-011	16WW21-210415	.01	6850/ClO4 DOD			Ground Water	10mL	
19	E2100485-012	16WW39-210415	.01	6850/ClO4 DOD			Ground Water	10mL	
20	E2100485-013	16WW51-210415	.01	6850/ClO4 DOD			Ground Water	10mL	
21	EQ2100244-01	MB		6850/ClO4 DOD			Liquid	10mL	
22	EQ2100244-02	LCS		6850/ClO4 DOD			Liquid	10mL	
23	EQ2100244-03	DLCS		6850/ClO4 DOD			Liquid	10mL	
24	EQ2100244-04	16WW56-210415 MS	.01	6850/ClO4 DOD			Liquid	10mL	
25	EQ2100244-05	16WW56-210415 DMS	.01	6850/ClO4 DOD			Liquid	10mL	

Spiking Solutions

Name: Perchlorate Intermediate Stock1 Inventory ID 214035 Logbook Ref: Perchlorate Expires On: 05/23/2021

EQ2100244-02 1.00µL EQ2100244-03 1.00µL EQ2100244-04 1.00µL EQ2100244-05 1.00µL

Name: Perchlorate Internal Standard 1ug/mL Inventory ID 214820 Logbook Ref: Perchlorate Internal Standard Expires On: 07/03/2021

E2100412-011 100.00µL E2100412-012 100.00µL E2100412-013 100.00µL E2100412-014 100.00µL E2100412-015 100.00µL E2100412-016 100.00µL
E2100412-017 100.00µL E2100485-001 100.00µL E2100485-002 100.00µL E2100485-003 100.00µL E2100485-004 100.00µL E2100485-005 100.00µL
E2100485-006 100.00µL E2100485-007 100.00µL E2100485-008 100.00µL E2100485-009 100.00µL E2100485-010 100.00µL E2100485-011 100.00µL

Preparation Information Benchsheet

Prep Run#: 378052 **Prep WorkFlow:** GenExt28Day **Status:** Prepped
Team: Semivoa GCMS/GRIVERA **Prep Method:** Method **Prep Date/Time:** 4/23/21 12:17

E2100485-012	100.00µL	E2100485-013	100.00µL	EQ2100244-01	100.00µL	EQ2100244-02	100.00µL	EQ2100244-03	100.00µL	EQ2100244-04	100.00µL
EQ2100244-05	100.00µL										

Preparation Steps

Step: Preparation
Started: 4/23/21 12:17
Finished: 4/23/21 13:30
By: GRIVERA
Comments

Comments: _____

Reviewed By: GR Date: 4/23/21

Chain of Custody

Relinquished By: _____ Date: _____ Extracts Examined

Received By: _____ Date: _____ Yes No

Analytical Results

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 210, Houston, TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100412
Project:	HS21040695	**Date Collected:**	4/12/21 0740
Sample Matrix:	Ground Water	**Date Received:**	4/14/21
Sample Name:	16WW44-210412	**Units:**	µg/L
Lab Code:	E2100412-001	**Basis:**	As Received

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.134**		0.100	0.0500	0.0250	1	4/15/21	4/29/21 12:16	377530	721582	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100412
Project:	HS21040695	**Date Collected:**	4/12/21 0830
Sample Matrix:	Ground Water	**Date Received:**	4/14/21
Sample Name:	16WW38-210412	**Units:**	µg/L
Lab Code:	E2100412-002	**Basis:**	As Received

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	0.100	0.0500	0.0250	1	4/15/21	4/20/21 14:20	377530	721439	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100412
Project:	HS21040695	**Date Collected:**	4/12/21 0915
Sample Matrix:	Ground Water	**Date Received:**	4/14/21
Sample Name:	16WW37-210412	**Units:**	µg/L
Lab Code:	E2100412-003	**Basis:**	As Received

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**1.60**		1.00	0.500	0.250	10	4/15/21	4/28/21 22:20	377530	721483	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100412
Project:	HS21040695	**Date Collected:**	4/12/21 1000
Sample Matrix:	Ground Water	**Date Received:**	4/14/21
Sample Name:	16WW14-210412	**Units:**	µg/L
Lab Code:	E2100412-004	**Basis:**	As Received

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	0.100	0.0500	0.0250	1	4/15/21	4/20/21 14:36	377530	721439	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100412
Project:	HS21040695	**Date Collected:**	4/12/21 1045
Sample Matrix:	Ground Water	**Date Received:**	4/14/21
Sample Name:	16WW34-210412	**Units:**	µg/L
Lab Code:	E2100412-005	**Basis:**	As Received

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	0.100	0.0500	0.0250	1	4/15/21	4/20/21 14:52	377530	721439	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100412
Project:	HS21040695	**Date Collected:**	4/12/21 1045
Sample Matrix:	Ground Water	**Date Received:**	4/14/21
Sample Name:	16WW34-210412-FD	**Units:**	µg/L
Lab Code:	E2100412-006	**Basis:**	As Received

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	0.100	0.0500	0.0250	1	4/15/21	4/20/21 15:00	377530	721439	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100412
Project:	HS21040695	**Date Collected:**	4/12/21 1130
Sample Matrix:	Ground Water	**Date Received:**	4/14/21
Sample Name:	16WW33-210412	**Units:**	µg/L
Lab Code:	E2100412-007	**Basis:**	As Received

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	0.100	0.0500	0.0250	1	4/15/21	4/20/21 15:08	377530	721439	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100412
Project:	HS21040695	**Date Collected:**	4/12/21 1215
Sample Matrix:	Ground Water	**Date Received:**	4/14/21
Sample Name:	16WW32-210412	**Units:**	µg/L
Lab Code:	E2100412-008	**Basis:**	As Received

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	0.100	0.0500	0.0250	1	4/15/21	4/20/21 15:16	377530	721439	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100412
Project:	HS21040695	**Date Collected:**	4/12/21 1300
Sample Matrix:	Ground Water	**Date Received:**	4/14/21
Sample Name:	16WW31-210412	**Units:**	µg/L
Lab Code:	E2100412-009	**Basis:**	As Received

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	0.100	0.0500	0.0250	1	4/15/21	4/20/21 15:23	377530	721439	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100412
Project:	HS21040695	**Date Collected:**	4/12/21 1345
Sample Matrix:	Ground Water	**Date Received:**	4/14/21
Sample Name:	16WW46-210412	**Units:**	µg/L
Lab Code:	E2100412-010	**Basis:**	As Received

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	1.00	0.500	0.250	10	4/15/21	4/28/21 22:29	377530	721483	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100412
Project:	HS21040695	**Date Collected:**	4/13/21 0740
Sample Matrix:	Ground Water	**Date Received:**	4/14/21
Sample Name:	16WW58-210413	**Units:**	µg/L
Lab Code:	E2100412-011	**Basis:**	As Received

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.0348**	J	0.100	0.0500	0.0250	1	4/23/21	4/29/21 10:54	378052	721582	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100412
Project:	HS21040695	**Date Collected:**	4/13/21 0830
Sample Matrix:	Ground Water	**Date Received:**	4/14/21
Sample Name:	16WW57-210413	**Units:**	µg/L
Lab Code:	E2100412-012	**Basis:**	As Received

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.171**	J	0.500	0.250	0.125	5	4/23/21	4/29/21 16:10	378052	721582	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100412
Project:	HS21040695	**Date Collected:**	4/13/21 0940
Sample Matrix:	Ground Water	**Date Received:**	4/14/21
Sample Name:	16WW35-210413	**Units:**	µg/L
Lab Code:	E2100412-013	**Basis:**	As Received

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**367**		5.00	2.50	1.25	50	4/23/21	4/29/21 15:23	378052	721582	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100412
Project:	HS21040695	**Date Collected:**	4/13/21 1030
Sample Matrix:	Ground Water	**Date Received:**	4/14/21
Sample Name:	16WW36-210413	**Units:**	µg/L
Lab Code:	E2100412-014	**Basis:**	As Received

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**1.26**		0.100	0.0500	0.0250	1	4/23/21	4/29/21 10:44	378052	721582	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100412
Project:	HS21040695	**Date Collected:**	4/13/21 1115
Sample Matrix:	Ground Water	**Date Received:**	4/14/21
Sample Name:	16PM09-210413	**Units:**	µg/L
Lab Code:	E2100412-015	**Basis:**	As Received

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.0355**	J	0.100	0.0500	0.0250	1	4/23/21	4/29/21 11:03	378052	721582	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100412
Project:	HS21040695	**Date Collected:**	4/13/21 1205
Sample Matrix:	Ground Water	**Date Received:**	4/14/21
Sample Name:	16PM06-210413	**Units:**	µg/L
Lab Code:	E2100412-016	**Basis:**	As Received

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	1.00	0.500	0.250	10	4/23/21	4/28/21 20:55	378052	721483	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100412
Project:	HS21040695	**Date Collected:**	4/13/21 1250
Sample Matrix:	Ground Water	**Date Received:**	4/14/21
Sample Name:	16PM14-210413	**Units:**	µg/L
Lab Code:	E2100412-017	**Basis:**	As Received

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.259**	J	1.00	0.500	0.250	10	4/23/21	4/28/21 21:05	378052	721483	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100412
Project:	HS21040695	**Date Collected:**	NA
Sample Matrix:	Ground Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	EQ2100213-01	**Basis:**	As Received

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	0.100	0.0500	0.0250	1	4/15/21	4/20/21 13:25	377530	721439	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100412
Project:	HS21040695	**Date Collected:**	NA
Sample Matrix:	Ground Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	EQ2100244-01	**Basis:**	As Received

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	0.100	0.0500	0.0250	1	4/23/21	4/28/21 20:27	378052	721483	

Accuracy & Precision

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 210, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS21040695
Sample Matrix: Ground Water

Service Request: E2100412
Date Analyzed: 4/20/21

Lab Control Sample Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Units: µg/L
Basis: As Received

Extraction Lot: 377530

	Lab Control Sample EQ2100213-02			Duplicate Lab Control Sample EQ2100213-03				
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Perchlorate	0.117	0.100	117	0.108	0.100	108	84 - 119	8	15

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100412
Project:	HS21040695	**Date Collected:**	NA
Sample Matrix:	Ground Water	**Date Received:**	NA
Sample Name:	Lab Control Sample	**Units:**	µg/L
Lab Code:	EQ2100213-02	**Basis:**	As Received

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.117**		0.100	0.0500	0.0250	1	4/15/21	4/20/21 13:33	377530	721439	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100412
Project:	HS21040695	**Date Collected:**	NA
Sample Matrix:	Ground Water	**Date Received:**	NA
Sample Name:	Duplicate Lab Control Sample	**Units:**	µg/L
Lab Code:	EQ2100213-03	**Basis:**	As Received

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.108**		0.100	0.0500	0.0250	1	4/15/21	4/20/21 13:41	377530	721439	

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS21040695
Sample Matrix: Ground Water

Service Request: E2100412
Date Analyzed: 4/28/21

Lab Control Sample Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Units: µg/L
Basis: As Received

Extraction Lot: 378052

	Lab Control Sample EQ2100244-02			Duplicate Lab Control Sample EQ2100244-03					
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Perchlorate	0.0857	0.100	86	0.0977	0.100	98	84 - 119	13	15

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100412
Project:	HS21040695	**Date Collected:**	NA
Sample Matrix:	Ground Water	**Date Received:**	NA
Sample Name:	Lab Control Sample	**Units:**	µg/L
Lab Code:	EQ2100244-02	**Basis:**	As Received

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.0857**	J	0.100	0.0500	0.0250	1	4/23/21	4/28/21 20:37	378052	721483	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100412
Project:	HS21040695	**Date Collected:**	NA
Sample Matrix:	Ground Water	**Date Received:**	NA
Sample Name:	Duplicate Lab Control Sample	**Units:**	µg/L
Lab Code:	EQ2100244-03	**Basis:**	As Received

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.0977**	J	0.100	0.0500	0.0250	1	4/23/21	4/28/21 20:46	378052	721483	

HS21040695 8260_W_DOD Raw Data

ALS WO# HS21040695

MSVOA06 -Logbook

Batch: 44312 **Analyst:** Presenta Cabascango

Date: 04-02-2021 **Reviewer:**

Method: 8260 **Laboratory:** Houston

Comments:

#	Samp ID	Type	Analyzed	DF	Init Wt/Vol	Final Vol	File ID	Matrix	Status	pH
1	BFB	TUNE	04-02-2021 10:32 am	1.00	50 mL	50 mL	X040201.D	Liquid	Y	NA
2	VSTD000.25	ICAL1	04-02-2021 10:53 am	1.00	50 mL	50 mL	X040202.D	Liquid	Y	NA
3	VSTD000.5	ICAL2	04-02-2021 11:35 am	1.00	50 mL	50 mL	X040203.D	Liquid	Y	NA
4	VSTD001	ICAL3	04-02-2021 11:56 am	1.00	50 mL	50 mL	X040204.D	Liquid	Y	NA
5	VSTD002	ICAL4	04-02-2021 12:17 pm	1.00	50 mL	50 mL	X040205.D	Liquid	Y	NA
6	VSTD005	ICAL5	04-02-2021 12:38 pm	1.00	50 mL	50 mL	X040206.D	Liquid	Y	NA
7	VSTD020	ICAL6	04-02-2021 12:59 pm	1.00	50 mL	50 mL	X040207.D	Liquid	Y	NA
8	VSTD050	ICAL7	04-02-2021 01:20 pm	1.00	50 mL	50 mL	X040208.D	Liquid	Y	NA
9	VSTD100	ICAL8	04-02-2021 01:41 pm	1.00	50 mL	50 mL	X040209.D	Liquid	Y	NA
10	VSTD150	ICAL9	04-02-2021 02:02 pm	1.00	50 mL	50 mL	X040210.D	Liquid	Y	NA
11	VSTD200	ICAL	04-02-2021 02:23 pm	1.00	50 mL	50 mL	X040211.D	Liquid	Y	NA
12	BLANK	SAMP	04-02-2021 02:44 pm	1.00	50 mL	50 mL	X040212.D	Liquid	Y	NA
13	CCV	SAMP	04-02-2021 03:05 pm	1.00	50 mL	50 mL	X040213.D	Liquid	Y	NA
14	CCV	CCV	04-02-2021 03:26 pm	1.00	50 mL	50 mL	X040214.D	Liquid	Y	NA
15	CCB	SAMP	04-02-2021 03:47 pm	1.00	50 mL	50 mL	X040215.D	Liquid	Y	NA
16	VLCSW-210402	LCS	04-02-2021 04:08 pm	1.00	50 mL	50 mL	X040216.D	Liquid	Y	NA
17	BLANK	SAMP	04-02-2021 04:29 pm	1.00	50 mL	50 mL	X040217.D	Liquid	Y	NA
18	BLANK	SAMP	04-02-2021 04:50 pm	1.00	50 mL	50 mL	X040218.D	Liquid	Y	NA
19	VBLKW-210402	MBLK	04-02-2021 05:11 pm	1.00	50 mL	50 mL	X040219.D	Liquid	Y	NA
20	HS21031390-28	SAMP	04-02-2021 05:32 pm	1.00	50 mL	50 mL	X040220.D	Liquid	Y	NA
21	HS21031390-01	SAMP	04-02-2021 05:53 pm	1.00	50 mL	50 mL	X040221.D	Liquid	Y	NA
22	HS21031390-02	SAMP	04-02-2021 06:14 pm	1.00	50 mL	50 mL	X040222.D	Liquid	Y	NA
23	HS21031390-08	SAMP	04-02-2021 06:35 pm	1.00	50 mL	50 mL	X040223.D	Liquid	Y	NA
24	HS21031390-14	SAMP	04-02-2021 06:56 pm	1.00	50 mL	50 mL	X040224.D	Liquid	Y	NA
25	HS21031390-06	SAMP	04-02-2021 07:17 pm	10.00	5 mL	50 mL	X040225.D	Liquid	Y	NA
26	HS21031390-09	SAMP	04-02-2021 07:38 pm	5.00	10 mL	50 mL	X040226.D	Liquid	Y	NA
27	HS21031390-28MS	MS	04-02-2021 07:59 pm	1.00	50 mL	50 mL	X040227.D	Liquid	Y	NA
28	HS21031390-28MSD	MSD	04-02-2021 08:20 pm	1.00	50 mL	50 mL	X040228.D	Liquid	Y	NA
29	HS21031390-06	SAMP	04-02-2021 08:41 pm	100.0(	500 µL	50 mL	X040229.D	Liquid	Y	NA
30	HS21031390-09	SAMP	04-02-2021 09:03 pm	25.00	2 mL	50 mL	X040230.D	Liquid	Y	NA
31	HS21031318-29	SAMP	04-02-2021 09:24 pm	1.00	50 mL	50 mL	X040231.D	Liquid	Y	NA
32	HS21040032-03	SAMP	04-02-2021 09:45 pm	1.00	50 mL	50 mL	X040232.D	Liquid	Y	NA
33	BFB	TUNE	04-02-2021 10:06 pm	1.00	50 mL	50 mL	Y040201.D	Liquid	Y	NA
34	CCV	CCV	04-02-2021 10:27 pm	1.00	50 mL	50 mL	Y040202a.D	Liquid	Y	NA
35	CCV	CCV	04-02-2021 10:48 pm	1.00	50 mL	50 mL	Y040203.D	Liquid	Y	NA
36	CCB	SAMP	04-02-2021 11:09 pm	1.00	50 mL	50 mL	Y040204.D	Liquid	Y	NA
37	VLCSW-210402	LCS	04-02-2021 11:30 pm	1.00	50 mL	50 mL	Y040205.D	Liquid	Y	NA
38	BLANK	SAMP	04-02-2021 11:51 pm	1.00	50 mL	50 mL	Y040206.D	Liquid	Y	NA
39	VBLKW-210402	MBLK	04-03-2021 12:12 am	1.00	50 mL	50 mL	Y040207.D	Liquid	Y	NA
40	HS21031399-49	SAMP	04-03-2021 12:33 am	1.00	50 mL	50 mL	Y040208.D	Liquid	Y	NA
41	HS21031390-31	SAMP	04-03-2021 12:54 am	1.00	50 mL	50 mL	Y040209.D	Liquid	Y	NA

MSVOA06 -Logbook

#	Samp ID	Type	Analyzed	DF	Init Wt/Vol	Final Vol	File ID	Matrix	Status	pH
42	HS21031390-33	SAMP	04-03-2021 01:15 am	1.00	50 mL	50 mL	Y040210.D	Liquid	Y	NA
43	HS21031390-31MS	MS	04-03-2021 01:36 am	1.00	50 mL	50 mL	Y040211.D	Liquid	Y	NA
44	HS21031390-31MSD	MSD	04-03-2021 01:57 am	1.00	50 mL	50 mL	Y040212.D	Liquid	Y	NA
45	BLANK	SAMP	04-03-2021 02:18 am	1.00	50 mL	50 mL	Y040213.D	Liquid	Y	NA
46	BLANK	SAMP	04-03-2021 02:39 am	1.00	50 mL	50 mL	Y040214.D	Liquid	Y	NA
47	HS21031399-38	SAMP	04-03-2021 03:00 am	1.00	50 mL	50 mL	Y040215.D	Liquid	Y	NA
48	HS21031399-39	SAMP	04-03-2021 03:21 am	1.00	50 mL	50 mL	Y040216.D	Liquid	Y	NA
49	HS21031399-41	SAMP	04-03-2021 03:43 am	1.00	50 mL	50 mL	Y040217.D	Liquid	Y	NA
50	HS21031399-42	SAMP	04-03-2021 04:04 am	1.00	50 mL	50 mL	Y040218.D	Liquid	Y	NA
51	HS21031399-43	SAMP	04-03-2021 04:25 am	1.00	50 mL	50 mL	Y040219.D	Liquid	Y	NA
52	HS21031399-44	SAMP	04-03-2021 04:46 am	1.00	50 mL	50 mL	Y040220.D	Liquid	Y	NA
53	HS21031399-45	SAMP	04-03-2021 05:07 am	1.00	50 mL	50 mL	Y040221.D	Liquid	Y	NA
54	HS21031399-46	SAMP	04-03-2021 05:28 am	1.00	50 mL	50 mL	Y040222.D	Liquid	Y	NA
55	HS21031565-01	SAMP	04-03-2021 05:49 am	1.00	50 mL	50 mL	Y040223.D	Liquid	Y	NA
56	HS21031565-05	SAMP	04-03-2021 06:10 am	1.00	50 mL	50 mL	Y040224.D	Liquid	Y	NA
57	HS21031565-06	SAMP	04-03-2021 06:31 am	1.00	50 mL	50 mL	Y040225.D	Liquid	Y	NA
58	HS21031565-07	SAMP	04-03-2021 06:52 am	1.00	50 mL	50 mL	Y040226.D	Liquid	Y	NA
59	HS21031565-08	SAMP	04-03-2021 07:13 am	1.00	50 mL	50 mL	Y040227.D	Liquid	Y	NA
60	HS21031565-11	SAMP	04-03-2021 07:35 am	1.00	50 mL	50 mL	Y040228.D	Liquid	Y	NA
61	HS21031565-14	SAMP	04-03-2021 07:56 am	1.00	50 mL	50 mL	Y040229.D	Liquid	Y	NA
62	HS21031565-15	SAMP	04-03-2021 08:17 am	1.00	50 mL	50 mL	Y040230.D	Liquid	Y	NA
63	HS21031390-32	SAMP	04-03-2021 08:38 am	1.00	50 mL	50 mL	Y040231.D	Liquid	Y	NA
64	BLANJ	SAMP	04-03-2021 08:59 am	1.00	50 mL	50 mL	Y040240.D	Liquid	Y	NA

FORM 3
WATER VOLATILE METHOD SPIKE RECOVERY

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS21040695

Matrix Spike - Sample No.: ICV

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE AMOUNT ()	% REC #	QC. LIMITS REC.
Vinyl Chloride	50.00	46.17	92	80-120
Methylene Chloride	50.00	45.57	91	80-120
1,1-Dichloroethene	50.00	46.21	92	80-120
1,2-Dichloroethane	50.00	47.48	95	80-120
cis-1,2-Dichloroethene	50.00	46.33	93	80-120
1,1,2-Trichloroethane	50.00	48.15	96	80-120
Trichloroethene	50.00	50.43	101	80-120

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

COMMENTS: _____

_____

FORM III VOA

FORM 5
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS21040695

Lab File ID: X040201 BFB Injection Date: 04/02/21

Instrument ID: VOA6 BFB Injection Time: 1032

GC Column: DB624 ID: 0.25 (mm) Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	22.5
75	30.0 - 60.0% of mass 95	53.3
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.5
173	Less than 2.0% of mass 174	1.1 (1.3)1
174	Greater than 50.0% of mass 95	83.8
175	5.0 - 9.0% of mass 174	6.3 (7.6)1
176	95.0 - 101.0% of mass 174	81.4 (97.1)1
177	5.0 - 9.0% of mass 176	4.4 (5.4)2

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

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD000.25	VSTD000.25	X040202	04/02/21	1053
02	VSTD000.5	VSTD000.5	X040203	04/02/21	1135
03	VSTD001	VSTD001	X040204	04/02/21	1156
04	VSTD002	VSTD002	X040205	04/02/21	1217
05	VSTD005	VSTD005	X040206	04/02/21	1238
06	VSTD020	VSTD020	X040207	04/02/21	1259
07	VSTD050	VSTD050	X040208	04/02/21	1320
08	VSTD100	VSTD100	X040209	04/02/21	1341
09	VSTD150	VSTD150	X040210	04/02/21	1402
10	VSTD200	VSTD200	X040211	04/02/21	1423
11	ICV	ICV	X040214	04/02/21	1526
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS21040695

Instrument ID: VOA6 Calibration Date(s): 04/02/21 04/02/21

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1053 1423

LAB FILE ID: RF0.25: X040202 RF0.5: X040203 RF1: X040204
RF2: X040205 RF5: X040206 RF20: X040207

COMPOUND	RF0.25	RF0.5	RF1	RF2	RF5	RF20
Vinyl Chloride		0.844	0.943	0.758	0.756	0.736
Methylene Chloride		2167	4155	7271	17205	63925
1,1-Dichloroethene		0.748	0.754	0.752	0.776	0.659
1,2-Dichloroethane		0.560	0.634	0.506	0.530	0.475
cis-1,2-Dichloroethene		0.588	0.711	0.624	0.604	0.542
1,1,2-Trichloroethane		0.276	0.355	0.300	0.320	0.251
Trichloroethene		0.263	0.401	0.364	0.376	0.308
Dibromofluoromethane		1934	3862	6870	17824	68668
1,2-Dichloroethane-d4		2323	4438	7506	20809	80475
Toluene-d8		6330	12313	22274	56112	218999
4-Bromofluorobenzene		2889	4647	7732	19193	81621

FORM VI VOA

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS2104069

Instrument ID: VOA6 Calibration Date(s): 04/02/21 04/02/21

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1053 1423

LAB FILE ID: RF50: X040208 RF100: X040209 RF150: X040210
RF200: X040211

COMPOUND	RF50	RF100	RF150	RF200
Vinyl Chloride	0.712	0.681	0.664	0.652
Methylene Chloride	173954	420832	703062	1013494
1,1-Dichloroethene	0.668	0.684	0.663	0.702
1,2-Dichloroethane	0.517	0.525	0.513	0.503
cis-1,2-Dichloroethene	0.580	0.612	0.608	0.631
1,1,2-Trichloroethane	0.265	0.281	0.281	0.284
Trichloroethene	0.345	0.350	0.337	0.337
Dibromofluoromethane	201590	476731	758989	1061294
1,2-Dichloroethane-d4	243778	568806	919399	1266674
Toluene-d8	658700	1733824	2714142	3949224
4-Bromofluorobenzene	267013	624362	1011725	1473828

FORM VI VOA

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS2104069

Instrument ID: VOA6 Calibration Date(s): 04/02/21 04/02/21

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1053 1423

COMPOUND	CURVE	COEFFICENTS A0	COEFFICENTS A1	%RSD OR R^2	MAX %RSD OR R^2
Vinyl Chloride	AVRG		0.74959896	12.472	15.000
Methylene Chloride	LINR	2.966e-002	1.78818120	0.9978871	0.9900000
1,1-Dichloroethene	AVRG		0.71193342	6.418	15.000
1,2-Dichloroethane	AVRG		0.52923847	8.569	15.000
cis-1,2-Dichloroethene	AVRG		0.61120734	7.506	15.000
1,1,2-Trichloroethane	AVRG		0.29044925	10.722	15.000
Trichloroethene	AVRG		0.34228157	11.637	15.000
Dibromofluoromethane	LINR	8.656e-003	1.68407127	0.9996746	0.9900000
1,2-Dichloroethane-d4	LINR	9.666e-003	1.40410549	0.9998489	0.9900000
Toluene-d8	LINR	3.71e-002	0.74922718	0.9979532	0.9900000
4-Bromofluorobenzene	LINR	3.301e-002	2.01663185	0.9986184	0.9900000

FORM VI VOA

Data File: \\NAHSTWS005\Target\chem\voa6.i\X210402.b\X040201.D

Date : 02-APR-2021 10:32

Client ID: BFB

Instrument: voa6.i

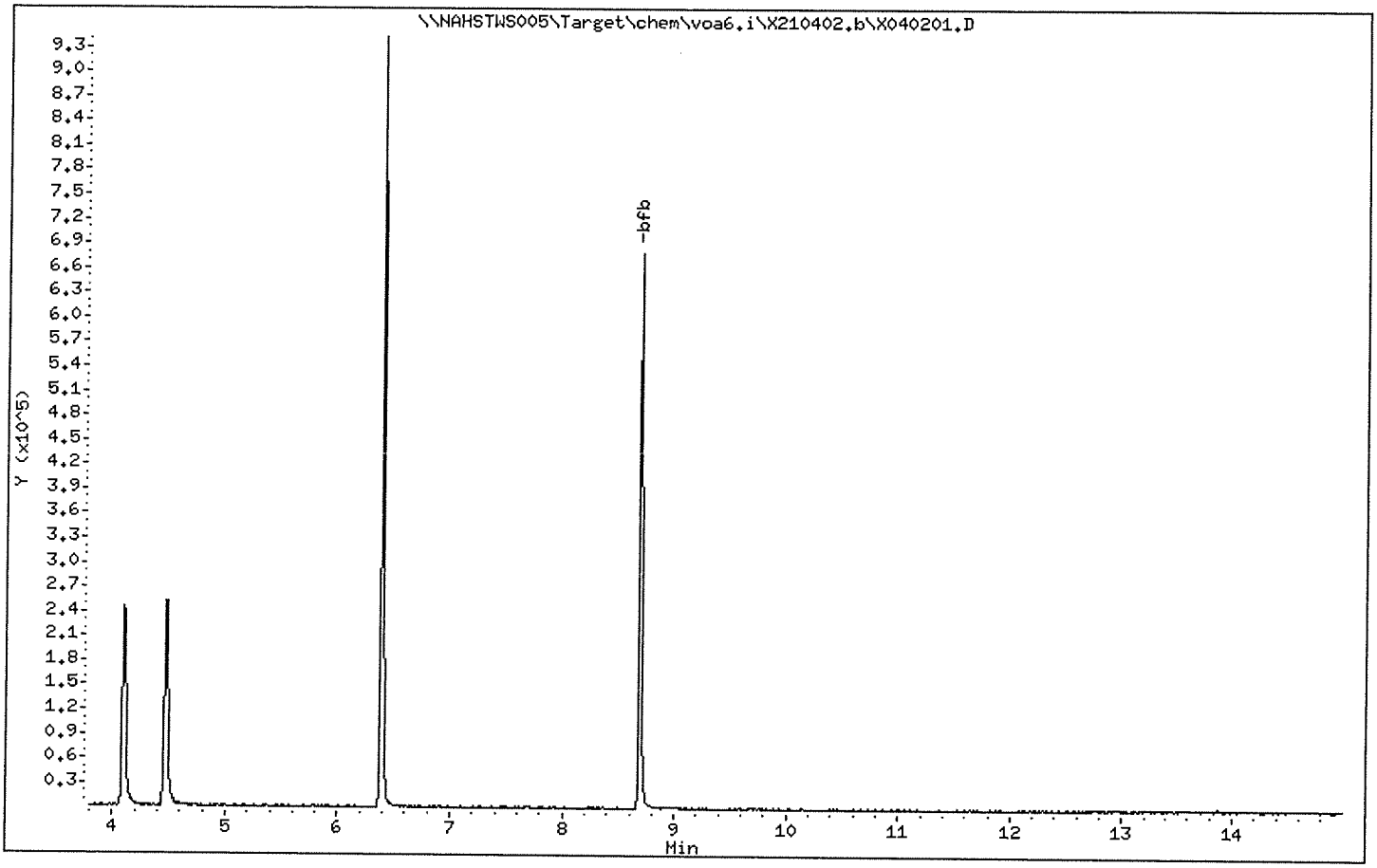
Sample Info: BFB;BFB;3;;BFB

Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

Column diameter: 0.25



Data File: \\NAHSTWS005\Target\chem\voa6.i\X210402.b\X040201.D

Date : 02-APR-2021 10:32

Client ID: BFB

Instrument: voa6.i

Sample Info: BFB;BFB;3;;BFB

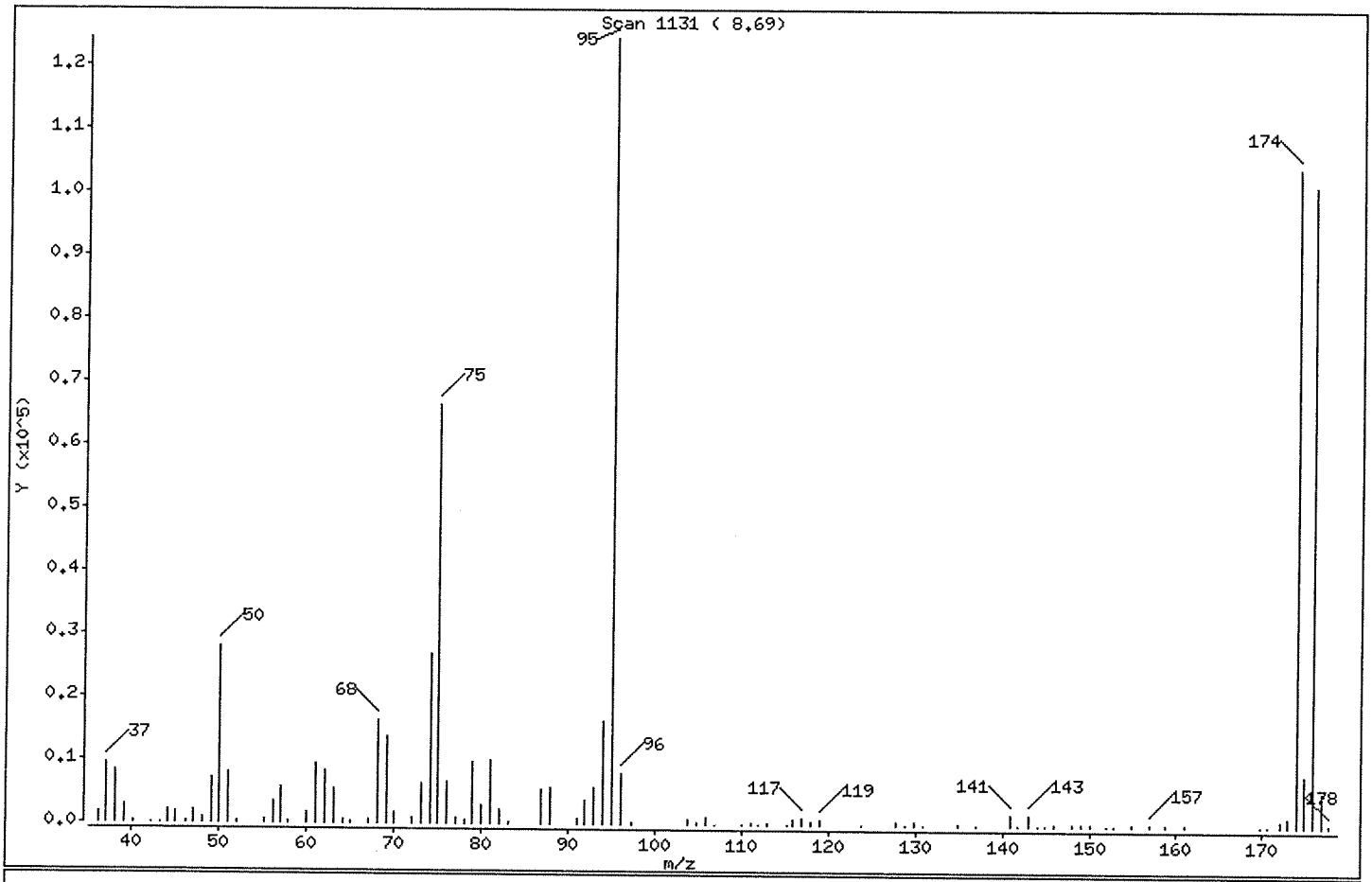
Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

Column diameter: 0.25

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	22.51
75	30.00 - 60.00% of mass 95	53.31
96	5.00 - 9.00% of mass 95	6.51
173	Less than 2.00% of mass 174	1.06 (1.26)
174	Greater than 50.00% of mass 95	83.79
175	5.00 - 9.00% of mass 174	6.34 (7.56)
176	95.00 - 101.00% of mass 174	81.37 (97.11)
177	5.00 - 9.00% of mass 176	4.40 (5.40)

Data File: \\NAHSTWS005\Target\chem\voa6.i\X210402.b\X040201.D

Date : 02-APR-2021 10:32

Client ID: BFB

Instrument: voa6.i

Sample Info: BFB;BFB;3;;BFB

Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

Column diameter: 0.25

Data File: X040201.D
Spectrum: Scan 1131 (8.69)
Location of Maximum: 95.00
Number of points: 95

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.10	1732	64.00	599	95.00	124200	141.70	84
37.00	9290	65.00	153	96.00	8090	142.90	1576
38.00	8308	67.00	500	97.20	217	143.90	75
39.00	2929	68.00	16384	103.70	740	144.80	94
40.10	424	69.00	13717	104.80	164	145.90	148
42.20	74	70.00	1785	105.80	1029	147.90	250
43.20	72	72.10	777	106.90	112	148.90	155
44.00	2050	73.00	6328	109.90	136	150.00	286
45.00	1795	74.00	26912	111.00	268	151.80	52
46.10	242	75.00	66216	111.90	85	152.70	124
47.00	1874	76.00	6620	112.90	237	154.80	284
48.00	988	77.10	800	115.10	59	156.80	312
49.00	7094	78.10	446	115.80	811	158.80	260
50.00	27952	78.90	9818	116.90	1154	161.00	258
51.00	7947	79.90	2794	117.80	635	169.80	139
51.90	391	80.90	10133	118.90	930	170.60	140
55.20	631	82.00	2269	123.70	57	172.20	893
56.10	3391	83.00	193	127.70	679	172.90	1311
57.00	5690	86.90	5298	128.70	113	173.90	104064
57.90	400	87.90	5776	129.70	519	174.90	7871
59.90	1604	90.90	805	130.80	68	175.90	101056
61.00	9323	91.90	3707	134.80	220	176.90	5459
62.00	8245	92.90	5610	136.80	123	177.80	373
63.00	5418	94.00	16192	140.90	1678		

Data File: \\NAHSTWS005\Target\chem\voa6.i\X210402.b\X040202.D Page 1
Report Date: 04-May-2021 11:39

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X210402.b\X040202.D
Lab Smp Id: VSTD000.25 Client Smp ID: VSTD000.25
Inj Date : 02-APR-2021 10:53
Operator : PC Inst ID: voa6.i
Smp Info : VSTD000.25;VSTD000.25;1;1;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X210402.b\8260W.m
Meth Date : 04-May-2021 11:39 voa6.i Quant Type: ISTD
Cal Date : 02-APR-2021 14:23 Cal File: X040211.D
Als bottle: 2 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBI_short1.sub
Target Version: 4.14
Processing Host: NAHSTW7066

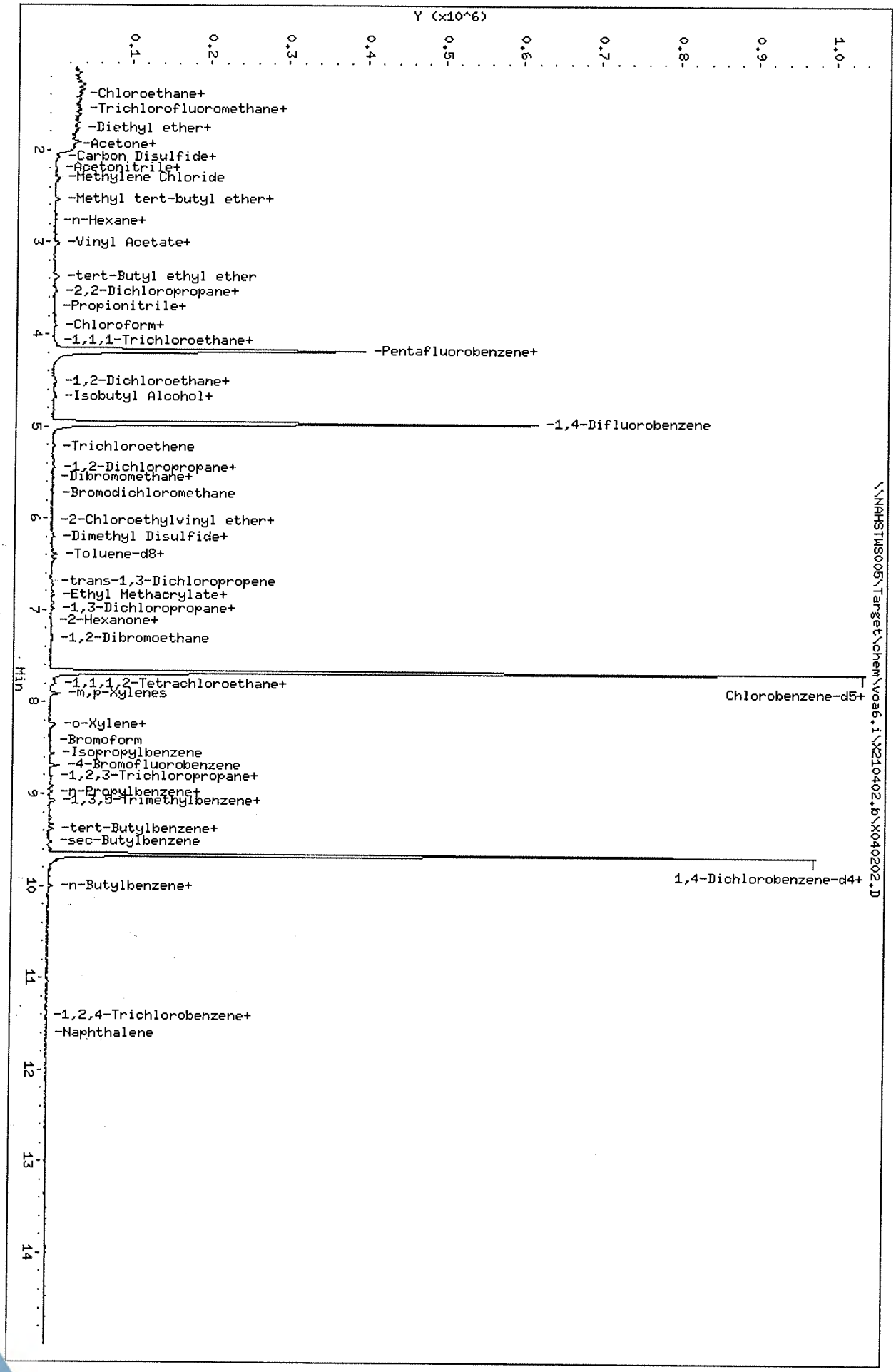
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	311555	50.0000	
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	505232	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	450629	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	197083	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	968	0.25000	0.69(M)
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	1238	0.25000	0.76(TM)
$ 48 Toluene-d8	98	6.396	6.396	(0.834)	4819	0.25000	2.25
$ 69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	3592	0.25000	2.45
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	995	0.25000	0.38(a)
11 1,1-Dichloroethene	96	1.904	1.904	(0.455)	1567	0.25000	0.35(aM)
33 1,2-Dichloroethane	62	4.562	4.562	(0.919)	1597	0.25000	0.29(a)
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	893	0.25000	0.23(M)
17 Methylene Chloride	84	2.305	2.305	(0.551)	2054	0.25000	2.07(aM)
38 Trichloroethene	130	5.221	5.221	(1.052)	988	0.25000	0.28(M)
5 Vinyl Chloride	62	1.145	1.145	(0.274)	1614	0.25000	0.34(M)

QC Flag Legend

T - Target compound detected outside RT window.
a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.



Data File: \\NAHSTWS005\Target\chem\voa6.i\X210402.b\X040202.D
Date : 02-APR-2021 10:53
Client ID: VSTD000.25
Sample Info: VSTD000.25;VSTD000.25;1;1;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\NAHSTWS005\Target\chem\voa6.i\X210402.b\X040203.D Page 1
Report Date: 04-May-2021 11:39

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X210402.b\X040203.D
Lab Smp Id: VSTD000.5 Client Smp ID: VSTD000.5
Inj Date : 02-APR-2021 11:35
Operator : PC Inst ID: voa6.i
Smp Info : VSTD000.5;VSTD000.5;1;2;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X210402.b\8260W.m
Meth Date : 04-May-2021 11:39 voa6.i Quant Type: ISTD
Cal Date : 02-APR-2021 10:53 Cal File: X040202.D
Als bottle: 4 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBI_short1.sub
Target Version: 4.14
Processing Host: NAHSTW7066

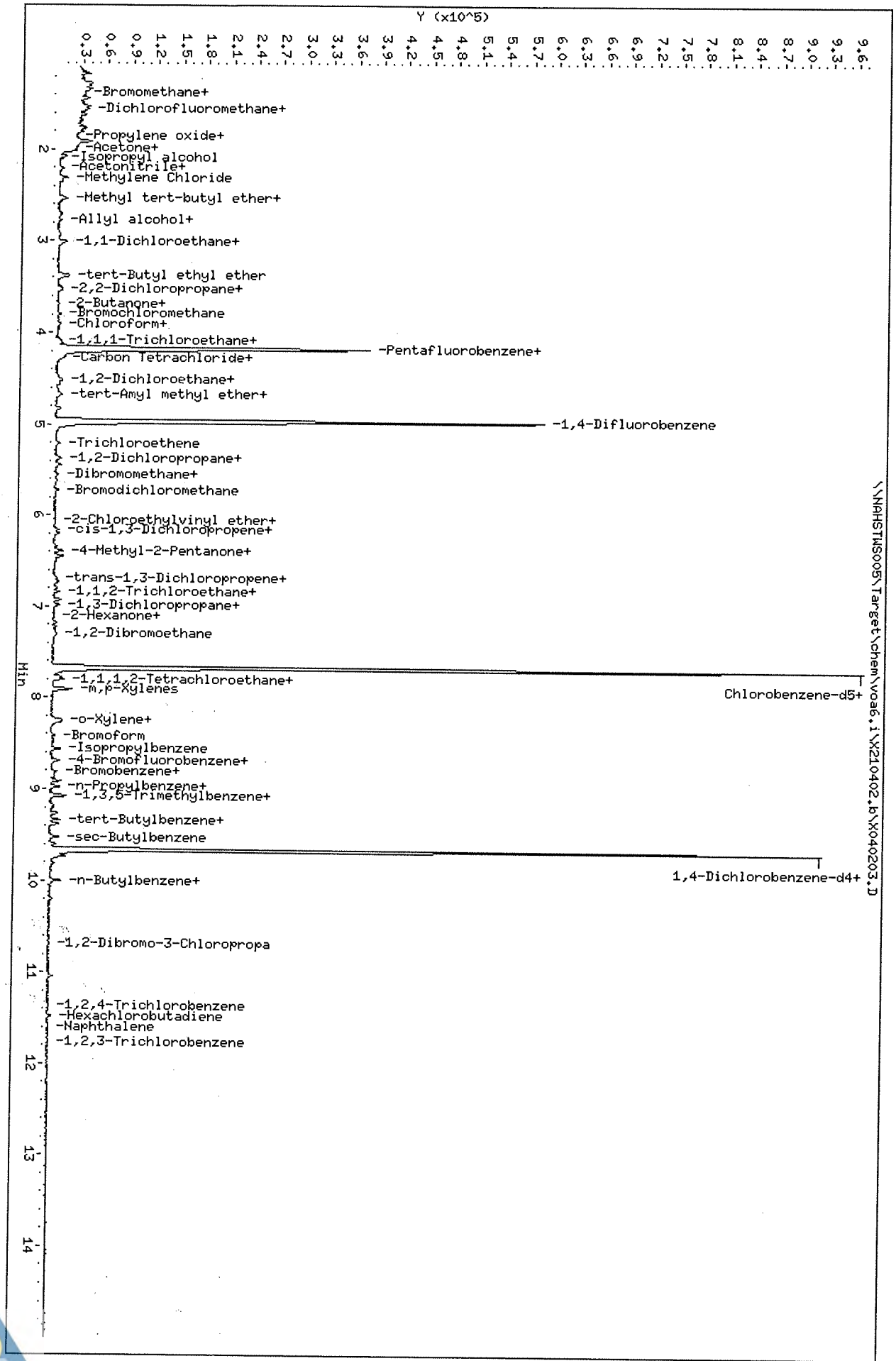
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	292480	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	476531	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	420545	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	191809	50.0000	
$ 30 Dibromofluoromethane	113	4.118	4.118	(0.985)	1934	0.50000	0.98
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	2323	0.50000	1.04(T)
$ 48 Toluene-d8	98	6.389	6.389	(0.833)	6330	0.50000	2.41(T)
$ 69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	2889	0.50000	2.34
53 1,1,2-Trichloroethane	83	6.847	6.847	(0.893)	1162	0.50000	0.47(a)
11 1,1-Dichloroethene	96	1.926	1.926	(0.461)	2188	0.50000	0.52(aM)
33 1,2-Dichloroethane	62	4.562	4.562	(0.918)	2669	0.50000	0.52(aM)
27 cis-1,2-Dichloroethene	96	3.545	3.545	(0.848)	1721	0.50000	0.48
17 Methylene Chloride	84	2.306	2.306	(0.551)	2167	0.50000	2.14(aM)
38 Trichloroethene	130	5.214	5.214	(1.049)	1254	0.50000	0.38
5 Vinyl Chloride	62	1.145	1.145	(0.274)	2470	0.50000	0.56

QC Flag Legend

T - Target compound detected outside RT window.
a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.

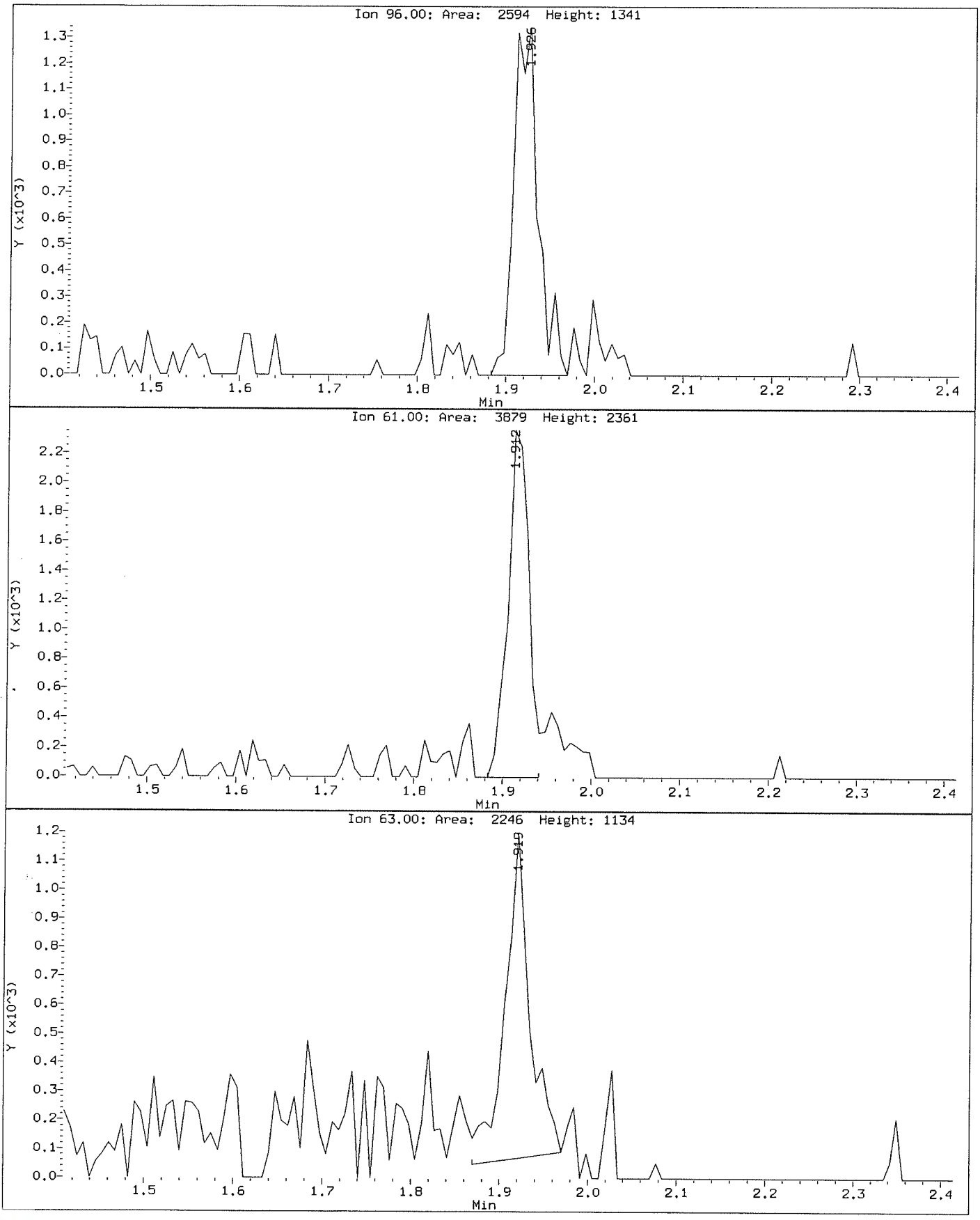


Data File: \\NAHSTWS005\Target\chem\voa6.i\X210402.b\X040203.D
Date : 02-APR-2021 11:35
Client ID: VSTD000.5
Sample Info: VSTD000.5;VSTD000.5;1;2;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

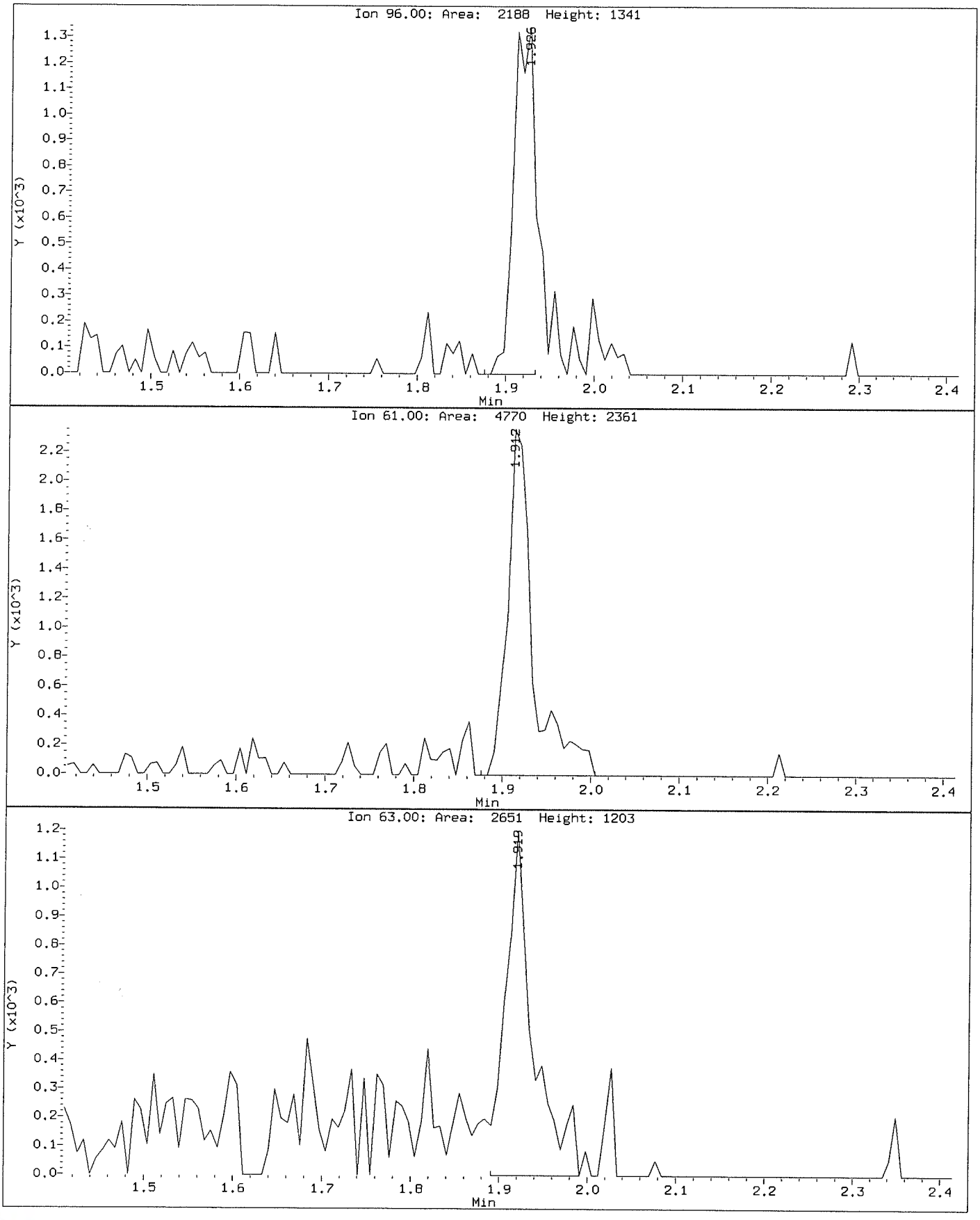
Data File: \\NAHSTWS005\Target\chem\voa6.i\X210402.b\Before6\X040203.D
Injection Date: 02-APR-2021 11:35
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: 1,1-Dichloroethene
CAS Number: 75-35-4



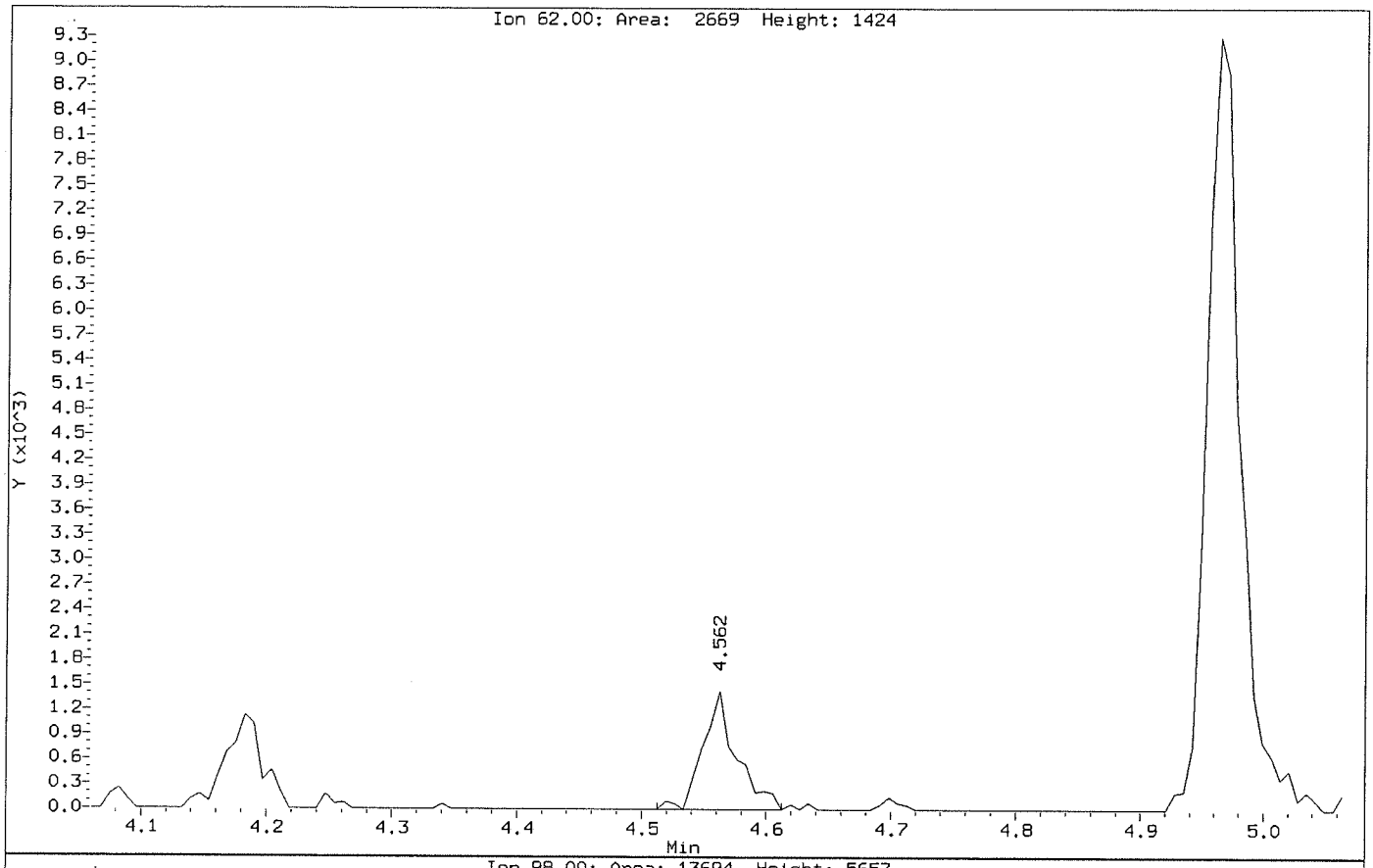
Data File: \\NAHSTWS005\Target\chem\voa6.i\X210402.b\X040203.D
Injection Date: 02-APR-2021 11:35
Instrument: voa6.i
Client Sample ID: VSTD000.5

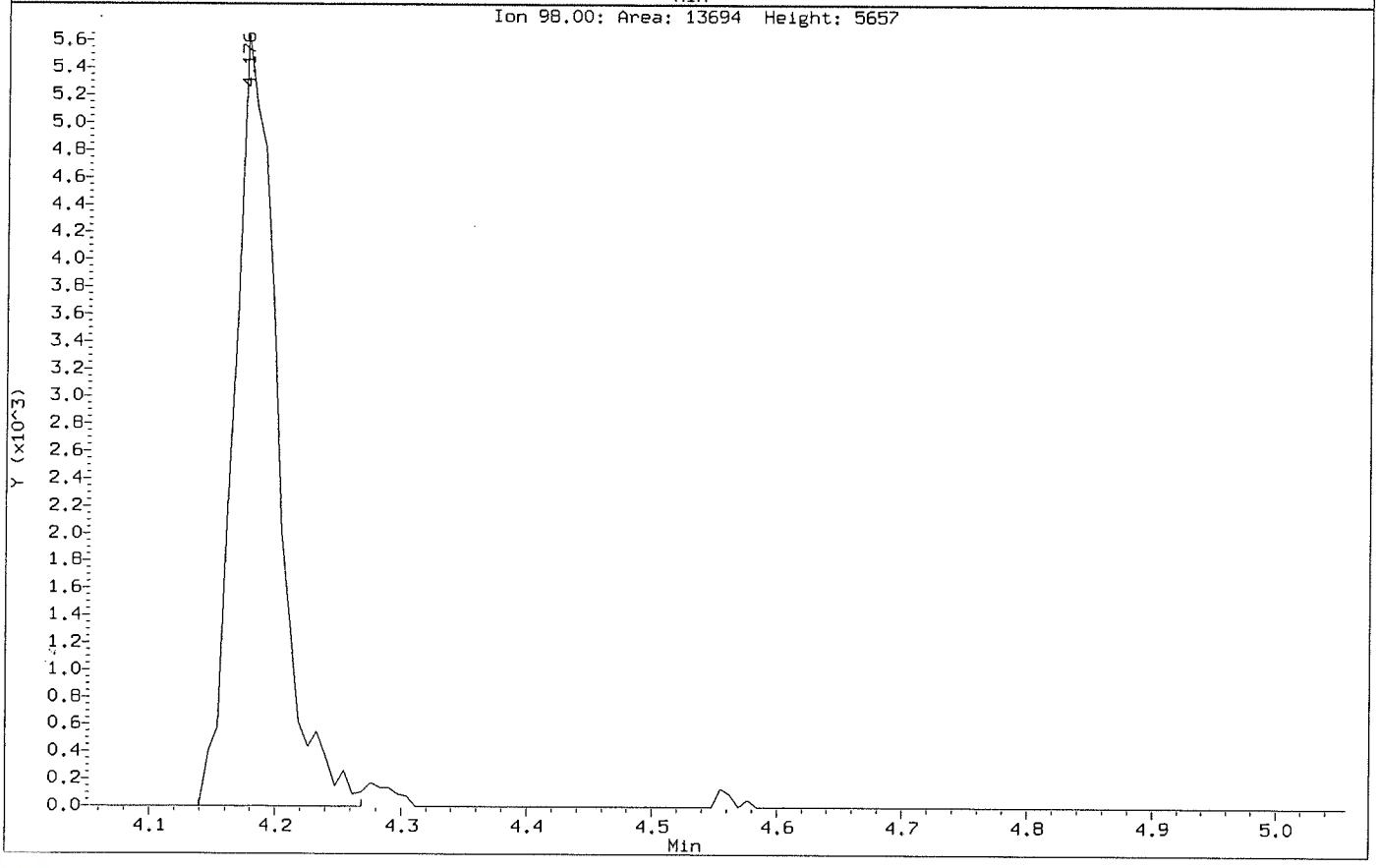
Compound: 1,1-Dichloroethene
CAS Number: 75-35-4



Data File: \\NAHSTWS005\Target\chem\voa6.i\X210402.b\Before6\X040203.D
Injection Date: 02-APR-2021 11:35
Instrument: voa6.i
Client Sample ID: VSTD000.5

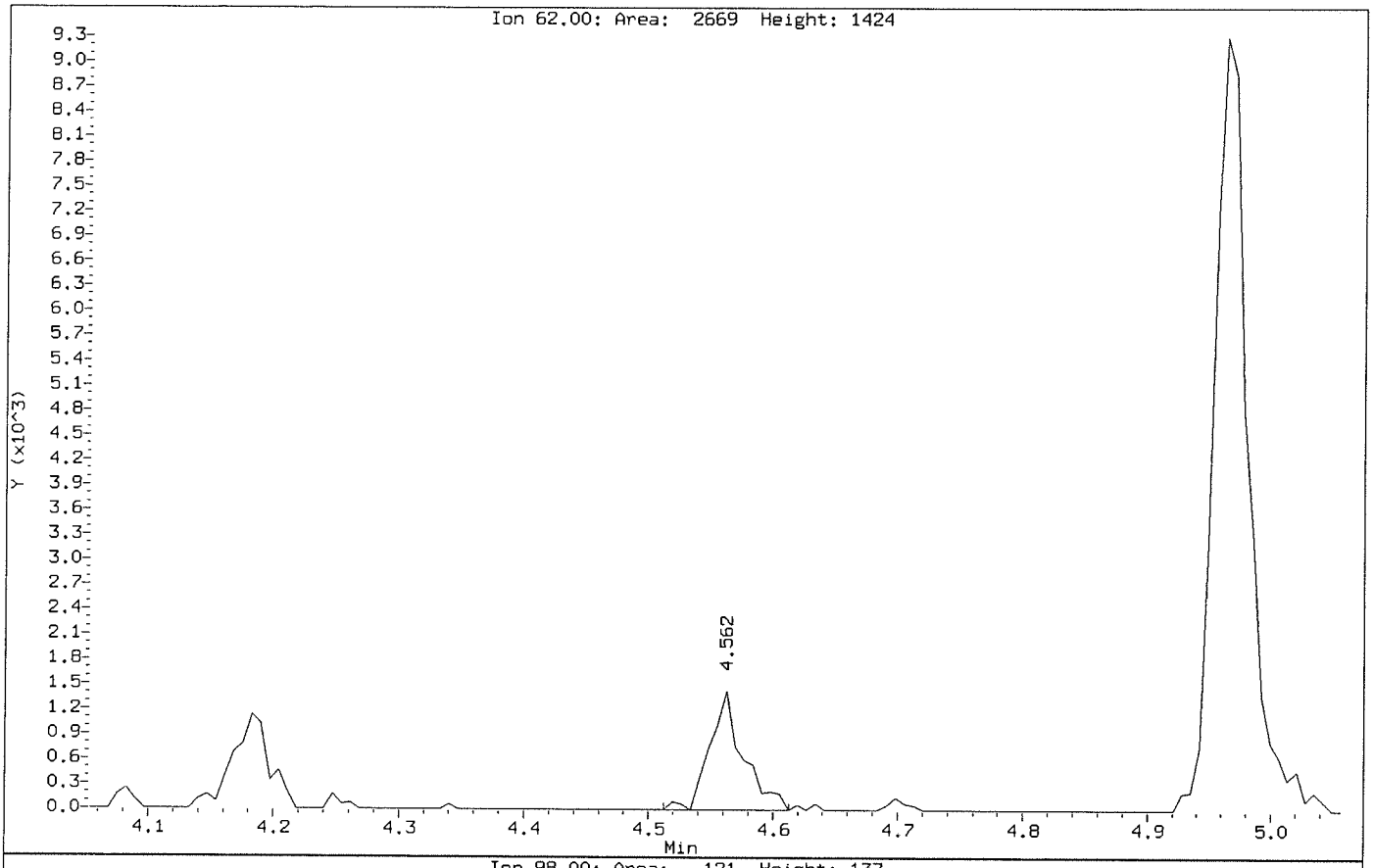
Compound: 1,2-Dichloroethane
CAS Number: 107-06-2

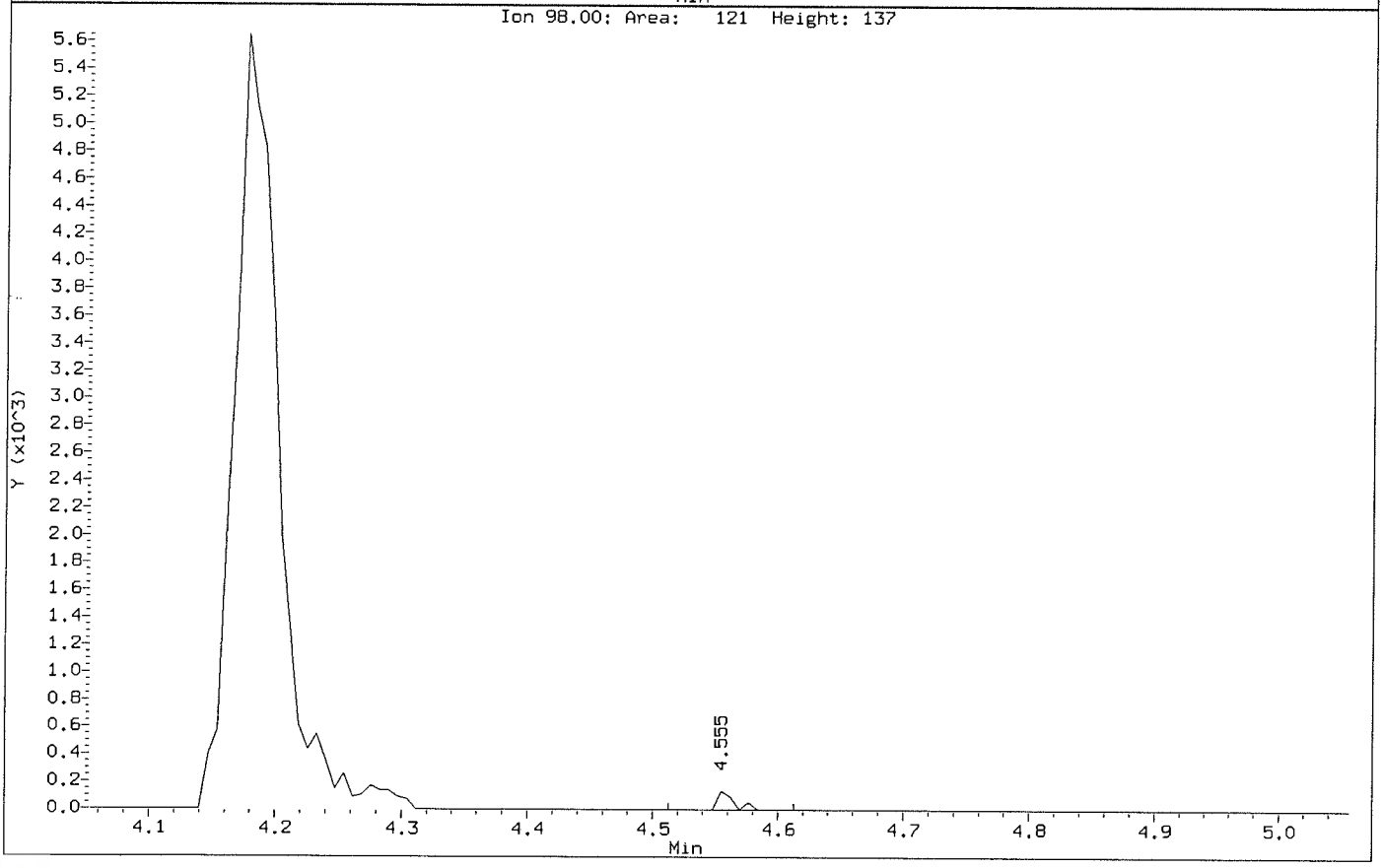




Data File: \\NAHSTWS005\Target\chem\voa6.i\X210402.b\X040203.D
Injection Date: 02-APR-2021 11:35
Instrument: voa6.i
Client Sample ID: VSTD000.5

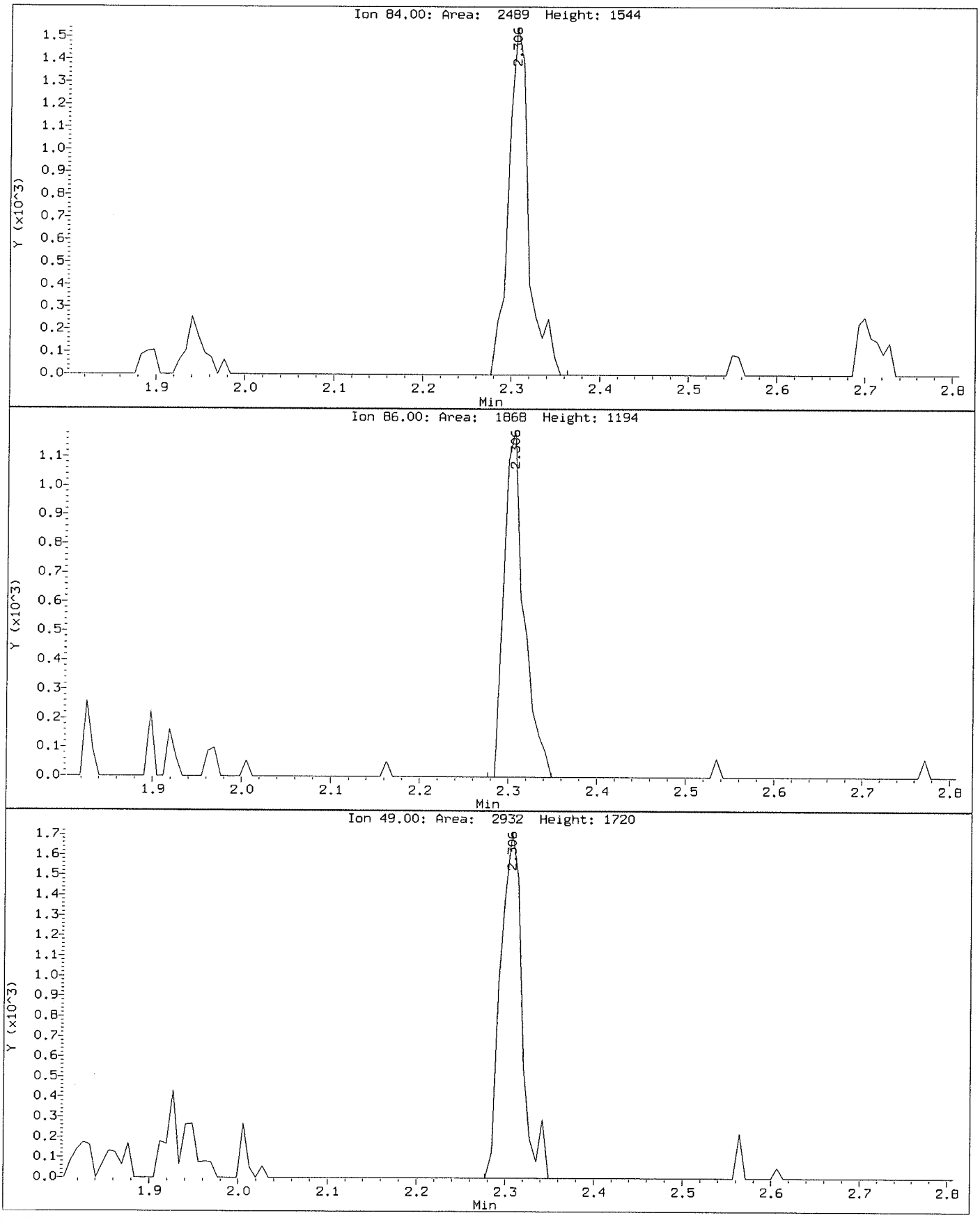
Compound: 1,2-Dichloroethane
CAS Number: 107-06-2





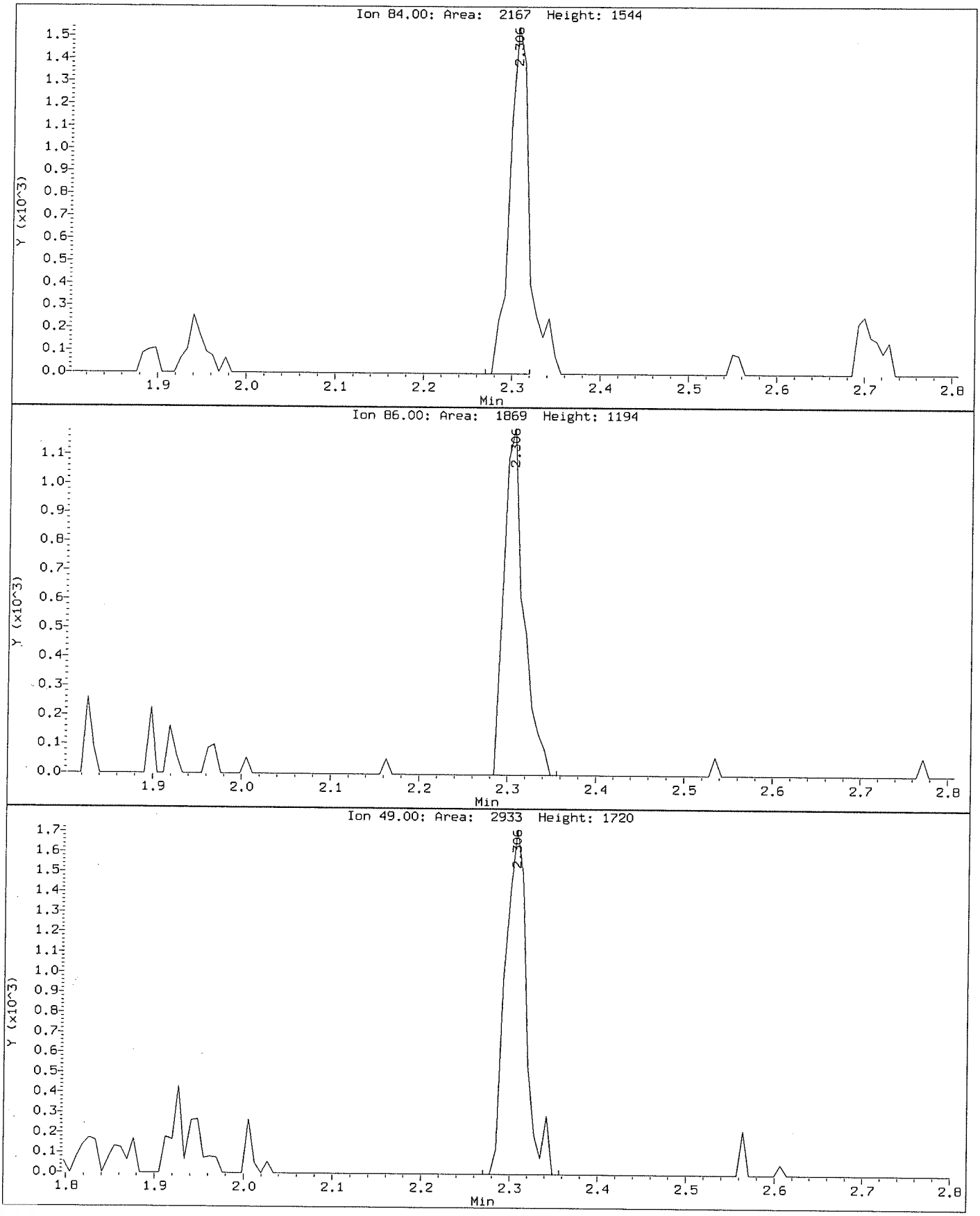
Data File: \\NAHSTWS005\Target\chem\voa6.i\X210402.b\Before6\X040203.D
Injection Date: 02-APR-2021 11:35
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Methylene Chloride
CAS Number: 75-09-2



Data File: \\NAHSTWS005\Target\chem\voa6.i\X210402.b\X040203.D
Injection Date: 02-APR-2021 11:35
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Methylene Chloride
CAS Number: 75-09-2



Data File: \\NAHSTWS005\Target\chem\voa6.i\X210402.b\X040204.D Page 1
Report Date: 04-May-2021 11:39

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X210402.b\X040204.D
Lab Smp Id: VSTD001 Client Smp ID: VSTD001
Inj Date : 02-APR-2021 11:56
Operator : PC Inst ID: voa6.i
Smp Info : VSTD001;VSTD001;1;3;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X210402.b\8260W.m
Meth Date : 04-May-2021 11:39 voa6.i Quant Type: ISTD
Cal Date : 02-APR-2021 11:35 Cal File: X040203.D
Als bottle: 5 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBI_short1.sub
Target Version: 4.14
Processing Host: NAHSTW7066

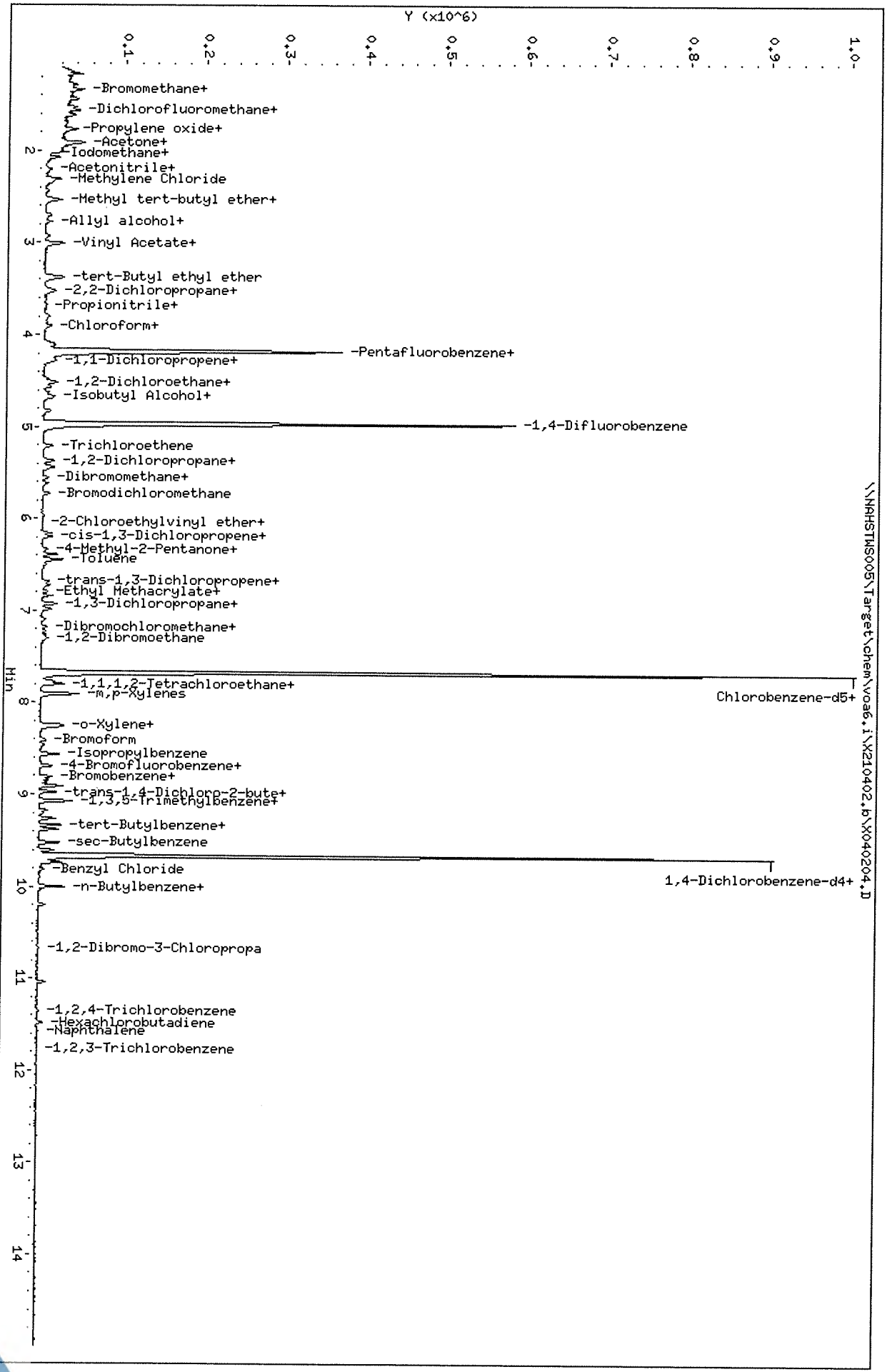
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	278422	50.0000	
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	467952	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	425730	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	185938	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	3862	1.00000	1.60
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	4438	1.00000	1.60
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	12313	1.00000	2.93
$ 69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	4647	1.00000	2.75
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	3024	1.00000	1.22(a)
11 1,1-Dichloroethene	96	1.919	1.919	(0.459)	4199	1.00000	1.05(aM)
33 1,2-Dichloroethane	62	4.562	4.562	(0.919)	5931	1.00000	1.19(aM)
27 cis-1,2-Dichloroethene	96	3.538	3.538	(0.846)	3959	1.00000	1.16
17 Methylene Chloride	84	2.298	2.298	(0.550)	4155	1.00000	2.81(aM)
38 Trichloroethene	130	5.207	5.207	(1.049)	3757	1.00000	1.17(M)
5 Vinyl Chloride	62	1.145	1.145	(0.274)	5253	1.00000	1.25(M)

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.

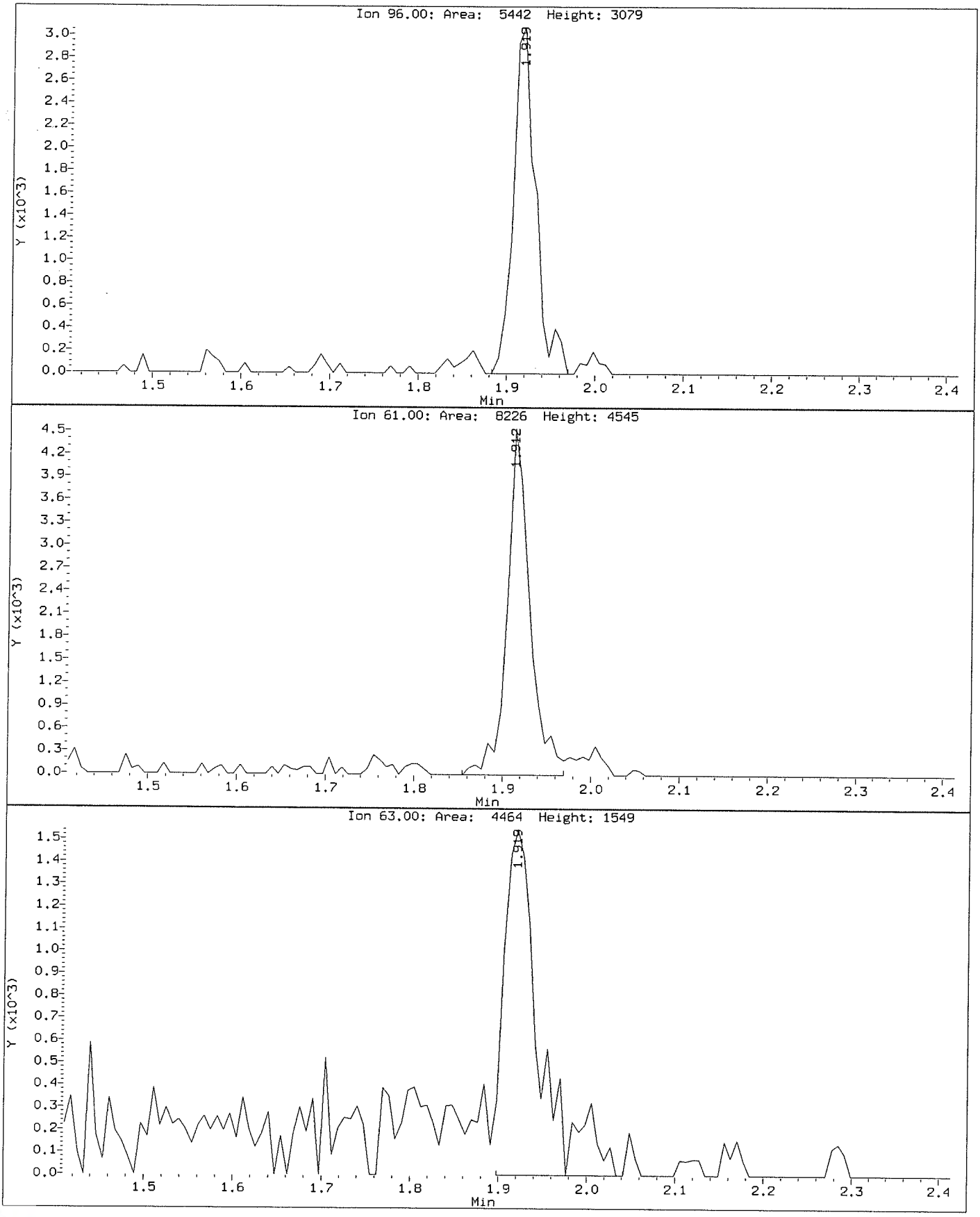


Data File: \\NAHSTWS005\Target\chem\voa6.i\X210402.b\X040204.D
Date : 02-APR-2021 11:56
Client ID: VSTD001
Sample Info: VSTD001;VSTD001;1;3;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

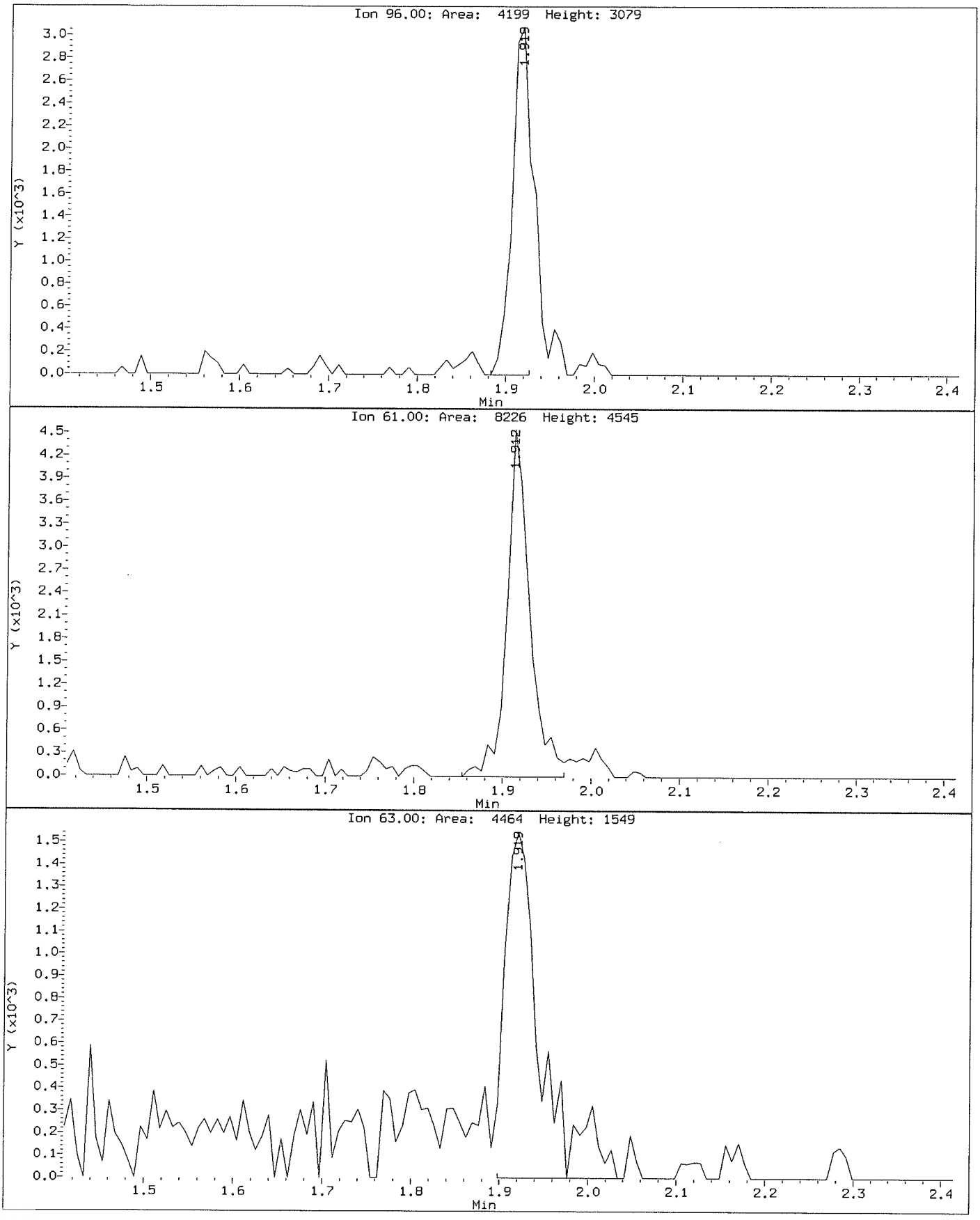
Data File: \\NAHSTWS005\Target\chem\voa6.i\X210402.b\Before6\X040204.D
Injection Date: 02-APR-2021 11:56
Instrument: voa6.i
Client Sample ID: VSTD001

Compound: 1,1-Dichloroethene
CAS Number: 75-35-4



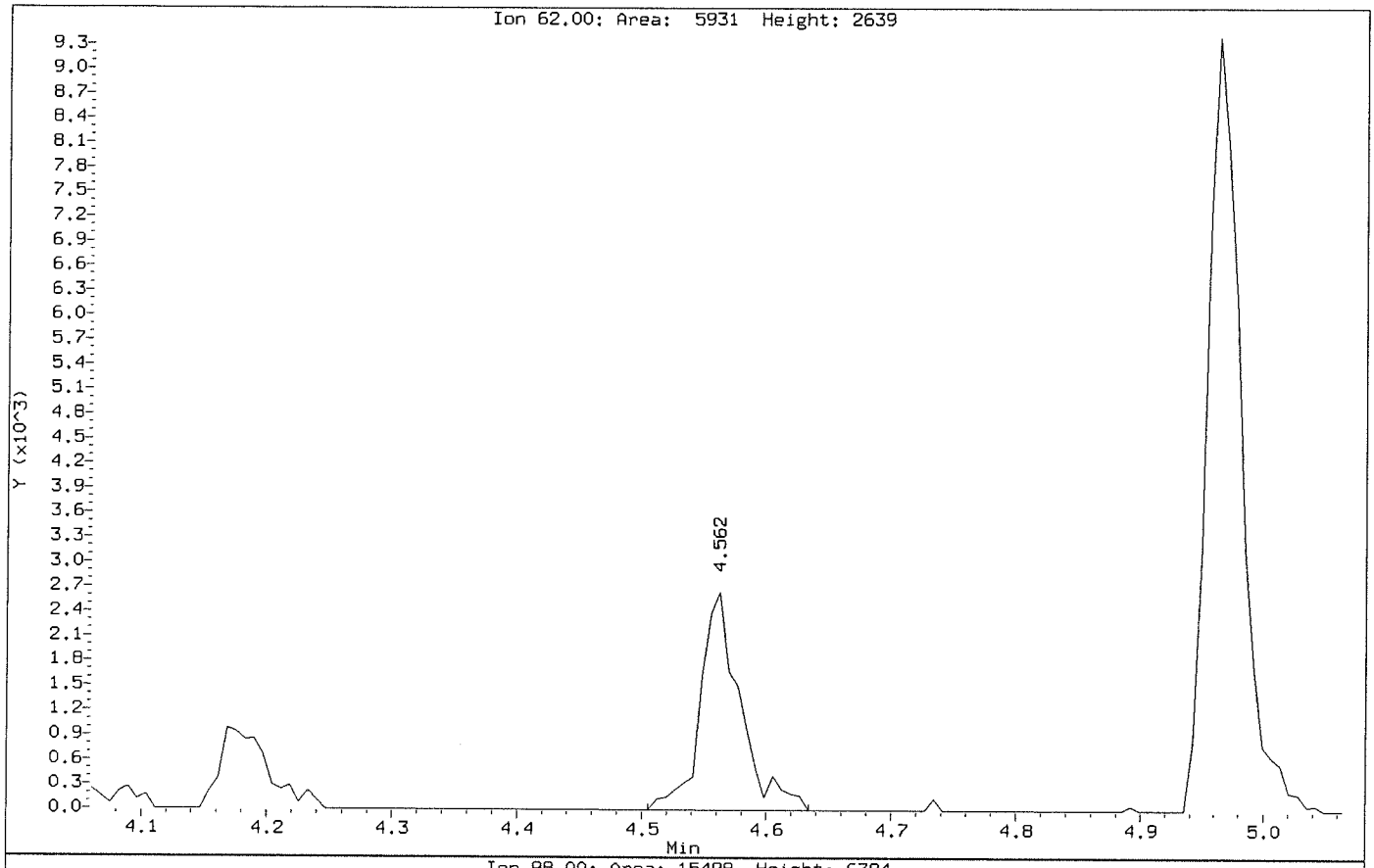
Data File: \\NAHSTWS005\Target\chem\voa6.i\X210402.b\X040204.D
Injection Date: 02-APR-2021 11:56
Instrument: voa6.i
Client Sample ID: VSTD001

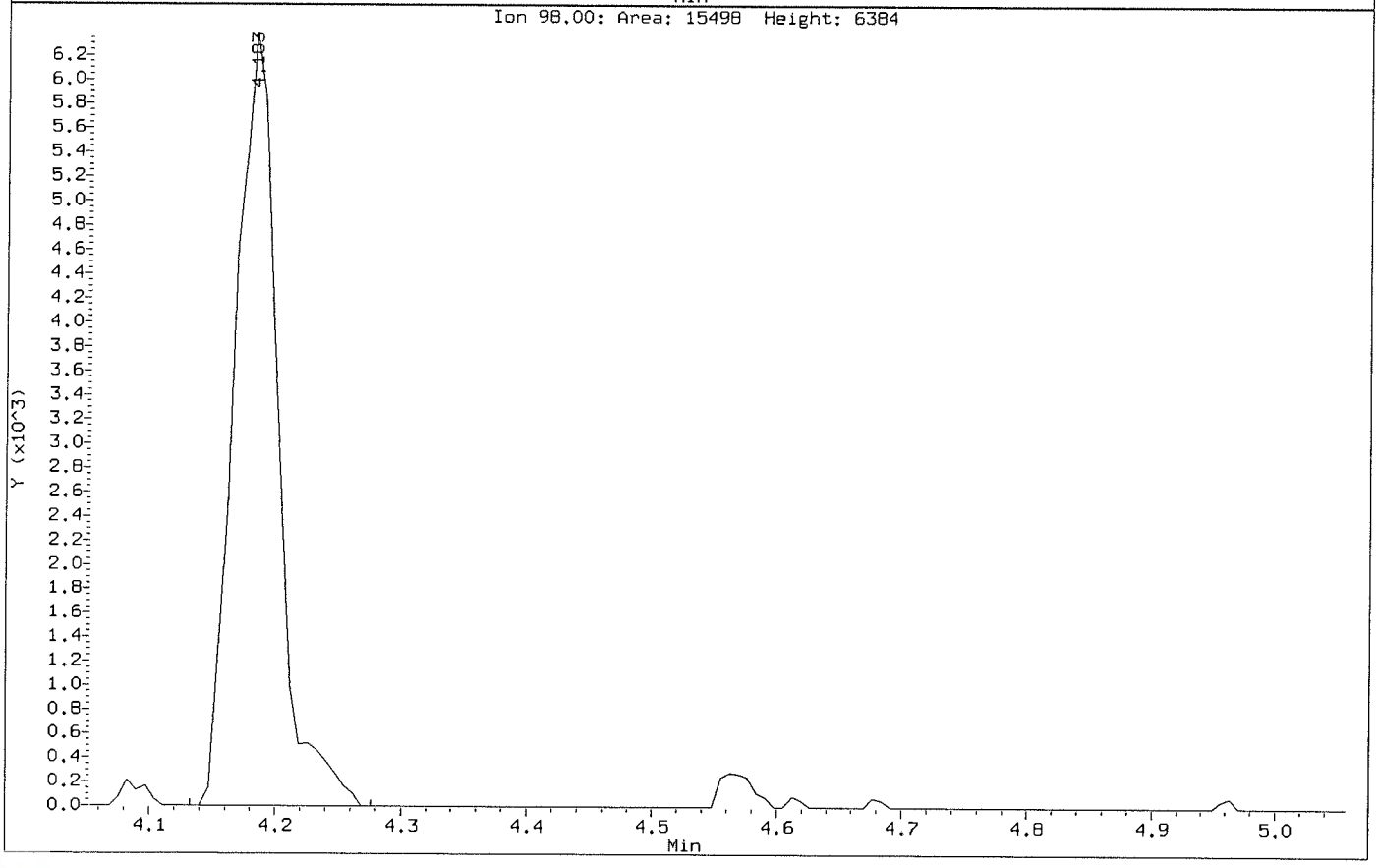
Compound: 1,1-Dichloroethene
CAS Number: 75-35-4



Data File: \\NAHSTWS005\Target\chem\voa6.i\X210402.b\Before6\X040204.D
Injection Date: 02-APR-2021 11:56
Instrument: voa6.i
Client Sample ID: VSTD001

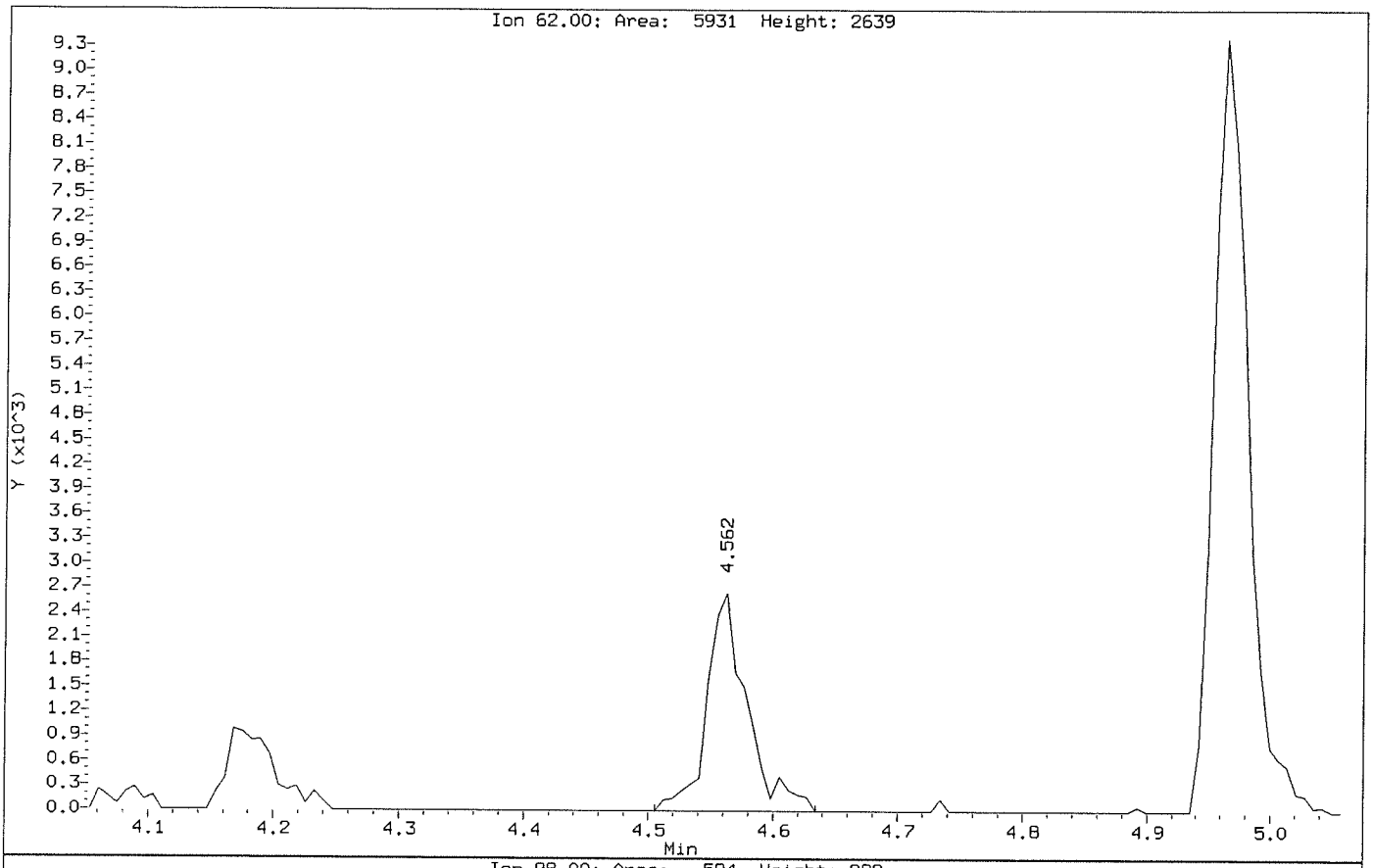
Compound: 1,2-Dichloroethane
CAS Number: 107-06-2

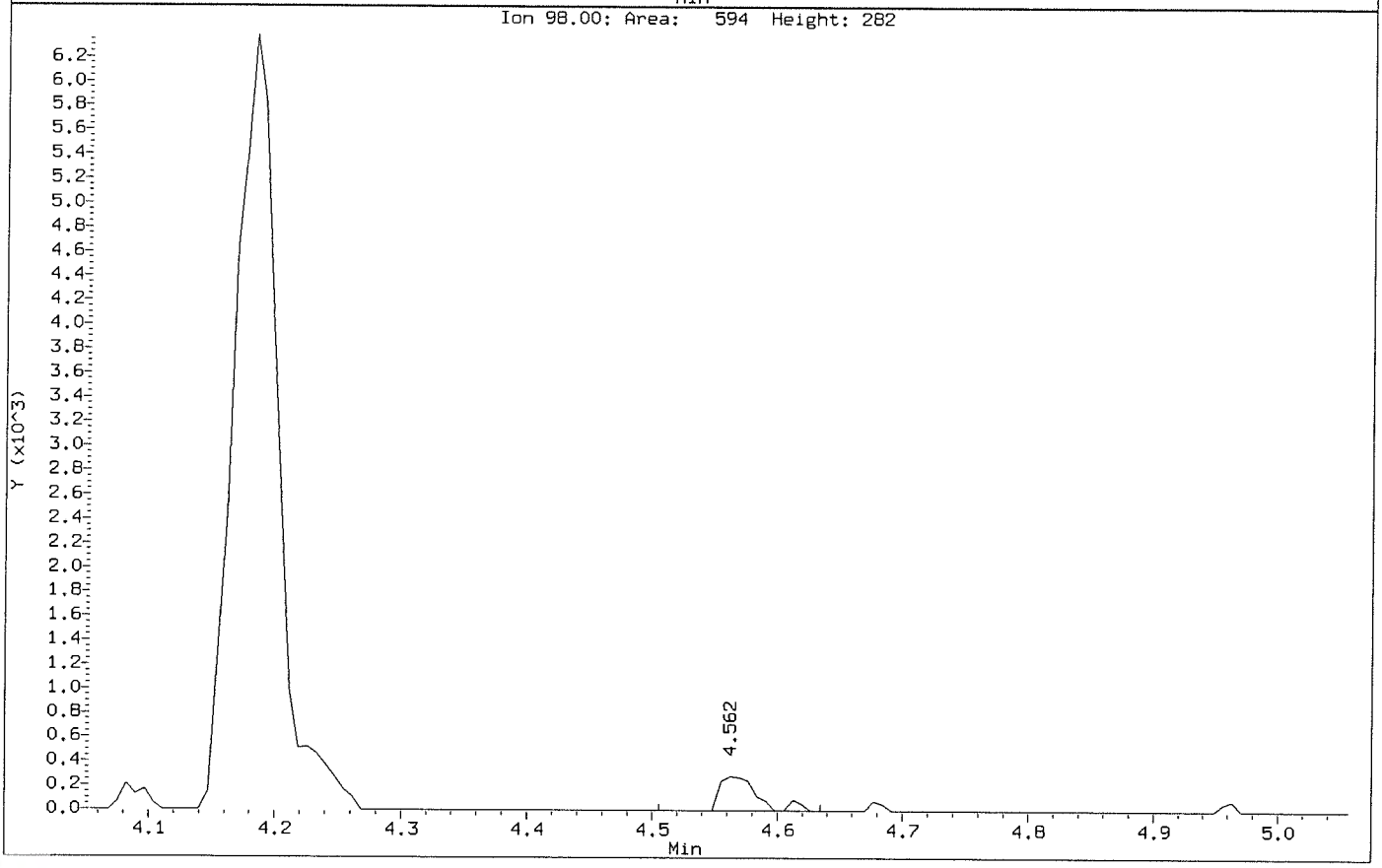




Data File: \\NAHSTWS005\Target\chem\voa6.i\X210402.b\X040204.D
Injection Date: 02-APR-2021 11:56
Instrument: voa6.i
Client Sample ID: VSTD001

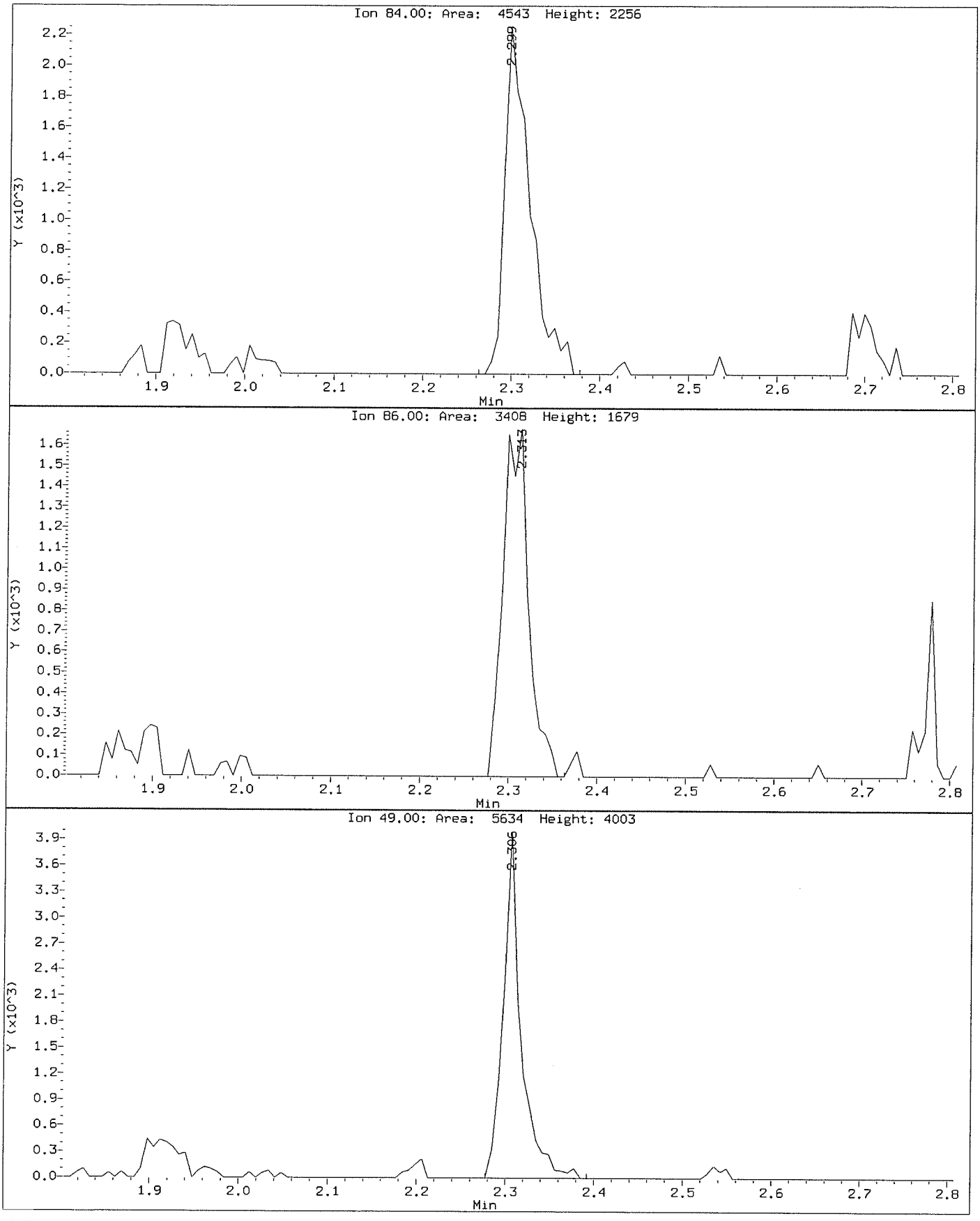
Compound: 1,2-Dichloroethane
CAS Number: 107-06-2





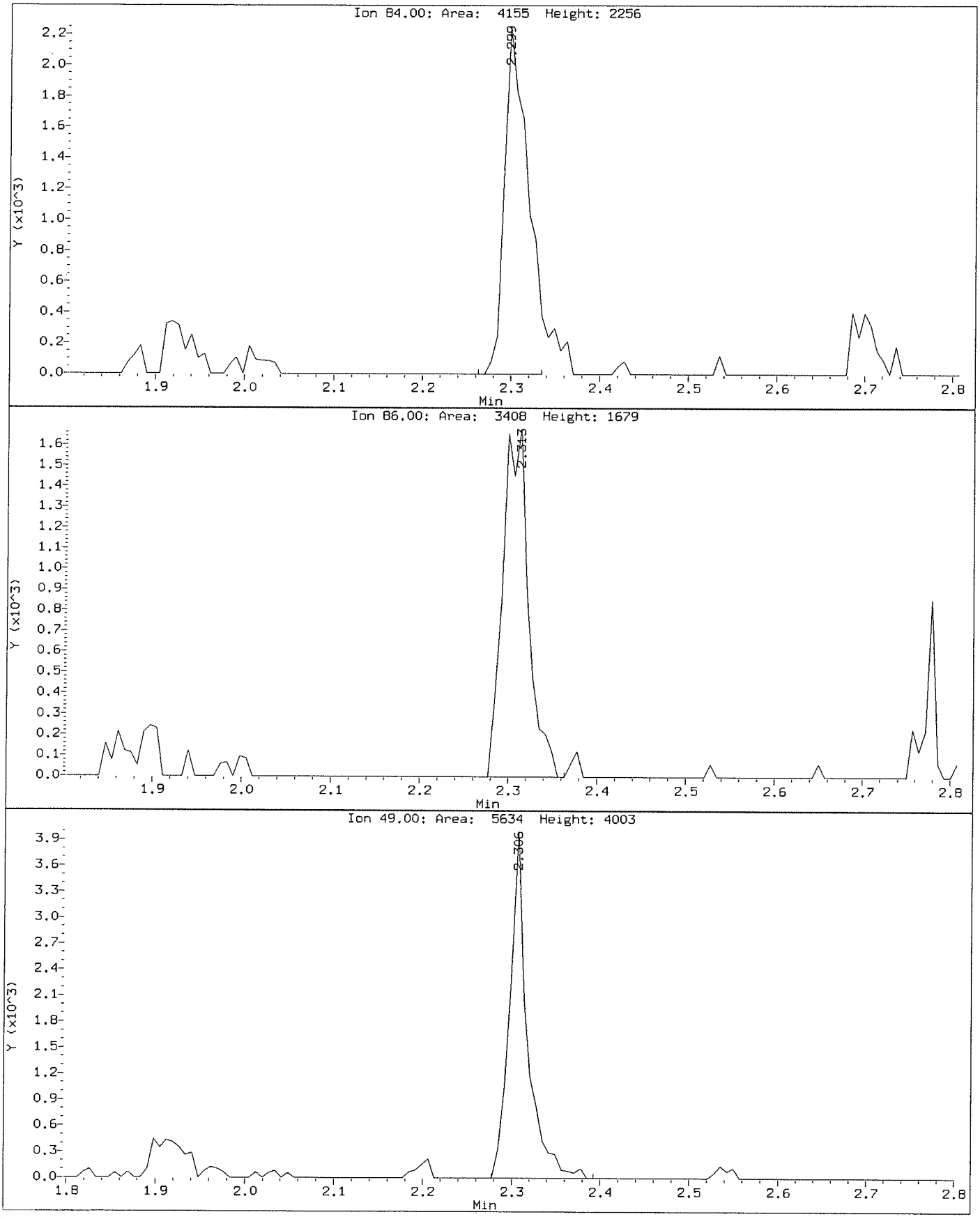
Data File: \\NAHSTWS005\Target\chem\voa6.i\X210402.b\Before6\X040204.D
Injection Date: 02-APR-2021 11:56
Instrument: voa6.i
Client Sample ID: VSTD001

Compound: Methylene Chloride
CAS Number: 75-09-2



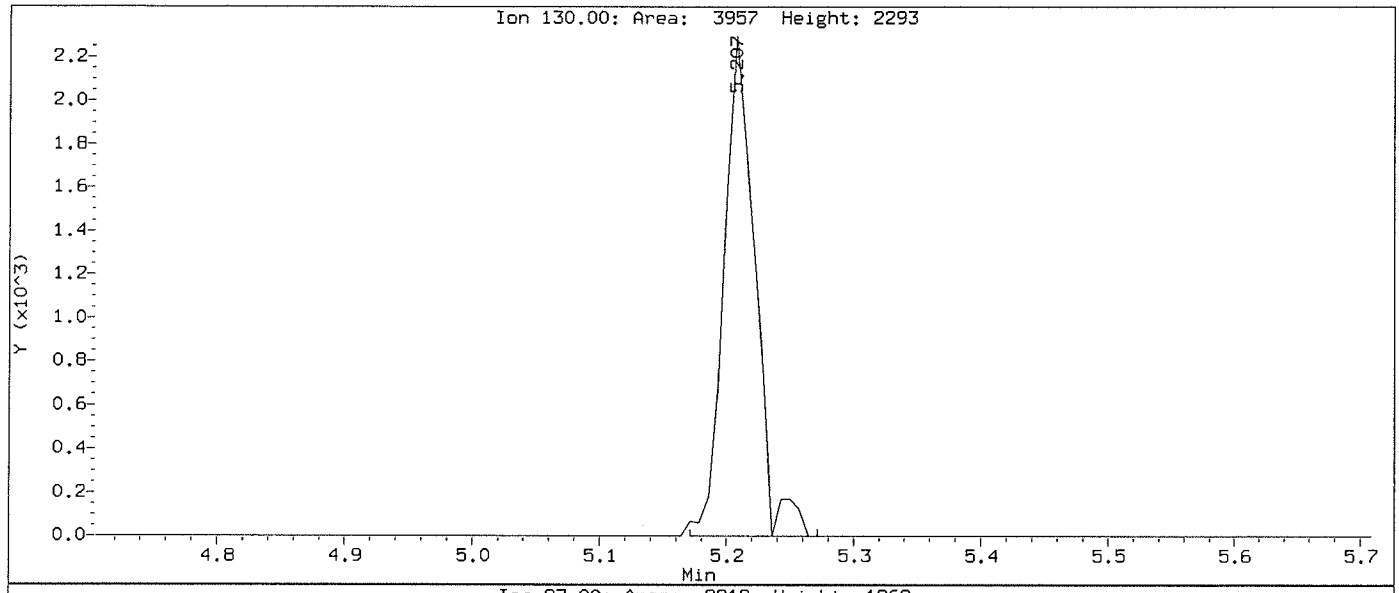
Data File: \\NAHSTWS005\Target\chem\voa6.i\X210402.b\X040204.D
Injection Date: 02-APR-2021 11:56
Instrument: voa6.i
Client Sample ID: VSTD001

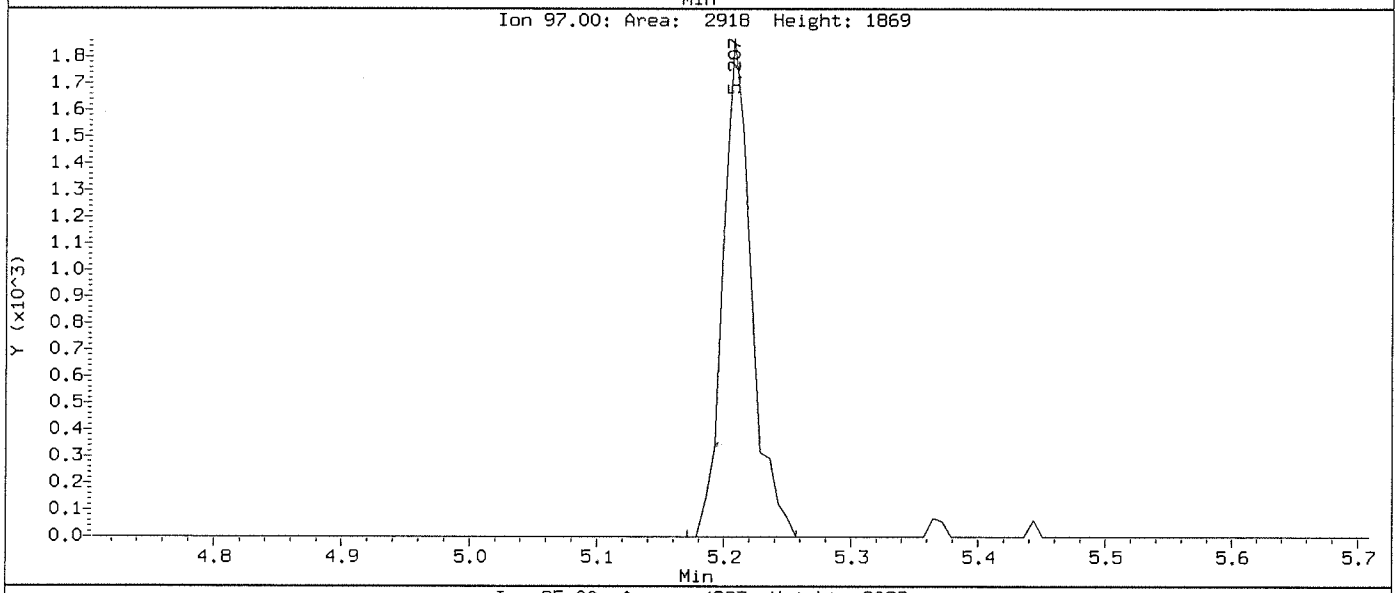
Compound: Methylene Chloride
CAS Number: 75-09-2

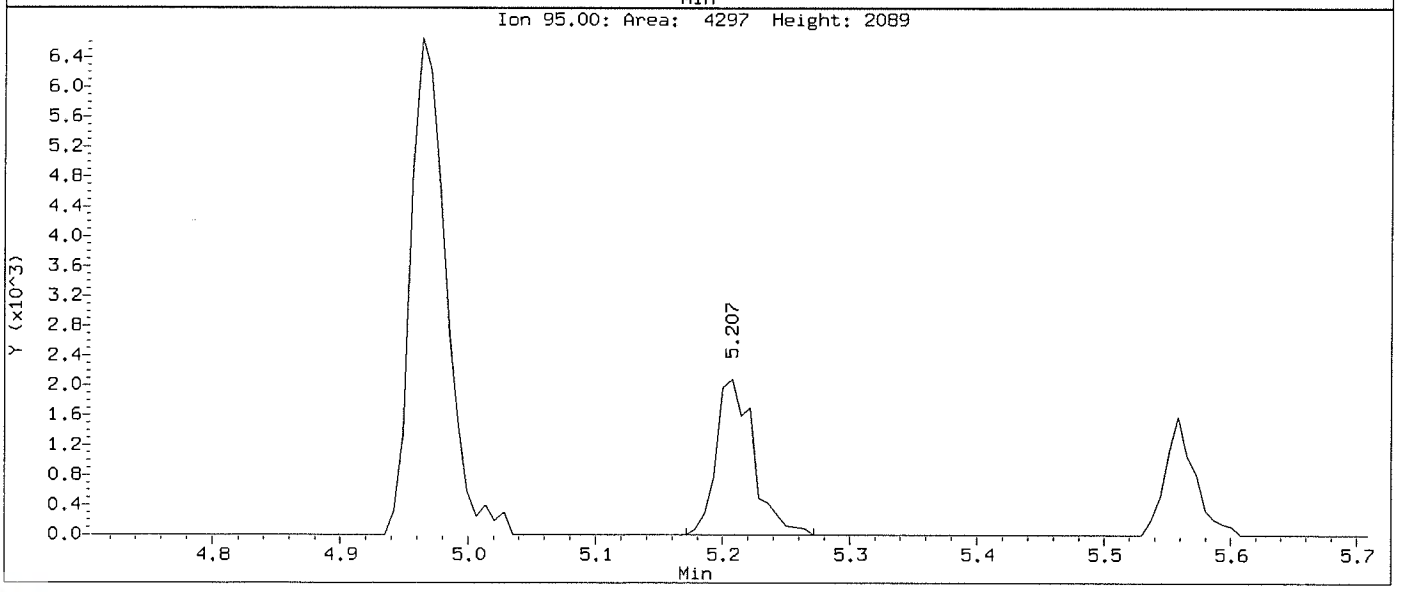


Data File: \\NAHSTWS005\Target\chem\voa6.i\X210402.b\Before6\X040204.D
Injection Date: 02-APR-2021 11:56
Instrument: voa6.i
Client Sample ID: VSTD001

Compound: Trichloroethene
CAS Number: 79-01-6

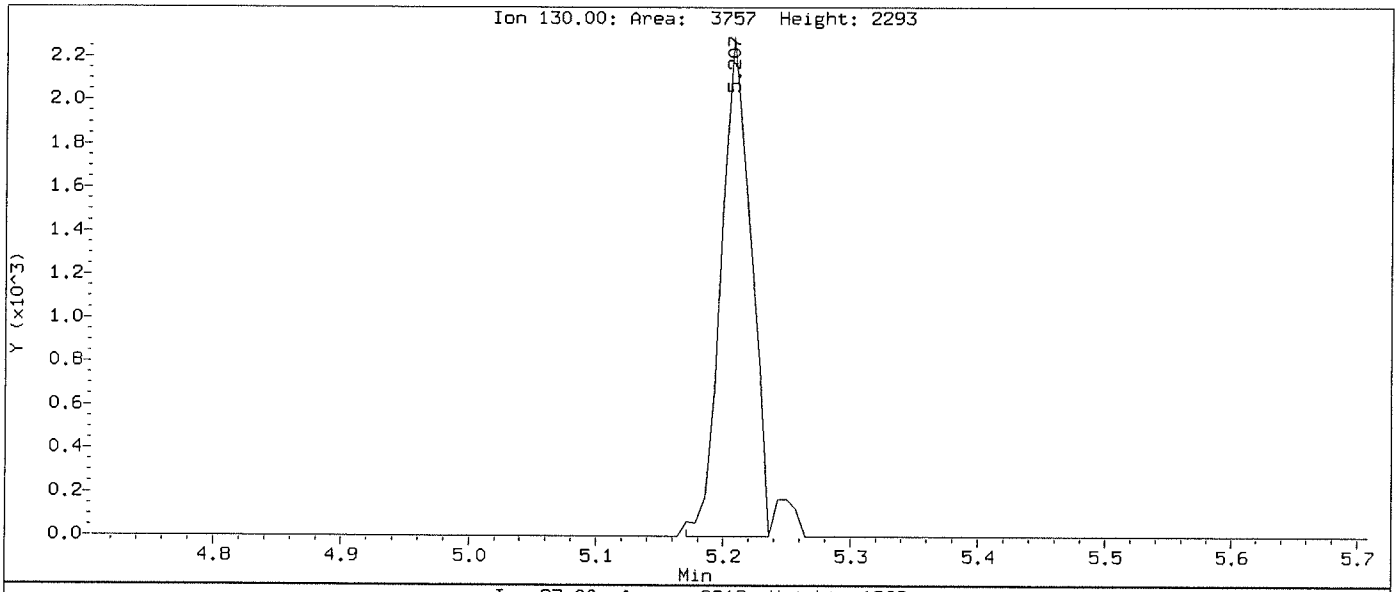


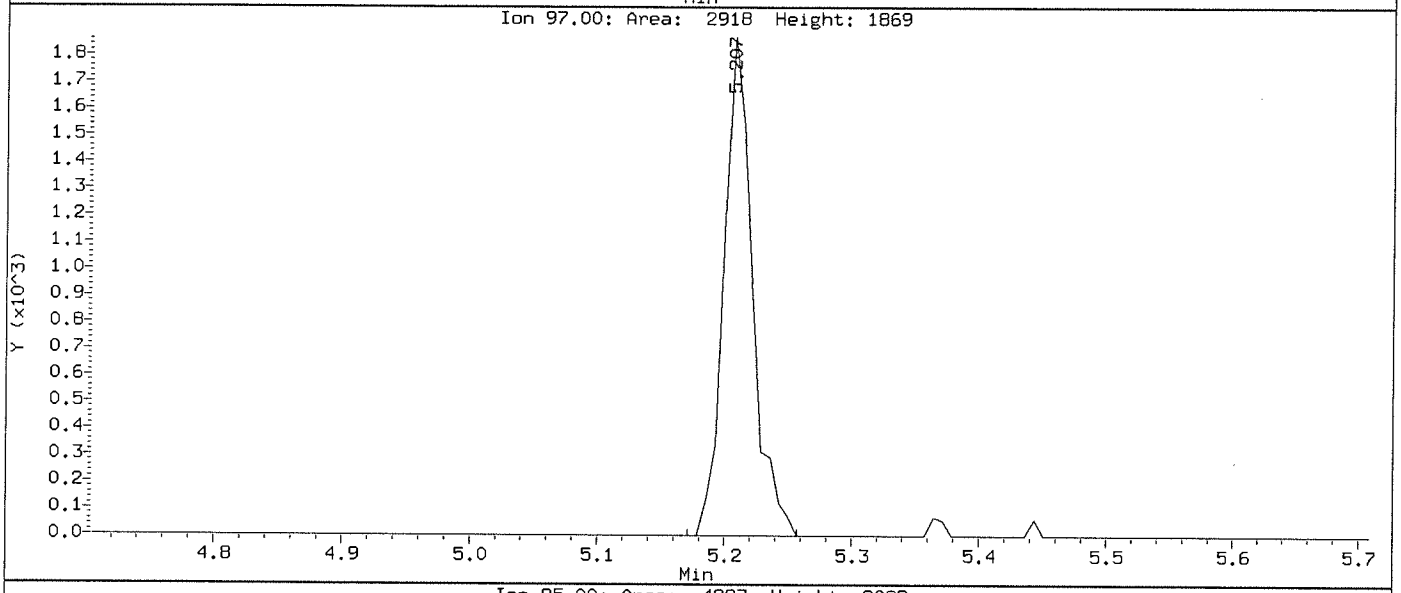


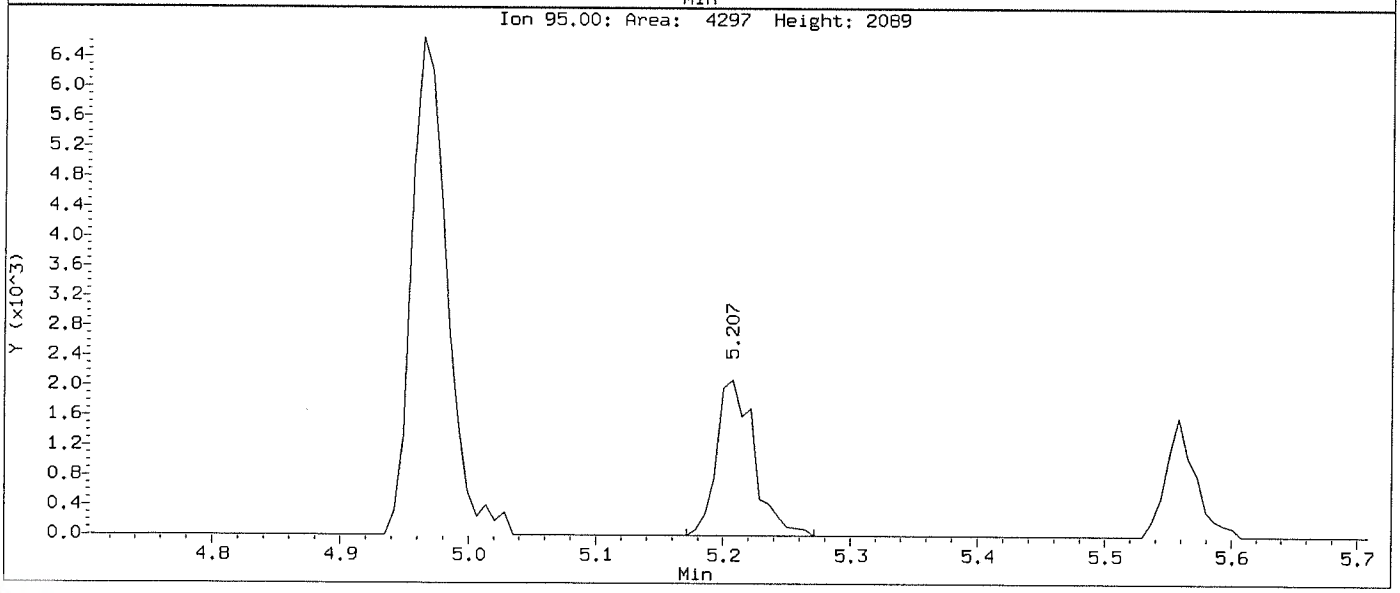


Data File: \\NAHSTWS005\Target\chem\voa6.i\X210402.b\X040204.D
Injection Date: 02-APR-2021 11:56
Instrument: voa6.i
Client Sample ID: VSTD001

Compound: Trichloroethene
CAS Number: 79-01-6

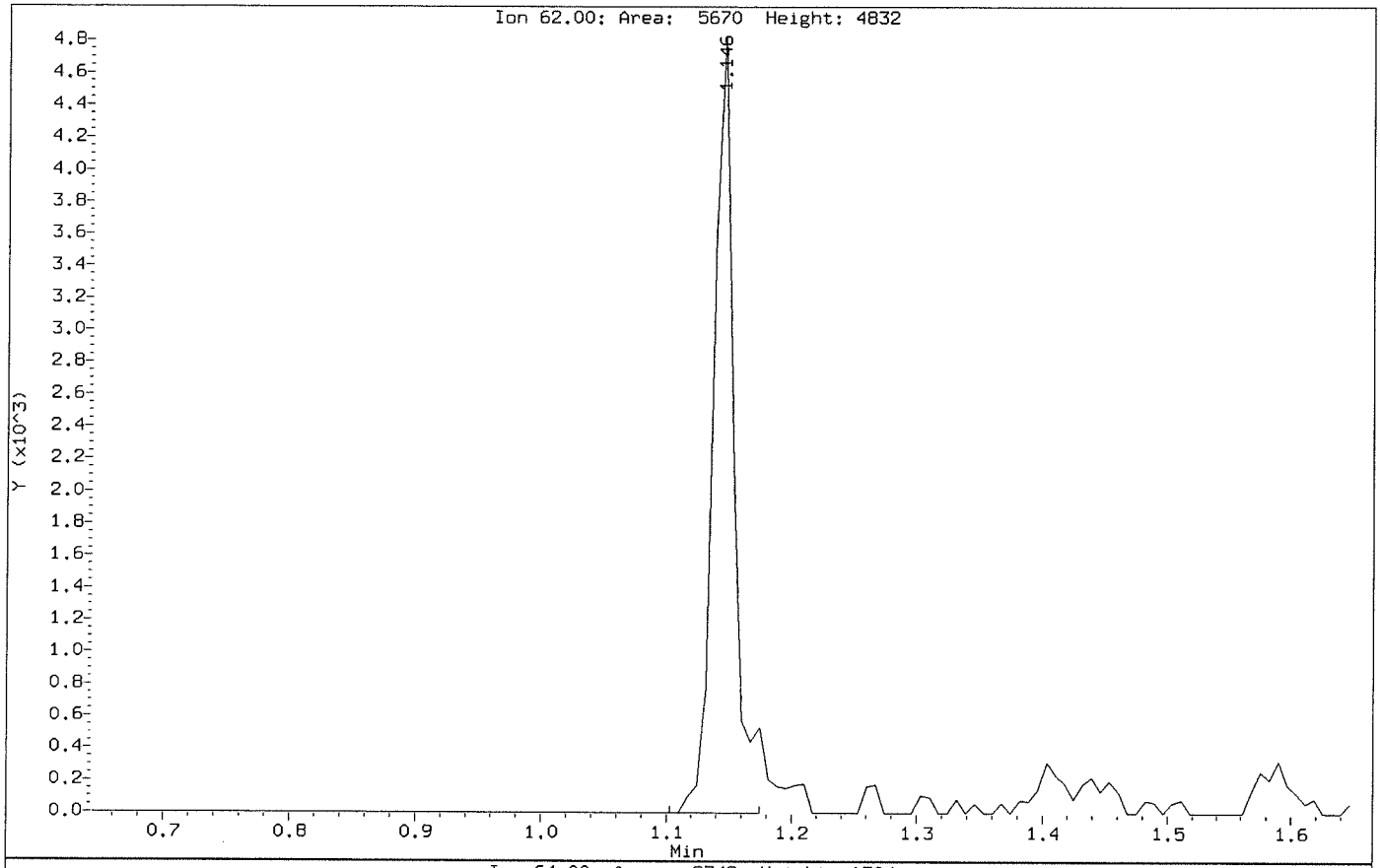


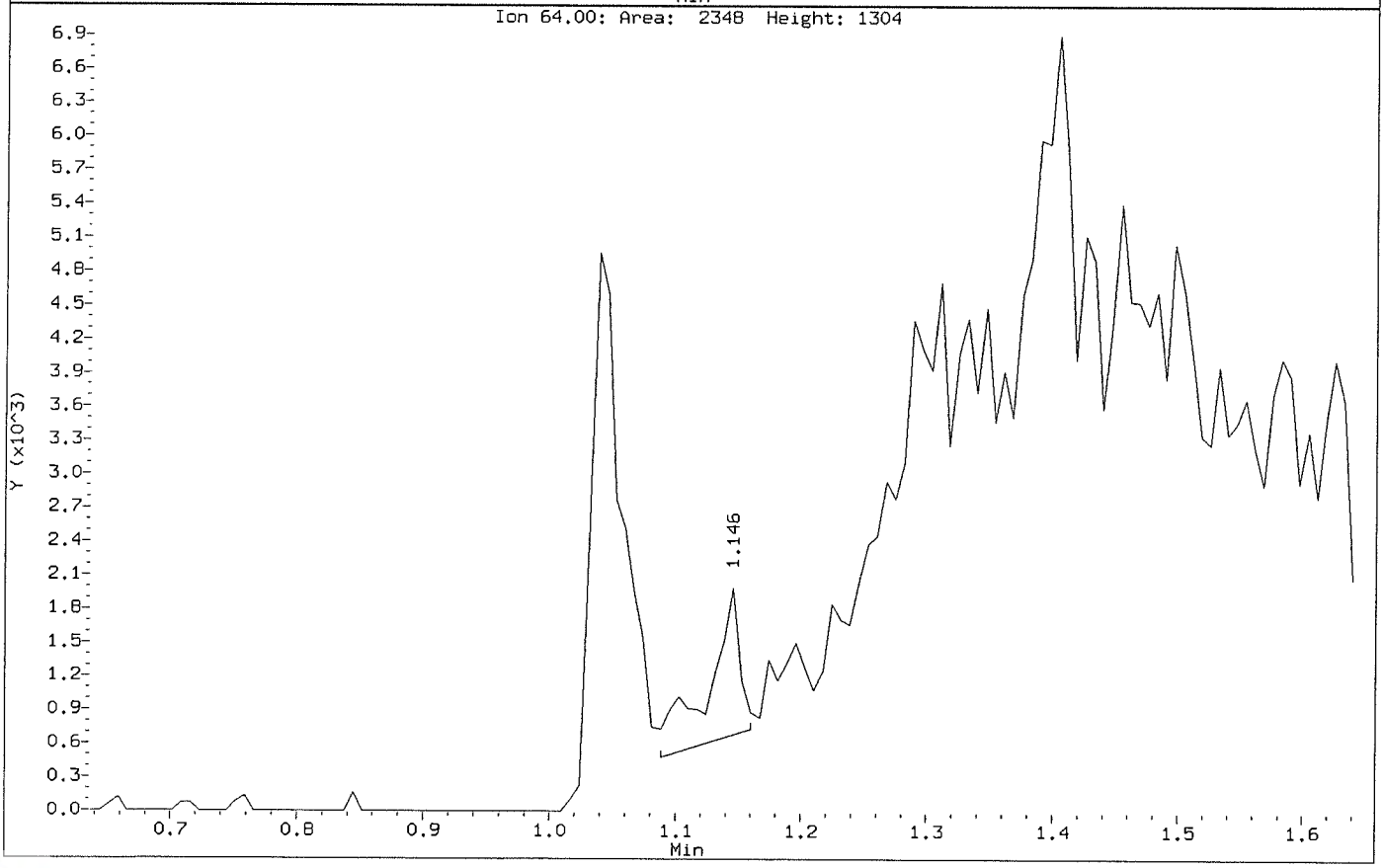




Data File: \\NAHSTWS005\Target\chem\voa6.i\X210402.b\Before6\X040204.D
Injection Date: 02-APR-2021 11:56
Instrument: voa6.i
Client Sample ID: VSTD001

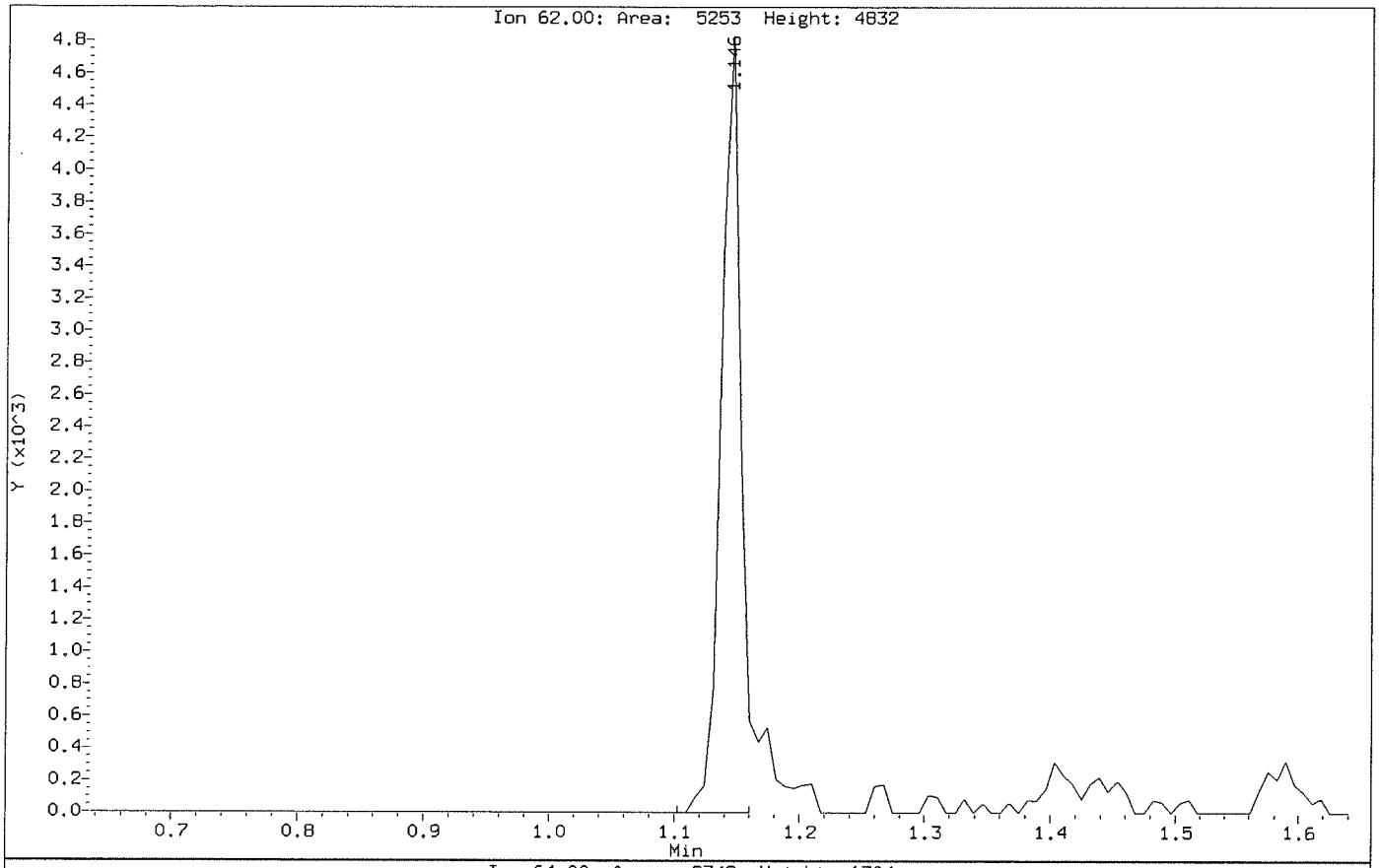
Compound: Vinyl Chloride
CAS Number: 75-01-4

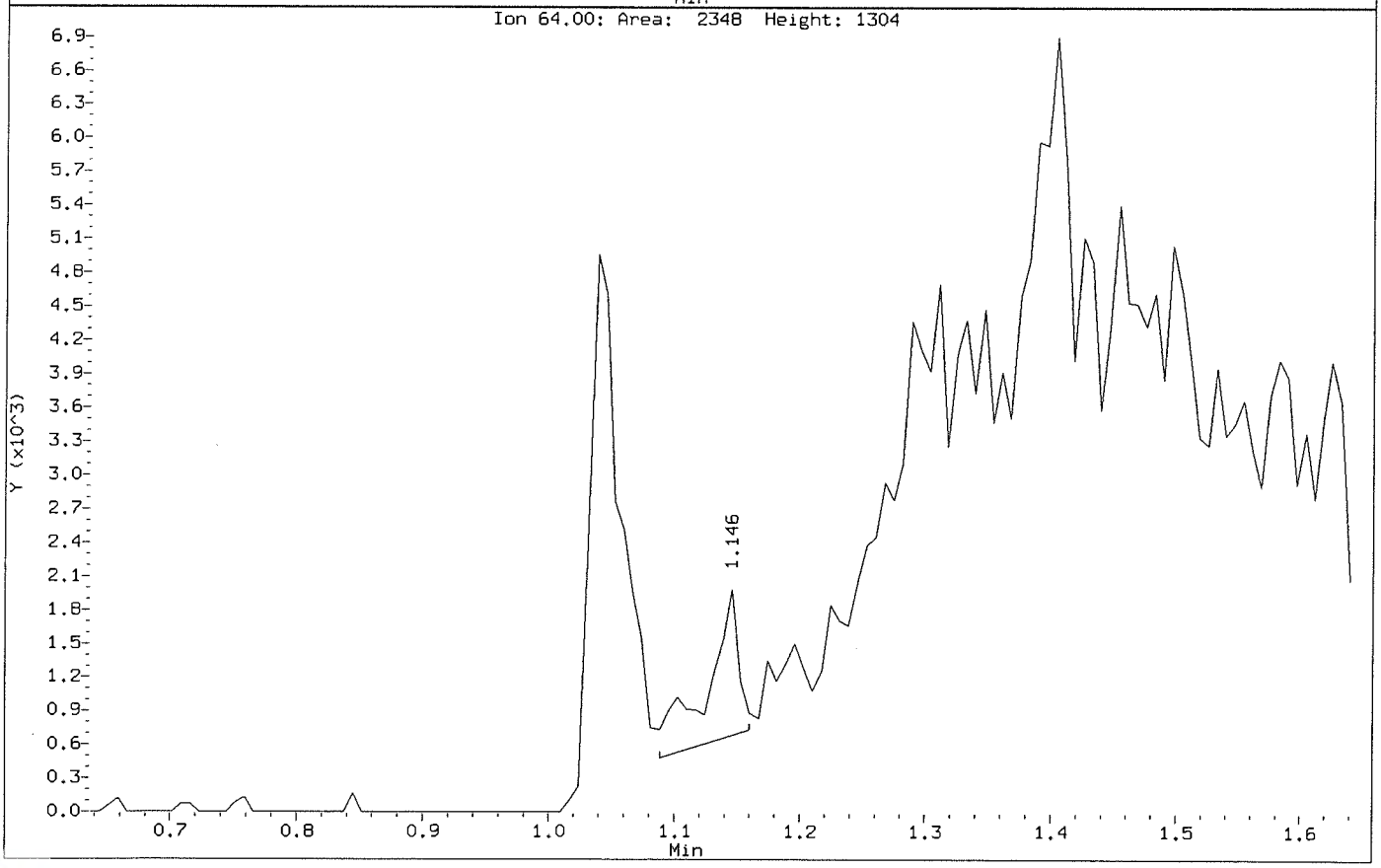




Data File: \\NAHSTWS005\Target\chem\voa6.i\X210402.b\X040204.D
Injection Date: 02-APR-2021 11:56
Instrument: voa6.i
Client Sample ID: VSTD001

Compound: Vinyl Chloride
CAS Number: 75-01-4





Data File: \\NAHSTWS005\Target\chem\voa6.i\X210402.b\X040205.D Page 1
Report Date: 04-May-2021 11:39

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X210402.b\X040205.D
Lab Smp Id: VSTD002 Client Smp ID: VSTD002
Inj Date : 02-APR-2021 12:17
Operator : PC Inst ID: voa6.i
Smp Info : VSTD002;VSTD002;1;4;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X210402.b\8260W.m
Meth Date : 04-May-2021 11:39 voa6.i Quant Type: ISTD
Cal Date : 02-APR-2021 11:56 Cal File: X040204.D
Als bottle: 6 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBI_short1.sub
Target Version: 4.14
Processing Host: NAHSTW7066

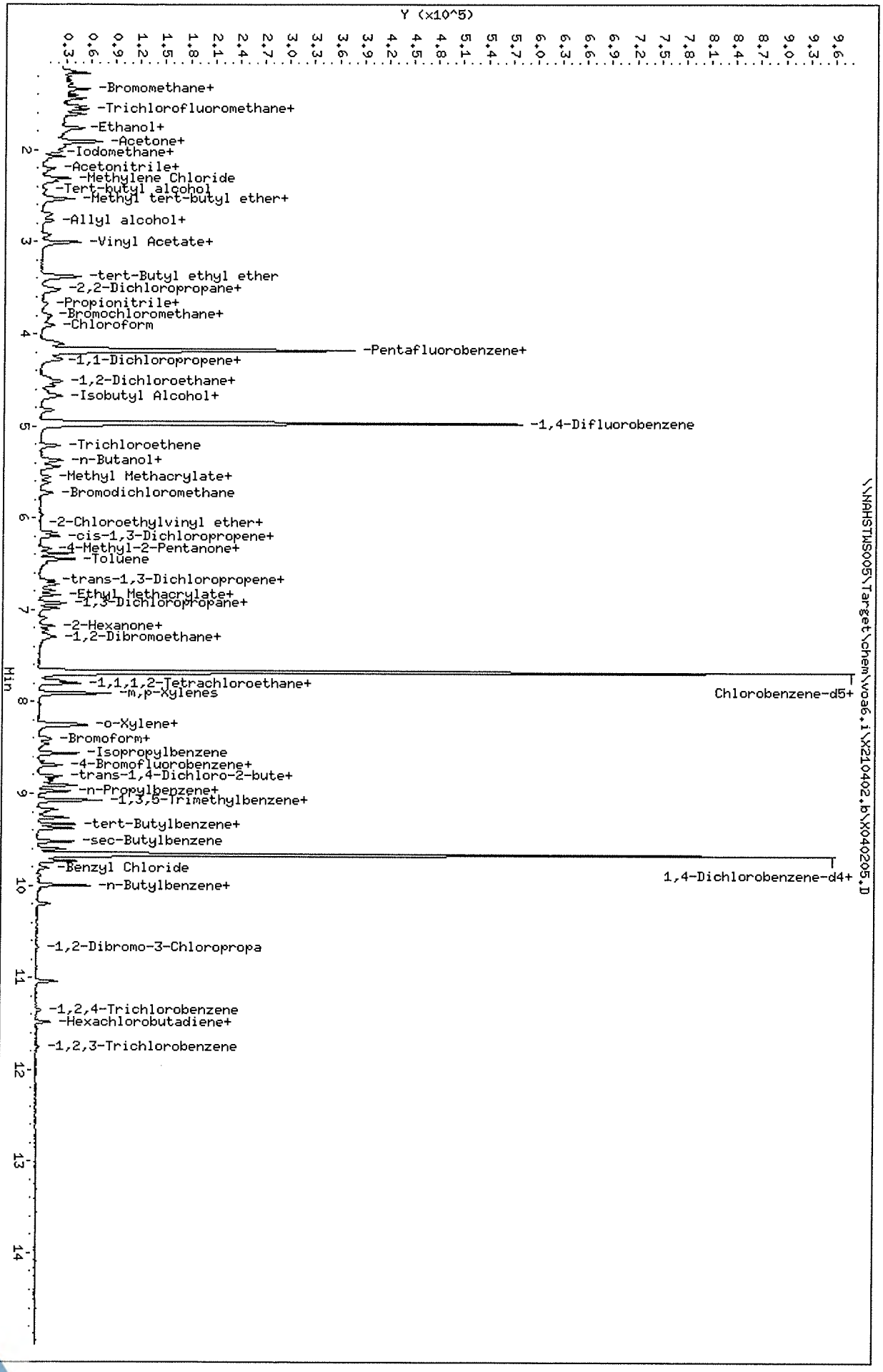
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)
*	1 Pentafluorobenzene	168	4.182	4.182	(1.000)	278535	50.0000	
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	469682	50.0000	
*	47 Chlorobenzene-d5	117	7.670	7.670	(1.000)	424642	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	187429	50.0000	
$	30 Dibromofluoromethane	113	4.103	4.103	(0.981)	6870	2.00000	2.50
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	7506	2.00000	2.37
$	48 Toluene-d8	98	6.388	6.388	(0.833)	22274	2.00000	3.81
$	69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	7732	2.00000	3.48
	53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	5102	2.00000	2.06(a)
	11 1,1-Dichloroethene	96	1.911	1.911	(0.457)	8383	2.00000	2.11(aM)
	33 1,2-Dichloroethane	62	4.562	4.562	(0.918)	9508	2.00000	1.91(aM)
	27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	6948	2.00000	2.04
	17 Methylene Chloride	84	2.305	2.305	(0.551)	7271	2.00000	3.81(a)
	38 Trichloroethene	130	5.206	5.206	(1.048)	6830	2.00000	2.12
	5 Vinyl Chloride	62	1.145	1.145	(0.274)	8442	2.00000	2.02(M)

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.

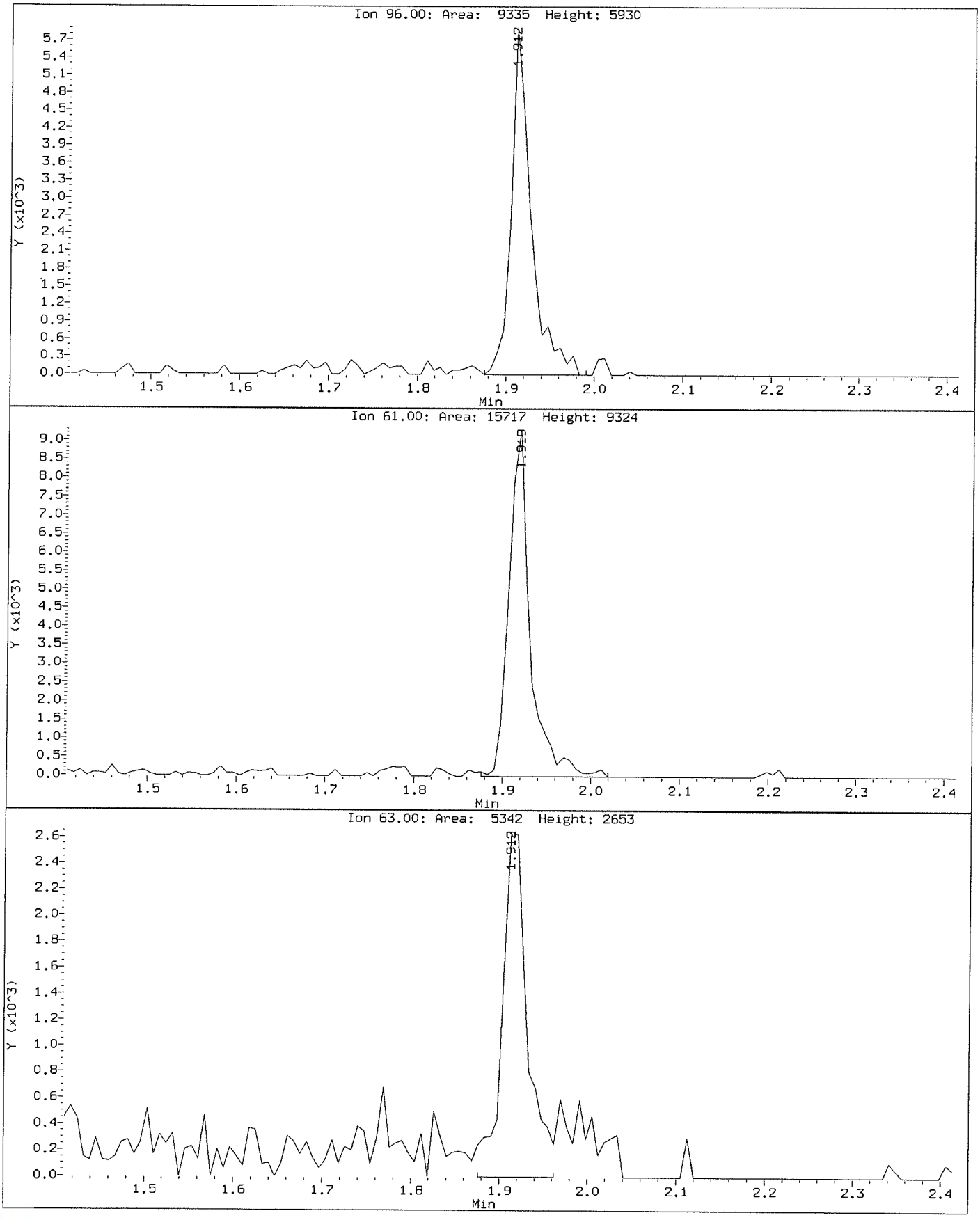


Data File: \\NAHSTWS005\Target\chem\voa6.i\X210402.b\X040205.D
Date : 02-APR-2021 12:17
Client ID: VSTD002
Sample Info: VSTD002;VSTD002;1;4;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

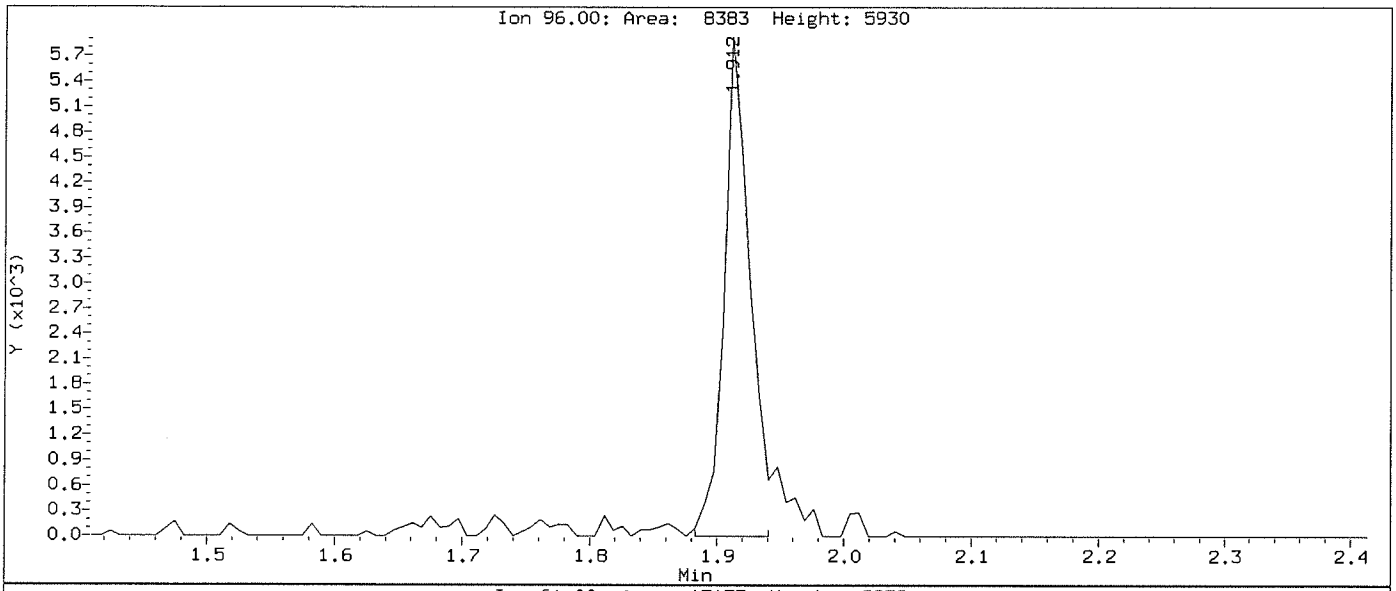
Data File: \\NAHSTWS005\Target\chem\voa6.i\X210402.b\Before6\X040205.D
Injection Date: 02-APR-2021 12:17
Instrument: voa6.i
Client Sample ID: VSTD002

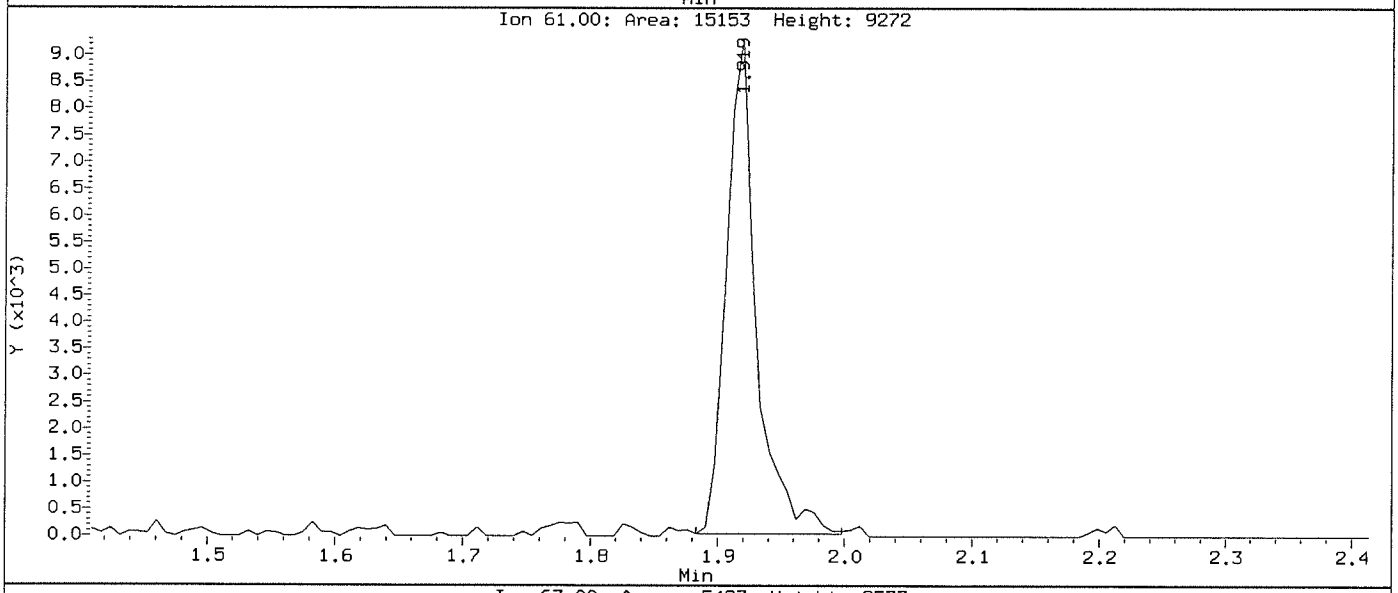
Compound: 1,1-Dichloroethene
CAS Number: 75-35-4

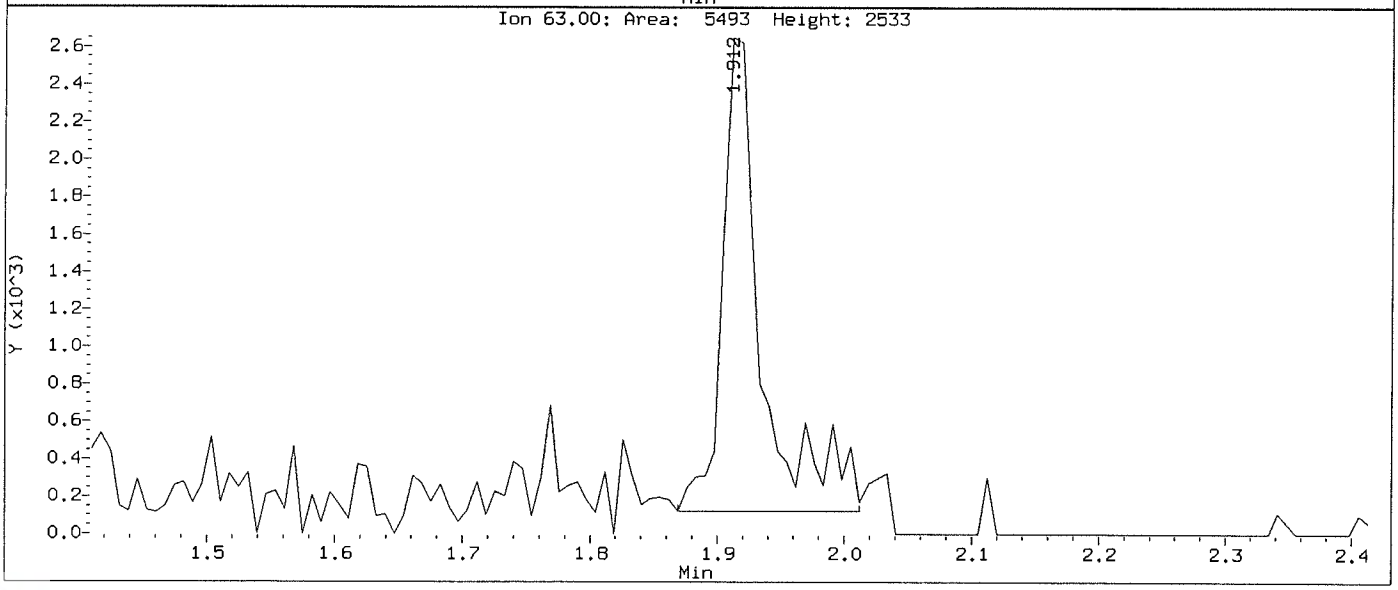


Data File: \\NAHSTWS005\Target\chem\voa6.i\X210402.b\X040205.D
Injection Date: 02-APR-2021 12:17
Instrument: voa6.i
Client Sample ID: VSTD002

Compound: 1,1-Dichloroethene
CAS Number: 75-35-4

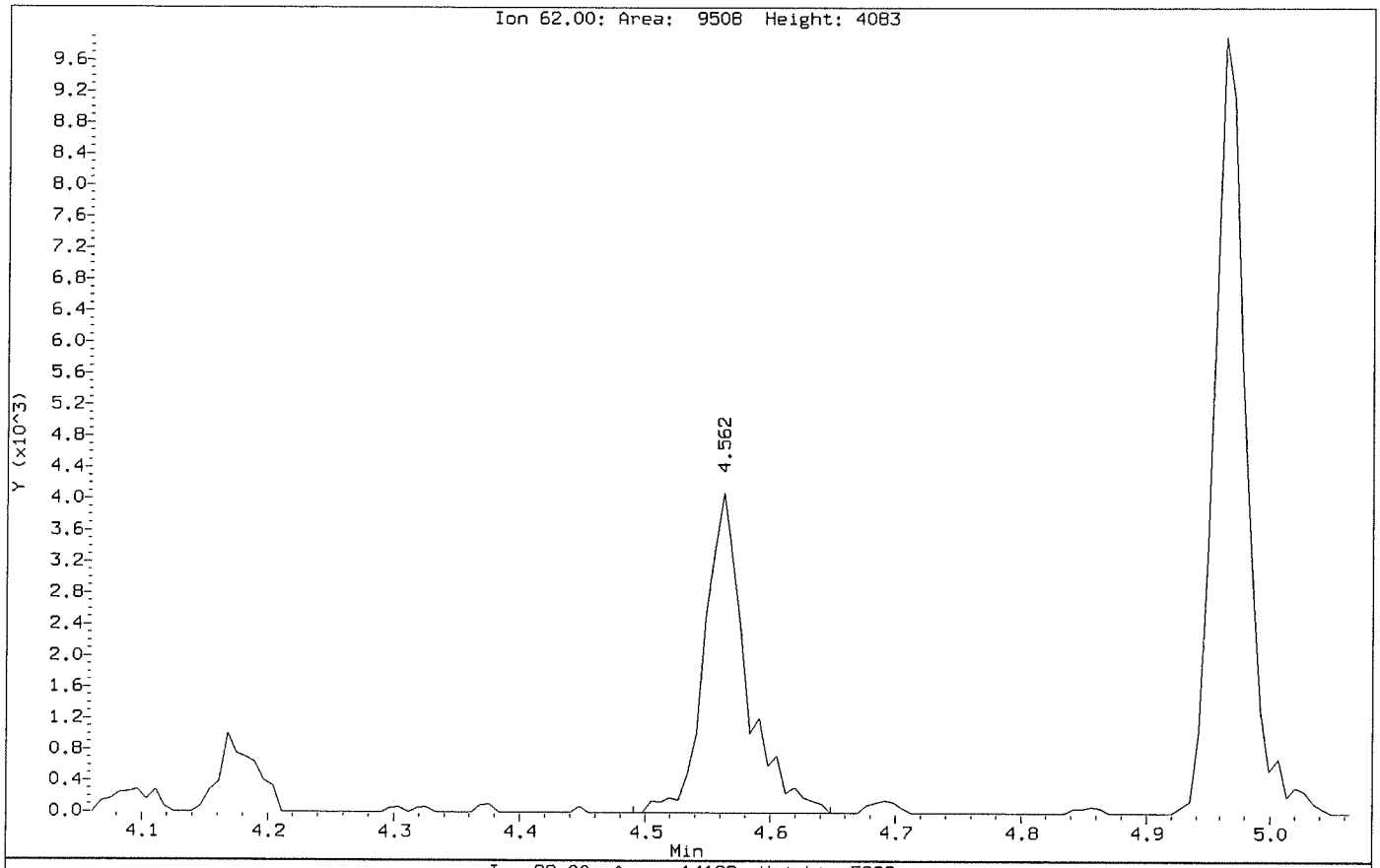


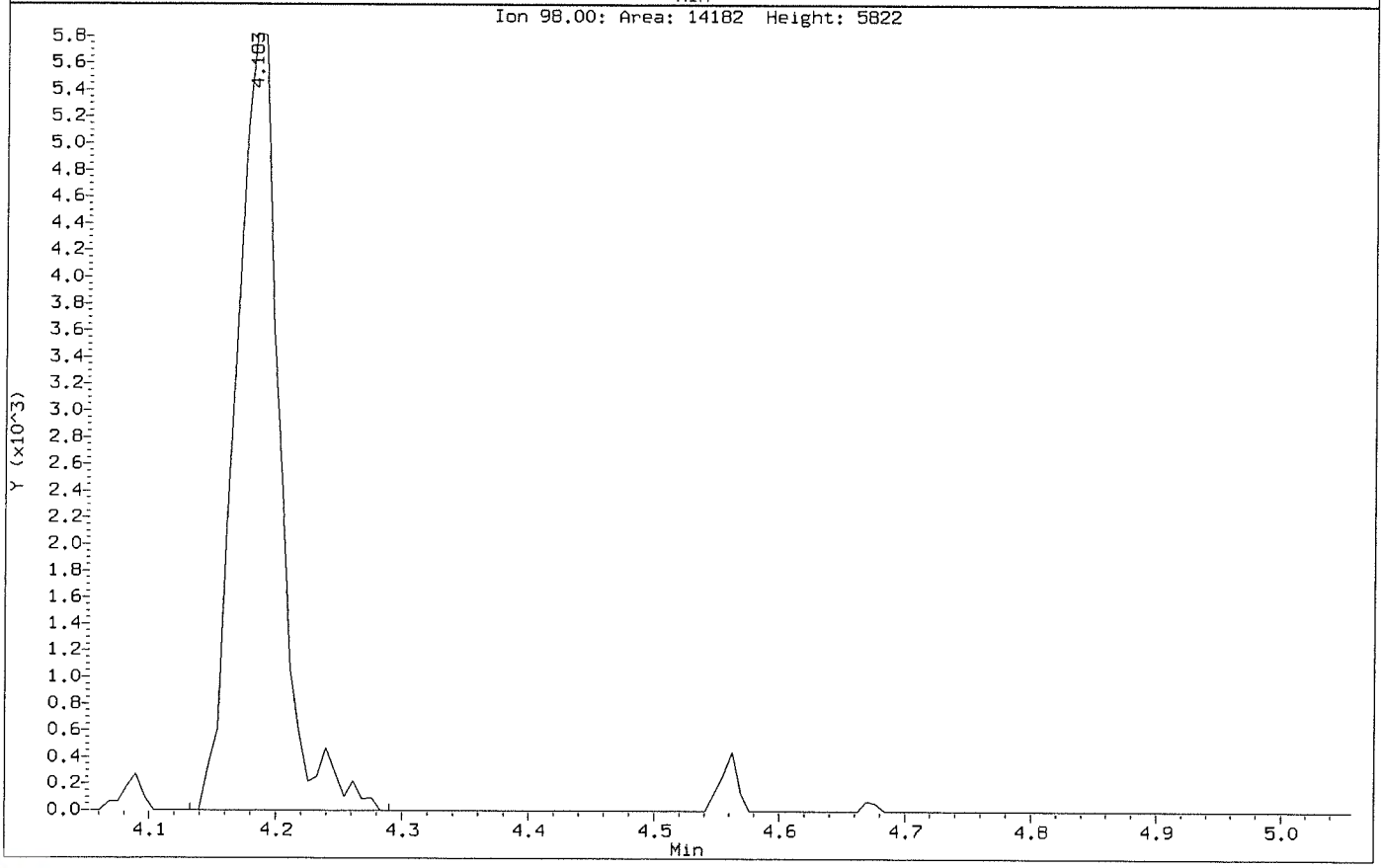




Data File: \\NAHSTWS005\Target\chem\voa6.i\X210402.b\Before6\X040205.D
Injection Date: 02-APR-2021 12:17
Instrument: voa6.i
Client Sample ID: VSTD002

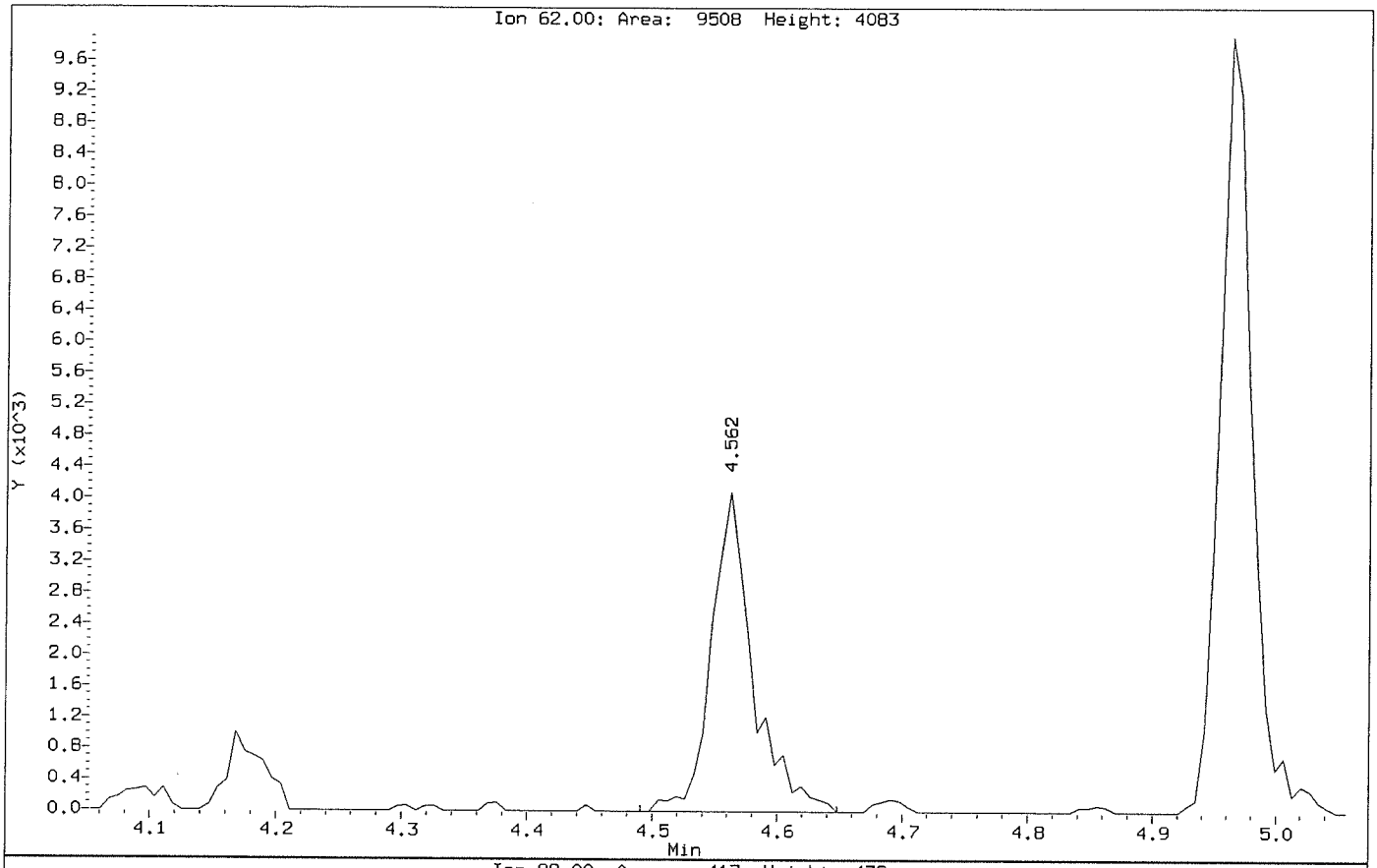
Compound: 1,2-Dichloroethane
CAS Number: 107-06-2

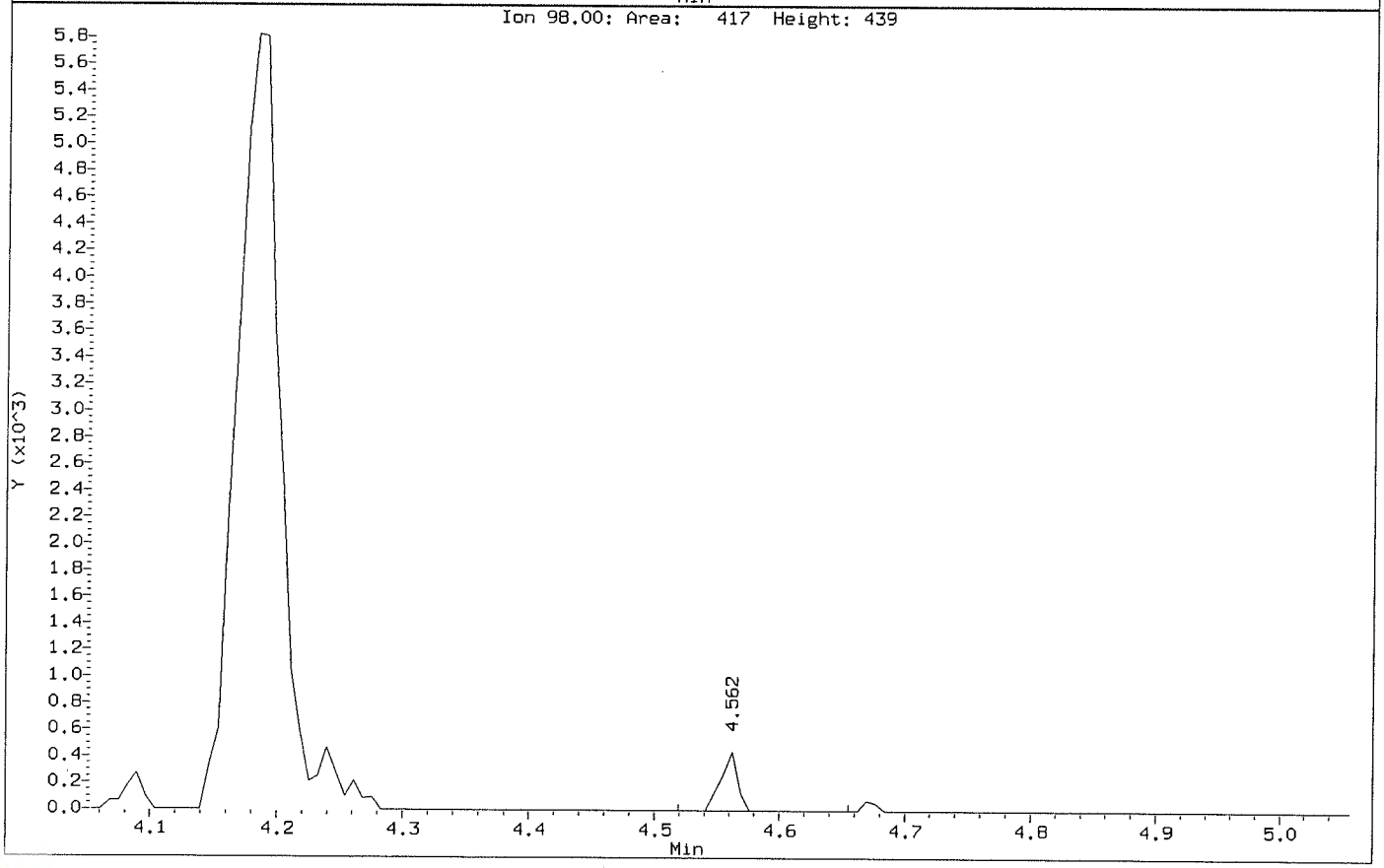




Data File: \\NAHSTWS005\Target\chem\voa6.i\X210402.b\X040205.D
Injection Date: 02-APR-2021 12:17
Instrument: voa6.i
Client Sample ID: VSTD002

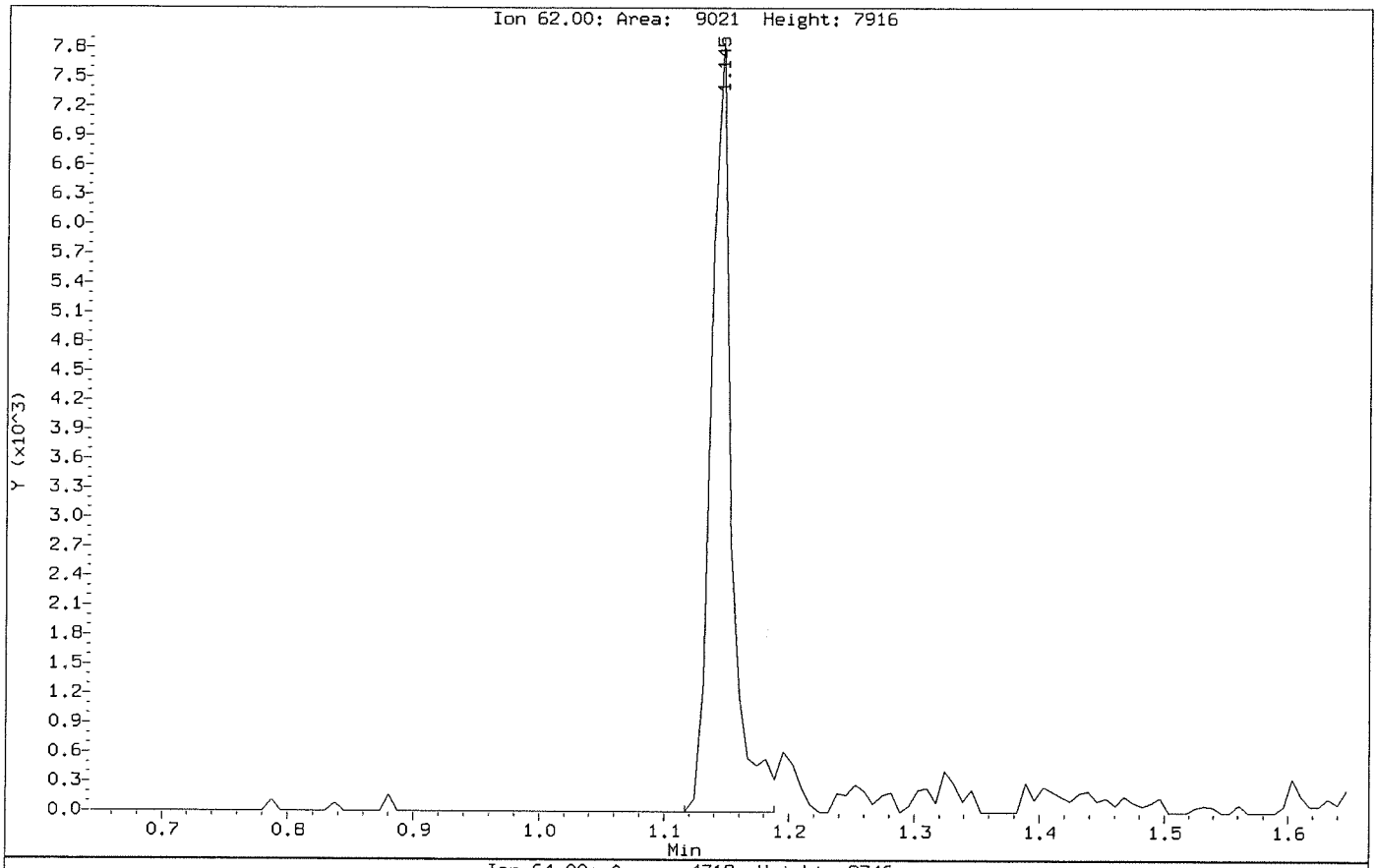
Compound: 1,2-Dichloroethane
CAS Number: 107-06-2

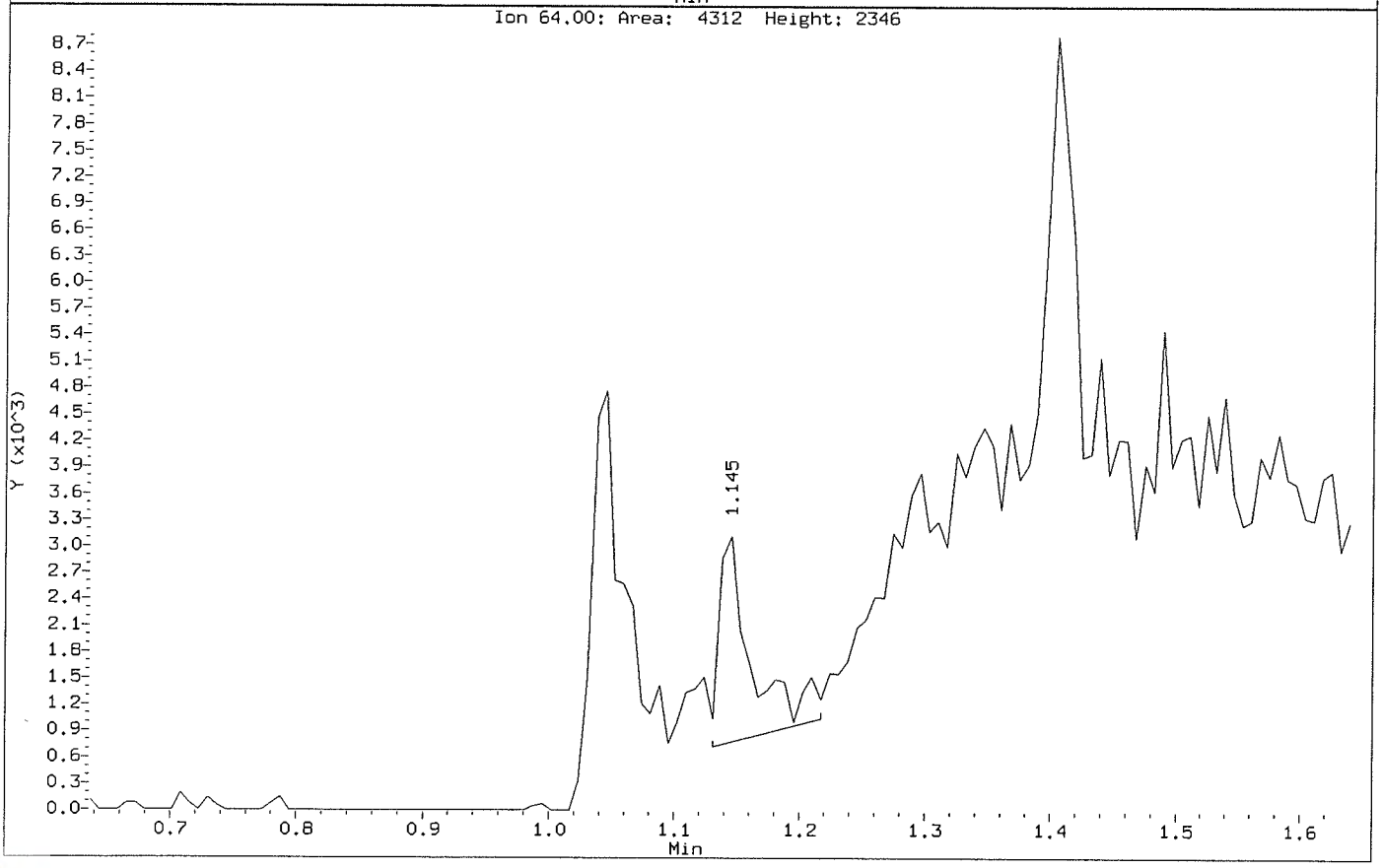




Data File: \\NAHSTWS005\Target\chem\voa6.i\X210402.b\Before6\X040205.D
Injection Date: 02-APR-2021 12:17
Instrument: voa6.i
Client Sample ID: VSTD002

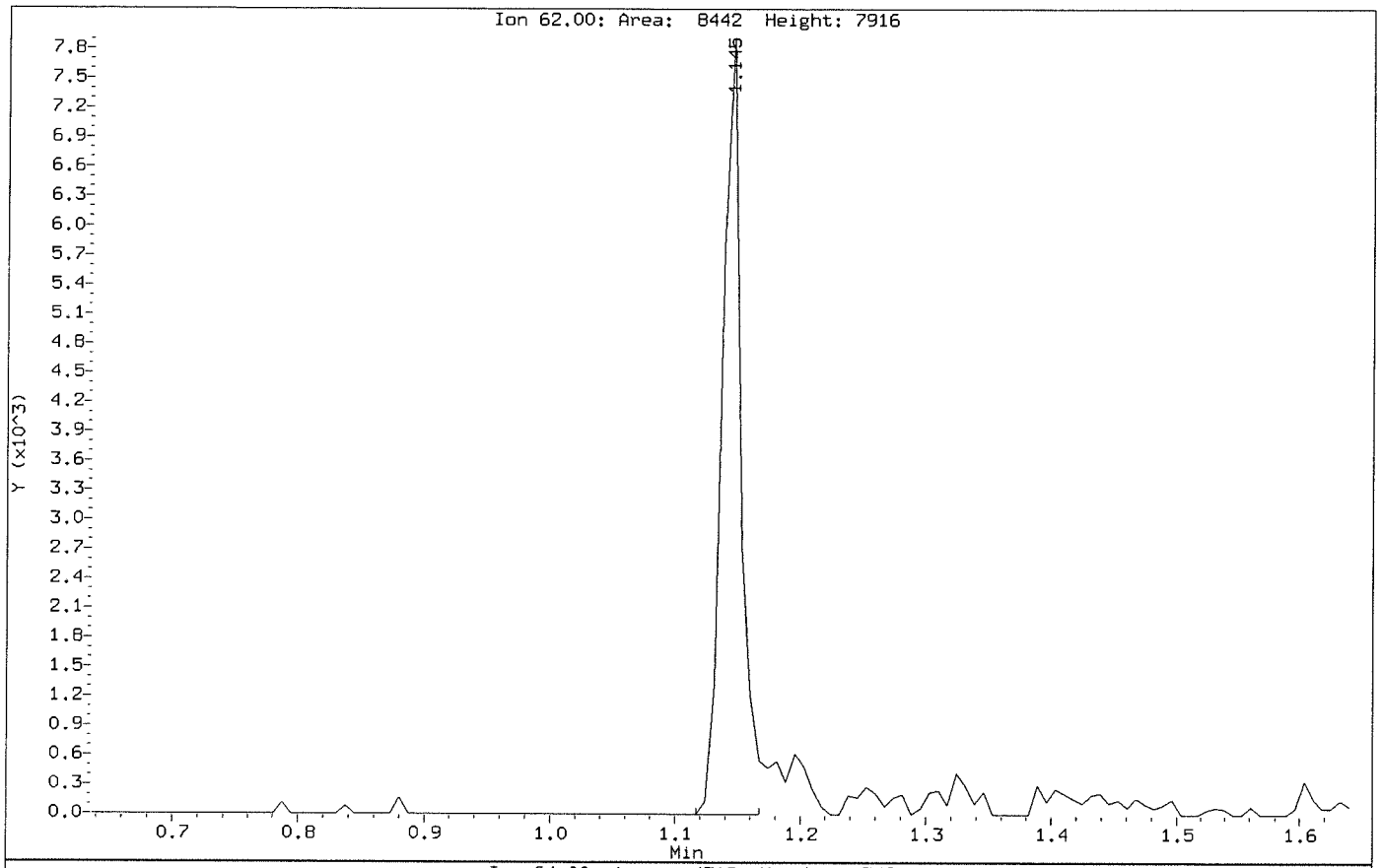
Compound: Vinyl Chloride
CAS Number: 75-01-4

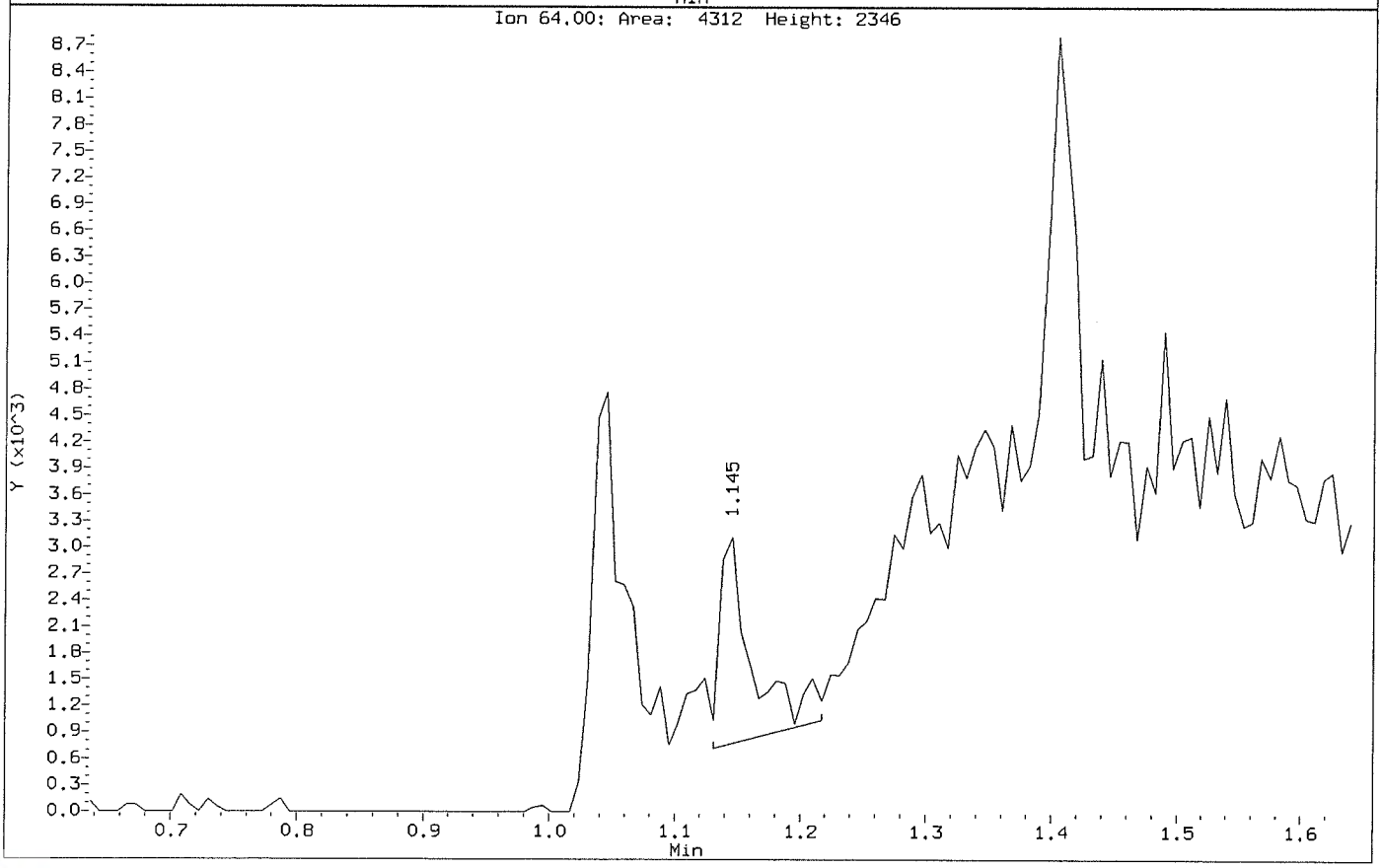




Data File: \\NAHSTWS005\Target\chem\voa6.i\X210402.b\X040205.D
Injection Date: 02-APR-2021 12:17
Instrument: voa6.i
Client Sample ID: VSTD002

Compound: Vinyl Chloride
CAS Number: 75-01-4





Data File: \\NAHSTWS005\Target\chem\voa6.i\X210402.b\X040206.D Page 1
Report Date: 04-May-2021 11:39

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X210402.b\X040206.D
Lab Smp Id: VSTD005 Client Smp ID: VSTD005
Inj Date : 02-APR-2021 12:38
Operator : PC Inst ID: voa6.i
Smp Info : VSTD005;VSTD005;1;5;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X210402.b\8260W.m
Meth Date : 04-May-2021 11:39 voa6.i Quant Type: ISTD
Cal Date : 02-APR-2021 12:17 Cal File: X040205.D
Als bottle: 7 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBI_short1.sub
Target Version: 4.14
Processing Host: NAHSTW7066

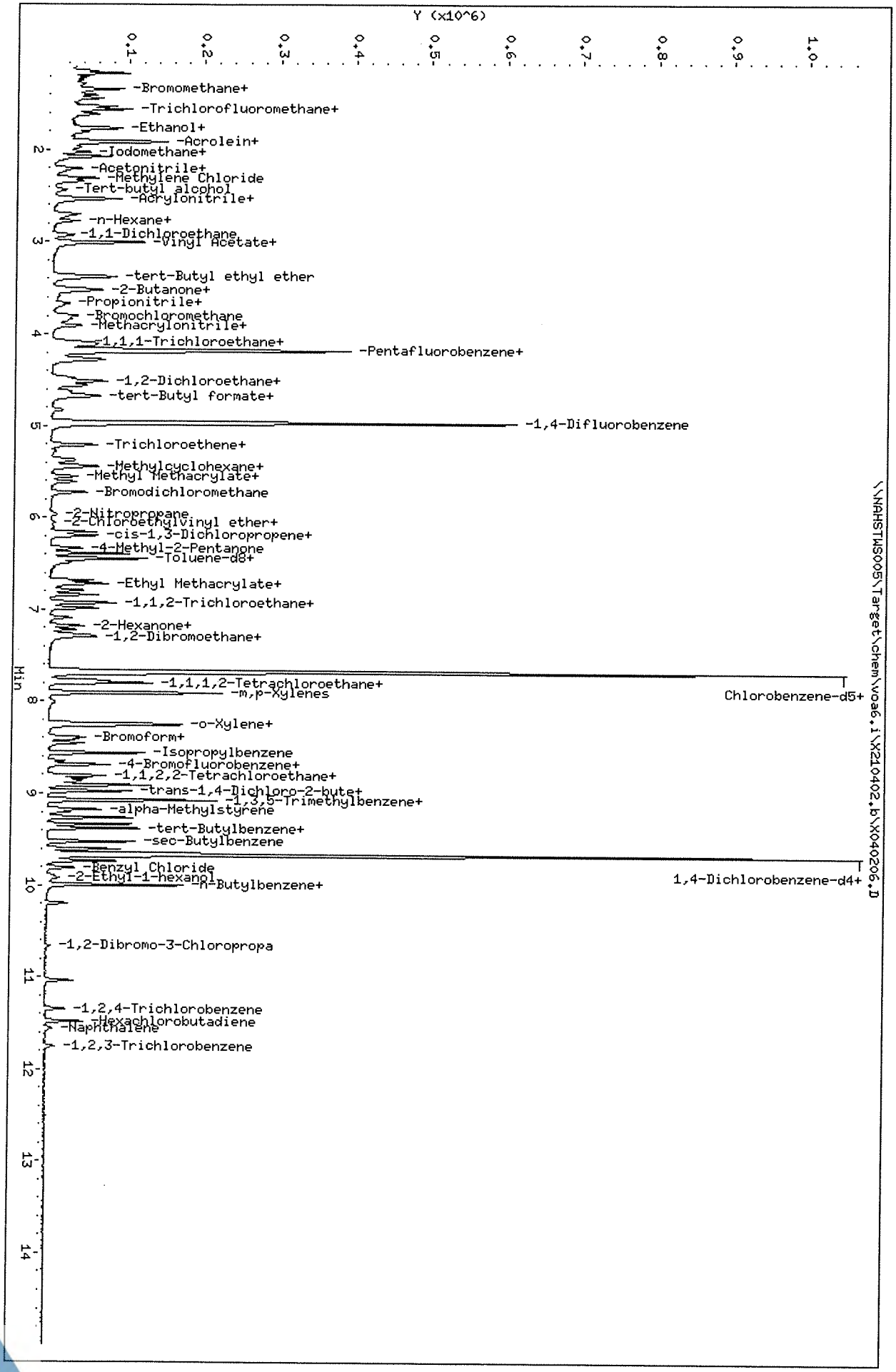
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	291823	50.0000	
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	482057	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	440939	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	205433	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	17824	5.00000	5.57
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	20809	5.00000	5.48
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	56112	5.00000	6.62
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	19193	5.00000	6.03
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	14112	5.00000	5.50
11 1,1-Dichloroethene	96	1.912	1.912	(0.457)	22632	5.00000	5.44
33 1,2-Dichloroethane	62	4.562	4.562	(0.919)	25538	5.00000	5.00
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	17639	5.00000	4.94
17 Methylene Chloride	84	2.306	2.306	(0.551)	17205	5.00000	6.75
38 Trichloroethene	130	5.207	5.207	(1.049)	18140	5.00000	5.49
5 Vinyl Chloride	62	1.145	1.145	(0.274)	22066	5.00000	5.04(M)

QC Flag Legend

M - Compound response manually integrated.

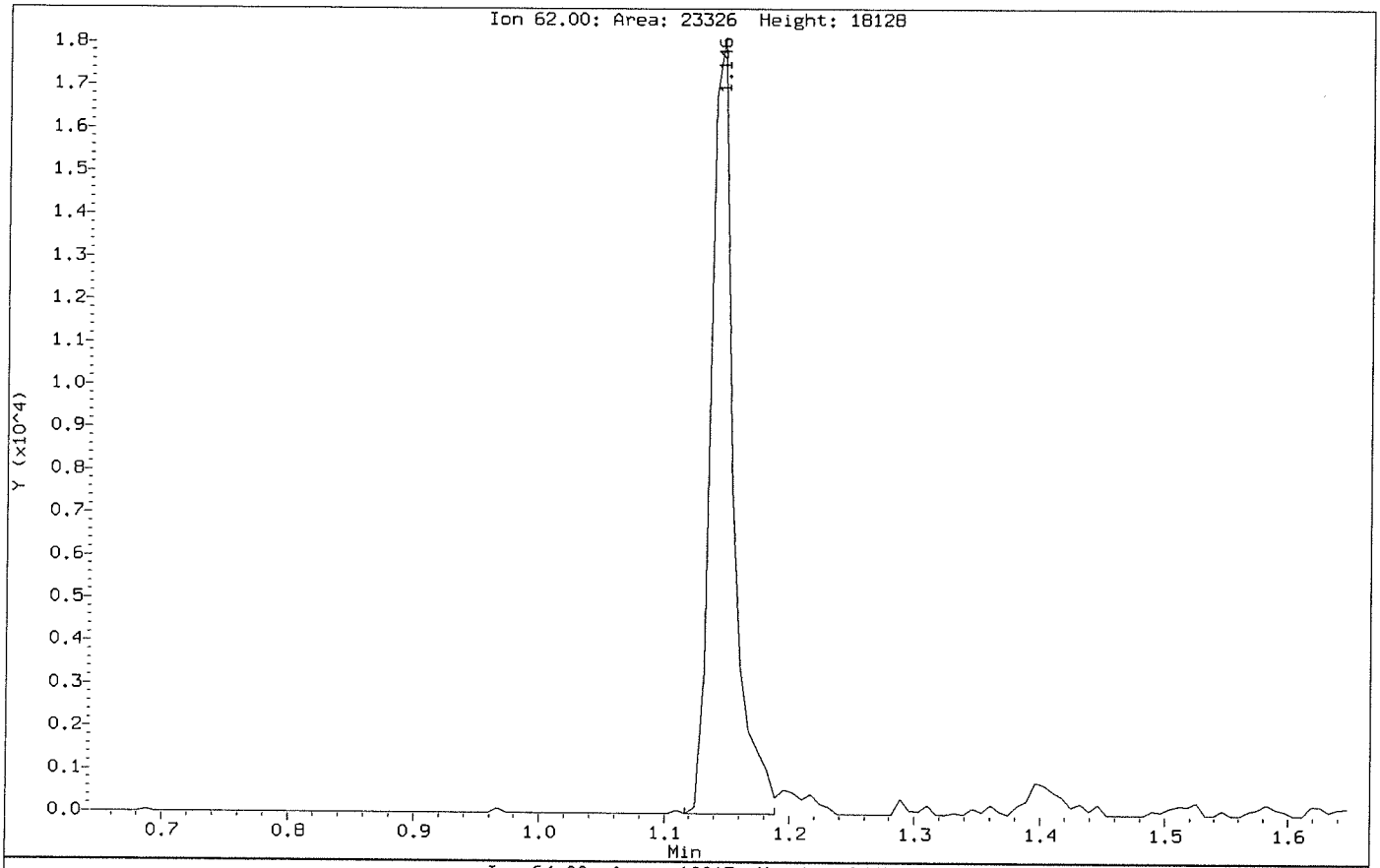


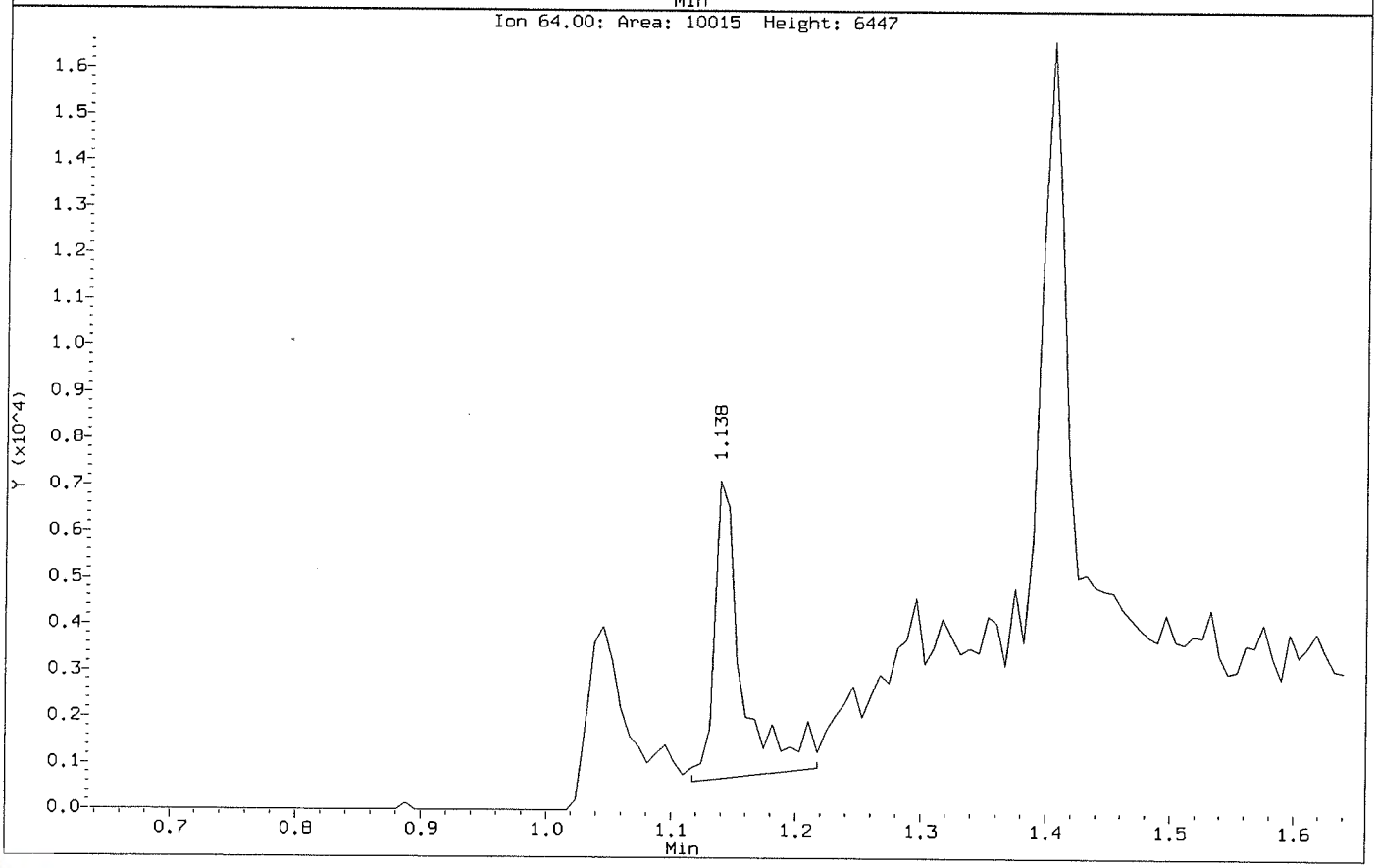
Data File: \\NAHSTWS005\Target\chem\voa6.i\X210402.b\X040206.D
Date : 02-APR-2021 12:38
Client ID: VSTD005
Sample Info: VSTD005;VSTD005;1;5;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\NAHSTWS005\Target\chem\voa6.i\X210402.b\Before6\X040206.D
Injection Date: 02-APR-2021 12:38
Instrument: voa6.i
Client Sample ID: VSTD005

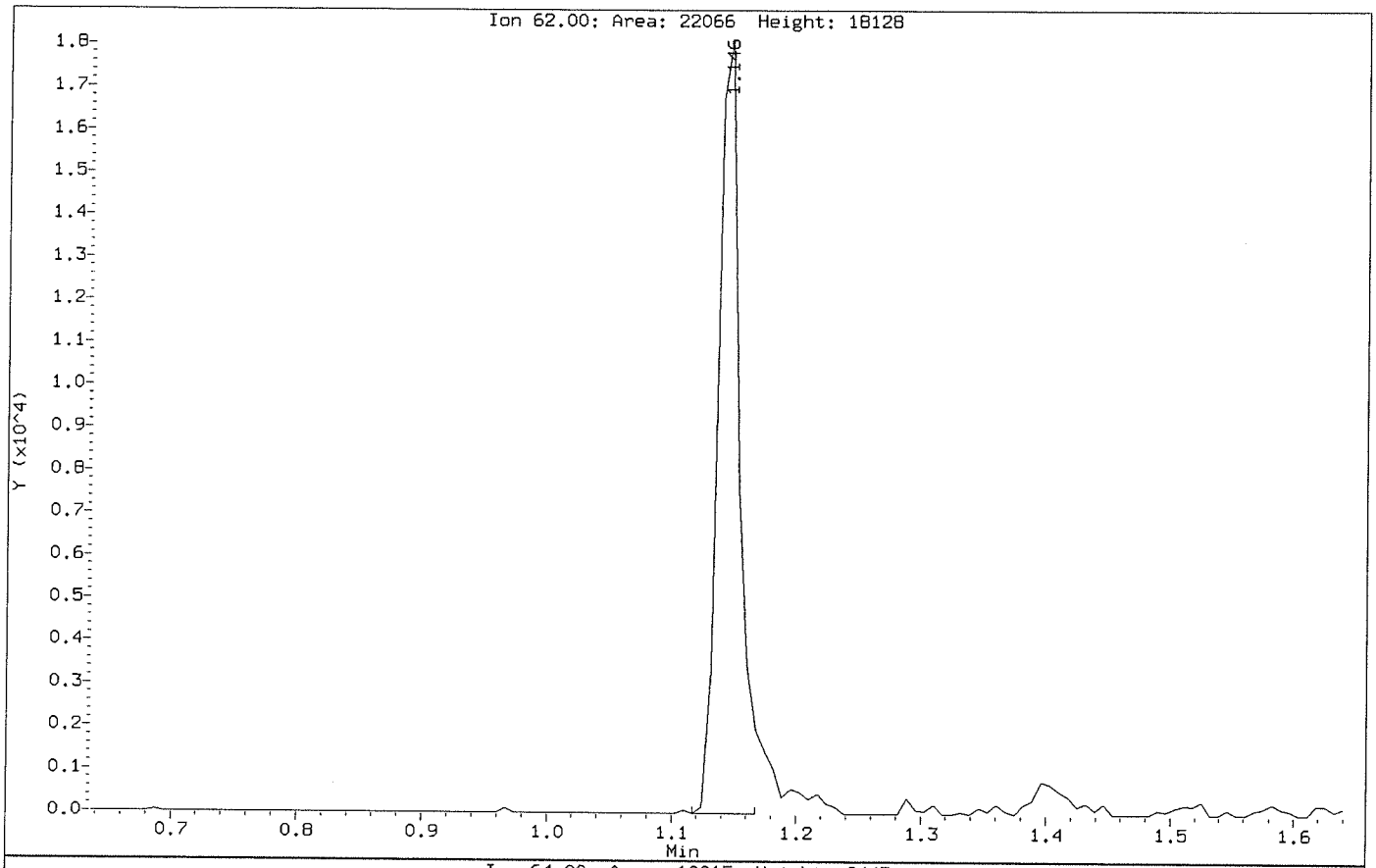
Compound: Vinyl Chloride
CAS Number: 75-01-4

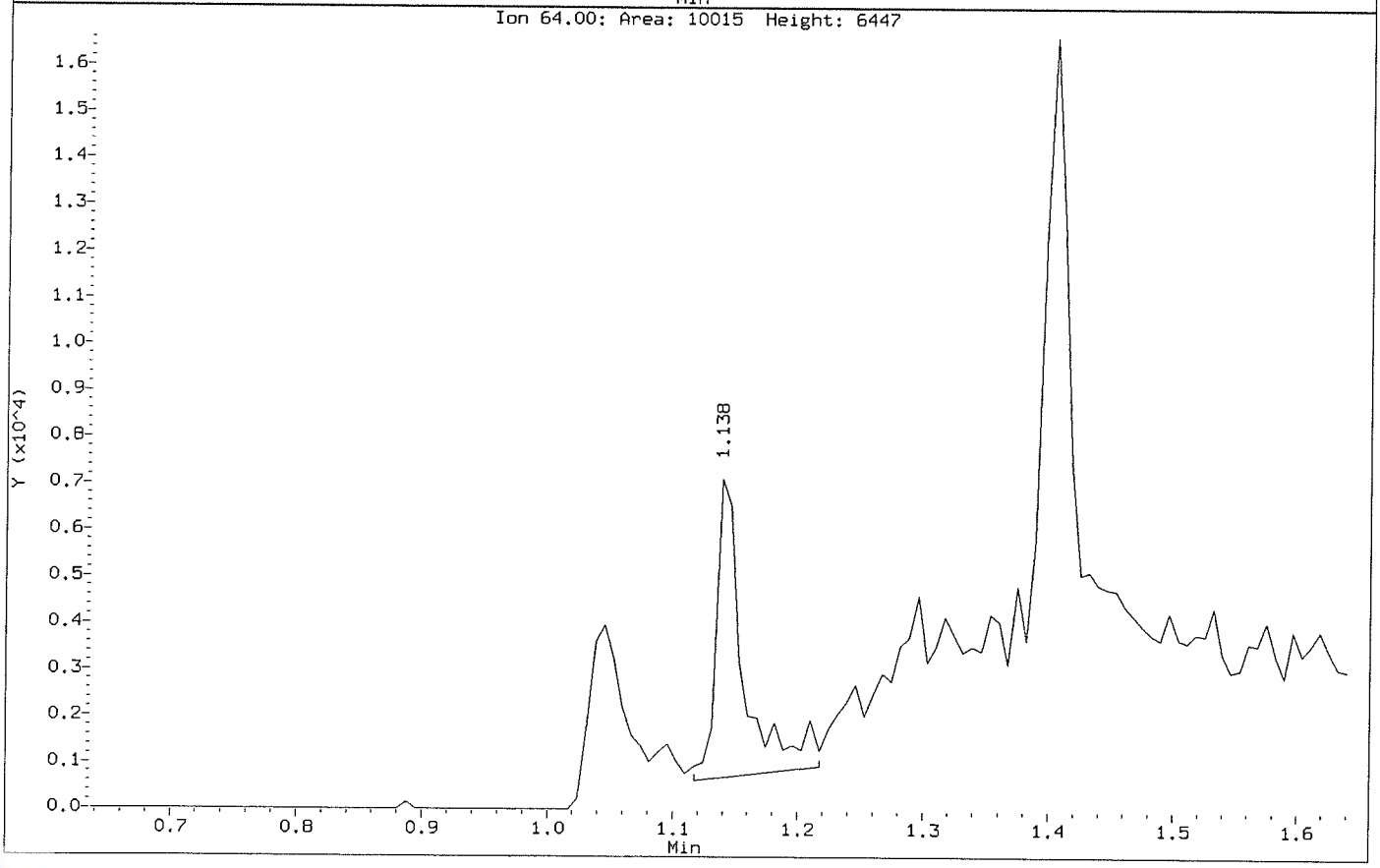




Data File: \\NAHSTWS005\Target\chem\voa6.i\X210402.b\X040206.D
Injection Date: 02-APR-2021 12:38
Instrument: voa6.i
Client Sample ID: VSTD005

Compound: Vinyl Chloride
CAS Number: 75-01-4





Data File: \\NAHSTWS005\Target\chem\voa6.i\X210402.b\X040207.D Page 1
Report Date: 04-May-2021 11:39

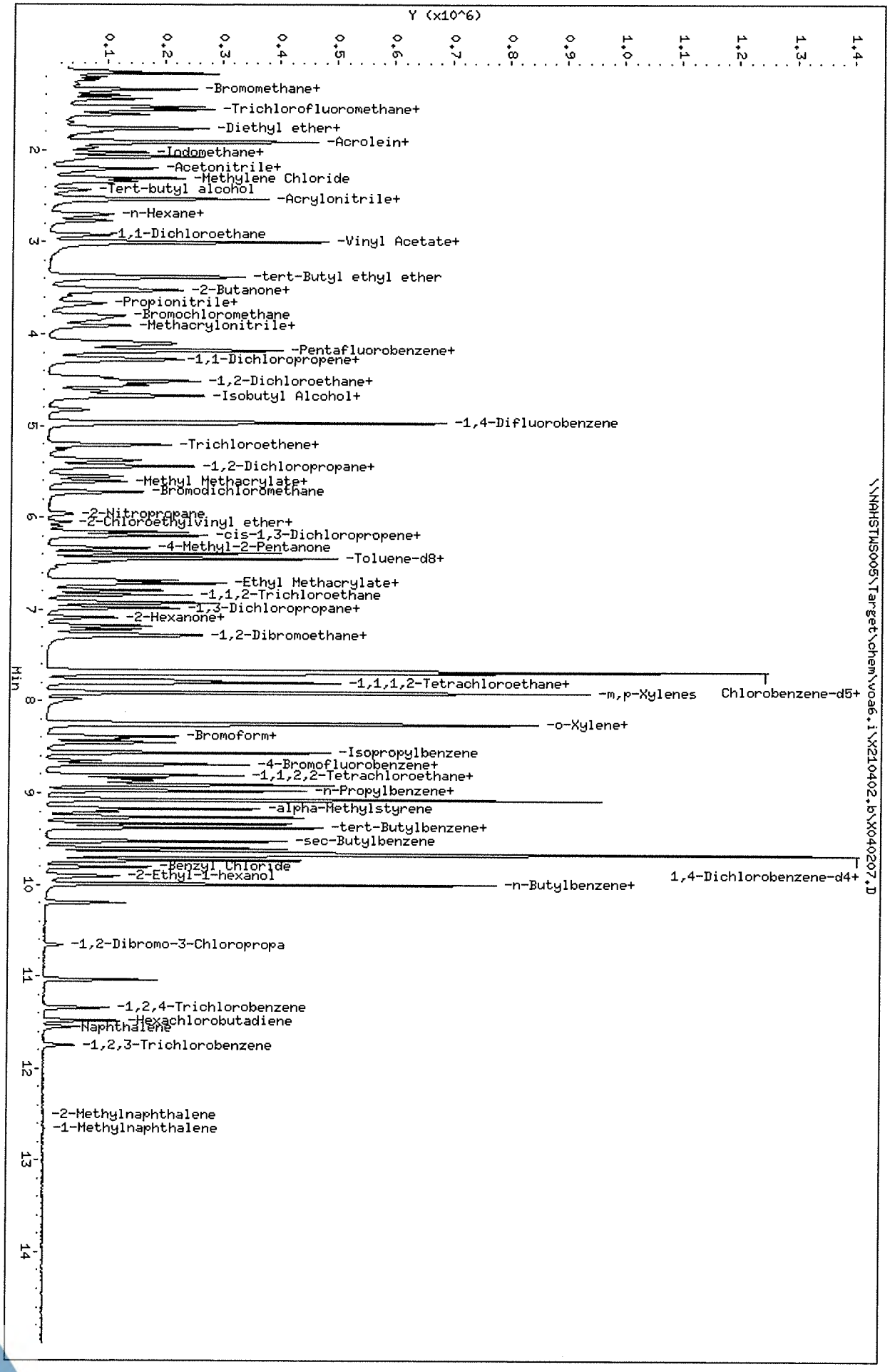
ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X210402.b\X040207.D
Lab Smp Id: VSTD020 Client Smp ID: VSTD020
Inj Date : 02-APR-2021 12:59
Operator : PC Inst ID: voa6.i
Smp Info : VSTD020;VSTD020;1;6;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X210402.b\8260W.m
Meth Date : 04-May-2021 11:39 voa6.i Quant Type: ISTD
Cal Date : 02-APR-2021 12:38 Cal File: X040206.D
Als bottle: 8 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBI_short1.sub
Target Version: 4.14
Processing Host: NAHSTW7066

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	303845	50.0000	
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	500849	50.0000	
* 47 Chlorobenzene-d5	117	7.670	7.670	(1.000)	505360	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	244406	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	68668	20.0000	19.46
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	80475	20.0000	19.07
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	218999	20.0000	18.08
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	81621	20.0000	17.93
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	50828	20.0000	17.31
11 1,1-Dichloroethene	96	1.919	1.919	(0.459)	80105	20.0000	18.51
33 1,2-Dichloroethane	62	4.555	4.555	(0.918)	95203	20.0000	17.95
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	65903	20.0000	17.74
17 Methylene Chloride	84	2.305	2.305	(0.551)	63925	20.0000	20.29
38 Trichloroethene	130	5.206	5.206	(1.049)	61652	20.0000	17.98
5 Vinyl Chloride	62	1.145	1.145	(0.274)	89514	20.0000	19.65



Data File: \\NAHSTWS005\Target\chem\voa6.i\X210402.b\X040207.D
Date : 02-APR-2021 12:59
Client ID: VSTD020
Sample Info: VSTD020;VSTD020;1;6;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\NAHSTWS005\Target\chem\voa6.i\X210402.b\X040208.D Page 1
Report Date: 04-May-2021 11:39

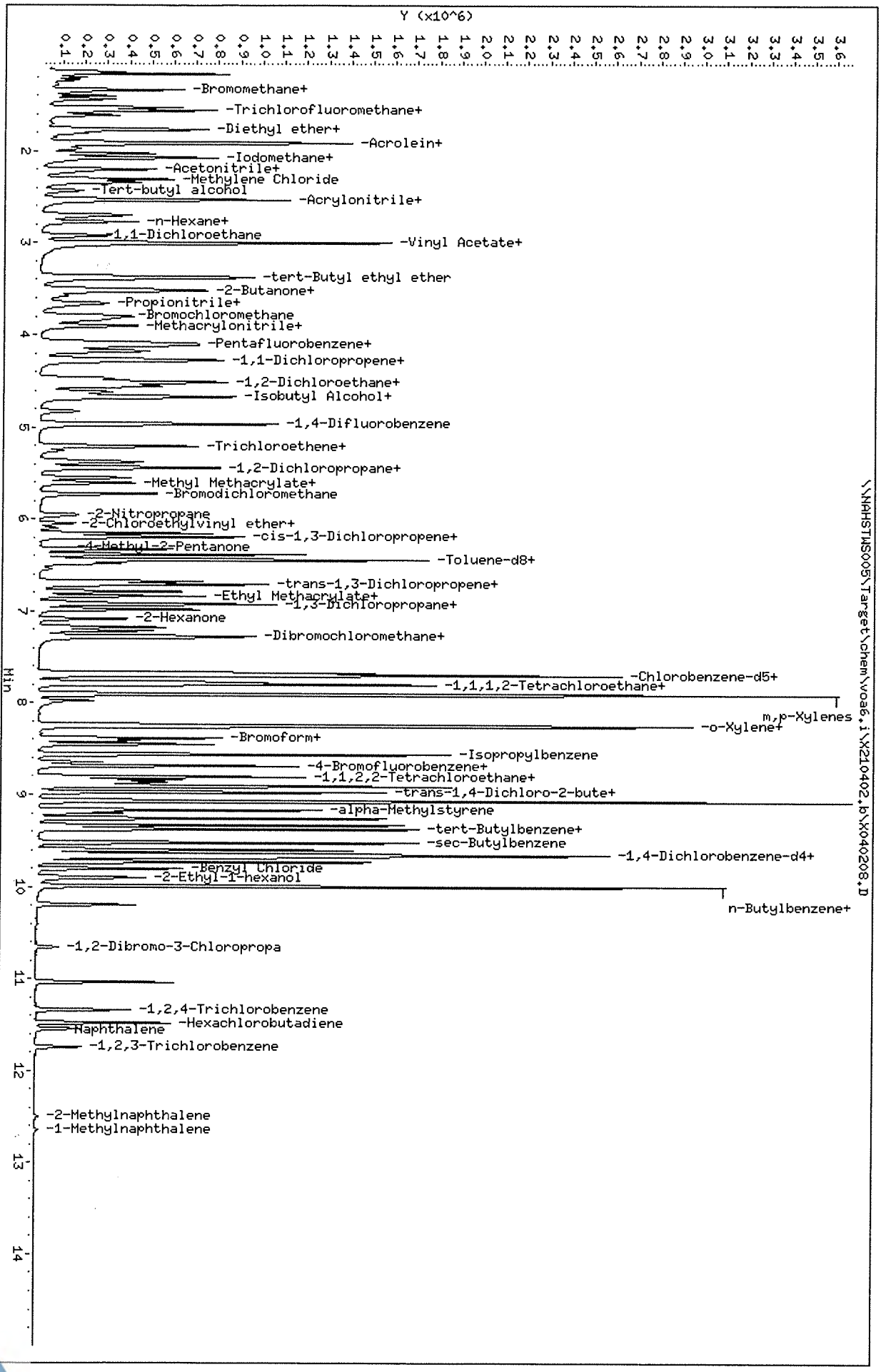
ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X210402.b\X040208.D
Lab Smp Id: VSTD050 Client Smp ID: VSTD050
Inj Date : 02-APR-2021 13:20
Operator : PC Inst ID: voa6.i
Smp Info : VSTD050;VSTD050;1;7;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X210402.b\8260W.m
Meth Date : 04-May-2021 11:39 voa6.i Quant Type: ISTD
Cal Date : 02-APR-2021 12:59 Cal File: X040207.D
Als bottle: 9 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBI_short1.sub
Target Version: 4.14
Processing Host: NAHSTW7066

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	359684	50.0000	
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	598485	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	588191	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	309539	50.0000	
$ 30 Dibromofluoromethane	113	4.096	4.096	(0.979)	201590	50.0000	47.62
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	243778	50.0000	48.06
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	658700	50.0000	43.80
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	267013	50.0000	47.42
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	155825	50.0000	45.60
11 1,1-Dichloroethene	96	1.911	1.911	(0.457)	240341	50.0000	46.92
33 1,2-Dichloroethane	62	4.555	4.555	(0.918)	309702	50.0000	48.88
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	208514	50.0000	47.42
17 Methylene Chloride	84	2.305	2.305	(0.551)	173954	50.0000	44.72
38 Trichloroethene	130	5.206	5.206	(1.049)	206412	50.0000	50.38
5 Vinyl Chloride	62	1.145	1.145	(0.274)	256013	50.0000	47.47



Data File: \\NAHSTWS005\Target\chem\voa6.i\X210402.b\X040208.D
Date : 02-APR-2021 13:20
Client ID: VSTD050
Sample Info: VSTD050;VSTD050;1;7;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\NAHSTWS005\Target\chem\voa6.i\X210402.b\X040209.D Page 1
Report Date: 04-May-2021 11:39

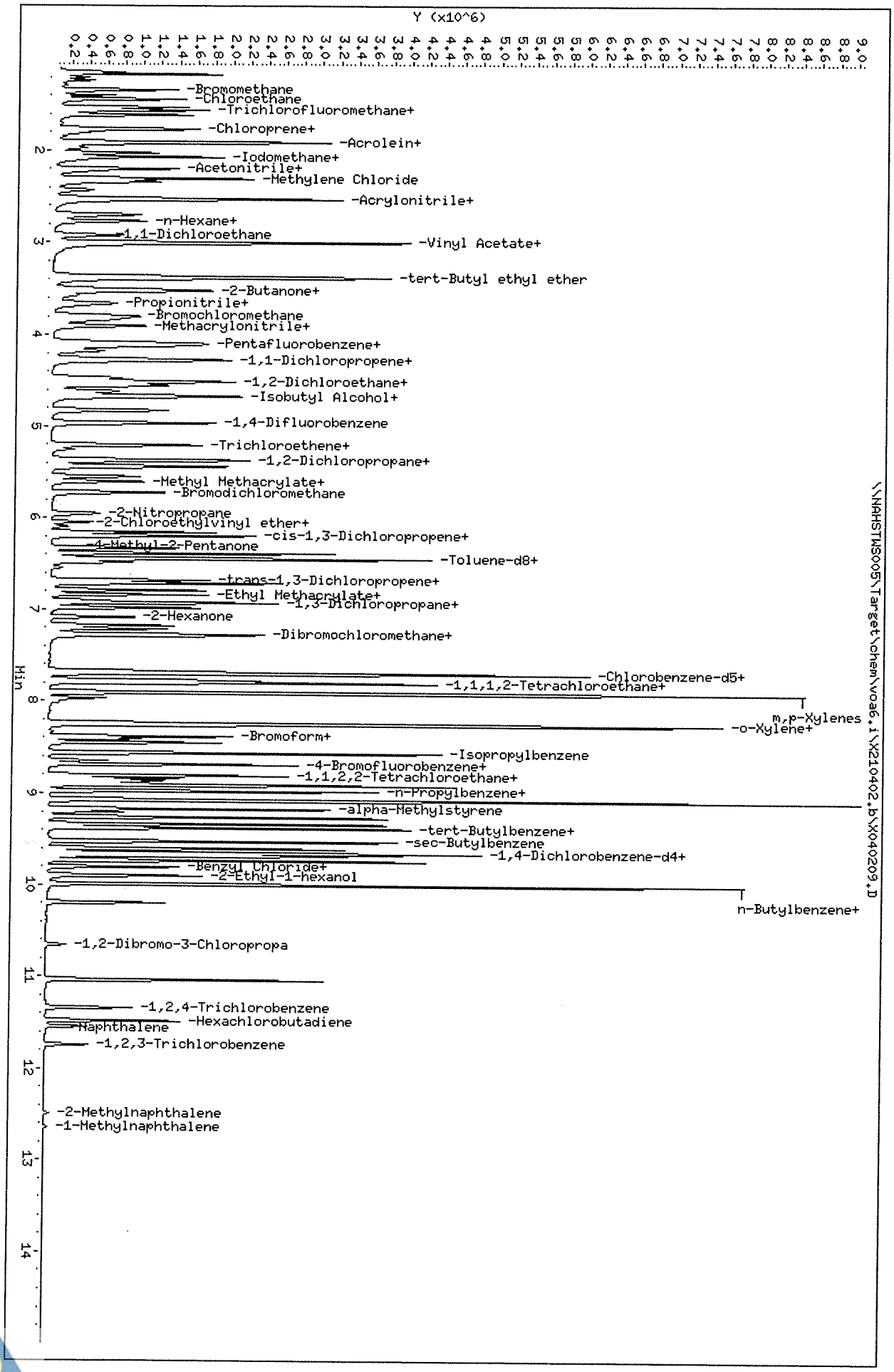
ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X210402.b\X040209.D
Lab Smp Id: VSTD100 Client Smp ID: VSTD100
Inj Date : 02-APR-2021 13:41
Operator : PC Inst ID: voa6.i
Smp Info : VSTD100;VSTD100;1;8;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X210402.b\8260W.m
Meth Date : 04-May-2021 11:39 voa6.i Quant Type: ISTD
Cal Date : 02-APR-2021 13:20 Cal File: X040208.D
Als bottle: 10 Calibration Sample, Level: 8
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBI_short1.sub
Target Version: 4.14
Processing Host: NAHSTW7066

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	397825	50.0000	
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	683502	50.0000	
* 47 Chlorobenzene-d5	117	7.670	7.670	(1.000)	652649	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	339759	50.0000	
$ 30 Dibromofluoromethane	113	4.096	4.096	(0.979)	476731	100.000	101.33
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	568806	100.000	100.86
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	1733824	100.000	101.37
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	624362	100.000	98.11
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	366869	100.000	96.76
11 1,1-Dichloroethene	96	1.911	1.911	(0.457)	544587	100.000	96.14
33 1,2-Dichloroethane	62	4.555	4.555	(0.918)	718135	100.000	99.26
27 cis-1,2-Dichloroethene	96	3.523	3.523	(0.842)	487101	100.000	100.16
17 Methylene Chloride	84	2.305	2.305	(0.551)	420832	100.000	96.06
38 Trichloroethene	130	5.206	5.206	(1.049)	478548	100.000	102.27
5 Vinyl Chloride	62	1.145	1.145	(0.274)	541798	100.000	90.84



Data File: \\NAHSTWS005\Target\chem\voa6.i\X210402.b\X040209.D
Date : 02-APR-2021 13:41
Client ID: VSTD100
Sample Info: VSTD100;VSTD100;1;8;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\NAHSTWS005\Target\chem\voa6.i\X210402.b\X040210.D Page 1
Report Date: 04-May-2021 11:39

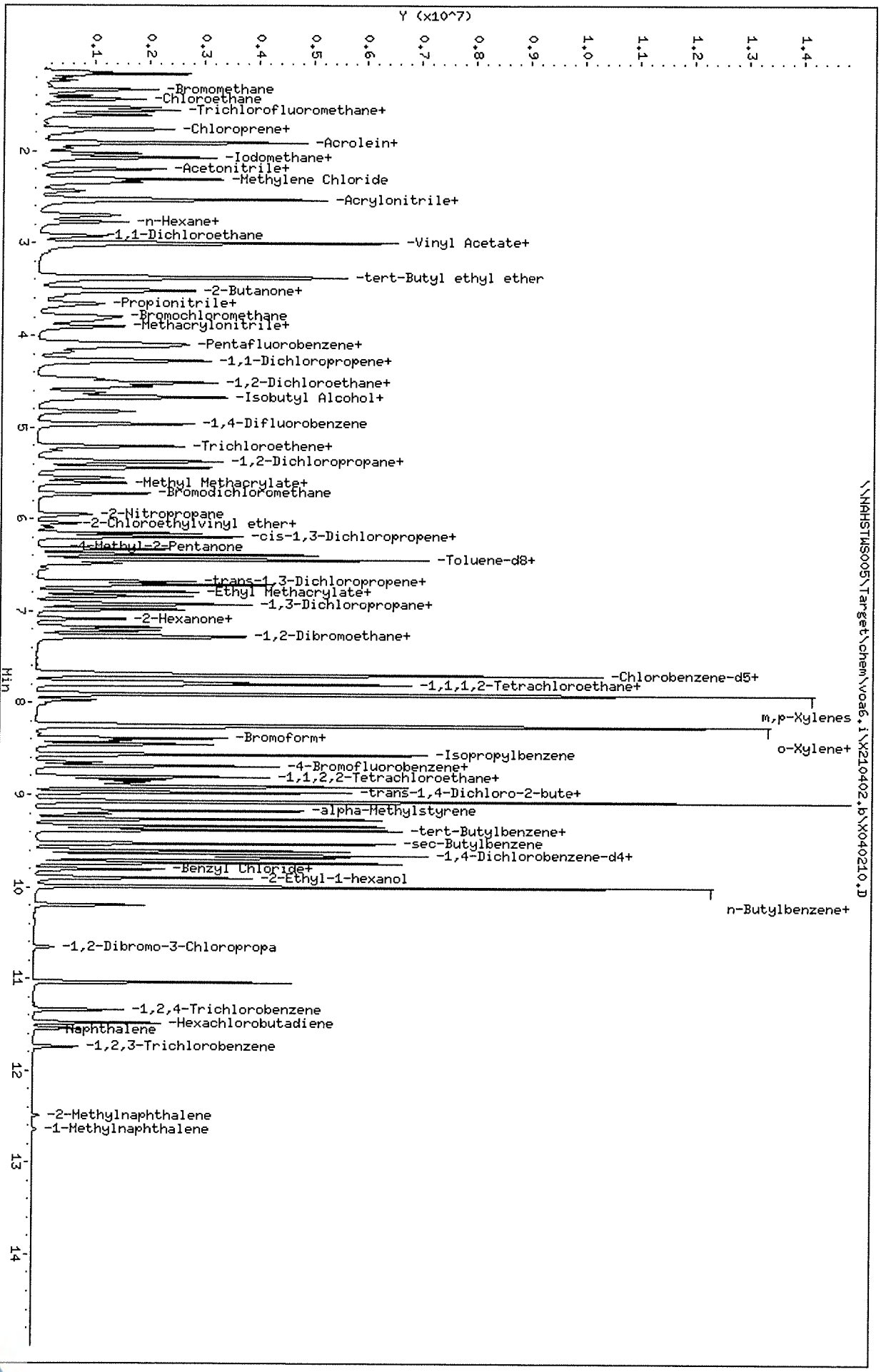
ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X210402.b\X040210.D
Lab Smp Id: VSTD150 Client Smp ID: VSTD150
Inj Date : 02-APR-2021 14:02
Operator : PC Inst ID: voa6.i
Smp Info : VSTD150;VSTD150;1;9;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X210402.b\8260W.m
Meth Date : 04-May-2021 11:39 voa6.i Quant Type: ISTD
Cal Date : 02-APR-2021 13:41 Cal File: X040209.D
Als bottle: 11 Calibration Sample, Level: 9
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBI_short1.sub
Target Version: 4.14
Processing Host: NAHSTW7066

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
*	1 Pentafluorobenzene	168	4.182	4.182	(1.000)	432906	50.0000	
*	36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	745206	50.0000	
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	707197	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	375287	50.0000	
$	30 Dibromofluoromethane	113	4.096	4.096	(0.979)	758989	150.000	148.06
$	35 1,2-Dichloroethane-d4	65	4.469	4.469	(1.068)	919399	150.000	149.58
$	48 Toluene-d8	98	6.388	6.388	(0.833)	2714142	150.000	145.62
$	69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	1011725	150.000	145.90
	53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	595658	150.000	144.99
	11 1,1-Dichloroethene	96	1.912	1.912	(0.457)	861197	150.000	139.71
	33 1,2-Dichloroethane	62	4.555	4.555	(0.918)	1146217	150.000	145.31
	27 cis-1,2-Dichloroethene	96	3.523	3.523	(0.842)	789545	150.000	149.19
	17 Methylene Chloride	84	2.298	2.298	(0.550)	703062	150.000	146.68
	38 Trichloroethene	130	5.207	5.207	(1.049)	752757	150.000	147.55
	5 Vinyl Chloride	62	1.138	1.138	(0.272)	862204	150.000	132.84



Data File: \\NAHSTWS005\Target\chem\voa6.i\X210402.b\X040210.D
Date : 02-APR-2021 14:02
Client ID: VSTD150
Sample Info: VSTD150;VSTD150;1;9;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X210402.b\X040211.D
Lab Smp Id: VSTD200 Client Smp ID: VSTD200
Inj Date : 02-APR-2021 14:23
Operator : PC Inst ID: voa6.i
Smp Info : VSTD200;VSTD200;1;10;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X210402.b\8260W.m
Meth Date : 04-May-2021 11:39 voa6.i Quant Type: ISTD
Cal Date : 02-APR-2021 14:02 Cal File: X040210.D
Als bottle: 12 Calibration Sample, Level: 10
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBI_short1.sub
Target Version: 4.14
Processing Host: NAHSTW7066

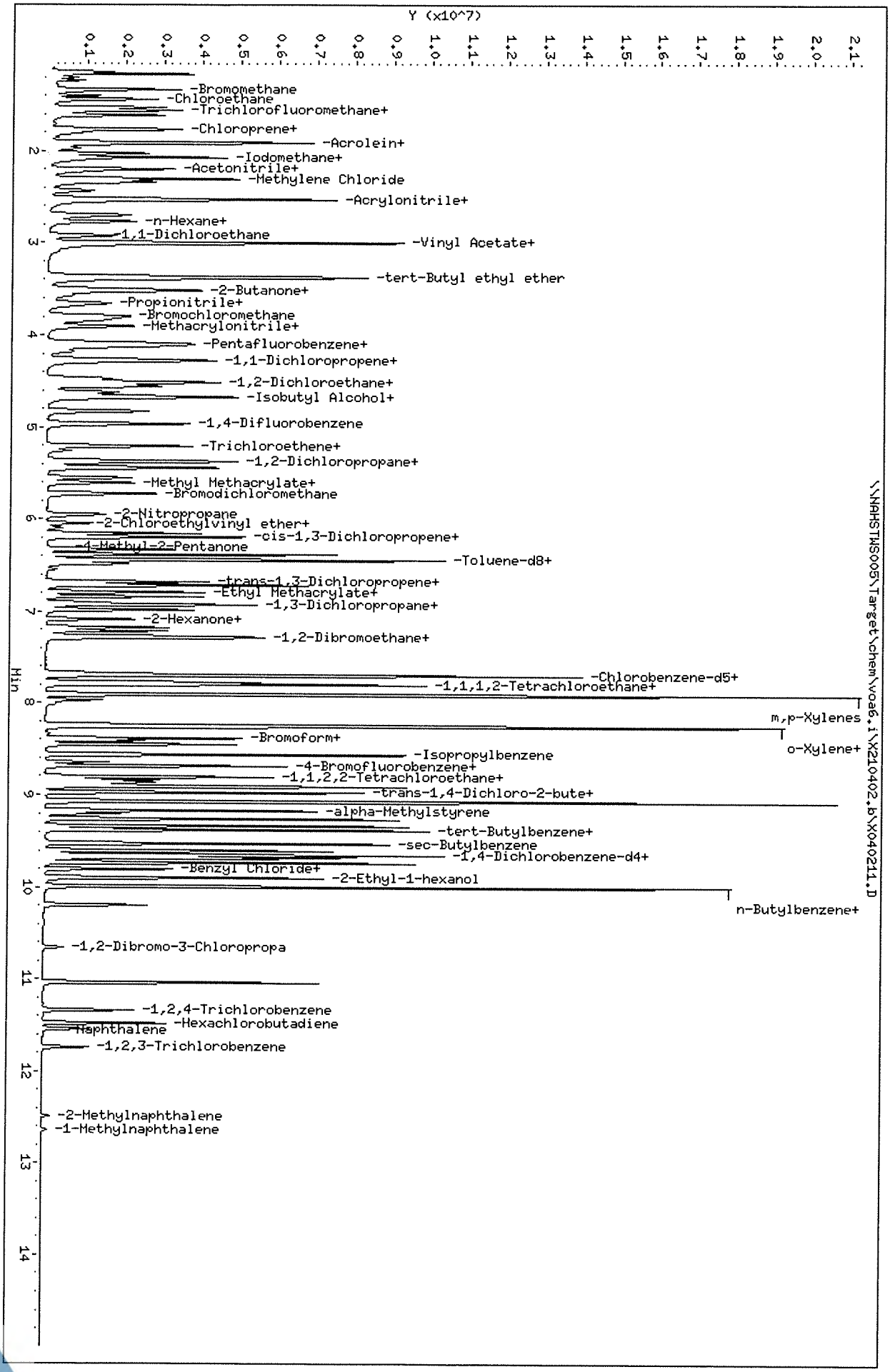
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	444815	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	788136	50.0000	
* 47 Chlorobenzene-d5	117	7.670	7.670	(1.000)	732576	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	399401	50.0000	
$ 30 Dibromofluoromethane	113	4.096	4.096	(0.979)	1061294	200.000	201.33(A)
$ 35 1,2-Dichloroethane-d4	65	4.469	4.469	(1.069)	1266674	200.000	200.40(A)
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	3949224	200.000	203.80(A)
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	1473828	200.000	204.50(A)
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	832139	200.000	195.54
11 1,1-Dichloroethene	96	1.911	1.911	(0.457)	1249794	200.000	197.32
33 1,2-Dichloroethane	62	4.555	4.555	(0.916)	1584950	200.000	189.99
27 cis-1,2-Dichloroethene	96	3.523	3.523	(0.842)	1123271	200.000	206.57(A)
17 Methylene Chloride	84	2.305	2.305	(0.551)	1013494	200.000	205.19(A)
38 Trichloroethene	130	5.206	5.206	(1.048)	1061444	200.000	196.73
5 Vinyl Chloride	62	1.138	1.138	(0.272)	1159290	200.000	173.84

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.



Data File: \\NAHSTWS005\Target\chem\voa6.i\X210402.b\X040211.D
Date : 02-APR-2021 14:23
Client ID: VSTD200
Sample Info: VSTD200;VSTD200;1;10;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\NAHSTWS005\Target\chem\voa6.i\X210402.b\X040214.D Page 1
Report Date: 04-May-2021 11:39

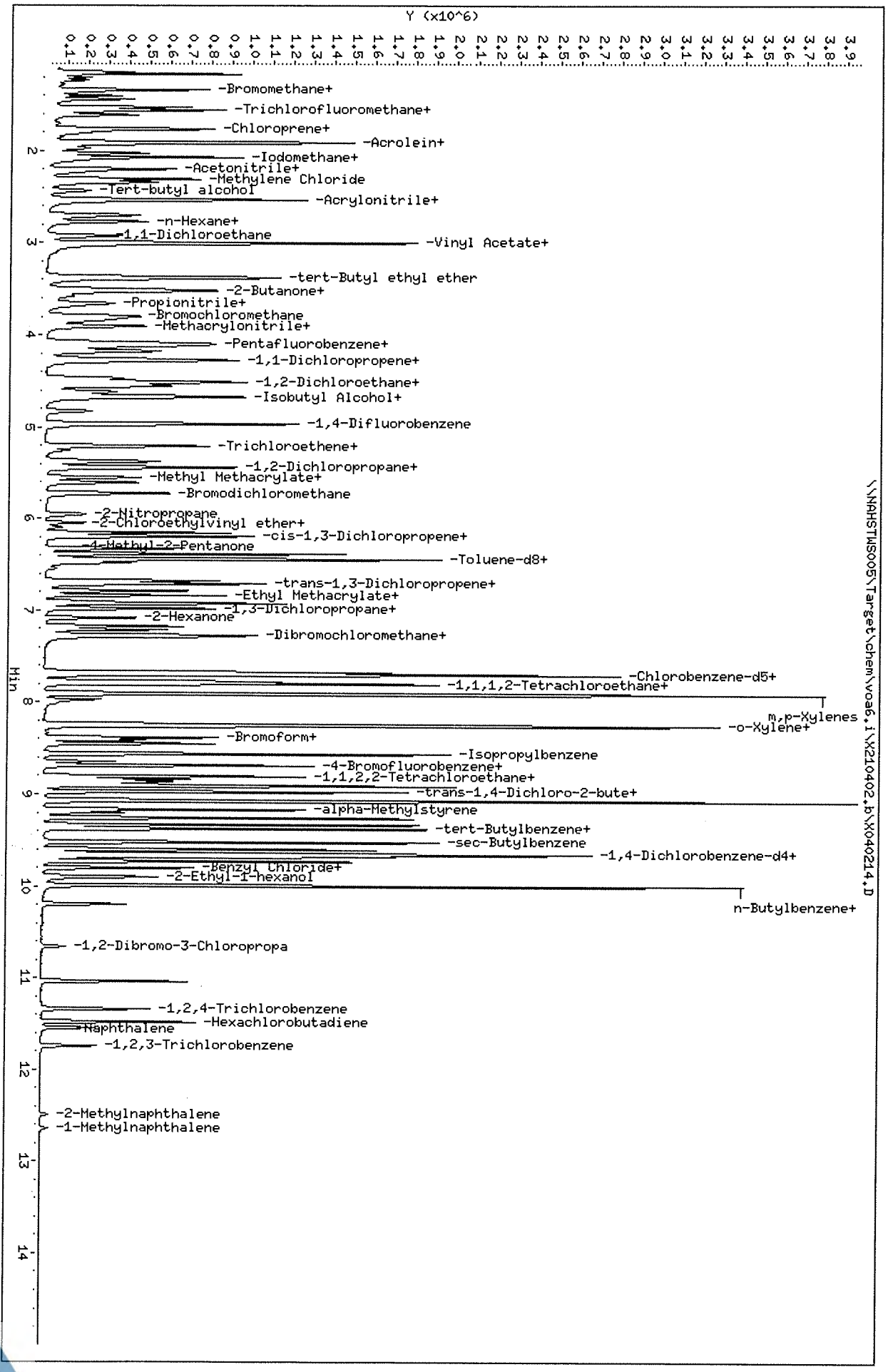
ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X210402.b\X040214.D
Lab Smp Id: ICV Client Smp ID: ICV
Inj Date : 02-APR-2021 15:26
Operator : PC Inst ID: voa6.i
Smp Info : CCV;CCV;2;;ICV
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X210402.b\8260W.m
Meth Date : 04-May-2021 11:39 voa6.i Quant Type: ISTD
Cal Date : 02-APR-2021 14:23 Cal File: X040211.D
Als bottle: 15 QC Sample: METHSPIKE
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBI_short1.sub
Target Version: 4.14
Processing Host: NAHSTW7066

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
*	1 Pentafluorobenzene	168	4.182	4.182	(1.000)	403237	50.0000	
*	36 1,4-Difluorobenzene	114	4.963	4.970	(1.000)	674704	50.0000	
*	47 Chlorobenzene-d5	117	7.670	7.670	(1.000)	639311	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	322985	50.0000	
$	30 Dibromofluoromethane	113	4.096	4.096	(0.979)	233448	49.1812	49.18
$	35 1,2-Dichloroethane-d4	65	4.469	4.469	(1.069)	278339	48.9433	48.94
$	48 Toluene-d8	98	6.388	6.388	(0.833)	812891	49.4873	49.48
$	69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	292882	47.8435	47.84
	53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	178830	48.1535	48.15
	11 1,1-Dichloroethene	96	1.919	1.911	(0.459)	265347	46.2152	46.21
	33 1,2-Dichloroethane	62	4.555	4.555	(0.918)	339122	47.4855	47.48
	27 cis-1,2-Dichloroethene	96	3.530	3.523	(0.844)	228412	46.3383	46.33
	17 Methylene Chloride	84	2.305	2.305	(0.551)	198869	45.5779	45.57
	38 Trichloroethene	130	5.206	5.206	(1.049)	232943	50.4339	50.43
	5 Vinyl Chloride	62	1.145	1.138	(0.274)	279152	46.1765	46.17



Data File: \\NAHSTWS005\Target\chem\voa6,i\X210402,b\X040214,D
Date : 02-APR-2021 15:26
Client ID: ICV
Sample Info: CCV;CCV;2;;ICV
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6,i
Operator: PC
Column diameter: 0.18

MSVOA06 -Logbook

Batch: 44420
Date: 04-15-2021
Method: 8260
Comments:

Analyst: Presenta Cabascango
Reviewer:
Laboratory: Houston

#	Samp ID	Type	Analyzed	DF	Init Wt/Vol	Final Vol	File ID	Matrix	Status	pH
1	BFB	TUNE	04-15-2021 10:22 am	1.00	50 mL	50 mL	X041501.D	Liquid	Y	NA
2	CCV	CCV	04-15-2021 10:43 am	1.00	50 mL	50 mL	X041502.D	Liquid	Y	NA
3	BLANK	SAMP	04-15-2021 11:04 am	1.00	50 mL	50 mL	X041503.D	Liquid	Y	NA
4	CCB	SAMP	04-15-2021 11:25 am	1.00	50 mL	50 mL	X041504.D	Liquid	Y	NA
5	VLCSW-210415	LCS	04-15-2021 11:46 am	1.00	50 mL	50 mL	X041505.D	Liquid	Y	NA
6	BLANK	SAMP	04-15-2021 12:12 pm	1.00	50 mL	50 mL	X041506.D	Liquid	Y	NA
7	VBLKW-210415	MBLK	04-15-2021 12:33 pm	1.00	50 mL	50 mL	X041507.D	Liquid	Y	NA
8	HS21040694-03	SAMP	04-15-2021 12:54 pm	1.00	50 mL	50 mL	X041508.D	Liquid	Y	NA
9	HS21040694-01	SAMP	04-15-2021 01:15 pm	1.00	50 mL	50 mL	X041509.D	Liquid	Y	NA
10	HS21040695-18	SAMP	04-15-2021 01:36 pm	1.00	50 mL	50 mL	X041510.D	Liquid	Y	NA
11	HS21040695-01	SAMP	04-15-2021 01:57 pm	1.00	50 mL	50 mL	X041511.D	Liquid	Y	NA
12	HS21040695-03	SAMP	04-15-2021 02:18 pm	1.00	50 mL	50 mL	X041512.D	Liquid	Y	NA
13	HS21040768-13	SAMP	04-15-2021 02:39 pm	1.00	50 mL	50 mL	X041513.D	Liquid	Y	NA
14	HS21040768-14	SAMP	04-15-2021 03:00 pm	1.00	50 mL	50 mL	X041514.D	Liquid	Y	NA
15	HS21040768-15	SAMP	04-15-2021 03:21 pm	1.00	50 mL	50 mL	X041515.D	Liquid	Y	NA
16	HS21040768-01	SAMP	04-15-2021 03:42 pm	20.00	2.5 mL	50 mL	X041516.D	Liquid	Y	NA
17	HS21040695-01MS	MS	04-15-2021 04:03 pm	1.00	50 mL	50 mL	X041517.D	Liquid	Y	NA
18	HS21040695-01MSD	MSD	04-15-2021 04:24 pm	1.00	50 mL	50 mL	X041518.D	Liquid	Y	NA
19	HS21040768-01	SAMP	04-15-2021 04:45 pm	250.0(	200 µL	50 mL	X041519.D	Liquid	Y	NA
20	HS21040768-16	SAMP	04-15-2021 05:06 pm	1.00	50 mL	50 mL	X041520.D	Liquid	Y	NA
21	HS21040768-17	SAMP	04-15-2021 05:27 pm	1.00	50 mL	50 mL	X041521.D	Liquid	Y	NA
22	HS21040768-18	SAMP	04-15-2021 05:49 pm	1.00	50 mL	50 mL	X041522.D	Liquid	Y	NA
23	HS21040768-19	SAMP	04-15-2021 06:10 pm	1.00	50 mL	50 mL	X041523.D	Liquid	Y	NA
24	HS21040768-02	SAMP	04-15-2021 06:31 pm	1.00	50 mL	50 mL	X041524.D	Liquid	Y	NA
25	HS21040768-03	SAMP	04-15-2021 06:52 pm	1.00	50 mL	50 mL	X041525.D	Liquid	Y	NA
26	HS21040768-04	SAMP	04-15-2021 07:13 pm	1.00	50 mL	50 mL	X041526.D	Liquid	Y	NA
27	HS21040768-06	SAMP	04-15-2021 07:34 pm	1.00	50 mL	50 mL	X041527.D	Liquid	Y	NA
28	HS21040768-07	SAMP	04-15-2021 07:55 pm	1.00	50 mL	50 mL	X041528.D	Liquid	Y	NA
29	HS21040768-08	SAMP	04-15-2021 08:16 pm	1.00	50 mL	50 mL	X041529.D	Liquid	Y	NA
30	CCV-END	CCV	04-15-2021 08:37 pm	1.00	50 mL	50 mL	X041530.D	Liquid	Y	NA
31	BFB	TUNE	04-15-2021 08:58 pm	1.00	50 mL	50 mL	Y041501.D	Liquid	Y	NA
32	CCV	CCV	04-15-2021 09:19 pm	1.00	50 mL	50 mL	Y041502.D	Liquid	Y	NA
33	BLANK	SAMP	04-15-2021 09:40 pm	1.00	50 mL	50 mL	Y041503.D	Liquid	Y	NA
34	CCB	SAMP	04-15-2021 10:01 pm	1.00	50 mL	50 mL	Y041504.D	Liquid	Y	NA
35	VLCSW-210415	LCS	04-15-2021 10:22 pm	1.00	50 mL	50 mL	Y041505.D	Liquid	Y	NA
36	BLANK	SAMP	04-15-2021 10:43 pm	1.00	50 mL	50 mL	Y041506.D	Liquid	Y	NA
37	VBLKW-210415	MBLK	04-15-2021 11:04 pm	1.00	50 mL	50 mL	Y041507.D	Liquid	Y	NA
38	HS21040695-04	SAMP	04-15-2021 11:25 pm	1.00	50 mL	50 mL	Y041508.D	Liquid	Y	NA
39	HS21040695-15	SAMP	04-15-2021 11:46 pm	1.00	50 mL	50 mL	Y041509.D	Liquid	Y	NA
40	HS21040695-04MS	MS	04-16-2021 12:07 am	1.00	50 mL	50 mL	Y041510.D	Liquid	Y	NA
41	HS21040695-04MSD	MSD	04-16-2021 12:28 am	1.00	50 mL	50 mL	Y041511.D	Liquid	Y	NA

MSVOA06 -Logbook

#	Samp ID	Type	Analyzed	DF	Init Wt/Vol	Final Vol	File ID	Matrix	Status	pH
42	HS21040286-01	SAMP	04-16-2021 12:49 am	10.00	5 mL	50 mL	Y041512.D	Liquid	Y	NA
43	HS21040286-02	SAMP	04-16-2021 01:10 am	5.00	10 mL	50 mL	Y041513.D	Liquid	Y	NA
44	HS21040286-05	SAMP	04-16-2021 01:31 am	10.00	5 mL	50 mL	Y041514.D	Liquid	Y	NA
45	HS21040286-06	SAMP	04-16-2021 01:52 am	5.00	10 mL	50 mL	Y041515.D	Liquid	Y	NA
46	HS21040286-07	SAMP	04-16-2021 02:14 am	5.00	10 mL	50 mL	Y041516.D	Liquid	Y	NA
47	HS21040695-05	SAMP	04-16-2021 02:35 am	1.00	50 mL	50 mL	Y041517.D	Liquid	Y	NA
48	HS21040695-06	SAMP	04-16-2021 02:56 am	1.00	50 mL	50 mL	Y041518.D	Liquid	Y	NA
49	HS21040695-07	SAMP	04-16-2021 03:17 am	1.00	50 mL	50 mL	Y041519.D	Liquid	Y	NA
50	HS21040695-08	SAMP	04-16-2021 03:38 am	1.00	50 mL	50 mL	Y041520.D	Liquid	Y	NA
51	HS21040695-09	SAMP	04-16-2021 03:59 am	1.00	50 mL	50 mL	Y041521.D	Liquid	Y	NA
52	HS21040695-10	SAMP	04-16-2021 04:20 am	1.00	50 mL	50 mL	Y041522.D	Liquid	Y	NA
53	HS21040695-12	SAMP	04-16-2021 04:41 am	1.00	50 mL	50 mL	Y041523.D	Liquid	Y	NA
54	HS21040695-02	SAMP	04-16-2021 05:02 am	10.00	5 mL	50 mL	Y041524.D	Liquid	Y	NA
55	HS21040695-02	SAMP	04-16-2021 05:23 am	100.0(	500 µL	50 mL	Y041525.D	Liquid	Y	NA
56	HS21040695-13	SAMP	04-16-2021 05:44 am	10.00	5 mL	50 mL	Y041526.D	Liquid	Y	NA
57	HS21040695-13	SAMP	04-16-2021 06:05 am	100.0(	500 µL	50 mL	Y041527.D	Liquid	Y	NA
58	HS21040695-14	SAMP	04-16-2021 06:26 am	25.00	2 mL	50 mL	Y041528.D	Liquid	Y	NA
59	HS21040695-14	SAMP	04-16-2021 06:47 am	250.0(	200 µL	50 mL	Y041529.D	Liquid	Y	NA
60	CCV-END	CCV	04-16-2021 07:08 am	1.00	50 mL	50 mL	Y041530.D	Liquid	Y	NA
61	BLANK	SAMP	04-16-2021 07:29 am	1.00	50 mL	50 mL	Y041531.D	Liquid	Y	NA

FORM 2
WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS21040695

	CLIENT SAMPLE NO.	SMC1 #	SMC2 (DCE)#	SMC3 (TOL)#	OTHER #	TOT OUT
01	VLCSW-210415	99	104	98	99	0
02	VBLKW-210415	92	95	108	97	0
03	HS21040695-18	91	96	108	94	0
04	HS21040695-01	91	97	106	97	0
05	HS21040695-03	88	94	108	95	0
06	HS21040695-01MS	92	95	103	101	0
07	HS21040695-01MSD	95	100	104	99	0
08						
09						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						
28						

		QC LIMITS
SMC1	= Dibromofluoromethane	(0-130)
SMC2 (DCE)	= 1,2-Dichloroethane-d4	(0-130)
SMC3 (TOL)	= Toluene-d8	(0-130)
OTHER	= 4-Bromofluorobenzene	(0-130)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D System Monitoring Compound diluted out

FORM 4
VOLATILE METHOD BLANK SUMMARY

CLIENT SAMPLE NO.

VBLKW-210415

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS21040695

Lab File ID: X041507 Lab Sample ID: VBLKW-210415

Date Analyzed: 04/15/21 Time Analyzed: 1233

GC Column: DB624 ID: 0.18 (mm) Heated Purge: (Y/N) N

Instrument ID: VOA6

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	VLCSW-210415	VLCSW-210415	X041505	1146
02	HS21040695-18	HS21040695-18	X041510	1336
03	HS21040695-01	HS21040695-01	X041511	1357
04	HS21040695-03	HS21040695-03	X041512	1418
05	HS21040695-01MS	HS21040695-01MS	X041517	1603
06	HS21040695-01MSD	HS21040695-01MSD	X041518	1624
07				
08				
09				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				

COMMENTS:

FORM 5
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS21040695

Lab File ID: X041501 BFB Injection Date: 04/15/21

Instrument ID: VOA6 BFB Injection Time: 1022

GC Column: DB624 ID: 0.25 (mm) Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	20.5
75	30.0 - 60.0% of mass 95	57.5
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.7
173	Less than 2.0% of mass 174	0.9 (1.4)1
174	Greater than 50.0% of mass 95	62.3
175	5.0 - 9.0% of mass 174	4.8 (7.7)1
176	95.0 - 101.0% of mass 174	61.4 (98.6)1
177	5.0 - 9.0% of mass 176	4.6 (7.6)2

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

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	CCV	CCV	X041502	04/15/21	1043
02	VLCSW-210415	VLCSW-210415	X041505	04/15/21	1146
03	VBLKW-210415	VBLKW-210415	X041507	04/15/21	1233
04	HS21040695-18	HS21040695-18	X041510	04/15/21	1336
05	HS21040695-01	HS21040695-01	X041511	04/15/21	1357
06	HS21040695-03	HS21040695-03	X041512	04/15/21	1418
07	HS21040695-01MS	HS21040695-01MS	X041517	04/15/21	1603
08	HS21040695-01MSD	HS21040695-01MSD	X041518	04/15/21	1624
09	CCV-END	CCV-END	X041530	04/15/21	2037
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS21040695

Instrument ID: VOA6 Calibration Date: 04/15/21 Time: 1043

Lab File ID: X041502 Init. Calib. Date(s): 04/02/21 04/02/21

Init. Calib. Times: 1053 1423

GC Column: DB624 ID: 0.18 (mm)

COMPOUND	RRF or AMOUNT	RRF50.000 or AMOUNT	CCAL RRF50.000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Vinyl Chloride	0.7500000	0.7065309	0.7065309	0.1	5.80	20.00	AVRG
Methylene Chloride	49.169540	50.000000	0.5333528	0.1	1.66	20.00	LINR
1,1-Dichloroethene	0.7120000	0.6181612	0.6181612	0.1	13.18	20.00	AVRG
1,2-Dichloroethane	0.5290000	0.5101626	0.5101626	0.1	3.56	20.00	AVRG
cis-1,2-Dichloroethene	0.6110000	0.5922422	0.5922422	0.1	3.07	20.00	AVRG
1,1,2-Trichloroethane	0.2900000	0.2949948	0.2949948	0.1	-1.72	20.00	AVRG
Trichloroethene	0.3420000	0.3281423	0.3281423	0.2	4.05	20.00	AVRG
Dibromofluoromethane	49.412147	50.000000	0.5816776	0.1	1.18	20.00	LINR
1,2-Dichloroethane-d4	50.719366	50.000000	0.7155594	0.1	-1.44	20.00	LINR
Toluene-d8	47.263469	50.000000	1.2121474	0.1	5.47	20.00	LINR
4-Bromofluorobenzene	50.417229	50.000000	0.4836463	0.1	-0.83	20.00	LINR

FORM VII VOA

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS21040695

Instrument ID: VOA6 Calibration Date: 04/15/21 Time: 2037

Lab File ID: X041530 Init. Calib. Date(s): 04/02/21 04/02/21

Init. Calib. Times: 1053 1423

GC Column: DB624 ID: 0.18 (mm)

COMPOUND	RRF or AMOUNT	RRF50.000 or AMOUNT	CCAL RRF50.000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Vinyl Chloride	0.7500000	0.7804488	0.7804488	0.1	-4.06	50.00	AVRG
Methylene Chloride	50.422638	50.000000	0.5473681	0.1	-0.84	50.00	LINR
1,1-Dichloroethene	0.7120000	0.6799445	0.6799445	0.1	4.50	50.00	AVRG
1,2-Dichloroethane	0.5290000	0.5110200	0.5110200	0.1	3.40	50.00	AVRG
cis-1,2-Dichloroethene	0.6110000	0.6255748	0.6255748	0.1	-2.38	50.00	AVRG
1,1,2-Trichloroethane	0.2900000	0.2881846	0.2881846	0.1	0.62	50.00	AVRG
Trichloroethene	0.3420000	0.3371266	0.3371266	0.2	1.42	50.00	AVRG
Dibromofluoromethane	49.509394	50.000000	0.5828325	0.1	0.98	50.00	LINR
1,2-Dichloroethane-d4	50.879060	50.000000	0.7178341	0.1	-1.76	50.00	LINR
Toluene-d8	46.524250	50.000000	1.1924146	0.1	6.95	50.00	LINR
4-Bromofluorobenzene	48.903163	50.000000	0.4686305	0.1	2.19	50.00	LINR

FORM VII VOA

FORM 8
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS21040695

Lab File ID (Standard): X041502 Date Analyzed: 04/15/21

Instrument ID: VOA6 Time Analyzed: 1043

GC Column: DB624 ID: 0.18 (mm) Heated Purge: (Y/N) N

		IS1 AREA #	RT #	IS2(DFB) AREA #	RT #	IS3(CBZ) AREA #	RT #
	12 HOUR STD	435511	4.18	739676	4.96	738213	7.67
	UPPER LIMIT	871022	4.68	1479352	5.46	1476426	8.17
	LOWER LIMIT	217756	3.68	369838	4.46	369107	7.17
	CLIENT SAMPLE NO.						
01	VLCSW-210415	415613	4.18	724192	4.97	667118	7.67
02	VBLKW-210415	465215	4.18	758092	4.96	682660	7.67
03	HS21040695-18	460966	4.18	745681	4.97	663464	7.67
04	HS21040695-01	457795	4.18	742908	4.97	657301	7.67
05	HS21040695-03	461892	4.18	736204	4.96	655538	7.67
06	HS21040695-01MS	488538	4.18	783568	4.97	708882	7.67
07	HS21040695-01MSD	500471	4.18	806319	4.97	721892	7.67
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							

IS1 = Pentafluorobenzene
IS2 (DFB) = 1,4-Difluorobenzene
IS3 (CBZ) = Chlorobenzene-d5

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

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

FORM 8
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS21040695

Lab File ID (Standard): X041502 Date Analyzed: 04/15/21

Instrument ID: VOA6 Time Analyzed: 1043

GC Column: DB624 ID: 0.18 (mm) Heated Purge: (Y/N) N

		IS4 (DCB) AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	359382	9.66				
	UPPER LIMIT	718764	10.16				
	LOWER LIMIT	179691	9.16				
	CLIENT SAMPLE NO.						
01	VLCSW-210415	332648	9.66				
02	VBLKW-210415	293406	9.66				
03	HS21040695-18	285997	9.66				
04	HS21040695-01	282238	9.66				
05	HS21040695-03	276814	9.66				
06	HS21040695-01MS	355954	9.66				
07	HS21040695-01MSD	341050	9.66				
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							

IS4 (DCB) = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

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

Data File: \\NAHSTWS005\Target\chem\voa6.i\X210415.b\X041501.D

Date : 15-APR-2021 10:22

Client ID: BFB

Instrument: voa6.i

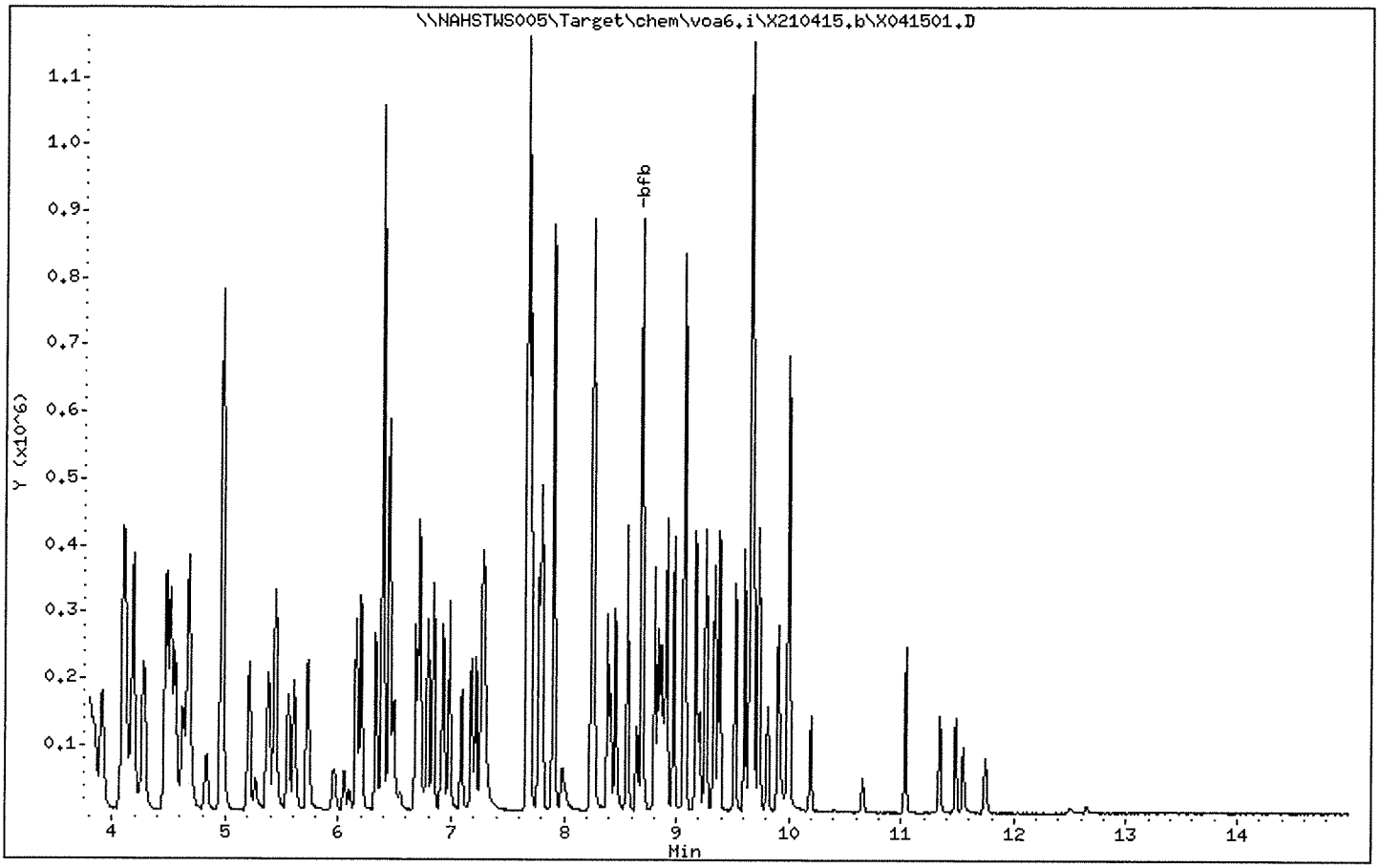
Sample Info: BFB;BFB;3;;BFB

Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

Column diameter: 0.25



Data File: \\NAHSTWS005\Target\chem\voa6.i\X210415.b\X041501.D

Date : 15-APR-2021 10:22

Client ID: BFB

Instrument: voa6.i

Sample Info: BFB;BFB;3;;BFB

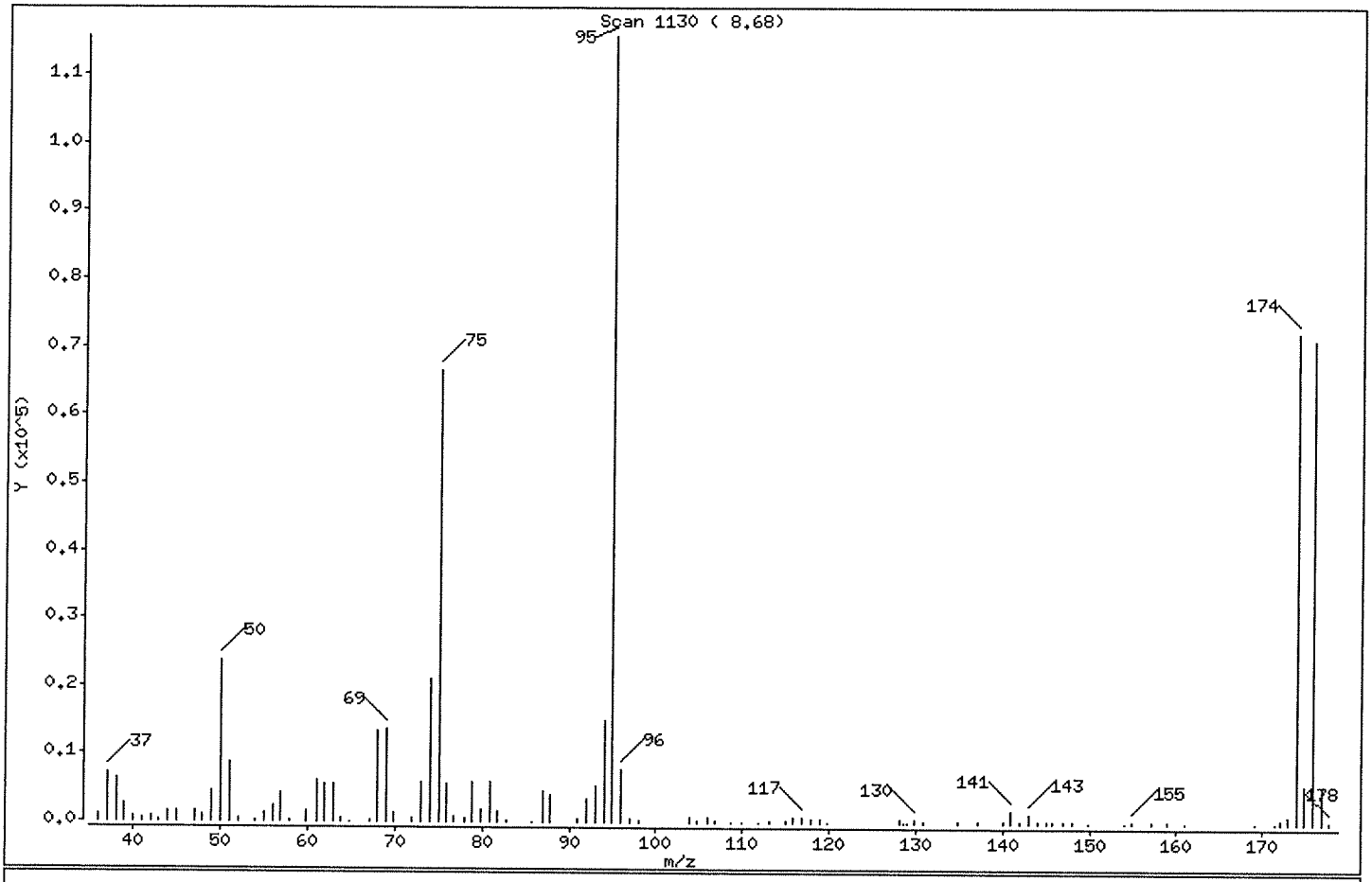
Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

Column diameter: 0.25

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	20.49
75	30.00 - 60.00% of mass 95	57.48
96	5.00 - 9.00% of mass 95	6.73
173	Less than 2.00% of mass 174	0.86 (1.38)
174	Greater than 50.00% of mass 95	62.27
175	5.00 - 9.00% of mass 174	4.81 (7.72)
176	95.00 - 101.00% of mass 174	61.39 (98.59)
177	5.00 - 9.00% of mass 176	4.65 (7.57)

Data File: \\NAHSTWS005\Target\chem\voa6.i\X210415.b\X041501.D

Date : 15-APR-2021 10:22

Client ID: BFB

Instrument: voa6.i

Sample Info: BFB;BFB;3;;BFB

Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

Column diameter: 0.25

Data File: X041501.D
Spectrum: Scan 1130 (8.68)
Location of Maximum: 95.00
Number of points: 99

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	1103	63.90	568	95.00	115640	139.90	182
37.00	7208	64.80	54	96.00	7785	140.80	1758
38.10	6443	67.10	369	97.00	600	141.80	154
39.00	2674	68.00	13418	98.00	314	142.90	1253
40.00	753	69.00	13617	103.80	801	143.90	144
41.10	598	69.90	1421	104.80	273	144.90	162
42.00	756	72.00	536	106.00	807	145.60	172
43.00	381	72.90	5726	106.80	147	146.80	293
44.00	1698	74.00	21000	108.70	73	147.90	158
45.00	1529	75.00	66472	110.00	78	149.80	71
47.10	1486	76.00	5652	111.90	55	154.00	85
47.90	1072	76.80	822	113.00	144	154.90	364
49.00	4439	77.90	482	114.90	180	157.10	287
50.00	23696	78.90	5726	115.70	758	159.00	136
51.00	8773	79.90	1834	116.90	762	161.00	119
52.10	548	80.90	5833	117.80	611	169.10	80
53.90	198	81.80	1654	118.90	418	171.50	120
55.00	1375	82.80	215	119.80	87	172.10	536
56.00	2458	85.80	82	128.00	447	172.90	991
57.00	4355	86.90	4572	128.60	122	173.90	72008
58.00	283	87.90	3904	129.00	118	174.90	5557
59.90	1714	90.90	458	129.80	486	175.90	70992
61.00	6189	92.00	3340	130.90	203	176.90	5377
62.00	5679	93.00	5372	134.80	301	177.80	245
63.00	5683	94.00	14777	137.10	213		

Data File: \\NAHSTWS005\Target\chem\voa6.i\X210415.b\X041502.D Page 1
Report Date: 04-May-2021 11:54

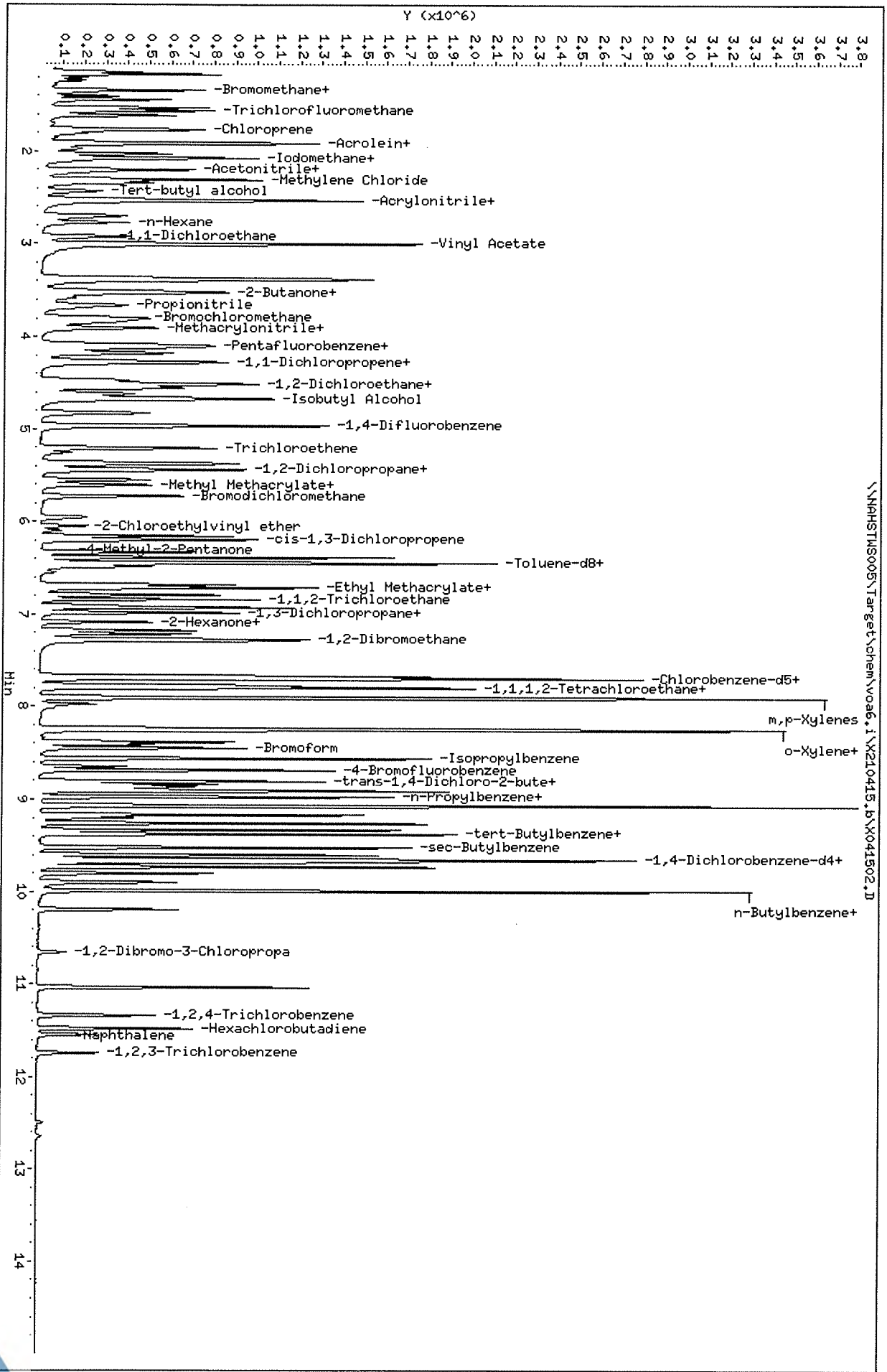
ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X210415.b\X041502.D
Lab Smp Id: CCV Client Smp ID: CCV
Inj Date : 15-APR-2021 10:43
Operator : PC Inst ID: voa6.i
Smp Info : CCV;CCV;2;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X210415.b\8260W.m
Meth Date : 04-May-2021 11:54 voa6.i Quant Type: ISTD
Cal Date : 02-APR-2021 13:20 Cal File: X040208.D
Als bottle: 2 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBI_short1.sub
Target Version: 4.14
Processing Host: NAHSTW7066

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
*	1 Pentafluorobenzene	168	4.182	4.182	(1.000)	435511	50.0000	
*	36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	739676	50.0000	
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	738213	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	359382	50.0000	
$	30 Dibromofluoromethane	113	4.103	4.103	(0.981)	253327	50.0000	49.41
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	311634	50.0000	50.71
$	48 Toluene-d8	98	6.388	6.388	(0.833)	894823	50.0000	47.26
$	69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	357034	50.0000	50.41
	53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	217769	50.0000	50.78
	11 1,1-Dichloroethene	96	1.919	1.919	(0.459)	269216	50.0000	43.41
	33 1,2-Dichloroethane	62	4.555	4.555	(0.918)	377355	50.0000	48.19
	27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	257928	50.0000	48.44
	17 Methylene Chloride	84	2.305	2.305	(0.551)	232281	50.0000	49.16
	38 Trichloroethene	130	5.207	5.207	(1.049)	242719	50.0000	47.93
	5 Vinyl Chloride	62	1.145	1.145	(0.274)	307702	50.0000	47.12



Data File: \\NAHSTWS005\Target\chem\voa6,i\X210415,b\X041502.D
Date : 15-APR-2021 10:43
Client ID: CCV
Sample Info: CCV;CCV;2;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6,i
Operator: PC
Column diameter: 0.18

Data File: \\NAHSTWS005\Target\chem\voa6.i\X210415.b\X041505.D Page 1
Report Date: 04-May-2021 11:54

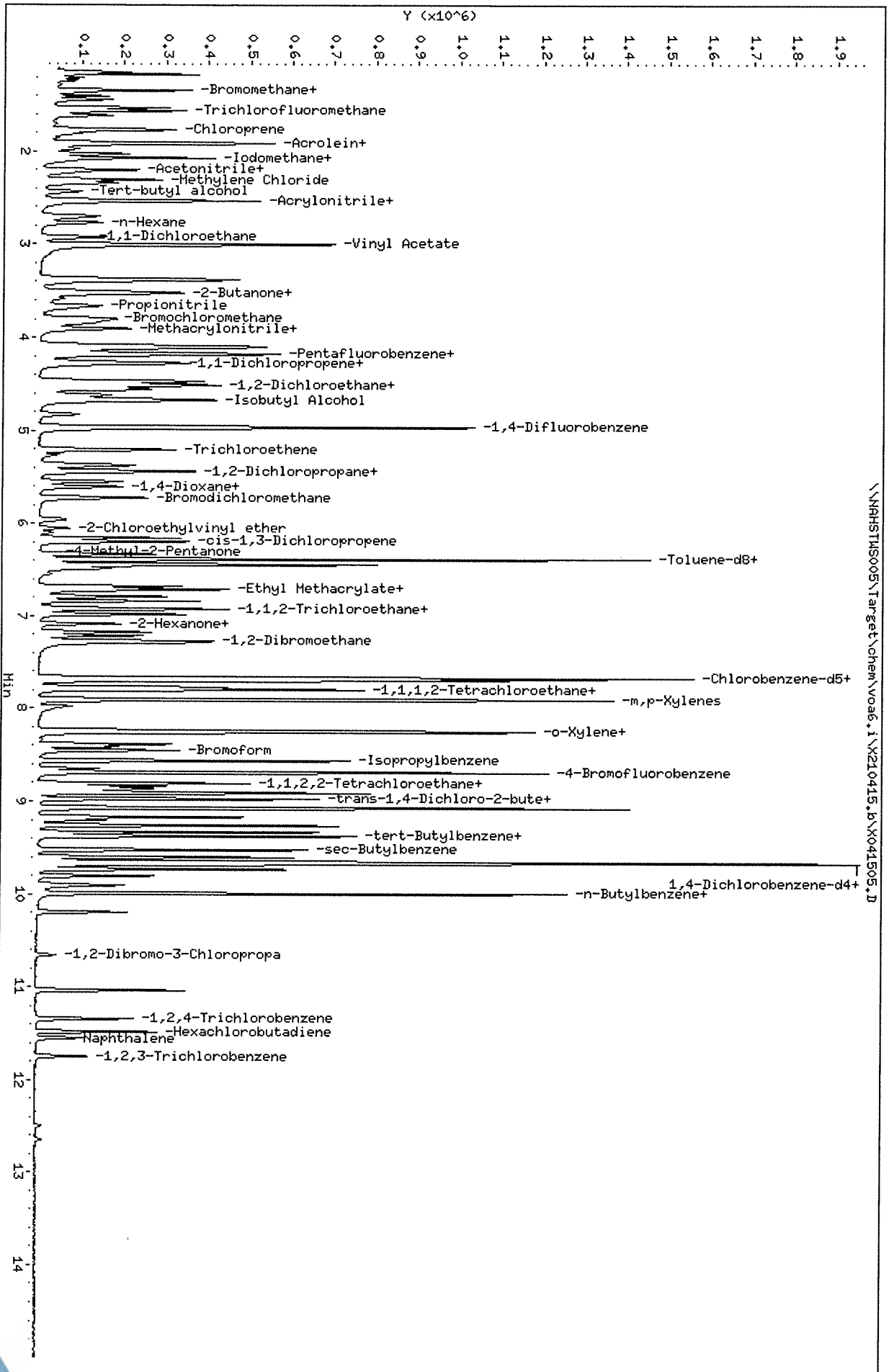
ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X210415.b\X041505.D
Lab Smp Id: VLCSW-210415 Client Smp ID: VLCSW-210415
Inj Date : 15-APR-2021 11:46
Operator : PC Inst ID: voa6.i
Smp Info : VLCSW-210415;VLCSW-210415;3;;LCS
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X210415.b\8260W.m
Meth Date : 04-May-2021 11:54 voa6.i Quant Type: ISTD
Cal Date : 02-APR-2021 13:20 Cal File: X040208.D
Als bottle: 5 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBI_short1.sub
Target Version: 4.14
Processing Host: NAHSTW7066

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	415613	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.963	(1.000)	724192	50.0000	
* 47 Chlorobenzene-d5	117	7.670	7.671	(1.000)	667118	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	332648	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	241648	49.3909	49.39
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	306505	52.2581	52.25
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	839396	48.9902	48.99
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	315528	49.3409	49.34
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	82589	21.3118	21.31
11 1,1-Dichloroethene	96	1.919	1.919	(0.459)	114017	19.2669	19.26
33 1,2-Dichloroethane	62	4.562	4.555	(0.918)	151257	19.7324	19.73
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	100349	19.7517	19.75
17 Methylene Chloride	84	2.305	2.305	(0.551)	87331	20.2701	20.27
38 Trichloroethene	130	5.206	5.207	(1.048)	97301	19.6268	19.62
5 Vinyl Chloride	62	1.145	1.145	(0.274)	131203	21.0570	21.05



Data File: \\NAHSTWS005\Target\chem\voa6,i\X210415,b\X041505.D
Date : 15-APR-2021 11:46
Client ID: VLCSW-210415
Sample Info: VLCSW-210415;VLCSW-210415;3;;LCS
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6,i
Operator: PC
Column diameter: 0.18

Data File: \\NAHSTWS005\Target\chem\voa6.i\X210415.b\X041507.D Page 1
Report Date: 04-May-2021 11:54

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X210415.b\X041507.D
Lab Smp Id: VBLKW-210415 Client Smp ID: VBLKW-210415
Inj Date : 15-APR-2021 12:33
Operator : PC Inst ID: voa6.i
Smp Info : VBLKW-210415;VBLKW-210415;3;;BLANK
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X210415.b\8260W.m
Meth Date : 04-May-2021 11:54 voa6.i Quant Type: ISTD
Cal Date : 02-APR-2021 13:20 Cal File: X040208.D
Als bottle: 7 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBI_short1.sub
Target Version: 4.14
Processing Host: NAHSTW7066

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

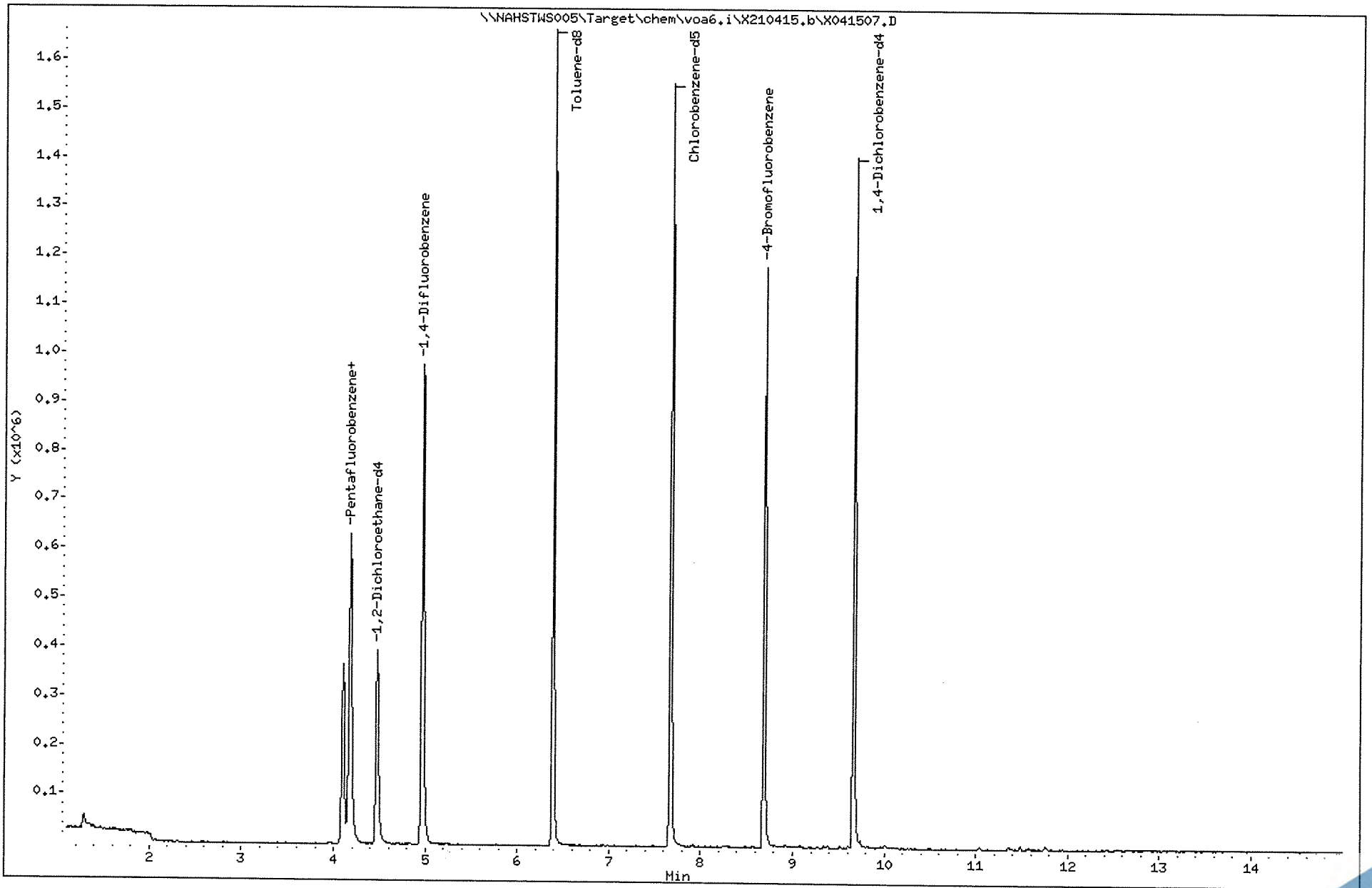
Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	465215	50.0000	
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	758092	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	682660	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	293406	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	251119	45.8852	45.88
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	312058	47.5758	47.57
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	951207	54.0528	54.05
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	316958	48.4664	48.46

Data File: \\NAHSTWS005\Target\chem\voa6.i\X210415.b\X041507.D
Date : 15-APR-2021 12:33
Client ID: VBLKW-210415
Sample Info: VBLKW-210415;VBLKW-210415;3;;BLANK
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i

Operator: PC
Column diameter: 0.18



Data File: \\NAHSTWS005\Target\chem\voa6.i\X210415.b\X041510.D Page 1
Report Date: 04-May-2021 11:55

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X210415.b\X041510.D
Lab Smp Id: HS21040695-18 Client Smp ID: HS21040695-18
Inj Date : 15-APR-2021 13:36
Operator : PC Inst ID: voa6.i
Smp Info : HS21040695-18;HS21040695-18;;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X210415.b\8260W.m
Meth Date : 04-May-2021 11:55 Qin.Xu Quant Type: ISTD
Cal Date : 02-APR-2021 13:20 Cal File: X040208.D
Als bottle: 10
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBI_short1.sub
Target Version: 4.14
Processing Host: NAHSTW7066

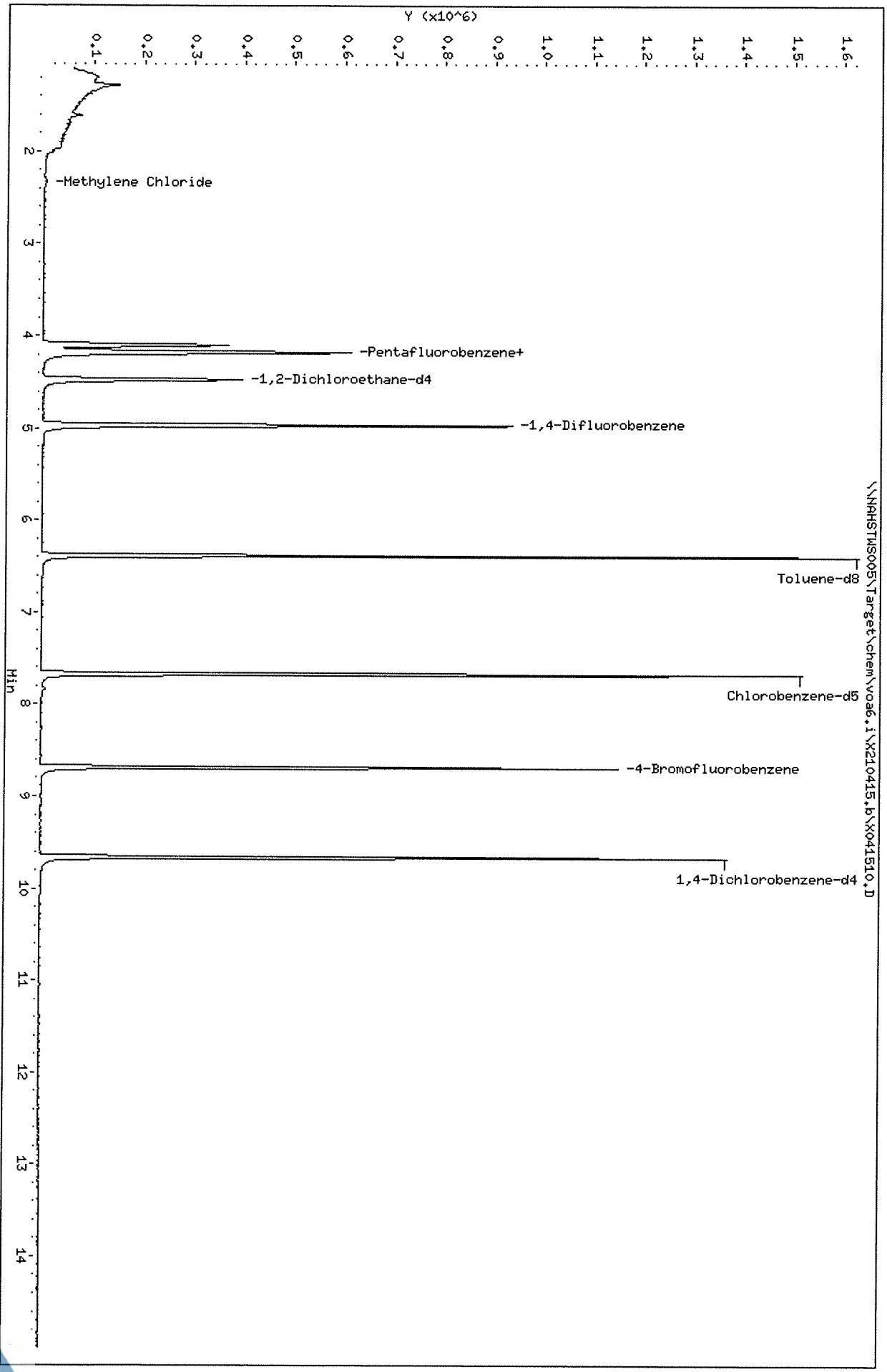
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	460966	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.963	(1.000)	745681	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	663464	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	285997	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.104	(0.981)	247713	45.6820	45.68
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	311893	47.9847	47.98
$ 48 Toluene-d8	98	6.388	6.389	(0.833)	919800	53.7897	53.78
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	300178	47.2707	47.27
17 Methylene Chloride	84	2.306	2.306	(0.551)	1188	1.71339	1.71(a)

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).



Data File: \\NAHSTWS005\Target\chem\voa6.i\X210415.b\X041510.D
Date : 15-APR-2021 13:36
Client ID: HS21040695-18
Sample Info: HS21040695-18;HS21040695-18;;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\NAHSTWS005\Target\chem\voa6.i\X210415.b\X041510.D

Date : 15-APR-2021 13:36

Client ID: HS21040695-18

Instrument: voa6.i

Sample Info: HS21040695-18;HS21040695-18;;;

Purge Volume: 5.0

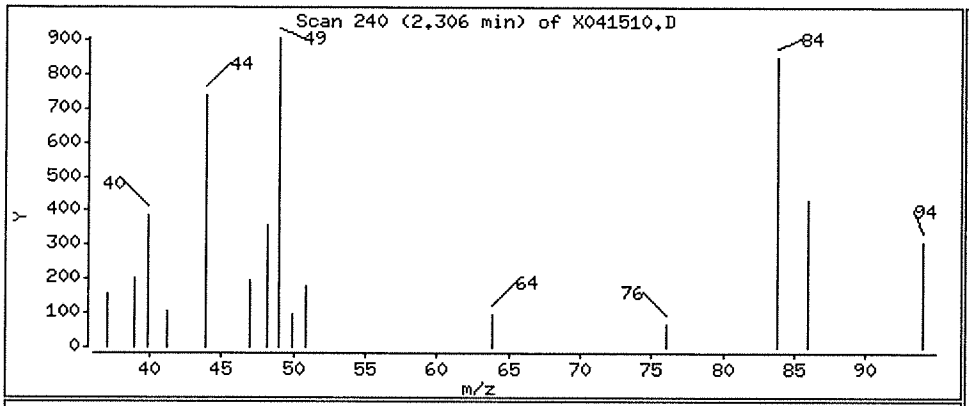
Operator: PC

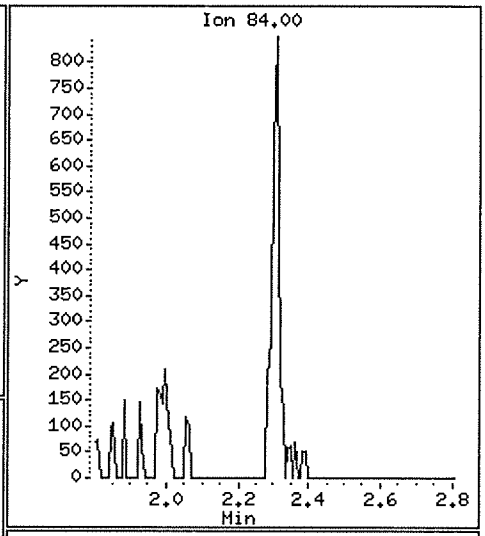
Column phase: DB624

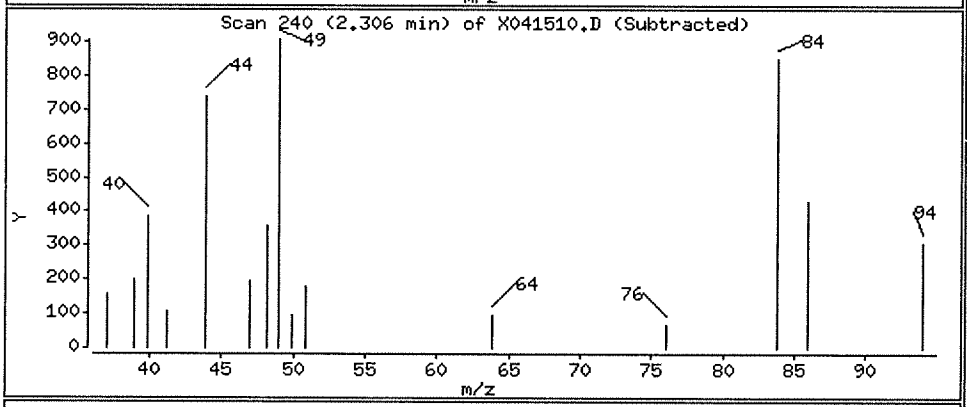
Column diameter: 0.18

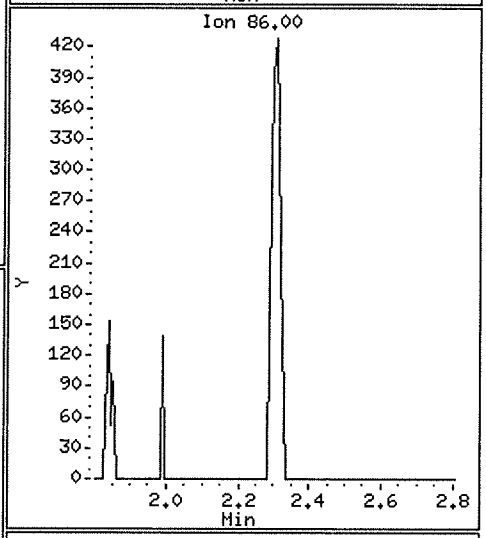
17 Methylene Chloride

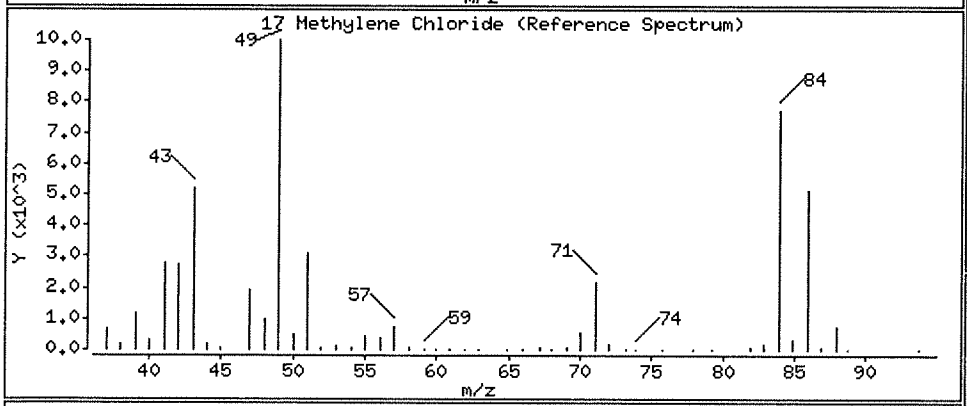
Concentration: 1.71 ug/l

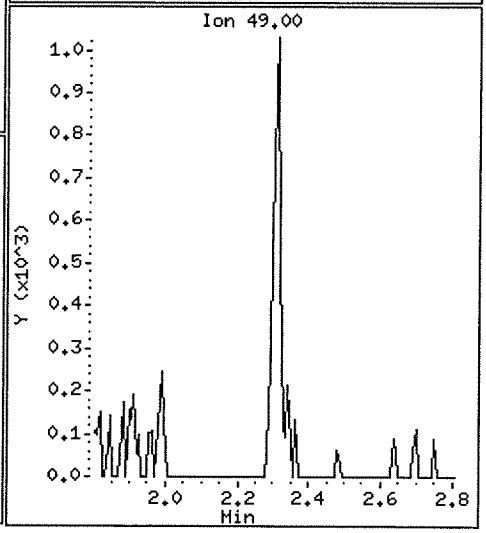


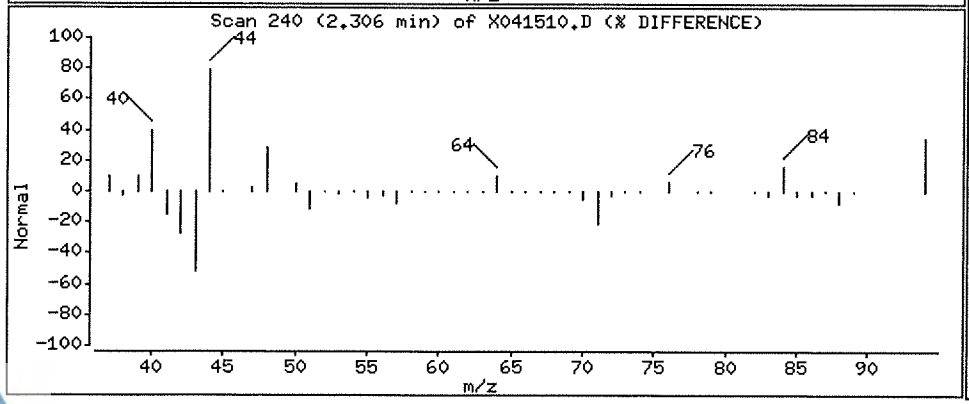












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210415.b\X041511.D Page 1
Report Date: 04-May-2021 11:55

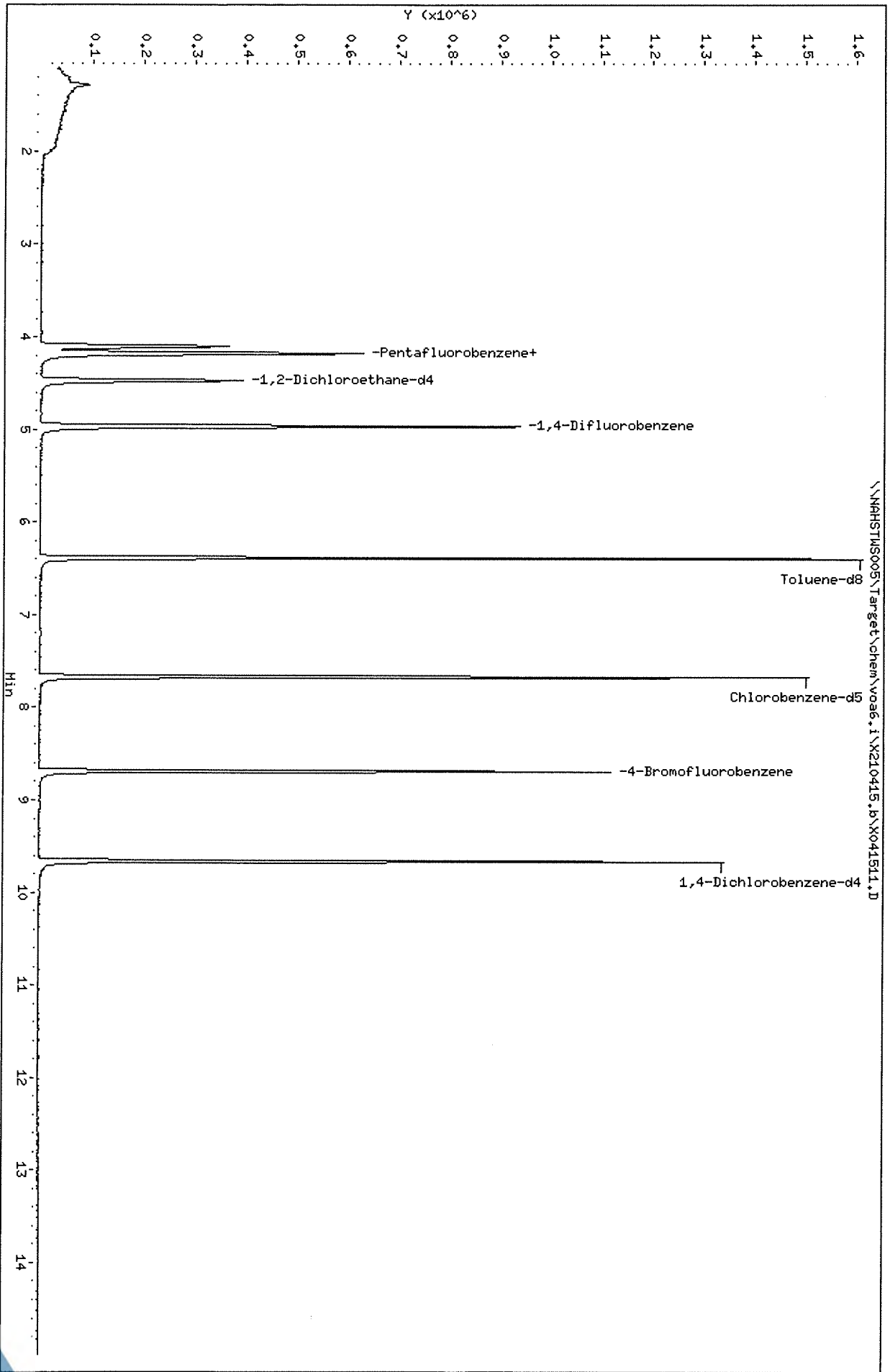
ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X210415.b\X041511.D
Lab Smp Id: HS21040695-01 Client Smp ID: HS21040695-01
Inj Date : 15-APR-2021 13:57
Operator : PC Inst ID: voa6.i
Smp Info : HS21040695-01;HS21040695-01;;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X210415.b\8260W.m
Meth Date : 04-May-2021 11:55 Qin.Xu Quant Type: ISTD
Cal Date : 02-APR-2021 13:20 Cal File: X040208.D
Als bottle: 11
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBI_short1.sub
Target Version: 4.14
Processing Host: NAHSTW7066

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	457795	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.963	(1.000)	742908	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	657301	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	282238	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.104	(0.981)	245600	45.6067	45.60
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	313050	48.4912	48.49
$ 48 Toluene-d8	98	6.388	6.389	(0.833)	899675	53.1297	53.12
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	304178	48.3121	48.31


Data File: \\NAHSTWS005\Target\chem\voa6.i\X210415.b\X041511.D
Date : 15-APR-2021 13:57
Client ID: HS21040695-01
Sample Info: HS21040695-01;HS21040695-01;;;
Purge Volume: 5.0
Column phase: DB624
Instrument: voa6.i
Operator: PC
Column diameter: 0.18
Y (x10^6)
Min
-Pentafluorobenzene+
-1,2-Dichloroethane-d4
-1,4-Difluorobenzene
Toluene-d8
Chlorobenzene-d5
-4-Bromofluorobenzene
1,4-Dichlorobenzene-d4
\\NAHSTWS005\Target\chem\voa6.i\X210415.b\X041511.D

Data File: \\NAHSTWS005\Target\chem\voa6.i\X210415.b\X041512.D Page 1
Report Date: 04-May-2021 11:55

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X210415.b\X041512.D
Lab Smp Id: HS21040695-03 Client Smp ID: HS21040695-03
Inj Date : 15-APR-2021 14:18
Operator : PC Inst ID: voa6.i
Smp Info : HS21040695-03;HS21040695-03;;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X210415.b\8260W.m
Meth Date : 04-May-2021 11:55 Qin.Xu Quant Type: ISTD
Cal Date : 02-APR-2021 13:20 Cal File: X040208.D
Als bottle: 12
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBI_short1.sub
Target Version: 4.14
Processing Host: NAHSTW7066

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

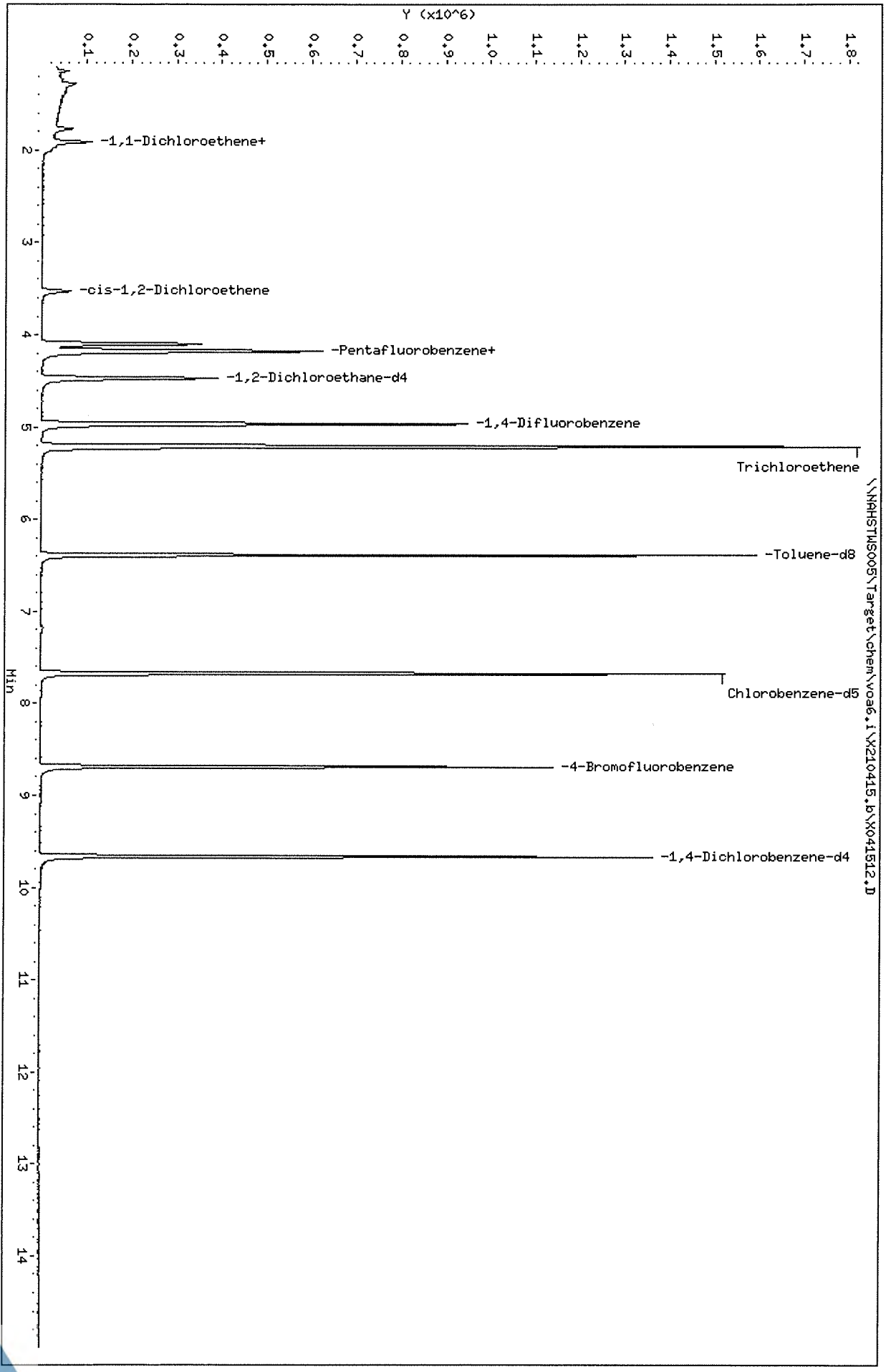
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	461892	50.0000	
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	736204	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	655538	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	276814	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.104	(0.981)	237624	43.7520	43.75
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	305718	46.9509	46.95
$ 48 Toluene-d8	98	6.388	6.389	(0.833)	911584	53.9481	53.94
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	297758	47.4501	47.45
11 1,1-Dichloroethene	96	1.919	1.919	(0.459)	5903	0.89756	0.89(a)
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	32810	5.81095	5.81
38 Trichloroethene	130	5.206	5.207	(1.049)	530497	105.262	105.26
5 Vinyl Chloride	62	1.145	1.145	(0.274)	15053	2.17382	2.17

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Data File: \\NAHSTWS005\Target\chem\voa6.i\X210415.b\X041512.D
Date : 15-APR-2021 14:18
Client ID: HS21040695-03
Sample Info: HS21040695-03;HS21040695-03;;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18



Data File: \\NAHSTWS005\Target\chem\voa6.i\X210415.b\X041512.D

Date : 15-APR-2021 14:18

Client ID: HS21040695-03

Instrument: voa6.i

Sample Info: HS21040695-03;HS21040695-03;;;

Purge Volume: 5.0

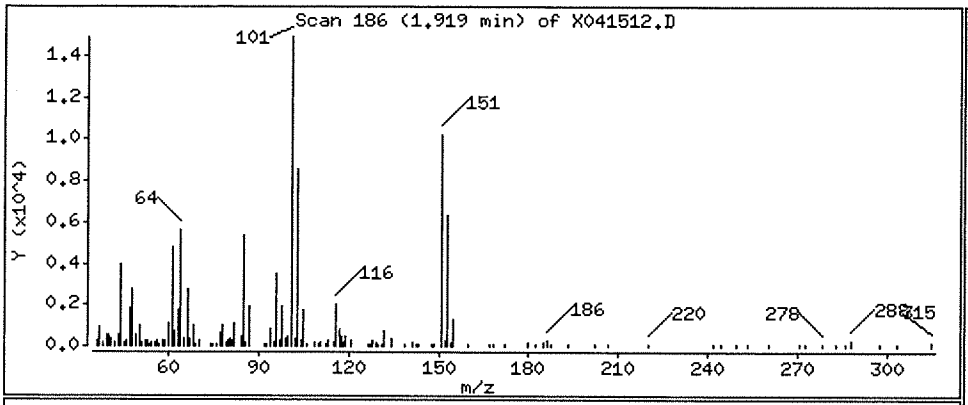
Operator: PC

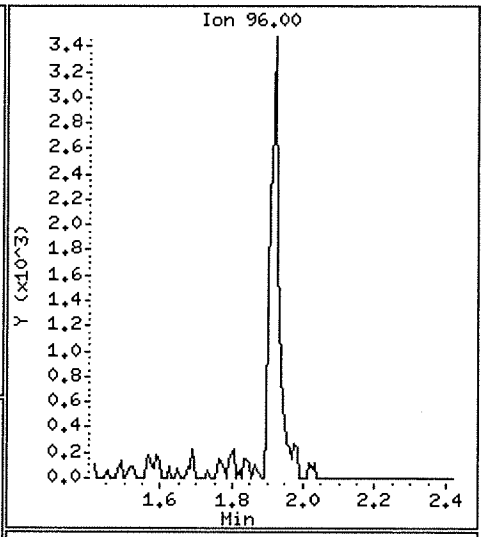
Column phase: DB624

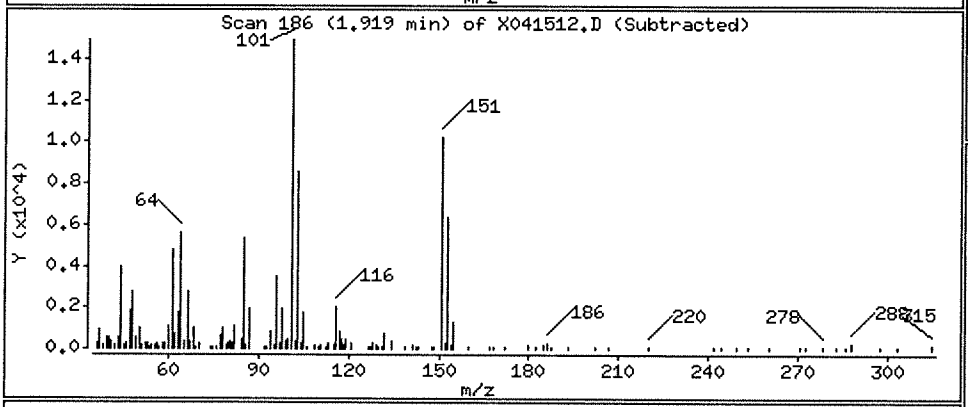
Column diameter: 0.18

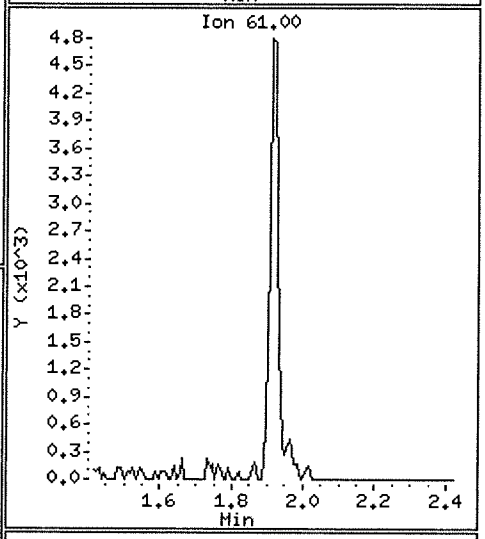
11 1,1-Dichloroethene

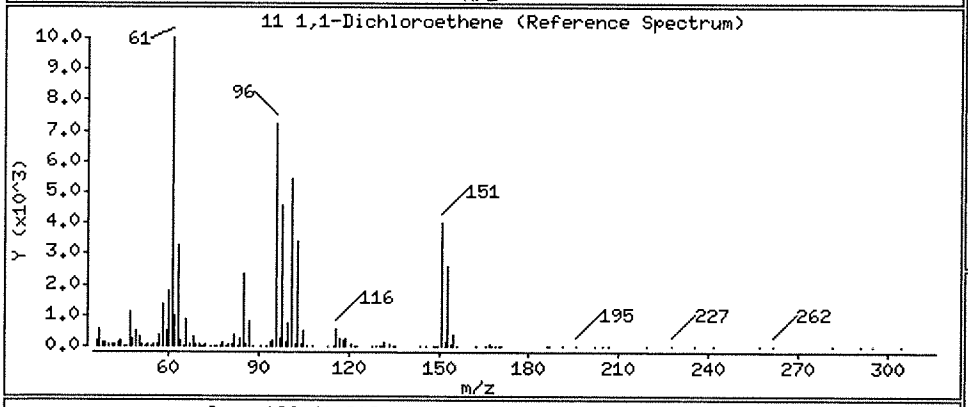
Concentration: 0.89 ug/l

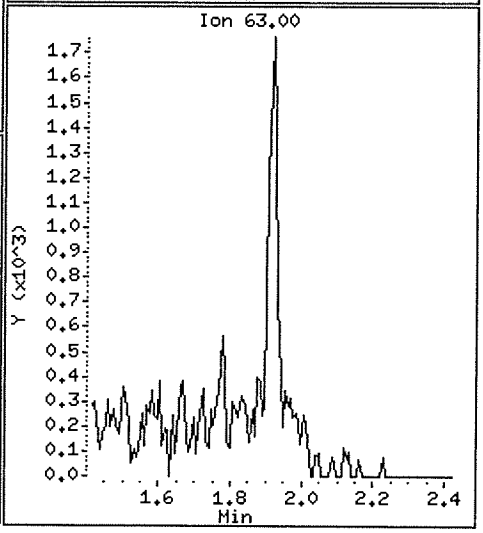


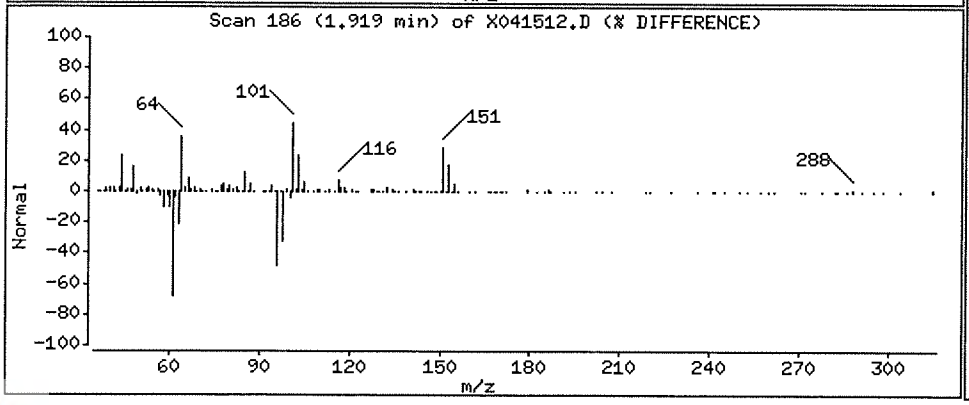












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210415.b\X041512.D Page 4

Date : 15-APR-2021 14:18

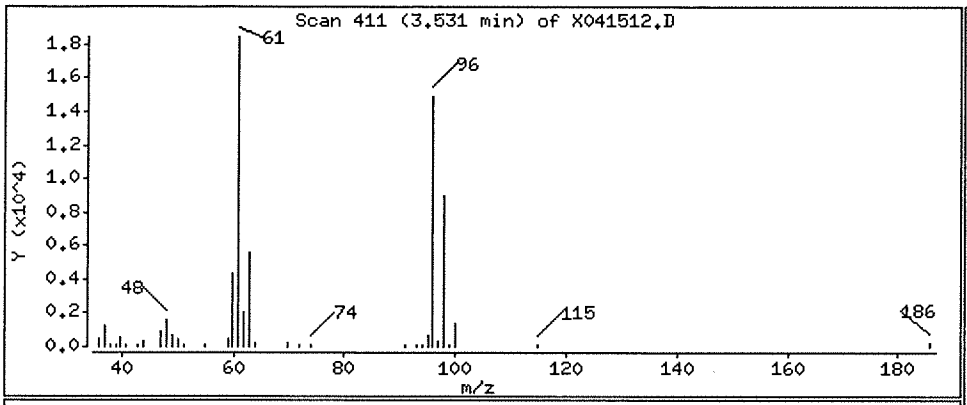
Client ID: HS21040695-03 Instrument: voa6.i

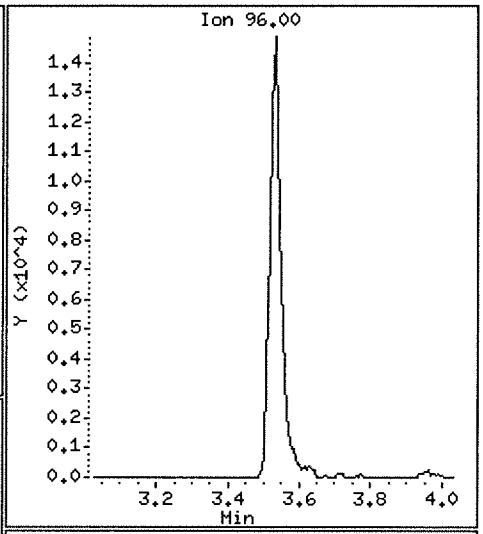
Sample Info: HS21040695-03;HS21040695-03;;;

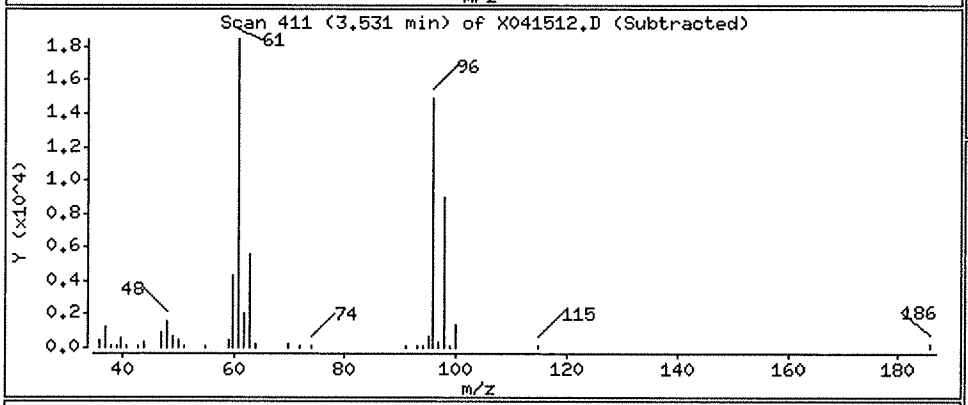
Purge Volume: 5.0 Operator: PC

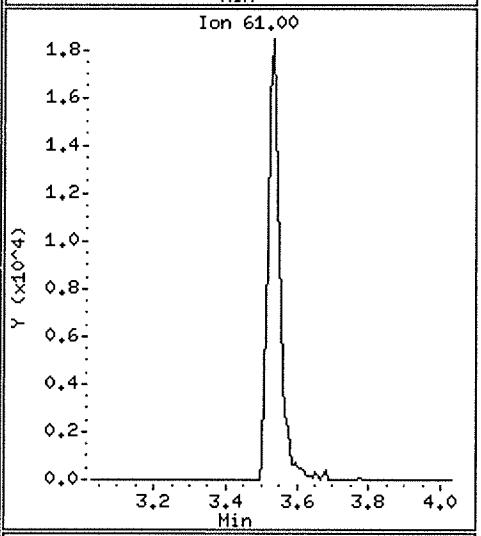
Column phase: DB624 Column diameter: 0.18

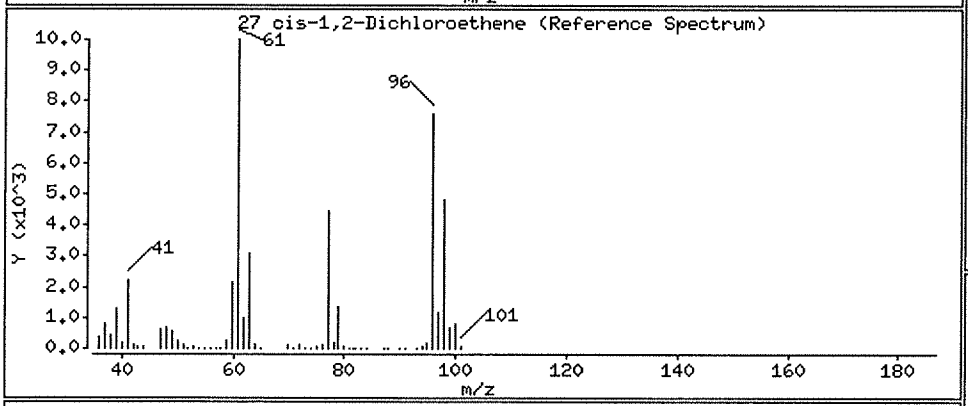
27 cis-1,2-Dichloroethene Concentration: 5.81 ug/l

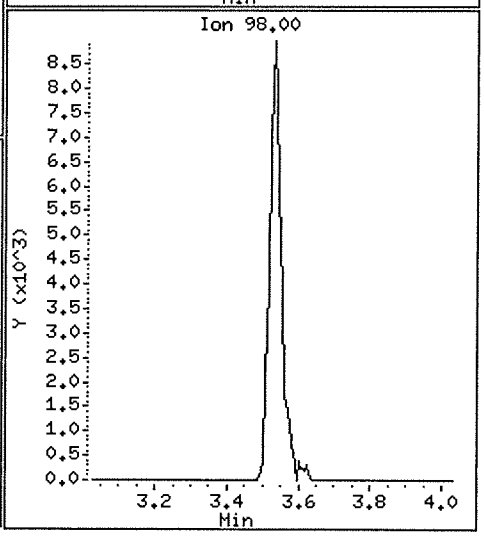


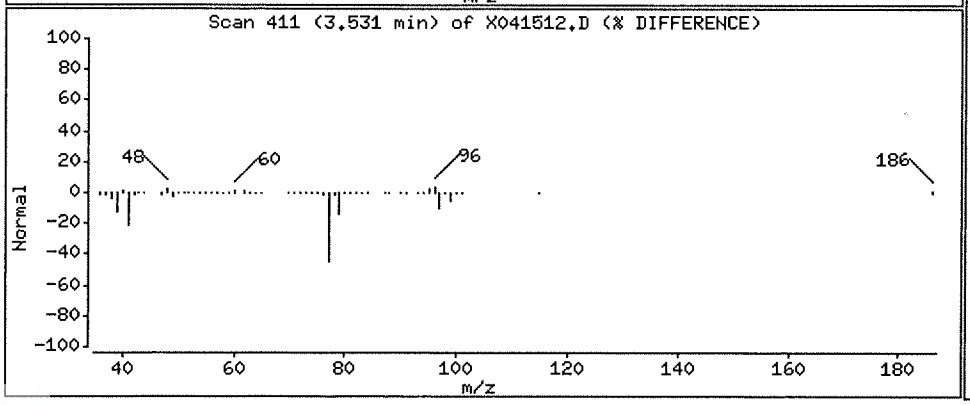












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210415.b\X041512.D Page 5

Date : 15-APR-2021 14:18

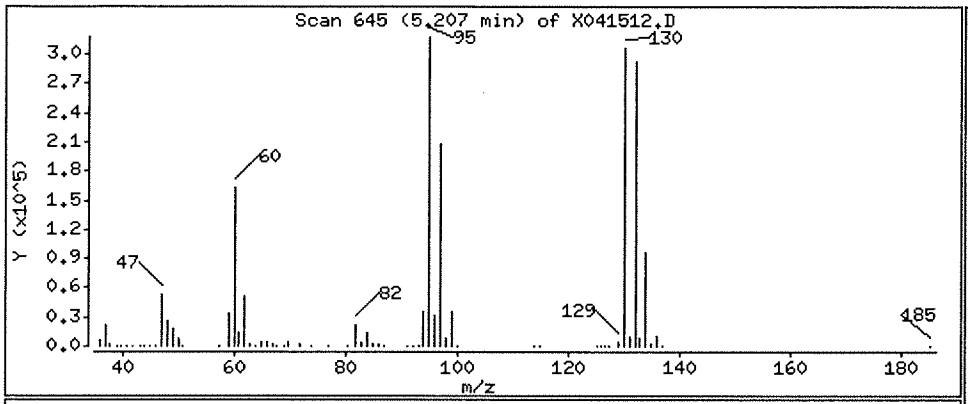
Client ID: HS21040695-03 Instrument: voa6.i

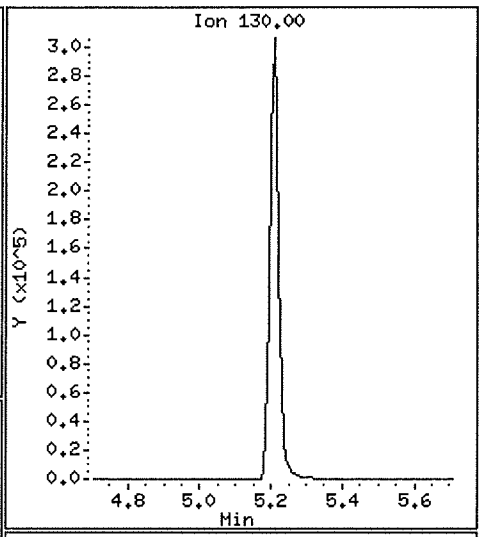
Sample Info: HS21040695-03;HS21040695-03;;;

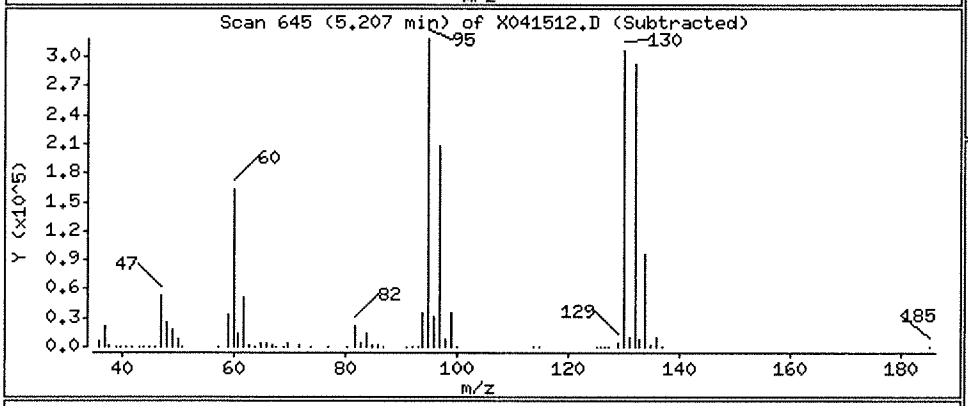
Purge Volume: 5.0 Operator: PC

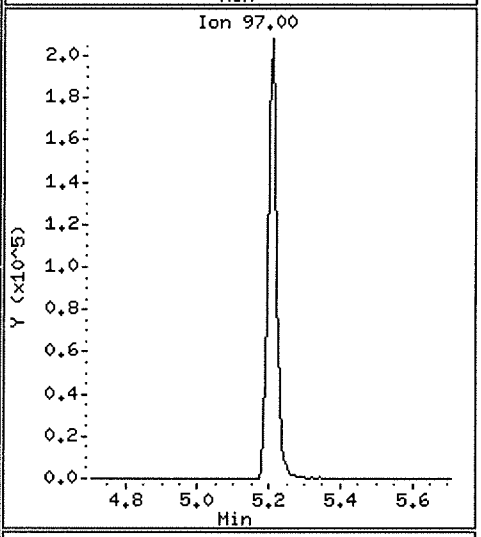
Column phase: DB624 Column diameter: 0.18

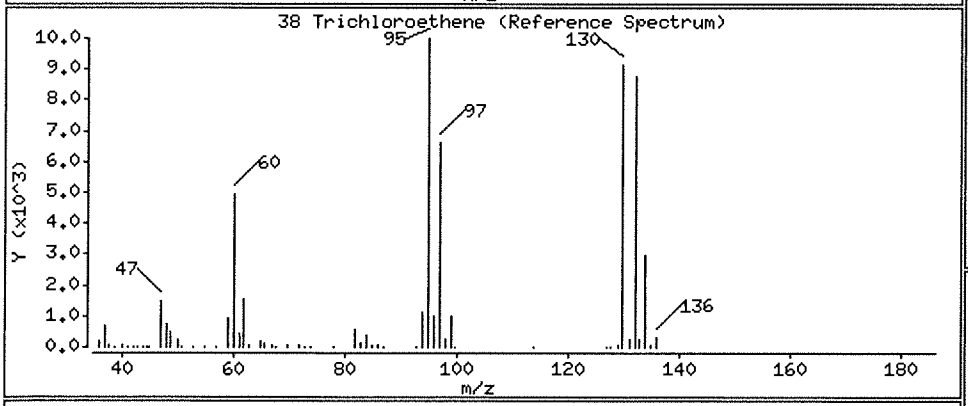
38 Trichloroethene Concentration: 105.26 ug/l

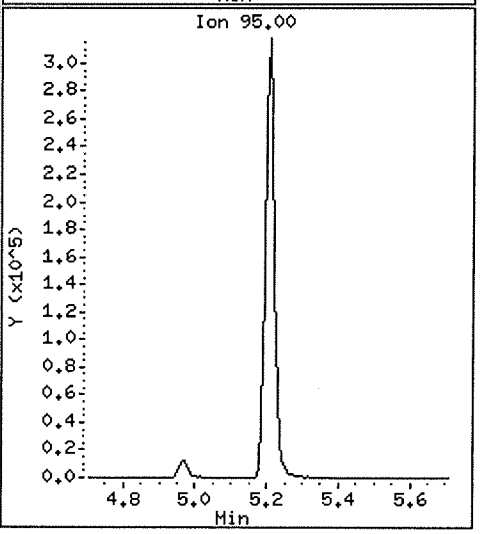


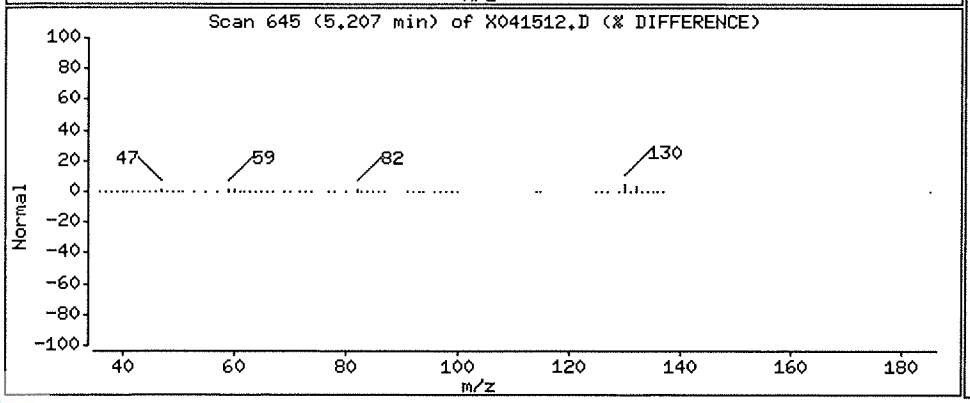












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210415.b\X041512.D

Date : 15-APR-2021 14:18

Client ID: HS21040695-03

Instrument: voa6.i

Sample Info: HS21040695-03;HS21040695-03;;;

Purge Volume: 5.0

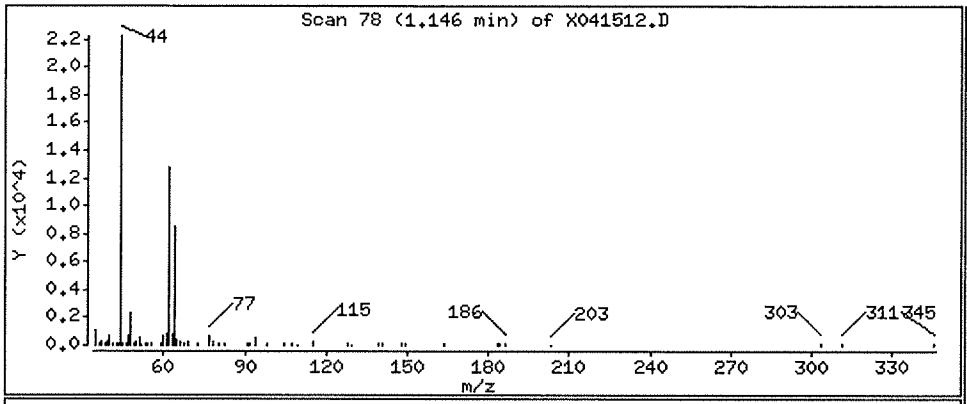
Operator: PC

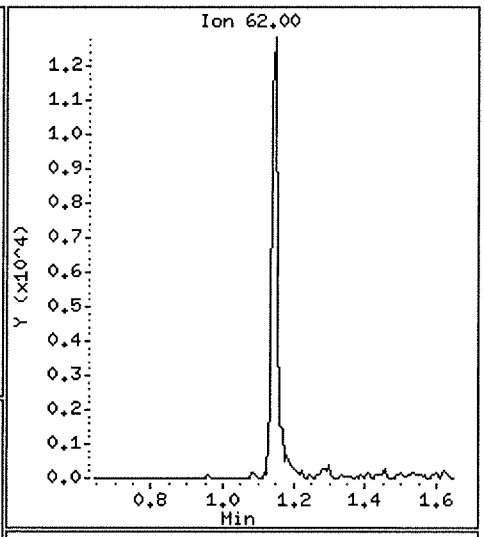
Column phase: DB624

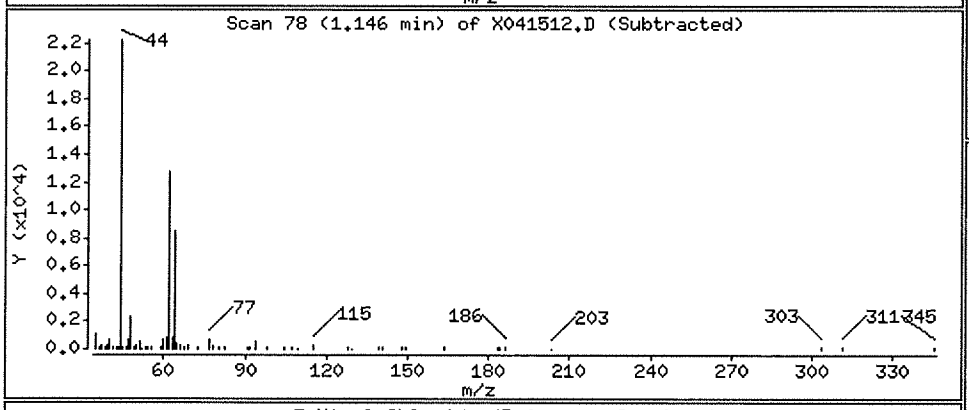
Column diameter: 0.18

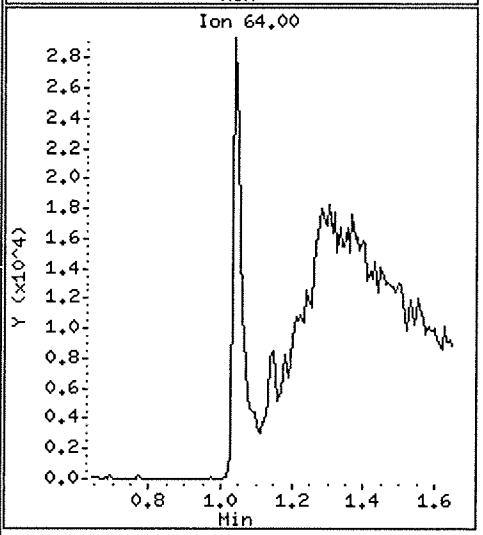
5 Vinyl Chloride

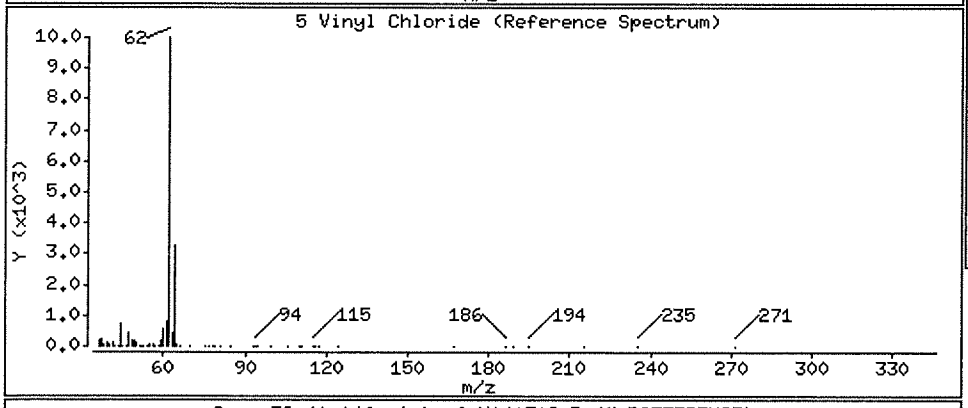
Concentration: 2.17 ug/l

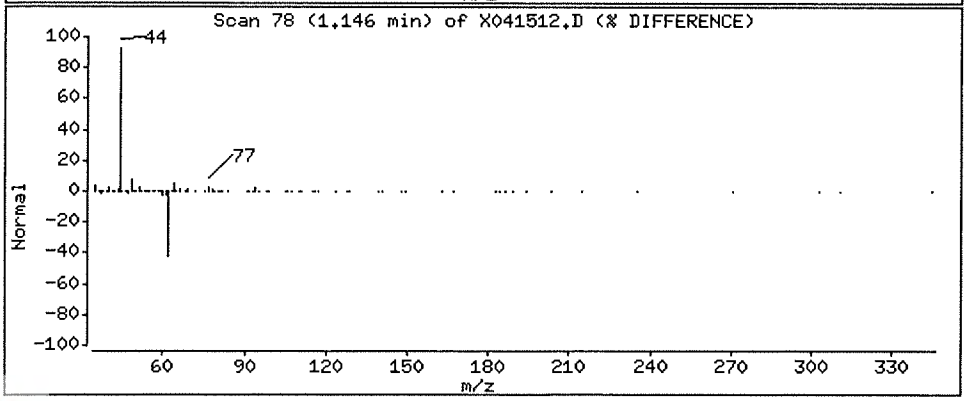












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210415.b\X041517.D Page 1
Report Date: 04-May-2021 11:54

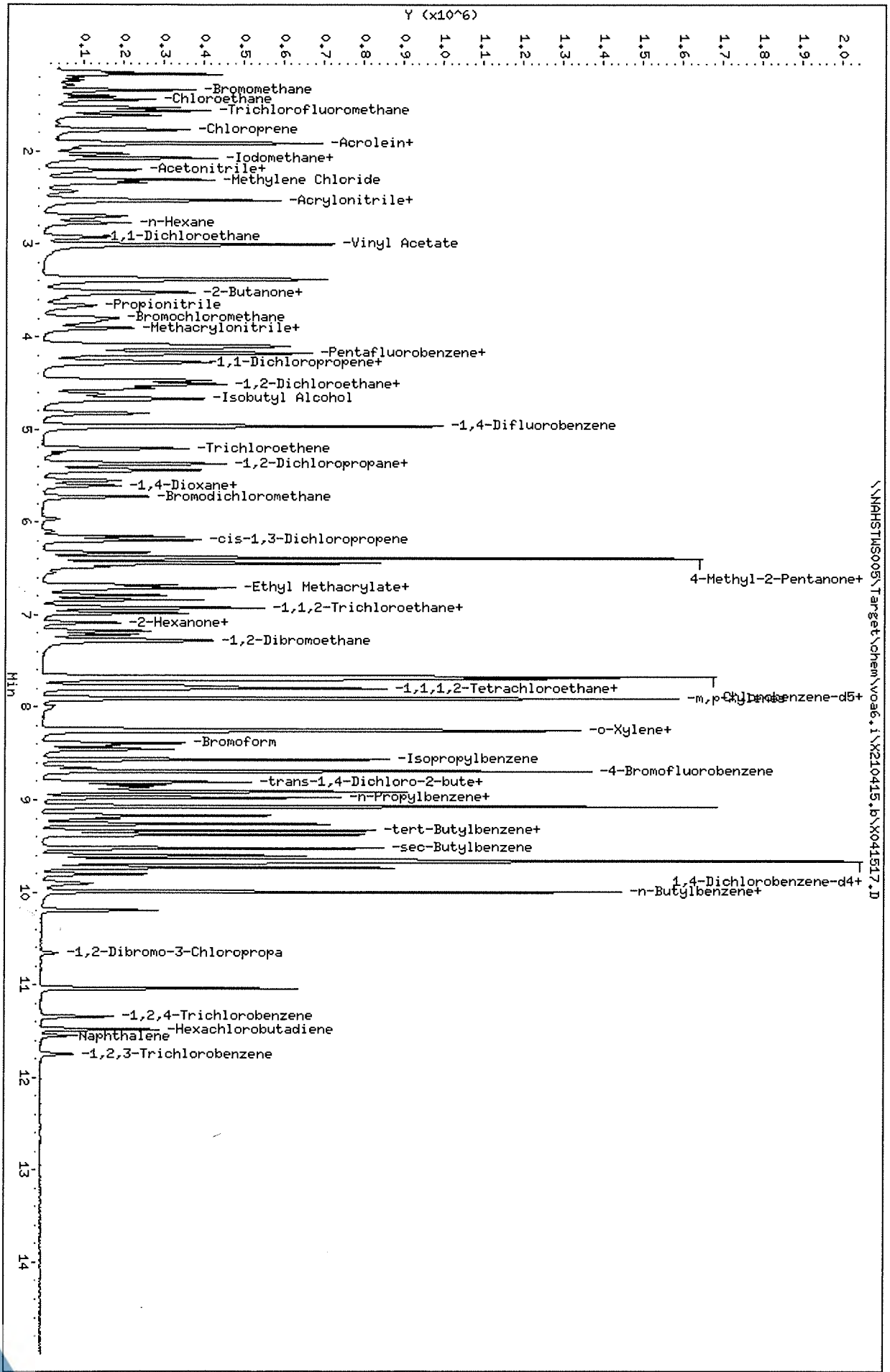
ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X210415.b\X041517.D
Lab Smp Id: HS21040695-01MS Client Smp ID: HS21040695-01MS
Inj Date : 15-APR-2021 16:03
Operator : PC Inst ID: voa6.i
Smp Info : HS21040695-01MS;HS21040695-01MS;3;;MS
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X210415.b\8260W.m
Meth Date : 04-May-2021 11:54 voa6.i Quant Type: ISTD
Cal Date : 02-APR-2021 13:20 Cal File: X040208.D
Als bottle: 17 QC Sample: MS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBI_short1.sub
Target Version: 4.14
Processing Host: NAHSTW7066

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	488538	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.963	(1.000)	783568	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	708882	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	355954	50.0000	
$ 30 Dibromofluoromethane	113	4.096	4.103	(0.979)	264423	46.0083	46.00
$ 35 1,2-Dichloroethane-d4	65	4.469	4.476	(1.069)	327069	47.4847	47.48
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	943480	51.7136	51.71
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	343703	50.5388	50.53
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	82162	19.9525	19.95
11 1,1-Dichloroethene	96	1.919	1.919	(0.459)	129255	18.5815	18.58
33 1,2-Dichloroethane	62	4.555	4.555	(0.916)	162679	19.6143	19.61
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	106733	17.8724	17.87
17 Methylene Chloride	84	2.306	2.305	(0.551)	91721	18.2692	18.26
38 Trichloroethene	130	5.207	5.207	(1.048)	109151	20.3487	20.34
5 Vinyl Chloride	62	1.145	1.145	(0.274)	145178	19.8218	19.82



Data File: \\NAHSTWS005\Target\chem\voa6.i\X210415.b\X041517.D
Date : 15-APR-2021 16:03
Client ID: HS21040695-01MS
Sample Info: HS21040695-01MS;HS21040695-01MS;3;;MS
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

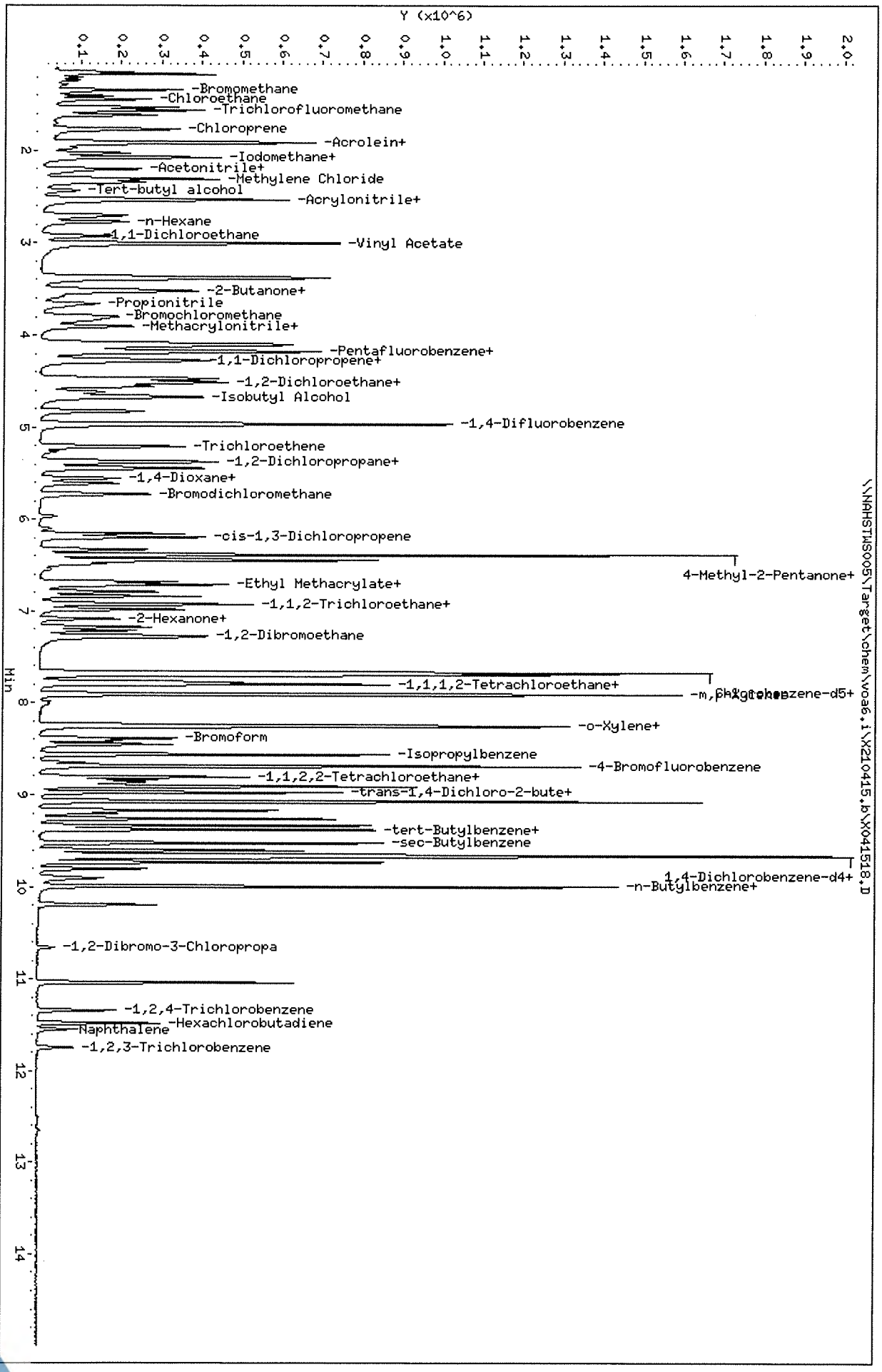
ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X210415.b\X041518.D
Lab Smp Id: HS21040695-01MSD Client Smp ID: HS21040695-01MSD
Inj Date : 15-APR-2021 16:24
Operator : PC Inst ID: voa6.i
Smp Info : HS21040695-01MSD;HS21040695-01MSD;3;;MSD
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X210415.b\8260W.m
Meth Date : 04-May-2021 11:54 voa6.i Quant Type: ISTD
Cal Date : 02-APR-2021 13:20 Cal File: X040208.D
Als bottle: 17 QC Sample: MSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBI_short1.sub
Target Version: 4.14
Processing Host: NAHSTW7066

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	500471	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.963	(1.000)	806319	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	721892	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	341050	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	278762	47.3341	47.33
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	352370	49.9132	49.91
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	971851	52.2873	52.28
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	344037	49.7044	49.70
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	84860	20.2363	20.23
11 1,1-Dichloroethene	96	1.919	1.919	(0.459)	128940	18.0942	18.09
33 1,2-Dichloroethane	62	4.555	4.555	(0.916)	163339	19.1382	19.13
27 cis-1,2-Dichloroethene	96	3.523	3.530	(0.842)	110177	18.0092	18.00
17 Methylene Chloride	84	2.305	2.305	(0.551)	96004	18.6341	18.63
38 Trichloroethene	130	5.206	5.207	(1.048)	109966	19.9222	19.92
5 Vinyl Chloride	62	1.145	1.145	(0.274)	139051	18.5326	18.53



Data File: \\NAHSTWS005\Target\chem\voa6.i\X210415.b\X041518.D
Date : 15-APR-2021 16:24
Client ID: HS2104069S-01MSD
Sample Info: HS2104069S-01MSD;HS2104069S-01MSD;3;;MSD
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\NAHSTWS005\Target\chem\voa6.i\X210415.b\X041530.D Page 1
Report Date: 04-May-2021 11:54

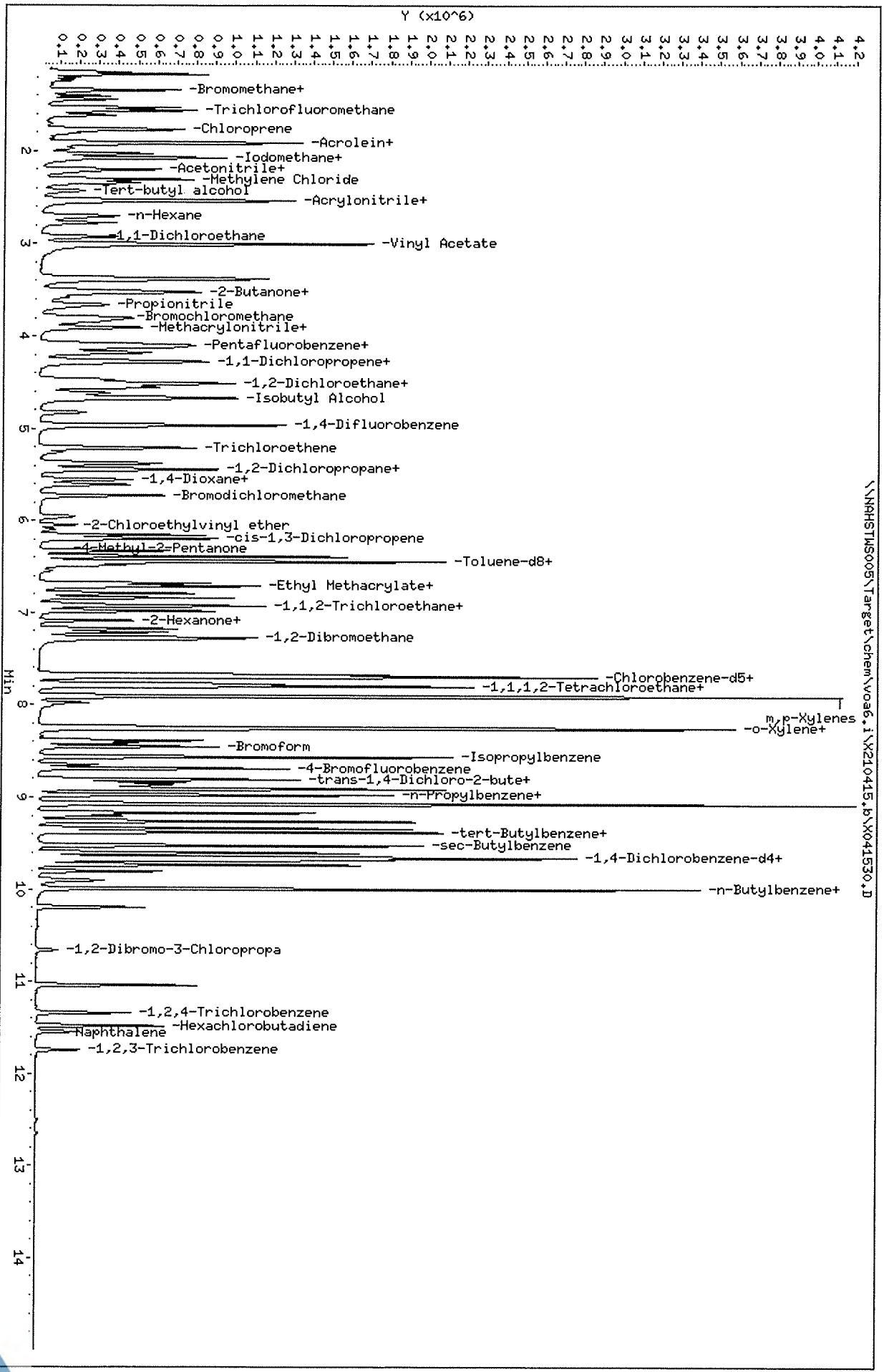
ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X210415.b\X041530.D
Lab Smp Id: CCV-END Client Smp ID: CCV-END
Inj Date : 15-APR-2021 20:37
Operator : PC Inst ID: voa6.i
Smp Info : CCV-END;CCV-END;2;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X210415.b\8260W.m
Meth Date : 04-May-2021 11:54 voa6.i Quant Type: ISTD
Cal Date : 02-APR-2021 13:20 Cal File: X040208.D
Als bottle: 29 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBI_short1.sub
Target Version: 4.14
Processing Host: NAHSTW7066

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
*	1 Pentafluorobenzene	168	4.182	4.182	(1.000)	405336	50.0000	
*	36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	718739	50.0000	
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	731826	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	358146	50.0000	
$	30 Dibromofluoromethane	113	4.104	4.104	(0.981)	236243	50.0000	49.50
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	290964	50.0000	50.87
$	48 Toluene-d8	98	6.389	6.389	(0.833)	872640	50.0000	46.52
$	69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	342956	50.0000	48.90
	53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	210901	50.0000	49.61
	11 1,1-Dichloroethene	96	1.919	1.919	(0.459)	275606	50.0000	47.75
	33 1,2-Dichloroethane	62	4.555	4.555	(0.918)	367290	50.0000	48.27
	27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	253568	50.0000	51.17
	17 Methylene Chloride	84	2.306	2.306	(0.551)	221868	50.0000	50.42
	38 Trichloroethene	130	5.207	5.207	(1.049)	242306	50.0000	49.24
	5 Vinyl Chloride	62	1.145	1.145	(0.274)	316344	50.0000	52.05



Data File: \\NAHSTWS005\Target\chem\voa6.i\X210415.b\X041530.D
Date : 15-APR-2021 20:37
Client ID: CCV-END
Sample Info: CCV-END;CCV-END;2;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

MSVOA06 -Logbook

Batch: 44420 **Analyst:** Presenta Cabascango

Date: 04-15-2021 **Reviewer:**

Method: 8260 **Laboratory:** Houston

Comments:

#	Samp ID	Type	Analyzed	DF	Init Wt/Vol	Final Vol	File ID	Matrix	Status	pH
1	BFB	TUNE	04-15-2021 10:22 am	1.00	50 mL	50 mL	X041501.D	Liquid	Y	NA
2	CCV	CCV	04-15-2021 10:43 am	1.00	50 mL	50 mL	X041502.D	Liquid	Y	NA
3	BLANK	SAMP	04-15-2021 11:04 am	1.00	50 mL	50 mL	X041503.D	Liquid	Y	NA
4	CCB	SAMP	04-15-2021 11:25 am	1.00	50 mL	50 mL	X041504.D	Liquid	Y	NA
5	VLCSW-210415	LCS	04-15-2021 11:46 am	1.00	50 mL	50 mL	X041505.D	Liquid	Y	NA
6	BLANK	SAMP	04-15-2021 12:12 pm	1.00	50 mL	50 mL	X041506.D	Liquid	Y	NA
7	VBLKW-210415	MBLK	04-15-2021 12:33 pm	1.00	50 mL	50 mL	X041507.D	Liquid	Y	NA
8	HS21040694-03	SAMP	04-15-2021 12:54 pm	1.00	50 mL	50 mL	X041508.D	Liquid	Y	NA
9	HS21040694-01	SAMP	04-15-2021 01:15 pm	1.00	50 mL	50 mL	X041509.D	Liquid	Y	NA
10	HS21040695-18	SAMP	04-15-2021 01:36 pm	1.00	50 mL	50 mL	X041510.D	Liquid	Y	NA
11	HS21040695-01	SAMP	04-15-2021 01:57 pm	1.00	50 mL	50 mL	X041511.D	Liquid	Y	NA
12	HS21040695-03	SAMP	04-15-2021 02:18 pm	1.00	50 mL	50 mL	X041512.D	Liquid	Y	NA
13	HS21040768-13	SAMP	04-15-2021 02:39 pm	1.00	50 mL	50 mL	X041513.D	Liquid	Y	NA
14	HS21040768-14	SAMP	04-15-2021 03:00 pm	1.00	50 mL	50 mL	X041514.D	Liquid	Y	NA
15	HS21040768-15	SAMP	04-15-2021 03:21 pm	1.00	50 mL	50 mL	X041515.D	Liquid	Y	NA
16	HS21040768-01	SAMP	04-15-2021 03:42 pm	20.00	2.5 mL	50 mL	X041516.D	Liquid	Y	NA
17	HS21040695-01MS	MS	04-15-2021 04:03 pm	1.00	50 mL	50 mL	X041517.D	Liquid	Y	NA
18	HS21040695-01MSD	MSD	04-15-2021 04:24 pm	1.00	50 mL	50 mL	X041518.D	Liquid	Y	NA
19	HS21040768-01	SAMP	04-15-2021 04:45 pm	250.0(	200 µL	50 mL	X041519.D	Liquid	Y	NA
20	HS21040768-16	SAMP	04-15-2021 05:06 pm	1.00	50 mL	50 mL	X041520.D	Liquid	Y	NA
21	HS21040768-17	SAMP	04-15-2021 05:27 pm	1.00	50 mL	50 mL	X041521.D	Liquid	Y	NA
22	HS21040768-18	SAMP	04-15-2021 05:49 pm	1.00	50 mL	50 mL	X041522.D	Liquid	Y	NA
23	HS21040768-19	SAMP	04-15-2021 06:10 pm	1.00	50 mL	50 mL	X041523.D	Liquid	Y	NA
24	HS21040768-02	SAMP	04-15-2021 06:31 pm	1.00	50 mL	50 mL	X041524.D	Liquid	Y	NA
25	HS21040768-03	SAMP	04-15-2021 06:52 pm	1.00	50 mL	50 mL	X041525.D	Liquid	Y	NA
26	HS21040768-04	SAMP	04-15-2021 07:13 pm	1.00	50 mL	50 mL	X041526.D	Liquid	Y	NA
27	HS21040768-06	SAMP	04-15-2021 07:34 pm	1.00	50 mL	50 mL	X041527.D	Liquid	Y	NA
28	HS21040768-07	SAMP	04-15-2021 07:55 pm	1.00	50 mL	50 mL	X041528.D	Liquid	Y	NA
29	HS21040768-08	SAMP	04-15-2021 08:16 pm	1.00	50 mL	50 mL	X041529.D	Liquid	Y	NA
30	CCV-END	CCV	04-15-2021 08:37 pm	1.00	50 mL	50 mL	X041530.D	Liquid	Y	NA
31	BFB	TUNE	04-15-2021 08:58 pm	1.00	50 mL	50 mL	Y041501.D	Liquid	Y	NA
32	CCV	CCV	04-15-2021 09:19 pm	1.00	50 mL	50 mL	Y041502.D	Liquid	Y	NA
33	BLANK	SAMP	04-15-2021 09:40 pm	1.00	50 mL	50 mL	Y041503.D	Liquid	Y	NA
34	CCB	SAMP	04-15-2021 10:01 pm	1.00	50 mL	50 mL	Y041504.D	Liquid	Y	NA
35	VLCSW-210415	LCS	04-15-2021 10:22 pm	1.00	50 mL	50 mL	Y041505.D	Liquid	Y	NA
36	BLANK	SAMP	04-15-2021 10:43 pm	1.00	50 mL	50 mL	Y041506.D	Liquid	Y	NA
37	VBLKW-210415	MBLK	04-15-2021 11:04 pm	1.00	50 mL	50 mL	Y041507.D	Liquid	Y	NA
38	HS21040695-04	SAMP	04-15-2021 11:25 pm	1.00	50 mL	50 mL	Y041508.D	Liquid	Y	NA
39	HS21040695-15	SAMP	04-15-2021 11:46 pm	1.00	50 mL	50 mL	Y041509.D	Liquid	Y	NA
40	HS21040695-04MS	MS	04-16-2021 12:07 am	1.00	50 mL	50 mL	Y041510.D	Liquid	Y	NA
41	HS21040695-04MSD	MSD	04-16-2021 12:28 am	1.00	50 mL	50 mL	Y041511.D	Liquid	Y	NA

MSVOA06 -Logbook

#	Samp ID	Type	Analyzed	DF	Init Wt/Vol	Final Vol	File ID	Matrix	Status	pH
42	HS21040286-01	SAMP	04-16-2021 12:49 am	10.00	5 mL	50 mL	Y041512.D	Liquid	Y	NA
43	HS21040286-02	SAMP	04-16-2021 01:10 am	5.00	10 mL	50 mL	Y041513.D	Liquid	Y	NA
44	HS21040286-05	SAMP	04-16-2021 01:31 am	10.00	5 mL	50 mL	Y041514.D	Liquid	Y	NA
45	HS21040286-06	SAMP	04-16-2021 01:52 am	5.00	10 mL	50 mL	Y041515.D	Liquid	Y	NA
46	HS21040286-07	SAMP	04-16-2021 02:14 am	5.00	10 mL	50 mL	Y041516.D	Liquid	Y	NA
47	HS21040695-05	SAMP	04-16-2021 02:35 am	1.00	50 mL	50 mL	Y041517.D	Liquid	Y	NA
48	HS21040695-06	SAMP	04-16-2021 02:56 am	1.00	50 mL	50 mL	Y041518.D	Liquid	Y	NA
49	HS21040695-07	SAMP	04-16-2021 03:17 am	1.00	50 mL	50 mL	Y041519.D	Liquid	Y	NA
50	HS21040695-08	SAMP	04-16-2021 03:38 am	1.00	50 mL	50 mL	Y041520.D	Liquid	Y	NA
51	HS21040695-09	SAMP	04-16-2021 03:59 am	1.00	50 mL	50 mL	Y041521.D	Liquid	Y	NA
52	HS21040695-10	SAMP	04-16-2021 04:20 am	1.00	50 mL	50 mL	Y041522.D	Liquid	Y	NA
53	HS21040695-12	SAMP	04-16-2021 04:41 am	1.00	50 mL	50 mL	Y041523.D	Liquid	Y	NA
54	HS21040695-02	SAMP	04-16-2021 05:02 am	10.00	5 mL	50 mL	Y041524.D	Liquid	Y	NA
55	HS21040695-02	SAMP	04-16-2021 05:23 am	100.0(	500 µL	50 mL	Y041525.D	Liquid	Y	NA
56	HS21040695-13	SAMP	04-16-2021 05:44 am	10.00	5 mL	50 mL	Y041526.D	Liquid	Y	NA
57	HS21040695-13	SAMP	04-16-2021 06:05 am	100.0(	500 µL	50 mL	Y041527.D	Liquid	Y	NA
58	HS21040695-14	SAMP	04-16-2021 06:26 am	25.00	2 mL	50 mL	Y041528.D	Liquid	Y	NA
59	HS21040695-14	SAMP	04-16-2021 06:47 am	250.0(	200 µL	50 mL	Y041529.D	Liquid	Y	NA
60	CCV-END	CCV	04-16-2021 07:08 am	1.00	50 mL	50 mL	Y041530.D	Liquid	Y	NA
61	BLANK	SAMP	04-16-2021 07:29 am	1.00	50 mL	50 mL	Y041531.D	Liquid	Y	NA

FORM 2
WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS21040695

	CLIENT SAMPLE NO.	SMC1 #	SMC2 (DCE)#	SMC3 (TOL)#	OTHER #	TOT OUT
01	VLCSW-210415	96	105	95	97	0
02	VBLKW-210415	94	100	109	98	0
03	HS21040695-04	92	96	108	96	0
04	HS21040695-15	92	97	107	95	0
05	HS21040695-04MS	93	99	102	101	0
06	HS21040695-04MSD	94	97	105	103	0
07	HS21040695-05	90	97	108	95	0
08	HS21040695-06	92	96	106	98	0
09	HS21040695-07	92	97	108	94	0
10	HS21040695-08	90	99	108	94	0
11	HS21040695-09	93	96	105	94	0
12	HS21040695-10	92	99	105	96	0
13	HS21040695-12	92	99	109	94	0
14	HS21040695-02	92	98	106	101	0
15	HS21040695-02	92	97	106	91	0
16	HS21040695-13	93	98	108	94	0
17	HS21040695-13	93	98	108	97	0
18	HS21040695-14	93	100	106	96	0
19	HS21040695-14	91	97	109	97	0
20						
21						
22						
23						
24						
25						
26						
27						
28						

		QC LIMITS
SMC1	= Dibromofluoromethane	(0-130)
SMC2 (DCE)	= 1,2-Dichloroethane-d4	(0-130)
SMC3 (TOL)	= Toluene-d8	(0-130)
OTHER	= 4-Bromofluorobenzene	(0-130)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D System Monitoring Compound diluted out

FORM 4
VOLATILE METHOD BLANK SUMMARY

CLIENT SAMPLE NO.

VBLKW-210415

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS21040695

Lab File ID: Y041507 Lab Sample ID: VBLKW-210415

Date Analyzed: 04/15/21 Time Analyzed: 2304

GC Column: DB624 ID: 0.18 (mm) Heated Purge: (Y/N) N

Instrument ID: VOA6

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	VLCSW-210415	VLCSW-210415	Y041505	2222
02	HS21040695-04	HS21040695-04	Y041508	2325
03	HS21040695-15	HS21040695-15	Y041509	2346
04	HS21040695-04MS	HS21040695-04MS	Y041510	0007
05	HS21040695-04MSD	HS21040695-04MSD	Y041511	0028
06	HS21040695-05	HS21040695-05	Y041517	0235
07	HS21040695-06	HS21040695-06	Y041518	0256
08	HS21040695-07	HS21040695-07	Y041519	0317
09	HS21040695-08	HS21040695-08	Y041520	0338
10	HS21040695-09	HS21040695-09	Y041521	0359
11	HS21040695-10	HS21040695-10	Y041522	0420
12	HS21040695-12	HS21040695-12	Y041523	0441
13	HS21040695-02	HS21040695-02	Y041524	0502
14	HS21040695-02	HS21040695-02	Y041525	0523
15	HS21040695-13	HS21040695-13	Y041526	0544
16	HS21040695-13	HS21040695-13	Y041527	0605
17	HS21040695-14	HS21040695-14	Y041528	0626
18	HS21040695-14	HS21040695-14	Y041529	0647
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				

COMMENTS:

FORM 5
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS21040695

Lab File ID: Y041501 BFB Injection Date: 04/15/21

Instrument ID: VOA6 BFB Injection Time: 2058

GC Column: DB624 ID: 0.25 (mm) Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	23.9
75	30.0 - 60.0% of mass 95	56.6
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.2
173	Less than 2.0% of mass 174	0.5 (0.7)1
174	Greater than 50.0% of mass 95	67.4
175	5.0 - 9.0% of mass 174	5.7 (8.4)1
176	95.0 - 101.0% of mass 174	64.4 (95.6)1
177	5.0 - 9.0% of mass 176	4.2 (6.6)2

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

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	CCV	CCV	Y041502	04/15/21	2119
02	VLCSW-210415	VLCSW-210415	Y041505	04/15/21	2222
03	VBLKW-210415	VBLKW-210415	Y041507	04/15/21	2304
04	HS21040695-04	HS21040695-04	Y041508	04/15/21	2325
05	HS21040695-15	HS21040695-15	Y041509	04/15/21	2346
06	HS21040695-04MS	HS21040695-04MS	Y041510	04/16/21	0007
07	HS21040695-04MSD	HS21040695-04MSD	Y041511	04/16/21	0028
08	HS21040695-05	HS21040695-05	Y041517	04/16/21	0235
09	HS21040695-06	HS21040695-06	Y041518	04/16/21	0256
10	HS21040695-07	HS21040695-07	Y041519	04/16/21	0317
11	HS21040695-08	HS21040695-08	Y041520	04/16/21	0338
12	HS21040695-09	HS21040695-09	Y041521	04/16/21	0359
13	HS21040695-10	HS21040695-10	Y041522	04/16/21	0420
14	HS21040695-12	HS21040695-12	Y041523	04/16/21	0441
15	HS21040695-02	HS21040695-02	Y041524	04/16/21	0502
16	HS21040695-02	HS21040695-02	Y041525	04/16/21	0523
17	HS21040695-13	HS21040695-13	Y041526	04/16/21	0544
18	HS21040695-13	HS21040695-13	Y041527	04/16/21	0605
19	HS21040695-14	HS21040695-14	Y041528	04/16/21	0626
20	HS21040695-14	HS21040695-14	Y041529	04/16/21	0647
21	CCV-END	CCV-END	Y041530	04/16/21	0708
22					

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS21040695

Instrument ID: VOA6 Calibration Date: 04/15/21 Time: 2119

Lab File ID: Y041502 Init. Calib. Date(s): 04/02/21 04/02/21

Init. Calib. Times: 1053 1423

GC Column: DB624 ID: 0.18 (mm)

COMPOUND	RRF or AMOUNT	RRF50.000 or AMOUNT	CCAL RRF50.000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Vinyl Chloride	0.7500000	0.7506463	0.7506463	0.1	-0.09	20.00	AVRG
Methylene Chloride	52.073470	50.000000	0.5658319	0.1	-4.15	20.00	LINR
1,1-Dichloroethene	0.7120000	0.6676877	0.6676877	0.1	6.22	20.00	AVRG
1,2-Dichloroethane	0.5290000	0.5209370	0.5209370	0.1	1.52	20.00	AVRG
cis-1,2-Dichloroethene	0.6110000	0.6125641	0.6125641	0.1	-0.26	20.00	AVRG
1,1,2-Trichloroethane	0.2900000	0.3093436	0.3093436	0.1	-6.67	20.00	AVRG
Trichloroethene	0.3420000	0.3404694	0.3404694	0.2	0.45	20.00	AVRG
Dibromofluoromethane	48.869922	50.000000	0.5752382	0.1	2.26	20.00	LINR
1,2-Dichloroethane-d4	49.891060	50.000000	0.7037611	0.1	0.22	20.00	LINR
Toluene-d8	47.231488	50.000000	1.2112937	0.1	5.54	20.00	LINR
4-Bromofluorobenzene	47.840962	50.000000	0.4580961	0.1	4.32	20.00	LINR

FORM VII VOA

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS21040695

Instrument ID: VOA6 Calibration Date: 04/16/21 Time: 0708

Lab File ID: Y041530 Init. Calib. Date(s): 04/02/21 04/02/21

Init. Calib. Times: 1053 1423

GC Column: DB624 ID: 0.18 (mm)

COMPOUND	RRF or AMOUNT	RRF50.000 or AMOUNT	CCAL RRF50.000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Vinyl Chloride	0.7500000	0.7787878	0.7787878	0.1	-3.84	50.00	AVRG
Methylene Chloride	50.851458	50.000000	0.5521643	0.1	-1.70	50.00	LINR
1,1-Dichloroethene	0.7120000	0.6736986	0.6736986	0.1	5.38	50.00	AVRG
1,2-Dichloroethane	0.5290000	0.5041594	0.5041594	0.1	4.70	50.00	AVRG
cis-1,2-Dichloroethene	0.6110000	0.6264485	0.6264485	0.1	-2.53	50.00	AVRG
1,1,2-Trichloroethane	0.2900000	0.3063799	0.3063799	0.1	-5.65	50.00	AVRG
Trichloroethene	0.3420000	0.3312467	0.3312467	0.2	3.14	50.00	AVRG
Dibromofluoromethane	50.395994	50.000000	0.5933618	0.1	-0.79	50.00	LINR
1,2-Dichloroethane-d4	49.350907	50.000000	0.6960672	0.1	1.30	50.00	LINR
Toluene-d8	47.689033	50.000000	1.2235075	0.1	4.62	50.00	LINR
4-Bromofluorobenzene	50.354475	50.000000	0.4830239	0.1	-0.71	50.00	LINR

FORM VII VOA

FORM 8
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS21040695

Lab File ID (Standard): Y041502 Date Analyzed: 04/15/21

Instrument ID: VOA6 Time Analyzed: 2119

GC Column: DB624 ID: 0.18 (mm) Heated Purge: (Y/N) N

		IS1 AREA #	RT #	IS2(DFB) AREA #	RT #	IS3(CBZ) AREA #	RT #
	12 HOUR STD	424718	4.18	754335	4.97	740552	7.67
	UPPER LIMIT	849436	4.68	1508670	5.47	1481104	8.17
	LOWER LIMIT	212359	3.68	377168	4.47	370276	7.17
	CLIENT SAMPLE NO.						
01	VLCSW-210415	407969	4.18	710440	4.97	652816	7.67
02	VBLKW-210415	461480	4.18	750111	4.96	640430	7.67
03	HS21040695-04	468365	4.18	759360	4.96	662867	7.67
04	HS21040695-15	508464	4.18	809333	4.96	706835	7.67
05	HS21040695-04MS	486307	4.18	783562	4.96	714036	7.67
06	HS21040695-04MSD	506036	4.18	824032	4.96	744085	7.67
07	HS21040695-05	466451	4.18	748513	4.96	648074	7.67
08	HS21040695-06	463107	4.18	745255	4.96	662059	7.67
09	HS21040695-07	458761	4.18	730069	4.97	636238	7.67
10	HS21040695-08	454127	4.18	730579	4.97	626151	7.67
11	HS21040695-09	444625	4.18	724380	4.96	633694	7.67
12	HS21040695-10	453698	4.18	733063	4.96	654546	7.67
13	HS21040695-12	444910	4.18	723023	4.96	629208	7.67
14	HS21040695-02	451287	4.18	723191	4.96	643803	7.67
15	HS21040695-02	448419	4.18	721367	4.97	633947	7.67
16	HS21040695-13	453032	4.18	730241	4.96	635476	7.67
17	HS21040695-13	449319	4.18	715630	4.96	626839	7.67
18	HS21040695-14	455063	4.18	728315	4.96	645257	7.67
19	HS21040695-14	451469	4.18	727679	4.96	619342	7.67
20							

IS1 = Pentafluorobenzene
IS2 (DFB) = 1,4-Difluorobenzene
IS3 (CBZ) = Chlorobenzene-d5

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

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

FORM 8
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS21040695

Lab File ID (Standard): Y041502 Date Analyzed: 04/15/21

Instrument ID: VOA6 Time Analyzed: 2119

GC Column: DB624 ID: 0.18 (mm) Heated Purge: (Y/N) N

		IS4 (DCB) AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	358645	9.66				
	UPPER LIMIT	717290	10.16				
	LOWER LIMIT	179323	9.16				
	CLIENT SAMPLE NO.						
01	VLCSW-210415	329440	9.66				
02	VBLKW-210415	277455	9.66				
03	HS21040695-04	295875	9.66				
04	HS21040695-15	302261	9.66				
05	HS21040695-04MS	335383	9.66				
06	HS21040695-04MSD	349865	9.66				
07	HS21040695-05	263480	9.66				
08	HS21040695-06	291077	9.66				
09	HS21040695-07	261340	9.66				
10	HS21040695-08	263925	9.66				
11	HS21040695-09	263606	9.66				
12	HS21040695-10	288357	9.66				
13	HS21040695-12	267835	9.66				
14	HS21040695-02	296231	9.66				
15	HS21040695-02	264190	9.66				
16	HS21040695-13	275955	9.66				
17	HS21040695-13	276668	9.66				
18	HS21040695-14	276595	9.66				
19	HS21040695-14	271425	9.66				
20							

IS4 (DCB) = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

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

Data File: \\NAHSTWS005\Target\chem\voa6.i\X210415.b\Y041501.D

Date : 15-APR-2021 20:58

Client ID: BFB

Instrument: voa6.i

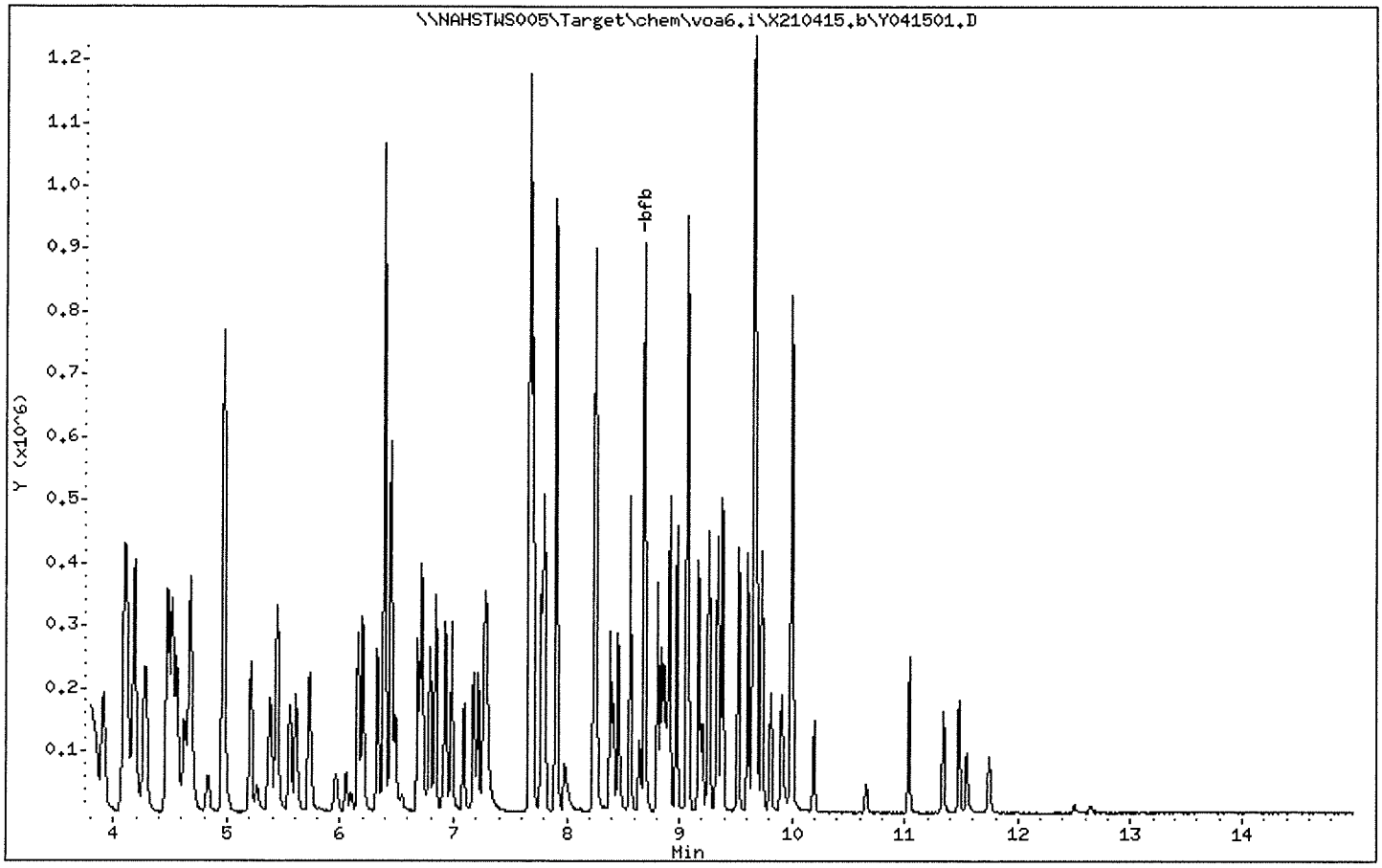
Sample Info: BFB;BFB;3;;BFB

Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

Column diameter: 0.25



Data File: \\NAHSTWS005\Target\chem\voa6.i\X210415.b\Y041501.D

Date : 15-APR-2021 20:58

Client ID: BFB

Instrument: voa6.i

Sample Info: BFB;BFB;3;;BFB

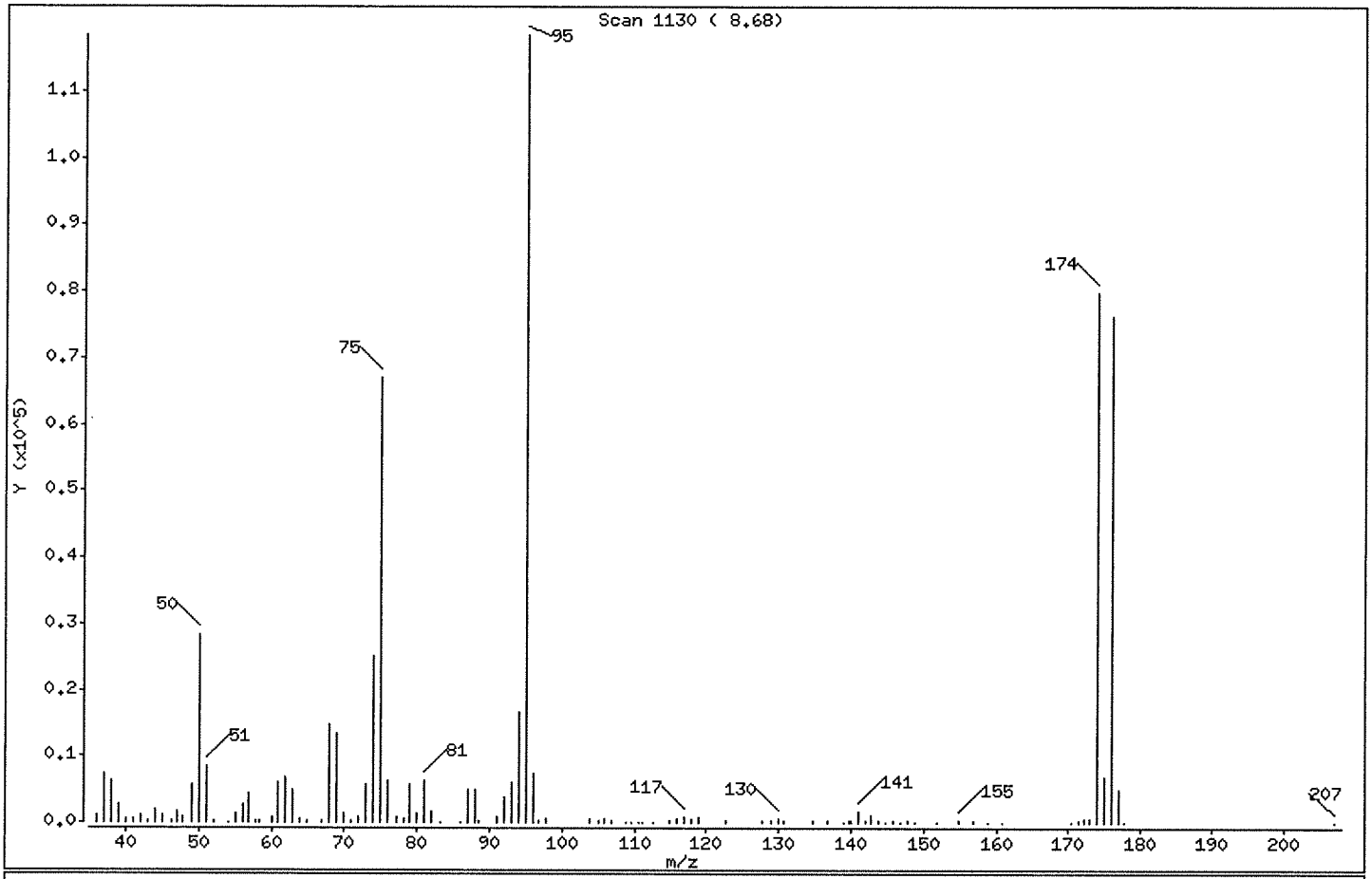
Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

Column diameter: 0.25

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	23.85
75	30.00 - 60.00% of mass 95	56.55
96	5.00 - 9.00% of mass 95	6.22
173	Less than 2.00% of mass 174	0.50 (0.74)
174	Greater than 50.00% of mass 95	67.37
175	5.00 - 9.00% of mass 174	5.69 (8.44)
176	95.00 - 101.00% of mass 174	64.40 (95.60)
177	5.00 - 9.00% of mass 176	4.23 (6.56)

Data File: \\NAHSTWS005\Target\chem\voa6.i\X210415.b\Y041501.D

Date : 15-APR-2021 20:58

Client ID: BFB

Instrument: voa6.i

Sample Info: BFB;BFB;3;;BFB

Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

Column diameter: 0.25

Data File: Y041501.D
Spectrum: Scan 1130 (8.68)
Location of Maximum: 95.00
Number of points: 106

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	1143	64.00	521	95.00	118432	140.00	143
37.00	7311	65.00	173	96.00	7367	140.90	1559
38.00	6332	66.90	379	96.90	198	142.00	297
39.00	2676	68.00	14781	97.90	421	142.90	1138
39.90	596	69.00	13238	103.80	592	143.90	177
41.00	594	70.00	1370	105.00	233	144.90	79
42.00	972	70.90	200	105.90	665	145.90	229
43.10	371	72.00	819	106.80	154	146.70	81
44.00	1968	73.00	5760	108.90	95	147.80	183
45.00	1031	74.00	25136	109.70	75	148.80	112
46.20	173	75.00	66976	110.60	97	151.80	73
47.00	1549	76.00	6340	111.10	135	154.90	222
47.90	850	77.10	778	112.70	128	156.90	221
49.00	5734	78.10	499	114.80	217	158.90	103
50.00	28248	78.90	5720	115.80	461	160.90	121
51.00	8439	79.90	1376	116.90	892	170.50	53
52.00	355	80.90	6364	117.80	537	171.30	162
54.10	63	81.90	1720	119.00	716	172.20	515
55.00	1455	83.30	52	122.80	143	172.90	589
56.00	2768	86.10	76	127.80	346	173.90	79784
56.90	4395	86.90	4880	128.90	165	174.90	6734
57.90	312	87.90	4827	129.90	431	175.90	76272
58.30	199	88.60	374	130.70	235	176.90	5004
60.10	931	90.90	686	134.80	305	177.80	66
61.00	5914	92.00	3754	136.80	206	207.10	122
62.00	6805	93.00	6121	139.00	122		
63.00	4850	94.00	16576	139.70	139		

Data File: \\NAHSTWS005\Target\chem\voa6.i\X210415.b\Y041502.D Page 1
Report Date: 04-May-2021 12:04

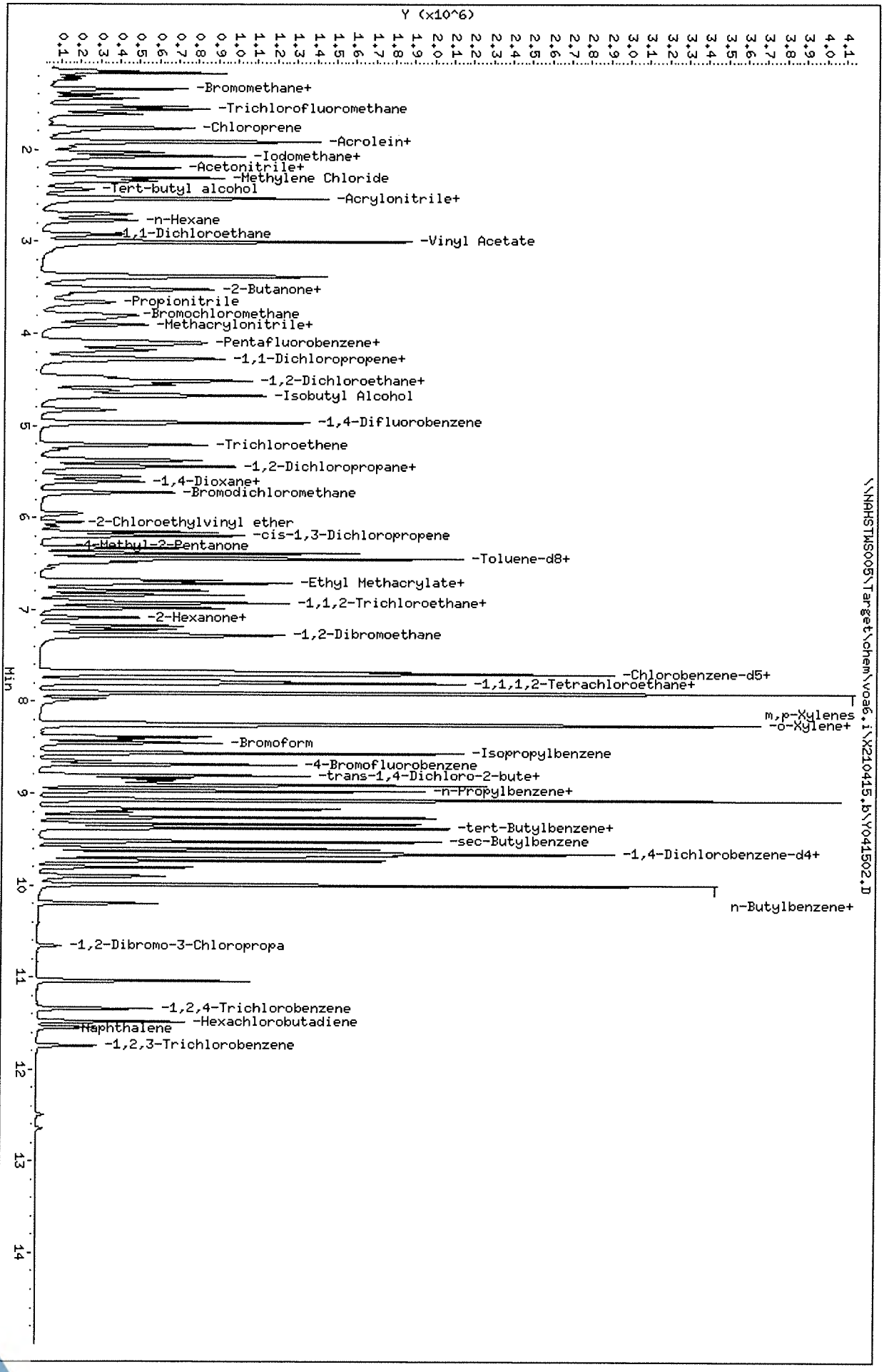
ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X210415.b\Y041502.D
Lab Smp Id: CCV Client Smp ID: CCV
Inj Date : 15-APR-2021 21:19
Operator : PC Inst ID: voa6.i
Smp Info : CCV;CCV;2;;
Misc Info : HS18090001;WATER;0;1;
Comment   :
Method   : \\NAHSTWS005\Target\chem\voa6.i\X210415.b\8260W.m
Meth Date : 04-May-2021 12:04 voa6.i Quant Type: ISTD
Cal Date : 02-APR-2021 13:20 Cal File: X040208.D
Als bottle: 31 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBI_short1.sub
Target Version: 4.14
Processing Host: NAHSTW7066

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
*	1 Pentafluorobenzene	168	4.182	4.182	(1.000)	424718	50.0000	
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	754335	50.0000	
*	47 Chlorobenzene-d5	117	7.670	7.670	(1.000)	740552	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	358645	50.0000	
$	30 Dibromofluoromethane	113	4.103	4.103	(0.981)	244314	50.0000	48.86
$	35 1,2-Dichloroethane-d4	65	4.469	4.469	(1.069)	298900	50.0000	49.89
$	48 Toluene-d8	98	6.388	6.388	(0.833)	897026	50.0000	47.23
$	69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	339244	50.0000	47.84
	53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	229085	50.0000	53.25
	11 1,1-Dichloroethene	96	1.919	1.919	(0.459)	283579	50.0000	46.89
	33 1,2-Dichloroethane	62	4.555	4.555	(0.916)	392961	50.0000	49.21
	27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	260167	50.0000	50.11
	17 Methylene Chloride	84	2.305	2.305	(0.551)	240319	50.0000	52.07
	38 Trichloroethene	130	5.206	5.206	(1.048)	256828	50.0000	49.73
	5 Vinyl Chloride	62	1.145	1.145	(0.274)	318813	50.0000	50.06



Data File: \\NAHSTWS005\Target\chem\voa6.i\X210415.b\Y041502.D
Date : 15-APR-2021 21:19
Client ID: CCV
Sample Info: CCV;CCV;2;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\NAHSTWS005\Target\chem\voa6.i\X210415.b\Y041505.D Page 1
Report Date: 04-May-2021 12:04

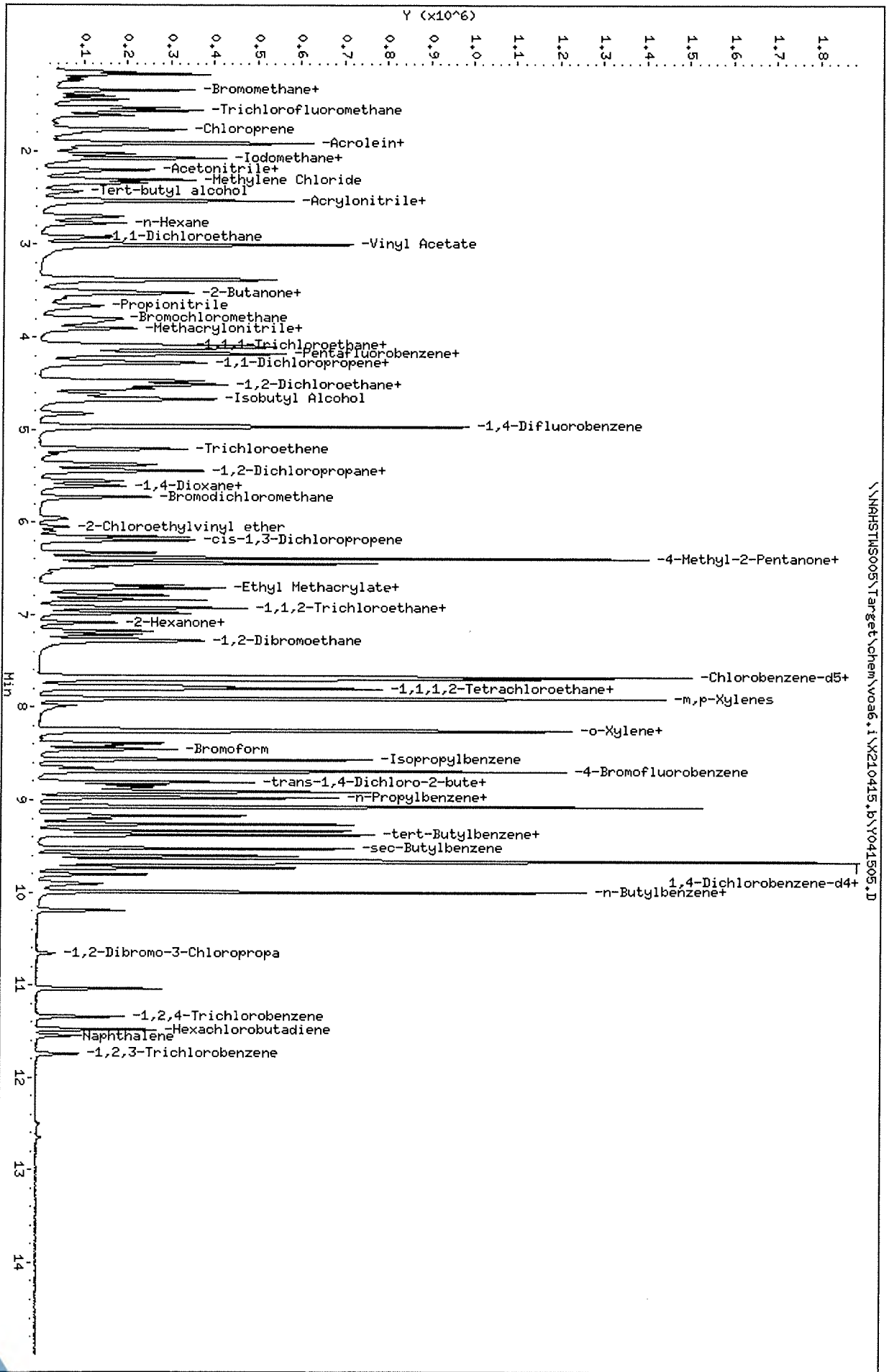
ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X210415.b\Y041505.D
Lab Smp Id: VLCSW-210415 Client Smp ID: VLCSW-210415
Inj Date : 15-APR-2021 22:22
Operator : PC Inst ID: voa6.i
Smp Info : VLCSW-210415;VLCSW-210415;3;;LCS
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X210415.b\8260W.m
Meth Date : 04-May-2021 12:04 voa6.i Quant Type: ISTD
Cal Date : 02-APR-2021 13:20 Cal File: X040208.D
Als bottle: 33 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBI_short1.sub
Target Version: 4.14
Processing Host: NAHSTW7066

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	407969	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	710440	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.670	(1.000)	652816	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	329440	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	230442	47.9953	47.99
$ 35 1,2-Dichloroethane-d4	65	4.476	4.469	(1.070)	301976	52.4488	52.44
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	796055	47.5358	47.53
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	303583	48.5407	48.54
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	80295	21.1737	21.17
11 1,1-Dichloroethene	96	1.919	1.919	(0.459)	119379	20.5509	20.55
33 1,2-Dichloroethane	62	4.562	4.555	(0.918)	156141	20.7639	20.76
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	104802	21.0147	21.01
17 Methylene Chloride	84	2.306	2.305	(0.551)	94285	22.1461	22.14
38 Trichloroethene	130	5.207	5.206	(1.048)	101162	20.8006	20.80
5 Vinyl Chloride	62	1.145	1.145	(0.274)	136785	22.3641	22.36



Data File: \\NAHSTWS005\Target\chem\voa6.i\X210415.b\Y041505.D
Date : 15-APR-2021 22:22
Client ID: VLCSW-210415
Sample Info: VLCSW-210415;VLCSW-210415;3;;LCS
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\NAHSTWS005\Target\chem\voa6.i\X210415.b\Y041507.D Page 1
Report Date: 04-May-2021 12:04

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X210415.b\Y041507.D
Lab Smp Id: VBLKW-210415 Client Smp ID: VBLKW-210415
Inj Date : 15-APR-2021 23:04
Operator : PC Inst ID: voa6.i
Smp Info : VBLKW-210415;VBLKW-210415;3;;BLANK
Misc Info : HS18090001;WATER;0;1;
Comment   :
Method   : \\NAHSTWS005\Target\chem\voa6.i\X210415.b\8260W.m
Meth Date : 04-May-2021 12:04 voa6.i Quant Type: ISTD
Cal Date : 02-APR-2021 13:20 Cal File: X040208.D
Als bottle: 35 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBI_short1.sub
Target Version: 4.14
Processing Host: NAHSTW7066

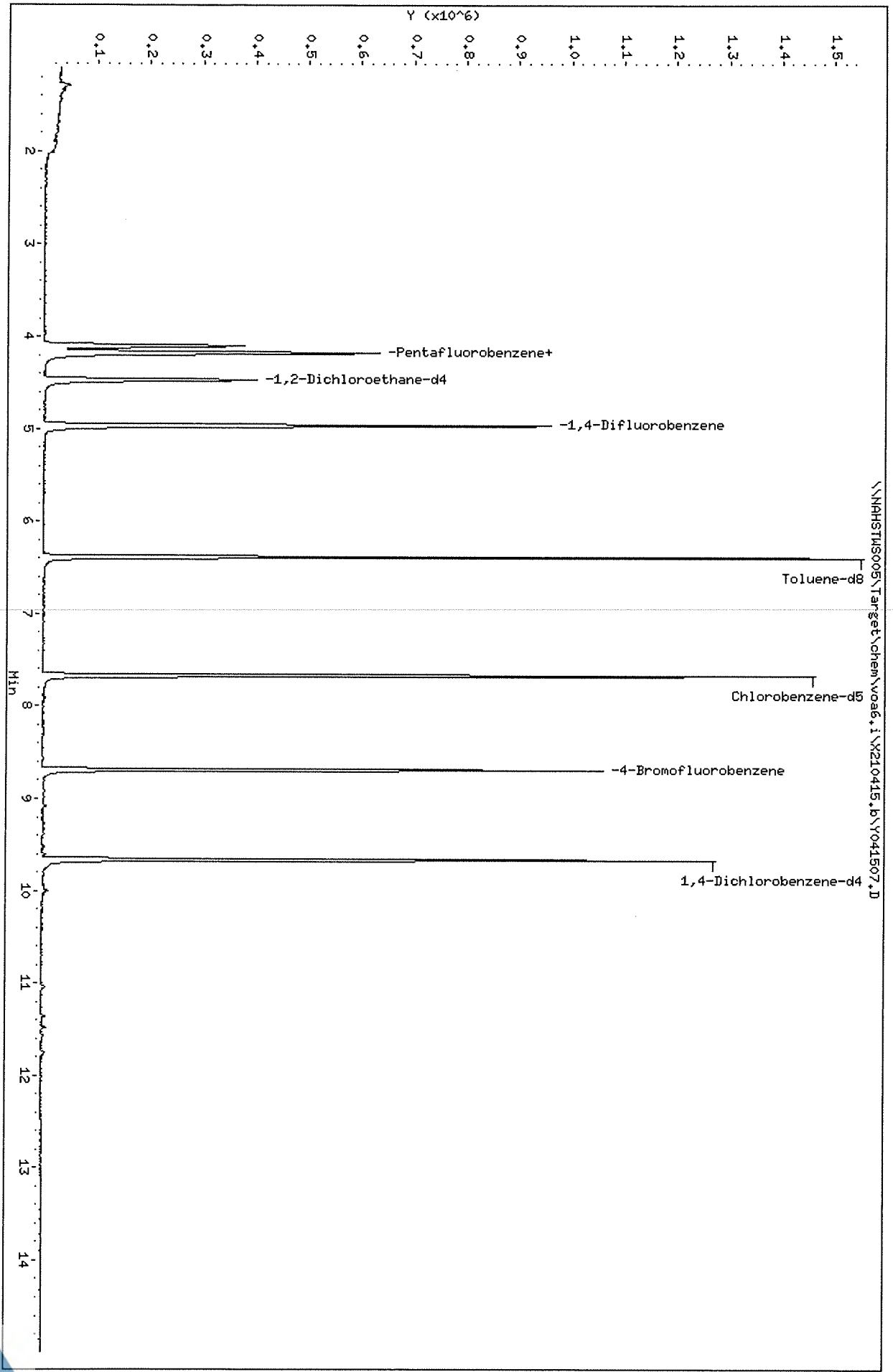
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	461480	50.0000	
* 36 1,4-Difluorobenzene	114	4.963	4.970	(1.000)	750111	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.670	(1.000)	640430	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	277455	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	256770	47.2841	47.28
$ 35 1,2-Dichloroethane-d4	65	4.469	4.469	(1.069)	326359	50.1325	50.13
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	900715	54.5413	54.54
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	299367	48.7838	48.78

Data File: \\NAHSTWS005\Target\chem\voa6.i\X210415.b\Y041507.D
Date : 15-APR-2021 23:04
Client ID: VBLKW-210415
Sample Info: VBLKW-210415;VBLKW-210415;3;;BLANK
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18



Data File: \\NAHSTWS005\Target\chem\voa6.i\X210415.b\Y041508.D Page 1
Report Date: 04-May-2021 12:06

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X210415.b\Y041508.D
Lab Smp Id: HS21040695-04 Client Smp ID: HS21040695-04
Inj Date : 15-APR-2021 23:25
Operator : PC Inst ID: voa6.i
Smp Info : HS21040695-04;HS21040695-04;;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X210415.b\8260W.m
Meth Date : 04-May-2021 12:05 Qin.Xu Quant Type: ISTD
Cal Date : 02-APR-2021 13:20 Cal File: X040208.D
Als bottle: 36
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBI_short1.sub
Target Version: 4.14
Processing Host: NAHSTW7066

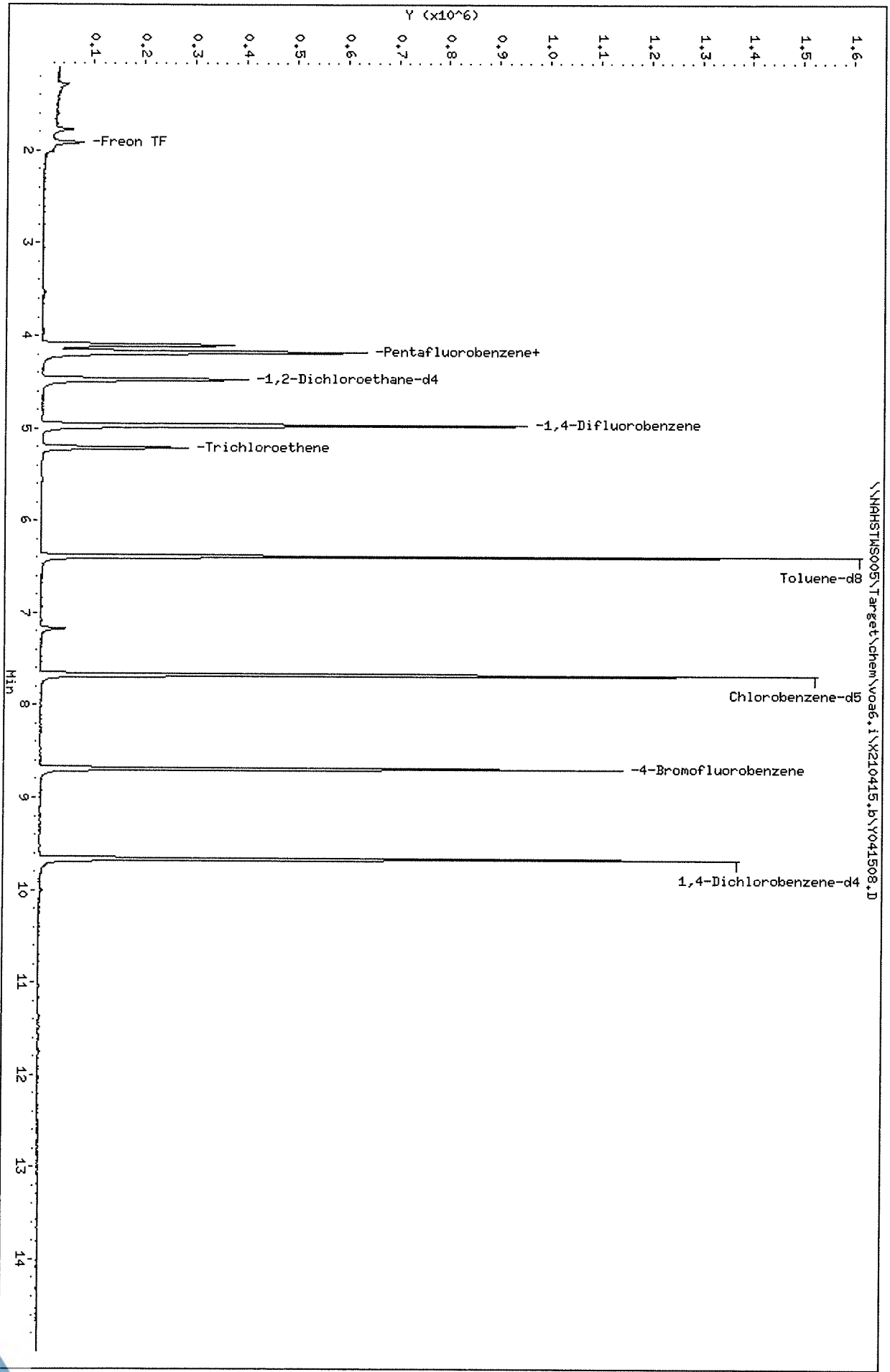
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	468365	50.0000	
* 36 1,4-Difluorobenzene	114	4.963	4.970	(1.000)	759360	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	662867	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	295875	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	253136	45.9421	45.94
$ 35 1,2-Dichloroethane-d4	65	4.476	4.469	(1.070)	315497	47.7745	47.77
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	926513	54.2159	54.21
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	305916	48.1846	48.18
38 Trichloroethene	130	5.206	5.207	(1.049)	87331	16.7999	16.79

Data File: \\NAHSTWS005\Target\chem\voa6.i\X210415.b\Y041508.D
Date : 15-APR-2021 23:25
Client ID: HS21040695-04
Sample Info: HS21040695-04;HS21040695-04;;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18



Data File: \\NAHSTWS005\Target\chem\voa6.i\X210415.b\Y041508.D

Date : 15-APR-2021 23:25

Client ID: HS21040695-04

Instrument: voa6.i

Sample Info: HS21040695-04;HS21040695-04;;;

Purge Volume: 5.0

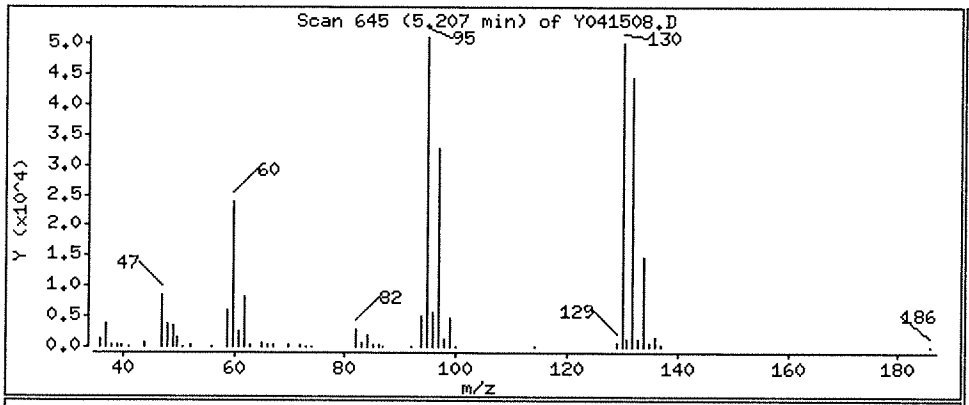
Operator: PC

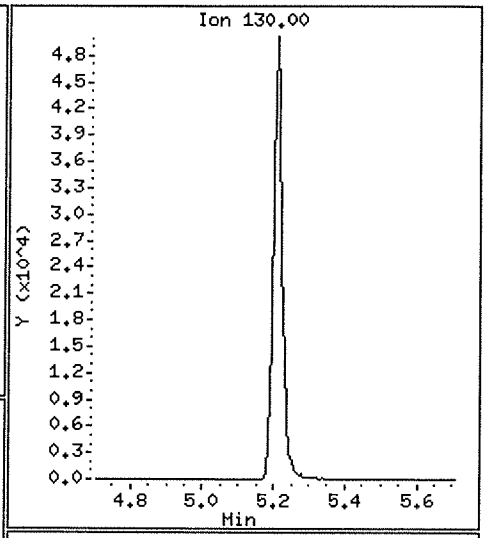
Column phase: DB624

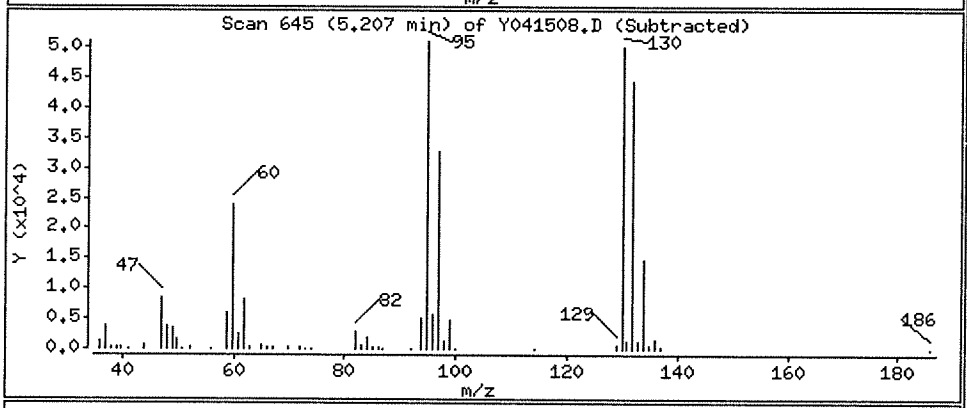
Column diameter: 0.18

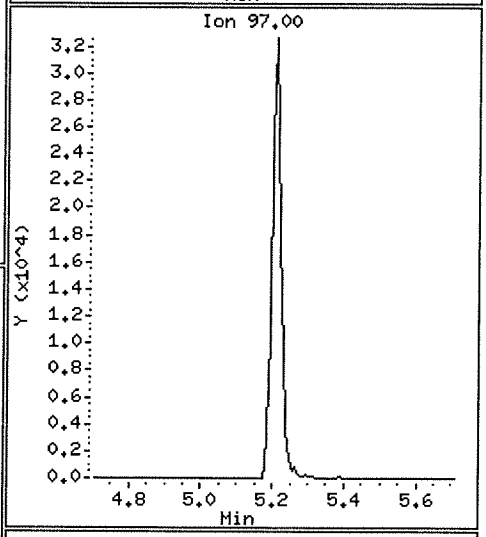
38 Trichloroethene

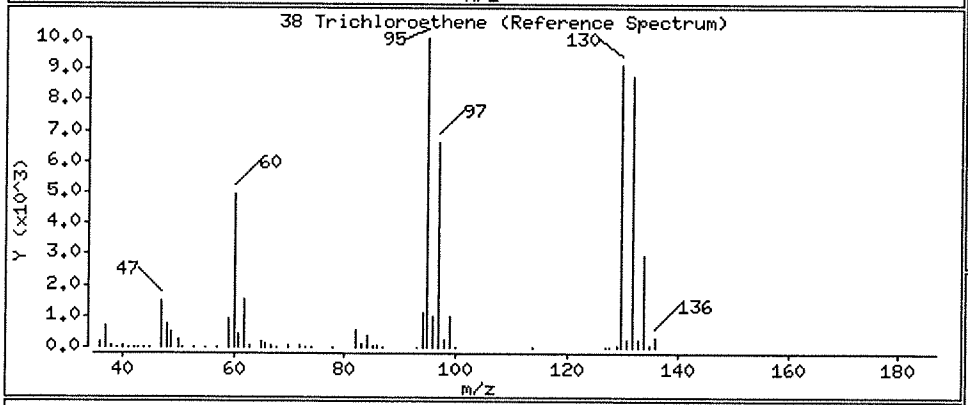
Concentration: 16.79 ug/l

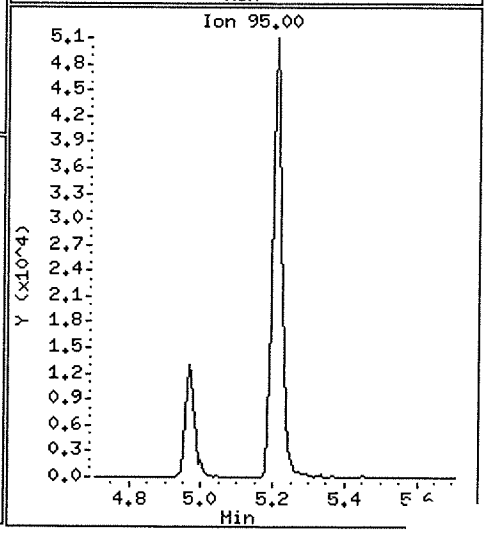


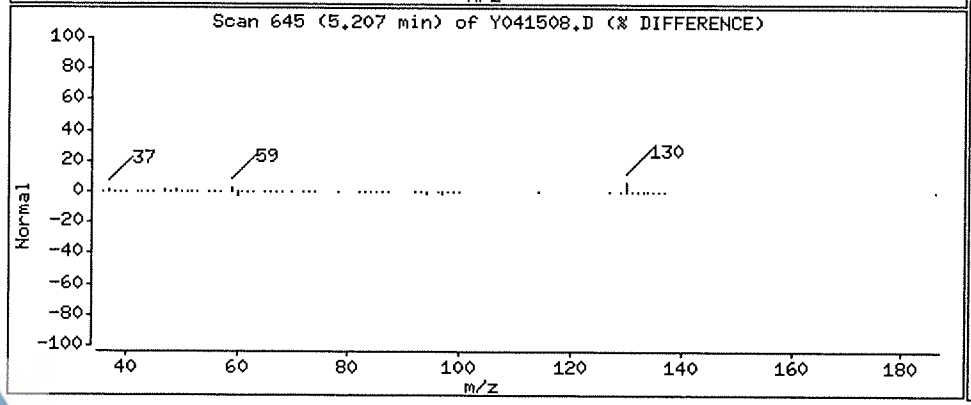












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210415.b\Y041509.D Page 1
Report Date: 04-May-2021 12:06

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X210415.b\Y041509.D
Lab Smp Id: HS21040695-15 Client Smp ID: HS21040695-15
Inj Date : 15-APR-2021 23:46
Operator : PC Inst ID: voa6.i
Smp Info : HS21040695-15;HS21040695-15;;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X210415.b\8260W.m
Meth Date : 04-May-2021 12:05 Qin.Xu Quant Type: ISTD
Cal Date : 02-APR-2021 13:20 Cal File: X040208.D
Als bottle: 37
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBI_short1.sub
Target Version: 4.14
Processing Host: NAHSTW7066

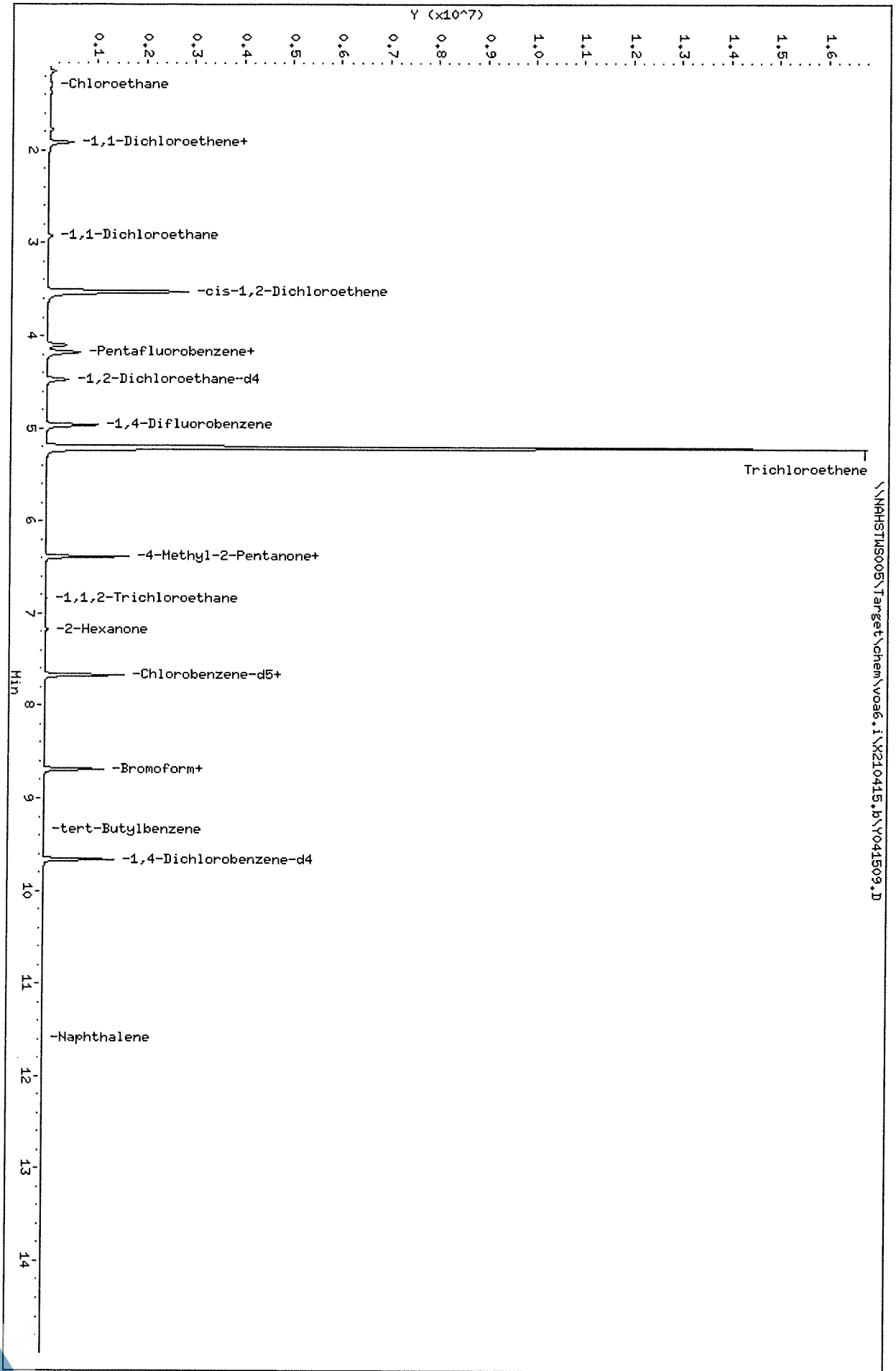
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	508464	50.0000	
* 36 1,4-Difluorobenzene	114	4.963	4.970	(1.000)	809333	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	706835	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	302261	50.0000	
$ 30 Dibromofluoromethane	113	4.096	4.103	(0.979)	275200	46.0070	46.00
$ 35 1,2-Dichloroethane-d4	65	4.476	4.469	(1.070)	347884	48.5168	48.51
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	973496	53.4488	53.44
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	320686	47.3970	47.39
53 1,1,2-Trichloroethane	83	6.847	6.840	(0.893)	3363	0.81905	0.81(a)
11 1,1-Dichloroethene	96	1.912	1.919	(0.457)	93397	12.9004	12.90
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	1426557	229.515	229.51(A)
38 Trichloroethene	130	5.207	5.207	(1.049)	4642643	837.962	837.96(A)
5 Vinyl Chloride	62	1.145	1.145	(0.274)	78022	10.2352	10.23

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).
A - Target compound detected but, quantitated amount exceeded maximum amount.



Data File: \\NAHSTWS005\Target\chem\voa6.i\X210415.b\Y041509.D
Date : 15-APR-2021 23:46
Client ID: HS21040695-15
Sample Info: HS21040695-15;HS21040695-15;;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\NAHSTWS005\Target\chem\voa6.i\X210415.b\Y041509.D

Date : 15-APR-2021 23:46

Client ID: HS21040695-15

Instrument: voa6.i

Sample Info: HS21040695-15;HS21040695-15;;;

Purge Volume: 5.0

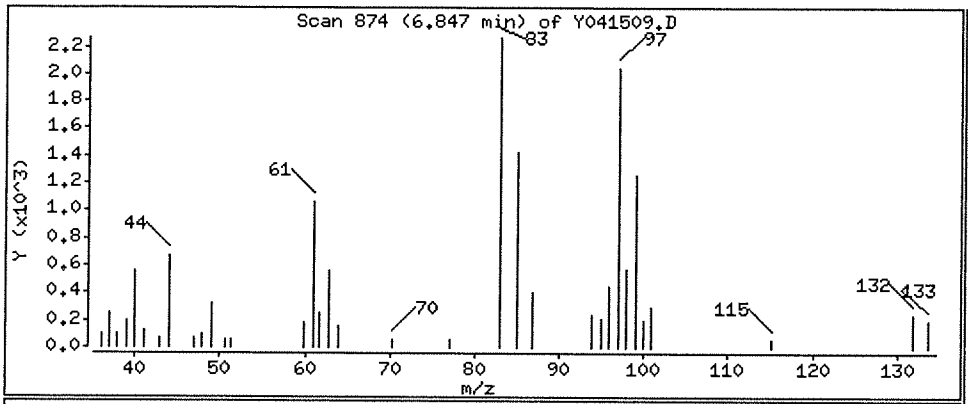
Operator: PC

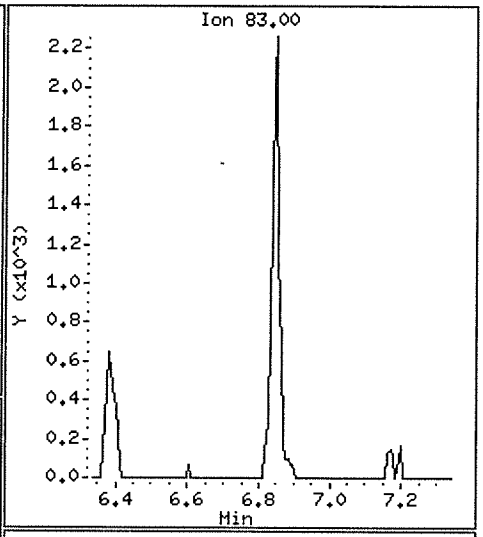
Column phase: DB624

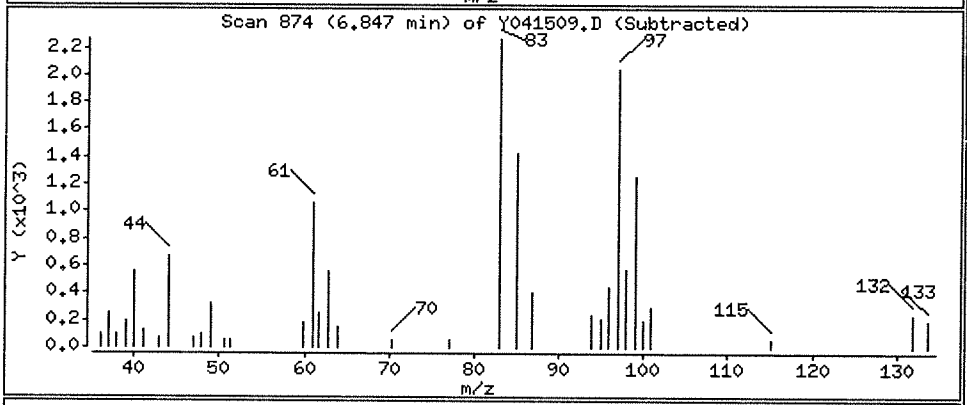
Column diameter: 0.18

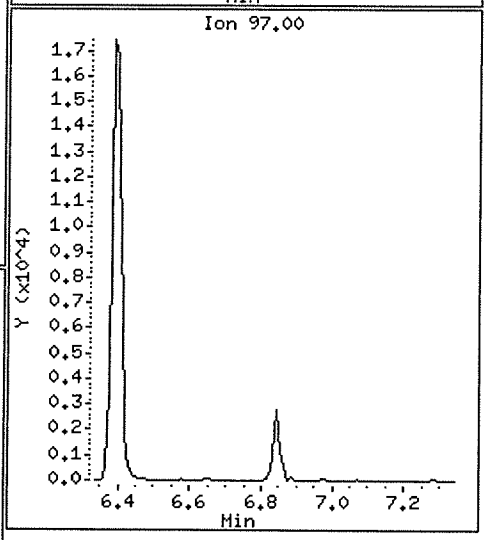
53 1,1,2-Trichloroethane

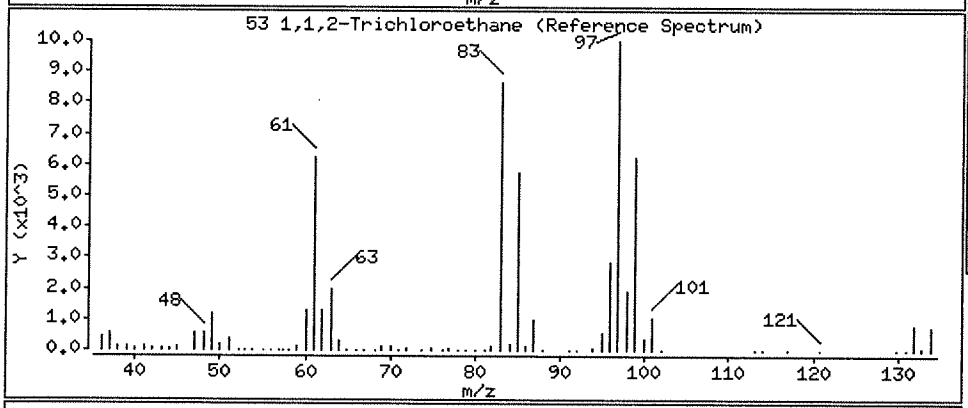
Concentration: 0.81 ug/l

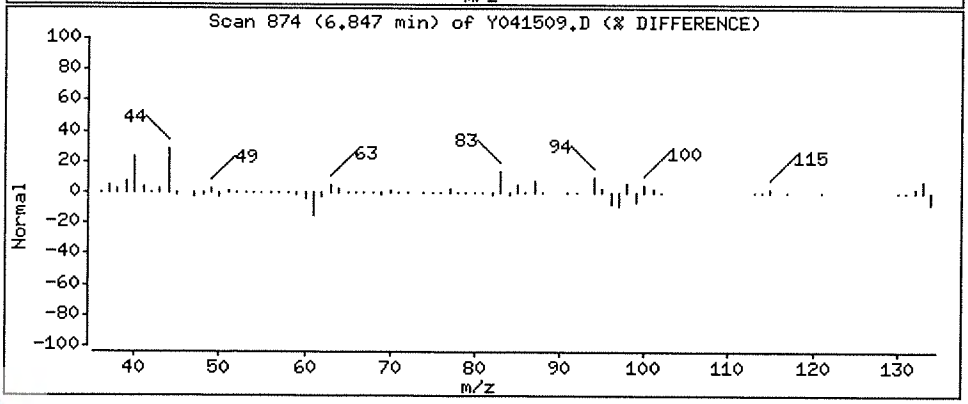












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210415.b\Y041509.D

Date : 15-APR-2021 23:46

Client ID: HS21040695-15

Instrument: voa6.i

Sample Info: HS21040695-15;HS21040695-15;;;

Purge Volume: 5.0

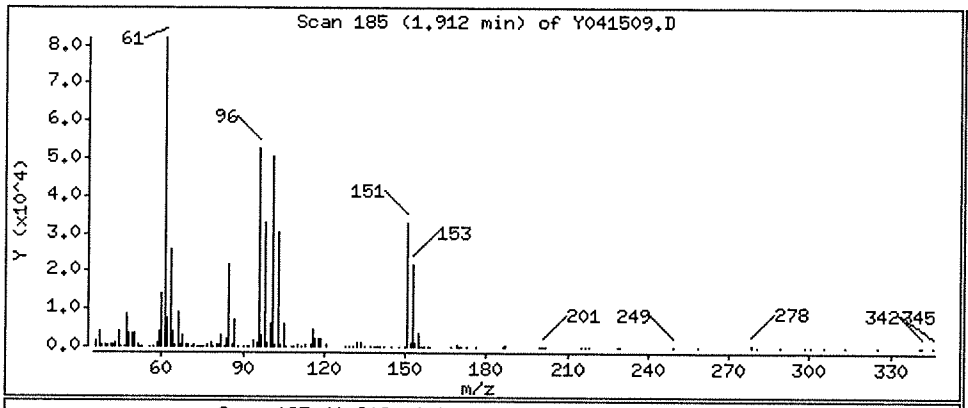
Operator: PC

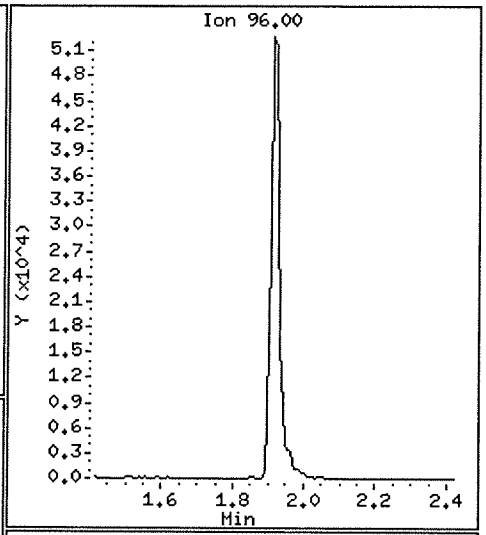
Column phase: DB624

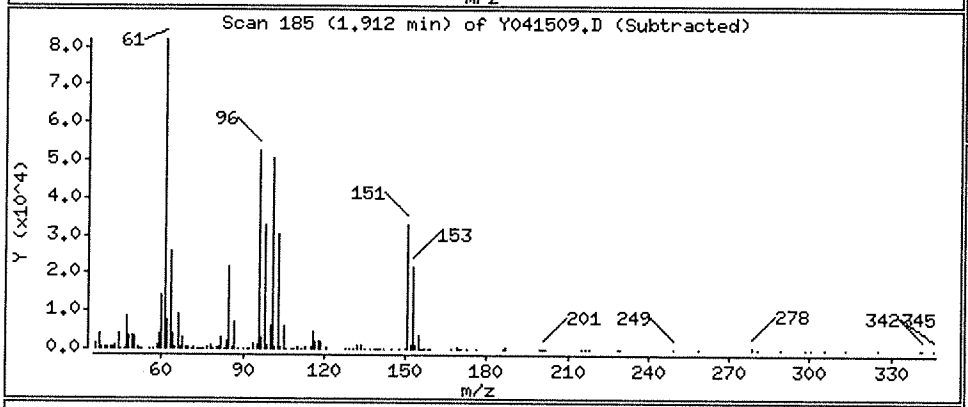
Column diameter: 0.18

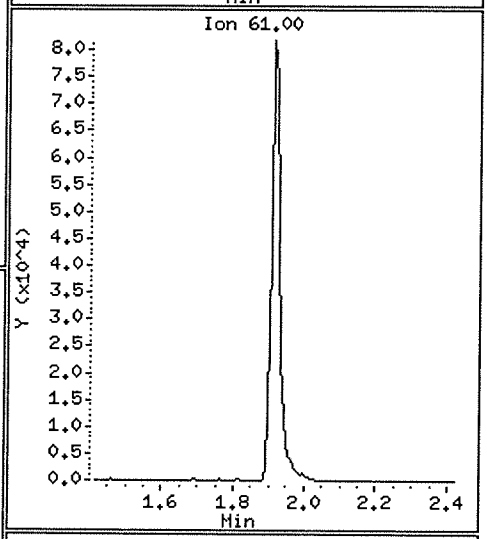
11 1,1-Dichloroethene

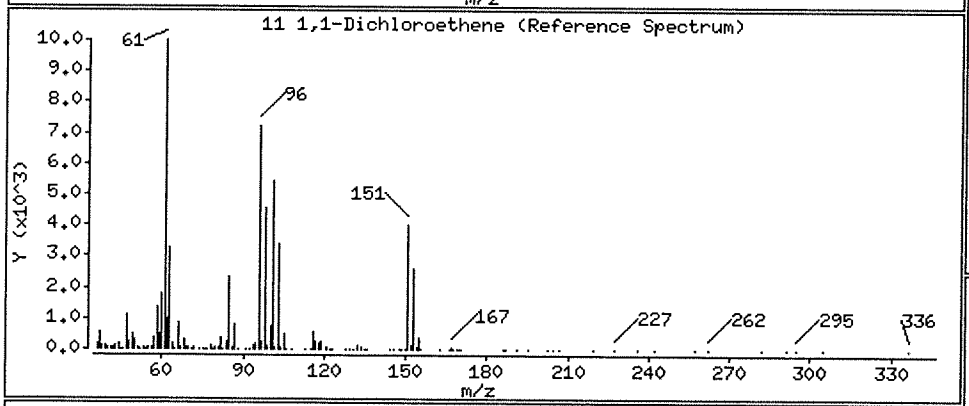
Concentration: 12.90 ug/l

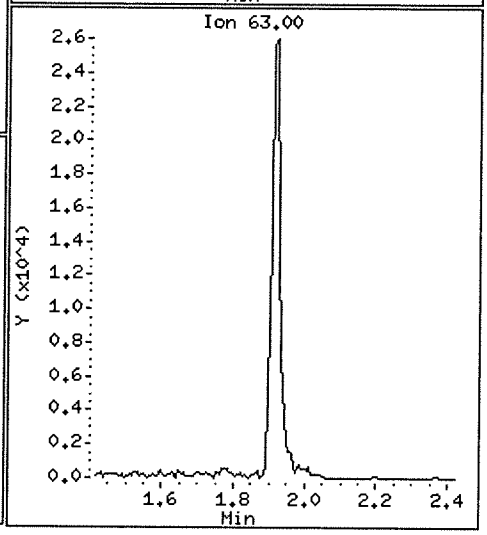


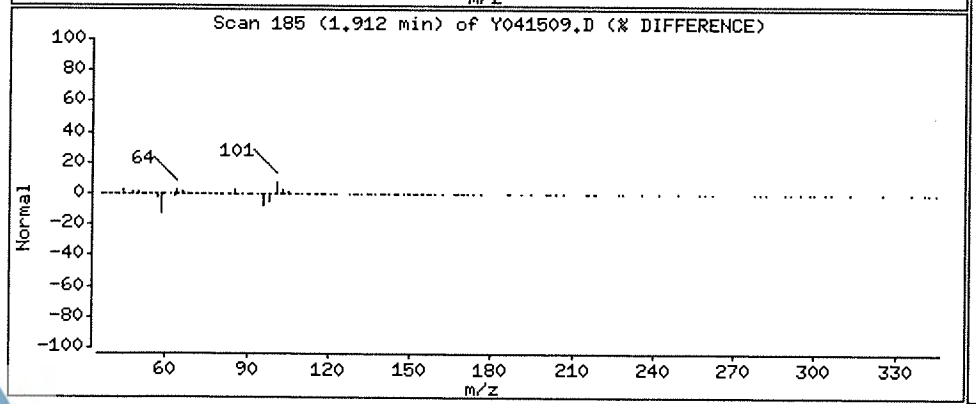












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210415.b\Y041509.D

Date : 15-APR-2021 23:46

Client ID: HS21040695-15

Instrument: voa6.i

Sample Info: HS21040695-15;HS21040695-15;;;

Purge Volume: 5.0

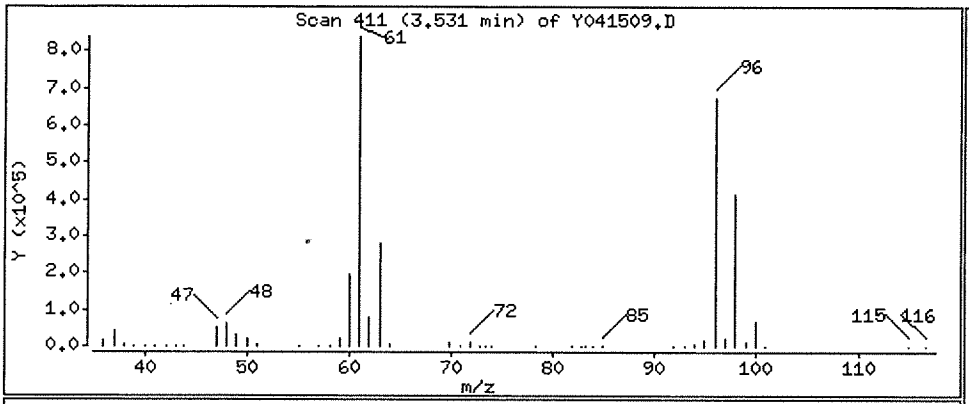
Operator: PC

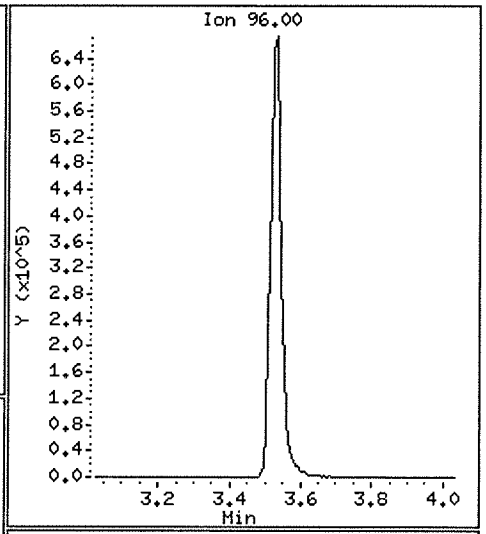
Column phase: DB624

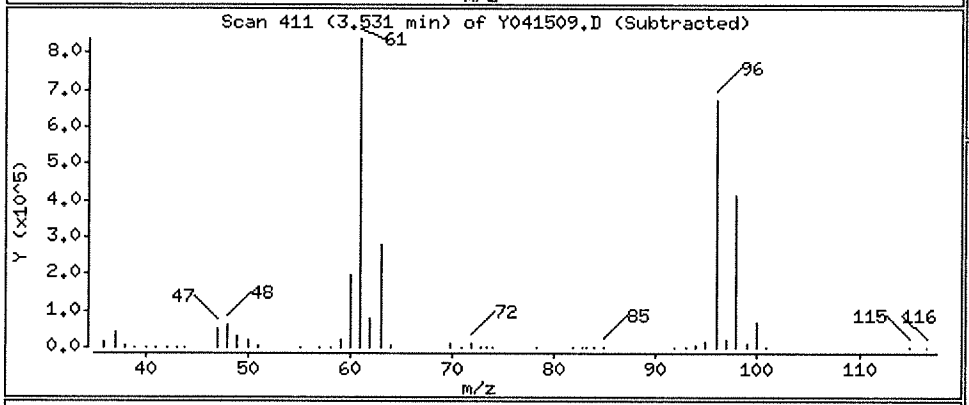
Column diameter: 0.18

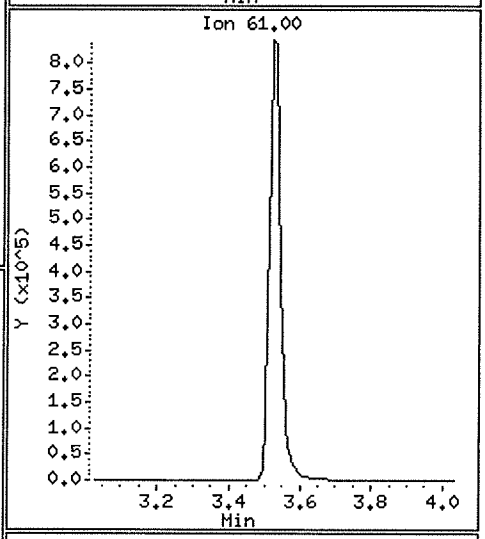
27 cis-1,2-Dichloroethene

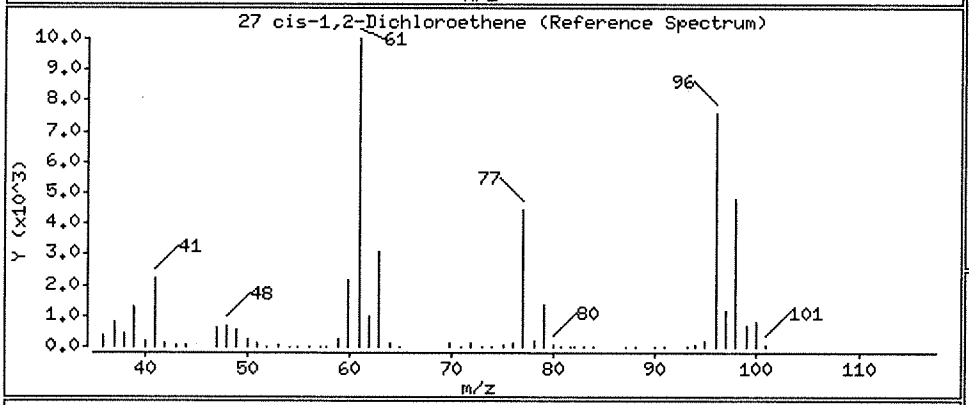
Concentration: 229.51 ug/l

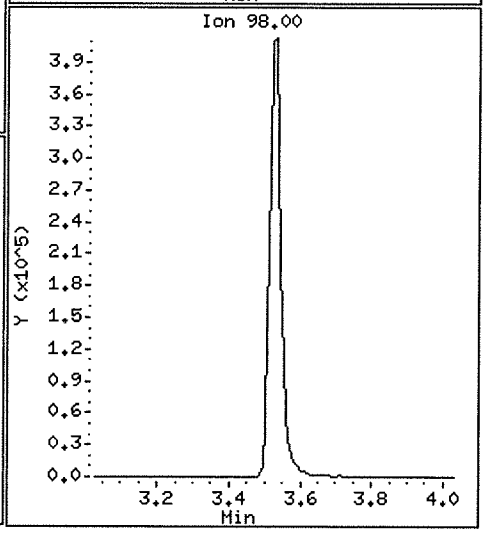


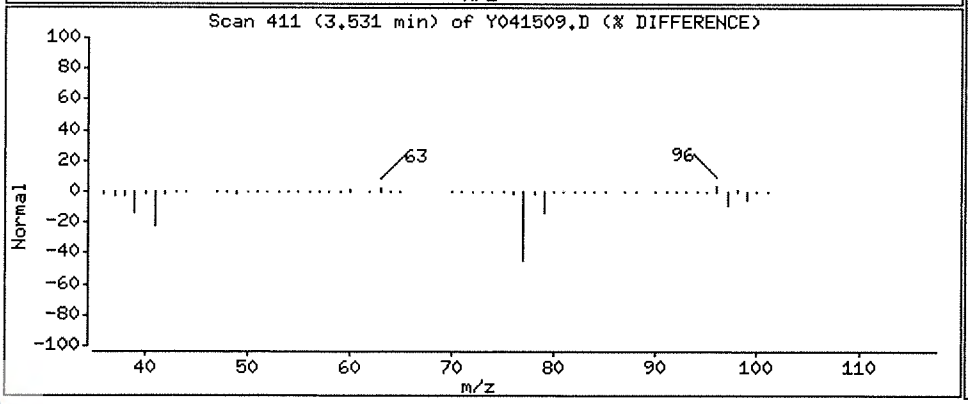












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210415.b\Y041509.D

Date : 15-APR-2021 23:46

Client ID: HS21040695-15

Instrument: voa6.i

Sample Info: HS21040695-15;HS21040695-15;;;

Purge Volume: 5.0

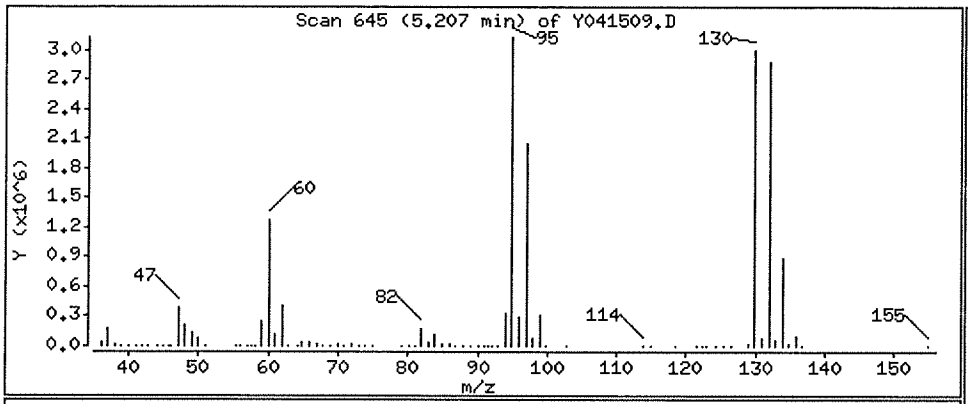
Operator: PC

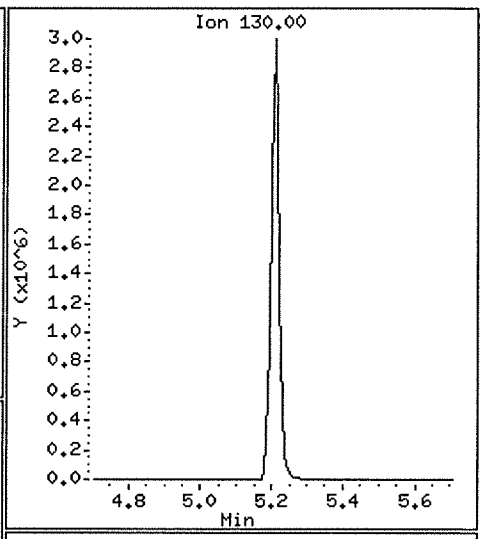
Column phase: DB624

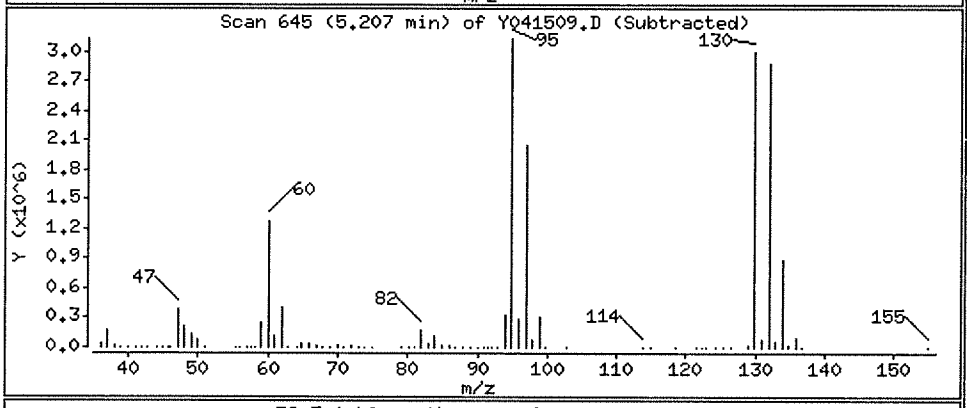
Column diameter: 0.18

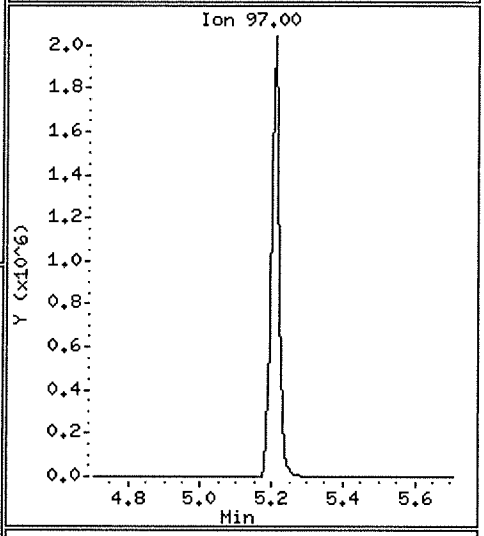
38 Trichloroethene

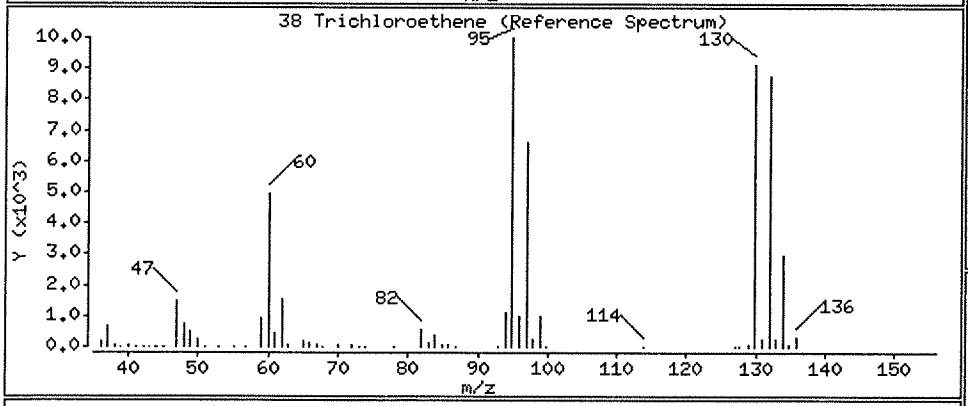
Concentration: 837.96 ug/l

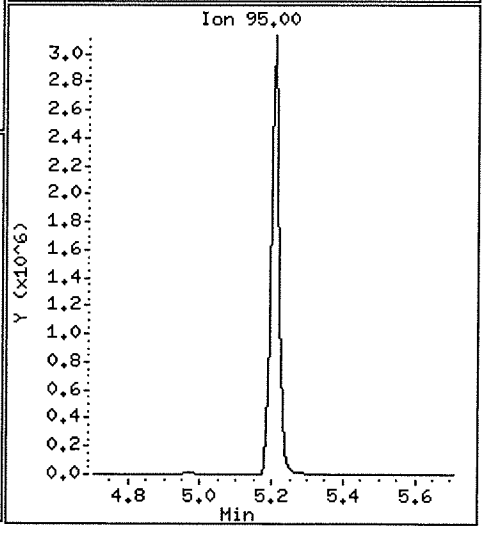


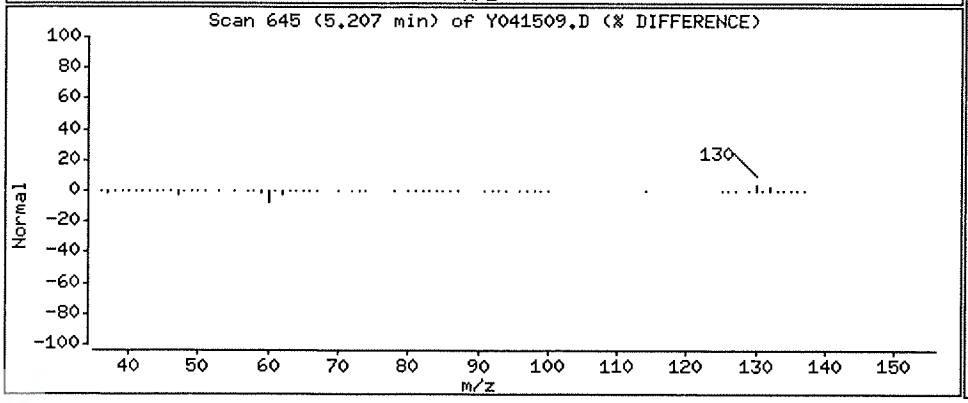












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210415.b\Y041509.D

Date : 15-APR-2021 23:46

Client ID: HS21040695-15

Instrument: voa6.i

Sample Info: HS21040695-15;HS21040695-15;;;

Purge Volume: 5.0

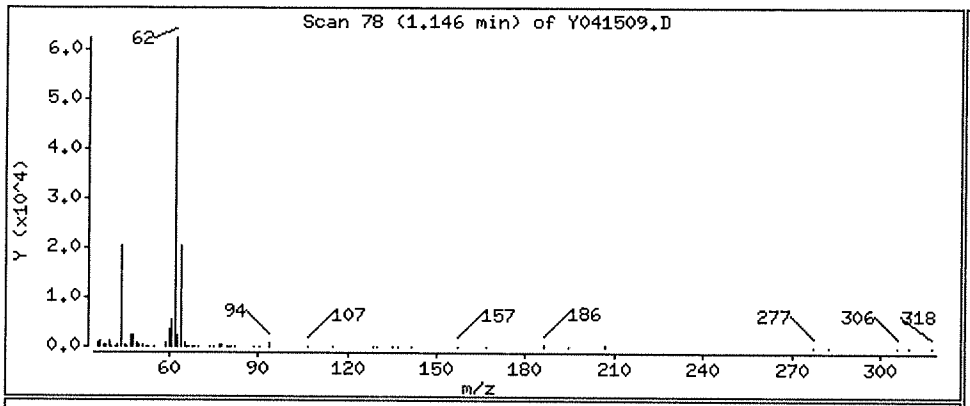
Operator: PC

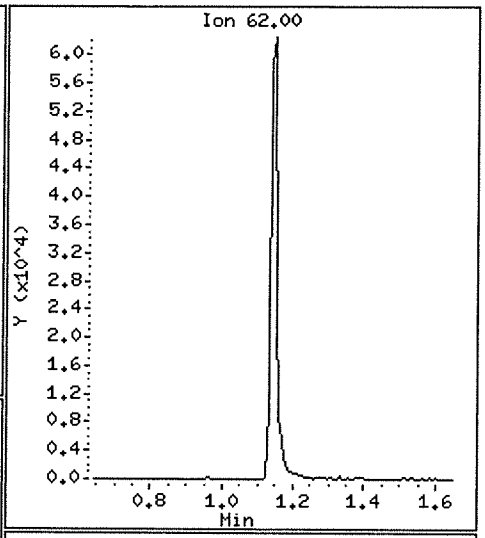
Column phase: DB624

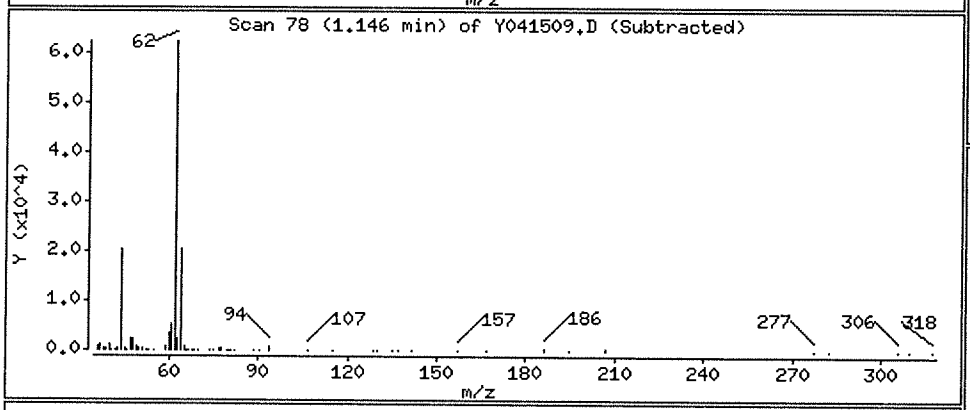
Column diameter: 0.18

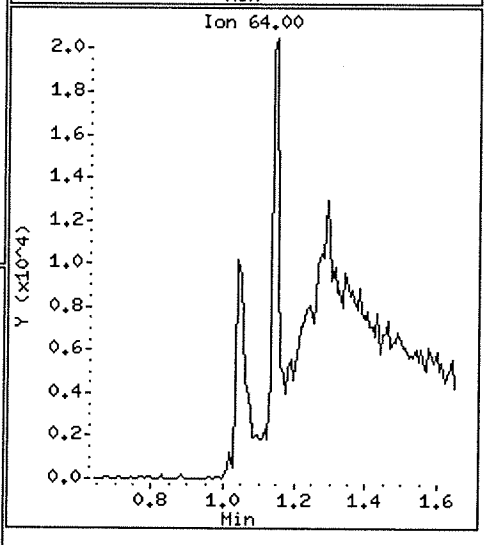
5 Vinyl Chloride

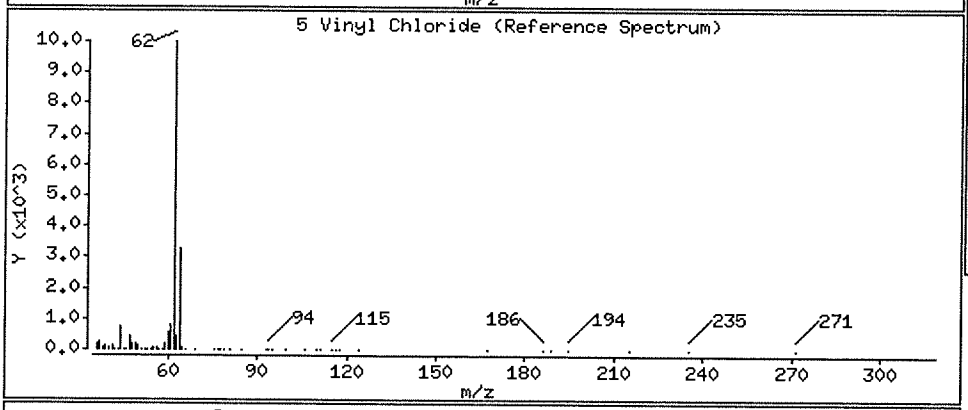
Concentration: 10.23 ug/l

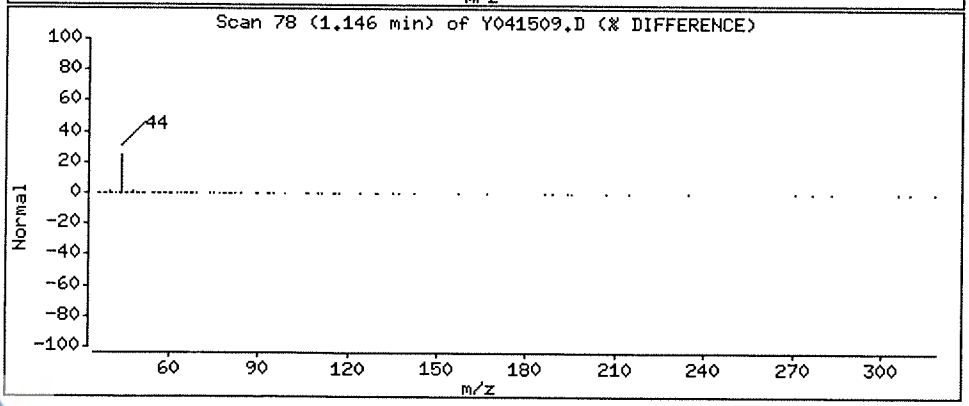












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210415.b\Y041510.D Page 1
Report Date: 04-May-2021 12:05

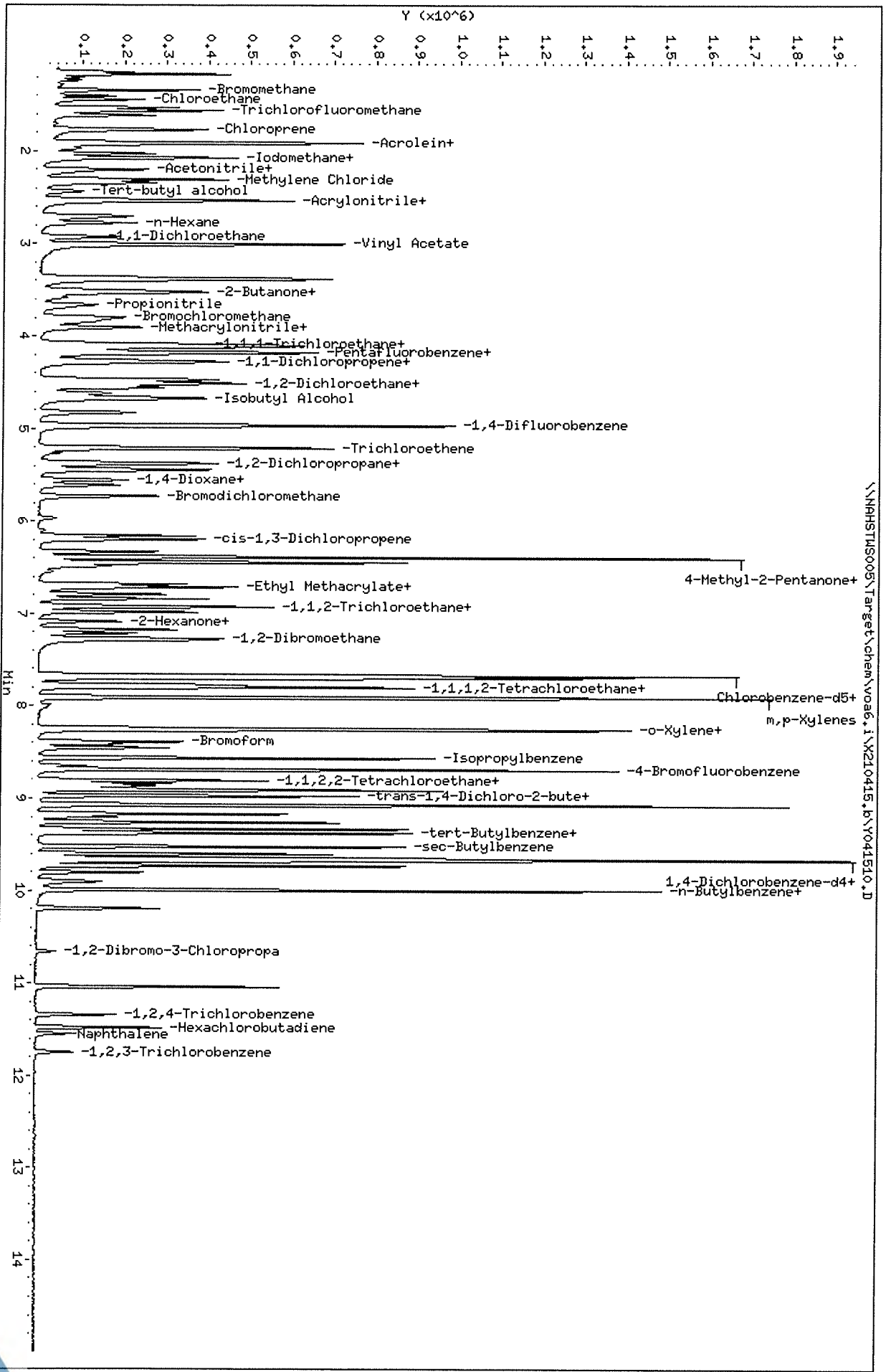
ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X210415.b\Y041510.D
Lab Smp Id: HS21040695-04MS Client Smp ID: HS21040695-04MS
Inj Date : 16-APR-2021 00:07
Operator : PC Inst ID: voa6.i
Smp Info : HS21040695-04MS;HS21040695-04MS;3;;MS
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X210415.b\8260W.m
Meth Date : 04-May-2021 12:04 voa6.i Quant Type: ISTD
Cal Date : 02-APR-2021 13:20 Cal File: X040208.D
Als bottle: 38 QC Sample: MS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBI_short1.sub
Target Version: 4.14
Processing Host: NAHSTW7066

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	486307	50.0000	
* 36 1,4-Difluorobenzene	114	4.963	4.970	(1.000)	783562	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.670	(1.000)	714036	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	335383	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	264941	46.3071	46.30
$ 35 1,2-Dichloroethane-d4	65	4.469	4.469	(1.068)	340774	49.6789	49.67
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	934379	50.8763	50.87
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	345681	50.4653	50.46
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	89304	21.5303	21.53
11 1,1-Dichloroethene	96	1.919	1.919	(0.459)	137975	19.9260	19.92
33 1,2-Dichloroethane	62	4.555	4.555	(0.918)	165415	19.9444	19.94
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	123587	20.7895	20.78
17 Methylene Chloride	84	2.306	2.305	(0.551)	98662	19.6223	19.62
38 Trichloroethene	130	5.207	5.206	(1.049)	215076	40.0964	40.09
5 Vinyl Chloride	62	1.145	1.145	(0.274)	144880	19.8719	19.87



Data File: \\NAHSTWS005\Target\chem\voa6.i\X210415.b\Y041510.D
Date : 16-APR-2021 00:07
Client ID: HS21040695-04MS
Sample Info: HS21040695-04MS;HS21040695-04MS;3;;MS
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\NAHSTWS005\Target\chem\voa6.i\X210415.b\Y041511.D Page 1
Report Date: 04-May-2021 12:05

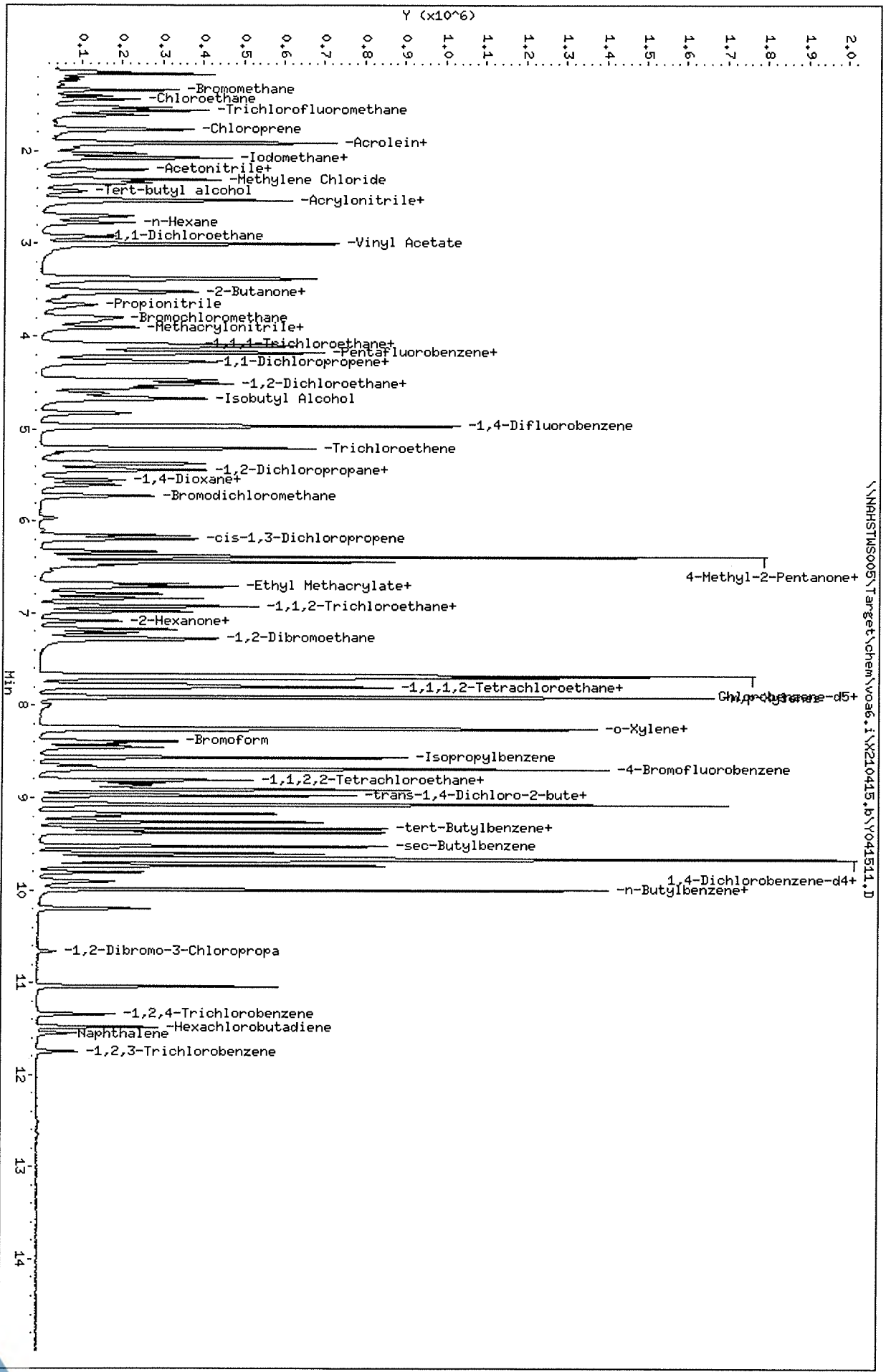
ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X210415.b\Y041511.D
Lab Smp Id: HS21040695-04MSD Client Smp ID: HS21040695-04MSD
Inj Date : 16-APR-2021 00:28
Operator : PC Inst ID: voa6.i
Smp Info : HS21040695-04MSD;HS21040695-04MSD;3;;MSD
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X210415.b\8260W.m
Meth Date : 04-May-2021 12:04 voa6.i Quant Type: ISTD
Cal Date : 02-APR-2021 13:20 Cal File: X040208.D
Als bottle: 38 QC Sample: MSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBI_short1.sub
Target Version: 4.14
Processing Host: NAHSTW7066

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
*	1 Pentafluorobenzene	168	4.182	4.182	(1.000)	506036	50.0000	
*	36 1,4-Difluorobenzene	114	4.963	4.970	(1.000)	824032	50.0000	
*	47 Chlorobenzene-d5	117	7.671	7.670	(1.000)	744085	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	349865	50.0000	
$	30 Dibromofluoromethane	113	4.103	4.103	(0.981)	279602	46.9581	46.95
$	35 1,2-Dichloroethane-d4	65	4.476	4.469	(1.070)	344897	48.3329	48.33
$	48 Toluene-d8	98	6.388	6.388	(0.833)	1005480	52.4762	52.47
$	69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	366998	51.3826	51.38
	53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	86091	19.9175	19.91
	11 1,1-Dichloroethene	96	1.911	1.919	(0.457)	131232	18.2133	18.21
	33 1,2-Dichloroethane	62	4.562	4.555	(0.919)	168673	19.3384	19.33
	27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	120168	19.4262	19.42
	17 Methylene Chloride	84	2.305	2.305	(0.551)	102222	19.5441	19.54
	38 Trichloroethene	130	5.206	5.206	(1.049)	206690	36.6405	36.64
	5 Vinyl Chloride	62	1.145	1.145	(0.274)	134876	17.7785	17.77



Data File: \\NAHSTWS005\Target\chem\voa6.i\X210415.b\Y041511.D
Date : 16-APR-2021 00:28
Client ID: HS21040695-04HSD
Sample Info: HS21040695-04HSD;HS21040695-04HSD;3;;HSD
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\NAHSTWS005\Target\chem\voa6.i\X210415.b\Y041517.D Page 1
Report Date: 04-May-2021 12:06

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X210415.b\Y041517.D
Lab Smp Id: HS21040695-05 Client Smp ID: HS21040695-05
Inj Date : 16-APR-2021 02:35
Operator : PC Inst ID: voa6.i
Smp Info : HS21040695-05;HS21040695-05;;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X210415.b\8260W.m
Meth Date : 04-May-2021 12:05 Qin.Xu Quant Type: ISTD
Cal Date : 02-APR-2021 13:20 Cal File: X040208.D
Als bottle: 44
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBI_short1.sub
Target Version: 4.14
Processing Host: NAHSTW7066

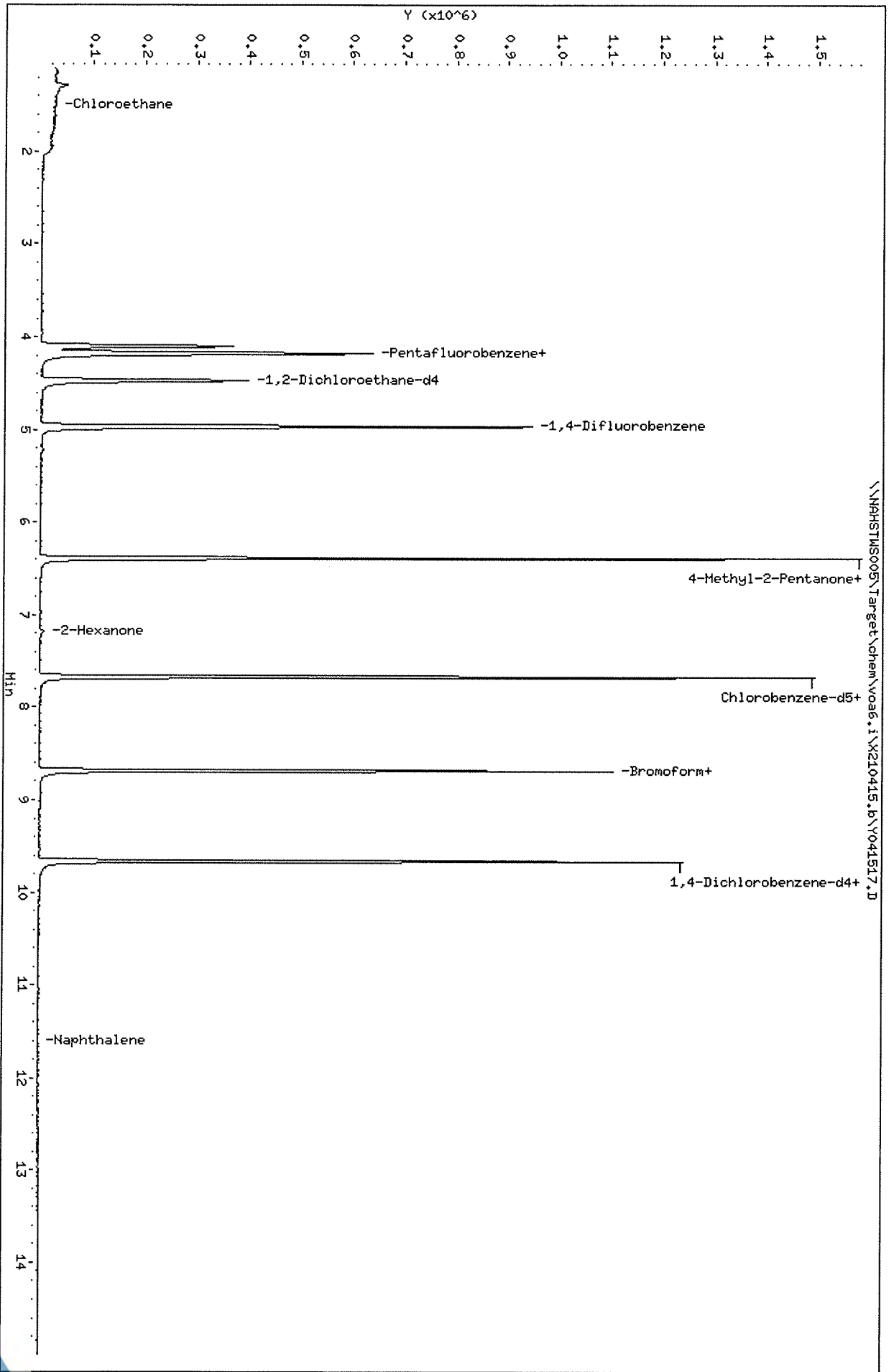
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	466451	50.0000	
* 36 1,4-Difluorobenzene	114	4.963	4.970	(1.000)	748513	50.0000	
* 47 Chlorobenzene-d5	117	7.670	7.671	(1.000)	648074	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	263480	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	245610	44.7702	44.77
$ 35 1,2-Dichloroethane-d4	65	4.476	4.469	(1.070)	319352	48.5488	48.54
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	903868	54.1021	54.10
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	295049	47.5561	47.55

Data File: \\NAHSTWS005\Target\chem\voa6.i\X210415.b\Y041517.D
Date : 16-APR-2021 02:35
Client ID: HS21040695-05
Sample Info: HS21040695-05;HS21040695-05;;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18



Data File: \\NAHSTWS005\Target\chem\voa6.i\X210415.b\Y041518.D Page 1
Report Date: 04-May-2021 12:06

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X210415.b\Y041518.D
Lab Smp Id: HS21040695-06 Client Smp ID: HS21040695-06
Inj Date : 16-APR-2021 02:56
Operator : PC Inst ID: voa6.i
Smp Info : HS21040695-06;HS21040695-06;;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X210415.b\8260W.m
Meth Date : 04-May-2021 12:05 Qin.Xu Quant Type: ISTD
Cal Date : 02-APR-2021 13:20 Cal File: X040208.D
Als bottle: 45
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBI_short1.sub
Target Version: 4.14
Processing Host: NAHSTW7066

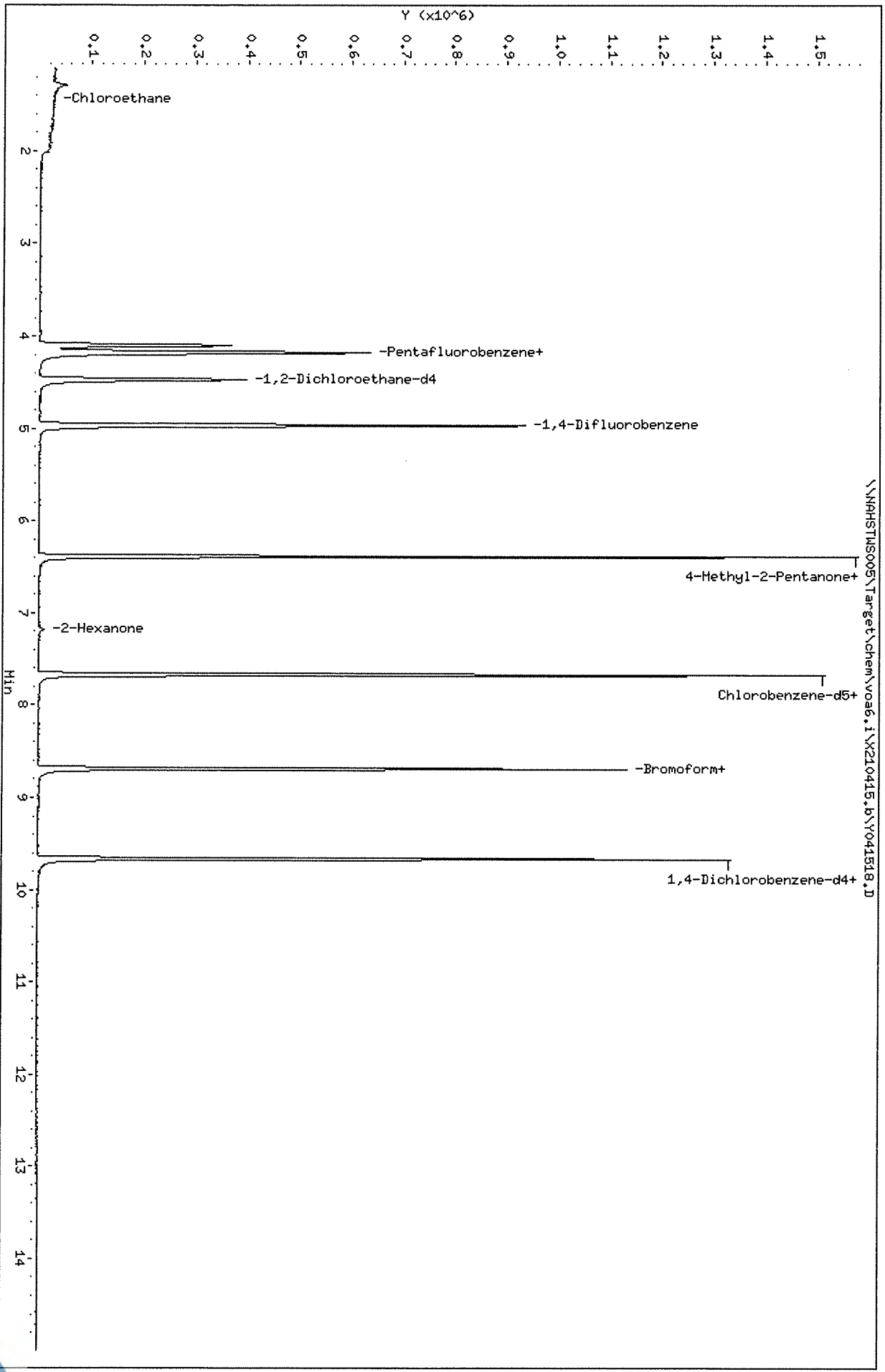
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	463107	50.0000	
* 36 1,4-Difluorobenzene	114	4.963	4.970	(1.000)	745255	50.0000	
* 47 Chlorobenzene-d5	117	7.670	7.671	(1.000)	662059	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	291077	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	251069	46.0830	46.08
$ 35 1,2-Dichloroethane-d4	65	4.476	4.469	(1.070)	313646	48.0309	48.03
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	908433	53.2567	53.25
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	311927	49.1569	49.15

Data File: \\NAHSTWS005\Target\chem\voa6.i\X210415.b\Y041518.D
Date : 16-APR-2021 02:56
Client ID: HS21040695-06
Sample Info: HS21040695-06;HS21040695-06;;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18



Data File: \\NAHSTWS005\Target\chem\voa6.i\X210415.b\Y041519.D Page 1
Report Date: 04-May-2021 12:06

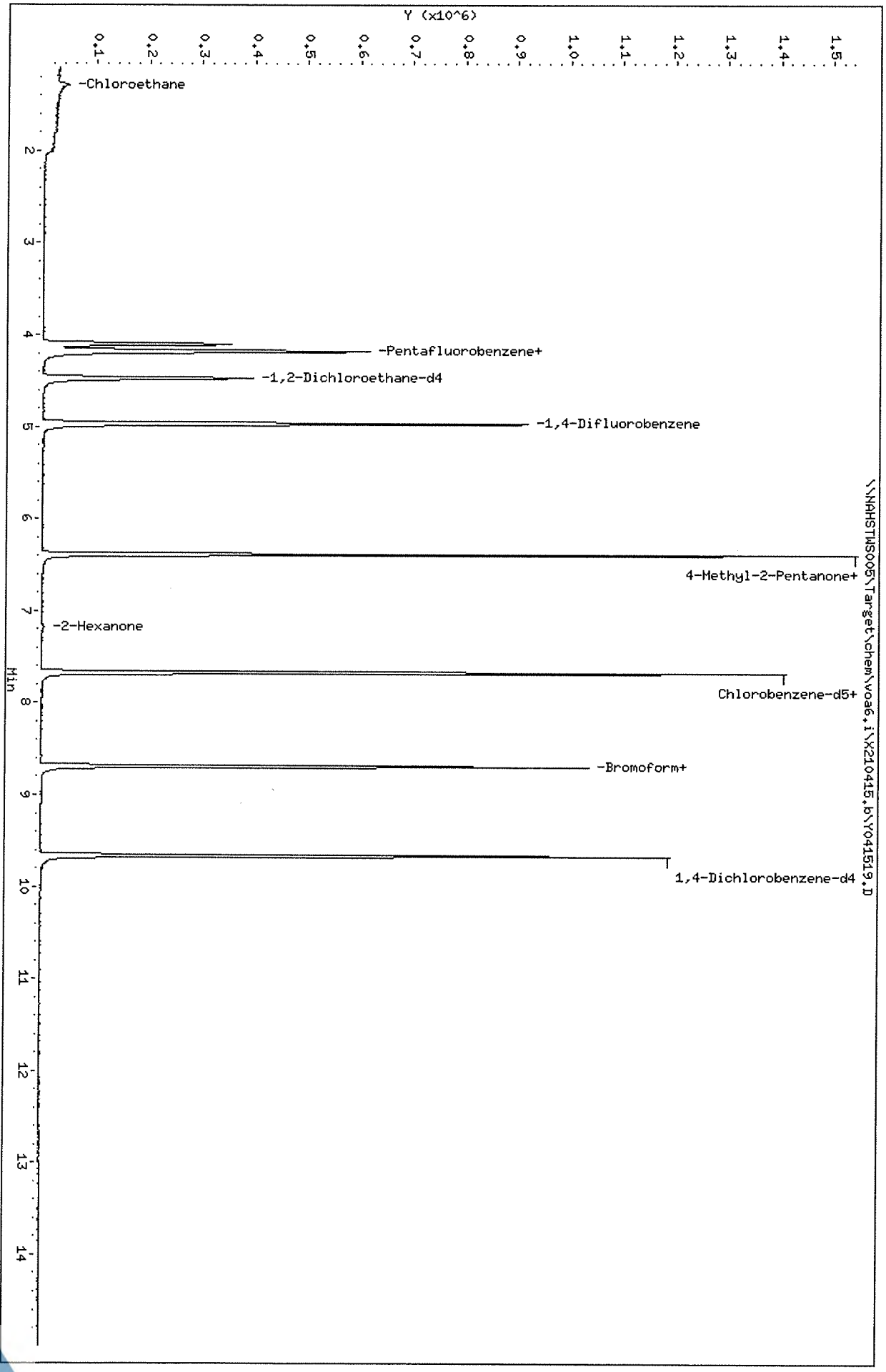
ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X210415.b\Y041519.D
Lab Smp Id: HS21040695-07 Client Smp ID: HS21040695-07
Inj Date : 16-APR-2021 03:17
Operator : PC Inst ID: voa6.i
Smp Info : HS21040695-07;HS21040695-07;;;
Misc Info : HS18090001;WATER;0;1;
Comment   :
Method   : \\NAHSTWS005\Target\chem\voa6.i\X210415.b\8260W.m
Meth Date : 04-May-2021 12:05 Qin.Xu Quant Type: ISTD
Cal Date : 02-APR-2021 13:20 Cal File: X040208.D
Als bottle: 46
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBI_short1.sub
Target Version: 4.14
Processing Host: NAHSTW7066

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	458761	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	730069	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	636238	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	261340	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	249400	46.2091	46.20
$ 35 1,2-Dichloroethane-d4	65	4.476	4.469	(1.070)	314284	48.5789	48.57
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	885487	53.9918	53.99
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	287375	47.1939	47.19



Data File: \\NAHSTWS005\Target\chem\voa6.i\X210415.b\Y041519.D
Date : 16-APR-2021 03:17
Client ID: HS21040695-07
Sample Info: HS21040695-07;HS21040695-07;;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\NAHSTWS005\Target\chem\voa6.i\X210415.b\Y041520.D Page 1
Report Date: 04-May-2021 12:06

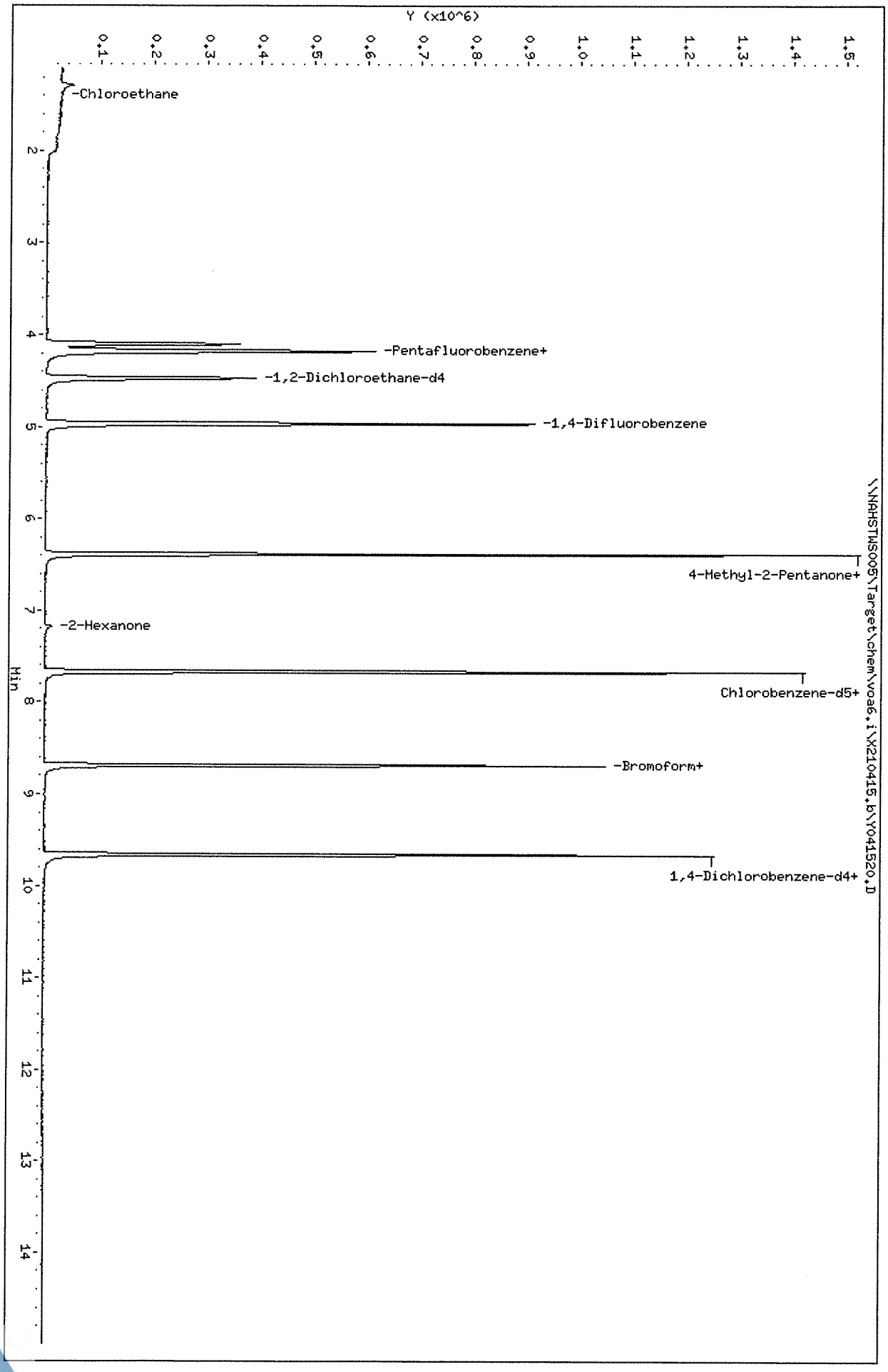
ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X210415.b\Y041520.D
Lab Smp Id: HS21040695-08 Client Smp ID: HS21040695-08
Inj Date : 16-APR-2021 03:38
Operator : PC Inst ID: voa6.i
Smp Info : HS21040695-08;HS21040695-08;;;
Misc Info : HS18090001;WATER;0;1;
Comment   :
Method   : \\NAHSTWS005\Target\chem\voa6.i\X210415.b\8260W.m
Meth Date : 04-May-2021 12:05 Qin.Xu Quant Type: ISTD
Cal Date : 02-APR-2021 13:20 Cal File: X040208.D
Als bottle: 47
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBI_short1.sub
Target Version: 4.14
Processing Host: NAHSTW7066

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	454127	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	730579	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	626151	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	263925	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	239253	44.7948	44.79
$ 35 1,2-Dichloroethane-d4	65	4.476	4.469	(1.070)	317027	49.4938	49.49
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	873605	54.1208	54.12
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	282686	47.1725	47.17



Data File: \\NAHSTWS005\Target\chem\voa6,i\X210415,b\Y041520,D
Date : 16-APR-2021 03:38
Client ID: HS21040695-08
Sample Info: HS21040695-08;HS21040695-08;;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6,i
Operator: PC
Column diameter: 0.18

Data File: \\NAHSTWS005\Target\chem\voa6.i\X210415.b\Y041521.D Page 1
Report Date: 04-May-2021 12:06

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X210415.b\Y041521.D
Lab Smp Id: HS21040695-09 Client Smp ID: HS21040695-09
Inj Date : 16-APR-2021 03:59
Operator : PC Inst ID: voa6.i
Smp Info : HS21040695-09;HS21040695-09;;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X210415.b\8260W.m
Meth Date : 04-May-2021 12:05 Qin.Xu Quant Type: ISTD
Cal Date : 02-APR-2021 13:20 Cal File: X040208.D
Als bottle: 48
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBI_short1.sub
Target Version: 4.14
Processing Host: NAHSTW7066

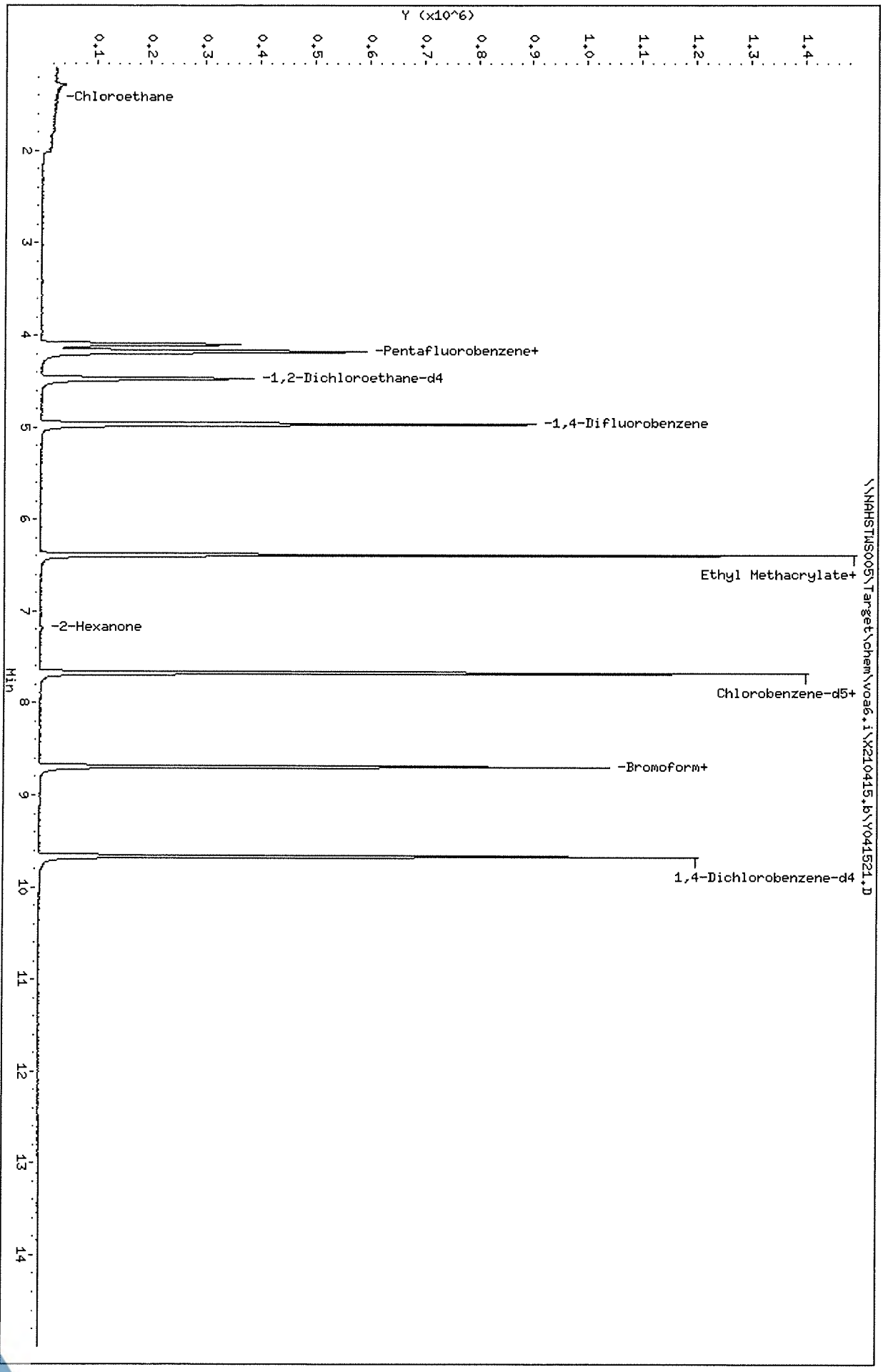
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	444625	50.0000	
* 36 1,4-Difluorobenzene	114	4.963	4.970	(1.000)	724380	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	633694	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	263606	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	242468	46.3517	46.35
$ 35 1,2-Dichloroethane-d4	65	4.476	4.469	(1.070)	302420	48.2347	48.23
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	859284	52.6521	52.65
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	284158	46.8648	46.86

Data File: \\NAHSTWS005\Target\chem\voa6.i\X210415.b\Y041521.D
Date : 16-APR-2021 03:59
Client ID: HS21040695-09
Sample Info: HS21040695-09;HS21040695-09;;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18



Data File: \\NAHSTWS005\Target\chem\voa6.i\X210415.b\Y041522.D Page 1
Report Date: 04-May-2021 12:06

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X210415.b\Y041522.D
Lab Smp Id: HS21040695-10 Client Smp ID: HS21040695-10
Inj Date : 16-APR-2021 04:20
Operator : PC Inst ID: voa6.i
Smp Info : HS21040695-10;HS21040695-10;;;
Misc Info : HS18090001;WATER;0;1;
Comment   :
Method   : \\NAHSTWS005\Target\chem\voa6.i\X210415.b\8260W.m
Meth Date : 04-May-2021 12:05 Qin.Xu Quant Type: ISTD
Cal Date : 02-APR-2021 13:20 Cal File: X040208.D
Als bottle: 49
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBI_short1.sub
Target Version: 4.14
Processing Host: NAHSTW7066

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

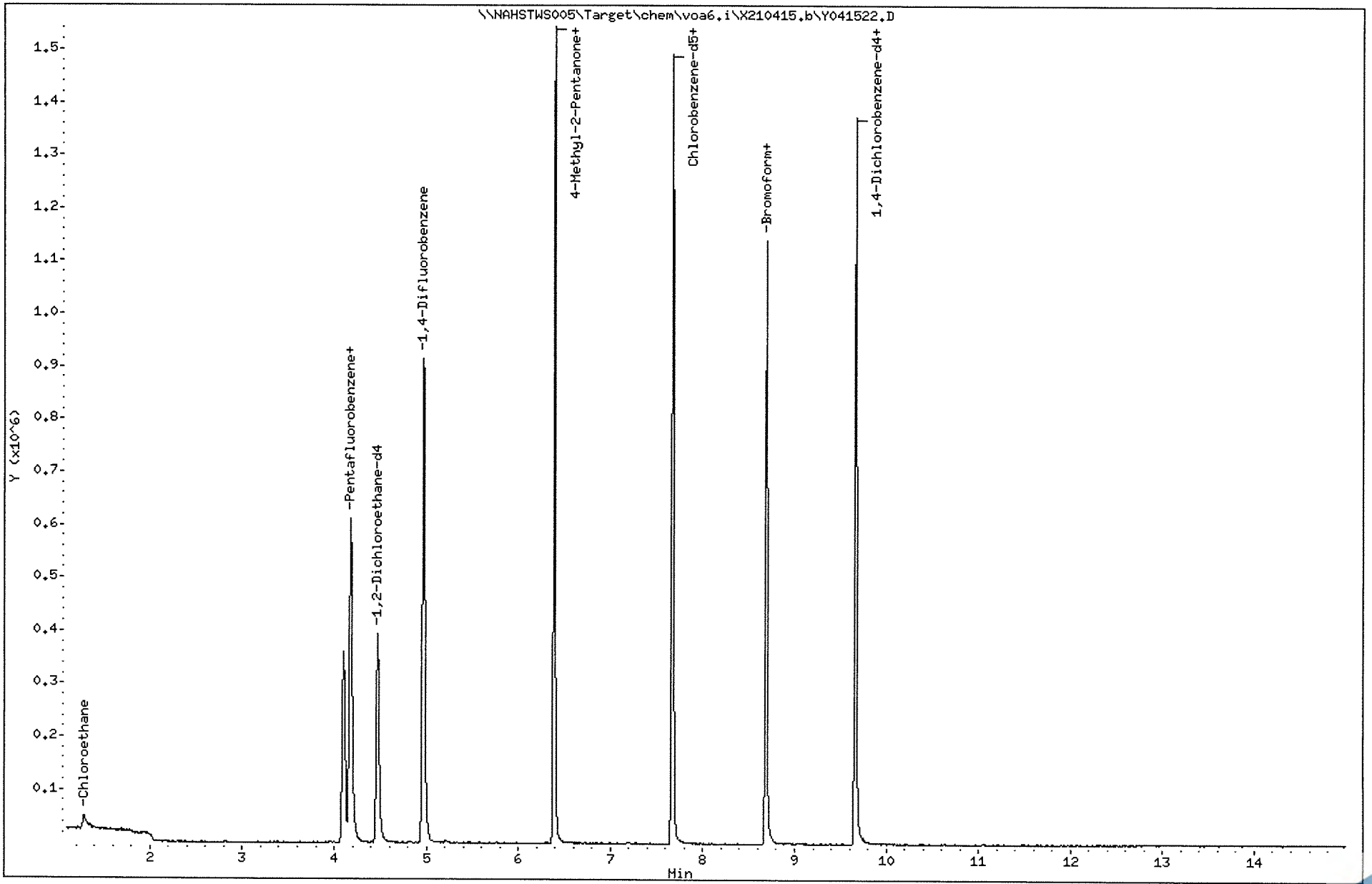
Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	453698	50.0000	
* 36 1,4-Difluorobenzene	114	4.963	4.970	(1.000)	733063	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	654546	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	288357	50.0000	
$ 30 Dibromofluoromethane	113	4.096	4.103	(0.979)	245442	45.9853	45.98
$ 35 1,2-Dichloroethane-d4	65	4.476	4.469	(1.070)	317451	49.6057	49.60
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	888698	52.7173	52.71
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	301182	48.0469	48.04

Data File: \\NAHSTWS005\Target\chem\voa6.i\X210415.b\Y041522.D
Date : 16-APR-2021 04:20
Client ID: HS21040695-10
Sample Info: HS21040695-10;HS21040695-10;;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i

Operator: PC
Column diameter: 0.18



Data File: \\NAHSTWS005\Target\chem\voa6.i\X210415.b\Y041523.D Page 1
Report Date: 04-May-2021 12:06

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X210415.b\Y041523.D
Lab Smp Id: HS21040695-12 Client Smp ID: HS21040695-12
Inj Date : 16-APR-2021 04:41
Operator : PC Inst ID: voa6.i
Smp Info : HS21040695-12;HS21040695-12;;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X210415.b\8260W.m
Meth Date : 04-May-2021 12:05 Qin.Xu Quant Type: ISTD
Cal Date : 02-APR-2021 13:20 Cal File: X040208.D
Als bottle: 50
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBI_short1.sub
Target Version: 4.14
Processing Host: NAHSTW7066

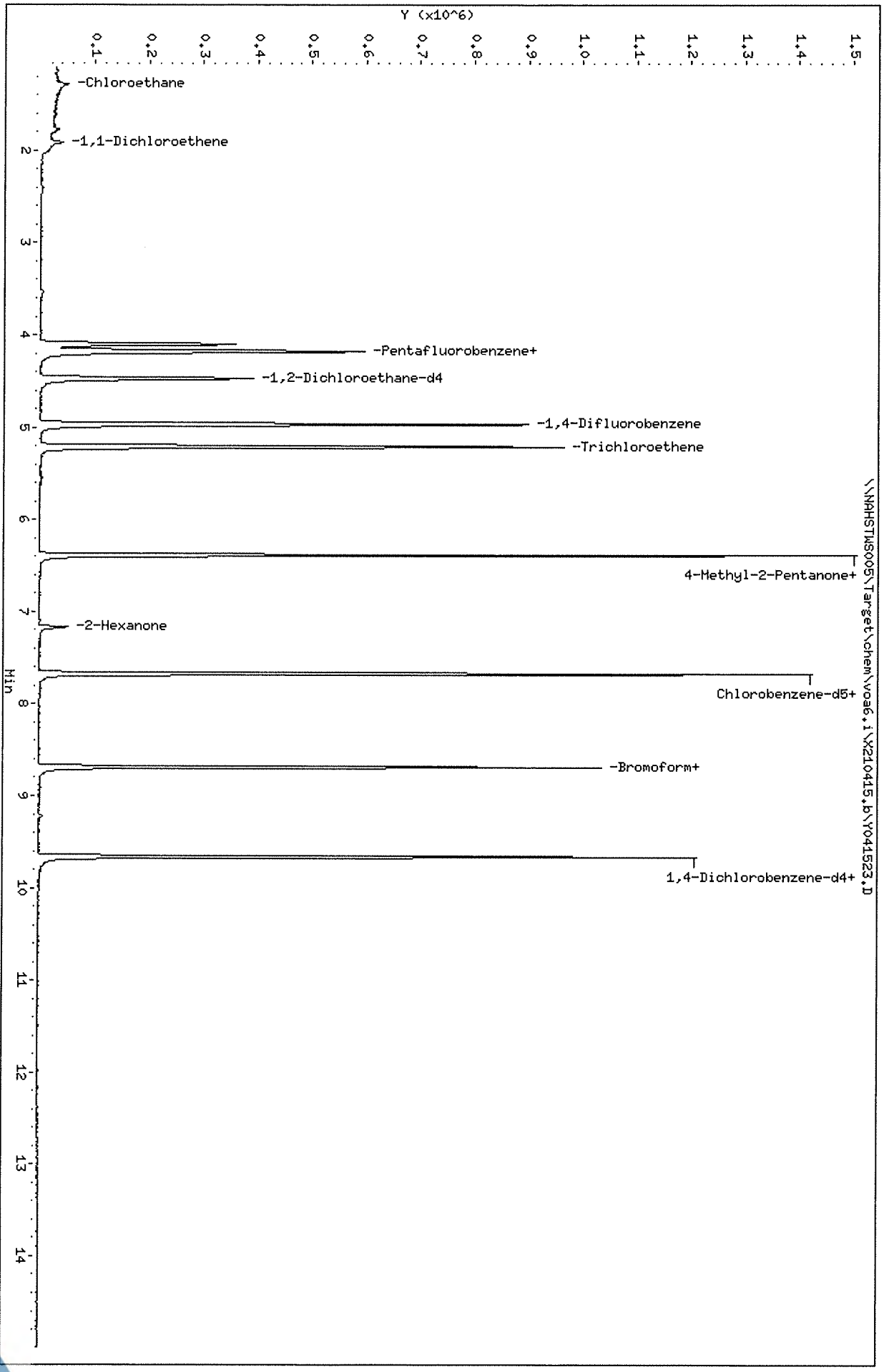
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	444910	50.0000	
* 36 1,4-Difluorobenzene	114	4.963	4.970	(1.000)	723023	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	629208	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	267835	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	240001	45.8554	45.85
$ 35 1,2-Dichloroethane-d4	65	4.469	4.469	(1.069)	311232	49.5947	49.59
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	881563	54.3407	54.34
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	283329	47.0543	47.05
11 1,1-Dichloroethene	96	1.919	1.919	(0.459)	6589	1.04011	1.04(a)
38 Trichloroethene	130	5.206	5.207	(1.049)	283551	57.2883	57.28

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).



Data File: \\NAHSTWS005\Target\chem\voa6.i\X210415.b\Y041523.D
Date : 16-APR-2021 04:41
Client ID: HS21040695-12
Sample Info: HS21040695-12;HS21040695-12;;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

\\NAHSTWS005\Target\chem\voa6.i\X210415.b\Y041523.D

Data File: \\NAHSTWS005\Target\chem\voa6.i\X210415.b\Y041523.D Page 3

Date : 16-APR-2021 04:41

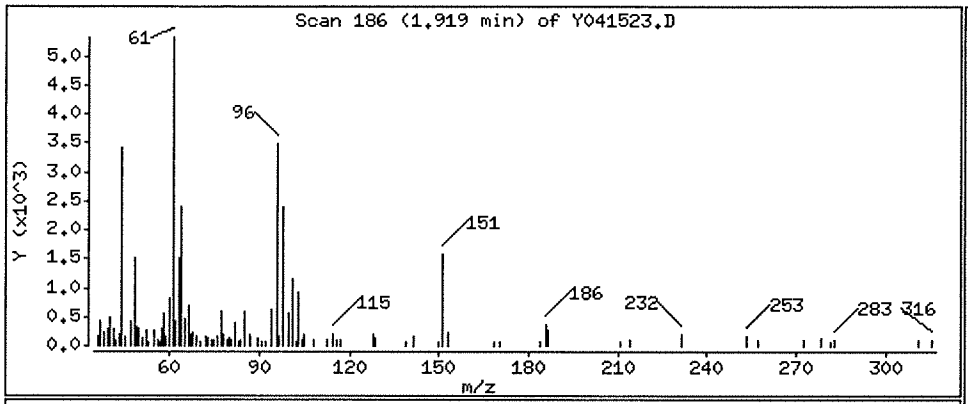
Client ID: HS21040695-12 Instrument: voa6.i

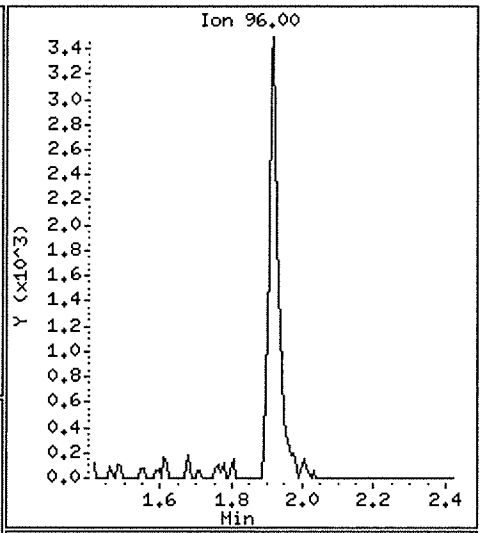
Sample Info: HS21040695-12;HS21040695-12;;;

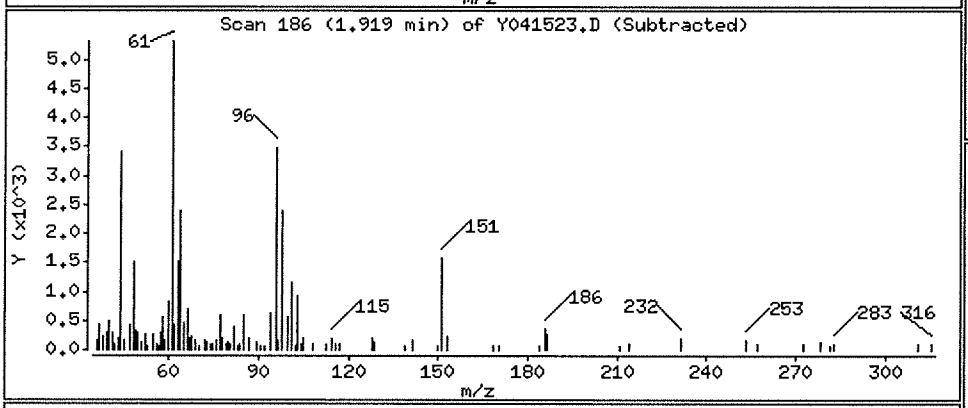
Purge Volume: 5.0 Operator: PC

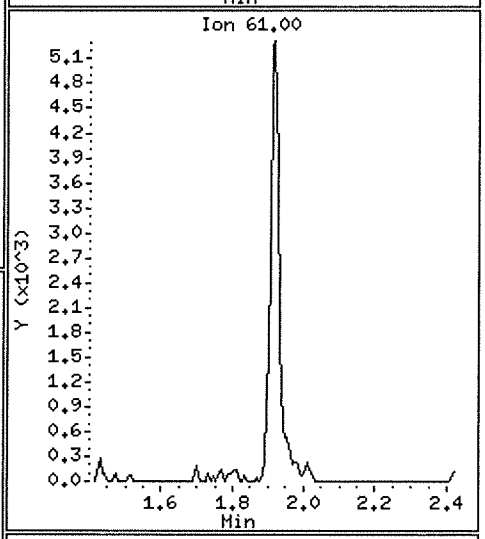
Column phase: DB624 Column diameter: 0.18

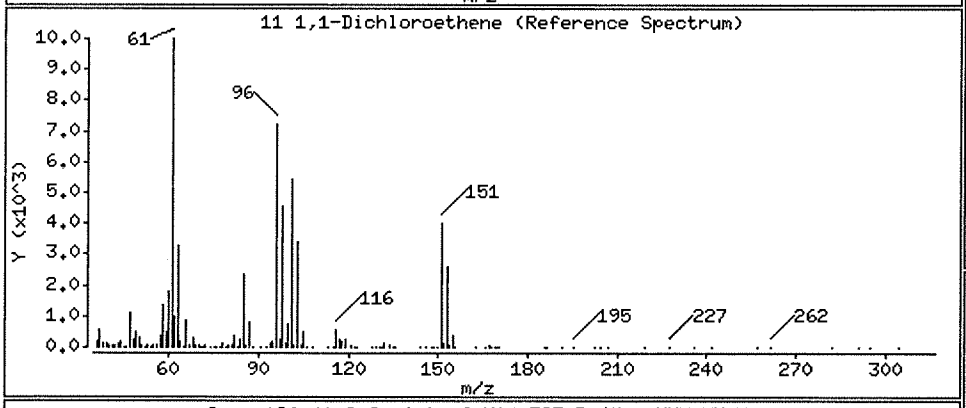
11 1,1-Dichloroethene Concentration: 1.04 ug/l

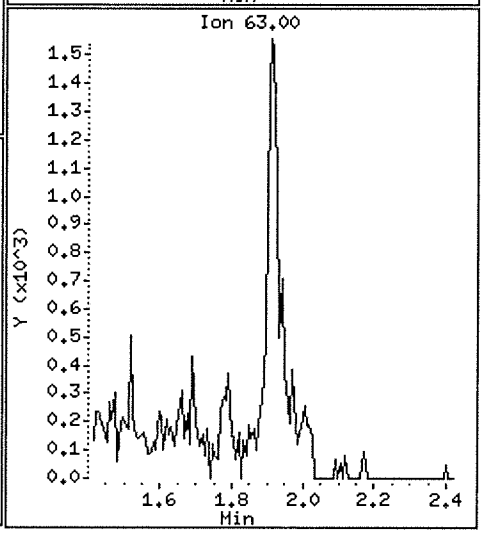


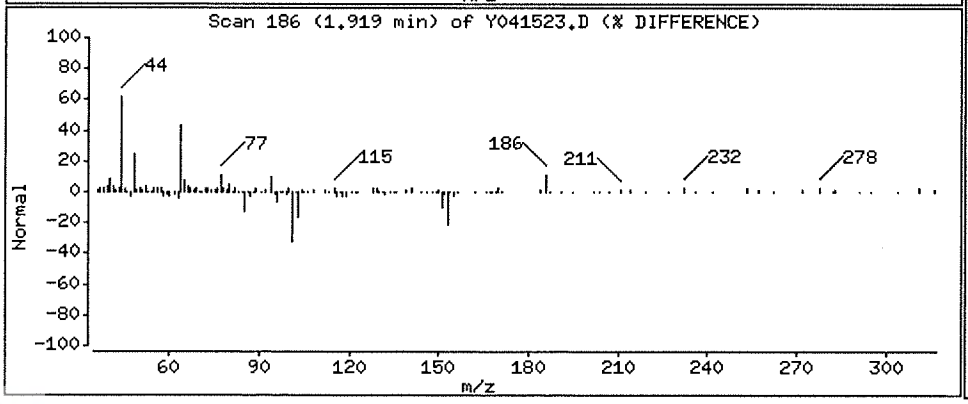












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210415.b\Y041523.D

Date : 16-APR-2021 04:41

Client ID: HS21040695-12

Instrument: voa6.i

Sample Info: HS21040695-12;HS21040695-12;;;

Purge Volume: 5.0

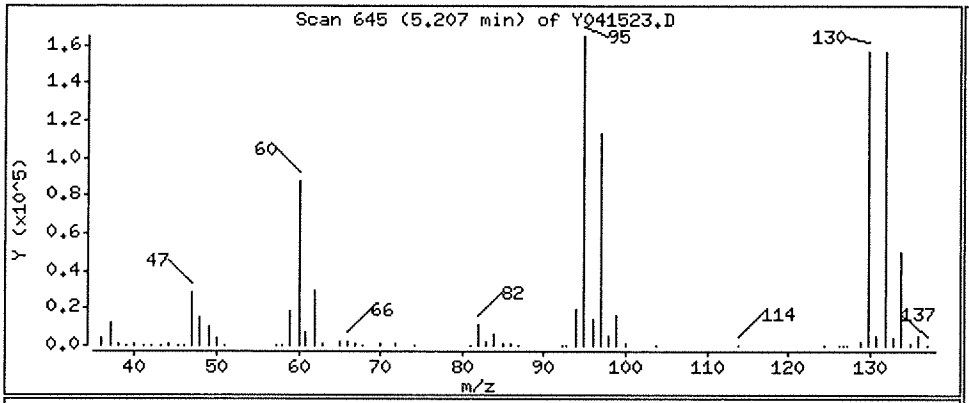
Operator: PC

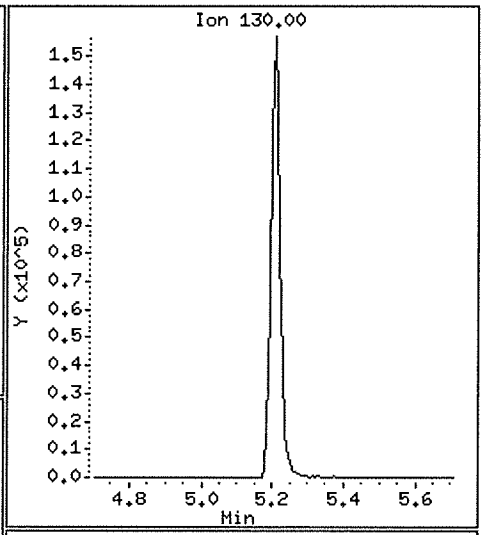
Column phase: DB624

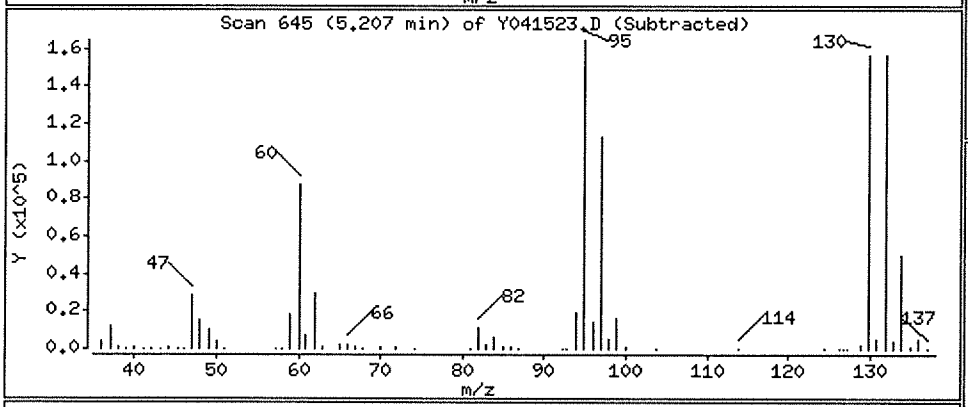
Column diameter: 0.18

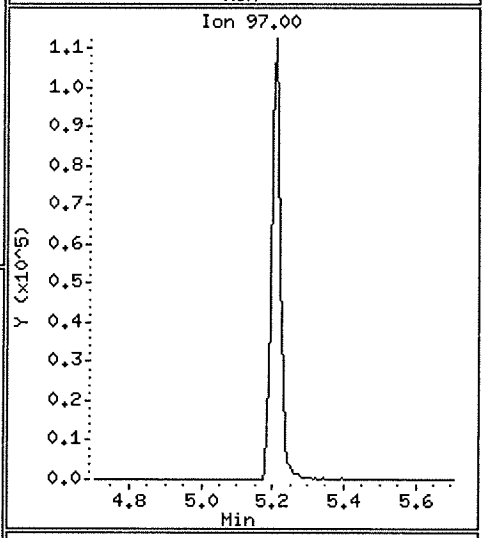
38 Trichloroethene

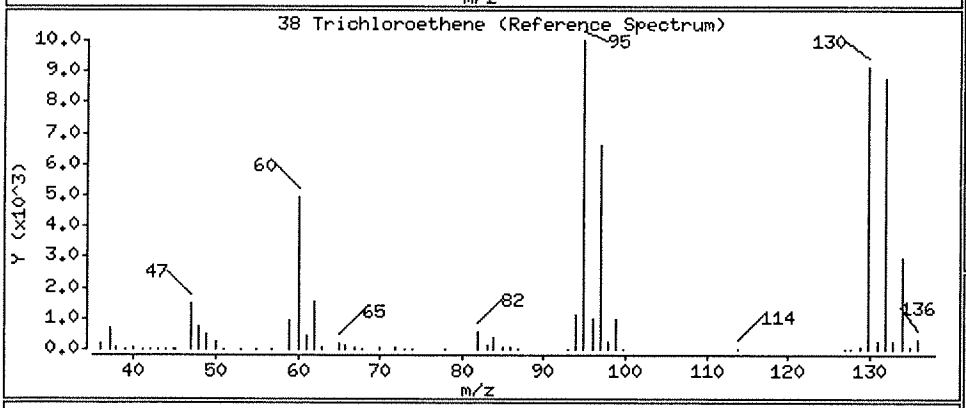
Concentration: 57.28 ug/l

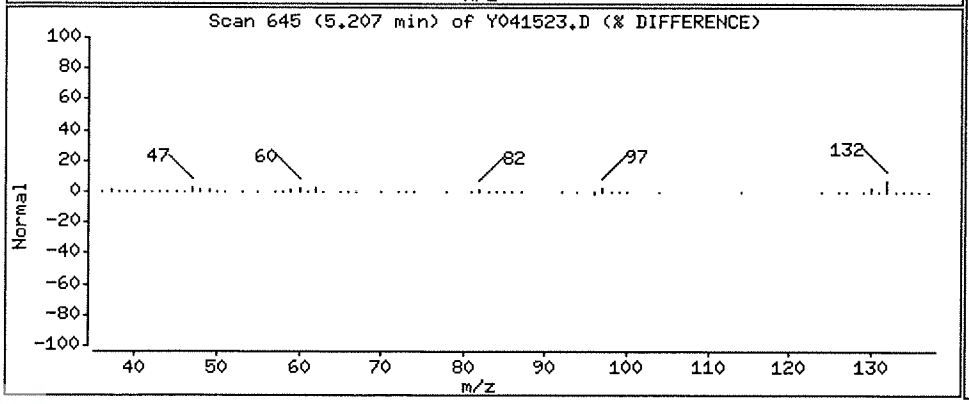


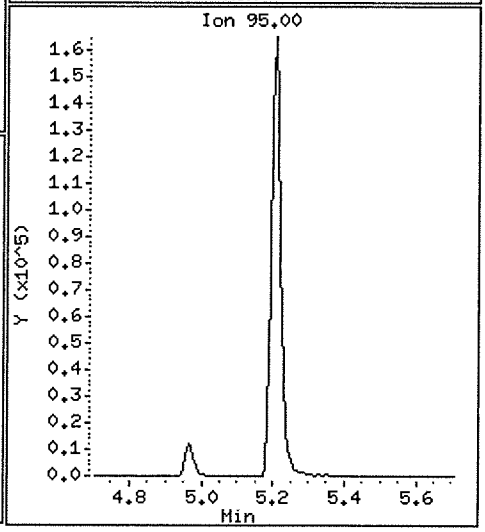












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210415.b\Y041524.D Page 1
Report Date: 04-May-2021 12:06

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X210415.b\Y041524.D
Lab Smp Id: HS21040695-02 Client Smp ID: HS21040695-02
Inj Date : 16-APR-2021 05:02
Operator : PC Inst ID: voa6.i
Smp Info : HS21040695-02;HS21040695-02;;;
Misc Info : HS18090001;WATER;0;10;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X210415.b\8260W.m
Meth Date : 04-May-2021 12:05 Qin.Xu Quant Type: ISTD
Cal Date : 02-APR-2021 13:20 Cal File: X040208.D
Als bottle: 51
Dil Factor: 10.00000
Integrator: HP RTE Compound Sublist: CBI_short1.sub
Target Version: 4.14
Processing Host: NAHSTW7066

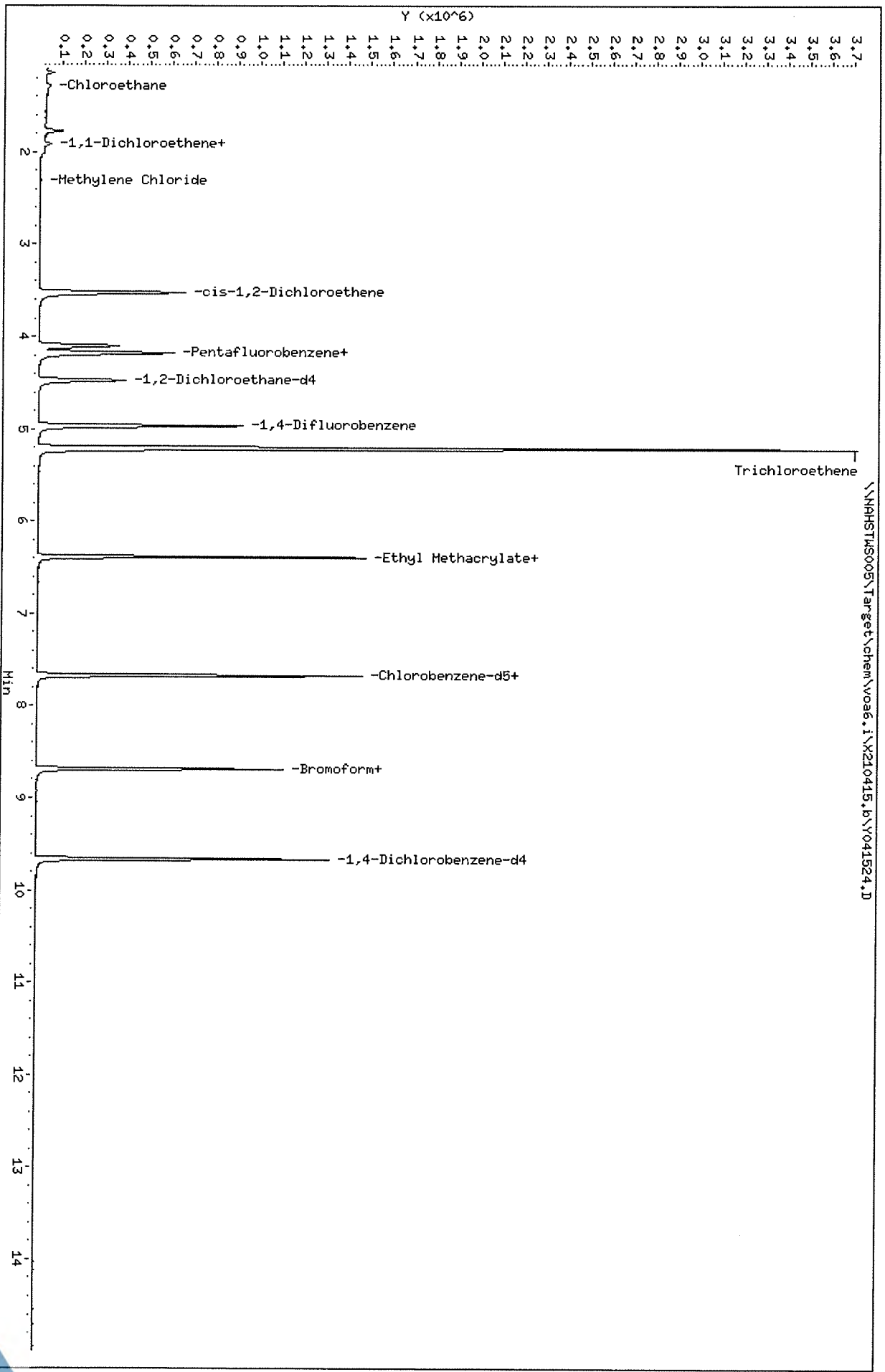
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	10.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	451287	50.0000	
* 36 1,4-Difluorobenzene	114	4.963	4.970	(1.000)	723191	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	643803	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	296231	50.0000	
$ 30 Dibromofluoromethane	113	4.104	4.103	(0.981)	244607	46.0729	46.07
$ 35 1,2-Dichloroethane-d4	65	4.476	4.469	(1.070)	311782	48.9862	48.98
$ 48 Toluene-d8	98	6.389	6.388	(0.833)	878718	52.9853	52.98
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	310741	50.3183	50.31
11 1,1-Dichloroethene	96	1.919	1.919	(0.459)	6812	1.06011	10.60(a)
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	331154	60.0287	600.28
17 Methylene Chloride	84	2.306	2.306	(0.551)	666	1.61492	16.14(a)
38 Trichloroethene	130	5.207	5.207	(1.049)	1045448	211.172	2111.71(A)
5 Vinyl Chloride	62	1.145	1.145	(0.274)	26624	3.93515	39.35

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).
A - Target compound detected but, quantitated amount exceeded maximum amount.



Data File: \\NAHSTWS005\Target\chem\voa6.i\X210415.b\Y041524.D
Date : 16-APR-2021 05:02
Client ID: HS21040695-02
Sample Info: HS21040695-02;HS21040695-02;;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\NAHSTWS005\Target\chem\voa6.i\X210415.b\Y041524.D Page 3

Date : 16-APR-2021 05:02

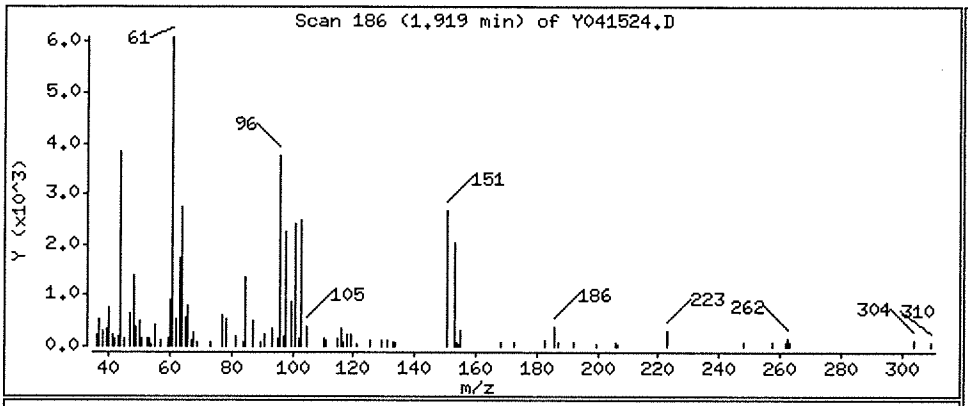
Client ID: HS21040695-02 Instrument: voa6.i

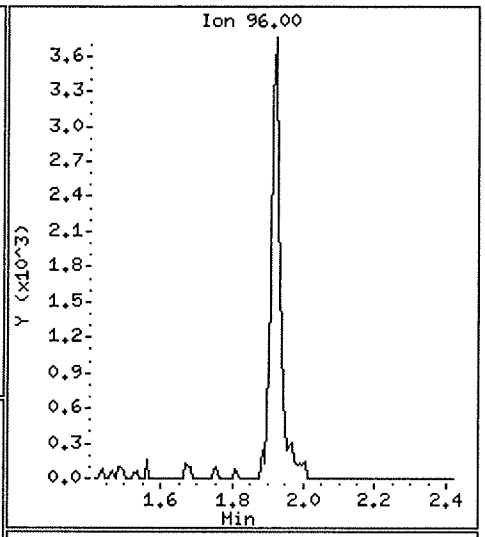
Sample Info: HS21040695-02;HS21040695-02;;;

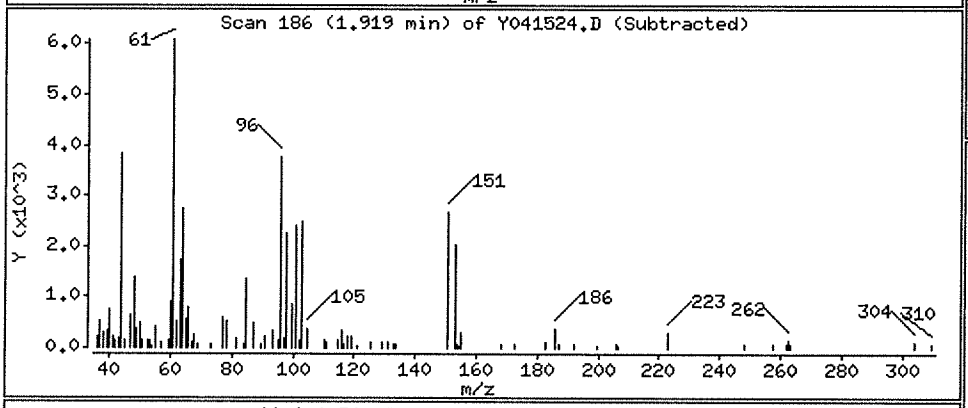
Purge Volume: 5.0 Operator: PC

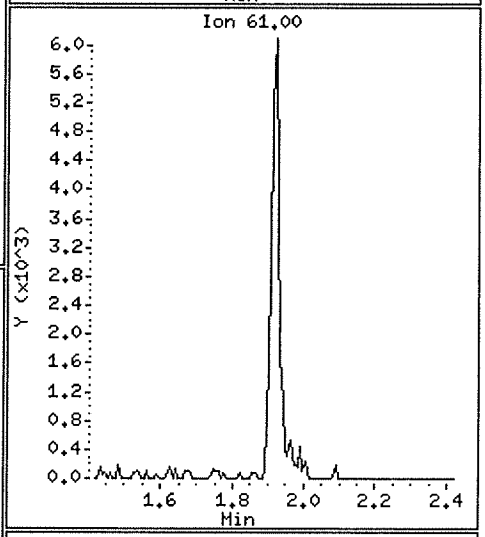
Column phase: DB624 Column diameter: 0.18

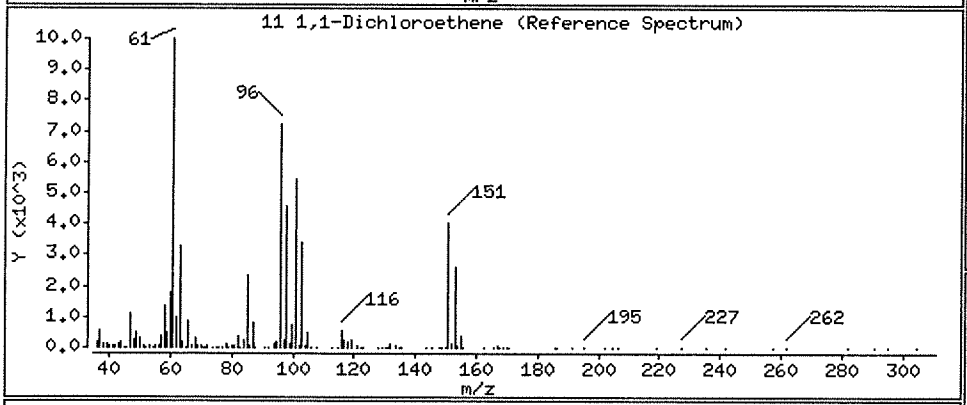
11 1,1-Dichloroethene Concentration: 10.60 ug/l

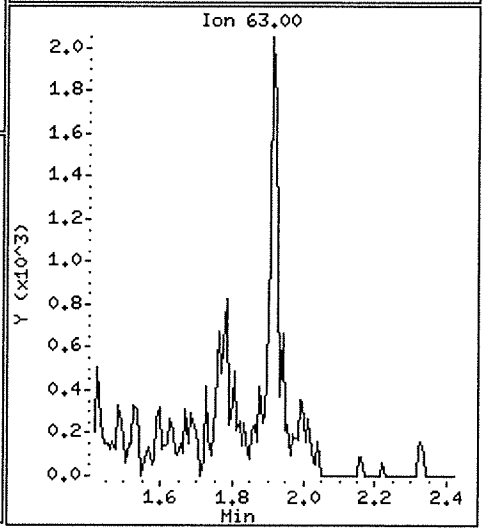


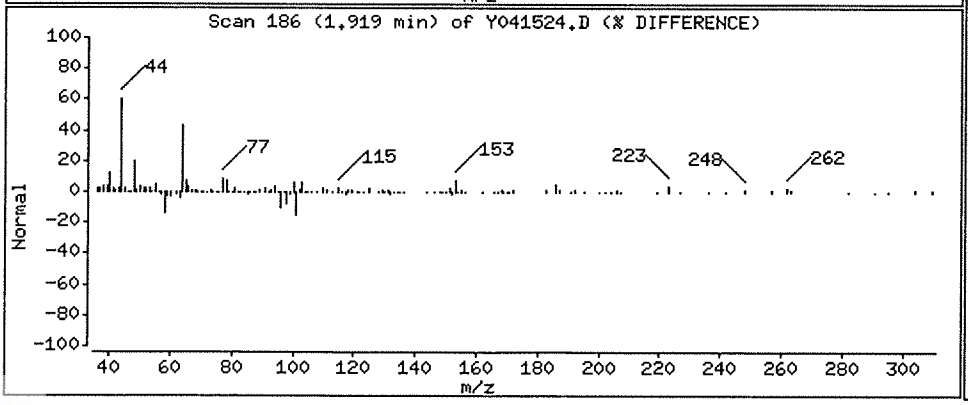












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210415.b\Y041524.D Page 4

Date : 16-APR-2021 05:02

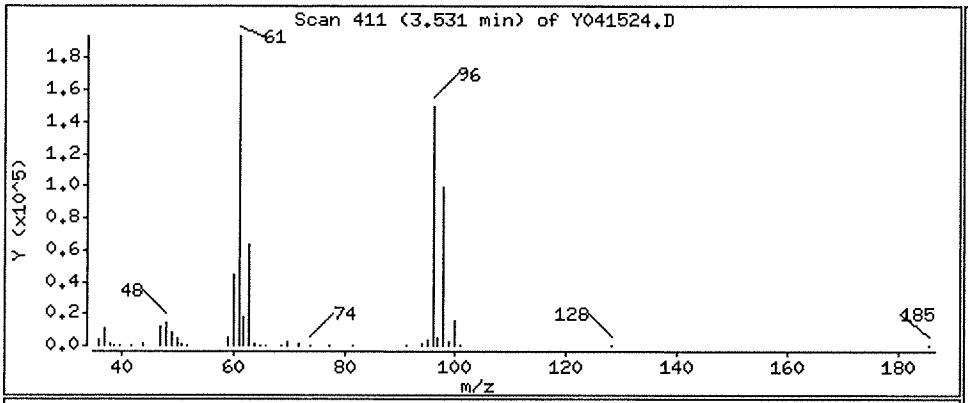
Client ID: HS21040695-02 Instrument: voa6.i

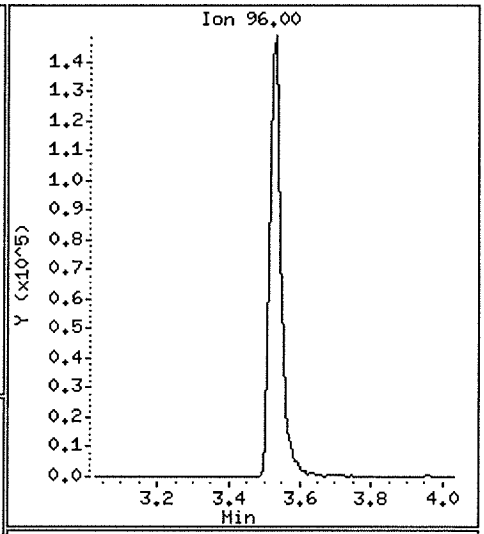
Sample Info: HS21040695-02;HS21040695-02;;;

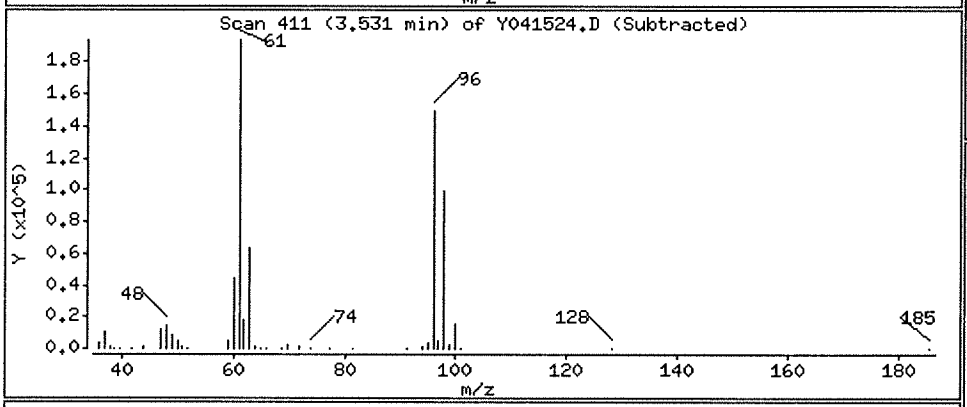
Purge Volume: 5.0 Operator: PC

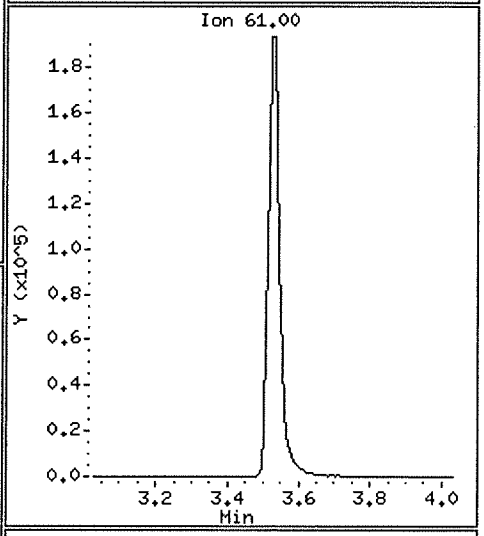
Column phase: DB624 Column diameter: 0.18

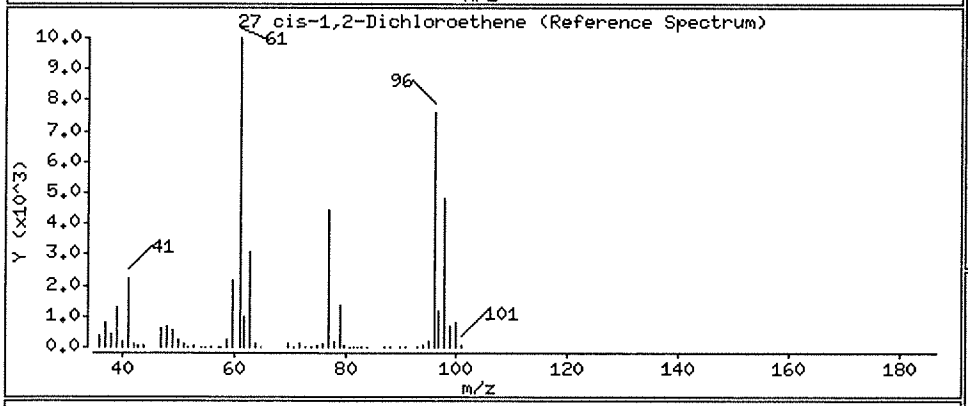
27 cis-1,2-Dichloroethene Concentration: 600.28 ug/l

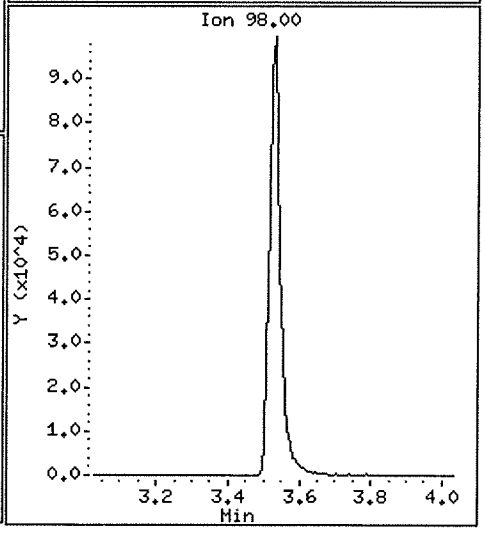


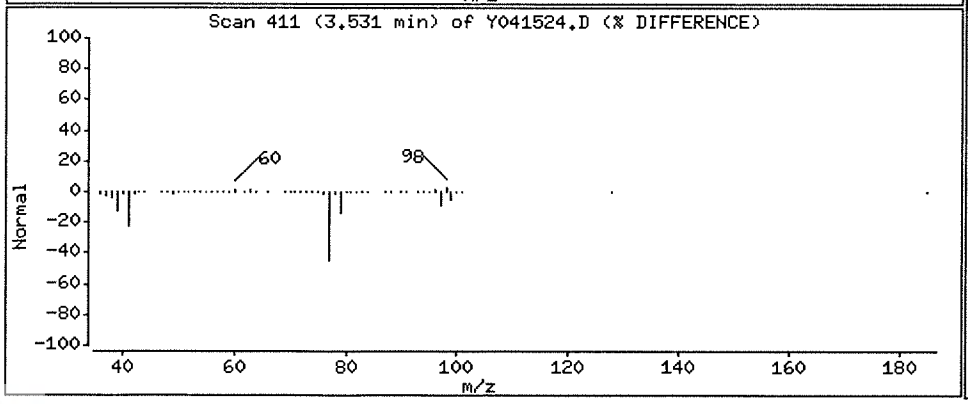












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210415.b\Y041524.D Page 5

Date : 16-APR-2021 05:02

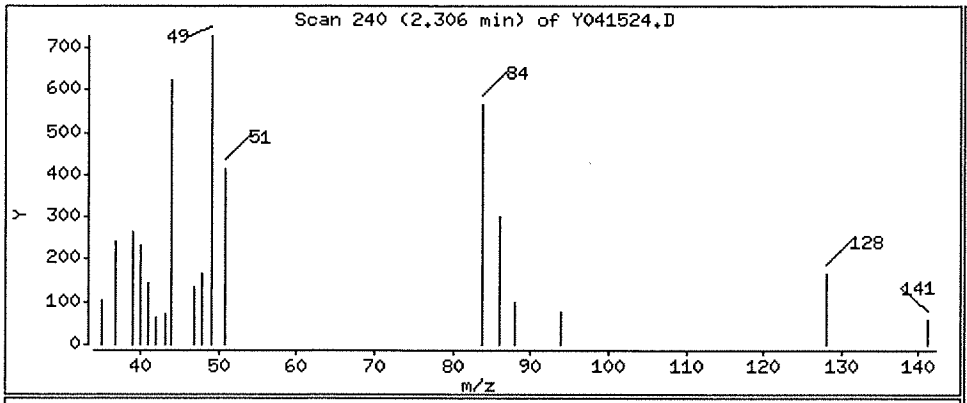
Client ID: HS21040695-02 Instrument: voa6.i

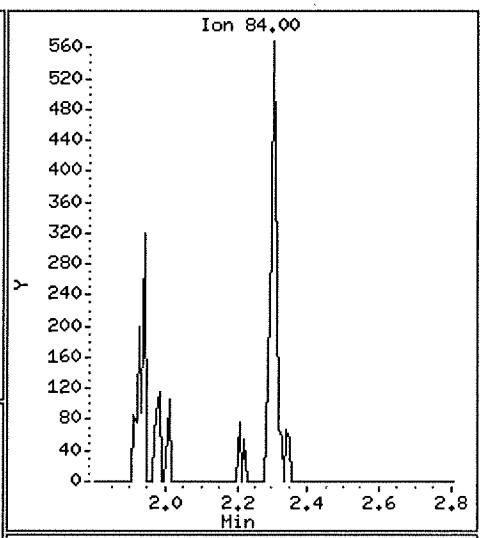
Sample Info: HS21040695-02;HS21040695-02;;;

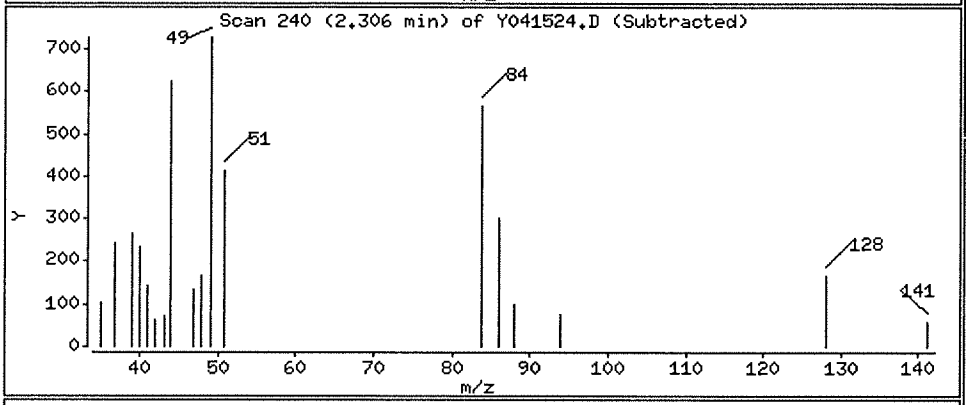
Purge Volume: 5.0 Operator: PC

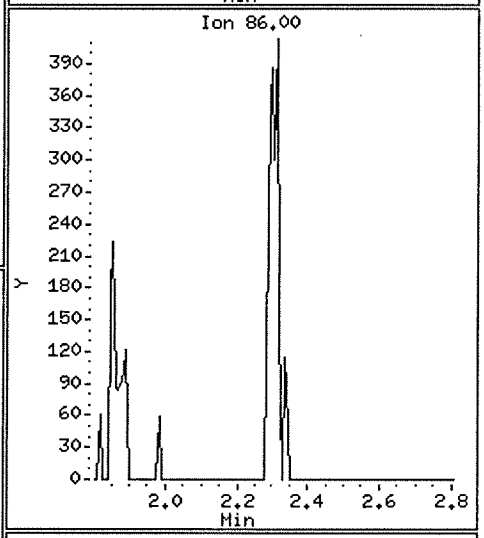
Column phase: DB624 Column diameter: 0.18

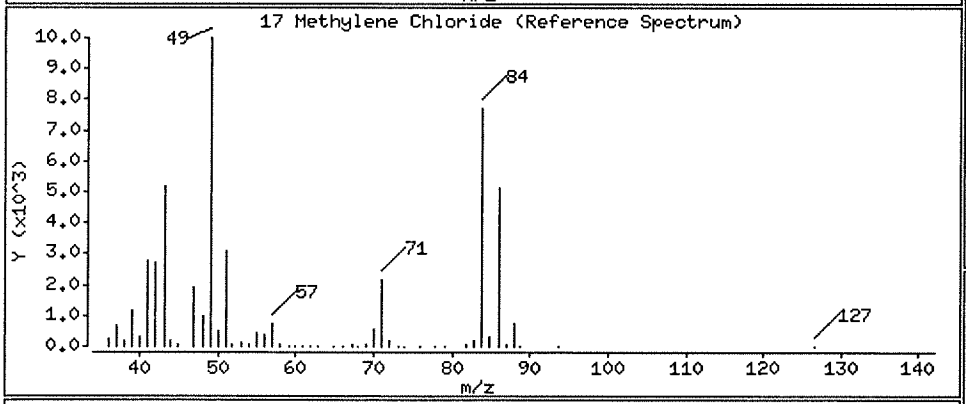
17 Methylene Chloride Concentration: 16.14 ug/l

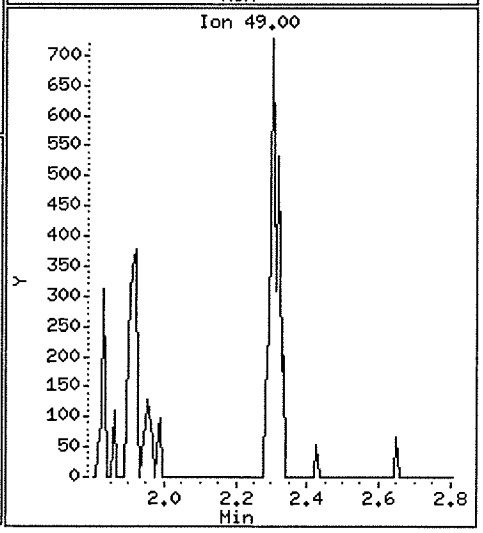


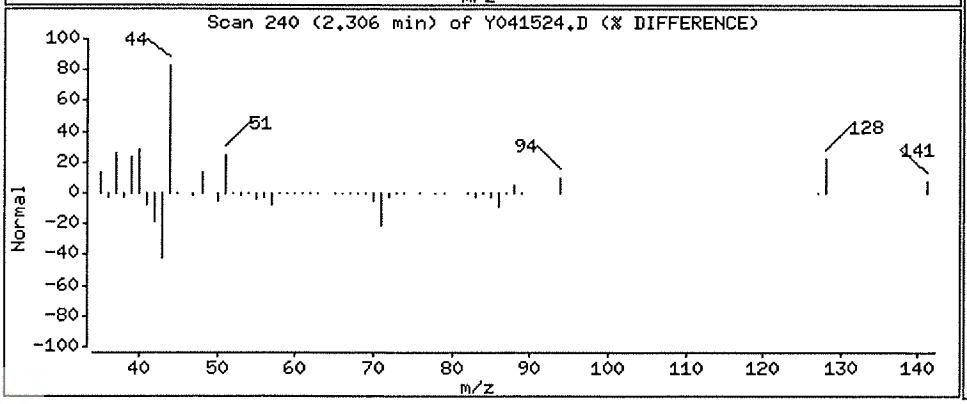












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210415.b\Y041524.D

Date : 16-APR-2021 05:02

Client ID: HS21040695-02

Instrument: voa6.i

Sample Info: HS21040695-02;HS21040695-02;;;

Purge Volume: 5.0

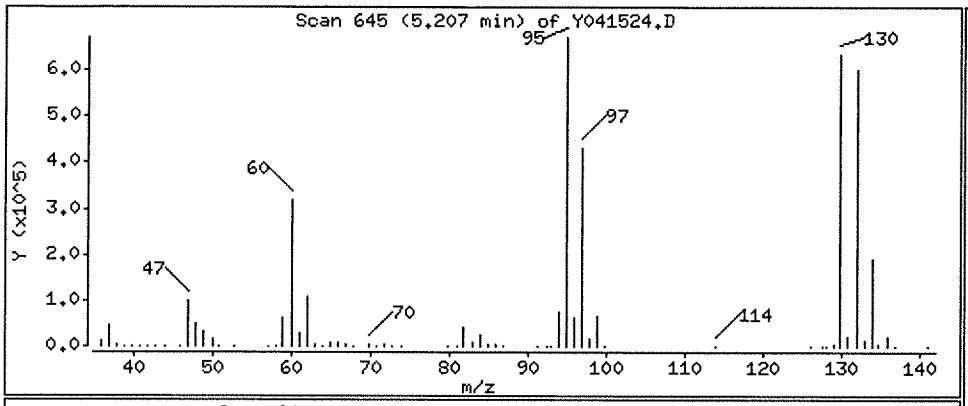
Operator: PC

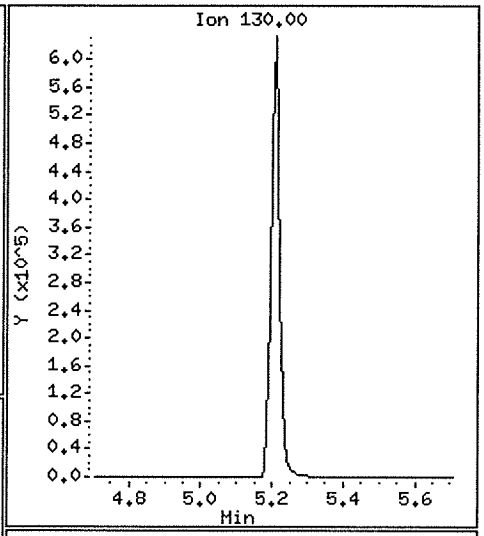
Column phase: DB624

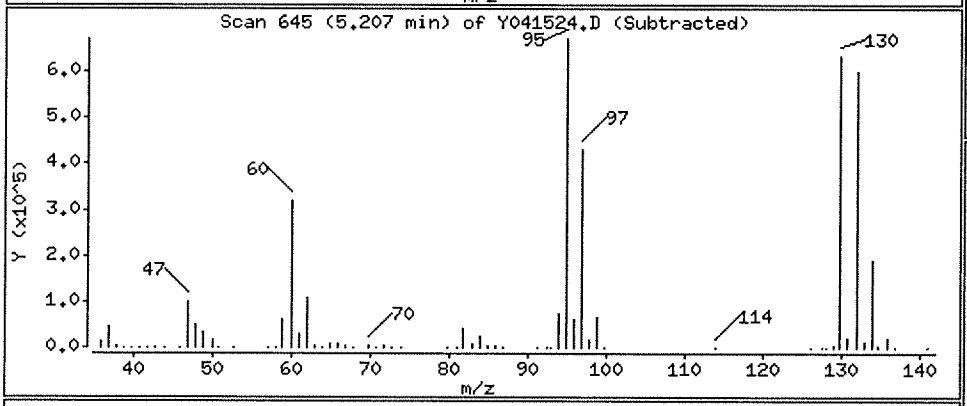
Column diameter: 0.18

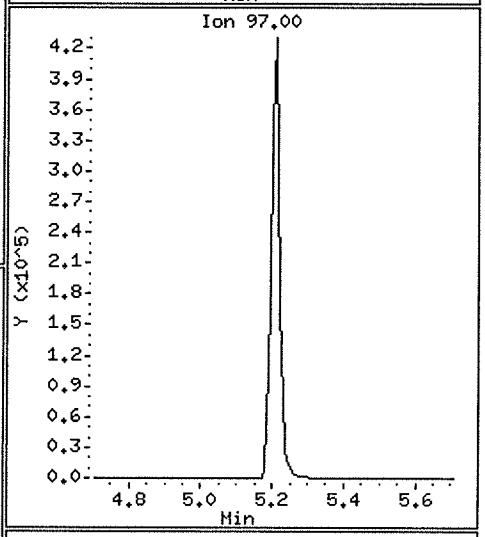
38 Trichloroethene

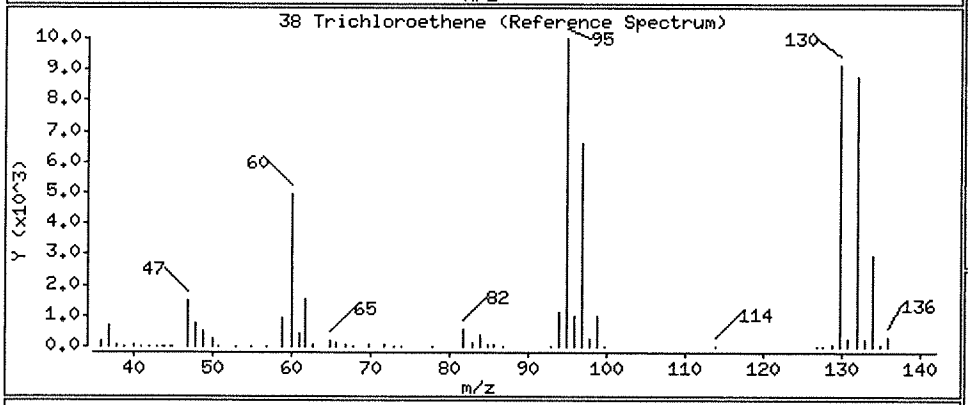
Concentration: 2111.71 ug/l

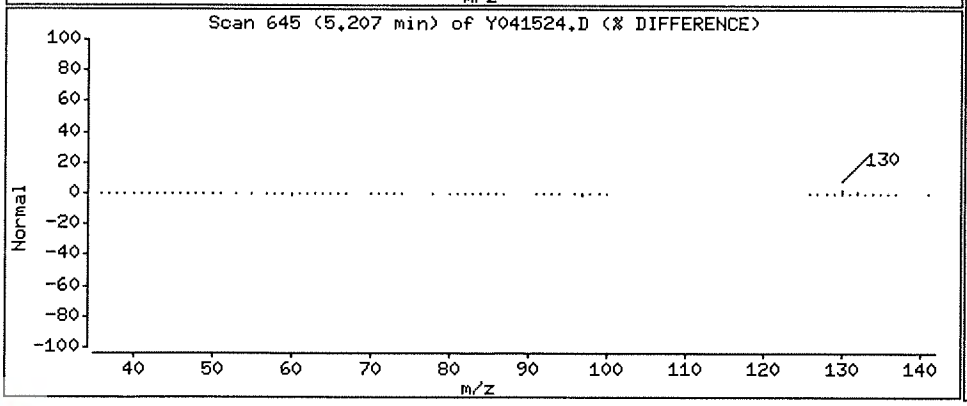


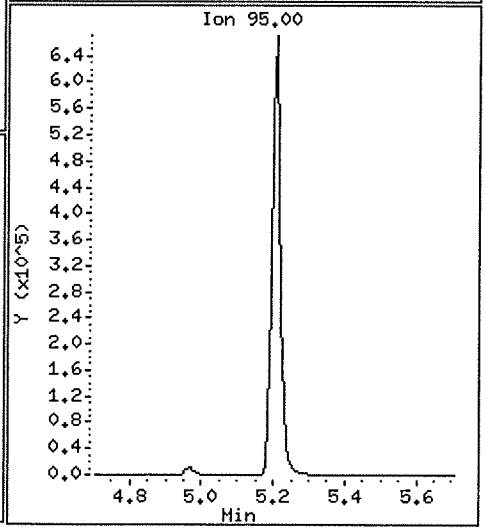












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210415.b\Y041524.D

Date : 16-APR-2021 05:02

Client ID: HS21040695-02

Instrument: voa6.i

Sample Info: HS21040695-02;HS21040695-02;;;

Purge Volume: 5.0

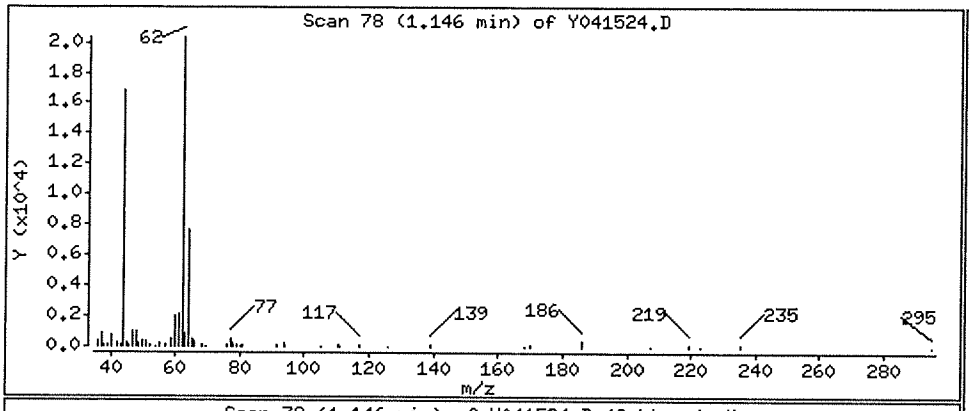
Operator: PC

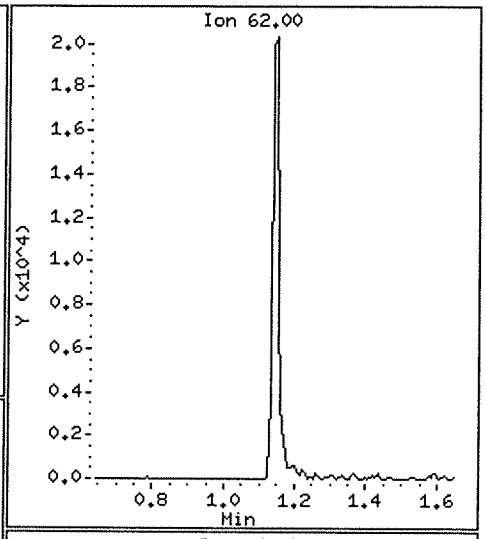
Column phase: DB624

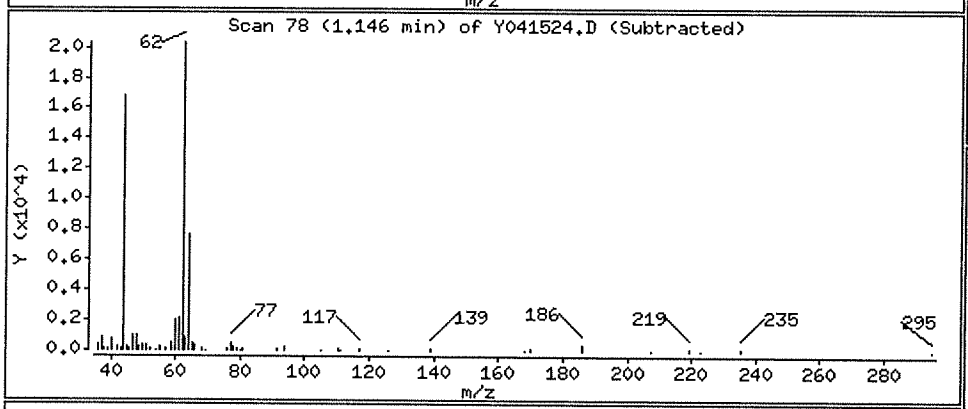
Column diameter: 0.18

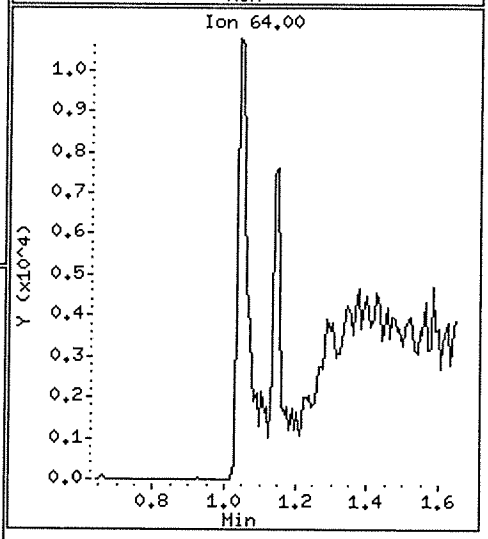
5 Vinyl Chloride

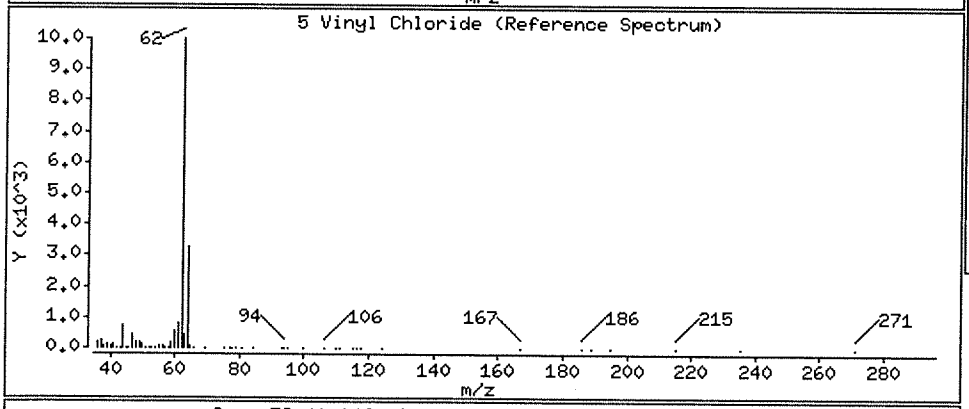
Concentration: 39.35 ug/l

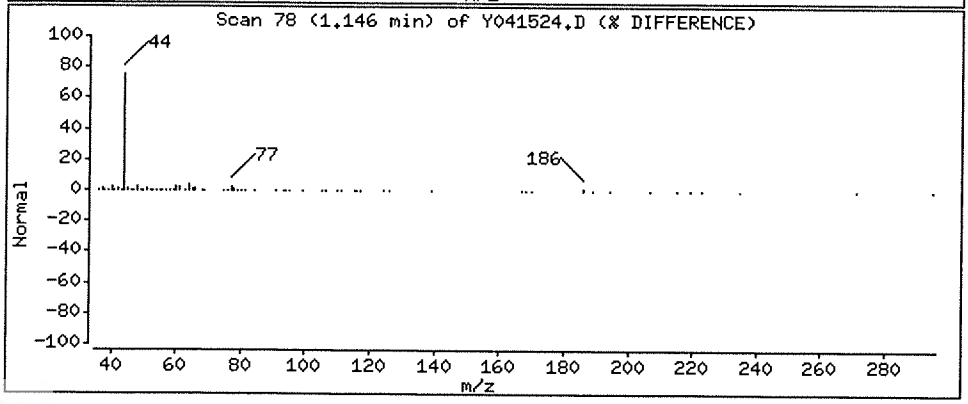












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210415.b\Y041525.D Page 1
Report Date: 04-May-2021 12:06

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X210415.b\Y041525.D
Lab Smp Id: HS21040695-02 Client Smp ID: HS21040695-02
Inj Date : 16-APR-2021 05:23
Operator : PC Inst ID: voa6.i
Smp Info : HS21040695-02;HS21040695-02;;;
Misc Info : HS18090001;WATER;0;100;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X210415.b\8260W.m
Meth Date : 04-May-2021 12:05 Qin.Xu Quant Type: ISTD
Cal Date : 02-APR-2021 13:20 Cal File: X040208.D
Als bottle: 52
Dil Factor: 100.00000
Integrator: HP RTE Compound Sublist: CBI_short1.sub
Target Version: 4.14
Processing Host: NAHSTW7066

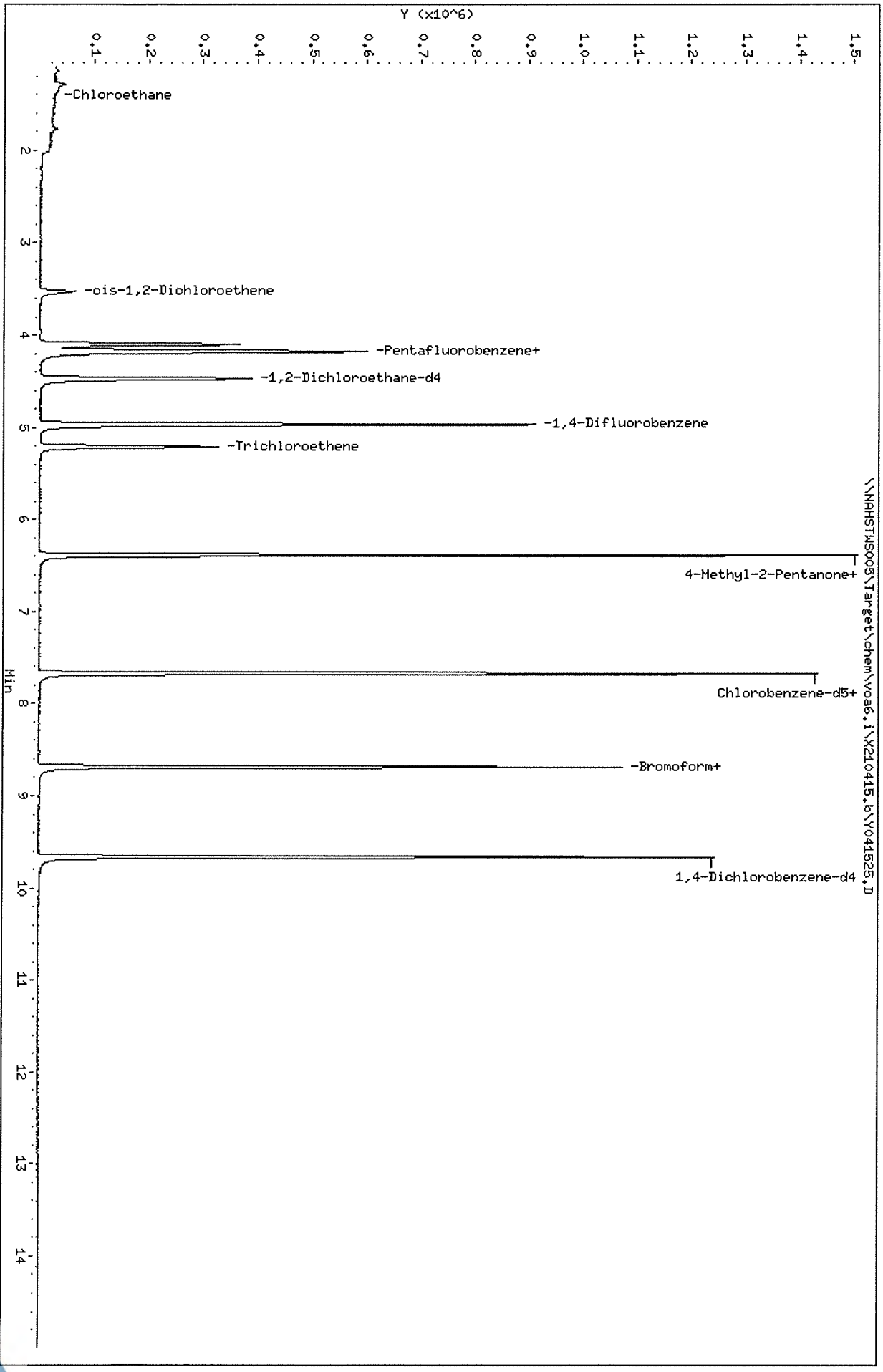
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	100.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	448419	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	721367	50.0000	
* 47 Chlorobenzene-d5	117	7.670	7.671	(1.000)	633947	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	264190	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	242533	45.9754	45.97
$ 35 1,2-Dichloroethane-d4	65	4.476	4.469	(1.070)	307896	48.6881	48.68
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	868441	53.1729	53.17
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	276294	45.5960	45.59
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	32836	5.99029	599.02
38 Trichloroethene	130	5.206	5.207	(1.048)	101359	20.5254	2052.54

Data File: \\NAHSTWS005\Target\chem\voa6.i\X210415.b\Y041525.D
Date : 16-APR-2021 05:23
Client ID: HS21040695-02
Sample Info: HS21040695-02;HS21040695-02;;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18



Data File: \\NAHSTWS005\Target\chem\voa6.i\X210415.b\Y041525.D Page 3

Date : 16-APR-2021 05:23

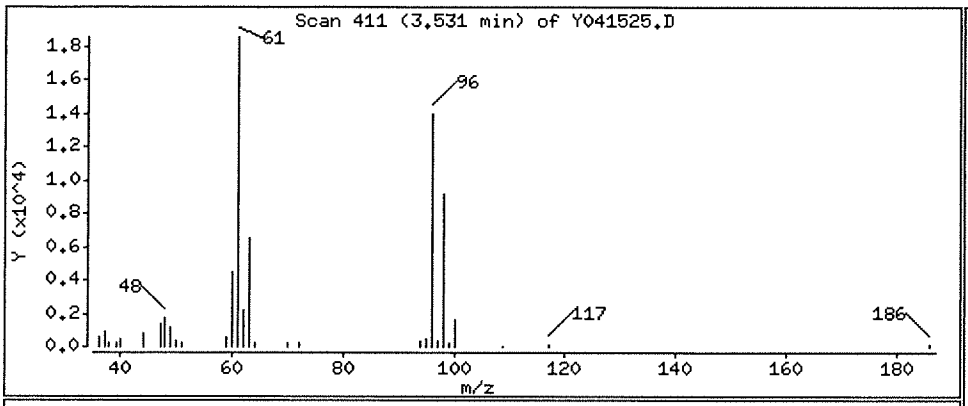
Client ID: HS21040695-02 Instrument: voa6.i

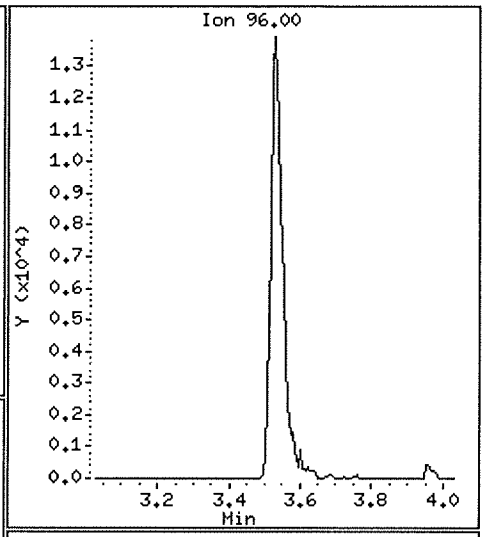
Sample Info: HS21040695-02;HS21040695-02;;;

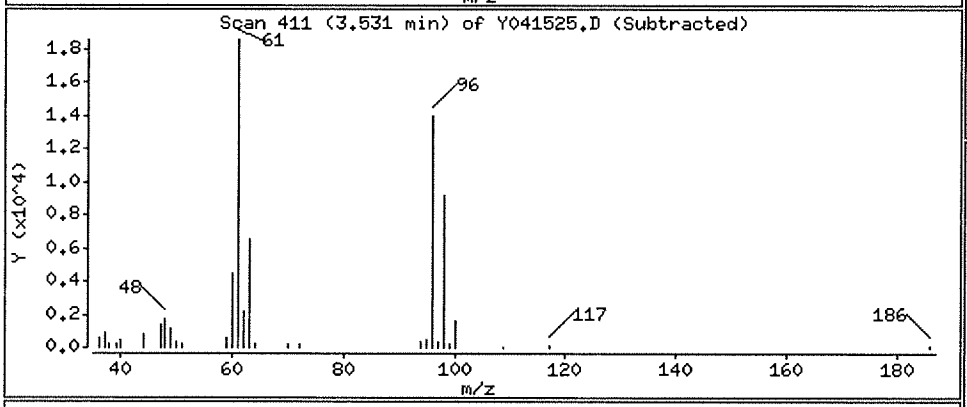
Purge Volume: 5.0 Operator: PC

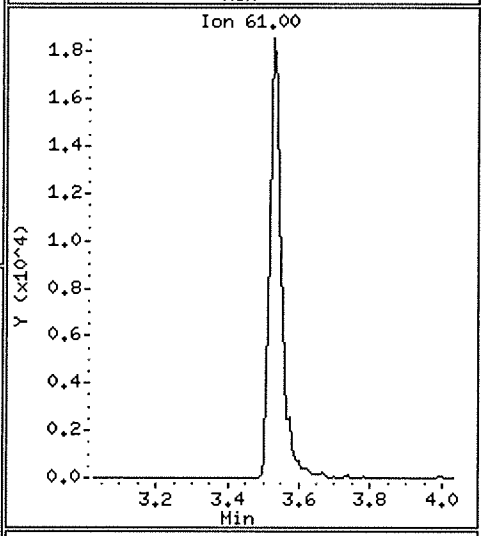
Column phase: DB624 Column diameter: 0.18

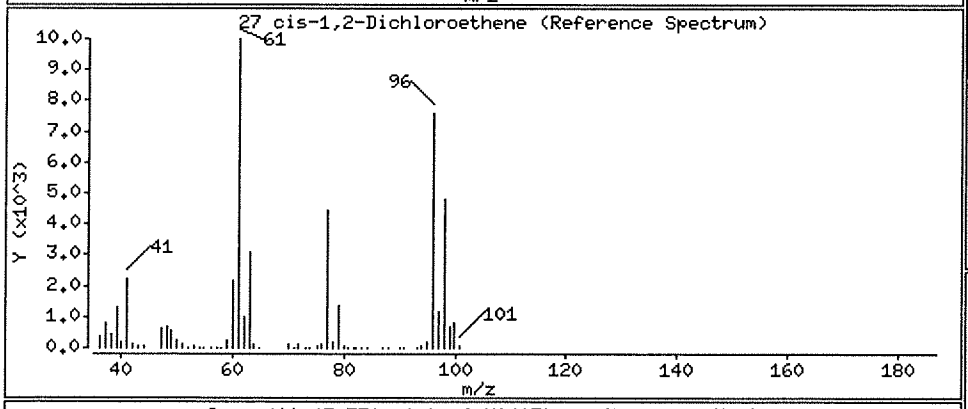
27 cis-1,2-Dichloroethene Concentration: 599.02 ug/l

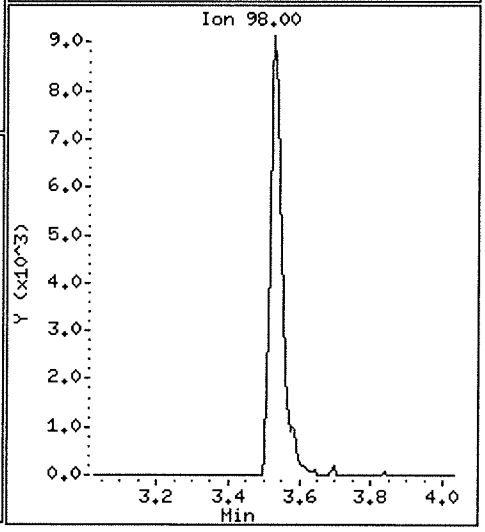


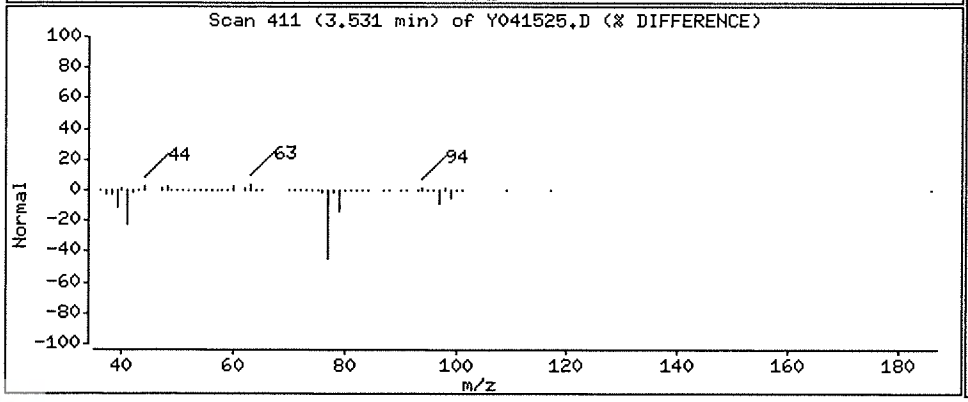












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210415.b\Y041525.D

Date : 16-APR-2021 05:23

Client ID: HS21040695-02

Instrument: voa6.i

Sample Info: HS21040695-02;HS21040695-02;;;

Purge Volume: 5.0

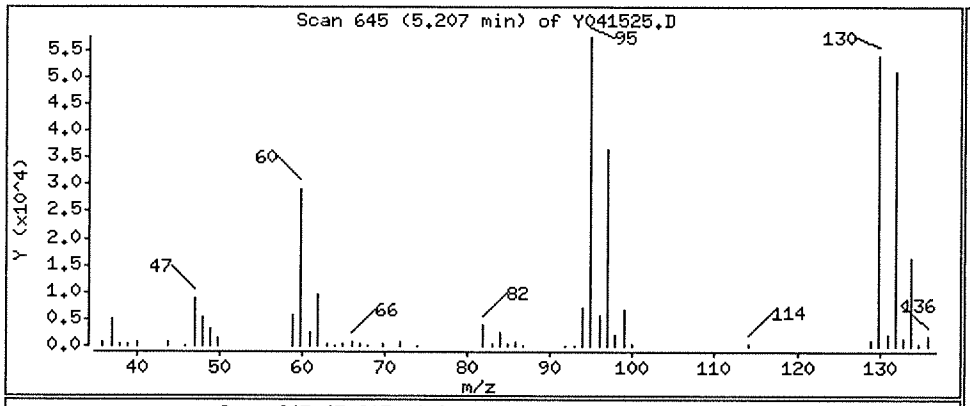
Operator: PC

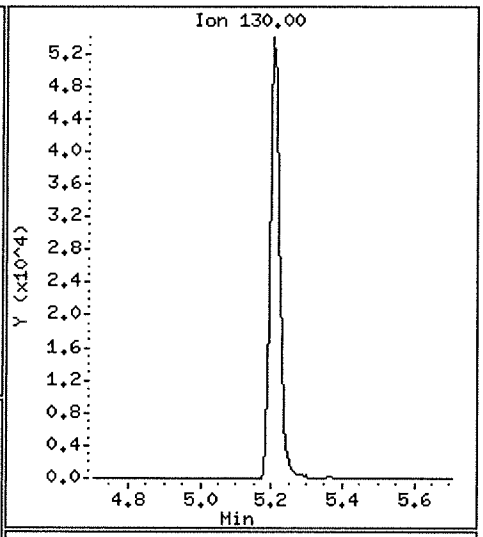
Column phase: DB624

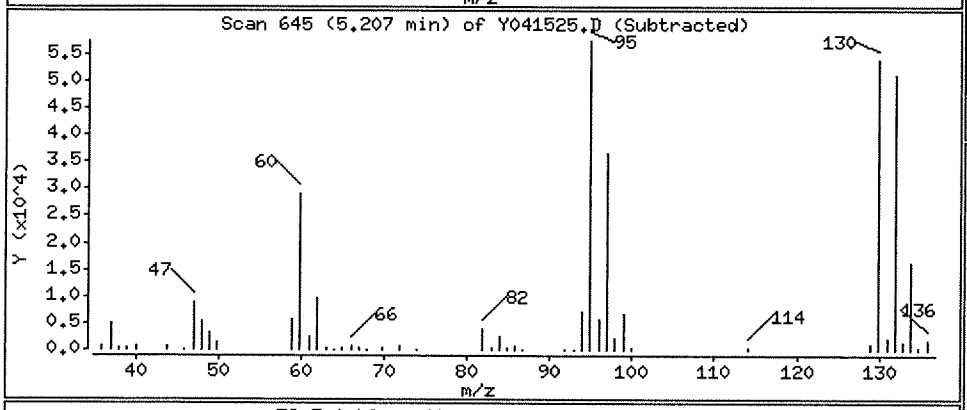
Column diameter: 0.18

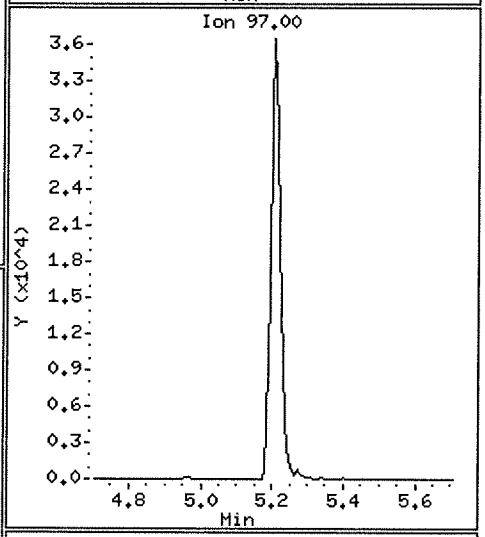
38 Trichloroethene

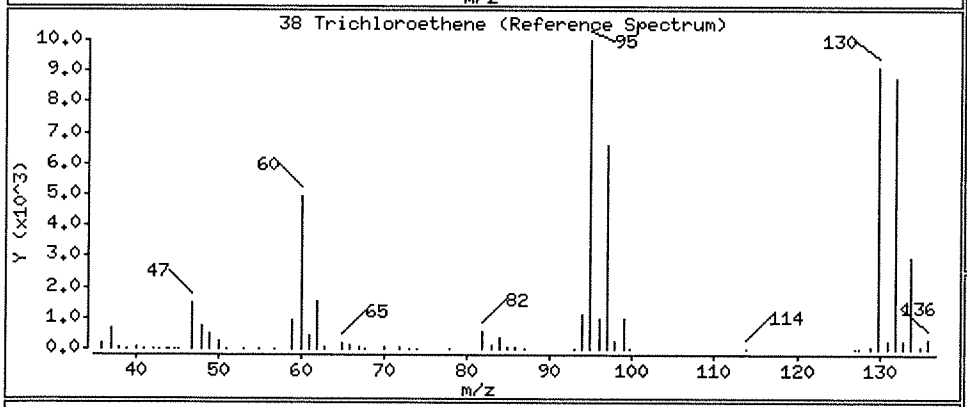
Concentration: 2052.54 ug/l

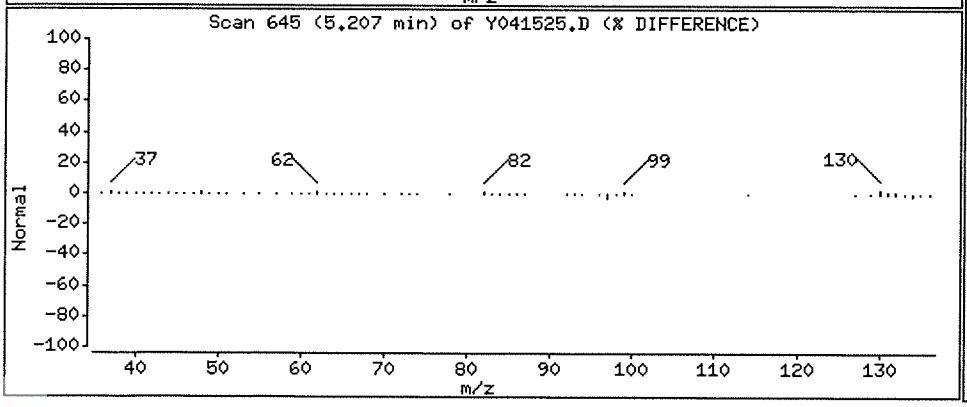


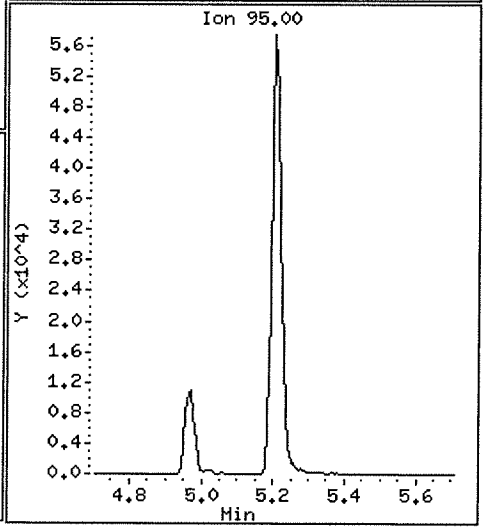












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210415.b\Y041526.D Page 1
Report Date: 04-May-2021 12:06

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X210415.b\Y041526.D
Lab Smp Id: HS21040695-13 Client Smp ID: HS21040695-13
Inj Date : 16-APR-2021 05:44
Operator : PC Inst ID: voa6.i
Smp Info : HS21040695-13;HS21040695-13;;;
Misc Info : HS18090001;WATER;0;10;
Comment   :
Method   : \\NAHSTWS005\Target\chem\voa6.i\X210415.b\8260W.m
Meth Date : 04-May-2021 12:05 Qin.Xu Quant Type: ISTD
Cal Date : 02-APR-2021 13:20 Cal File: X040208.D
Als bottle: 53
Dil Factor: 10.00000
Integrator: HP RTE Compound Sublist: CBI_short1.sub
Target Version: 4.14
Processing Host: NAHSTW7066

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	10.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

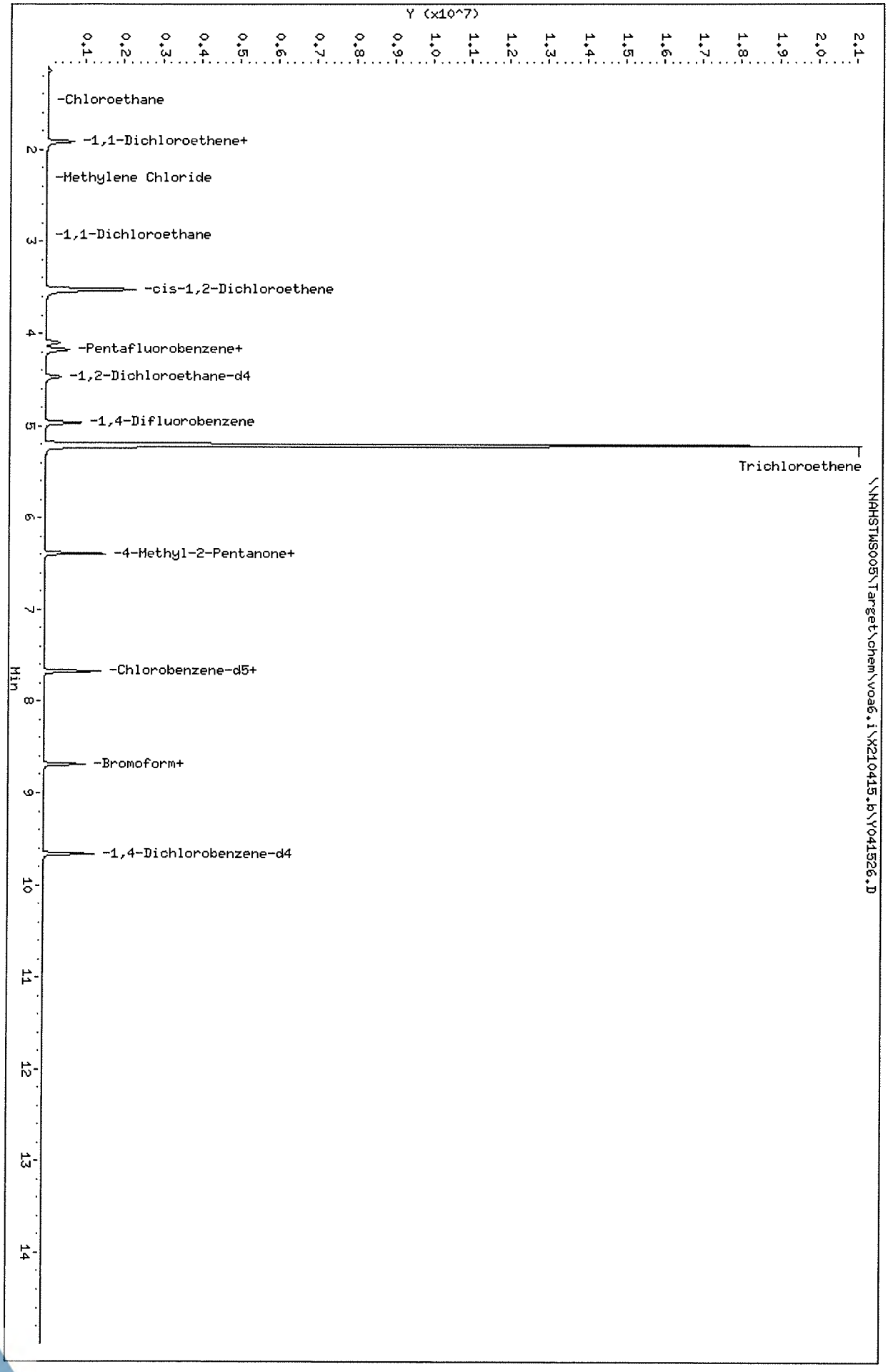
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
*	1 Pentafluorobenzene	168	4.182	4.182	(1.000)	453032	50.0000	
*	36 1,4-Difluorobenzene	114	4.963	4.970	(1.000)	730241	50.0000	
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	635476	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	275955	50.0000	
$	30 Dibromofluoromethane	113	4.096	4.103	(0.979)	248259	46.5759	46.57
$	35 1,2-Dichloroethane-d4	65	4.476	4.469	(1.070)	312982	48.9854	48.98
$	48 Toluene-d8	98	6.389	6.388	(0.833)	881027	53.7914	53.79
$	69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	285058	46.8808	46.88
	11 1,1-Dichloroethene	96	1.919	1.919	(0.459)	54708	8.48111	84.81
	27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	1155773	208.701	2087.01(A)
	17 Methylene Chloride	84	2.298	2.306	(0.550)	1064	1.69296	16.92(a)
	38 Trichloroethene	130	5.207	5.207	(1.049)	5940111	1188.27	11882.69(A)
	5 Vinyl Chloride	62	1.145	1.145	(0.274)	61030	8.98577	89.85

QC Flag Legend

a - Target compound detected but, quantitated amount
    Below Limit Of Quantitation(BLOQ).
A - Target compound detected but, quantitated amount
    exceeded maximum amount.

Data File: \\NAHSTWS005\Target\chem\voa6.i\X210415.b\Y041526.D
Date : 16-APR-2021 05:44
Client ID: HS21040695-13
Sample Info: HS21040695-13;HS21040695-13;;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18



Data File: \\NAHSTWS005\Target\chem\voa6.i\X210415.b\Y041526.D Page 3

Date : 16-APR-2021 05:44

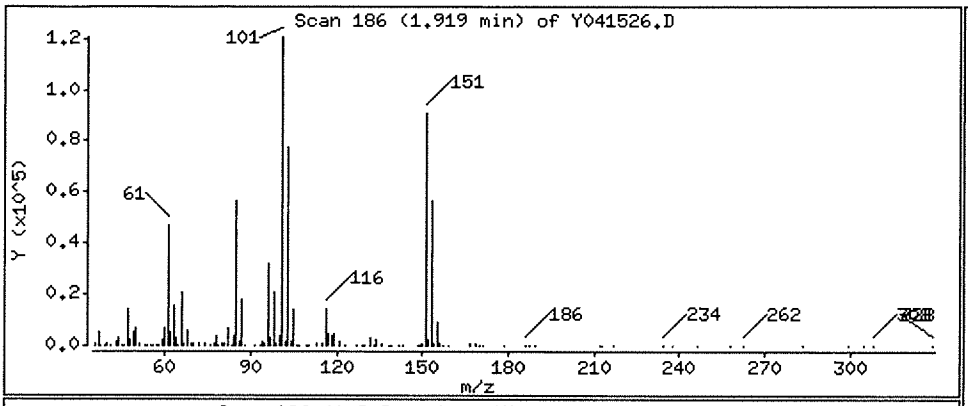
Client ID: HS21040695-13 Instrument: voa6.i

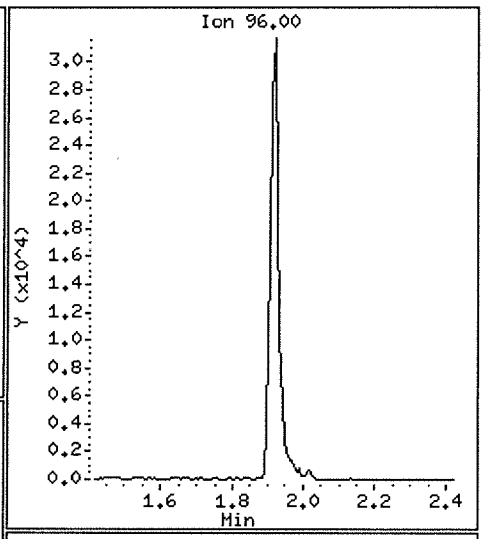
Sample Info: HS21040695-13;HS21040695-13;;;

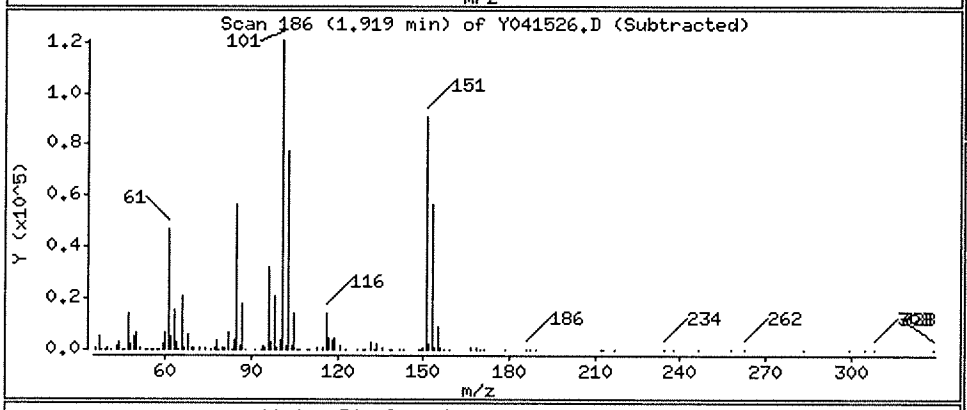
Purge Volume: 5.0 Operator: PC

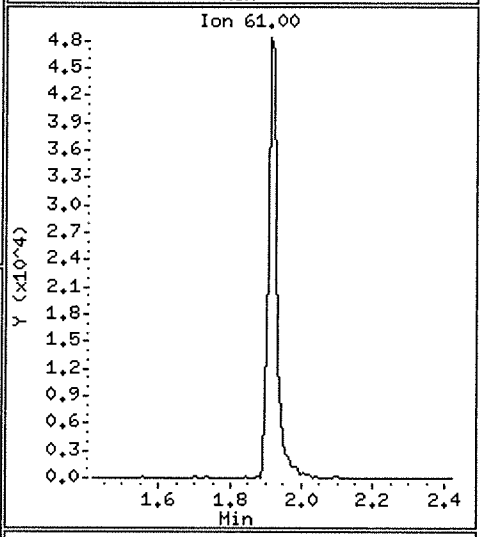
Column phase: DB624 Column diameter: 0.18

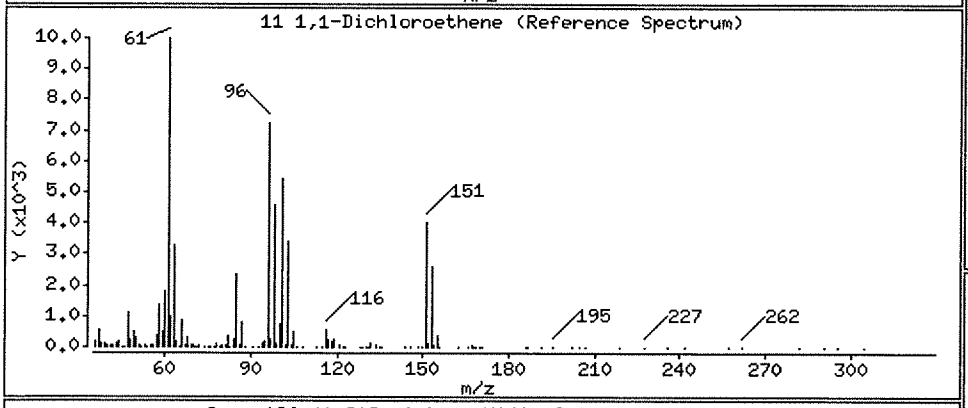
11 1,1-Dichloroethene Concentration: 84.81 ug/l

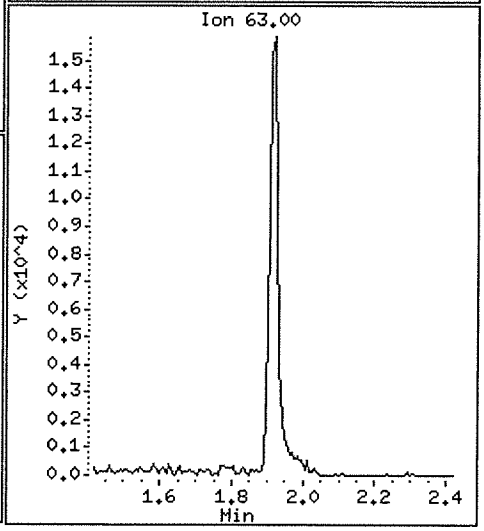


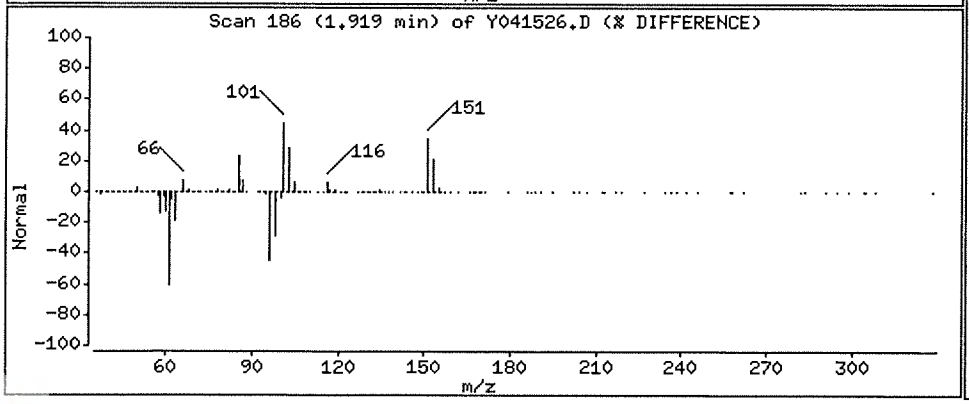












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210415.b\Y041526.D

Date : 16-APR-2021 05:44

Client ID: HS21040695-13

Instrument: voa6.i

Sample Info: HS21040695-13;HS21040695-13;;;

Purge Volume: 5.0

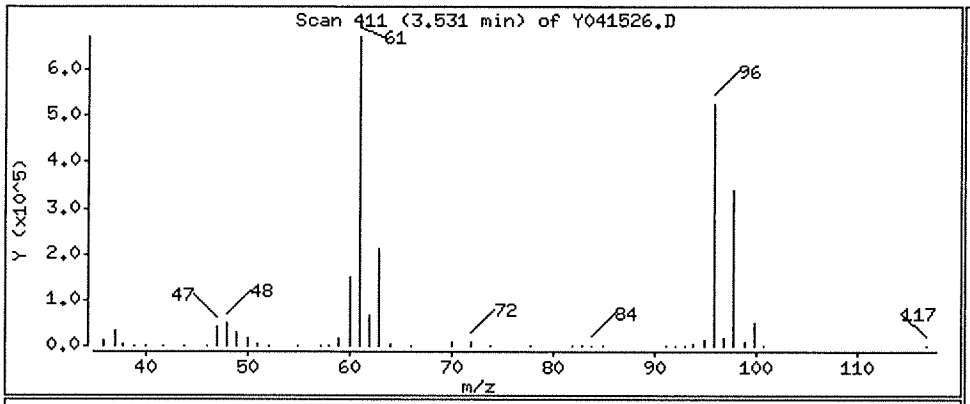
Operator: PC

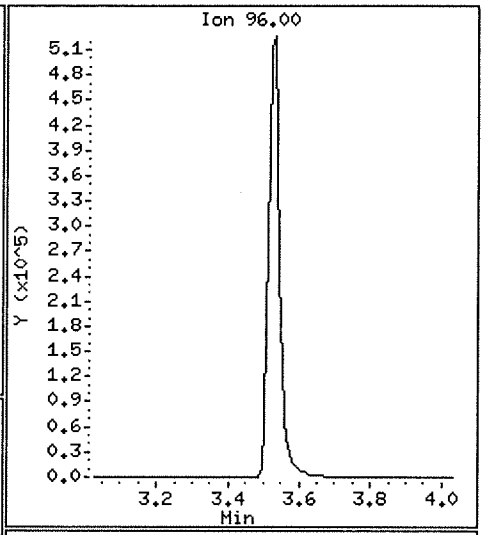
Column phase: DB624

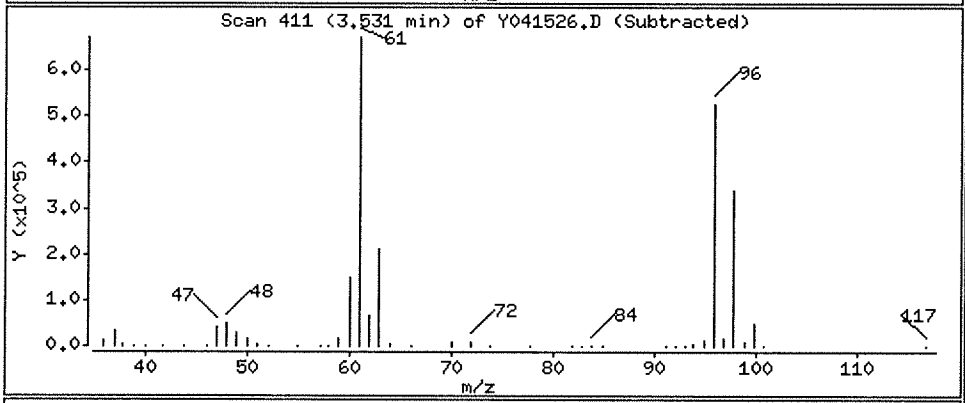
Column diameter: 0.18

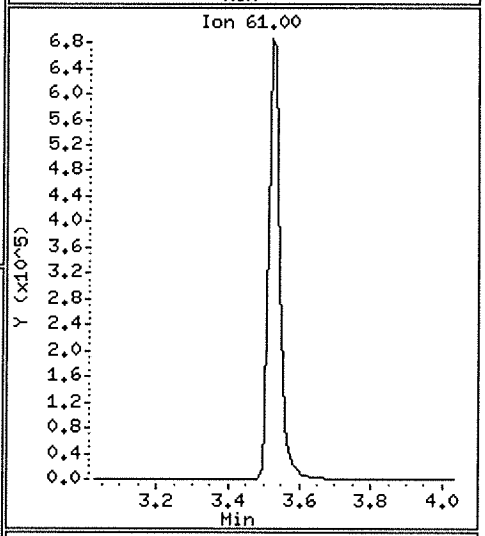
27 cis-1,2-Dichloroethene

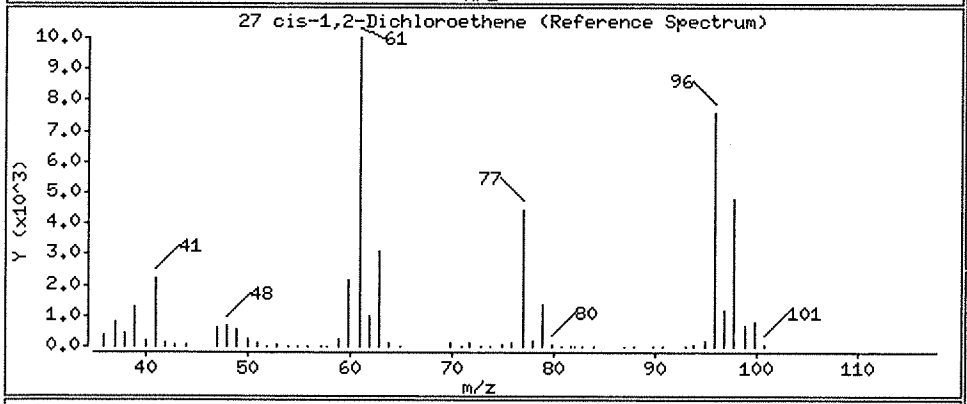
Concentration: 2087.01 ug/l

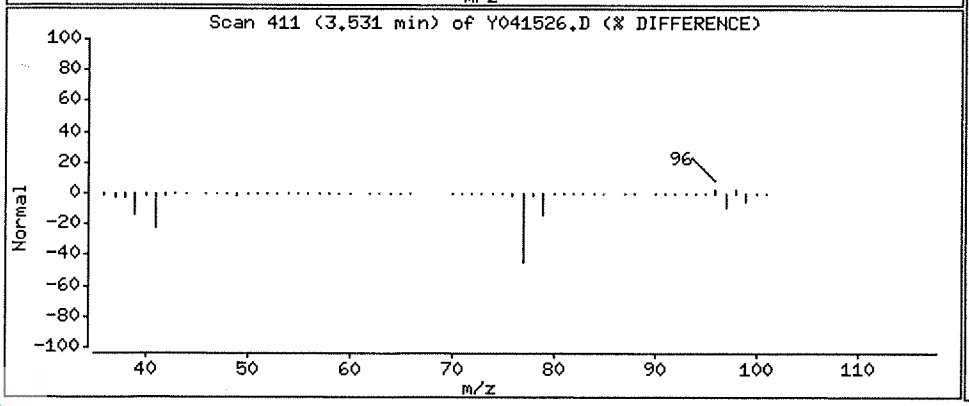


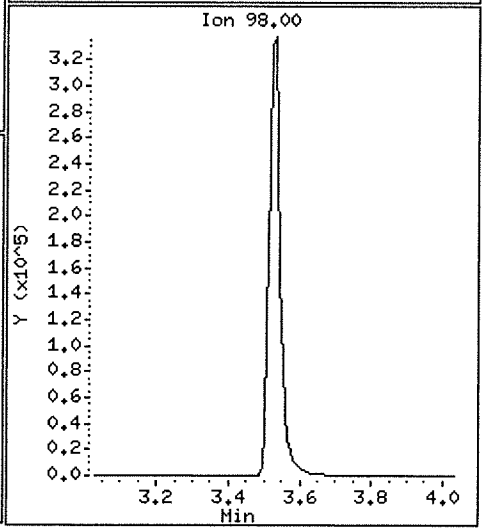












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210415.b\Y041526.D

Date : 16-APR-2021 05:44

Client ID: HS21040695-13

Instrument: voa6.i

Sample Info: HS21040695-13;HS21040695-13;;;

Purge Volume: 5.0

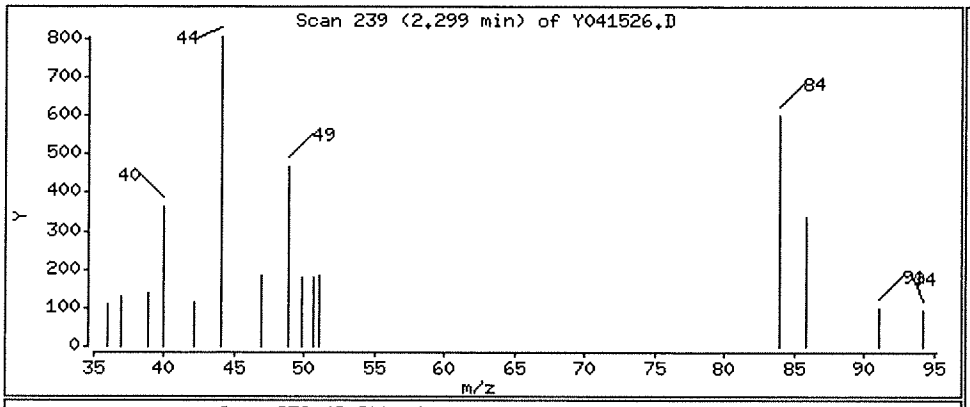
Operator: PC

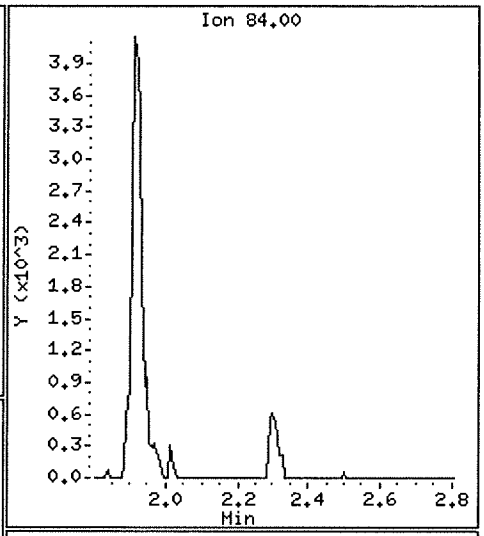
Column phase: DB624

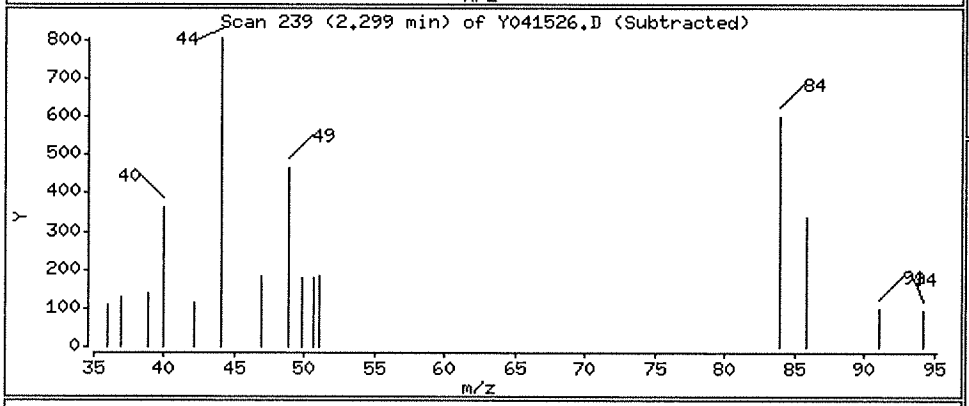
Column diameter: 0.18

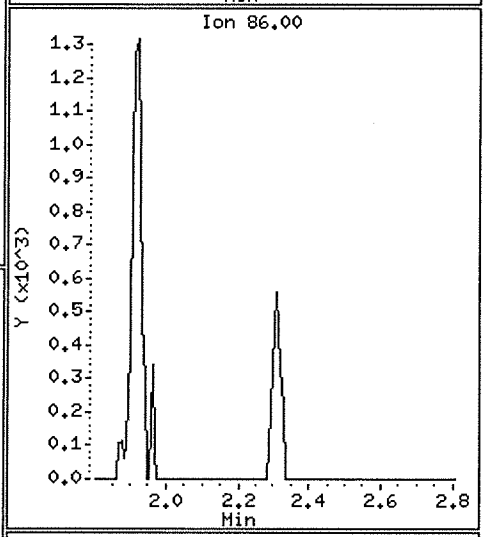
17 Methylene Chloride

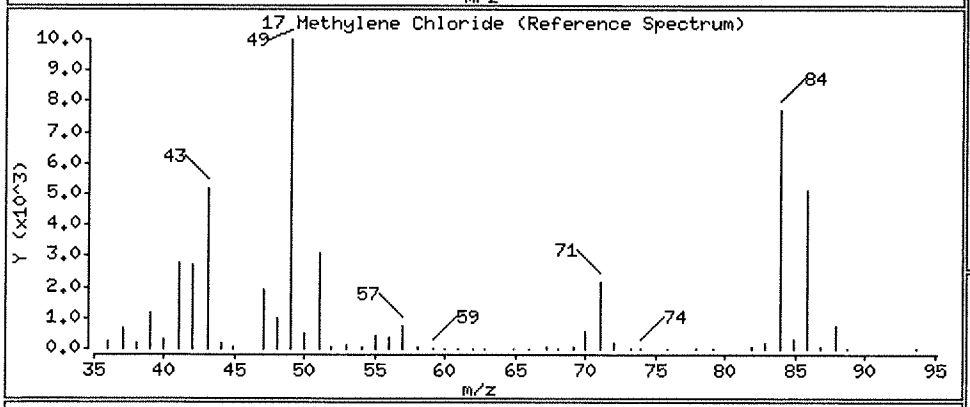
Concentration: 16.92 ug/l

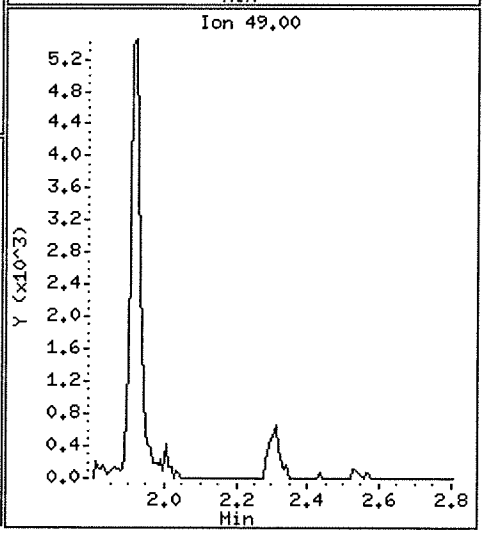


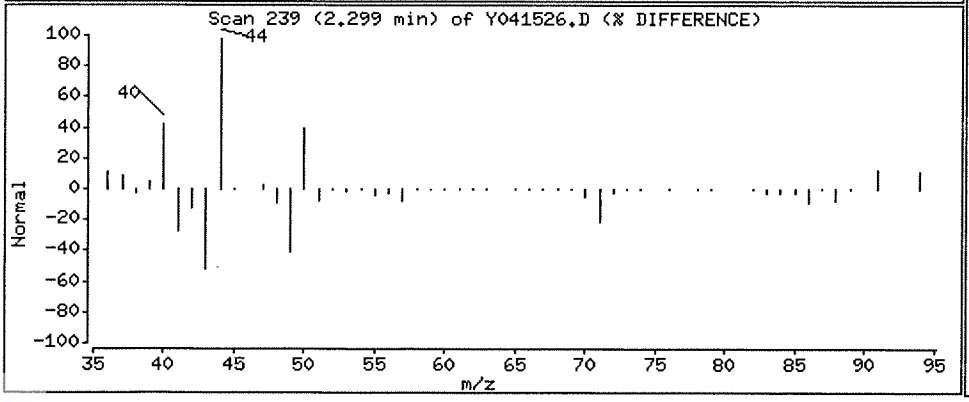












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210415.b\Y041526.D

Date : 16-APR-2021 05:44

Client ID: HS21040695-13

Instrument: voa6.i

Sample Info: HS21040695-13;HS21040695-13;;;

Purge Volume: 5.0

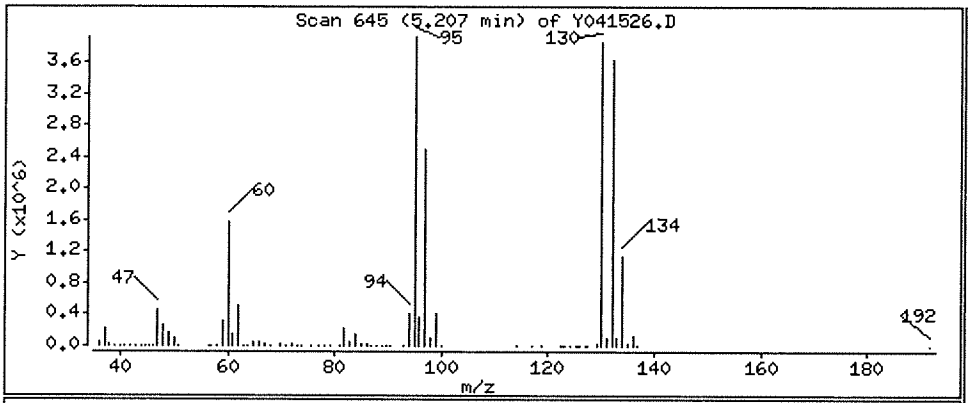
Operator: PC

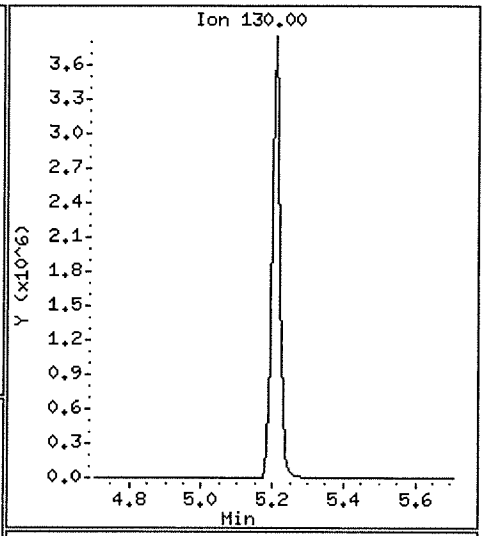
Column phase: DB624

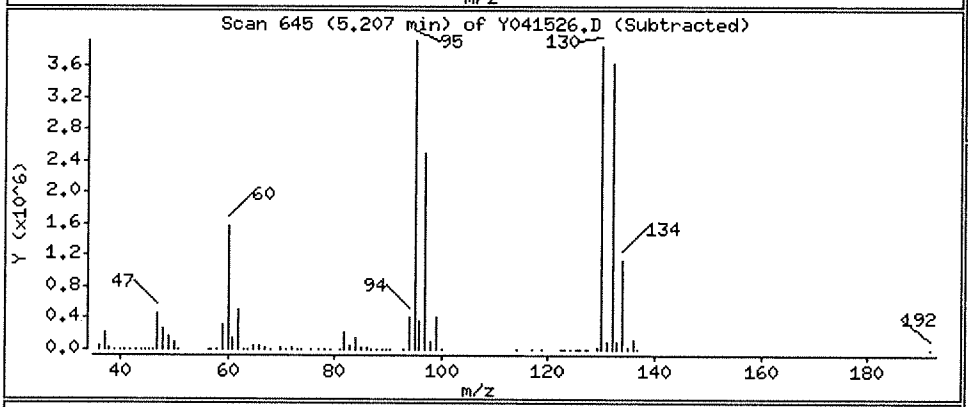
Column diameter: 0.18

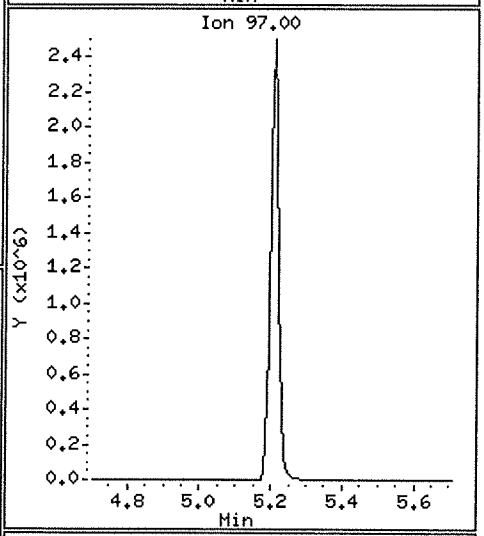
38 Trichloroethene

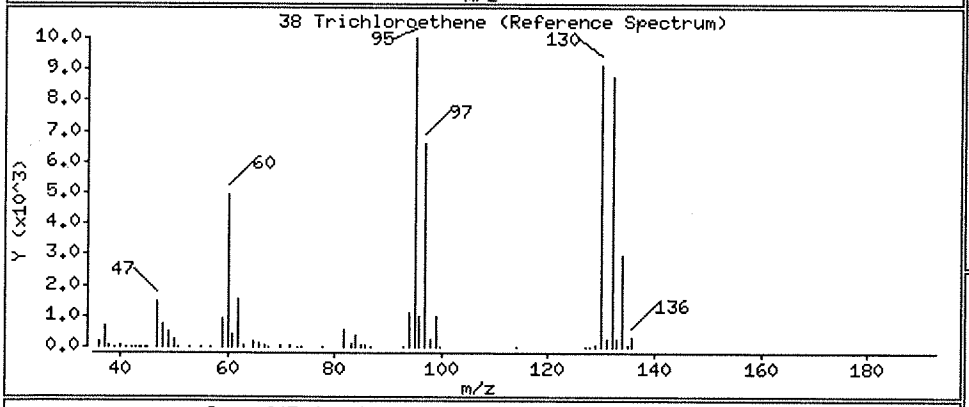
Concentration: 11882.69 ug/l

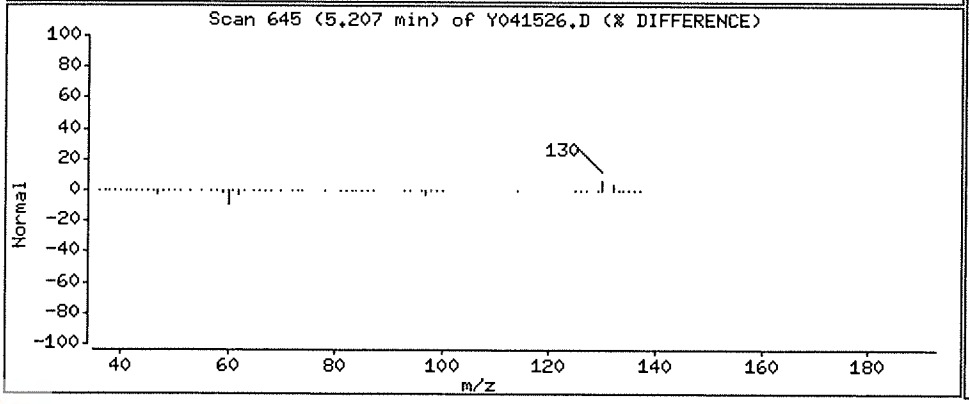


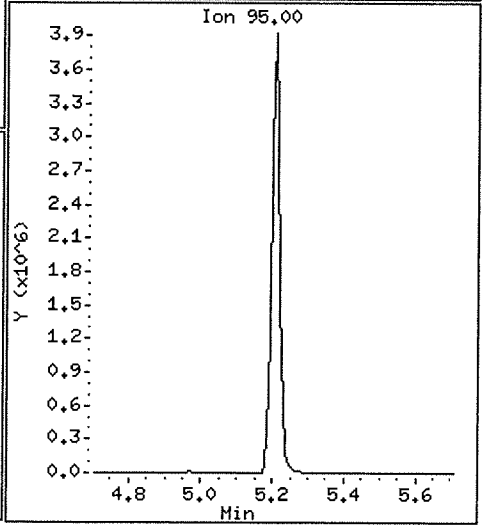












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210415.b\Y041526.D

Date : 16-APR-2021 05:44

Client ID: HS21040695-13

Instrument: voa6.i

Sample Info: HS21040695-13;HS21040695-13;;;

Purge Volume: 5.0

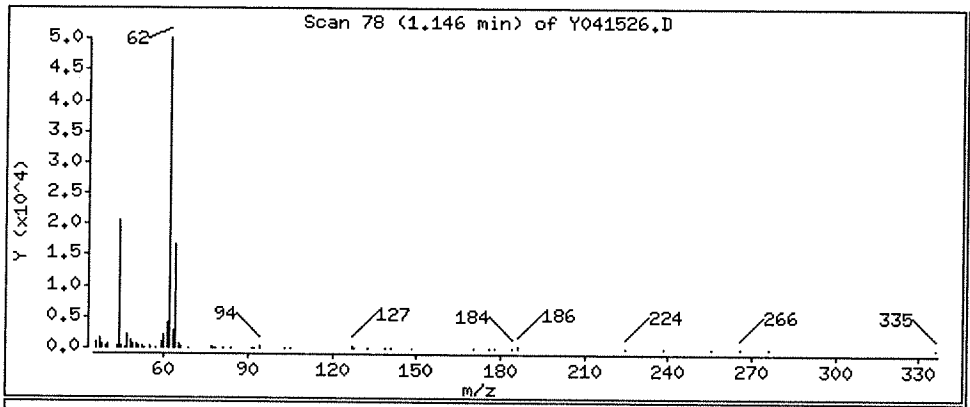
Operator: PC

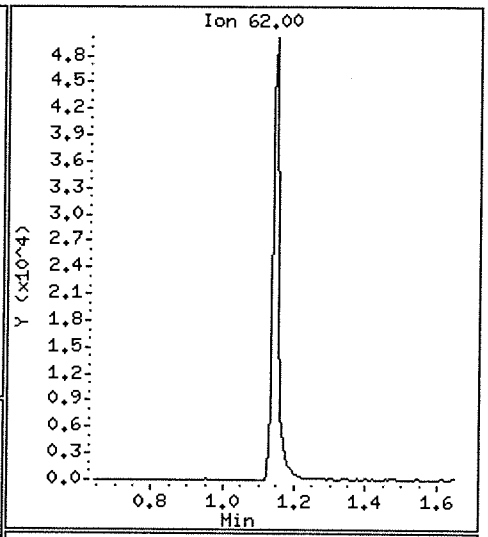
Column phase: DB624

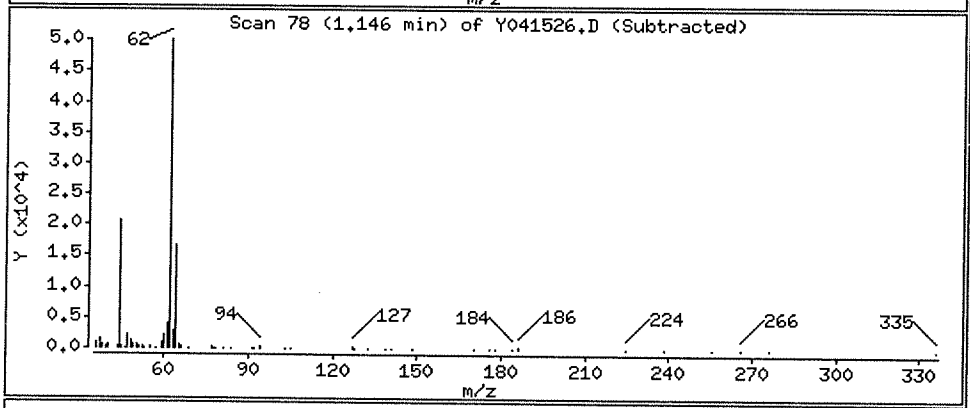
Column diameter: 0.18

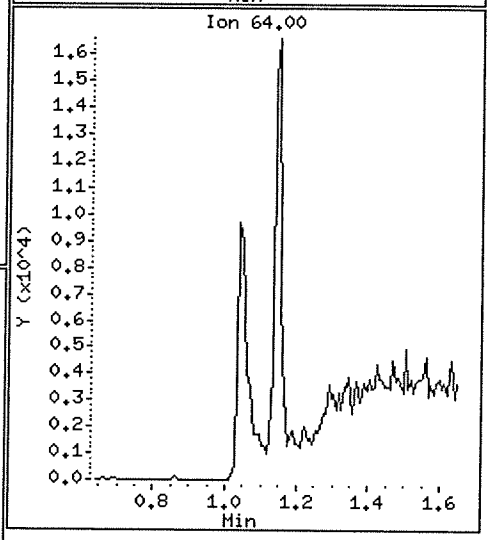
5 Vinyl Chloride

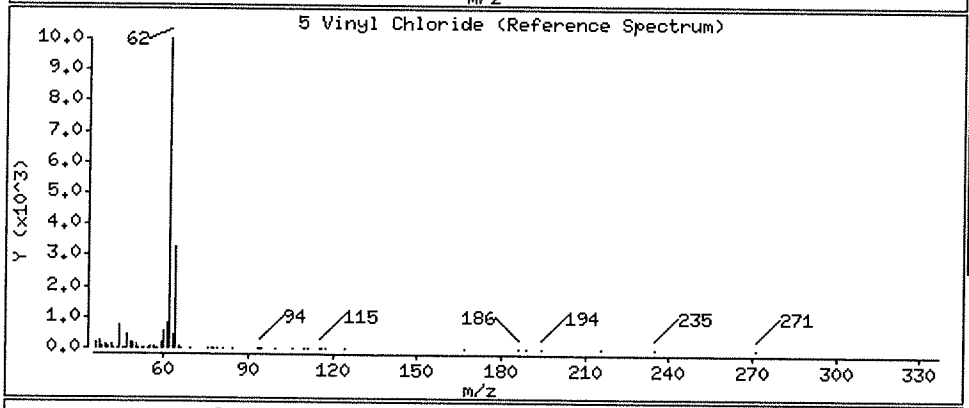
Concentration: 89.85 ug/l

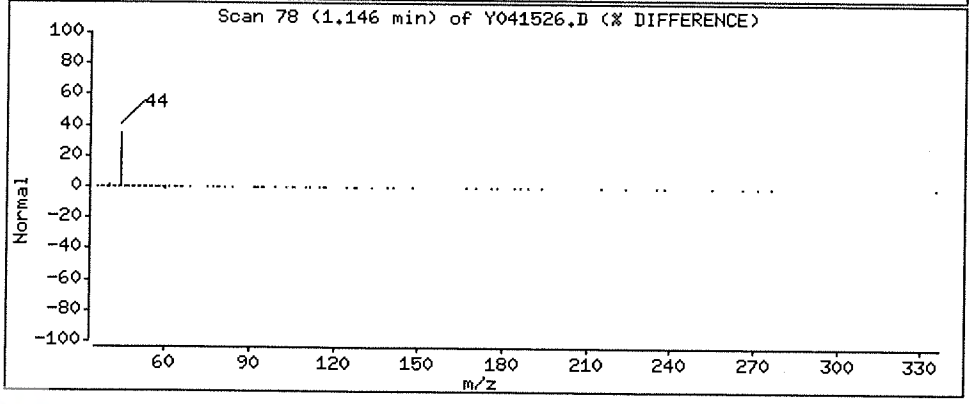












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210415.b\Y041527.D Page 1
Report Date: 04-May-2021 12:06

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X210415.b\Y041527.D
Lab Smp Id: HS21040695-13 Client Smp ID: HS21040695-13
Inj Date : 16-APR-2021 06:05
Operator : PC Inst ID: voa6.i
Smp Info : HS21040695-13;HS21040695-13;;;
Misc Info : HS18090001;WATER;0;100;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X210415.b\8260W.m
Meth Date : 04-May-2021 12:05 Qin.Xu Quant Type: ISTD
Cal Date : 02-APR-2021 13:20 Cal File: X040208.D
Als bottle: 54
Dil Factor: 100.00000
Integrator: HP RTE Compound Sublist: CBI_short1.sub
Target Version: 4.14
Processing Host: NAHSTW7066

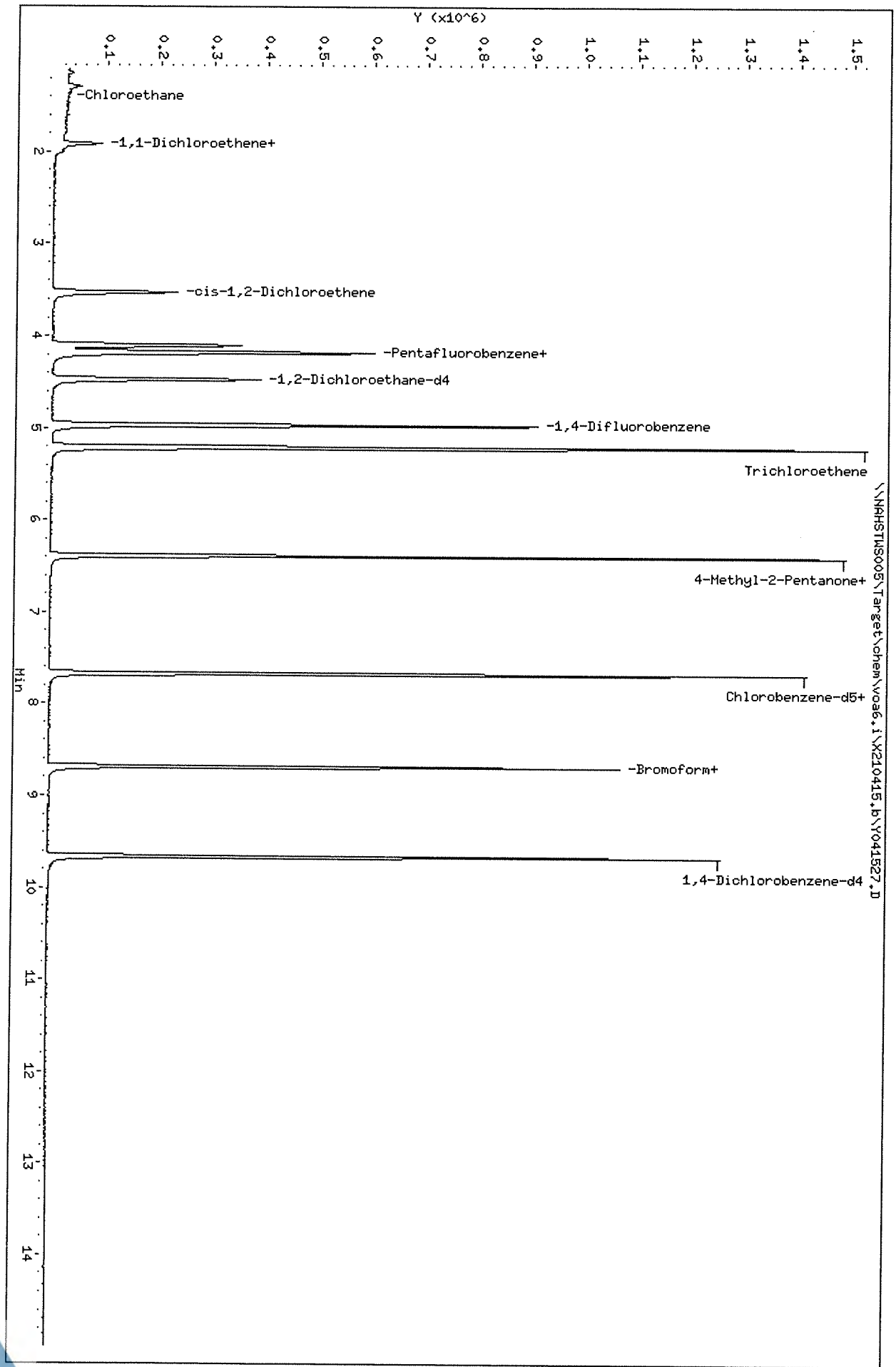
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	100.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	449319	50.0000	
* 36 1,4-Difluorobenzene	114	4.963	4.970	(1.000)	715630	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	626839	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	276668	50.0000	
$ 30 Dibromofluoromethane	113	4.096	4.103	(0.979)	246703	46.6656	46.66
$ 35 1,2-Dichloroethane-d4	65	4.469	4.469	(1.068)	311880	49.2140	49.21
$ 48 Toluene-d8	98	6.389	6.388	(0.833)	874285	54.1041	54.10
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	290081	48.3120	48.31
11 1,1-Dichloroethene	96	1.919	1.919	(0.459)	5948	0.92971	92.97(a)
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	114494	20.8454	2084.53
38 Trichloroethene	130	5.207	5.207	(1.049)	458032	93.4962	9349.61

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).



Data File: \\NAHSTWS005\Target\chem\voa6.i\X210415.b\Y041527.D
Date : 16-APR-2021 06:05
Client ID: HS21040695-13
Sample Info: HS21040695-13;HS21040695-13;;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\NAHSTWS005\Target\chem\voa6.i\X210415.b\Y041527.D

Date : 16-APR-2021 06:05

Client ID: HS21040695-13

Instrument: voa6.i

Sample Info: HS21040695-13;HS21040695-13;;;

Purge Volume: 5.0

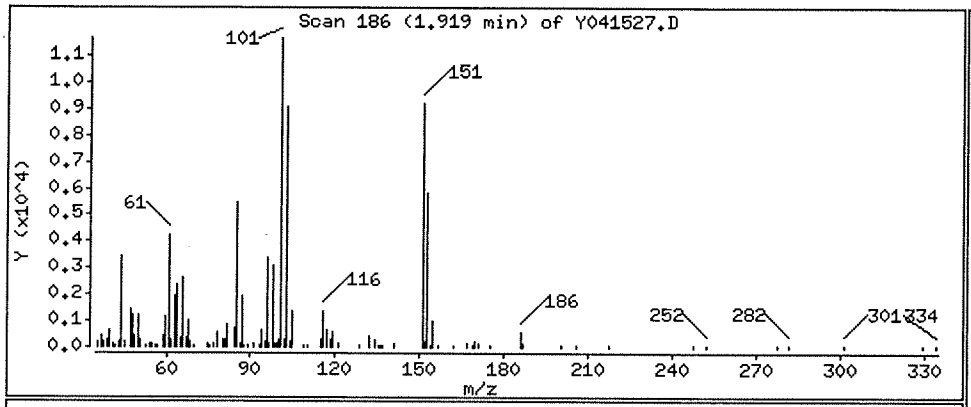
Operator: PC

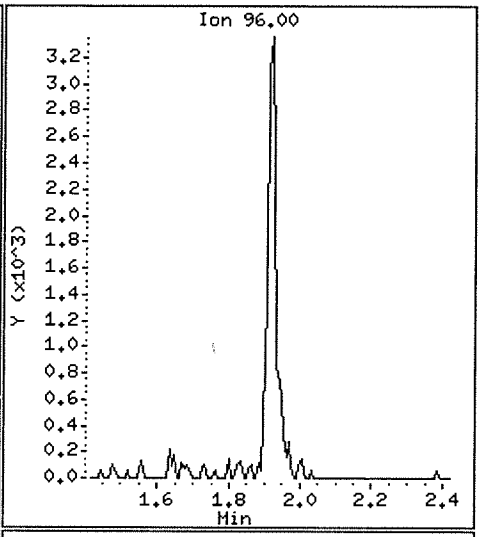
Column phase: DB624

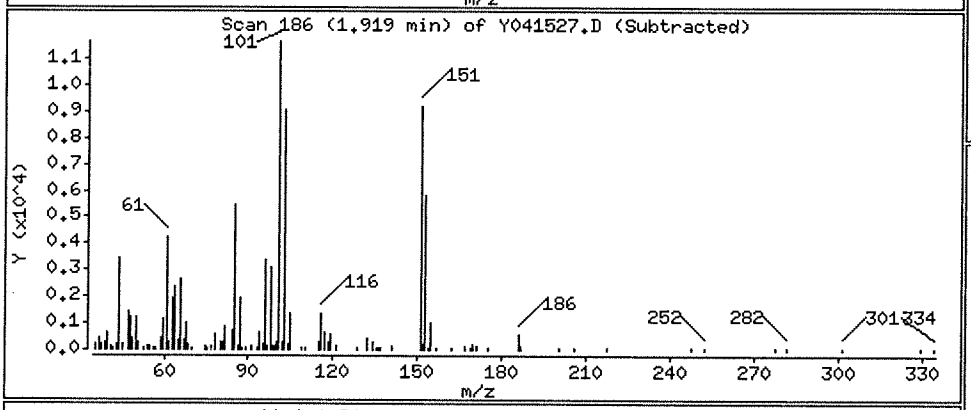
Column diameter: 0.18

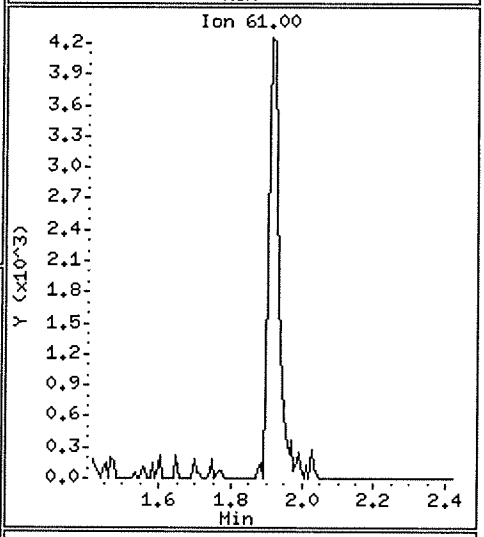
11 1,1-Dichloroethene

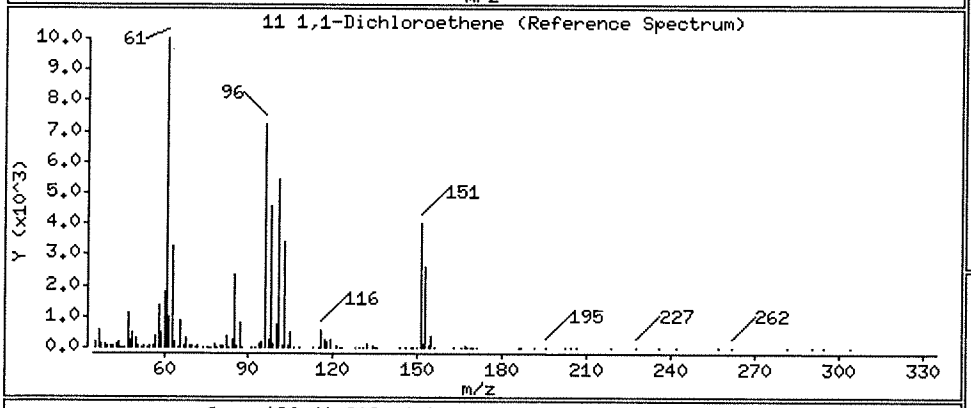
Concentration: 92.97 ug/l

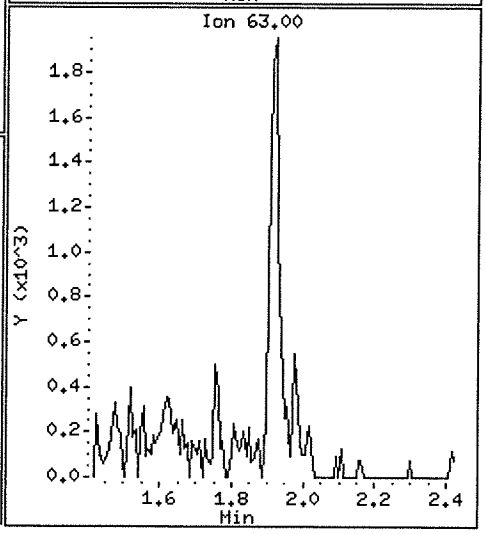


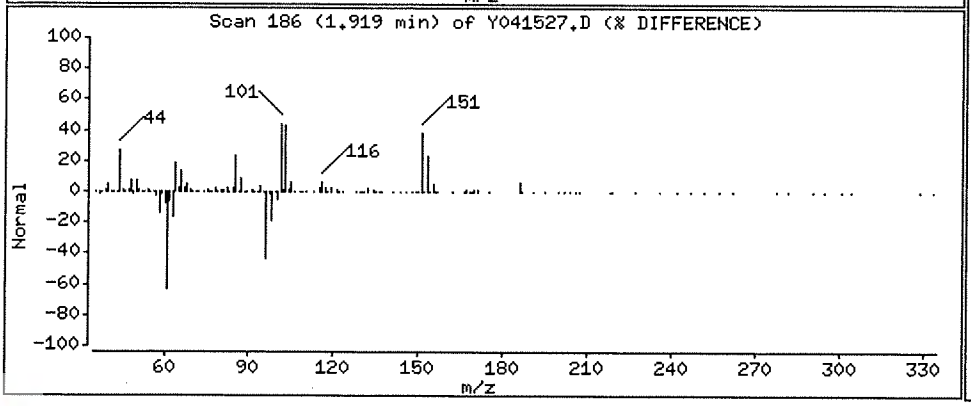












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210415.b\Y041527.D

Date : 16-APR-2021 06:05

Client ID: HS21040695-13

Instrument: voa6.i

Sample Info: HS21040695-13;HS21040695-13;;;

Purge Volume: 5.0

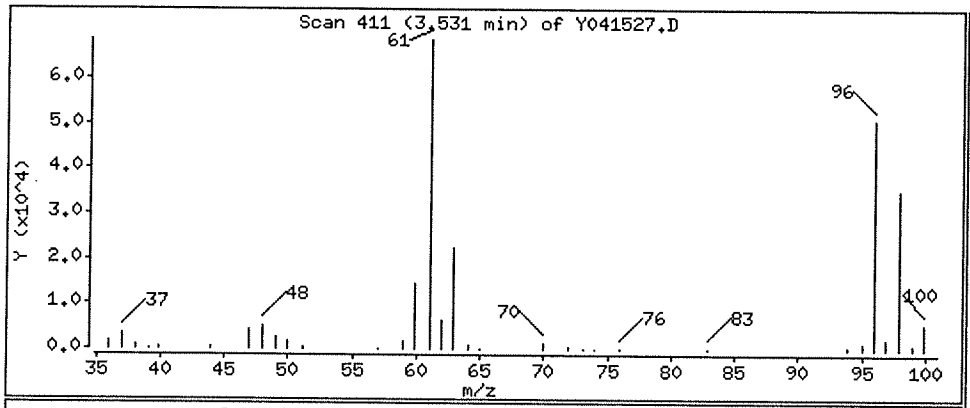
Operator: PC

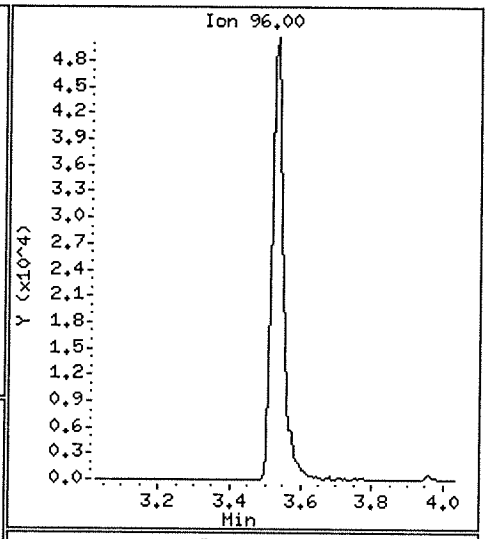
Column phase: DB624

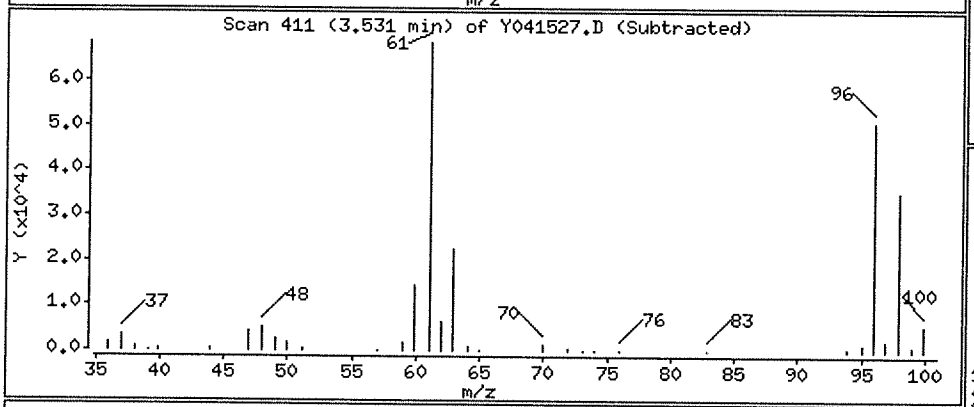
Column diameter: 0.18

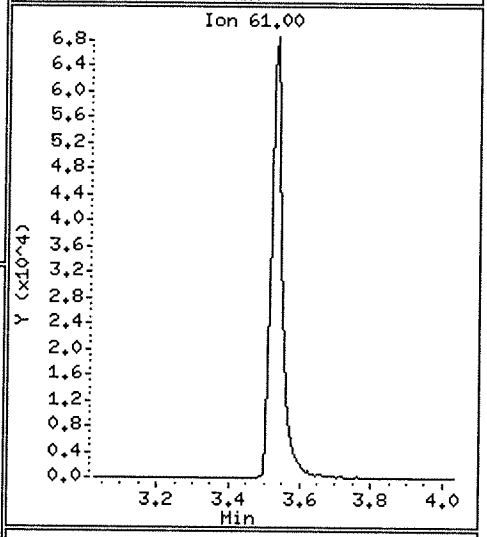
27 cis-1,2-Dichloroethene

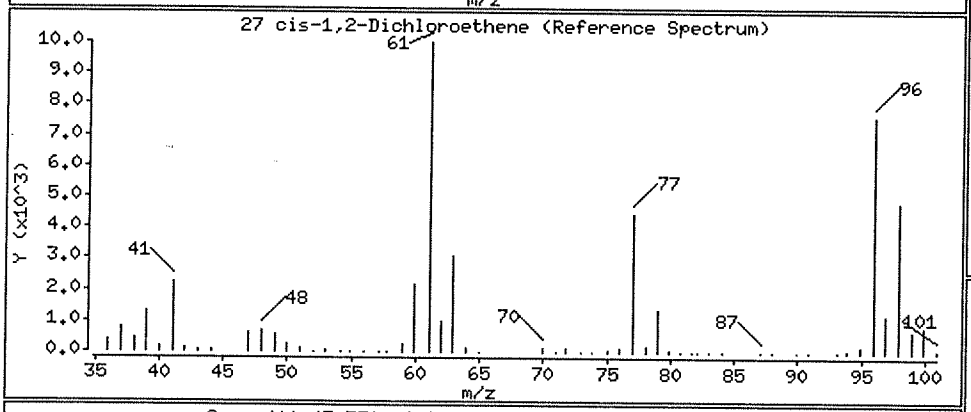
Concentration: 2084.53 ug/l

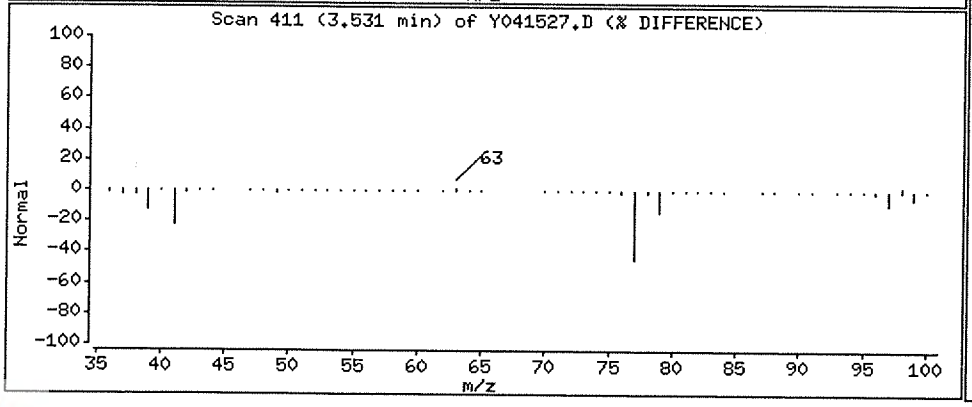


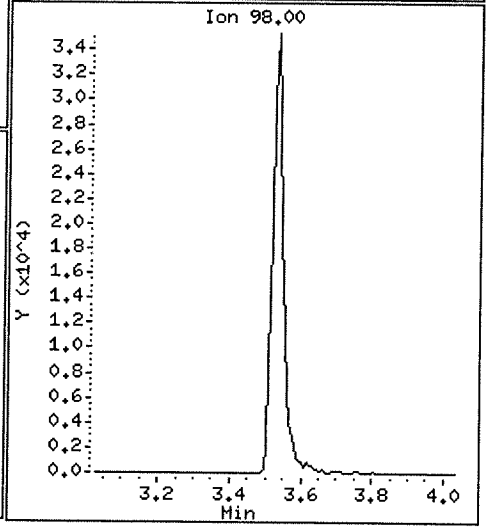












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210415.b\Y041527.D

Date : 16-APR-2021 06:05

Client ID: HS21040695-13

Instrument: voa6.i

Sample Info: HS21040695-13;HS21040695-13;;;

Purge Volume: 5.0

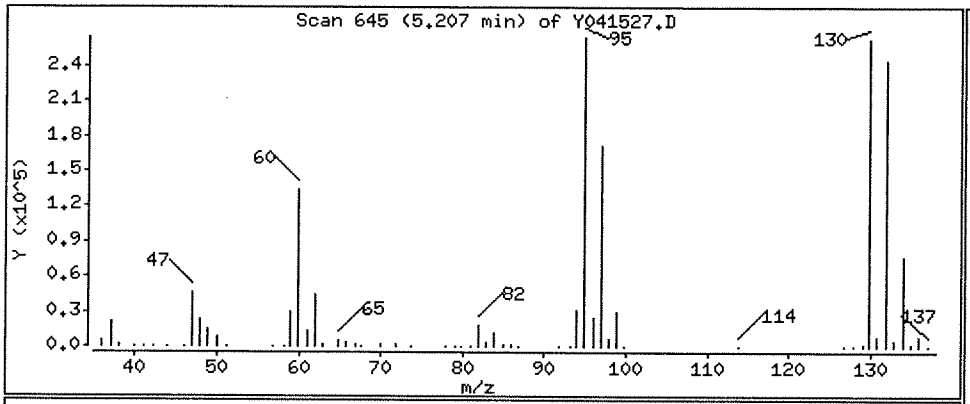
Operator: PC

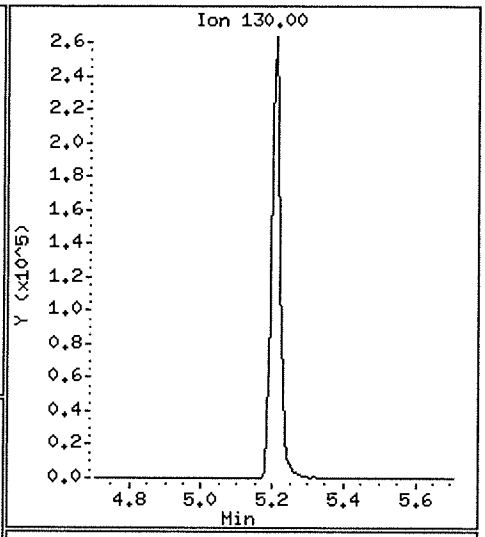
Column phase: DB624

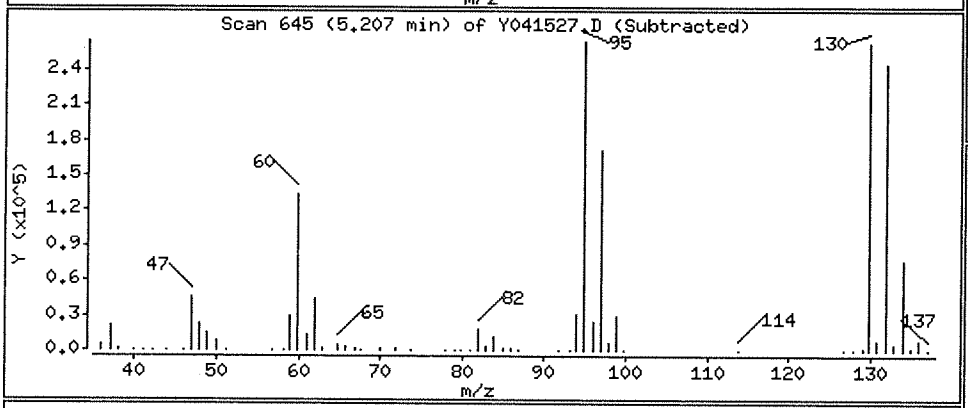
Column diameter: 0.18

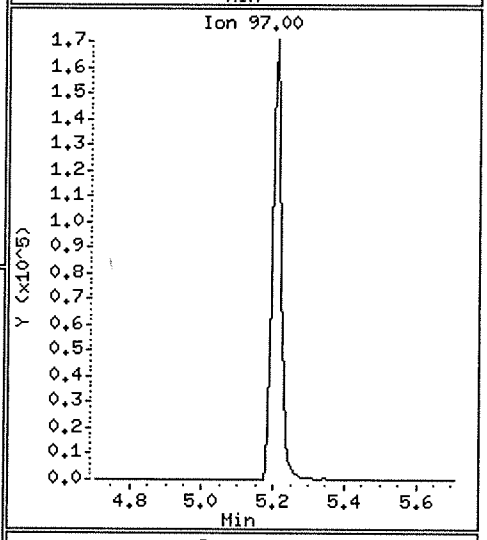
38 Trichloroethene

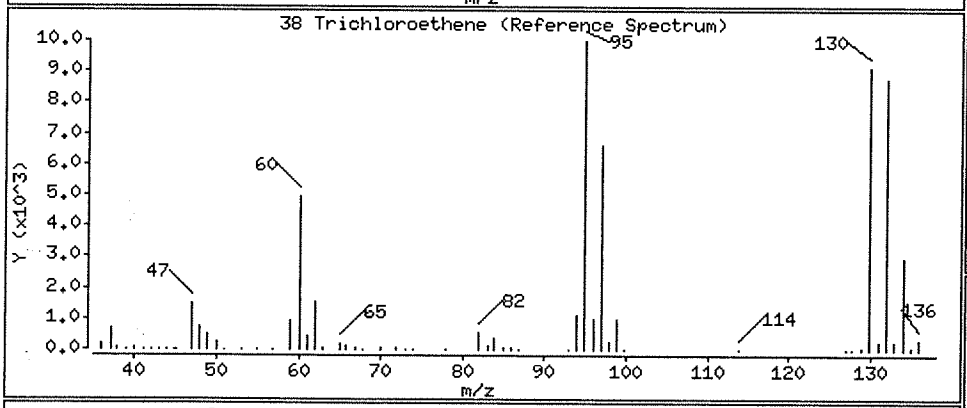
Concentration: 9349.61 ug/l

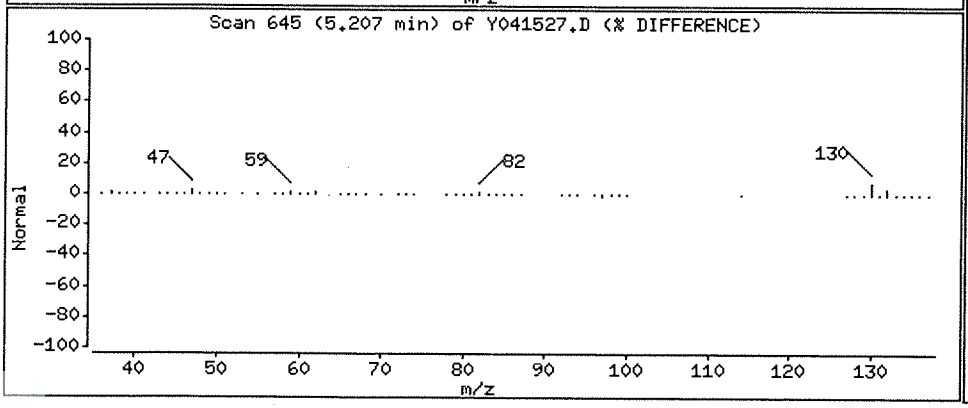


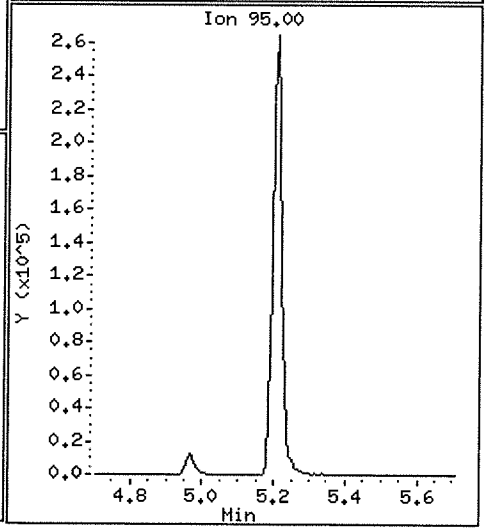












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210415.b\Y041528.D Page 1
Report Date: 04-May-2021 12:06

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X210415.b\Y041528.D
Lab Smp Id: HS21040695-14 Client Smp ID: HS21040695-14
Inj Date : 16-APR-2021 06:26
Operator : PC Inst ID: voa6.i
Smp Info : HS21040695-14;HS21040695-14;;;
Misc Info : HS18090001;WATER;0;25;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X210415.b\8260W.m
Meth Date : 04-May-2021 12:05 Qin.Xu Quant Type: ISTD
Cal Date : 02-APR-2021 13:20 Cal File: X040208.D
Als bottle: 55
Dil Factor: 25.00000
Integrator: HP RTE Compound Sublist: CBI_short1.sub
Target Version: 4.14
Processing Host: NAHSTW7066

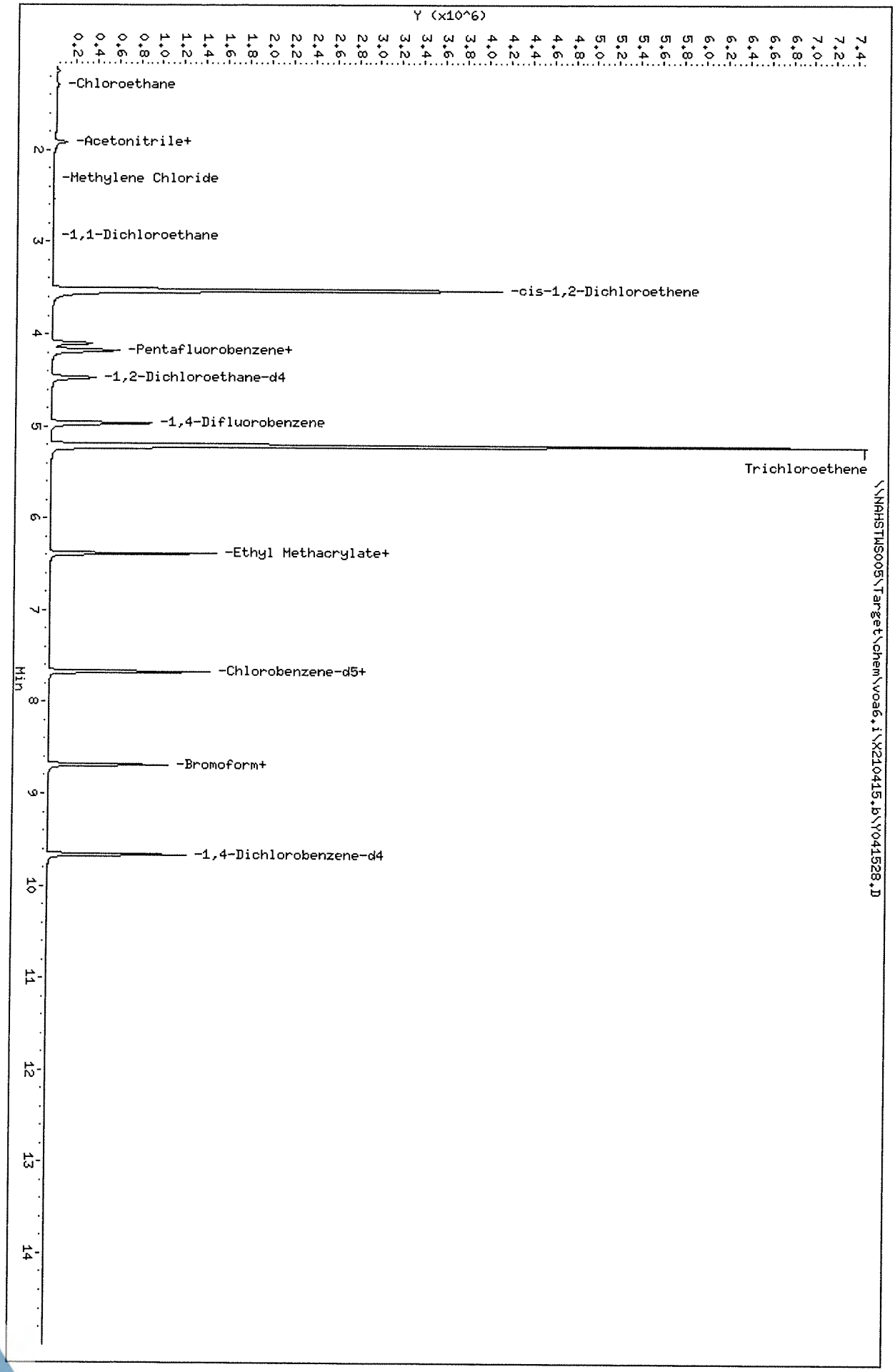
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	25.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	455063	50.0000	
* 36 1,4-Difluorobenzene	114	4.963	4.970	(1.000)	728315	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	645257	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	276595	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	249944	46.6817	46.68
$ 35 1,2-Dichloroethane-d4	65	4.476	4.469	(1.070)	321646	50.1056	50.10
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	879350	52.9068	52.90
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	298185	48.2465	48.24
11 1,1-Dichloroethene	96	1.919	1.919	(0.459)	19265	2.97323	74.33(a)
27 cis-1,2-Dichloroethene	96	3.523	3.530	(0.842)	1999368	359.420	8985.50(A)
17 Methylene Chloride	84	2.313	2.306	(0.553)	1199	1.71854	42.96(a)
38 Trichloroethene	130	5.206	5.207	(1.049)	2164860	434.207	10855.18(A)
5 Vinyl Chloride	62	1.145	1.145	(0.274)	21358	3.13062	78.26

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).
A - Target compound detected but, quantitated amount exceeded maximum amount.



Data File: \\NAHSTWS005\Target\chem\voa6,i\X210415,b\Y041528,D
Date : 16-APR-2021 06:26
Client ID: HS21040695-14
Sample Info: HS21040695-14;HS21040695-14;;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6,i
Operator: PC
Column diameter: 0.18

Data File: \\NAHSTWS005\Target\chem\voa6.i\X210415.b\Y041528.D

Date : 16-APR-2021 06:26

Client ID: HS21040695-14

Instrument: voa6.i

Sample Info: HS21040695-14;HS21040695-14;;;

Purge Volume: 5.0

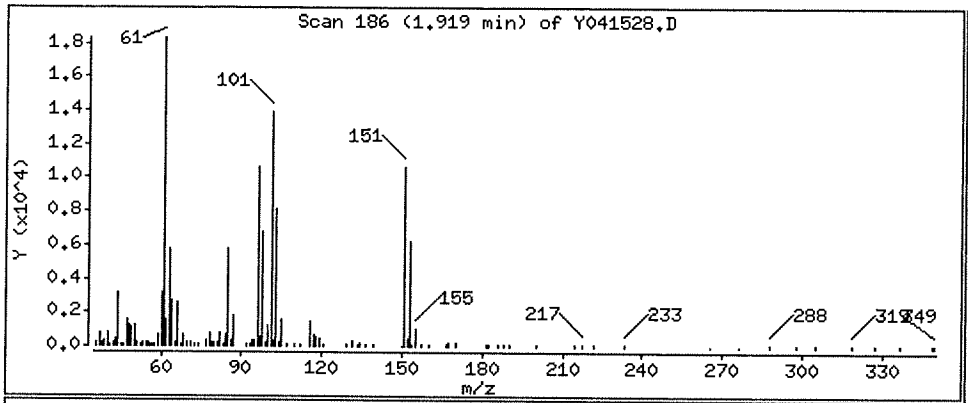
Operator: PC

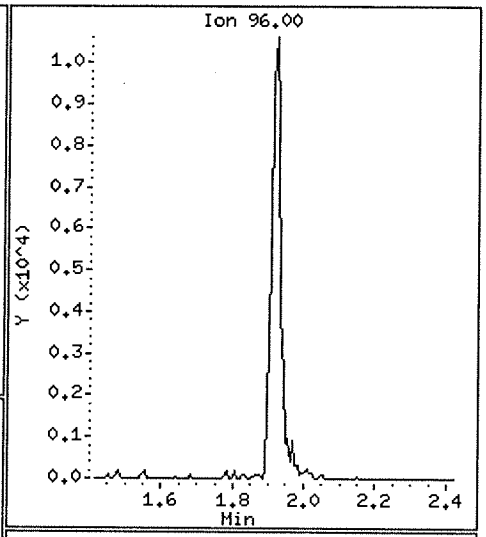
Column phase: DB624

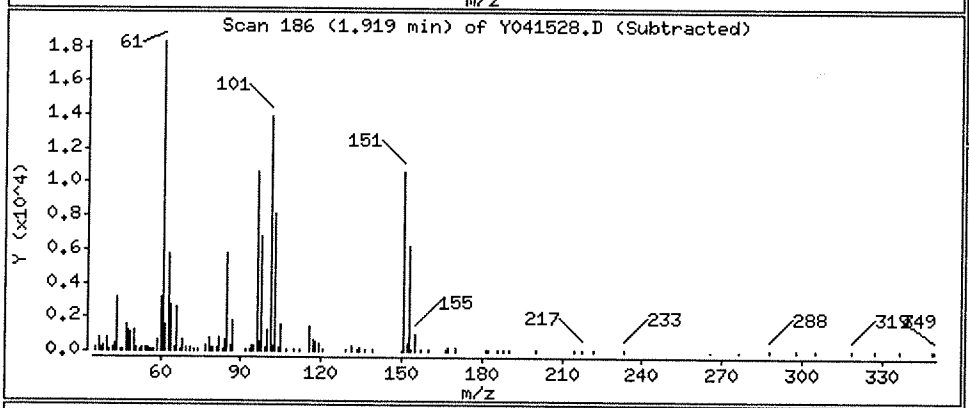
Column diameter: 0.18

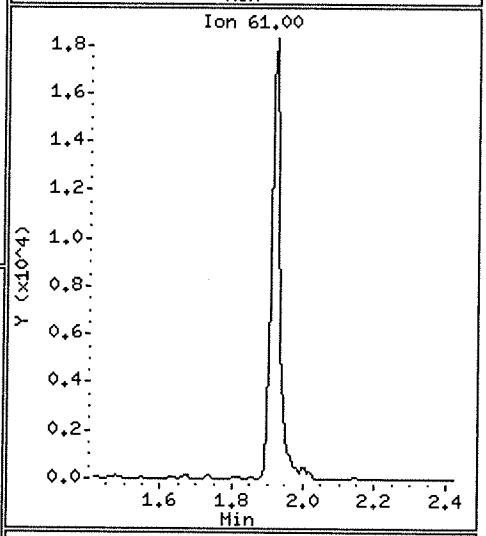
11 1,1-Dichloroethene

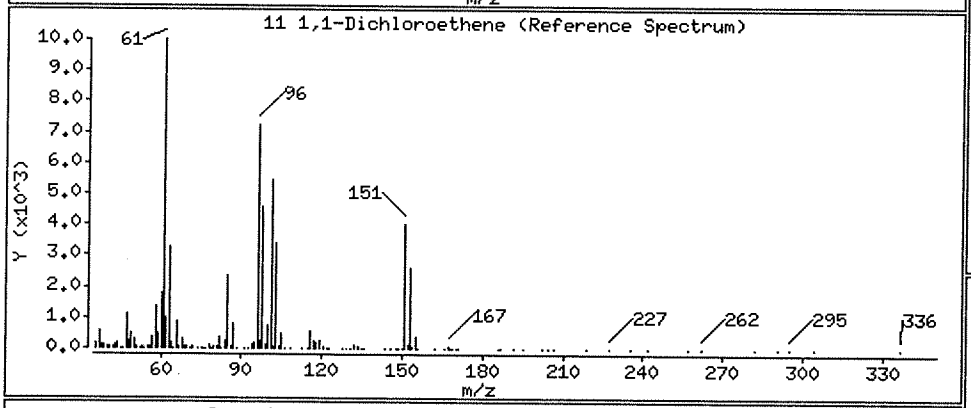
Concentration: 74.33 ug/l

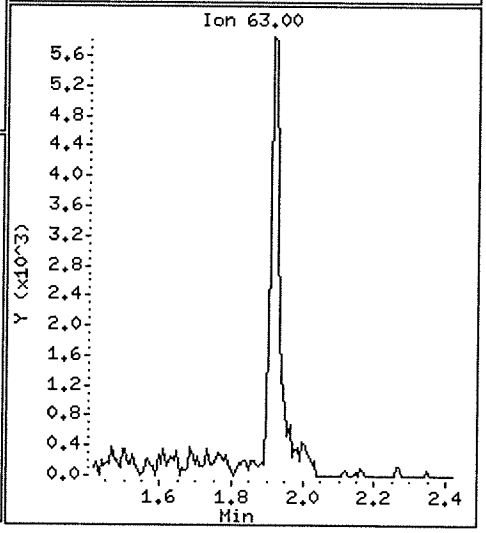


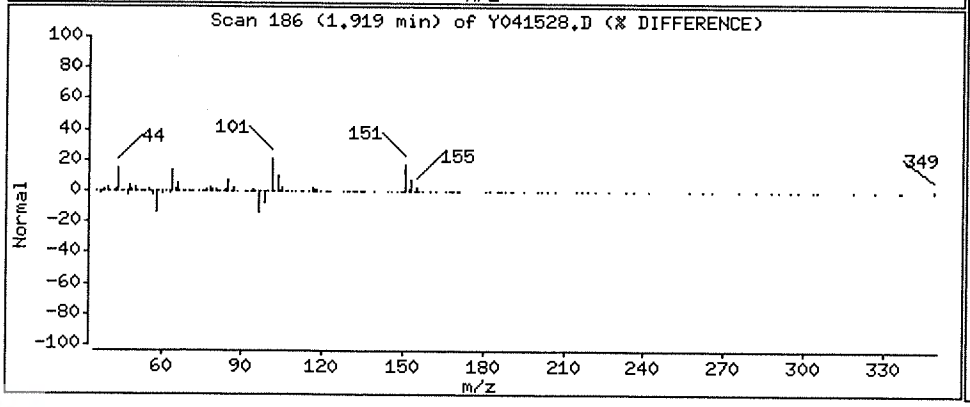












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210415.b\Y041528.D

Date : 16-APR-2021 06:26

Client ID: HS21040695-14

Instrument: voa6.i

Sample Info: HS21040695-14;HS21040695-14;;;

Purge Volume: 5.0

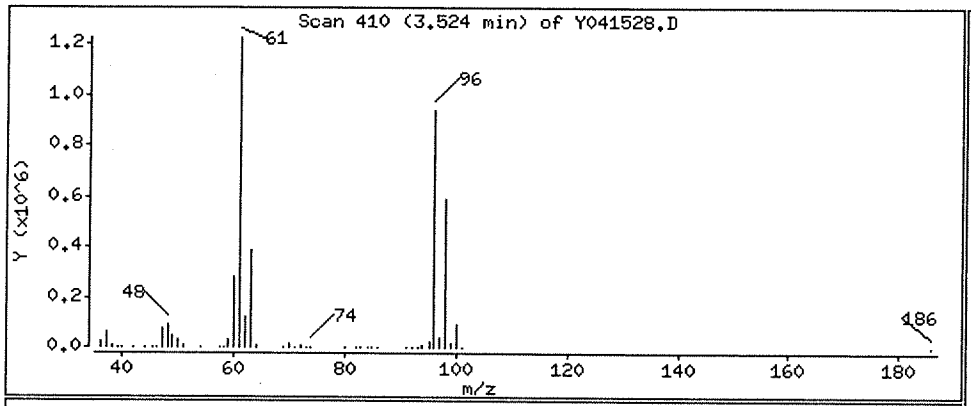
Operator: PC

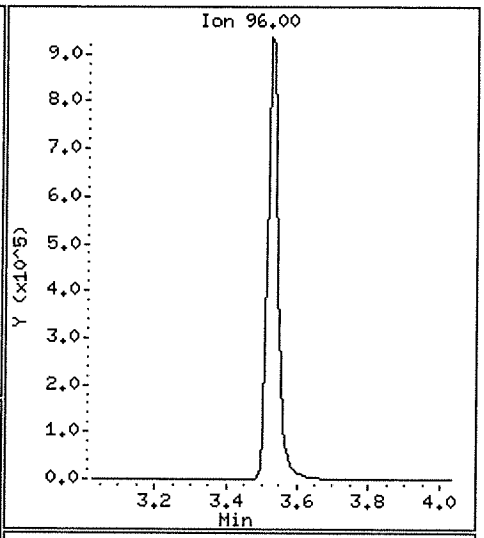
Column phase: DB624

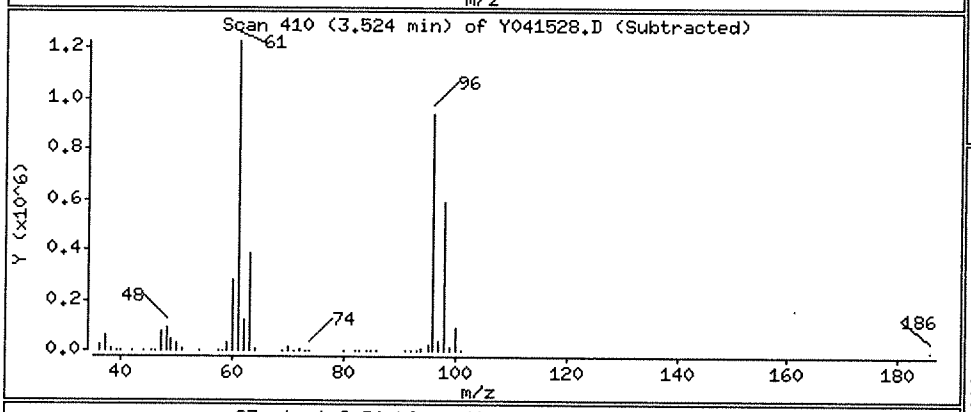
Column diameter: 0.18

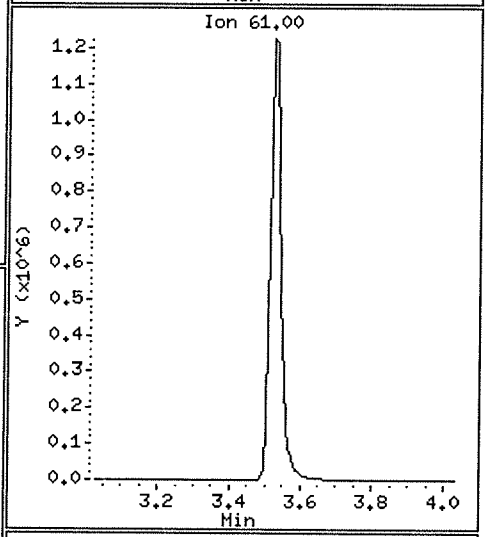
27 cis-1,2-Dichloroethene

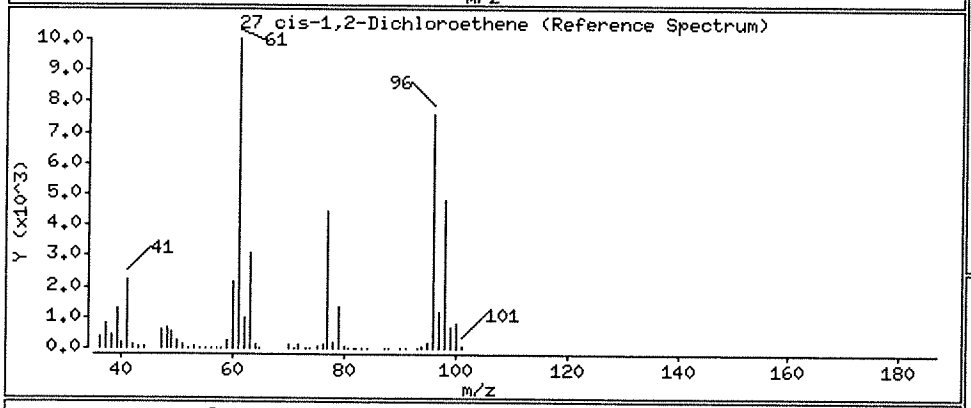
Concentration: 8985.50 ug/l

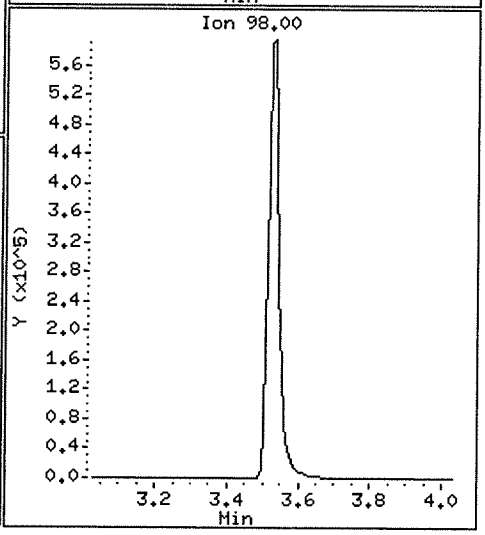


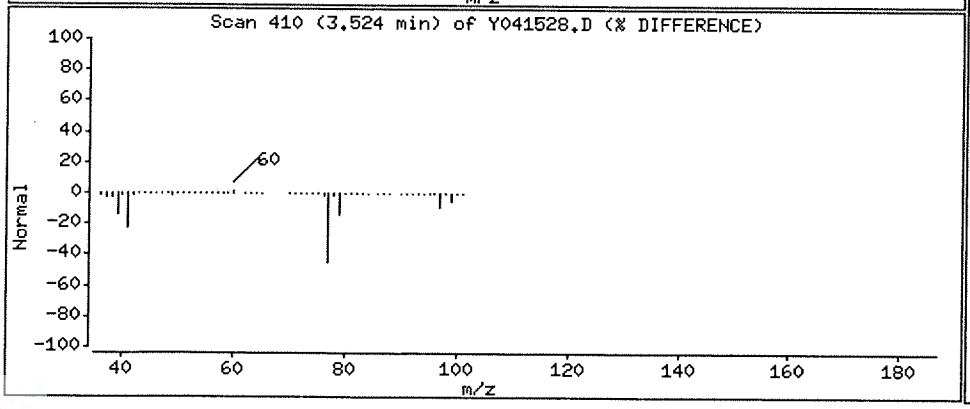












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210415.b\Y041528.D

Date : 16-APR-2021 06:26

Client ID: HS21040695-14

Instrument: voa6.i

Sample Info: HS21040695-14;HS21040695-14;;;

Purge Volume: 5.0

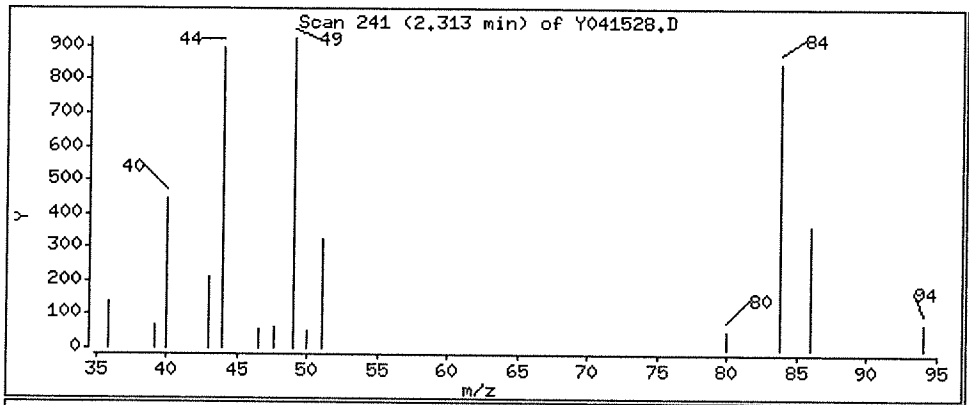
Operator: PC

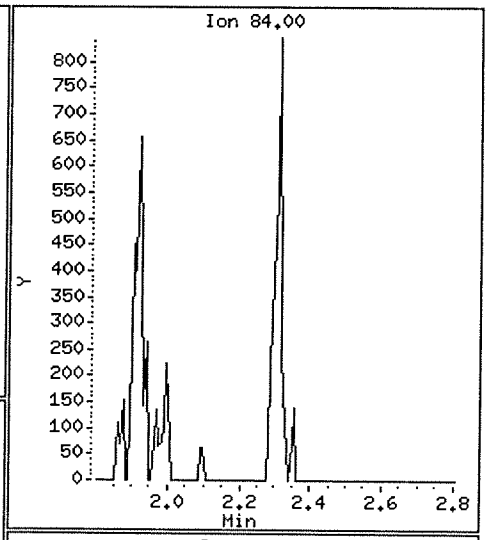
Column phase: DB624

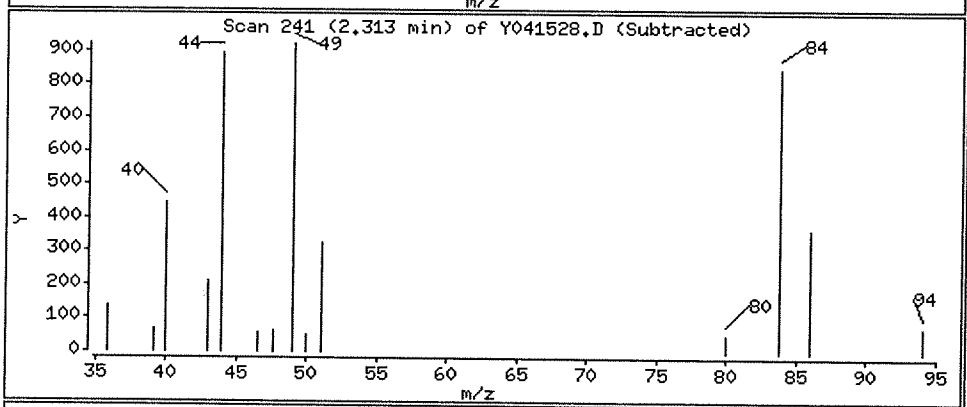
Column diameter: 0.18

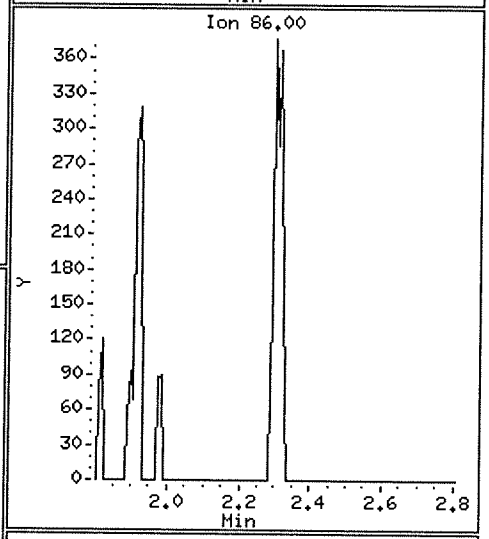
17 Methylene Chloride

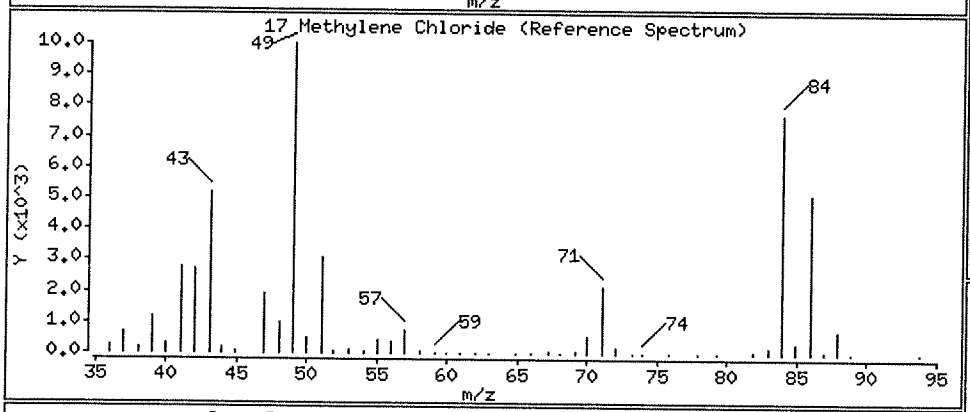
Concentration: 42.96 ug/l

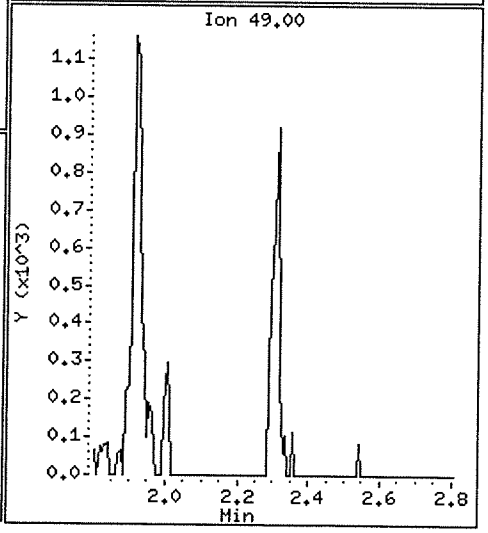


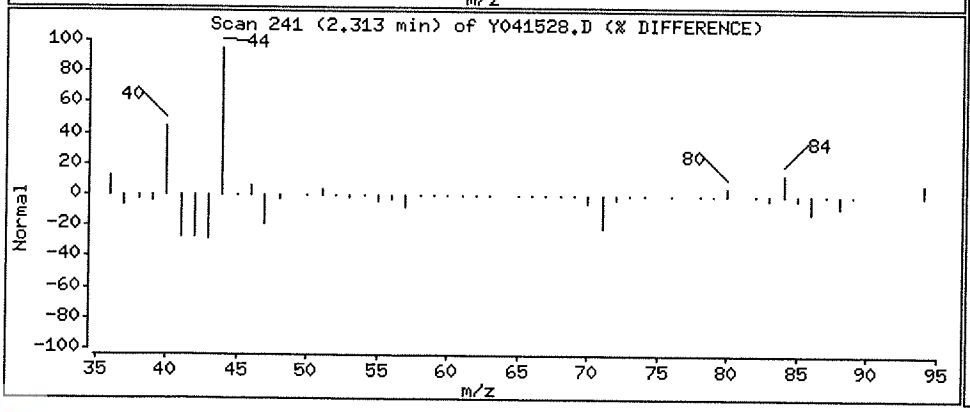












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210415.b\Y041528.D

Date : 16-APR-2021 06:26

Client ID: HS21040695-14

Instrument: voa6.i

Sample Info: HS21040695-14;HS21040695-14;;;

Purge Volume: 5.0

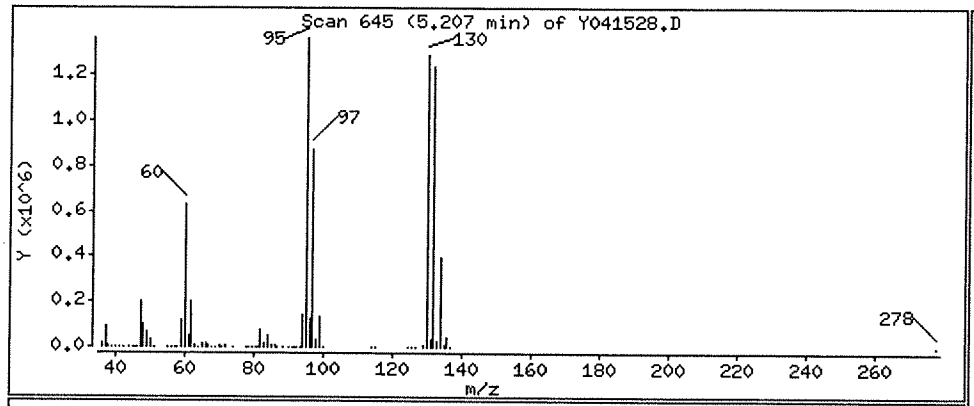
Operator: PC

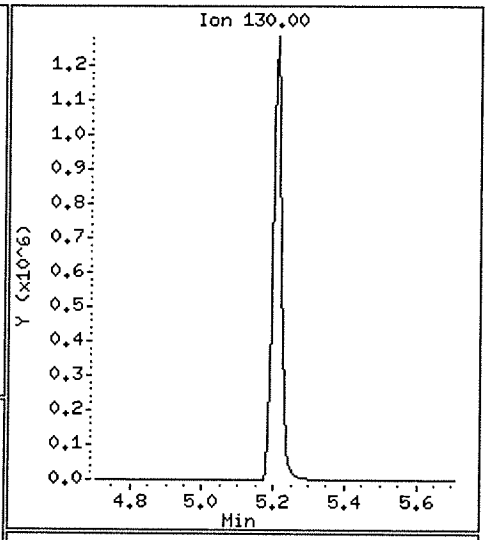
Column phase: DB624

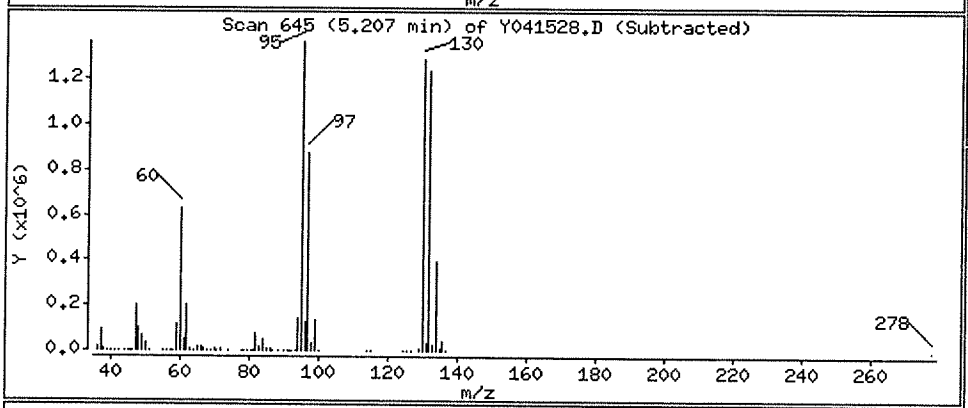
Column diameter: 0.18

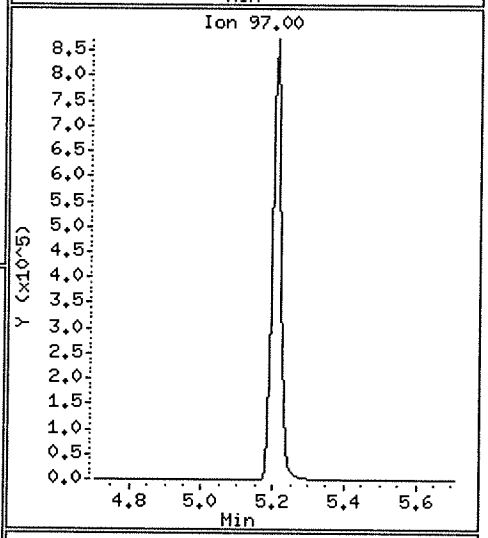
38 Trichloroethene

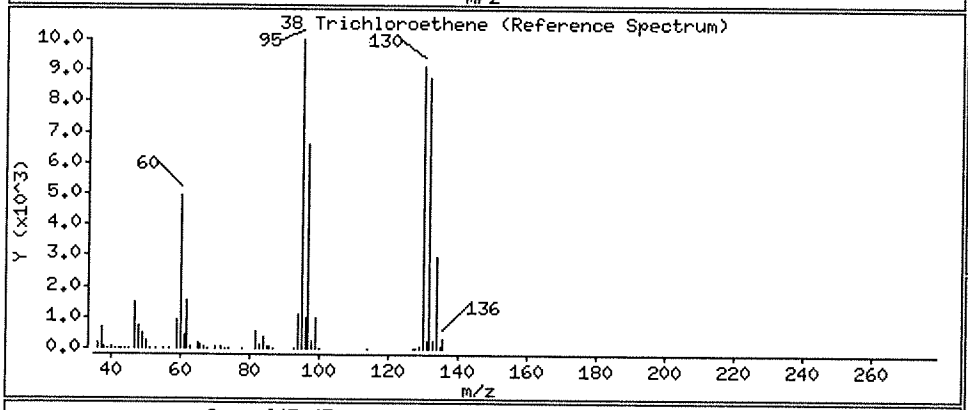
Concentration: 10855.18 ug/l

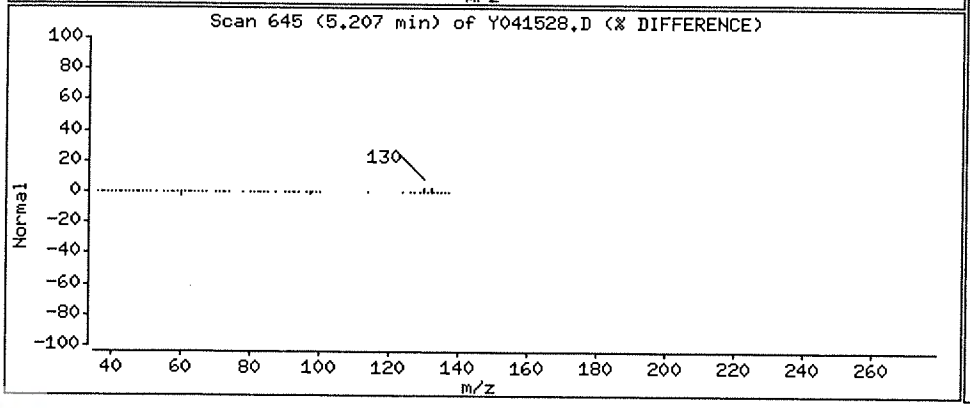


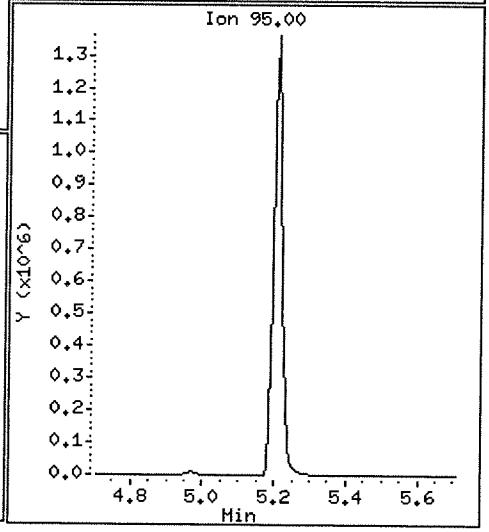












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210415.b\Y041528.D

Date : 16-APR-2021 06:26

Client ID: HS21040695-14

Instrument: voa6.i

Sample Info: HS21040695-14;HS21040695-14;;;

Purge Volume: 5.0

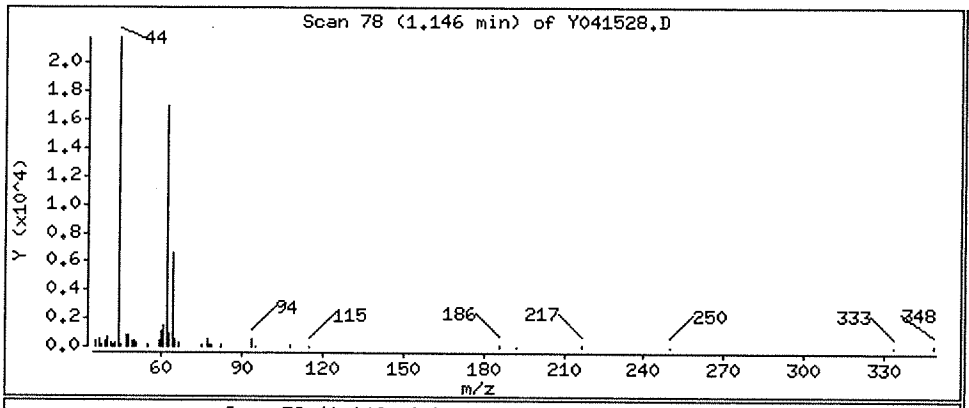
Operator: PC

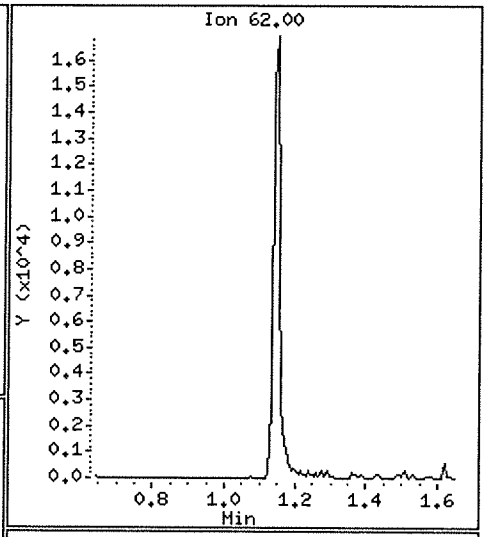
Column phase: DB624

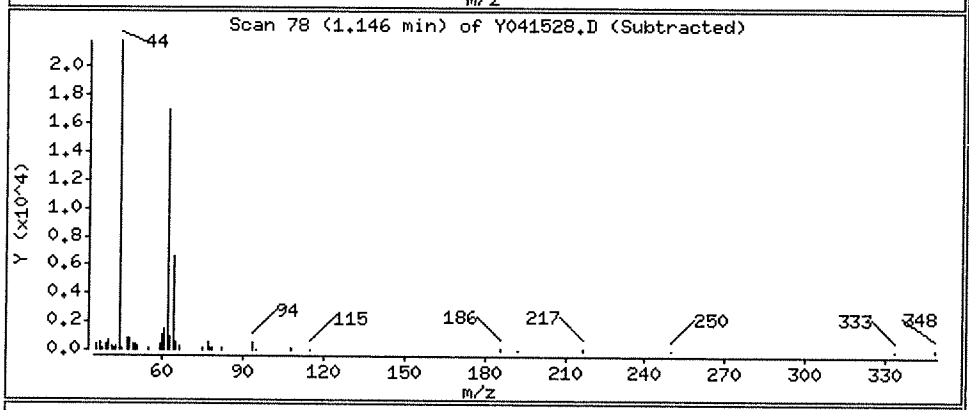
Column diameter: 0.18

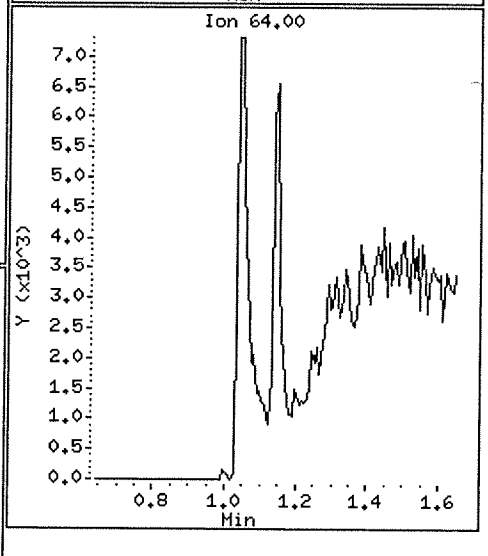
5 Vinyl Chloride

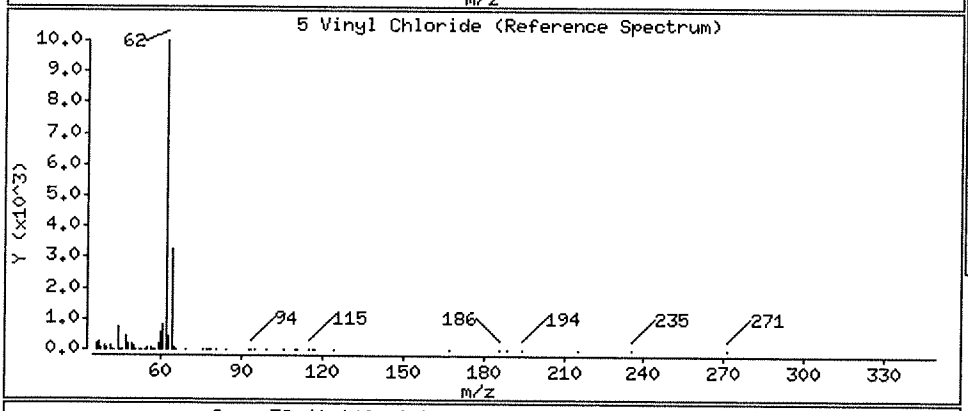
Concentration: 78.26 ug/l

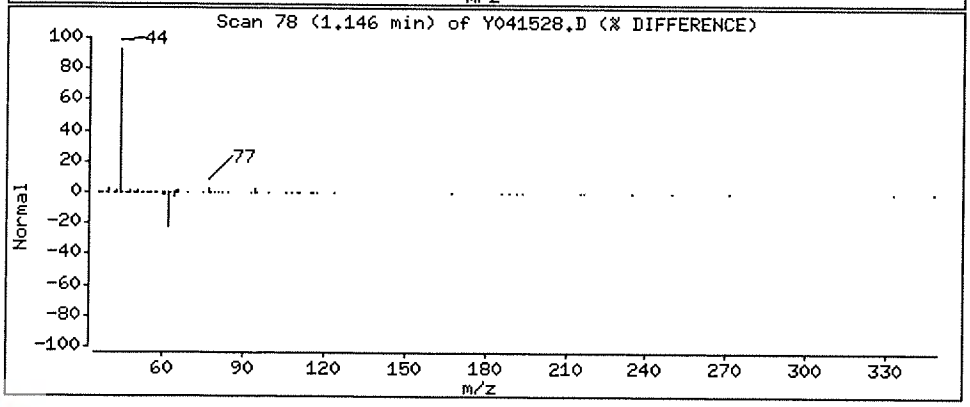












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210415.b\Y041529.D Page 1
Report Date: 04-May-2021 12:06

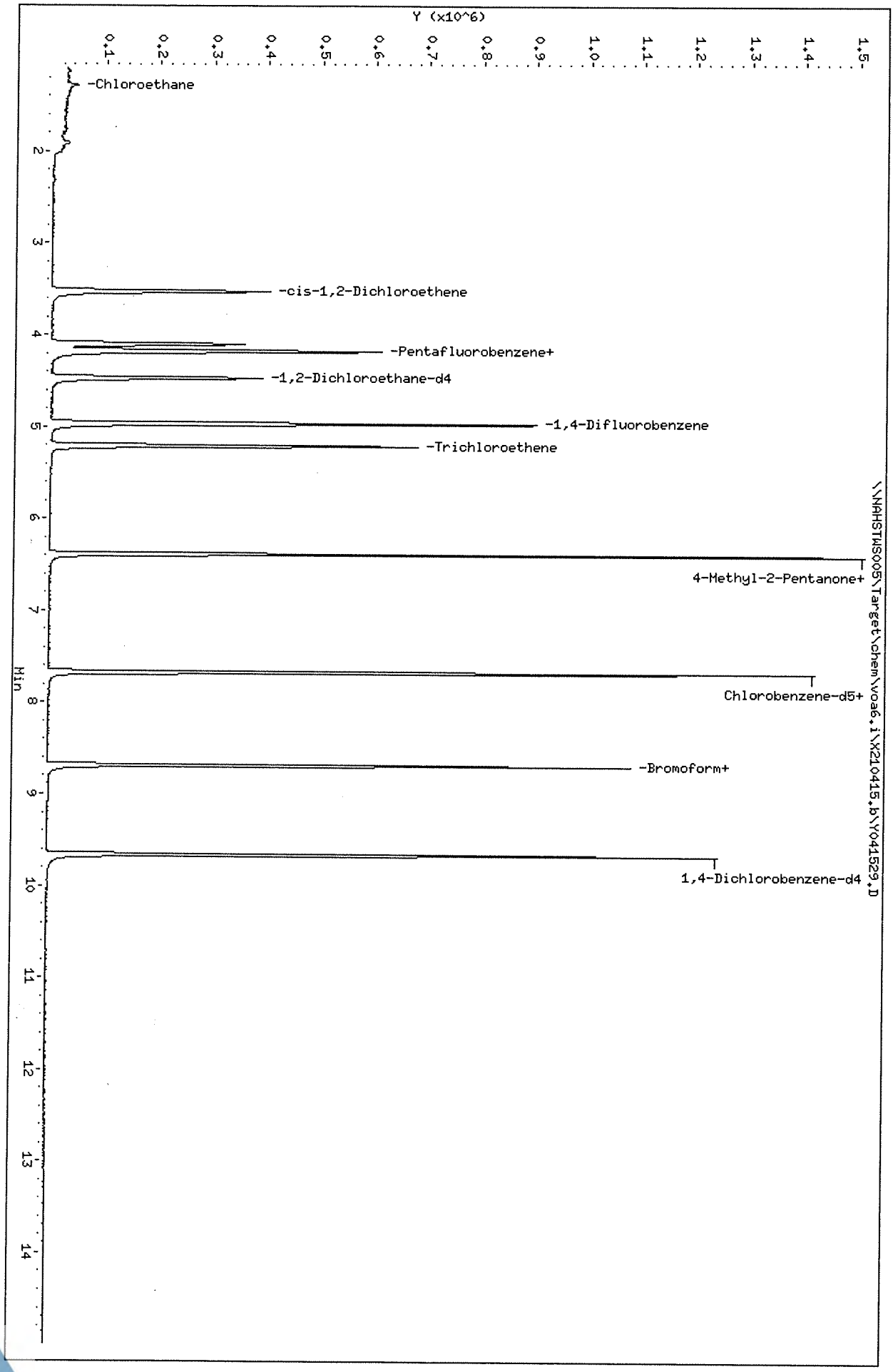
ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X210415.b\Y041529.D
Lab Smp Id: HS21040695-14 Client Smp ID: HS21040695-14
Inj Date : 16-APR-2021 06:47
Operator : PC Inst ID: voa6.i
Smp Info : HS21040695-14;HS21040695-14;;;
Misc Info : HS18090001;WATER;0;250;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X210415.b\8260W.m
Meth Date : 04-May-2021 12:05 Qin.Xu Quant Type: ISTD
Cal Date : 02-APR-2021 13:20 Cal File: X040208.D
Als bottle: 56
Dil Factor: 250.00000
Integrator: HP RTE Compound Sublist: CBI_short1.sub
Target Version: 4.14
Processing Host: NAHSTW7066

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	250.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	451469	50.0000	
* 36 1,4-Difluorobenzene	114	4.963	4.970	(1.000)	727679	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	619342	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	271425	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	242536	45.6683	45.66
$ 35 1,2-Dichloroethane-d4	65	4.469	4.469	(1.068)	309187	48.5632	48.56
$ 48 Toluene-d8	98	6.389	6.388	(0.833)	873201	54.6710	54.67
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	287098	48.3912	48.39
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	198085	35.8926	8973.15
38 Trichloroethene	130	5.207	5.207	(1.049)	206956	41.5456	10386.39



Data File: \\NAHSTWS005\Target\chem\voa6.i\X210415.b\Y041529.D
Date : 16-APR-2021 06:47
Client ID: HS21040695-14
Sample Info: HS21040695-14;HS21040695-14;;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\NAHSTWS005\Target\chem\voa6.i\X210415.b\Y041529.D

Date : 16-APR-2021 06:47

Client ID: HS21040695-14

Instrument: voa6.i

Sample Info: HS21040695-14;HS21040695-14;;;

Purge Volume: 5.0

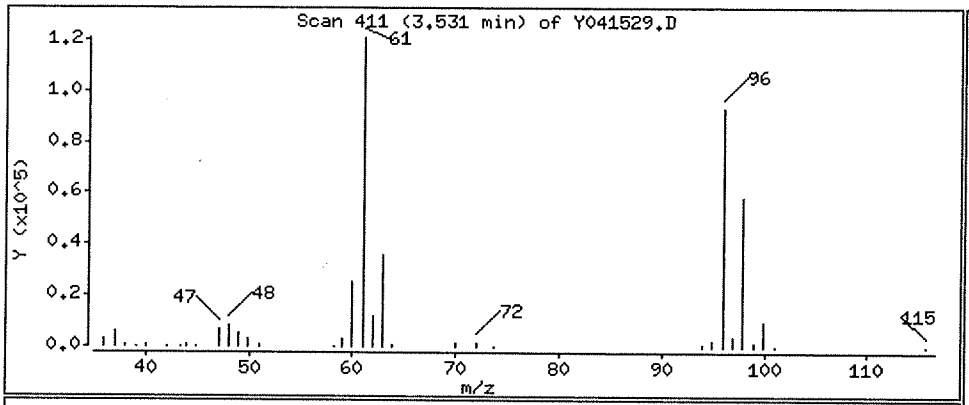
Operator: PC

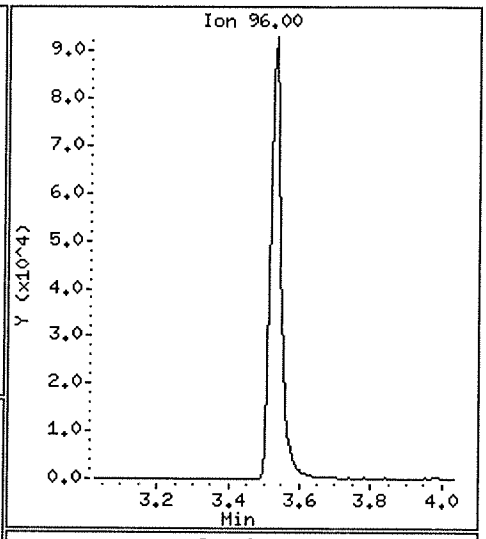
Column phase: DB624

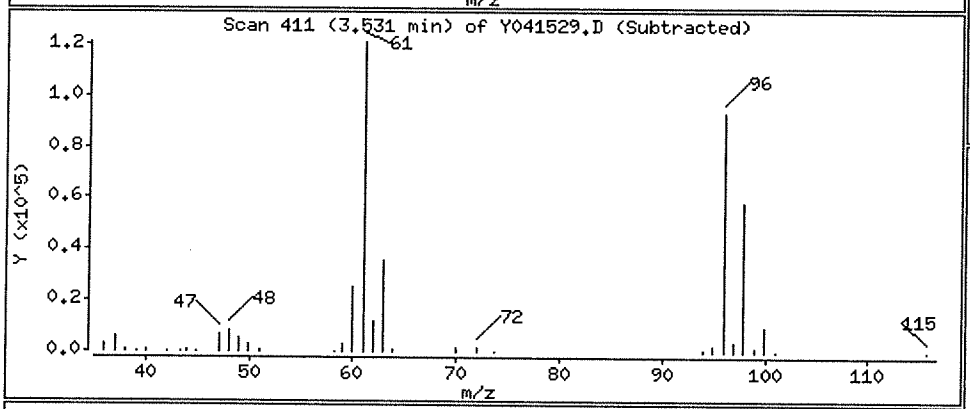
Column diameter: 0.18

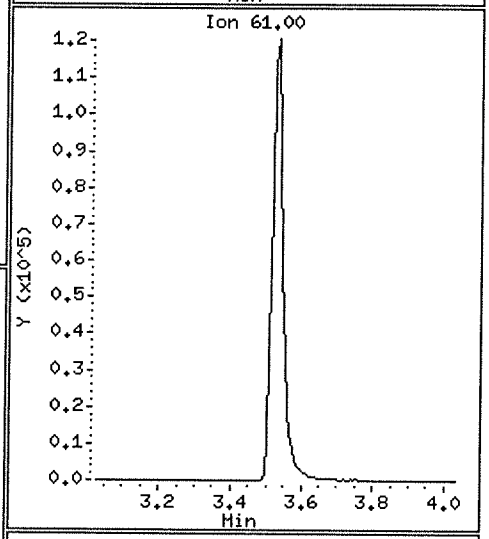
27 cis-1,2-Dichloroethene

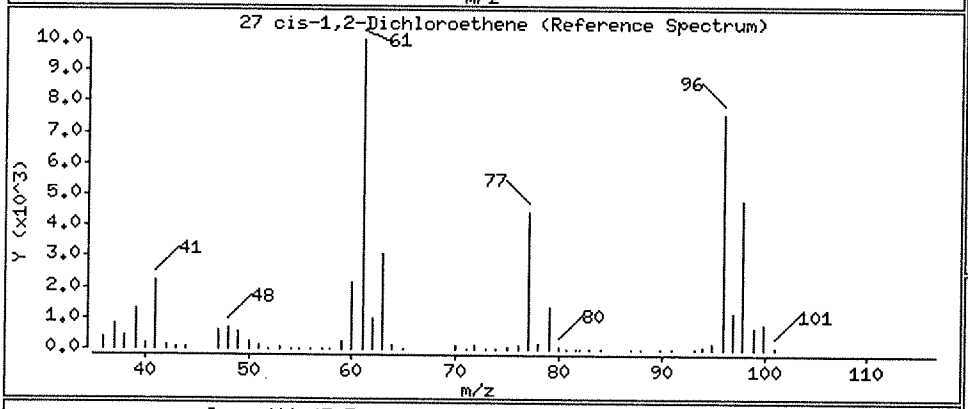
Concentration: 8973.15 ug/l

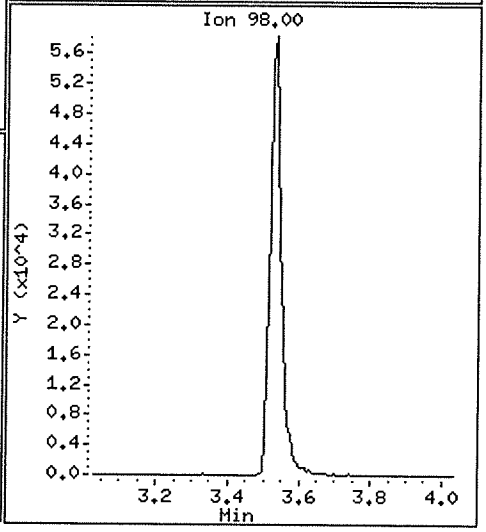


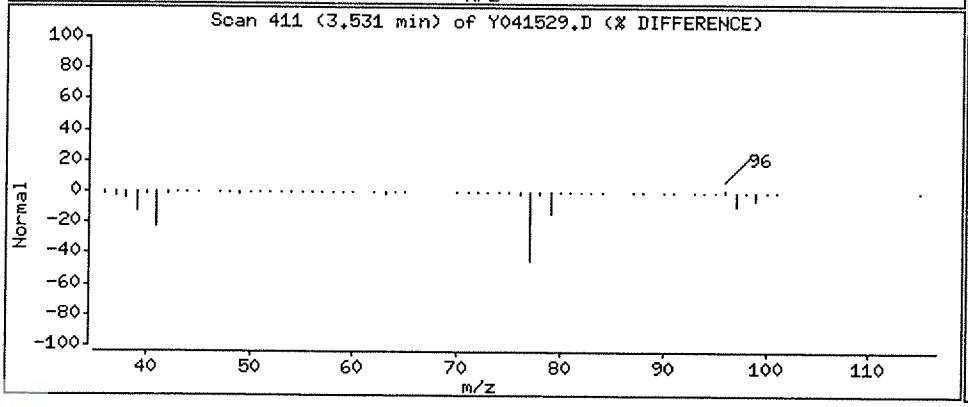












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210415.b\Y041529.D

Date : 16-APR-2021 06:47

Client ID: HS21040695-14

Instrument: voa6.i

Sample Info: HS21040695-14;HS21040695-14;;;

Purge Volume: 5.0

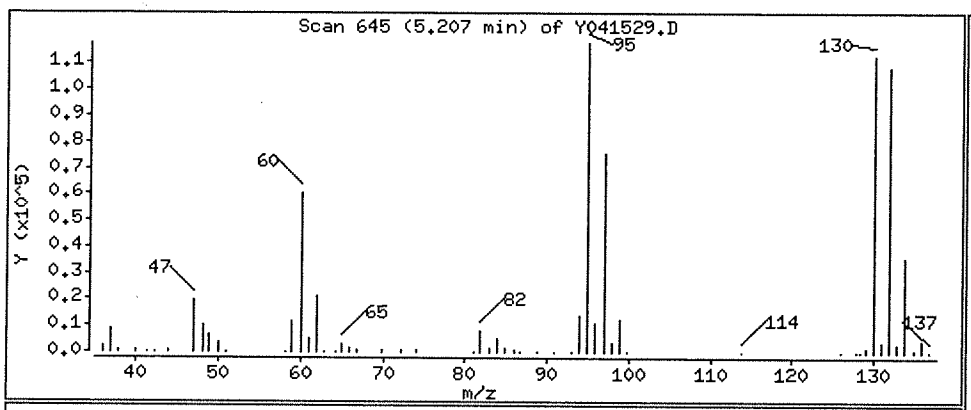
Operator: PC

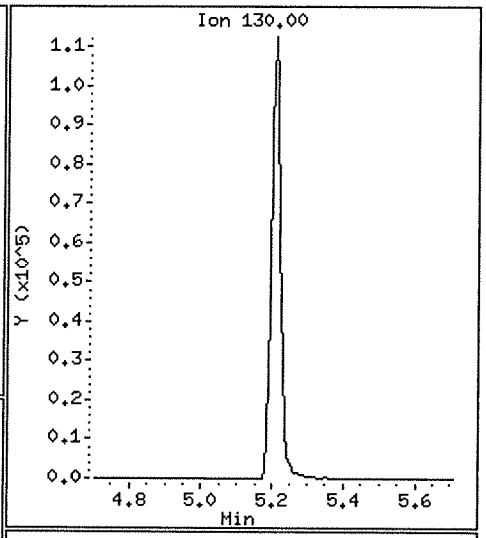
Column phase: DB624

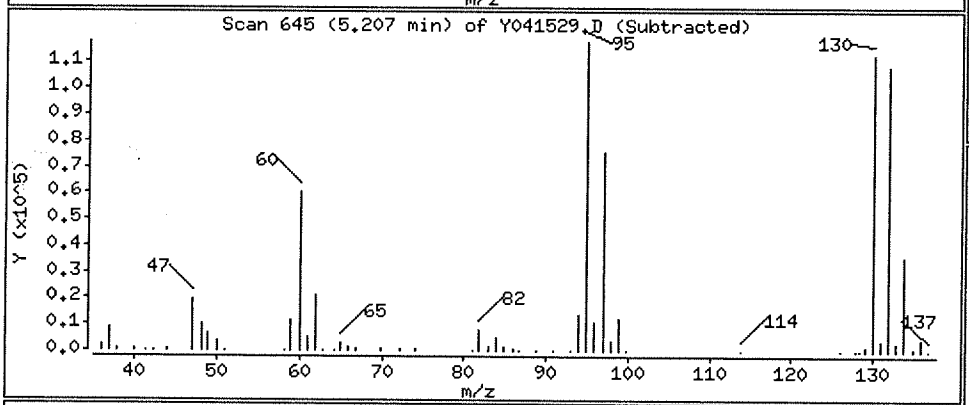
Column diameter: 0.18

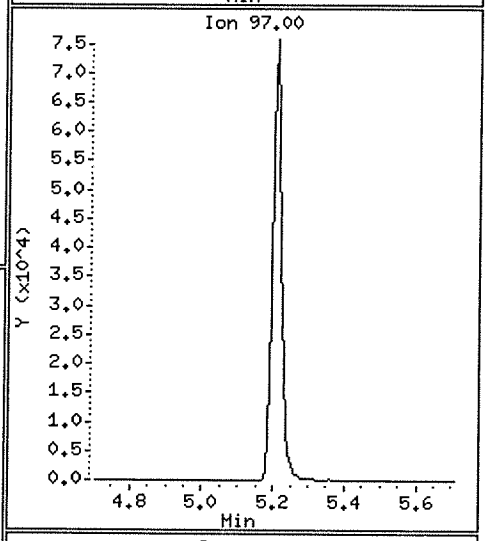
38 Trichloroethene

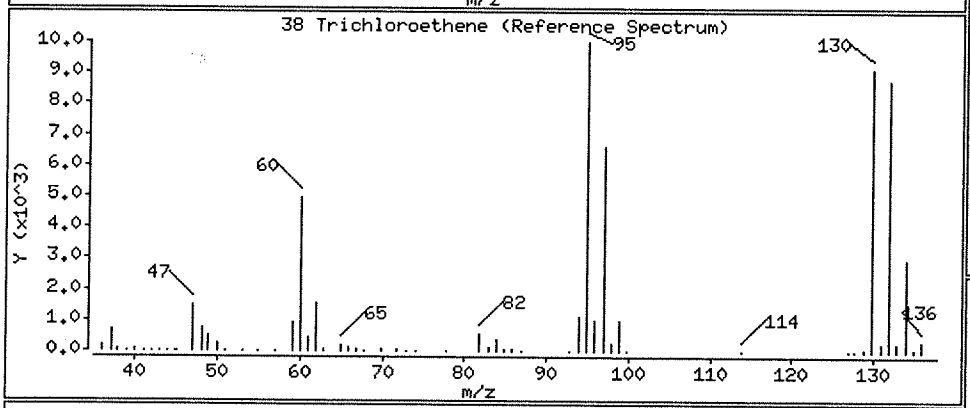
Concentration: 10386.39 ug/l

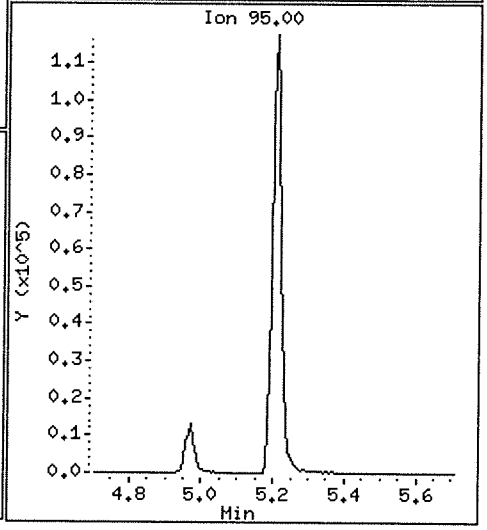


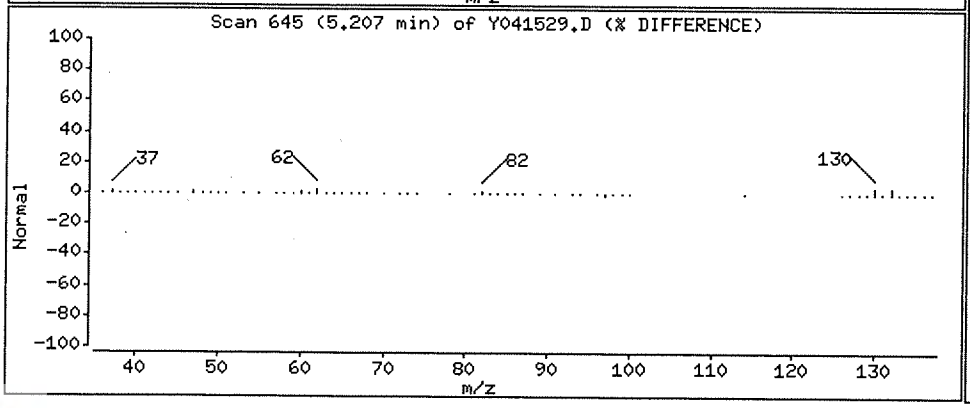












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210415.b\Y041530.D Page 1
Report Date: 04-May-2021 12:05

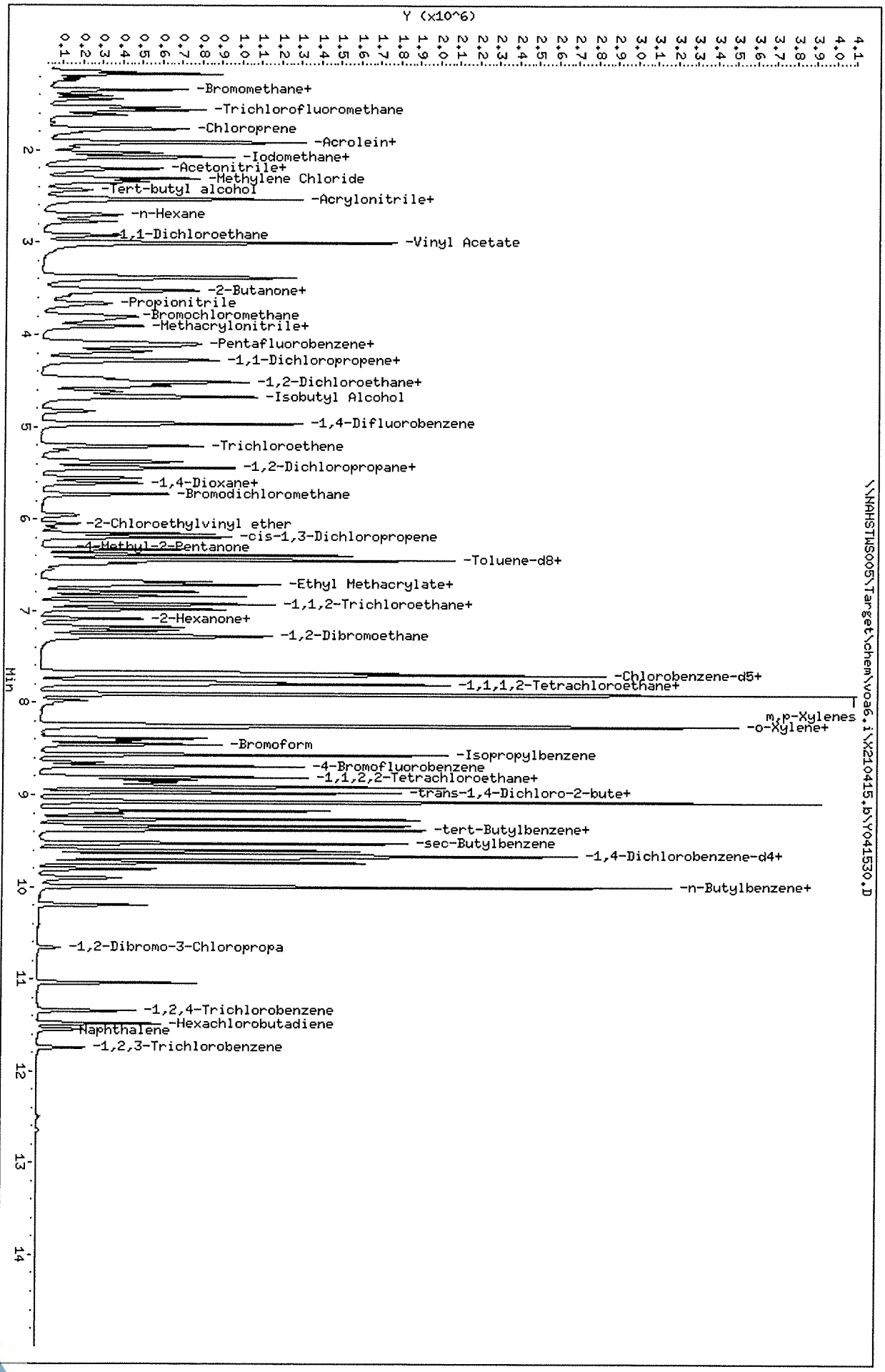
ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X210415.b\Y041530.D
Lab Smp Id: CCV-END Client Smp ID: CCV-END
Inj Date : 16-APR-2021 07:08
Operator : PC Inst ID: voa6.i
Smp Info : CCV-END;CCV-END;2;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X210415.b\8260W.m
Meth Date : 04-May-2021 12:05 voa6.i Quant Type: ISTD
Cal Date : 02-APR-2021 13:20 Cal File: X040208.D
Als bottle: 57 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBI_short1.sub
Target Version: 4.14
Processing Host: NAHSTW7066

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	402306	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	735799	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	715184	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	349450	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	238713	50.0000	50.39
$ 35 1,2-Dichloroethane-d4	65	4.469	4.469	(1.069)	280032	50.0000	49.35
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	875033	50.0000	47.68
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	345451	50.0000	50.35
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	219118	50.0000	52.74
11 1,1-Dichloroethene	96	1.919	1.919	(0.459)	271033	50.0000	47.31
33 1,2-Dichloroethane	62	4.555	4.555	(0.916)	370960	50.0000	47.63
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	252024	50.0000	51.24
17 Methylene Chloride	84	2.306	2.306	(0.551)	222139	50.0000	50.85
38 Trichloroethene	130	5.207	5.207	(1.048)	243731	50.0000	48.38
5 Vinyl Chloride	62	1.145	1.145	(0.274)	313311	50.0000	51.94



Data File: \\NAHSTWS005\Target\chem\voa6.i\X210415.b\Y041530.D
Date : 16-APR-2021 07:08
Client ID: CCV-END
Sample Info: CCV-END;CCV-END;2;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

MSVOA06 -Logbook

Batch: 44421 **Analyst:** Presenta Cabascango

Date: 04-16-2021 **Reviewer:**

Method: 8260 **Laboratory:** Houston

Comments:

#	Samp ID	Type	Analyzed	DF	Init Wt/Vol	Final Vol	File ID	Matrix	Status	pH
1	BFB	TUNE	04-16-2021 10:22 am	1.00	50 mL	50 mL	X041601.D	Liquid	Y	NA
2	CCV	CCV	04-16-2021 10:43 am	1.00	50 mL	50 mL	X041602.D	Liquid	Y	NA
3	BLANK	SAMP	04-16-2021 11:04 am	1.00	50 mL	50 mL	X041603.D	Liquid	Y	NA
4	CCB	SAMP	04-16-2021 11:25 am	1.00	50 mL	50 mL	X041604.D	Liquid	Y	NA
5	VLCSW-210416	LCS	04-16-2021 11:45 am	1.00	50 mL	50 mL	X041605.D	Liquid	Y	NA
6	BLANK	SAMP	04-16-2021 12:07 pm	1.00	50 mL	50 mL	X041606.D	Liquid	Y	NA
7	VBLKW-210416	MBLK	04-16-2021 12:28 pm	1.00	50 mL	50 mL	X041607.D	Liquid	Y	NA
8	HS21040768-20	SAMP	04-16-2021 12:49 pm	1.00	50 mL	50 mL	X041608.D	Liquid	Y	NA
9	HS21040768-09	SAMP	04-16-2021 01:10 pm	1.00	50 mL	50 mL	X041609.D	Liquid	Y	NA
10	HS21040768-11	SAMP	04-16-2021 01:31 pm	1.00	50 mL	50 mL	X041610.D	Liquid	Y	NA
11	HS21040768-12	SAMP	04-16-2021 01:52 pm	1.00	50 mL	50 mL	X041611.D	Liquid	Y	NA
12	HS21040768-10	SAMP	04-16-2021 02:13 pm	1.00	50 mL	50 mL	X041612.D	Liquid	Y	NA
13	HS21040768-06	SAMP	04-16-2021 02:34 pm	5.00	10 mL	50 mL	X041613.D	Liquid	Y	NA
14	HS21040695-15	SAMP	04-16-2021 02:55 pm	10.00	5 mL	50 mL	X041614.D	Liquid	Y	NA
15	HS21040768-05	SAMP	04-16-2021 03:16 pm	50.00	1 mL	50 mL	X041615.D	Liquid	Y	NA
16	HS21040768-09MS	MS	04-16-2021 03:37 pm	1.00	50 mL	50 mL	X041616.D	Liquid	Y	NA
17	HS21040768-09MSD	MSD	04-16-2021 03:58 pm	1.00	50 mL	50 mL	X041617.D	Liquid	Y	NA
18	HS21040768-10	SAMP	04-16-2021 04:19 pm	10.00	5 mL	50 mL	X041618.D	Liquid	Y	NA
19	HS21040695-11	SAMP	04-16-2021 04:40 pm	1.00	50 mL	50 mL	X041619.D	Liquid	Y	NA
20	HS21040695-11	SAMP	04-16-2021 05:01 pm	10.00	5 mL	50 mL	X041620.D	Liquid	Y	NA
21	HS21040695-17	SAMP	04-16-2021 05:22 pm	20.00	2.5 mL	50 mL	X041621.D	Liquid	Y	NA
22	HS21040695-17	SAMP	04-16-2021 05:43 pm	250.0(	200 µL	50 mL	X041622.D	Liquid	Y	NA
23	HS21040695-16	SAMP	04-16-2021 06:05 pm	100.0(	500 µL	50 mL	X041623.D	Liquid	Y	NA
24	HS21040695-16	SAMP	04-16-2021 06:26 pm	500.0(	100 µL	50 mL	X041624.D	Liquid	Y	NA
25	CCV-END	CCV	04-16-2021 06:47 pm	1.00	50 mL	50 mL	X041625.D	Liquid	Y	NA
26	HS21040817-03	SAMP	04-16-2021 07:08 pm	1.00	50 mL	50 mL	X041626.D	Liquid	Y	NA
27	HS21040822-01	SAMP	04-16-2021 07:29 pm	1.00	50 mL	50 mL	X041627.D	Liquid	Y	NA
28	HS21040815-11	SAMP	04-16-2021 07:50 pm	1.00	50 mL	50 mL	X041628.D	Liquid	Y	NA
29	HS21040792-07	SAMP	04-16-2021 08:11 pm	1.00	50 mL	50 mL	X041629.D	Liquid	Y	NA
30	HS21040793-07	SAMP	04-16-2021 08:32 pm	1.00	50 mL	50 mL	X041630.D	Liquid	Y	NA
31	BLANK	SAMP	04-16-2021 08:53 pm	1.00	50 mL	50 mL	X041640.D	Liquid	Y	NA

FORM 2
WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS21040695

	CLIENT SAMPLE NO.	SMC1 #	SMC2 (DCE)#	SMC3 (TOL)#	OTHER #	TOT OUT
01	VLCSW-210416	97	102	93	100	0
02	VBLKW-210416	91	97	109	94	0
03	HS21040695-15	91	94	107	94	0
04	HS21040768-09MS	94	101	104	104	0
05	HS21040768-09MSD	93	99	102	104	0
06	HS21040695-11	93	99	108	98	0
07	HS21040695-11	92	98	105	96	0
08	HS21040695-17	93	100	107	98	0
09	HS21040695-17	94	98	106	93	0
10	HS21040695-16	95	98	106	96	0
11	HS21040695-16	93	98	106	96	0
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						
28						

		QC LIMITS
SMC1	= Dibromofluoromethane	(0-130)
SMC2 (DCE)	= 1,2-Dichloroethane-d4	(0-130)
SMC3 (TOL)	= Toluene-d8	(0-130)
OTHER	= 4-Bromofluorobenzene	(0-130)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D System Monitoring Compound diluted out

FORM 4
VOLATILE METHOD BLANK SUMMARY

CLIENT SAMPLE NO.

VBLKW-210416

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS21040695

Lab File ID: X041607 Lab Sample ID: VBLKW-210416

Date Analyzed: 04/16/21 Time Analyzed: 1228

GC Column: DB624 ID: 0.18 (mm) Heated Purge: (Y/N) N

Instrument ID: VOA6

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	VLCSW-210416	VLCSW-210416	X041605	1145
02	HS21040695-15	HS21040695-15	X041614	1455
03	HS21040768-09MS	HS21040768-09MS	X041616	1537
04	HS21040768-09MSD	HS21040768-09MSD	X041617	1558
05	HS21040695-11	HS21040695-11	X041619	1640
06	HS21040695-11	HS21040695-11	X041620	1701
07	HS21040695-17	HS21040695-17	X041621	1722
08	HS21040695-17	HS21040695-17	X041622	1743
09	HS21040695-16	HS21040695-16	X041623	1805
10	HS21040695-16	HS21040695-16	X041624	1826
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				

COMMENTS:

FORM 5
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS21040695

Lab File ID: X041601 BFB Injection Date: 04/16/21

Instrument ID: VOA6 BFB Injection Time: 1022

GC Column: DB624 ID: 0.25 (mm) Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	22.4
75	30.0 - 60.0% of mass 95	58.7
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.8
173	Less than 2.0% of mass 174	0.7 (1.2)1
174	Greater than 50.0% of mass 95	62.6
175	5.0 - 9.0% of mass 174	4.8 (7.7)1
176	95.0 - 101.0% of mass 174	60.2 (96.2)1
177	5.0 - 9.0% of mass 176	4.4 (7.3)2

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

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	CCV	CCV	X041602	04/16/21	1043
02	VLCSW-210416	VLCSW-210416	X041605	04/16/21	1145
03	VBLKW-210416	VBLKW-210416	X041607	04/16/21	1228
04	HS21040695-15	HS21040695-15	X041614	04/16/21	1455
05	HS21040768-09MS	HS21040768-09MS	X041616	04/16/21	1537
06	HS21040768-09MSD	HS21040768-09MSD	X041617	04/16/21	1558
07	HS21040695-11	HS21040695-11	X041619	04/16/21	1640
08	HS21040695-11	HS21040695-11	X041620	04/16/21	1701
09	HS21040695-17	HS21040695-17	X041621	04/16/21	1722
10	HS21040695-17	HS21040695-17	X041622	04/16/21	1743
11	HS21040695-16	HS21040695-16	X041623	04/16/21	1805
12	HS21040695-16	HS21040695-16	X041624	04/16/21	1826
13	CCV-END	CCV-END	X041625	04/16/21	1847
14					
15					
16					
17					
18					
19					
20					
21					
22					

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS21040695

Instrument ID: VOA6 Calibration Date: 04/16/21 Time: 1043

Lab File ID: X041602 Init. Calib. Date(s): 04/02/21 04/02/21

Init. Calib. Times: 1053 1423

GC Column: DB624 ID: 0.18 (mm)

COMPOUND	RRF or AMOUNT	RRF50.000 or AMOUNT	CCAL RRF50.000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Vinyl Chloride	0.7500000	0.7511057	0.7511057	0.1	-0.15	20.00	AVRG
Methylene Chloride	50.129007	50.000000	0.5440840	0.1	-0.26	20.00	LINR
1,1-Dichloroethene	0.7120000	0.6496922	0.6496922	0.1	8.75	20.00	AVRG
1,2-Dichloroethane	0.5290000	0.4999516	0.4999516	0.1	5.49	20.00	AVRG
cis-1,2-Dichloroethene	0.6110000	0.6026305	0.6026305	0.1	1.37	20.00	AVRG
1,1,2-Trichloroethane	0.2900000	0.3042349	0.3042349	0.1	-4.91	20.00	AVRG
Trichloroethene	0.3420000	0.3295951	0.3295951	0.2	3.63	20.00	AVRG
Dibromofluoromethane	47.874018	50.000000	0.5634108	0.1	4.25	20.00	LINR
1,2-Dichloroethane-d4	48.016277	50.000000	0.6770568	0.1	3.97	20.00	LINR
Toluene-d8	48.224470	50.000000	1.2378006	0.1	3.55	20.00	LINR
4-Bromofluorobenzene	48.690677	50.000000	0.4665232	0.1	2.62	20.00	LINR

FORM VII VOA

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS21040695

Instrument ID: VOA6 Calibration Date: 04/16/21 Time: 1847

Lab File ID: X041625 Init. Calib. Date(s): 04/02/21 04/02/21

Init. Calib. Times: 1053 1423

GC Column: DB624 ID: 0.18 (mm)

COMPOUND	RRF or AMOUNT	RRF50.000 or AMOUNT	CCAL RRF50.000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Vinyl Chloride	0.7500000	0.7439543	0.7439543	0.1	0.81	50.00	AVRG
Methylene Chloride	50.216920	50.000000	0.5450673	0.1	-0.43	50.00	LINR
1,1-Dichloroethene	0.7120000	0.6586455	0.6586455	0.1	7.49	50.00	AVRG
1,2-Dichloroethane	0.5290000	0.5109597	0.5109597	0.1	3.41	50.00	AVRG
cis-1,2-Dichloroethene	0.6110000	0.6117506	0.6117506	0.1	-0.12	50.00	AVRG
1,1,2-Trichloroethane	0.2900000	0.3124412	0.3124412	0.1	-7.74	50.00	AVRG
Trichloroethene	0.3420000	0.3347964	0.3347964	0.2	2.11	50.00	AVRG
Dibromofluoromethane	49.298423	50.000000	0.5803270	0.1	1.40	50.00	LINR
1,2-Dichloroethane-d4	48.685729	50.000000	0.6865924	0.1	2.63	50.00	LINR
Toluene-d8	47.573585	50.000000	1.2204257	0.1	4.85	50.00	LINR
4-Bromofluorobenzene	49.763466	50.000000	0.4771626	0.1	0.47	50.00	LINR

FORM VII VOA

FORM 8
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS21040695

Lab File ID (Standard): X041602 Date Analyzed: 04/16/21

Instrument ID: VOA6 Time Analyzed: 1043

GC Column: DB624 ID: 0.18 (mm) Heated Purge: (Y/N) N

		IS1 AREA #	RT #	IS2(DFB) AREA #	RT #	IS3(CBZ) AREA #	RT #
	12 HOUR STD	429351	4.18	775057	4.97	718333	7.67
	UPPER LIMIT	858702	4.68	1550114	5.47	1436666	8.17
	LOWER LIMIT	214676	3.68	387529	4.47	359167	7.17
	CLIENT SAMPLE NO.						
01	VLCSW-210416	398313	4.18	684083	4.97	650851	7.67
02	VBLKW-210416	486928	4.18	771558	4.96	658790	7.67
03	HS21040695-15	468065	4.18	729518	4.97	643550	7.67
04	HS21040768-09MS	467720	4.18	758598	4.96	706341	7.67
05	HS21040768-09MSD	494434	4.18	796641	4.96	765001	7.67
06	HS21040695-11	464134	4.18	758364	4.97	652338	7.67
07	HS21040695-11	458006	4.18	738569	4.97	642718	7.67
08	HS21040695-17	459476	4.18	749189	4.96	640657	7.67
09	HS21040695-17	451227	4.18	724098	4.97	635622	7.67
10	HS21040695-16	453390	4.18	737999	4.97	653595	7.67
11	HS21040695-16	453393	4.18	730570	4.96	636092	7.67
12							
13							
14							
15							
16							
17							
18							
19							
20							

IS1 = Pentafluorobenzene
IS2 (DFB) = 1,4-Difluorobenzene
IS3 (CBZ) = Chlorobenzene-d5

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

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

FORM 8
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS21040695

Lab File ID (Standard): X041602 Date Analyzed: 04/16/21

Instrument ID: VOA6 Time Analyzed: 1043

GC Column: DB624 ID: 0.18 (mm) Heated Purge: (Y/N) N

		IS4 (DCB) AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	346364	9.66				
	UPPER LIMIT	692728	10.16				
	LOWER LIMIT	173182	9.16				
	CLIENT SAMPLE NO.						
01	VLCSW-210416	322535	9.66				
02	VBLKW-210416	274722	9.66				
03	HS21040695-15	260773	9.66				
04	HS21040768-09MS	329772	9.66				
05	HS21040768-09MSD	361014	9.66				
06	HS21040695-11	290112	9.66				
07	HS21040695-11	269006	9.66				
08	HS21040695-17	284524	9.66				
09	HS21040695-17	271856	9.66				
10	HS21040695-16	284610	9.66				
11	HS21040695-16	269022	9.66				
12							
13							
14							
15							
16							
17							
18							
19							
20							

IS4 (DCB) = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

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

Data File: \\NAHSTWS005\Target\chem\voa6.i\X210416.b\X041601.D

Date : 16-APR-2021 10:22

Client ID: BFB

Instrument: voa6.i

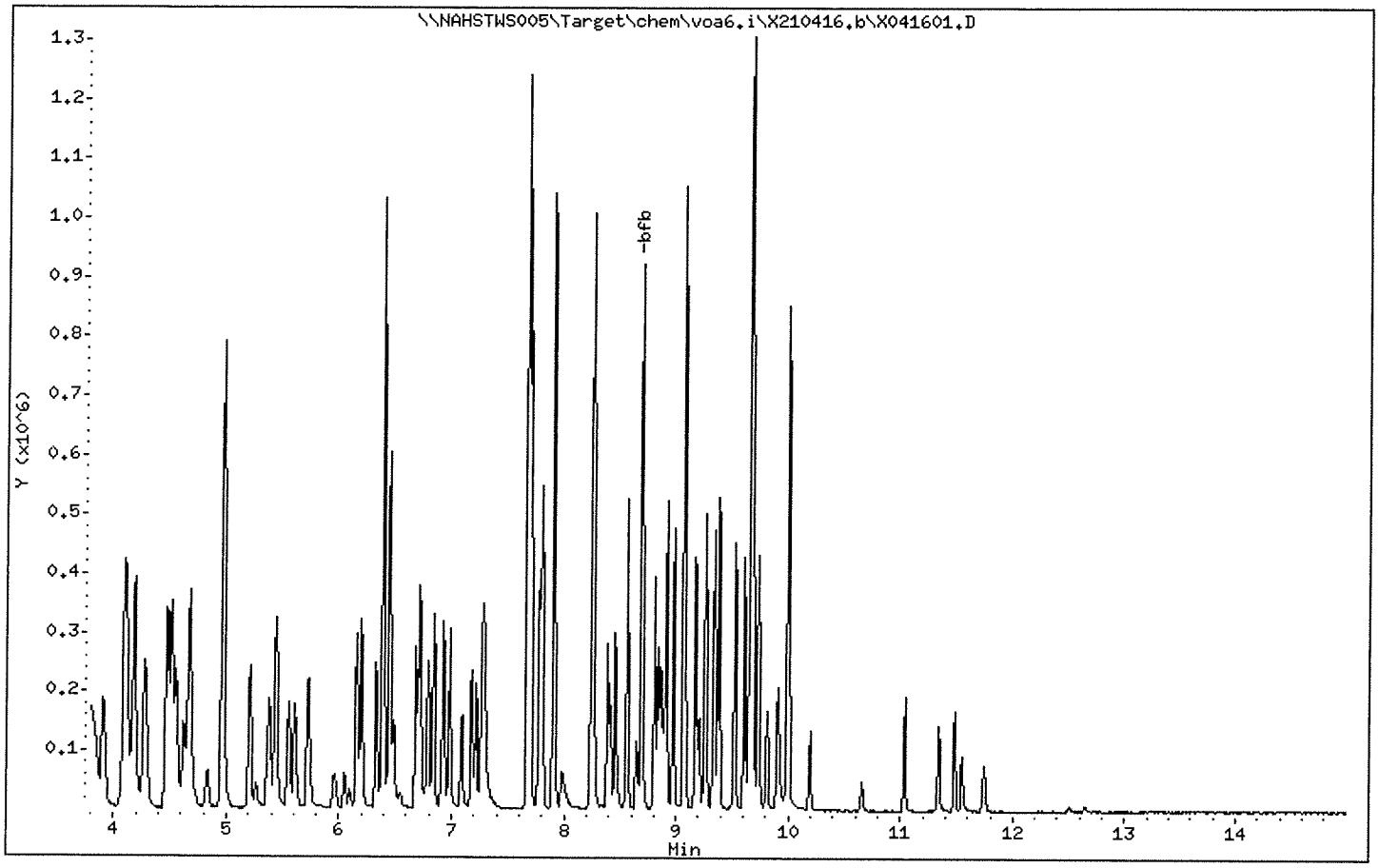
Sample Info: BFB;BFB;3;;BFB

Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

Column diameter: 0.25



Data File: \\NAHSTWS005\Target\chem\voa6.i\X210416.b\X041601.D

Date : 16-APR-2021 10:22

Client ID: BFB

Instrument: voa6.i

Sample Info: BFB;BFB;3;;BFB

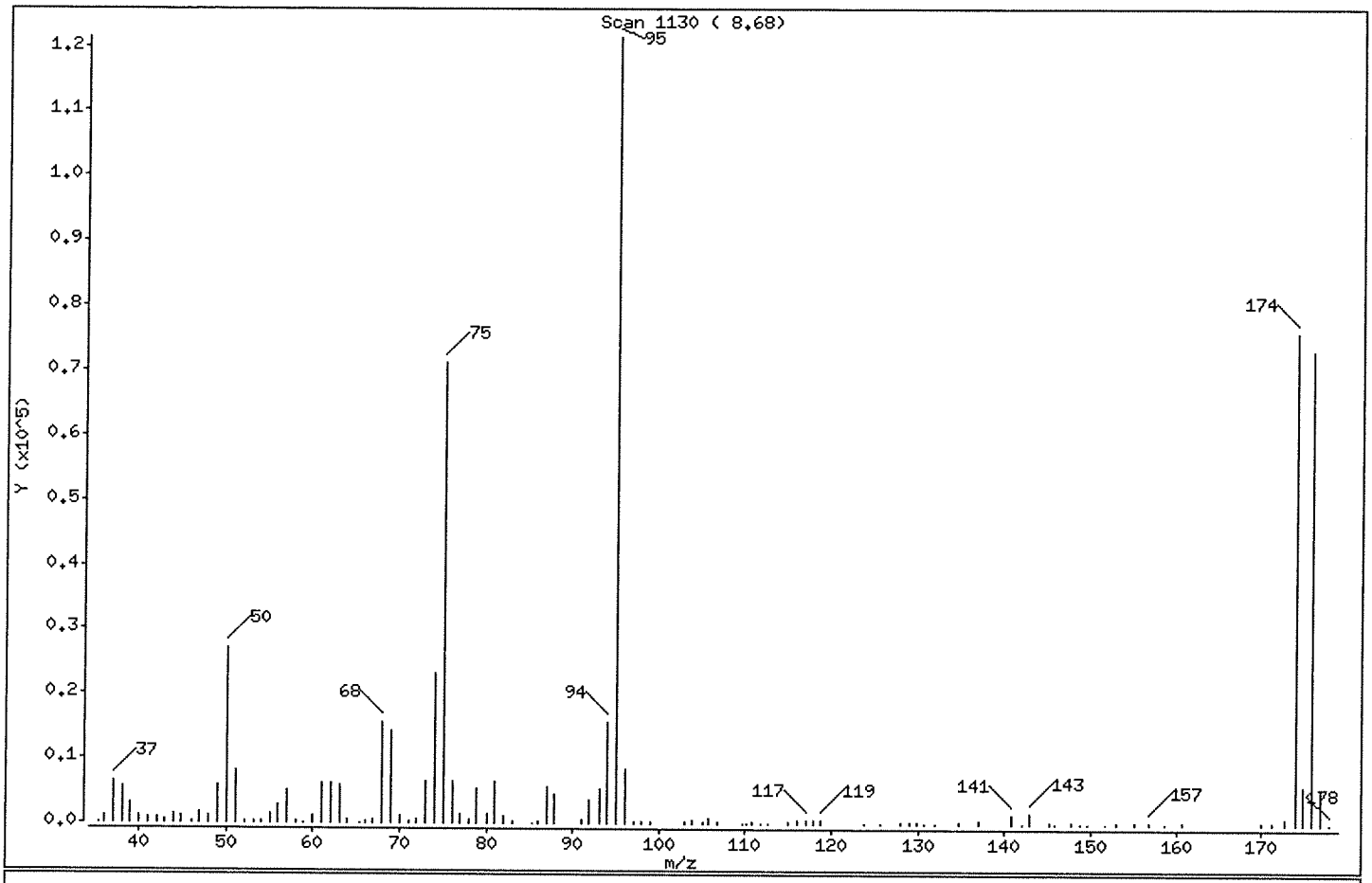
Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

Column diameter: 0.25

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	22.37
75	30.00 - 60.00% of mass 95	58.69
96	5.00 - 9.00% of mass 95	6.84
173	Less than 2.00% of mass 174	0.74 (1.19)
174	Greater than 50.00% of mass 95	62.62
175	5.00 - 9.00% of mass 174	4.84 (7.73)
176	95.00 - 101.00% of mass 174	60.25 (96.22)
177	5.00 - 9.00% of mass 176	4.41 (7.32)

Data File: \\NAHSTWS005\Target\chem\voa6.i\X210416.b\X041601.D

Date : 16-APR-2021 10:22

Client ID: BFB

Instrument: voa6.i

Sample Info: BFB;BFB;3;;BFB

Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

Column diameter: 0.25

Data File: X041601.D
Spectrum: Scan 1130 (8.68)
Location of Maximum: 95.00
Number of points: 108

m/z	Y	m/z	Y	m/z	Y	m/z	Y
35.30	78	63.00	5853	94.00	15619	134.70	370
36.00	1088	63.90	517	95.00	121256	136.90	472
37.00	6546	65.30	63	96.00	8292	140.80	1533
38.00	5510	66.00	159	97.00	344	142.10	137
39.00	3092	66.80	490	97.90	331	142.90	1613
40.00	983	68.00	15478	98.90	253	145.10	161
41.10	702	69.00	14238	103.00	282	145.90	122
42.00	859	70.00	1157	103.90	582	147.70	324
43.00	479	71.00	156	105.00	231	148.70	63
43.90	1399	71.90	686	105.80	699	149.70	69
44.90	1009	73.00	6542	106.70	195	151.70	80
46.10	200	74.00	23160	109.70	112	153.00	178
47.00	1596	75.00	71160	110.10	66	155.00	160
48.00	1005	76.00	6547	110.80	234	156.80	199
49.00	5801	77.00	1361	111.70	108	158.70	74
50.00	27128	78.00	631	112.70	65	160.80	175
51.00	7951	78.90	5382	115.00	196	170.00	223
52.20	414	80.00	1440	115.90	653	171.30	240
53.10	244	80.90	6452	117.00	680	172.80	903
54.10	210	81.90	1236	117.80	538	173.90	75928
55.00	1431	83.00	197	118.80	470	174.90	5871
56.00	2867	85.40	136	123.70	71	175.90	73056
57.00	5065	85.90	176	125.70	102	176.90	5351
58.10	367	87.00	5542	127.90	384	178.00	128
58.80	52	87.90	4461	129.00	410		
60.00	1149	90.90	624	129.80	391		
60.90	6177	91.90	3746	130.80	131		
62.00	6242	93.00	5397	132.00	81		

Data File: \\NAHSTWS005\Target\chem\voa6.i\X210416.b\X041602.D Page 1
Report Date: 04-May-2021 12:16

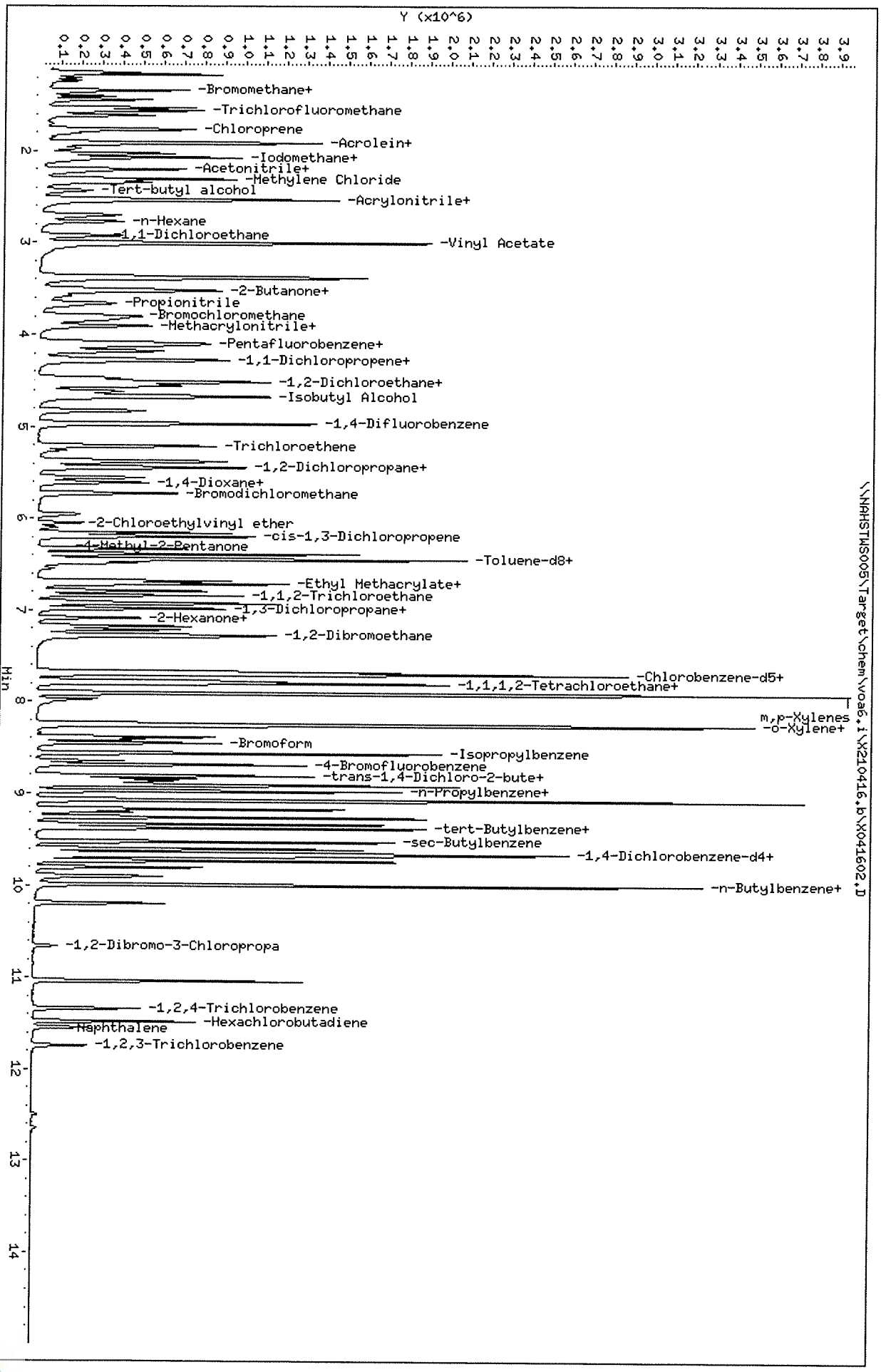
ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X210416.b\X041602.D
Lab Smp Id: CCV Client Smp ID: CCV
Inj Date : 16-APR-2021 10:43
Operator : PC Inst ID: voa6.i
Smp Info : CCV;CCV;2;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X210416.b\8260W.m
Meth Date : 04-May-2021 12:16 voa6.i Quant Type: ISTD
Cal Date : 02-APR-2021 13:20 Cal File: X040208.D
Als bottle: 2 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBI_short1.sub
Target Version: 4.14
Processing Host: NAHSTW7066

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	429351	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	775057	50.0000	
* 47 Chlorobenzene-d5	117	7.670	7.670	(1.000)	718333	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	346364	50.0000	
$ 30 Dibromofluoromethane	113	4.096	4.096	(0.979)	241901	50.0000	47.87
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	290695	50.0000	48.01
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	889153	50.0000	48.22
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	335119	50.0000	48.69
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	218542	50.0000	52.37
11 1,1-Dichloroethene	96	1.919	1.919	(0.459)	278946	50.0000	45.62
33 1,2-Dichloroethane	62	4.555	4.555	(0.916)	387491	50.0000	47.23
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	258740	50.0000	49.29
17 Methylene Chloride	84	2.305	2.305	(0.551)	233603	50.0000	50.12
38 Trichloroethene	130	5.206	5.206	(1.048)	255455	50.0000	48.14
5 Vinyl Chloride	62	1.145	1.145	(0.274)	322488	50.0000	50.10



Data File: \\NAHSTWS005\Target\chem\voa6,i\X210416,b\X041602.D
Date : 16-APR-2021 10:43
Client ID: CCV
Sample Info: CCV;CCV;2;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6,i
Operator: PC
Column diameter: 0.18

Data File: \\NAHSTWS005\Target\chem\voa6.i\X210416.b\X041605.D Page 1
Report Date: 04-May-2021 12:16

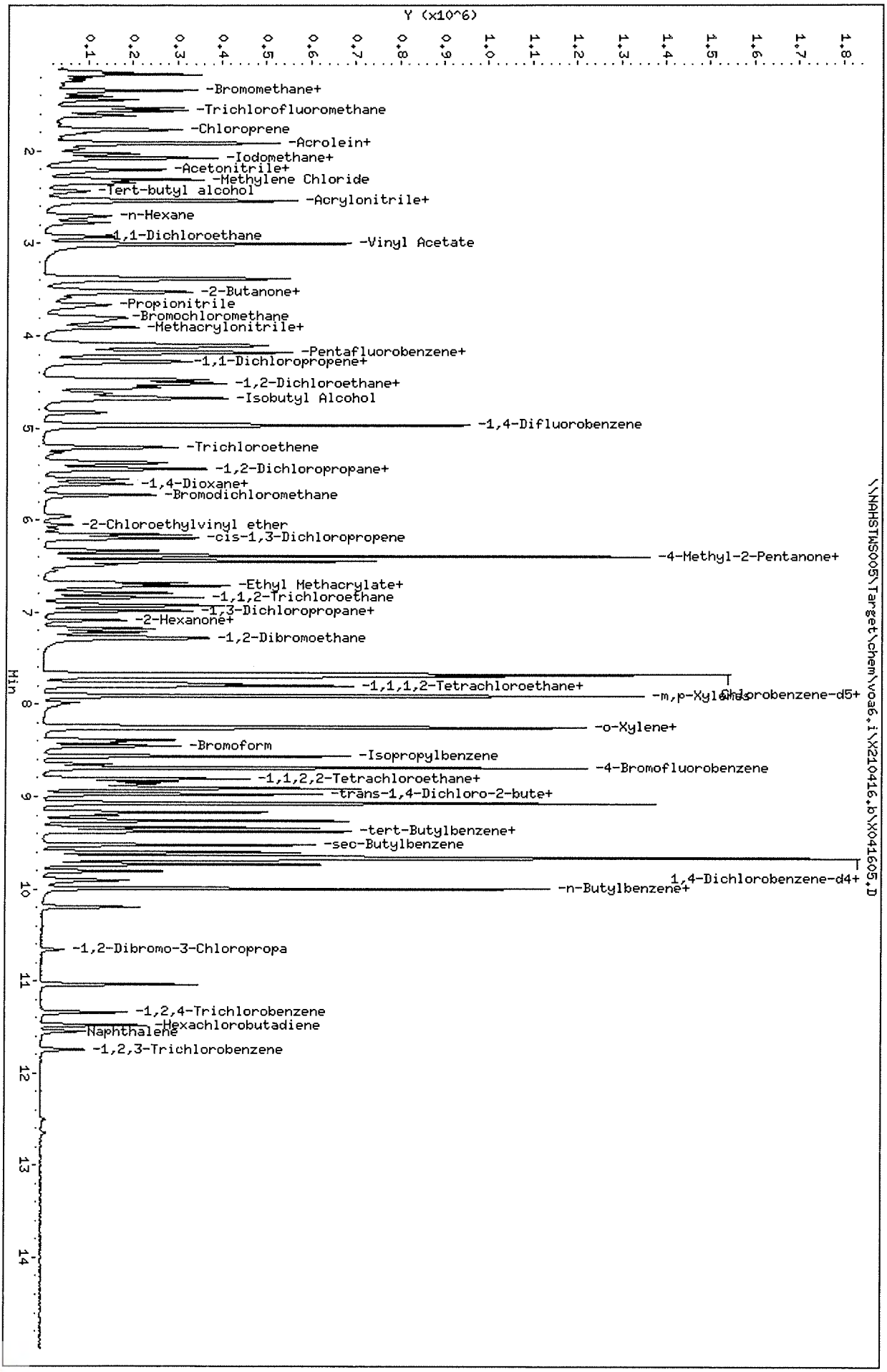
ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X210416.b\X041605.D
Lab Smp Id: VLCSW-210416 Client Smp ID: VLCSW-210416
Inj Date : 16-APR-2021 11:45
Operator : PC Inst ID: voa6.i
Smp Info : VLCSW-210416;VLCSW-210416;3;;LCS
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X210416.b\8260W.m
Meth Date : 04-May-2021 12:16 voa6.i Quant Type: ISTD
Cal Date : 02-APR-2021 13:20 Cal File: X040208.D
Als bottle: 5 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBI_short1.sub
Target Version: 4.14
Processing Host: NAHSTW7066

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
*	1 Pentafluorobenzene	168	4.182	4.182	(1.000)	398313	50.0000	
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	684083	50.0000	
*	47 Chlorobenzene-d5	117	7.671	7.670	(1.000)	650851	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	322535	50.0000	
$	30 Dibromofluoromethane	113	4.096	4.096	(0.979)	227579	48.5431	48.54
$	35 1,2-Dichloroethane-d4	65	4.469	4.476	(1.068)	286834	51.0397	51.03
$	48 Toluene-d8	98	6.389	6.388	(0.833)	779233	46.7055	46.70
$	69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	313023	50.1448	50.14
	53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	78559	20.7785	20.77
	11 1,1-Dichloroethene	96	1.919	1.919	(0.459)	106820	18.8347	18.83
	33 1,2-Dichloroethane	62	4.555	4.555	(0.916)	151029	20.8579	20.85
	27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	99721	20.4806	20.48
	17 Methylene Chloride	84	2.306	2.305	(0.551)	93611	22.4958	22.49
	38 Trichloroethene	130	5.207	5.206	(1.048)	94214	20.1184	20.11
	5 Vinyl Chloride	62	1.145	1.145	(0.274)	123953	20.7574	20.75



Data File: \\NAHSTWS005\Target\chem\voa6.i\X210416.b\X041605.D
Date : 16-APR-2021 11:45
Client ID: VLCSW-210416
Sample Info: VLCSW-210416;VLCSW-210416;3;;LCS
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\NAHSTWS005\Target\chem\voa6.i\X210416.b\X041607.D Page 1
Report Date: 04-May-2021 12:16

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X210416.b\X041607.D
Lab Smp Id: VBLKW-210416 Client Smp ID: VBLKW-210416
Inj Date : 16-APR-2021 12:28
Operator : PC Inst ID: voa6.i
Smp Info : VBLKW-210416;VBLKW-210416;3;;BLANK
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X210416.b\8260W.m
Meth Date : 04-May-2021 12:16 voa6.i Quant Type: ISTD
Cal Date : 02-APR-2021 13:20 Cal File: X040208.D
Als bottle: 7 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBI_short1.sub
Target Version: 4.14
Processing Host: NAHSTW7066

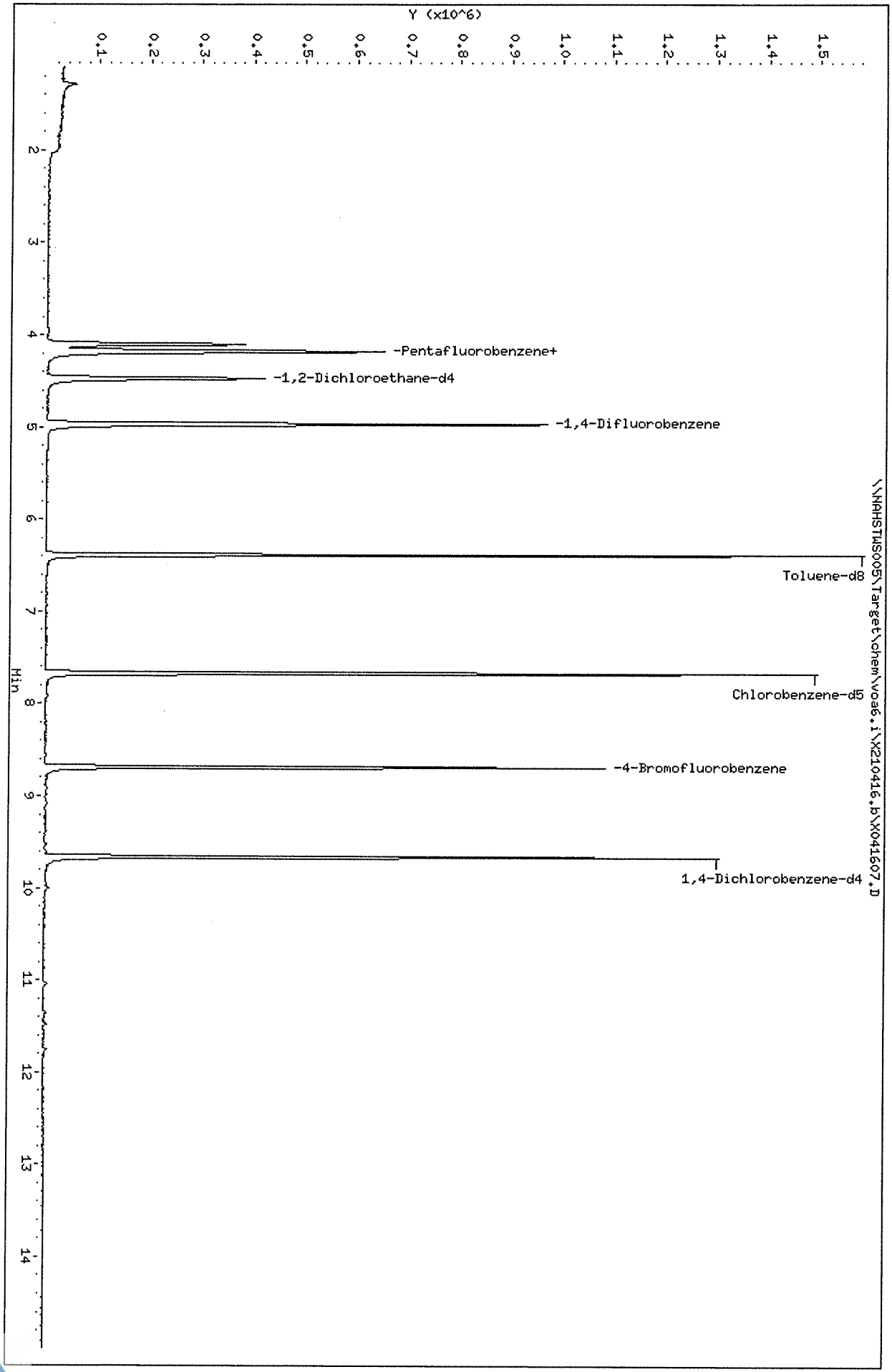
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	486928	50.0000	
* 36 1,4-Difluorobenzene	114	4.963	4.970	(1.000)	771558	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.670	(1.000)	658790	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	274722	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.096	(0.981)	261206	45.6027	45.60
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	334543	48.7177	48.71
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	923100	54.3458	54.34
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	297777	47.2269	47.22

Data File: \\NAHSTWS005\Target\chem\voa6.i\X210416.b\X041607.D
Date : 16-APR-2021 12:28
Client ID: VBLKW-210416
Sample Info: VBLKW-210416;VBLKW-210416;3;;BLANK
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18



Data File: \\NAHSTWS005\Target\chem\voa6.i\X210416.b\X041614.D Page 1
Report Date: 04-May-2021 12:21

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X210416.b\X041614.D
Lab Smp Id: HS21040695-15 Client Smp ID: HS21040695-15
Inj Date : 16-APR-2021 14:55
Operator : PC Inst ID: voa6.i
Smp Info : HS21040695-15;HS21040695-15;;;
Misc Info : HS18090001;WATER;0;10;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X210416.b\8260W.m
Meth Date : 04-May-2021 12:21 Qin.Xu Quant Type: ISTD
Cal Date : 02-APR-2021 13:20 Cal File: X040208.D
Als bottle: 14
Dil Factor: 10.00000
Integrator: HP RTE Compound Sublist: CBI_short1.sub
Target Version: 4.14
Processing Host: NAHSTW7066

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	10.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

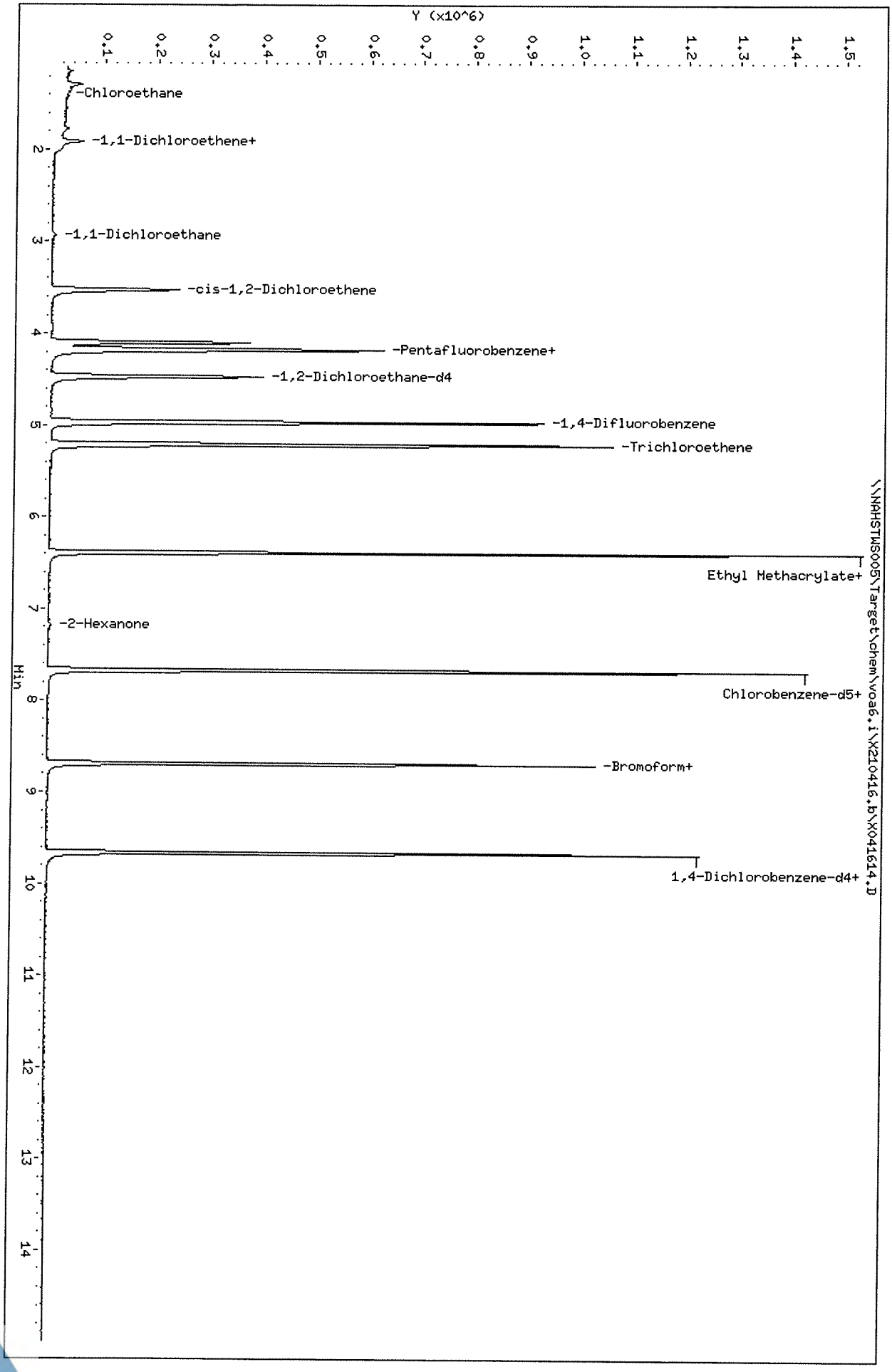
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	468065	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.963	(1.000)	729518	50.0000	
* 47 Chlorobenzene-d5	117	7.670	7.670	(1.000)	643550	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	260773	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.096	(0.981)	250393	45.4778	45.47
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	312027	47.2844	47.28
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	888076	53.5501	53.55
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	289672	47.0363	47.03
11 1,1-Dichloroethene	96	1.919	1.919	(0.459)	7517	1.12790	11.27(a)
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	118809	20.7647	207.64
38 Trichloroethene	130	5.206	5.206	(1.048)	320898	64.2566	642.56
5 Vinyl Chloride	62	1.145	1.145	(0.274)	6174	0.87984	8.79

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Data File: \\NAHSTWS005\Target\chem\voa6.i\X210416.b\X041614.D
Date : 16-APR-2021 14:55
Client ID: HS21040695-15
Sample Info: HS21040695-15;HS21040695-15;;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18



Data File: \\NAHSTWS005\Target\chem\voa6.i\X210416.b\X041614.D

Date : 16-APR-2021 14:55

Client ID: HS21040695-15

Instrument: voa6.i

Sample Info: HS21040695-15;HS21040695-15;;;

Purge Volume: 5.0

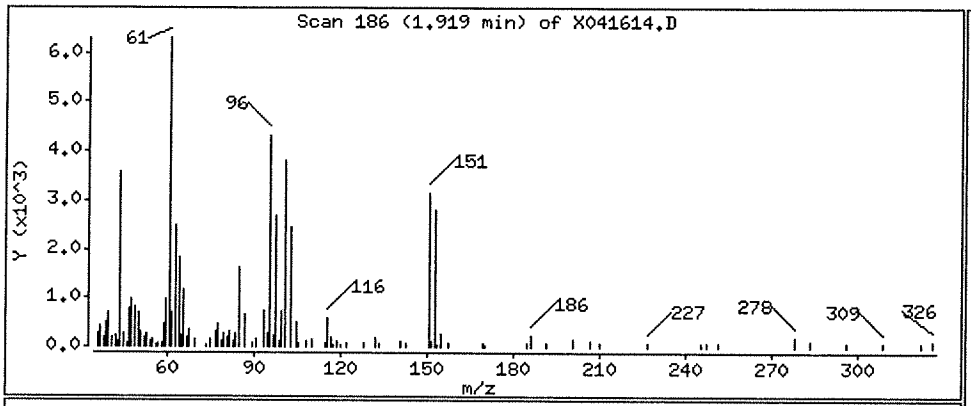
Operator: PC

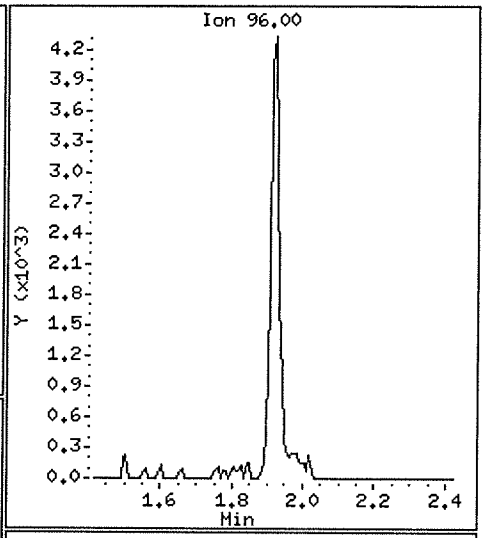
Column phase: DB624

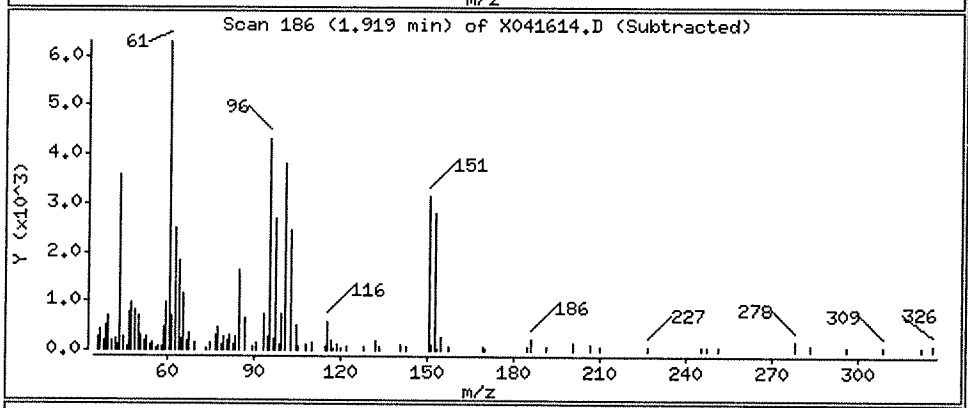
Column diameter: 0.18

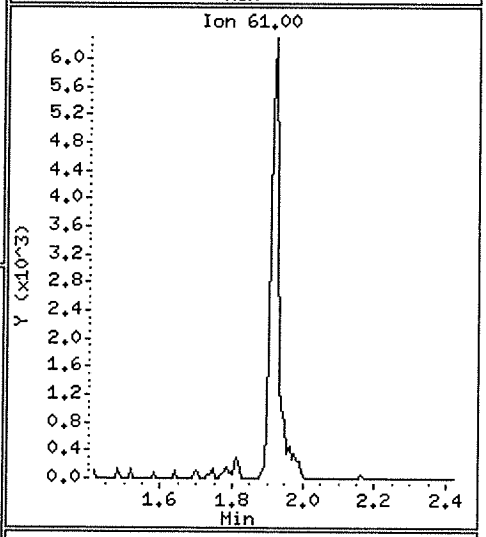
11 1,1-Dichloroethene

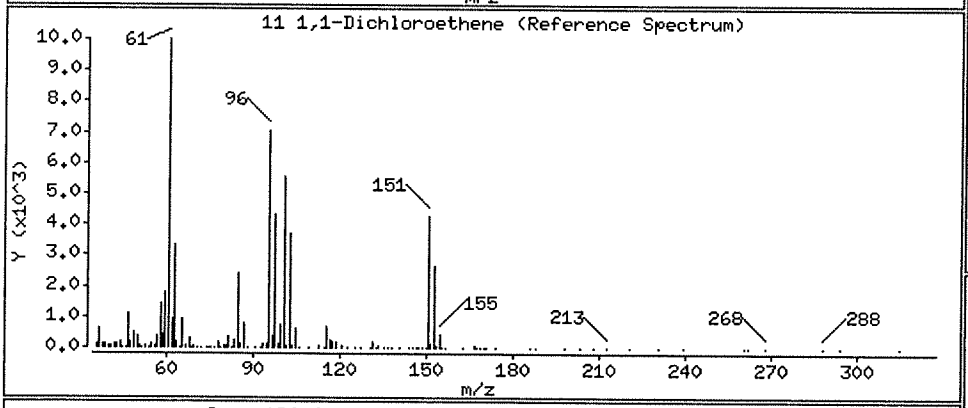
Concentration: 11.27 ug/l

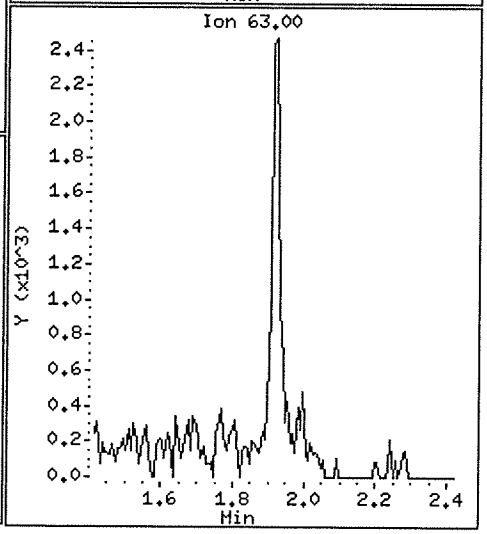


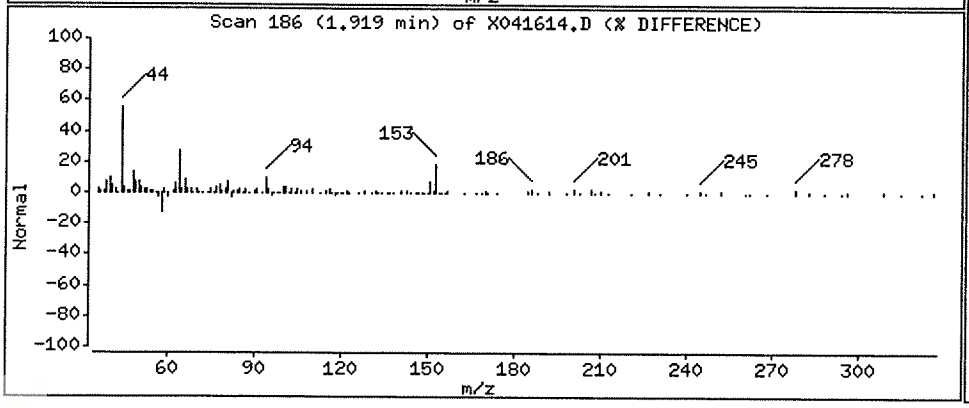












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210416.b\X041614.D

Date : 16-APR-2021 14:55

Client ID: HS21040695-15

Instrument: voa6.i

Sample Info: HS21040695-15;HS21040695-15;;;

Purge Volume: 5.0

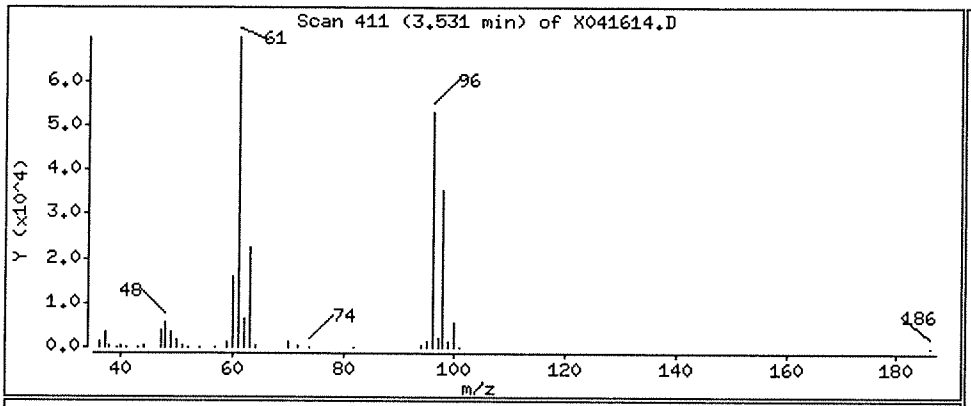
Operator: PC

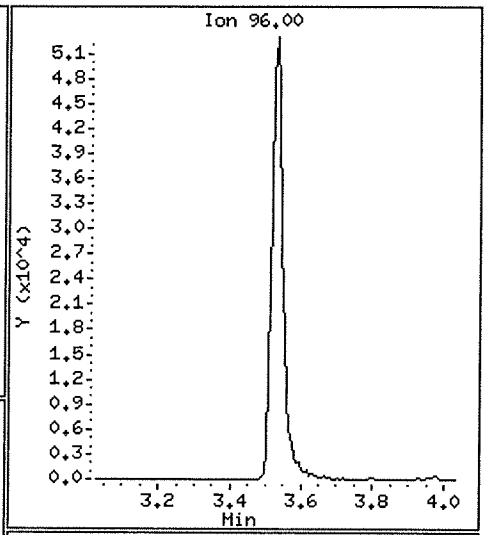
Column phase: DB624

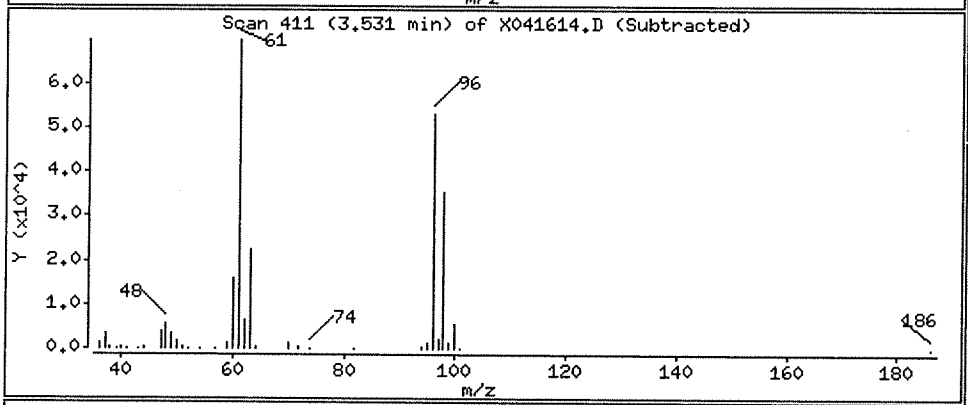
Column diameter: 0.18

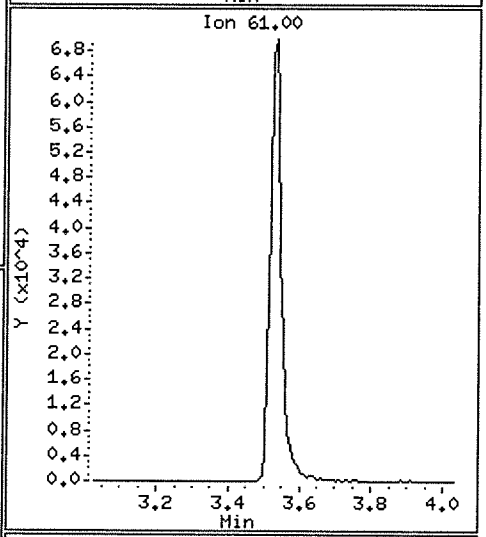
27 cis-1,2-Dichloroethene

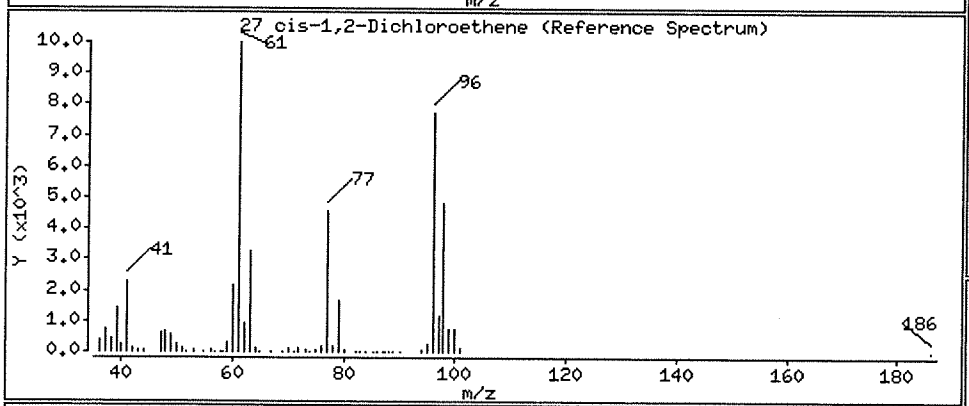
Concentration: 207.64 ug/l

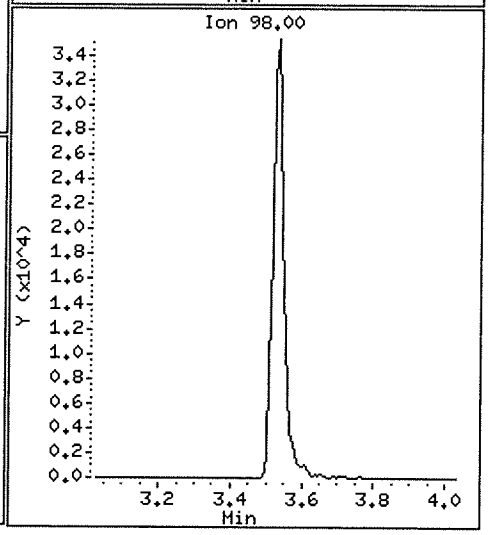


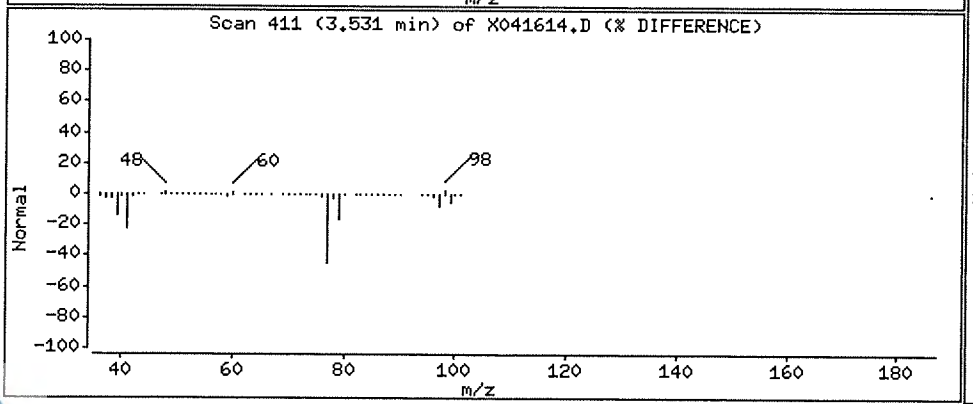












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210416.b\X041614.D

Date : 16-APR-2021 14:55

Client ID: HS21040695-15

Instrument: voa6.i

Sample Info: HS21040695-15;HS21040695-15;;;

Purge Volume: 5.0

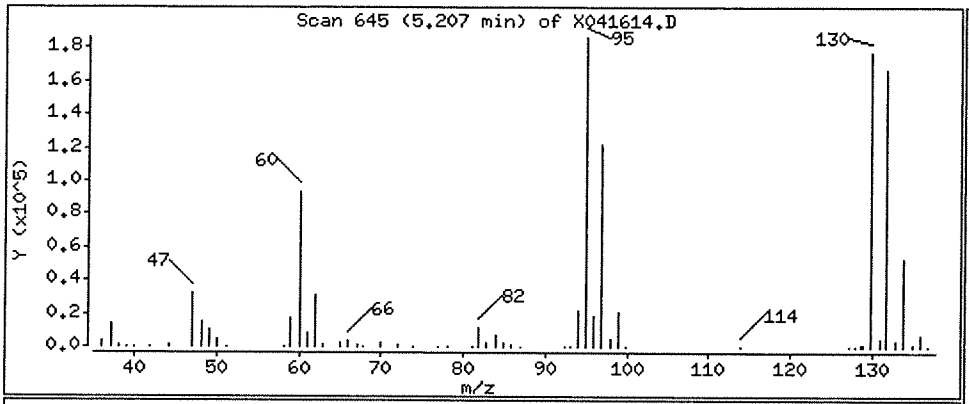
Operator: PC

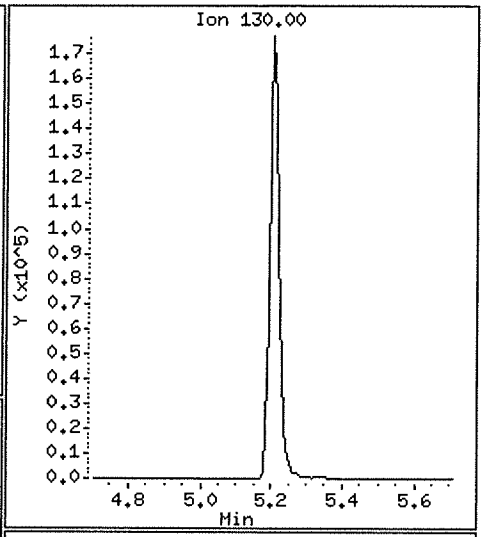
Column phase: DB624

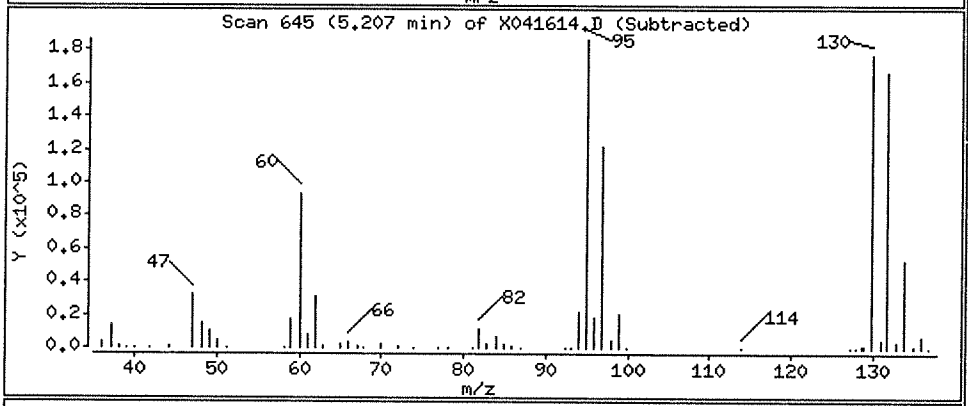
Column diameter: 0.18

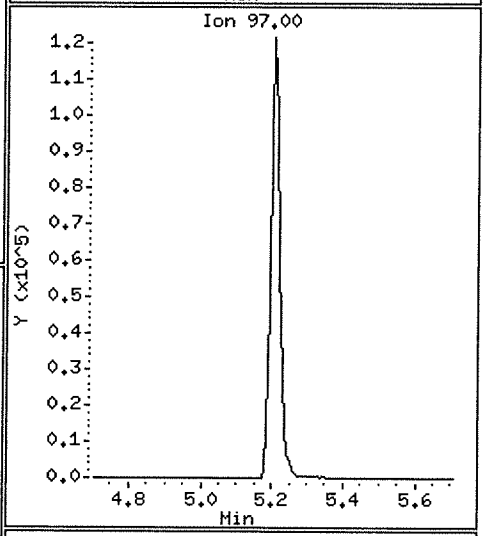
38 Trichloroethene

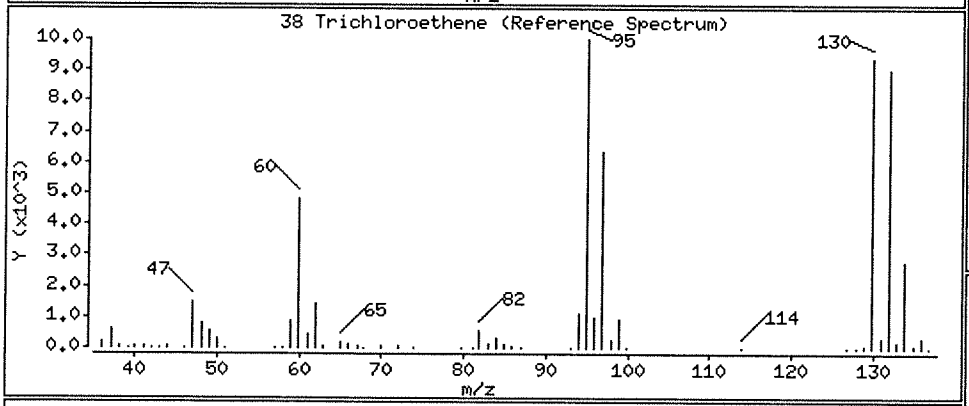
Concentration: 642.56 ug/l

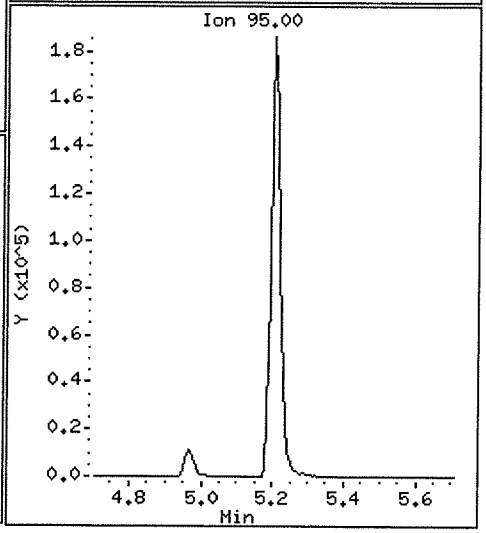


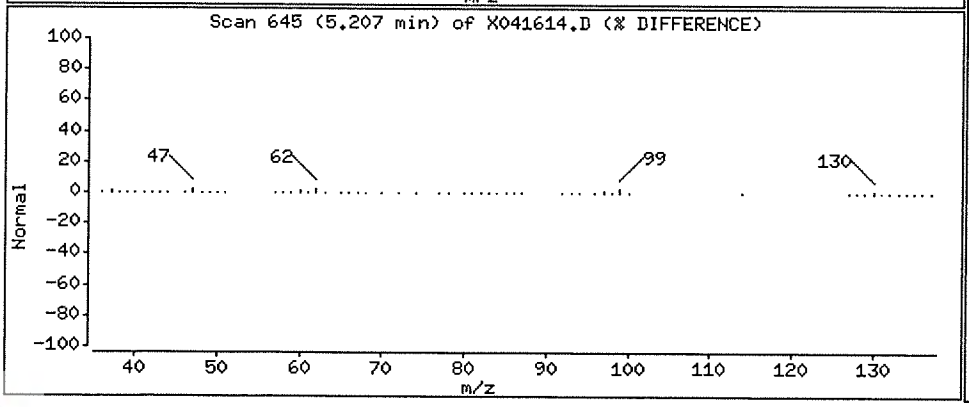












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210416.b\X041614.D

Date : 16-APR-2021 14:55

Client ID: HS21040695-15

Instrument: voa6.i

Sample Info: HS21040695-15;HS21040695-15;;;

Purge Volume: 5.0

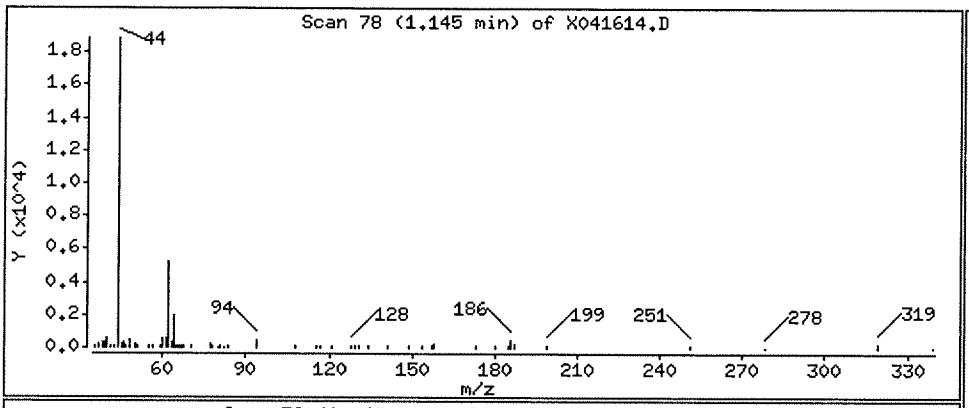
Operator: PC

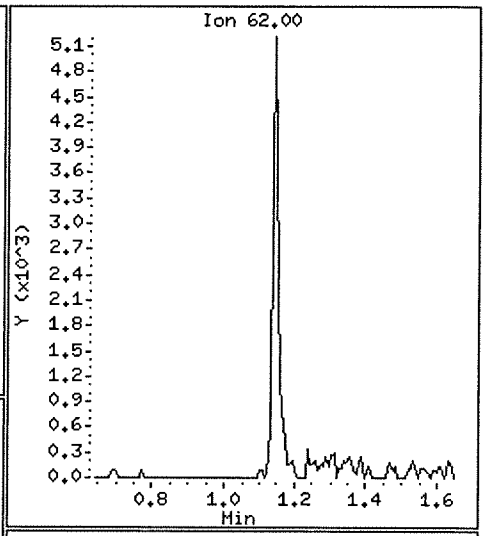
Column phase: DB624

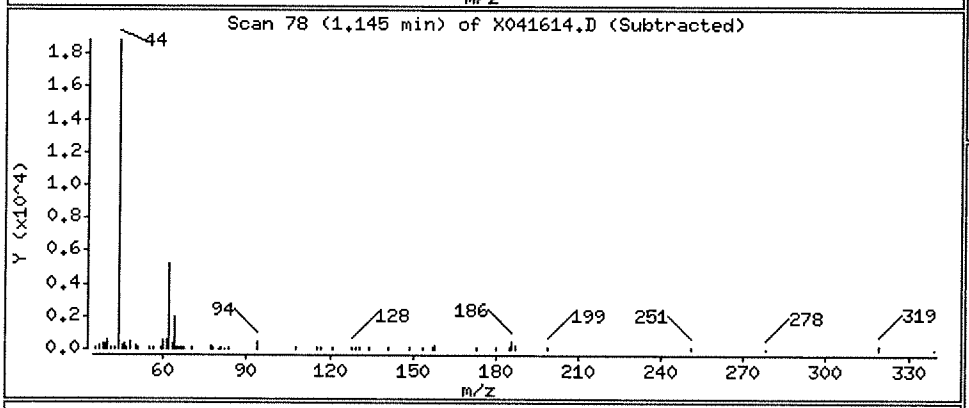
Column diameter: 0.18

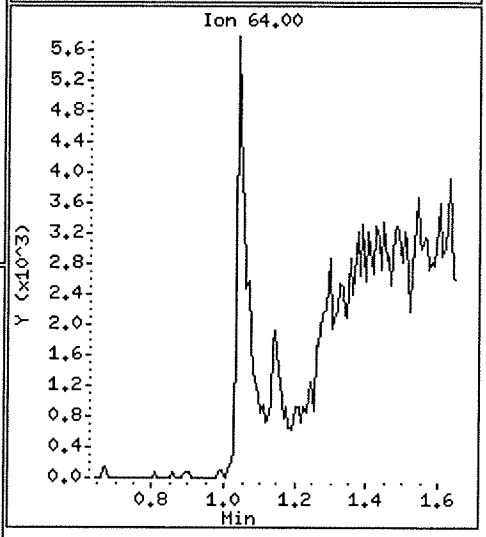
5 Vinyl Chloride

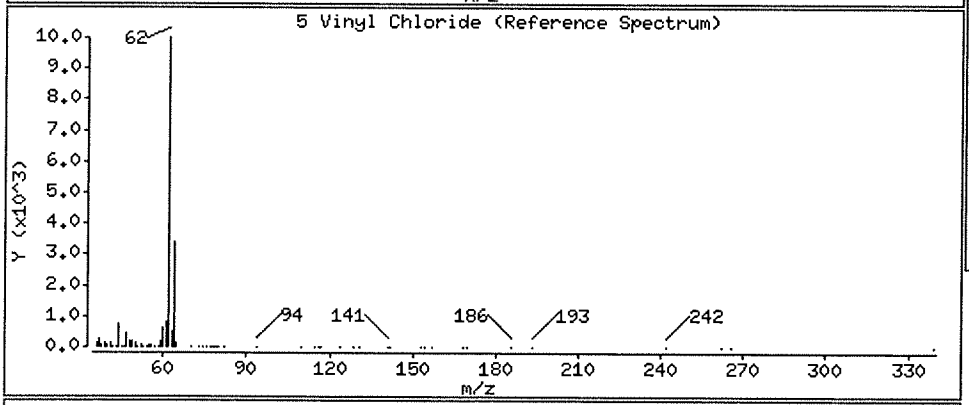
Concentration: 8.79 ug/l

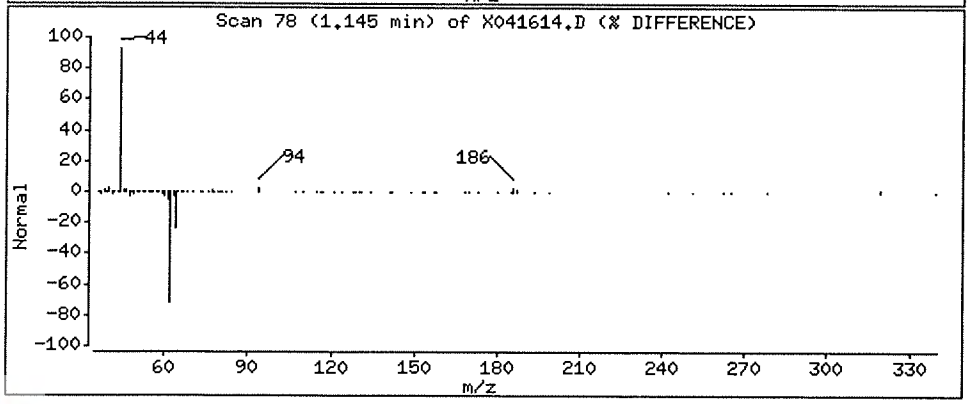












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210416.b\X041616.D Page 1
Report Date: 04-May-2021 12:16

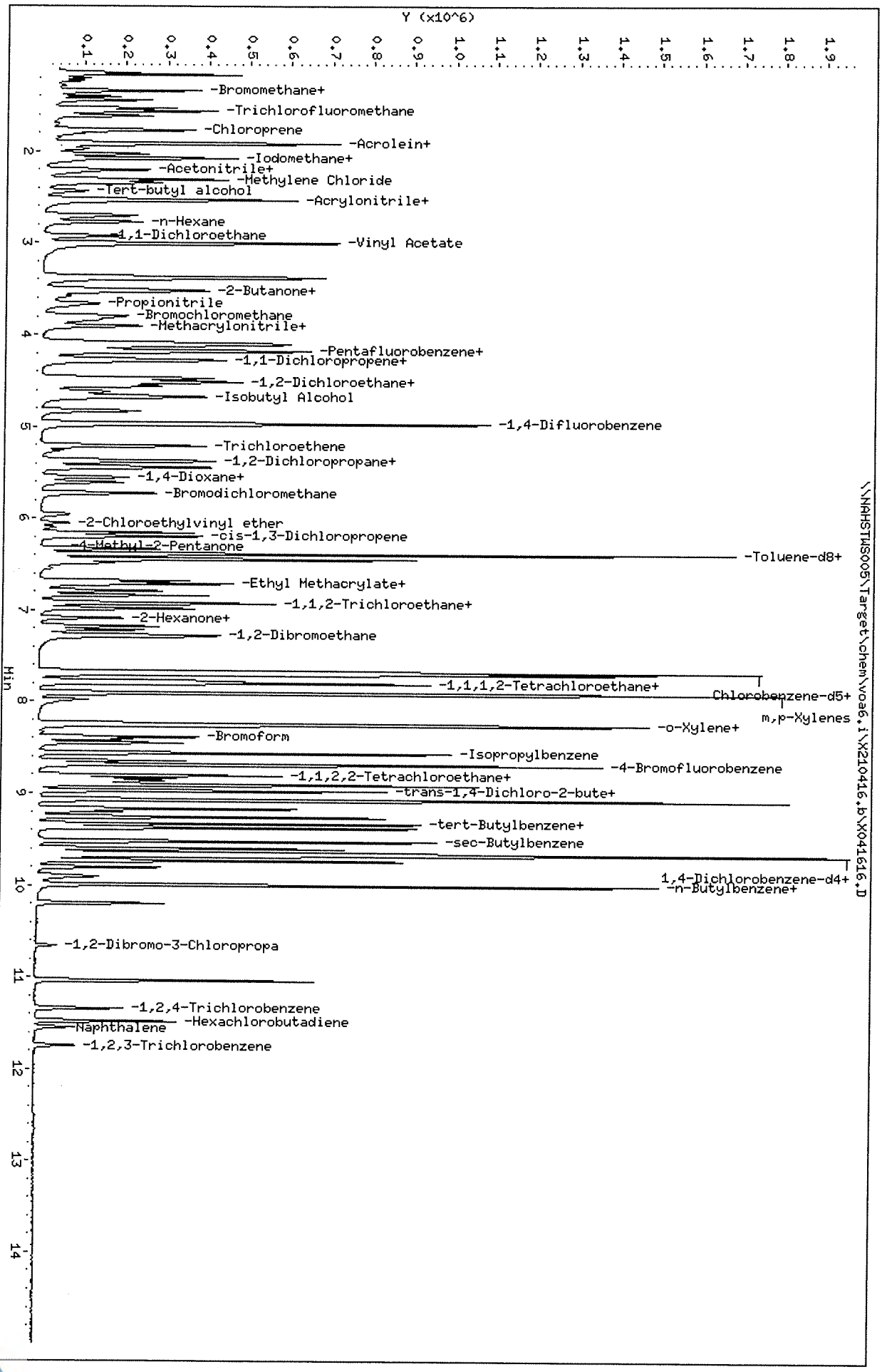
ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X210416.b\X041616.D
Lab Smp Id: HS21040768-09MS Client Smp ID: HS21040768-09MS
Inj Date : 16-APR-2021 15:37
Operator : PC Inst ID: voa6.i
Smp Info : HS21040768-09MS;HS21040768-09MS;3;;MS
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X210416.b\8260W.m
Meth Date : 04-May-2021 12:16 voa6.i Quant Type: ISTD
Cal Date : 02-APR-2021 13:20 Cal File: X040208.D
Als bottle: 16 QC Sample: MS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBI_short1.sub
Target Version: 4.14
Processing Host: NAHSTW7066

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
*	1 Pentafluorobenzene	168	4.182	4.182	(1.000)	467720	50.0000	
*	36 1,4-Difluorobenzene	114	4.963	4.970	(1.000)	758598	50.0000	
*	47 Chlorobenzene-d5	117	7.671	7.670	(1.000)	706341	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	329772	50.0000	
$	30 Dibromofluoromethane	113	4.103	4.096	(0.981)	258059	46.8911	46.89
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	332526	50.3958	50.39
$	48 Toluene-d8	98	6.388	6.388	(0.833)	950975	52.2905	52.29
$	69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	353301	52.0848	52.08
	53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	87364	21.2921	21.29
	11 1,1-Dichloroethene	96	1.919	1.919	(0.459)	134591	20.2097	20.20
	33 1,2-Dichloroethane	62	4.555	4.555	(0.918)	164186	20.4476	20.44
	27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	116023	20.2927	20.29
	17 Methylene Chloride	84	2.305	2.305	(0.551)	100529	20.7000	20.70
	38 Trichloroethene	130	5.206	5.206	(1.049)	124150	23.9068	23.90
	5 Vinyl Chloride	62	1.145	1.145	(0.274)	142517	20.3246	20.32



Data File: \\NAHSTWS005\Target\chem\voa6,i\X210416,b\X041616,D
Date : 16-APR-2021 15:37
Client ID: HS21040768-09MS
Sample Info: HS21040768-09MS;HS21040768-09MS;3;;MS
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6,i
Operator: PC
Column diameter: 0.18

Data File: \\NAHSTWS005\Target\chem\voa6.i\X210416.b\X041617.D Page 1
Report Date: 04-May-2021 12:16

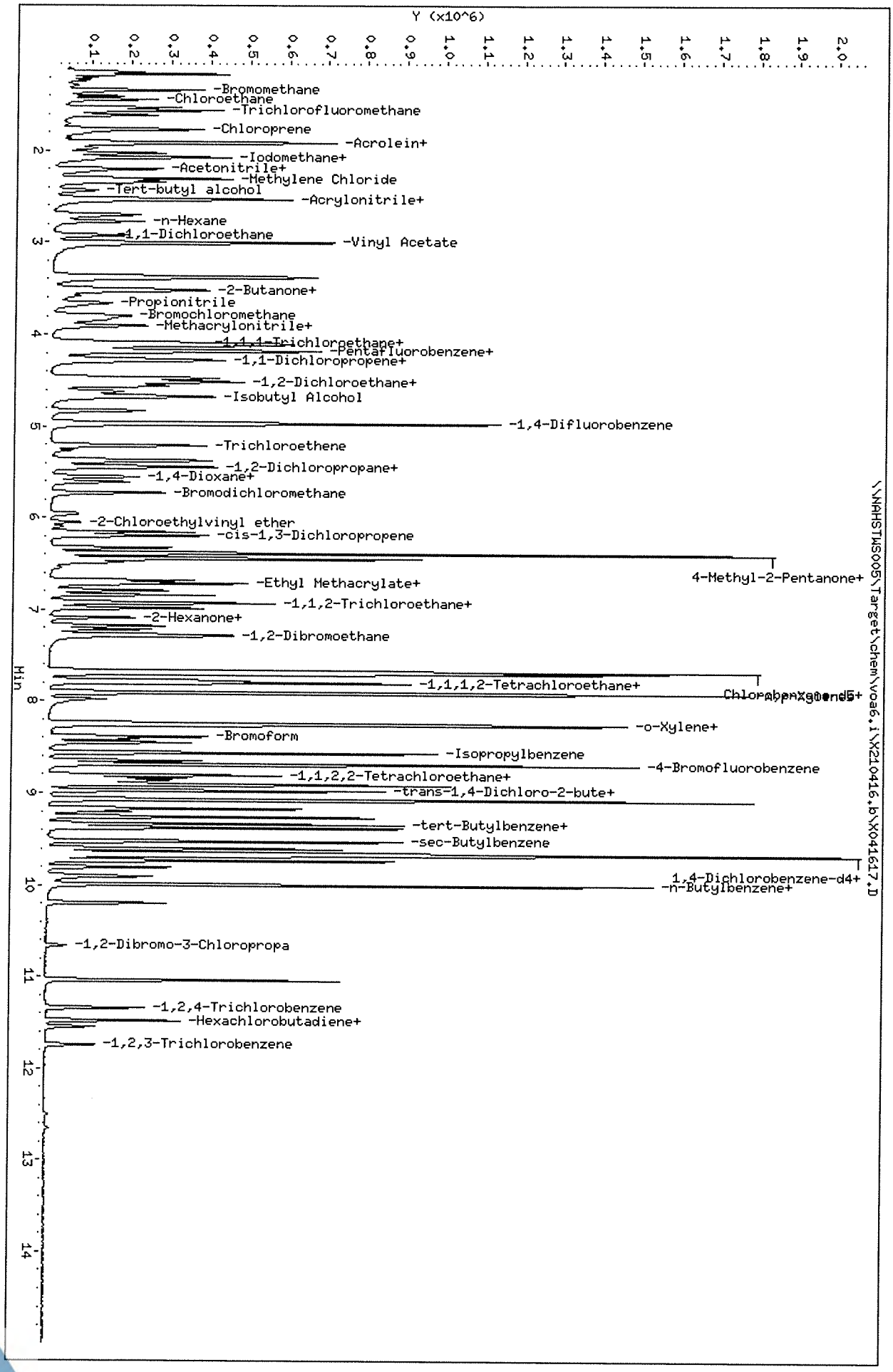
ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X210416.b\X041617.D
Lab Smp Id: HS21040768-09MSD Client Smp ID: HS21040768-09MSD
Inj Date : 16-APR-2021 15:58
Operator : PC Inst ID: voa6.i
Smp Info : HS21040768-09MSD;HS21040768-09MSD;3;;MSD
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X210416.b\8260W.m
Meth Date : 04-May-2021 12:16 voa6.i Quant Type: ISTD
Cal Date : 02-APR-2021 13:20 Cal File: X040208.D
Als bottle: 16 QC Sample: MSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBI_short1.sub
Target Version: 4.14
Processing Host: NAHSTW7066

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
*	1 Pentafluorobenzene	168	4.182	4.182	(1.000)	494434	50.0000	
*	36 1,4-Difluorobenzene	114	4.963	4.970	(1.000)	796641	50.0000	
*	47 Chlorobenzene-d5	117	7.671	7.670	(1.000)	765001	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	361014	50.0000	
$	30 Dibromofluoromethane	113	4.103	4.096	(0.981)	269361	46.3058	46.30
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	345132	49.4890	49.48
$	48 Toluene-d8	98	6.389	6.388	(0.833)	1003189	50.9800	50.97
$	69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	381285	51.9060	51.90
	53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	88720	19.9645	19.96
	11 1,1-Dichloroethene	96	1.912	1.919	(0.457)	140890	20.0126	20.01
	33 1,2-Dichloroethane	62	4.555	4.555	(0.918)	169979	20.1582	20.15
	27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	114845	19.0014	19.00
	17 Methylene Chloride	84	2.306	2.305	(0.551)	103642	20.2247	20.22
	38 Trichloroethene	130	5.207	5.206	(1.049)	118881	21.7990	21.79
	5 Vinyl Chloride	62	1.145	1.145	(0.274)	147682	19.9233	19.92



Data File: \\NAHSTWS005\Target\chem\voa6.i\X210416.b\X041617.D
Date : 16-APR-2021 15:58
Client ID: HS21040768-09HSD
Sample Info: HS21040768-09HSD;HS21040768-09HSD;3;;HSD
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\NAHSTWS005\Target\chem\voa6.i\X210416.b\X041619.D Page 1
Report Date: 04-May-2021 12:21

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X210416.b\X041619.D
Lab Smp Id: HS21040695-11 Client Smp ID: HS21040695-11
Inj Date : 16-APR-2021 16:40
Operator : PC Inst ID: voa6.i
Smp Info : HS21040695-11;HS21040695-11;;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X210416.b\8260W.m
Meth Date : 04-May-2021 12:21 Qin.Xu Quant Type: ISTD
Cal Date : 02-APR-2021 13:20 Cal File: X040208.D
Als bottle: 18
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBI_short1.sub
Target Version: 4.14
Processing Host: NAHSTW7066

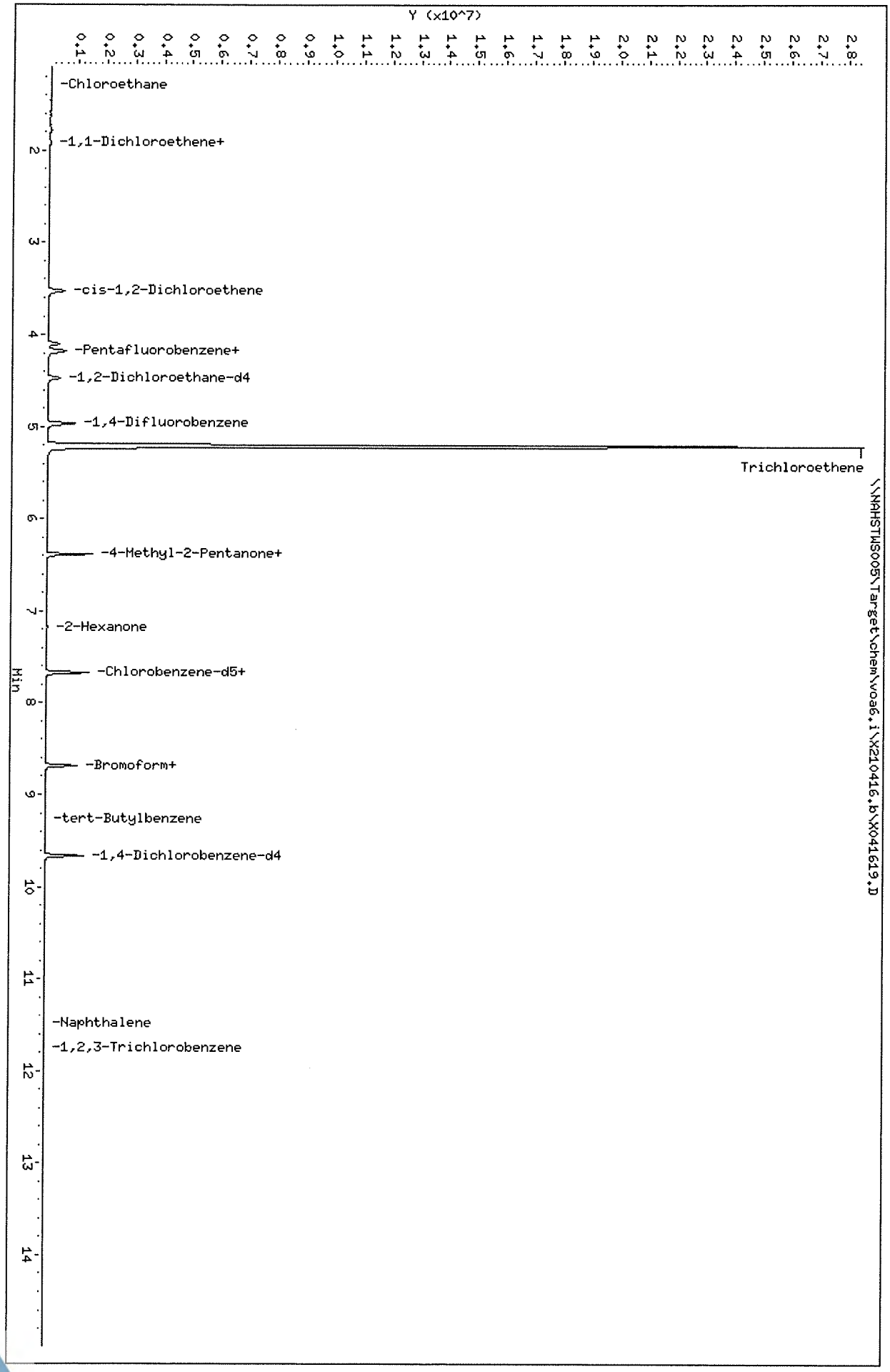
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	464134	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.963	(1.000)	758364	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.670	(1.000)	652338	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	290112	50.0000	
$ 30 Dibromofluoromethane	113	4.096	4.096	(0.979)	254682	46.6374	46.63
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	323560	49.4253	49.42
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	906680	53.9221	53.92
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	305111	48.8113	48.81
11 1,1-Dichloroethene	96	1.919	1.919	(0.459)	6942	1.05044	1.05(a)
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	278425	49.0734	49.07
38 Trichloroethene	130	5.206	5.206	(1.048)	8294335	1597.68	1597.68(A)

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).
A - Target compound detected but, quantitated amount exceeded maximum amount.



Data File: \\NAHSTWS005\Target\chem\voa6.i\X210416.b\X041619.D
Date : 16-APR-2021 16:40
Client ID: HS21040695-11
Sample Info: HS21040695-11;HS21040695-11;;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\NAHSTWS005\Target\chem\voa6.i\X210416.b\X041619.D

Date : 16-APR-2021 16:40

Client ID: HS21040695-11

Instrument: voa6.i

Sample Info: HS21040695-11;HS21040695-11;;;

Purge Volume: 5.0

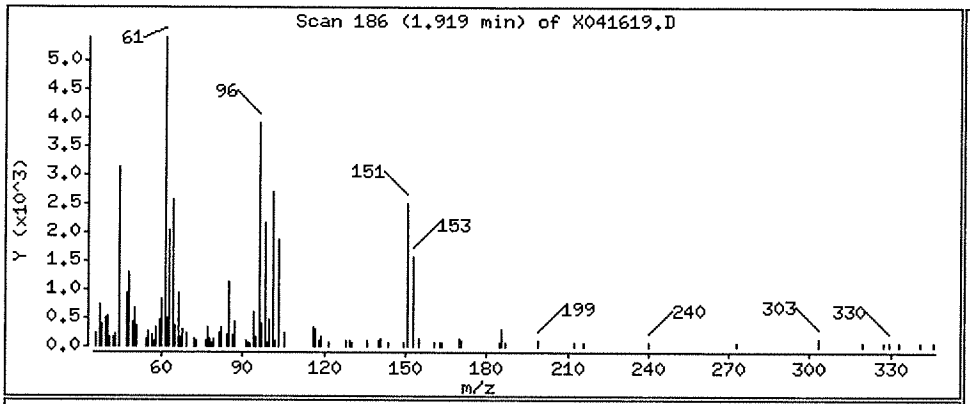
Operator: PC

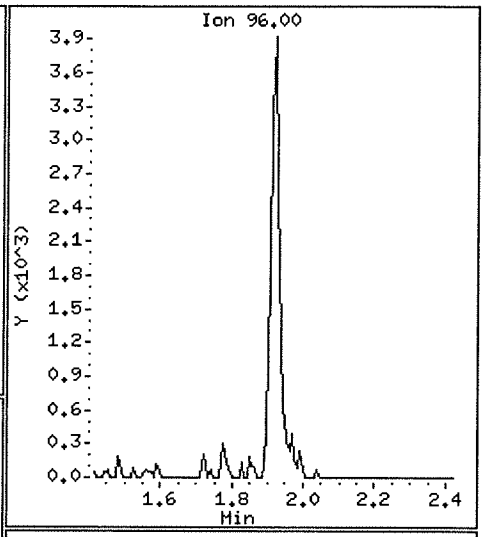
Column phase: DB624

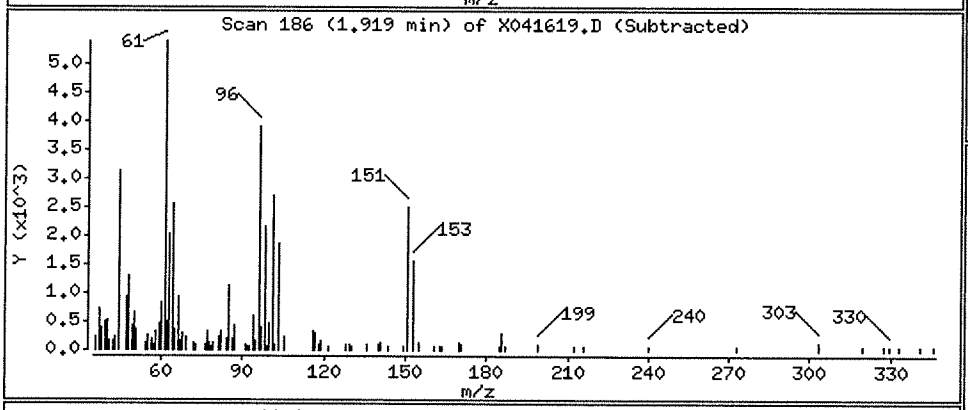
Column diameter: 0.18

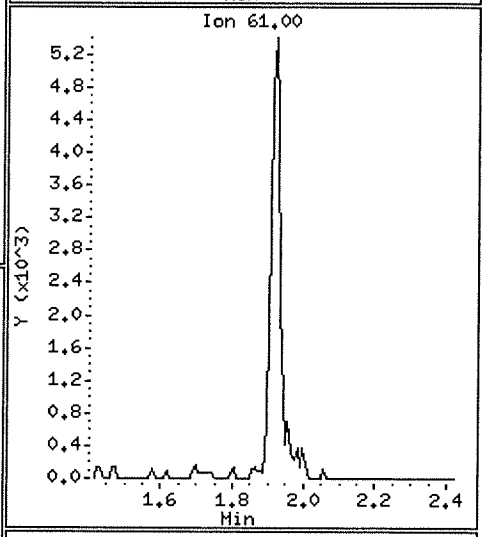
11 1,1-Dichloroethene

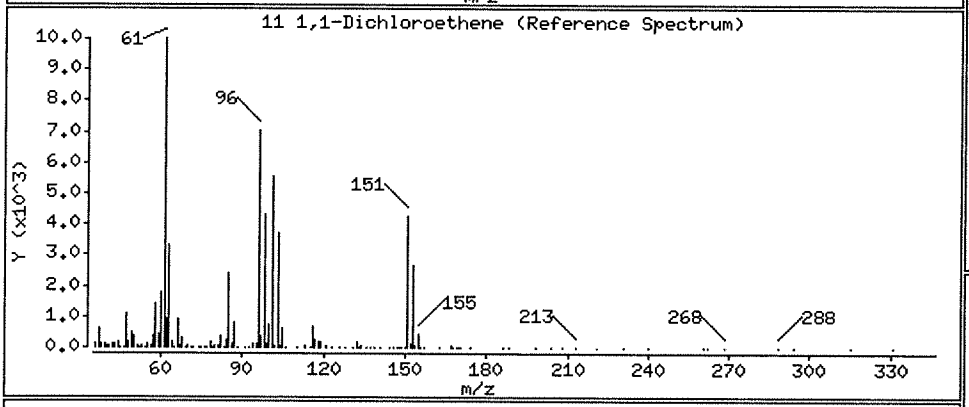
Concentration: 1.05 ug/l

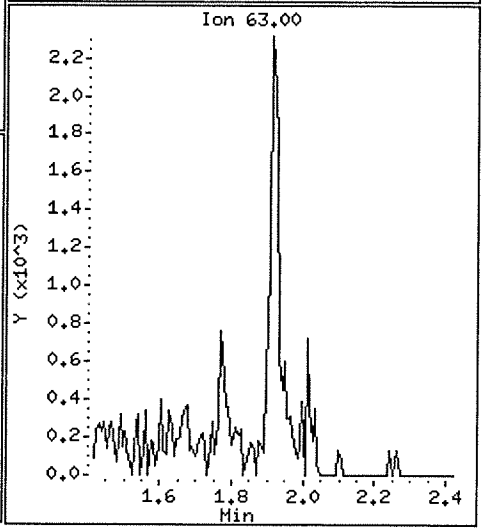


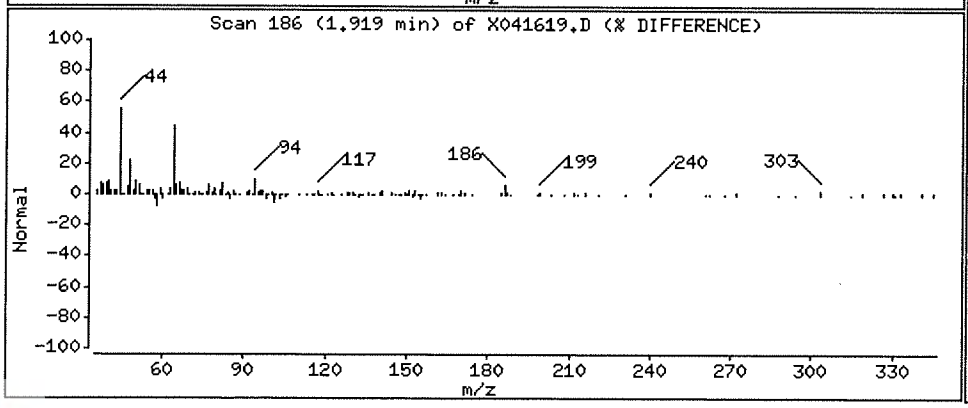












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210416.b\X041619.D

Date : 16-APR-2021 16:40

Client ID: HS21040695-11

Instrument: voa6.i

Sample Info: HS21040695-11;HS21040695-11;;;

Purge Volume: 5.0

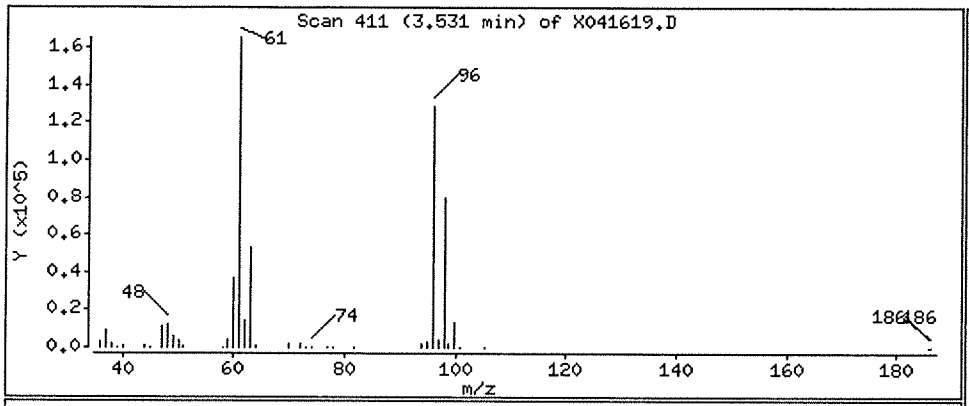
Operator: PC

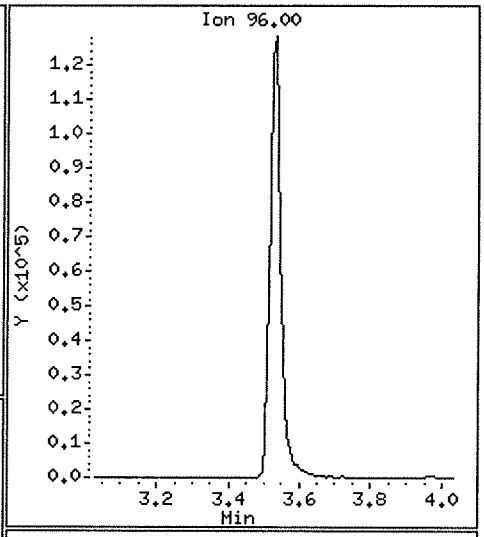
Column phase: DB624

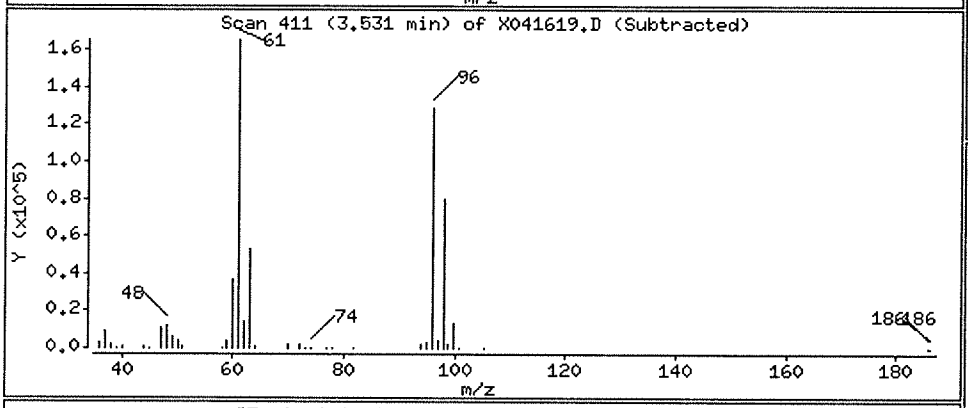
Column diameter: 0.18

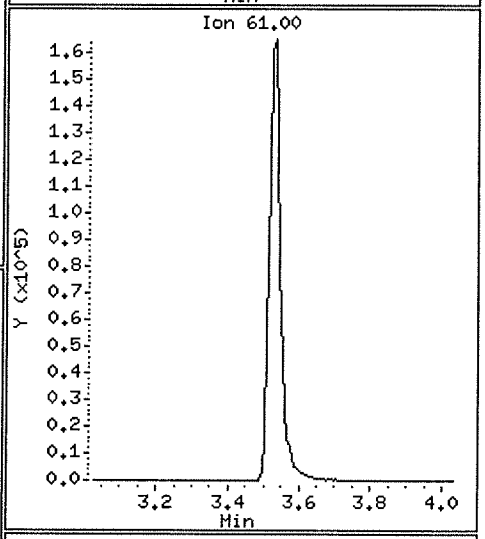
27 cis-1,2-Dichloroethene

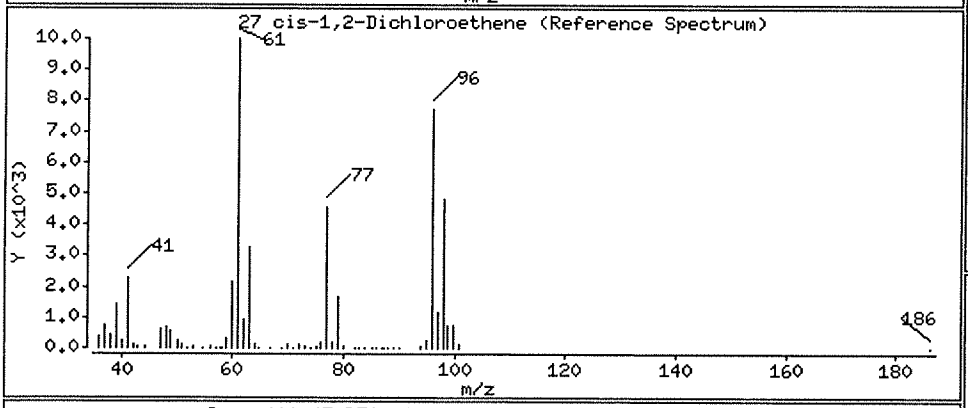
Concentration: 49.07 ug/l

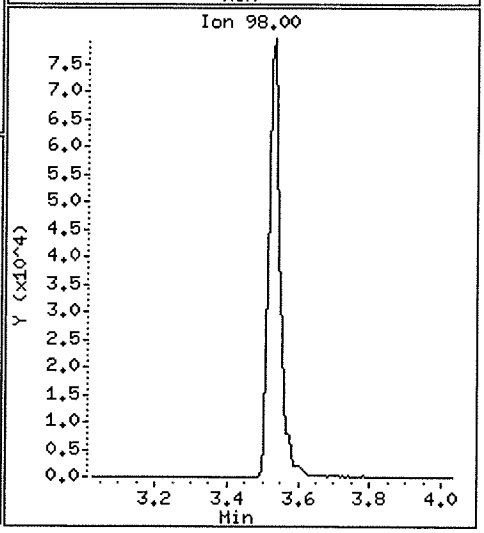


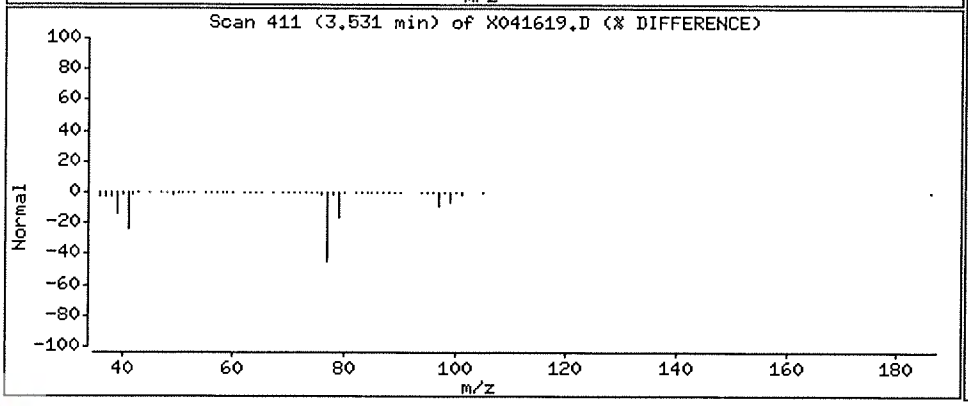












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210416.b\X041619.D

Date : 16-APR-2021 16:40

Client ID: HS21040695-11

Instrument: voa6.i

Sample Info: HS21040695-11;HS21040695-11;;;

Purge Volume: 5.0

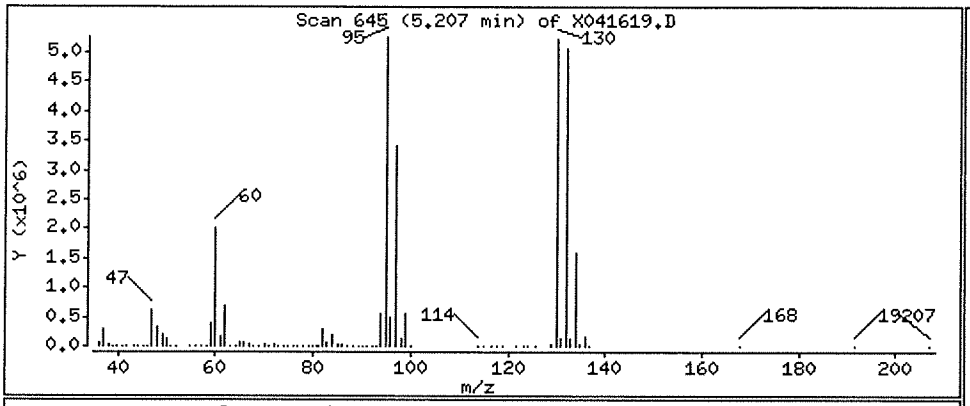
Operator: PC

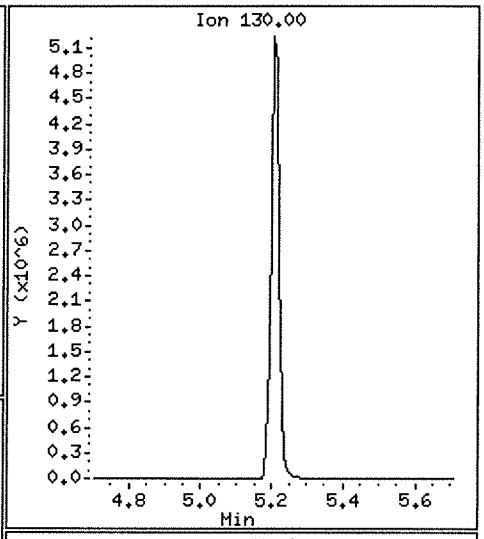
Column phase: DB624

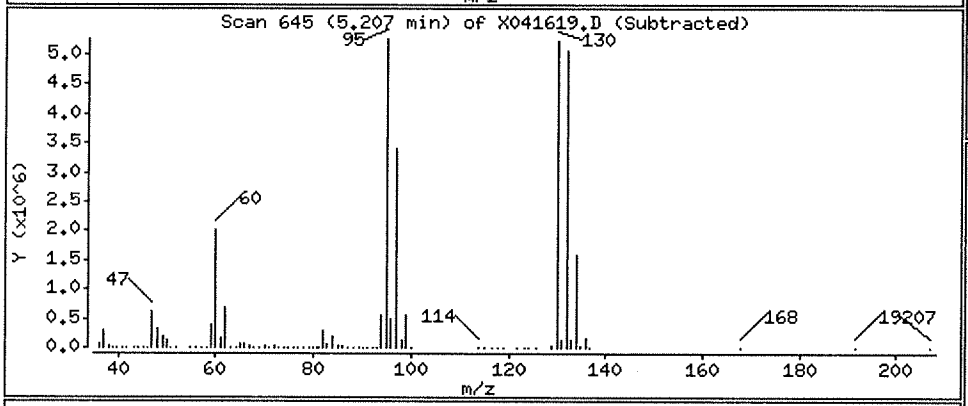
Column diameter: 0.18

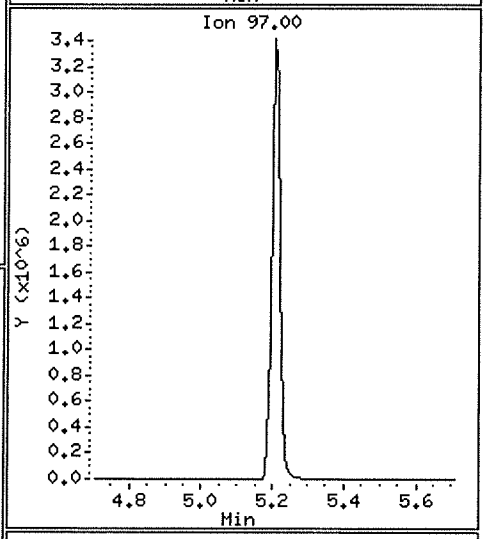
38 Trichloroethene

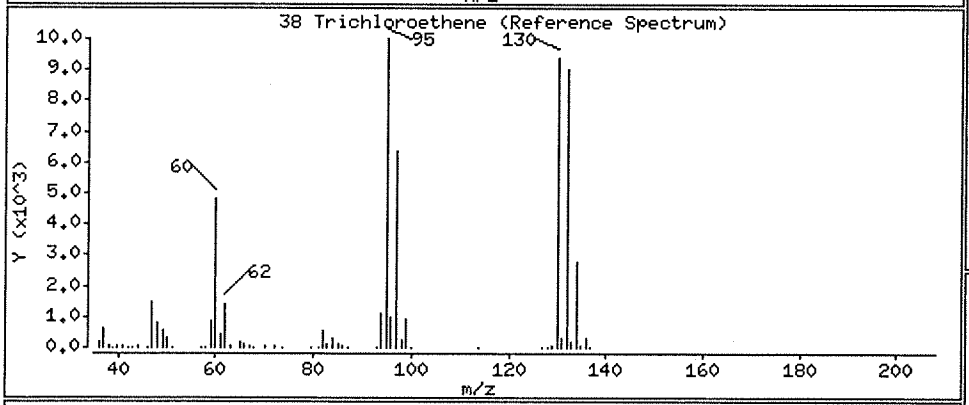
Concentration: 1597.68 ug/l

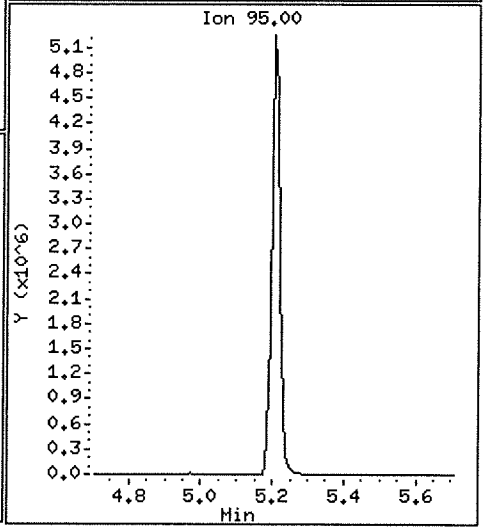


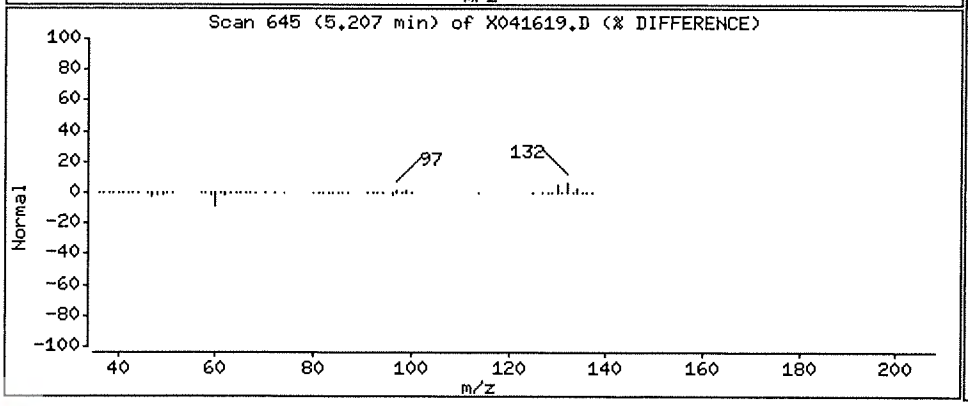












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210416.b\X041620.D Page 1
Report Date: 04-May-2021 12:21

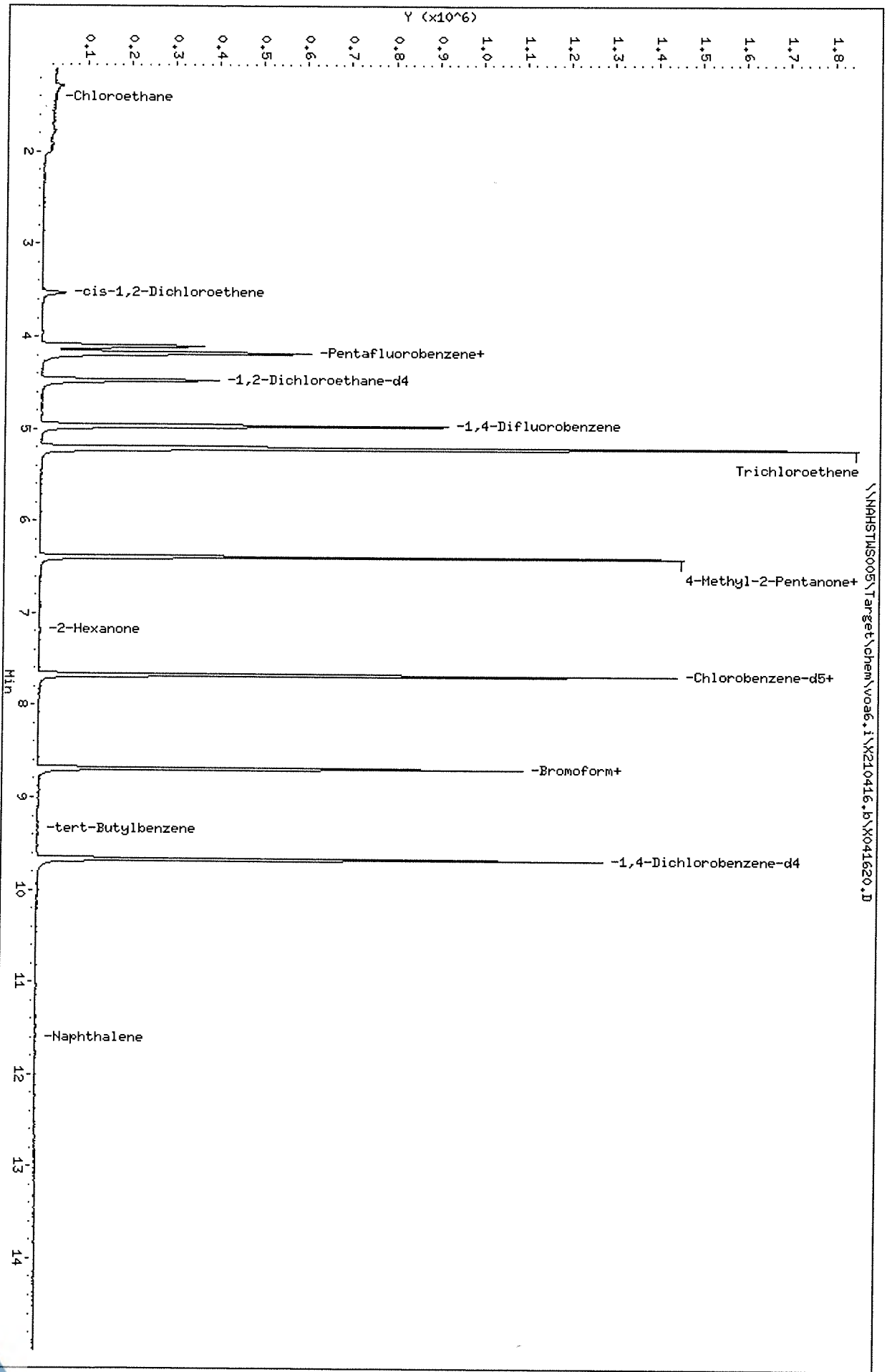
ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X210416.b\X041620.D
Lab Smp Id: HS21040695-11 Client Smp ID: HS21040695-11
Inj Date : 16-APR-2021 17:01
Operator : PC Inst ID: voa6.i
Smp Info : HS21040695-11;HS21040695-11;;;
Misc Info : HS18090001;WATER;0;10;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X210416.b\8260W.m
Meth Date : 04-May-2021 12:21 Qin.Xu Quant Type: ISTD
Cal Date : 02-APR-2021 13:20 Cal File: X040208.D
Als bottle: 19
Dil Factor: 10.00000
Integrator: HP RTE Compound Sublist: CBI_short1.sub
Target Version: 4.14
Processing Host: NAHSTW7066

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	10.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
*	1 Pentafluorobenzene	168	4.182	4.182	(1.000)	458006	50.0000	
*	36 1,4-Difluorobenzene	114	4.970	4.963	(1.000)	738569	50.0000	
*	47 Chlorobenzene-d5	117	7.671	7.670	(1.000)	642718	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	269006	50.0000	
$	30 Dibromofluoromethane	113	4.103	4.096	(0.981)	248597	46.1369	46.13
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	315987	48.9193	48.91
$	48 Toluene-d8	98	6.388	6.388	(0.833)	870383	52.5858	52.58
$	69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	296662	48.1917	48.19
	27 cis-1,2-Dichloroethene	96	3.538	3.530	(0.846)	25455	4.54656	45.46
	38 Trichloroethene	130	5.207	5.206	(1.048)	557795	110.324	1103.24



Data File: \\NAHSTWS005\Target\chem\voa6.i\X210416.b\X041620.D
Date : 16-APR-2021 17:01
Client ID: HS21040695-11
Sample Info: HS21040695-11;HS21040695-11;;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\NAHSTWS005\Target\chem\voa6.i\X210416.b\X041620.D

Date : 16-APR-2021 17:01

Client ID: HS21040695-11

Instrument: voa6.i

Sample Info: HS21040695-11;HS21040695-11;;;

Purge Volume: 5.0

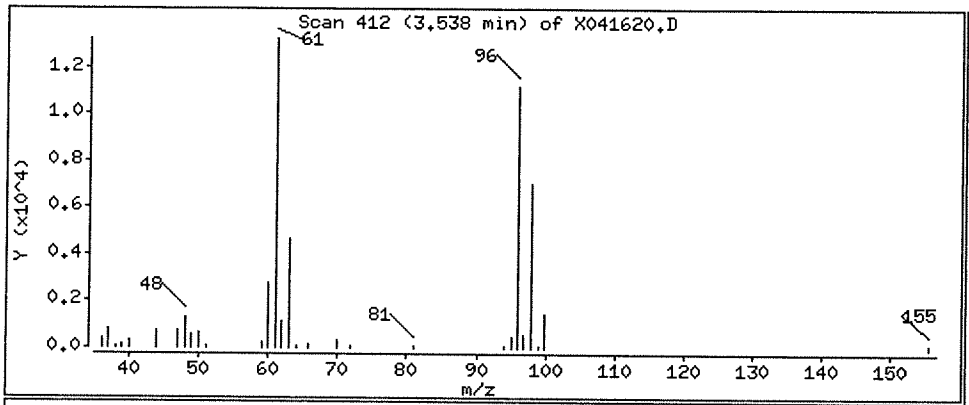
Operator: PC

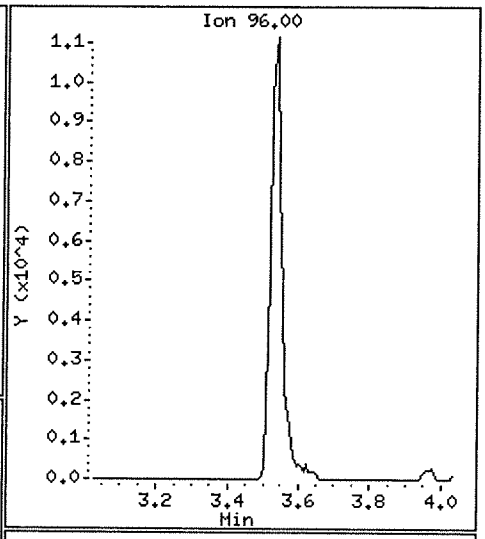
Column phase: DB624

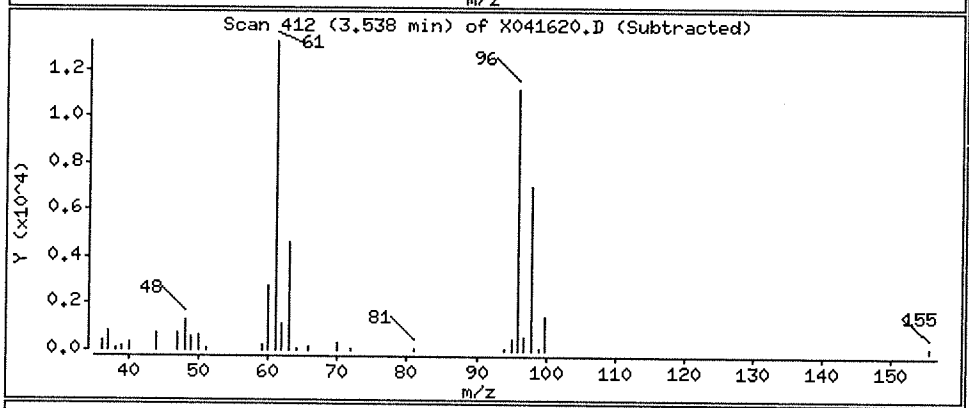
Column diameter: 0.18

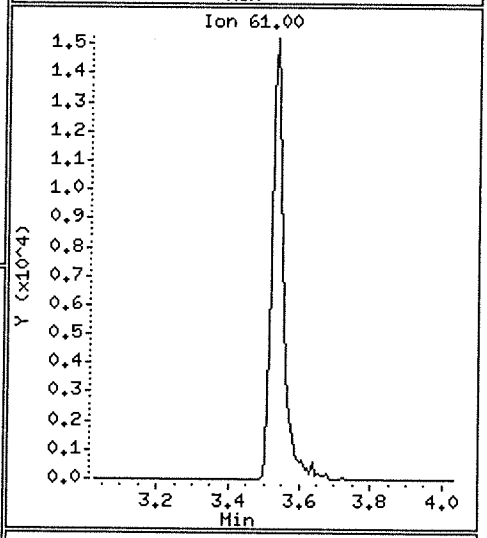
27 cis-1,2-Dichloroethene

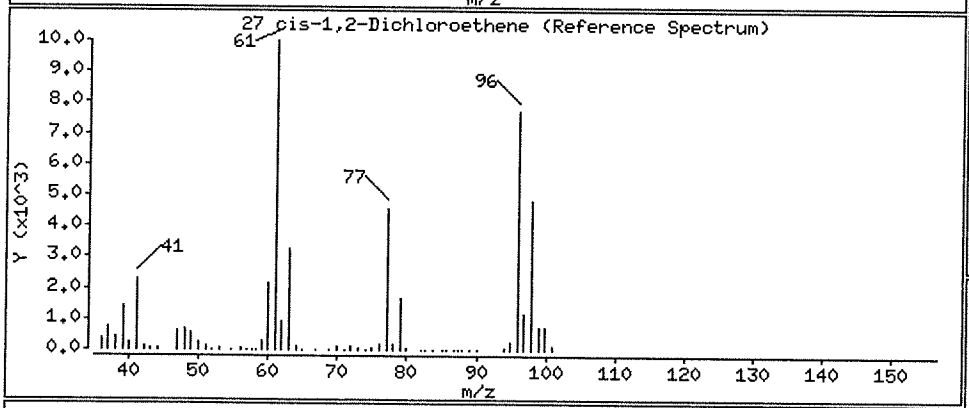
Concentration: 45.46 ug/l

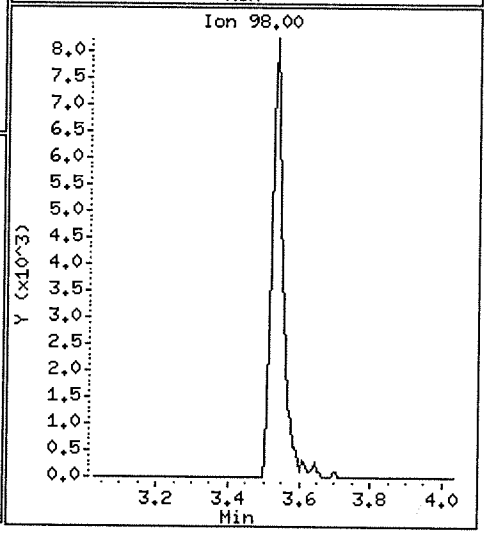


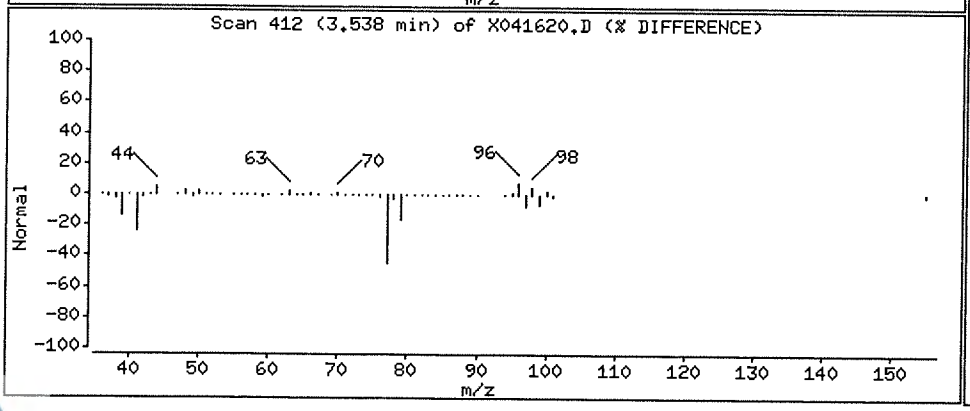












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210416.b\X041620.D

Date : 16-APR-2021 17:01

Client ID: HS21040695-11

Instrument: voa6.i

Sample Info: HS21040695-11;HS21040695-11;;;

Purge Volume: 5.0

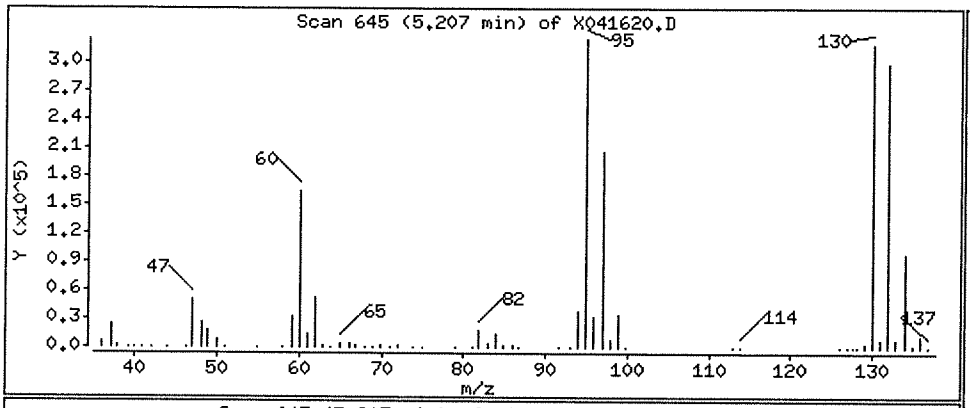
Operator: PC

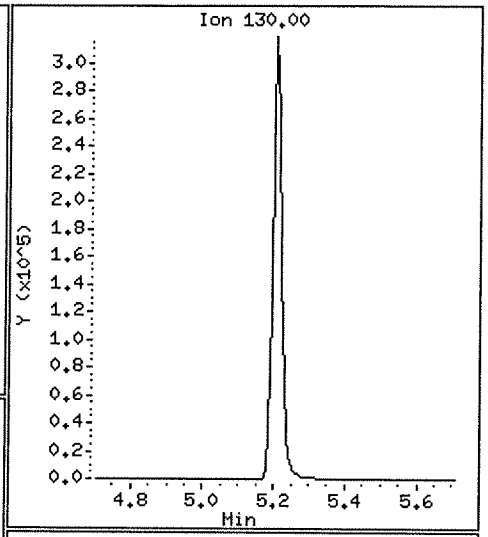
Column phase: DB624

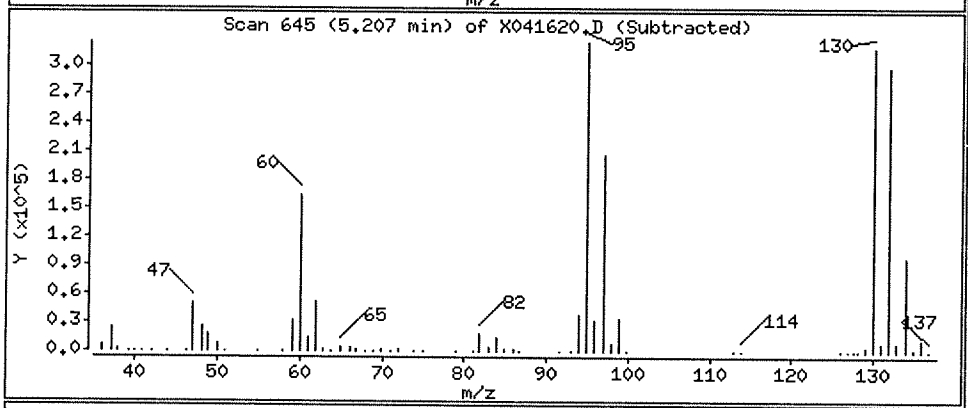
Column diameter: 0.18

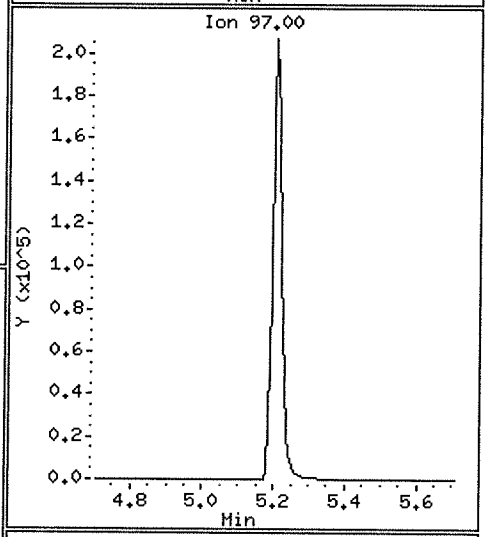
38 Trichloroethene

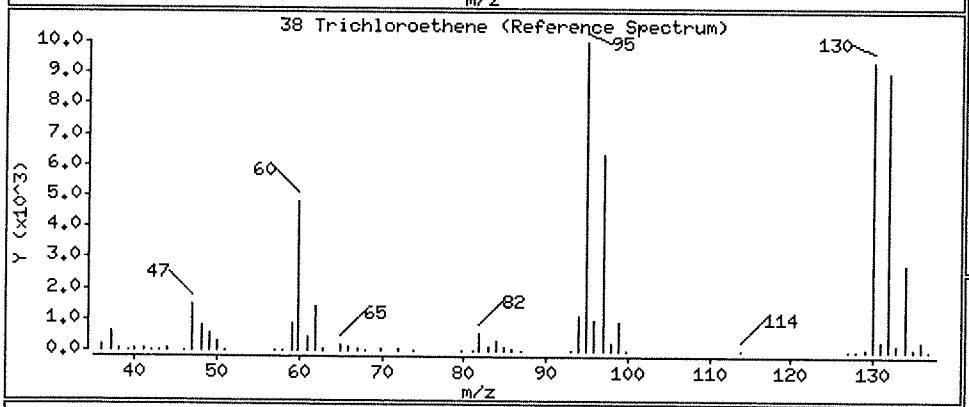
Concentration: 1103.24 ug/l

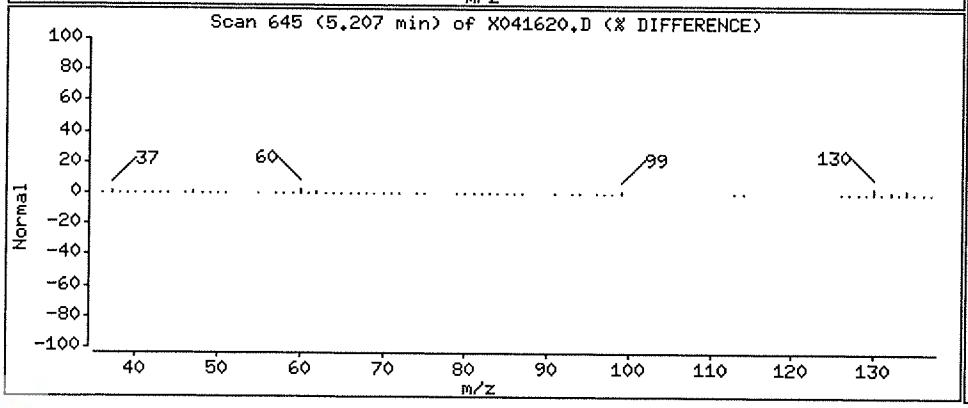


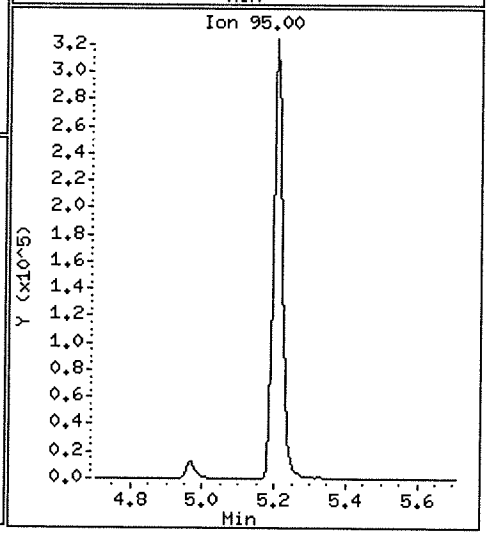












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210416.b\X041621.D Page 1
Report Date: 04-May-2021 12:21

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X210416.b\X041621.D
Lab Smp Id: HS21040695-17 Client Smp ID: HS21040695-17
Inj Date : 16-APR-2021 17:22
Operator : PC Inst ID: voa6.i
Smp Info : HS21040695-17;HS21040695-17;;;
Misc Info : HS18090001;WATER;0;20;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X210416.b\8260W.m
Meth Date : 04-May-2021 12:21 Qin.Xu Quant Type: ISTD
Cal Date : 02-APR-2021 13:20 Cal File: X040208.D
Als bottle: 20
Dil Factor: 20.00000
Integrator: HP RTE Compound Sublist: CBI_short1.sub
Target Version: 4.14
Processing Host: NAHSTW7066

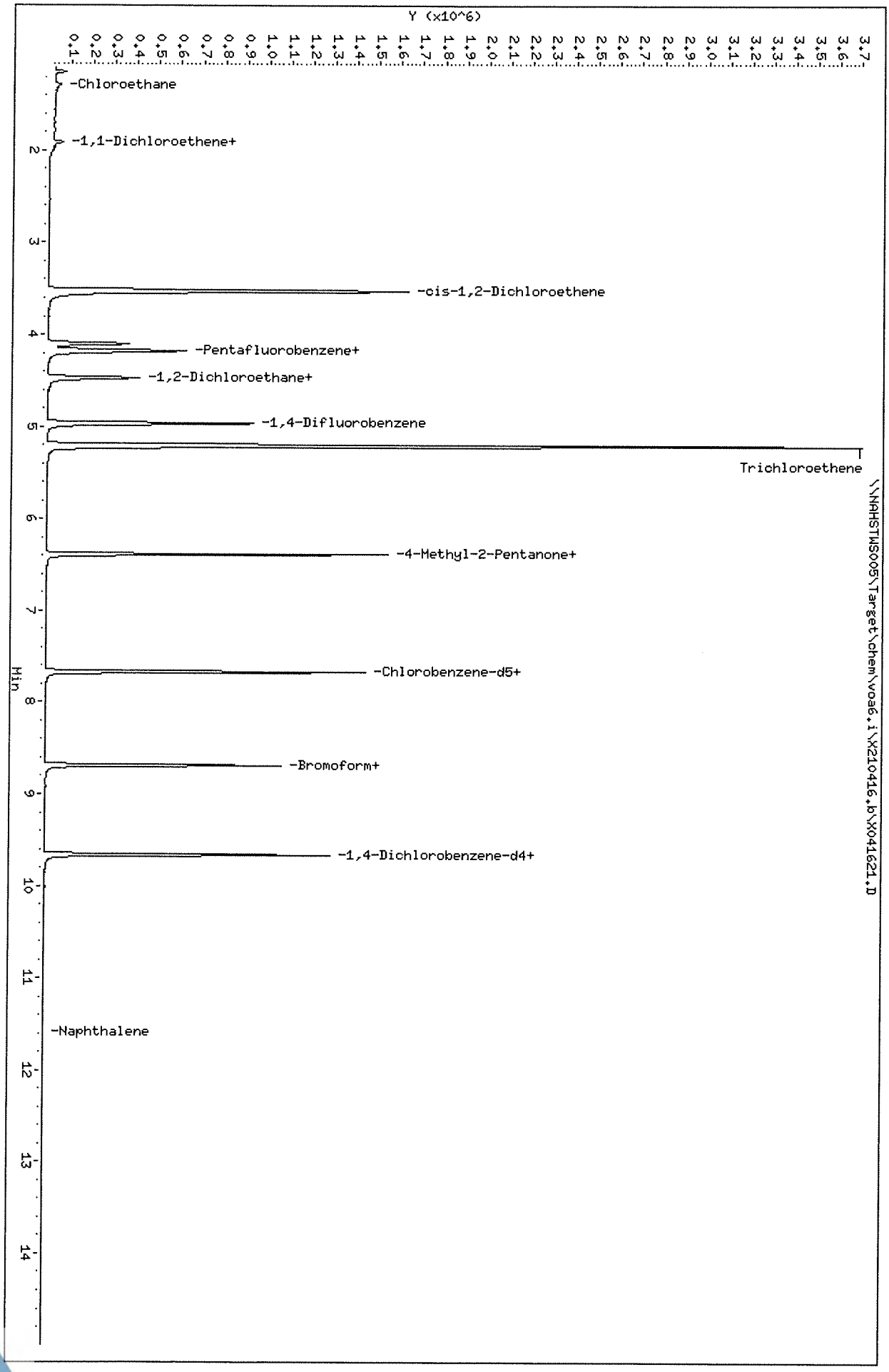
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	20.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	459476	50.0000	
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	749189	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.670	(1.000)	640657	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	284524	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.096	(0.981)	250412	46.3233	46.32
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	323734	49.9480	49.94
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	882978	53.4855	53.48
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	300294	48.9130	48.91
11 1,1-Dichloroethene	96	1.911	1.919	(0.457)	4732	0.72329	14.46(a)
33 1,2-Dichloroethane	62	4.562	4.555	(0.919)	8537	1.07655	21.53(a)
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	827552	147.338	2946.75
38 Trichloroethene	130	5.206	5.206	(1.049)	1052647	205.247	4104.94(A)
5 Vinyl Chloride	62	1.145	1.145	(0.274)	38097	5.53056	110.61

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).
A - Target compound detected but, quantitated amount exceeded maximum amount.



Data File: \\NAHSTWS005\Target\chem\voa6.i\X210416.b\X041621.D
Date : 16-APR-2021 17:22
Client ID: HS21040695-17
Sample Info: HS21040695-17;HS21040695-17;;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\NAHSTWS005\Target\chem\voa6.i\X210416.b\X041621.D

Date : 16-APR-2021 17:22

Client ID: HS21040695-17

Instrument: voa6.i

Sample Info: HS21040695-17;HS21040695-17;;;

Purge Volume: 5.0

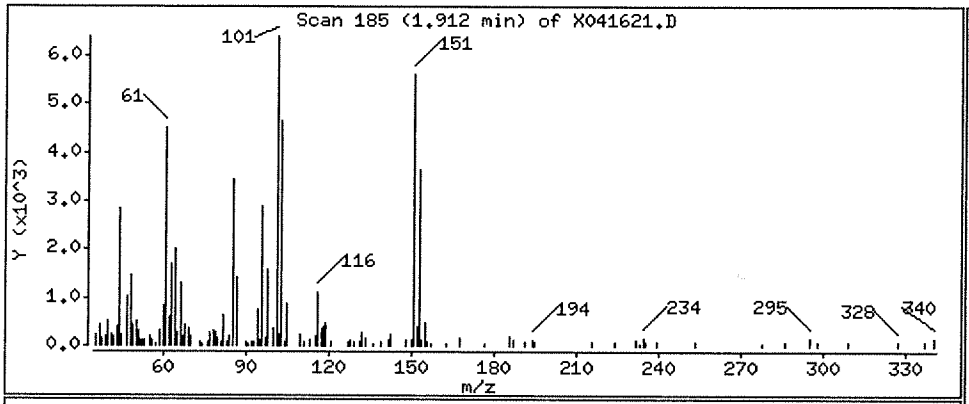
Operator: PC

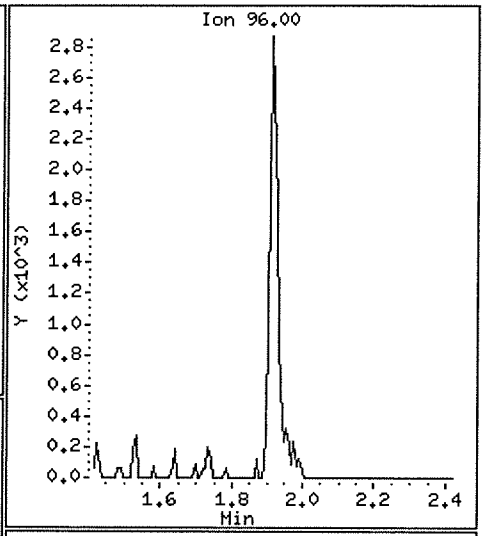
Column phase: DB624

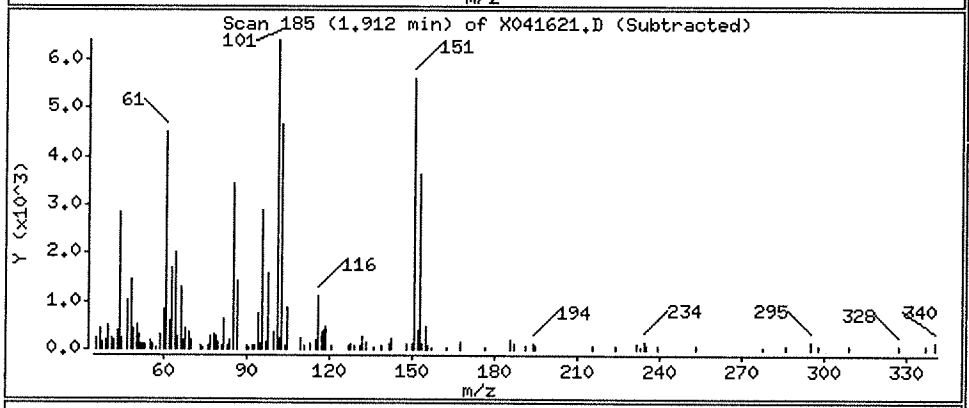
Column diameter: 0.18

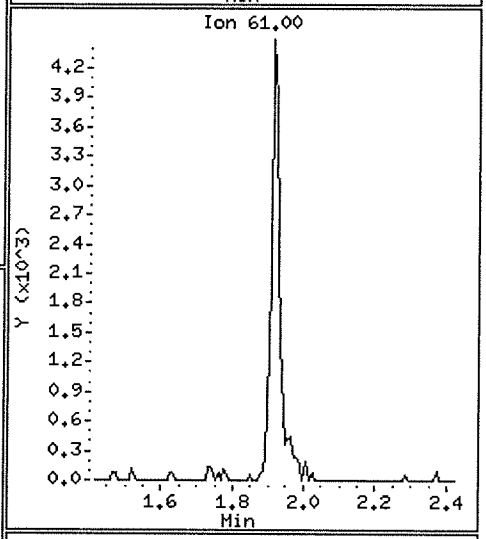
11 1,1-Dichloroethene

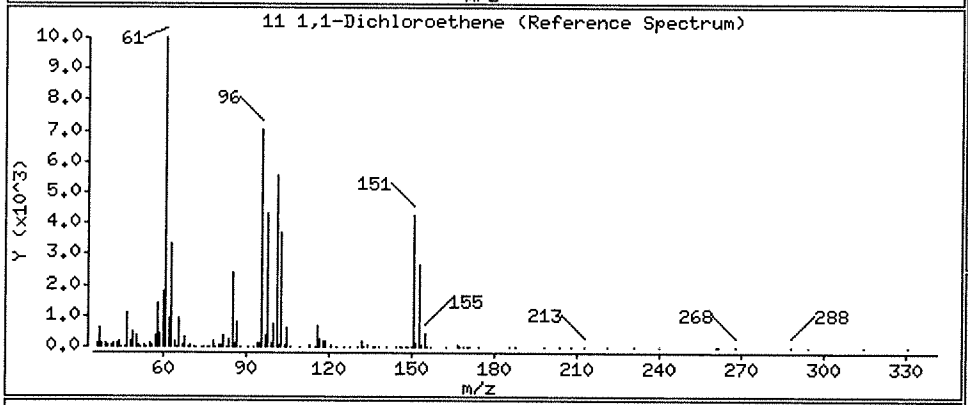
Concentration: 14.46 ug/l

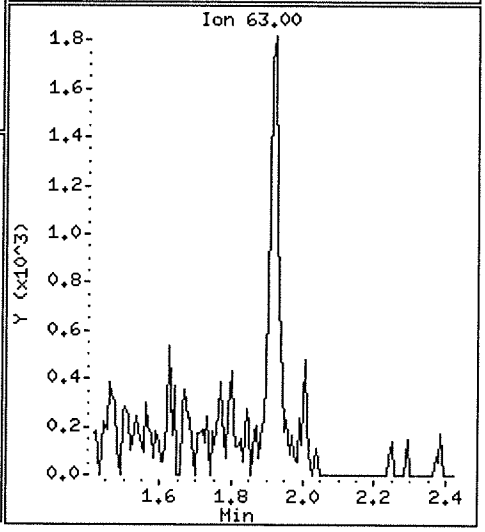


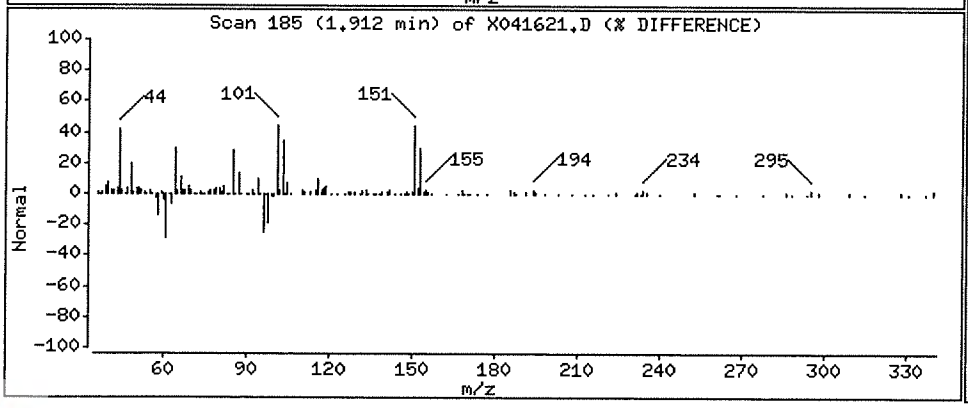












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210416.b\X041621.D

Date : 16-APR-2021 17:22

Client ID: HS21040695-17

Instrument: voa6.i

Sample Info: HS21040695-17;HS21040695-17;;;

Purge Volume: 5.0

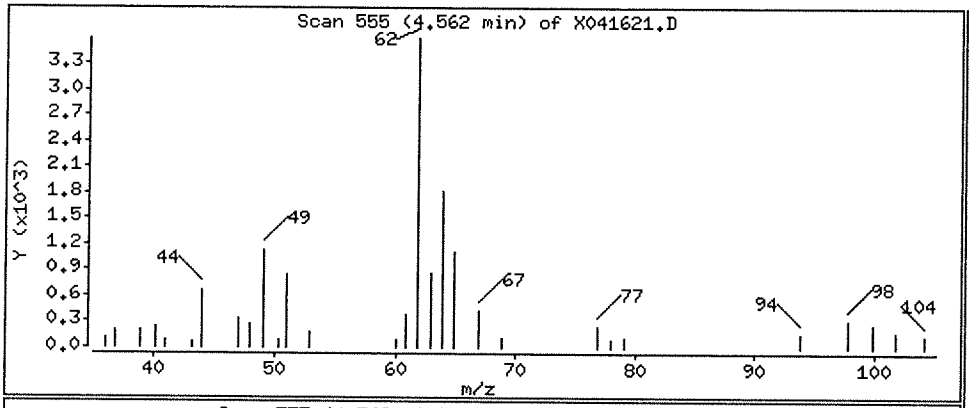
Operator: PC

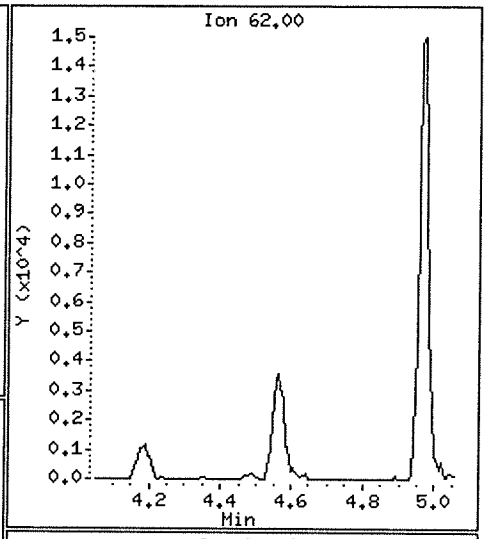
Column phase: DB624

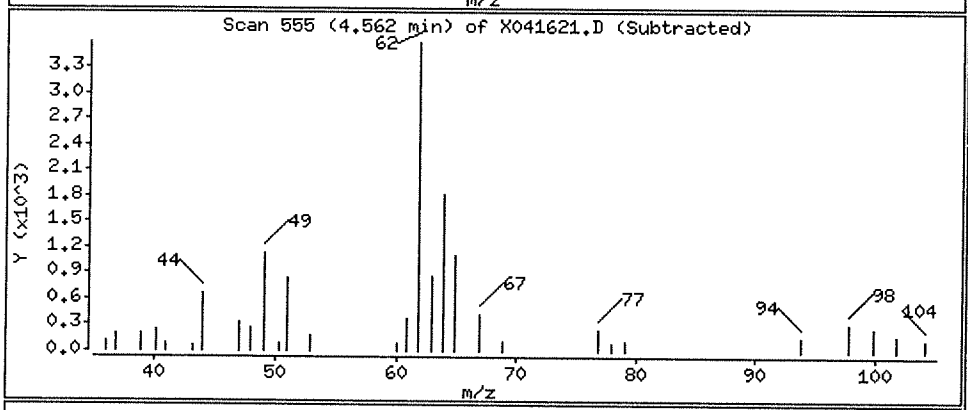
Column diameter: 0.18

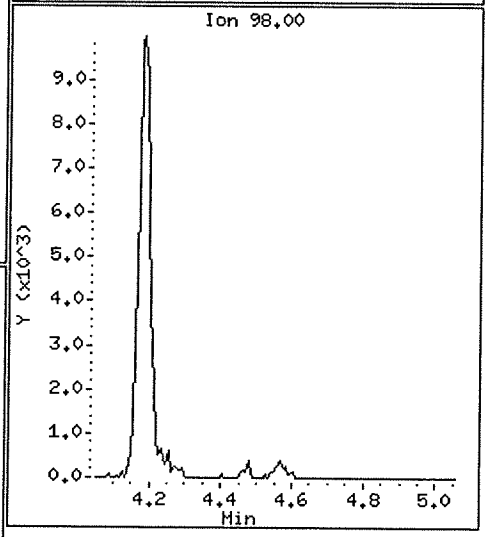
33 1,2-Dichloroethane

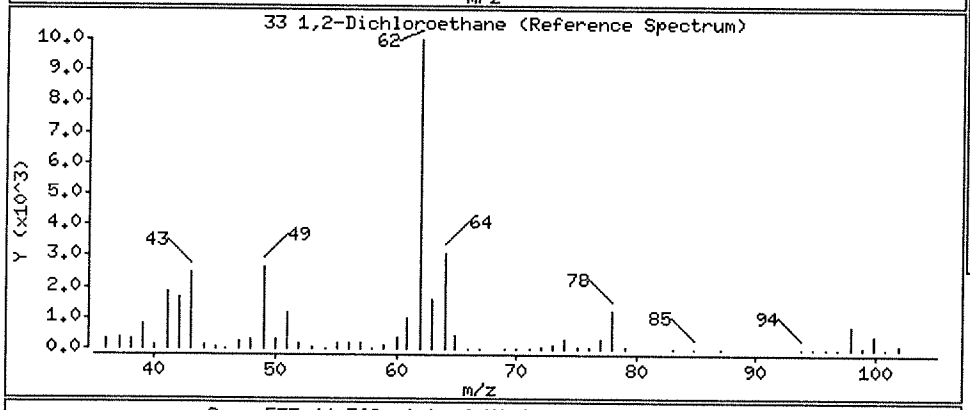
Concentration: 21.53 ug/l

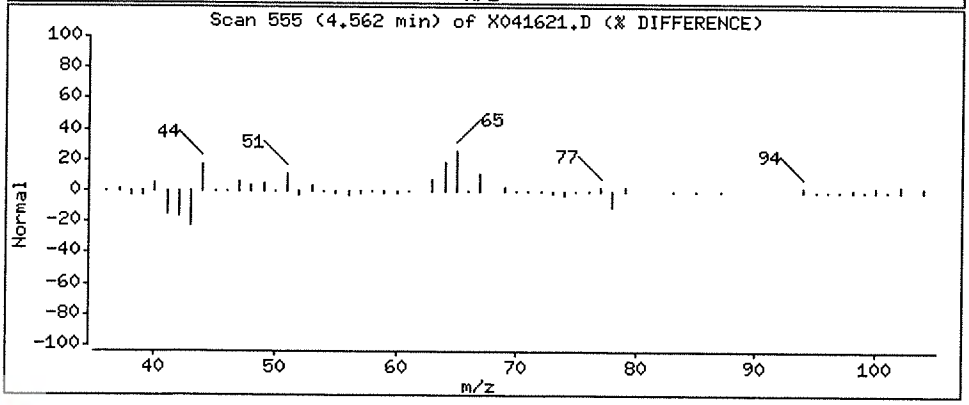












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210416.b\X041621.D

Date : 16-APR-2021 17:22

Client ID: HS21040695-17

Instrument: voa6.i

Sample Info: HS21040695-17;HS21040695-17;;;

Purge Volume: 5.0

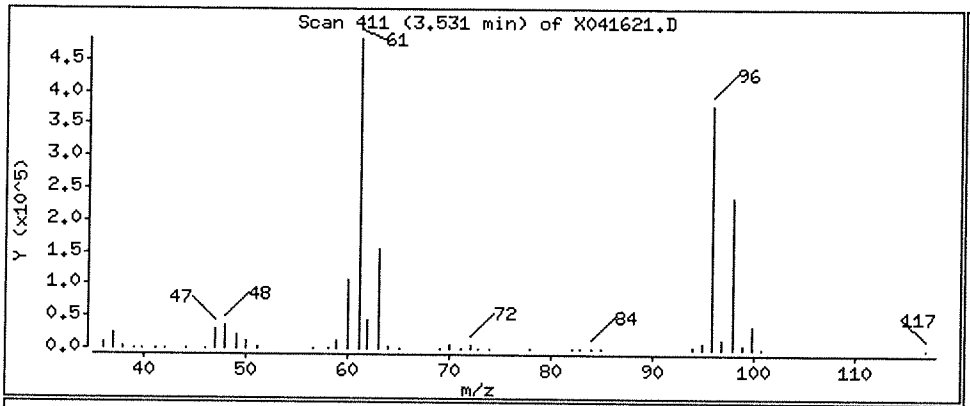
Operator: PC

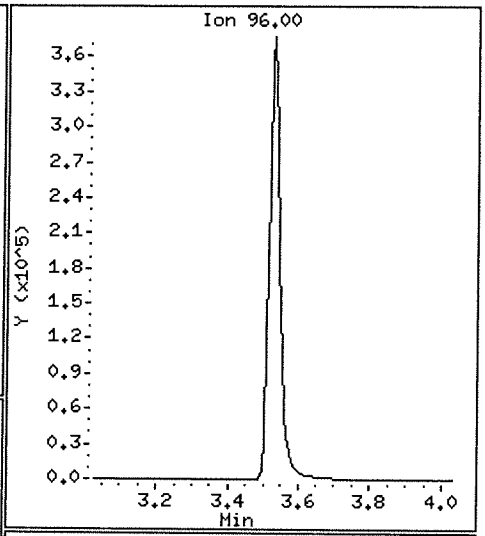
Column phase: DB624

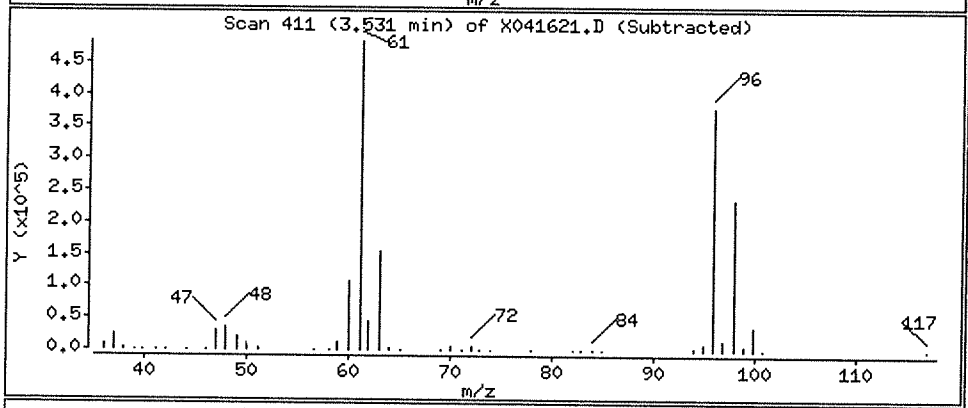
Column diameter: 0.18

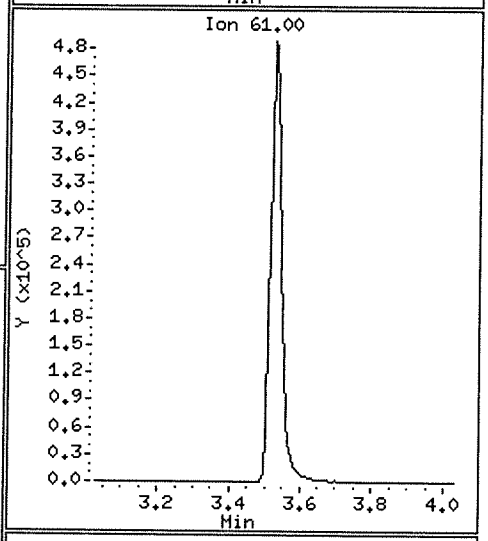
27 cis-1,2-Dichloroethene

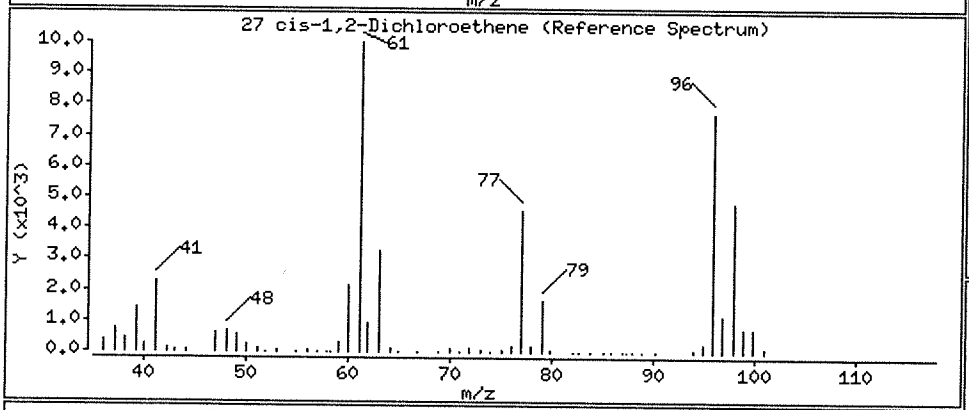
Concentration: 2946.75 ug/l

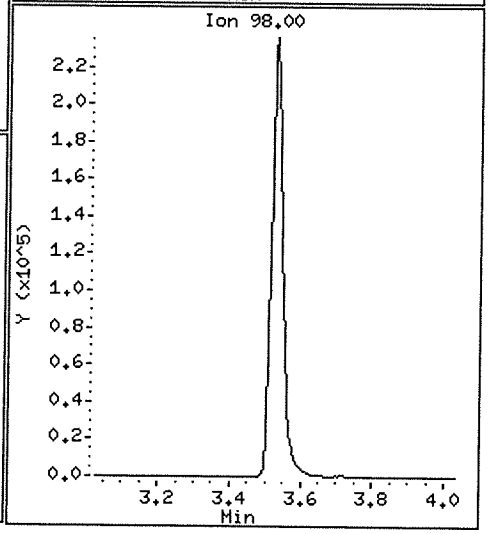


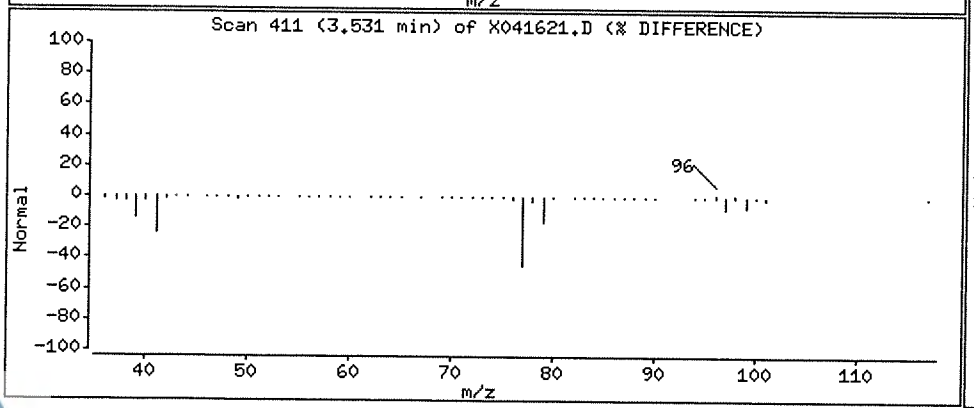












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210416.b\X041621.D

Date : 16-APR-2021 17:22

Client ID: HS21040695-17

Instrument: voa6.i

Sample Info: HS21040695-17;HS21040695-17;;;

Purge Volume: 5.0

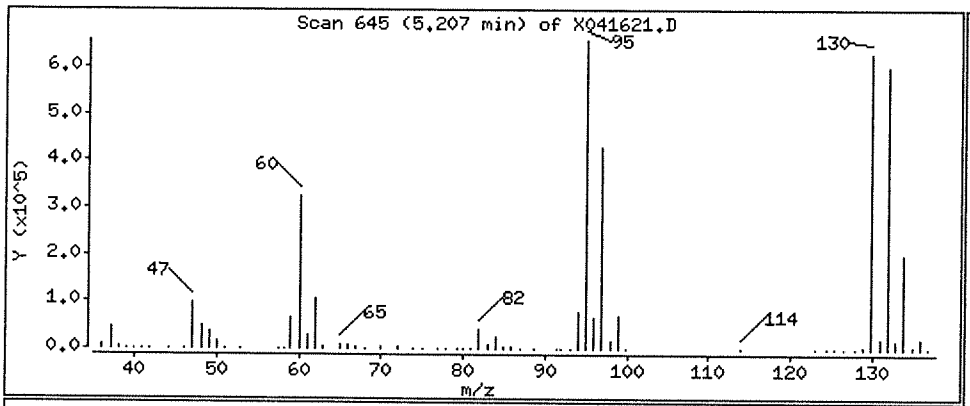
Operator: PC

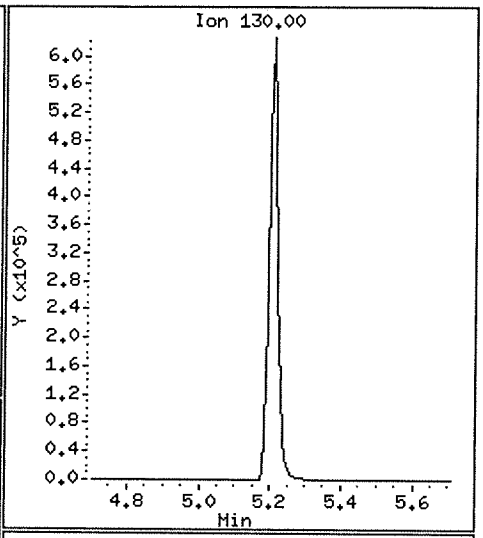
Column phase: DB624

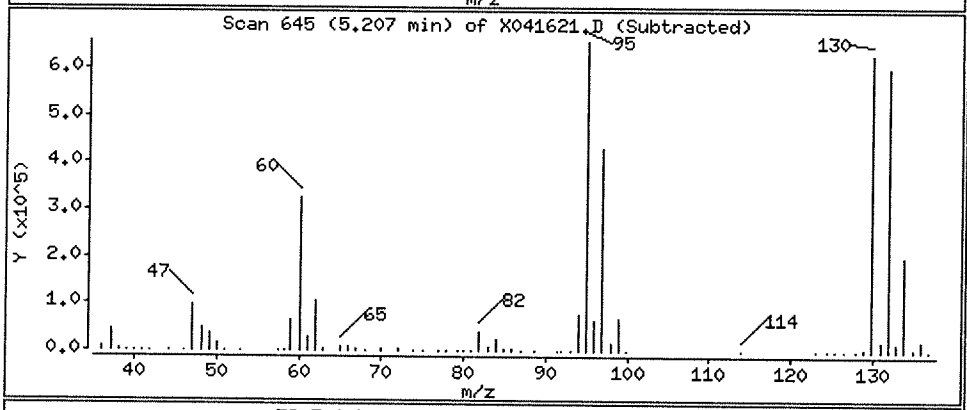
Column diameter: 0.18

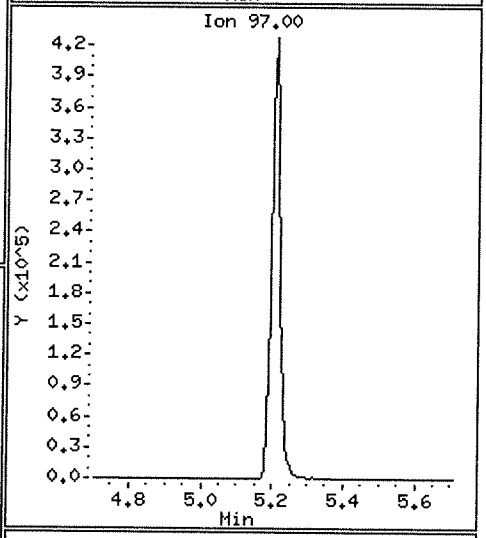
38 Trichloroethene

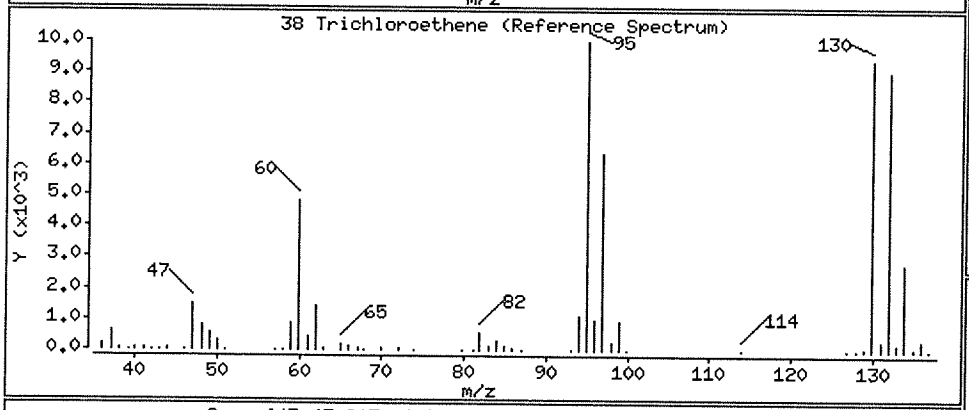
Concentration: 4104.94 ug/l

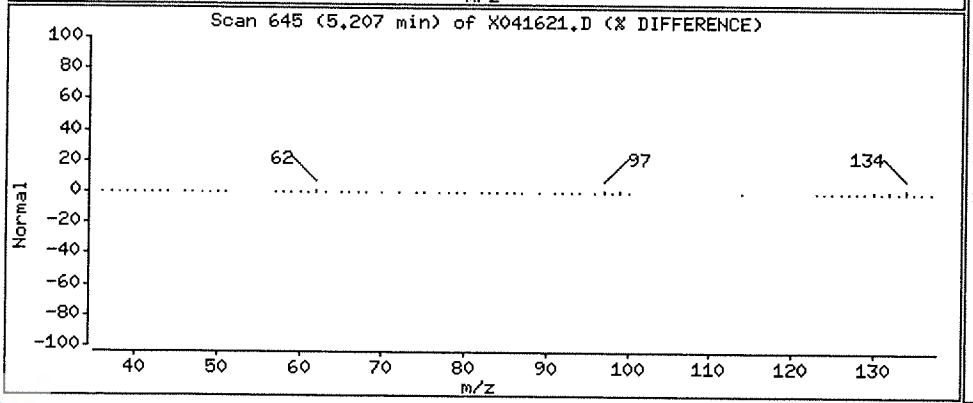


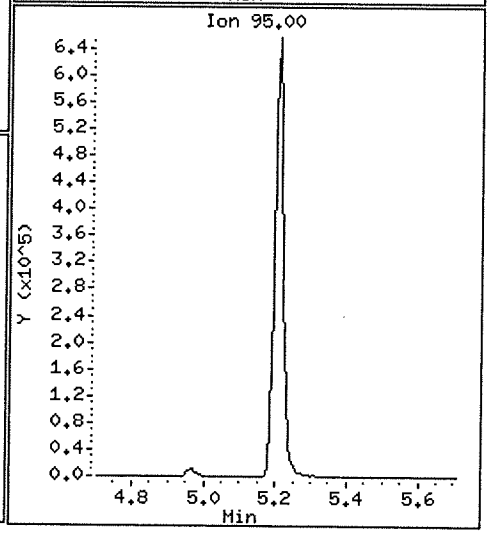












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210416.b\X041621.D

Date : 16-APR-2021 17:22

Client ID: HS21040695-17

Instrument: voa6.i

Sample Info: HS21040695-17;HS21040695-17;;;

Purge Volume: 5.0

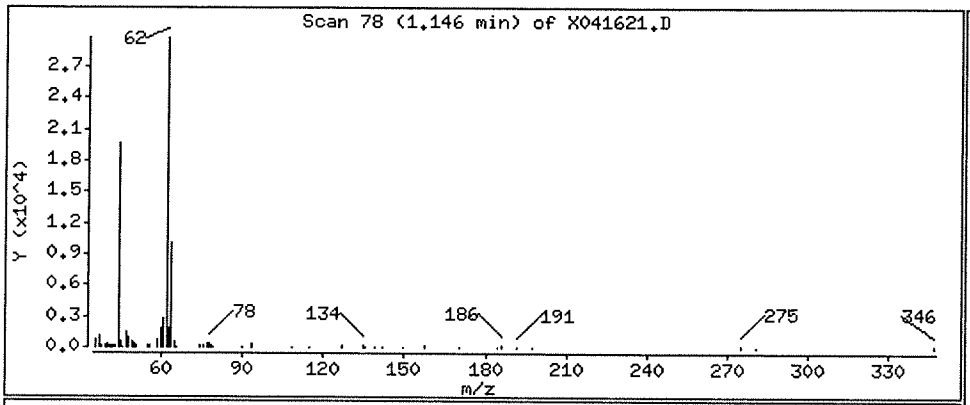
Operator: PC

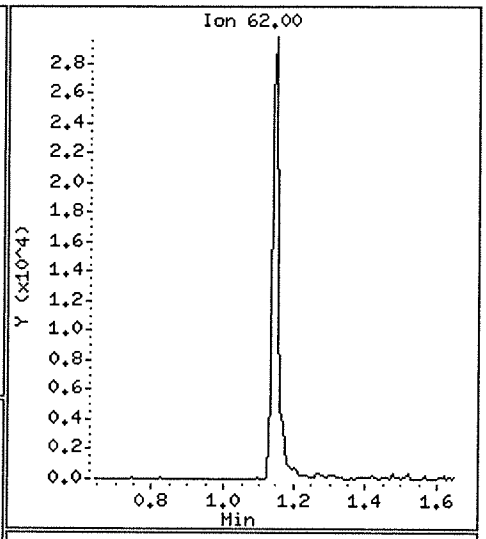
Column phase: DB624

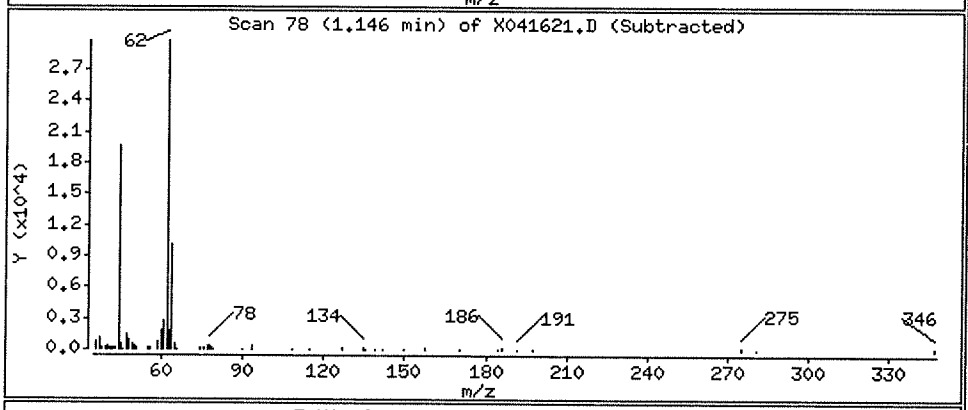
Column diameter: 0.18

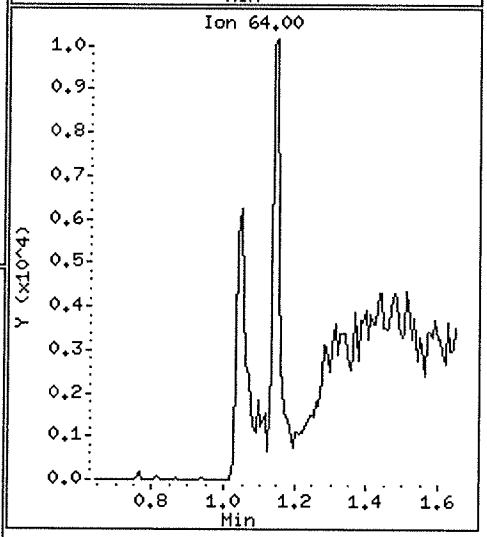
5 Vinyl Chloride

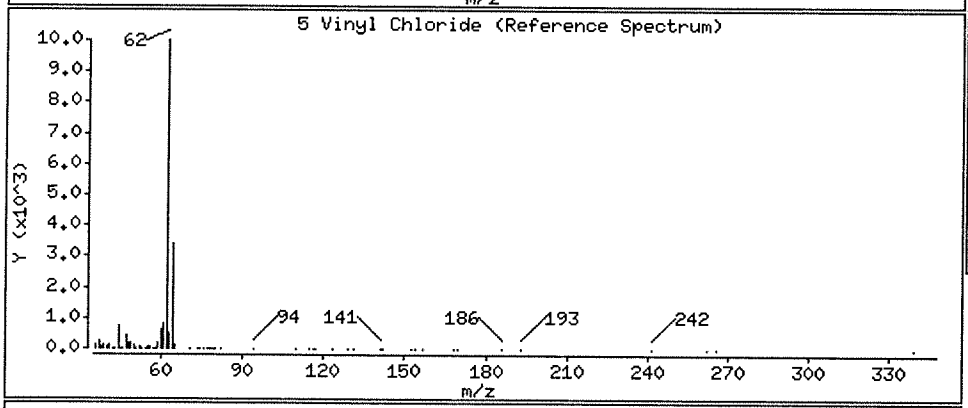
Concentration: 110.61 ug/l

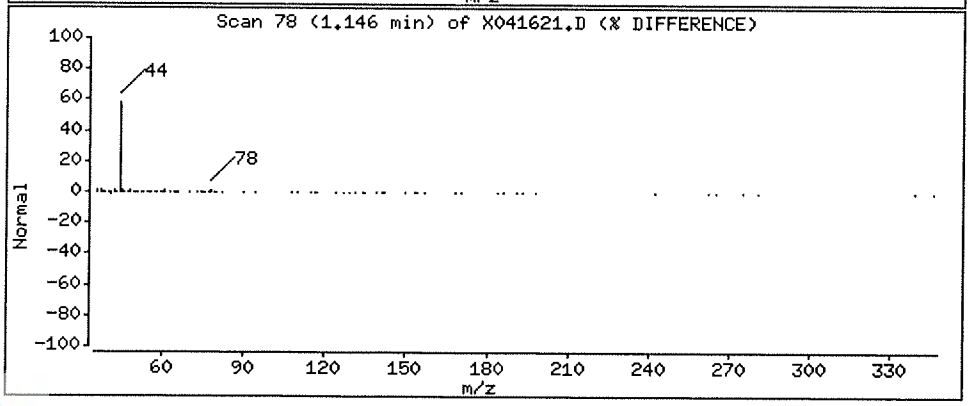












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210416.b\X041622.D Page 1
Report Date: 04-May-2021 12:21

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X210416.b\X041622.D
Lab Smp Id: HS21040695-17 Client Smp ID: HS21040695-17
Inj Date : 16-APR-2021 17:43
Operator : PC Inst ID: voa6.i
Smp Info : HS21040695-17;HS21040695-17;;;
Misc Info : HS18090001;WATER;0;250;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X210416.b\8260W.m
Meth Date : 04-May-2021 12:21 Qin.Xu Quant Type: ISTD
Cal Date : 02-APR-2021 13:20 Cal File: X040208.D
Als bottle: 21
Dil Factor: 250.00000
Integrator: HP RTE Compound Sublist: CBI_short1.sub
Target Version: 4.14
Processing Host: NAHSTW7066

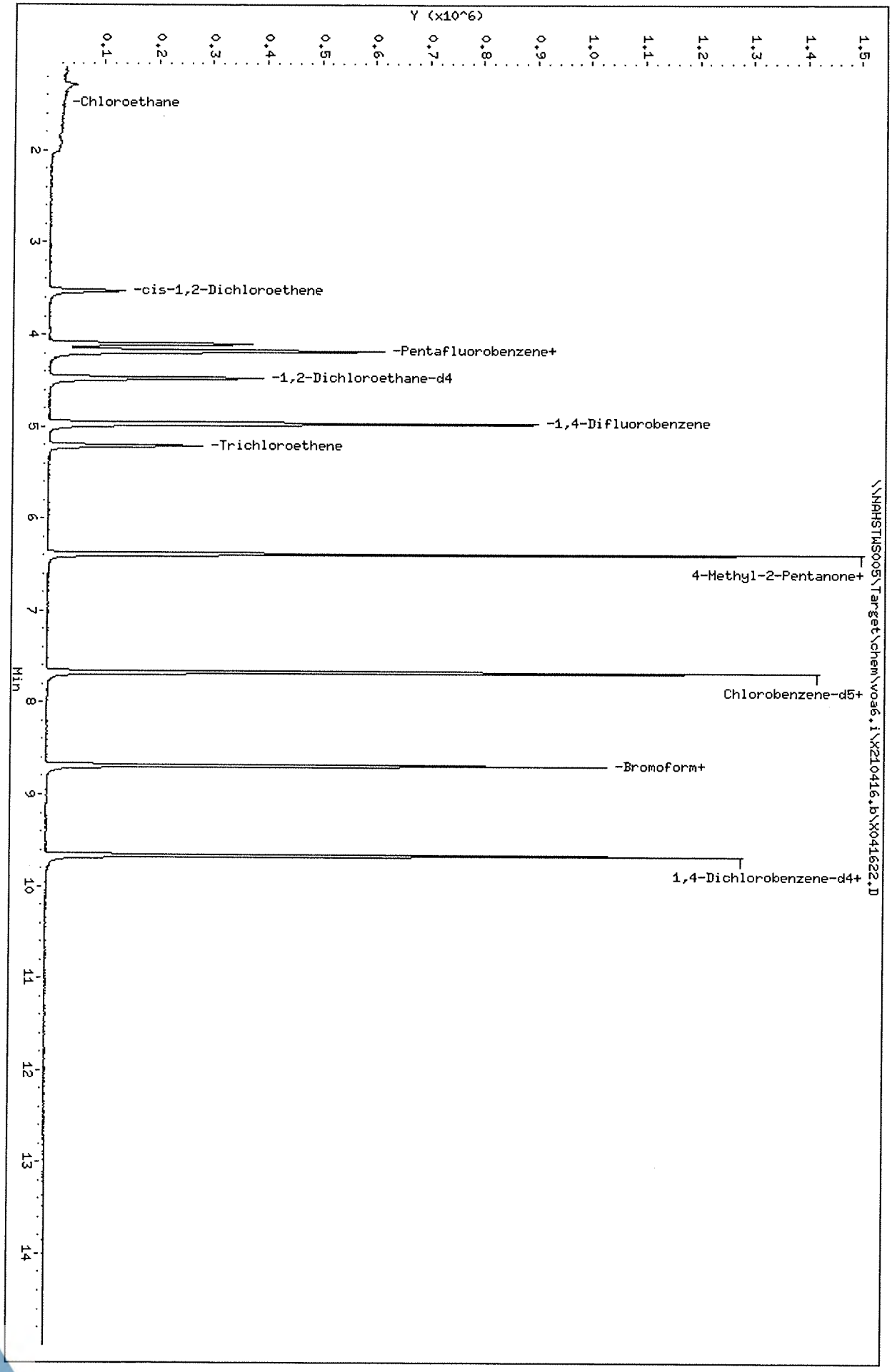
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	250.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	451227	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.963	(1.000)	724098	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.670	(1.000)	635622	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	271856	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.096	(0.981)	248827	46.8665	46.86
$ 35 1,2-Dichloroethane-d4	65	4.469	4.476	(1.069)	311310	48.9193	48.91
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	868079	53.0163	53.01
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	282569	46.4756	46.47
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	67257	12.1934	3048.34
38 Trichloroethene	130	5.206	5.206	(1.048)	85162	17.1805	4295.11

Data File: \\NAHSTWS005\Target\chem\voa6.i\X210416.b\X041622.D
Date : 16-APR-2021 17:43
Client ID: HS21040695-17
Sample Info: HS21040695-17;HS21040695-17;;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18



Data File: \\NAHSTWS005\Target\chem\voa6.i\X210416.b\X041622.D

Date : 16-APR-2021 17:43

Client ID: HS21040695-17

Instrument: voa6.i

Sample Info: HS21040695-17;HS21040695-17;;;

Purge Volume: 5.0

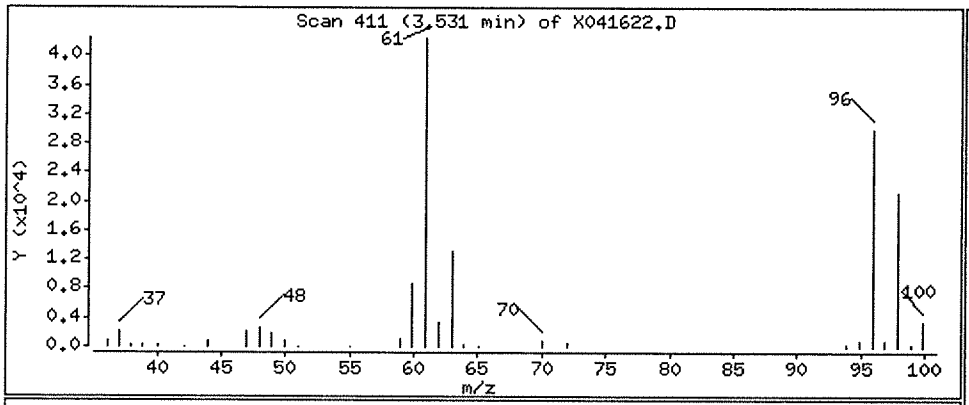
Operator: PC

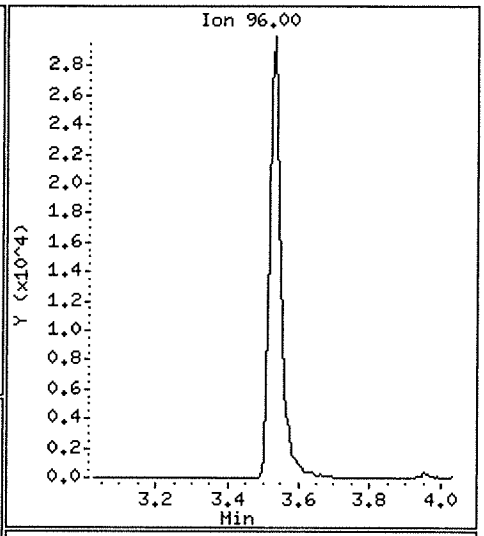
Column phase: DB624

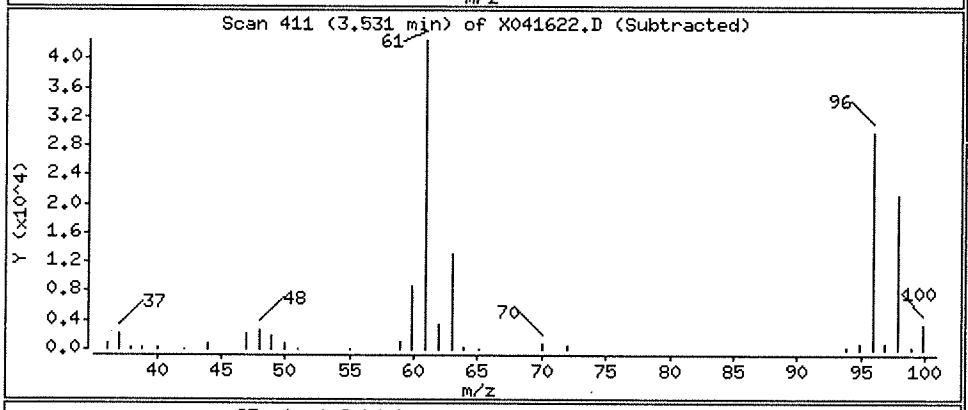
Column diameter: 0.18

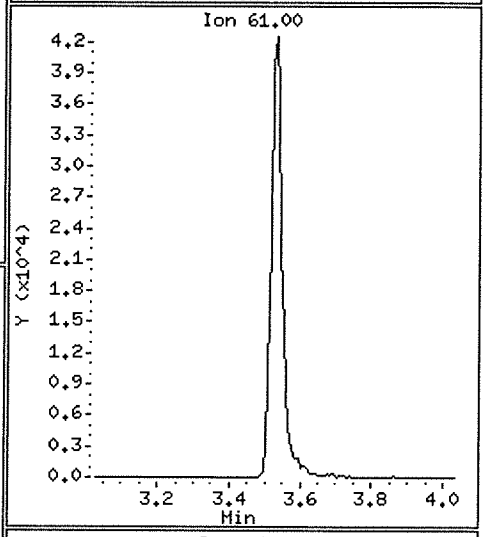
27 cis-1,2-Dichloroethene

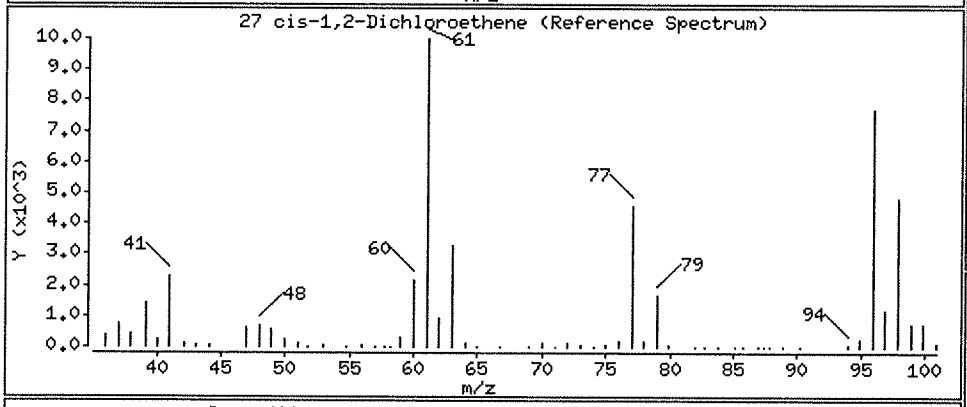
Concentration: 3048.34 ug/l

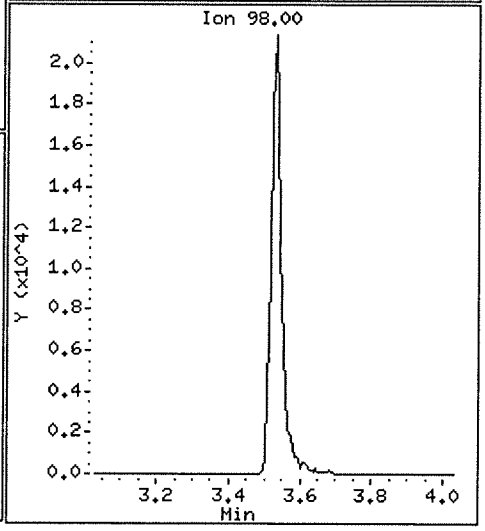


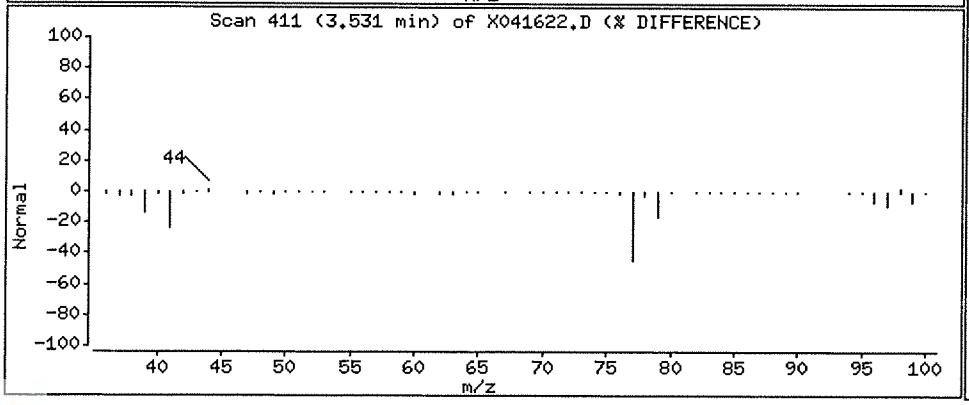












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210416.b\X041622.D

Date : 16-APR-2021 17:43

Client ID: HS21040695-17

Instrument: voa6.i

Sample Info: HS21040695-17;HS21040695-17;;;

Purge Volume: 5.0

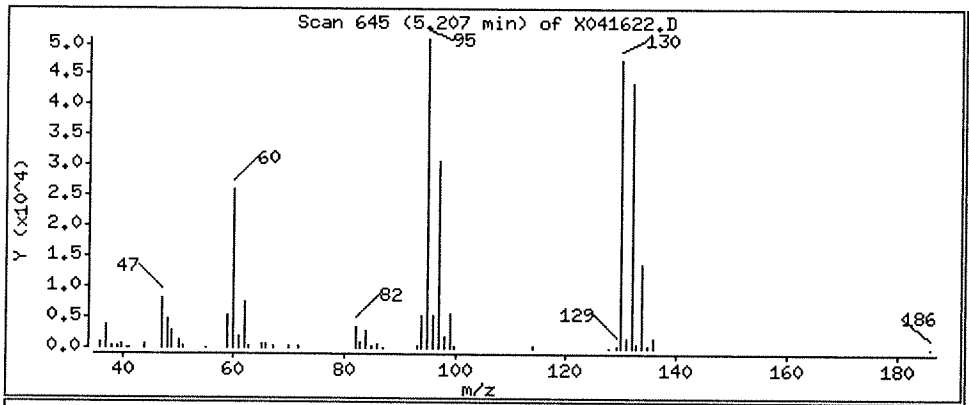
Operator: PC

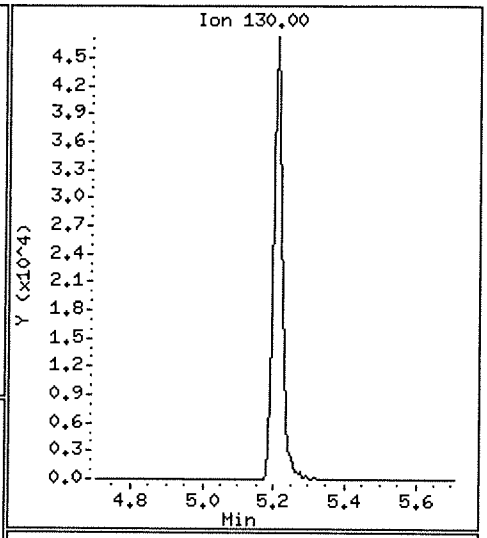
Column phase: DB624

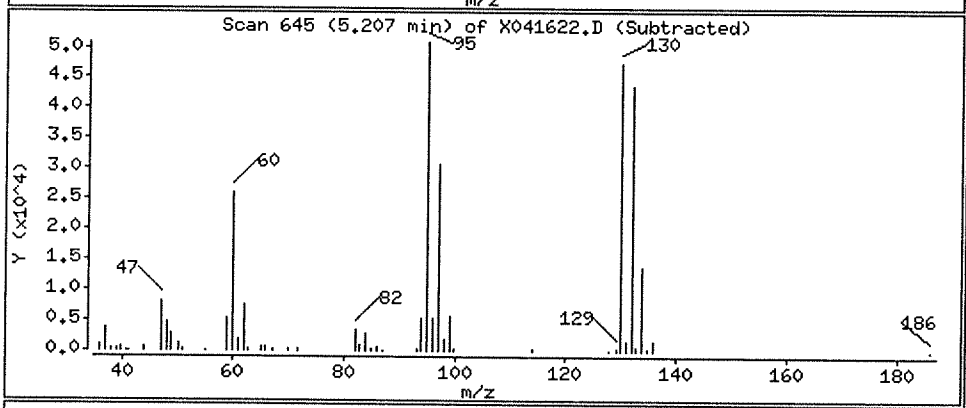
Column diameter: 0.18

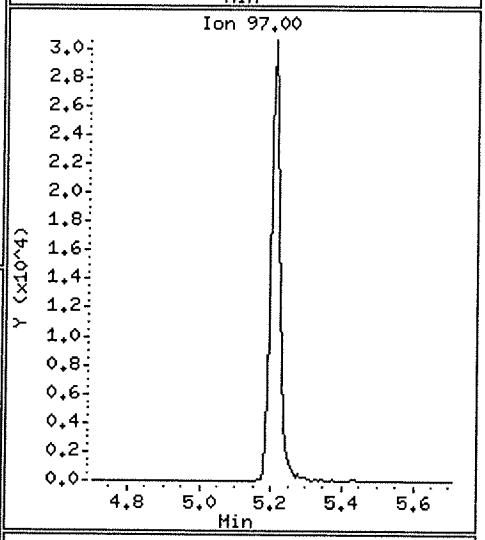
38 Trichloroethene

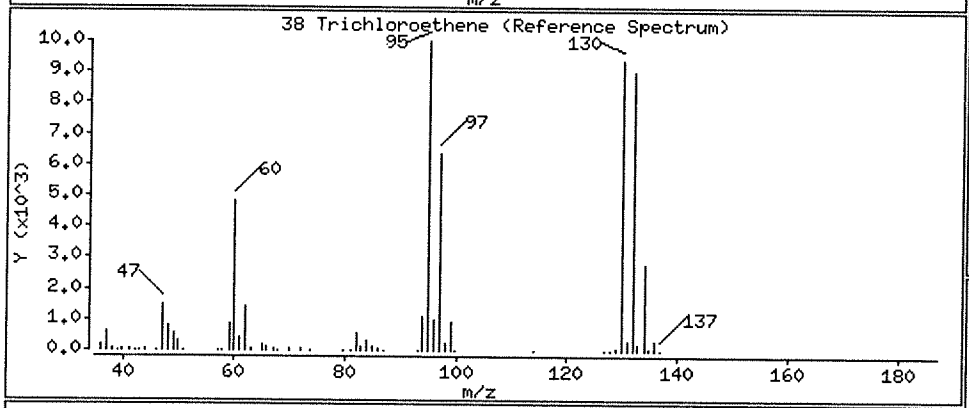
Concentration: 4295.11 ug/l

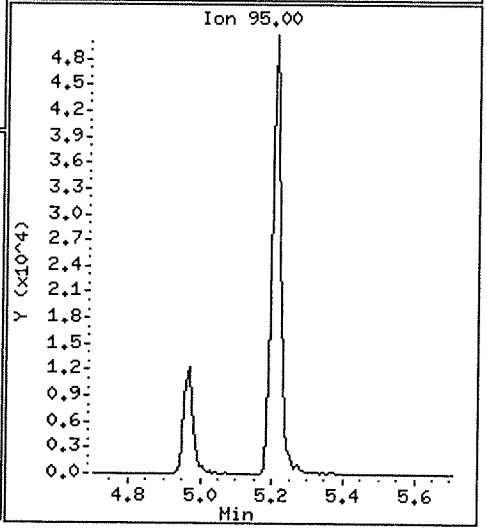


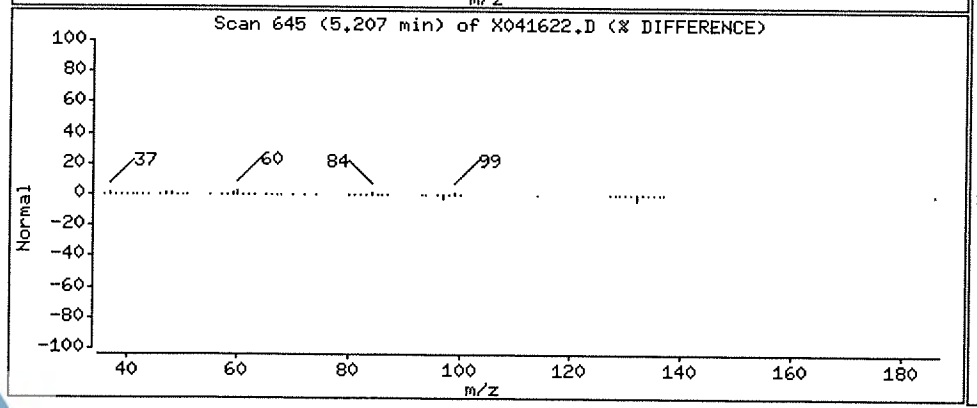












ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X210416.b\X041623.D
Lab Smp Id: HS21040695-16 Client Smp ID: HS21040695-16
Inj Date : 16-APR-2021 18:05
Operator : PC Inst ID: voa6.i
Smp Info : HS21040695-16;HS21040695-16;;;
Misc Info : HS18090001;WATER;0;100;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X210416.b\8260W.m
Meth Date : 04-May-2021 12:21 Qin.Xu Quant Type: ISTD
Cal Date : 02-APR-2021 13:20 Cal File: X040208.D
Als bottle: 22
Dil Factor: 100.00000
Integrator: HP RTE Compound Sublist: CBI_short1.sub
Target Version: 4.14
Processing Host: NAHSTW7066

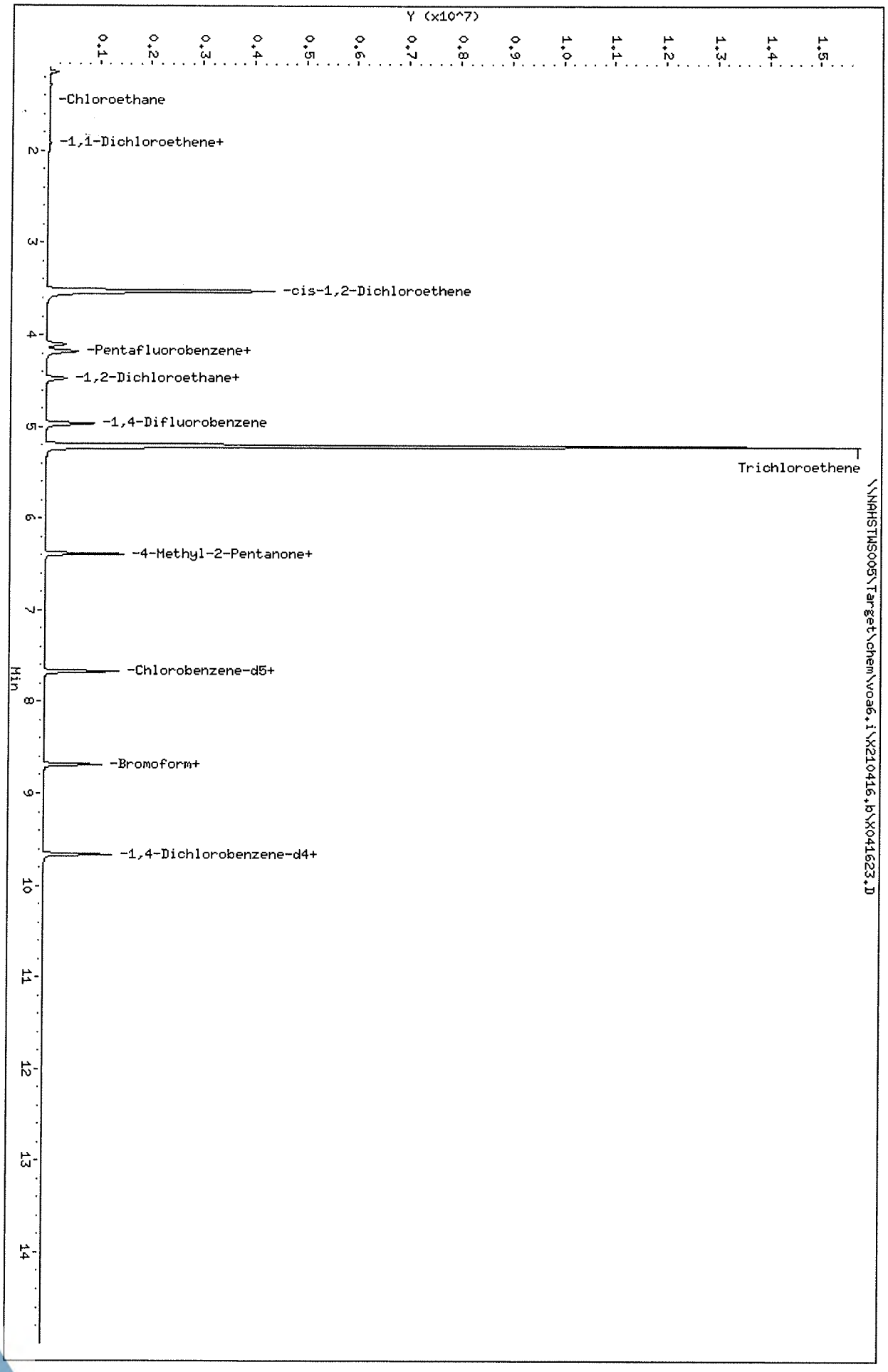
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	100.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	453390	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.963	(1.000)	737999	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.670	(1.000)	653595	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	284610	50.0000	
$ 30 Dibromofluoromethane	113	4.104	4.096	(0.981)	252669	47.3585	47.35
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	315051	49.2675	49.26
$ 48 Toluene-d8	98	6.389	6.388	(0.833)	889929	52.8618	52.86
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	301788	48.2079	48.20
11 1,1-Dichloroethene	96	1.919	1.919	(0.459)	7810	1.20979	120.97(a)
33 1,2-Dichloroethane	62	4.562	4.555	(0.918)	4202	0.53792	53.79(a)
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	2242408	404.598	40459.83(A)
38 Trichloroethene	130	5.207	5.206	(1.048)	4488303	888.409	88840.88(A)
5 Vinyl Chloride	62	1.145	1.145	(0.274)	125622	18.4814	1848.13

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).
A - Target compound detected but, quantitated amount exceeded maximum amount.



Data File: \\NAHSTWS005\Target\chem\voa6.i\X210416.b\X041623.D
Date : 16-APR-2021 18:05
Client ID: HS21040695-16
Sample Info: HS21040695-16;HS21040695-16;;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\NAHSTWS005\Target\chem\voa6.i\X210416.b\X041623.D

Date : 16-APR-2021 18:05

Client ID: HS21040695-16

Instrument: voa6.i

Sample Info: HS21040695-16;HS21040695-16;;;

Purge Volume: 5.0

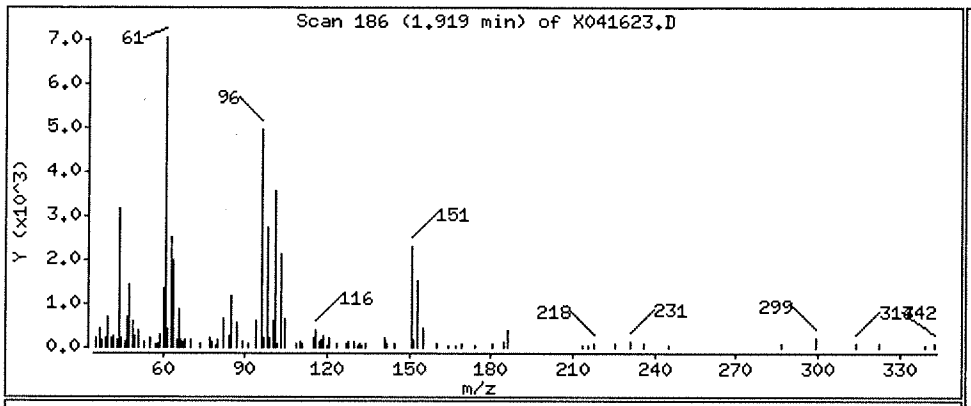
Operator: PC

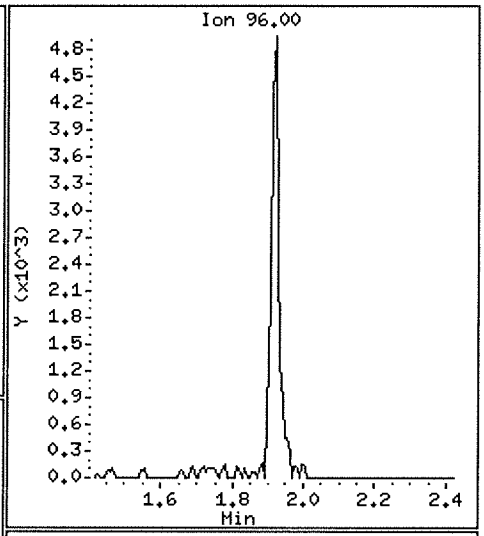
Column phase: DB624

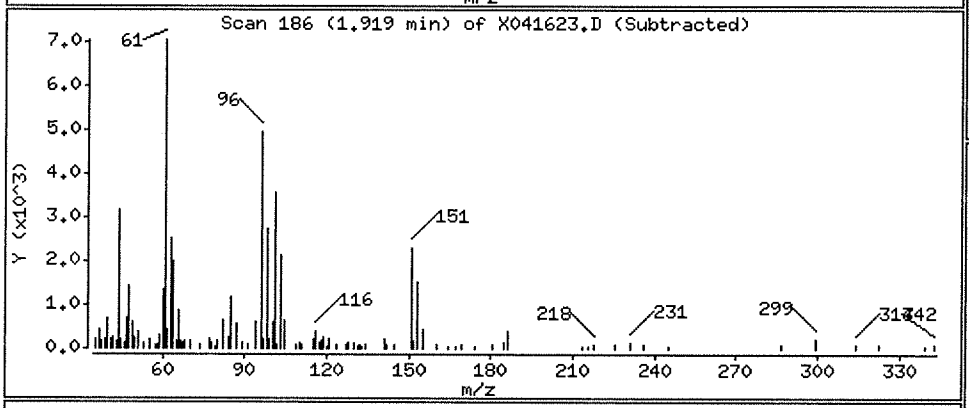
Column diameter: 0.18

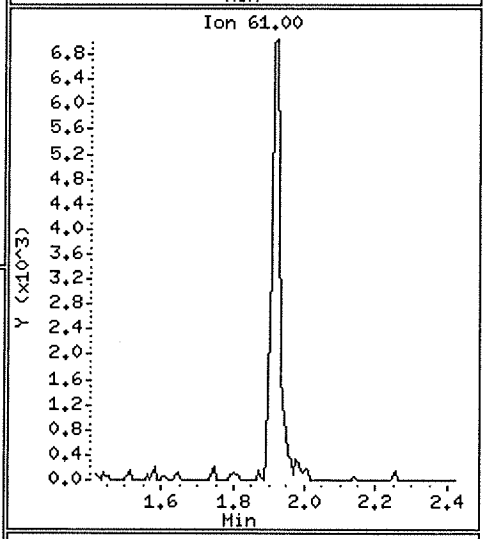
11 1,1-Dichloroethene

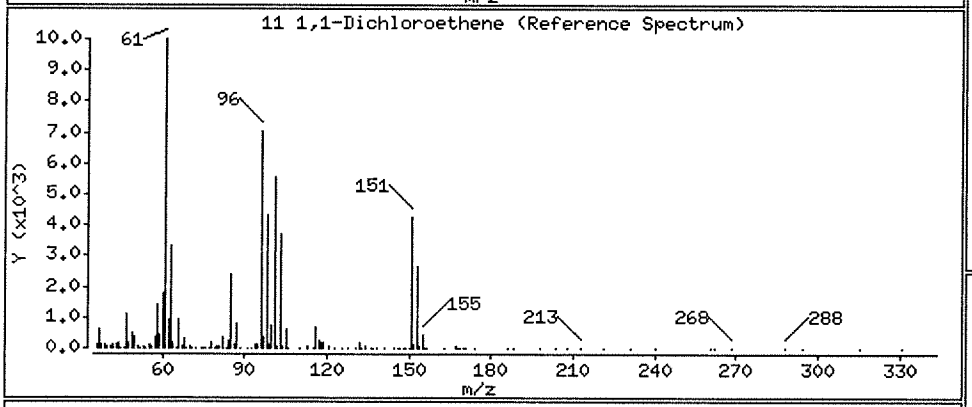
Concentration: 120.97 ug/l

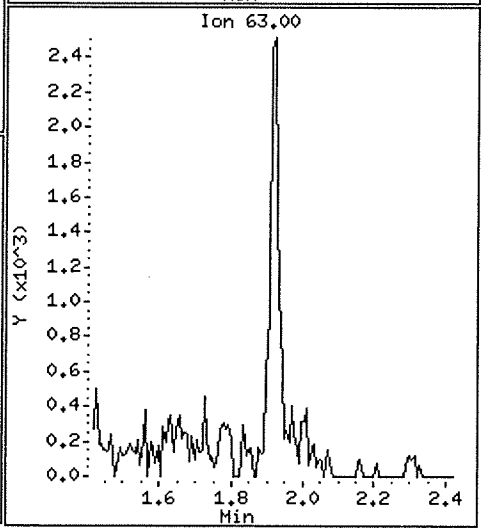


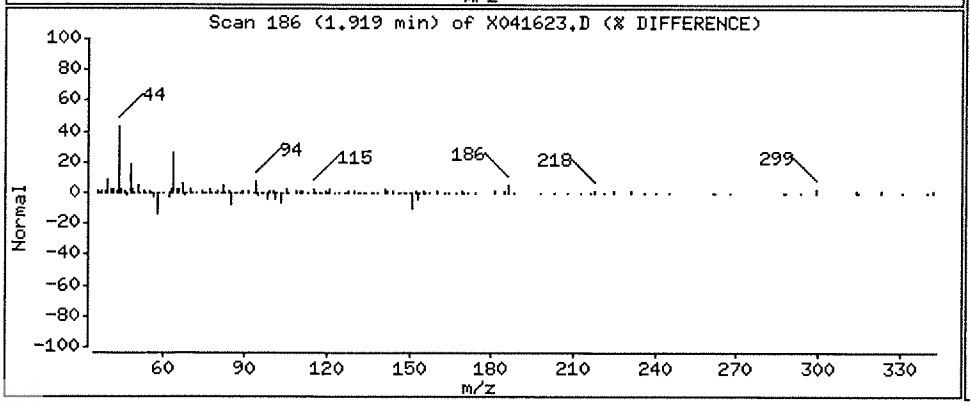












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210416.b\X041623.D

Date : 16-APR-2021 18:05

Client ID: HS21040695-16

Instrument: voa6.i

Sample Info: HS21040695-16;HS21040695-16;;;

Purge Volume: 5.0

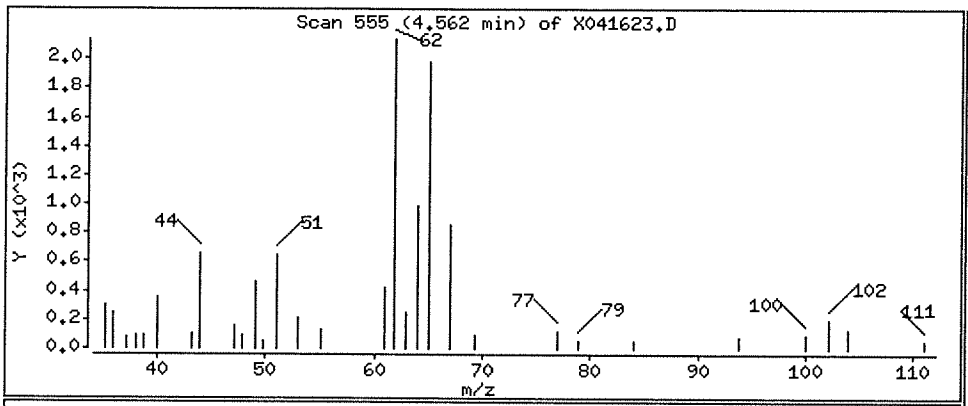
Operator: PC

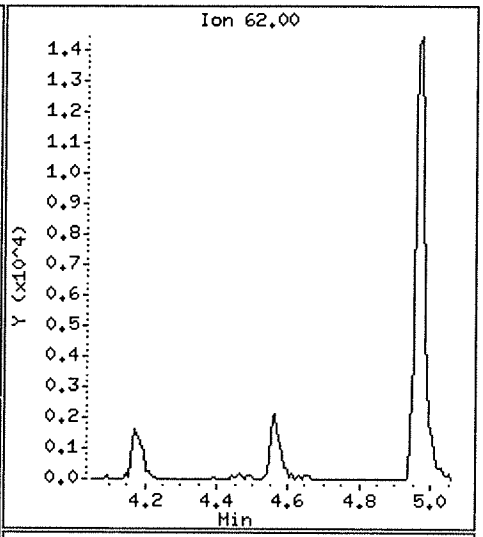
Column phase: DB624

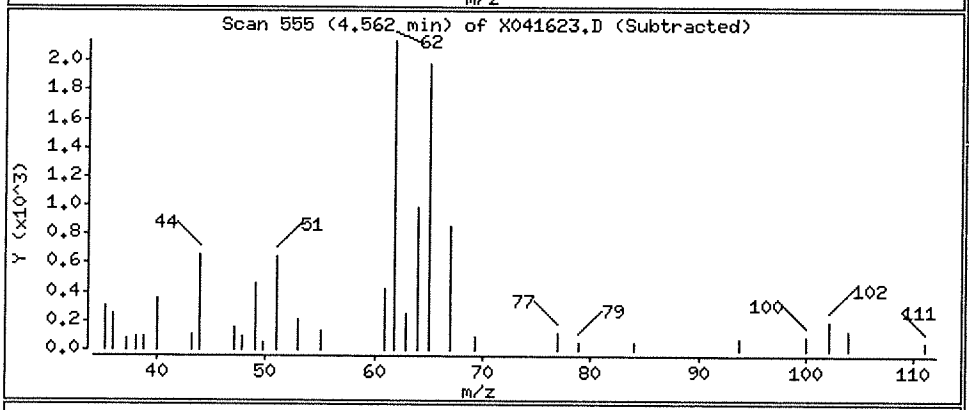
Column diameter: 0.18

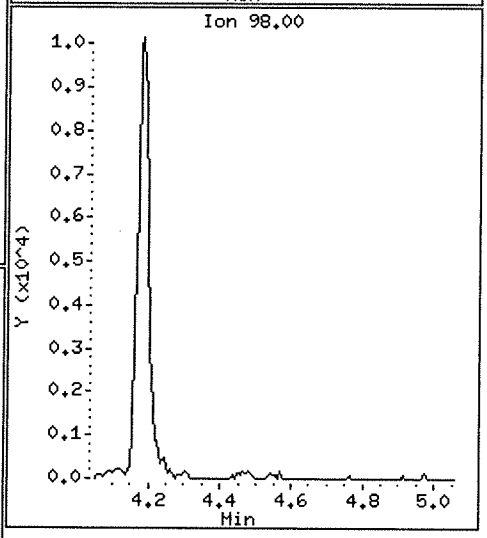
33 1,2-Dichloroethane

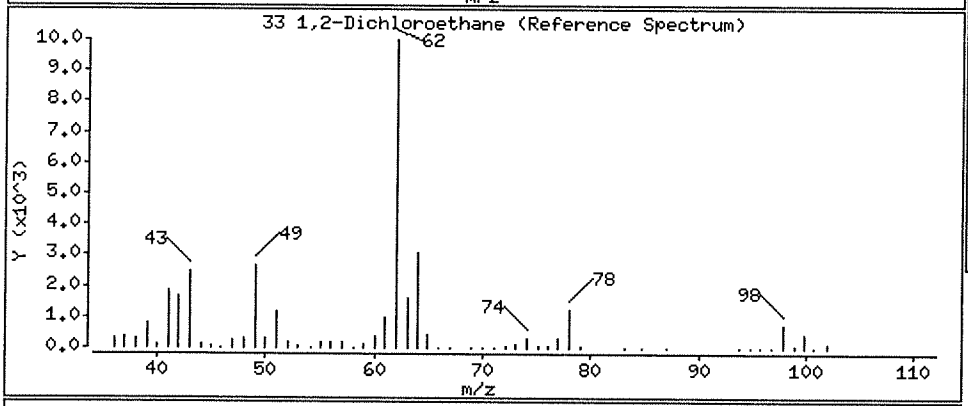
Concentration: 53.79 ug/l

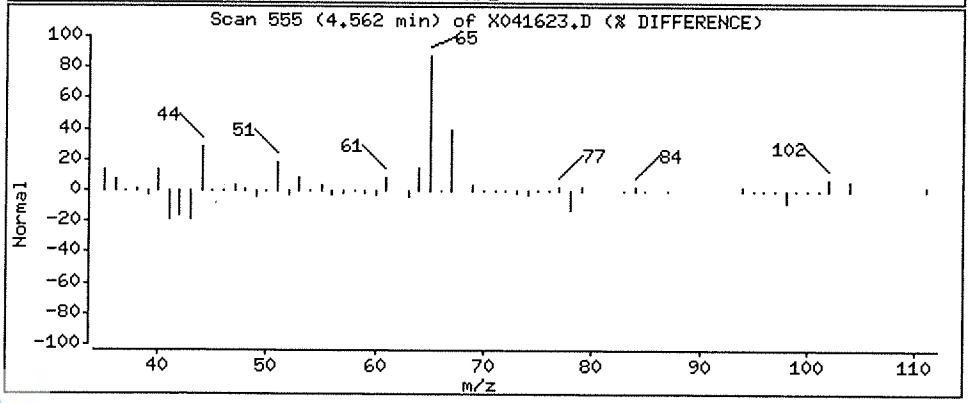












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210416.b\X041623.D

Date : 16-APR-2021 18:05

Client ID: HS21040695-16

Instrument: voa6.i

Sample Info: HS21040695-16;HS21040695-16;;;

Purge Volume: 5.0

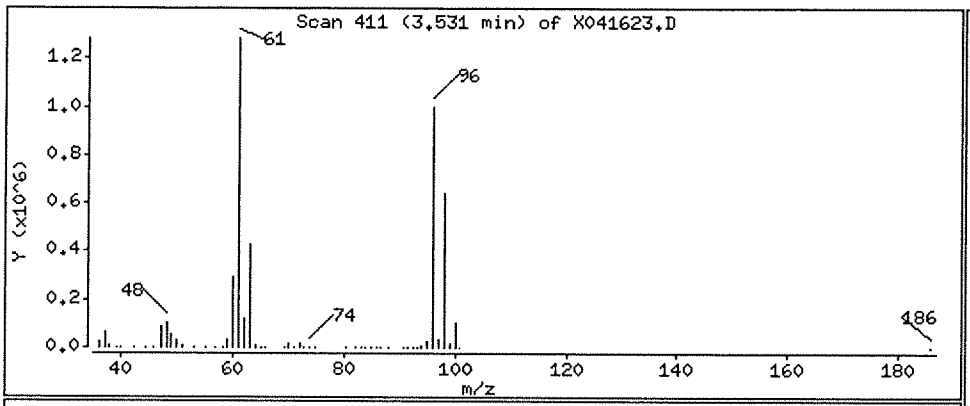
Operator: PC

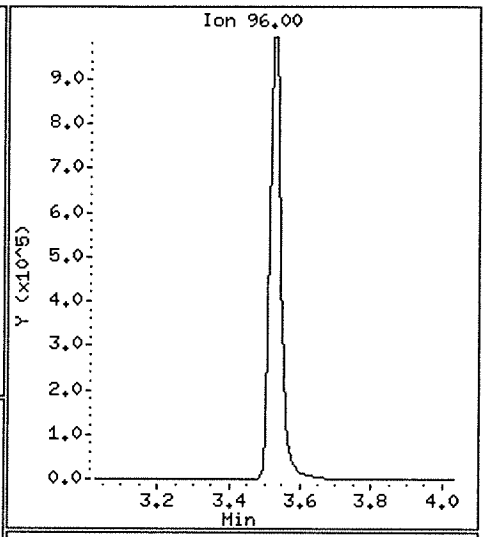
Column phase: DB624

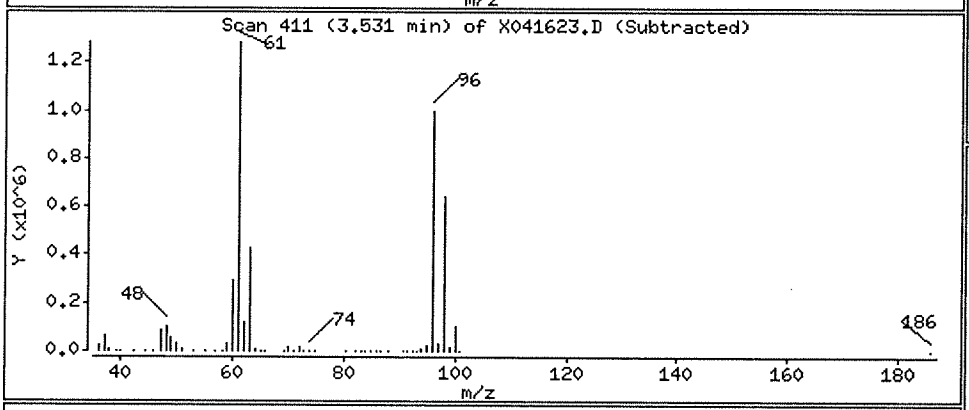
Column diameter: 0.18

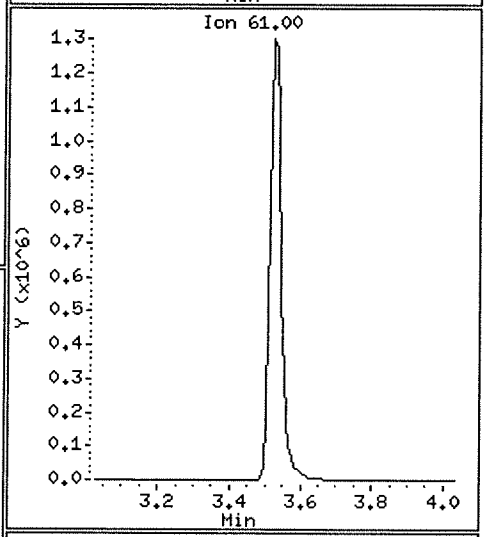
27 cis-1,2-Dichloroethene

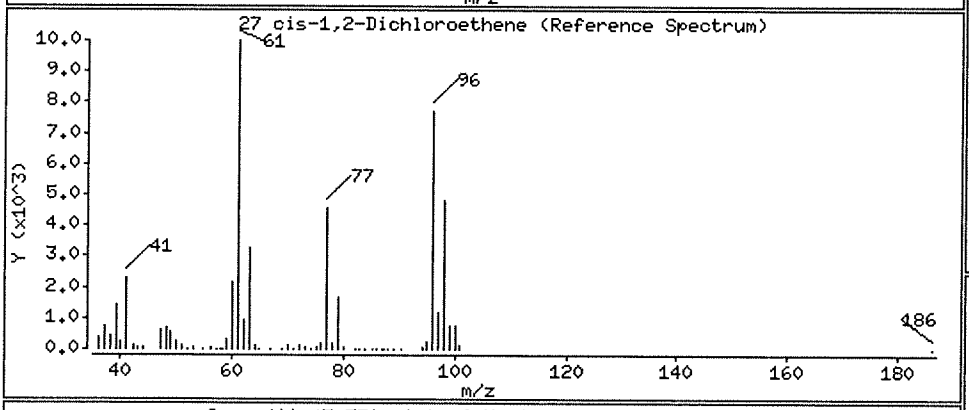
Concentration: 40459.83 ug/l

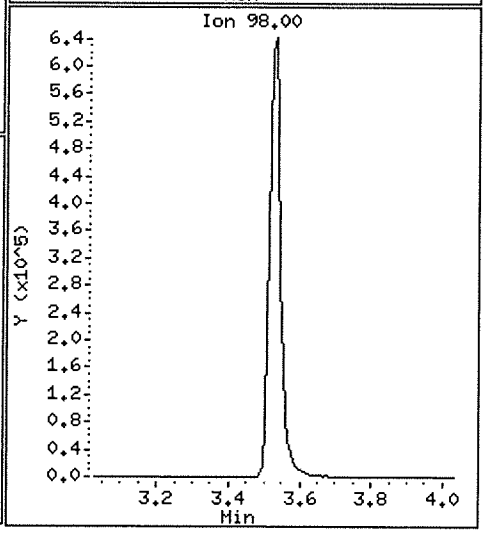


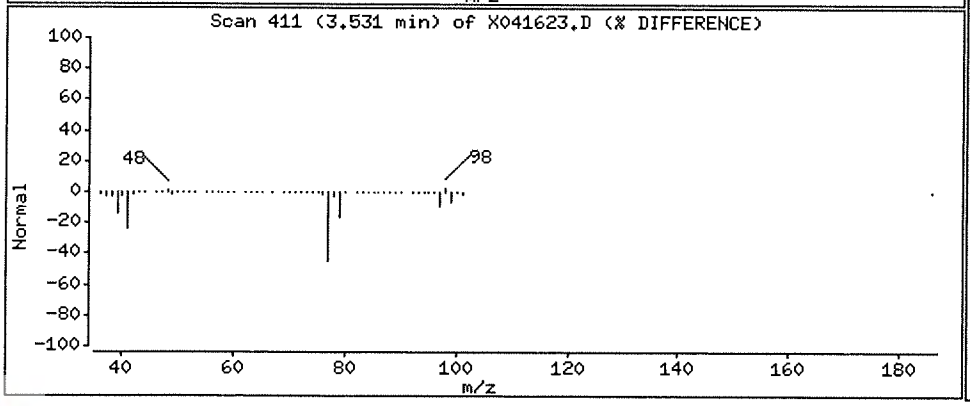












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210416.b\X041623.D

Date : 16-APR-2021 18:05

Client ID: HS21040695-16

Instrument: voa6.i

Sample Info: HS21040695-16;HS21040695-16;;;

Purge Volume: 5.0

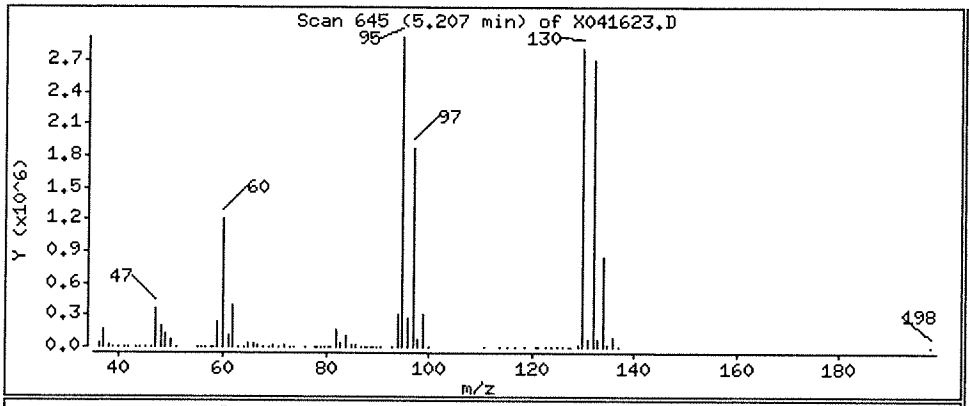
Operator: PC

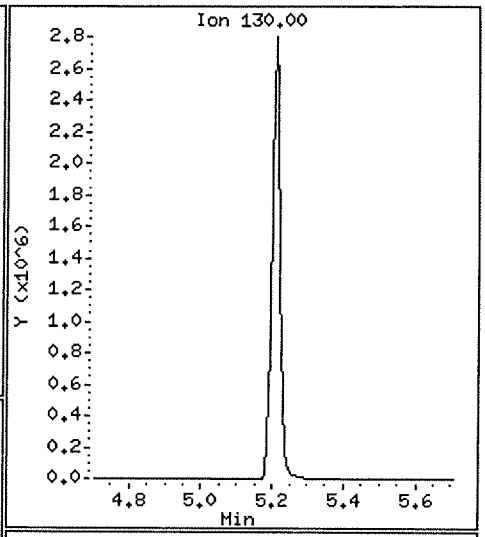
Column phase: DB624

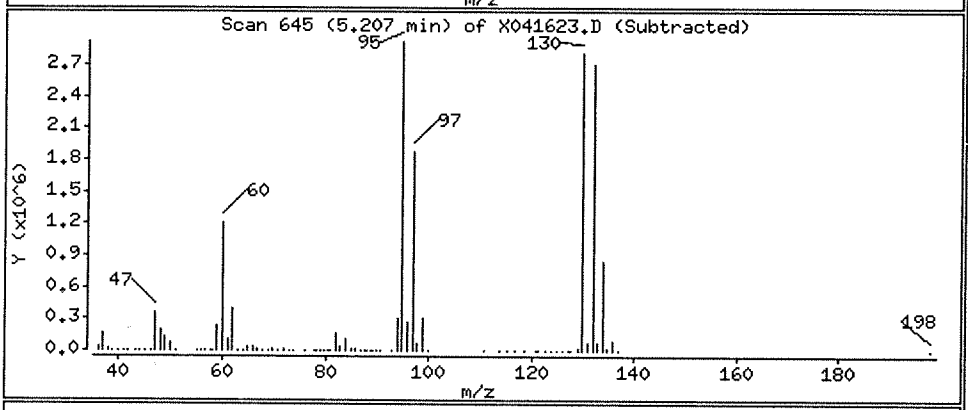
Column diameter: 0.18

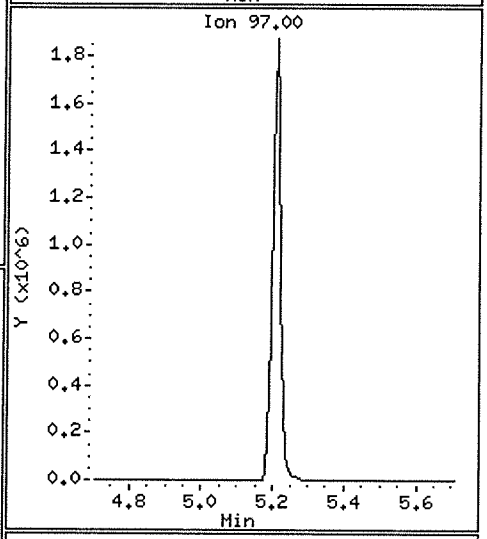
38 Trichloroethene

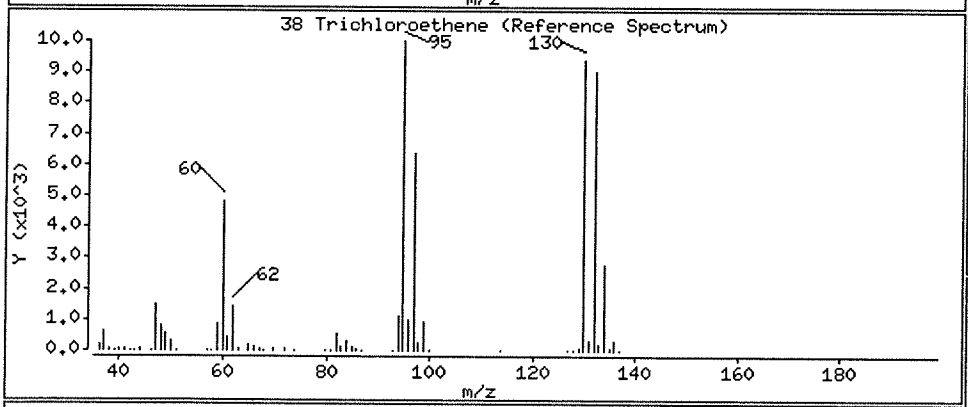
Concentration: 88840.88 ug/l

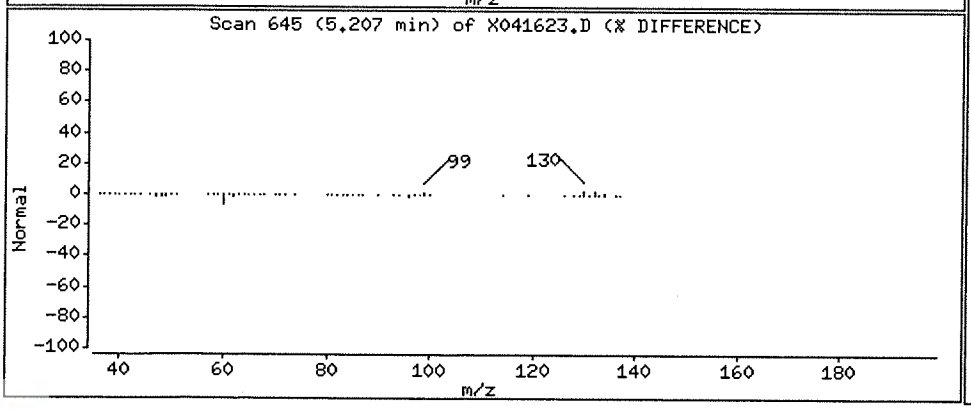


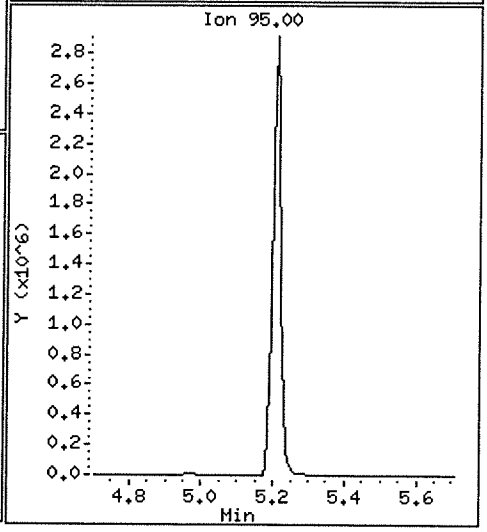












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210416.b\X041623.D

Date : 16-APR-2021 18:05

Client ID: HS21040695-16

Instrument: voa6.i

Sample Info: HS21040695-16;HS21040695-16;;;

Purge Volume: 5.0

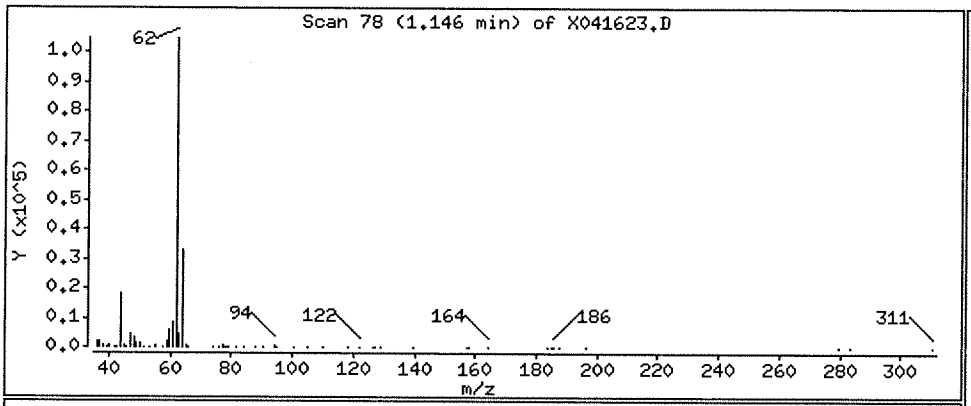
Operator: PC

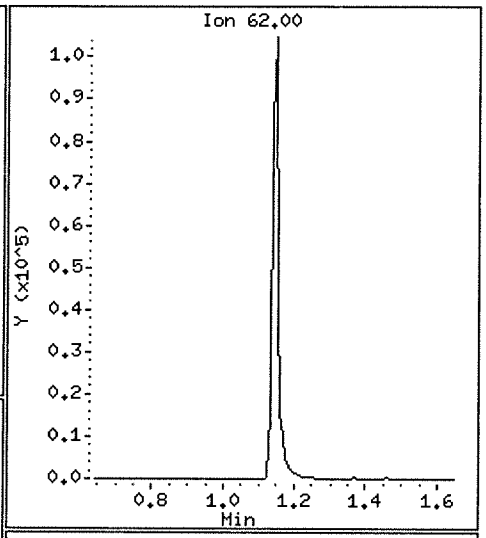
Column phase: DB624

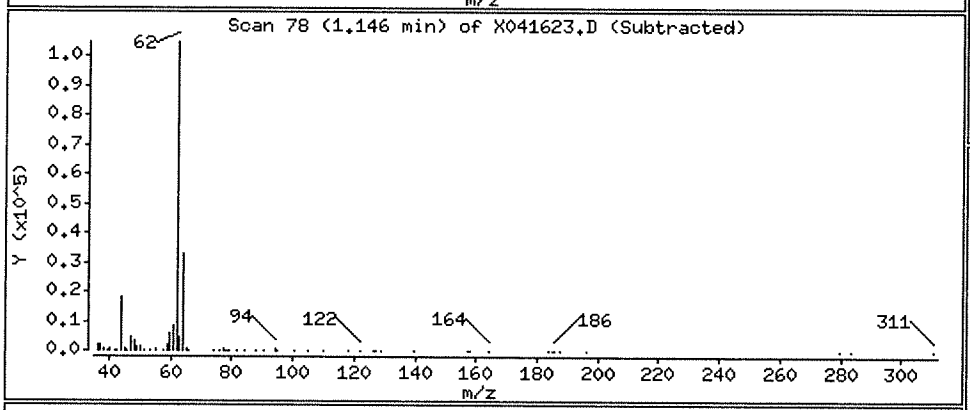
Column diameter: 0.18

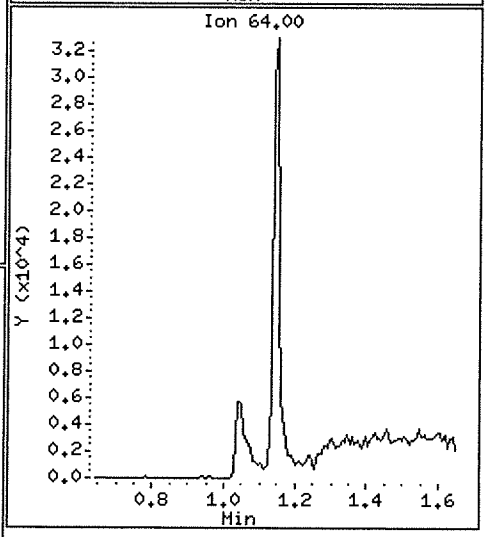
5 Vinyl Chloride

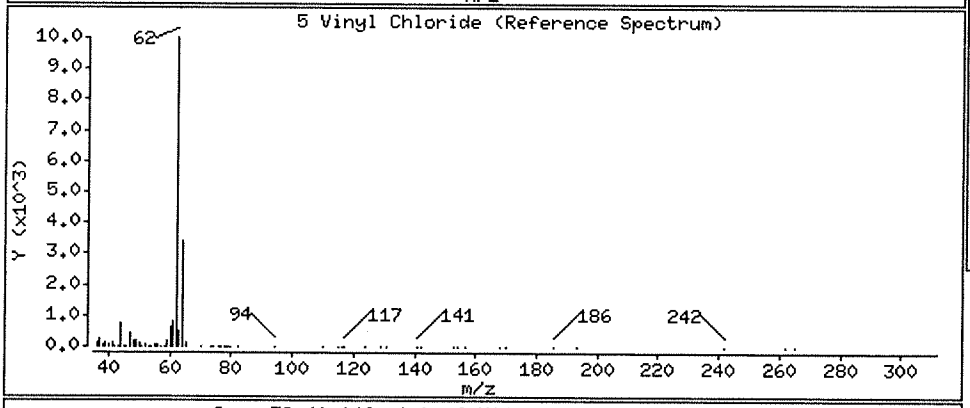
Concentration: 1848.13 ug/l

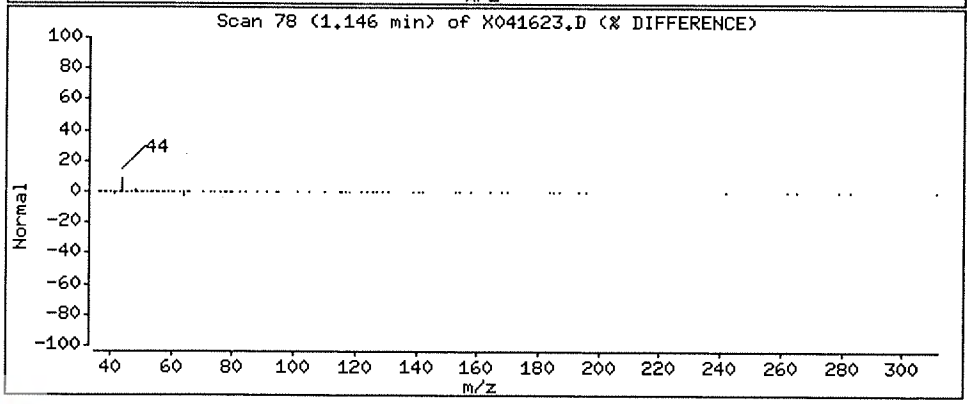












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210416.b\X041624.D Page 1
Report Date: 04-May-2021 12:21

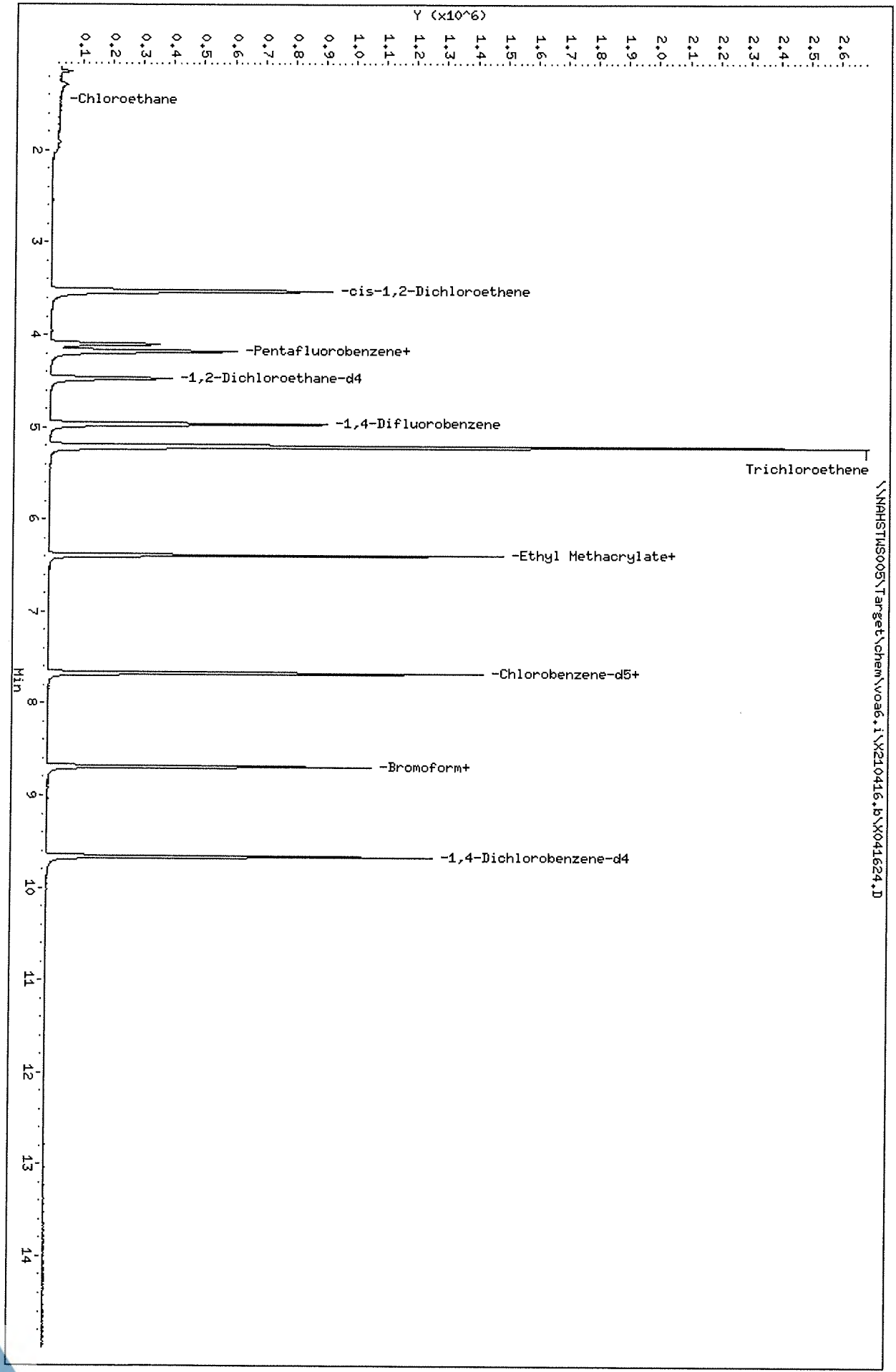
ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X210416.b\X041624.D
Lab Smp Id: HS21040695-16 Client Smp ID: HS21040695-16
Inj Date : 16-APR-2021 18:26
Operator : PC Inst ID: voa6.i
Smp Info : HS21040695-16;HS21040695-16;;;
Misc Info : HS18090001;WATER;0;500;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X210416.b\8260W.m
Meth Date : 04-May-2021 12:21 Qin.Xu Quant Type: ISTD
Cal Date : 02-APR-2021 13:20 Cal File: X040208.D
Als bottle: 23
Dil Factor: 500.00000
Integrator: HP RTE Compound Sublist: CBI_short1.sub
Target Version: 4.14
Processing Host: NAHSTW7066

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	500.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	453393	50.0000	
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	730570	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.670	(1.000)	636092	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	269022	50.0000	
$ 30 Dibromofluoromethane	113	4.096	4.096	(0.979)	248602	46.6029	46.60
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	312053	48.8029	48.80
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	870022	53.0930	53.09
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	292923	48.0838	48.08
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	467155	84.2884	42144.18
38 Trichloroethene	130	5.206	5.206	(1.049)	769875	153.938	76968.82
5 Vinyl Chloride	62	1.145	1.145	(0.274)	27639	4.06620	2033.09



Data File: \\NAHSTWS005\Target\chem\voa6.i\X210416.b\X041624.D
Date : 16-APR-2021 18:26
Client ID: HS21040695-16
Sample Info: HS21040695-16;HS21040695-16;;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\NAHSTWS005\Target\chem\voa6.i\X210416.b\X041624.D

Date : 16-APR-2021 18:26

Client ID: HS21040695-16

Instrument: voa6.i

Sample Info: HS21040695-16;HS21040695-16;;;

Purge Volume: 5.0

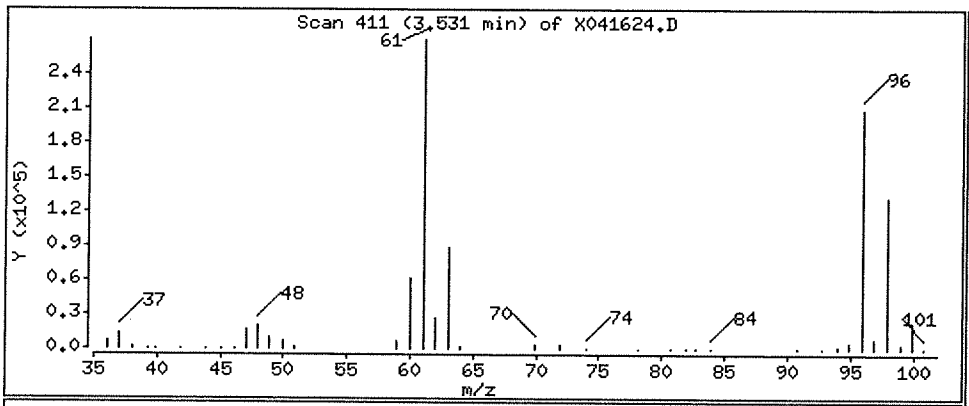
Operator: PC

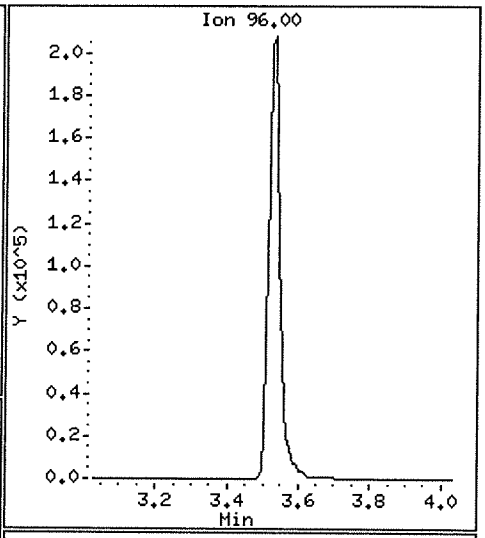
Column phase: DB624

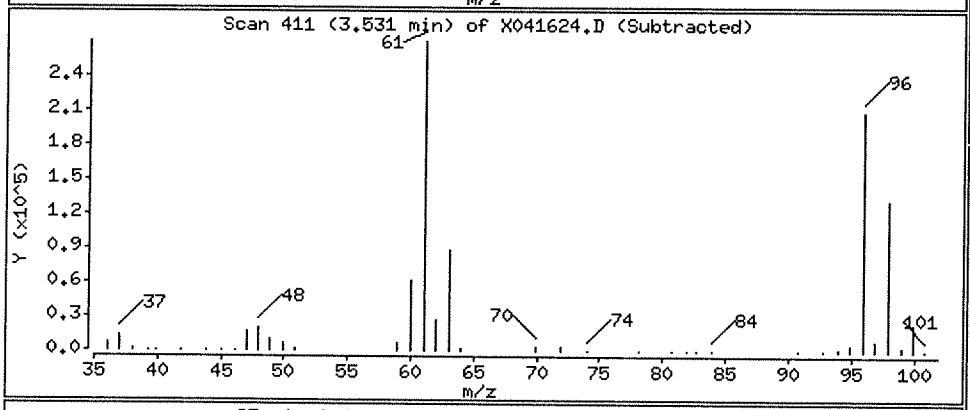
Column diameter: 0.18

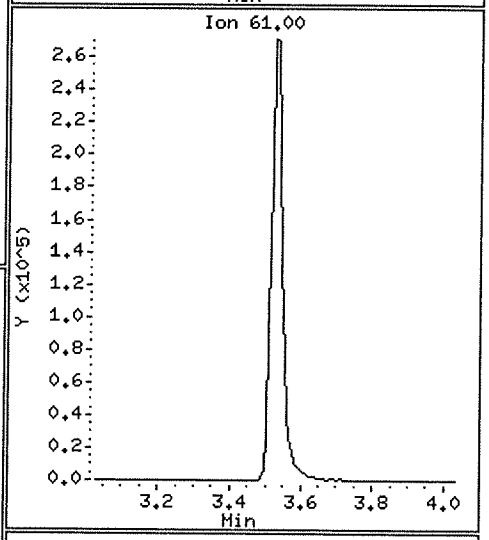
27 cis-1,2-Dichloroethene

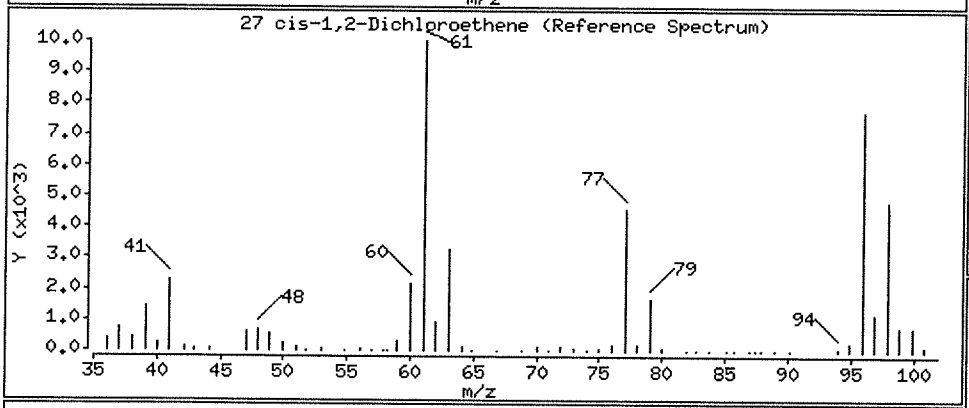
Concentration: 42144.18 ug/l

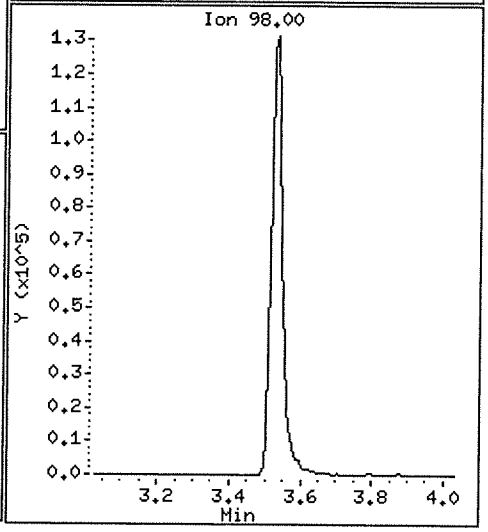


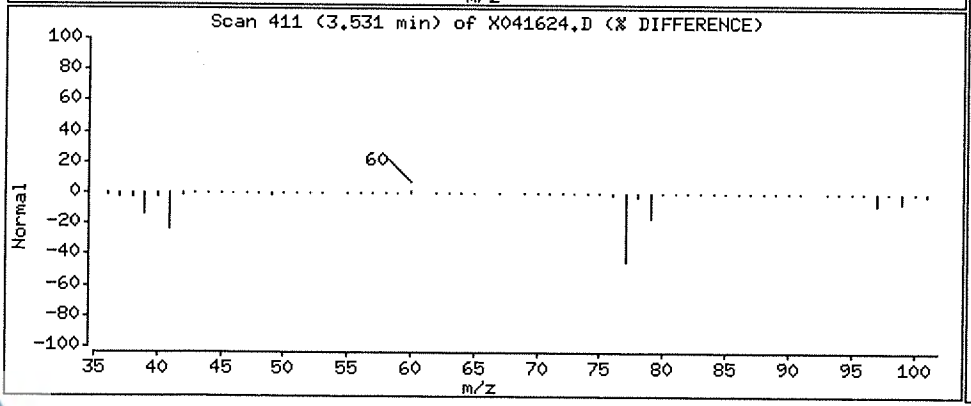












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210416.b\X041624.D

Date : 16-APR-2021 18:26

Client ID: HS21040695-16

Instrument: voa6.i

Sample Info: HS21040695-16;HS21040695-16;;;

Purge Volume: 5.0

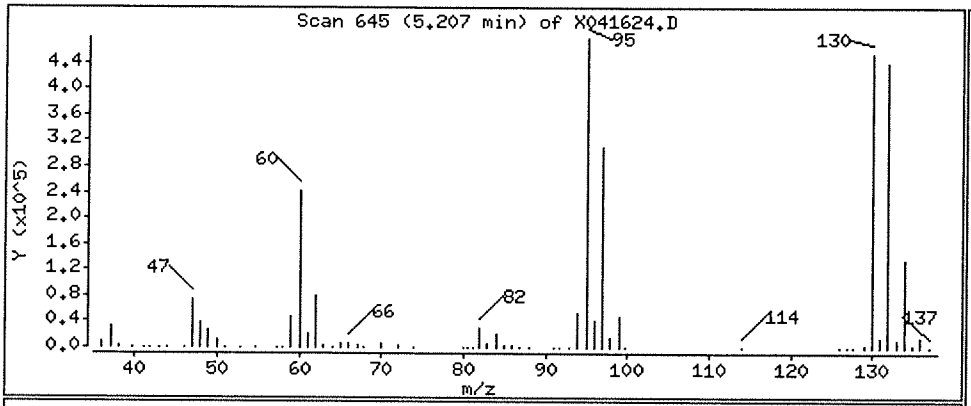
Operator: PC

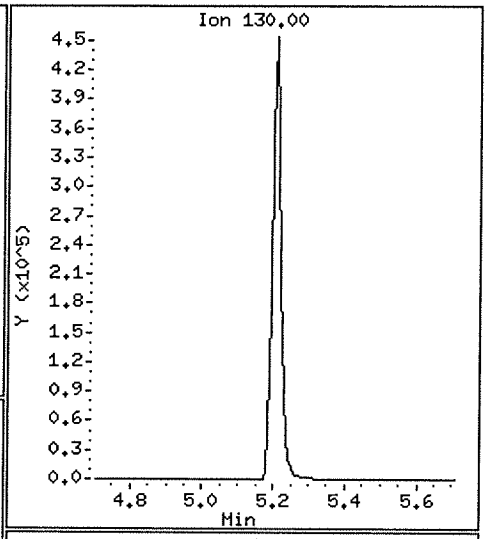
Column phase: DB624

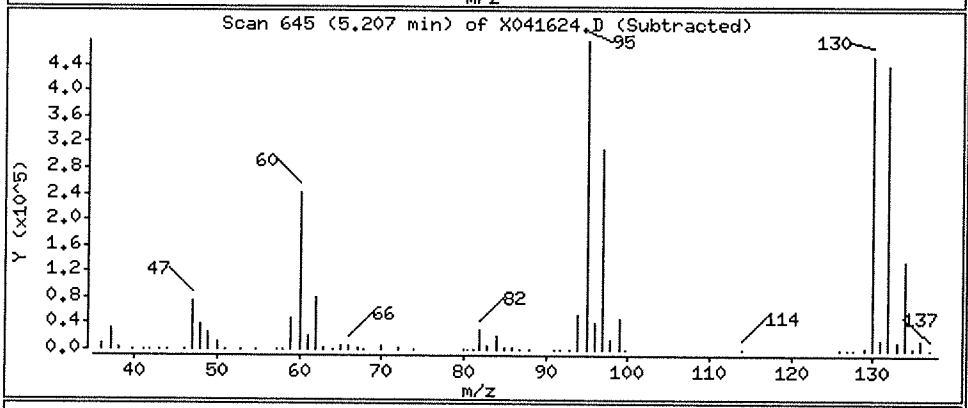
Column diameter: 0.18

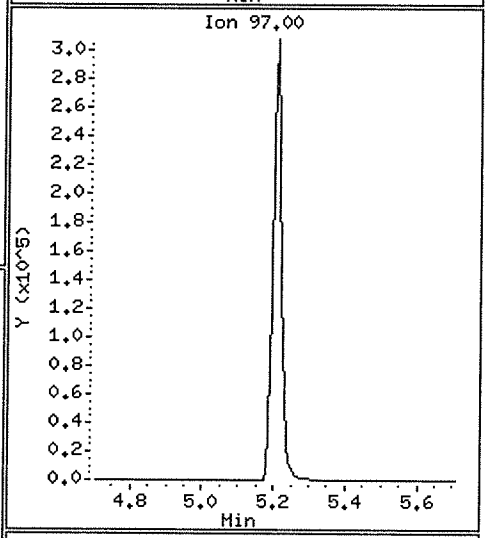
38 Trichloroethene

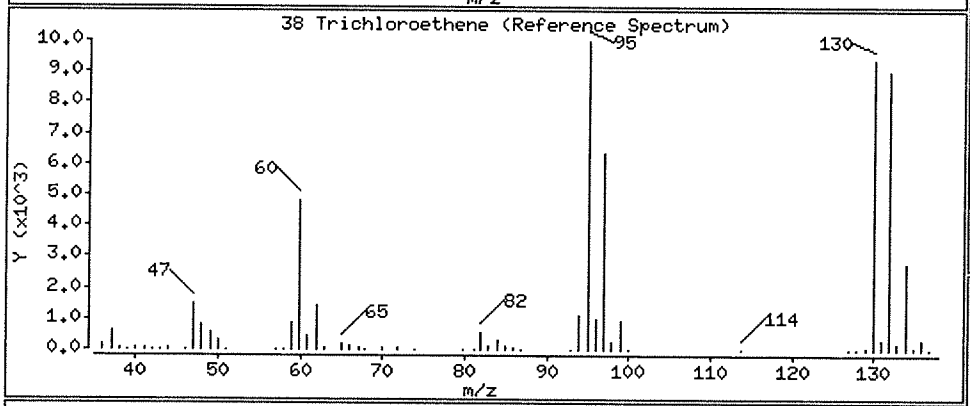
Concentration: 76968.82 ug/l

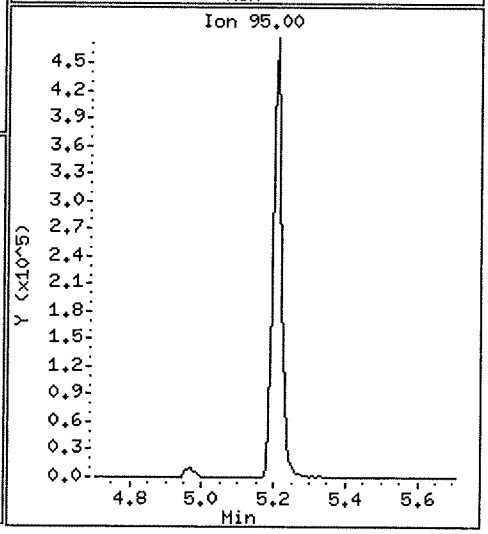


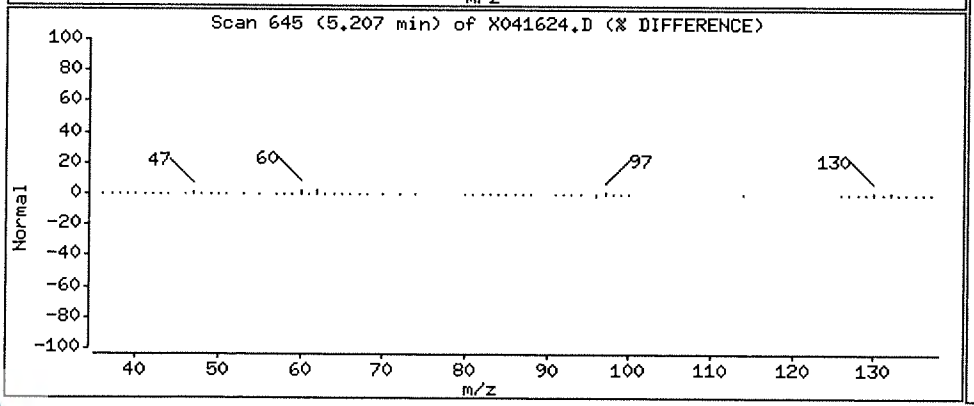












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210416.b\X041624.D

Date : 16-APR-2021 18:26

Client ID: HS21040695-16

Instrument: voa6.i

Sample Info: HS21040695-16;HS21040695-16;;;

Purge Volume: 5.0

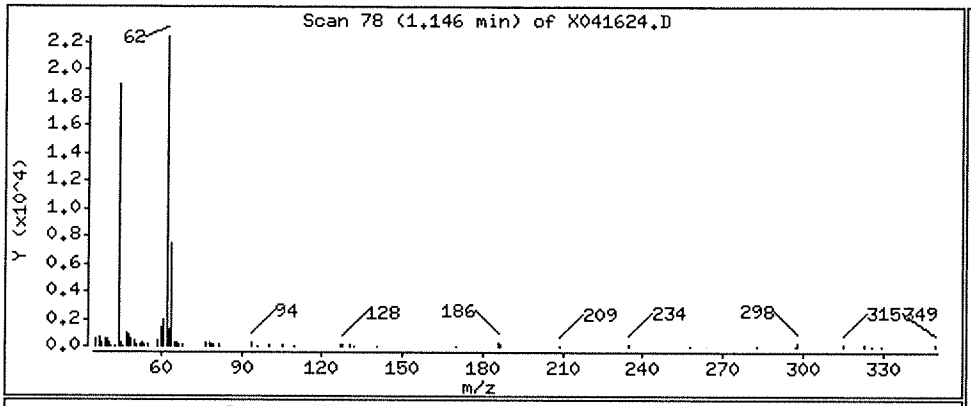
Operator: PC

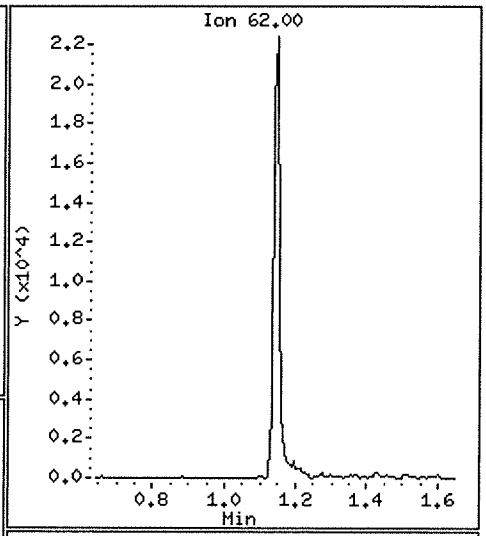
Column phase: DB624

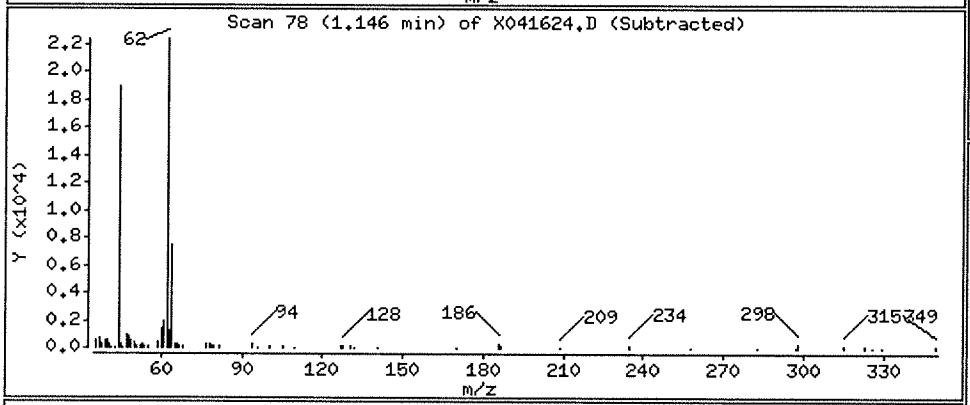
Column diameter: 0.18

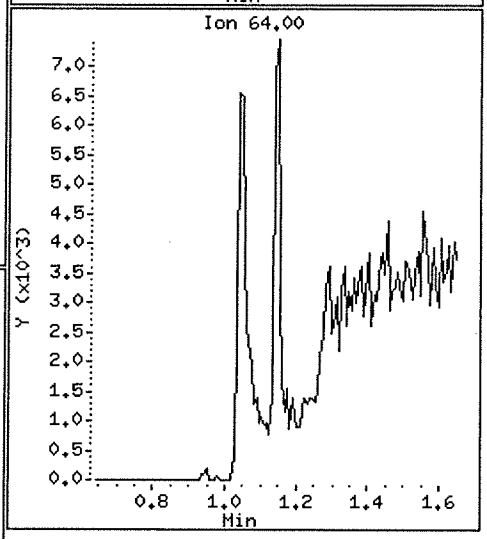
5 Vinyl Chloride

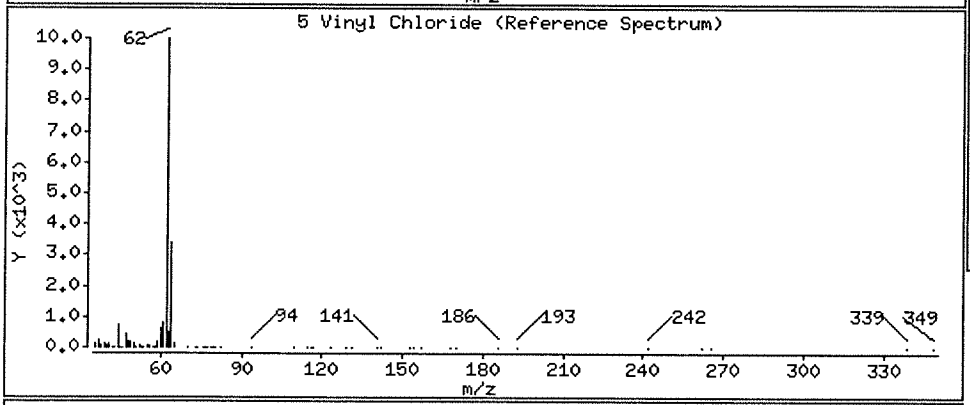
Concentration: 2033.09 ug/l

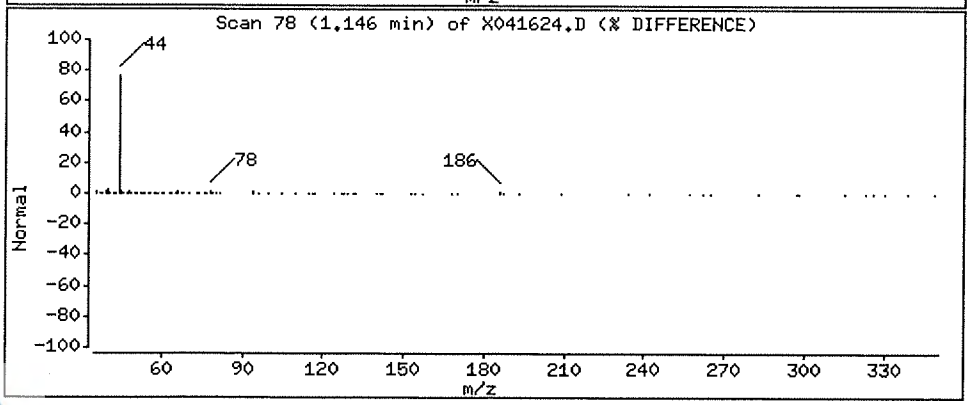












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210416.b\X041625.D Page 1
Report Date: 04-May-2021 12:16

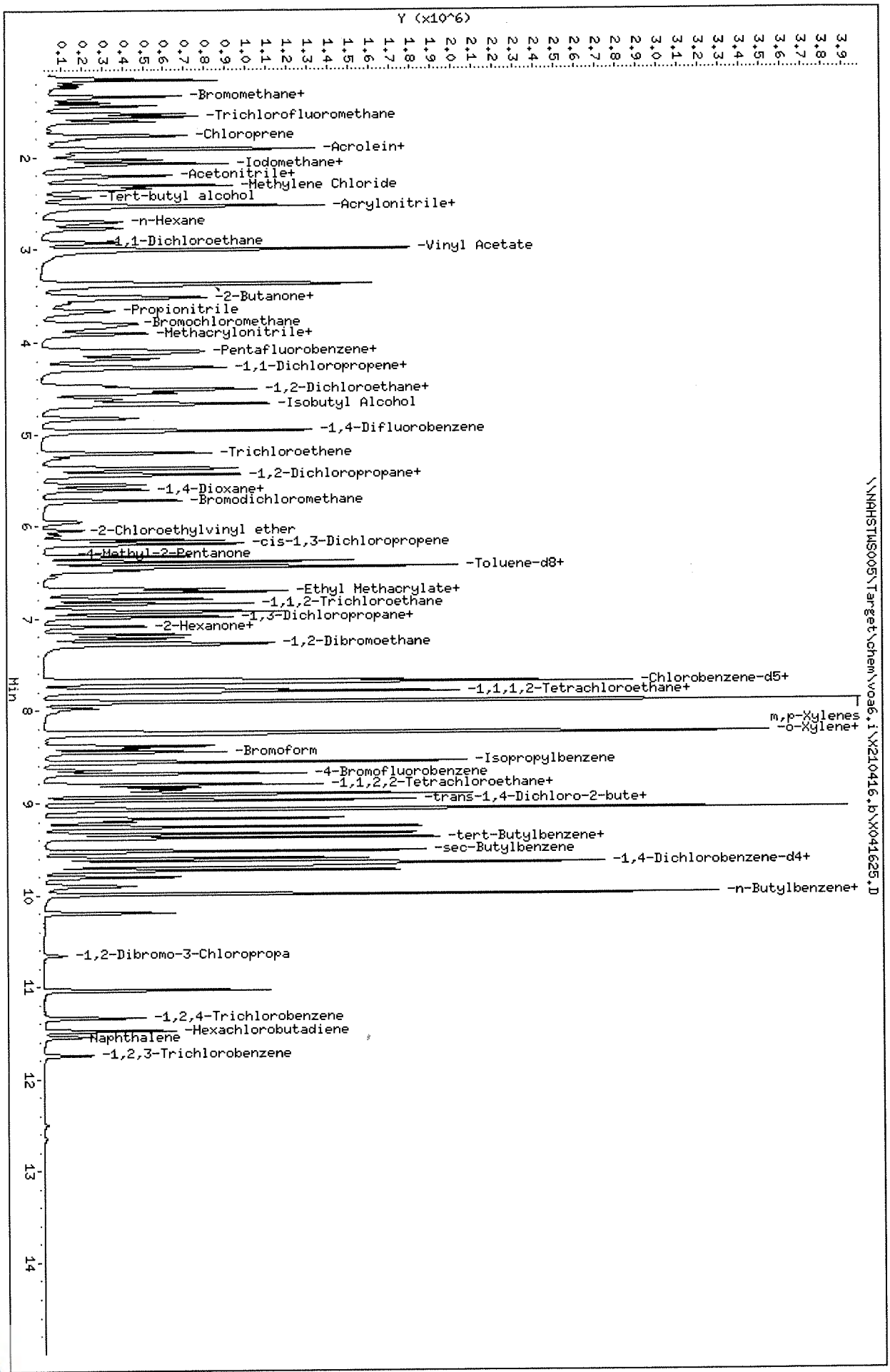
ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X210416.b\X041625.D
Lab Smp Id: CCV-END Client Smp ID: CCV-END
Inj Date : 16-APR-2021 18:47
Operator : PC Inst ID: voa6.i
Smp Info : CCV-END;CCV-END;2;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X210416.b\8260W.m
Meth Date : 04-May-2021 12:16 voa6.i Quant Type: ISTD
Cal Date : 02-APR-2021 13:20 Cal File: X040208.D
Als bottle: 24 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBI_short1.sub
Target Version: 4.14
Processing Host: NAHSTW7066

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	403264	50.0000	
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	736788	50.0000	
* 47 Chlorobenzene-d5	117	7.670	7.670	(1.000)	705816	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	348842	50.0000	
$ 30 Dibromofluoromethane	113	4.096	4.096	(0.979)	234025	50.0000	49.29
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	276878	50.0000	48.68
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	861396	50.0000	47.57
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	336789	50.0000	49.76
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	220526	50.0000	53.78
11 1,1-Dichloroethene	96	1.919	1.919	(0.459)	265608	50.0000	46.25
33 1,2-Dichloroethane	62	4.555	4.555	(0.918)	376469	50.0000	48.27
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	246697	50.0000	50.04
17 Methylene Chloride	84	2.305	2.305	(0.551)	219806	50.0000	50.21
38 Trichloroethene	130	5.206	5.206	(1.049)	246674	50.0000	48.90
5 Vinyl Chloride	62	1.145	1.145	(0.274)	300010	50.0000	49.62



Data File: \\NAHSTWS005\Target\chem\voa6.i\X210416.b\X041625.D
Date : 16-APR-2021 18:47
Client ID: CCV-END
Sample Info: CCV-END;CCV-END;2;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

HS21040695 RSK175 Raw Data

ALS WO# HS21040695

FID04 -Logbook

Batch: 26730 **Analyst:** Nosa Izekor

Date: 01-24-2017 **Reviewer:**

Method: RSK 175 ICAL **Laboratory:** Houston

Comments: Target Sequence 170124

#	Samp ID	Type	Analyzed	DF	Init Wt/Vol	Final Vol	File ID	Matrix	Status	pH
1	ICAL1	CALIB_1	01-24-2017 09:06 am	1.00	0.00 mL	0.00 mL	001.D	Liquid	Y	NA
2	ICAL2	CALIB_2	01-24-2017 09:30 am	1.00	0.00 mL	0.00 mL	002.D	Liquid	Y	NA
3	ICAL3	CALIB_3	01-24-2017 09:59 am	1.00	0.00 mL	0.00 mL	003.D	Liquid	Y	NA
4	ICAL4	CALIB_4	01-24-2017 10:15 am	1.00	0.00 mL	0.00 mL	004.D	Liquid	Y	NA
5	ICAL5	CALIB_5	01-24-2017 10:39 am	1.00	0.00 mL	0.00 mL	005.D	Liquid	Y	NA
6	ICAL6	CALIB_6	01-24-2017 10:57 am	1.00	0.00 mL	0.00 mL	006.D	Liquid	Y	NA
7	ICAL7	CALIB_7	01-24-2017 11:13 am	1.00	0.00 mL	0.00 mL	007.D	Liquid	Y	NA
8	ICV	METHSPIKI	01-24-2017 12:05 pm	1.00	0.00 mL	0.00 mL	008.D	Liquid	Y	NA
9	LCS-170124	LCS	01-24-2017 12:24 pm	1.00	0.00 mL	0.00 mL	009.D	Liquid	Y	NA
10	LCSD-170124	LCSD	01-24-2017 12:40 pm	1.00	0.00 mL	0.00 mL	010.D	Liquid	Y	NA
11	MBLK-170124	MBLK	01-24-2017 12:57 pm	1.00	0.00 mL	0.00 mL	011.D	Liquid	Y	NA
12	HS17010778-01	SAMP	01-24-2017 01:14 pm	1.00	0.00 mL	0.00 mL	012.D	Liquid	Y	NA
13	HS17010779-01	SAMP	01-24-2017 01:31 pm	1.00	0.00 mL	0.00 mL	013.D	Liquid	Y	NA
14	HS17010779-01DUP	SAMP	01-24-2017 01:47 pm	1.00	0.00 mL	0.00 mL	014.D	Liquid	Y	NA
15	CCV	CCV	01-24-2017 02:01 pm	1.00	0.00 mL	0.00 mL	015.D	Liquid	Y	NA

Chemical	Value
ICAL STD ID	30010700217
ICV STD ID	30010700610

FORM 3
WATER GASES METHOD SPIKE RECOVERY

Lab Name: ALS HOUSTON Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS21040695

Matrix Spike - ENG SC Sample No.: ICV

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE AMOUNT ()	% REC #	QC. LIMITS REC.
Ethene	16.800	19.090	114	75-125
Methane	9.647	9.597	99	75-125
Ethane	18.043	19.657	109	75-125
Propane	26.463	27.238	103	75-125
N-Butane	34.955	36.010	103	75-125

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

COMMENTS: _____

_____

FORM III GASES

FORM 6
GASES INITIAL CALIBRATION DATA

Lab Name: ALS HOUSTON Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS21040695

Instrument ID: FID-4 Calibration Date(s): 01/24/17 01/24/17

Column: RTX-PLOT ID: 0.53 (mm) Calibration Time(s): 0906 1113

LAB FILE ID: RF10: 001 RF25: 002 RF50: 003
RF100: 004 RF250: 005 RF500: 006

COMPOUND	RF10	RF25	RF50	RF100	RF250	RF500
Ethene	535.608	567.359	564.985	516.024	665.282	425.678
Methane	968.912	978.238	1019.699	880.798	960.713	930.704
Ethane	602.493	670.177	658.908	597.201	808.513	817.630
Propane	500	1279	2602	4785	18294	38286
N-Butane	438	936	2034	3864	18446	42817

FORM VI GASES

FORM 6
GASES INITIAL CALIBRATION DATA

Lab Name: ALS HOUSTON Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS2104069

Instrument ID: FID-4 Calibration Date(s): 01/24/17 01/24/17

Column: RTX-PLOT ID: 0.53 (mm) Calibration Time(s): 0906 1113

RF1000: 007

COMPOUND	RF1000	CURVE	COEFFICENTS A0	A1	A2	%RSD OR R^2	MA
Ethene	828.858	AVRG		586.256273		21.932	
Methane	1081.580	AVRG		974.377787		6.550	
Ethane	999.335	AVRG		736.322546		19.885	
Propane	96509	2ORDR	0.97987006	1.529e-003	-4.58e-009	0.9991365	0
N-Butane	114164	2ORDR	2.46870151	1.834e-003	-5.54e-009	0.9980766	0

FORM VI GASES

Data File: \\NAHSTWS005\Target\chem\FID-4.i\170124A.b\001.D Page 1
Report Date: 08-Apr-2020 12:18

ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\NAHSTWS005\Target\chem\FID-4.i\170124A.b\001.D
Lab Smp Id: ICAL1 Client Smp ID: ICAL1
Inj Date : 24-JAN-2017 09:06
Operator : JA Inst ID: FID-4.i
Smp Info : ICAL1;ICAL1;;;
Misc Info :
Comment :
Method : \\nahstws005\Target\chem\FID-4.i\170124A.b\RSKNI2.m
Meth Date : 26-Feb-2020 16:33 Purvi.lad Quant Type: ESTD
Cal Date : 24-JAN-2017 09:06 Cal File: 001.D
Als bottle: 1 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: stdNIP2.sub
Target Version: 4.14

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	ON-COL (ug/L)
1 Methane	1.043	1.030	0.013	374	0.38600	0.383(a)
2 Ethene	1.553	1.556	-0.003	361	0.67400	0.615(a)
3 Ethane	1.716	1.723	-0.007	435	0.72200	0.590(a)
4 Propane	4.073	4.113	-0.040	500	1.05900	1.743
5 N-Butane	7.640	7.690	-0.050	438	1.39800	3.271

QC Flag Legend

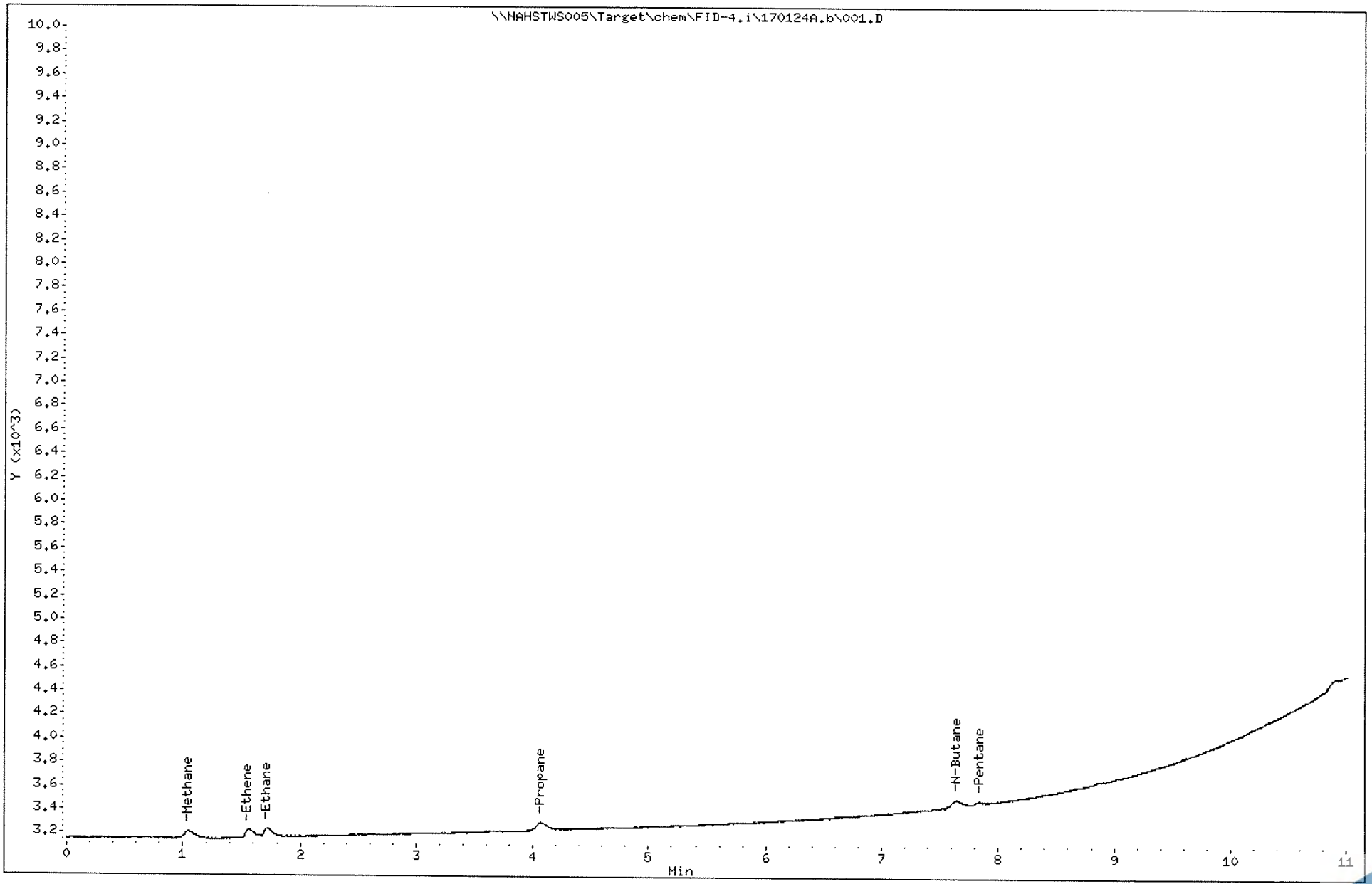
a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).

Data File: \\NAHSTWS005\Target\chem\FID-4.i\170124A.b\001.D
Date : 24-JAN-2017 09:06
Client ID: ICAL1
Sample Info: ICAL1;ICAL1;;;

Column phase: Rtx-PLOT

Instrument: FID-4.i

Operator: JA
Column diameter: 0.53



Data File: \\NAHSTWS005\Target\chem\FID-4.i\170124A.b\002.D Page 1
Report Date: 08-Apr-2020 12:18

ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\NAHSTWS005\Target\chem\FID-4.i\170124A.b\002.D
Lab Smp Id: ICAL2 Client Smp ID: ICAL2
Inj Date : 24-JAN-2017 09:30
Operator : MA Inst ID: FID-4.i
Smp Info : ICAL2;ICAL2;;;
Misc Info : ;1;0;1
Comment :
Method : \\nahstws005\Target\chem\FID-4.i\170124A.b\RSKNI2.m
Meth Date : 26-Feb-2020 16:33 Purvi.lad Quant Type: ESTD
Cal Date : 24-JAN-2017 09:59 Cal File: 003.D
Als bottle: 2 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: stdNIP2.sub
Target Version: 4.14

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

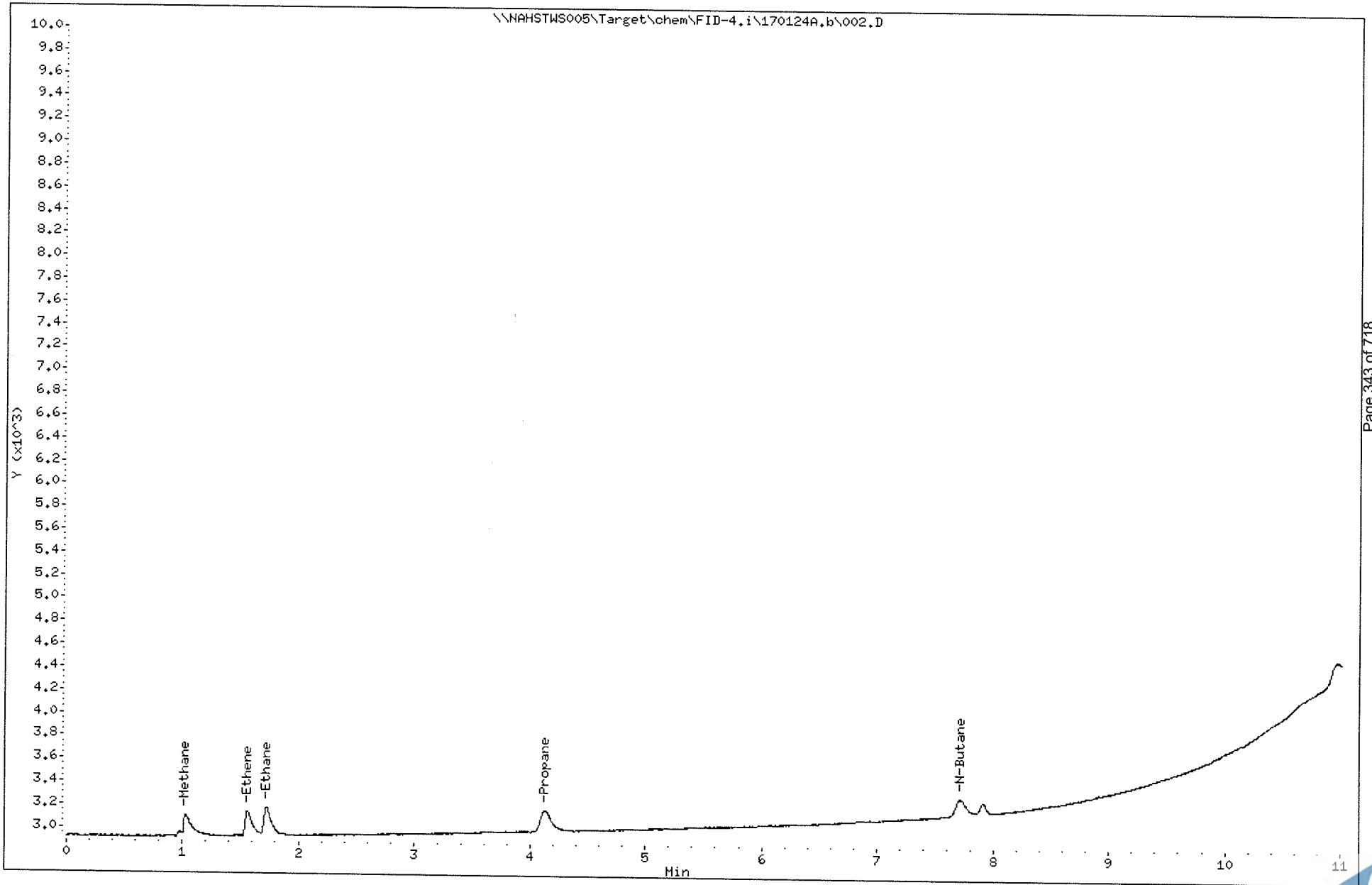
					AMOUNTS	
					CAL-AMT	ON-COL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/L)	(ug/L)
1 Methane	1.023	1.030	-0.007	944	0.96500	0.968
2 Ethene	1.560	1.556	0.004	956	1.68500	1.630
3 Ethane	1.723	1.723	0.000	1209	1.80400	1.641
4 Propane	4.123	4.113	0.010	1279	2.64600	2.927
5 N-Butane	7.716	7.690	0.026	936	3.49600	4.180

Data File: \\NAHSTWS005\Target\chem\FID-4.i\170124A.b\002.D
Date : 24-JAN-2017 09:30
Client ID: ICAL2
Sample Info: ICAL2;ICAL2;;;

Column phase: Rtx-PLOT

Instrument: FID-4.i

Operator: MA
Column diameter: 0.53



Data File: \\NAHSTWS005\Target\chem\FID-4.i\170124A.b\003.D Page 1
Report Date: 08-Apr-2020 12:18

ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\NAHSTWS005\Target\chem\FID-4.i\170124A.b\003.D
Lab Smp Id: ICAL3 Client Smp ID: ICAL3
Inj Date : 24-JAN-2017 09:59
Operator : MA Inst ID: FID-4.i
Smp Info : ICAL3;ICAL3;;;
Misc Info : ;1;0;1
Comment :
Method : \\nahstws005\Target\chem\FID-4.i\170124A.b\RSKNI2.m
Meth Date : 26-Feb-2020 16:33 Purvi.lad Quant Type: ESTD
Cal Date : 24-JAN-2017 11:13 Cal File: 007.D
Als bottle: 3 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: stdNIP2.sub
Target Version: 4.14

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

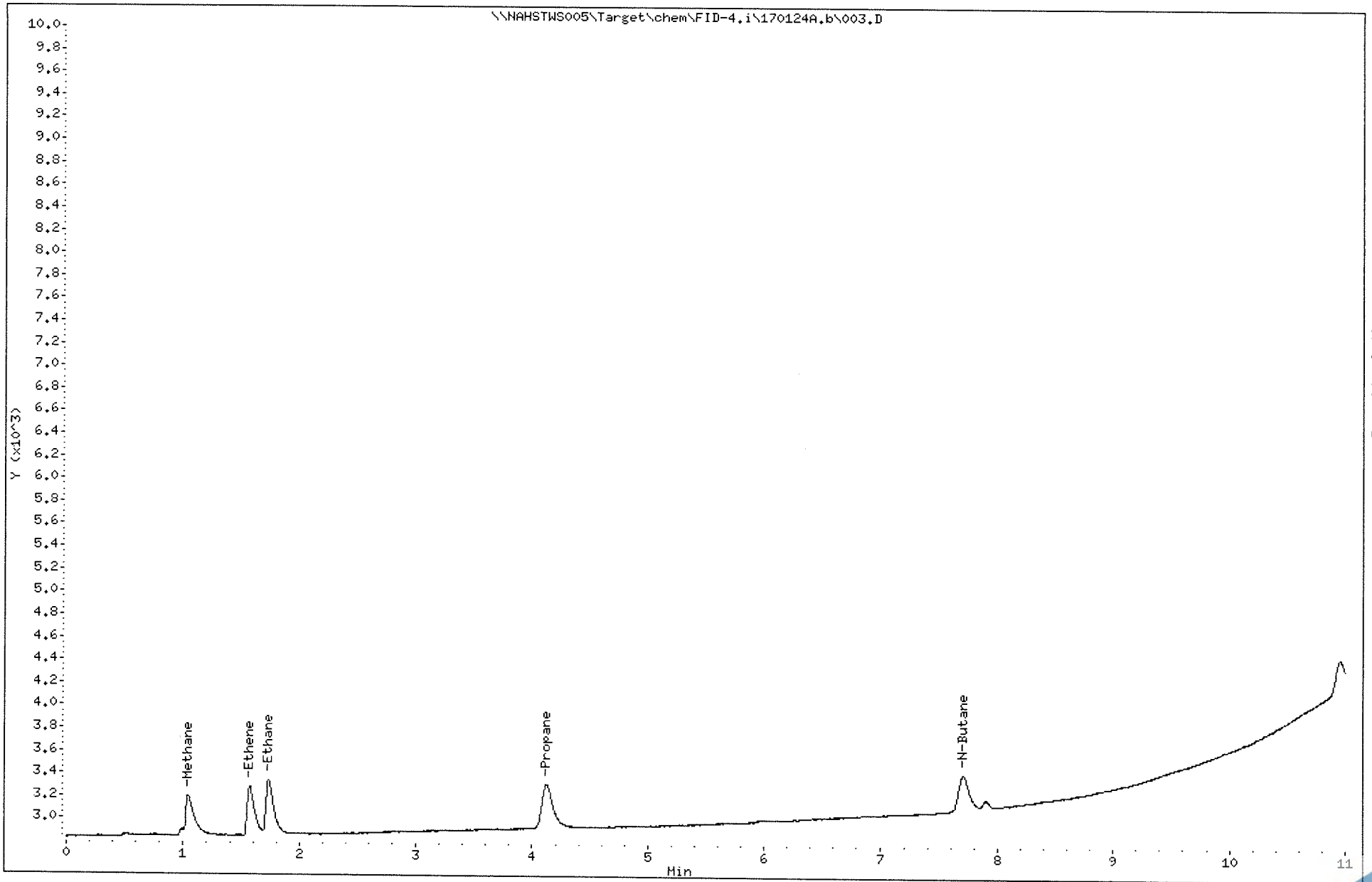
					AMOUNTS	
Compounds	RT	EXP RT	DLT RT	RESPONSE	CAL-AMT (ug/L)	ON-COL (ug/L)
1 Methane	1.043	1.030	0.013	1967	1.92900	2.018
2 Ethene	1.570	1.556	0.014	1904	3.37000	3.247
3 Ethane	1.736	1.723	0.013	2378	3.60900	3.229
4 Propane	4.123	4.113	0.010	2602	5.29300	4.926
5 N-Butane	7.703	7.690	0.013	2034	6.99100	6.176

Data File: \\NAHSTWS005\Target\chem\FID-4.i\170124A.b\003.D
Date : 24-JAN-2017 09:59
Client ID: ICAL3
Sample Info: ICAL3;ICAL3;;;

Column phase: Rtx-PLOT

Instrument: FID-4.i

Operator: MA
Column diameter: 0.53



Data File: \\NAHSTWS005\Target\chem\FID-4.i\170124A.b\004.D Page 1
Report Date: 08-Apr-2020 12:18

ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\NAHSTWS005\Target\chem\FID-4.i\170124A.b\004.D
Lab Smp Id: ICAL4 Client Smp ID: ICAL4
Inj Date : 24-JAN-2017 10:15
Operator : MA Inst ID: FID-4.i
Smp Info : ICAL4;ICAL4;;;
Misc Info : ;1;0;1
Comment :
Method : \\nahstws005\Target\chem\FID-4.i\170124A.b\RSKNI2.m
Meth Date : 26-Feb-2020 16:33 Purvi.lad Quant Type: ESTD
Cal Date : 24-JAN-2017 09:30 Cal File: 002.D
Als bottle: 4 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: stdNIP2.sub
Target Version: 4.14

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
1 Methane	1.033	1.030	0.003	3399	3.85900	3.488
2 Ethene	1.563	1.556	0.007	3478	6.74000	5.932
3 Ethane	1.726	1.723	0.003	4310	7.21700	5.853
4 Propane	4.120	4.113	0.007	4785	10.5850	8.190
5 N-Butane	7.703	7.690	0.013	3864	13.9820	9.473(M)

QC Flag Legend

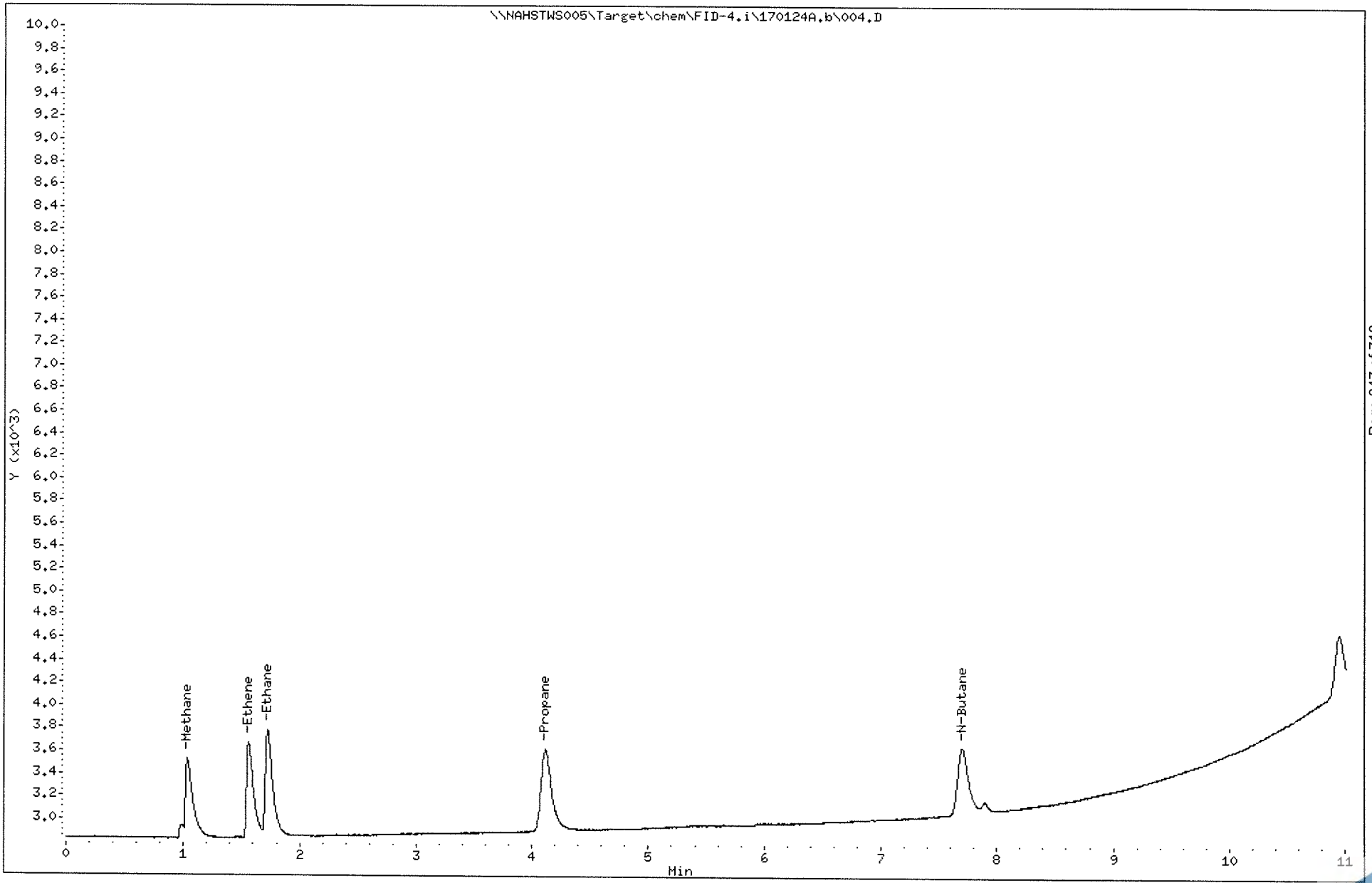
M - Compound response manually integrated.

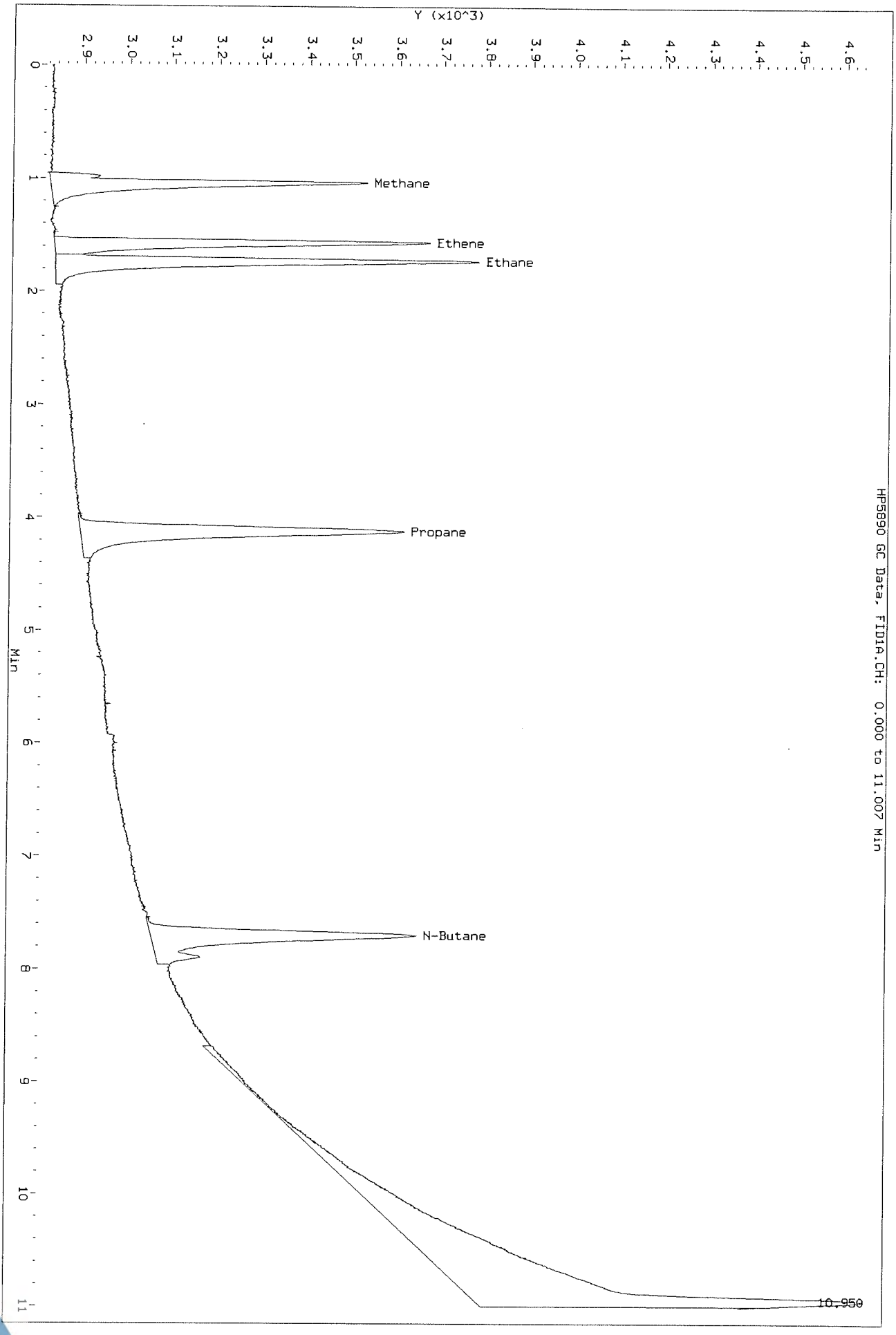
Data File: \\NAHSTWS005\Target\chem\FID-4.i\170124A.b\004.D
Date : 24-JAN-2017 10:15
Client ID: ICAL4
Sample Info: ICAL4;ICAL4;;;

Column phase: Rtx-PLOT

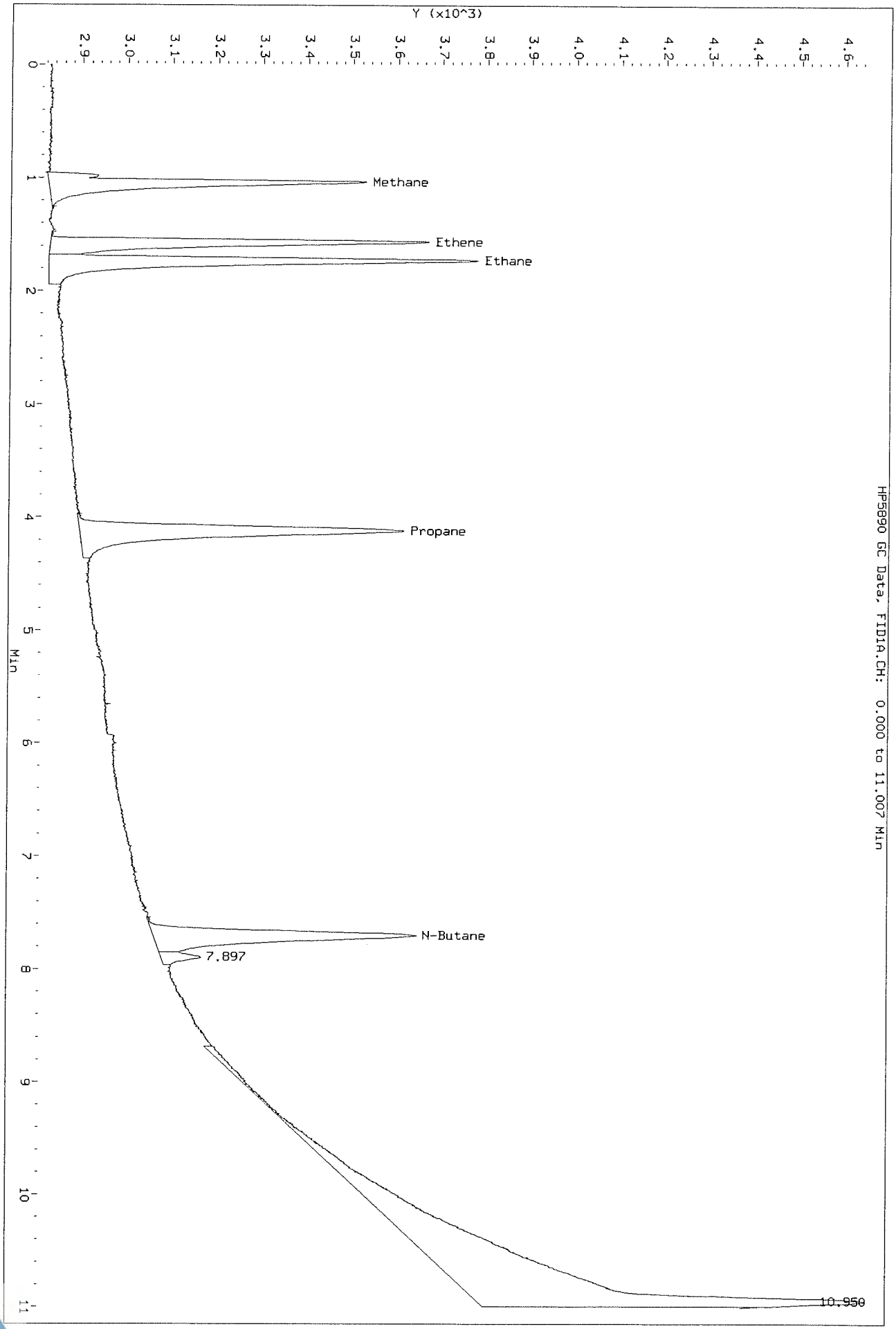
Instrument: FID-4.i

Operator: MA
Column diameter: 0.53




Data File: \\nahstws005\Target\chem\FID-4.i\2017-ICAL\170124.b\BEFORE\004.D
Injection Date: 24-JAN-2017 10:15
Instrument: FID-4.i
Client Sample ID: ICAL4
HP5890 GC Data, FID1A.CH: 0.000 to 11.007 Min
Y (x10^3)
Min
Methane
Ethene
Ethane
Propane
N-Butane
10.950

Data File: \\nahstws005\Target\chem\FID-4.i\2017-ICAL\170124.b\004.D
Injection Date: 24-JAN-2017 10:15
Instrument: FID-4.i
Client Sample ID: ICAL4



Data File: \\NAHSTWS005\Target\chem\FID-4.i\170124A.b\005.D Page 1
Report Date: 08-Apr-2020 12:18

ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\NAHSTWS005\Target\chem\FID-4.i\170124A.b\005.D
Lab Smp Id: ICAL5 Client Smp ID: ICAL5
Inj Date : 24-JAN-2017 10:39
Operator : MA Inst ID: FID-4.i
Smp Info : ICAL5;ICAL5;;;
Misc Info : ;1;0;1
Comment :
Method : \\nahstws005\Target\chem\FID-4.i\170124A.b\RSKNI2.m
Meth Date : 26-Feb-2020 16:33 Purvi.lad Quant Type: ESTD
Cal Date : 24-JAN-2017 10:39 Cal File: 005.D
Als bottle: 5 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: stdNIP2.sub
Target Version: 4.14

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
1 Methane	1.043	1.030	0.013	9268	9.64700	9.511
2 Ethene	1.570	1.556	0.014	11210	16.8500	19.121
3 Ethane	1.733	1.723	0.010	14588	18.0430	19.811
4 Propane	4.120	4.113	0.007	18294	26.4630	27.415
5 N-Butane	7.700	7.690	0.010	18446	34.9550	34.419(M)

QC Flag Legend

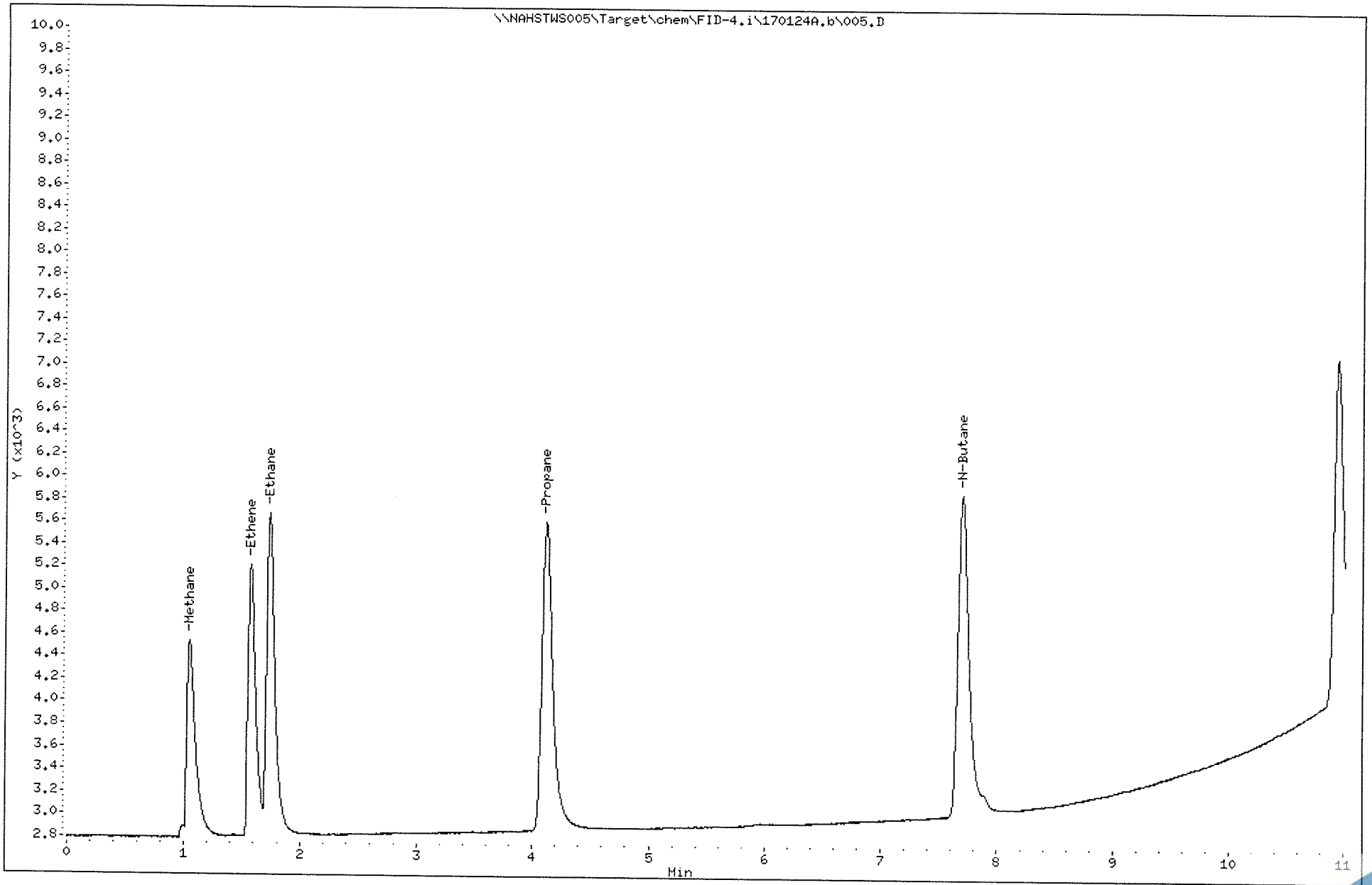
M - Compound response manually integrated.

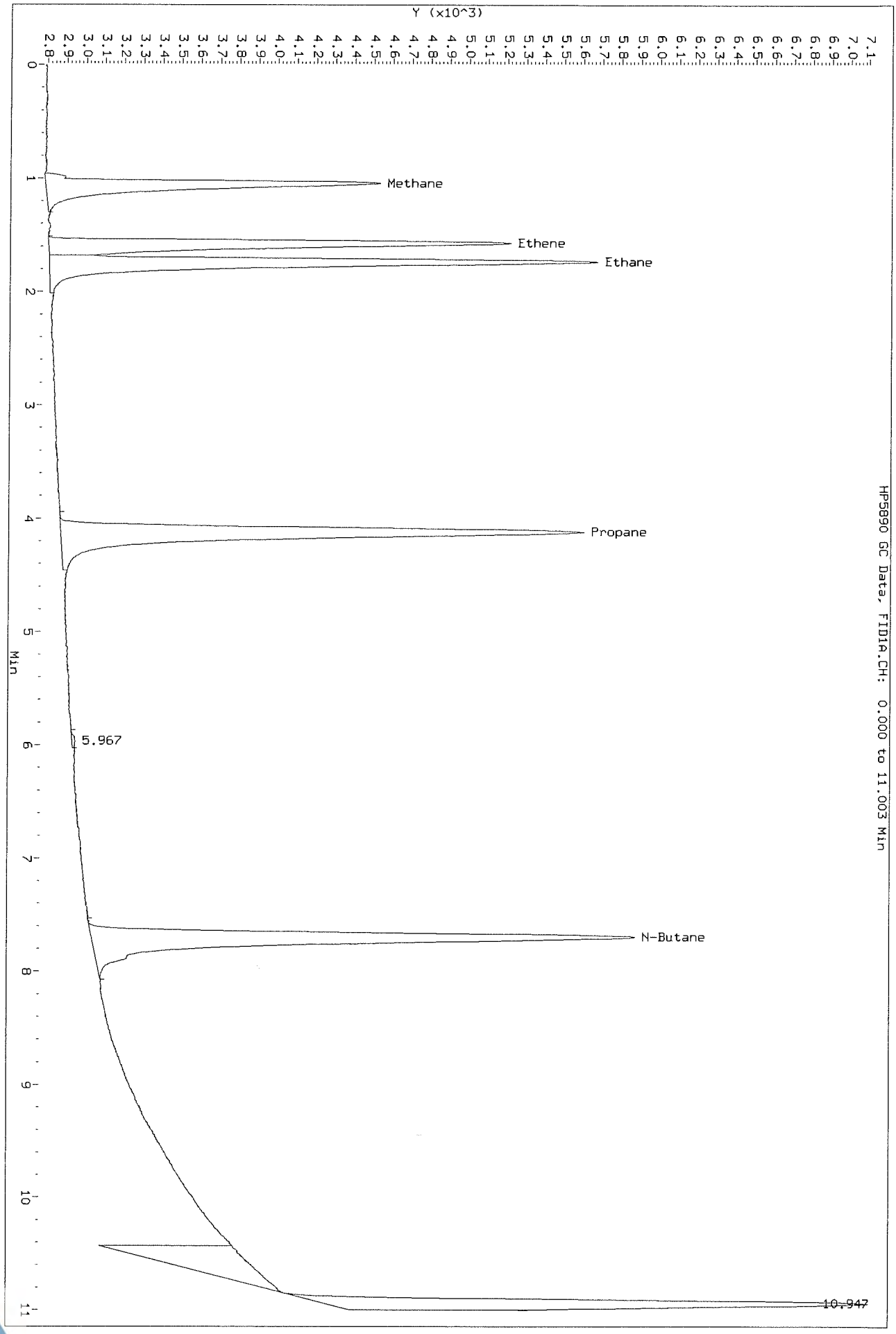
Data File: \\NAHSTWS005\Target\chem\FID-4.i\170124A.b\005.D
Date : 24-JAN-2017 10:39
Client ID: ICAL5
Sample Info: ICAL5;ICAL5;;;

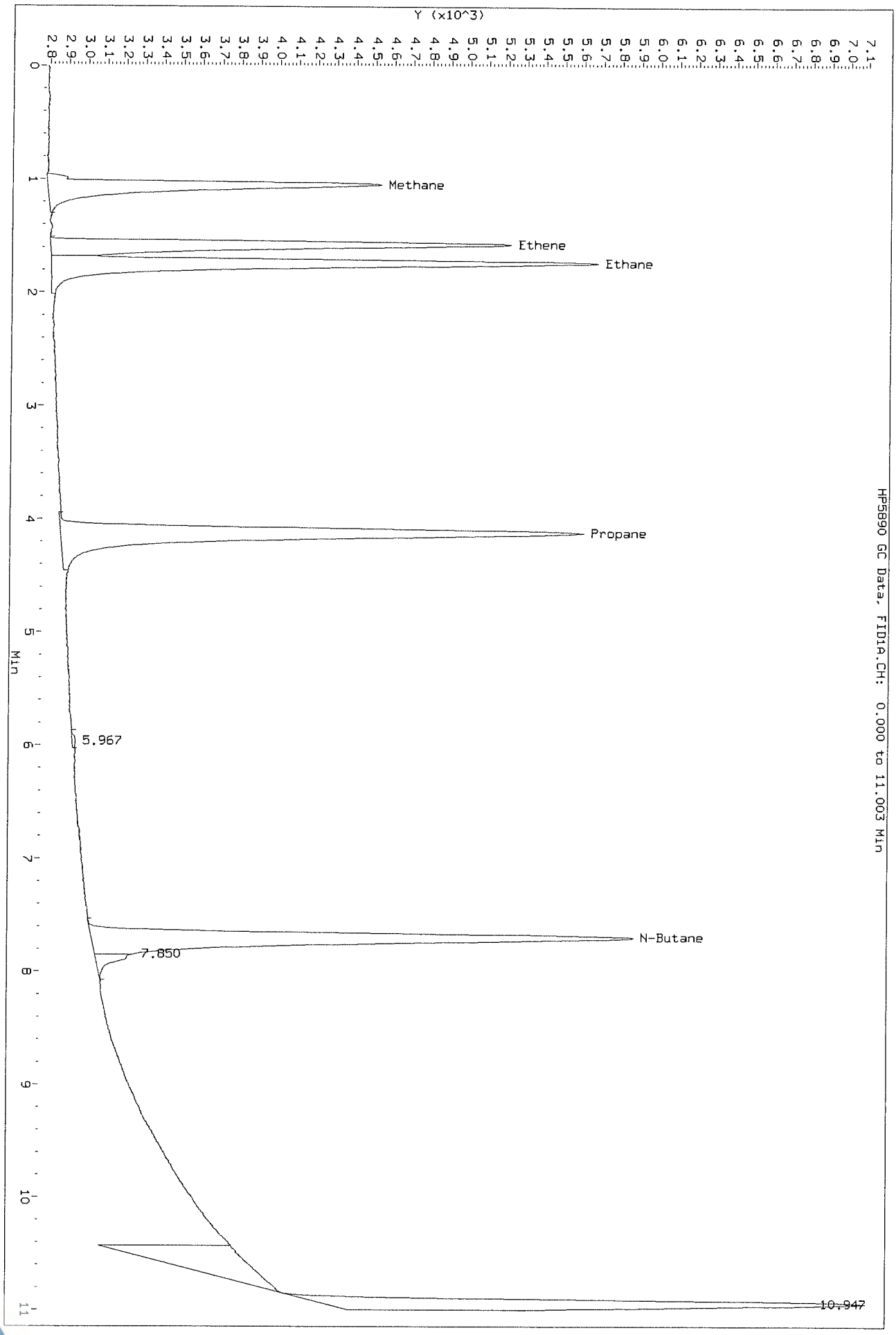
Column phase: Rtx-PLOT

Instrument: FID-4.i

Operator: MA
Column diameter: 0.53




Data File: \\nahstws005\Target\chem\FID-4.i\2017-ICAL\170124.b\BEFORE\005.D
Injection Date: 24-JAN-2017 10:39
Instrument: FID-4.i
Client Sample ID: ICAL5
HP5890 GC Data, FID1A.CH: 0.000 to 11.003 Min
Y (x10^3)
Min
Methane
Ethene
Ethane
Propane
5.967
N-Butane
10.947


Data File: \\nahstws005\Target\chem\FID-4.i\2017-ICAL\170124.b\005.D
Injection Date: 24-JAN-2017 10:39
Instrument: FID-4.i
Client Sample ID: ICAL5
HP5890 GC Data, FID1A.CH: 0.000 to 11.003 Min
Y (x10^3)
Min
Methane
Ethene
Ethane
Propane
5.967
N-Butane
7.850
10.947

Data File: \\NAHSTWS005\Target\chem\FID-4.i\170124A.b\006.D Page 1
Report Date: 08-Apr-2020 12:18

ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\NAHSTWS005\Target\chem\FID-4.i\170124A.b\006.D
Lab Smp Id: ICAL6 Client Smp ID: ICAL6
Inj Date : 24-JAN-2017 10:57
Operator : MA Inst ID: FID-4.i
Smp Info : ICAL6;ICAL6;;;
Misc Info : ;1;0;1
Comment :
Method : \\nahstws005\Target\chem\FID-4.i\170124A.b\RSKNI2.m
Meth Date : 26-Feb-2020 16:33 Purvi.lad Quant Type: ESTD
Cal Date : 24-JAN-2017 10:39 Cal File: 005.D
Als bottle: 6 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: stdNIP2.sub
Target Version: 4.14

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

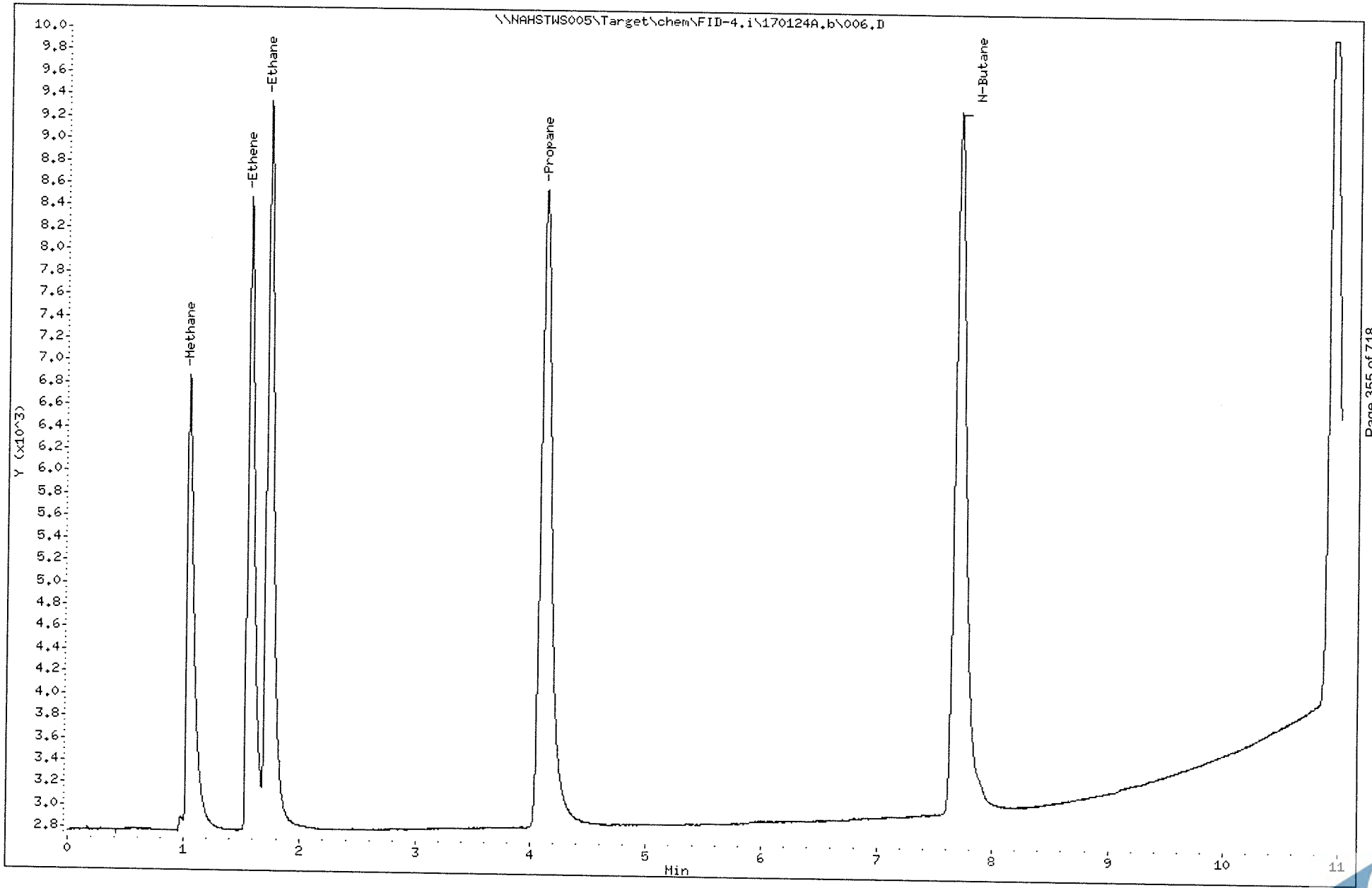
Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
1 Methane	1.023	1.030	-0.007	17957	19.2940	18.429
2 Ethene	1.550	1.556	-0.006	22910	53.8200	39.078
3 Ethane	1.716	1.723	-0.007	29505	36.0860	40.070
4 Propane	4.110	4.113	-0.003	38286	52.9260	52.796
5 N-Butane	7.696	7.690	0.006	42817	69.9110	70.855

Data File: \\NAHSTWS005\Target\chem\FID-4.i\170124A.b\006.D
Date : 24-JAN-2017 10:57
Client ID: ICAL6
Sample Info: ICAL6;ICAL6;;;

Column phase: Rtx-PLOT

Instrument: FID-4.i

Operator: MA
Column diameter: 0.53



Data File: \\NAHSTWS005\Target\chem\FID-4.i\170124A.b\007.D Page 1
Report Date: 08-Apr-2020 12:18

ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\NAHSTWS005\Target\chem\FID-4.i\170124A.b\007.D
Lab Smp Id: ICAL7 Client Smp ID: ICAL7
Inj Date : 24-JAN-2017 11:13
Operator : MA Inst ID: FID-4.i
Smp Info : ICAL7;ICAL7;;;
Misc Info : ;1;0;1
Comment :
Method : \\nahstws005\Target\chem\FID-4.i\170124A.b\RSKNI2.m
Meth Date : 26-Feb-2020 16:33 Purvi.lad Quant Type: ESTD
Cal Date : 24-JAN-2017 10:57 Cal File: 006.D
Als bottle: 7 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: stdNIP2.sub
Target Version: 4.14

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

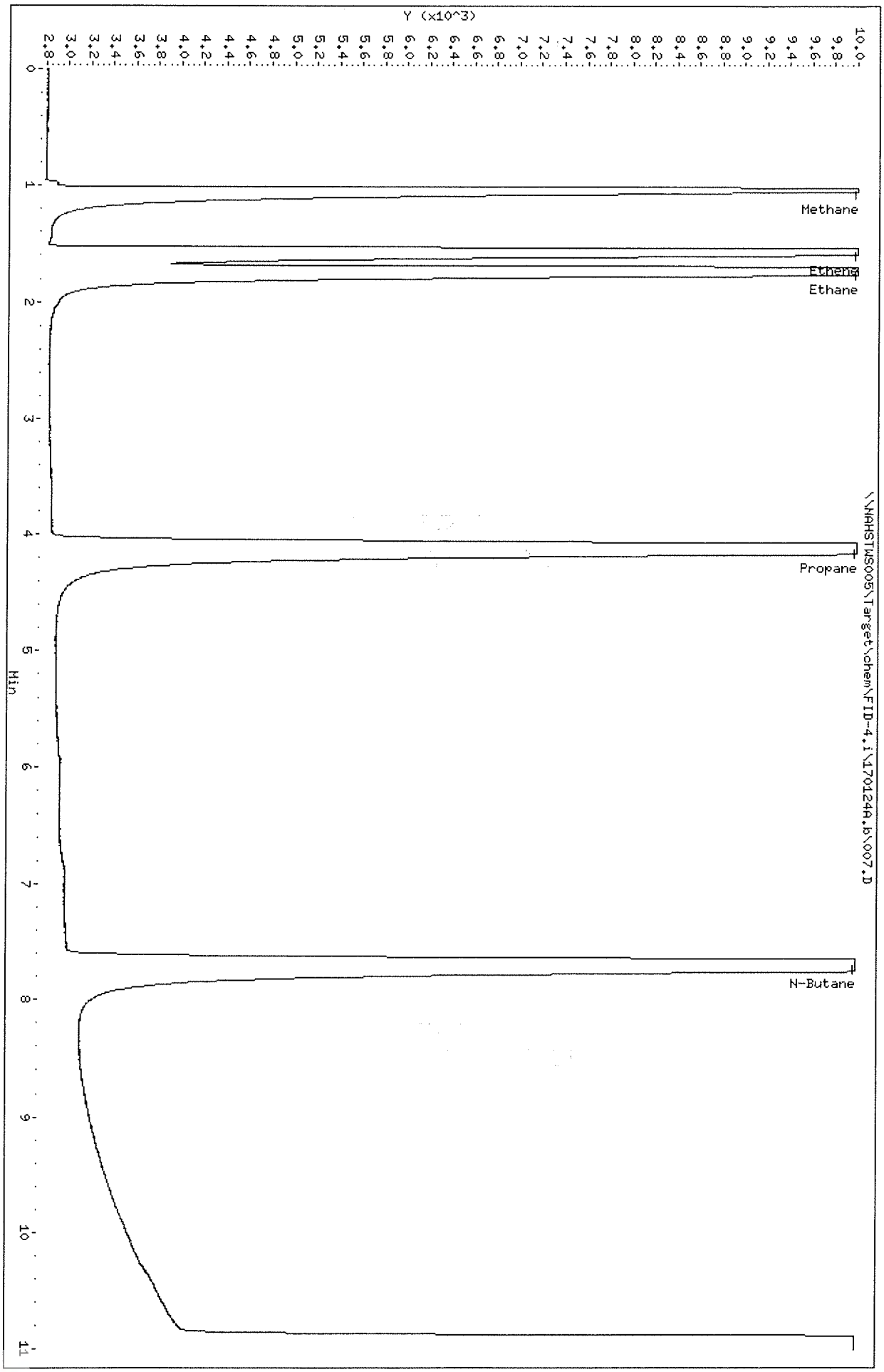
Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	ON-COL (ug/L)
1 Methane	1.030	1.030	0.000	41736	38.5880	42.833(A)
2 Ethene	1.556	1.556	0.000	55865	67.4000	95.291(A)
3 Ethane	1.723	1.723	0.000	72124	72.1720	97.951(A)
4 Propane	4.113	4.113	0.000	96509	105.852	105.844
5 N-Butane	7.690	7.690	0.000	114164	139.821	139.707

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.

Data File: \\NAHSTWS005\Target\chem\FID-4.i\170124A.b\007.D
Date : 24-JAN-2017 11:13
Client ID: ICAL7
Sample Info: ICAL7;ICAL7;;;
Column phase: Rtx-PLOT

Instrument: FID-4.i
Operator: MA
Column diameter: 0.53



Data File: \\NAHSTWS005\Target\chem\FID-4.i\170124A.b\008.D
Report Date: 08-Apr-2020 12:18

ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\NAHSTWS005\Target\chem\FID-4.i\170124A.b\008.D
Lab Smp Id: ICV Client Smp ID: ICV
Inj Date : 24-JAN-2017 12:05
Operator : MA Inst ID: FID-4.i
Smp Info : ICV;ICV;;;
Misc Info : ;1;0;1
Comment :
Method : \\NAHSTWS005\Target\chem\FID-4.i\170124A.b\RSKNI2.m
Meth Date : 26-Feb-2020 16:33 Purvi.lad Quant Type: ESTD
Cal Date : 24-JAN-2017 11:13 Cal File: 007.D
Als bottle: 8 QC Sample: METHSPIKE
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: stdNIP2.sub
Target Version: 4.14

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

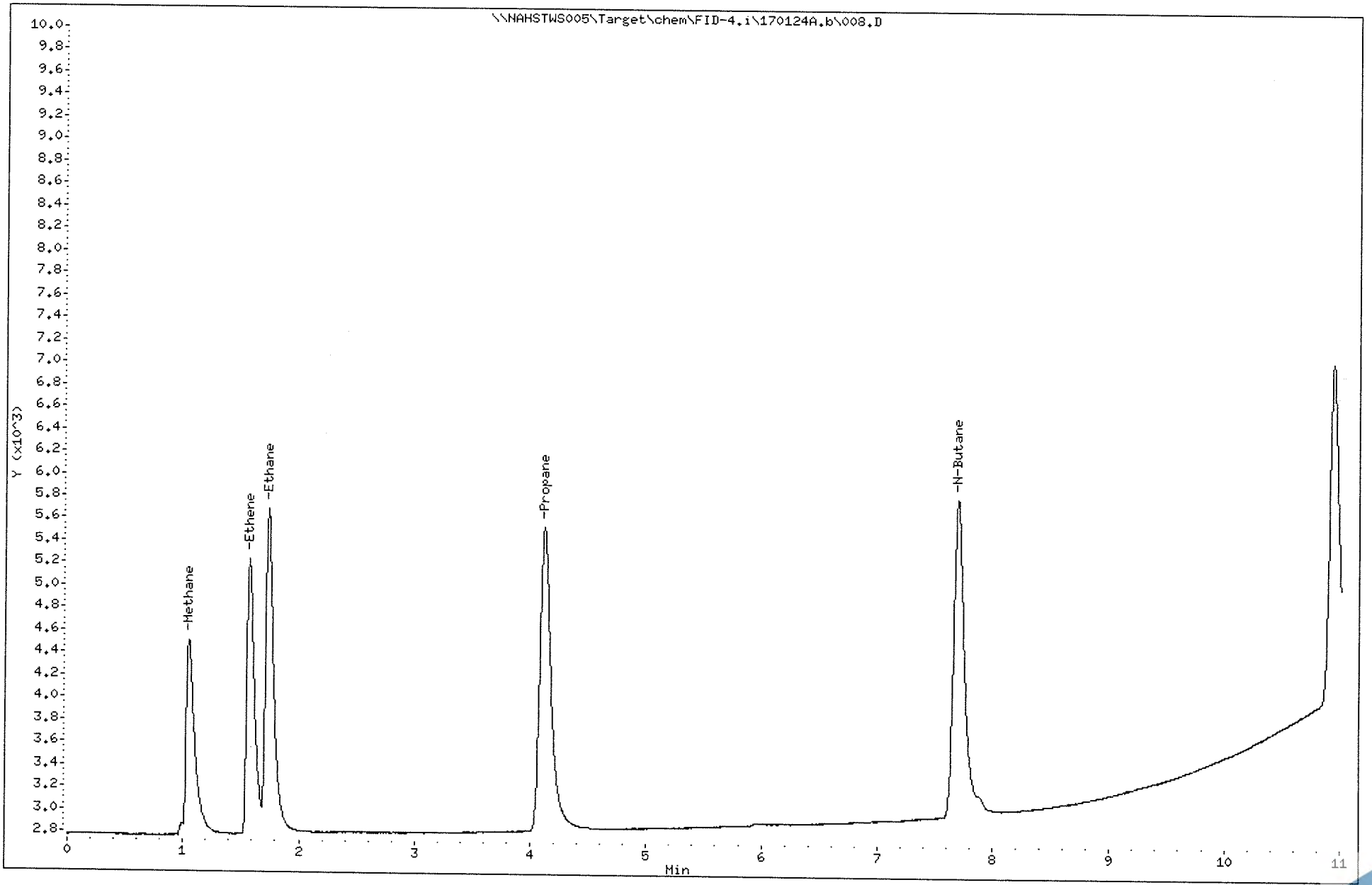
Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)
1 Methane	1.046	1.030	0.016	9352	9.59792	9.597
2 Ethene	1.573	1.556	0.017	11192	19.0906	19.090
3 Ethane	1.736	1.723	0.013	14474	19.6571	19.657
4 Propane	4.116	4.113	0.003	18164	27.2381	27.238
5 N-Butane	7.696	7.690	0.006	19425	36.0103	36.010

Data File: \\NAHSTWS005\Target\chem\FID-4.i\170124A.b\008.D
Date : 24-JAN-2017 12:05
Client ID: ICV
Sample Info: ICV;ICV;;;

Column phase: Rtx-PLOT

Instrument: FID-4.i

Operator: MA
Column diameter: 0.53



FID04 -Logbook

Batch: 44519 **Analyst:** Purvi Lad

Date: 04-21-2021 **Reviewer:**

Method: rsk175 **Laboratory:** Houston

Comments:

#	Samp ID	Type	Analyzed	DF	Init Wt/Vol	Final Vol	File ID	Matrix	Status	pH
1	RSK-CCV	CCV	04-21-2021 09:57 am	1.00	0.00 mL	0.00 mL	001.D	Liquid	Y	NA
2	MBLK-210421	MBLK	04-21-2021 10:29 am	1.00	0.00 mL	0.00 mL	002.D	Liquid	Y	NA
3	LCS-210421	LCS	04-21-2021 10:40 am	1.00	0.00 mL	0.00 mL	003.D	Liquid	Y	NA
4	HS21040695-11	SAMP	04-21-2021 10:49 am	1.00	0.00 mL	30.76	004.D	Liquid	Y	<2
5	HS21040695-12	SAMP	04-21-2021 11:07 am	1.00	0.00 mL	30.59	005.D	Liquid	Y	>2
6	HS21040695-13	SAMP	04-21-2021 11:20 am	1.00	0.00 mL	31.10	006.D	Liquid	Y	<2
7	HS21040695-14	SAMP	04-21-2021 11:30 am	1.00	0.00 mL	33.00	007.D	Liquid	Y	<2
8	HS21040695-13	SAMP	04-21-2021 11:43 am	10.00	0.00 mL	0.00 mL	008.D	Liquid	Y	NA
9	HS21040695-14	SAMP	04-21-2021 11:52 am	10.00	0.00 mL	0.00 mL	009.D	Liquid	Y	NA
10	HS21040859-07	SAMP	04-21-2021 11:59 am	1.00	0.00 mL	30.78	010.D	Liquid	Y	<2
11	RSK-CCV	CCV	04-21-2021 12:09 pm	1.00	0.00 mL	0.00 mL	011.D	Liquid	Y	NA
12	HS21040859-08	SAMP	04-21-2021 12:25 pm	1.00	0.00 mL	31.89	012.D	Liquid	Y	<2
13	HS21040859-08MS	MS	04-21-2021 01:01 pm	1.00	0.00 mL	30.46	013.D	Liquid	Y	<2
14	HS21040859-08MSD	MSD	04-21-2021 01:46 pm	1.00	0.00 mL	31.25	014.D	Liquid	Y	<2
15	HS21040859-09	SAMP	04-21-2021 01:58 pm	1.00	0.00 mL	31.02	015.D	Liquid	Y	<2
16	HS21040859-10	SAMP	04-21-2021 02:22 pm	1.00	0.00 mL	31.05	016.D	Liquid	Y	<2
17	HS21040859-07	SAMP	04-21-2021 02:32 pm	50.00	0.00 mL	0.00 mL	017.D	Liquid	Y	NA
18	RSK-CCV	CCV	04-21-2021 02:46 pm	1.00	0.00 mL	0.00 mL	018.D	Liquid	Y	NA

Chemical	Value
pH Paper	300107057-07
CCV/LC/LSD/MS/MSD	300107043-11

FORM 7B
GASES CALIBRATION VERIFICATION SUMMARY

Lab Name: ALS HOUSTON Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS21040695

Instrument ID: FID-4 Calibration Date: 04/21/21 Time: 0957

Lab File ID: 001 Init. Calib. Date(s): 01/24/17 01/24/17

Init. Calib. Times: 0906 1113

GC Column: RTX-PLOT ID: 0.53 (mm)

COMPOUND	RRF OR AMOUNT	RRF250.00 OR AMOUNT	MIN RRF	%D OR %DRIFT	MAX %D OR %DRIFT	CURV TYPE
Ethane	719.48900	683.64463	0.01	4.98	20.00	AVRG
Methane	974.99200	821.91355	0.01	15.70	20.00	AVRG
Ethene	585.76000	515.72700	0.01	11.96	20.00	AVRG

FORM VII GASES

FORM 7B
GASES CALIBRATION VERIFICATION SUMMARY

Lab Name: ALS HOUSTON Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS21040695

Instrument ID: FID-4 Calibration Date: 04/21/21 Time: 1209

Lab File ID: 011 Init. Calib. Date(s): 01/24/17 01/24/17

Init. Calib. Times: 0906 1113

GC Column: RTX-PLOT ID: 0.53 (mm)

COMPOUND	RRF OR AMOUNT	RRF250.00 OR AMOUNT	MIN RRF	%D OR %DRIFT	MAX %D OR %DRIFT	CURV TYPE
Ethane	719.48900	775.86876	0.01	-7.84	20.00	AVRG
Methane	974.99200	887.73712	0.01	8.95	20.00	AVRG
Ethene	585.76000	615.07418	0.01	-5.00	20.00	AVRG

FORM VII GASES

Data File: \\nahstws005\Target\chem\FID-4.i\210421.b\001.D Page 1
Report Date: 19-May-2021 14:26

ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\nahstws005\Target\chem\FID-4.i\210421.b\001.D
Lab Smp Id: RSK-CCV Client Smp ID: RSK-CCV
Inj Date : 21-APR-2021 09:57
Operator : PL Inst ID: FID-4.i
Smp Info : RSK-CCV;RSK-CCV;2;4
Misc Info : ;1;0;1
Comment :
Method : \\nahstws005\Target\chem\FID-4.i\210421.b\RSKNI3.m
Meth Date : 19-May-2021 14:26 FID-4.i Quant Type: ESTD
Cal Date : 24-JAN-2017 10:15 Cal File: 004.D
Als bottle: 1 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: RSK175.sub
Target Version: 4.14
Processing Host: NAHSTW7056

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

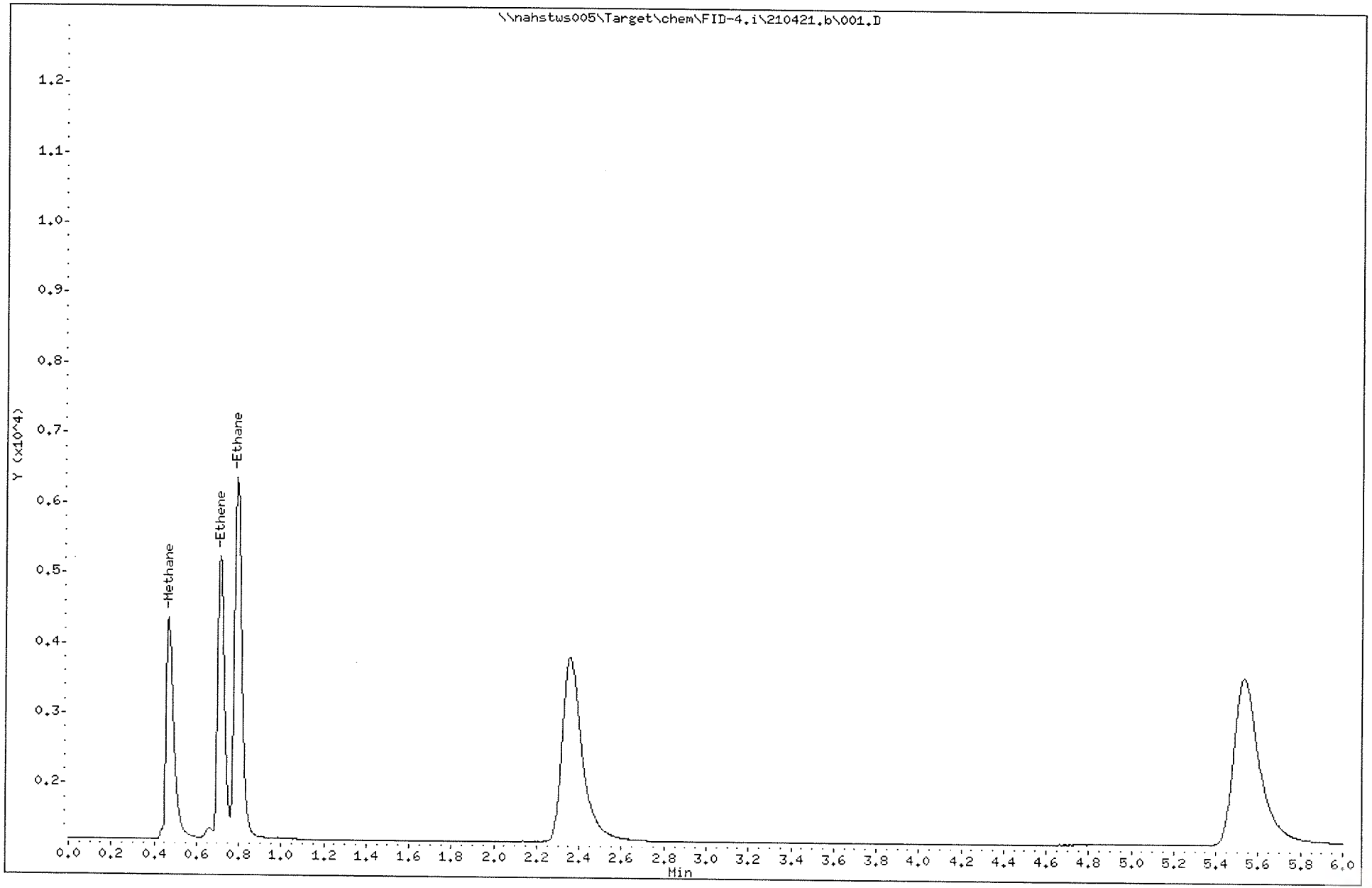
Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
1 Methane	0.466	0.466	0.000	7929	9.64700	8.132
2 Ethene	0.710	0.710	0.000	8690	16.8500	14.835
3 Ethane	0.790	0.790	0.000	12335	18.0430	17.144

Data File: \\nahstws005\Target\chem\FID-4.i\210421.b\001.D
Date : 21-APR-2021 09:57
Client ID: RSK-CCV
Sample Info: RSK-CCV;RSK-CCV;2;4

Column phase: Rtx-PLOT

Instrument: FID-4.i

Operator: PL
Column diameter: 0.53



Data File: \\nahstws005\Target\chem\FID-4.i\210421.b\002.D Page 1
Report Date: 19-May-2021 14:26

ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\nahstws005\Target\chem\FID-4.i\210421.b\002.D
Lab Smp Id: MBLK-210421 Client Smp ID: MBLK-210421
Inj Date : 21-APR-2021 10:29
Operator : PL Inst ID: FID-4.i
Smp Info : MBLK-210421;MBLK-210421;3;;BLANK
Misc Info : ;1;0;1
Comment :
Method : \\nahstws005\Target\chem\FID-4.i\210421.b\RSKNI3.m
Meth Date : 19-May-2021 14:26 FID-4.i Quant Type: ESTD
Cal Date : 24-JAN-2017 10:15 Cal File: 004.D
Als bottle: 2 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: RSK175.sub
Target Version: 4.14
Processing Host: NAHSTW7056

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

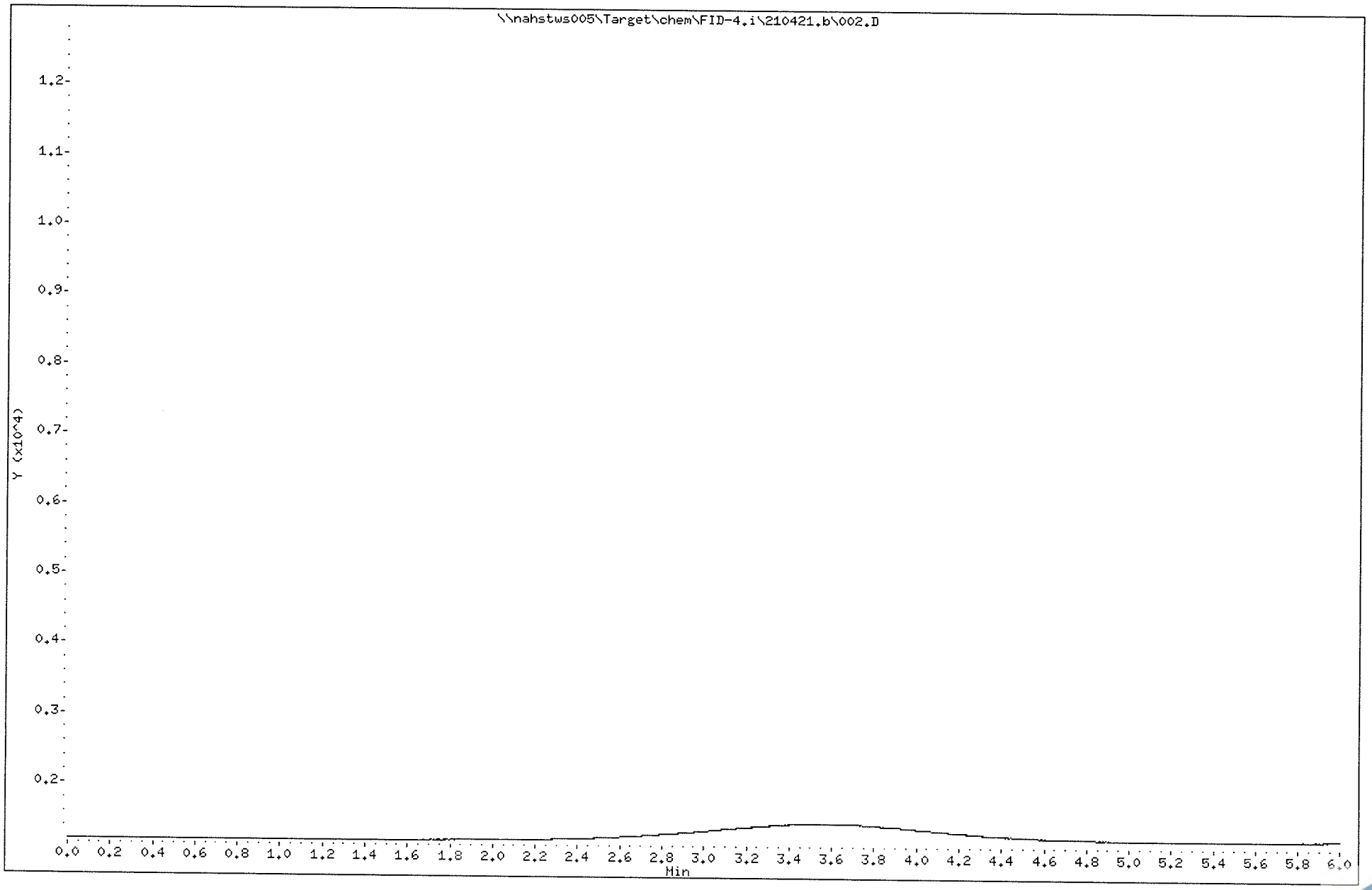
Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)

Data File: \\nahstws005\Target\chem\FID-4.i\210421.b\002.D
Date : 21-APR-2021 10:29
Client ID: MBLK-210421
Sample Info: MBLK-210421;MBLK-210421;3;;BLANK

Column phase: Rtx-PLOT

Instrument: FID-4.i

Operator: PL
Column diameter: 0.53



Data File: \\nahstws005\Target\chem\FID-4.i\210421.b\003.D Page 1
Report Date: 19-May-2021 14:26

ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\nahstws005\Target\chem\FID-4.i\210421.b\003.D
Lab Smp Id: LCS-210421 Client Smp ID: LCS-210421
Inj Date : 21-APR-2021 10:40
Operator : PL Inst ID: FID-4.i
Smp Info : LCS-210421;LCS-210421;3;;LCS
Misc Info : ;1;0;1
Comment :
Method : \\nahstws005\Target\chem\FID-4.i\210421.b\RSKNI3.m
Meth Date : 19-May-2021 14:26 FID-4.i Quant Type: ESTD
Cal Date : 24-JAN-2017 10:15 Cal File: 004.D
Als bottle: 3 QC Sample: LCS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: RSK175.sub
Target Version: 4.14
Processing Host: NAHSTW7056

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

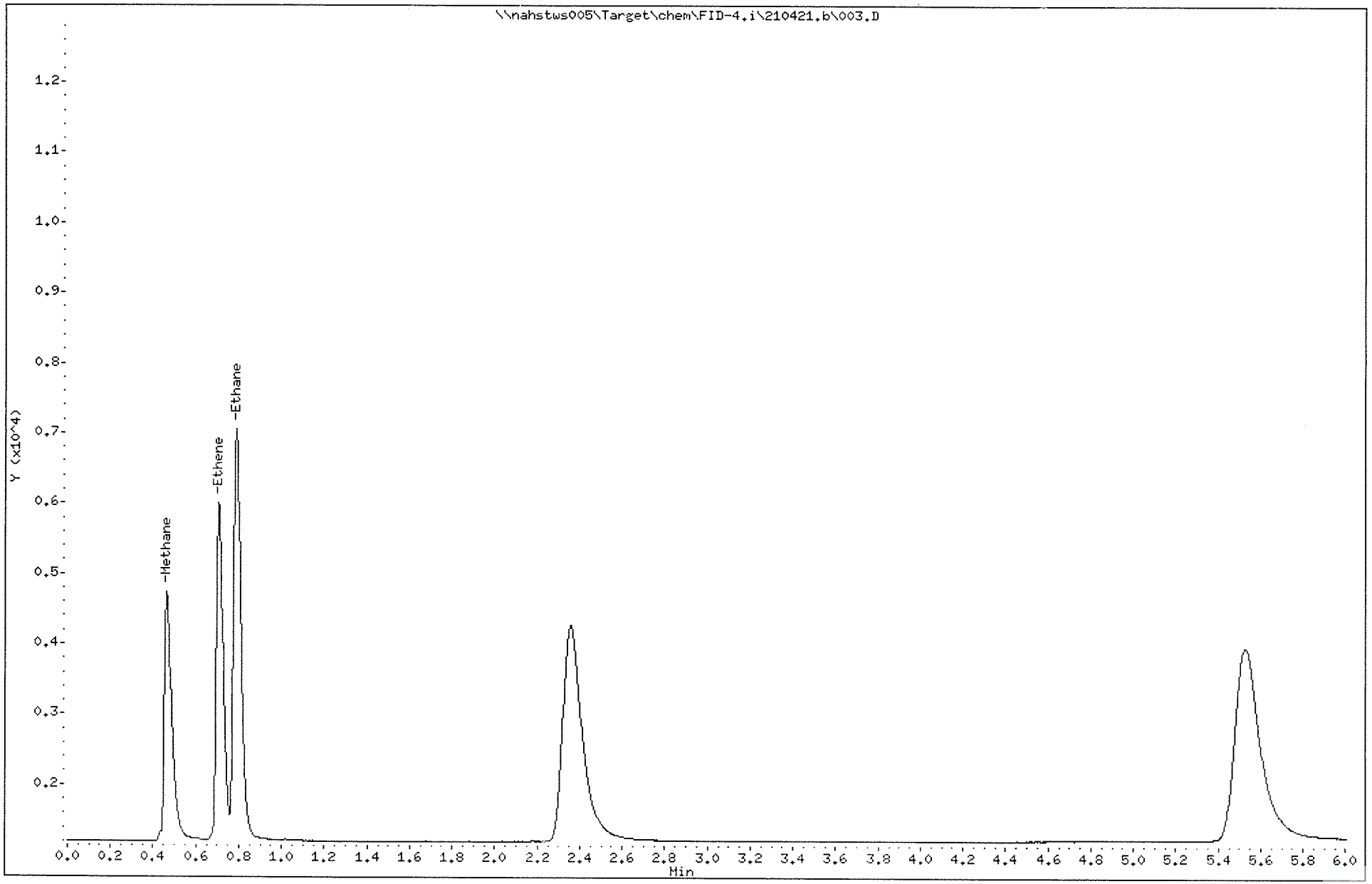
Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)
1 Methane	0.463	0.466	-0.003	8954	9.18366	9.183
2 Ethene	0.706	0.710	-0.004	10682	18.2361	18.236
3 Ethane	0.786	0.790	-0.004	14379	19.9850	19.984

Data File: \\nahstws005\Target\chem\FID-4.i\210421.b\003.D
Date : 21-APR-2021 10:40
Client ID: LCS-210421
Sample Info: LCS-210421;LCS-210421;3;;LCS

Column phase: Rtx-PLOT

Instrument: FID-4.i

Operator: PL
Column diameter: 0.53



ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\nahstws005\Target\chem\FID-4.i\210421.b\004.D
Lab Smp Id: HS21040695-11 Client Smp ID: HS21040695-11
Inj Date : 21-APR-2021 10:49
Operator : PL Inst ID: FID-4.i
Smp Info : HS21040695-11;HS21040695-11
Misc Info : ;1;0;1
Comment :
Method : \\nahstws005\Target\chem\FID-4.i\210421.b\RSKNI3.m
Meth Date : 19-May-2021 14:26 FID-4.i Quant Type: ESTD
Cal Date : 24-JAN-2017 10:15 Cal File: 004.D
Als bottle: 4
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: RSK175.sub
Target Version: 4.14
Processing Host: NAHSTW7056

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

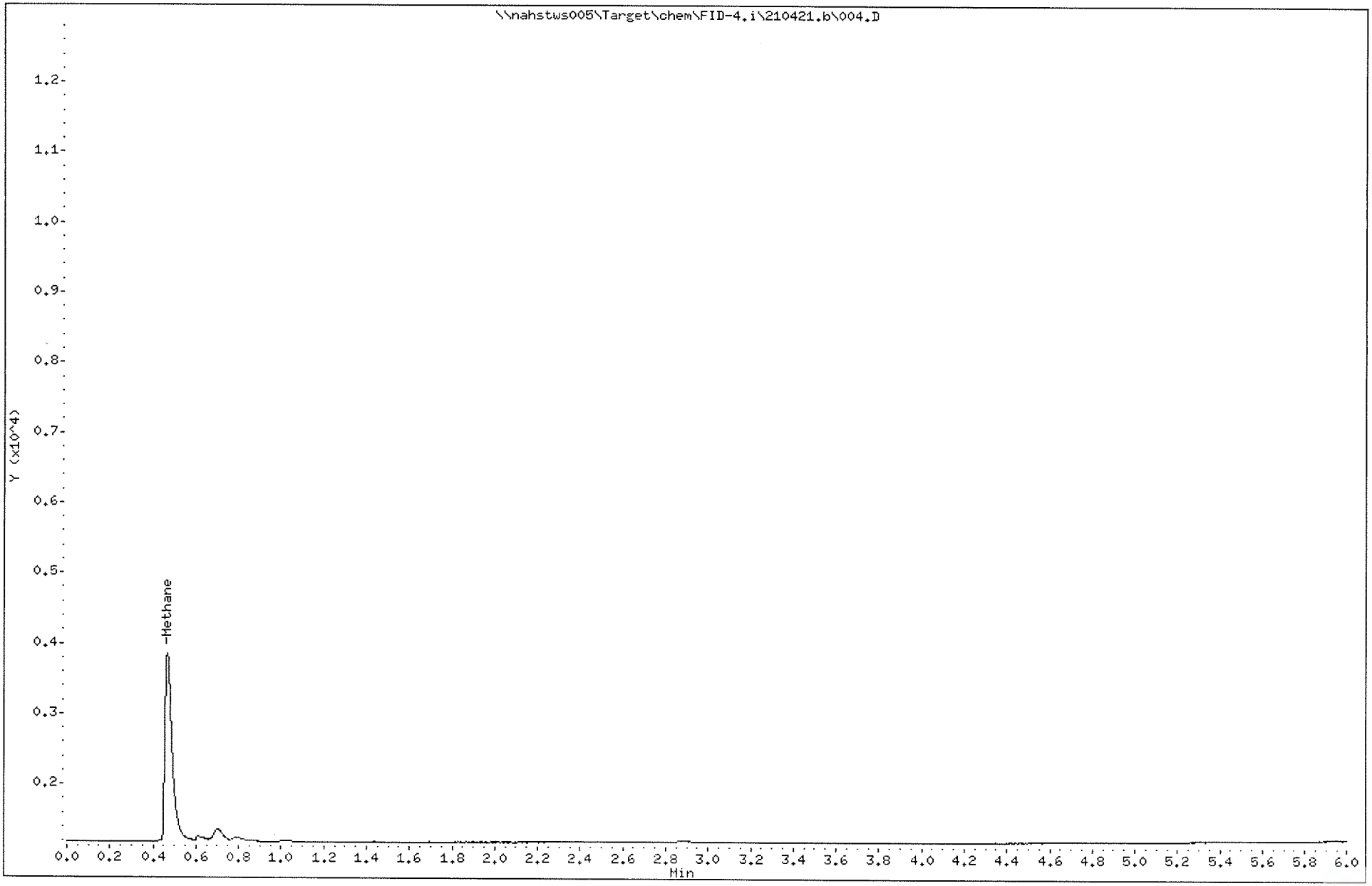
					CONCENTRATIONS	
					ON-COLUMN	FINAL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/L)	(ug/L)
1 Methane	0.466	0.466	0.000	6132	6.28928	6.289

Data File: \\nahstws005\Target\chem\FID-4.i\210421.b\004.D
Date : 21-APR-2021 10:49
Client ID: HS21040695-11
Sample Info: HS21040695-11;HS21040695-11

Column phase: Rtx-PLOT

Instrument: FID-4.i

Operator: PL
Column diameter: 0.53



Data File: \\nahstws005\Target\chem\FID-4.i\210421.b\005.D Page 1
Report Date: 19-May-2021 14:26

ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\nahstws005\Target\chem\FID-4.i\210421.b\005.D
Lab Smp Id: HS21040695-12 Client Smp ID: HS21040695-12
Inj Date : 21-APR-2021 11:07
Operator : PL Inst ID: FID-4.i
Smp Info : HS21040695-12;HS21040695-12
Misc Info : ;1;0;1
Comment :
Method : \\nahstws005\Target\chem\FID-4.i\210421.b\RSKNI3.m
Meth Date : 19-May-2021 14:26 FID-4.i Quant Type: ESTD
Cal Date : 24-JAN-2017 10:15 Cal File: 004.D
Als bottle: 5
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: RSK175.sub
Target Version: 4.14
Processing Host: NAHSTW7056

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

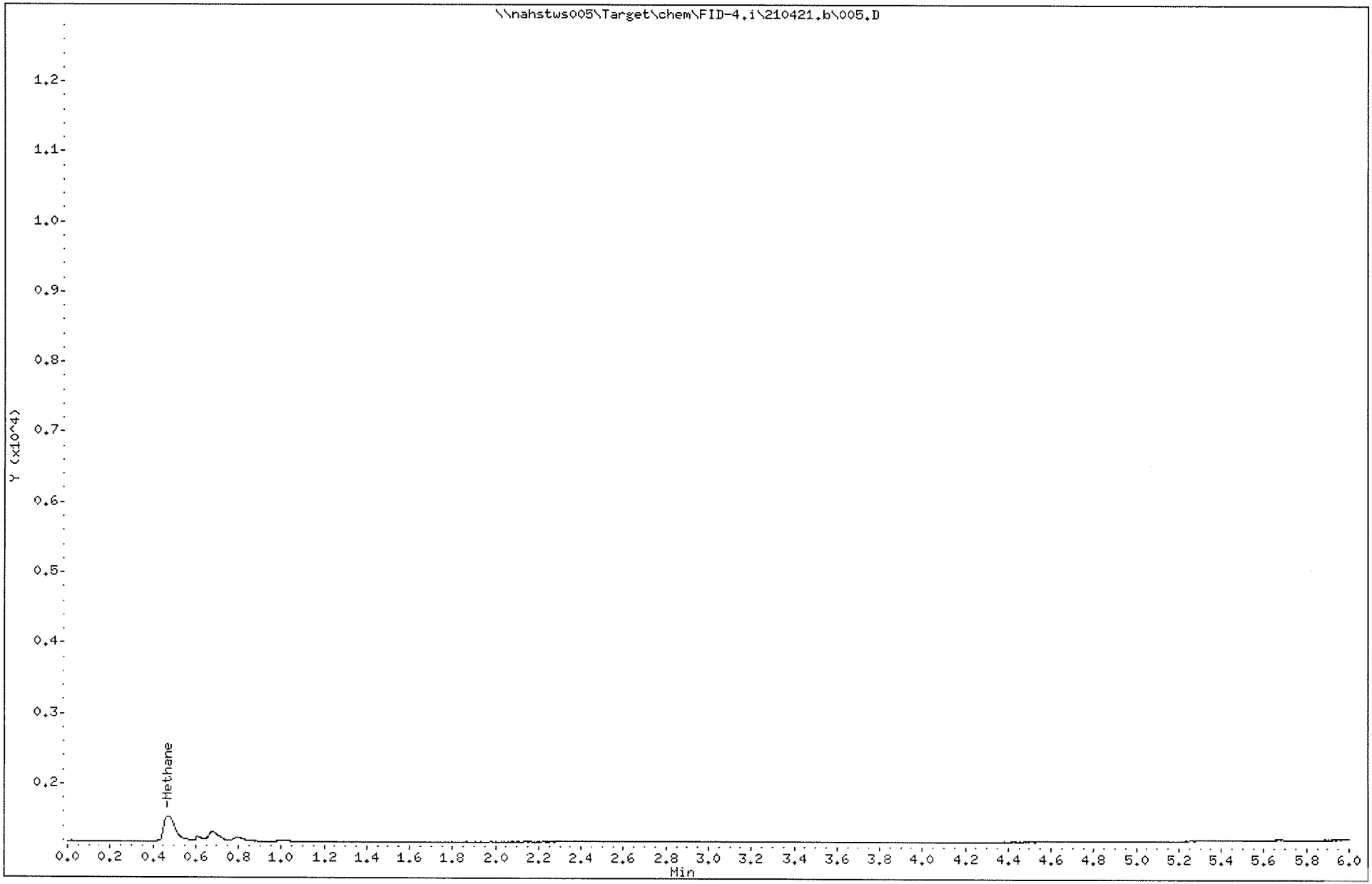
Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)
1 Methane	0.473	0.466	0.007	1370	1.40514	1.405

Data File: \\nahstws005\Target\chem\FID-4.i\210421.b\005.D
Date : 21-APR-2021 11:07
Client ID: HS21040695-12
Sample Info: HS21040695-12;HS21040695-12

Column phase: Rtx-PLOT

Instrument: FID-4.i

Operator: PL
Column diameter: 0.53



ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\nahstws005\Target\chem\FID-4.i\210421.b\006.D
Lab Smp Id: HS21040695-13 Client Smp ID: HS21040695-13
Inj Date : 21-APR-2021 11:20
Operator : PL Inst ID: FID-4.i
Smp Info : HS21040695-13;HS21040695-13
Misc Info : ;1;0;1
Comment :
Method : \\nahstws005\Target\chem\FID-4.i\210421.b\RSKNI3.m
Meth Date : 19-May-2021 14:26 FID-4.i Quant Type: ESTD
Cal Date : 24-JAN-2017 10:15 Cal File: 004.D
Als bottle: 6
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: RSK175.sub
Target Version: 4.14
Processing Host: NAHSTW7056

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
1 Methane	0.463	0.466	-0.003	98260	100.780	100.780(AM)
2 Ethene	0.703	0.710	-0.007	5123	8.74590	8.745(M)

QC Flag Legend

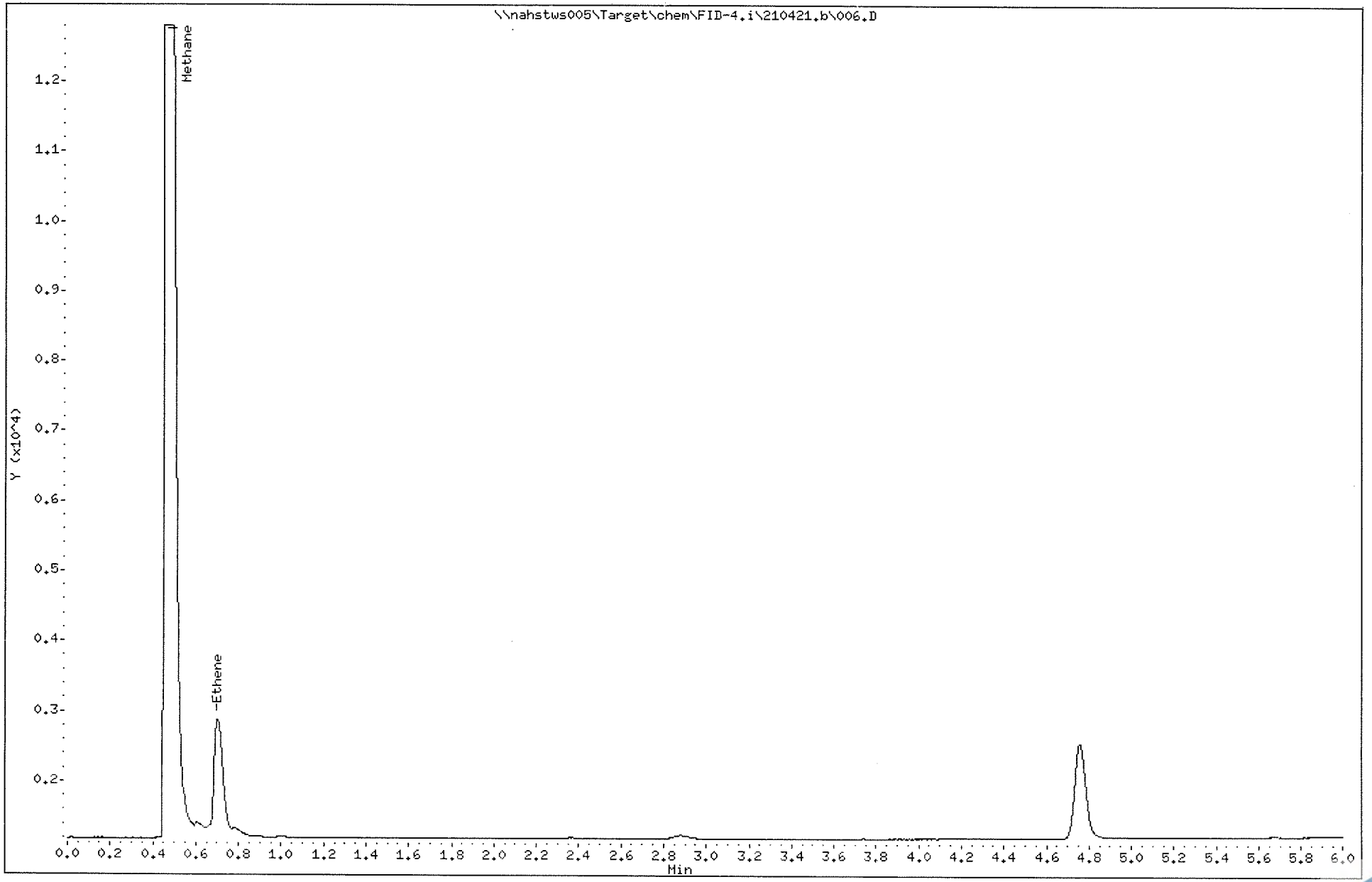
A - Target compound detected but, quantitated amount exceeded maximum amount.
M - Compound response manually integrated.

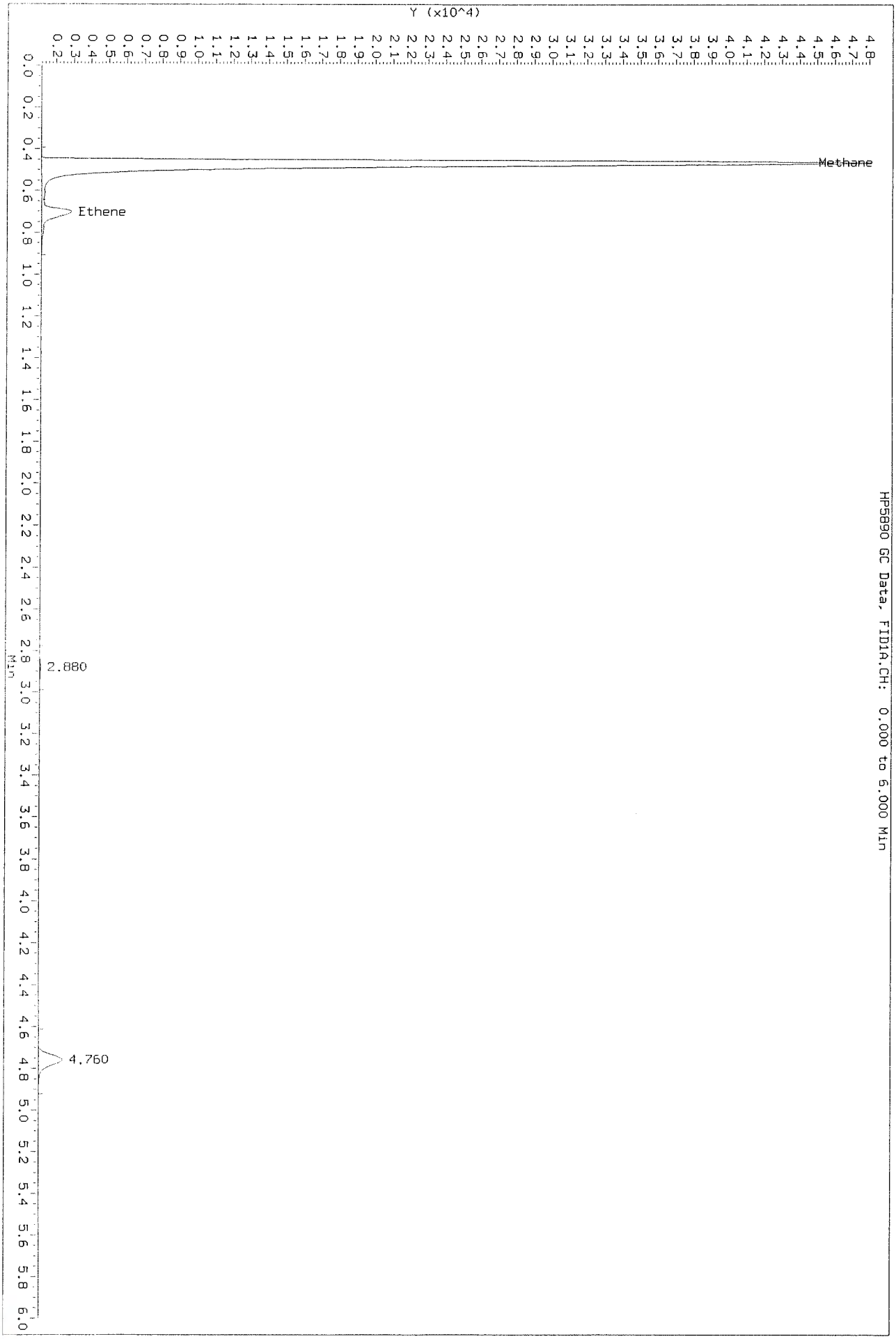
Data File: \\nahstws005\Target\chem\FID-4.i\210421.b\006.D
Date : 21-APR-2021 11:20
Client ID: HS21040695-13
Sample Info: HS21040695-13;HS21040695-13

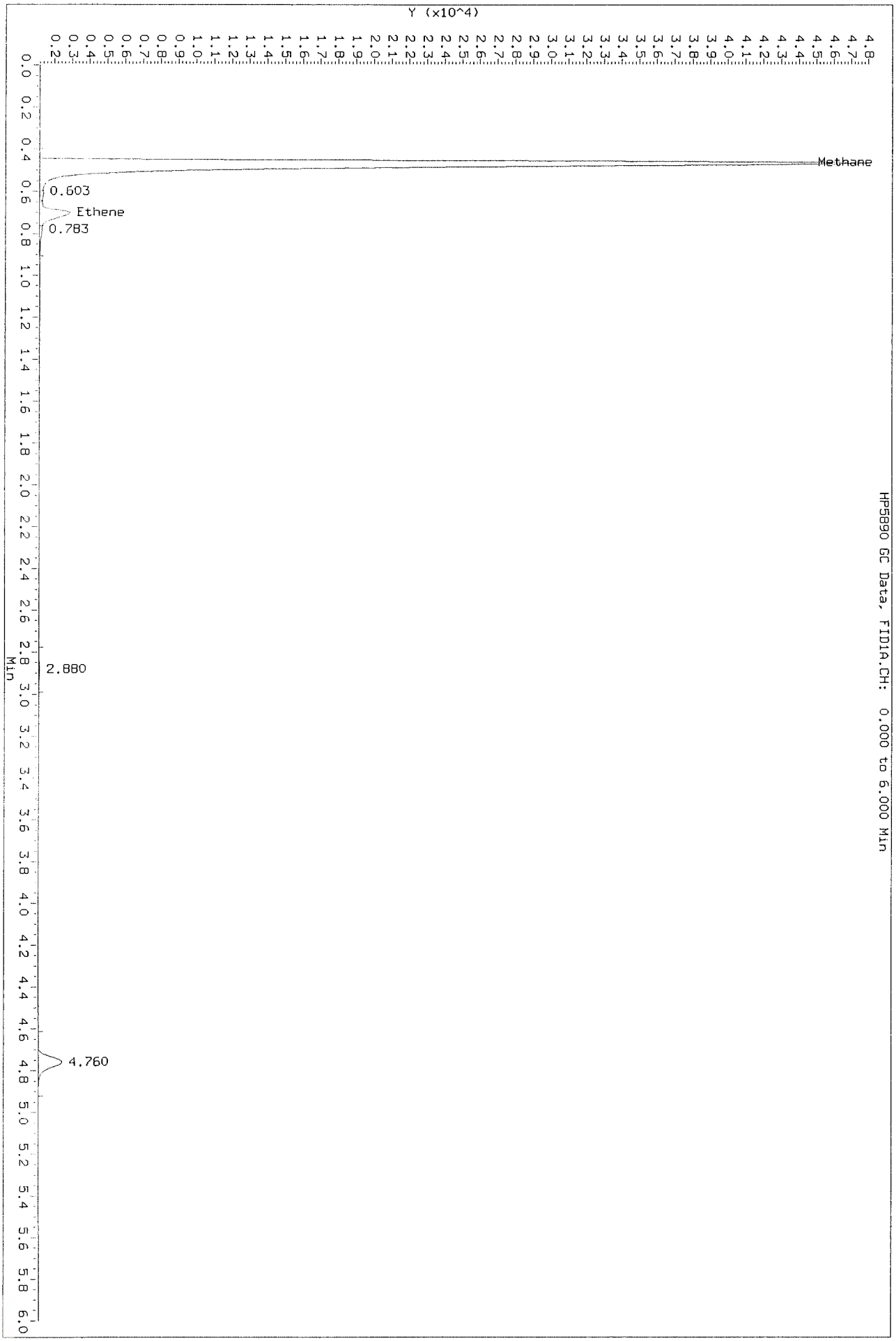
Column phase: Rtx-PLOT

Instrument: FID-4.i

Operator: PL
Column diameter: 0.53




Data File: \\nahstws005\Target\chem\FID-4.i\210421.b\Before\006.D
Injection Date: 21-APR-2021 11:20
Instrument: FID-4.i
Client Sample ID: HS21040695-13
HP5890 GC Data, FID1A.CH: 0.000 to 6.000 Min
Y (x10^4)
Min
Methane
Ethene
2.880
4.760


Data File: \\nahstws005\Target\chem\FID-4.i\210421.b\006.D
Injection Date: 21-APR-2021 11:20
Instrument: FID-4.i
Client Sample ID: HS21040695-13
HP5890 GC Data, FIDiA.CH: 0.000 to 6.000 Min
Y (x10^4)
Min
Methane
0.603
Ethene
0.783
2.880
4.760

Data File: \\nahstws005\Target\chem\FID-4.i\210421.b\007.D Page 1
Report Date: 19-May-2021 14:26

ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\nahstws005\Target\chem\FID-4.i\210421.b\007.D
Lab Smp Id: HS21040695-14 Client Smp ID: HS21040695-14
Inj Date : 21-APR-2021 11:30
Operator : PL Inst ID: FID-4.i
Smp Info : HS21040695-14;HS21040695-14
Misc Info : ;1;0;1
Comment :
Method : \\nahstws005\Target\chem\FID-4.i\210421.b\RSKNI3.m
Meth Date : 19-May-2021 14:26 FID-4.i Quant Type: ESTD
Cal Date : 24-JAN-2017 10:15 Cal File: 004.D
Als bottle: 7
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: RSK175.sub
Target Version: 4.14
Processing Host: NAHSTW7056

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)
1 Methane	0.463	0.466	-0.003	146261	150.012	150.012(AM)
2 Ethene	0.703	0.710	-0.007	2870	4.89961	4.899(M)

QC Flag Legend

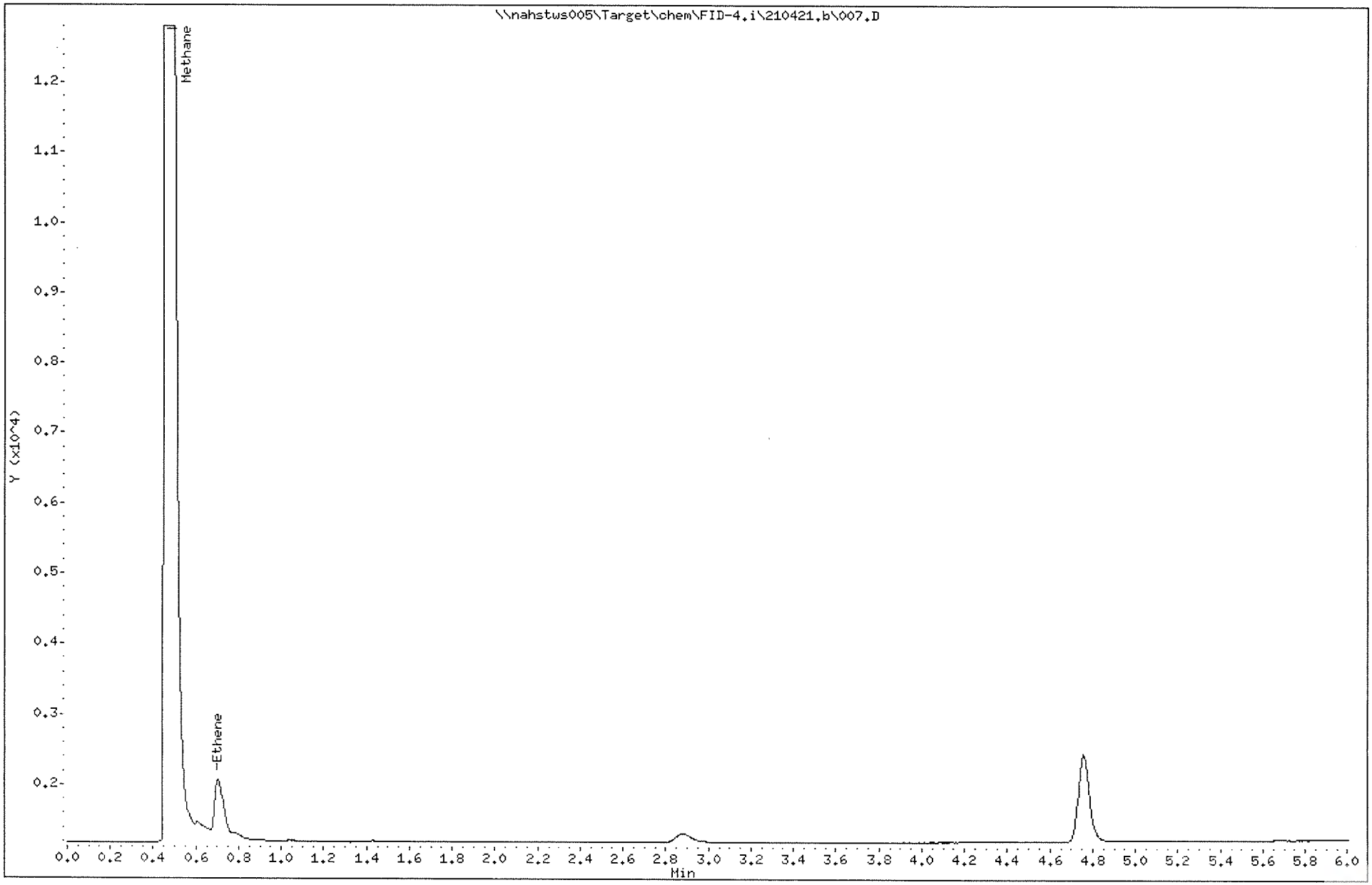
A - Target compound detected but, quantitated amount exceeded maximum amount.
M - Compound response manually integrated.

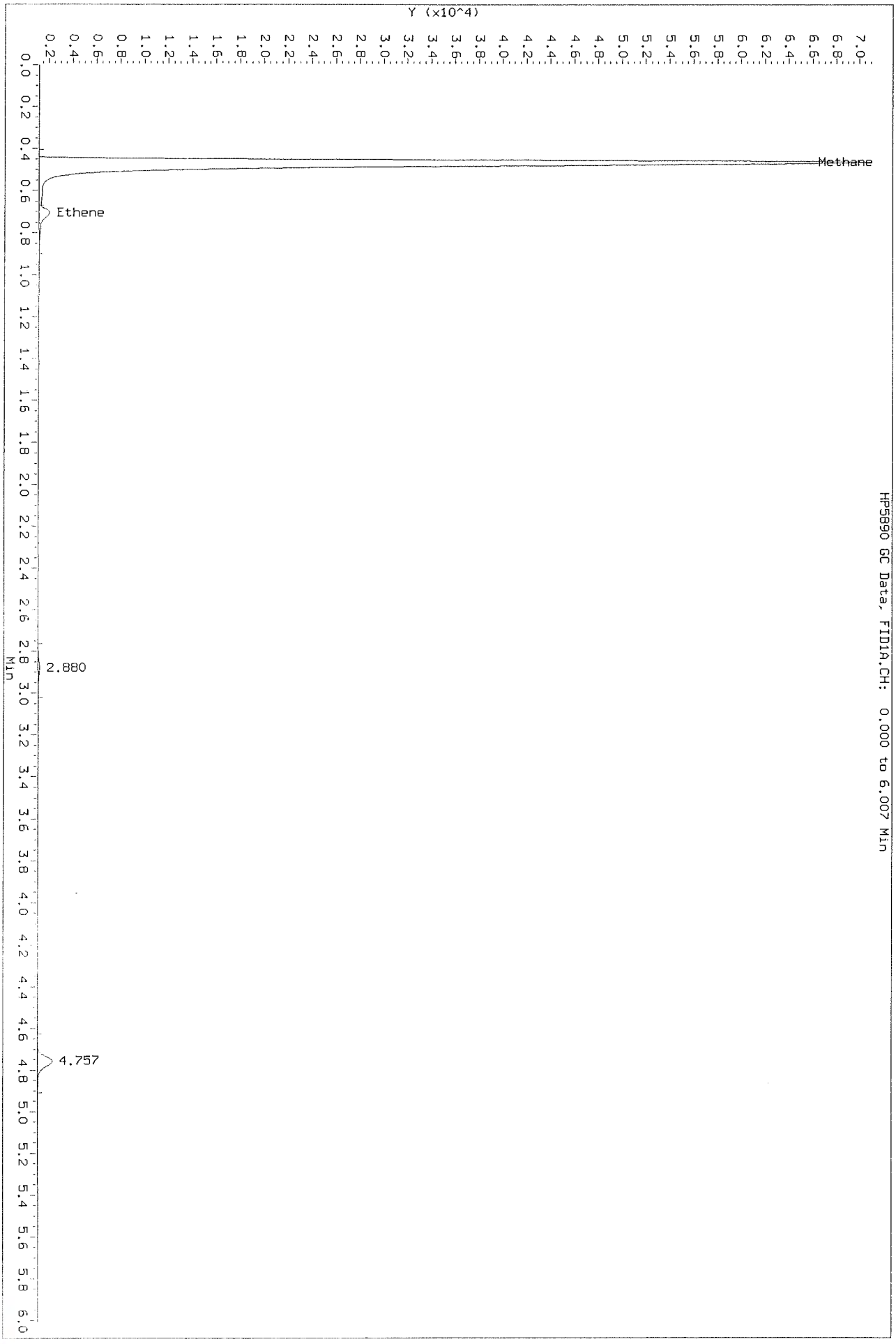
Data File: \\nahstws005\Target\chem\FID-4.i\210421.b\007.D
Date : 21-APR-2021 11:30
Client ID: HS21040695-14
Sample Info: HS21040695-14;HS21040695-14

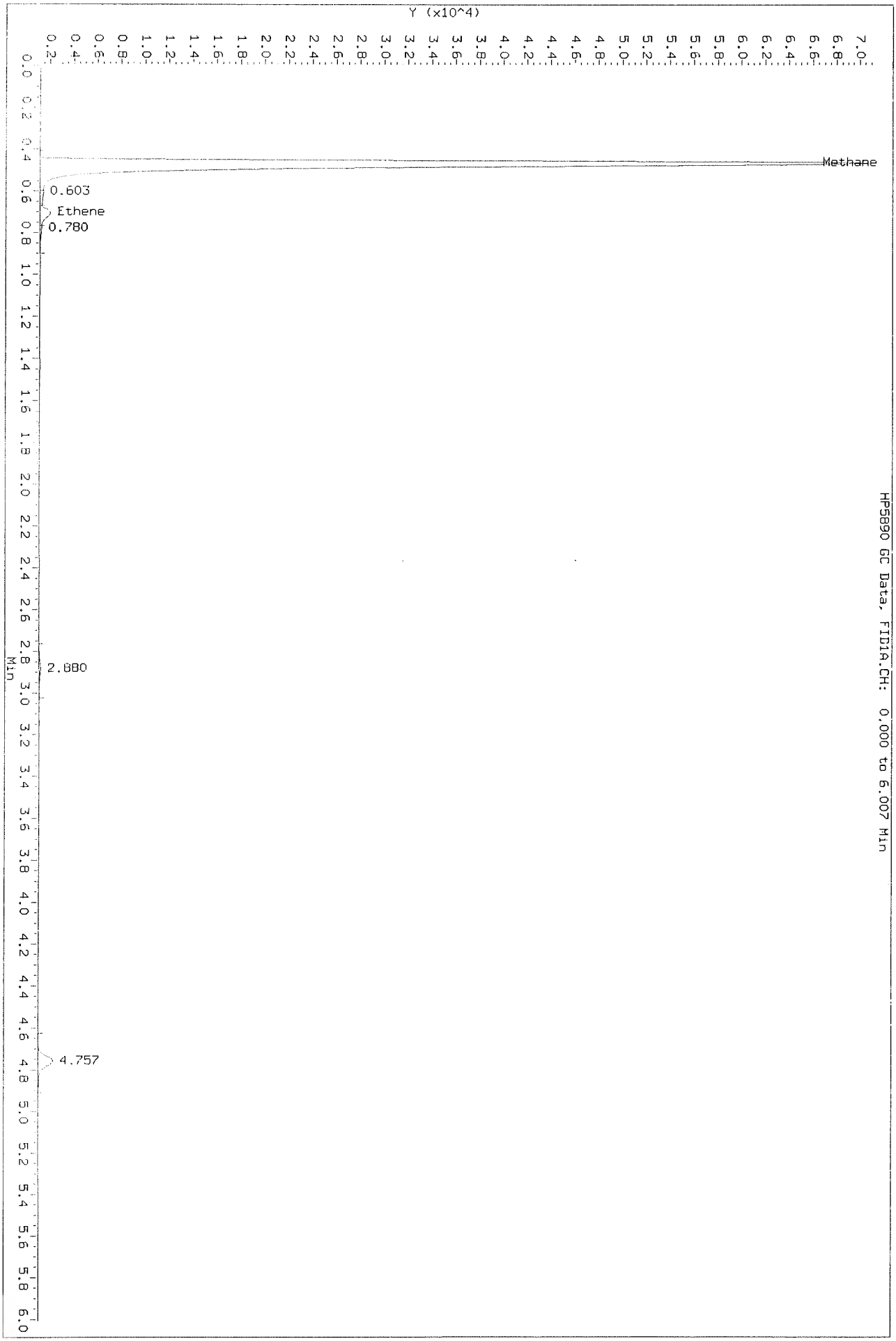
Column phase: Rtx-PLOT

Instrument: FID-4.i

Operator: PL
Column diameter: 0.53




Data File: \\nahstws005\Target\chem\FID-4.i\210421.b\Before\007.D
Injection Date: 21-APR-2021 11:30
Instrument: FID-4.i
Client Sample ID: HS21040695-14
HP5890 GC Data, FID1A.CH: 0.000 to 6.007 Min
Y (x10^4)
Min
Methane
Ethene
2.880
4.757


Data File: \\nahstws005\Target\chem\FID-4.i\210421.b\007.D
Injection Date: 21-APR-2021 11:30
Instrument: FID-4.i
Client Sample ID: HS21040695-14
HP5890 GC Data, FID1A.CH: 0.000 to 6.007 Min
Y (x10^4)
Min
Methane
0.603
Ethene
0.780
2.880
4.757

Data File: \\nahstws005\Target\chem\FID-4.i\210421.b\008.D Page 1
Report Date: 19-May-2021 14:26

ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\nahstws005\Target\chem\FID-4.i\210421.b\008.D
Lab Smp Id: HS21040695-13 Client Smp ID: HS21040695-13
Inj Date : 21-APR-2021 11:43
Operator : PL Inst ID: FID-4.i
Smp Info : HS21040695-13;HS21040695-13
Misc Info : ;1;0;10
Comment :
Method : \\nahstws005\Target\chem\FID-4.i\210421.b\RSKNI3.m
Meth Date : 19-May-2021 14:26 FID-4.i Quant Type: ESTD
Cal Date : 24-JAN-2017 10:15 Cal File: 004.D
Als bottle: 8
Dil Factor: 10.00000
Integrator: Falcon Compound Sublist: RSK175.sub
Target Version: 4.14
Processing Host: NAHSTW7056

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

					CONCENTRATIONS	
					ON-COLUMN	FINAL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/L)	(ug/L)
1 Methane	0.473	0 466	0.007	9906	10.1601	101.600
2 Ethene	0.713	0.710	0.003	646	1.10284	11.028(M)

QC Flag Legend

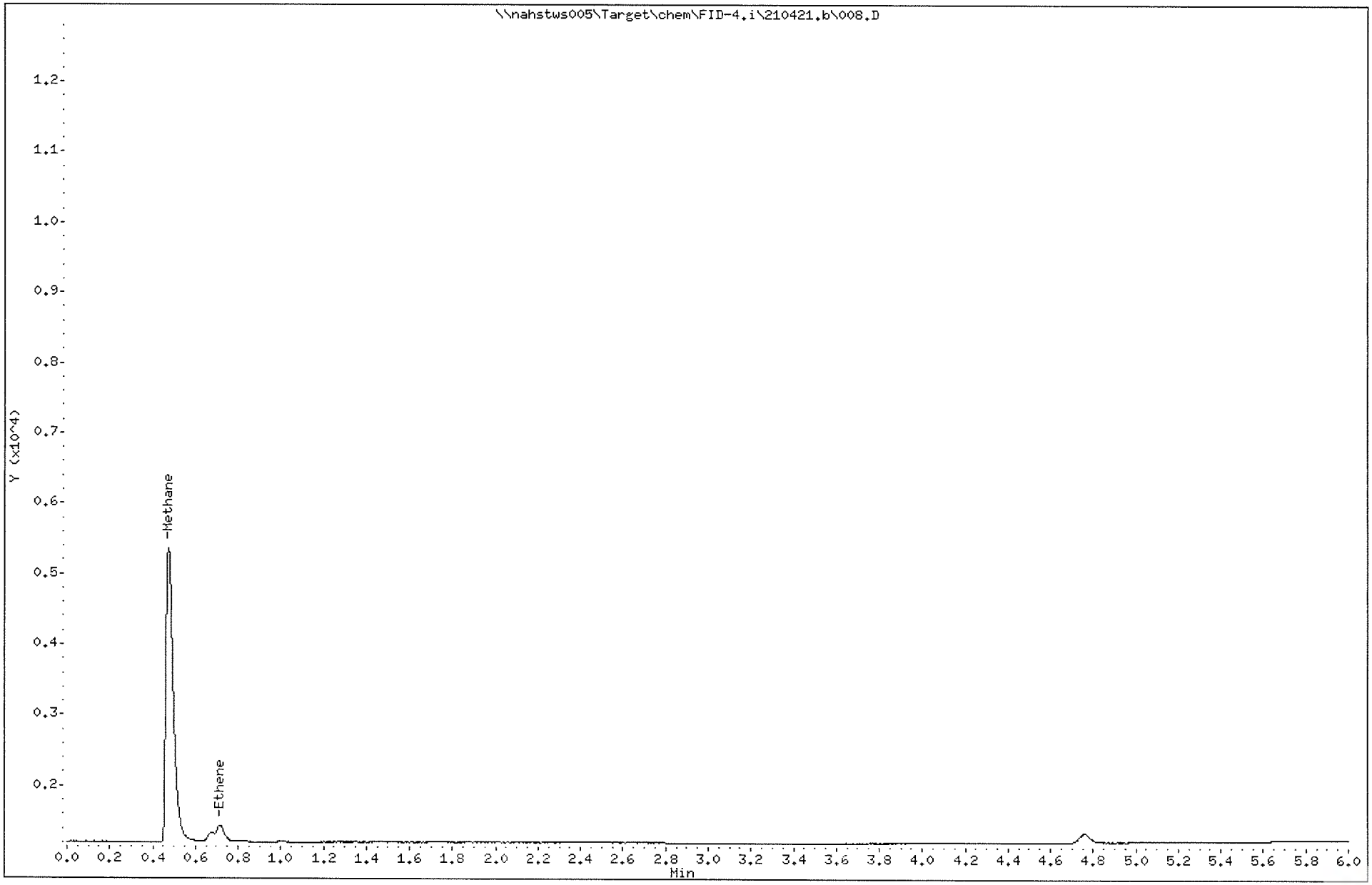
M - Compound response manually integrated.

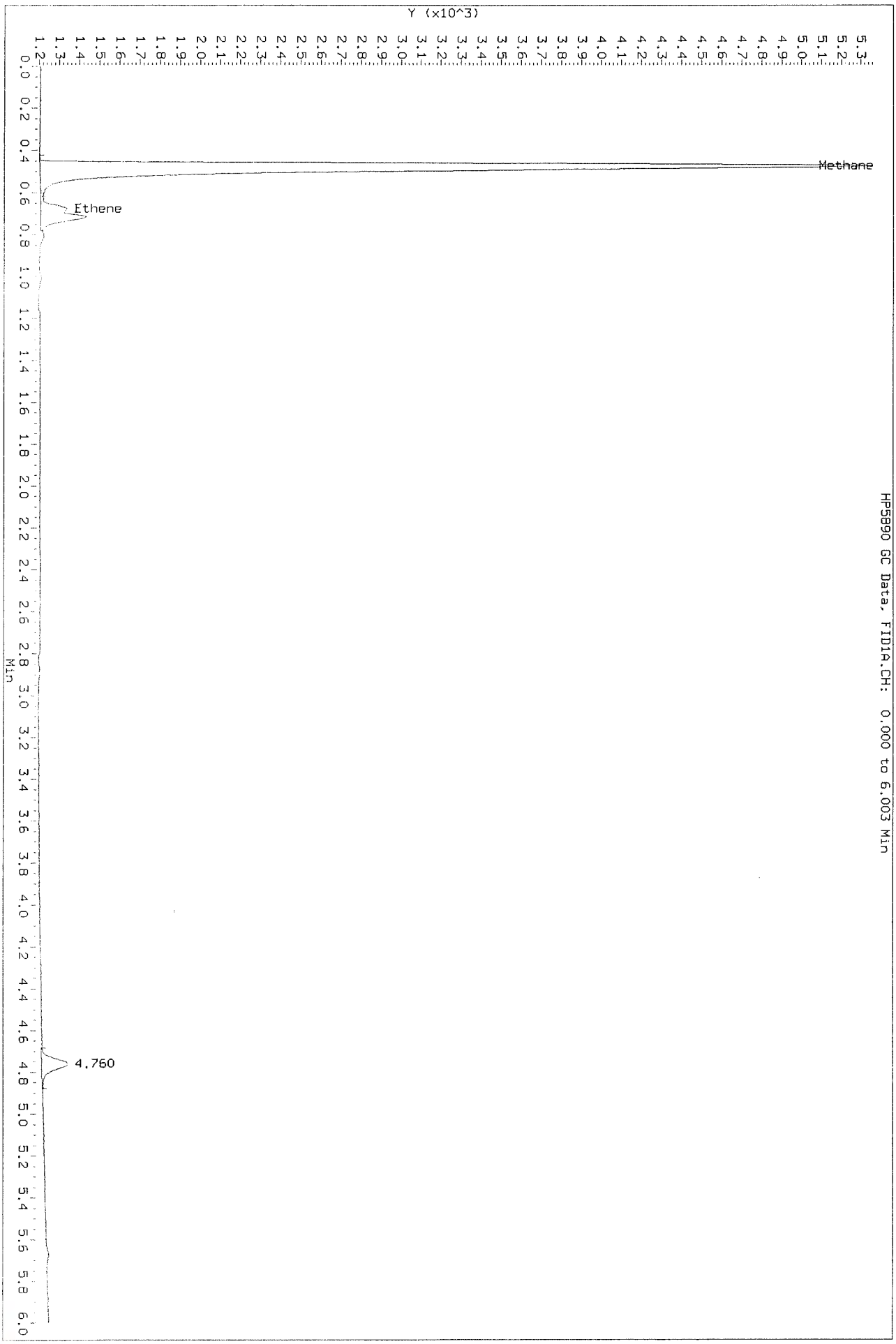
Data File: \\nahstws005\Target\chem\FID-4.i\210421.b\008.D
Date : 21-APR-2021 11:43
Client ID: HS21040695-13
Sample Info: HS21040695-13;HS21040695-13

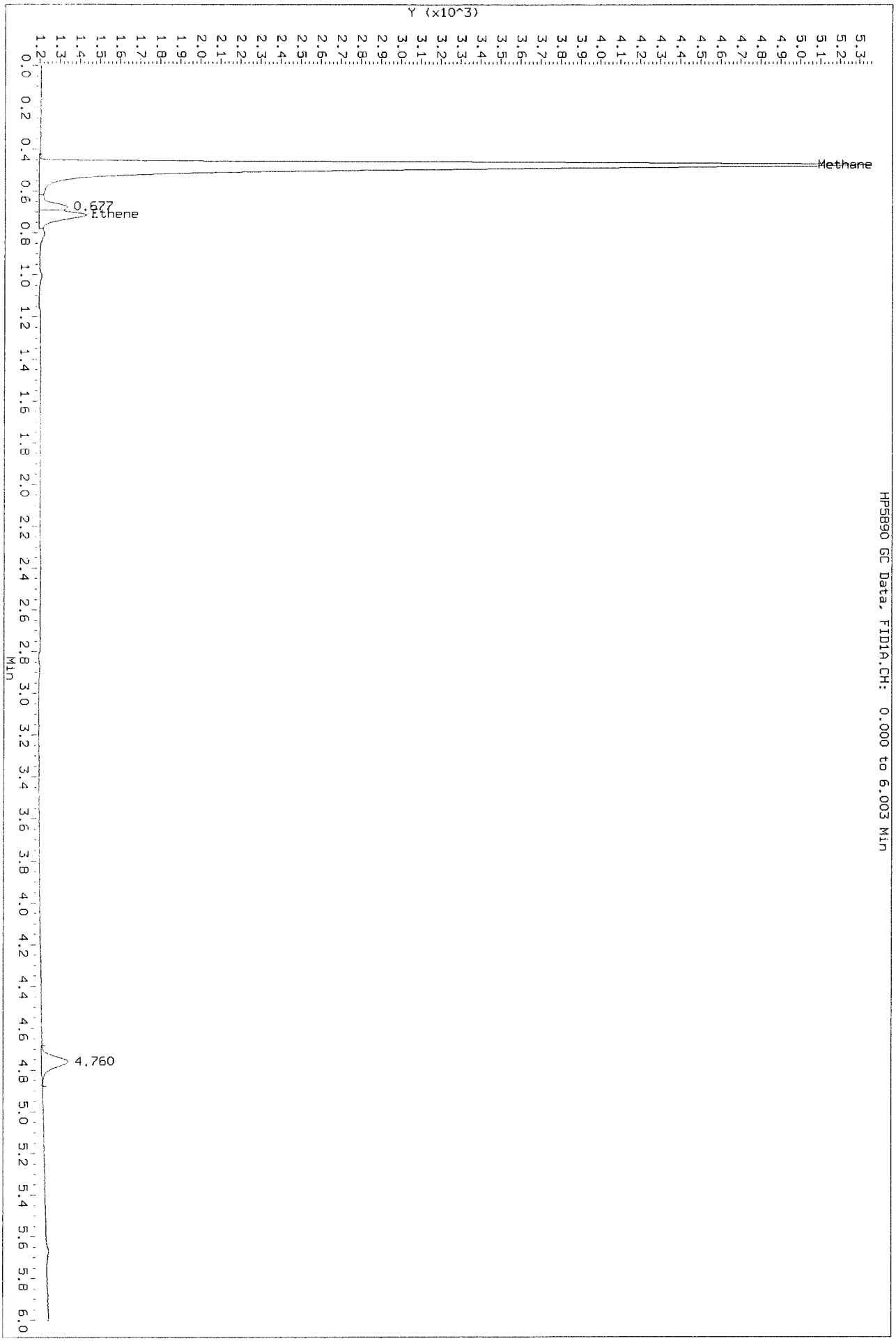
Column phase: Rtx-PLOT

Instrument: FID-4.i

Operator: PL
Column diameter: 0.53




Data File: \\nahstws005\Target\chem\FID-4.i\210421.b\Before\008.D
Injection Date: 21-APR-2021 11:43
Instrument: FID-4.i
Client Sample ID: HS21040695-13
HP5890 GC Data, FID1A.CH: 0.000 to 6.003 Min
Y (x10^3)
Methane
Ethene
4.760
Min


Data File: \\nahstws005\Target\chem\FID-4.i\210421.b\008.D
Injection Date: 21-APR-2021 11:43
Instrument: FID-4.i
Client Sample ID: HS21040695-13
HP5890 GC Data, FID1A.CH: 0.000 to 6.003 Min
Y (x10^3)
Min
Methane
0.627
Ethene
4.760

Data File: \\nahstws005\Target\chem\FID-4.i\210421.b\009.D Page 1
Report Date: 19-May-2021 14:26

ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\nahstws005\Target\chem\FID-4.i\210421.b\009.D
Lab Smp Id: HS21040695-14 Client Smp ID: HS21040695-14
Inj Date : 21-APR-2021 11:52
Operator : PL Inst ID: FID-4.i
Smp Info : HS21040695-14;HS21040695-14
Misc Info : ;1;0;10
Comment :
Method : \\nahstws005\Target\chem\FID-4.i\210421.b\RSKNI3.m
Meth Date : 19-May-2021 14:26 FID-4.i Quant Type: ESTD
Cal Date : 24-JAN-2017 10:15 Cal File: 004.D
Als bottle: 9
Dil Factor: 10.00000
Integrator: Falcon Compound Sublist: RSK175.sub
Target Version: 4.14
Processing Host: NAHSTW7056

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

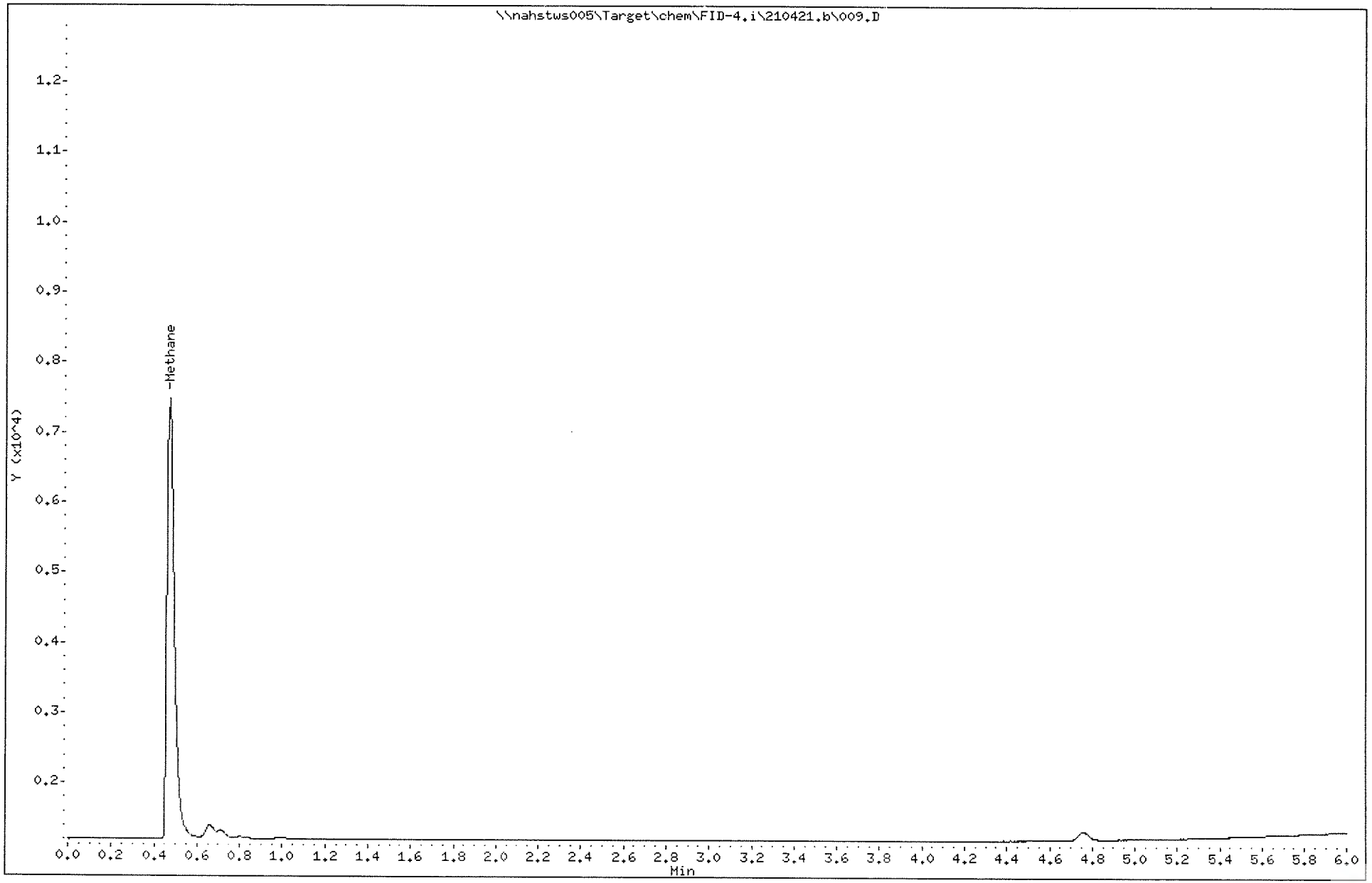
					CONCENTRATIONS	
					ON-COLUMN	FINAL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/L)	(ug/L)
1 Methane	0.470	0.466	0.004	14740	15.1181	151.180

Data File: \\nahstws005\Target\chem\FID-4.i\210421.b\009.D
Date : 21-APR-2021 11:52
Client ID: HS21040695-14
Sample Info: HS21040695-14;HS21040695-14

Column phase: Rtx-PLOT

Instrument: FID-4.i

Operator: PL
Column diameter: 0.53



ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\nahstws005\Target\chem\FID-4.i\210421.b\011.D
Lab Smp Id: RSK-CCV Client Smp ID: RSK-CCV
Inj Date : 21-APR-2021 12:09
Operator : PL Inst ID: FID-4.i
Smp Info : RSK-CCV;RSK-CCV;2;4
Misc Info : ;1;0;1
Comment :
Method : \\nahstws005\Target\chem\FID-4.i\210421.b\RSKNI3.m
Meth Date : 19-May-2021 14:26 FID-4.i Quant Type: ESTD
Cal Date : 24-JAN-2017 10:15 Cal File: 004.D
Als bottle: 11 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: RSK175.sub
Target Version: 4.14
Processing Host: NAHSTW7056

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

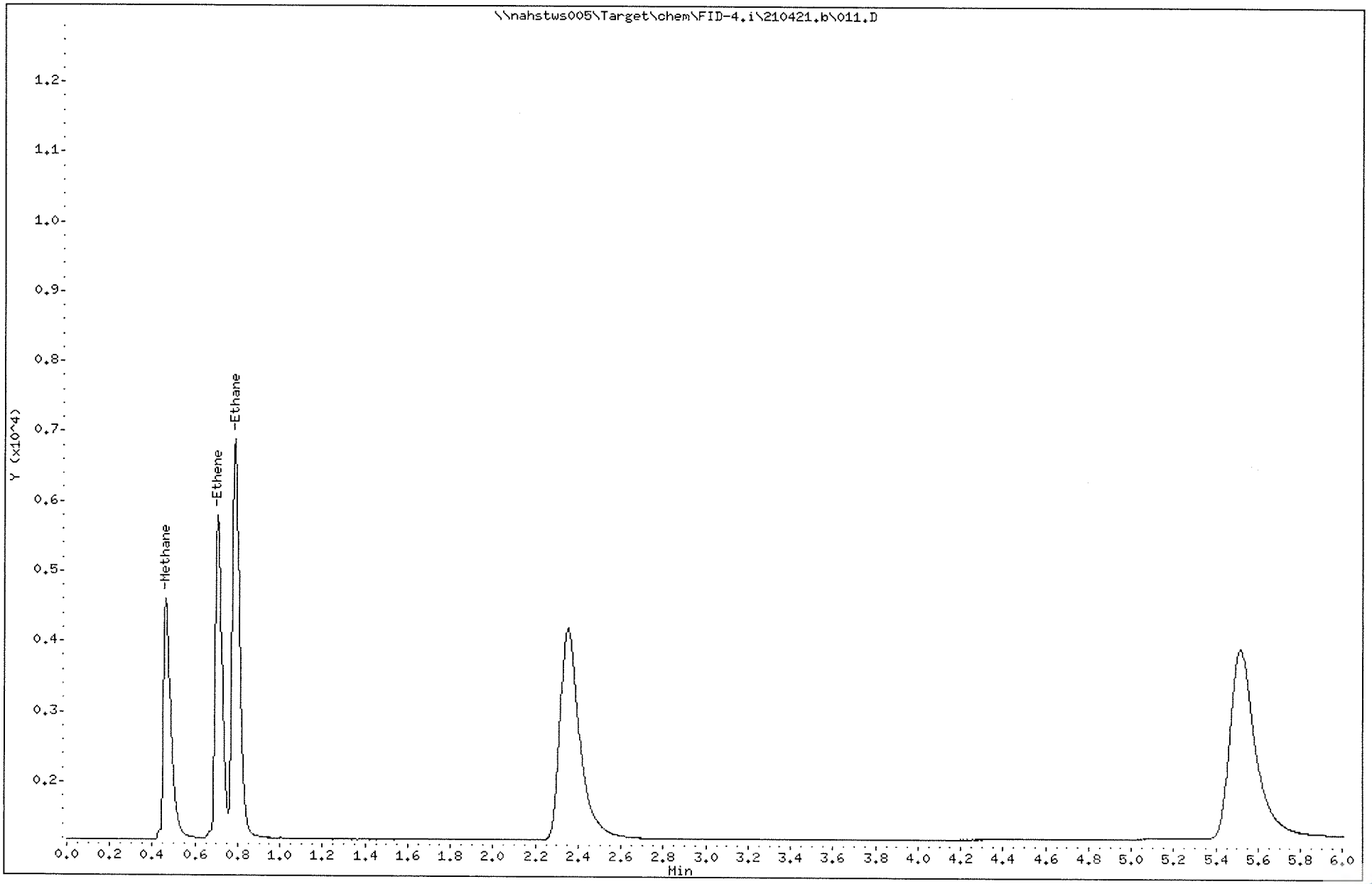
					AMOUNTS	
					CAL-AMT	ON-COL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/L)	(ug/L)
1 Methane	0.463	0.463	0.000	8564	9.64700	8.783
2 Ethene	0.706	0.706	0.000	10364	16.8500	17.693
3 Ethane	0.786	0.786	0.000	13999	18.0430	19.456

Data File: \\nahstws005\Target\chem\FID-4.i\210421.b\011.D
Date : 21-APR-2021 12:09
Client ID: RSK-CCV
Sample Info: RSK-CCV;RSK-CCV;2;4

Column phase: Rtx-PLOT

Instrument: FID-4.i

Operator: PL
Column diameter: 0.53



HS21040695 Wet Chem Raw Data (ALK_W 2320B)

ALS WO# HS21040695

Report Date: 04/21/2021 : 6:23

PC-TitratION PLUS
Calibration Report

Calibration Record # 2353

Calibration Settings

Calibration ID	PH CAL 4-7-10	Date	04/21/2021
Channel	1	Time	6:23 PM
Probe Type	pH	Temperature	295.58 K 22.43 C
Probe ID	PH ELECTRODE	Analysis Type	Single Line Fit

Calibration Results

Slope	-58.247	CorrCoeff	0.9998
Intercept	-0.650	Equation:	Y = (-58.247) X + (-0.650)

Calibration Validity True Operator

	Result	Minimum	Maximum
Slope	-58.247	-65.00	-53.00
Intercept	-0.650	-100.00	100.00
Correlation Coefficient	0.9998	0.99	1.00

Note: "True" means the calibration was within the specified ranges
"False" means the calibration was NOT within the specified ranges

Calibration Data	Standard	Reading
	4.00	176.02
	7.00	-4.51
	10.00	-173.46

#382120 (A)

#382121 (B)

4/22/2021.

Copyright Hinterland Software Ltd.

Report Date: 4/21/2021 11:54 PM

PC-TitratION PLUS
Water Analysis Report

Run Number 4071 **Order Number** 20210421-3

SampleID	RunDate	RunTime	Temp	cond (uS)	pH	palk-ppm	talk-ppm	bcarb-ppm	carb-ppm	hydr-ppm	mLs @ 8.3	mLs @ 4.5	mLs @ 4.2
ICV-PH	4/21/2021	6:54 PM	21.83	-1.00	6.04	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
TAP WATER	4/21/2021	7:01 PM	21.83	-1.00	7.86	.00	152.51	152.51	.00	.00	.00	1.45	1.45
WBLKW1-210421	4/21/2021	7:06 PM	21.40	-1.00	5.57	.00	.71	.71	.00	.00	.00	.02	.02
LCS1-210421	4/21/2021	7:15 PM	21.47	-1.00	10.91	533.86	1,034.54	.00	1,001.37	33.17	5.08	9.85	9.85
LCSD1-210421	4/21/2021	7:23 PM	21.02	-1.00	10.92	535.12	1,037.50	.00	1,004.74	32.75	5.10	9.88	9.88
HS21040846-01	4/21/2021	7:30 PM	20.91	-1.00	7.78	.00	234.25	234.25	.00	.00	.00	2.23	2.23
HS21040846-01DUP	4/21/2021	7:37 PM	21.27	-1.00	7.78	.00	249.33	249.33	.00	.00	.00	2.37	2.37
HS21040846-02	4/21/2021	7:44 PM	21.53	-1.00	7.79	.00	231.07	231.07	.00	.00	.00	2.20	2.20
HS21040846-03	4/21/2021	7:50 PM	21.71	-1.00	7.71	.00	229.44	229.44	.00	.00	.00	2.19	2.19
HS21040846-04	4/21/2021	7:57 PM	21.90	-1.00	7.77	.00	231.46	231.46	.00	.00	.00	2.20	2.20
HS21040846-05	4/21/2021	8:04 PM	22.13	-1.00	7.80	.00	230.20	230.20	.00	.00	.00	2.19	2.19
CCV-PH	4/21/2021	8:07 PM	22.52	-1.00	7.08	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
CCV-ALK	4/21/2021	8:15 PM	22.37	-1.00	10.87	524.70	1,023.06	.00	996.72	26.34	5.00	9.74	9.74
DI RINSE	4/21/2021	8:20 PM	22.49	-1.00	5.93	.00	1.07	1.07	.00	.00	.00	.03	.03
HS21041007-01	4/21/2021	8:26 PM	22.46	-1.00	5.58	.00	.42	.42	.00	.00	.00	.02	.02
WBLKW1-210421	4/21/2021	8:31 PM	22.48	-1.00	5.55	.00	.62	.62	.00	.00	.00	.02	.02
HS21040863-01	4/21/2021	8:37 PM	22.07	-1.00	8.03	.00	135.81	135.81	.00	.00	.00	1.29	1.29
HS21040840-01DF2	4/21/2021	8:45 PM	21.61	-1.00	10.25	252.12	420.53	.00	336.81	83.71	2.40	4.01	4.01
HS21040842-01DF2	4/21/2021	8:54 PM	21.24	-1.00	10.77	149.19	350.22	51.83	298.39	.00	1.42	3.34	3.34
HS21040848-01DF2	4/21/2021	9:03 PM	20.98	-1.00	10.87	111.92	277.53	53.70	223.83	.00	1.07	2.64	2.64
HS21040845-01DF2	4/21/2021	9:11 PM	21.09	-1.00	10.03	198.52	336.76	.00	276.47	60.29	1.89	3.21	3.21
HS21040875-01DF2	4/21/2021	9:20 PM	21.47	-1.00	10.37	144.52	499.10	210.07	289.03	.00	1.38	4.75	4.75
CCV-PH	4/21/2021	9:23 PM	21.66	-1.00	7.12	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
CCV-ALK	4/21/2021	9:32 PM	21.56	-1.00	10.93	516.86	1,042.36	8.64	1,033.72	.00	4.92	9.93	9.93
DI RINSE	4/21/2021	9:38 PM	21.90	-1.00	6.03	.00	.86	.86	.00	.00	.00	.03	.03
WBLKW2-210421	4/21/2021	9:43 PM	21.96	-1.00	5.71	.00	.63	.63	.00	.00	.00	.03	.03
LCS2-210421	4/21/2021	9:52 PM	22.03	-1.00	10.91	521.63	1,027.12	.00	1,010.98	16.14	4.97	9.78	9.78

Copyright Hinterland Software Ltd.

Run Number 4071 **Order Number** 20210421-3

SampleID	RunDate	RunTime	Temp	cond (uS)	pH	palk-ppm	talk-ppm	bcarb-ppm	carb-ppm	hydr-ppm	mLs @ 8.3	mLs @ 4.5	mLs @ 4.2
LCSD2-210421	4/21/2021	10:01 PM	22.19	-1.00	10.89	525.30	1,059.44	8.84	1,050.60	.00	5.00	10.09	10.09
HS21040859-08	4/21/2021	10:07 PM	22.48	-1.00	6.38	.00	169.72	169.72	.00	.00	.00	1.62	1.62
HS21040859-08DUP	4/21/2021	10:12 PM	22.35	-1.00	6.29	.00	168.42	168.42	.00	.00	.00	1.60	1.60
HS21040859-07	4/21/2021	10:18 PM	22.39	-1.00	6.62	.00	337.92	337.92	.00	.00	.00	3.22	3.22
HS21040859-09	4/21/2021	10:24 PM	22.45	-1.00	6.73	.00	251.67	251.67	.00	.00	.00	2.40	2.40
CCV-PH	4/21/2021	10:27 PM	22.43	-1.00	7.09	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
CCV-ALK	4/21/2021	10:35 PM	22.19	-1.00	10.84	518.47	1,027.89	.00	1,018.83	9.05	4.94	9.79	9.79
DI RINSE	4/21/2021	10:40 PM	22.48	-1.00	5.90	.00	.92	.92	.00	.00	.00	.03	.03
HS21040859-10	4/21/2021	10:50 PM	22.52	-1.00	7.39	.00	1,043.04	1,043.04	.00	.00	.00	9.93	9.93
HS21041102-01	4/21/2021	10:55 PM	22.66	-1.00	6.26	.00	86.50	86.50	.00	.00	.00	.82	.82
HS21041102-02	4/21/2021	11:01 PM	22.70	-1.00	6.20	.00	77.50	77.50	.00	.00	.00	.74	.74
HS21041102-03	4/21/2021	11:05 PM	22.70	-1.00	5.04	.00	2.88	2.88	.00	.00	.00	.05	.05
HS21041102-04	4/21/2021	11:11 PM	22.75	-1.00	6.24	.00	41.40	41.40	.00	.00	.00	.39	.39
HS21041102-05	4/21/2021	11:16 PM	22.78	-1.00	6.20	.00	35.44	35.44	.00	.00	.00	.34	.34
HS21041102-07	4/21/2021	11:22 PM	22.77	-1.00	6.34	.00	320.84	320.84	.00	.00	.00	3.06	3.06
HS21041102-10	4/21/2021	11:35 PM	22.74	-1.00	5.21	.00	1,696.09	1,696.09	.00	.00	.00	16.15	16.15
CCV-PH	4/21/2021	11:39 PM	22.84	-1.00	7.08	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
CCV-ALK	4/21/2021	11:47 PM	22.69	-1.00	10.78	515.54	1,032.90	1.82	1,031.07	.00	4.91	9.84	9.84
DI RINSE	4/21/2021	11:52 PM	22.92	-1.00	5.89	.00	.91	.91	.00	.00	.00	.03	.03

Copyright Hinterland Software Ltd.

Batch ID Exception Report

Batch ID: R382120
QC Group: 0

Sample ID	Seq No	Sample Type	Test Code	Analyzed Date	Dilution Factor
	Analyte Type	Analyte		Qualifier	
SAMP	0	SAMP		22 Apr 2021 7:56 AM	1

X No exceptions found

Batch ID Exception Report

Batch ID: R382121
QC Group: 0

Sample ID	Seq No	Sample Type	Test Code	Analyzed Date	Dilution Factor
	Analyte Type	Analyte		Qualifier	
SAMP	0	SAMP		22 Apr 2021 8:01 AM	1

X No exceptions found

Report Date: 04/15/2021 : 6:24

PC-TitratION PLUS
Calibration Report

Calibration Record # 2351

Calibration Settings

Calibration ID	PH CAL 4-7-10	Date	04/15/2021
Channel	1	Time	6:24 PM
Probe Type	pH	Temperature	295.76 K 22.61 C
Probe ID	PH ELECTRODE	Analysis Type	Single Line Fit

Calibration Results

Slope	-58.247	CorrCoeff	0.9998
Intercept	0.610	Equation:	Y = (-58.247) X + (0.610)

Calibration Validity True Operator

	Result	Minimum	Maximum
Slope	-58.247	-65.00	-53.00
Intercept	0.610	-100.00	100.00
Correlation Coefficient	0.9998	0.99	1.00

Note: "True" means the calibration was within the specified ranges
"False" means the calibration was NOT within the specified ranges

Calibration Data	Standard	Reading
	4.00	177.24
	7.00	-3.17
	10.00	-172.24

#381715 (A)
#381716 (B)
#381717 (D)

ph 4/16/21

Copyright Hinterland Software Ltd.

Report Date: 4/16/2021 : 5:21 AM

PC-TitratION PLUS
Water Analysis Report

Run Number 4066 **Order Number** 20210415-2

SampleID	RunDate	RunTime	Temp	cond (uS)	pH	palk-ppm	talk-ppm	bcarb-ppm	carb-ppm	hydr-ppm	mLs @ 8.3	mLs @ 4.5	mLs @ 4.2	
ICV-PH	4/15/2021	6:47 PM	22.10	-1.00	6.04	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	
TAP WATER	4/15/2021	6:53 PM	21.89	-1.00	7.86	.00	254.35	254.35	.00	.00	.00	2.42	2.42	
WBLKW1-210415	4/15/2021	6:58 PM	21.50	-1.00	5.63	.00	.60	.60	.00	.00	.00	.02	.02	
LCS1-210415	4/15/2021	7:07 PM	21.57	-1.00	10.90	516.00	1,003.78	.00	975.57	28.21	4.91	9.56	9.56	
LCSD1-210415	4/15/2021	7:15 PM	21.82	-1.00	10.89	515.90	1,006.84	.00	981.90	24.95	4.91	9.59	9.59	
HS21040756-02	4/15/2021	7:22 PM	22.07	-1.00	7.84	.00	130.68	130.68	.00	.00	.00	1.24	1.24	
HS21040756-02DUP	4/15/2021	7:29 PM	22.20	-1.00	7.86	.00	131.06	131.06	.00	.00	.00	1.25	1.25	
HS21040756-03	4/15/2021	7:37 PM	22.39	-1.00	8.02	.00	152.46	152.46	.00	.00	.00	1.45	1.45	
HS21040668-01DF5	4/15/2021	7:51 PM	22.42	-1.00	10.67	2,305.33	.00	-4,610.67	4,610.67	.00	21.96	.00	.00	NR TH 4-16
HS21040668-02DF2	4/15/2021	8:01 PM	22.67	-1.00	10.12	508.22	1,311.21	294.78	1,016.43	.00	4.84	12.49	12.49	
HS21040668-03	4/15/2021	8:08 PM	22.26	-1.00	8.27	.00	272.01	272.01	.00	.00	.00	2.59	2.59	
CCV-PH	4/15/2021	8:11 PM	22.03	-1.00	7.09	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	
CCV-ALK	4/15/2021	8:20 PM	21.74	-1.00	10.87	514.33	1,022.32	.00	1,015.98	6.34	4.90	9.74	9.74	
DI RINSE	4/15/2021	8:25 PM	21.44	-1.00	6.08	.00	1.26	1.26	.00	.00	.00	.03	.03	
HS21040616-01	4/15/2021	8:30 PM	21.45	-1.00	5.63	.00	.43	.43	.00	.00	.00	.02	.02	
HS21040299-59	4/15/2021	8:37 PM	21.70	-1.00	7.56	.00	5.42	5.42	.00	.00	.00	.07	.07	
HS21040299-60	4/15/2021	8:45 PM	21.96	-1.00	9.30	1.59	10.41	7.23	3.18	.00	.02	.12	.12	
HS21040668-04DF20	4/15/2021	9:00 PM	22.05	-1.00	11.11	2,305.37	.00	-4,610.75	4,610.75	.00	21.96	.00	.00	NR TH 4-16
HS21040617-02	4/15/2021	9:07 PM	22.31	-1.00	10.30	42.95	95.80	9.91	85.89	.00	.41	.91	.91	
HS21040617-01DF2	4/15/2021	9:16 PM	22.45	-1.00	10.00	94.77	319.35	129.80	189.54	.00	.90	3.04	3.04	
HS21040704-01	4/15/2021	9:22 PM	22.67	-1.00	7.16	.00	5.78	5.78	.00	.00	.00	.07	.07	
HS21040706-01	4/15/2021	9:29 PM	22.66	-1.00	6.67	.00	3.64	3.64	.00	.00	.00	.05	.05	
HS21040695-11	4/15/2021	9:34 PM	22.66	-1.00	5.99	.00	98.35	98.35	.00	.00	.00	.94	.94	
CCV-PH	4/15/2021	9:37 PM	22.60	-1.00	7.09	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	
CCV-ALK	4/15/2021	9:45 PM	22.28	-1.00	10.82	503.57	1,005.27	.00	1,003.41	1.87	4.80	9.57	9.57	
DI RINSE	4/15/2021	9:50 PM	21.82	-1.00	6.04	.00	.87	.87	.00	.00	.00	.03	.03	
HS21040695-12	4/15/2021	9:56 PM	21.45	-1.00	6.13	.00	175.21	175.21	.00	.00	.00	1.67	1.67	

PC-TitratION PLUS by Man-Tech Associates, Inc.

GENERAL RESULTS REPORT.SRW
Copyright Hinterland Software Ltd.

Run Number 4066 Order Number 20210415-2

SampleID	RunDate	RunTime	Temp	cond (uS)	pH	palk-ppm	talk-ppm	bcarb-ppm	carb-ppm	hydr-ppm	mLs @ 8.3	mLs @ 4.5	mLs @ 4.2
HS21040695-13	4/15/2021	10:05 PM	21.30	-1.00	7.31	.00	1,094.61	1,094.61	.00	.00	.00	10.42	10.42
HS21040695-14	4/15/2021	10:12 PM	21.69	-1.00	6.66	.00	478.53	478.53	.00	.00	.00	4.56	4.56
HS21040725-01	4/15/2021	10:18 PM	21.90	-1.00	7.96	.00	332.17	332.17	.00	.00	.00	3.16	3.16
HS21040725-02	4/15/2021	10:25 PM	22.02	-1.00	8.04	.00	548.50	548.50	.00	.00	.00	5.22	5.22
HS21040725-04	4/15/2021	10:32 PM	22.17	-1.00	7.99	.00	366.26	366.26	.00	.00	.00	3.49	3.49
WLCS2-210415	4/15/2021	10:41 PM	22.20	-1.00	10.84	518.68	1,016.03	.00	994.70	21.33	4.94	9.68	9.68
WLCSD2-210415	4/15/2021	10:50 PM	22.40	-1.00	10.84	499.25	998.68	.18	998.50	.00	4.75	9.51	9.51
CCV-PH	4/15/2021	10:53 PM	22.52	-1.00	7.09	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
CCVALK	4/15/2021	11:02 PM	22.40	-1.00	10.80	497.81	1,016.11	20.49	995.62	.00	4.74	9.68	9.68
DI RINSE	4/15/2021	11:07 PM	22.83	-1.00	5.94	.00	1.06	1.06	.00	.00	.00	.03	.03
WBLKW2-210415	4/15/2021	11:12 PM	22.92	-1.00	5.54	.00	.38	.38	.00	.00	.00	.02	.02
HS21040612-03	4/15/2021	11:23 PM	22.75	-1.00	7.40	.00	1,614.45	1,614.45	.00	.00	.00	15.38	15.38
HS21040612-03DUP	4/15/2021	11:34 PM	22.39	-1.00	7.43	.00	1,648.56	1,648.56	.00	.00	.00	15.70	15.70
HS21040619-01	4/15/2021	11:41 PM	21.76	-1.00	7.93	.00	196.91	196.91	.00	.00	.00	1.88	1.88
HS21040619-02	4/15/2021	11:48 PM	21.61	-1.00	8.04	.00	188.80	188.80	.00	.00	.00	1.80	1.80
HS21040619-03	4/15/2021	11:54 PM	21.86	-1.00	7.92	.00	194.76	194.76	.00	.00	.00	1.85	1.85
HS21040619-04	4/16/2021	12:01 AM	22.02	-1.00	8.07	.00	189.71	189.71	.00	.00	.00	1.81	1.81
HS21040761-01	4/16/2021	12:08 AM	22.17	-1.00	7.54	.00	67.36	67.36	.00	.00	.00	.64	.64
HS21040761-02	4/16/2021	12:14 AM	22.48	-1.00	7.71	.00	73.31	73.31	.00	.00	.00	.70	.70
HS21040761-03	4/16/2021	12:21 AM	22.52	-1.00	7.55	.00	47.99	47.99	.00	.00	.00	.46	.46
CCV-PH	4/16/2021	12:24 AM	22.58	-1.00	7.09	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
CCV-ALK	4/16/2021	12:33 AM	22.45	-1.00	10.78	496.92	1,023.38	29.54	993.84	.00	4.73	9.75	9.75
DI RINSE	4/16/2021	12:39 AM	22.75	-1.00	5.95	.00	1.14	1.14	.00	.00	.00	.03	.03
HS21040761-04	4/16/2021	12:45 AM	22.75	-1.00	7.50	.00	46.16	46.16	.00	.00	.00	.44	.44
HS21040761-05	4/16/2021	12:52 AM	22.81	-1.00	7.50	.00	45.78	45.78	.00	.00	.00	.44	.44
HS21040762-01	4/16/2021	12:58 AM	22.83	-1.00	7.67	.00	94.54	94.54	.00	.00	.00	.90	.90
HS21040762-02	4/16/2021	1:05 AM	22.42	-1.00	7.68	.00	80.18	80.18	.00	.00	.00	.76	.76
HS21040762-03	4/16/2021	1:11 AM	22.25	-1.00	7.77	.00	87.97	87.97	.00	.00	.00	.84	.84
HS21040762-04	4/16/2021	1:18 AM	21.79	-1.00	7.75	.00	87.67	87.67	.00	.00	.00	.83	.83
HS21040763-01	4/16/2021	1:25 AM	21.54	-1.00	7.64	.00	117.54	117.54	.00	.00	.00	1.12	1.12

Copyright Hinterland Software Ltd.

Run Number 4066 **Order Number** 20210415-2

SampleID	RunDate	RunTime	Temp	cond (uS)	pH	palk-ppm	talk-ppm	bcarb-ppm	carb-ppm	hydr-ppm	mLs @ 8.3	mLs @ 4.5	mLs @ 4.2
HS21040763-02	4/16/2021	1:31 AM	21.76	-1.00	7.61	.00	65.70	65.70	.00	.00	.00	.63	.63
HS21040763-03	4/16/2021	1:38 AM	21.95	-1.00	7.73	.00	203.53	203.53	.00	.00	.00	1.94	1.94
CCV-PH	4/16/2021	1:41 AM	22.08	-1.00	7.08	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
CCV-ALK	4/16/2021	1:49 AM	22.07	-1.00	10.75	491.60	1,000.93	17.72	983.21	.00	4.68	9.53	9.53
DI RINSE	4/16/2021	1:54 AM	22.39	-1.00	5.98	.00	.79	.79	.00	.00	.00	.03	.03
HS21040763-04	4/16/2021	2:01 AM	22.52	-1.00	7.68	.00	181.84	181.84	.00	.00	.00	1.73	1.73
HS21040763-05	4/16/2021	2:08 AM	22.63	-1.00	7.66	.00	65.06	65.06	.00	.00	.00	.62	.62
LCS3-210415	4/16/2021	2:17 AM	22.63	-1.00	10.77	508.75	1,018.84	1.35	1,017.49	.00	4.85	9.70	9.70
LCSD3-210415	4/16/2021	2:25 AM	22.75	-1.00	10.77	492.11	1,007.41	23.19	984.22	.00	4.69	9.59	9.59
WBLKW3-210415	4/16/2021	2:31 AM	22.84	-1.00	5.95	.00	1.08	1.08	.00	.00	.00	.03	.03
HS21040615-05	4/16/2021	2:38 AM	22.86	-1.00	6.82	.00	757.73	757.73	.00	.00	.00	7.22	7.22
HS21040615-05DUP	4/16/2021	2:46 AM	22.98	-1.00	6.83	.00	783.11	783.11	.00	.00	.00	7.46	7.46
HS21040615-02	4/16/2021	2:58 AM	22.54	-1.00	12.05	957.20	978.77	.00	43.14	935.63	9.12	9.32	9.32
HS21040615-03	4/16/2021	3:07 AM	22.17	-1.00	6.88	.00	911.18	911.18	.00	.00	.00	8.68	8.68
CCV-PH	4/16/2021	3:10 AM	21.79	-1.00	7.08	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
CCV-ALK	4/16/2021	3:18 AM	21.77	-1.00	10.74	486.89	1,000.17	26.39	973.78	.00	4.64	9.53	9.53
DI RINSE	4/16/2021	3:24 AM	22.11	-1.00	5.91	.00	.86	.86	.00	.00	.00	.03	.03
HS21040615-08	4/16/2021	3:31 AM	22.16	-1.00	6.70	.00	815.73	815.73	.00	.00	.00	7.77	7.77
HS21040615-10	4/16/2021	3:40 AM	22.26	-1.00	6.68	.00	833.59	833.59	.00	.00	.00	7.94	7.94
HS21040612-02	4/16/2021	3:48 AM	22.42	-1.00	7.63	.00	897.98	897.98	.00	.00	.00	8.55	8.55
HS21040612-04	4/16/2021	3:55 AM	22.55	-1.00	7.62	.00	611.21	611.21	.00	.00	.00	5.82	5.82
HS21040612-06	4/16/2021	4:01 AM	22.61	-1.00	7.54	.00	440.76	440.76	.00	.00	.00	4.20	4.20
HS21040612-07	4/16/2021	4:09 AM	22.84	-1.00	6.95	.00	626.79	626.79	.00	.00	.00	5.97	5.97
HS21040612-08	4/16/2021	4:18 AM	22.93	-1.00	7.26	.00	1,279.46	1,279.46	.00	.00	.00	12.19	12.19
HS21040612-10	4/16/2021	4:25 AM	23.03	-1.00	7.00	.00	361.83	361.83	.00	.00	.00	3.45	3.45
HS21040612-11	4/16/2021	4:30 AM	22.99	-1.00	6.25	.00	1.45	1.45	.00	.00	.00	.03	.03
CCV-PH	4/16/2021	4:33 AM	22.99	-1.00	7.08	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
CCV-ALK	4/16/2021	4:42 AM	22.90	-1.00	10.69	483.17	1,024.76	58.43	966.33	.00	4.60	9.76	9.76
DI RINSE	4/16/2021	4:48 AM	22.74	-1.00	5.97	.00	1.54	1.54	.00	.00	.00	.03	.03
HS21040725-05	4/16/2021	4:55 AM	22.20	-1.00	8.15	.00	508.56	508.56	.00	.00	.00	4.84	4.84

Copyright Hinterland Software Ltd.

Run Number 4066 **Order Number** 20210415-2

SampleID	RunDate	RunTime	Temp	cond (uS)	pH	palk-ppm	talk-ppm	bcarb-ppm	carb-ppm	hydr-ppm	mLs @ 8.3	mLs @ 4.5	mLs @ 4.2
HS21040725-06	4/16/2021	5:02 AM	22.08	-1.00	8.19	.00	414.15	414.15	.00	.00	.00	3.94	3.94
CCV-PH	4/16/2021	5:05 AM	21.70	-1.00	7.09	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
CCV-ALK	4/16/2021	5:13 AM	21.51	-1.00	10.69	482.64	1,002.09	36.82	965.27	.00	4.60	9.54	9.54
DI RINSE	4/16/2021	5:18 AM	22.05	-1.00	5.94	.00	.78	.78	.00	.00	.00	.03	.03

Copyright Hinterland Software Ltd.

Batch ID Exception Report

Batch ID: R381715
QC Group: 0

Sample ID	Seq No	Sample Type	Test Code		Analyzed Date	Dilution Factor
	Analyte Type	Analyte		Qualifier		
HS21040756-02	6044115	SAMP	ALK_W 2320B		15 Apr 2021 7:22 PM	1
	A	**Alkalinity, Total (As CaCO3)**		*		
HS21040299-59	6044123	SAMP	ALK_W 2320B		15 Apr 2021 8:37 PM	1
	A	**Alkalinity, Carbonate (As CaCO3)**		S		
	A	**Alkalinity, Hydroxide (As CaCO3)**		S		
HS21040299-60	6044124	SAMP	ALK_W 2320B		15 Apr 2021 8:45 PM	1
	A	**Alkalinity, Carbonate (As CaCO3)**		S		
	A	**Alkalinity, Hydroxide (As CaCO3)**		S		

Batch ID Exception Report

Batch ID: R381716
QC Group: 0

Sample ID	Seq No	Sample Type	Test Code	Analyzed Date	Dilution Factor
	Analyte Type	Analyte		Qualifier	
SAMP	0	SAMP		16 Apr 2021 8:14 AM	1

X No exceptions found

Batch ID Exception Report

Batch ID: R381717
QC Group: 0

Sample ID	Seq No	Sample Type	Test Code	Analyzed Date	Dilution Factor
	Analyte Type	Analyte	Qualifier		
SAMP	0	SAMP		16 Apr 2021 8:20 AM	1

X No exceptions found

HS21040695 Wet Chem Raw Data (TOC_W 5310B)

ALS WO# HS21040695

C:\TOC-L\Data\2021_02_25_001.tlx

	Type	Analysis	Sample Name	Sample ID	Origin	Result
1	Standard	NPOC	CAL	3150171(01-07)	02_25_2021_CAL.2021_02_	
2	Unknown	NPOC	ICV	315017108	02_25_2021_CAL.cal	NPOC:10.14mg/L
3	Unknown	NPOC	ICB		02_25_2021_CAL.cal	NPOC:-0.1140mg/L
4	Unknown	NPOC	CCV	315017106	02_25_2021_CAL.cal	NPOC:25.02mg/L
5	Unknown	NPOC	CCB		02_25_2021_CAL.cal	NPOC:-0.07587mg/L
6	Unknown	NPOC	MBLK-02252021		02_25_2021_CAL.cal	NPOC:-0.1214mg/L
7	Unknown	NPOC	LCS-02252021		02_25_2021_CAL.cal	NPOC:10.15mg/L
8	Unknown	NPOC	LCSD02252021		02_25_2021_CAL.cal	NPOC:10.16mg/L
9	Unknown	NPOC	HS21020689-01		02_25_2021_CAL.cal	NPOC:22.48mg/L
10	Unknown	NPOC	HS21020689-02		02_25_2021_CAL.cal	NPOC:17.34mg/L
11	Unknown	NPOC	HS21020689-02MS		02_25_2021_CAL.cal	NPOC:28.25mg/L
12	Unknown	NPOC	HS21020689-03		02_25_2021_CAL.cal	NPOC:10.22mg/L
13	Unknown	NPOC	HS21020538-01		02_25_2021_CAL.cal	NPOC:20.36mg/L
14	Unknown	NPOC	HS21020538-02		02_25_2021_CAL.cal	NPOC:4.452mg/L
15	Unknown	NPOC	HS21020793-02DF10		02_25_2021_CAL.cal	NPOC:17.50mg/L
16	Unknown	NPOC	CCV		02_25_2021_CAL.cal	NPOC:25.46mg/L
17	Unknown	NPOC	CCB		02_25_2021_CAL.cal	NPOC:0.08018mg/L

	Notes	Status	Date / Time	Vial
1		Completed	2/25/2021 1	1, 2, 3, 4, 5,
2		Completed	2/25/2021 1	8
3		Completed	2/25/2021 1	9
4		Completed	2/25/2021 1	10
5		Completed	2/25/2021 1	11
6		Completed	2/25/2021 1	12
7		Completed	2/25/2021 1	13
8		Completed	2/25/2021 1:	14
9		Completed	2/25/2021 1:	15
10		Completed	2/25/2021 1:	16
11		Completed	2/25/2021 1:	17
12		Completed	2/25/2021 2:	18
13		Completed	2/25/2021 2:	19
14		Completed	2/25/2021 2:	20
15		Completed	2/25/2021 2:	21
16		Completed	2/25/2021 3:	22
17		Completed	2/25/2021 3:	23

TOC-Control L Report

2021_02_25_001.tlx

Instr.Information

Instrument Options	TOC/ASI/IC Unit/
Catalyst	Regular Sensitivity

Cal. Curve

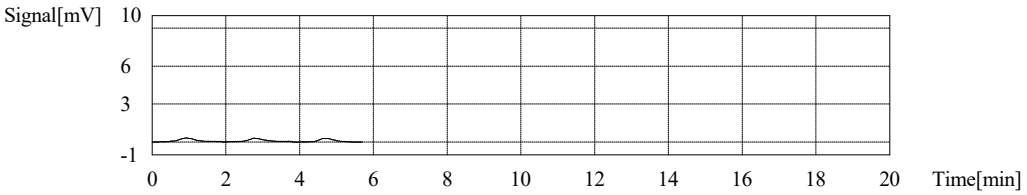
Sample Name:	CAL
Sample ID:	3150171(01-07)
Cal. Curve:	02_25_2021_CAL.2021_02_25_09_13_02.cal
Status	Completed

Type	Anal.
Standard	NPOC

Conc: 0.000mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	0.7577	50uL	1.000	*******		2/25/2021 9:21:39 AM
2	0.6368	50uL	1.000	*******		2/25/2021 9:23:47 AM
3	0.6500	50uL	1.000	*******		2/25/2021 9:25:55 AM

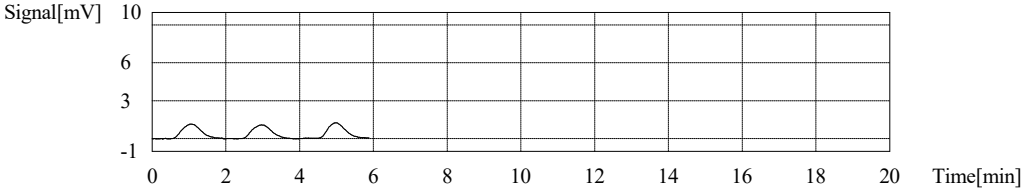
Acid Add.	0.000%
Sparge Gas Flow	80mL/min
Sp. Time	180.0sec
Mean Area	0.6815



Conc: 1.000mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	4.063	50uL	1.000	*******		2/25/2021 9:34:44 AM
2	3.946	50uL	1.000	*******		2/25/2021 9:37:02 AM
3	3.886	50uL	1.000	*******		2/25/2021 9:39:10 AM

Acid Add.	0.000%
Sparge Gas Flow	80mL/min
Sp. Time	180.0sec
Mean Area	3.965

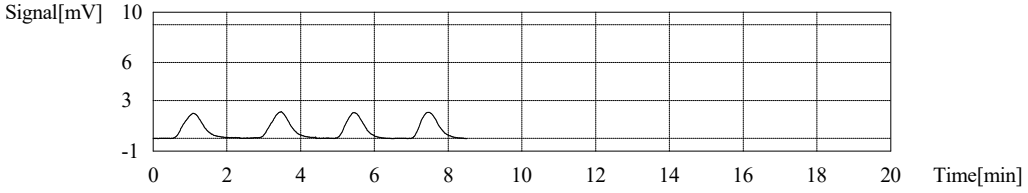


Conc: 2.000mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	7.014	50uL	1.000	*******		2/25/2021 9:48:25 AM
2	6.976	50uL	1.000	*******		2/25/2021 9:50:44 AM
3	6.738	50uL	1.000	*******	E	2/25/2021 9:53:02 AM
4	6.989	50uL	1.000	*******		2/25/2021 9:55:18 AM

TOC-Control L Report

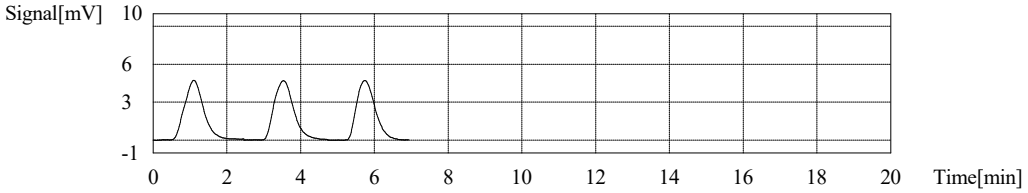
Acid Add. 0.000%
Sparge Gas Flow 80mL/min
Sp. Time 180.0sec
Mean Area 6.993



Conc: 5.000mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	16.70	50uL	1.000	*******		2/25/2021 10:04:35 AM
2	16.99	50uL	1.000	*******		2/25/2021 10:07:06 AM
3	16.40	50uL	1.000	*******		2/25/2021 10:09:32 AM

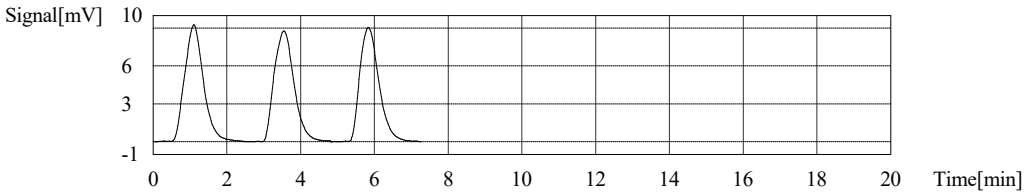
Acid Add. 0.000%
Sparge Gas Flow 80mL/min
Sp. Time 180.0sec
Mean Area 16.70



Conc: 10.00mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	32.33	50uL	1.000	*******		2/25/2021 10:18:54 AM
2	32.41	50uL	1.000	*******		2/25/2021 10:21:29 AM
3	32.27	50uL	1.000	*******		2/25/2021 10:24:10 AM

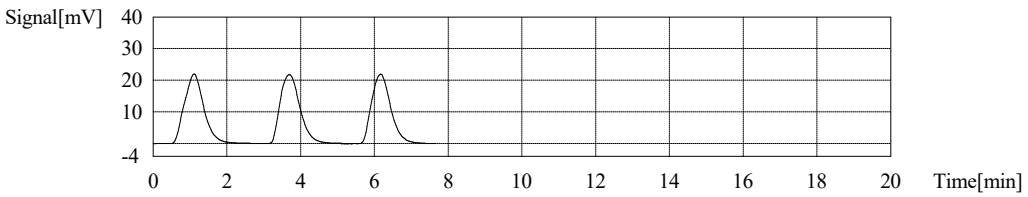
Acid Add. 0.000%
Sparge Gas Flow 80mL/min
Sp. Time 180.0sec
Mean Area 32.34



Conc: 25.00mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	79.83	50uL	1.000	*******		2/25/2021 10:33:42 AM
2	80.51	50uL	1.000	*******		2/25/2021 10:36:25 AM
3	79.09	50uL	1.000	*******		2/25/2021 10:39:12 AM

Acid Add. 0.000%
Sparge Gas Flow 80mL/min
Sp. Time 180.0sec
Mean Area 79.81



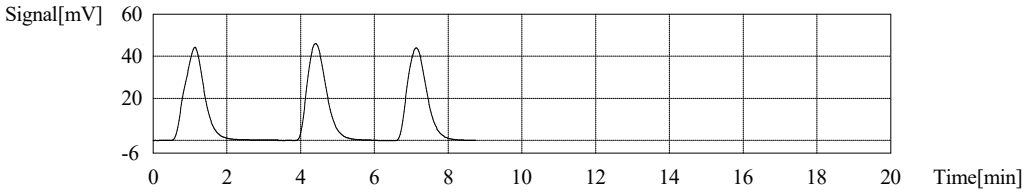
Conc: 50.00mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	162.4	50uL	1.000	*******		2/25/2021 10:49:29 AM
2	163.8	50uL	1.000	*******		2/25/2021 10:52:26 AM
3	159.9	50uL	1.000	*******		2/25/2021 10:55:21 AM

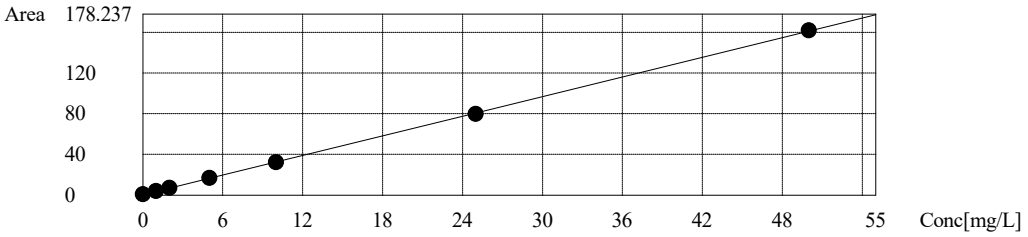
TOC-Control L Report

2021_02_25_001.tlx

Acid Add.	0.000%
Sparge Gas Flow	80mL/min
Sp. Time	180.0sec
Mean Area	162.0



Slope:	3.220
Intercept	0.4365
r^2	0.9999
r	1.0000
RSE(%)	N/A
Zero Shift	No



Sample

Sample Name:	ICV
Sample ID:	315017108
Origin:	02_25_2021_CAL.cal
Status	Completed
Chk. Result	

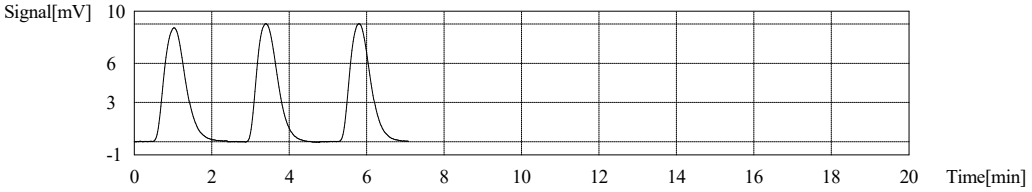
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:10.14mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	33.04	10.13mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	2/25/2021 11:32:06 AM
2	33.24	10.19mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	2/25/2021 11:34:44 AM
3	32.98	10.11mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	2/25/2021 11:37:17 AM

Mean Area	33.09
Mean Conc.	10.14mg/L



Sample

Sample Name:	ICB
Sample ID:	
Origin:	02_25_2021_CAL.cal
Status	Completed
Chk. Result	

Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:-0.1140mg/L

1. Det

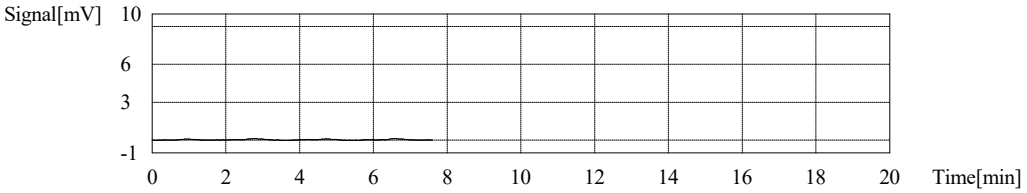
TOC-Control L Report

2021_02_25_001.tlx

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.000	-0.1356mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	2/25/2021 11:46:05 AM
2	0.2080	-0.07096mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	2/25/2021 11:48:13 AM
3	0.000	-0.1356mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	2/25/2021 11:50:20 AM
4	0.2102	-0.07028mg/L	50uL	1.000	E	02_25_2021_CAL.2021_02_25_09_13_02.cal	2/25/2021 11:52:27 AM

Mean Area 0.06933
Mean Conc. -0.1140mg/L



C:\TOC-L\Data\2021_04_23_001.tlx

	Type	Analysis	Sample Name	Sample ID	Origin	Result	Notes	Status	Date / Time
1	Unknown	NPOC	CCV	316131907	02_25_2021	NPOC:23.8		Completed	4/23/2021 9:
2	Unknown	NPOC	CCB		02_25_2021	NPOC:-0.05		Completed	4/23/2021 9:
3	Unknown	NPOC	MBLK-04232021		02_25_2021	NPOC:-0.10		Completed	4/23/2021 9:
4	Unknown	NPOC	LCS-04232021		02_25_2021	NPOC:9.75		Completed	4/23/2021 1
5	Unknown	NPOC	LCSD-04232021	TOC_W 531	02_25_2021	NPOC:10.0		Completed	4/23/2021 1
6	Unknown	NPOC	HS21040505-02		02_25_2021	NPOC:0.19		Completed	4/23/2021 1
7	Unknown	NPOC	HS21040505-03		02_25_2021	NPOC:0.42		Completed	4/23/2021 1
8	Unknown	NPOC	HS21040505-04		02_25_2021	NPOC:0.50		Completed	4/23/2021 1
9	Unknown	NPOC	HS21040505-05		02_25_2021	NPOC:0.43		Completed	4/23/2021 1
10	Unknown	NPOC	HS21040505-05MS		02_25_2021	NPOC:11.2		Completed	4/23/2021 1
11	Unknown	NPOC	HS21040505-07		02_25_2021	NPOC:1.07		Completed	4/23/2021 1
12	Unknown	NPOC	HS21040505-08		02_25_2021	NPOC:2.58		Completed	4/23/2021 1
13	Unknown	NPOC	CCV	316131907	02_25_2021	NPOC:24.7		Completed	4/23/2021 1
14	Unknown	NPOC	CCB		02_25_2021	NPOC:-0.04		Completed	4/23/2021 1
15	Unknown	NPOC	HS21040505-09		02_25_2021	NPOC:0.99		Completed	4/23/2021 1
16	Unknown	NPOC	HS21040505-10		02_25_2021	NPOC:0.06		Completed	4/23/2021 1:
17	Unknown	NPOC	HS21040843-01		02_25_2021	NPOC:13.6		Completed	4/23/2021 1:
18	Unknown	NPOC	HS21041084-01		02_25_2021	NPOC:1.20		Completed	4/23/2021 1:
19	Unknown	NPOC	CCV	316131907	02_25_2021	NPOC:24.1		Completed	4/23/2021 1:
20	Unknown	NPOC	CCB		02_25_2021	NPOC:-0.08		Completed	4/23/2021 2:
21	Unknown	NPOC	MBLK-04232021		02_25_2021	NPOC:-0.11		Completed	4/23/2021 2:
22	Unknown	NPOC	LCS-04232021		02_25_2021	NPOC:9.73		Completed	4/23/2021 2:
23	Unknown	NPOC	LCSD-04232021	TOC_W 531	02_25_2021	NPOC:10.1		Completed	4/23/2021 2:
24	Unknown	NPOC	HS21040889-01		02_25_2021	NPOC:10.9		Completed	4/23/2021 3:
25	Unknown	NPOC	HS21041036-01		02_25_2021	NPOC:-0.02		Completed	4/23/2021 3:
26	Unknown	NPOC	HS21040940-01		02_25_2021	NPOC:6.89		Completed	4/23/2021 3:
27	Unknown	NPOC	HS21040940-01MS		02_25_2021	NPOC:17.1		Completed	4/23/2021 3:
28	Unknown	NPOC	CCV	316131907	02_25_2021	NPOC:24.4		Completed	4/23/2021 4:
29	Unknown	NPOC	CCB		02_25_2021	NPOC:-0.02		Completed	4/23/2021 4:
30	Unknown	NPOC	HS21040939-01		02_25_2021	NPOC:12.8		Completed	4/23/2021 4:
31	Unknown	NPOC	HS21041166-04		02_25_2021	NPOC:14.8		Completed	4/23/2021 4:
32	Unknown	NPOC	HS21040548-01		02_25_2021	NPOC:5.53		Completed	4/23/2021 5:
33	Unknown	NPOC	HS21040695-11		02_25_2021	NPOC:3.42		Completed	4/23/2021 5:
34	Unknown	NPOC	HS21040695-12		02_25_2021	NPOC:16.8		Completed	4/23/2021 5:
35	Unknown	NPOC	HS21040695-13		02_25_2021	NPOC:65.5		Completed	4/23/2021 5:
36	Unknown	NPOC	HS21040695-14		02_25_2021	NPOC:15.1		Completed	4/23/2021 6:
37	Unknown	NPOC	CCV	316131907	02_25_2021	NPOC:24.2		Completed	4/23/2021 6:
38	Unknown	NPOC	CCB		02_25_2021	NPOC:0.04		Completed	4/23/2021 6:

	Vial
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
10	10
11	11
12	12
13	13
14	14
15	15
16	16
17	17
18	18
19	1
20	2
21	3
22	4
23	5
24	19
25	20
26	21
27	22
28	13
29	14
30	23
31	24
32	25
33	26
34	27
35	28
36	29
37	1
38	2

TOC-Control L Report

Instr.Information

Instrument Options TOC/ASI/IC Unit/
Catalyst Regular Sensitivity

Sample

Sample Name: CCV
Sample ID: 316131907
Origin: 02_25_2021_CAL.cal
Status Completed
Chk. Result

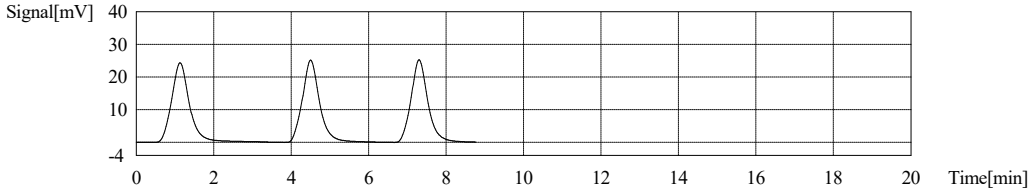
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:23.81mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	77.97	24.08mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/23/2021 9:19:06 AM
2	77.46	23.92mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/23/2021 9:22:10 AM
3	75.89	23.43mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/23/2021 9:24:58 AM

Mean Area 77.11
Mean Conc. 23.81mg/L



Sample

Sample Name: CCB
Sample ID:
Origin: 02_25_2021_CAL.cal
Status Completed
Chk. Result

Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:-0.05136mg/L

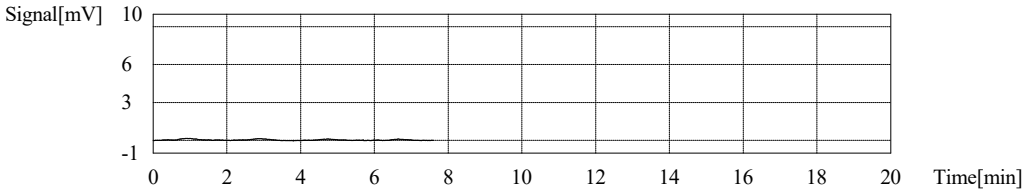
1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.3143	-0.03795mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/23/2021 9:33:47 AM
2	0.2936	-0.04438mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/23/2021 9:35:54 AM
3	0.000	-0.1356mg/L	50uL	1.000	E	02_25_2021_CAL.2021_02_25_09_13_02.cal	4/23/2021 9:38:00 AM
4	0.2055	-0.07174mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/23/2021 9:40:08 AM

TOC-Control L Report

Mean Area 0.2711
Mean Conc. -0.05136mg/L



Sample

Sample Name: MBLK-04232021
Sample ID:
Origin: 02_25_2021_CAL.cal
Status Completed
Chk. Result

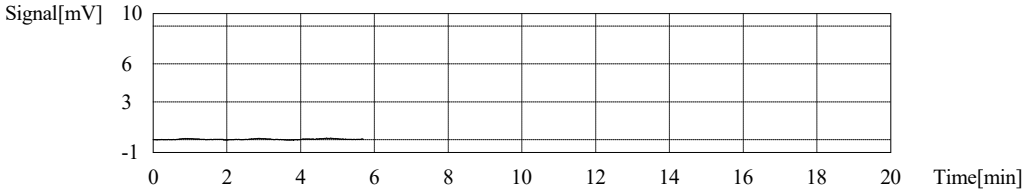
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:-0.1057mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.1661	-0.08398mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/23/2021 9:48:50 AM
2	0.1226	-0.09748mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/23/2021 9:51:00 AM
3	0.000	-0.1356mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/23/2021 9:53:06 AM

Mean Area 0.09623
Mean Conc. -0.1057mg/L



Sample

Sample Name: LCS-04232021
Sample ID:
Origin: 02_25_2021_CAL.cal
Status Completed
Chk. Result

Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:9.759mg/L

1. Det

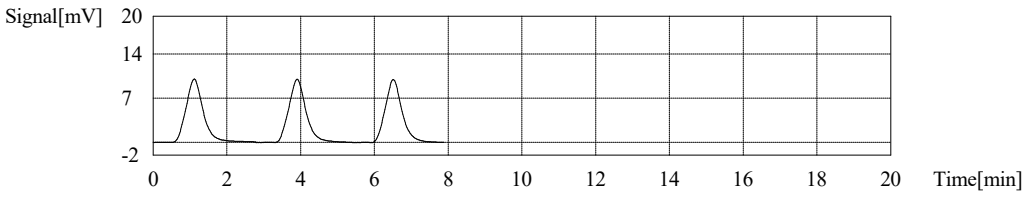
Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	32.07	9.824mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/23/2021 10:02:47 AM
2	32.17	9.855mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/23/2021 10:05:40 AM
3	31.34	9.597mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/23/2021 10:08:21 AM

TOC-Control L Report

2021_04_23_001.tlx

Mean Area 31.86
Mean Conc. 9.759mg/L



Sample

Sample Name: LCSD-04232021
Sample ID: TOC_W 5310B
Origin: 02_25_2021_CAL.cal
Status Completed
Chk. Result

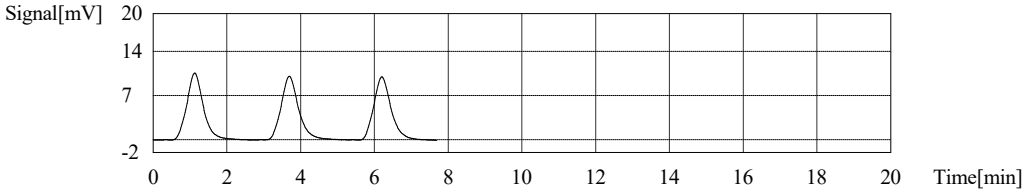
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:10.05mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	32.93	10.09mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/23/2021 10:17:49 AM
2	32.75	10.04mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/23/2021 10:20:35 AM
3	32.70	10.02mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/23/2021 10:23:23 AM

Mean Area 32.79
Mean Conc. 10.05mg/L



Sample

Sample Name: HS21040505-02
Sample ID:
Origin: 02_25_2021_CAL.cal
Status Completed
Chk. Result

Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.1929mg/L

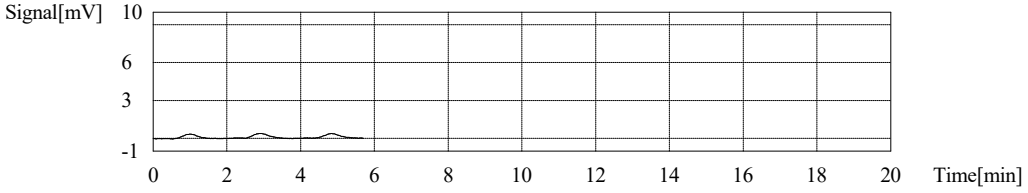
1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.9926	0.1727mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/23/2021 10:32:11 AM
2	1.126	0.2141mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/23/2021 10:34:18 AM
3	1.054	0.1918mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/23/2021 10:36:25 AM

TOC-Control L Report

Mean Area 1.058
Mean Conc. 0.1929mg/L



Sample

Sample Name: HS21040505-03
Sample ID:
Origin: 02_25_2021_CAL.cal
Status Completed
Chk. Result

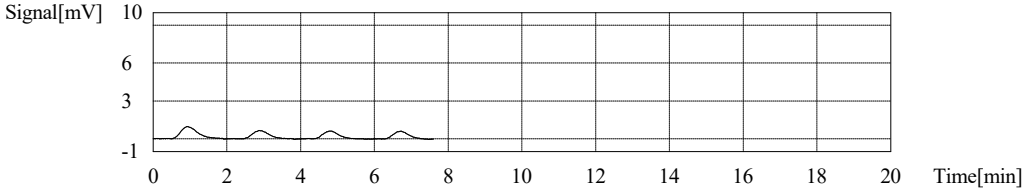
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.4285mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	2.955	0.7821mg/L	50uL	1.000	E	02_25_2021_CAL.2021_02_25_09_13_02.cal	4/23/2021 10:45:13 AM
2	1.962	0.4738mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/23/2021 10:47:20 AM
3	1.745	0.4064mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/23/2021 10:49:26 AM
4	1.742	0.4054mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/23/2021 10:51:33 AM

Mean Area 1.816
Mean Conc. 0.4285mg/L



Sample

Sample Name: HS21040505-04
Sample ID:
Origin: 02_25_2021_CAL.cal
Status Completed
Chk. Result

Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.5037mg/L

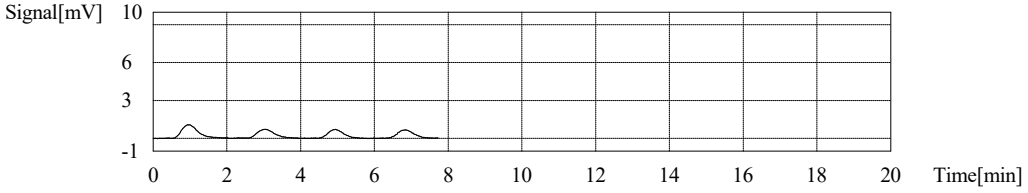
1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	3.270	0.8800mg/L	50uL	1.000	E	02_25_2021_CAL.2021_02_25_09_13_02.cal	4/23/2021 11:00:24 AM
2	2.144	0.5303mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/23/2021 11:02:34 AM
3	2.015	0.4902mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/23/2021 11:04:41 AM
4	2.016	0.4905mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/23/2021 11:06:48 AM

TOC-Control L Report

Mean Area 2.058
Mean Conc. 0.5037mg/L



Sample

Sample Name: HS21040505-05
Sample ID:
Origin: 02_25_2021_CAL.cal
Status Completed
Chk. Result

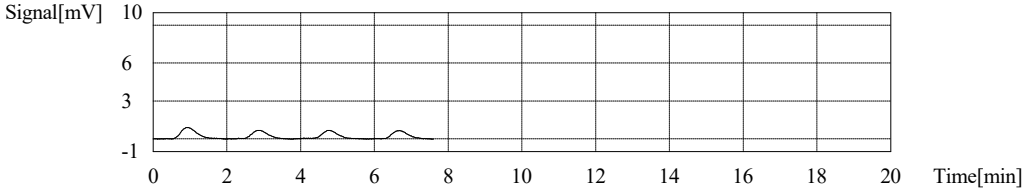
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.4357mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	2.568	0.6620mg/L	50uL	1.000	E	02_25_2021_CAL.2021_02_25_09_13_02.cal	4/23/2021 11:15:31 AM
2	1.933	0.4648mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/23/2021 11:17:38 AM
3	1.734	0.4029mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/23/2021 11:19:45 AM
4	1.851	0.4393mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/23/2021 11:21:52 AM

Mean Area 1.839
Mean Conc. 0.4357mg/L



Sample

Sample Name: HS21040505-05MS
Sample ID:
Origin: 02_25_2021_CAL.cal
Status Completed
Chk. Result

Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:11.26mg/L

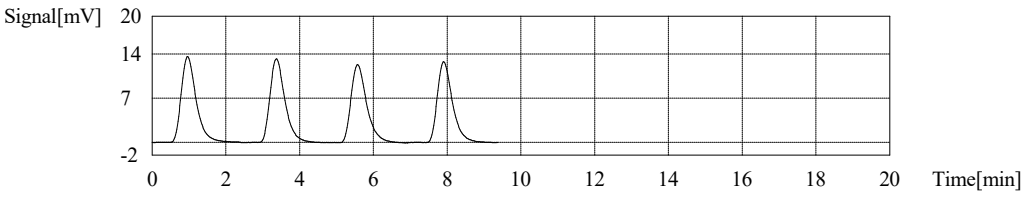
1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	38.31	11.76mg/L	50uL	1.000	E	02_25_2021_CAL.2021_02_25_09_13_02.cal	4/23/2021 11:31:04 AM
2	37.26	11.44mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/23/2021 11:33:32 AM
3	36.41	11.17mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/23/2021 11:36:04 AM
4	36.38	11.16mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/23/2021 11:38:45 AM

TOC-Control L Report

Mean Area 36.68
Mean Conc. 11.26mg/L



Sample

Sample Name: HS21040505-07
Sample ID:
Origin: 02_25_2021_CAL.cal
Status Completed
Chk. Result

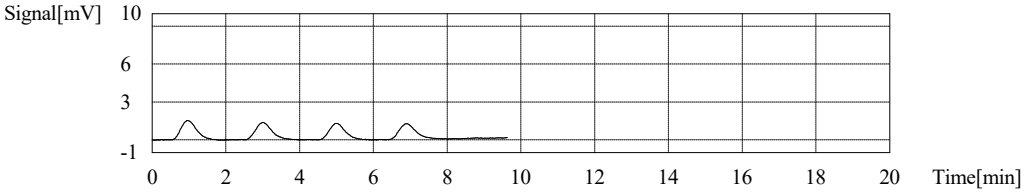
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:1.074mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	4.548	1.277mg/L	50uL	1.000	E	02_25_2021_CAL.2021_02_25_09_13_02.cal	4/23/2021 11:47:33 AM
2	4.175	1.161mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/23/2021 11:49:46 AM
3	3.820	1.051mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/23/2021 11:51:53 AM
4	3.686	1.009mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/23/2021 11:55:51 AM

Mean Area 3.894
Mean Conc. 1.074mg/L



Sample

Sample Name: HS21040505-08
Sample ID:
Origin: 02_25_2021_CAL.cal
Status Completed
Chk. Result

Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:2.584mg/L

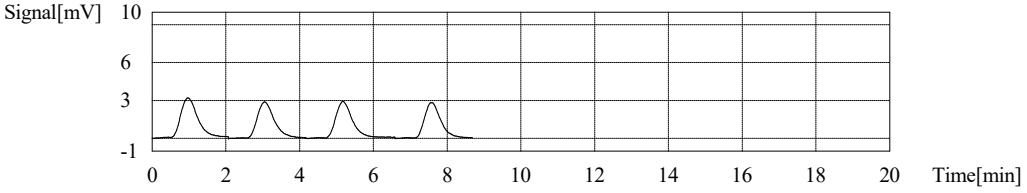
1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	9.535	2.826mg/L	50uL	1.000	E	02_25_2021_CAL.2021_02_25_09_13_02.cal	4/23/2021 12:04:44 PM
2	9.001	2.660mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/23/2021 12:07:05 PM
3	8.865	2.618mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/23/2021 12:09:46 PM
4	8.405	2.475mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/23/2021 12:12:07 PM

TOC-Control L Report

Mean Area 8.757
Mean Conc. 2.584mg/L



Sample

Sample Name: CCV
Sample ID: 316131907
Origin: 02_25_2021_CAL.cal
Status Completed
Chk. Result

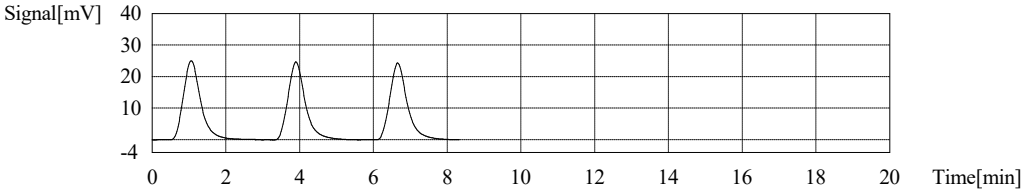
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:24.71mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	80.74	24.94mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/23/2021 12:21:44 PM
2	80.12	24.75mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/23/2021 12:24:45 PM
3	79.17	24.45mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/23/2021 12:27:43 PM

Mean Area 80.01
Mean Conc. 24.71mg/L



Sample

Sample Name: CCB
Sample ID:
Origin: 02_25_2021_CAL.cal
Status Completed
Chk. Result

Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:-0.04932mg/L

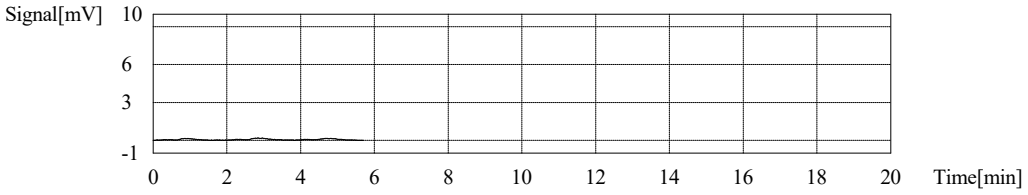
1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.2964	-0.04351mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/23/2021 12:36:32 PM
2	0.2942	-0.04419mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/23/2021 12:38:39 PM
3	0.2425	-0.06025mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/23/2021 12:40:47 PM

TOC-Control L Report

Mean Area 0.2777
Mean Conc. -0.04932mg/L



Sample

Sample Name: HS21040505-09
Sample ID:
Origin: 02_25_2021_CAL.cal
Status Completed
Chk. Result

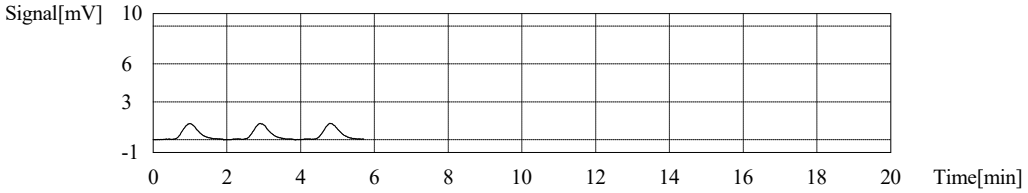
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.9903mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	3.591	0.9797mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/23/2021 12:49:35 PM
2	3.655	0.9995mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/23/2021 12:51:43 PM
3	3.630	0.9918mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/23/2021 12:53:52 PM

Mean Area 3.625
Mean Conc. 0.9903mg/L



Sample

Sample Name: HS21040505-10
Sample ID:
Origin: 02_25_2021_CAL.cal
Status Completed
Chk. Result

Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.06028mg/L

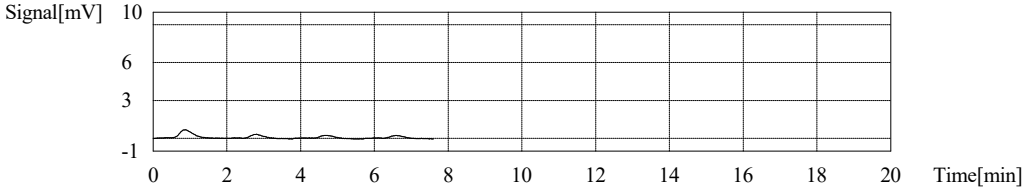
1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1.595	0.3598mg/L	50uL	1.000	E	02_25_2021_CAL.2021_02_25_09_13_02.cal	4/23/2021 1:02:40 PM
2	0.7396	0.09413mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/23/2021 1:04:47 PM
3	0.5926	0.04848mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/23/2021 1:06:53 PM
4	0.5596	0.03823mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/23/2021 1:09:03 PM

TOC-Control L Report

Mean Area 0.6306
Mean Conc. 0.06028mg/L



Sample

Sample Name: HS21040843-01
Sample ID:
Origin: 02_25_2021_CAL.cal
Status Completed
Chk. Result

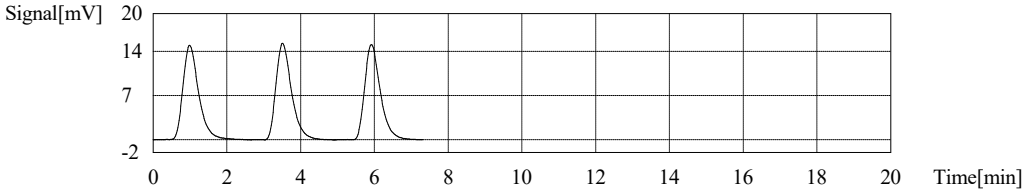
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:13.63mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	43.93	13.51mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/23/2021 1:18:22 PM
2	44.87	13.80mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/23/2021 1:21:00 PM
3	44.18	13.58mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/23/2021 1:23:37 PM

Mean Area 44.33
Mean Conc. 13.63mg/L



Sample

Sample Name: HS21041084-01
Sample ID:
Origin: 02_25_2021_CAL.cal
Status Completed
Chk. Result

Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:1.206mg/L

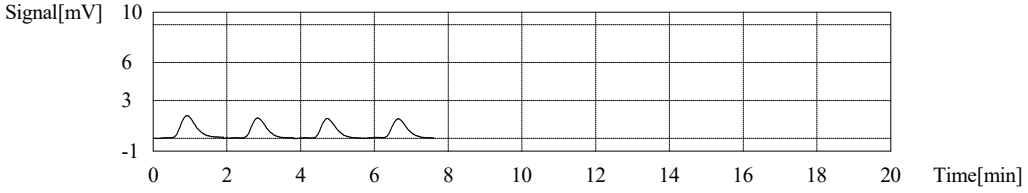
1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	4.943	1.400mg/L	50uL	1.000	E	02_25_2021_CAL.2021_02_25_09_13_02.cal	4/23/2021 1:32:25 PM
2	4.313	1.204mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/23/2021 1:34:35 PM
3	4.263	1.188mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/23/2021 1:36:44 PM
4	4.382	1.225mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/23/2021 1:38:52 PM

TOC-Control L Report

Mean Area 4.319
Mean Conc. 1.206mg/L



Sample

Sample Name: CCV
Sample ID: 316131907
Origin: 02_25_2021_CAL.cal
Status Completed
Chk. Result

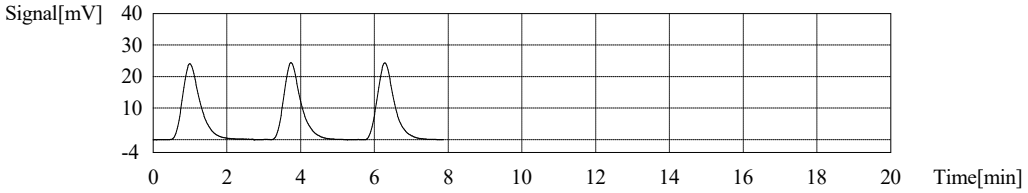
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:24.17mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	78.71	24.31mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/23/2021 1:48:32 PM
2	78.49	24.24mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/23/2021 1:51:18 PM
3	77.64	23.98mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/23/2021 1:54:10 PM

Mean Area 78.28
Mean Conc. 24.17mg/L



Sample

Sample Name: CCB
Sample ID:
Origin: 02_25_2021_CAL.cal
Status Completed
Chk. Result

Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:-0.08730mg/L

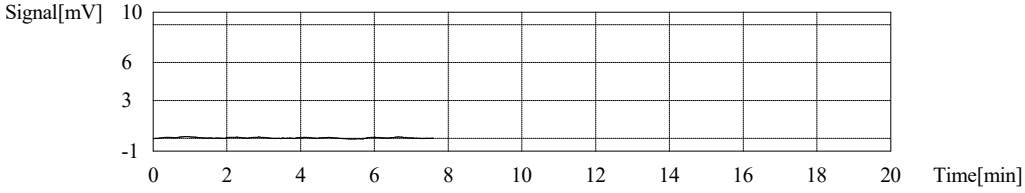
1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.4439	0.00230mg/L	50uL	1.000	E	02_25_2021_CAL.2021_02_25_09_13_02.cal	4/23/2021 2:02:59 PM
2	0.1910	-0.07624mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/23/2021 2:05:07 PM
3	0.08990	-0.1076mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/23/2021 2:07:15 PM
4	0.1853	-0.07801mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/23/2021 2:09:23 PM

TOC-Control L Report

Mean Area 0.1554
Mean Conc. -0.08730mg/L



Sample

Sample Name: MBLK-04232021
Sample ID:
Origin: 02_25_2021_CAL.cal
Status Completed
Chk. Result

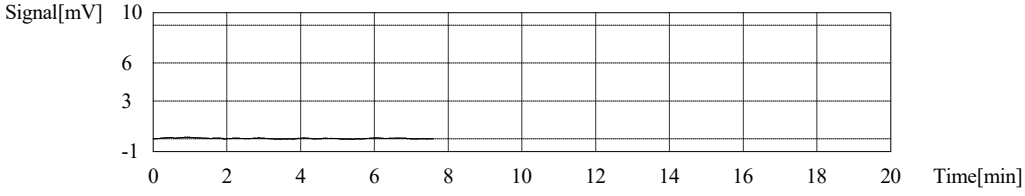
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:-0.1123mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.000	-0.1356mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/23/2021 2:18:07 PM
2	0.000	-0.1356mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/23/2021 2:20:16 PM
3	0.3160	-0.03742mg/L	50uL	1.000	E	02_25_2021_CAL.2021_02_25_09_13_02.cal	4/23/2021 2:22:24 PM
4	0.2242	-0.06593mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/23/2021 2:24:32 PM

Mean Area 0.07473
Mean Conc. -0.1123mg/L



Sample

Sample Name: LCS-04232021
Sample ID:
Origin: 02_25_2021_CAL.cal
Status Completed
Chk. Result

Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:9.735mg/L

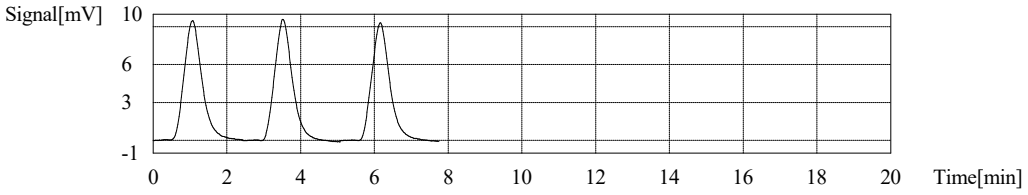
1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	31.56	9.666mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/23/2021 2:33:48 PM
2	32.18	9.858mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/23/2021 2:36:40 PM
3	31.61	9.681mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/23/2021 2:39:36 PM

TOC-Control L Report

Mean Area 31.78
Mean Conc. 9.735mg/L



Sample

Sample Name: LCSD-04232021
Sample ID: TOC_W 5310B
Origin: 02_25_2021_CAL.cal
Status Completed
Chk. Result

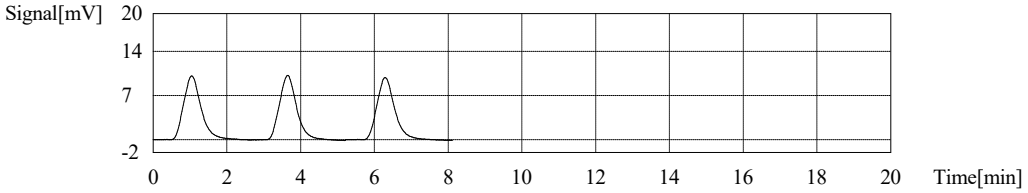
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:10.11mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	33.03	10.12mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/23/2021 2:49:05 PM
2	33.08	10.14mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/23/2021 2:51:58 PM
3	32.86	10.07mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/23/2021 2:55:07 PM

Mean Area 32.99
Mean Conc. 10.11mg/L



Sample

Sample Name: HS21040889-01
Sample ID:
Origin: 02_25_2021_CAL.cal
Status Completed
Chk. Result

Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:10.92mg/L

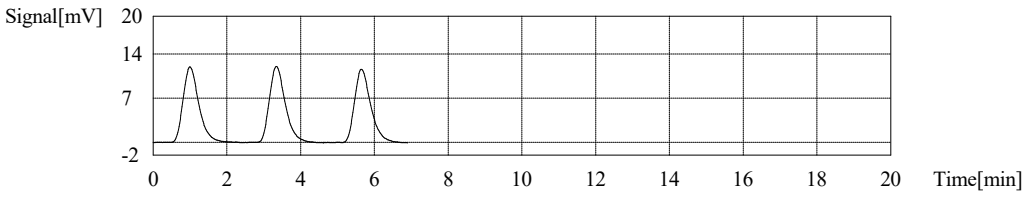
1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	35.36	10.85mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/23/2021 3:04:31 PM
2	36.16	11.09mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/23/2021 3:07:03 PM
3	35.25	10.81mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/23/2021 3:09:33 PM

TOC-Control L Report

Mean Area 35.59
Mean Conc. 10.92mg/L



Sample

Sample Name: HS21041036-01
Sample ID:
Origin: 02_25_2021_CAL.cal
Status Completed
Chk. Result

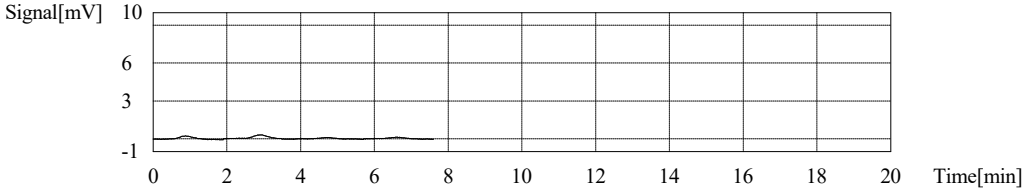
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:-0.02502mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.6203	0.05708mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/23/2021 3:18:22 PM
2	0.7965	0.1118mg/L	50uL	1.000	E	02_25_2021_CAL.2021_02_25_09_13_02.cal	4/23/2021 3:20:30 PM
3	0.2005	-0.07329mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/23/2021 3:22:38 PM
4	0.2470	-0.05885mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/23/2021 3:24:46 PM

Mean Area 0.3559
Mean Conc. -0.02502mg/L



Sample

Sample Name: HS21040940-01
Sample ID:
Origin: 02_25_2021_CAL.cal
Status Completed
Chk. Result

Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:6.891mg/L

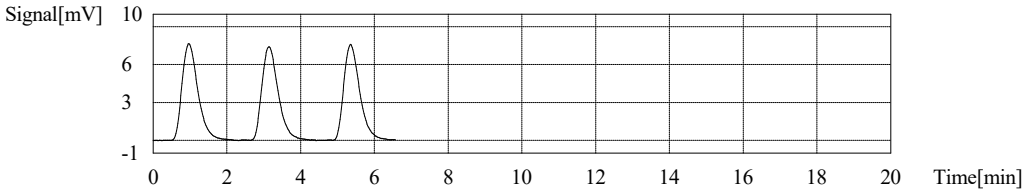
1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	22.76	6.933mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/23/2021 3:33:45 PM
2	22.60	6.883mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/23/2021 3:36:15 PM
3	22.52	6.858mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/23/2021 3:38:39 PM

TOC-Control L Report

Mean Area 22.63
Mean Conc. 6.891mg/L



Sample

Sample Name: HS21040940-01MS
Sample ID:
Origin: 02_25_2021_CAL.cal
Status Completed
Chk. Result

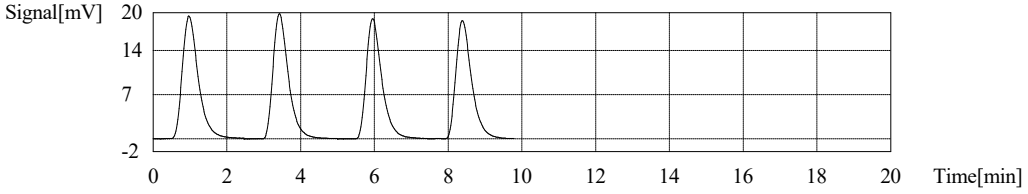
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:17.19mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	58.06	17.90mg/L	50uL	1.000	E	02_25_2021_CAL.2021_02_25_09_13_02.cal	4/23/2021 3:48:01 PM
2	56.94	17.55mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/23/2021 3:50:48 PM
3	55.36	17.06mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/23/2021 3:53:30 PM
4	55.05	16.96mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/23/2021 3:56:06 PM

Mean Area 55.78
Mean Conc. 17.19mg/L



Sample

Sample Name: CCV
Sample ID: 316131907
Origin: 02_25_2021_CAL.cal
Status Completed
Chk. Result

Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:24.45mg/L

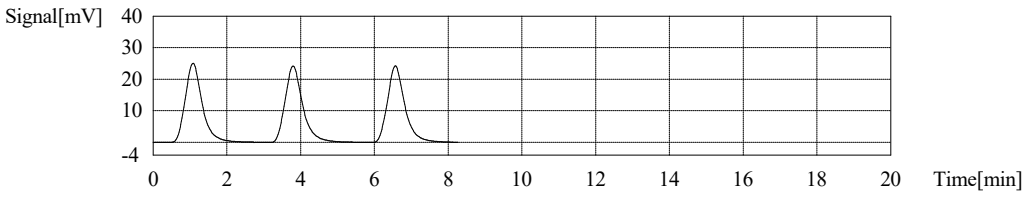
1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	79.54	24.57mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/23/2021 4:05:49 PM
2	79.53	24.56mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/23/2021 4:08:50 PM
3	78.41	24.22mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/23/2021 4:11:52 PM

TOC-Control L Report

Mean Area 79.16
Mean Conc. 24.45mg/L



Sample

Sample Name: CCB
Sample ID:
Origin: 02_25_2021_CAL.cal
Status Completed
Chk. Result

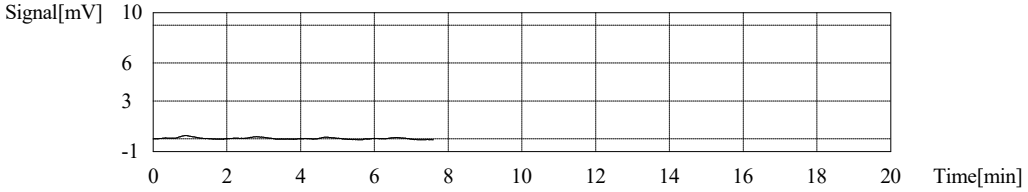
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:-0.02270mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.5265	0.02795mg/L	50uL	1.000	E	02_25_2021_CAL.2021_02_25_09_13_02.cal	4/23/2021 4:20:40 PM
2	0.4124	-0.00748mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/23/2021 4:22:48 PM
3	0.3216	-0.03568mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/23/2021 4:24:56 PM
4	0.3562	-0.02494mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/23/2021 4:27:05 PM

Mean Area 0.3634
Mean Conc. -0.02270mg/L



Sample

Sample Name: HS21040939-01
Sample ID:
Origin: 02_25_2021_CAL.cal
Status Completed
Chk. Result

Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:12.81mg/L

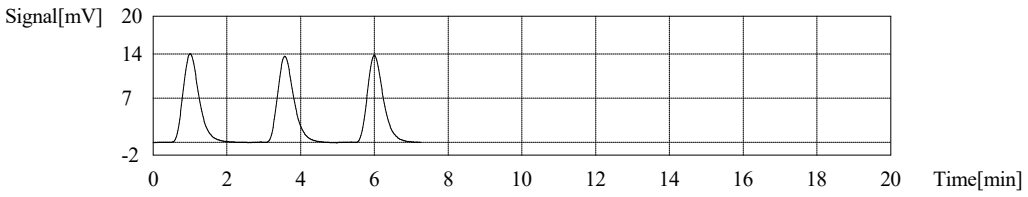
1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	42.41	13.04mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/23/2021 4:38:39 PM
2	41.50	12.75mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/23/2021 4:41:19 PM
3	41.14	12.64mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/23/2021 4:43:48 PM

TOC-Control L Report

Mean Area 41.68
Mean Conc. 12.81mg/L



Sample

Sample Name: HS21041166-04
Sample ID:
Origin: 02_25_2021_CAL.cal
Status Completed
Chk. Result

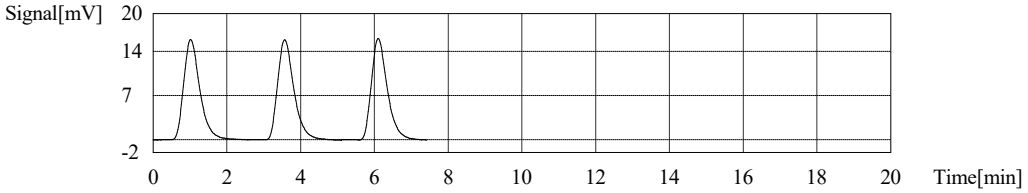
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:14.86mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	48.06	14.79mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/23/2021 4:53:16 PM
2	48.71	14.99mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/23/2021 4:56:02 PM
3	48.04	14.78mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/23/2021 4:58:36 PM

Mean Area 48.27
Mean Conc. 14.86mg/L



Sample

Sample Name: HS21040548-01
Sample ID:
Origin: 02_25_2021_CAL.cal
Status Completed
Chk. Result

Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:5.534mg/L

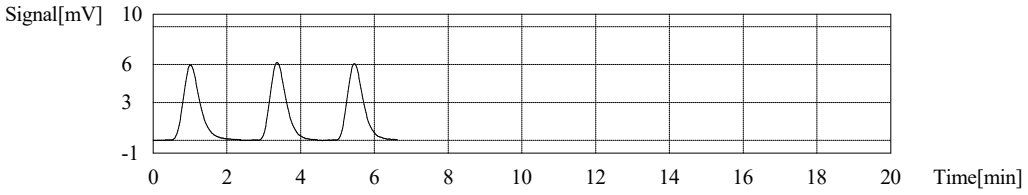
1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	18.41	5.582mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/23/2021 5:07:52 PM
2	18.30	5.548mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/23/2021 5:10:11 PM
3	18.06	5.473mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/23/2021 5:12:35 PM

TOC-Control L Report

Mean Area 18.26
Mean Conc. 5.534mg/L



Sample

Sample Name: HS21040695-11
Sample ID:
Origin: 02_25_2021_CAL.cal
Status Completed
Chk. Result

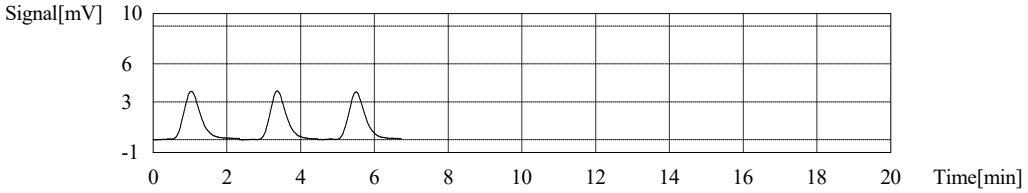
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:3.427mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	11.68	3.492mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/23/2021 5:21:49 PM
2	11.34	3.386mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/23/2021 5:24:12 PM
3	11.39	3.402mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/23/2021 5:26:43 PM

Mean Area 11.47
Mean Conc. 3.427mg/L



Sample

Sample Name: HS21040695-12
Sample ID:
Origin: 02_25_2021_CAL.cal
Status Completed
Chk. Result

Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:16.82mg/L

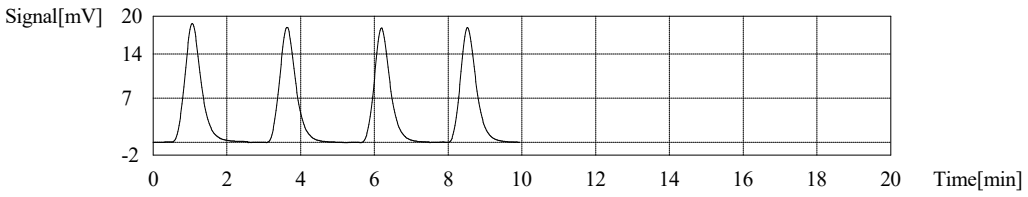
1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	57.65	17.77mg/L	50uL	1.000	E	02_25_2021_CAL.2021_02_25_09_13_02.cal	4/23/2021 5:36:12 PM
2	55.94	17.24mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/23/2021 5:39:01 PM
3	53.76	16.56mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/23/2021 5:41:36 PM
4	54.05	16.65mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/23/2021 5:44:18 PM

TOC-Control L Report

Mean Area 54.58
Mean Conc. 16.82mg/L



Sample

Sample Name: HS21040695-13
Sample ID:
Origin: 02_25_2021_CAL.cal
Status Completed
Chk. Result

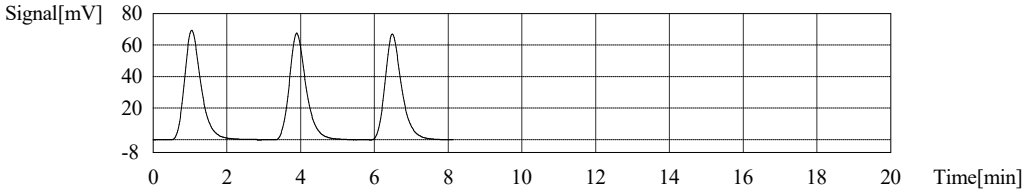
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:65.50mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	214.3	66.42mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/23/2021 5:53:57 PM
2	211.6	65.58mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/23/2021 5:56:49 PM
3	208.1	64.49mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/23/2021 5:59:46 PM

Mean Area 211.3
Mean Conc. 65.50mg/L



Sample

Sample Name: HS21040695-14
Sample ID:
Origin: 02_25_2021_CAL.cal
Status Completed
Chk. Result

Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:15.14mg/L

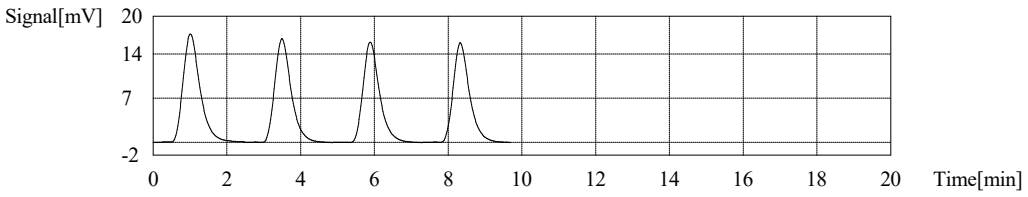
1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	54.26	16.72mg/L	50uL	1.000	E	02_25_2021_CAL.2021_02_25_09_13_02.cal	4/23/2021 6:09:09 PM
2	50.63	15.59mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/23/2021 6:11:48 PM
3	48.98	15.08mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/23/2021 6:14:28 PM
4	47.94	14.75mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/23/2021 6:17:05 PM

TOC-Control L Report

Mean Area 49.18
Mean Conc. 15.14mg/L



Sample

Sample Name: CCV
Sample ID: 316131907
Origin: 02_25_2021_CAL.cal
Status Completed
Chk. Result

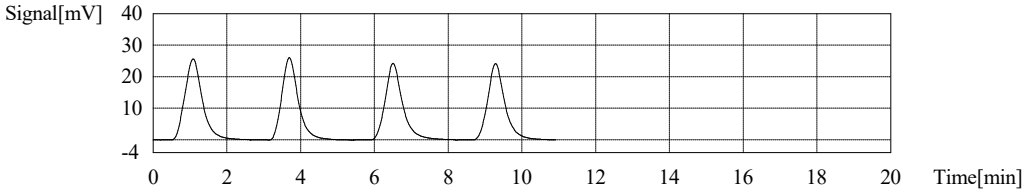
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:24.24mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	84.09	25.98mg/L	50uL	1.000	E	02_25_2021_CAL.2021_02_25_09_13_02.cal	4/23/2021 6:26:48 PM
2	80.10	24.74mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/23/2021 6:29:50 PM
3	77.99	24.08mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/23/2021 6:32:50 PM
4	77.40	23.90mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/23/2021 6:35:49 PM

Mean Area 78.50
Mean Conc. 24.24mg/L



Sample

Sample Name: CCB
Sample ID:
Origin: 02_25_2021_CAL.cal
Status Completed
Chk. Result

Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.04276mg/L

1. Det

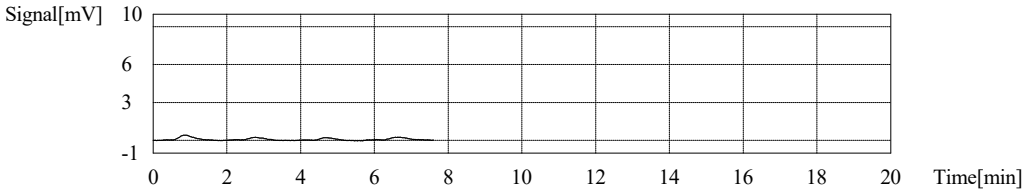
Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.9350	0.1548mg/L	50uL	1.000	E	02_25_2021_CAL.2021_02_25_09_13_02.cal	4/23/2021 6:44:32 PM
2	0.5874	0.04686mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/23/2021 6:46:40 PM
3	0.5749	0.04298mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/23/2021 6:48:48 PM
4	0.5603	0.03845mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/23/2021 6:50:56 PM

TOC-Control L Report

2021_04_23_001.tlx

Mean Area	0.5742
Mean Conc.	0.04276mg/L



C:\TOC-L\Data\2021_04_27_001.tlx

	Type	Analysis	Sample Name	Sample ID	Origin	Result	Notes
1	Unknown	NPOC	CCV	316131907	02_25_2021	NPOC:22.59mg/L	
2	Unknown	NPOC	CCB		02_25_2021	NPOC:-0.09851mg/L	
3	Unknown	NPOC	MBLK-04272021		02_25_2021	NPOC:-0.1019mg/L	
4	Unknown	NPOC	LCS-04272021		02_25_2021	NPOC:9.152mg/L	
5	Unknown	NPOC	LCSD-04272021	TOC_W 5310B	02_25_2021	NPOC:9.770mg/L	
6	Unknown	NPOC	HS21040695-13DF10		02_25_2021	NPOC:5.906mg/L	
7	Unknown	NPOC	HS21040705-01		02_25_2021	NPOC:2050mg/L	
8	Unknown	NPOC	HS21041110-01		02_25_2021	NPOC:16.81mg/L	
9	Unknown	NPOC	HS21041142-04		02_25_2021	NPOC:31.20mg/L	
10	Unknown	NPOC	HS21040859-07		02_25_2021	NPOC:4.707mg/L	
11	Unknown	NPOC	HS21040859-08		02_25_2021	NPOC:1.798mg/L	
12	Unknown	NPOC	HS21040859-08MS		02_25_2021	NPOC:11.87mg/L	
13	Unknown	NPOC	CCV	316131907	02_25_2021	NPOC:24.93mg/L	
14	Unknown	NPOC	CCB		02_25_2021	NPOC:0.06861mg/L	
15	Unknown	NPOC	HS21040859-09		02_25_2021	NPOC:1.487mg/L	
16	Unknown	NPOC	HS21040859-10		02_25_2021	NPOC:53.11mg/L	
17	Unknown	NPOC	HS21041109-02		02_25_2021	NPOC:0.7701mg/L	
18	Unknown	NPOC	HS21041103-01		02_25_2021	NPOC:21.33mg/L	
19	Unknown	NPOC	CCV	316131907	02_25_2021	NPOC:22.83mg/L	
20	Unknown	NPOC	CCB		02_25_2021	NPOC:-0.02601mg/L	
21	Unknown	NPOC	MBLK2-04272021		02_25_2021	NPOC:-0.06956mg/L	
22	Unknown	NPOC	LCS2-04272021		02_25_2021	NPOC:9.037mg/L	
23	Unknown	NPOC	LCSD2-04272021	TOC_W 5310B	02_25_2021	NPOC:9.866mg/L	
24	Unknown	NPOC	HS21041260-01		02_25_2021	NPOC:13.34mg/L	
25	Unknown	NPOC	HS21041389-01		02_25_2021	NPOC:-0.00900mg/L	
26	Unknown	NPOC	HS21041176-01DF100		02_25_2021	NPOC:1043mg/L	
27	Unknown	NPOC	HS21041176-01MS		02_25_2021	NPOC:1049mg/L	
28	Unknown	NPOC	HS21041108-01		02_25_2021	NPOC:5.110mg/L	
29	Unknown	NPOC	HS21041083-01	TOC-W	02_25_2021	NPOC:8.286mg/L	
30	Unknown	NPOC	HS21041168-01		02_25_2021	NPOC:12.24mg/L	
31	Unknown	NPOC	CCV	316131907	02_25_2021	NPOC:24.09mg/L	
32	Unknown	NPOC	CCB		02_25_2021	NPOC:-0.02739mg/L	

	Status	Date / Time	Vial
1	Completed	4/27/2021 4:30:18 PM	1
2	Completed	4/27/2021 4:45:30 PM	2
3	Completed	4/27/2021 4:58:29 PM	3
4	Completed	4/27/2021 5:14:21 PM	4
5	Completed	4/27/2021 5:29:19 PM	5
6	Completed	4/27/2021 5:43:39 PM	6
7	Completed	4/27/2021 6:10:54 PM	7
8	Completed	4/27/2021 6:28:21 PM	8
9	Completed	4/27/2021 6:44:10 PM	9
10	Completed	4/27/2021 7:00:34 PM	10
11	Completed	4/27/2021 7:16:04 PM	11
12	Completed	4/27/2021 7:32:59 PM	12
13	Completed	4/27/2021 7:53:45 PM	13
14	Completed	4/27/2021 8:06:51 PM	14
15	Completed	4/27/2021 8:22:18 PM	15
16	Completed	4/27/2021 8:37:34 PM	16
17	Completed	4/27/2021 8:52:48 PM	17
18	Completed	4/27/2021 9:07:47 PM	18
19	Completed	4/27/2021 9:23:28 PM	1
20	Completed	4/27/2021 9:36:31 PM	2
21	Completed	4/27/2021 9:51:41 PM	3
22	Completed	4/27/2021 10:06:25 PM	4
23	Completed	4/27/2021 10:21:34 PM	5
24	Completed	4/27/2021 10:36:26 PM	19
25	Completed	4/27/2021 10:51:35 PM	20
26	Completed	4/27/2021 11:08:56 PM	21
27	Completed	4/27/2021 11:26:20 PM	22
28	Completed	4/27/2021 11:43:07 PM	23
29	Completed	4/27/2021 11:57:00 PM	24
30	Completed	4/28/2021 12:11:36 AM	25
31	Completed	4/28/2021 12:27:34 AM	13
32	Completed	4/28/2021 12:42:47 AM	14

TOC-Control L Report

Instr.Information

Instrument Options TOC/ASI/IC Unit/
Catalyst Regular Sensitivity

Sample

Sample Name: CCV
Sample ID: 316131907
Origin: 02_25_2021_CAL.cal
Status Completed
Chk. Result

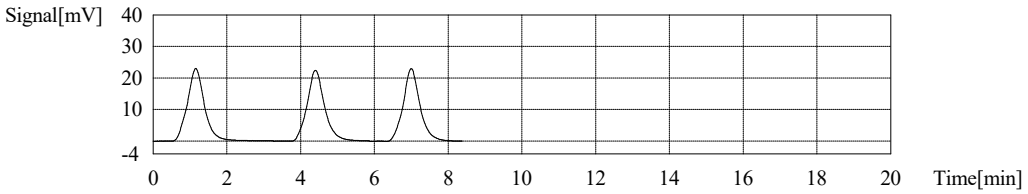
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:22.59mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	74.01	22.85mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/27/2021 4:24:39 PM
2	72.98	22.53mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/27/2021 4:27:30 PM
3	72.57	22.40mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/27/2021 4:30:18 PM

Mean Area 73.19
Mean Conc. 22.59mg/L



Sample

Sample Name: CCB
Sample ID:
Origin: 02_25_2021_CAL.cal
Status Completed
Chk. Result

Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:-0.09851mg/L

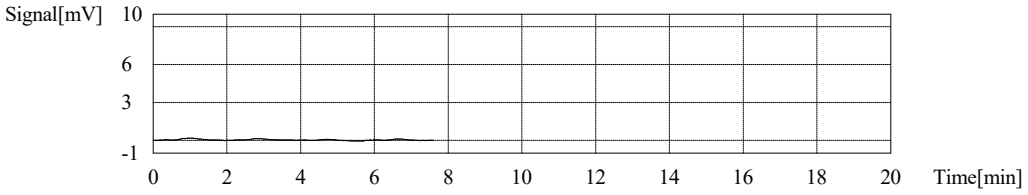
1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.4471	0.00329mg/L	50uL	1.000	E	02_25_2021_CAL.2021_02_25_09_13_02.cal	4/27/2021 4:39:06 PM
2	0.1800	-0.07966mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/27/2021 4:41:14 PM
3	0.000	-0.1356mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/27/2021 4:43:22 PM
4	0.1779	-0.08031mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/27/2021 4:45:30 PM

TOC-Control L Report

Mean Area 0.1193
Mean Conc. -0.09851mg/L



Sample

Sample Name: MBLK-04272021
Sample ID:
Origin: 02_25_2021_CAL.cal
Status Completed
Chk. Result

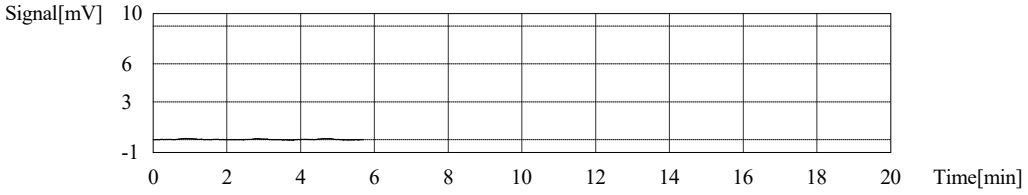
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:-0.1019mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.1506	-0.08879mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/27/2021 4:54:13 PM
2	0.000	-0.1356mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/27/2021 4:56:21 PM
3	0.1746	-0.08134mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/27/2021 4:58:29 PM

Mean Area 0.1084
Mean Conc. -0.1019mg/L



Sample

Sample Name: LCS-04272021
Sample ID:
Origin: 02_25_2021_CAL.cal
Status Completed
Chk. Result

Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:9.152mg/L

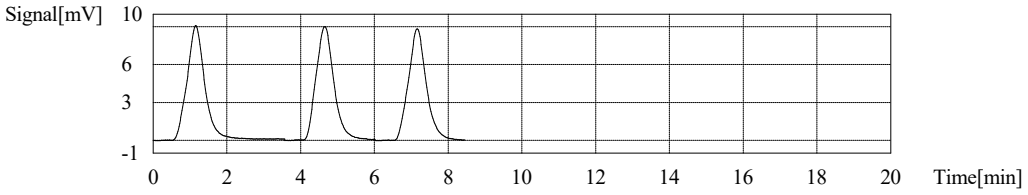
1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	30.29	9.271mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/27/2021 5:08:57 PM
2	29.82	9.125mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/27/2021 5:11:40 PM
3	29.61	9.060mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/27/2021 5:14:21 PM

TOC-Control L Report

Mean Area 29.91
Mean Conc. 9.152mg/L



Sample

Sample Name: LCSD-04272021
Sample ID: TOC_W 5310B
Origin: 02_25_2021_CAL.cal
Status Completed
Chk. Result

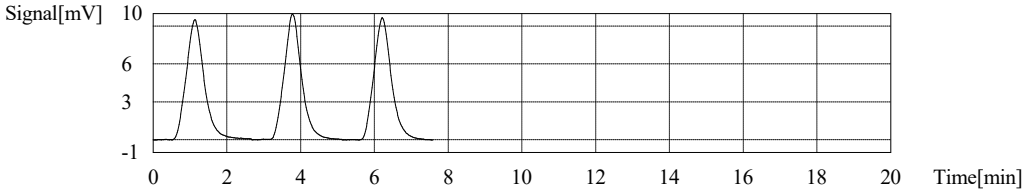
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:9.770mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	31.64	9.691mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/27/2021 5:23:55 PM
2	32.13	9.843mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/27/2021 5:26:37 PM
3	31.92	9.777mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/27/2021 5:29:19 PM

Mean Area 31.90
Mean Conc. 9.770mg/L



Sample

Sample Name: HS21040695-13DF10
Sample ID:
Origin: 02_25_2021_CAL.cal
Status Completed
Chk. Result

Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:5.906mg/L

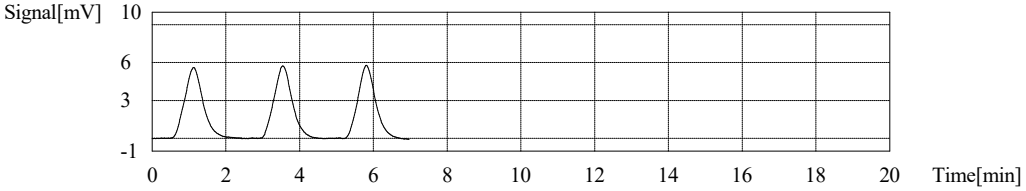
1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	19.27	5.849mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/27/2021 5:38:38 PM
2	19.67	5.973mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/27/2021 5:41:08 PM
3	19.42	5.895mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/27/2021 5:43:39 PM

TOC-Control L Report

Mean Area 19.45
Mean Conc. 5.906mg/L



Sample

Sample Name: HS21040705-01
Sample ID:
Origin: 02_25_2021_CAL.cal
Status Completed
Chk. Result

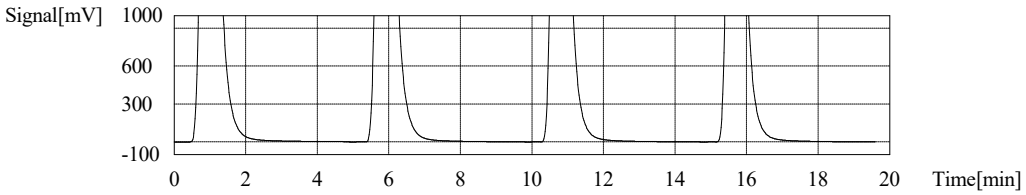
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:2050mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	6700	2081mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/27/2021 5:55:27 PM
2	6705	2082mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/27/2021 6:00:36 PM
3	6400	1987mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/27/2021 6:05:45 PM
4	6346	1971mg/L	50uL	1.000	E	02_25_2021_CAL.2021_02_25_09_13_02.cal	4/27/2021 6:10:54 PM

Mean Area 6602
Mean Conc. 2050mg/L



Sample

Sample Name: HS21041110-01
Sample ID:
Origin: 02_25_2021_CAL.cal
Status Completed
Chk. Result

Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:16.81mg/L

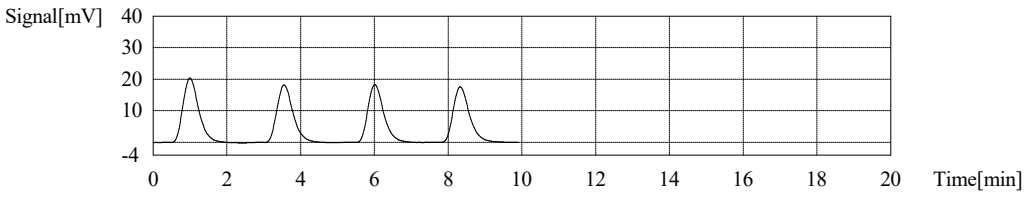
1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	60.76	18.73mg/L	50uL	1.000	E	02_25_2021_CAL.2021_02_25_09_13_02.cal	4/27/2021 6:20:15 PM
2	55.47	17.09mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/27/2021 6:22:59 PM
3	54.51	16.79mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/27/2021 6:25:34 PM
4	53.74	16.55mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/27/2021 6:28:21 PM

TOC-Control L Report

Mean Area 54.57
Mean Conc. 16.81mg/L



Sample

Sample Name: HS21041142-04
Sample ID:
Origin: 02_25_2021_CAL.cal
Status Completed
Chk. Result

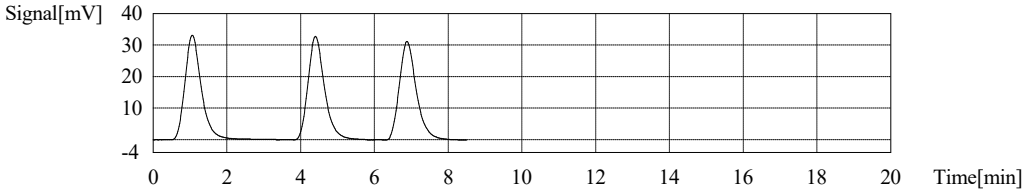
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:31.20mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	101.6	31.42mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/27/2021 6:38:30 PM
2	101.2	31.29mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/27/2021 6:41:14 PM
3	99.92	30.90mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/27/2021 6:44:10 PM

Mean Area 100.9
Mean Conc. 31.20mg/L



Sample

Sample Name: HS21040859-07
Sample ID:
Origin: 02_25_2021_CAL.cal
Status Completed
Chk. Result

Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:4.707mg/L

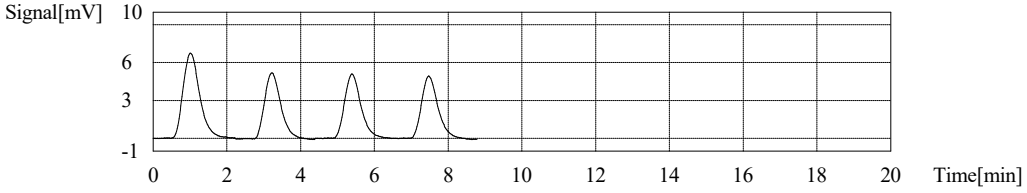
1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	20.92	6.361mg/L	50uL	1.000	E	02_25_2021_CAL.2021_02_25_09_13_02.cal	4/27/2021 6:53:17 PM
2	16.04	4.846mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/27/2021 6:55:41 PM
3	15.48	4.672mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/27/2021 6:58:01 PM
4	15.26	4.604mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/27/2021 7:00:34 PM

TOC-Control L Report

Mean Area 15.59
Mean Conc. 4.707mg/L



Sample

Sample Name: HS21040859-08
Sample ID:
Origin: 02_25_2021_CAL.cal
Status Completed
Chk. Result

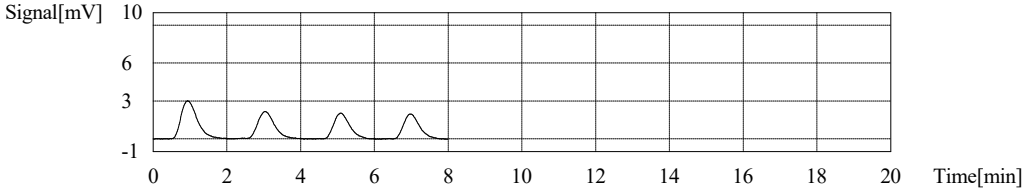
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:1.798mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	9.203	2.723mg/L	50uL	1.000	E	02_25_2021_CAL.2021_02_25_09_13_02.cal	4/27/2021 7:09:26 PM
2	6.699	1.945mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/27/2021 7:11:44 PM
3	6.011	1.731mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/27/2021 7:13:52 PM
4	5.972	1.719mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/27/2021 7:16:04 PM

Mean Area 6.227
Mean Conc. 1.798mg/L



Sample

Sample Name: HS21040859-08MS
Sample ID:
Origin: 02_25_2021_CAL.cal
Status Completed
Chk. Result

Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:11.87mg/L

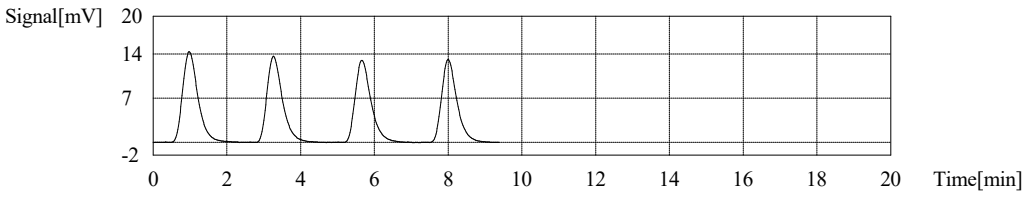
1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	41.23	12.67mg/L	50uL	1.000	E	02_25_2021_CAL.2021_02_25_09_13_02.cal	4/27/2021 7:25:12 PM
2	39.74	12.21mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/27/2021 7:27:49 PM
3	38.41	11.79mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/27/2021 7:30:22 PM
4	37.83	11.61mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/27/2021 7:32:59 PM

TOC-Control L Report

Mean Area 38.66
Mean Conc. 11.87mg/L



Sample

Sample Name: CCV
Sample ID: 316131907
Origin: 02_25_2021_CAL.cal
Status Completed
Chk. Result

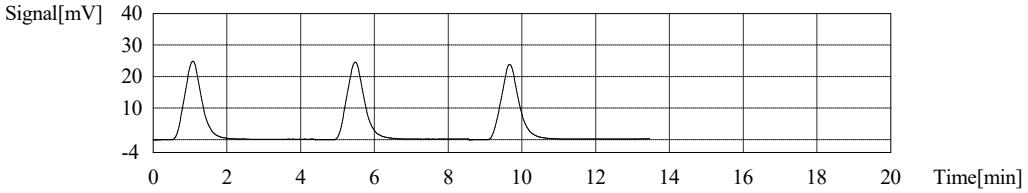
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:24.93mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	80.89	24.99mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/27/2021 7:44:12 PM
2	81.49	25.17mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/27/2021 7:48:37 PM
3	79.80	24.65mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/27/2021 7:53:45 PM

Mean Area 80.73
Mean Conc. 24.93mg/L



Sample

Sample Name: CCB
Sample ID:
Origin: 02_25_2021_CAL.cal
Status Completed
Chk. Result

Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.06861mg/L

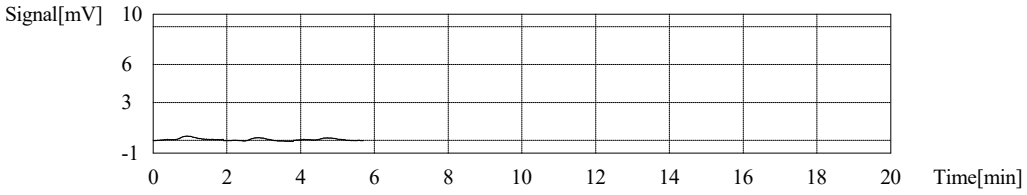
1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.6976	0.08109mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/27/2021 8:02:34 PM
2	0.7248	0.08953mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/27/2021 8:04:43 PM
3	0.5499	0.03522mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/27/2021 8:06:51 PM

TOC-Control L Report

Mean Area 0.6574
Mean Conc. 0.06861mg/L



Sample

Sample Name: HS21040859-09
Sample ID:
Origin: 02_25_2021_CAL.cal
Status Completed
Chk. Result

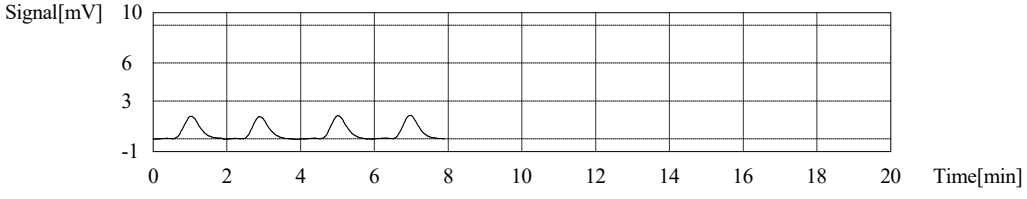
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:1.487mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	5.154	1.465mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/27/2021 8:15:38 PM
2	5.212	1.483mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/27/2021 8:17:59 PM
3	5.372	1.533mg/L	50uL	1.000	E	02_25_2021_CAL.2021_02_25_09_13_02.cal	4/27/2021 8:20:09 PM
4	5.310	1.514mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/27/2021 8:22:18 PM

Mean Area 5.225
Mean Conc. 1.487mg/L



Sample

Sample Name: HS21040859-10
Sample ID:
Origin: 02_25_2021_CAL.cal
Status Completed
Chk. Result

Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:53.11mg/L

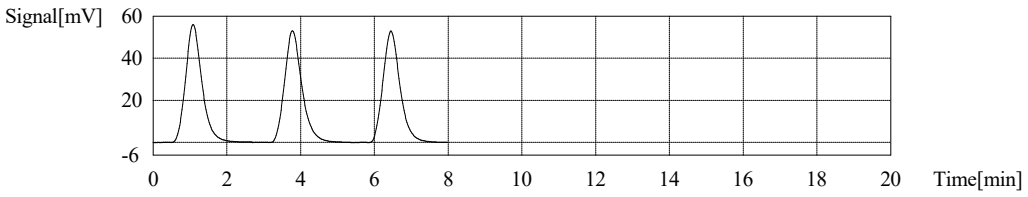
1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	172.2	53.34mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/27/2021 8:31:48 PM
2	172.7	53.50mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/27/2021 8:34:44 PM
3	169.5	52.50mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/27/2021 8:37:34 PM

TOC-Control L Report

Mean Area 171.5
Mean Conc. 53.11mg/L



Sample

Sample Name: HS21041109-02
Sample ID:
Origin: 02_25_2021_CAL.cal
Status Completed
Chk. Result

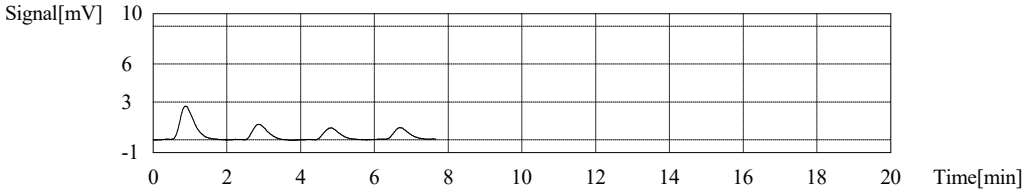
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.7701mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	7.058	2.056mg/L	50uL	1.000	E	02_25_2021_CAL.2021_02_25_09_13_02.cal	4/27/2021 8:46:25 PM
2	3.545	0.9654mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/27/2021 8:48:34 PM
3	2.699	0.7026mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/27/2021 8:50:41 PM
4	2.505	0.6424mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/27/2021 8:52:48 PM

Mean Area 2.916
Mean Conc. 0.7701mg/L



Sample

Sample Name: HS21041103-01
Sample ID:
Origin: 02_25_2021_CAL.cal
Status Completed
Chk. Result

Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:21.33mg/L

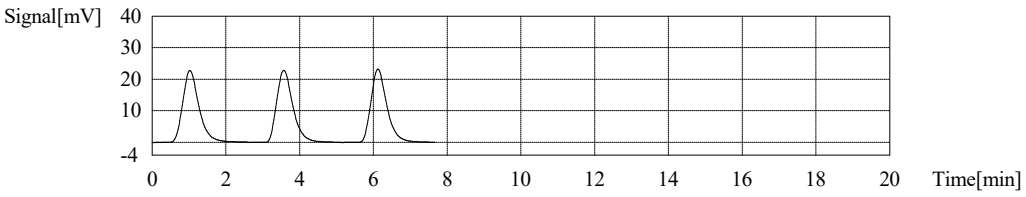
1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	68.74	21.21mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/27/2021 9:02:11 PM
2	69.36	21.40mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/27/2021 9:04:58 PM
3	69.25	21.37mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/27/2021 9:07:47 PM

TOC-Control L Report

Mean Area 69.12
Mean Conc. 21.33mg/L



Sample

Sample Name: CCV
Sample ID: 316131907
Origin: 02_25_2021_CAL.cal
Status Completed
Chk. Result

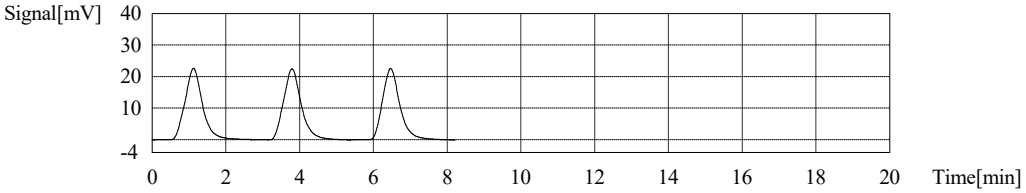
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:22.83mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	73.75	22.77mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/27/2021 9:17:28 PM
2	74.70	23.06mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/27/2021 9:20:25 PM
3	73.36	22.65mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/27/2021 9:23:28 PM

Mean Area 73.94
Mean Conc. 22.83mg/L



Sample

Sample Name: CCB
Sample ID:
Origin: 02_25_2021_CAL.cal
Status Completed
Chk. Result

Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:-0.02601mg/L

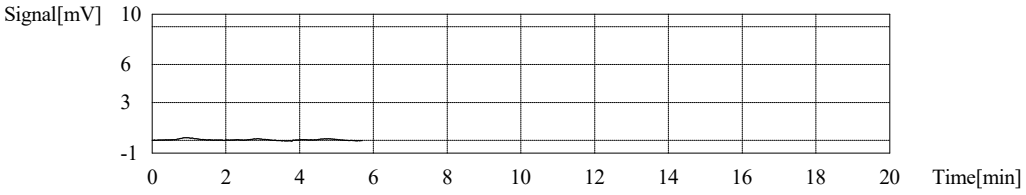
1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.4470	0.00326mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/27/2021 9:32:16 PM
2	0.3266	-0.03413mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/27/2021 9:34:23 PM
3	0.2846	-0.04717mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/27/2021 9:36:31 PM

TOC-Control L Report

Mean Area 0.3527
Mean Conc. -0.02601mg/L



Sample

Sample Name: MBLK2-04272021
Sample ID:
Origin: 02_25_2021_CAL.cal
Status Completed
Chk. Result

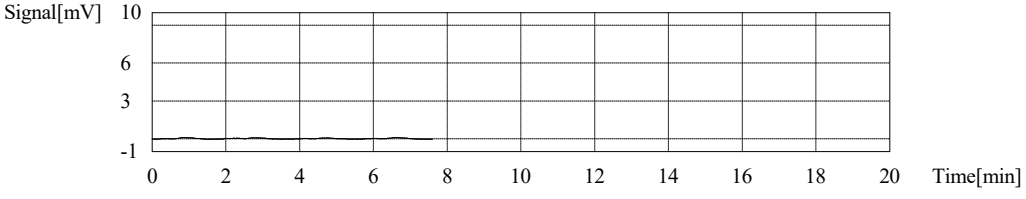
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:-0.06956mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.2590	-0.05512mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/27/2021 9:45:20 PM
2	0.000	-0.1356mg/L	50uL	1.000	E	02_25_2021_CAL.2021_02_25_09_13_02.cal	4/27/2021 9:47:27 PM
3	0.1115	-0.1009mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/27/2021 9:49:34 PM
4	0.2671	-0.05261mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/27/2021 9:51:41 PM

Mean Area 0.2125
Mean Conc. -0.06956mg/L



Sample

Sample Name: LCS2-04272021
Sample ID:
Origin: 02_25_2021_CAL.cal
Status Completed
Chk. Result

Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:9.037mg/L

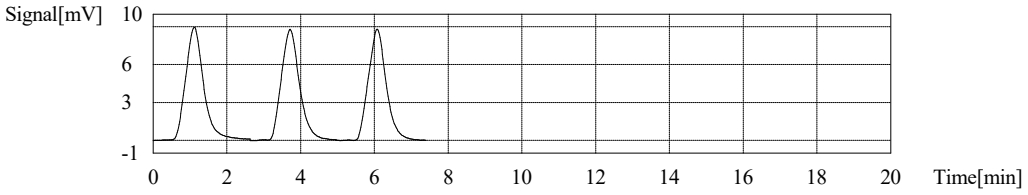
1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	29.72	9.094mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/27/2021 10:01:08 PM
2	29.51	9.029mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/27/2021 10:03:44 PM
3	29.38	8.989mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/27/2021 10:06:25 PM

TOC-Control L Report

Mean Area 29.54
Mean Conc. 9.037mg/L



Sample

Sample Name: LCSD2-04272021
Sample ID: TOC_W 5310B
Origin: 02_25_2021_CAL.cal
Status Completed
Chk. Result

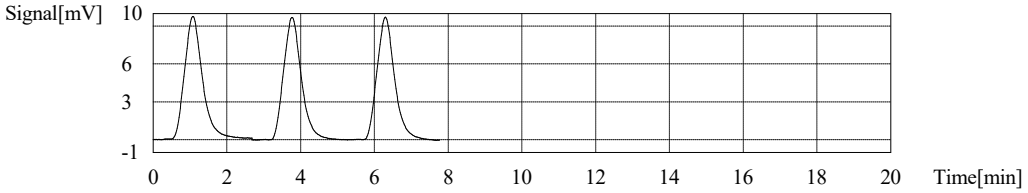
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:9.866mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	32.34	9.908mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/27/2021 10:16:00 PM
2	32.13	9.843mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/27/2021 10:18:47 PM
3	32.15	9.849mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/27/2021 10:21:34 PM

Mean Area 32.21
Mean Conc. 9.866mg/L



Sample

Sample Name: HS21041260-01
Sample ID:
Origin: 02_25_2021_CAL.cal
Status Completed
Chk. Result

Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:13.34mg/L

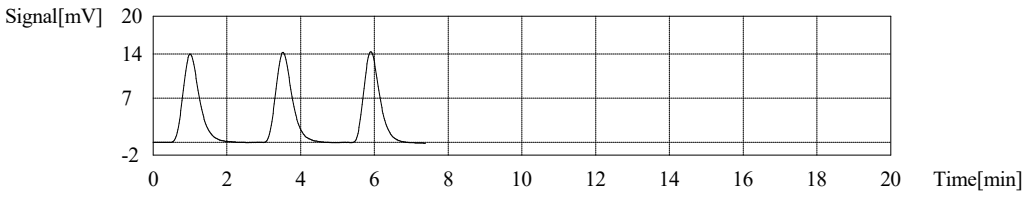
1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	43.08	13.24mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/27/2021 10:31:07 PM
2	43.69	13.43mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/27/2021 10:33:44 PM
3	43.43	13.35mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/27/2021 10:36:26 PM

TOC-Control L Report

Mean Area 43.40
Mean Conc. 13.34mg/L



Sample

Sample Name: HS21041389-01
Sample ID:
Origin: 02_25_2021_CAL.cal
Status Completed
Chk. Result

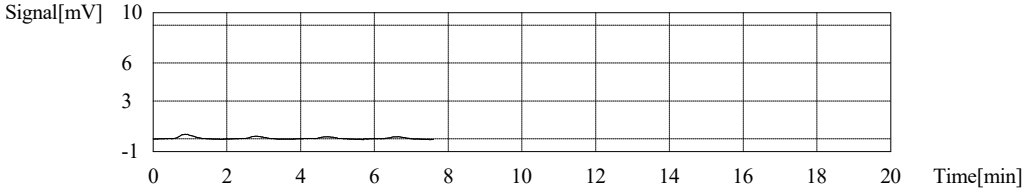
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:-0.00900mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.8706	0.1348mg/L	50uL	1.000	E	02_25_2021_CAL.2021_02_25_09_13_02.cal	4/27/2021 10:45:14 PM
2	0.4368	0.00009mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/27/2021 10:47:21 PM
3	0.3503	-0.02677mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/27/2021 10:49:28 PM
4	0.4355	-0.00031mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/27/2021 10:51:35 PM

Mean Area 0.4075
Mean Conc. -0.00900mg/L



Sample

Sample Name: HS21041176-01DF100
Sample ID:
Origin: 02_25_2021_CAL.cal
Status Completed
Chk. Result

Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:1043mg/L

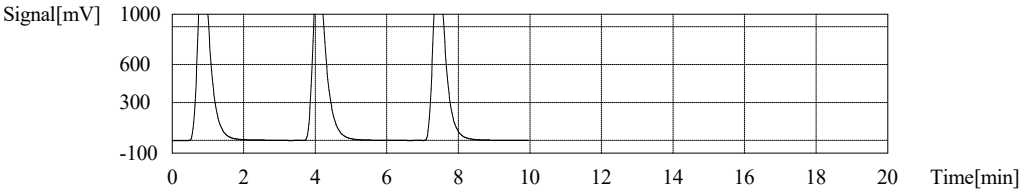
1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	3354	1041mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/27/2021 11:01:39 PM
2	3401	1056mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/27/2021 11:05:16 PM
3	3324	1032mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/27/2021 11:08:56 PM

TOC-Control L Report

Mean Area 3360
Mean Conc. 1043mg/L



Sample

Sample Name: HS21041176-01MS
Sample ID:
Origin: 02_25_2021_CAL.cal
Status Completed
Chk. Result

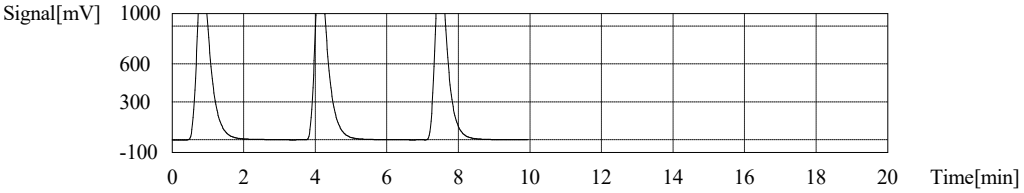
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:1049mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	3421	1062mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/27/2021 11:19:08 PM
2	3394	1054mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/27/2021 11:22:45 PM
3	3315	1029mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/27/2021 11:26:20 PM

Mean Area 3377
Mean Conc. 1049mg/L



Sample

Sample Name: HS21041108-01
Sample ID:
Origin: 02_25_2021_CAL.cal
Status Completed
Chk. Result

Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:5.110mg/L

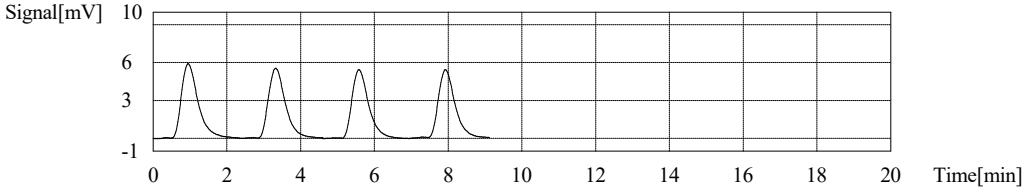
1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	18.38	5.573mg/L	50uL	1.000	E	02_25_2021_CAL.2021_02_25_09_13_02.cal	4/27/2021 11:35:35 PM
2	17.35	5.253mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/27/2021 11:38:07 PM
3	16.83	5.091mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/27/2021 11:40:43 PM
4	16.49	4.986mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/27/2021 11:43:07 PM

TOC-Control L Report

Mean Area 16.89
Mean Conc. 5.110mg/L



Sample

Sample Name: HS21041083-01
Sample ID: TOC-W
Origin: 02_25_2021_CAL.cal
Status Completed
Chk. Result

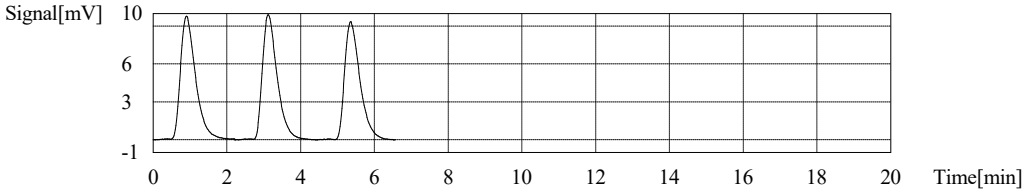
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:8.286mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	27.39	8.371mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/27/2021 11:52:10 PM
2	27.25	8.327mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/27/2021 11:54:39 PM
3	26.71	8.159mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/27/2021 11:57:00 PM

Mean Area 27.12
Mean Conc. 8.286mg/L



Sample

Sample Name: HS21041168-01
Sample ID:
Origin: 02_25_2021_CAL.cal
Status Completed
Chk. Result

Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:12.24mg/L

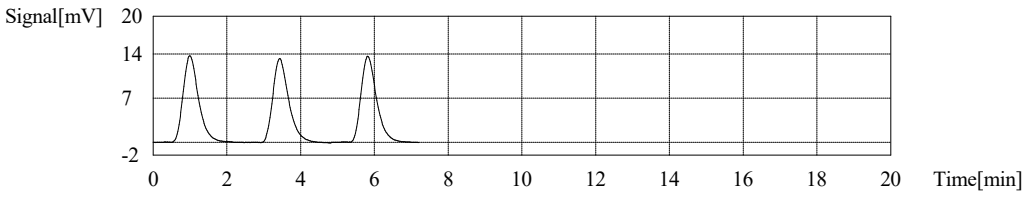
1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	39.90	12.26mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/28/2021 12:06:22 AM
2	39.83	12.23mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/28/2021 12:08:59 AM
3	39.80	12.22mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/28/2021 12:11:36 AM

TOC-Control L Report

Mean Area 39.84
Mean Conc. 12.24mg/L



Sample

Sample Name: CCV
Sample ID: 316131907
Origin: 02_25_2021_CAL.cal
Status Completed
Chk. Result

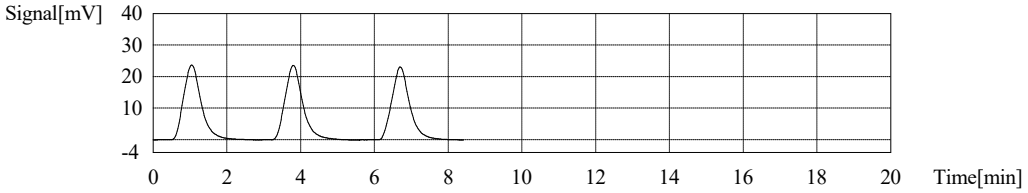
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:24.09mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	78.44	24.22mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/28/2021 12:21:23 AM
2	78.71	24.31mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/28/2021 12:24:30 AM
3	76.90	23.75mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/28/2021 12:27:34 AM

Mean Area 78.02
Mean Conc. 24.09mg/L



Sample

Sample Name: CCB
Sample ID:
Origin: 02_25_2021_CAL.cal
Status Completed
Chk. Result

Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:-0.02739mg/L

1. Det

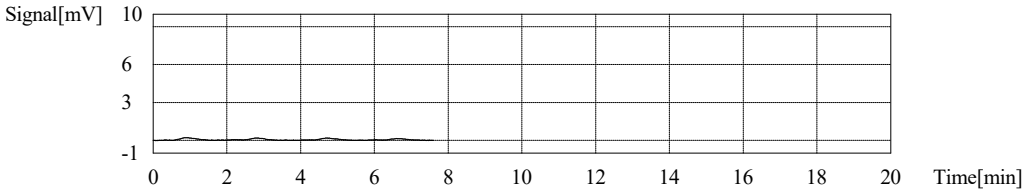
Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.5678	0.04078mg/L	50uL	1.000	E	02_25_2021_CAL.2021_02_25_09_13_02.cal	4/28/2021 12:36:23 AM
2	0.3468	-0.02786mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/28/2021 12:38:31 AM
3	0.4038	-0.01016mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/28/2021 12:40:39 AM
4	0.2943	-0.04416mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/28/2021 12:42:47 AM

TOC-Control L Report

2021_04_27_001.tlx

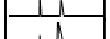
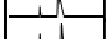
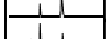
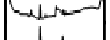
Mean Area	0.3483
Mean Conc.	-0.02739mg/L



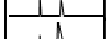
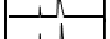
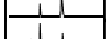
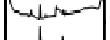
HS21040695 Wet Chem Raw Data (9056_anions_W)

ALS WO# HS21040695

Sequence: 041421
Last Update Operator: alshs.nouser

CD	Name	Comment	Type	Position	Dilution	Level	Instrument Method	Processing Method
	STD1		Calibration	BB1	1.00	1	Anions Program 06022020.1	Anions Processing Method
	STD2		Calibration	BB2	1.00	2	Anions Program 06022020.1	Anions Processing Method
	STD3		Calibration	BB3	1.00	3	Anions Program 06022020.1	Anions Processing Method
	STD4		Calibration	BB4	1.00	4	Anions Program 06022020.1	Anions Processing Method
	STD5		Calibration	BB5	1.00	5	Anions Program 06022020.1	Anions Processing Method
	STD6		Calibration	BB6	1.00	6	Anions Program 06022020.1	Anions Processing Method
	ICV		Unknown	BB7	1.00		Anions Program 06022020.1	Anions Processing Method
	ICB		Unknown	BB8	1.00		Anions Program 06022020.1	Anions Processing Method
	CCV		Unknown	R1	1.00		Anions Program 06022020.1	Anions Processing Method
	CCB		Unknown	R4	1.00		Anions Program 06022020.1	Anions Processing Method
	MBLK-		Unknown	R5	1.00		Anions Program 06022020.1	Anions Processing Method
	LCS-		Unknown	R2	1.00		Anions Program 06022020.1	Anions Processing Method
	CCV1		Unknown	R3	1.00		Anions Program 06022020.1	Anions Processing Method
	CCB		Unknown	R6	1.00		Anions Program 06022020.1	Anions Processing Method
	CCV		Unknown	R1	1.00		Anions Program 06022020.1	Anions Processing Method
	CCB		Unknown	R4	1.00		Anions Program 06022020.1	Anions Processing Method
	HS21040695-11		Unknown	RB3	1.00		Anions Program 06022020.1	Anions Processing Method
	HS21040695-11MS		Unknown	RB4	1.00		Anions Program 06022020.1	Anions Processing Method
	HS21040695-11MSD		Unknown	RB5	1.00		Anions Program 06022020.1	Anions Processing Method
	HS21040695-12DF5		Unknown	RB6	5.00		Anions Program 06022020.1	Anions Processing Method
	HS21040695-13DF5		Unknown	RB7	5.00		Anions Program 06022020.1	Anions Processing Method
	HS21040695-14DF5		Unknown	RB8	5.00		Anions Program 06022020.1	Anions Processing Method
	CCV1		Unknown	R3	1.00		Anions Program 06022020.1	Anions Processing Method
	CCB		Unknown	R6	1.00		Anions Program 06022020.1	Anions Processing Method
	CCV1		Unknown	R3	1.00		Anions Program 06022020.1	Anions Processing Method
	CCB		Unknown	R6	1.00		Anions Program 06022020.1	Anions Processing Method
	HS21040110-06		Unknown	RE4	1.00		Anions Program 06022020.1	Anions Processing Method
	HS21040110-06MS		Unknown	RE5	1.00		Anions Program 06022020.1	Anions Processing Method
	HS21040110-06MSD		Unknown	RE6	1.00		Anions Program 06022020.1	Anions Processing Method
	CCV		Unknown	R1	1.00		Anions Program 06022020.1	Anions Processing Method
	CCB		Unknown	R4	1.00		Anions Program 06022020.1	Anions Processing Method

Sequence: 041421
Last Update Operator: alshs.nouser

CD	Name	Volume	Status	Inject Time
	STD1	5.0	Finished	3/19/2021 2:34:19 AM -05:00
	STD2	5.0	Finished	3/19/2021 2:52:47 AM -05:00
	STD3	5.0	Finished	3/19/2021 3:11:11 AM -05:00
	STD4	5.0	Finished	3/19/2021 3:29:36 AM -05:00
	STD5	5.0	Finished	3/19/2021 3:48:01 AM -05:00
	STD6	5.0	Finished	3/19/2021 4:06:28 AM -05:00
	ICV	5.0	Finished	3/19/2021 4:24:53 AM -05:00
	ICB	5.0	Finished	3/19/2021 5:01:41 AM -05:00
	CCV	5.0	Finished	4/14/2021 9:16:16 AM -05:00
	CCB	5.0	Finished	4/14/2021 9:34:41 AM -05:00
	MBLK-	5.0	Finished	4/14/2021 9:53:05 AM -05:00
	LCS-	5.0	Finished	4/14/2021 10:11:29 AM -05:00
	CCV1	5.0	Finished	4/14/2021 12:57:17 PM -05:00
	CCB	5.0	Finished	4/14/2021 1:15:44 PM -05:00
	CCV	5.0	Finished	4/14/2021 2:29:22 PM -05:00
	CCB	5.0	Finished	4/14/2021 2:47:46 PM -05:00
	HS21040695-11	5.0	Finished	4/14/2021 3:43:08 PM -05:00
	HS21040695-11MS	5.0	Finished	4/14/2021 4:01:31 PM -05:00
	HS21040695-11MSD	5.0	Finished	4/14/2021 4:19:59 PM -05:00
	HS21040695-12DF5	5.0	Finished	4/14/2021 4:38:27 PM -05:00
	HS21040695-13DF5	5.0	Finished	4/14/2021 4:56:57 PM -05:00
	HS21040695-14DF5	5.0	Finished	4/14/2021 5:15:21 PM -05:00
	CCV1	5.0	Finished	4/14/2021 6:47:32 PM -05:00
	CCB	5.0	Finished	4/14/2021 7:05:57 PM -05:00
	CCV1	5.0	Finished	4/15/2021 2:27:49 AM -05:00
	CCB	5.0	Finished	4/15/2021 2:46:16 AM -05:00
	HS21040110-06	5.0	Finished	4/15/2021 4:55:09 AM -05:00
	HS21040110-06MS	5.0	Finished	4/15/2021 5:13:35 AM -05:00
	HS21040110-06MSD	5.0	Finished	4/15/2021 5:31:58 AM -05:00
	CCV	5.0	Finished	4/15/2021 6:08:47 AM -05:00
	CCB	5.0	Finished	4/15/2021 6:27:14 AM -05:00

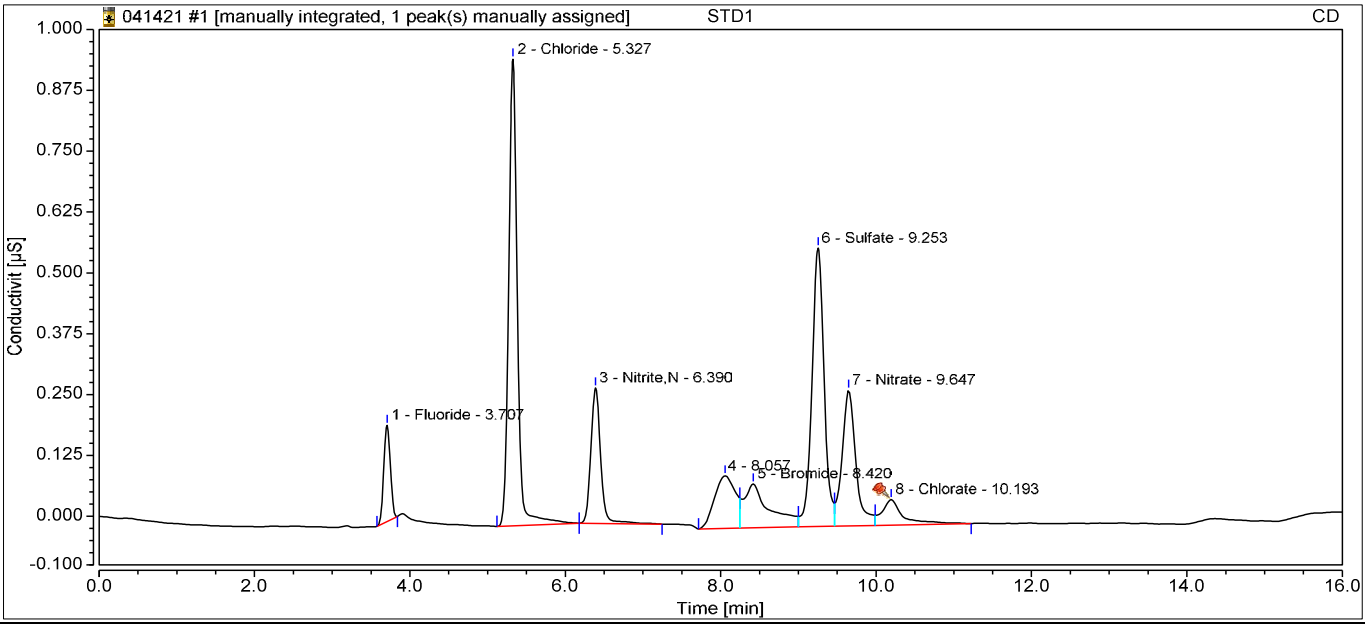
Sequence: 041421
Injection #5: STD5

Calibration

Peak No.	Peak Name	Cal.Type	Eval.Type	Number of Points	Rel.Std.Dev. %	Coeff.of Determination	C0 (Offset)	C1 (Slope)	C2 (Curve)
1	*Fluoride*	*Lin, WithOffset, 1/*	*Area*	*6*	*14.2721*	*0.99908*	*-0.0101*	*0.2938*	*0.0000*
2	Chloride	Lin, WithOffset, 1/	Area	6	1.9269	0.99998	0.0246	0.1961	0.0000
3	Nitrite,N	Lin, WithOffset, 1/	Area	6	27.5964	0.99528	0.0145	0.3813	0.0000
5	Bromide	Lin, WithOffset, 1/	Area	6	6.5273	0.99931	0.0258	0.0775	0.0000
6	Sulfate	Lin, WithOffset, 1/	Area	6	5.7842	0.99978	0.0360	0.1408	0.0000
7	Nitrate	Lin, WithOffset, 1/	Area	6	2.7454	0.99996	0.0067	0.4997	0.0000
8	Chlorate	Lin, WithOffset, 1/	Area	6	17.5063	0.99733	0.0108	0.0850	0.0000
10	Phosphate	Lin, WithOffset, 1/	Area	5	12.5412	0.99846	-0.0503	0.1737	0.0000
Maximum					**27.5964**	0.99998			
Minimum					1.9269	**0.99528**			

1 STD1			
Sample Name:	**STD1**	*Injection Volume:*	**5.00**
Vial Number:	**BB1**	*Channel:*	**CD**
Sample Type:	**Calibration Standard**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**03/19/2021 02:34**	*Sample Weight:*	**1.0000**

Run Time:



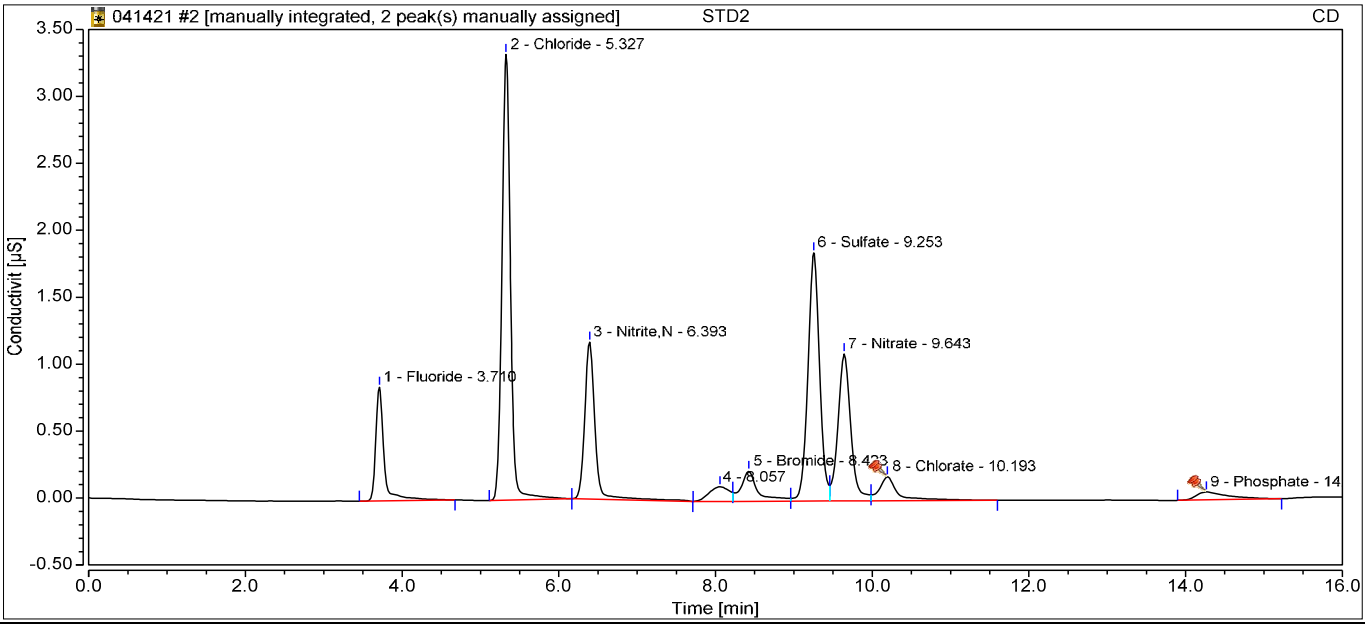
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.71	Fluoride	BMB	0.019	0.1001	0.1001	1.0000
2	5.33	Chloride	BMB	0.123	0.5037	0.5037	1.0000
3	6.39	Nitrite,N	BMB	0.041	0.0691	0.0691	1.0000
5	8.42	Bromide	M *	0.035	0.1129	0.1129	1.0000
6	9.25	Sulfate	M	0.104	0.4806	0.4806	1.0000
7	9.65	Nitrate	M	0.057	0.1016	0.1016	1.0000
8	10.19	Chlorate	MB^	0.017	0.0682	0.0682	1.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	1.0000
Total:			**0.000**	**0.396**		**1.44**	

2 STD2

Sample Name:	**STD2**	*Injection Volume:*	**5.00**
Vial Number:	**BB2**	*Channel:*	**CD**
Sample Type:	**Calibration Standard**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**03/19/2021 02:52**	*Sample Weight:*	**1.0000**

Run Time:



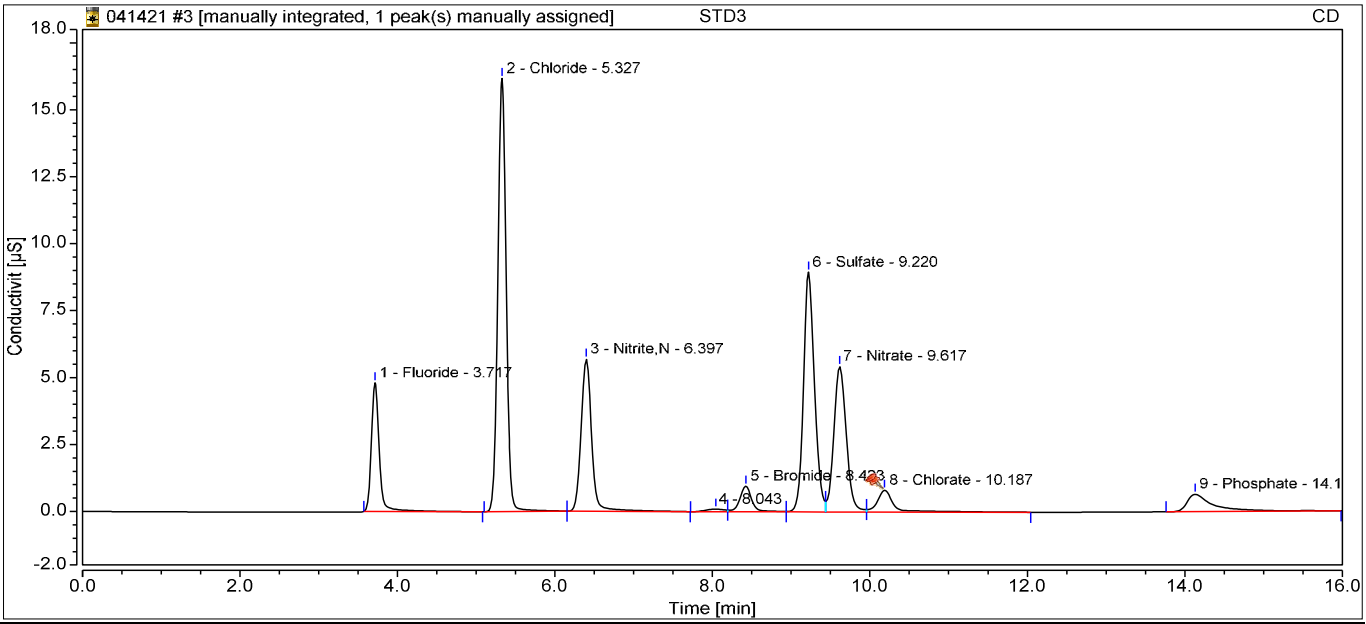
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.71	Fluoride	BMB*	0.105	0.3907	0.3907	1.0000
2	5.33	Chloride	BMB	0.415	1.9922	1.9922	1.0000
3	6.39	Nitrite,N	BMB	0.181	0.4352	0.4352	1.0000
5	8.42	Bromide	M *	0.056	0.3871	0.3871	1.0000
6	9.25	Sulfate	M	0.320	2.0188	2.0188	1.0000
7	9.64	Nitrate	M	0.208	0.4033	0.4033	1.0000
8	10.19	Chlorate	MB^	0.050	0.4595	0.4595	1.0000
9	14.26	Phosphate	BMB^	0.029	0.4541	0.4541	1.0000
Total:			**0.000**	**1.364**		**6.54**	

3 STD3

Sample Name:	**STD3**	*Injection Volume:*	**5.00**
Vial Number:	**BB3**	*Channel:*	**CD**
Sample Type:	**Calibration Standard**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**03/19/2021 03:11**	*Sample Weight:*	**1.0000**

Run Time:



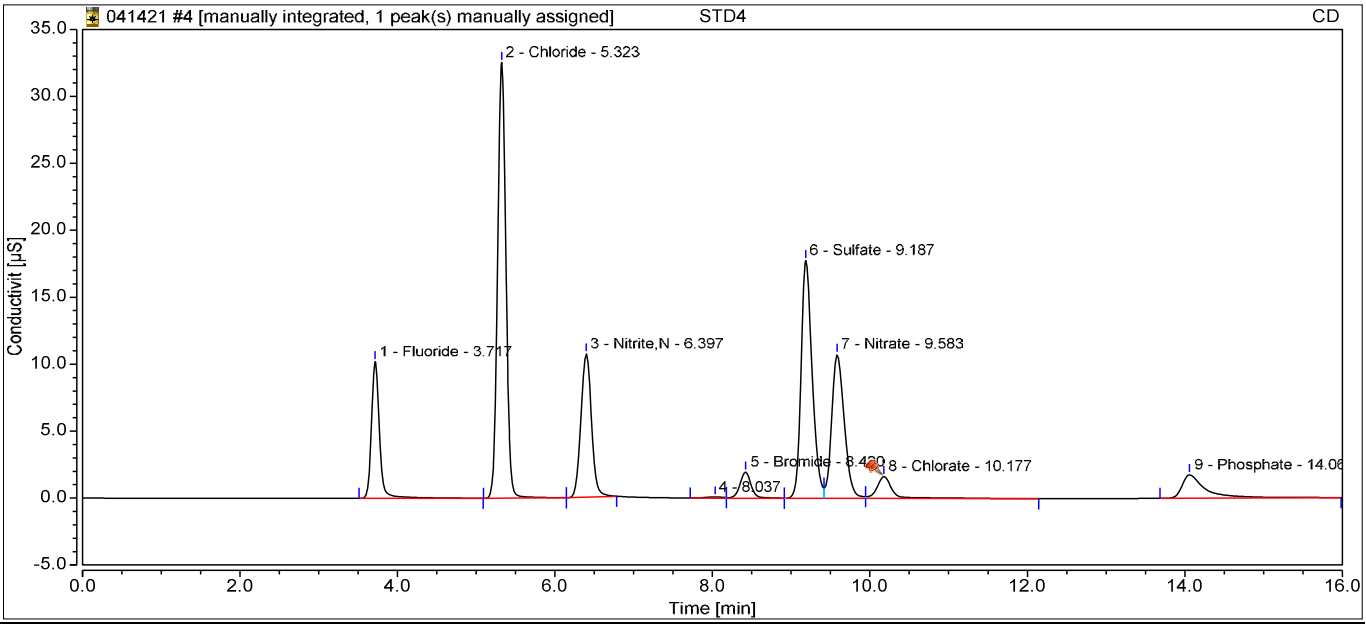
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.72	Fluoride	BMB	0.559	1.9360	1.9360	1.0000
2	5.33	Chloride	BMB	1.967	9.9055	9.9055	1.0000
3	6.40	Nitrite,N	BMB	0.892	2.2893	2.2893	1.0000
5	8.42	Bromide	M *	0.169	1.8534	1.8534	1.0000
6	9.22	Sulfate	M	1.452	10.0579	10.0579	1.0000
7	9.62	Nitrate	M	0.989	1.9651	1.9651	1.0000
8	10.19	Chlorate	MB^	0.201	2.2396	2.2396	1.0000
9	14.13	Phosphate	BMB	0.258	1.7779	1.7779	1.0000
Total:			**0.000**	**6.488**		**32.02**	

4 STD4

Sample Name:	**STD4**	*Injection Volume:*	**5.00**
Vial Number:	**BB4**	*Channel:*	**CD**
Sample Type:	**Calibration Standard**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**03/19/2021 03:29**	*Sample Weight:*	**1.0000**

Run Time:



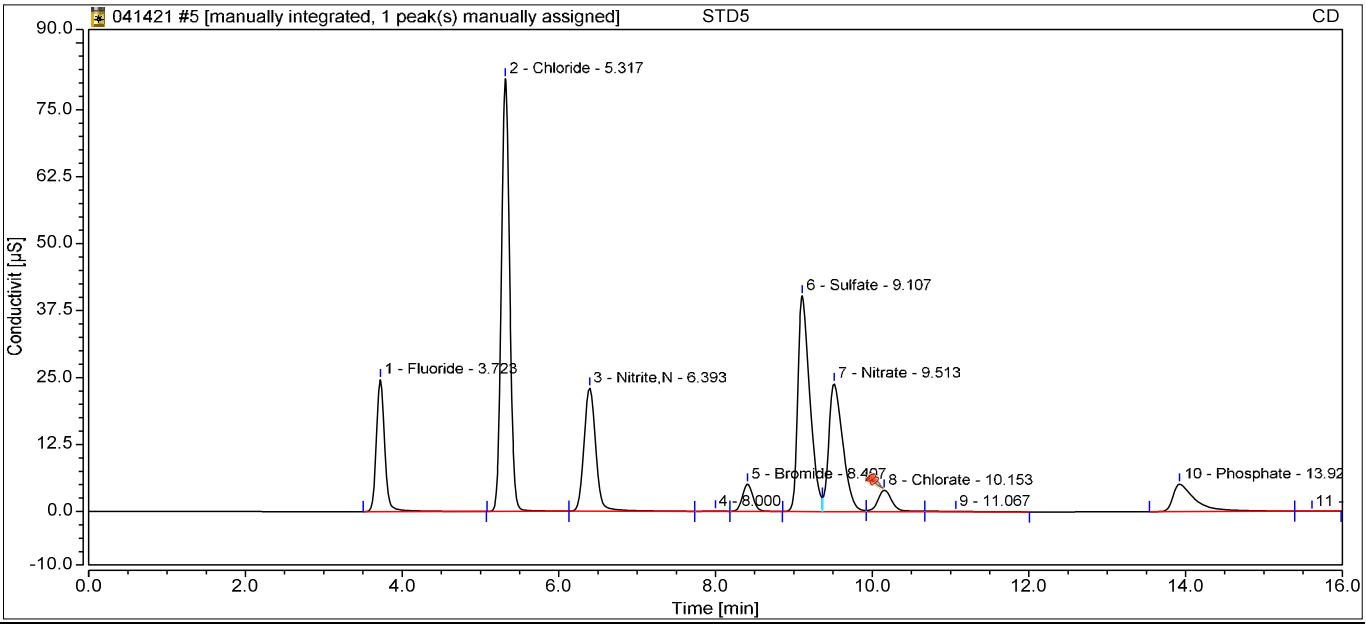
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.72	Fluoride	BMB	1.213	4.1637	4.1637	1.0000
2	5.32	Chloride	BMb*	3.957	20.0467	20.0467	1.0000
3	6.40	Nitrite,N	bMB*	1.671	4.3222	4.3222	1.0000
5	8.42	Bromide	M *	0.323	3.8403	3.8403	1.0000
6	9.19	Sulfate	M	2.909	20.4074	20.4074	1.0000
7	9.58	Nitrate	M	1.986	3.9610	3.9610	1.0000
8	10.18	Chlorate	MB^	0.380	4.3412	4.3412	1.0000
9	14.06	Phosphate	BMB	0.619	3.8518	3.8518	1.0000
Total:			**0.000**	**13.058**		**64.93**	

5 STD5

Sample Name:	**STD5**	*Injection Volume:*	**5.00**
Vial Number:	**BB5**	*Channel:*	**CD**
Sample Type:	**Calibration Standard**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**03/19/2021 03:48**	*Sample Weight:*	**1.0000**

Run Time:



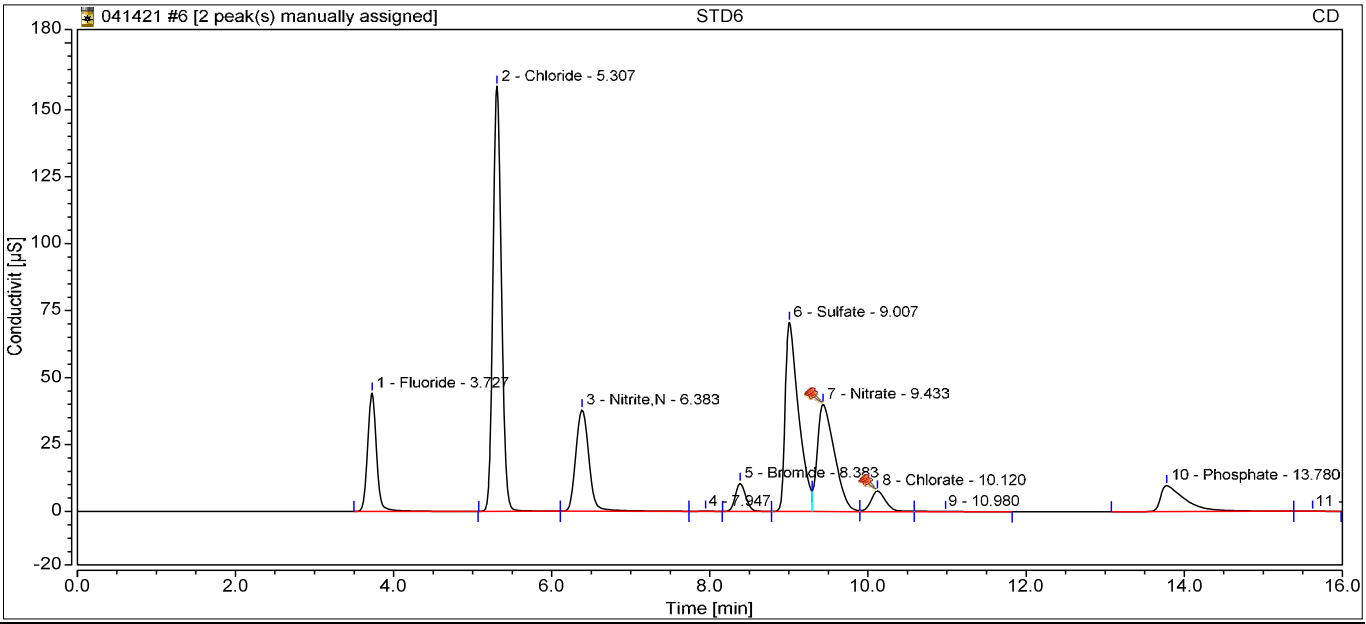
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.72	Fluoride	BMB	3.032	10.3517	10.3517	1.0000
2	5.32	Chloride	BMB	9.893	50.3135	50.3135	1.0000
3	6.39	Nitrite,N	BM *	4.056	10.5424	10.5424	1.0000
5	8.41	Bromide	MB*	0.803	10.0249	10.0249	1.0000
6	9.11	Sulfate	BM	7.184	50.7797	50.7797	1.0000
7	9.51	Nitrate	M	4.996	9.9839	9.9839	1.0000
8	10.15	Chlorate	M ^	0.852	9.8970	9.8970	1.0000
10	13.92	Phosphate	BMB	1.677	9.9434	9.9434	1.0000
Total:			**0.000**	**32.492**		**161.84**	

6 STD6

Sample Name:	**STD6**	*Injection Volume:*	**5.00**
Vial Number:	**BB6**	*Channel:*	**CD**
Sample Type:	**Calibration Standard**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**03/19/2021 04:06**	*Sample Weight:*	**1.0000**

Run Time:



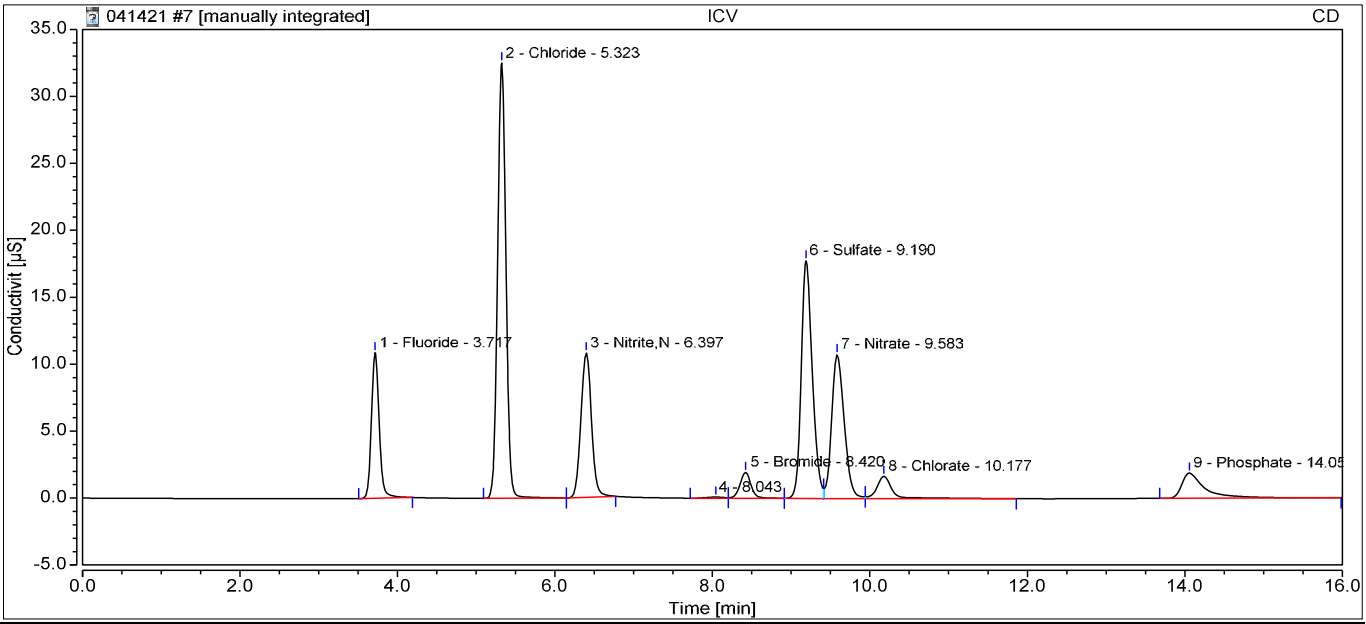
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.73	Fluoride	BMB	5.737	19.5578	19.5578	1.0000
2	5.31	Chloride	BMB	19.587	99.7384	99.7384	1.0000
3	6.38	Nitrite,N	BMB	7.239	18.8419	18.8419	1.0000
5	8.38	Bromide	BM	1.597	20.2814	20.2814	1.0000
6	9.01	Sulfate	M	13.938	98.7555	98.7555	1.0000
7	9.43	Nitrate	M ^	10.043	20.0851	20.0851	1.0000
8	10.12	Chlorate	M ^	1.667	19.4945	19.4945	1.0000
10	13.78	Phosphate	BMB	3.488	20.3728	20.3728	1.0000
Total:			**0.000**	**63.296**		**317.13**	

7 ICV

Sample Name:	**ICV**	*Injection Volume:*	**5.00**
Vial Number:	**BB7**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**03/19/2021 04:24**	*Sample Weight:*	**1.0000**

Run Time:



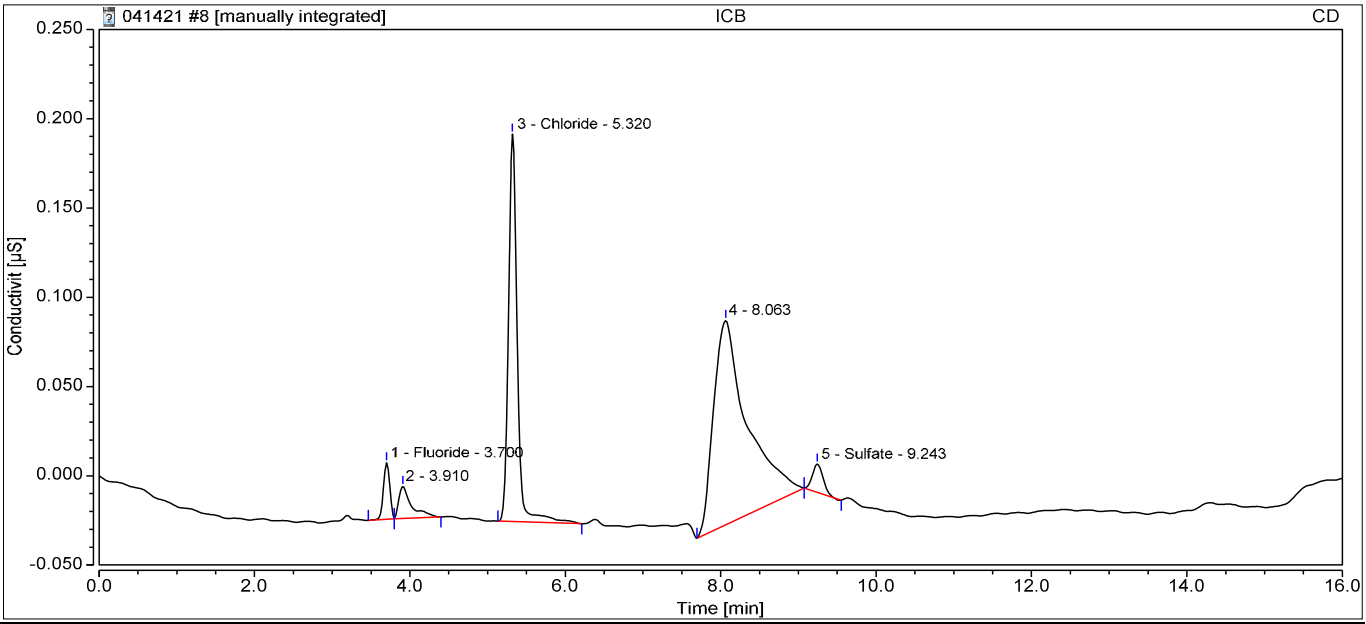
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.72	Fluoride	BMB*	1.234	4.2342	4.2342	1.0000
2	5.32	Chloride	BMb*	3.949	20.0060	20.0060	1.0000
3	6.40	Nitrite,N	bMB*	1.681	4.3476	4.3476	1.0000
5	8.42	Bromide	M	0.321	3.8099	3.8099	1.0000
6	9.19	Sulfate	M	2.901	20.3535	20.3535	1.0000
7	9.58	Nitrate	M	1.981	3.9506	3.9506	1.0000
8	10.18	Chlorate	MB	0.383	4.3825	4.3825	1.0000
9	14.06	Phosphate	BMB	0.657	4.0742	4.0742	1.0000
Total:			**0.000**	**13.107**		**65.16**	

8 ICB

Sample Name:	**ICB**	*Injection Volume:*	**5.00**
Vial Number:	**BB8**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**03/19/2021 05:01**	*Sample Weight:*	**1.0000**

Run Time:

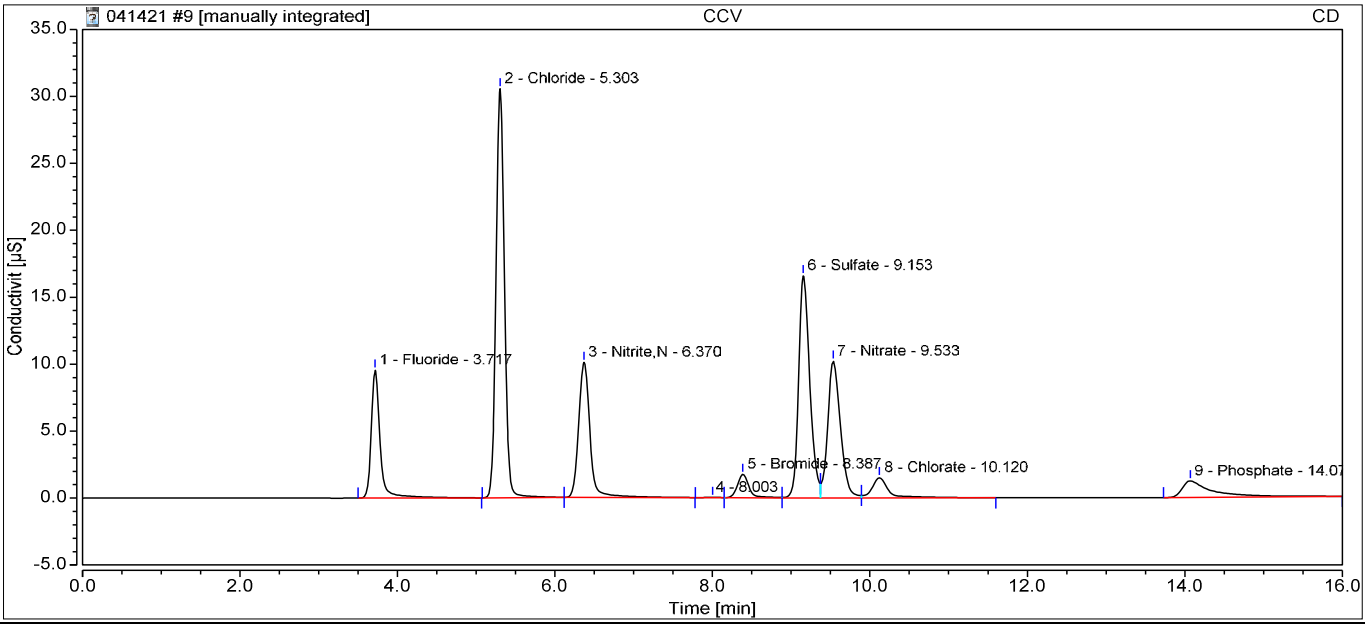


Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.70	Fluoride	BMB	0.003	0.0444	0.0444	1.0000
3	5.32	Chloride	BMB	0.028	0.0191	0.0191	1.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	1.0000
5	9.24	Sulfate	bMB*	0.003	n.a.	n.a.	1.0000
n.a.	n.a.	Nitrate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	1.0000
Total:			**0.000**	**0.034**		**0.06**	

9 CCV			
Sample Name:	**CCV**	*Injection Volume:*	**5.00**
Vial Number:	**R1**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**04/14/2021 09:16**	*Sample Weight:*	**1.0000**

Run Time:



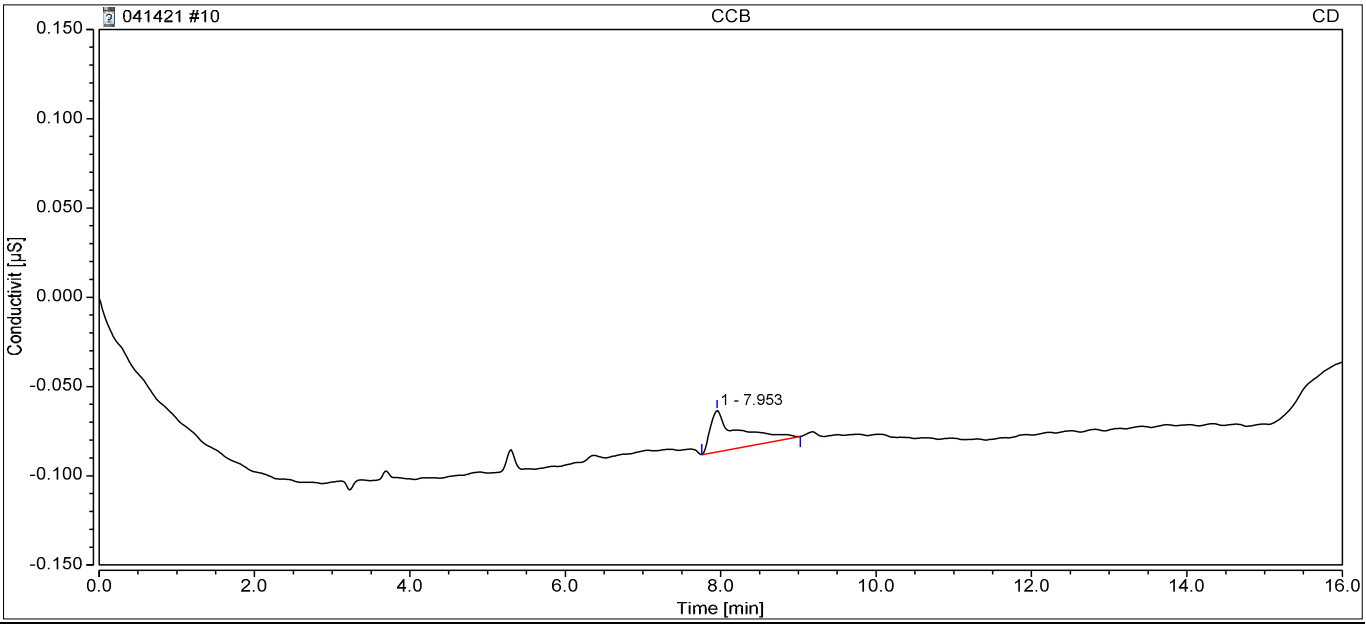
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.72	Fluoride	BMB	1.249	4.2863	4.2863	1.0000
2	5.30	Chloride	BMB	3.747	18.9772	18.9772	1.0000
3	6.37	Nitrite,N	BMB	1.675	4.3319	4.3319	1.0000
5	8.39	Bromide	M *	0.306	3.6116	3.6116	1.0000
6	9.15	Sulfate	M *	2.718	19.0513	19.0513	1.0000
7	9.53	Nitrate	M *	1.923	3.8354	3.8354	1.0000
8	10.12	Chlorate	MB*	0.377	4.3052	4.3052	1.0000
9	14.07	Phosphate	BM *	0.583	3.6453	3.6453	1.0000
Total:			**0.000**	**12.578**		**62.04**	

10 CCB

Sample Name:	**CCB**	*Injection Volume:*	**5.00**
Vial Number:	**R4**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**04/14/2021 09:34**	*Sample Weight:*	**1.0000**

Run Time:



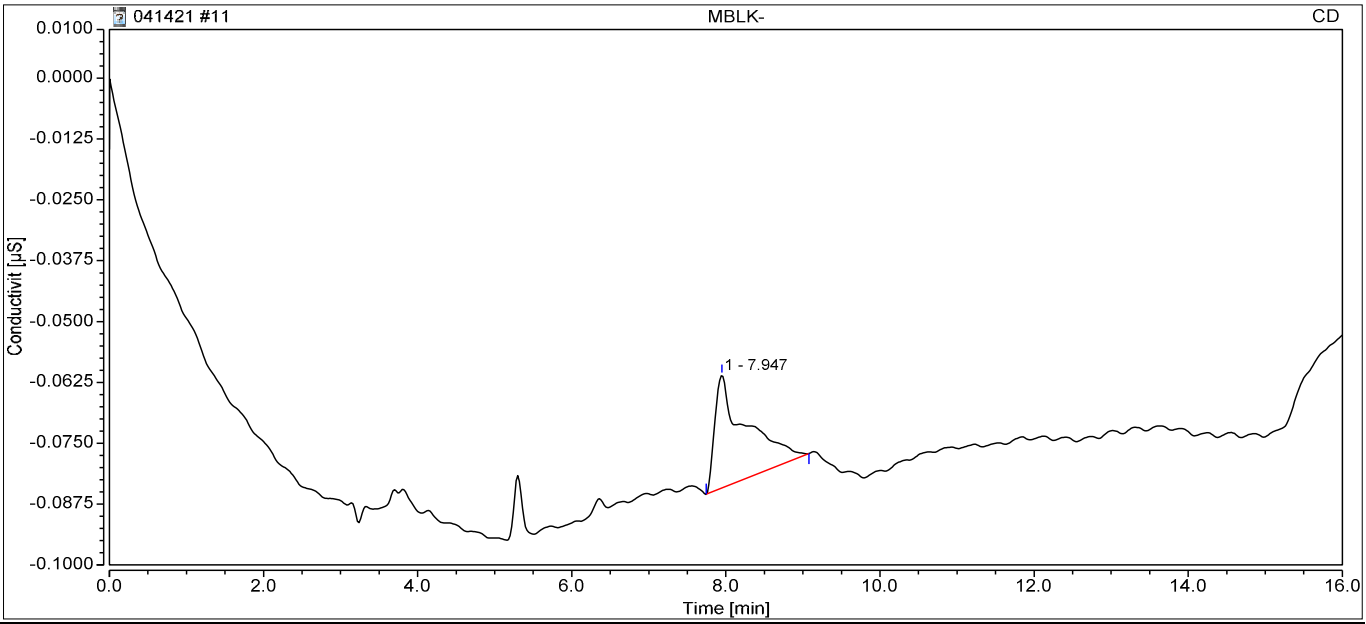
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Chloride	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Nitrate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	1.0000
Total:			**0.000**	**0.000**		**0.00**	

11 MBLK-

Sample Name:	**MBLK-**	*Injection Volume:*	**5.00**
Vial Number:	**R5**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**04/14/2021 09:53**	*Sample Weight:*	**1.0000**

Run Time:

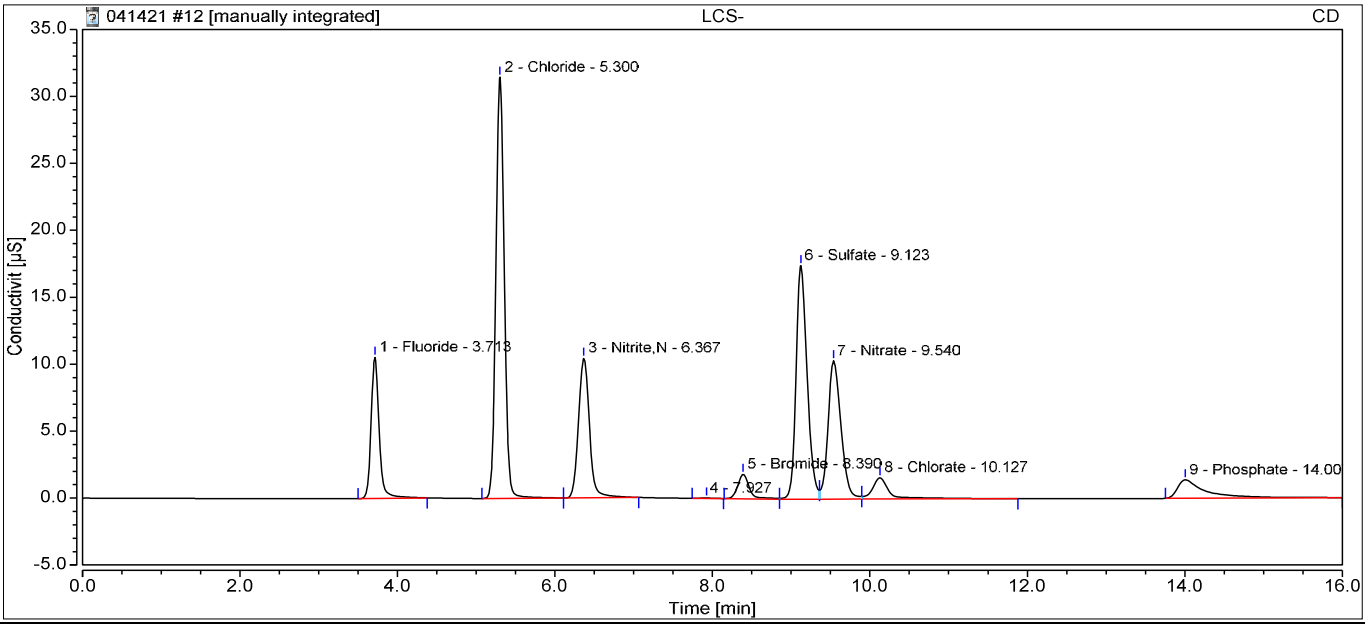


Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Chloride	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Nitrate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	1.0000
Total:			**0.000**	**0.000**		**0.00**	

12 LCS-			
Sample Name:	**LCS-**	*Injection Volume:*	**5.00**
Vial Number:	**R2**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**04/14/2021 10:11**	*Sample Weight:*	**1.0000**

Run Time:



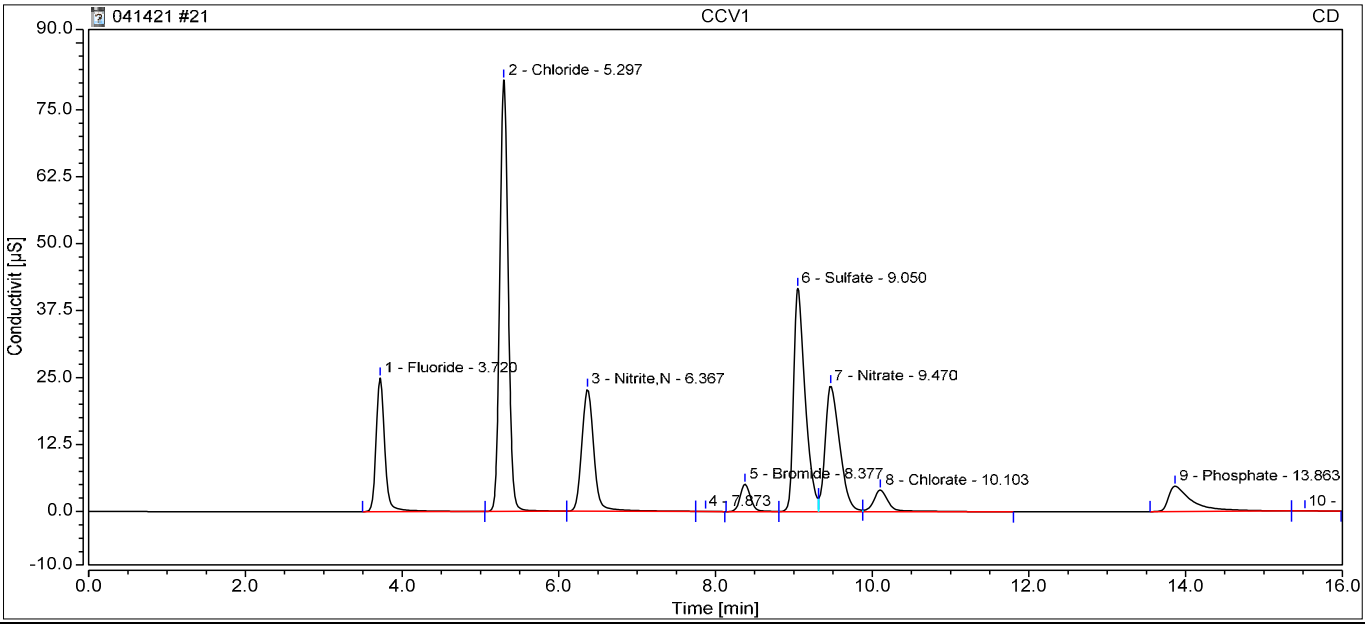
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.71	Fluoride	BMB*	1.250	4.2885	4.2885	1.0000
2	5.30	Chloride	BMb*	3.852	19.5151	19.5151	1.0000
3	6.37	Nitrite,N	bMB*	1.681	4.3480	4.3480	1.0000
5	8.39	Bromide	BM *	0.311	3.6859	3.6859	1.0000
6	9.12	Sulfate	M *	2.820	19.7770	19.7770	1.0000
7	9.54	Nitrate	M *	1.971	3.9307	3.9307	1.0000
8	10.13	Chlorate	MB*	0.407	4.6647	4.6647	1.0000
9	14.01	Phosphate	BMB*	0.584	3.6508	3.6508	1.0000
Total:			**0.000**	**12.877**		**63.86**	

21 CCV1

Sample Name:	**CCV1**	*Injection Volume:*	**5.00**
Vial Number:	**R3**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**04/14/2021 12:57**	*Sample Weight:*	**1.0000**

Run Time:



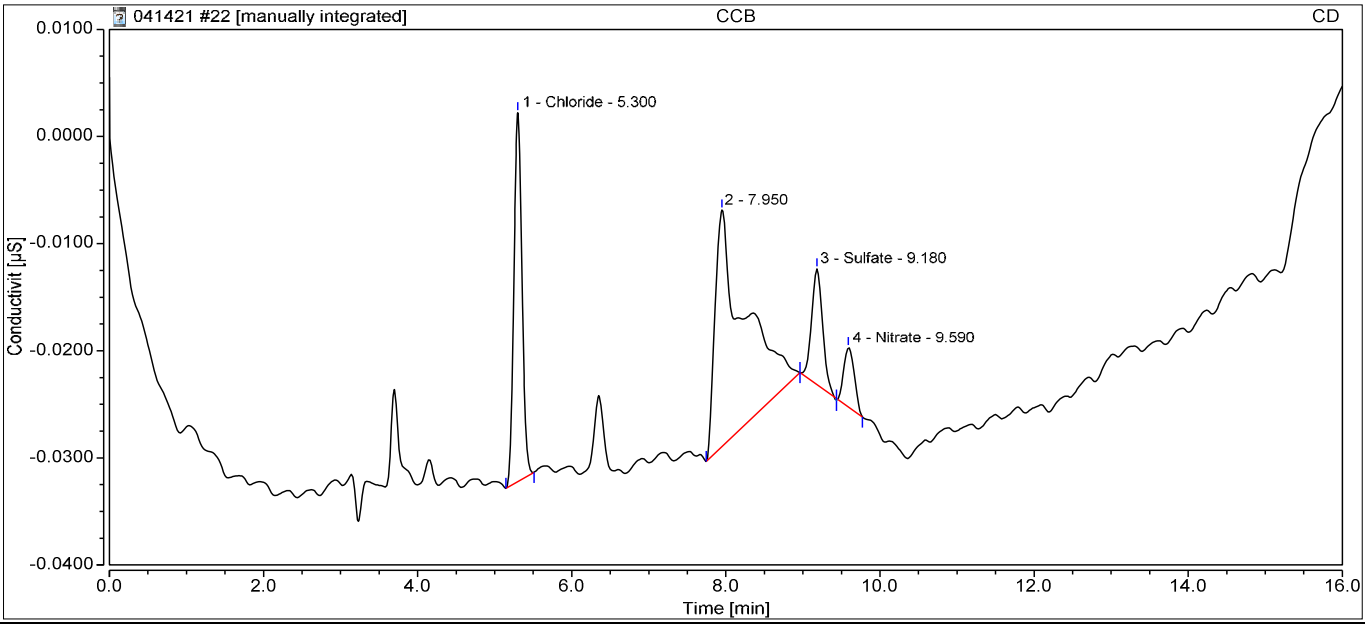
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.72	Fluoride	BMB	3.186	10.8755	10.8755	1.0000
2	5.30	Chloride	BMB	9.958	50.6443	50.6443	1.0000
3	6.37	Nitrite,N	BMB	4.067	10.5708	10.5708	1.0000
5	8.38	Bromide	BM	0.792	9.8829	9.8829	1.0000
6	9.05	Sulfate	M	7.167	50.6559	50.6559	1.0000
7	9.47	Nitrate	M	5.061	10.1147	10.1147	1.0000
8	10.10	Chlorate	MB	0.939	10.9196	10.9196	1.0000
9	13.86	Phosphate	BMB	1.657	9.8316	9.8316	1.0000
Total:			**0.000**	**32.826**		**163.50**	

22 CCB

Sample Name:	**CCB**	*Injection Volume:*	**5.00**
Vial Number:	**R6**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**04/14/2021 13:15**	*Sample Weight:*	**1.0000**

Run Time:



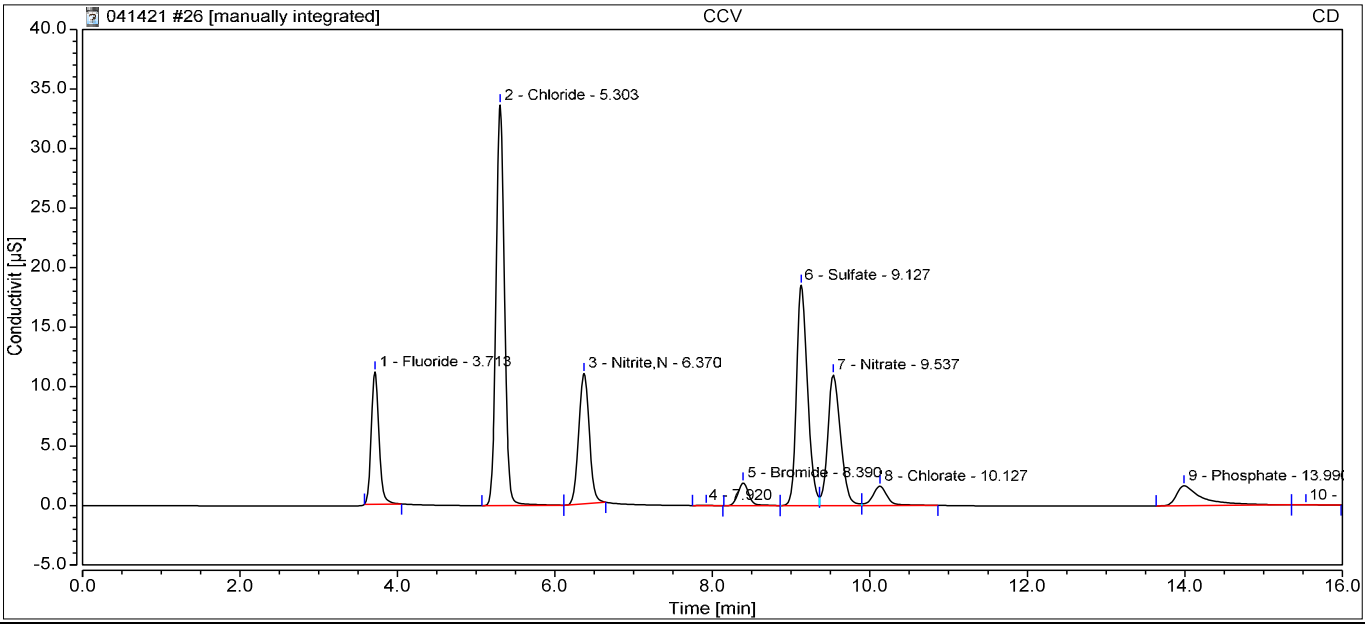
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	1.0000
1	5.30	Chloride	BMB	0.004	n.a.	n.a.	1.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	1.0000
3	9.18	Sulfate	bM *	0.002	n.a.	n.a.	1.0000
4	9.59	Nitrate	MB*	0.001	n.a.	n.a.	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	1.0000
Total:			**0.000**	**0.007**		**0.00**	

26 CCV

Sample Name:	**CCV**	*Injection Volume:*	**5.00**
Vial Number:	**R1**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**04/14/2021 14:29**	*Sample Weight:*	**1.0000**

Run Time:



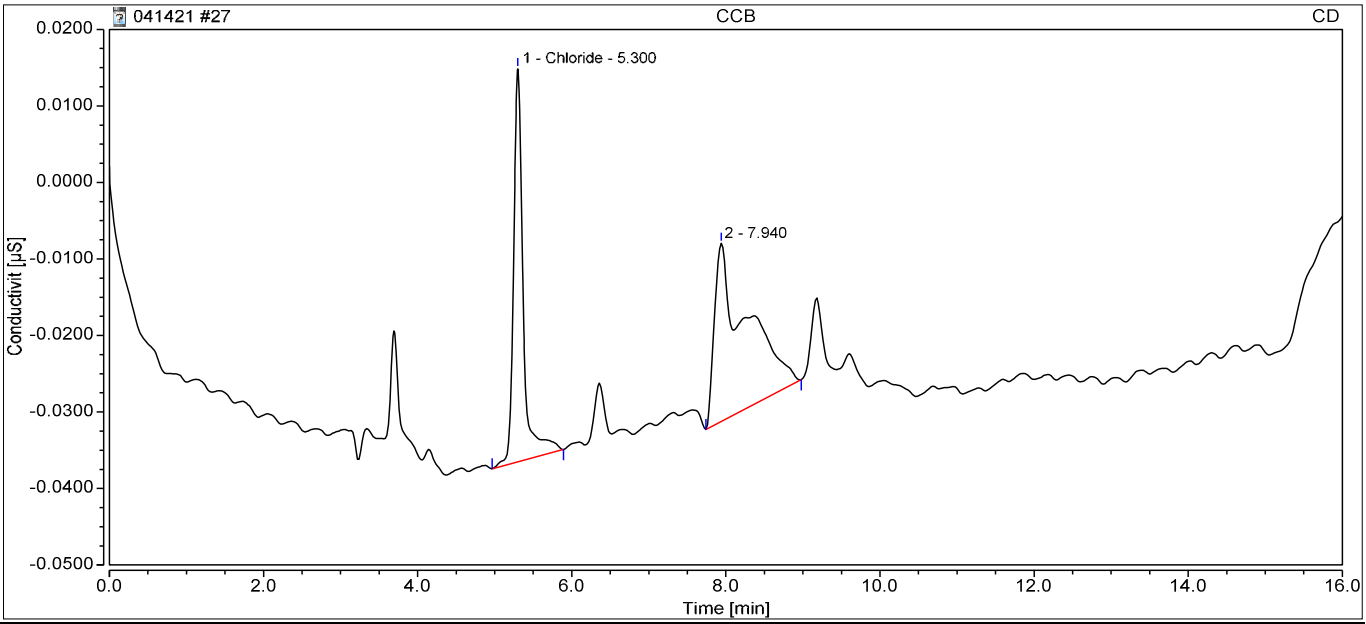
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.71	Fluoride	BMB*	1.259	4.3187	4.3187	1.0000
2	5.30	Chloride	BMb*	4.133	20.9474	20.9474	1.0000
3	6.37	Nitrite,N	bMB*	1.696	4.3868	4.3868	1.0000
5	8.39	Bromide	BM *	0.311	3.6751	3.6751	1.0000
6	9.13	Sulfate	M *	2.988	20.9731	20.9731	1.0000
7	9.54	Nitrate	M *	2.081	4.1519	4.1519	1.0000
8	10.13	Chlorate	MB*	0.346	3.9421	3.9421	1.0000
9	13.99	Phosphate	BMB	0.637	3.9549	3.9549	1.0000
Total:			**0.000**	**13.451**		**66.35**	

27 CCB

Sample Name:	**CCB**	*Injection Volume:*	**5.00**
Vial Number:	**R4**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**04/14/2021 14:47**	*Sample Weight:*	**1.0000**

Run Time:

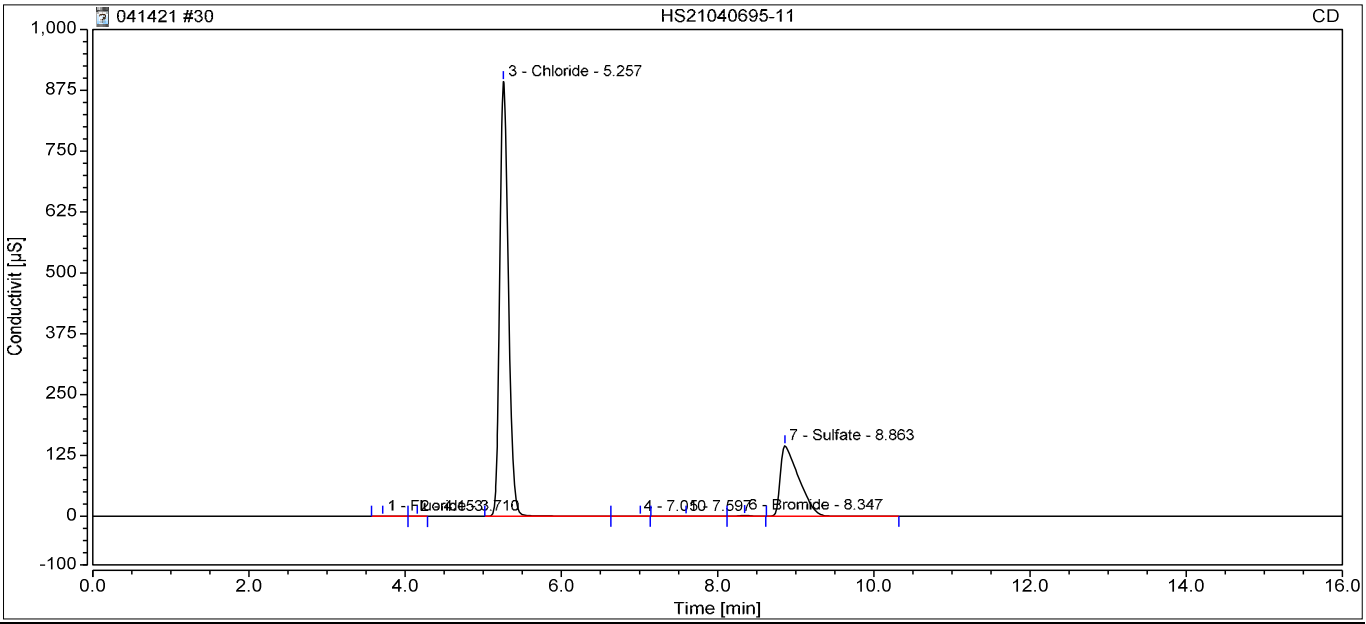


Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	1.0000
1	5.30	Chloride	BMB	0.007	n.a.	n.a.	1.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Nitrate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	1.0000
Total:			**0.000**	**0.007**		**0.00**	

30	*HS21040695-11*		
Sample Name:	**HS21040695-11**	*Injection Volume:*	**5.00**
Vial Number:	**RB3**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**04/14/2021 15:43**	*Sample Weight:*	**1.0000**

Run Time:



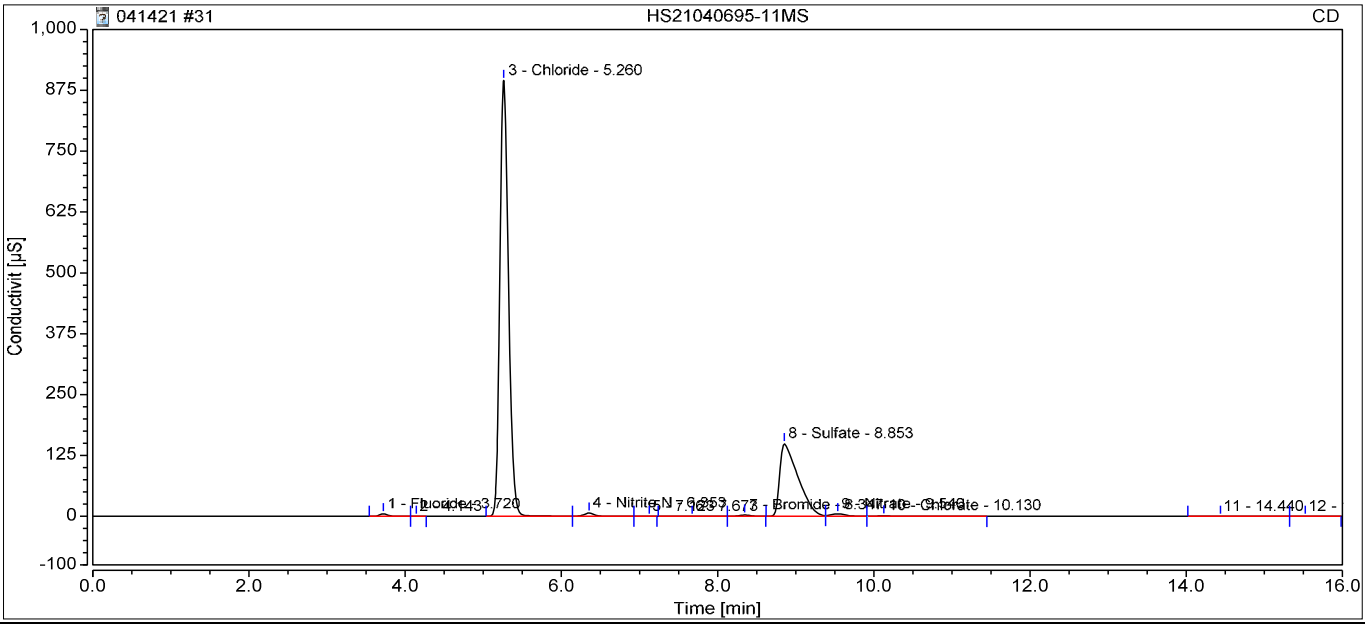
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.71	Fluoride	BMB	0.023	0.1117	0.1117	1.0000
3	5.26	Chloride	BMB	114.336	582.8151	582.8151	1.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	1.0000
6	8.35	Bromide	BMB	0.220	2.5019	2.5019	1.0000
7	8.86	Sulfate	BMB	39.763	282.2097	282.2097	1.0000
n.a.	n.a.	Nitrate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	1.0000
Total:			**0.000**	**154.342**		**867.64**	

31 HS21040695-11MS

Sample Name:	**HS21040695-11MS**	*Injection Volume:*	**5.00**
Vial Number:	**RB4**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**04/14/2021 16:01**	*Sample Weight:*	**1.0000**

Run Time:



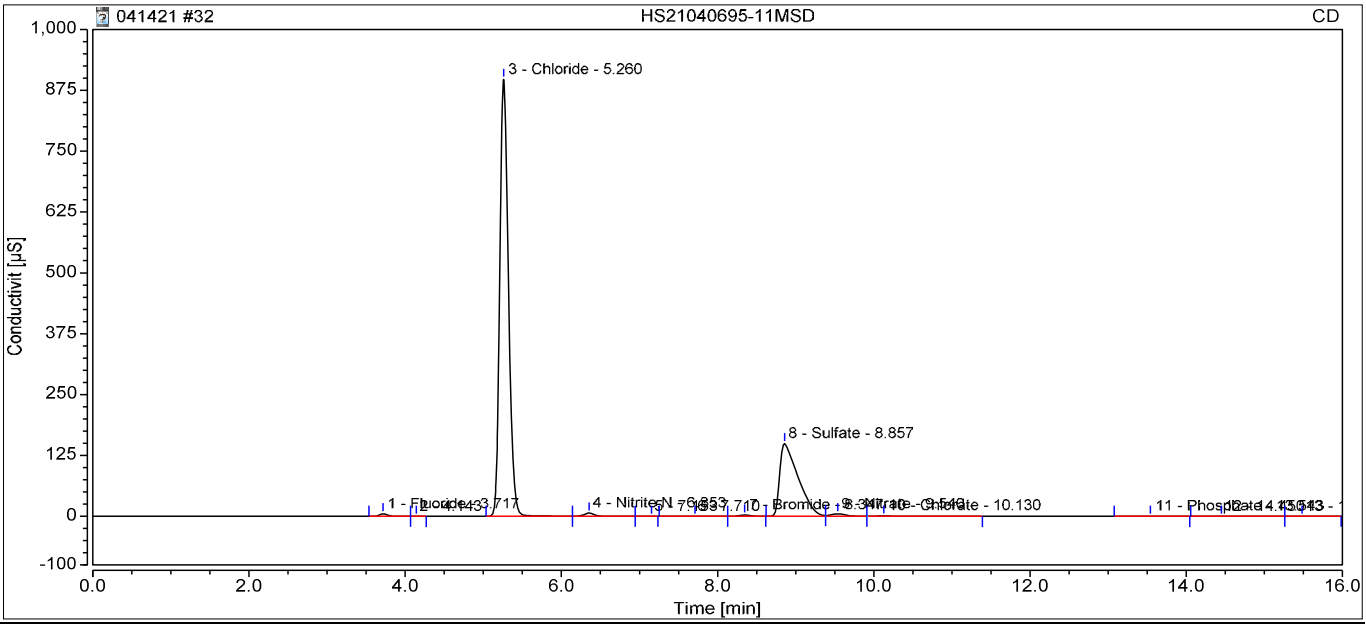
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.72	Fluoride	BMB	0.610	2.1095	2.1095	1.0000
3	5.26	Chloride	BMB	114.274	582.4985	582.4985	1.0000
4	6.35	Nitrite,N	BMB	0.922	2.3684	2.3684	1.0000
7	8.35	Bromide	BMB	0.381	4.5797	4.5797	1.0000
8	8.85	Sulfate	BM	40.411	286.8136	286.8136	1.0000
9	9.54	Nitrate	M	1.071	2.1304	2.1304	1.0000
10	10.13	Chlorate	MB	0.184	2.0393	2.0393	1.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	1.0000
Total:			**0.000**	**157.853**		**882.54**	

32 HS21040695-11MSD

Sample Name:	**HS21040695-11MSD**	*Injection Volume:*	**5.00**
Vial Number:	**RB5**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**04/14/2021 16:19**	*Sample Weight:*	**1.0000**

Run Time:



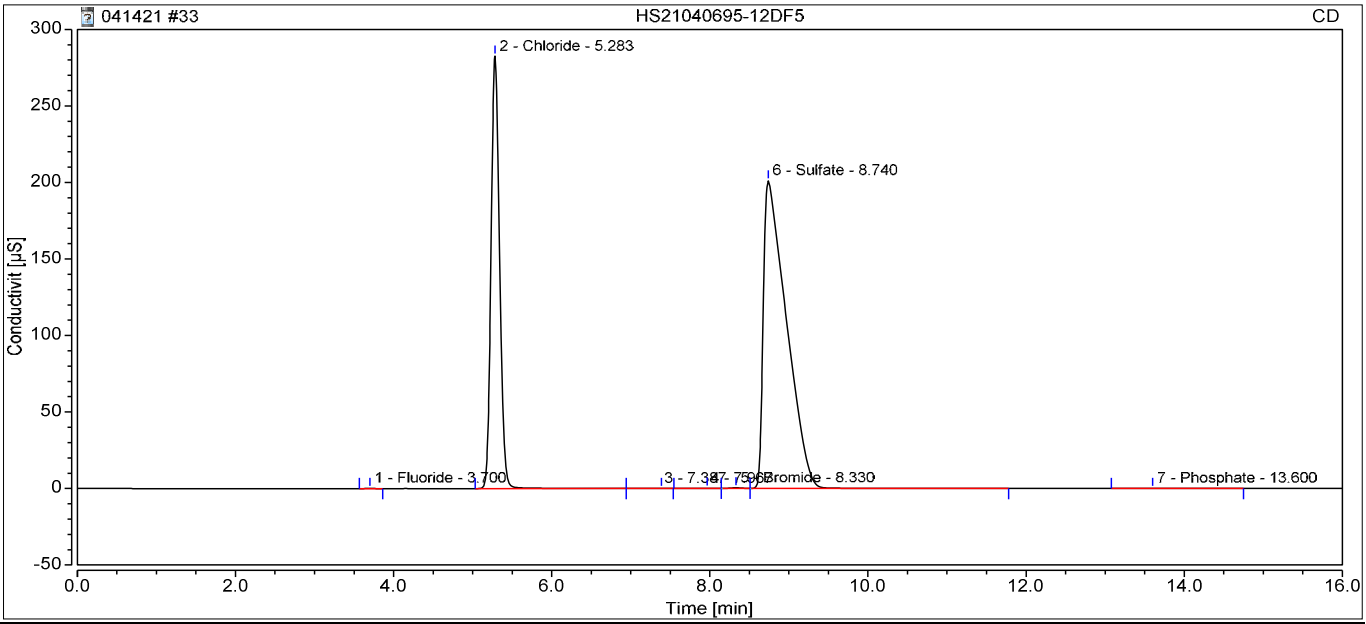
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.72	Fluoride	BMB	0.611	2.1150	2.1150	1.0000
3	5.26	Chloride	BMB	114.425	583.2678	583.2678	1.0000
4	6.35	Nitrite,N	BMB	0.928	2.3842	2.3842	1.0000
7	8.35	Bromide	BMB	0.380	4.5710	4.5710	1.0000
8	8.86	Sulfate	BM	40.640	288.4394	288.4394	1.0000
9	9.54	Nitrate	M	1.075	2.1380	2.1380	1.0000
10	10.13	Chlorate	MB	0.183	2.0269	2.0269	1.0000
11	13.54	Phosphate	BMB	0.027	0.4435	0.4435	1.0000
Total:			**0.000**	**158.270**		**885.39**	

33 HS21040695-12DF5

Sample Name:	**HS21040695-12DF5**	*Injection Volume:*	**5.00**
Vial Number:	**RB6**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**5.0000**
Recording Time:	**04/14/2021 16:38**	*Sample Weight:*	**1.0000**

Run Time:



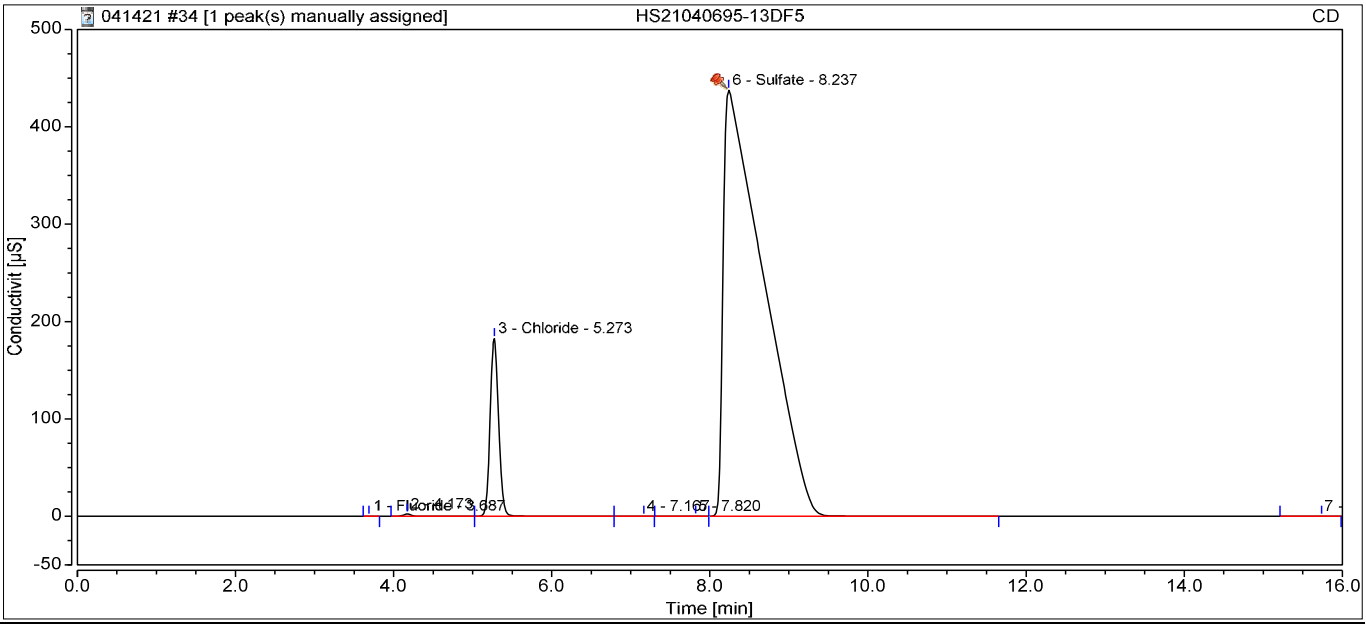
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.70	Fluoride	BMB	0.007	0.0577	0.2885	5.0000
2	5.28	Chloride	BMB	35.190	179.2912	896.4560	5.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	5.0000
5	8.33	Bromide	M	0.100	0.9551	4.7755	5.0000
6	8.74	Sulfate	MB	67.569	479.7373	2398.6864	5.0000
n.a.	n.a.	Nitrate	n.a.	n.a.	n.a.	n.a.	5.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	5.0000
7	13.60	Phosphate	BMB	0.045	0.5461	2.7306	5.0000
Total:			**0.000**	**102.911**		**3302.94**	

34 HS21040695-13DF5

Sample Name:	**HS21040695-13DF5**	*Injection Volume:*	**5.00**
Vial Number:	**RB7**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**5.0000**
Recording Time:	**04/14/2021 16:56**	*Sample Weight:*	**1.0000**

Run Time:



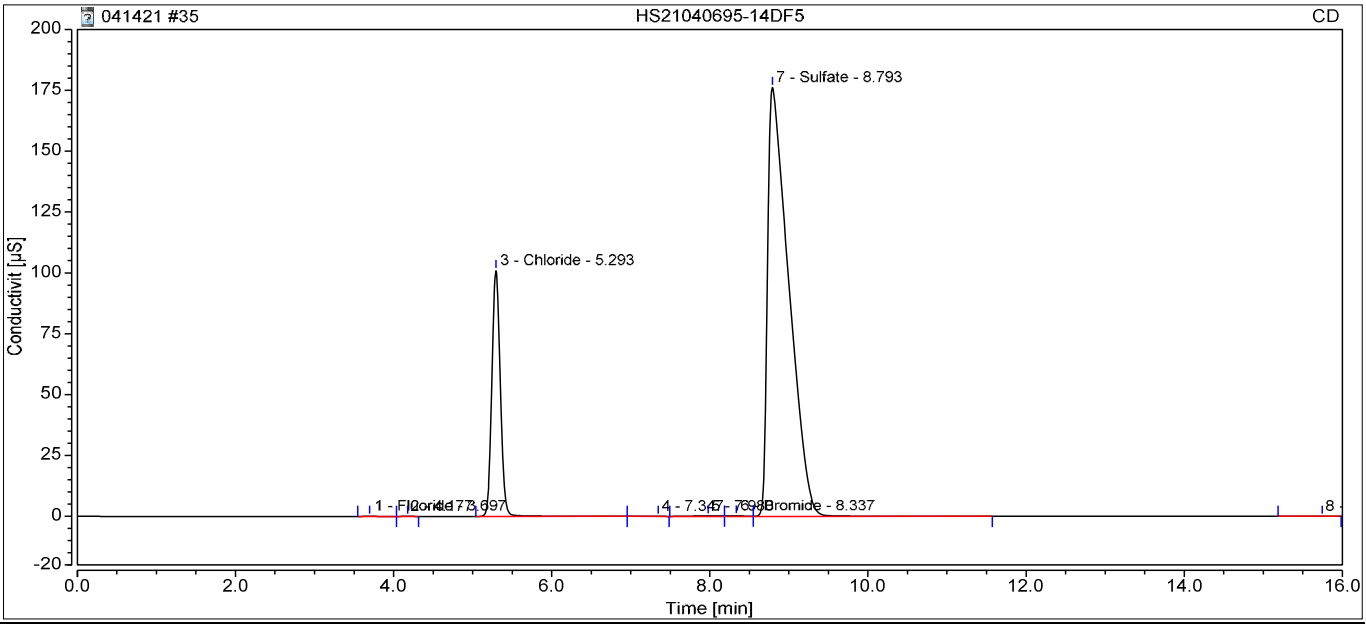
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.69	Fluoride	BMB	0.008	0.0629	0.3146	5.0000
3	5.27	Chloride	BMB	22.848	116.3627	581.8133	5.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	5.0000
6	8.24	Sulfate	MB^	260.485	1850.1555	9250.7775	5.0000
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	5.0000
n.a.	n.a.	Nitrate	n.a.	n.a.	n.a.	n.a.	5.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	5.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	5.0000
Total:			**0.000**	**283.341**		**9832.91**	

35 HS21040695-14DF5

Sample Name:	**HS21040695-14DF5**	*Injection Volume:*	**5.00**
Vial Number:	**RB8**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**5.0000**
Recording Time:	**04/14/2021 17:15**	*Sample Weight:*	**1.0000**

Run Time:



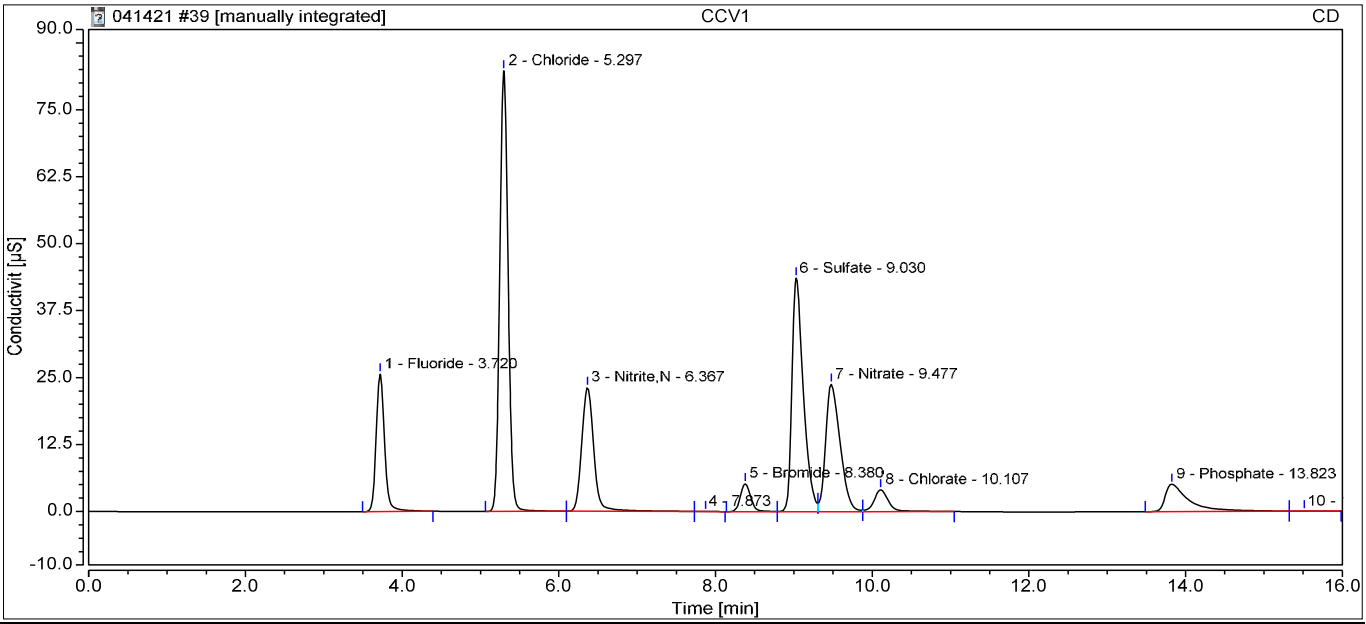
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.70	Fluoride	BMB	0.011	0.0715	0.3574	5.0000
3	5.29	Chloride	BMB	12.429	63.2436	316.2178	5.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	5.0000
6	8.34	Bromide	M	0.056	0.3919	1.9593	5.0000
7	8.79	Sulfate	MB	54.507	386.9452	1934.7258	5.0000
n.a.	n.a.	Nitrate	n.a.	n.a.	n.a.	n.a.	5.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	5.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	5.0000
Total:			**0.000**	**67.003**		**2253.26**	

39 CCV1

Sample Name:	**CCV1**	*Injection Volume:*	**5.00**
Vial Number:	**R3**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**04/14/2021 18:47**	*Sample Weight:*	**1.0000**

Run Time:



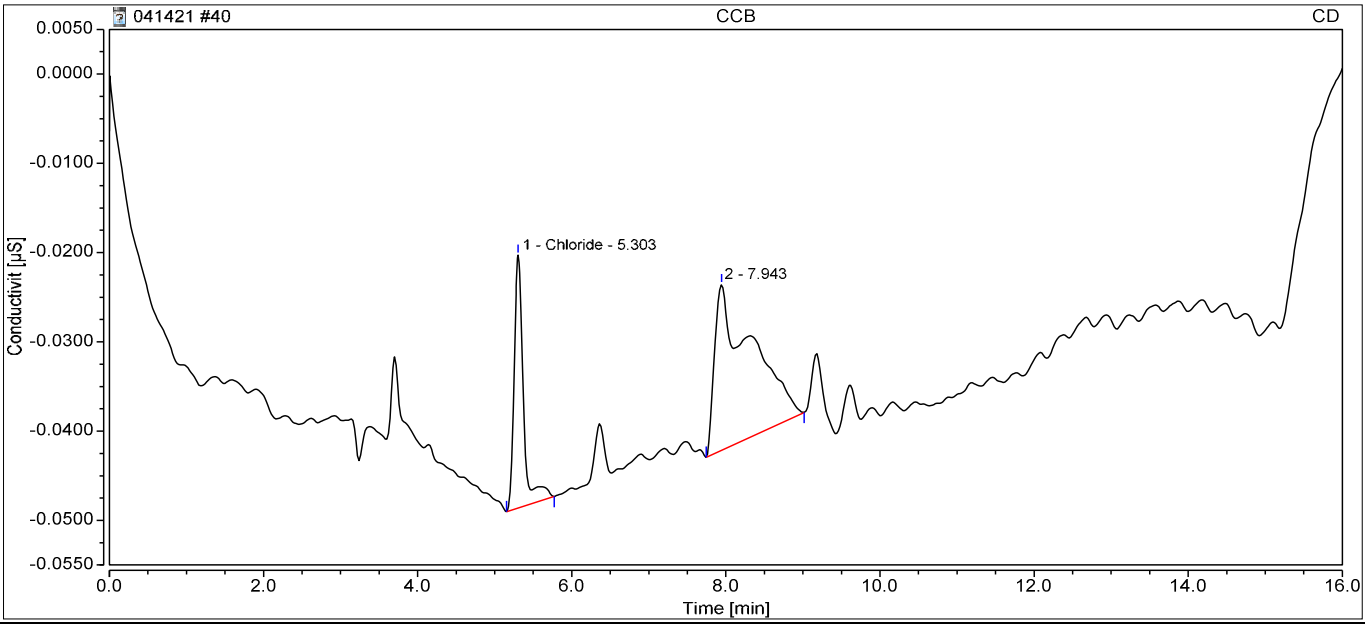
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.72	Fluoride	BMB*	3.181	10.8609	10.8609	1.0000
2	5.30	Chloride	BMB	10.125	51.4968	51.4968	1.0000
3	6.37	Nitrite,N	BMB	4.135	10.7479	10.7479	1.0000
5	8.38	Bromide	BM *	0.799	9.9837	9.9837	1.0000
6	9.03	Sulfate	M *	7.372	52.1106	52.1106	1.0000
7	9.48	Nitrate	M *	5.095	10.1834	10.1834	1.0000
8	10.11	Chlorate	MB*	0.867	10.0782	10.0782	1.0000
9	13.82	Phosphate	BMB	1.783	10.5592	10.5592	1.0000
Total:			**0.000**	**33.359**		**166.02**	

40 CCB

Sample Name:	**CCB**	*Injection Volume:*	**5.00**
Vial Number:	**R6**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**04/14/2021 19:05**	*Sample Weight:*	**1.0000**

Run Time:



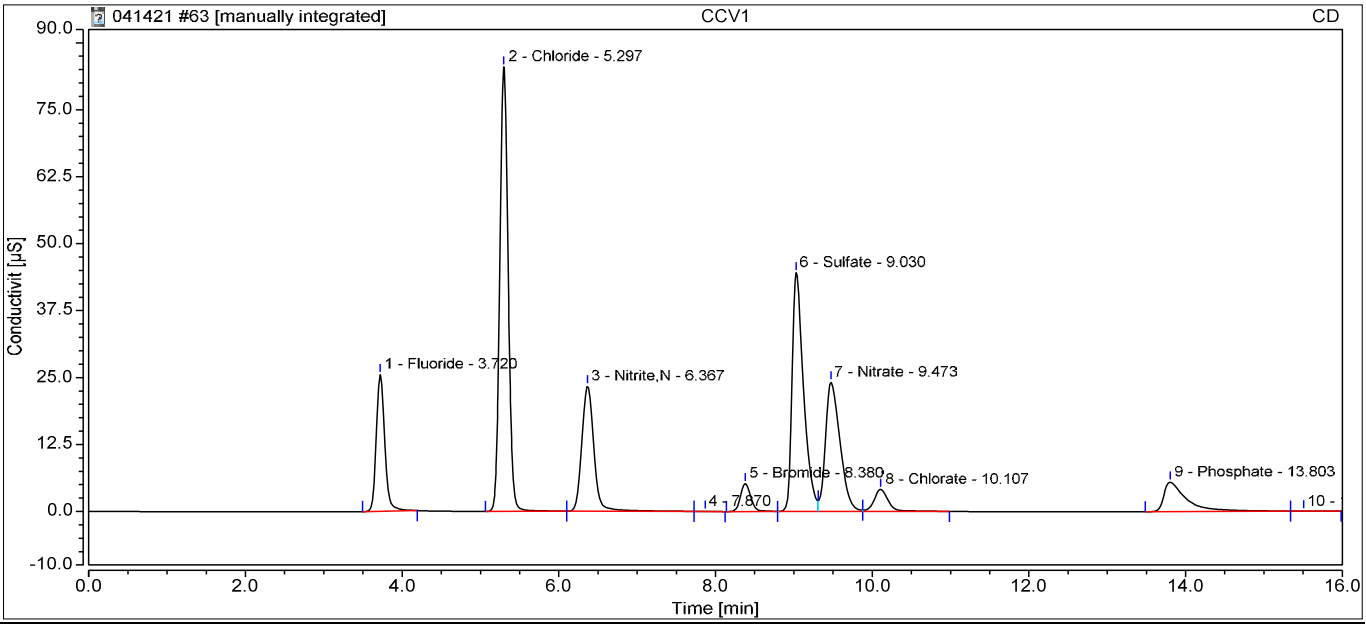
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	1.0000
1	5.30	Chloride	BMB	0.004	n.a.	n.a.	1.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Nitrate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	1.0000
Total:			**0.000**	**0.004**		**0.00**	

63 CCV1

Sample Name:	**CCV1**	*Injection Volume:*	**5.00**
Vial Number:	**R3**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**04/15/2021 02:27**	*Sample Weight:*	**1.0000**

Run Time:



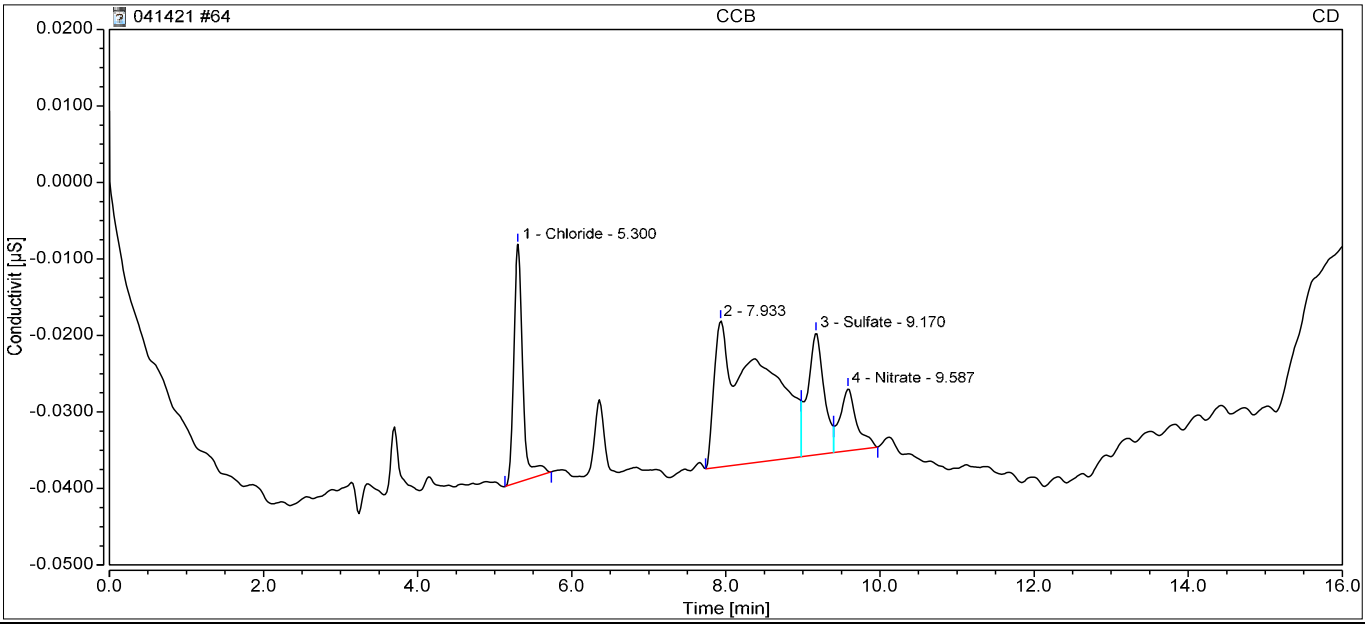
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.72	Fluoride	BMB*	3.176	10.8440	10.8440	1.0000
2	5.30	Chloride	BMB	10.237	52.0667	52.0667	1.0000
3	6.37	Nitrite,N	BMB	4.183	10.8737	10.8737	1.0000
5	8.38	Bromide	BM *	0.802	10.0230	10.0230	1.0000
6	9.03	Sulfate	M *	7.594	53.6918	53.6918	1.0000
7	9.47	Nitrate	M *	5.220	10.4332	10.4332	1.0000
8	10.11	Chlorate	MB*	0.871	10.1224	10.1224	1.0000
9	13.80	Phosphate	BMB	1.842	10.8981	10.8981	1.0000
Total:			**0.000**	**33.927**		**168.95**	

64 CCB

Sample Name:	**CCB**	*Injection Volume:*	**5.00**
Vial Number:	**R6**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**04/15/2021 02:46**	*Sample Weight:*	**1.0000**

Run Time:

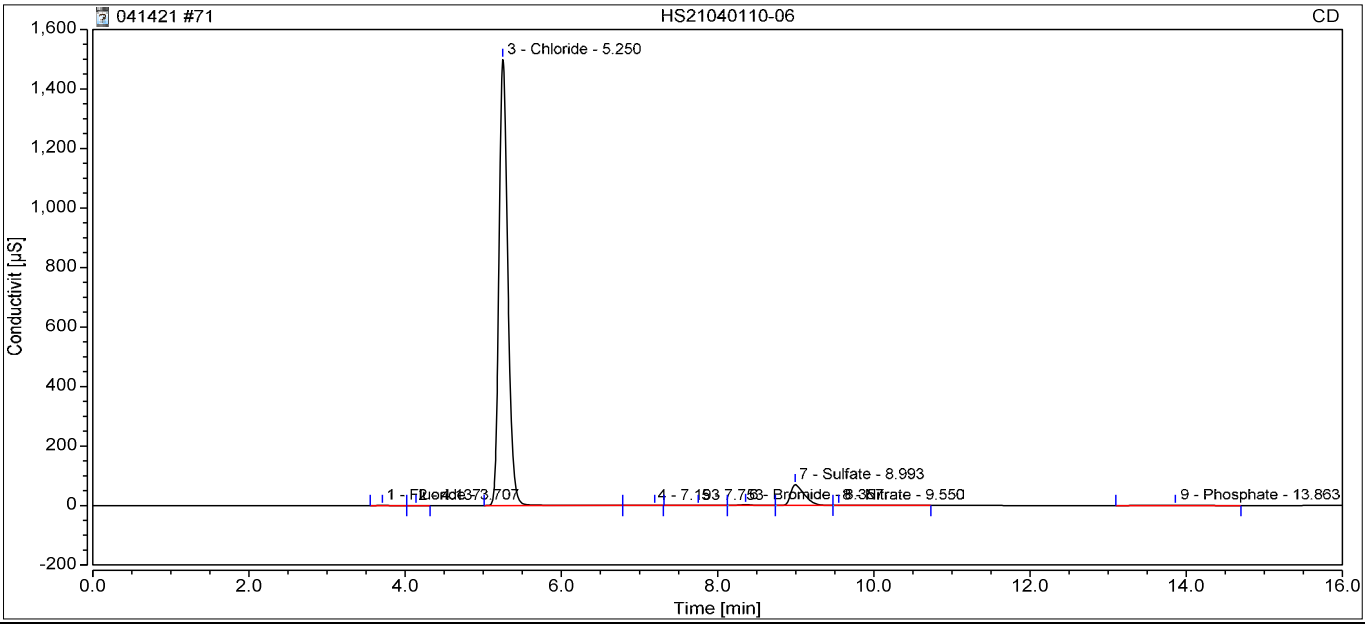


Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	1.0000
1	5.30	Chloride	BMB	0.004	n.a.	n.a.	1.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	1.0000
3	9.17	Sulfate	M	0.004	n.a.	n.a.	1.0000
4	9.59	Nitrate	MB	0.002	n.a.	n.a.	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	1.0000
Total:			**0.000**	**0.010**		**0.00**	

71 HS21040110-06			
Sample Name:	**HS21040110-06**	*Injection Volume:*	**5.00**
Vial Number:	**RE4**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**04/15/2021 04:55**	*Sample Weight:*	**1.0000**

Run Time:



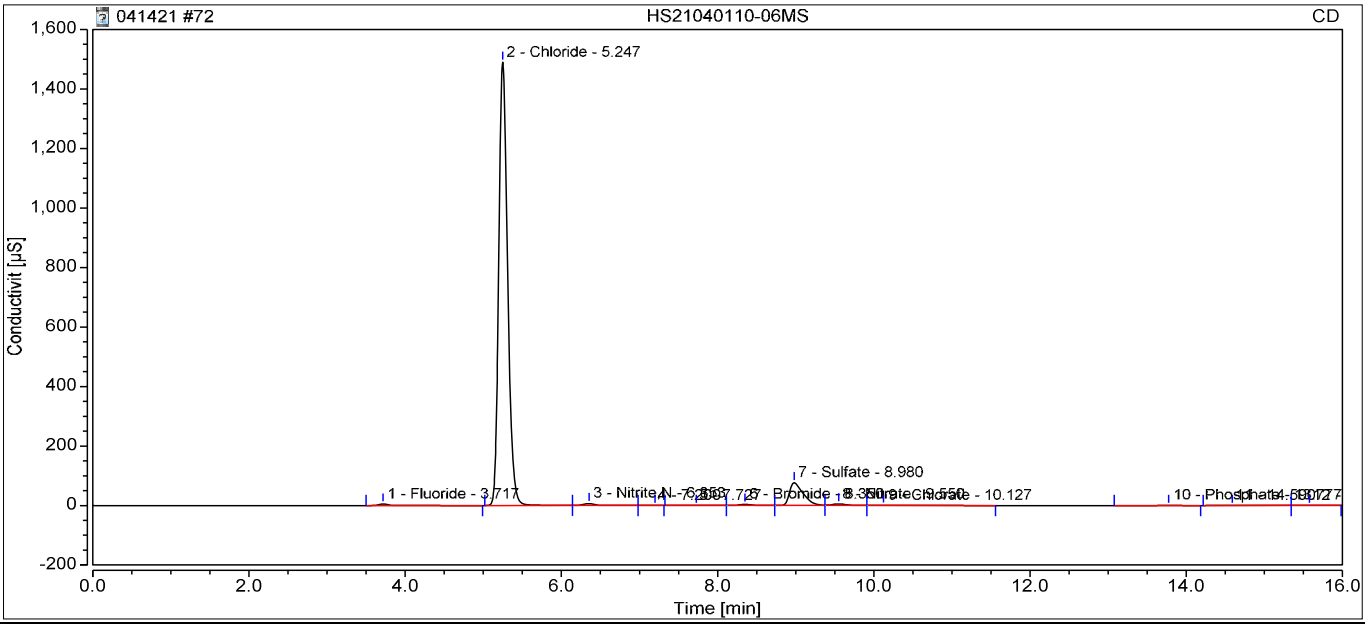
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.71	Fluoride	BMB	0.021	0.1049	0.1049	1.0000
3	5.25	Chloride	BMB	195.493	996.5915	996.5915	1.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	1.0000
6	8.36	Bromide	M	0.528	6.4843	6.4843	1.0000
7	8.99	Sulfate	M	14.266	101.0836	101.0836	1.0000
8	9.55	Nitrate	MB	0.077	0.1416	0.1416	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
9	13.86	Phosphate	BMB	0.019	0.3997	0.3997	1.0000
Total:			**0.000**	**210.404**		**1104.81**	

72 HS21040110-06MS

Sample Name:	**HS21040110-06MS**	*Injection Volume:*	**5.00**
Vial Number:	**RE5**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**04/15/2021 05:13**	*Sample Weight:*	**1.0000**

Run Time:



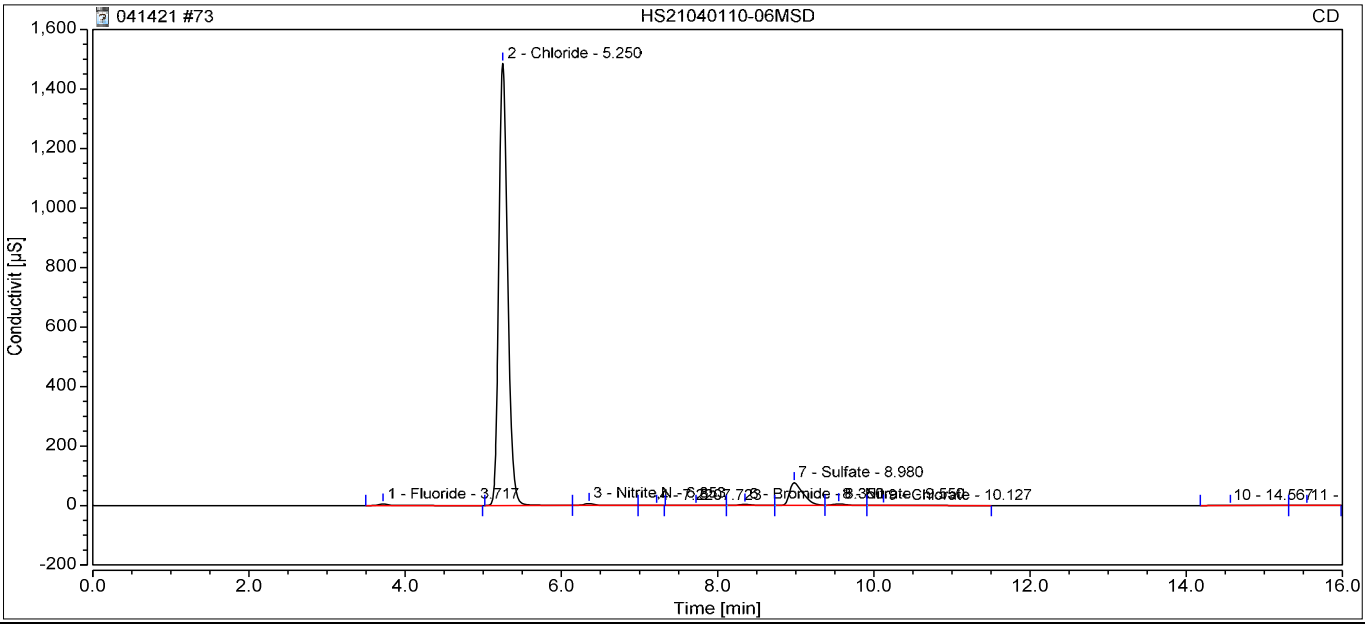
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.72	Fluoride	BMB	0.716	2.4694	2.4694	1.0000
2	5.25	Chloride	BMB	193.987	988.9132	988.9132	1.0000
3	6.35	Nitrite,N	BMB	0.910	2.3373	2.3373	1.0000
6	8.35	Bromide	M	0.683	8.4778	8.4778	1.0000
7	8.98	Sulfate	M	15.504	109.8804	109.8804	1.0000
8	9.55	Nitrate	M	1.087	2.1627	2.1627	1.0000
9	10.13	Chlorate	MB	0.198	2.2010	2.2010	1.0000
10	13.78	Phosphate	BMB	0.009	0.3426	0.3426	1.0000
Total:			**0.000**	**213.094**		**1116.78**	

73 HS21040110-06MSD

Sample Name:	**HS21040110-06MSD**	*Injection Volume:*	**5.00**
Vial Number:	**RE6**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**04/15/2021 05:31**	*Sample Weight:*	**1.0000**

Run Time:



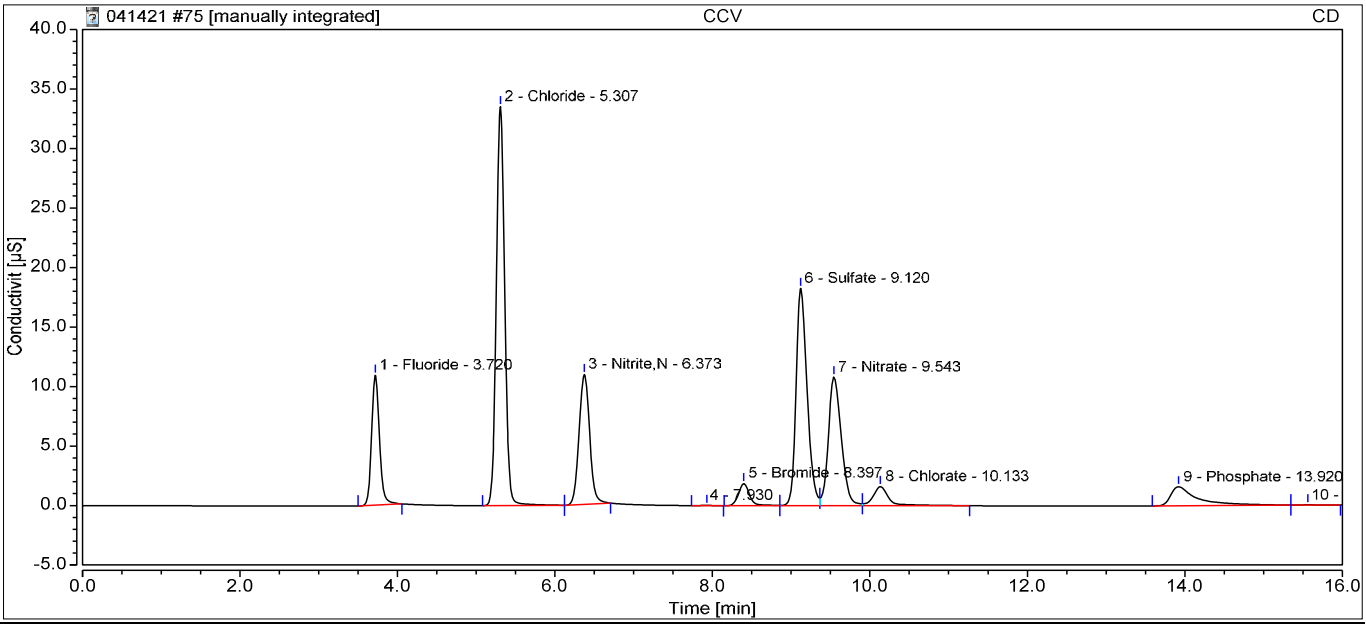
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.72	Fluoride	BMB	0.717	2.4736	2.4736	1.0000
2	5.25	Chloride	BMB	193.649	987.1913	987.1913	1.0000
3	6.35	Nitrite,N	BMB	0.906	2.3255	2.3255	1.0000
6	8.35	Bromide	M	0.682	8.4655	8.4655	1.0000
7	8.98	Sulfate	M	15.463	109.5854	109.5854	1.0000
8	9.55	Nitrate	M	1.083	2.1546	2.1546	1.0000
9	10.13	Chlorate	MB	0.198	2.2003	2.2003	1.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	1.0000
Total:			**0.000**	**212.697**		**1114.40**	

75 CCV

Sample Name:	**CCV**	*Injection Volume:*	**5.00**
Vial Number:	**R1**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**04/15/2021 06:08**	*Sample Weight:*	**1.0000**

Run Time:



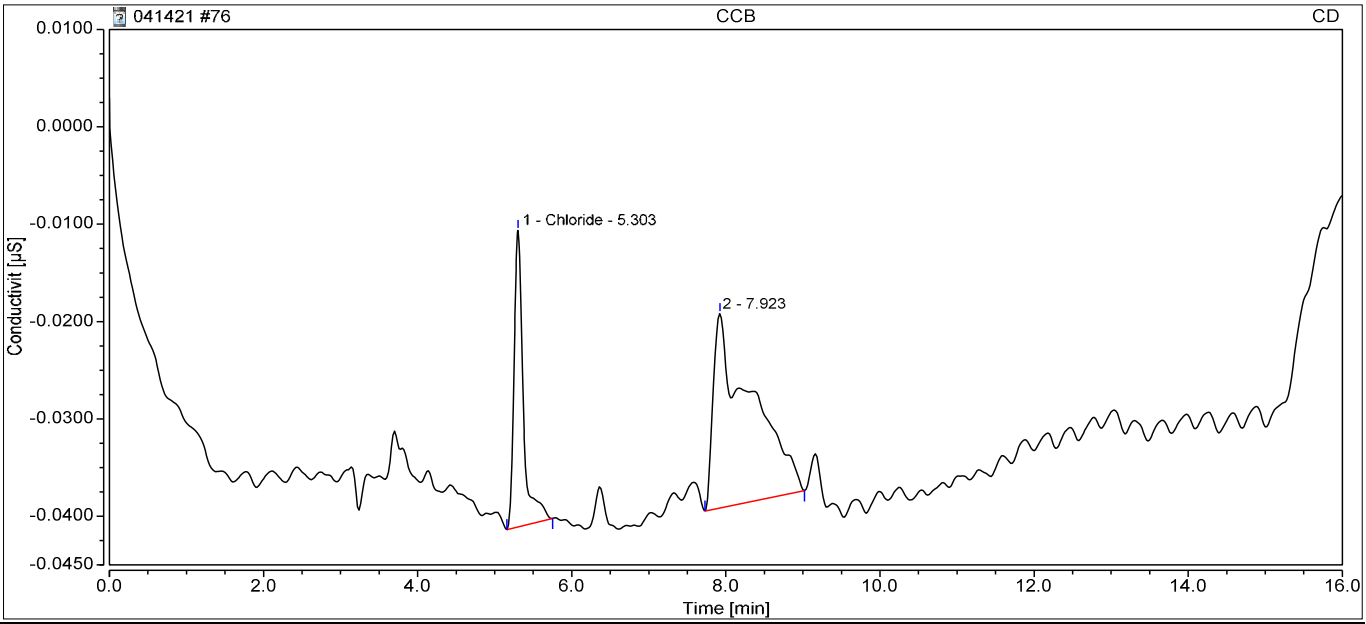
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.72	Fluoride	BMB*	1.256	4.3093	4.3093	1.0000
2	5.31	Chloride	BMb*	4.103	20.7912	20.7912	1.0000
3	6.37	Nitrite,N	bMB*	1.698	4.3914	4.3914	1.0000
5	8.40	Bromide	BM *	0.308	3.6377	3.6377	1.0000
6	9.12	Sulfate	M *	2.945	20.6647	20.6647	1.0000
7	9.54	Nitrate	M *	2.063	4.1148	4.1148	1.0000
8	10.13	Chlorate	MB*	0.374	4.2789	4.2789	1.0000
9	13.92	Phosphate	BMB	0.617	3.8418	3.8418	1.0000
Total:			**0.000**	**13.364**		**66.03**	

76 CCB

Sample Name:	**CCB**	*Injection Volume:*	**5.00**
Vial Number:	**R4**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**04/15/2021 06:27**	*Sample Weight:*	**1.0000**

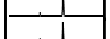
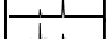
Run Time:



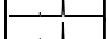
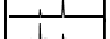
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	1.0000
1	5.30	Chloride	BMB	0.004	n.a.	n.a.	1.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Nitrate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	1.0000
Total:			**0.000**	**0.004**		**0.00**	

Sequence: 042621
Last Update Operator: alshs.nouser

CD	Name	Comment	Type	Position	Dilution	Level	Instrument Method	Processing Method
	STD1		Calibration	BE1	1.00	1	Anions Program 06022020.1	Anions Processing Method
	STD2		Calibration	BE2	1.00	2	Anions Program 06022020.1	Anions Processing Method
	STD3		Calibration	BE3	1.00	3	Anions Program 06022020.1	Anions Processing Method
	STD4		Calibration	BE4	1.00	4	Anions Program 06022020.1	Anions Processing Method
	STD5		Calibration	BE5	1.00	5	Anions Program 06022020.1	Anions Processing Method
	STD6		Calibration	BE6	1.00	6	Anions Program 06022020.1	Anions Processing Method
	ICV		Unknown	BE7	1.00		Anions Program 06022020.1	Anions Processing Method
	ICB		Unknown	BE8	1.00		Anions Program 06022020.1	Anions Processing Method
	CCV		Unknown	R1	1.00		Anions Program 06022020.1	Anions Processing Method
	CCB		Unknown	R4	1.00		Anions Program 06022020.1	Anions Processing Method
	MBLK-		Unknown	R5	1.00		Anions Program 06022020.1	Anions Processing Method
	LCS-		Unknown	R2	1.00		Anions Program 06022020.1	Anions Processing Method
	CCV1		Unknown	R3	1.00		Anions Program 06022020.1	Anions Processing Method
	CCB		Unknown	R6	1.00		Anions Program 06022020.1	Anions Processing Method
	HS21040612-07DF10		Unknown	RA7	10.00		Anions Program 06022020.1	Anions Processing Method
	HS21040612-07MSDF10		Unknown	RA8	10.00		Anions Program 06022020.1	Anions Processing Method
	HS21040612-07MSDDF10		Unknown	RB1	10.00		Anions Program 06022020.1	Anions Processing Method
	HS21040695-11DF10		Unknown	RB2	10.00		Anions Program 06022020.1	Anions Processing Method
	HS21040695-12DF50		Unknown	RB3	50.00		Anions Program 06022020.1	Anions Processing Method
	HS21040695-13DF500		Unknown	RB4	500.00		Anions Program 06022020.1	Anions Processing Method
	HS21040695-14DF50		Unknown	RB5	50.00		Anions Program 06022020.1	Anions Processing Method
	CCV		Unknown	R1	1.00		Anions Program 06022020.1	Anions Processing Method
	CCB		Unknown	R4	1.00		Anions Program 06022020.1	Anions Processing Method

Sequence: 042621
Last Update Operator: alshs.nouser

CD	Name	Volume	Status	Inject Time
	STD1	5.0	Finished	4/20/2021 9:54:11 AM -05:00
	STD2	5.0	Finished	4/20/2021 10:12:33 AM -05:00
	STD3	5.0	Finished	4/20/2021 10:30:56 AM -05:00
	STD4	5.0	Finished	4/20/2021 10:49:20 AM -05:00
	STD5	5.0	Finished	4/20/2021 11:07:48 AM -05:00
	STD6	5.0	Finished	4/20/2021 11:28:05 AM -05:00
	ICV	5.0	Finished	4/20/2021 11:46:31 AM -05:00
	ICB	5.0	Finished	4/20/2021 12:25:13 PM -05:00
	CCV	5.0	Finished	4/26/2021 12:52:17 PM -05:00
	CCB	5.0	Finished	4/26/2021 1:10:40 PM -05:00
	MBLK-	5.0	Finished	4/26/2021 1:29:05 PM -05:00
	LCS-	5.0	Finished	4/26/2021 1:47:30 PM -05:00
	CCV1	5.0	Finished	4/26/2021 4:38:14 PM -05:00
	CCB	5.0	Finished	4/26/2021 4:56:40 PM -05:00
	HS21040612-07DF10	5.0	Finished	4/26/2021 6:10:25 PM -05:00
	HS21040612-07MSDF10	5.0	Finished	4/26/2021 6:28:49 PM -05:00
	HS21040612-07MSDDF10	5.0	Finished	4/26/2021 6:47:14 PM -05:00
	HS21040695-11DF10	5.0	Finished	4/26/2021 7:05:37 PM -05:00
	HS21040695-12DF50	5.0	Finished	4/26/2021 7:24:03 PM -05:00
	HS21040695-13DF500	5.0	Finished	4/26/2021 7:42:27 PM -05:00
	HS21040695-14DF50	5.0	Finished	4/26/2021 8:00:50 PM -05:00
	CCV	5.0	Finished	4/26/2021 8:37:41 PM -05:00
	CCB	5.0	Finished	4/26/2021 8:56:05 PM -05:00

Sequence: 042621
Injection #6: STD6

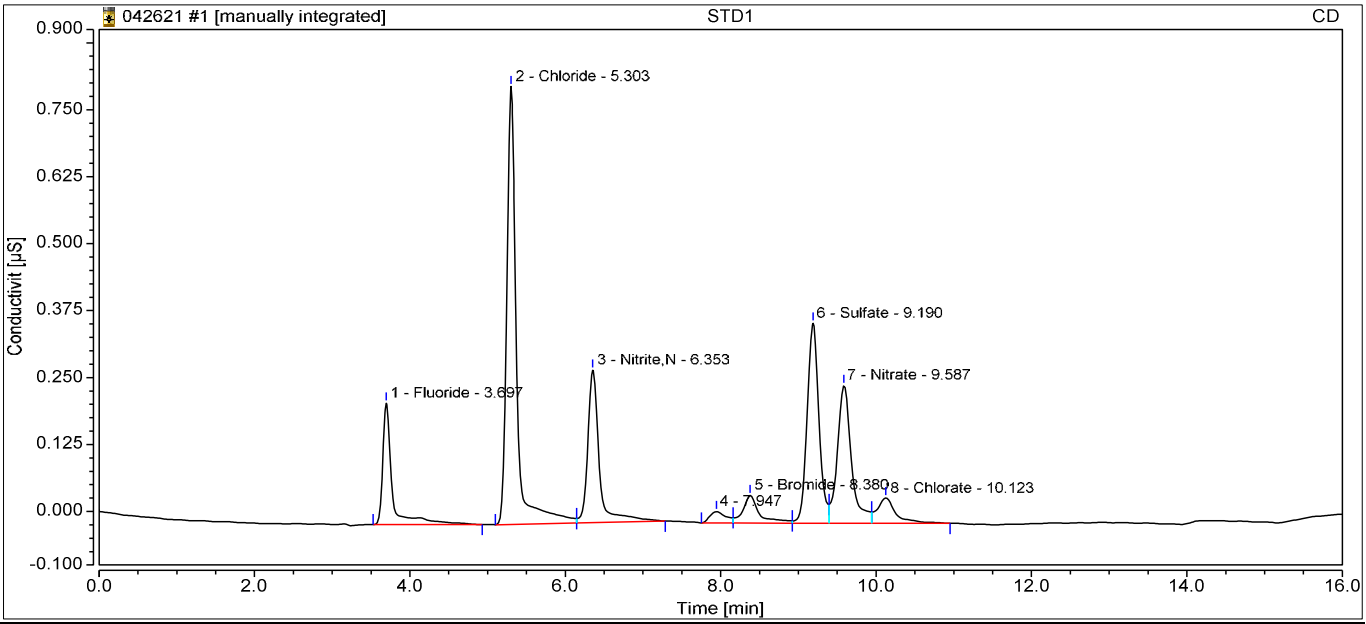
Calibration

Peak No.	Peak Name	Cal.Type	Eval.Type	Number of Points	Rel.Std.Dev. %	Coeff.of Determination	C0 (Offset)	C1 (Slope)	C2 (Curve)
1	*Fluoride*	*Lin, WithOffset, 1/*	*Area*	*6*	*18.7874*	*0.99804*	*0.0037*	*0.3228*	*0.0000*
2	Chloride	Lin, WithOffset, 1/	Area	6	4.4845	0.99989	0.0060	0.2088	0.0000
3	Nitrite,N	Lin, WithOffset, 1/	Area	6	23.2258	0.99660	0.0167	0.4015	0.0000
5	Bromide	Lin, WithOffset, 1/	Area	6	13.6081	0.99885	0.0031	0.0812	0.0000
6	Sulfate	Lin, WithOffset, 1/	Area	6	4.6885	0.99989	-0.0143	0.1515	0.0000
7	Nitrate	Lin, WithOffset, 1/	Area	6	5.2526	0.99986	-0.0011	0.5393	0.0000
8	Chlorate	Lin, WithOffset, 1/	Area	6	20.9413	0.99684	0.0071	0.0945	0.0000
11	Phosphate	Lin, WithOffset, 1/	Area	5	9.6125	0.99905	-0.0521	0.2007	0.0000
Maximum					**23.2258**	0.99989			
Minimum					4.4845	**0.99660**			

1 STD1

Sample Name:	**STD1**	*Injection Volume:*	**5.00**
Vial Number:	**BE1**	*Channel:*	**CD**
Sample Type:	**Calibration Standard**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**04/20/2021 09:54**	*Sample Weight:*	**1.0000**

Run Time:



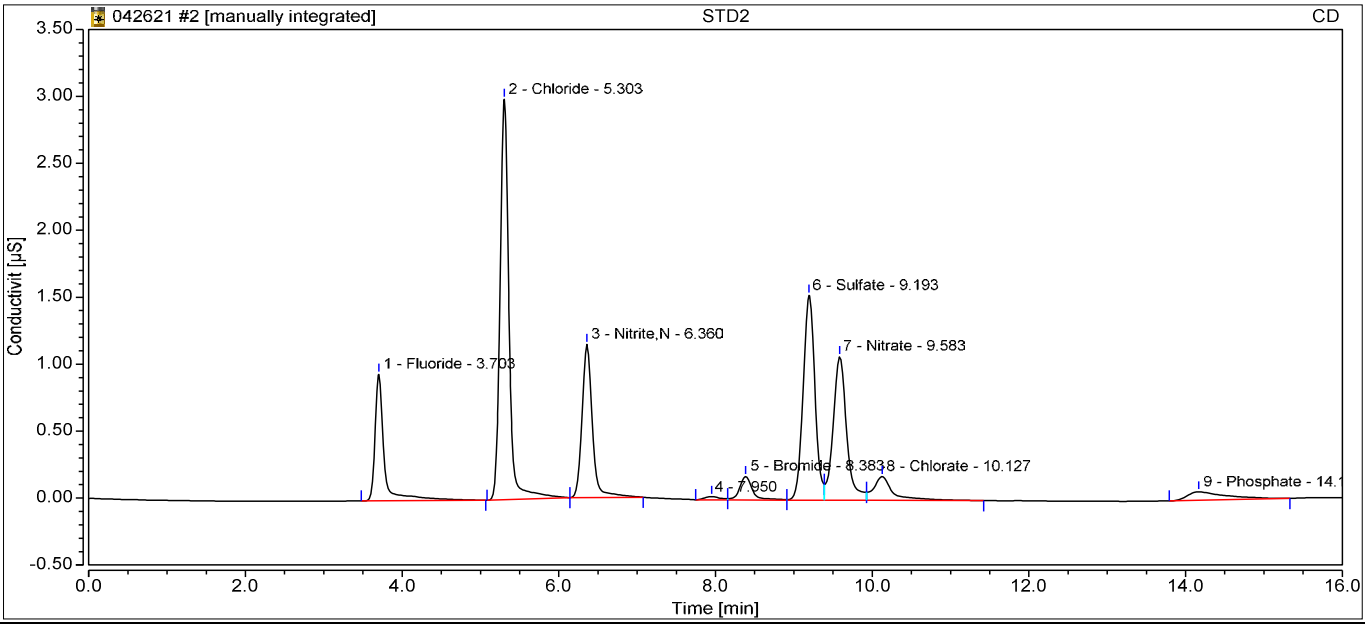
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.70	Fluoride	BMB	0.032	0.0880	0.0880	1.0000
2	5.30	Chloride	BM *	0.118	0.5381	0.5381	1.0000
3	6.35	Nitrite,N	MB*	0.049	0.0802	0.0802	1.0000
5	8.38	Bromide	M	0.013	0.1188	0.1188	1.0000
6	9.19	Sulfate	M	0.066	0.5285	0.5285	1.0000
7	9.59	Nitrate	M	0.054	0.1022	0.1022	1.0000
8	10.12	Chlorate	MB	0.013	0.0640	0.0640	1.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	1.0000
Total:			**0.000**	**0.345**		**1.52**	

2 STD2

Sample Name:	**STD2**	*Injection Volume:*	**5.00**
Vial Number:	**BE2**	*Channel:*	**CD**
Sample Type:	**Calibration Standard**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**04/20/2021 10:12**	*Sample Weight:*	**1.0000**

Run Time:



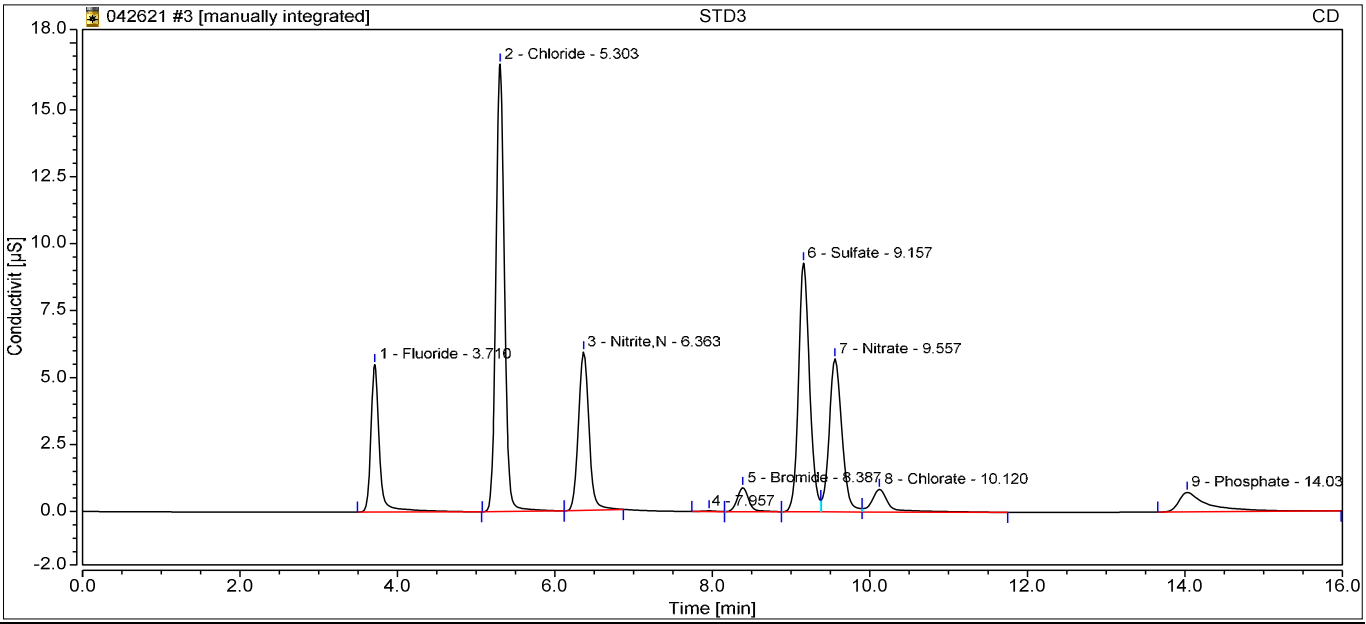
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.70	Fluoride	BMB	0.129	0.3886	0.3886	1.0000
2	5.30	Chloride	BMb*	0.393	1.8537	1.8537	1.0000
3	6.36	Nitrite,N	bMB*	0.176	0.3975	0.3975	1.0000
5	8.38	Bromide	M	0.033	0.3714	0.3714	1.0000
6	9.19	Sulfate	M	0.266	1.8512	1.8512	1.0000
7	9.58	Nitrate	M	0.213	0.3976	0.3976	1.0000
8	10.13	Chlorate	MB	0.052	0.4776	0.4776	1.0000
9	14.17	Phosphate	BMB	0.036	0.4401	0.4401	1.0000
Total:			**0.000**	**1.300**		**6.18**	

3 STD3

Sample Name:	**STD3**	*Injection Volume:*	**5.00**
Vial Number:	**BE3**	*Channel:*	**CD**
Sample Type:	**Calibration Standard**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**04/20/2021 10:30**	*Sample Weight:*	**1.0000**

Run Time:



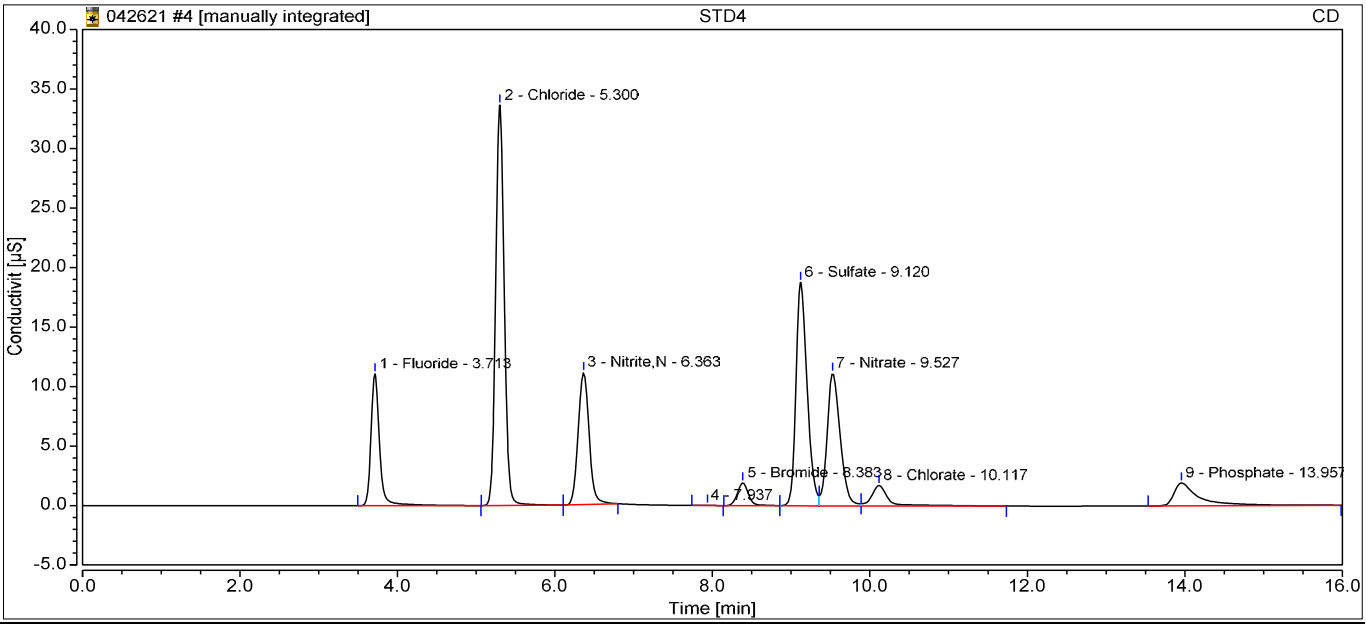
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.71	Fluoride	BMB	0.701	2.1586	2.1586	1.0000
2	5.30	Chloride	BMb*	2.082	9.9444	9.9444	1.0000
3	6.36	Nitrite,N	bMB*	0.918	2.2461	2.2461	1.0000
5	8.39	Bromide	M	0.152	1.8301	1.8301	1.0000
6	9.16	Sulfate	M	1.509	10.0487	10.0487	1.0000
7	9.56	Nitrate	M	1.072	1.9895	1.9895	1.0000
8	10.12	Chlorate	MB	0.216	2.2126	2.2126	1.0000
9	14.03	Phosphate	BMB	0.322	1.8648	1.8648	1.0000
Total:			**0.000**	**6.971**		**32.29**	

4 STD4

Sample Name:	**STD4**	*Injection Volume:*	**5.00**
Vial Number:	**BE4**	*Channel:*	**CD**
Sample Type:	**Calibration Standard**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**04/20/2021 10:49**	*Sample Weight:*	**1.0000**

Run Time:



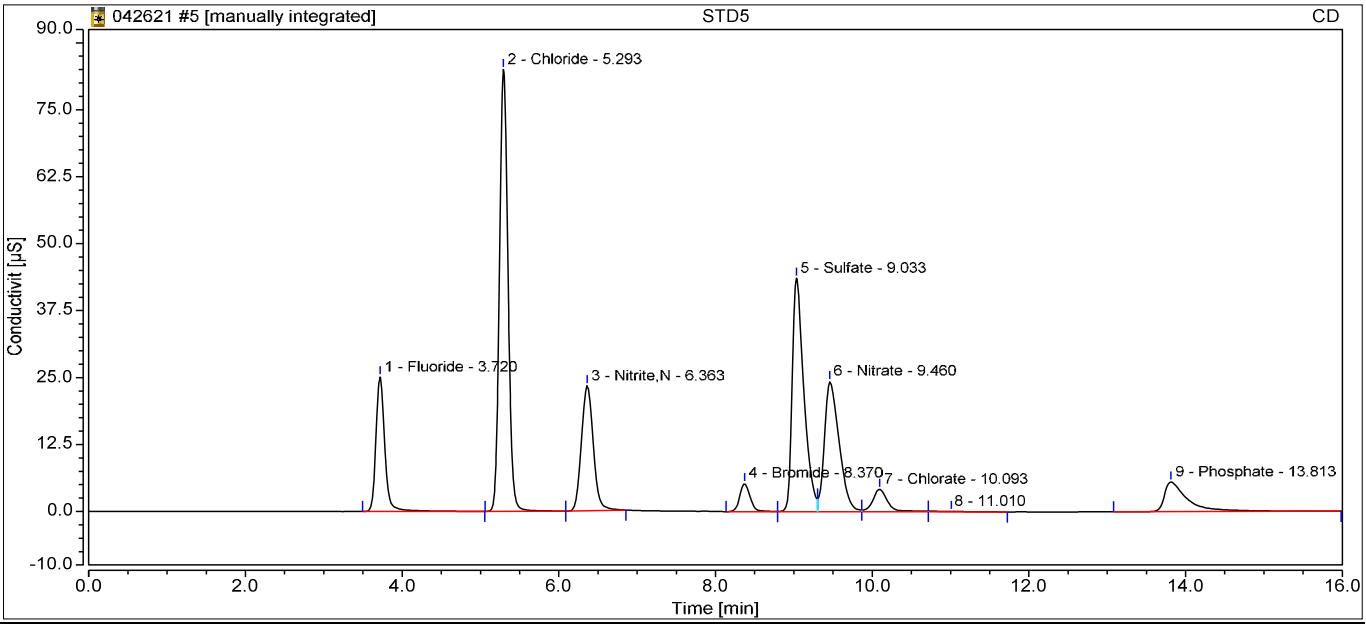
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.71	Fluoride	BMB	1.403	4.3336	4.3336	1.0000
2	5.30	Chloride	BMb*	4.203	20.1063	20.1063	1.0000
3	6.36	Nitrite,N	bMB*	1.787	4.4092	4.4092	1.0000
5	8.38	Bromide	BM	0.313	3.8179	3.8179	1.0000
6	9.12	Sulfate	M	3.063	20.3070	20.3070	1.0000
7	9.53	Nitrate	M	2.148	3.9846	3.9846	1.0000
8	10.12	Chlorate	MB	0.424	4.4085	4.4085	1.0000
9	13.96	Phosphate	BMB	0.719	3.8422	3.8422	1.0000
Total:			**0.000**	**14.060**		**65.21**	

5 STD5

Sample Name:	**STD5**	*Injection Volume:*	**5.00**
Vial Number:	**BE5**	*Channel:*	**CD**
Sample Type:	**Calibration Standard**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**04/20/2021 11:07**	*Sample Weight:*	**1.0000**

Run Time:



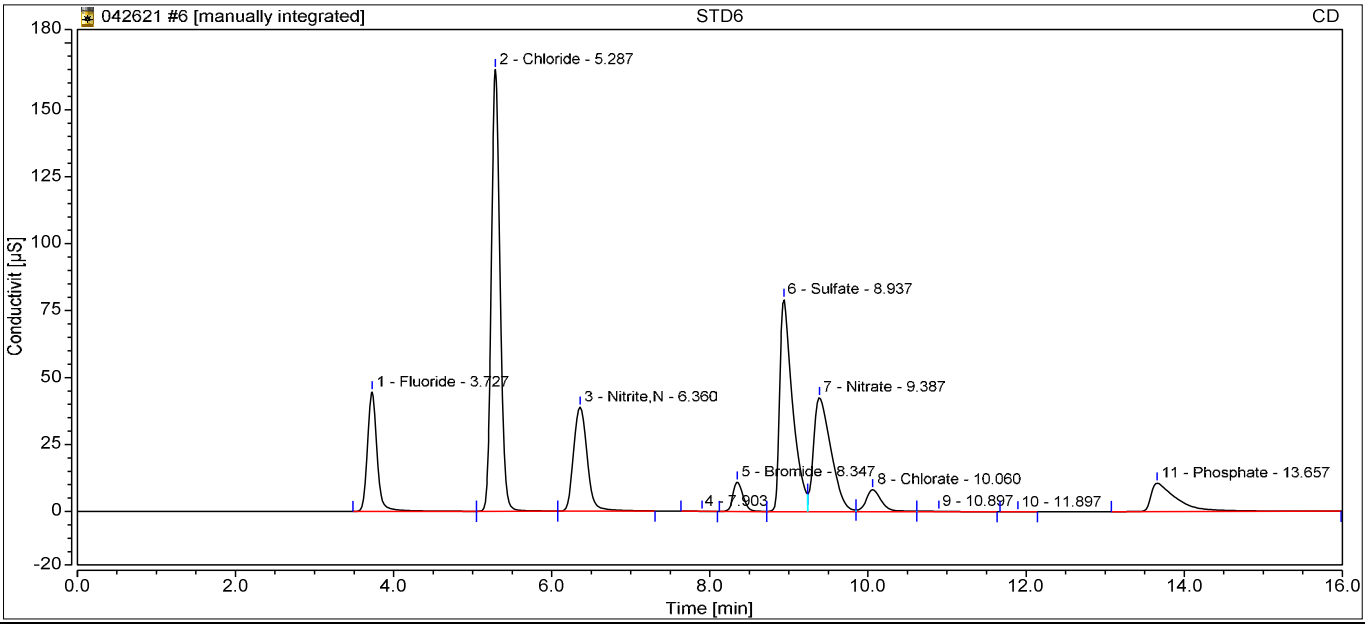
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.72	Fluoride	BMB	3.290	10.1807	10.1807	1.0000
2	5.29	Chloride	BMb*	10.372	49.6551	49.6551	1.0000
3	6.36	Nitrite,N	bMB*	4.114	10.2053	10.2053	1.0000
4	8.37	Bromide	BM	0.808	9.9156	9.9156	1.0000
5	9.03	Sulfate	M	7.557	49.9615	49.9615	1.0000
6	9.46	Nitrate	M	5.301	9.8318	9.8318	1.0000
7	10.09	Chlorate	M	0.936	9.8243	9.8243	1.0000
9	13.81	Phosphate	BMB	1.932	9.8822	9.8822	1.0000
Total:			**0.000**	**34.310**		**159.46**	

6 STD6

Sample Name:	**STD6**	*Injection Volume:*	**5.00**
Vial Number:	**BE6**	*Channel:*	**CD**
Sample Type:	**Calibration Standard**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**04/20/2021 11:28**	*Sample Weight:*	**1.0000**

Run Time:



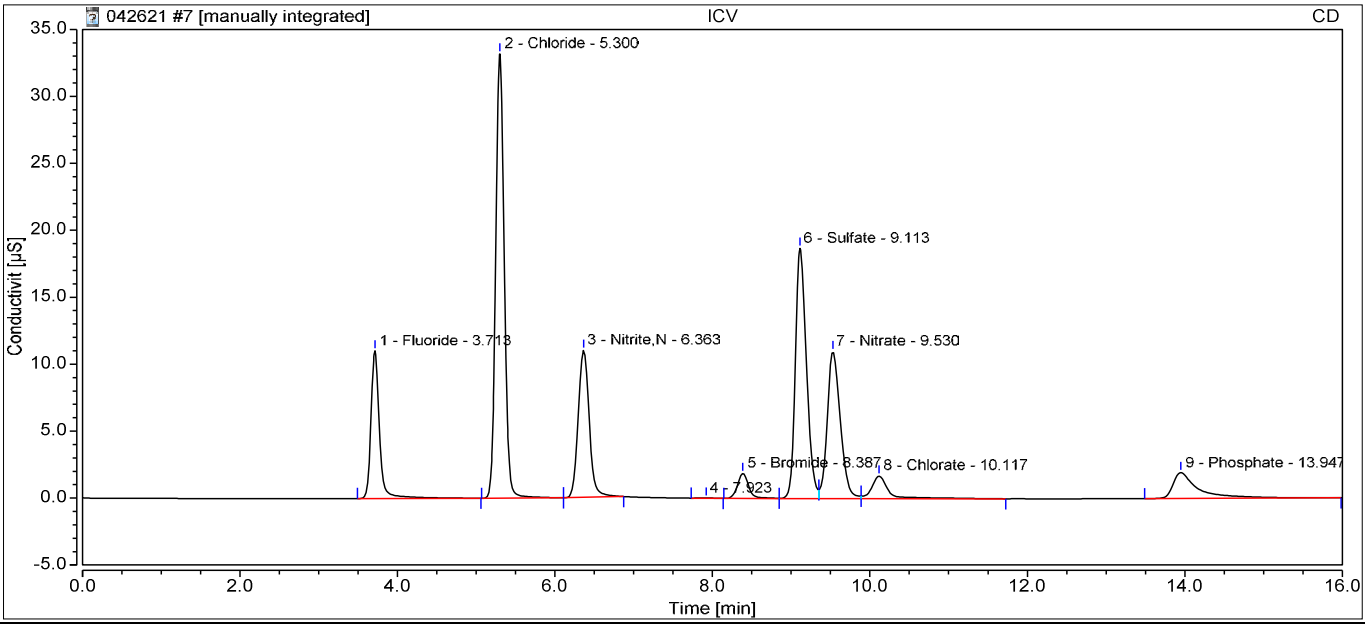
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.73	Fluoride	BMB	6.250	19.3505	19.3505	1.0000
2	5.29	Chloride	BMb*	20.966	100.4024	100.4024	1.0000
3	6.36	Nitrite,N	bMB*	7.710	19.1617	19.1617	1.0000
5	8.35	Bromide	BM	1.662	20.4462	20.4462	1.0000
6	8.94	Sulfate	M	15.110	99.8032	99.8032	1.0000
7	9.39	Nitrate	M	10.889	20.1943	20.1943	1.0000
8	10.06	Chlorate	M	1.852	19.5130	19.5130	1.0000
11	13.66	Phosphate	BMB	4.037	20.3707	20.3707	1.0000
Total:			**0.000**	**68.477**		**319.24**	

7 ICV

Sample Name:	**ICV**	*Injection Volume:*	**5.00**
Vial Number:	**BE7**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**04/20/2021 11:46**	*Sample Weight:*	**1.0000**

Run Time:



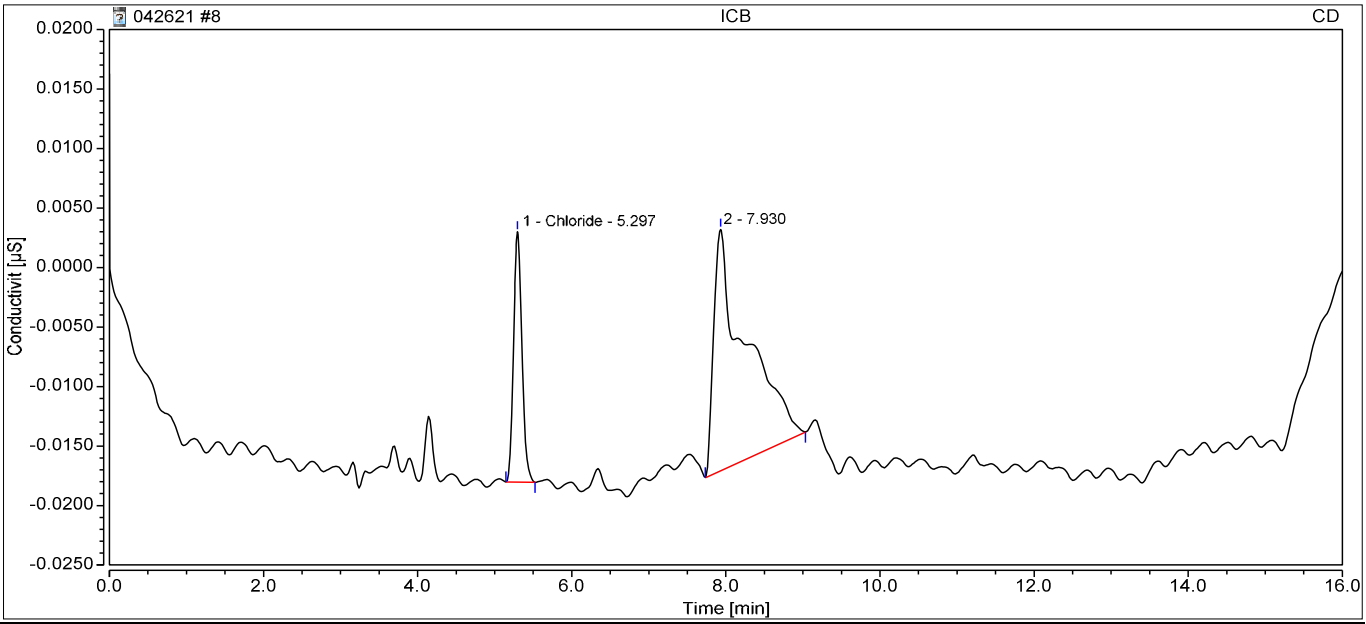
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.71	Fluoride	BMB	1.384	4.2770	4.2770	1.0000
2	5.30	Chloride	BMb*	4.144	19.8205	19.8205	1.0000
3	6.36	Nitrite,N	bMB*	1.777	4.3839	4.3839	1.0000
5	8.39	Bromide	BM	0.309	3.7640	3.7640	1.0000
6	9.11	Sulfate	M	3.024	20.0510	20.0510	1.0000
7	9.53	Nitrate	M	2.119	3.9305	3.9305	1.0000
8	10.12	Chlorate	MB	0.422	4.3868	4.3868	1.0000
9	13.95	Phosphate	BMB	0.725	3.8706	3.8706	1.0000
Total:			**0.000**	**13.903**		**64.48**	

8 ICB

Sample Name:	**ICB**	*Injection Volume:*	**5.00**
Vial Number:	**BE8**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**04/20/2021 12:25**	*Sample Weight:*	**1.0000**

Run Time:

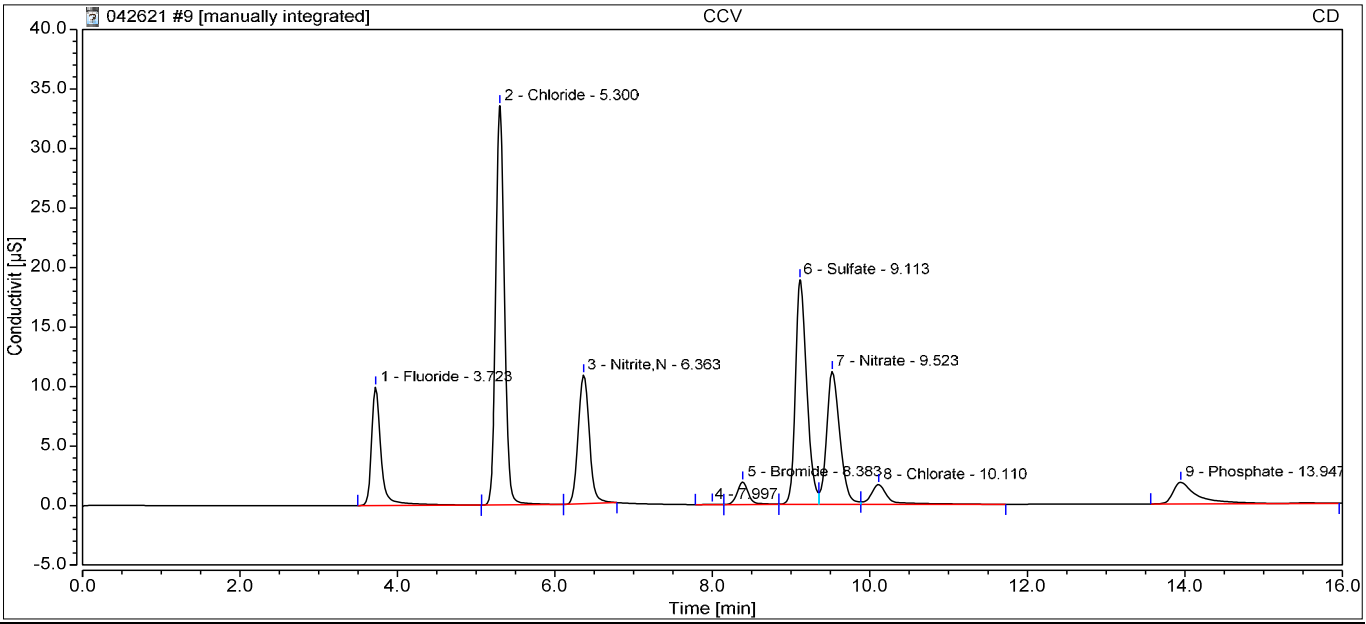


Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	1.0000
1	5.30	Chloride	BMB	0.003	n.a.	n.a.	1.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Nitrate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	1.0000
Total:			**0.000**	**0.003**		**0.00**	

9 CCV			
Sample Name:	**CCV**	*Injection Volume:*	**5.00**
Vial Number:	**R1**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**04/26/2021 12:52**	*Sample Weight:*	**1.0000**

Run Time:



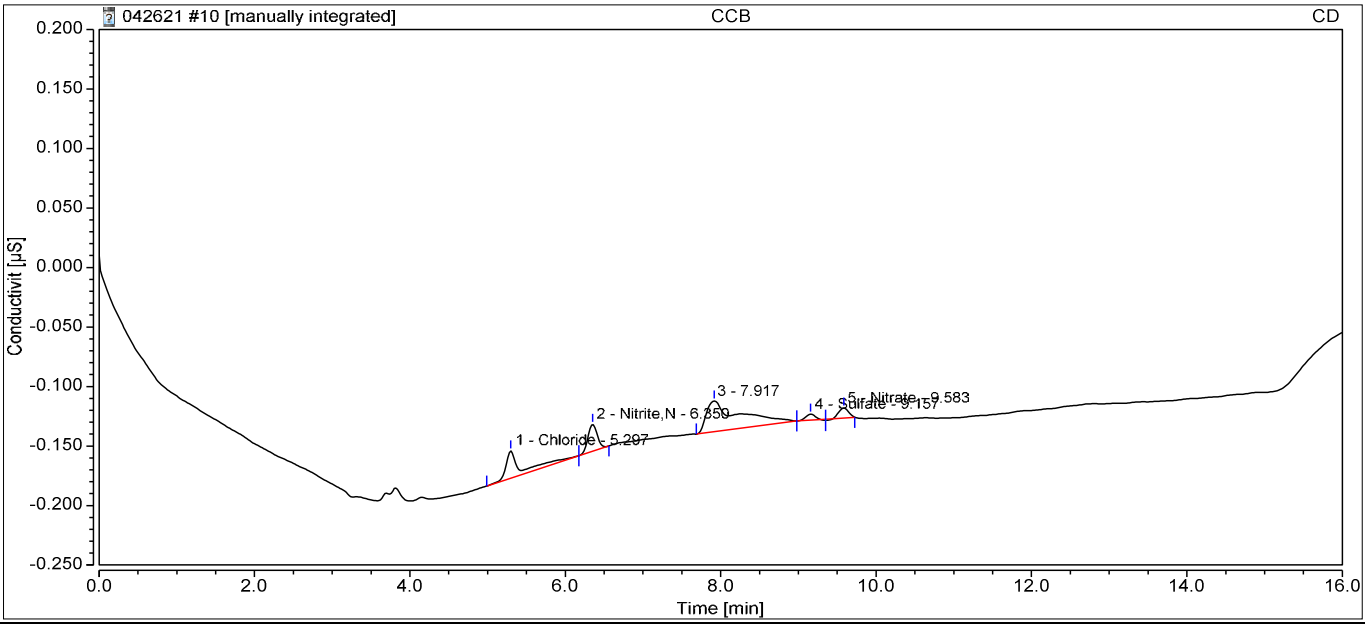
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.72	Fluoride	BMB	1.407	4.3482	4.3482	1.0000
2	5.30	Chloride	BMb*	4.279	20.4679	20.4679	1.0000
3	6.36	Nitrite,N	bMB*	1.775	4.3799	4.3799	1.0000
5	8.38	Bromide	M	0.318	3.8824	3.8824	1.0000
6	9.11	Sulfate	M	3.128	20.7363	20.7363	1.0000
7	9.52	Nitrate	M	2.190	4.0622	4.0622	1.0000
8	10.11	Chlorate	MB	0.427	4.4395	4.4395	1.0000
9	13.95	Phosphate	BM *	0.675	3.6197	3.6197	1.0000
Total:			**0.000**	**14.199**		**65.94**	

10 CCB

Sample Name:	**CCB**	*Injection Volume:*	**5.00**
Vial Number:	**R4**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**04/26/2021 13:10**	*Sample Weight:*	**1.0000**

Run Time:



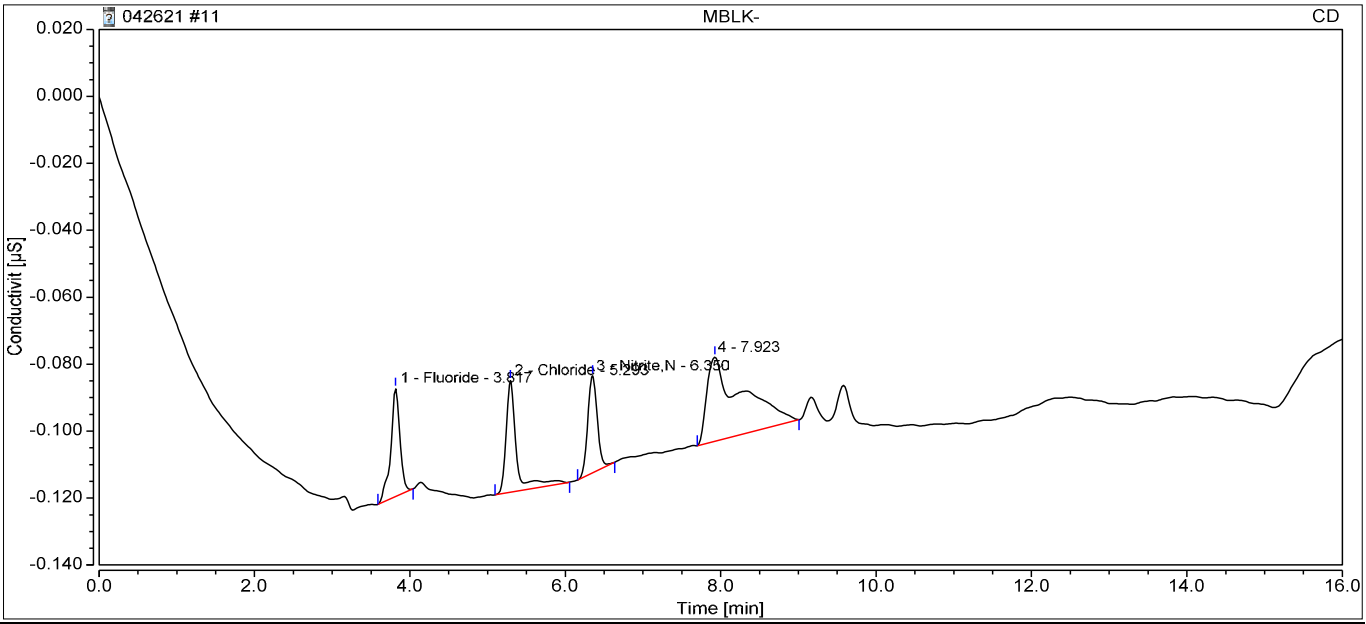
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	1.0000
1	5.30	Chloride	BMB	0.005	n.a.	n.a.	1.0000
2	6.35	Nitrite,N	BMB	0.003	n.a.	n.a.	1.0000
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	1.0000
4	9.16	Sulfate	bM *	0.001	0.0985	0.0985	1.0000
5	9.58	Nitrate	MB*	0.001	0.0043	0.0043	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	1.0000
Total:			**0.000**	**0.010**		**0.10**	

11 MBLK-

Sample Name:	**MBLK-**	*Injection Volume:*	**5.00**
Vial Number:	**R5**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**04/26/2021 13:29**	*Sample Weight:*	**1.0000**

Run Time:

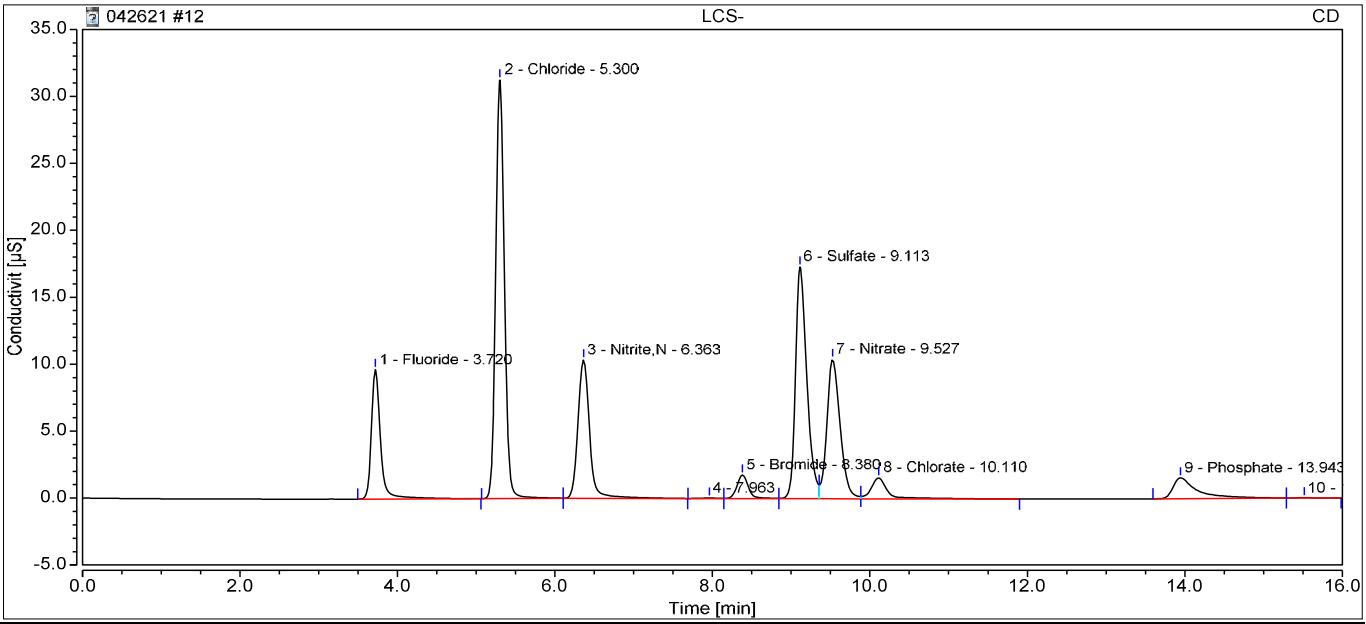


Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.82	Fluoride	BMB	0.004	0.0023	0.0023	1.0000
2	5.29	Chloride	BMB	0.005	n.a.	n.a.	1.0000
3	6.35	Nitrite,N	BMB	0.004	n.a.	n.a.	1.0000
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Nitrate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	1.0000
Total:			**0.000**	**0.014**		**0.00**	

12	*LCS-*		
Sample Name:	**LCS-**	*Injection Volume:*	**5.00**
Vial Number:	**R2**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**04/26/2021 13:47**	*Sample Weight:*	**1.0000**

Run Time:



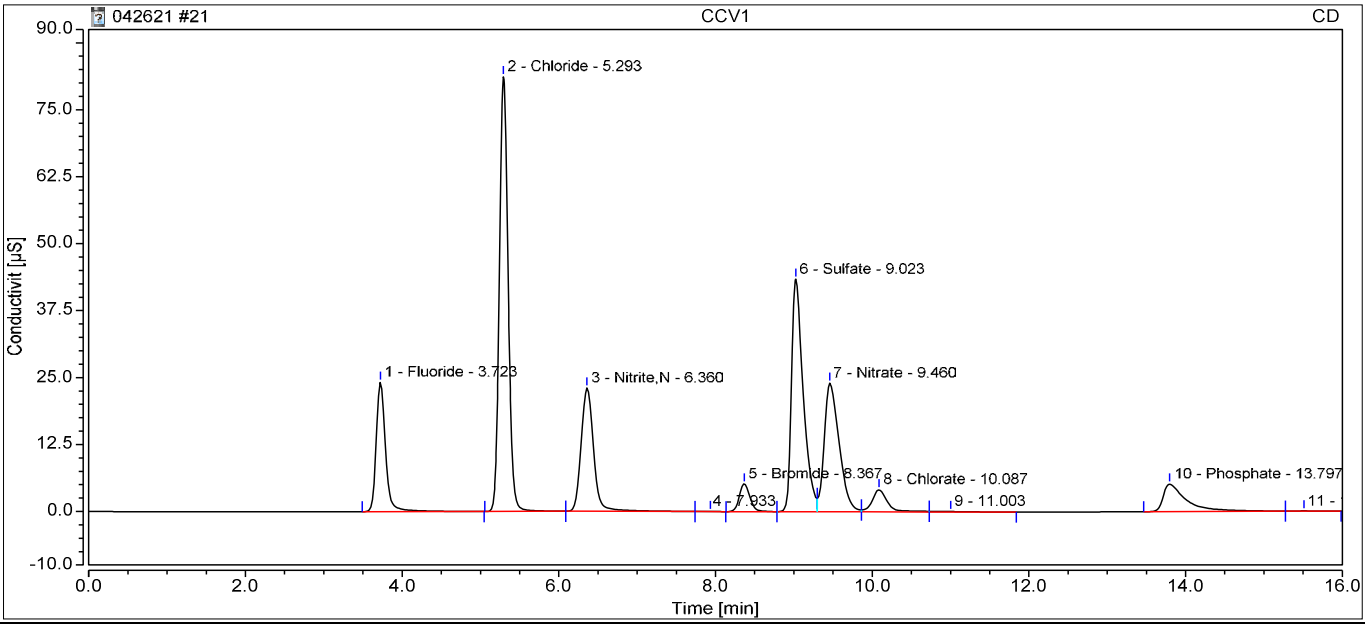
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.72	Fluoride	BMB	1.308	4.0415	4.0415	1.0000
2	5.30	Chloride	BMB	3.976	19.0186	19.0186	1.0000
3	6.36	Nitrite,N	BMB	1.761	4.3454	4.3454	1.0000
5	8.38	Bromide	M	0.294	3.5890	3.5890	1.0000
6	9.11	Sulfate	M	2.868	19.0196	19.0196	1.0000
7	9.53	Nitrate	M	2.035	3.7761	3.7761	1.0000
8	10.11	Chlorate	MB	0.390	4.0480	4.0480	1.0000
9	13.94	Phosphate	BMB	0.561	3.0518	3.0518	1.0000
Total:			**0.000**	**13.194**		**60.89**	

21 CCV1

Sample Name:	**CCV1**	*Injection Volume:*	**5.00**
Vial Number:	**R3**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**04/26/2021 16:38**	*Sample Weight:*	**1.0000**

Run Time:



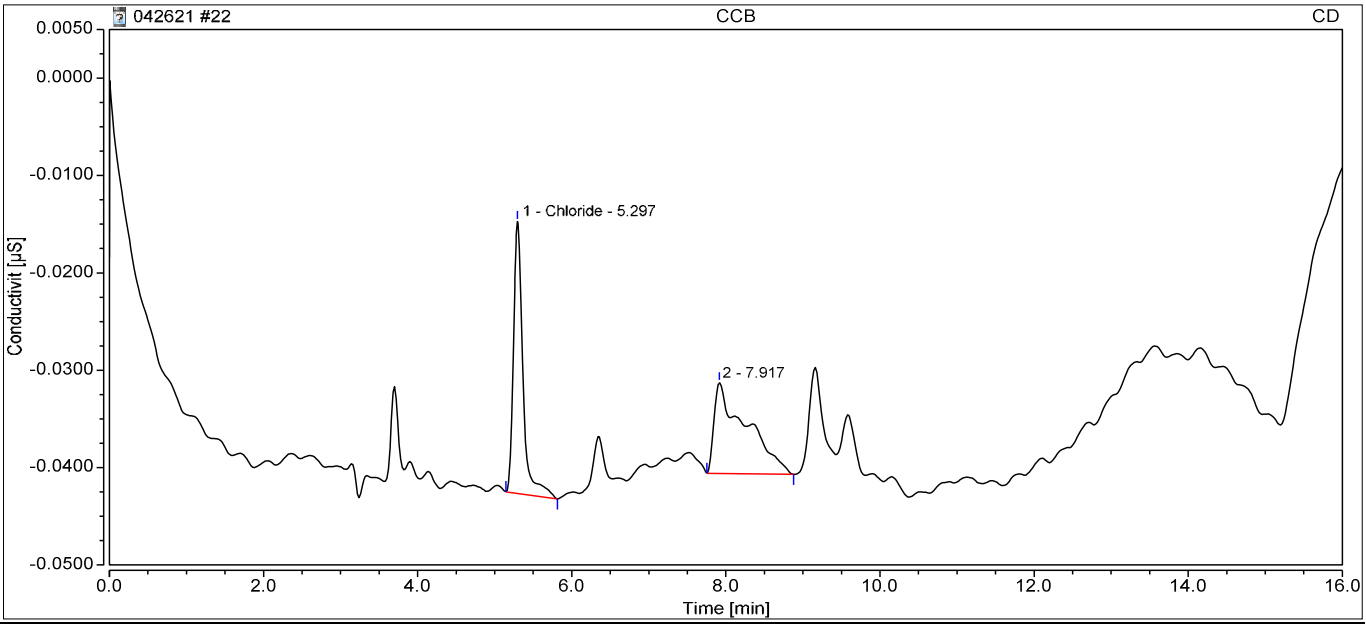
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.72	Fluoride	BMB	3.347	10.3563	10.3563	1.0000
2	5.29	Chloride	BMB	10.456	50.0564	50.0564	1.0000
3	6.36	Nitrite,N	BMB	4.269	10.5919	10.5919	1.0000
5	8.37	Bromide	BM	0.821	10.0730	10.0730	1.0000
6	9.02	Sulfate	M	7.554	49.9434	49.9434	1.0000
7	9.46	Nitrate	M	5.319	9.8644	9.8644	1.0000
8	10.09	Chlorate	M	0.939	9.8590	9.8590	1.0000
10	13.80	Phosphate	BMB	1.764	9.0462	9.0462	1.0000
Total:			**0.000**	**34.468**		**159.79**	

22 CCB

Sample Name:	**CCB**	*Injection Volume:*	**5.00**
Vial Number:	**R6**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**04/26/2021 16:56**	*Sample Weight:*	**1.0000**

Run Time:



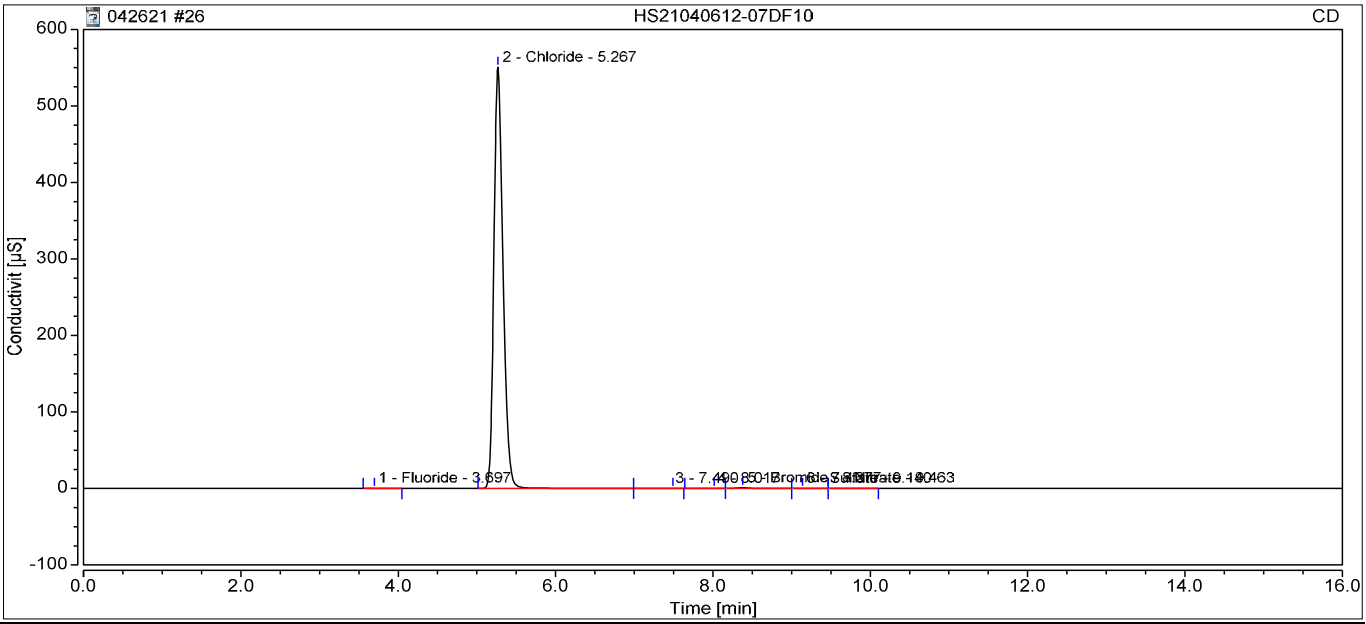
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	1.0000
1	5.30	Chloride	BMB	0.004	n.a.	n.a.	1.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Nitrate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	1.0000
Total:			**0.000**	**0.004**		**0.00**	

26 HS21040612-07DF10

Sample Name:	**HS21040612-07DF10**	*Injection Volume:*	**5.00**
Vial Number:	**RA7**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**10.0000**
Recording Time:	**04/26/2021 18:10**	*Sample Weight:*	**1.0000**

Run Time:



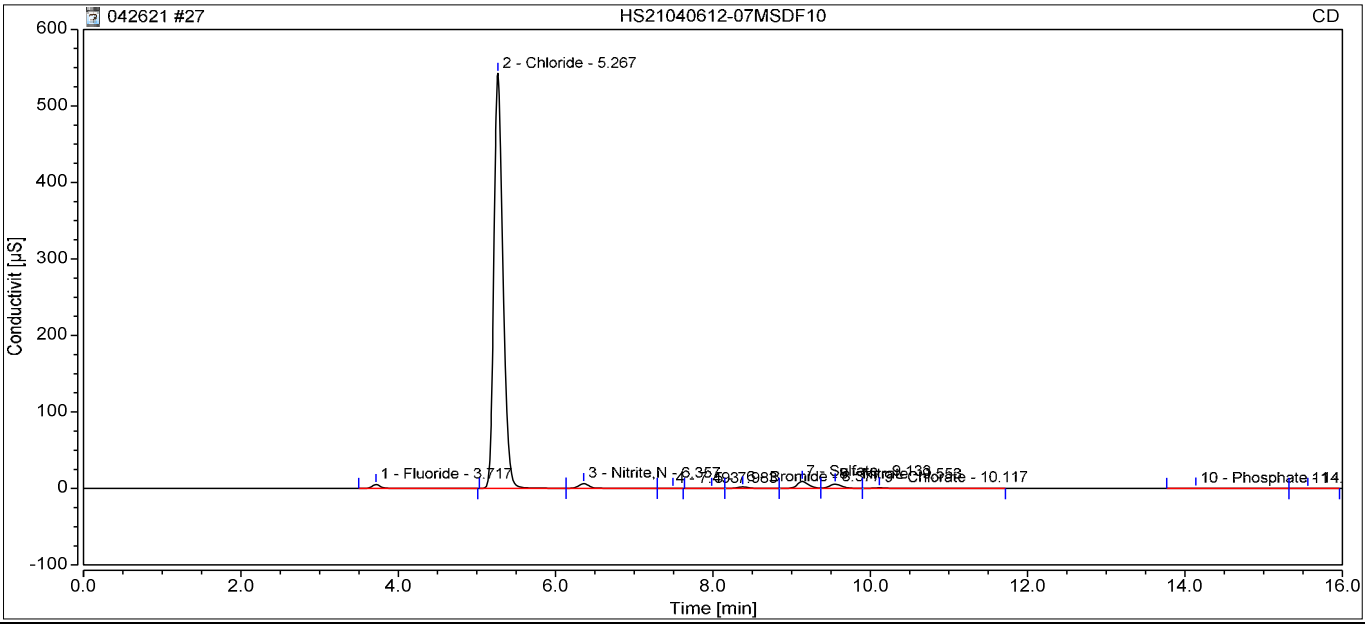
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.70	Fluoride	BMB	0.011	0.0230	0.2304	10.0000
2	5.27	Chloride	BMB	73.569	352.3781	3523.7811	10.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	10.0000
5	8.38	Bromide	M	0.233	2.8379	28.3786	10.0000
6	9.14	Sulfate	M	0.016	0.2028	2.0277	10.0000
7	9.46	Nitrate	MB	0.004	0.0093	0.0929	10.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	10.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	10.0000
Total:			**0.000**	**73.834**		**3554.51**	

27 HS21040612-07MSDF10

Sample Name:	**HS21040612-07MSDF10**	*Injection Volume:*	**5.00**
Vial Number:	**RA8**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**10.0000**
Recording Time:	**04/26/2021 18:28**	*Sample Weight:*	**1.0000**

Run Time:



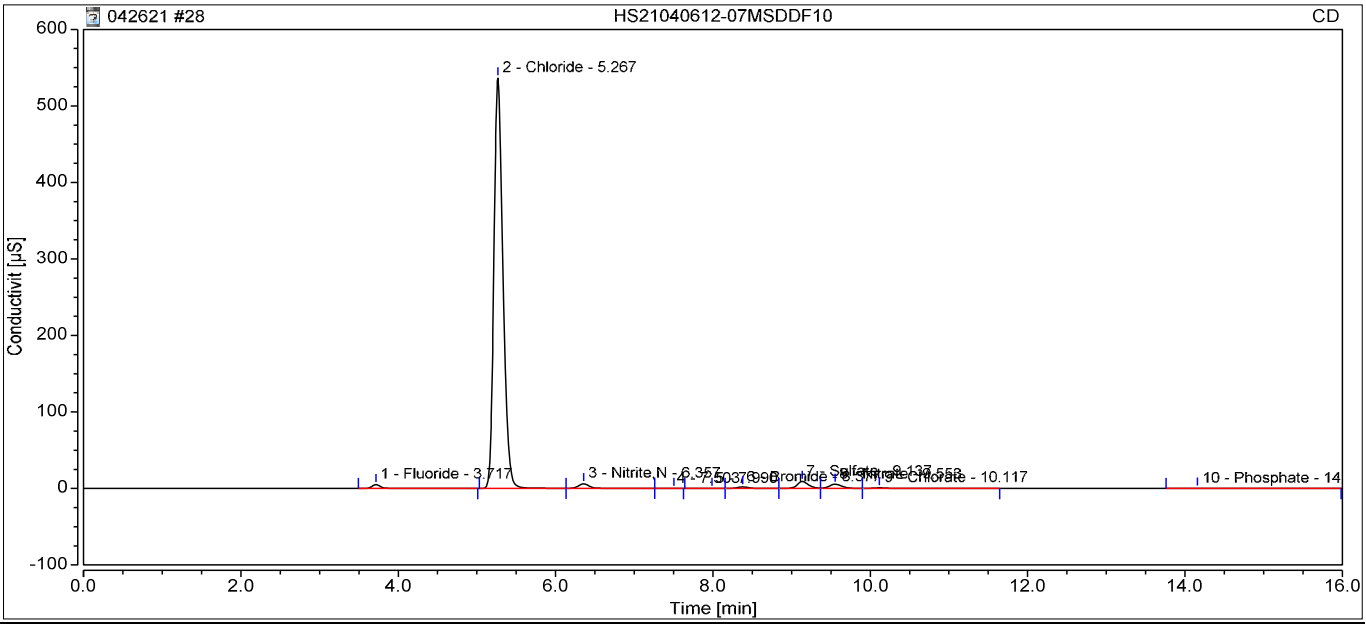
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.72	Fluoride	BMB	0.730	2.2494	22.4941	10.0000
2	5.27	Chloride	BMB	72.225	345.9414	3459.4140	10.0000
3	6.36	Nitrite,N	BMB	0.974	2.3843	23.8434	10.0000
6	8.38	Bromide	M	0.379	4.6342	46.3424	10.0000
7	9.13	Sulfate	M	1.581	10.5256	105.2562	10.0000
8	9.55	Nitrate	M	1.101	2.0428	20.4281	10.0000
9	10.12	Chlorate	MB	0.224	2.2969	22.9691	10.0000
10	14.14	Phosphate	BMB	0.172	1.1158	11.1579	10.0000
Total:			**0.000**	**77.386**		**3711.91**	

28 HS21040612-07MSDDF10

Sample Name:	**HS21040612-07MSDDF10**	*Injection Volume:*	**5.00**
Vial Number:	**RB1**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**10.0000**
Recording Time:	**04/26/2021 18:47**	*Sample Weight:*	**1.0000**

Run Time:



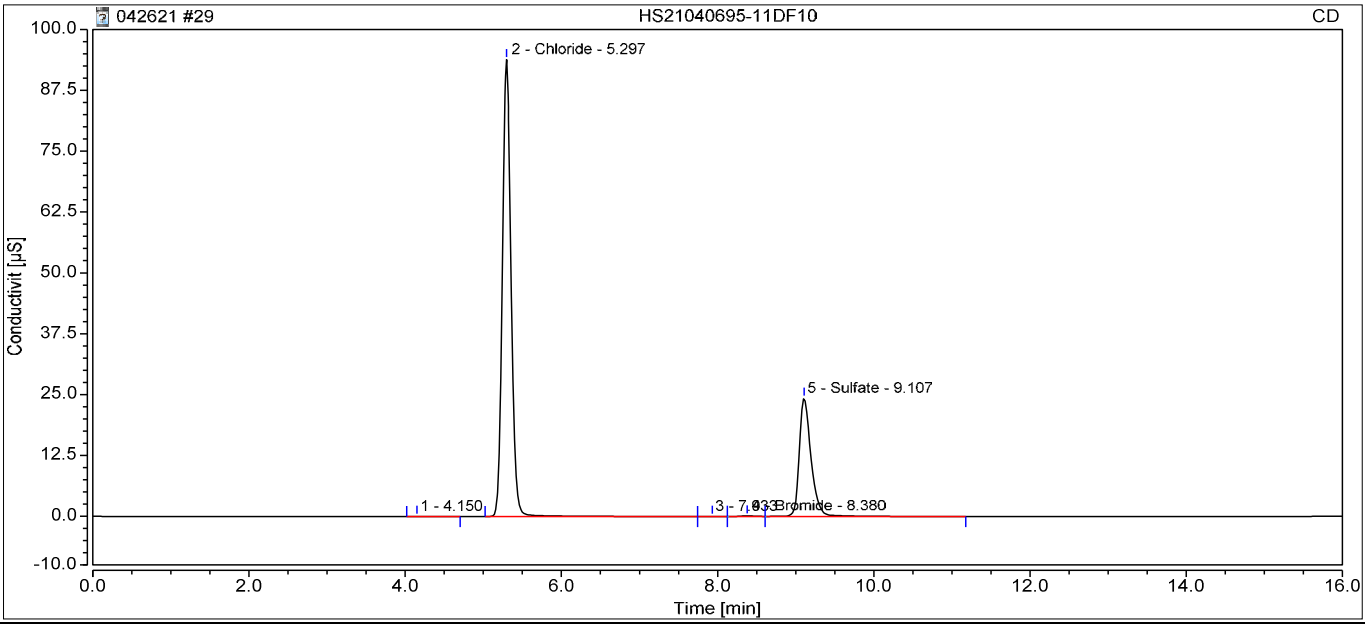
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.72	Fluoride	BMB	0.720	2.2192	22.1920	10.0000
2	5.27	Chloride	BMB	71.242	341.2310	3412.3100	10.0000
3	6.36	Nitrite,N	BMB	0.962	2.3546	23.5461	10.0000
6	8.38	Bromide	M	0.371	4.5309	45.3089	10.0000
7	9.14	Sulfate	M	1.552	10.3324	103.3242	10.0000
8	9.55	Nitrate	M	1.085	2.0148	20.1478	10.0000
9	10.12	Chlorate	MB	0.219	2.2358	22.3582	10.0000
10	14.16	Phosphate	BMB	0.191	1.2130	12.1302	10.0000
Total:			**0.000**	**76.342**		**3661.32**	

29 HS21040695-11DF10

Sample Name:	**HS21040695-11DF10**	*Injection Volume:*	**5.00**
Vial Number:	**RB2**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**10.0000**
Recording Time:	**04/26/2021 19:05**	*Sample Weight:*	**1.0000**

Run Time:



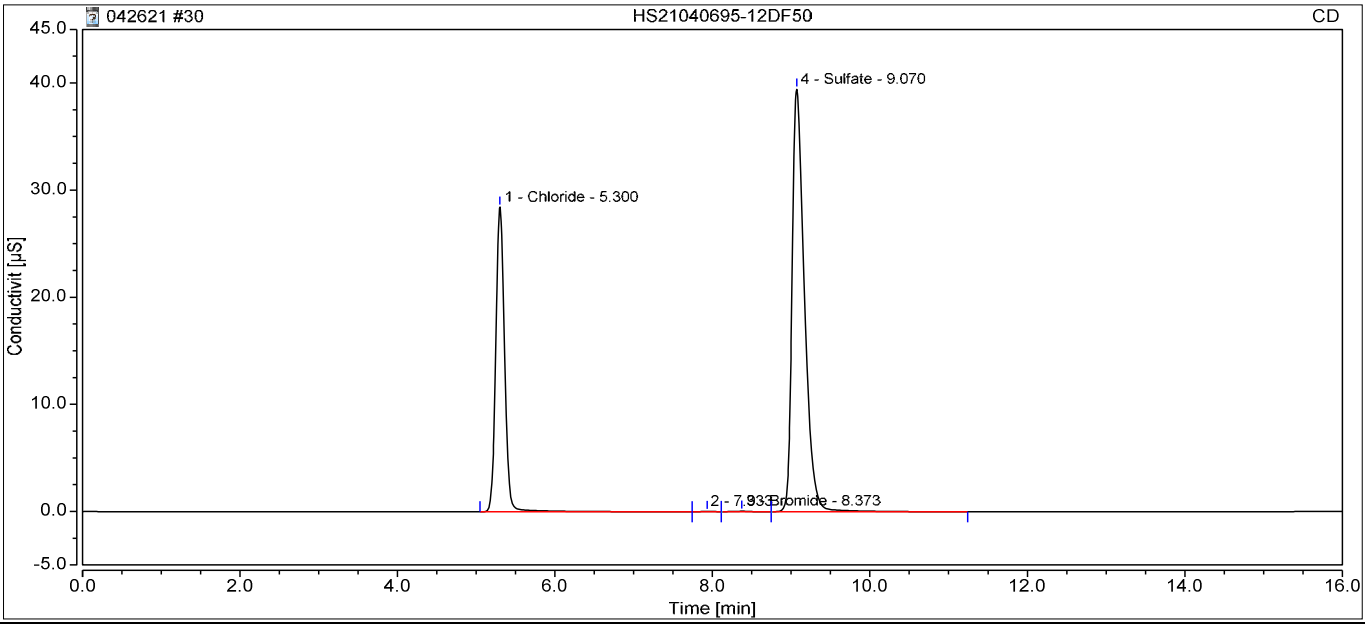
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	10.0000
2	5.30	Chloride	BMB	12.135	58.1012	581.0118	10.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	10.0000
4	8.38	Bromide	M	0.026	0.2852	2.8517	10.0000
5	9.11	Sulfate	MB	4.261	28.2084	282.0843	10.0000
n.a.	n.a.	Nitrate	n.a.	n.a.	n.a.	n.a.	10.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	10.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	10.0000
Total:			**0.000**	**16.422**		**865.95**	

30 HS21040695-12DF50

Sample Name:	**HS21040695-12DF50**	*Injection Volume:*	**5.00**
Vial Number:	**RB3**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**50.0000**
Recording Time:	**04/26/2021 19:24**	*Sample Weight:*	**1.0000**

Run Time:



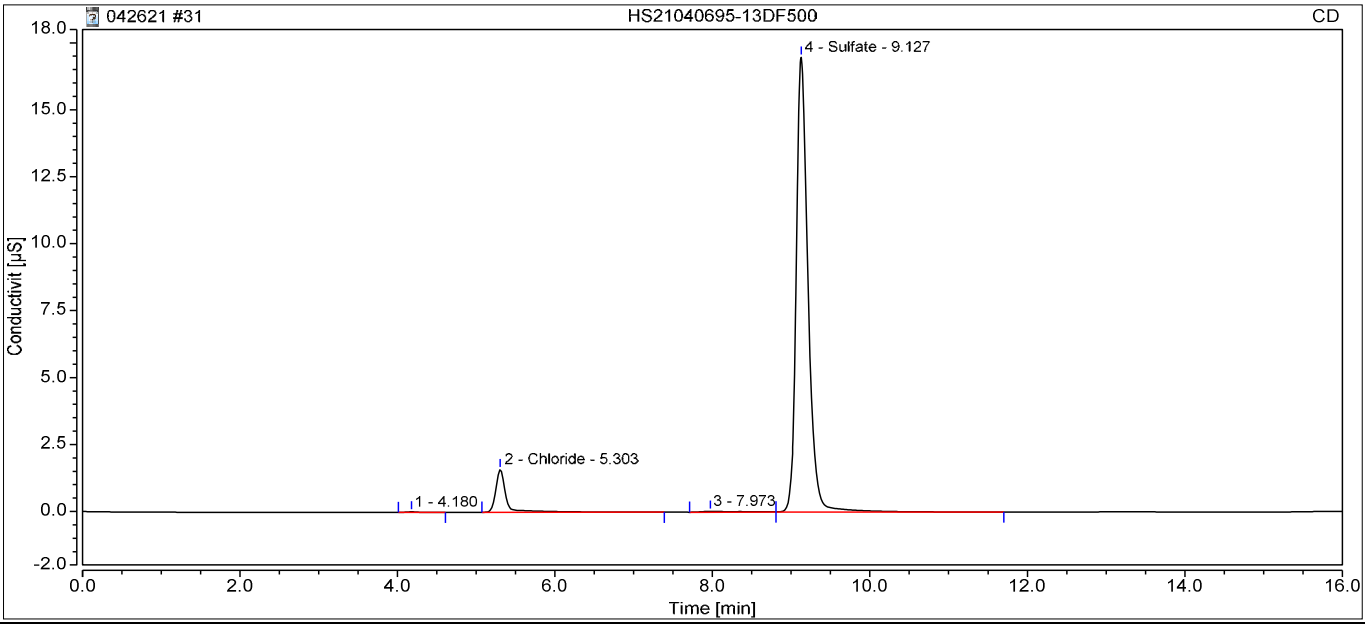
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	50.0000
1	5.30	Chloride	BMB	3.663	17.5166	875.8301	50.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	50.0000
3	8.37	Bromide	M	0.011	0.0949	4.7461	50.0000
4	9.07	Sulfate	MB	7.139	47.2024	2360.1212	50.0000
n.a.	n.a.	Nitrate	n.a.	n.a.	n.a.	n.a.	50.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	50.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	50.0000
Total:			**0.000**	**10.813**		**3240.70**	

31 HS21040695-13DF500

Sample Name:	**HS21040695-13DF500**	*Injection Volume:*	**5.00**
Vial Number:	**RB4**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**500.0000**
Recording Time:	**04/26/2021 19:42**	*Sample Weight:*	**1.0000**

Run Time:



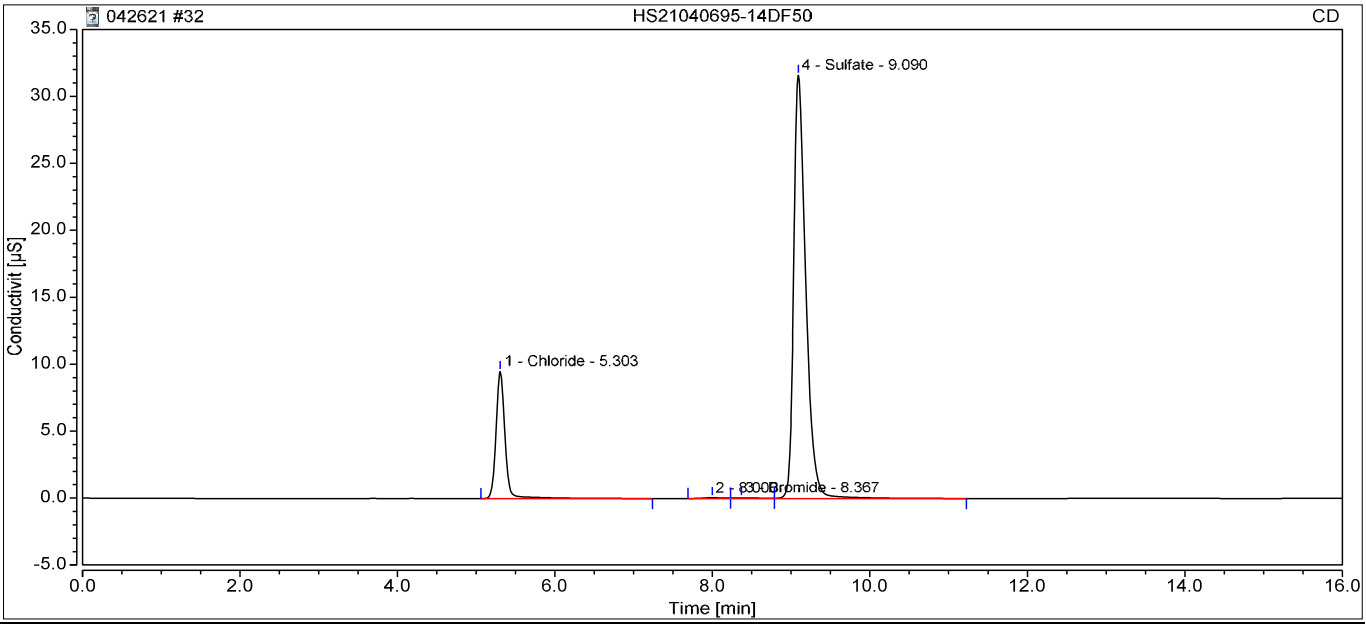
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	500.0000
2	5.30	Chloride	BMB	0.241	1.1259	562.9621	500.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	500.0000
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	500.0000
4	9.13	Sulfate	MB	2.958	19.6137	9806.8729	500.0000
n.a.	n.a.	Nitrate	n.a.	n.a.	n.a.	n.a.	500.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	500.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	500.0000
Total:			**0.000**	**3.199**		**10369.84**	

32 HS21040695-14DF50

Sample Name:	**HS21040695-14DF50**	*Injection Volume:*	**5.00**
Vial Number:	**RB5**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**50.0000**
Recording Time:	**04/26/2021 20:00**	*Sample Weight:*	**1.0000**

Run Time:



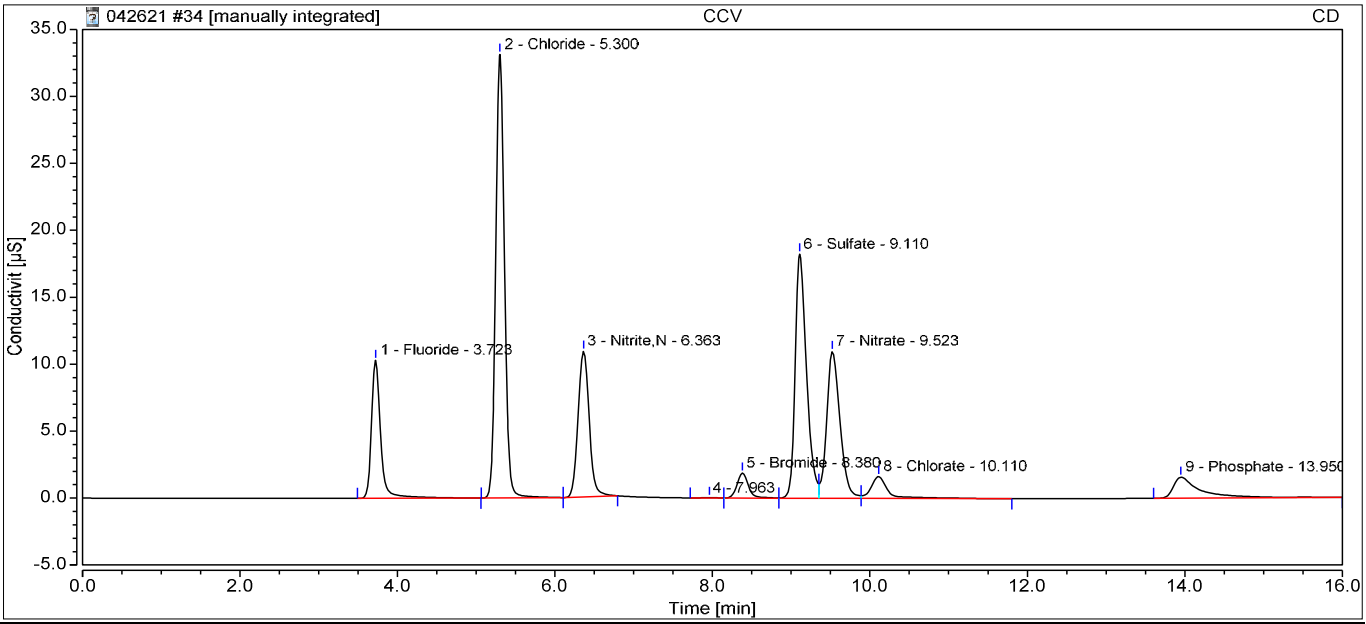
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	50.0000
1	5.30	Chloride	BMB	1.246	5.9381	296.9059	50.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	50.0000
3	8.37	Bromide	M	0.019	0.2017	10.0837	50.0000
4	9.09	Sulfate	MB	5.607	37.0919	1854.5961	50.0000
n.a.	n.a.	Nitrate	n.a.	n.a.	n.a.	n.a.	50.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	50.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	50.0000
Total:			**0.000**	**6.872**		**2161.59**	

34 CCV

Sample Name:	**CCV**	*Injection Volume:*	**5.00**
Vial Number:	**R1**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**04/26/2021 20:37**	*Sample Weight:*	**1.0000**

Run Time:



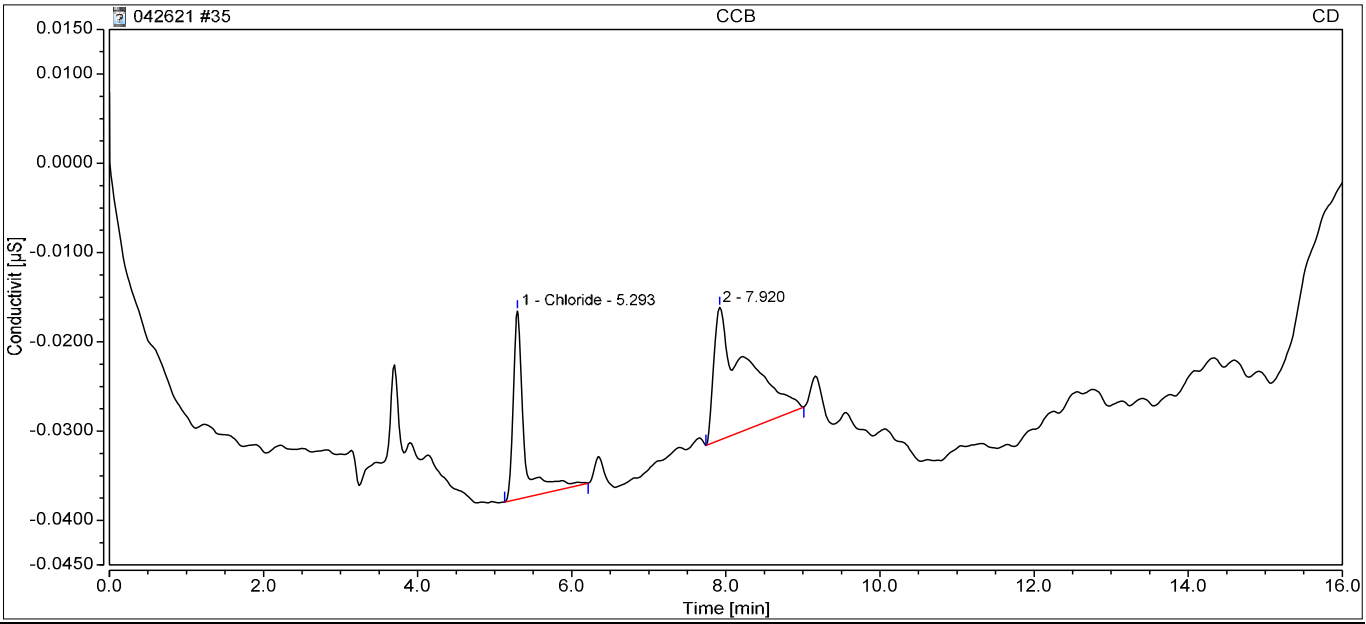
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.72	Fluoride	BMB	1.399	4.3235	4.3235	1.0000
2	5.30	Chloride	BMb*	4.219	20.1797	20.1797	1.0000
3	6.36	Nitrite,N	bMB*	1.776	4.3832	4.3832	1.0000
5	8.38	Bromide	M	0.312	3.8083	3.8083	1.0000
6	9.11	Sulfate	M	3.022	20.0363	20.0363	1.0000
7	9.52	Nitrate	M	2.156	4.0001	4.0001	1.0000
8	10.11	Chlorate	MB	0.417	4.3331	4.3331	1.0000
9	13.95	Phosphate	BMB*	0.640	3.4495	3.4495	1.0000
Total:			**0.000**	**13.942**		**64.51**	

35 CCB

Sample Name:	**CCB**	*Injection Volume:*	**5.00**
Vial Number:	**R4**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**04/26/2021 20:56**	*Sample Weight:*	**1.0000**

Run Time:



Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	1.0000
1	5.29	Chloride	BMB	0.003	n.a.	n.a.	1.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Nitrate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	1.0000
Total:			**0.000**	**0.003**		**0.00**	

HS21040695 - Sub Perch IV (E2100412)

ALS WO# HS21040695

April 30, 2021 Service Request No:E2100412

RJ Modashia
ALS Laboratory Group
10450 Stancliff Road
Suite 210
Houston, TX 77099-4338

Laboratory Results for: HS21040695

Dear RJ,

Enclosed are the results of the sample(s) submitted to our laboratory April 14, 2021
For your reference, these analyses have been assigned our service request number **E2100412.**

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current TNI standards, where applicable, and except as noted in the laboratory case narrative provided. All results are intended to be considered in their entirety and ALS Environmental is not responsible for use of less than the complete final report. Results apply only to the items submitted to the laboratory, as received for analysis. In accordance with the current TNI Standard, a statement on the estimated uncertainty of measurement of any quantitative analysis will be supplied upon request.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Corey Grandits
Project Manager

ADDRESS 10450 Stancliff Rd., Suite 210, Houston, TX 77099
PHONE +1 281 530 5656 | FAX +1 281 530 5887
ALS Group USA, Corp.
dba ALS Environmental

Certificate of Analysis

ALS Environmental - Houston HRMS
10450 Stancliff Rd, Suite 210, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

ALS Environmental

Client:	ALS Houston	**Service Request No.:**	E2100412
Project:	HS21040695	**Date Received:**	04/14/21
Sample Matrix:	W		

CASE NARRATIVE

All analyses were performed in adherence to the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier IV. When appropriate to the method, method blank results have been reported with each analytical test.

Sample Receipt

Seventeen samples were received for analysis at ALS Environmental in Houston on 04/14/21.

The samples were received in good condition and are consistent with the accompanying chain of custody form. The samples were stored in a refrigerator at 4°C upon receipt at the laboratory.

Data Validation Notes and Discussion

Precision and Accuracy:

EQ2100213 & EQ2100244: Laboratory Control Spike/Duplicate Laboratory Control Spike recoveries are within QC limits. EQ2100244 MS/MSD was performed on an unrelated sample. EQ2100213 LCS/LCSD reported in lieu of MS/MSD.

DoD certification is held for the method/matrix/analytes provided in this report.

The results of analyses are given in the attached laboratory report. All results are intended to be considered in their entirety, and ALS Environmental (ALS) is not responsible for utilization of less than the complete report.

Use of ALS group USA Corp dba ALS Environmental (ALS)'s Name. Client shall not use ALS's name or trademark in any marketing or reporting materials, press releases or in any other manner ("Materials") whatsoever and shall not attribute to ALS any test result, tolerance or specification derived from ALS's data ("Attribution") without ALS's prior written consent, which may be withheld by ALS for any reason in its sole discretion. To request ALS's consent, Client shall provide copies of the proposed Materials or Attribution and describe in writing Client's proposed use of such Materials or Attribution. If ALS has not provided written approval of the Materials or Attribution within ten (10) days of receipt from Client, Client's request to use ALS's name or trademark in any Materials or Attribution shall be deemed denied. ALS may, in its discretion, reasonably charge Client for its time in reviewing Materials or Attribution requests. Client acknowledges and agrees that the unauthorized use of ALS's name or trademark may cause ALS to incur irreparable harm for which the recovery of money damages will be inadequate. Accordingly, Client acknowledges and agrees that a violation shall justify preliminary injunctive relief. For questions contact the laboratory.

Client: ALS Environmental - US **Service Request:**E2100412
Project: HS21040695

SAMPLE CROSS-REFERENCE

SAMPLE #	CLIENT SAMPLE ID	DATE	TIME
E2100412-001	16WW44-210412	4/12/2021	0740
E2100412-002	16WW38-210412	4/12/2021	0830
E2100412-003	16WW37-210412	4/12/2021	0915
E2100412-004	16WW14-210412	4/12/2021	1000
E2100412-005	16WW34-210412	4/12/2021	1045
E2100412-006	16WW34-210412-FD	4/12/2021	1045
E2100412-007	16WW33-210412	4/12/2021	1130
E2100412-008	16WW32-210412	4/12/2021	1215
E2100412-009	16WW31-210412	4/12/2021	1300
E2100412-010	16WW46-210412	4/12/2021	1345
E2100412-011	16WW58-210413	4/13/2021	0740
E2100412-012	16WW57-210413	4/13/2021	0830
E2100412-013	16WW35-210413	4/13/2021	0940
E2100412-014	16WW36-210413	4/13/2021	1030
E2100412-015	16PM09-210413	4/13/2021	1115
E2100412-016	16PM06-210413	4/13/2021	1205
E2100412-017	16PM14-210413	4/13/2021	1250

Service Request Summary

Folder #: **E2100412**
Client Name: ALS Environmental - US
Project Name: HS21040695
Project Number:

Report To: RJ Modashia
ALS Laboratory Group
10450 Stancliff Road
Houston, TX 77099-4338
USA
Phone Number: 281-530-5656
Cell Number:
Fax Number: 281-530-5887
E-mail: rj.modashia@alsglobal.com

Project Chemist: Corey Grandits
Originating Lab: HOUSTON
Logged By: CGRANDITS
Date Received: 04/14/21
Internal Due Date: 4/28/2021
QAP: LAB QAP
Qualifier Set: Lab Standard
Formset: Lab Standard
Merged?: Y
Report to MDL?: Y
P.O. Number: HS21040695
EDD: No EDD Specified

17 125 mL-Plastic Bottle Plastic
Location: EHRMS-WIC 3B
Pressure Gas:

Lab Samp No.	Client Samp No	Matrix	Collected	HOUSTON ClO4 DOD/6850
E2100412-001	16WW44-210412	Ground Water	04/12/21 0740	**IV**
E2100412-002	16WW38-210412	Ground Water	04/12/21 0830	**IV**
E2100412-003	16WW37-210412	Ground Water	04/12/21 0915	**IV**
E2100412-004	16WW14-210412	Ground Water	04/12/21 1000	**IV**
E2100412-005	16WW34-210412	Ground Water	04/12/21 1045	**IV**
E2100412-006	16WW34-210412-FD	Ground Water	04/12/21 1045	**IV**
E2100412-007	16WW33-210412	Ground Water	04/12/21 1130	**IV**
E2100412-008	16WW32-210412	Ground Water	04/12/21 1215	**IV**
E2100412-009	16WW31-210412	Ground Water	04/12/21 1300	**IV**
E2100412-010	16WW46-210412	Ground Water	04/12/21 1345	**IV**
E2100412-011	16WW58-210413	Ground Water	04/13/21 0740	**IV**
E2100412-012	16WW57-210413	Ground Water	04/13/21 0830	**IV**
E2100412-013	16WW35-210413	Ground Water	04/13/21 0940	**IV**
E2100412-014	16WW36-210413	Ground Water	04/13/21 1030	**IV**
E2100412-015	16PM09-210413	Ground Water	04/13/21 1115	**IV**
E2100412-016	16PM06-210413	Ground Water	04/13/21 1205	**IV**

Service Request Summary

Folder #: **E2100412**
Client Name: ALS Environmental - US
Project Name: HS21040695
Project Number:

Report To: RJ Modashia
ALS Laboratory Group
10450 Stancliff Road
Houston, TX 77099-4338
USA
Phone Number: 281-530-5656
Cell Number:
Fax Number: 281-530-5887
E-mail: rj.modashia@alsglobal.com

Project Chemist: Corey Grandits
Originating Lab: HOUSTON
Logged By: CGRANDITS
Date Received: 04/14/21
Internal Due Date: 4/28/2021
QAP: LAB QAP
Qualifier Set: Lab Standard
Formset: Lab Standard
Merged?: Y
Report to MDL?: Y
P.O. Number: HS21040695
EDD: No EDD Specified

17 125 mL-Plastic Bottle Plastic
Location: EHRMS-WIC 3B
Pressure Gas:

Service Request Summary

Folder #: **E2100412**
Client Name: ALS Environmental - US
Project Name: HS21040695
Project Number:

Report To: RJ Modashia
ALS Laboratory Group
10450 Stancliff Road
Houston, TX 77099-4338
USA
Phone Number: 281-530-5656
Cell Number:
Fax Number: 281-530-5887
E-mail: rj.modashia@alsglobal.com

Project Chemist: Corey Grandits
Originating Lab: HOUSTON
Logged By: CGRANDITS
Date Received: 04/14/21
Internal Due Date: 4/28/2021
QAP: LAB QAP
Qualifier Set: Lab Standard
Formset: Lab Standard
Merged?: Y
Report to MDL?: Y
P.O. Number: HS21040695
EDD: No EDD Specified

17 125 mL-Plastic Bottle Plastic
Location: EHRMS-WIC 3B
Pressure Gas:

Service Request Summary

Folder #: **E2100412**
Client Name: ALS Environmental - US
Project Name: HS21040695
Project Number:

Report To: RJ Modashia
ALS Laboratory Group
10450 Stancliff Road
Houston, TX 77099-4338
USA
Phone Number: 281-530-5656
Cell Number:
Fax Number: 281-530-5887
E-mail: rj.modashia@alsglobal.com

Project Chemist: Corey Grandits
Originating Lab: HOUSTON
Logged By: CGRANDITS
Date Received: 04/14/21
Internal Due Date: 4/28/2021
QAP: LAB QAP
Qualifier Set: Lab Standard
Formset: Lab Standard
Merged?: Y
Report to MDL?: Y
P.O. Number: HS21040695
EDD: No EDD Specified

17 125 mL-Plastic Bottle Plastic
Location: EHRMS-WIC 3B
Pressure Gas:

Test Comments:

Group	Test/Method	Samples	Comments
Semivoa GCMS	ClO4 DOD/6850	17	Level II due 4/28,IV due 5/5

Data Qualifiers

Lab Standard

+	Possible Tedlar bag artifact.
A	TIC is a suspected aldol-condensation product
B	Analyte found in the associated method blank as well as in the sample.
BC	Reported results are not blank corrected.
BH	The back section of the tube yielded higher results than the front.
BT	Results indicated possible breakthrough; back section >=10% front section.
C	Result identification confirmed.
D	Compound identified in an analysis at a secondary dilution factor
D	Spike was diluted out
DE	Reported results are corrected for desorption efficiency.
E	Estimated value. Concentration above calibration range
E	The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
F	The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
H	The chromatographic fingerprint of the sample resembles a petroleum product but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
H1	Sample analysis performed past holding time. See case narrative.
H2	Initial analysis within holding time. Reanalysis for the required dilution was past holding time.
H3	Sample was received and analyzed past holding time.
H4	Sample was extracted past required extraction holding time, but analyzed within analysis holding time. See case narrative.
I	Internal standard not within the specified limits. See case narrative.
J	Estimated Value. Concentration found below MRL.
K	A deflection in the QC ion may indicate interference with the quantitation of this ion. The concentration of this analyte should be considered as an estimate.
K	Analyte was detected above the method reporting limit prior to normalization.
K	The reference ion ratio was outside acceptance criteria, which may indicate a potential bias to this result.
L	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
L1	Laboratory control sample recovery outside the specified limits; results may be biased high.
L2	Laboratory control sample recovery outside the specified limits; results may be biased low.
L3	Laboratory control sample recovery outside the specified limits.
M	Matrix interference; results may be biased high.
M	The duplicate injection precision not met.
M1	Matrix interference due to coelution with a non-target compound; results may be biased high.
N	Presumptive evidence of a compound for TICs that have been identified based on a mass spectral library search.
N	The Matrix Spike sample recovery is not within control limits. See case narrative.

Data Qualifiers

Lab Standard

O	The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
P	Indicates chlorodiphenyl ether interference present at the retention time of the target compound.
P	Pesticide/Aroclor target analyte > 40% difference for detected concentrations between GC columns
Q	Indicates as estimated value because the P and P + 2 theoretical abundance ratio does not meet method criteria.
R	Duplicate Precision not met.
R1	Duplicate precision not within the specified limits; however, the results are below the MRL and considered estimated.
S	Surrogate recovery not within specified limits.
S	The reported value was determined by the Method of Standard Additions (MSA).
T	Analyte is a tentatively identified compound, result is estimated.
U	Compound was analyzed for, but was not detected (ND).
V1	The continuing calibration verification standard was outside (biased high) the specified limits for this compound.
V2	The continuing calibration verification standard was outside (biased low) the specified limits for this compound.
W	Result quantified, but the corresponding peak was detected outside the generated retention time window.
W	The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
X	See case narrative.
Y	Recovery outside limits
Y	The chromatogram resembles a petroleum product but does not match the calibration standard.
Z	The chromatogram does not resemble a petroleum product.
i	The MRL/MDL has been elevated due to a matrix interference.

ALS Laboratory Group

Acronyms

Cal	Calibration
Conc	CONCentration
Dioxin(s)	Polychlorinated dibenzo-p-dioxin(s)
EDL	Estimated Detection Limit
EMPC	Estimated Maximum Possible Concentration
Flags	Data qualifiers
Furan(s)	Polychlorinated dibenzofuran(s)
g	Grams
ICAL	Initial CALibration
ID	IDentifier
Ions	Masses monitored for the analyte during data acquisition
L	Liter (s)
LCS	Laboratory Control Sample
DLCS	Duplicate Laboratory Control Sample
MB	Method Blank
MCL	Method Calibration Limit
MDL	Method Detection Limit
mL	Milliliters
MS	Matrix Spiked sample
DMS	Duplicate Matrix Spiked sample
NO	Number of peaks meeting all identification criteria
PCDD(s)	Polychlorinated dibenzo-p-dioxin(s)
PCDF(s)	Polychlorinated dibenzofuran(s)
ppb	Parts per billion
ppm	Parts per million
ppq	Parts per quadrillion
ppt	Parts per trillion
QA	Quality Assurance
QC	Quality Control
Ratio	Ratio of areas from monitored ions for an analyte
% Rec.	Percent recovery
RPD	Relative Percent Difference
RRF	Relative Response Factor
RT	Retention Time
SDG	Sample Delivery Group
S/N	Signal-to-noise ratio
TEF	Toxicity Equivalence Factor
TEQ	Toxicity Equivalence Quotient

10450 Stancliff Rd, Houston, TX 77099 | 281-530-5656 | www.alsglobal.com

ALS Environmental

State Certifications, Accreditations, and Licenses

Agency	Number	Expire Date
American Association for Laboratory Accreditation	2897.01 2020	11/30/2021
Arizona Department of Health Services	AZ0793-2020	5/27/2021
Arkansas Department of Environmental Quality	21-022-0	3/26/2022
Department of Defense	A2LA 2897.01	11/30/2021
Florida Department of Health	E87611-2020	6/30/2021
Illinois Environmental Protection Agency	2000322020-4	5/9/2021
Kansas Department of Health and Environment	E-10352-2020	7/31/2021
Louisiana Department of Environmental Quality	03087-2020	6/30/2021
Louisiana Department of Health and Hospitals	LA028-2021	12/31/2021
Maine Department of Health and Human Services	2020016	6/5/2022
Maryland Department of the Environment	343-2020	6/30/2021
Nevada Department of Concervation and Natural Resources	TX026932021-1	7/31/2021
New Jersey Department of Environmental Protection	TX008	6/30/2021
Oklahoma Department of Environmental Quality	2020-123	8/31/2021
Pennsylvania Department of Environmental Protection	014	6/30/2021
United States Department of Agriculture	P330-19-00299	10/10/2022

Chain of Custody

ALS Environmental - Houston HRMS
10450 Stancliff Rd, Suite 210, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

10450 Stancliff Rd, Ste 210
Houston, TX 77099
T: +1 281 530 5656
F: +1 281 530 5887
www.alsglobal.com

Subcontract Chain of Custody

SAMPLING STATE: **Dept of Defense** **COC ID: 15934**

SUBCONTRACT TO:

ALS Environmental
10450 Stancliff RoadSuite 210
Houston, TX 77084

Phone: +1 281 530 5656

CUSTOMER INFORMATION:

Company:	ALS Houston
Contact:	RJ Modashia
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Email:	RJ.Modashia@alsglobal.com
Alternate Contact:	
Email:	

INVOICE INFORMATION:

Company:	ALS Houston
Contact:	Accounts Payable
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Reference:	HS21040695
TSR:	Sonia West

	LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
	ANALYSIS REQUESTED			DUE DATE
1.	**HS21040695-01**	**16WW44-210412**	**Groundwater**	**12 Apr 2021 07:40**
	Level II and Level IV reports on a seperate pdf. Send WOA to Vicki Graves.			28 Apr 2021
2.	**HS21040695-02**	**16WW38-210412**	**Groundwater**	**12 Apr 2021 08:30**
	Level II and Level IV reports on a seperate pdf. Send WOA to Vicki Graves.			28 Apr 2021
3.	**HS21040695-03**	**16WW37-210412**	**Groundwater**	**12 Apr 2021 09:15**
	Level II and Level IV reports on a seperate pdf. Send WOA to Vicki Graves.			28 Apr 2021
4.	**HS21040695-04**	**16WW14-210412**	**Groundwater**	**12 Apr 2021 10:00**
	Level II and Level IV reports on a seperate pdf. Send WOA to Vicki Graves.			28 Apr 2021
5.	**HS21040695-05**	**16WW34-210412**	**Groundwater**	**12 Apr 2021 10:45**
	Level II and Level IV reports on a seperate pdf. Send WOA to Vicki Graves.			28 Apr 2021
6.	**HS21040695-06**	**16WW34-210412-FD**	**Groundwater**	**12 Apr 2021 10:45**
	Level II and Level IV reports on a seperate pdf. Send WOA to Vicki Graves.			28 Apr 2021
7.	**HS21040695-07**	**16WW33-210412**	**Groundwater**	**12 Apr 2021 11:30**
	Level II and Level IV reports on a seperate pdf. Send WOA to Vicki Graves.			28 Apr 2021
8.	**HS21040695-08**	**16WW32-210412**	**Groundwater**	**12 Apr 2021 12:15**

Subcontract Chain of Custody

SAMPLING STATE: **Dept of Defense** **COC ID: 15934**

	LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
	ANALYSIS REQUESTED			DUE DATE
	Level II and Level IV reports on a seperate pdf. Send WOA to Vicki Graves.			28 Apr 2021
9.	**HS21040695-09**	**16WW31-210412**	**Groundwater**	**12 Apr 2021 13:00**
	Level II and Level IV reports on a seperate pdf. Send WOA to Vicki Graves.			28 Apr 2021
10.	**HS21040695-10**	**16WW46-210412**	**Groundwater**	**12 Apr 2021 13:45**
	Level II and Level IV reports on a seperate pdf. Send WOA to Vicki Graves.			28 Apr 2021
11.	**HS21040695-11**	**16WW58-210413**	**Groundwater**	**13 Apr 2021 07:40**
	Level II and Level IV reports on a seperate pdf. Send WOA to Vicki Graves.			28 Apr 2021
12.	**HS21040695-12**	**16WW57-210413**	**Groundwater**	**13 Apr 2021 08:30**
	Level II and Level IV reports on a seperate pdf. Send WOA to Vicki Graves.			28 Apr 2021
13.	**HS21040695-13**	**16WW35-210413**	**Groundwater**	**13 Apr 2021 09:40**
	Level II and Level IV reports on a seperate pdf. Send WOA to Vicki Graves.			28 Apr 2021
14.	**HS21040695-14**	**16WW36-210413**	**Groundwater**	**13 Apr 2021 10:30**
	Level II and Level IV reports on a seperate pdf. Send WOA to Vicki Graves.			28 Apr 2021
15.	**HS21040695-15**	**16PM09-210413**	**Groundwater**	**13 Apr 2021 11:15**
	Level II and Level IV reports on a seperate pdf. Send WOA to Vicki Graves.			28 Apr 2021
16.	**HS21040695-16**	**16PM06-210413**	**Groundwater**	**13 Apr 2021 12:05**
	Level II and Level IV reports on a seperate pdf. Send WOA to Vicki Graves.			28 Apr 2021
17.	**HS21040695-17**	**16PM14-210413**	**Groundwater**	**13 Apr 2021 12:50**
	Level II and Level IV reports on a seperate pdf. Send WOA to Vicki Graves.			28 Apr 2021

Comments: Please analyze for the analysis listed above.
Send report to the emails shown above.

QC Level: DOD IV (DoD Data Package)

Relinquished By: _____ Date/Time: _____

Received By: _____ Date/Time: 4/14/21 1415

Cooler ID(s): _____ Temperature(s): _____

ALS Environmental

Cooler Receipt Form

Project Chemist: LA

Client/Project: ALS-11

Thermometer ID: IR31

Date/Time Received: 9/14/21 Initials: LA

Date/Time Logged in: 9/14/21 Initials: LA

1. Method of delivery: ○ US Mail ○ Fed Ex ○ UPS ○ DHL ✓ Courier (ALS) ○ Client

2. Samples received in: ✓ Cooler ○ Box ○ Envelope ○ Other _____

3. Were custody seals on coolers? ○ Yes ✓ No

Were they intact? ○ Yes ○ No ✓ N/A

Were they signed and dated? ○ Yes ○ No ✓ N/A

If yes, how many and where?

4. Packing Material: ○ Inserts ✓ Baggies ○ Bubble Wrap ○ Gel Packs ✓ Wet Ice ○ Sleeves ○ Other _____

5. Foreign or Regulated Soil? ○ Yes ○ No Location of Sampling: _____

Cooler Tracking Number	COC ID	Date Opened	Time Opened	Opened By	Temp. °C	Temp Blank?
NA		9/14/21	1915	LA	3.9	☑
						☐
						☐
						☐

6. Were custody papers properly filled out (ink, signed, dated, etc)? ✓ Yes ○ No

7. Did all bottles arrive in good condition (not broken, no signs of leakage)? ✓ Yes ○ No

8. Were all sample labels complete (i.e., sample ID, analysis, preservation, etc)? ✓ Yes ○ No

9. Were appropriate bottles/containers and volumes received for the requested tests? ✓ Yes ○ No

10. Did sample labels and tags agree with custody documents? ✓ Yes ○ No

Notes, Discrepancies, & Resolutions:

Service request Label:

HS-HRMSCoolerReceipt R1.0

ALS Environmental - Houston HRMS

10450 Stancliff Rd., Suite 210
Houston, TX 77099
T: +1 713 266 1599
F: +1 713 266 1599
www.alsglobal.com

SAMPLE ACCEPTANCE POLICY

This policy outlines the criteria samples must meet to be accepted by ALS Environmental – Houston HRMS.

Cooler Custody Seals (desirable, mandatory if specified in SAP):

- ✓ Intact on outside of cooler, signed and dated

Chain-of-Custody (COC) documentation (mandatory):

The following is required on each COC:

- ✓ Sample ID, the location, date and time of collection, collector's name, preservation type, sample type, and any other special remarks concerning the sampleThe COC must be completed in ink.
- ✓ Signature and date of relinquishing party.

In the absence of a COC at sample receipt, the COC will be requested from the client.

Sample Integrity (mandatory):

Samples are inspected upon arrival to ensure that sample integrity was not compromised during transfer to the laboratory.

- ✓ Sample containers must arrive in good condition (not broken or leaking).
- ✓ Samples must be labeled appropriately, including Sample IDs, and requested test using durable labels and indelible ink.
- ✓ The correct type of sample bottle must be used for the method requested.
- ✓ An appropriate sample volume, or weight, must be received.
- ✓ Sample IDs and number of containers must reconcile with the COC.
- ✓ Samples must be received within the method defined holding time.

Temperature Requirement (varies by sample matrix):

- ✓ Aqueous and Non-aqueous samples must be shipped and stored cold, at 0 to 6ºC.
- ✓ Tissue samples must be shipped and stored frozen, at -20 to -10ºC.
- ✓ Air samples are shipped and stored cold, at 0 to 6ºC
- ✓ The sample temperature must be recorded on the COC

All cooler inspections are documented on the Cooler Receipt Form (CRF). A separate CRF is completed for each service request. Any samples not meeting the above criteria are noted on the CRF and the Project Manager notified. The Project Manager must resolve any sample integrity issues with the client prior to proceeding with the analysis. Such resolutions are documented in writing and filed with the project folder. Data associated with samples received outside of this acceptance policy will be qualified on the case narrative of the final report

Preparation Information Benchsheets

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 210, Houston, TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

Preparation Information Benchsheet

Prep Run#: 377530 **Prep WorkFlow:** GenExt28Day **Status:** Prepped
Team: Semivoa GCMS/GRIVERA **Prep Method:** Method **Prep Date/Time:** 4/15/21 11:50

#	Lab Code	Client ID	B#	Method /Test	pH	Cl	Matrix	Amt. Ext.	Sample Description
1	E2100409-001	LH18/24-SP650_041321_BIX	.01	6850/ClO4 DOD			Ground Water	10mL	
2	E2100410-001	LH18/24-SP140_041321	.01	6850/ClO4 DOD			Ground Water	10mL	
3	E2100411-001	LH18/24-SP650_041321_BIX	.01	6850/ClO4 DOD			Ground Water	10mL	
4	E2100412-001	16WW44-210412	.01	6850/ClO4 DOD			Ground Water	10mL	
5	E2100412-002	16WW38-210412	.01	6850/ClO4 DOD			Ground Water	10mL	
6	E2100412-003	16WW37-210412	.01	6850/ClO4 DOD			Ground Water	10mL	
7	E2100412-004	16WW14-210412	.01	6850/ClO4 DOD			Ground Water	10mL	
8	E2100412-005	16WW34-210412	.01	6850/ClO4 DOD			Ground Water	10mL	
9	E2100412-006	16WW34-210412-FD	.01	6850/ClO4 DOD			Ground Water	10mL	
10	E2100412-007	16WW33-210412	.01	6850/ClO4 DOD			Ground Water	10mL	
11	E2100412-008	16WW32-210412	.01	6850/ClO4 DOD			Ground Water	10mL	
12	E2100412-009	16WW31-210412	.01	6850/ClO4 DOD			Ground Water	10mL	
13	E2100412-010	16WW46-210412	.01	6850/ClO4 DOD			Ground Water	10mL	
14	EQ2100213-01	MB		6850/ClO4 DOD			Liquid	10mL	
15	EQ2100213-02	LCS		6850/ClO4 DOD			Liquid	10mL	
16	EQ2100213-03	DLCS		6850/ClO4 DOD			Liquid	10mL	
17	R2103214-010	45MI20088	.14	6850/ClO4 DOD			Water	10mL	
18	R2103214-011	45MI30028	.06	6850/ClO4 DOD			Water	10mL	
19	R2103214-013	45MI30025	.06	6850/ClO4 DOD			Water	10mL	
20	R2103380-002	45MI30022	.05	6850/ClO4 DOD			Water	10mL	
21	R2103380-003	45MI30023	.05	6850/ClO4 DOD			Water	10mL	
22	R2103380-004	45MI30027	.05	6850/ClO4 DOD			Water	10mL	
23	R2103380-005	45MI30026	.05	6850/ClO4 DOD			Water	10mL	

Spiking Solutions

Name: Perchlorate Intermediate Stock1 Inventory ID 214035 Logbook Ref: Perchlorate Expires On: 05/23/2021

EQ2100213-02 1.00µL EQ2100213-03 1.00µL

Name: Perchlorate Internal Standard 1ug/mL Inventory ID 214820 Logbook Ref: Perchlorate Internal Standard Expires On: 07/03/2021

E2100409-001	100.00µL	E2100410-001	100.00µL	E2100411-001	100.00µL	E2100412-001	100.00µL	E2100412-002	100.00µL	E2100412-003	100.00µL
E2100412-004	100.00µL	E2100412-005	100.00µL	E2100412-006	100.00µL	E2100412-007	100.00µL	E2100412-008	100.00µL	E2100412-009	100.00µL
E2100412-010	100.00µL	EQ2100213-01	100.00µL	EQ2100213-02	100.00µL	EQ2100213-03	100.00µL	R2103214-010	100.00µL	R2103214-011	100.00µL
R2103214-013	100.00µL	R2103380-002	100.00µL	R2103380-003	100.00µL	R2103380-004	100.00µL	R2103380-005	100.00µL		

Preparation Information Benchsheet

Prep Run#: 377530 **Prep WorkFlow:** GenExt28Day **Status:** Prepped
Team: Semivoa GCMS/GRIVERA **Prep Method:** Method **Prep Date/Time:** 4/15/21 11:50

Preparation Steps

Step: Preparation
Started: 4/15/21 11:50
Finished: 4/15/21 13:00
By: GRIVERA
Comments

Comments: _____

Reviewed By: GR Date: 4/15/21

Chain of Custody

Relinquished By: _____ Date: _____ Extracts Examined

Received By: _____ Date: _____ Yes No

Preparation Information Benchsheet

Prep Run#: 378052 **Prep WorkFlow:** GenExt28Day **Status:** Prepped
Team: Semivoa GCMS/GRIVERA **Prep Method:** Method **Prep Date/Time:** 4/23/21 12:17

#	Lab Code	Client ID	B#	Method /Test	pH	Cl	Matrix	Amt. Ext.	Sample Description
1	E2100412-011	16WW58-210413	.01	6850/ClO4 DOD			Ground Water	10mL	
2	E2100412-012	16WW57-210413	.01	6850/ClO4 DOD			Ground Water	10mL	
3	E2100412-013	16WW35-210413	.01	6850/ClO4 DOD			Ground Water	10mL	
4	E2100412-014	16WW36-210413	.01	6850/ClO4 DOD			Ground Water	10mL	
5	E2100412-015	16PM09-210413	.01	6850/ClO4 DOD			Ground Water	10mL	
6	E2100412-016	16PM06-210413	.01	6850/ClO4 DOD			Ground Water	10mL	
7	E2100412-017	16PM14-210413	.01	6850/ClO4 DOD			Ground Water	10mL	
8	E2100485-001	16PM02-210414	.01	6850/ClO4 DOD			Ground Water	10mL	
9	E2100485-002	16PM03-210414	.01	6850/ClO4 DOD			Ground Water	10mL	
10	E2100485-003	16PM03-210414-FD	.01	6850/ClO4 DOD			Ground Water	10mL	
11	E2100485-004	16RW01-210414	.01	6850/ClO4 DOD			Ground Water	10mL	
12	E2100485-005	16RW04-210414	.01	6850/ClO4 DOD			Ground Water	10mL	
13	E2100485-006	16RW02-210414	.01	6850/ClO4 DOD			Ground Water	10mL	
14	E2100485-007	16WW16-210415	.01	6850/ClO4 DOD			Ground Water	10mL	
15	E2100485-008	16WW56-210415	.01	6850/ClO4 DOD			Ground Water	10mL	
16	E2100485-009	16WW22-210415	.01	6850/ClO4 DOD			Ground Water	10mL	
17	E2100485-010	16WW41-210415	.01	6850/ClO4 DOD			Ground Water	10mL	
18	E2100485-011	16WW21-210415	.01	6850/ClO4 DOD			Ground Water	10mL	
19	E2100485-012	16WW39-210415	.01	6850/ClO4 DOD			Ground Water	10mL	
20	E2100485-013	16WW51-210415	.01	6850/ClO4 DOD			Ground Water	10mL	
21	EQ2100244-01	MB		6850/ClO4 DOD			Liquid	10mL	
22	EQ2100244-02	LCS		6850/ClO4 DOD			Liquid	10mL	
23	EQ2100244-03	DLCS		6850/ClO4 DOD			Liquid	10mL	
24	EQ2100244-04	16WW56-210415 MS	.01	6850/ClO4 DOD			Liquid	10mL	
25	EQ2100244-05	16WW56-210415 DMS	.01	6850/ClO4 DOD			Liquid	10mL	

Spiking Solutions

Name: Perchlorate Intermediate Stock1 Inventory ID 214035 Logbook Ref: Perchlorate Expires On: 05/23/2021

EQ2100244-02 1.00µL EQ2100244-03 1.00µL EQ2100244-04 1.00µL EQ2100244-05 1.00µL

Name: Perchlorate Internal Standard 1ug/mL Inventory ID 214820 Logbook Ref: Perchlorate Internal Standard Expires On: 07/03/2021

E2100412-011 100.00µL E2100412-012 100.00µL E2100412-013 100.00µL E2100412-014 100.00µL E2100412-015 100.00µL E2100412-016 100.00µL
E2100412-017 100.00µL E2100485-001 100.00µL E2100485-002 100.00µL E2100485-003 100.00µL E2100485-004 100.00µL E2100485-005 100.00µL
E2100485-006 100.00µL E2100485-007 100.00µL E2100485-008 100.00µL E2100485-009 100.00µL E2100485-010 100.00µL E2100485-011 100.00µL

Preparation Information Benchsheet

Prep Run#: 378052 **Prep WorkFlow:** GenExt28Day **Status:** Prepped
Team: Semivoa GCMS/GRIVERA **Prep Method:** Method **Prep Date/Time:** 4/23/21 12:17

E2100485-012	100.00µL	E2100485-013	100.00µL	EQ2100244-01	100.00µL	EQ2100244-02	100.00µL	EQ2100244-03	100.00µL	EQ2100244-04	100.00µL
EQ2100244-05	100.00µL										

Preparation Steps

Step: Preparation
Started: 4/23/21 12:17
Finished: 4/23/21 13:30
By: GRIVERA
Comments

Comments: _____

Reviewed By: GR Date: 4/23/21

Chain of Custody

Relinquished By: _____ Date: _____ Extracts Examined

Received By: _____ Date: _____ Yes No

Analytical Results

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 210, Houston, TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100412
Project:	HS21040695	**Date Collected:**	4/12/21 0740
Sample Matrix:	Ground Water	**Date Received:**	4/14/21
Sample Name:	16WW44-210412	**Units:**	µg/L
Lab Code:	E2100412-001	**Basis:**	As Received

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.134**		0.100	0.0500	0.0250	1	4/15/21	4/29/21 12:16	377530	721582	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100412
Project:	HS21040695	**Date Collected:**	4/12/21 0830
Sample Matrix:	Ground Water	**Date Received:**	4/14/21
Sample Name:	16WW38-210412	**Units:**	µg/L
Lab Code:	E2100412-002	**Basis:**	As Received

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	0.100	0.0500	0.0250	1	4/15/21	4/20/21 14:20	377530	721439	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100412
Project:	HS21040695	**Date Collected:**	4/12/21 0915
Sample Matrix:	Ground Water	**Date Received:**	4/14/21
Sample Name:	16WW37-210412	**Units:**	µg/L
Lab Code:	E2100412-003	**Basis:**	As Received

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**1.60**		1.00	0.500	0.250	10	4/15/21	4/28/21 22:20	377530	721483	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100412
Project:	HS21040695	**Date Collected:**	4/12/21 1000
Sample Matrix:	Ground Water	**Date Received:**	4/14/21
Sample Name:	16WW14-210412	**Units:**	µg/L
Lab Code:	E2100412-004	**Basis:**	As Received

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	0.100	0.0500	0.0250	1	4/15/21	4/20/21 14:36	377530	721439	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100412
Project:	HS21040695	**Date Collected:**	4/12/21 1045
Sample Matrix:	Ground Water	**Date Received:**	4/14/21
Sample Name:	16WW34-210412	**Units:**	µg/L
Lab Code:	E2100412-005	**Basis:**	As Received

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	0.100	0.0500	0.0250	1	4/15/21	4/20/21 14:52	377530	721439	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100412
Project:	HS21040695	**Date Collected:**	4/12/21 1045
Sample Matrix:	Ground Water	**Date Received:**	4/14/21
Sample Name:	16WW34-210412-FD	**Units:**	µg/L
Lab Code:	E2100412-006	**Basis:**	As Received

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	0.100	0.0500	0.0250	1	4/15/21	4/20/21 15:00	377530	721439	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100412
Project:	HS21040695	**Date Collected:**	4/12/21 1130
Sample Matrix:	Ground Water	**Date Received:**	4/14/21
Sample Name:	16WW33-210412	**Units:**	µg/L
Lab Code:	E2100412-007	**Basis:**	As Received

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	0.100	0.0500	0.0250	1	4/15/21	4/20/21 15:08	377530	721439	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100412
Project:	HS21040695	**Date Collected:**	4/12/21 1215
Sample Matrix:	Ground Water	**Date Received:**	4/14/21
Sample Name:	16WW32-210412	**Units:**	µg/L
Lab Code:	E2100412-008	**Basis:**	As Received

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	0.100	0.0500	0.0250	1	4/15/21	4/20/21 15:16	377530	721439	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100412
Project:	HS21040695	**Date Collected:**	4/12/21 1300
Sample Matrix:	Ground Water	**Date Received:**	4/14/21
Sample Name:	16WW31-210412	**Units:**	µg/L
Lab Code:	E2100412-009	**Basis:**	As Received

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	0.100	0.0500	0.0250	1	4/15/21	4/20/21 15:23	377530	721439	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100412
Project:	HS21040695	**Date Collected:**	4/12/21 1345
Sample Matrix:	Ground Water	**Date Received:**	4/14/21
Sample Name:	16WW46-210412	**Units:**	µg/L
Lab Code:	E2100412-010	**Basis:**	As Received

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	1.00	0.500	0.250	10	4/15/21	4/28/21 22:29	377530	721483	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100412
Project:	HS21040695	**Date Collected:**	4/13/21 0740
Sample Matrix:	Ground Water	**Date Received:**	4/14/21
Sample Name:	16WW58-210413	**Units:**	µg/L
Lab Code:	E2100412-011	**Basis:**	As Received

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.0348**	J	0.100	0.0500	0.0250	1	4/23/21	4/29/21 10:54	378052	721582	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100412
Project:	HS21040695	**Date Collected:**	4/13/21 0830
Sample Matrix:	Ground Water	**Date Received:**	4/14/21
Sample Name:	16WW57-210413	**Units:**	µg/L
Lab Code:	E2100412-012	**Basis:**	As Received

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.171**	J	0.500	0.250	0.125	5	4/23/21	4/29/21 16:10	378052	721582	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100412
Project:	HS21040695	**Date Collected:**	4/13/21 0940
Sample Matrix:	Ground Water	**Date Received:**	4/14/21
Sample Name:	16WW35-210413	**Units:**	µg/L
Lab Code:	E2100412-013	**Basis:**	As Received

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**367**		5.00	2.50	1.25	50	4/23/21	4/29/21 15:23	378052	721582	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100412
Project:	HS21040695	**Date Collected:**	4/13/21 1030
Sample Matrix:	Ground Water	**Date Received:**	4/14/21
Sample Name:	16WW36-210413	**Units:**	µg/L
Lab Code:	E2100412-014	**Basis:**	As Received

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**1.26**		0.100	0.0500	0.0250	1	4/23/21	4/29/21 10:44	378052	721582	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100412
Project:	HS21040695	**Date Collected:**	4/13/21 1115
Sample Matrix:	Ground Water	**Date Received:**	4/14/21
Sample Name:	16PM09-210413	**Units:**	µg/L
Lab Code:	E2100412-015	**Basis:**	As Received

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.0355**	J	0.100	0.0500	0.0250	1	4/23/21	4/29/21 11:03	378052	721582	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100412
Project:	HS21040695	**Date Collected:**	4/13/21 1205
Sample Matrix:	Ground Water	**Date Received:**	4/14/21
Sample Name:	16PM06-210413	**Units:**	µg/L
Lab Code:	E2100412-016	**Basis:**	As Received

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	1.00	0.500	0.250	10	4/23/21	4/28/21 20:55	378052	721483	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100412
Project:	HS21040695	**Date Collected:**	4/13/21 1250
Sample Matrix:	Ground Water	**Date Received:**	4/14/21
Sample Name:	16PM14-210413	**Units:**	µg/L
Lab Code:	E2100412-017	**Basis:**	As Received

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.259**	J	1.00	0.500	0.250	10	4/23/21	4/28/21 21:05	378052	721483	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100412
Project:	HS21040695	**Date Collected:**	NA
Sample Matrix:	Ground Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	EQ2100213-01	**Basis:**	As Received

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	0.100	0.0500	0.0250	1	4/15/21	4/20/21 13:25	377530	721439	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100412
Project:	HS21040695	**Date Collected:**	NA
Sample Matrix:	Ground Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	EQ2100244-01	**Basis:**	As Received

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	0.100	0.0500	0.0250	1	4/23/21	4/28/21 20:27	378052	721483	

Accuracy & Precision

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 210, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS21040695
Sample Matrix: Ground Water

Service Request: E2100412
Date Analyzed: 4/20/21

Lab Control Sample Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Units: µg/L
Basis: As Received

Extraction Lot: 377530

	Lab Control Sample EQ2100213-02			Duplicate Lab Control Sample EQ2100213-03				
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Perchlorate	0.117	0.100	117	0.108	0.100	108	84 - 119	8	15

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100412
Project:	HS21040695	**Date Collected:**	NA
Sample Matrix:	Ground Water	**Date Received:**	NA
Sample Name:	Lab Control Sample	**Units:**	µg/L
Lab Code:	EQ2100213-02	**Basis:**	As Received

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.117**		0.100	0.0500	0.0250	1	4/15/21	4/20/21 13:33	377530	721439	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100412
Project:	HS21040695	**Date Collected:**	NA
Sample Matrix:	Ground Water	**Date Received:**	NA
Sample Name:	Duplicate Lab Control Sample	**Units:**	µg/L
Lab Code:	EQ2100213-03	**Basis:**	As Received

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.108**		0.100	0.0500	0.0250	1	4/15/21	4/20/21 13:41	377530	721439	

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS21040695
Sample Matrix: Ground Water

Service Request: E2100412
Date Analyzed: 4/28/21

Lab Control Sample Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Units: µg/L
Basis: As Received

Extraction Lot: 378052

	Lab Control Sample EQ2100244-02			Duplicate Lab Control Sample EQ2100244-03					
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Perchlorate	0.0857	0.100	86	0.0977	0.100	98	84 - 119	13	15

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100412
Project:	HS21040695	**Date Collected:**	NA
Sample Matrix:	Ground Water	**Date Received:**	NA
Sample Name:	Lab Control Sample	**Units:**	µg/L
Lab Code:	EQ2100244-02	**Basis:**	As Received

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.0857**	J	0.100	0.0500	0.0250	1	4/23/21	4/28/21 20:37	378052	721483	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100412
Project:	HS21040695	**Date Collected:**	NA
Sample Matrix:	Ground Water	**Date Received:**	NA
Sample Name:	Duplicate Lab Control Sample	**Units:**	µg/L
Lab Code:	EQ2100244-03	**Basis:**	As Received

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.0977**	J	0.100	0.0500	0.0250	1	4/23/21	4/28/21 20:46	378052	721483	

Initial Calibration

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 210, Houston, TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

20210413

1st Review: Grivera
2nd Review: Kneir

ALS Environmental

Injection Log
LCMS01 -Shimadzu 8050

ICAL Date: 4/13/2021
Cal. Std. xp: 5/20/2021
ICAL ID: **EC2100018**

Mobile Phases **A:** 0.75% Formic Acid/Water 3100807-09 **B:** MeOH 3100802-01

			File Name	Acquisition Method	Dilution	R	Comments	Date/Time
1	PERCHLORATE1		20210413_008	Perchlorate6850b.lcm	1x	☒	3100808-05	4/13/2021 10:15
2	PERCHLORATE2		20210413_009	Perchlorate6850b.lcm	1x	☒	3100808-06	4/13/2021 10:23
3	PERCHLORATE3		20210413_010	Perchlorate6850b.lcm	1x	☒	3100808-07	4/13/2021 10:31
4	PERCHLORATE4		20210413_011	Perchlorate6850b.lcm	1x	☒	3100808-08	4/13/2021 10:39
5	PERCHLORATE5		20210413_012	Perchlorate6850b.lcm	1x	☒	3100808-09	4/13/2021 10:47
6	PERCHLORATE6		20210413_013	Perchlorate6850b.lcm	1x	☒	3100809-01	4/13/2021 10:54
7	PERCHLORATE7		20210413_014	Perchlorate6850b.lcm	1x	☒	3100809-02	4/13/2021 11:02
8	PERCHLORATE8		20210413_015	Perchlorate6850b.lcm	1x	☒	3100809-03	4/13/2021 11:10
9	PERCHLORATE9		20210413_016	Perchlorate6850b.lcm	1x	☒	3100809-04	4/13/2021 11:18
10	PERCHLORATE10		20210413_017	Perchlorate6850b.lcm	1x	☒	3100809-05	4/13/2021 11:26
11	PERCHLORATEICV		20210413_018	Perchlorate6850b.lcm	1x	☒	3100809-06	4/13/2021 11:58
12	ICS		20210413_019	Perchlorate6850b.lcm	1x	☒		4/13/2021 12:24
13	LODV		20210413_020	Perchlorate6850b.lcm	1x	☒		4/13/2021 12:31
14	PERCHLORATE7		20210413_021	Perchlorate6850b.lcm	1x	☒	3100809-02	4/13/2021 12:39
15	EQ2100193-01-DNU		20210413_022	Perchlorate6850b.lcm	1x	☒	INST failed high	4/13/2021 12:47
16	EQ2100193-02		20210413_023	Perchlorate6850b.lcm	1x	☒		4/13/2021 12:55
17	EQ2100193-03		20210413_024	Perchlorate6850b.lcm	1x	☒		4/13/2021 13:27
18	EQ2100193-01-DNU		20210413_025	Perchlorate6850b.lcm	1x	☒	INST failed high	4/13/2021 13:35
19	EQ2100193-04		20210413_026	Perchlorate6850b.lcm	1x	☒		4/13/2021 13:43
20	EQ2100193-05		20210413_027	Perchlorate6850b.lcm	1x	☒		4/13/2021 13:51
21	E2100329-001		20210413_028	Perchlorate6850b.lcm	1x	☒		4/13/2021 13:59
22	E2100330-001DNU		20210413_029	Perchlorate6850b.lcm	1x	☒	need 100X dilution	4/13/2021 14:07
23	E2100331-001		20210413_030	Perchlorate6850b.lcm	1x	☒		4/13/2021 14:15
24	E2100368-001		20210413_031	Perchlorate6850b.lcm	1x	☒		4/13/2021 14:23
25	E2100369-001DNU		20210413_032	Perchlorate6850b.lcm	1x	☒	need 10X dilution	4/13/2021 14:31
26	PERCHLORATE7		20210413_033	Perchlorate6850b.lcm	1x	☒	3100809-02	4/13/2021 14:39
27	E2100369-002		20210413_034	Perchlorate6850b.lcm	1x	☒		4/13/2021 15:03
28	E2100369-003		20210413_035	Perchlorate6850b.lcm	1x	☒		4/13/2021 15:11
29	E2100369-004		20210413_036	Perchlorate6850b.lcm	1x	☒		4/13/2021 15:18
30	E2100330-001X100		20210413_037	Perchlorate6850b.lcm	100x	☒		4/13/2021 15:26
31	E2100369-001X10		20210413_038	Perchlorate6850b.lcm	10x	☒		4/13/2021 15:34
32	E2100369-005DNU		20210413_039	Perchlorate6850b.lcm	1x	☒	need 10X dilution	4/13/2021 15:42
33	E2100369-006DNU		20210413_040	Perchlorate6850b.lcm	1x	☒	need 20X dilution	4/13/2021 15:50
34	E2100369-007DNU		20210413_041	Perchlorate6850b.lcm	1x	☒	need 20X dilution	4/13/2021 15:58
35	E2100369-008DNU		20210413_042	Perchlorate6850b.lcm	1x	☒	reanalyze: possible carryover	4/13/2021 16:06
36	E2100369-009DNU		20210413_043	Perchlorate6850b.lcm	1x	☒	need 5000X dilution	4/13/2021 16:14
37	PERCHLORATE7		20210413_044	Perchlorate6850b.lcm	1x	☒	3100809-02	4/13/2021 16:38
38	E2100369-008DNU		20210413_045	Perchlorate6850b.lcm	1x	☒		4/13/2021 16:46
39	E2100369-005X10		20210413_046	Perchlorate6850b.lcm	10x	☒		4/13/2021 16:54
40	E2100369-006X20		20210413_047	Perchlorate6850b.lcm	20x	☒		4/13/2021 17:02
41	E2100369-007X20		20210413_048	Perchlorate6850b.lcm	20x	☒		4/13/2021 17:10
42	E2100369-009X5000		20210413_049	Perchlorate6850b.lcm	5000x	☒		4/13/2021 17:17
43	EQ2100193-01		20210413_050	Perchlorate6850b.lcm	1x	☒		4/13/2021 17:25
44	PERCHLORATE7		20210413_051	Perchlorate6850b.lcm	1x	☒	3100809-02	4/13/2021 17:33
45								
46								

Initial Calibration - Detailed Report

Calibration ID: EC2100018 **Instrument ID:** E-LCMS-01
Column Name: 1

#	Lab Code	Sample Name	File Location	Aquisition Date
01	EC2100018-01	PERCHLORATE1	20210413_008	04/13/2021 10:15
02	EC2100018-02	PERCHLORATE2	20210413_009	04/13/2021 10:23
03	EC2100018-03	PERCHLORATE3	20210413_010	04/13/2021 10:31
04	EC2100018-04	PERCHLORATE4	20210413_011	04/13/2021 10:39
05	EC2100018-05	PERCHLORATE5	20210413_012	04/13/2021 10:47
06	EC2100018-06	PERCHLORATE6	20210413_013	04/13/2021 10:54
07	EC2100018-07	PERCHLORATE7	20210413_014	04/13/2021 11:02
08	EC2100018-08	PERCHLORATE8	20210413_015	04/13/2021 11:10
09	EC2100018-09	PERCHLORATE9	20210413_016	04/13/2021 11:18
10	EC2100018-10	PERCHLORATE10	20210413_017	04/13/2021 11:26

Analyte **Curve Fit** **Weighting**

Perchlorate **Average RF** **RSD = 9.714** **Average RF = 0.1227**

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.1000	0.154	02	0.5000	0.1219	03	0.7000	0.1209	04	1.0000	0.1214
05	2.0000	0.1284	06	5.0000	0.1206	07	10.0000	0.1183	08	20.0000	0.114
09	30.0000	0.1156	10	50.0000	0.112						

Analyte

Perchlorate

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	0.1000	0.125	25.5	02	0.5000	0.497	-0.6	03	0.7000	0.690	-1.5
04	1.0000	0.989	-1.1	05	2.0000	2.09	4.6	06	5.0000	4.91	-1.7
07	10.0000	9.64	-3.6	08	20.0000	18.6	-7.1	09	30.0000	28.3	-5.8
10	50.0000	45.7	-8.7								

Initial Calibration Verification Summary Report

Calibration ID:	EC2100018	**Instrument ID:**	E-LCMS-01
Datafile ID:	20210413_018	**Column Name:**	1

Analyte	Lab Code	Type	Curve Fit	True Value	Calc Conc	Units	Result	Criteria
Perchlorate	EC2100018-11	T	Average RF	10	9.478	ng/mL	-5.2	<= 15

Insight Report

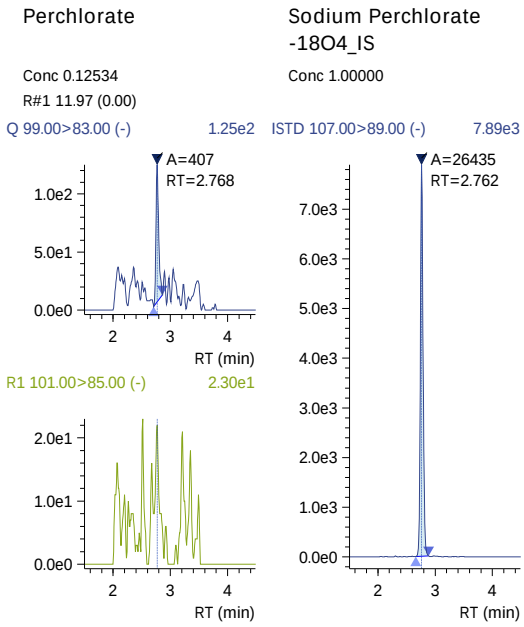
Printed at 4/14/2021 8:51:54 AM

Method File: I:\LCMS01\DATA\20210413\20210413.lcm
Project File: I:\LCMS01\DATA\20210413\20210413.damlp

20210413_008

Sample ID: PERCHLORATE1
Date Acquired: 4/13/2021 10:15:23 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210413\20210413_008.lcd
Vial: 22 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.768	407	26435	1	0.12534	ng/mL	0.1000	11.97
Sodium Perchlorate-18O4 _IS	Auto	2.762	26435	26435	1	1.00000	ng/mL	1.0000	----



Insight Report

Printed at 4/14/2021 8:55:34 AM

Method File: I:\LCMS01\DATA\20210413\Before\20210413.lcm

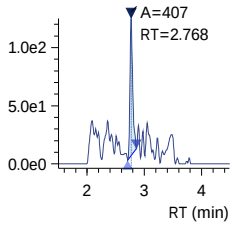
20210413_008

Sample ID: PERCHLORATE1
Date Acquired: 4/13/2021 10:15:23 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210413\Before\20210413_008.lcd
Vial: 22 | Inj. Volume: 25.0000uL | Tray: 1

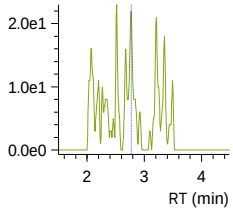
Perchlorate

Conc 0.12722
R#1 11.97 (0.00)

Q 99.00>83.00 (-) 1.25e2



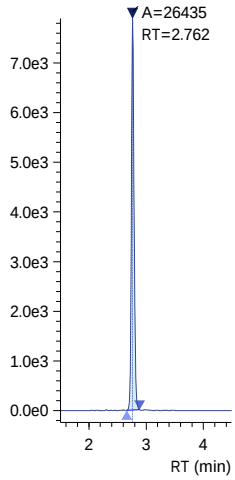
R1 101.00>85.00 (-) 2.30e1



Sodium Perchlorate -18O4_IS

Conc 1.00000

ISTD 107.00>89.00 (-) 7.89e3



Insight Report

Printed at 4/14/2021 8:51:54 AM

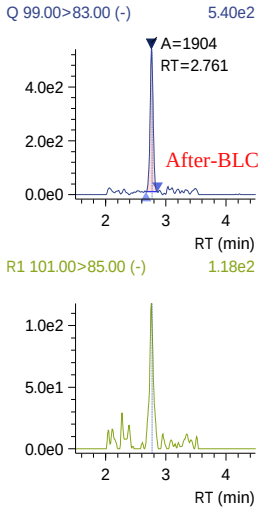
20210413_009

Sample ID: PERCHLORATE2
Date Acquired: 4/13/2021 10:23:19 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210413\20210413_009.lcd
Vial: 23 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	M	2.761	1904	31237	1	0.49684	ng/mL	0.5000	21.42
Sodium Perchlorate-18O4 _IS	Auto	2.758	31237	31237	1	1.00000	ng/mL	1.0000	----

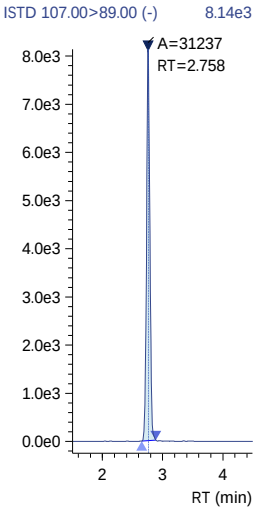
Perchlorate

Conc 0.49684
R#1 21.42 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.00000



Insight Report

Printed at 4/14/2021 8:55:34 AM

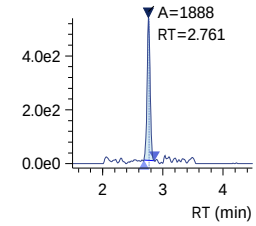
20210413_009

Sample ID: PERCHLORATE2
Date Acquired: 4/13/2021 10:23:19 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210413\Before\20210413_009.lcd
Vial: 23 | Inj. Volume: 25.0000uL | Tray: 1

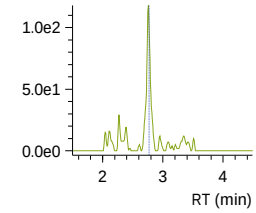
Perchlorate

Conc 0.50005
R#1 20.15 (0.00)

Q 99.00>83.00 (-) 5.40e2



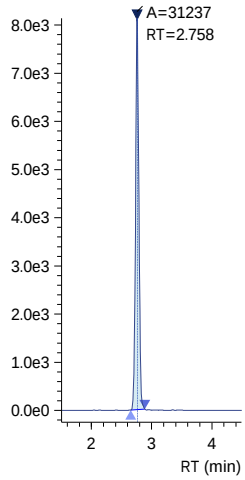
R1 101.00>85.00 (-) 1.18e2



Sodium Perchlorate -18O4_IS

Conc 1.00000

ISTD 107.00>89.00 (-) 8.14e3



Insight Report

Printed at 4/14/2021 8:51:54 AM

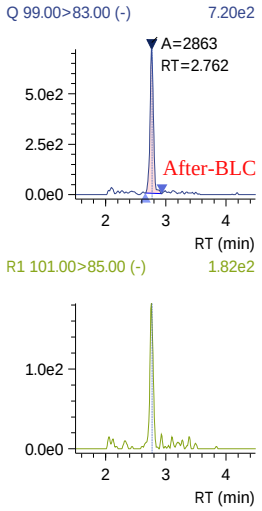
20210413_010

Sample ID: PERCHLORATE3
Date Acquired: 4/13/2021 10:31:12 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210413\20210413_010.lcd
Vial: 24 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	M	2.762	2863	33837	1	0.68967	ng/mL	0.7000	23.86
Sodium Perchlorate-18O4 _IS	Auto	2.761	33837	33837	1	1.00000	ng/mL	1.0000	----

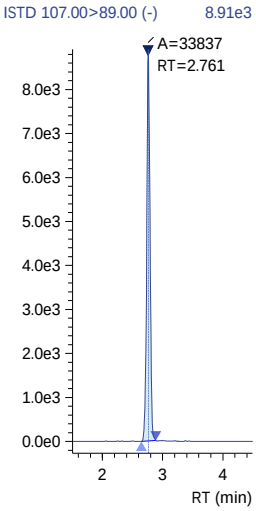
Perchlorate

Conc 0.68967
R#1 23.86 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.00000



Insight Report

Printed at 4/14/2021 8:55:34 AM

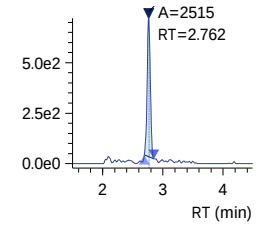
20210413_010

Sample ID: PERCHLORATE3
Date Acquired: 4/13/2021 10:31:12 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210413\Before\20210413_010.lcd
Vial: 24 | Inj. Volume: 25.0000uL | Tray: 1

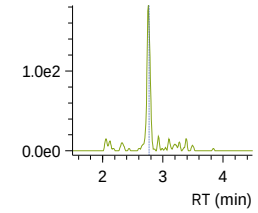
Perchlorate

Conc 0.61492
R#1 25.48 (0.00)

Q 99.00>83.00 (-) 7.20e2



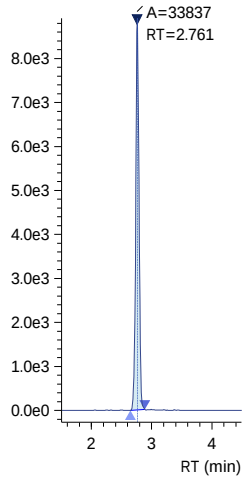
R1 101.00>85.00 (-) 1.82e2



Sodium Perchlorate -18O4_IS

Conc 1.00000

ISTD 107.00>89.00 (-) 8.91e3



Insight Report

Printed at 4/14/2021 8:51:54 AM

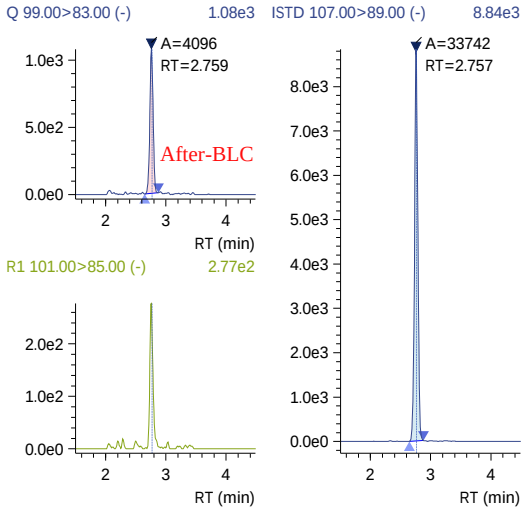
20210413_011

Sample ID: PERCHLORATE4
Date Acquired: 4/13/2021 10:39:04 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210413\20210413_011.lcd
Vial: 25 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	M	2.759	4096	33742	1	0.98947	ng/mL	1.0000	25.61
Sodium Perchlorate-18O4 _IS	Auto	2.757	33742	33742	1	1.00000	ng/mL	1.0000	----

Perchlorate

Conc 0.98947
R#1 25.61 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.00000

Insight Report

Printed at 4/14/2021 8:55:34 AM

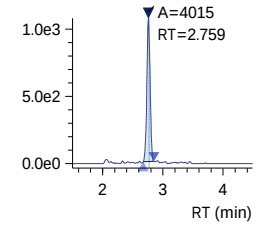
20210413_011

Sample ID: PERCHLORATE4
Date Acquired: 4/13/2021 10:39:04 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210413\Before\20210413_011.lcd
Vial: 25 | Inj. Volume: 25.0000uL | Tray: 1

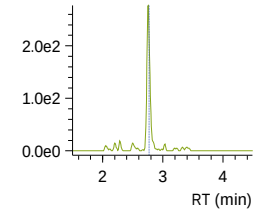
Perchlorate

Conc 0.98444
R#1 25.21 (0.00)

Q 99.00>83.00 (-) 1.08e3



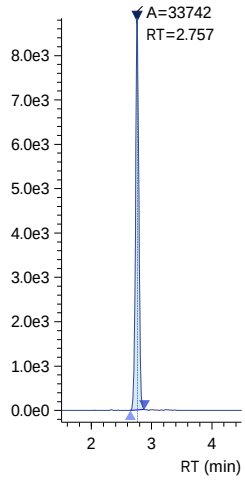
R1 101.00>85.00 (-) 2.77e2



Sodium Perchlorate -18O4_IS

Conc 1.00000

ISTD 107.00>89.00 (-) 8.84e3



Insight Report

Printed at 4/14/2021 8:51:54 AM

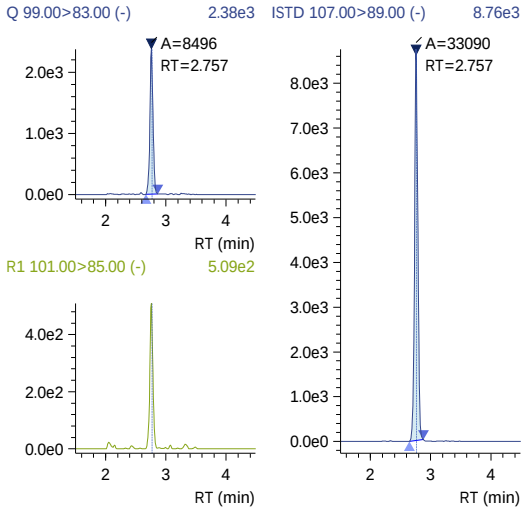
20210413_012

Sample ID: PERCHLORATE5
Date Acquired: 4/13/2021 10:47:01 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210413\20210413_012.lcd
Vial: 26 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.757	8496	33090	1	2.09273	ng/mL	2.0000	22.06
Sodium Perchlorate-18O4 _IS	Auto	2.757	33090	33090	1	1.00000	ng/mL	1.0000	----

Perchlorate

Conc 2.09273
R#1 22.06 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.00000

Insight Report

Printed at 4/14/2021 8:55:34 AM

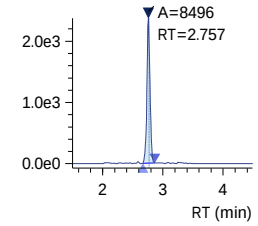
20210413_012

Sample ID: PERCHLORATE5
Date Acquired: 4/13/2021 10:47:01 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210413\Before\20210413_012.lcd
Vial: 26 | Inj. Volume: 25.0000uL | Tray: 1

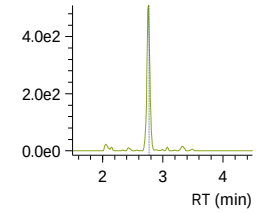
Perchlorate

Conc 2.12410
R#1 22.06 (0.00)

Q 99.00>83.00 (-) 2.38e3



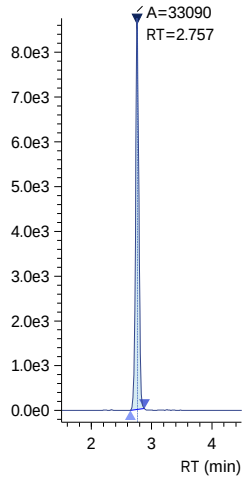
R1 101.00>85.00 (-) 5.09e2



Sodium Perchlorate -18O4_IS

Conc 1.00000

ISTD 107.00>89.00 (-) 8.76e3



Insight Report

Printed at 4/14/2021 8:51:54 AM

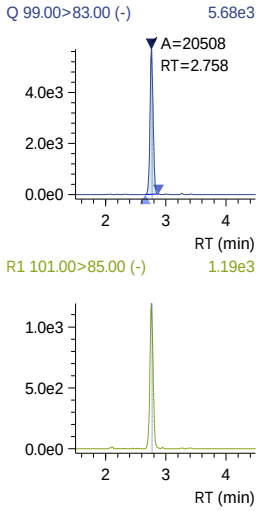
20210413_013

Sample ID: PERCHLORATE6
Date Acquired: 4/13/2021 10:54:54 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210413\20210413_013.lcd
Vial: 27 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.758	20508	34019	1	4.91382	ng/mL	5.0000	20.99
Sodium Perchlorate-18O4 _IS	Auto	2.759	34019	34019	1	1.00000	ng/mL	1.0000	----

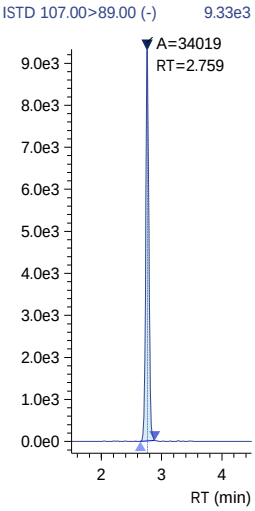
Perchlorate

Conc 4.91382
R#1 20.99 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.00000



Insight Report

Printed at 4/14/2021 8:55:34 AM

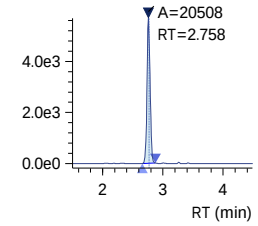
20210413_013

Sample ID: PERCHLORATE6
Date Acquired: 4/13/2021 10:54:54 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210413\Before\20210413_013.lcd
Vial: 27 | Inj. Volume: 25.0000uL | Tray: 1

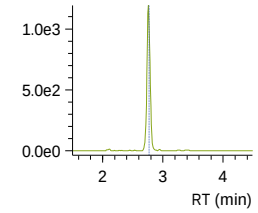
Perchlorate

Conc 4.98748
R#1 20.99 (0.00)

Q 99.00>83.00 (-) 5.68e3



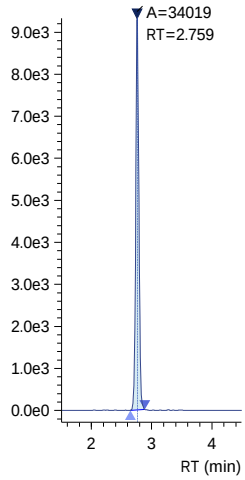
R1 101.00>85.00 (-) 1.19e3



Sodium Perchlorate -18O4_IS

Conc 1.00000

ISTD 107.00>89.00 (-) 9.33e3



Insight Report

Printed at 4/14/2021 8:51:54 AM

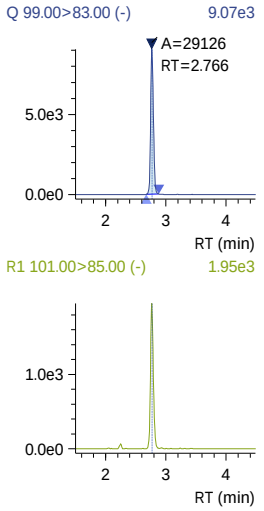
20210413_014

Sample ID: PERCHLORATE7
Date Acquired: 4/13/2021 11:02:49 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210413\20210413_014.lcd
Vial: 21 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.766	29126	24621	1	9.64243	ng/mL	10.0000	22.37
Sodium Perchlorate-18O4 _IS	Auto	2.765	24621	24621	1	1.00000	ng/mL	1.0000	----

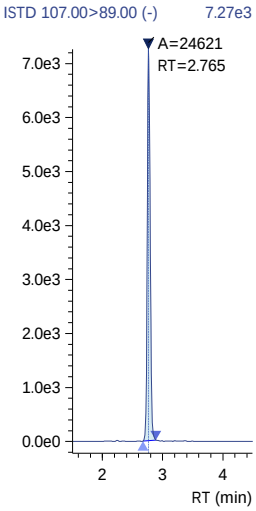
Perchlorate

Conc 9.64243
R#1 22.37 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.00000



Insight Report

Printed at 4/14/2021 8:55:34 AM

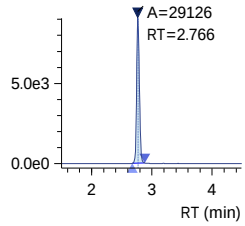
20210413_014

Sample ID: PERCHLORATE7
Date Acquired: 4/13/2021 11:02:49 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210413\Before\20210413_014.lcd
Vial: 21 | Inj. Volume: 25.0000uL | Tray: 1

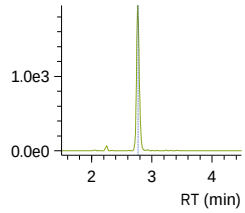
Perchlorate

Conc 9.78696
R#1 22.37 (0.00)

Q 99.00>83.00 (-) 9.07e3



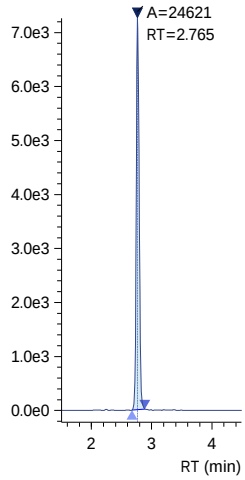
R1 101.00>85.00 (-) 1.95e3



Sodium Perchlorate -18O4_IS

Conc 1.00000

ISTD 107.00>89.00 (-) 7.27e3



Insight Report

Printed at 4/14/2021 8:51:54 AM

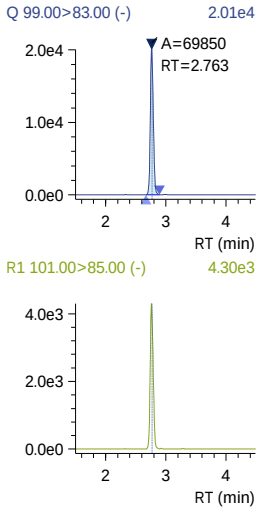
20210413_015

Sample ID: PERCHLORATE8
Date Acquired: 4/13/2021 11:10:43 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210413\20210413_015.lcd
Vial: 28 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.763	69850	30625	1	18.59082	ng/mL	20.0000	21.49
Sodium Perchlorate-18O4_IS	Auto	2.761	30625	30625	1	1.00000	ng/mL	1.0000	----

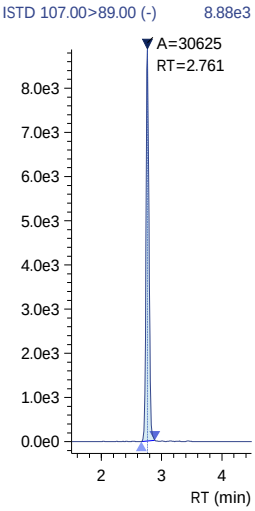
Perchlorate

Conc 18.59082
R#1 21.49 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.00000



Insight Report

Printed at 4/14/2021 8:55:34 AM

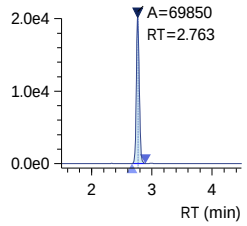
20210413_015

Sample ID: PERCHLORATE8
Date Acquired: 4/13/2021 11:10:43 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210413\Before\20210413_015.lcd
Vial: 28 | Inj. Volume: 25.0000uL | Tray: 1

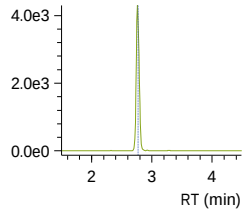
Perchlorate

Conc 18.86948
R#1 21.49 (0.00)

Q 99.00>83.00 (-) 2.01e4



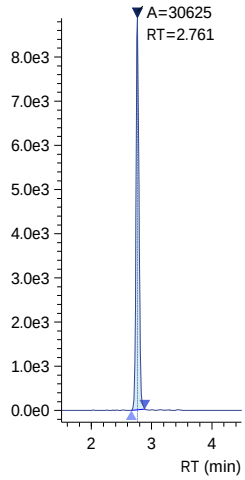
R1 101.00>85.00 (-) 4.30e3



Sodium Perchlorate -18O4_IS

Conc 1.00000

ISTD 107.00>89.00 (-) 8.88e3



Insight Report

Printed at 4/14/2021 8:51:54 AM

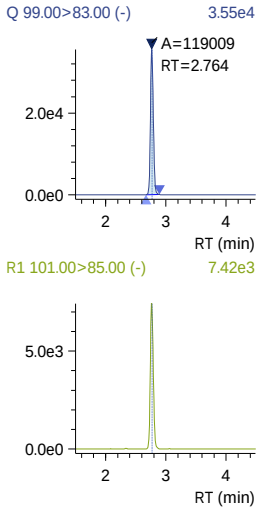
20210413_016

Sample ID: PERCHLORATE9
Date Acquired: 4/13/2021 11:18:37 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210413\20210413_016.lcd
Vial: 29 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.764	119009	34325	1	28.26043	ng/mL	30.0000	21.59
Sodium Perchlorate-18O4_IS	Auto	2.763	34325	34325	1	1.00000	ng/mL	1.0000	----

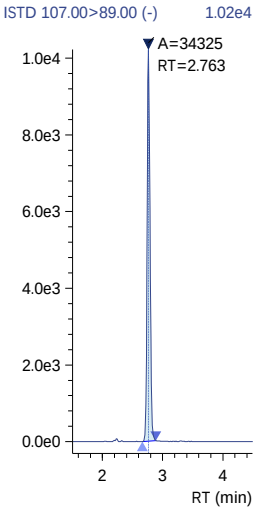
Perchlorate

Conc 28.26043
R#1 21.59 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.00000



Insight Report

Printed at 4/14/2021 8:55:34 AM

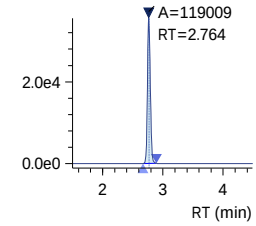
20210413_016

Sample ID: PERCHLORATE9
Date Acquired: 4/13/2021 11:18:37 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210413\Before\20210413_016.lcd
Vial: 29 | Inj. Volume: 25.0000uL | Tray: 1

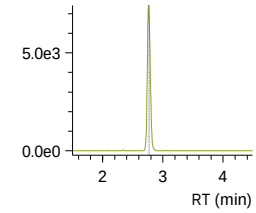
Perchlorate

Conc 28.68402
R#1 21.59 (0.00)

Q 99.00>83.00 (-) 3.55e4



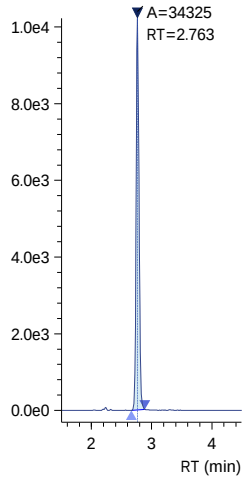
R1 101.00>85.00 (-) 7.42e3



Sodium Perchlorate -18O4_IS

Conc 1.00000

ISTD 107.00>89.00 (-) 1.02e4



Insight Report

Printed at 4/14/2021 8:51:54 AM

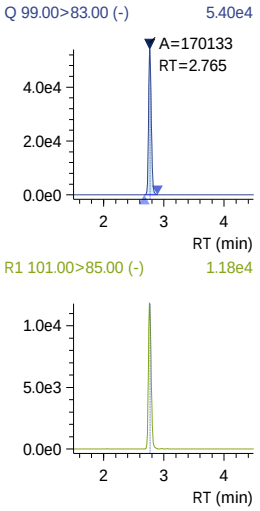
20210413_017

Sample ID: PERCHLORATE10
Date Acquired: 4/13/2021 11:26:31 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210413\20210413_017.lcd
Vial: 30 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.765	170133	30370	1	45.66271	ng/mL	50.0000	22.95
Sodium Perchlorate-18O4_IS	Auto	2.763	30370	30370	1	1.00000	ng/mL	1.0000	----

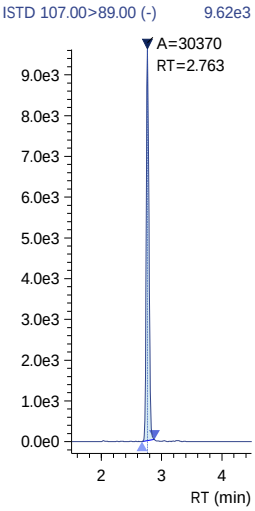
Perchlorate

Conc 45.66271
R#1 22.95 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.00000



Insight Report

Printed at 4/14/2021 8:55:34 AM

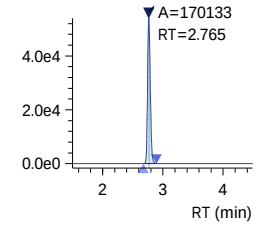
20210413_017

Sample ID: PERCHLORATE10
Date Acquired: 4/13/2021 11:26:31 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210413\Before\20210413_017.lcd
Vial: 30 | Inj. Volume: 25.0000uL | Tray: 1

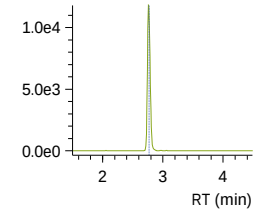
Perchlorate

Conc 46.34714
R#1 22.95 (0.00)

Q 99.00>83.00 (-) 5.40e4



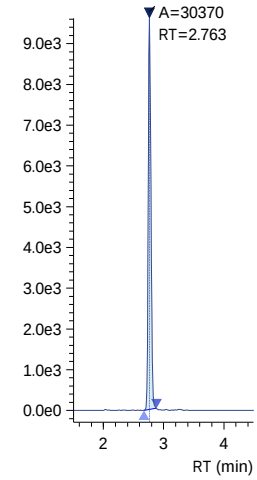
R1 101.00>85.00 (-) 1.18e4



Sodium Perchlorate -18O4_IS

Conc 1.00000

ISTD 107.00>89.00 (-) 9.62e3



Insight Report

Printed at 4/14/2021 8:51:54 AM

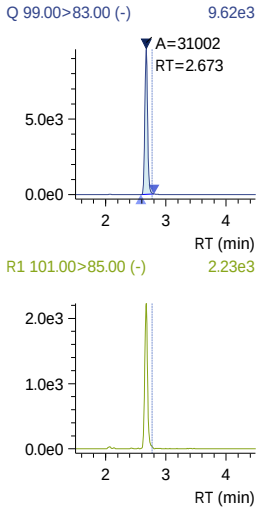
20210413_018

Sample ID: PERCHLORATEICV
Date Acquired: 4/13/2021 11:58:42 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210413\20210413_018.lcd
Vial: 31 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.673	31002	26657	1	9.47985	ng/mL	10.0000	23.51
Sodium Perchlorate-18O4 _IS	Auto	2.672	26657	26657	1	1.00000	ng/mL	1.0000	----

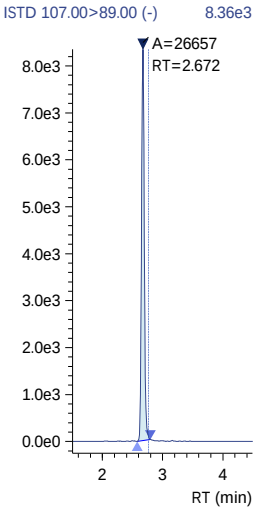
Perchlorate

Conc 9.47985
R#1 23.51 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.00000



Insight Report

Printed at 4/14/2021 8:55:34 AM

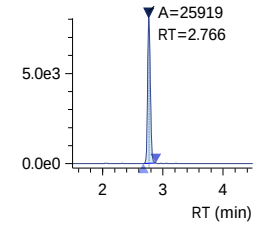
20210413_018

Sample ID: PERCHLORATEICV
Date Acquired: 4/13/2021 11:34:26 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210413\Before\20210413_018.lcd
Vial: 31 | Inj. Volume: 25.0000uL | Tray: 1

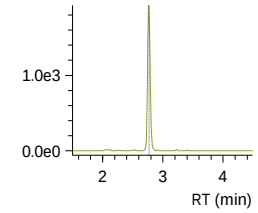
Perchlorate

Conc 8.37906
R#1 24.46 (0.00)

Q 99.00>83.00 (-) 8.06e3



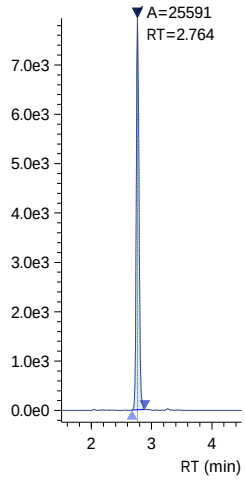
R1 101.00>85.00 (-) 1.93e3



Sodium Perchlorate -18O4_IS

Conc 1.00000

ISTD 107.00>89.00 (-) 7.95e3



20210428

1st Review: Grivera
2nd Review: Kneir

ALS Environmental

Injection Log
LCMS01 -Shimadzu 8050

ICAL Date: 4/28/2021
Cal. Std. xp: 5/20/2021
ICAL ID: **EC2100026**

Mobile Phases **A:** 0.75% Formic Acid/Water 3100809-07 **B:** MeOH 216350

			File Name	Acquisition Method	Dilution	R	Comments	Date/Time
1	PERCHLORATE1		20210428_044	Perchlorate6850b.lcm	1x	☒	3100808-05	4/28/2021 18:16
2	PERCHLORATE2		20210428_045	Perchlorate6850b.lcm	1x	☒	3100808-06	4/28/2021 18:25
3	PERCHLORATE3		20210428_046	Perchlorate6850b.lcm	1x	☒	3100808-07	4/28/2021 18:34
4	PERCHLORATE4		20210428_047	Perchlorate6850b.lcm	1x	☒	3100808-08	4/28/2021 18:44
5	PERCHLORATE5		20210428_048	Perchlorate6850b.lcm	1x	☒	3100808-09	4/28/2021 18:53
6	PERCHLORATE6		20210428_049	Perchlorate6850b.lcm	1x	☒	3100809-01	4/28/2021 19:03
7	PERCHLORATE7		20210428_050	Perchlorate6850b.lcm	1x	☒	3100809-02	4/28/2021 19:12
8	PERCHLORATE8		20210428_051	Perchlorate6850b.lcm	1x	☒	3100809-03	4/28/2021 19:22
9	PERCHLORATE9		20210428_052	Perchlorate6850b.lcm	1x	☒	3100809-04	4/28/2021 19:31
10	PERCHLORATEICV		20210428_054	Perchlorate6850b.lcm	1x	☒	3100809-06	4/28/2021 19:50
11	ICS		20210428_055	Perchlorate6850b.lcm	1x	☒		4/28/2021 19:59
12	LODV		20210428_056	Perchlorate6850b.lcm	1x	☒		4/28/2021 20:08
13	PERCHLORATE7		20210428_057	Perchlorate6850b.lcm	1x	☒	3100809-02	4/28/2021 20:18
14	EQ2100244-01		20210428_058	Perchlorate6850b.lcm	1x	☒		4/28/2021 20:27
15	EQ2100244-02		20210428_059	Perchlorate6850b.lcm	1x	☒		4/28/2021 20:37
16	EQ2100244-03		20210428_060	Perchlorate6850b.lcm	1x	☒		4/28/2021 20:46
17	E2100412-016X10		20210428_061	Perchlorate6850b.lcm	10X	☒		4/28/2021 20:55
18	E2100412-017X10		20210428_062	Perchlorate6850b.lcm	10X	☒		4/28/2021 21:05
19	E2100412-011X10DNU		20210428_063	Perchlorate6850b.lcm	10X	☒	DNU:Report 1X	4/28/2021 21:14
20	E2100412-012X10DNU		20210428_064	Perchlorate6850b.lcm	10X	☒	Bad injection: Reanalyze	4/28/2021 21:24
21	E2100412-013X10DNU		20210428_065	Perchlorate6850b.lcm	10X	☒	Over ICAL: Run 50X	4/28/2021 21:33
22	E2100412-014X10DNU		20210428_066	Perchlorate6850b.lcm	10X	☒	Bad injection: Reanalyze	4/28/2021 21:42
23	E2100412-015X10DNU		20210428_067	Perchlorate6850b.lcm	10X	☒	DNU:Report 1X	4/28/2021 21:52
24	PERCHLORATE7		20210428_068	Perchlorate6850b.lcm	1x	☒	3100809-02	4/28/2021 22:01
25	E2100411-001		20210428_069	Perchlorate6850b.lcm	1x	☒		4/28/2021 22:10
26	E2100412-003X10		20210428_070	Perchlorate6850b.lcm	10X	☒		4/28/2021 22:20
27	E2100412-010X10		20210428_071	Perchlorate6850b.lcm	10X	☒		4/28/2021 22:29
28	R2103214-010		20210428_072	Perchlorate6850b.lcm	1x	☒		4/28/2021 22:38
29	PERCHLORATE7		20210428_073	Perchlorate6850b.lcm	1x	☒	3100809-02	4/28/2021 22:48
30	E2100485-002X10		20210428_074	Perchlorate6850b.lcm	10X	☒		4/28/2021 22:57
31	E2100485-003X10		20210428_075	Perchlorate6850b.lcm	10X	☒		4/28/2021 23:07
32	E2100485-007X10		20210428_076	Perchlorate6850b.lcm	10X	☒		4/28/2021 23:16
33	E2100485-010X10		20210428_077	Perchlorate6850b.lcm	10X	☒		4/28/2021 23:25
34	EQ2100244-04X10DNU		20210428_078	Perchlorate6850b.lcm	10X	☒	DNU: report 1X	4/28/2021 23:35
35	EQ2100244-05X10DNU		20210428_079	Perchlorate6850b.lcm	10X	☒	DNU: report 1X	4/28/2021 23:44
36	PERCHLORATE7		20210428_080	Perchlorate6850b.lcm	1x	☒	3100809-02	4/28/2021 23:54
37	E2100485-001		20210428_081	Perchlorate6850b.lcm	1x	☒		4/29/2021 0:03
38	E2100485-004		20210428_082	Perchlorate6850b.lcm	1x	☒		4/29/2021 0:12
39	E2100485-005		20210428_083	Perchlorate6850b.lcm	1x	☒		4/29/2021 0:22
40	E2100485-006DNU		20210428_084	Perchlorate6850b.lcm	1x	☒	DNU: INST failed	4/29/2021 0:31
41	PERCHLORATE7		20210428_085	Perchlorate6850b.lcm	1x	☒	3100809-02	4/29/2021 0:40
42	E2100485-008		20210428_086	Perchlorate6850b.lcm	1x	☒		4/29/2021 0:50
43	E2100485-009		20210428_087	Perchlorate6850b.lcm	1x	☒		4/29/2021 0:59
44	E2100485-011		20210428_088	Perchlorate6850b.lcm	1x	☒		4/29/2021 1:09
45	E2100485-012DNU		20210428_089	Perchlorate6850b.lcm	1x	☒	DNU-low INST	4/29/2021 1:18
46	E2100485-013		20210428_090	Perchlorate6850b.lcm	1x	☒		4/29/2021 1:27
47	EQ2100244-04		20210428_091	Perchlorate6850b.lcm	1x	☒		4/29/2021 1:37
48	EQ2100244-05		20210428_092	Perchlorate6850b.lcm	1x	☒		4/29/2021 1:46
49	PERCHLORATE7		20210428_093	Perchlorate6850b.lcm	1x	☒	3100809-02	4/29/2021 1:56
50								
51								

Initial Calibration - Detailed Report

Calibration ID: EC2100026 **Instrument ID:** E-LCMS-01
Column Name: 1

#	Lab Code	Sample Name	File Location	Aquisition Date
01	EC2100026-01	PERCHLORATE1	20210428_044	04/28/2021 18:16
02	EC2100026-02	PERCHLORATE2	20210428_045	04/28/2021 18:25
03	EC2100026-03	PERCHLORATE3	20210428_046	04/28/2021 18:34
04	EC2100026-04	PERCHLORATE4	20210428_047	04/28/2021 18:44
05	EC2100026-05	PERCHLORATE5	20210428_048	04/28/2021 18:53
06	EC2100026-06	PERCHLORATE6	20210428_049	04/28/2021 19:03
07	EC2100026-07	PERCHLORATE7	20210428_050	04/28/2021 19:12
08	EC2100026-08	PERCHLORATE8	20210428_051	04/28/2021 19:22
10	EC2100026-10	PERCHLORATE9	20210428_052	04/28/2021 19:31

Analyte **Curve Fit** **Weighting**

Perchlorate **Average RF** **RSD = 13.94** **Average RF = 0.1168**

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.1000	0.1516	02	0.5000	0.1269	03	0.7000	0.1246	04	1.0000	0.1032
05	2.0000	0.1172	06	5.0000	0.1124	07	10.0000	0.1144	08	20.0000	0.09843
10	30.0000	0.1026									

Analyte

Perchlorate

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	0.1000	0.130	29.8	02	0.5000	0.543	8.6	03	0.7000	0.746	6.6
04	1.0000	0.883	-11.7	05	2.0000	2.01	0.3	06	5.0000	4.81	-3.8
07	10.0000	9.79	-2.1	08	20.0000	16.9	-15.7	10	30.0000	26.4	-12.1

Initial Calibration Verification Summary Report

Calibration ID:	EC2100026	**Instrument ID:**	E-LCMS-01
Datafile ID:	20210428_054	**Column Name:**	1

Analyte	Lab Code	Type	Curve Fit	True Value	Calc Conc	Units	Result	Criteria
Perchlorate	EC2100026-09	T	Average RF	10	9.455	ng/mL	-5.4	<= 15

Insight Report

Printed at 4/29/2021 1:26:51 PM

Method File: I:\LCMS01\DATA\20210428\20210428.lcm
Project File: I:\LCMS01\DATA\20210428\20210428-ICAL.damlp

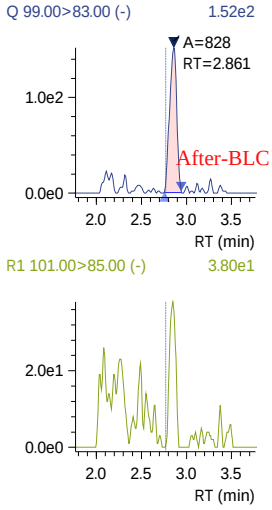
20210428_044

Sample ID: PERCHLORATE1
Date Acquired: 4/28/2021 6:16:06 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210428\20210428_044.lcd
Vial: 22 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	M	2.861	828	54618	1	0.12971	ng/mL	0.1000	24.00
Sodium Perchlorate-18O4 _IS	M	2.848	54618	54618	1	1.00000	ng/mL	1.0000	----

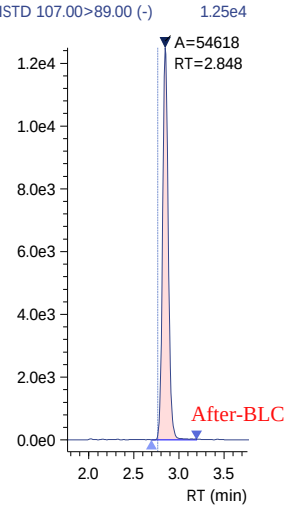
Perchlorate

Conc 0.12971
R#1 24.00 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.00000



Insight Report

Printed at 4/29/2021 1:28:28 PM

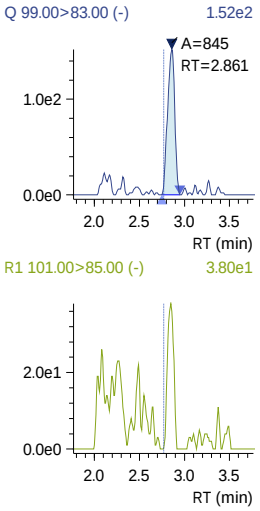
Method File: I:\LCMS01\DATA\20210428\Before\20210426.lcm

20210428_044

Sample ID: PERCHLORATE1
Date Acquired: 4/28/2021 6:16:06 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210428\Before\20210428_044.lcd
Vial: 22 | Inj. Volume: 25.0000uL | Tray: 1

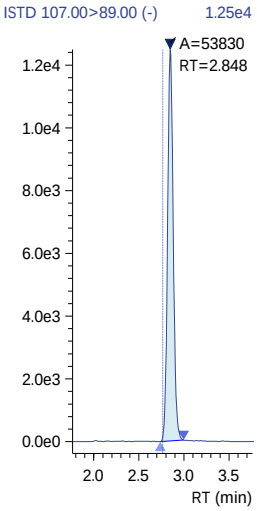
Perchlorate

Conc 0.13578
R#1 23.68 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.00000



Insight Report

Printed at 4/29/2021 1:26:51 PM

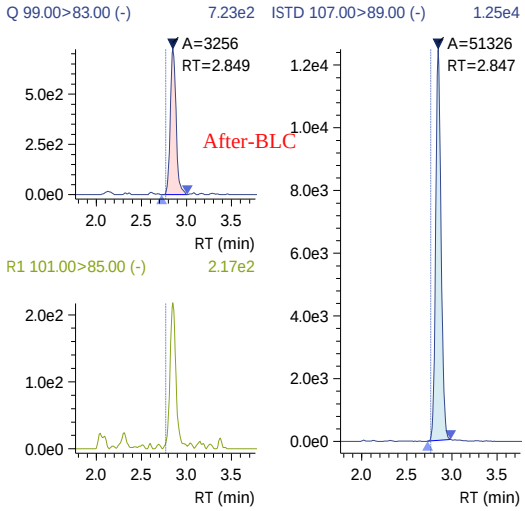
20210428_045

Sample ID: PERCHLORATE2
Date Acquired: 4/28/2021 6:25:33 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210428\20210428_045.lcd
Vial: 23 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	M	2.849	3256	51326	1	0.54312	ng/mL	0.5000	30.04
Sodium Perchlorate-18O4 _IS	Auto	2.847	51326	51326	1	1.00000	ng/mL	1.0000	----

Perchlorate

Conc 0.54312
R#1 30.04 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.00000

After-BLC

Insight Report

Printed at 4/29/2021 1:28:28 PM

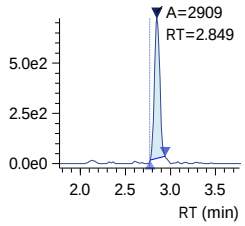
20210428_045

Sample ID: PERCHLORATE2
Date Acquired: 4/28/2021 6:25:33 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210428\Before\20210428_045.lcd
Vial: 23 | Inj. Volume: 25.0000uL | Tray: 1

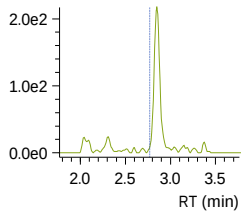
Perchlorate

Conc 0.49019
R#1 29.78 (0.00)

Q 99.00>83.00 (-) 7.23e2



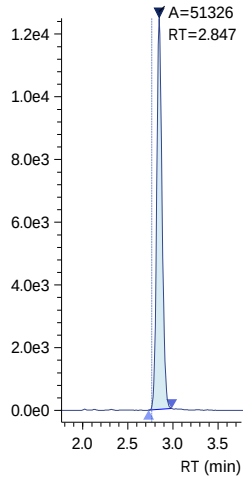
R1 101.00>85.00 (-) 2.17e2



Sodium Perchlorate -18O4_IS

Conc 1.00000

ISTD 107.00>89.00 (-) 1.25e4



Insight Report

Printed at 4/29/2021 1:26:51 PM

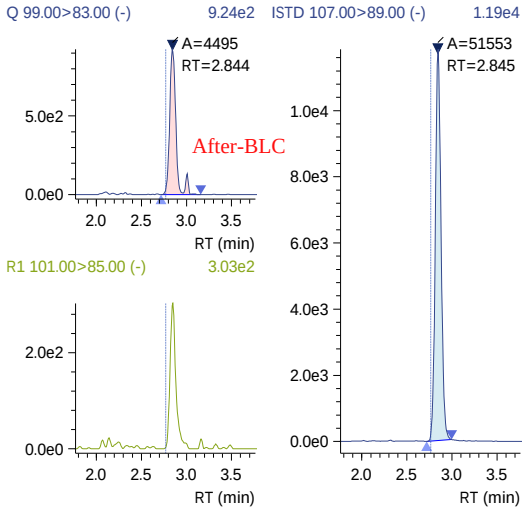
20210428_046

Sample ID: PERCHLORATE3
Date Acquired: 4/28/2021 6:34:56 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210428\20210428_046.lcd
Vial: 24 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	M	2.844	4495	51553	1	0.74640	ng/mL	0.7000	31.37
Sodium Perchlorate-18O4 _IS	Auto	2.845	51553	51553	1	1.00000	ng/mL	1.0000	----

Perchlorate

Conc 0.74640
R#1 31.37 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.00000

Insight Report

Printed at 4/29/2021 1:28:28 PM

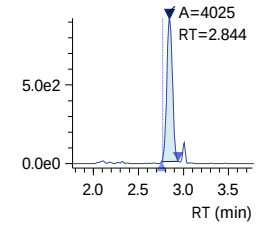
20210428_046

Sample ID: PERCHLORATE3
Date Acquired: 4/28/2021 6:34:56 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210428\Before\20210428_046.lcd
Vial: 24 | Inj. Volume: 25.0000uL | Tray: 1

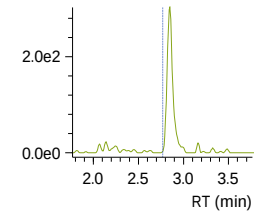
Perchlorate

Conc 0.67532
R#1 31.38 (0.00)

Q 99.00>83.00 (-) 9.24e2



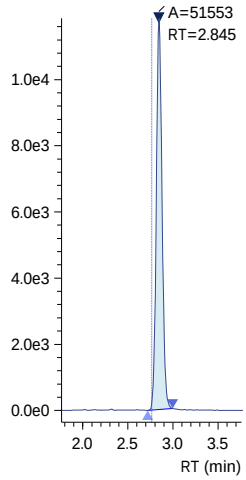
R1 101.00>85.00 (-) 3.03e2



Sodium Perchlorate -18O4_IS

Conc 1.00000

ISTD 107.00>89.00 (-) 1.19e4



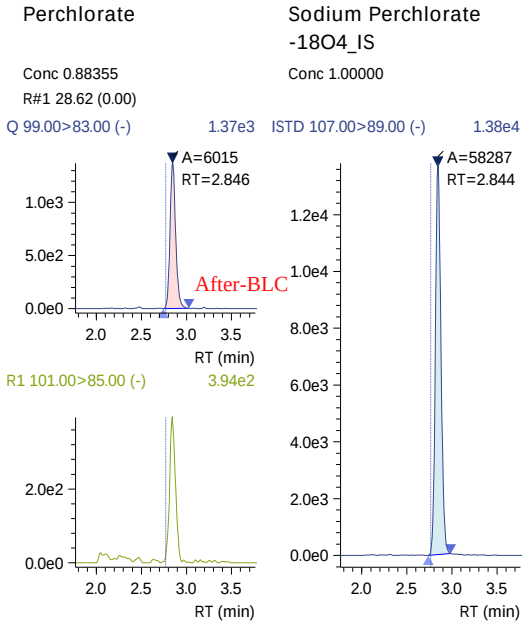
Insight Report

Printed at 4/29/2021 1:26:51 PM

20210428_047

Sample ID: PERCHLORATE4
Date Acquired: 4/28/2021 6:44:22 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210428\20210428_047.lcd
Vial: 25 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	M	2.846	6015	58287	1	0.88355	ng/mL	1.0000	28.62
Sodium Perchlorate-18O4 _IS	Auto	2.844	58287	58287	1	1.00000	ng/mL	1.0000	----



Insight Report

Printed at 4/29/2021 1:28:28 PM

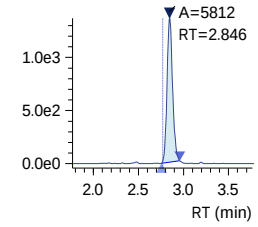
20210428_047

Sample ID: PERCHLORATE4
Date Acquired: 4/28/2021 6:44:22 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210428\Before\20210428_047.lcd
Vial: 25 | Inj. Volume: 25.0000uL | Tray: 1

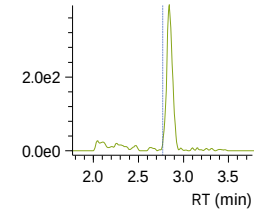
Perchlorate

Conc 0.86245
R#1 28.86 (0.00)

Q 99.00>83.00 (-) 1.37e3



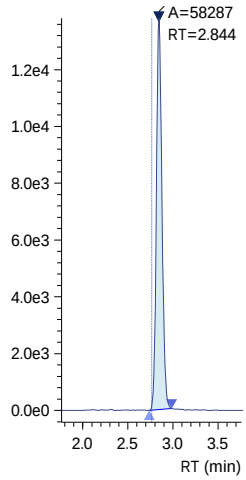
R1 101.00>85.00 (-) 3.94e2



Sodium Perchlorate -18O4_IS

Conc 1.00000

ISTD 107.00>89.00 (-) 1.38e4



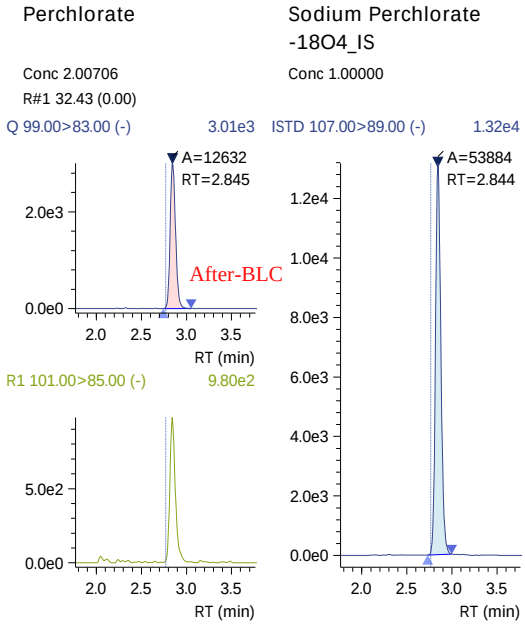
Insight Report

Printed at 4/29/2021 1:26:51 PM

20210428_048

Sample ID: PERCHLORATE5
Date Acquired: 4/28/2021 6:53:45 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210428\20210428_048.lcd
Vial: 26 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	M	2.845	12632	53884	1	2.00706	ng/mL	2.0000	32.43
Sodium Perchlorate-18O4 _IS	Auto	2.844	53884	53884	1	1.00000	ng/mL	1.0000	----



Insight Report

Printed at 4/29/2021 1:28:28 PM

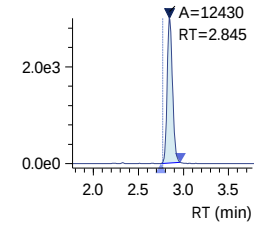
20210428_048

Sample ID: PERCHLORATE5
Date Acquired: 4/28/2021 6:53:45 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210428\Before\20210428_048.lcd
Vial: 26 | Inj. Volume: 25.0000uL | Tray: 1

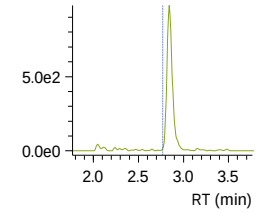
Perchlorate

Conc 1.99532
R#1 32.28 (0.00)

Q 99.00>83.00 (-) 3.01e3



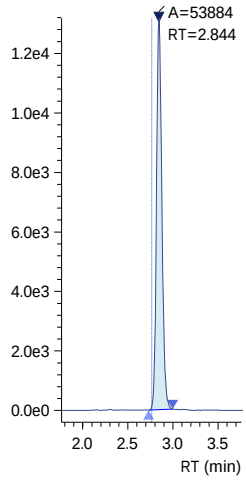
R1 101.00>85.00 (-) 9.80e2



Sodium Perchlorate -18O4_IS

Conc 1.00000

ISTD 107.00>89.00 (-) 1.32e4



Insight Report

Printed at 4/29/2021 1:26:51 PM

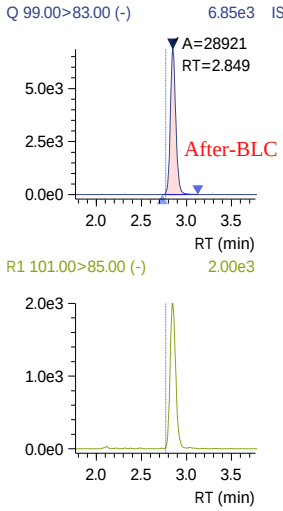
20210428_049

Sample ID: PERCHLORATE6
Date Acquired: 4/28/2021 7:03:12 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210428\20210428_049.lcd
Vial: 27 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	M	2.849	28921	51456	1	4.81188	ng/mL	5.0000	30.04
Sodium Perchlorate-18O4 _IS	Auto	2.846	51456	51456	1	1.00000	ng/mL	1.0000	----

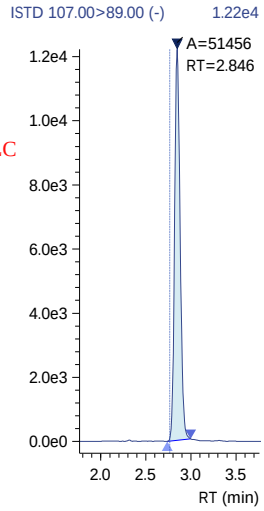
Perchlorate

Conc 4.81188
R#1 30.04 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.00000



Insight Report

Printed at 4/29/2021 1:28:28 PM

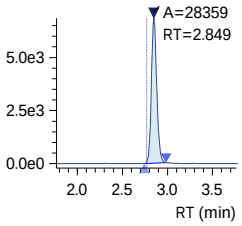
20210428_049

Sample ID: PERCHLORATE6
Date Acquired: 4/28/2021 7:03:12 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210428\Before\20210428_049.lcd
Vial: 27 | Inj. Volume: 25.0000uL | Tray: 1

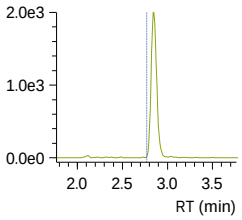
Perchlorate

Conc 4.76710
R#1 30.13 (0.00)

Q 99.00>83.00 (-) 6.85e3



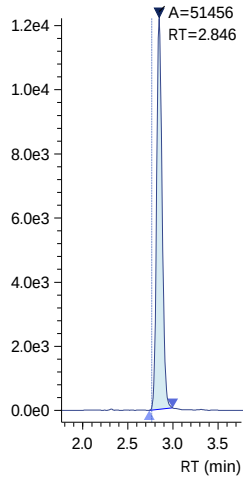
R1 101.00>85.00 (-) 2.00e3



Sodium Perchlorate -18O4_IS

Conc 1.00000

ISTD 107.00>89.00 (-) 1.22e4



Insight Report

Printed at 4/29/2021 1:26:51 PM

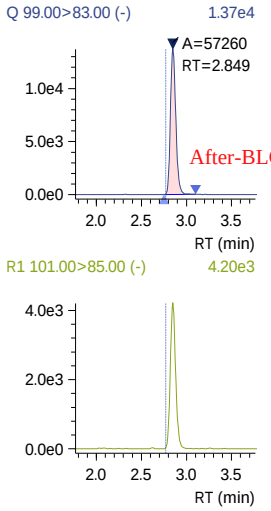
20210428_050

Sample ID: PERCHLORATE7
Date Acquired: 4/28/2021 7:12:36 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210428\20210428_050.lcd
Vial: 21 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	M	2.849	57260	50051	1	9.79458	ng/mL	10.0000	30.74
Sodium Perchlorate-18O4 _IS	Auto	2.848	50051	50051	1	1.00000	ng/mL	1.0000	----

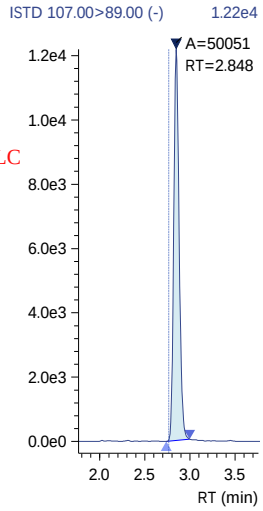
Perchlorate

Conc 9.79458
R#1 30.74 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.00000



Insight Report

Printed at 4/29/2021 1:28:28 PM

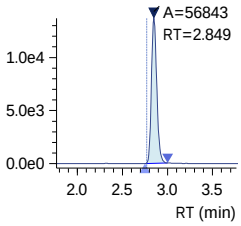
20210428_050

Sample ID: PERCHLORATE7
Date Acquired: 4/28/2021 7:12:36 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210428\Before\20210428_050.lcd
Vial: 21 | Inj. Volume: 25.0000uL | Tray: 1

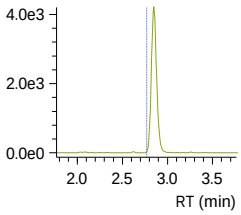
Perchlorate

Conc 9.82335
R#1 30.77 (0.00)

Q 99.00>83.00 (-) 1.37e4



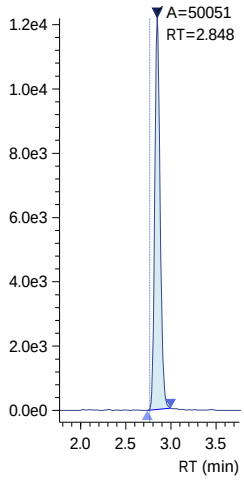
R1 101.00>85.00 (-) 4.20e3



Sodium Perchlorate -18O4_IS

Conc 1.00000

ISTD 107.00>89.00 (-) 1.22e4



Insight Report

Printed at 4/29/2021 1:26:51 PM

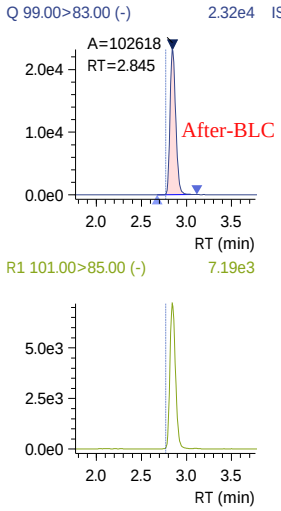
20210428_051

Sample ID: PERCHLORATE8
Date Acquired: 4/28/2021 7:22:01 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210428\20210428_051.lcd
Vial: 28 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	M	2.845	102618	52128	1	16.85388	ng/mL	20.0000	30.96
Sodium Perchlorate-18O4_IS	Auto	2.844	52128	52128	1	1.00000	ng/mL	1.0000	----

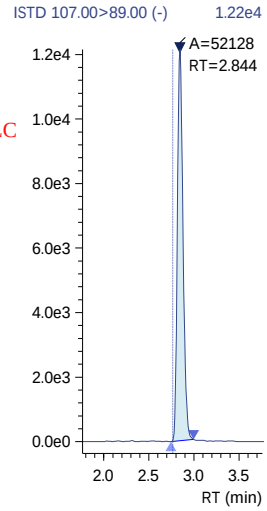
Perchlorate

Conc 16.85388
R#1 30.96 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.00000



Insight Report

Printed at 4/29/2021 1:28:28 PM

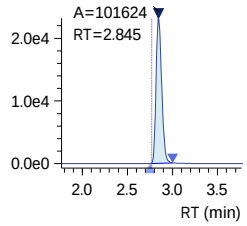
20210428_051

Sample ID: PERCHLORATE8
Date Acquired: 4/28/2021 7:22:01 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210428\Before\20210428_051.lcd
Vial: 28 | Inj. Volume: 25.0000uL | Tray: 1

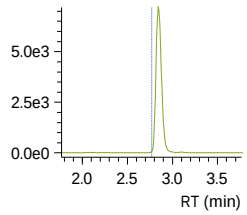
Perchlorate

Conc 16.86268
R#1 30.97 (0.00)

Q 99.00>83.00 (-) 2.32e4



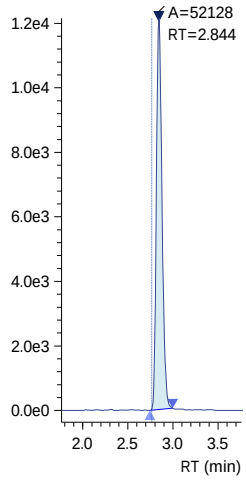
R1 101.00>85.00 (-) 7.19e3



Sodium Perchlorate -18O4_IS

Conc 1.00000

ISTD 107.00>89.00 (-) 1.22e4



Insight Report

Printed at 4/29/2021 1:26:51 PM

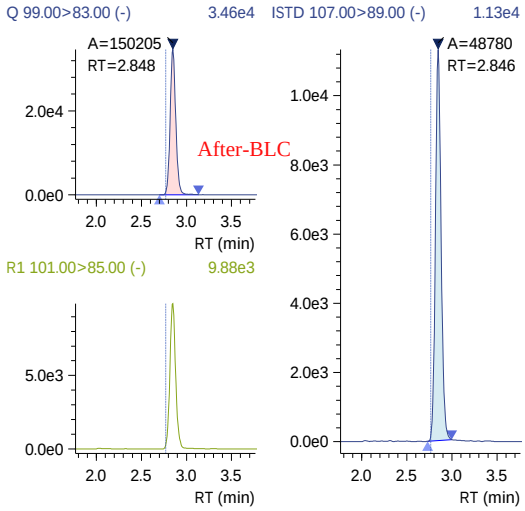
20210428_052

Sample ID: PERCHLORATE9
Date Acquired: 4/28/2021 7:31:24 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210428\20210428_052.lcd
Vial: 29 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	M	2.848	150205	48780	1	26.36258	ng/mL	30.0000	29.04
Sodium Perchlorate-18O4_IS	Auto	2.846	48780	48780	1	1.00000	ng/mL	1.0000	----

Perchlorate

Conc 26.36258
R#1 29.04 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.00000

Insight Report

Printed at 4/29/2021 1:28:28 PM

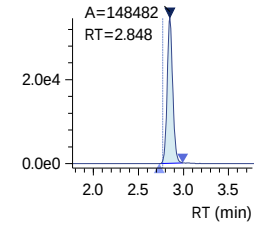
20210428_052

Sample ID: PERCHLORATE9
Date Acquired: 4/28/2021 7:31:24 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210428\Before\20210428_052.lcd
Vial: 29 | Inj. Volume: 25.0000uL | Tray: 1

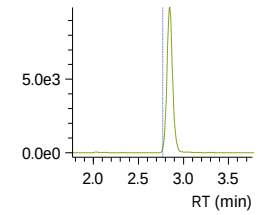
Perchlorate

Conc 26.32873
R#1 29.04 (0.00)

Q 99.00>83.00 (-) 3.46e4



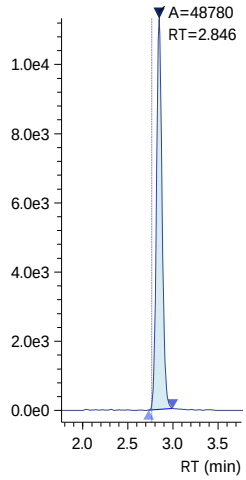
R1 101.00>85.00 (-) 9.88e3



Sodium Perchlorate -18O4_IS

Conc 1.00000

ISTD 107.00>89.00 (-) 1.13e4



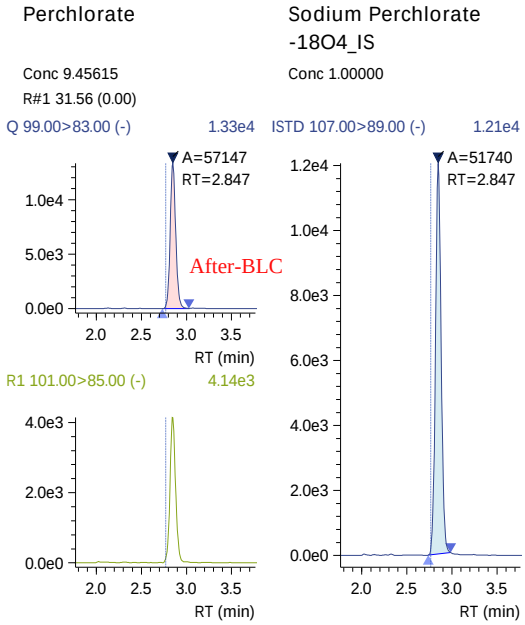
Insight Report

Printed at 4/29/2021 1:26:51 PM

20210428_054

Sample ID: PERCHLORATEICV
Date Acquired: 4/28/2021 7:50:10 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210428\20210428_054.lcd
Vial: 31 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	M	2.847	57147	51740	1	9.45615	ng/mL	10.0000	31.56
Sodium Perchlorate-18O4 _IS	Auto	2.847	51740	51740	1	1.00000	ng/mL	1.0000	----



Insight Report

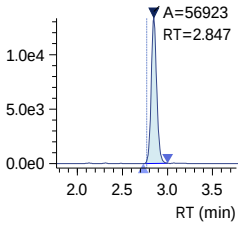
20210428_054

Sample ID: PERCHLORATEICV
Date Acquired: 4/28/2021 7:50:10 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210428\Before\20210428_054.lcd
Vial: 31 | Inj. Volume: 25.0000uL | Tray: 1

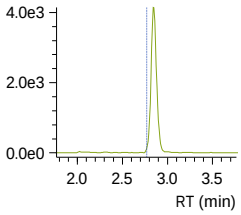
Perchlorate

Conc 9.51618
R#1 31.56 (0.00)

Q 99.00>83.00 (-) 1.33e4



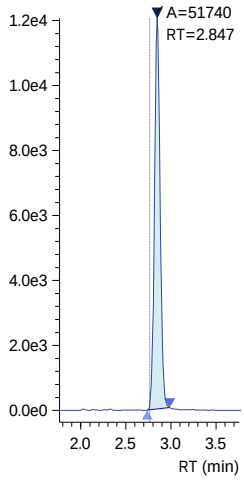
R1 101.00>85.00 (-) 4.14e3



Sodium Perchlorate -18O4_IS

Conc 1.00000

ISTD 107.00>89.00 (-) 1.21e4



Chromatograms and Selected Ion Monitoring

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 320, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

20210420

ALS Environmental

Injection Log

LCMS01 -Shimadzu 8050

ICAL Date: 4/13/2021
Cal. Std. xp: 5/20/2021
ICAL ID: **EC2100018**

1st Review: Grivera
2nd Review: Kneir

Mobile Phases **A:** 0.75% Formic Acid/Water 3100807-09 **B:** MeOH 3100802-01

			File Name	Acquisition Method	Dilution	R	Comments	Date/Time
1	null		20210420_001	Perchlorate6850b.lcm	1x	☒		4/20/2021 10:09
2	null		20210420_002	Perchlorate6850b.lcm	1x	☒		4/20/2021 10:14
3	null		20210420_002~1	Perchlorate6850b.lcm	1x	☒		4/20/2021 10:20
4	IB		20210420_003	Perchlorate6850b.lcm	1x	☒		4/20/2021 10:25
5	IB		20210420_004	Perchlorate6850b.lcm	1x	☒		4/20/2021 10:33
6	ICS		20210420_005	Perchlorate6850b.lcm	1x	☒		4/20/2021 10:41
7	LODV		20210420_006	Perchlorate6850b.lcm	1x	☒		4/20/2021 10:49
8	PERCHLORATE7		20210420_007	Perchlorate6850b.lcm	1x	☒	3100809-02	4/20/2021 10:57
9	EQ2100212-01		20210420_008	Perchlorate6850b.lcm	1x	☒		4/20/2021 11:05
10	EQ2100212-02		20210420_009	Perchlorate6850b.lcm	1x	☒		4/20/2021 11:13
11	EQ2100212-03		20210420_010	Perchlorate6850b.lcm	1x	☒		4/20/2021 11:21
12	EQ2100212-04		20210420_011	Perchlorate6850b.lcm	1x	☒		4/20/2021 11:28
13	EQ2100212-05		20210420_012	Perchlorate6850b.lcm	1x	☒		4/20/2021 11:36
14	EQ2100212-06		20210420_013	Perchlorate6850b.lcm	1x	☒		4/20/2021 12:18
15	EQ2100212-07		20210420_014	Perchlorate6850b.lcm	1x	☒		4/20/2021 12:26
16	E2100389-001		20210420_015	Perchlorate6850b.lcm	1x	☒		4/20/2021 12:34
17	E2100389-004		20210420_016	Perchlorate6850b.lcm	1x	☒		4/20/2021 12:42
18	PERCHLORATE7		20210420_017	Perchlorate6850b.lcm	1x	☒	3100809-02	4/20/2021 12:50
19	EQ2100213-01		20210420_018	Perchlorate6850b.lcm	1x	☒		4/20/2021 13:25
20	EQ2100213-02		20210420_019	Perchlorate6850b.lcm	1x	☒		4/20/2021 13:33
21	EQ2100213-03		20210420_020	Perchlorate6850b.lcm	1x	☒		4/20/2021 13:41
22	E2100409-001		20210420_021	Perchlorate6850b.lcm	1x	☒		4/20/2021 13:49
23	E2100410-001DNU		20210420_022	Perchlorate6850b.lcm	1x	☒	over ICAL range	4/20/2021 13:57
24	E2100411-001DNU		20210420_023	Perchlorate6850b.lcm	1x	☒	RR-carryover	4/20/2021 14:05
25	E2100412-001		20210420_024	Perchlorate6850b.lcm	1x	☒	RR-carryover	4/20/2021 14:13
26	E2100412-002		20210420_025	Perchlorate6850b.lcm	1x	☒		4/20/2021 14:20
27	E2100412-003DNU		20210420_026	Perchlorate6850b.lcm	1x	☒	DNU: INST failed	4/20/2021 14:28
28	E2100412-004		20210420_027	Perchlorate6850b.lcm	1x	☒		4/20/2021 14:36
29	PERCHLORATE7		20210420_028	Perchlorate6850b.lcm	1x	☒	3100809-02	4/20/2021 14:44
30	E2100412-005		20210420_029	Perchlorate6850b.lcm	1x	☒		4/20/2021 14:52
31	E2100412-006		20210420_030	Perchlorate6850b.lcm	1x	☒		4/20/2021 15:00
32	E2100412-007		20210420_031	Perchlorate6850b.lcm	1x	☒		4/20/2021 15:08
33	E2100412-008		20210420_032	Perchlorate6850b.lcm	1x	☒		4/20/2021 15:16
34	E2100412-009		20210420_033	Perchlorate6850b.lcm	1x	☒		4/20/2021 15:23
35	E2100412-010DNU		20210420_034	Perchlorate6850b.lcm	1x	☒	DNU: INST failed	4/20/2021 15:31
36	R2103214-010DNU		20210420_035	Perchlorate6850b.lcm	1x	☒	DNU: INST failed	4/20/2021 15:39
37	R2103214-011		20210420_036	Perchlorate6850b.lcm	1x	☒		4/20/2021 15:47
38	R2103214-013		20210420_037	Perchlorate6850b.lcm	1x	☒		4/20/2021 15:55
39	PERCHLORATE7		20210420_038	Perchlorate6850b.lcm	1x	☒	3100809-02	4/20/2021 16:03
40	R2103380-002		20210420_039	Perchlorate6850b.lcm	1x	☒		4/20/2021 16:11
41	R2103380-003		20210420_040	Perchlorate6850b.lcm	1x	☒		4/20/2021 16:19
42	R2103380-004		20210420_041	Perchlorate6850b.lcm	1x	☒		4/20/2021 16:26
43	R2103380-005		20210420_042	Perchlorate6850b.lcm	1x	☒		4/20/2021 16:34
44	PERCHLORATE7		20210420_043	Perchlorate6850b.lcm	1x	☒	3100809-02	4/20/2021 16:42
45								

20210428

1st Review: Grivera
2nd Review: Kneir

ALS Environmental

Injection Log
LCMS01 -Shimadzu 8050

ICAL Date: 4/28/2021
Cal. Std. xp: 5/20/2021
ICAL ID: **EC2100026**

Mobile Phases **A:** 0.75% Formic Acid/Water 3100809-07 **B:** MeOH 216350

			File Name	Acquisition Method	Dilution	R	Comments	Date/Time
1	PERCHLORATE1		20210428_044	Perchlorate6850b.lcm	1x	☒	3100808-05	4/28/2021 18:16
2	PERCHLORATE2		20210428_045	Perchlorate6850b.lcm	1x	☒	3100808-06	4/28/2021 18:25
3	PERCHLORATE3		20210428_046	Perchlorate6850b.lcm	1x	☒	3100808-07	4/28/2021 18:34
4	PERCHLORATE4		20210428_047	Perchlorate6850b.lcm	1x	☒	3100808-08	4/28/2021 18:44
5	PERCHLORATE5		20210428_048	Perchlorate6850b.lcm	1x	☒	3100808-09	4/28/2021 18:53
6	PERCHLORATE6		20210428_049	Perchlorate6850b.lcm	1x	☒	3100809-01	4/28/2021 19:03
7	PERCHLORATE7		20210428_050	Perchlorate6850b.lcm	1x	☒	3100809-02	4/28/2021 19:12
8	PERCHLORATE8		20210428_051	Perchlorate6850b.lcm	1x	☒	3100809-03	4/28/2021 19:22
9	PERCHLORATE9		20210428_052	Perchlorate6850b.lcm	1x	☒	3100809-04	4/28/2021 19:31
10	PERCHLORATEICV		20210428_054	Perchlorate6850b.lcm	1x	☒	3100809-06	4/28/2021 19:50
11	ICS		20210428_055	Perchlorate6850b.lcm	1x	☒		4/28/2021 19:59
12	LODV		20210428_056	Perchlorate6850b.lcm	1x	☒		4/28/2021 20:08
13	PERCHLORATE7		20210428_057	Perchlorate6850b.lcm	1x	☒	3100809-02	4/28/2021 20:18
14	EQ2100244-01		20210428_058	Perchlorate6850b.lcm	1x	☒		4/28/2021 20:27
15	EQ2100244-02		20210428_059	Perchlorate6850b.lcm	1x	☒		4/28/2021 20:37
16	EQ2100244-03		20210428_060	Perchlorate6850b.lcm	1x	☒		4/28/2021 20:46
17	E2100412-016X10		20210428_061	Perchlorate6850b.lcm	10X	☒		4/28/2021 20:55
18	E2100412-017X10		20210428_062	Perchlorate6850b.lcm	10X	☒		4/28/2021 21:05
19	E2100412-011X10DNU		20210428_063	Perchlorate6850b.lcm	10X	☒	DNU:Report 1X	4/28/2021 21:14
20	E2100412-012X10DNU		20210428_064	Perchlorate6850b.lcm	10X	☒	Bad injection: Reanalyze	4/28/2021 21:24
21	E2100412-013X10DNU		20210428_065	Perchlorate6850b.lcm	10X	☒	Over ICAL: Run 50X	4/28/2021 21:33
22	E2100412-014X10DNU		20210428_066	Perchlorate6850b.lcm	10X	☒	Bad injection: Reanalyze	4/28/2021 21:42
23	E2100412-015X10DNU		20210428_067	Perchlorate6850b.lcm	10X	☒	DNU:Report 1X	4/28/2021 21:52
24	PERCHLORATE7		20210428_068	Perchlorate6850b.lcm	1x	☒	3100809-02	4/28/2021 22:01
25	E2100411-001		20210428_069	Perchlorate6850b.lcm	1x	☒		4/28/2021 22:10
26	E2100412-003X10		20210428_070	Perchlorate6850b.lcm	10X	☒		4/28/2021 22:20
27	E2100412-010X10		20210428_071	Perchlorate6850b.lcm	10X	☒		4/28/2021 22:29
28	R2103214-010		20210428_072	Perchlorate6850b.lcm	1x	☒		4/28/2021 22:38
29	PERCHLORATE7		20210428_073	Perchlorate6850b.lcm	1x	☒	3100809-02	4/28/2021 22:48
30	E2100485-002X10		20210428_074	Perchlorate6850b.lcm	10X	☒		4/28/2021 22:57
31	E2100485-003X10		20210428_075	Perchlorate6850b.lcm	10X	☒		4/28/2021 23:07
32	E2100485-007X10		20210428_076	Perchlorate6850b.lcm	10X	☒		4/28/2021 23:16
33	E2100485-010X10		20210428_077	Perchlorate6850b.lcm	10X	☒		4/28/2021 23:25
34	EQ2100244-04X10DNU		20210428_078	Perchlorate6850b.lcm	10X	☒	DNU: report 1X	4/28/2021 23:35
35	EQ2100244-05X10DNU		20210428_079	Perchlorate6850b.lcm	10X	☒	DNU: report 1X	4/28/2021 23:44
36	PERCHLORATE7		20210428_080	Perchlorate6850b.lcm	1x	☒	3100809-02	4/28/2021 23:54
37	E2100485-001		20210428_081	Perchlorate6850b.lcm	1x	☒		4/29/2021 0:03
38	E2100485-004		20210428_082	Perchlorate6850b.lcm	1x	☒		4/29/2021 0:12
39	E2100485-005		20210428_083	Perchlorate6850b.lcm	1x	☒		4/29/2021 0:22
40	E2100485-006DNU		20210428_084	Perchlorate6850b.lcm	1x	☒	DNU: INST failed	4/29/2021 0:31
41	PERCHLORATE7		20210428_085	Perchlorate6850b.lcm	1x	☒	3100809-02	4/29/2021 0:40
42	E2100485-008		20210428_086	Perchlorate6850b.lcm	1x	☒		4/29/2021 0:50
43	E2100485-009		20210428_087	Perchlorate6850b.lcm	1x	☒		4/29/2021 0:59
44	E2100485-011		20210428_088	Perchlorate6850b.lcm	1x	☒		4/29/2021 1:09
45	E2100485-012DNU		20210428_089	Perchlorate6850b.lcm	1x	☒	DNU-low INST	4/29/2021 1:18
46	E2100485-013		20210428_090	Perchlorate6850b.lcm	1x	☒		4/29/2021 1:27
47	EQ2100244-04		20210428_091	Perchlorate6850b.lcm	1x	☒		4/29/2021 1:37
48	EQ2100244-05		20210428_092	Perchlorate6850b.lcm	1x	☒		4/29/2021 1:46
49	PERCHLORATE7		20210428_093	Perchlorate6850b.lcm	1x	☒	3100809-02	4/29/2021 1:56
50								
51								

20210429

1st Review: Grivera
2nd Review: Kneir

ALS Environmental

Injection Log
LCMS01 -Shimadzu 8050

ICAL Date: 4/28/2021
Cal. Std. xp: 5/20/2021
ICAL ID: **EC2100026**

Mobile Phases **A:** 0.75% Formic Acid/Water 3100809-07 **B:** MeOH 216350

			File Name	Acquisition Method	Dilution	R	Comments	Date/Time
1	null		20210429_001	Perchlorate6850b.lcm	1x	☒		4/29/2021 9:14
2	null		20210429_002	Perchlorate6850b.lcm	1x	☒		4/29/2021 9:20
3	IB		20210429_003	Perchlorate6850b.lcm	1x	☒		4/29/2021 9:27
4	IB		20210429_004	Perchlorate6850b.lcm	1x	☒		4/29/2021 9:36
5	ICS		20210429_005	Perchlorate6850b.lcm	1x	☒		4/29/2021 9:45
6	LODV		20210429_006	Perchlorate6850b.lcm	1x	☒		4/29/2021 9:55
7	PERCHLORATE7		20210429_007	Perchlorate6850b.lcm	1x	☒	3100809-02	4/29/2021 10:04
8	E2100412-014		20210429_009	Perchlorate6850b.lcm	1x	☒		4/29/2021 10:44
9	E2100412-011		20210429_010	Perchlorate6850b.lcm	1x	☒		4/29/2021 10:54
10	E2100412-015		20210429_011	Perchlorate6850b.lcm	1x	☒		4/29/2021 11:03
11	E2100412-016DNU		20210429_012	Perchlorate6850b.lcm	1x	☒	DNU:low INST	4/29/2021 11:13
12	E2100412-017DNU		20210429_013	Perchlorate6850b.lcm	1x	☒	DNU:low INST	4/29/2021 11:22
13	PERCHLORATE7		20210429_014	Perchlorate6850b.lcm	1x	☒	3100809-02	4/29/2021 11:31
14	E2100485-012X10		20210429_015	Perchlorate6850b.lcm	10X	☒		4/29/2021 12:06
15	E2100412-001		20210429_016	Perchlorate6850b.lcm	1x	☒		4/29/2021 12:16
16	PERCHLORATE7		20210429_018	Perchlorate6850b.lcm	1x	☒	3100809-02	4/29/2021 12:34
17	PERCHLORATE7		20210429_019	Perchlorate6850b.lcm	1x	☒	3100809-02	4/29/2021 14:45
18	E2100412-012DNU		20210429_020	Perchlorate6850b.lcm	1x	☒	DNU:low INST	4/29/2021 15:13
19	E2100412-013X50		20210429_021	Perchlorate6850b.lcm	50X	☒		4/29/2021 15:23
20	E2100412-012X10DNU		20210429_022	Perchlorate6850b.lcm	10X	☒	DNU: INST failed	4/29/2021 15:42
21	E2100485-006DNU		20210429_024	Perchlorate6850b.lcm	1x	☒	DNU: INST failed	4/29/2021 16:00
22	E2100412-012X5		20210429_025	Perchlorate6850b.lcm	5X	☒		4/29/2021 16:10
23	E2100485-006X2		20210429_026	Perchlorate6850b.lcm	2X	☒		4/29/2021 16:19
24	PERCHLORATE7		20210429_027	Perchlorate6850b.lcm	1x	☒	3100809-02	4/29/2021 16:29
25								
26								
27								
28								
29								
30								
31								
32								
33								
34								
35								

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS21040695

Service Request: E2100412
Date Analyzed: 4/20/21

Continuing Calibration Verification Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
File ID: I:\LCMS01\DATA\20210420\20210420_017

Calibration Date: 4/13/21
Calibration ID: EC2100018
Analysis Lot: 721439
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	9.68	0.1227	0.1187	-3.2	NA	± 15 %	Average RF

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS21040695

Service Request: E2100412
Date Analyzed: 4/20/21

Continuing Calibration Verification Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
File ID: I:\LCMS01\DATA\20210420\20210420_028

Calibration Date: 4/13/21
Calibration ID: EC2100018
Analysis Lot: 721439
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	9.30	0.1227	0.1141	-7.0	NA	± 15 %	Average RF

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS21040695

Service Request: E2100412
Date Analyzed: 4/20/21

Continuing Calibration Verification Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
File ID: I:\LCMS01\DATA\20210420\20210420_038

Calibration Date: 4/13/21
Calibration ID: EC2100018
Analysis Lot: 721439
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	9.35	0.1227	0.1147	-6.5	NA	± 15 %	Average RF

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS21040695

Service Request: E2100412
Date Analyzed: 4/20/21

Continuing Calibration Verification Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
File ID: I:\LCMS01\DATA\20210420\20210420_043

Calibration Date: 4/13/21
Calibration ID: EC2100018
Analysis Lot: 721439
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	9.01	0.1227	0.1105	-10.0	NA	± 15 %	Average RF

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS21040695

Service Request: E2100412
Date Analyzed: 4/28/21

Continuing Calibration Verification Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
File ID: I:\LCMS01\DATA\20210428\20210428_057

Calibration Date: 4/28/21
Calibration ID: EC2100026
Analysis Lot: 721483
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	9.73	0.1168	0.1137	-2.7	NA	± 15 %	Average RF

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS21040695

Service Request: E2100412
Date Analyzed: 4/28/21

Continuing Calibration Verification Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
File ID: I:\LCMS01\DATA\20210428\20210428_068

Calibration Date: 4/28/21
Calibration ID: EC2100026
Analysis Lot: 721483
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	9.57	0.1168	0.1118	-4.3	NA	± 15 %	Average RF

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS21040695

Service Request: E2100412
Date Analyzed: 4/28/21

Continuing Calibration Verification Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
File ID: I:\LCMS01\DATA\20210428\20210428_073

Calibration Date: 4/28/21
Calibration ID: EC2100026
Analysis Lot: 721483
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	9.70	0.1168	0.1133	-3.0	NA	± 15 %	Average RF

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS21040695

Service Request: E2100412
Date Analyzed: 4/28/21

Continuing Calibration Verification Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
File ID: I:\LCMS01\DATA\20210428\20210428_080

Calibration Date: 4/28/21
Calibration ID: EC2100026
Analysis Lot: 721483
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	9.34	0.1168	0.1091	-6.6	NA	± 15 %	Average RF

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS21040695

Service Request: E2100412
Date Analyzed: 4/29/21

Continuing Calibration Verification Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
File ID: I:\LCMS01\DATA\20210428\20210428_085

Calibration Date: 4/28/21
Calibration ID: EC2100026
Analysis Lot: 721483
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	9.68	0.1168	0.1130	-3.2	NA	± 15 %	Average RF

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS21040695

Service Request: E2100412
Date Analyzed: 4/29/21

Continuing Calibration Verification Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
File ID: I:\LCMS01\DATA\20210428\20210428_093

Calibration Date: 4/28/21
Calibration ID: EC2100026
Analysis Lot: 721483
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	9.67	0.1168	0.1130	-3.3	NA	± 15 %	Average RF

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS21040695

Service Request: E2100412
Date Analyzed: 4/29/21

Continuing Calibration Verification Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
File ID: I:\LCMS01\DATA\20210429\20210429_007

Calibration Date: 4/28/21
Calibration ID: EC2100026
Analysis Lot: 721582
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	9.68	0.1168	0.1131	-3.2	NA	± 15 %	Average RF

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS21040695

Service Request: E2100412
Date Analyzed: 4/29/21

Continuing Calibration Verification Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
File ID: I:\LCMS01\DATA\20210429\20210429_014

Calibration Date: 4/28/21
Calibration ID: EC2100026
Analysis Lot: 721582
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	9.66	0.1168	0.1128	-3.4	NA	± 15 %	Average RF

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS21040695

Service Request: E2100412
Date Analyzed: 4/29/21

Continuing Calibration Verification Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
File ID: I:\LCMS01\DATA\20210429\20210429_018

Calibration Date: 4/28/21
Calibration ID: EC2100026
Analysis Lot: 721582
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	9.63	0.1168	0.1125	-3.7	NA	± 15 %	Average RF

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2100412
Project:	HS21040695	**Date Analyzed:**	4/20/21 12:50

Internal Standard Area and RT Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

File ID:	I:\LCMS01\DATA\20210420\20210420_017	**Lab Code:**	EQ2100256-01
Instrument ID:	E-LCMS-01	**Analysis Lot:**	721439
Analytical Method:	6850	**Signal ID:**	1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	31,230	2.76
	Upper Limit ==>	46,845	4.76
	Lower Limit ==>	15,615	0.76
Associated Analyses			
Continuing Calibration Verification	EQ2100256-01	22,784	2.80
Method Blank	EQ2100213-01	28,932	2.70
Lab Control Sample	EQ2100213-02	38,966	2.77
Duplicate Lab Control Sample	EQ2100213-03	41,071	2.77
16WW38-210412	E2100412-002	23,406	2.76
16WW14-210412	E2100412-004	16,199	2.75

Results flagged with an asterisk (*) indicate values outside control criteria.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2100412
Project:	HS21040695	**Date Analyzed:**	4/20/21 14:44

Internal Standard Area and RT Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

File ID:	I:\LCMS01\DATA\20210420\20210420_028	**Lab Code:**	EQ2100256-02
Instrument ID:	E-LCMS-01	**Analysis Lot:**	721439
Analytical Method:	6850	**Signal ID:**	1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	31,230	2.76
	Upper Limit ==>	46,845	4.76
	Lower Limit ==>	15,615	0.76
Associated Analyses			
Continuing Calibration Verification	EQ2100256-02	16,630	2.77
16WW34-210412	E2100412-005	22,619	2.75
16WW34-210412-FD	E2100412-006	24,018	2.76
16WW33-210412	E2100412-007	22,074	2.76
16WW32-210412	E2100412-008	21,414	2.74
16WW31-210412	E2100412-009	25,809	2.75

Results flagged with an asterisk (*) indicate values outside control criteria.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS21040695

Service Request: E2100412
Date Analyzed: 4/20/21 16:03

Internal Standard Area and RT Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

File ID: I:\LCMS01\DATA\20210420\20210420_038
Instrument ID: E-LCMS-01
Analytical Method: 6850

Lab Code: EQ2100256-03
Analysis Lot: 721439
Signal ID: 1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	31,230	2.76
	Upper Limit ==>	46,845	4.76
	Lower Limit ==>	15,615	0.76
Associated Analyses			
Continuing Calibration Verification	EQ2100256-03	18,155	2.77

Results flagged with an asterisk (*) indicate values outside control criteria.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2100412
Project:	HS21040695	**Date Analyzed:**	4/20/21 16:42

Internal Standard Area and RT Summary

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

File ID:	I:\LCMS01\DATA\20210420\20210420_043	**Lab Code:**	EQ2100256-04
Instrument ID:	E-LCMS-01	**Analysis Lot:**	721439
Analytical Method:	6850	**Signal ID:**	1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	31,230	2.76
	Upper Limit ==>	46,845	4.76
	Lower Limit ==>	15,615	0.76
Associated Analyses			
Continuing Calibration Verification	EQ2100256-04	18,820	2.76

Results flagged with an asterisk (*) indicate values outside control criteria.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS21040695

Service Request: E2100412
Date Analyzed: 4/28/21 20:18

Internal Standard Area and RT Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

File ID: I:\LCMS01\DATA\20210428\20210428_057
Instrument ID: E-LCMS-01
Analytical Method: 6850

Lab Code: EQ2100258-01
Analysis Lot: 721483
Signal ID: 1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	52,454	2.85
	Upper Limit ==>	78,681	4.85
	Lower Limit ==>	26,227	0.85
Associated Analyses			
Continuing Calibration Verification	EQ2100258-01	54,358	2.85
Method Blank	EQ2100244-01	62,052	2.84
Lab Control Sample	EQ2100244-02	62,495	2.85
Duplicate Lab Control Sample	EQ2100244-03	63,156	2.85
16PM06-210413	E2100412-016	64,229	2.86
16PM14-210413	E2100412-017	61,811	2.86

Results flagged with an asterisk (*) indicate values outside control criteria.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS21040695

Service Request: E2100412
Date Analyzed: 4/28/21 22:01

Internal Standard Area and RT Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

File ID: I:\LCMS01\DATA\20210428\20210428_068
Instrument ID: E-LCMS-01
Analytical Method: 6850

Lab Code: EQ2100258-02
Analysis Lot: 721483
Signal ID: 1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	52,454	2.85
	Upper Limit ==>	78,681	4.85
	Lower Limit ==>	26,227	0.85
Associated Analyses			
Continuing Calibration Verification	EQ2100258-02	49,259	2.85
16WW37-210412	E2100412-003	76,474	2.85
16WW46-210412	E2100412-010	75,332	2.83

Results flagged with an asterisk (*) indicate values outside control criteria.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2100412
Project:	HS21040695	**Date Analyzed:**	4/28/21 22:48

Internal Standard Area and RT Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

File ID:	I:\LCMS01\DATA\20210428\20210428_073	**Lab Code:**	EQ2100258-03
Instrument ID:	E-LCMS-01	**Analysis Lot:**	721483
Analytical Method:	6850	**Signal ID:**	1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	52,454	2.85
	Upper Limit ==>	78,681	4.85
	Lower Limit ==>	26,227	0.85
Associated Analyses			
Continuing Calibration Verification	EQ2100258-03	43,925	2.85

Results flagged with an asterisk (*) indicate values outside control criteria.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2100412
Project:	HS21040695	**Date Analyzed:**	4/28/21 23:54

Internal Standard Area and RT Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

File ID:	I:\LCMS01\DATA\20210428\20210428_080	**Lab Code:**	EQ2100258-04
Instrument ID:	E-LCMS-01	**Analysis Lot:**	721483
Analytical Method:	6850	**Signal ID:**	1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	52,454	2.85
	Upper Limit ==>	78,681	4.85
	Lower Limit ==>	26,227	0.85
Associated Analyses			
Continuing Calibration Verification	EQ2100258-04	46,305	2.85

Results flagged with an asterisk (*) indicate values outside control criteria.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS21040695

Service Request: E2100412
Date Analyzed: 4/29/21 00:40

Internal Standard Area and RT Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

File ID: I:\LCMS01\DATA\20210428\20210428_085
Instrument ID: E-LCMS-01
Analytical Method: 6850

Lab Code: EQ2100258-05
Analysis Lot: 721483
Signal ID: 1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	52,454	2.85
	Upper Limit ==>	78,681	4.85
	Lower Limit ==>	26,227	0.85
Associated Analyses			
Continuing Calibration Verification	EQ2100258-05	48,328	2.85

Results flagged with an asterisk (*) indicate values outside control criteria.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2100412
Project:	HS21040695	**Date Analyzed:**	4/29/21 01:56

Internal Standard Area and RT Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

File ID:	I:\LCMS01\DATA\20210428\20210428_093	**Lab Code:**	EQ2100258-06
Instrument ID:	E-LCMS-01	**Analysis Lot:**	721483
Analytical Method:	6850	**Signal ID:**	1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	52,454	2.85
	Upper Limit ==>	78,681	4.85
	Lower Limit ==>	26,227	0.85
Associated Analyses			
Continuing Calibration Verification	EQ2100258-06	43,314	2.85

Results flagged with an asterisk (*) indicate values outside control criteria.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS21040695

Service Request: E2100412
Date Analyzed: 4/29/21 10:04

Internal Standard Area and RT Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

File ID: I:\LCMS01\DATA\20210429\20210429_007
Instrument ID: E-LCMS-01
Analytical Method: 6850

Lab Code: EQ2100259-01
Analysis Lot: 721582
Signal ID: 1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	52,454	2.85
	Upper Limit ==>	78,681	4.85
	Lower Limit ==>	26,227	0.85
Associated Analyses			
Continuing Calibration Verification	EQ2100259-01	49,173	2.85
16WW36-210413	E2100412-014	28,871	2.87
16WW58-210413	E2100412-011	61,437	2.85
16PM09-210413	E2100412-015	75,422	2.86

Results flagged with an asterisk (*) indicate values outside control criteria.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS21040695

Service Request: E2100412
Date Analyzed: 4/29/21 11:31

Internal Standard Area and RT Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

File ID: I:\LCMS01\DATA\20210429\20210429_014
Instrument ID: E-LCMS-01
Analytical Method: 6850

Lab Code: EQ2100259-02
Analysis Lot: 721582
Signal ID: 1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	52,454	2.85
	Upper Limit ==>	78,681	4.85
	Lower Limit ==>	26,227	0.85
Associated Analyses			
Continuing Calibration Verification	EQ2100259-02	55,375	2.85
16WW44-210412	E2100412-001	72,495	2.84

Results flagged with an asterisk (*) indicate values outside control criteria.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2100412
Project:	HS21040695	**Date Analyzed:**	4/29/21 12:34

Internal Standard Area and RT Summary

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

File ID:	I:\LCMS01\DATA\20210429\20210429_018	**Lab Code:**	EQ2100259-03
Instrument ID:	E-LCMS-01	**Analysis Lot:**	721582
Analytical Method:	6850	**Signal ID:**	1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	52,454	2.85
	Upper Limit ==>	78,681	4.85
	Lower Limit ==>	26,227	0.85
Associated Analyses			
Continuing Calibration Verification	EQ2100259-03	54,333	2.85

Results flagged with an asterisk (*) indicate values outside control criteria.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS21040695

Service Request: E2100412
Date Analyzed: 4/29/21 14:45

Internal Standard Area and RT Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

File ID: I:\LCMS01\DATA\20210429\20210429_019
Instrument ID: E-LCMS-01
Analytical Method: 6850

Lab Code: EQ2100259-04
Analysis Lot: 721582
Signal ID: 1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	52,454	2.85
	Upper Limit ==>	78,681	4.85
	Lower Limit ==>	26,227	0.85
Associated Analyses			
Continuing Calibration Verification	EQ2100259-04	60,412	2.72
16WW35-210413	E2100412-013	70,168	2.87
16WW57-210413	E2100412-012	46,161	2.78

Results flagged with an asterisk (*) indicate values outside control criteria.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2100412
Project:	HS21040695	**Date Analyzed:**	4/29/21 16:29

Internal Standard Area and RT Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

File ID:	I:\LCMS01\DATA\20210429\20210429_027	**Lab Code:**	EQ2100259-05
Instrument ID:	E-LCMS-01	**Analysis Lot:**	721582
Analytical Method:	6850	**Signal ID:**	1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	52,454	2.85
	Upper Limit ==>	78,681	4.85
	Lower Limit ==>	26,227	0.85
Associated Analyses			
Continuing Calibration Verification	EQ2100259-05	51,614	2.85

Results flagged with an asterisk (*) indicate values outside control criteria.

Insight Report

Printed at 4/20/2021 1:06:52 PM

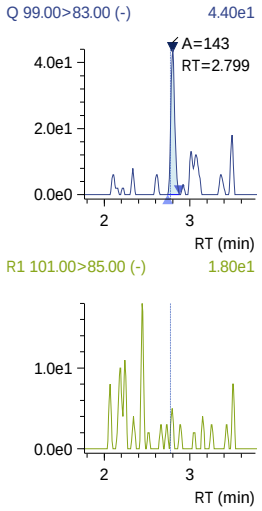
20210420_006

Sample ID: LODV
Date Acquired: 4/20/2021 10:49:33 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210420\20210420_006.lcd
Vial: 20 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.799	143	30510	1	0.03807	ng/mL	----	4.76
Sodium Perchlorate-18O4 _IS	Auto	2.795	30510	30510	1	1.00000	ng/mL	----	----

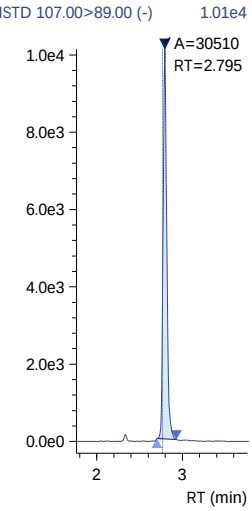
Perchlorate

Conc 0.03807
R#1 4.76 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.00000



Insight Report

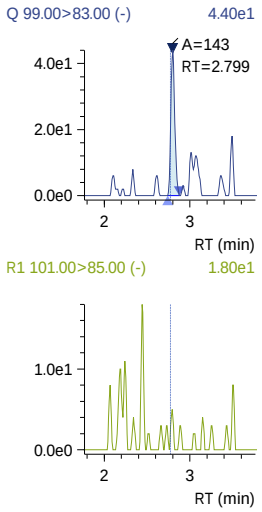
Printed at 4/20/2021 1:08:25 PM

20210420_006

Sample ID: LODV
Date Acquired: 4/20/2021 10:49:33 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210420\Before\20210420_006.lcd
Vial: 20 | Inj. Volume: 25.0000uL | Tray: 1

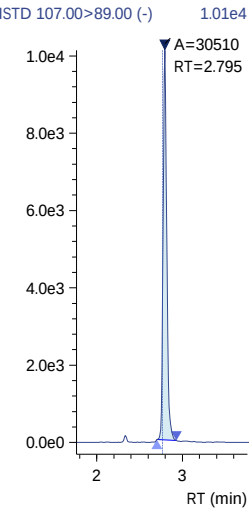
Perchlorate

Conc 0.03807
R#1 4.76 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.00000



Insight Report

Printed at 4/20/2021 1:06:52 PM

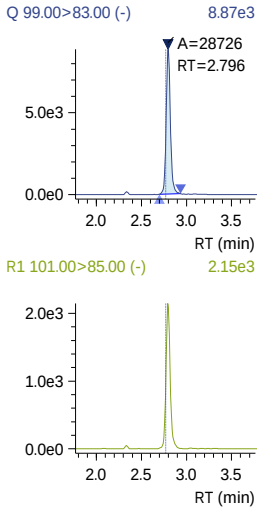
20210420_007

Sample ID: PERCHLORATE7
Date Acquired: 4/20/2021 10:57:25 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210420\20210420_007.lcd
Vial: 21 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.796	28726	26585	1	8.80736	ng/mL	10.0000	24.43
Sodium Perchlorate-18O4 _IS	Auto	2.795	26585	26585	1	1.00000	ng/mL	1.0000	----

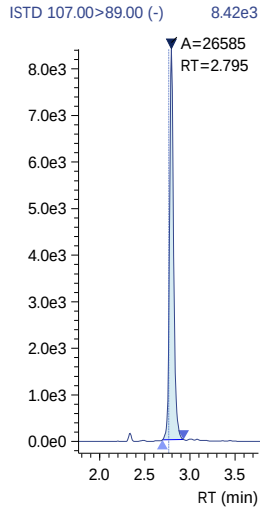
Perchlorate

Conc 8.80736
R#1 24.43 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.00000



Insight Report

Printed at 4/20/2021 1:08:25 PM

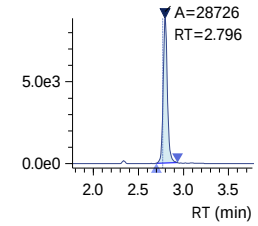
20210420_007

Sample ID: PERCHLORATE7
Date Acquired: 4/20/2021 10:57:25 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210420\Before\20210420_007.lcd
Vial: 21 | Inj. Volume: 25.0000uL | Tray: 1

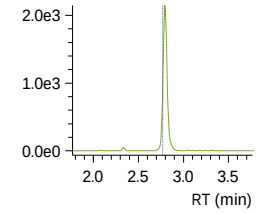
Perchlorate

Conc 8.80736
R#1 24.43 (0.00)

Q 99.00>83.00 (-) 8.87e3



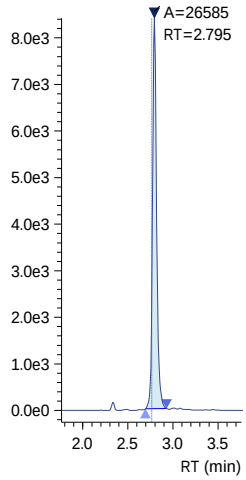
R1 101.00>85.00 (-) 2.15e3



Sodium Perchlorate -18O4_IS

Conc 1.00000

ISTD 107.00>89.00 (-) 8.42e3



Insight Report

Printed at 4/20/2021 1:06:52 PM

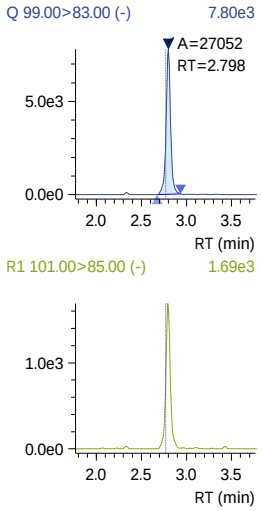
20210420_017

Sample ID: PERCHLORATE7
Date Acquired: 4/20/2021 12:50:30 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210420\20210420_017.lcd
Vial: 21 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.798	27052	22784	1	9.67789	ng/mL	10.0000	22.48
Sodium Perchlorate-18O4 _IS	Auto	2.796	22784	22784	1	1.00000	ng/mL	1.0000	----

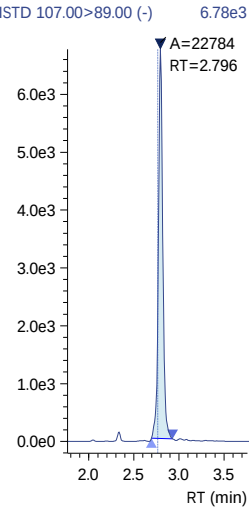
Perchlorate

Conc 9.67789
R#1 22.48 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.00000



Insight Report

Printed at 4/20/2021 1:08:25 PM

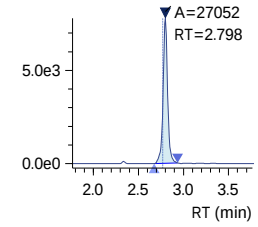
20210420_017

Sample ID: PERCHLORATE7
Date Acquired: 4/20/2021 12:50:30 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210420\Before\20210420_017.lcd
Vial: 21 | Inj. Volume: 25.0000uL | Tray: 1

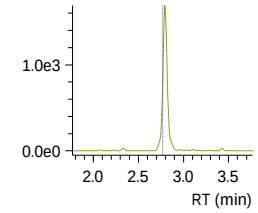
Perchlorate

Conc 9.67789
R#1 22.48 (0.00)

Q 99.00>83.00 (-) 7.80e3



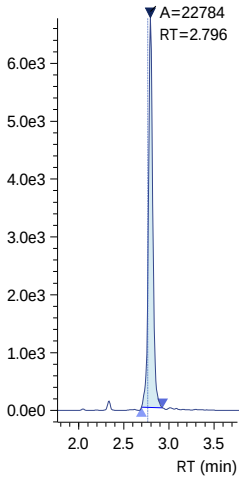
R1 101.00>85.00 (-) 1.69e3



Sodium Perchlorate -18O4_IS

Conc 1.00000

ISTD 107.00>89.00 (-) 6.78e3



Insight Report

Printed at 4/28/2021 12:53:14 PM

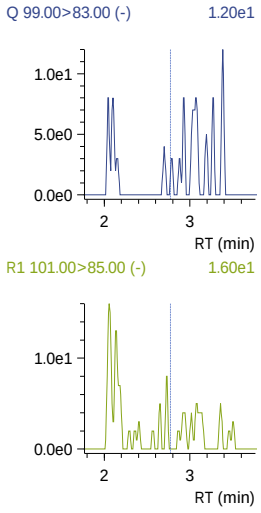
20210420_018

Sample ID: EQ2100213-01
Date Acquired: 4/20/2021 1:25:38 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210420\20210420_018.lcd
Vial: 29 | Inj. Volume: 25.0000uL | Tray: 4

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	ND(W/B)	----	----	28932	1	----	ng/mL	----	----
Sodium Perchlorate-18O4_IS	Auto	2.695	28932	28932	1	1.00000	ng/mL	----	----

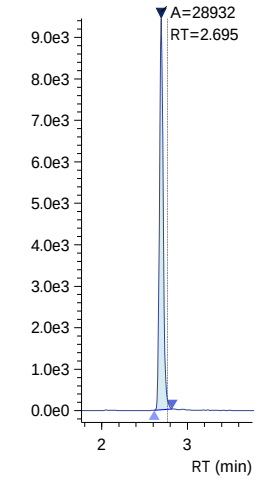
Perchlorate

Conc ----
R#1 ---- (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.00000



Insight Report

Printed at 4/28/2021 12:55:35 PM

Method File: I:\LCMS01\DATA\20210420\Before\20210413.lcm

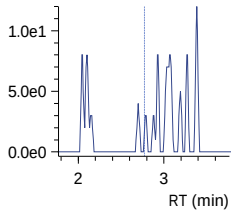
20210420_018

Sample ID: EQ2100213-01
Date Acquired: 4/20/2021 1:25:38 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210420\Before\20210420_018.lcd
Vial: 29 | Inj. Volume: 25.0000uL | Tray: 4

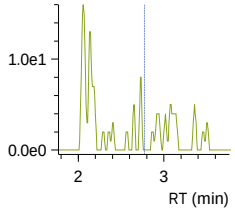
Perchlorate

Conc ----
R#1 ---- (0.00)

Q 99.00>83.00 (-) 1.20e1



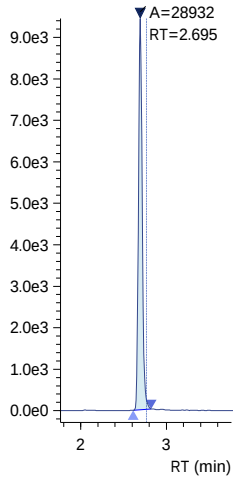
R1 101.00>85.00 (-) 1.60e1



Sodium Perchlorate -18O4_IS

Conc 1.00000

ISTD 107.00>89.00 (-) 9.46e3



Insight Report

Printed at 4/28/2021 12:53:14 PM

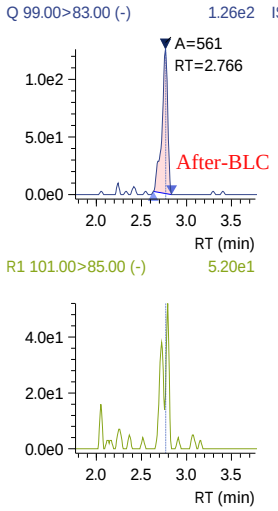
20210420_019

Sample ID: EQ2100213-02
Date Acquired: 4/20/2021 1:33:32 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210420\20210420_019.lcd
Vial: 30 | Inj. Volume: 25.0000uL | Tray: 4

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	M	2.766	561	38966	1	0.11741	ng/mL	----	12.82
Sodium Perchlorate-18O4 _IS	M	2.766	38966	38966	1	1.00000	ng/mL	----	----

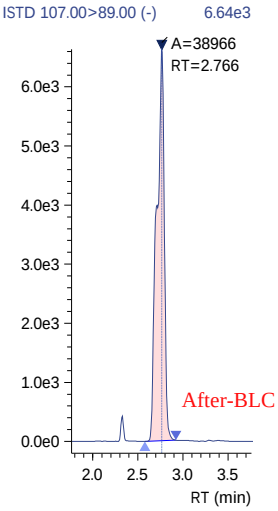
Perchlorate

Conc 0.11741
R#1 12.82 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.00000



Insight Report

Printed at 4/28/2021 12:55:35 PM

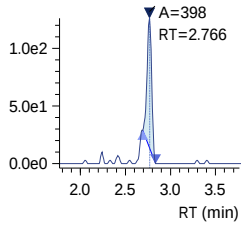
20210420_019

Sample ID: EQ2100213-02
Date Acquired: 4/20/2021 1:33:32 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210420\Before\20210420_019.lcd
Vial: 30 | Inj. Volume: 25.0000uL | Tray: 4

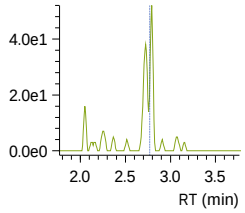
Perchlorate

Conc 0.08358
R#1 5.83 (0.00)

Q 99.00>83.00 (-) 1.26e2



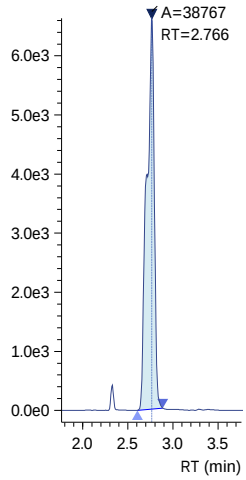
R1 101.00>85.00 (-) 5.20e1



Sodium Perchlorate -18O4_IS

Conc 1.00000

ISTD 107.00>89.00 (-) 6.64e3



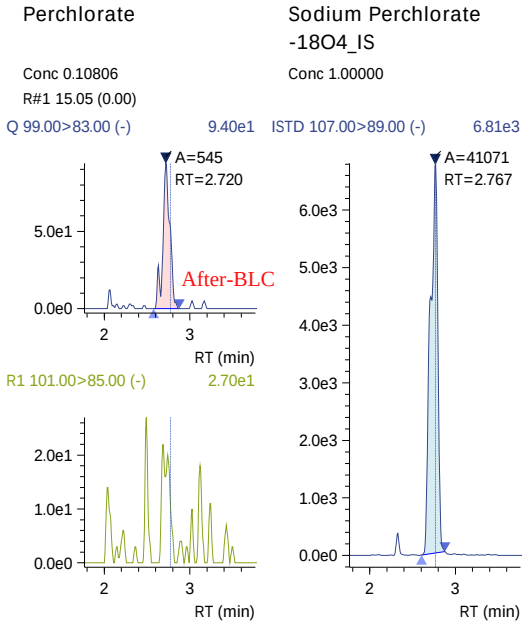
Insight Report

Printed at 4/28/2021 12:53:14 PM

20210420_020

Sample ID: EQ2100213-03
Date Acquired: 4/20/2021 1:41:26 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210420\20210420_020.lcd
Vial: 31 | Inj. Volume: 25.0000uL | Tray: 4

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	M	2.720	545	41071	1	0.10806	ng/mL	----	15.05
Sodium Perchlorate-18O4 _IS	Auto	2.767	41071	41071	1	1.00000	ng/mL	----	----



Insight Report

Printed at 4/28/2021 12:55:35 PM

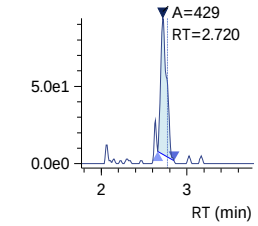
20210420_020

Sample ID: EQ2100213-03
Date Acquired: 4/20/2021 1:41:26 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210420\Before\20210420_020.lcd
Vial: 31 | Inj. Volume: 25.0000uL | Tray: 4

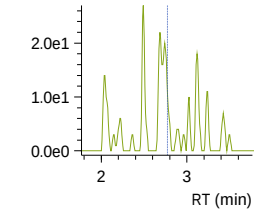
Perchlorate

Conc 0.08514
R#1 11.49 (0.00)

Q 99.00>83.00 (-) 9.40e1



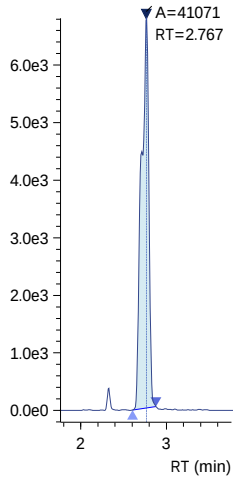
R1 101.00>85.00 (-) 2.70e1



Sodium Perchlorate -18O4_IS

Conc 1.00000

ISTD 107.00>89.00 (-) 6.81e3



Insight Report

Printed at 4/28/2021 12:53:14 PM

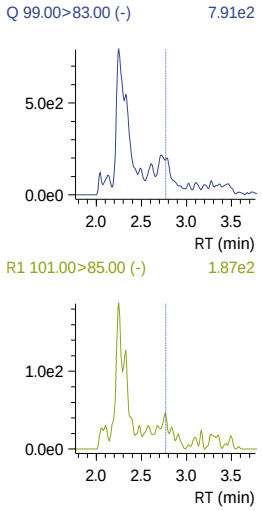
20210420_025

Sample ID: E2100412-002
Date Acquired: 4/20/2021 2:20:54 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210420\20210420_025.lcd
Vial: 36 | Inj. Volume: 25.0000uL | Tray: 4

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	ND(W/B)	----	----	23406	1	----	ng/mL	----	----
Sodium Perchlorate-18O4_IS	Auto	2.755	23406	23406	1	1.00000	ng/mL	----	----

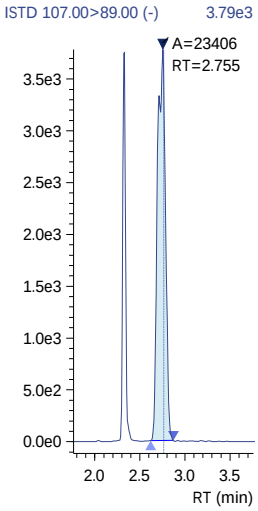
Perchlorate

Conc ----
R#1 ---- (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.00000



Insight Report

Printed at 4/28/2021 12:55:35 PM

20210420_025

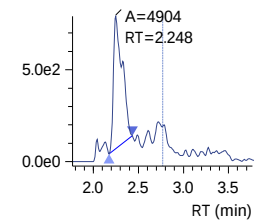
Sample ID: E2100412-002
Date Acquired: 4/20/2021 2:20:54 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210420\Before\20210420_025.lcd
Vial: 36 | Inj. Volume: 25.0000uL | Tray: 4

Perchlorate

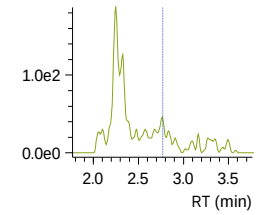
Conc ----

R#1 ---- (0.00)

Q 99.00>83.00 (-) 7.91e2



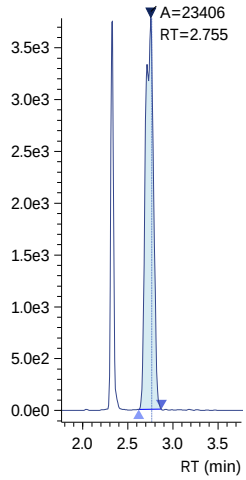
R1 101.00>85.00 (-) 1.87e2



Sodium Perchlorate -18O4_IS

Conc 1.00000

ISTD 107.00>89.00 (-) 3.79e3



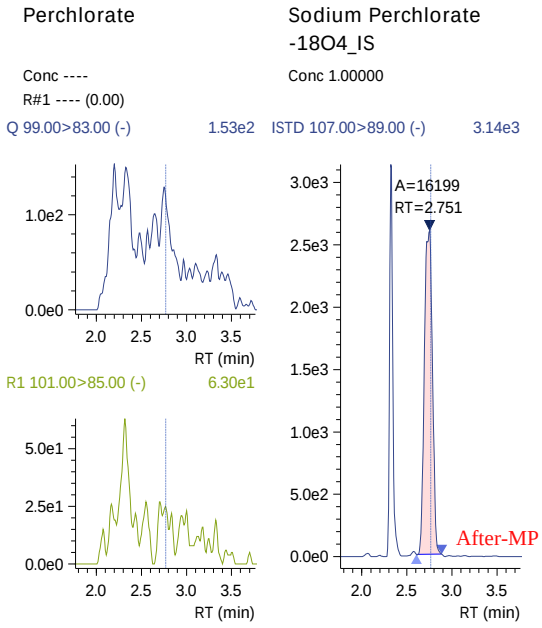
Insight Report

Printed at 4/28/2021 12:53:14 PM

20210420_027

Sample ID: E2100412-004
Date Acquired: 4/20/2021 2:36:40 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210420\20210420_027.lcd
Vial: 38 | Inj. Volume: 25.0000uL | Tray: 4

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	ND(W/B)	----	----	16199	1	----	ng/mL	----	----
Sodium Perchlorate-18O4_IS	M	2.751	16199	16199	1	1.00000	ng/mL	----	----



Insight Report

Printed at 4/28/2021 12:55:35 PM

20210420_027

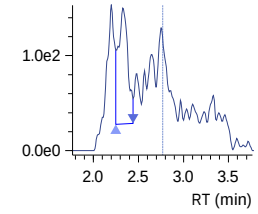
Sample ID: E2100412-004
Date Acquired: 4/20/2021 2:36:40 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210420\Before\20210420_027.lcd
Vial: 38 | Inj. Volume: 25.0000uL | Tray: 4

Perchlorate

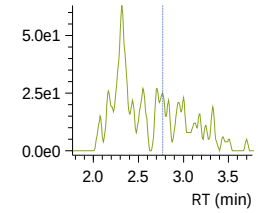
Conc ----

R#1 ---- (0.00)

Q 99.00>83.00 (-) 1.53e2



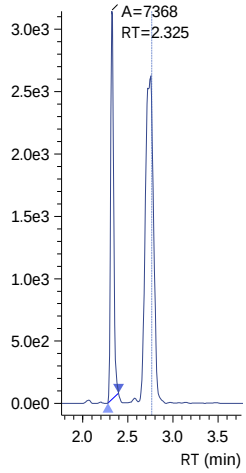
R1 101.00>85.00 (-) 6.30e1



Sodium Perchlorate -18O4_IS

Conc ----

ISTD 107.00>89.00 (-) 3.14e3



Insight Report

Printed at 4/28/2021 12:53:14 PM

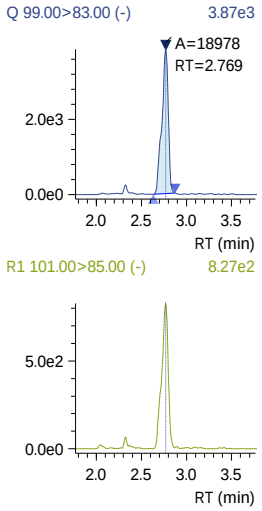
20210420_028

Sample ID: PERCHLORATE7
Date Acquired: 4/20/2021 2:44:35 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210420\20210420_028.lcd
Vial: 21 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.769	18978	16630	1	9.30200	ng/mL	10.0000	21.40
Sodium Perchlorate-18O4 _IS	Auto	2.769	16630	16630	1	1.00000	ng/mL	1.0000	----

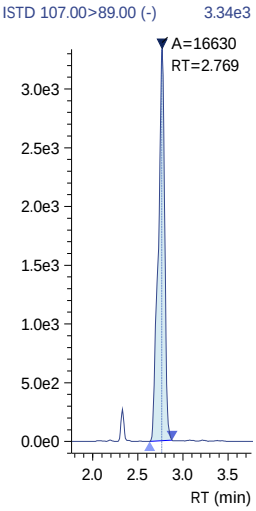
Perchlorate

Conc 9.30200
R#1 21.40 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.00000



Insight Report

Printed at 4/28/2021 12:55:35 PM

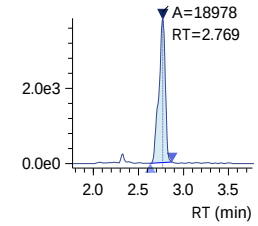
20210420_028

Sample ID: PERCHLORATE7
Date Acquired: 4/20/2021 2:44:35 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210420\Before\20210420_028.lcd
Vial: 21 | Inj. Volume: 25.0000uL | Tray: 1

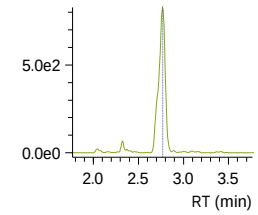
Perchlorate

Conc 9.30200
R#1 21.40 (0.00)

Q 99.00>83.00 (-) 3.87e3



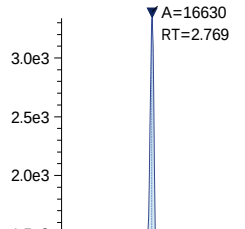
R1 101.00>85.00 (-) 8.27e2



Sodium Perchlorate -18O4_IS

Conc 1.00000

ISTD 107.00>89.00 (-) 3.34e3



Insight Report

Printed at 4/28/2021 12:53:14 PM

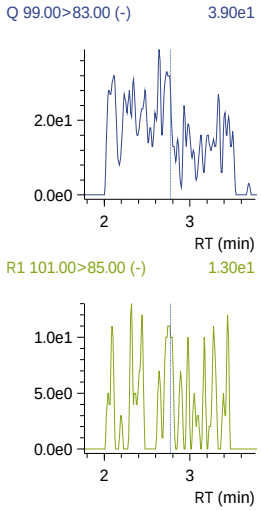
20210420_029

Sample ID: E2100412-005
Date Acquired: 4/20/2021 2:52:25 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210420\20210420_029.lcd
Vial: 39 | Inj. Volume: 25.0000uL | Tray: 4

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	ND(W/B)	----	----	22619	1	----	ng/mL	----	----
Sodium Perchlorate-18O4_IS	Auto	2.753	22619	22619	1	1.00000	ng/mL	----	----

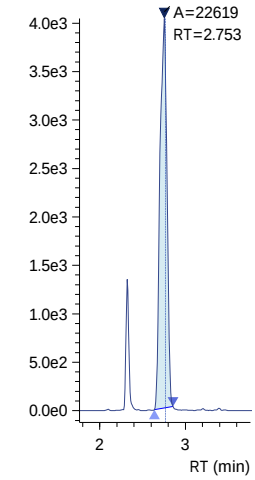
Perchlorate

Conc ----
R#1 ---- (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.00000



Insight Report

Printed at 4/28/2021 12:55:35 PM

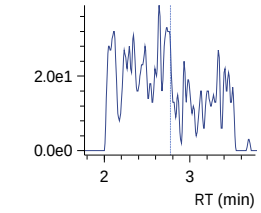
20210420_029

Sample ID: E2100412-005
Date Acquired: 4/20/2021 2:52:25 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210420\Before\20210420_029.lcd
Vial: 39 | Inj. Volume: 25.0000uL | Tray: 4

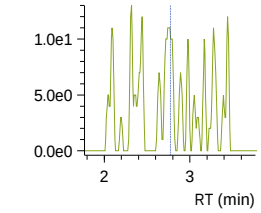
Perchlorate

Conc ----
R#1 ---- (0.00)

Q 99.00>83.00 (-) 3.90e1



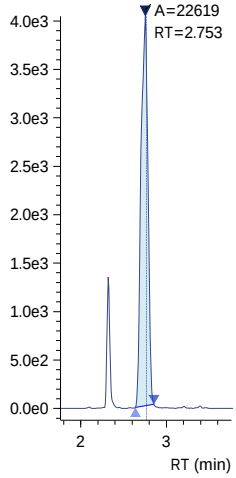
R1 101.00>85.00 (-) 1.30e1



Sodium Perchlorate -18O4_IS

Conc 1.00000

ISTD 107.00>89.00 (-) 4.05e3



Insight Report

Printed at 4/28/2021 12:53:14 PM

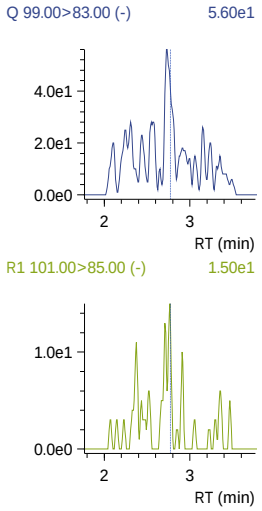
20210420_030

Sample ID: E2100412-006
Date Acquired: 4/20/2021 3:00:18 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210420\20210420_030.lcd
Vial: 40 | Inj. Volume: 25.0000uL | Tray: 4

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	ND(W/B)	----	----	24018	1	----	ng/mL	----	----
Sodium Perchlorate-18O4_IS	Auto	2.755	24018	24018	1	1.00000	ng/mL	----	----

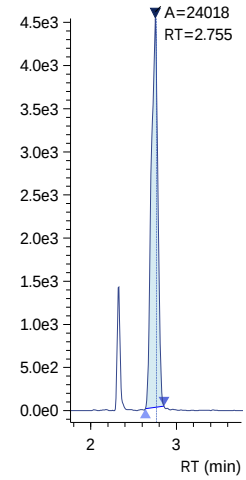
Perchlorate

Conc ----
R#1 ---- (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.00000



Insight Report

Printed at 4/28/2021 12:55:35 PM

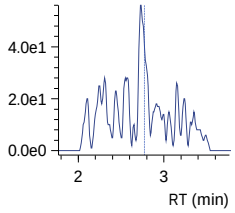
20210420_030

Sample ID: E2100412-006
Date Acquired: 4/20/2021 3:00:18 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210420\Before\20210420_030.lcd
Vial: 40 | Inj. Volume: 25.0000uL | Tray: 4

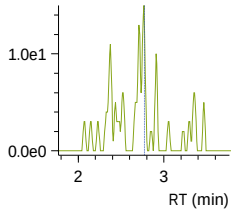
Perchlorate

Conc ----
R#1 ---- (0.00)

Q 99.00>83.00 (-) 5.60e1



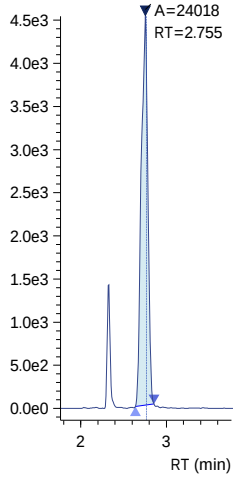
R1 101.00>85.00 (-) 1.50e1



Sodium Perchlorate -18O4_IS

Conc 1.00000

ISTD 107.00>89.00 (-) 4.55e3



Insight Report

Printed at 4/28/2021 12:53:14 PM

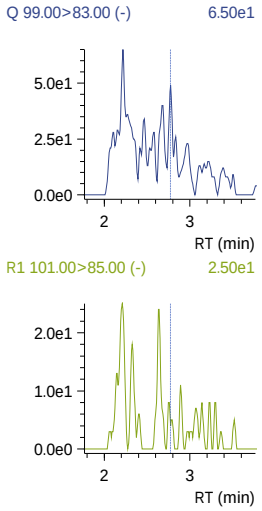
20210420_031

Sample ID: E2100412-007
Date Acquired: 4/20/2021 3:08:11 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210420\20210420_031.lcd
Vial: 41 | Inj. Volume: 25.0000uL | Tray: 4

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	ND(W/B)	----	----	22074	1	----	ng/mL	----	----
Sodium Perchlorate-18O4_IS	Auto	2.755	22074	22074	1	1.00000	ng/mL	----	----

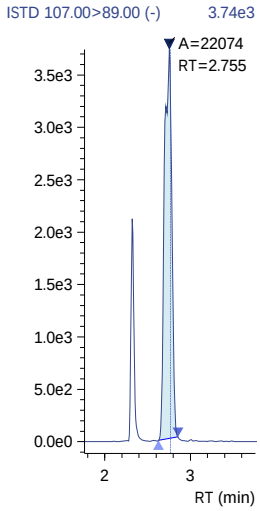
Perchlorate

Conc ----
R#1 ---- (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.00000



Insight Report

Printed at 4/28/2021 12:55:35 PM

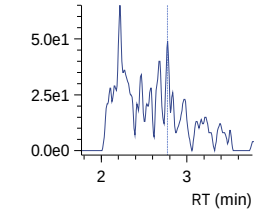
20210420_031

Sample ID: E2100412-007
Date Acquired: 4/20/2021 3:08:11 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210420\Before\20210420_031.lcd
Vial: 41 | Inj. Volume: 25.0000uL | Tray: 4

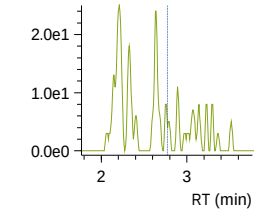
Perchlorate

Conc ----
R#1 ---- (0.00)

Q 99.00>83.00 (-) 6.50e1



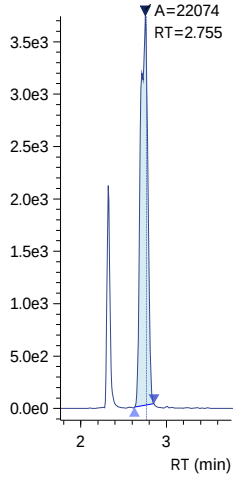
R1 101.00>85.00 (-) 2.50e1



Sodium Perchlorate -18O4_IS

Conc 1.00000

ISTD 107.00>89.00 (-) 3.74e3



Insight Report

Printed at 4/28/2021 12:53:14 PM

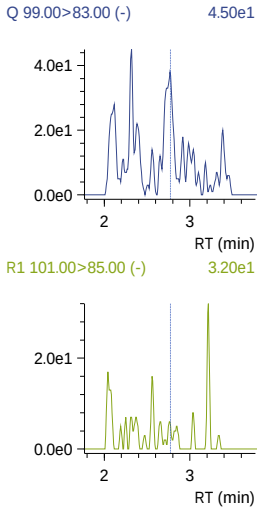
20210420_032

Sample ID: E2100412-008
Date Acquired: 4/20/2021 3:16:04 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210420\20210420_032.lcd
Vial: 42 | Inj. Volume: 25.0000uL | Tray: 4

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	ND(W/B)	----	----	21414	1	----	ng/mL	----	----
Sodium Perchlorate-18O4_IS	Auto	2.737	21414	21414	1	1.00000	ng/mL	----	----

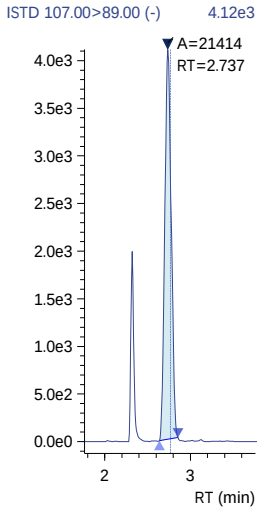
Perchlorate

Conc ----
R#1 ---- (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.00000



Insight Report

Printed at 4/28/2021 12:55:35 PM

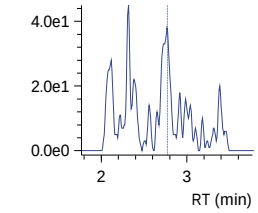
20210420_032

Sample ID: E2100412-008
Date Acquired: 4/20/2021 3:16:04 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210420\Before\20210420_032.lcd
Vial: 42 | Inj. Volume: 25.0000uL | Tray: 4

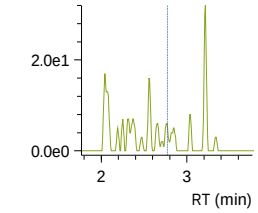
Perchlorate

Conc ----
R#1 ---- (0.00)

Q 99.00>83.00 (-) 4.50e1



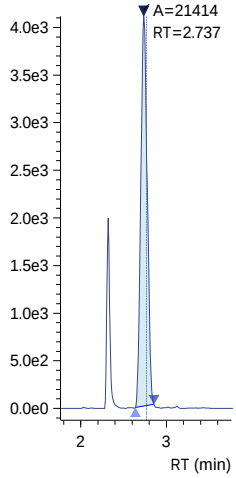
R1 101.00>85.00 (-) 3.20e1



Sodium Perchlorate -18O4_IS

Conc 1.00000

ISTD 107.00>89.00 (-) 4.12e3



Insight Report

Printed at 4/28/2021 12:53:14 PM

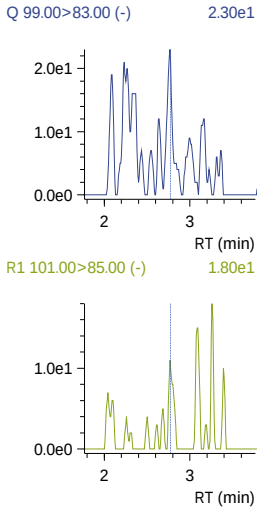
20210420_033

Sample ID: E2100412-009
Date Acquired: 4/20/2021 3:23:55 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210420\20210420_033.lcd
Vial: 43 | Inj. Volume: 25.0000uL | Tray: 4

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	ND(W/B)	----	----	25809	1	----	ng/mL	----	----
Sodium Perchlorate-18O4_IS	Auto	2.750	25809	25809	1	1.00000	ng/mL	----	----

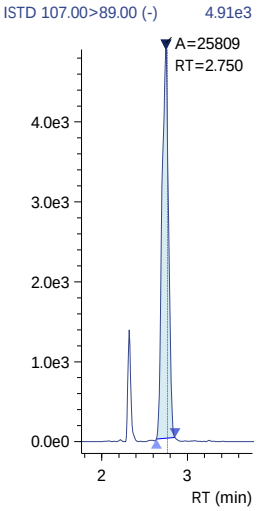
Perchlorate

Conc ----
R#1 ---- (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.00000



Insight Report

Printed at 4/28/2021 12:55:35 PM

20210420_033

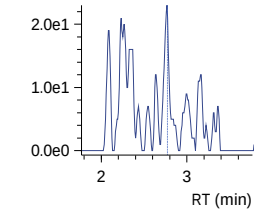
Sample ID: E2100412-009
Date Acquired: 4/20/2021 3:23:55 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210420\Before\20210420_033.lcd
Vial: 43 | Inj. Volume: 25.0000uL | Tray: 4

Perchlorate

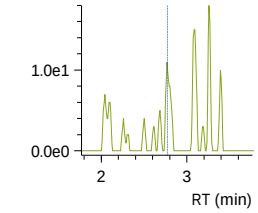
Conc ----

R#1 ---- (0.00)

Q 99.00>83.00 (-) 2.30e1



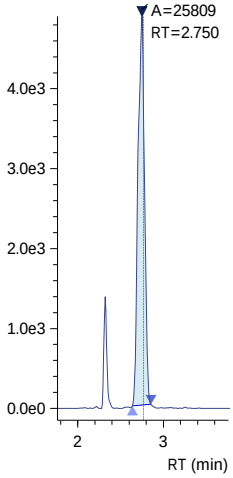
R1 101.00>85.00 (-) 1.80e1



Sodium Perchlorate -18O4_IS

Conc 1.00000

ISTD 107.00>89.00 (-) 4.91e3



Insight Report

Printed at 4/28/2021 12:53:14 PM

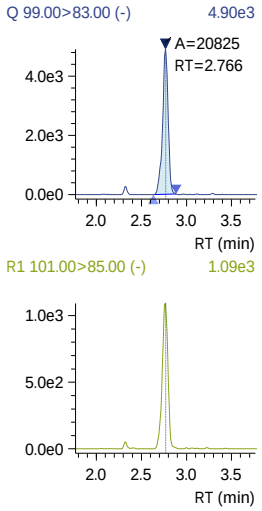
20210420_038

Sample ID: PERCHLORATE7
Date Acquired: 4/20/2021 4:03:20 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210420\20210420_038.lcd
Vial: 21 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.766	20825	18155	1	9.34964	ng/mL	10.0000	23.35
Sodium Perchlorate-18O4 _IS	Auto	2.766	18155	18155	1	1.00000	ng/mL	1.0000	----

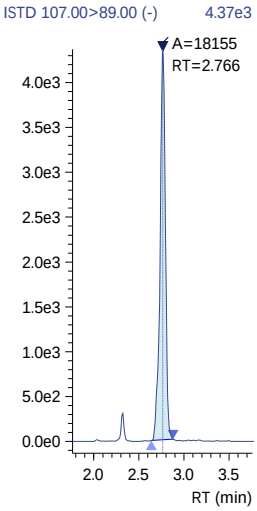
Perchlorate

Conc 9.34964
R#1 23.35 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.00000



Insight Report

Printed at 4/28/2021 12:55:35 PM

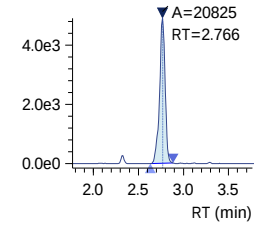
20210420_038

Sample ID: PERCHLORATE7
Date Acquired: 4/20/2021 4:03:20 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210420\Before\20210420_038.lcd
Vial: 21 | Inj. Volume: 25.0000uL | Tray: 1

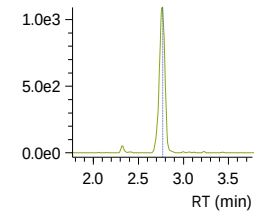
Perchlorate

Conc 9.34964
R#1 23.35 (0.00)

Q 99.00>83.00 (-) 4.90e3



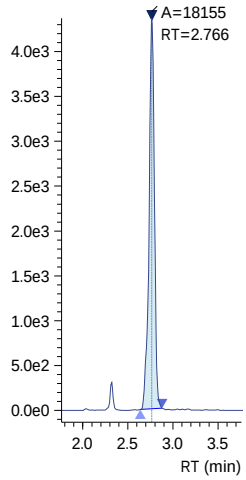
R1 101.00>85.00 (-) 1.09e3



Sodium Perchlorate -18O4_IS

Conc 1.00000

ISTD 107.00>89.00 (-) 4.37e3



Insight Report

Printed at 4/29/2021 1:32:13 PM

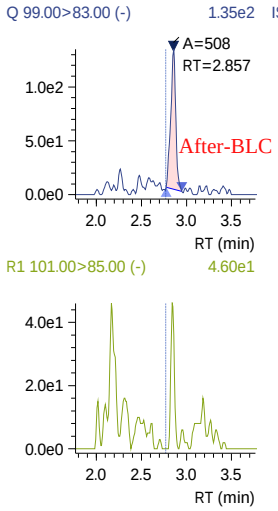
20210428_056

Sample ID: LODV
Date Acquired: 4/28/2021 8:08:56 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210428\20210428_056.lcd
Vial: 20 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	M	2.857	508	68910	1	0.06311	ng/mL	----	34.43
Sodium Perchlorate-18O4 _IS	M	2.844	68910	68910	1	1.00000	ng/mL	----	----

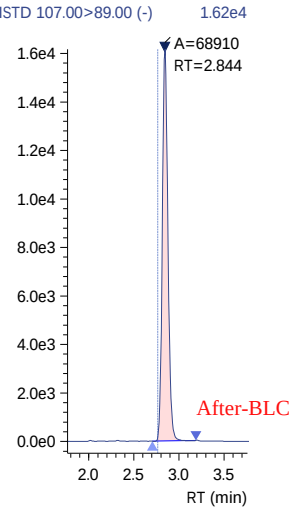
Perchlorate

Conc 0.06311
R#1 34.43 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.00000



Insight Report

Printed at 4/29/2021 1:34:11 PM

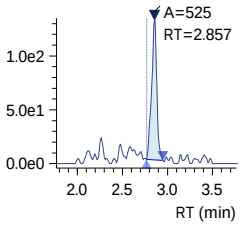
20210428_056

Sample ID: LODV
Date Acquired: 4/28/2021 8:08:56 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210428\Before\20210428_056.lcd
Vial: 20 | Inj. Volume: 25.0000uL | Tray: 1

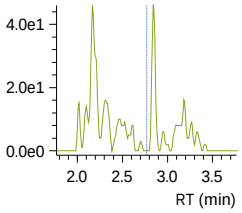
Perchlorate

Conc 0.06565
R#1 33.87 (0.00)

Q 99.00>83.00 (-) 1.35e2



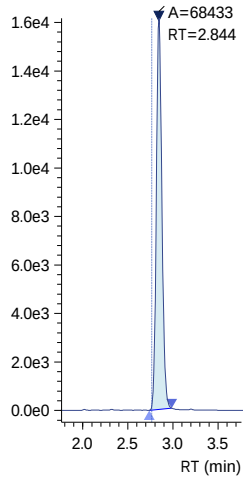
R1 101.00>85.00 (-) 4.60e1



Sodium Perchlorate -18O4_IS

Conc 1.00000

ISTD 107.00>89.00 (-) 1.62e4



Insight Report

Printed at 4/29/2021 1:32:13 PM

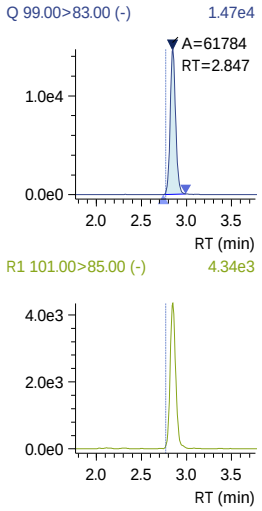
20210428_057

Sample ID: PERCHLORATE7
Date Acquired: 4/28/2021 8:18:20 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210428\20210428_057.lcd
Vial: 21 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.847	61784	54358	1	9.73105	ng/mL	10.0000	29.51
Sodium Perchlorate-18O4 _IS	Auto	2.846	54358	54358	1	1.00000	ng/mL	1.0000	----

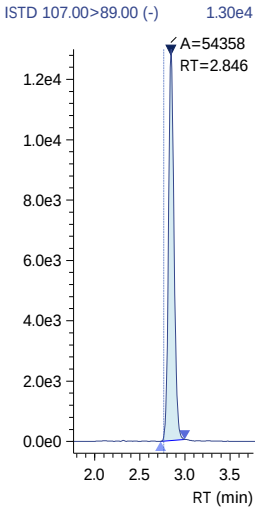
Perchlorate

Conc 9.73105
R#1 29.51 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.00000



Insight Report

Printed at 4/29/2021 1:34:11 PM

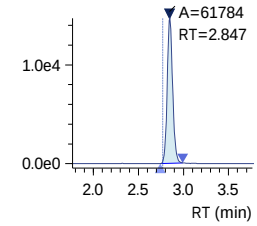
20210428_057

Sample ID: PERCHLORATE7
Date Acquired: 4/28/2021 8:18:20 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210428\Before\20210428_057.lcd
Vial: 21 | Inj. Volume: 25.0000uL | Tray: 1

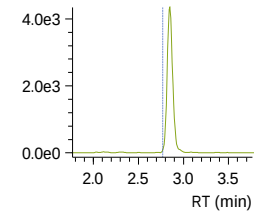
Perchlorate

Conc 9.73105
R#1 29.51 (0.00)

Q 99.00>83.00 (-) 1.47e4



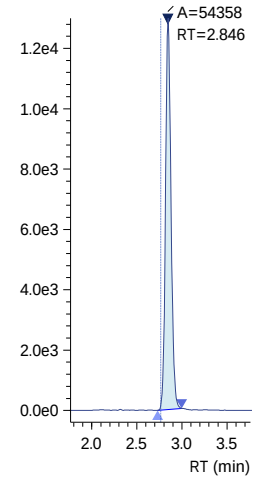
R1 101.00>85.00 (-) 4.34e3



Sodium Perchlorate -18O4_IS

Conc 1.00000

ISTD 107.00>89.00 (-) 1.30e4



Insight Report

Printed at 4/29/2021 1:32:13 PM

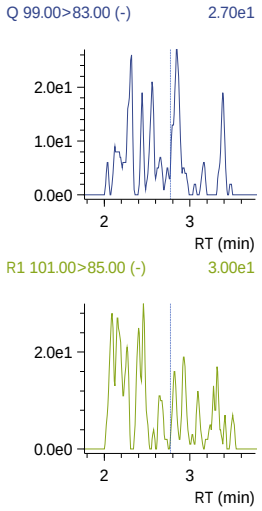
20210428_058

Sample ID: EQ2100244-01
Date Acquired: 4/28/2021 8:27:44 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210428\20210428_058.lcd
Vial: 10 | Inj. Volume: 25.0000uL | Tray: 5

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	ND(W/B)	----	----	62052	1	----	ng/mL	----	----
Sodium Perchlorate-18O4_IS	Auto	2.844	62052	62052	1	1.00000	ng/mL	----	----

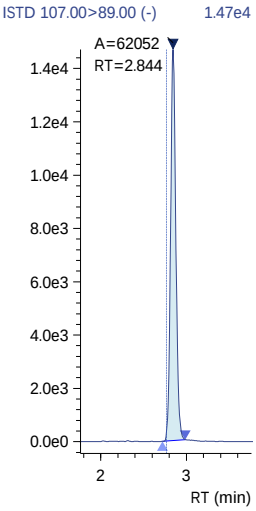
Perchlorate

Conc ----
R#1 ---- (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.00000



Insight Report

Printed at 4/29/2021 1:34:11 PM

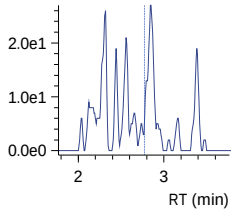
20210428_058

Sample ID: EQ2100244-01
Date Acquired: 4/28/2021 8:27:44 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210428\Before\20210428_058.lcd
Vial: 10 | Inj. Volume: 25.0000uL | Tray: 5

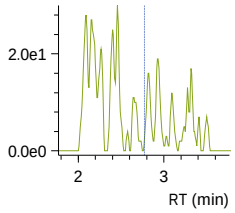
Perchlorate

Conc ----
R#1 ---- (0.00)

Q 99.00>83.00 (-) 2.70e1



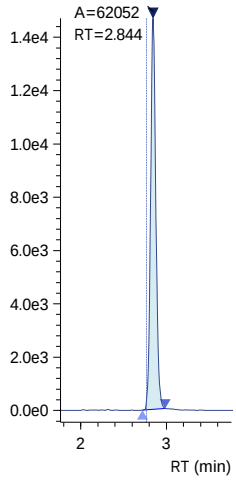
R1 101.00>85.00 (-) 3.00e1



Sodium Perchlorate -18O4_IS

Conc 1.00000

ISTD 107.00>89.00 (-) 1.47e4



Insight Report

Printed at 4/29/2021 1:32:13 PM

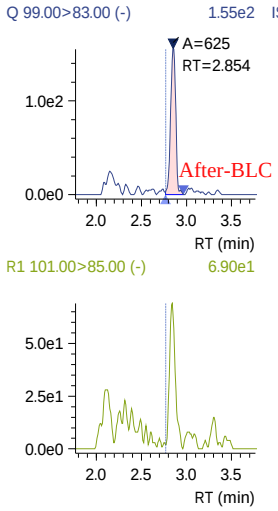
20210428_059

Sample ID: EQ2100244-02
Date Acquired: 4/28/2021 8:37:06 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210428\20210428_059.lcd
Vial: 11 | Inj. Volume: 25.0000uL | Tray: 5

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	M	2.854	625	62495	1	0.08566	ng/mL	----	41.06
Sodium Perchlorate-18O4 _IS	Auto	2.846	62495	62495	1	1.00000	ng/mL	----	----

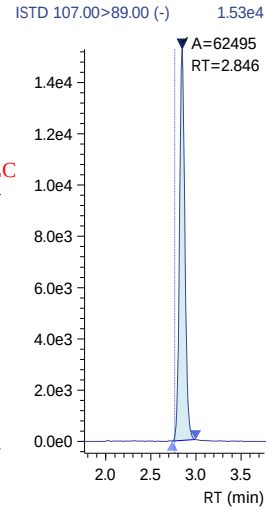
Perchlorate

Conc 0.08566
R#1 41.06 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.00000



Insight Report

Printed at 4/29/2021 1:34:11 PM

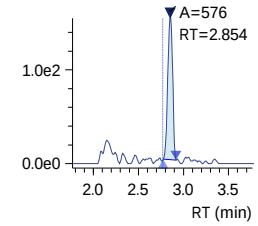
20210428_059

Sample ID: EQ2100244-02
Date Acquired: 4/28/2021 8:37:06 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210428\Before\20210428_059.lcd
Vial: 11 | Inj. Volume: 25.0000uL | Tray: 5

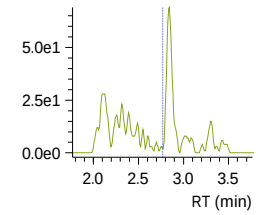
Perchlorate

Conc 0.07884
R#1 38.93 (0.00)

Q 99.00>83.00 (-) 1.55e2



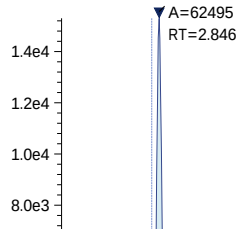
R1 101.00>85.00 (-) 6.90e1



Sodium Perchlorate -18O4_IS

Conc 1.00000

ISTD 107.00>89.00 (-) 1.53e4



Insight Report

Printed at 4/29/2021 1:32:13 PM

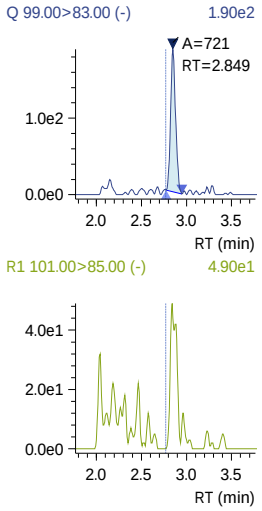
20210428_060

Sample ID: EQ2100244-03
Date Acquired: 4/28/2021 8:46:27 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210428\20210428_060.lcd
Vial: 12 | Inj. Volume: 25.0000uL | Tray: 5

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.849	721	63156	1	0.09767	ng/mL	----	25.71
Sodium Perchlorate-18O4 _IS	Auto	2.846	63156	63156	1	1.00000	ng/mL	----	----

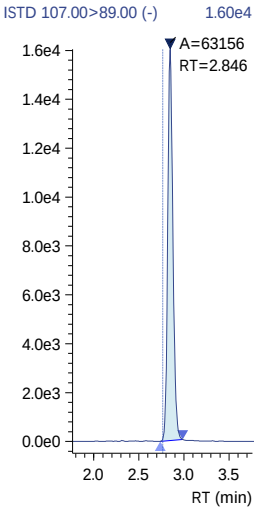
Perchlorate

Conc 0.09767
R#1 25.71 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.00000



Insight Report

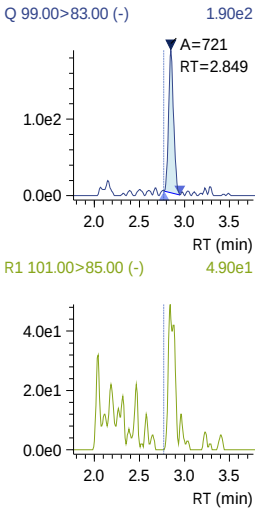
Printed at 4/29/2021 1:34:11 PM

20210428_060

Sample ID: EQ2100244-03
Date Acquired: 4/28/2021 8:46:27 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210428\Before\20210428_060.lcd
Vial: 12 | Inj. Volume: 25.0000uL | Tray: 5

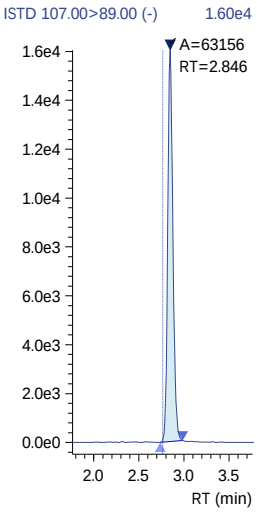
Perchlorate

Conc 0.09767
R#1 25.71 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.00000



Insight Report

Printed at 4/29/2021 1:32:13 PM

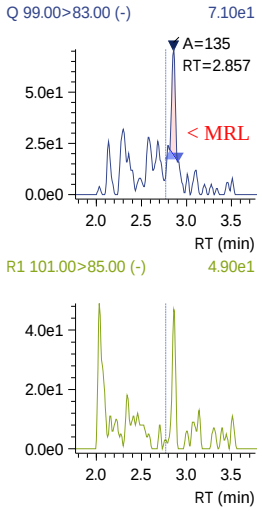
20210428_061

Sample ID: E2100412-016X10
Date Acquired: 4/28/2021 8:55:49 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210428\20210428_061.lcd
Vial: 20 | Inj. Volume: 25.0000uL | Tray: 5

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	M	2.857	135	64229	1	0.01799	ng/mL	----	68.75
Sodium Perchlorate-18O4 _IS	Auto	2.857	64229	64229	1	1.00000	ng/mL	----	----

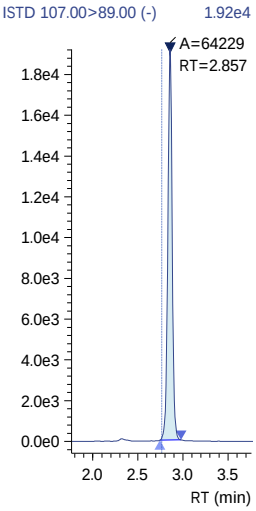
Perchlorate

Conc 0.01799
R#1 68.75 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.00000



Insight Report

Printed at 4/29/2021 1:34:11 PM

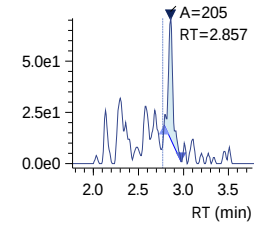
20210428_061

Sample ID: E2100412-016X10
Date Acquired: 4/28/2021 8:55:49 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210428\Before\20210428_061.lcd
Vial: 20 | Inj. Volume: 25.0000uL | Tray: 5

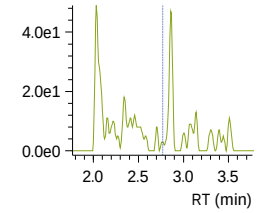
Perchlorate

Conc 0.02726
R#1 66.67 (0.00)

Q 99.00>83.00 (-) 7.10e1



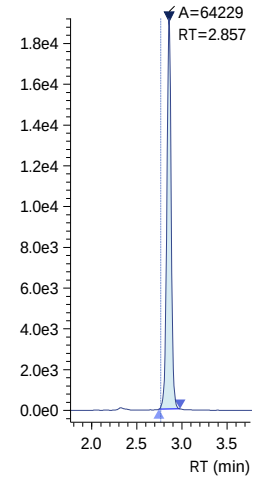
R1 101.00>85.00 (-) 4.90e1



Sodium Perchlorate -18O4_IS

Conc 1.00000

ISTD 107.00>89.00 (-) 1.92e4



Insight Report

Printed at 4/29/2021 1:32:13 PM

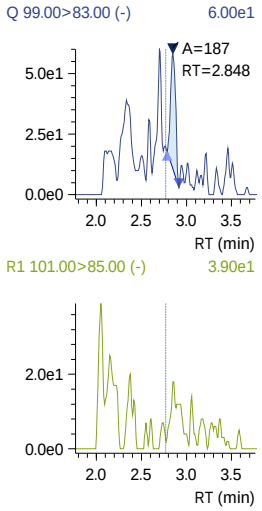
20210428_062

Sample ID: E2100412-017X10
Date Acquired: 4/28/2021 9:05:14 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210428\20210428_062.lcd
Vial: 9 | Inj. Volume: 25.0000uL | Tray: 5

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.848	187	61811	1	0.02587	ng/mL	----	17.78
Sodium Perchlorate-18O4 _IS	Auto	2.859	61811	61811	1	1.00000	ng/mL	----	----

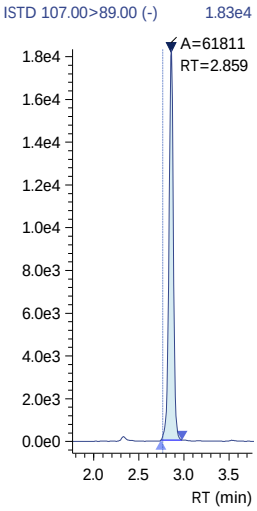
Perchlorate

Conc 0.02587
R#1 17.78 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.00000



Insight Report

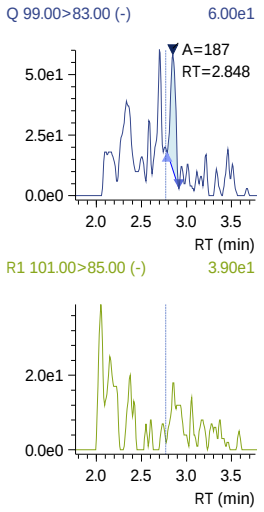
Printed at 4/29/2021 1:34:11 PM

20210428_062

Sample ID: E2100412-017X10
Date Acquired: 4/28/2021 9:05:14 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210428\Before\20210428_062.lcd
Vial: 9 | Inj. Volume: 25.0000uL | Tray: 5

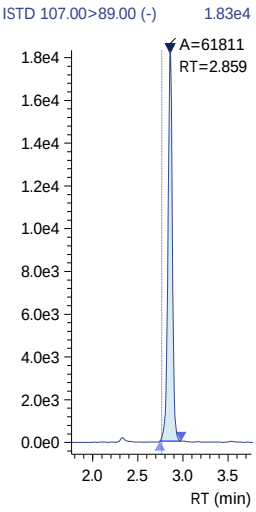
Perchlorate

Conc 0.02587
R#1 17.78 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.00000



Insight Report

Printed at 4/29/2021 1:32:13 PM

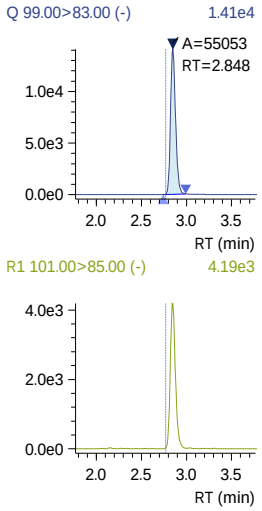
20210428_068

Sample ID: PERCHLORATE7
Date Acquired: 4/28/2021 10:01:30 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210428\20210428_068.lcd
Vial: 21 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.848	55053	49259	1	9.56857	ng/mL	10.0000	30.43
Sodium Perchlorate-18O4 _IS	Auto	2.847	49259	49259	1	1.00000	ng/mL	1.0000	----

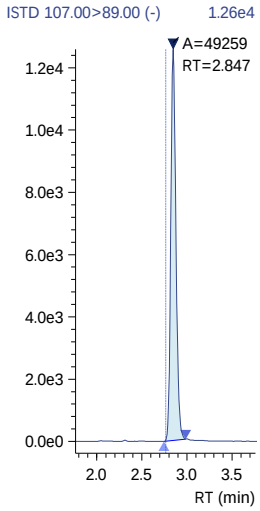
Perchlorate

Conc 9.56857
R#1 30.43 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.00000



Insight Report

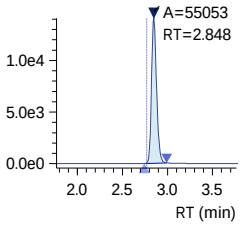
20210428_068

Sample ID: PERCHLORATE7
Date Acquired: 4/28/2021 10:01:30 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210428\Before\20210428_068.lcd
Vial: 21 | Inj. Volume: 25.0000uL | Tray: 1

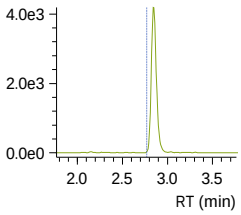
Perchlorate

Conc 9.56857
R#1 30.43 (0.00)

Q 99.00>83.00 (-) 1.41e4



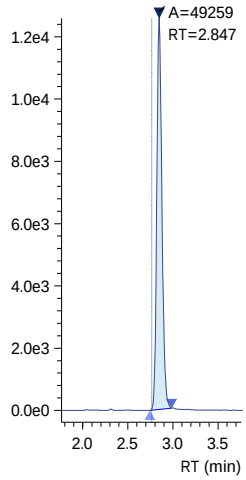
R1 101.00>85.00 (-) 4.19e3



Sodium Perchlorate -18O4_IS

Conc 1.00000

ISTD 107.00>89.00 (-) 1.26e4



Insight Report

Printed at 4/29/2021 1:32:13 PM

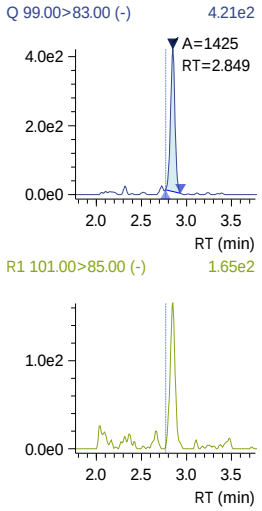
20210428_070

Sample ID: E2100412-003X10
Date Acquired: 4/28/2021 10:20:13 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210428\20210428_070.lcd
Vial: 37 | Inj. Volume: 25.0000uL | Tray: 4

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.849	1425	76474	1	0.15953	ng/mL	----	40.57
Sodium Perchlorate-18O4 _IS	Auto	2.846	76474	76474	1	1.00000	ng/mL	----	----

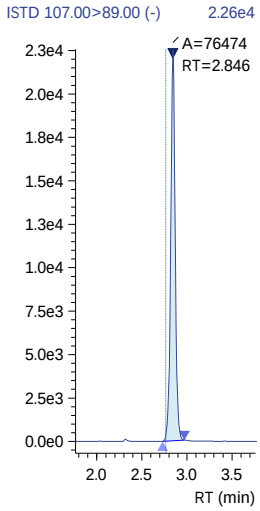
Perchlorate

Conc 0.15953
R#1 40.57 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.00000



Insight Report

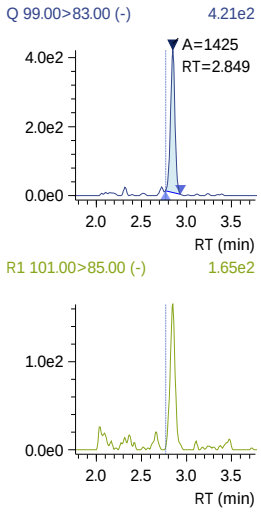
Printed at 4/29/2021 1:34:11 PM

20210428_070

Sample ID: E2100412-003X10
Date Acquired: 4/28/2021 10:20:13 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210428\Before\20210428_070.lcd
Vial: 37 | Inj. Volume: 25.0000uL | Tray: 4

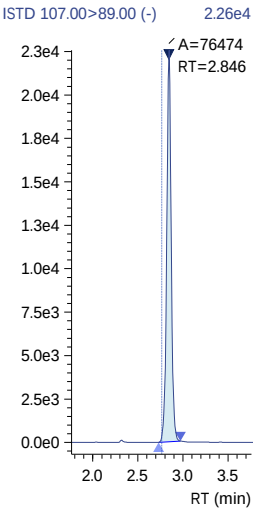
Perchlorate

Conc 0.15953
R#1 40.57 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.00000



Insight Report

Printed at 4/29/2021 1:32:13 PM

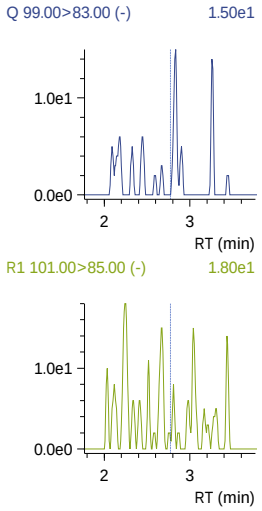
20210428_071

Sample ID: E2100412-010X10
Date Acquired: 4/28/2021 10:29:35 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210428\20210428_071.lcd
Vial: 44 | Inj. Volume: 25.0000uL | Tray: 4

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	ND(W/B)	----	----	75332	1	----	ng/mL	----	----
Sodium Perchlorate-18O4_IS	Auto	2.830	75332	75332	1	1.00000	ng/mL	----	----

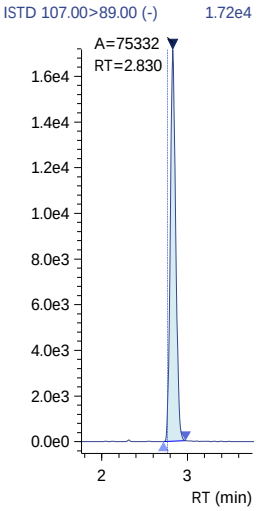
Perchlorate

Conc ----
R#1 ---- (0.00)



Sodium Perchlorate-18O4_IS

Conc 1.00000



Insight Report

Printed at 4/29/2021 1:34:11 PM

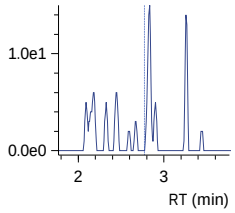
20210428_071

Sample ID: E2100412-010X10
Date Acquired: 4/28/2021 10:29:35 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210428\Before\20210428_071.lcd
Vial: 44 | Inj. Volume: 25.0000uL | Tray: 4

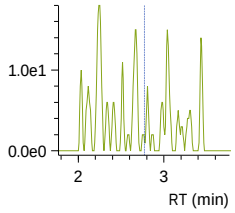
Perchlorate

Conc ----
R#1 ---- (0.00)

Q 99.00>83.00 (-) 1.50e1



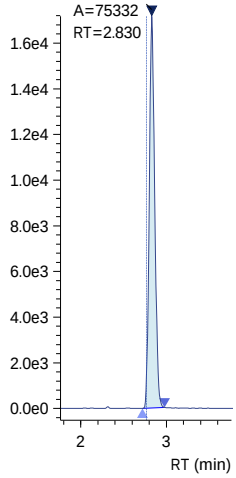
R1 101.00>85.00 (-) 1.80e1



Sodium Perchlorate -18O4_IS

Conc 1.00000

ISTD 107.00>89.00 (-) 1.72e4



Insight Report

Printed at 4/29/2021 1:32:13 PM

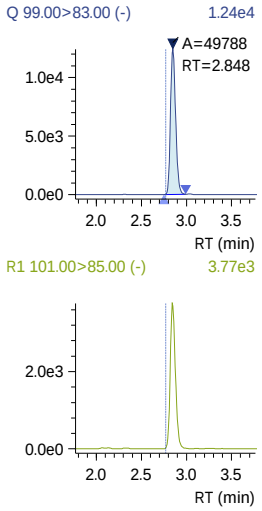
20210428_073

Sample ID: PERCHLORATE7
Date Acquired: 4/28/2021 10:48:21 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210428\20210428_073.lcd
Vial: 21 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.848	49788	43925	1	9.70407	ng/mL	10.0000	31.09
Sodium Perchlorate-18O4 _IS	Auto	2.846	43925	43925	1	1.00000	ng/mL	1.0000	----

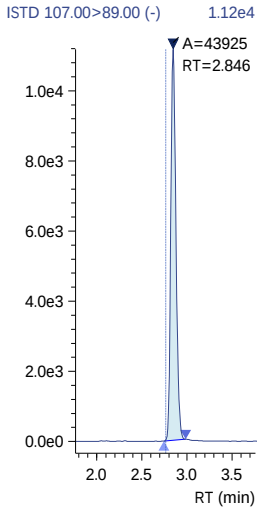
Perchlorate

Conc 9.70407
R#1 31.09 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.00000



Insight Report

Printed at 4/29/2021 1:34:11 PM

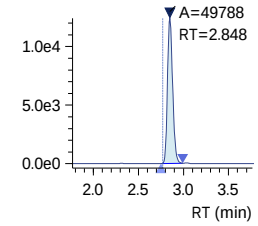
20210428_073

Sample ID: PERCHLORATE7
Date Acquired: 4/28/2021 10:48:21 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210428\Before\20210428_073.lcd
Vial: 21 | Inj. Volume: 25.0000uL | Tray: 1

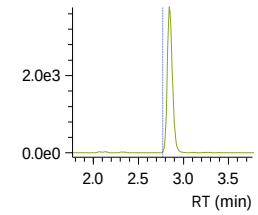
Perchlorate

Conc 9.70407
R#1 31.09 (0.00)

Q 99.00>83.00 (-) 1.24e4



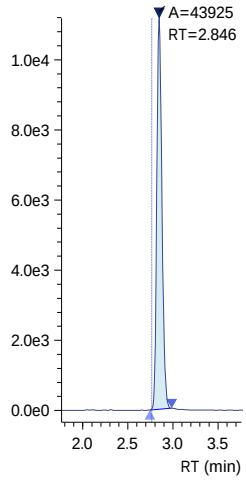
R1 101.00>85.00 (-) 3.77e3



Sodium Perchlorate -18O4_IS

Conc 1.00000

ISTD 107.00>89.00 (-) 1.12e4



Insight Report

Printed at 4/29/2021 1:36:30 PM

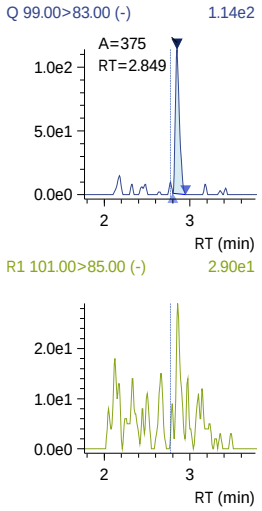
20210429_006

Sample ID: LODV
Date Acquired: 4/29/2021 9:55:24 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210429\20210429_006.lcd
Vial: 20 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.849	375	56204	1	0.05716	ng/mL	----	11.32
Sodium Perchlorate-18O4 _IS	Auto	2.848	56204	56204	1	1.00000	ng/mL	----	----

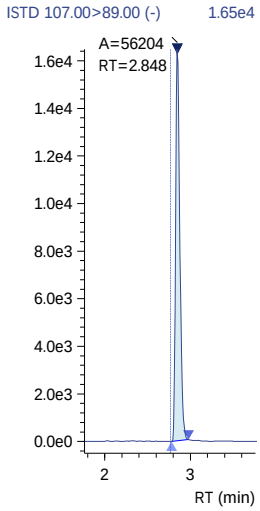
Perchlorate

Conc 0.05716
R#1 11.32 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.00000



Insight Report

Printed at 4/29/2021 1:37:47 PM

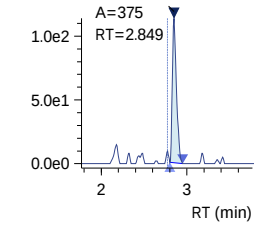
20210429_006

Sample ID: LODV
Date Acquired: 4/29/2021 9:55:24 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210429\Before\20210429_006.lcd
Vial: 20 | Inj. Volume: 25.0000uL | Tray: 1

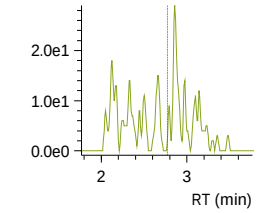
Perchlorate

Conc 0.05716
R#1 11.32 (0.00)

Q 99.00>83.00 (-) 1.14e2



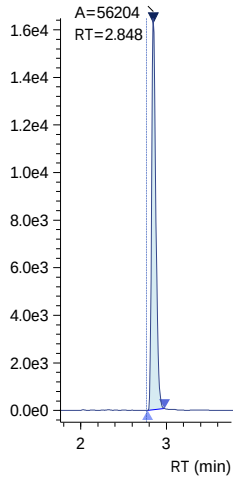
R1 101.00>85.00 (-) 2.90e1



Sodium Perchlorate -18O4_IS

Conc 1.00000

ISTD 107.00>89.00 (-) 1.65e4



Insight Report

Printed at 4/29/2021 1:36:30 PM

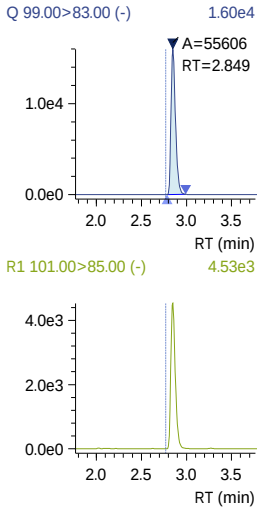
20210429_007

Sample ID: PERCHLORATE7
Date Acquired: 4/29/2021 10:04:45 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210429\20210429_007.lcd
Vial: 21 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.849	55606	49173	1	9.68155	ng/mL	10.0000	29.55
Sodium Perchlorate-18O4 _IS	Auto	2.847	49173	49173	1	1.00000	ng/mL	1.0000	----

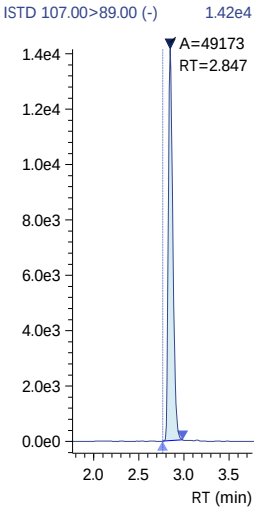
Perchlorate

Conc 9.68155
R#1 29.55 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.00000



Insight Report

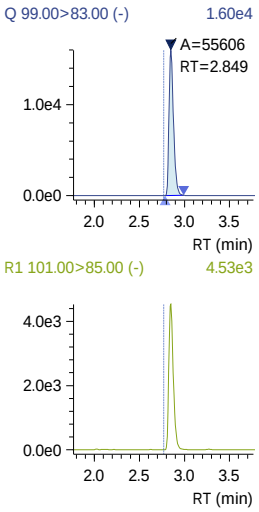
Printed at 4/29/2021 1:37:47 PM

20210429_007

Sample ID: PERCHLORATE7
Date Acquired: 4/29/2021 10:04:45 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210429\Before\20210429_007.lcd
Vial: 21 | Inj. Volume: 25.0000uL | Tray: 1

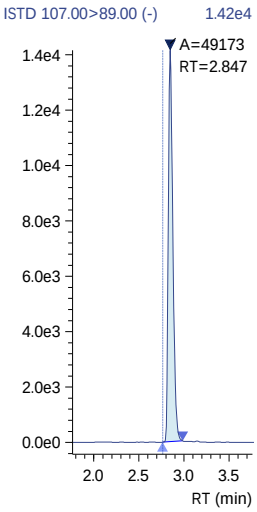
Perchlorate

Conc 9.68155
R#1 29.55 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.00000



Insight Report

Printed at 4/29/2021 1:36:30 PM

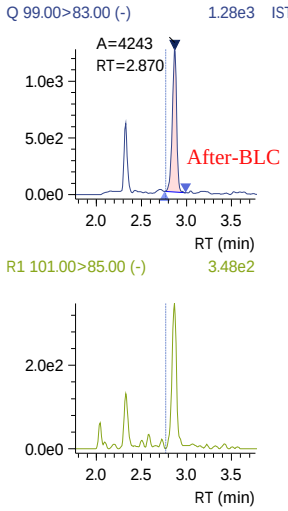
20210429_009

Sample ID: E2100412-014
Date Acquired: 4/29/2021 10:44:55 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210429\20210429_009.lcd
Vial: 7 | Inj. Volume: 25.0000uL | Tray: 2

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	M	2.870	4243	28871	1	1.25832	ng/mL	----	27.36
Sodium Perchlorate-18O4 _IS	M	2.867	28871	28871	1	1.00000	ng/mL	----	----

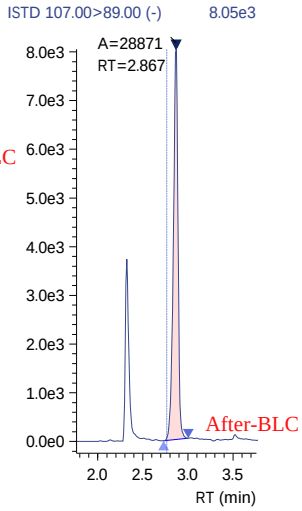
Perchlorate

Conc 1.25832
R#1 27.36 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.00000



Insight Report

Printed at 4/29/2021 1:37:47 PM

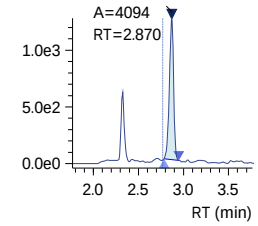
20210429_009

Sample ID: E2100412-014
Date Acquired: 4/29/2021 10:44:55 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210429\Before\20210429_009.lcd
Vial: 7 | Inj. Volume: 25.0000uL | Tray: 2

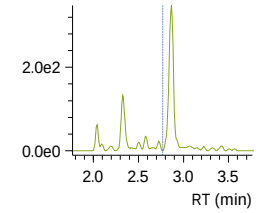
Perchlorate

Conc 1.30529
R#1 27.38 (0.00)

Q 99.00>83.00 (-) 1.28e3



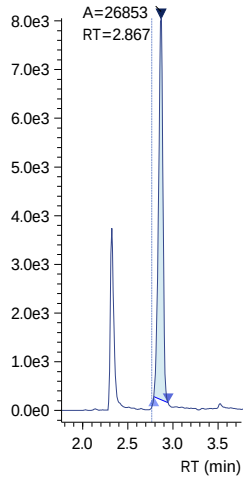
R1 101.00>85.00 (-) 3.48e2



Sodium Perchlorate -18O4_IS

Conc 1.00000

ISTD 107.00>89.00 (-) 8.05e3



Insight Report

Printed at 4/29/2021 1:36:30 PM

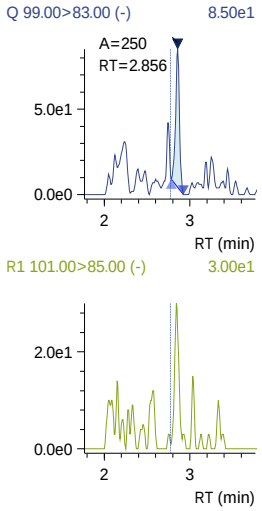
20210429_010

Sample ID: E2100412-011
Date Acquired: 4/29/2021 10:54:20 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210429\20210429_010.lcd
Vial: 8 | Inj. Volume: 25.0000uL | Tray: 2

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.856	250	61437	1	0.03477	ng/mL	----	36.49
Sodium Perchlorate-18O4 _IS	Auto	2.853	61437	61437	1	1.00000	ng/mL	----	----

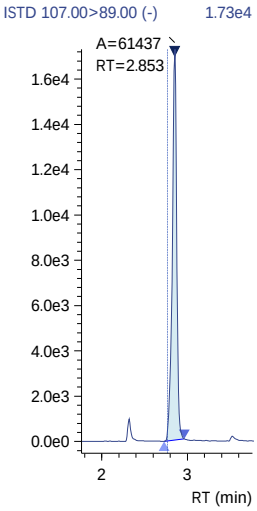
Perchlorate

Conc 0.03477
R#1 36.49 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.00000



Insight Report

Printed at 4/29/2021 1:37:47 PM

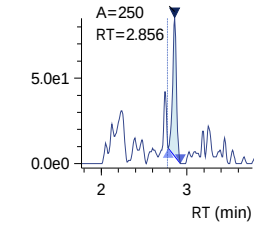
20210429_010

Sample ID: E2100412-011
Date Acquired: 4/29/2021 10:54:20 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210429\Before\20210429_010.lcd
Vial: 8 | Inj. Volume: 25.0000uL | Tray: 2

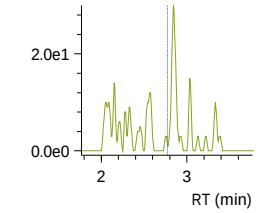
Perchlorate

Conc 0.03477
R#1 36.49 (0.00)

Q 99.00>83.00 (-) 8.50e1



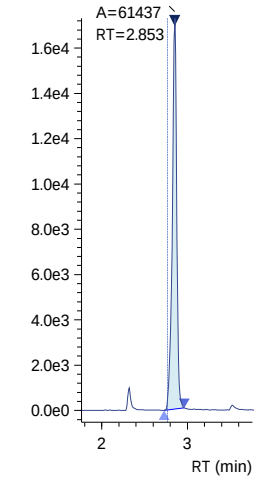
R1 101.00>85.00 (-) 3.00e1



Sodium Perchlorate -18O4_IS

Conc 1.00000

ISTD 107.00>89.00 (-) 1.73e4



Insight Report

Printed at 4/29/2021 1:36:30 PM

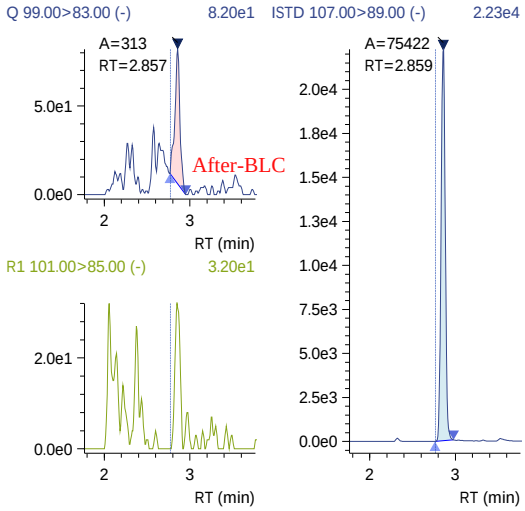
20210429_011

Sample ID: E2100412-015
Date Acquired: 4/29/2021 11:03:47 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210429\20210429_011.lcd
Vial: 9 | Inj. Volume: 25.0000uL | Tray: 2

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	M	2.857	313	75422	1	0.03547	ng/mL	----	42.86
Sodium Perchlorate-18O4 _IS	Auto	2.859	75422	75422	1	1.00000	ng/mL	----	----

Perchlorate

Conc 0.03547
R#1 42.86 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.00000

Insight Report

Printed at 4/29/2021 1:37:47 PM

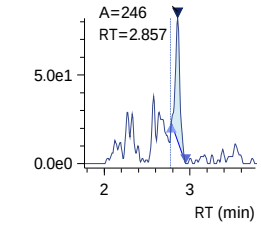
20210429_011

Sample ID: E2100412-015
Date Acquired: 4/29/2021 11:03:47 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210429\Before\20210429_011.lcd
Vial: 9 | Inj. Volume: 25.0000uL | Tray: 2

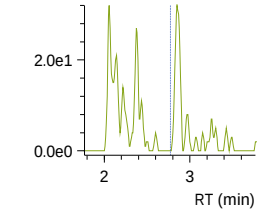
Perchlorate

Conc 0.02795
R#1 47.62 (0.00)

Q 99.00>83.00 (-) 8.20e1



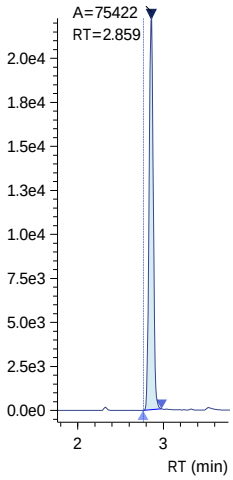
R1 101.00>85.00 (-) 3.20e1



Sodium Perchlorate -18O4_IS

Conc 1.00000

ISTD 107.00>89.00 (-) 2.23e4



Insight Report

Printed at 4/29/2021 1:36:30 PM

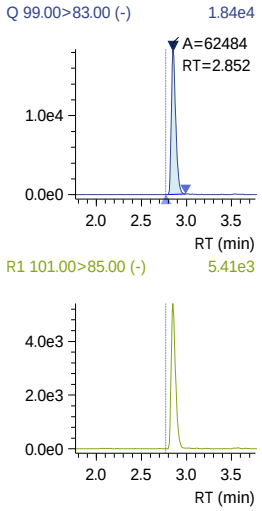
20210429_014

Sample ID: PERCHLORATE7
Date Acquired: 4/29/2021 11:31:55 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210429\20210429_014.lcd
Vial: 21 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.852	62484	55375	1	9.66061	ng/mL	10.0000	29.36
Sodium Perchlorate-18O4 _IS	Auto	2.851	55375	55375	1	1.00000	ng/mL	1.0000	----

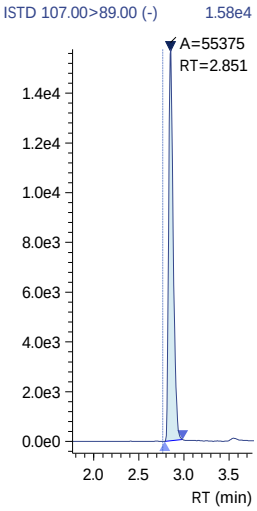
Perchlorate

Conc 9.66061
R#1 29.36 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.00000



Insight Report

Printed at 4/29/2021 1:37:47 PM

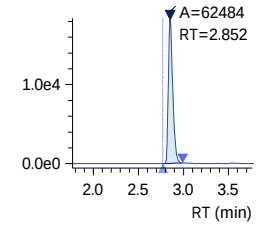
20210429_014

Sample ID: PERCHLORATE7
Date Acquired: 4/29/2021 11:31:55 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210429\Before\20210429_014.lcd
Vial: 21 | Inj. Volume: 25.0000uL | Tray: 1

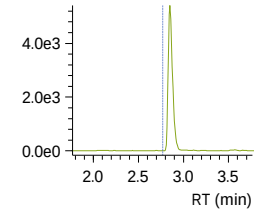
Perchlorate

Conc 9.66061
R#1 29.36 (0.00)

Q 99.00>83.00 (-) 1.84e4



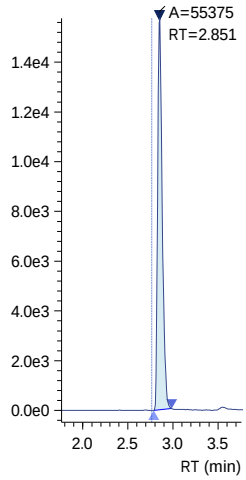
R1 101.00>85.00 (-) 5.41e3



Sodium Perchlorate -18O4_IS

Conc 1.00000

ISTD 107.00>89.00 (-) 1.58e4



Insight Report

Printed at 4/29/2021 1:36:30 PM

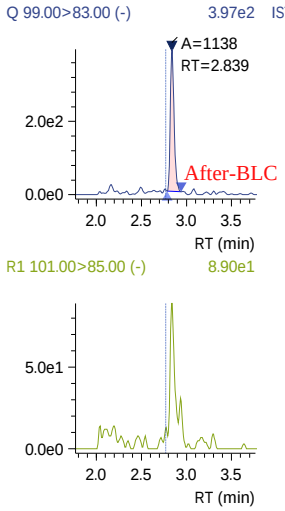
20210429_016

Sample ID: E2100412-001
Date Acquired: 4/29/2021 12:16:01 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210429\20210429_016.lcd
Vial: 35 | Inj. Volume: 25.0000uL | Tray: 4

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	M	2.839	1138	72495	1	0.13434	ng/mL	----	18.97
Sodium Perchlorate-18O4 _IS	Auto	2.839	72495	72495	1	1.00000	ng/mL	----	----

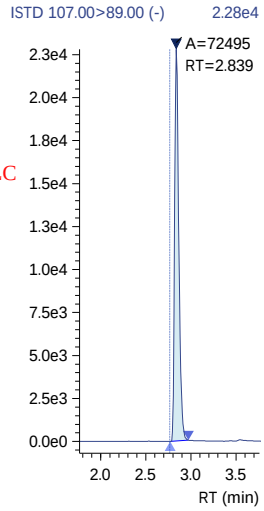
Perchlorate

Conc 0.13434
R#1 18.97 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.00000



Insight Report

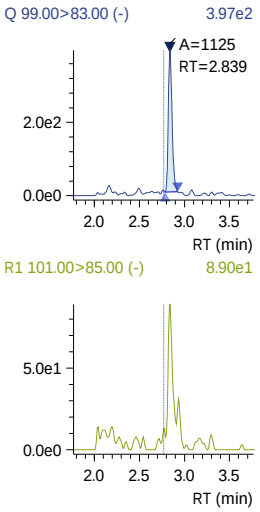
Printed at 4/29/2021 1:37:47 PM

20210429_016

Sample ID: E2100412-001
Date Acquired: 4/29/2021 12:16:01 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210429\Before\20210429_016.lcd
Vial: 35 | Inj. Volume: 25.0000uL | Tray: 4

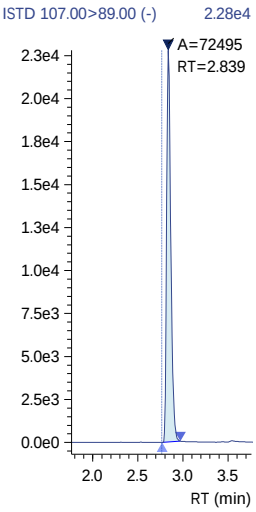
Perchlorate

Conc 0.13280
R#1 19.57 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.00000



Insight Report

Printed at 4/29/2021 1:36:30 PM

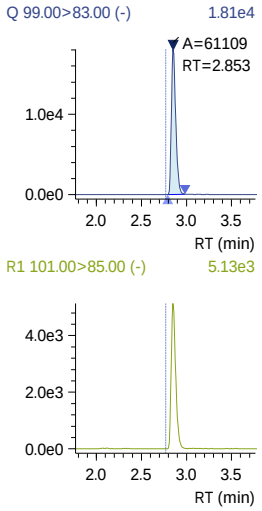
20210429_018

Sample ID: PERCHLORATE7
Date Acquired: 4/29/2021 12:34:48 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210429\20210429_018.lcd
Vial: 21 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.853	61109	54333	1	9.62913	ng/mL	10.0000	28.43
Sodium Perchlorate-18O4 _IS	Auto	2.851	54333	54333	1	1.00000	ng/mL	1.0000	----

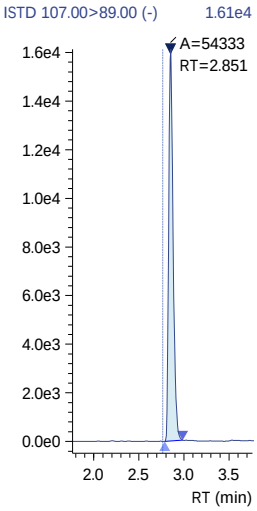
Perchlorate

Conc 9.62913
R#1 28.43 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.00000



Insight Report

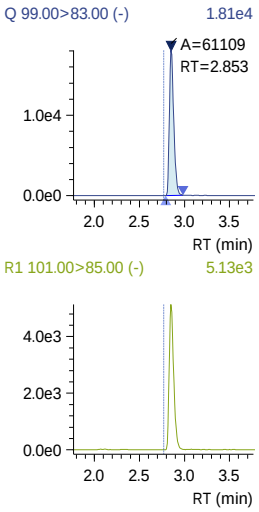
Printed at 4/29/2021 1:37:47 PM

20210429_018

Sample ID: PERCHLORATE7
Date Acquired: 4/29/2021 12:34:48 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210429\Before\20210429_018.lcd
Vial: 21 | Inj. Volume: 25.0000uL | Tray: 1

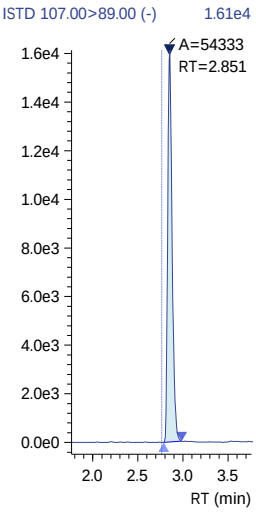
Perchlorate

Conc 9.62913
R#1 28.43 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.00000



Insight Report

Printed at 4/29/2021 4:35:03 PM

Method File: I:\LCMS01\DATA\20210429\20210428.lcm
Project File: I:\LCMS01\DATA\20210429\20210429.damlp

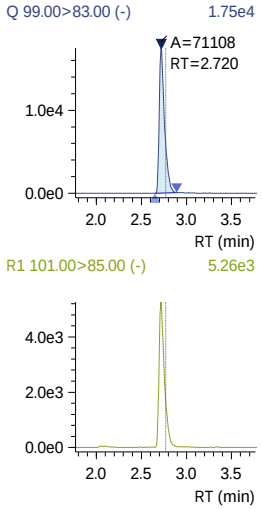
20210429_019

Sample ID: PERCHLORATE7
Date Acquired: 4/29/2021 2:45:44 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210429\20210429_019.lcd
Vial: 21 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.720	71108	60412	1	10.07723	ng/mL	10.0000	30.06
Sodium Perchlorate-18O4_IS	Auto	2.719	60412	60412	1	1.00000	ng/mL	1.0000	----

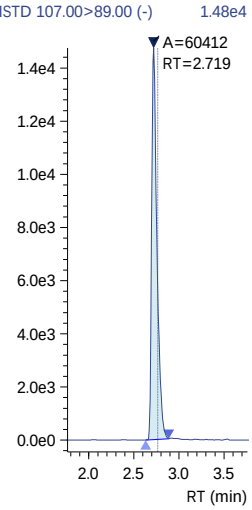
Perchlorate

Conc 10.07723
R#1 30.06 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.00000



Insight Report

Printed at 4/29/2021 4:36:44 PM

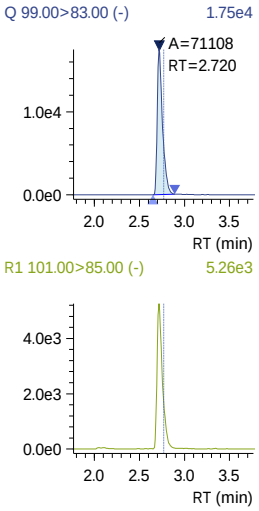
Method File: I:\LCMS01\DATA\20210429\Before\20210428.lcm

20210429_019

Sample ID: PERCHLORATE7
Date Acquired: 4/29/2021 2:45:44 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210429\Before\20210429_019.lcd
Vial: 21 | Inj. Volume: 25.0000uL | Tray: 1

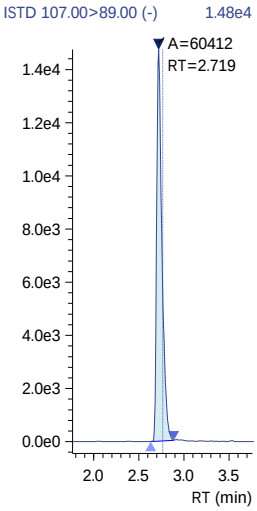
Perchlorate

Conc 10.07723
R#1 30.06 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.00000



Insight Report

Printed at 4/29/2021 4:35:03 PM

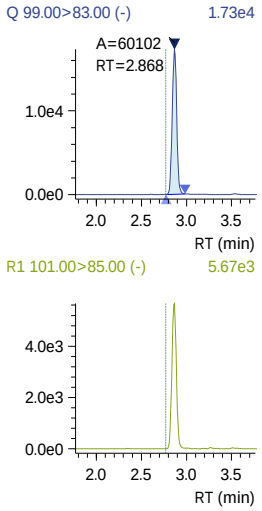
20210429_021

Sample ID: E2100412-013X50
Date Acquired: 4/29/2021 3:23:19 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210429\20210429_021.lcd
Vial: 13 | Inj. Volume: 25.0000uL | Tray: 2

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.868	60102	70168	1	7.33328	ng/mL	----	32.67
Sodium Perchlorate-18O4 _IS	Auto	2.865	70168	70168	1	1.00000	ng/mL	----	----

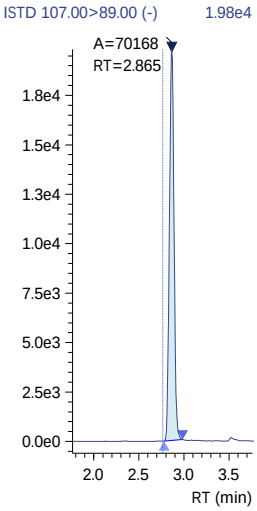
Perchlorate

Conc 7.33328
R#1 32.67 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.00000



Insight Report

Printed at 4/29/2021 4:36:44 PM

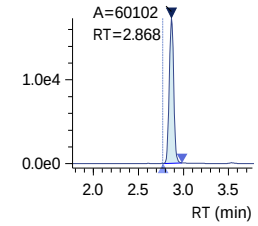
20210429_021

Sample ID: E2100412-013X50
Date Acquired: 4/29/2021 3:23:19 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210429\Before\20210429_021.lcd
Vial: 13 | Inj. Volume: 25.0000uL | Tray: 2

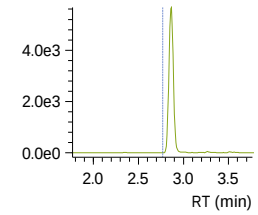
Perchlorate

Conc 7.33328
R#1 32.67 (0.00)

Q 99.00>83.00 (-) 1.73e4



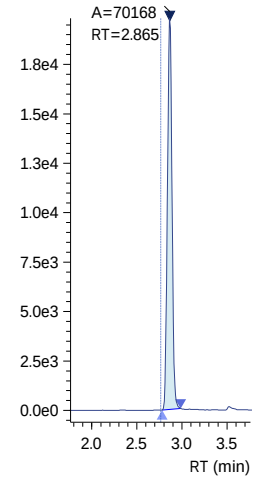
R1 101.00>85.00 (-) 5.67e3



Sodium Perchlorate -18O4_IS

Conc 1.00000

ISTD 107.00>89.00 (-) 1.98e4



Insight Report

Printed at 4/29/2021 4:35:03 PM

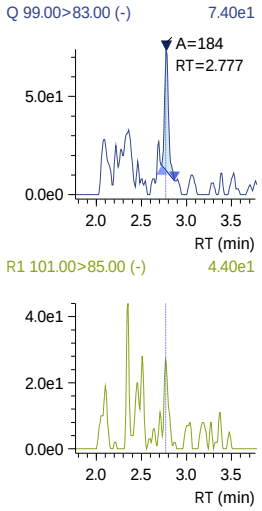
20210429_025

Sample ID: E2100412-012X5
Date Acquired: 4/29/2021 4:10:28 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210429\20210429_025.lcd
Vial: 15 | Inj. Volume: 25.0000uL | Tray: 2

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.777	184	46161	1	0.03413	ng/mL	----	33.90
Sodium Perchlorate-18O4 _IS	Auto	2.776	46161	46161	1	1.00000	ng/mL	----	----

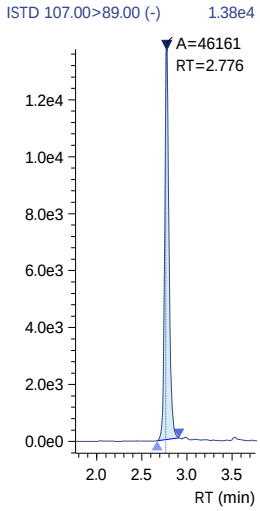
Perchlorate

Conc 0.03413
R#1 33.90 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.00000



Insight Report

Printed at 4/29/2021 4:36:44 PM

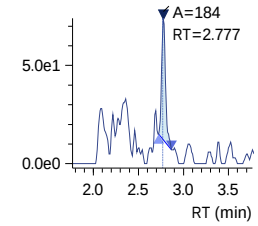
20210429_025

Sample ID: E2100412-012X5
Date Acquired: 4/29/2021 4:10:28 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210429\Before\20210429_025.lcd
Vial: 15 | Inj. Volume: 25.0000uL | Tray: 2

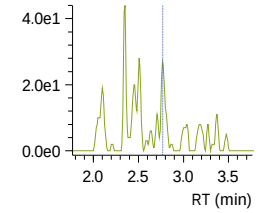
Perchlorate

Conc 0.03413
R#1 33.90 (0.00)

Q 99.00>83.00 (-) 7.40e1



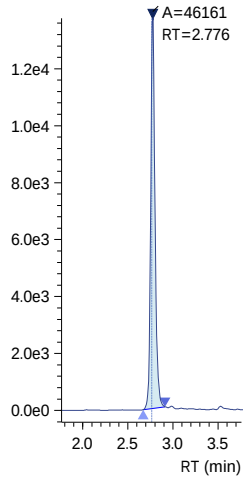
R1 101.00>85.00 (-) 4.40e1



Sodium Perchlorate -18O4_IS

Conc 1.00000

ISTD 107.00>89.00 (-) 1.38e4



Insight Report

Printed at 4/29/2021 4:35:03 PM

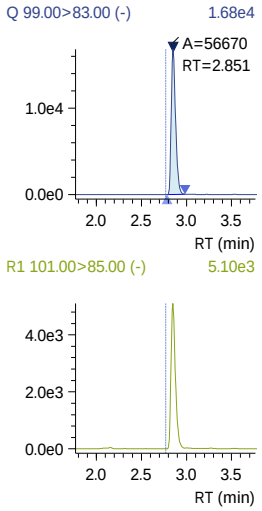
20210429_027

Sample ID: PERCHLORATE7
Date Acquired: 4/29/2021 4:29:16 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210429\20210429_027.lcd
Vial: 21 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.851	56670	51614	1	9.40011	ng/mL	10.0000	30.31
Sodium Perchlorate-18O4 _IS	Auto	2.849	51614	51614	1	1.00000	ng/mL	1.0000	----

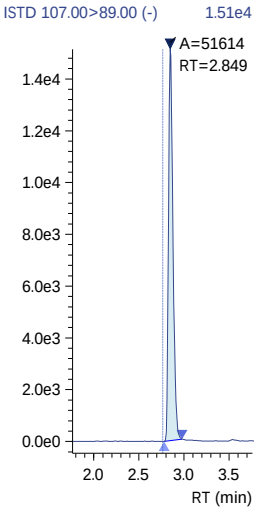
Perchlorate

Conc 9.40011
R#1 30.31 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.00000



Insight Report

Printed at 4/29/2021 4:36:44 PM

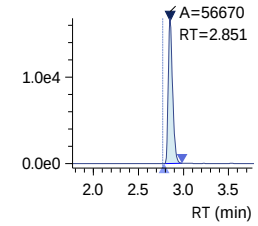
20210429_027

Sample ID: PERCHLORATE7
Date Acquired: 4/29/2021 4:29:16 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210429\Before\20210429_027.lcd
Vial: 21 | Inj. Volume: 25.0000uL | Tray: 1

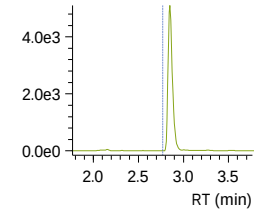
Perchlorate

Conc 9.40011
R#1 30.31 (0.00)

Q 99.00>83.00 (-) 1.68e4



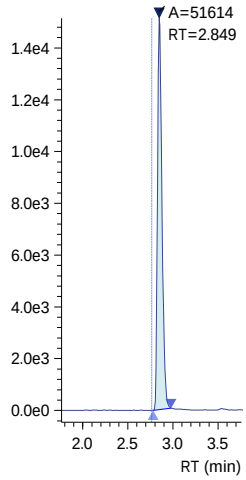
R1 101.00>85.00 (-) 5.10e3



Sodium Perchlorate -18O4_IS

Conc 1.00000

ISTD 107.00>89.00 (-) 1.51e4



10450 Stancliff Rd. Suite 210
Houston, TX 77099
T: +1 281 530 5656
F: +1 281 530 5887
www.alsglobal.com

WorkOrder: HS21040859

Longhorn Army Ammunition Plant LHAAP 16 April 2021

Aptim Environmental & Infrastucture, Inc.

Vicki Graves
10333 Richmond Ave Ste 1030
Houston TX 77042

20-May-2021

ALS Environmental
ALS Group USA, Corp
10450 Stancliff Road, Suite 210
Houston, TX 77099
T : +1 281 530 5656
F : +1 281 530 5887
www.alsglobal.com

Table of Contents

HS21040859 Cover Page
- CoverPage
- HS21040859 Longhorn Army Ammunition Plant LHAAP 16 April 2021 Final REV01
  - CoverLetter
  - Sample Summary
  - CaseNarrative
  - 16PM02-210414
  - 16PM03-210414
  - 16PM03-210414-FD
  - 16RW01-210414
  - 16RW04-210414
  - 16RW02-210414
  - 16WW16-210415
  - 16WW56-210415
  - 16WW22-210415
  - 16WW41-210415
  - 16WW21-210415
  - 16WW39-210415
  - 16WW51-210415
  - 16EW07-210415
  - Trip Blank - 210415
  - Dates Report

Table of Contents (continued)

- QC
- Acronyms
- Certifications
- SampleReceiptCheckList
- COC
- HS21040859 - Sub Perch II (E2100485)

HS21040859 8260_W_DOD Raw Data

HS21040859 RSK175 Raw Data

HS21040859 Wet Chem Raw Data (ALK_W 2320B)

HS21040859 Wet Chem Raw Data (TOC_W 5310B)

HS21040859 Wet Chem Raw Data (9056_anions_W)

HS21040859 - Sub Perch Level IV (E2100485)

- CoverLetter
- Certificate of Analysis
- Chain of Custody
- Preparation Sheets
- Analytical Results
- Accuracy and Precision
- Initial Calibration
- Chromatogram

HS21040859 Longhorn Army Ammunition Plant
LHAAP 16 April 2021 Final REV01

ALS WO# HS21040859

10450 Stancliff Rd. Suite 210
Houston, TX 77099
T: +1 281 530 5656
F: +1 281 530 5887

May 03, 2021

Vicki Graves
Aptim Environmental & Infrastucture, Inc.
2500 City West Blvd., Suite 1700
Houston, TX 77042

Work Order: **HS21040859**

Laboratory Results for: **Longhorn Army Ammunition Plant LHAAP 16 April 2021**

Dear Vicki Graves ,

ALS Environmental received 15 sample(s) on Apr 16, 2021 for the analysis presented in the following report.

This is a REVISED REPORT. Please see the Case Narrative for discussion concerning this revision.

Regards,

Generated By: RJ.MODASHIA
RJ Modashia
Project Manager

ALS Houston, US Date: 03-May-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP 16 April 2021
Work Order: HS21040859

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS21040859-01	16PM02-210414	Groundwater		14-Apr-2021 10:30	16-Apr-2021 10:00	☐
HS21040859-02	16PM03-210414	Groundwater		14-Apr-2021 11:20	16-Apr-2021 10:00	☐
HS21040859-03	16PM03-210414-FD	Groundwater		14-Apr-2021 11:20	16-Apr-2021 10:00	☐
HS21040859-04	16RW01-210414	Groundwater		14-Apr-2021 12:10	16-Apr-2021 10:00	☐
HS21040859-05	16RW04-210414	Groundwater		14-Apr-2021 12:55	16-Apr-2021 10:00	☐
HS21040859-06	16RW02-210414	Groundwater		14-Apr-2021 13:40	16-Apr-2021 10:00	☐
HS21040859-07	16WW16-210415	Groundwater		15-Apr-2021 07:25	16-Apr-2021 10:00	☐
HS21040859-08	16WW56-210415	Groundwater		15-Apr-2021 08:15	16-Apr-2021 10:00	☐
HS21040859-09	16WW22-210415	Groundwater		15-Apr-2021 09:10	16-Apr-2021 10:00	☐
HS21040859-10	16WW41-210415	Groundwater		15-Apr-2021 10:00	16-Apr-2021 10:00	☐
HS21040859-11	16WW21-210415	Groundwater		15-Apr-2021 10:45	16-Apr-2021 10:00	☐
HS21040859-12	16WW39-210415	Groundwater		15-Apr-2021 11:30	16-Apr-2021 10:00	☐
HS21040859-13	16WW51-210415	Groundwater		15-Apr-2021 12:15	16-Apr-2021 10:00	☐
HS21040859-14	16EW07-210415	Groundwater		15-Apr-2021 13:00	16-Apr-2021 10:00	☐
HS21040859-15	Trip Blank - 210415	Water		14-Apr-2021 00:00	16-Apr-2021 10:00	☐

Revision:1

RIGHT SOLUTIONS RIGHT PARTNER

ALS Houston, US Date: 03-May-21

Client: Aptim Environmental & Infrastucture, Inc. **CASE NARRATIVE**
Project: Longhorn Army Ammunition Plant LHAAP 16 April 2021
Work Order: HS21040859

Work Order Comments

- REV01: Revised to add Perchlorate Level II report.
- The analysis for Methane, Methene, Ethane and CO2 by RSK175 was subcontracted to ALS Simi Valley, CA. Final report attached.
- The analysis for Perchlorate was subcontracted to ALS Salt Lake City, UT. Final report attached.

Work Order Comments

- The analysis for Methane, Methene, Ethane and CO2 by RSK175 was subcontracted to ALS Simi Valley, CA. Final report attached.
- The analysis for Perchlorate was subcontracted to ALS Salt Lake City, UT. Final report attached.
- The analysis for Perchlorate was subcontracted our ALS Houston TX, High Resolution Lab. Final report attached.

GC Semivolatiles by Method RSK-175

Batch ID: R382191

Sample ID: 16WW56-210415 (HS21040859-08MS)

- The recovery of the Matrix Spike (MS) associated to this analyte was outside of the established control limits. However, the LCS was within control limits. The recovery of the MS may be due to sample matrix interference.

Sample ID: 16WW56-210415 (HS21040859-08MSD)

- The recovery of the Matrix Spike Duplicate (MSD) associated to this analyte was outside of the established control limits. However, the LCS was within control limits. The failed recovery of the MSD may be due to sample matrix interference.

GCMS Volatiles by Method SW8260

Batch ID: R382069

Sample ID: 16EW07-210415 (HS21040859-14)

- Lowest practical dilution for sample HS21040859-14 due to matrix. Sample is oily.

Batch ID: R381929

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

WetChemistry by Method SM2320B

Batch ID: R382121

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

WetChemistry by Method SM5310B

Batch ID: R382505,R382565

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

WetChemistry by Method SW9056

Batch ID: R382498

Sample ID: 16WW41-210415 (HS21040859-10)

RIGHT SOLUTIONS | RIGHT PARTNER

ALS Houston, US Date: 03-May-21

Client: Aptim Environmental & Infrastucture, Inc. **CASE NARRATIVE**
Project: Longhorn Army Ammunition Plant LHAAP 16 April 2021
Work Order: HS21040859

WetChemistry by Method SW9056

Batch ID: R382498

- Sample ran at 5X due to high concentration of Sulfate

Sample ID: 16WW56-210415 (HS21040859-08)

- Sample ran at 2X due to high concentration of Chloride

Batch ID: R382646,R382746

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

RIGHT SOLUTIONS RIGHT PARTNER

ALS Houston, US Date: 03-May-21

Client: Aptim Environmental & Infrastucture, Inc. **ANALYTICAL REPORT**
Project: Longhorn Army Ammunition Plant LHAAP 16 April 2021 WorkOrder:HS21040859
Sample ID: 16PM02-210414 Lab ID:HS21040859-01
Collection Date: 14-Apr-2021 10:30 Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
1,1,2-Trichloroethane	25	U	7.5	25	25	ug/L	25	19-Apr-2021 18:47
1,1-Dichloroethene	**27**		**5.0**	**12**	**25**	**ug/L**	25	19-Apr-2021 18:47
1,2-Dichloroethane	**14**	J	**5.0**	**12**	**25**	**ug/L**	25	19-Apr-2021 18:47
cis-1,2-Dichloroethene	**2,200**		**5.0**	**12**	**25**	**ug/L**	25	19-Apr-2021 18:47
Methylene chloride	50	U	10	50	50	ug/L	25	19-Apr-2021 18:47
Trichloroethene	**15,000**		**50**	**120**	**250**	**ug/L**	250	19-Apr-2021 19:08
Vinyl chloride	**40**		**5.0**	**12**	**25**	**ug/L**	25	19-Apr-2021 18:47
Surr: 1,2-Dichloroethane-d4	*97.0*			**0**	*81-118*	*%REC*	*250*	*19-Apr-2021 19:08*
Surr: 1,2-Dichloroethane-d4	*96.8*			**0**	*81-118*	*%REC*	*25*	*19-Apr-2021 18:47*
Surr: 4-Bromofluorobenzene	*92.1*			**0**	*85-114*	*%REC*	*25*	*19-Apr-2021 18:47*
Surr: 4-Bromofluorobenzene	*94.8*			**0**	*85-114*	*%REC*	*250*	*19-Apr-2021 19:08*
Surr: Dibromofluoromethane	*91.9*			**0**	*80-119*	*%REC*	*25*	*19-Apr-2021 18:47*
Surr: Dibromofluoromethane	*92.1*			**0**	*80-119*	*%REC*	*250*	*19-Apr-2021 19:08*
Surr: Toluene-d8	*109*			**0**	*89-112*	*%REC*	*25*	*19-Apr-2021 18:47*
Surr: Toluene-d8	*106*			**0**	*89-112*	*%REC*	*250*	*19-Apr-2021 19:08*
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: GR
Subcontract Analysis	See Attached		0	0		NA	1	30-Apr-2021 15:53

Note: See Qualifiers Page for a list of qualifiers and their explanation. **Revision:** 1

RIGHT SOLUTIONS RIGHT PARTNER

ALS Houston, US Date: 03-May-21

Client: Aptim Environmental & Infrastucture, Inc. **ANALYTICAL REPORT**
Project: Longhorn Army Ammunition Plant LHAAP 16 April 2021 WorkOrder:HS21040859
Sample ID: 16PM03-210414 Lab ID:HS21040859-02
Collection Date: 14-Apr-2021 11:20 Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
1,1,2-Trichloroethane	25	U	7.5	25	25	ug/L	25	19-Apr-2021 19:29
1,1-Dichloroethene	**37**		**5.0**	**12**	**25**	**ug/L**	25	19-Apr-2021 19:29
1,2-Dichloroethane	**23**	J	**5.0**	**12**	**25**	**ug/L**	25	19-Apr-2021 19:29
cis-1,2-Dichloroethene	**6,800**		**50**	**120**	**250**	**ug/L**	250	19-Apr-2021 19:50
Methylene chloride	50	U	10	50	50	ug/L	25	19-Apr-2021 19:29
Trichloroethene	**8,800**		**50**	**120**	**250**	**ug/L**	250	19-Apr-2021 19:50
Vinyl chloride	**220**		**5.0**	**12**	**25**	**ug/L**	25	19-Apr-2021 19:29
Surr: 1,2-Dichloroethane-d4	*97.6*			**0**	*81-118*	*%REC*	*25*	*19-Apr-2021 19:29*
Surr: 1,2-Dichloroethane-d4	*96.5*			**0**	*81-118*	*%REC*	*250*	*19-Apr-2021 19:50*
Surr: 4-Bromofluorobenzene	*95.3*			**0**	*85-114*	*%REC*	*25*	*19-Apr-2021 19:29*
Surr: 4-Bromofluorobenzene	*95.2*			**0**	*85-114*	*%REC*	*250*	*19-Apr-2021 19:50*
Surr: Dibromofluoromethane	*94.2*			**0**	*80-119*	*%REC*	*25*	*19-Apr-2021 19:29*
Surr: Dibromofluoromethane	*92.7*			**0**	*80-119*	*%REC*	*250*	*19-Apr-2021 19:50*
Surr: Toluene-d8	*109*			**0**	*89-112*	*%REC*	*250*	*19-Apr-2021 19:50*
Surr: Toluene-d8	*109*			**0**	*89-112*	*%REC*	*25*	*19-Apr-2021 19:29*
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: GR
Subcontract Analysis	See Attached		0	0		NA	1	30-Apr-2021 15:53

Note: See Qualifiers Page for a list of qualifiers and their explanation. **Revision:** 1

RIGHT SOLUTIONS RIGHT PARTNER

ALS Houston, US Date: 03-May-21

Client: Aptim Environmental & Infrastucture, Inc. **ANALYTICAL REPORT**
Project: Longhorn Army Ammunition Plant LHAAP 16 April 2021 WorkOrder:HS21040859
Sample ID: 16PM03-210414-FD Lab ID:HS21040859-03
Collection Date: 14-Apr-2021 11:20 Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
1,1,2-Trichloroethane	25	U	7.5	25	25	ug/L	25	19-Apr-2021 20:12
1,1-Dichloroethene	**37**		**5.0**	**12**	**25**	**ug/L**	25	19-Apr-2021 20:12
1,2-Dichloroethane	**23**	J	**5.0**	**12**	**25**	**ug/L**	25	19-Apr-2021 20:12
cis-1,2-Dichloroethene	**7,100**		**50**	**120**	**250**	**ug/L**	250	19-Apr-2021 20:33
Methylene chloride	50	U	10	50	50	ug/L	25	19-Apr-2021 20:12
Trichloroethene	**9,000**		**50**	**120**	**250**	**ug/L**	250	19-Apr-2021 20:33
Vinyl chloride	**240**		**5.0**	**12**	**25**	**ug/L**	25	19-Apr-2021 20:12
Surr: 1,2-Dichloroethane-d4	*100*			**0**	*81-118*	*%REC*	*25*	*19-Apr-2021 20:12*
Surr: 1,2-Dichloroethane-d4	*98.4*			**0**	*81-118*	*%REC*	*250*	*19-Apr-2021 20:33*
Surr: 4-Bromofluorobenzene	*96.4*			**0**	*85-114*	*%REC*	*25*	*19-Apr-2021 20:12*
Surr: 4-Bromofluorobenzene	*95.2*			**0**	*85-114*	*%REC*	*250*	*19-Apr-2021 20:33*
Surr: Dibromofluoromethane	*95.4*			**0**	*80-119*	*%REC*	*25*	*19-Apr-2021 20:12*
Surr: Dibromofluoromethane	*93.0*			**0**	*80-119*	*%REC*	*250*	*19-Apr-2021 20:33*
Surr: Toluene-d8	*110*			**0**	*89-112*	*%REC*	*25*	*19-Apr-2021 20:12*
Surr: Toluene-d8	*107*			**0**	*89-112*	*%REC*	*250*	*19-Apr-2021 20:33*
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: GR
Subcontract Analysis	See Attached		0	0		NA	1	30-Apr-2021 15:53

Note: See Qualifiers Page for a list of qualifiers and their explanation. **Revision:** 1

RIGHT SOLUTIONS RIGHT PARTNER

ALS Houston, US Date: 03-May-21

Client: Aptim Environmental & Infrastucture, Inc. **ANALYTICAL REPORT**
Project: Longhorn Army Ammunition Plant LHAAP 16 April 2021 WorkOrder:HS21040859
Sample ID: 16RW01-210414 Lab ID:HS21040859-04
Collection Date: 14-Apr-2021 12:10 Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
1,1,2-Trichloroethane	10	U	3.0	10	10	ug/L	10	19-Apr-2021 18:05
1,1-Dichloroethene	5.0	U	2.0	5.0	10	ug/L	10	19-Apr-2021 18:05
1,2-Dichloroethane	5.0	U	2.0	5.0	10	ug/L	10	19-Apr-2021 18:05
cis-1,2-Dichloroethene	**130**		**2.0**	**5.0**	**10**	**ug/L**	10	19-Apr-2021 18:05
Methylene chloride	20	U	4.0	20	20	ug/L	10	19-Apr-2021 18:05
Trichloroethene	**3,000**		**20**	**50**	**100**	**ug/L**	100	19-Apr-2021 18:26
Vinyl chloride	5.0	U	2.0	5.0	10	ug/L	10	19-Apr-2021 18:05
Surr: 1,2-Dichloroethane-d4	*98.5*			**0**	*81-118*	*%REC*	*10*	*19-Apr-2021 18:05*
Surr: 1,2-Dichloroethane-d4	*101*			**0**	*81-118*	*%REC*	*100*	*19-Apr-2021 18:26*
Surr: 4-Bromofluorobenzene	*97.1*			**0**	*85-114*	*%REC*	*10*	*19-Apr-2021 18:05*
Surr: 4-Bromofluorobenzene	*95.6*			**0**	*85-114*	*%REC*	*100*	*19-Apr-2021 18:26*
Surr: Dibromofluoromethane	*93.5*			**0**	*80-119*	*%REC*	*10*	*19-Apr-2021 18:05*
Surr: Dibromofluoromethane	*95.4*			**0**	*80-119*	*%REC*	*100*	*19-Apr-2021 18:26*
Surr: Toluene-d8	*106*			**0**	*89-112*	*%REC*	*10*	*19-Apr-2021 18:05*
Surr: Toluene-d8	*108*			**0**	*89-112*	*%REC*	*100*	*19-Apr-2021 18:26*
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: GR
Subcontract Analysis	See Attached		0	0		NA	1	30-Apr-2021 15:53

Note: See Qualifiers Page for a list of qualifiers and their explanation. **Revision:** 1

RIGHT SOLUTION RIGHT PARTNER

ALS Houston, US Date: 03-May-21

Client: Aptim Environmental & Infrastucture, Inc. **ANALYTICAL REPORT**
Project: Longhorn Army Ammunition Plant LHAAP 16 April 2021 WorkOrder:HS21040859
Sample ID: 16RW04-210414 Lab ID:HS21040859-05
Collection Date: 14-Apr-2021 12:55 Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
1,1,2-Trichloroethane	5.0	U	1.5	5.0	5.0	ug/L	5	19-Apr-2021 17:02
1,1-Dichloroethene	2.5	U	1.0	2.5	5.0	ug/L	5	19-Apr-2021 17:02
1,2-Dichloroethane	2.5	U	1.0	2.5	5.0	ug/L	5	19-Apr-2021 17:02
cis-1,2-Dichloroethene	**62**		**1.0**	**2.5**	**5.0**	**ug/L**	5	19-Apr-2021 17:02
Methylene chloride	10	U	2.0	10	10	ug/L	5	19-Apr-2021 17:02
Trichloroethene	**1,100**		**5.0**	**12**	**25**	**ug/L**	25	19-Apr-2021 17:23
Vinyl chloride	2.5	U	1.0	2.5	5.0	ug/L	5	19-Apr-2021 17:02
Surr: 1,2-Dichloroethane-d4	*97.8*			**0**	*81-118*	*%REC*	*5*	*19-Apr-2021 17:02*
Surr: 1,2-Dichloroethane-d4	*98.4*			**0**	*81-118*	*%REC*	*25*	*19-Apr-2021 17:23*
Surr: 4-Bromofluorobenzene	*94.2*			**0**	*85-114*	*%REC*	*5*	*19-Apr-2021 17:02*
Surr: 4-Bromofluorobenzene	*98.5*			**0**	*85-114*	*%REC*	*25*	*19-Apr-2021 17:23*
Surr: Dibromofluoromethane	*94.5*			**0**	*80-119*	*%REC*	*5*	*19-Apr-2021 17:02*
Surr: Dibromofluoromethane	*93.8*			**0**	*80-119*	*%REC*	*25*	*19-Apr-2021 17:23*
Surr: Toluene-d8	*107*			**0**	*89-112*	*%REC*	*5*	*19-Apr-2021 17:02*
Surr: Toluene-d8	*106*			**0**	*89-112*	*%REC*	*25*	*19-Apr-2021 17:23*
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: GR
Subcontract Analysis	See Attached		0	0		NA	1	30-Apr-2021 15:53

Note: See Qualifiers Page for a list of qualifiers and their explanation. **Revision:** 1

RIGHT SOLUTION RIGHT PARTNER

ALS Houston, US Date: 03-May-21

Client: Aptim Environmental & Infrastucture, Inc. **ANALYTICAL REPORT**
Project: Longhorn Army Ammunition Plant LHAAP 16 April 2021 WorkOrder:HS21040859
Sample ID: 16RW02-210414 Lab ID:HS21040859-06
Collection Date: 14-Apr-2021 13:40 Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
1,1,2-Trichloroethane	1.0	U	0.30	1.0	1.0	ug/L	1	19-Apr-2021 13:52
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	19-Apr-2021 13:52
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	19-Apr-2021 13:52
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	19-Apr-2021 13:52
Methylene chloride	2.0	U	0.40	2.0	2.0	ug/L	1	19-Apr-2021 13:52
Trichloroethene	**3.1**		**0.20**	**0.50**	**1.0**	**ug/L**	1	19-Apr-2021 13:52
Vinyl chloride	0.50	U	0.20	0.50	1.0	ug/L	1	19-Apr-2021 13:52
Surr: 1,2-Dichloroethane-d4	*98.4*			**0**	*81-118*	*%REC*	*1*	*19-Apr-2021 13:52*
Surr: 4-Bromofluorobenzene	*94.1*			**0**	*85-114*	*%REC*	*1*	*19-Apr-2021 13:52*
Surr: Dibromofluoromethane	*94.6*			**0**	*80-119*	*%REC*	*1*	*19-Apr-2021 13:52*
Surr: Toluene-d8	*107*			**0**	*89-112*	*%REC*	*1*	*19-Apr-2021 13:52*
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: GR
Subcontract Analysis	See Attached		0	0		NA	1	30-Apr-2021 15:53

Note: See Qualifiers Page for a list of qualifiers and their explanation. **Revision:** 1

RIGHT SOLUTION RIGHT PARTNER

ALS Houston, US Date: 03-May-21

Client: Aptim Environmental & Infrastucture, Inc. **ANALYTICAL REPORT**
Project: Longhorn Army Ammunition Plant LHAAP 16 April 2021 WorkOrder:HS21040859
Sample ID: 16WW16-210415 Lab ID:HS21040859-07
Collection Date: 15-Apr-2021 07:25 Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
1,1,2-Trichloroethane	50	U	15	50	50	ug/L	50	19-Apr-2021 20:54
1,1-Dichloroethene	**33**	J	**10**	**25**	**50**	**ug/L**	50	19-Apr-2021 20:54
1,2-Dichloroethane	**32**	J	**10**	**25**	**50**	**ug/L**	50	19-Apr-2021 20:54
cis-1,2-Dichloroethene	**13,000**		**100**	**250**	**500**	**ug/L**	500	19-Apr-2021 21:15
Methylene chloride	100	U	20	100	100	ug/L	50	19-Apr-2021 20:54
Trichloroethene	**28,000**		**100**	**250**	**500**	**ug/L**	500	19-Apr-2021 21:15
Vinyl chloride	**260**		**10**	**25**	**50**	**ug/L**	50	19-Apr-2021 20:54
Surr: 1,2-Dichloroethane-d4	*97.8*			**0**	*81-118*	*%REC*	*50*	*19-Apr-2021 20:54*
Surr: 1,2-Dichloroethane-d4	*98.2*			**0**	*81-118*	*%REC*	*500*	*19-Apr-2021 21:15*
Surr: 4-Bromofluorobenzene	*95.4*			**0**	*85-114*	*%REC*	*500*	*19-Apr-2021 21:15*
Surr: 4-Bromofluorobenzene	*95.5*			**0**	*85-114*	*%REC*	*50*	*19-Apr-2021 20:54*
Surr: Dibromofluoromethane	*92.6*			**0**	*80-119*	*%REC*	*50*	*19-Apr-2021 20:54*
Surr: Dibromofluoromethane	*93.0*			**0**	*80-119*	*%REC*	*500*	*19-Apr-2021 21:15*
Surr: Toluene-d8	*107*			**0**	*89-112*	*%REC*	*50*	*19-Apr-2021 20:54*
Surr: Toluene-d8	*106*			**0**	*89-112*	*%REC*	*500*	*19-Apr-2021 21:15*
DISSOLVED GASES BY RSK-175		**Method:RSK-175**						Analyst: PPM
Ethane	**0.00240**		**0.000144**	**0.000500**	**0.00100**	**mg/L**	1	21-Apr-2021 11:59
Ethene	**0.00344**		**0.000234**	**0.000500**	**0.00100**	**mg/L**	1	21-Apr-2021 11:59
Methane	**0.437**		**0.00535**	**0.0250**	**0.0250**	**mg/L**	50	21-Apr-2021 14:32
ALKALINITY BY SM2320B		**Method:SM2320B**						Analyst: TH
Alkalinity, Total (As CaCO3)	**338**		**5.00**	**5.00**	**5.00**	**mg/L**	1	21-Apr-2021 22:18
TOTAL ORGANIC CARBON - SM5310B		**Method:SM5310B**						Analyst: MZD
Organic Carbon, Total	**4.71**		**0.500**	**0.500**	**1.00**	**mg/L**	1	27-Apr-2021 19:00
ANIONS BY SW9056A		**Method:SW9056**						Analyst: YP
Bromide	**3.97**		**0.0300**	**0.100**	**0.100**	**mg/L**	1	16-Apr-2021 19:17
Nitrogen, Nitrate (As N)	0.100	U	0.0300	0.100	0.100	mg/L	1	16-Apr-2021 19:17
Sulfate	**367**		**2.00**	**5.00**	**5.00**	**mg/L**	10	28-Apr-2021 22:46
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: GR
Subcontract Analysis	See Attached		0	0		NA	1	30-Apr-2021 15:53

Note: See Qualifiers Page for a list of qualifiers and their explanation. **Revision:** 1

RIGHT SOLUTION RIGHT PARTNER

ALS Houston, US Date: 03-May-21

Client: Aptim Environmental & Infrastucture, Inc. **ANALYTICAL REPORT**
Project: Longhorn Army Ammunition Plant LHAAP 16 April 2021 WorkOrder:HS21040859
Sample ID: 16WW56-210415 Lab ID:HS21040859-08
Collection Date: 15-Apr-2021 08:15 Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
1,1,2-Trichloroethane	1.0	U	0.30	1.0	1.0	ug/L	1	19-Apr-2021 14:13
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	19-Apr-2021 14:13
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	19-Apr-2021 14:13
cis-1,2-Dichloroethene	**1.2**		**0.20**	**0.50**	**1.0**	**ug/L**	1	19-Apr-2021 14:13
Methylene chloride	2.0	U	0.40	2.0	2.0	ug/L	1	19-Apr-2021 14:13
Trichloroethene	**14**		**0.20**	**0.50**	**1.0**	**ug/L**	1	19-Apr-2021 14:13
Vinyl chloride	0.50	U	0.20	0.50	1.0	ug/L	1	19-Apr-2021 14:13
Surr: 1,2-Dichloroethane-d4	*99.9*			**0**	*81-118*	*%REC*	*1*	*19-Apr-2021 14:13*
Surr: 4-Bromofluorobenzene	*91.1*			**0**	*85-114*	*%REC*	*1*	*19-Apr-2021 14:13*
Surr: Dibromofluoromethane	*95.0*			**0**	*80-119*	*%REC*	*1*	*19-Apr-2021 14:13*
Surr: Toluene-d8	*105*			**0**	*89-112*	*%REC*	*1*	*19-Apr-2021 14:13*
DISSOLVED GASES BY RSK-175		**Method:RSK-175**						Analyst: PPM
Ethane	0.000500	U	0.000144	0.000500	0.00100	mg/L	1	21-Apr-2021 12:25
Ethene	0.000500	U	0.000234	0.000500	0.00100	mg/L	1	21-Apr-2021 12:25
Methane	**0.00102**		**0.000107**	**0.000500**	**0.000500**	**mg/L**	1	21-Apr-2021 12:25
ALKALINITY BY SM2320B		**Method:SM2320B**						Analyst: TH
Alkalinity, Total (As CaCO3)	**170**		**5.00**	**5.00**	**5.00**	**mg/L**	1	21-Apr-2021 22:07
TOTAL ORGANIC CARBON - SM5310B		**Method:SM5310B**						Analyst: MZD
Organic Carbon, Total	**1.80**		**0.500**	**0.500**	**1.00**	**mg/L**	1	27-Apr-2021 19:16
ANIONS BY SW9056A		**Method:SW9056**						Analyst: YP
Bromide	**5.19**		**0.0600**	**0.200**	**0.200**	**mg/L**	2	16-Apr-2021 19:37
Nitrogen, Nitrate (As N)	**0.249**		**0.0600**	**0.200**	**0.200**	**mg/L**	2	16-Apr-2021 19:37
Sulfate	**137**		**0.400**	**1.00**	**1.00**	**mg/L**	2	16-Apr-2021 19:37
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: GR
Subcontract Analysis	See Attached		0	0		NA	1	30-Apr-2021 15:53

Note: See Qualifiers Page for a list of qualifiers and their explanation. **Revision:** 1

RIGHT SOLUTION RIGHT PARTNER

ALS Houston, US Date: 03-May-21

Client: Aptim Environmental & Infrastucture, Inc. **ANALYTICAL REPORT**
Project: Longhorn Army Ammunition Plant LHAAP 16 April 2021 WorkOrder:HS21040859
Sample ID: 16WW22-210415 Lab ID:HS21040859-09
Collection Date: 15-Apr-2021 09:10 Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
1,1,2-Trichloroethane	1.0	U	0.30	1.0	1.0	ug/L	1	19-Apr-2021 14:34
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	19-Apr-2021 14:34
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	19-Apr-2021 14:34
cis-1,2-Dichloroethene	**2.0**		**0.20**	**0.50**	**1.0**	**ug/L**	1	19-Apr-2021 14:34
Methylene chloride	2.0	U	0.40	2.0	2.0	ug/L	1	19-Apr-2021 14:34
Trichloroethene	**12**		**0.20**	**0.50**	**1.0**	**ug/L**	1	19-Apr-2021 14:34
Vinyl chloride	0.50	U	0.20	0.50	1.0	ug/L	1	19-Apr-2021 14:34
Surr: 1,2-Dichloroethane-d4	*100.0*			**0**	*81-118*	*%REC*	*1*	*19-Apr-2021 14:34*
Surr: 4-Bromofluorobenzene	*95.8*			**0**	*85-114*	*%REC*	*1*	*19-Apr-2021 14:34*
Surr: Dibromofluoromethane	*92.6*			**0**	*80-119*	*%REC*	*1*	*19-Apr-2021 14:34*
Surr: Toluene-d8	*109*			**0**	*89-112*	*%REC*	*1*	*19-Apr-2021 14:34*
DISSOLVED GASES BY RSK-175		**Method:RSK-175**						Analyst: PPM
Ethane	0.000500	U	0.000144	0.000500	0.00100	mg/L	1	21-Apr-2021 13:58
Ethene	**0.00124**		**0.000234**	**0.000500**	**0.00100**	**mg/L**	1	21-Apr-2021 13:58
Methane	**0.000981**		**0.000107**	**0.000500**	**0.000500**	**mg/L**	1	21-Apr-2021 13:58
ALKALINITY BY SM2320B		**Method:SM2320B**						Analyst: TH
Alkalinity, Total (As CaCO3)	**252**		**5.00**	**5.00**	**5.00**	**mg/L**	1	21-Apr-2021 22:24
TOTAL ORGANIC CARBON - SM5310B		**Method:SM5310B**						Analyst: MZD
Organic Carbon, Total	**1.49**		**0.500**	**0.500**	**1.00**	**mg/L**	1	27-Apr-2021 20:22
ANIONS BY SW9056A		**Method:SW9056**						Analyst: YP
Bromide	**4.62**		**0.0300**	**0.100**	**0.100**	**mg/L**	1	16-Apr-2021 21:34
Nitrogen, Nitrate (As N)	**0.0682**	J	**0.0300**	**0.100**	**0.100**	**mg/L**	1	16-Apr-2021 21:34
Sulfate	**209**		**2.00**	**5.00**	**5.00**	**mg/L**	10	28-Apr-2021 22:59
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: GR
Subcontract Analysis	See Attached		0	0		NA	1	30-Apr-2021 15:53

Note: See Qualifiers Page for a list of qualifiers and their explanation. **Revision:** 1

RIGHT SOLUTION RIGHT PARTNER

ALS Houston, US Date: 03-May-21

Client: Aptim Environmental & Infrastucture, Inc. **ANALYTICAL REPORT**
Project: Longhorn Army Ammunition Plant LHAAP 16 April 2021 WorkOrder:HS21040859
Sample ID: 16WW41-210415 Lab ID:HS21040859-10
Collection Date: 15-Apr-2021 10:00 Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
1,1,2-Trichloroethane	5.0	U	1.5	5.0	5.0	ug/L	5	19-Apr-2021 17:44
1,1-Dichloroethene	**19**		**1.0**	**2.5**	**5.0**	**ug/L**	5	19-Apr-2021 17:44
1,2-Dichloroethane	**4.2**	J	**1.0**	**2.5**	**5.0**	**ug/L**	5	19-Apr-2021 17:44
cis-1,2-Dichloroethene	**2,600**		**20**	**50**	**100**	**ug/L**	100	20-Apr-2021 13:50
Methylene chloride	10	U	2.0	10	10	ug/L	5	19-Apr-2021 17:44
Trichloroethene	**6,200**		**20**	**50**	**100**	**ug/L**	100	20-Apr-2021 13:50
Vinyl chloride	**330**		**1.0**	**2.5**	**5.0**	**ug/L**	5	19-Apr-2021 17:44
Surr: 1,2-Dichloroethane-d4	*97.7*			**0**	*81-118*	*%REC*	*5*	*19-Apr-2021 17:44*
Surr: 1,2-Dichloroethane-d4	*98.9*			**0**	*81-118*	*%REC*	*100*	*20-Apr-2021 13:50*
Surr: 4-Bromofluorobenzene	*92.5*			**0**	*85-114*	*%REC*	*5*	*19-Apr-2021 17:44*
Surr: 4-Bromofluorobenzene	*97.2*			**0**	*85-114*	*%REC*	*100*	*20-Apr-2021 13:50*
Surr: Dibromofluoromethane	*93.3*			**0**	*80-119*	*%REC*	*5*	*19-Apr-2021 17:44*
Surr: Dibromofluoromethane	*92.4*			**0**	*80-119*	*%REC*	*100*	*20-Apr-2021 13:50*
Surr: Toluene-d8	*110*			**0**	*89-112*	*%REC*	*5*	*19-Apr-2021 17:44*
Surr: Toluene-d8	*107*			**0**	*89-112*	*%REC*	*100*	*20-Apr-2021 13:50*
DISSOLVED GASES BY RSK-175		**Method:RSK-175**						Analyst: PPM
Ethane	0.000500	U	0.000144	0.000500	0.00100	mg/L	1	21-Apr-2021 14:22
Ethene	**0.0143**		**0.000234**	**0.000500**	**0.00100**	**mg/L**	1	21-Apr-2021 14:22
Methane	**0.0160**		**0.000107**	**0.000500**	**0.000500**	**mg/L**	1	21-Apr-2021 14:22
ALKALINITY BY SM2320B		**Method:SM2320B**						Analyst: TH
Alkalinity, Total (As CaCO3)	**1,040**		**5.00**	**5.00**	**5.00**	**mg/L**	1	21-Apr-2021 22:50
TOTAL ORGANIC CARBON - SM5310B		**Method:SM5310B**						Analyst: MZD
Organic Carbon, Total	**47.6**		**5.00**	**5.00**	**10.0**	**mg/L**	10	28-Apr-2021 11:38
ANIONS BY SW9056A		**Method:SW9056**						Analyst: YP
Bromide	**9.79**		**0.600**	**2.00**	**2.00**	**mg/L**	20	30-Apr-2021 09:41
Nitrogen, Nitrate (As N)	0.500	U	0.150	0.500	0.500	mg/L	5	16-Apr-2021 21:52
Sulfate	**7,890**		**100**	**250**	**250**	**mg/L**	500	28-Apr-2021 23:12
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: GR
Subcontract Analysis	See Attached		0	0		NA	1	30-Apr-2021 15:53

Note: See Qualifiers Page for a list of qualifiers and their explanation. **Revision:** 1

RIGHT SOLUTION RIGHT PARTNER

ALS Houston, US Date: 03-May-21

Client: Aptim Environmental & Infrastucture, Inc. **ANALYTICAL REPORT**
Project: Longhorn Army Ammunition Plant LHAAP 16 April 2021 WorkOrder:HS21040859
Sample ID: 16WW21-210415 Lab ID:HS21040859-11
Collection Date: 15-Apr-2021 10:45 Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
1,1,2-Trichloroethane	1.0	U	0.30	1.0	1.0	ug/L	1	19-Apr-2021 14:55
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	19-Apr-2021 14:55
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	19-Apr-2021 14:55
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	19-Apr-2021 14:55
Methylene chloride	2.0	U	0.40	2.0	2.0	ug/L	1	19-Apr-2021 14:55
Trichloroethene	**1.1**		**0.20**	**0.50**	**1.0**	**ug/L**	1	19-Apr-2021 14:55
Vinyl chloride	0.50	U	0.20	0.50	1.0	ug/L	1	19-Apr-2021 14:55
Surr: 1,2-Dichloroethane-d4	*99.2*			**0**	*81-118*	*%REC*	*1*	*19-Apr-2021 14:55*
Surr: 4-Bromofluorobenzene	*94.3*			**0**	*85-114*	*%REC*	*1*	*19-Apr-2021 14:55*
Surr: Dibromofluoromethane	*91.9*			**0**	*80-119*	*%REC*	*1*	*19-Apr-2021 14:55*
Surr: Toluene-d8	*107*			**0**	*89-112*	*%REC*	*1*	*19-Apr-2021 14:55*
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: GR
Subcontract Analysis	See Attached		0	0		NA	1	30-Apr-2021 15:53

Note: See Qualifiers Page for a list of qualifiers and their explanation. **Revision:** 1

RIGHT SOLUTION RIGHT PARTNER

ALS Houston, US Date: 03-May-21

Client: Aptim Environmental & Infrastucture, Inc. **ANALYTICAL REPORT**
Project: Longhorn Army Ammunition Plant LHAAP 16 April 2021 WorkOrder:HS21040859
Sample ID: 16WW39-210415 Lab ID:HS21040859-12
Collection Date: 15-Apr-2021 11:30 Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
1,1,2-Trichloroethane	1.0	U	0.30	1.0	1.0	ug/L	1	19-Apr-2021 15:17
1,1-Dichloroethene	**0.75**	J	**0.20**	**0.50**	**1.0**	**ug/L**	1	19-Apr-2021 15:17
1,2-Dichloroethane	**0.72**	J	**0.20**	**0.50**	**1.0**	**ug/L**	1	19-Apr-2021 15:17
cis-1,2-Dichloroethene	**39**		**0.20**	**0.50**	**1.0**	**ug/L**	1	19-Apr-2021 15:17
Methylene chloride	2.0	U	0.40	2.0	2.0	ug/L	1	19-Apr-2021 15:17
Trichloroethene	**330**		**1.0**	**2.5**	**5.0**	**ug/L**	5	20-Apr-2021 14:54
Vinyl chloride	**1.1**		**0.20**	**0.50**	**1.0**	**ug/L**	1	19-Apr-2021 15:17
Surr: 1,2-Dichloroethane-d4	*101*			**0**	*81-118*	*%REC*	*1*	*19-Apr-2021 15:17*
Surr: 1,2-Dichloroethane-d4	*99.9*			**0**	*81-118*	*%REC*	*5*	*20-Apr-2021 14:54*
Surr: 4-Bromofluorobenzene	*95.7*			**0**	*85-114*	*%REC*	*1*	*19-Apr-2021 15:17*
Surr: 4-Bromofluorobenzene	*94.2*			**0**	*85-114*	*%REC*	*5*	*20-Apr-2021 14:54*
Surr: Dibromofluoromethane	*94.4*			**0**	*80-119*	*%REC*	*1*	*19-Apr-2021 15:17*
Surr: Dibromofluoromethane	*92.8*			**0**	*80-119*	*%REC*	*5*	*20-Apr-2021 14:54*
Surr: Toluene-d8	*107*			**0**	*89-112*	*%REC*	*1*	*19-Apr-2021 15:17*
Surr: Toluene-d8	*109*			**0**	*89-112*	*%REC*	*5*	*20-Apr-2021 14:54*
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: GR
Subcontract Analysis	See Attached		0	0		NA	1	30-Apr-2021 15:53

Note: See Qualifiers Page for a list of qualifiers and their explanation. **Revision:** 1

RIGHT SOLUTIONS RIGHT PARTNER

ALS Houston, US Date: 03-May-21

Client: Aptim Environmental & Infrastucture, Inc. **ANALYTICAL REPORT**
Project: Longhorn Army Ammunition Plant LHAAP 16 April 2021 WorkOrder:HS21040859
Sample ID: 16WW51-210415 Lab ID:HS21040859-13
Collection Date: 15-Apr-2021 12:15 Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
1,1,2-Trichloroethane	1.0	U	0.30	1.0	1.0	ug/L	1	19-Apr-2021 15:38
1,1-Dichloroethene	**0.83**	J	**0.20**	**0.50**	**1.0**	**ug/L**	1	19-Apr-2021 15:38
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	19-Apr-2021 15:38
cis-1,2-Dichloroethene	**44**		**0.20**	**0.50**	**1.0**	**ug/L**	1	19-Apr-2021 15:38
Methylene chloride	2.0	U	0.40	2.0	2.0	ug/L	1	19-Apr-2021 15:38
Trichloroethene	**560**		**2.0**	**5.0**	**10**	**ug/L**	10	20-Apr-2021 15:15
Vinyl chloride	0.50	U	0.20	0.50	1.0	ug/L	1	19-Apr-2021 15:38
Surr: 1,2-Dichloroethane-d4	*98.2*			**0**	*81-118*	*%REC*	*1*	*19-Apr-2021 15:38*
Surr: 1,2-Dichloroethane-d4	*98.2*			**0**	*81-118*	*%REC*	*10*	*20-Apr-2021 15:15*
Surr: 4-Bromofluorobenzene	*93.7*			**0**	*85-114*	*%REC*	*1*	*19-Apr-2021 15:38*
Surr: 4-Bromofluorobenzene	*92.7*			**0**	*85-114*	*%REC*	*10*	*20-Apr-2021 15:15*
Surr: Dibromofluoromethane	*93.3*			**0**	*80-119*	*%REC*	*1*	*19-Apr-2021 15:38*
Surr: Dibromofluoromethane	*95.1*			**0**	*80-119*	*%REC*	*10*	*20-Apr-2021 15:15*
Surr: Toluene-d8	*107*			**0**	*89-112*	*%REC*	*1*	*19-Apr-2021 15:38*
Surr: Toluene-d8	*106*			**0**	*89-112*	*%REC*	*10*	*20-Apr-2021 15:15*
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: GR
Subcontract Analysis	See Attached		0	0		NA	1	30-Apr-2021 15:53

Note: See Qualifiers Page for a list of qualifiers and their explanation. **Revision:** 1

RIGHT SOLUTION RIGHT PARTNER

ALS Houston, US Date: 03-May-21

Client: Aptim Environmental & Infrastucture, Inc. **ANALYTICAL REPORT**
Project: Longhorn Army Ammunition Plant LHAAP 16 April 2021 WorkOrder:HS21040859
Sample ID: 16EW07-210415 Lab ID:HS21040859-14
Collection Date: 15-Apr-2021 13:00 Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
1,1,2-Trichloroethane	1,000	U	300	1000	1000	ug/L	1000	20-Apr-2021 13:29
1,1-Dichloroethene	500	U	200	500	1000	ug/L	1000	20-Apr-2021 13:29
1,2-Dichloroethane	500	U	200	500	1000	ug/L	1000	20-Apr-2021 13:29
cis-1,2-Dichloroethene	500	U	200	500	1000	ug/L	1000	20-Apr-2021 13:29
Methylene chloride	2,000	U	400	2000	2000	ug/L	1000	20-Apr-2021 13:29
Trichloroethene	500	U	200	500	1000	ug/L	1000	20-Apr-2021 13:29
Vinyl chloride	500	U	200	500	1000	ug/L	1000	20-Apr-2021 13:29
Surr: 1,2-Dichloroethane-d4	*97.8*			**0**	*81-118*	*%REC*	*1000*	*20-Apr-2021 13:29*
Surr: 4-Bromofluorobenzene	*94.2*			**0**	*85-114*	*%REC*	*1000*	*20-Apr-2021 13:29*
Surr: Dibromofluoromethane	*95.1*			**0**	*80-119*	*%REC*	*1000*	*20-Apr-2021 13:29*
Surr: Toluene-d8	*108*			**0**	*89-112*	*%REC*	*1000*	*20-Apr-2021 13:29*
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: GR
Subcontract Analysis	See Attached		0	0		NA	1	30-Apr-2021 15:53

Note: See Qualifiers Page for a list of qualifiers and their explanation. **Revision:** 1

RIGHT SOLUTION | RIGHT PARTNER

ALS Houston, US Date: 03-May-21

Client: Aptim Environmental & Infrastucture, Inc. **ANALYTICAL REPORT**
Project: Longhorn Army Ammunition Plant LHAAP 16 April 2021 WorkOrder:HS21040859
Sample ID: Trip Blank - 210415 Lab ID:HS21040859-15
Collection Date: 14-Apr-2021 00:00 Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
1,1,2-Trichloroethane	1.0	U	0.30	1.0	1.0	ug/L	1	19-Apr-2021 13:31
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	19-Apr-2021 13:31
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	19-Apr-2021 13:31
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	19-Apr-2021 13:31
Methylene chloride	2.0	U	0.40	2.0	2.0	ug/L	1	19-Apr-2021 13:31
Trichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	19-Apr-2021 13:31
Vinyl chloride	0.50	U	0.20	0.50	1.0	ug/L	1	19-Apr-2021 13:31
Surr: 1,2-Dichloroethane-d4	*101*			**0**	*81-118*	*%REC*	*1*	*19-Apr-2021 13:31*
Surr: 4-Bromofluorobenzene	*93.5*			**0**	*85-114*	*%REC*	*1*	*19-Apr-2021 13:31*
Surr: Dibromofluoromethane	*94.5*			**0**	*80-119*	*%REC*	*1*	*19-Apr-2021 13:31*
Surr: Toluene-d8	*106*			**0**	*89-112*	*%REC*	*1*	*19-Apr-2021 13:31*

Note: See Qualifiers Page for a list of qualifiers and their explanation. **Revision:** 1

RIGHT SOLUTIONS | RIGHT PARTNER

ALS Houston, US Date: 03-May-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP 16 April 2021 **DATES REPORT**
WorkOrder: HS21040859

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: R381929 (0)	**Test Name :** VOLATILES ORGANICS BY METHOD 8260C				**Matrix:** Water	
HS21040859-15	Trip Blank - 210415	14 Apr 2021 00:00			19 Apr 2021 13:31	1
Batch ID: R381929 (0)	**Test Name :** VOLATILES ORGANICS BY METHOD 8260C				**Matrix:** Groundwater	
HS21040859-01	16PM02-210414	14 Apr 2021 10:30			19 Apr 2021 19:08	250
HS21040859-01	16PM02-210414	14 Apr 2021 10:30			19 Apr 2021 18:47	25
HS21040859-02	16PM03-210414	14 Apr 2021 11:20			19 Apr 2021 19:50	250
HS21040859-02	16PM03-210414	14 Apr 2021 11:20			19 Apr 2021 19:29	25
HS21040859-03	16PM03-210414-FD	14 Apr 2021 11:20			19 Apr 2021 20:33	250
HS21040859-03	16PM03-210414-FD	14 Apr 2021 11:20			19 Apr 2021 20:12	25
HS21040859-04	16RW01-210414	14 Apr 2021 12:10			19 Apr 2021 18:26	100
HS21040859-04	16RW01-210414	14 Apr 2021 12:10			19 Apr 2021 18:05	10
HS21040859-05	16RW04-210414	14 Apr 2021 12:55			19 Apr 2021 17:23	25
HS21040859-05	16RW04-210414	14 Apr 2021 12:55			19 Apr 2021 17:02	5
HS21040859-06	16RW02-210414	14 Apr 2021 13:40			19 Apr 2021 13:52	1
HS21040859-07	16WW16-210415	15 Apr 2021 07:25			19 Apr 2021 21:15	500
HS21040859-07	16WW16-210415	15 Apr 2021 07:25			19 Apr 2021 20:54	50
HS21040859-08	16WW56-210415	15 Apr 2021 08:15			19 Apr 2021 14:13	1
HS21040859-09	16WW22-210415	15 Apr 2021 09:10			19 Apr 2021 14:34	1
HS21040859-10	16WW41-210415	15 Apr 2021 10:00			19 Apr 2021 17:44	5
HS21040859-11	16WW21-210415	15 Apr 2021 10:45			19 Apr 2021 14:55	1
HS21040859-12	16WW39-210415	15 Apr 2021 11:30			19 Apr 2021 15:17	1
HS21040859-13	16WW51-210415	15 Apr 2021 12:15			19 Apr 2021 15:38	1
Batch ID: R382069 (0)	**Test Name :** VOLATILES ORGANICS BY METHOD 8260C				**Matrix:** Groundwater	
HS21040859-10	16WW41-210415	15 Apr 2021 10:00			20 Apr 2021 13:50	100
HS21040859-12	16WW39-210415	15 Apr 2021 11:30			20 Apr 2021 14:54	5
HS21040859-13	16WW51-210415	15 Apr 2021 12:15			20 Apr 2021 15:15	10
HS21040859-14	16EW07-210415	15 Apr 2021 13:00			20 Apr 2021 13:29	1000
Batch ID: R382121 (0)	**Test Name :** ALKALINITY BY SM2320B				**Matrix:** Groundwater	
HS21040859-07	16WW16-210415	15 Apr 2021 07:25			21 Apr 2021 22:18	1
HS21040859-08	16WW56-210415	15 Apr 2021 08:15			21 Apr 2021 22:07	1
HS21040859-09	16WW22-210415	15 Apr 2021 09:10			21 Apr 2021 22:24	1
HS21040859-10	16WW41-210415	15 Apr 2021 10:00			21 Apr 2021 22:50	1
Batch ID: R382191 (0)	**Test Name :** DISSOLVED GASES BY RSK-175				**Matrix:** Groundwater	
HS21040859-07	16WW16-210415	15 Apr 2021 07:25			21 Apr 2021 14:32	50
HS21040859-07	16WW16-210415	15 Apr 2021 07:25			21 Apr 2021 11:59	1
HS21040859-08	16WW56-210415	15 Apr 2021 08:15			21 Apr 2021 12:25	1
HS21040859-09	16WW22-210415	15 Apr 2021 09:10			21 Apr 2021 13:58	1
HS21040859-10	16WW41-210415	15 Apr 2021 10:00			21 Apr 2021 14:22	1

Revision: 1

RIGHT SOLUTIONS | RIGHT PARTNER

ALS Houston, US Date: 03-May-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP 16 April 2021 **DATES REPORT**
WorkOrder: HS21040859

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: R382498 (0)	**Test Name :** ANIONS BY SW9056A				**Matrix:** Groundwater	
HS21040859-07	16WW16-210415	15 Apr 2021 07:25			16 Apr 2021 19:17	1
HS21040859-08	16WW56-210415	15 Apr 2021 08:15			16 Apr 2021 19:37	2
HS21040859-09	16WW22-210415	15 Apr 2021 09:10			16 Apr 2021 21:34	1
HS21040859-10	16WW41-210415	15 Apr 2021 10:00			16 Apr 2021 21:52	5
Batch ID: R382505 (0)	**Test Name :** TOTAL ORGANIC CARBON - SM5310B				**Matrix:** Groundwater	
HS21040859-07	16WW16-210415	15 Apr 2021 07:25			27 Apr 2021 19:00	1
HS21040859-08	16WW56-210415	15 Apr 2021 08:15			27 Apr 2021 19:16	1
HS21040859-09	16WW22-210415	15 Apr 2021 09:10			27 Apr 2021 20:22	1
Batch ID: R382565 (0)	**Test Name :** TOTAL ORGANIC CARBON - SM5310B				**Matrix:** Groundwater	
HS21040859-10	16WW41-210415	15 Apr 2021 10:00			28 Apr 2021 11:38	10
Batch ID: R382646 (0)	**Test Name :** ANIONS BY SW9056A				**Matrix:** Groundwater	
HS21040859-07	16WW16-210415	15 Apr 2021 07:25			28 Apr 2021 22:46	10
HS21040859-09	16WW22-210415	15 Apr 2021 09:10			28 Apr 2021 22:59	10
HS21040859-10	16WW41-210415	15 Apr 2021 10:00			28 Apr 2021 23:12	500
Batch ID: R382746 (0)	**Test Name :** ANIONS BY SW9056A				**Matrix:** Groundwater	
HS21040859-10	16WW41-210415	15 Apr 2021 10:00			30 Apr 2021 09:41	20
Batch ID: R382774 (0)	**Test Name :** SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)				**Matrix:** Groundwater	
HS21040859-01	16PM02-210414	14 Apr 2021 10:30			30 Apr 2021 15:53	1
HS21040859-02	16PM03-210414	14 Apr 2021 11:20			30 Apr 2021 15:53	1
HS21040859-03	16PM03-210414-FD	14 Apr 2021 11:20			30 Apr 2021 15:53	1
HS21040859-04	16RW01-210414	14 Apr 2021 12:10			30 Apr 2021 15:53	1
HS21040859-05	16RW04-210414	14 Apr 2021 12:55			30 Apr 2021 15:53	1
HS21040859-06	16RW02-210414	14 Apr 2021 13:40			30 Apr 2021 15:53	1
HS21040859-07	16WW16-210415	15 Apr 2021 07:25			30 Apr 2021 15:53	1
HS21040859-08	16WW56-210415	15 Apr 2021 08:15			30 Apr 2021 15:53	1
HS21040859-09	16WW22-210415	15 Apr 2021 09:10			30 Apr 2021 15:53	1
HS21040859-10	16WW41-210415	15 Apr 2021 10:00			30 Apr 2021 15:53	1
HS21040859-11	16WW21-210415	15 Apr 2021 10:45			30 Apr 2021 15:53	1
HS21040859-12	16WW39-210415	15 Apr 2021 11:30			30 Apr 2021 15:53	1
HS21040859-13	16WW51-210415	15 Apr 2021 12:15			30 Apr 2021 15:53	1
HS21040859-14	16EW07-210415	15 Apr 2021 13:00			30 Apr 2021 15:53	1

Revision: 1

RIGHT SOLUTIONS | RIGHT PARTNER

ALS Houston, US Date: 03-May-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP 16 April 2021
WorkOrder: HS21040859

QC BATCH REPORT

Batch ID: R382191 (0) **Instrument:** FID-4 **Method:** DISSOLVED GASES BY RSK-175

MBLK Sample ID: **MBLK-210421** Units: **mg/L** Analysis Date: **21-Apr-2021 10:29**
Client ID: Run ID: **FID-4_382191** SeqNo: **6056346** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ethane	0.000500	0.00100								U
Ethene	0.000500	0.00100								U
Methane	0.000500	0.000500								U

LCS Sample ID: **LCS-210421** Units: **mg/L** Analysis Date: **21-Apr-2021 10:40**
Client ID: Run ID: **FID-4_382191** SeqNo: **6056347** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ethane	0.0200	0.00100	0.01804	0	111	75 - 125				
Ethene	0.0182	0.00100	0.0168	0	109	75 - 125				
Methane	0.00918	0.000500	0.009647	0	95.2	75 - 125				

MS Sample ID: **HS21040859-08MS** Units: **mg/L** Analysis Date: **21-Apr-2021 13:01**
Client ID: **16WW56-210415** Run ID: **FID-4_382191** SeqNo: **6056357** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ethane	0.0159	0.00100	0.01804	0	88.3	75 - 125				
Ethene	0.0157	0.00100	0.0168	0	93.6	75 - 125				
Methane	0.00746	0.000500	0.009647	0.001022	66.8	75 - 125				S

MSD Sample ID: **HS21040859-08MSD** Units: **mg/L** Analysis Date: **21-Apr-2021 13:46**
Client ID: **16WW56-210415** Run ID: **FID-4_382191** SeqNo: **6056358** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ethane	0.0160	0.00100	0.01804	0	88.5	75 - 125	0.01594	0.166	30	
Ethene	0.0157	0.00100	0.0168	0	93.6	75 - 125	0.01573	0.0543	30	
Methane	0.00713	0.000500	0.009647	0.001022	63.3	75 - 125	0.007465	4.6	30	S

The following samples were analyzed in this batch: HS21040859-07 HS21040859-08 HS21040859-09 HS21040859-10

Revision: 1

RIGHT SOLUTION | RIGHT PARTNER

ALS Houston, US Date: 03-May-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP 16 April 2021
WorkOrder: HS21040859

QC BATCH REPORT

Batch ID: R381929 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MBLK Sample ID: **VBLKW-210419** Units: **ug/L** Analysis Date: **19-Apr-2021 13:10**
Client ID: Run ID: **VOA6_381929** SeqNo: **6050030** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,2-Trichloroethane	1.0	1.0								U
1,1-Dichloroethene	0.50	1.0								U
1,2-Dichloroethane	0.50	1.0								U
cis-1,2-Dichloroethene	0.50	1.0								U
Methylene chloride	2.0	2.0								U
Trichloroethene	0.50	1.0								U
Vinyl chloride	0.50	1.0								U
Surr: 1,2-Dichloroethane-d4	*50.27*	*1.0*	*50*	*0*	*101*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*48.74*	*1.0*	*50*	*0*	*97.5*	*85 - 114*				
Surr: Dibromofluoromethane	*47.44*	*1.0*	*50*	*0*	*94.9*	*80 - 119*				
Surr: Toluene-d8	*53.5*	*1.0*	*50*	*0*	*107*	*89 - 112*				

LCS Sample ID: **VLCSW-210419** Units: **ug/L** Analysis Date: **19-Apr-2021 12:28**
Client ID: Run ID: **VOA6_381929** SeqNo: **6050029** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,2-Trichloroethane	19.99	1.0	20	0	100.0	80 - 119				
1,1-Dichloroethene	18.68	1.0	20	0	93.4	71 - 131				
1,2-Dichloroethane	20.3	1.0	20	0	102	73 - 128				
cis-1,2-Dichloroethene	21.51	1.0	20	0	108	78 - 123				
Methylene chloride	23.03	2.0	20	0	115	74 - 124				
Trichloroethene	20.55	1.0	20	0	103	79 - 123				
Vinyl chloride	21.84	1.0	20	0	109	58 - 137				
Surr: 1,2-Dichloroethane-d4	*50.32*	*1.0*	*50*	*0*	*101*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*49.45*	*1.0*	*50*	*0*	*98.9*	*85 - 114*				
Surr: Dibromofluoromethane	*48.91*	*1.0*	*50*	*0*	*97.8*	*80 - 119*				
Surr: Toluene-d8	*47.77*	*1.0*	*50*	*0*	*95.5*	*89 - 112*				

Revision: 1

RIGHT SOLUTIONS | RIGHT PARTNER

ALS Houston, US Date: 03-May-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP 16 April 2021
WorkOrder: HS21040859

QC BATCH REPORT

Batch ID: R381929 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MS Sample ID: **HS21040859-08MS** Units: **ug/L** Analysis Date: **19-Apr-2021 15:59**
Client ID: **16WW56-210415** Run ID: **VOA6_381929** SeqNo: **6050038** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,2-Trichloroethane	21.01	1.0	20	0	105	80 - 119				
1,1-Dichloroethene	19.43	1.0	20	0	97.2	71 - 131				
1,2-Dichloroethane	21.25	1.0	20	0	106	73 - 128				
cis-1,2-Dichloroethene	22.21	1.0	20	1.174	105	78 - 123				
Methylene chloride	21.34	2.0	20	0	107	74 - 124				
Trichloroethene	37.3	1.0	20	13.68	118	79 - 123				
Vinyl chloride	19.7	1.0	20	0	98.5	58 - 137				
Surr: 1,2-Dichloroethane-d4	*49.07*	*1.0*	*50*	*0*	*98.1*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*50.8*	*1.0*	*50*	*0*	*102*	*85 - 114*				
Surr: Dibromofluoromethane	*46.88*	*1.0*	*50*	*0*	*93.8*	*80 - 119*				
Surr: Toluene-d8	*51.72*	*1.0*	*50*	*0*	*103*	*89 - 112*				

MSD Sample ID: **HS21040859-08MSD** Units: **ug/L** Analysis Date: **19-Apr-2021 16:20**
Client ID: **16WW56-210415** Run ID: **VOA6_381929** SeqNo: **6050039** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,2-Trichloroethane	21.13	1.0	20	0	106	80 - 119	21.01	0.582	20	
1,1-Dichloroethene	17.91	1.0	20	0	89.6	71 - 131	19.43	8.15	20	
1,2-Dichloroethane	21.09	1.0	20	0	105	73 - 128	21.25	0.759	20	
cis-1,2-Dichloroethene	21.67	1.0	20	1.174	102	78 - 123	22.21	2.46	20	
Methylene chloride	20.98	2.0	20	0	105	74 - 124	21.34	1.72	20	
Trichloroethene	34.64	1.0	20	13.68	105	79 - 123	37.3	7.39	20	
Vinyl chloride	18.86	1.0	20	0	94.3	58 - 137	19.7	4.38	20	
Surr: 1,2-Dichloroethane-d4	*49.48*	*1.0*	*50*	*0*	*99.0*	*81 - 118*	*49.07*	*0.843*	*20*	
Surr: 4-Bromofluorobenzene	*50.4*	*1.0*	*50*	*0*	*101*	*85 - 114*	*50.8*	*0.79*	*20*	
Surr: Dibromofluoromethane	*45.79*	*1.0*	*50*	*0*	*91.6*	*80 - 119*	*46.88*	*2.36*	*20*	
Surr: Toluene-d8	*52.07*	*1.0*	*50*	*0*	*104*	*89 - 112*	*51.72*	*0.671*	*20*	

The following samples were analyzed in this batch:

HS21040859-01	HS21040859-02	HS21040859-03	HS21040859-04
HS21040859-05	HS21040859-06	HS21040859-07	HS21040859-08
HS21040859-09	HS21040859-10	HS21040859-11	HS21040859-12
HS21040859-13	HS21040859-15		

Revision: 1

RIGHT SOLUTIONS | RIGHT PARTNER

ALS Houston, US Date: 03-May-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP 16 April 2021
WorkOrder: HS21040859

QC BATCH REPORT

Batch ID: R382069 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MBLK Sample ID: **VBLKW-210420** Units: **ug/L** Analysis Date: **20-Apr-2021 12:47**
Client ID: Run ID: **VOA6_382069** SeqNo: **6053299** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,2-Trichloroethane	1.0	1.0								U
1,1-Dichloroethene	0.50	1.0								U
1,2-Dichloroethane	0.50	1.0								U
cis-1,2-Dichloroethene	0.50	1.0								U
Methylene chloride	2.0	2.0								U
Trichloroethene	0.50	1.0								U
Vinyl chloride	0.50	1.0								U
Surr: 1,2-Dichloroethane-d4	*49.97*	*1.0*	*50*	*0*	*99.9*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*48.01*	*1.0*	*50*	*0*	*96.0*	*85 - 114*				
Surr: Dibromofluoromethane	*46.96*	*1.0*	*50*	*0*	*93.9*	*80 - 119*				
Surr: Toluene-d8	*53.95*	*1.0*	*50*	*0*	*108*	*89 - 112*				

LCS Sample ID: **VLCSW-210420** Units: **ug/L** Analysis Date: **20-Apr-2021 11:37**
Client ID: Run ID: **VOA6_382069** SeqNo: **6053298** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,2-Trichloroethane	19.41	1.0	20	0	97.0	80 - 119				
1,1-Dichloroethene	20.18	1.0	20	0	101	71 - 131				
1,2-Dichloroethane	20.68	1.0	20	0	103	73 - 128				
cis-1,2-Dichloroethene	21.3	1.0	20	0	106	78 - 123				
Methylene chloride	22.91	2.0	20	0	115	74 - 124				
Trichloroethene	20.34	1.0	20	0	102	79 - 123				
Vinyl chloride	21.84	1.0	20	0	109	58 - 137				
Surr: 1,2-Dichloroethane-d4	*53.97*	*1.0*	*50*	*0*	*108*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*50.38*	*1.0*	*50*	*0*	*101*	*85 - 114*				
Surr: Dibromofluoromethane	*50.33*	*1.0*	*50*	*0*	*101*	*80 - 119*				
Surr: Toluene-d8	*49.03*	*1.0*	*50*	*0*	*98.1*	*89 - 112*				

Revision: 1

RIGHT SOLUTIONS | RIGHT PARTNER

ALS Houston, US Date: 03-May-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP 16 April 2021
WorkOrder: HS21040859

QC BATCH REPORT

Batch ID: R382069 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MS Sample ID: **HS21040859-10MS** Units: **ug/L** Analysis Date: **20-Apr-2021 14:12**
Client ID: **16WW41-210415** Run ID: **VOA6_382069** SeqNo: **6053302** PrepDate: DF: **100**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,2-Trichloroethane	2080	100	2000	0	104	80 - 119				
1,1-Dichloroethene	2137	100	2000	0	107	71 - 131				
1,2-Dichloroethane	2136	100	2000	0	107	73 - 128				
cis-1,2-Dichloroethene	4717	100	2000	2602	106	78 - 123				
Methylene chloride	2154	200	2000	0	108	74 - 124				
Trichloroethene	8625	100	2000	6210	121	79 - 123				
Vinyl chloride	2487	100	2000	345.9	107	58 - 137				
Surr: 1,2-Dichloroethane-d4	*4955*	*100*	*5000*	*0*	*99.1*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*5068*	*100*	*5000*	*0*	*101*	*85 - 114*				
Surr: Dibromofluoromethane	*4683*	*100*	*5000*	*0*	*93.7*	*80 - 119*				
Surr: Toluene-d8	*5164*	*100*	*5000*	*0*	*103*	*89 - 112*				

MSD Sample ID: **HS21040859-10MSD** Units: **ug/L** Analysis Date: **20-Apr-2021 14:33**
Client ID: **16WW41-210415** Run ID: **VOA6_382069** SeqNo: **6053303** PrepDate: DF: **100**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,2-Trichloroethane	2089	100	2000	0	104	80 - 119	2080	0.403	20	
1,1-Dichloroethene	1890	100	2000	0	94.5	71 - 131	2137	12.2	20	
1,2-Dichloroethane	2044	100	2000	0	102	73 - 128	2136	4.41	20	
cis-1,2-Dichloroethene	4540	100	2000	2602	96.9	78 - 123	4717	3.83	20	
Methylene chloride	2136	200	2000	0	107	74 - 124	2154	0.844	20	
Trichloroethene	8202	100	2000	6210	99.6	79 - 123	8625	5.04	20	
Vinyl chloride	2214	100	2000	345.9	93.4	58 - 137	2487	11.6	20	
Surr: 1,2-Dichloroethane-d4	*4744*	*100*	*5000*	*0*	*94.9*	*81 - 118*	*4955*	*4.34*	*20*	
Surr: 4-Bromofluorobenzene	*4998*	*100*	*5000*	*0*	*100.0*	*85 - 114*	*5068*	*1.39*	*20*	
Surr: Dibromofluoromethane	*4621*	*100*	*5000*	*0*	*92.4*	*80 - 119*	*4683*	*1.33*	*20*	
Surr: Toluene-d8	*5168*	*100*	*5000*	*0*	*103*	*89 - 112*	*5164*	*0.067*	*20*	

The following samples were analyzed in this batch: HS21040859-10 HS21040859-12 HS21040859-13 HS21040859-14

Revision: 1

RIGHT SOLUTION RIGHT PARTNER

ALS Houston, US Date: 03-May-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP 16 April 2021
WorkOrder: HS21040859

QC BATCH REPORT

Batch ID: R382121 (0) **Instrument: ManTech01** **Method: ALKALINITY BY SM2320B**

MBLK Sample ID: **WBLKW2-210421** Units: **mg/L** Analysis Date: **21-Apr-2021 21:43**
Client ID: Run ID: **ManTech01_382121** SeqNo: **6054847** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Alkalinity, Total (As CaCO3)	5.00	5.00								U

LCS Sample ID: **LCS2-210421** Units: **mg/L** Analysis Date: **21-Apr-2021 21:52**
Client ID: Run ID: **ManTech01_382121** SeqNo: **6054848** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Alkalinity, Total (As CaCO3)	1027	5.00	1000	0	103	85 - 115				

LCSD Sample ID: **LCSD2-210421** Units: **mg/L** Analysis Date: **21-Apr-2021 22:01**
Client ID: Run ID: **ManTech01_382121** SeqNo: **6054849** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Alkalinity, Total (As CaCO3)	1059	5.00	1000	0	106	85 - 115	1027	3.1	20	

DUP Sample ID: **HS21040859-08DUP** Units: **mg/L** Analysis Date: **21-Apr-2021 22:12**
Client ID: **16WW56-210415** Run ID: **ManTech01_382121** SeqNo: **6054851** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Alkalinity, Total (As CaCO3)	168.4	5.00					169.7	0.769	20	

The following samples were analyzed in this batch: HS21040859-07 HS21040859-08 HS21040859-09 HS21040859-10

Revision: 1

RIGHT SOLUTION | RIGHT PARTNER

ALS Houston, US Date: 03-May-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP 16 April 2021
WorkOrder: HS21040859

QC BATCH REPORT

Batch ID: R382498 (0) **Instrument:** ICS-Integrion **Method:** ANIONS BY SW9056A

MBLK Sample ID: **MBLK-** Units: **mg/L** Analysis Date: **17-Apr-2021 03:01**
Client ID: Run ID: **ICS-Integrion_382498** SeqNo: **6063755** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Bromide	0.100	0.100								U
Nitrogen, Nitrate (As N)	0.100	0.100								U
Sulfate	0.500	0.500								U

LCS Sample ID: **LCS-** Units: **mg/L** Analysis Date: **17-Apr-2021 03:21**
Client ID: Run ID: **ICS-Integrion_382498** SeqNo: **6063756** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Bromide	3.412	0.100	4	0	85.3	80 - 120				
Nitrogen, Nitrate (As N)	4.007	0.100	4	0	100	80 - 120				
Sulfate	19.87	0.500	20	0	99.4	80 - 120				

MS Sample ID: **HS21040859-08MS** Units: **mg/L** Analysis Date: **16-Apr-2021 19:56**
Client ID: **16WW56-210415** Run ID: **ICS-Integrion_382498** SeqNo: **6063747** PrepDate: DF: **2**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Bromide	9.16	0.200	4	5.189	99.3	80 - 120				
Nitrogen, Nitrate (As N)	4.434	0.200	4	0.2492	105	80 - 120				
Sulfate	154.9	1.00	20	136.8	90.4	80 - 120				O

MSD Sample ID: **HS21040859-08MSD** Units: **mg/L** Analysis Date: **16-Apr-2021 21:13**
Client ID: **16WW56-210415** Run ID: **ICS-Integrion_382498** SeqNo: **6063750** PrepDate: DF: **2**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Bromide	9.203	0.200	4	5.189	100	80 - 120	9.16	0.462	20	
Nitrogen, Nitrate (As N)	4.414	0.200	4	0.2492	104	80 - 120	4.434	0.457	20	
Sulfate	155	1.00	20	136.8	90.8	80 - 120	154.9	0.0423	20	O

The following samples were analyzed in this batch: HS21040859-07 HS21040859-08 HS21040859-09 HS21040859-10

Revision: 1

RIGHT SOLUTION | RIGHT PARTNER

ALS Houston, US Date: 03-May-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP 16 April 2021
WorkOrder: HS21040859

QC BATCH REPORT

Batch ID: R382505 (0) **Instrument:** TOC_04 **Method:** TOTAL ORGANIC CARBON - SM5310B

MBLK Sample ID: **MBLK-04272021** Units: **mg/L** Analysis Date: **27-Apr-2021 16:58**
Client ID: Run ID: **TOC_04_382505** SeqNo: **6063982** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Organic Carbon, Total	0.500	1.00								U

LCS Sample ID: **LCS-04272021** Units: **mg/L** Analysis Date: **27-Apr-2021 17:14**
Client ID: Run ID: **TOC_04_382505** SeqNo: **6063983** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Organic Carbon, Total	9.152	1.00	10	0	91.5	85 - 115				

LCSD Sample ID: **LCSD-04272021** Units: **mg/L** Analysis Date: **27-Apr-2021 17:29**
Client ID: Run ID: **TOC_04_382505** SeqNo: **6063984** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Organic Carbon, Total	9.77	1.00	10	0	97.7	85 - 115	9.152	6.53	20	

MS Sample ID: **HS21040859-08MS** Units: **mg/L** Analysis Date: **27-Apr-2021 19:32**
Client ID: **16WW56-210415** Run ID: **TOC_04_382505** SeqNo: **6063991** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Organic Carbon, Total	11.87	1.00	10	1.798	101	80 - 120				

The following samples were analyzed in this batch: HS21040859-07 HS21040859-08 HS21040859-09

Revision: 1

RIGHT SOLUTIONS RIGHT PARTNER

ALS Houston, US Date: 03-May-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP 16 April 2021
WorkOrder: HS21040859

QC BATCH REPORT

Batch ID: R382565 (0) **Instrument: TOC_04** **Method: TOTAL ORGANIC CARBON - SM5310B**

MBLK Sample ID: **MBLK-04282021** Units: **mg/L** Analysis Date: **28-Apr-2021 10:39**
Client ID: Run ID: **TOC_04_382565** SeqNo: **6065153** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Organic Carbon, Total	0.500	1.00								U

LCS Sample ID: **LCS-04282021** Units: **mg/L** Analysis Date: **28-Apr-2021 10:54**
Client ID: Run ID: **TOC_04_382565** SeqNo: **6065154** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Organic Carbon, Total	10.18	1.00	10	0	102	85 - 115				

LCSD Sample ID: **LCSD-04282021** Units: **mg/L** Analysis Date: **28-Apr-2021 11:09**
Client ID: Run ID: **TOC_04_382565** SeqNo: **6065155** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Organic Carbon, Total	9.81	1.00	10	0	98.1	85 - 115	10.18	3.7	20	

MS Sample ID: **HS21041366-01MS** Units: **mg/L** Analysis Date: **28-Apr-2021 12:26**
Client ID: Run ID: **TOC_04_382565** SeqNo: **6065160** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Organic Carbon, Total	18.56	1.00	10	7.513	110	80 - 120				

The following samples were analyzed in this batch: HS21040859-10

Revision: 1

RIGHT SOLUTION | RIGHT PARTNER

ALS Houston, US Date: 03-May-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP 16 April 2021
WorkOrder: HS21040859

QC BATCH REPORT

Batch ID: R382646 (0) **Instrument:** ICS2100 **Method:** ANIONS BY SW9056A

MBLK Sample ID: **MBLK-** Units: **mg/L** Analysis Date: **28-Apr-2021 19:59**
Client ID: Run ID: **ICS2100_382646** SeqNo: **6067019** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfate	0.500	0.500								U

LCS Sample ID: **LCS-** Units: **mg/L** Analysis Date: **28-Apr-2021 20:12**
Client ID: Run ID: **ICS2100_382646** SeqNo: **6067020** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfate	19.43	0.500	20	0	97.2	80 - 120				

MS Sample ID: **HS21041447-01MS** Units: **mg/L** Analysis Date: **28-Apr-2021 18:30**
Client ID: Run ID: **ICS2100_382646** SeqNo: **6067015** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfate	32.06	0.500	10	22.49	95.8	80 - 120				

MSD Sample ID: **HS21041447-01MSD** Units: **mg/L** Analysis Date: **28-Apr-2021 18:43**
Client ID: Run ID: **ICS2100_382646** SeqNo: **6067016** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfate	31.85	0.500	10	22.49	93.7	80 - 120	32.06	0.665	20	

The following samples were analyzed in this batch: HS21040859-07 HS21040859-09 HS21040859-10

Revision: 1

RIGHT SOLUTIONS RIGHT PARTNER

ALS Houston, US Date: 03-May-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP 16 April 2021
WorkOrder: HS21040859

QC BATCH REPORT

Batch ID: R382746 (0) **Instrument:** ICS-Integrion **Method:** ANIONS BY SW9056A

MBLK Sample ID: **MBLK-** Units: **mg/L** Analysis Date: **29-Apr-2021 10:03**
Client ID: Run ID: **ICS-Integrion_382746** SeqNo: **6069396** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Bromide	0.100	0.100								U

LCS Sample ID: **LCS-** Units: **mg/L** Analysis Date: **29-Apr-2021 10:21**
Client ID: Run ID: **ICS-Integrion_382746** SeqNo: **6069397** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Bromide	3.534	0.100	4	0	88.4	80 - 120				

MS Sample ID: **HS21041522-01MS** Units: **mg/L** Analysis Date: **29-Apr-2021 11:00**
Client ID: Run ID: **ICS-Integrion_382746** SeqNo: **6069399** PrepDate: DF: **5**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Bromide	20.74	0.500	10	10.6	101	80 - 120				

MSD Sample ID: **HS21041522-01MSD** Units: **mg/L** Analysis Date: **29-Apr-2021 11:20**
Client ID: Run ID: **ICS-Integrion_382746** SeqNo: **6069400** PrepDate: DF: **5**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Bromide	20.2	0.500	10	10.6	96.0	80 - 120	20.74	2.64	20	

The following samples were analyzed in this batch: HS21040859-10

Revision: 1

RIGHT SOLUTIONS RIGHT PARTNER

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP 16 April 2021
WorkOrder: **HS21040859**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL/SDL

Acronym	Description
DCS	Detectability Check Study
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitaion Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

Unit Reported	Description
mg/L	Milligrams per Liter

RIGHT SOLUTIONS RIGHT PARTNER

CERTIFICATIONS,ACCREDITATIONS & LICENSES

Agency	Number	Expire Date
Arkansas	21-022-0	26-Mar-2022
Dept of Defense	PJLA L20-507-R2	22-Dec-2021
Florida	E87611-30-07/01/2020	30-Jun-2021
Illinois	2000322020-4	09-May-2021
Kansas	E-10352 2020-2021	31-Jul-2021
Kentucky	123043, 2021-2022	30-Apr-2022
Louisiana	03087, 2020-2021	30-Jun-2021
North Carolina	624-2021	31-Dec-2021
Oklahoma	2020-165	31-Aug-2021
Texas	T104704231-21-27	30-Apr-2022

RIGHT SOLUTIONS | RIGHT PARTNER

ALS Houston, US Date: 03-May-21

Sample Receipt Checklist

Work Order ID: HS21040859 **Date/Time Received:** 16-Apr-2021 10:00

Client Name: CBI-Houston **Received by:** Pablo Marinez

Completed By:	/S/ Jared R. Makan	16-Apr-2021 16:45	**Reviewed by:**	/S/ RJ Modashia	19-Apr-2021 11:08
	eSignature	Date/Time		eSignature	Date/Time

Matrices: **Water** Carrier name: **FedEx Priority Overnight**

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
VOA/TX1005/TX1006 Solids in hermetically sealed vials?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	1 Page(s)
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Samplers name present on COC?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	

Temperature(s)/Thermometer(s):	0.3°C UC/C	IR31
Cooler(s)/Kit(s):	46944	
Date/Time sample(s) sent to storage:	04/16/2021 16:45	

Water - VOA vials have zero headspace?	Yes ☑	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑
pH adjusted?	Yes ☐	No ☐	N/A ☑
pH adjusted by:			

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

Corrective Action:

RIGHT SOLUTION | RIGHT PARTNER

CHAIN OF CUSTODY

Name Of Lab Shipping To: ALS 10450 Stancliff Rd. Suite 210 Houston, TX. 77099 (281) 530-5656 ATTN: RJ Modashia

Page 1 of 1

Project: APTIM LONGHORN ARMY AMMN. PLANT (LHAAP) GROUNDWATER TREATMENT PLANT (GWTP) KARNACK, TEXAS	Project No. 501032
Job: **LHAAP 16 April 2021**	
Prepared By: Scott Beesinger	P.O. Number

Field Sample I.D. / Time	Sample Matrix	Date /	MS / MSD	No. OF CONTAINERS	Analyses: VOC by SW 8260B	TOC by SM5310C	MEE by RSK 175	Anions (bromide, sulfate, nitrate) by SW9056 and Alkalinity by SM2320	Bromide by SW9056	Perchlorate by SW6850	Metals (arsenic, chromium, manganese, nickel, thallium) by SW6020				Remarks (Preservatives, etc.)	Lab I.D.#
16PM02-210414	WG	4/14/21/1030		4	X					X						
16PM03-210414	WG	4/14/21/1120		4	X					X						
16PM03-210414-FD	WG	4/14/21/1120		4	X					X						
16RW01-210414	WG	4/14/21/1210		4	X					X						
16RW04-210414	WG	4/14/21/1255		4	X					X						
16RW02-210414	WG	4/14/21/1340		4	X					X						
16WW16-210415	WG	4/15/21/0725		10	X	X	X	X	X	X						
16WW56-210415	WG	4/15/21/0815		10	X	X	X	X	X	X						

Additional Remarks: Standard TAT on all parameters. Please email results to Vicki.Graves@aptim.com and invoices to fedinvoices@aptim.com

Relinquished By:	Date	Time	Received By:	Date	Time	Relinquished By:	Date	Time	Received By:	Date	Time
Scott Beesinger	4/15/21	1430	Patti Mc	4/16/21	10:00						

For Lab Use Only

Received At Lab By:	Date	Time	Airbill No.	Opened By:	Date	Time	Temp of Container	Seal No.	Condition

Remarks:

HS21040859

Aptim Environmental & Infrastucture, Inc.
Longhorn Army Ammunition Plant LHAAP 16 April 20

46444 BJC
IR3 CFO

(Word) S:\I-ces\Forms\Chain of Custody - BiWeekly

RIGHT SOLUTIONS | RIGHT PARTNER

CHAIN OF CUSTODY

Name Of Lab Shipping To: ALS 10450 Stancliff Rd. Suite 210 Houston, TX. 77099 (281) 530-5656 ATTN: R.J Modashia

Project: APTIM
LONGHORN ARMY AMMN. PLANT (LHAAP)
GROUNDWATER TREATMENT PLANT (GWTP)
KARNACK, TEXAS

Project No. 501032

Job: **LHAAP 16 April 2021**

Prepared By: Scott Beesinger

P.O. Number

Field Sample I.D. / Time	Sample Matrix	Date /	MS / MSD	No. OF CONTAINERS	VOC by SW 8260B	TOC by SM5310C	MEE by RSK 175	Anions (bromide, sulfate, nitrate) by SW9056 and Alkalinity by SM2320	Bromide by SW9056	Perchlorate by SW6850	Metals (arsenic, chromium, manganese, nickel, thallium) by SW6020				Remarks (Preservatives, etc.)	Lab I.D.#
16WW56-210415-MS	WG	4/15/21/0815		10	X	X	X	X	X	X						
16WW56-210415-MSD	WG	4/15/21/0815		10	X	X	X	X	X	X						
16WW22-210415	WG	4/15/21/0910		10	X	X	X	X	X	X						
16WW41-210415	WG	4/15/21/1000		10	X	X	X	X	X	X						
16WW21-210415	WG	4/15/21/1045		4	X					X						
16WW39-210415	WG	4/15/21/1130		4	X					X						
16WW51-210415	WG	4/15/21/1215		4	X					X						
16 EW07-210415	WG	4/15/21/1300		4	X					X						

Additional Remarks: Standard TAT on all parameters. Please email results to Vicki.Graves@aptim.com and invoices to fedinvoices@aptim.com

Relinquished By:	Date	Time	Received By:	Date	Time	Relinquished By:	Date	Time	Received By:	Date	Time
Scott Beesinger	4/15/21	1430	Paula Mann	4-16-21	10:00						

For Lab Use Only

Received At Lab By:	Date	Time	Airbill No.	Opened By:	Date	Time	Temp of Container	Seal No.	Condition

Remarks:

HS21040859

Aptim Environmental & Infrastucture, Inc.
Longhorn Army Ammunition Plant LHAAP 16 April 20

46944 0.3C
IR71 CFO

(Word) S:\I-ces\Forms\Chain of Custody - BiWeekly

RIGHT SOLUTIONS | RIGHT PARTNER

CHAIN OF CUSTODY

Name Of Lab Shipping To: ALS 10450 Stancliff Rd. Suite 210 Houston, TX. 77099 (281) 530-5656 ATTN: RJ Modashia

Page 1 of 1

Project: APTIM LONGHORN ARMY AMMN. PLANT (LHAAP) GROUNDWATER TREATMENT PLANT (GWTP) KARNACK, TEXAS	Project No. 501032
Job: **LHAAP 16 April 2021**	
Prepared By: Scott Beesinger	P.O. Number

Field Sample I.D. / Time	Sample Matrix	Date	MS / MSD	No. OF CONTAINERS	VOC by SW 8260B	TOC by SM5310C	MEE by RSK 175	Anions (bromide, sulfate, nitrate) by SW9056 and Alkalinity by SM2320	Bromide by SW9056	Perchlorate by SW6850	Metals (arsenic, chromium, manganese, nickel, thallium) by SW6020				Remarks (Preservatives, etc.)	Lab I.D.#
					Analyses											
TRIP BLANK-210415	W	4/15/21		2	X											

Additional Remarks: Standard TAT on all parameters. Please email results to Vicki.Graves@aptim.com and invoices to fedinvoices@aptim.com

Relinquished By:	Date	Time	Received By:	Date	Time	Relinquished By:	Date	Time	Received By:	Date	Time
Scott Beesinger	4/15/21	1430	Pauls Moore	4/16/21	10:00						

For Lab Use Only

Received At Lab By:	Date	Time	Airbill No.	Opened By:	Date	Time	Temp of Container	Seal No.	Condition

Remarks:

HS21040859

Aptim Environmental & Infrastucture, Inc.
Longhorn Army Ammunition Plant LHAAP 16 April 20

46944 0.3C
IR-71 CFO

(Word) S:\Lt-ces\Forms\Chain of Custody - BiWeekly

RIGHT SOLUTIONS | RIGHT PARTNER

ALS
10450 Stancliff Rd., Suite 210
Houston, Texas 77099
Tel. +1 281 530 5656
Fax. +1 281 530 5887

46.

CUSTODY SEAL

Date: 4/15/21 Time: 1730
Name: Matt Beesinger
Company: APTIM

Seal Broken By: SMS
Date: 04/16/21

46744 APR 1 6 202.

Must Deliver Next Business Day
Time and Tempature Sensitive!

ALS

ORIGIN ID:SGRA (903) 930-8193
SCOTT BEESINGER
APTIM ENVIROMENTAL & INFASTRUCTURE
1203-B EAST GRAND AVE
PMB 202
MARSHALL, TX 75670
UNITED STATES US

SHIP DATE: 29MAR21
ACTWGT: 1.00 LB MAN
CAD: 0221347/CAFE3409
DIMS: 26x14x14 IN

TO CLIENT SERVICES
ALS LABORATORY GROUP
10450 STANCLIFF ROAD
SUITE 210
HOUSTON TX 77099
(281) 530-5656
REF: LH3AP-B0 77443-RJ
RMA:

FedEx Express

FedEx
TRK# 0221 9473 0841 7487

RETURNS MON-SAT
FRI - 16 APR AA
PRIORITY OVERNIGHT

AB SGRA

77099
TX-US
IAH

560C2/5FF2/1873

RIGHT SOLUTIONS | RIGHT PARTNER

April 30, 2021 Service Request No:E2100485

RJ Modashia
ALS Laboratory Group
10450 Stancliff Road
Suite 210
Houston, TX 77099-4338

Laboratory Results for: HS21040859

Dear RJ,

Enclosed are the results of the sample(s) submitted to our laboratory April 19, 2021
For your reference, these analyses have been assigned our service request number **E2100485.**

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current TNI standards, where applicable, and except as noted in the laboratory case narrative provided. All results are intended to be considered in their entirety and ALS Environmental is not responsible for use of less than the complete final report. Results apply only to the items submitted to the laboratory, as received for analysis. In accordance with the current TNI Standard, a statement on the estimated uncertainty of measurement of any quantitative analysis will be supplied upon request.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental



Corey Grandits
Project Manager

ADDRESS 10450 Stancliff Rd., Suite 210, Houston, TX 77099
PHONE +1 281 530 5656 | FAX +1 281 530 5887
ALS Group USA, Corp.
dba ALS Environmental

RIGHT SOLUTION RIGHT PARTNER

Certificate of Analysis

ALS Environmental - Houston HRMS
10450 Stancliff Rd, Suite 210, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

ALS Environmental

Client:	ALS Houston	**Service Request No.:**	E2100485
Project:	HS21040859	**Date Received:**	04/19/21
Sample Matrix:	W		

CASE NARRATIVE

All analyses were performed in adherence to the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier II. When appropriate to the method, method blank results have been reported with each analytical test.

Sample Receipt

Fourteen samples were received for analysis at ALS Environmental in Houston on 04/19/21.

The samples were received in good condition and are consistent with the accompanying chain of custody form. The samples were stored in a refrigerator at 4°C upon receipt at the laboratory.

Data Validation Notes and Discussion

Precision and Accuracy:

EQ2100238 & EQ2100244: Laboratory Control Spike/Duplicate Laboratory Control Spike DLCS recoveries are within QC limits. EQ2100244 MSD recovery was above the upper control limit. QC limits. EQ2100238 a LCS/DLCS was reported in lieu of a MS/MSD.

DoD certification is held for the method/matrix/analytes provided in this report.

The results of analyses are given in the attached laboratory report. All results are intended to be considered in their entirety, and ALS Environmental (ALS) is not responsible for utilization of less than the complete report.

Use of ALS group USA Corp dba ALS Environmental (ALS)'s Name. Client shall not use ALS's name or trademark in any marketing or reporting materials, press releases or in any other manner ("Materials") whatsoever and shall not attribute to ALS any test result, tolerance or specification derived from ALS's data ("Attribution") without ALS's prior written consent, which may be withheld by ALS for any reason in its sole discretion. To request ALS's consent, Client shall provide copies of the proposed Materials or Attribution and describe in writing Client's proposed use of such Materials or Attribution. If ALS has not provided written approval of the Materials or Attribution within ten (10) days of receipt from Client, Client's request to use ALS's name or trademark in any Materials or Attribution shall be deemed denied. ALS may, in its discretion, reasonably charge Client for its time in reviewing Materials or Attribution requests. Client acknowledges and agrees that the unauthorized use of ALS's name or trademark may cause ALS to incur irreparable harm for which the recovery of money damages will be inadequate. Accordingly, Client acknowledges and agrees that a violation shall justify preliminary injunctive relief. For questions contact the laboratory.

RIGHT SOLUTION. RIGHT PARTNER

Client: ALS Environmental - US **Service Request:**E2100485
Project: HS21040859

SAMPLE CROSS-REFERENCE

SAMPLE #	CLIENT SAMPLE ID	DATE	TIME
E2100485-001	16PM02-210414	4/14/2021	1030
E2100485-002	16PM03-210414	4/14/2021	1120
E2100485-003	16PM03-210414-FD	4/14/2021	1120
E2100485-004	16RW01-210414	4/14/2021	1210
E2100485-005	16RW04-210414	4/14/2021	1255
E2100485-006	16RW02-210414	4/14/2021	1340
E2100485-007	16WW16-210415	4/15/2021	0725
E2100485-008	16WW56-210415	4/15/2021	0815
E2100485-009	16WW22-210415	4/15/2021	0910
E2100485-010	16WW41-210415	4/15/2021	1000
E2100485-011	16WW21-210415	4/15/2021	1045
E2100485-012	16WW39-210415	4/15/2021	1130
E2100485-013	16WW51-210415	4/15/2021	1215
E2100485-014	16EW07-210415	4/15/2021	1300

RIGHT SOLUTIONS | RIGHT PARTNER

Service Request Summary

Folder #: **E2100485**
Client Name: ALS Environmental - US
Project Name: HS21040859
Project Number:

Report To: RJ Modashia
ALS Laboratory Group
10450 Stancliff Road
Houston, TX 77099-4338
USA
Phone Number: 281-530-5656
Cell Number:
Fax Number: 281-530-5887
E-mail: rj.modashia@alsglobal.com

Project Chemist: Corey Grandits
Originating Lab: HOUSTON
Logged By: CGRANDITS
Date Received: 04/19/21
Internal Due Date: 4/30/2021
QAP: LAB QAP
Qualifier Set: Lab Standard
Formset: Lab Standard
Merged?: Y
Report to MDL?: Y
P.O. Number: HS21040859
EDD: No EDD Specified

13 120 mL-Plastic Bottle Natural WM Unpreserved
2 4 oz-Glass Jar WM AMBER Teflon Liner Unpreserved
Location: SMO
Pressure Gas:

Lab Samp No.	Client Samp No	Matrix	Collected	HOUSTON ClO4 DOD/6850
E2100485-001	16PM02-210414	Ground Water	04/14/21 1030	II
E2100485-002	16PM03-210414	Ground Water	04/14/21 1120	II
E2100485-003	16PM03-210414-FD	Ground Water	04/14/21 1120	II
E2100485-004	16RW01-210414	Ground Water	04/14/21 1210	II
E2100485-005	16RW04-210414	Ground Water	04/14/21 1255	II
E2100485-006	16RW02-210414	Ground Water	04/14/21 1340	II
E2100485-007	16WW16-210415	Ground Water	04/15/21 0725	II
E2100485-008	16WW56-210415	Ground Water	04/15/21 0815	II
E2100485-009	16WW22-210415	Ground Water	04/15/21 0910	II
E2100485-010	16WW41-210415	Ground Water	04/15/21 1000	II
E2100485-011	16WW21-210415	Ground Water	04/15/21 1045	II
E2100485-012	16WW39-210415	Ground Water	04/15/21 1130	II
E2100485-013	16WW51-210415	Ground Water	04/15/21 1215	II
E2100485-014	16EW07-210415	Misc. Solid	04/15/21 1300	II

RIGHT SOLUTIONS | RIGHT PARTNER

Service Request Summary

Folder #: **E2100485**
Client Name: ALS Environmental - US
Project Name: HS21040859
Project Number:

Report To: RJ Modashia
ALS Laboratory Group
10450 Stancliff Road
Houston, TX 77099-4338
USA
Phone Number: 281-530-5656
Cell Number:
Fax Number: 281-530-5887
E-mail: rj.modashia@alsglobal.com

Project Chemist: Corey Grandits
Originating Lab: HOUSTON
Logged By: CGRANDITS
Date Received: 04/19/21
Internal Due Date: 4/30/2021
QAP: LAB QAP
Qualifier Set: Lab Standard
Formset: Lab Standard
Merged?: Y
Report to MDL?: Y
P.O. Number: HS21040859
EDD: No EDD Specified

13 120 mL-Plastic Bottle Natural WM Unpreserved
2 4 oz-Glass Jar WM AMBER Teflon Liner Unpreserved
Location: SMO
Pressure Gas:

Lab Samp No.	Client Samp No	Matrix	Collected	HOUSTON ClO4 DOD/6850
E2100485-001	16PM02-210414	Ground Water	04/14/21 1030	II
E2100485-002	16PM03-210414	Ground Water	04/14/21 1120	II
E2100485-003	16PM03-210414-FD	Ground Water	04/14/21 1120	II
E2100485-004	16RW01-210414	Ground Water	04/14/21 1210	II
E2100485-005	16RW04-210414	Ground Water	04/14/21 1255	II
E2100485-006	16RW02-210414	Ground Water	04/14/21 1340	II
E2100485-007	16WW16-210415	Ground Water	04/15/21 0725	II
E2100485-008	16WW56-210415	Ground Water	04/15/21 0815	II
E2100485-009	16WW22-210415	Ground Water	04/15/21 0910	II
E2100485-010	16WW41-210415	Ground Water	04/15/21 1000	II
E2100485-011	16WW21-210415	Ground Water	04/15/21 1045	II
E2100485-012	16WW39-210415	Ground Water	04/15/21 1130	II
E2100485-013	16WW51-210415	Ground Water	04/15/21 1215	II
E2100485-014	16EW07-210415	Misc. Solid	04/15/21 1300	II

RIGHT SOLUTIONS | RIGHT PARTNER

Service Request Summary

Folder #:	**E2100485**
Client Name:	ALS Environmental - US
Project Name:	HS21040859
Project Number:	

Report To:	RJ Modashia ALS Laboratory Group 10450 Stancliff Road Houston, TX 77099-4338 USA
Phone Number:	281-530-5656
Cell Number:	
Fax Number:	281-530-5887
E-mail:	rj.modashia@alsglobal.com

Project Chemist:	Corey Grandits
Originating Lab:	HOUSTON
Logged By:	CGRANDITS
Date Received:	04/19/21
Internal Due Date:	4/30/2021
QAP:	LAB QAP
Qualifier Set:	Lab Standard
Formset:	Lab Standard
Merged?:	Y
Report to MDL?:	Y
P.O. Number:	HS21040859
EDD:	No EDD Specified

13 120 mL-Plastic Bottle Natural WM Unpreserved
2 4 oz-Glass Jar WM AMBER Teflon Liner Unpreserved

Location: SMO

Pressure Gas:

Test Comments:

Group	Test/Method	Samples	Comments
Semivoa GCMS	ClO4 DOD/6850	1	MS/MSD

RIGHT SOLUTIONS | RIGHT PARTNER

Data Qualifiers

Lab Standard

+	Possible Tedlar bag artifact.
A	TIC is a suspected aldol-condensation product
B	Analyte found in the associated method blank as well as in the sample.
BC	Reported results are not blank corrected.
BH	The back section of the tube yielded higher results than the front.
BT	Results indicated possible breakthrough; back section >=10% front section.
C	Result identification confirmed.
D	Compound identified in an analysis at a secondary dilution factor
D	Spike was diluted out
DE	Reported results are corrected for desorption efficiency.
E	Estimated value. Concentration above calibration range
E	The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
F	The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
H	The chromatographic fingerprint of the sample resembles a petroleum product but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
H1	Sample analysis performed past holding time. See case narrative.
H2	Initial analysis within holding time. Reanalysis for the required dilution was past holding time.
H3	Sample was received and analyzed past holding time.
H4	Sample was extracted past required extraction holding time, but analyzed within analysis holding time. See case narrative.
I	Internal standard not within the specified limits. See case narrative.
J	Estimated Value. Concentration found below MRL.
K	A deflection in the QC ion may indicate interference with the quantitation of this ion. The concentration of this analyte should be considered as an estimate.
K	Analyte was detected above the method reporting limit prior to normalization.
K	The reference ion ratio was outside acceptance criteria, which may indicate a potential bias to this result.
L	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
L1	Laboratory control sample recovery outside the specified limits; results may be biased high.
L2	Laboratory control sample recovery outside the specified limits; results may be biased low.
L3	Laboratory control sample recovery outside the specified limits.
M	Matrix interference; results may be biased high.
M	The duplicate injection precision not met.
M1	Matrix interference due to coelution with a non-target compound; results may be biased high.
N	Presumptive evidence of a compound for TICs that have been identified based on a mass spectral library search.
N	The Matrix Spike sample recovery is not within control limits. See case narrative.

RIGHT SOLUTION | RIGHT PARTNER

Data Qualifiers

Lab Standard

O	The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
P	Indicates chlorodiphenyl ether interference present at the retention time of the target compound.
P	Pesticide/Aroclor target analyte > 40% difference for detected concentrations between GC columns
Q	Indicates as estimated value because the P and P + 2 theoretical abundance ratio does not meet method criteria.
R	Duplicate Precision not met.
R1	Duplicate precision not within the specified limits; however, the results are below the MRL and considered estimated.
S	Surrogate recovery not within specified limits.
S	The reported value was determined by the Method of Standard Additions (MSA).
T	Analyte is a tentatively identified compound, result is estimated.
U	Compound was analyzed for, but was not detected (ND).
V1	The continuing calibration verification standard was outside (biased high) the specified limits for this compound.
V2	The continuing calibration verification standard was outside (biased low) the specified limits for this compound.
W	Result quantified, but the corresponding peak was detected outside the generated retention time window.
W	The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
X	See case narrative.
Y	Recovery outside limits
Y	The chromatogram resembles a petroleum product but does not match the calibration standard.
Z	The chromatogram does not resemble a petroleum product.
i	The MRL/MDL has been elevated due to a matrix interference.

RIGHT SOLUTION | RIGHT PARTNER

ALS Laboratory Group

Acronyms

Cal	Calibration
Conc	CONCentration
Dioxin(s)	Polychlorinated dibenzo-p-dioxin(s)
EDL	Estimated Detection Limit
EMPC	Estimated Maximum Possible Concentration
Flags	Data qualifiers
Furan(s)	Polychlorinated dibenzofuran(s)
g	Grams
ICAL	Initial CALibration
ID	IDentifier
Ions	Masses monitored for the analyte during data acquisition
L	Liter (s)
LCS	Laboratory Control Sample
DLCS	Duplicate Laboratory Control Sample
MB	Method Blank
MCL	Method Calibration Limit
MDL	Method Detection Limit
mL	Milliliters
MS	Matrix Spiked sample
DMS	Duplicate Matrix Spiked sample
NO	Number of peaks meeting all identification criteria
PCDD(s)	Polychlorinated dibenzo-p-dioxin(s)
PCDF(s)	Polychlorinated dibenzofuran(s)
ppb	Parts per billion
ppm	Parts per million
ppq	Parts per quadrillion
ppt	Parts per trillion
QA	Quality Assurance
QC	Quality Control
Ratio	Ratio of areas from monitored ions for an analyte
% Rec.	Percent recovery
RPD	Relative Percent Difference
RRF	Relative Response Factor
RT	Retention Time
SDG	Sample Delivery Group
S/N	Signal-to-noise ratio
TEF	Toxicity Equivalence Factor
TEQ	Toxicity Equivalence Quotient

RIGHT SOLUTION RIGHT PARTNER

10450 Stancliff Rd, Houston, TX 77099 | 281-530-5656 | www.alsglobal.com

ALS Environmental

State Certifications, Accreditations, and Licenses

Agency	Number	Expire Date
American Association for Laboratory Accreditation	2897.01 2020	11/30/2021
Arizona Department of Health Services	AZ0793-2020	5/27/2021
Arkansas Department of Environmental Quality	21-022-0	3/26/2022
Department of Defense	A2LA 2897.01	11/30/2021
Florida Department of Health	E87611-2020	6/30/2021
Illinois Environmental Protection Agency	2000322020-4	5/9/2021
Kansas Department of Health and Environment	E-10352-2020	7/31/2021
Louisiana Department of Environmental Quality	03087-2020	6/30/2021
Louisiana Department of Health and Hospitals	LA028-2021	12/31/2021
Maine Department of Health and Human Services	2020016	6/5/2022
Maryland Department of the Environment	343-2020	6/30/2021
Nevada Department of Concervation and Natural Resources	TX026932021-1	7/31/2021
New Jersey Department of Environmental Protection	TX008	6/30/2021
Oklahoma Department of Environmental Quality	2020-123	8/31/2021
Pennsylvania Department of Environmental Protection	014	6/30/2021
United States Department of Agriculture	P330-19-00299	10/10/2022

RIGHT SOLUTION | RIGHT PARTNER

Chain of Custody

ALS Environmental - Houston HRMS
10450 Stancliff Rd, Suite 210, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

10450 Stancliff Rd, Ste 210
Houston, TX 77099
T: +1 281 530 5656
F: +1 281 530 5887
www.alsglobal.com

Subcontract Chain of Custody

SAMPLING STATE: **Dept of Defense** **COC ID:** **15943**

SUBCONTRACT TO:

ALS Environmental
10450 Stancliff RoadSuite 210
Houston, TX 77084

Phone: +1 281 530 5656

CUSTOMER INFORMATION:

Company:	ALS Houston
Contact:	RJ Modashia
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Email:	RJ.Modashia@alsglobal.com
Alternate Contact:	Jumoke M. Lawal
Email:	jumoke.lawal@alsglobal.com

INVOICE INFORMATION:

Company:	ALS Houston
Contact:	Accounts Payable
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Reference:	HS21040859
TSR:	Sonia West

	LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
	ANALYSIS REQUESTED			DUE DATE
1.	**HS21040859-01**	**16PM02-210414**	**Groundwater**	**14 Apr 2021 10:30**
	Level II and Level IV reports on a seperate pdf. Send WOA to Vicki Graves.			30 Apr 2021
2.	**HS21040859-02**	**16PM03-210414**	**Groundwater**	**14 Apr 2021 11:20**
	Level II and Level IV reports on a seperate pdf. Send WOA to Vicki Graves.			30 Apr 2021
3.	**HS21040859-03**	**16PM03-210414-FD**	**Groundwater**	**14 Apr 2021 11:20**
	Level II and Level IV reports on a seperate pdf. Send WOA to Vicki Graves.			30 Apr 2021
4.	**HS21040859-04**	**16RW01-210414**	**Groundwater**	**14 Apr 2021 12:10**
	Level II and Level IV reports on a seperate pdf. Send WOA to Vicki Graves.			30 Apr 2021
5.	**HS21040859-05**	**16RW04-210414**	**Groundwater**	**14 Apr 2021 12:55**
	Level II and Level IV reports on a seperate pdf. Send WOA to Vicki Graves.			30 Apr 2021
6.	**HS21040859-06**	**16RW02-210414**	**Groundwater**	**14 Apr 2021 13:40**
	Level II and Level IV reports on a seperate pdf. Send WOA to Vicki Graves.			30 Apr 2021
7.	**HS21040859-07**	**16WW16-210415**	**Groundwater**	**15 Apr 2021 07:25**
	Level II and Level IV reports on a seperate pdf. Send WOA to Vicki Graves.			30 Apr 2021
8.	**HS21040859-08**	**16WW56-210415**	**Groundwater**	**15 Apr 2021 08:15**

Subcontract Chain of Custody

SAMPLING STATE: **Dept of Defense** **COC ID: 15943**

	LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
	ANALYSIS REQUESTED			DUE DATE
	Level II and Level IV reports on a seperate pdf. Send WOA to Vicki Graves.			30 Apr 2021
9.	**HS21040859-09**	**16WW22-210415**	**Groundwater**	**15 Apr 2021 09:10**
	Level II and Level IV reports on a seperate pdf. Send WOA to Vicki Graves.			30 Apr 2021
10.	**HS21040859-10**	**16WW41-210415**	**Groundwater**	**15 Apr 2021 10:00**
	Level II and Level IV reports on a seperate pdf. Send WOA to Vicki Graves.			30 Apr 2021
11.	**HS21040859-11**	**16WW21-210415**	**Groundwater**	**15 Apr 2021 10:45**
	Level II and Level IV reports on a seperate pdf. Send WOA to Vicki Graves.			30 Apr 2021
12.	**HS21040859-12**	**16WW39-210415**	**Groundwater**	**15 Apr 2021 11:30**
	Level II and Level IV reports on a seperate pdf. Send WOA to Vicki Graves.			30 Apr 2021
13.	**HS21040859-13**	**16WW51-210415**	**Groundwater**	**15 Apr 2021 12:15**
	Level II and Level IV reports on a seperate pdf. Send WOA to Vicki Graves.			30 Apr 2021
14.	**HS21040859-14**	**16EW07-210415**	**Groundwater**	**15 Apr 2021 13:00**
	Level II and Level IV reports on a seperate pdf. Send WOA to Vicki Graves.			30 Apr 2021

Comments: Please analyze for the analysis listed above.
Send report to the emails shown above.

HS21040856-08 MS/MSD

QC Level: DOD IV (DoD Data Package)

Relinquished By: J. Mangum Date/Time: 4/19/21

Received By: Libby A Date/Time: 4/19/21 1712

Cooler ID(s): Temperature(s):

RIGHT SOLUTIONS | RIGHT PARTNER

ALS Environmental

Cooler Receipt Form

Project Chemist CG

Client/Project ALS-HI

Thermometer ID IR21

Date/Time Received: 4/16/21 Initials: CG Date/Time Logged in: 4/16/21 Initials CG

1. Method of delivery: ○ US Mail ○ Fed Ex ○ UPS ○ DHL ✓ ALS Courier ○ Client

2. Samples received in: ✓ Cooler ○ Box ○ Envelope ○ Other

3. Were custody seals on coolers? ○ Yes ✓ No
   Were they intact? ○ Yes ○ No ✓ N/A
   Were they signed and dated? ○ Yes ○ No ✓ N/A
   If yes, how many and where?

4. Packing Material: ○ Inserts ✓ Baggies ○ Bubble Wrap ○ Gel Packs ✓ Wet Ice ○ Sleeves ○ Other

5. Foreign or Regulated Soil? ○ Yes ○ No Location of Sampling:

Cooler Tracking Number	COC ID	Date Opened	Time Opened	Opened By	Temp. °C	Temp Blank?
NA		4/16/21	1712	CG	4.4	☑
						☐
						☐
						☐

6. Were custody papers properly filled out (ink, signed, dated, etc)? ✓ Yes ○ No
7. Did all bottles arrive in good condition (not broken, no signs of leakage)? ✓ Yes ○ No
8. Were all sample labels complete (i.e., sample ID, analysis, preservation, etc)? ✓ Yes ○ No
9. Were appropriate bottles/containers and volumes received for the requested tests? ✓ Yes ○ No
10. Did sample labels and tags agree with custody documents? ✓ Yes ○ No

Notes, Discrepancies, & Resolutions:

Service request Label:

RIGHT SOLUTIONS RIGHT PARTNER

10450 Stancliff Rd., Suite 210
Houston, TX 77099
T: +1 713 266 1599
F: +1 713 266 1599
www.alsglobal.com

SAMPLE ACCEPTANCE POLICY

This policy outlines the criteria samples must meet to be accepted by ALS Environmental – Houston HRMS.

Cooler Custody Seals (desirable, mandatory if specified in SAP):

- ✓ Intact on outside of cooler, signed and dated

Chain-of-Custody (COC) documentation (mandatory):

The following is required on each COC:

- ✓ Sample ID, the location, date and time of collection, collector's name, preservation type, sample type, and any other special remarks concerning the sampleThe COC must be completed in ink.
- ✓ Signature and date of relinquishing party.

In the absence of a COC at sample receipt, the COC will be requested from the client.

Sample Integrity (mandatory):

Samples are inspected upon arrival to ensure that sample integrity was not compromised during transfer to the laboratory.

- ✓ Sample containers must arrive in good condition (not broken or leaking).
- ✓ Samples must be labeled appropriately, including Sample IDs, and requested test using durable labels and indelible ink.
- ✓ The correct type of sample bottle must be used for the method requested.
- ✓ An appropriate sample volume, or weight, must be received.
- ✓ Sample IDs and number of containers must reconcile with the COC.
- ✓ Samples must be received within the method defined holding time.

Temperature Requirement (varies by sample matrix):

- ✓ Aqueous and Non-aqueous samples must be shipped and stored cold, at 0 to 6ºC.
- ✓ Tissue samples must be shipped and stored frozen, at -20 to -10ºC.
- ✓ Air samples are shipped and stored cold, at 0 to 6ºC
- ✓ The sample temperature must be recorded on the COC

All cooler inspections are documented on the Cooler Receipt Form (CRF). A separate CRF is completed for each service request. Any samples not meeting the above criteria are noted on the CRF and the Project Manager notified. The Project Manager must resolve any sample integrity issues with the client prior to proceeding with the analysis. Such resolutions are documented in writing and filed with the project folder. Data associated with samples received outside of this acceptance policy will be qualified on the case narrative of the final report

Preparation Information Benchsheets

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 210, Houston, TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

RIGHT SOLUTIONS | RIGHT PARTNER

RIGHT SOLUTIONS | RIGHT PARTNER

Preparation Information Benchsheet

Prep Run#: 377991 **Prep WorkFlow:** Gen CLO4 **Status:** Prepped
Team: Semivoa GCMS/GRIVERA **Prep Method:** Method **Prep Date/Time:** 4/22/21 09:30

#	Lab Code	Client ID	B#	Method /Test	pH	Cl	Matrix	Amt. Ext.	Sample Description
1	E2100485-014	16EW07-210415	.02	6850/ClO4 DOD			Misc. Solid	1.086g	
2	EQ2100238-01	MB		6850/ClO4 DOD			Solid	1.036g	
3	EQ2100238-02	LCS		6850/ClO4 DOD			Solid	1.051g	
4	EQ2100238-03	DLCS		6850/ClO4 DOD			Solid	1.031g	
5	R2103213-001	45MI40014	.15	6850/ClO4 DOD			Soil	1.001g	
6	R2103213-002	45MI40025	.15	6850/ClO4 DOD			Soil	1.058g	
7	R2103213-004	45MI40017	.21	6850/ClO4 DOD			Soil	1.065g	
8	R2103213-005	45MI40026	.15	6850/ClO4 DOD			Soil	1.043g	
9	R2103213-006	45MI40024	.15	6850/ClO4 DOD			Soil	1.019g	
10	R2103213-007	45MI40023	.15	6850/ClO4 DOD			Soil	1.023g	
11	R2103213-008	45MI40022	.15	6850/ClO4 DOD			Soil	1.054g	
12	R2103213-009	45MI40021	.15	6850/ClO4 DOD			Soil	1.053g	
13	R2103213-010	45MI40018	.15	6850/ClO4 DOD			Soil	1.080g	
14	R2103379-002	45MI40015	.08	6850/ClO4 DOD			Soil	1.084g	
15	R2103379-003	45MI40016	.08	6850/ClO4 DOD			Soil	1.089g	
16	R2103379-004	45MI40020	.08	6850/ClO4 DOD			Soil	1.087g	
17	R2103379-005	45MI40019	.08	6850/ClO4 DOD			Soil	1.009g	

Spiking Solutions

Name: Perchlorate Intermediate Stock1 Inventory ID 214035 Logbook Ref: Perchlorate Expires On: 05/23/2021

EQ2100238-02 100.00µL EQ2100238-03 100.00µL

Name: Perchlorate Internal Standard 1ug/mL Inventory ID 214820 Logbook Ref: Perchlorate Internal Standard Expires On: 07/03/2021

E2100485-014	100.00µL	EQ2100238-01	100.00µL	EQ2100238-02	100.00µL	EQ2100238-03	100.00µL	R2103213-001	100.00µL	R2103213-002	100.00µL
R2103213-004	100.00µL	R2103213-005	100.00µL	R2103213-006	100.00µL	R2103213-007	100.00µL	R2103213-008	100.00µL	R2103213-009	100.00µL
R2103213-010	100.00µL	R2103379-002	100.00µL	R2103379-003	100.00µL	R2103379-004	100.00µL	R2103379-005	100.00µL		

Preparation Steps

Step: Extraction
Started: 4/22/21 09:30
Finished: 4/22/21 11:00
By: GRIVERA
Comments

Preparation Information Benchsheet

Prep Run#: 377991
Team: Semivoa GCMS/GRIVERA

Prep WorkFlow: Gen CLO4
Prep Method: Method

Status: Prepped
Prep Date/Time: 4/22/21 09:30

Comments: _____

Reviewed By: GR Date: 4/22/21

Chain of Custody

Relinquished By: _____ Date: _____

Received By: _____ Date: _____

Extracts Examined
Yes No

RIGHT SOLUTIONS | RIGHT PARTNER

Preparation Information Benchsheet

Prep Run#: 378052 **Prep WorkFlow:** GenExt28Day **Status:** Prepped
Team: Semivoa GCMS/GRIVERA **Prep Method:** Method **Prep Date/Time:** 4/23/21 12:17

#	Lab Code	Client ID	B#	Method /Test	pH	Cl	Matrix	Amt. Ext.	Sample Description
1	E2100412-011	16WW58-210413	.01	6850/ClO4 DOD			Ground Water	10mL	
2	E2100412-012	16WW57-210413	.01	6850/ClO4 DOD			Ground Water	10mL	
3	E2100412-013	16WW35-210413	.01	6850/ClO4 DOD			Ground Water	10mL	
4	E2100412-014	16WW36-210413	.01	6850/ClO4 DOD			Ground Water	10mL	
5	E2100412-015	16PM09-210413	.01	6850/ClO4 DOD			Ground Water	10mL	
6	E2100412-016	16PM06-210413	.01	6850/ClO4 DOD			Ground Water	10mL	
7	E2100412-017	16PM14-210413	.01	6850/ClO4 DOD			Ground Water	10mL	
8	E2100485-001	16PM02-210414	.01	6850/ClO4 DOD			Ground Water	10mL	
9	E2100485-002	16PM03-210414	.01	6850/ClO4 DOD			Ground Water	10mL	
10	E2100485-003	16PM03-210414-FD	.01	6850/ClO4 DOD			Ground Water	10mL	
11	E2100485-004	16RW01-210414	.01	6850/ClO4 DOD			Ground Water	10mL	
12	E2100485-005	16RW04-210414	.01	6850/ClO4 DOD			Ground Water	10mL	
13	E2100485-006	16RW02-210414	.01	6850/ClO4 DOD			Ground Water	10mL	
14	E2100485-007	16WW16-210415	.01	6850/ClO4 DOD			Ground Water	10mL	
15	E2100485-008	16WW56-210415	.01	6850/ClO4 DOD			Ground Water	10mL	
16	E2100485-009	16WW22-210415	.01	6850/ClO4 DOD			Ground Water	10mL	
17	E2100485-010	16WW41-210415	.01	6850/ClO4 DOD			Ground Water	10mL	
18	E2100485-011	16WW21-210415	.01	6850/ClO4 DOD			Ground Water	10mL	
19	E2100485-012	16WW39-210415	.01	6850/ClO4 DOD			Ground Water	10mL	
20	E2100485-013	16WW51-210415	.01	6850/ClO4 DOD			Ground Water	10mL	
21	EQ2100244-01	MB		6850/ClO4 DOD			Liquid	10mL	
22	EQ2100244-02	LCS		6850/ClO4 DOD			Liquid	10mL	
23	EQ2100244-03	DLCS		6850/ClO4 DOD			Liquid	10mL	
24	EQ2100244-04	16WW56-210415 MS	.01	6850/ClO4 DOD			Liquid	10mL	
25	EQ2100244-05	16WW56-210415 DMS	.01	6850/ClO4 DOD			Liquid	10mL	

Spiking Solutions

Name: Perchlorate Intermediate Stock1 Inventory ID 214035 Logbook Ref: Perchlorate Expires On: 05/23/2021

EQ2100244-02 1.00µL EQ2100244-03 1.00µL EQ2100244-04 1.00µL EQ2100244-05 1.00µL

Name: Perchlorate Internal Standard 1ug/mL Inventory ID 214820 Logbook Ref: Perchlorate Internal Standard Expires On: 07/03/2021

E2100412-011 100.00µL E2100412-012 100.00µL E2100412-013 100.00µL E2100412-014 100.00µL E2100412-015 100.00µL E2100412-016 100.00µL
E2100412-017 100.00µL E2100485-001 100.00µL E2100485-002 100.00µL E2100485-003 100.00µL E2100485-004 100.00µL E2100485-005 100.00µL
E2100485-006 100.00µL E2100485-007 100.00µL E2100485-008 100.00µL E2100485-009 100.00µL E2100485-010 100.00µL E2100485-011 100.00µL

Preparation Information Benchsheet

Prep Run#: 378052 **Prep WorkFlow:** GenExt28Day **Status:** Prepped
Team: Semivoa GCMS/GRIVERA **Prep Method:** Method **Prep Date/Time:** 4/23/21 12:17

E2100485-012	100.00µL	E2100485-013	100.00µL	EQ2100244-01	100.00µL	EQ2100244-02	100.00µL	EQ2100244-03	100.00µL	EQ2100244-04	100.00µL
EQ2100244-05	100.00µL										

Preparation Steps

Step: Preparation
Started: 4/23/21 12:17
Finished: 4/23/21 13:30
By: GRIVERA
Comments

Comments: _____

Reviewed By: GR Date: 4/23/21

Chain of Custody

Relinquished By: _____ Date: _____ Extracts Examined

Received By: _____ Date: _____ Yes No

RIGHT SOLUTIONS | RIGHT PARTNER

Analytical Results

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 210, Houston, TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

RIGHT SOLUTIONS | RIGHT PARTNER

RIGHT SOLUTIONS | RIGHT PARTNER

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100485
Project:	HS21040859	**Date Collected:**	4/14/21 1030
Sample Matrix:	Ground Water	**Date Received:**	4/19/21
Sample Name:	16PM02-210414	**Units:**	µg/L
Lab Code:	E2100485-001	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.0372**	J	0.100	0.0500	0.0250	1	4/23/21	4/29/21 00:03	378052	721483	

RIGHT SOLUTIONS RIGHT PARTNER

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100485
Project:	HS21040859	**Date Collected:**	4/14/21 1120
Sample Matrix:	Ground Water	**Date Received:**	4/19/21
Sample Name:	16PM03-210414	**Units:**	µg/L
Lab Code:	E2100485-002	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**193**		1.00	0.500	0.250	10	4/23/21	4/28/21 22:57	378052	721483	

RIGHT SOLUTIONS | RIGHT PARTNER

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100485
Project:	HS21040859	**Date Collected:**	4/14/21 1120
Sample Matrix:	Ground Water	**Date Received:**	4/19/21
Sample Name:	16PM03-210414-FD	**Units:**	µg/L
Lab Code:	E2100485-003	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**189**		1.00	0.500	0.250	10	4/23/21	4/28/21 23:07	378052	721483	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100485
Project:	HS21040859	**Date Collected:**	4/14/21 1210
Sample Matrix:	Ground Water	**Date Received:**	4/19/21
Sample Name:	16RW01-210414	**Units:**	µg/L
Lab Code:	E2100485-004	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.0618**	J	0.100	0.0500	0.0250	1	4/23/21	4/29/21 00:12	378052	721483	

RIGHT SOLUTIONS | RIGHT PARTNER

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100485
Project:	HS21040859	**Date Collected:**	4/14/21 1255
Sample Matrix:	Ground Water	**Date Received:**	4/19/21
Sample Name:	16RW04-210414	**Units:**	µg/L
Lab Code:	E2100485-005	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	0.100	0.0500	0.0250	1	4/23/21	4/29/21 00:22	378052	721483	

RIGHT SOLUTIONS RIGHT PARTNER

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100485
Project:	HS21040859	**Date Collected:**	4/14/21 1340
Sample Matrix:	Ground Water	**Date Received:**	4/19/21
Sample Name:	16RW02-210414	**Units:**	µg/L
Lab Code:	E2100485-006	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.0612**	J	0.200	0.100	0.0500	2	4/23/21	4/29/21 16:19	378052	721582	

RIGHT SOLUTIONS | RIGHT PARTNER

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100485
Project:	HS21040859	**Date Collected:**	4/15/21 0725
Sample Matrix:	Ground Water	**Date Received:**	4/19/21
Sample Name:	16WW16-210415	**Units:**	µg/L
Lab Code:	E2100485-007	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**288**		1.00	0.500	0.250	10	4/23/21	4/28/21 23:16	378052	721483	

RIGHT SOLUTIONS | RIGHT PARTNER

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100485
Project:	HS21040859	**Date Collected:**	4/15/21 0815
Sample Matrix:	Ground Water	**Date Received:**	4/19/21
Sample Name:	16WW56-210415	**Units:**	µg/L
Lab Code:	E2100485-008	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.0783**	J	0.100	0.0500	0.0250	1	4/23/21	4/29/21 00:50	378052	721483	

RIGHT SOLUTIONS | RIGHT PARTNER

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100485
Project:	HS21040859	**Date Collected:**	4/15/21 0910
Sample Matrix:	Ground Water	**Date Received:**	4/19/21
Sample Name:	16WW22-210415	**Units:**	µg/L
Lab Code:	E2100485-009	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.471**		0.100	0.0500	0.0250	1	4/23/21	4/29/21 00:59	378052	721483	

RIGHT SOLUTIONS | RIGHT PARTNER

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100485
Project:	HS21040859	**Date Collected:**	4/15/21 1000
Sample Matrix:	Ground Water	**Date Received:**	4/19/21
Sample Name:	16WW41-210415	**Units:**	µg/L
Lab Code:	E2100485-010	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**212**		1.00	0.500	0.250	10	4/23/21	4/28/21 23:25	378052	721483	

RIGHT SOLUTIONS | RIGHT PARTNER

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100485
Project:	HS21040859	**Date Collected:**	4/15/21 1045
Sample Matrix:	Ground Water	**Date Received:**	4/19/21
Sample Name:	16WW21-210415	**Units:**	µg/L
Lab Code:	E2100485-011	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	0.100	0.0500	0.0250	1	4/23/21	4/29/21 01:09	378052	721483	

RIGHT SOLUTIONS RIGHT PARTNER

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100485
Project:	HS21040859	**Date Collected:**	4/15/21 1130
Sample Matrix:	Ground Water	**Date Received:**	4/19/21
Sample Name:	16WW39-210415	**Units:**	µg/L
Lab Code:	E2100485-012	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**7.87**		1.00	0.500	0.250	10	4/23/21	4/29/21 12:06	378052	721582	

RIGHT SOLUTIONS | RIGHT PARTNER

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100485
Project:	HS21040859	**Date Collected:**	4/15/21 1215
Sample Matrix:	Ground Water	**Date Received:**	4/19/21
Sample Name:	16WW51-210415	**Units:**	µg/L
Lab Code:	E2100485-013	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.306**		0.100	0.0500	0.0250	1	4/23/21	4/29/21 01:27	378052	721483	

RIGHT SOLUTIONS RIGHT PARTNER

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100485
Project:	HS21040859	**Date Collected:**	4/15/21 1300
Sample Matrix:	Misc. Solid	**Date Received:**	4/19/21
Sample Name:	16EW07-210415	**Units:**	µg/Kg
Lab Code:	E2100485-014	**Basis:**	As Received

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.375**	J	0.921	0.750	0.300	1	4/22/21	4/26/21 21:59	377991	721147	

RIGHT SOLUTIONS | RIGHT PARTNER

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100485
Project:	HS21040859	**Date Collected:**	NA
Sample Matrix:	Misc. Solid	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	µg/Kg
Lab Code:	EQ2100238-01	**Basis:**	As Received

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	0.965	0.750	0.300	1	4/22/21	4/26/21 19:45	377991	721147	

RIGHT SOLUTIONS RIGHT PARTNER

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100485
Project:	HS21040859	**Date Collected:**	NA
Sample Matrix:	Ground Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	EQ2100244-01	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	0.100	0.0500	0.0250	1	4/23/21	4/28/21 20:27	378052	721483	

RIGHT SOLUTIONS | RIGHT PARTNER

Accuracy & Precision

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 210, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2100485
Project:	HS21040859	**Date Analyzed:**	4/26/21
Sample Matrix:	Misc. Solid		

Lab Control Sample Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method:	6850	**Units:**	µg/Kg
Prep Method:	Method	**Basis:**	As Received
		Extraction Lot:	377991

	Lab Control Sample EQ2100238-02			Duplicate Lab Control Sample EQ2100238-03					
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Perchlorate	89.4	95.1	94	92.7	97.0	96	84 - 121	4	15

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

RIGHT SOLUTIONS RIGHT PARTNER

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100485
Project:	HS21040859	**Date Collected:**	NA
Sample Matrix:	Misc. Solid	**Date Received:**	NA
Sample Name:	Lab Control Sample	**Units:**	µg/Kg
Lab Code:	EQ2100238-02	**Basis:**	As Received

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**89.4**		0.951	0.750	0.300	1	4/22/21	4/26/21 19:53	377991	721147	

RIGHT SOLUTIONS | RIGHT PARTNER

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100485
Project:	HS21040859	**Date Collected:**	NA
Sample Matrix:	Misc. Solid	**Date Received:**	NA
Sample Name:	Duplicate Lab Control Sample	**Units:**	µg/Kg
Lab Code:	EQ2100238-03	**Basis:**	As Received

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**92.7**		0.970	0.750	0.300	1	4/22/21	4/26/21 20:01	377991	721147	

RIGHT SOLUTIONS RIGHT PARTNER

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS21040859
Sample Matrix: Ground Water

Service Request: E2100485
Date Analyzed: 4/28/21

Lab Control Sample Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Units: µg/L
Basis: NA

Extraction Lot: 378052

	Lab Control Sample EQ2100244-02			Duplicate Lab Control Sample EQ2100244-03					
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Perchlorate	0.0857	0.100	86	0.0977	0.100	98	84 - 119	13	15

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

RIGHT SOLUTIONS RIGHT PARTNER

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100485
Project:	HS21040859	**Date Collected:**	NA
Sample Matrix:	Ground Water	**Date Received:**	NA
Sample Name:	Lab Control Sample	**Units:**	µg/L
Lab Code:	EQ2100244-02	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.0857**	J	0.100	0.0500	0.0250	1	4/23/21	4/28/21 20:37	378052	721483	

RIGHT SOLUTIONS | RIGHT PARTNER

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100485
Project:	HS21040859	**Date Collected:**	NA
Sample Matrix:	Ground Water	**Date Received:**	NA
Sample Name:	Duplicate Lab Control Sample	**Units:**	µg/L
Lab Code:	EQ2100244-03	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.0977**	J	0.100	0.0500	0.0250	1	4/23/21	4/28/21 20:46	378052	721483	

RIGHT SOLUTIONS | RIGHT PARTNER

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2100485
Project:	HS21040859	**Date Collected:**	4/15/21
Sample Matrix:	Ground Water	**Date Received:**	4/19/21
		Date Analyzed:	4/29/21

Matrix Spike Summary

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Sample Name:	16WW56-210415	**Units:**	µg/L
Lab Code:	E2100485-008	**Basis:**	NA

Analytical Method: 6850
Prep Method: Method

		16WW56-210415MS				16WW56-210415DMS					
		Matrix Spike				**Duplicate Matrix Spike**					
		EQ2100244-04				EQ2100244-05					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**		**% Rec Limits**	**RPD**	**RPD Limit**
Perchlorate	0.0783	0.170	0.100	92	0.146	0.100	68	*	84 - 119	15	15

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

RIGHT SOLUTIONS RIGHT PARTNER

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100485
Project:	HS21040859	**Date Collected:**	4/15/21 0815
Sample Matrix:	Ground Water	**Date Received:**	4/19/21
Sample Name:	16WW56-210415	**Units:**	µg/L
Lab Code:	EQ2100244-04	**Basis:**	NA
Run Type:	Matrix Spike		

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.170**		0.100	0.0500	0.0250	1	4/23/21	4/29/21 01:37	378052	721483	

RIGHT SOLUTIONS | RIGHT PARTNER

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100485
Project:	HS21040859	**Date Collected:**	4/15/21 0815
Sample Matrix:	Ground Water	**Date Received:**	4/19/21
Sample Name:	16WW56-210415	**Units:**	µg/L
Lab Code:	EQ2100244-05	**Basis:**	NA
Run Type:	Duplicate Matrix Spike		

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.146**		0.100	0.0500	0.0250	1	4/23/21	4/29/21 01:46	378052	721483	

RIGHT SOLUTIONS RIGHT PARTNER

HS21040859 8260_W_DOD Raw Data

ALS WO# HS21040859

MSVOA06 -Logbook

Batch: 44312 **Analyst:** Presenta Cabascango

Date: 04-02-2021 **Reviewer:**

Method: 8260 **Laboratory:** Houston

Comments:

#	Samp ID	Type	Analyzed	DF	Init Wt/Vol	Final Vol	File ID	Matrix	Status	pH
1	BFB	TUNE	04-02-2021 10:32 am	1.00	50 mL	50 mL	X040201.D	Liquid	Y	NA
2	VSTD000.25	ICAL1	04-02-2021 10:53 am	1.00	50 mL	50 mL	X040202.D	Liquid	Y	NA
3	VSTD000.5	ICAL2	04-02-2021 11:35 am	1.00	50 mL	50 mL	X040203.D	Liquid	Y	NA
4	VSTD001	ICAL3	04-02-2021 11:56 am	1.00	50 mL	50 mL	X040204.D	Liquid	Y	NA
5	VSTD002	ICAL4	04-02-2021 12:17 pm	1.00	50 mL	50 mL	X040205.D	Liquid	Y	NA
6	VSTD005	ICAL5	04-02-2021 12:38 pm	1.00	50 mL	50 mL	X040206.D	Liquid	Y	NA
7	VSTD020	ICAL6	04-02-2021 12:59 pm	1.00	50 mL	50 mL	X040207.D	Liquid	Y	NA
8	VSTD050	ICAL7	04-02-2021 01:20 pm	1.00	50 mL	50 mL	X040208.D	Liquid	Y	NA
9	VSTD100	ICAL8	04-02-2021 01:41 pm	1.00	50 mL	50 mL	X040209.D	Liquid	Y	NA
10	VSTD150	ICAL9	04-02-2021 02:02 pm	1.00	50 mL	50 mL	X040210.D	Liquid	Y	NA
11	VSTD200	ICAL	04-02-2021 02:23 pm	1.00	50 mL	50 mL	X040211.D	Liquid	Y	NA
12	BLANK	SAMP	04-02-2021 02:44 pm	1.00	50 mL	50 mL	X040212.D	Liquid	Y	NA
13	CCV	SAMP	04-02-2021 03:05 pm	1.00	50 mL	50 mL	X040213.D	Liquid	Y	NA
14	CCV	CCV	04-02-2021 03:26 pm	1.00	50 mL	50 mL	X040214.D	Liquid	Y	NA
15	CCB	SAMP	04-02-2021 03:47 pm	1.00	50 mL	50 mL	X040215.D	Liquid	Y	NA
16	VLCSW-210402	LCS	04-02-2021 04:08 pm	1.00	50 mL	50 mL	X040216.D	Liquid	Y	NA
17	BLANK	SAMP	04-02-2021 04:29 pm	1.00	50 mL	50 mL	X040217.D	Liquid	Y	NA
18	BLANK	SAMP	04-02-2021 04:50 pm	1.00	50 mL	50 mL	X040218.D	Liquid	Y	NA
19	VBLKW-210402	MBLK	04-02-2021 05:11 pm	1.00	50 mL	50 mL	X040219.D	Liquid	Y	NA
20	HS21031390-28	SAMP	04-02-2021 05:32 pm	1.00	50 mL	50 mL	X040220.D	Liquid	Y	NA
21	HS21031390-01	SAMP	04-02-2021 05:53 pm	1.00	50 mL	50 mL	X040221.D	Liquid	Y	NA
22	HS21031390-02	SAMP	04-02-2021 06:14 pm	1.00	50 mL	50 mL	X040222.D	Liquid	Y	NA
23	HS21031390-08	SAMP	04-02-2021 06:35 pm	1.00	50 mL	50 mL	X040223.D	Liquid	Y	NA
24	HS21031390-14	SAMP	04-02-2021 06:56 pm	1.00	50 mL	50 mL	X040224.D	Liquid	Y	NA
25	HS21031390-06	SAMP	04-02-2021 07:17 pm	10.00	5 mL	50 mL	X040225.D	Liquid	Y	NA
26	HS21031390-09	SAMP	04-02-2021 07:38 pm	5.00	10 mL	50 mL	X040226.D	Liquid	Y	NA
27	HS21031390-28MS	MS	04-02-2021 07:59 pm	1.00	50 mL	50 mL	X040227.D	Liquid	Y	NA
28	HS21031390-28MSD	MSD	04-02-2021 08:20 pm	1.00	50 mL	50 mL	X040228.D	Liquid	Y	NA
29	HS21031390-06	SAMP	04-02-2021 08:41 pm	100.0(	500 µL	50 mL	X040229.D	Liquid	Y	NA
30	HS21031390-09	SAMP	04-02-2021 09:03 pm	25.00	2 mL	50 mL	X040230.D	Liquid	Y	NA
31	HS21031318-29	SAMP	04-02-2021 09:24 pm	1.00	50 mL	50 mL	X040231.D	Liquid	Y	NA
32	HS21040032-03	SAMP	04-02-2021 09:45 pm	1.00	50 mL	50 mL	X040232.D	Liquid	Y	NA
33	BFB	TUNE	04-02-2021 10:06 pm	1.00	50 mL	50 mL	Y040201.D	Liquid	Y	NA
34	CCV	CCV	04-02-2021 10:27 pm	1.00	50 mL	50 mL	Y040202a.D	Liquid	Y	NA
35	CCV	CCV	04-02-2021 10:48 pm	1.00	50 mL	50 mL	Y040203.D	Liquid	Y	NA
36	CCB	SAMP	04-02-2021 11:09 pm	1.00	50 mL	50 mL	Y040204.D	Liquid	Y	NA
37	VLCSW-210402	LCS	04-02-2021 11:30 pm	1.00	50 mL	50 mL	Y040205.D	Liquid	Y	NA
38	BLANK	SAMP	04-02-2021 11:51 pm	1.00	50 mL	50 mL	Y040206.D	Liquid	Y	NA
39	VBLKW-210402	MBLK	04-03-2021 12:12 am	1.00	50 mL	50 mL	Y040207.D	Liquid	Y	NA
40	HS21031399-49	SAMP	04-03-2021 12:33 am	1.00	50 mL	50 mL	Y040208.D	Liquid	Y	NA
41	HS21031390-31	SAMP	04-03-2021 12:54 am	1.00	50 mL	50 mL	Y040209.D	Liquid	Y	NA

MSVOA06 -Logbook

#	Samp ID	Type	Analyzed	DF	Init Wt/Vol	Final Vol	File ID	Matrix	Status	pH
42	HS21031390-33	SAMP	04-03-2021 01:15 am	1.00	50 mL	50 mL	Y040210.D	Liquid	Y	NA
43	HS21031390-31MS	MS	04-03-2021 01:36 am	1.00	50 mL	50 mL	Y040211.D	Liquid	Y	NA
44	HS21031390-31MSD	MSD	04-03-2021 01:57 am	1.00	50 mL	50 mL	Y040212.D	Liquid	Y	NA
45	BLANK	SAMP	04-03-2021 02:18 am	1.00	50 mL	50 mL	Y040213.D	Liquid	Y	NA
46	BLANK	SAMP	04-03-2021 02:39 am	1.00	50 mL	50 mL	Y040214.D	Liquid	Y	NA
47	HS21031399-38	SAMP	04-03-2021 03:00 am	1.00	50 mL	50 mL	Y040215.D	Liquid	Y	NA
48	HS21031399-39	SAMP	04-03-2021 03:21 am	1.00	50 mL	50 mL	Y040216.D	Liquid	Y	NA
49	HS21031399-41	SAMP	04-03-2021 03:43 am	1.00	50 mL	50 mL	Y040217.D	Liquid	Y	NA
50	HS21031399-42	SAMP	04-03-2021 04:04 am	1.00	50 mL	50 mL	Y040218.D	Liquid	Y	NA
51	HS21031399-43	SAMP	04-03-2021 04:25 am	1.00	50 mL	50 mL	Y040219.D	Liquid	Y	NA
52	HS21031399-44	SAMP	04-03-2021 04:46 am	1.00	50 mL	50 mL	Y040220.D	Liquid	Y	NA
53	HS21031399-45	SAMP	04-03-2021 05:07 am	1.00	50 mL	50 mL	Y040221.D	Liquid	Y	NA
54	HS21031399-46	SAMP	04-03-2021 05:28 am	1.00	50 mL	50 mL	Y040222.D	Liquid	Y	NA
55	HS21031565-01	SAMP	04-03-2021 05:49 am	1.00	50 mL	50 mL	Y040223.D	Liquid	Y	NA
56	HS21031565-05	SAMP	04-03-2021 06:10 am	1.00	50 mL	50 mL	Y040224.D	Liquid	Y	NA
57	HS21031565-06	SAMP	04-03-2021 06:31 am	1.00	50 mL	50 mL	Y040225.D	Liquid	Y	NA
58	HS21031565-07	SAMP	04-03-2021 06:52 am	1.00	50 mL	50 mL	Y040226.D	Liquid	Y	NA
59	HS21031565-08	SAMP	04-03-2021 07:13 am	1.00	50 mL	50 mL	Y040227.D	Liquid	Y	NA
60	HS21031565-11	SAMP	04-03-2021 07:35 am	1.00	50 mL	50 mL	Y040228.D	Liquid	Y	NA
61	HS21031565-14	SAMP	04-03-2021 07:56 am	1.00	50 mL	50 mL	Y040229.D	Liquid	Y	NA
62	HS21031565-15	SAMP	04-03-2021 08:17 am	1.00	50 mL	50 mL	Y040230.D	Liquid	Y	NA
63	HS21031390-32	SAMP	04-03-2021 08:38 am	1.00	50 mL	50 mL	Y040231.D	Liquid	Y	NA
64	BLANJ	SAMP	04-03-2021 08:59 am	1.00	50 mL	50 mL	Y040240.D	Liquid	Y	NA

FORM 3
WATER VOLATILE METHOD SPIKE RECOVERY

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS21040859

Matrix Spike - Sample No.: ICV

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE AMOUNT ()	% REC #	QC. LIMITS REC.
Vinyl Chloride	50.00	46.17	92	80-120
Methylene Chloride	50.00	45.57	91	80-120
1,1-Dichloroethene	50.00	46.21	92	80-120
1,2-Dichloroethane	50.00	47.48	95	80-120
cis-1,2-Dichloroethene	50.00	46.33	93	80-120
1,1,2-Trichloroethane	50.00	48.15	96	80-120
Trichloroethene	50.00	50.43	101	80-120

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

COMMENTS: _____

_____

FORM III VOA

FORM 5
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS21040859

Lab File ID: X040201 BFB Injection Date: 04/02/21

Instrument ID: VOA6 BFB Injection Time: 1032

GC Column: DB624 ID: 0.25 (mm) Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	22.5
75	30.0 - 60.0% of mass 95	53.3
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.5
173	Less than 2.0% of mass 174	1.1 (1.3)1
174	Greater than 50.0% of mass 95	83.8
175	5.0 - 9.0% of mass 174	6.3 (7.6)1
176	95.0 - 101.0% of mass 174	81.4 (97.1)1
177	5.0 - 9.0% of mass 176	4.4 (5.4)2

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

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD000.25	VSTD000.25	X040202	04/02/21	1053
02	VSTD000.5	VSTD000.5	X040203	04/02/21	1135
03	VSTD001	VSTD001	X040204	04/02/21	1156
04	VSTD002	VSTD002	X040205	04/02/21	1217
05	VSTD005	VSTD005	X040206	04/02/21	1238
06	VSTD020	VSTD020	X040207	04/02/21	1259
07	VSTD050	VSTD050	X040208	04/02/21	1320
08	VSTD100	VSTD100	X040209	04/02/21	1341
09	VSTD150	VSTD150	X040210	04/02/21	1402
10	VSTD200	VSTD200	X040211	04/02/21	1423
11	ICV	ICV	X040214	04/02/21	1526
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS21040859

Instrument ID: VOA6 Calibration Date(s): 04/02/21 04/02/21

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1053 1423

LAB FILE ID: RF0.25: X040202 RF0.5: X040203 RF1: X040204
RF2: X040205 RF5: X040206 RF20: X040207

COMPOUND	RF0.25	RF0.5	RF1	RF2	RF5	RF20
Vinyl Chloride		0.844	0.943	0.758	0.756	0.736
Methylene Chloride		2167	4155	7271	17205	63925
1,1-Dichloroethene		0.748	0.754	0.752	0.776	0.659
1,2-Dichloroethane		0.560	0.634	0.506	0.530	0.475
cis-1,2-Dichloroethene		0.588	0.711	0.624	0.604	0.542
1,1,2-Trichloroethane		0.276	0.355	0.300	0.320	0.251
Trichloroethene		0.263	0.401	0.364	0.376	0.308
Dibromofluoromethane		1934	3862	6870	17824	68668
1,2-Dichloroethane-d4		2323	4438	7506	20809	80475
Toluene-d8		6330	12313	22274	56112	218999
4-Bromofluorobenzene		2889	4647	7732	19193	81621

FORM VI VOA

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS2104085

Instrument ID: VOA6 Calibration Date(s): 04/02/21 04/02/21

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1053 1423

LAB FILE ID: RF50: X040208 RF100: X040209 RF150: X040210
RF200: X040211

COMPOUND	RF50	RF100	RF150	RF200
Vinyl Chloride	0.712	0.681	0.664	0.652
Methylene Chloride	173954	420832	703062	1013494
1,1-Dichloroethene	0.668	0.684	0.663	0.702
1,2-Dichloroethane	0.517	0.525	0.513	0.503
cis-1,2-Dichloroethene	0.580	0.612	0.608	0.631
1,1,2-Trichloroethane	0.265	0.281	0.281	0.284
Trichloroethene	0.345	0.350	0.337	0.337
Dibromofluoromethane	201590	476731	758989	1061294
1,2-Dichloroethane-d4	243778	568806	919399	1266674
Toluene-d8	658700	1733824	2714142	3949224
4-Bromofluorobenzene	267013	624362	1011725	1473828

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS2104085

Instrument ID: VOA6 Calibration Date(s): 04/02/21 04/02/21

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1053 1423

COMPOUND	CURVE	COEFFICENTS A0	COEFFICENTS A1	%RSD OR R^2	MAX %RSD OR R^2
Vinyl Chloride	AVRG		0.74959896	12.472	15.000
Methylene Chloride	LINR	2.966e-002	1.78818120	0.9978871	0.9900000
1,1-Dichloroethene	AVRG		0.71193342	6.418	15.000
1,2-Dichloroethane	AVRG		0.52923847	8.569	15.000
cis-1,2-Dichloroethene	AVRG		0.61120734	7.506	15.000
1,1,2-Trichloroethane	AVRG		0.29044925	10.722	15.000
Trichloroethene	AVRG		0.34228157	11.637	15.000
Dibromofluoromethane	LINR	8.656e-003	1.68407127	0.9996746	0.9900000
1,2-Dichloroethane-d4	LINR	9.666e-003	1.40410549	0.9998489	0.9900000
Toluene-d8	LINR	3.71e-002	0.74922718	0.9979532	0.9900000
4-Bromofluorobenzene	LINR	3.301e-002	2.01663185	0.9986184	0.9900000

FORM VI VOA

Data File: \\NAHSTWS005\Target\chem\voa6.i\X210402.b\X040201.D

Date : 02-APR-2021 10:32

Client ID: BFB

Instrument: voa6.i

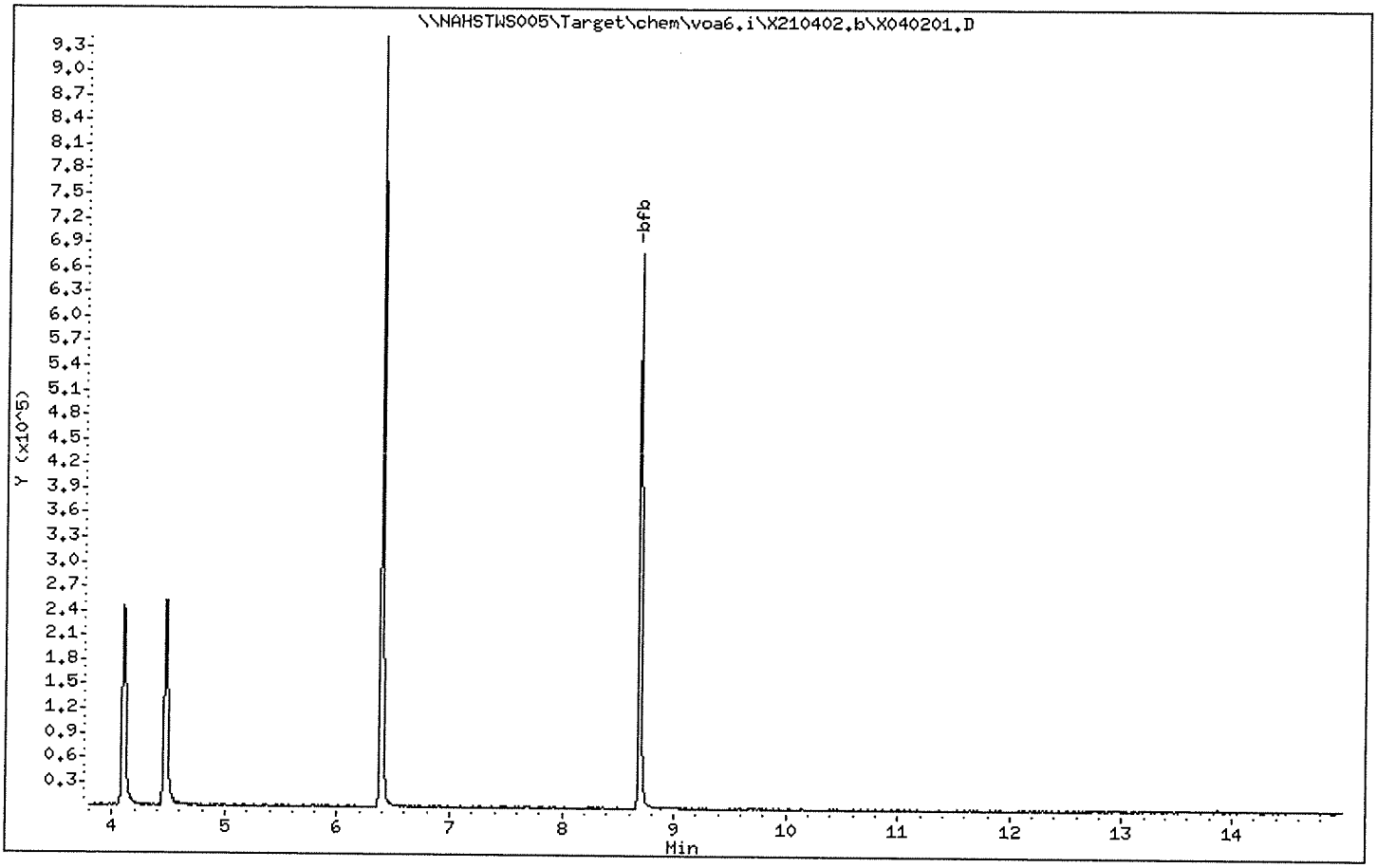
Sample Info: BFB;BFB;3;;BFB

Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

Column diameter: 0.25



Data File: \\NAHSTWS005\Target\chem\voa6.i\X210402.b\X040201.D

Date : 02-APR-2021 10:32

Client ID: BFB

Instrument: voa6.i

Sample Info: BFB;BFB;3;;BFB

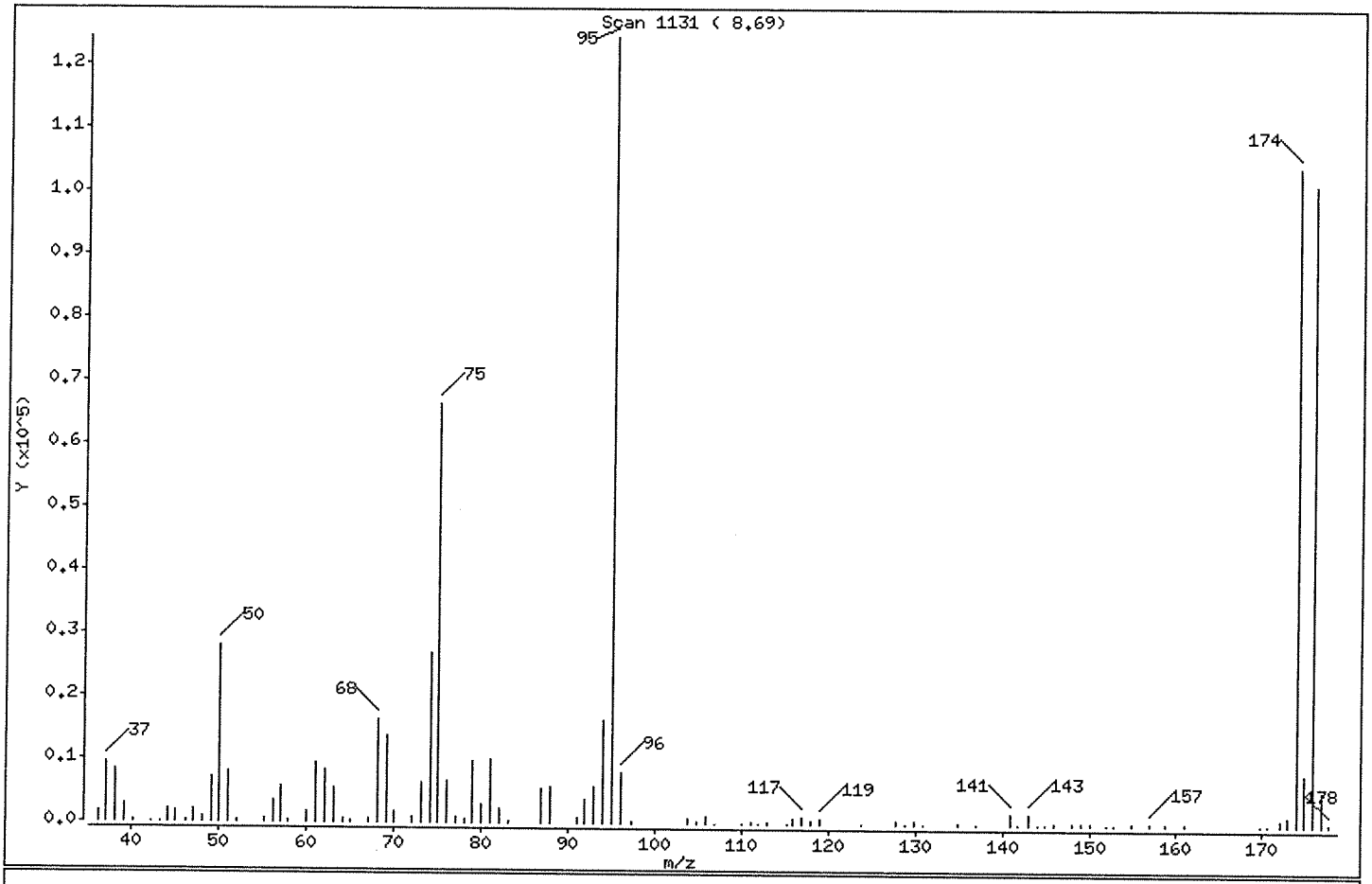
Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

Column diameter: 0.25

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	22.51
75	30.00 - 60.00% of mass 95	53.31
96	5.00 - 9.00% of mass 95	6.51
173	Less than 2.00% of mass 174	1.06 (1.26)
174	Greater than 50.00% of mass 95	83.79
175	5.00 - 9.00% of mass 174	6.34 (7.56)
176	95.00 - 101.00% of mass 174	81.37 (97.11)
177	5.00 - 9.00% of mass 176	4.40 (5.40)

Data File: \\NAHSTWS005\Target\chem\voa6.i\X210402.b\X040201.D

Date : 02-APR-2021 10:32

Client ID: BFB

Instrument: voa6.i

Sample Info: BFB;BFB;3;;BFB

Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

Column diameter: 0.25

Data File: X040201.D
Spectrum: Scan 1131 (8.69)
Location of Maximum: 95.00
Number of points: 95

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.10	1732	64.00	599	95.00	124200	141.70	84
37.00	9290	65.00	153	96.00	8090	142.90	1576
38.00	8308	67.00	500	97.20	217	143.90	75
39.00	2929	68.00	16384	103.70	740	144.80	94
40.10	424	69.00	13717	104.80	164	145.90	148
42.20	74	70.00	1785	105.80	1029	147.90	250
43.20	72	72.10	777	106.90	112	148.90	155
44.00	2050	73.00	6328	109.90	136	150.00	286
45.00	1795	74.00	26912	111.00	268	151.80	52
46.10	242	75.00	66216	111.90	85	152.70	124
47.00	1874	76.00	6620	112.90	237	154.80	284
48.00	988	77.10	800	115.10	59	156.80	312
49.00	7094	78.10	446	115.80	811	158.80	260
50.00	27952	78.90	9818	116.90	1154	161.00	258
51.00	7947	79.90	2794	117.80	635	169.80	139
51.90	391	80.90	10133	118.90	930	170.60	140
55.20	631	82.00	2269	123.70	57	172.20	893
56.10	3391	83.00	193	127.70	679	172.90	1311
57.00	5690	86.90	5298	128.70	113	173.90	104064
57.90	400	87.90	5776	129.70	519	174.90	7871
59.90	1604	90.90	805	130.80	68	175.90	101056
61.00	9323	91.90	3707	134.80	220	176.90	5459
62.00	8245	92.90	5610	136.80	123	177.80	373
63.00	5418	94.00	16192	140.90	1678		

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X210402.b\X040202.D
Lab Smp Id: VSTD000.25 Client Smp ID: VSTD000.25
Inj Date : 02-APR-2021 10:53
Operator : PC Inst ID: voa6.i
Smp Info : VSTD000.25;VSTD000.25;1;1;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X210402.b\8260W.m
Meth Date : 04-May-2021 11:39 voa6.i Quant Type: ISTD
Cal Date : 02-APR-2021 14:23 Cal File: X040211.D
Als bottle: 2 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBI_short1.sub
Target Version: 4.14
Processing Host: NAHSTW7066

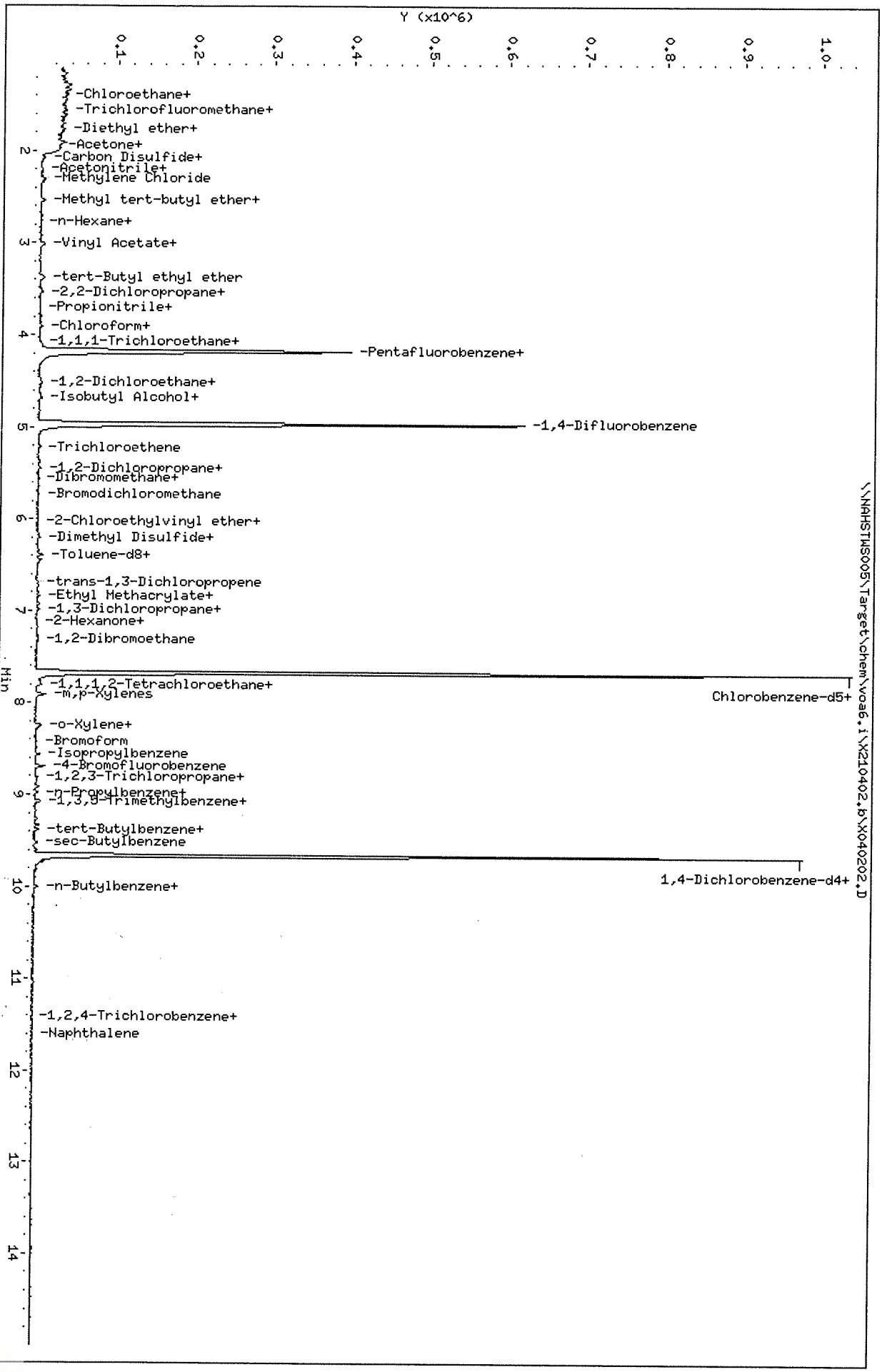
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	311555	50.0000	
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	505232	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	450629	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	197083	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	968	0.25000	0.69(M)
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	1238	0.25000	0.76(TM)
$ 48 Toluene-d8	98	6.396	6.396	(0.834)	4819	0.25000	2.25
$ 69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	3592	0.25000	2.45
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	995	0.25000	0.38(a)
11 1,1-Dichloroethene	96	1.904	1.904	(0.455)	1567	0.25000	0.35(aM)
33 1,2-Dichloroethane	62	4.562	4.562	(0.919)	1597	0.25000	0.29(a)
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	893	0.25000	0.23(M)
17 Methylene Chloride	84	2.305	2.305	(0.551)	2054	0.25000	2.07(aM)
38 Trichloroethene	130	5.221	5.221	(1.052)	988	0.25000	0.28(M)
5 Vinyl Chloride	62	1.145	1.145	(0.274)	1614	0.25000	0.34(M)

QC Flag Legend

T - Target compound detected outside RT window.
a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.



Data File: \\NAHSTWS005\Target\chem\voa6.i\X210402.b\X040202.D
Date : 02-APR-2021 10:53
Client ID: VSTD000.25
Sample Info: VSTD000.25;VSTD000.25;1;1;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\NAHSTWS005\Target\chem\voa6.i\X210402.b\X040203.D Page 1
Report Date: 04-May-2021 11:39

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X210402.b\X040203.D
Lab Smp Id: VSTD000.5 Client Smp ID: VSTD000.5
Inj Date : 02-APR-2021 11:35
Operator : PC Inst ID: voa6.i
Smp Info : VSTD000.5;VSTD000.5;1;2;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X210402.b\8260W.m
Meth Date : 04-May-2021 11:39 voa6.i Quant Type: ISTD
Cal Date : 02-APR-2021 10:53 Cal File: X040202.D
Als bottle: 4 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBI_short1.sub
Target Version: 4.14
Processing Host: NAHSTW7066

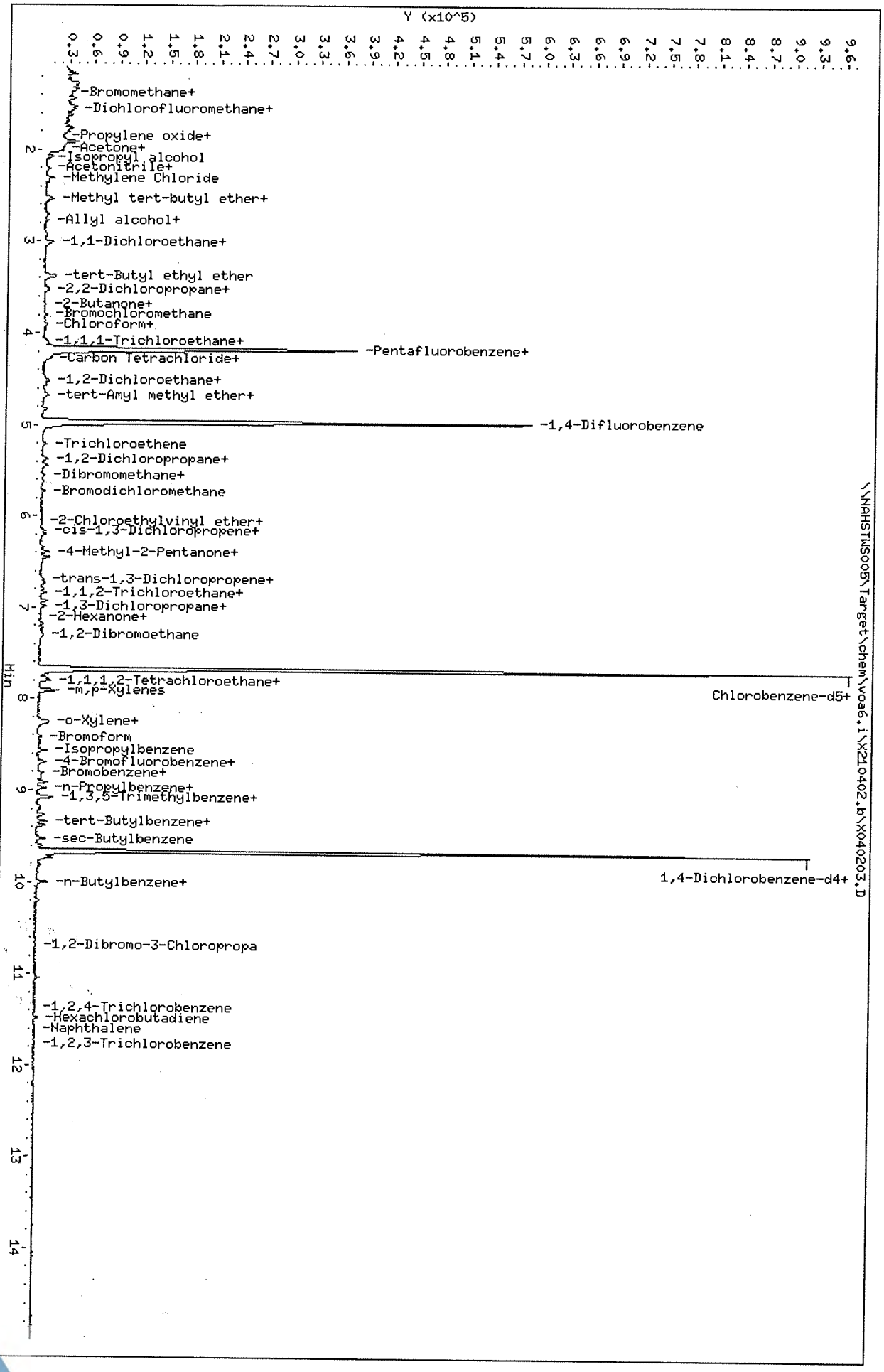
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	292480	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	476531	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	420545	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	191809	50.0000	
$ 30 Dibromofluoromethane	113	4.118	4.118	(0.985)	1934	0.50000	0.98
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	2323	0.50000	1.04(T)
$ 48 Toluene-d8	98	6.389	6.389	(0.833)	6330	0.50000	2.41(T)
$ 69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	2889	0.50000	2.34
53 1,1,2-Trichloroethane	83	6.847	6.847	(0.893)	1162	0.50000	0.47(a)
11 1,1-Dichloroethene	96	1.926	1.926	(0.461)	2188	0.50000	0.52(aM)
33 1,2-Dichloroethane	62	4.562	4.562	(0.918)	2669	0.50000	0.52(aM)
27 cis-1,2-Dichloroethene	96	3.545	3.545	(0.848)	1721	0.50000	0.48
17 Methylene Chloride	84	2.306	2.306	(0.551)	2167	0.50000	2.14(aM)
38 Trichloroethene	130	5.214	5.214	(1.049)	1254	0.50000	0.38
5 Vinyl Chloride	62	1.145	1.145	(0.274)	2470	0.50000	0.56

QC Flag Legend

T - Target compound detected outside RT window.
a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.

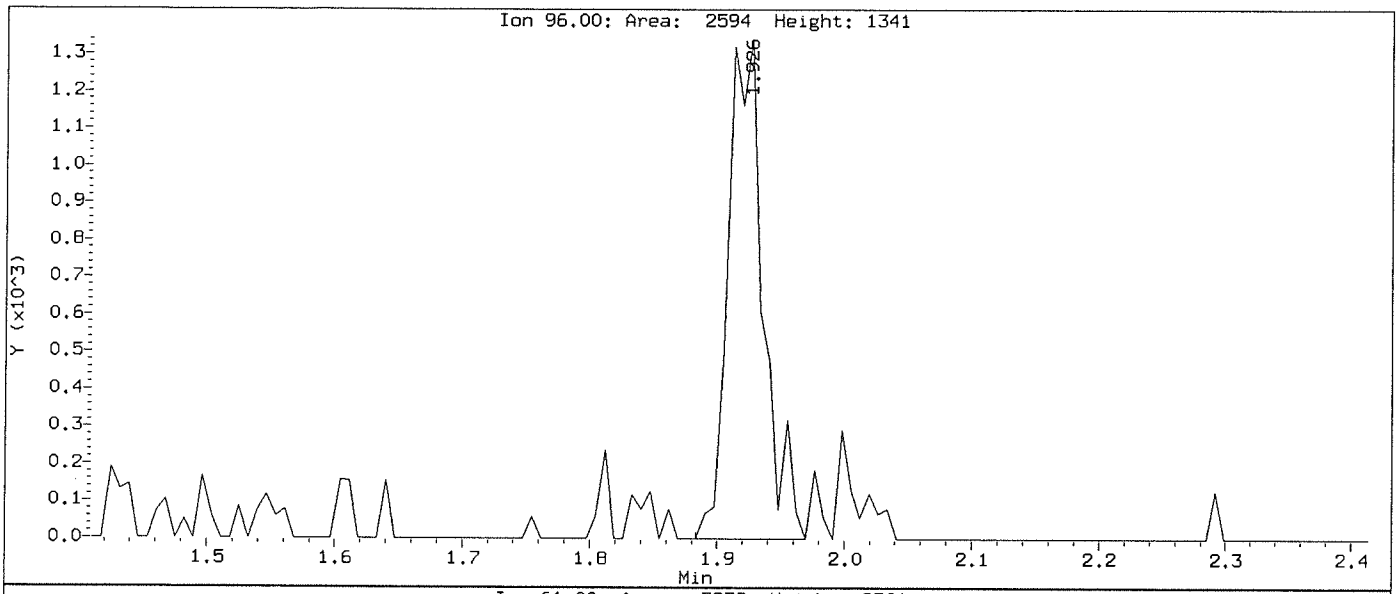


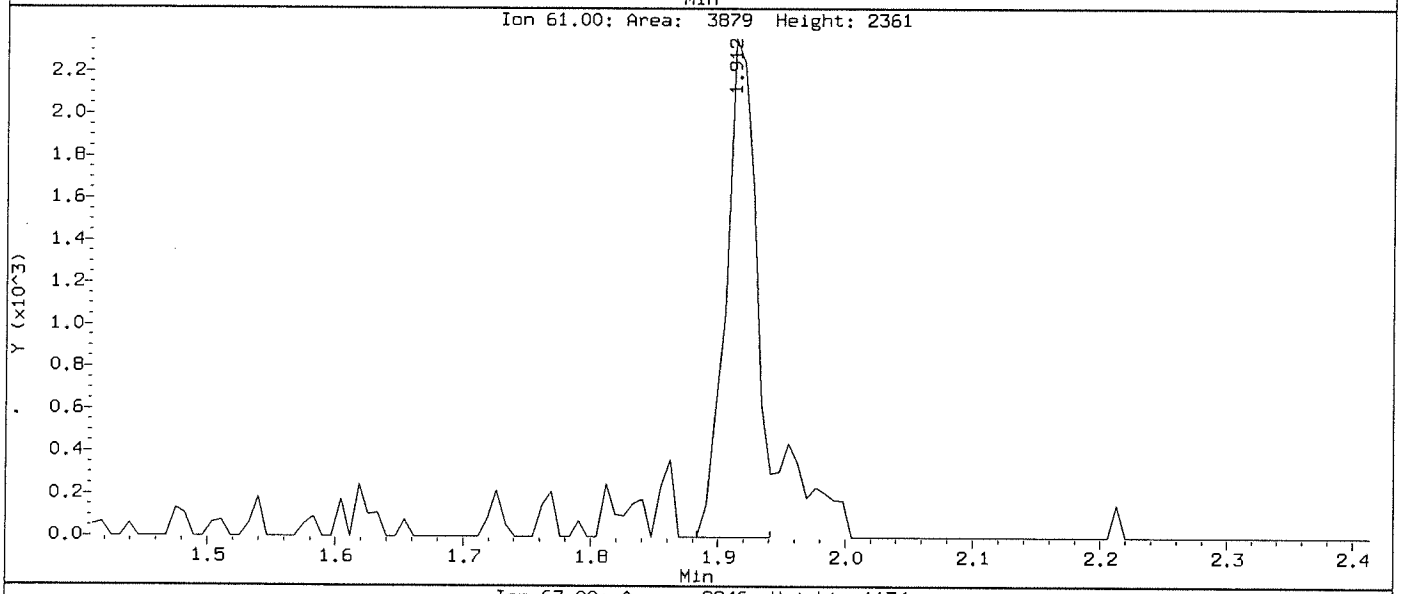
Data File: \\NAHSTWS005\Target\chem\voa6.i\X210402.b\X040203.D
Date : 02-APR-2021 11:35
Client ID: VSTD000.5
Sample Info: VSTD000.5;VSTD000.5;1;2;;
Purge Volume: 5.0
Column phase: DB624

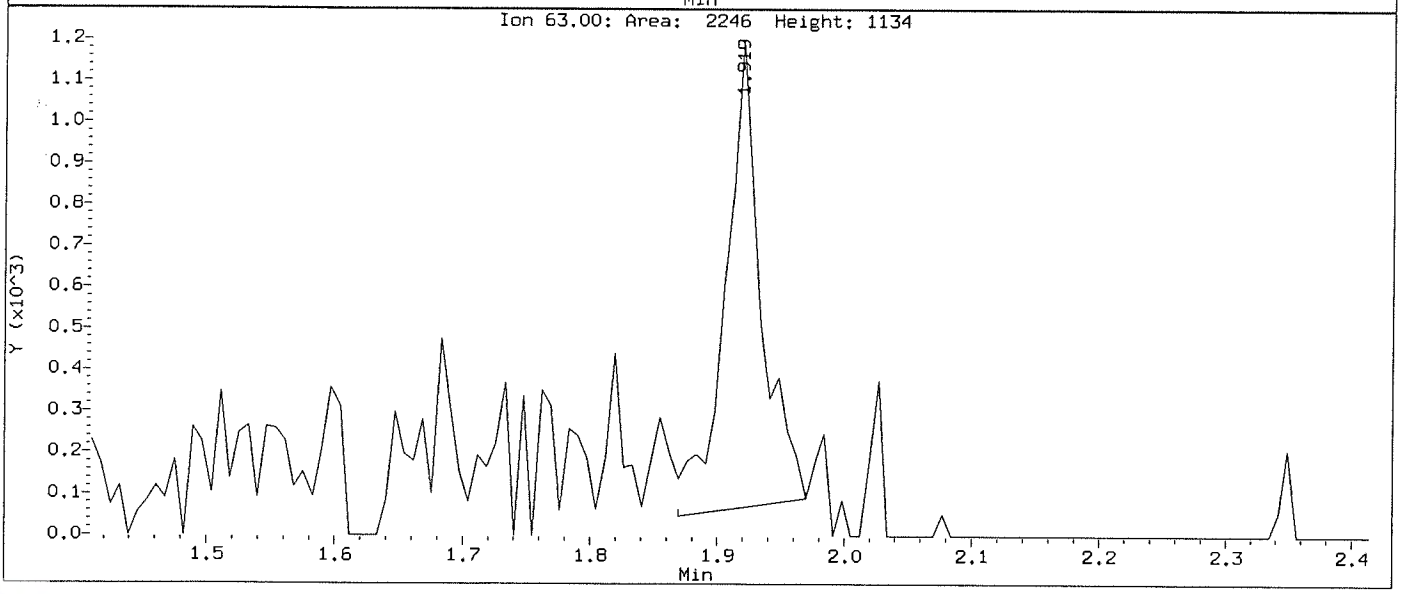
Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\NAHSTWS005\Target\chem\voa6.i\X210402.b\Before6\X040203.D
Injection Date: 02-APR-2021 11:35
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: 1,1-Dichloroethene
CAS Number: 75-35-4

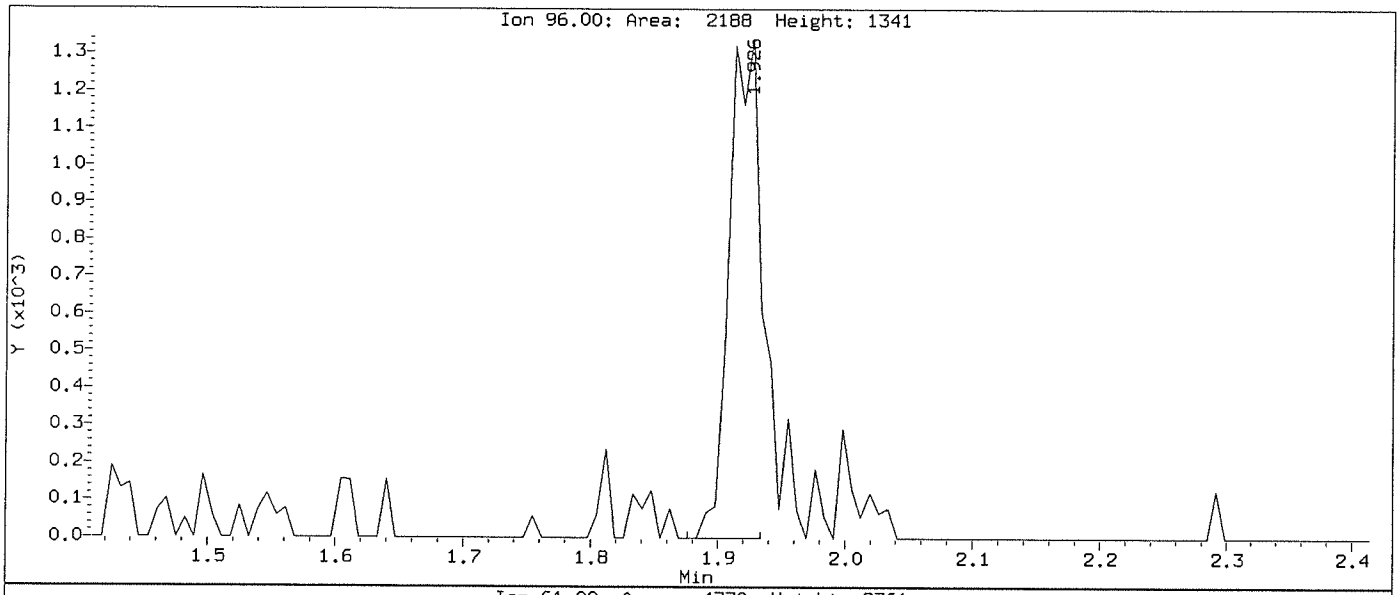


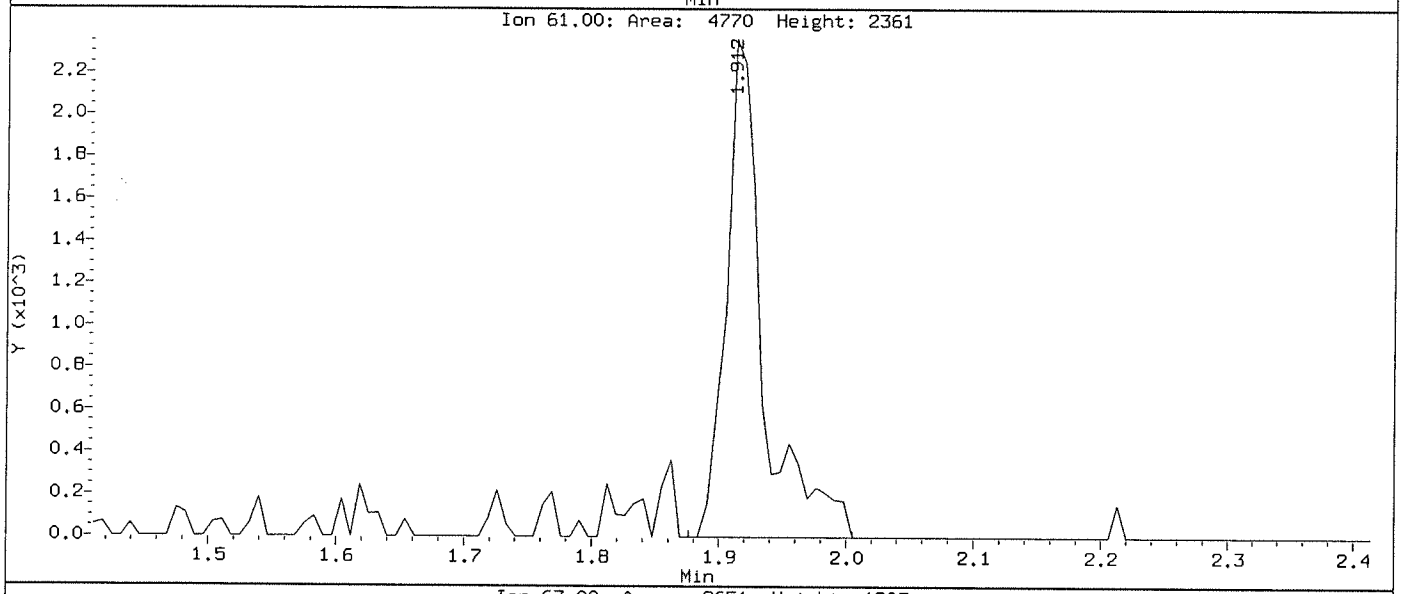


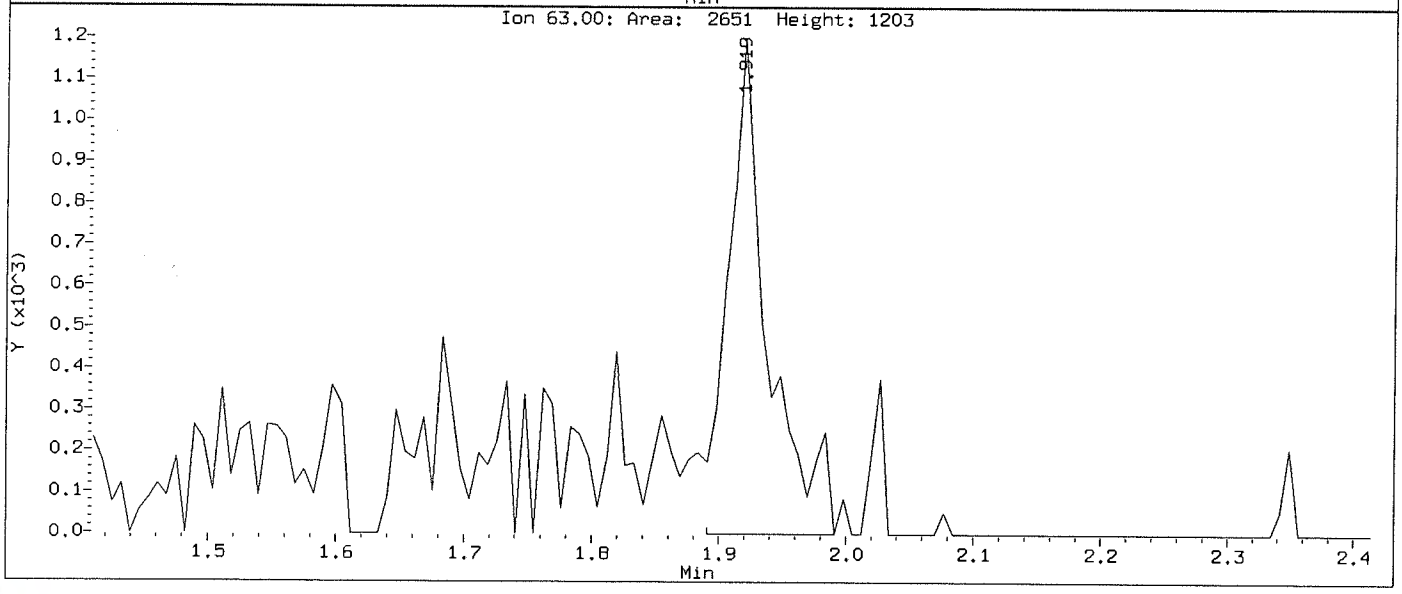


Data File: \\NAHSTWS005\Target\chem\voa6.i\X210402.b\X040203.D
Injection Date: 02-APR-2021 11:35
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: 1,1-Dichloroethene
CAS Number: 75-35-4

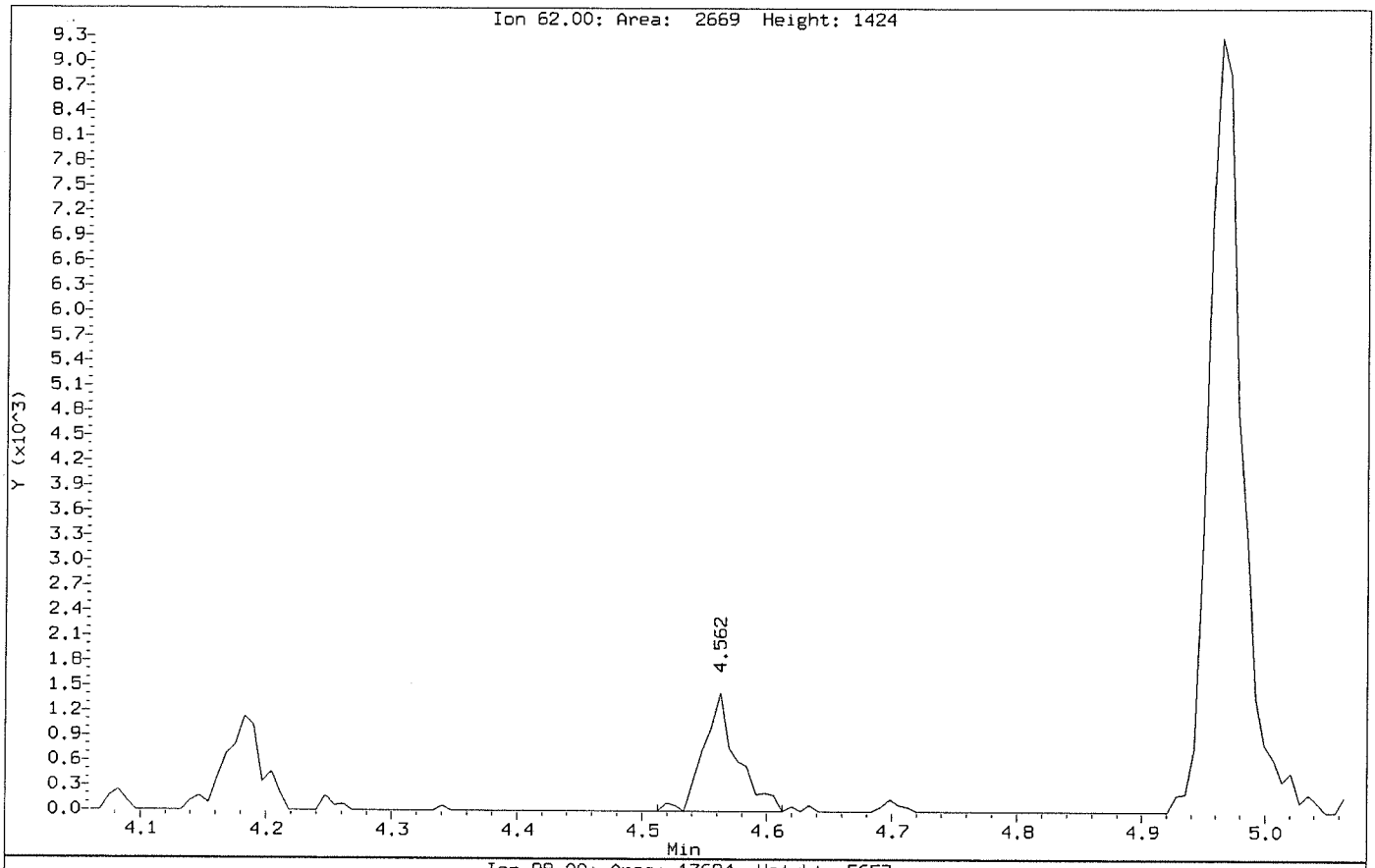


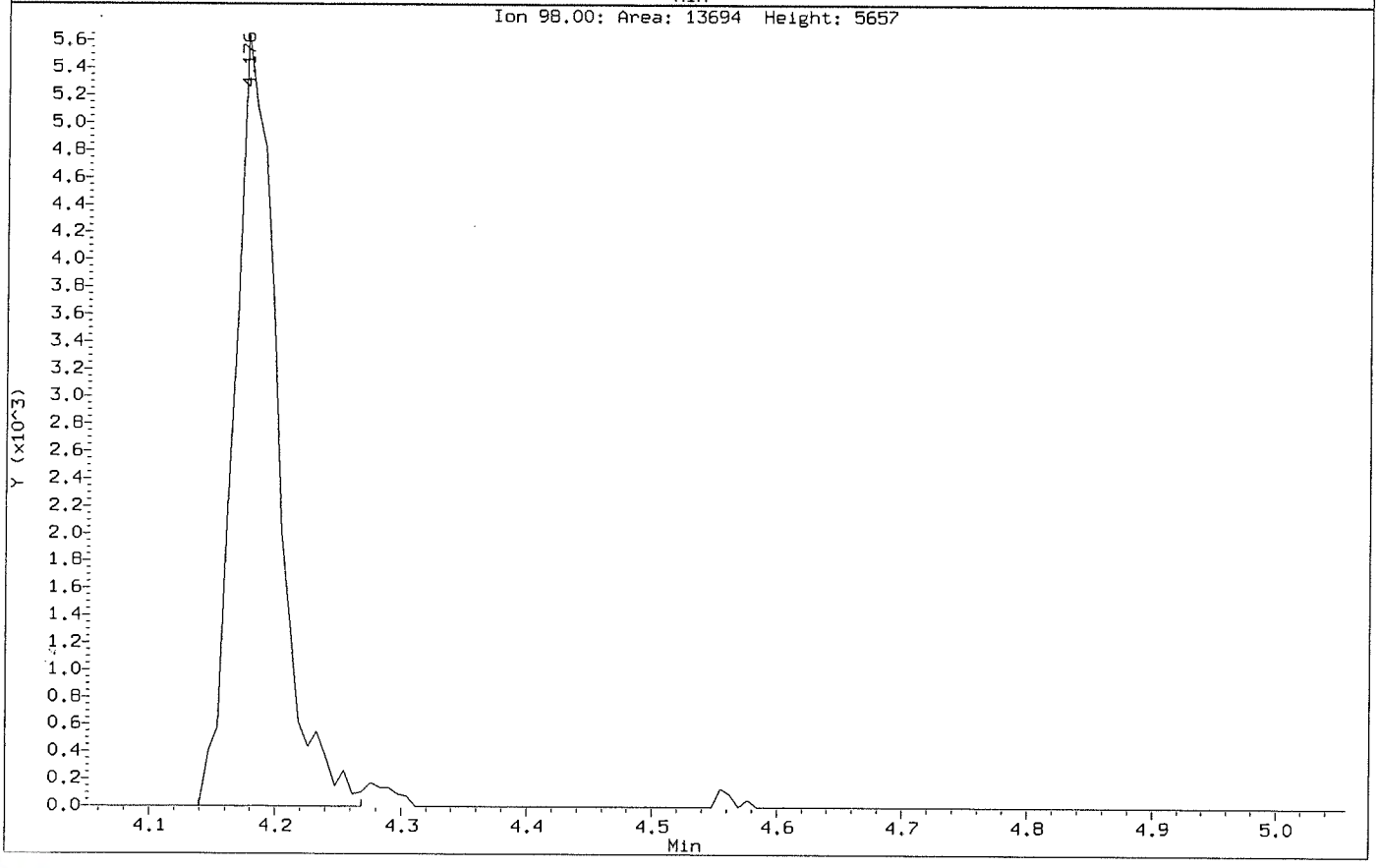




Data File: \\NAHSTWS005\Target\chem\voa6.i\X210402.b\Before6\X040203.D
Injection Date: 02-APR-2021 11:35
Instrument: voa6.i
Client Sample ID: VSTD000.5

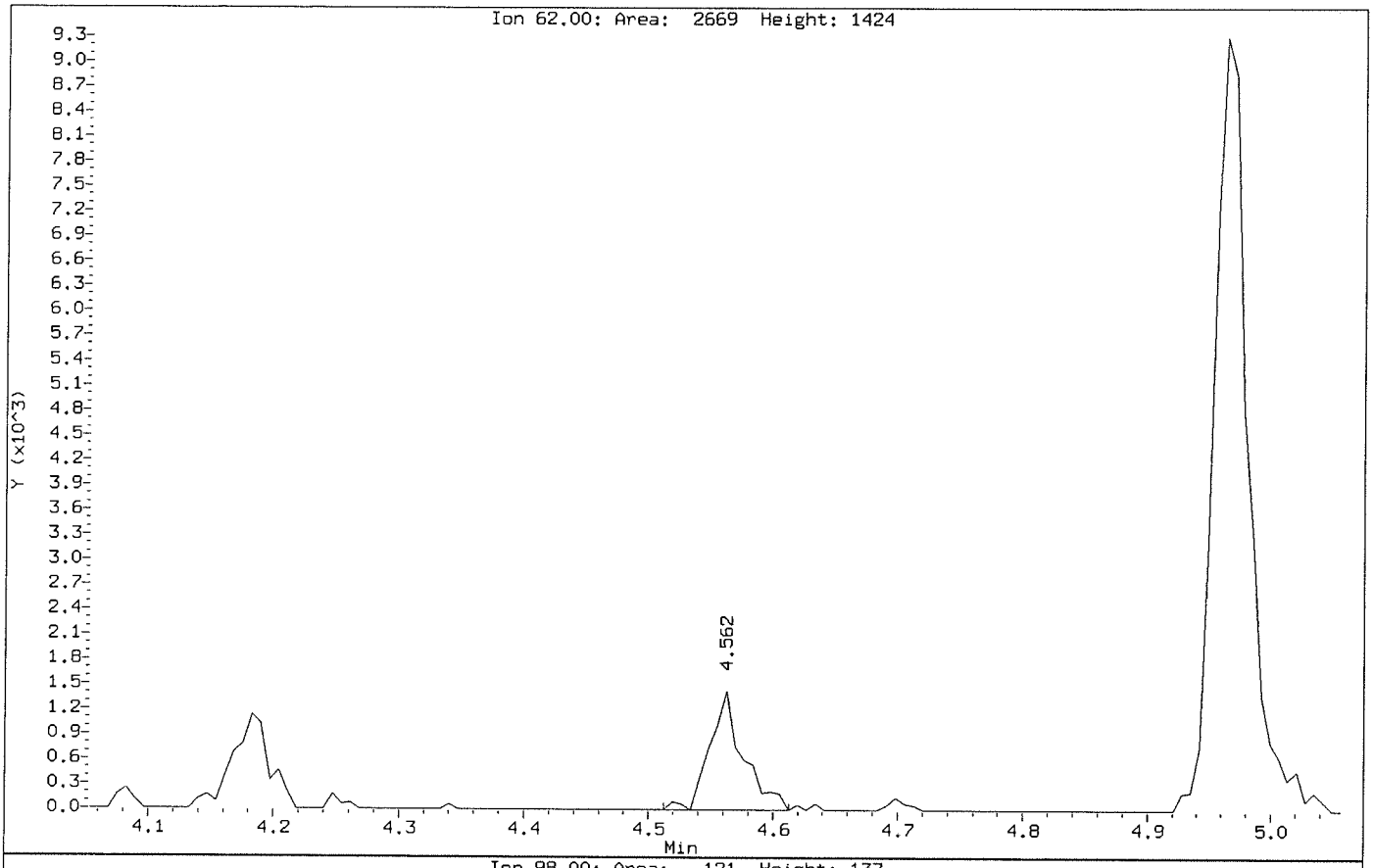
Compound: 1,2-Dichloroethane
CAS Number: 107-06-2

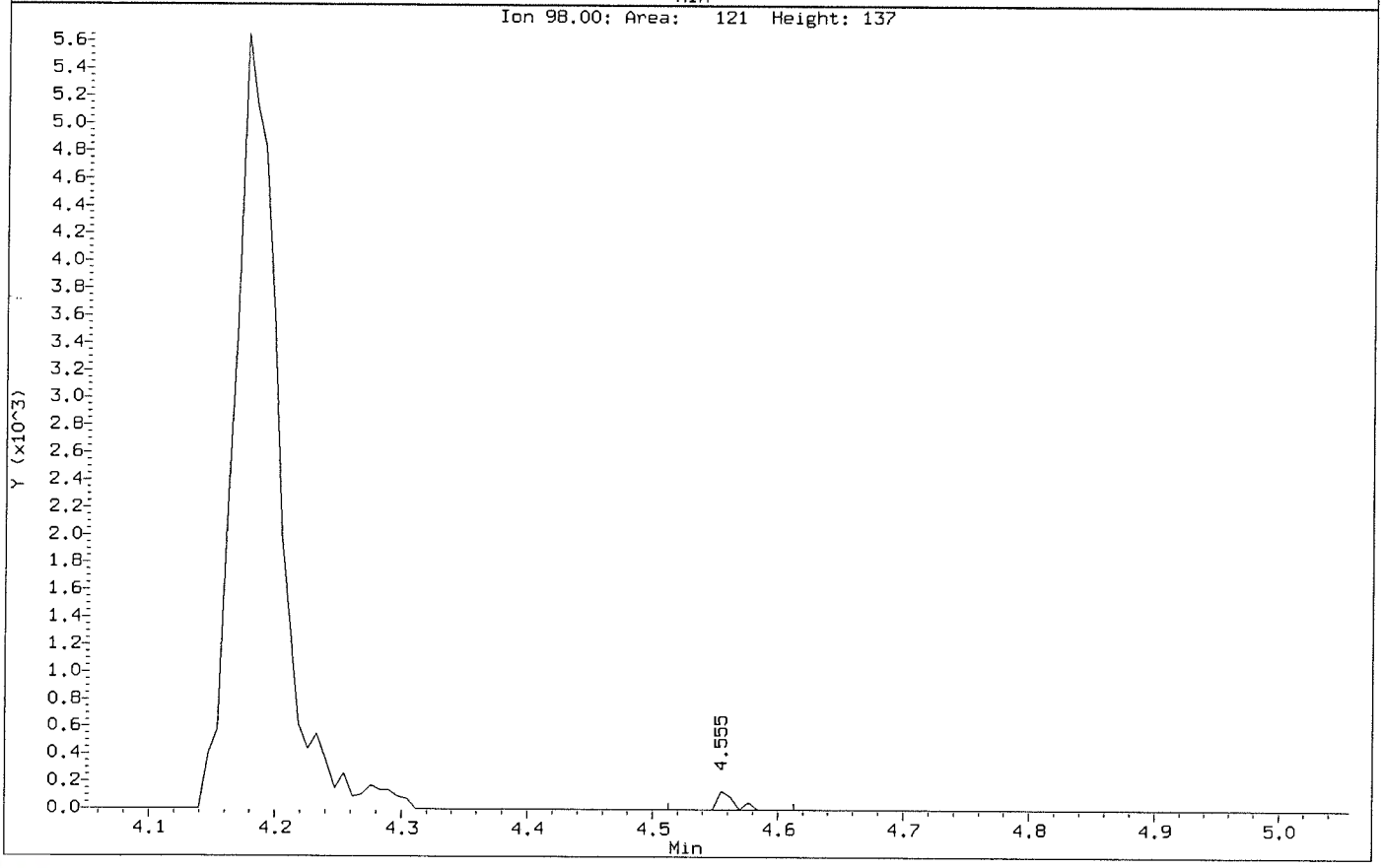




Data File: \\NAHSTWS005\Target\chem\voa6.i\X210402.b\X040203.D
Injection Date: 02-APR-2021 11:35
Instrument: voa6.i
Client Sample ID: VSTD000.5

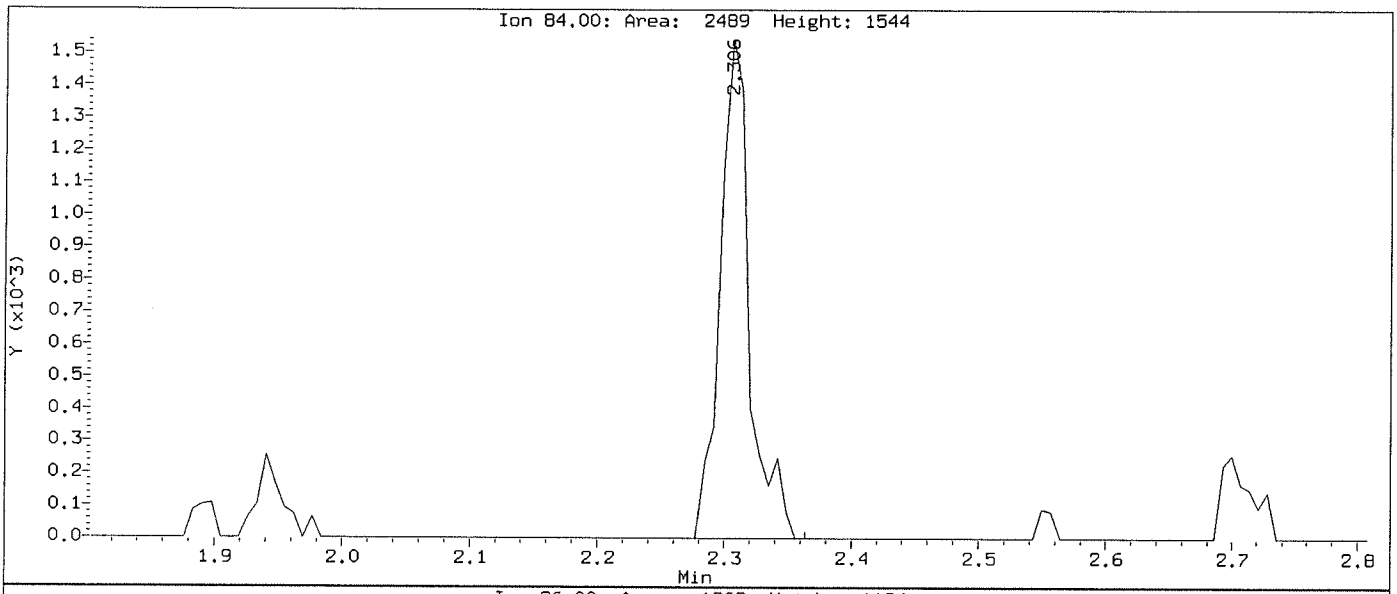
Compound: 1,2-Dichloroethane
CAS Number: 107-06-2

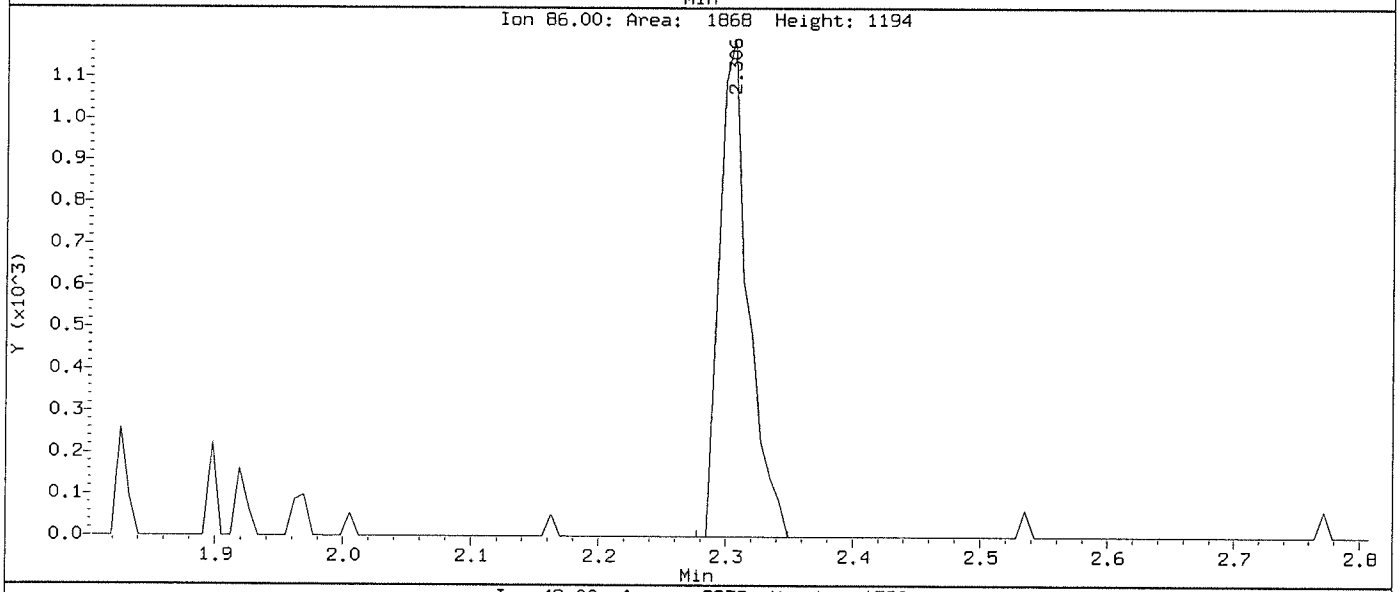


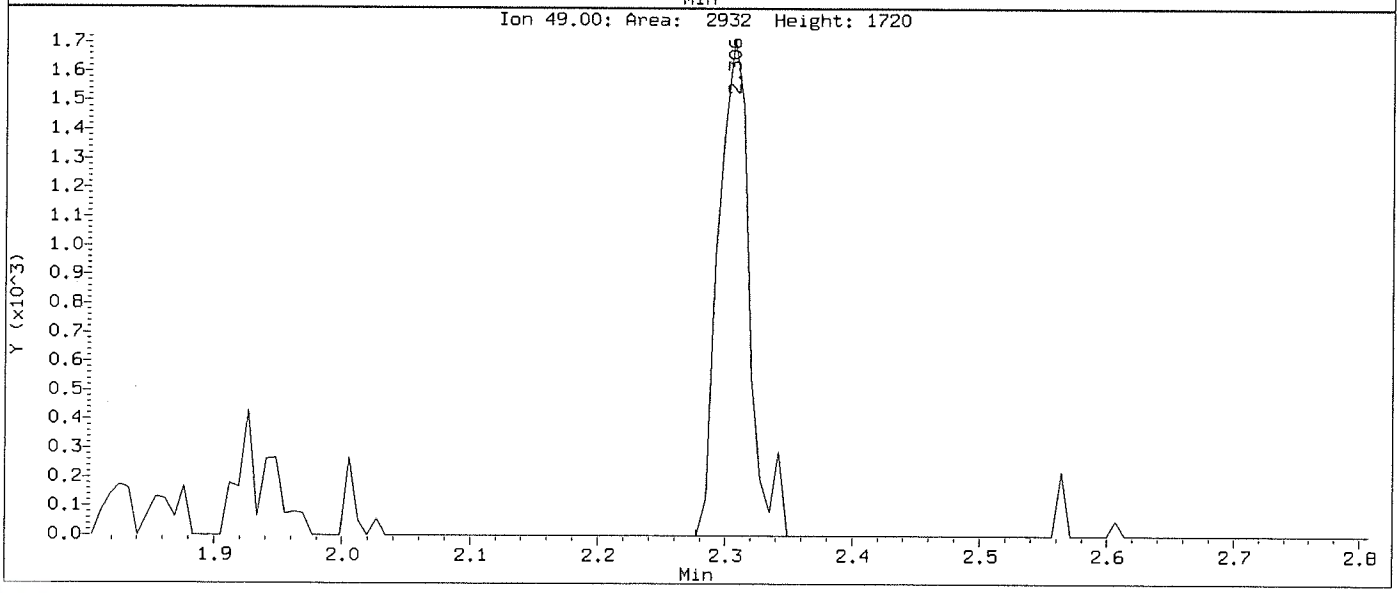


Data File: \\NAHSTWS005\Target\chem\voa6.i\X210402.b\Before6\X040203.D
Injection Date: 02-APR-2021 11:35
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Methylene Chloride
CAS Number: 75-09-2

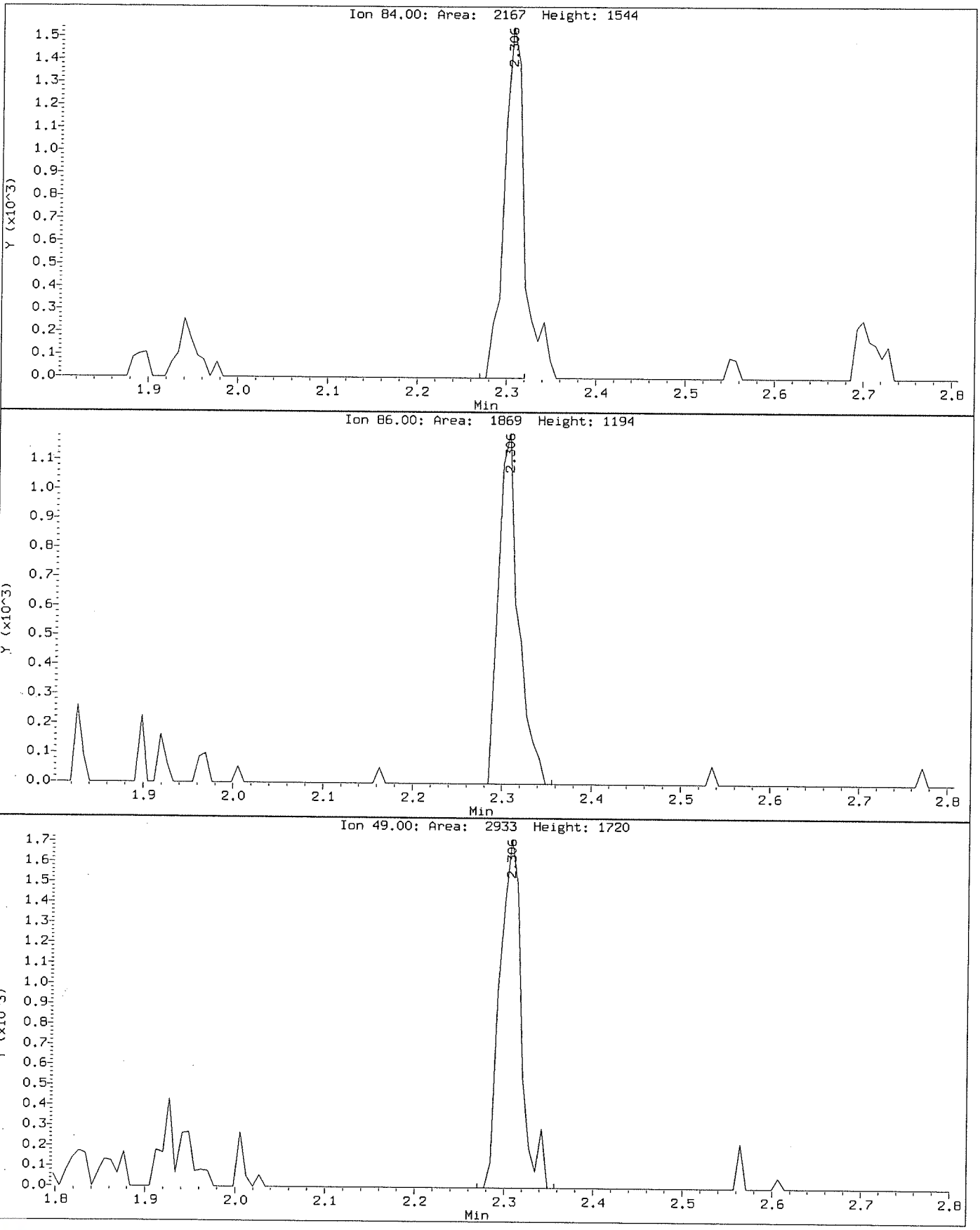






Data File: \\NAHSTWS005\Target\chem\voa6.i\X210402.b\X040203.D
Injection Date: 02-APR-2021 11:35
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Methylene Chloride
CAS Number: 75-09-2



Data File: \\NAHSTWS005\Target\chem\voa6.i\X210402.b\X040204.D Page 1
Report Date: 04-May-2021 11:39

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X210402.b\X040204.D
Lab Smp Id: VSTD001 Client Smp ID: VSTD001
Inj Date : 02-APR-2021 11:56
Operator : PC Inst ID: voa6.i
Smp Info : VSTD001;VSTD001;1;3;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X210402.b\8260W.m
Meth Date : 04-May-2021 11:39 voa6.i Quant Type: ISTD
Cal Date : 02-APR-2021 11:35 Cal File: X040203.D
Als bottle: 5 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBI_short1.sub
Target Version: 4.14
Processing Host: NAHSTW7066

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

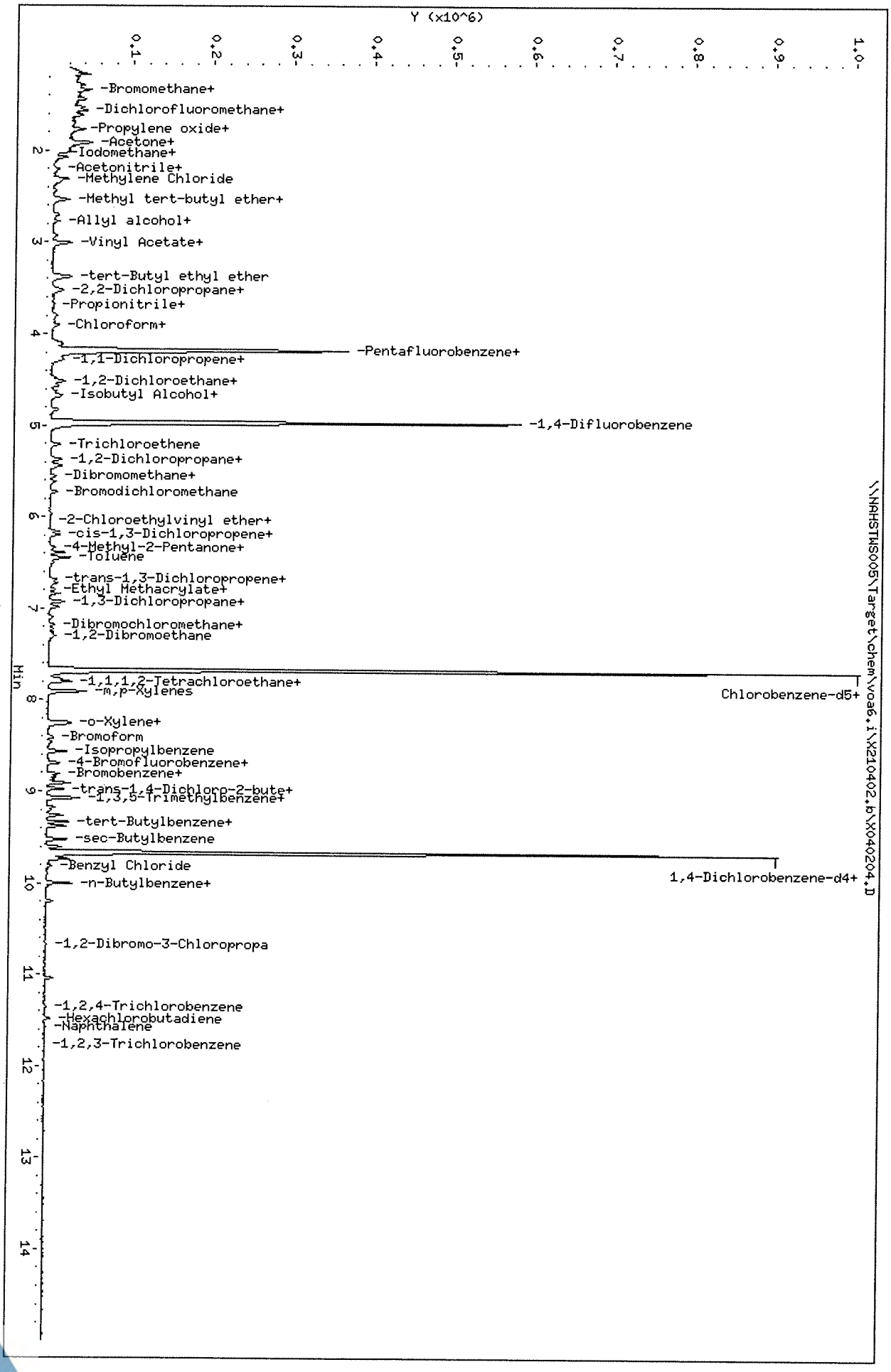
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	278422	50.0000	
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	467952	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	425730	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	185938	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	3862	1.00000	1.60
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	4438	1.00000	1.60
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	12313	1.00000	2.93
$ 69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	4647	1.00000	2.75
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	3024	1.00000	1.22(a)
11 1,1-Dichloroethene	96	1.919	1.919	(0.459)	4199	1.00000	1.05(aM)
33 1,2-Dichloroethane	62	4.562	4.562	(0.919)	5931	1.00000	1.19(aM)
27 cis-1,2-Dichloroethene	96	3.538	3.538	(0.846)	3959	1.00000	1.16
17 Methylene Chloride	84	2.298	2.298	(0.550)	4155	1.00000	2.81(aM)
38 Trichloroethene	130	5.207	5.207	(1.049)	3757	1.00000	1.17(M)
5 Vinyl Chloride	62	1.145	1.145	(0.274)	5253	1.00000	1.25(M)

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.

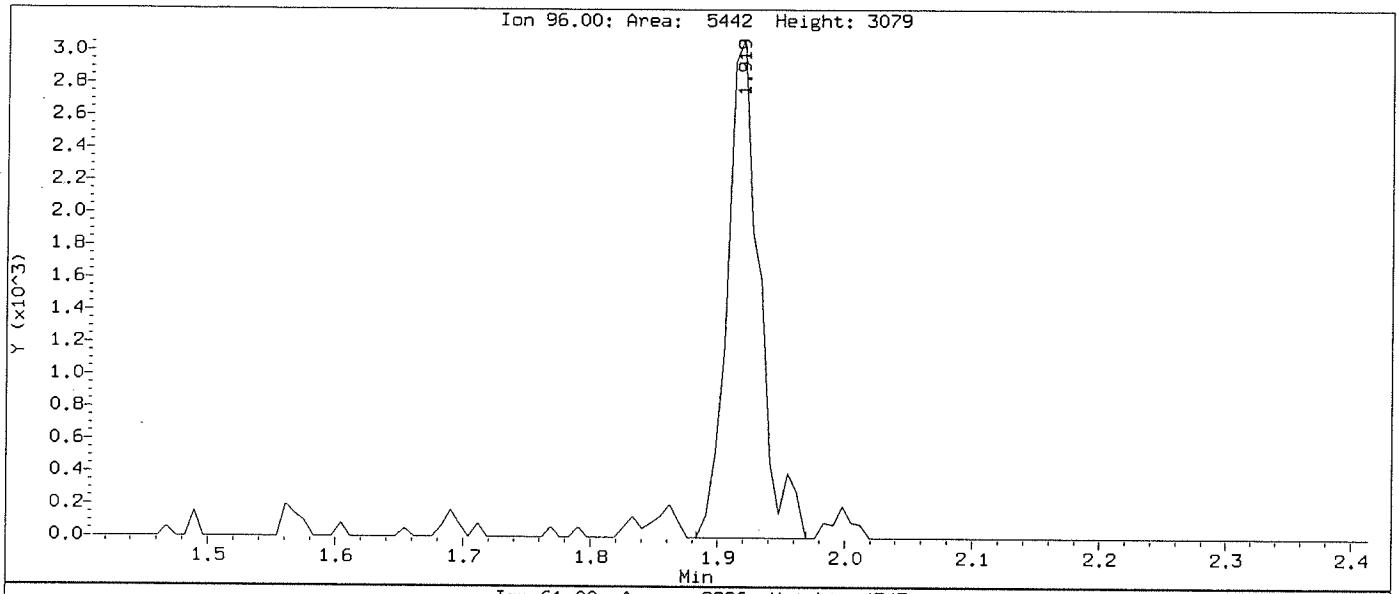
Data File: \\NAHSTWS005\Target\chem\voa6.i\X210402.b\X040204.D
Date : 02-APR-2021 11:56
Client ID: VSTD001
Sample Info: VSTD001;VSTD001;1;3;;
Purge Volume: 5.0
Column phase: DB624

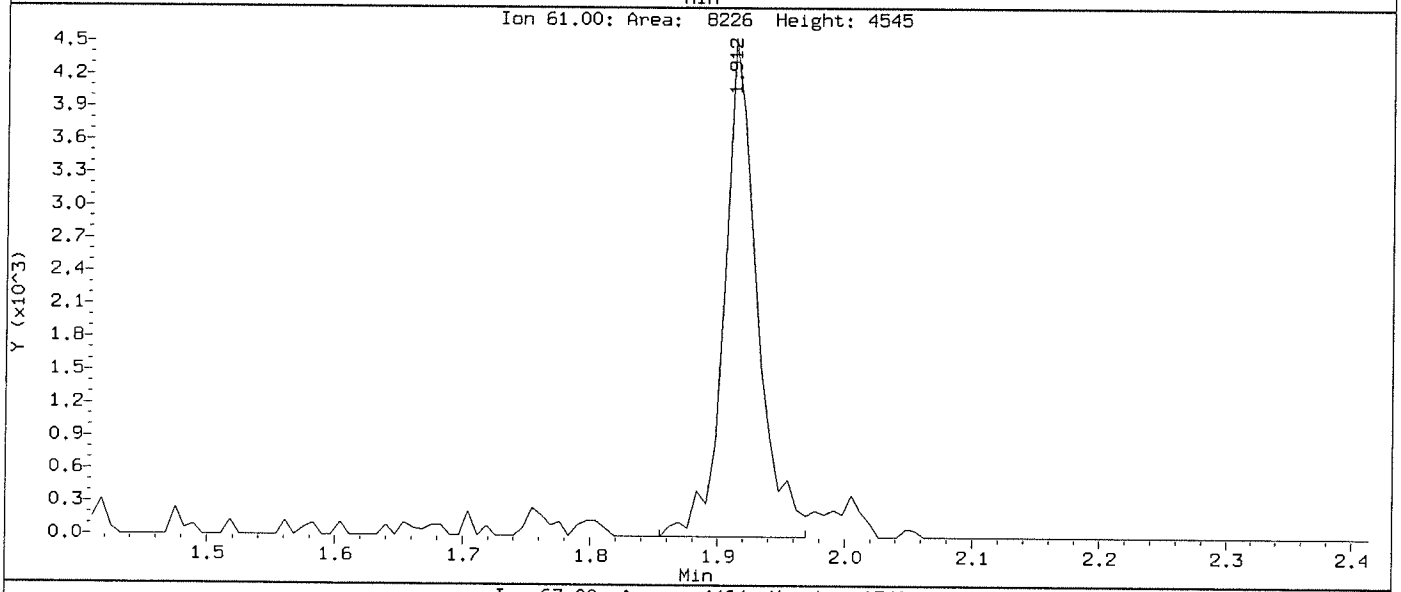
Instrument: voa6.i
Operator: PC
Column diameter: 0.18

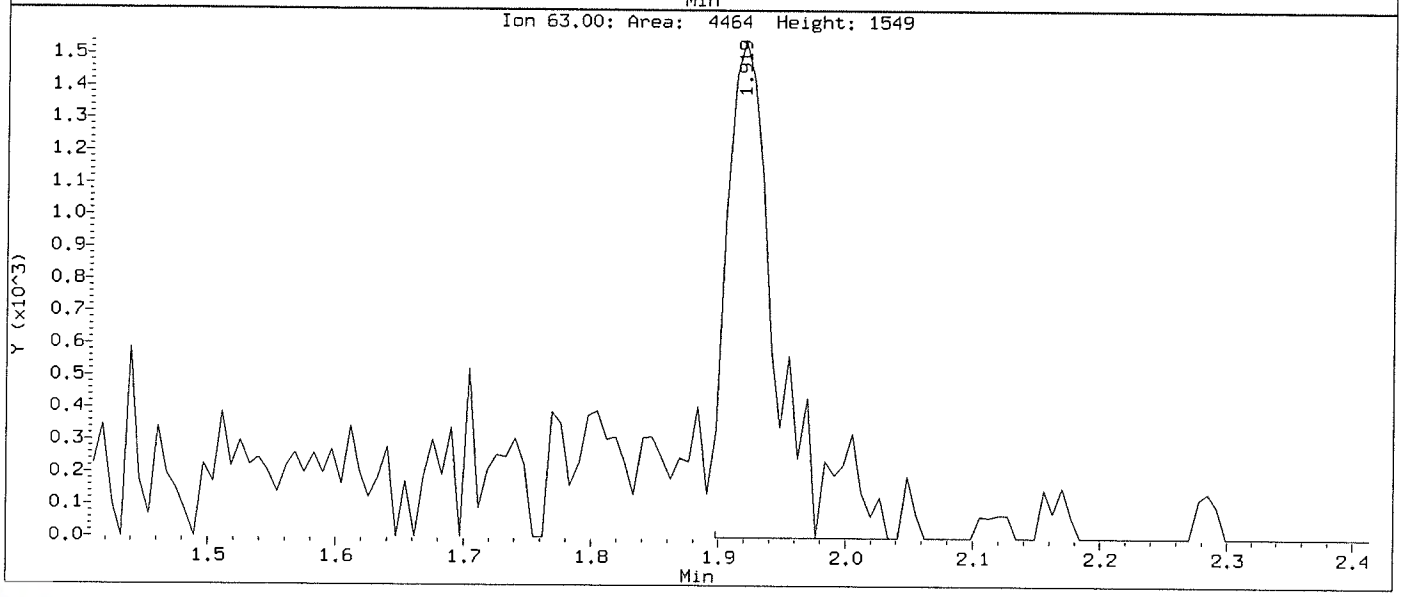


Data File: \\NAHSTWS005\Target\chem\voa6.i\X210402.b\Before6\X040204.D
Injection Date: 02-APR-2021 11:56
Instrument: voa6.i
Client Sample ID: VSTD001

Compound: 1,1-Dichloroethene
CAS Number: 75-35-4

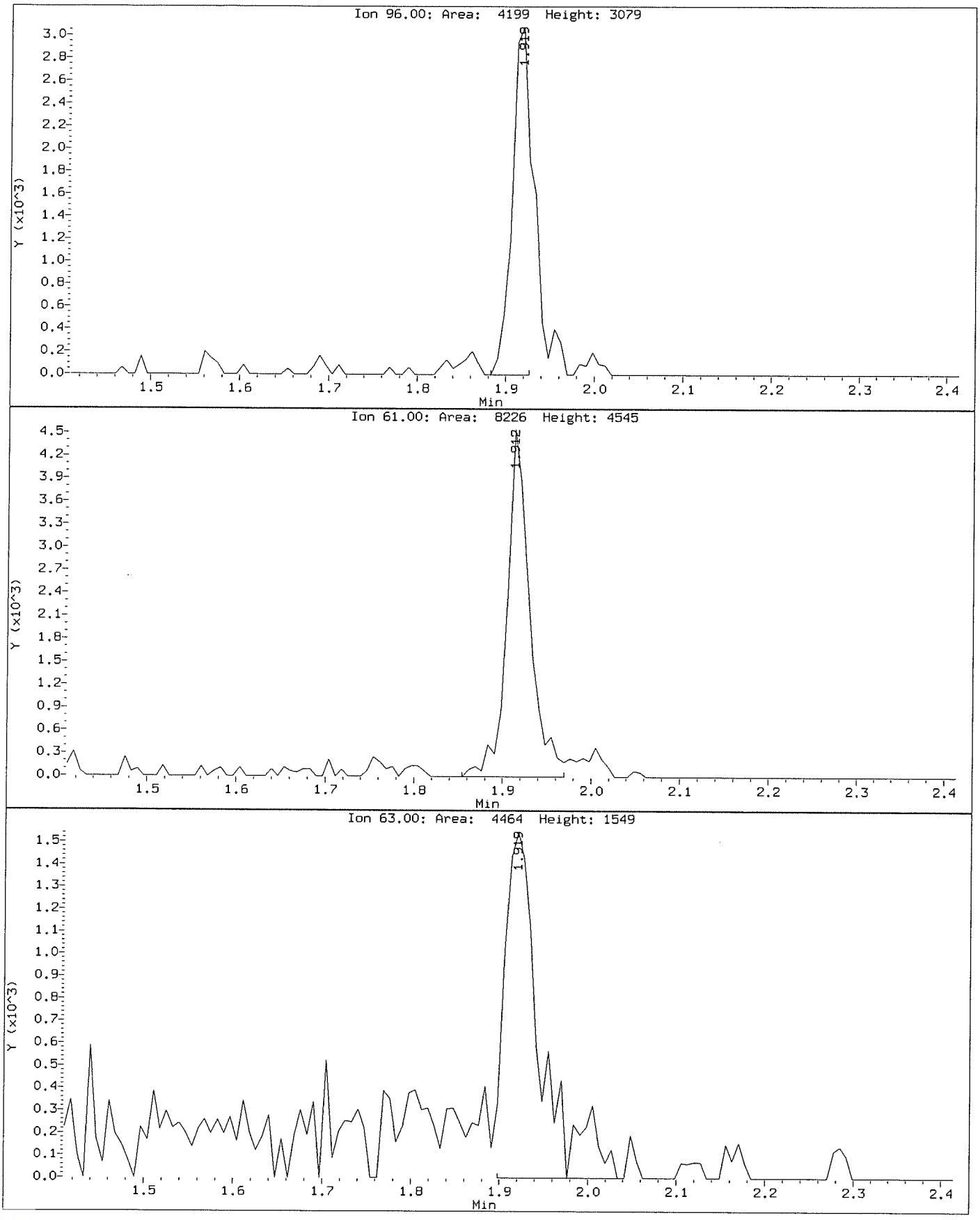






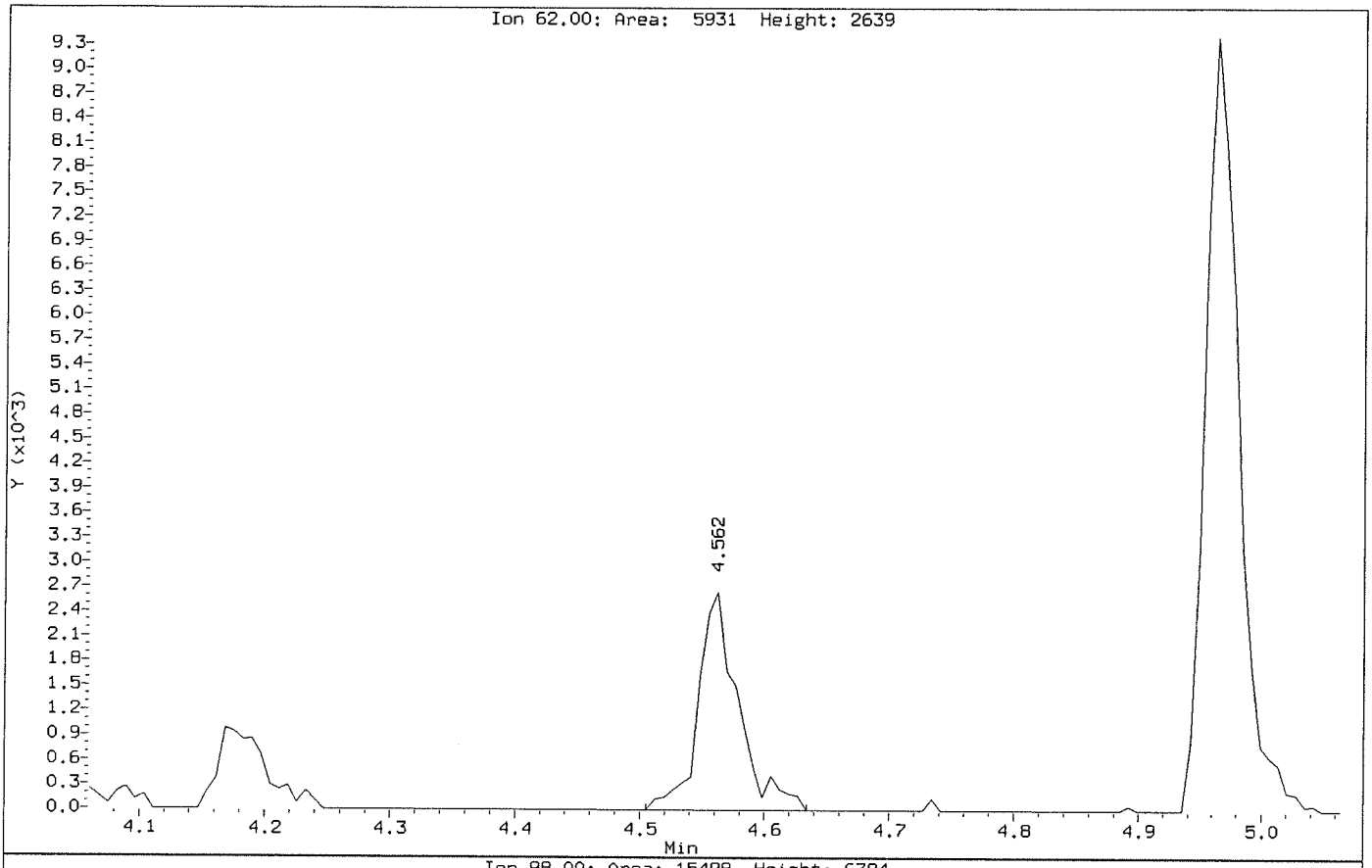
Data File: \\NAHSTWS005\Target\chem\voa6.i\X210402.b\X040204.D
Injection Date: 02-APR-2021 11:56
Instrument: voa6.i
Client Sample ID: VSTD001

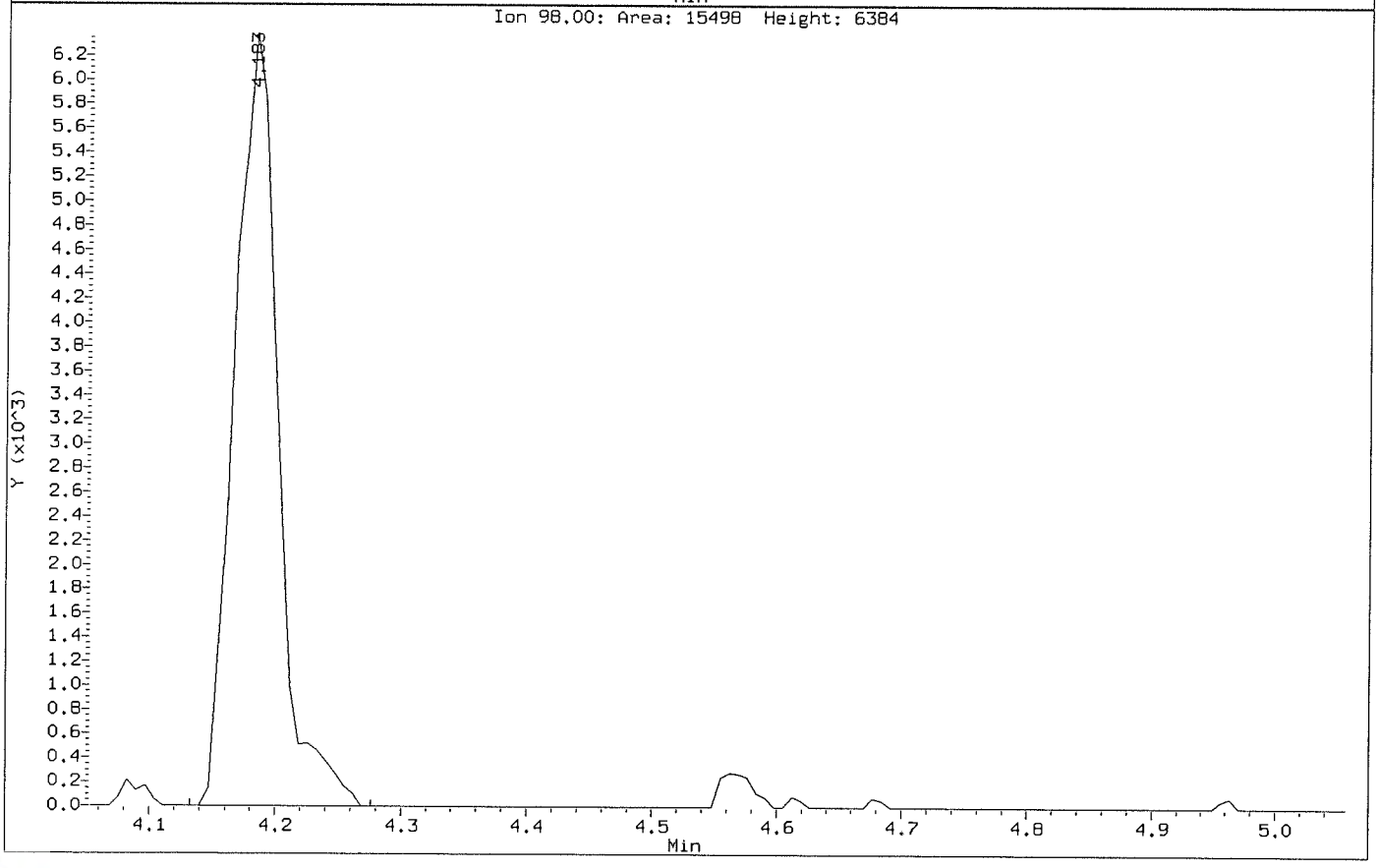
Compound: 1,1-Dichloroethene
CAS Number: 75-35-4



Data File: \\NAHSTWS005\Target\chem\voa6.i\X210402.b\Before6\X040204.D
Injection Date: 02-APR-2021 11:56
Instrument: voa6.i
Client Sample ID: VSTD001

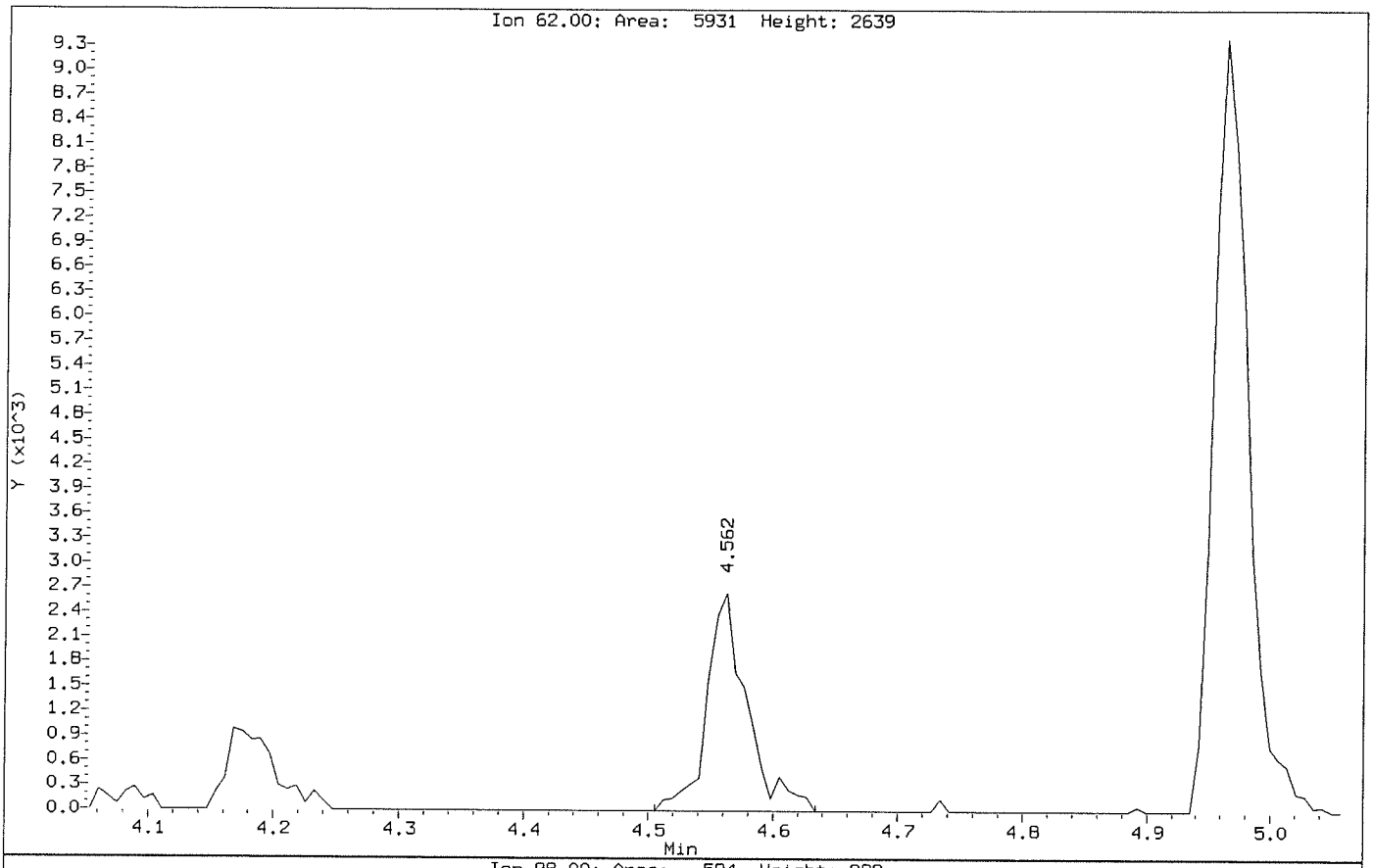
Compound: 1,2-Dichloroethane
CAS Number: 107-06-2

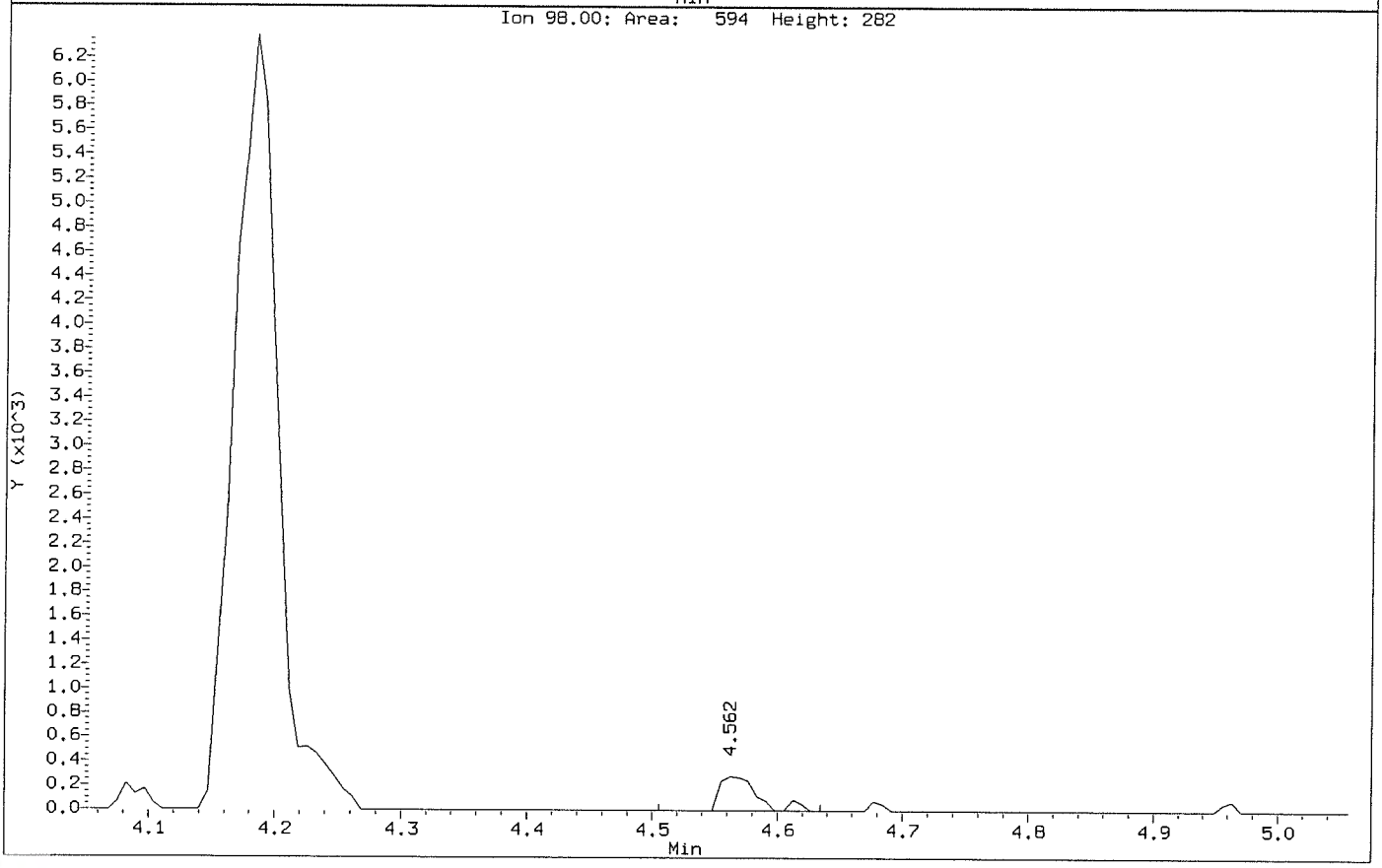




Data File: \\NAHSTWS005\Target\chem\voa6.i\X210402.b\X040204.D
Injection Date: 02-APR-2021 11:56
Instrument: voa6.i
Client Sample ID: VSTD001

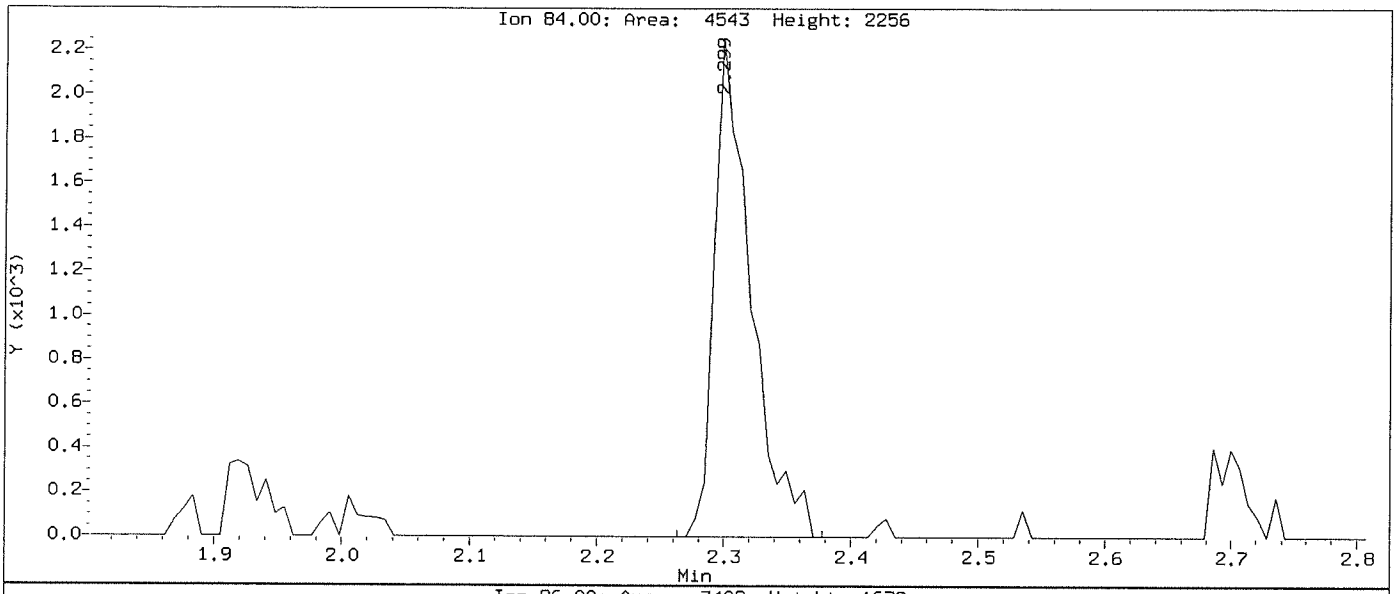
Compound: 1,2-Dichloroethane
CAS Number: 107-06-2

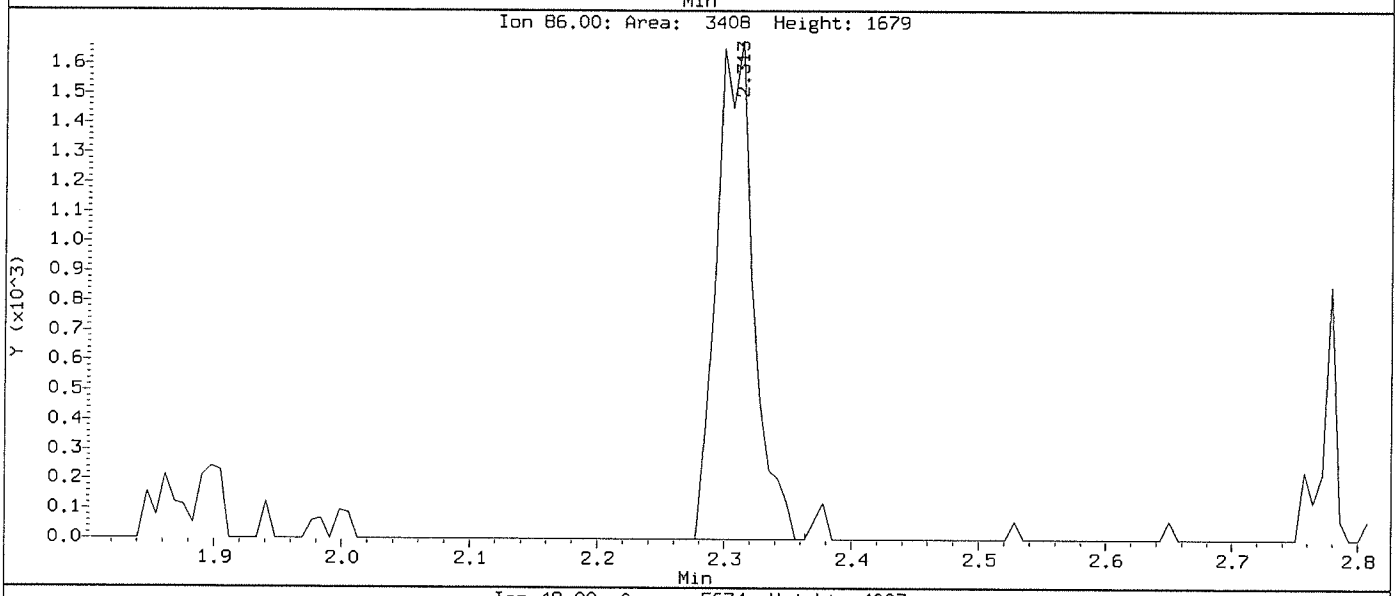


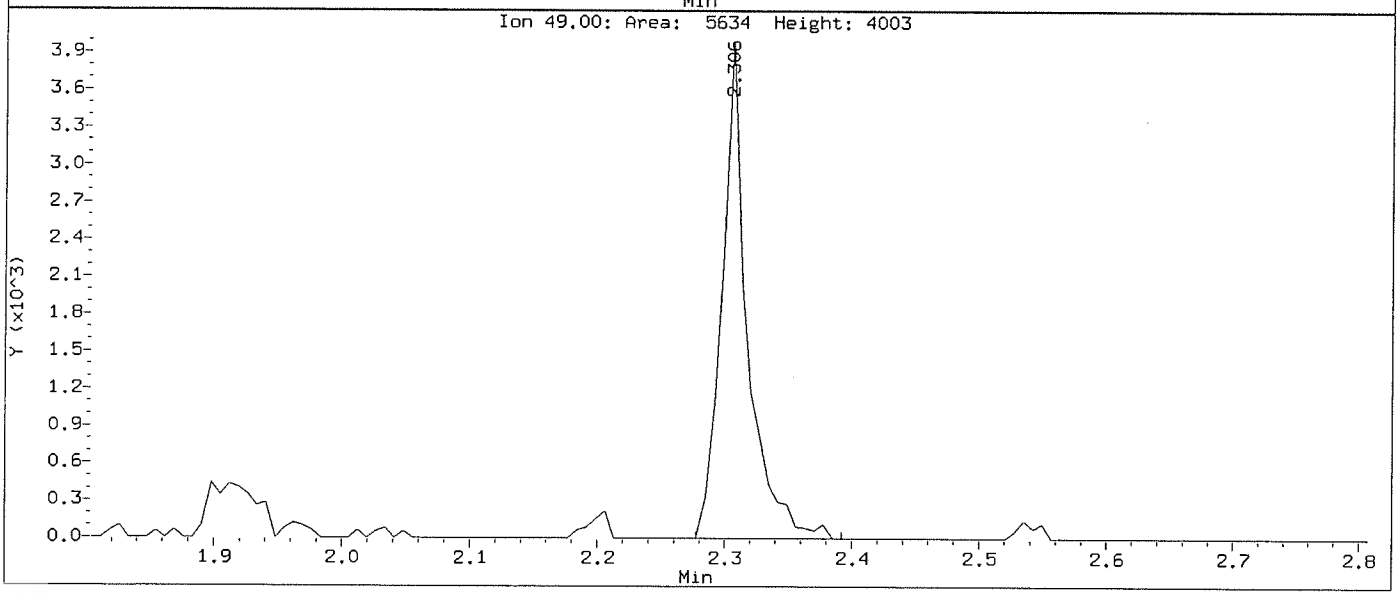


Data File: \\NAHSTWS005\Target\chem\voa6.i\X210402.b\Before6\X040204.D
Injection Date: 02-APR-2021 11:56
Instrument: voa6.i
Client Sample ID: VSTD001

Compound: Methylene Chloride
CAS Number: 75-09-2

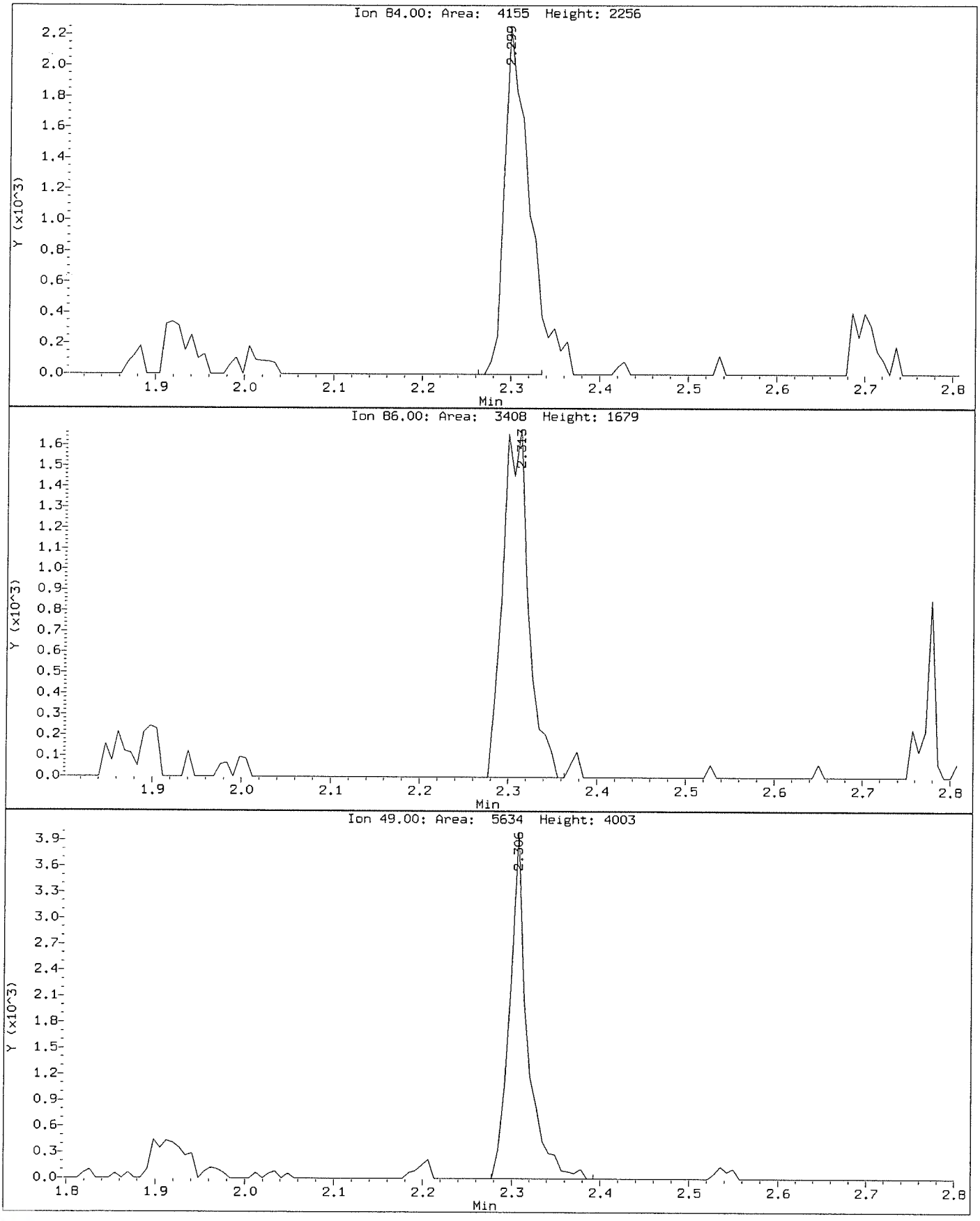






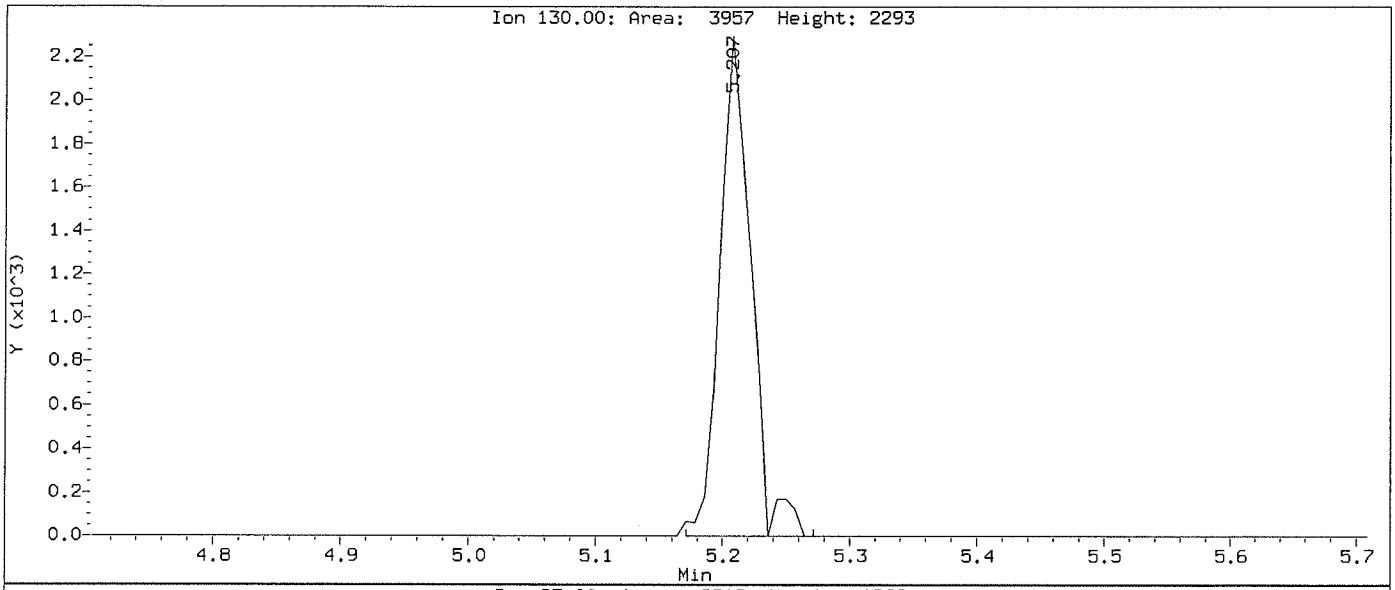
Data File: \\NAHSTWS005\Target\chem\voa6.i\X210402.b\X040204.D
Injection Date: 02-APR-2021 11:56
Instrument: voa6.i
Client Sample ID: VSTD001

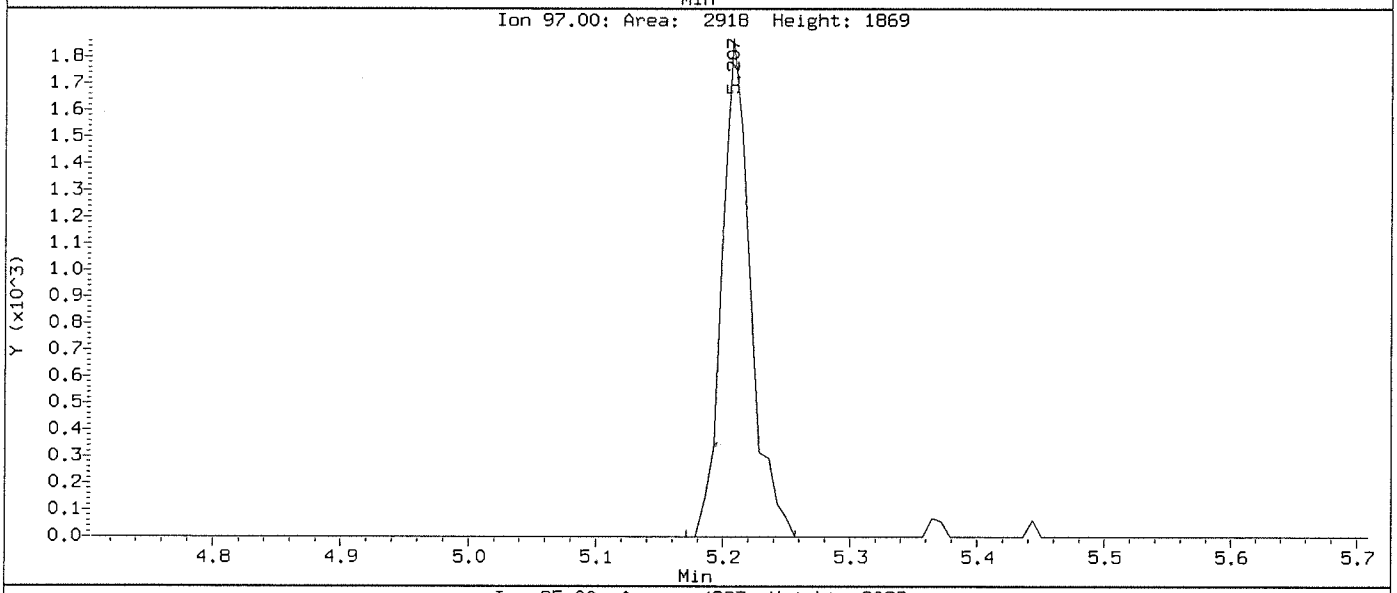
Compound: Methylene Chloride
CAS Number: 75-09-2

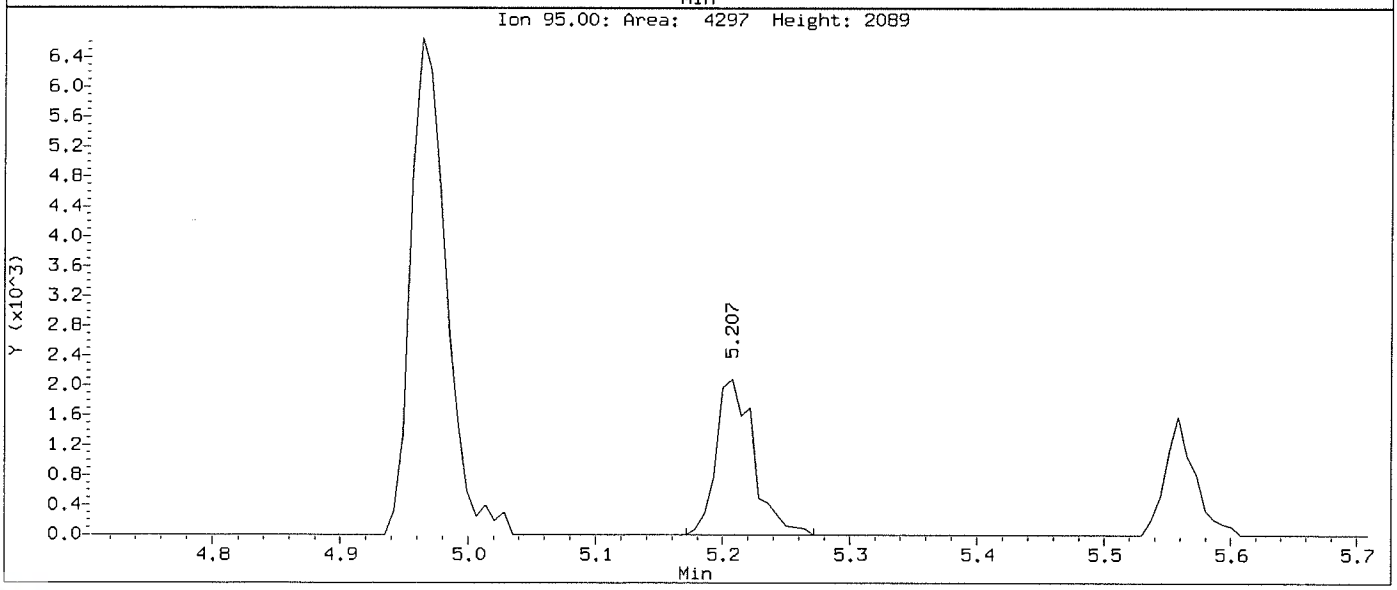


Data File: \\NAHSTWS005\Target\chem\voa6.i\X210402.b\Before6\X040204.D
Injection Date: 02-APR-2021 11:56
Instrument: voa6.i
Client Sample ID: VSTD001

Compound: Trichloroethene
CAS Number: 79-01-6

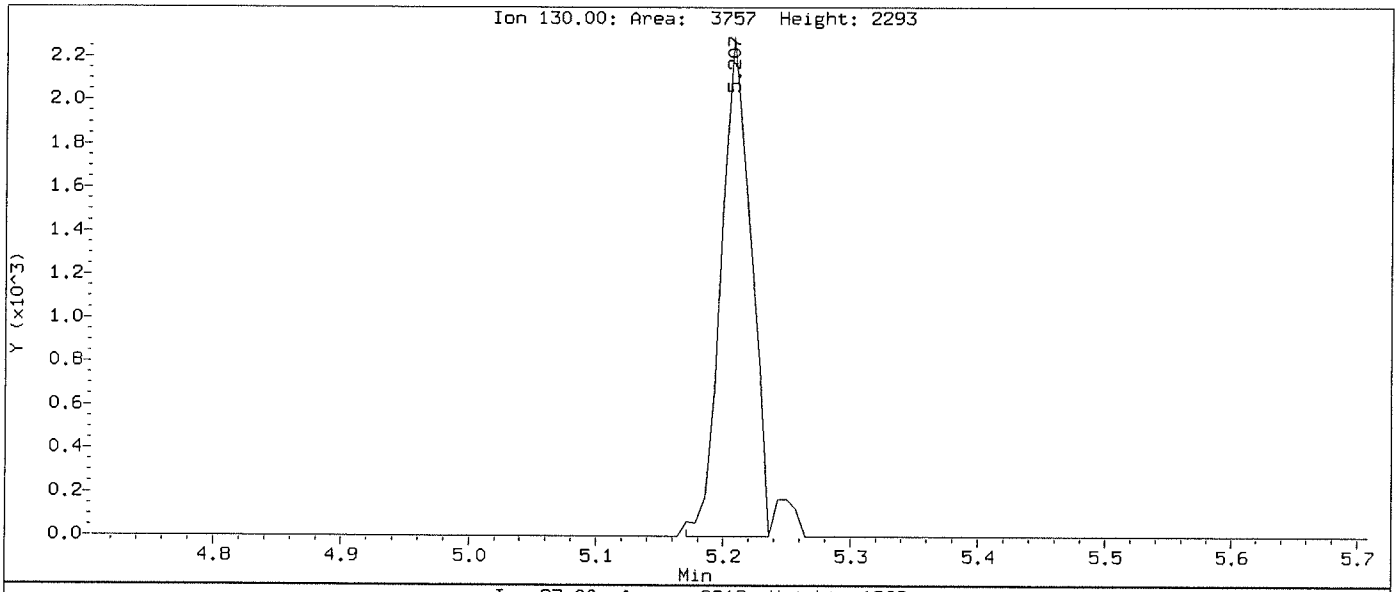


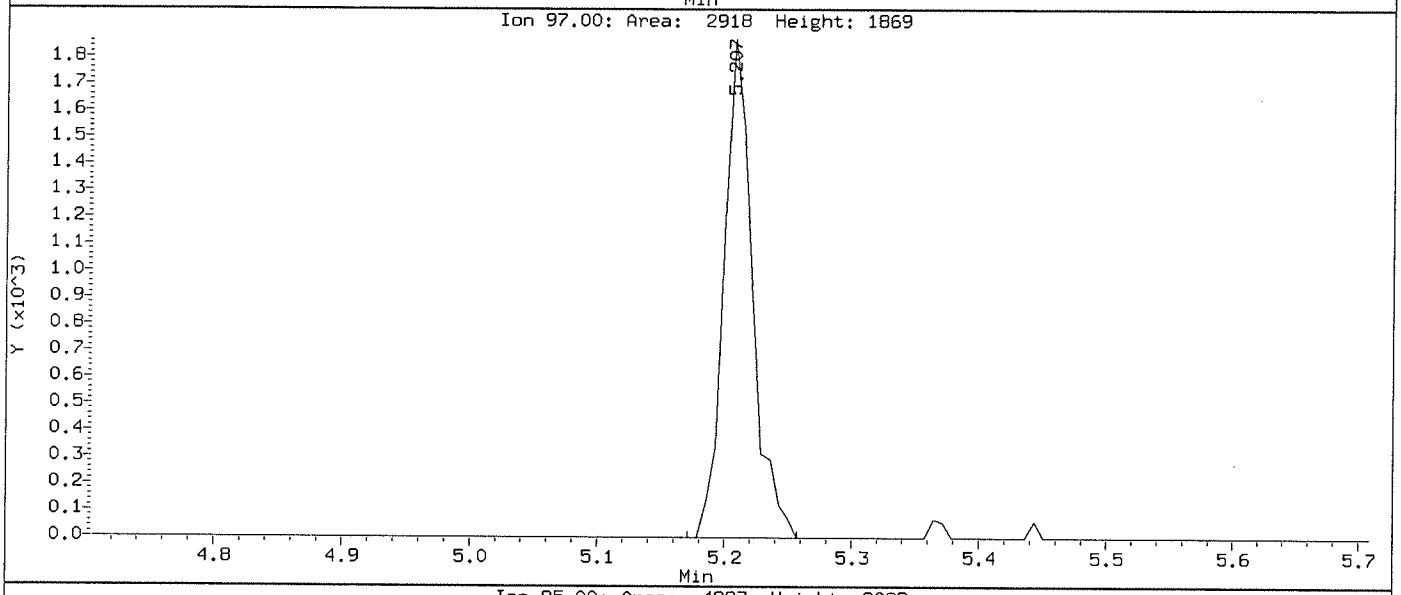


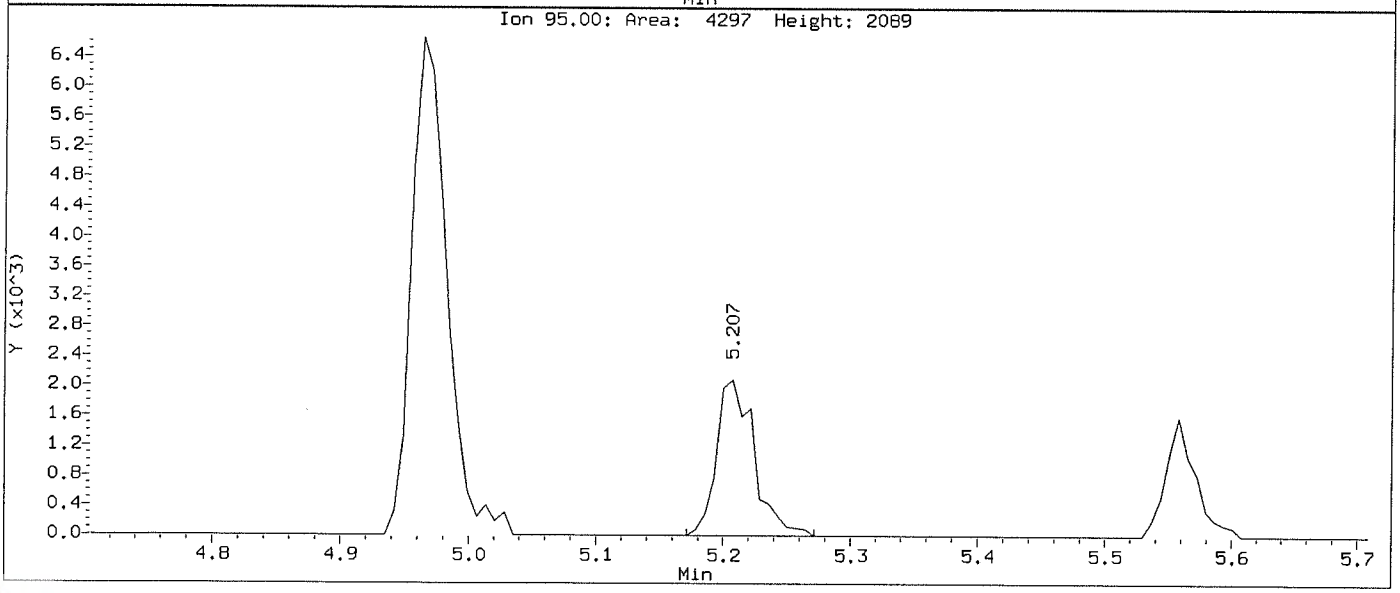


Data File: \\NAHSTWS005\Target\chem\voa6.i\X210402.b\X040204.D
Injection Date: 02-APR-2021 11:56
Instrument: voa6.i
Client Sample ID: VSTD001

Compound: Trichloroethene
CAS Number: 79-01-6

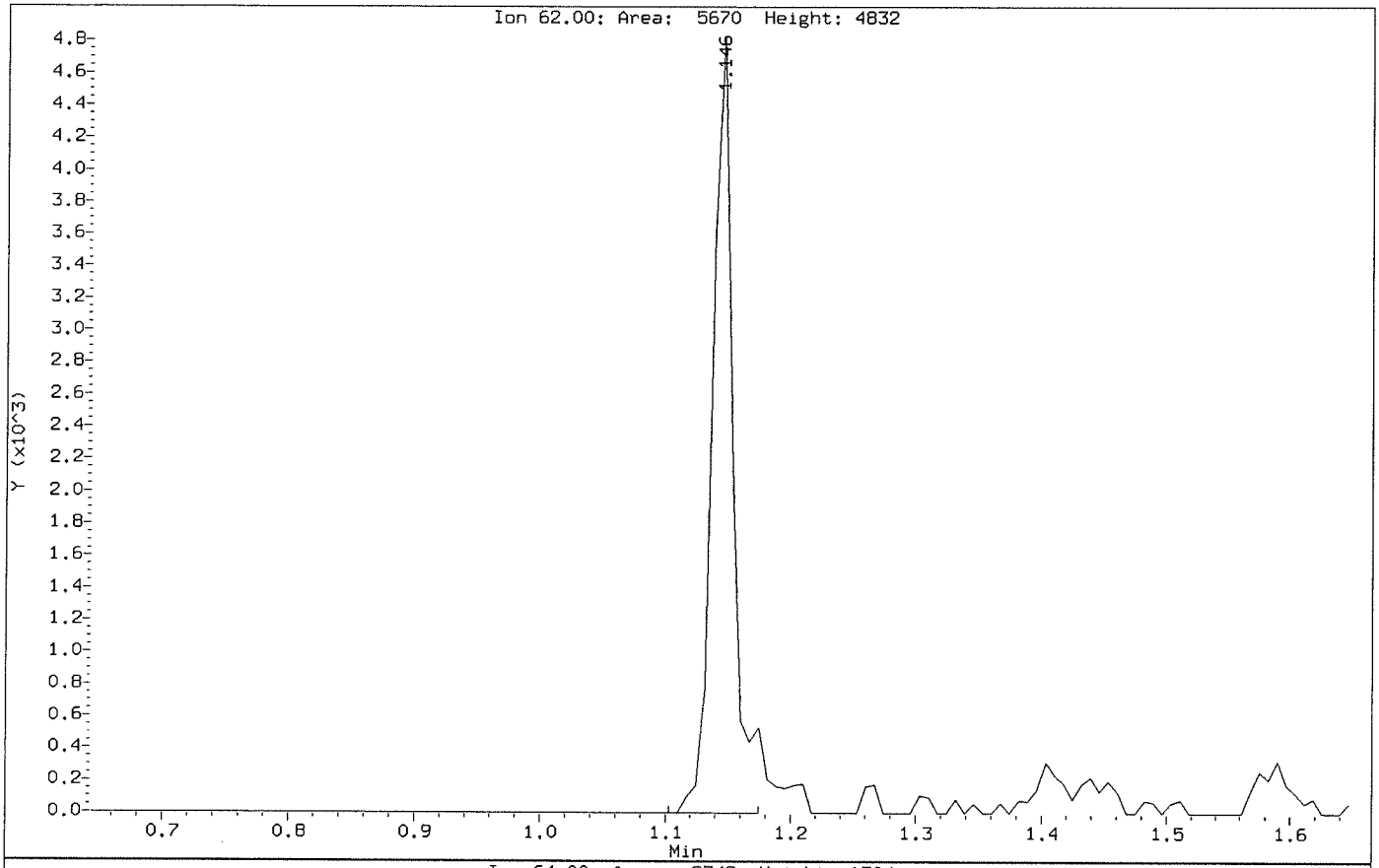


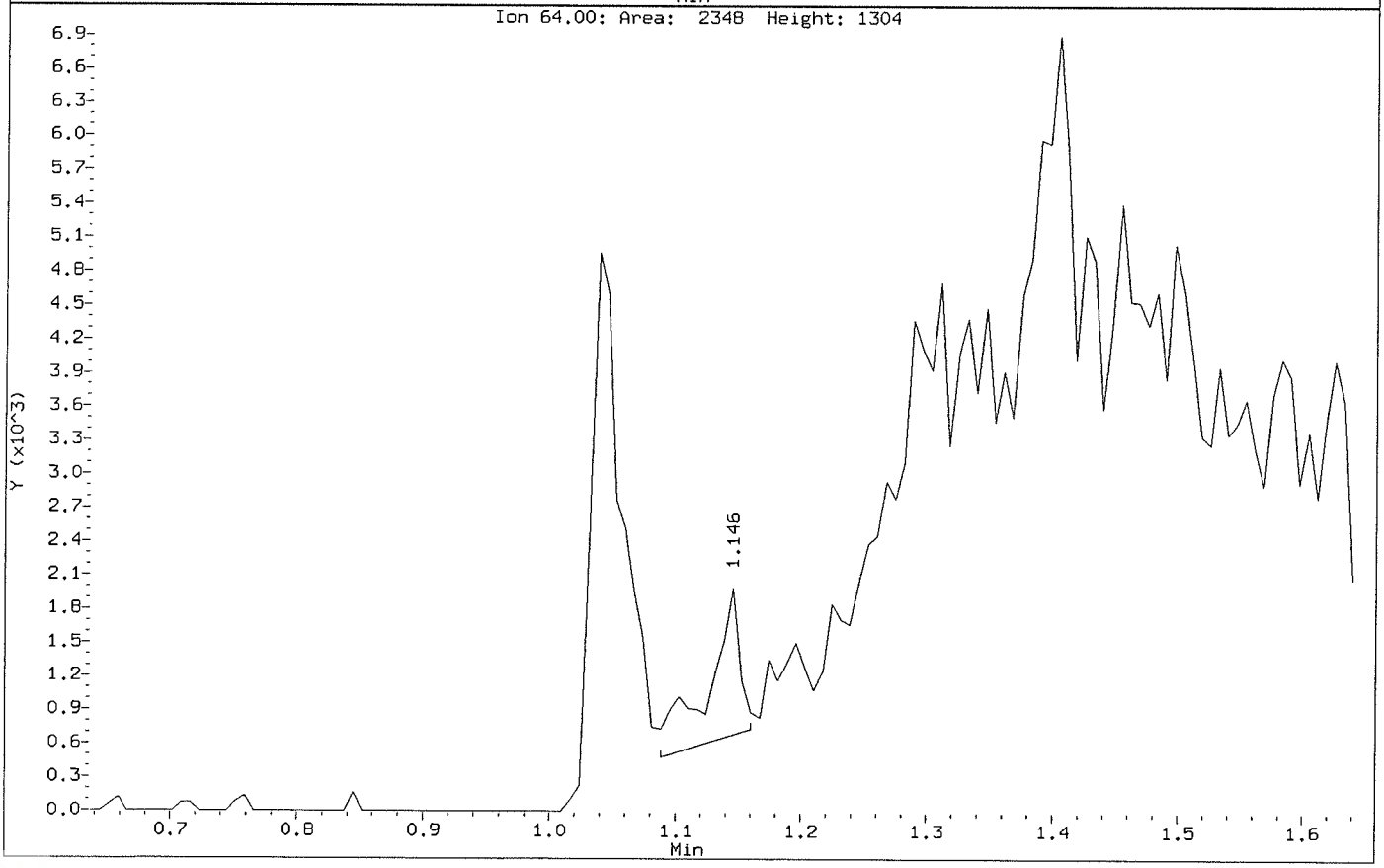




Data File: \\NAHSTWS005\Target\chem\voa6.i\X210402.b\Before6\X040204.D
Injection Date: 02-APR-2021 11:56
Instrument: voa6.i
Client Sample ID: VSTD001

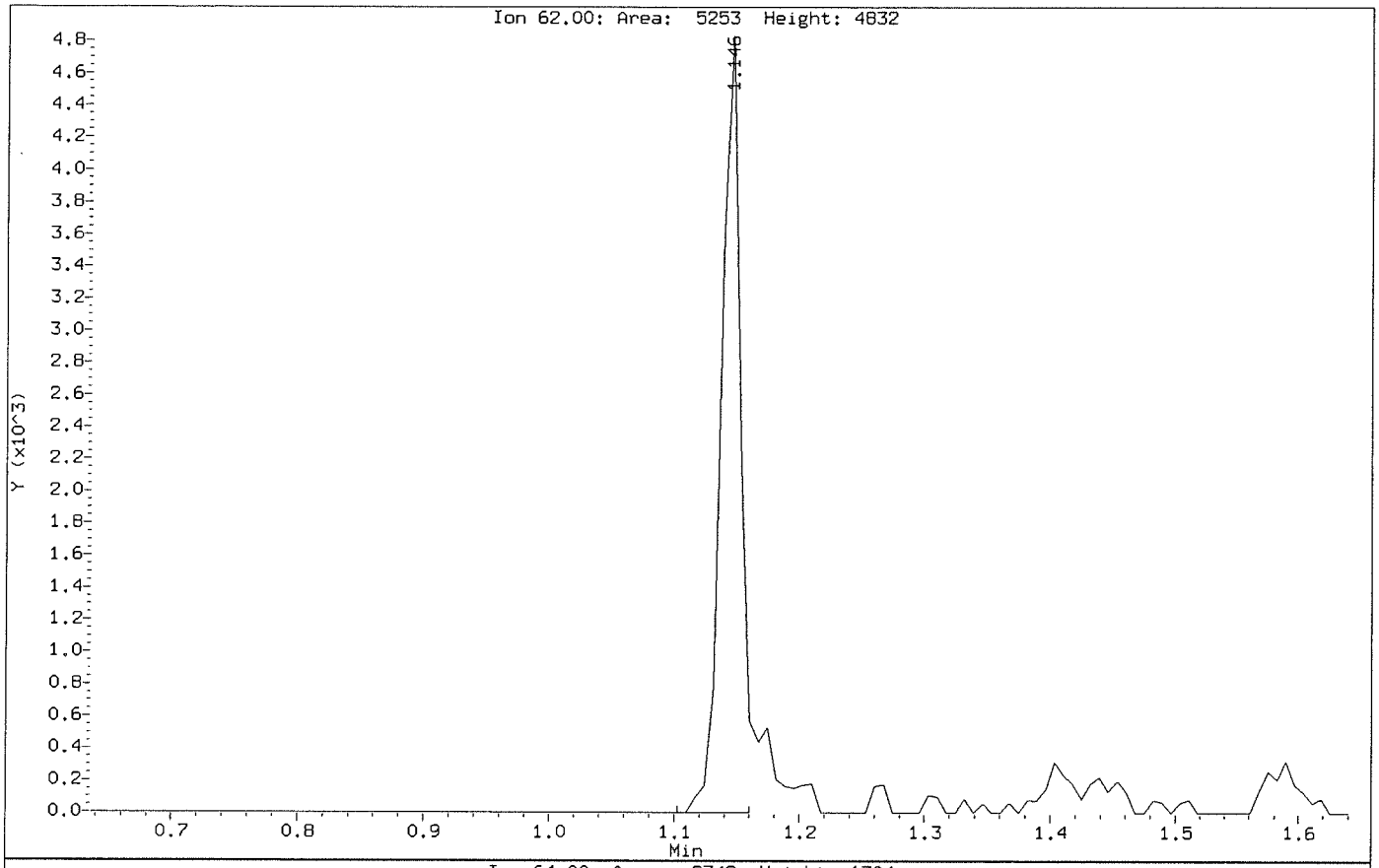
Compound: Vinyl Chloride
CAS Number: 75-01-4

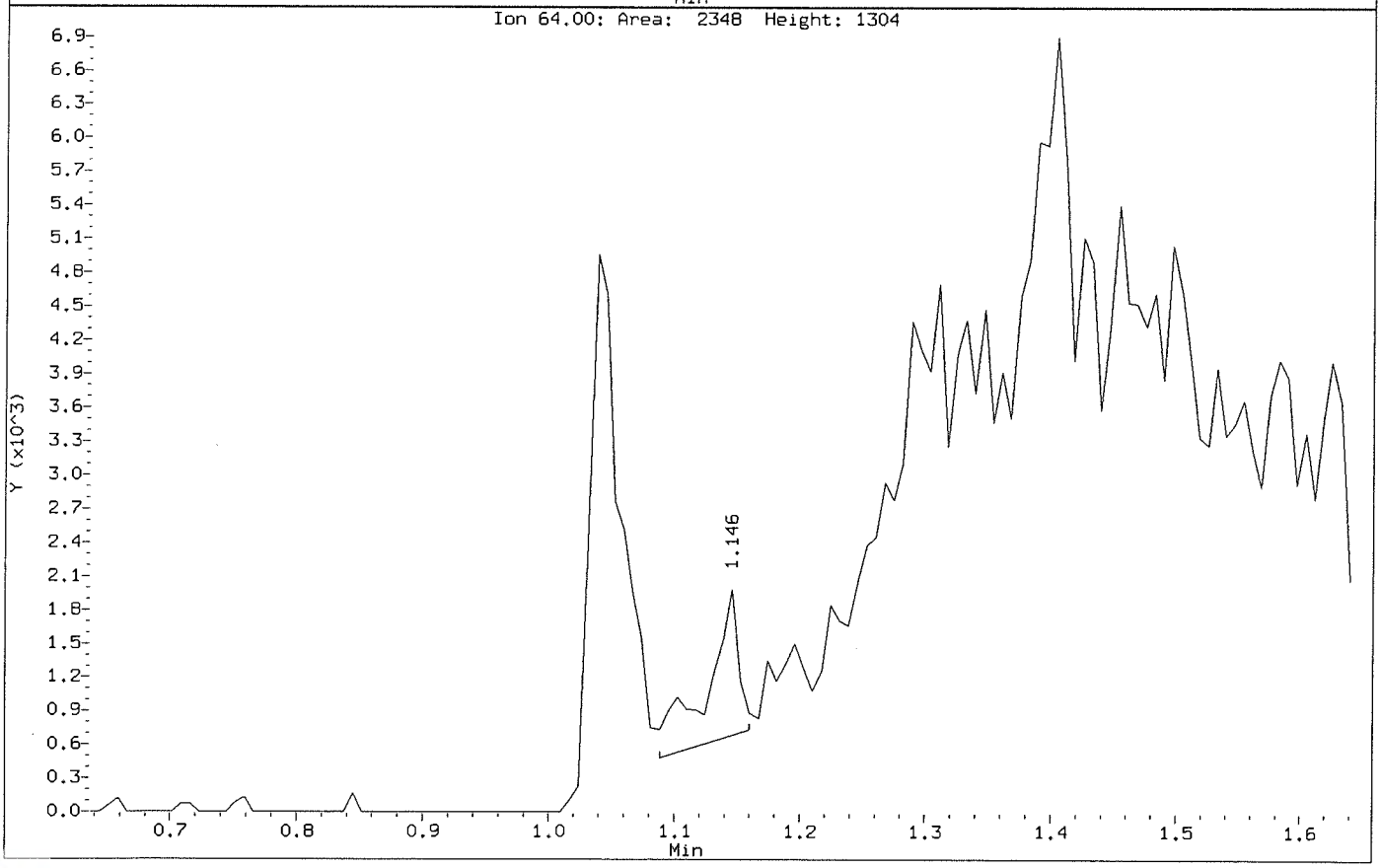




Data File: \\NAHSTWS005\Target\chem\voa6.i\X210402.b\X040204.D
Injection Date: 02-APR-2021 11:56
Instrument: voa6.i
Client Sample ID: VSTD001

Compound: Vinyl Chloride
CAS Number: 75-01-4





ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X210402.b\X040205.D
Lab Smp Id: VSTD002 Client Smp ID: VSTD002
Inj Date : 02-APR-2021 12:17
Operator : PC Inst ID: voa6.i
Smp Info : VSTD002;VSTD002;1;4;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X210402.b\8260W.m
Meth Date : 04-May-2021 11:39 voa6.i Quant Type: ISTD
Cal Date : 02-APR-2021 11:56 Cal File: X040204.D
Als bottle: 6 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBI_short1.sub
Target Version: 4.14
Processing Host: NAHSTW7066

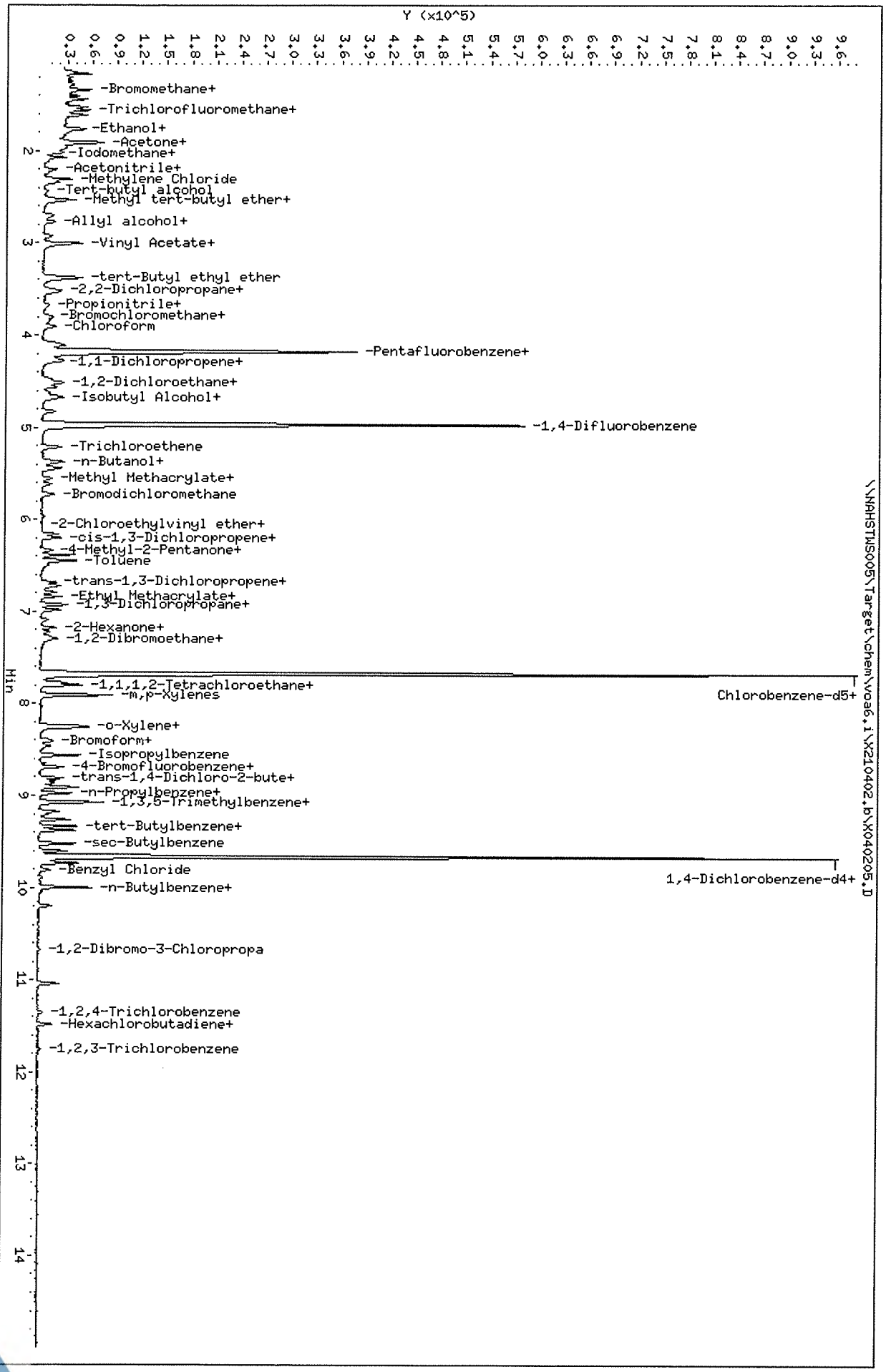
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	278535	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	469682	50.0000	
* 47 Chlorobenzene-d5	117	7.670	7.670	(1.000)	424642	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	187429	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	6870	2.00000	2.50
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	7506	2.00000	2.37
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	22274	2.00000	3.81
$ 69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	7732	2.00000	3.48
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	5102	2.00000	2.06(a)
11 1,1-Dichloroethene	96	1.911	1.911	(0.457)	8383	2.00000	2.11(aM)
33 1,2-Dichloroethane	62	4.562	4.562	(0.918)	9508	2.00000	1.91(aM)
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	6948	2.00000	2.04
17 Methylene Chloride	84	2.305	2.305	(0.551)	7271	2.00000	3.81(a)
38 Trichloroethene	130	5.206	5.206	(1.048)	6830	2.00000	2.12
5 Vinyl Chloride	62	1.145	1.145	(0.274)	8442	2.00000	2.02(M)

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.

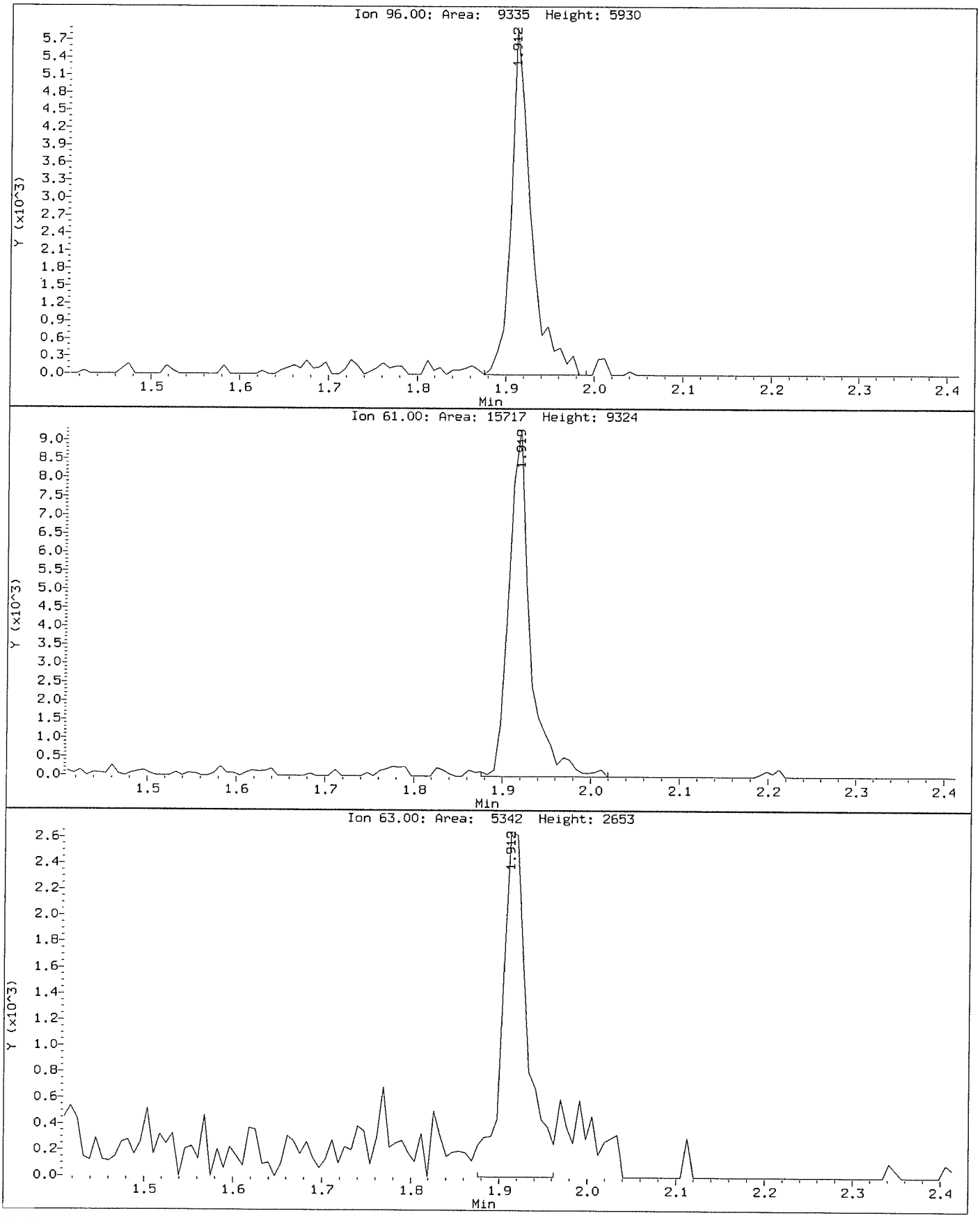


Data File: \\NAHSTWS005\Target\chem\voa6.i\X210402.b\X040205.D
Date : 02-APR-2021 12:17
Client ID: VSTD002
Sample Info: VSTD002;VSTD002;1;4;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

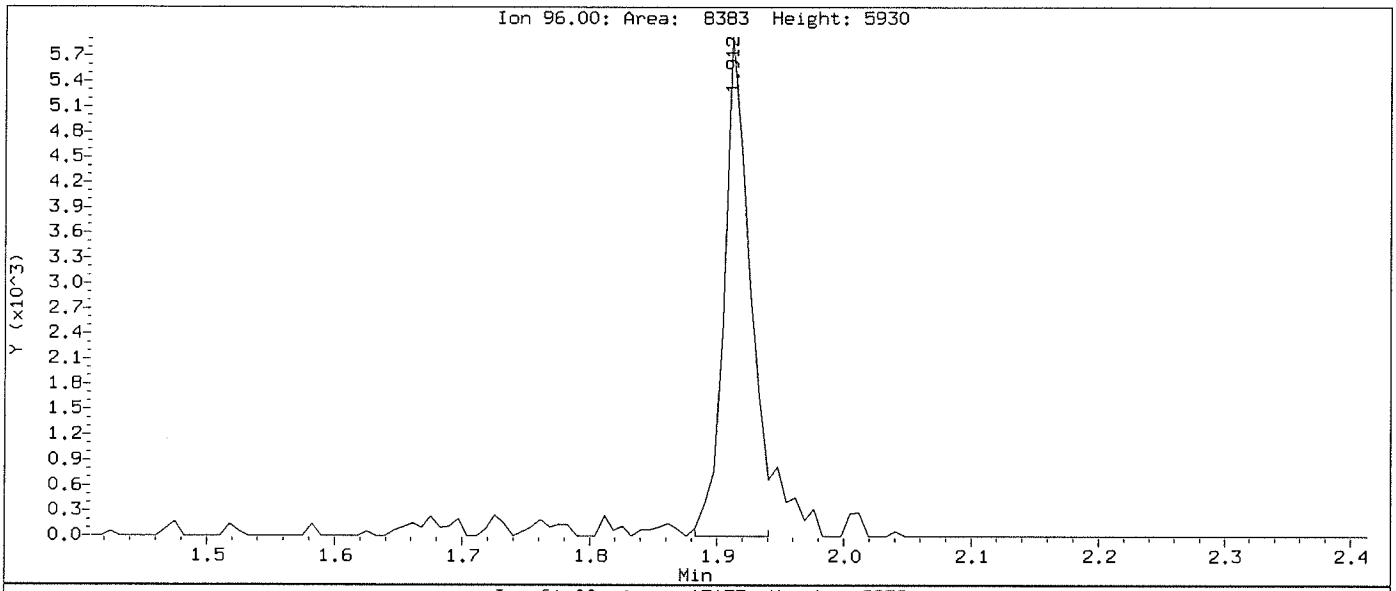
Data File: \\NAHSTWS005\Target\chem\voa6.i\X210402.b\Before6\X040205.D
Injection Date: 02-APR-2021 12:17
Instrument: voa6.i
Client Sample ID: VSTD002

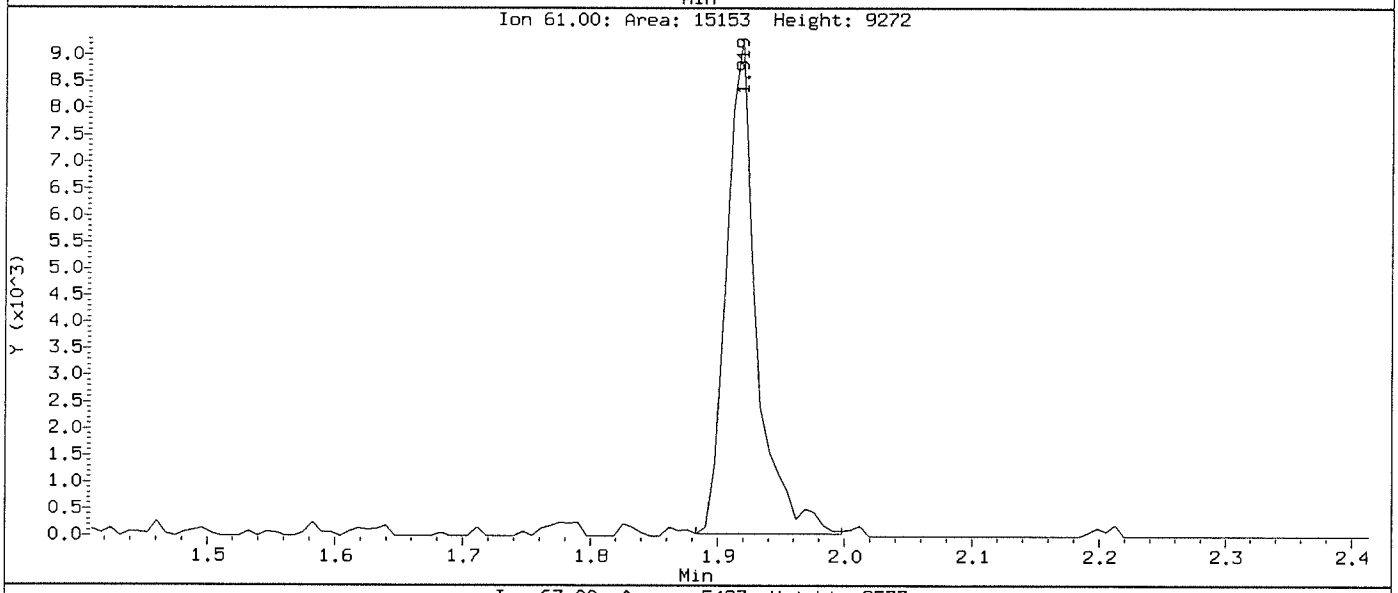
Compound: 1,1-Dichloroethene
CAS Number: 75-35-4

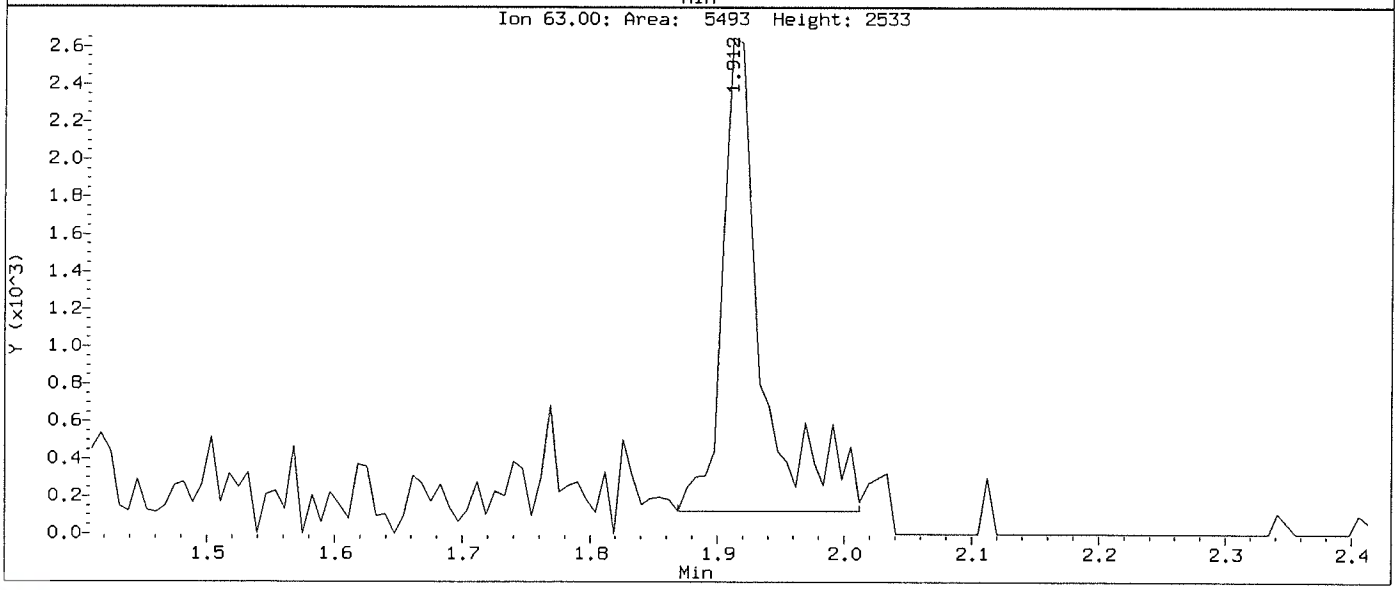


Data File: \\NAHSTWS005\Target\chem\voa6.i\X210402.b\X040205.D
Injection Date: 02-APR-2021 12:17
Instrument: voa6.i
Client Sample ID: VSTD002

Compound: 1,1-Dichloroethene
CAS Number: 75-35-4

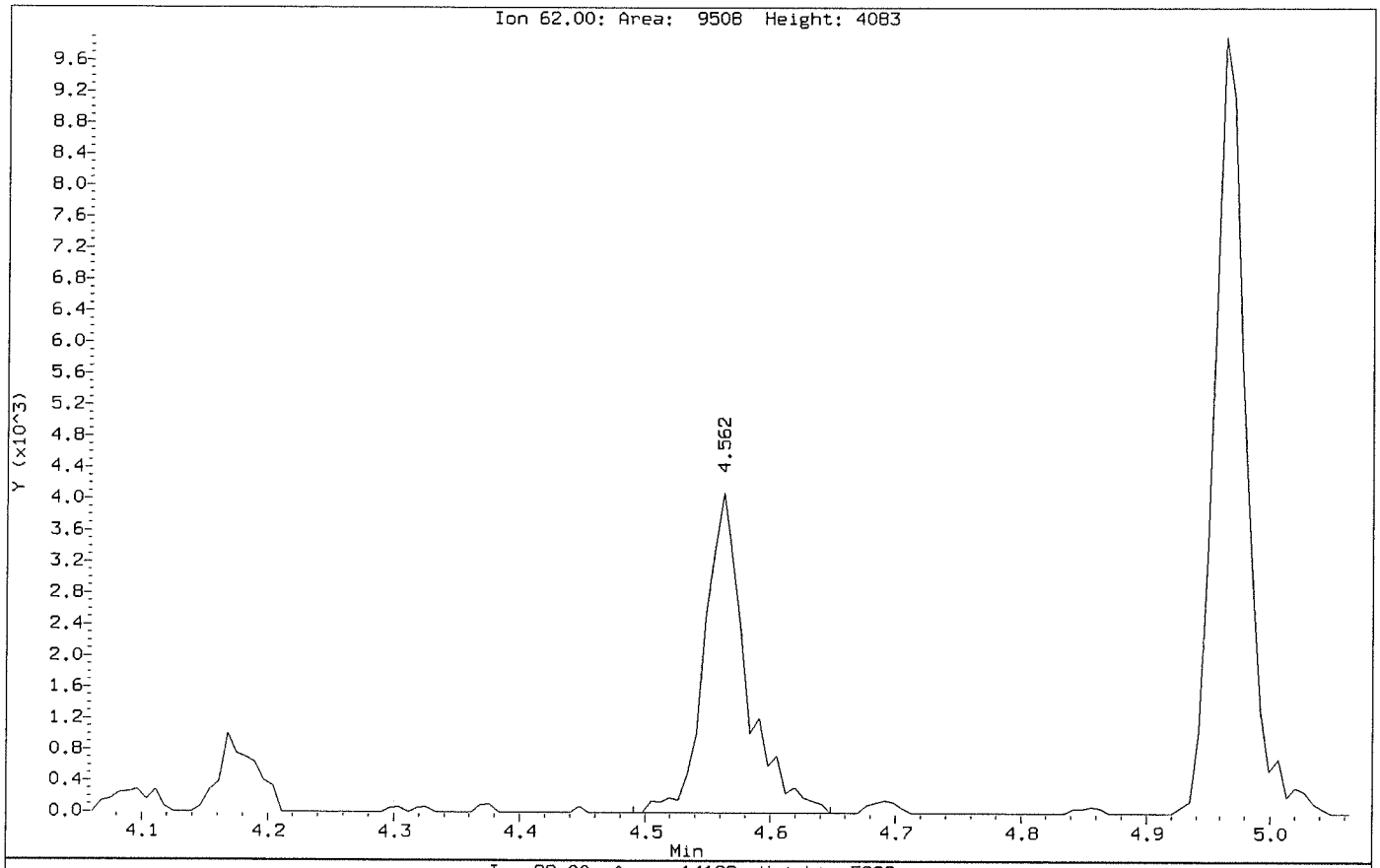


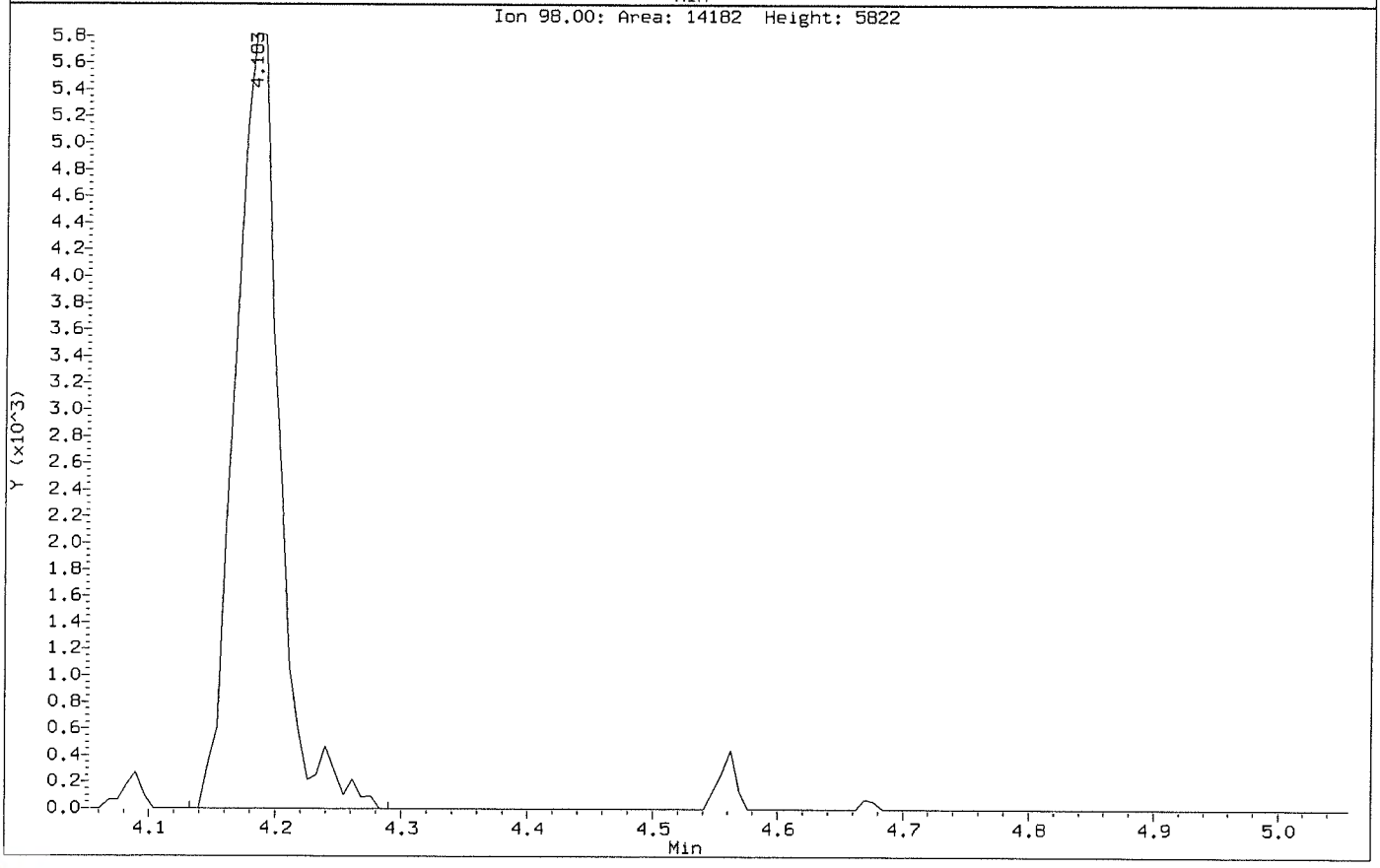




Data File: \\NAHSTWS005\Target\chem\voa6.i\X210402.b\Before6\X040205.D
Injection Date: 02-APR-2021 12:17
Instrument: voa6.i
Client Sample ID: VSTD002

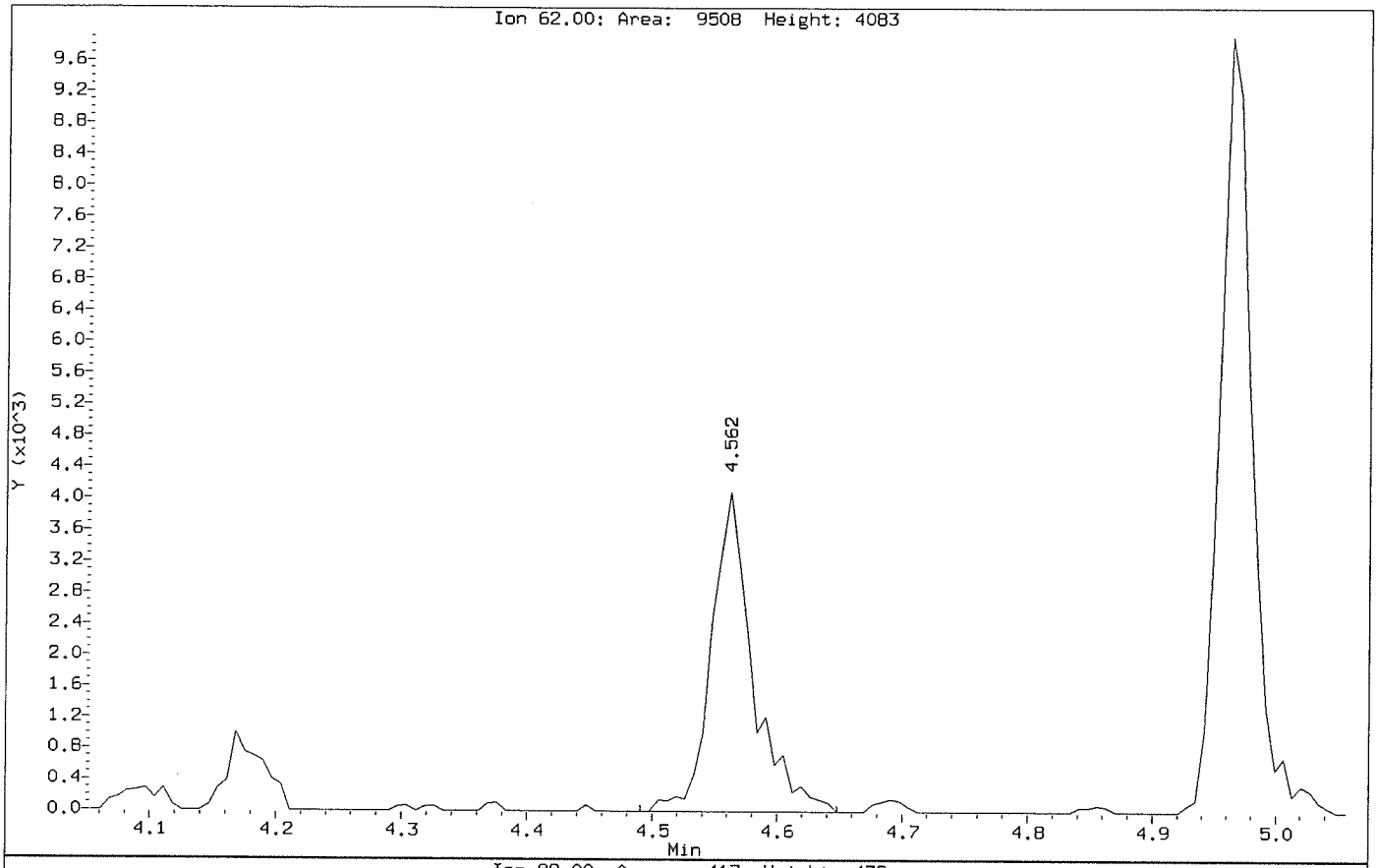
Compound: 1,2-Dichloroethane
CAS Number: 107-06-2

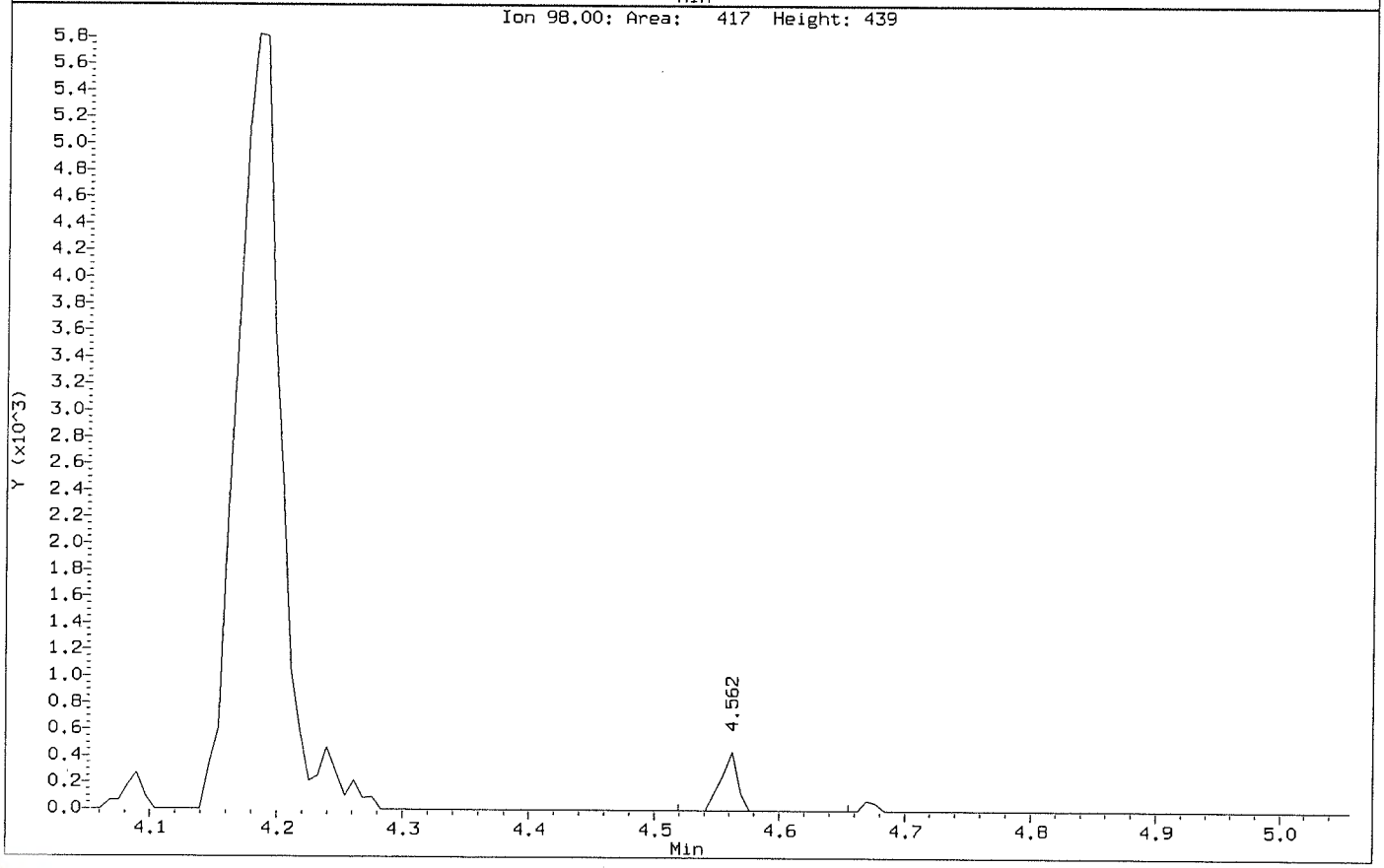




Data File: \\NAHSTWS005\Target\chem\voa6.i\X210402.b\X040205.D
Injection Date: 02-APR-2021 12:17
Instrument: voa6.i
Client Sample ID: VSTD002

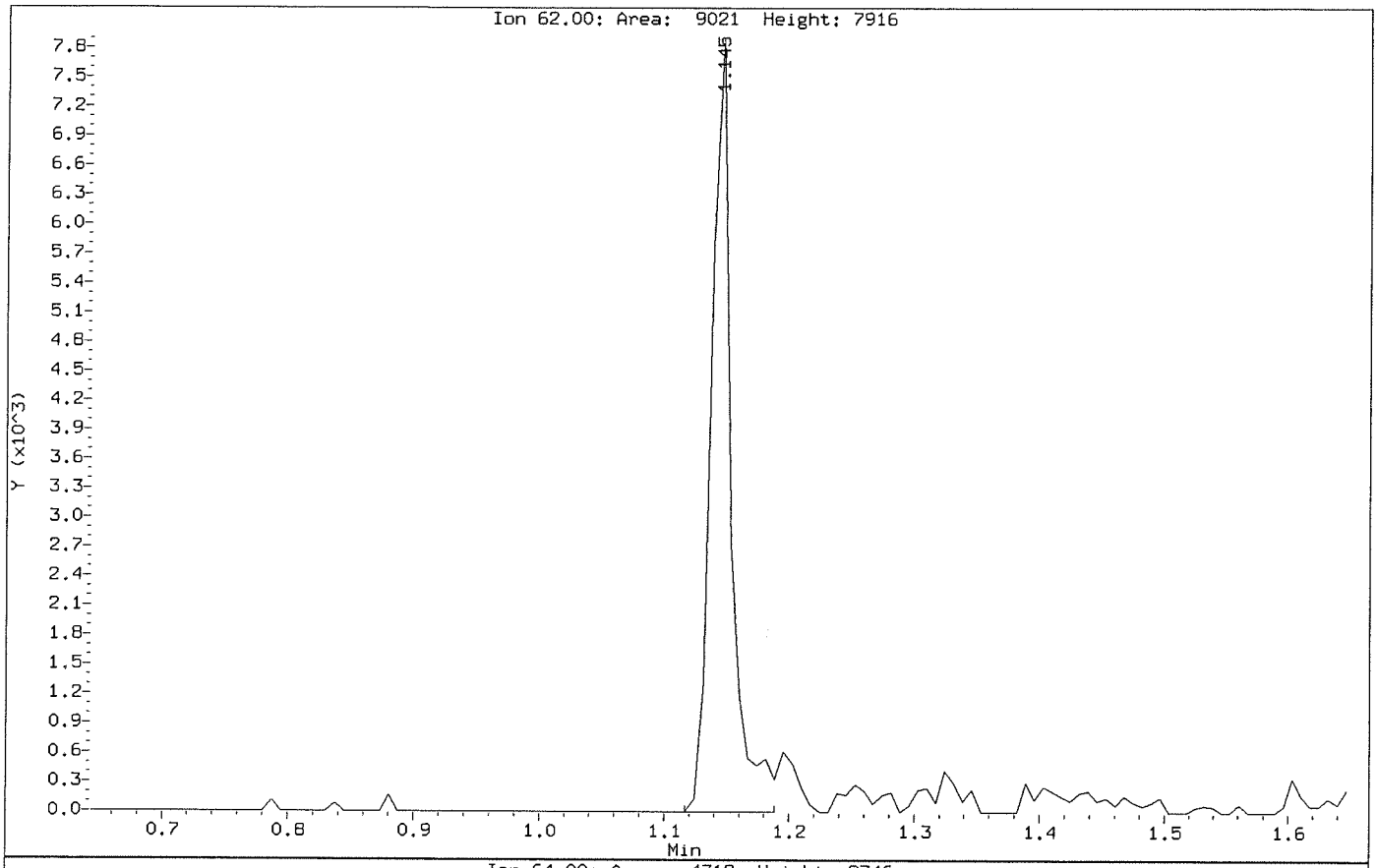
Compound: 1,2-Dichloroethane
CAS Number: 107-06-2

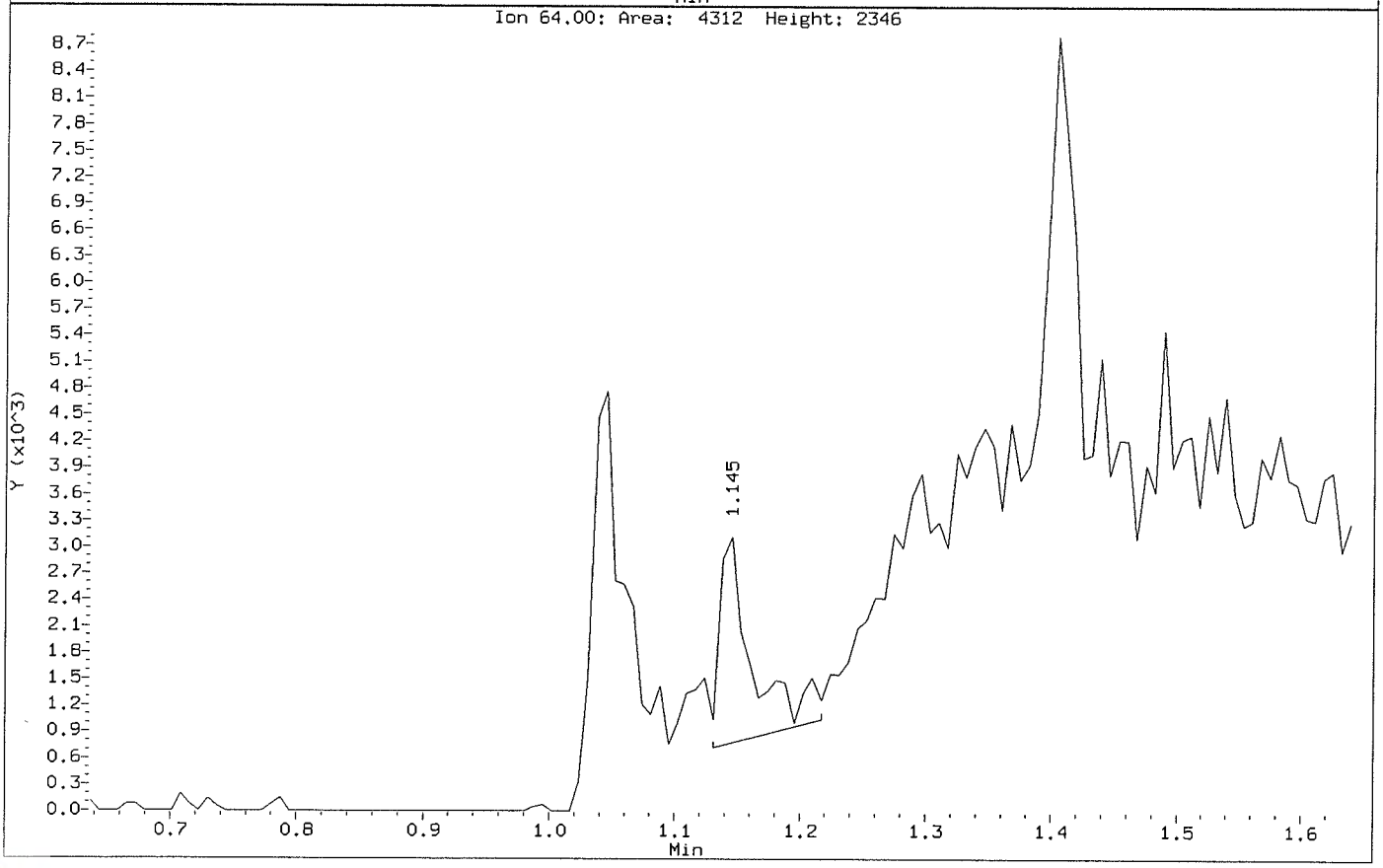




Data File: \\NAHSTWS005\Target\chem\voa6.i\X210402.b\Before6\X040205.D
Injection Date: 02-APR-2021 12:17
Instrument: voa6.i
Client Sample ID: VSTD002

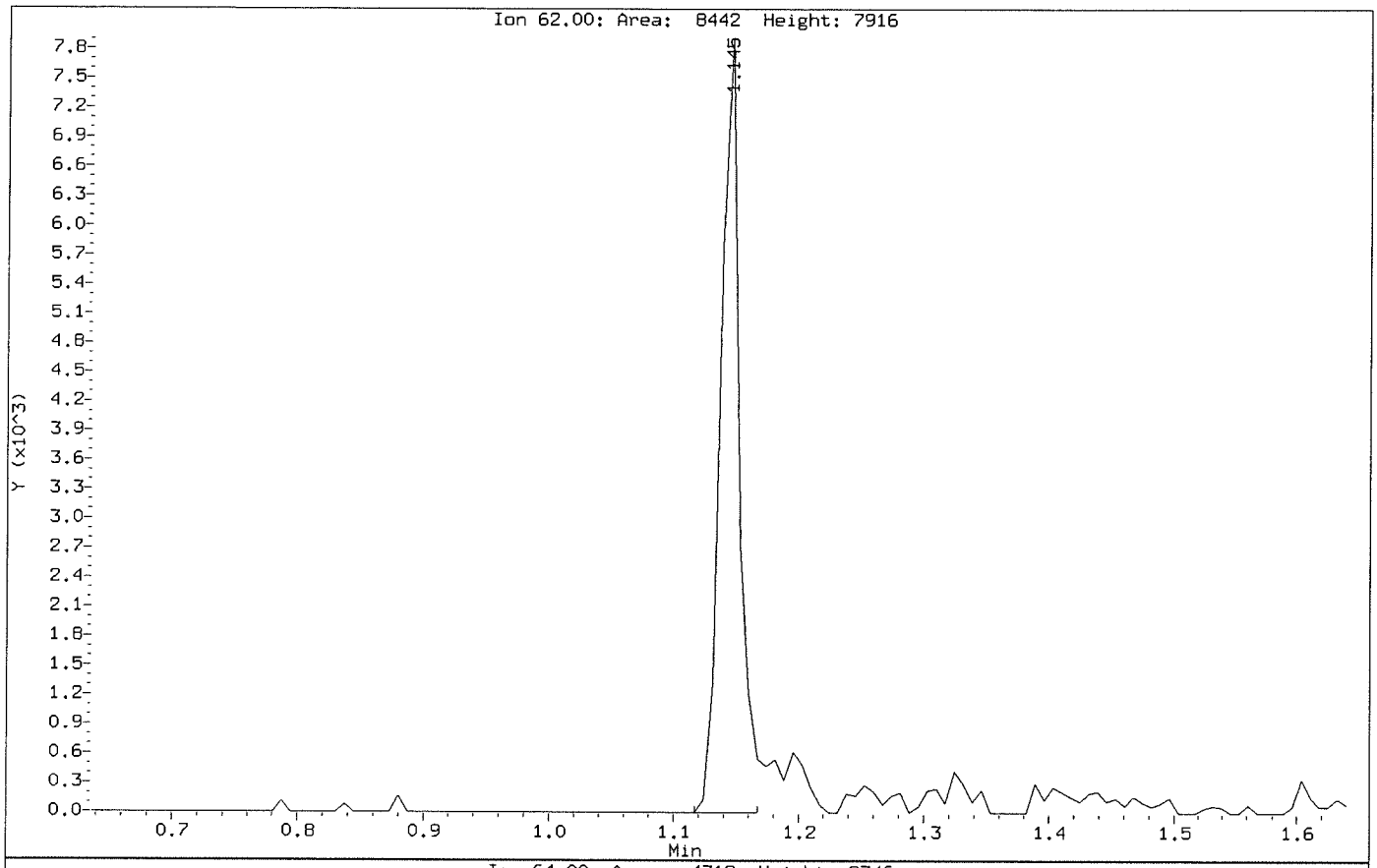
Compound: Vinyl Chloride
CAS Number: 75-01-4

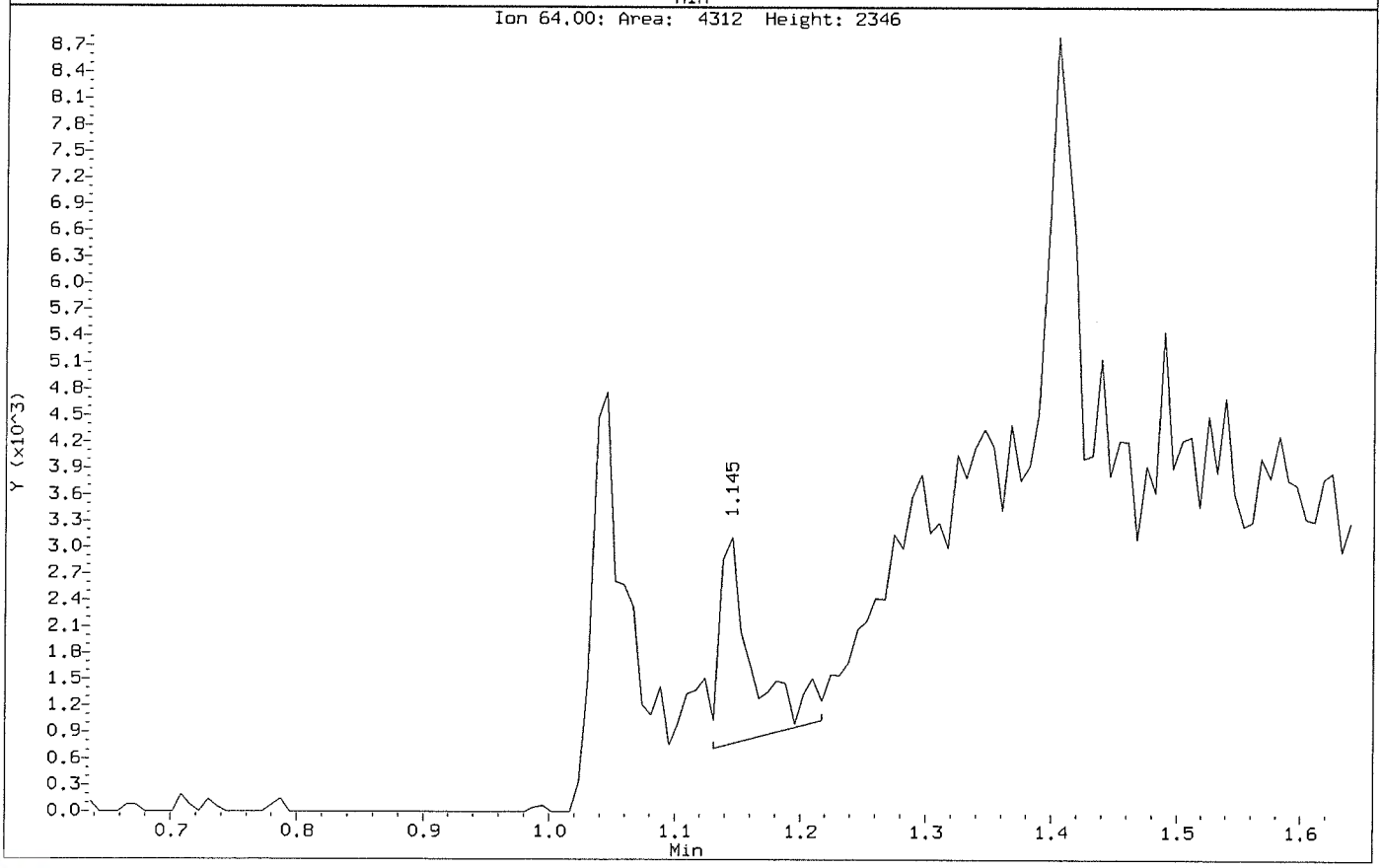




Data File: \\NAHSTWS005\Target\chem\voa6.i\X210402.b\X040205.D
Injection Date: 02-APR-2021 12:17
Instrument: voa6.i
Client Sample ID: VSTD002

Compound: Vinyl Chloride
CAS Number: 75-01-4





Data File: \\NAHSTWS005\Target\chem\voa6.i\X210402.b\X040206.D Page 1
Report Date: 04-May-2021 11:39

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X210402.b\X040206.D
Lab Smp Id: VSTD005 Client Smp ID: VSTD005
Inj Date : 02-APR-2021 12:38
Operator : PC Inst ID: voa6.i
Smp Info : VSTD005;VSTD005;1;5;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X210402.b\8260W.m
Meth Date : 04-May-2021 11:39 voa6.i Quant Type: ISTD
Cal Date : 02-APR-2021 12:17 Cal File: X040205.D
Als bottle: 7 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBI_short1.sub
Target Version: 4.14
Processing Host: NAHSTW7066

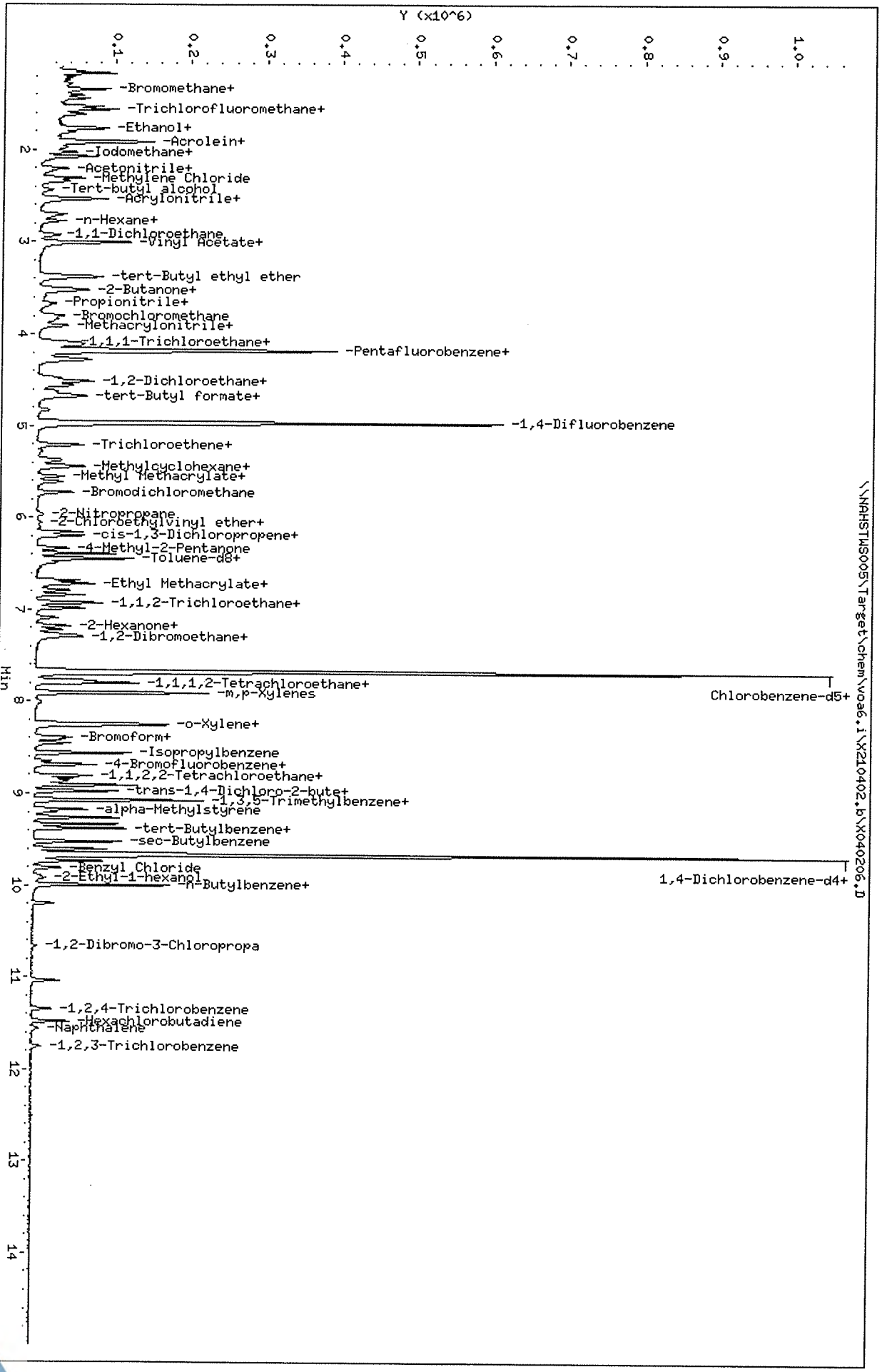
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	291823	50.0000	
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	482057	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	440939	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	205433	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	17824	5.00000	5.57
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	20809	5.00000	5.48
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	56112	5.00000	6.62
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	19193	5.00000	6.03
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	14112	5.00000	5.50
11 1,1-Dichloroethene	96	1.912	1.912	(0.457)	22632	5.00000	5.44
33 1,2-Dichloroethane	62	4.562	4.562	(0.919)	25538	5.00000	5.00
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	17639	5.00000	4.94
17 Methylene Chloride	84	2.306	2.306	(0.551)	17205	5.00000	6.75
38 Trichloroethene	130	5.207	5.207	(1.049)	18140	5.00000	5.49
5 Vinyl Chloride	62	1.145	1.145	(0.274)	22066	5.00000	5.04(M)

QC Flag Legend

M - Compound response manually integrated.

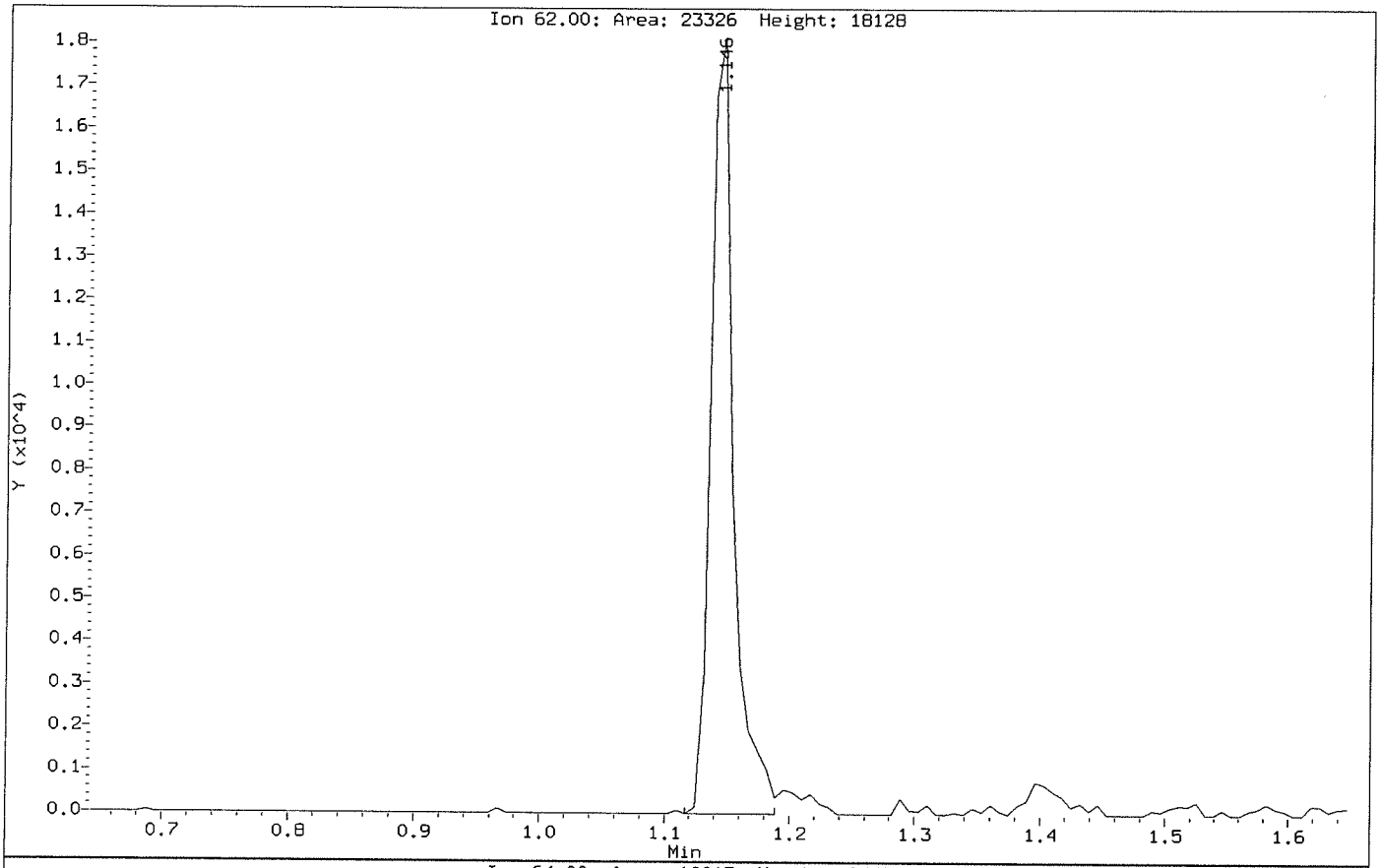


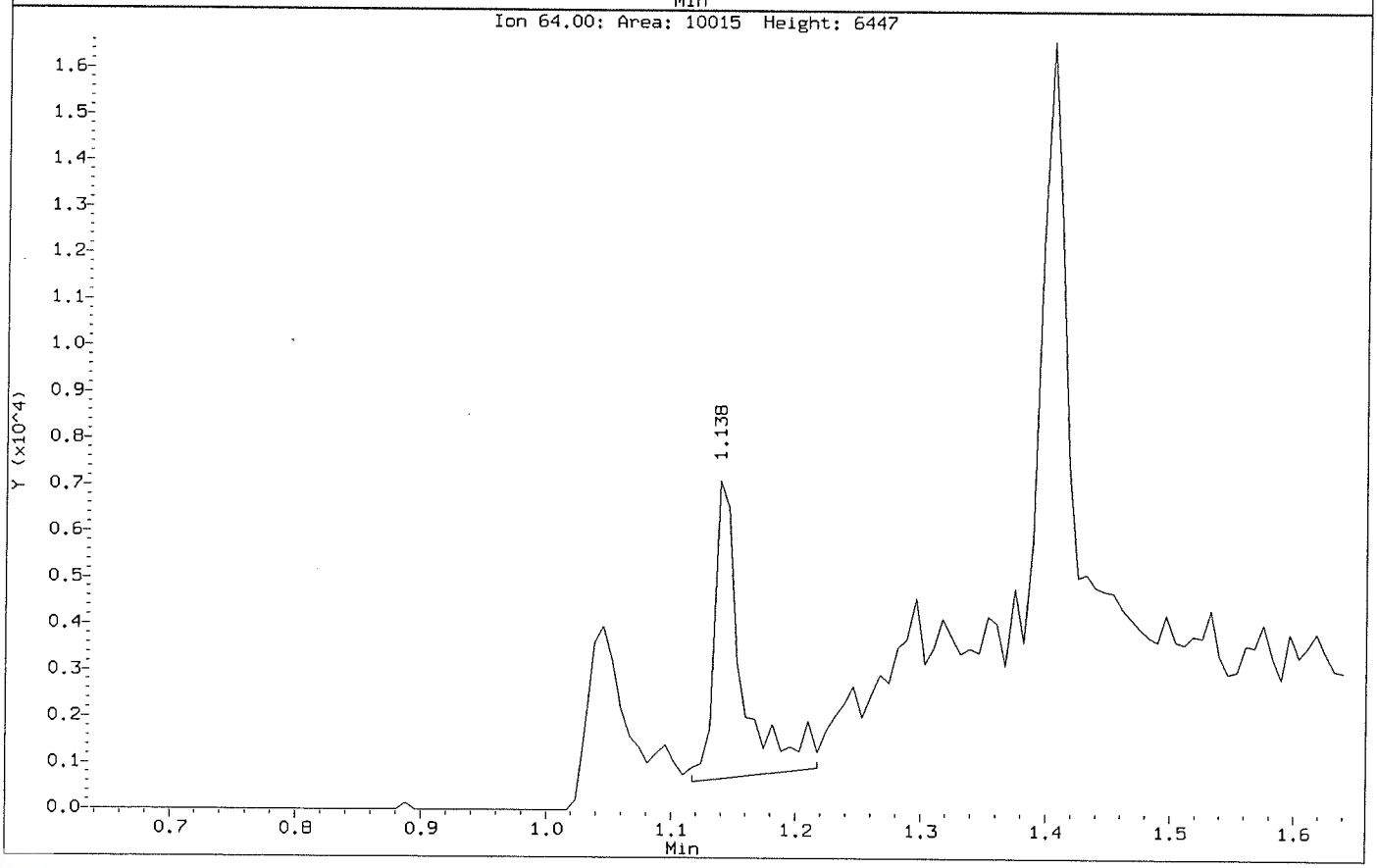
Data File: \\NAHSTWS005\Target\chem\voa6.i\X210402.b\X040206.D
Date : 02-APR-2021 12:38
Client ID: VSTD005
Sample Info: VSTD005;VSTD005;1;5;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\NAHSTWS005\Target\chem\voa6.i\X210402.b\Before6\X040206.D
Injection Date: 02-APR-2021 12:38
Instrument: voa6.i
Client Sample ID: VSTD005

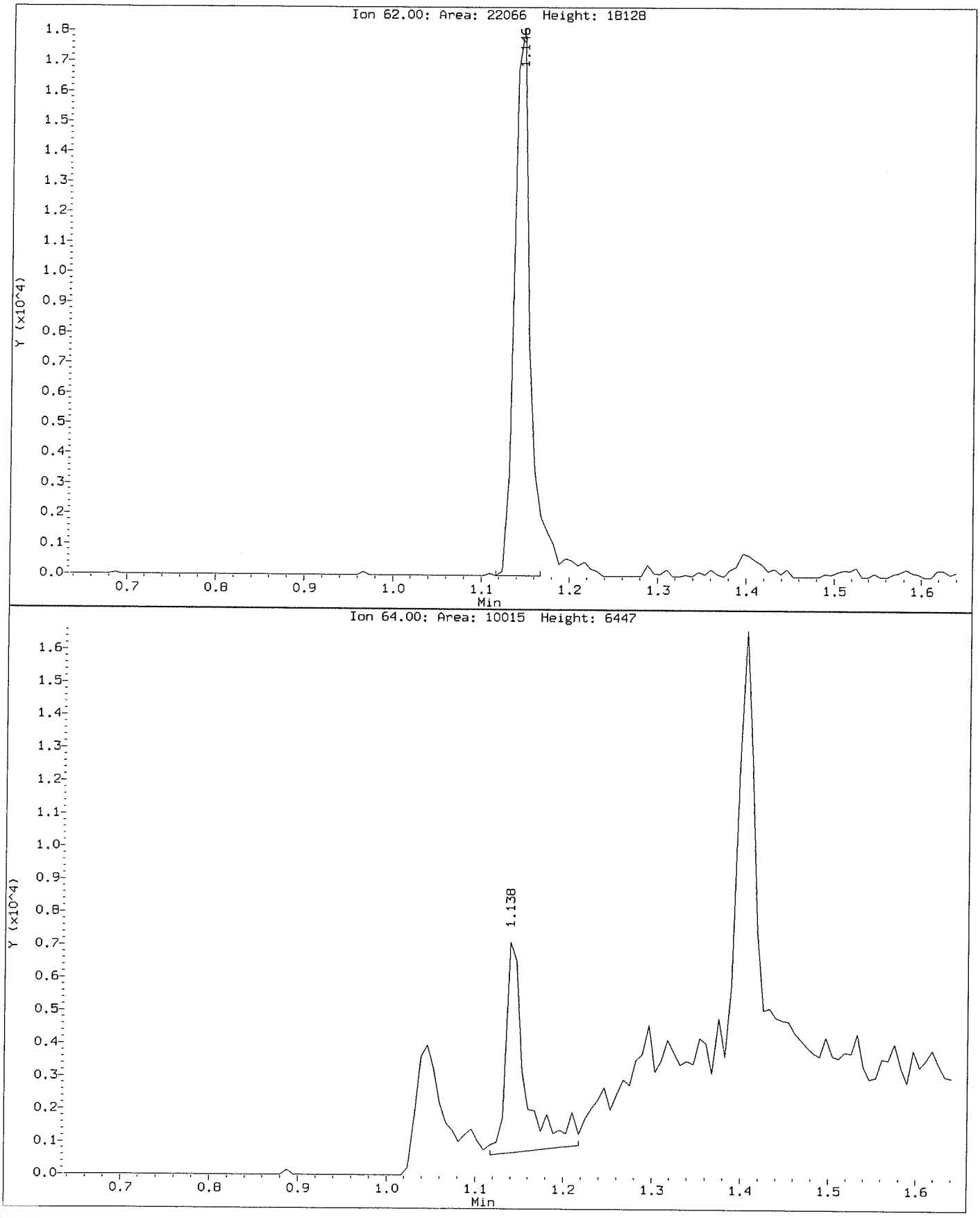
Compound: Vinyl Chloride
CAS Number: 75-01-4





Data File: \\NAHSTWS005\Target\chem\voa6.i\X210402.b\X040206.D
Injection Date: 02-APR-2021 12:38
Instrument: voa6.i
Client Sample ID: VSTD005

Compound: Vinyl Chloride
CAS Number: 75-01-4



Data File: \\NAHSTWS005\Target\chem\voa6.i\X210402.b\X040207.D Page 1
Report Date: 04-May-2021 11:39

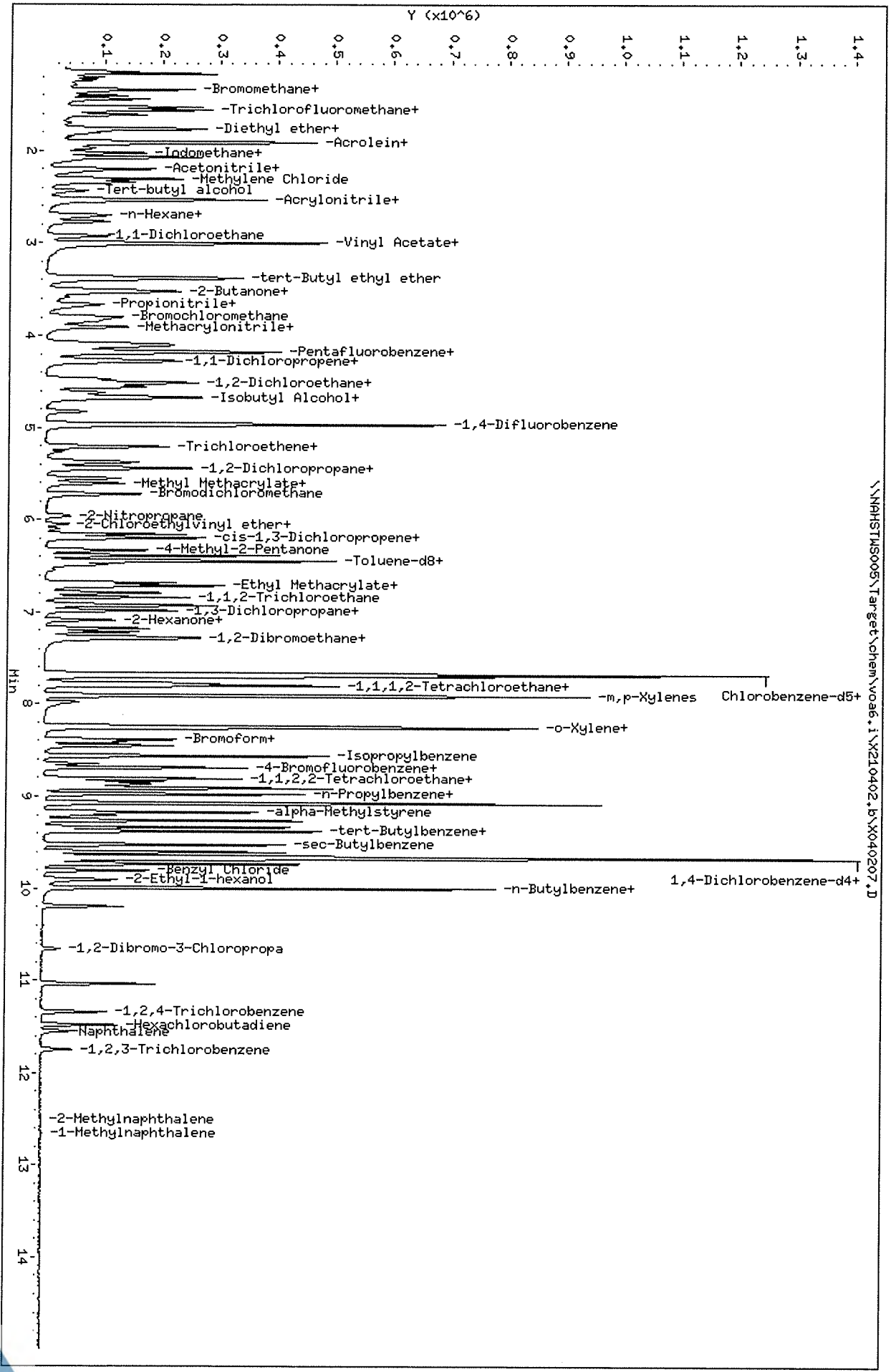
ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X210402.b\X040207.D
Lab Smp Id: VSTD020 Client Smp ID: VSTD020
Inj Date : 02-APR-2021 12:59
Operator : PC Inst ID: voa6.i
Smp Info : VSTD020;VSTD020;1;6;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X210402.b\8260W.m
Meth Date : 04-May-2021 11:39 voa6.i Quant Type: ISTD
Cal Date : 02-APR-2021 12:38 Cal File: X040206.D
Als bottle: 8 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBI_short1.sub
Target Version: 4.14
Processing Host: NAHSTW7066

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
*	1 Pentafluorobenzene	168	4.182	4.182	(1.000)	303845	50.0000	
*	36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	500849	50.0000	
*	47 Chlorobenzene-d5	117	7.670	7.670	(1.000)	505360	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	244406	50.0000	
$	30 Dibromofluoromethane	113	4.103	4.103	(0.981)	68668	20.0000	19.46
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	80475	20.0000	19.07
$	48 Toluene-d8	98	6.388	6.388	(0.833)	218999	20.0000	18.08
$	69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	81621	20.0000	17.93
	53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	50828	20.0000	17.31
	11 1,1-Dichloroethene	96	1.919	1.919	(0.459)	80105	20.0000	18.51
	33 1,2-Dichloroethane	62	4.555	4.555	(0.918)	95203	20.0000	17.95
	27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	65903	20.0000	17.74
	17 Methylene Chloride	84	2.305	2.305	(0.551)	63925	20.0000	20.29
	38 Trichloroethene	130	5.206	5.206	(1.049)	61652	20.0000	17.98
	5 Vinyl Chloride	62	1.145	1.145	(0.274)	89514	20.0000	19.65



Data File: \\NAHSTWS005\Target\chem\voa6.i\X210402.b\X040207.D
Date : 02-APR-2021 12:59
Client ID: VSTD020
Sample Info: VSTD020;VSTD020;1;6;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\NAHSTWS005\Target\chem\voa6.i\X210402.b\X040208.D Page 1
Report Date: 04-May-2021 11:39

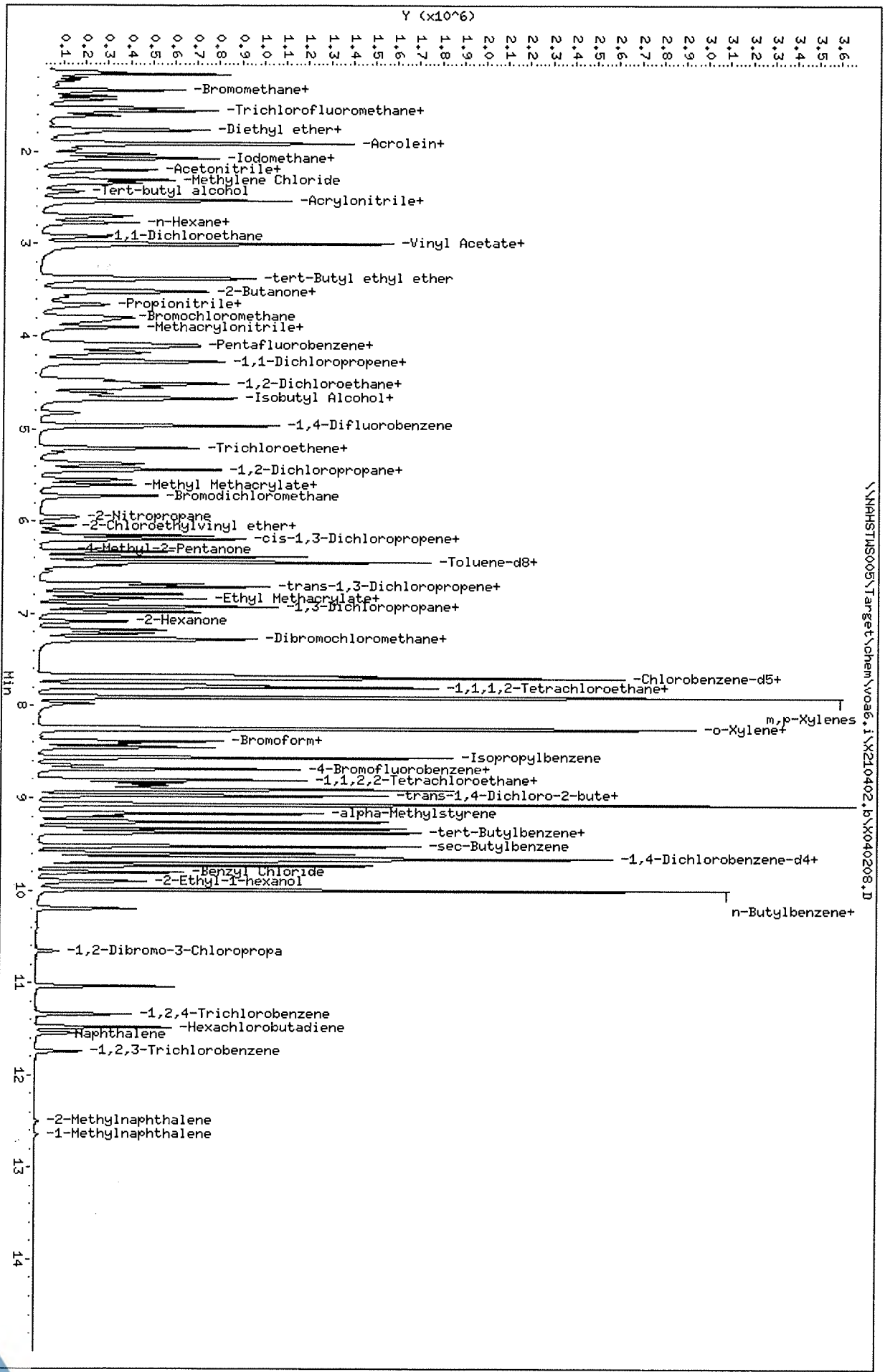
ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X210402.b\X040208.D
Lab Smp Id: VSTD050 Client Smp ID: VSTD050
Inj Date : 02-APR-2021 13:20
Operator : PC Inst ID: voa6.i
Smp Info : VSTD050;VSTD050;1;7;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X210402.b\8260W.m
Meth Date : 04-May-2021 11:39 voa6.i Quant Type: ISTD
Cal Date : 02-APR-2021 12:59 Cal File: X040207.D
Als bottle: 9 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBI_short1.sub
Target Version: 4.14
Processing Host: NAHSTW7066

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
*	1 Pentafluorobenzene	168	4.182	4.182	(1.000)	359684	50.0000	
*	36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	598485	50.0000	
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	588191	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	309539	50.0000	
$	30 Dibromofluoromethane	113	4.096	4.096	(0.979)	201590	50.0000	47.62
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	243778	50.0000	48.06
$	48 Toluene-d8	98	6.388	6.388	(0.833)	658700	50.0000	43.80
$	69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	267013	50.0000	47.42
	53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	155825	50.0000	45.60
	11 1,1-Dichloroethene	96	1.911	1.911	(0.457)	240341	50.0000	46.92
	33 1,2-Dichloroethane	62	4.555	4.555	(0.918)	309702	50.0000	48.88
	27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	208514	50.0000	47.42
	17 Methylene Chloride	84	2.305	2.305	(0.551)	173954	50.0000	44.72
	38 Trichloroethene	130	5.206	5.206	(1.049)	206412	50.0000	50.38
	5 Vinyl Chloride	62	1.145	1.145	(0.274)	256013	50.0000	47.47



Data File: \\NAHSTWS005\Target\chem\voa6.i\X210402.b\X040208.D
Date : 02-APR-2021 13:20
Client ID: VSTD050
Sample Info: VSTD050;VSTD050;1;7;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\NAHSTWS005\Target\chem\voa6.i\X210402.b\X040209.D Page 1
Report Date: 04-May-2021 11:39

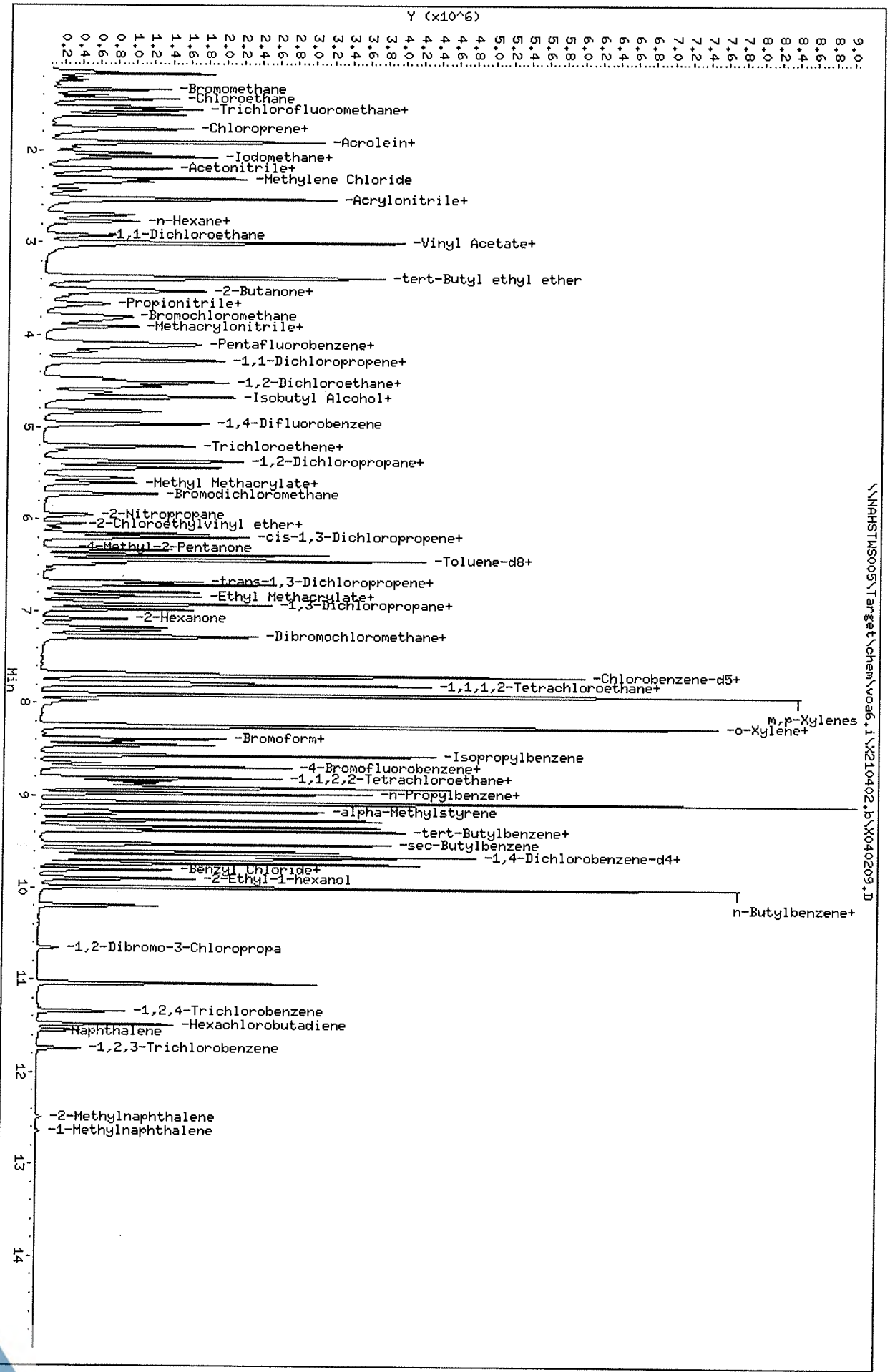
ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X210402.b\X040209.D
Lab Smp Id: VSTD100 Client Smp ID: VSTD100
Inj Date : 02-APR-2021 13:41
Operator : PC Inst ID: voa6.i
Smp Info : VSTD100;VSTD100;1;8;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X210402.b\8260W.m
Meth Date : 04-May-2021 11:39 voa6.i Quant Type: ISTD
Cal Date : 02-APR-2021 13:20 Cal File: X040208.D
Als bottle: 10 Calibration Sample, Level: 8
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBI_short1.sub
Target Version: 4.14
Processing Host: NAHSTW7066

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	397825	50.0000	
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	683502	50.0000	
* 47 Chlorobenzene-d5	117	7.670	7.670	(1.000)	652649	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	339759	50.0000	
$ 30 Dibromofluoromethane	113	4.096	4.096	(0.979)	476731	100.000	101.33
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	568806	100.000	100.86
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	1733824	100.000	101.37
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	624362	100.000	98.11
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	366869	100.000	96.76
11 1,1-Dichloroethene	96	1.911	1.911	(0.457)	544587	100.000	96.14
33 1,2-Dichloroethane	62	4.555	4.555	(0.918)	718135	100.000	99.26
27 cis-1,2-Dichloroethene	96	3.523	3.523	(0.842)	487101	100.000	100.16
17 Methylene Chloride	84	2.305	2.305	(0.551)	420832	100.000	96.06
38 Trichloroethene	130	5.206	5.206	(1.049)	478548	100.000	102.27
5 Vinyl Chloride	62	1.145	1.145	(0.274)	541798	100.000	90.84



Data File: \\NAHSTWS005\Target\chem\voa6.i\X210402.b\X040209.D
Date : 02-APR-2021 13:41
Client ID: VSTD100
Sample Info: VSTD100;VSTD100;1;8;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\NAHSTWS005\Target\chem\voa6.i\X210402.b\X040210.D Page 1
Report Date: 04-May-2021 11:39

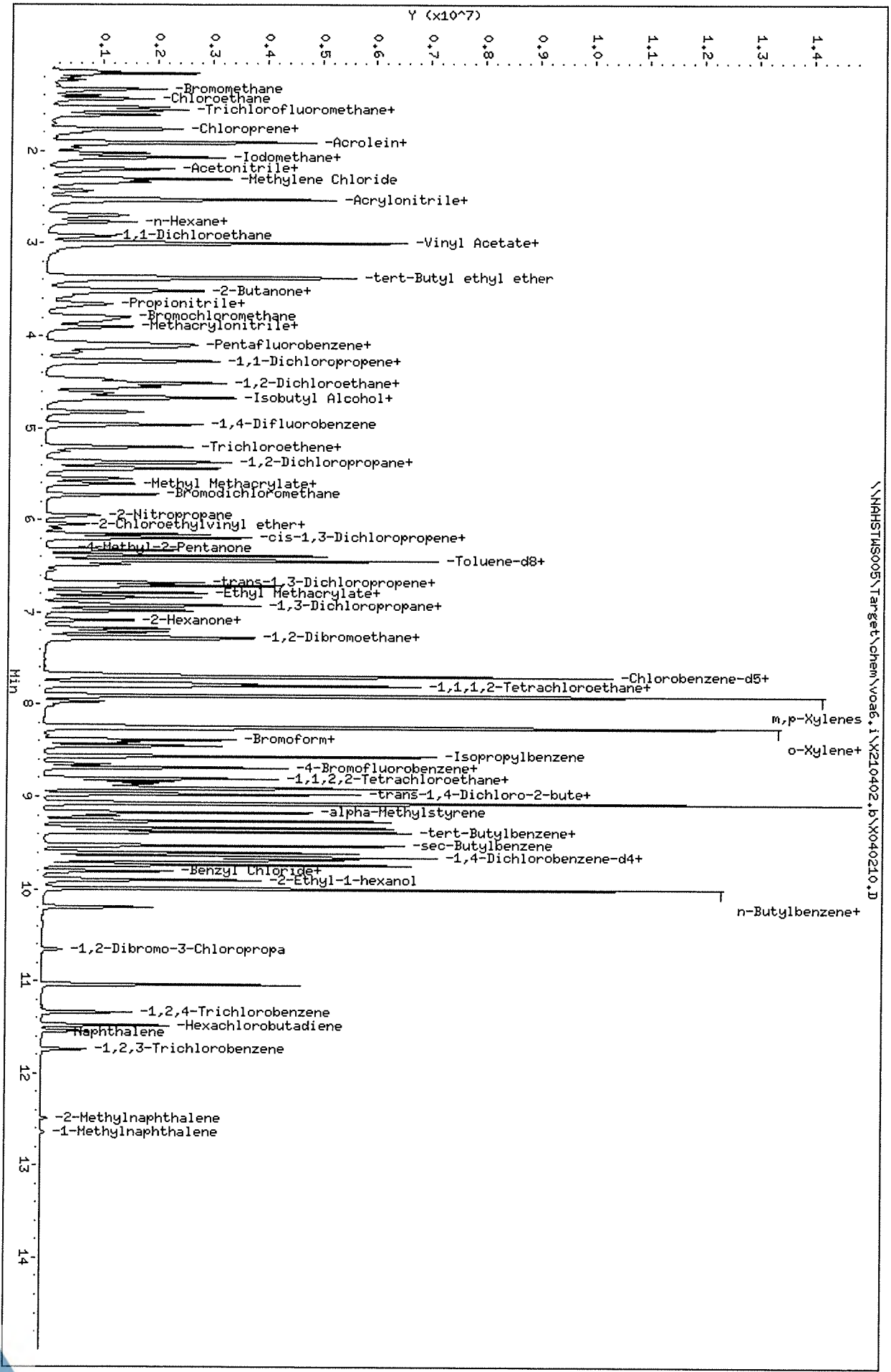
ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X210402.b\X040210.D
Lab Smp Id: VSTD150 Client Smp ID: VSTD150
Inj Date : 02-APR-2021 14:02
Operator : PC Inst ID: voa6.i
Smp Info : VSTD150;VSTD150;1;9;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X210402.b\8260W.m
Meth Date : 04-May-2021 11:39 voa6.i Quant Type: ISTD
Cal Date : 02-APR-2021 13:41 Cal File: X040209.D
Als bottle: 11 Calibration Sample, Level: 9
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBI_short1.sub
Target Version: 4.14
Processing Host: NAHSTW7066

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)
*	1 Pentafluorobenzene	168	4.182	4.182	(1.000)	432906	50.0000	
*	36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	745206	50.0000	
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	707197	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	375287	50.0000	
$	30 Dibromofluoromethane	113	4.096	4.096	(0.979)	758989	150.000	148.06
$	35 1,2-Dichloroethane-d4	65	4.469	4.469	(1.068)	919399	150.000	149.58
$	48 Toluene-d8	98	6.388	6.388	(0.833)	2714142	150.000	145.62
$	69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	1011725	150.000	145.90
	53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	595658	150.000	144.99
	11 1,1-Dichloroethene	96	1.912	1.912	(0.457)	861197	150.000	139.71
	33 1,2-Dichloroethane	62	4.555	4.555	(0.918)	1146217	150.000	145.31
	27 cis-1,2-Dichloroethene	96	3.523	3.523	(0.842)	789545	150.000	149.19
	17 Methylene Chloride	84	2.298	2.298	(0.550)	703062	150.000	146.68
	38 Trichloroethene	130	5.207	5.207	(1.049)	752757	150.000	147.55
	5 Vinyl Chloride	62	1.138	1.138	(0.272)	862204	150.000	132.84



Data File: \\NAHSTWS005\Target\chem\voa6.i\X210402.b\X040210.D
Date : 02-APR-2021 14:02
Client ID: VSTD150
Sample Info: VSTD150;VSTD150;1;9;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\NAHSTWS005\Target\chem\voa6.i\X210402.b\X040211.D Page 1
Report Date: 04-May-2021 11:39

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X210402.b\X040211.D
Lab Smp Id: VSTD200 Client Smp ID: VSTD200
Inj Date : 02-APR-2021 14:23
Operator : PC Inst ID: voa6.i
Smp Info : VSTD200;VSTD200;1;10;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X210402.b\8260W.m
Meth Date : 04-May-2021 11:39 voa6.i Quant Type: ISTD
Cal Date : 02-APR-2021 14:02 Cal File: X040210.D
Als bottle: 12 Calibration Sample, Level: 10
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBI_short1.sub
Target Version: 4.14
Processing Host: NAHSTW7066

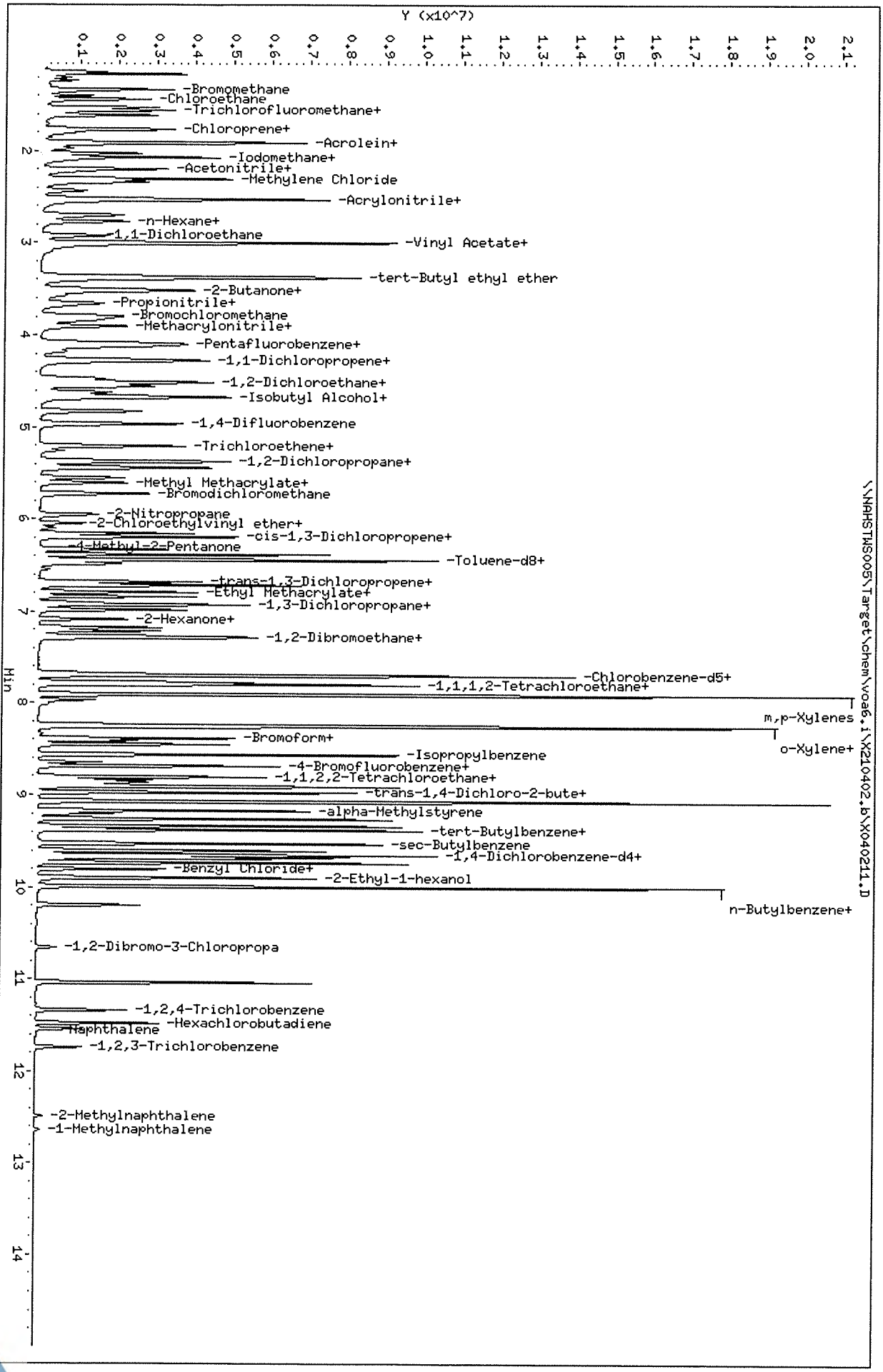
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	444815	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	788136	50.0000	
* 47 Chlorobenzene-d5	117	7.670	7.670	(1.000)	732576	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	399401	50.0000	
$ 30 Dibromofluoromethane	113	4.096	4.096	(0.979)	1061294	200.000	201.33(A)
$ 35 1,2-Dichloroethane-d4	65	4.469	4.469	(1.069)	1266674	200.000	200.40(A)
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	3949224	200.000	203.80(A)
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	1473828	200.000	204.50(A)
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	832139	200.000	195.54
11 1,1-Dichloroethene	96	1.911	1.911	(0.457)	1249794	200.000	197.32
33 1,2-Dichloroethane	62	4.555	4.555	(0.916)	1584950	200.000	189.99
27 cis-1,2-Dichloroethene	96	3.523	3.523	(0.842)	1123271	200.000	206.57(A)
17 Methylene Chloride	84	2.305	2.305	(0.551)	1013494	200.000	205.19(A)
38 Trichloroethene	130	5.206	5.206	(1.048)	1061444	200.000	196.73
5 Vinyl Chloride	62	1.138	1.138	(0.272)	1159290	200.000	173.84

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.



Data File: \\NAHSTWS005\Target\chem\voa6.i\X210402.b\X040211.D
Date : 02-APR-2021 14:23
Client ID: VSTD200
Sample Info: VSTD200;VSTD200;1;10;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\NAHSTWS005\Target\chem\voa6.i\X210402.b\X040214.D Page 1
Report Date: 04-May-2021 11:39

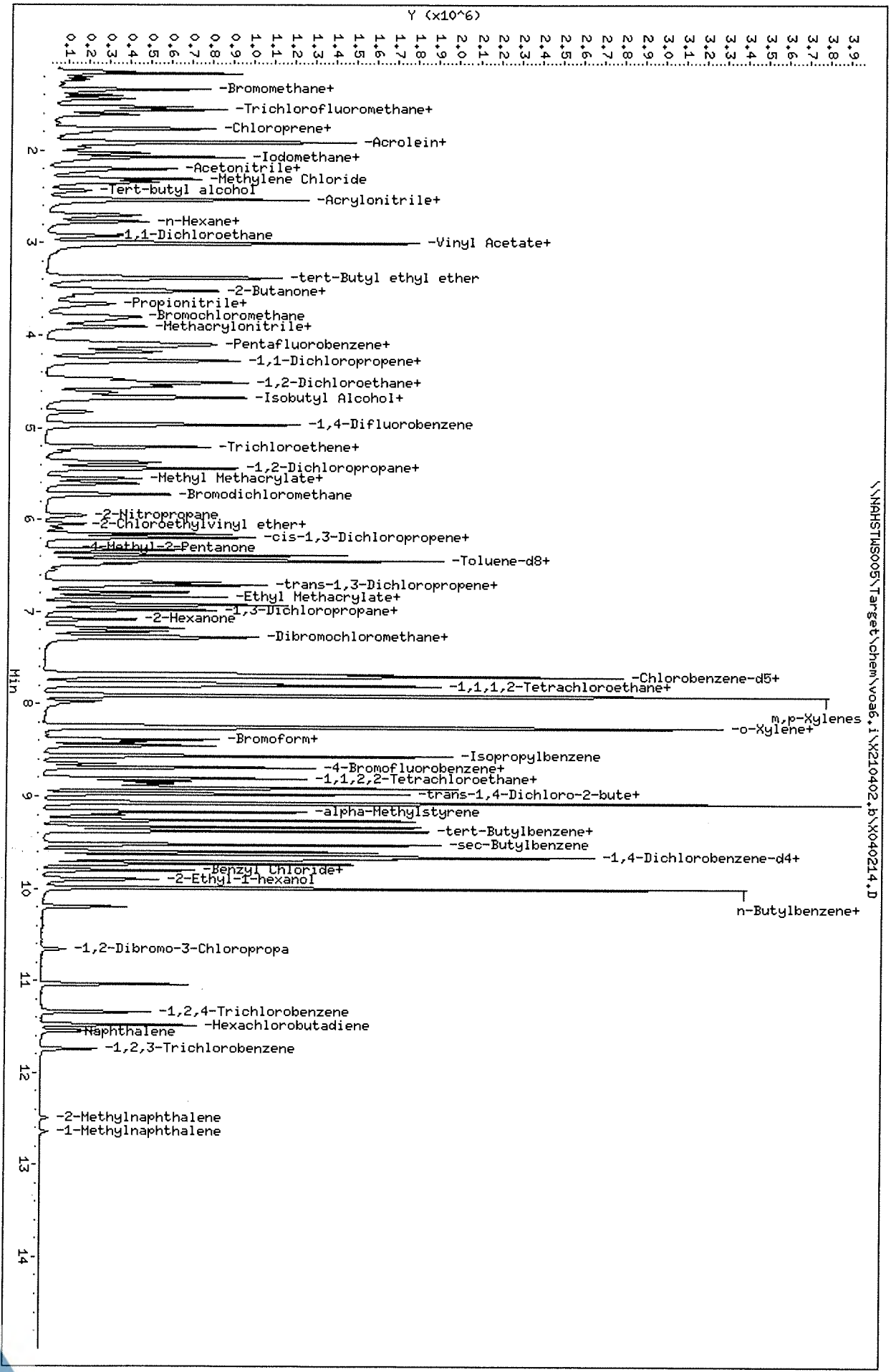
ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X210402.b\X040214.D
Lab Smp Id: ICV Client Smp ID: ICV
Inj Date : 02-APR-2021 15:26
Operator : PC Inst ID: voa6.i
Smp Info : CCV;CCV;2;;ICV
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X210402.b\8260W.m
Meth Date : 04-May-2021 11:39 voa6.i Quant Type: ISTD
Cal Date : 02-APR-2021 14:23 Cal File: X040211.D
Als bottle: 15 QC Sample: METHSPIKE
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBI_short1.sub
Target Version: 4.14
Processing Host: NAHSTW7066

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	403237	50.0000	
* 36 1,4-Difluorobenzene	114	4.963	4.970	(1.000)	674704	50.0000	
* 47 Chlorobenzene-d5	117	7.670	7.670	(1.000)	639311	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	322985	50.0000	
$ 30 Dibromofluoromethane	113	4.096	4.096	(0.979)	233448	49.1812	49.18
$ 35 1,2-Dichloroethane-d4	65	4.469	4.469	(1.069)	278339	48.9433	48.94
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	812891	49.4873	49.48
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	292882	47.8435	47.84
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	178830	48.1535	48.15
11 1,1-Dichloroethene	96	1.919	1.911	(0.459)	265347	46.2152	46.21
33 1,2-Dichloroethane	62	4.555	4.555	(0.918)	339122	47.4855	47.48
27 cis-1,2-Dichloroethene	96	3.530	3.523	(0.844)	228412	46.3383	46.33
17 Methylene Chloride	84	2.305	2.305	(0.551)	198869	45.5779	45.57
38 Trichloroethene	130	5.206	5.206	(1.049)	232943	50.4339	50.43
5 Vinyl Chloride	62	1.145	1.138	(0.274)	279152	46.1765	46.17



Data File: \\NAHSTWS005\Target\chem\voa6.i\X210402.b\X040214.D
Date : 02-APR-2021 15:26
Client ID: ICV
Sample Info: CCV;CCV;2;;ICV
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

MSVOA06 -Logbook

Batch: 44482 **Analyst:** Presenta Cabascango

Date: 04-19-2021 **Reviewer:**

Method: 8260 **Laboratory:** Houston

Comments:

#	Samp ID	Type	Analyzed	DF	Init Wt/Vol	Final Vol	File ID	Matrix	Status	pH
1	BFB	TUNE	04-19-2021 11:04 am	1.00	50 mL	50 mL	X041901.D	Liquid	Y	NA
2	CCV	CCV	04-19-2021 11:25 am	1.00	50 mL	50 mL	X041902.D	Liquid	Y	NA
3	BLANK	SAMP	04-19-2021 11:46 am	1.00	50 mL	50 mL	X041903.D	Liquid	Y	NA
4	CCB	SAMP	04-19-2021 12:07 pm	1.00	50 mL	50 mL	X041904.D	Liquid	Y	NA
5	VLCSW-210419	LCS	04-19-2021 12:28 pm	1.00	50 mL	50 mL	X041905.D	Liquid	Y	NA
6	BLANK	SAMP	04-19-2021 12:49 pm	1.00	50 mL	50 mL	X041906.D	Liquid	Y	NA
7	VBLKW-210419	MBLK	04-19-2021 01:10 pm	1.00	50 mL	50 mL	X041907.D	Liquid	Y	NA
8	HS21040859-15	SAMP	04-19-2021 01:31 pm	1.00	50 mL	50 mL	X041908.D	Liquid	Y	NA
9	HS21040859-06	SAMP	04-19-2021 01:52 pm	1.00	50 mL	50 mL	X041909.D	Liquid	Y	NA
10	HS21040859-08	SAMP	04-19-2021 02:13 pm	1.00	50 mL	50 mL	X041910.D	Liquid	Y	NA
11	HS21040859-09	SAMP	04-19-2021 02:34 pm	1.00	50 mL	50 mL	X041911.D	Liquid	Y	NA
12	HS21040859-11	SAMP	04-19-2021 02:55 pm	1.00	50 mL	50 mL	X041912.D	Liquid	Y	NA
13	HS21040859-12	SAMP	04-19-2021 03:17 pm	1.00	50 mL	50 mL	X041913.D	Liquid	Y	NA
14	HS21040859-13	SAMP	04-19-2021 03:38 pm	1.00	50 mL	50 mL	X041914.D	Liquid	Y	NA
15	HS21040859-08MS	MS	04-19-2021 03:59 pm	1.00	50 mL	50 mL	X041915.D	Liquid	Y	NA
16	HS21040859-08MSD	MSD	04-19-2021 04:20 pm	1.00	50 mL	50 mL	X041916.D	Liquid	Y	NA
17	BLANK	SAMP	04-19-2021 04:41 pm	1.00	50 mL	50 mL	X041917.D	Liquid	Y	NA
18	HS21040859-05	SAMP	04-19-2021 05:02 pm	5.00	10 mL	50 mL	X041918.D	Liquid	Y	NA
19	HS21040859-05	SAMP	04-19-2021 05:23 pm	25.00	2 mL	50 mL	X041919.D	Liquid	Y	NA
20	HS21040859-10	SAMP	04-19-2021 05:44 pm	5.00	10 mL	50 mL	X041920.D	Liquid	Y	NA
21	HS21040859-04	SAMP	04-19-2021 06:05 pm	10.00	5 mL	50 mL	X041921.D	Liquid	Y	NA
22	HS21040859-04	SAMP	04-19-2021 06:26 pm	100.0(	500 µL	50 mL	X041922.D	Liquid	Y	NA
23	HS21040859-01	SAMP	04-19-2021 06:47 pm	25.00	2 mL	50 mL	X041923.D	Liquid	Y	NA
24	HS21040859-01	SAMP	04-19-2021 07:08 pm	250.0(	200 µL	50 mL	X041924.D	Liquid	Y	NA
25	HS21040859-02	SAMP	04-19-2021 07:29 pm	25.00	2 mL	50 mL	X041925.D	Liquid	Y	NA
26	HS21040859-02	SAMP	04-19-2021 07:50 pm	250.0(	200 µL	50 mL	X041926.D	Liquid	Y	NA
27	HS21040859-03	SAMP	04-19-2021 08:12 pm	25.00	2 mL	50 mL	X041927.D	Liquid	Y	NA
28	HS21040859-03	SAMP	04-19-2021 08:33 pm	250.0(	200 µL	50 mL	X041928.D	Liquid	Y	NA
29	HS21040859-07	SAMP	04-19-2021 08:54 pm	50.00	1 mL	50 mL	X041929.D	Liquid	Y	NA
30	HS21040859-07	SAMP	04-19-2021 09:15 pm	500.0(	100 µL	50 mL	X041930.D	Liquid	Y	NA
31	CCV-END	CCV	04-19-2021 09:36 pm	1.00	50 mL	50 mL	X041931.D	Liquid	Y	NA

FORM 2
WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS21040859

	CLIENT SAMPLE NO.	SMC1 #	SMC2 (DCE)#	SMC3 (TOL)#	OTHER #	TOT OUT
01	VLCSW-210419	98	101	96	99	0
02	VBLKW-210419	95	100	107	97	0
03	HS21040859-15	94	101	106	94	0
04	HS21040859-06	94	98	107	94	0
05	HS21040859-08	95	100	105	91	0
06	HS21040859-09	93	100	109	96	0
07	HS21040859-11	92	99	107	94	0
08	HS21040859-12	94	101	107	96	0
09	HS21040859-13	93	98	107	94	0
10	HS21040859-08MS	94	98	103	102	0
11	HS21040859-08MSD	92	99	104	101	0
12	HS21040859-05	94	98	107	94	0
13	HS21040859-05	94	98	106	98	0
14	HS21040859-10	93	98	110	92	0
15	HS21040859-04	93	98	106	97	0
16	HS21040859-04	95	101	108	96	0
17	HS21040859-01	92	97	109	92	0
18	HS21040859-01	92	97	106	95	0
19	HS21040859-02	94	98	109	95	0
20	HS21040859-02	93	96	109	95	0
21	HS21040859-03	95	100	110	96	0
22	HS21040859-03	93	98	107	95	0
23	HS21040859-07	93	98	107	95	0
24	HS21040859-07	93	98	106	95	0
25						
26						
27						
28						

		QC LIMITS
SMC1	= Dibromofluoromethane	(0-130)
SMC2 (DCE)	= 1,2-Dichloroethane-d4	(0-130)
SMC3 (TOL)	= Toluene-d8	(0-130)
OTHER	= 4-Bromofluorobenzene	(0-130)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D System Monitoring Compound diluted out

FORM 4
VOLATILE METHOD BLANK SUMMARY

CLIENT SAMPLE NO.

VBLKW-210419

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS21040859

Lab File ID: X041907 Lab Sample ID: VBLKW-210419

Date Analyzed: 04/19/21 Time Analyzed: 1310

GC Column: DB624 ID: 0.18 (mm) Heated Purge: (Y/N) N

Instrument ID: VOA6

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	VLCSW-210419	VLCSW-210419	X041905	1228
02	HS21040859-15	HS21040859-15	X041908	1331
03	HS21040859-06	HS21040859-06	X041909	1352
04	HS21040859-08	HS21040859-08	X041910	1413
05	HS21040859-09	HS21040859-09	X041911	1434
06	HS21040859-11	HS21040859-11	X041912	1455
07	HS21040859-12	HS21040859-12	X041913	1517
08	HS21040859-13	HS21040859-13	X041914	1538
09	HS21040859-08MS	HS21040859-08MS	X041915	1559
10	HS21040859-08MSD	HS21040859-08MSD	X041916	1620
11	HS21040859-05	HS21040859-05	X041918	1702
12	HS21040859-05	HS21040859-05	X041919	1723
13	HS21040859-10	HS21040859-10	X041920	1744
14	HS21040859-04	HS21040859-04	X041921	1805
15	HS21040859-04	HS21040859-04	X041922	1826
16	HS21040859-01	HS21040859-01	X041923	1847
17	HS21040859-01	HS21040859-01	X041924	1908
18	HS21040859-02	HS21040859-02	X041925	1929
19	HS21040859-02	HS21040859-02	X041926	1950
20	HS21040859-03	HS21040859-03	X041927	2012
21	HS21040859-03	HS21040859-03	X041928	2033
22	HS21040859-07	HS21040859-07	X041929	2054
23	HS21040859-07	HS21040859-07	X041930	2115
24				
25				
26				
27				
28				
29				
30				

COMMENTS:

FORM 5
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS21040859

Lab File ID: X041901 BFB Injection Date: 04/19/21

Instrument ID: VOA6 BFB Injection Time: 1104

GC Column: DB624 ID: 0.25 (mm) Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	19.7
75	30.0 - 60.0% of mass 95	50.8
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.6
173	Less than 2.0% of mass 174	0.8 (1.2)1
174	Greater than 50.0% of mass 95	73.1
175	5.0 - 9.0% of mass 174	5.6 (7.6)1
176	95.0 - 101.0% of mass 174	73.7 (100.9)1
177	5.0 - 9.0% of mass 176	5.0 (6.8)2

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

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	CCV	CCV	X041902	04/19/21	1125
02	VLCSW-210419	VLCSW-210419	X041905	04/19/21	1228
03	VBLKW-210419	VBLKW-210419	X041907	04/19/21	1310
04	HS21040859-15	HS21040859-15	X041908	04/19/21	1331
05	HS21040859-06	HS21040859-06	X041909	04/19/21	1352
06	HS21040859-08	HS21040859-08	X041910	04/19/21	1413
07	HS21040859-09	HS21040859-09	X041911	04/19/21	1434
08	HS21040859-11	HS21040859-11	X041912	04/19/21	1455
09	HS21040859-12	HS21040859-12	X041913	04/19/21	1517
10	HS21040859-13	HS21040859-13	X041914	04/19/21	1538
11	HS21040859-08MS	HS21040859-08MS	X041915	04/19/21	1559
12	HS21040859-08MSD	HS21040859-08MSD	X041916	04/19/21	1620
13	HS21040859-05	HS21040859-05	X041918	04/19/21	1702
14	HS21040859-05	HS21040859-05	X041919	04/19/21	1723
15	HS21040859-10	HS21040859-10	X041920	04/19/21	1744
16	HS21040859-04	HS21040859-04	X041921	04/19/21	1805
17	HS21040859-04	HS21040859-04	X041922	04/19/21	1826
18	HS21040859-01	HS21040859-01	X041923	04/19/21	1847
19	HS21040859-01	HS21040859-01	X041924	04/19/21	1908
20	HS21040859-02	HS21040859-02	X041925	04/19/21	1929
21	HS21040859-02	HS21040859-02	X041926	04/19/21	1950
22	HS21040859-03	HS21040859-03	X041927	04/19/21	2012

FORM 5
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS21040859

Lab File ID: X041901 BFB Injection Date: 04/19/21

Instrument ID: VOA6 BFB Injection Time: 1104

GC Column: DB624 ID: 0.25 (mm) Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	19.7
75	30.0 - 60.0% of mass 95	50.8
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.6
173	Less than 2.0% of mass 174	0.8 (1.2)1
174	Greater than 50.0% of mass 95	73.1
175	5.0 - 9.0% of mass 174	5.6 (7.6)1
176	95.0 - 101.0% of mass 174	73.7 (100.9)1
177	5.0 - 9.0% of mass 176	5.0 (6.8)2

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

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	HS21040859-03	HS21040859-03	X041928	04/19/21	2033
02	HS21040859-07	HS21040859-07	X041929	04/19/21	2054
03	HS21040859-07	HS21040859-07	X041930	04/19/21	2115
04	CCV-END	CCV-END	X041931	04/19/21	2136
05					
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

FORM V VOA

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS21040859

Instrument ID: VOA6 Calibration Date: 04/19/21 Time: 1125

Lab File ID: X041902 Init. Calib. Date(s): 04/02/21 04/02/21

Init. Calib. Times: 1053 1423

GC Column: DB624 ID: 0.18 (mm)

COMPOUND	RRF or AMOUNT	RRF50.000 or AMOUNT	CCAL RRF50.000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Vinyl Chloride	0.7500000	0.7297963	0.7297963	0.1	2.69	20.00	AVRG
Methylene Chloride	47.172695	50.000000	0.5110190	0.1	5.65	20.00	LINR
1,1-Dichloroethene	0.7120000	0.6202388	0.6202388	0.1	12.89	20.00	AVRG
1,2-Dichloroethane	0.5290000	0.5059900	0.5059900	0.1	4.35	20.00	AVRG
cis-1,2-Dichloroethene	0.6110000	0.6012757	0.6012757	0.1	1.59	20.00	AVRG
1,1,2-Trichloroethane	0.2900000	0.2927588	0.2927588	0.1	-0.95	20.00	AVRG
Trichloroethene	0.3420000	0.3362422	0.3362422	0.2	1.68	20.00	AVRG
Dibromofluoromethane	51.923814	50.000000	0.6115061	0.1	-3.85	20.00	LINR
1,2-Dichloroethane-d4	52.641991	50.000000	0.7429452	0.1	-5.28	20.00	LINR
Toluene-d8	51.157491	50.000000	1.3160951	0.1	-2.31	20.00	LINR
4-Bromofluorobenzene	54.117524	50.000000	0.5203441	0.1	-8.24	20.00	LINR

FORM VII VOA

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS21040859

Instrument ID: VOA6 Calibration Date: 04/19/21 Time: 2136

Lab File ID: X041931 Init. Calib. Date(s): 04/02/21 04/02/21

Init. Calib. Times: 1053 1423

GC Column: DB624 ID: 0.18 (mm)

COMPOUND	RRF or AMOUNT	RRF50.000 or AMOUNT	CCAL RRF50.000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Vinyl Chloride	0.7500000	0.7927999	0.7927999	0.1	-5.71	50.00	AVRG
Methylene Chloride	51.888418	50.000000	0.5637622	0.1	-3.78	50.00	LINR
1,1-Dichloroethene	0.7120000	0.6949117	0.6949117	0.1	2.40	50.00	AVRG
1,2-Dichloroethane	0.5290000	0.5295819	0.5295819	0.1	-0.11	50.00	AVRG
cis-1,2-Dichloroethene	0.6110000	0.6379647	0.6379647	0.1	-4.41	50.00	AVRG
1,1,2-Trichloroethane	0.2900000	0.3113523	0.3113523	0.1	-7.36	50.00	AVRG
Trichloroethene	0.3420000	0.3545487	0.3545487	0.2	-3.67	50.00	AVRG
Dibromofluoromethane	55.482813	50.000000	0.6537727	0.1	-10.96	50.00	LINR
1,2-Dichloroethane-d4	56.846143	50.000000	0.8028289	0.1	-13.69	50.00	LINR
Toluene-d8	53.222021	50.000000	1.3712061	0.1	-6.44	50.00	LINR
4-Bromofluorobenzene	55.954134	50.000000	0.5385587	0.1	-11.91	50.00	LINR

FORM VII VOA

FORM 8
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS21040859

Lab File ID (Standard): X041902 Date Analyzed: 04/19/21

Instrument ID: VOA6 Time Analyzed: 1125

GC Column: DB624 ID: 0.18 (mm) Heated Purge: (Y/N) N

		IS1 AREA #	RT #	IS2(DFB) AREA #	RT #	IS3(CBZ) AREA #	RT #
	12 HOUR STD	441330	4.18	771786	4.97	712836	7.67
	UPPER LIMIT	882660	4.68	1543572	5.47	1425672	8.17
	LOWER LIMIT	220665	3.68	385893	4.47	356418	7.17
	CLIENT SAMPLE NO.						
01	VLCSW-210419	389766	4.18	678334	4.97	666252	7.67
02	VBLKW-210419	465497	4.18	755918	4.97	664019	7.67
03	HS21040859-15	462264	4.18	752318	4.96	660105	7.67
04	HS21040859-06	460038	4.18	744285	4.96	643656	7.67
05	HS21040859-08	452490	4.18	747316	4.97	654094	7.67
06	HS21040859-09	443777	4.18	726788	4.97	619943	7.67
07	HS21040859-11	455324	4.18	737076	4.96	643006	7.67
08	HS21040859-12	440740	4.18	711558	4.97	611651	7.67
09	HS21040859-13	446560	4.18	723242	4.97	618041	7.67
10	HS21040859-08MS	467985	4.18	766492	4.96	722964	7.67
11	HS21040859-08MSD	480079	4.18	771078	4.96	741170	7.67
12	HS21040859-05	441780	4.18	708072	4.96	606496	7.67
13	HS21040859-05	443188	4.18	714167	4.96	626768	7.67
14	HS21040859-10	454477	4.18	729613	4.97	617179	7.67
15	HS21040859-04	442591	4.18	712026	4.97	620018	7.67
16	HS21040859-04	421606	4.18	690587	4.97	589026	7.67
17	HS21040859-01	441392	4.18	701110	4.96	602088	7.67
18	HS21040859-01	439584	4.18	707638	4.97	620096	7.67
19	HS21040859-02	438698	4.18	702462	4.96	601170	7.67
20	HS21040859-02	426088	4.18	691986	4.97	588654	7.67

IS1 = Pentafluorobenzene
IS2 (DFB) = 1,4-Difluorobenzene
IS3 (CBZ) = Chlorobenzene-d5

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

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

FORM VIII VOA

FORM 8
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS21040859

Lab File ID (Standard): X041902 Date Analyzed: 04/19/21

Instrument ID: VOA6 Time Analyzed: 1125

GC Column: DB624 ID: 0.18 (mm) Heated Purge: (Y/N) N

		IS1 AREA #	IS1 RT #	IS2(DFB) AREA #	IS2(DFB) RT #	IS3(CBZ) AREA #	IS3(CBZ) RT #
	12 HOUR STD	441330	4.18	771786	4.97	712836	7.67
	UPPER LIMIT	882660	4.68	1543572	5.47	1425672	8.17
	LOWER LIMIT	220665	3.68	385893	4.47	356418	7.17
	CLIENT SAMPLE NO.						
01	HS21040859-03	422721	4.18	685344	4.96	581842	7.67
02	HS21040859-03	426527	4.18	693259	4.96	598862	7.67
03	HS21040859-07	432482	4.18	686496	4.96	601036	7.67
04	HS21040859-07	424000	4.18	682649	4.96	604565	7.67
05							
06							
07							
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							

IS1 = Pentafluorobenzene
IS2 (DFB) = 1,4-Difluorobenzene
IS3 (CBZ) = Chlorobenzene-d5

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

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

FORM VIII VOA

FORM 8
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS21040859

Lab File ID (Standard): X041902 Date Analyzed: 04/19/21

Instrument ID: VOA6 Time Analyzed: 1125

GC Column: DB624 ID: 0.18 (mm) Heated Purge: (Y/N) N

		IS4 (DCB) AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	345600	9.66				
	UPPER LIMIT	691200	10.16				
	LOWER LIMIT	172800	9.16				
	CLIENT SAMPLE NO.						
01	VLCSW-210419	299494	9.66				
02	VBLKW-210419	287973	9.66				
03	HS21040859-15	278765	9.66				
04	HS21040859-06	272940	9.66				
05	HS21040859-08	263490	9.66				
06	HS21040859-09	261879	9.66				
07	HS21040859-11	275422	9.66				
08	HS21040859-12	256702	9.66				
09	HS21040859-13	253982	9.66				
10	HS21040859-08MS	326279	9.66				
11	HS21040859-08MSD	328543	9.66				
12	HS21040859-05	254000	9.66				
13	HS21040859-05	277342	9.66				
14	HS21040859-10	267133	9.66				
15	HS21040859-04	257201	9.66				
16	HS21040859-04	242068	9.66				
17	HS21040859-01	254848	9.66				
18	HS21040859-01	268727	9.66				
19	HS21040859-02	253595	9.66				
20	HS21040859-02	246524	9.66				

IS4 (DCB) = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

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

FORM VIII VOA

FORM 8
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS21040859

Lab File ID (Standard): X041902 Date Analyzed: 04/19/21

Instrument ID: VOA6 Time Analyzed: 1125

GC Column: DB624 ID: 0.18 (mm) Heated Purge: (Y/N) N

		IS4 (DCB) AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	345600	9.66				
	UPPER LIMIT	691200	10.16				
	LOWER LIMIT	172800	9.16				
	CLIENT SAMPLE NO.						
01	HS21040859-03	239546	9.66				
02	HS21040859-03	257972	9.66				
03	HS21040859-07	259549	9.66				
04	HS21040859-07	250253	9.66				
05							
06							
07							
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							

IS4 (DCB) = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

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

FORM VIII VOA

Data File: \\NAHSTWS005\Target\chem\voa6.i\X210419.b\X041901.D

Date : 19-APR-2021 11:04

Client ID: BFB

Instrument: voa6.i

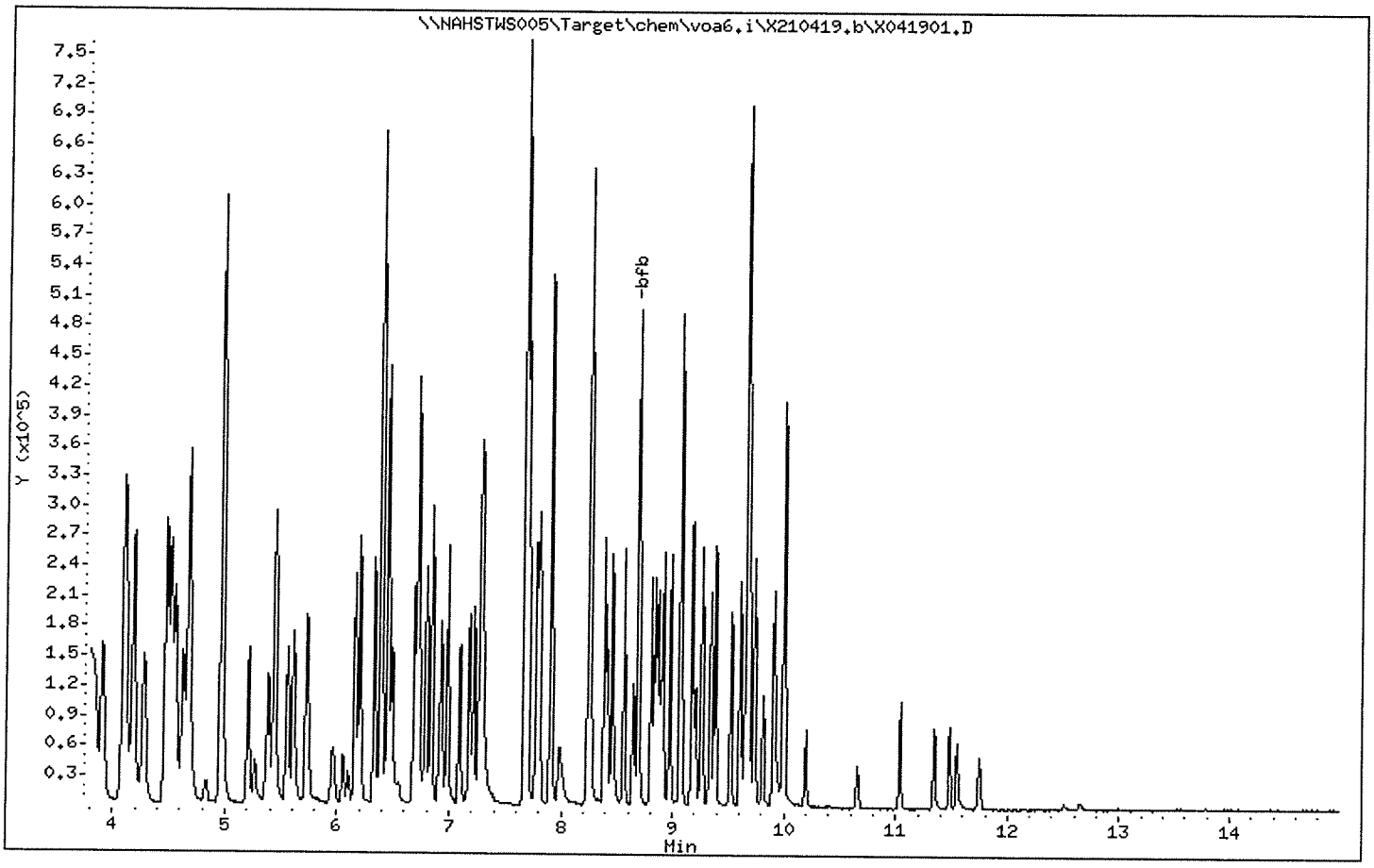
Sample Info: BFB;BFB;3;;BFB

Volume Injected (uL): 2.0

Operator:

Column phase: DB624

Column diameter: 0.25



Data File: \\NAHSTWS005\Target\chem\voa6.i\X210419.b\X041901.D

Date : 19-APR-2021 11:04

Client ID: BFB

Instrument: voa6.i

Sample Info: BFB;BFB;3;;BFB

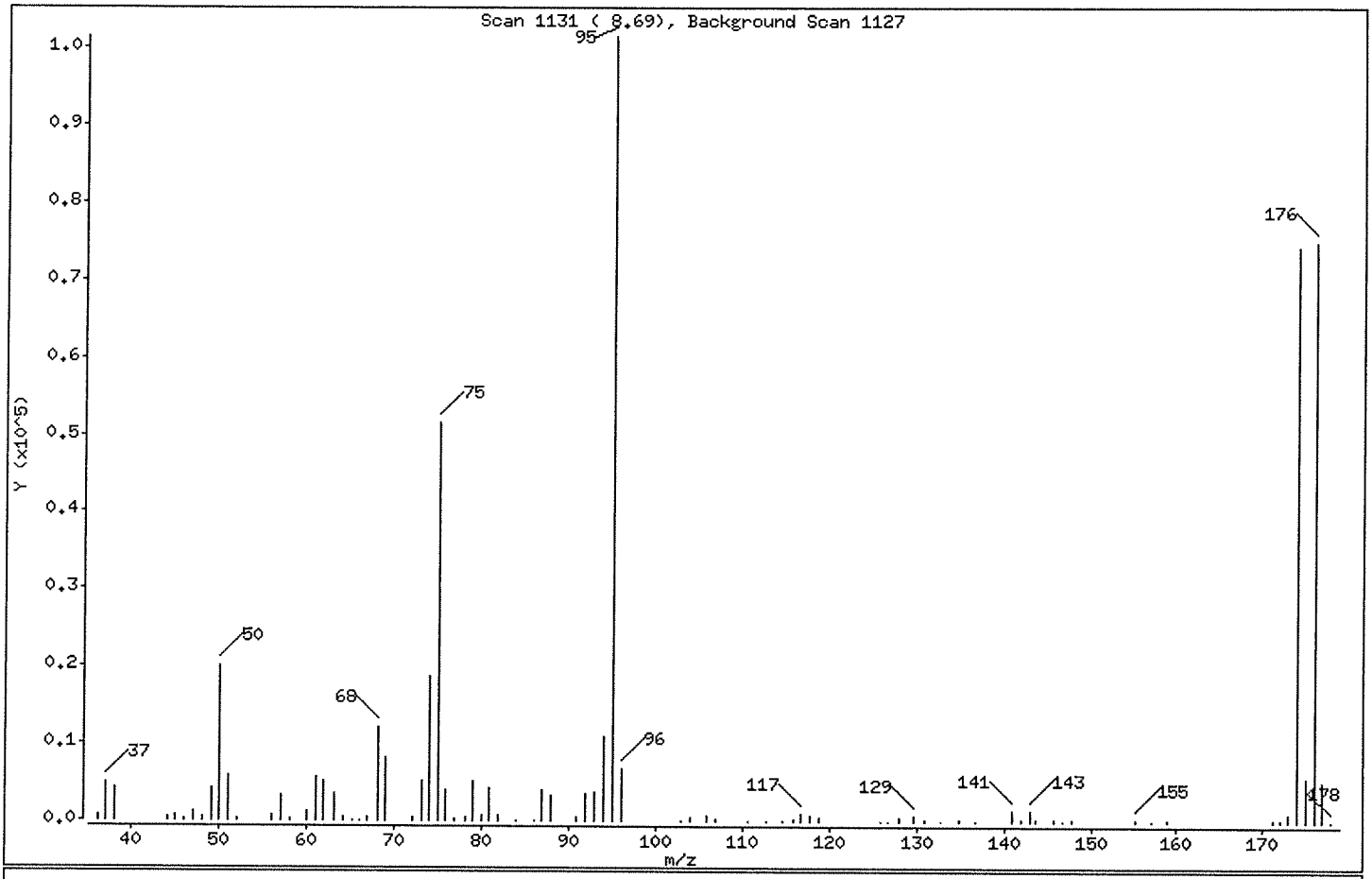
Volume Injected (uL): 2.0

Operator:

Column phase: DB624

Column diameter: 0.25

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	19.75
75	30.00 - 60.00% of mass 95	50.78
96	5.00 - 9.00% of mass 95	6.63
173	Less than 2.00% of mass 174	0.85 (1.16)
174	Greater than 50.00% of mass 95	73.09
175	5.00 - 9.00% of mass 174	5.57 (7.62)
176	95.00 - 101.00% of mass 174	73.71 (100.85)
177	5.00 - 9.00% of mass 176	5.02 (6.80)

Data File: \\NAHSTWS005\Target\chem\voa6.i\X210419.b\X041901.D

Date : 19-APR-2021 11:04

Client ID: BFB

Instrument: voa6.i

Sample Info: BFB;BFB;3;;BFB

Volume Injected (uL): 2.0

Operator:

Column phase: DB624

Column diameter: 0.25

Data File: X041901.D
Spectrum: Scan 1131 (8.69), Background Scan 1127
Location of Maximum: 95.00
Number of points: 83

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.10	712	66.00	108	93.00	3803	134.80	154
37.00	4969	66.90	478	94.00	10871	136.70	84
38.10	4181	68.00	12099	95.00	101440	140.90	1317
44.00	535	69.00	8094	96.00	6730	141.90	285
45.00	764	72.00	467	102.90	79	143.00	1290
45.90	179	73.00	5092	103.90	503	143.70	120
47.00	1219	74.00	18768	105.80	641	145.80	152
48.10	559	75.00	51512	106.90	175	146.80	89
49.00	4142	75.90	3878	110.60	71	147.90	154
50.00	20032	76.90	149	112.80	71	155.10	221
51.00	5752	78.10	382	114.70	73	157.00	58
52.00	245	78.90	5033	115.90	204	158.90	121
55.90	649	79.90	731	116.80	901	171.10	173
57.00	3360	80.90	4267	117.80	596	172.00	312
58.10	332	81.80	783	118.80	528	172.80	862
59.90	1103	83.90	90	125.90	80	173.90	74144
61.00	5681	86.10	76	126.80	110	174.90	5651
61.90	5086	86.90	4031	127.90	532	175.90	74776
63.00	3438	88.00	3196	129.60	618	176.90	5088
64.10	469	90.90	422	131.00	121	177.90	105
65.10	41	91.90	3601	132.80	104		

Data File: \\NAHSTWS005\Target\chem\voa6.i\X210419.b\X041902.D Page 1
Report Date: 05-May-2021 09:57

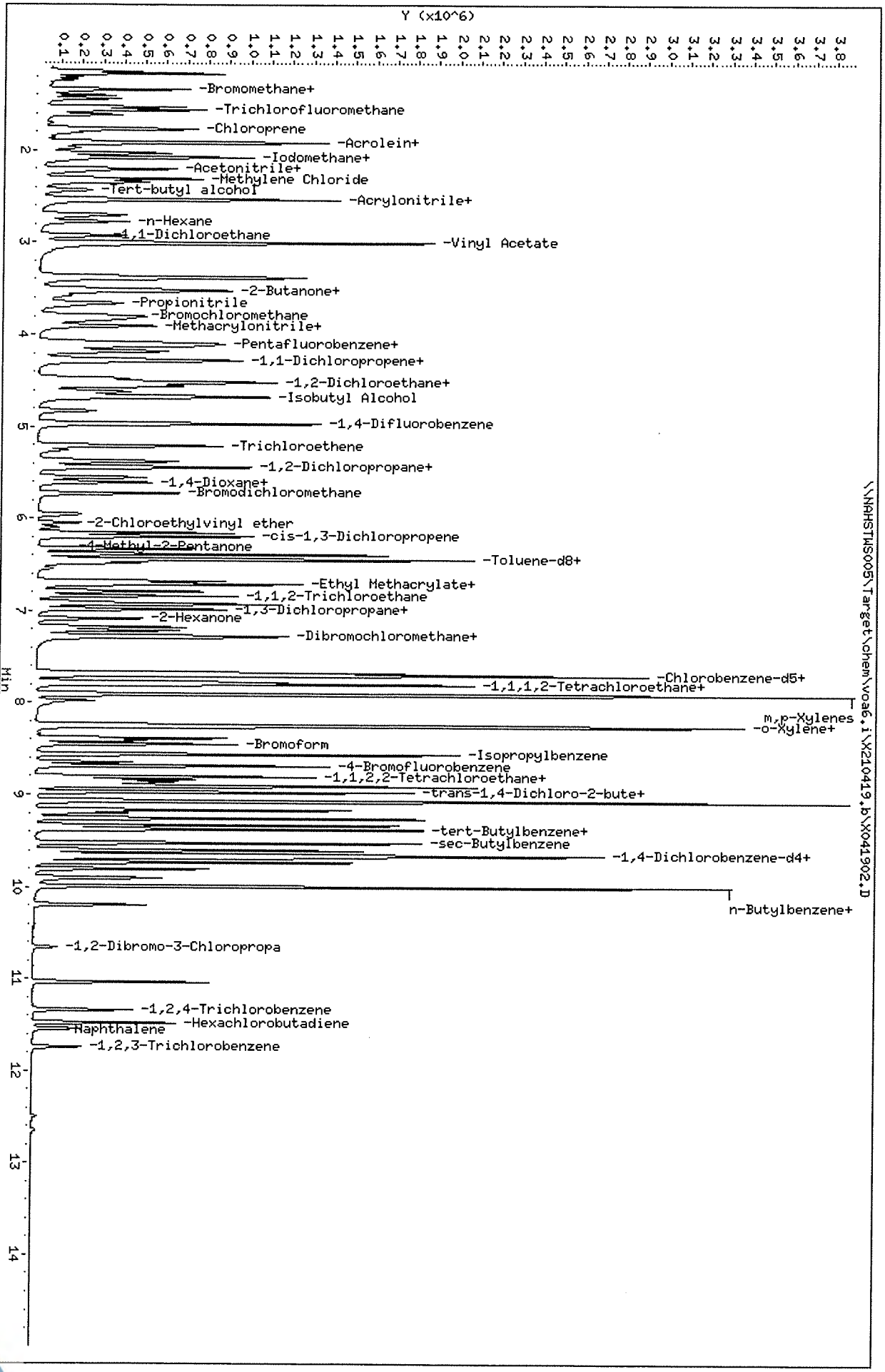
ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X210419.b\X041902.D
Lab Smp Id: CCV Client Smp ID: CCV
Inj Date : 19-APR-2021 11:25
Operator : PC Inst ID: voa6.i
Smp Info : CCV;CCV;2;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X210419.b\8260W.m
Meth Date : 05-May-2021 09:57 voa6.i Quant Type: ISTD
Cal Date : 02-APR-2021 13:20 Cal File: X040208.D
Als bottle: 2 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBI_short1.sub
Target Version: 4.14
Processing Host: NAHSTW7066

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	441330	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	771786	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	712836	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	345600	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	269876	50.0000	51.92
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	327884	50.0000	52.64
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	938160	50.0000	51.15
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	370920	50.0000	54.11
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	208689	50.0000	50.39
11 1,1-Dichloroethene	96	1.919	1.919	(0.459)	273730	50.0000	43.56
33 1,2-Dichloroethane	62	4.555	4.555	(0.916)	390516	50.0000	47.80
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	265361	50.0000	49.18
17 Methylene Chloride	84	2.306	2.306	(0.551)	225528	50.0000	47.17
38 Trichloroethene	130	5.207	5.207	(1.048)	259507	50.0000	49.11
5 Vinyl Chloride	62	1.145	1.145	(0.274)	322081	50.0000	48.67



Data File: \\NAHSTWS005\Target\chem\voa6,i\X210419,b\X041902.D
Date : 19-APR-2021 11:25
Client ID: CCV
Sample Info: CCV;CCV;2;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6,i
Operator: PC
Column diameter: 0.18

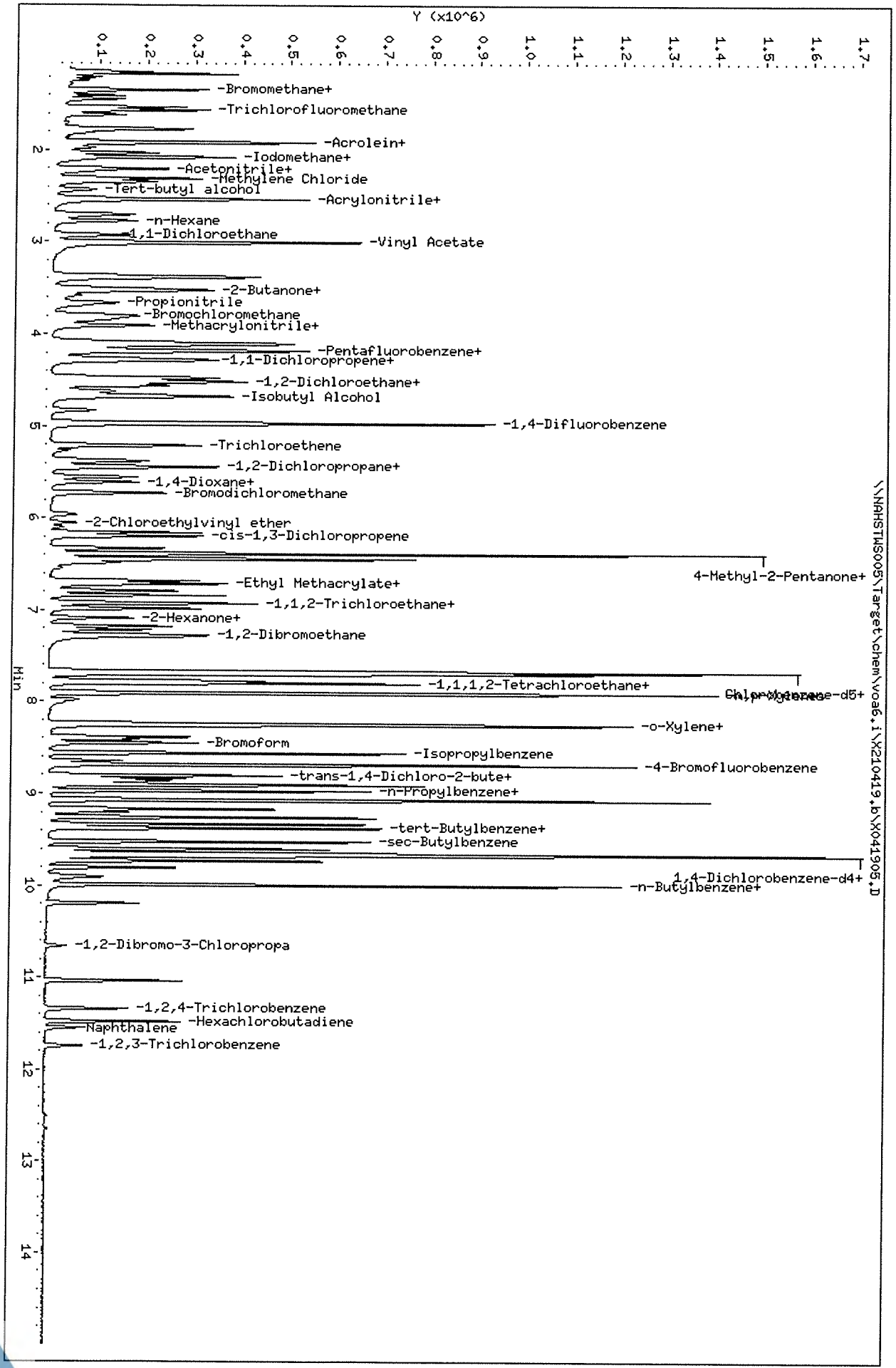
ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X210419.b\X041905.D
Lab Smp Id: VLCSW-210419 Client Smp ID: VLCSW-210419
Inj Date : 19-APR-2021 12:28
Operator : PC Inst ID: voa6.i
Smp Info : VLCSW-210419;VLCSW-210419;3;;LCS
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X210419.b\8260W.m
Meth Date : 05-May-2021 09:57 voa6.i Quant Type: ISTD
Cal Date : 02-APR-2021 13:20 Cal File: X040208.D
Als bottle: 5 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBI_short1.sub
Target Version: 4.14
Processing Host: NAHSTW7066

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	389766	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	678334	50.0000	
* 47 Chlorobenzene-d5	117	7.670	7.671	(1.000)	666252	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	299494	50.0000	
$ 30 Dibromofluoromethane	113	4.096	4.103	(0.979)	224371	48.9051	48.90
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	276675	50.3185	50.31
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	816664	47.7734	47.77
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	315807	49.4451	49.44
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	77379	19.9933	19.99
11 1,1-Dichloroethene	96	1.919	1.919	(0.459)	103677	18.6814	18.68
33 1,2-Dichloroethane	62	4.555	4.555	(0.916)	145758	20.3005	20.30
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	102487	21.5103	21.51
17 Methylene Chloride	84	2.305	2.306	(0.551)	93938	23.0316	23.03
38 Trichloroethene	130	5.206	5.207	(1.048)	95436	20.5520	20.55
5 Vinyl Chloride	62	1.145	1.145	(0.274)	127590	21.8350	21.83



Data File: \\NAHSTWS005\Target\chem\voa6.i\X210419.b\X041905.D
Date : 19-APR-2021 12:28
Client ID: VLCSW-210419
Sample Info: VLCSW-210419;VLCSW-210419;3;;LCS
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\NAHSTWS005\Target\chem\voa6.i\X210419.b\X041907.D Page 1
Report Date: 05-May-2021 09:57

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X210419.b\X041907.D
Lab Smp Id: VBLKW-210419 Client Smp ID: VBLKW-210419
Inj Date : 19-APR-2021 13:10
Operator : PC Inst ID: voa6.i
Smp Info : VBLKW-210419;VBLKW-210419;3;;BLANK
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X210419.b\8260W.m
Meth Date : 05-May-2021 09:57 voa6.i Quant Type: ISTD
Cal Date : 02-APR-2021 13:20 Cal File: X040208.D
Als bottle: 7 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBI_short1.sub
Target Version: 4.14
Processing Host: NAHSTW7066

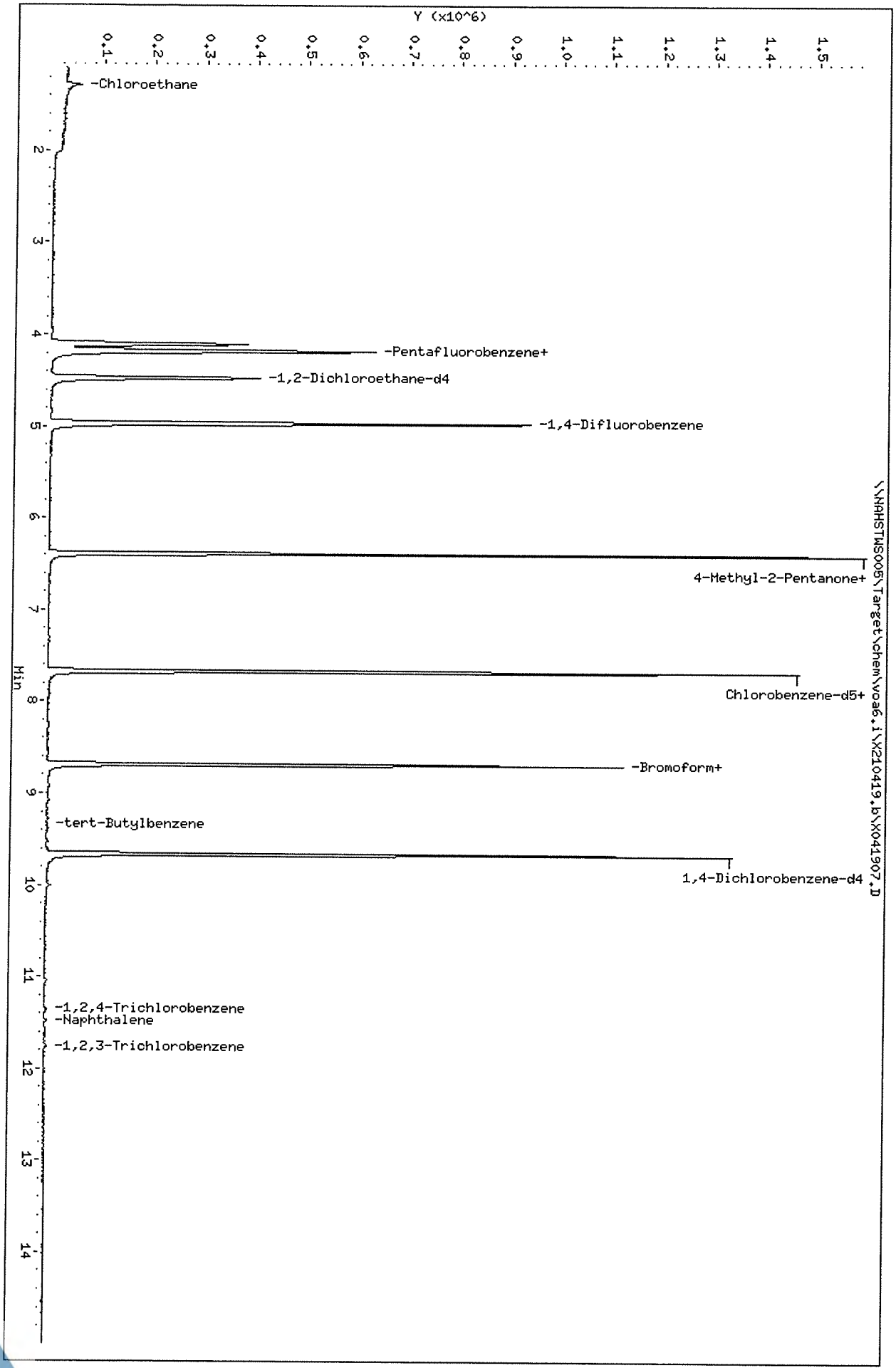
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	465497	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	755918	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	664019	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	287973	50.0000	
$ 30 Dibromofluoromethane	113	4.104	4.103	(0.981)	259878	47.4420	47.44
$ 35 1,2-Dichloroethane-d4	65	4.469	4.476	(1.068)	330085	50.2660	50.26
$ 48 Toluene-d8	98	6.389	6.388	(0.833)	915472	53.5021	53.50
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	310082	48.7365	48.73

Data File: \\NAHSTWS005\Target\chem\voa6.i\X210419.b\X041907.D
Date : 19-APR-2021 13:10
Client ID: VBLKW-210419
Sample Info: VBLKW-210419;VBLKW-210419;3;;BLANK
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18



Data File: \\NAHSTWS005\Target\chem\voa6.i\X210419.b\X041908.D Page 1
Report Date: 05-May-2021 10:26

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X210419.b\X041908.D
Lab Smp Id: HS21040859-15 Client Smp ID: HS21040859-15
Inj Date : 19-APR-2021 13:31
Operator : PC Inst ID: voa6.i
Smp Info : HS21040859-15;HS21040859-15;;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X210419.b\8260W.m
Meth Date : 05-May-2021 10:25 Qin.Xu Quant Type: ISTD
Cal Date : 02-APR-2021 13:20 Cal File: X040208.D
Als bottle: 8
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBI_short1.sub
Target Version: 4.14
Processing Host: NAHSTW7066

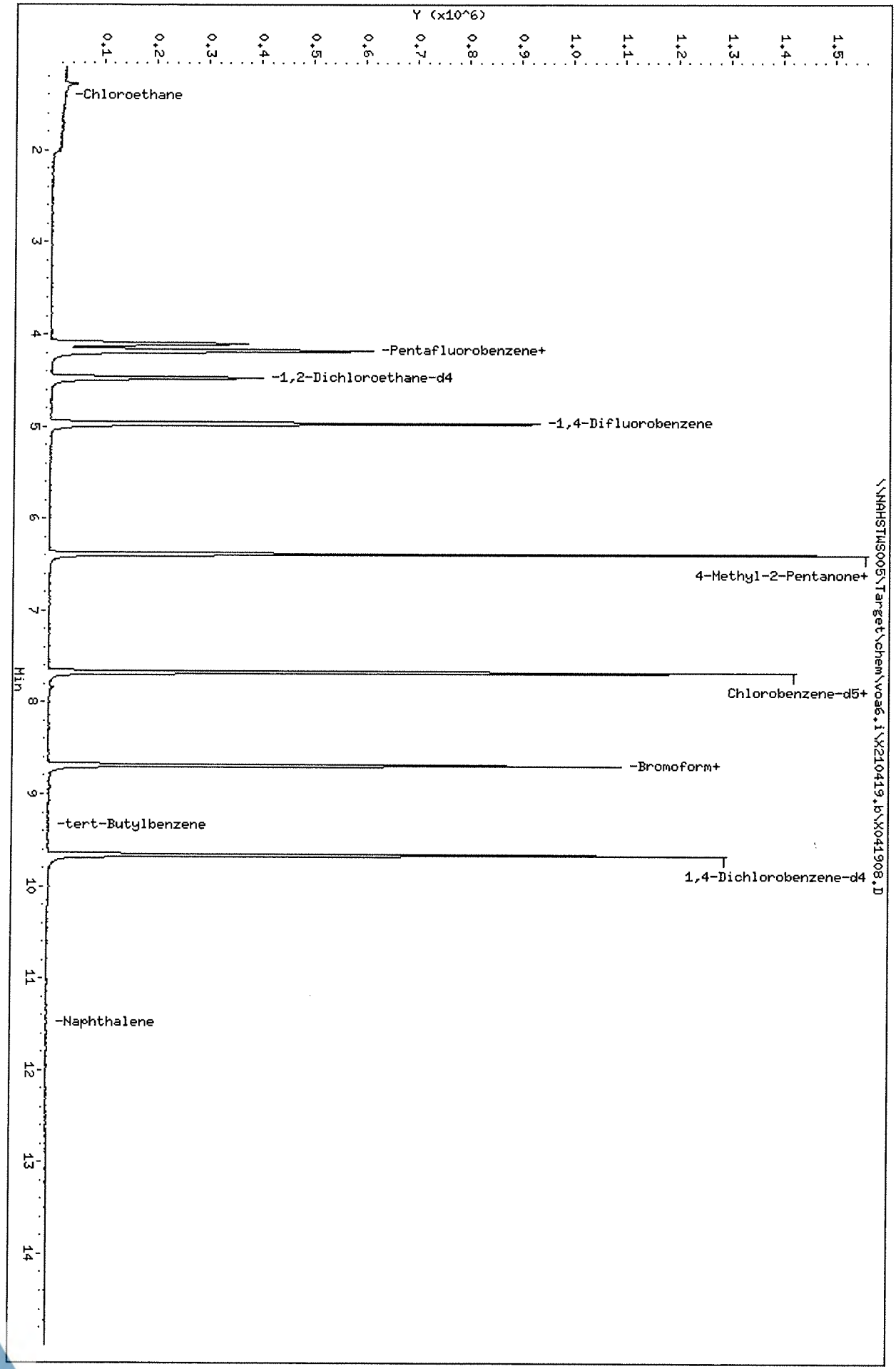
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	462264	50.0000	
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	752318	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	660105	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	278765	50.0000	
$ 30 Dibromofluoromethane	113	4.104	4.103	(0.981)	256970	47.2411	47.24
$ 35 1,2-Dichloroethane-d4	65	4.469	4.476	(1.068)	328541	50.3797	50.37
$ 48 Toluene-d8	98	6.389	6.388	(0.833)	904000	53.1573	53.15
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	295385	46.7707	46.77

Data File: \\NAHSTWS005\Target\chem\voa6.i\X210419.b\X041908.D
Date : 19-APR-2021 13:31
Client ID: HS21040859-15
Sample Info: HS21040859-15;HS21040859-15;;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18



Data File: \\NAHSTWS005\Target\chem\voa6.i\X210419.b\X041909.D Page 1
Report Date: 05-May-2021 10:26

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X210419.b\X041909.D
Lab Smp Id: HS21040859-06 Client Smp ID: HS21040859-06
Inj Date : 19-APR-2021 13:52
Operator : PC Inst ID: voa6.i
Smp Info : HS21040859-06;HS21040859-06;;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X210419.b\8260W.m
Meth Date : 05-May-2021 10:25 Qin.Xu Quant Type: ISTD
Cal Date : 02-APR-2021 13:20 Cal File: X040208.D
Als bottle: 9
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBI_short1.sub
Target Version: 4.14
Processing Host: NAHSTW7066

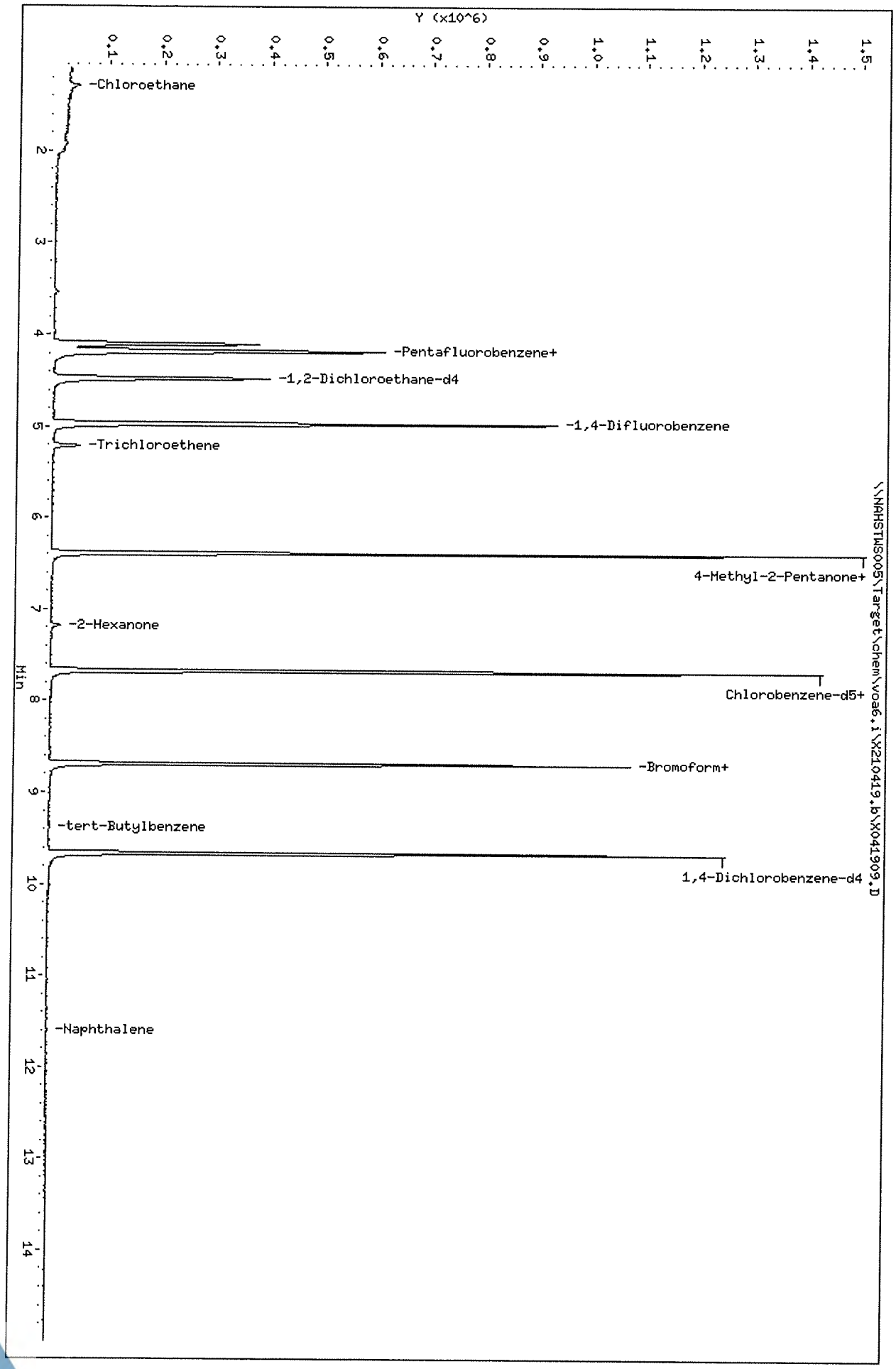
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	460038	50.0000	
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	744285	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	643656	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	272940	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	255968	47.2842	47.28
$ 35 1,2-Dichloroethane-d4	65	4.469	4.476	(1.069)	319236	49.2011	49.20
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	889400	53.6187	53.61
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	289694	47.0323	47.03
38 Trichloroethene	130	5.214	5.207	(1.051)	16046	3.14930	3.14

Data File: \\NAHSTWS005\Target\chem\voa6.i\X210419.b\X041909.D
Date : 19-APR-2021 13:52
Client ID: HS21040859-06
Sample Info: HS21040859-06;HS21040859-06;;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18



Data File: \\NAHSTWS005\Target\chem\voa6.i\X210419.b\X041909.D

Date : 19-APR-2021 13:52

Client ID: HS21040859-06

Instrument: voa6.i

Sample Info: HS21040859-06;HS21040859-06;;;

Purge Volume: 5.0

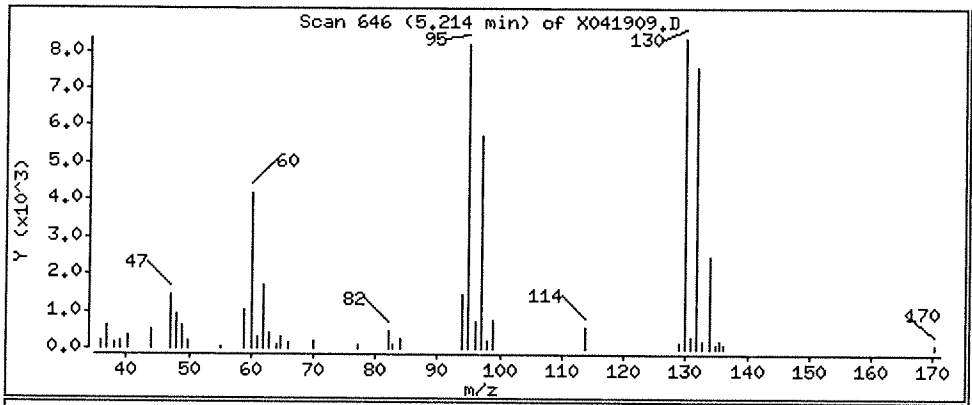
Operator: PC

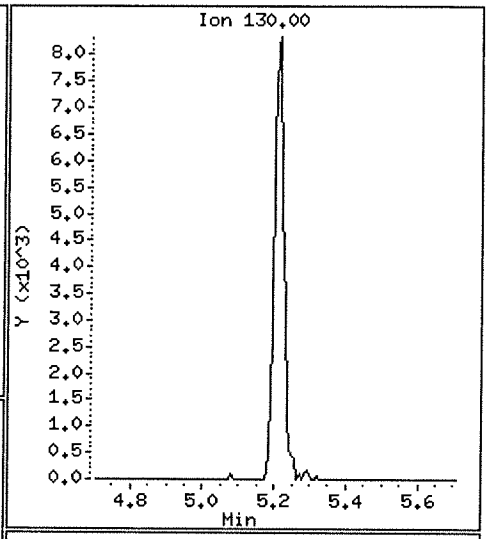
Column phase: DB624

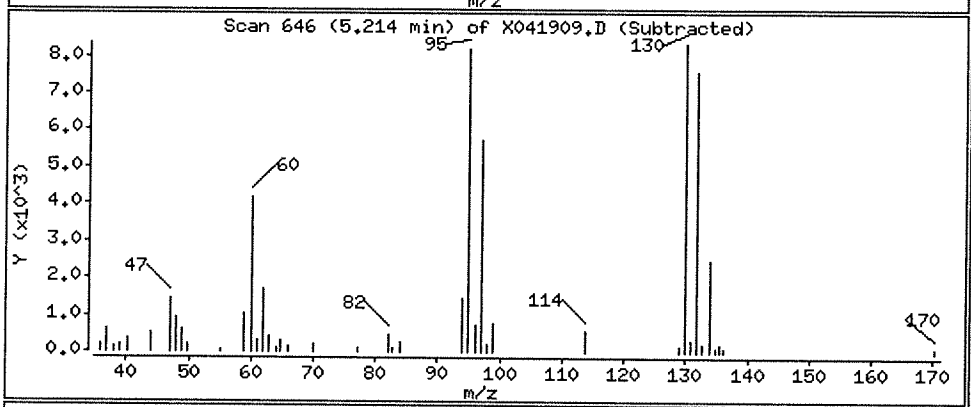
Column diameter: 0.18

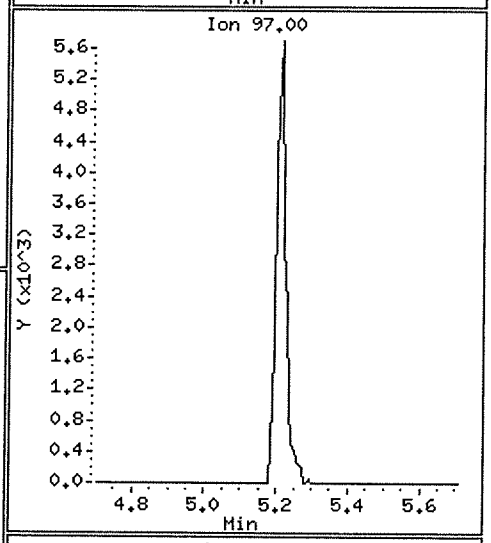
38 Trichloroethene

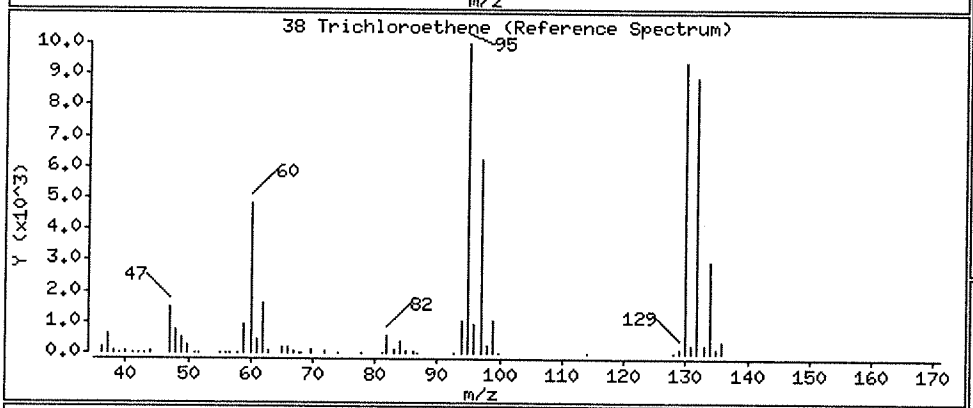
Concentration: 3.14 ug/l

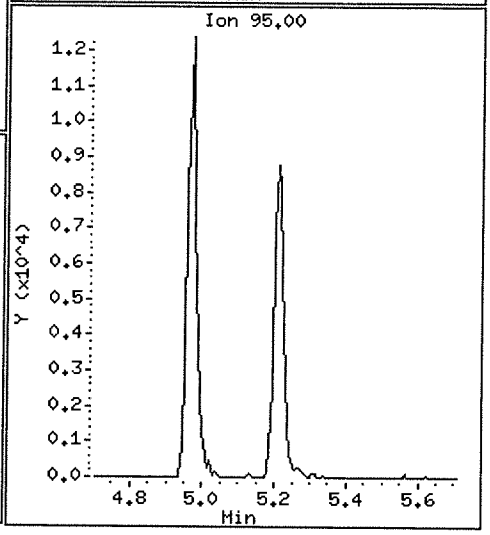


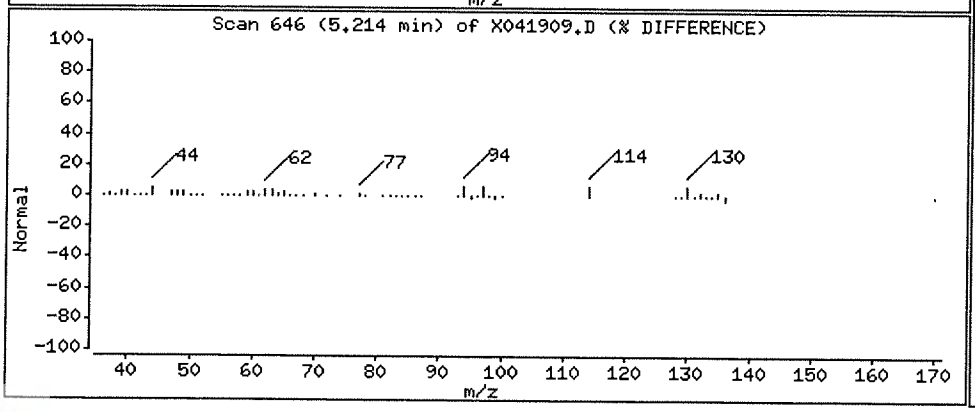












ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X210419.b\X041910.D
Lab Smp Id: HS21040859-08 Client Smp ID: HS21040859-08
Inj Date : 19-APR-2021 14:13
Operator : PC Inst ID: voa6.i
Smp Info : HS21040859-08;HS21040859-08;;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X210419.b\8260W.m
Meth Date : 05-May-2021 10:25 Qin.Xu Quant Type: ISTD
Cal Date : 02-APR-2021 13:20 Cal File: X040208.D
Als bottle: 10
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBI_short1.sub
Target Version: 4.14
Processing Host: NAHSTW7066

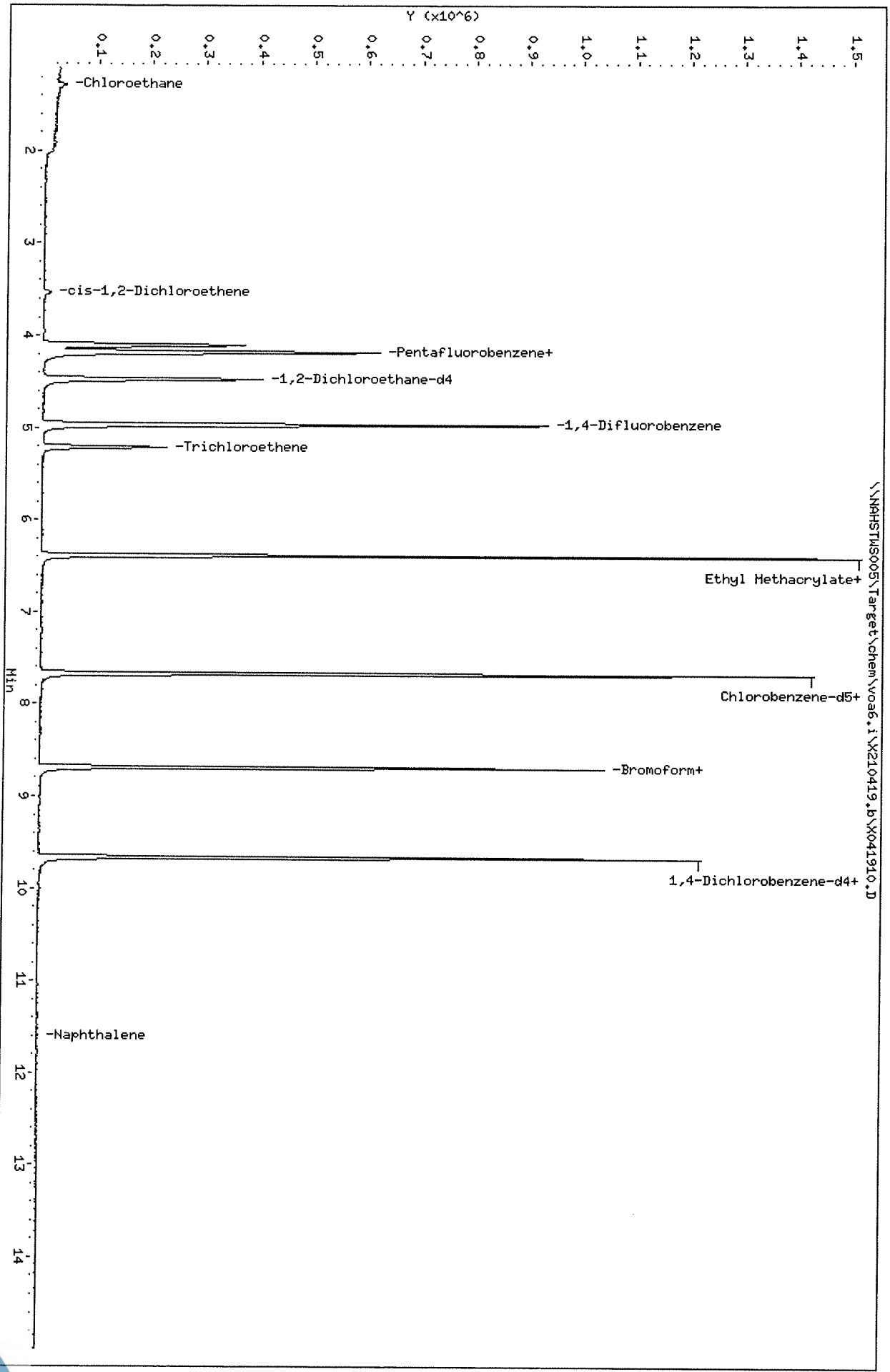
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	452490	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.963	(1.000)	747316	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	654094	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	263490	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	253019	47.5170	47.51
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	318820	49.9493	49.94
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	887381	52.6770	52.67
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	284793	45.5525	45.55
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	6493	1.17386	1.17
38 Trichloroethene	130	5.207	5.207	(1.048)	69983	13.6796	13.67

Data File: \\NAHSTWS005\Target\chem\voa6.i\X210419.b\X041910.D
Date : 19-APR-2021 14:13
Client ID: HS21040859-08
Sample Info: HS21040859-08;HS21040859-08;;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18



Data File: \\NAHSTWS005\Target\chem\voa6.i\X210419.b\X041910.D

Date : 19-APR-2021 14:13

Client ID: HS21040859-08

Instrument: voa6.i

Sample Info: HS21040859-08;HS21040859-08;;;

Purge Volume: 5.0

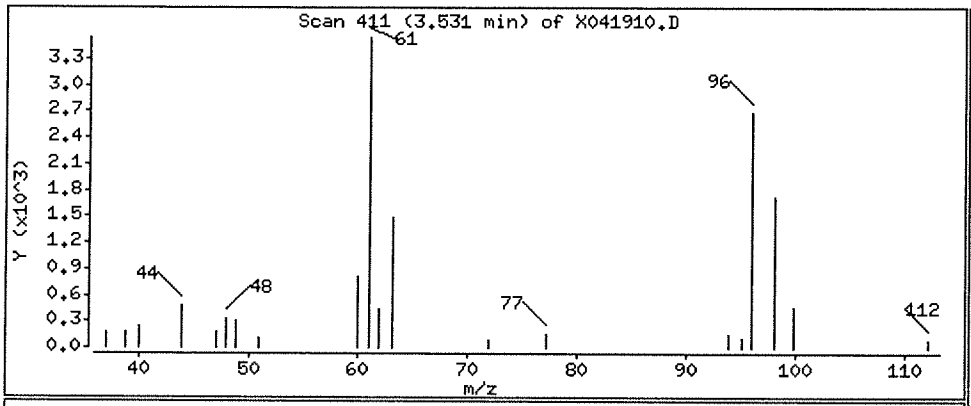
Operator: PC

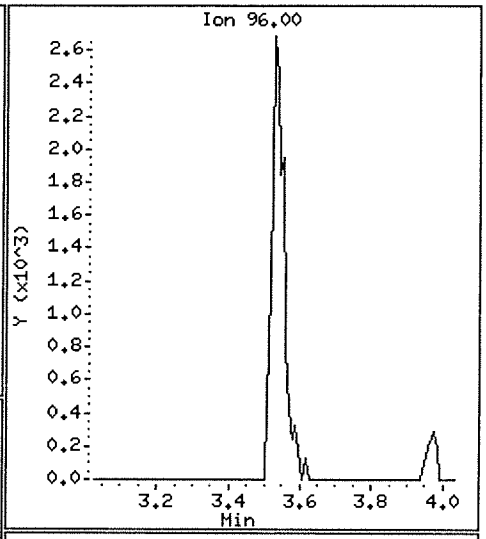
Column phase: DB624

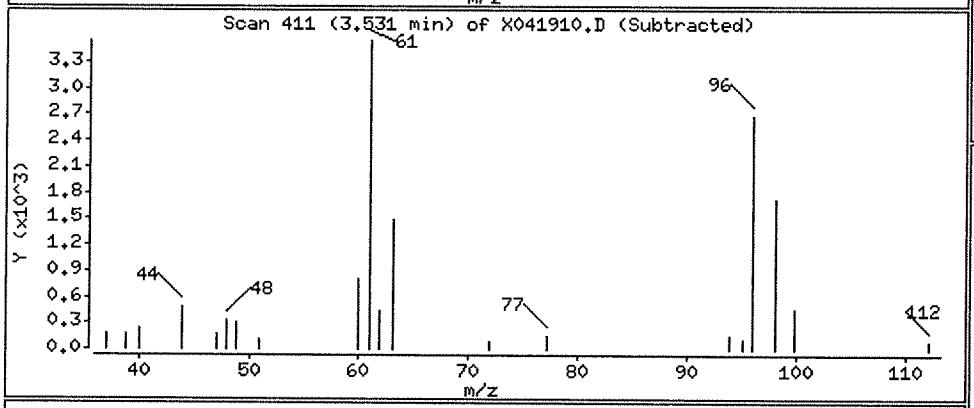
Column diameter: 0.18

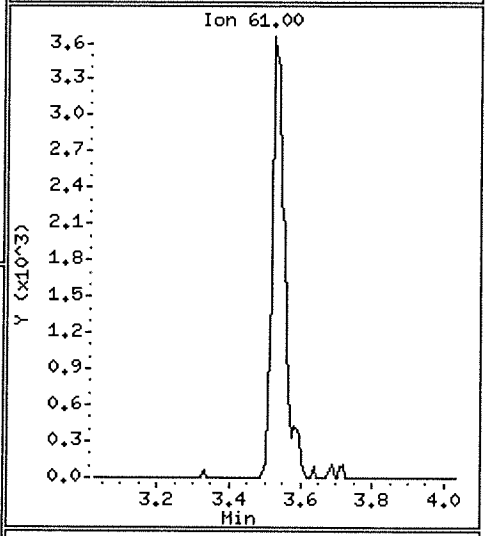
27 cis-1,2-Dichloroethene

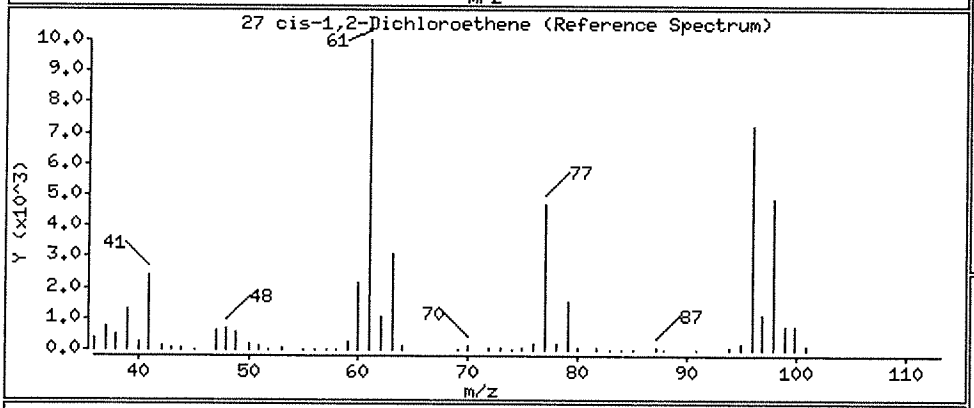
Concentration: 1.17 ug/l

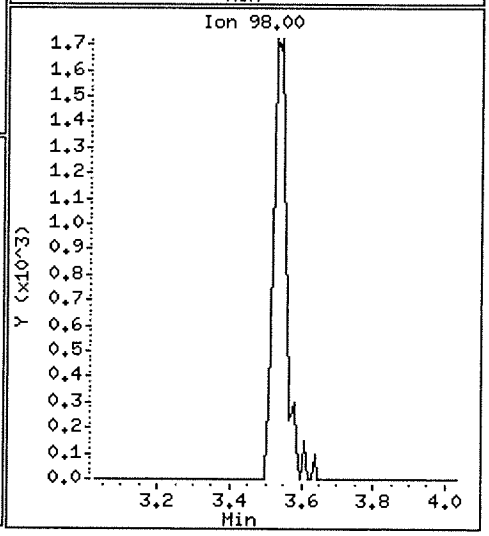


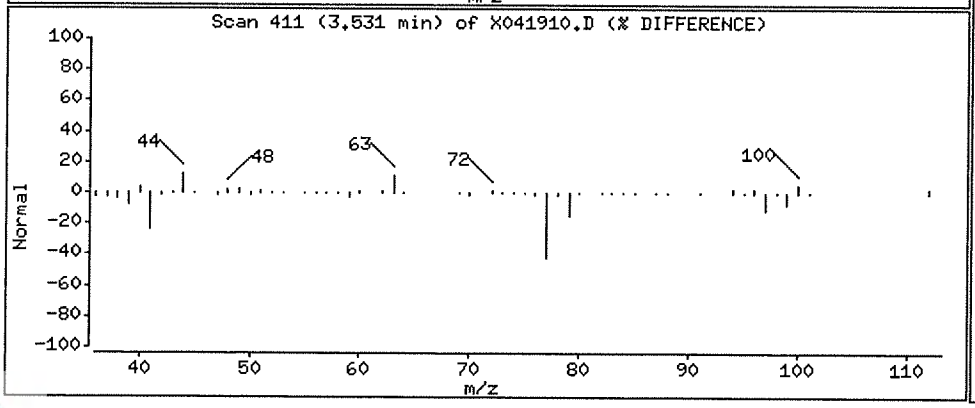












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210419.b\X041910.D

Date : 19-APR-2021 14:13

Client ID: HS21040859-08

Instrument: voa6.i

Sample Info: HS21040859-08;HS21040859-08;;;

Purge Volume: 5.0

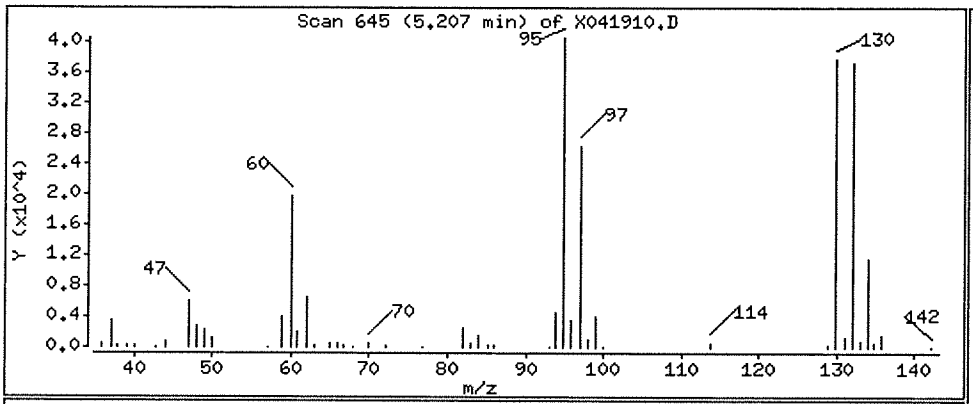
Operator: PC

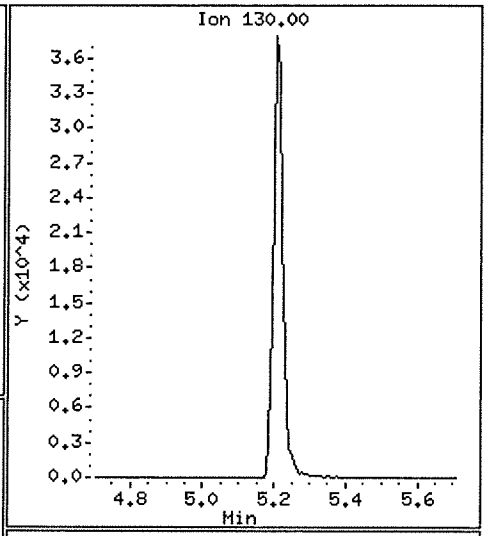
Column phase: DB624

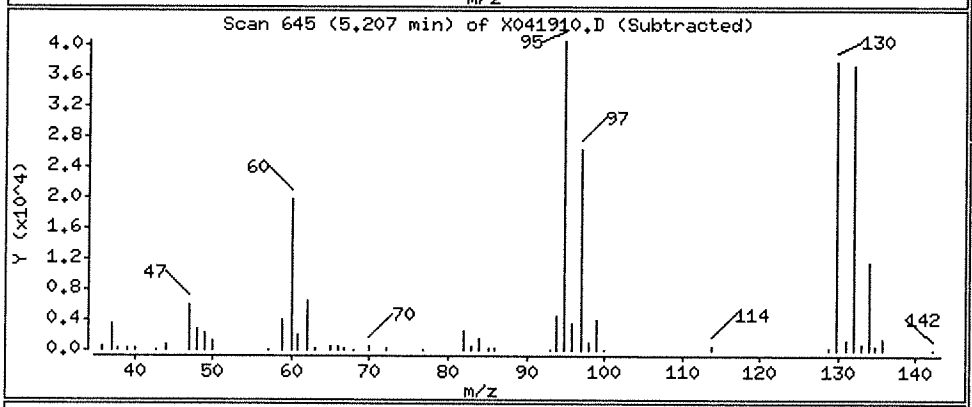
Column diameter: 0.18

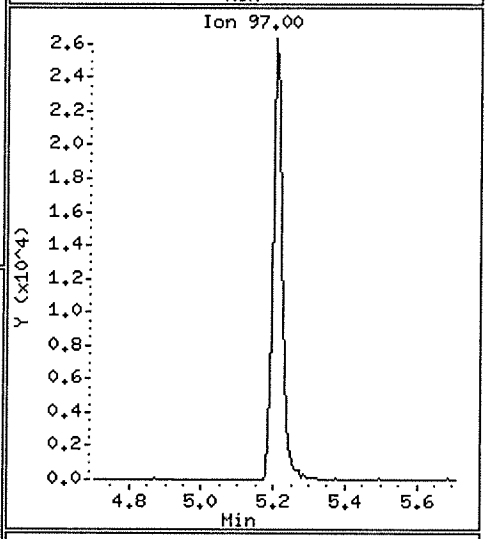
38 Trichloroethene

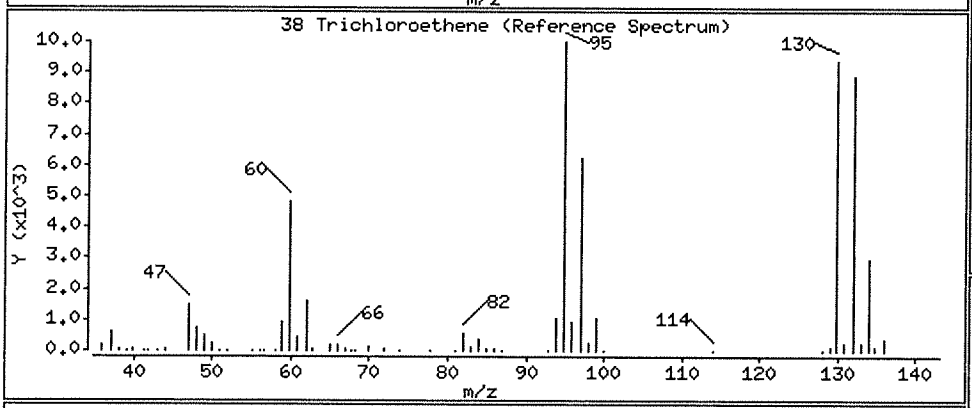
Concentration: 13.67 ug/l

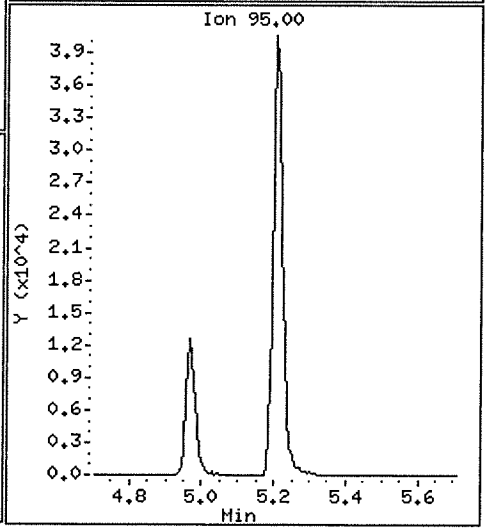


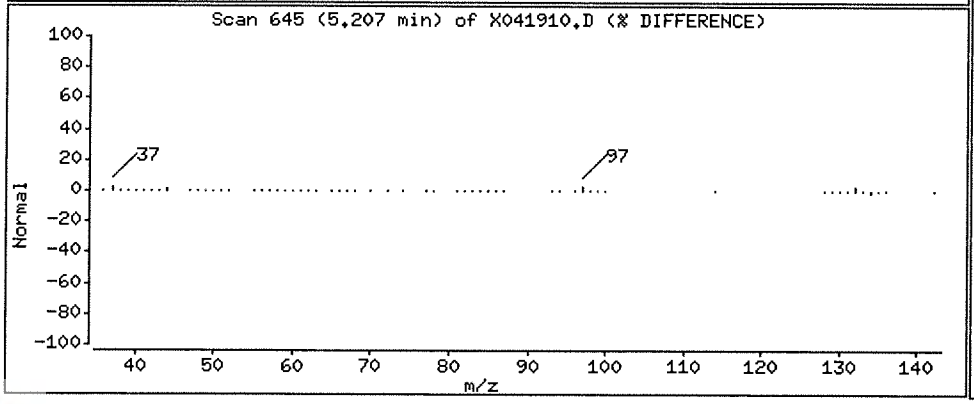












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210419.b\X041911.D Page 1
Report Date: 05-May-2021 10:26

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X210419.b\X041911.D
Lab Smp Id: HS21040859-09 Client Smp ID: HS21040859-09
Inj Date : 19-APR-2021 14:34
Operator : PC Inst ID: voa6.i
Smp Info : HS21040859-09;HS21040859-09;;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X210419.b\8260W.m
Meth Date : 05-May-2021 10:25 Qin.Xu Quant Type: ISTD
Cal Date : 02-APR-2021 13:20 Cal File: X040208.D
Als bottle: 11
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBI_short1.sub
Target Version: 4.14
Processing Host: NAHSTW7066

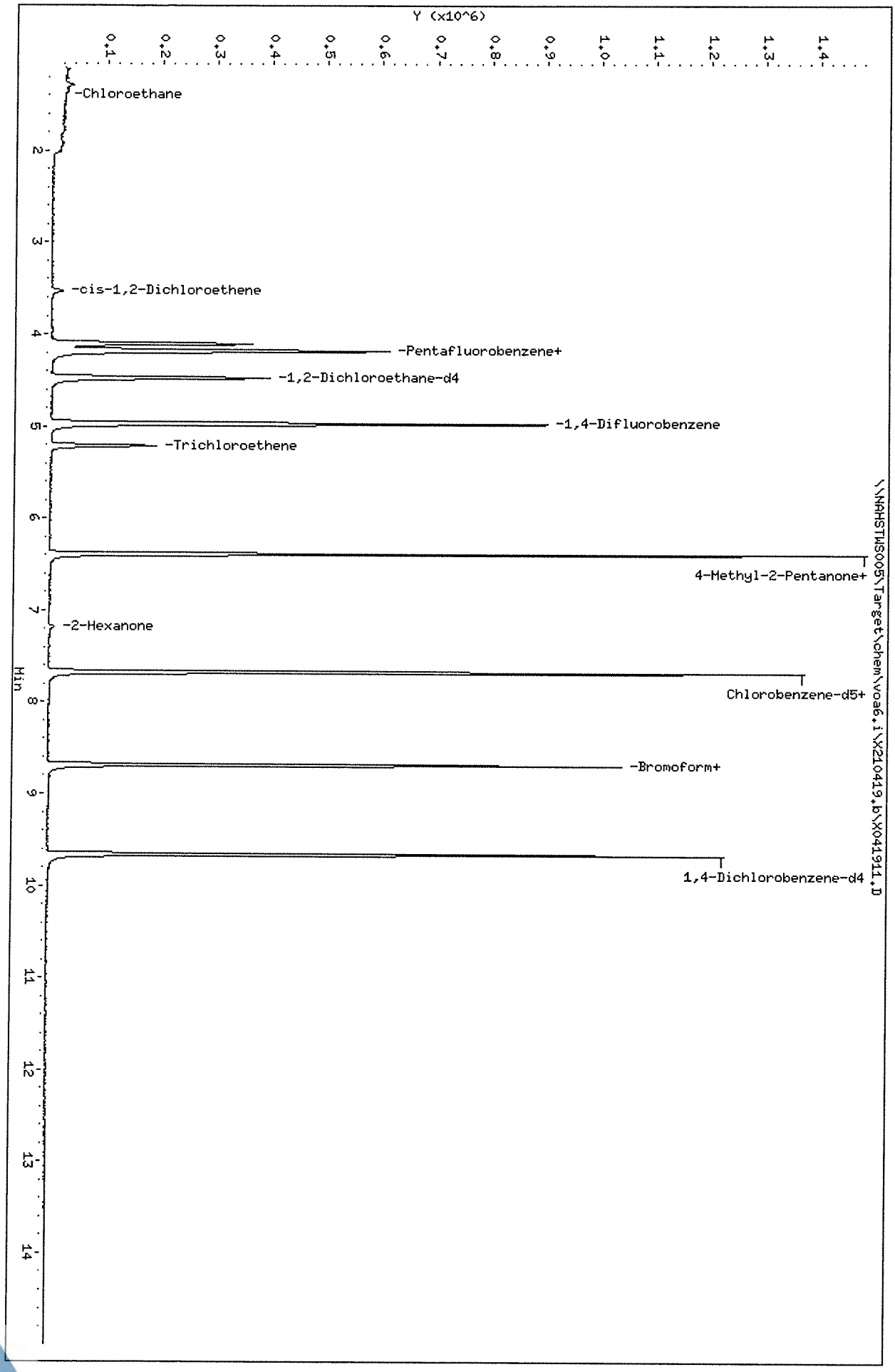
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	443777	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.963	(1.000)	726788	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	619943	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	261879	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	241769	46.3068	46.30
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	312876	49.9801	49.98
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	872657	54.5869	54.58
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	284206	47.8755	47.87
27 cis-1,2-Dichloroethene	96	3.537	3.530	(0.846)	10718	1.97574	1.97
38 Trichloroethene	130	5.214	5.207	(1.049)	59429	11.9448	11.94

Data File: \\NAHSTWS005\Target\chem\voa6.i\X210419.b\X041911.D
Date : 19-APR-2021 14:34
Client ID: HS21040859-09
Sample Info: HS21040859-09;HS21040859-09;;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18



Data File: \\NAHSTWS005\Target\chem\voa6.i\X210419.b\X041911.D

Date : 19-APR-2021 14:34

Client ID: HS21040859-09

Instrument: voa6.i

Sample Info: HS21040859-09;HS21040859-09;;;

Purge Volume: 5.0

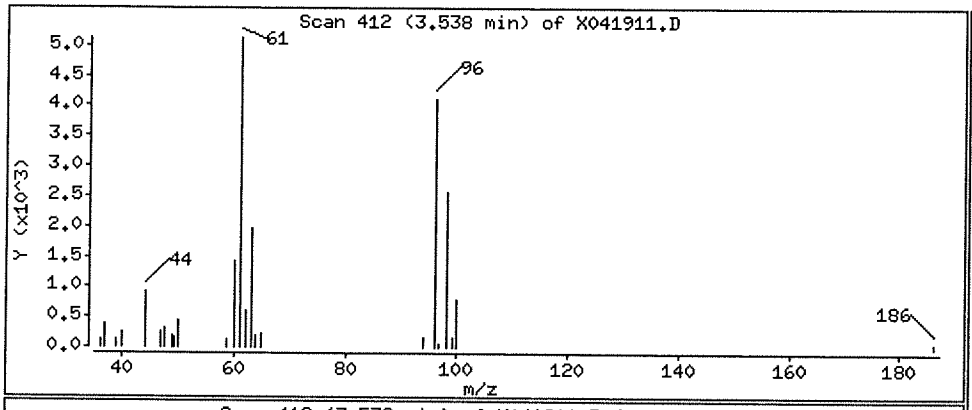
Operator: PC

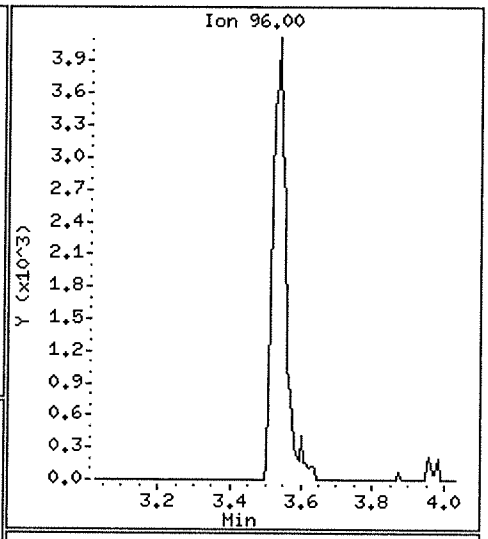
Column phase: DB624

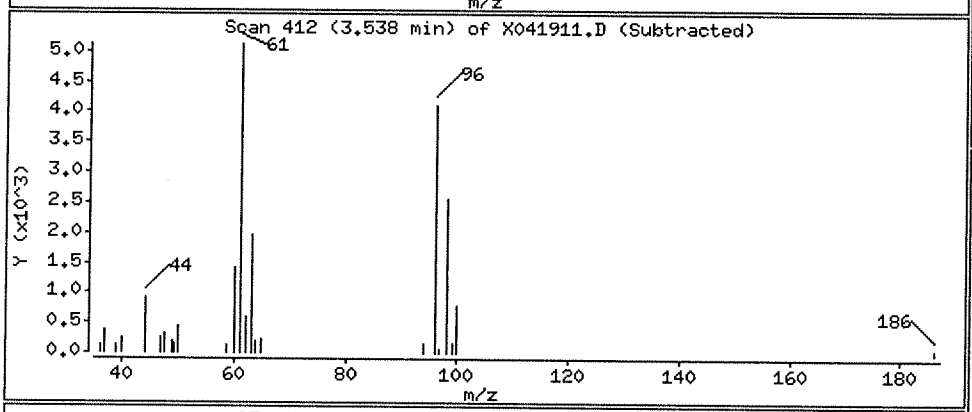
Column diameter: 0.18

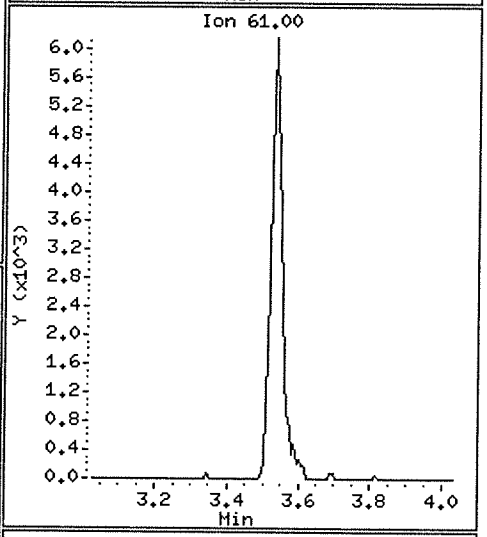
27 cis-1,2-Dichloroethene

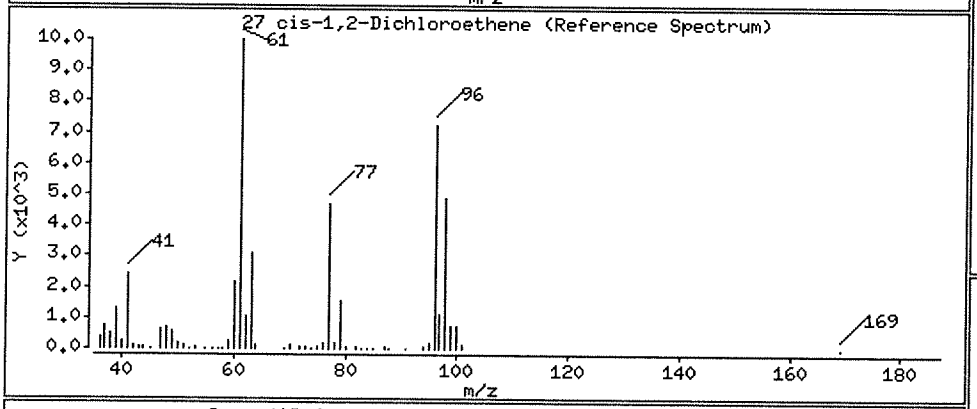
Concentration: 1.97 ug/l

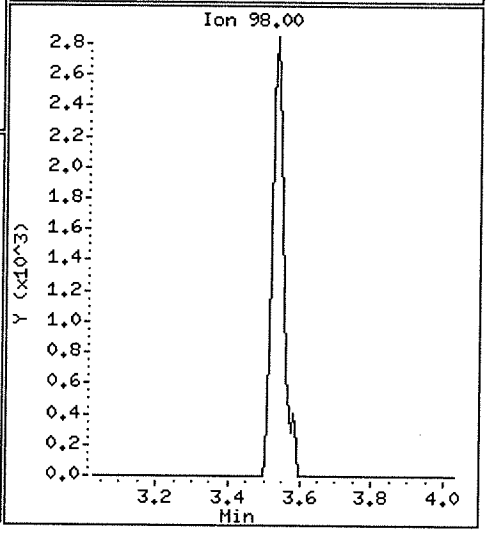


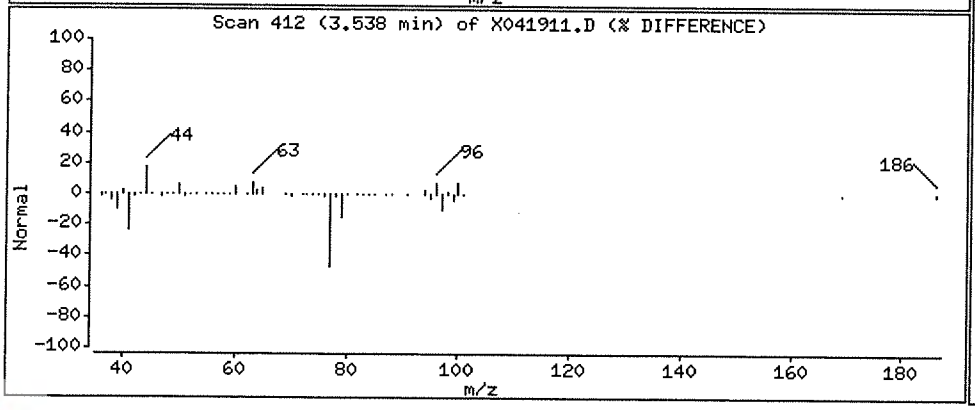












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210419.b\X041911.D

Date : 19-APR-2021 14:34

Client ID: HS21040859-09

Instrument: voa6.i

Sample Info: HS21040859-09;HS21040859-09;;;

Purge Volume: 5.0

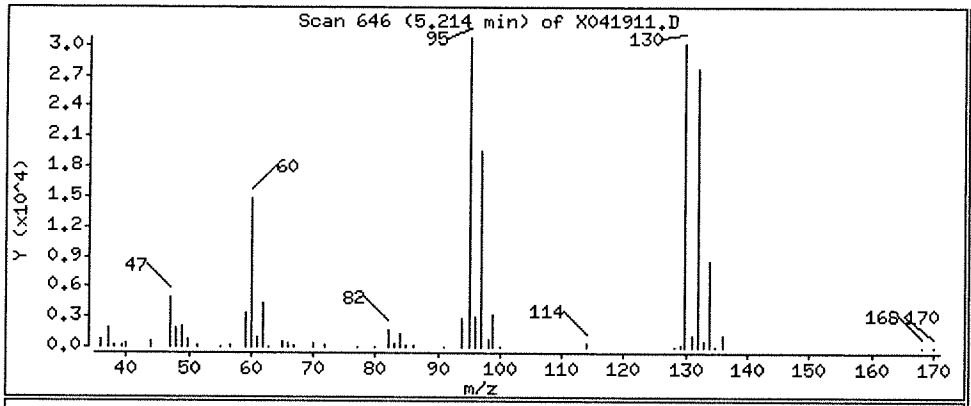
Operator: PC

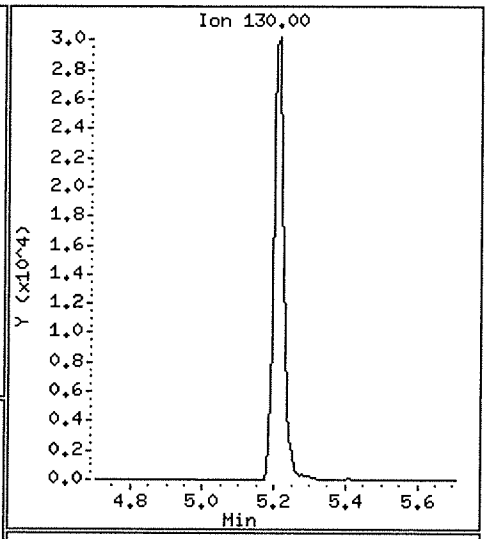
Column phase: DB624

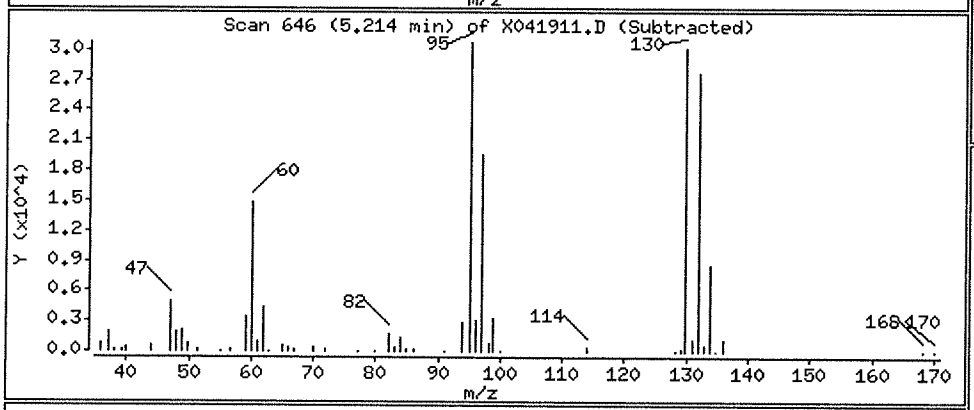
Column diameter: 0.18

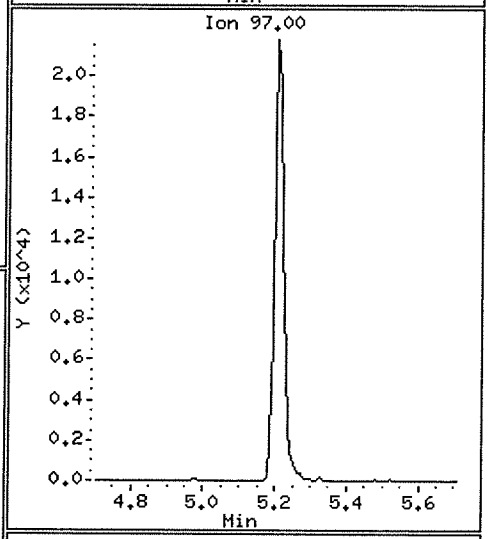
38 Trichloroethene

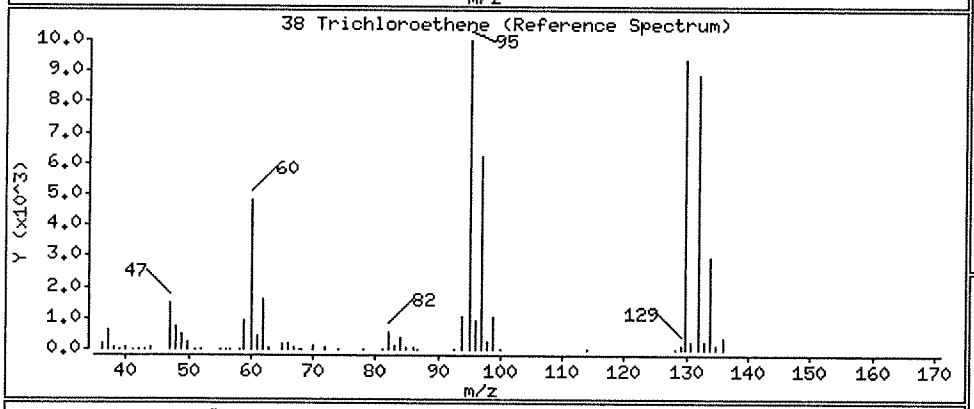
Concentration: 11.94 ug/l

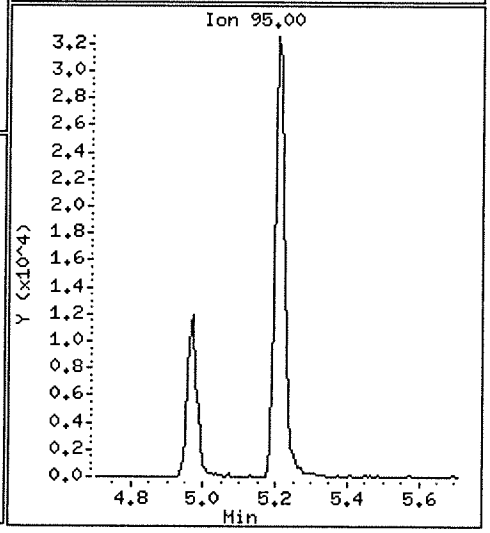


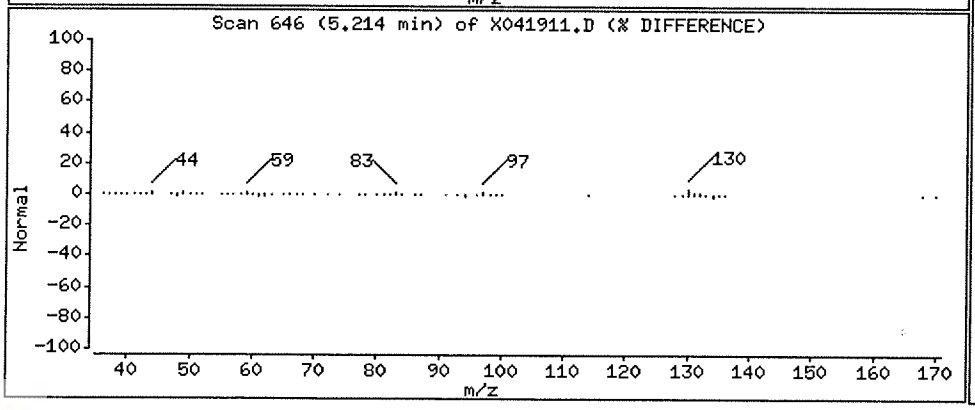












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210419.b\X041912.D Page 1
Report Date: 05-May-2021 10:26

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X210419.b\X041912.D
Lab Smp Id: HS21040859-11 Client Smp ID: HS21040859-11
Inj Date : 19-APR-2021 14:55
Operator : PC Inst ID: voa6.i
Smp Info : HS21040859-11;HS21040859-11;;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X210419.b\8260W.m
Meth Date : 05-May-2021 10:25 Qin.Xu Quant Type: ISTD
Cal Date : 02-APR-2021 13:20 Cal File: X040208.D
Als bottle: 12
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBI_short1.sub
Target Version: 4.14
Processing Host: NAHSTW7066

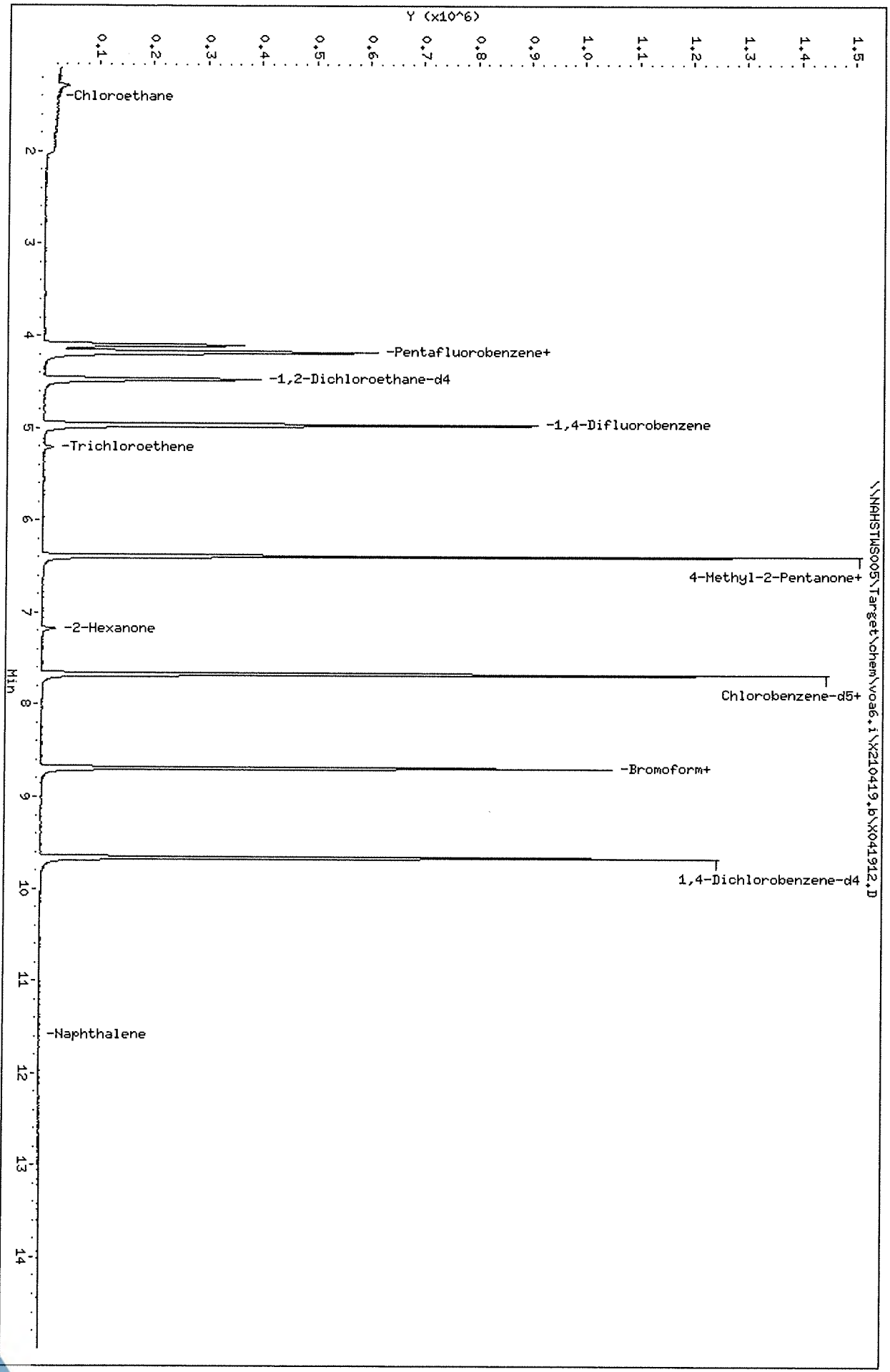
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
*	1 Pentafluorobenzene	168	4.182	4.182	(1.000)	455324	50.0000	
*	36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	737076	50.0000	
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	643006	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	275422	50.0000	
$	30 Dibromofluoromethane	113	4.103	4.103	(0.981)	246255	45.9730	45.97
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	318514	49.5942	49.59
$	48 Toluene-d8	98	6.388	6.388	(0.833)	889830	53.6960	53.69
$	69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	290031	47.1310	47.13
	38 Trichloroethene	130	5.206	5.207	(1.049)	5412	1.07259	1.07

Data File: \\NAHSTWS005\Target\chem\voa6.i\X210419.b\X041912.D
Date : 19-APR-2021 14:55
Client ID: HS21040859-11
Sample Info: HS21040859-11;HS21040859-11;;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18



Data File: \\NAHSTWS005\Target\chem\voa6.i\X210419.b\X041912.D

Date : 19-APR-2021 14:55

Client ID: HS21040859-11

Instrument: voa6.i

Sample Info: HS21040859-11;HS21040859-11;;;

Purge Volume: 5.0

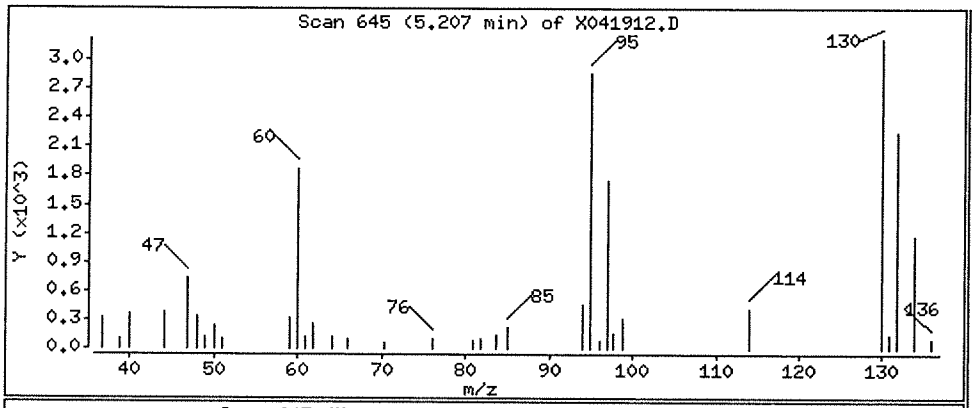
Operator: PC

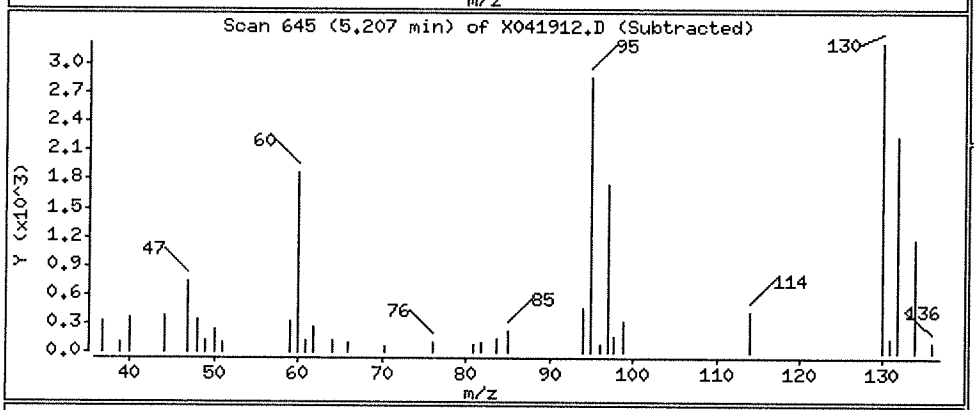
Column phase: DB624

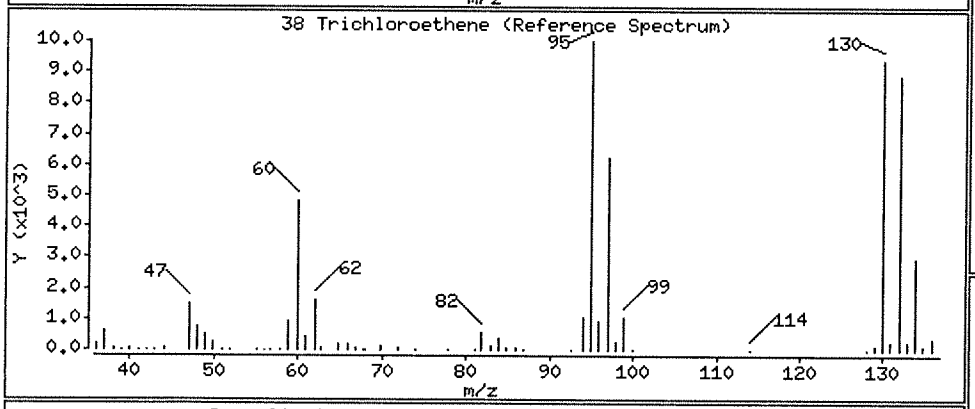
Column diameter: 0.18

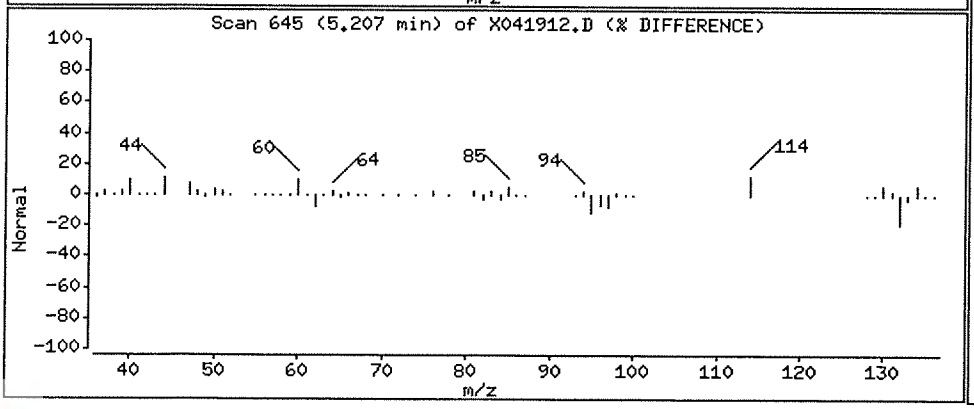
38 Trichloroethene

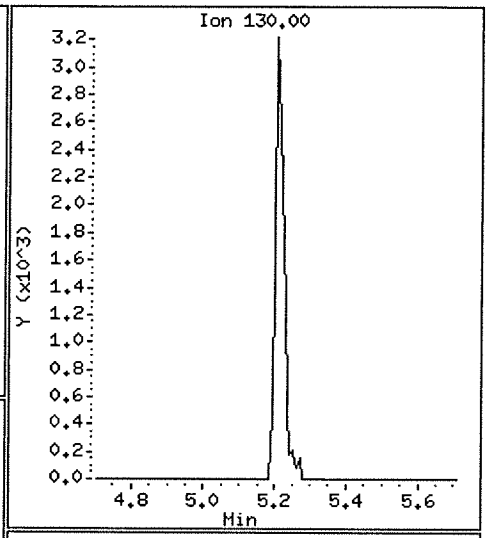
Concentration: 1.07 ug/l

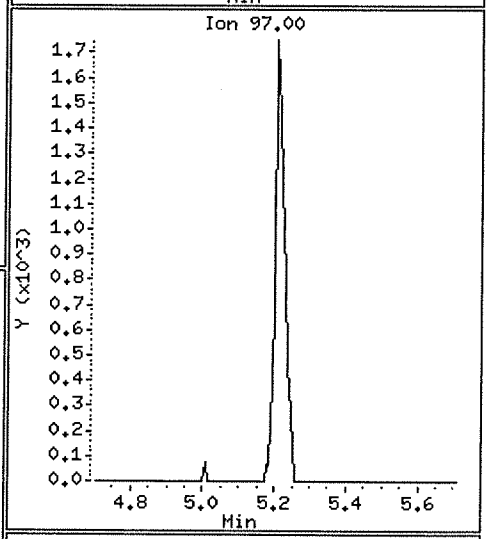


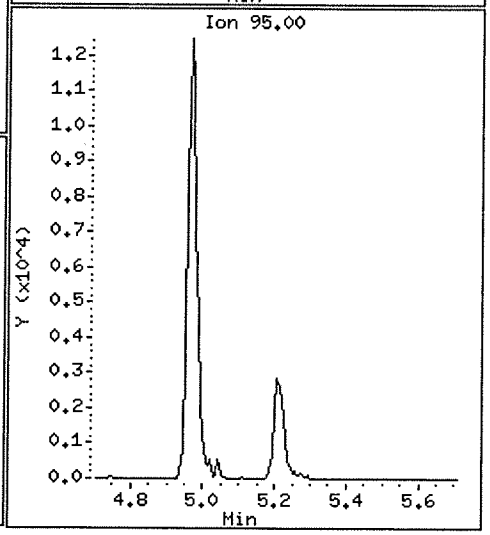












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210419.b\X041913.D Page 1
Report Date: 05-May-2021 10:26

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X210419.b\X041913.D
Lab Smp Id: HS21040859-12 Client Smp ID: HS21040859-12
Inj Date : 19-APR-2021 15:17
Operator : PC Inst ID: voa6.i
Smp Info : HS21040859-12;HS21040859-12;;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X210419.b\8260W.m
Meth Date : 05-May-2021 10:25 Qin.Xu Quant Type: ISTD
Cal Date : 02-APR-2021 13:20 Cal File: X040208.D
Als bottle: 13
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBI_short1.sub
Target Version: 4.14
Processing Host: NAHSTW7066

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

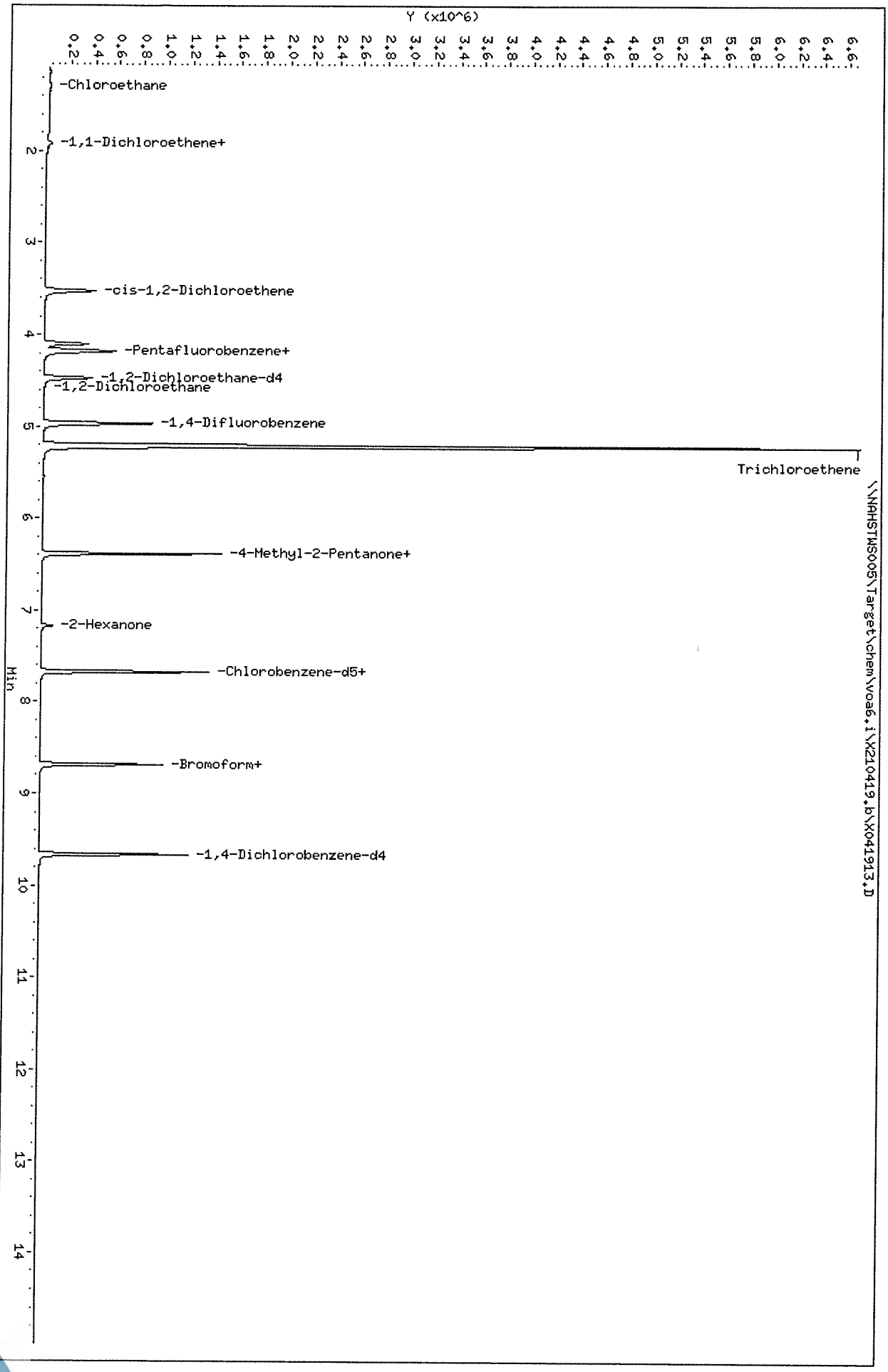
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	440740	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.963	(1.000)	711558	50.0000	
* 47 Chlorobenzene-d5	117	7.670	7.671	(1.000)	611651	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	256702	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	244766	47.1955	47.19
$ 35 1,2-Dichloroethane-d4	65	4.469	4.476	(1.069)	312762	50.3030	50.30
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	841625	53.4012	53.40
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	280229	47.8466	47.84
11 1,1-Dichloroethene	96	1.919	1.919	(0.459)	4723	0.75260	0.75(a)
33 1,2-Dichloroethane	62	4.569	4.555	(0.919)	5453	0.72401	0.72(a)
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	208314	38.6649	38.66
38 Trichloroethene	130	5.206	5.207	(1.048)	1873727	384.665	384.66(A)
5 Vinyl Chloride	62	1.145	1.145	(0.274)	6955	1.05258	1.05

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).
A - Target compound detected but, quantitated amount exceeded maximum amount.

Data File: \\NAHSTWS005\Target\chem\voa6.i\X210419.b\X041913.D
Date : 19-APR-2021 15:17
Client ID: HS21040859-12
Sample Info: HS21040859-12;HS21040859-12;;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18



Data File: \\NAHSTWS005\Target\chem\voa6.i\X210419.b\X041913.D

Date : 19-APR-2021 15:17

Client ID: HS21040859-12

Instrument: voa6.i

Sample Info: HS21040859-12;HS21040859-12;;;

Purge Volume: 5.0

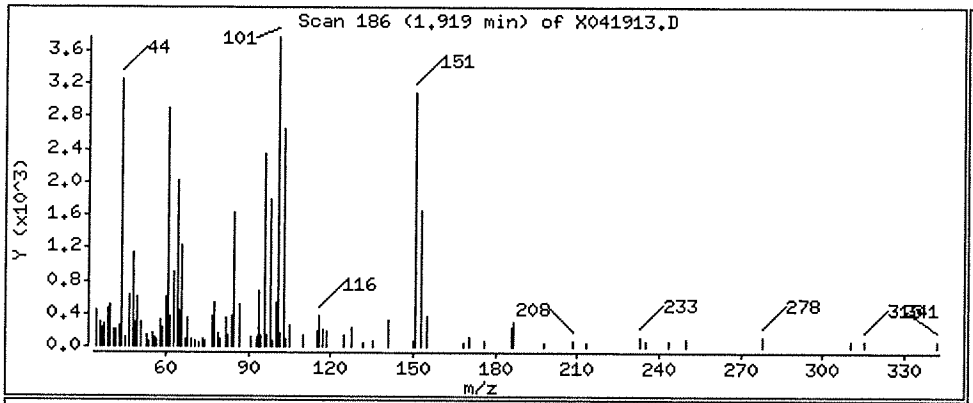
Operator: PC

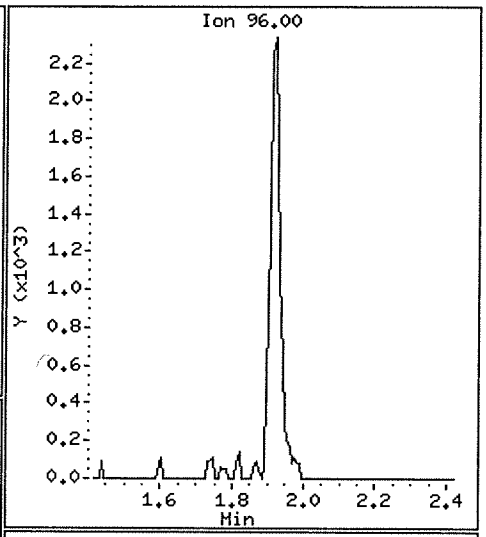
Column phase: DB624

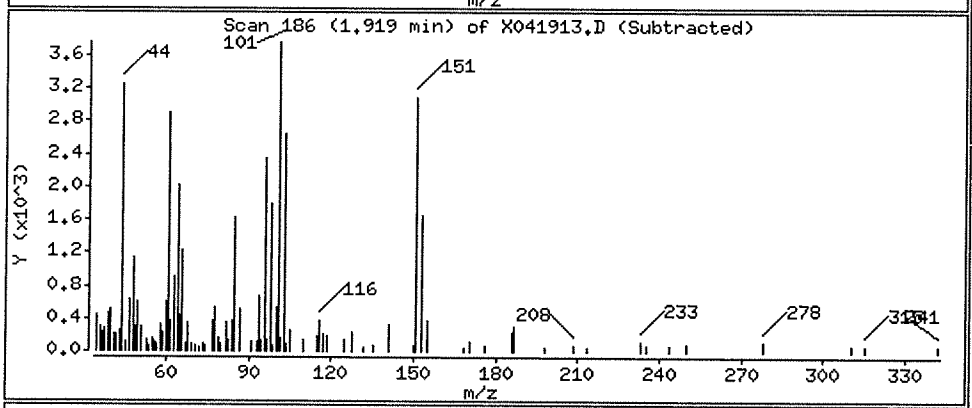
Column diameter: 0.18

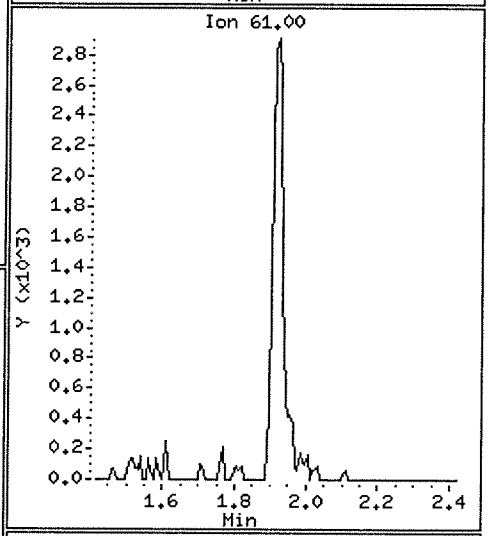
11 1,1-Dichloroethene

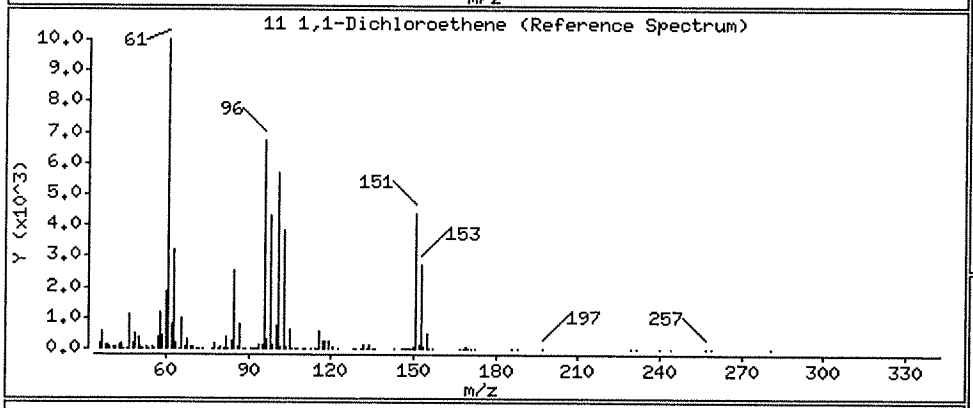
Concentration: 0.75 ug/l

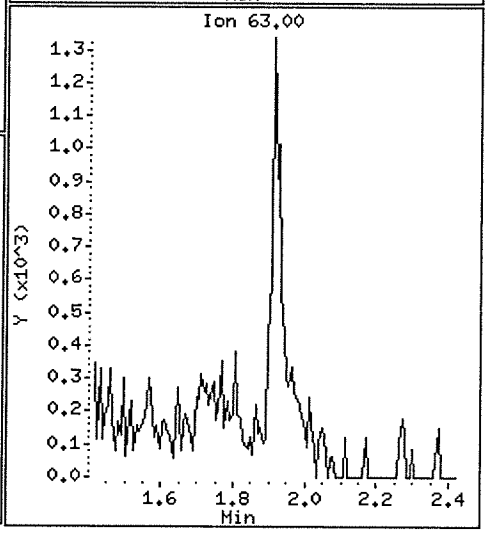


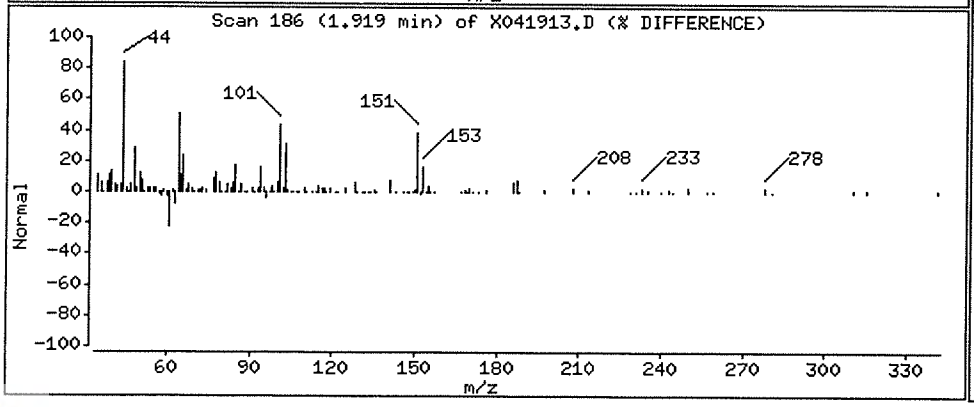












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210419.b\X041913.D

Date : 19-APR-2021 15:17

Client ID: HS21040859-12

Instrument: voa6.i

Sample Info: HS21040859-12;HS21040859-12;;;

Purge Volume: 5.0

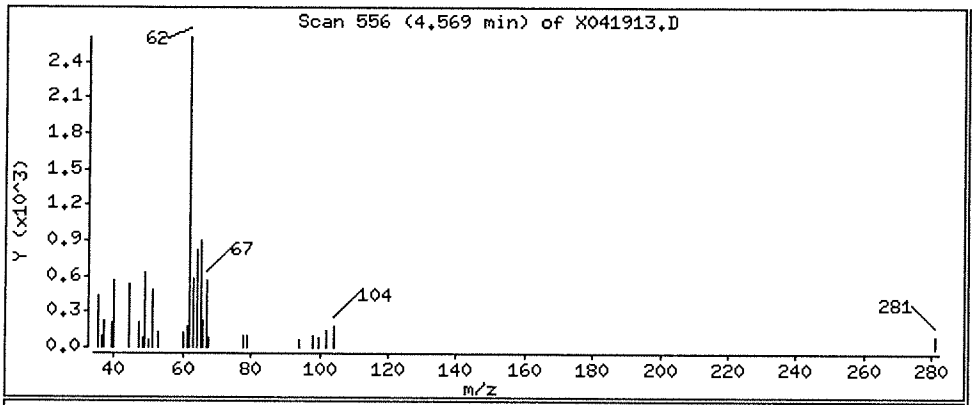
Operator: PC

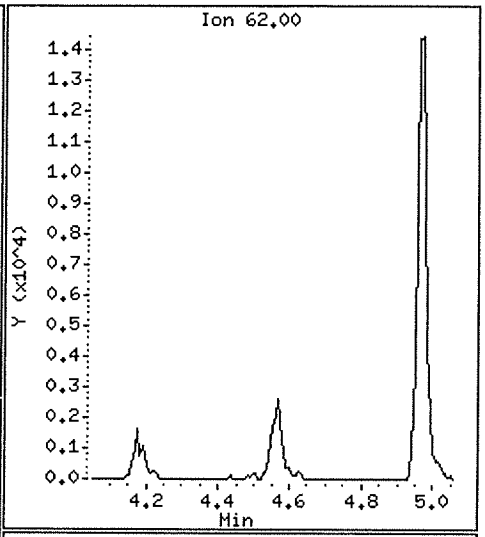
Column phase: DB624

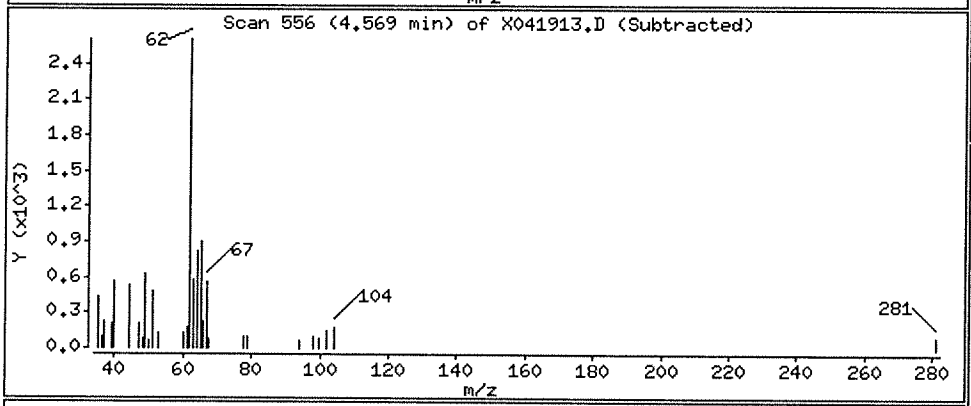
Column diameter: 0.18

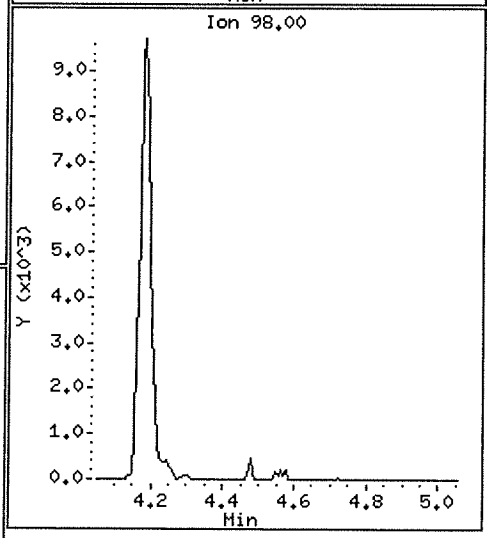
33 1,2-Dichloroethane

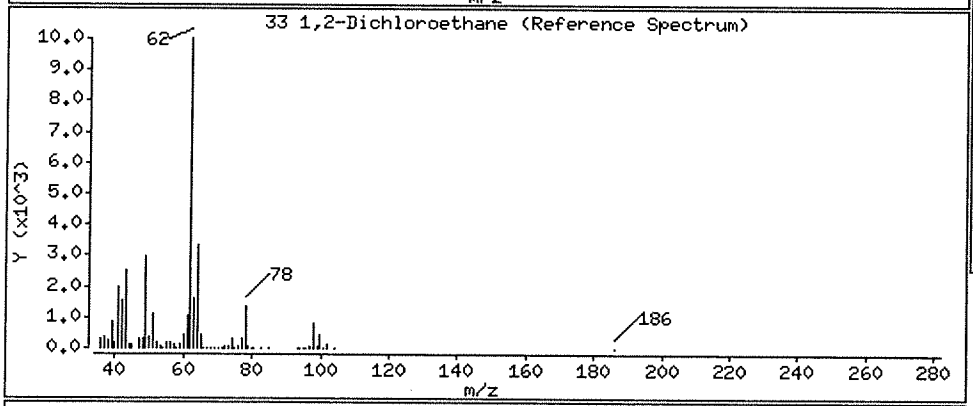
Concentration: 0.72 ug/l

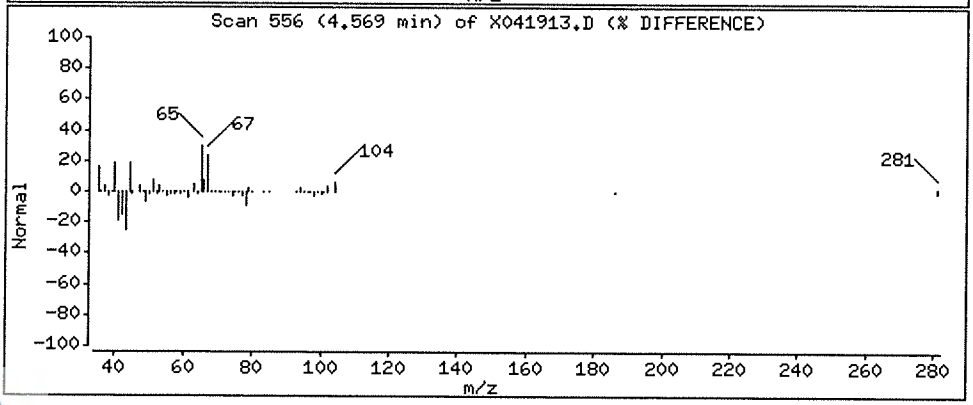












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210419.b\X041913.D

Date : 19-APR-2021 15:17

Client ID: HS21040859-12

Instrument: voa6.i

Sample Info: HS21040859-12;HS21040859-12;;;

Purge Volume: 5.0

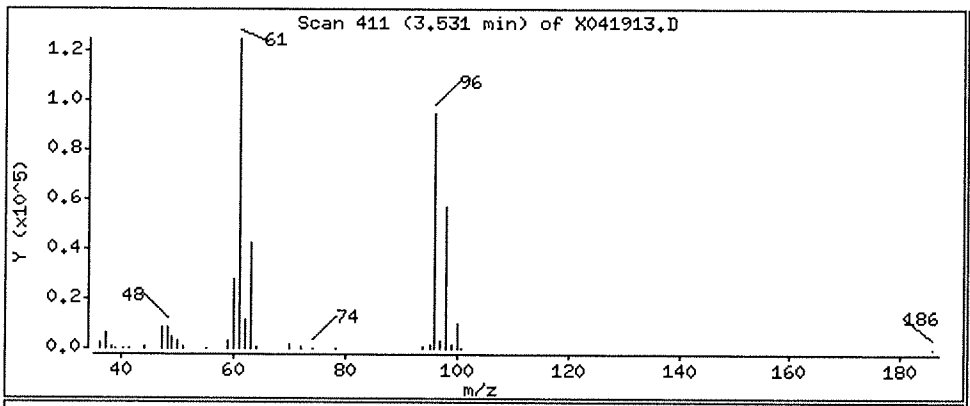
Operator: PC

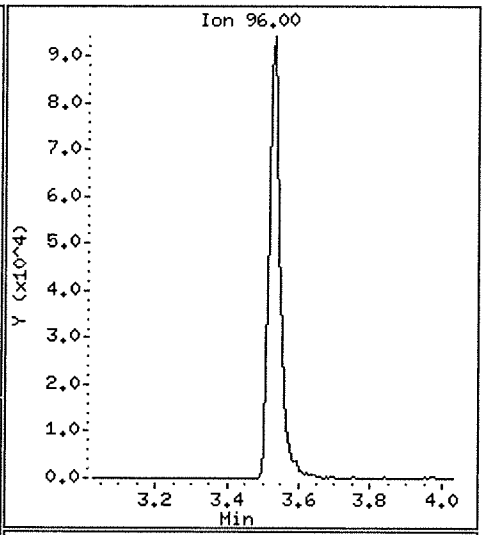
Column phase: DB624

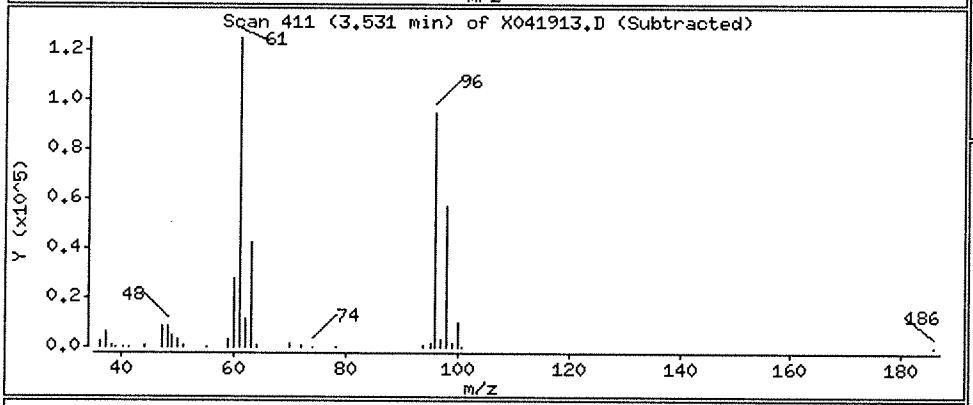
Column diameter: 0.18

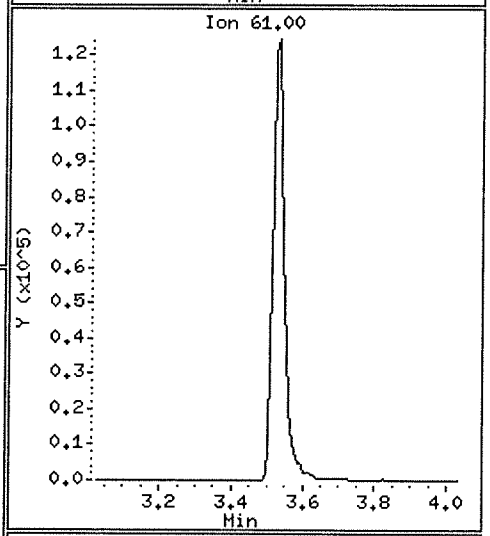
27 cis-1,2-Dichloroethene

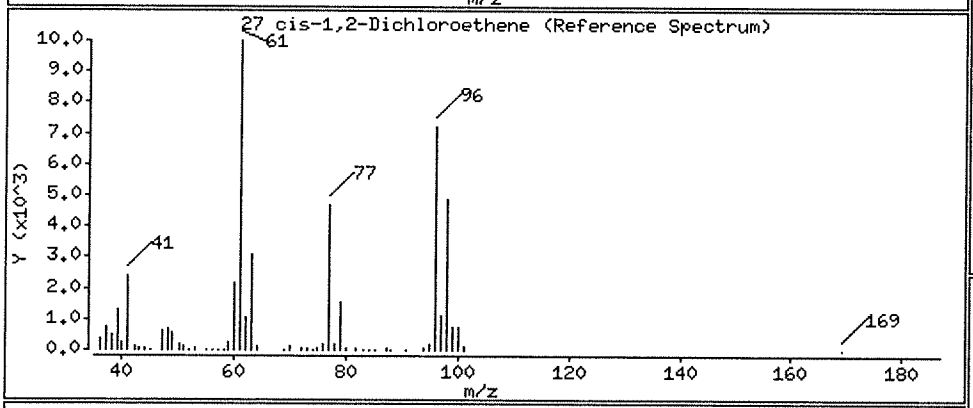
Concentration: 38.66 ug/l

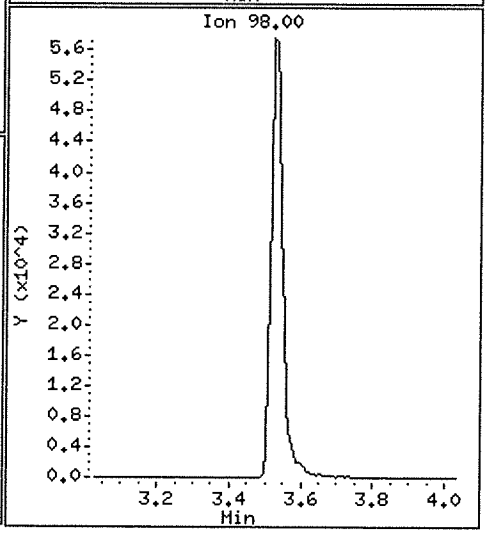


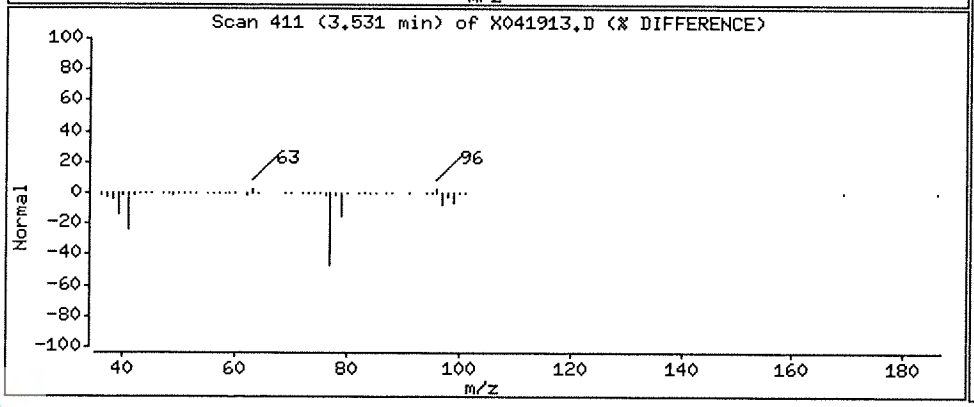












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210419.b\X041913.D

Date : 19-APR-2021 15:17

Client ID: HS21040859-12

Instrument: voa6.i

Sample Info: HS21040859-12;HS21040859-12;;;

Purge Volume: 5.0

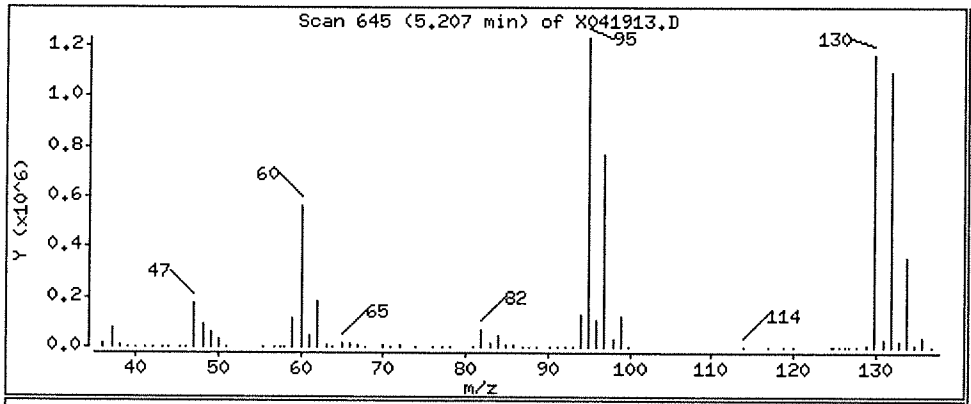
Operator: PC

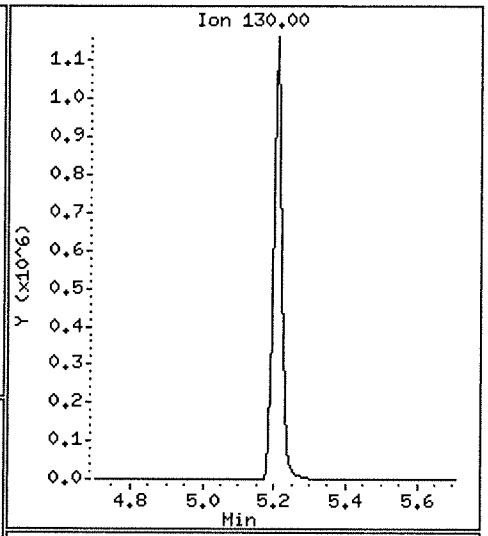
Column phase: DB624

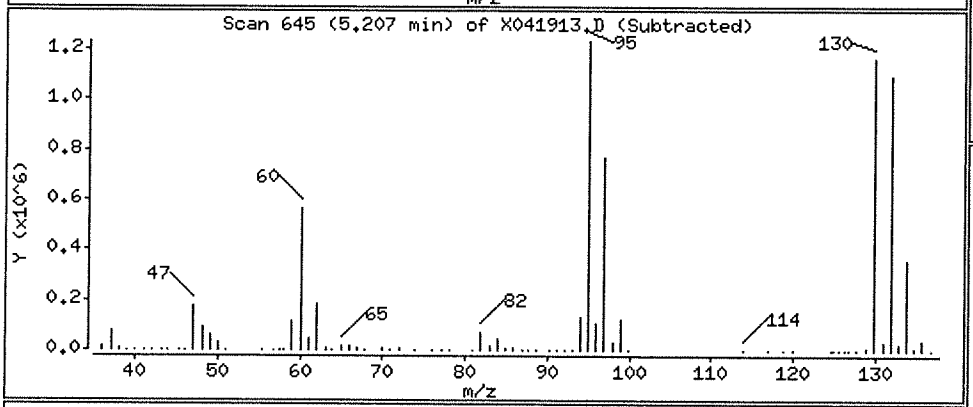
Column diameter: 0.18

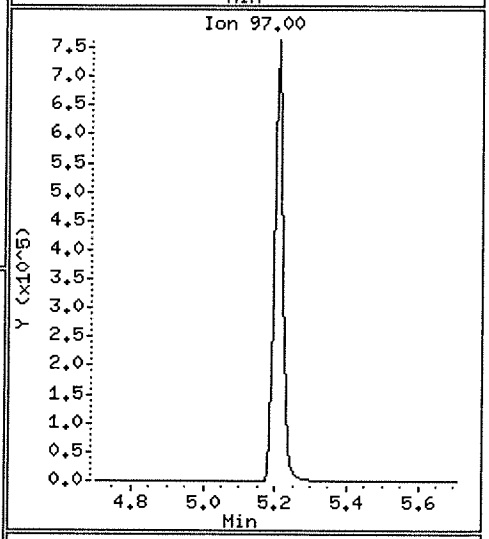
38 Trichloroethene

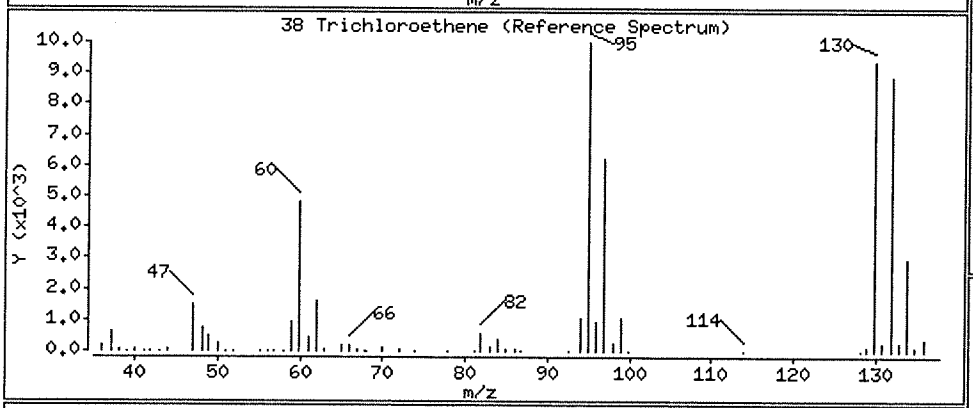
Concentration: 384.66 ug/l

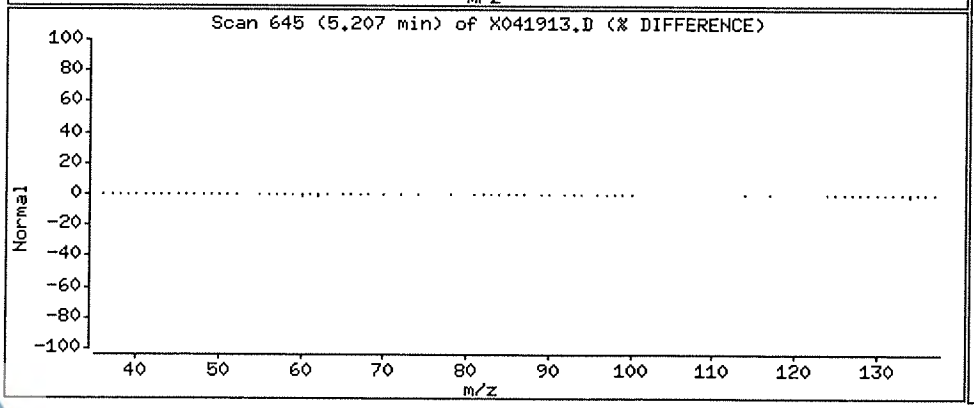


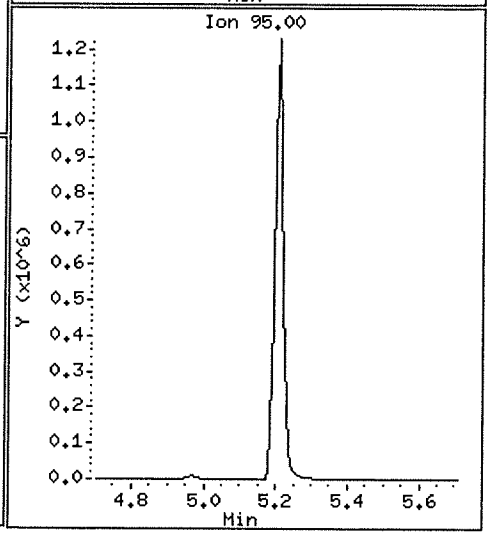












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210419.b\X041913.D

Date : 19-APR-2021 15:17

Client ID: HS21040859-12

Instrument: voa6.i

Sample Info: HS21040859-12;HS21040859-12;;;

Purge Volume: 5.0

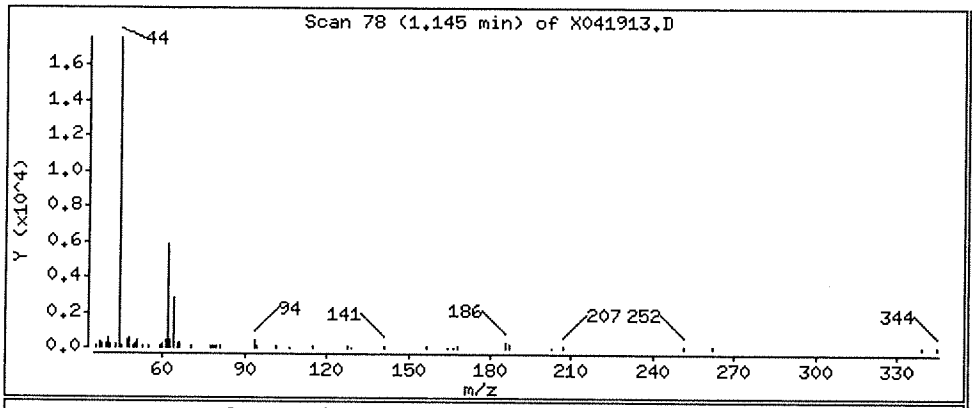
Operator: PC

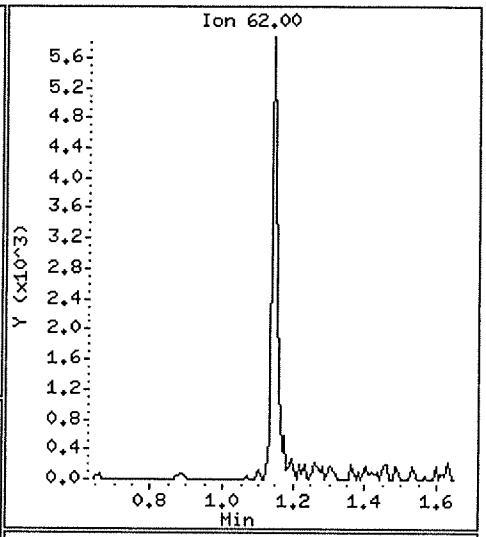
Column phase: DB624

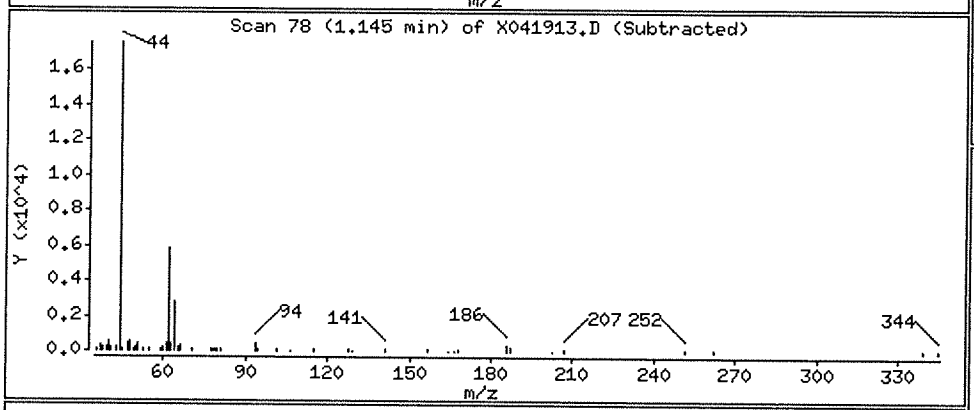
Column diameter: 0.18

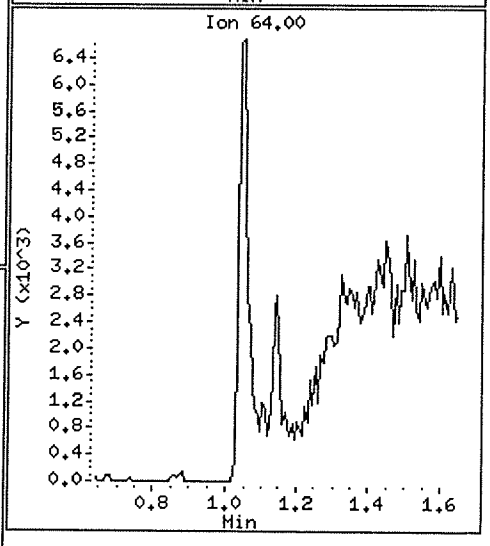
5 Vinyl Chloride

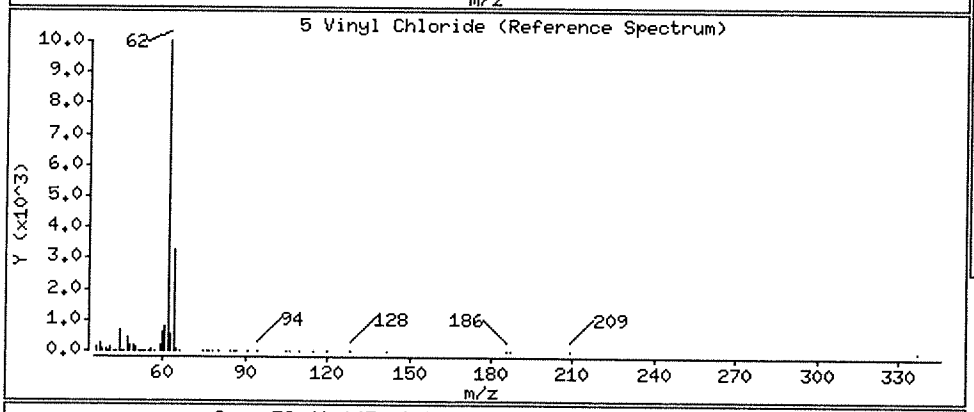
Concentration: 1.05 ug/l

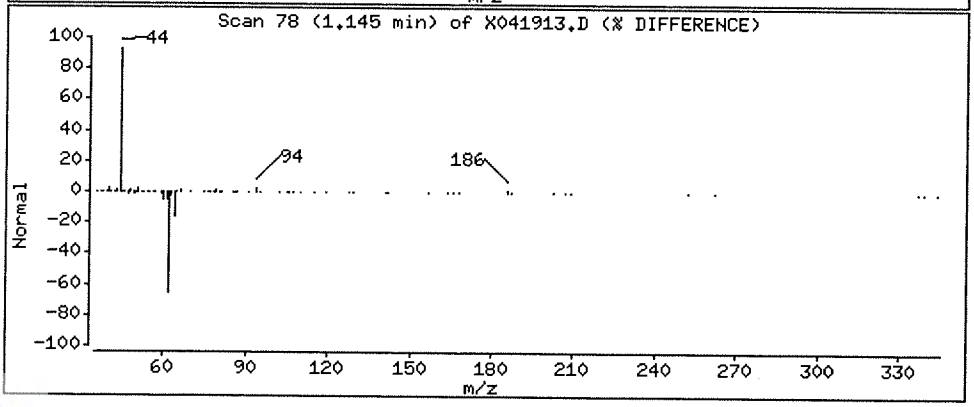












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210419.b\X041914.D Page 1
Report Date: 05-May-2021 10:26

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X210419.b\X041914.D
Lab Smp Id: HS21040859-13 Client Smp ID: HS21040859-13
Inj Date : 19-APR-2021 15:38
Operator : PC Inst ID: voa6.i
Smp Info : HS21040859-13;HS21040859-13;;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X210419.b\8260W.m
Meth Date : 05-May-2021 10:25 Qin.Xu Quant Type: ISTD
Cal Date : 02-APR-2021 13:20 Cal File: X040208.D
Als bottle: 14
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBI_short1.sub
Target Version: 4.14
Processing Host: NAHSTW7066

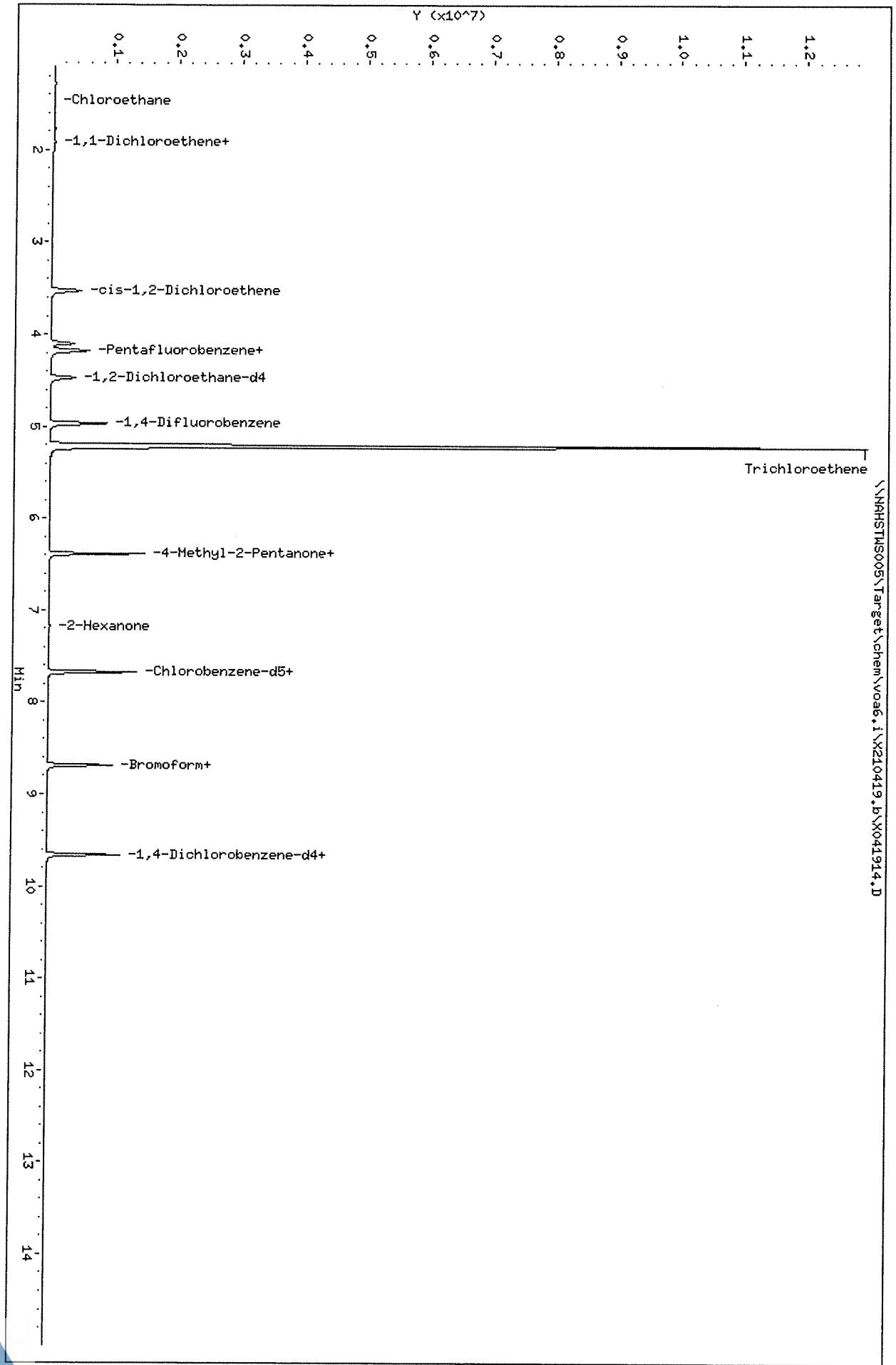
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	446560	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.963	(1.000)	723242	50.0000	
* 47 Chlorobenzene-d5	117	7.670	7.671	(1.000)	618041	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	253982	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	245185	46.6650	46.66
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	309179	49.0904	49.09
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	852169	53.5074	53.50
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	276900	46.8258	46.82
11 1,1-Dichloroethene	96	1.919	1.919	(0.459)	5303	0.83401	0.83(a)
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	237832	43.5684	43.56
38 Trichloroethene	130	5.206	5.207	(1.048)	3672925	741.848	741.84(A)

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).
A - Target compound detected but, quantitated amount exceeded maximum amount.



Data File: \\NAHSTWS005\Target\chem\voa6.i\X210419.b\X041914.D
Date : 19-APR-2021 15:38
Client ID: HS21040859-13
Sample Info: HS21040859-13;HS21040859-13;;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\NAHSTWS005\Target\chem\voa6.i\X210419.b\X041914.D

Date : 19-APR-2021 15:38

Client ID: HS21040859-13

Instrument: voa6.i

Sample Info: HS21040859-13;HS21040859-13;;;

Purge Volume: 5.0

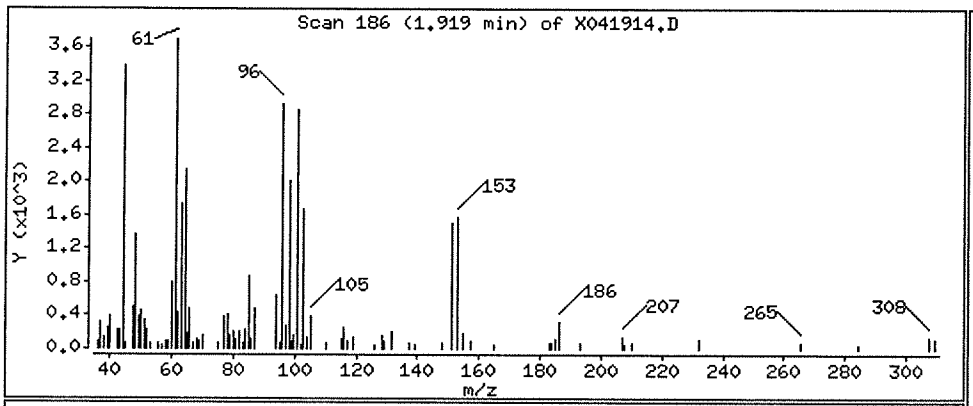
Operator: PC

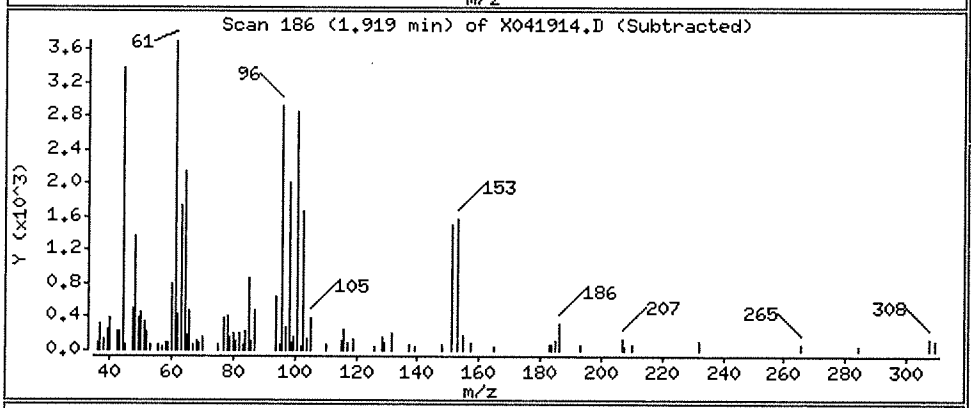
Column phase: DB624

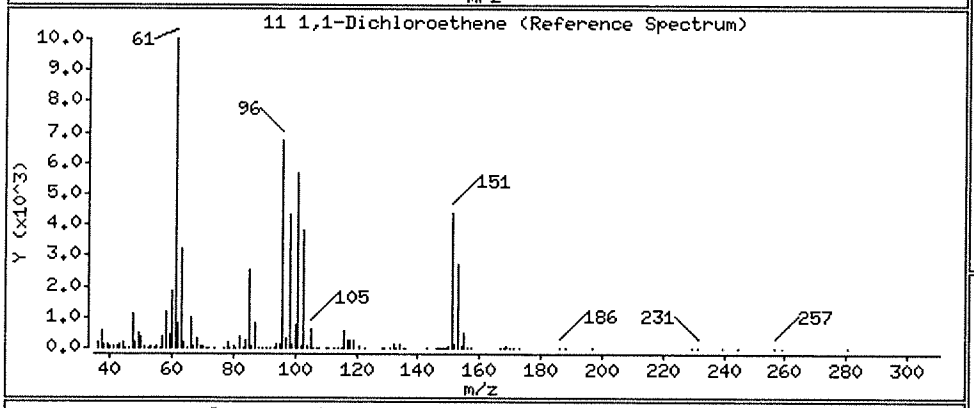
Column diameter: 0.18

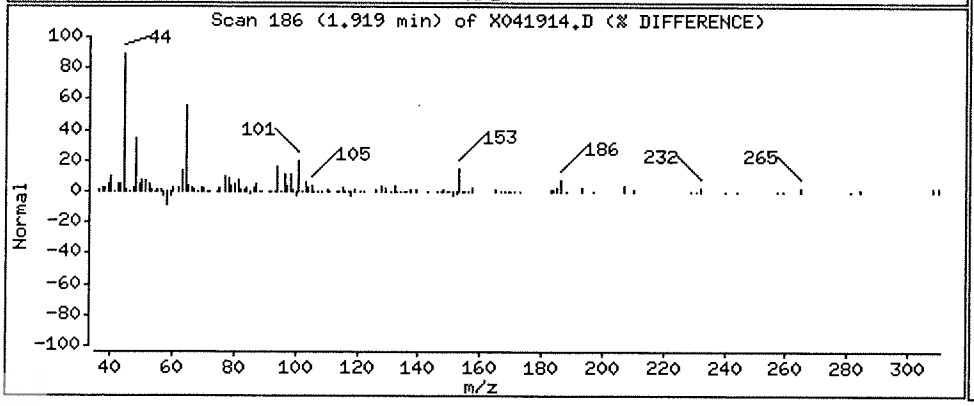
11 1,1-Dichloroethene

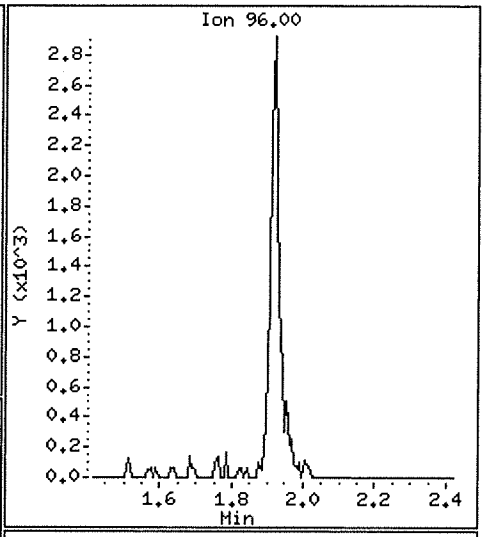
Concentration: 0.83 ug/l

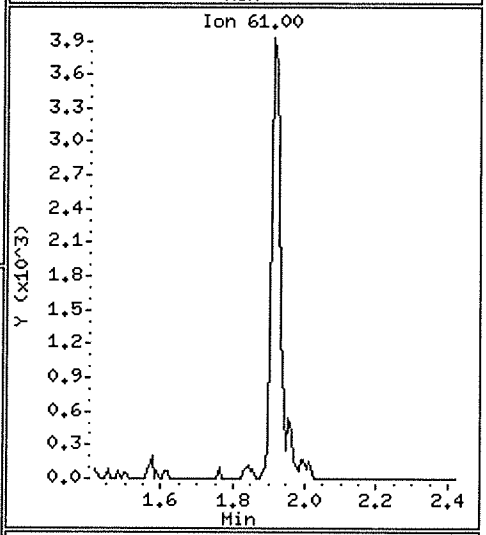


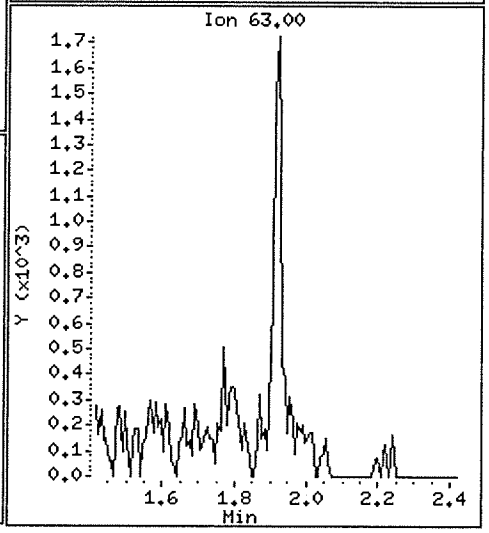












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210419.b\X041914.D

Date : 19-APR-2021 15:38

Client ID: HS21040859-13

Instrument: voa6.i

Sample Info: HS21040859-13;HS21040859-13;;;

Purge Volume: 5.0

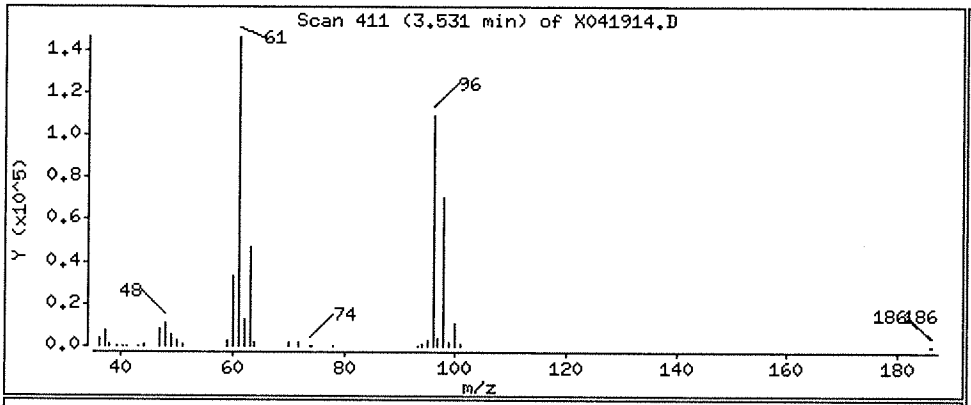
Operator: PC

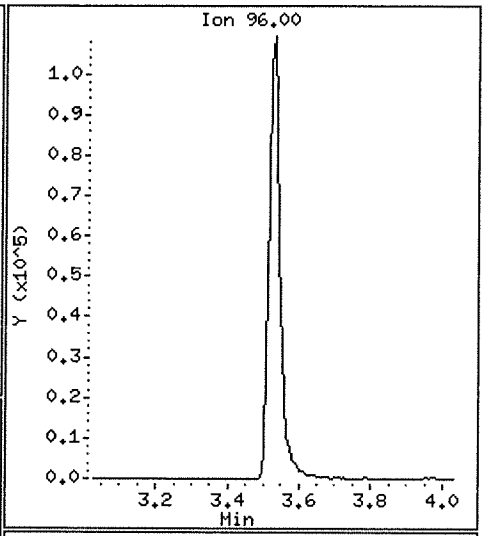
Column phase: DB624

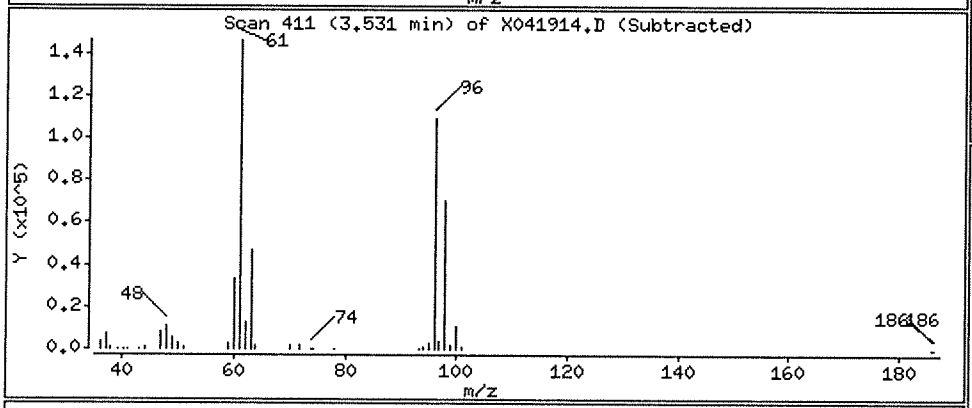
Column diameter: 0.18

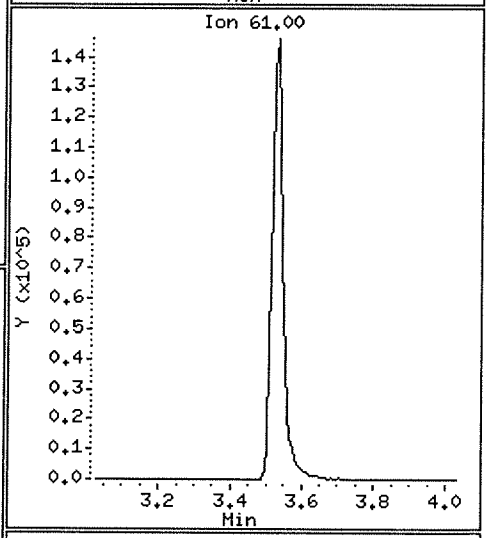
27 cis-1,2-Dichloroethene

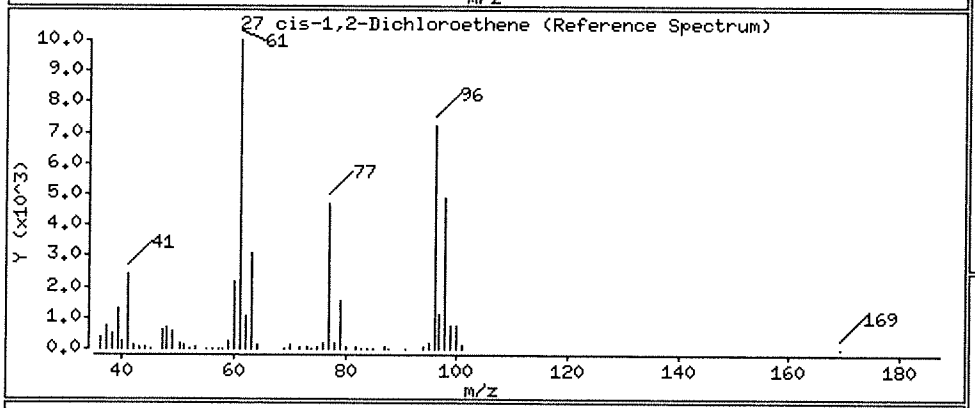
Concentration: 43.56 ug/l

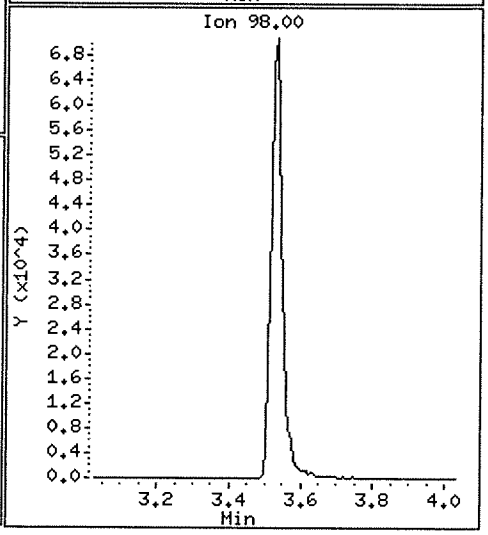


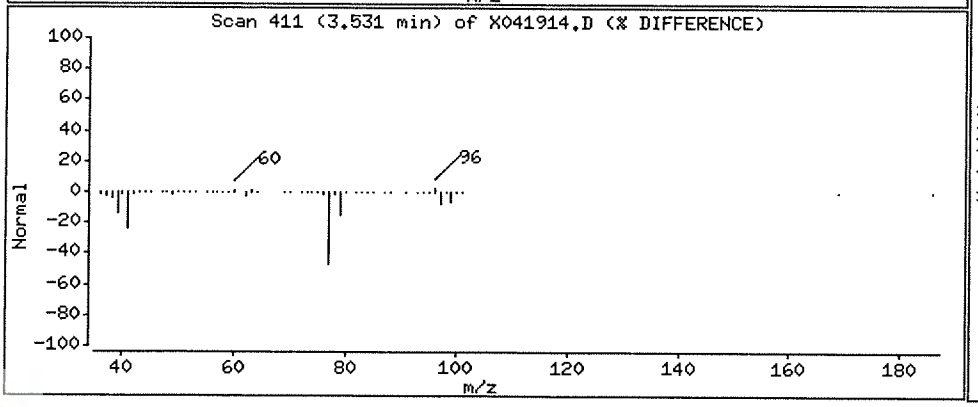












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210419.b\X041914.D

Date : 19-APR-2021 15:38

Client ID: HS21040859-13

Instrument: voa6.i

Sample Info: HS21040859-13;HS21040859-13;;;

Purge Volume: 5.0

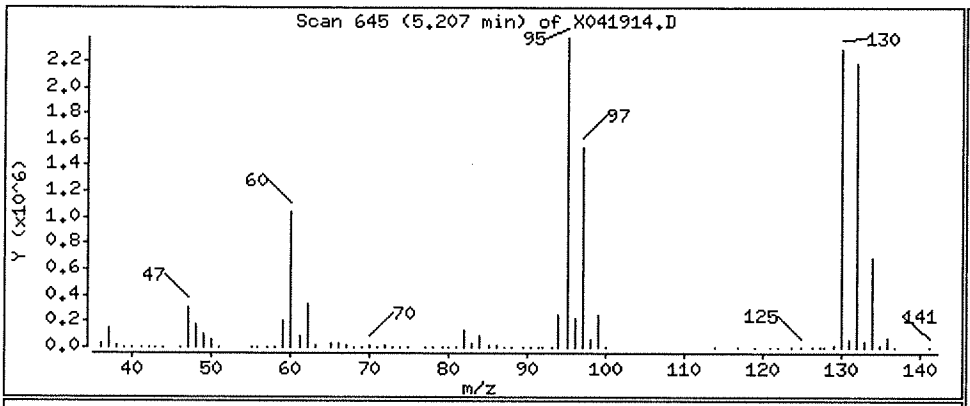
Operator: PC

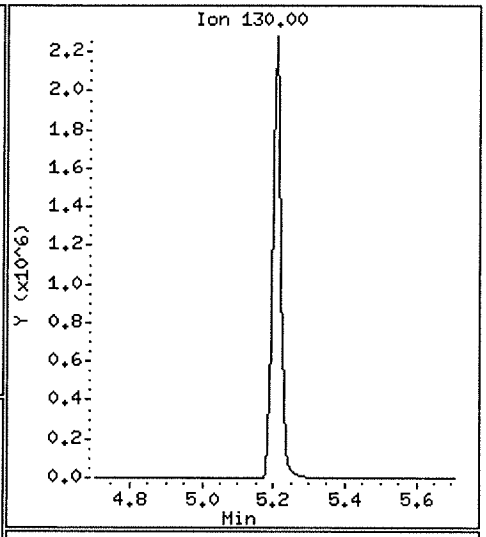
Column phase: DB624

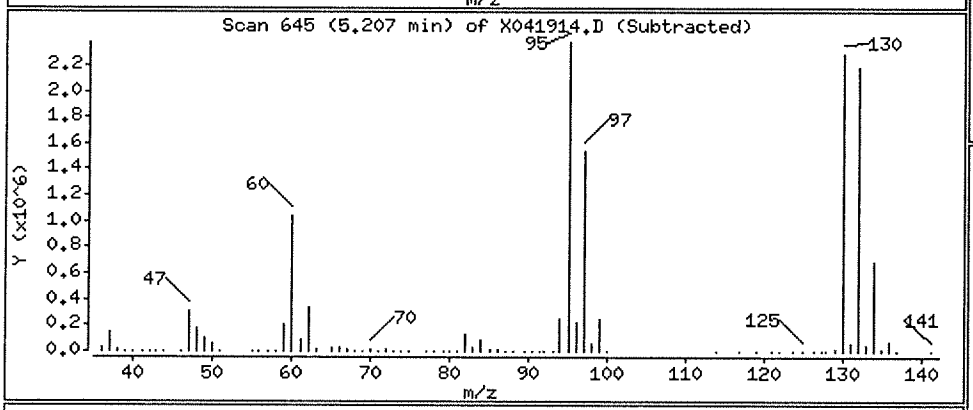
Column diameter: 0.18

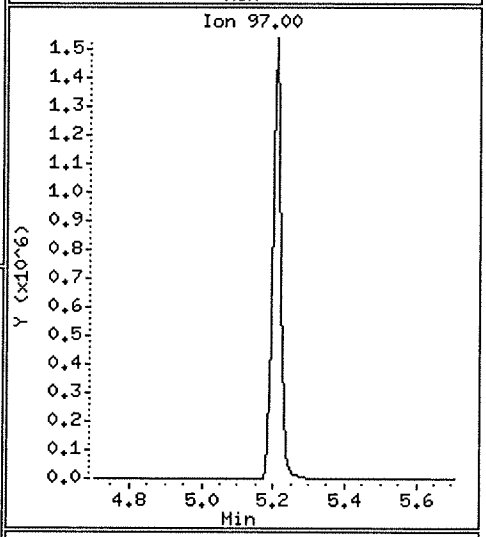
38 Trichloroethene

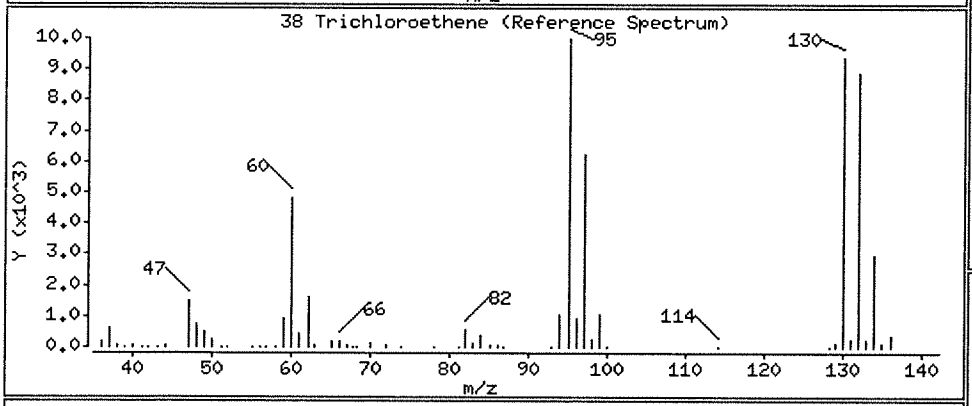
Concentration: 741.84 ug/l

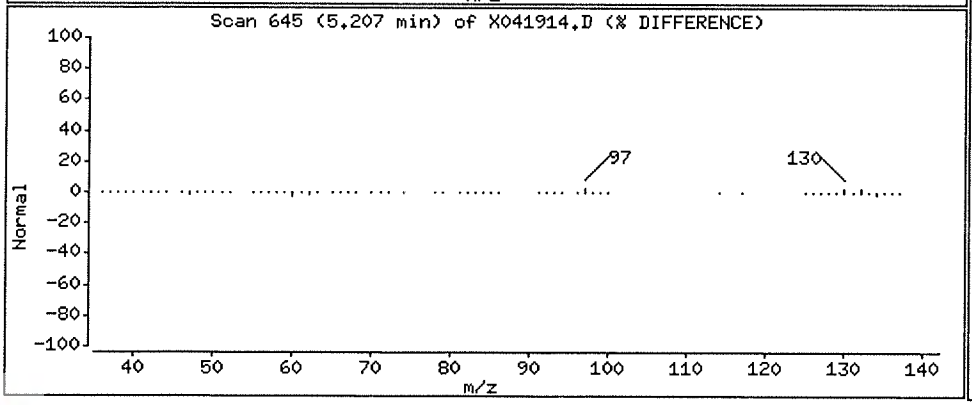


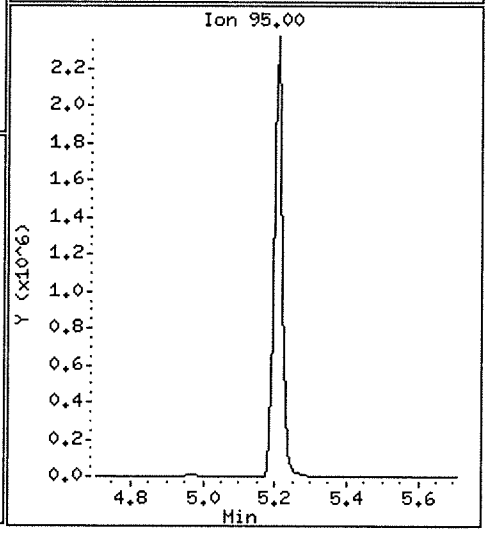












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210419.b\X041915.D Page 1
Report Date: 05-May-2021 09:57

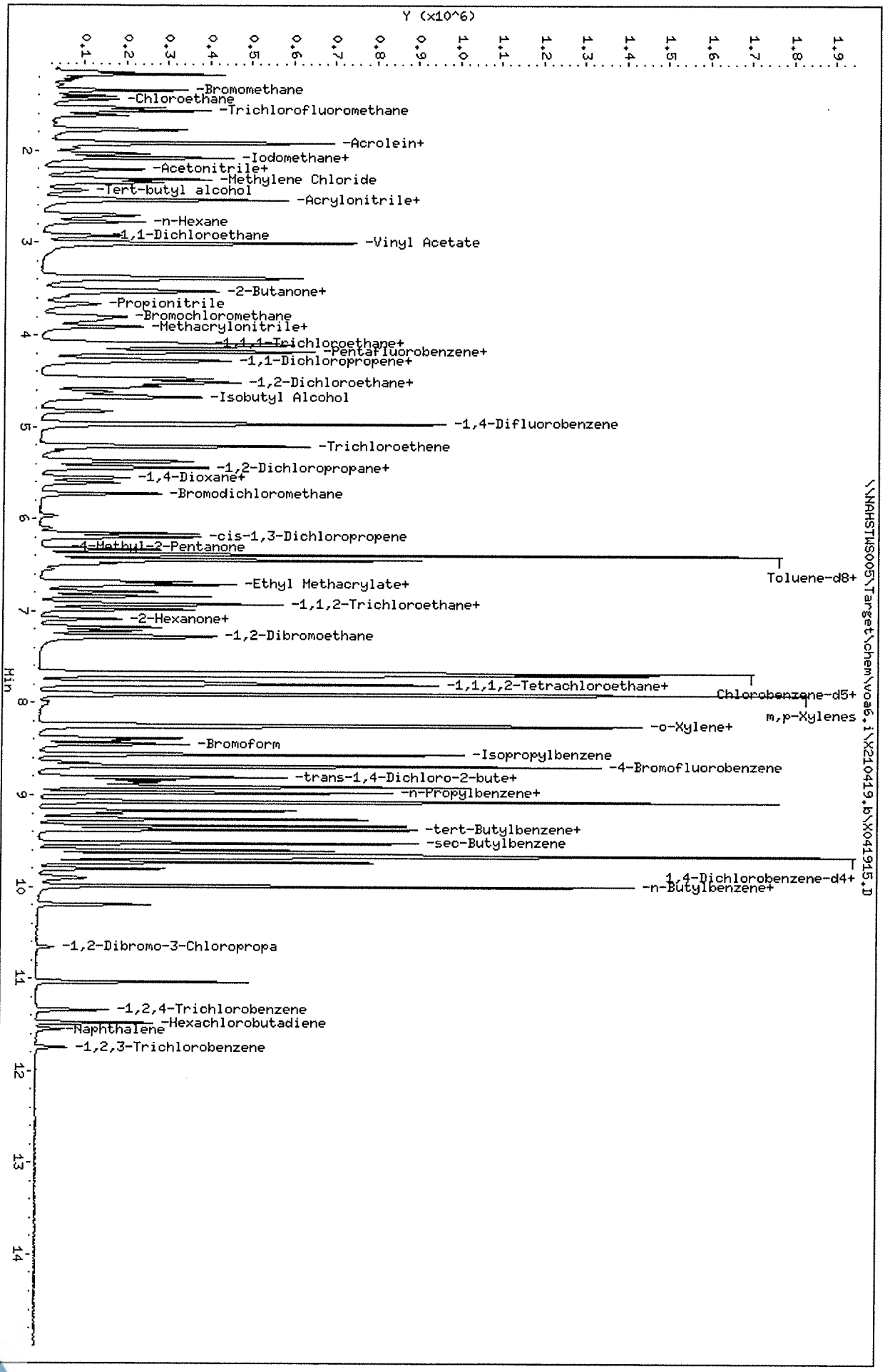
ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X210419.b\X041915.D
Lab Smp Id: HS21040859-08MS Client Smp ID: HS21040859-08MS
Inj Date : 19-APR-2021 15:59
Operator : PC Inst ID: voa6.i
Smp Info : HS21040859-08MS;HS21040859-08MS;3;;MS
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X210419.b\8260W.m
Meth Date : 05-May-2021 09:57 voa6.i Quant Type: ISTD
Cal Date : 02-APR-2021 13:20 Cal File: X040208.D
Als bottle: 15 QC Sample: MS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBI_short1.sub
Target Version: 4.14
Processing Host: NAHSTW7066

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	467985	50.0000	
* 36 1,4-Difluorobenzene	114	4.963	4.970	(1.000)	766492	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	722964	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	326279	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	258136	46.8787	46.87
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	323870	49.0690	49.06
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	962409	51.7233	51.72
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	352382	50.7970	50.79
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	88228	21.0082	21.00
11 1,1-Dichloroethene	96	1.919	1.919	(0.459)	129483	19.4317	19.43
33 1,2-Dichloroethane	62	4.555	4.555	(0.918)	172400	21.2495	21.24
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	127059	22.2103	22.21
17 Methylene Chloride	84	2.306	2.306	(0.551)	103936	21.3401	21.34
38 Trichloroethene	130	5.207	5.207	(1.049)	195717	37.2999	37.29
5 Vinyl Chloride	62	1.145	1.145	(0.274)	138233	19.7025	19.70



Data File: \\NAHSTWS005\Target\chem\voa6.i\X210419.b\X041915.D
Date : 19-APR-2021 15:59
Client ID: HS21040859-08MS
Sample Info: HS21040859-08MS;HS21040859-08MS;3;;MS
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\NAHSTWS005\Target\chem\voa6.i\X210419.b\X041916.D Page 1
Report Date: 05-May-2021 09:57

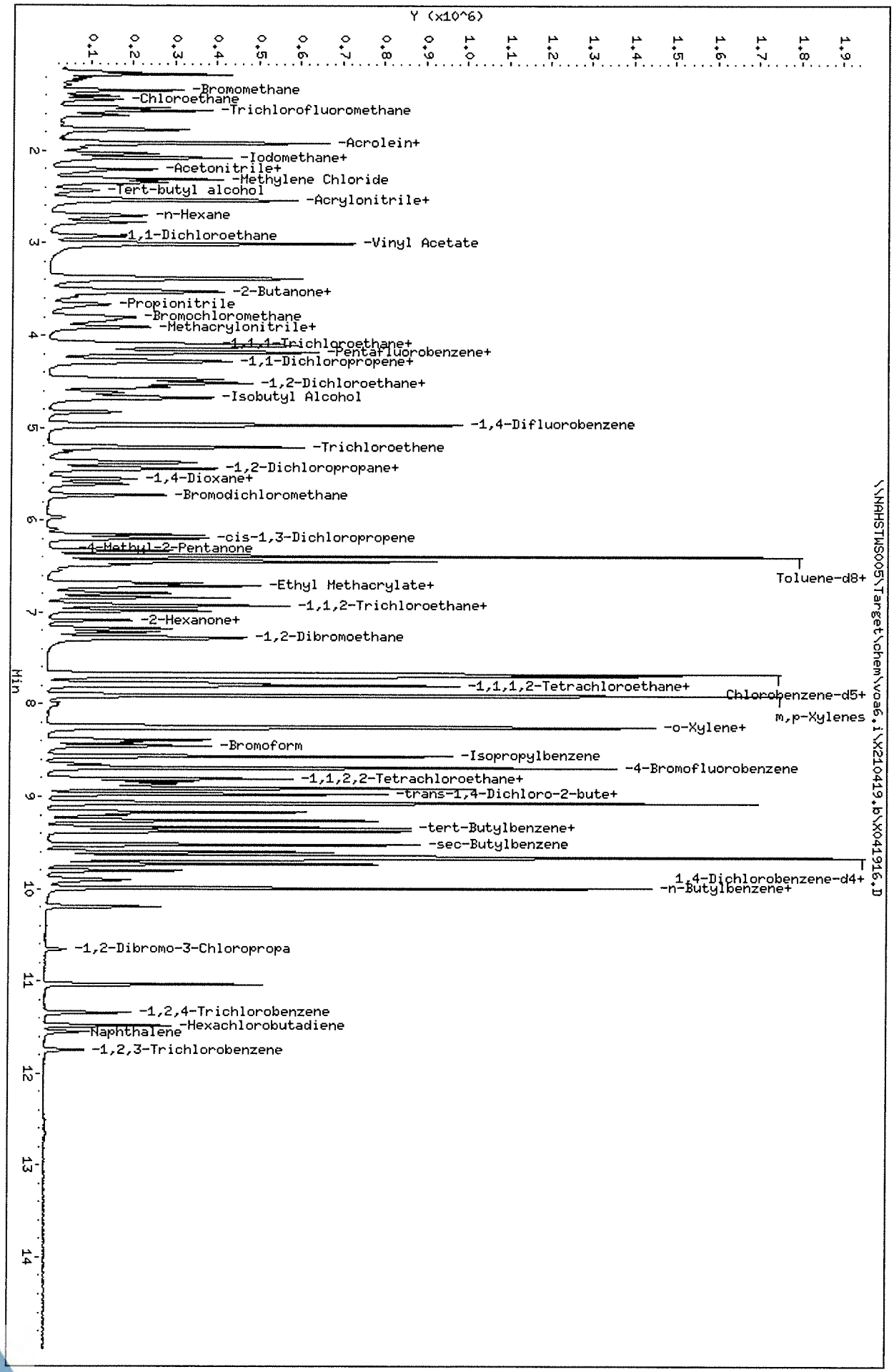
ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X210419.b\X041916.D
Lab Smp Id: HS21040859-08MSD Client Smp ID: HS21040859-08MSD
Inj Date : 19-APR-2021 16:20
Operator : PC Inst ID: voa6.i
Smp Info : HS21040859-08MSD;HS21040859-08MSD;3;;MSD
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X210419.b\8260W.m
Meth Date : 05-May-2021 09:57 voa6.i Quant Type: ISTD
Cal Date : 02-APR-2021 13:20 Cal File: X040208.D
Als bottle: 15 QC Sample: MSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBI_short1.sub
Target Version: 4.14
Processing Host: NAHSTW7066

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	480079	50.0000	
* 36 1,4-Difluorobenzene	114	4.963	4.970	(1.000)	771078	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	741170	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	328543	50.0000	
$ 30 Dibromofluoromethane	113	4.104	4.103	(0.981)	258581	45.7867	45.78
$ 35 1,2-Dichloroethane-d4	65	4.469	4.476	(1.068)	335081	49.4845	49.48
$ 48 Toluene-d8	98	6.389	6.388	(0.833)	993537	52.0717	52.07
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	358318	50.3973	50.39
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	90978	21.1309	21.13
11 1,1-Dichloroethene	96	1.919	1.919	(0.459)	122429	17.9103	17.91
33 1,2-Dichloroethane	62	4.555	4.555	(0.918)	172120	21.0888	21.08
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	127177	21.6709	21.67
17 Methylene Chloride	84	2.306	2.306	(0.551)	104667	20.9760	20.97
38 Trichloroethene	130	5.207	5.207	(1.049)	182864	34.6431	34.64
5 Vinyl Chloride	62	1.145	1.145	(0.274)	135728	18.8581	18.85



Data File: \\NAHSTWS005\Target\chem\voa6.i\X210419.b\X041916.D
Date : 19-APR-2021 16:20
Client ID: HS21040859-08MSD
Sample Info: HS21040859-08MSD;HS21040859-08MSD;3;;MSD
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\NAHSTWS005\Target\chem\voa6.i\X210419.b\X041918.D Page 1
Report Date: 05-May-2021 10:26

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X210419.b\X041918.D
Lab Smp Id: HS21040859-05 Client Smp ID: HS21040859-05
Inj Date : 19-APR-2021 17:02
Operator : PC Inst ID: voa6.i
Smp Info : HS21040859-05;HS21040859-05;;;
Misc Info : HS18090001;WATER;0;5;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X210419.b\8260W.m
Meth Date : 05-May-2021 10:25 Qin.Xu Quant Type: ISTD
Cal Date : 02-APR-2021 13:20 Cal File: X040208.D
Als bottle: 17
Dil Factor: 5.00000
Integrator: HP RTE Compound Sublist: CBI_short1.sub
Target Version: 4.14
Processing Host: NAHSTW7066

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	5.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

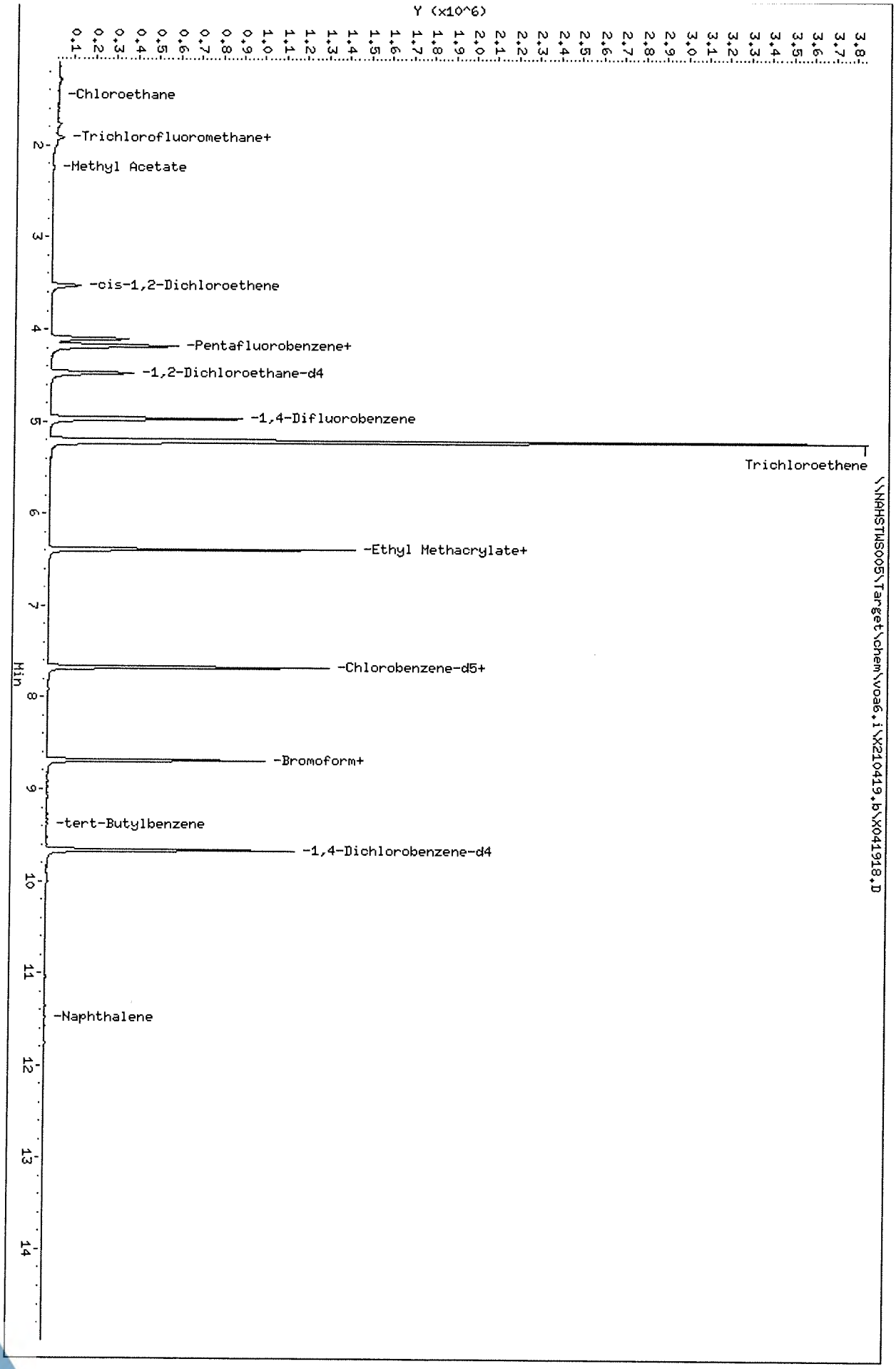
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	441780	50.0000	
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	708072	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	606496	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	254000	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	245515	47.2281	47.22
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	304631	48.8936	48.89
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	839227	53.6912	53.69
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	273238	47.0770	47.07
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	67305	12.4630	62.31
38 Trichloroethene	130	5.207	5.207	(1.049)	1119722	231.004	1155.01(A)

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.

Data File: \\NAHSTWS005\Target\chem\voa6.i\X210419.b\X041918.D
Date : 19-APR-2021 17:02
Client ID: HS21040859-05
Sample Info: HS21040859-05;HS21040859-05;;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18



Data File: \\NAHSTWS005\Target\chem\voa6.i\X210419.b\X041918.D

Date : 19-APR-2021 17:02

Client ID: HS21040859-05

Instrument: voa6.i

Sample Info: HS21040859-05;HS21040859-05;;;

Purge Volume: 5.0

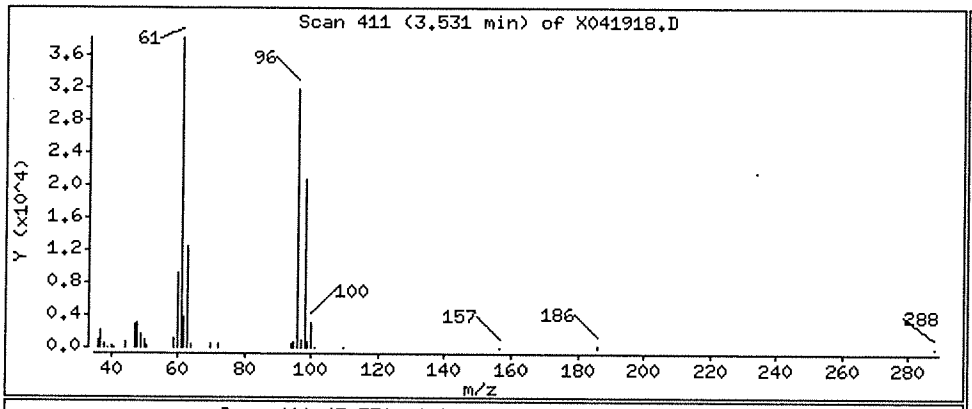
Operator: PC

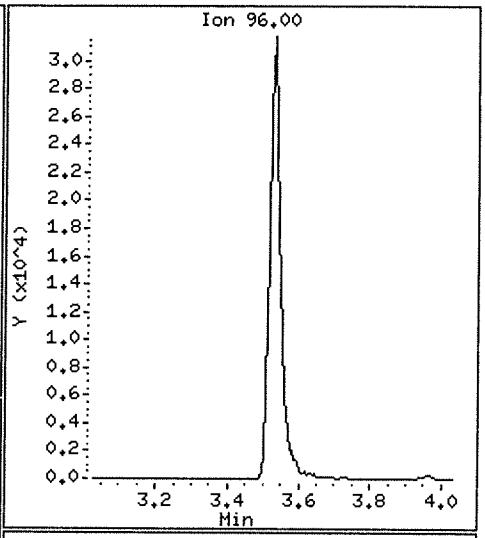
Column phase: DB624

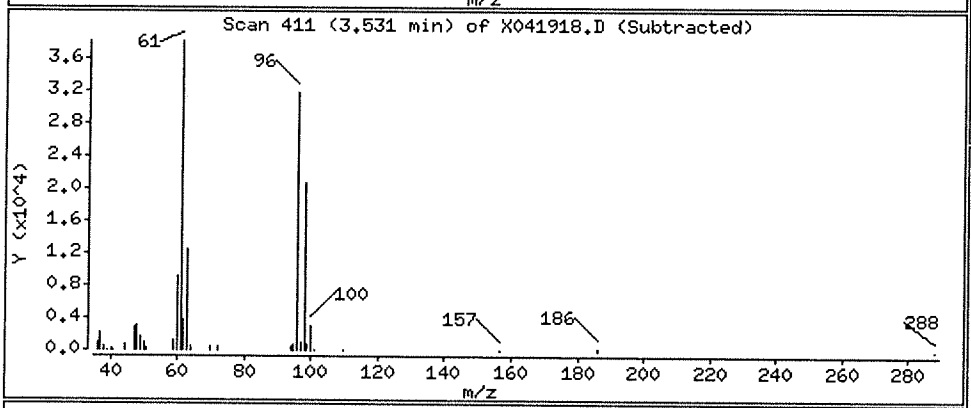
Column diameter: 0.18

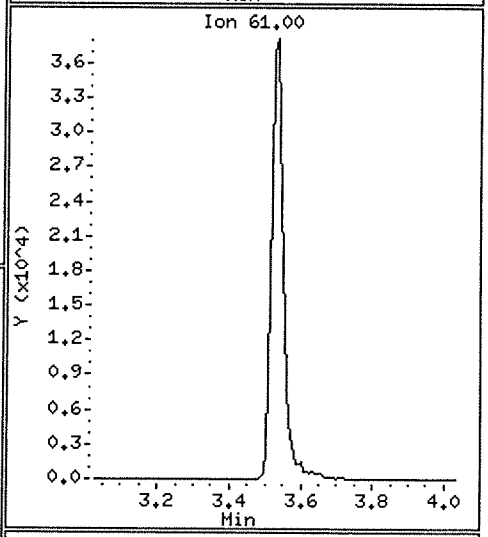
27 cis-1,2-Dichloroethene

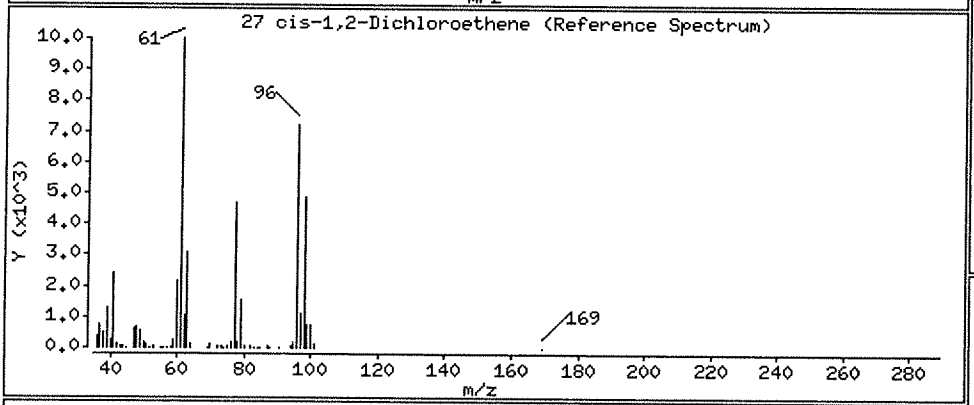
Concentration: 62.31 ug/l

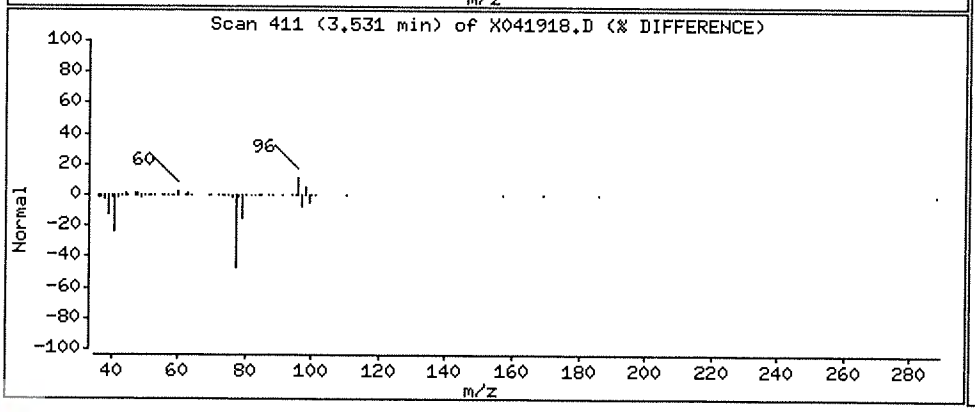


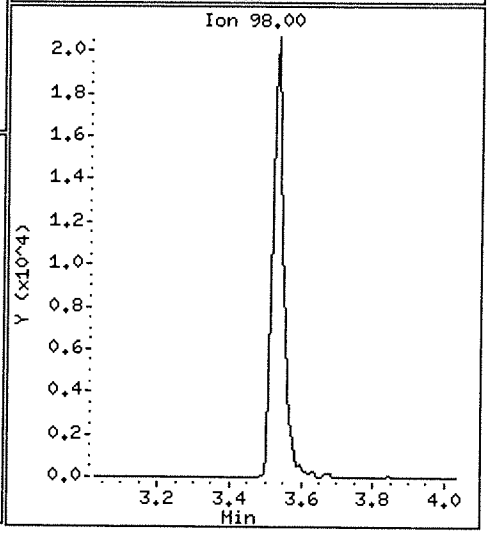












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210419.b\X041918.D

Date : 19-APR-2021 17:02

Client ID: HS21040859-05

Instrument: voa6.i

Sample Info: HS21040859-05;HS21040859-05;;;

Purge Volume: 5.0

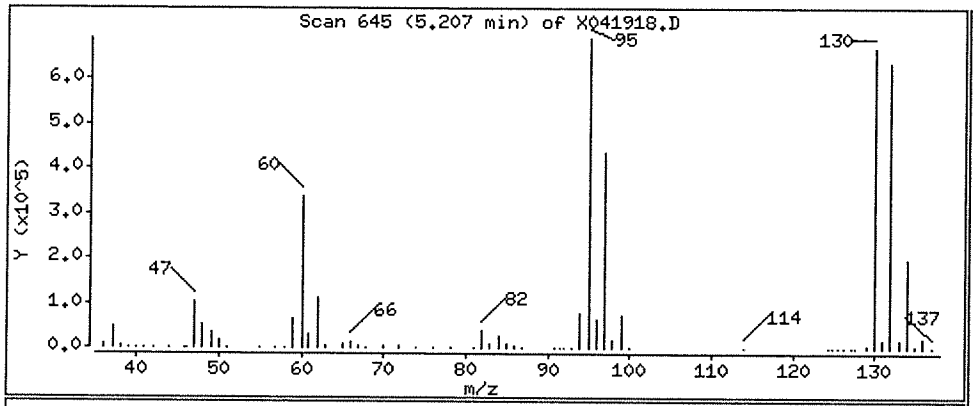
Operator: PC

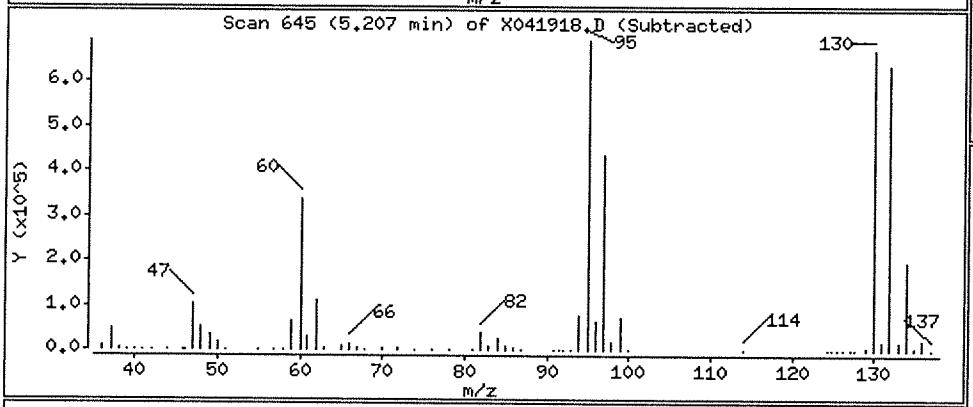
Column phase: DB624

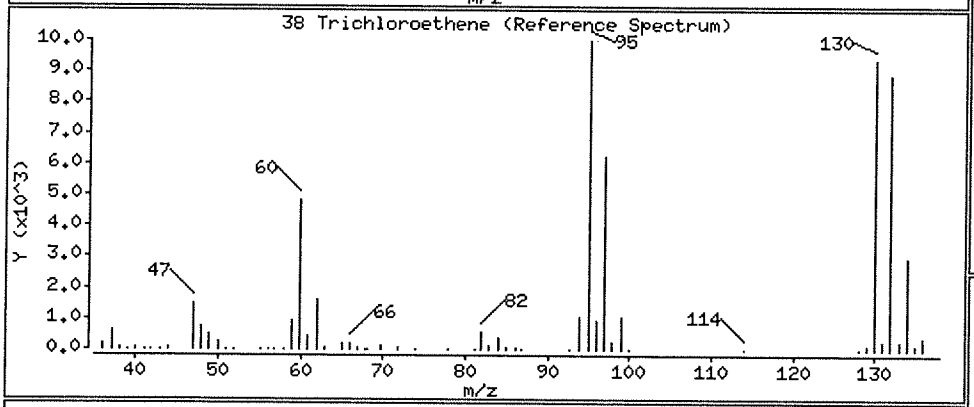
Column diameter: 0.18

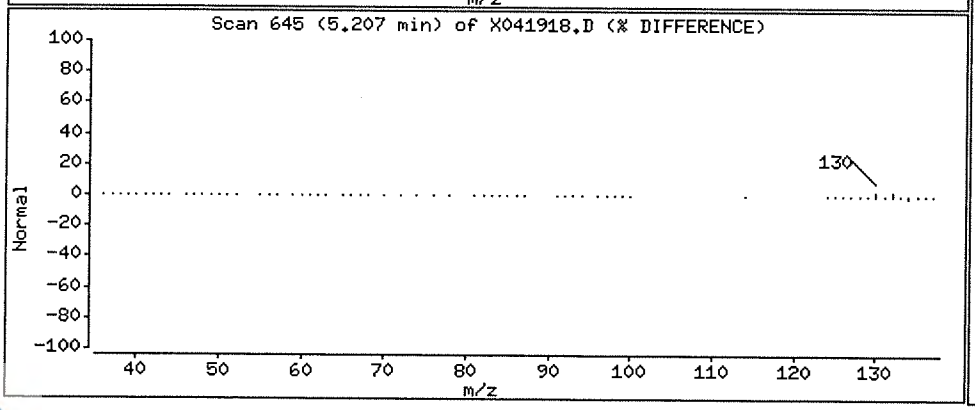
38 Trichloroethene

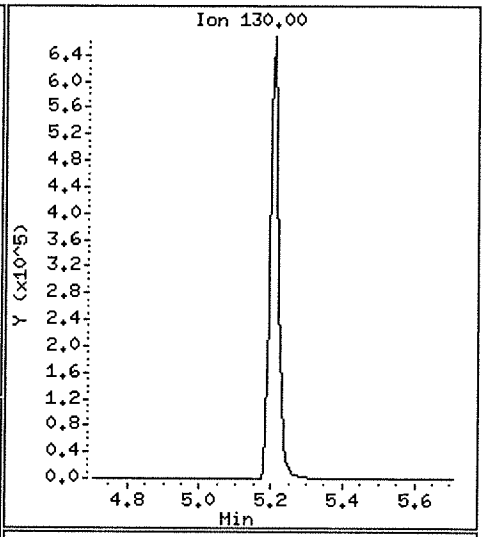
Concentration: 1155.01 ug/l

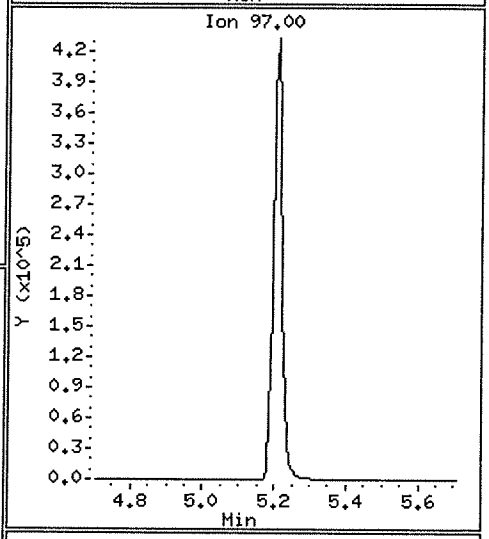


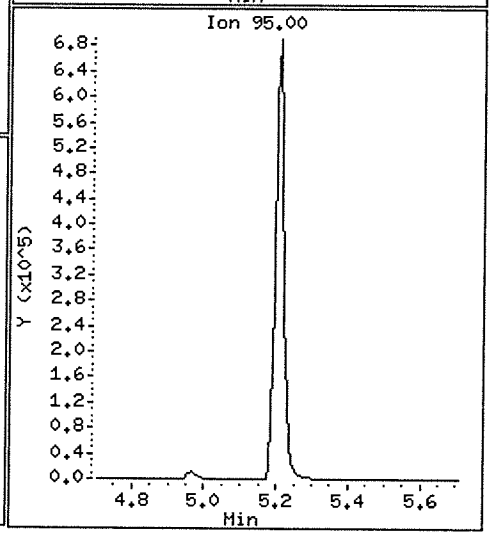












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210419.b\X041919.D Page 1
Report Date: 05-May-2021 10:26

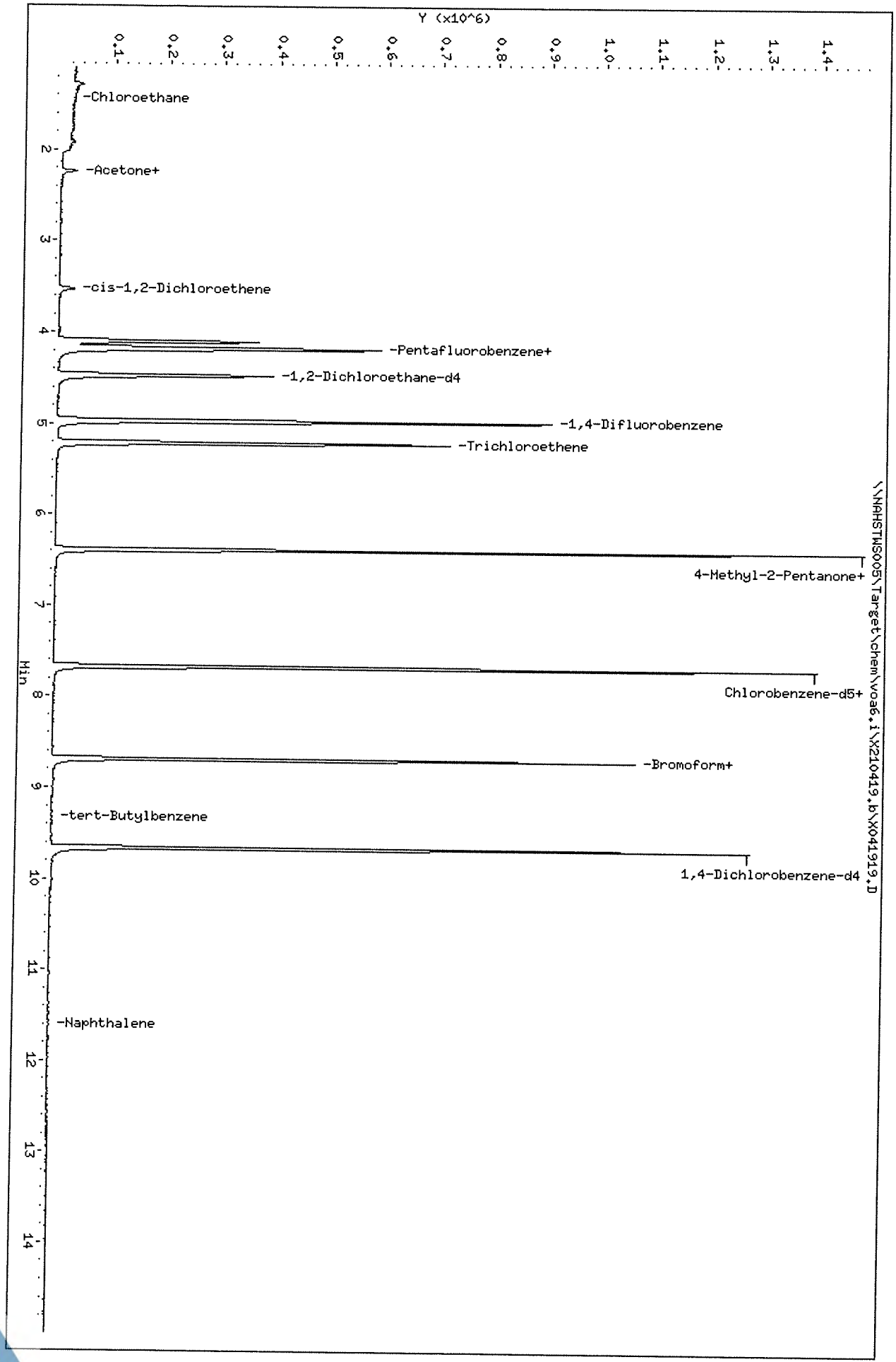
ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X210419.b\X041919.D
Lab Smp Id: HS21040859-05 Client Smp ID: HS21040859-05
Inj Date : 19-APR-2021 17:23
Operator : PC Inst ID: voa6.i
Smp Info : HS21040859-05;HS21040859-05;;;
Misc Info : HS18090001;WATER;0;25;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X210419.b\8260W.m
Meth Date : 05-May-2021 10:25 Qin.Xu Quant Type: ISTD
Cal Date : 02-APR-2021 13:20 Cal File: X040208.D
Als bottle: 18
Dil Factor: 25.00000
Integrator: HP RTE Compound Sublist: CBI_short1.sub
Target Version: 4.14
Processing Host: NAHSTW7066

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	25.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	443188	50.0000	
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	714167	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	626768	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	277342	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	244543	46.8948	46.89
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	307552	49.2025	49.20
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	857536	53.1089	53.10
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	295849	49.2452	49.24
27 cis-1,2-Dichloroethene	96	3.537	3.530	(0.846)	14166	2.61481	65.37
38 Trichloroethene	130	5.206	5.207	(1.049)	219166	44.8291	1120.72



Data File: \\NAHSTWS005\Target\chem\voa6.i\X210419.b\X041919.D
Date : 19-APR-2021 17:23
Client ID: HS21040859-05
Sample Info: HS21040859-05;HS21040859-05;;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\NAHSTWS005\Target\chem\voa6.i\X210419.b\X041919.D

Date : 19-APR-2021 17:23

Client ID: HS21040859-05

Instrument: voa6.i

Sample Info: HS21040859-05;HS21040859-05;;;

Purge Volume: 5.0

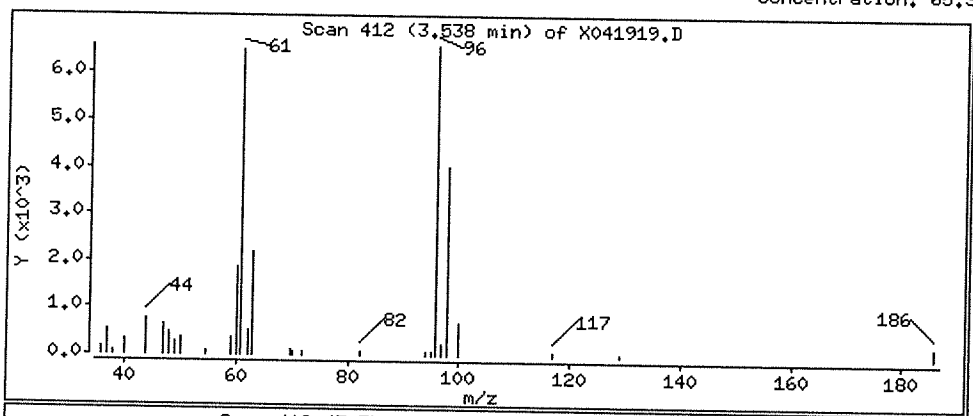
Operator: PC

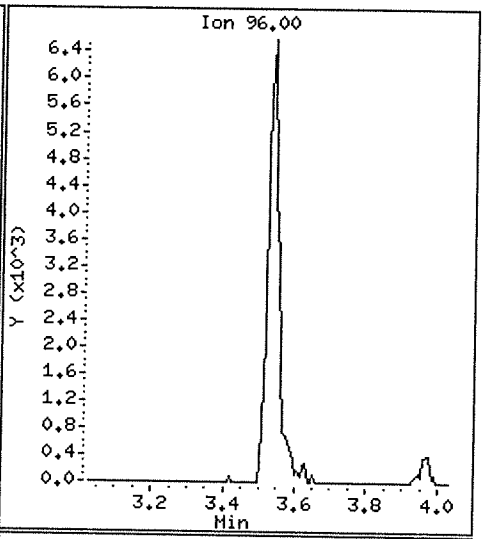
Column phase: DB624

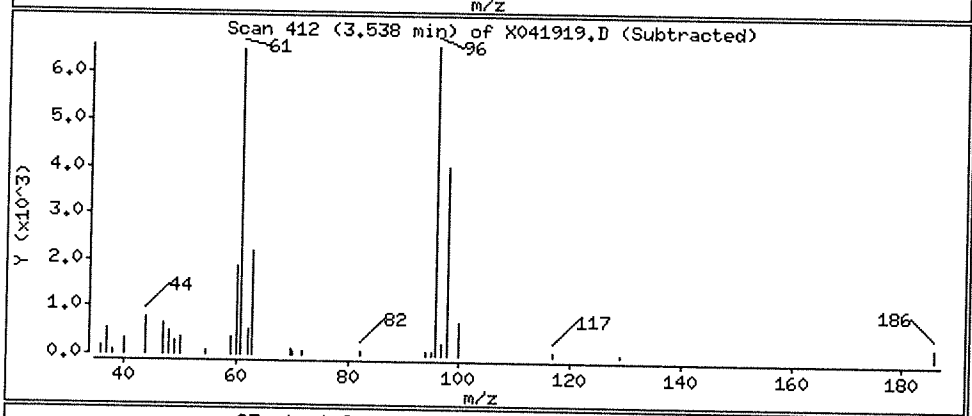
Column diameter: 0.18

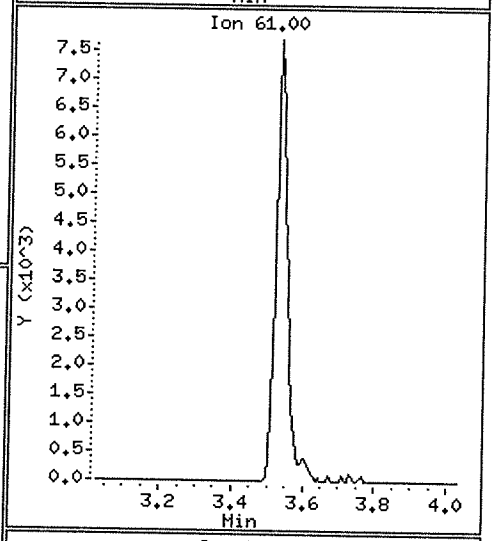
27 cis-1,2-Dichloroethene

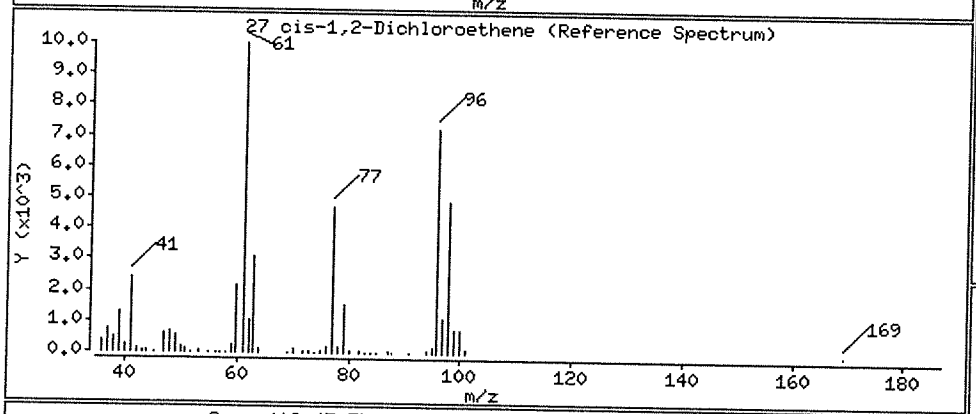
Concentration: 65.37 ug/l

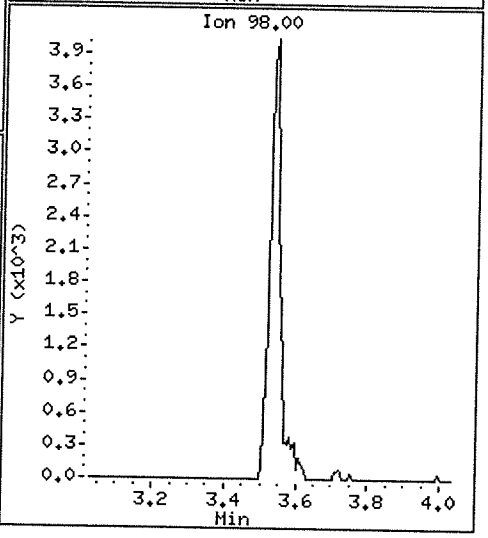


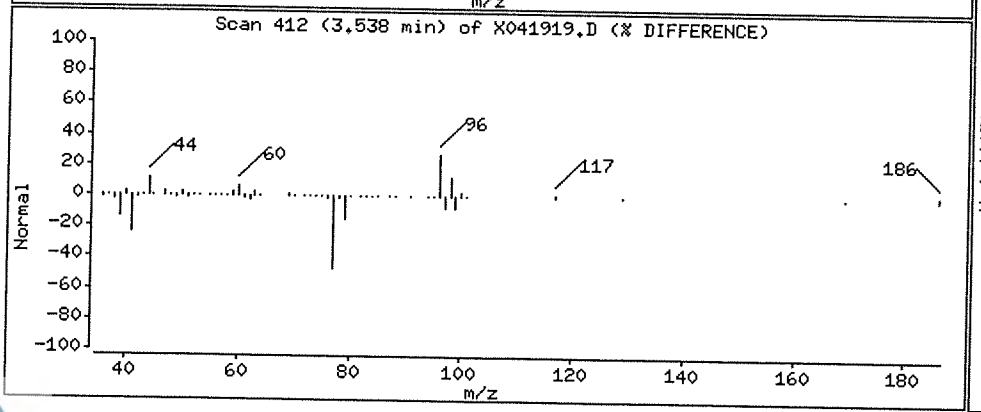












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210419.b\X041919.D

Date : 19-APR-2021 17:23

Client ID: HS21040859-05

Instrument: voa6.i

Sample Info: HS21040859-05;HS21040859-05;;;

Purge Volume: 5.0

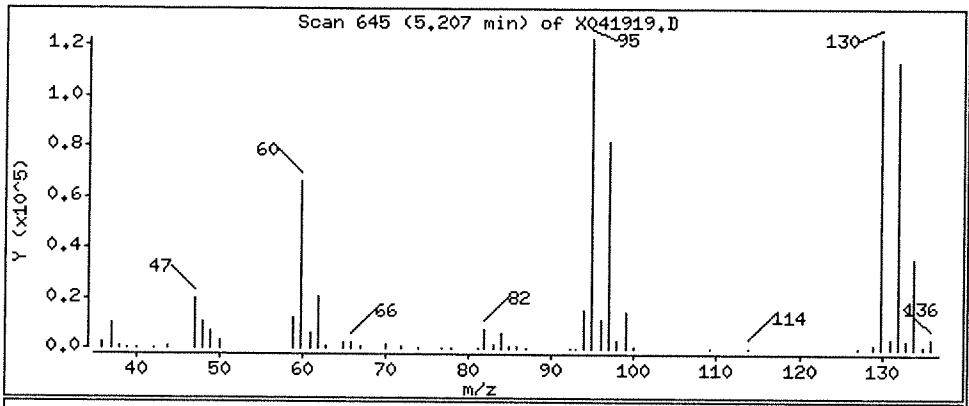
Operator: PC

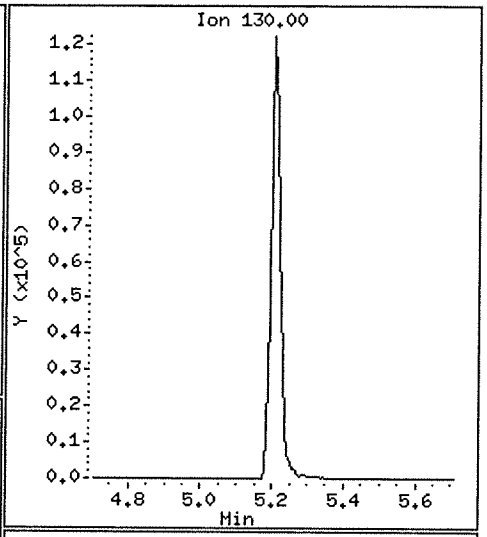
Column phase: DB624

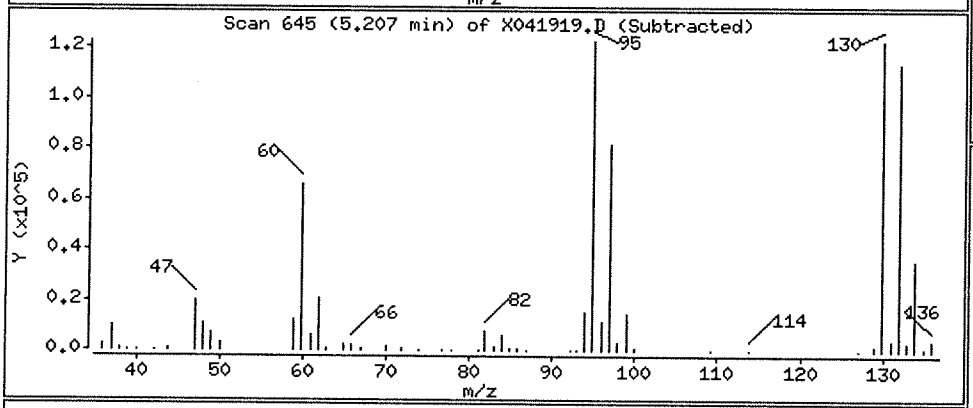
Column diameter: 0.18

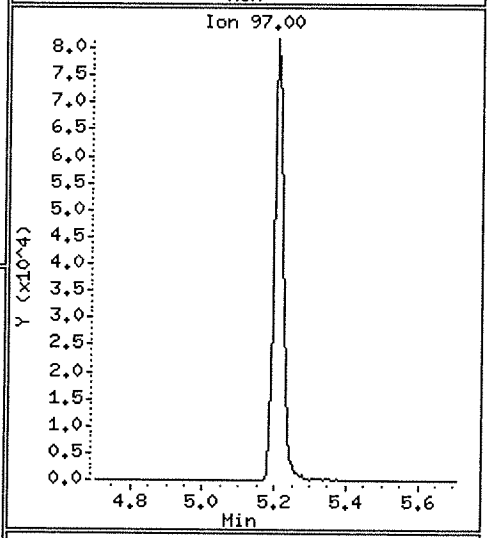
38 Trichloroethene

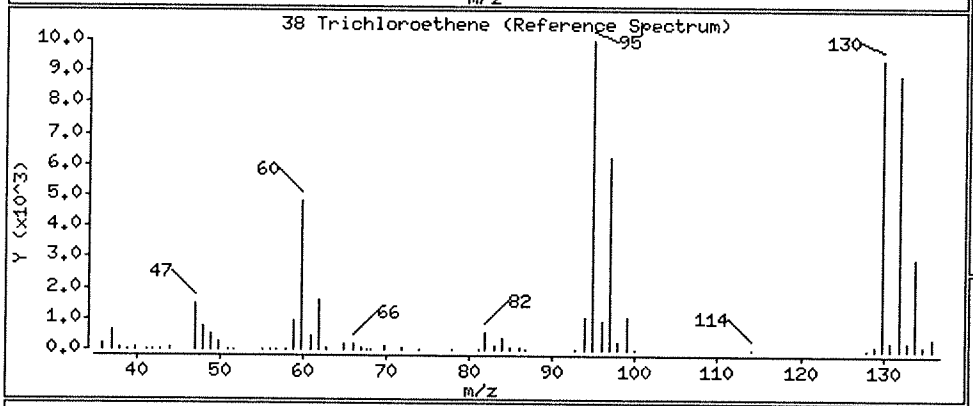
Concentration: 1120.72 ug/l

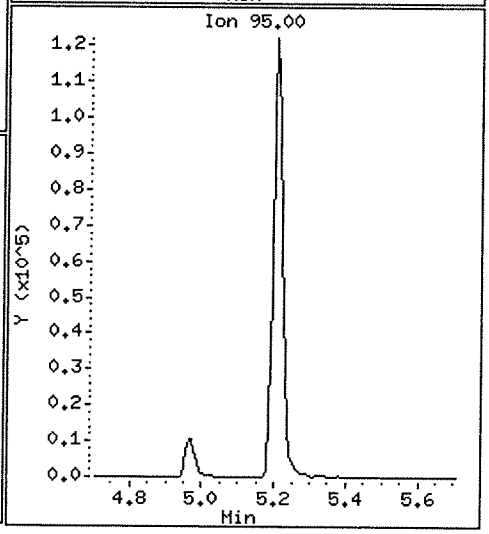


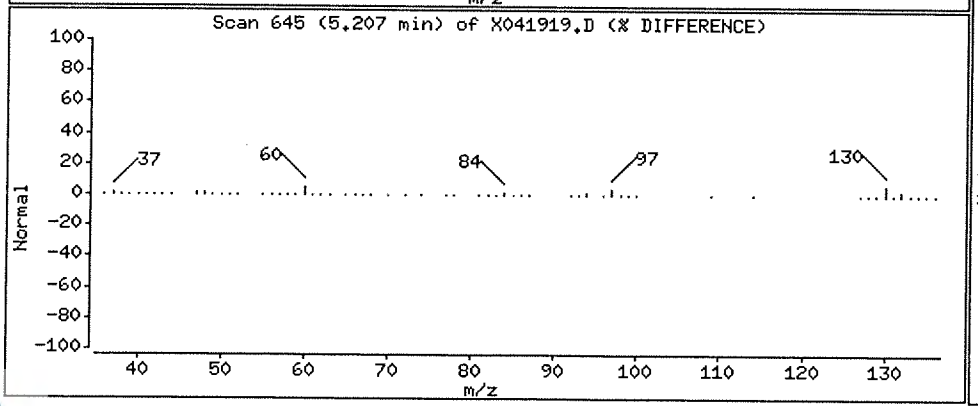












ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X210419.b\X041920.D
Lab Smp Id: HS21040859-10 Client Smp ID: HS21040859-10
Inj Date : 19-APR-2021 17:44
Operator : PC Inst ID: voa6.i
Smp Info : HS21040859-10;HS21040859-10;;;
Misc Info : HS18090001;WATER;0;5;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X210419.b\8260W.m
Meth Date : 05-May-2021 10:25 Qin.Xu Quant Type: ISTD
Cal Date : 02-APR-2021 13:20 Cal File: X040208.D
Als bottle: 19
Dil Factor: 5.00000
Integrator: HP RTE Compound Sublist: CBI_short1.sub
Target Version: 4.14
Processing Host: NAHSTW7066

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	5.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

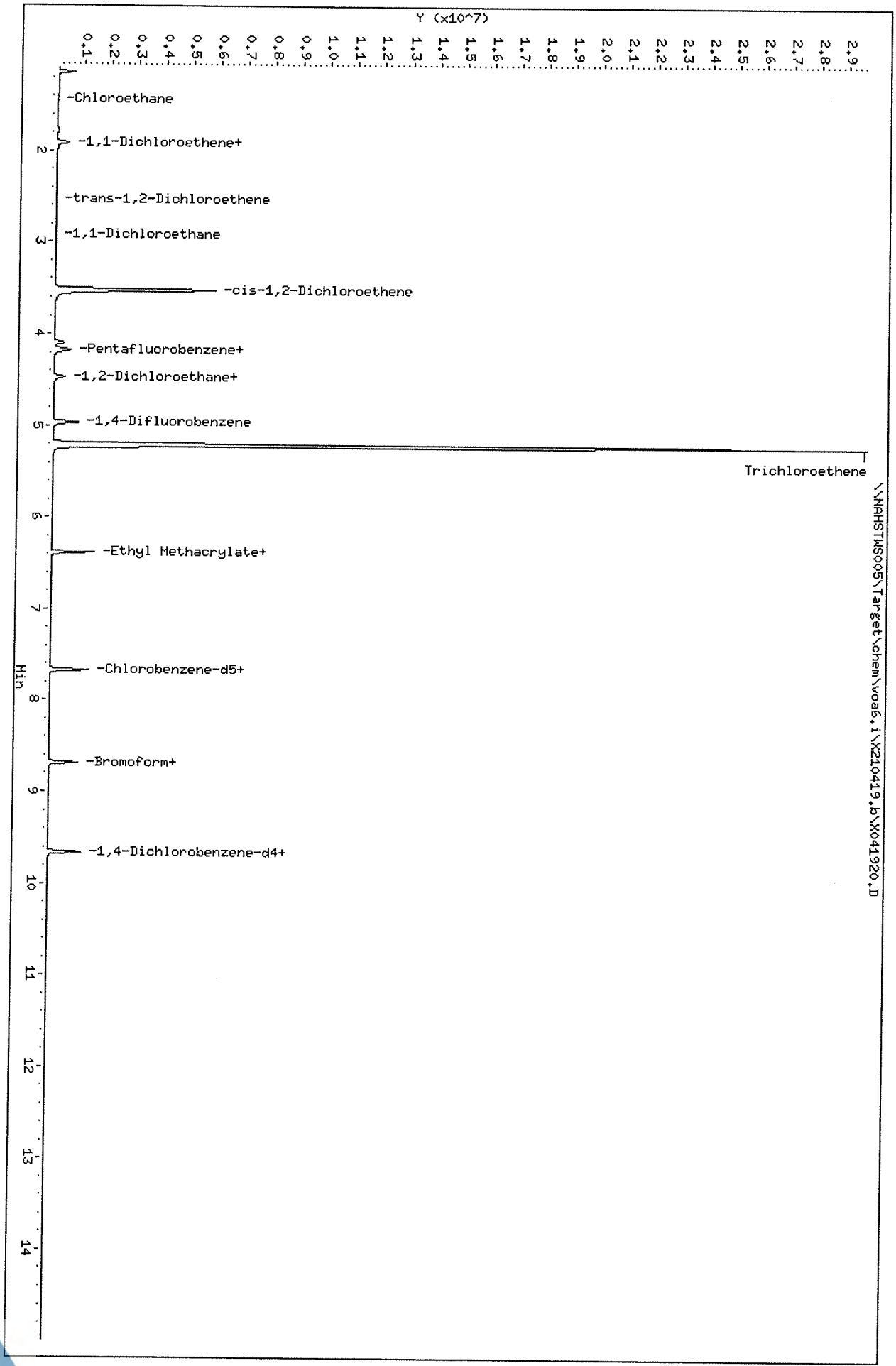
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	454477	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.963	(1.000)	729613	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	617179	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	267133	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	249547	46.6678	46.66
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	313261	48.8743	48.87
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	873547	54.8771	54.87
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	273030	46.2567	46.25
11 1,1-Dichloroethene	96	1.911	1.919	(0.457)	24852	3.84043	19.20(a)
33 1,2-Dichloroethane	62	4.562	4.555	(0.918)	6499	0.84154	4.20(a)
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	2818109	507.256	2536.28(A)
38 Trichloroethene	130	5.206	5.207	(1.048)	8437092	1689.22	8446.10(A)
5 Vinyl Chloride	62	1.145	1.145	(0.274)	455944	66.9176	334.58

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).
A - Target compound detected but, quantitated amount exceeded maximum amount.

Data File: \\NAHSTWS005\Target\chem\voa6.i\X210419.b\X041920.D
Date : 19-APR-2021 17:44
Client ID: HS21040859-10
Sample Info: HS21040859-10;HS21040859-10;;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18



Data File: \\NAHSTWS005\Target\chem\voa6.i\X210419.b\X041920.D

Date : 19-APR-2021 17:44

Client ID: HS21040859-10

Instrument: voa6.i

Sample Info: HS21040859-10;HS21040859-10;;;

Purge Volume: 5.0

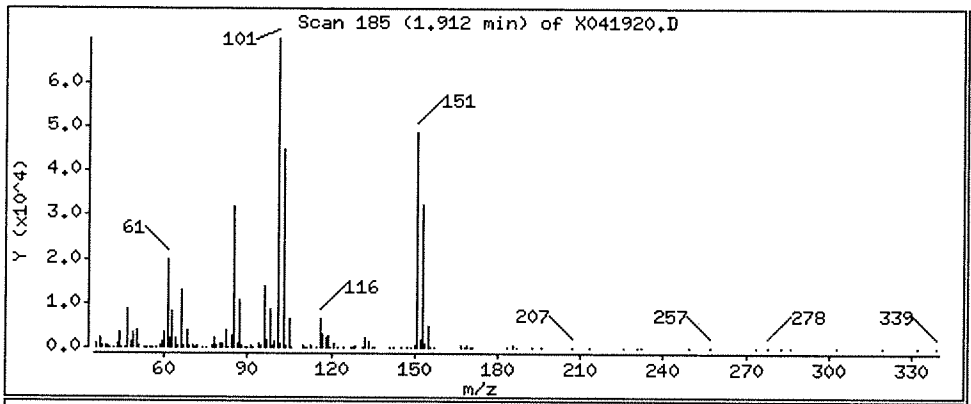
Operator: PC

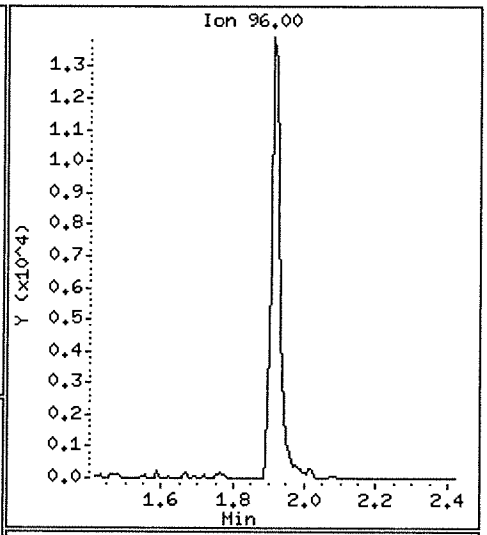
Column phase: DB624

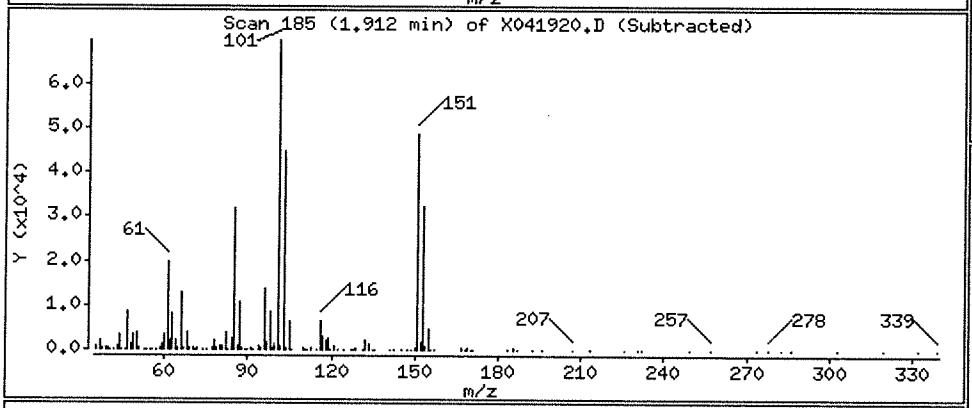
Column diameter: 0.18

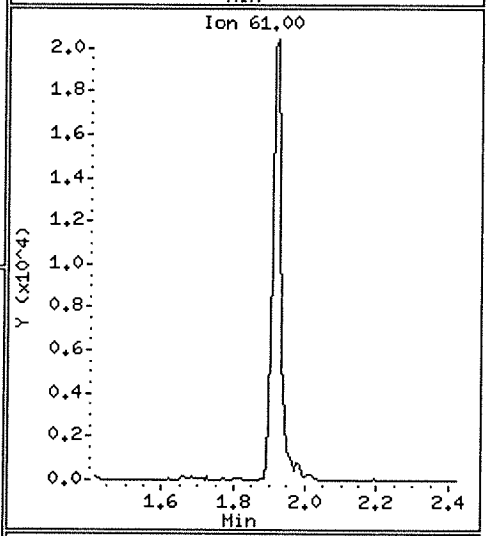
11 1,1-Dichloroethene

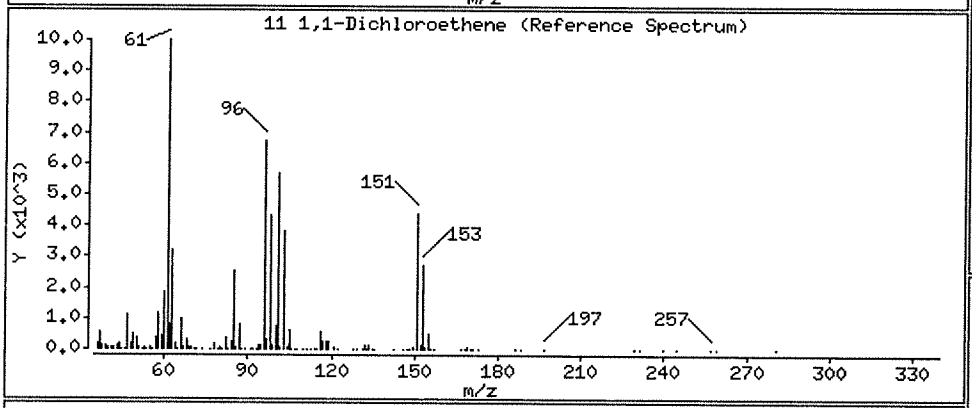
Concentration: 19.20 ug/l

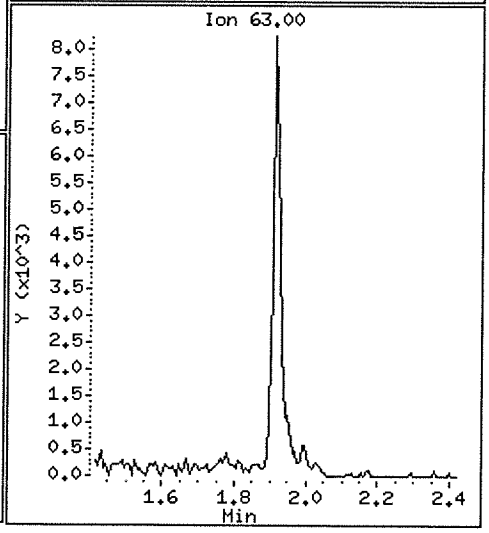


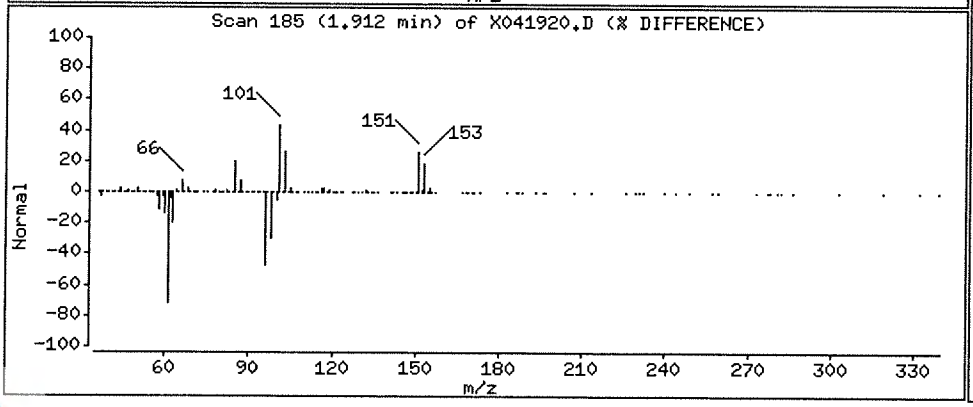












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210419.b\X041920.D

Date : 19-APR-2021 17:44

Client ID: HS21040859-10

Instrument: voa6.i

Sample Info: HS21040859-10;HS21040859-10;;;

Purge Volume: 5.0

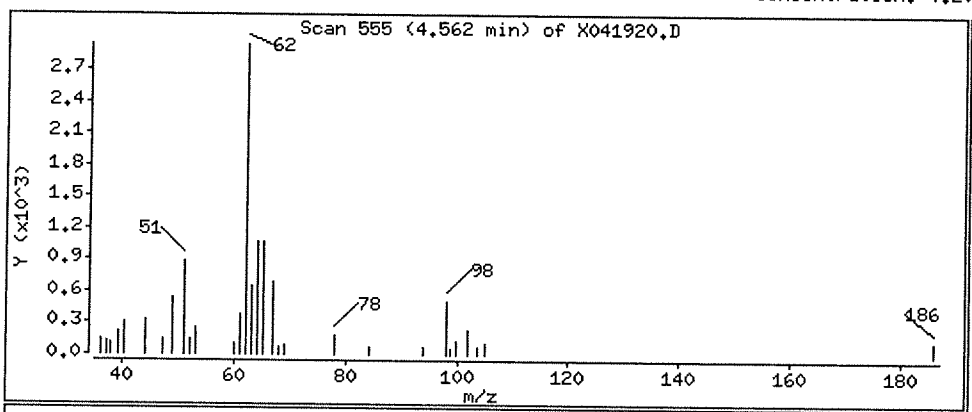
Operator: PC

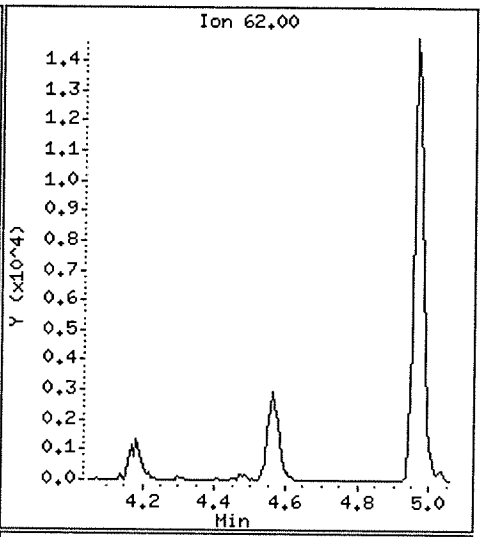
Column phase: DB624

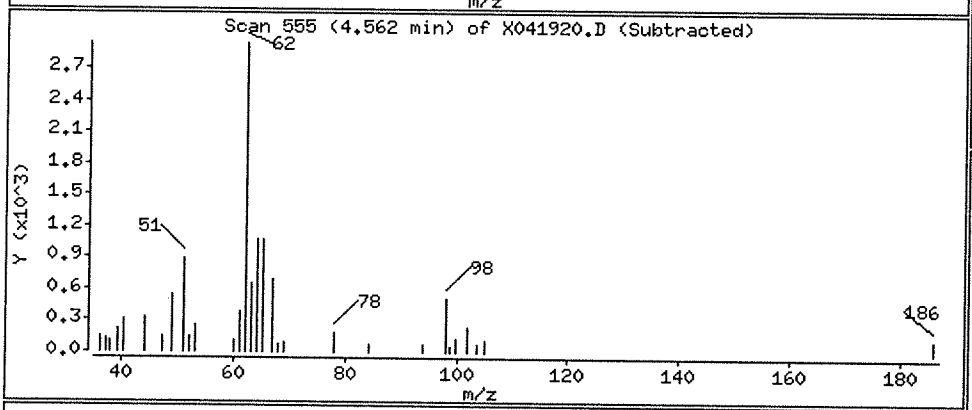
Column diameter: 0.18

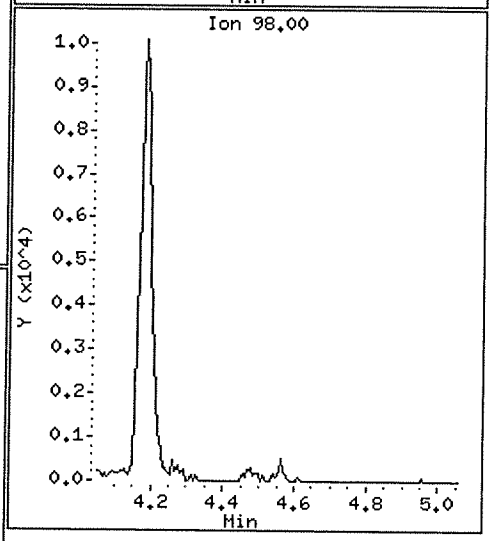
33 1,2-Dichloroethane

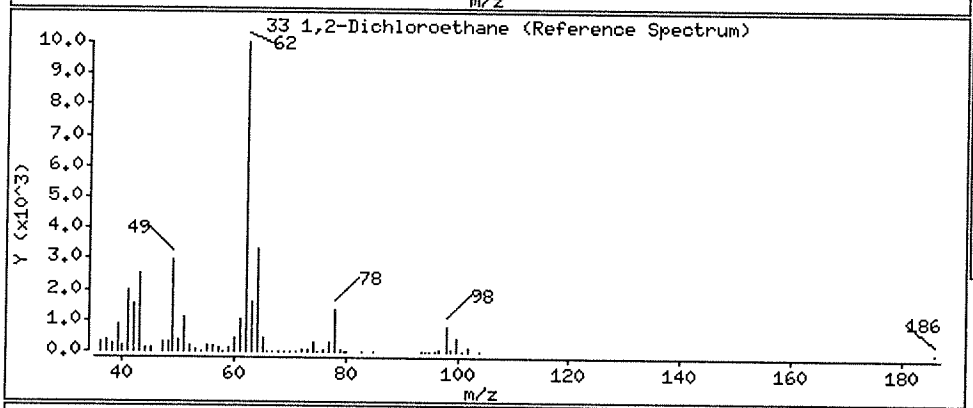
Concentration: 4.20 ug/l

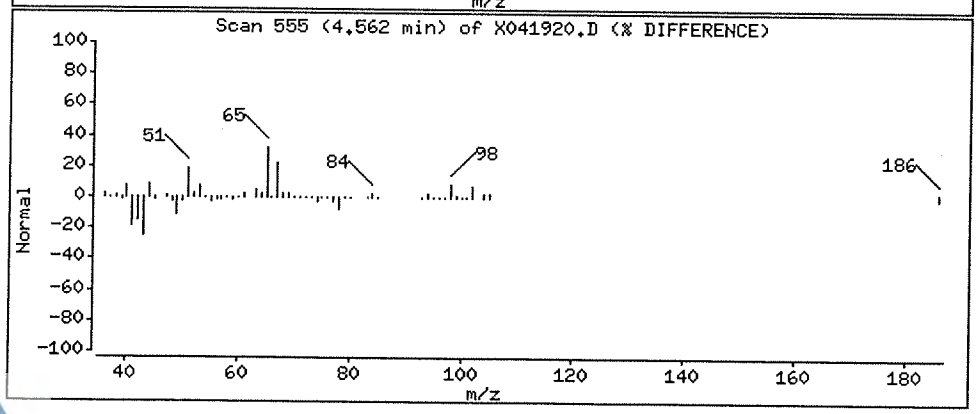












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210419.b\X041920.D

Date : 19-APR-2021 17:44

Client ID: HS21040859-10

Instrument: voa6.i

Sample Info: HS21040859-10;HS21040859-10;;;

Purge Volume: 5.0

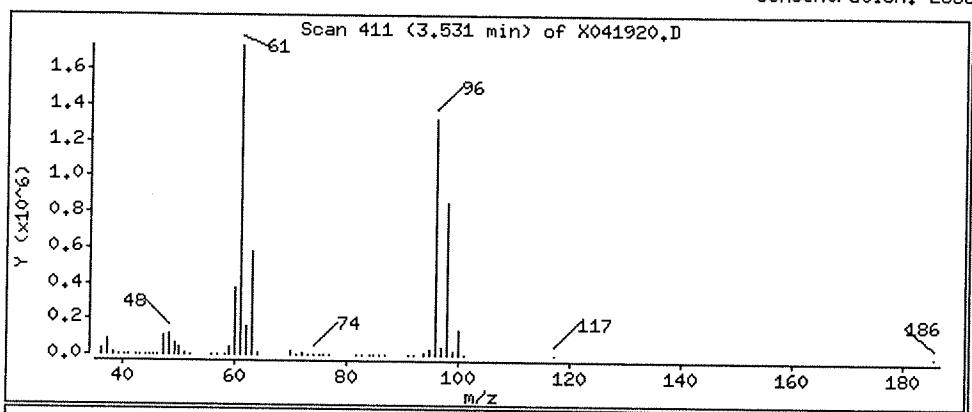
Operator: PC

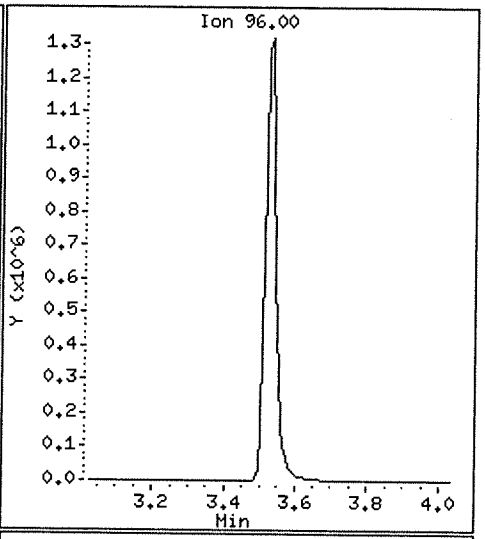
Column phase: DB624

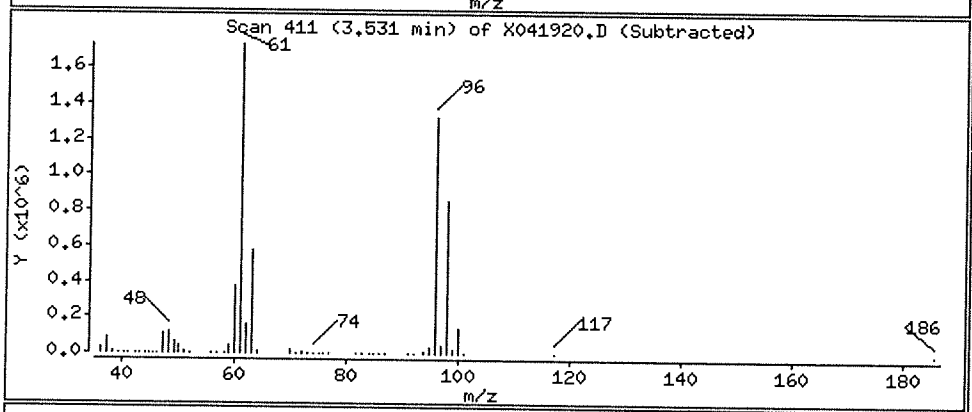
Column diameter: 0.18

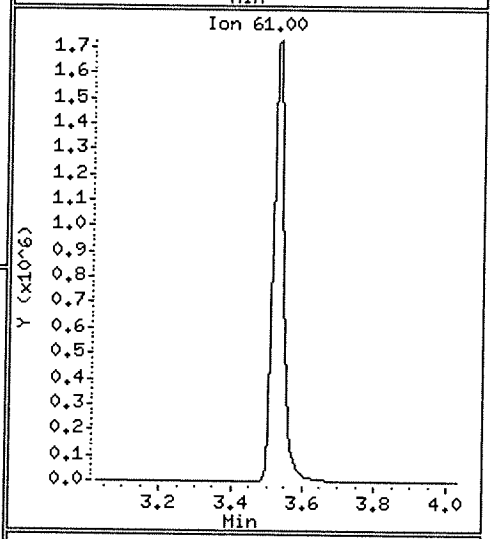
27 cis-1,2-Dichloroethene

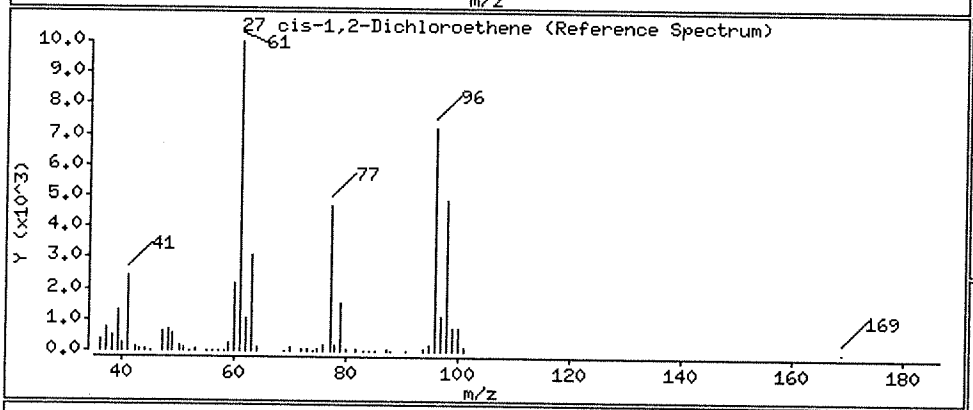
Concentration: 2536.28 ug/l

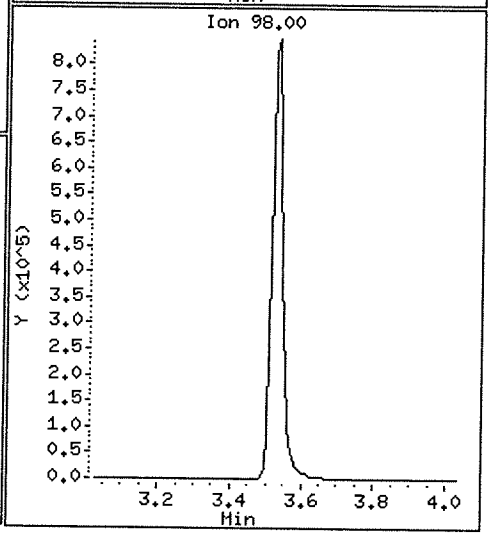


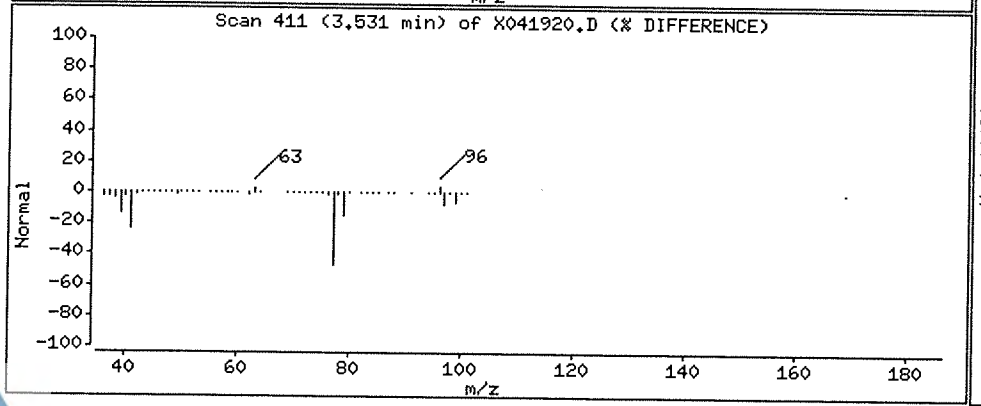












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210419.b\X041920.D

Date : 19-APR-2021 17:44

Client ID: HS21040859-10

Instrument: voa6.i

Sample Info: HS21040859-10;HS21040859-10;;;

Purge Volume: 5.0

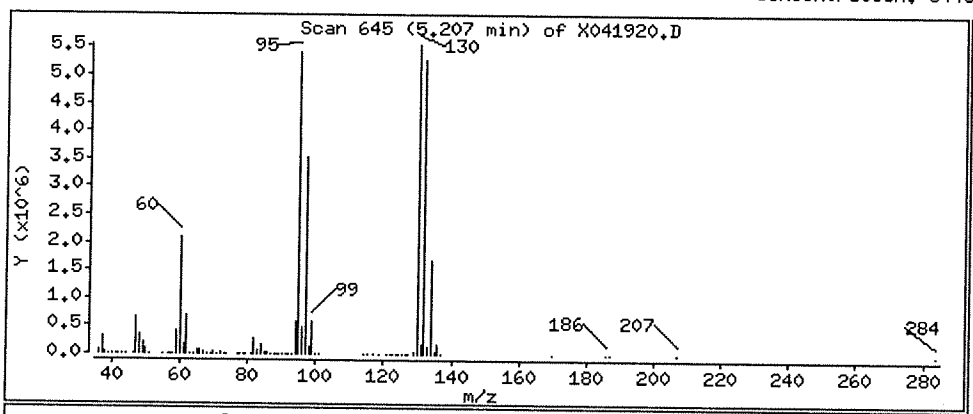
Operator: PC

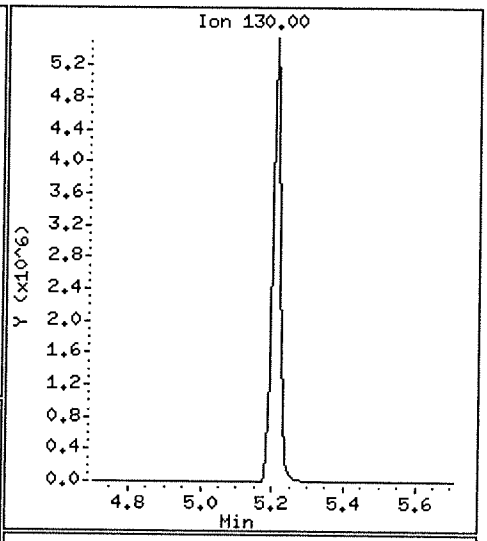
Column phase: DB624

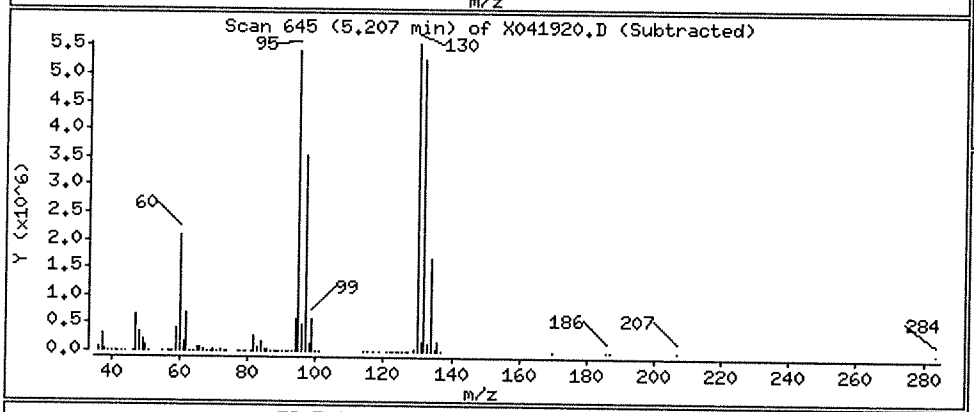
Column diameter: 0.18

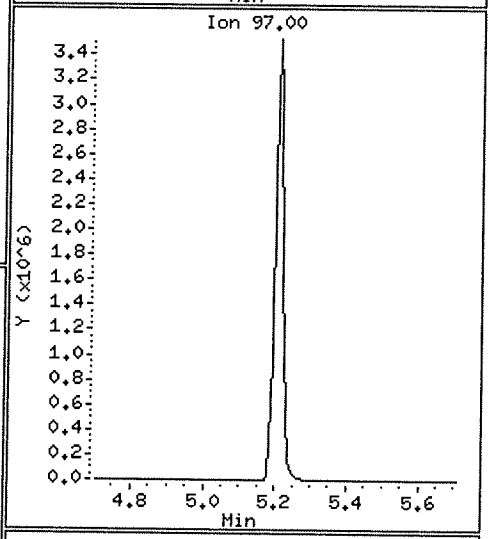
38 Trichloroethene

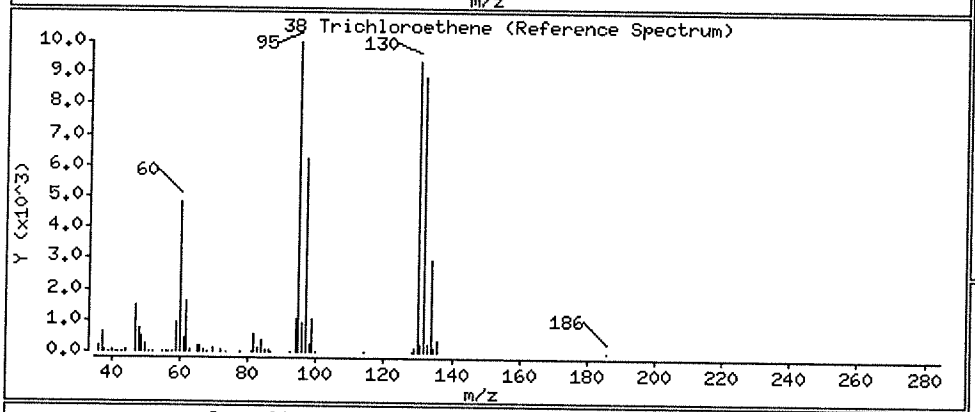
Concentration: 8446.10 ug/l

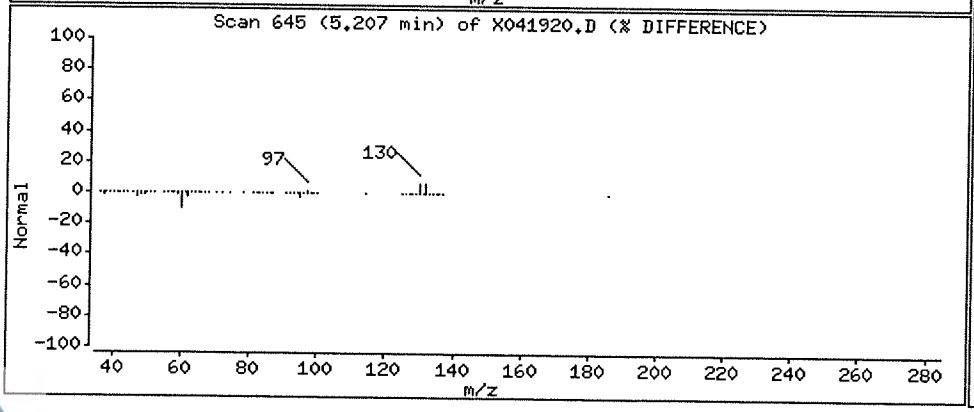


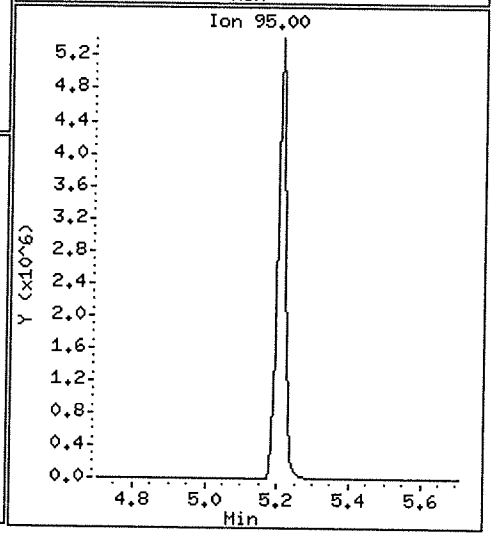












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210419.b\X041920.D

Date : 19-APR-2021 17:44

Client ID: HS21040859-10

Instrument: voa6.i

Sample Info: HS21040859-10;HS21040859-10;;;

Purge Volume: 5.0

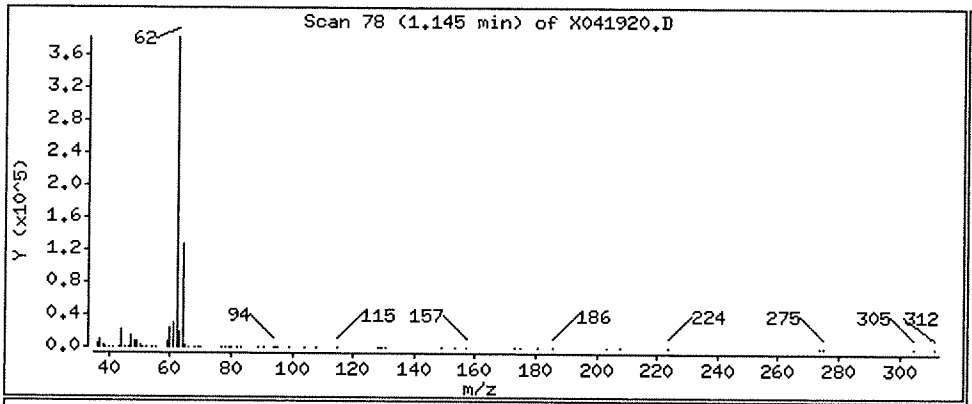
Operator: PC

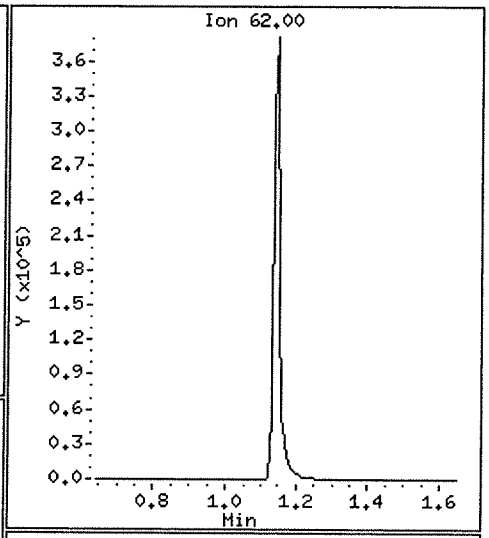
Column phase: DB624

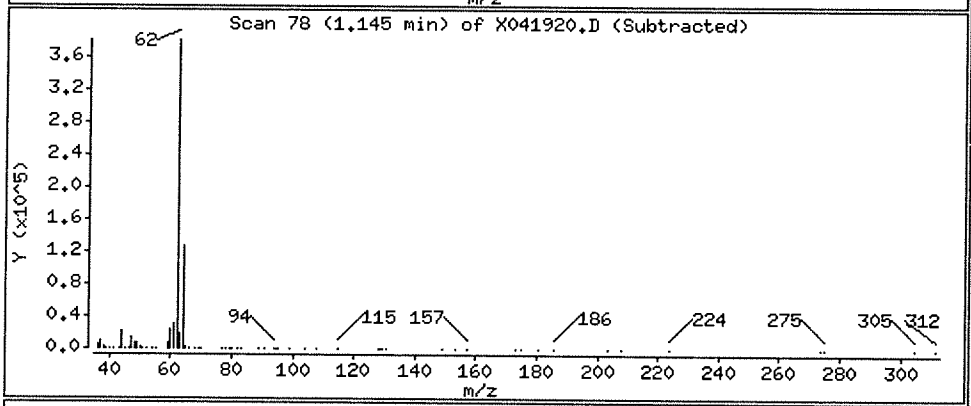
Column diameter: 0.18

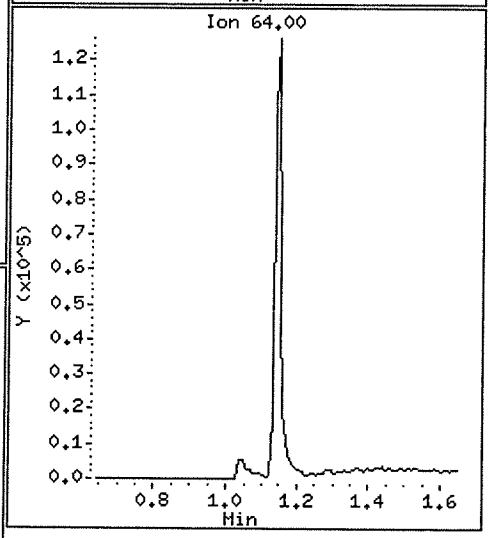
5 Vinyl Chloride

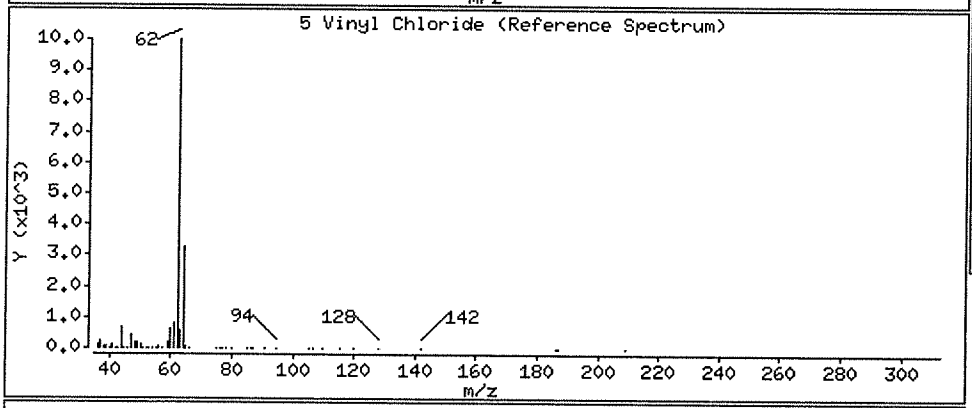
Concentration: 334.58 ug/l

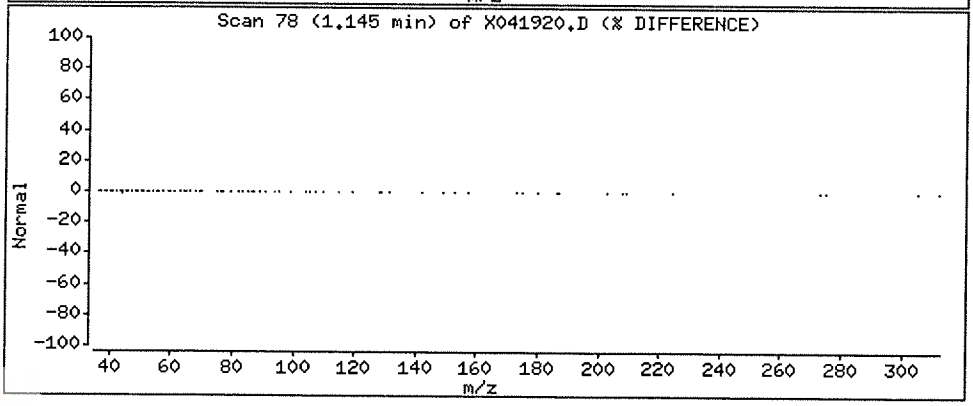












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210419.b\X041921.D Page 1
Report Date: 05-May-2021 10:26

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X210419.b\X041921.D
Lab Smp Id: HS21040859-04 Client Smp ID: HS21040859-04
Inj Date : 19-APR-2021 18:05
Operator : PC Inst ID: voa6.i
Smp Info : HS21040859-04;HS21040859-04;;;
Misc Info : HS18090001;WATER;0;10;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X210419.b\8260W.m
Meth Date : 05-May-2021 10:25 Qin.Xu Quant Type: ISTD
Cal Date : 02-APR-2021 13:20 Cal File: X040208.D
Als bottle: 20
Dil Factor: 10.00000
Integrator: HP RTE Compound Sublist: CBI_short1.sub
Target Version: 4.14
Processing Host: NAHSTW7066

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	10.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

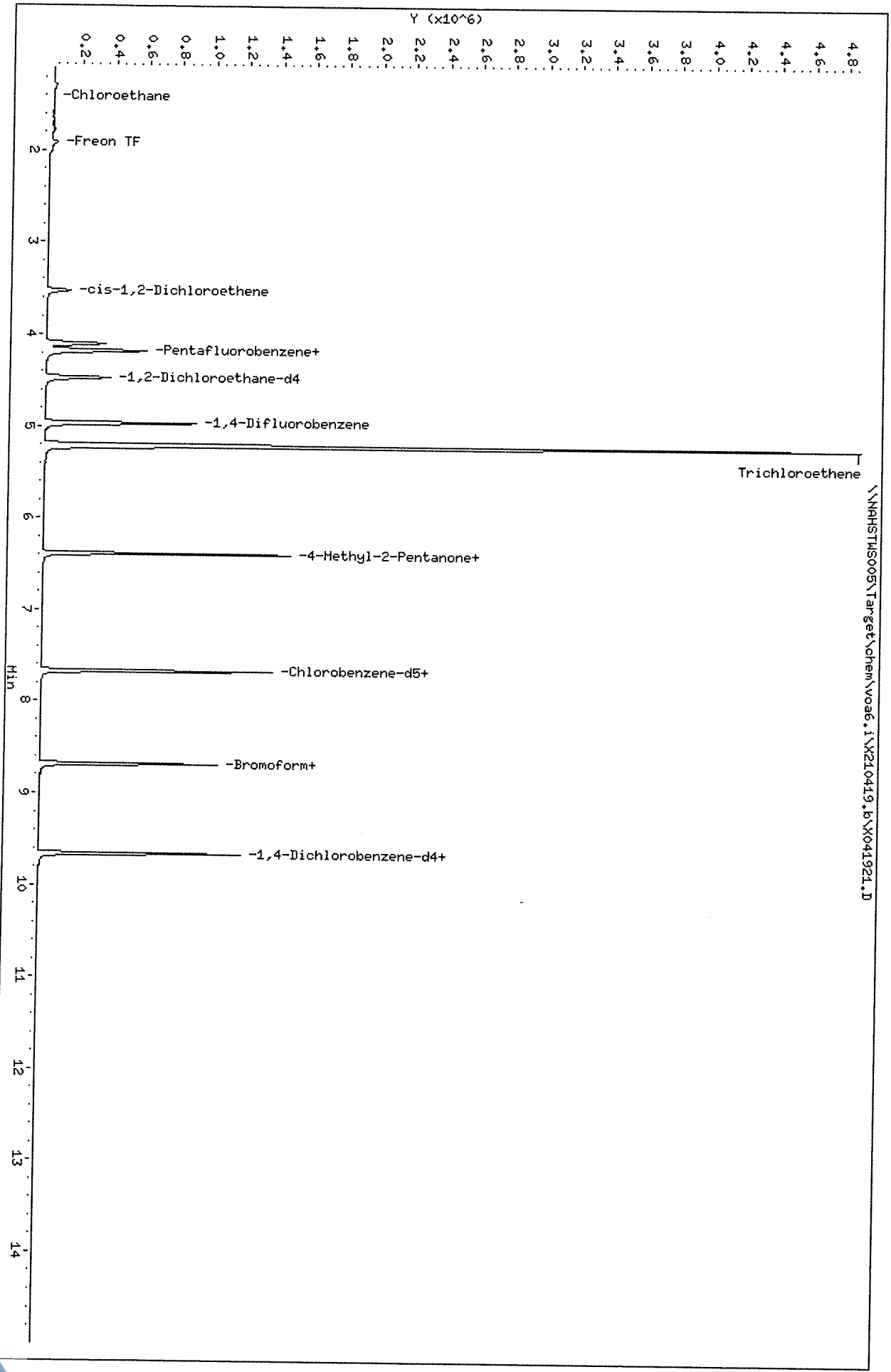
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	442591	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.963	(1.000)	712026	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	620018	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	257201	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	243431	46.7459	46.74
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	307594	49.2749	49.27
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	847975	53.0893	53.08
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	288314	48.5380	48.53
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	68007	12.5699	125.69
38 Trichloroethene	130	5.207	5.207	(1.048)	1419028	291.126	2911.26(A)

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.

Data File: \\NAHSTWS005\Target\chem\voa6.i\X210419.b\X041921.D
Date : 19-APR-2021 18:05
Client ID: HS21040859-04
Sample Info: HS21040859-04;HS21040859-04;;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18



Data File: \\NAHSTWS005\Target\chem\voa6.i\X210419.b\X041921.D

Date : 19-APR-2021 18:05

Client ID: HS21040859-04

Instrument: voa6.i

Sample Info: HS21040859-04;HS21040859-04;;;

Purge Volume: 5.0

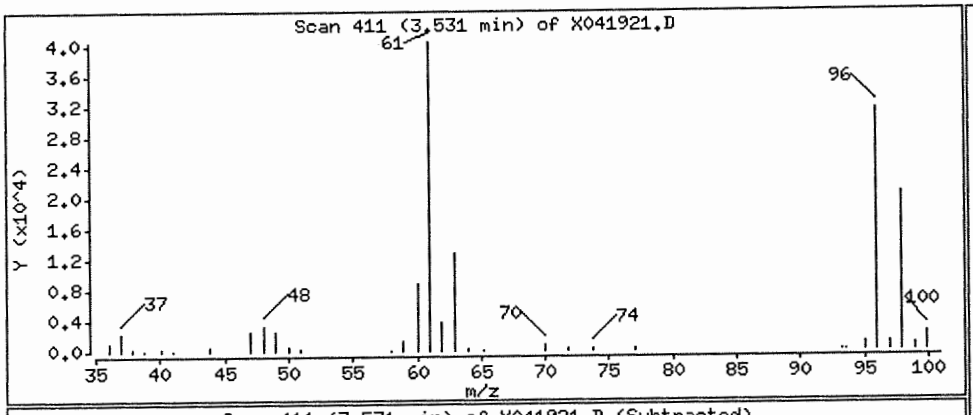
Operator: PC

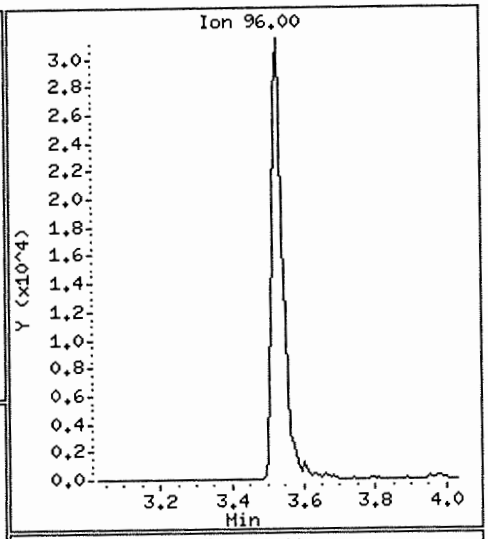
Column phase: DB624

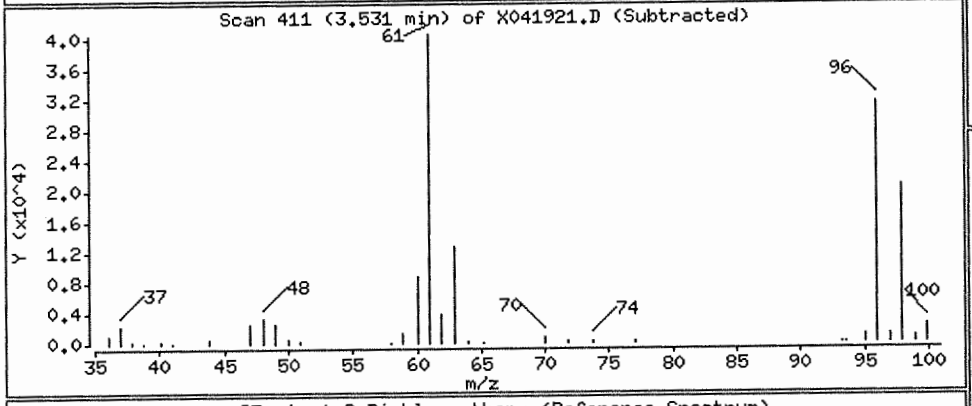
Column diameter: 0.18

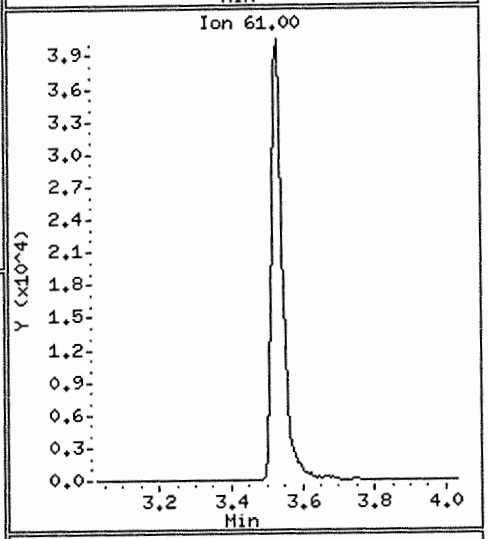
27 cis-1,2-Dichloroethene

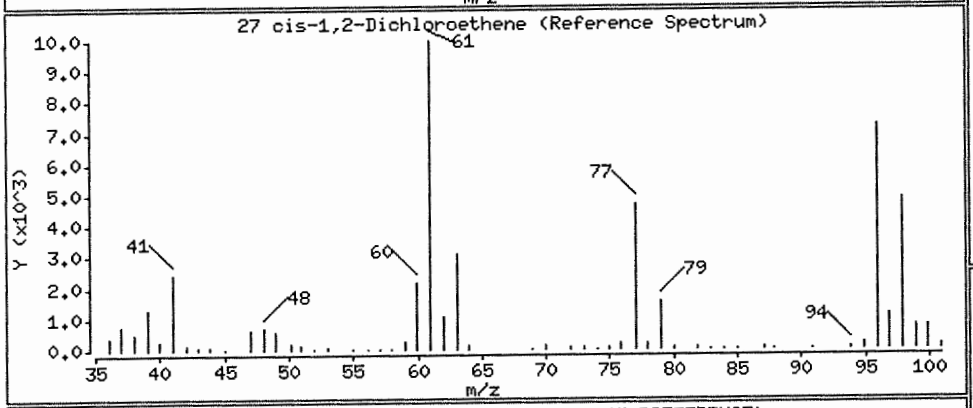
Concentration: 125.69 ug/l

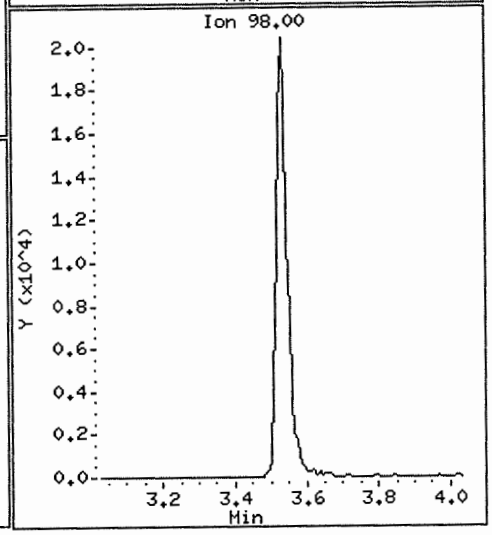


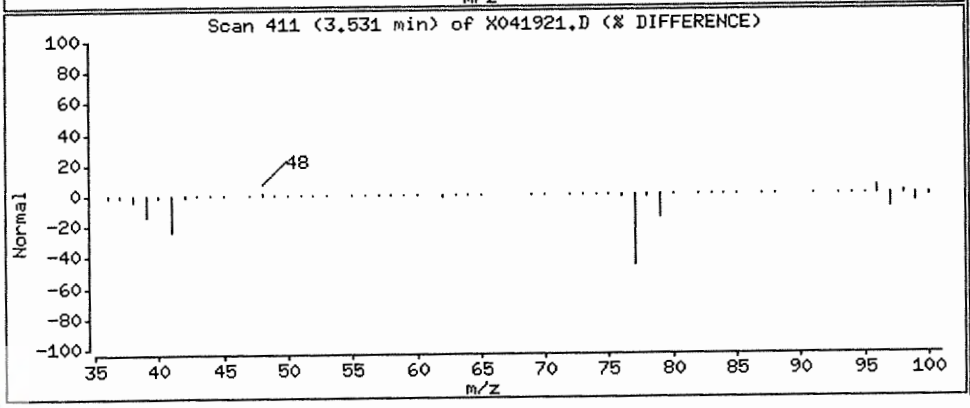












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210419.b\X041921.D

Date : 19-APR-2021 18:05

Client ID: HS21040859-04

Instrument: voa6.i

Sample Info: HS21040859-04;HS21040859-04;;;

Purge Volume: 5.0

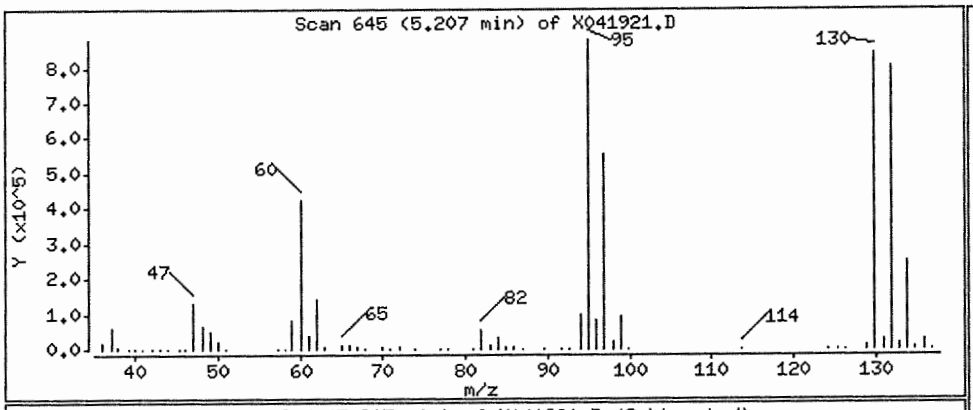
Operator: PC

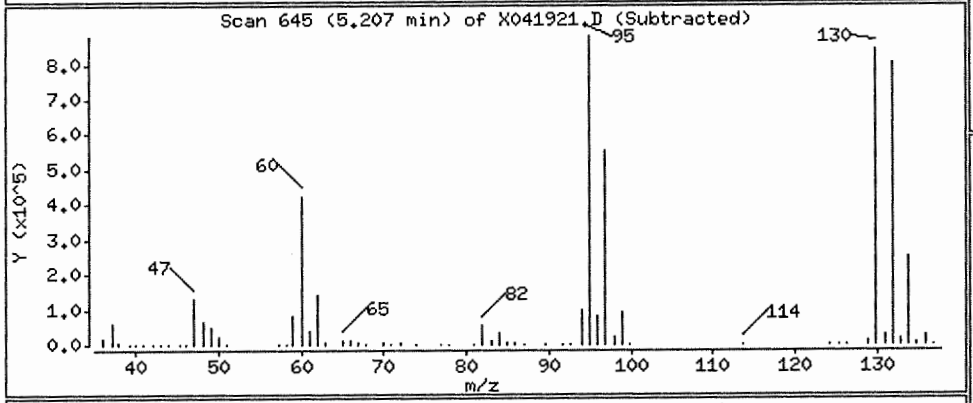
Column phase: DB624

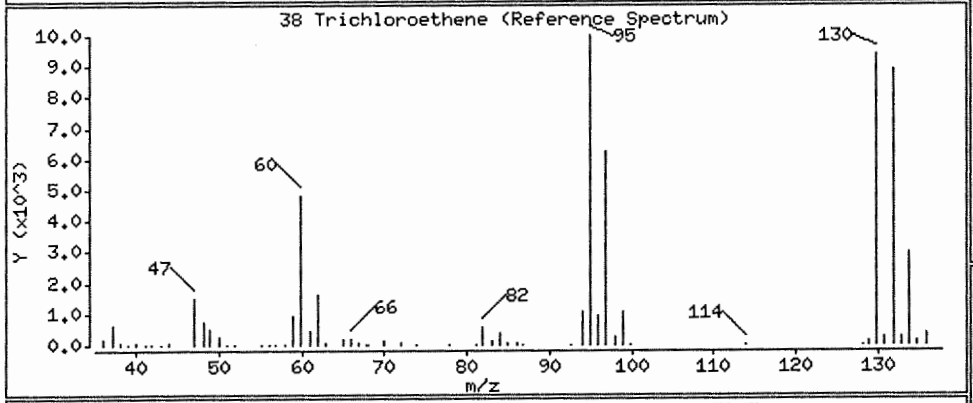
Column diameter: 0.18

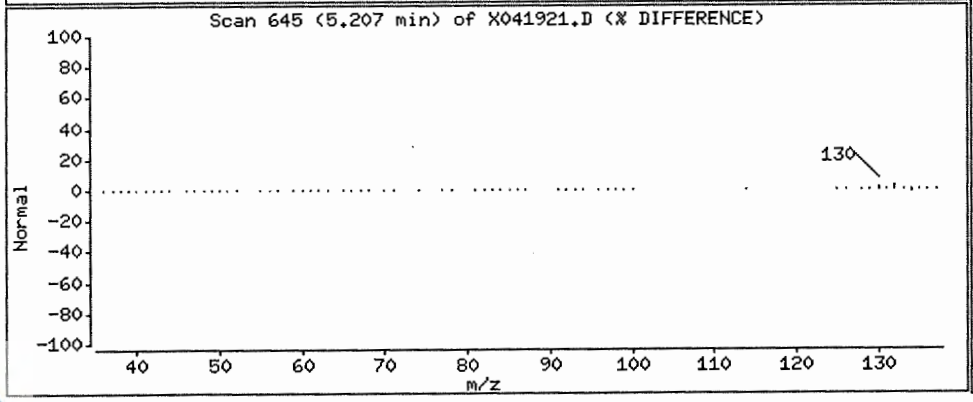
38 Trichloroethene

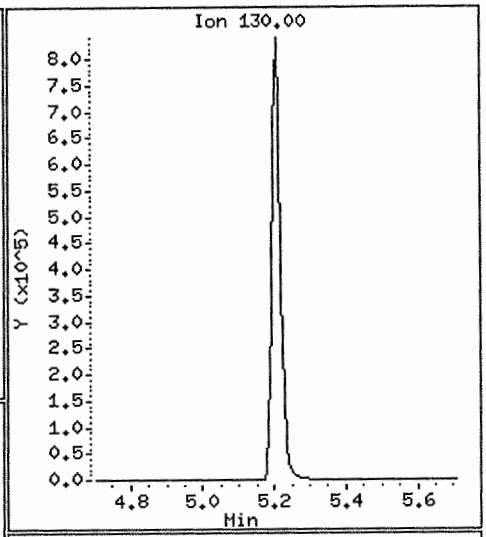
Concentration: 2911.26 ug/l

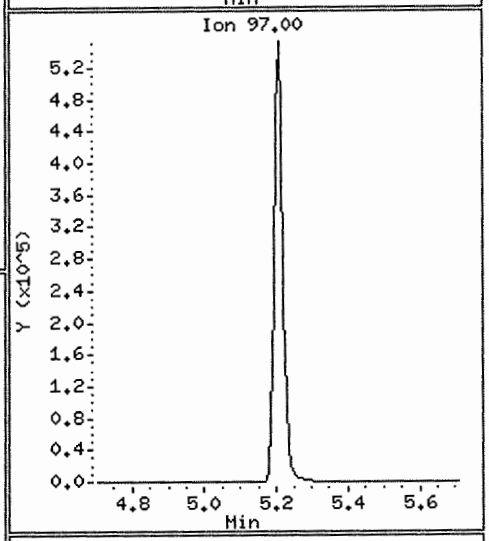


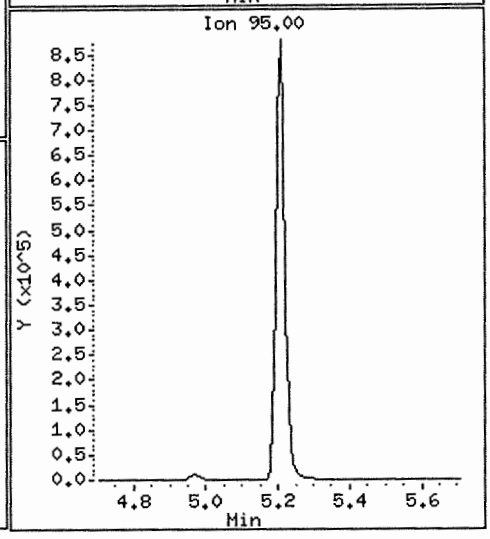












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210419.b\X041922.D Page 1
Report Date: 05-May-2021 10:26

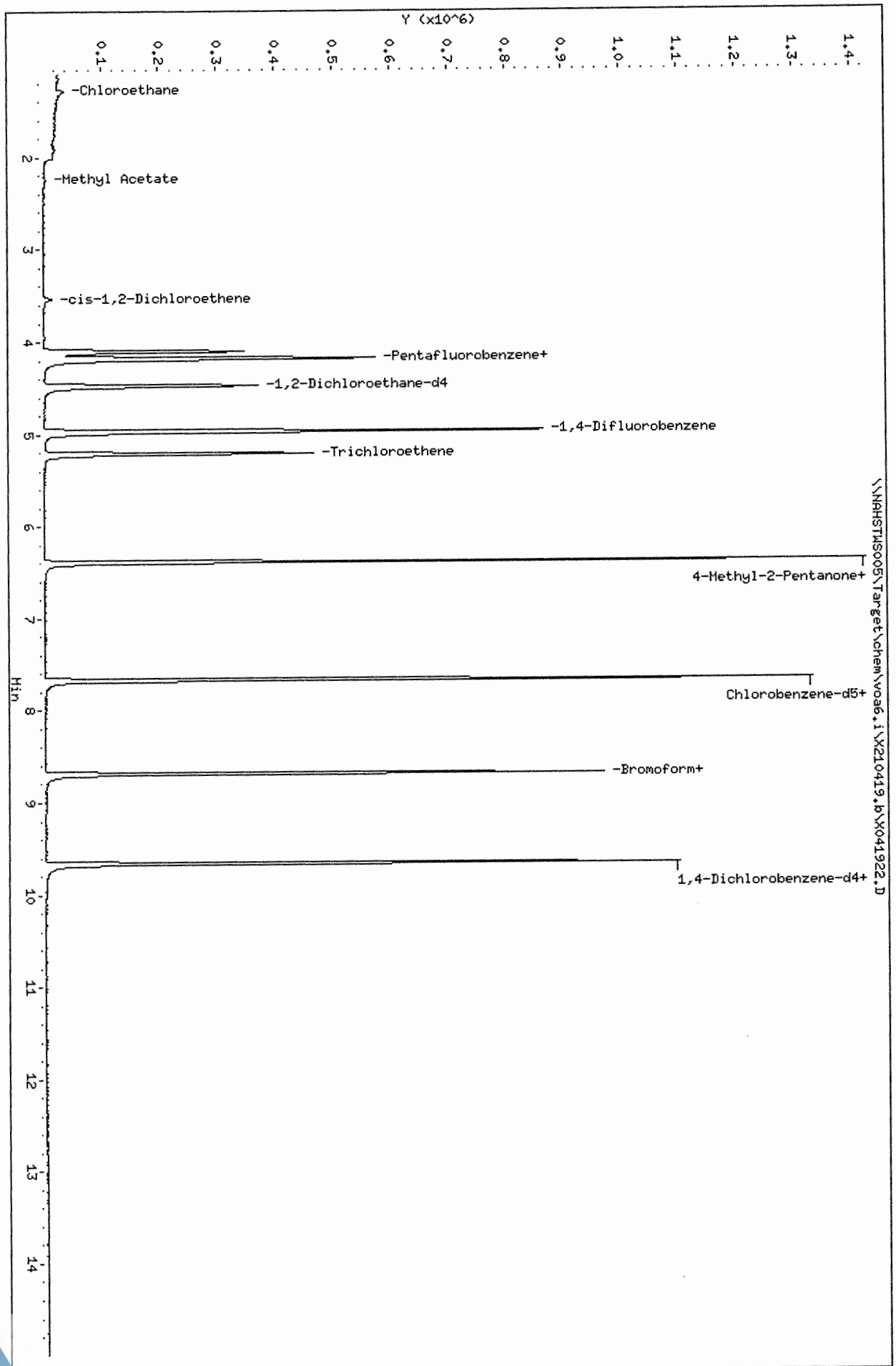
ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X210419.b\X041922.D
Lab Smp Id: HS21040859-04 Client Smp ID: HS21040859-04
Inj Date : 19-APR-2021 18:26
Operator : PC Inst ID: voa6.i
Smp Info : HS21040859-04;HS21040859-04;;;
Misc Info : HS18090001;WATER;0;100;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X210419.b\8260W.m
Meth Date : 05-May-2021 10:25 Qin.Xu Quant Type: ISTD
Cal Date : 02-APR-2021 13:20 Cal File: X040208.D
Als bottle: 21
Dil Factor: 100.00000
Integrator: HP RTE Compound Sublist: CBI_short1.sub
Target Version: 4.14
Processing Host: NAHSTW7066

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	100.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	421606	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.963	(1.000)	690587	50.0000	
* 47 Chlorobenzene-d5	117	7.670	7.671	(1.000)	589026	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	242068	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	236545	47.6758	47.67
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	300122	50.4592	50.45
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	818964	53.9399	53.93
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	269458	47.7772	47.77
27 cis-1,2-Dichloroethene	96	3.537	3.530	(0.846)	7319	1.42012	142.01
38 Trichloroethene	130	5.206	5.207	(1.048)	139510	29.5103	2951.02



Data File: \\NAHSTWS005\Target\chem\voa6.i\X210419.b\X041922.D
Date : 19-APR-2021 18:26
Client ID: HS21040859-04
Sample Info: HS21040859-04;HS21040859-04;;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\NAHSTWS005\Target\chem\voa6.i\X210419.b\X041922.D

Date : 19-APR-2021 18:26

Client ID: HS21040859-04

Instrument: voa6.i

Sample Info: HS21040859-04;HS21040859-04;;;

Purge Volume: 5.0

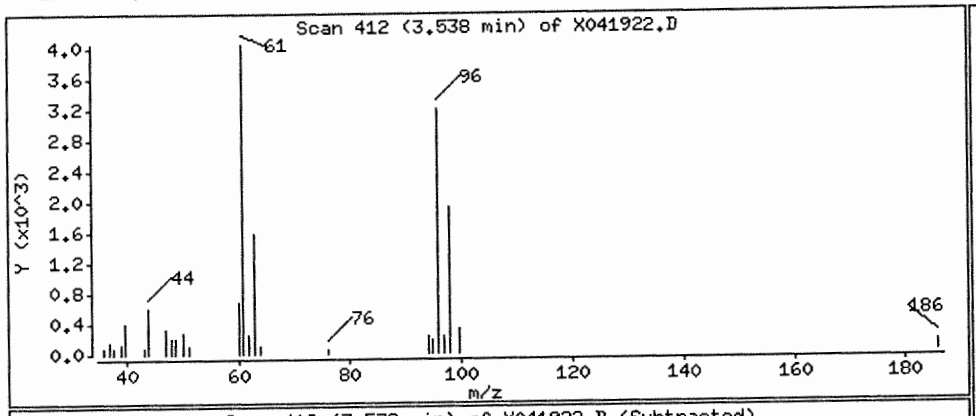
Operator: PC

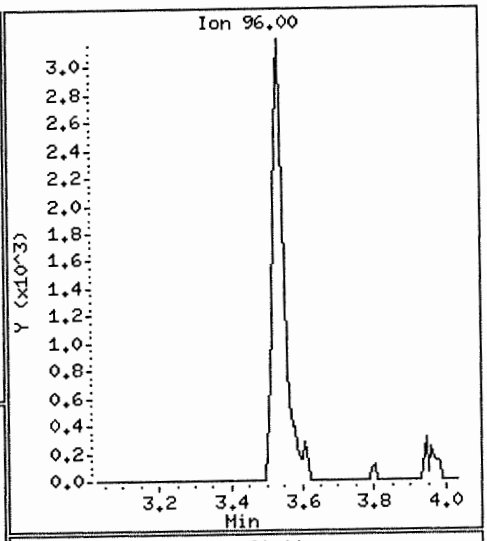
Column phase: DB624

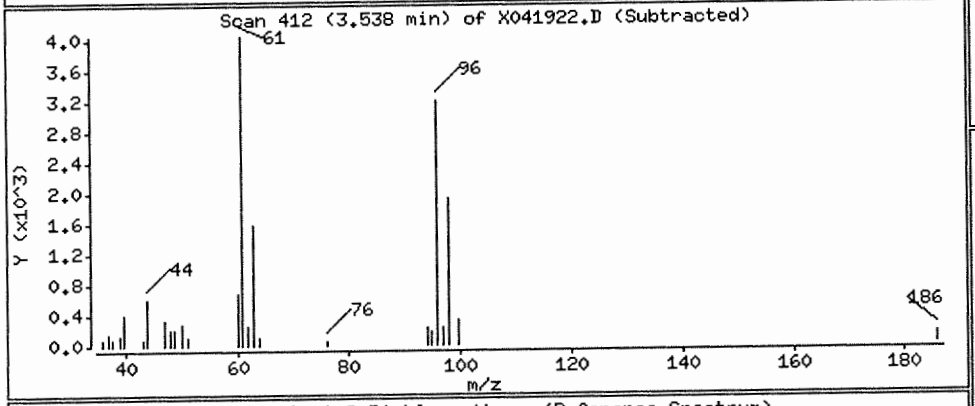
Column diameter: 0.18

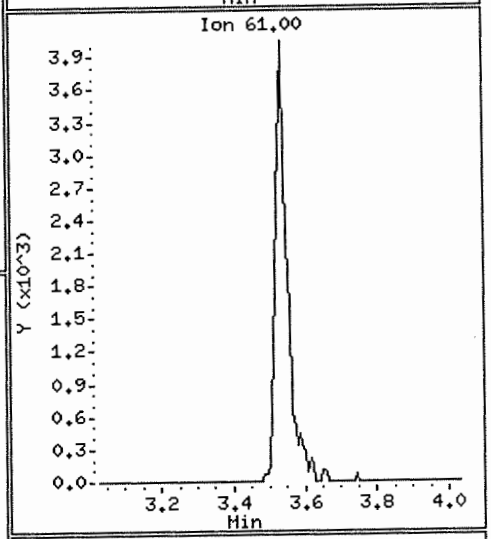
27 cis-1,2-Dichloroethene

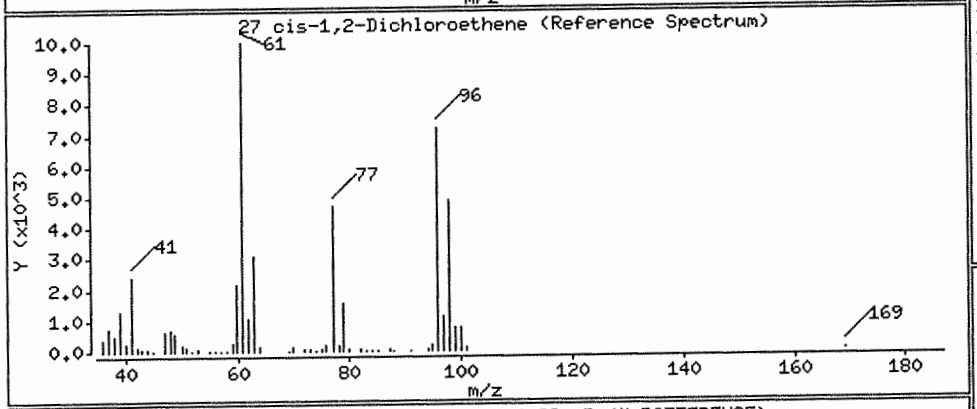
Concentration: 142.01 ug/l

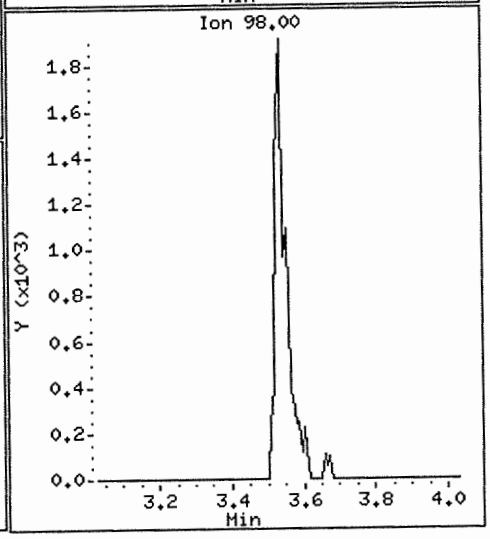


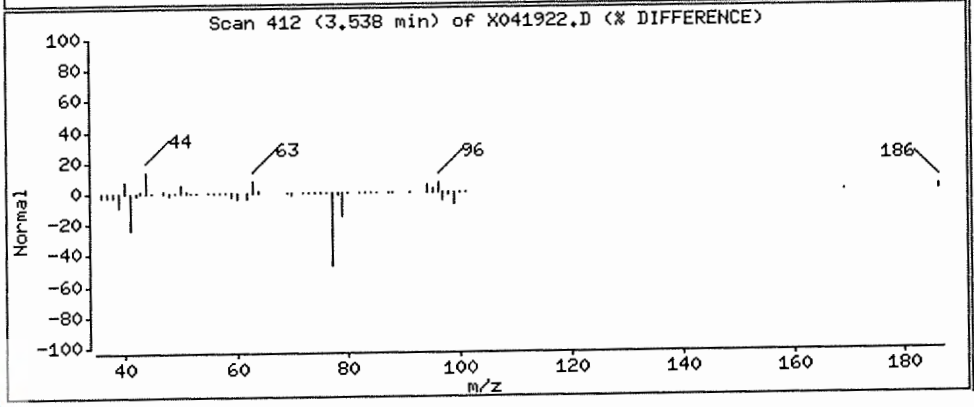












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210419.b\X041922.D

Date : 19-APR-2021 18:26

Client ID: HS21040859-04

Instrument: voa6.i

Sample Info: HS21040859-04;HS21040859-04;;;

Purge Volume: 5.0

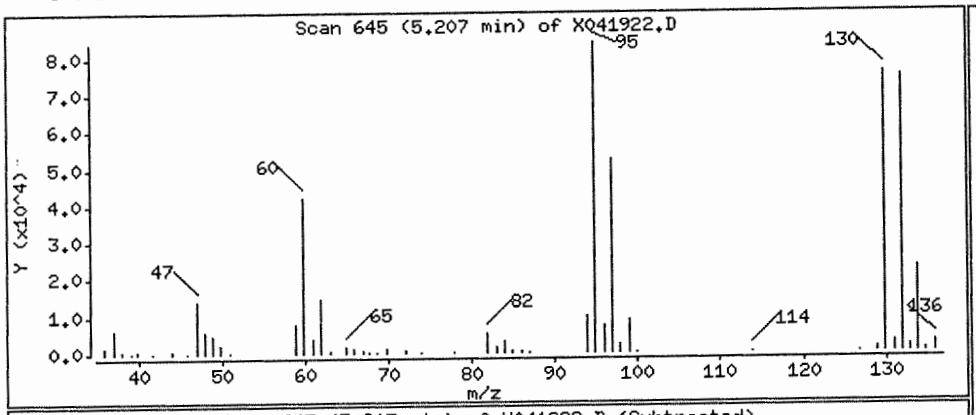
Operator: PC

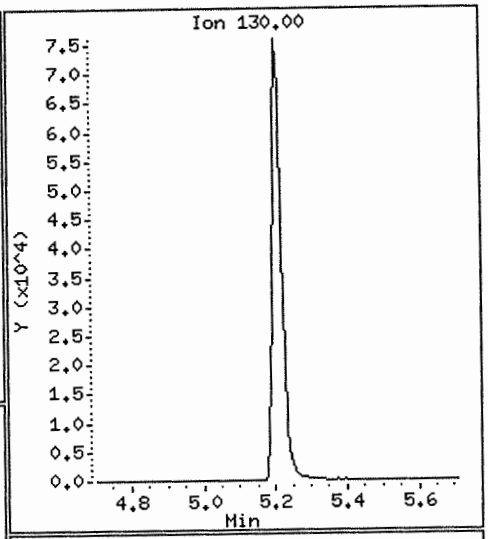
Column phase: DB624

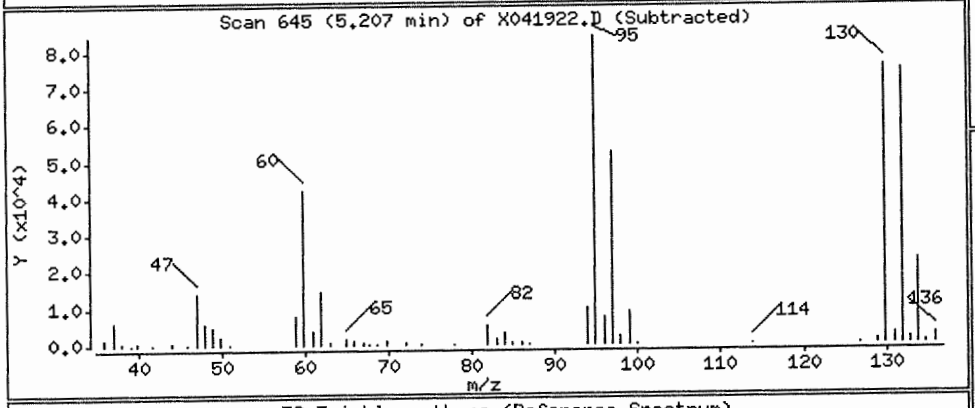
Column diameter: 0.18

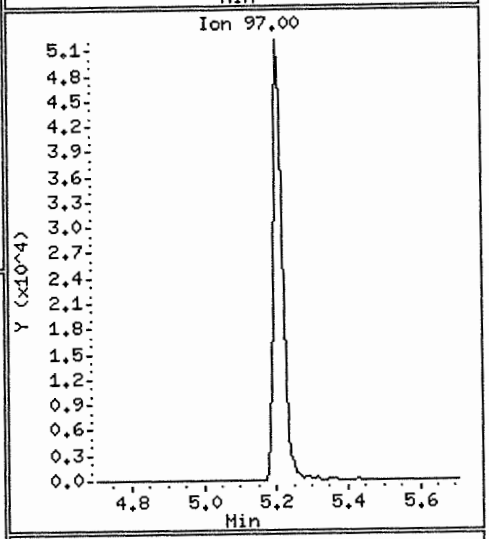
38 Trichloroethene

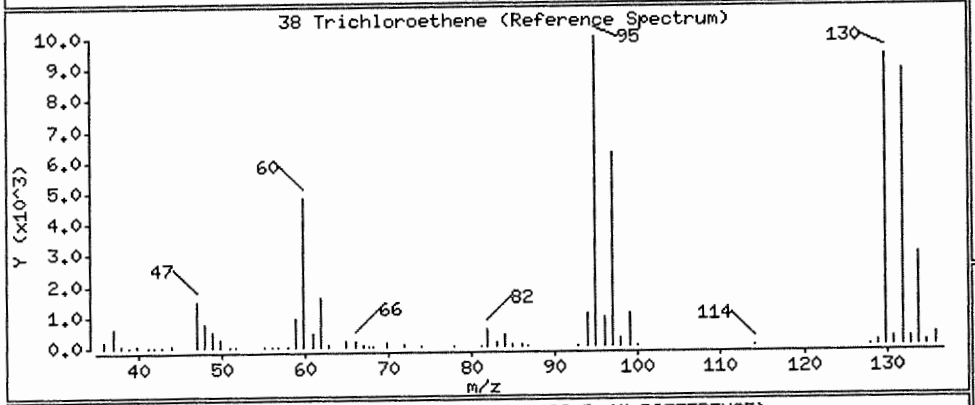
Concentration: 2951.02 ug/l

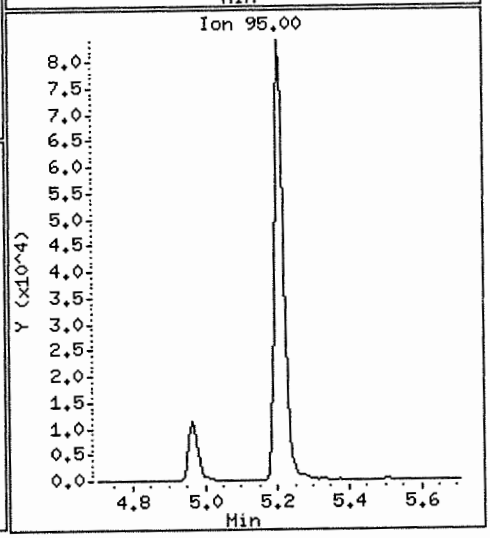


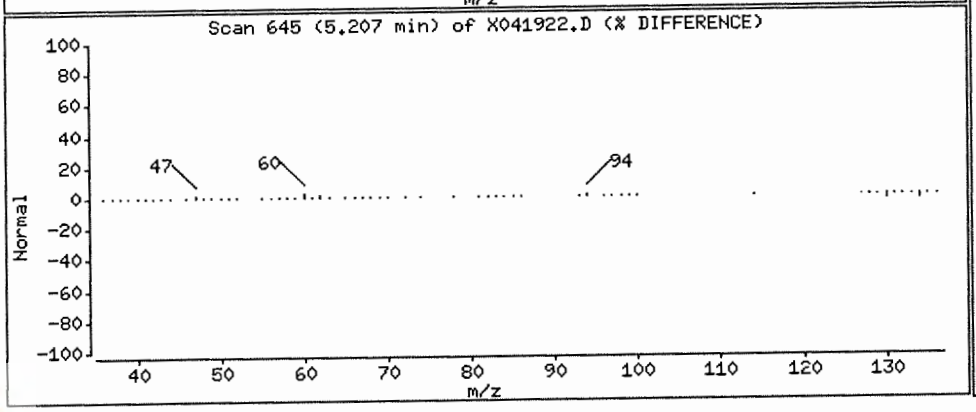












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210419.b\X041923.D Page 1
Report Date: 05-May-2021 10:26

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X210419.b\X041923.D
Lab Smp Id: HS21040859-01 Client Smp ID: HS21040859-01
Inj Date : 19-APR-2021 18:47
Operator : PC Inst ID: voa6.i
Smp Info : HS21040859-01;HS21040859-01;;;
Misc Info : HS18090001;WATER;0;25;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X210419.b\8260W.m
Meth Date : 05-May-2021 10:25 Qin.Xu Quant Type: ISTD
Cal Date : 02-APR-2021 13:20 Cal File: X040208.D
Als bottle: 22
Dil Factor: 25.00000
Integrator: HP RTE Compound Sublist: CBI_short1.sub
Target Version: 4.14
Processing Host: NAHSTW7066

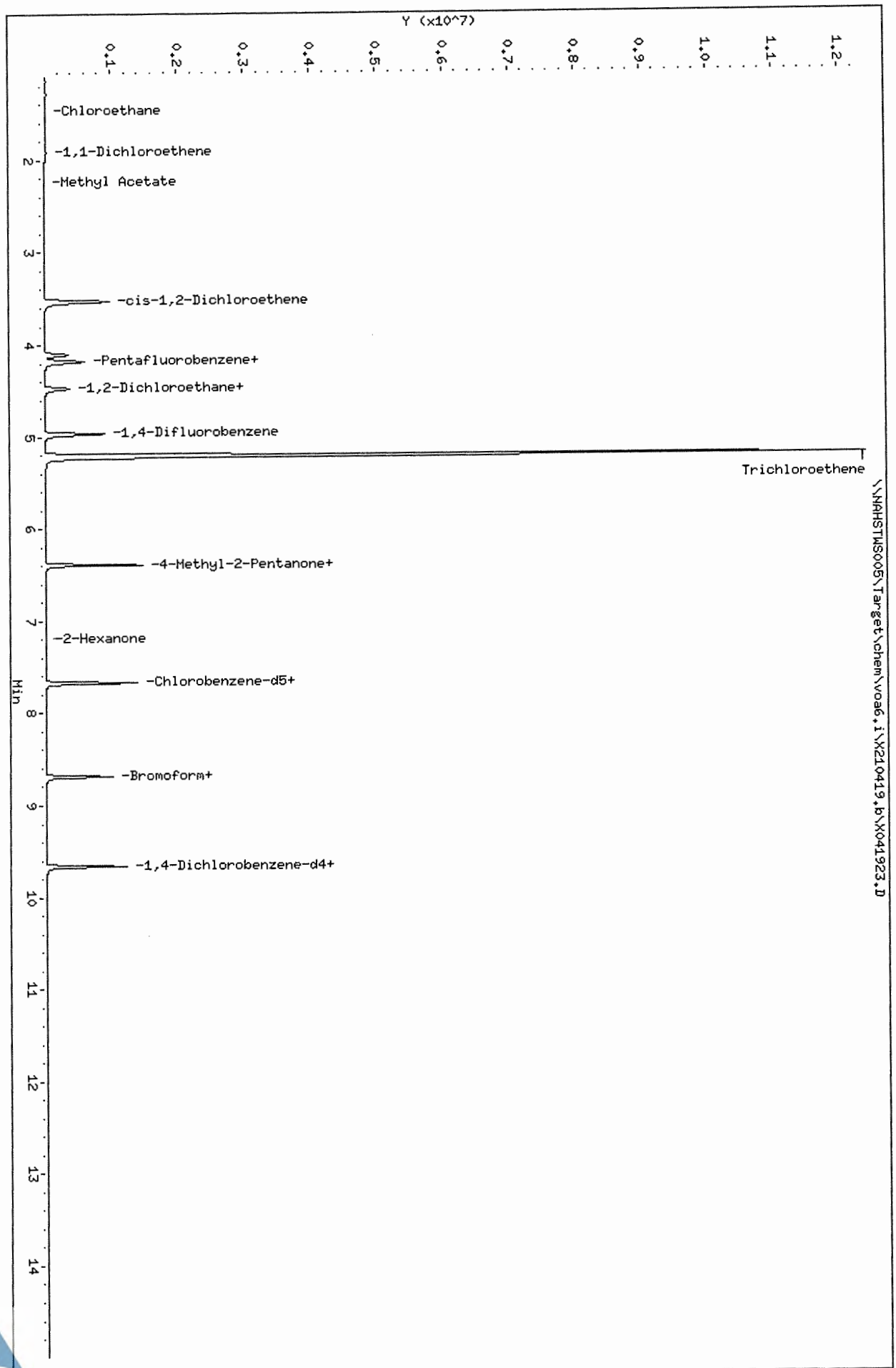
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	25.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	441392	50.0000	
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	701110	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	602088	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	254848	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	238680	45.9654	45.96
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	301290	48.4048	48.40
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	843908	54.3620	54.36
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	265240	46.0701	46.07
11 1,1-Dichloroethene	96	1.919	1.919	(0.459)	6869	1.09295	27.32(a)
33 1,2-Dichloroethane	62	4.562	4.555	(0.919)	4035	0.54372	13.59(a)
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	484117	89.7237	2243.09
38 Trichloroethene	130	5.207	5.207	(1.049)	3394528	707.261	17681.52(A)
5 Vinyl Chloride	62	1.145	1.145	(0.274)	10504	1.58734	39.68

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).
A - Target compound detected but, quantitated amount exceeded maximum amount.



Data File: \\NAHSTWS005\Target\chem\voa6.i\X210419.b\X041923.D
Date : 19-APR-2021 18:47
Client ID: HS21040859-01
Sample Info: HS21040859-01;HS21040859-01;;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\NAHSTWS005\Target\chem\voa6.i\X210419.b\X041923.D

Date : 19-APR-2021 18:47

Client ID: HS21040859-01

Instrument: voa6.i

Sample Info: HS21040859-01;HS21040859-01;;;

Purge Volume: 5.0

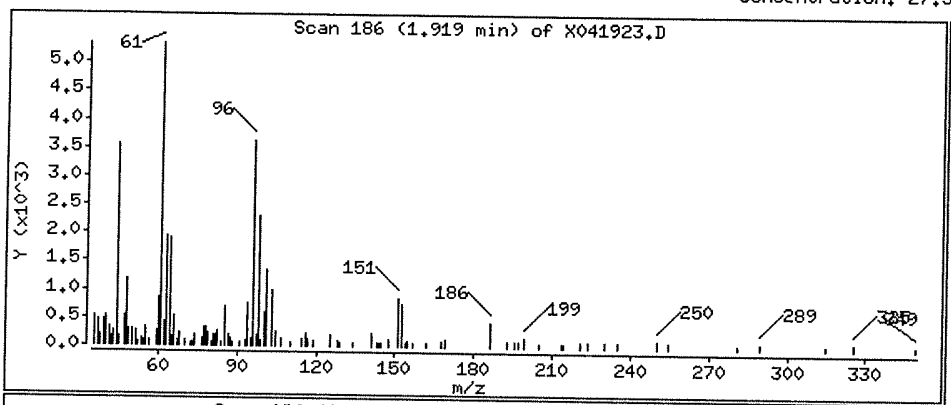
Operator: PC

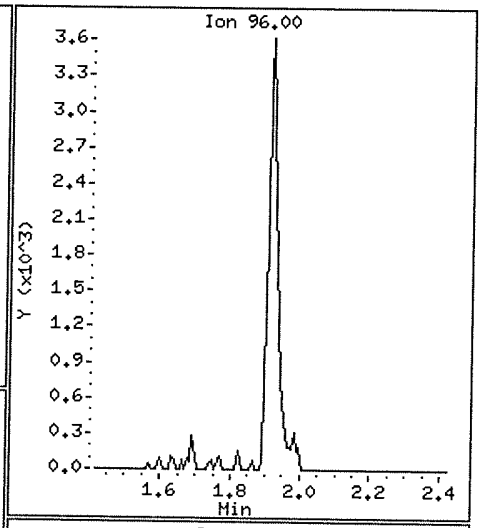
Column phase: DB624

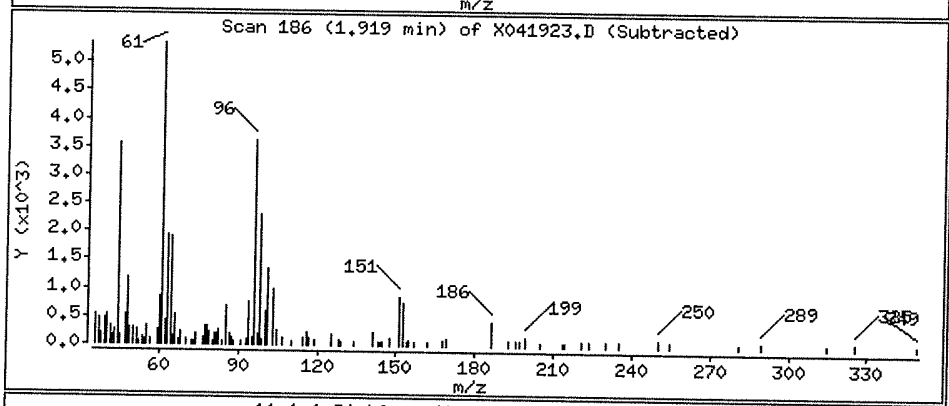
Column diameter: 0.18

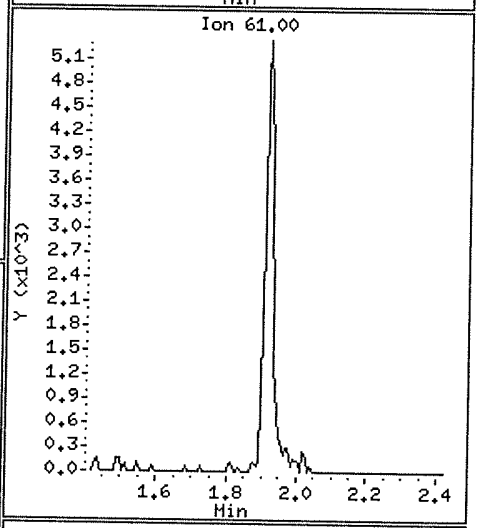
11 1,1-Dichloroethene

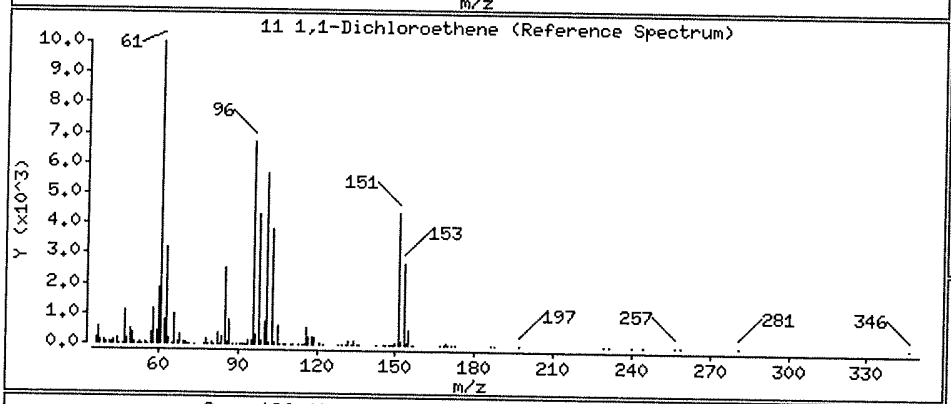
Concentration: 27.32 ug/l

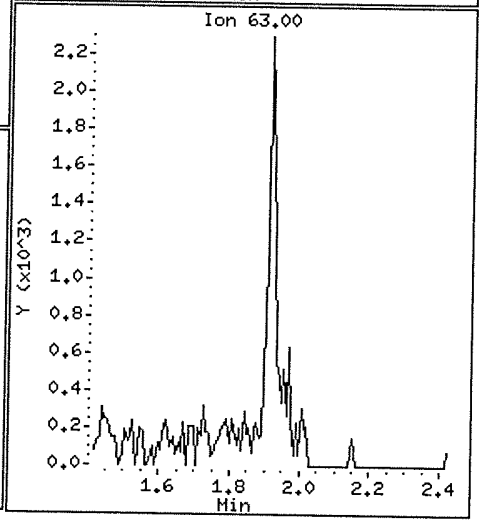


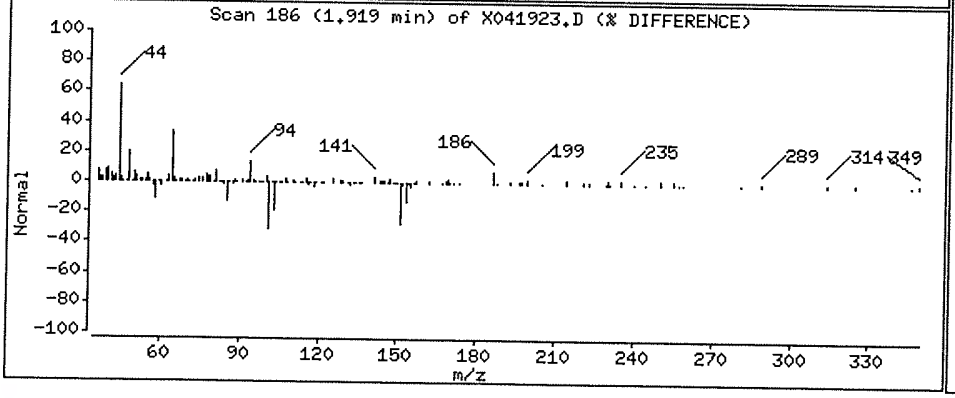












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210419.b\X041923.D

Date : 19-APR-2021 18:47

Client ID: HS21040859-01

Instrument: voa6.i

Sample Info: HS21040859-01;HS21040859-01;;;

Purge Volume: 5.0

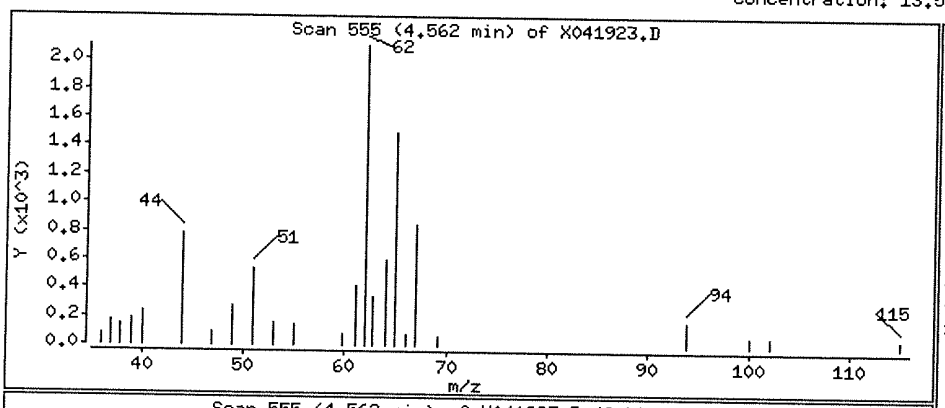
Operator: PC

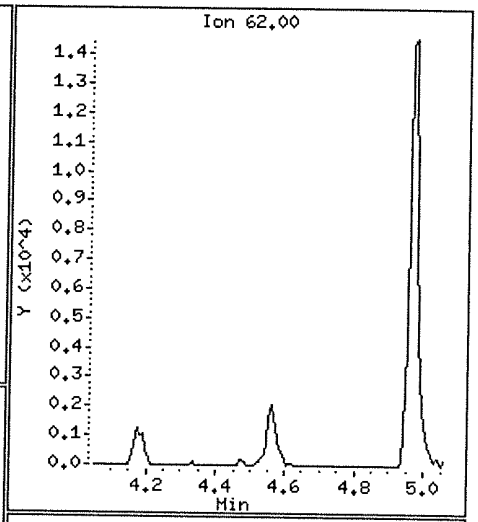
Column phase: DB624

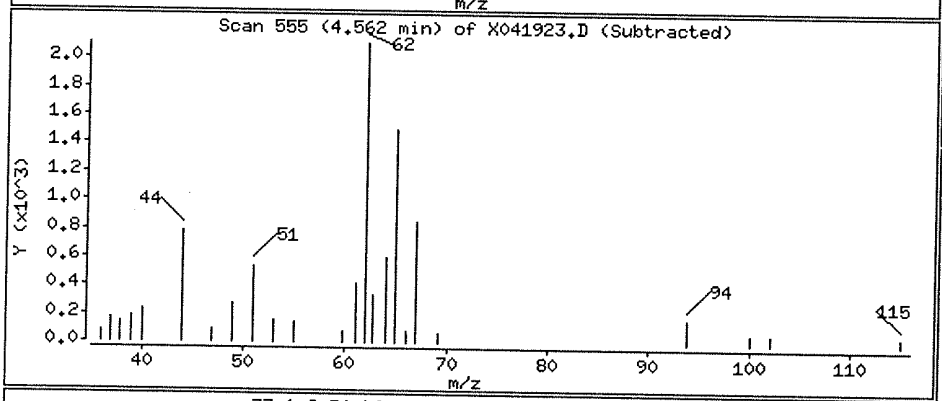
Column diameter: 0.18

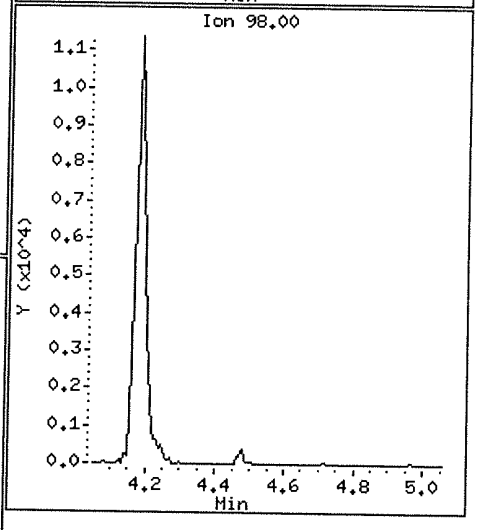
33 1,2-Dichloroethane

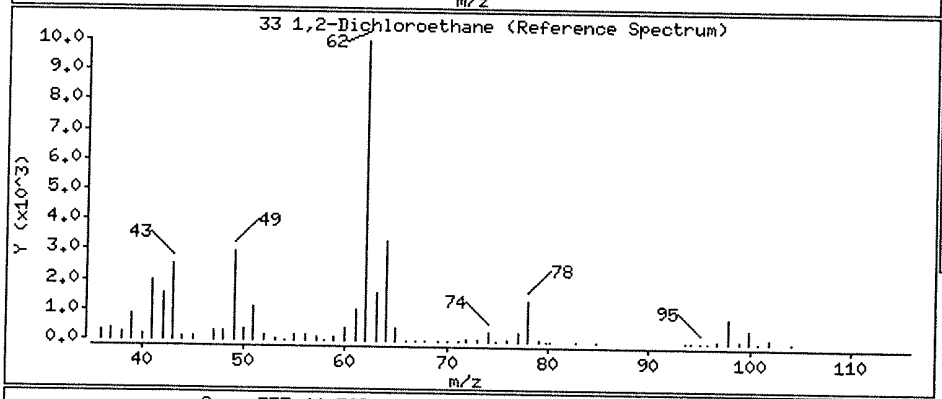
Concentration: 13.59 ug/l

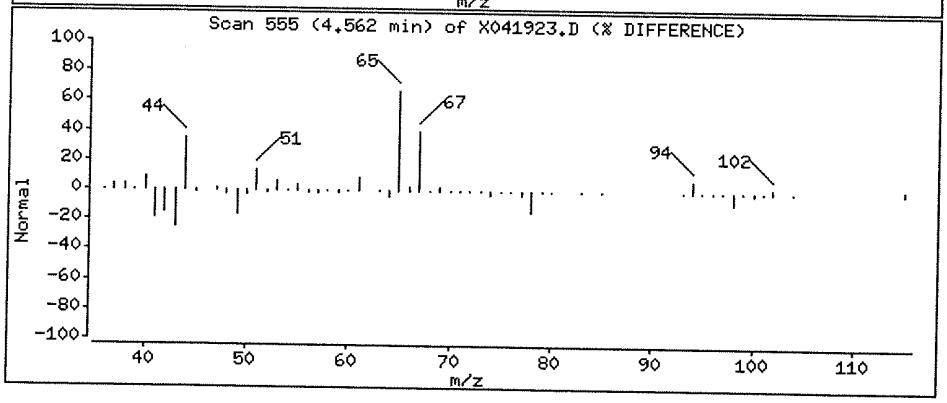












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210419.b\X041923.D

Date : 19-APR-2021 18:47

Client ID: HS21040859-01

Instrument: voa6.i

Sample Info: HS21040859-01;HS21040859-01;;;

Purge Volume: 5.0

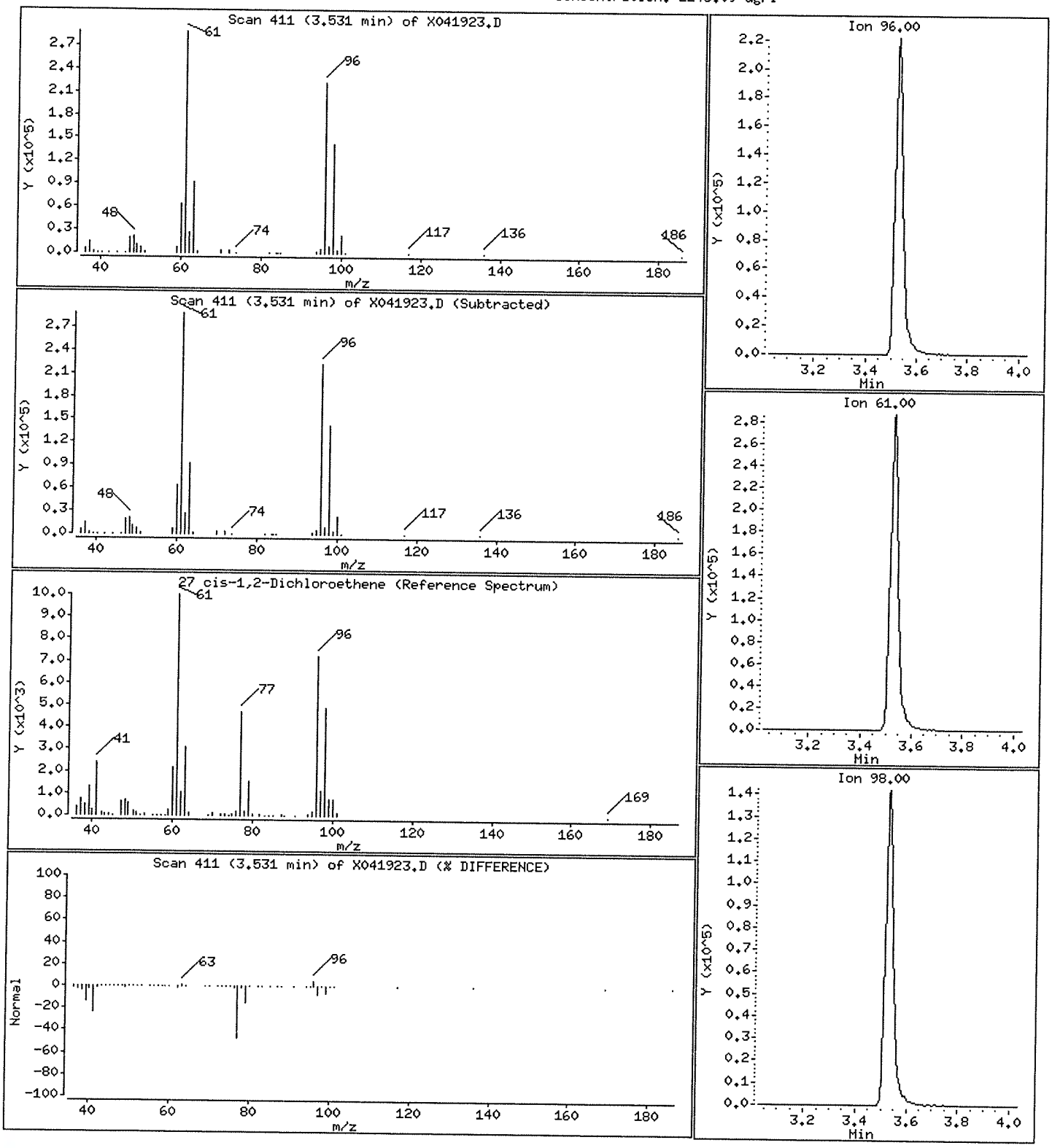
Operator: PC

Column phase: DB624

Column diameter: 0.18

27 cis-1,2-Dichloroethene

Concentration: 2243.09 ug/l



Data File: \\NAHSTWS005\Target\chem\voa6.i\X210419.b\X041923.D

Date : 19-APR-2021 18:47

Client ID: HS21040859-01

Instrument: voa6.i

Sample Info: HS21040859-01;HS21040859-01;;;

Purge Volume: 5.0

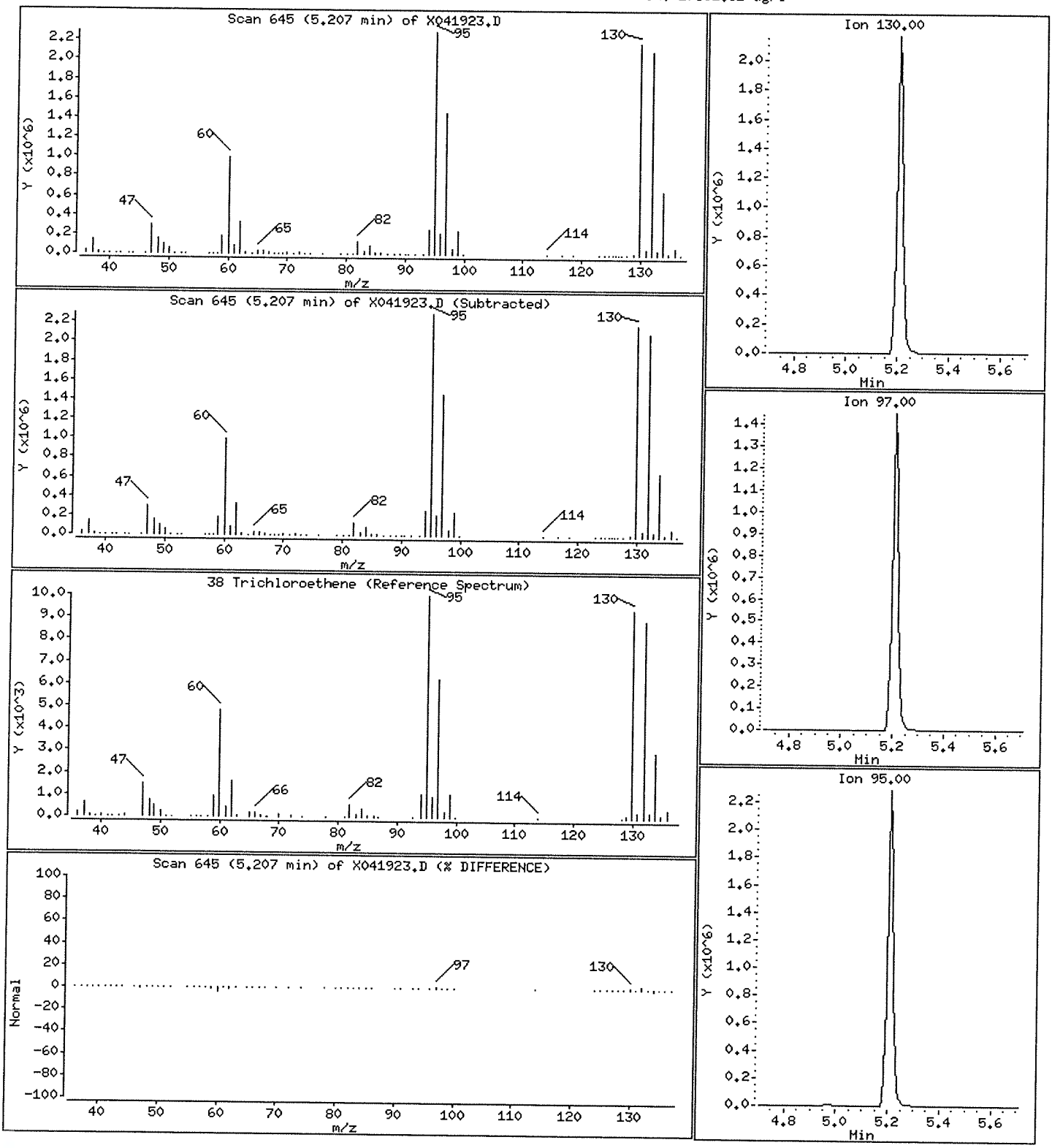
Operator: PC

Column phase: DB624

Column diameter: 0.18

38 Trichloroethene

Concentration: 17681.52 ug/l



Data File: \\NAHSTWS005\Target\chem\voa6.i\X210419.b\X041923.D

Date : 19-APR-2021 18:47

Client ID: HS21040859-01

Instrument: voa6.i

Sample Info: HS21040859-01;HS21040859-01;;;

Purge Volume: 5.0

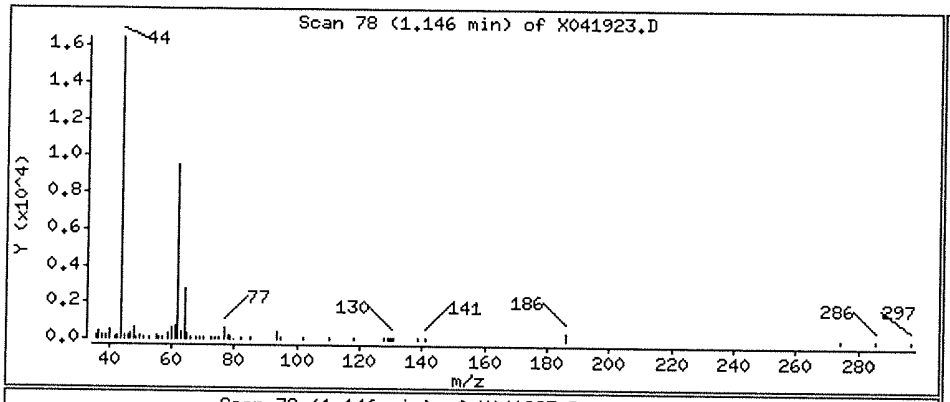
Operator: PC

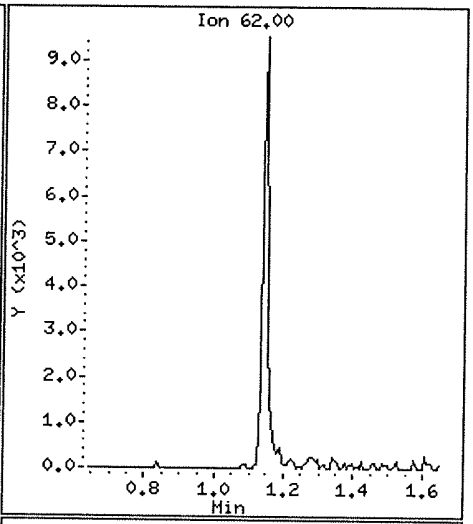
Column phase: DB624

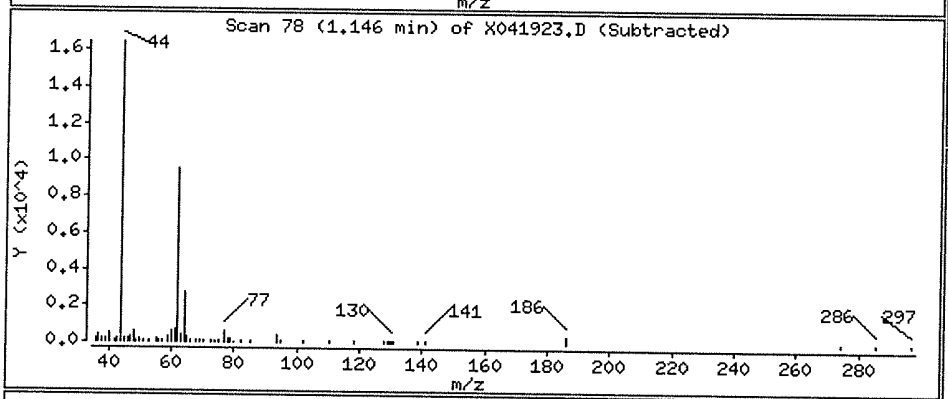
Column diameter: 0.18

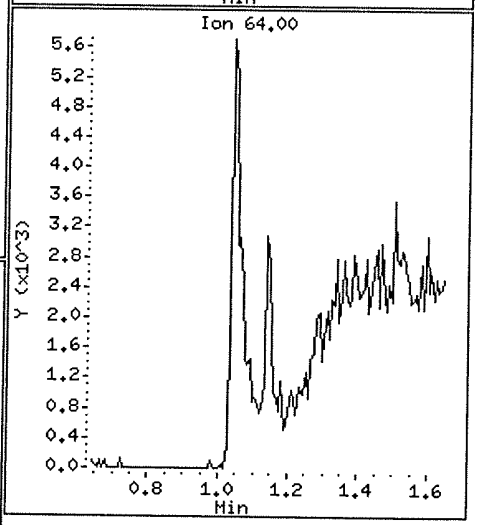
5 Vinyl Chloride

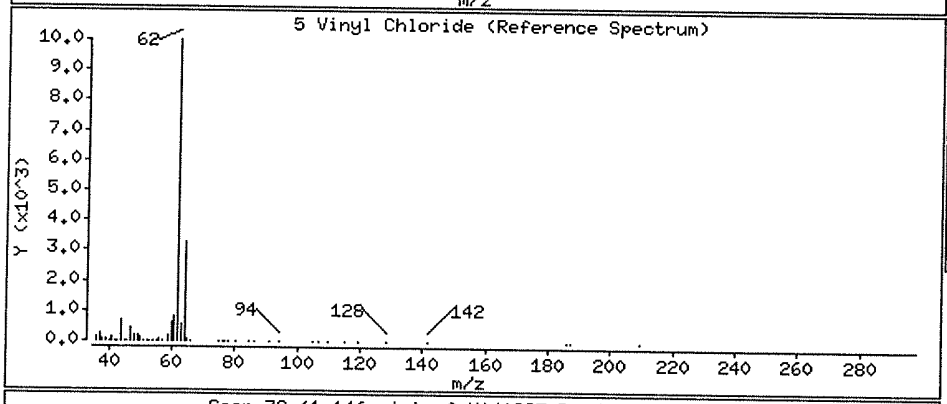
Concentration: 39.68 ug/l

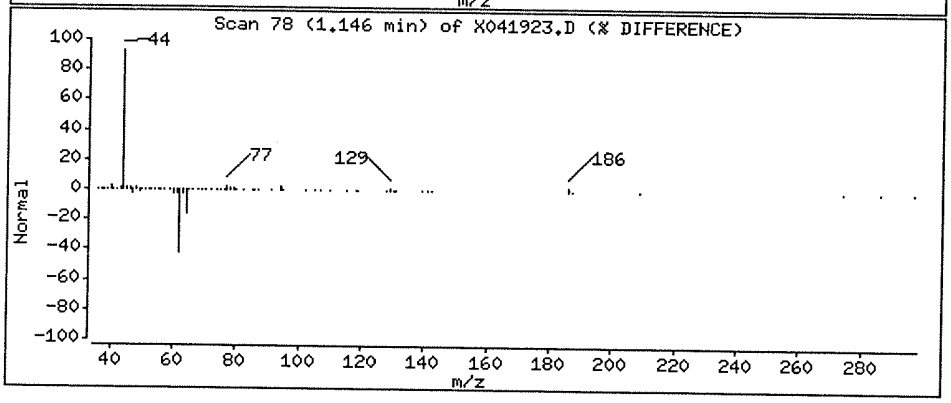












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210419.b\X041924.D Page 1
Report Date: 05-May-2021 10:26

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X210419.b\X041924.D
Lab Smp Id: HS21040859-01 Client Smp ID: HS21040859-01
Inj Date : 19-APR-2021 19:08
Operator : PC Inst ID: voa6.i
Smp Info : HS21040859-01;HS21040859-01;;;
Misc Info : HS18090001;WATER;0;250;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X210419.b\8260W.m
Meth Date : 05-May-2021 10:25 Qin.Xu Quant Type: ISTD
Cal Date : 02-APR-2021 13:20 Cal File: X040208.D
Als bottle: 23
Dil Factor: 250.00000
Integrator: HP RTE Compound Sublist: CBI_short1.sub
Target Version: 4.14
Processing Host: NAHSTW7066

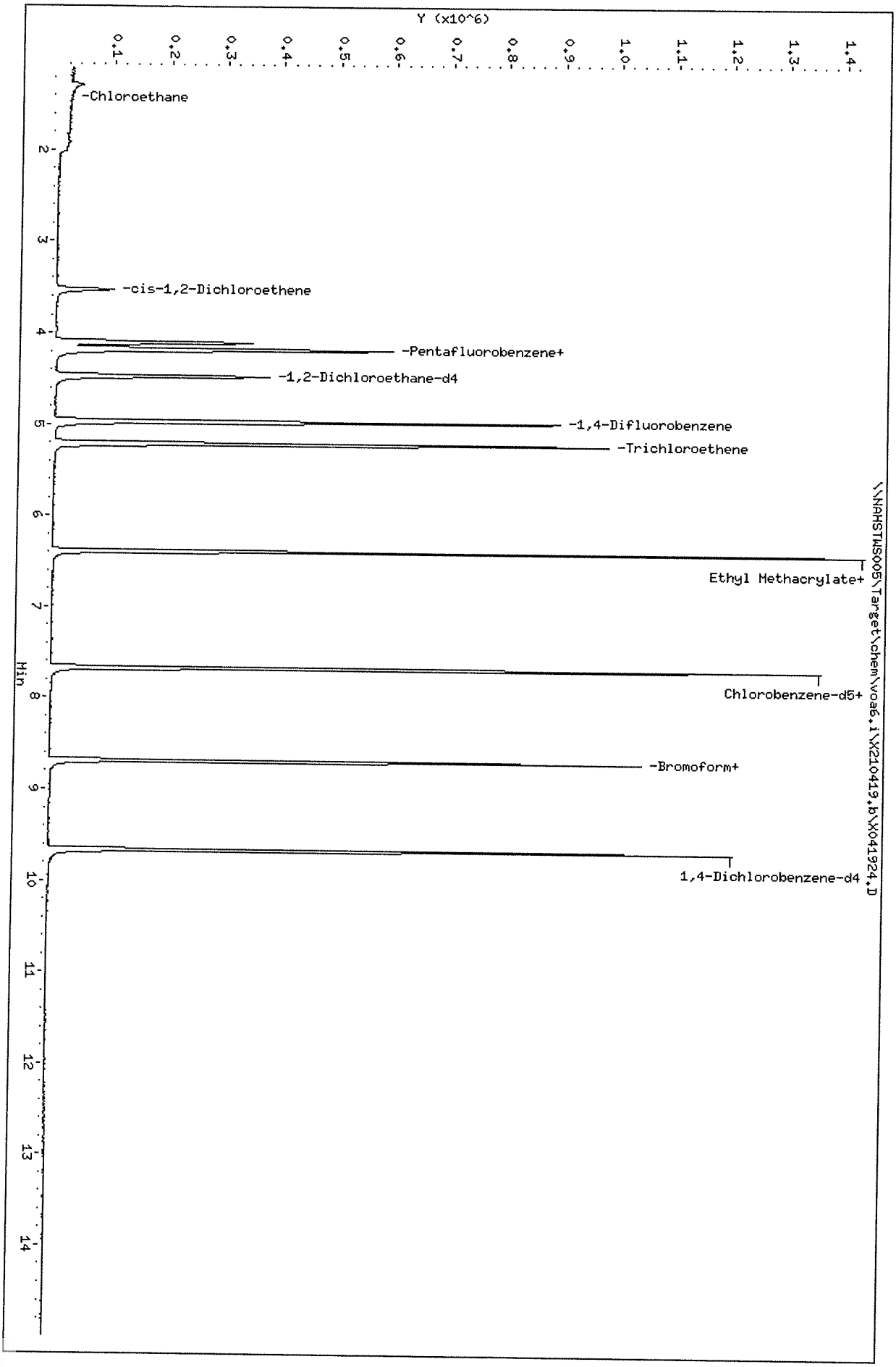
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	250.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
*	1 Pentafluorobenzene	168	4.182	4.182	(1.000)	439584	50.0000	
*	36 1,4-Difluorobenzene	114	4.970	4.963	(1.000)	707638	50.0000	
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	620096	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	268727	50.0000	
$	30 Dibromofluoromethane	113	4.103	4.103	(0.981)	238182	46.0573	46.05
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	300760	48.5172	48.51
$	48 Toluene-d8	98	6.388	6.388	(0.833)	844376	52.8654	52.86
$	69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	281438	47.4140	47.41
	27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	49563	9.22353	2305.88
	38 Trichloroethene	130	5.207	5.207	(1.048)	296501	61.2071	15301.76

Data File: \\NAHSTWS005\Target\chem\voa6.i\X210419.b\X041924.D
Date : 19-APR-2021 19:08
Client ID: HS21040859-01
Sample Info: HS21040859-01;HS21040859-01;;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18



Data File: \\NAHSTWS005\Target\chem\voa6.i\X210419.b\X041924.D

Date : 19-APR-2021 19:08

Client ID: HS21040859-01

Instrument: voa6.i

Sample Info: HS21040859-01;HS21040859-01;;;

Purge Volume: 5.0

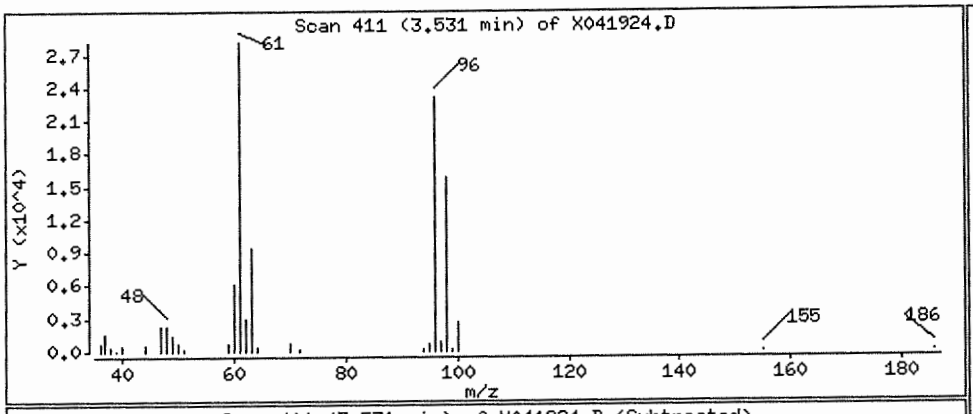
Operator: PC

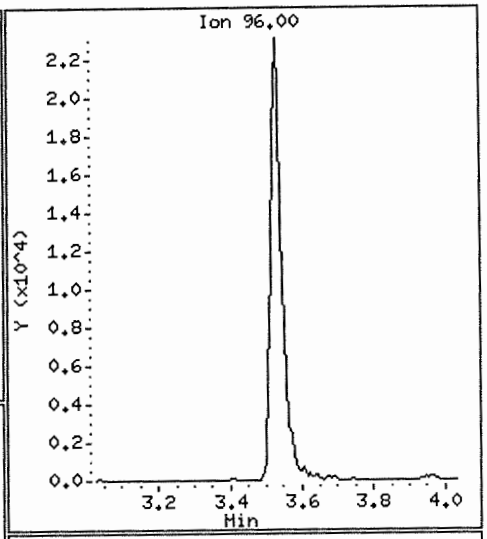
Column phase: DB624

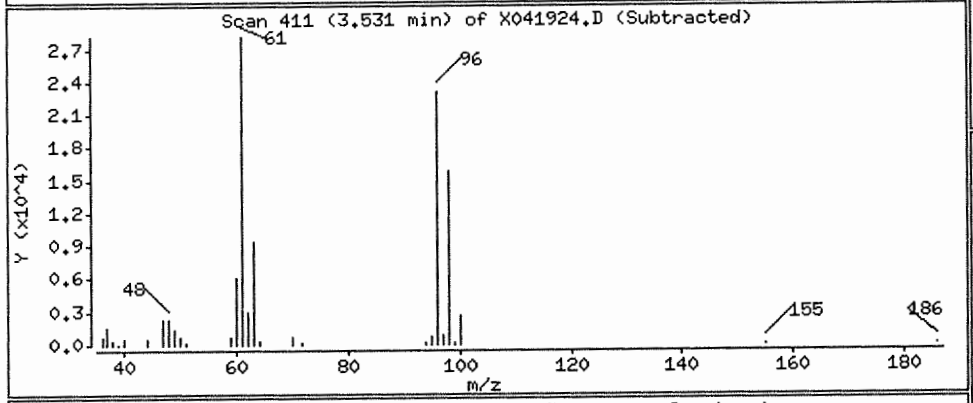
Column diameter: 0.18

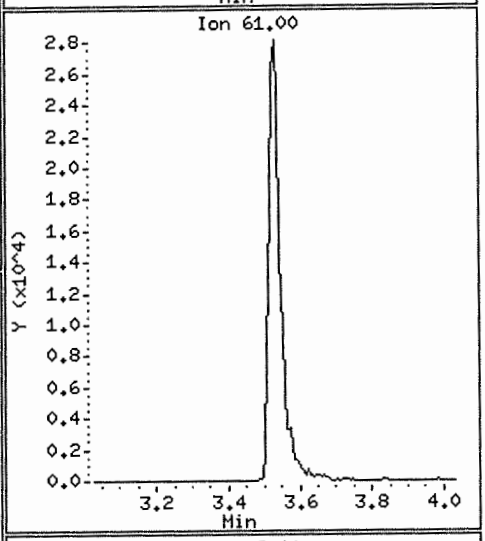
27 cis-1,2-Dichloroethene

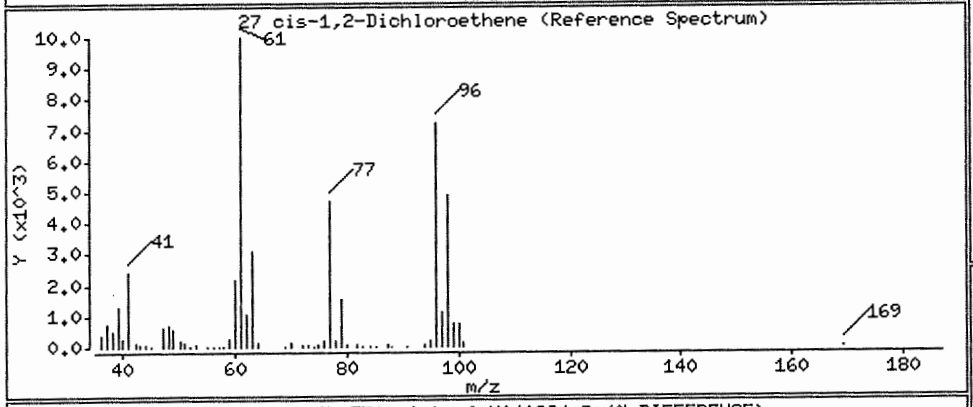
Concentration: 2305.88 ug/l

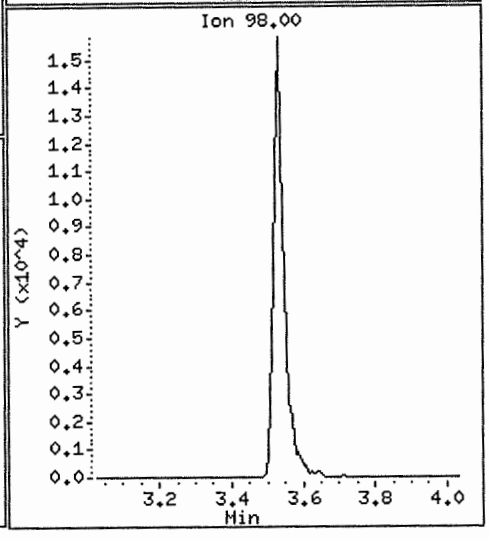


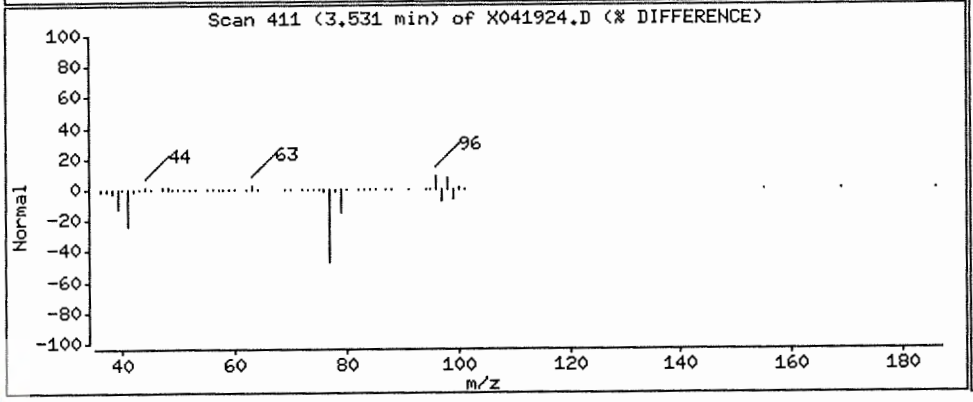












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210419.b\X041924.D

Date : 19-APR-2021 19:08

Client ID: HS21040859-01

Instrument: voa6.i

Sample Info: HS21040859-01;HS21040859-01;;;

Purge Volume: 5.0

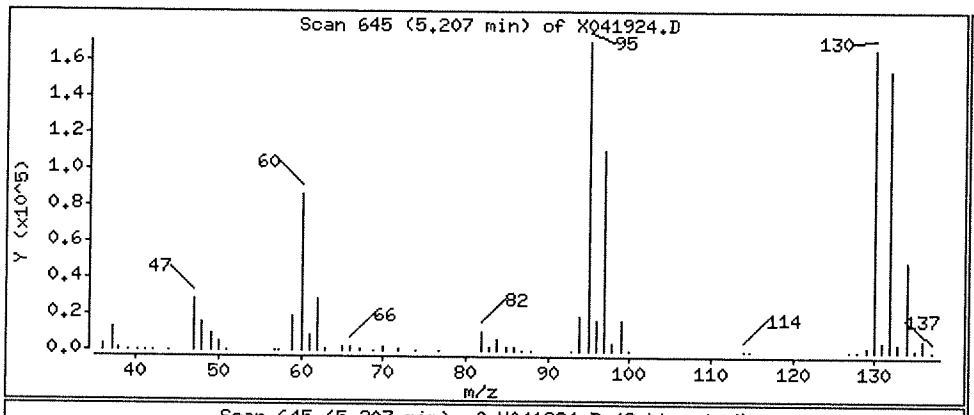
Operator: PC

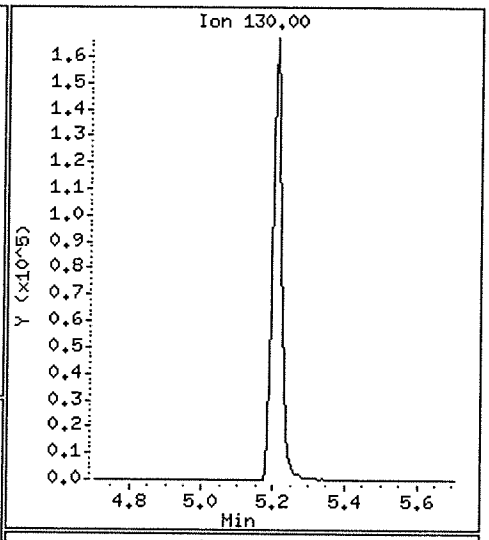
Column phase: DB624

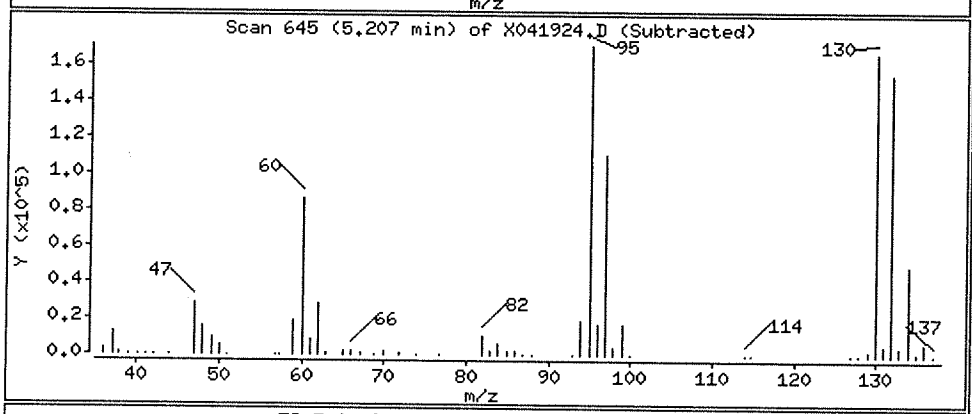
Column diameter: 0.18

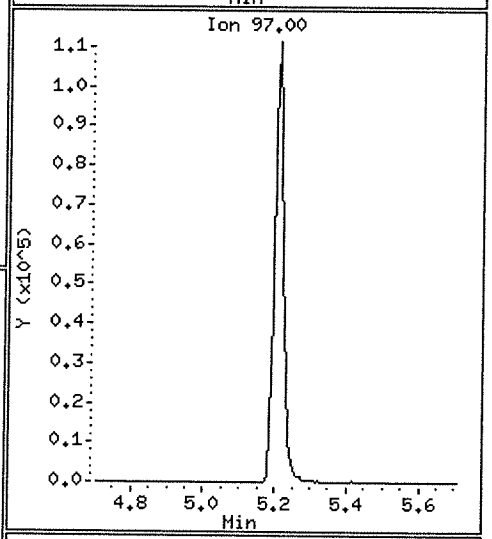
38 Trichloroethene

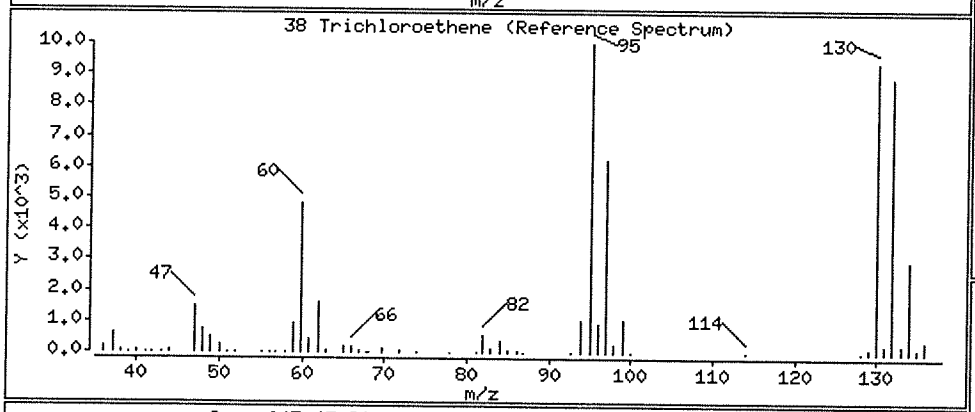
Concentration: 15301.76 ug/l

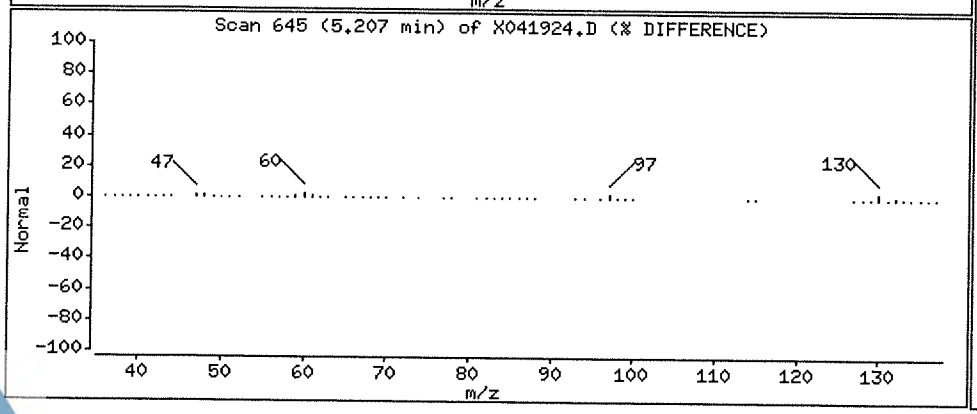


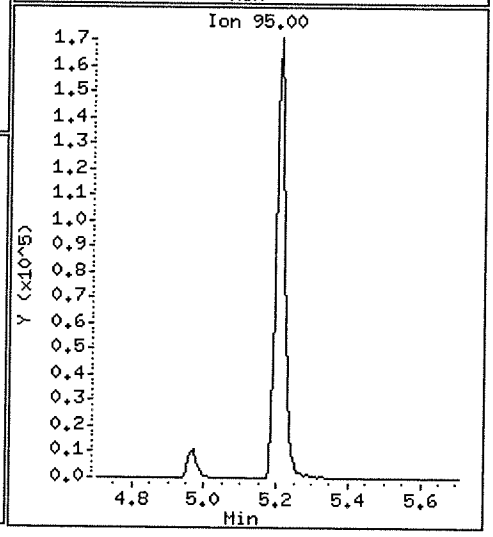












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210419.b\X041925.D Page 1
Report Date: 05-May-2021 10:26

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X210419.b\X041925.D
Lab Smp Id: HS21040859-02 Client Smp ID: HS21040859-02
Inj Date : 19-APR-2021 19:29
Operator : PC Inst ID: voa6.i
Smp Info : HS21040859-02;HS21040859-02;;;
Misc Info : HS18090001;WATER;0;25;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X210419.b\8260W.m
Meth Date : 05-May-2021 10:25 Qin.Xu Quant Type: ISTD
Cal Date : 02-APR-2021 13:20 Cal File: X040208.D
Als bottle: 24
Dil Factor: 25.00000
Integrator: HP RTE Compound Sublist: CBI_short1.sub
Target Version: 4.14
Processing Host: NAHSTW7066

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	25.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

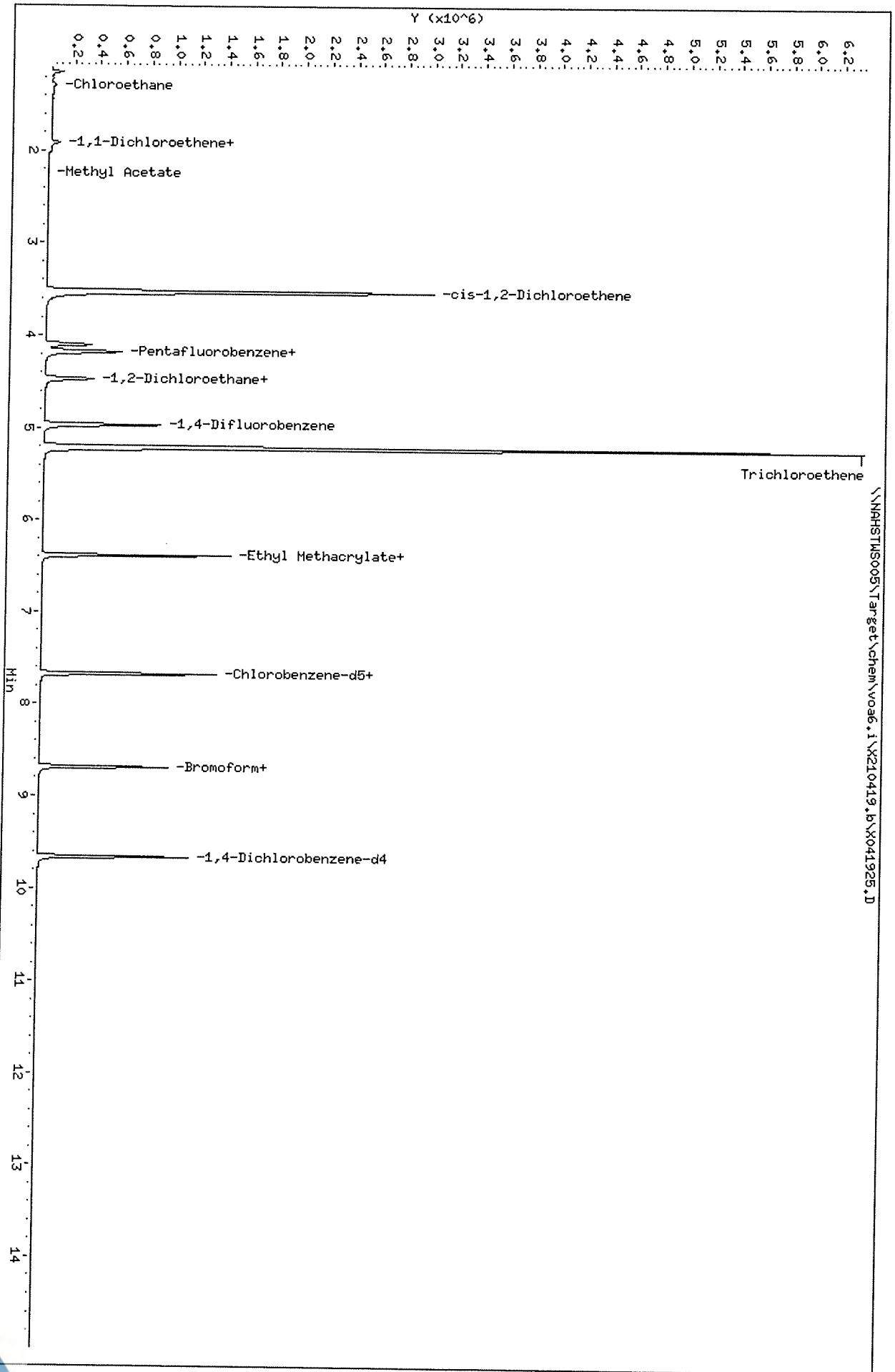
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	438698	50.0000	
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	702462	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	601170	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	253595	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	243032	47.0803	47.08
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	301939	48.8029	48.80
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	847098	54.6409	54.64
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	274182	47.6377	47.63
11 1,1-Dichloroethene	96	1.912	1.919	(0.457)	9316	1.49140	37.28(a)
33 1,2-Dichloroethane	62	4.562	4.555	(0.919)	6895	0.92732	23.18(a)
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	1421704	265.109	6627.73(A)
38 Trichloroethene	130	5.207	5.207	(1.049)	1769178	367.905	9197.61(A)
5 Vinyl Chloride	62	1.145	1.145	(0.274)	58994	8.96981	224.24

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).
A - Target compound detected but, quantitated amount exceeded maximum amount.

Data File: \\NAHSTWS005\Target\chem\voa6.i\X210419.b\X041925.D
Date : 19-APR-2021 19:29
Client ID: HS21040859-02
Sample Info: HS21040859-02;HS21040859-02;;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18



Data File: \\NAHSTWS005\Target\chem\voa6.i\X210419.b\X041925.D

Date : 19-APR-2021 19:29

Client ID: HS21040859-02

Instrument: voa6.i

Sample Info: HS21040859-02;HS21040859-02;;;

Purge Volume: 5.0

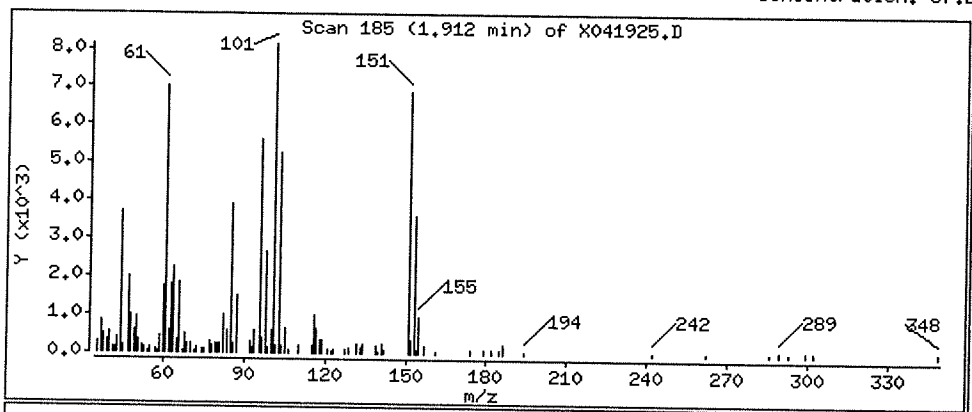
Operator: PC

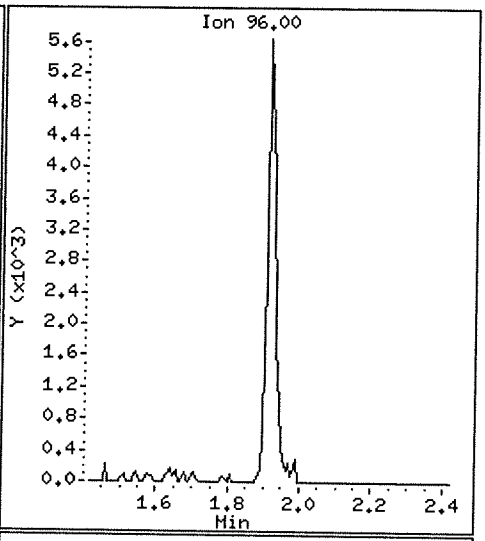
Column phase: DB624

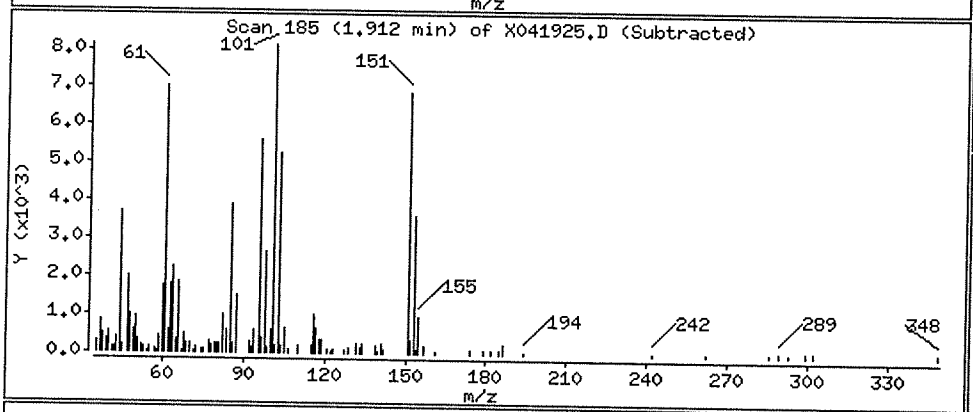
Column diameter: 0.18

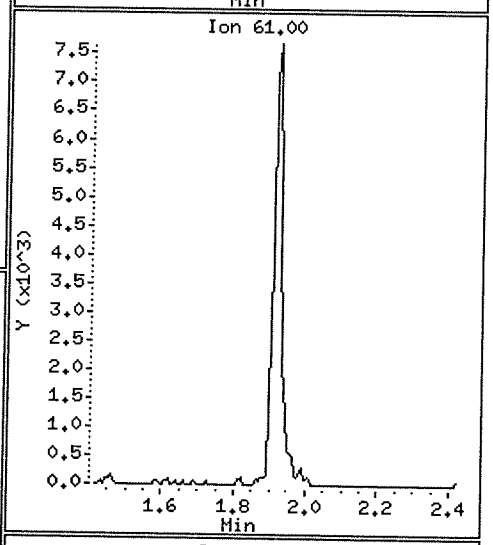
11 1,1-Dichloroethene

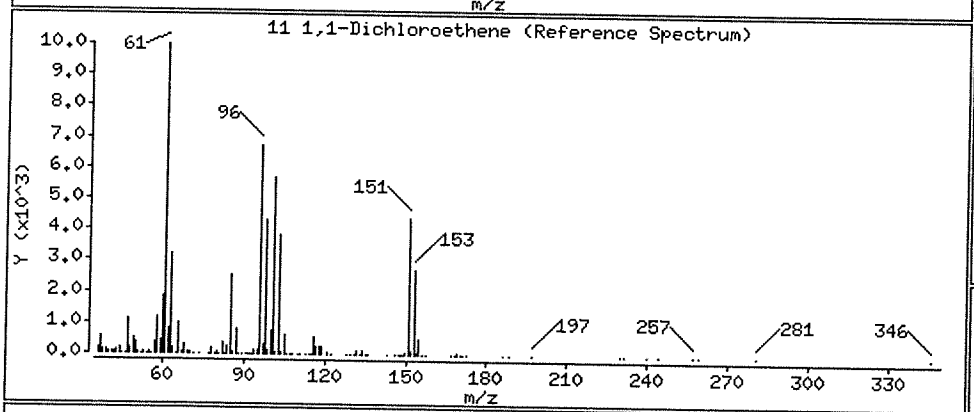
Concentration: 37.28 ug/l

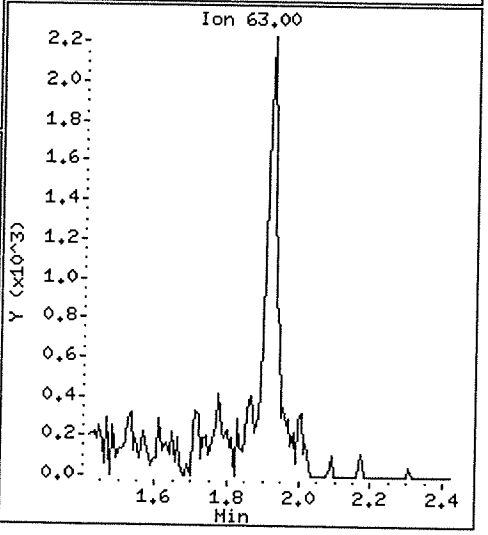


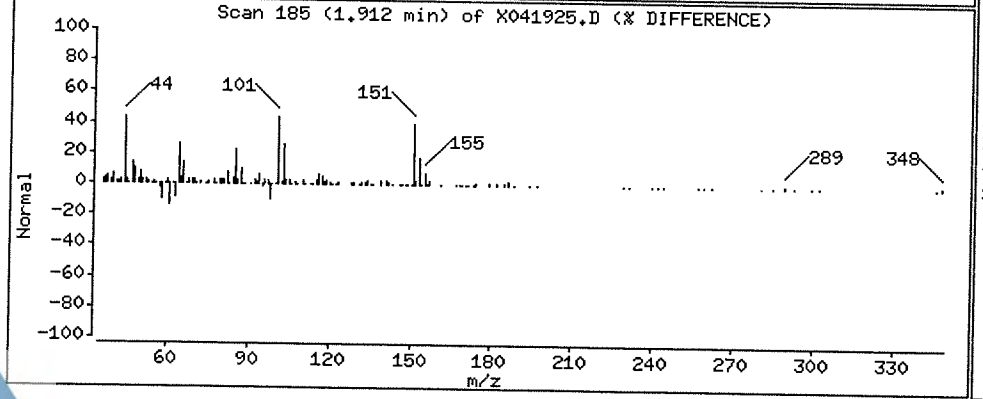












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210419.b\X041925.D

Date : 19-APR-2021 19:29

Client ID: HS21040859-02

Instrument: voa6.i

Sample Info: HS21040859-02;HS21040859-02;;;

Purge Volume: 5.0

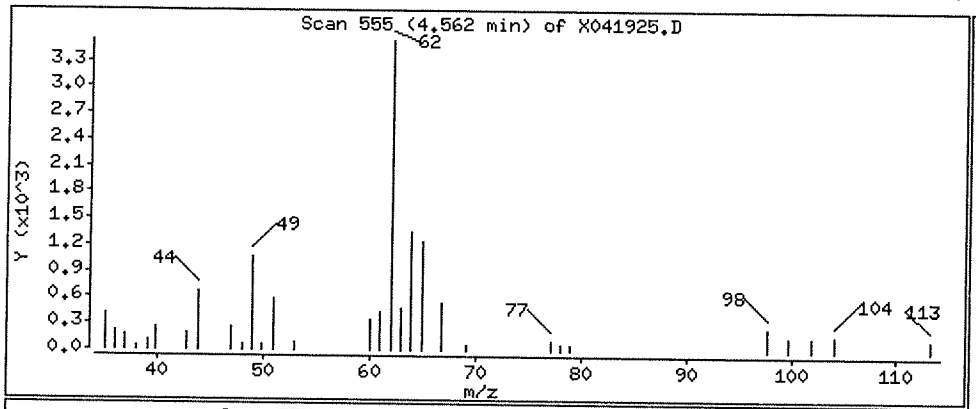
Operator: PC

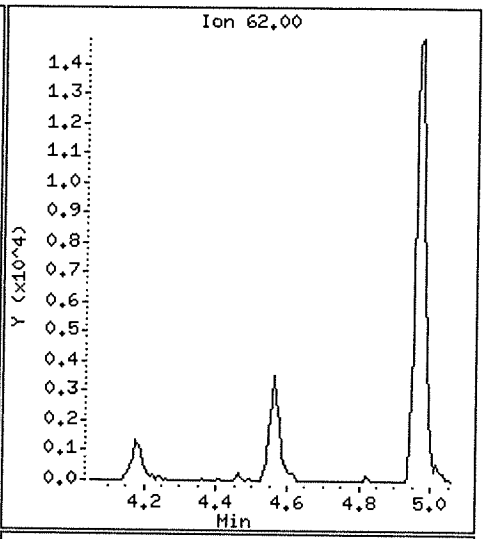
Column phase: DB624

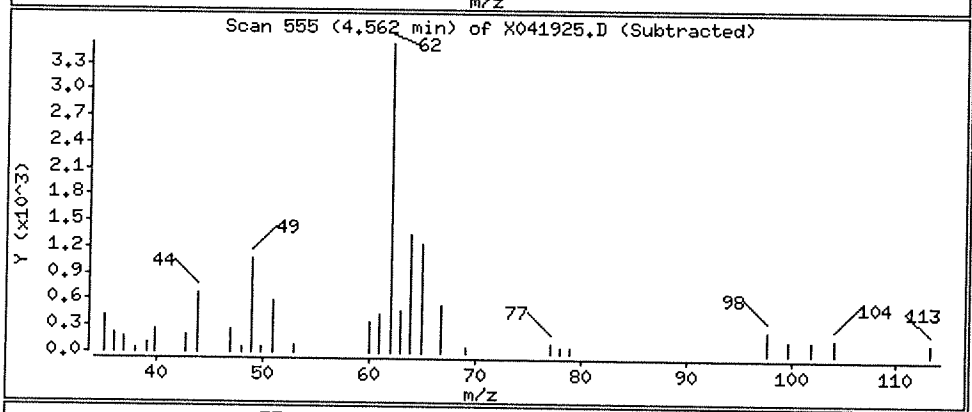
Column diameter: 0.18

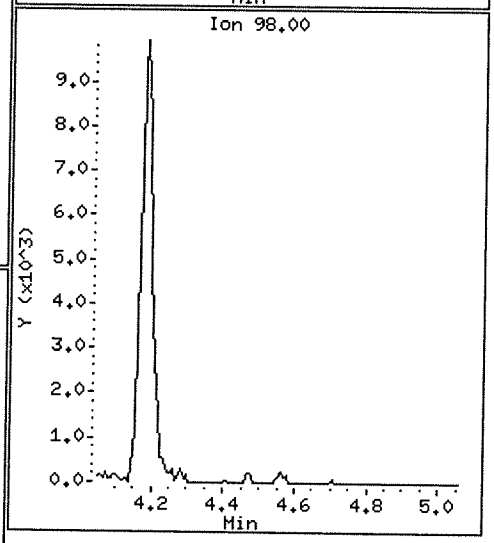
33 1,2-Dichloroethane

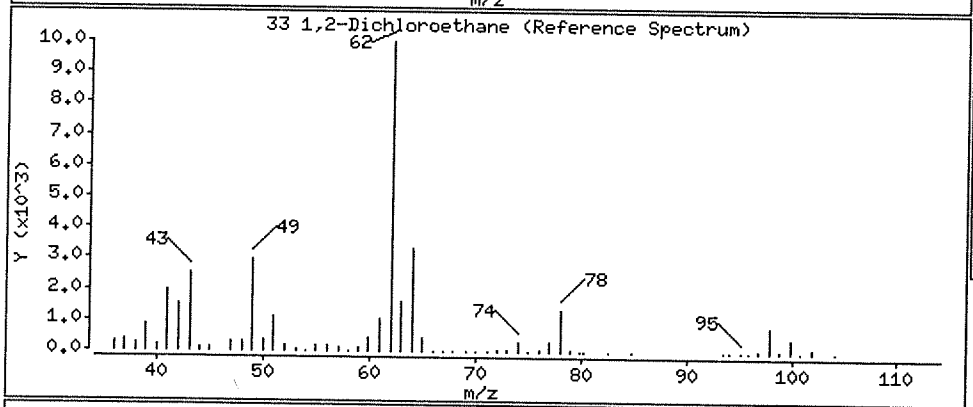
Concentration: 23.18 ug/l

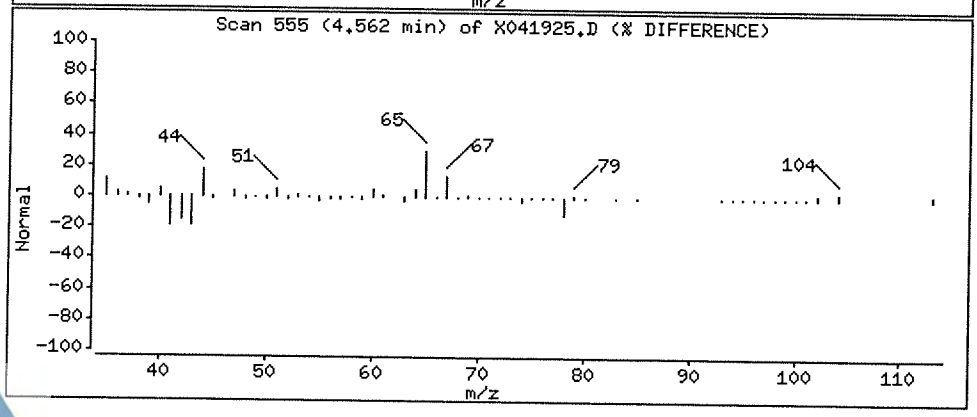












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210419.b\X041925.D

Date : 19-APR-2021 19:29

Client ID: HS21040859-02

Instrument: voa6.i

Sample Info: HS21040859-02;HS21040859-02;;;

Purge Volume: 5.0

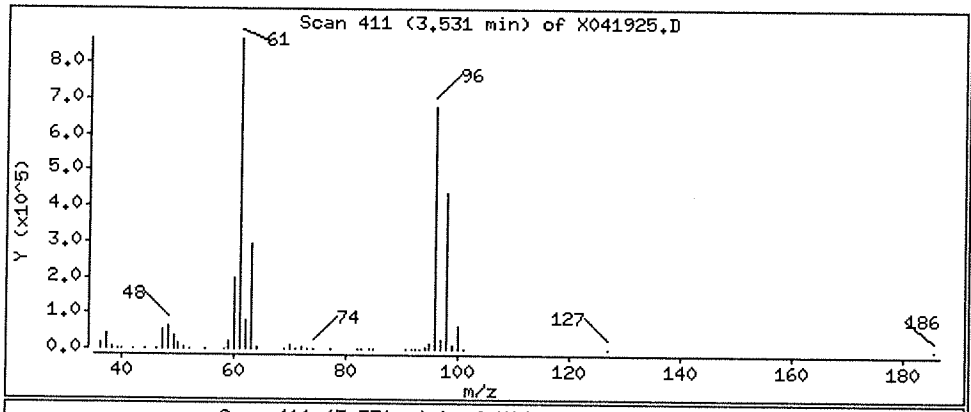
Operator: PC

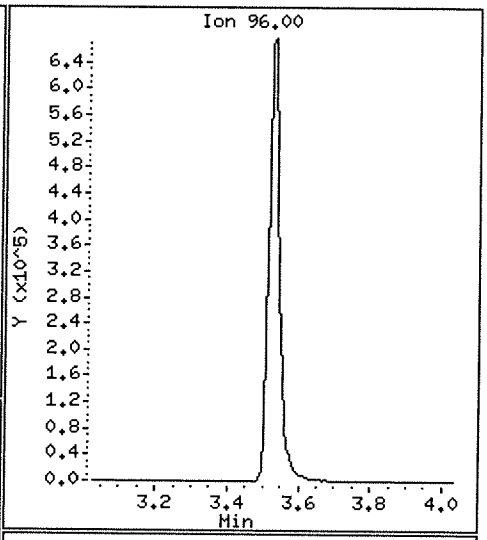
Column phase: DB624

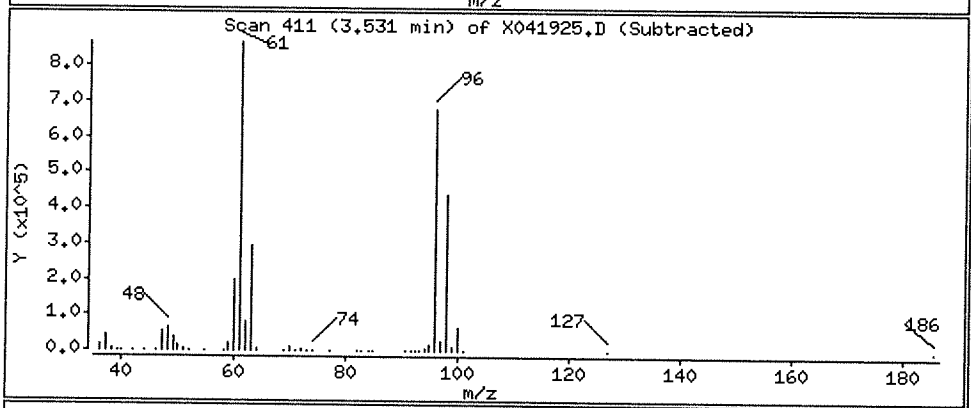
Column diameter: 0.18

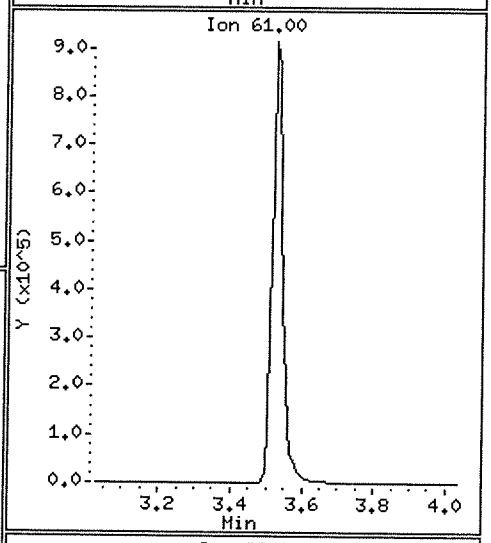
27 cis-1,2-Dichloroethene

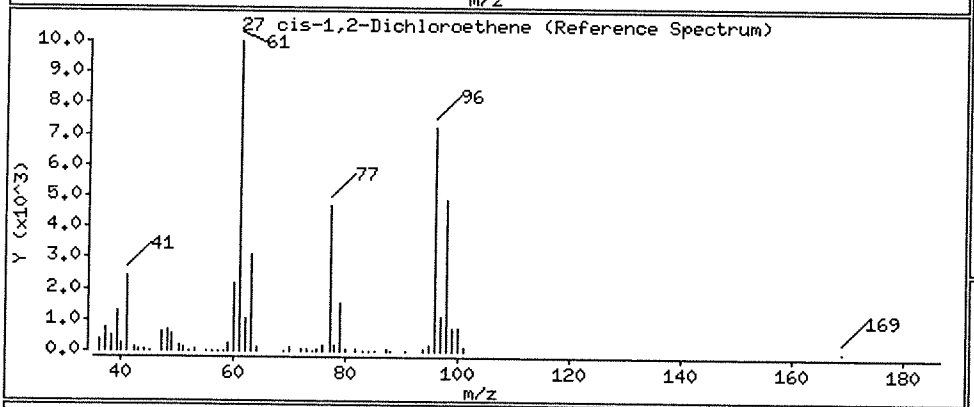
Concentration: 6627.73 ug/l

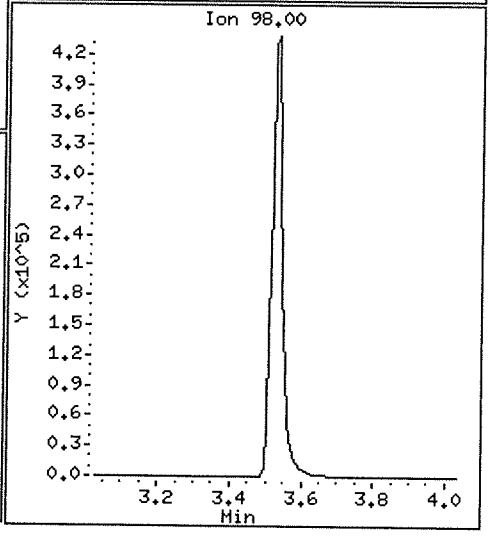


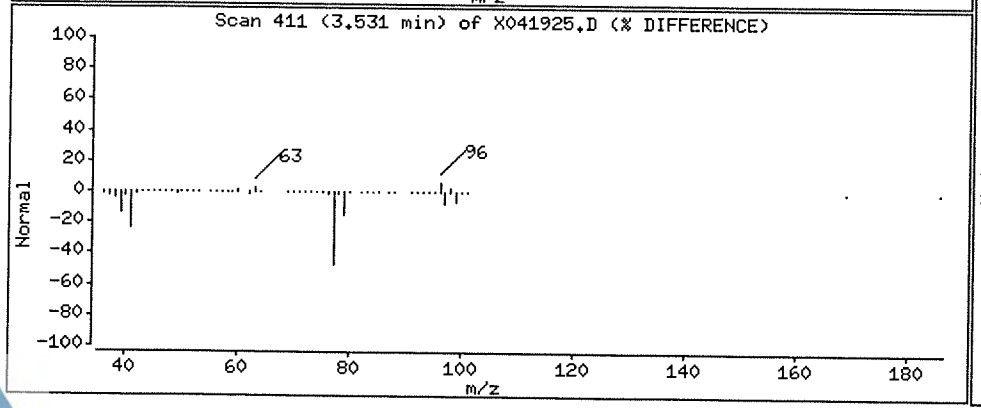












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210419.b\X041925.D

Date : 19-APR-2021 19:29

Client ID: HS21040859-02

Instrument: voa6.i

Sample Info: HS21040859-02;HS21040859-02;;;

Purge Volume: 5.0

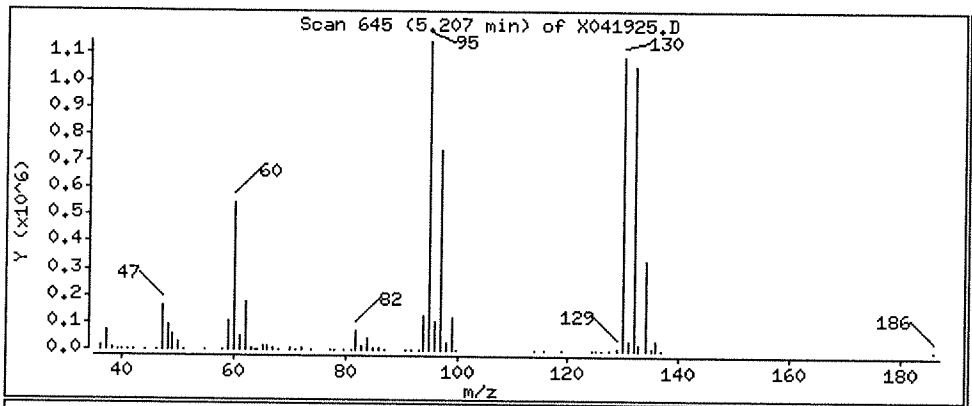
Operator: PC

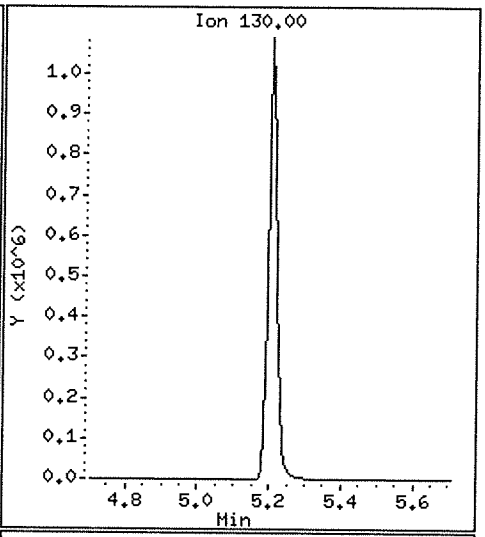
Column phase: DB624

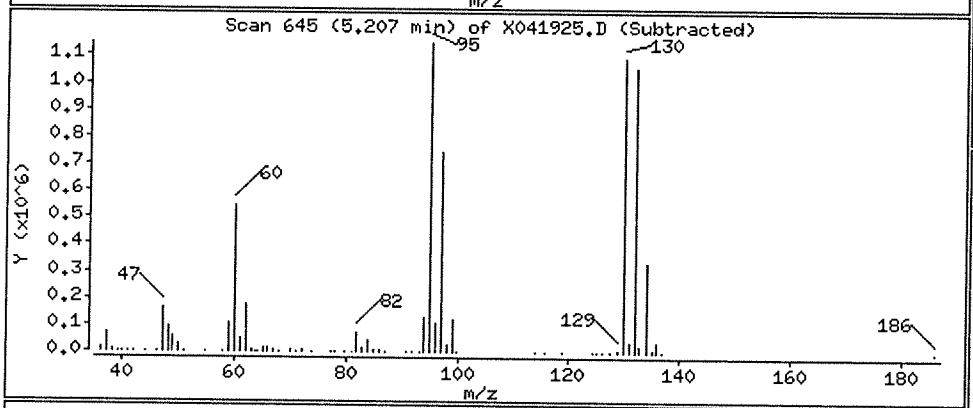
Column diameter: 0.18

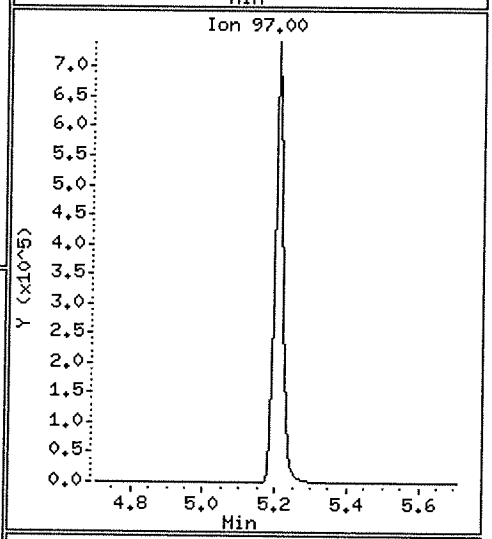
38 Trichloroethene

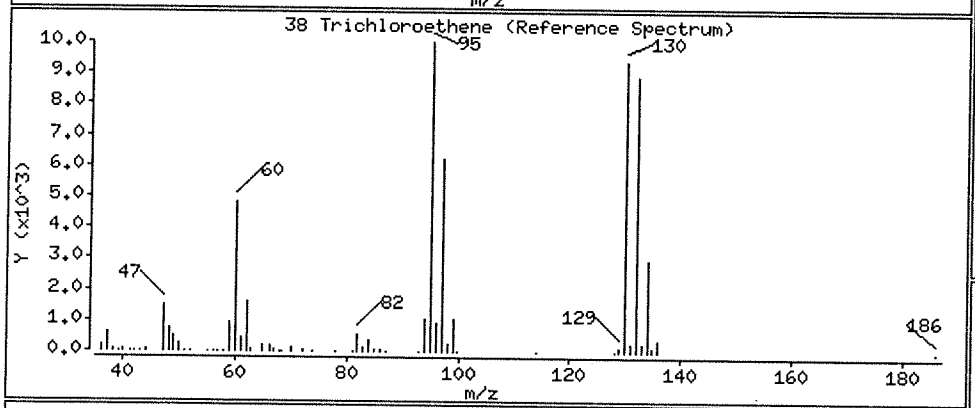
Concentration: 9197.61 ug/l

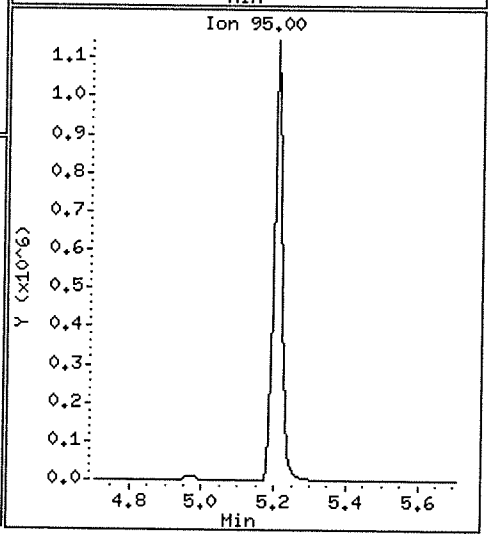


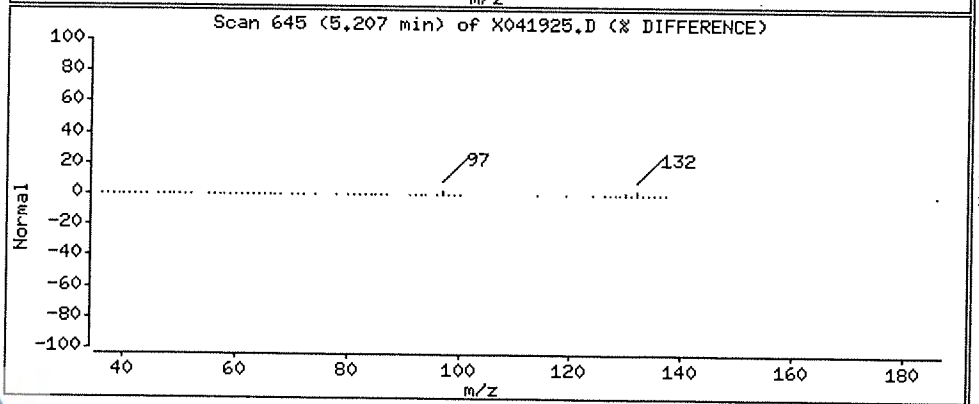












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210419.b\X041925.D

Date : 19-APR-2021 19:29

Client ID: HS21040859-02

Instrument: voa6.i

Sample Info: HS21040859-02;HS21040859-02;;;

Purge Volume: 5.0

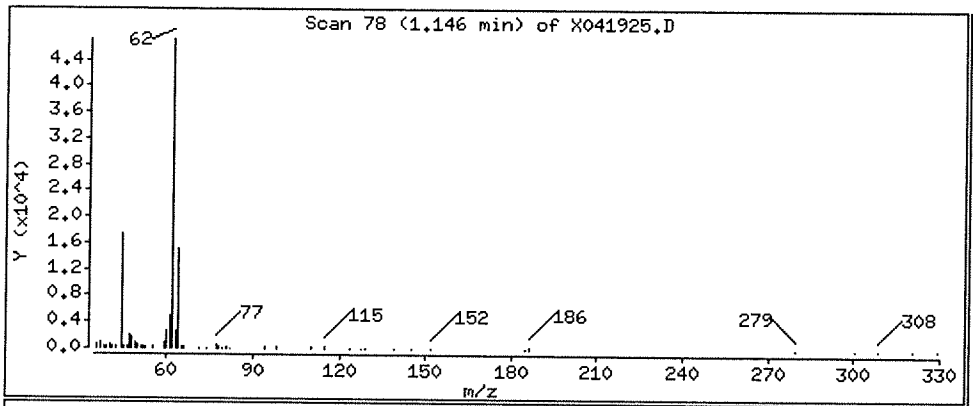
Operator: PC

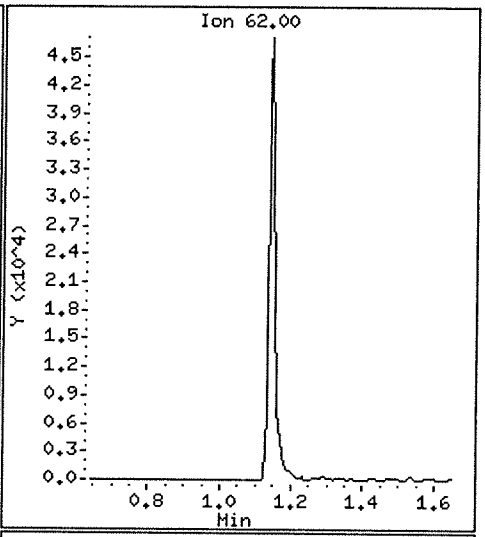
Column phase: DB624

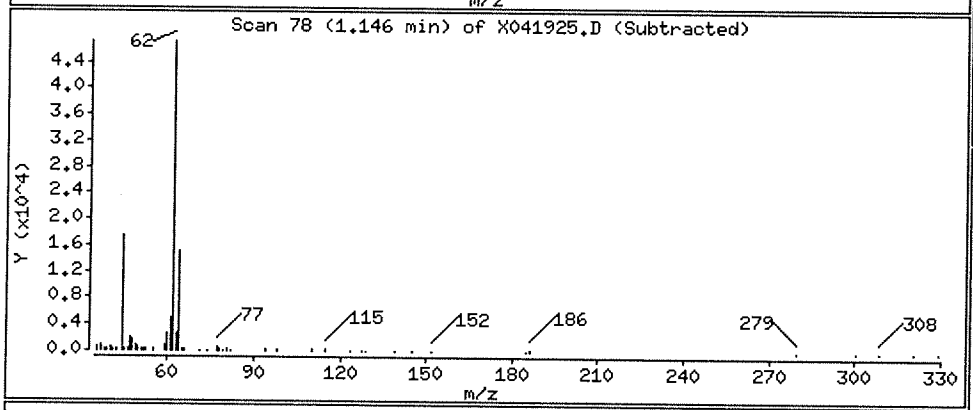
Column diameter: 0.18

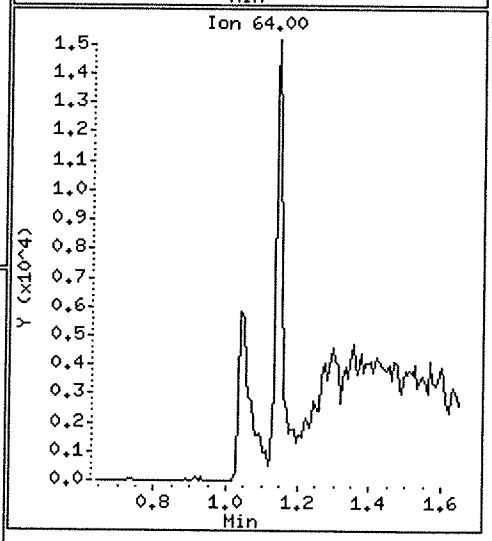
5 Vinyl Chloride

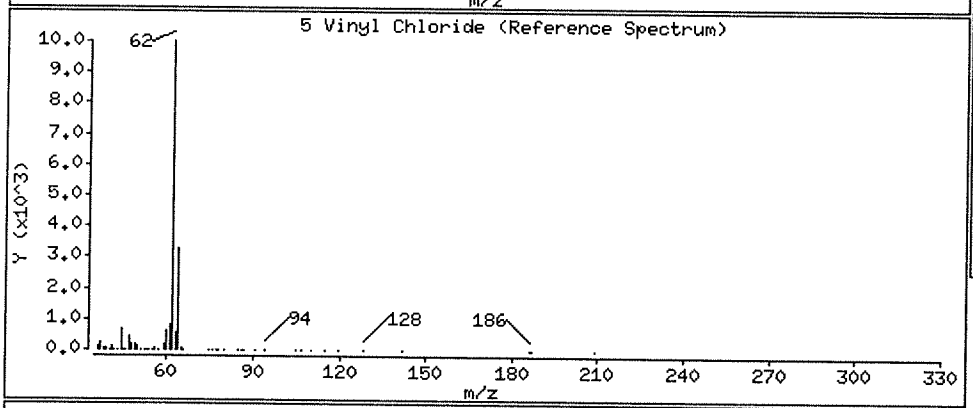
Concentration: 224.24 ug/l

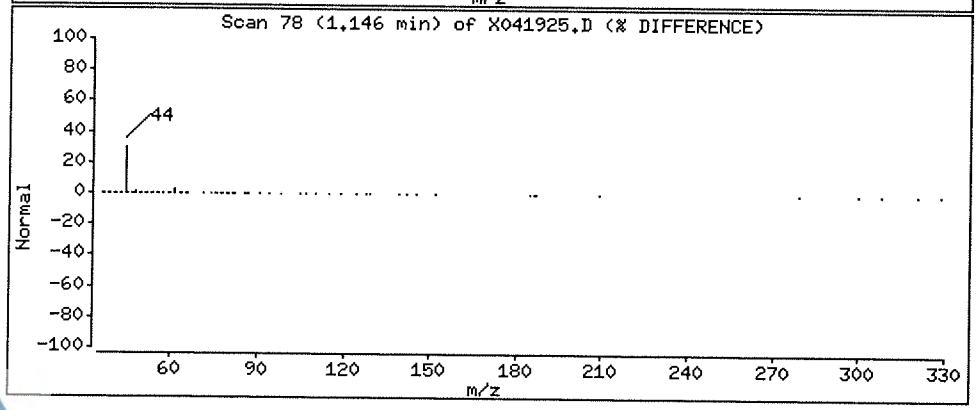












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210419.b\X041926.D Page 1
Report Date: 05-May-2021 10:26

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X210419.b\X041926.D
Lab Smp Id: HS21040859-02 Client Smp ID: HS21040859-02
Inj Date : 19-APR-2021 19:50
Operator : PC Inst ID: voa6.i
Smp Info : HS21040859-02;HS21040859-02;;;
Misc Info : HS18090001;WATER;0;250;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X210419.b\8260W.m
Meth Date : 05-May-2021 10:25 Qin.Xu Quant Type: ISTD
Cal Date : 02-APR-2021 13:20 Cal File: X040208.D
Als bottle: 25
Dil Factor: 250.00000
Integrator: HP RTE Compound Sublist: CBI_short1.sub
Target Version: 4.14
Processing Host: NAHSTW7066

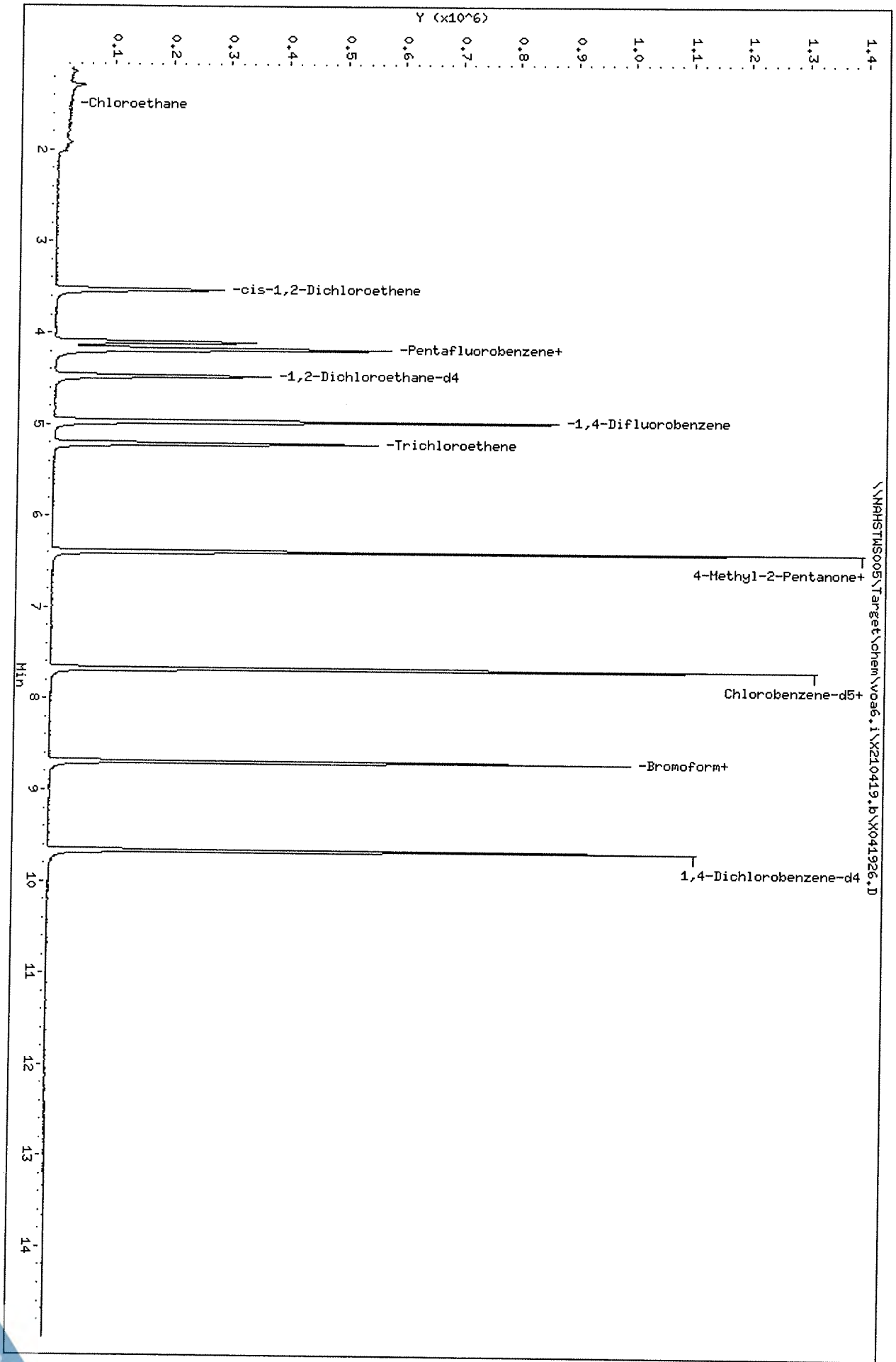
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	250.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
*	1 Pentafluorobenzene	168	4.182	4.182	(1.000)	426088	50.0000	
*	36 1,4-Difluorobenzene	114	4.970	4.963	(1.000)	691986	50.0000	
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	588654	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	246524	50.0000	
$	30 Dibromofluoromethane	113	4.103	4.103	(0.981)	232253	46.3307	46.33
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	289813	48.2350	48.23
$	48 Toluene-d8	98	6.388	6.388	(0.833)	829226	54.6259	54.62
$	69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	268336	47.6142	47.61
	27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	142213	27.3037	6825.92
	38 Trichloroethene	130	5.206	5.207	(1.048)	166590	35.1672	8791.80
	5 Vinyl Chloride	62	1.145	1.145	(0.274)	6199	0.97043	242.60

Data File: \\NAHSTWS005\Target\chem\voa6.i\X210419.b\X041926.D
Date : 19-APR-2021 19:50
Client ID: HS21040859-02
Sample Info: HS21040859-02;HS21040859-02;;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18



Data File: \\NAHSTWS005\Target\chem\voa6.i\X210419.b\X041926.D

Date : 19-APR-2021 19:50

Client ID: HS21040859-02

Instrument: voa6.i

Sample Info: HS21040859-02;HS21040859-02;;;

Purge Volume: 5.0

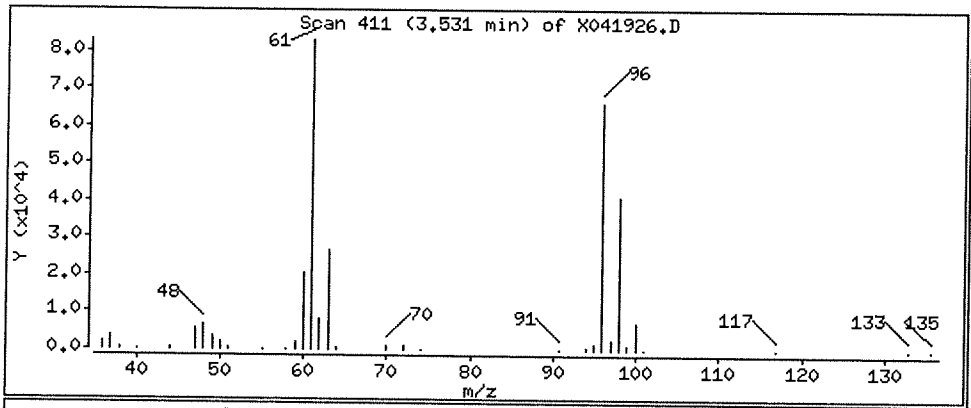
Operator: PC

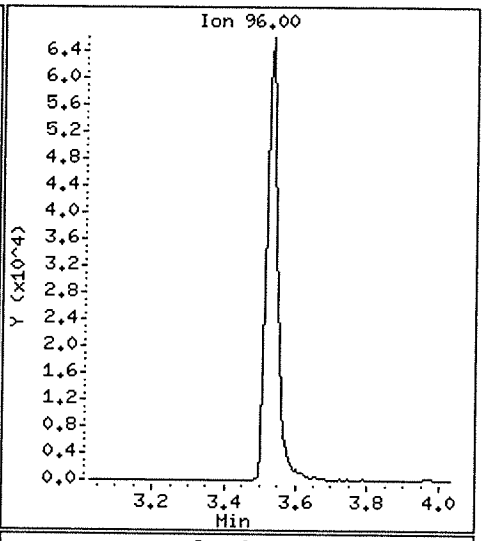
Column phase: DB624

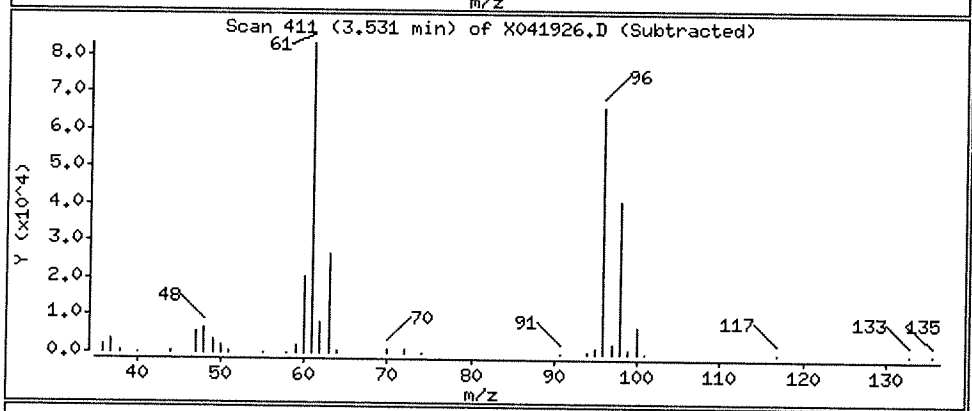
Column diameter: 0.18

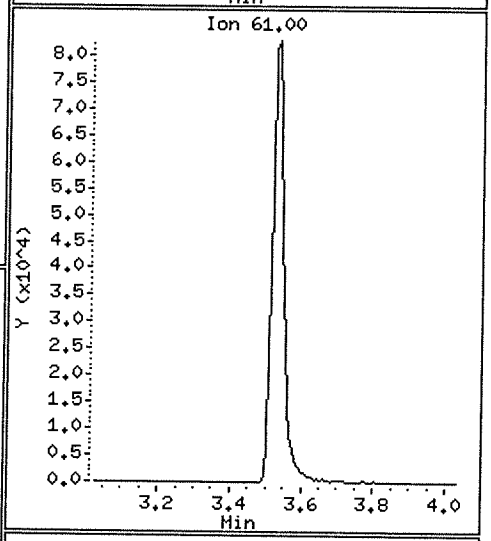
27 cis-1,2-Dichloroethene

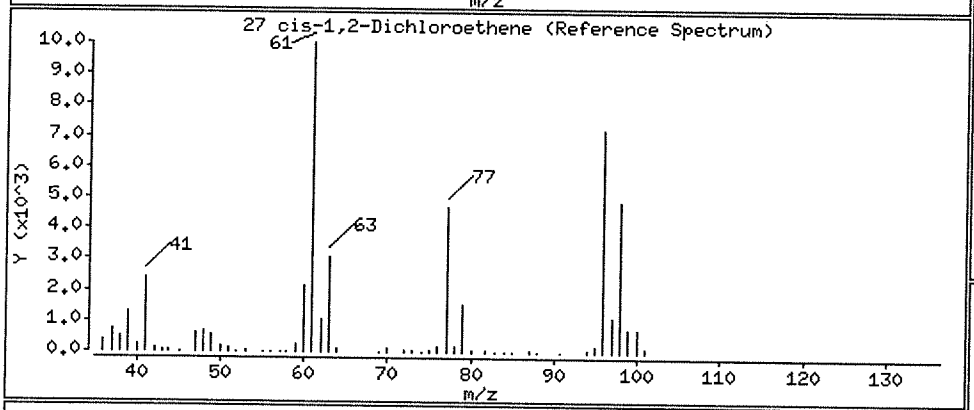
Concentration: 6825.92 ug/l

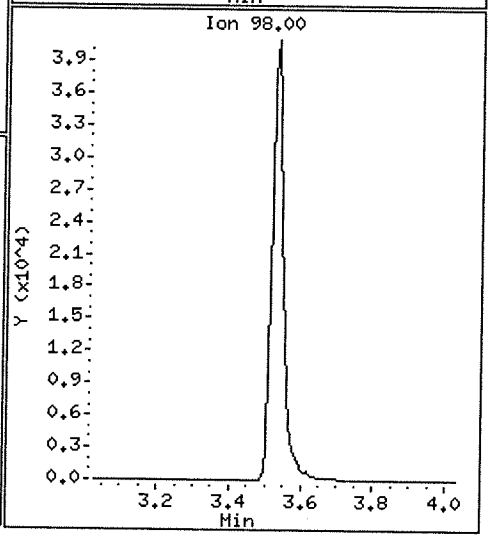


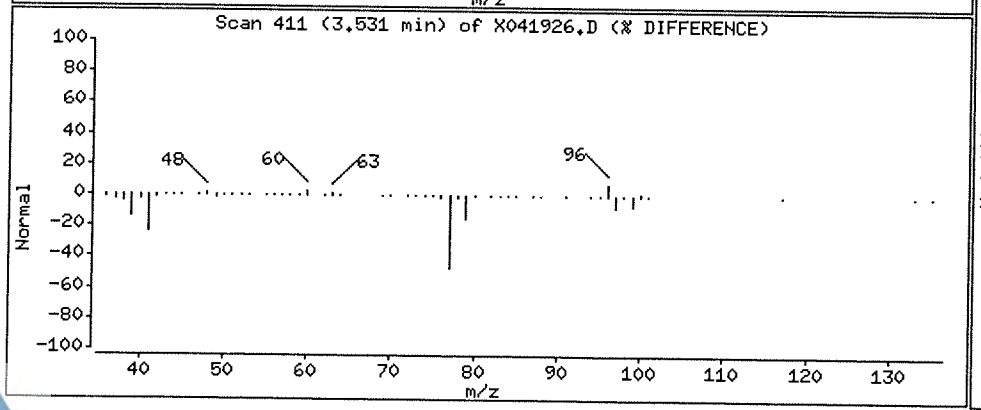












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210419.b\X041926.D

Date : 19-APR-2021 19:50

Client ID: HS21040859-02

Instrument: voa6.i

Sample Info: HS21040859-02;HS21040859-02;;;

Purge Volume: 5.0

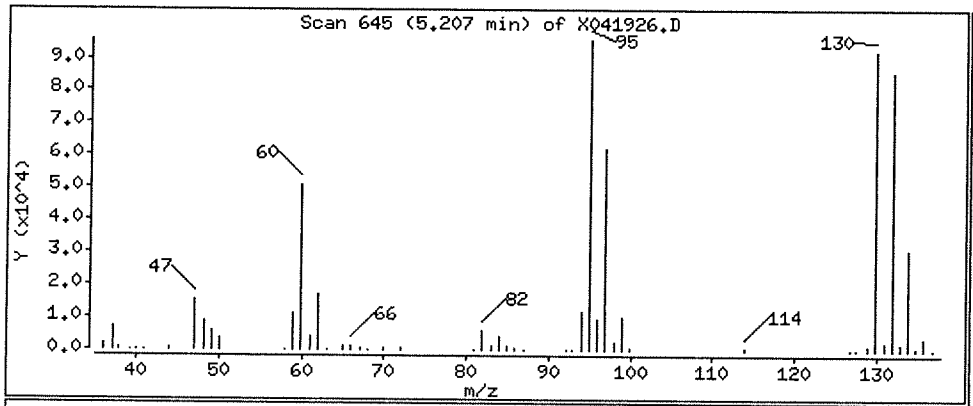
Operator: PC

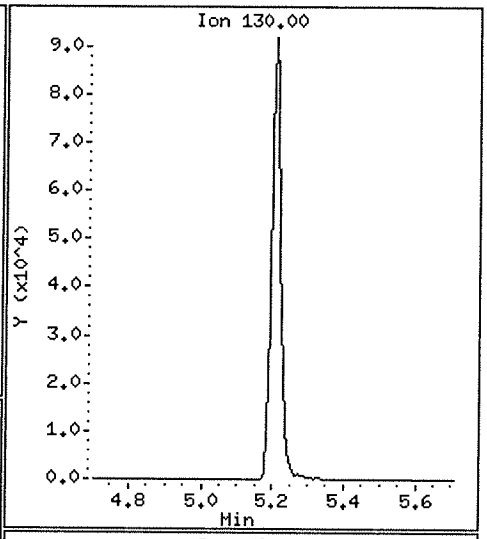
Column phase: DB624

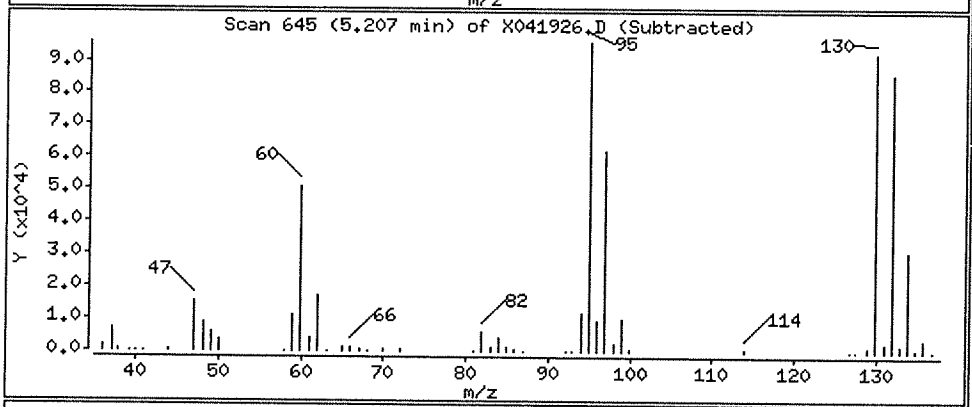
Column diameter: 0.18

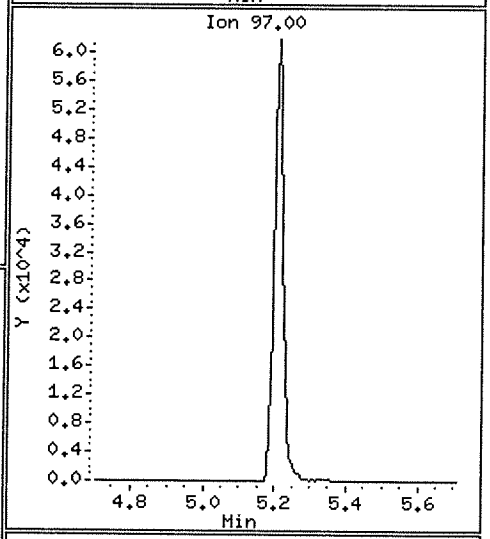
38 Trichloroethene

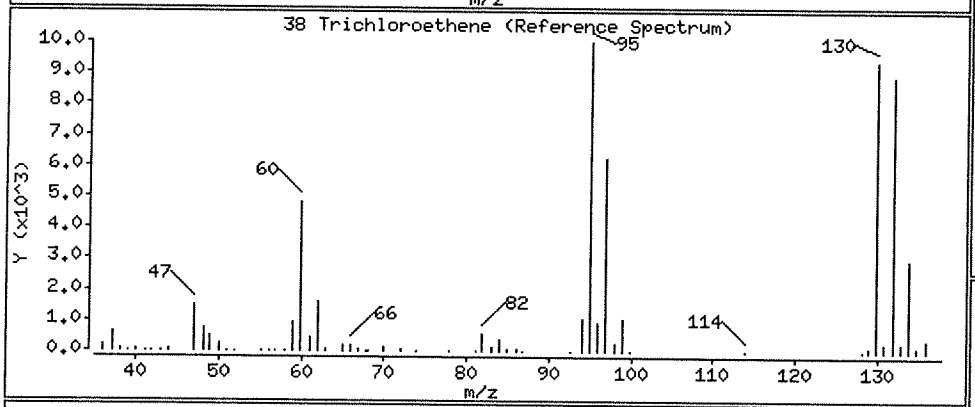
Concentration: 8791.80 ug/l

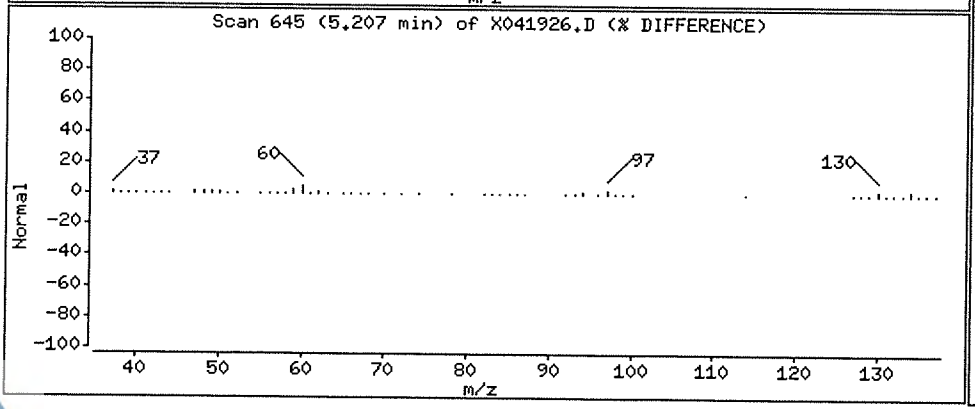


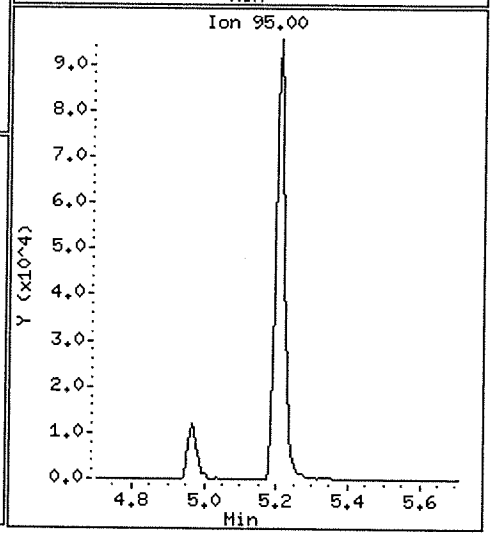












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210419.b\X041926.D

Date : 19-APR-2021 19:50

Client ID: HS21040859-02

Instrument: voa6.i

Sample Info: HS21040859-02;HS21040859-02;;;

Purge Volume: 5.0

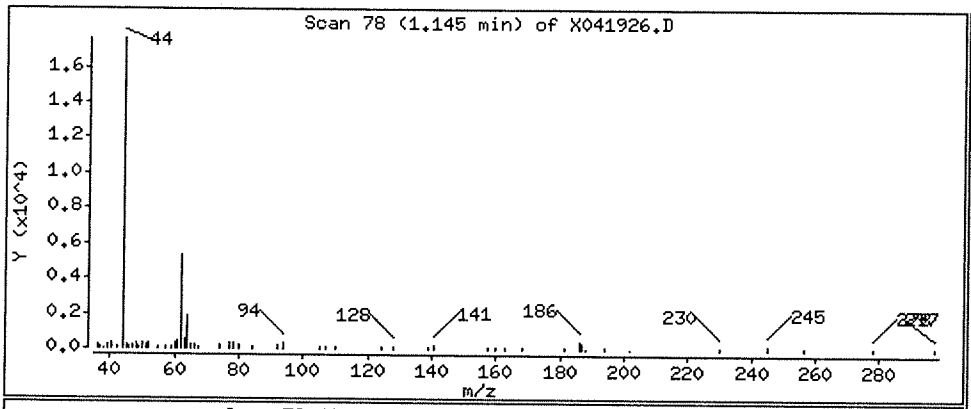
Operator: PC

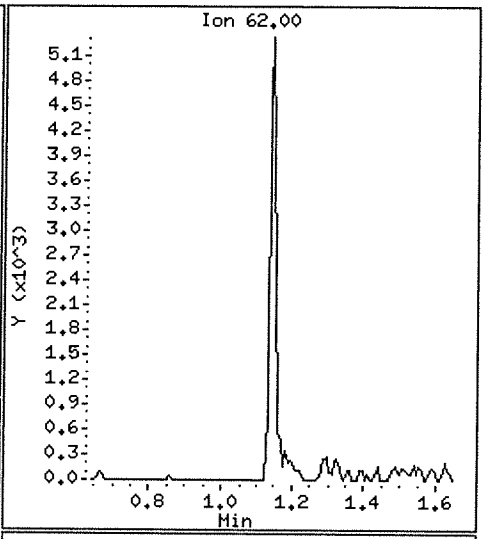
Column phase: DB624

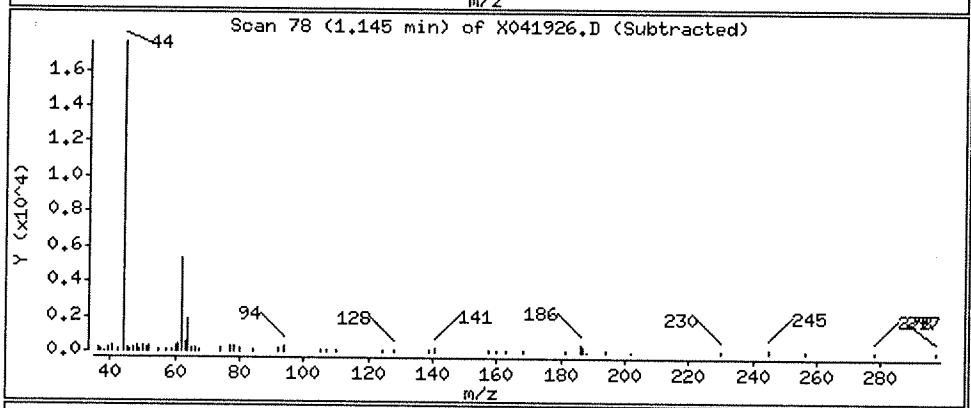
Column diameter: 0.18

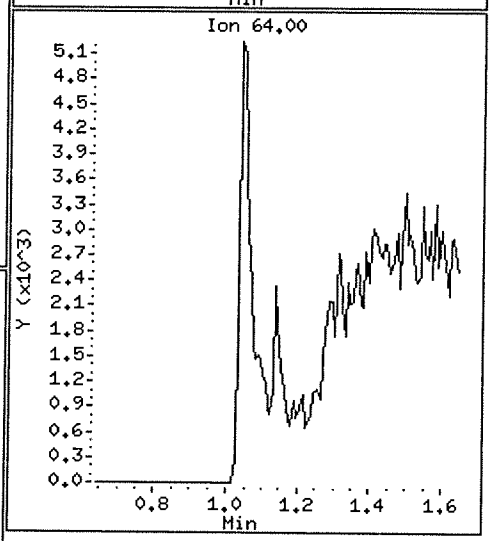
5 Vinyl Chloride

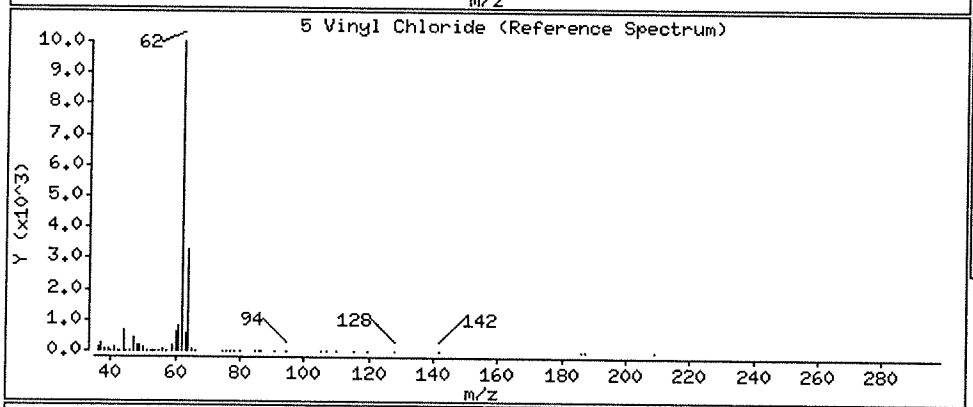
Concentration: 242.60 ug/l

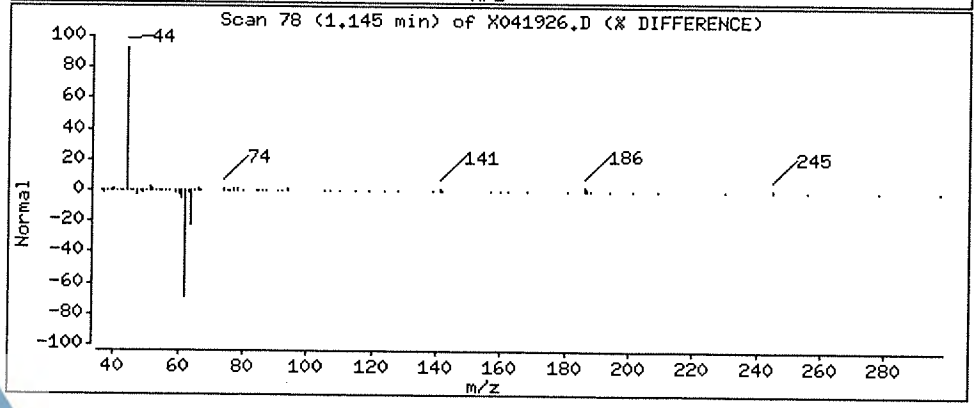












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210419.b\X041927.D Page 1
Report Date: 05-May-2021 10:26

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X210419.b\X041927.D
Lab Smp Id: HS21040859-03 Client Smp ID: HS21040859-03
Inj Date : 19-APR-2021 20:12
Operator : PC Inst ID: voa6.i
Smp Info : HS21040859-03;HS21040859-03;;;
Misc Info : HS18090001;WATER;0;25;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X210419.b\8260W.m
Meth Date : 05-May-2021 10:25 Qin.Xu Quant Type: ISTD
Cal Date : 02-APR-2021 13:20 Cal File: X040208.D
Als bottle: 26
Dil Factor: 25.00000
Integrator: HP RTE Compound Sublist: CBI_short1.sub
Target Version: 4.14
Processing Host: NAHSTW7066

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	25.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

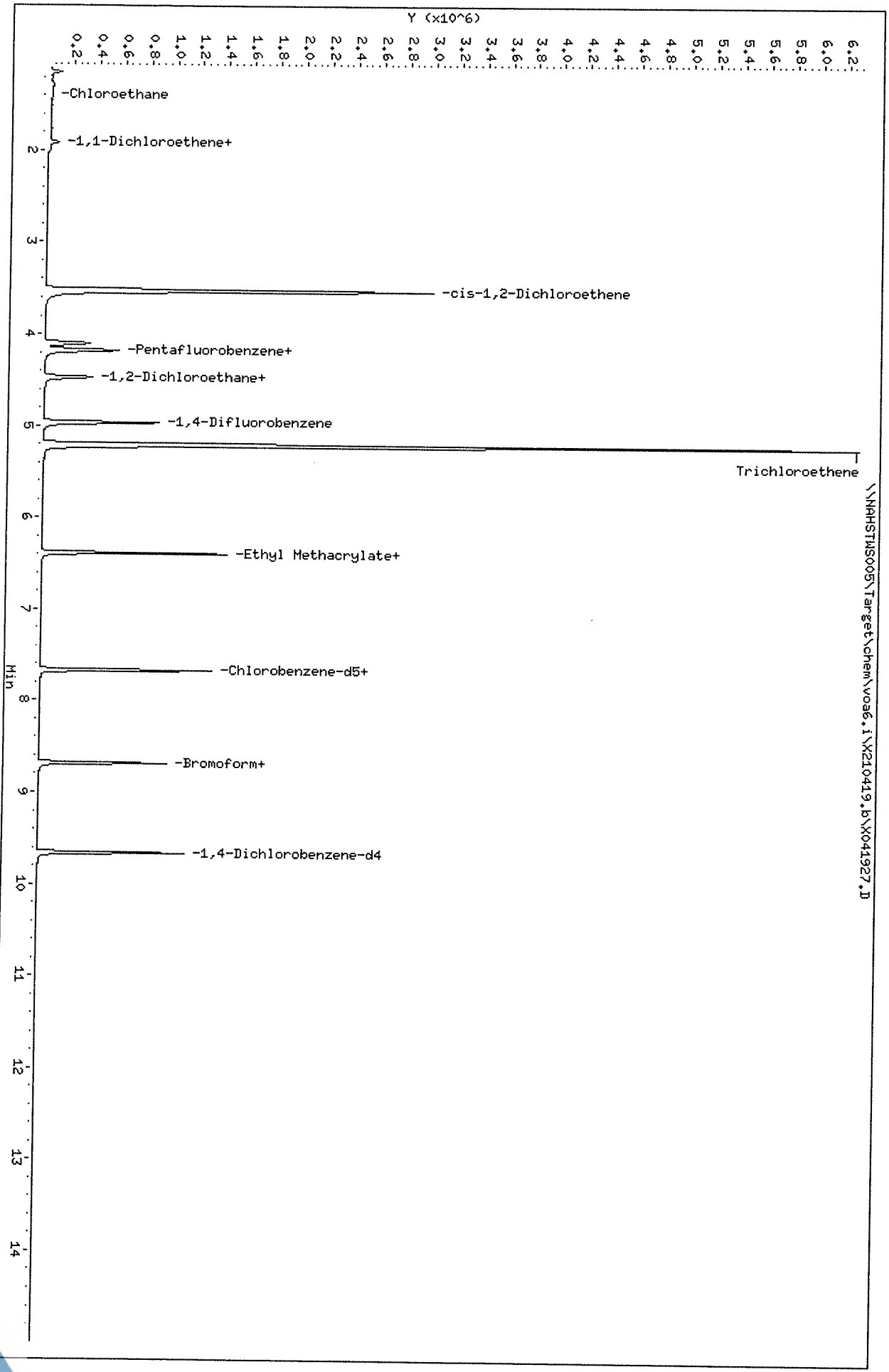
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	422721	50.0000	
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	685344	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	581842	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	239546	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	237172	47.6761	47.67
$ 35 1,2-Dichloroethane-d4	65	4.469	4.476	(1.068)	298527	50.0625	50.06
$ 48 Toluene-d8	98	6.389	6.388	(0.833)	822714	54.8245	54.82
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	268714	48.2178	48.21
11 1,1-Dichloroethene	96	1.919	1.919	(0.459)	8891	1.47716	36.92(a)
33 1,2-Dichloroethane	62	4.562	4.555	(0.919)	6534	0.90072	22.51(a)
27 cis-1,2-Dichloroethene	96	3.523	3.530	(0.842)	1393213	269.616	6740.39(A)
38 Trichloroethene	130	5.207	5.207	(1.049)	1756037	374.293	9357.32(A)
5 Vinyl Chloride	62	1.138	1.145	(0.272)	61255	9.66560	241.63

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
A - Target compound detected but, quantitated amount
exceeded maximum amount.

Data File: \\NAHSTWS005\Target\chem\voa6.i\X210419.b\X041927.D
Date : 19-APR-2021 20:12
Client ID: HS21040859-03
Sample Info: HS21040859-03;HS21040859-03;;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18



Data File: \\NAHSTWS005\Target\chem\voa6.i\X210419.b\X041927.D

Date : 19-APR-2021 20:12

Client ID: HS21040859-03

Instrument: voa6.i

Sample Info: HS21040859-03;HS21040859-03;;;

Purge Volume: 5.0

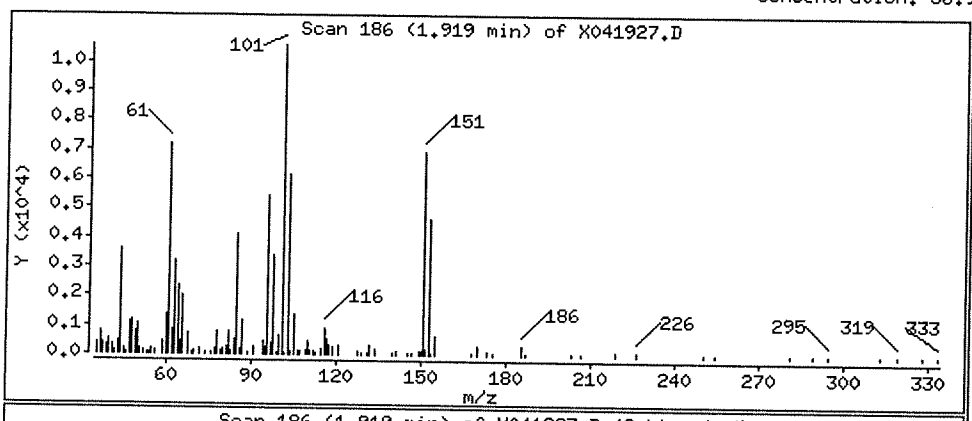
Operator: PC

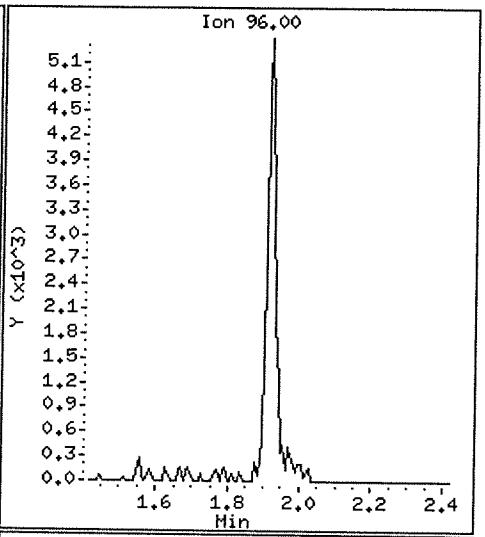
Column phase: DB624

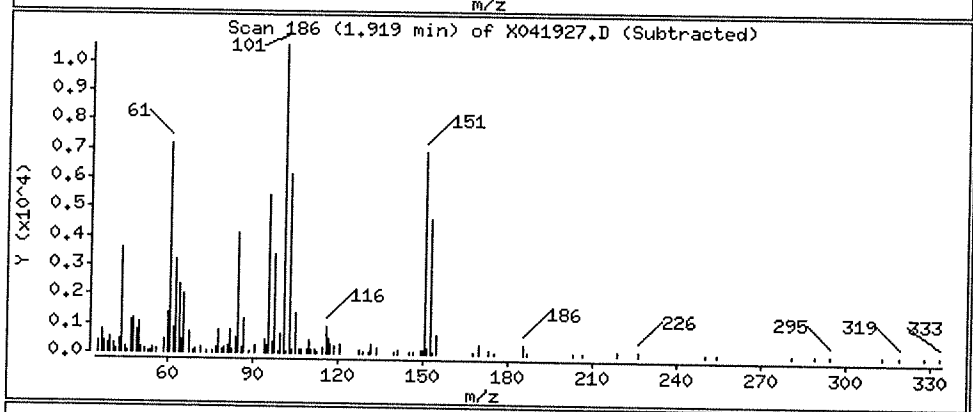
Column diameter: 0.18

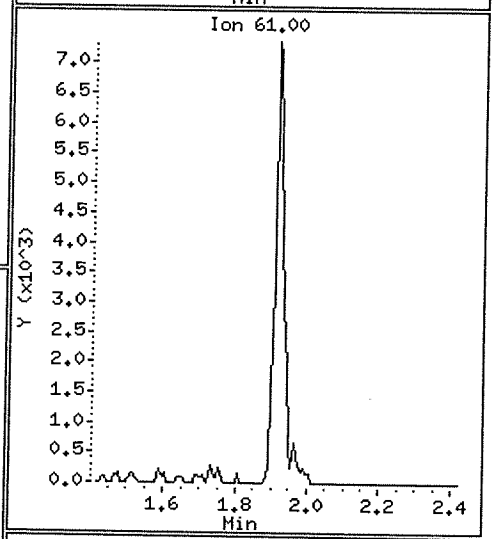
11 1,1-Dichloroethene

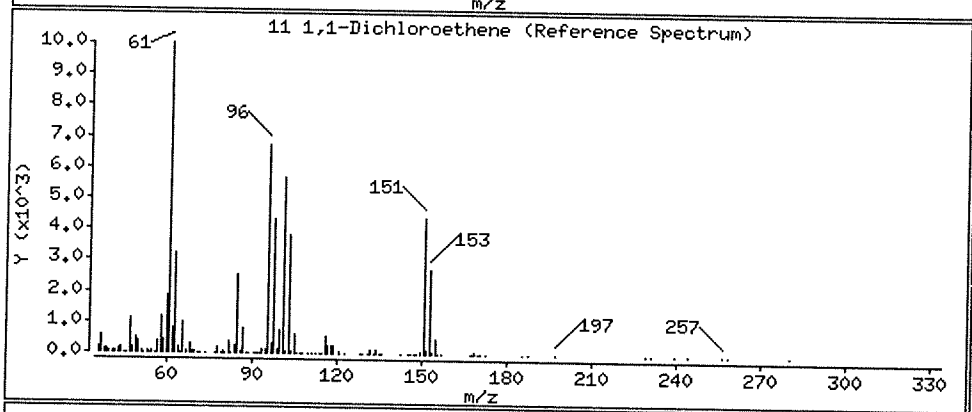
Concentration: 36.92 ug/l

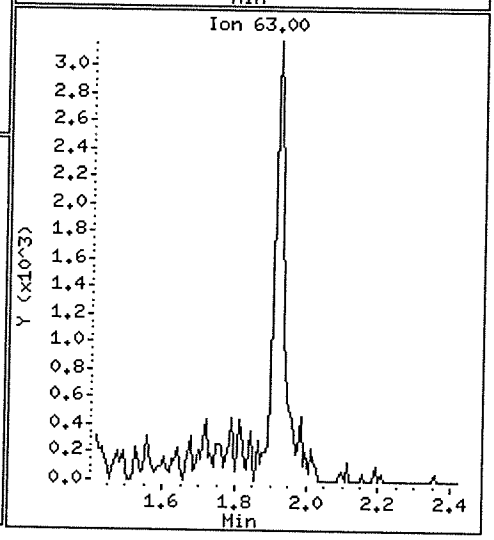


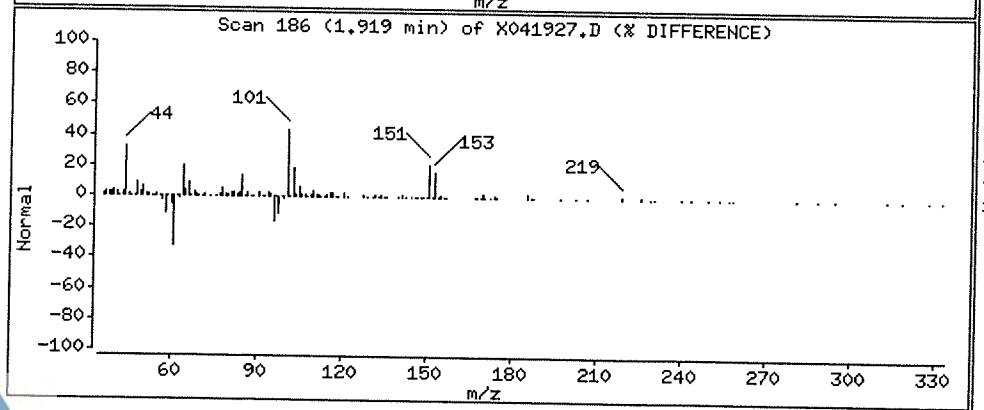












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210419.b\X041927.D

Date : 19-APR-2021 20:12

Client ID: HS21040859-03

Instrument: voa6.i

Sample Info: HS21040859-03;HS21040859-03;;;

Purge Volume: 5.0

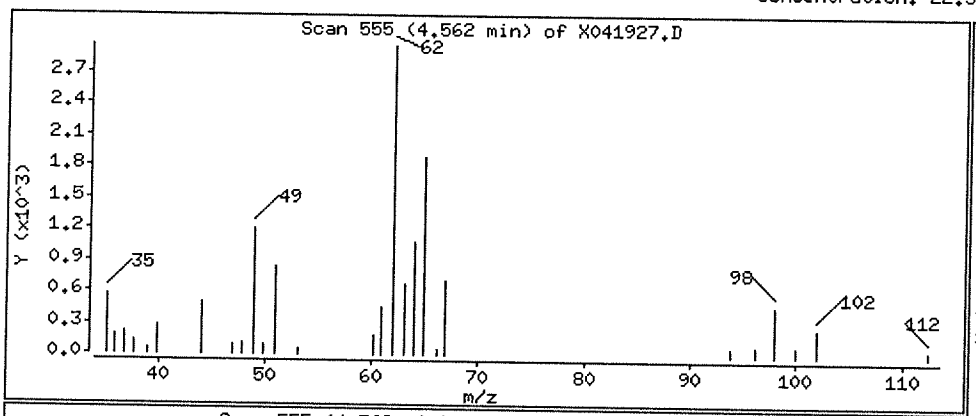
Operator: PC

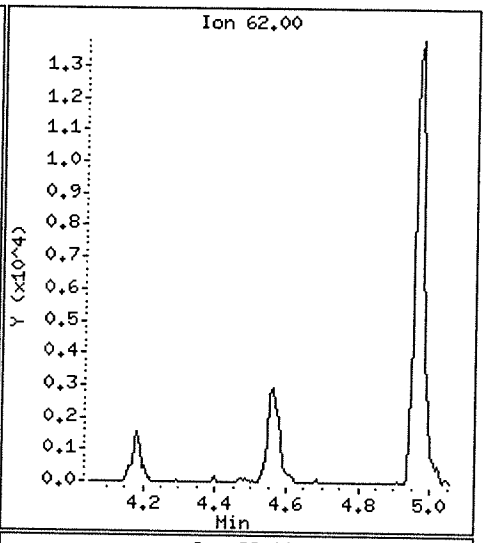
Column phase: DB624

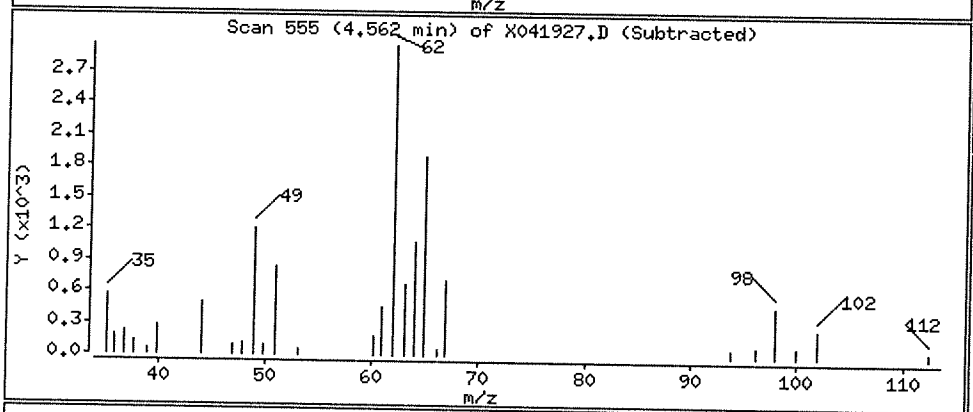
Column diameter: 0.18

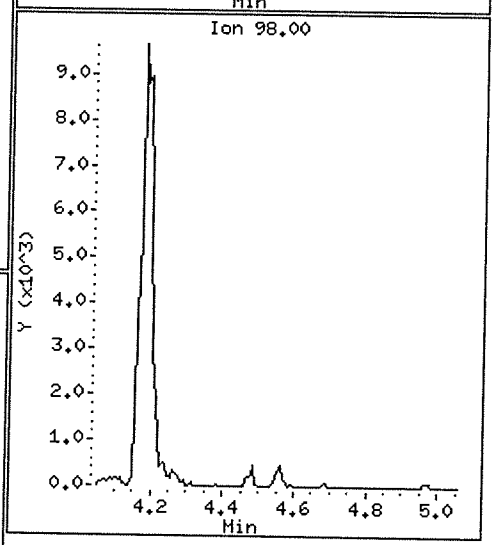
33 1,2-Dichloroethane

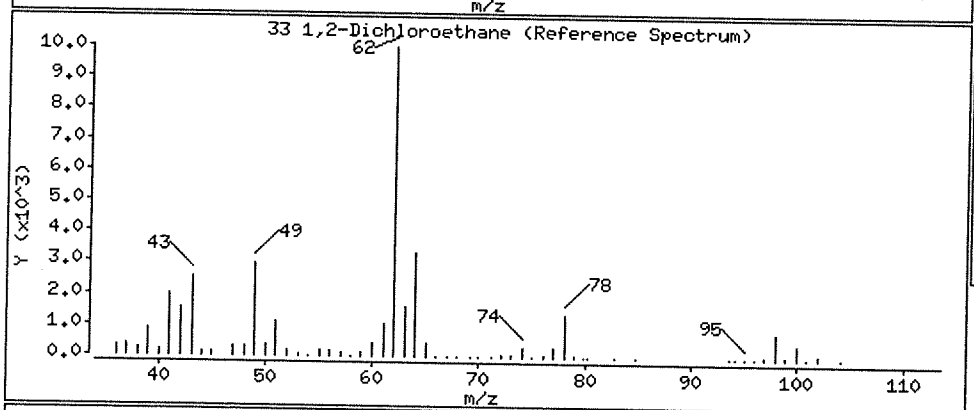
Concentration: 22.51 ug/l

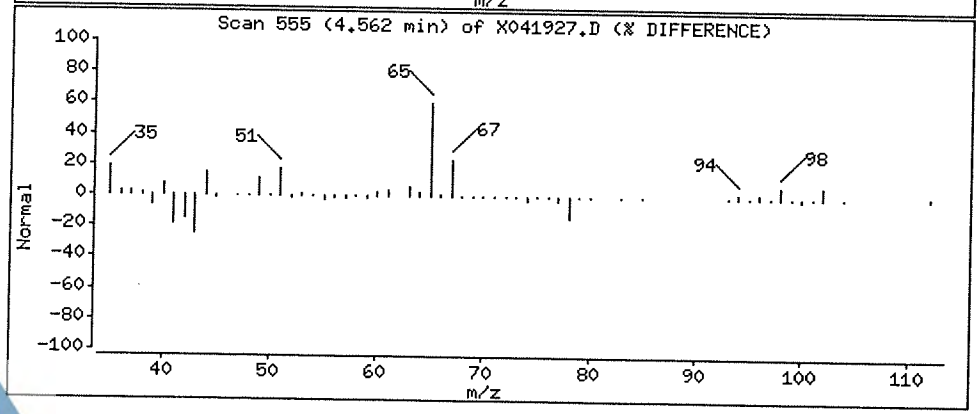












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210419.b\X041927.D

Date : 19-APR-2021 20:12

Client ID: HS21040859-03

Instrument: voa6.i

Sample Info: HS21040859-03;HS21040859-03;;;

Purge Volume: 5.0

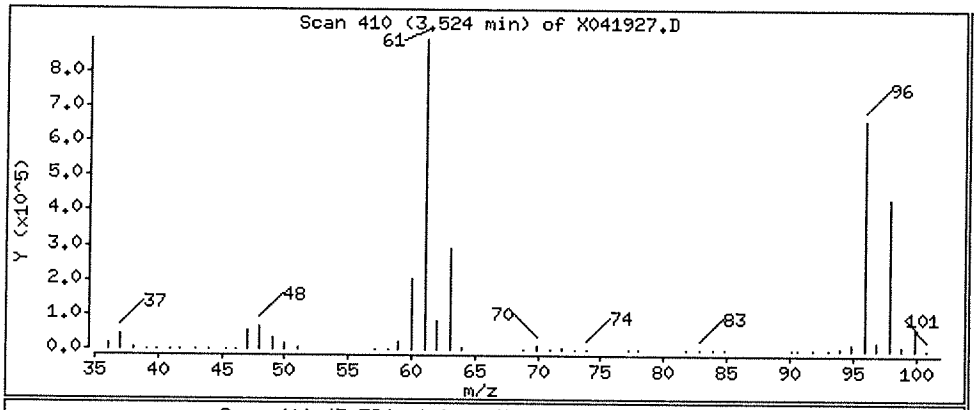
Operator: PC

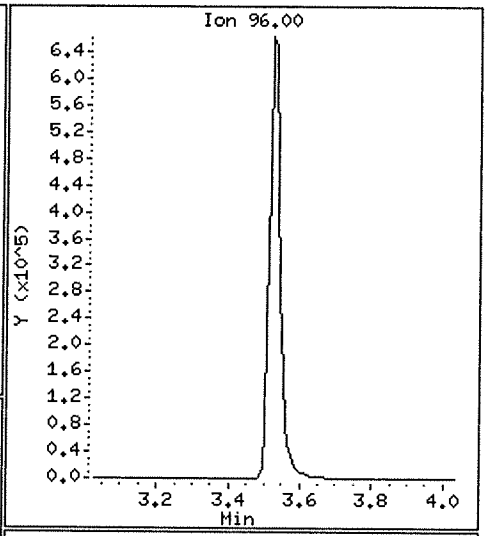
Column phase: DB624

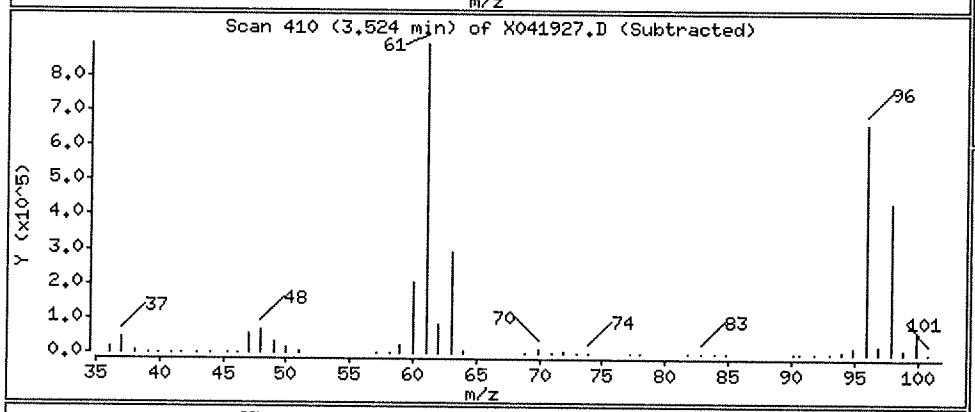
Column diameter: 0.18

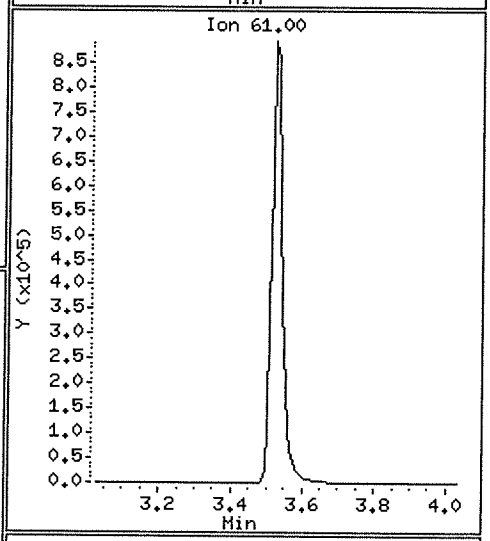
27 cis-1,2-Dichloroethene

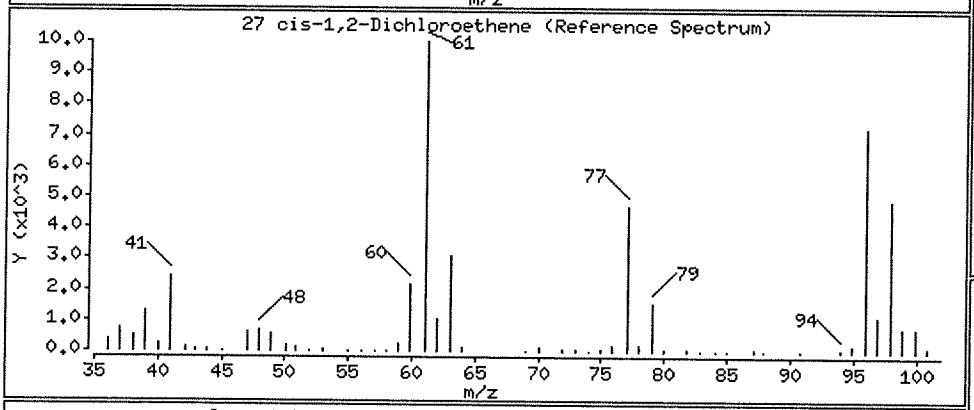
Concentration: 6740.39 ug/l

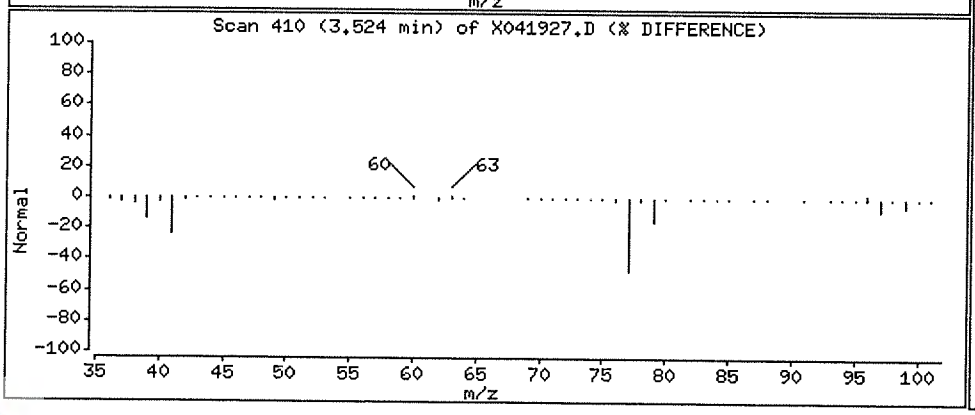


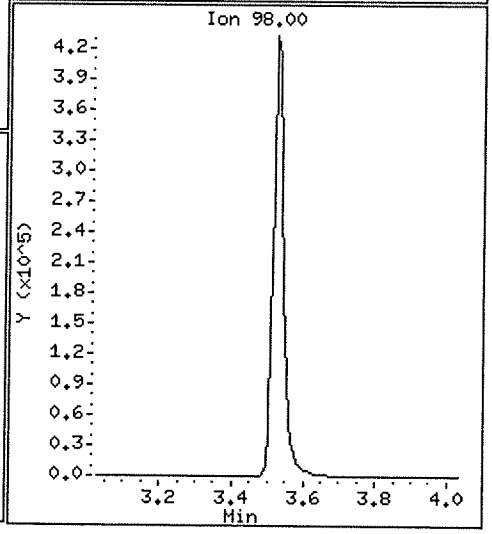












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210419.b\X041927.D

Date : 19-APR-2021 20:12

Client ID: HS21040859-03

Instrument: voa6.i

Sample Info: HS21040859-03;HS21040859-03;;;

Purge Volume: 5.0

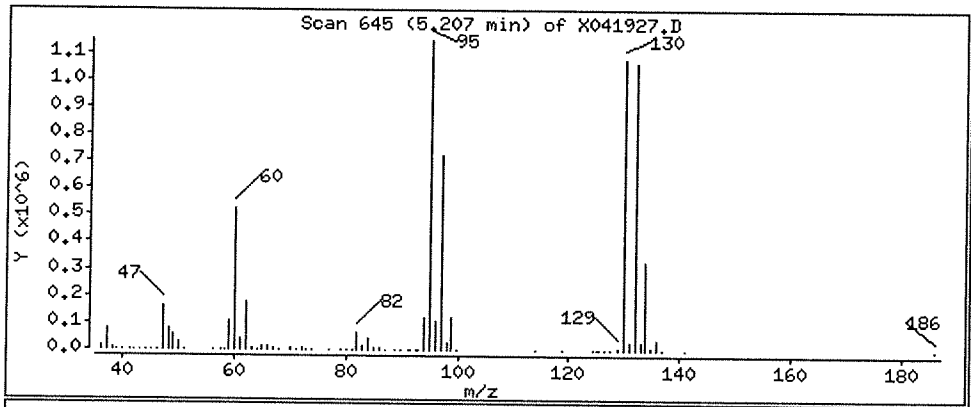
Operator: PC

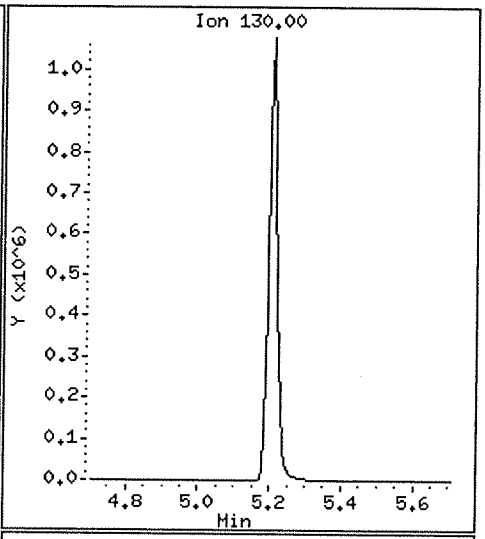
Column phase: DB624

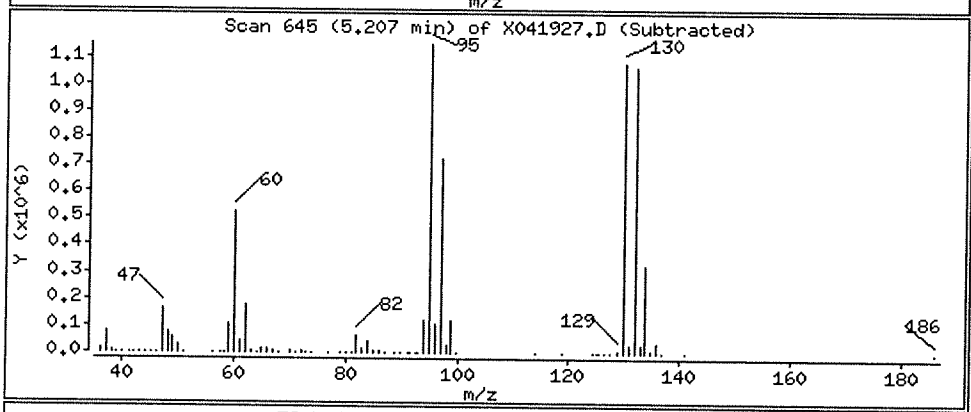
Column diameter: 0.18

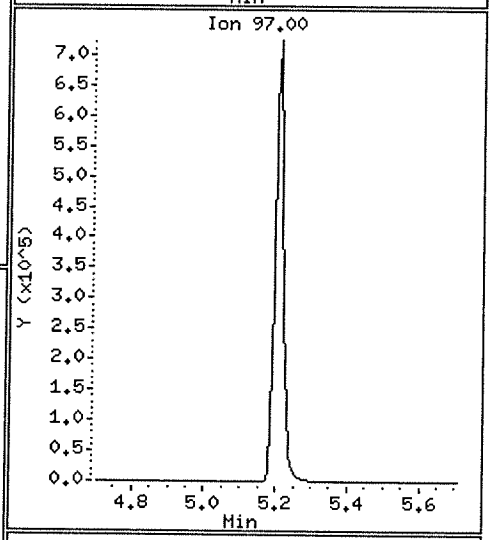
38 Trichloroethene

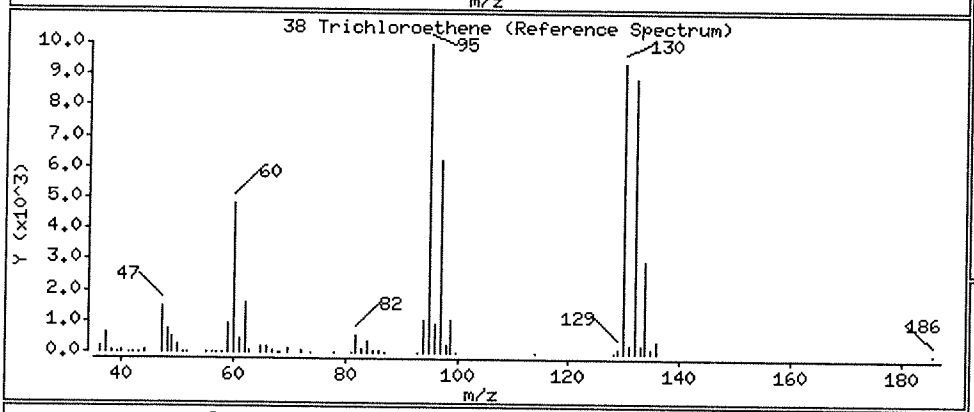
Concentration: 9357.32 ug/l

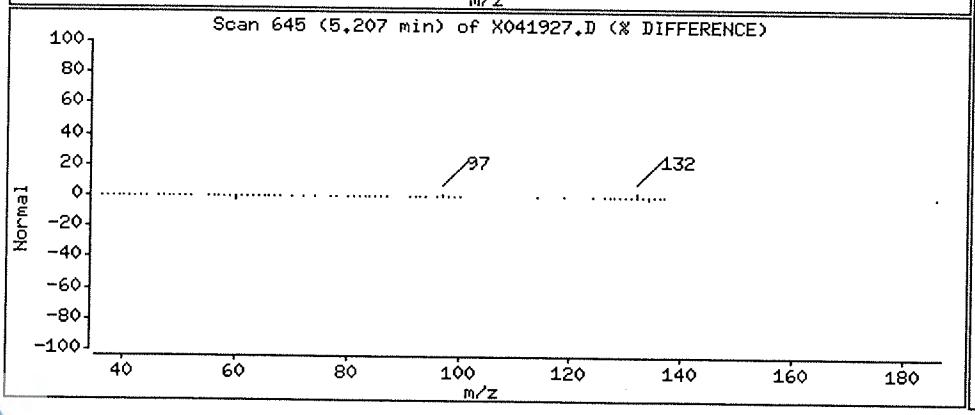


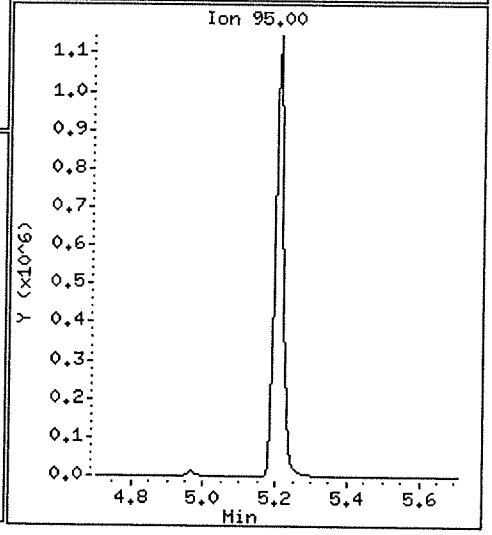












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210419.b\X041927.D

Date : 19-APR-2021 20:12

Client ID: HS21040859-03

Instrument: voa6.i

Sample Info: HS21040859-03;HS21040859-03;;;

Purge Volume: 5.0

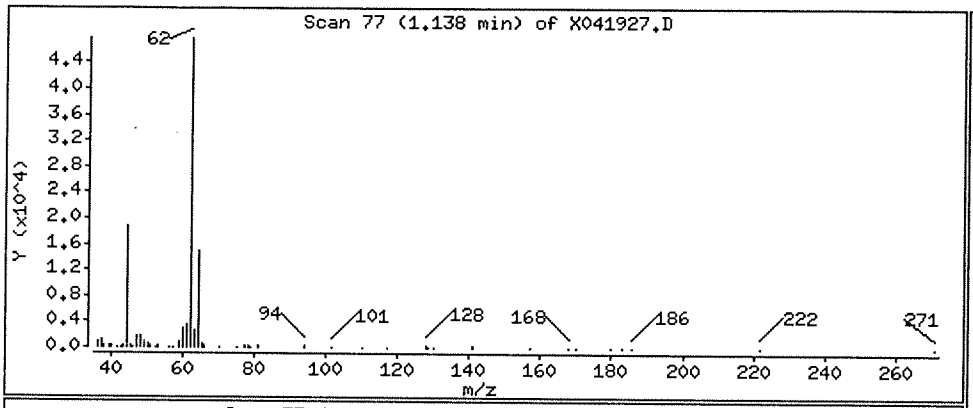
Operator: PC

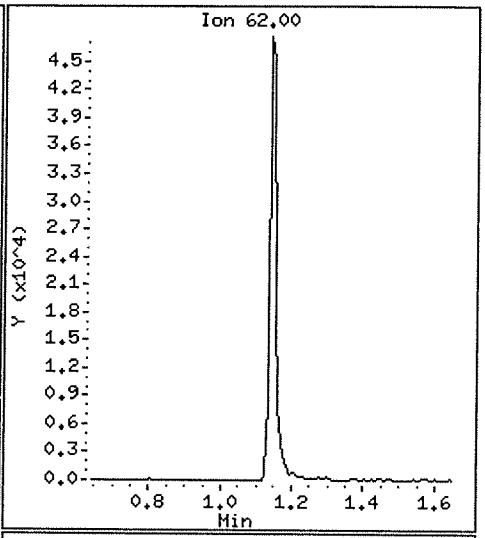
Column phase: DB624

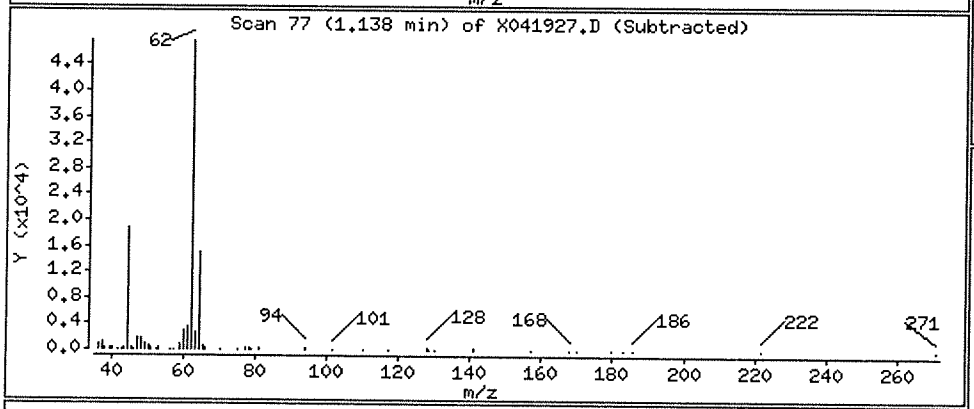
Column diameter: 0.18

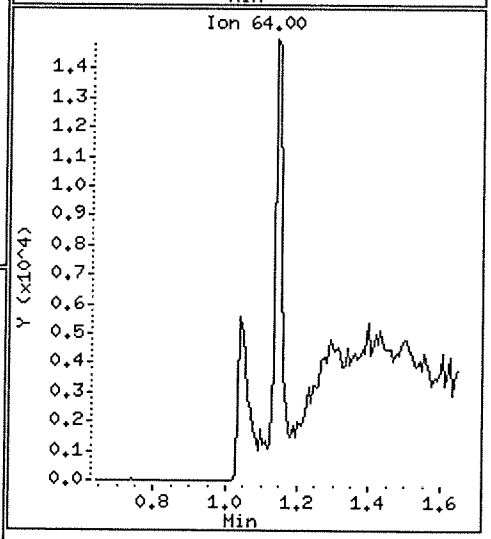
5 Vinyl Chloride

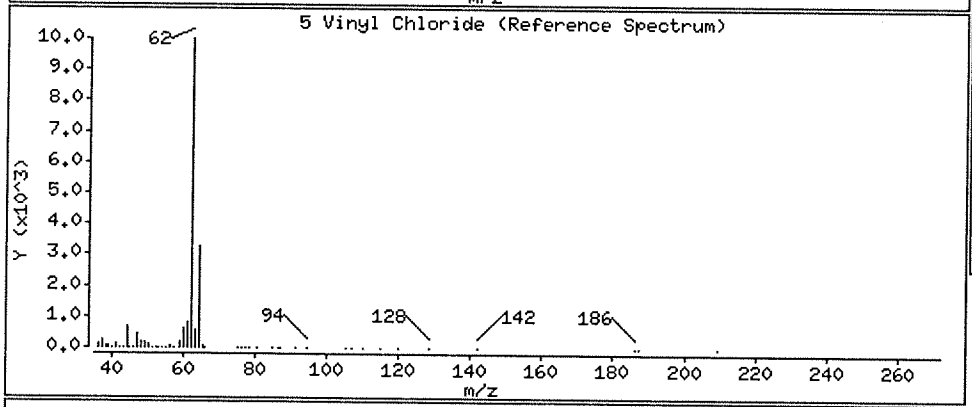
Concentration: 241.63 ug/l

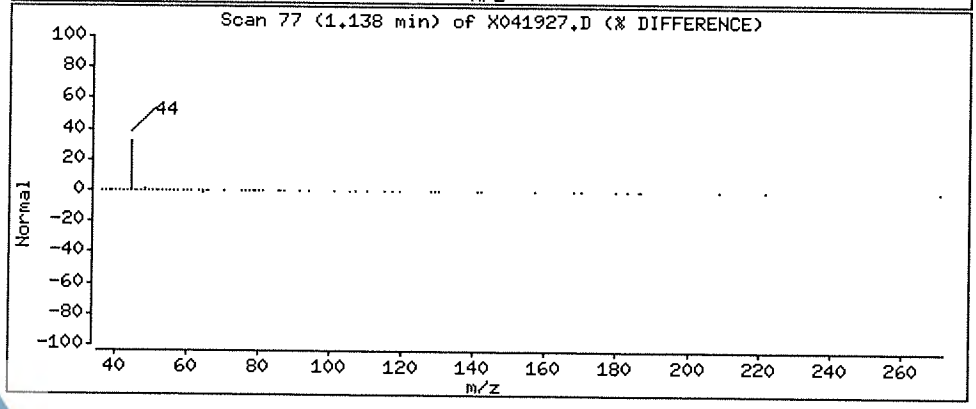












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210419.b\X041928.D Page 1
Report Date: 05-May-2021 10:26

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X210419.b\X041928.D
Lab Smp Id: HS21040859-03 Client Smp ID: HS21040859-03
Inj Date : 19-APR-2021 20:33
Operator : PC Inst ID: voa6.i
Smp Info : HS21040859-03;HS21040859-03;;;
Misc Info : HS18090001;WATER;0;250;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X210419.b\8260W.m
Meth Date : 05-May-2021 10:25 Qin.Xu Quant Type: ISTD
Cal Date : 02-APR-2021 13:20 Cal File: X040208.D
Als bottle: 27
Dil Factor: 250.00000
Integrator: HP RTE Compound Sublist: CBI_short1.sub
Target Version: 4.14
Processing Host: NAHSTW7066

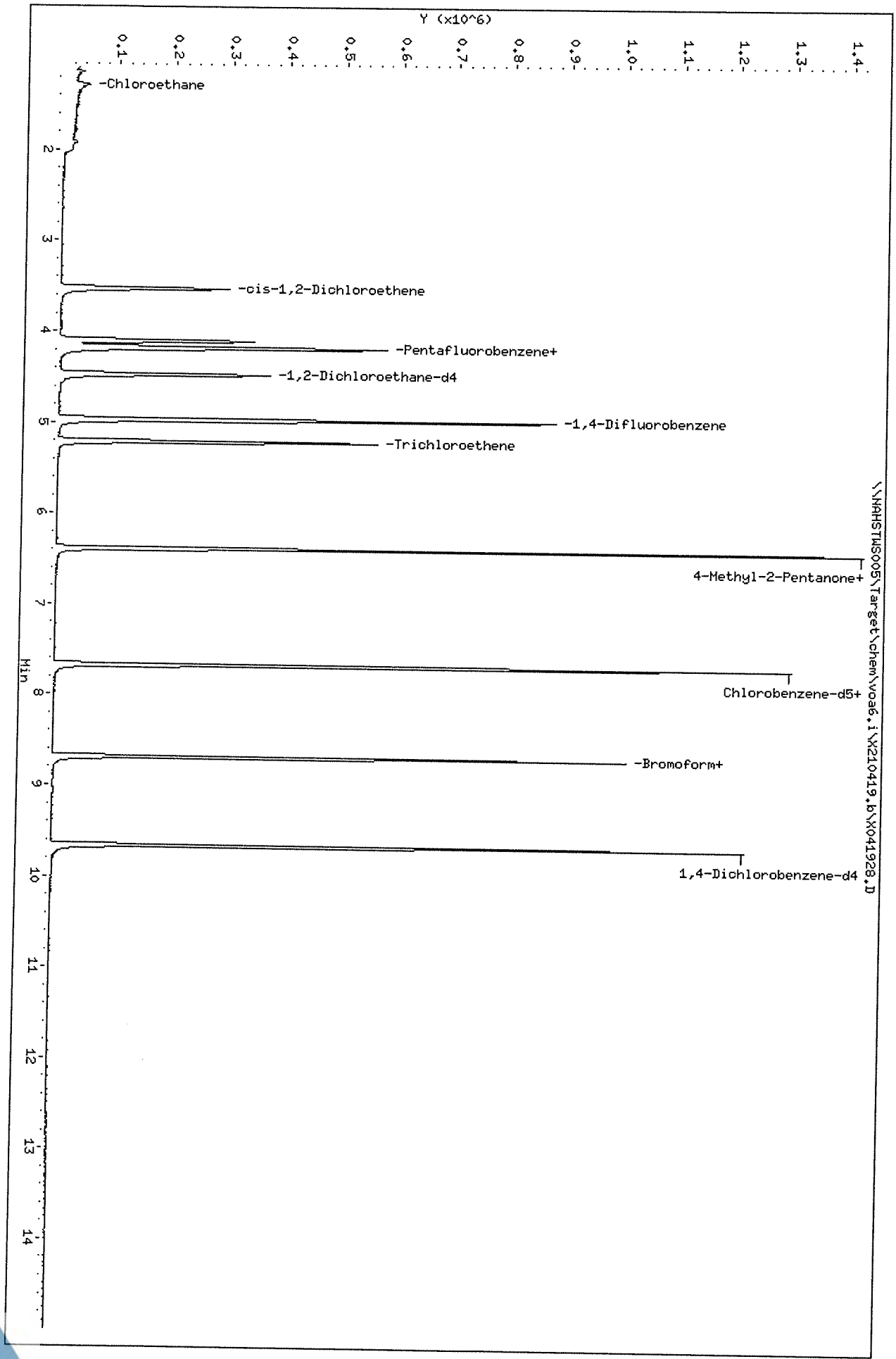
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	250.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	426527	50.0000	
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	693259	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	598862	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	257972	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	233257	46.4817	46.48
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	295833	49.1767	49.17
$ 48 Toluene-d8	98	6.389	6.388	(0.833)	825222	53.4759	53.47
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	272905	47.6000	47.59
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	147241	28.2399	7059.98
38 Trichloroethene	130	5.207	5.207	(1.049)	170142	35.8511	8962.77
5 Vinyl Chloride	62	1.145	1.145	(0.274)	6774	1.05935	264.83

Data File: \\NAHSTWS005\Target\chem\voa6.i\X210419.b\X041928.D
Date : 19-APR-2021 20:33
Client ID: HS21040859-03
Sample Info: HS21040859-03;HS21040859-03;;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18



Data File: \\NAHSTWS005\Target\chem\voa6.i\X210419.b\X041928.D

Date : 19-APR-2021 20:33

Client ID: HS21040859-03

Instrument: voa6.i

Sample Info: HS21040859-03;HS21040859-03;;;

Purge Volume: 5.0

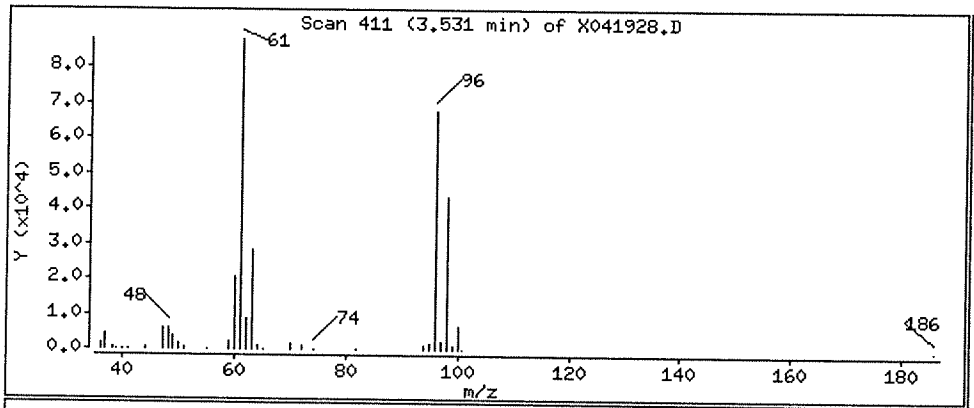
Operator: PC

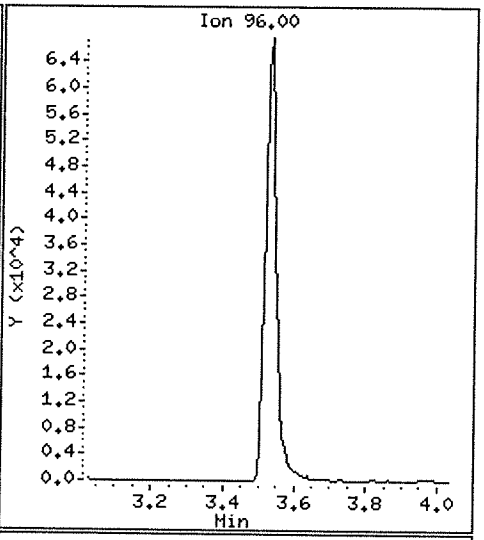
Column phase: DB624

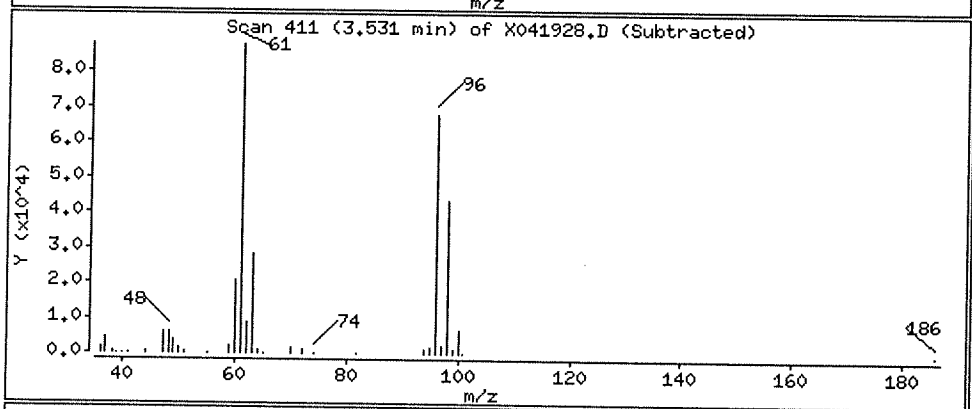
Column diameter: 0.18

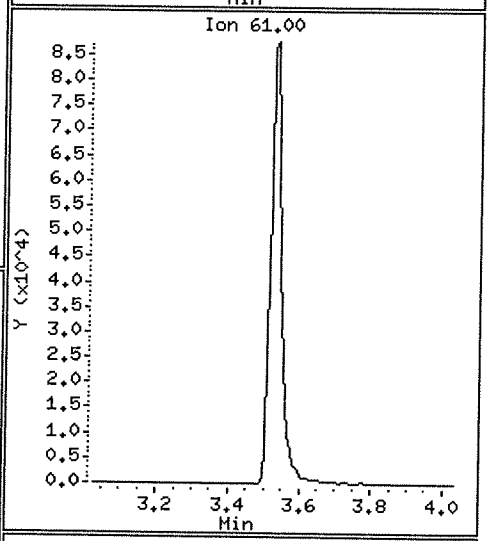
27 cis-1,2-Dichloroethene

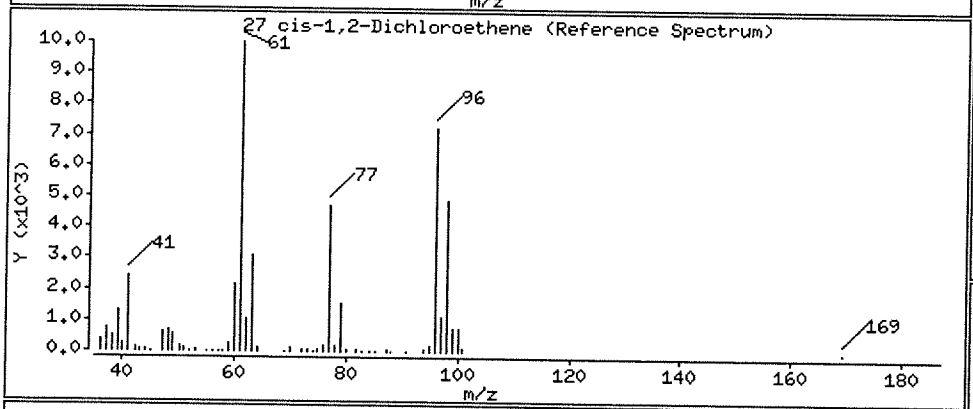
Concentration: 7059.98 ug/l

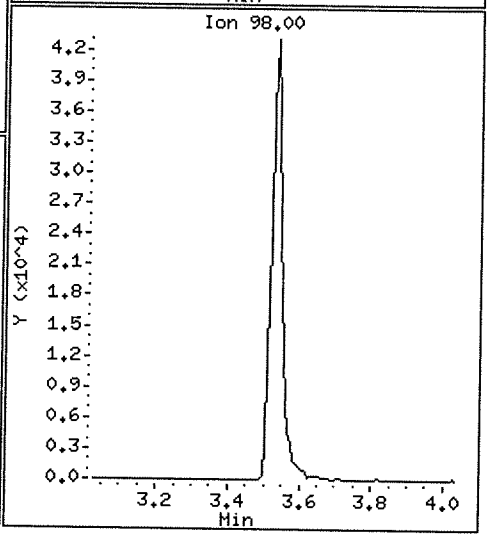


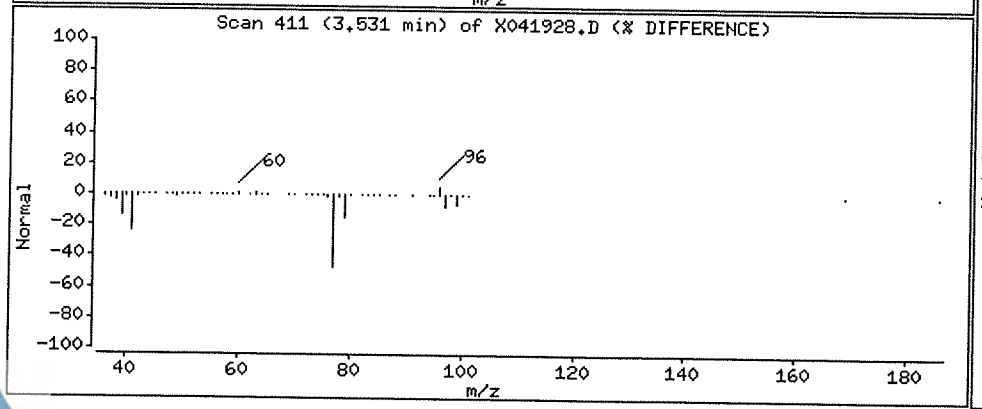












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210419.b\X041928.D

Date : 19-APR-2021 20:33

Client ID: HS21040859-03

Instrument: voa6.i

Sample Info: HS21040859-03;HS21040859-03;;;

Purge Volume: 5.0

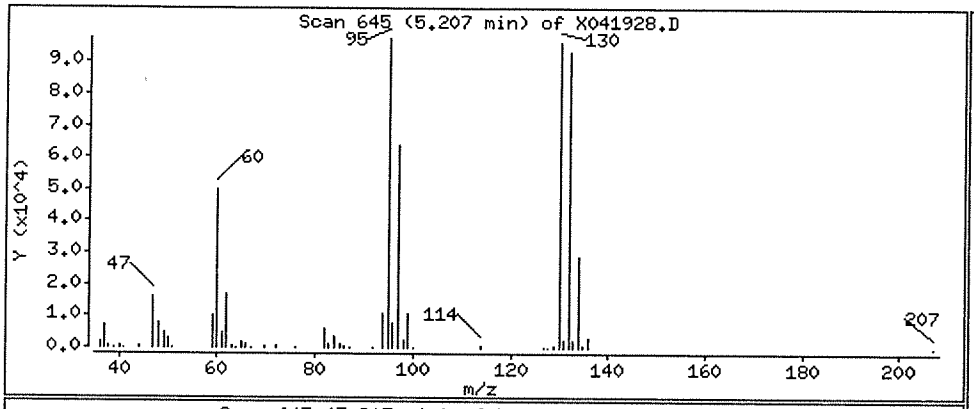
Operator: PC

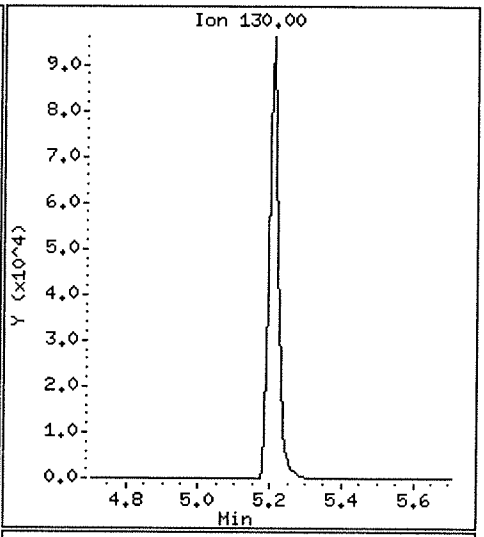
Column phase: DB624

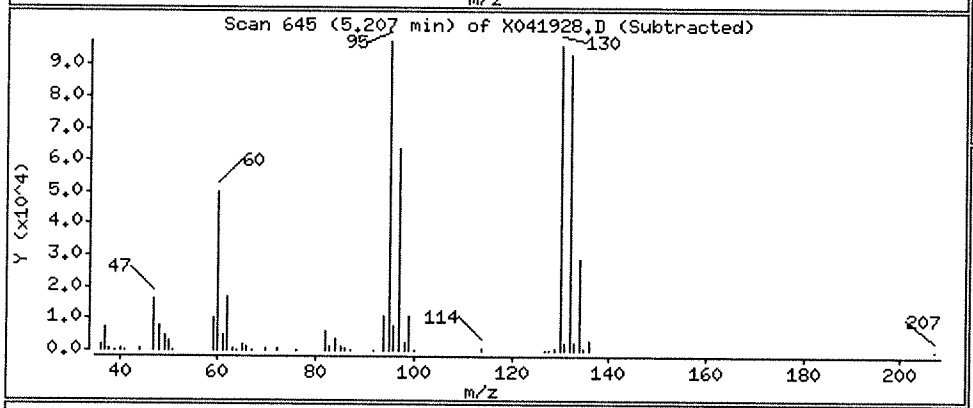
Column diameter: 0.18

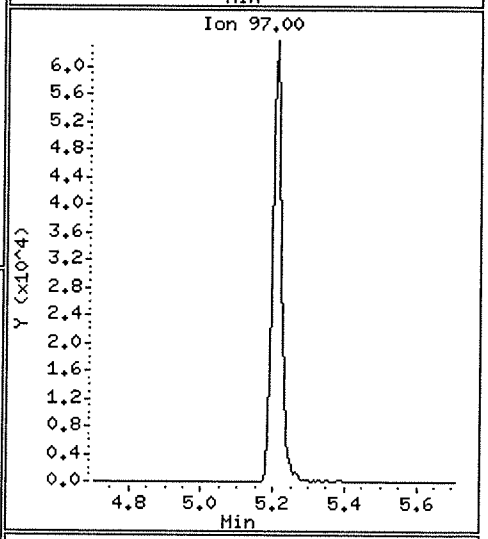
38 Trichloroethene

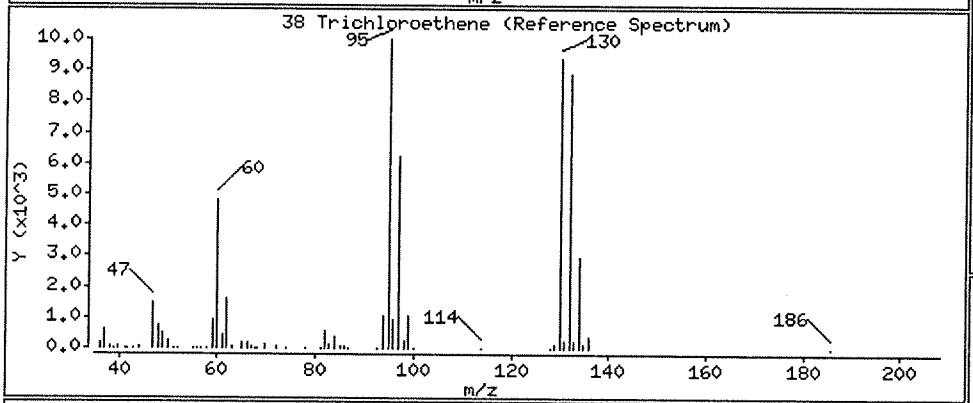
Concentration: 8962.77 ug/l

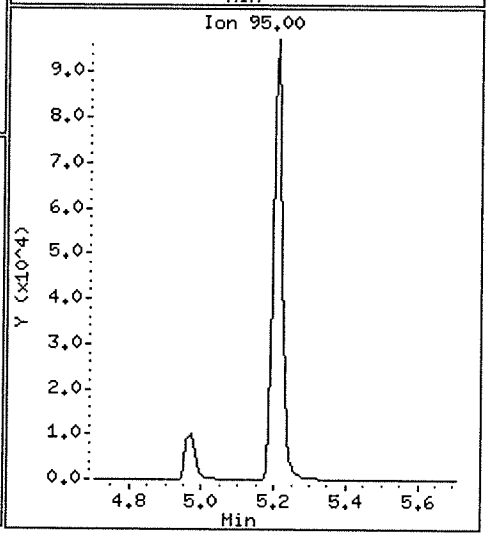


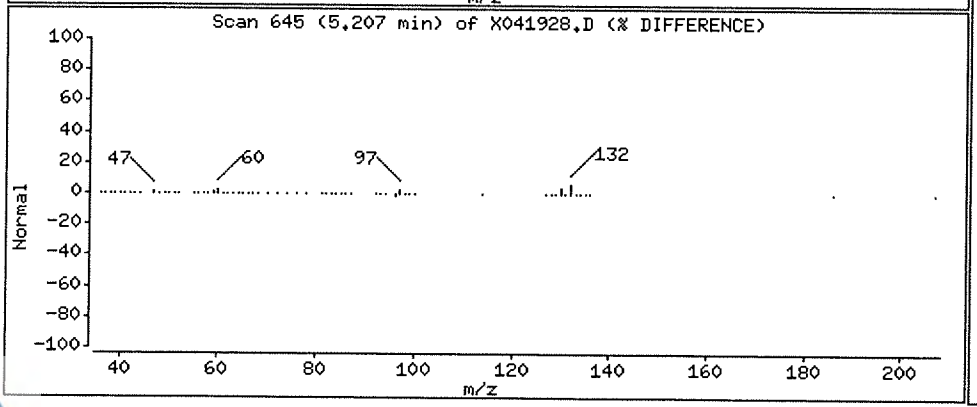












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210419.b\X041928.D

Date : 19-APR-2021 20:33

Client ID: HS21040859-03

Instrument: voa6.i

Sample Info: HS21040859-03;HS21040859-03;;;

Purge Volume: 5.0

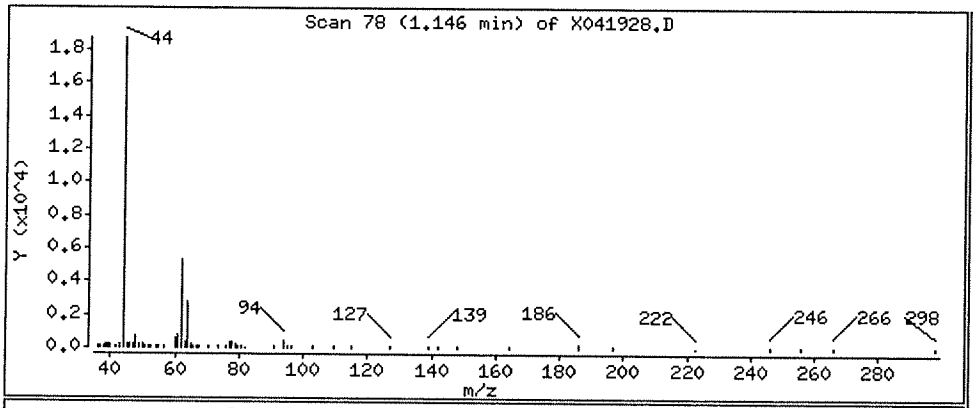
Operator: PC

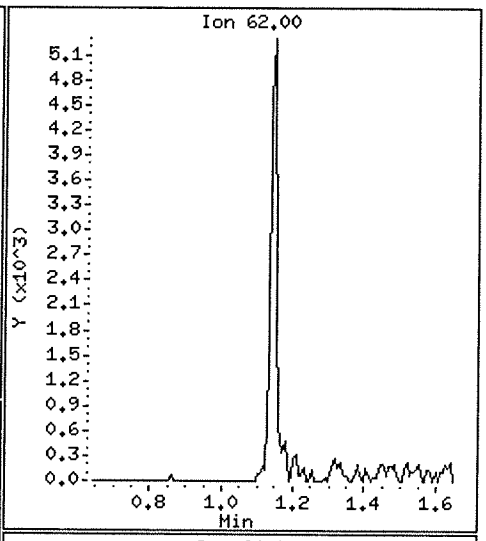
Column phase: DB624

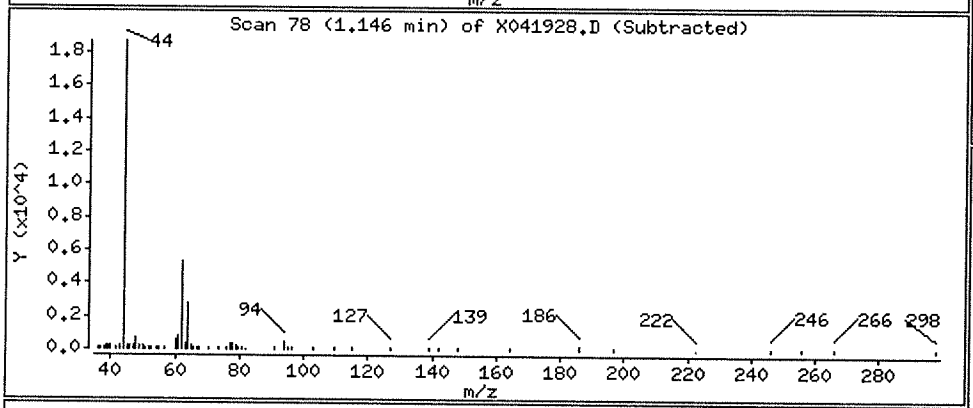
Column diameter: 0.18

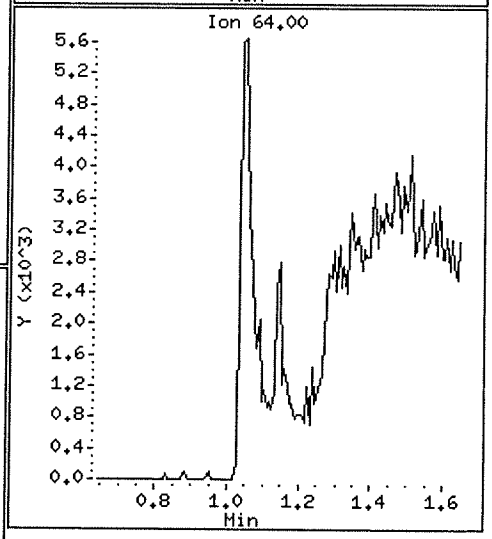
5 Vinyl Chloride

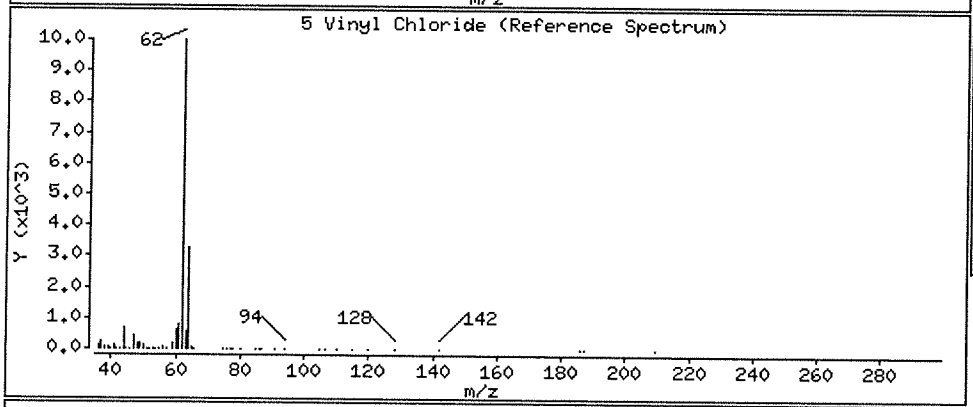
Concentration: 264.83 ug/l

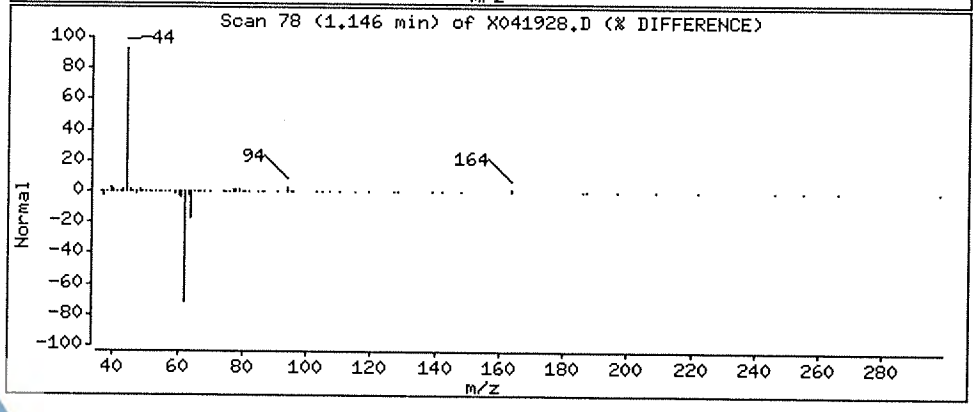












ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X210419.b\X041929.D
Lab Smp Id: HS21040859-07 Client Smp ID: HS21040859-07
Inj Date : 19-APR-2021 20:54
Operator : PC Inst ID: voa6.i
Smp Info : HS21040859-07;HS21040859-07;;;
Misc Info : HS18090001;WATER;0;50;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X210419.b\8260W.m
Meth Date : 05-May-2021 10:25 Qin.Xu Quant Type: ISTD
Cal Date : 02-APR-2021 13:20 Cal File: X040208.D
Als bottle: 28
Dil Factor: 50.00000
Integrator: HP RTE Compound Sublist: CBI_short1.sub
Target Version: 4.14
Processing Host: NAHSTW7066

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	50.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	432482	50.0000	
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	686496	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	601036	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	259549	50.0000	
$ 30 Dibromofluoromethane	113	4.104	4.103	(0.981)	235618	46.3073	46.30
$ 35 1,2-Dichloroethane-d4	65	4.469	4.476	(1.068)	298281	48.9036	48.90
$ 48 Toluene-d8	98	6.389	6.388	(0.833)	830991	53.6488	53.64
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	274700	47.7349	47.73
11 1,1-Dichloroethene	96	1.912	1.919	(0.457)	4102	0.66613	33.30(a)
33 1,2-Dichloroethane	62	4.562	4.555	(0.919)	4707	0.64778	32.38(a)
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	1274542	241.084	12054.17(A)
38 Trichloroethene	130	5.207	5.207	(1.049)	2920948	621.545	31077.23(A)
5 Vinyl Chloride	62	1.145	1.145	(0.274)	33095	5.10429	255.21

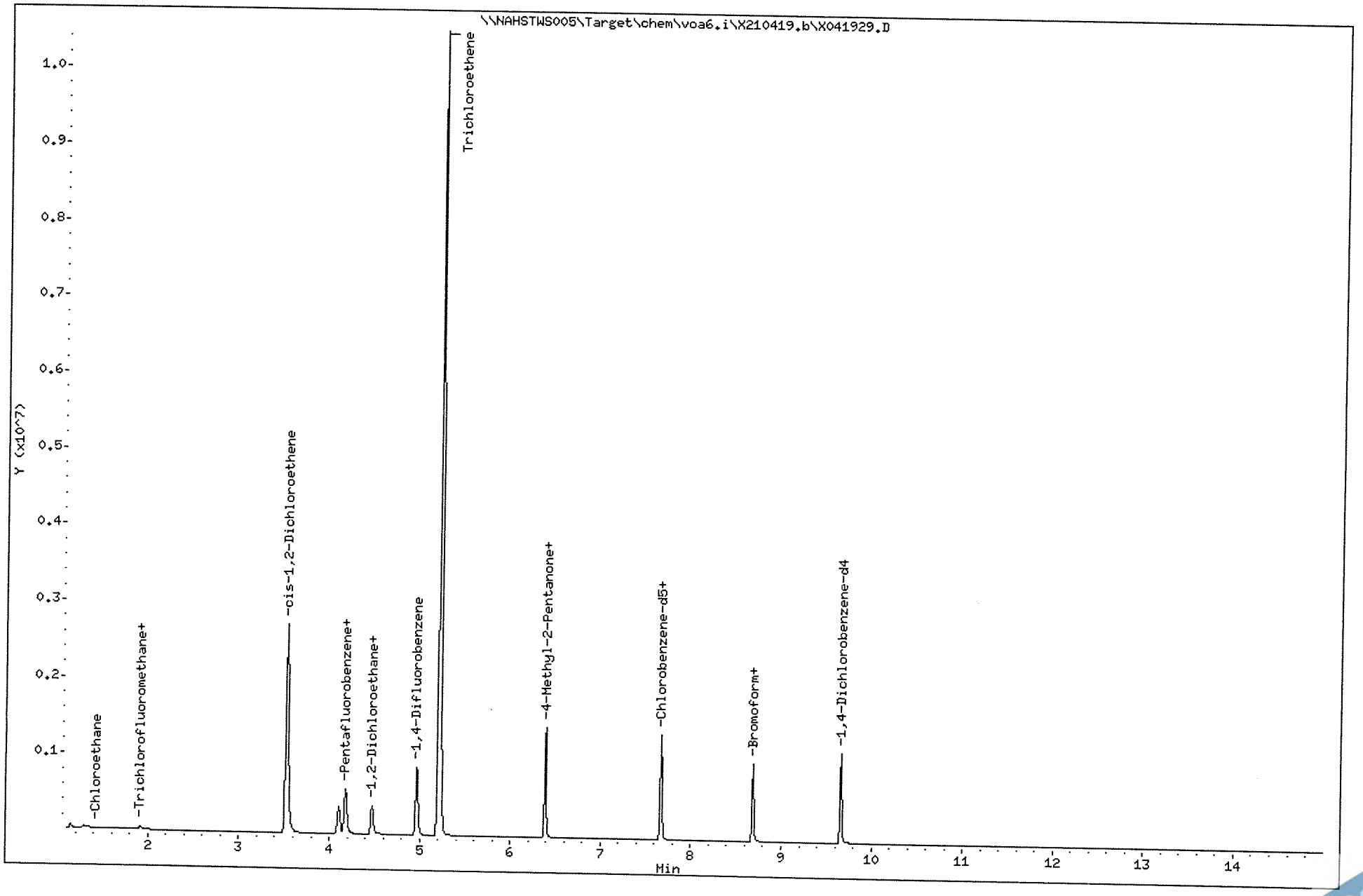
QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).
A - Target compound detected but, quantitated amount exceeded maximum amount.

Data File: \\NAHSTWS005\Target\chem\voa6.i\X210419.b\X041929.D
Date : 19-APR-2021 20:54
Client ID: HS21040859-07
Sample Info: HS21040859-07;HS21040859-07;;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i

Operator: PC
Column diameter: 0.18



Data File: \\NAHSTWS005\Target\chem\voa6.i\X210419.b\X041929.D

Date : 19-APR-2021 20:54

Client ID: HS21040859-07

Instrument: voa6.i

Sample Info: HS21040859-07;HS21040859-07;;;

Purge Volume: 5.0

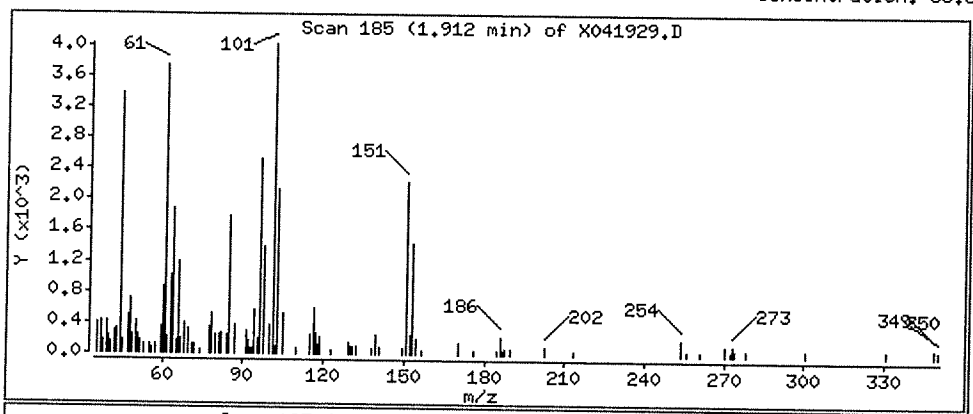
Operator: PC

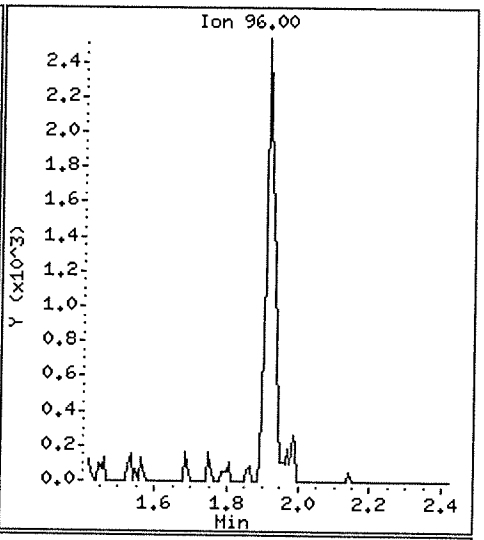
Column phase: DB624

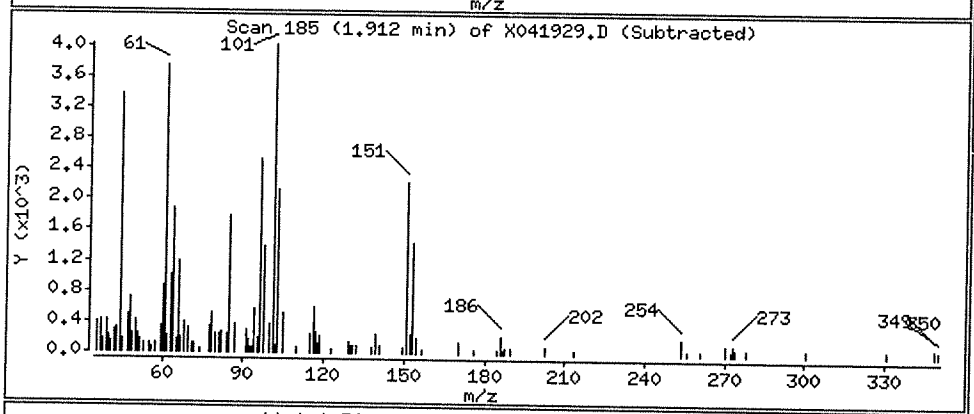
Column diameter: 0.18

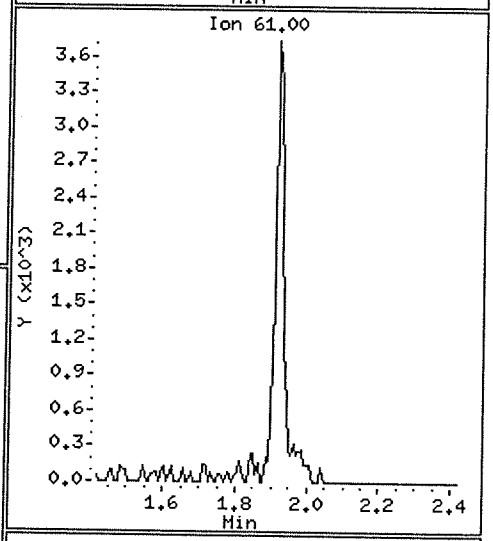
11 1,1-Dichloroethene

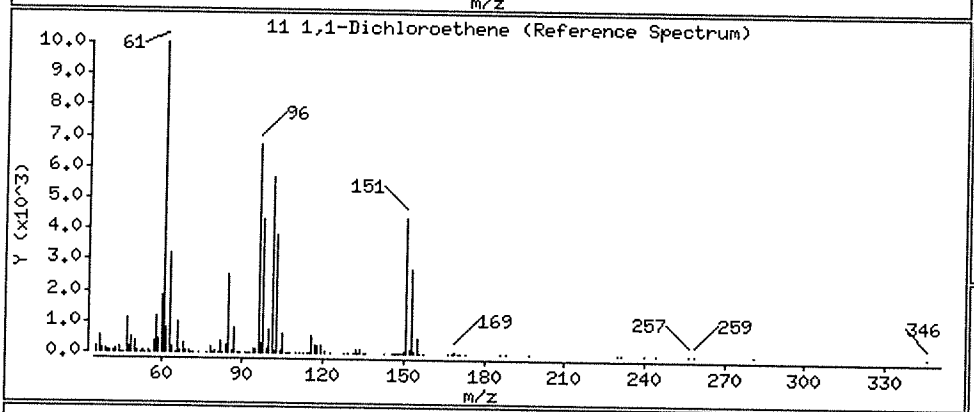
Concentration: 33.30 ug/l

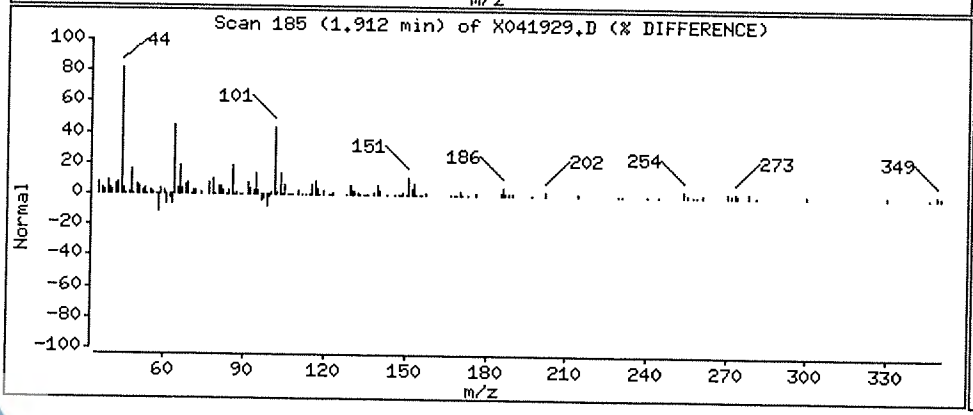


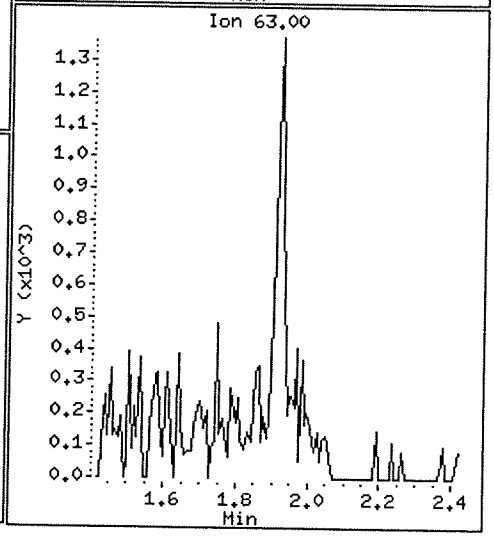












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210419.b\X041929.D

Date : 19-APR-2021 20:54

Client ID: HS21040859-07

Instrument: voa6.i

Sample Info: HS21040859-07;HS21040859-07;;;

Purge Volume: 5.0

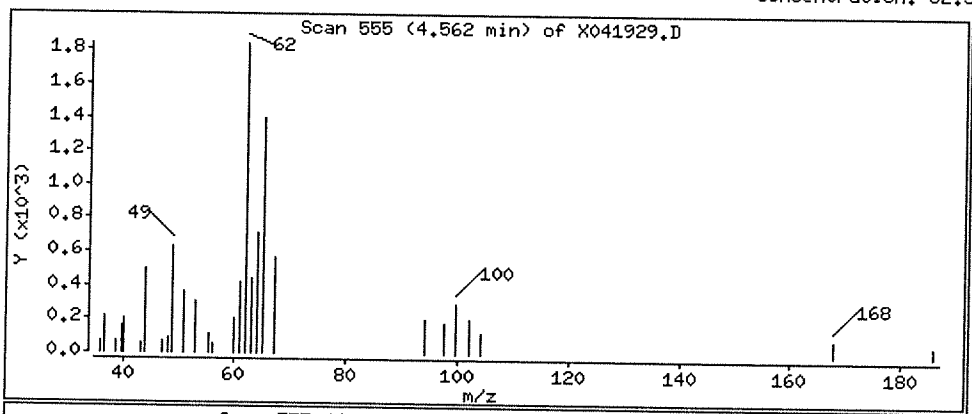
Operator: PC

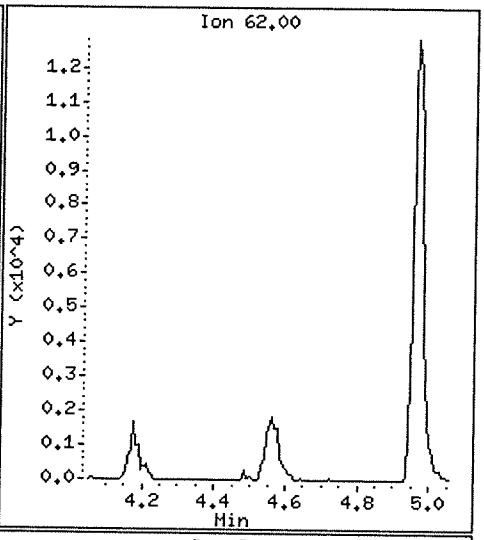
Column phase: DB624

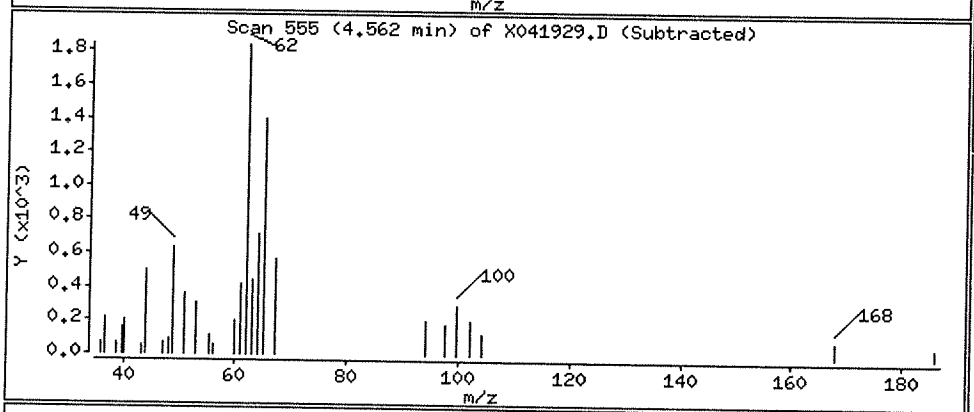
Column diameter: 0.18

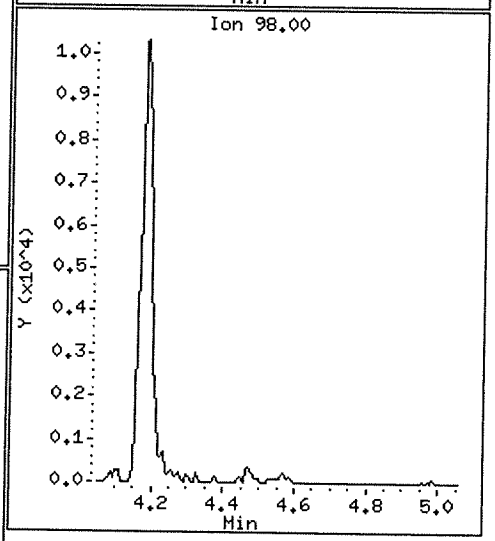
33 1,2-Dichloroethane

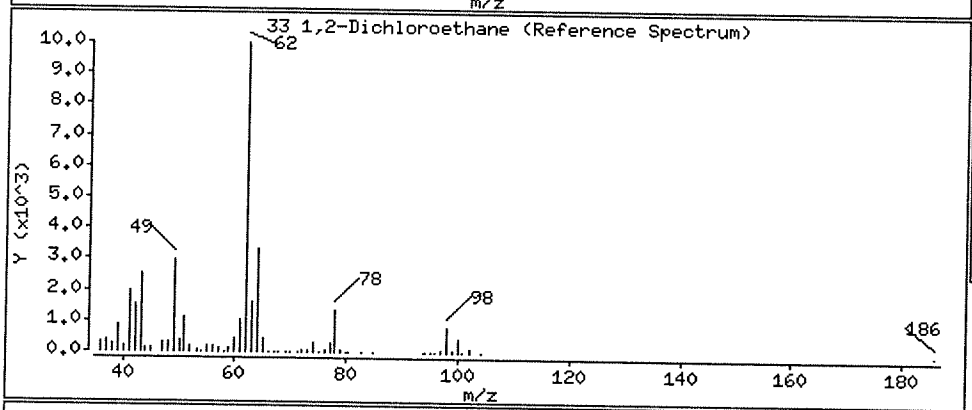
Concentration: 32.38 ug/l

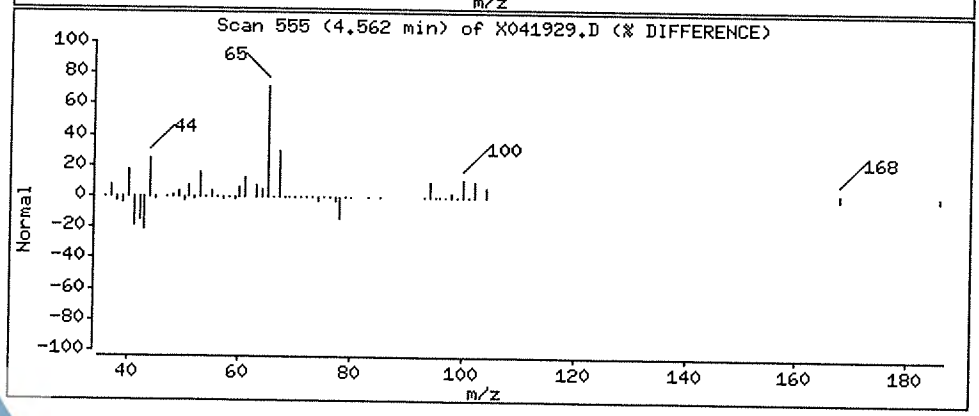












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210419.b\X041929.D

Date : 19-APR-2021 20:54

Client ID: HS21040859-07

Instrument: voa6.i

Sample Info: HS21040859-07;HS21040859-07;;;

Purge Volume: 5.0

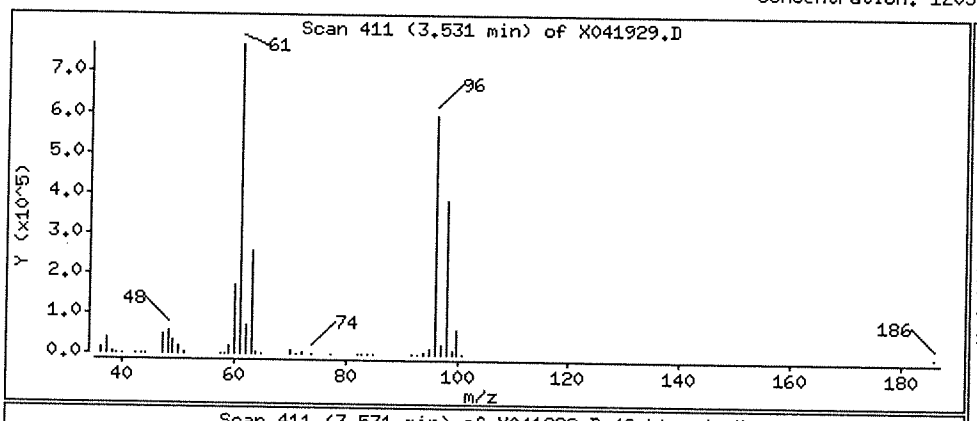
Operator: PC

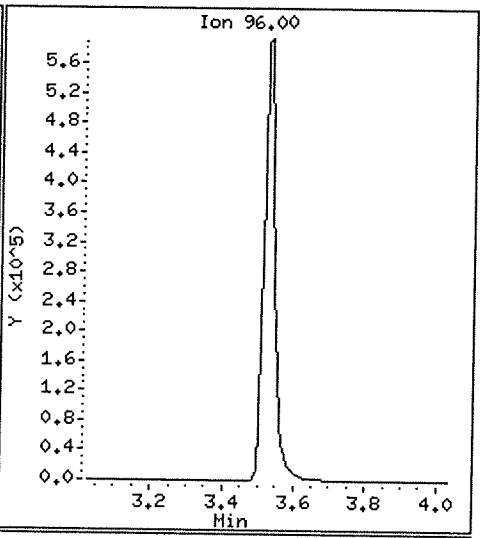
Column phase: DB624

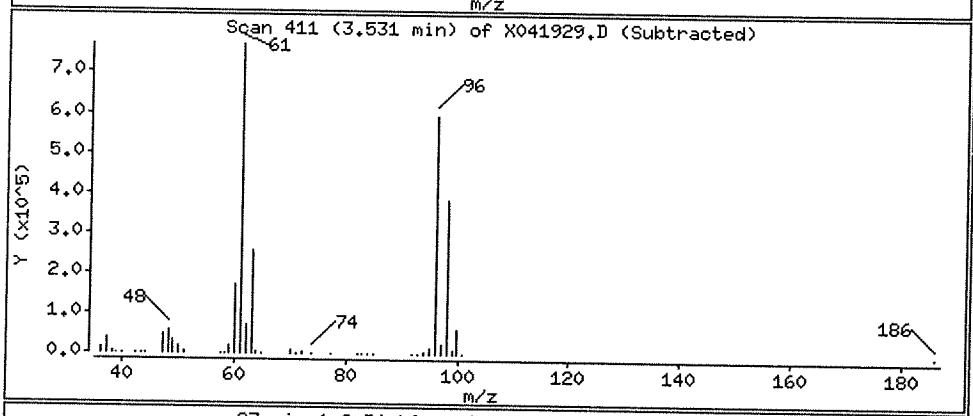
Column diameter: 0.18

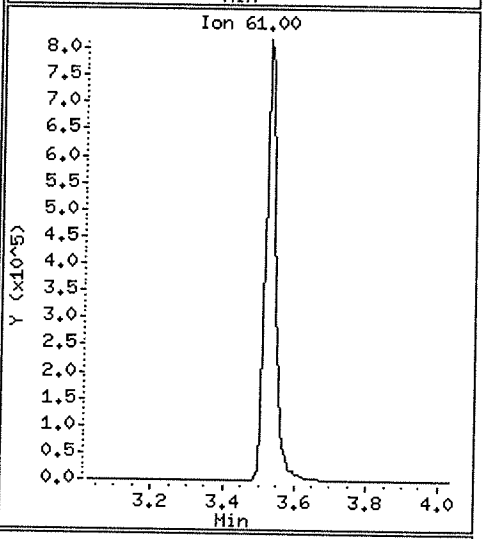
27 cis-1,2-Dichloroethene

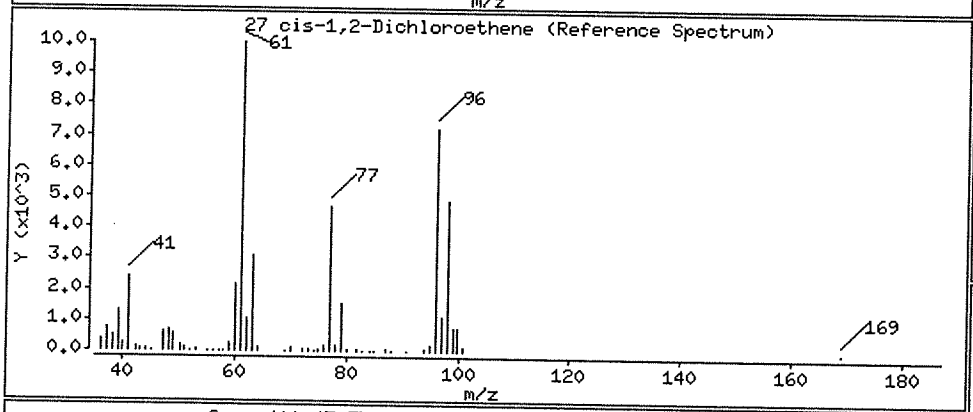
Concentration: 12054.17 ug/l

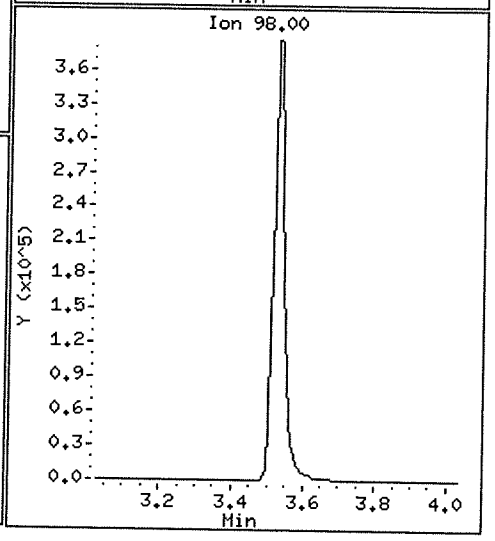


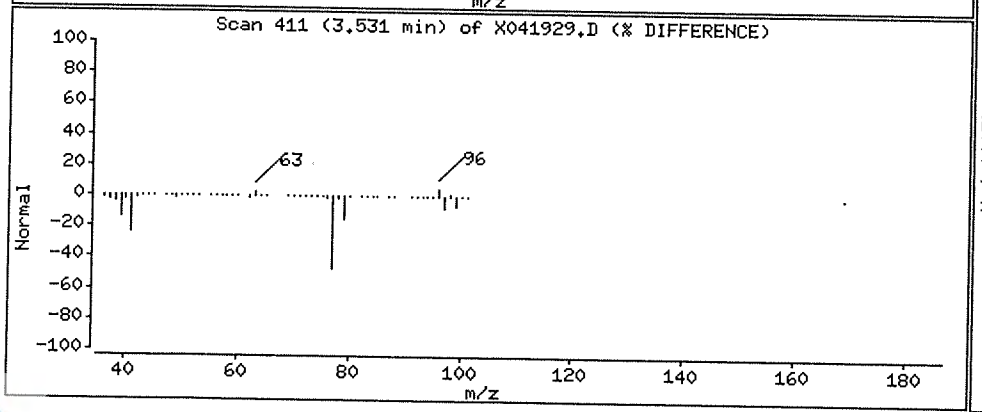












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210419.b\X041929.D

Date : 19-APR-2021 20:54

Client ID: HS21040859-07

Instrument: voa6.i

Sample Info: HS21040859-07;HS21040859-07;;;

Purge Volume: 5.0

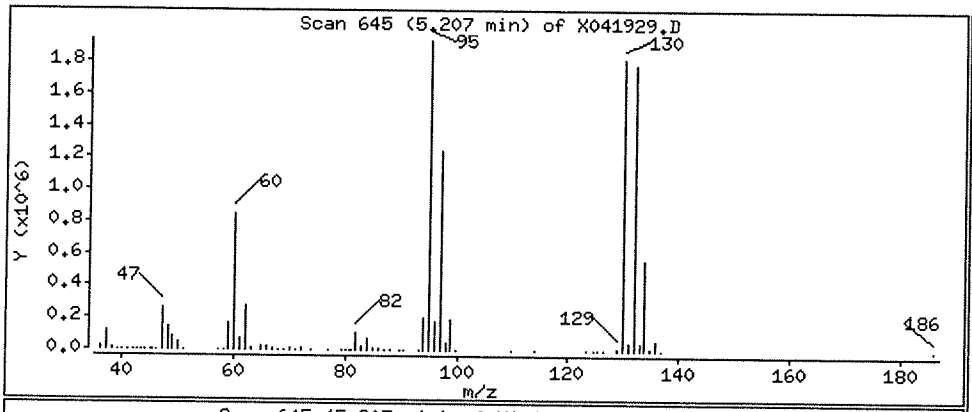
Operator: PC

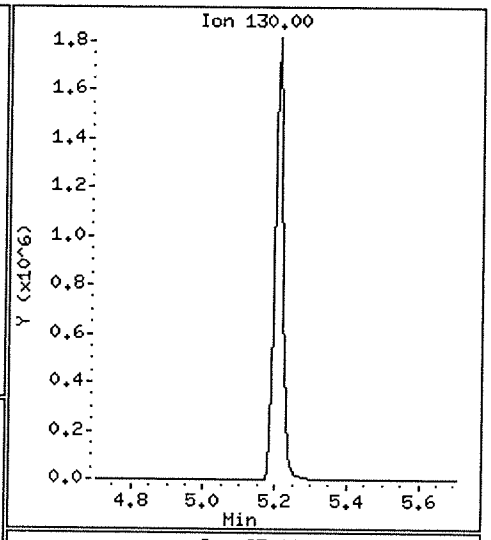
Column phase: DB624

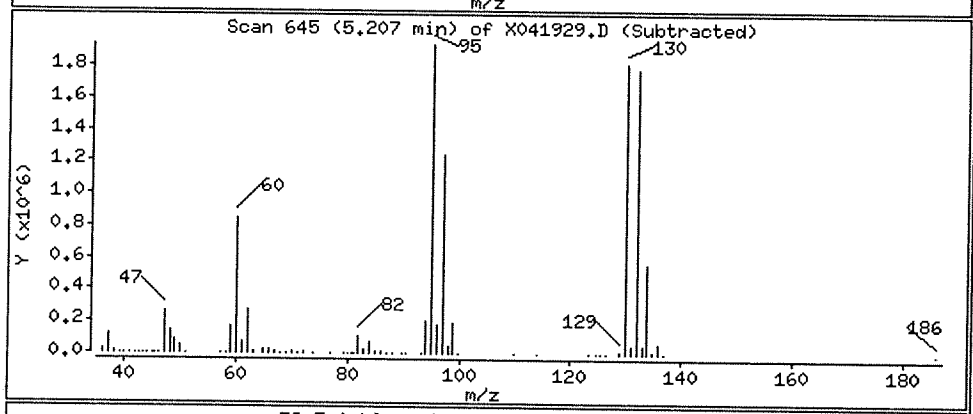
Column diameter: 0.18

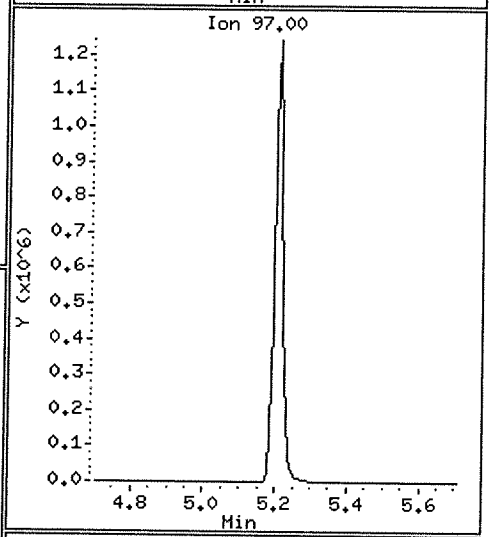
38 Trichloroethene

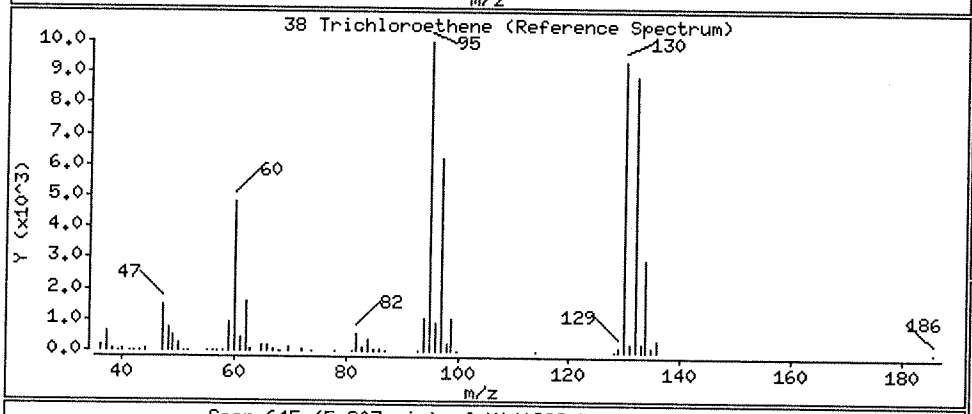
Concentration: 31077.23 ug/l

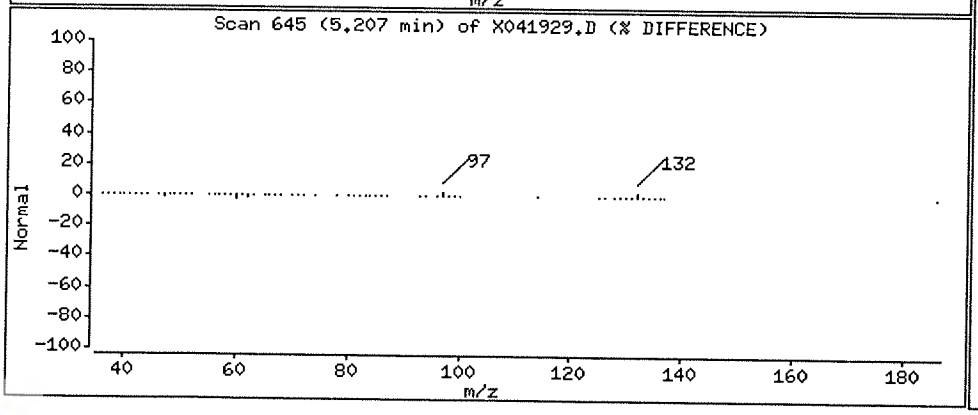


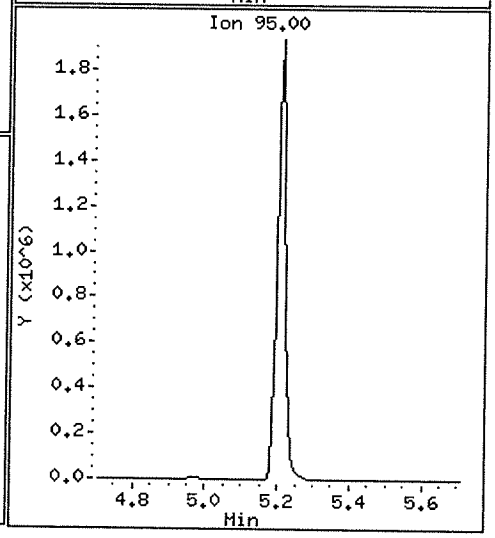












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210419.b\X041929.D

Date : 19-APR-2021 20:54

Client ID: HS21040859-07

Instrument: voa6.i

Sample Info: HS21040859-07;HS21040859-07;;;

Purge Volume: 5.0

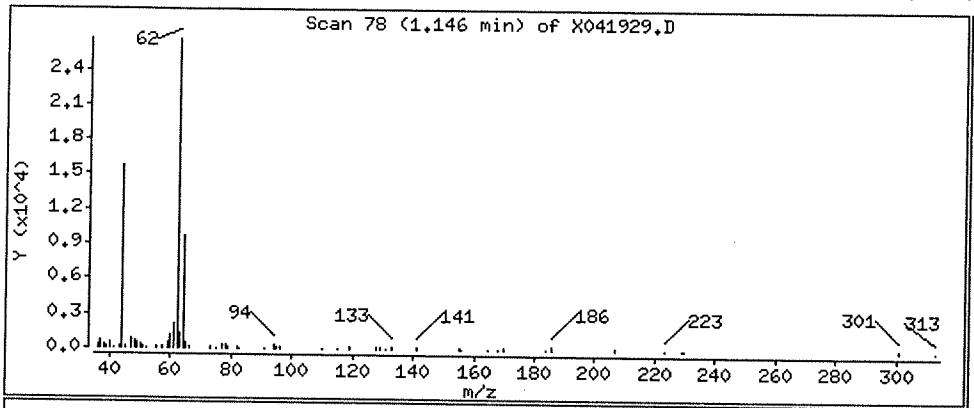
Operator: PC

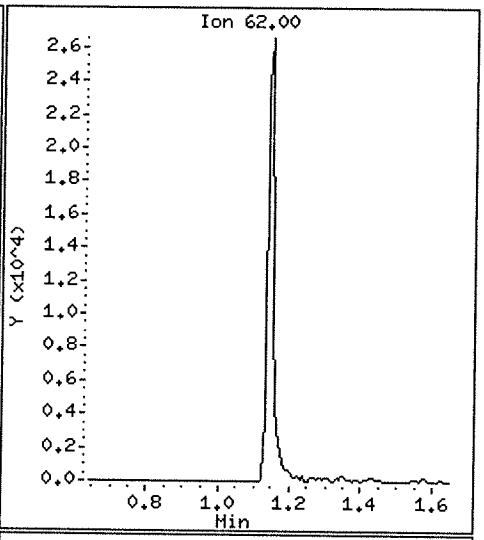
Column phase: DB624

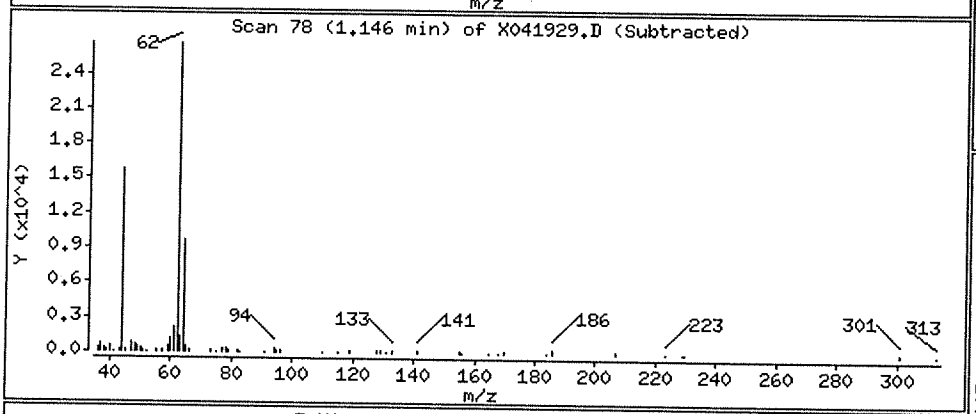
Column diameter: 0.18

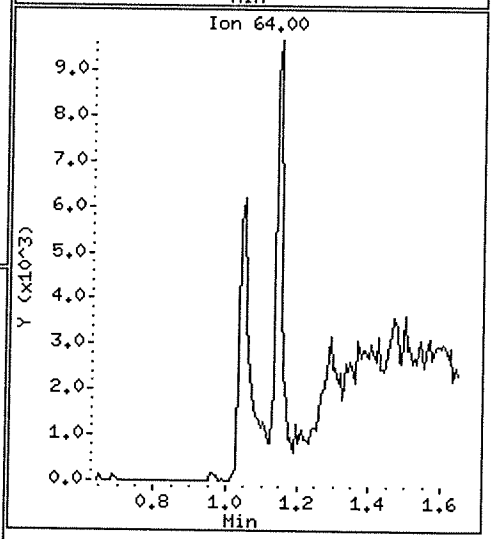
5 Vinyl Chloride

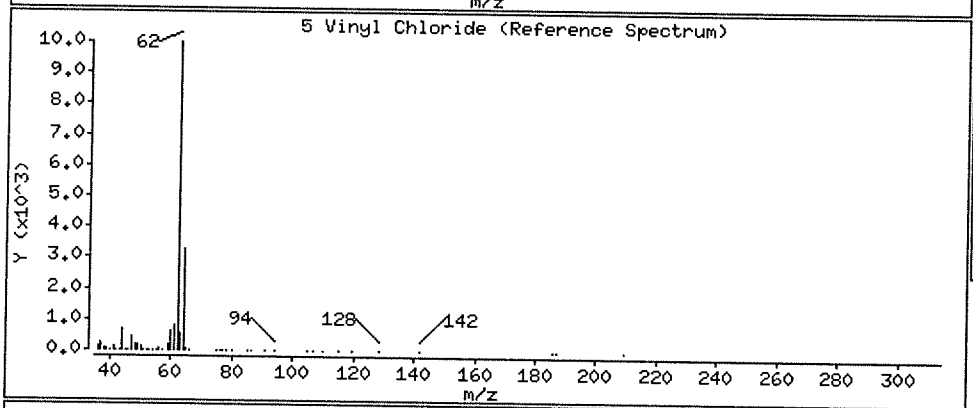
Concentration: 255.21 ug/l

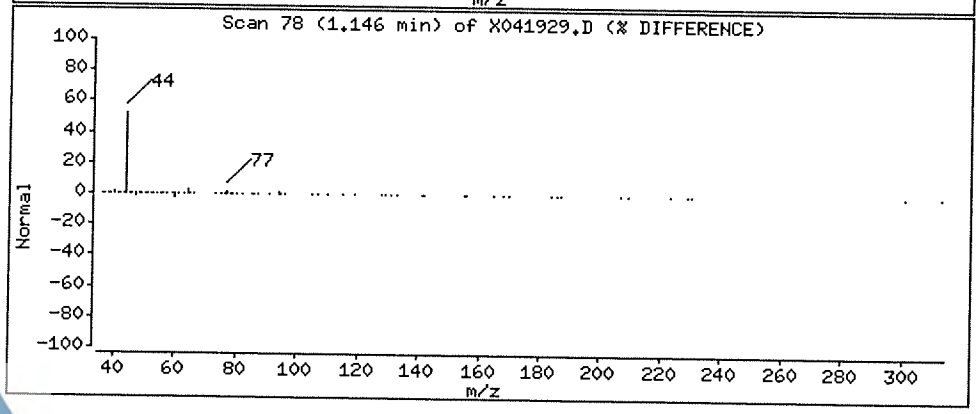












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210419.b\X041930.D Page 1
Report Date: 05-May-2021 10:26

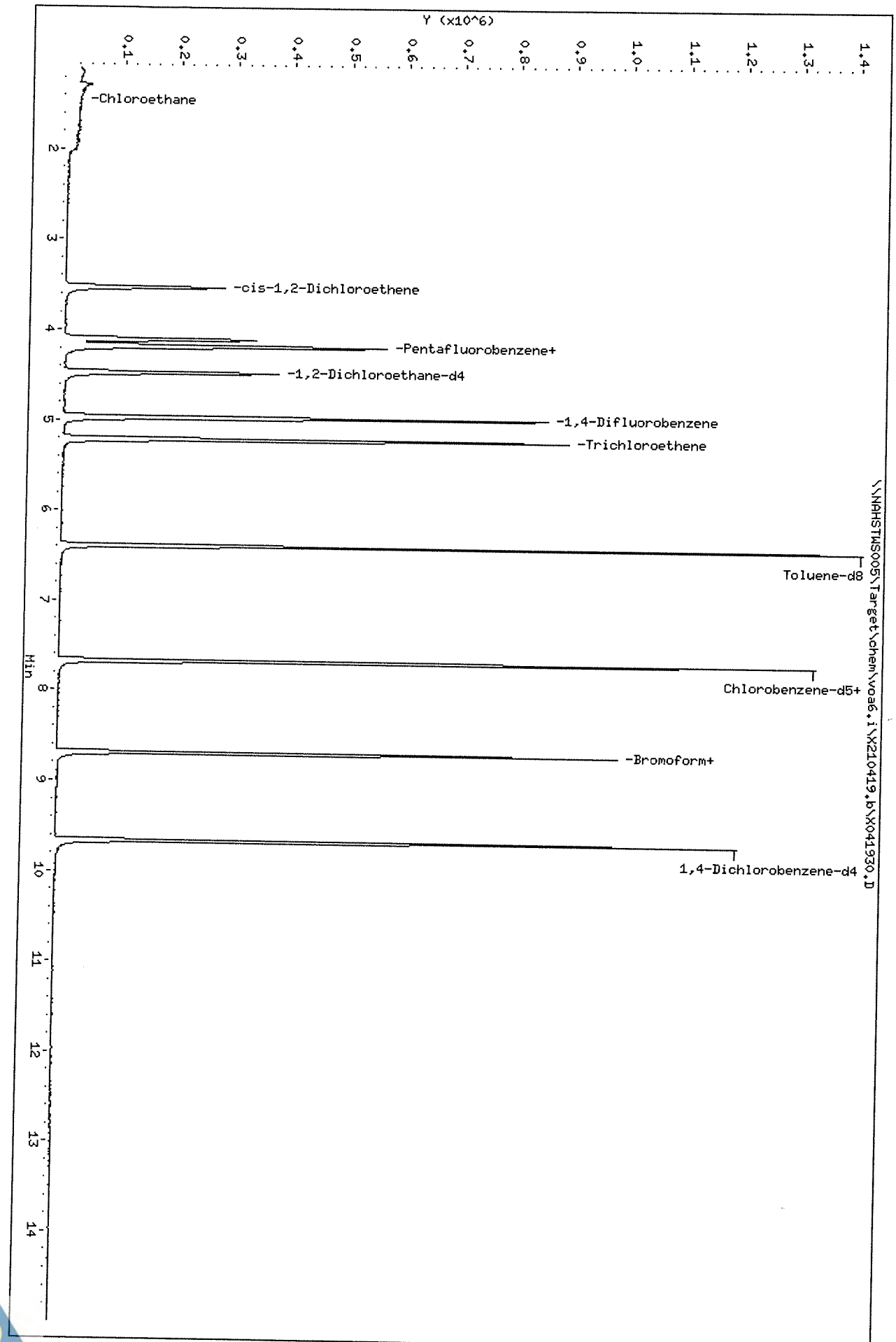
ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X210419.b\X041930.D
Lab Smp Id: HS21040859-07 Client Smp ID: HS21040859-07
Inj Date : 19-APR-2021 21:15
Operator : PC Inst ID: voa6.i
Smp Info : HS21040859-07;HS21040859-07;;;
Misc Info : HS18090001;WATER;0;500;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X210419.b\8260W.m
Meth Date : 05-May-2021 10:25 Qin.Xu Quant Type: ISTD
Cal Date : 02-APR-2021 13:20 Cal File: X040208.D
Als bottle: 29
Dil Factor: 500.00000
Integrator: HP RTE Compound Sublist: CBI_short1.sub
Target Version: 4.14
Processing Host: NAHSTW7066

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	500.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	424000	50.0000	
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	682649	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	604565	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	250253	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	231872	46.4810	46.48
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	293661	49.1073	49.10
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	823834	52.9030	52.90
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	276119	47.7026	47.70
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	134988	26.0442	13022.09
38 Trichloroethene	130	5.207	5.207	(1.049)	265052	56.7179	28358.94
5 Vinyl Chloride	62	1.145	1.145	(0.274)	3804	0.59843	299.21



Data File: \\NAHSTWS005\Target\chem\voa6.i\X210419.b\X041930.D
Date : 19-APR-2021 21:15
Client ID: HS21040859-07
Sample Info: HS21040859-07;HS21040859-07;;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\NAHSTWS005\Target\chem\voa6.i\X210419.b\X041930.D

Date : 19-APR-2021 21:15

Client ID: HS21040859-07

Instrument: voa6.i

Sample Info: HS21040859-07;HS21040859-07;;;

Purge Volume: 5.0

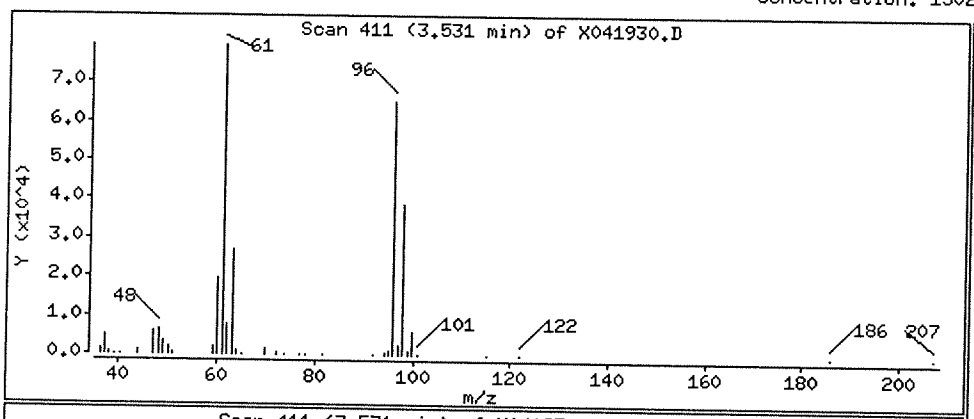
Operator: PC

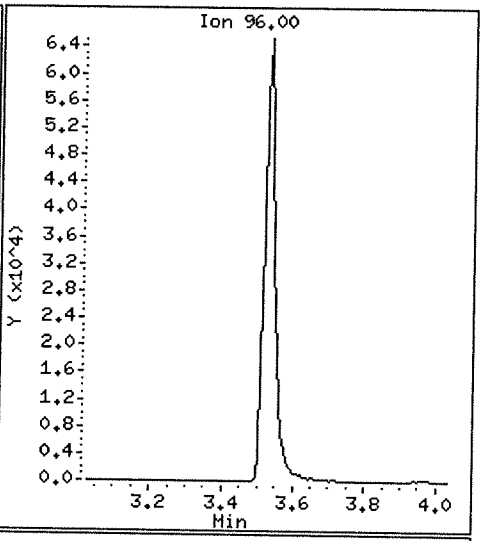
Column phase: DB624

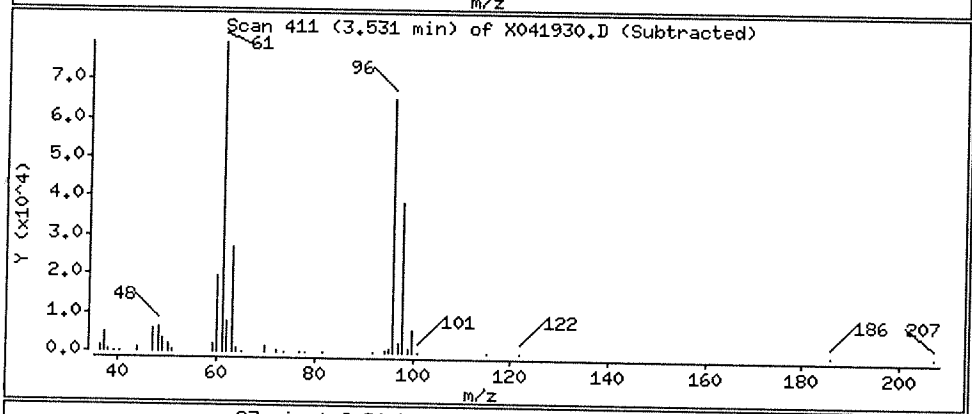
Column diameter: 0.18

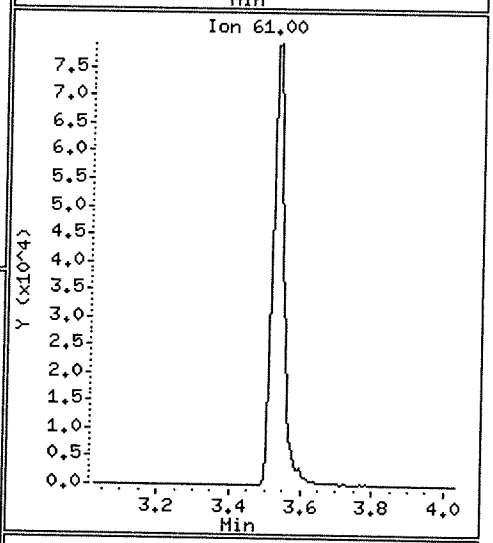
27 cis-1,2-Dichloroethene

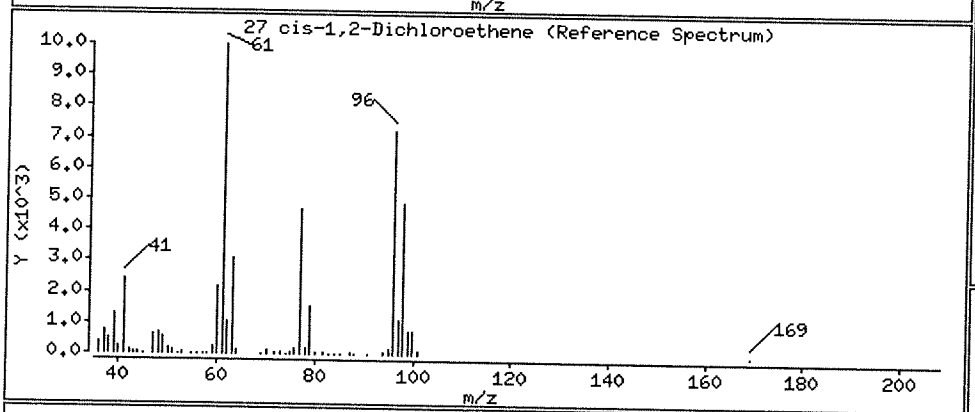
Concentration: 13022.09 ug/l

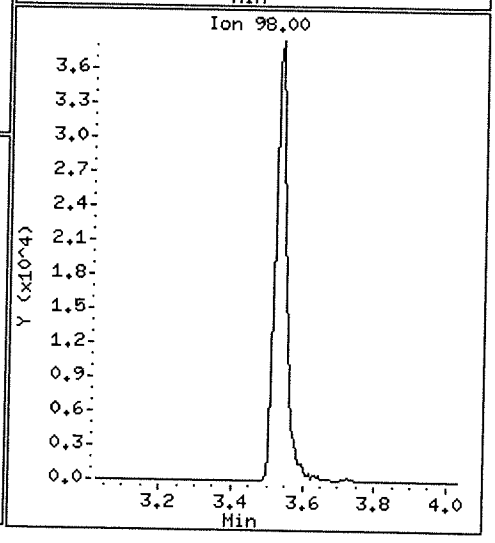


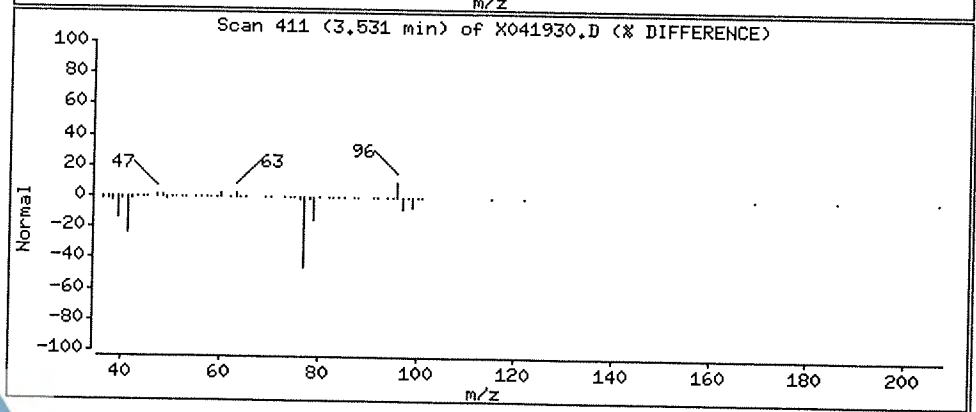












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210419.b\X041930.D

Date : 19-APR-2021 21:15

Client ID: HS21040859-07

Instrument: voa6.i

Sample Info: HS21040859-07;HS21040859-07;;;

Purge Volume: 5.0

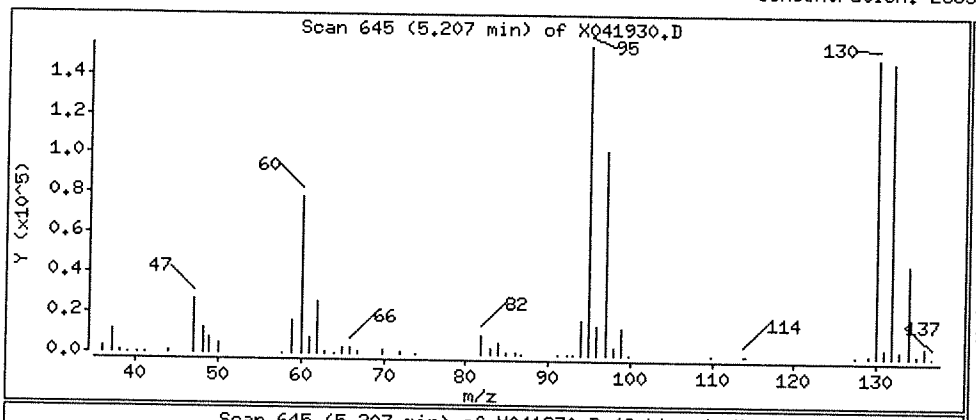
Operator: PC

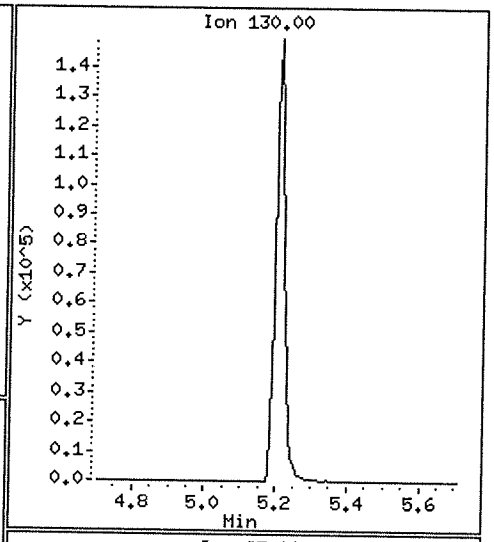
Column phase: DB624

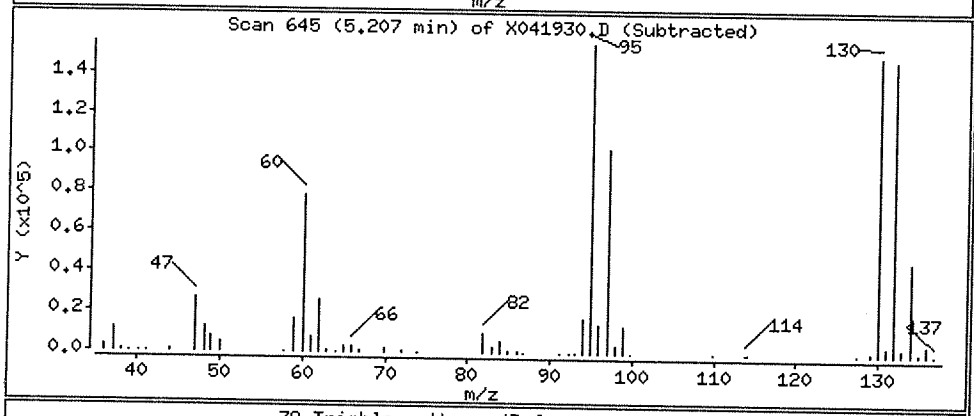
Column diameter: 0.18

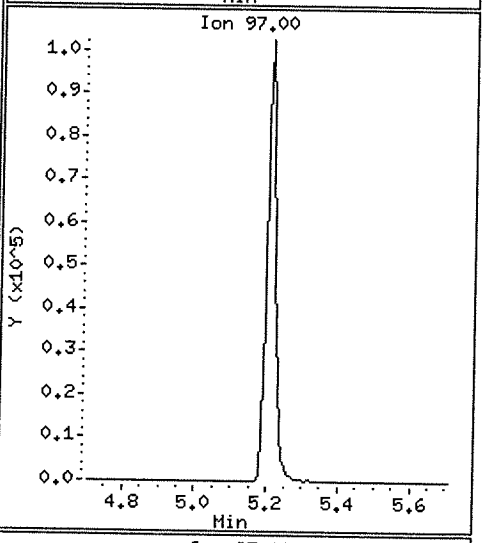
38 Trichloroethene

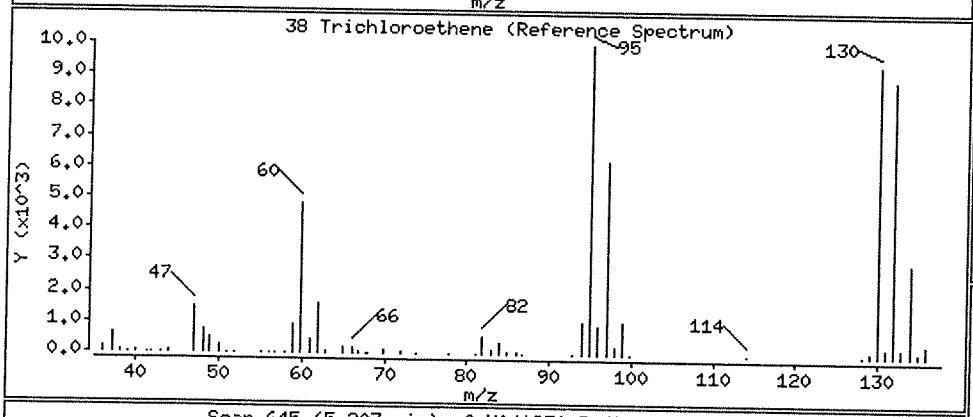
Concentration: 28358.94 ug/l

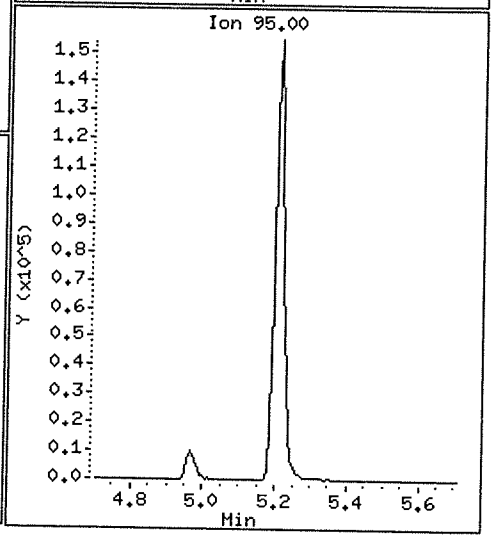


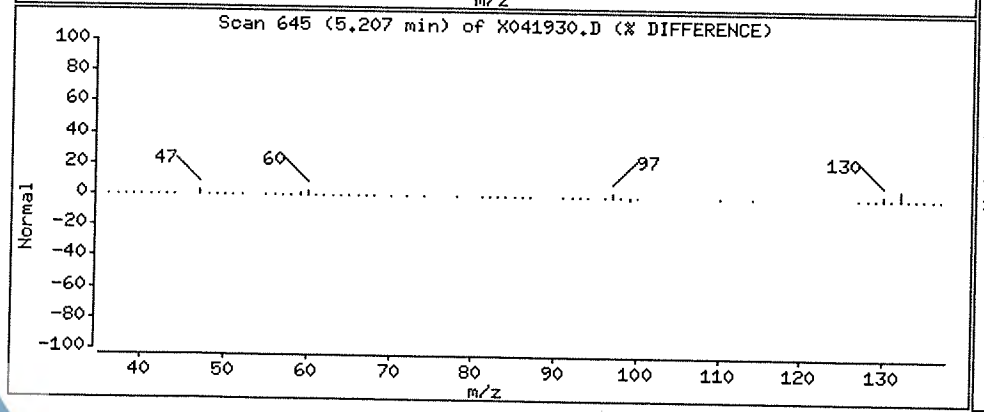












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210419.b\X041930.D

Date : 19-APR-2021 21:15

Client ID: HS21040859-07

Instrument: voa6.i

Sample Info: HS21040859-07;HS21040859-07;;;

Purge Volume: 5.0

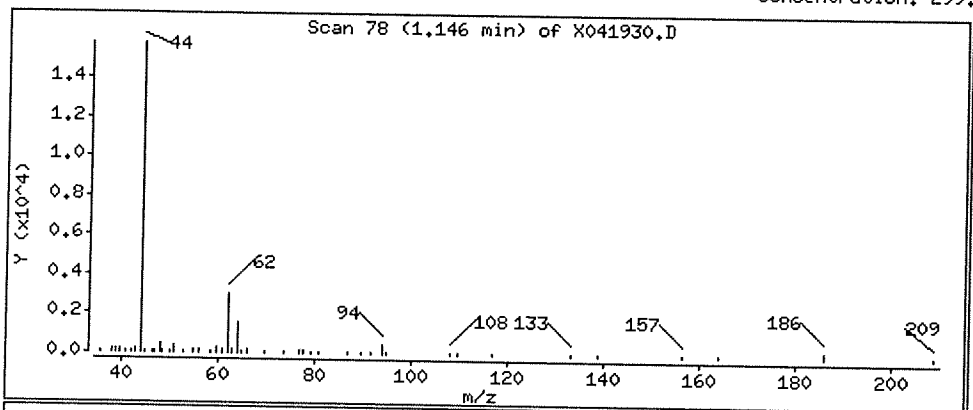
Operator: PC

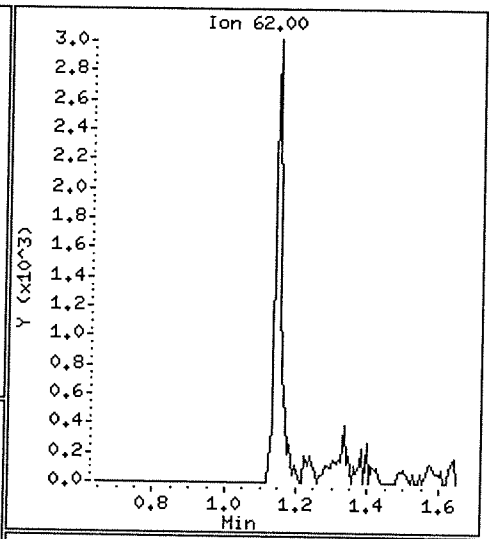
Column phase: DB624

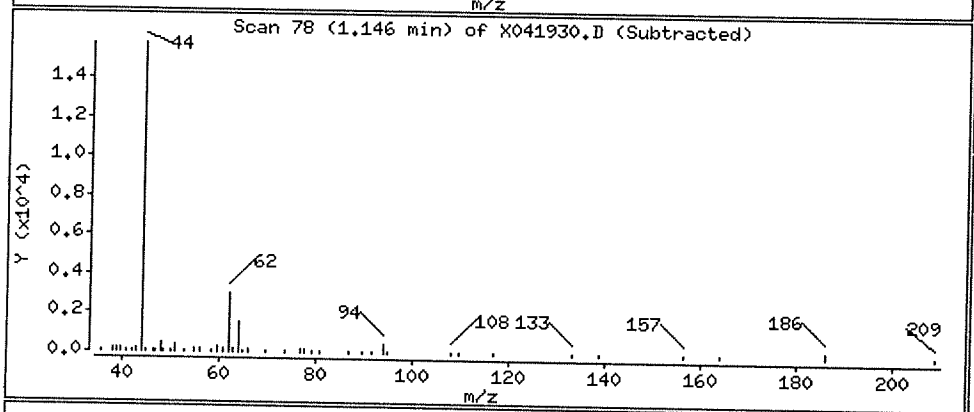
Column diameter: 0.18

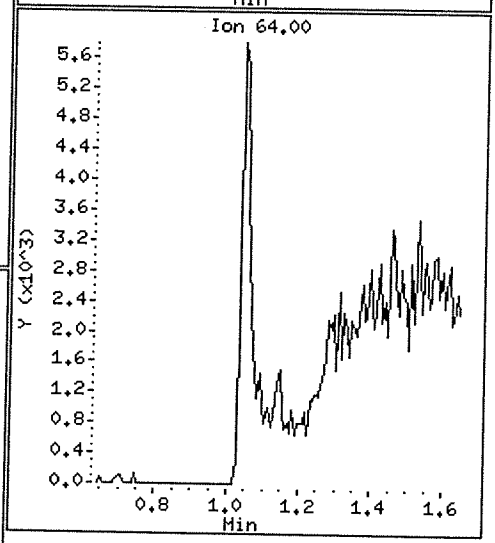
5 Vinyl Chloride

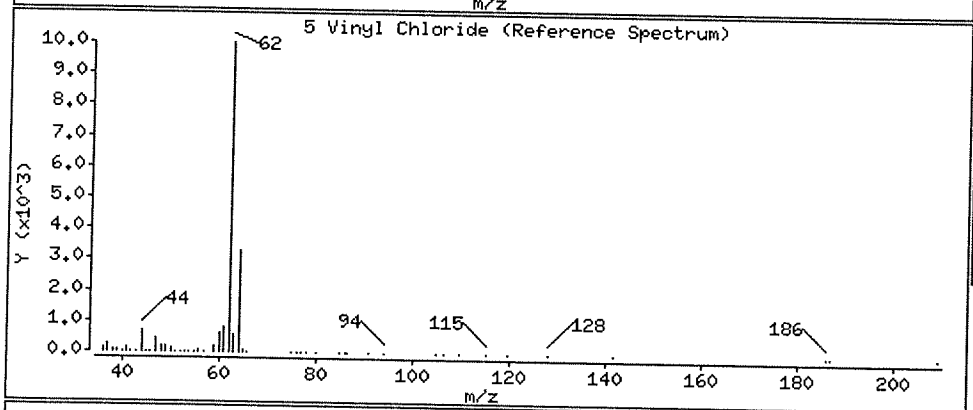
Concentration: 299.21 ug/l

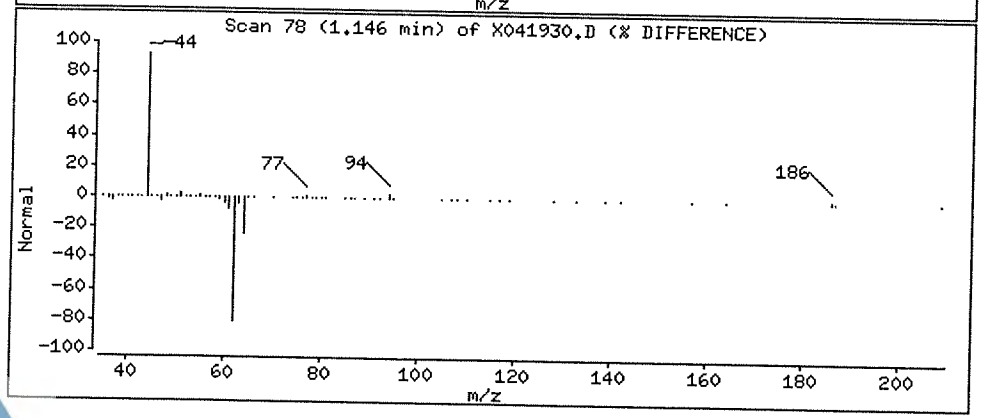












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210419.b\X041931.D Page 1
Report Date: 05-May-2021 09:57

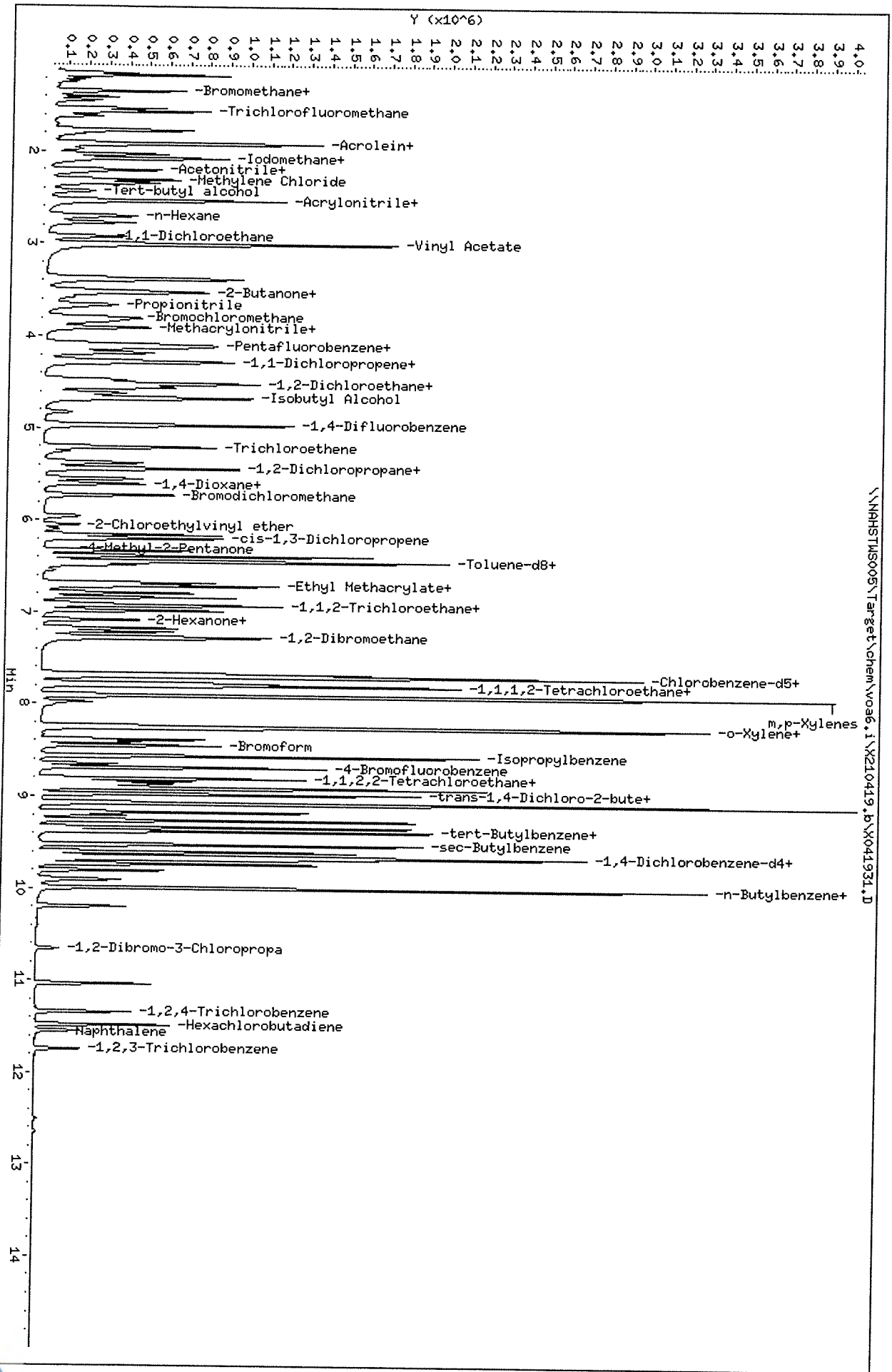
ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X210419.b\X041931.D
Lab Smp Id: CCV-END Client Smp ID: CCV-END
Inj Date : 19-APR-2021 21:36
Operator : PC Inst ID: voa6.i
Smp Info : CCV-END;CCV-END;2;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X210419.b\8260W.m
Meth Date : 05-May-2021 09:57 voa6.i Quant Type: ISTD
Cal Date : 02-APR-2021 13:20 Cal File: X040208.D
Als bottle: 30 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBI_short1.sub
Target Version: 4.14
Processing Host: NAHSTW7066

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	379300	50.0000	
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	700513	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	668863	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	330700	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	247976	50.0000	55.48
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	304513	50.0000	56.84
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	917149	50.0000	53.22
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	360222	50.0000	55.95
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	208252	50.0000	53.59
11 1,1-Dichloroethene	96	1.919	1.919	(0.459)	263580	50.0000	48.80
33 1,2-Dichloroethane	62	4.555	4.555	(0.918)	370979	50.0000	50.03
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	241980	50.0000	52.18
17 Methylene Chloride	84	2.306	2.306	(0.551)	213835	50.0000	51.88
38 Trichloroethene	130	5.207	5.207	(1.049)	248366	50.0000	51.79
5 Vinyl Chloride	62	1.145	1.145	(0.274)	300709	50.0000	52.88



Data File: \\NAHSTWS005\Target\chem\voa6.i\X210419.b\X041931.D
Date : 19-APR-2021 21:36
Client ID: CCV-END
Sample Info: CCV-END;CCV-END;2;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

MSVOA06 -Logbook

Batch: 44483 **Analyst:** Presenta Cabascango

Date: 04-20-2021 **Reviewer:**

Method: 8260 **Laboratory:** Houston

Comments:

#	Samp ID	Type	Analyzed	DF	Init Wt/Vol	Final Vol	File ID	Matrix	Status	pH
1	BFB	TUNE	04-20-2021 10:13 am	1.00	50 mL	50 mL	X042001a.D	Liquid	Y	NA
2	BFB	TUNE	04-20-2021 10:34 am	1.00	50 mL	50 mL	X042002.D	Liquid	Y	NA
3	CCV	CCV	04-20-2021 10:55 am	1.00	50 mL	50 mL	X042003.D	Liquid	Y	NA
4	CCB	SAMP	04-20-2021 11:16 am	1.00	50 mL	50 mL	X042004.D	Liquid	Y	NA
5	VLCSW-210420	LCS	04-20-2021 11:37 am	1.00	50 mL	50 mL	X042005.D	Liquid	Y	NA
6	BLANK	SAMP	04-20-2021 11:58 am	1.00	50 mL	50 mL	X042006.D	Liquid	Y	NA
7	VBLKW-210420	MBLK	04-20-2021 12:47 pm	1.00	50 mL	50 mL	X042007.D	Liquid	Y	NA
8	HS21040877-01	SAMP	04-20-2021 01:08 pm	1.00	50 mL	50 mL	X042008.D	Liquid	Y	NA
9	HS21040859-14	SAMP	04-20-2021 01:29 pm	1000.0	50 µL	50 mL	X042009.D	Liquid	Y	NA
10	HS21040859-10	SAMP	04-20-2021 01:50 pm	100.0(	500 µL	50 mL	X042010.D	Liquid	Y	NA
11	HS21040859-10MS	MS	04-20-2021 02:12 pm	100.0(	500 µL	50 mL	X042011.D	Liquid	Y	NA
12	HS21040859-10MSD	MSD	04-20-2021 02:33 pm	100.0(	500 µL	50 mL	X042012.D	Liquid	Y	NA
13	HS21040859-12	SAMP	04-20-2021 02:54 pm	5.00	10 mL	50 mL	X042013.D	Liquid	Y	NA
14	HS21040859-13	SAMP	04-20-2021 03:15 pm	10.00	5 mL	50 mL	X042014.D	Liquid	Y	NA
15	CCV-END	CCV	04-20-2021 03:36 pm	1.00	50 mL	50 mL	X042015.D	Liquid	Y	NA
16	HS21041012-08	SAMP	04-20-2021 03:57 pm	1.00	50 mL	50 mL	X042016.D	Liquid	Y	NA
17	HS21040968-04	SAMP	04-20-2021 04:18 pm	1.00	50 mL	50 mL	X042017.D	Liquid	Y	NA
18	MBLK-164842	MBLK	04-20-2021 04:39 pm	20.00	2.5 mL	50 mL	X042018.D	Liquid	Y	NA
19	HS21040838-01	SAMP	04-20-2021 05:00 pm	100.0(	500 µL	50 mL	X042019.D	Liquid	Y	NA
20	HS21040992-01	SAMP	04-20-2021 05:21 pm	100.0(	500 µL	50 mL	X042020.D	Liquid	Y	NA
21	HS21040850-01	SAMP	04-20-2021 05:42 pm	20.00	2.5 mL	50 mL	X042021.D	Liquid	Y	NA
22	HS21040850-02	SAMP	04-20-2021 06:03 pm	20.00	2.5 mL	50 mL	X042022.D	Liquid	Y	NA
23	HS21040857-02	SAMP	04-20-2021 06:24 pm	20.00	2.5 mL	50 mL	X042023.D	Liquid	Y	NA
24	HS21040798-01	SAMP	04-20-2021 06:45 pm	20.00	2.5 mL	50 mL	X042024.D	Liquid	Y	NA
25	HS21040862-01	SAMP	04-20-2021 07:06 pm	20.00	2.5 mL	50 mL	X042025.D	Liquid	Y	NA
26	HS21040922-01	SAMP	04-20-2021 07:27 pm	20.00	2.5 mL	50 mL	X042026.D	Liquid	Y	NA
27	MBLK-164808	MBLK	04-20-2021 07:48 pm	20.00	2.5 mL	50 mL	X042027.D	Liquid	Y	NA
28	HS21040797-01	SAMP	04-20-2021 08:09 pm	20.00	2.5 mL	50 mL	X042028.D	Liquid	Y	NA
29	MBLK-164807	MBLK	04-20-2021 08:30 pm	20.00	2.5 mL	50 mL	X042029.D	Liquid	Y	NA
30	HS21040794-01	SAMP	04-20-2021 08:52 pm	20.00	2.5 mL	50 mL	X042030.D	Liquid	Y	NA
31	HS21040794-02	SAMP	04-20-2021 09:13 pm	20.00	2.5 mL	50 mL	X042031.D	Liquid	Y	NA
32	HS21040794-03	SAMP	04-20-2021 09:34 pm	20.00	2.5 mL	50 mL	X042032.D	Liquid	Y	NA
33	HS21040794-04	SAMP	04-20-2021 09:55 pm	20.00	2.5 mL	50 mL	X042033.D	Liquid	Y	NA
34	BLANK	SAMP	04-20-2021 10:16 pm	1.00	50 mL	50 mL	X042034.D	Liquid	Y	NA

FORM 2
WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS21040859

	CLIENT SAMPLE NO.	SMC1 #	SMC2 (DCE) #	SMC3 (TOL) #	OTHER #	TOT OUT
01	VLCSW-210420	101	108	98	101	0
02	VBLKW-210420	94	100	108	96	0
03	HS21040859-14	95	98	108	94	0
04	HS21040859-10	92	99	107	97	0
05	HS21040859-10MS	94	99	103	101	0
06	HS21040859-10MSD	92	95	103	100	0
07	HS21040859-12	93	100	109	94	0
08	HS21040859-13	95	98	106	93	0
09						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						
28						

		QC LIMITS
SMC1	= Dibromofluoromethane	(0-130)
SMC2 (DCE)	= 1,2-Dichloroethane-d4	(0-130)
SMC3 (TOL)	= Toluene-d8	(0-130)
OTHER	= 4-Bromofluorobenzene	(0-130)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D System Monitoring Compound diluted out

FORM II VOA

FORM 4
VOLATILE METHOD BLANK SUMMARY

CLIENT SAMPLE NO.

VBLKW-210420

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS21040859

Lab File ID: X042007 Lab Sample ID: VBLKW-210420

Date Analyzed: 04/20/21 Time Analyzed: 1247

GC Column: DB624 ID: 0.18 (mm) Heated Purge: (Y/N) N

Instrument ID: VOA6

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	VLCSW-210420	VLCSW-210420	X042005	1137
02	HS21040859-14	HS21040859-14	X042009	1329
03	HS21040859-10	HS21040859-10	X042010	1350
04	HS21040859-10MS	HS21040859-10MS	X042011	1412
05	HS21040859-10MSD	HS21040859-10MSD	X042012	1433
06	HS21040859-12	HS21040859-12	X042013	1454
07	HS21040859-13	HS21040859-13	X042014	1515
08				
09				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				

COMMENTS:

FORM 5
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS21040859

Lab File ID: X042002 BFB Injection Date: 04/20/21

Instrument ID: VOA6 BFB Injection Time: 1034

GC Column: DB624 ID: 0.25 (mm) Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	17.7
75	30.0 - 60.0% of mass 95	50.0
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	7.1
173	Less than 2.0% of mass 174	0.9 (1.2)1
174	Greater than 50.0% of mass 95	73.2
175	5.0 - 9.0% of mass 174	5.8 (7.9)1
176	95.0 - 101.0% of mass 174	70.0 (95.5)1
177	5.0 - 9.0% of mass 176	4.5 (6.4)2

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

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	CCV	CCV	X042003	04/20/21	1055
02	VLCSW-210420	VLCSW-210420	X042005	04/20/21	1137
03	VBLKW-210420	VBLKW-210420	X042007	04/20/21	1247
04	HS21040859-14	HS21040859-14	X042009	04/20/21	1329
05	HS21040859-10	HS21040859-10	X042010	04/20/21	1350
06	HS21040859-10MS	HS21040859-10MS	X042011	04/20/21	1412
07	HS21040859-10MSD	HS21040859-10MSD	X042012	04/20/21	1433
08	HS21040859-12	HS21040859-12	X042013	04/20/21	1454
09	HS21040859-13	HS21040859-13	X042014	04/20/21	1515
10	CCV-END	CCV-END	X042015	04/20/21	1536
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS21040859

Instrument ID: VOA6 Calibration Date: 04/20/21 Time: 1055

Lab File ID: X042003 Init. Calib. Date(s): 04/02/21 04/02/21

Init. Calib. Times: 1053 1423

GC Column: DB624 ID: 0.18 (mm)

COMPOUND	RRF or AMOUNT	RRF50.000 or AMOUNT	CCAL RRF50.000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Vinyl Chloride	0.7500000	0.7643288	0.7643288	0.1	-1.91	20.00	AVRG
Methylene Chloride	51.509841	50.000000	0.5595280	0.1	-3.02	20.00	LINR
1,1-Dichloroethene	0.7120000	0.6632529	0.6632529	0.1	6.85	20.00	AVRG
1,2-Dichloroethane	0.5290000	0.5249125	0.5249125	0.1	0.77	20.00	AVRG
cis-1,2-Dichloroethene	0.6110000	0.6480684	0.6480684	0.1	-6.07	20.00	AVRG
1,1,2-Trichloroethane	0.2900000	0.2899002	0.2899002	0.1	0.03	20.00	AVRG
Trichloroethene	0.3420000	0.3487300	0.3487300	0.2	-1.97	20.00	AVRG
Dibromofluoromethane	52.535342	50.000000	0.6187686	0.1	-5.07	20.00	LINR
1,2-Dichloroethane-d4	54.240801	50.000000	0.7657186	0.1	-8.48	20.00	LINR
Toluene-d8	50.977021	50.000000	1.3112776	0.1	-1.95	20.00	LINR
4-Bromofluorobenzene	53.472417	50.000000	0.5139462	0.1	-6.94	20.00	LINR

FORM VII VOA

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS21040859

Instrument ID: VOA6 Calibration Date: 04/20/21 Time: 1536

Lab File ID: X042015 Init. Calib. Date(s): 04/02/21 04/02/21

Init. Calib. Times: 1053 1423

GC Column: DB624 ID: 0.18 (mm)

COMPOUND	RRF or AMOUNT	RRF50.000 or AMOUNT	CCAL RRF50.000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Vinyl Chloride	0.7500000	0.7183769	0.7183769	0.1	4.22	50.00	AVRG
Methylene Chloride	49.935684	50.000000	0.5419218	0.1	0.13	50.00	LINR
1,1-Dichloroethene	0.7120000	0.6071701	0.6071701	0.1	14.72	50.00	AVRG
1,2-Dichloroethane	0.5290000	0.5138122	0.5138122	0.1	2.87	50.00	AVRG
cis-1,2-Dichloroethene	0.6110000	0.6140909	0.6140909	0.1	-0.50	50.00	AVRG
1,1,2-Trichloroethane	0.2900000	0.3022215	0.3022215	0.1	-4.21	50.00	AVRG
Trichloroethene	0.3420000	0.3304798	0.3304798	0.2	3.37	50.00	AVRG
Dibromofluoromethane	53.761356	50.000000	0.6333287	0.1	-7.52	50.00	LINR
1,2-Dichloroethane-d4	54.279411	50.000000	0.7662685	0.1	-8.56	50.00	LINR
Toluene-d8	53.324121	50.000000	1.3739315	0.1	-6.65	50.00	LINR
4-Bromofluorobenzene	54.998191	50.000000	0.5290781	0.1	-10.0	50.00	LINR

FORM VII VOA

FORM 8
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS21040859

Lab File ID (Standard): X042003 Date Analyzed: 04/20/21

Instrument ID: VOA6 Time Analyzed: 1055

GC Column: DB624 ID: 0.18 (mm) Heated Purge: (Y/N) N

		IS1 AREA #	IS1 RT #	IS2(DFB) AREA #	IS2(DFB) RT #	IS3(CBZ) AREA #	IS3(CBZ) RT #
	12 HOUR STD	436761	4.18	758997	4.96	716036	7.67
	UPPER LIMIT	873522	4.68	1517994	5.46	1432072	8.17
	LOWER LIMIT	218381	3.68	379499	4.46	358018	7.17
	CLIENT SAMPLE NO.						
01	VLCSW-210420	367698	4.18	634210	4.96	624468	7.67
02	VBLKW-210420	430281	4.18	711090	4.96	598362	7.67
03	HS21040859-14	431042	4.18	696134	4.97	594086	7.67
04	HS21040859-10	438628	4.18	705926	4.96	614681	7.67
05	HS21040859-10MS	453324	4.18	742267	4.97	714577	7.67
06	HS21040859-10MSD	471359	4.18	786604	4.97	735798	7.67
07	HS21040859-12	440703	4.18	707661	4.96	611522	7.67
08	HS21040859-13	440190	4.18	715402	4.96	619464	7.67
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							

IS1 = Pentafluorobenzene
IS2 (DFB) = 1,4-Difluorobenzene
IS3 (CBZ) = Chlorobenzene-d5

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

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

FORM VIII VOA

FORM 8
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS21040859

Lab File ID (Standard): X042003 Date Analyzed: 04/20/21

Instrument ID: VOA6 Time Analyzed: 1055

GC Column: DB624 ID: 0.18 (mm) Heated Purge: (Y/N) N

		IS4 (DCB) AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	351923	9.66				
	UPPER LIMIT	703846	10.16				
	LOWER LIMIT	175962	9.16				
	CLIENT SAMPLE NO.						
01	VLCSW-210420	285418	9.66				
02	VBLKW-210420	245129	9.66				
03	HS21040859-14	229538	9.66				
04	HS21040859-10	260783	9.66				
05	HS21040859-10MS	320258	9.66				
06	HS21040859-10MSD	316583	9.66				
07	HS21040859-12	253990	9.66				
08	HS21040859-13	256257	9.66				
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							

IS4 (DCB) = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

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

FORM VIII VOA

Data File: \\NAHSTWS005\Target\chem\voa6.i\X210420.b\X042002.D

Date : 20-APR-2021 10:34

Client ID: BFB

Instrument: voa6.i

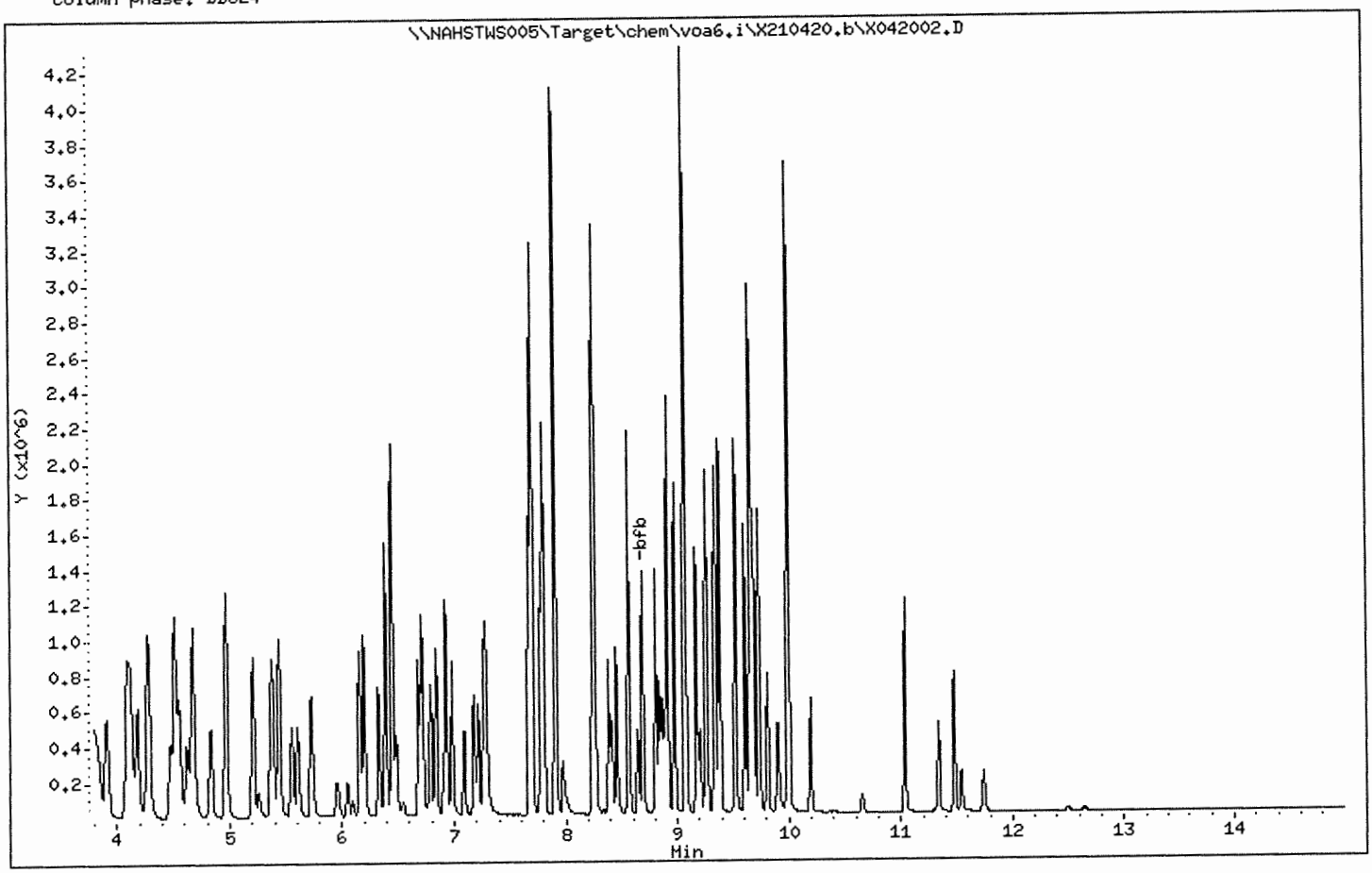
Sample Info: BFB;BFB;3;;BFB

Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

Column diameter: 0.25



Data File: \\NAHSTWS005\Target\chem\voa6.i\X210420.b\X042002.D

Date : 20-APR-2021 10:34

Client ID: BFB

Instrument: voa6.i

Sample Info: BFB;BFB;3;;BFB

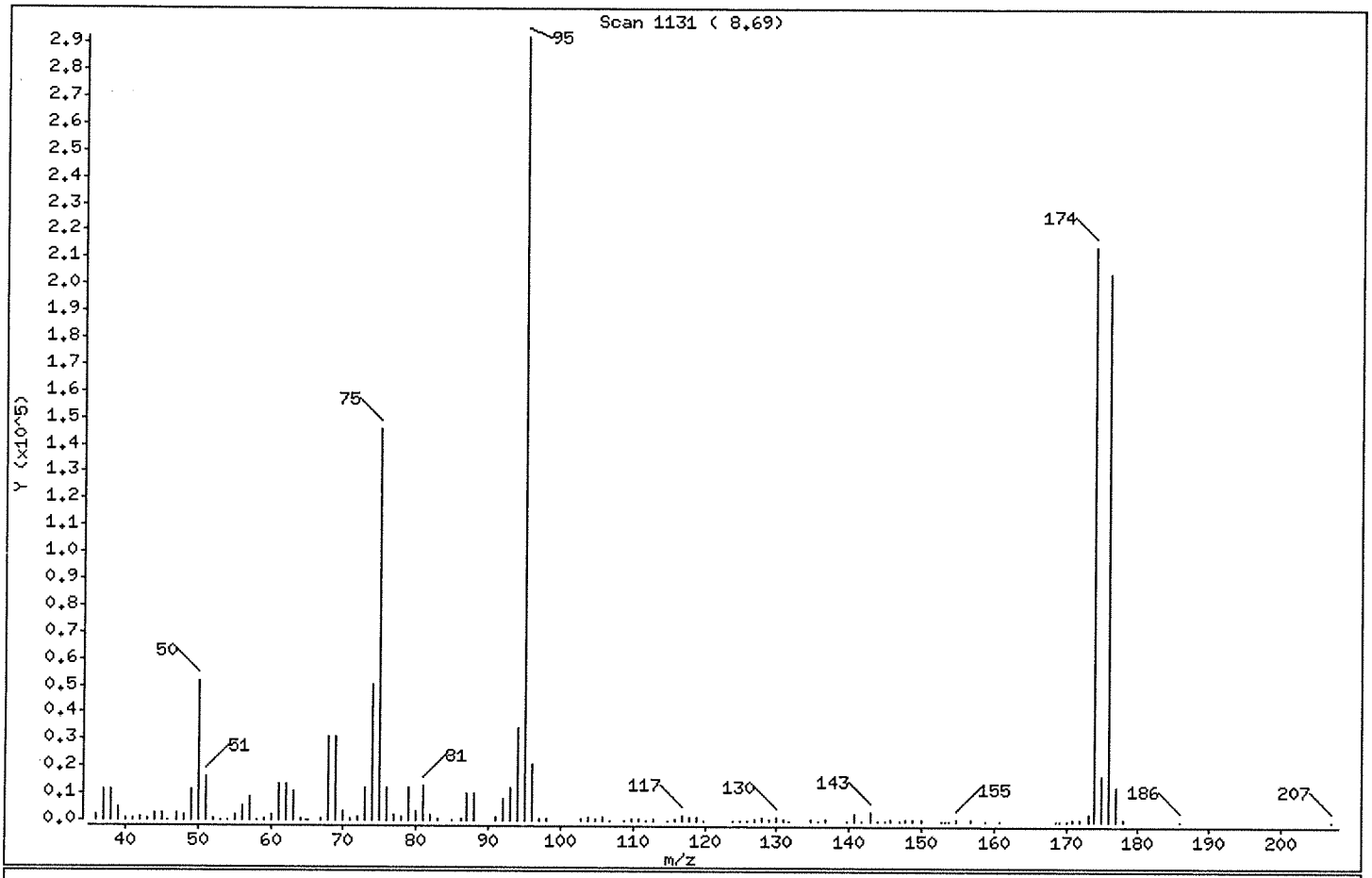
Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

Column diameter: 0.25

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	17.73
75	30.00 - 60.00% of mass 95	49.97
96	5.00 - 9.00% of mass 95	7.13
173	Less than 2.00% of mass 174	0.90 (1.23)
174	Greater than 50.00% of mass 95	73.23
175	5.00 - 9.00% of mass 174	5.75 (7.86)
176	95.00 - 101.00% of mass 174	69.97 (95.54)
177	5.00 - 9.00% of mass 176	4.46 (6.38)

Data File: \\NAHSTWS005\Target\chem\voa6.i\X210420.b\X042002.D

Date : 20-APR-2021 10:34

Client ID: BFB

Instrument: voa6.i

Sample Info: BFB;BFB;3;;BFB

Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

Column diameter: 0.25

Data File: X042002.D
Spectrum: Scan 1131 (8.69)
Location of Maximum: 95.00
Number of points: 119

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	1953	65.20	118	102.90	435	141.80	333
37.00	11365	66.90	713	103.90	1124	142.90	3162
38.00	11542	68.00	31032	104.90	783	143.90	198
39.00	4743	69.00	30912	105.90	1201	144.90	133
40.00	695	70.00	3422	106.90	256	145.80	400
41.10	981	71.00	459	108.70	90	147.00	90
42.10	1095	72.00	1625	109.80	383	147.80	966
43.10	991	73.00	12092	110.90	376	148.80	456
44.00	2873	74.00	50360	111.90	234	149.90	452
45.00	2786	75.00	145984	112.90	344	152.70	80
45.90	225	76.00	11907	114.80	319	153.20	113
47.00	2821	76.90	1723	115.80	988	153.80	167
48.00	1741	78.00	1300	116.90	2098	154.80	689
49.00	11602	78.90	11977	117.80	1244	156.90	462
50.00	51792	79.90	3152	118.90	1428	158.80	258
51.00	16221	80.90	12537	119.90	74	160.90	216
52.00	739	81.90	2251	123.90	155	168.60	188
53.20	115	83.00	472	124.80	76	169.20	290
54.10	128	84.90	172	125.80	64	170.20	103
55.10	2233	86.10	357	126.80	424	170.80	555
56.00	5697	86.90	10170	127.90	1139	171.80	501
57.00	8637	87.90	9914	128.90	619	173.00	2626
58.00	299	90.90	1359	129.80	1294	173.90	213952
59.00	791	92.00	7982	131.00	599	174.90	16808
60.00	1972	93.00	12090	131.70	88	175.90	204416
61.00	13253	94.00	34056	134.80	665	176.90	13037
62.00	13713	95.00	292160	135.70	80	177.90	659
63.00	10701	96.00	20832	136.60	543	185.80	156
64.10	898	97.00	762	139.70	267	207.00	91
64.80	86	97.90	856	140.80	2876		

Data File: \\NAHSTWS005\Target\chem\voa6.i\X210420.b\X042003.D Page 1
Report Date: 05-May-2021 10:41

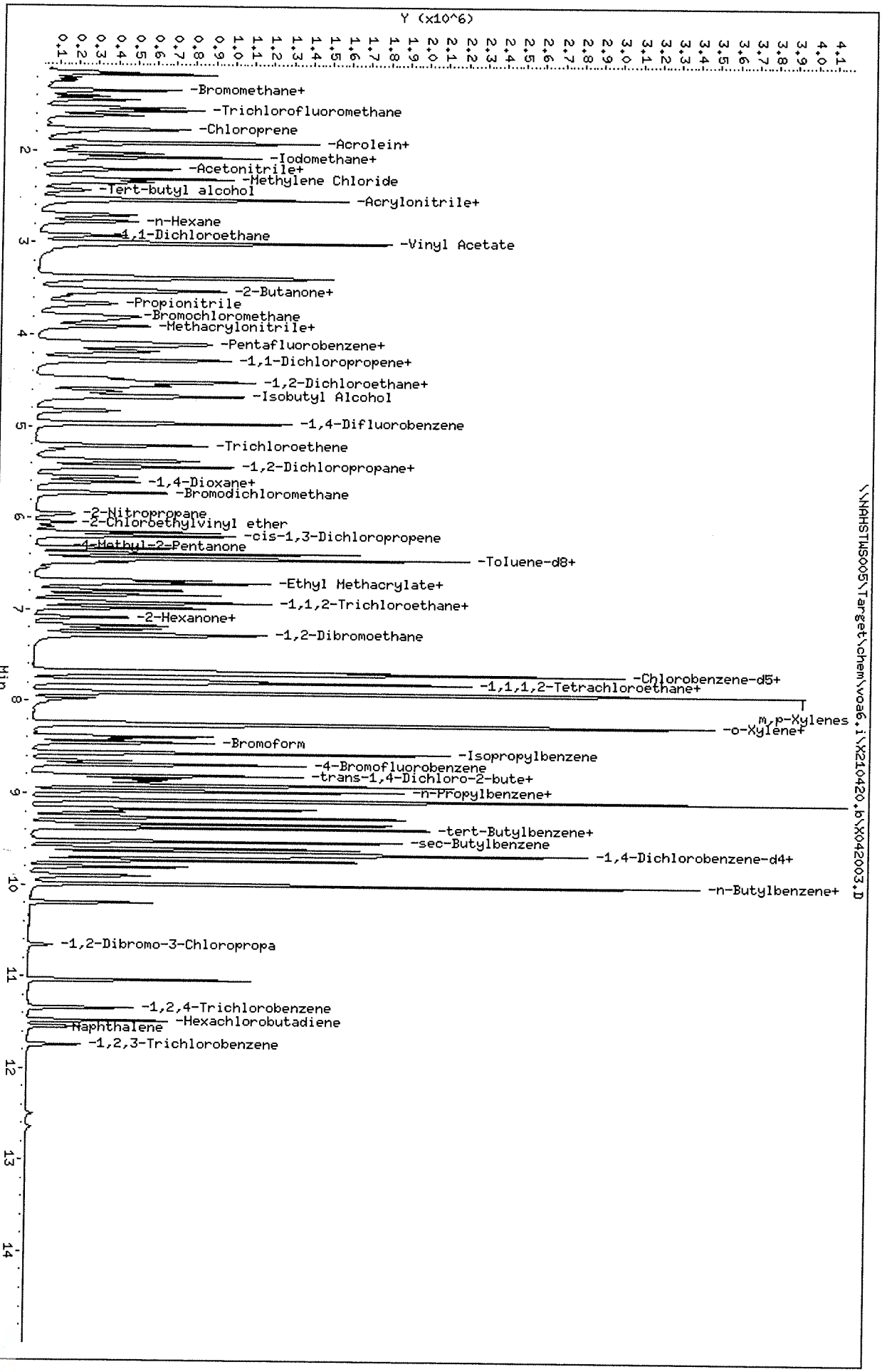
ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X210420.b\X042003.D
Lab Smp Id: CCV Client Smp ID: CCV
Inj Date : 20-APR-2021 10:55
Operator : PC Inst ID: voa6.i
Smp Info : CCV;CCV;2;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X210420.b\8260W.m
Meth Date : 05-May-2021 10:41 voa6.i Quant Type: ISTD
Cal Date : 02-APR-2021 13:20 Cal File: X040208.D
Als bottle: 3 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBI_short1.sub
Target Version: 4.14
Processing Host: NAHSTW7066

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	436761	50.0000	
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	758997	50.0000	
* 47 Chlorobenzene-d5	117	7.670	7.670	(1.000)	716036	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	351923	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	270254	50.0000	52.53
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	334436	50.0000	54.24
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	938922	50.0000	50.97
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	368004	50.0000	53.47
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	207579	50.0000	49.90
11 1,1-Dichloroethene	96	1.919	1.919	(0.459)	289683	50.0000	46.58
33 1,2-Dichloroethane	62	4.555	4.555	(0.918)	398407	50.0000	49.59
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	283051	50.0000	53.01
17 Methylene Chloride	84	2.305	2.305	(0.551)	244380	50.0000	51.50
38 Trichloroethene	130	5.206	5.206	(1.049)	264685	50.0000	50.94
5 Vinyl Chloride	62	1.145	1.145	(0.274)	333829	50.0000	50.98



Data File: \\NAHSTWS005\Target\chem\voa6.i\X210420.b\X042003.D
Date : 20-APR-2021 10:55
Client ID: CCV
Sample Info: CCV;CCV;2;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\NAHSTWS005\Target\chem\voa6.i\X210420.b\X042005.D Page 1
Report Date: 05-May-2021 10:41

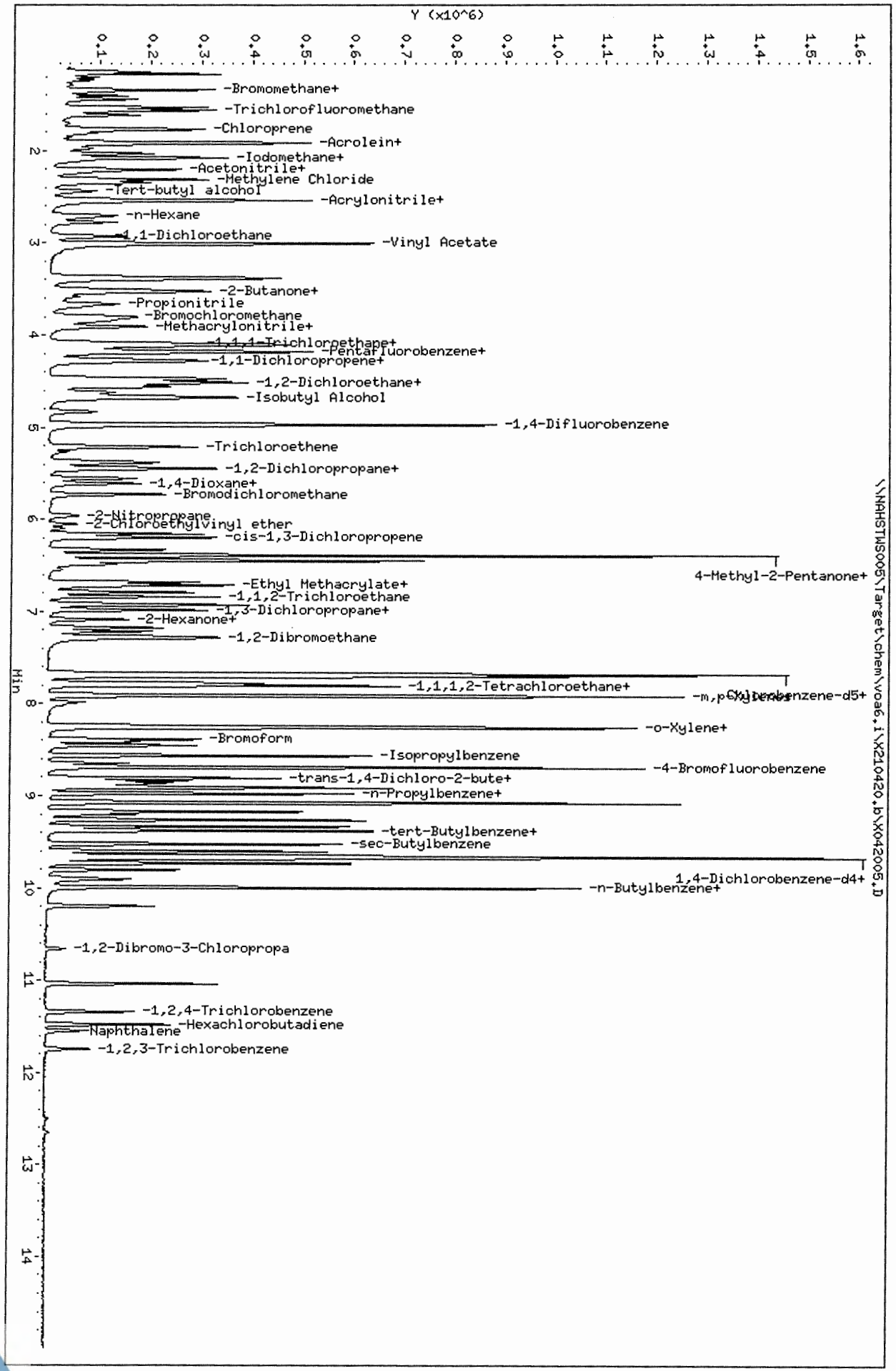
ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X210420.b\X042005.D
Lab Smp Id: VLCSW-210420 Client Smp ID: VLCSW-210420
Inj Date : 20-APR-2021 11:37
Operator : PC Inst ID: voa6.i
Smp Info : VLCSW-210420;VLCSW-210420;3;;LCS
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X210420.b\8260W.m
Meth Date : 05-May-2021 10:41 voa6.i Quant Type: ISTD
Cal Date : 02-APR-2021 13:20 Cal File: X040208.D
Als bottle: 5 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBI_short1.sub
Target Version: 4.14
Processing Host: NAHSTW7066

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
*	1 Pentafluorobenzene	168	4.182	4.182	(1.000)	367698	50.0000	
*	36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	634210	50.0000	
*	47 Chlorobenzene-d5	117	7.671	7.670	(1.000)	624468	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	285418	50.0000	
$	30 Dibromofluoromethane	113	4.096	4.103	(0.979)	217908	50.3342	50.33
$	35 1,2-Dichloroethane-d4	65	4.469	4.476	(1.069)	280121	53.9674	53.96
$	48 Toluene-d8	98	6.388	6.388	(0.833)	786357	49.0277	49.02
$	69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	301809	50.3829	50.38
	53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	70396	19.4061	19.40
	11 1,1-Dichloroethene	96	1.919	1.919	(0.459)	105633	20.1762	20.17
	33 1,2-Dichloroethane	62	4.555	4.555	(0.918)	138820	20.6794	20.67
	27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	95730	21.2980	21.29
	17 Methylene Chloride	84	2.305	2.305	(0.551)	88114	22.9087	22.90
	38 Trichloroethene	130	5.207	5.206	(1.049)	88286	20.3351	20.33
	5 Vinyl Chloride	62	1.145	1.145	(0.274)	120366	21.8350	21.83



Data File: \\NAHSTWS005\Target\chem\voa6.i\X210420.b\X042005.D
Date : 20-APR-2021 11:37
Client ID: VLCSW-210420
Sample Info: VLCSW-210420;VLCSW-210420;3;;LCS
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\NAHSTWS005\Target\chem\voa6.i\X210420.b\X042007.D Page 1
Report Date: 05-May-2021 10:41

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X210420.b\X042007.D
Lab Smp Id: VBLKW-210420 Client Smp ID: VBLKW-210420
Inj Date : 20-APR-2021 12:47
Operator : PC Inst ID: voa6.i
Smp Info : VBLKW-210420;VBLKW-210420;3;;BLANK
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X210420.b\8260W.m
Meth Date : 05-May-2021 10:41 voa6.i Quant Type: ISTD
Cal Date : 02-APR-2021 13:20 Cal File: X040208.D
Als bottle: 7 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBI_short1.sub
Target Version: 4.14
Processing Host: NAHSTW7066

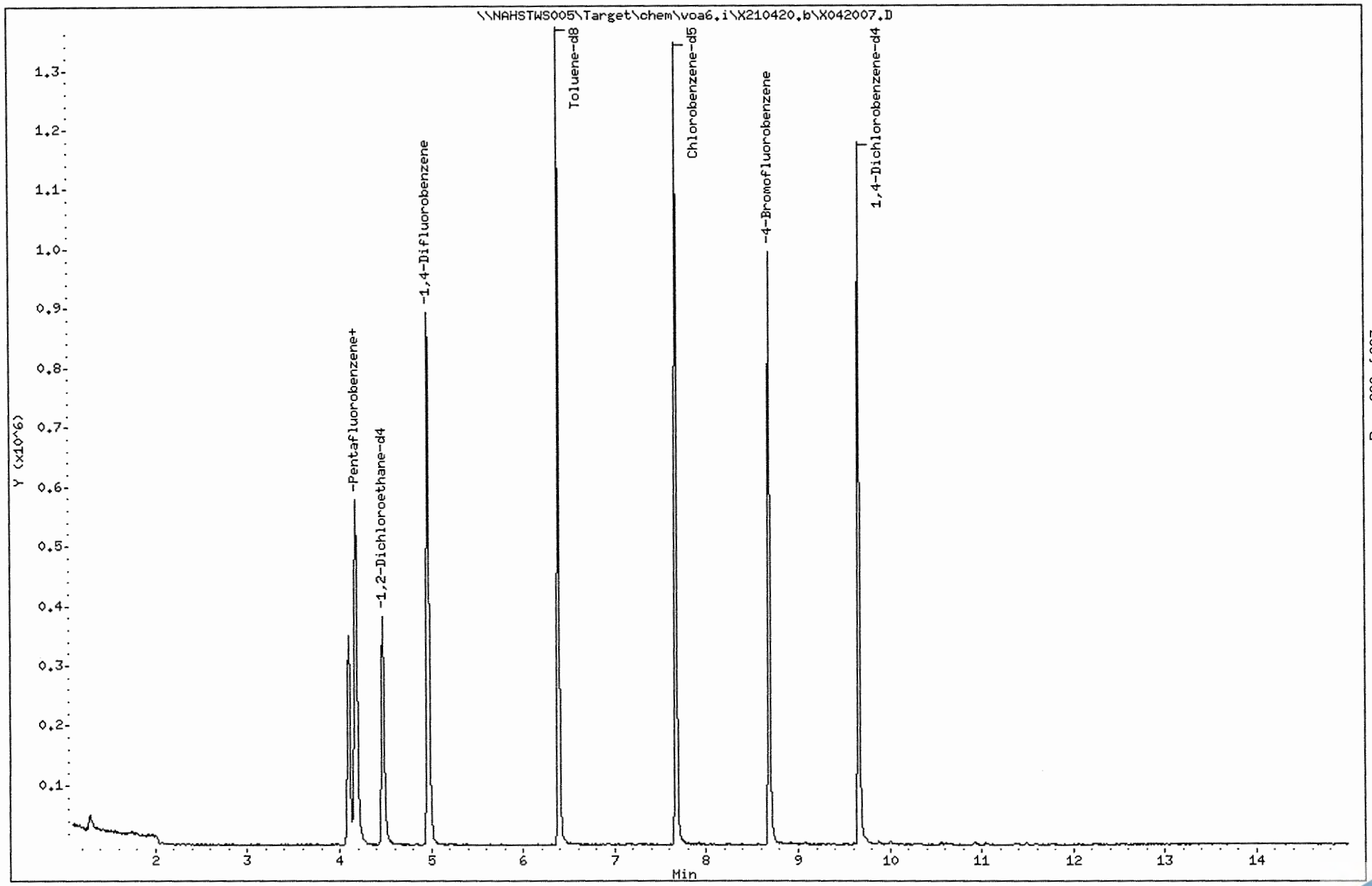
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	430281	50.0000	
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	711090	50.0000	
* 47 Chlorobenzene-d5	117	7.670	7.670	(1.000)	598362	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	245129	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	237769	46.9629	46.96
$ 35 1,2-Dichloroethane-d4	65	4.469	4.476	(1.069)	303318	49.9731	49.97
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	832154	53.9530	53.95
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	275109	48.0098	48.00

Data File: \\NAHSTWS005\Target\chem\voa6.i\X210420.b\X042007.D
Date : 20-APR-2021 12:47
Client ID: VBLKW-210420
Sample Info: VBLKW-210420;VBLKW-210420;3;;BLANK
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18



Data File: \\NAHSTWS005\Target\chem\voa6.i\X210420.b\X042009.D Page 1
Report Date: 05-May-2021 10:42

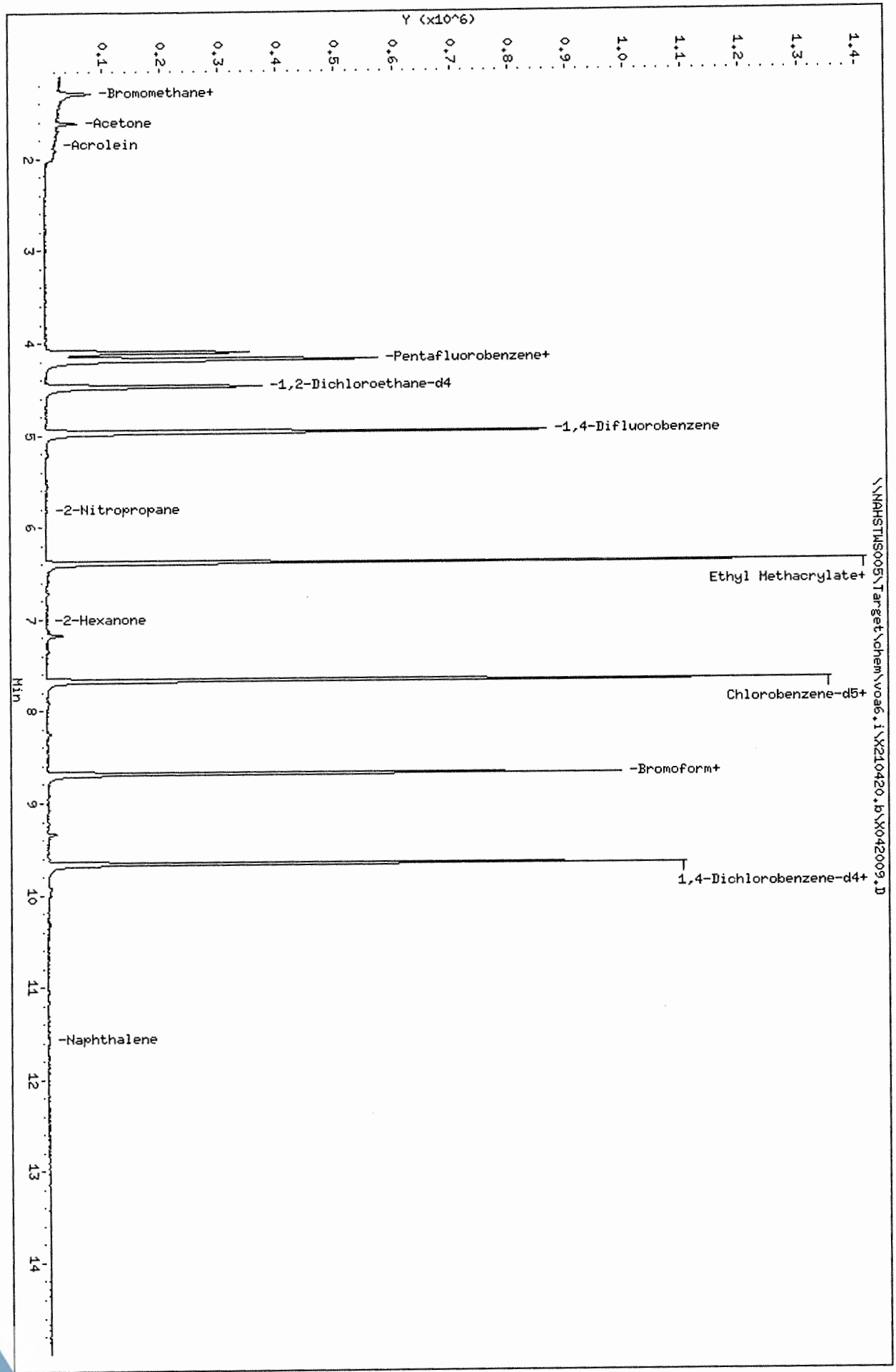
ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X210420.b\X042009.D
Lab Smp Id: HS21040859-14 Client Smp ID: HS21040859-14
Inj Date : 20-APR-2021 13:29
Operator : PC Inst ID: voa6.i
Smp Info : HS21040859-14;HS21040859-14;;;
Misc Info : HS18090001;WATER;0;1000;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X210420.b\8260W.m
Meth Date : 05-May-2021 10:42 Qin.Xu Quant Type: ISTD
Cal Date : 02-APR-2021 13:20 Cal File: X040208.D
Als bottle: 9
Dil Factor: 1000.00000
Integrator: HP RTE Compound Sublist: CBI_short1.sub
Target Version: 4.14
Processing Host: NAHSTW7066

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1000.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	431042	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.963	(1.000)	696134	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.670	(1.000)	594086	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	229538	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	241149	47.5410	47.54
$ 35 1,2-Dichloroethane-d4	65	4.469	4.476	(1.069)	297299	48.9054	48.90
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	830188	54.2041	54.20
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	267823	47.1068	47.10



Data File: \\NAHSTWS005\Target\chem\voa6.i\X210420.b\X042009.D
Date : 20-APR-2021 13:29
Client ID: HS21040859-14
Sample Info: HS21040859-14;HS21040859-14;;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X210420.b\X042010.D
Lab Smp Id: HS21040859-10 Client Smp ID: HS21040859-10
Inj Date : 20-APR-2021 13:50
Operator : PC Inst ID: voa6.i
Smp Info : HS21040859-10;HS21040859-10;;;
Misc Info : HS18090001;WATER;0;100;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X210420.b\8260W.m
Meth Date : 05-May-2021 10:42 Qin.Xu Quant Type: ISTD
Cal Date : 02-APR-2021 13:20 Cal File: X040208.D
Als bottle: 10
Dil Factor: 100.00000
Integrator: HP RTE Compound Sublist: CBI_short1.sub
Target Version: 4.14
Processing Host: NAHSTW7066

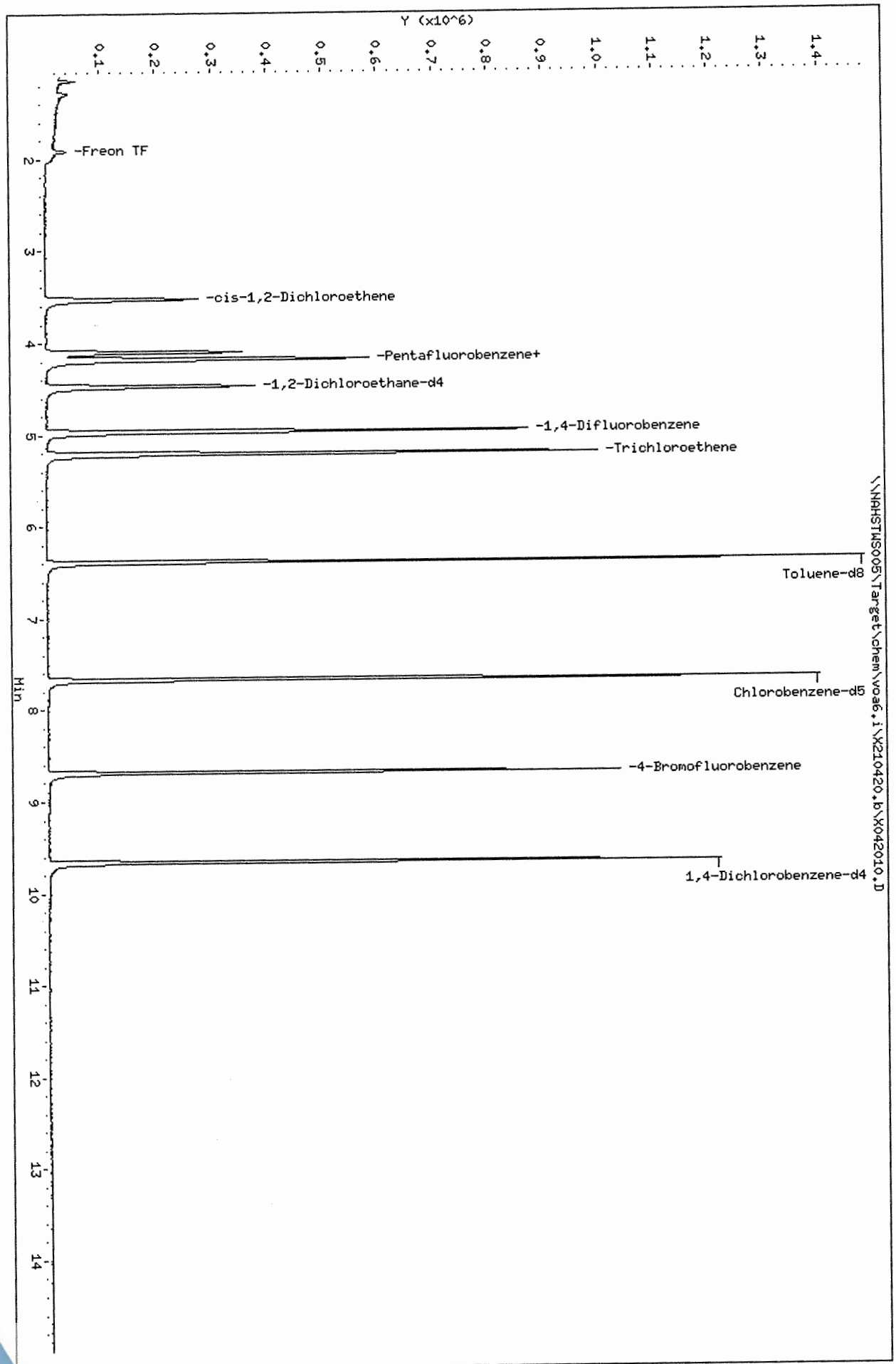
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	100.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
*	1 Pentafluorobenzene	168	4.182	4.182	(1.000)	438628	50.0000	
*	36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	705926	50.0000	
*	47 Chlorobenzene-d5	117	7.670	7.670	(1.000)	614681	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	260783	50.0000	
$	30 Dibromofluoromethane	113	4.103	4.103	(0.981)	238529	46.2233	46.22
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	305828	49.4331	49.43
$	48 Toluene-d8	98	6.388	6.388	(0.833)	846953	53.4718	53.47
$	69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	286066	48.5764	48.57
	27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	139509	26.0188	2601.88
	38 Trichloroethene	130	5.206	5.206	(1.049)	300115	62.1033	6210.33
	5 Vinyl Chloride	62	1.145	1.145	(0.274)	22745	3.45884	345.88

Data File: \\NAHSTWS005\Target\chem\voa6.i\X210420.b\X042010.D
Date : 20-APR-2021 13:50
Client ID: HS21040859-10
Sample Info: HS21040859-10;HS21040859-10;;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18



Data File: \\NAHSTWS005\Target\chem\voa6.i\X210420.b\X042010.D

Date : 20-APR-2021 13:50

Client ID: HS21040859-10

Instrument: voa6.i

Sample Info: HS21040859-10;HS21040859-10;;;

Purge Volume: 5.0

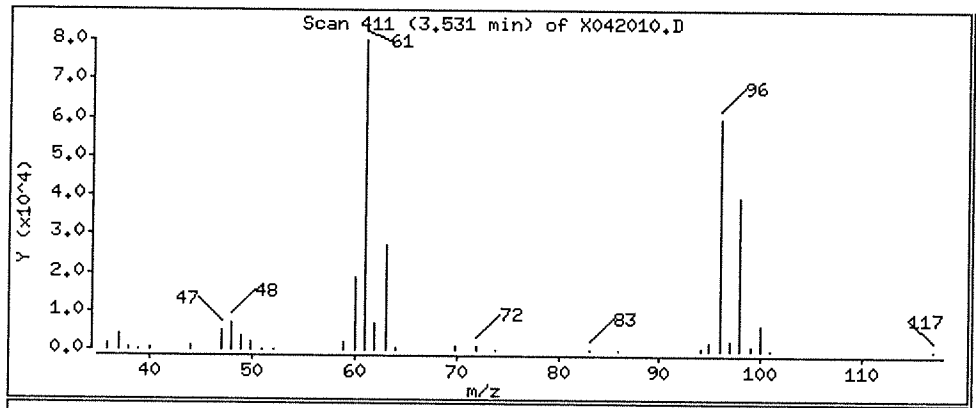
Operator: PC

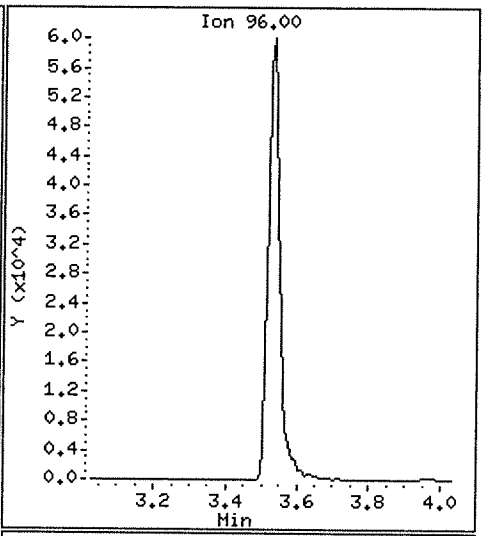
Column phase: DB624

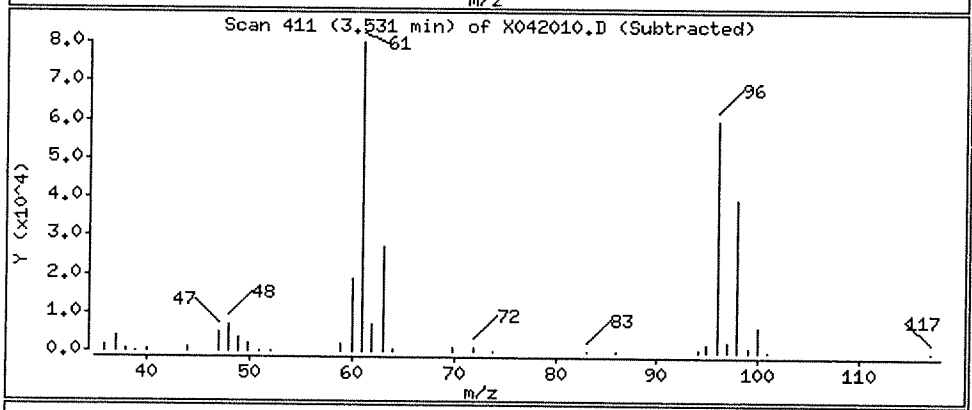
Column diameter: 0.18

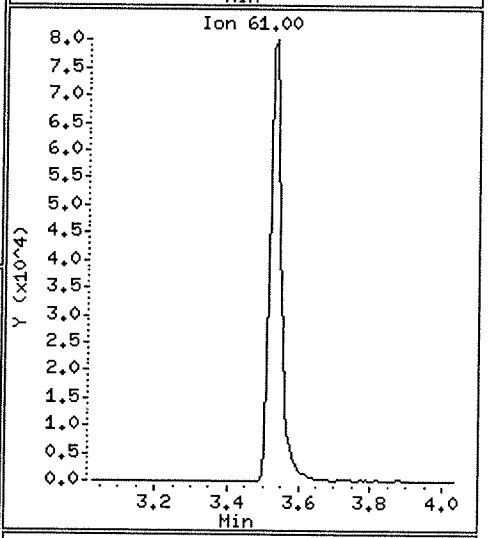
27 cis-1,2-Dichloroethene

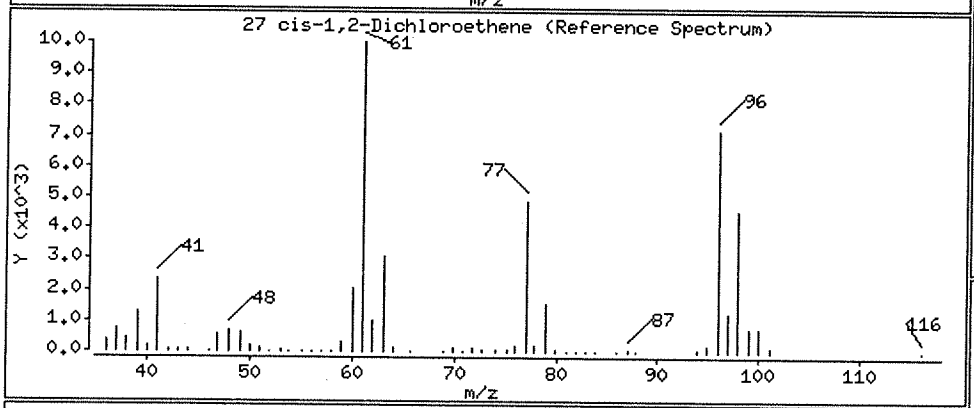
Concentration: 2601.88 ug/l

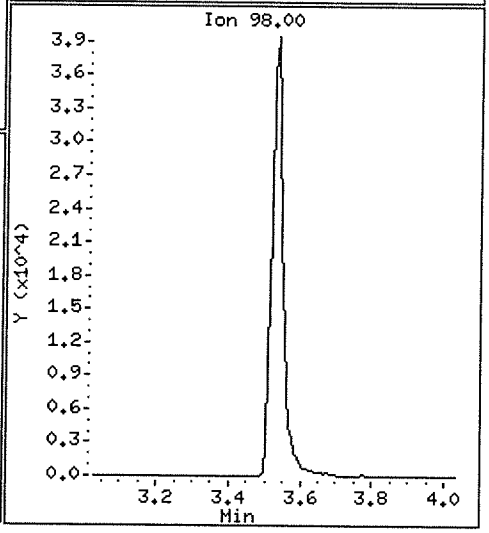


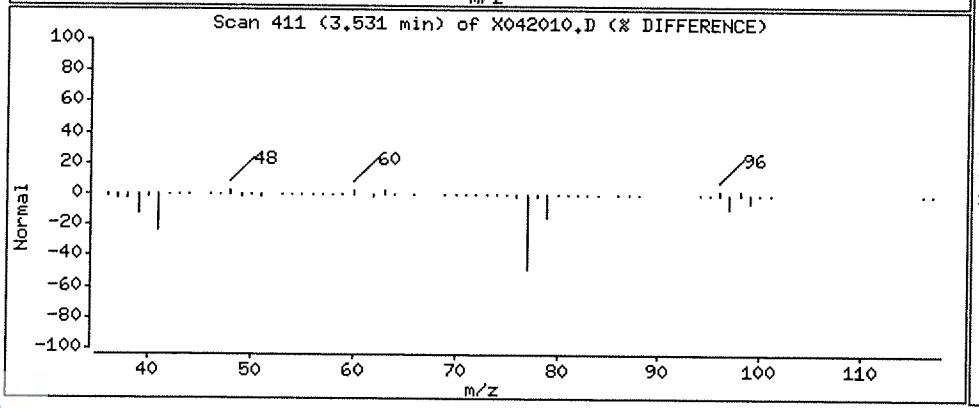












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210420.b\X042010.D

Date : 20-APR-2021 13:50

Client ID: HS21040859-10

Instrument: voa6.i

Sample Info: HS21040859-10;HS21040859-10;;;

Purge Volume: 5.0

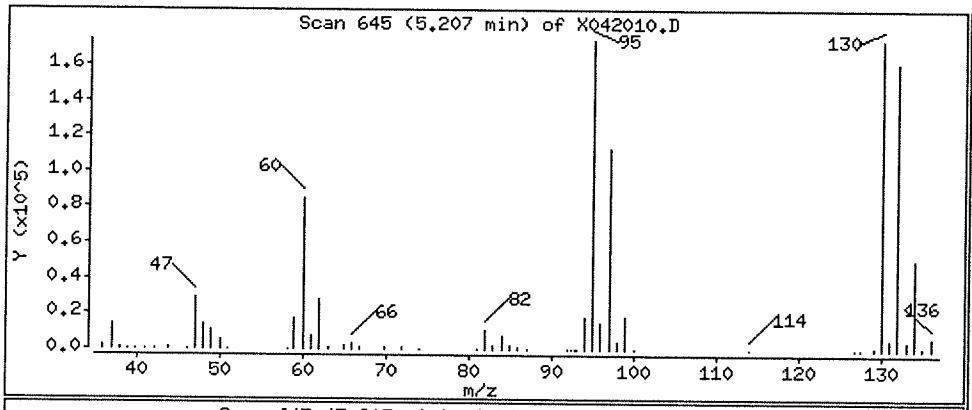
Operator: PC

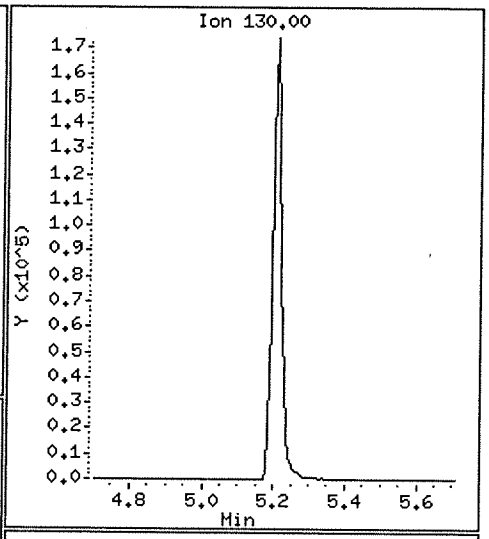
Column phase: DB624

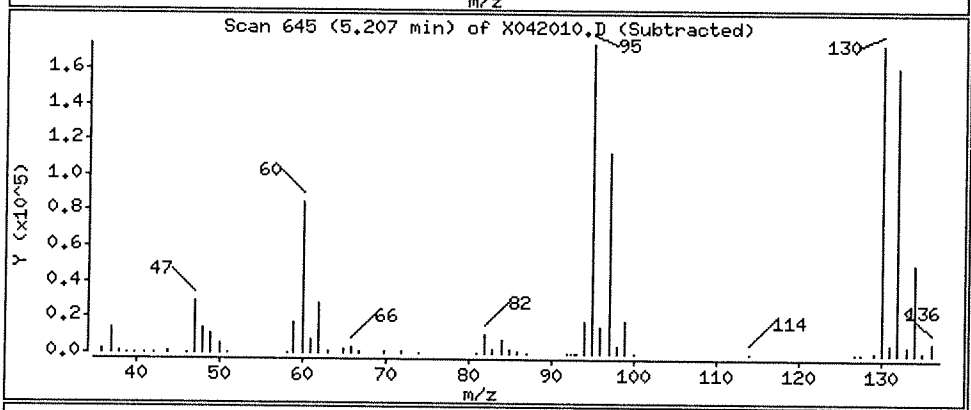
Column diameter: 0.18

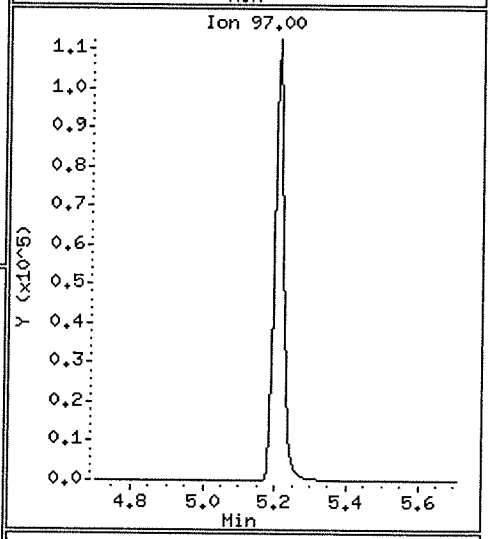
38 Trichloroethene

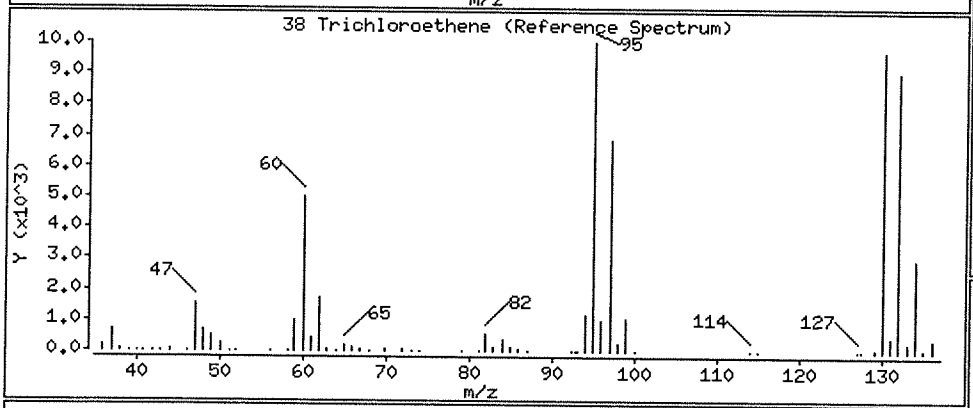
Concentration: 6210.33 ug/l

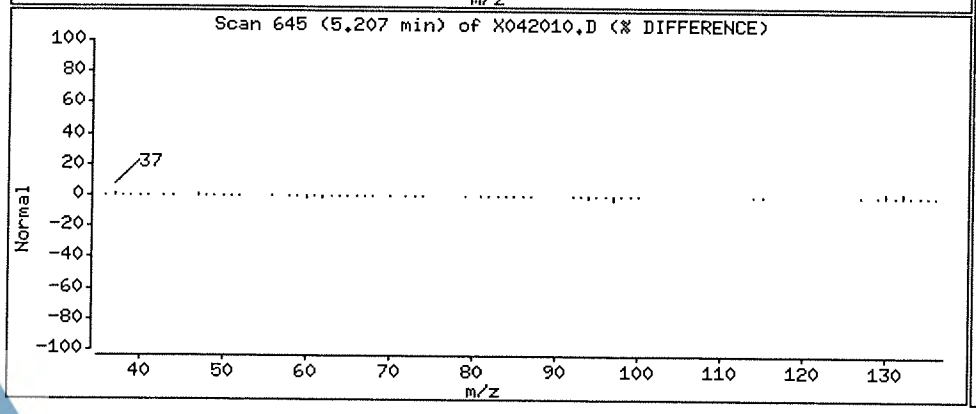


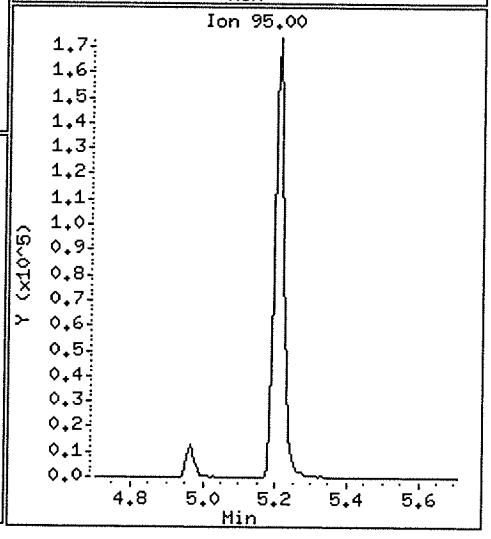












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210420.b\X042010.D

Date : 20-APR-2021 13:50

Client ID: HS21040859-10

Instrument: voa6.i

Sample Info: HS21040859-10;HS21040859-10;;;

Purge Volume: 5.0

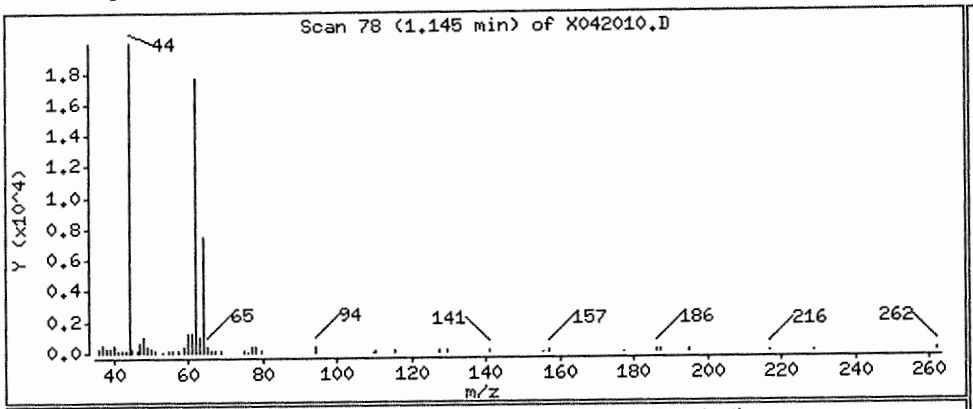
Operator: PC

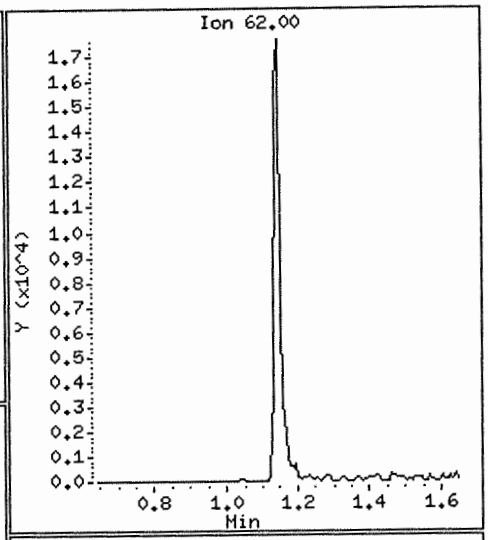
Column phase: DB624

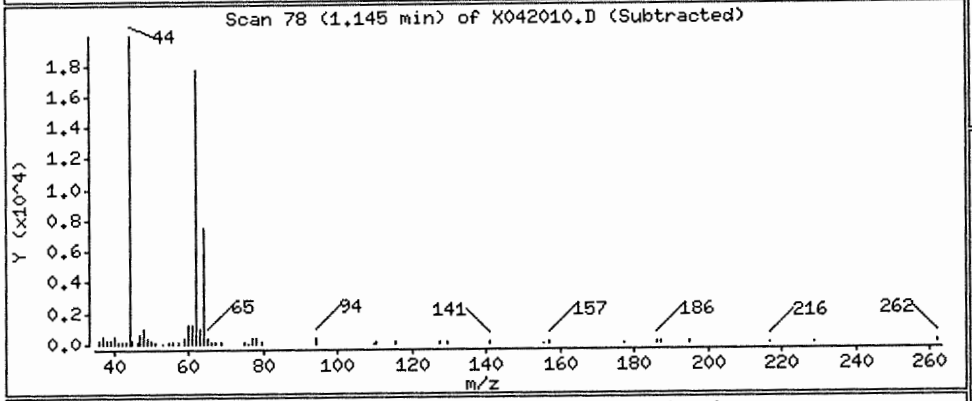
Column diameter: 0.18

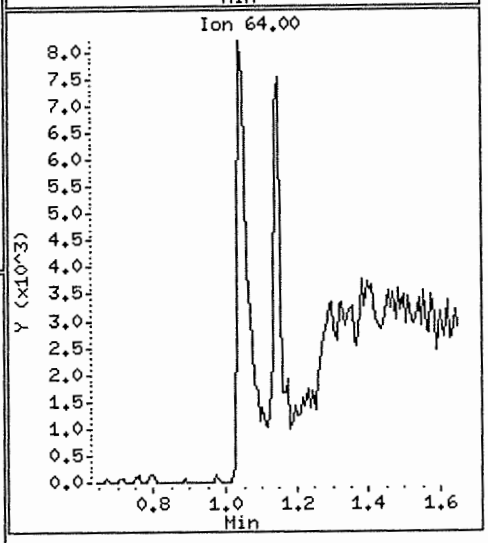
5 Vinyl Chloride

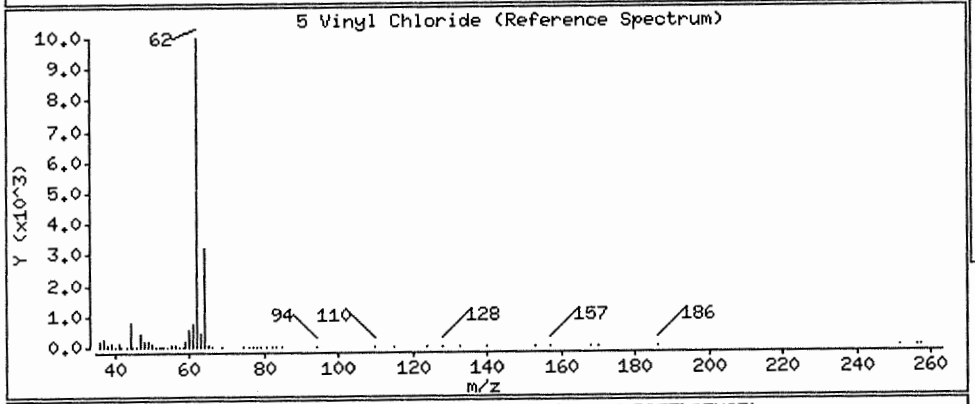
Concentration: 345.88 ug/l

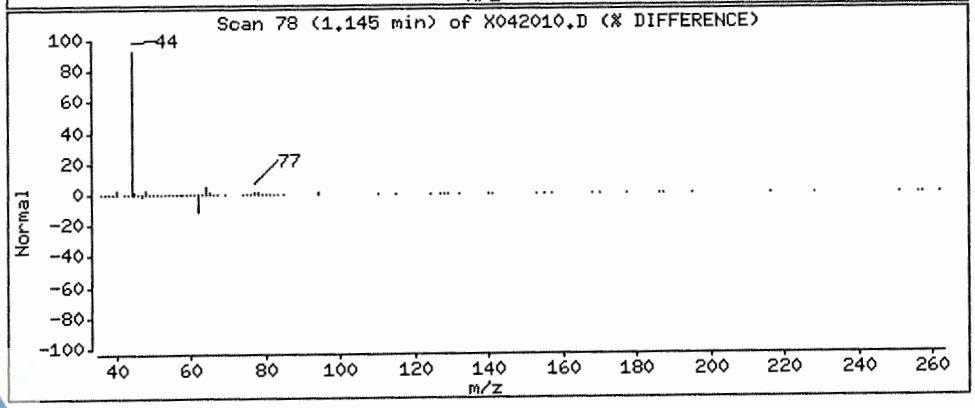












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210420.b\X042011.D Page 1
Report Date: 05-May-2021 10:41

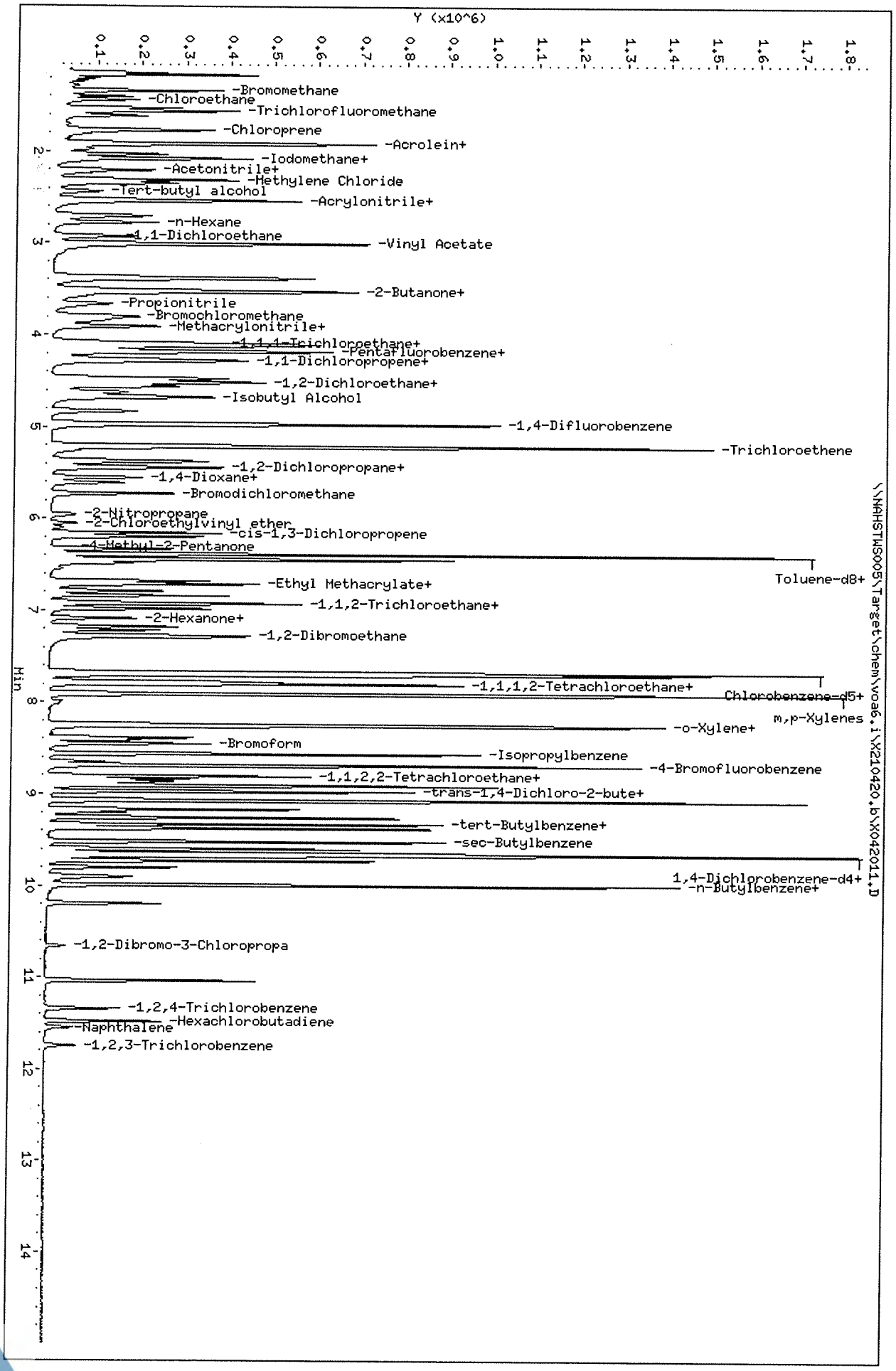
ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X210420.b\X042011.D
Lab Smp Id: HS21040859-10MS Client Smp ID: HS21040859-10MS
Inj Date : 20-APR-2021 14:12
Operator : PC Inst ID: voa6.i
Smp Info : HS21040859-10MS;HS21040859-10MS;3;;MS
Misc Info : HS18090001;WATER;0;100;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X210420.b\8260W.m
Meth Date : 05-May-2021 10:41 voa6.i Quant Type: ISTD
Cal Date : 02-APR-2021 13:20 Cal File: X040208.D
Als bottle: 11 QC Sample: MS
Dil Factor: 100.00000
Integrator: HP RTE Compound Sublist: CBI_short1.sub
Target Version: 4.14
Processing Host: NAHSTW7066

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	100.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	453324	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.963	(1.000)	742267	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.670	(1.000)	714577	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	320258	50.0000	
$ 30 Dibromofluoromethane	113	4.096	4.103	(0.979)	249793	46.8311	46.83
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	316805	49.5462	49.54
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	949692	51.6419	51.64
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	347488	50.6833	50.68
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	86348	20.8019	2080.18
11 1,1-Dichloroethene	96	1.912	1.919	(0.457)	137910	21.3657	2136.57
33 1,2-Dichloroethane	62	4.555	4.555	(0.916)	167853	21.3642	2136.42
27 cis-1,2-Dichloroethene	96	3.523	3.530	(0.842)	261388	47.1692	4716.91
17 Methylene Chloride	84	2.306	2.305	(0.551)	101693	21.5399	2153.98
38 Trichloroethene	130	5.207	5.206	(1.048)	438285	86.2547	8625.47
5 Vinyl Chloride	62	1.145	1.145	(0.274)	169032	24.8715	2487.14



Data File: \\NAHSTWS005\Target\chem\voa6.i\X210420.b\X042011.D
Date : 20-APR-2021 14:12
Client ID: HS21040859-10HS
Sample Info: HS21040859-10HS;HS21040859-10HS;3;;HS
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\NAHSTWS005\Target\chem\voa6.i\X210420.b\X042012.D Page 1
Report Date: 05-May-2021 10:41

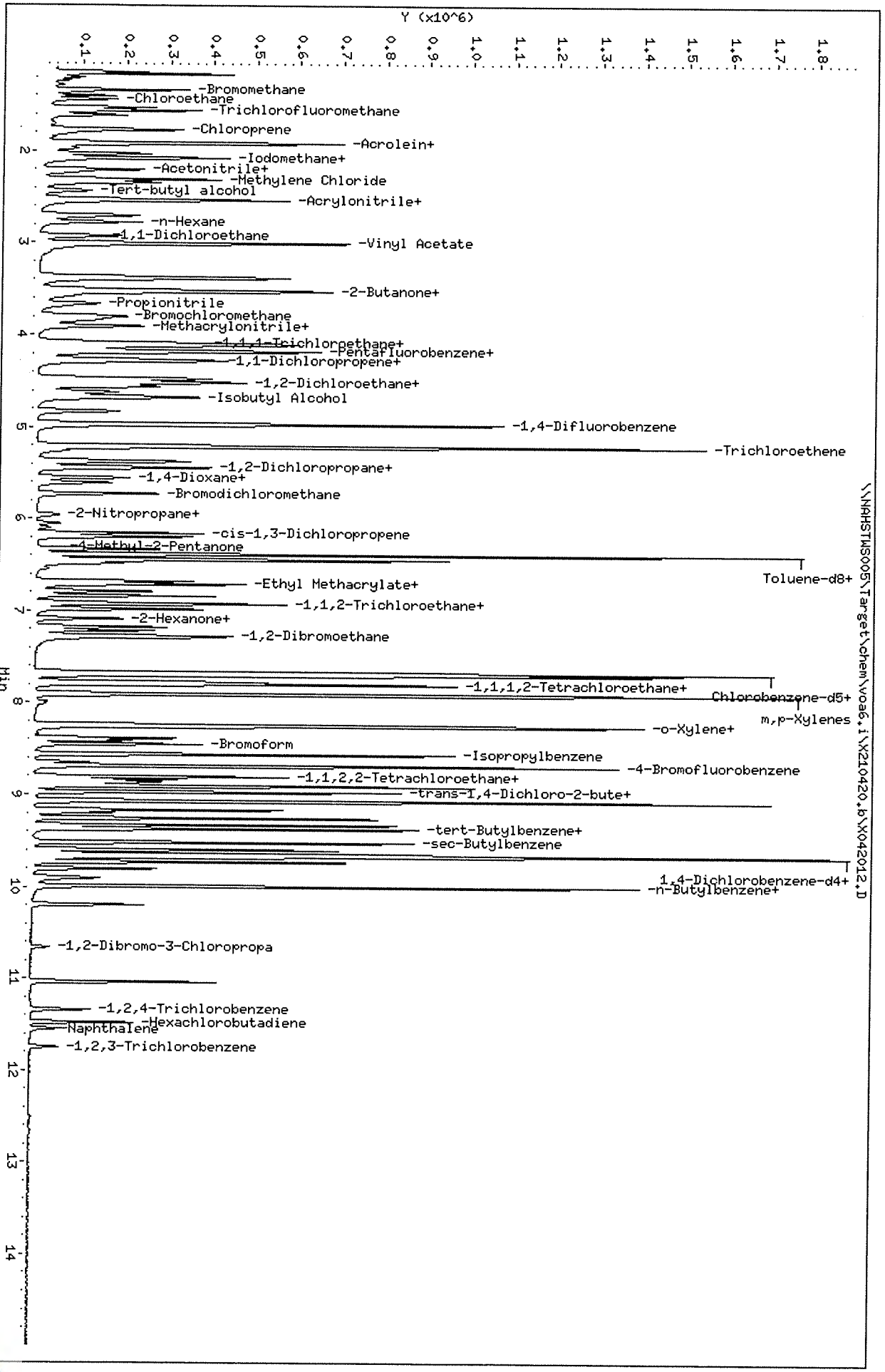
ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X210420.b\X042012.D
Lab Smp Id: HS21040859-10MSD Client Smp ID: HS21040859-10MSD
Inj Date : 20-APR-2021 14:33
Operator : PC Inst ID: voa6.i
Smp Info : HS21040859-10MSD;HS21040859-10MSD;3;;MSD
Misc Info : HS18090001;WATER;0;100;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X210420.b\8260W.m
Meth Date : 05-May-2021 10:41 voa6.i Quant Type: ISTD
Cal Date : 02-APR-2021 13:20 Cal File: X040208.D
Als bottle: 11 QC Sample: MSD
Dil Factor: 100.00000
Integrator: HP RTE Compound Sublist: CBI_short1.sub
Target Version: 4.14
Processing Host: NAHSTW7066

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	100.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	471359	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.963	(1.000)	786604	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.670	(1.000)	735798	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	316583	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	256262	46.2115	46.21
$ 35 1,2-Dichloroethane-d4	65	4.469	4.476	(1.069)	315276	47.4412	47.44
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	978575	51.6765	51.67
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	352693	49.9824	49.98
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	89271	20.8858	2088.58
11 1,1-Dichloroethene	96	1.919	1.919	(0.459)	126856	18.9012	1890.12
33 1,2-Dichloroethane	62	4.555	4.555	(0.916)	170202	20.4422	2044.21
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	261577	45.3972	4539.72
17 Methylene Chloride	84	2.305	2.305	(0.551)	104784	21.3588	2135.87
38 Trichloroethene	130	5.207	5.206	(1.048)	441641	82.0162	8201.62
5 Vinyl Chloride	62	1.145	1.145	(0.274)	156440	22.1379	2213.79



Data File: \\NAHSTWS005\Target\chem\voa6.i\X210420.b\X042012.D
Date : 20-APR-2021 14:33
Client ID: HS21040859-10HSD
Sample Info: HS21040859-10HSD;HS21040859-10HSD;3;;HSD
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\NAHSTWS005\Target\chem\voa6.i\X210420.b\X042013.D Page 1
Report Date: 05-May-2021 10:42

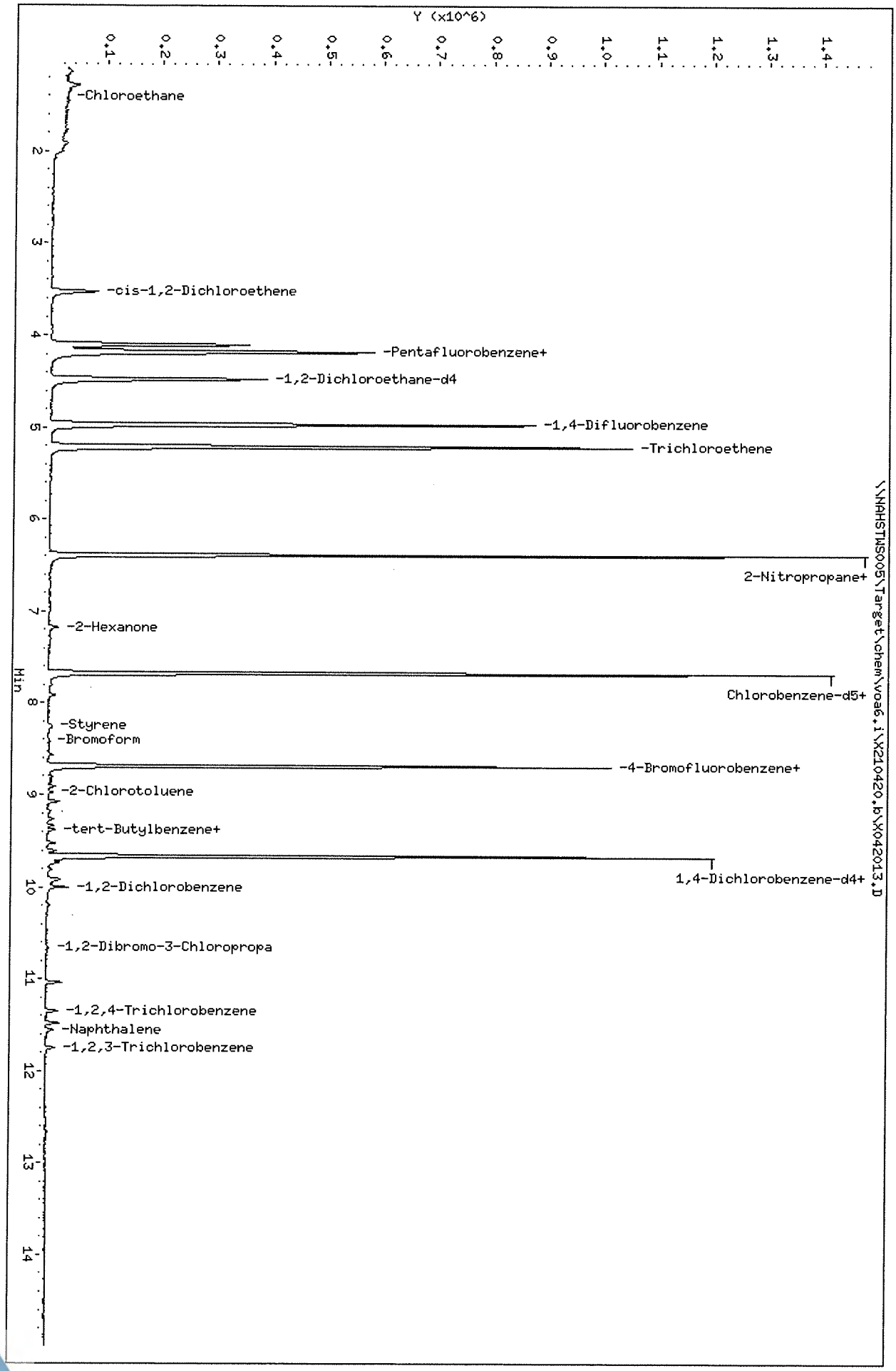
ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X210420.b\X042013.D
Lab Smp Id: HS21040859-12 Client Smp ID: HS21040859-12
Inj Date : 20-APR-2021 14:54
Operator : PC Inst ID: voa6.i
Smp Info : HS21040859-12;HS21040859-12;;;
Misc Info : HS18090001;WATER;0;5;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X210420.b\8260W.m
Meth Date : 05-May-2021 10:42 Qin.Xu Quant Type: ISTD
Cal Date : 02-APR-2021 13:20 Cal File: X040208.D
Als bottle: 12
Dil Factor: 5.00000
Integrator: HP RTE Compound Sublist: CBI_short1.sub
Target Version: 4.14
Processing Host: NAHSTW7066

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	5.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	440703	50.0000	
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	707661	50.0000	
* 47 Chlorobenzene-d5	117	7.670	7.670	(1.000)	611522	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	253990	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	240452	46.3751	46.37
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	310601	49.9630	49.96
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	859007	54.4769	54.47
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	275608	47.0944	47.09
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	40665	7.54842	37.74
38 Trichloroethene	130	5.206	5.206	(1.049)	322650	66.6029	333.01



Data File: \\NAHSTWS005\Target\chem\voa6.i\X210420.b\X042013.D
Date : 20-APR-2021 14:54
Client ID: HS21040859-12
Sample Info: HS21040859-12;HS21040859-12;;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\NAHSTWS005\Target\chem\voa6.i\X210420.b\X042013.D

Date : 20-APR-2021 14:54

Client ID: HS21040859-12

Instrument: voa6.i

Sample Info: HS21040859-12;HS21040859-12;;;

Purge Volume: 5.0

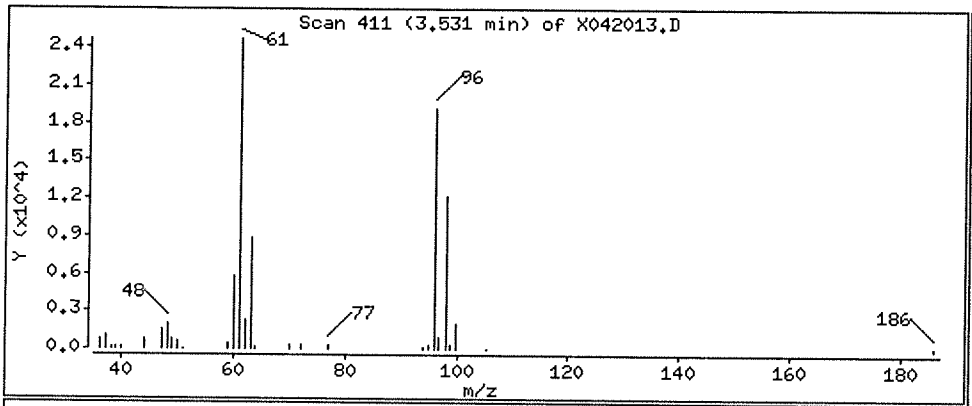
Operator: PC

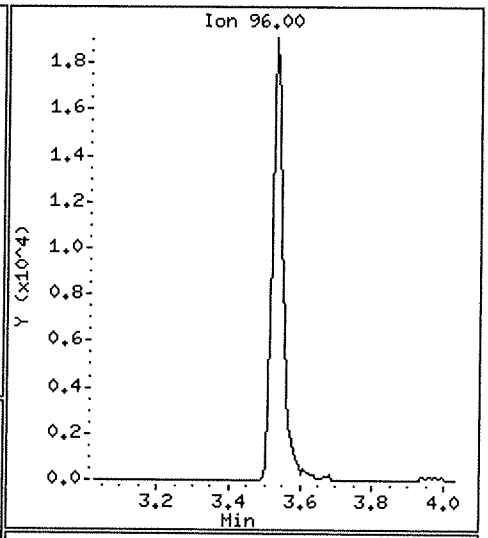
Column phase: DB624

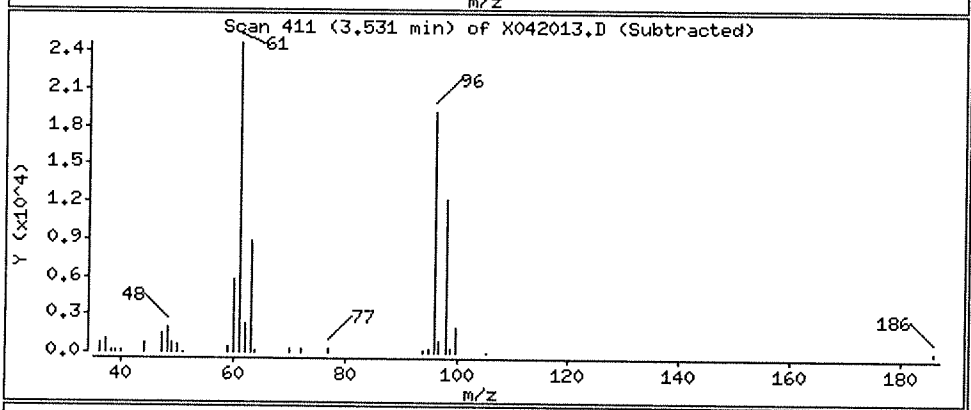
Column diameter: 0.18

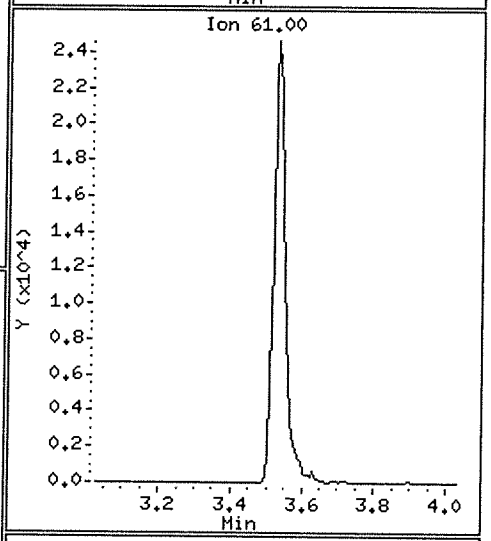
27 cis-1,2-Dichloroethene

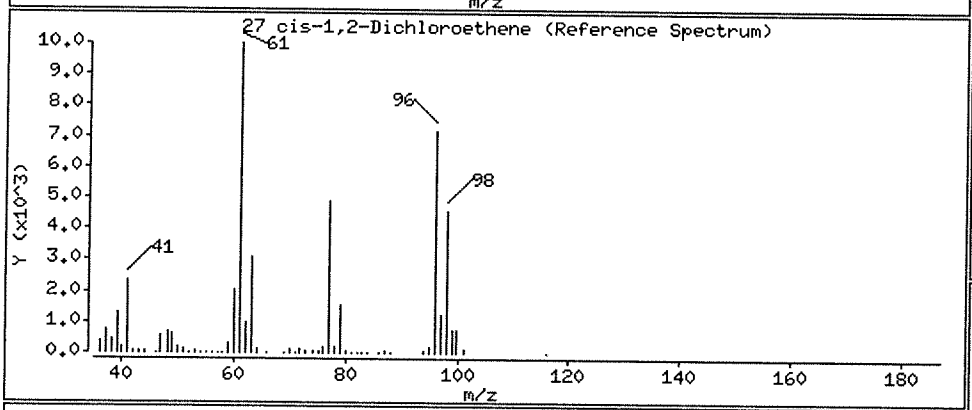
Concentration: 37.74 ug/l

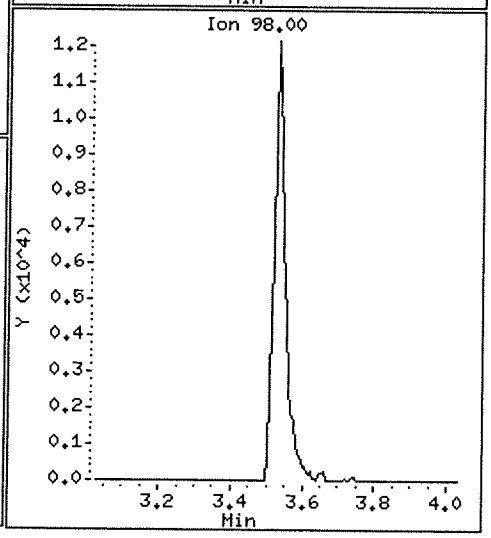


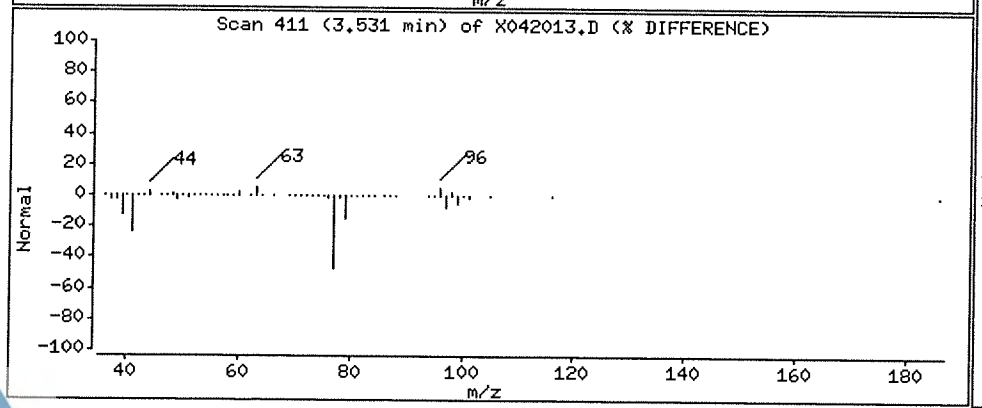












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210420.b\X042013.D

Date : 20-APR-2021 14:54

Client ID: HS21040859-12

Instrument: voa6.i

Sample Info: HS21040859-12;HS21040859-12;;;

Purge Volume: 5.0

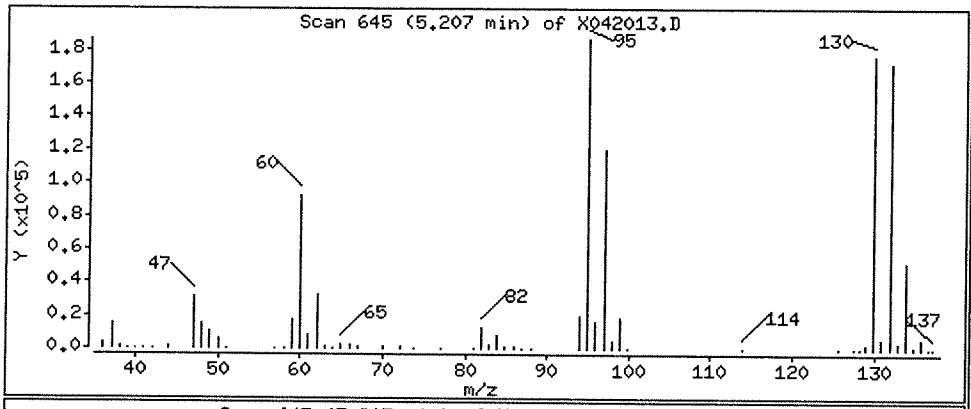
Operator: PC

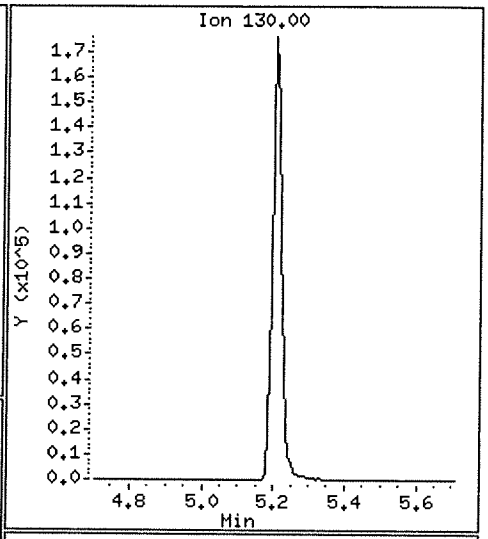
Column phase: DB624

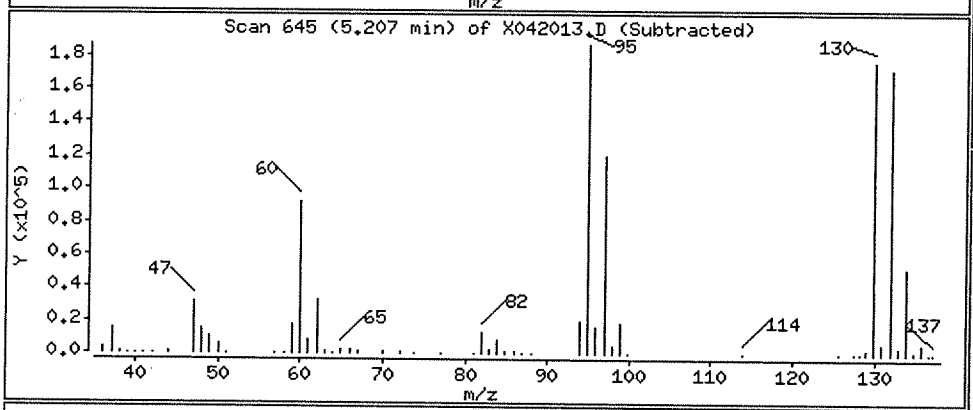
Column diameter: 0.18

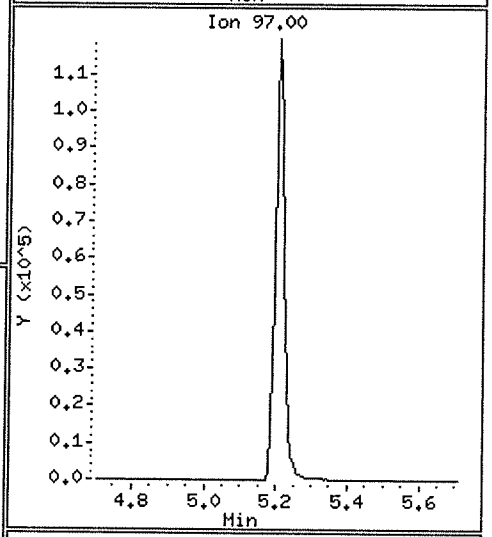
38 Trichloroethene

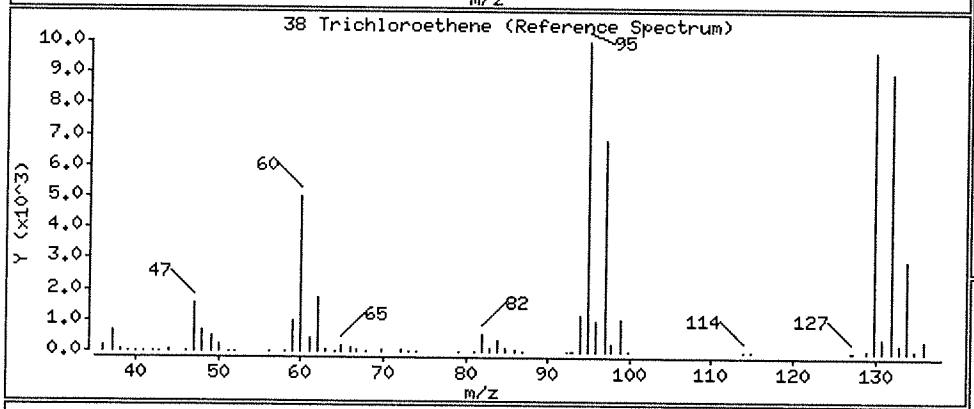
Concentration: 333.01 ug/l

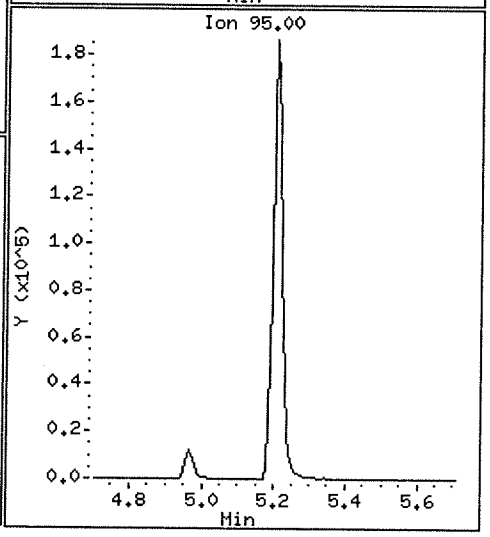


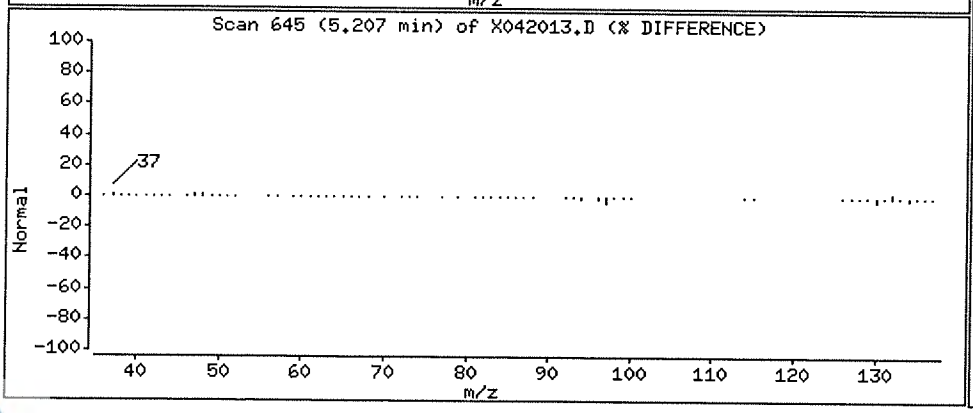












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210420.b\X042014.D Page 1
Report Date: 05-May-2021 10:42

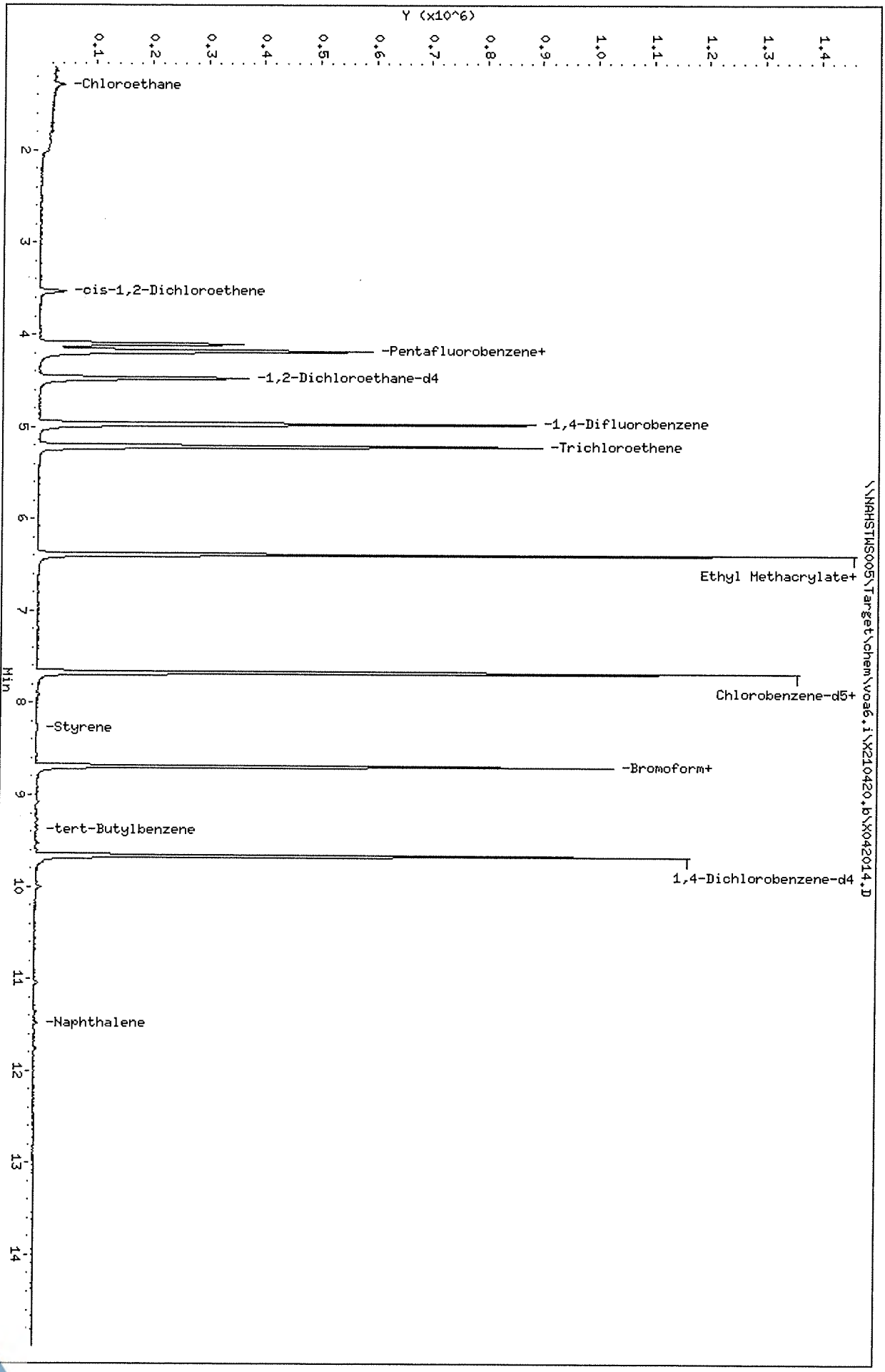
ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X210420.b\X042014.D
Lab Smp Id: HS21040859-13 Client Smp ID: HS21040859-13
Inj Date : 20-APR-2021 15:15
Operator : PC Inst ID: voa6.i
Smp Info : HS21040859-13;HS21040859-13;;;
Misc Info : HS18090001;WATER;0;10;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X210420.b\8260W.m
Meth Date : 05-May-2021 10:42 Qin.Xu Quant Type: ISTD
Cal Date : 02-APR-2021 13:20 Cal File: X040208.D
Als bottle: 13
Dil Factor: 10.00000
Integrator: HP RTE Compound Sublist: CBI_short1.sub
Target Version: 4.14
Processing Host: NAHSTW7066

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	10.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	440190	50.0000	
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	715402	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.670	(1.000)	619464	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	256257	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	246291	47.5456	47.54
$ 35 1,2-Dichloroethane-d4	65	4.469	4.476	(1.069)	304812	49.0974	49.09
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	847965	53.1345	53.13
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	274633	46.3531	46.35
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	23291	4.32842	43.28
38 Trichloroethene	130	5.207	5.206	(1.049)	272329	55.6071	556.07



Data File: \\NAHSTWS005\Target\chem\voa6.i\X210420.b\X042014.D
Date : 20-APR-2021 15:15
Client ID: HS21040859-13
Sample Info: HS21040859-13;HS21040859-13;;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\NAHSTWS005\Target\chem\voa6.i\X210420.b\X042014.D

Date : 20-APR-2021 15:15

Client ID: HS21040859-13

Instrument: voa6.i

Sample Info: HS21040859-13;HS21040859-13;;;

Purge Volume: 5.0

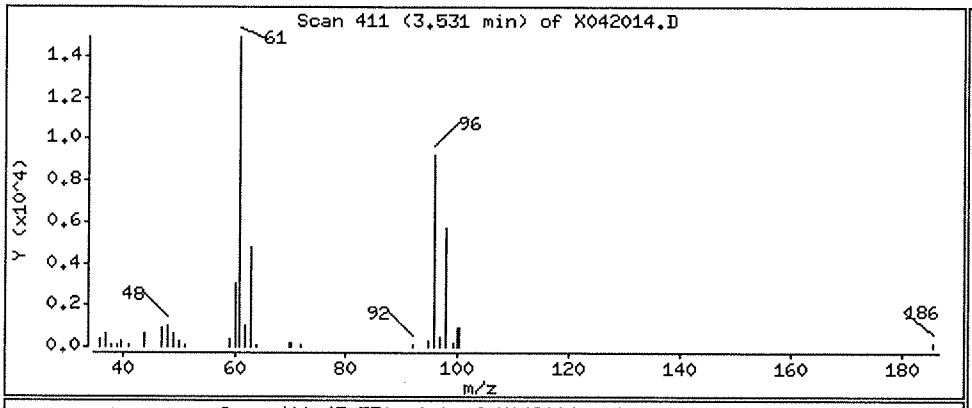
Operator: PC

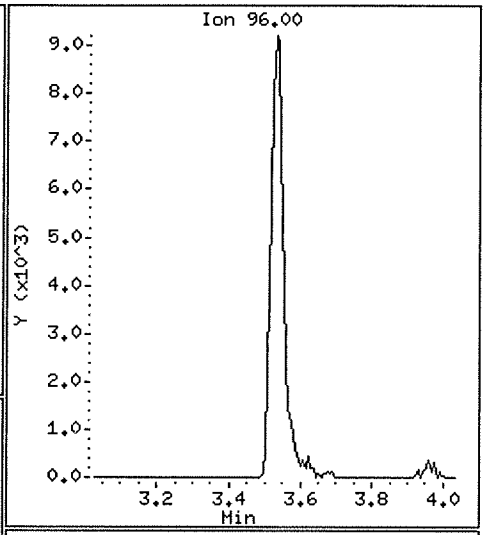
Column phase: DB624

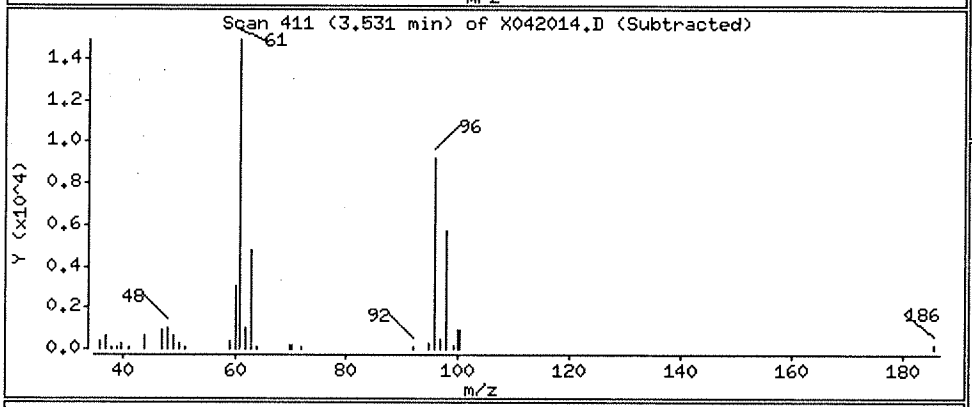
Column diameter: 0.18

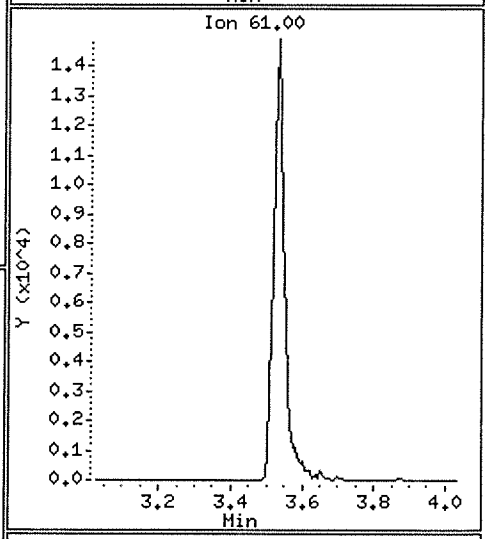
27 cis-1,2-Dichloroethene

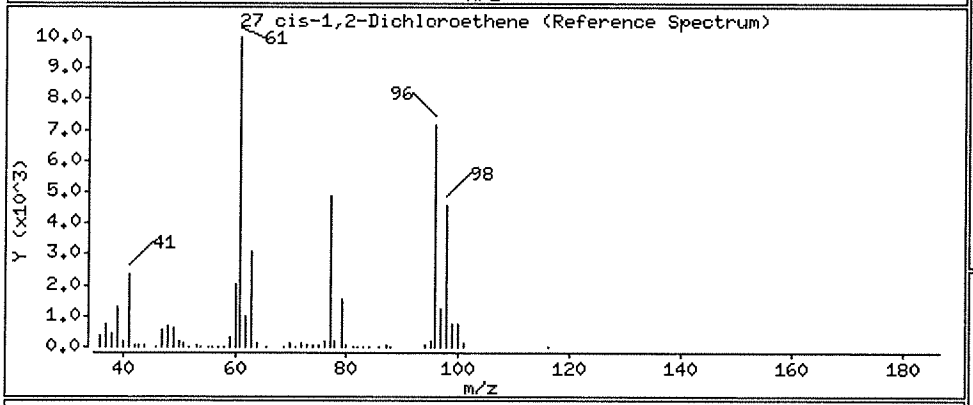
Concentration: 43.28 ug/l

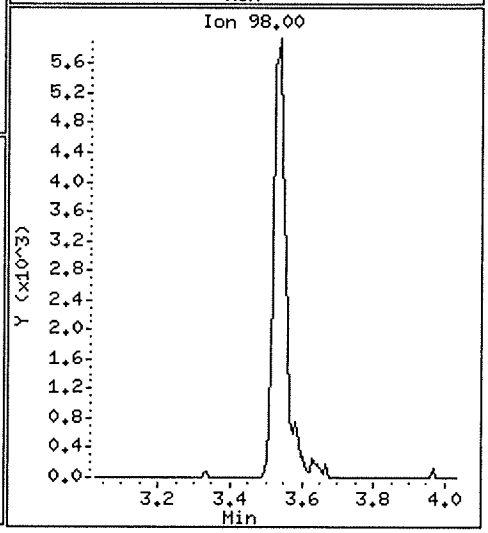


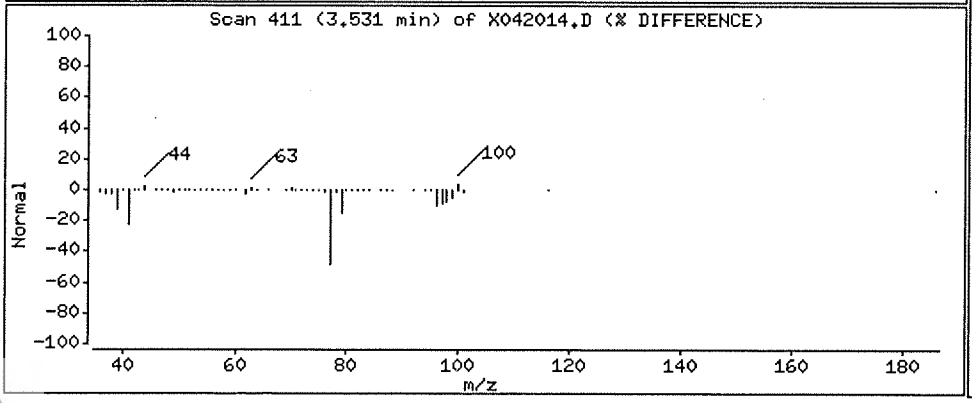












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210420.b\X042014.D

Date : 20-APR-2021 15:15

Client ID: HS21040859-13

Instrument: voa6.i

Sample Info: HS21040859-13;HS21040859-13;;;

Purge Volume: 5.0

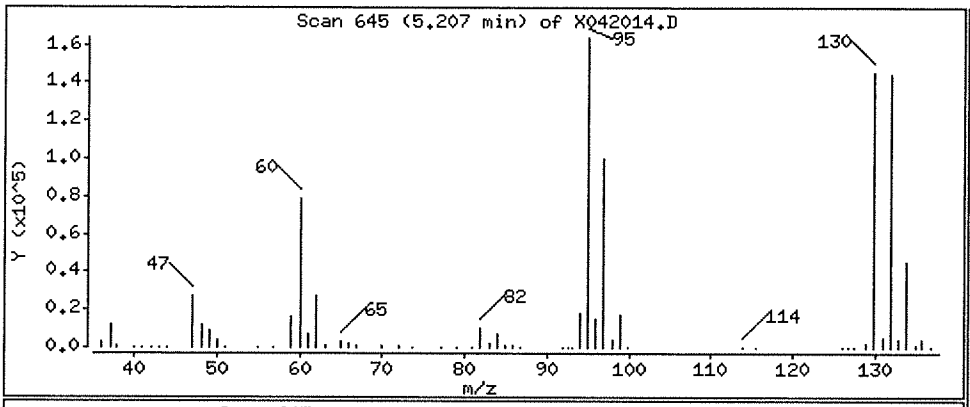
Operator: PC

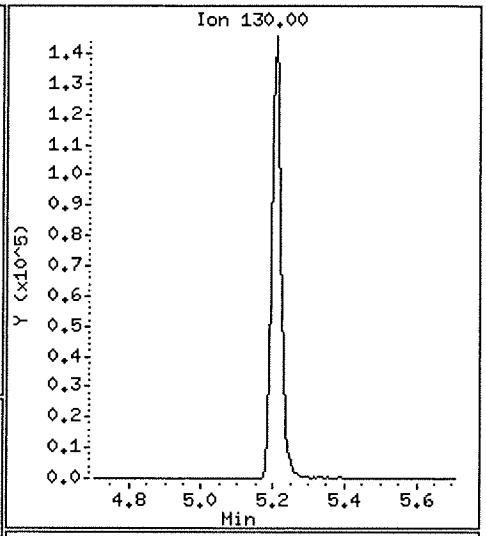
Column phase: DB624

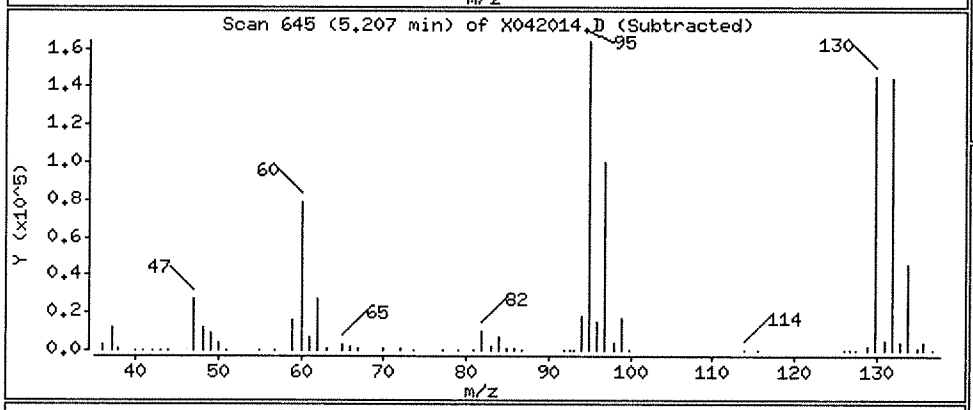
Column diameter: 0.18

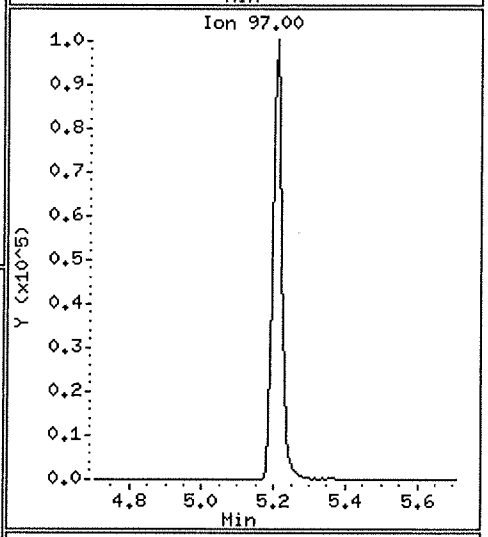
38 Trichloroethene

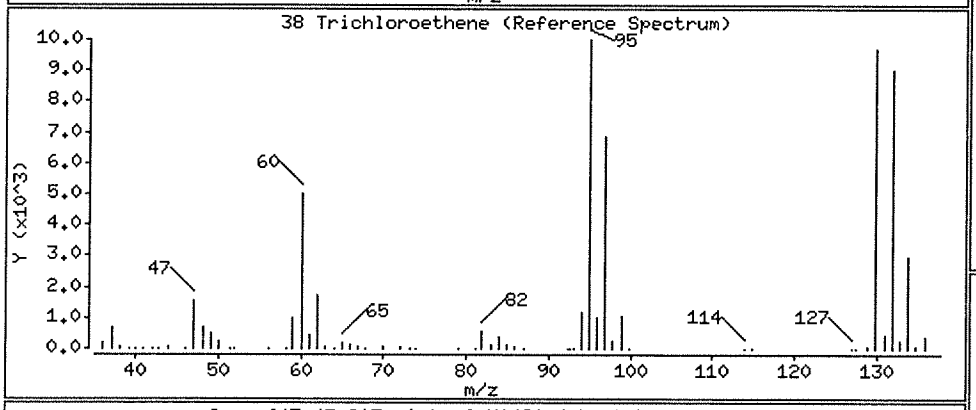
Concentration: 556.07 ug/l

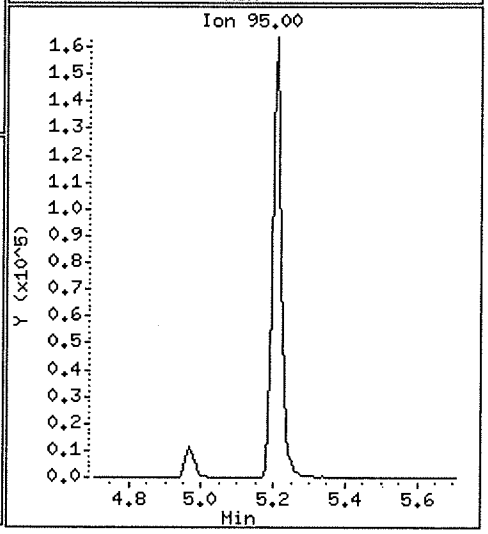


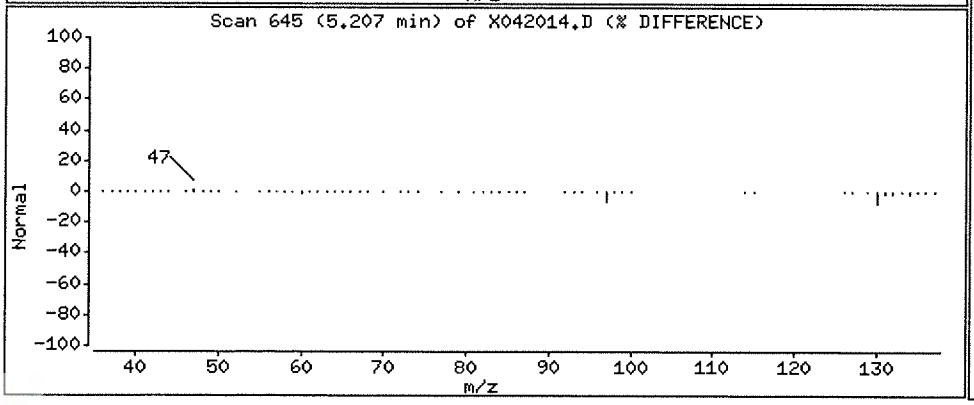












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210420.b\X042015.D Page 1
Report Date: 05-May-2021 10:41

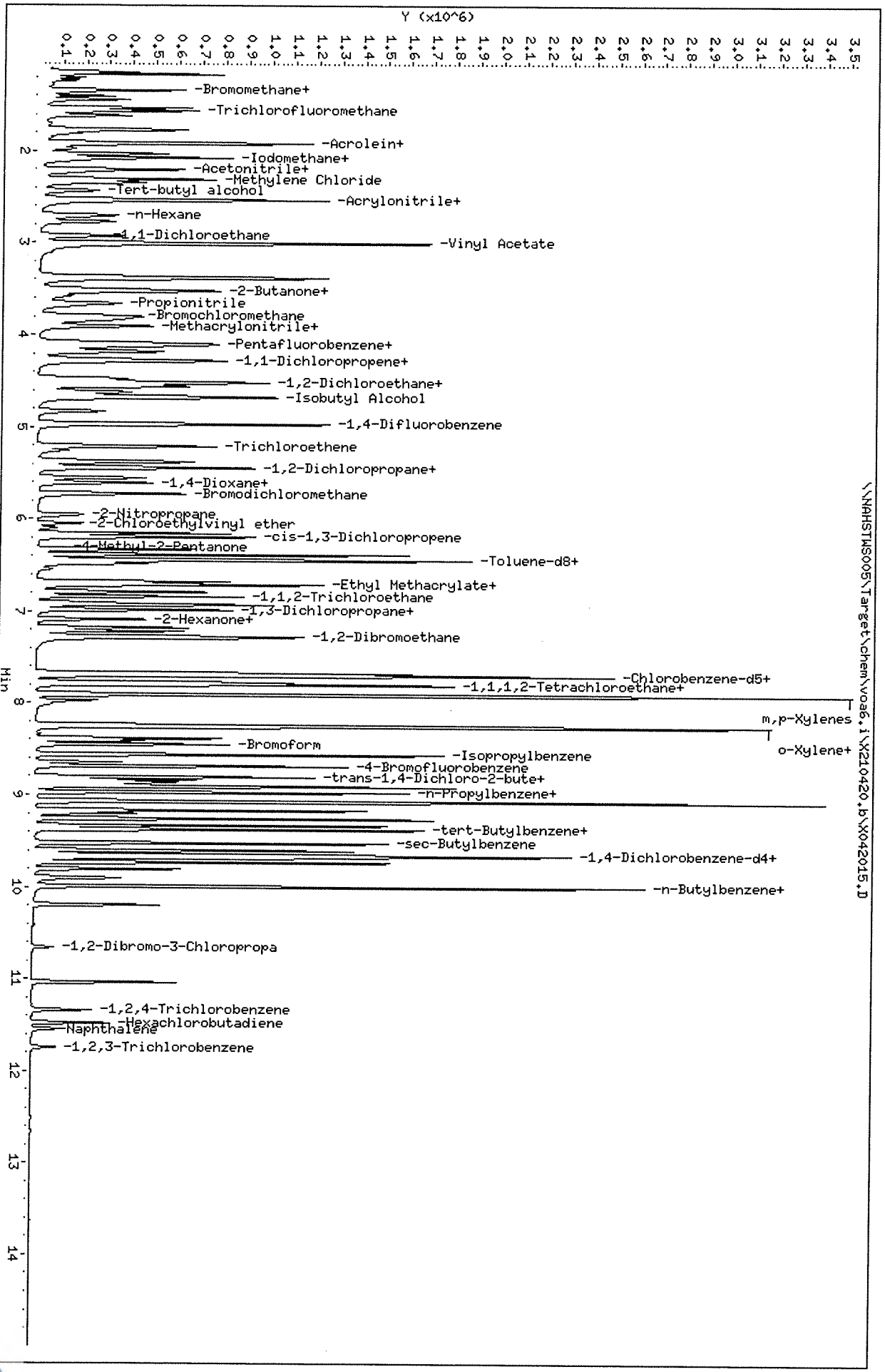
ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X210420.b\X042015.D
Lab Smp Id: CCV-END Client Smp ID: CCV-END
Inj Date : 20-APR-2021 15:36
Operator : PC Inst ID: voa6.i
Smp Info : CCV-END;CCV-END;2;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X210420.b\8260W.m
Meth Date : 05-May-2021 10:41 voa6.i Quant Type: ISTD
Cal Date : 02-APR-2021 13:20 Cal File: X040208.D
Als bottle: 14 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBI_short1.sub
Target Version: 4.14
Processing Host: NAHSTW7066

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	384347	50.0000	
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	697607	50.0000	
* 47 Chlorobenzene-d5	117	7.670	7.670	(1.000)	653395	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	308294	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	243418	50.0000	53.76
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	294513	50.0000	54.27
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	897720	50.0000	53.32
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	345697	50.0000	54.99
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	197470	50.0000	52.02
11 1,1-Dichloroethene	96	1.919	1.919	(0.459)	233364	50.0000	42.64
33 1,2-Dichloroethane	62	4.555	4.555	(0.918)	358439	50.0000	48.54
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	236024	50.0000	50.23
17 Methylene Chloride	84	2.305	2.305	(0.551)	208286	50.0000	49.93
38 Trichloroethene	130	5.206	5.206	(1.049)	230545	50.0000	48.27
5 Vinyl Chloride	62	1.145	1.145	(0.274)	276106	50.0000	47.91



Data File: \\NAHSTWS005\Target\chem\voa6.i\X210420.b\X042015.D
Date : 20-APR-2021 15:36
Client ID: CCV-END
Sample Info: CCV-END;CCV-END;2;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

HS21040859 RSK175 Raw Data

ALS WO# HS21040859

FID04 -Logbook

Batch: 26730 **Analyst:** Nosa Izekor

Date: 01-24-2017 **Reviewer:**

Method: RSK 175 ICAL **Laboratory:** Houston

Comments: Target Sequence 170124

#	Samp ID	Type	Analyzed	DF	Init Wt/Vol	Final Vol	File ID	Matrix	Status	pH
1	ICAL1	CALIB_1	01-24-2017 09:06 am	1.00	0.00 mL	0.00 mL	001.D	Liquid	Y	NA
2	ICAL2	CALIB_2	01-24-2017 09:30 am	1.00	0.00 mL	0.00 mL	002.D	Liquid	Y	NA
3	ICAL3	CALIB_3	01-24-2017 09:59 am	1.00	0.00 mL	0.00 mL	003.D	Liquid	Y	NA
4	ICAL4	CALIB_4	01-24-2017 10:15 am	1.00	0.00 mL	0.00 mL	004.D	Liquid	Y	NA
5	ICAL5	CALIB_5	01-24-2017 10:39 am	1.00	0.00 mL	0.00 mL	005.D	Liquid	Y	NA
6	ICAL6	CALIB_6	01-24-2017 10:57 am	1.00	0.00 mL	0.00 mL	006.D	Liquid	Y	NA
7	ICAL7	CALIB_7	01-24-2017 11:13 am	1.00	0.00 mL	0.00 mL	007.D	Liquid	Y	NA
8	ICV	METHSPIKI	01-24-2017 12:05 pm	1.00	0.00 mL	0.00 mL	008.D	Liquid	Y	NA
9	LCS-170124	LCS	01-24-2017 12:24 pm	1.00	0.00 mL	0.00 mL	009.D	Liquid	Y	NA
10	LCSD-170124	LCSD	01-24-2017 12:40 pm	1.00	0.00 mL	0.00 mL	010.D	Liquid	Y	NA
11	MBLK-170124	MBLK	01-24-2017 12:57 pm	1.00	0.00 mL	0.00 mL	011.D	Liquid	Y	NA
12	HS17010778-01	SAMP	01-24-2017 01:14 pm	1.00	0.00 mL	0.00 mL	012.D	Liquid	Y	NA
13	HS17010779-01	SAMP	01-24-2017 01:31 pm	1.00	0.00 mL	0.00 mL	013.D	Liquid	Y	NA
14	HS17010779-01DUP	SAMP	01-24-2017 01:47 pm	1.00	0.00 mL	0.00 mL	014.D	Liquid	Y	NA
15	CCV	CCV	01-24-2017 02:01 pm	1.00	0.00 mL	0.00 mL	015.D	Liquid	Y	NA

Chemical	Value
ICAL STD ID	30010700217
ICV STD ID	30010700610

FORM 3
WATER GASES METHOD SPIKE RECOVERY

Lab Name: ALS HOUSTON Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS21040859

Matrix Spike - ENG SC Sample No.: ICV

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE AMOUNT ()	% REC #	QC. LIMITS REC.
Ethene	16.800	19.090	114	75-125
Methane	9.647	9.597	99	75-125
Ethane	18.043	19.657	109	75-125
Propane	26.463	27.238	103	75-125
N-Butane	34.955	36.010	103	75-125

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

COMMENTS: _____

_____

FORM III GASES

FORM 6
GASES INITIAL CALIBRATION DATA

Lab Name: ALS HOUSTON Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS21040859

Instrument ID: FID-4 Calibration Date(s): 01/24/17 01/24/17

Column: RTX-PLOT ID: 0.53 (mm) Calibration Time(s): 0906 1113

LAB FILE ID: RF10: 001 RF25: 002 RF50: 003
RF100: 004 RF250: 005 RF500: 006

COMPOUND	RF10	RF25	RF50	RF100	RF250	RF500
Ethene	535.608	567.359	564.985	516.024	665.282	425.678
Methane	968.912	978.238	1019.699	880.798	960.713	930.704
Ethane	602.493	670.177	658.908	597.201	808.513	817.630
Propane	500	1279	2602	4785	18294	38286
N-Butane	438	936	2034	3864	18446	42817

FORM VI GASES

FORM 6
GASES INITIAL CALIBRATION DATA

Lab Name: ALS HOUSTON Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS2104085

Instrument ID: FID-4 Calibration Date(s): 01/24/17 01/24/17

Column: RTX-PLOT ID: 0.53 (mm) Calibration Time(s): 0906 1113

RF1000: 007

COMPOUND	RF1000	CURVE	COEFFICENTS A0	A1	A2	%RSD OR R^2	MA
Ethene	828.858	AVRG		586.256273		21.932	
Methane	1081.580	AVRG		974.377787		6.550	
Ethane	999.335	AVRG		736.322546		19.885	
Propane	96509	2ORDR	0.97987006	1.529e-003	-4.58e-009	0.9991365	0
N-Butane	114164	2ORDR	2.46870151	1.834e-003	-5.54e-009	0.9980766	0

FORM VI GASES

Data File: \\NAHSTWS005\Target\chem\FID-4.i\170124A.b\001.D Page 1
Report Date: 08-Apr-2020 12:18

ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\NAHSTWS005\Target\chem\FID-4.i\170124A.b\001.D
Lab Smp Id: ICAL1 Client Smp ID: ICAL1
Inj Date : 24-JAN-2017 09:06
Operator : JA Inst ID: FID-4.i
Smp Info : ICAL1;ICAL1;;;
Misc Info :
Comment :
Method : \\nahstws005\Target\chem\FID-4.i\170124A.b\RSKNI2.m
Meth Date : 26-Feb-2020 16:33 Purvi.lad Quant Type: ESTD
Cal Date : 24-JAN-2017 09:06 Cal File: 001.D
Als bottle: 1 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: stdNIP2.sub
Target Version: 4.14

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	ON-COL (ug/L)
1 Methane	1.043	1.030	0.013	374	0.38600	0.383(a)
2 Ethene	1.553	1.556	-0.003	361	0.67400	0.615(a)
3 Ethane	1.716	1.723	-0.007	435	0.72200	0.590(a)
4 Propane	4.073	4.113	-0.040	500	1.05900	1.743
5 N-Butane	7.640	7.690	-0.050	438	1.39800	3.271

QC Flag Legend

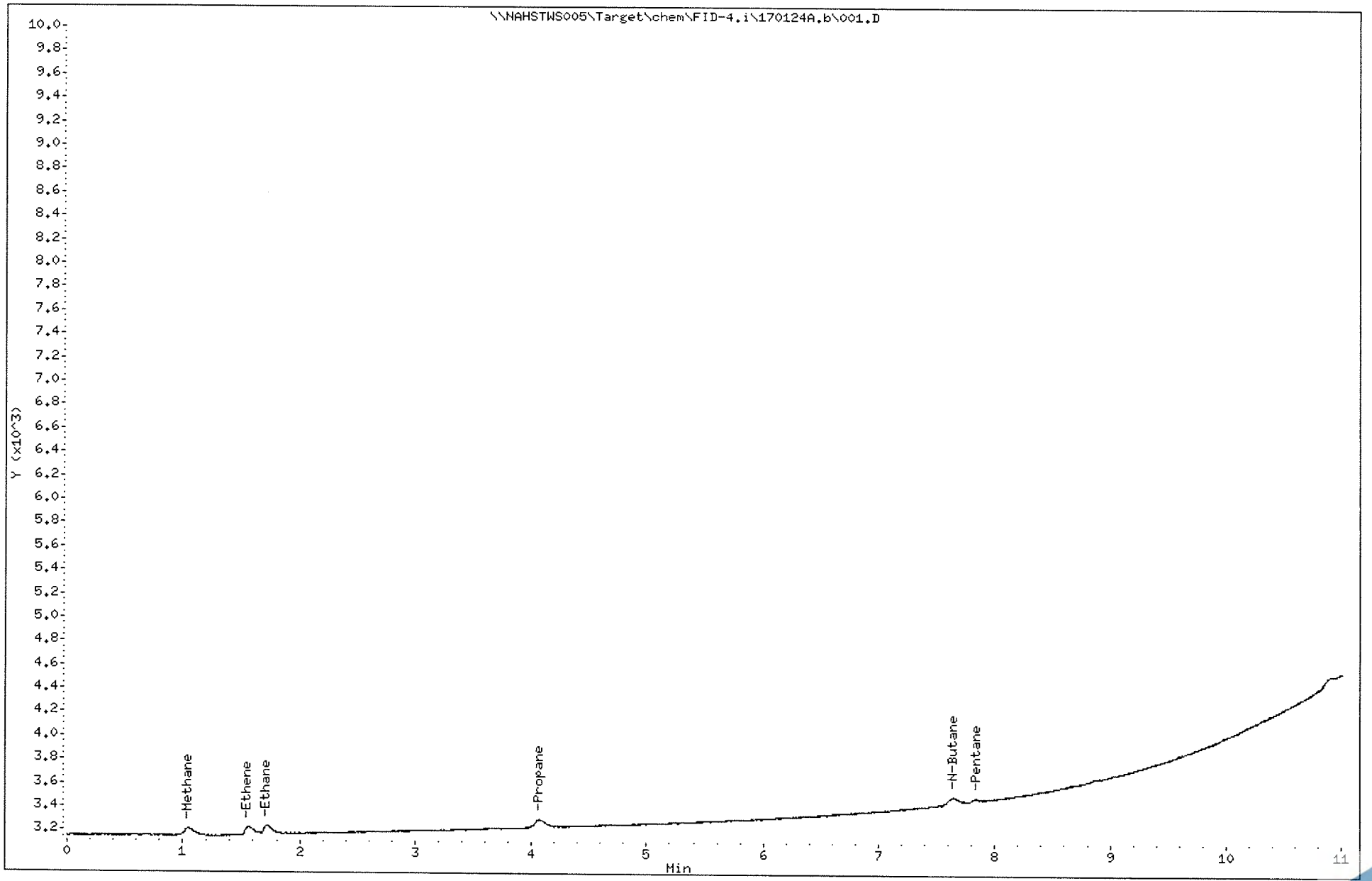
a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).

Data File: \\NAHSTWS005\Target\chem\FID-4.i\170124A.b\001.D
Date : 24-JAN-2017 09:06
Client ID: ICAL1
Sample Info: ICAL1;ICAL1;;;

Column phase: Rtx-PLOT

Instrument: FID-4.i

Operator: JA
Column diameter: 0.53



ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\NAHSTWS005\Target\chem\FID-4.i\170124A.b\002.D
Lab Smp Id: ICAL2 Client Smp ID: ICAL2
Inj Date : 24-JAN-2017 09:30
Operator : MA Inst ID: FID-4.i
Smp Info : ICAL2;ICAL2;;;
Misc Info : ;1;0;1
Comment :
Method : \\nahstws005\Target\chem\FID-4.i\170124A.b\RSKNI2.m
Meth Date : 26-Feb-2020 16:33 Purvi.lad Quant Type: ESTD
Cal Date : 24-JAN-2017 09:59 Cal File: 003.D
Als bottle: 2 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: stdNIP2.sub
Target Version: 4.14

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

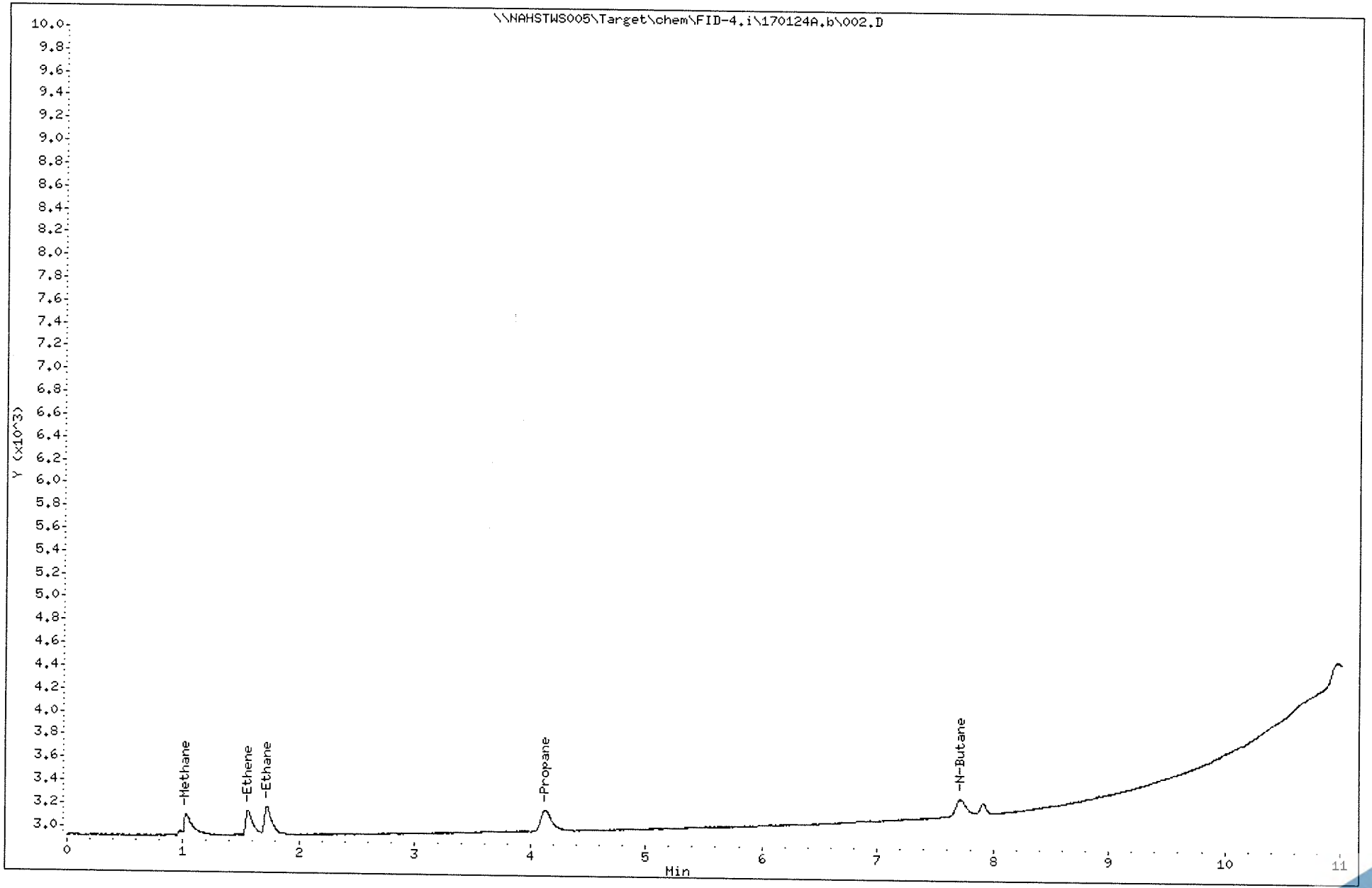
					AMOUNTS	
					CAL-AMT	ON-COL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/L)	(ug/L)
1 Methane	1.023	1.030	-0.007	944	0.96500	0.968
2 Ethene	1.560	1.556	0.004	956	1.68500	1.630
3 Ethane	1.723	1.723	0.000	1209	1.80400	1.641
4 Propane	4.123	4.113	0.010	1279	2.64600	2.927
5 N-Butane	7.716	7.690	0.026	936	3.49600	4.180

Data File: \\NAHSTWS005\Target\chem\FID-4.i\170124A.b\002.D
Date : 24-JAN-2017 09:30
Client ID: ICAL2
Sample Info: ICAL2;ICAL2;;;

Column phase: Rtx-PLOT

Instrument: FID-4.i

Operator: MA
Column diameter: 0.53



Data File: \\NAHSTWS005\Target\chem\FID-4.i\170124A.b\003.D Page 1
Report Date: 08-Apr-2020 12:18

ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\NAHSTWS005\Target\chem\FID-4.i\170124A.b\003.D
Lab Smp Id: ICAL3 Client Smp ID: ICAL3
Inj Date : 24-JAN-2017 09:59
Operator : MA Inst ID: FID-4.i
Smp Info : ICAL3;ICAL3;;;
Misc Info : ;1;0;1
Comment :
Method : \\nahstws005\Target\chem\FID-4.i\170124A.b\RSKNI2.m
Meth Date : 26-Feb-2020 16:33 Purvi.lad Quant Type: ESTD
Cal Date : 24-JAN-2017 11:13 Cal File: 007.D
Als bottle: 3 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: stdNIP2.sub
Target Version: 4.14

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

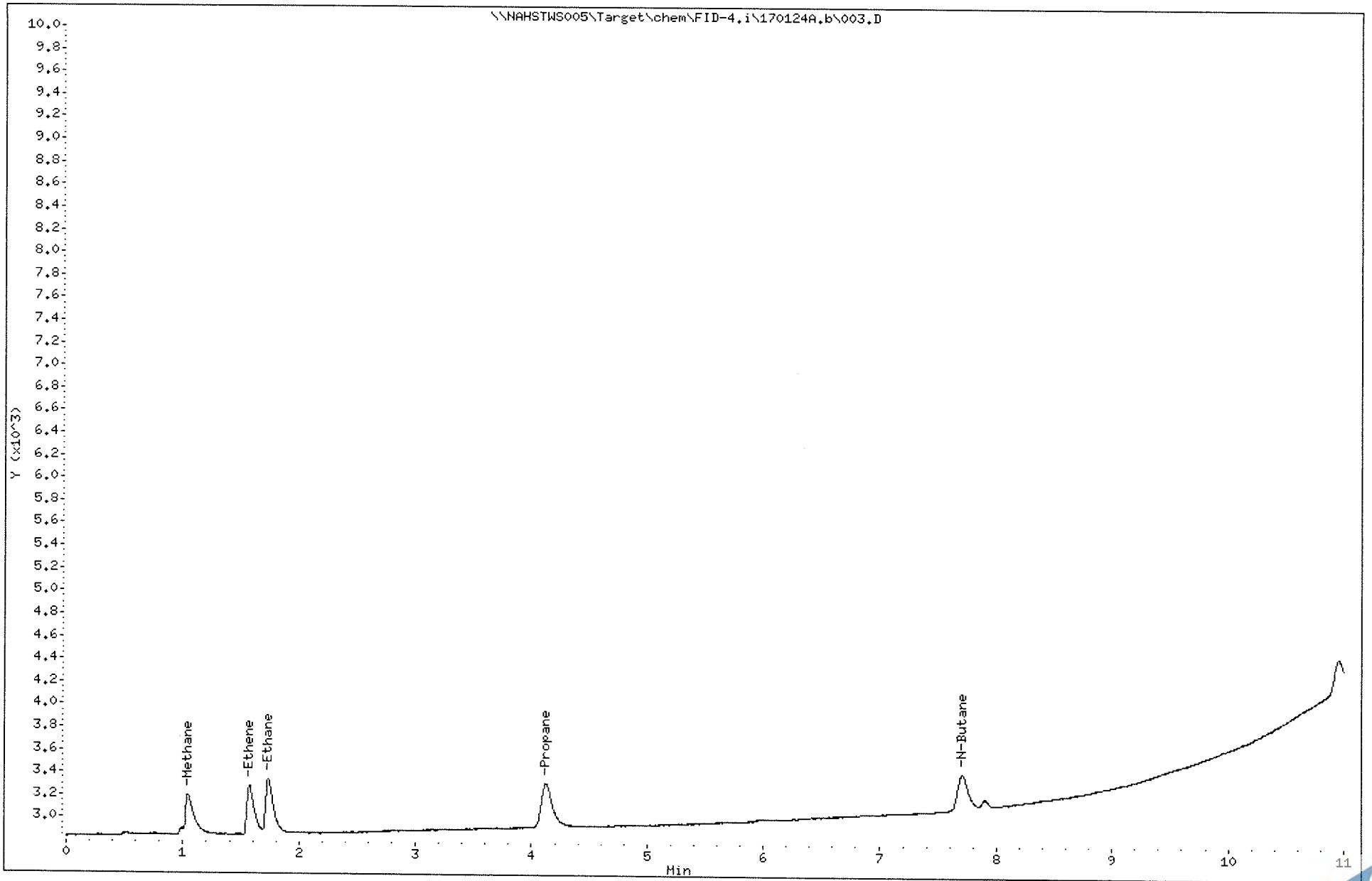
					AMOUNTS	
Compounds	RT	EXP RT	DLT RT	RESPONSE	CAL-AMT (ug/L)	ON-COL (ug/L)
1 Methane	1.043	1.030	0.013	1967	1.92900	2.018
2 Ethene	1.570	1.556	0.014	1904	3.37000	3.247
3 Ethane	1.736	1.723	0.013	2378	3.60900	3.229
4 Propane	4.123	4.113	0.010	2602	5.29300	4.926
5 N-Butane	7.703	7.690	0.013	2034	6.99100	6.176

Data File: \\NAHSTWS005\Target\chem\FID-4.i\170124A.b\003.D
Date : 24-JAN-2017 09:59
Client ID: ICAL3
Sample Info: ICAL3;ICAL3;;;

Column phase: Rtx-PLOT

Instrument: FID-4.i

Operator: MA
Column diameter: 0.53



Data File: \\NAHSTWS005\Target\chem\FID-4.i\170124A.b\004.D Page 1
Report Date: 08-Apr-2020 12:18

ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\NAHSTWS005\Target\chem\FID-4.i\170124A.b\004.D
Lab Smp Id: ICAL4 Client Smp ID: ICAL4
Inj Date : 24-JAN-2017 10:15
Operator : MA Inst ID: FID-4.i
Smp Info : ICAL4;ICAL4;;;
Misc Info : ;1;0;1
Comment :
Method : \\nahstws005\Target\chem\FID-4.i\170124A.b\RSKNI2.m
Meth Date : 26-Feb-2020 16:33 Purvi.lad Quant Type: ESTD
Cal Date : 24-JAN-2017 09:30 Cal File: 002.D
Als bottle: 4 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: stdNIP2.sub
Target Version: 4.14

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
1 Methane	1.033	1.030	0.003	3399	3.85900	3.488
2 Ethene	1.563	1.556	0.007	3478	6.74000	5.932
3 Ethane	1.726	1.723	0.003	4310	7.21700	5.853
4 Propane	4.120	4.113	0.007	4785	10.5850	8.190
5 N-Butane	7.703	7.690	0.013	3864	13.9820	9.473(M)

QC Flag Legend

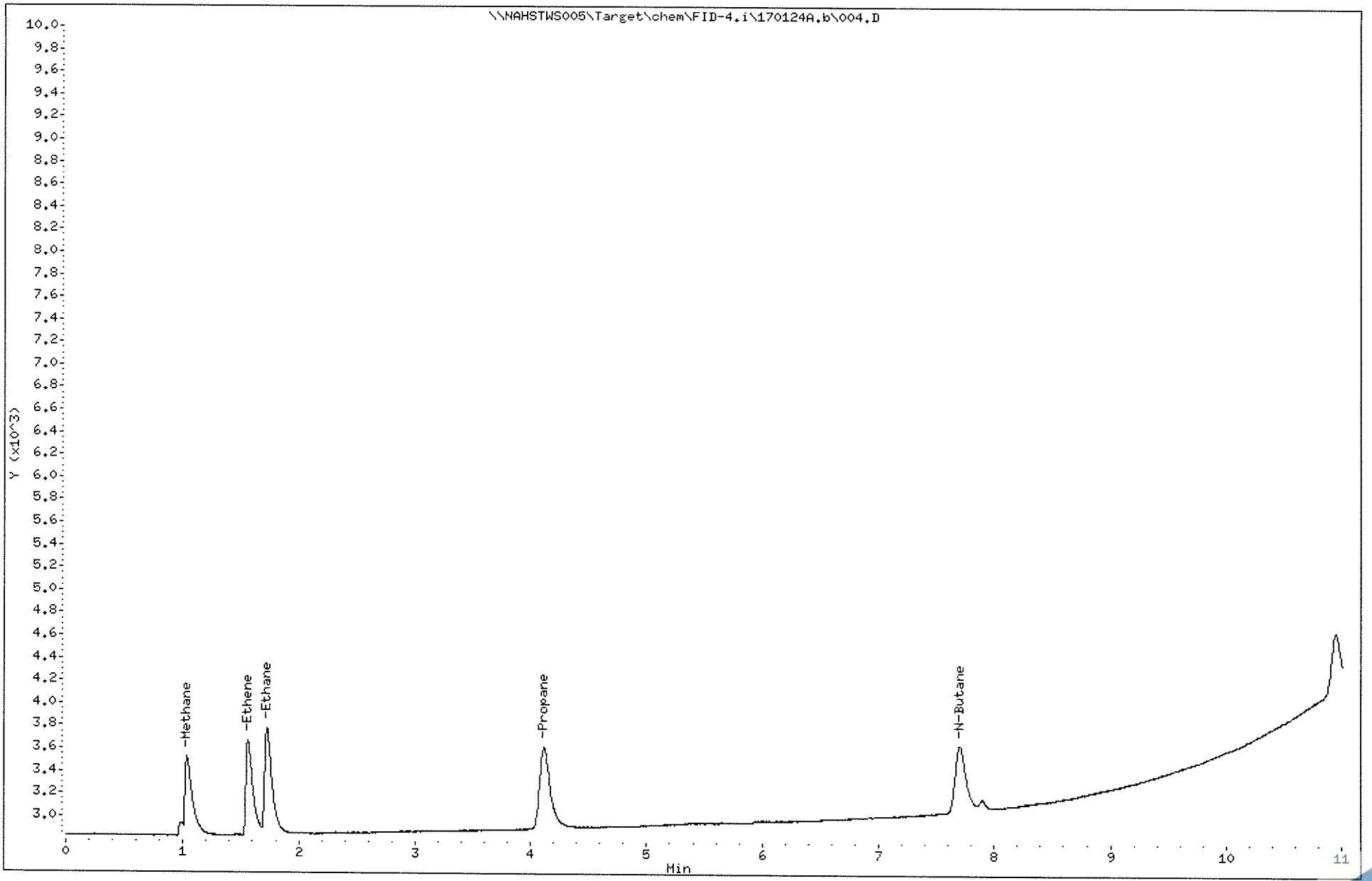
M - Compound response manually integrated.

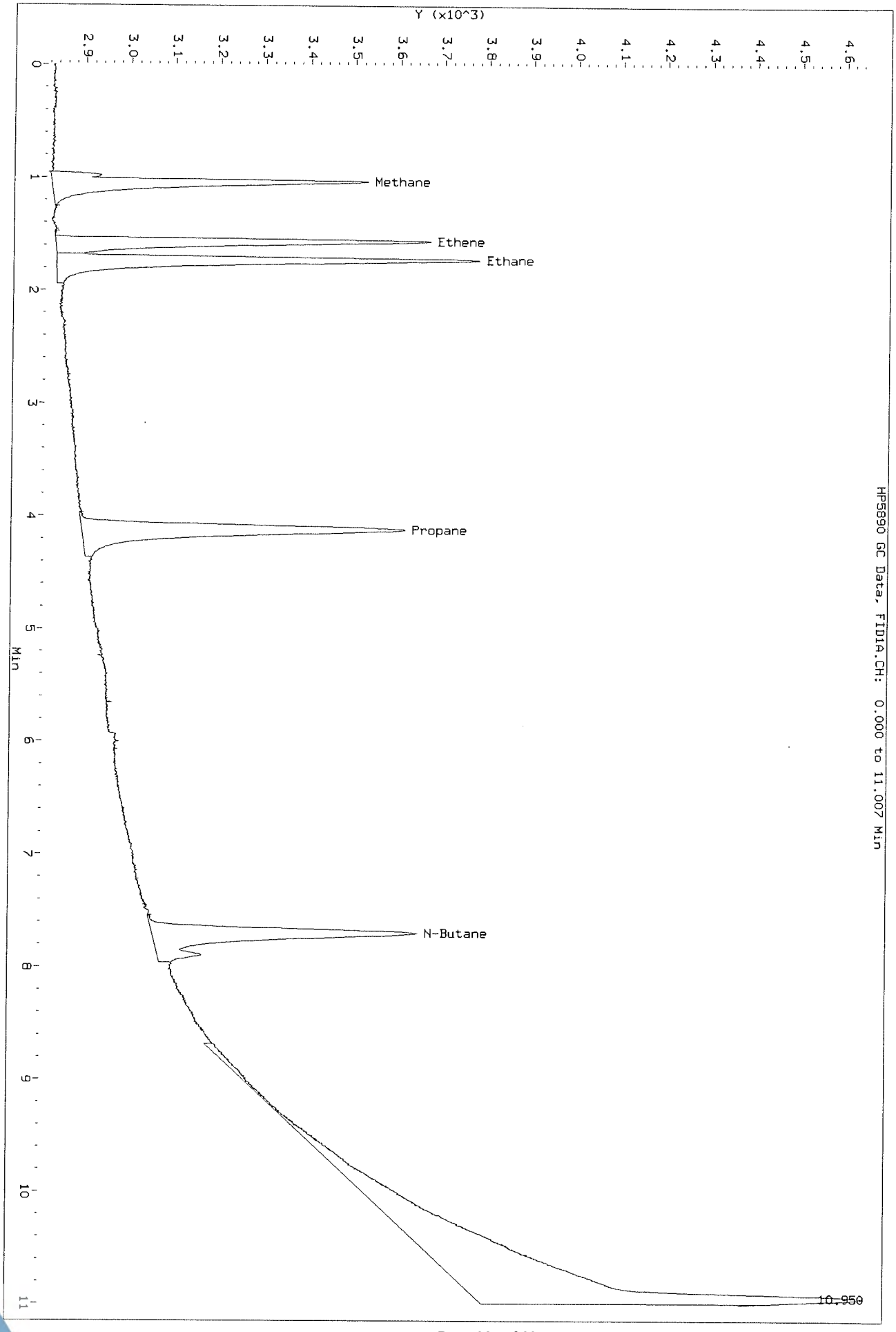
Data File: \\NAHSTWS005\Target\chem\FID-4.i\170124A.b\004.D
Date : 24-JAN-2017 10:15
Client ID: ICAL4
Sample Info: ICAL4;ICAL4;;;

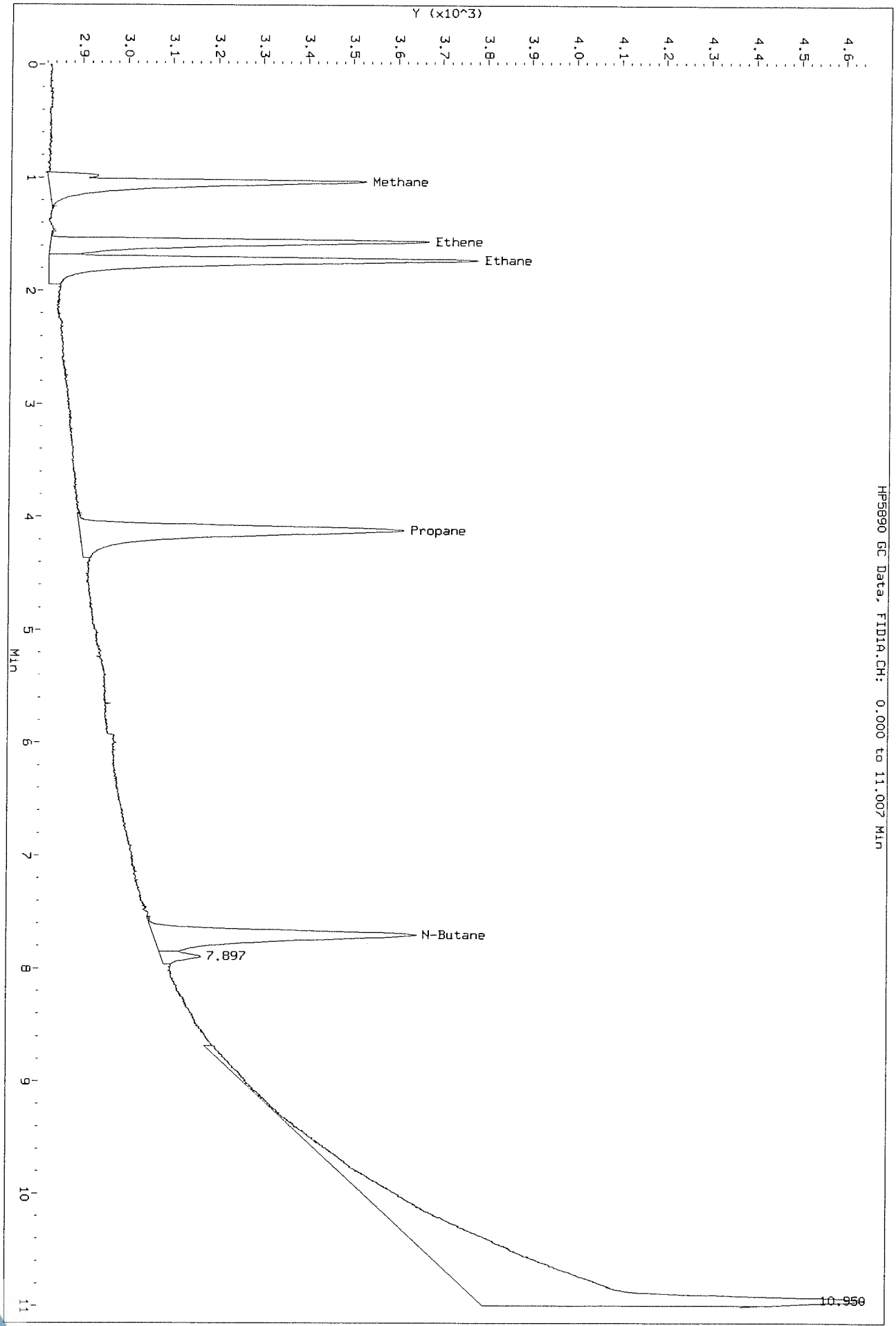
Column phase: Rtx-PLOT

Instrument: FID-4.i

Operator: MA
Column diameter: 0.53




Data File: \\nahstws005\Target\chem\FID-4.i\2017-ICAL\170124.b\BEFORE\004.D
Injection Date: 24-JAN-2017 10:15
Instrument: FID-4.i
Client Sample ID: ICAL4
Y (x10^3)
Methane
Ethene
Ethane
Propane
N-Butane
Min
HP5890 GC Data, FID1A.CH: 0.000 to 11.007 Min
10.950


Data File: \\nahstws005\Target\chem\FID-4.i\2017-ICAL\170124.b\004.D
Injection Date: 24-JAN-2017 10:15
Instrument: FID-4.i
Client Sample ID: ICAL4
HP5890 GC Data, FID1A.CH: 0.000 to 11.007 Min
Y (x10^3)
Min
Methane
Ethene
Ethane
Propane
N-Butane
7.897
10.950

Data File: \\NAHSTWS005\Target\chem\FID-4.i\170124A.b\005.D Page 1
Report Date: 08-Apr-2020 12:18

ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\NAHSTWS005\Target\chem\FID-4.i\170124A.b\005.D
Lab Smp Id: ICAL5 Client Smp ID: ICAL5
Inj Date : 24-JAN-2017 10:39
Operator : MA Inst ID: FID-4.i
Smp Info : ICAL5;ICAL5;;;
Misc Info : ;1;0;1
Comment :
Method : \\nahstws005\Target\chem\FID-4.i\170124A.b\RSKNI2.m
Meth Date : 26-Feb-2020 16:33 Purvi.lad Quant Type: ESTD
Cal Date : 24-JAN-2017 10:39 Cal File: 005.D
Als bottle: 5 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: stdNIP2.sub
Target Version: 4.14

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
1 Methane	1.043	1.030	0.013	9268	9.64700	9.511
2 Ethene	1.570	1.556	0.014	11210	16.8500	19.121
3 Ethane	1.733	1.723	0.010	14588	18.0430	19.811
4 Propane	4.120	4.113	0.007	18294	26.4630	27.415
5 N-Butane	7.700	7.690	0.010	18446	34.9550	34.419(M)

QC Flag Legend

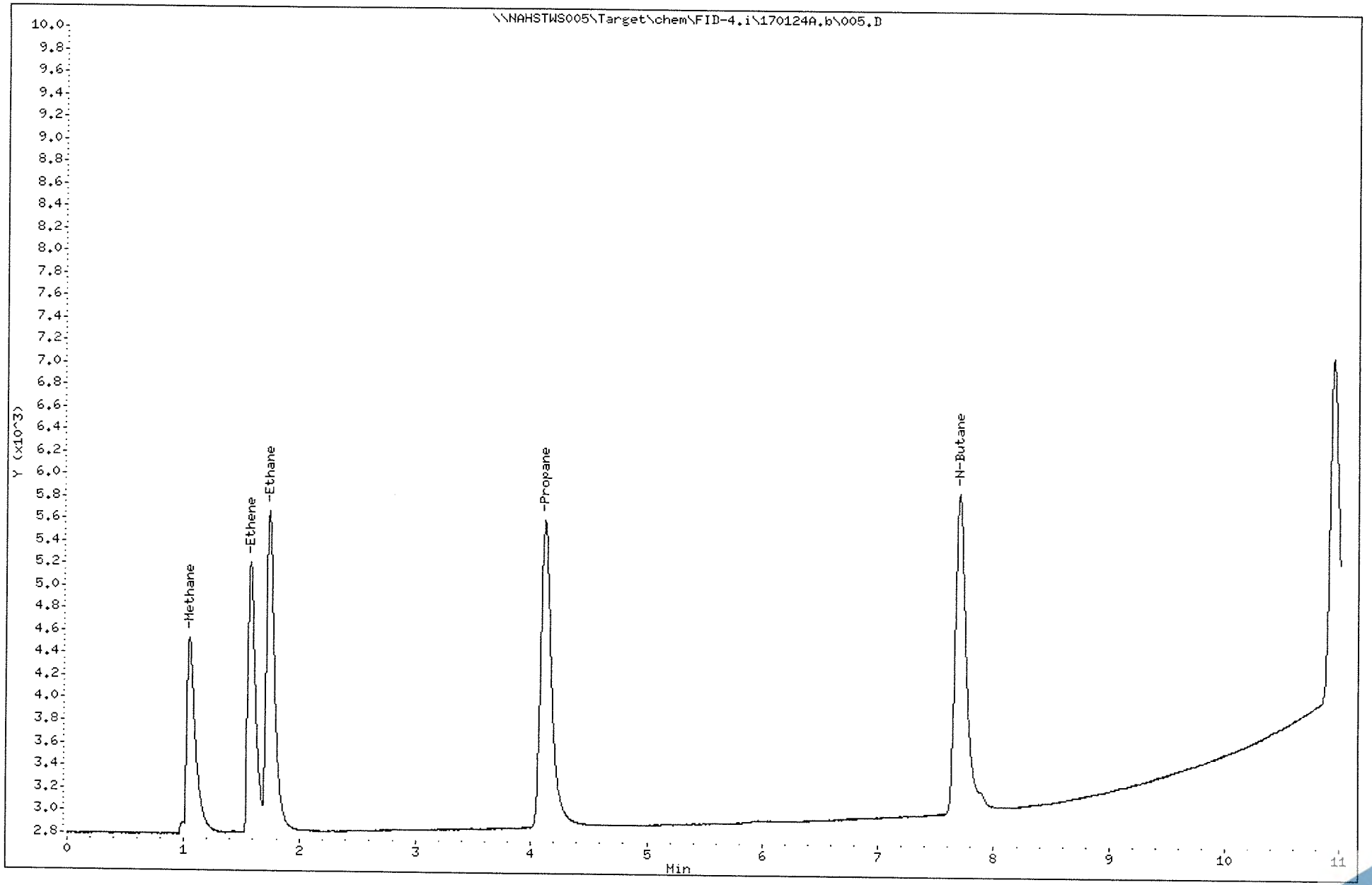
M - Compound response manually integrated.

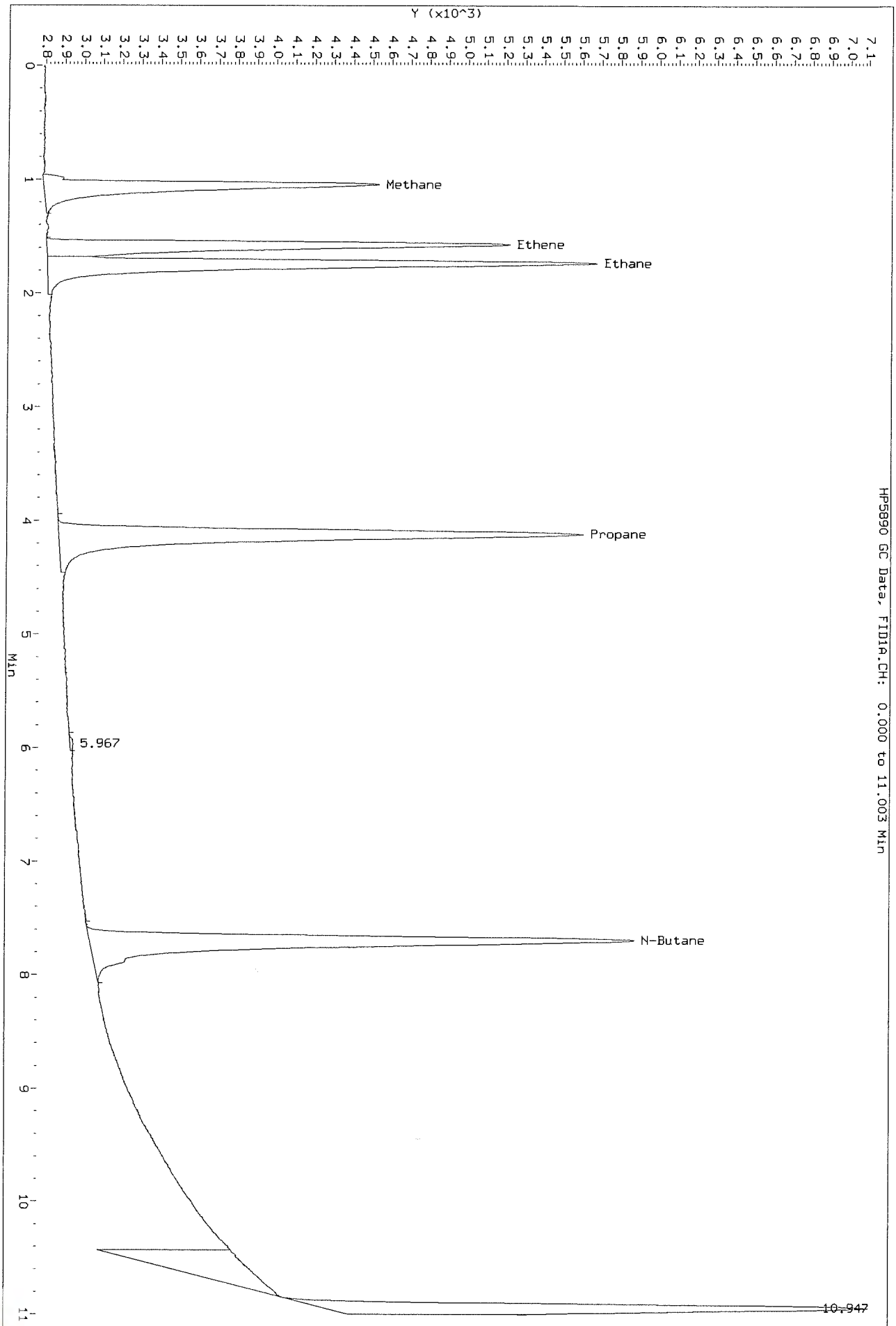
Data File: \\NAHSTWS005\Target\chem\FID-4.i\170124A.b\005.D
Date : 24-JAN-2017 10:39
Client ID: ICAL5
Sample Info: ICAL5;ICAL5;;;

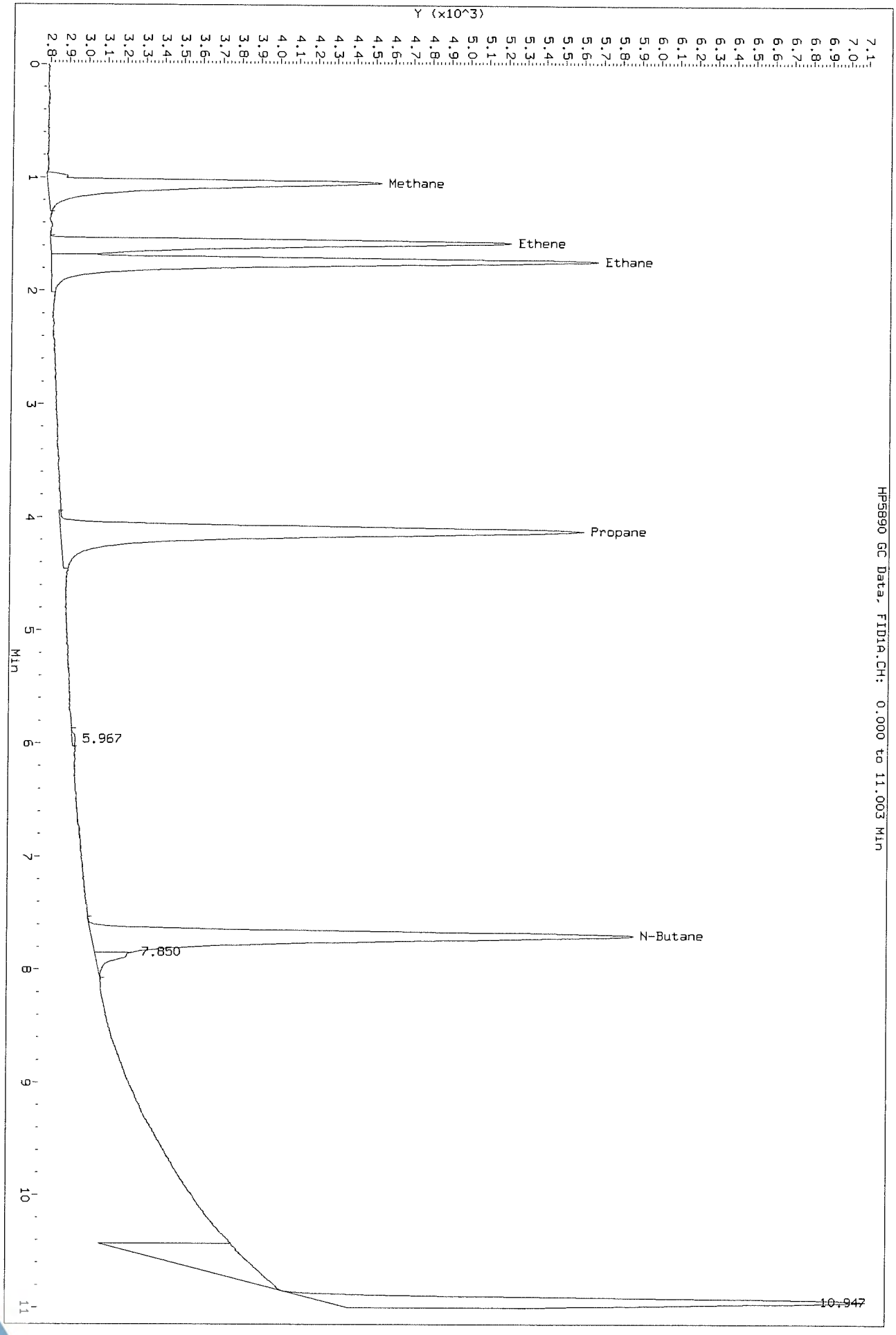
Column phase: Rtx-PLOT

Instrument: FID-4.i

Operator: MA
Column diameter: 0.53




Data File: \\nahstws005\Target\chem\FID-4.i\2017-ICAL\170124.b\BEFORE\005.D
Injection Date: 24-JAN-2017 10:39
Instrument: FID-4.i
Client Sample ID: ICAL5
HP5890 GC Data, FIDiA.CH: 0.000 to 11.003 Min
Y (x10^3)
Min
Methane
Ethene
Ethane
Propane
5.967
N-Butane
10.947


Data File: \\nahstws005\Target\chem\FID-4.i\2017-ICAL\170124.b\005.D
Injection Date: 24-JAN-2017 10:39
Instrument: FID-4.i
Client Sample ID: ICAL5
HP5890 GC Data, FID1A.CH: 0.000 to 11.003 Min
Y (x10^3)
Min
Methane
Ethene
Ethane
Propane
5.967
N-Butane
7.850
10.947

ALS Laboratory Group

Dissolved Gases Analysis

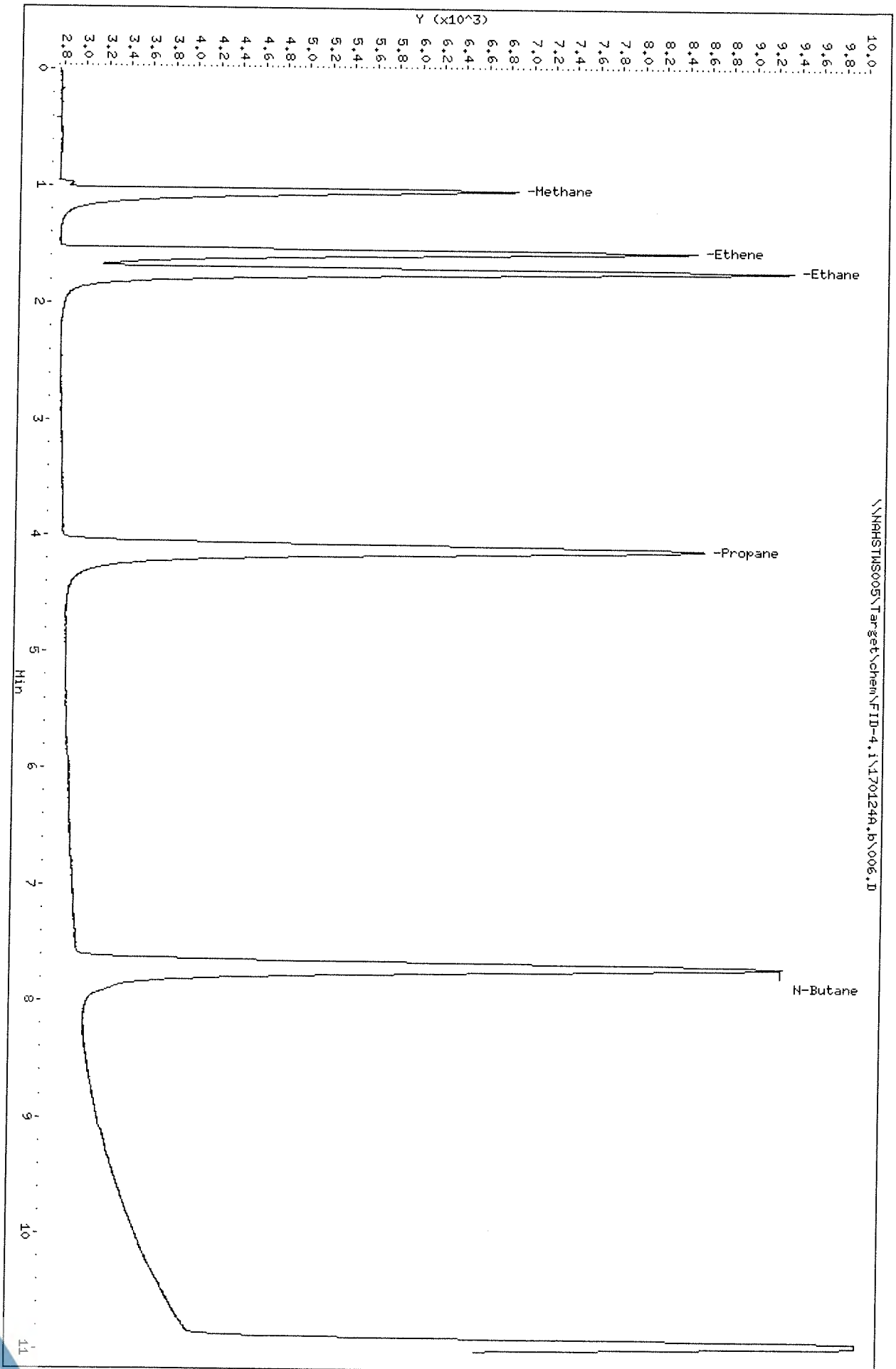
Data file : \\NAHSTWS005\Target\chem\FID-4.i\170124A.b\006.D
Lab Smp Id: ICAL6 Client Smp ID: ICAL6
Inj Date : 24-JAN-2017 10:57
Operator : MA Inst ID: FID-4.i
Smp Info : ICAL6;ICAL6;;;
Misc Info : ;1;0;1
Comment :
Method : \\nahstws005\Target\chem\FID-4.i\170124A.b\RSKNI2.m
Meth Date : 26-Feb-2020 16:33 Purvi.lad Quant Type: ESTD
Cal Date : 24-JAN-2017 10:39 Cal File: 005.D
Als bottle: 6 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: stdNIP2.sub
Target Version: 4.14

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

					AMOUNTS	
					CAL-AMT	ON-COL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/L)	(ug/L)
1 Methane	1.023	1.030	-0.007	17957	19.2940	18.429
2 Ethene	1.550	1.556	-0.006	22910	53.8200	39.078
3 Ethane	1.716	1.723	-0.007	29505	36.0860	40.070
4 Propane	4.110	4.113	-0.003	38286	52.9260	52.796
5 N-Butane	7.696	7.690	0.006	42817	69.9110	70.855

Data File: \\NAHSTWS005\Target\chem\FID-4.i\170124A.b\006.D
Date : 24-JAN-2017 10:57
Client ID: ICAL6
Sample Info: ICAL6;ICAL6;;;
Column phase: Rtx-PLOT

Instrument: FID-4.i
Operator: MA
Column diameter: 0.53



Data File: \\NAHSTWS005\Target\chem\FID-4.i\170124A.b\007.D Page 1
Report Date: 08-Apr-2020 12:18

ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\NAHSTWS005\Target\chem\FID-4.i\170124A.b\007.D
Lab Smp Id: ICAL7 Client Smp ID: ICAL7
Inj Date : 24-JAN-2017 11:13
Operator : MA Inst ID: FID-4.i
Smp Info : ICAL7;ICAL7;;;
Misc Info : ;1;0;1
Comment :
Method : \\nahstws005\Target\chem\FID-4.i\170124A.b\RSKNI2.m
Meth Date : 26-Feb-2020 16:33 Purvi.lad Quant Type: ESTD
Cal Date : 24-JAN-2017 10:57 Cal File: 006.D
Als bottle: 7 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: stdNIP2.sub
Target Version: 4.14

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	ON-COL (ug/L)
1 Methane	1.030	1.030	0.000	41736	38.5880	42.833(A)
2 Ethene	1.556	1.556	0.000	55865	67.4000	95.291(A)
3 Ethane	1.723	1.723	0.000	72124	72.1720	97.951(A)
4 Propane	4.113	4.113	0.000	96509	105.852	105.844
5 N-Butane	7.690	7.690	0.000	114164	139.821	139.707

QC Flag Legend

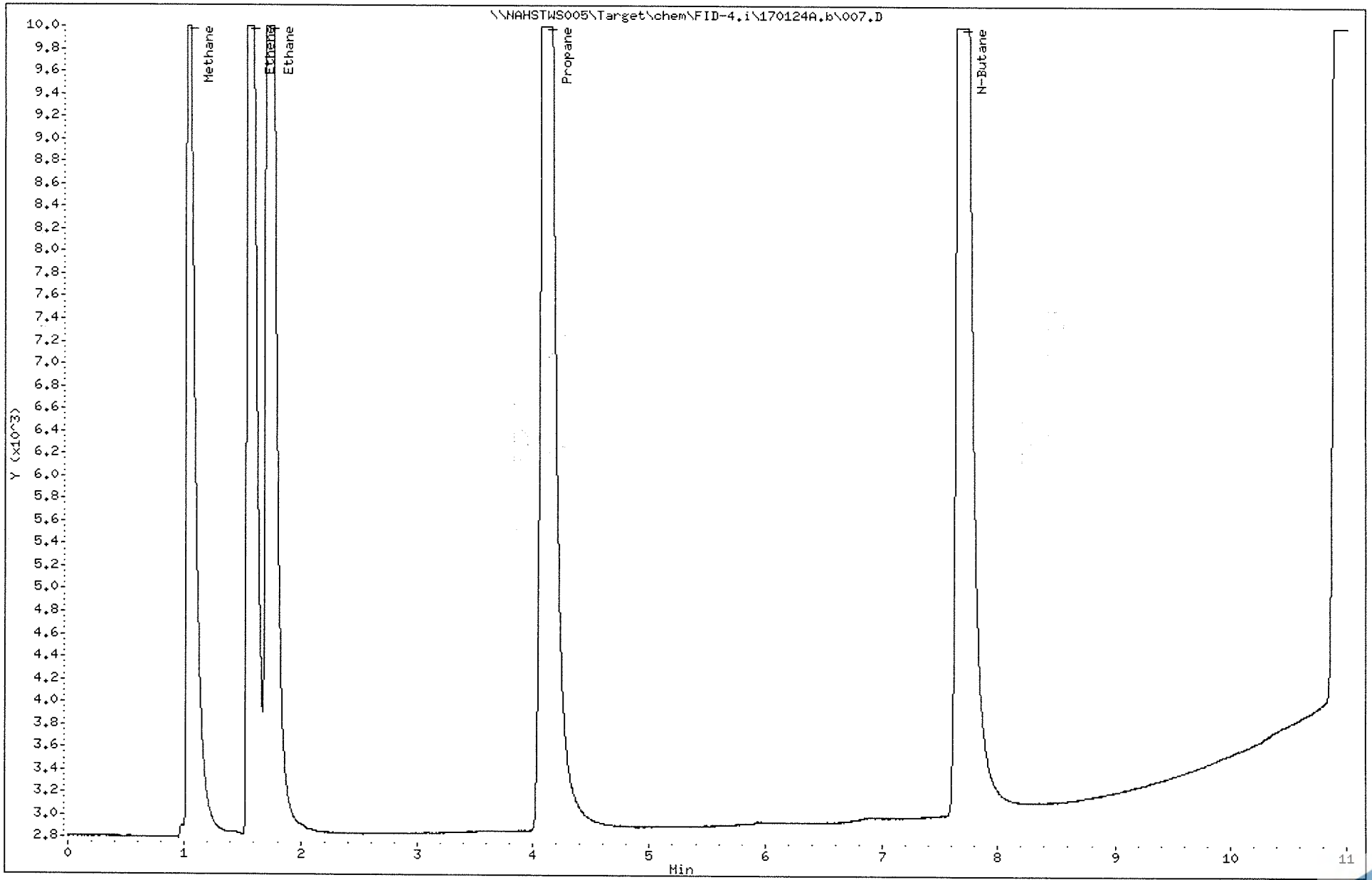
A - Target compound detected but, quantitated amount exceeded maximum amount.

Data File: \\NAHSTWS005\Target\chem\FID-4.i\170124A.b\007.D
Date : 24-JAN-2017 11:13
Client ID: ICAL7
Sample Info: ICAL7;ICAL7;;;

Column phase: Rtx-PLOT

Instrument: FID-4.i

Operator: MA
Column diameter: 0.53



Data File: \\NAHSTWS005\Target\chem\FID-4.i\170124A.b\008.D Page 1
Report Date: 08-Apr-2020 12:18

ALS Laboratory Group

Dissolved Gases Analysis

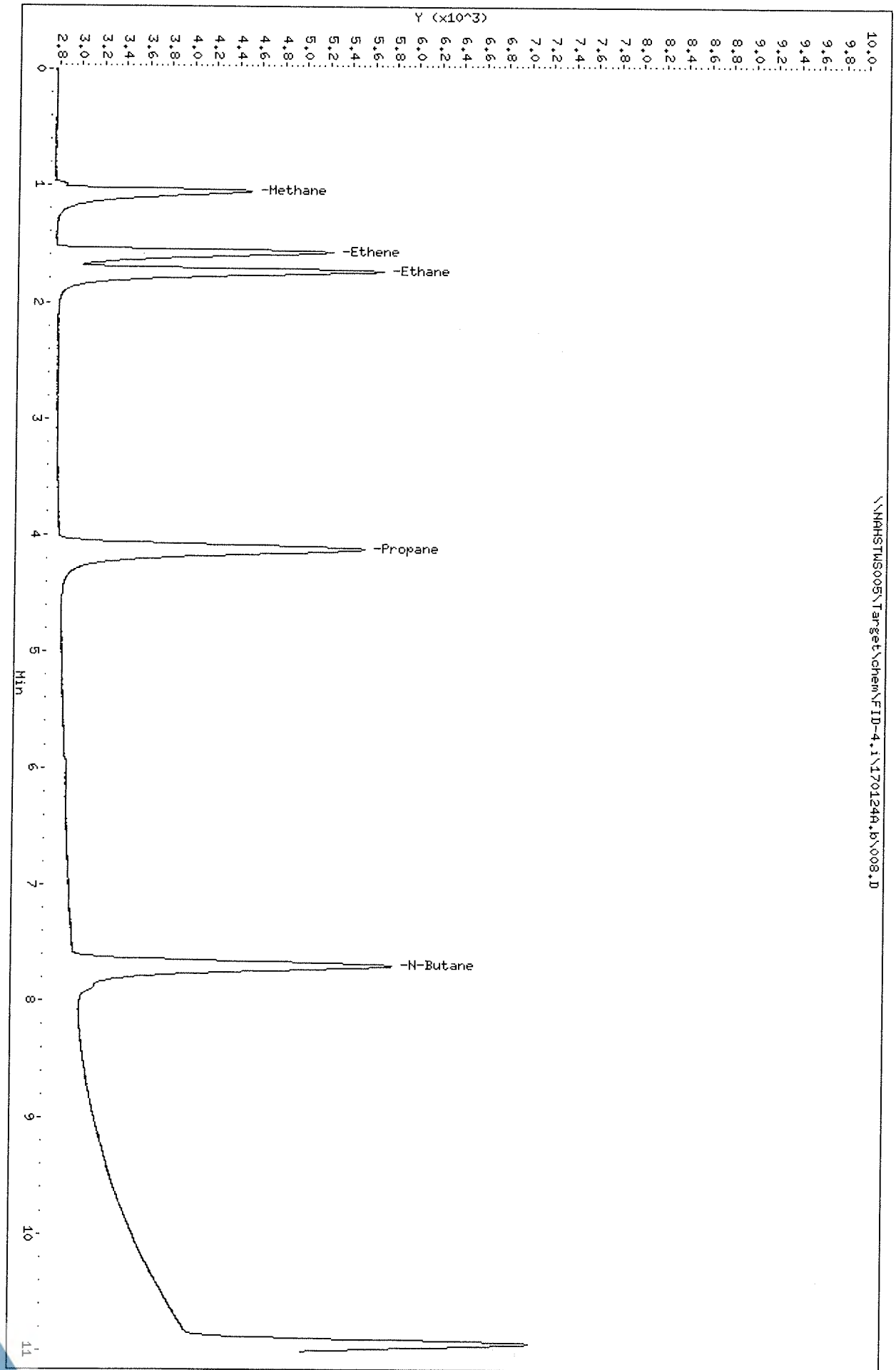
Data file : \\NAHSTWS005\Target\chem\FID-4.i\170124A.b\008.D
Lab Smp Id: ICV Client Smp ID: ICV
Inj Date : 24-JAN-2017 12:05
Operator : MA Inst ID: FID-4.i
Smp Info : ICV;ICV;;;
Misc Info : ;1;0;1
Comment :
Method : \\NAHSTWS005\Target\chem\FID-4.i\170124A.b\RSKNI2.m
Meth Date : 26-Feb-2020 16:33 Purvi.lad Quant Type: ESTD
Cal Date : 24-JAN-2017 11:13 Cal File: 007.D
Als bottle: 8 QC Sample: METHSPIKE
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: stdNIP2.sub
Target Version: 4.14

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
1 Methane	1.046	1.030	0.016	9352	9.59792	9.597
2 Ethene	1.573	1.556	0.017	11192	19.0906	19.090
3 Ethane	1.736	1.723	0.013	14474	19.6571	19.657
4 Propane	4.116	4.113	0.003	18164	27.2381	27.238
5 N-Butane	7.696	7.690	0.006	19425	36.0103	36.010

Data File: \\NAHSTWS005\Target\chem\FID-4.i\170124A.b\008.D
Date : 24-JAN-2017 12:05
Client ID: ICV
Sample Info: ICV;ICV;;;
Column phase: Rtx-PLOT

Instrument: FID-4.i
Operator: HA
Column diameter: 0.53



FID04 -Logbook

Batch: 44519 **Analyst:** Purvi Lad

Date: 04-21-2021 **Reviewer:**

Method: rsk175 **Laboratory:** Houston

Comments:

#	Samp ID	Type	Analyzed	DF	Init Wt/Vol	Final Vol	File ID	Matrix	Status	pH
1	RSK-CCV	CCV	04-21-2021 09:57 am	1.00	0.00 mL	0.00 mL	001.D	Liquid	Y	NA
2	MBLK-210421	MBLK	04-21-2021 10:29 am	1.00	0.00 mL	0.00 mL	002.D	Liquid	Y	NA
3	LCS-210421	LCS	04-21-2021 10:40 am	1.00	0.00 mL	0.00 mL	003.D	Liquid	Y	NA
4	HS21040695-11	SAMP	04-21-2021 10:49 am	1.00	0.00 mL	30.76	004.D	Liquid	Y	<2
5	HS21040695-12	SAMP	04-21-2021 11:07 am	1.00	0.00 mL	30.59	005.D	Liquid	Y	>2
6	HS21040695-13	SAMP	04-21-2021 11:20 am	1.00	0.00 mL	31.10	006.D	Liquid	Y	<2
7	HS21040695-14	SAMP	04-21-2021 11:30 am	1.00	0.00 mL	33.00	007.D	Liquid	Y	<2
8	HS21040695-13	SAMP	04-21-2021 11:43 am	10.00	0.00 mL	0.00 mL	008.D	Liquid	Y	NA
9	HS21040695-14	SAMP	04-21-2021 11:52 am	10.00	0.00 mL	0.00 mL	009.D	Liquid	Y	NA
10	HS21040859-07	SAMP	04-21-2021 11:59 am	1.00	0.00 mL	30.78	010.D	Liquid	Y	<2
11	RSK-CCV	CCV	04-21-2021 12:09 pm	1.00	0.00 mL	0.00 mL	011.D	Liquid	Y	NA
12	HS21040859-08	SAMP	04-21-2021 12:25 pm	1.00	0.00 mL	31.89	012.D	Liquid	Y	<2
13	HS21040859-08MS	MS	04-21-2021 01:01 pm	1.00	0.00 mL	30.46	013.D	Liquid	Y	<2
14	HS21040859-08MSD	MSD	04-21-2021 01:46 pm	1.00	0.00 mL	31.25	014.D	Liquid	Y	<2
15	HS21040859-09	SAMP	04-21-2021 01:58 pm	1.00	0.00 mL	31.02	015.D	Liquid	Y	<2
16	HS21040859-10	SAMP	04-21-2021 02:22 pm	1.00	0.00 mL	31.05	016.D	Liquid	Y	<2
17	HS21040859-07	SAMP	04-21-2021 02:32 pm	50.00	0.00 mL	0.00 mL	017.D	Liquid	Y	NA
18	RSK-CCV	CCV	04-21-2021 02:46 pm	1.00	0.00 mL	0.00 mL	018.D	Liquid	Y	NA

Chemical	Value
pH Paper	300107057-07
CCV/LC/LSD/MS/MSD	300107043-11

FORM 7B
GASES CALIBRATION VERIFICATION SUMMARY

Lab Name: ALS HOUSTON Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS21040859

Instrument ID: FID-4 Calibration Date: 04/21/21 Time: 0957

Lab File ID: 001 Init. Calib. Date(s): 01/24/17 01/24/17

Init. Calib. Times: 0906 1113

GC Column: RTX-PLOT ID: 0.53 (mm)

COMPOUND	RRF OR AMOUNT	RRF250.00 OR AMOUNT	MIN RRF	%D OR %DRIFT	MAX %D OR %DRIFT	CURV TYPE
Ethane	719.48900	683.64463	0.01	4.98	20.00	AVRG
Methane	974.99200	821.91355	0.01	15.70	20.00	AVRG
Ethene	585.76000	515.72700	0.01	11.96	20.00	AVRG

FORM VII GASES

FORM 7B
GASES CALIBRATION VERIFICATION SUMMARY

Lab Name: ALS HOUSTON Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS21040859

Instrument ID: FID-4 Calibration Date: 04/21/21 Time: 1209

Lab File ID: 011 Init. Calib. Date(s): 01/24/17 01/24/17

Init. Calib. Times: 0906 1113

GC Column: RTX-PLOT ID: 0.53 (mm)

COMPOUND	RRF OR AMOUNT	RRF250.00 OR AMOUNT	MIN RRF	%D OR %DRIFT	MAX %D OR %DRIFT	CURV TYPE
Ethane	719.48900	775.86876	0.01	-7.84	20.00	AVRG
Methane	974.99200	887.73712	0.01	8.95	20.00	AVRG
Ethene	585.76000	615.07418	0.01	-5.00	20.00	AVRG

FORM VII GASES

FORM 7B
GASES CALIBRATION VERIFICATION SUMMARY

Lab Name: ALS HOUSTON Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS21040859

Instrument ID: FID-4 Calibration Date: 04/21/21 Time: 1446

Lab File ID: 018 Init. Calib. Date(s): 01/24/17 01/24/17

Init. Calib. Times: 0906 1113

GC Column: RTX-PLOT ID: 0.53 (mm)

COMPOUND	RRF OR AMOUNT	RRF250.00 OR AMOUNT	MIN RRF	%D OR %DRIFT	MAX %D OR %DRIFT	CURV TYPE
Ethane	719.48900	769.49510	0.01	-6.95	20.00	AVRG
Methane	974.99200	890.95055	0.01	8.62	20.00	AVRG
Ethene	585.76000	609.49555	0.01	-4.05	20.00	AVRG

FORM VII GASES

ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\nahstws005\Target\chem\FID-4.i\210421.b\001.D
Lab Smp Id: RSK-CCV Client Smp ID: RSK-CCV
Inj Date : 21-APR-2021 09:57
Operator : PL Inst ID: FID-4.i
Smp Info : RSK-CCV;RSK-CCV;2;4
Misc Info : ;1;0;1
Comment :
Method : \\nahstws005\Target\chem\FID-4.i\210421.b\RSKNI3.m
Meth Date : 19-May-2021 14:26 FID-4.i Quant Type: ESTD
Cal Date : 24-JAN-2017 10:15 Cal File: 004.D
Als bottle: 1 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: RSK175.sub
Target Version: 4.14
Processing Host: NAHSTW7056

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

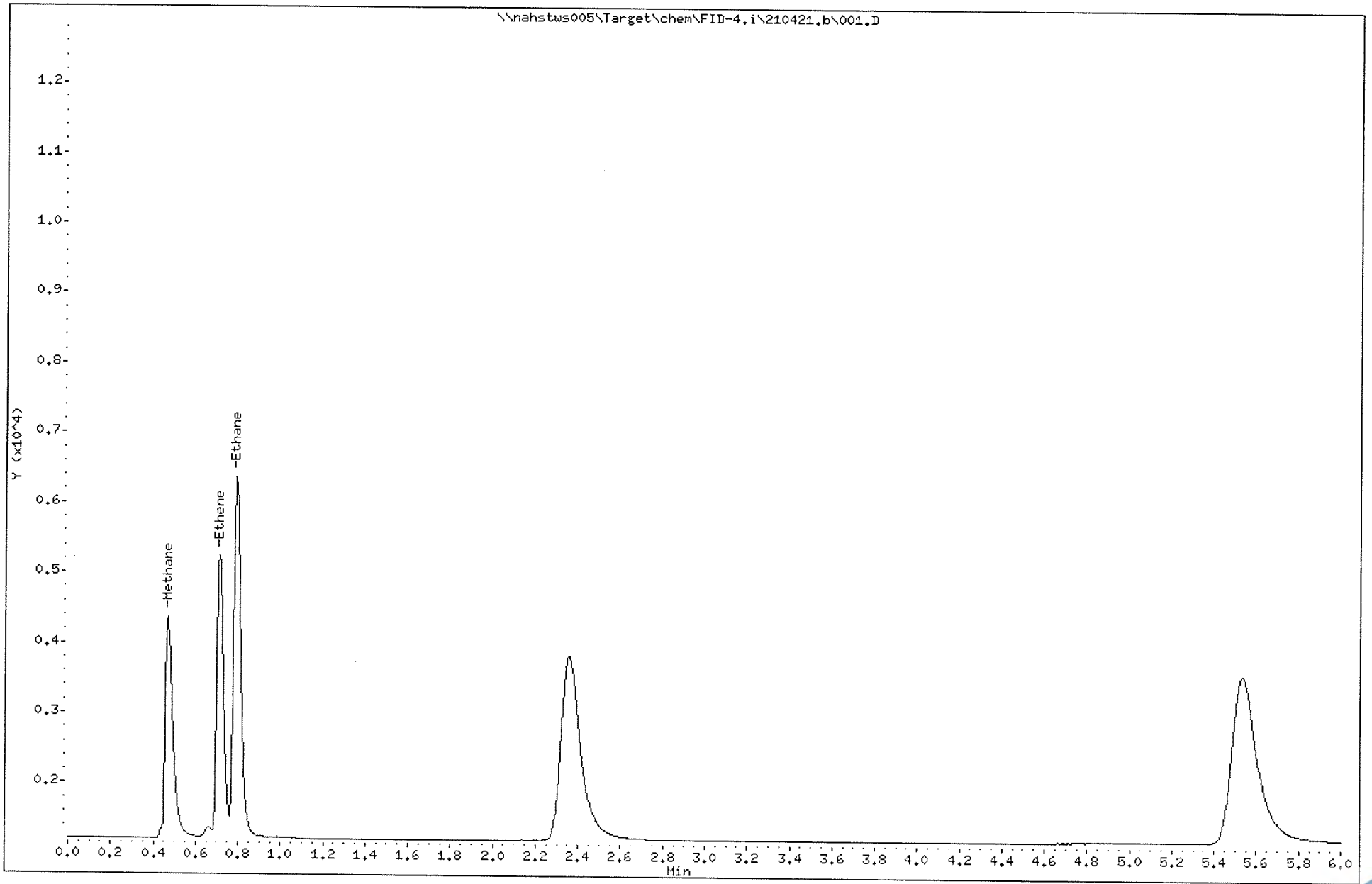
Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
1 Methane	0.466	0.466	0.000	7929	9.64700	8.132
2 Ethene	0.710	0.710	0.000	8690	16.8500	14.835
3 Ethane	0.790	0.790	0.000	12335	18.0430	17.144

Data File: \\nahstws005\Target\chem\FID-4.i\210421.b\001.D
Date : 21-APR-2021 09:57
Client ID: RSK-CCV
Sample Info: RSK-CCV;RSK-CCV;2;4

Column phase: Rtx-PLOT

Instrument: FID-4.i

Operator: PL
Column diameter: 0.53



Data File: \\nahstws005\Target\chem\FID-4.i\210421.b\002.D Page 1
Report Date: 19-May-2021 14:26

ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\nahstws005\Target\chem\FID-4.i\210421.b\002.D
Lab Smp Id: MBLK-210421 Client Smp ID: MBLK-210421
Inj Date : 21-APR-2021 10:29
Operator : PL Inst ID: FID-4.i
Smp Info : MBLK-210421;MBLK-210421;3;;BLANK
Misc Info : ;1;0;1
Comment :
Method : \\nahstws005\Target\chem\FID-4.i\210421.b\RSKNI3.m
Meth Date : 19-May-2021 14:26 FID-4.i Quant Type: ESTD
Cal Date : 24-JAN-2017 10:15 Cal File: 004.D
Als bottle: 2 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: RSK175.sub
Target Version: 4.14
Processing Host: NAHSTW7056

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

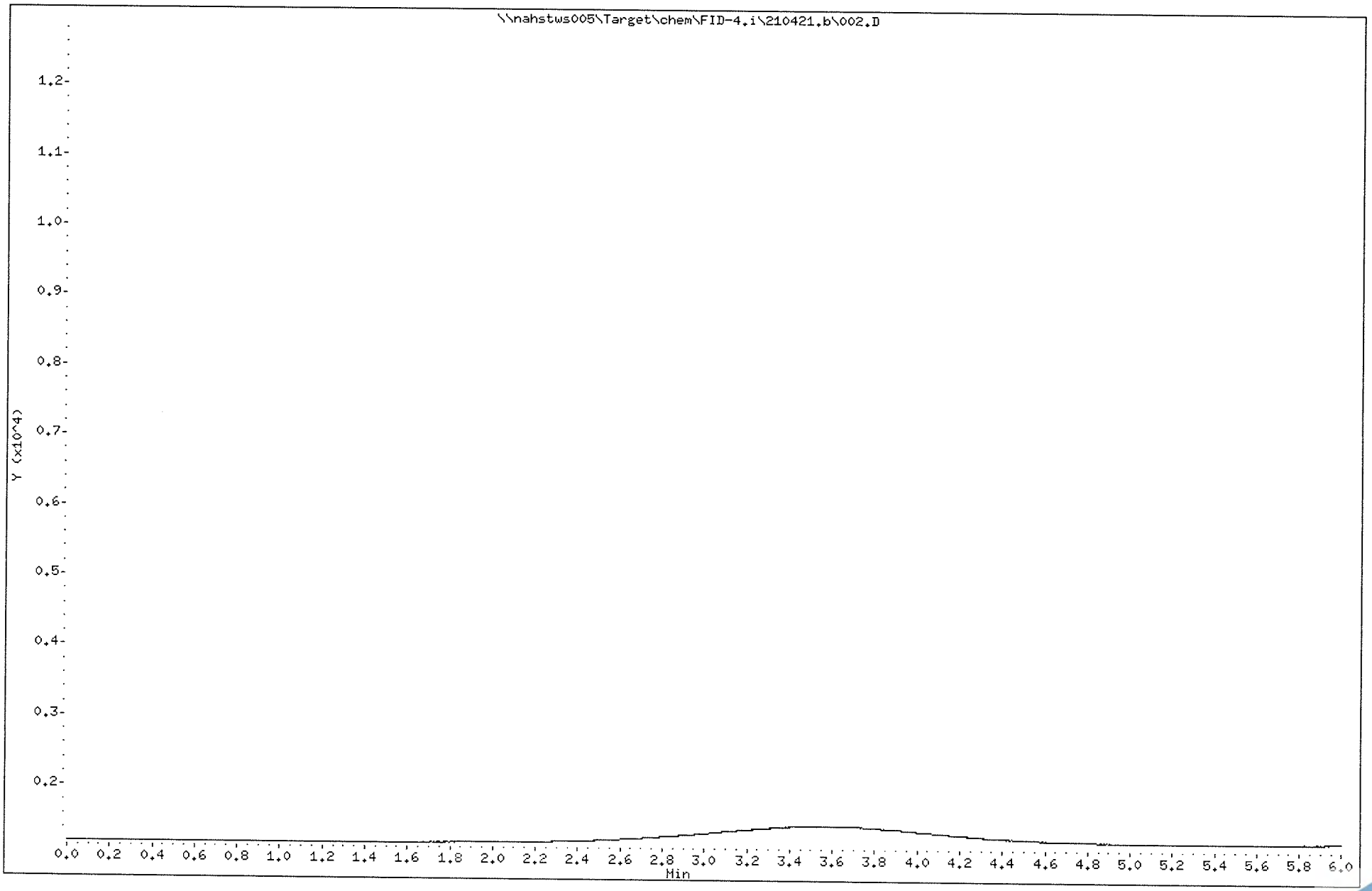
Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)

Data File: \\nahstws005\Target\chem\FID-4.i\210421.b\002.D
Date : 21-APR-2021 10:29
Client ID: MBLK-210421
Sample Info: MBLK-210421;MBLK-210421;3;;BLANK

Column phase: Rtx-PLOT

Instrument: FID-4.i

Operator: PL
Column diameter: 0.53



Data File: \\nahstws005\Target\chem\FID-4.i\210421.b\003.D Page 1
Report Date: 19-May-2021 14:26

ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\nahstws005\Target\chem\FID-4.i\210421.b\003.D
Lab Smp Id: LCS-210421 Client Smp ID: LCS-210421
Inj Date : 21-APR-2021 10:40
Operator : PL Inst ID: FID-4.i
Smp Info : LCS-210421;LCS-210421;3;;LCS
Misc Info : ;1;0;1
Comment :
Method : \\nahstws005\Target\chem\FID-4.i\210421.b\RSKNI3.m
Meth Date : 19-May-2021 14:26 FID-4.i Quant Type: ESTD
Cal Date : 24-JAN-2017 10:15 Cal File: 004.D
Als bottle: 3 QC Sample: LCS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: RSK175.sub
Target Version: 4.14
Processing Host: NAHSTW7056

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

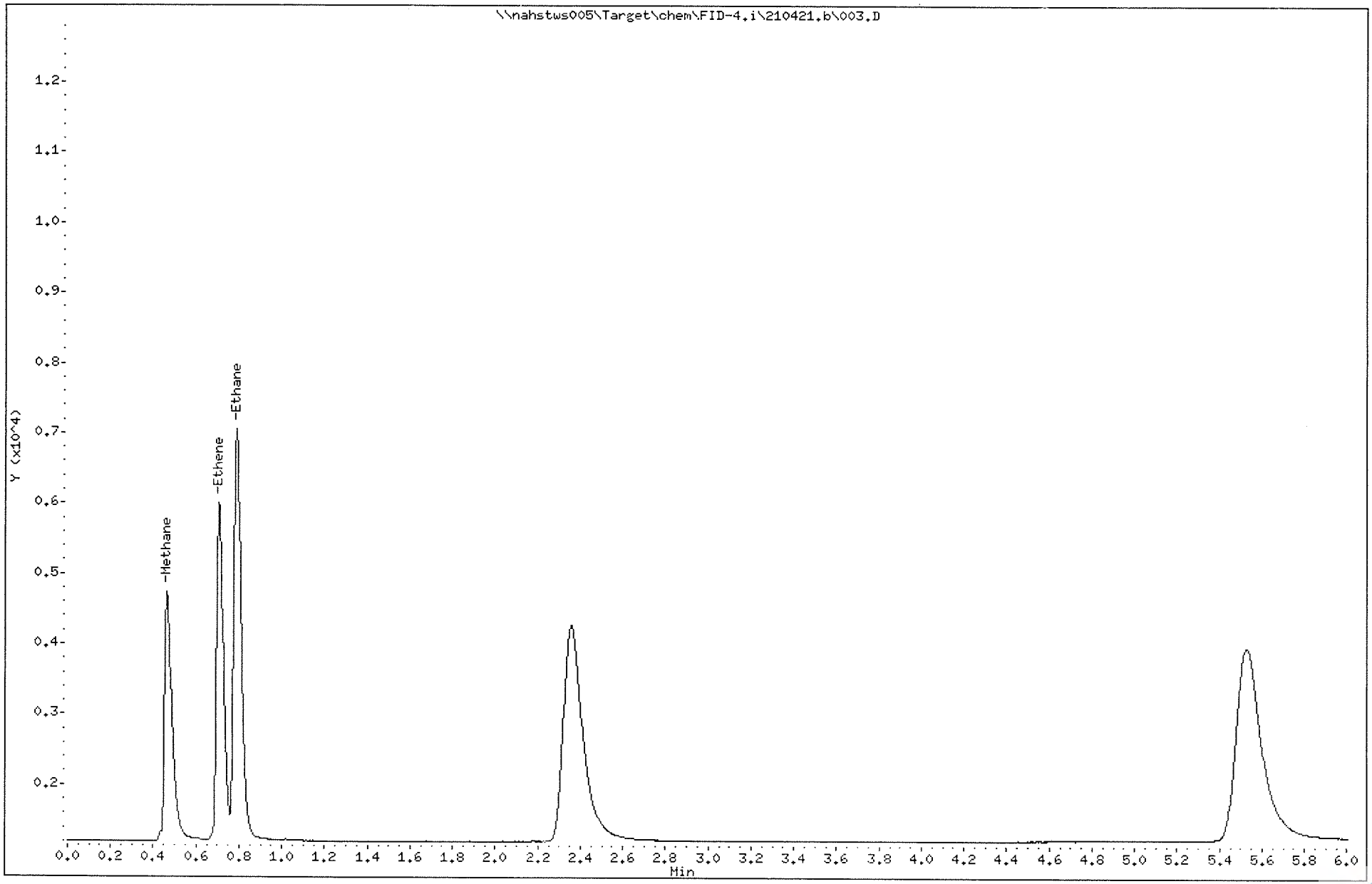
Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
1 Methane	0.463	0.466	-0.003	8954	9.18366	9.183
2 Ethene	0.706	0.710	-0.004	10682	18.2361	18.236
3 Ethane	0.786	0.790	-0.004	14379	19.9850	19.984

Data File: \\nahstws005\Target\chem\FID-4.i\210421.b\003.D
Date : 21-APR-2021 10:40
Client ID: LCS-210421
Sample Info: LCS-210421;LCS-210421;3;;LCS

Column phase: Rtx-PLOT

Instrument: FID-4.i

Operator: PL
Column diameter: 0.53



Data File: \\nahstws005\Target\chem\FID-4.i\210421.b\010.D Page 1
Report Date: 19-May-2021 14:28

ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\nahstws005\Target\chem\FID-4.i\210421.b\010.D
Lab Smp Id: HS21040859-07 Client Smp ID: HS21040859-07
Inj Date : 21-APR-2021 11:59
Operator : PL Inst ID: FID-4.i
Smp Info : HS21040859-07;HS21040859-07
Misc Info : ;1;0;1
Comment :
Method : \\nahstws005\Target\chem\FID-4.i\210421.b\RSKNI3.m
Meth Date : 19-May-2021 14:26 FID-4.i Quant Type: ESTD
Cal Date : 24-JAN-2017 10:15 Cal File: 004.D
Als bottle: 10
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: RSK175.sub
Target Version: 4.14
Processing Host: NAHSTW7056

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)
1 Methane	0.470	0.463	0.007	497385	510.142	510.142(A)
2 Ethene	0.710	0.706	0.004	2013	3.43656	3.436
3 Ethane	0.793	0.786	0.007	1728	2.40170	2.401(M)

QC Flag Legend

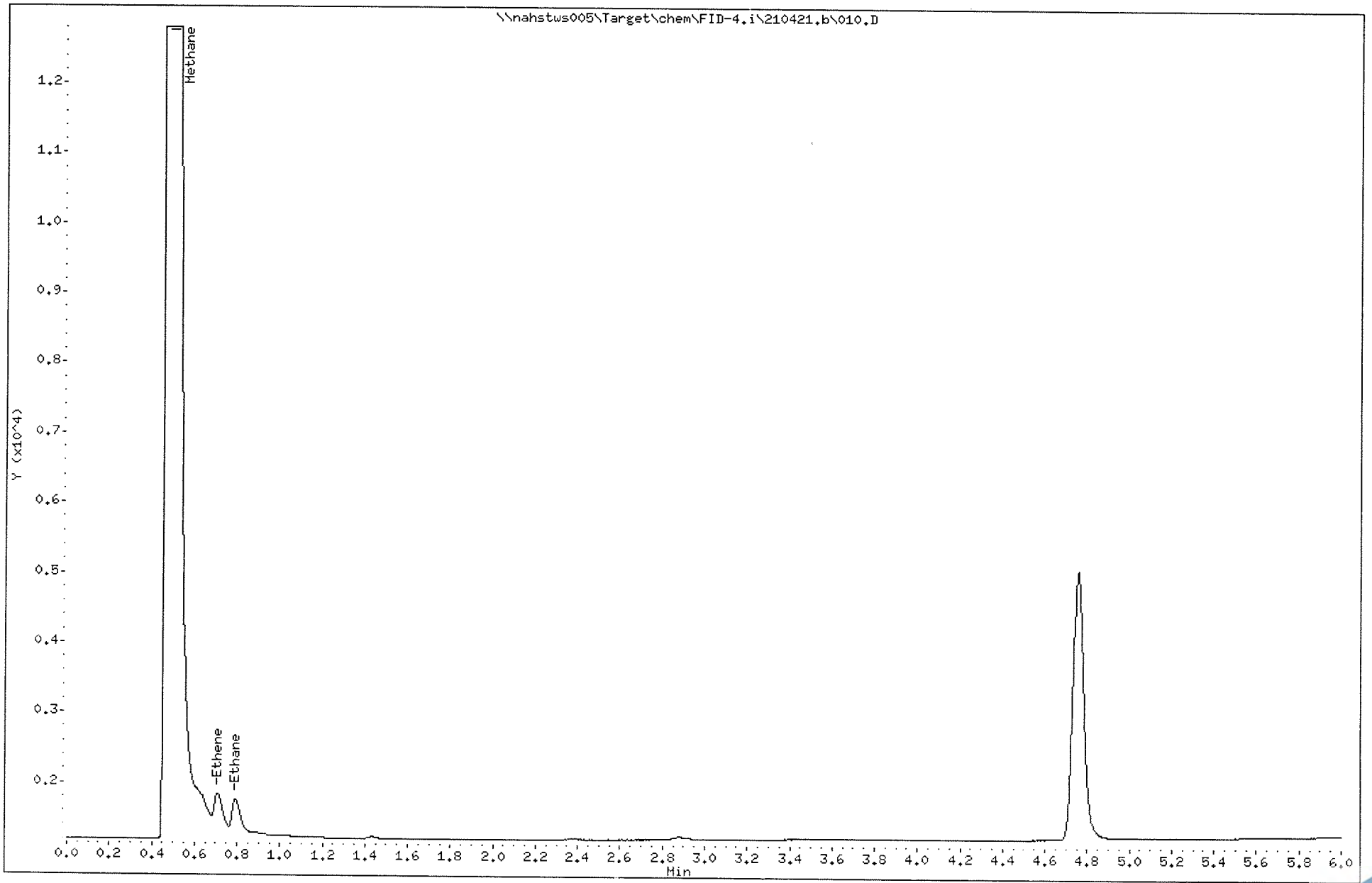
A - Target compound detected but, quantitated amount exceeded maximum amount.
M - Compound response manually integrated.

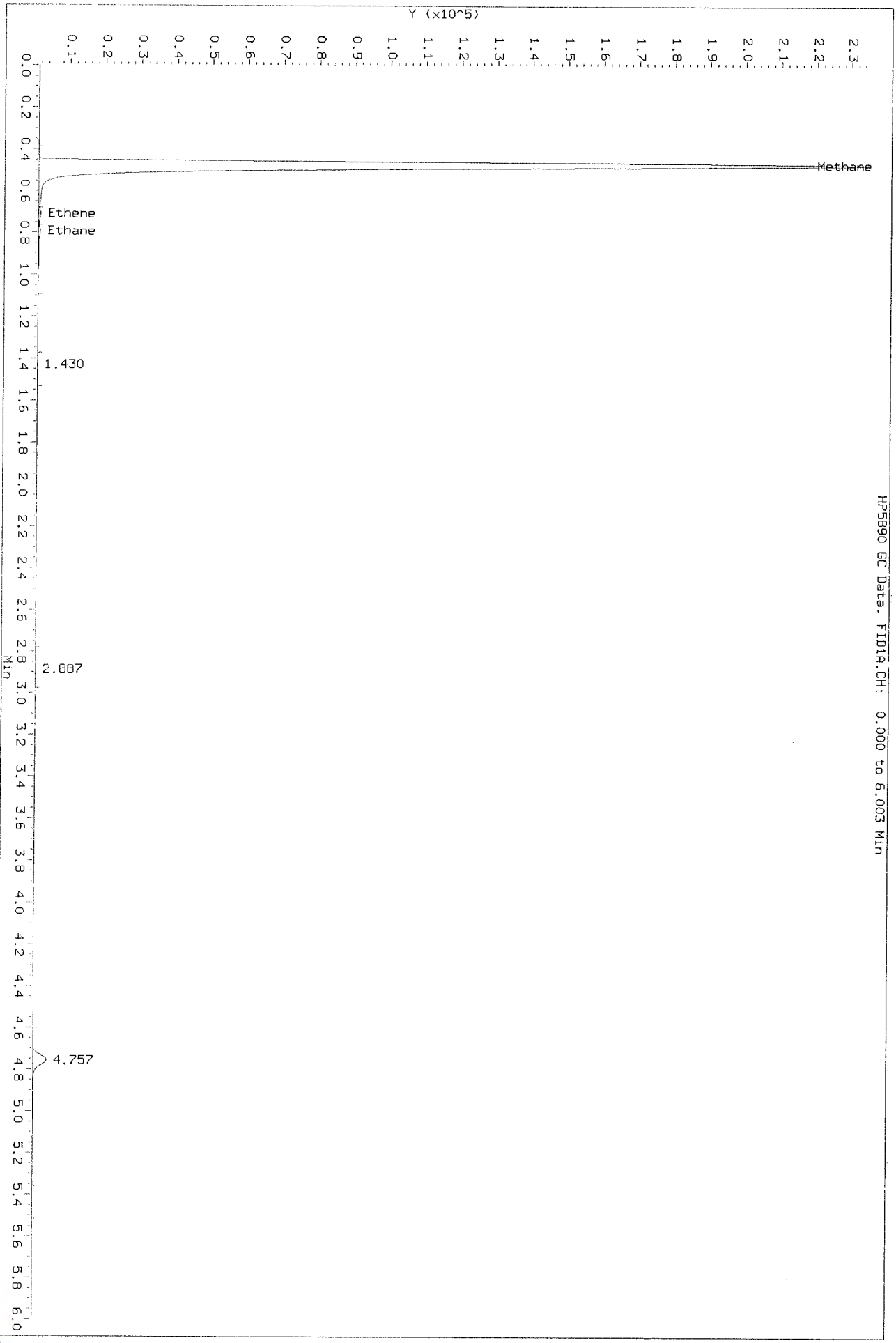
Data File: \\nahstws005\Target\chem\FID-4.i\210421.b\010.D
Date : 21-APR-2021 11:59
Client ID: HS21040859-07
Sample Info: HS21040859-07;HS21040859-07

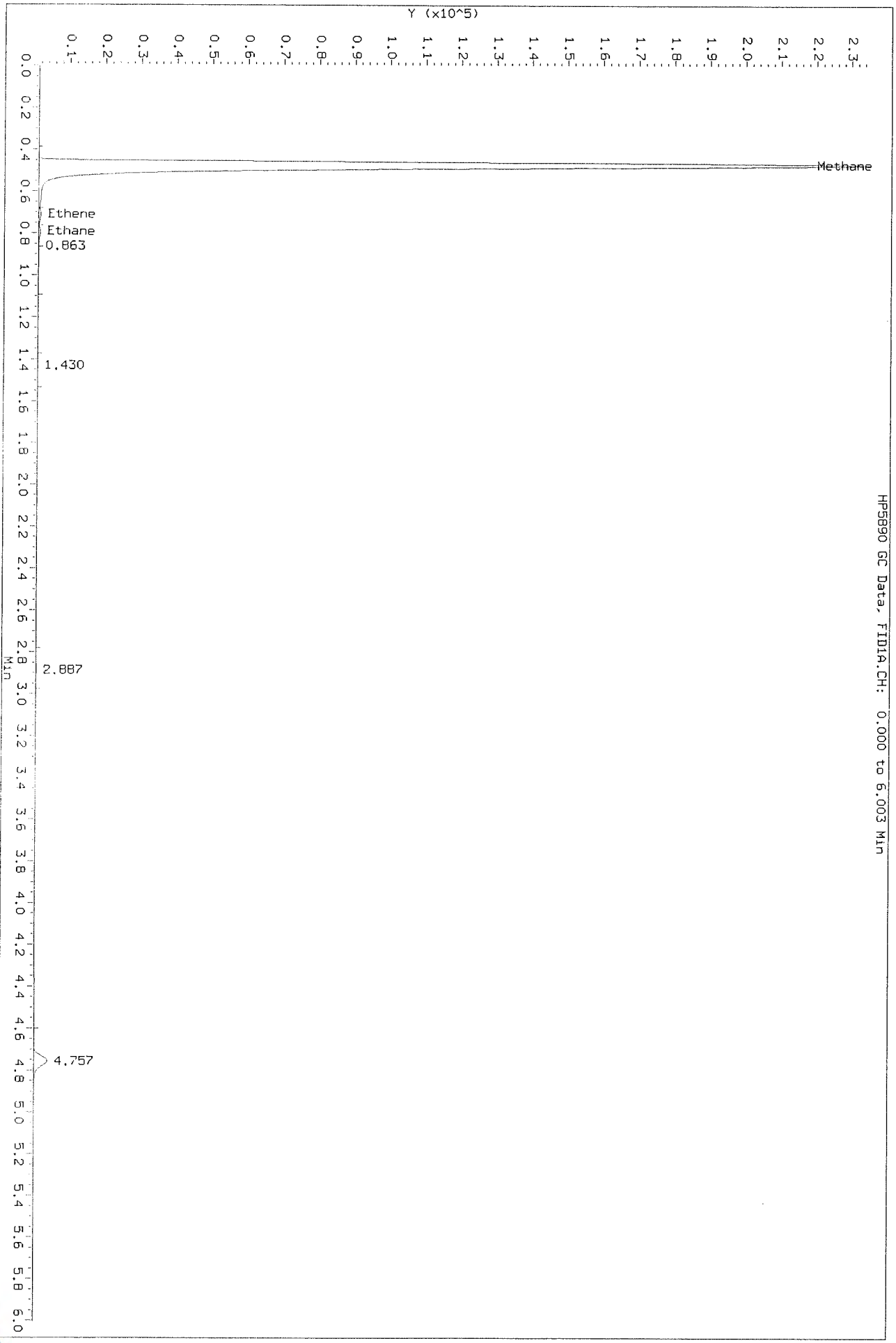
Column phase: Rtx-PLOT

Instrument: FID-4.i

Operator: PL
Column diameter: 0.53




Data File: \\mahstws005\Target\chem\FID-4.i\210421.b\Before\010.D
Injection Date: 21-APR-2021 11:59
Instrument: FID-4.i
Client Sample ID: HS21040859-07
HP5890 GC Data. FID1A.CH: 0.000 to 6.003 Min
Y (x10^5)
Methane
Ethene
Ethane
1.430
2.887
4.757
Min


Data File: \\nahstws005\Target\chem\FID-4.i\210421.b\010.D
Injection Date: 21-APR-2021 11:59
Instrument: FID-4.i
Client Sample ID: HS21040859-07
HP5890 GC Data, FID1A.CH: 0.000 to 6.003 Min
Y (x10^5)
Min
Methane
Ethene
Ethane
0.863
1.430
2.887
4.757

Data File: \\nahstws005\Target\chem\FID-4.i\210421.b\011.D Page 1
Report Date: 19-May-2021 14:28

ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\nahstws005\Target\chem\FID-4.i\210421.b\011.D
Lab Smp Id: RSK-CCV Client Smp ID: RSK-CCV
Inj Date : 21-APR-2021 12:09
Operator : PL Inst ID: FID-4.i
Smp Info : RSK-CCV;RSK-CCV;2;4
Misc Info : ;1;0;1
Comment :
Method : \\nahstws005\Target\chem\FID-4.i\210421.b\RSKNI3.m
Meth Date : 19-May-2021 14:28 FID-4.i Quant Type: ESTD
Cal Date : 24-JAN-2017 10:15 Cal File: 004.D
Als bottle: 11 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: RSK175.sub
Target Version: 4.14
Processing Host: NAHSTW7056

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

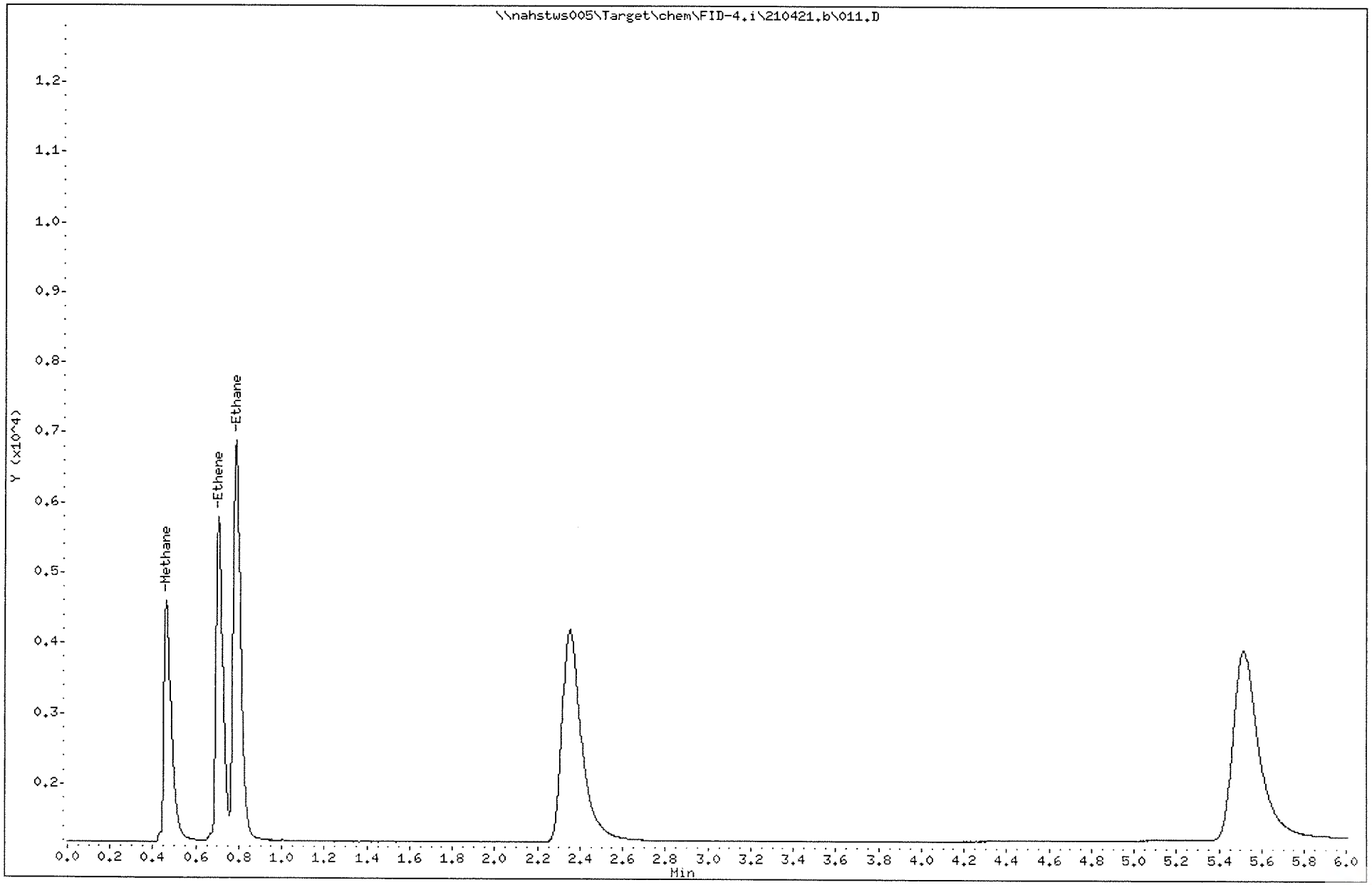
					AMOUNTS	
					CAL-AMT	ON-COL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/L)	(ug/L)
1 Methane	0.463	0.463	0.000	8564	9.64700	8.783
2 Ethene	0.706	0.706	0.000	10364	16.8500	17.693
3 Ethane	0.786	0.786	0.000	13999	18.0430	19.456

Data File: \\nahstws005\Target\chem\FID-4.i\210421.b\011.D
Date : 21-APR-2021 12:09
Client ID: RSK-CCV
Sample Info: RSK-CCV;RSK-CCV;2;4

Column phase: Rtx-PLOT

Instrument: FID-4.i

Operator: PL
Column diameter: 0.53



Data File: \\nahstws005\Target\chem\FID-4.i\210421.b\012.D Page 1
Report Date: 19-May-2021 14:28

ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\nahstws005\Target\chem\FID-4.i\210421.b\012.D
Lab Smp Id: HS21040859-08 Client Smp ID: HS21040859-08
Inj Date : 21-APR-2021 12:25
Operator : PL Inst ID: FID-4.i
Smp Info : HS21040859-08;HS21040859-08
Misc Info : ;1;0;1
Comment :
Method : \\nahstws005\Target\chem\FID-4.i\210421.b\RSKNI3.m
Meth Date : 19-May-2021 14:28 FID-4.i Quant Type: ESTD
Cal Date : 24-JAN-2017 10:15 Cal File: 004.D
Als bottle: 12
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: RSK175.sub
Target Version: 4.14
Processing Host: NAHSTW7056

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)
1 Methane	0.490	0.463	0.027	996	1.02155	1.021

Data File: \\nahstws005\Target\chem\FID-4.i\210421.b\012.D
Date : 21-APR-2021 12:25
Client ID: HS21040859-08
Sample Info: HS21040859-08;HS21040859-08

Column phase: Rtx-PLOT

Instrument: FID-4.i

Operator: PL
Column diameter: 0.53



Data File: \\nahstws005\Target\chem\FID-4.i\210421.b\013.D Page 1
Report Date: 19-May-2021 14:28

ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\nahstws005\Target\chem\FID-4.i\210421.b\013.D
Lab Smp Id: HS21040859-08MS Client Smp ID: HS21040859-08MS
Inj Date : 21-APR-2021 13:01
Operator : PL Inst ID: FID-4.i
Smp Info : HS21040859-08MS;HS21040859-08MS
Misc Info : ;1;0;1
Comment :
Method : \\nahstws005\Target\chem\FID-4.i\210421.b\RSKNI3.m
Meth Date : 19-May-2021 14:28 FID-4.i Quant Type: ESTD
Cal Date : 24-JAN-2017 10:15 Cal File: 004.D
Als bottle: 13 QC Sample: MS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: RSK175.sub
Target Version: 4.14
Processing Host: NAHSTW7056

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)
1 Methane	0.463	0.463	0.000	7278	7.46467	7.464 (M)
2 Ethene	0.703	0.706	-0.003	9214	15.7300	15.729 (M)
3 Ethane	0.786	0.786	0.000	11467	15.9377	15.937 (M)

QC Flag Legend

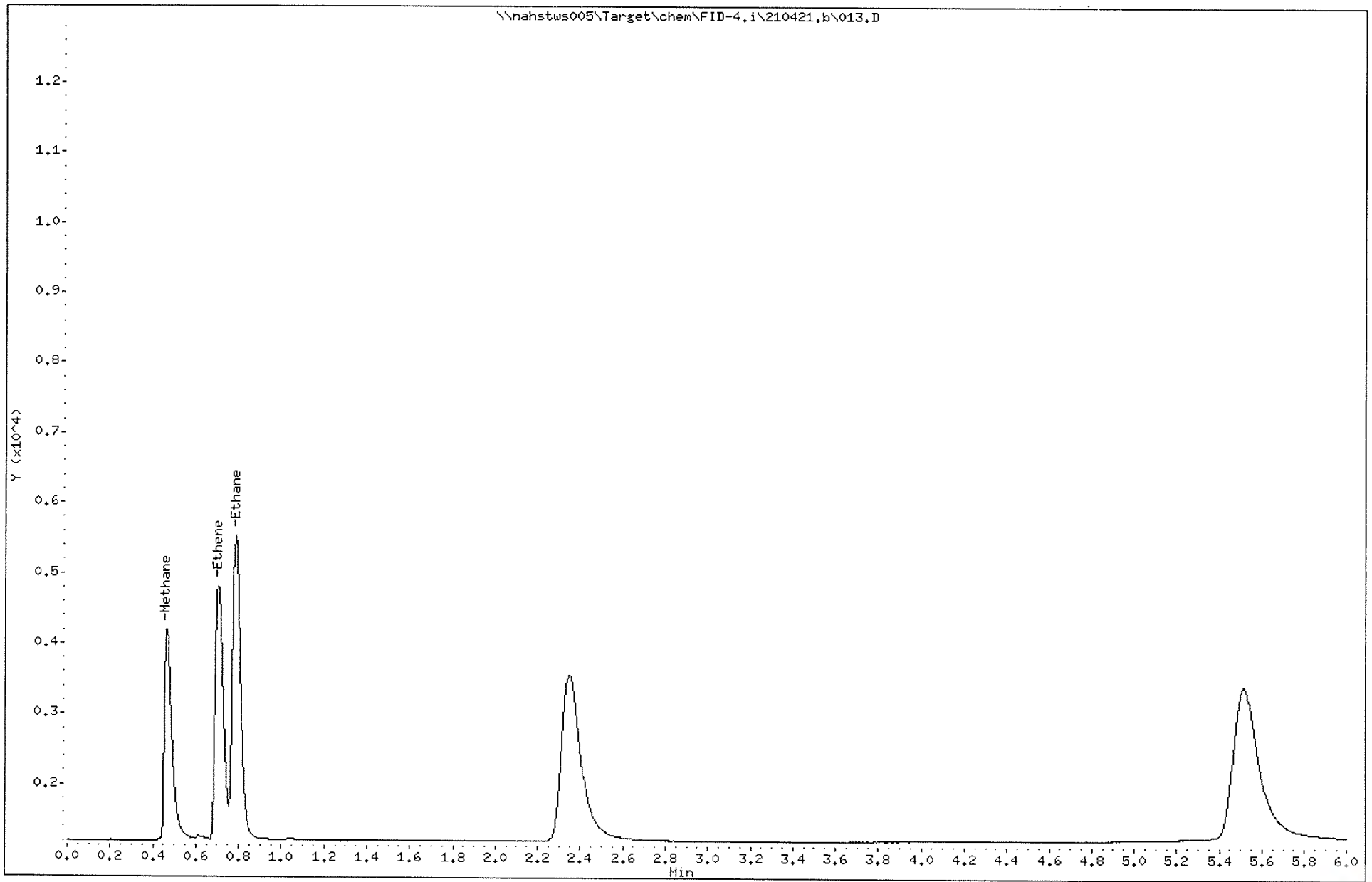
M - Compound response manually integrated.

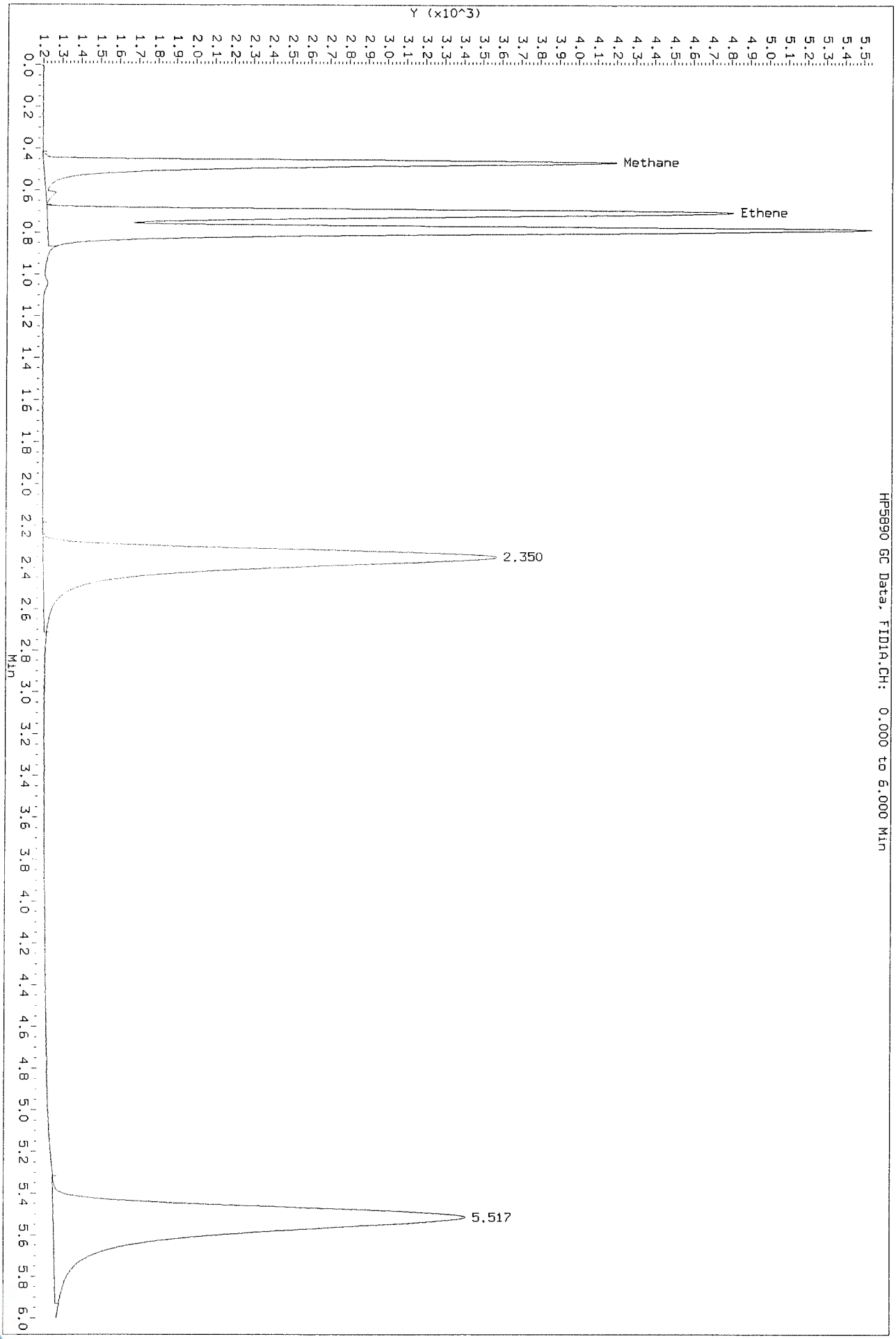
Data File: \\nahstws005\Target\chem\FID-4.i\210421.b\013.D
Date : 21-APR-2021 13:01
Client ID: HS21040859-08MS
Sample Info: HS21040859-08MS;HS21040859-08MS

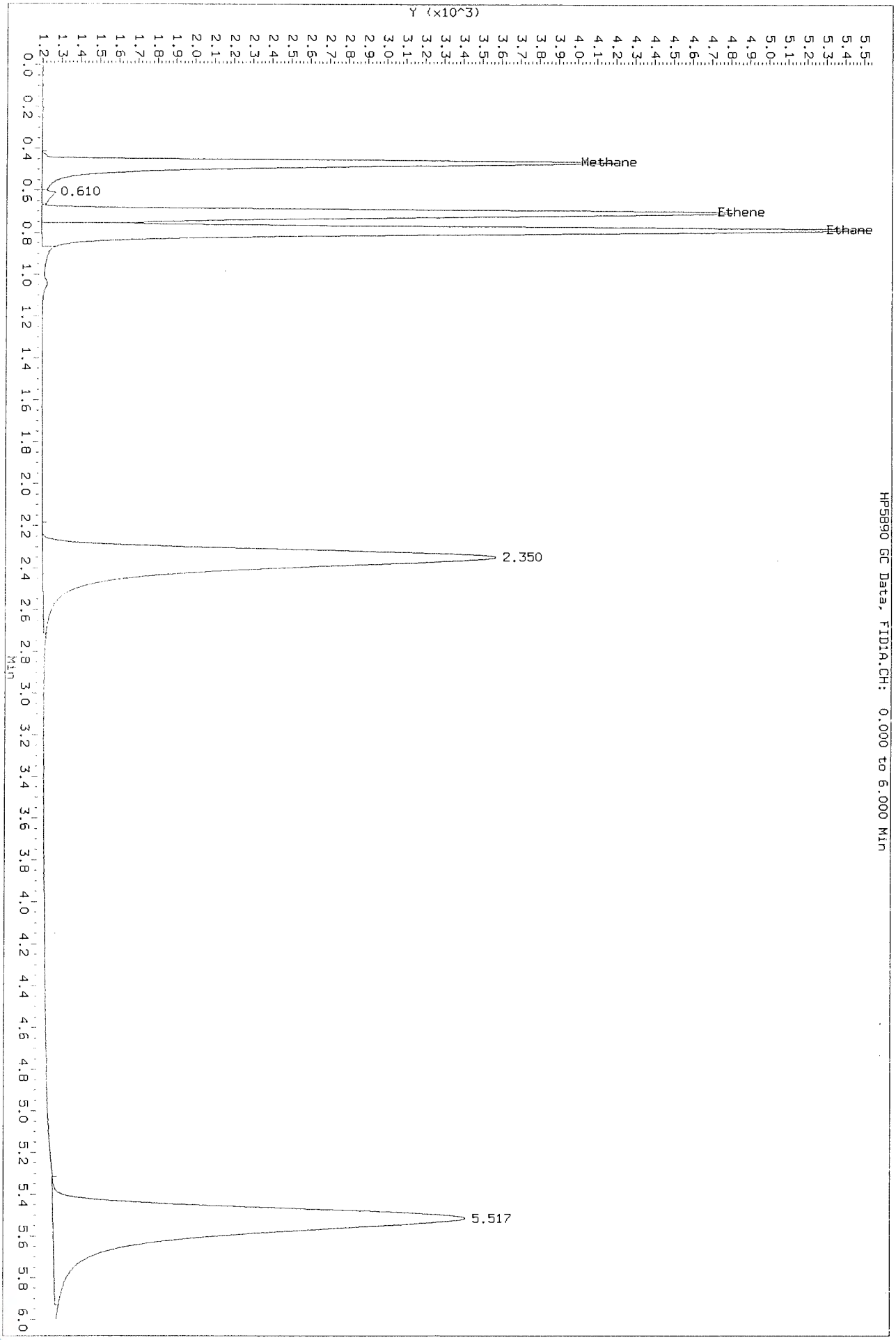
Column phase: Rtx-PLOT

Instrument: FID-4.i

Operator: PL
Column diameter: 0.53




Data File: \\nahstws005\Target\chem\FID-4.i\210421.b\Before\013.D
Injection Date: 21-APR-2021 13:01
Instrument: FID-4.i
Client Sample ID: HS210408S9-08MS
HP5890 GC Data, FID1A.CH: 0.000 to 6.000 Min
Y (x10^3)
Min
Methane
Ethene
2.350
5.517


Data File: \\nahstws005\Target\chem\FID-4.i\210421.b\013.D
Injection Date: 21-APR-2021 13:01
Instrument: FID-4.i
Client Sample ID: HS210408S9-OBMS
HP5890 GC Data, FID1A.CH: 0.000 to 6.000 Min
Y (x10^3)
Min
Methane
0.610
Ethene
Ethane
2.350
5.517

Data File: \\nahstws005\Target\chem\FID-4.i\210421.b\014.D Page 1
Report Date: 19-May-2021 14:28

ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\nahstws005\Target\chem\FID-4.i\210421.b\014.D
Lab Smp Id: HS21040859-08MSD Client Smp ID: HS21040859-08MSD
Inj Date : 21-APR-2021 13:46
Operator : PL Inst ID: FID-4.i
Smp Info : HS21040859-08MSD;HS21040859-08MSD
Misc Info : ;1;0;1
Comment :
Method : \\nahstws005\Target\chem\FID-4.i\210421.b\RSKNI3.m
Meth Date : 19-May-2021 14:28 FID-4.i Quant Type: ESTD
Cal Date : 24-JAN-2017 10:15 Cal File: 004.D
Als bottle: 14 QC Sample: MSD
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: RSK175.sub
Target Version: 4.14
Processing Host: NAHSTW7056

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)
1 Methane	0.463	0.463	0.000	6951	7.12929	7.129(RM)
2 Ethene	0.703	0.706	-0.003	9209	15.7214	15.721
3 Ethane	0.786	0.786	0.000	11486	15.9641	15.964

QC Flag Legend

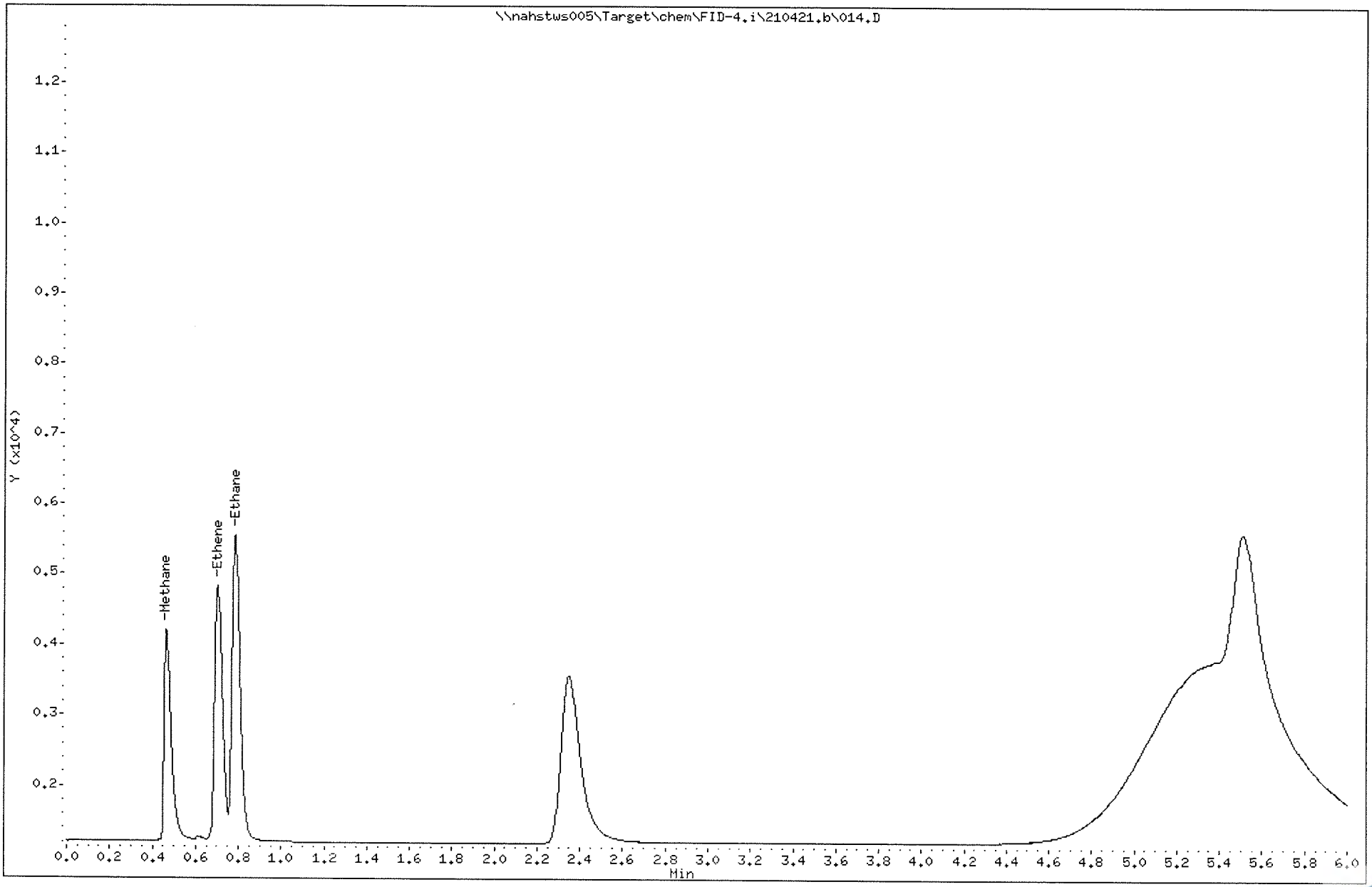
R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

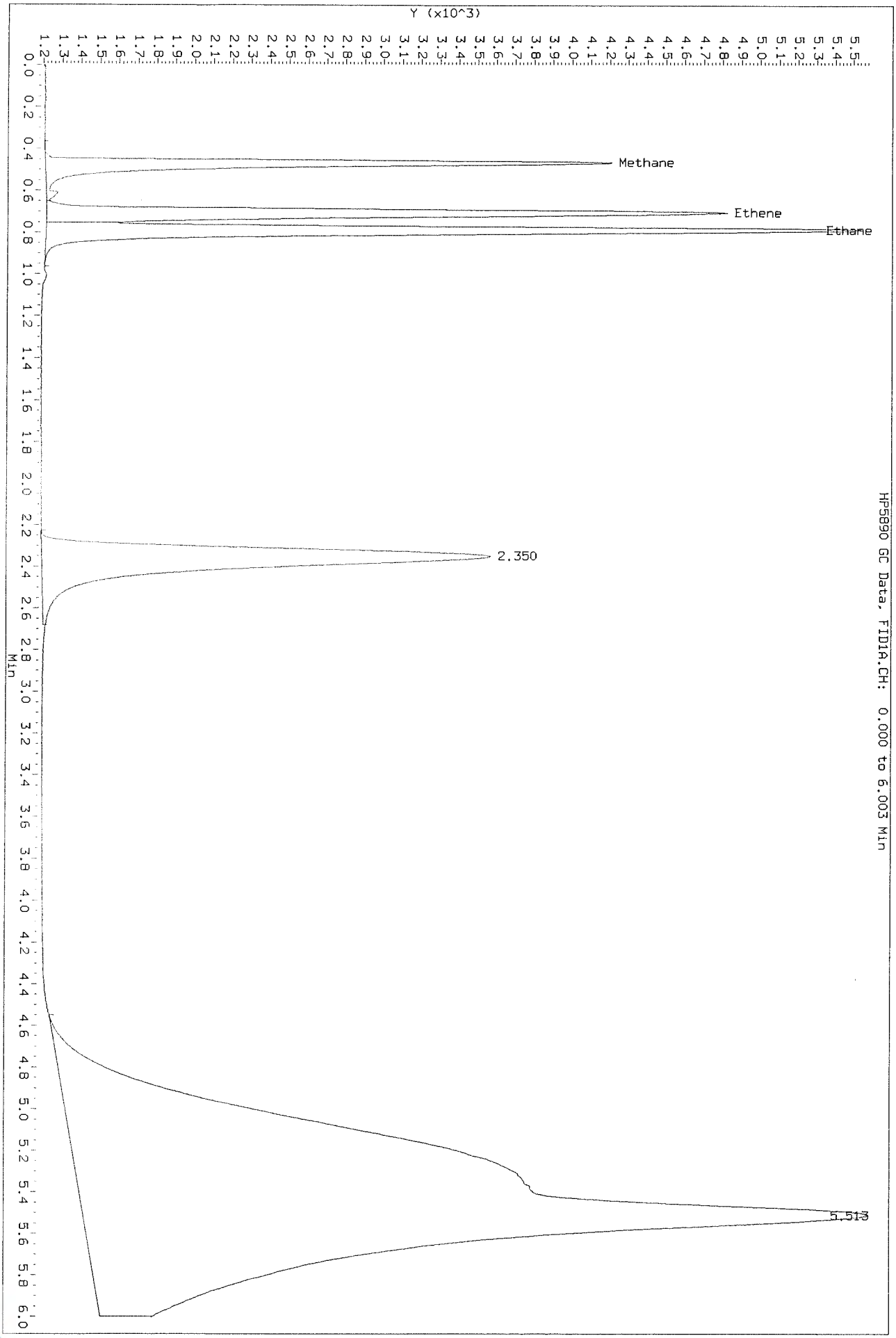
Data File: \\nahstws005\Target\chem\FID-4.i\210421.b\014.D
Date : 21-APR-2021 13:46
Client ID: HS21040859-08MSD
Sample Info: HS21040859-08MSD;HS21040859-08MSD

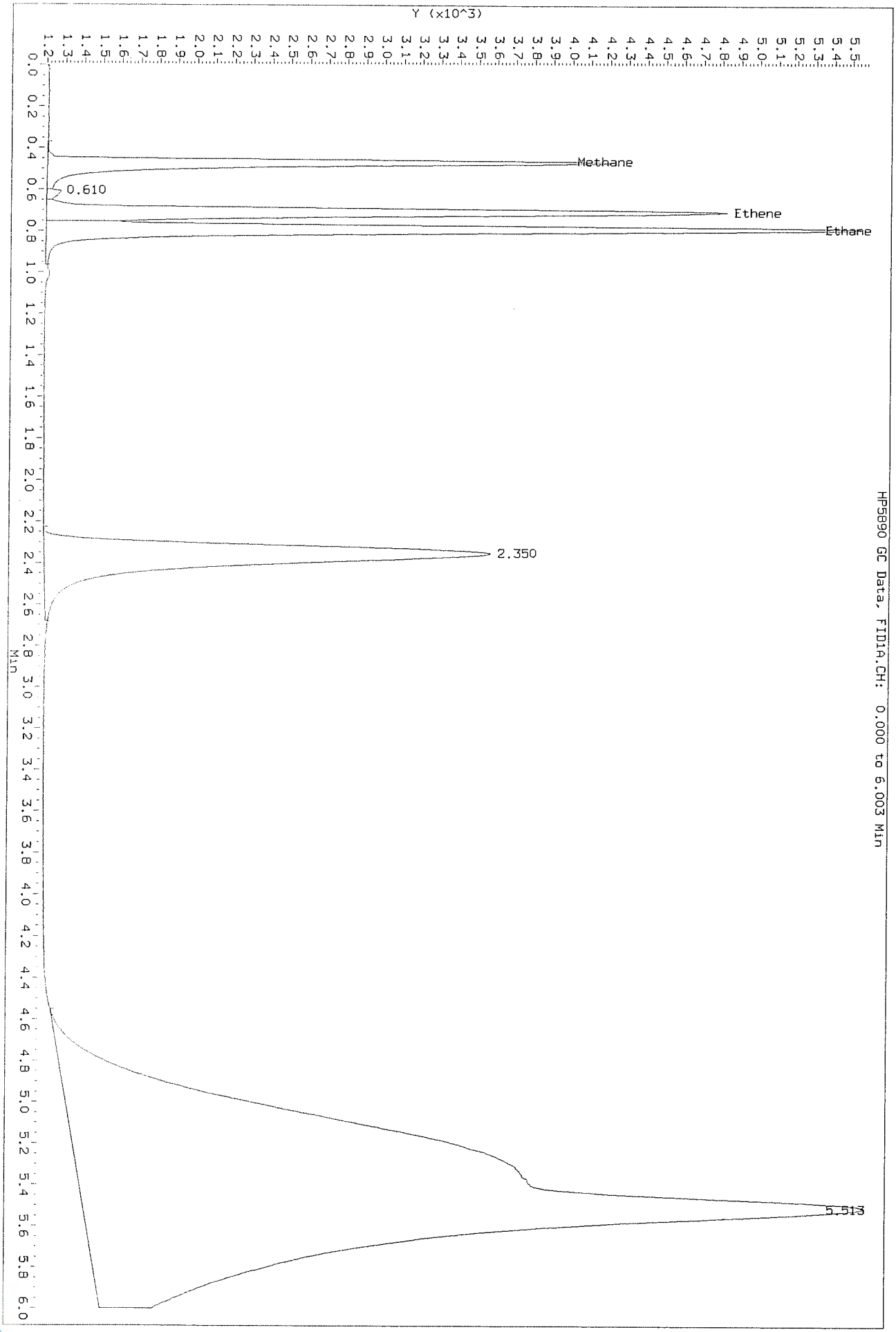
Column phase: Rtx-PLOT

Instrument: FID-4.i

Operator: PL
Column diameter: 0.53




Data File: \\nahstws005\Target\chem\FID-4.i\210421.b\Before\014.D
Injection Date: 21-APR-2021 13:46
Instrument: FID-4.i
Client Sample ID: HS210408S9-08MSD
Y (x10^3)
Methane
Ethene
Ethane
2.350
5.513
Min
HP5890 GC Data, FID1A.CH: 0.000 to 6.003 Min


Data File: \\nahstws005\Target\chem\FID-4.i\210421.b\014.D
Injection Date: 21-APR-2021 13:46
Instrument: FID-4.i
Client Sample ID: HS21040859-08MSD
HP5890 GC Data, FID1A.CH: 0.000 to 6.003 Min
Y (x10^3)
Min
Methane
0.610
Ethene
Ethane
2.350
5.513

ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\nahstws005\Target\chem\FID-4.i\210421.b\015.D
Lab Smp Id: HS21040859-09 Client Smp ID: HS21040859-09
Inj Date : 21-APR-2021 13:58
Operator : PL Inst ID: FID-4.i
Smp Info : HS21040859-09;HS21040859-09
Misc Info : ;1;0;1
Comment :
Method : \\nahstws005\Target\chem\FID-4.i\210421.b\RSKNI3.m
Meth Date : 19-May-2021 14:28 FID-4.i Quant Type: ESTD
Cal Date : 24-JAN-2017 10:15 Cal File: 004.D
Als bottle: 15
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: RSK175.sub
Target Version: 4.14
Processing Host: NAHSTW7056

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
1 Methane	0.483	0.463	0.020	956	0.98052	0.980
2 Ethene	0.650	0.706	-0.056	724	1.23600	1.236(M)

QC Flag Legend

M - Compound response manually integrated.

Data File: \\nahstws005\Target\chem\FID-4.i\210421.b\015.D

Date : 21-APR-2021 13:58

Client ID: HS21040859-09

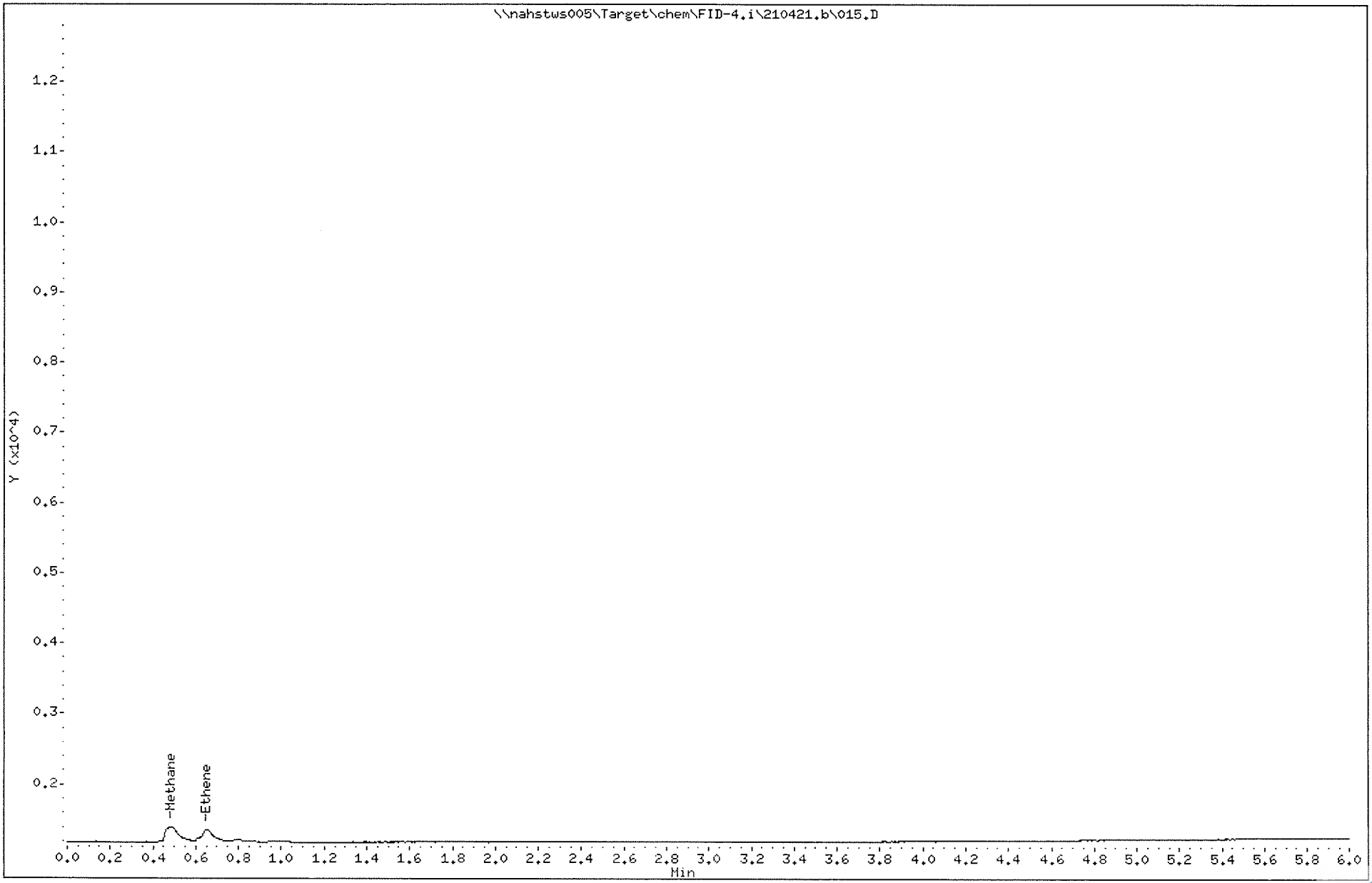
Instrument: FID-4.i

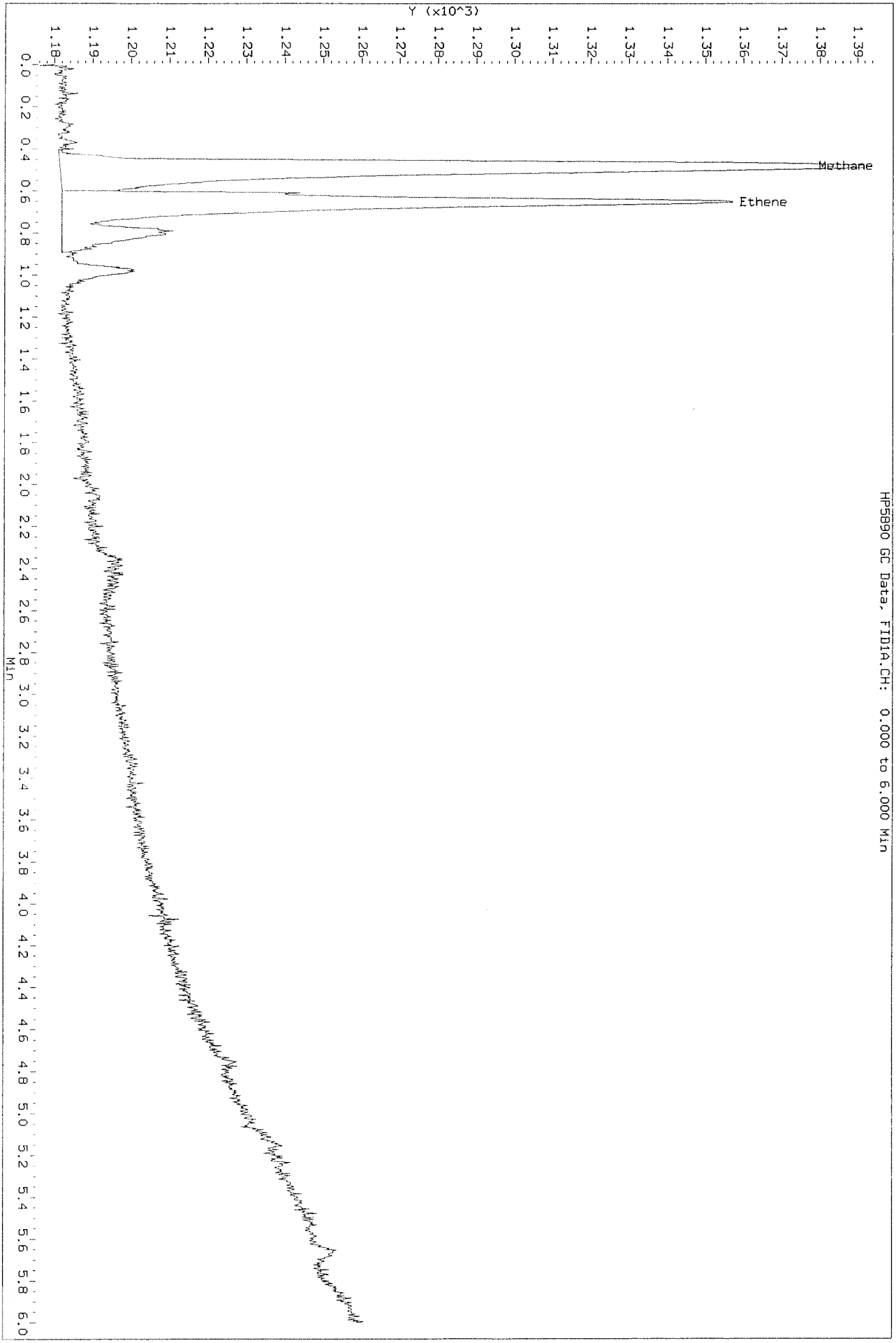
Sample Info: HS21040859-09;HS21040859-09

Operator: PL

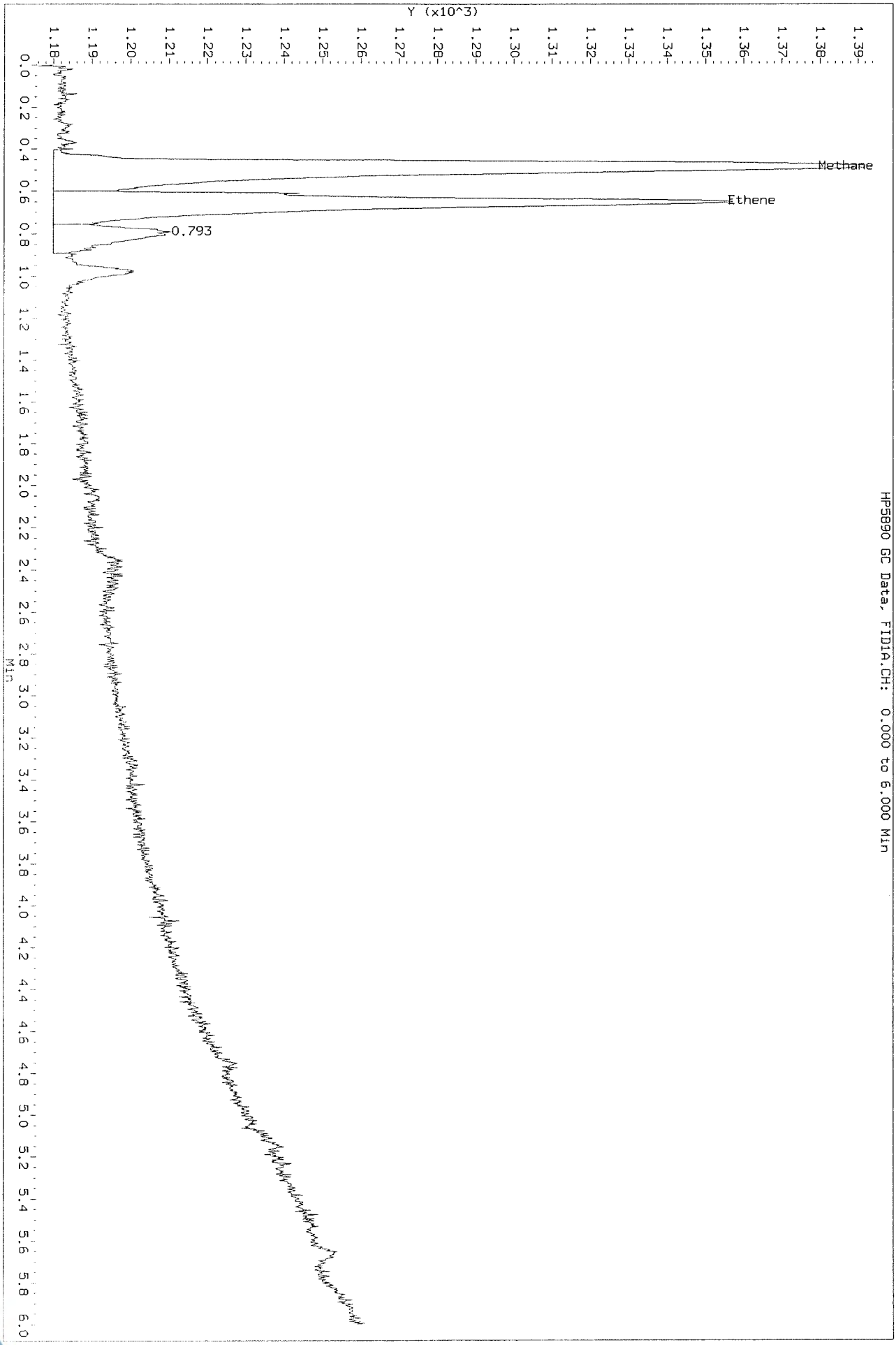
Column phase: Rtx-PLOT

Column diameter: 0.53




Data File: \\nahstws005\Target\chem\FID-4.i\210421.b\Before\015.D
Injection Date: 21-APR-2021 13:58
Instrument: FID-4.i
Client Sample ID: HS21040859-09
HP5890 GC Data, FIDiA.CH: 0.000 to 6.000 Min
Y (x10^3)
Methane
Ethene
Min

Data File: \\nahstws005\Target\chem\FID-4.i\210421.b\015.D
Injection Date: 21-APR-2021 13:58
Instrument: FID-4.i
Client Sample ID: HS21040859-09



ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\nahstws005\Target\chem\FID-4.i\210421.b\016.D
Lab Smp Id: HS21040859-10 Client Smp ID: HS21040859-10
Inj Date : 21-APR-2021 14:22
Operator : PL Inst ID: FID-4.i
Smp Info : HS21040859-10;HS21040859-10
Misc Info : ;1;0;1
Comment :
Method : \\nahstws005\Target\chem\FID-4.i\210421.b\RSKNI3.m
Meth Date : 19-May-2021 14:28 FID-4.i Quant Type: ESTD
Cal Date : 24-JAN-2017 10:15 Cal File: 004.D
Als bottle: 16
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: RSK175.sub
Target Version: 4.14
Processing Host: NAHSTW7056

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
1 Methane	0.460	0.463	-0.003	15553	15.9519	15.951(M)
2 Ethene	0.696	0.706	-0.010	8400	14.3403	14.340

QC Flag Legend

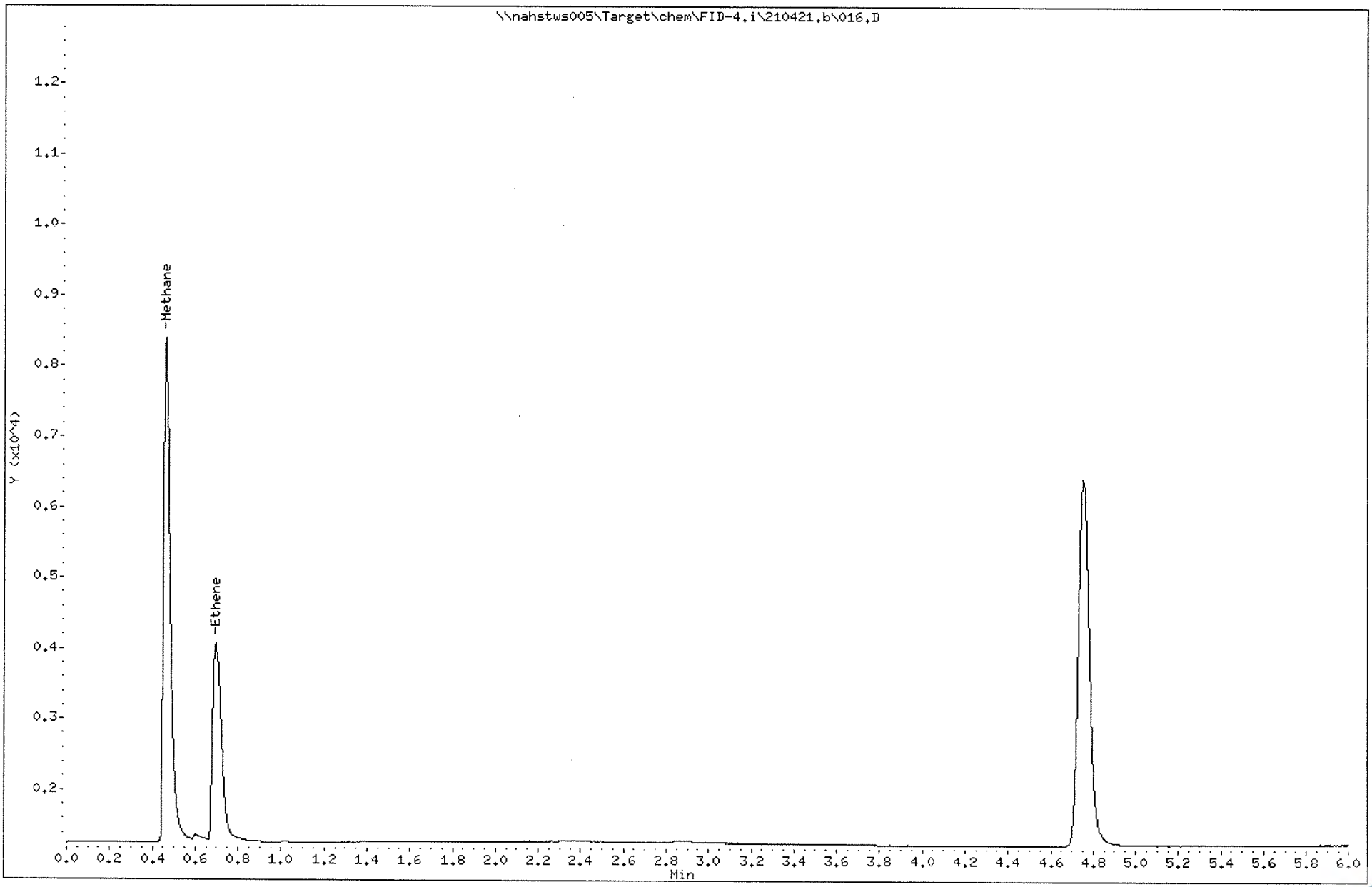
M - Compound response manually integrated.

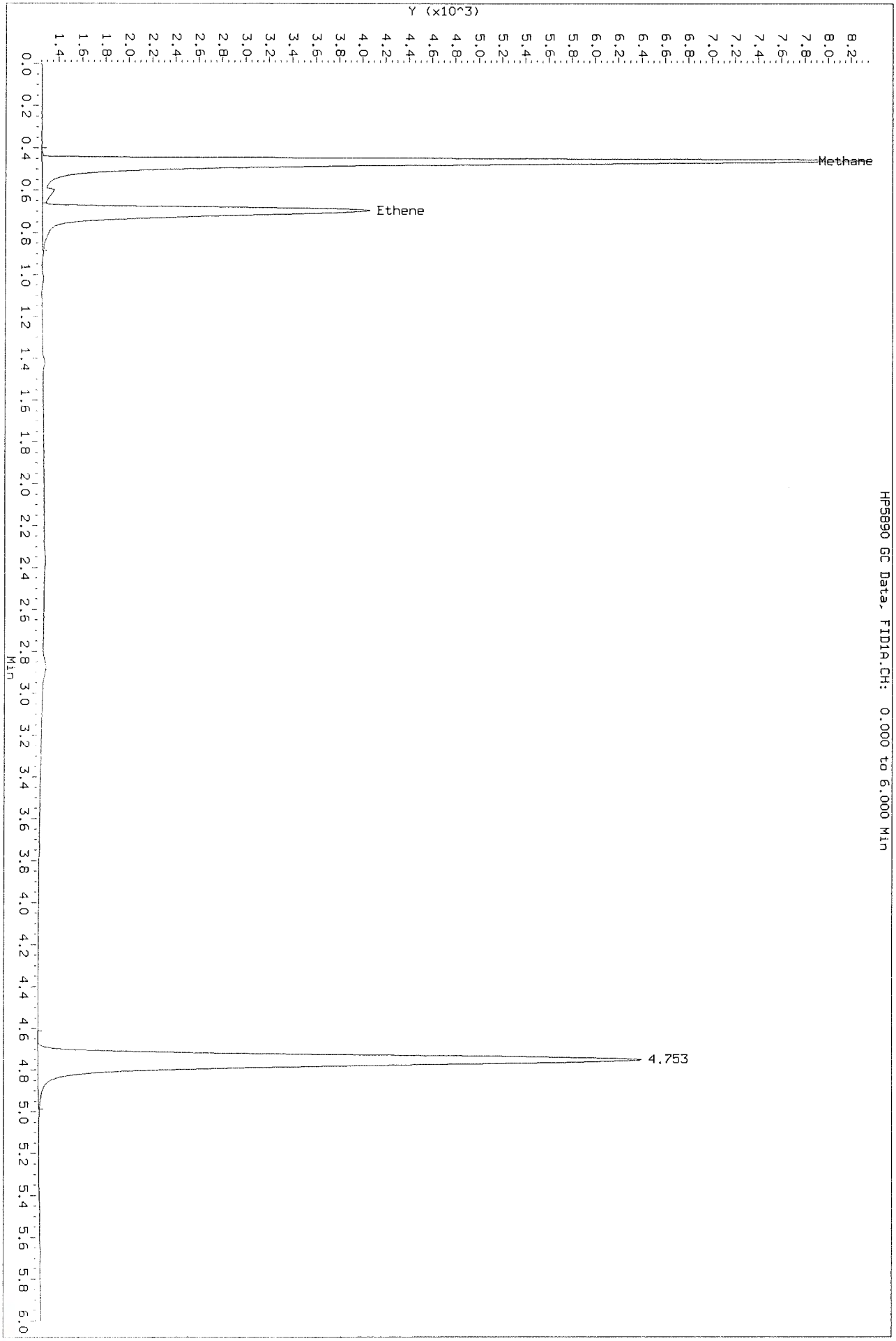
Data File: \\nahstws005\Target\chem\FID-4.i\210421.b\016.D
Date : 21-APR-2021 14:22
Client ID: HS21040859-10
Sample Info: HS21040859-10;HS21040859-10

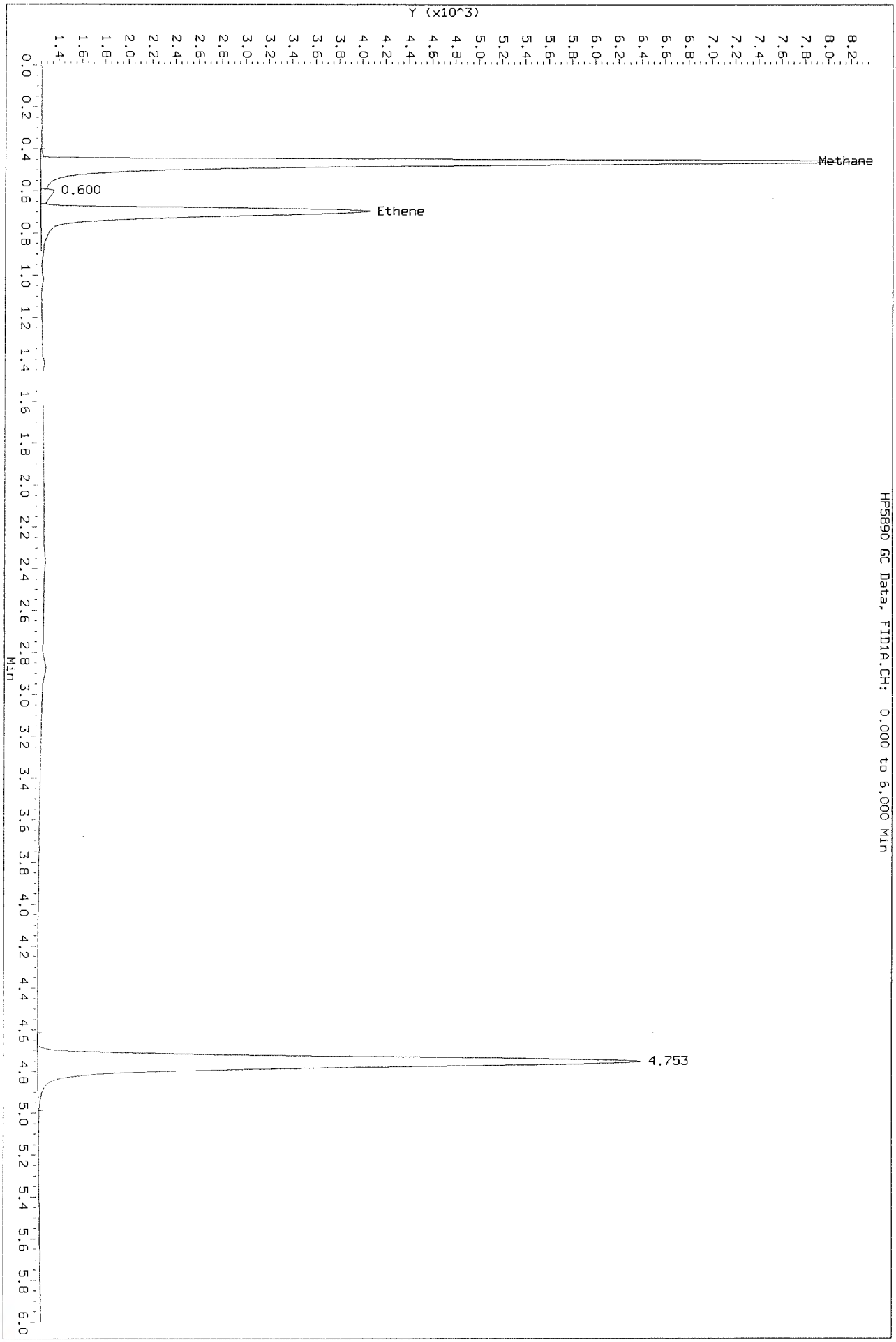
Column phase: Rtx-PLOT

Instrument: FID-4.i

Operator: PL
Column diameter: 0.53




Data File: \\nahstws005\Target\chem\FID-4.i\210421.b\Before\016.D
Injection Date: 21-APR-2021 14:22
Instrument: FID-4.i
Client Sample ID: HS2104085S-10
HP5890 GC Data, FID1A.CH: 0.000 to 6.000 Min
Y (x10^3)
Min
Methane
Ethene
4.753


Data File: \\nahstws005\Target\chem\FID-4.i\210421.b\016.D
Injection Date: 21-APR-2021 14:22
Instrument: FID-4.i
Client Sample ID: HS210408S9-10
HP5890 GC Data, FID1A.CH: 0.000 to 6.000 Min
Y (x10^3)
Min
Methane
0.600
Ethene
4.753

ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\nahstws005\Target\chem\FID-4.i\210421.b\017.D
Lab Smp Id: HS21040859-07 Client Smp ID: HS21040859-07
Inj Date : 21-APR-2021 14:32
Operator : PL Inst ID: FID-4.i
Smp Info : HS21040859-07;HS21040859-07
Misc Info : ;1;0;50
Comment :
Method : \\nahstws005\Target\chem\FID-4.i\210421.b\RSKNI3.m
Meth Date : 19-May-2021 14:28 FID-4.i Quant Type: ESTD
Cal Date : 24-JAN-2017 10:15 Cal File: 004.D
Als bottle: 17
Dil Factor: 50.00000
Integrator: Falcon Compound Sublist: RSK175.sub
Target Version: 4.14
Processing Host: NAHSTW7056

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

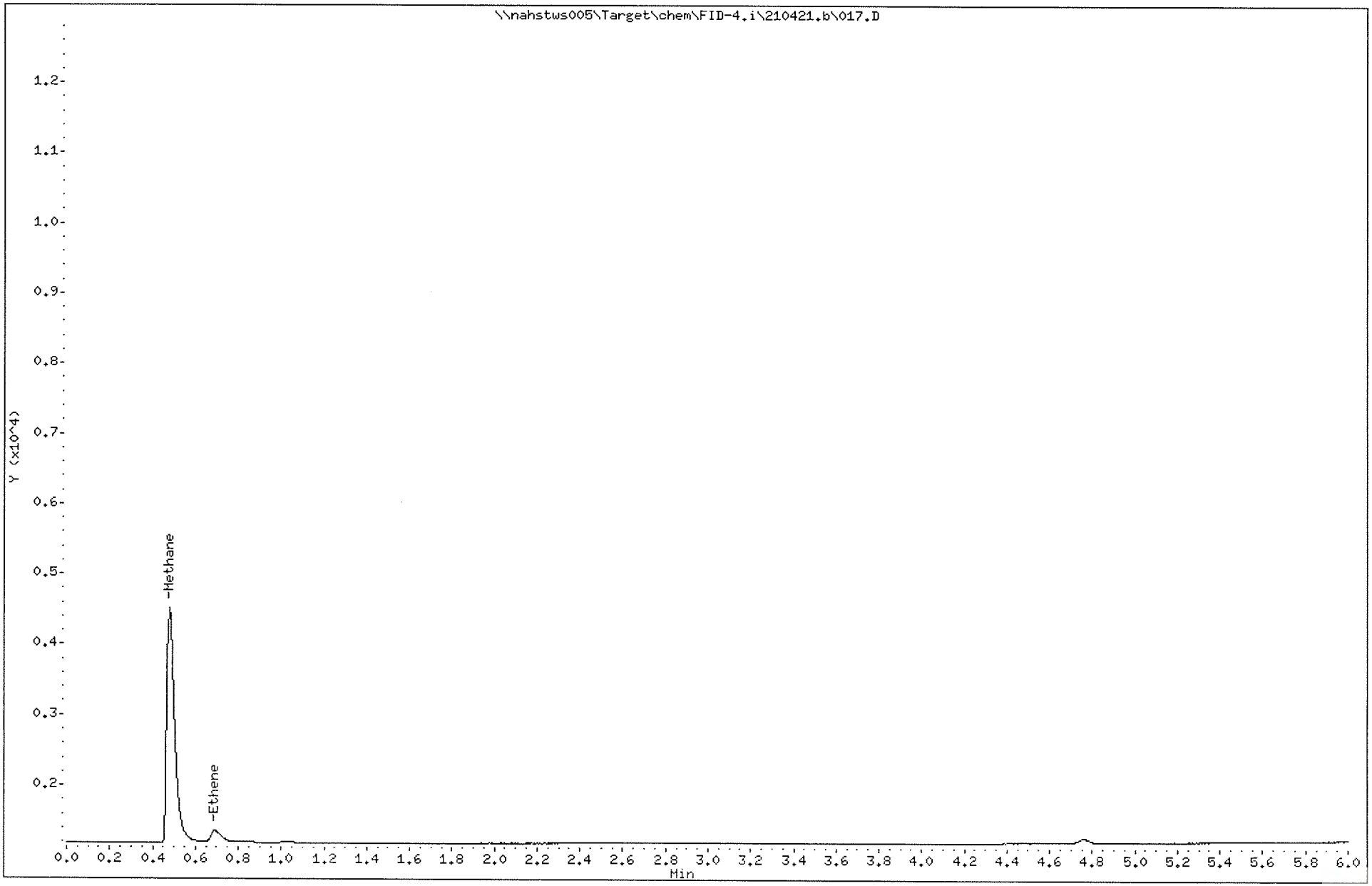
					CONCENTRATIONS	
					ON-COLUMN	FINAL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/L)	(ug/L)
1 Methane	0.480	0.463	0.017	8527	8.74571	437.285
2 Ethene	0.693	0.706	-0.013	623	1.06357	53.178

Data File: \\nahstws005\Target\chem\FID-4.i\210421.b\017.D
Date : 21-APR-2021 14:32
Client ID: HS21040859-07
Sample Info: HS21040859-07;HS21040859-07

Column phase: Rtx-PLOT

Instrument: FID-4.i

Operator: PL
Column diameter: 0.53



ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\nahstws005\Target\chem\FID-4.i\210421.b\018.D
Lab Smp Id: RSK-CCV Client Smp ID: RSK-CCV
Inj Date : 21-APR-2021 14:46
Operator : PL Inst ID: FID-4.i
Smp Info : RSK-CCV;RSK-CCV;2;4
Misc Info : ;1;0;1
Comment :
Method : \\nahstws005\Target\chem\FID-4.i\210421.b\RSKNI3.m
Meth Date : 19-May-2021 14:28 FID-4.i Quant Type: ESTD
Cal Date : 24-JAN-2017 10:15 Cal File: 004.D
Als bottle: 18 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: RSK175.sub
Target Version: 4.14
Processing Host: NAHSTW7056

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

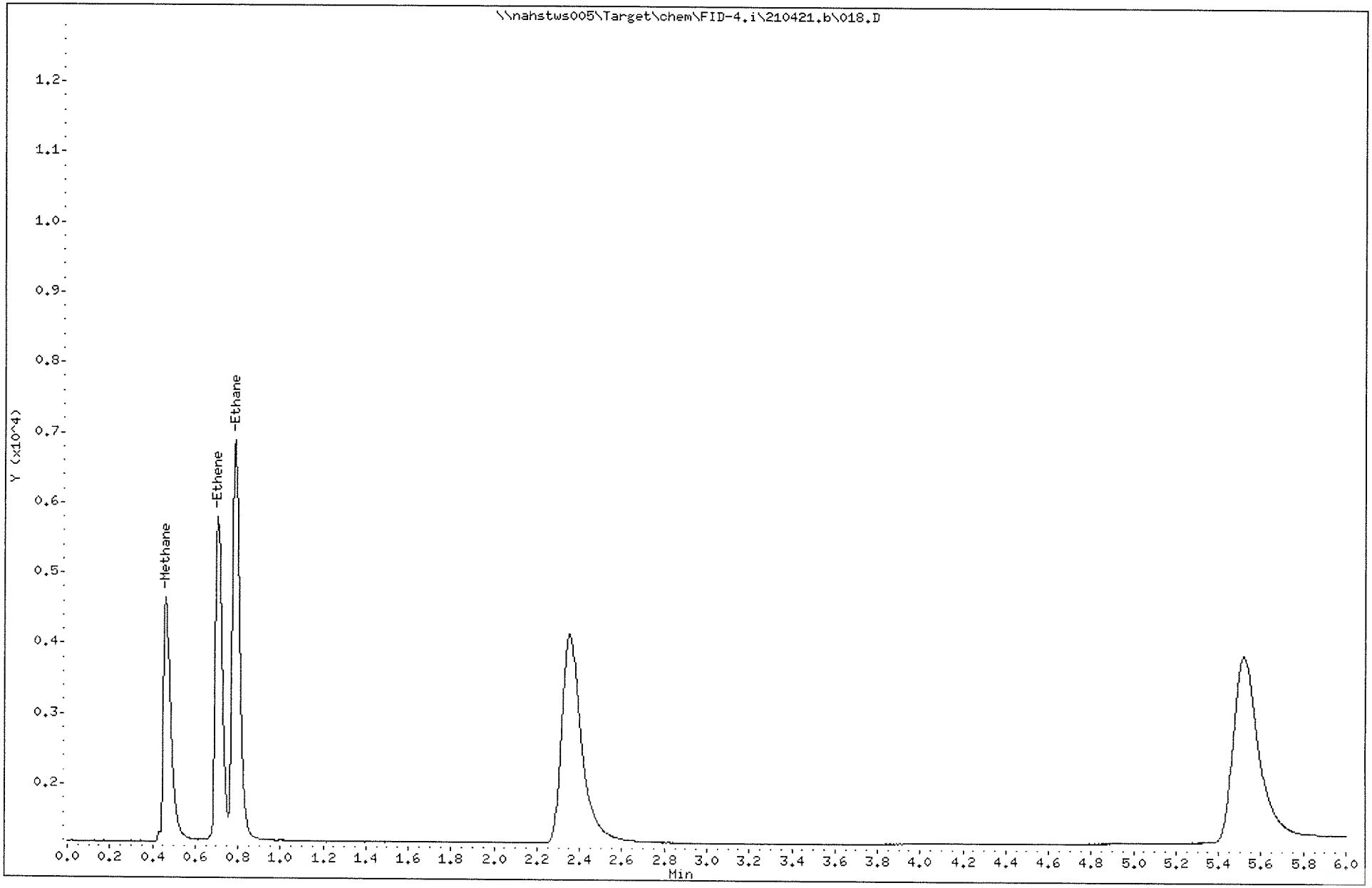
					AMOUNTS	
					CAL-AMT	ON-COL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/L)	(ug/L)
1 Methane	0.460	0.460	0.000	8595	9.64700	8.815
2 Ethene	0.706	0.706	0.000	10270	16.8500	17.532
3 Ethane	0.786	0.786	0.000	13884	18.0430	19.297

Data File: \\nahstws005\Target\chem\FID-4.i\210421.b\018.D
Date : 21-APR-2021 14:46
Client ID: RSK-CCV
Sample Info: RSK-CCV;RSK-CCV;2;4

Column phase: Rtx-PLOT

Instrument: FID-4.i

Operator: PL
Column diameter: 0.53



HS21040859 Wet Chem Raw Data (ALK_W 2320B)

ALS WO# HS21040859

Report Date: 04/21/2021 : 6:23

PC-TitratION PLUS
Calibration Report

Calibration Record # 2353

Calibration Settings

Calibration ID	PH CAL 4-7-10	Date	04/21/2021
Channel	1	Time	6:23 PM
Probe Type	pH	Temperature	295.58 K 22.43 C
Probe ID	PH ELECTRODE	Analysis Type	Single Line Fit

Calibration Results

Slope	-58.247	CorrCoeff	0.9998
Intercept	-0.650	Equation:	Y = (-58.247) X + (-0.650)

Calibration Validity True Operator

	Result	Minimum	Maximum
Slope	-58.247	-65.00	-53.00
Intercept	-0.650	-100.00	100.00
Correlation Coefficient	0.9998	0.99	1.00

Note: "True" means the calibration was within the specified ranges
"False" means the calibration was NOT within the specified ranges

Calibration Data	Standard	Reading
	4.00	176.02
	7.00	-4.51
	10.00	-173.46

#382120 (A)

#382121 (B)

4/22/2021.

Copyright Hinterland Software Ltd.

Report Date: 4/21/2021 11:54 PM

PC-TitratION PLUS
Water Analysis Report

Run Number 4071 **Order Number** 20210421-3

SampleID	RunDate	RunTime	Temp	cond (uS)	pH	palk-ppm	talk-ppm	bcarb-ppm	carb-ppm	hydr-ppm	mLs @ 8.3	mLs @ 4.5	mLs @ 4.2
ICV-PH	4/21/2021	6:54 PM	21.83	-1.00	6.04	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
TAP WATER	4/21/2021	7:01 PM	21.83	-1.00	7.86	.00	152.51	152.51	.00	.00	.00	1.45	1.45
WBLKW1-210421	4/21/2021	7:06 PM	21.40	-1.00	5.57	.00	.71	.71	.00	.00	.00	.02	.02
LCS1-210421	4/21/2021	7:15 PM	21.47	-1.00	10.91	533.86	1,034.54	.00	1,001.37	33.17	5.08	9.85	9.85
LCSD1-210421	4/21/2021	7:23 PM	21.02	-1.00	10.92	535.12	1,037.50	.00	1,004.74	32.75	5.10	9.88	9.88
HS21040846-01	4/21/2021	7:30 PM	20.91	-1.00	7.78	.00	234.25	234.25	.00	.00	.00	2.23	2.23
HS21040846-01DUP	4/21/2021	7:37 PM	21.27	-1.00	7.78	.00	249.33	249.33	.00	.00	.00	2.37	2.37
HS21040846-02	4/21/2021	7:44 PM	21.53	-1.00	7.79	.00	231.07	231.07	.00	.00	.00	2.20	2.20
HS21040846-03	4/21/2021	7:50 PM	21.71	-1.00	7.71	.00	229.44	229.44	.00	.00	.00	2.19	2.19
HS21040846-04	4/21/2021	7:57 PM	21.90	-1.00	7.77	.00	231.46	231.46	.00	.00	.00	2.20	2.20
HS21040846-05	4/21/2021	8:04 PM	22.13	-1.00	7.80	.00	230.20	230.20	.00	.00	.00	2.19	2.19
CCV-PH	4/21/2021	8:07 PM	22.52	-1.00	7.08	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
CCV-ALK	4/21/2021	8:15 PM	22.37	-1.00	10.87	524.70	1,023.06	.00	996.72	26.34	5.00	9.74	9.74
DI RINSE	4/21/2021	8:20 PM	22.49	-1.00	5.93	.00	1.07	1.07	.00	.00	.00	.03	.03
HS21041007-01	4/21/2021	8:26 PM	22.46	-1.00	5.58	.00	.42	.42	.00	.00	.00	.02	.02
WBLKW1-210421	4/21/2021	8:31 PM	22.48	-1.00	5.55	.00	.62	.62	.00	.00	.00	.02	.02
HS21040863-01	4/21/2021	8:37 PM	22.07	-1.00	8.03	.00	135.81	135.81	.00	.00	.00	1.29	1.29
HS21040840-01DF2	4/21/2021	8:45 PM	21.61	-1.00	10.25	252.12	420.53	.00	336.81	83.71	2.40	4.01	4.01
HS21040842-01DF2	4/21/2021	8:54 PM	21.24	-1.00	10.77	149.19	350.22	51.83	298.39	.00	1.42	3.34	3.34
HS21040848-01DF2	4/21/2021	9:03 PM	20.98	-1.00	10.87	111.92	277.53	53.70	223.83	.00	1.07	2.64	2.64
HS21040845-01DF2	4/21/2021	9:11 PM	21.09	-1.00	10.03	198.52	336.76	.00	276.47	60.29	1.89	3.21	3.21
HS21040875-01DF2	4/21/2021	9:20 PM	21.47	-1.00	10.37	144.52	499.10	210.07	289.03	.00	1.38	4.75	4.75
CCV-PH	4/21/2021	9:23 PM	21.66	-1.00	7.12	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
CCV-ALK	4/21/2021	9:32 PM	21.56	-1.00	10.93	516.86	1,042.36	8.64	1,033.72	.00	4.92	9.93	9.93
DI RINSE	4/21/2021	9:38 PM	21.90	-1.00	6.03	.00	.86	.86	.00	.00	.00	.03	.03
WBLKW2-210421	4/21/2021	9:43 PM	21.96	-1.00	5.71	.00	.63	.63	.00	.00	.00	.03	.03
LCS2-210421	4/21/2021	9:52 PM	22.03	-1.00	10.91	521.63	1,027.12	.00	1,010.98	16.14	4.97	9.78	9.78

Copyright Hinterland Software Ltd.

Run Number 4071 **Order Number** 20210421-3

SampleID	RunDate	RunTime	Temp	cond (uS)	pH	palk-ppm	talk-ppm	bcarb-ppm	carb-ppm	hydr-ppm	mLs @ 8.3	mLs @ 4.5	mLs @ 4.2
LCSD2-210421	4/21/2021	10:01 PM	22.19	-1.00	10.89	525.30	1,059.44	8.84	1,050.60	.00	5.00	10.09	10.09
HS21040859-08	4/21/2021	10:07 PM	22.48	-1.00	6.38	.00	169.72	169.72	.00	.00	.00	1.62	1.62
HS21040859-08DUP	4/21/2021	10:12 PM	22.35	-1.00	6.29	.00	168.42	168.42	.00	.00	.00	1.60	1.60
HS21040859-07	4/21/2021	10:18 PM	22.39	-1.00	6.62	.00	337.92	337.92	.00	.00	.00	3.22	3.22
HS21040859-09	4/21/2021	10:24 PM	22.45	-1.00	6.73	.00	251.67	251.67	.00	.00	.00	2.40	2.40
CCV-PH	4/21/2021	10:27 PM	22.43	-1.00	7.09	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
CCV-ALK	4/21/2021	10:35 PM	22.19	-1.00	10.84	518.47	1,027.89	.00	1,018.83	9.05	4.94	9.79	9.79
DI RINSE	4/21/2021	10:40 PM	22.48	-1.00	5.90	.00	.92	.92	.00	.00	.00	.03	.03
HS21040859-10	4/21/2021	10:50 PM	22.52	-1.00	7.39	.00	1,043.04	1,043.04	.00	.00	.00	9.93	9.93
HS21041102-01	4/21/2021	10:55 PM	22.66	-1.00	6.26	.00	86.50	86.50	.00	.00	.00	.82	.82
HS21041102-02	4/21/2021	11:01 PM	22.70	-1.00	6.20	.00	77.50	77.50	.00	.00	.00	.74	.74
HS21041102-03	4/21/2021	11:05 PM	22.70	-1.00	5.04	.00	2.88	2.88	.00	.00	.00	.05	.05
HS21041102-04	4/21/2021	11:11 PM	22.75	-1.00	6.24	.00	41.40	41.40	.00	.00	.00	.39	.39
HS21041102-05	4/21/2021	11:16 PM	22.78	-1.00	6.20	.00	35.44	35.44	.00	.00	.00	.34	.34
HS21041102-07	4/21/2021	11:22 PM	22.77	-1.00	6.34	.00	320.84	320.84	.00	.00	.00	3.06	3.06
HS21041102-10	4/21/2021	11:35 PM	22.74	-1.00	5.21	.00	1,696.09	1,696.09	.00	.00	.00	16.15	16.15
CCV-PH	4/21/2021	11:39 PM	22.84	-1.00	7.08	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
CCV-ALK	4/21/2021	11:47 PM	22.69	-1.00	10.78	515.54	1,032.90	1.82	1,031.07	.00	4.91	9.84	9.84
DI RINSE	4/21/2021	11:52 PM	22.92	-1.00	5.89	.00	.91	.91	.00	.00	.00	.03	.03

Copyright Hinterland Software Ltd.

Batch ID Exception Report

Batch ID: R382120
QC Group: 0

Sample ID	Seq No	Sample Type	Test Code	Analyzed Date	Dilution Factor
	Analyte Type	Analyte		Qualifier	
SAMP	0	SAMP		22 Apr 2021 7:56 AM	1

X No exceptions found

Batch ID Exception Report

Batch ID: R382121
QC Group: 0

Sample ID	Seq No	Sample Type	Test Code	Analyzed Date	Dilution Factor
	Analyte Type	Analyte		Qualifier	
SAMP	0	SAMP		22 Apr 2021 8:01 AM	1

X No exceptions found

HS21040859 Wet Chem Raw Data (TOC_W 5310B)

ALS WO# HS21040859

C:\TOC-L\Data\2021_02_25_001.tlx

	Type	Analysis	Sample Name	Sample ID	Origin	Result
1	Standard	NPOC	CAL	3150171(01-07)	02_25_2021_CAL.2021_02_	
2	Unknown	NPOC	ICV	315017108	02_25_2021_CAL.cal	NPOC:10.14mg/L
3	Unknown	NPOC	ICB		02_25_2021_CAL.cal	NPOC:-0.1140mg/L
4	Unknown	NPOC	CCV	315017106	02_25_2021_CAL.cal	NPOC:25.02mg/L
5	Unknown	NPOC	CCB		02_25_2021_CAL.cal	NPOC:-0.07587mg/L
6	Unknown	NPOC	MBLK-02252021		02_25_2021_CAL.cal	NPOC:-0.1214mg/L
7	Unknown	NPOC	LCS-02252021		02_25_2021_CAL.cal	NPOC:10.15mg/L
8	Unknown	NPOC	LCSD02252021		02_25_2021_CAL.cal	NPOC:10.16mg/L
9	Unknown	NPOC	HS21020689-01		02_25_2021_CAL.cal	NPOC:22.48mg/L
10	Unknown	NPOC	HS21020689-02		02_25_2021_CAL.cal	NPOC:17.34mg/L
11	Unknown	NPOC	HS21020689-02MS		02_25_2021_CAL.cal	NPOC:28.25mg/L
12	Unknown	NPOC	HS21020689-03		02_25_2021_CAL.cal	NPOC:10.22mg/L
13	Unknown	NPOC	HS21020538-01		02_25_2021_CAL.cal	NPOC:20.36mg/L
14	Unknown	NPOC	HS21020538-02		02_25_2021_CAL.cal	NPOC:4.452mg/L
15	Unknown	NPOC	HS21020793-02DF10		02_25_2021_CAL.cal	NPOC:17.50mg/L
16	Unknown	NPOC	CCV		02_25_2021_CAL.cal	NPOC:25.46mg/L
17	Unknown	NPOC	CCB		02_25_2021_CAL.cal	NPOC:0.08018mg/L

	Notes	Status	Date / Time	Vial
1		Completed	2/25/2021 1	1, 2, 3, 4, 5,
2		Completed	2/25/2021 1	8
3		Completed	2/25/2021 1	9
4		Completed	2/25/2021 1	10
5		Completed	2/25/2021 1	11
6		Completed	2/25/2021 1	12
7		Completed	2/25/2021 1	13
8		Completed	2/25/2021 1:	14
9		Completed	2/25/2021 1:	15
10		Completed	2/25/2021 1:	16
11		Completed	2/25/2021 1:	17
12		Completed	2/25/2021 2:	18
13		Completed	2/25/2021 2:	19
14		Completed	2/25/2021 2:	20
15		Completed	2/25/2021 2:	21
16		Completed	2/25/2021 3:	22
17		Completed	2/25/2021 3:	23

TOC-Control L Report

2021_02_25_001.tlx

Instr.Information

Instrument Options	TOC/ASI/IC Unit/
Catalyst	Regular Sensitivity

Cal. Curve

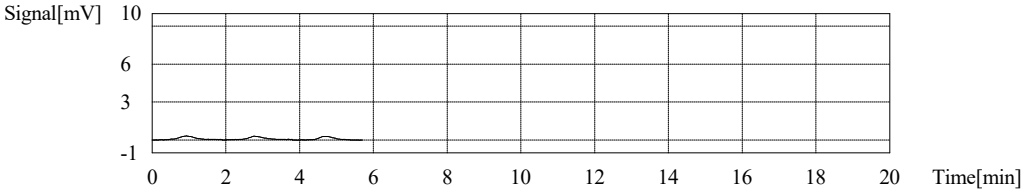
Sample Name:	CAL
Sample ID:	3150171(01-07)
Cal. Curve:	02_25_2021_CAL.2021_02_25_09_13_02.cal
Status	Completed

Type	Anal.
Standard	NPOC

Conc: 0.000mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	0.7577	50uL	1.000	*******		2/25/2021 9:21:39 AM
2	0.6368	50uL	1.000	*******		2/25/2021 9:23:47 AM
3	0.6500	50uL	1.000	*******		2/25/2021 9:25:55 AM

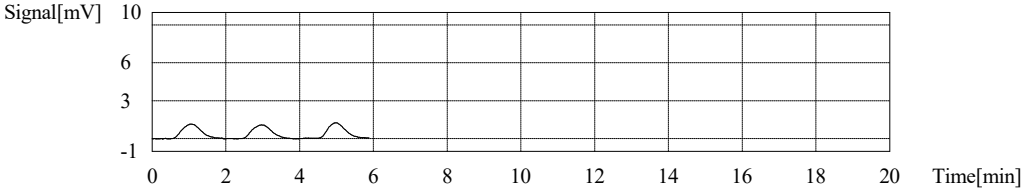
Acid Add.	0.000%
Sparge Gas Flow	80mL/min
Sp. Time	180.0sec
Mean Area	0.6815



Conc: 1.000mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	4.063	50uL	1.000	*******		2/25/2021 9:34:44 AM
2	3.946	50uL	1.000	*******		2/25/2021 9:37:02 AM
3	3.886	50uL	1.000	*******		2/25/2021 9:39:10 AM

Acid Add.	0.000%
Sparge Gas Flow	80mL/min
Sp. Time	180.0sec
Mean Area	3.965



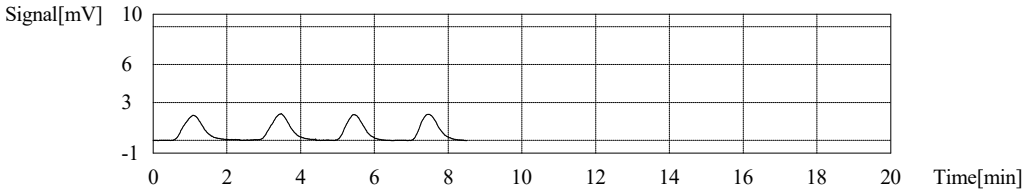
Conc: 2.000mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	7.014	50uL	1.000	*******		2/25/2021 9:48:25 AM
2	6.976	50uL	1.000	*******		2/25/2021 9:50:44 AM
3	6.738	50uL	1.000	*******	E	2/25/2021 9:53:02 AM
4	6.989	50uL	1.000	*******		2/25/2021 9:55:18 AM

TOC-Control L Report

2021_02_25_001.tlx

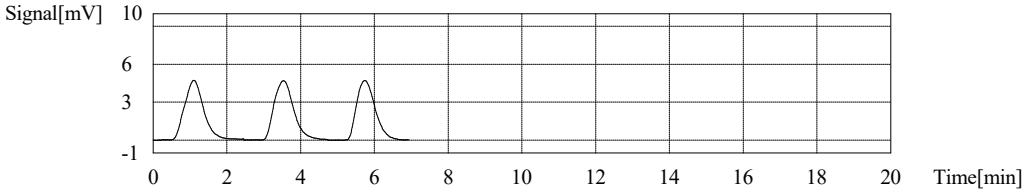
Acid Add. 0.000%
Sparge Gas Flow 80mL/min
Sp. Time 180.0sec
Mean Area 6.993



Conc: 5.000mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	16.70	50uL	1.000	*******		2/25/2021 10:04:35 AM
2	16.99	50uL	1.000	*******		2/25/2021 10:07:06 AM
3	16.40	50uL	1.000	*******		2/25/2021 10:09:32 AM

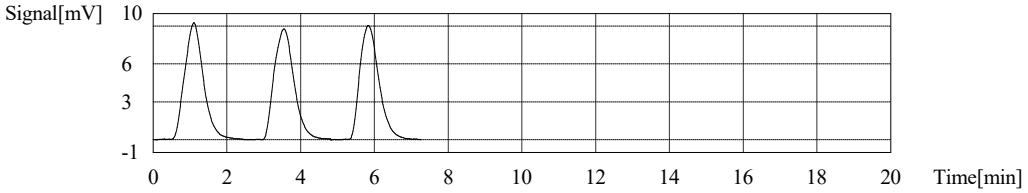
Acid Add. 0.000%
Sparge Gas Flow 80mL/min
Sp. Time 180.0sec
Mean Area 16.70



Conc: 10.00mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	32.33	50uL	1.000	*******		2/25/2021 10:18:54 AM
2	32.41	50uL	1.000	*******		2/25/2021 10:21:29 AM
3	32.27	50uL	1.000	*******		2/25/2021 10:24:10 AM

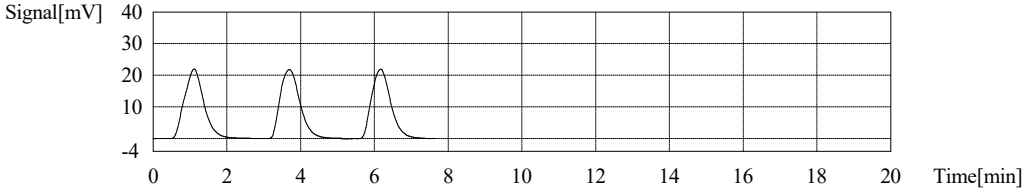
Acid Add. 0.000%
Sparge Gas Flow 80mL/min
Sp. Time 180.0sec
Mean Area 32.34



Conc: 25.00mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	79.83	50uL	1.000	*******		2/25/2021 10:33:42 AM
2	80.51	50uL	1.000	*******		2/25/2021 10:36:25 AM
3	79.09	50uL	1.000	*******		2/25/2021 10:39:12 AM

Acid Add. 0.000%
Sparge Gas Flow 80mL/min
Sp. Time 180.0sec
Mean Area 79.81



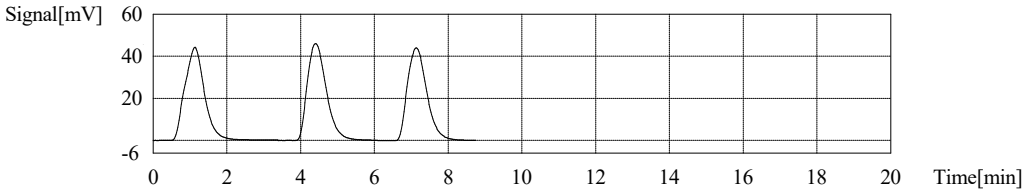
Conc: 50.00mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	162.4	50uL	1.000	*******		2/25/2021 10:49:29 AM
2	163.8	50uL	1.000	*******		2/25/2021 10:52:26 AM
3	159.9	50uL	1.000	*******		2/25/2021 10:55:21 AM

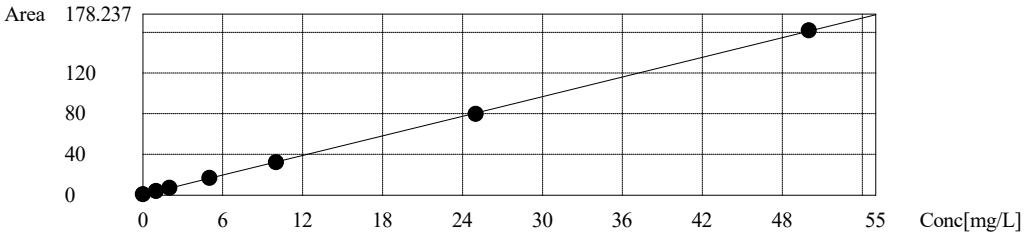
TOC-Control L Report

2021_02_25_001.tlx

Acid Add.	0.000%
Sparge Gas Flow	80mL/min
Sp. Time	180.0sec
Mean Area	162.0



Slope:	3.220
Intercept	0.4365
r^2	0.9999
r	1.0000
RSE(%)	N/A
Zero Shift	No



Sample

Sample Name:	ICV
Sample ID:	315017108
Origin:	02_25_2021_CAL.cal
Status	Completed
Chk. Result	

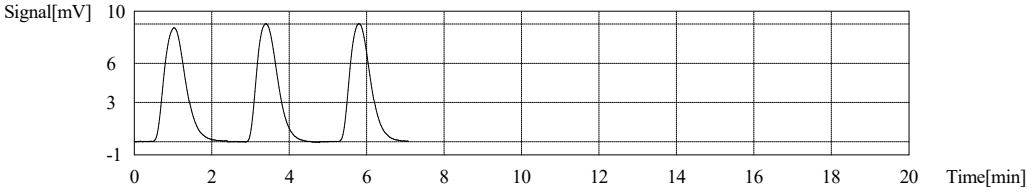
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:10.14mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	33.04	10.13mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	2/25/2021 11:32:06 AM
2	33.24	10.19mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	2/25/2021 11:34:44 AM
3	32.98	10.11mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	2/25/2021 11:37:17 AM

Mean Area	33.09
Mean Conc.	10.14mg/L



Sample

Sample Name:	ICB
Sample ID:	
Origin:	02_25_2021_CAL.cal
Status	Completed
Chk. Result	

Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:-0.1140mg/L

1. Det

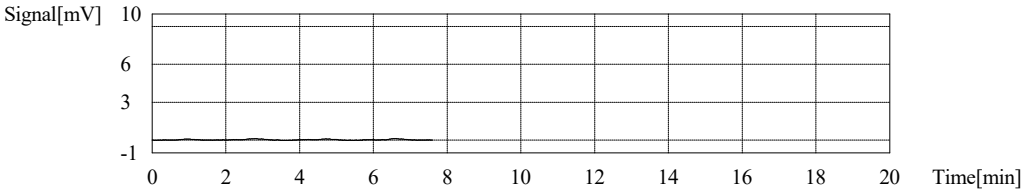
TOC-Control L Report

2021_02_25_001.tlx

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.000	-0.1356mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	2/25/2021 11:46:05 AM
2	0.2080	-0.07096mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	2/25/2021 11:48:13 AM
3	0.000	-0.1356mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	2/25/2021 11:50:20 AM
4	0.2102	-0.07028mg/L	50uL	1.000	E	02_25_2021_CAL.2021_02_25_09_13_02.cal	2/25/2021 11:52:27 AM

Mean Area 0.06933
Mean Conc. -0.1140mg/L



C:\TOC-L\Data\2021_04_27_001.tlx

	Type	Analysis	Sample Name	Sample ID	Origin	Result	Notes
1	Unknown	NPOC	CCV	316131907	02_25_2021	NPOC:22.59mg/L	
2	Unknown	NPOC	CCB		02_25_2021	NPOC:-0.09851mg/L	
3	Unknown	NPOC	MBLK-04272021		02_25_2021	NPOC:-0.1019mg/L	
4	Unknown	NPOC	LCS-04272021		02_25_2021	NPOC:9.152mg/L	
5	Unknown	NPOC	LCSD-04272021	TOC_W 5310B	02_25_2021	NPOC:9.770mg/L	
6	Unknown	NPOC	HS21040695-13DF10		02_25_2021	NPOC:5.906mg/L	
7	Unknown	NPOC	HS21040705-01		02_25_2021	NPOC:2050mg/L	
8	Unknown	NPOC	HS21041110-01		02_25_2021	NPOC:16.81mg/L	
9	Unknown	NPOC	HS21041142-04		02_25_2021	NPOC:31.20mg/L	
10	Unknown	NPOC	HS21040859-07		02_25_2021	NPOC:4.707mg/L	
11	Unknown	NPOC	HS21040859-08		02_25_2021	NPOC:1.798mg/L	
12	Unknown	NPOC	HS21040859-08MS		02_25_2021	NPOC:11.87mg/L	
13	Unknown	NPOC	CCV	316131907	02_25_2021	NPOC:24.93mg/L	
14	Unknown	NPOC	CCB		02_25_2021	NPOC:0.06861mg/L	
15	Unknown	NPOC	HS21040859-09		02_25_2021	NPOC:1.487mg/L	
16	Unknown	NPOC	HS21040859-10		02_25_2021	NPOC:53.11mg/L	
17	Unknown	NPOC	HS21041109-02		02_25_2021	NPOC:0.7701mg/L	
18	Unknown	NPOC	HS21041103-01		02_25_2021	NPOC:21.33mg/L	
19	Unknown	NPOC	CCV	316131907	02_25_2021	NPOC:22.83mg/L	
20	Unknown	NPOC	CCB		02_25_2021	NPOC:-0.02601mg/L	
21	Unknown	NPOC	MBLK2-04272021		02_25_2021	NPOC:-0.06956mg/L	
22	Unknown	NPOC	LCS2-04272021		02_25_2021	NPOC:9.037mg/L	
23	Unknown	NPOC	LCSD2-04272021	TOC_W 5310B	02_25_2021	NPOC:9.866mg/L	
24	Unknown	NPOC	HS21041260-01		02_25_2021	NPOC:13.34mg/L	
25	Unknown	NPOC	HS21041389-01		02_25_2021	NPOC:-0.00900mg/L	
26	Unknown	NPOC	HS21041176-01DF100		02_25_2021	NPOC:1043mg/L	
27	Unknown	NPOC	HS21041176-01MS		02_25_2021	NPOC:1049mg/L	
28	Unknown	NPOC	HS21041108-01		02_25_2021	NPOC:5.110mg/L	
29	Unknown	NPOC	HS21041083-01	TOC-W	02_25_2021	NPOC:8.286mg/L	
30	Unknown	NPOC	HS21041168-01		02_25_2021	NPOC:12.24mg/L	
31	Unknown	NPOC	CCV	316131907	02_25_2021	NPOC:24.09mg/L	
32	Unknown	NPOC	CCB		02_25_2021	NPOC:-0.02739mg/L	

	Status	Date / Time	Vial
1	Completed	4/27/2021 4:30:18 PM	1
2	Completed	4/27/2021 4:45:30 PM	2
3	Completed	4/27/2021 4:58:29 PM	3
4	Completed	4/27/2021 5:14:21 PM	4
5	Completed	4/27/2021 5:29:19 PM	5
6	Completed	4/27/2021 5:43:39 PM	6
7	Completed	4/27/2021 6:10:54 PM	7
8	Completed	4/27/2021 6:28:21 PM	8
9	Completed	4/27/2021 6:44:10 PM	9
10	Completed	4/27/2021 7:00:34 PM	10
11	Completed	4/27/2021 7:16:04 PM	11
12	Completed	4/27/2021 7:32:59 PM	12
13	Completed	4/27/2021 7:53:45 PM	13
14	Completed	4/27/2021 8:06:51 PM	14
15	Completed	4/27/2021 8:22:18 PM	15
16	Completed	4/27/2021 8:37:34 PM	16
17	Completed	4/27/2021 8:52:48 PM	17
18	Completed	4/27/2021 9:07:47 PM	18
19	Completed	4/27/2021 9:23:28 PM	1
20	Completed	4/27/2021 9:36:31 PM	2
21	Completed	4/27/2021 9:51:41 PM	3
22	Completed	4/27/2021 10:06:25 PM	4
23	Completed	4/27/2021 10:21:34 PM	5
24	Completed	4/27/2021 10:36:26 PM	19
25	Completed	4/27/2021 10:51:35 PM	20
26	Completed	4/27/2021 11:08:56 PM	21
27	Completed	4/27/2021 11:26:20 PM	22
28	Completed	4/27/2021 11:43:07 PM	23
29	Completed	4/27/2021 11:57:00 PM	24
30	Completed	4/28/2021 12:11:36 AM	25
31	Completed	4/28/2021 12:27:34 AM	13
32	Completed	4/28/2021 12:42:47 AM	14

TOC-Control L Report

Instr.Information

Instrument Options: TOC/ASI/IC Unit/
Catalyst: Regular Sensitivity

Sample

Sample Name: CCV
Sample ID: 316131907
Origin: 02_25_2021_CAL.cal
Status: Completed
Chk. Result:

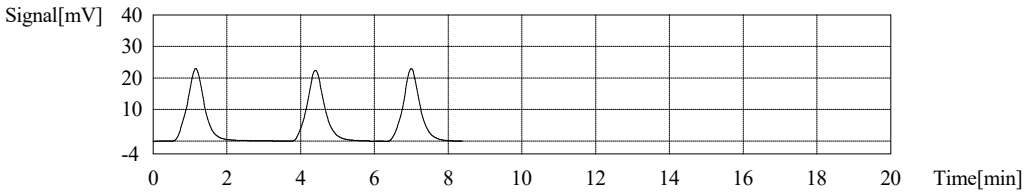
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:22.59mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	74.01	22.85mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/27/2021 4:24:39 PM
2	72.98	22.53mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/27/2021 4:27:30 PM
3	72.57	22.40mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/27/2021 4:30:18 PM

Mean Area 73.19
Mean Conc. 22.59mg/L



Sample

Sample Name: CCB
Sample ID:
Origin: 02_25_2021_CAL.cal
Status: Completed
Chk. Result:

Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:-0.09851mg/L

1. Det

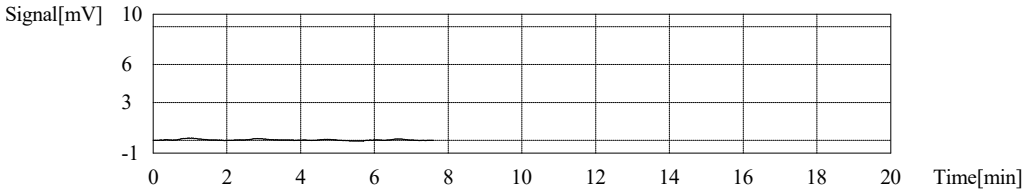
Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.4471	0.00329mg/L	50uL	1.000	E	02_25_2021_CAL.2021_02_25_09_13_02.cal	4/27/2021 4:39:06 PM
2	0.1800	-0.07966mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/27/2021 4:41:14 PM
3	0.000	-0.1356mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/27/2021 4:43:22 PM
4	0.1779	-0.08031mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/27/2021 4:45:30 PM

TOC-Control L Report

2021_04_27_001.tlx

Mean Area 0.1193
Mean Conc. -0.09851mg/L



Sample

Sample Name: MBLK-04272021
Sample ID:
Origin: 02_25_2021_CAL.cal
Status Completed
Chk. Result

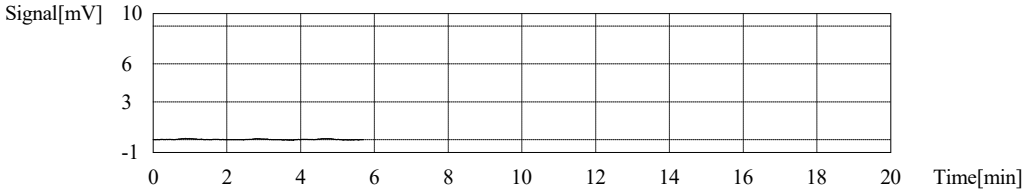
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:-0.1019mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.1506	-0.08879mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/27/2021 4:54:13 PM
2	0.000	-0.1356mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/27/2021 4:56:21 PM
3	0.1746	-0.08134mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/27/2021 4:58:29 PM

Mean Area 0.1084
Mean Conc. -0.1019mg/L



Sample

Sample Name: LCS-04272021
Sample ID:
Origin: 02_25_2021_CAL.cal
Status Completed
Chk. Result

Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:9.152mg/L

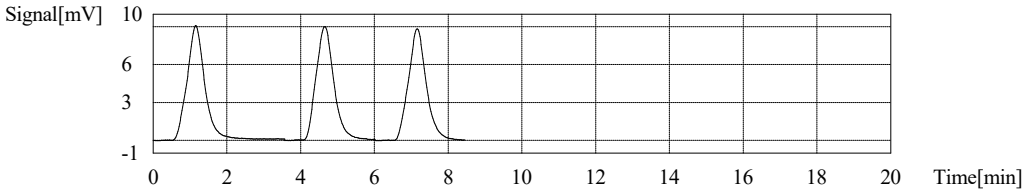
1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	30.29	9.271mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/27/2021 5:08:57 PM
2	29.82	9.125mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/27/2021 5:11:40 PM
3	29.61	9.060mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/27/2021 5:14:21 PM

TOC-Control L Report

Mean Area 29.91
Mean Conc. 9.152mg/L



Sample

Sample Name: LCSD-04272021
Sample ID: TOC_W 5310B
Origin: 02_25_2021_CAL.cal
Status Completed
Chk. Result

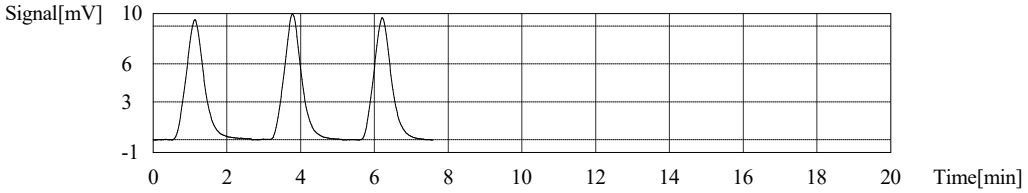
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:9.770mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	31.64	9.691mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/27/2021 5:23:55 PM
2	32.13	9.843mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/27/2021 5:26:37 PM
3	31.92	9.777mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/27/2021 5:29:19 PM

Mean Area 31.90
Mean Conc. 9.770mg/L



Sample

Sample Name: HS21040859-07
Sample ID:
Origin: 02_25_2021_CAL.cal
Status Completed
Chk. Result

Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:4.707mg/L

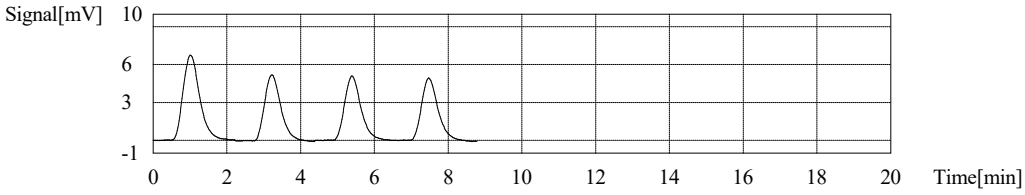
1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	20.92	6.361mg/L	50uL	1.000	E	02_25_2021_CAL.2021_02_25_09_13_02.cal	4/27/2021 6:53:17 PM
2	16.04	4.846mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/27/2021 6:55:41 PM
3	15.48	4.672mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/27/2021 6:58:01 PM
4	15.26	4.604mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/27/2021 7:00:34 PM

TOC-Control L Report

Mean Area 15.59
Mean Conc. 4.707mg/L



Sample

Sample Name: HS21040859-08
Sample ID:
Origin: 02_25_2021_CAL.cal
Status Completed
Chk. Result

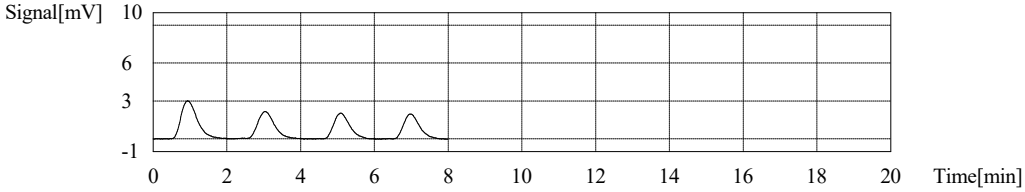
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:1.798mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	9.203	2.723mg/L	50uL	1.000	E	02_25_2021_CAL.2021_02_25_09_13_02.cal	4/27/2021 7:09:26 PM
2	6.699	1.945mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/27/2021 7:11:44 PM
3	6.011	1.731mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/27/2021 7:13:52 PM
4	5.972	1.719mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/27/2021 7:16:04 PM

Mean Area 6.227
Mean Conc. 1.798mg/L



Sample

Sample Name: HS21040859-08MS
Sample ID:
Origin: 02_25_2021_CAL.cal
Status Completed
Chk. Result

Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:11.87mg/L

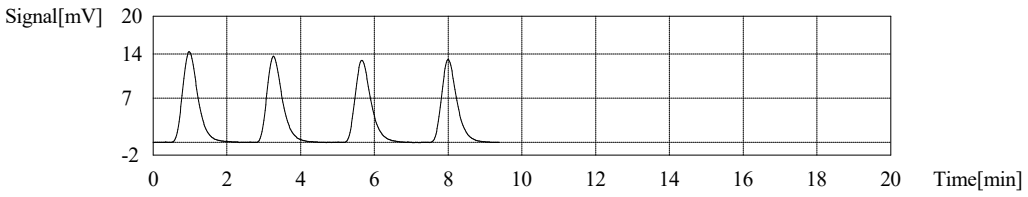
1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	41.23	12.67mg/L	50uL	1.000	E	02_25_2021_CAL.2021_02_25_09_13_02.cal	4/27/2021 7:25:12 PM
2	39.74	12.21mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/27/2021 7:27:49 PM
3	38.41	11.79mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/27/2021 7:30:22 PM
4	37.83	11.61mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/27/2021 7:32:59 PM

TOC-Control L Report

Mean Area 38.66
Mean Conc. 11.87mg/L



Sample

Sample Name: CCV
Sample ID: 316131907
Origin: 02_25_2021_CAL.cal
Status Completed
Chk. Result

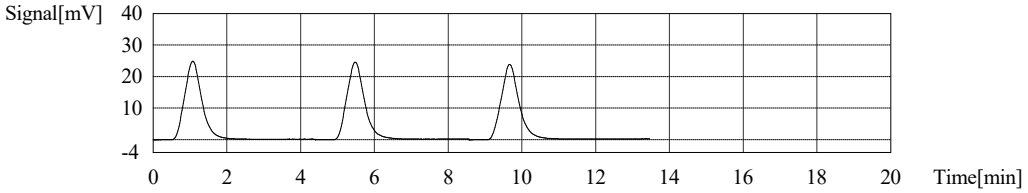
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:24.93mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	80.89	24.99mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/27/2021 7:44:12 PM
2	81.49	25.17mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/27/2021 7:48:37 PM
3	79.80	24.65mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/27/2021 7:53:45 PM

Mean Area 80.73
Mean Conc. 24.93mg/L



Sample

Sample Name: CCB
Sample ID:
Origin: 02_25_2021_CAL.cal
Status Completed
Chk. Result

Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.06861mg/L

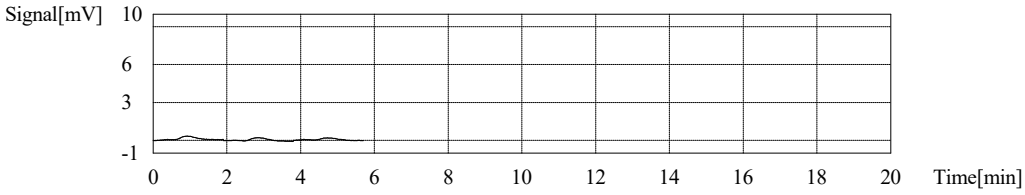
1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.6976	0.08109mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/27/2021 8:02:34 PM
2	0.7248	0.08953mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/27/2021 8:04:43 PM
3	0.5499	0.03522mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/27/2021 8:06:51 PM

TOC-Control L Report

Mean Area 0.6574
Mean Conc. 0.06861mg/L



Sample

Sample Name: HS21040859-09
Sample ID:
Origin: 02_25_2021_CAL.cal
Status Completed
Chk. Result

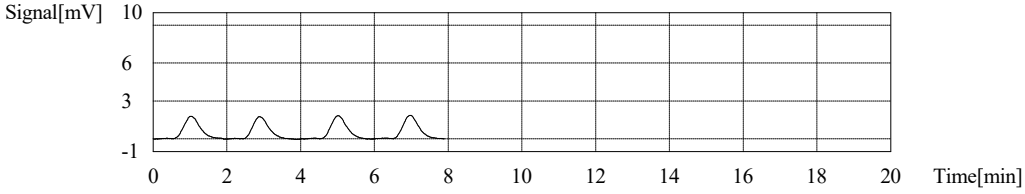
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:1.487mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	5.154	1.465mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/27/2021 8:15:38 PM
2	5.212	1.483mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/27/2021 8:17:59 PM
3	5.372	1.533mg/L	50uL	1.000	E	02_25_2021_CAL.2021_02_25_09_13_02.cal	4/27/2021 8:20:09 PM
4	5.310	1.514mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/27/2021 8:22:18 PM

Mean Area 5.225
Mean Conc. 1.487mg/L



Sample

Sample Name: HS21040859-10
Sample ID:
Origin: 02_25_2021_CAL.cal
Status Completed
Chk. Result

Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:53.11mg/L

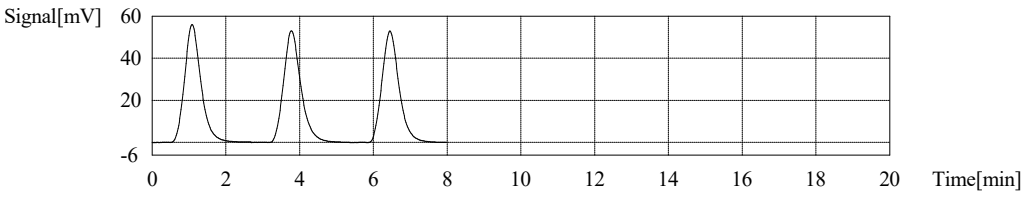
1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	172.2	53.34mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/27/2021 8:31:48 PM
2	172.7	53.50mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/27/2021 8:34:44 PM
3	169.5	52.50mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/27/2021 8:37:34 PM

TOC-Control L Report

Mean Area 171.5
Mean Conc. 53.11mg/L



Sample

Sample Name: CCV
Sample ID: 316131907
Origin: 02_25_2021_CAL.cal
Status Completed
Chk. Result

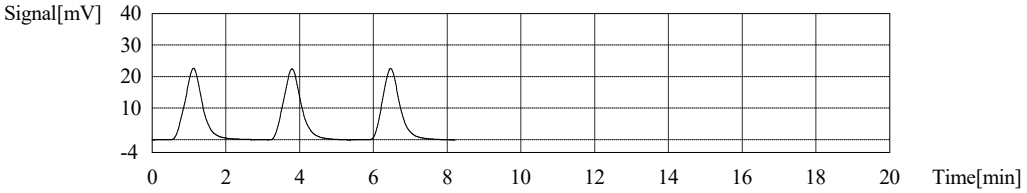
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:22.83mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	73.75	22.77mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/27/2021 9:17:28 PM
2	74.70	23.06mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/27/2021 9:20:25 PM
3	73.36	22.65mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/27/2021 9:23:28 PM

Mean Area 73.94
Mean Conc. 22.83mg/L



Sample

Sample Name: CCB
Sample ID:
Origin: 02_25_2021_CAL.cal
Status Completed
Chk. Result

Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:-0.02601mg/L

1. Det

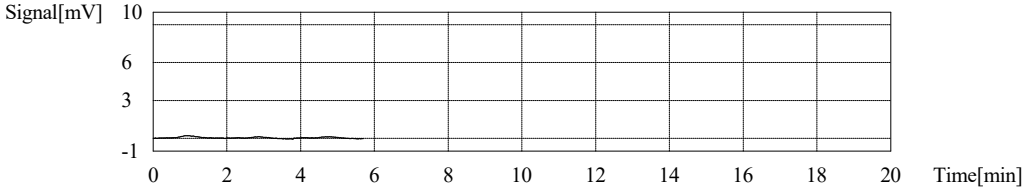
Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.4470	0.00326mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/27/2021 9:32:16 PM
2	0.3266	-0.03413mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/27/2021 9:34:23 PM
3	0.2846	-0.04717mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/27/2021 9:36:31 PM

TOC-Control L Report

2021_04_27_001.tlx

Mean Area	0.3527
Mean Conc.	-0.02601mg/L



C:\TOC-L\Data\2021_04_28_001.tlx

	Type	Analysis	Sample Name	Sample ID	Origin	Result	Notes	Status
1	Unknown	NPOC	CCV	316131907	02_25_2021	NPOC:22.33mg/L		Completed
2	Unknown	NPOC	CCV	316131907	02_25_2021	NPOC:23.74mg/L		Completed
3	Unknown	NPOC	CCB		02_25_2021	NPOC:-0.05408mg/L		Completed
4	Unknown	NPOC	MBLK-04282021		02_25_2021	NPOC:-0.06716mg/L		Completed
5	Unknown	NPOC	LCS-04282021		02_25_2021	NPOC:10.18mg/L		Completed
6	Unknown	NPOC	LCSD-04282021	TOC_W 531	02_25_2021	NPOC:9.810mg/L		Completed
7	Unknown	NPOC	HS21040705-01DF10		02_25_2021	NPOC:35.22mg/L		Completed
8	Unknown	NPOC	HS21040859-10DF10		02_25_2021	NPOC:4.763mg/L		Completed
9	Unknown	NPOC	HS21041366-01		02_25_2021	NPOC:7.513mg/L		Completed
10	Unknown	NPOC	HS21041366-01MS		02_25_2021	NPOC:18.56mg/L		Completed
11	Unknown	NPOC	CCV	316131907	02_25_2021	NPOC:24.18mg/L		Completed
12	Unknown	NPOC	CCB		02_25_2021	NPOC:-0.01053mg/L		Completed

	Date / Time	Vial
1	4/28/2021 1	1
2	4/28/2021 1	10
3	4/28/2021 1	2
4	4/28/2021 1	3
5	4/28/2021 1	4
6	4/28/2021 1	5
7	4/28/2021 1	6
8	4/28/2021 1	7
9	4/28/2021 1	8
10	4/28/2021 1	9
11	4/28/2021 1	10
12	4/28/2021 1	11

TOC-Control L Report

2021_04_28_001.tlx

Instr.Information

Instrument Options TOC/ASI/IC Unit/
Catalyst Regular Sensitivity

Sample

Sample Name: CCV
Sample ID: 316131907
Origin: 02_25_2021_CAL.cal
Status Completed
Chk. Result

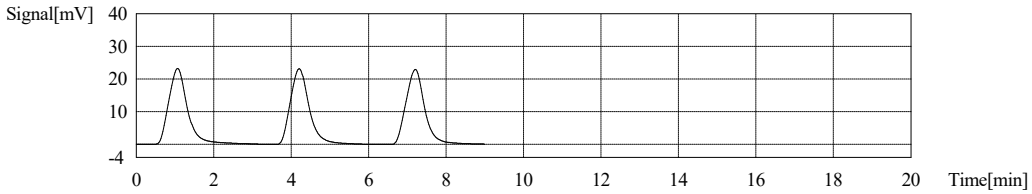
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:23.74mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	77.70	23.99mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/28/2021 11:51:28 AM
2	77.19	23.84mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/28/2021 11:54:40 AM
3	75.78	23.40mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/28/2021 11:57:48 AM

Mean Area 76.89
Mean Conc. 23.74mg/L



Sample

Sample Name: CCB
Sample ID:
Origin: 02_25_2021_CAL.cal
Status Completed
Chk. Result

Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:-0.05408mg/L

1. Det

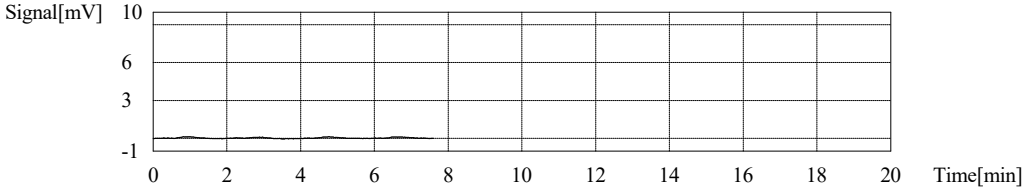
Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.2689	-0.05205mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/28/2021 10:20:33 AM
2	0.000	-0.1356mg/L	50uL	1.000	E	02_25_2021_CAL.2021_02_25_09_13_02.cal	4/28/2021 10:22:40 AM
3	0.3273	-0.03391mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/28/2021 10:24:47 AM
4	0.1909	-0.07627mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/28/2021 10:26:54 AM

TOC-Control L Report

2021_04_28_001.tlx

Mean Area 0.2624
Mean Conc. -0.05408mg/L



Sample

Sample Name: MBLK-04282021
Sample ID:
Origin: 02_25_2021_CAL.cal
Status Completed
Chk. Result

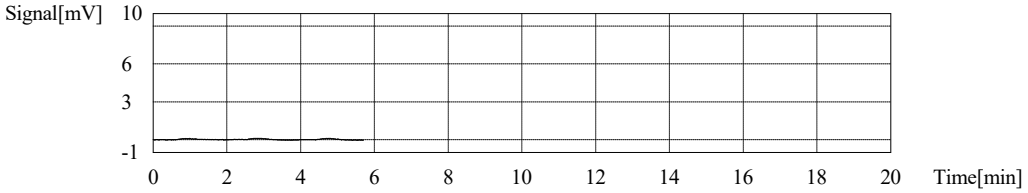
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:-0.06716mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.1811	-0.07932mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/28/2021 10:35:37 AM
2	0.2724	-0.05096mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/28/2021 10:37:44 AM
3	0.2072	-0.07121mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/28/2021 10:39:51 AM

Mean Area 0.2202
Mean Conc. -0.06716mg/L



Sample

Sample Name: LCS-04282021
Sample ID:
Origin: 02_25_2021_CAL.cal
Status Completed
Chk. Result

Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:10.18mg/L

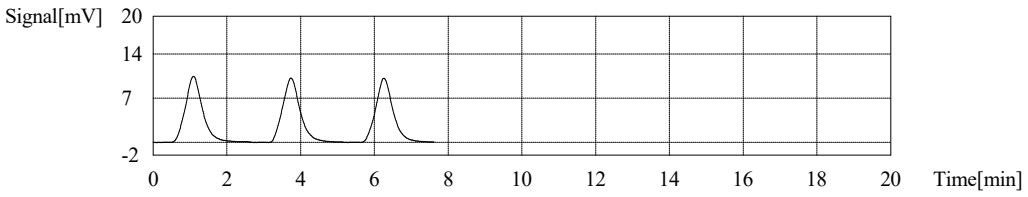
1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	33.45	10.25mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/28/2021 10:49:23 AM
2	33.42	10.24mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/28/2021 10:52:08 AM
3	32.81	10.05mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/28/2021 10:54:52 AM

TOC-Control L Report

Mean Area 33.23
Mean Conc. 10.18mg/L



Sample

Sample Name: LCSD-04282021
Sample ID: TOC_W 5310B
Origin: 02_25_2021_CAL.cal
Status Completed
Chk. Result

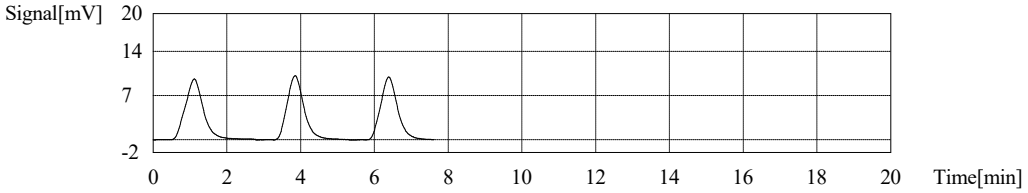
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:9.810mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	32.45	9.942mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/28/2021 11:04:34 AM
2	32.15	9.849mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/28/2021 11:07:20 AM
3	31.47	9.638mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/28/2021 11:09:52 AM

Mean Area 32.02
Mean Conc. 9.810mg/L



Sample

Sample Name: HS21040859-10DF10
Sample ID:
Origin: 02_25_2021_CAL.cal
Status Completed
Chk. Result

Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:4.763mg/L

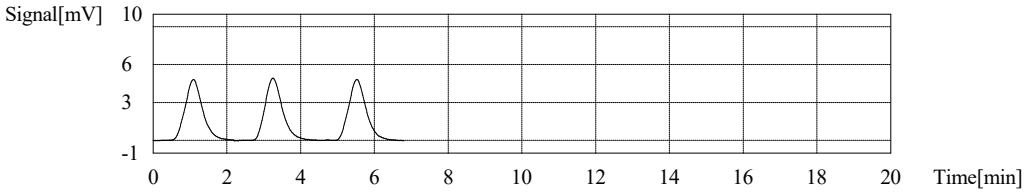
1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	15.54	4.691mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/28/2021 11:33:42 AM
2	15.94	4.815mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/28/2021 11:36:10 AM
3	15.84	4.784mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/28/2021 11:38:45 AM

TOC-Control L Report

Mean Area 15.77
Mean Conc. 4.763mg/L



Sample

Sample Name: HS21041366-01
Sample ID:
Origin: 02_25_2021_CAL.cal
Status Completed
Chk. Result

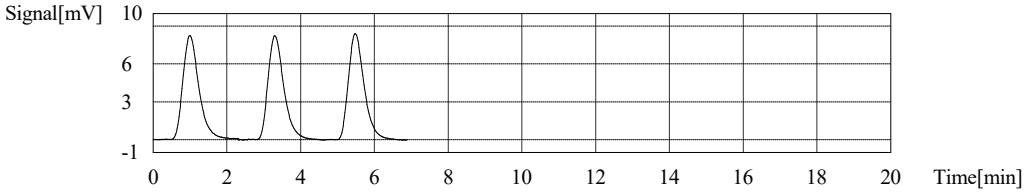
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:7.513mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	24.57	7.495mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/28/2021 12:07:17 PM
2	24.35	7.427mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/28/2021 12:09:42 PM
3	24.97	7.619mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/28/2021 12:12:19 PM

Mean Area 24.63
Mean Conc. 7.513mg/L



Sample

Sample Name: HS21041366-01MS
Sample ID:
Origin: 02_25_2021_CAL.cal
Status Completed
Chk. Result

Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:18.56mg/L

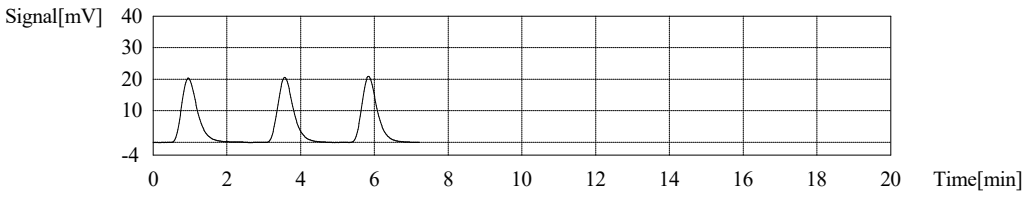
1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	60.26	18.58mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/28/2021 12:21:47 PM
2	60.41	18.63mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/28/2021 12:24:19 PM
3	59.94	18.48mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/28/2021 12:26:56 PM

TOC-Control L Report

Mean Area 60.20
Mean Conc. 18.56mg/L



Sample

Sample Name: CCV
Sample ID: 316131907
Origin: 02_25_2021_CAL.cal
Status Completed
Chk. Result

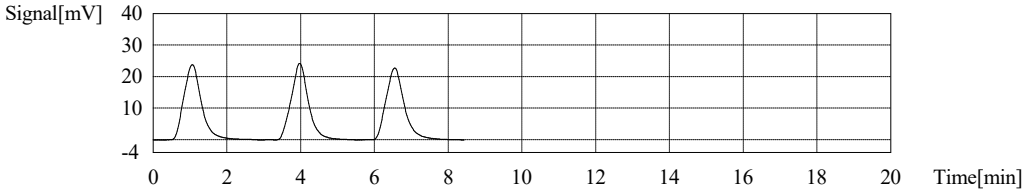
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:24.18mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	78.48	24.24mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/28/2021 12:36:40 PM
2	78.28	24.17mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/28/2021 12:39:33 PM
3	78.09	24.12mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/28/2021 12:42:46 PM

Mean Area 78.28
Mean Conc. 24.18mg/L



Sample

Sample Name: CCB
Sample ID:
Origin: 02_25_2021_CAL.cal
Status Completed
Chk. Result

Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:-0.01053mg/L

1. Det

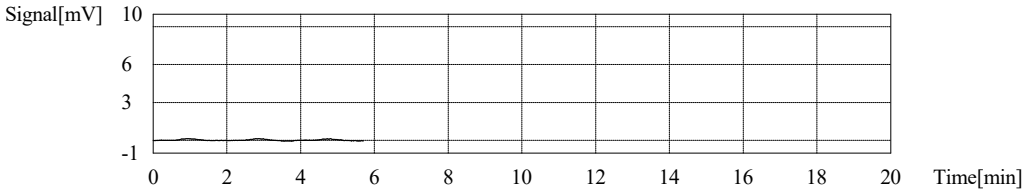
Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.4095	-0.00839mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/28/2021 12:51:35 PM
2	0.4979	0.01907mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/28/2021 12:53:43 PM
3	0.3004	-0.04227mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/28/2021 12:55:51 PM

TOC-Control L Report

2021_04_28_001.tlx

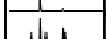
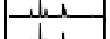
Mean Area	0.4026
Mean Conc.	-0.01053mg/L



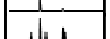
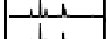
HS21040859 Wet Chem Raw Data (9056_anions_W)

ALS WO# HS21040859

Sequence: 041521
Last Update Operator: alshs.nouser

CD	Name	Comment	Type	Position	Dilution	Level	Instrument Method	Processing Method
	STD1		Calibration	BB1	1.00	1	Anions Program 06022020.1	Anions Processing Method
	STD2		Calibration	BB2	1.00	2	Anions Program 06022020.1	Anions Processing Method
	STD3		Calibration	BB3	1.00	3	Anions Program 06022020.1	Anions Processing Method
	STD4		Calibration	BB4	1.00	4	Anions Program 06022020.1	Anions Processing Method
	STD5		Calibration	BB5	1.00	5	Anions Program 06022020.1	Anions Processing Method
	STD6		Calibration	BB6	1.00	6	Anions Program 06022020.1	Anions Processing Method
	ICV		Unknown	BB7	1.00		Anions Program 06022020.1	Anions Processing Method
	ICB		Unknown	BB8	1.00		Anions Program 06022020.1	Anions Processing Method
	CCV1		Unknown	R3	1.00		Anions Program 06022020.1	Anions Processing Method
	CCB		Unknown	R6	1.00		Anions Program 06022020.1	Anions Processing Method
	HS21040859-07		Unknown	BC8	1.00		Anions Program 06022020.1	Anions Processing Method
	HS21040859-08DF2		Unknown	BD1	2.00		Anions Program 06022020.1	Anions Processing Method
	HS21040859-08MSDF2		Unknown	BD2	2.00		Anions Program 06022020.1	Anions Processing Method
	CCV		Unknown	R1	1.00		Anions Program 06022020.1	Anions Processing Method
	CCB		Unknown	R4	1.00		Anions Program 06022020.1	Anions Processing Method
	HS21040859-08MSDDF2		Unknown	BD3	2.00		Anions Program 06022020.1	Anions Processing Method
	HS21040859-09		Unknown	BD4	1.00		Anions Program 06022020.1	Anions Processing Method
	HS21040859-10DF5		Unknown	BD5	5.00		Anions Program 06022020.1	Anions Processing Method
	CCV1		Unknown	R3	1.00		Anions Program 06022020.1	Anions Processing Method
	CCB		Unknown	R6	1.00		Anions Program 06022020.1	Anions Processing Method
	MBLK-		Unknown	R5	1.00		Anions Program 06022020.1	Anions Processing Method
	LCS-		Unknown	R2	1.00		Anions Program 06022020.1	Anions Processing Method
	CCV		Unknown	R1	1.00		Anions Program 06022020.1	Anions Processing Method
	CCB		Unknown	R4	1.00		Anions Program 06022020.1	Anions Processing Method

Sequence: 041521
Last Update Operator: alshs.nouser

CD	Name	me	Status	Inject Time
	STD1	5.0	Finished	3/19/2021 2:34:19 AM -05:00
	STD2	5.0	Finished	3/19/2021 2:52:47 AM -05:00
	STD3	5.0	Finished	3/19/2021 3:11:11 AM -05:00
	STD4	5.0	Finished	3/19/2021 3:29:36 AM -05:00
	STD5	5.0	Finished	3/19/2021 3:48:01 AM -05:00
	STD6	5.0	Finished	3/19/2021 4:06:28 AM -05:00
	ICV	5.0	Finished	3/19/2021 4:24:53 AM -05:00
	ICB	5.0	Finished	3/19/2021 5:01:41 AM -05:00
	CCV1	5.0	Finished	4/16/2021 4:24:10 PM -05:00
	CCB	5.0	Finished	4/16/2021 4:42:36 PM -05:00
	HS21040859-07	5.0	Finished	4/16/2021 7:17:37 PM -05:00
	HS21040859-08DF2	5.0	Finished	4/16/2021 7:37:56 PM -05:00
	HS21040859-08MSDF2	5.0	Finished	4/16/2021 7:56:19 PM -05:00
	CCV	5.0	Finished	4/16/2021 8:16:39 PM -05:00
	CCB	5.0	Finished	4/16/2021 8:55:22 PM -05:00
	HS21040859-08MSDDF2	5.0	Finished	4/16/2021 9:13:45 PM -05:00
	HS21040859-09	5.0	Finished	4/16/2021 9:34:00 PM -05:00
	HS21040859-10DF5	5.0	Finished	4/16/2021 9:52:24 PM -05:00
	CCV1	5.0	Finished	4/17/2021 12:27:02 AM -05:00
	CCB	5.0	Finished	4/17/2021 1:05:41 AM -05:00
	MBLK-	5.0	Finished	4/17/2021 3:01:42 AM -05:00
	LCS-	5.0	Finished	4/17/2021 3:21:59 AM -05:00
	CCV	5.0	Finished	4/17/2021 4:39:19 AM -05:00
	CCB	5.0	Finished	4/17/2021 5:18:00 AM -05:00

Sequence: 041521
Injection #6: STD6

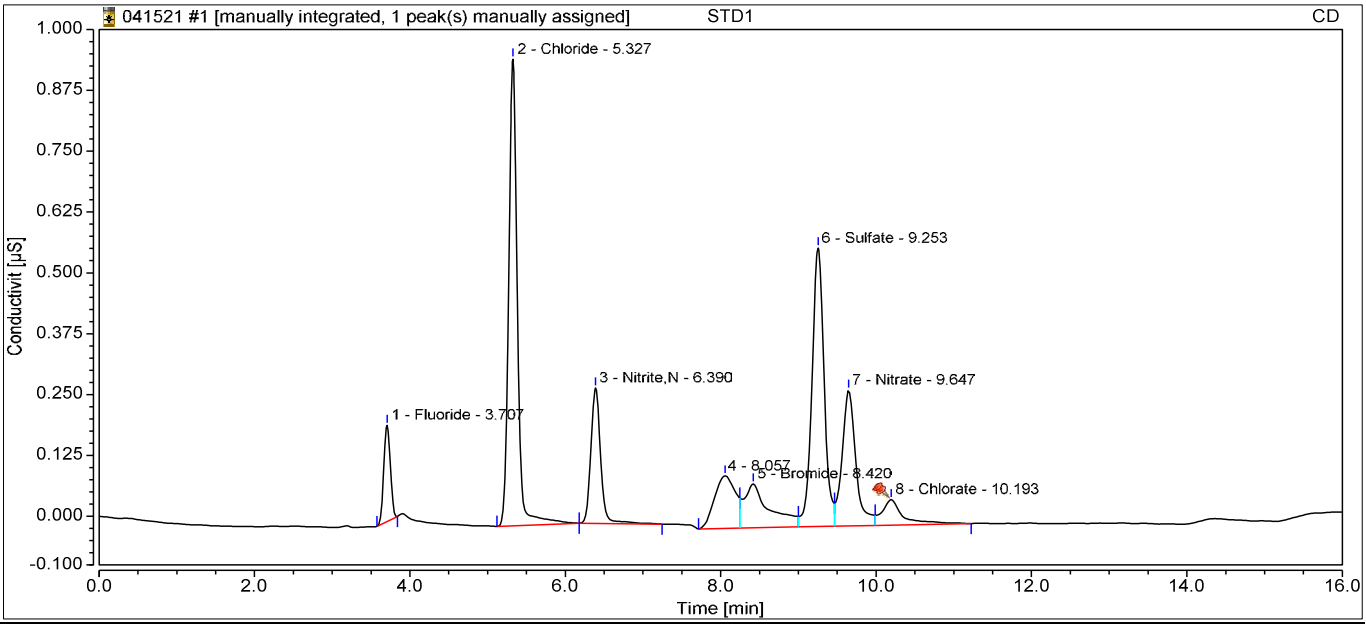
Calibration

Peak No.	Peak Name	Cal.Type	Eval.Type	Number of Points	Rel.Std.Dev. %	Coeff.of Determination	C0 (Offset)	C1 (Slope)	C2 (Curve)
1	*Fluoride*	*Lin, WithOffset, 1/*	*Area*	*6*	*14.2721*	*0.99908*	*-0.0101*	*0.2938*	*0.0000*
2	Chloride	Lin, WithOffset, 1/	Area	6	1.9269	0.99998	0.0246	0.1961	0.0000
3	Nitrite,N	Lin, WithOffset, 1/	Area	6	28.1265	0.99510	0.0143	0.3822	0.0000
5	Bromide	Lin, WithOffset, 1/	Area	6	6.5270	0.99931	0.0258	0.0775	0.0000
6	Sulfate	Lin, WithOffset, 1/	Area	6	5.7842	0.99978	0.0360	0.1408	0.0000
7	Nitrate	Lin, WithOffset, 1/	Area	6	2.7454	0.99996	0.0067	0.4997	0.0000
8	Chlorate	Lin, WithOffset, 1/	Area	6	17.5063	0.99733	0.0108	0.0850	0.0000
10	Phosphate	Lin, WithOffset, 1/	Area	5	12.5412	0.99846	-0.0503	0.1737	0.0000
Maximum					**28.1265**	0.99998			
Minimum					1.9269	**0.99510**			

1 STD1

Sample Name:	**STD1**	*Injection Volume:*	**5.00**
Vial Number:	**BB1**	*Channel:*	**CD**
Sample Type:	**Calibration Standard**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**03/19/2021 02:34**	*Sample Weight:*	**1.0000**

Run Time:



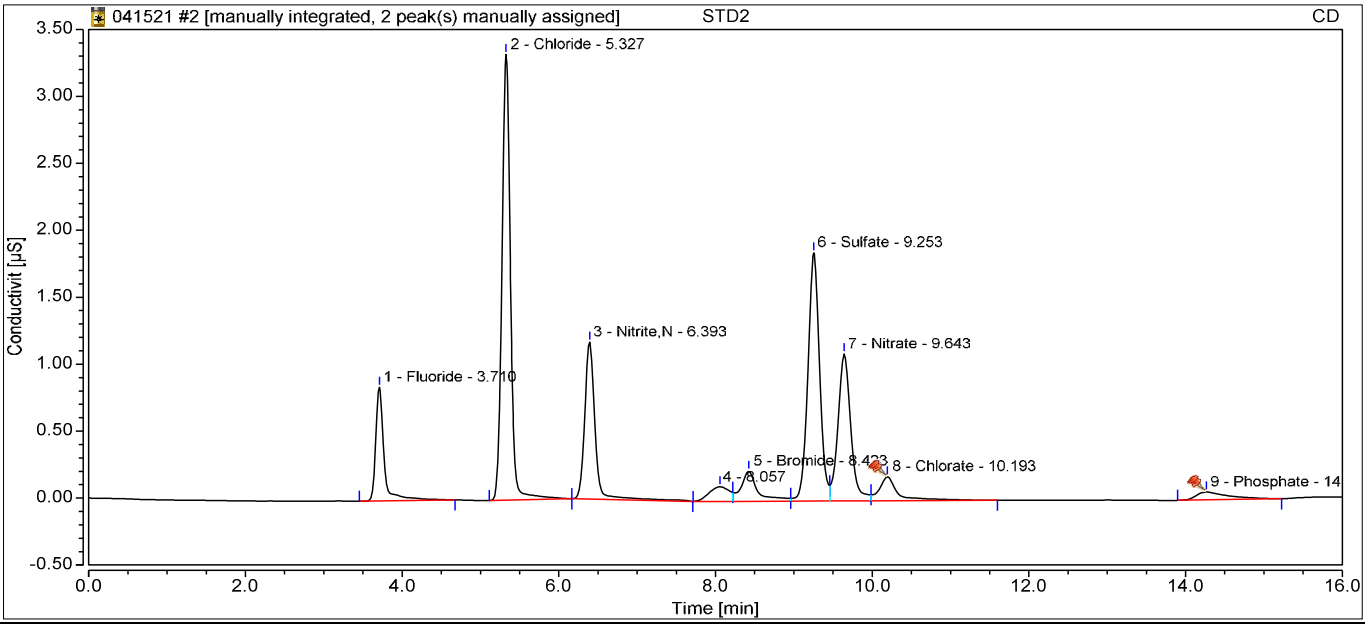
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.71	Fluoride	BMB	0.019	0.1001	0.1001	1.0000
2	5.33	Chloride	BMB	0.123	0.5037	0.5037	1.0000
3	6.39	Nitrite,N	BMB	0.041	0.0687	0.0687	1.0000
5	8.42	Bromide	M *	0.035	0.1129	0.1129	1.0000
6	9.25	Sulfate	M	0.104	0.4806	0.4806	1.0000
7	9.65	Nitrate	M	0.057	0.1016	0.1016	1.0000
8	10.19	Chlorate	MB^	0.017	0.0682	0.0682	1.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	1.0000
Total:			**0.000**	**0.396**		**1.44**	

2 STD2

Sample Name:	**STD2**	*Injection Volume:*	**5.00**
Vial Number:	**BB2**	*Channel:*	**CD**
Sample Type:	**Calibration Standard**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**03/19/2021 02:52**	*Sample Weight:*	**1.0000**

Run Time:



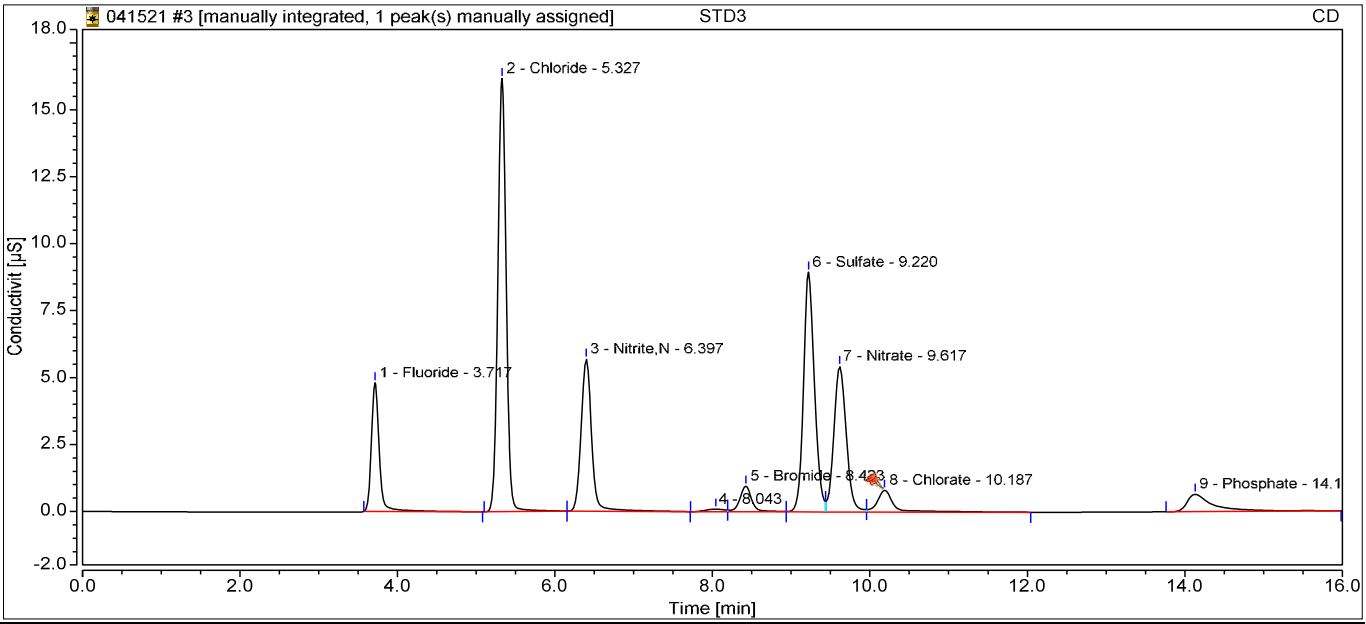
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.71	Fluoride	BMB*	0.105	0.3907	0.3907	1.0000
2	5.33	Chloride	BMB	0.415	1.9922	1.9922	1.0000
3	6.39	Nitrite,N	BMB	0.181	0.4360	0.4360	1.0000
5	8.42	Bromide	M *	0.056	0.3870	0.3870	1.0000
6	9.25	Sulfate	M	0.320	2.0188	2.0188	1.0000
7	9.64	Nitrate	M	0.208	0.4033	0.4033	1.0000
8	10.19	Chlorate	MB^	0.050	0.4595	0.4595	1.0000
9	14.26	Phosphate	BMB^	0.029	0.4541	0.4541	1.0000
Total:			**0.000**	**1.364**		**6.54**	

3 STD3

Sample Name:	**STD3**	*Injection Volume:*	**5.00**
Vial Number:	**BB3**	*Channel:*	**CD**
Sample Type:	**Calibration Standard**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**03/19/2021 03:11**	*Sample Weight:*	**1.0000**

Run Time:



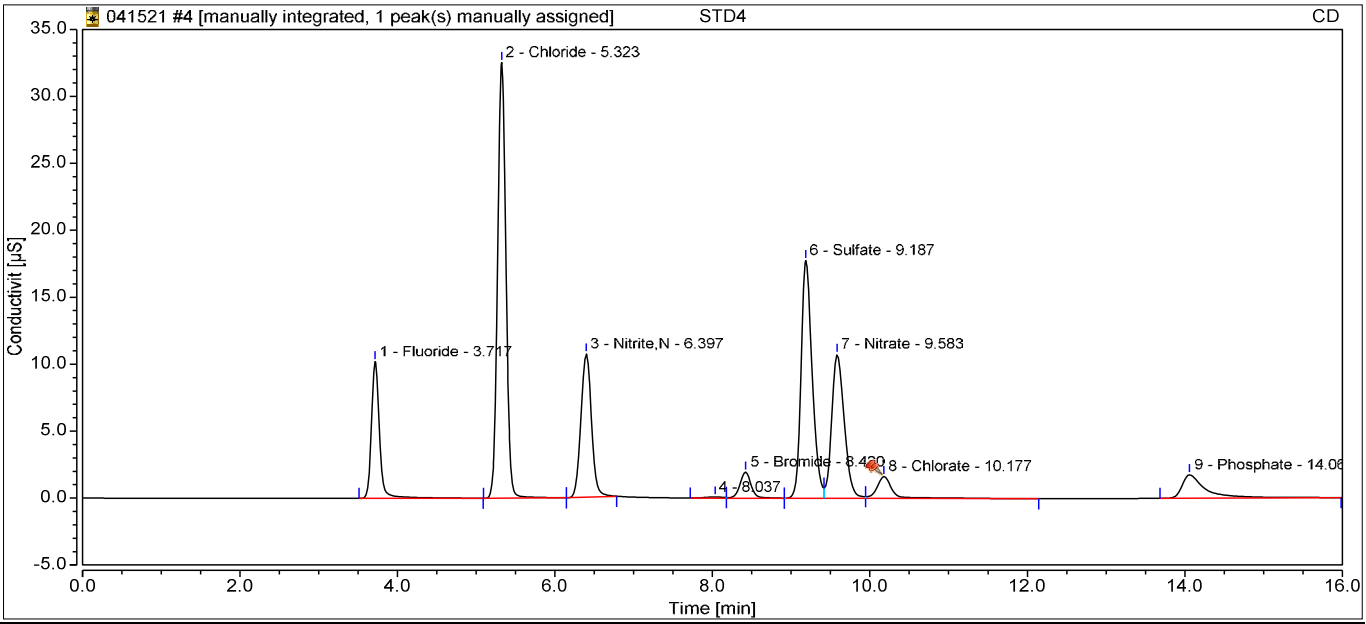
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.72	Fluoride	BMB	0.559	1.9360	1.9360	1.0000
2	5.33	Chloride	BMB	1.967	9.9055	9.9055	1.0000
3	6.40	Nitrite,N	BMB	0.892	2.2962	2.2962	1.0000
5	8.42	Bromide	M *	0.169	1.8533	1.8533	1.0000
6	9.22	Sulfate	M	1.452	10.0579	10.0579	1.0000
7	9.62	Nitrate	M	0.989	1.9651	1.9651	1.0000
8	10.19	Chlorate	MB^	0.201	2.2396	2.2396	1.0000
9	14.13	Phosphate	BMB	0.258	1.7779	1.7779	1.0000
Total:			**0.000**	**6.488**		**32.03**	

4 STD4

Sample Name:	**STD4**	*Injection Volume:*	**5.00**
Vial Number:	**BB4**	*Channel:*	**CD**
Sample Type:	**Calibration Standard**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**03/19/2021 03:29**	*Sample Weight:*	**1.0000**

Run Time:



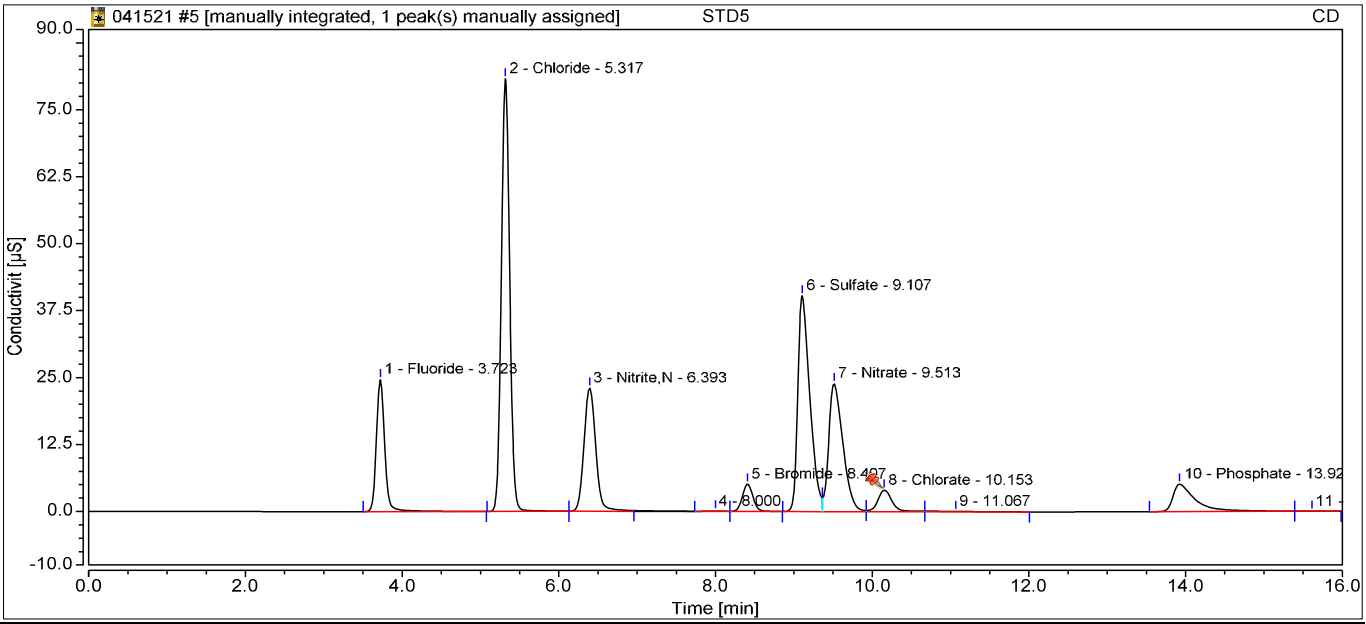
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.72	Fluoride	BMB	1.213	4.1637	4.1637	1.0000
2	5.32	Chloride	BMb*	3.957	20.0467	20.0467	1.0000
3	6.40	Nitrite,N	bMB*	1.671	4.3358	4.3358	1.0000
5	8.42	Bromide	M *	0.323	3.8399	3.8399	1.0000
6	9.19	Sulfate	M	2.909	20.4074	20.4074	1.0000
7	9.58	Nitrate	M	1.986	3.9610	3.9610	1.0000
8	10.18	Chlorate	MB^	0.380	4.3412	4.3412	1.0000
9	14.06	Phosphate	BMB	0.619	3.8518	3.8518	1.0000
Total:			**0.000**	**13.058**		**64.95**	

5 STD5

Sample Name:	**STD5**	*Injection Volume:*	**5.00**
Vial Number:	**BB5**	*Channel:*	**CD**
Sample Type:	**Calibration Standard**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**03/19/2021 03:48**	*Sample Weight:*	**1.0000**

Run Time:



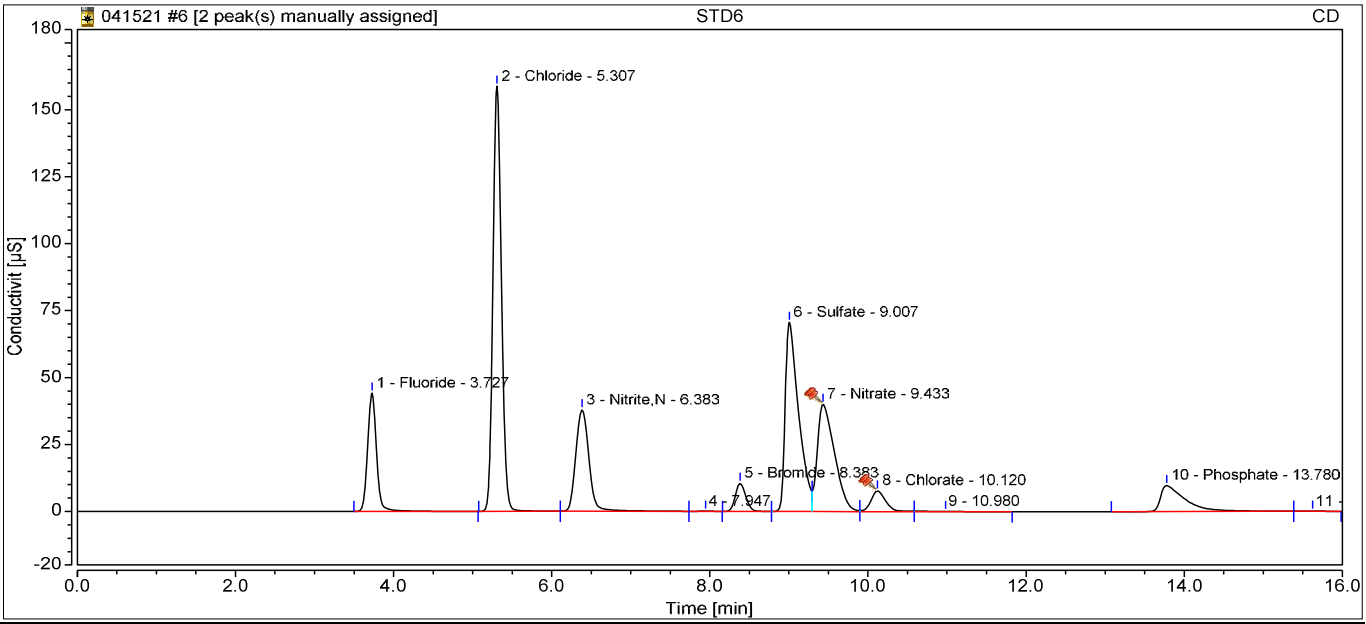
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.72	Fluoride	BMB	3.032	10.3517	10.3517	1.0000
2	5.32	Chloride	BMb*	9.893	50.3135	50.3135	1.0000
3	6.39	Nitrite,N	bM *	4.012	10.4601	10.4601	1.0000
5	8.41	Bromide	MB*	0.803	10.0274	10.0274	1.0000
6	9.11	Sulfate	BM	7.184	50.7797	50.7797	1.0000
7	9.51	Nitrate	M	4.996	9.9839	9.9839	1.0000
8	10.15	Chlorate	M ^	0.852	9.8970	9.8970	1.0000
10	13.92	Phosphate	BMB	1.677	9.9434	9.9434	1.0000
Total:			**0.000**	**32.448**		**161.76**	

6 STD6

Sample Name:	**STD6**	*Injection Volume:*	**5.00**
Vial Number:	**BB6**	*Channel:*	**CD**
Sample Type:	**Calibration Standard**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**03/19/2021 04:06**	*Sample Weight:*	**1.0000**

Run Time:



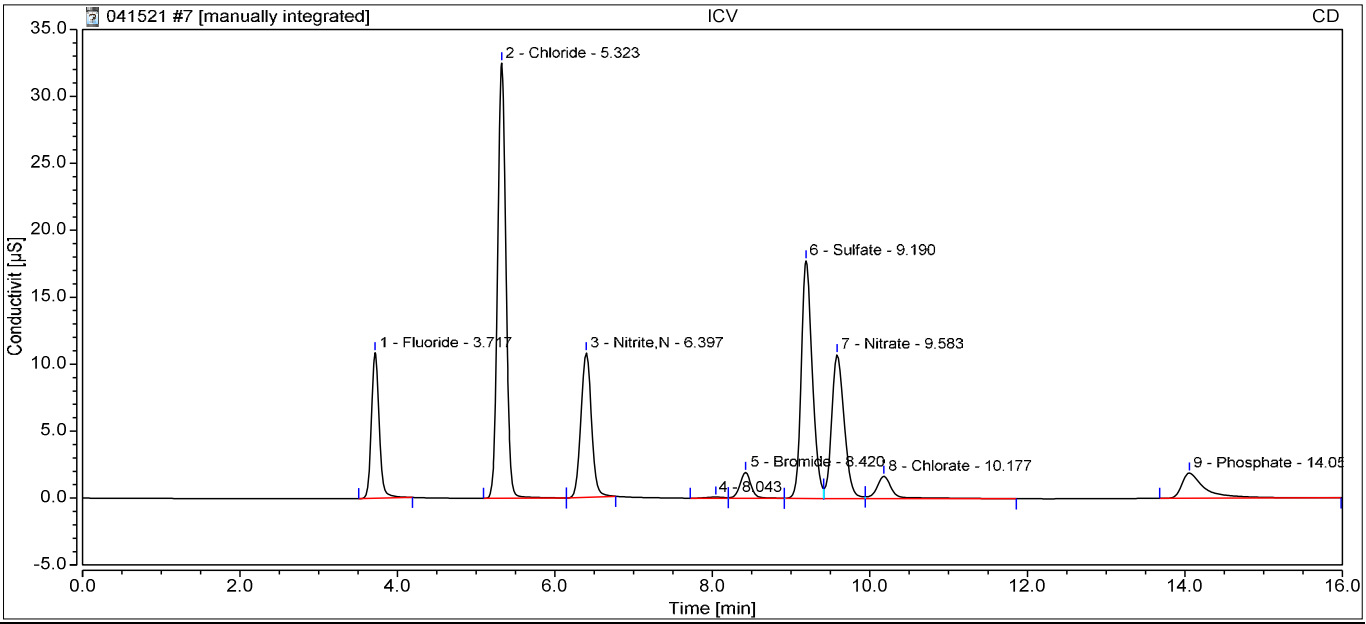
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.73	Fluoride	BMB	5.737	19.5578	19.5578	1.0000
2	5.31	Chloride	BMB	19.587	99.7384	99.7384	1.0000
3	6.38	Nitrite,N	BMB	7.239	18.9032	18.9032	1.0000
5	8.38	Bromide	BM	1.597	20.2794	20.2794	1.0000
6	9.01	Sulfate	M	13.938	98.7555	98.7555	1.0000
7	9.43	Nitrate	M ^	10.043	20.0851	20.0851	1.0000
8	10.12	Chlorate	M ^	1.667	19.4945	19.4945	1.0000
10	13.78	Phosphate	BMB	3.488	20.3728	20.3728	1.0000
Total:			**0.000**	**63.296**		**317.19**	

7 ICV

Sample Name:	**ICV**	*Injection Volume:*	**5.00**
Vial Number:	**BB7**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**03/19/2021 04:24**	*Sample Weight:*	**1.0000**

Run Time:



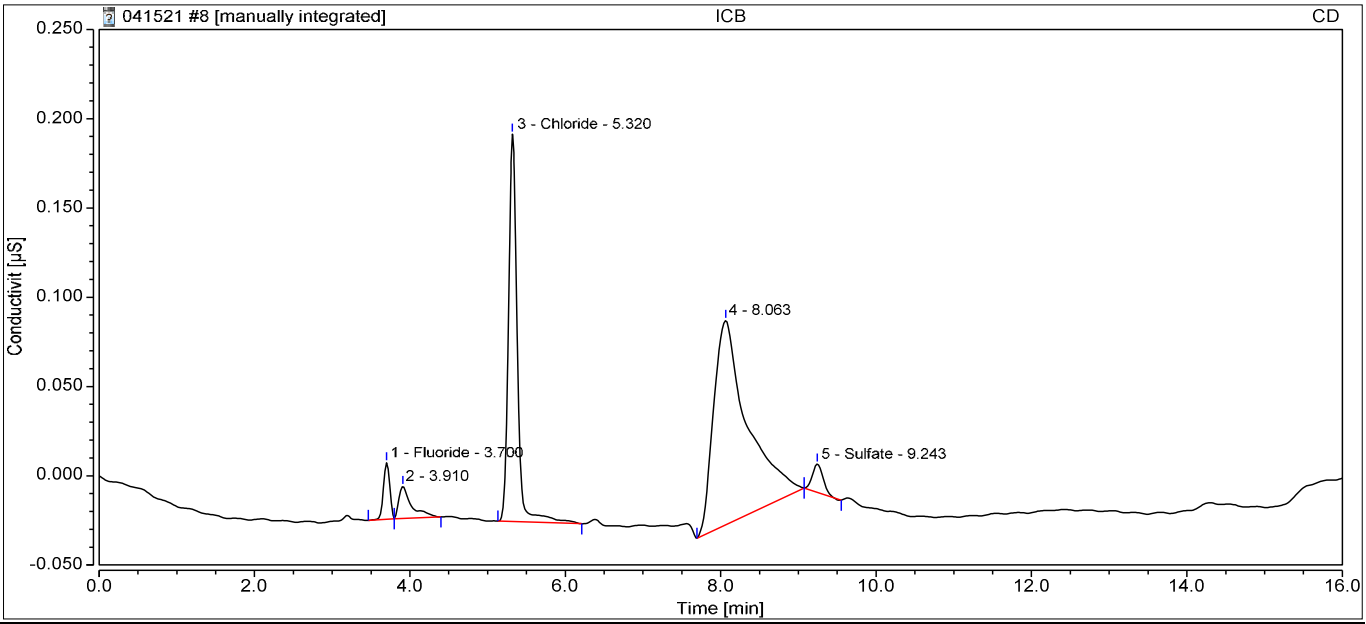
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.72	Fluoride	BMB*	1.234	4.2342	4.2342	1.0000
2	5.32	Chloride	BMb*	3.949	20.0060	20.0060	1.0000
3	6.40	Nitrite,N	bMB*	1.681	4.3613	4.3613	1.0000
5	8.42	Bromide	M	0.321	3.8095	3.8095	1.0000
6	9.19	Sulfate	M	2.901	20.3535	20.3535	1.0000
7	9.58	Nitrate	M	1.981	3.9506	3.9506	1.0000
8	10.18	Chlorate	MB	0.383	4.3825	4.3825	1.0000
9	14.06	Phosphate	BMB	0.657	4.0742	4.0742	1.0000
Total:			**0.000**	**13.107**		**65.17**	

8 ICB

Sample Name:	**ICB**	*Injection Volume:*	**5.00**
Vial Number:	**BB8**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**03/19/2021 05:01**	*Sample Weight:*	**1.0000**

Run Time:



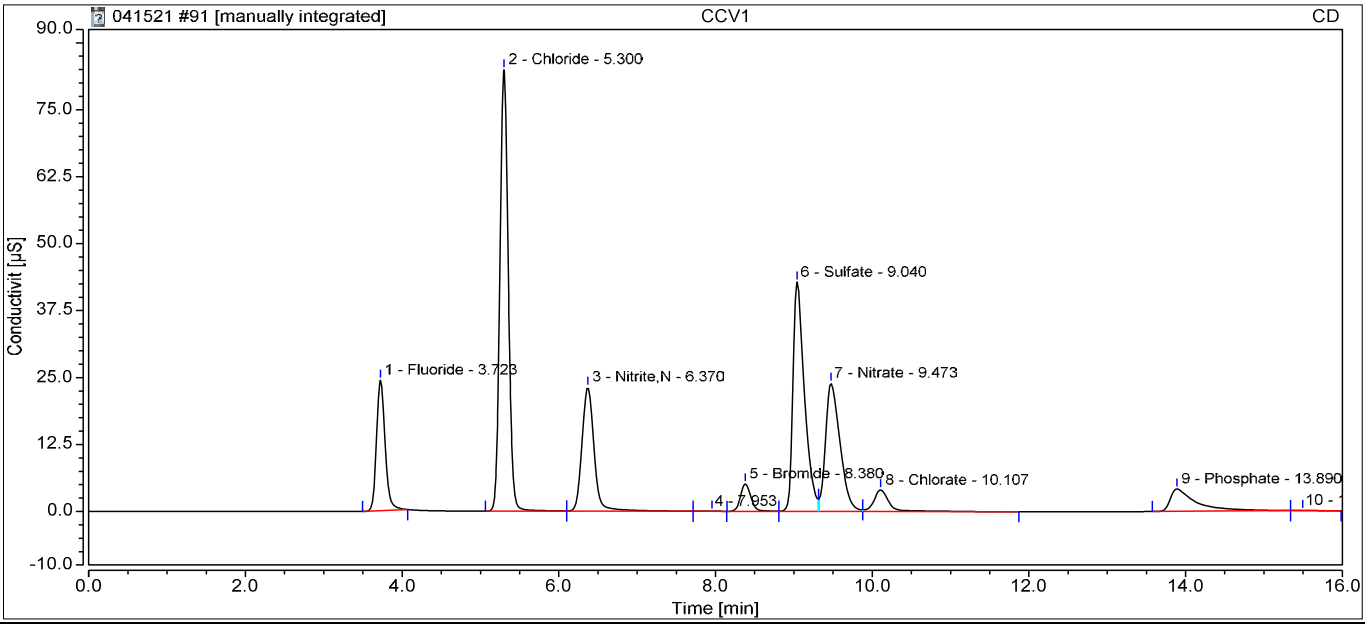
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.70	Fluoride	BMB	0.003	0.0444	0.0444	1.0000
3	5.32	Chloride	BMB	0.028	0.0191	0.0191	1.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	1.0000
5	9.24	Sulfate	bMB*	0.003	n.a.	n.a.	1.0000
n.a.	n.a.	Nitrate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	1.0000
Total:			**0.000**	**0.034**		**0.06**	

91 CCV1

Sample Name:	**CCV1**	*Injection Volume:*	**5.00**
Vial Number:	**R3**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**04/16/2021 16:24**	*Sample Weight:*	**1.0000**

Run Time:



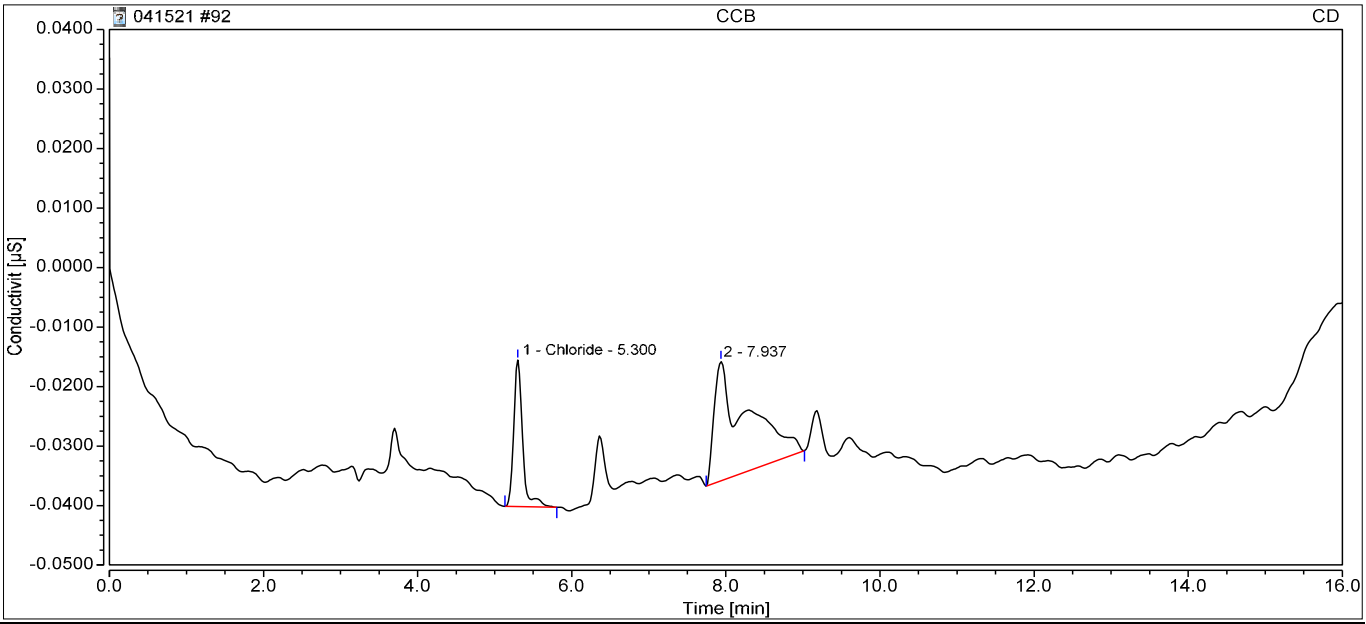
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.72	Fluoride	BMB*	3.067	10.4712	10.4712	1.0000
2	5.30	Chloride	BMB	10.175	51.7519	51.7519	1.0000
3	6.37	Nitrite,N	BMB	4.146	10.8110	10.8110	1.0000
5	8.38	Bromide	BM	0.796	9.9368	9.9368	1.0000
6	9.04	Sulfate	M	7.335	51.8513	51.8513	1.0000
7	9.47	Nitrate	M	5.169	10.3300	10.3300	1.0000
8	10.11	Chlorate	MB	0.949	11.0457	11.0457	1.0000
9	13.89	Phosphate	BMB	1.595	9.4753	9.4753	1.0000
Total:			**0.000**	**33.232**		**165.67**	

92 CCB

Sample Name:	**CCB**	*Injection Volume:*	**5.00**
Vial Number:	**R6**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**04/16/2021 16:42**	*Sample Weight:*	**1.0000**

Run Time:



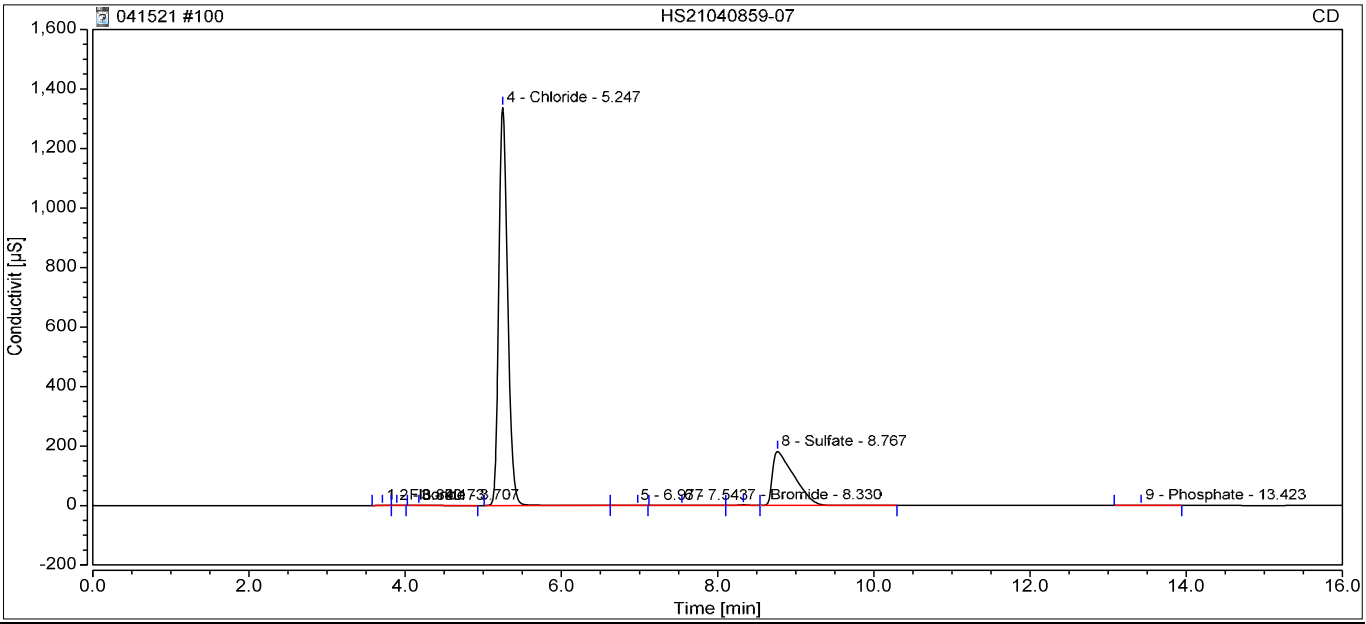
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	1.0000
1	5.30	Chloride	BMB	0.003	n.a.	n.a.	1.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Nitrate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	1.0000
Total:			**0.000**	**0.003**		**0.00**	

100 HS21040859-07

Sample Name:	**HS21040859-07**	*Injection Volume:*	**5.00**
Vial Number:	**BC8**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**04/16/2021 19:17**	*Sample Weight:*	**1.0000**

Run Time:



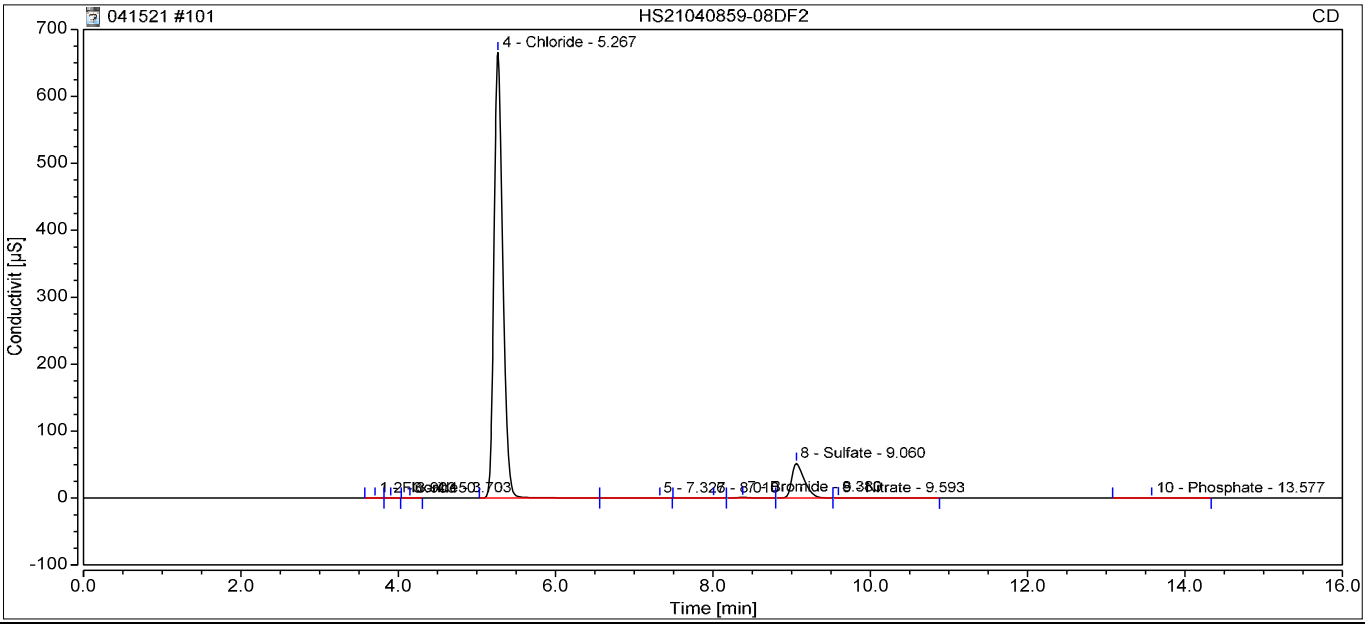
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.71	Fluoride	BMB	0.022	0.1107	0.1107	1.0000
4	5.25	Chloride	BMB	175.134	892.7918	892.7918	1.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	1.0000
7	8.33	Bromide	BM	0.334	3.9740	3.9740	1.0000
8	8.77	Sulfate	MB	57.660	409.3474	409.3474	1.0000
n.a.	n.a.	Nitrate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
9	13.42	Phosphate	BMB	0.006	0.3229	0.3229	1.0000
Total:			**0.000**	**233.157**		**1306.55**	

101 HS21040859-08DF2

Sample Name:	**HS21040859-08DF2**	*Injection Volume:*	**5.00**
Vial Number:	**BD1**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**2.0000**
Recording Time:	**04/16/2021 19:37**	*Sample Weight:*	**1.0000**

Run Time:



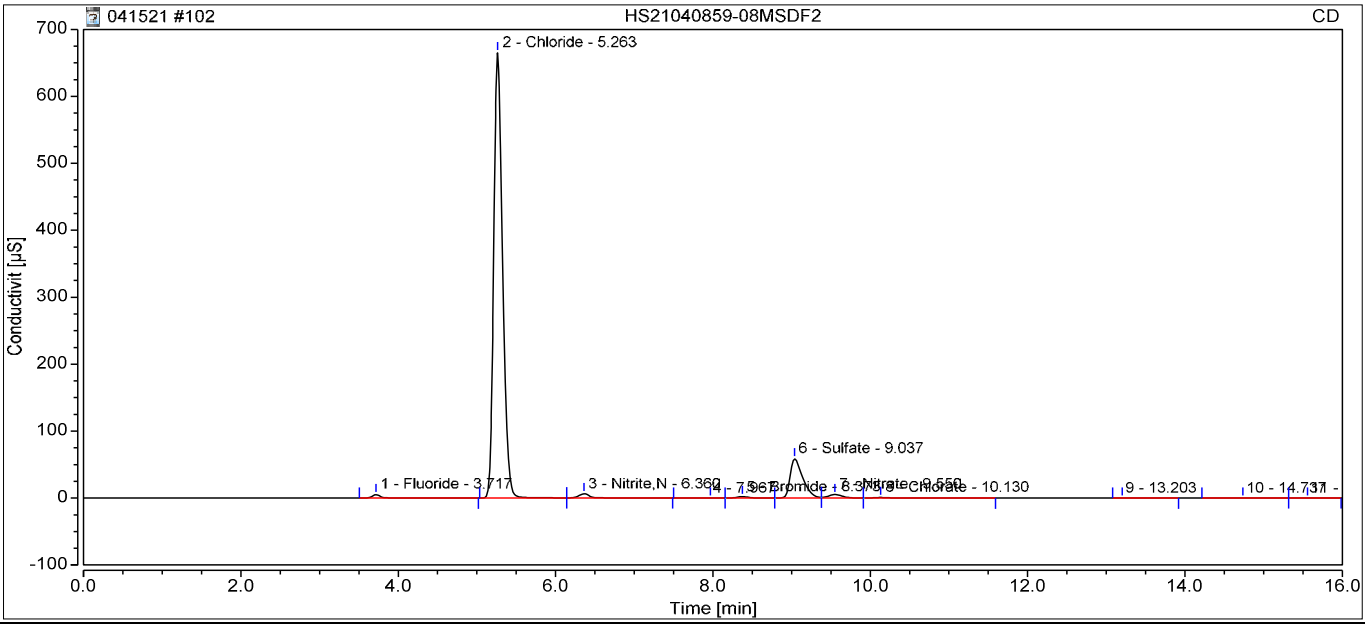
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.70	Fluoride	BMB	0.014	0.0820	0.1639	2.0000
4	5.27	Chloride	BMB	86.038	438.5355	877.0711	2.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	2.0000
7	8.38	Bromide	M	0.227	2.5943	5.1885	2.0000
8	9.06	Sulfate	M	9.665	68.4004	136.8008	2.0000
9	9.59	Nitrate	MB	0.069	0.1246	0.2493	2.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	2.0000
10	13.58	Phosphate	BMB	0.008	0.3375	0.6750	2.0000
Total:			**0.000**	**96.021**		**1020.15**	

102 HS21040859-08MSDF2

Sample Name:	**HS21040859-08MSDF2**	*Injection Volume:*	**5.00**
Vial Number:	**BD2**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**2.0000**
Recording Time:	**04/16/2021 19:56**	*Sample Weight:*	**1.0000**

Run Time:



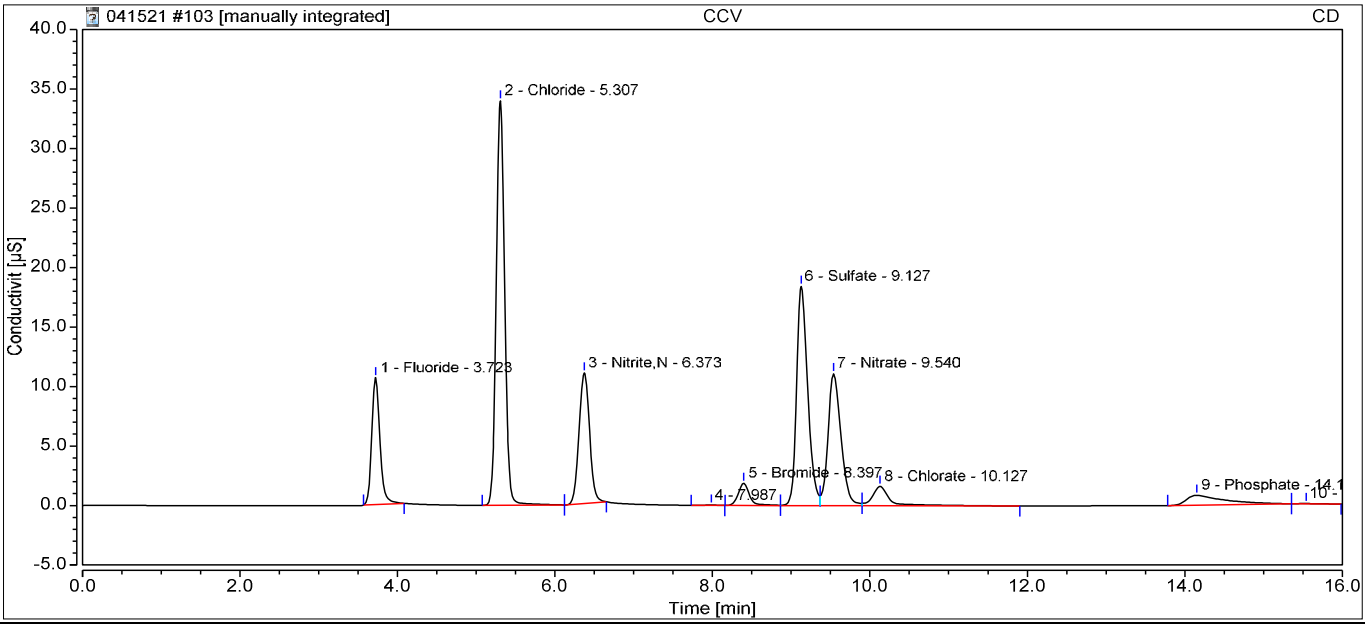
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.72	Fluoride	BMB	0.722	2.4924	4.9849	2.0000
2	5.26	Chloride	BMB	86.094	438.8219	877.6439	2.0000
3	6.36	Nitrite,N	BMB	0.979	2.5244	5.0488	2.0000
5	8.37	Bromide	M	0.381	4.5797	9.1594	2.0000
6	9.04	Sulfate	M	10.938	77.4428	154.8855	2.0000
7	9.55	Nitrate	M	1.115	2.2169	4.4339	2.0000
8	10.13	Chlorate	MB	0.228	2.5525	5.1049	2.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	2.0000
Total:			**0.000**	**100.456**		**1061.26**	

103 CCV

Sample Name:	**CCV**	*Injection Volume:*	**5.00**
Vial Number:	**R1**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**04/16/2021 20:16**	*Sample Weight:*	**1.0000**

Run Time:



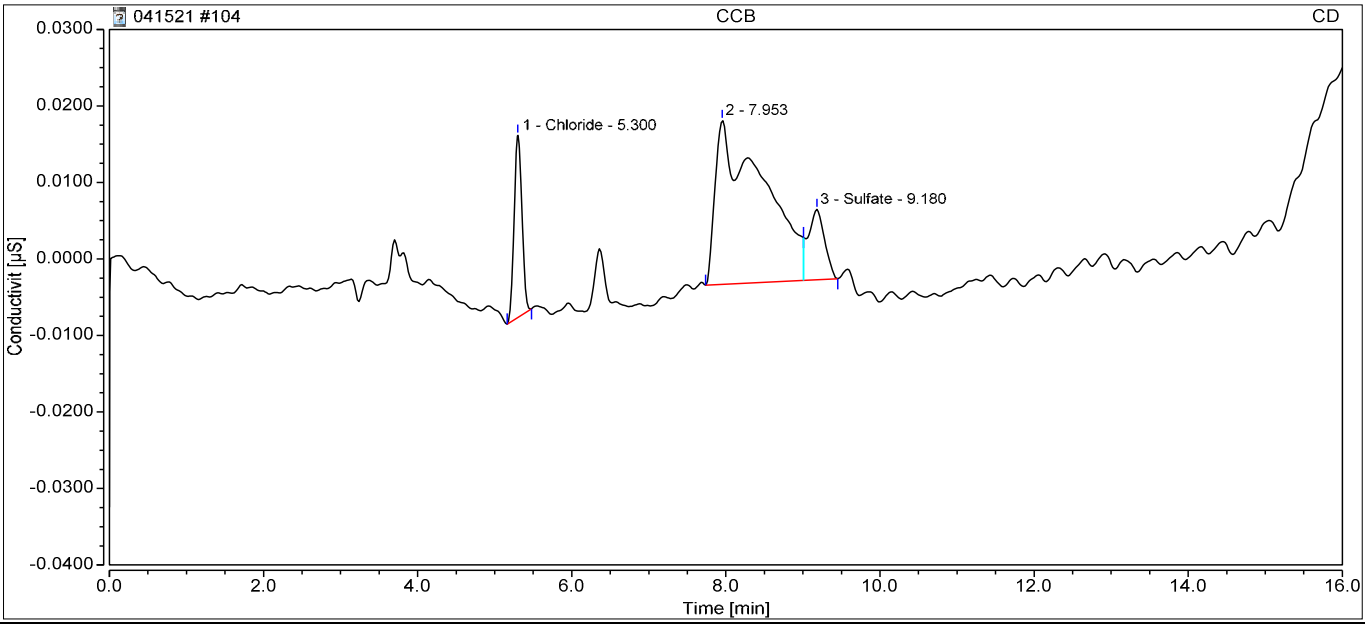
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.72	Fluoride	BMB*	1.281	4.3951	4.3951	1.0000
2	5.31	Chloride	BMb*	4.168	21.1226	21.1226	1.0000
3	6.37	Nitrite,N	bMB*	1.697	4.4042	4.4042	1.0000
5	8.40	Bromide	BM	0.309	3.6529	3.6529	1.0000
6	9.13	Sulfate	M	3.000	21.0519	21.0519	1.0000
7	9.54	Nitrate	M	2.117	4.2225	4.2225	1.0000
8	10.13	Chlorate	MB	0.412	4.7206	4.7206	1.0000
9	14.15	Phosphate	BMB	0.456	2.9163	2.9163	1.0000
Total:			**0.000**	**13.440**		**66.49**	

104 CCB

Sample Name:	**CCB**	*Injection Volume:*	**5.00**
Vial Number:	**R4**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**04/16/2021 20:55**	*Sample Weight:*	**1.0000**

Run Time:



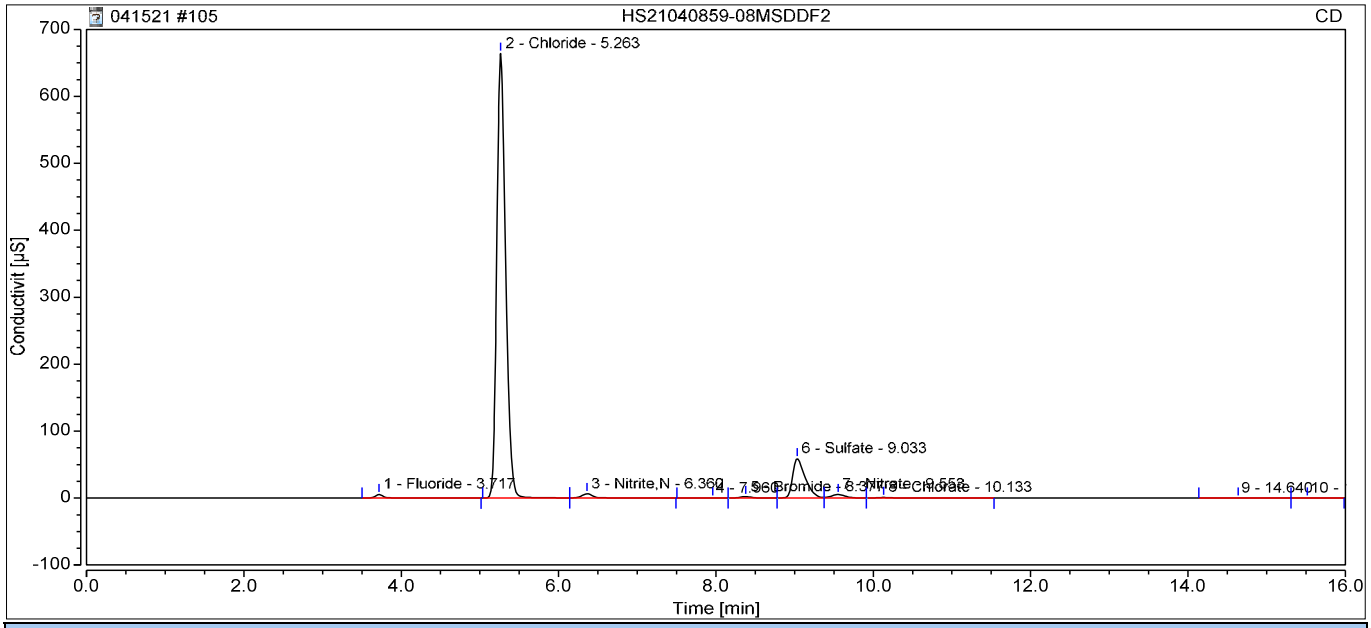
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	1.0000
1	5.30	Chloride	BMB	0.003	n.a.	n.a.	1.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	1.0000
3	9.18	Sulfate	MB	0.002	n.a.	n.a.	1.0000
n.a.	n.a.	Nitrate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	1.0000
Total:			**0.000**	**0.005**		**0.00**	

105 HS21040859-08MSDDF2

Sample Name:	**HS21040859-08MSDDF2**	*Injection Volume:*	**5.00**
Vial Number:	**BD3**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**2.0000**
Recording Time:	**04/16/2021 21:13**	*Sample Weight:*	**1.0000**

Run Time:



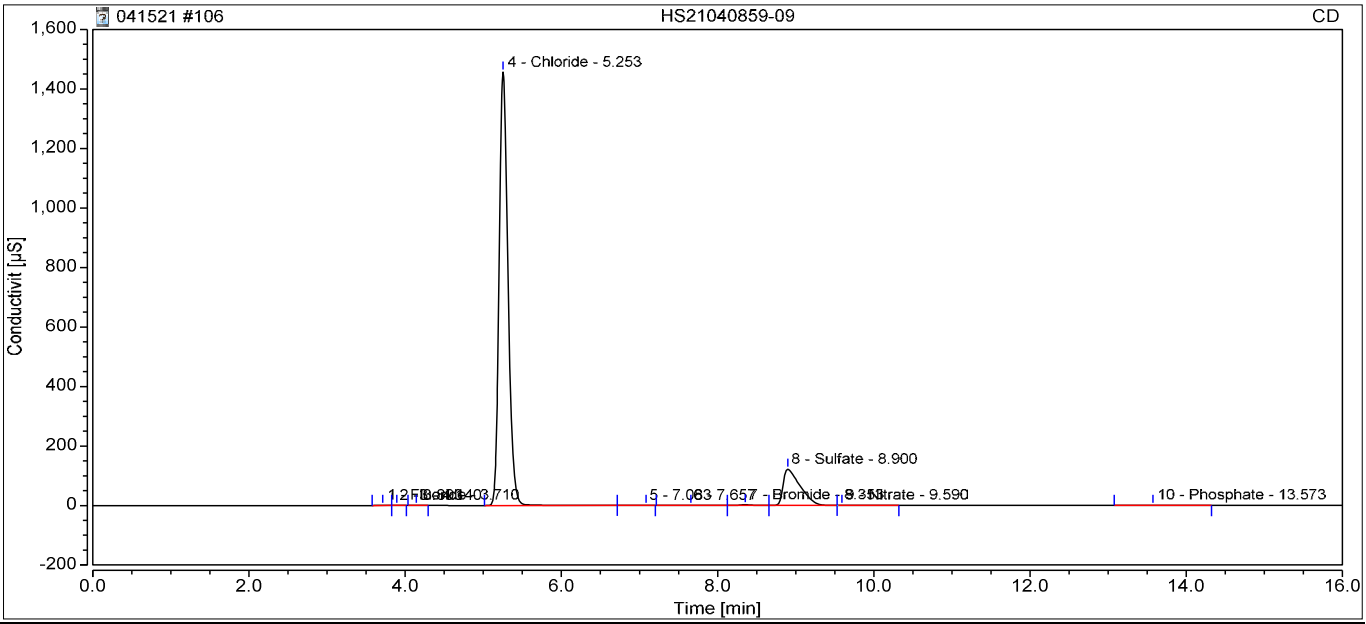
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.72	Fluoride	BMB	0.722	2.4898	4.9797	2.0000
2	5.26	Chloride	BMB	86.153	439.1221	878.2442	2.0000
3	6.36	Nitrite,N	BMB	0.980	2.5265	5.0529	2.0000
5	8.38	Bromide	M	0.382	4.6010	9.2019	2.0000
6	9.03	Sulfate	M	10.942	77.4756	154.9513	2.0000
7	9.55	Nitrate	M	1.109	2.2068	4.4136	2.0000
8	10.13	Chlorate	MB	0.223	2.4912	4.9824	2.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	2.0000
Total:			**0.000**	**100.511**		**1061.83**	

106 HS21040859-09

Sample Name:	**HS21040859-09**	*Injection Volume:*	**5.00**
Vial Number:	**BD4**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**04/16/2021 21:34**	*Sample Weight:*	**1.0000**

Run Time:



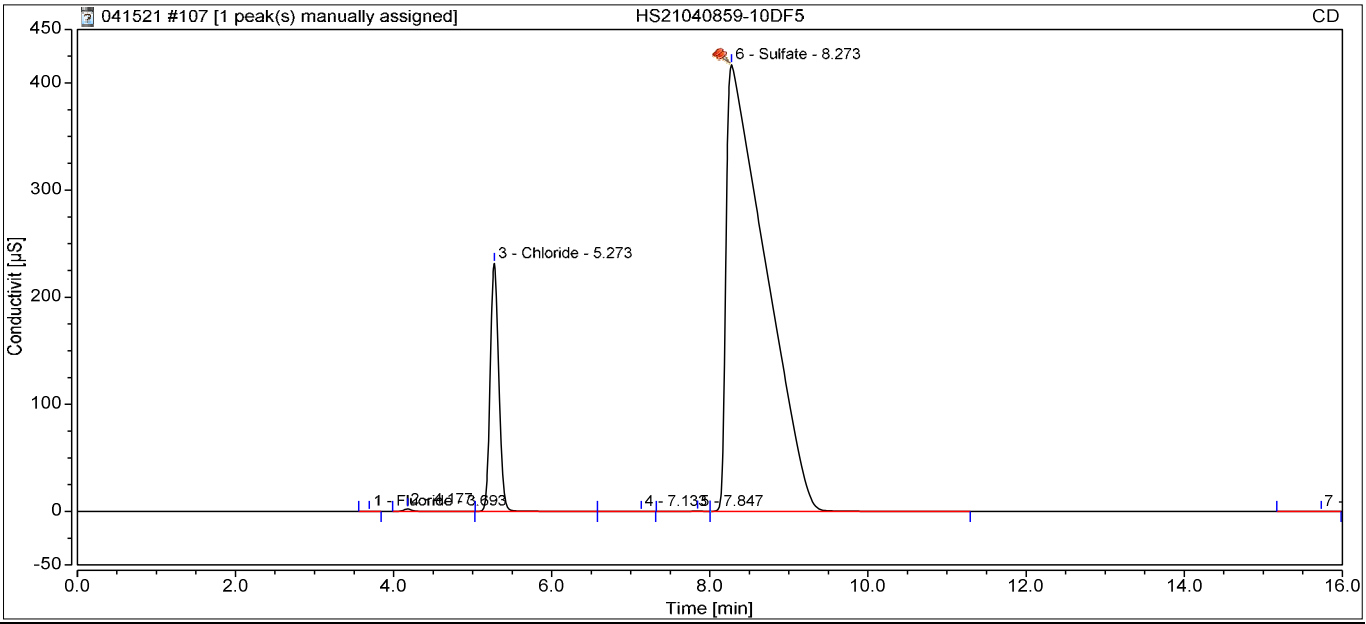
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.71	Fluoride	BMB	0.029	0.1340	0.1340	1.0000
4	5.25	Chloride	BMB	190.189	969.5506	969.5506	1.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	1.0000
7	8.35	Bromide	BMB	0.384	4.6239	4.6239	1.0000
8	8.90	Sulfate	BM	30.660	217.5447	217.5447	1.0000
9	9.59	Nitrate	MB	0.041	0.0682	0.0682	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
10	13.57	Phosphate	BMB	0.013	0.3621	0.3621	1.0000
Total:			**0.000**	**221.316**		**1192.28**	

107 HS21040859-10DF5

Sample Name:	**HS21040859-10DF5**	*Injection Volume:*	**5.00**
Vial Number:	**BD5**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**5.0000**
Recording Time:	**04/16/2021 21:52**	*Sample Weight:*	**1.0000**

Run Time:



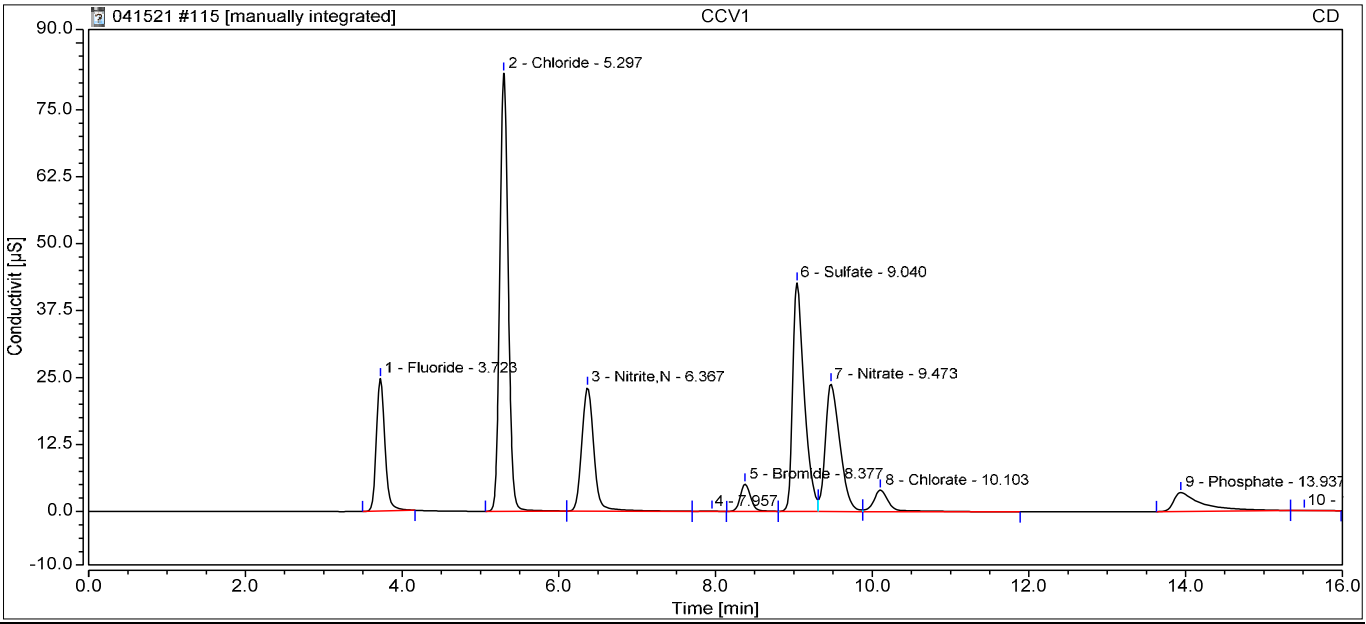
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.69	Fluoride	BMB	0.010	0.0700	0.3498	5.0000
3	5.27	Chloride	BMB	29.262	149.0651	745.3254	5.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	5.0000
6	8.27	Sulfate	MB^	239.157	1698.6461	8493.2304	5.0000
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	5.0000
n.a.	n.a.	Nitrate	n.a.	n.a.	n.a.	n.a.	5.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	5.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	5.0000
Total:			**0.000**	**268.429**		**9238.91**	

115 CCV1

Sample Name:	**CCV1**	*Injection Volume:*	**5.00**
Vial Number:	**R3**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**04/17/2021 00:27**	*Sample Weight:*	**1.0000**

Run Time:



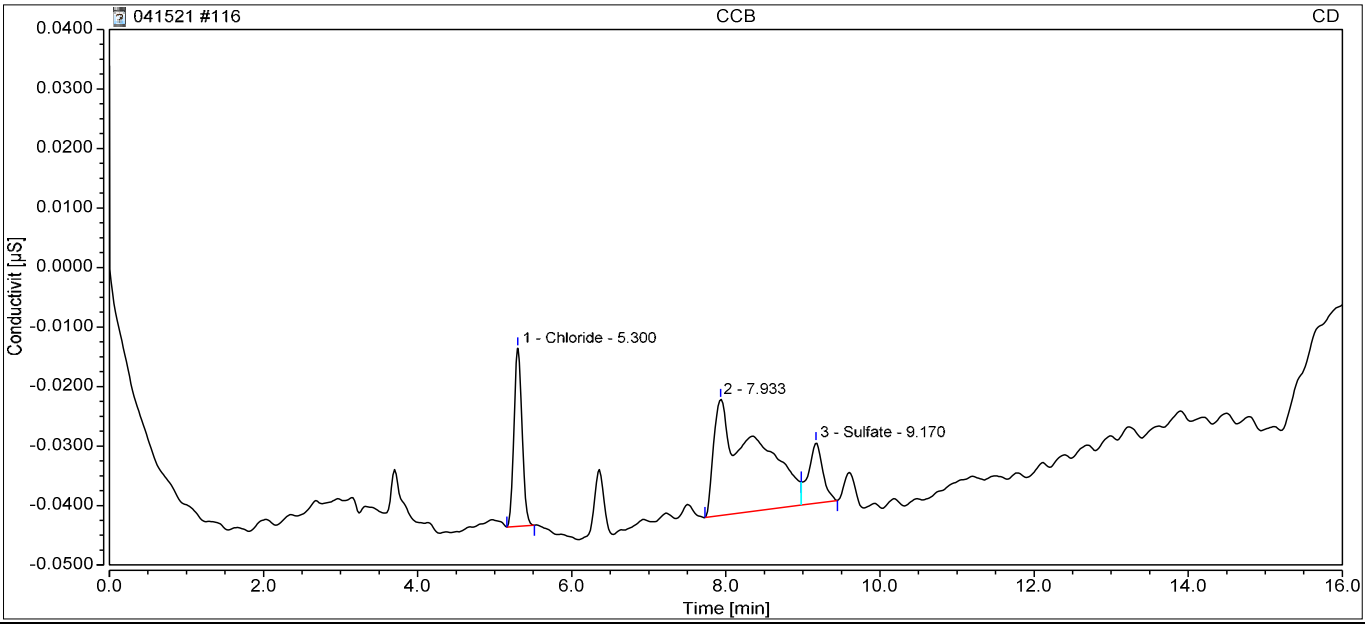
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.72	Fluoride	BMB*	3.119	10.6474	10.6474	1.0000
2	5.30	Chloride	BMB	10.152	51.6365	51.6365	1.0000
3	6.37	Nitrite,N	BMB	4.139	10.7929	10.7929	1.0000
5	8.38	Bromide	BM	0.792	9.8936	9.8936	1.0000
6	9.04	Sulfate	M	7.337	51.8620	51.8620	1.0000
7	9.47	Nitrate	M	5.148	10.2882	10.2882	1.0000
8	10.10	Chlorate	MB	0.953	11.0839	11.0839	1.0000
9	13.94	Phosphate	BMB	1.462	8.7089	8.7089	1.0000
Total:			**0.000**	**33.102**		**164.91**	

116 CCB

Sample Name:	**CCB**	*Injection Volume:*	**5.00**
Vial Number:	**R6**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**04/17/2021 01:05**	*Sample Weight:*	**1.0000**

Run Time:



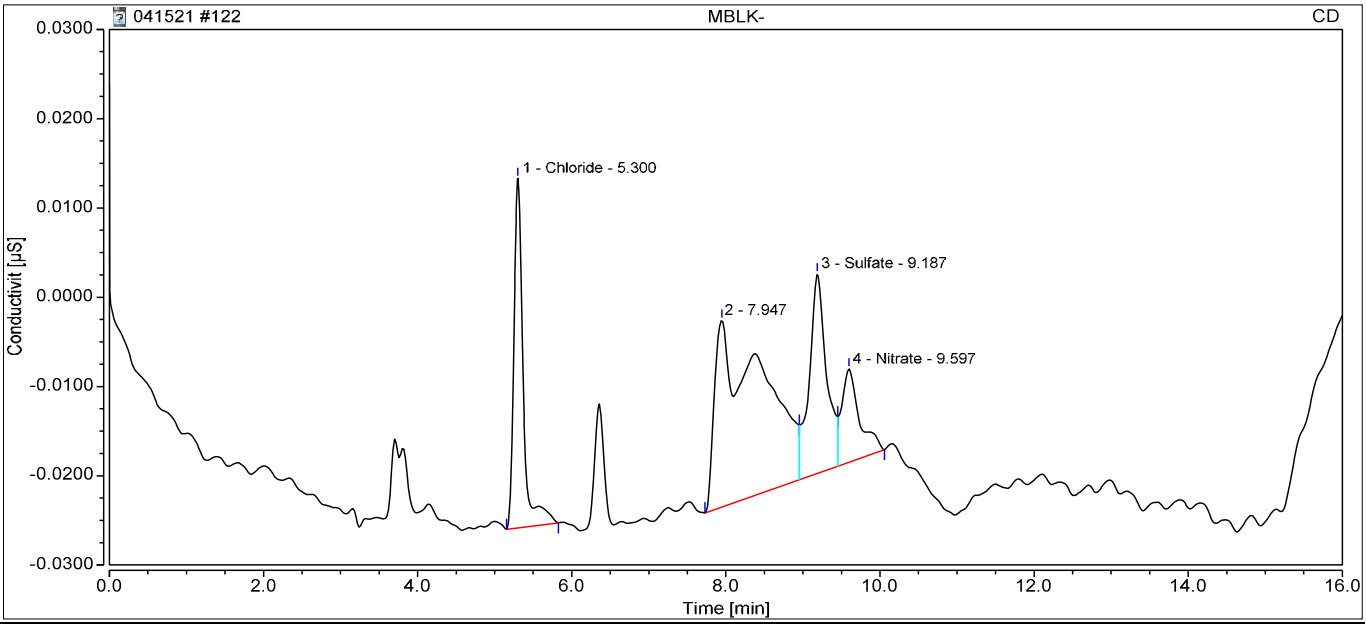
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	1.0000
1	5.30	Chloride	BMB	0.004	n.a.	n.a.	1.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	1.0000
3	9.17	Sulfate	MB	0.002	n.a.	n.a.	1.0000
n.a.	n.a.	Nitrate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	1.0000
Total:			**0.000**	**0.006**		**0.00**	

122 MBLK-

Sample Name:	**MBLK-**	*Injection Volume:*	**5.00**
Vial Number:	**R5**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**04/17/2021 03:01**	*Sample Weight:*	**1.0000**

Run Time:



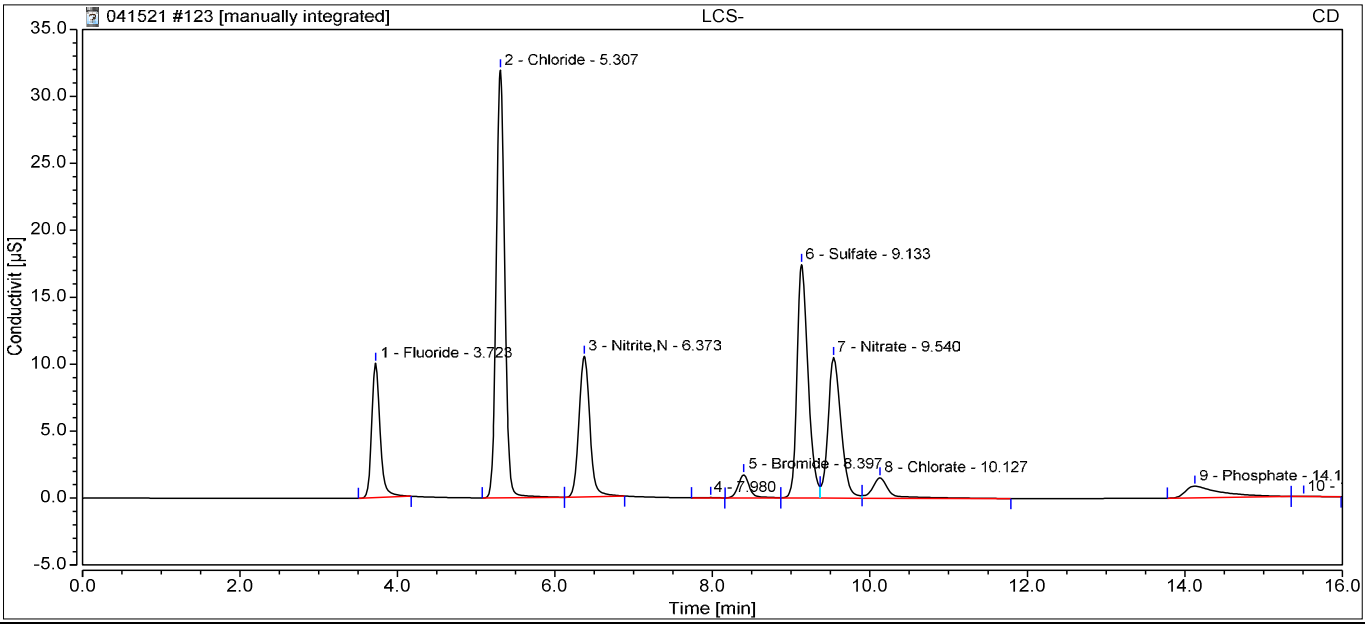
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	1.0000
1	5.30	Chloride	BMB	0.005	n.a.	n.a.	1.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	1.0000
3	9.19	Sulfate	M	0.006	n.a.	n.a.	1.0000
4	9.60	Nitrate	MB	0.003	n.a.	n.a.	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	1.0000
Total:			**0.000**	**0.014**		**0.00**	

123 LCS-

Sample Name:	**LCS-**	*Injection Volume:*	**5.00**
Vial Number:	**R2**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**04/17/2021 03:21**	*Sample Weight:*	**1.0000**

Run Time:



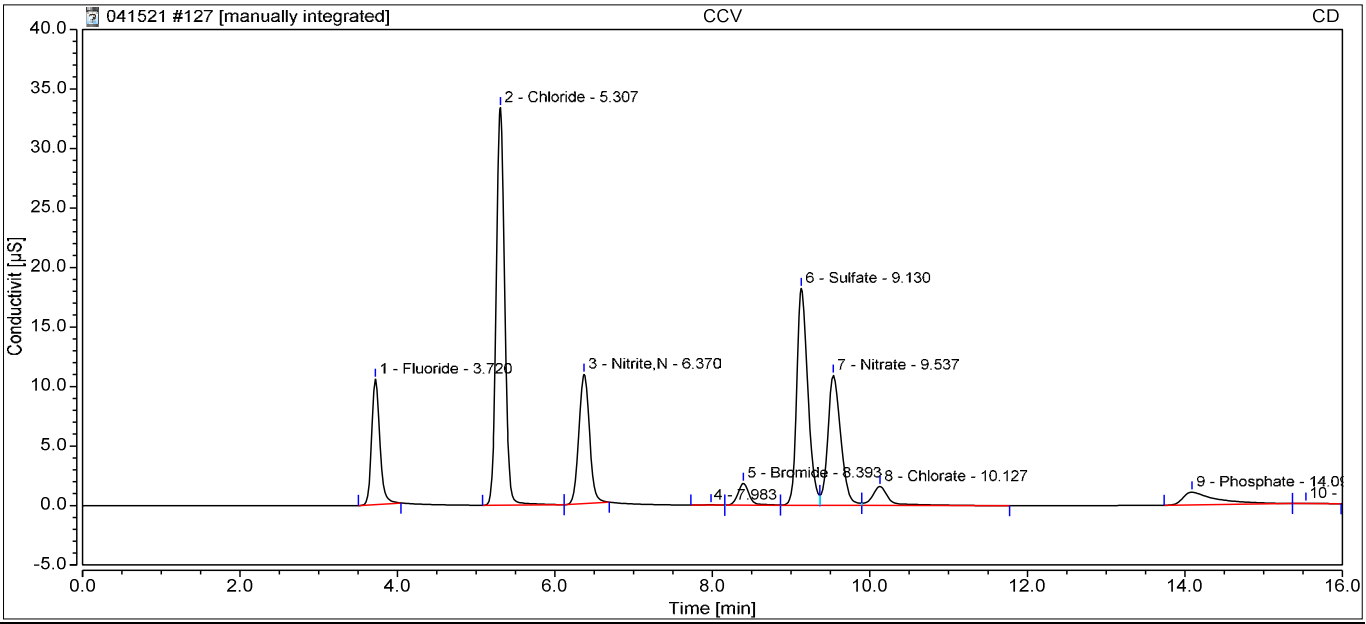
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.72	Fluoride	BMB*	1.238	4.2466	4.2466	1.0000
2	5.31	Chloride	BMb*	3.957	20.0483	20.0483	1.0000
3	6.37	Nitrite,N	bMB*	1.679	4.3553	4.3553	1.0000
5	8.40	Bromide	BM	0.290	3.4121	3.4121	1.0000
6	9.13	Sulfate	M	2.834	19.8728	19.8728	1.0000
7	9.54	Nitrate	M	2.009	4.0073	4.0073	1.0000
8	10.13	Chlorate	MB	0.391	4.4773	4.4773	1.0000
9	14.13	Phosphate	BMB	0.451	2.8874	2.8874	1.0000
Total:			**0.000**	**12.849**		**63.31**	

127 CCV

Sample Name:	**CCV**	*Injection Volume:*	**5.00**
Vial Number:	**R1**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**04/17/2021 04:39**	*Sample Weight:*	**1.0000**

Run Time:



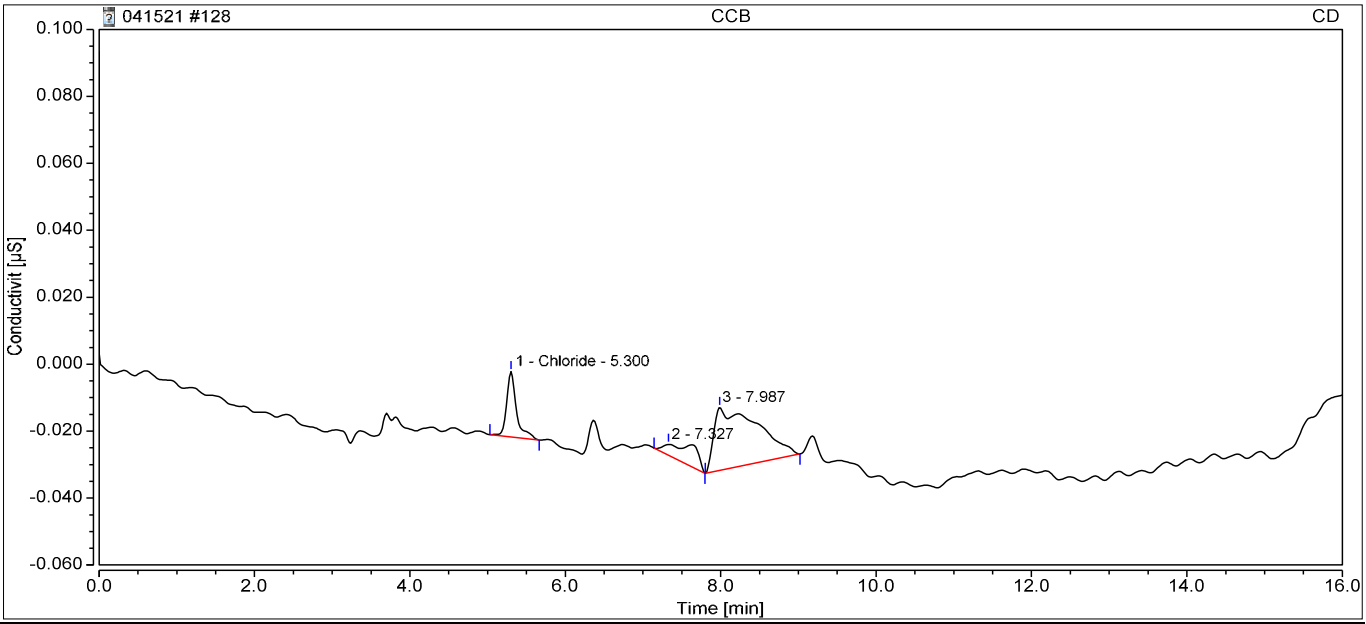
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.72	Fluoride	BMB*	1.262	4.3291	4.3291	1.0000
2	5.31	Chloride	BMb*	4.131	20.9342	20.9342	1.0000
3	6.37	Nitrite,N	bMB*	1.699	4.4076	4.4076	1.0000
5	8.39	Bromide	M	0.307	3.6271	3.6271	1.0000
6	9.13	Sulfate	M	2.963	20.7957	20.7957	1.0000
7	9.54	Nitrate	M	2.096	4.1808	4.1808	1.0000
8	10.13	Chlorate	MB	0.399	4.5694	4.5694	1.0000
9	14.09	Phosphate	BMB	0.524	3.3080	3.3080	1.0000
Total:			**0.000**	**13.381**		**66.15**	

128 CCB

Sample Name:	**CCB**	*Injection Volume:*	**5.00**
Vial Number:	**R4**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**04/17/2021 05:18**	*Sample Weight:*	**1.0000**

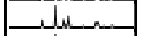
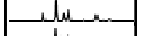
Run Time:



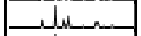
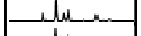
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	1.0000
1	5.30	Chloride	BMB	0.003	n.a.	n.a.	1.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Nitrate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	1.0000
Total:			**0.000**	**0.003**		**0.00**	

Sequence: 042821
Last Update Operator: alshs.nouser

ECD_1	Name	Comment	Type	Position	Dilution	Level	Instrument Method	Processing Method
	STD1		Calibration	BB1	1.00	01	ICS2100ISO39	Anion Processing Method ISO39
	STD2		Calibration	BB2	1.00	02	ICS2100ISO39	Anion Processing Method ISO39
	STD3		Calibration	BB3	1.00	03	ICS2100ISO39	Anion Processing Method ISO39
	STD4		Calibration	BB4	1.00	04	ICS2100ISO39	Anion Processing Method ISO39
	STD5		Calibration	BB5	1.00	05	ICS2100ISO39	Anion Processing Method ISO39
	STD6		Calibration	BB6	1.00	06	ICS2100ISO39	Anion Processing Method ISO39
	ICV		Unknown	BB7	1.00		ICS2100ISO39	Anion Processing Method ISO39
	ICB		Unknown	BA1	1.00		ICS2100ISO39	Anion Processing Method ISO39
	CCV		Unknown	G1	1.00		ICS2100ISO39	Anion Processing Method ISO39
	CCB		Unknown	G4	1.00		ICS2100ISO39	Anion Processing Method ISO39
	HS21041447-01		Unknown	GC1	1.00		ICS2100ISO39	Anion Processing Method ISO39
	HS21041447-01MS		Unknown	GC8	1.00		ICS2100ISO39	Anion Processing Method ISO39
	HS21041447-01MSD		Unknown	GD1	1.00		ICS2100ISO39	Anion Processing Method ISO39
	CCV1		Unknown	G3	1.00		ICS2100ISO39	Anion Processing Method ISO39
	CCB		Unknown	G7	1.00		ICS2100ISO39	Anion Processing Method ISO39
	MBLK-		Unknown	G5	1.00		ICS2100ISO39	Anion Processing Method ISO39
	LCS-		Unknown	G2	1.00		ICS2100ISO39	Anion Processing Method ISO39
	CCV		Unknown	G1	1.00		ICS2100ISO39	Anion Processing Method ISO39
	CCB		Unknown	G4	1.00		ICS2100ISO39	Anion Processing Method ISO39
	HS21040859-07DF10		Unknown	GE4	10.00		ICS2100ISO39	Anion Processing Method ISO39
	HS21040859-09DF10		Unknown	GE5	10.00		ICS2100ISO39	Anion Processing Method ISO39
	HS21040859-10DF500		Unknown	GE6	500.00		ICS2100ISO39	Anion Processing Method ISO39
	CCV1		Unknown	G3	1.00		ICS2100ISO39	Anion Processing Method ISO39
	CCB		Unknown	G7	1.00		ICS2100ISO39	Anion Processing Method ISO39

Sequence: 042821
Last Update Operator: alshs.nouser

ECD_1	Name	Volume [µl]	Status	Inject Time
	STD1	10.0	Finished	4/16/2021 12:17:16 PM -05:00
	STD2	10.0	Finished	4/16/2021 12:30:05 PM -05:00
	STD3	10.0	Finished	4/16/2021 12:42:55 PM -05:00
	STD4	10.0	Finished	4/16/2021 12:55:55 PM -05:00
	STD5	10.0	Finished	4/16/2021 1:08:46 PM -05:00
	STD6	10.0	Finished	4/16/2021 1:21:36 PM -05:00
	ICV	10.0	Finished	4/16/2021 1:34:34 PM -05:00
	ICB	10.0	Finished	4/16/2021 2:00:13 PM -05:00
	CCV	10.0	Finished	4/28/2021 4:33:57 PM -05:00
	CCB	10.0	Finished	4/28/2021 4:46:59 PM -05:00
	HS21041447-01	10.0	Finished	4/28/2021 4:59:52 PM -05:00
	HS21041447-01MS	10.0	Finished	4/28/2021 6:30:11 PM -05:00
	HS21041447-01MSD	10.0	Finished	4/28/2021 6:43:00 PM -05:00
	CCV1	10.0	Finished	4/28/2021 7:08:39 PM -05:00
	CCB	10.0	Finished	4/28/2021 7:21:29 PM -05:00
	MBLK-	10.0	Finished	4/28/2021 7:59:59 PM -05:00
	LCS-	10.0	Finished	4/28/2021 8:12:48 PM -05:00
	CCV	10.0	Finished	4/28/2021 9:42:32 PM -05:00
	CCB	10.0	Finished	4/28/2021 9:55:20 PM -05:00
	HS21040859-07DF10	10.0	Finished	4/28/2021 10:46:34 PM -05:00
	HS21040859-09DF10	10.0	Finished	4/28/2021 10:59:23 PM -05:00
	HS21040859-10DF500	10.0	Finished	4/28/2021 11:12:11 PM -05:00
	CCV1	10.0	Finished	4/29/2021 12:16:18 AM -05:00
	CCB	10.0	Finished	4/29/2021 12:29:07 AM -05:00

Calibration

Sequence: 042821
Injection #6: STD6

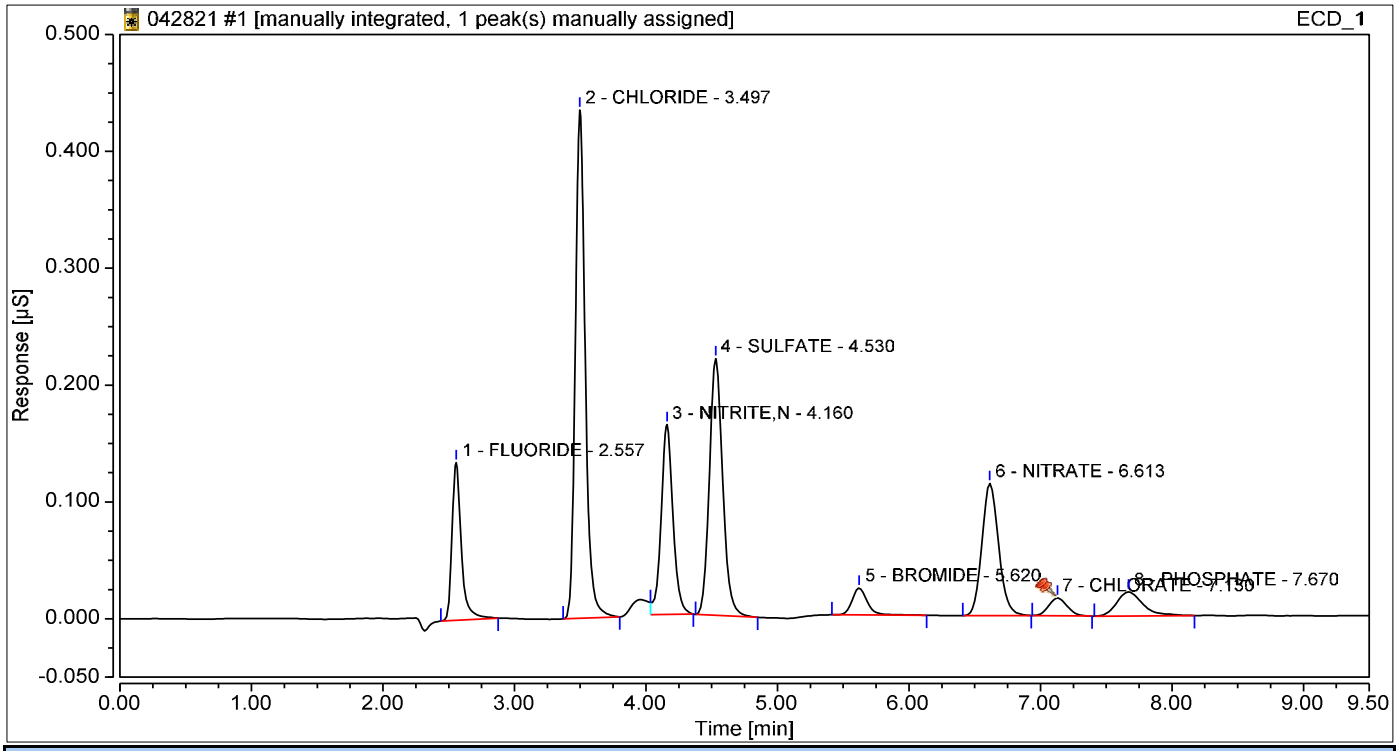
Peak No.	Peak Name	Cal.Type	Eval.Type	Number of Points	Rel.Std.Dev. %	Coeff.of Determination	C0 (Offset)	C1 (Slope)	C2 (Curve)
2	*FLUORIDE*	*Lin, WithOffset, 1/*	*Area*	*6*	*20.7057*	*0.99791*	*-0.0027*	*0.1517*	*0.0000*
3	CHLORIDE	Lin, WithOffset, 1/	Area	6	5.3679	0.99986	-0.0107	0.0937	0.0000
4	NITRITE,N	Lin, WithOffset, 1/	Area	6	21.1412	0.99763	0.0002	0.1889	0.0000
5	SULFATE	Lin, WithOffset, 1/	Area	6	8.3244	0.99969	-0.0124	0.0701	0.0000
6	BROMIDE	Lin, WithOffset, 1/	Area	6	23.4929	0.99769	-0.0019	0.0395	0.0000
7	NITRATE	Lin, WithOffset, 1/	Area	6	7.6163	0.99975	-0.0095	0.2337	0.0000
8	CHLORATE	Lin, WithOffset, 1/	Area	6	27.0751	0.99705	-0.0020	0.0358	0.0000
9	PHOSPHATE	Lin, WithOffset, 1/	Area	6	15.8236	0.99906	-0.0064	0.0918	0.0000
Maximum					**27.0751**	0.99986			
Minimum					5.3679	**0.99705**			

Chromatogram and Results

Injection Details

Injection Name:	**STD1**	***Run Time (min):***	**9.50**
Vial Number:	**BB1**	***Injection Volume:***	**10.00**
Injection Type:	**Calibration Standard**	***Channel:***	**ECD_1**
Calibration Level:	**01**	***Wavelength:***	**n.a.**
Instrument Method:	**ICS2100ISO39**	***Bandwidth:***	**n.a.**
Processing Method:	**Anion Processing Method ISO39**	***Dilution Factor:***	**1.0000**
Injection Date/Time:	**16/Apr/21 12:17**	***Sample Weight:***	**1.0000**

Chromatogram



Integration Results

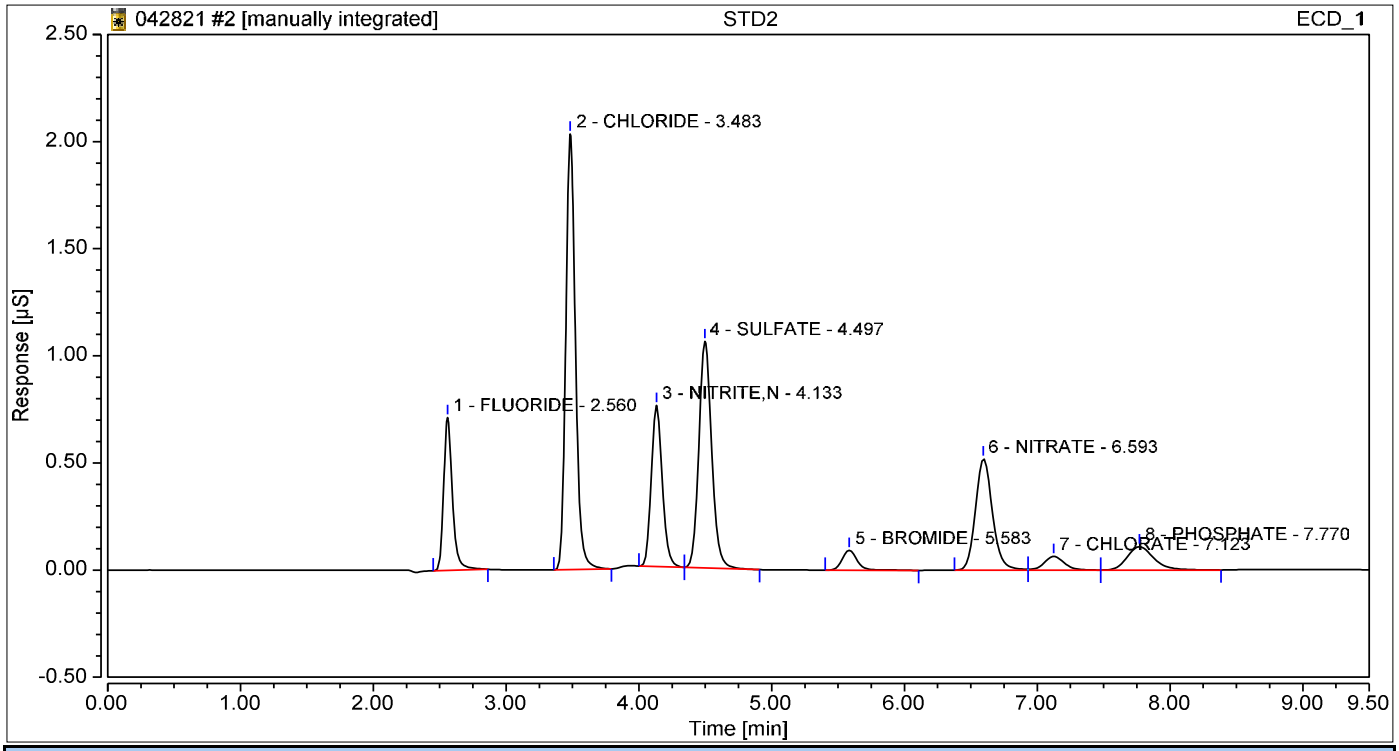
No.	Peak Name	Retention Time min	Area µS*min	Height µS	Relative Area %	Relative Height %	Amount
1	FLUORIDE	2.557	0.011	0.135	9.31	12.01	0.0903
2	CHLORIDE	3.497	0.038	0.435	32.03	38.71	0.5194
3	NITRITE,N	4.160	0.017	0.162	14.24	14.46	0.0883
4	SULFATE	4.530	0.026	0.220	21.68	19.55	0.5435
5	BROMIDE	5.620	0.003	0.023	2.59	2.04	0.1271
6	NITRATE	6.613	0.017	0.113	14.06	10.05	0.1119
7	CHLORATE	7.130	0.002	0.015	2.09	1.35	0.1264
8	PHOSPHATE	7.670	0.005	0.020	3.99	1.82	0.1218
Total:			**0.119**	**1.123**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**STD2**	***Run Time (min):***	**9.50**
Vial Number:	**BB2**	***Injection Volume:***	**10.00**
Injection Type:	**Calibration Standard**	***Channel:***	**ECD_1**
Calibration Level:	**02**	***Wavelength:***	**n.a.**
Instrument Method:	**ICS2100ISO39**	***Bandwidth:***	**n.a.**
Processing Method:	**Anion Processing Method ISO39**	***Dilution Factor:***	**1.0000**
Injection Date/Time:	**16/Apr/21 12:30**	***Sample Weight:***	**1.0000**

Chromatogram



Integration Results

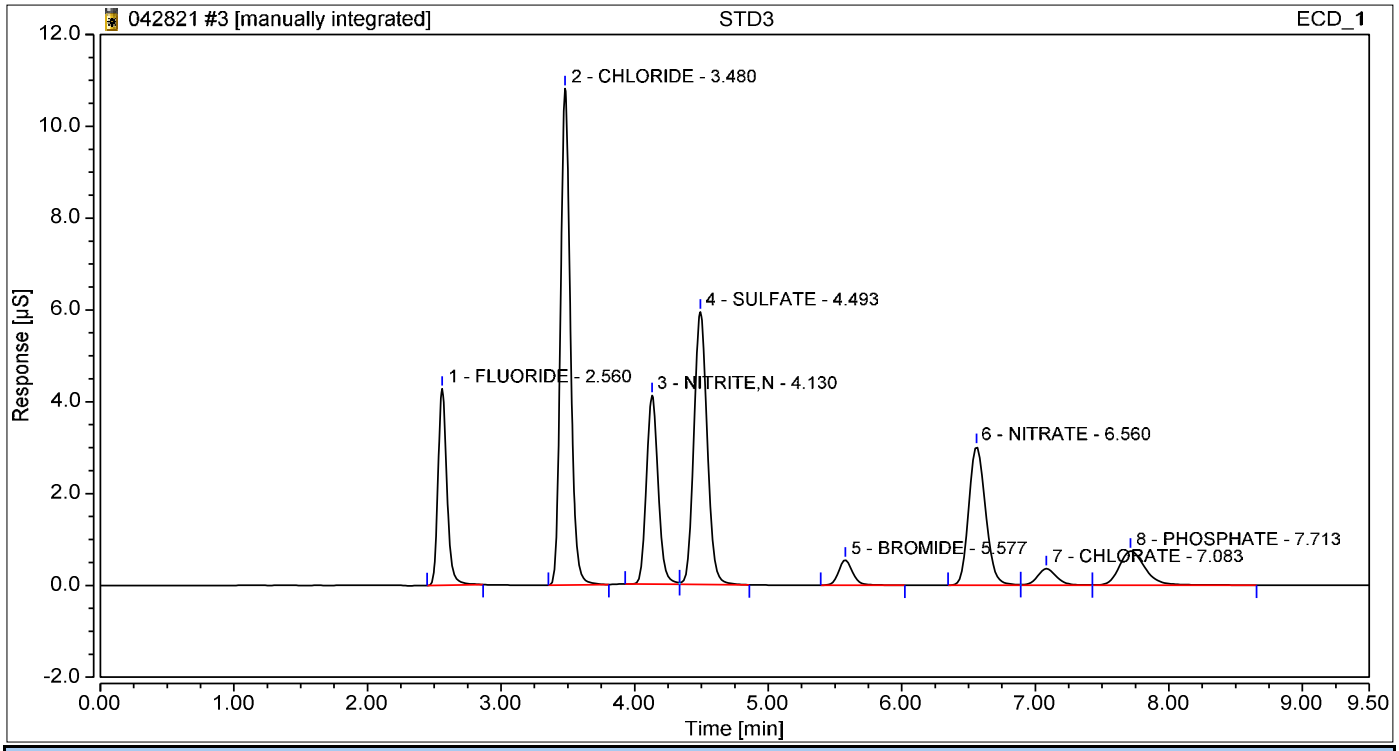
No.	Peak Name	Retention Time min	Area µS*min	Height µS	Relative Area %	Relative Height %	Amount
1	FLUORIDE	2.560	0.054	0.713	10.03	13.36	0.3752
2	CHLORIDE	3.483	0.171	2.033	31.56	38.08	1.9360
3	NITRITE,N	4.133	0.072	0.752	13.24	14.08	0.3781
4	SULFATE	4.497	0.119	1.057	21.90	19.79	1.8680
5	BROMIDE	5.583	0.012	0.093	2.26	1.74	0.3591
6	NITRATE	6.593	0.077	0.519	14.24	9.72	0.3703
7	CHLORATE	7.123	0.011	0.064	2.07	1.19	0.3697
8	PHOSPHATE	7.770	0.025	0.109	4.70	2.04	0.3476
Total:			**0.541**	**5.339**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**STD3**	***Run Time (min):***	**9.50**
Vial Number:	**BB3**	***Injection Volume:***	**10.00**
Injection Type:	**Calibration Standard**	***Channel:***	**ECD_1**
Calibration Level:	**03**	***Wavelength:***	**n.a.**
Instrument Method:	**ICS2100ISO39**	***Bandwidth:***	**n.a.**
Processing Method:	**Anion Processing Method ISO39**	***Dilution Factor:***	**1.0000**
Injection Date/Time:	**16/Apr/21 12:42**	***Sample Weight:***	**1.0000**

Chromatogram



Integration Results

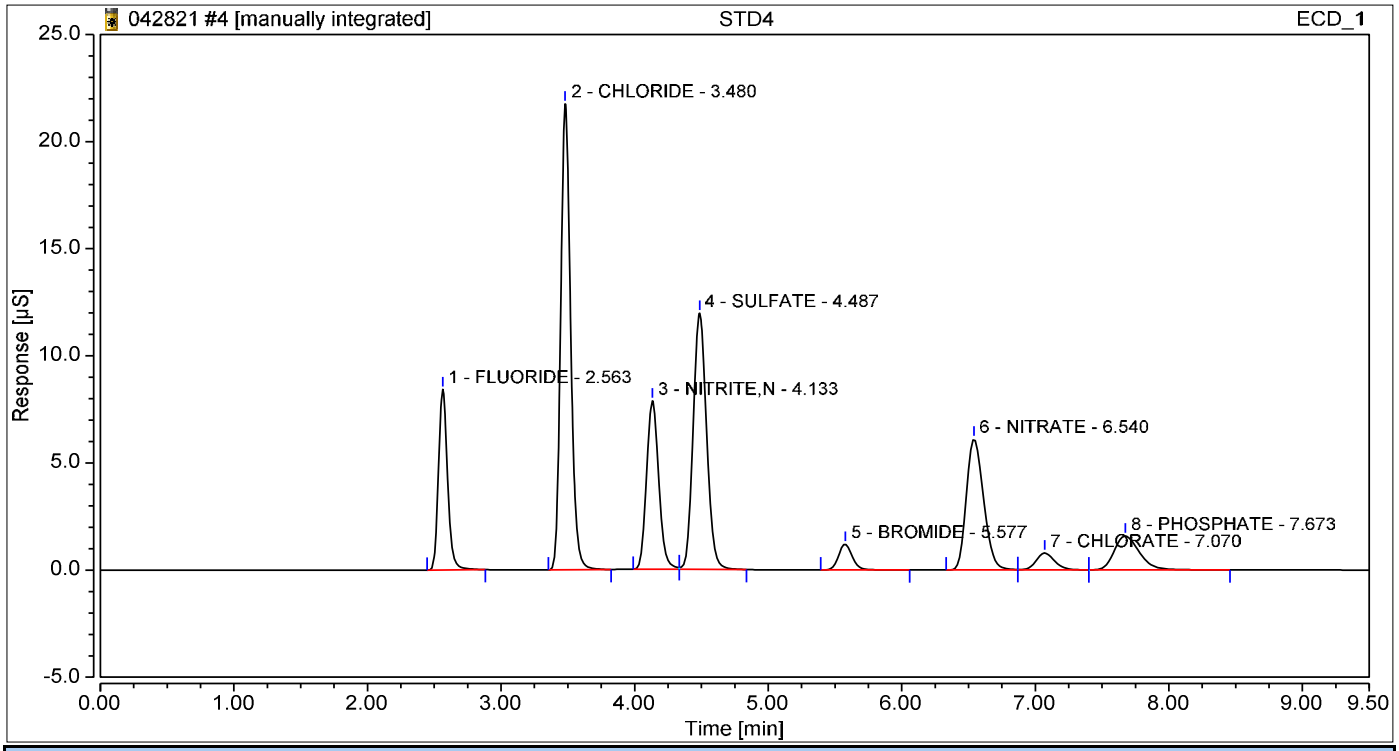
No.	Peak Name	Retention Time min	Area µS*min	Height µS	Relative Area %	Relative Height %	Amount
1	FLUORIDE	2.560	0.327	4.277	10.62	14.35	2.1743
2	CHLORIDE	3.480	0.924	10.811	29.98	36.26	9.9692
3	NITRITE,N	4.130	0.415	4.110	13.47	13.79	2.1971
4	SULFATE	4.493	0.680	5.936	22.08	19.91	9.8843
5	BROMIDE	5.577	0.067	0.549	2.18	1.84	1.7510
6	NITRATE	6.560	0.441	3.023	14.30	10.14	1.9269
7	CHLORATE	7.083	0.060	0.363	1.96	1.22	1.7475
8	PHOSPHATE	7.713	0.166	0.744	5.40	2.50	1.8826
Total:			**3.081**	**29.812**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**STD4**	***Run Time (min):***	**9.50**
Vial Number:	**BB4**	***Injection Volume:***	**10.00**
Injection Type:	**Calibration Standard**	***Channel:***	**ECD_1**
Calibration Level:	**04**	***Wavelength:***	**n.a.**
Instrument Method:	**ICS2100ISO39**	***Bandwidth:***	**n.a.**
Processing Method:	**Anion Processing Method ISO39**	***Dilution Factor:***	**1.0000**
Injection Date/Time:	**16/Apr/21 12:55**	***Sample Weight:***	**1.0000**

Chromatogram



Integration Results

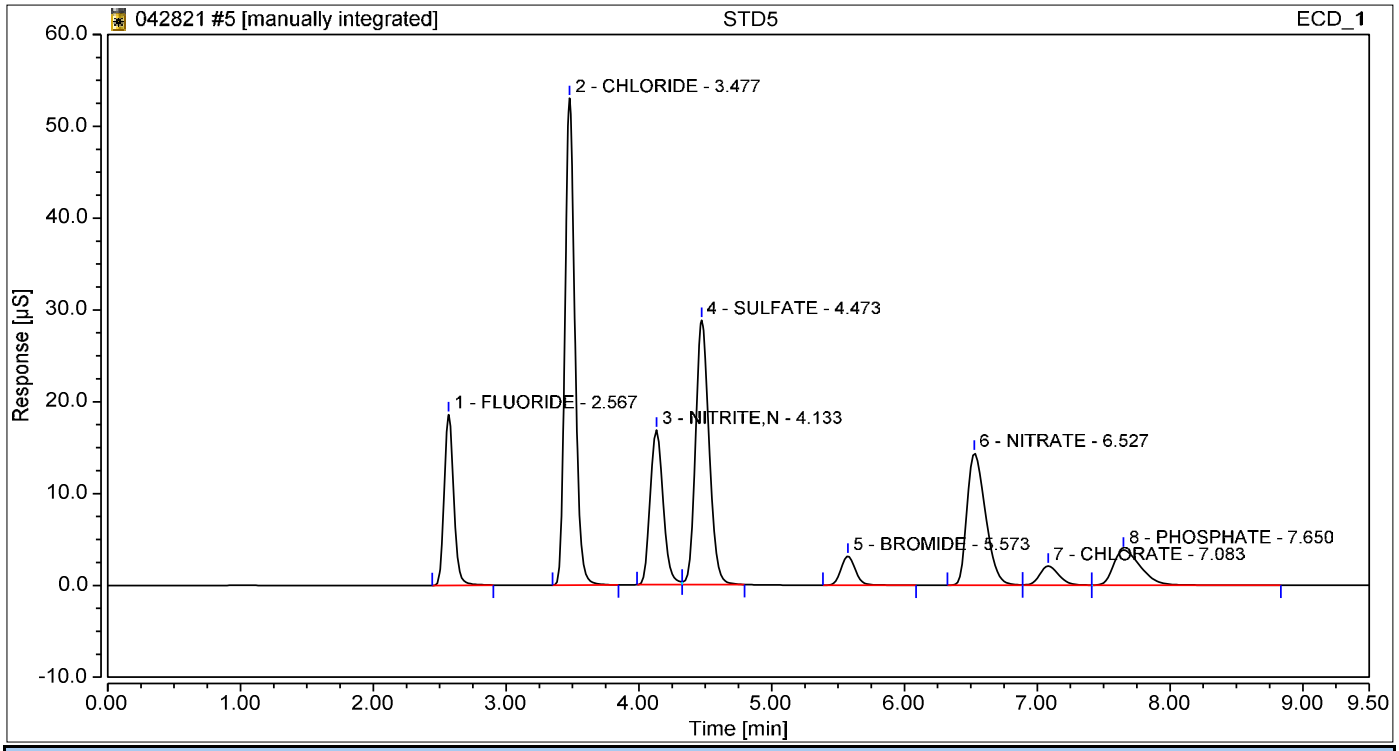
No.	Peak Name	Retention Time min	Area µS*min	Height µS	Relative Area %	Relative Height %	Amount
1	FLUORIDE	2.563	0.660	8.425	10.52	14.12	4.3705
2	CHLORIDE	3.480	1.873	21.745	29.82	36.44	20.0903
3	NITRITE,N	4.133	0.828	7.860	13.18	13.17	4.3822
4	SULFATE	4.487	1.387	11.956	22.09	20.04	19.9757
5	BROMIDE	5.577	0.145	1.201	2.31	2.01	3.7192
6	NITRATE	6.540	0.913	6.117	14.53	10.25	3.9463
7	CHLORATE	7.070	0.129	0.790	2.05	1.32	3.6629
8	PHOSPHATE	7.673	0.345	1.581	5.49	2.65	3.8293
Total:			**6.280**	**59.674**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**STD5**	***Run Time (min):***	**9.50**
Vial Number:	**BB5**	***Injection Volume:***	**10.00**
Injection Type:	**Calibration Standard**	***Channel:***	**ECD_1**
Calibration Level:	**05**	***Wavelength:***	**n.a.**
Instrument Method:	**ICS2100ISO39**	***Bandwidth:***	**n.a.**
Processing Method:	**Anion Processing Method ISO39**	***Dilution Factor:***	**1.0000**
Injection Date/Time:	**16/Apr/21 13:08**	***Sample Weight:***	**1.0000**

Chromatogram



Integration Results

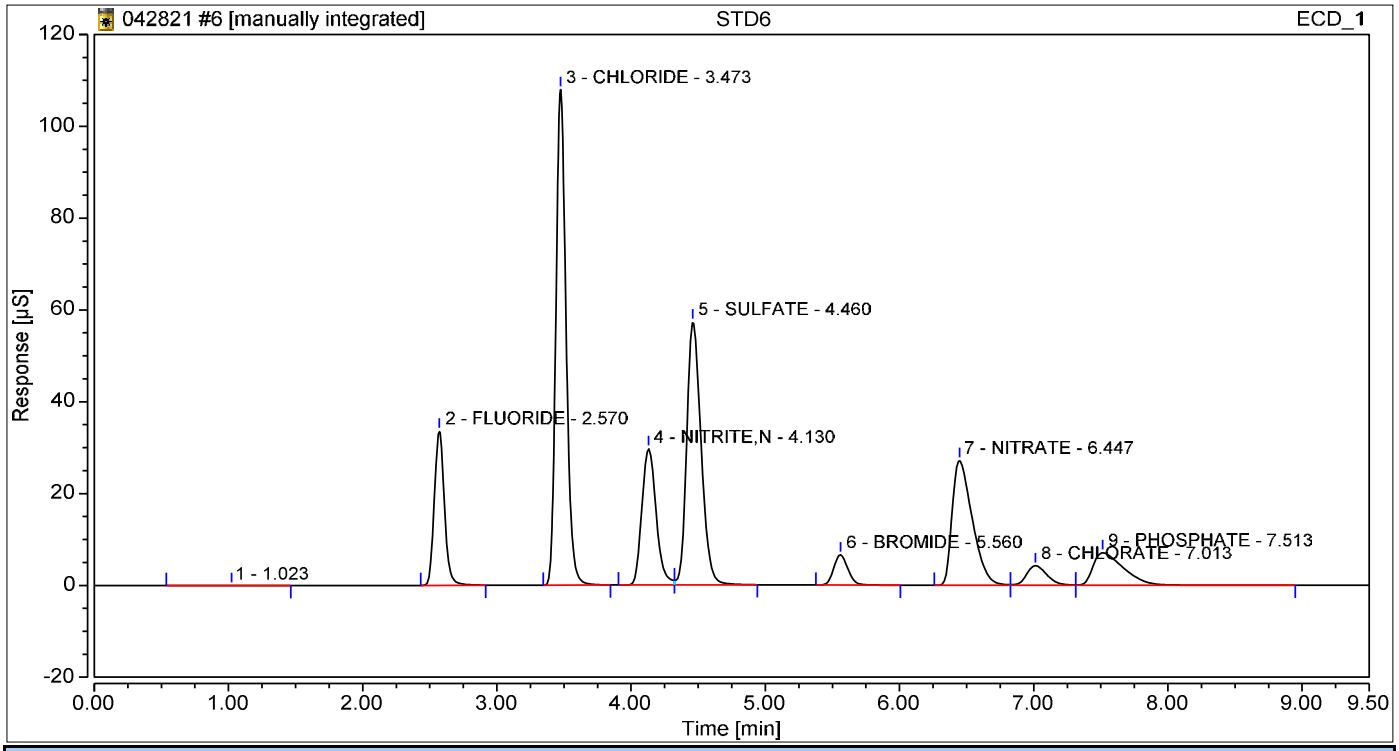
No.	Peak Name	Retention Time min	Area µS*min	Height µS	Relative Area %	Relative Height %	Amount
1	FLUORIDE	2.567	1.528	18.583	9.91	13.21	10.0905
2	CHLORIDE	3.477	4.600	53.021	29.82	37.69	49.1800
3	NITRITE,N	4.133	1.908	16.841	12.37	11.97	10.1010
4	SULFATE	4.473	3.418	28.793	22.16	20.46	48.9447
5	BROMIDE	5.573	0.392	3.150	2.54	2.24	9.9778
6	NITRATE	6.527	2.320	14.382	15.04	10.22	9.9716
7	CHLORATE	7.083	0.350	2.078	2.27	1.48	9.8456
8	PHOSPHATE	7.650	0.909	3.846	5.89	2.73	9.9723
Total:			**15.424**	**140.694**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**STD6**	***Run Time (min):***	**9.50**
Vial Number:	**BB6**	***Injection Volume:***	**10.00**
Injection Type:	**Calibration Standard**	***Channel:***	**ECD_1**
Calibration Level:	**06**	***Wavelength:***	**n.a.**
Instrument Method:	**ICS2100ISO39**	***Bandwidth:***	**n.a.**
Processing Method:	**Anion Processing Method ISO39**	***Dilution Factor:***	**1.0000**
Injection Date/Time:	**16/Apr/21 13:21**	***Sample Weight:***	**1.0000**

Chromatogram



Integration Results

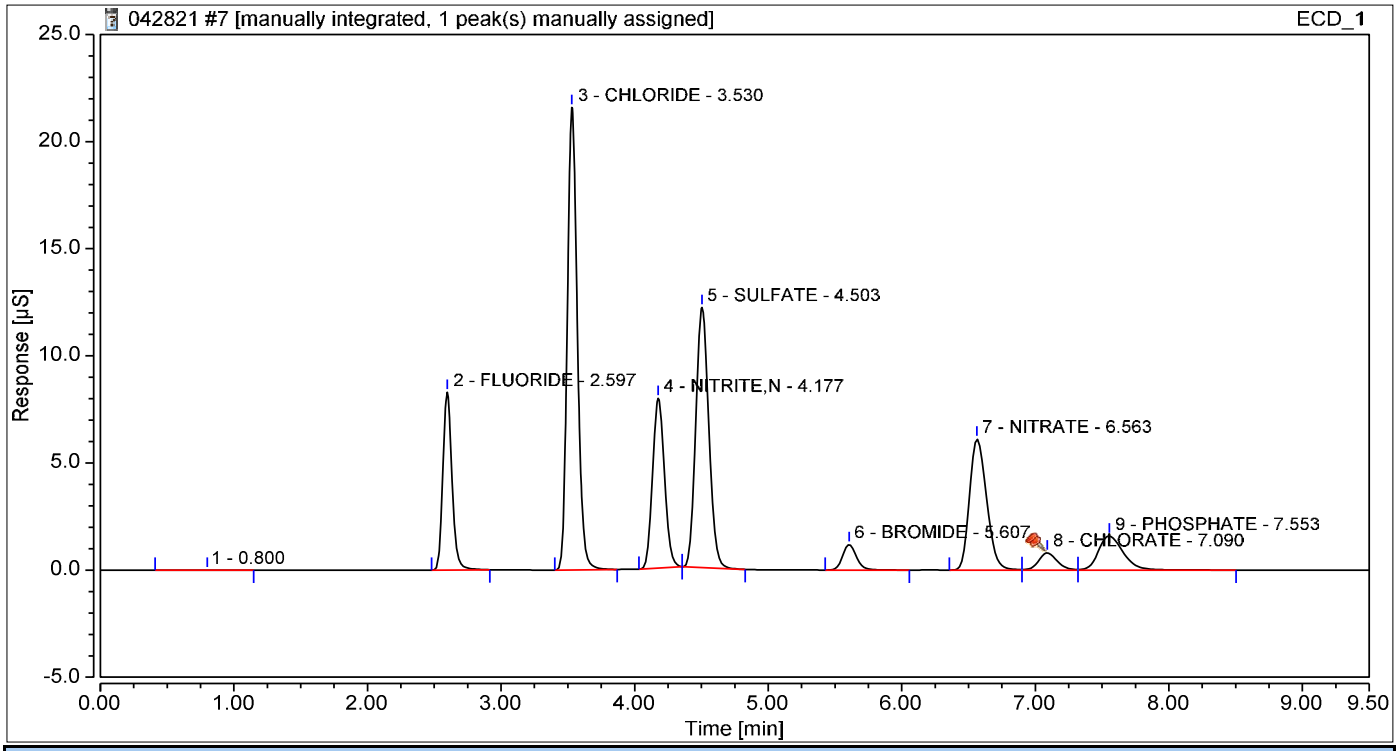
No.	Peak Name	Retention Time min	Area µS*min	Height µS	Relative Area %	Relative Height %	Amount
1		1.023	0.002	0.004	0.01	0.00	n.a.
2	FLUORIDE	2.570	2.941	33.620	9.41	12.28	19.3991
3	CHLORIDE	3.473	9.439	107.947	30.22	39.44	100.8050
4	NITRITE,N	4.130	3.656	29.680	11.70	10.84	19.3534
5	SULFATE	4.460	7.085	57.303	22.68	20.94	101.2839
6	BROMIDE	5.560	0.809	6.602	2.59	2.41	20.5658
7	NITRATE	6.447	4.704	27.190	15.06	9.93	20.1732
8	CHLORATE	7.013	0.740	4.262	2.37	1.56	20.7479
9	PHOSPHATE	7.513	1.860	7.083	5.96	2.59	20.3465
Total:			**31.237**	**273.691**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**ICV**	***Run Time (min):***	**9.50**
Vial Number:	**BB7**	***Injection Volume:***	**10.00**
Injection Type:	**Unknown**	***Channel:***	**ECD_1**
Calibration Level:		***Wavelength:***	**n.a.**
Instrument Method:	**ICS2100ISO39**	***Bandwidth:***	**n.a.**
Processing Method:	**Anion Processing Method ISO39**	***Dilution Factor:***	**1.0000**
Injection Date/Time:	**16/Apr/21 13:34**	***Sample Weight:***	**1.0000**

Chromatogram



Integration Results

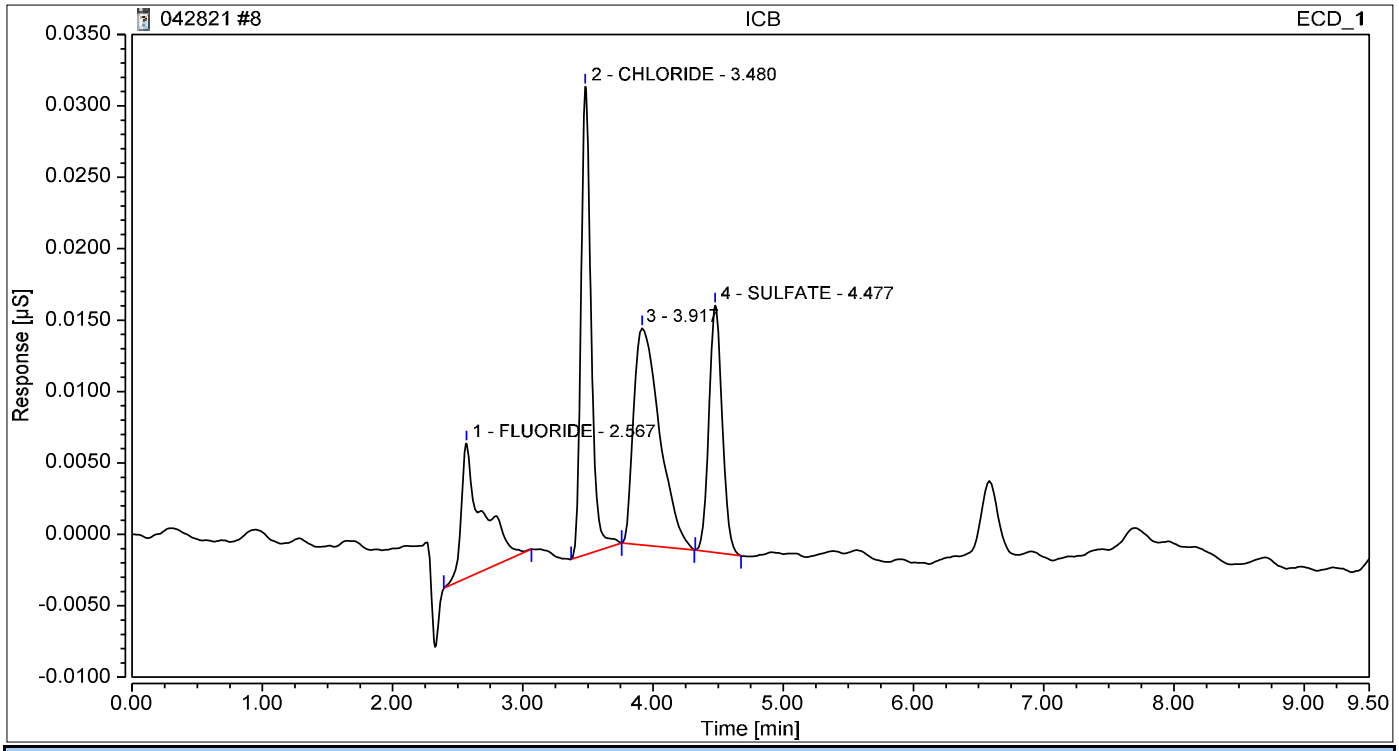
No.	Peak Name	Retention Time min	Area µS*min	Height µS	Relative Area %	Relative Height %	Amount
1		0.800	0.002	0.005	0.03	0.01	n.a.
2	FLUORIDE	2.597	0.655	8.294	10.51	13.91	4.3316
3	CHLORIDE	3.530	1.865	21.577	29.96	36.18	20.0118
4	NITRITE,N	4.177	0.815	7.916	13.09	13.27	4.3123
5	SULFATE	4.503	1.363	12.146	21.90	20.37	19.6278
6	BROMIDE	5.607	0.143	1.192	2.30	2.00	3.6807
7	NITRATE	6.563	0.908	6.116	14.59	10.26	3.9279
8	CHLORATE	7.090	0.130	0.805	2.09	1.35	3.7016
9	PHOSPHATE	7.553	0.344	1.588	5.52	2.66	3.8140
Total:			**6.225**	**59.640**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**ICB**	***Run Time (min):***	**9.50**
Vial Number:	**BA1**	***Injection Volume:***	**10.00**
Injection Type:	**Unknown**	***Channel:***	**ECD_1**
Calibration Level:		***Wavelength:***	**n.a.**
Instrument Method:	**ICS2100ISO39**	***Bandwidth:***	**n.a.**
Processing Method:	**Anion Processing Method ISO39**	***Dilution Factor:***	**1.0000**
Injection Date/Time:	**16/Apr/21 14:00**	***Sample Weight:***	**1.0000**

Chromatogram



Integration Results

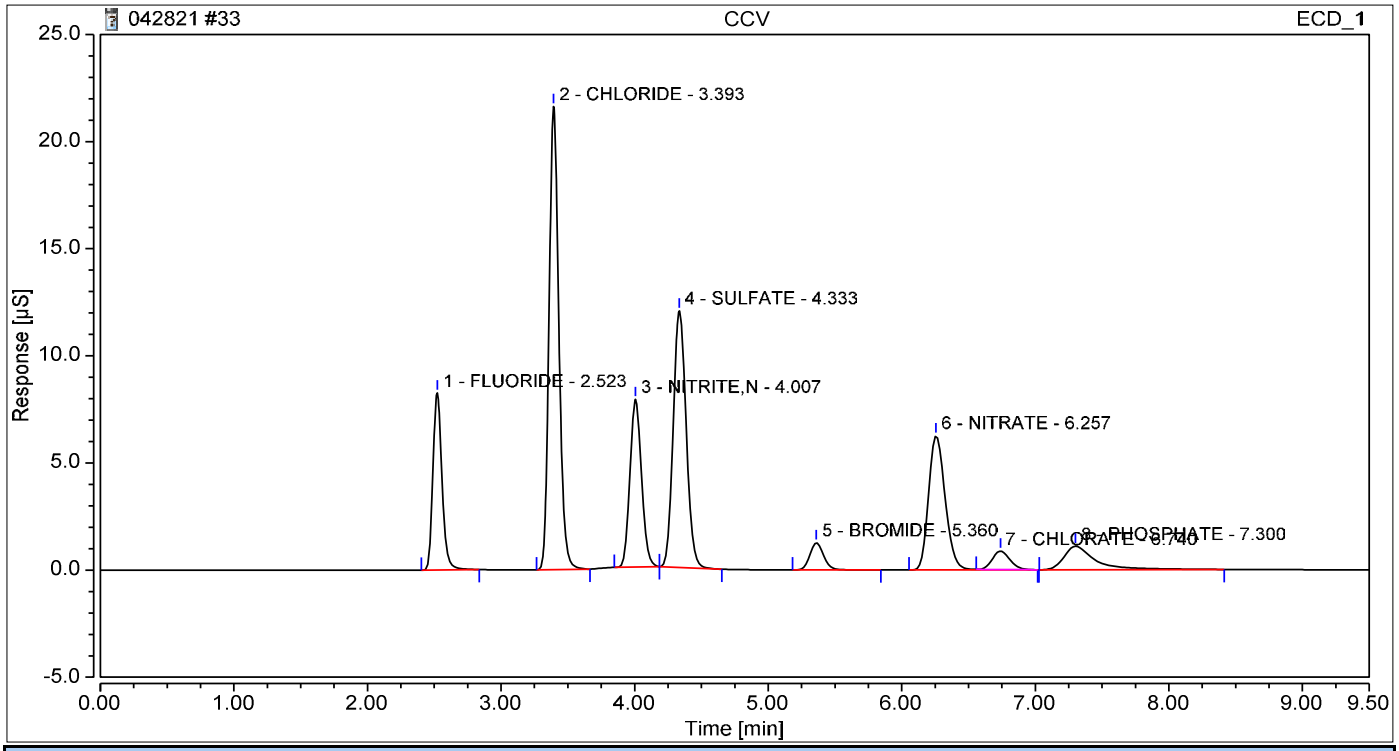
No.	Peak Name	Retention Time min	Area µS*min	Height µS	Relative Area %	Relative Height %	Amount
1	FLUORIDE	2.567	0.002	0.009	17.22	12.63	0.0293
2	CHLORIDE	3.480	0.003	0.033	28.66	43.89	0.1459
3		3.917	0.004	0.015	34.30	20.32	n.a.
n.a.	NITRITE,N	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
4	SULFATE	4.477	0.002	0.017	19.82	23.16	0.2060
n.a.	BROMIDE	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	NITRATE	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	CHLORATE	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	PHOSPHATE	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.010**	**0.075**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV**	***Run Time (min):***	**9.50**
Vial Number:	**G1**	***Injection Volume:***	**10.00**
Injection Type:	**Unknown**	***Channel:***	**ECD_1**
Calibration Level:		***Wavelength:***	**n.a.**
Instrument Method:	**ICS2100ISO39**	***Bandwidth:***	**n.a.**
Processing Method:	**Anion Processing Method ISO39**	***Dilution Factor:***	**1.0000**
Injection Date/Time:	**28/Apr/21 16:33**	***Sample Weight:***	**1.0000**

Chromatogram



Integration Results

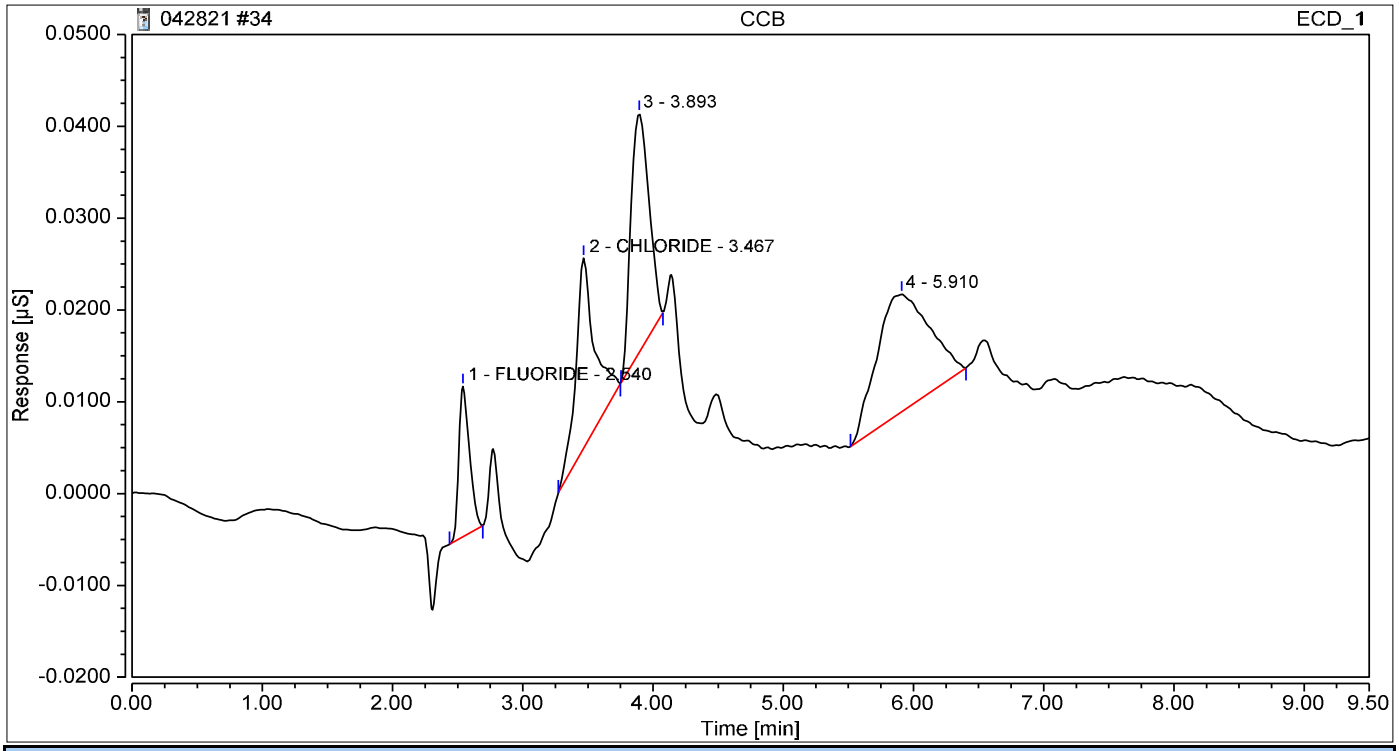
No.	Peak Name	Retention Time min	Area µS*min	Height µS	Relative Area %	Relative Height %	Amount
1	FLUORIDE	2.523	0.650	8.258	10.62	13.96	4.3046
2	CHLORIDE	3.393	1.839	21.613	30.02	36.53	19.7364
3	NITRITE,N	4.007	0.798	7.821	13.03	13.22	4.2251
4	SULFATE	4.333	1.348	11.977	22.01	20.25	19.4198
5	BROMIDE	5.360	0.150	1.265	2.45	2.14	3.8522
6	NITRATE	6.257	0.912	6.264	14.88	10.59	3.9416
7	CHLORATE	6.740	0.131	0.860	2.14	1.45	3.7259
8	PHOSPHATE	7.300	0.298	1.098	4.86	1.86	3.3166
Total:			**6.127**	**59.157**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB**	***Run Time (min):***	**9.50**
Vial Number:	**G4**	***Injection Volume:***	**10.00**
Injection Type:	**Unknown**	***Channel:***	**ECD_1**
Calibration Level:		***Wavelength:***	**n.a.**
Instrument Method:	**ICS2100ISO39**	***Bandwidth:***	**n.a.**
Processing Method:	**Anion Processing Method ISO39**	***Dilution Factor:***	**1.0000**
Injection Date/Time:	**28/Apr/21 16:46**	***Sample Weight:***	**1.0000**

Chromatogram



Integration Results

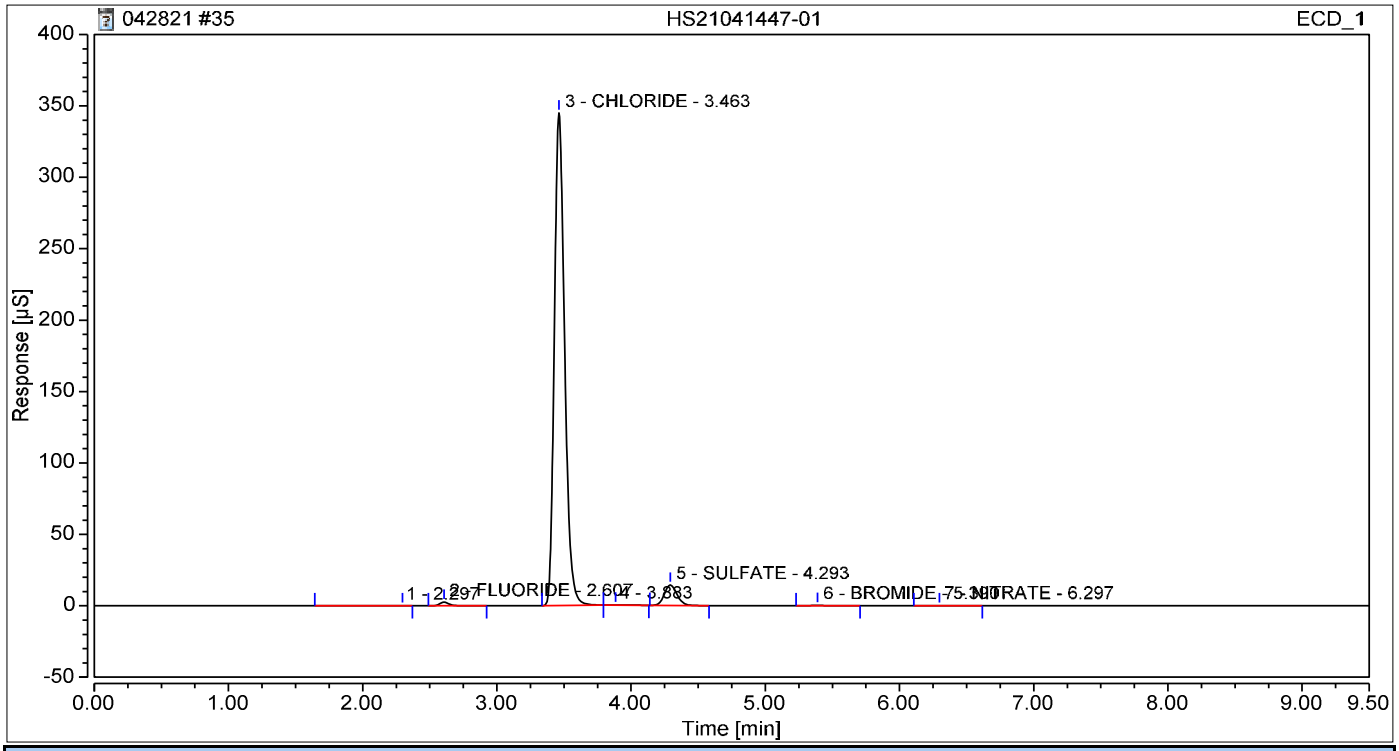
No.	Peak Name	Retention Time min	Area µS*min	Height µS	Relative Area %	Relative Height %	Amount
1	FLUORIDE	2.540	0.002	0.016	10.19	21.55	0.0279
2	CHLORIDE	3.467	0.003	0.021	22.73	27.29	0.1514
3		3.893	0.004	0.026	27.54	34.30	n.a.
n.a.	NITRITE,N	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	SULFATE	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	BROMIDE	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
4		5.910	0.006	0.013	39.54	16.87	n.a.
n.a.	NITRATE	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	CHLORATE	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	PHOSPHATE	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.015**	**0.076**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**HS21041447-01**	***Run Time (min):***	**9.50**
Vial Number:	**GC1**	***Injection Volume:***	**10.00**
Injection Type:	**Unknown**	***Channel:***	**ECD_1**
Calibration Level:		***Wavelength:***	**n.a.**
Instrument Method:	**ICS2100ISO39**	***Bandwidth:***	**n.a.**
Processing Method:	**Anion Processing Method ISO39**	***Dilution Factor:***	**1.0000**
Injection Date/Time:	**28/Apr/21 16:59**	***Sample Weight:***	**1.0000**

Chromatogram



Integration Results

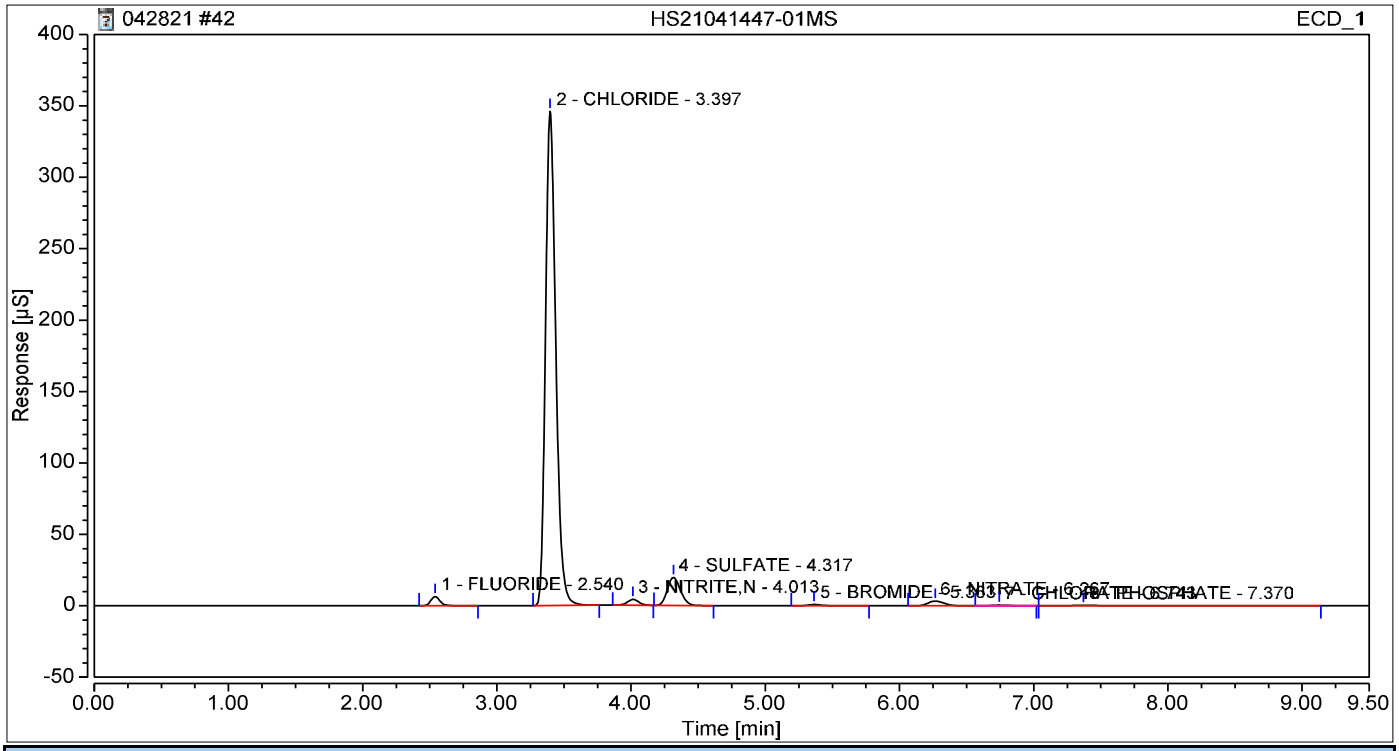
No.	Peak Name	Retention Time min	Area µS*min	Height µS	Relative Area %	Relative Height %	Amount
1		2.297	0.002	0.009	0.01	0.00	n.a.
2	FLUORIDE	2.607	0.203	2.544	0.63	0.70	1.3573
3	CHLORIDE	3.463	30.488	344.904	94.32	95.23	325.3379
4		3.883	0.019	0.082	0.06	0.02	n.a.
n.a.	NITRITE,N	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
5	SULFATE	4.293	1.563	14.270	4.84	3.94	22.4867
6	BROMIDE	5.390	0.032	0.271	0.10	0.07	0.8613
7	NITRATE	6.297	0.017	0.119	0.05	0.03	0.1127
n.a.	CHLORATE	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	PHOSPHATE	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**32.325**	**362.199**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**HS21041447-01MS**	***Run Time (min):***	**9.50**
Vial Number:	**GC8**	***Injection Volume:***	**10.00**
Injection Type:	**Unknown**	***Channel:***	**ECD_1**
Calibration Level:		***Wavelength:***	**n.a.**
Instrument Method:	**ICS2100ISO39**	***Bandwidth:***	**n.a.**
Processing Method:	**Anion Processing Method ISO39**	***Dilution Factor:***	**1.0000**
Injection Date/Time:	**28/Apr/21 18:30**	***Sample Weight:***	**1.0000**

Chromatogram



Integration Results

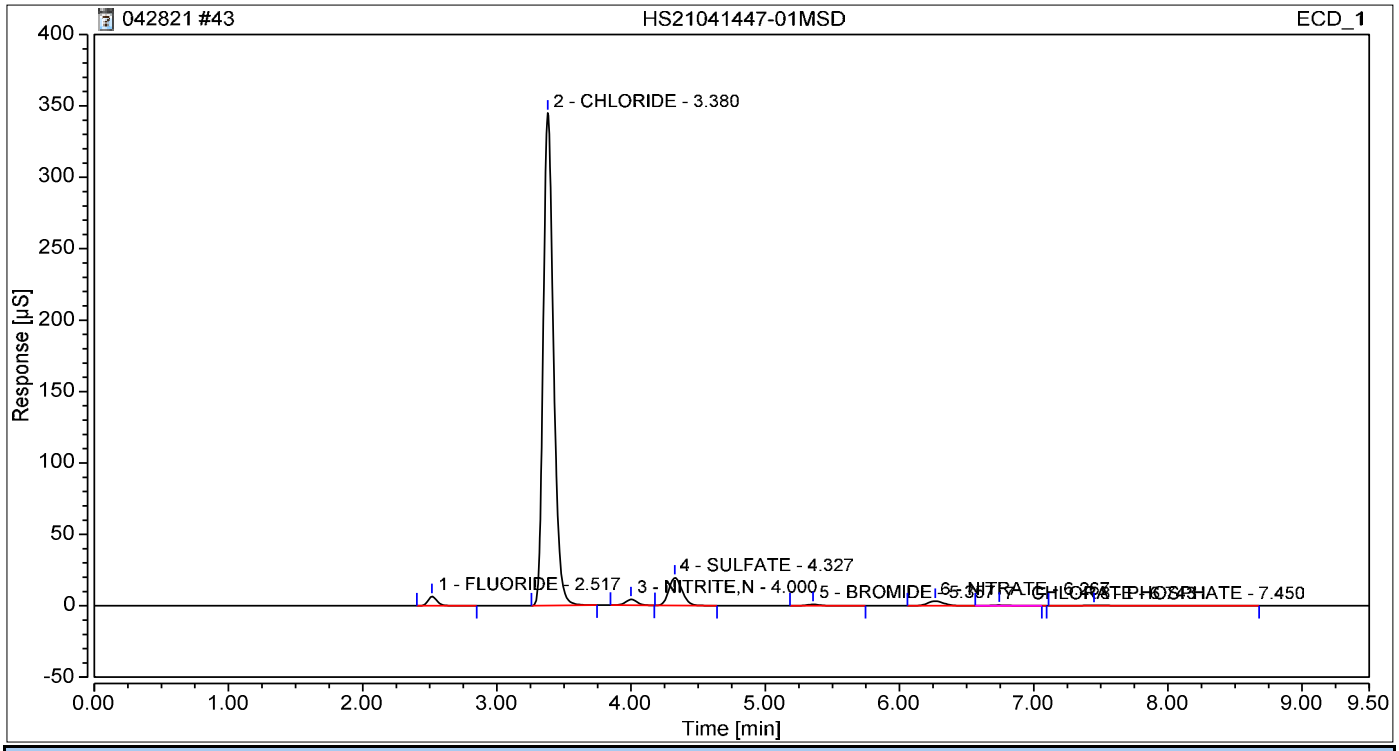
No.	Peak Name	Retention Time min	Area µS*min	Height µS	Relative Area %	Relative Height %	Amount
1	FLUORIDE	2.540	0.519	6.505	1.50	1.71	3.4375
2	CHLORIDE	3.397	30.599	346.059	88.71	90.83	326.5223
3	NITRITE,N	4.013	0.391	3.989	1.13	1.05	2.0675
4	SULFATE	4.317	2.235	19.625	6.48	5.15	32.0650
5	BROMIDE	5.363	0.106	0.902	0.31	0.24	2.7461
6	NITRATE	6.267	0.471	3.295	1.37	0.86	2.0566
7	CHLORATE	6.743	0.061	0.404	0.18	0.11	1.7660
8	PHOSPHATE	7.370	0.112	0.231	0.32	0.06	1.2888
Total:			**34.494**	**381.011**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**HS21041447-01MSD**	***Run Time (min):***	**9.50**
Vial Number:	**GD1**	***Injection Volume:***	**10.00**
Injection Type:	**Unknown**	***Channel:***	**ECD_1**
Calibration Level:		***Wavelength:***	**n.a.**
Instrument Method:	**ICS2100ISO39**	***Bandwidth:***	**n.a.**
Processing Method:	**Anion Processing Method ISO39**	***Dilution Factor:***	**1.0000**
Injection Date/Time:	**28/Apr/21 18:43**	***Sample Weight:***	**1.0000**

Chromatogram



Integration Results

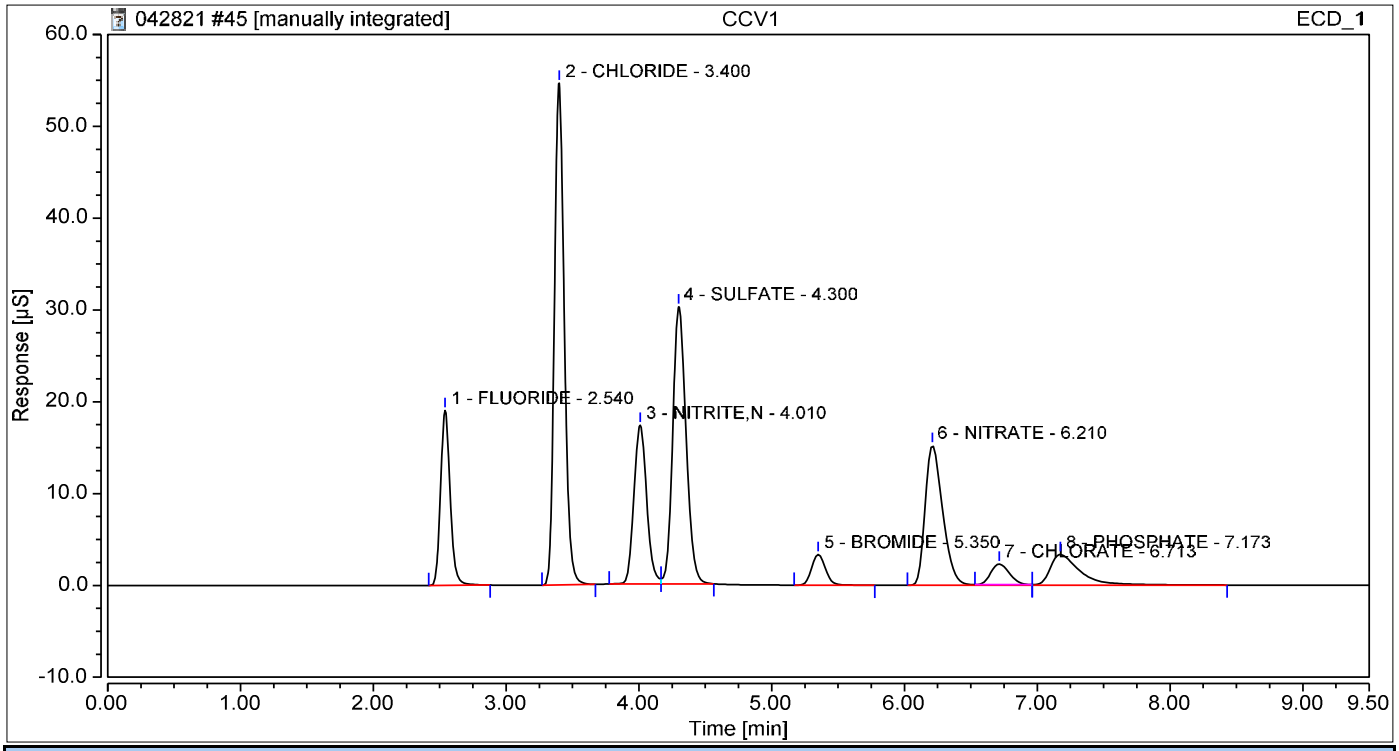
No.	Peak Name	Retention Time min	Area µS*min	Height µS	Relative Area %	Relative Height %	Amount
1	FLUORIDE	2.517	0.516	6.499	1.51	1.71	3.4218
2	CHLORIDE	3.380	30.432	344.933	88.71	90.85	324.7452
3	NITRITE,N	4.000	0.396	3.997	1.15	1.05	2.0954
4	SULFATE	4.327	2.220	19.445	6.47	5.12	31.8526
5	BROMIDE	5.357	0.106	0.900	0.31	0.24	2.7467
6	NITRATE	6.267	0.471	3.286	1.37	0.87	2.0544
7	CHLORATE	6.743	0.061	0.403	0.18	0.11	1.7722
8	PHOSPHATE	7.450	0.101	0.226	0.30	0.06	1.1741
Total:			**34.304**	**379.689**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV1**	***Run Time (min):***	**9.50**
Vial Number:	**G3**	***Injection Volume:***	**10.00**
Injection Type:	**Unknown**	***Channel:***	**ECD_1**
Calibration Level:		***Wavelength:***	**n.a.**
Instrument Method:	**ICS2100ISO39**	***Bandwidth:***	**n.a.**
Processing Method:	**Anion Processing Method ISO39**	***Dilution Factor:***	**1.0000**
Injection Date/Time:	**28/Apr/21 19:08**	***Sample Weight:***	**1.0000**

Chromatogram



Integration Results

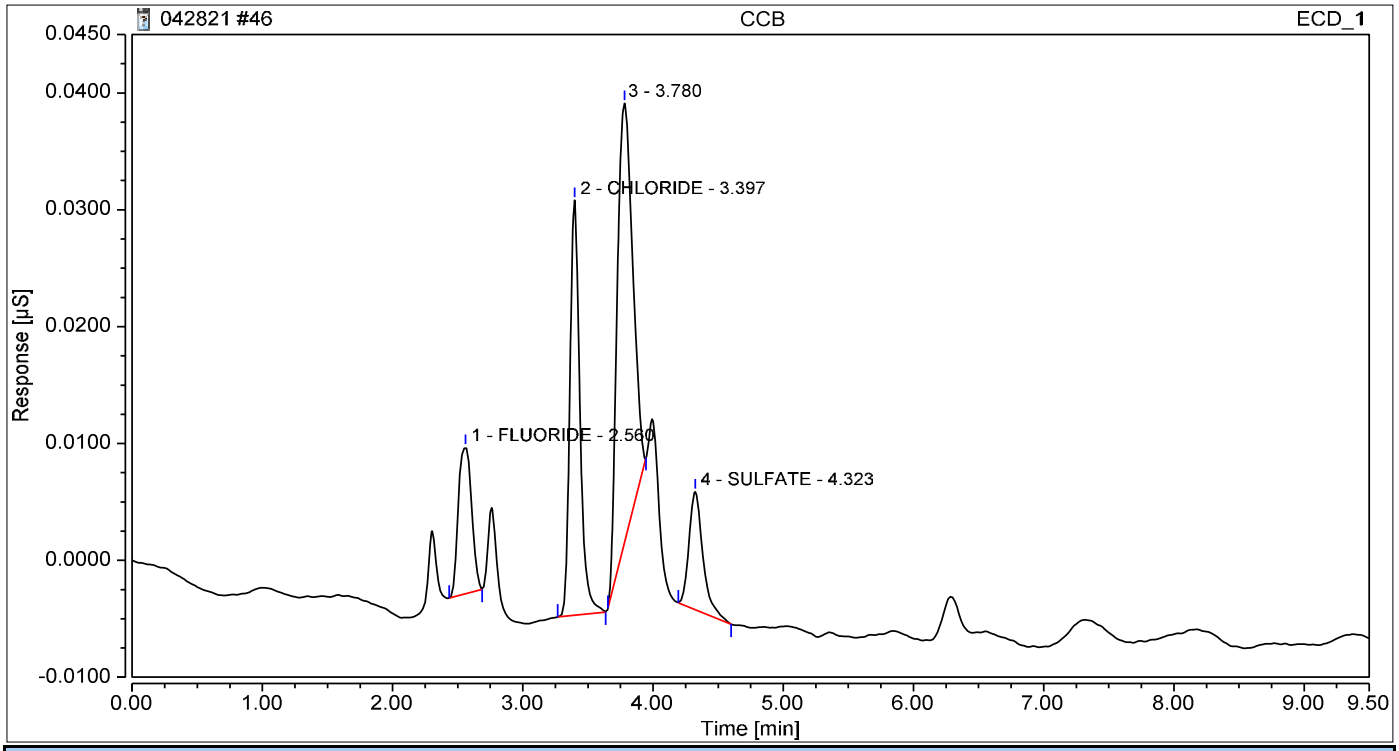
No.	Peak Name	Retention Time min	Area µS*min	Height µS	Relative Area %	Relative Height %	Amount
1	FLUORIDE	2.540	1.582	19.051	10.09	13.11	10.4475
2	CHLORIDE	3.400	4.690	54.640	29.91	37.60	50.1446
3	NITRITE,N	4.010	1.927	17.289	12.29	11.90	10.1999
4	SULFATE	4.300	3.504	30.175	22.35	20.77	50.1812
5	BROMIDE	5.350	0.399	3.348	2.54	2.30	10.1614
6	NITRATE	6.210	2.347	15.229	14.97	10.48	10.0835
7	CHLORATE	6.713	0.363	2.243	2.32	1.54	10.2104
8	PHOSPHATE	7.173	0.866	3.328	5.53	2.29	9.5132
Total:			**15.679**	**145.303**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB**	***Run Time (min):***	**9.50**
Vial Number:	**G7**	***Injection Volume:***	**10.00**
Injection Type:	**Unknown**	***Channel:***	**ECD_1**
Calibration Level:		***Wavelength:***	**n.a.**
Instrument Method:	**ICS2100ISO39**	***Bandwidth:***	**n.a.**
Processing Method:	**Anion Processing Method ISO39**	***Dilution Factor:***	**1.0000**
Injection Date/Time:	**28/Apr/21 19:21**	***Sample Weight:***	**1.0000**

Chromatogram



Integration Results

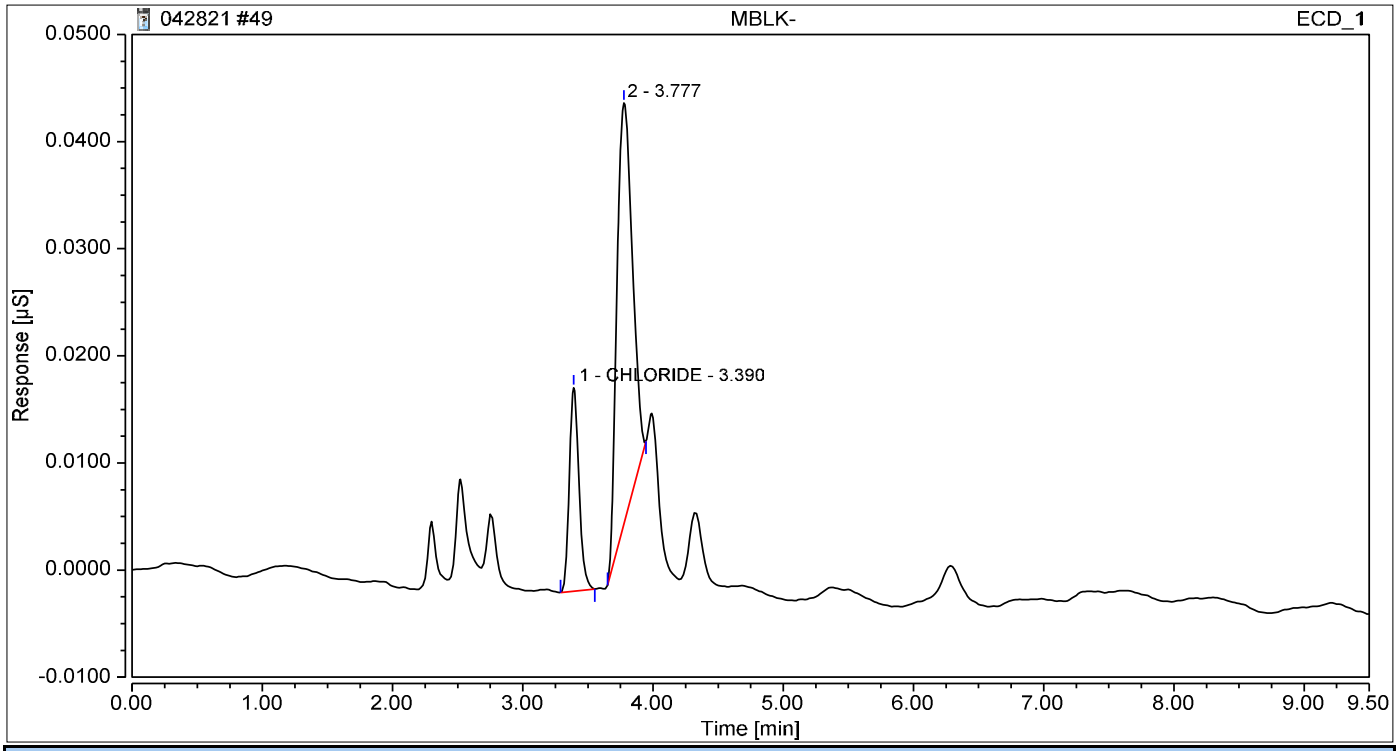
No.	Peak Name	Retention Time min	Area µS*min	Height µS	Relative Area %	Relative Height %	Amount
1	FLUORIDE	2.560	0.001	0.013	13.36	13.09	0.0274
2	CHLORIDE	3.397	0.003	0.036	28.43	37.07	0.1482
3		3.780	0.005	0.038	46.98	39.31	n.a.
n.a.	NITRITE,N	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
4	SULFATE	4.323	0.001	0.010	11.22	10.53	0.1947
n.a.	BROMIDE	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	NITRATE	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	CHLORATE	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	PHOSPHATE	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.011**	**0.096**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**MBLK-**	***Run Time (min):***	**9.50**
Vial Number:	**G5**	***Injection Volume:***	**10.00**
Injection Type:	**Unknown**	***Channel:***	**ECD_1**
Calibration Level:		***Wavelength:***	**n.a.**
Instrument Method:	**ICS2100ISO39**	***Bandwidth:***	**n.a.**
Processing Method:	**Anion Processing Method ISO39**	***Dilution Factor:***	**1.0000**
Injection Date/Time:	**28/Apr/21 19:59**	***Sample Weight:***	**1.0000**

Chromatogram



Integration Results

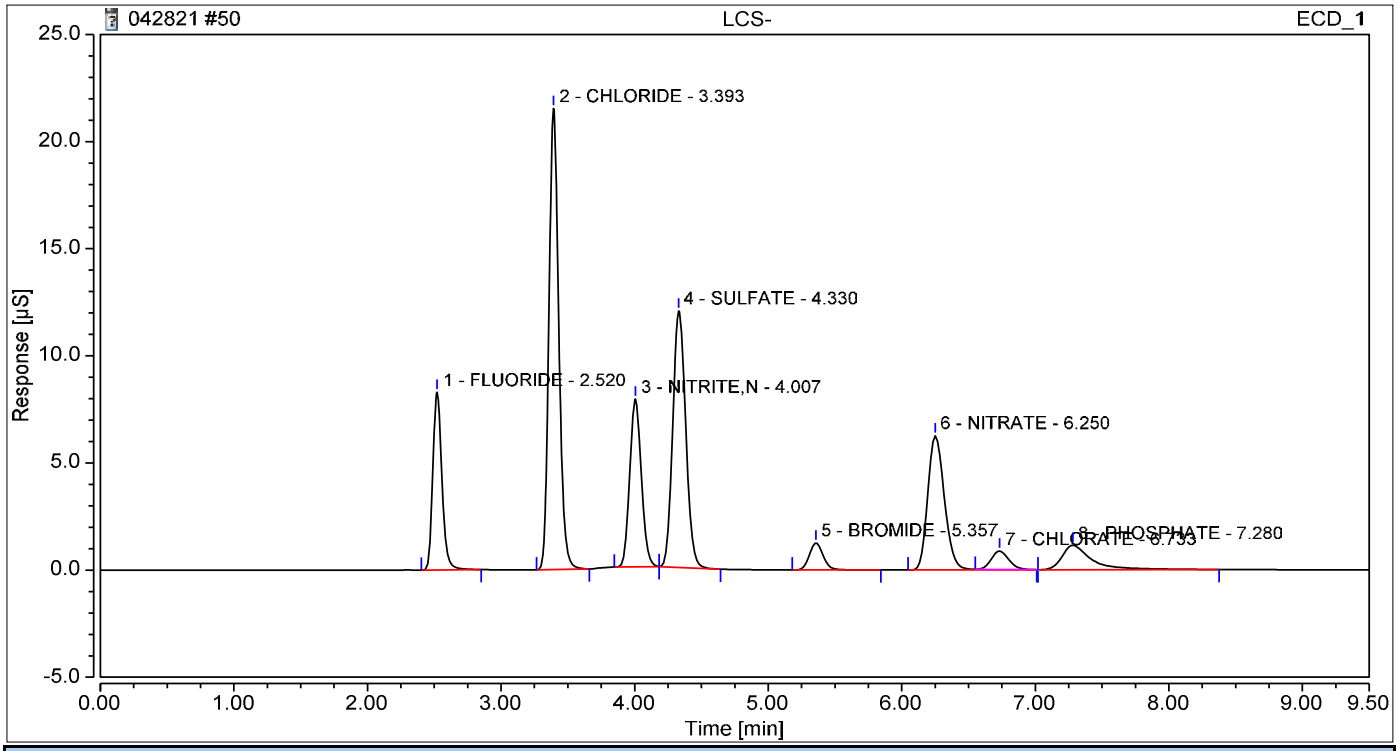
No.	Peak Name	Retention Time min	Area µS*min	Height µS	Relative Area %	Relative Height %	Amount
n.a.	FLUORIDE	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1	CHLORIDE	3.390	0.002	0.019	23.15	32.61	0.1318
2		3.777	0.005	0.039	76.85	67.39	n.a.
n.a.	NITRITE,N	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	SULFATE	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	BROMIDE	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	NITRATE	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	CHLORATE	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	PHOSPHATE	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.007**	**0.058**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**LCS-**	***Run Time (min):***	**9.50**
Vial Number:	**G2**	***Injection Volume:***	**10.00**
Injection Type:	**Unknown**	***Channel:***	**ECD_1**
Calibration Level:		***Wavelength:***	**n.a.**
Instrument Method:	**ICS2100ISO39**	***Bandwidth:***	**n.a.**
Processing Method:	**Anion Processing Method ISO39**	***Dilution Factor:***	**1.0000**
Injection Date/Time:	**28/Apr/21 20:12**	***Sample Weight:***	**1.0000**

Chromatogram



Integration Results

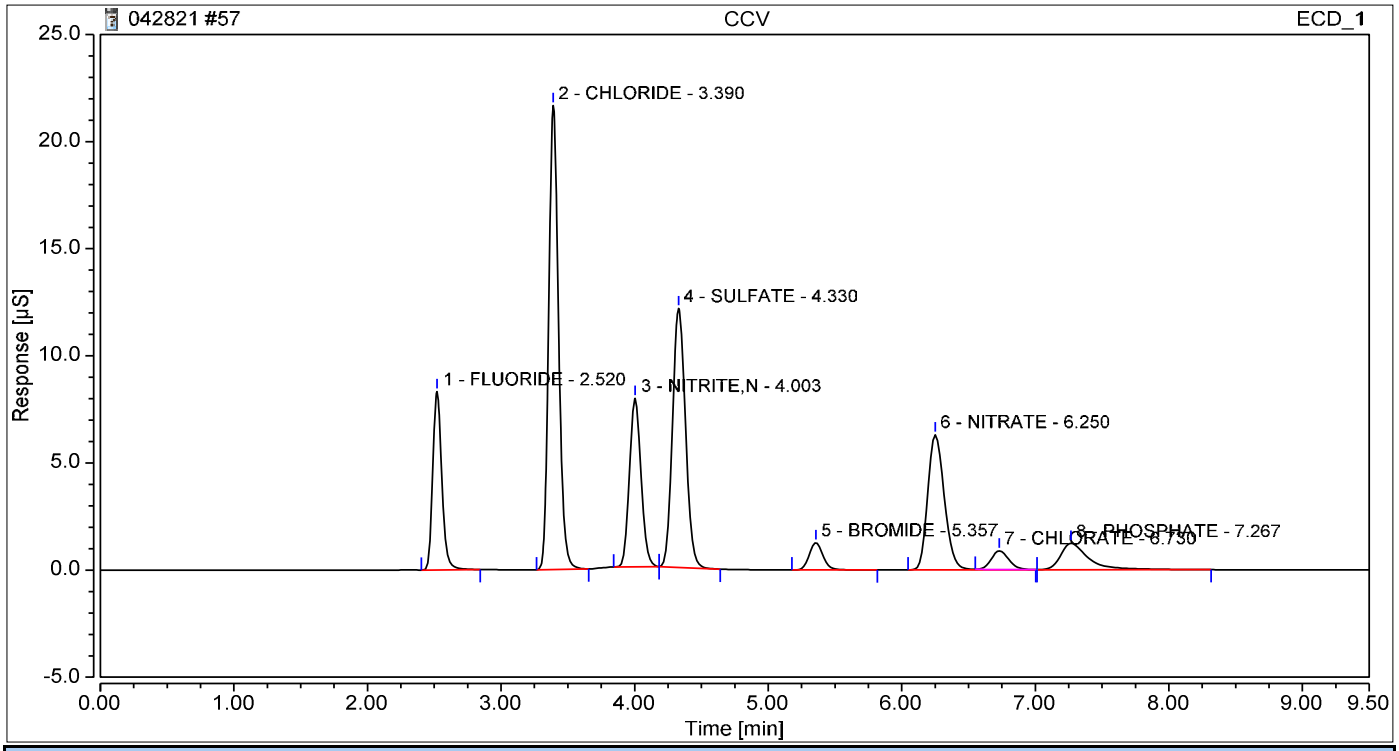
No.	Peak Name	Retention Time min	Area µS*min	Height µS	Relative Area %	Relative Height %	Amount
1	FLUORIDE	2.520	0.656	8.300	10.70	14.03	4.3425
2	CHLORIDE	3.393	1.842	21.524	30.02	36.39	19.7594
3	NITRITE,N	4.007	0.800	7.828	13.05	13.24	4.2363
4	SULFATE	4.330	1.349	11.968	22.00	20.24	19.4301
5	BROMIDE	5.357	0.149	1.260	2.44	2.13	3.8377
6	NITRATE	6.250	0.913	6.261	14.88	10.59	3.9466
7	CHLORATE	6.733	0.131	0.860	2.14	1.45	3.7192
8	PHOSPHATE	7.280	0.293	1.142	4.78	1.93	3.2681
Total:			**6.134**	**59.143**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV**	***Run Time (min):***	**9.50**
Vial Number:	**G1**	***Injection Volume:***	**10.00**
Injection Type:	**Unknown**	***Channel:***	**ECD_1**
Calibration Level:		***Wavelength:***	**n.a.**
Instrument Method:	**ICS2100ISO39**	***Bandwidth:***	**n.a.**
Processing Method:	**Anion Processing Method ISO39**	***Dilution Factor:***	**1.0000**
Injection Date/Time:	**28/Apr/21 21:42**	***Sample Weight:***	**1.0000**

Chromatogram



Integration Results

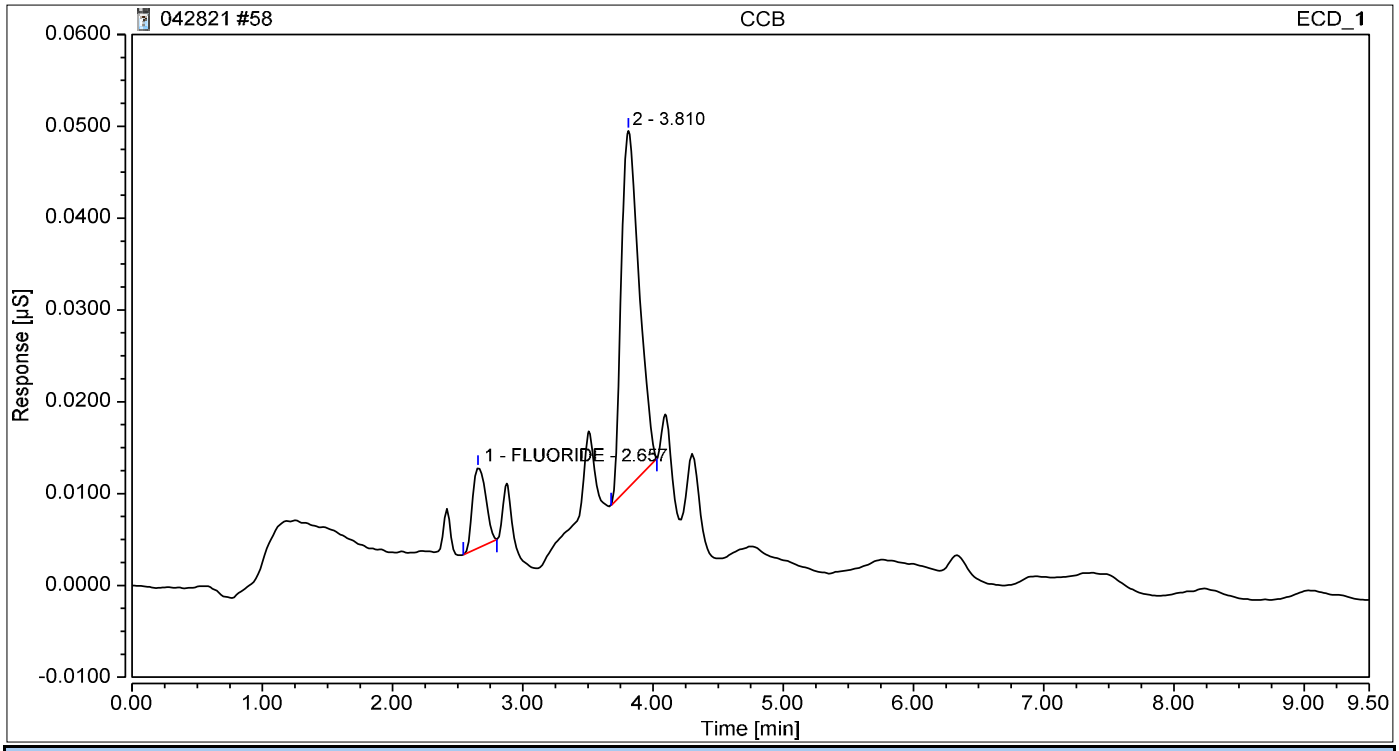
No.	Peak Name	Retention Time min	Area µS*min	Height µS	Relative Area %	Relative Height %	Amount
1	FLUORIDE	2.520	0.656	8.319	10.61	13.96	4.3385
2	CHLORIDE	3.390	1.852	21.656	29.96	36.33	19.8669
3	NITRITE,N	4.003	0.804	7.870	13.01	13.20	4.2570
4	SULFATE	4.330	1.364	12.083	22.07	20.27	19.6392
5	BROMIDE	5.357	0.151	1.269	2.44	2.13	3.8657
6	NITRATE	6.250	0.920	6.304	14.89	10.58	3.9797
7	CHLORATE	6.730	0.132	0.867	2.14	1.45	3.7482
8	PHOSPHATE	7.267	0.302	1.237	4.88	2.08	3.3599
Total:			**6.180**	**59.606**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB**	***Run Time (min):***	**9.50**
Vial Number:	**G4**	***Injection Volume:***	**10.00**
Injection Type:	**Unknown**	***Channel:***	**ECD_1**
Calibration Level:		***Wavelength:***	**n.a.**
Instrument Method:	**ICS2100ISO39**	***Bandwidth:***	**n.a.**
Processing Method:	**Anion Processing Method ISO39**	***Dilution Factor:***	**1.0000**
Injection Date/Time:	**28/Apr/21 21:55**	***Sample Weight:***	**1.0000**

Chromatogram



Integration Results

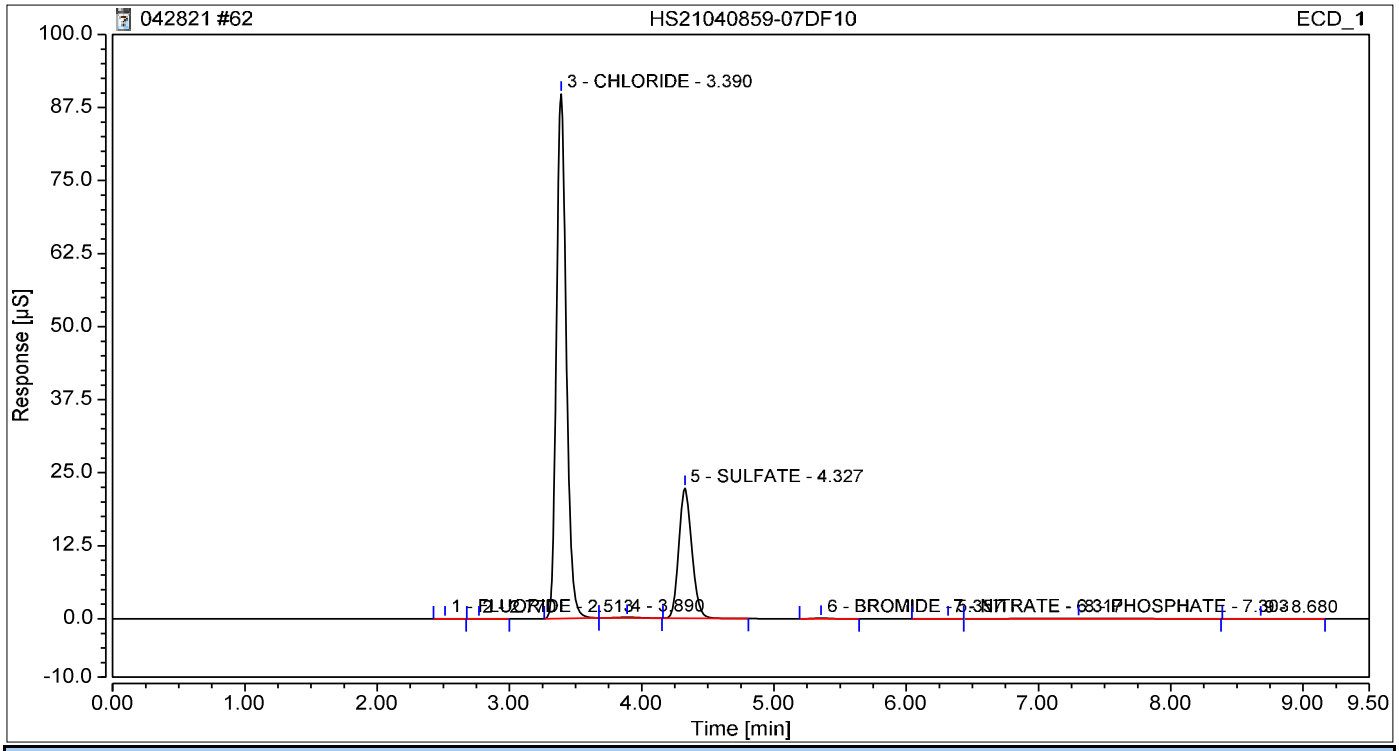
No.	Peak Name	Retention Time min	Area µS*min	Height µS	Relative Area %	Relative Height %	Amount
1	FLUORIDE	2.657	0.001	0.009	14.33	18.32	0.0244
n.a.	CHLORIDE	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
2		3.810	0.006	0.039	85.67	81.68	n.a.
n.a.	NITRITE,N	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	SULFATE	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	BROMIDE	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	NITRATE	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	CHLORATE	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	PHOSPHATE	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.007**	**0.048**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**HS21040859-07DF10**	***Run Time (min):***	**9.50**
Vial Number:	**GE4**	***Injection Volume:***	**10.00**
Injection Type:	**Unknown**	***Channel:***	**ECD_1**
Calibration Level:		***Wavelength:***	**n.a.**
Instrument Method:	**ICS2100ISO39**	***Bandwidth:***	**n.a.**
Processing Method:	**Anion Processing Method ISO39**	***Dilution Factor:***	**10.0000**
Injection Date/Time:	**28/Apr/21 22:46**	***Sample Weight:***	**1.0000**

Chromatogram



Integration Results

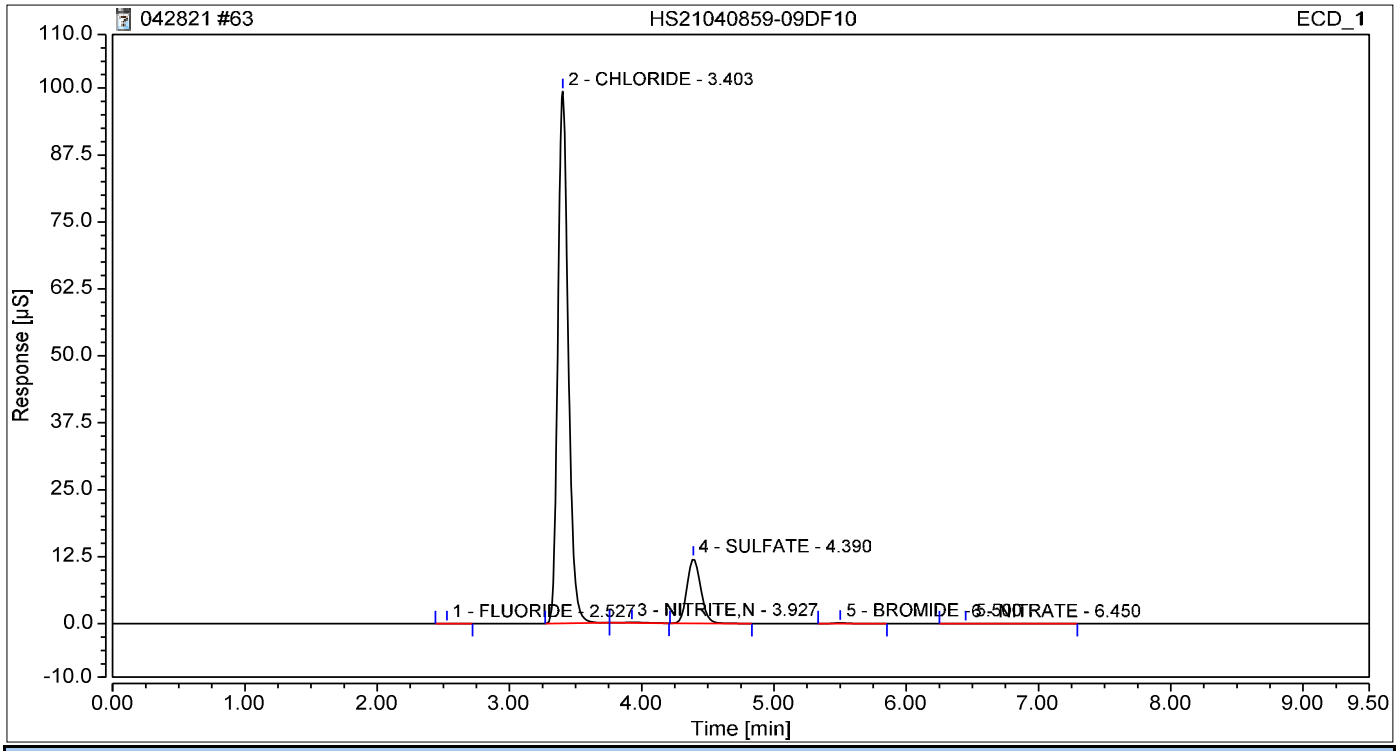
No.	Peak Name	Retention Time min	Area µS*min	Height µS	Relative Area %	Relative Height %	Amount
1	FLUORIDE	2.513	0.002	0.020	0.01	0.02	0.2757
2		2.770	0.001	0.017	0.01	0.02	n.a.
3	CHLORIDE	3.390	7.766	89.764	74.56	79.86	829.5902
4		3.890	0.031	0.138	0.29	0.12	n.a.
n.a.	NITRITE,N	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
5	SULFATE	4.327	2.560	22.294	24.58	19.83	367.1260
6	BROMIDE	5.357	0.013	0.111	0.13	0.10	3.8928
7	NITRATE	6.317	0.002	0.011	0.02	0.01	0.5001
n.a.	CHLORATE	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
8	PHOSPHATE	7.303	0.038	0.037	0.37	0.03	4.8473
9		8.680	0.002	0.005	0.02	0.00	n.a.
Total:			**10.416**	**112.396**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**HS21040859-09DF10**	***Run Time (min):***	**9.50**
Vial Number:	**GE5**	***Injection Volume:***	**10.00**
Injection Type:	**Unknown**	***Channel:***	**ECD_1**
Calibration Level:		***Wavelength:***	**n.a.**
Instrument Method:	**ICS2100ISO39**	***Bandwidth:***	**n.a.**
Processing Method:	**Anion Processing Method ISO39**	***Dilution Factor:***	**10.0000**
Injection Date/Time:	**28/Apr/21 22:59**	***Sample Weight:***	**1.0000**

Chromatogram



Integration Results

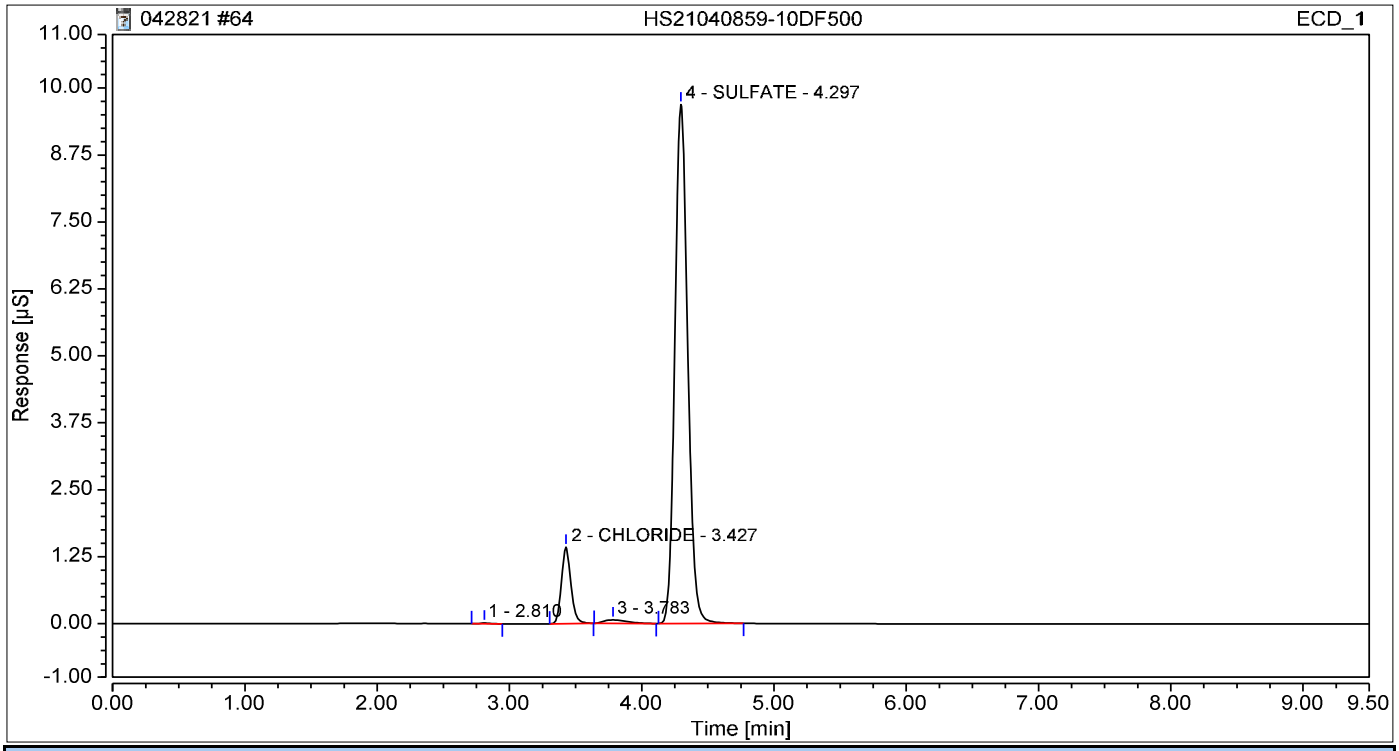
No.	Peak Name	Retention Time min	Area µS*min	Height µS	Relative Area %	Relative Height %	Amount
1	FLUORIDE	2.527	0.002	0.026	0.02	0.02	0.3082
2	CHLORIDE	3.403	9.051	99.314	85.82	88.97	966.6355
3	NITRITE,N	3.927	0.023	0.106	0.22	0.10	1.2212
4	SULFATE	4.390	1.449	12.047	13.74	10.79	208.5927
5	BROMIDE	5.500	0.017	0.130	0.16	0.12	4.6946
6	NITRATE	6.450	0.004	0.010	0.04	0.01	0.5671
n.a.	CHLORATE	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	PHOSPHATE	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**10.546**	**111.632**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**HS21040859-10DF500**	***Run Time (min):***	**9.50**
Vial Number:	**GE6**	***Injection Volume:***	**10.00**
Injection Type:	**Unknown**	***Channel:***	**ECD_1**
Calibration Level:		***Wavelength:***	**n.a.**
Instrument Method:	**ICS2100ISO39**	***Bandwidth:***	**n.a.**
Processing Method:	**Anion Processing Method ISO39**	***Dilution Factor:***	**500.0000**
Injection Date/Time:	**28/Apr/21 23:12**	***Sample Weight:***	**1.0000**

Chromatogram



Integration Results

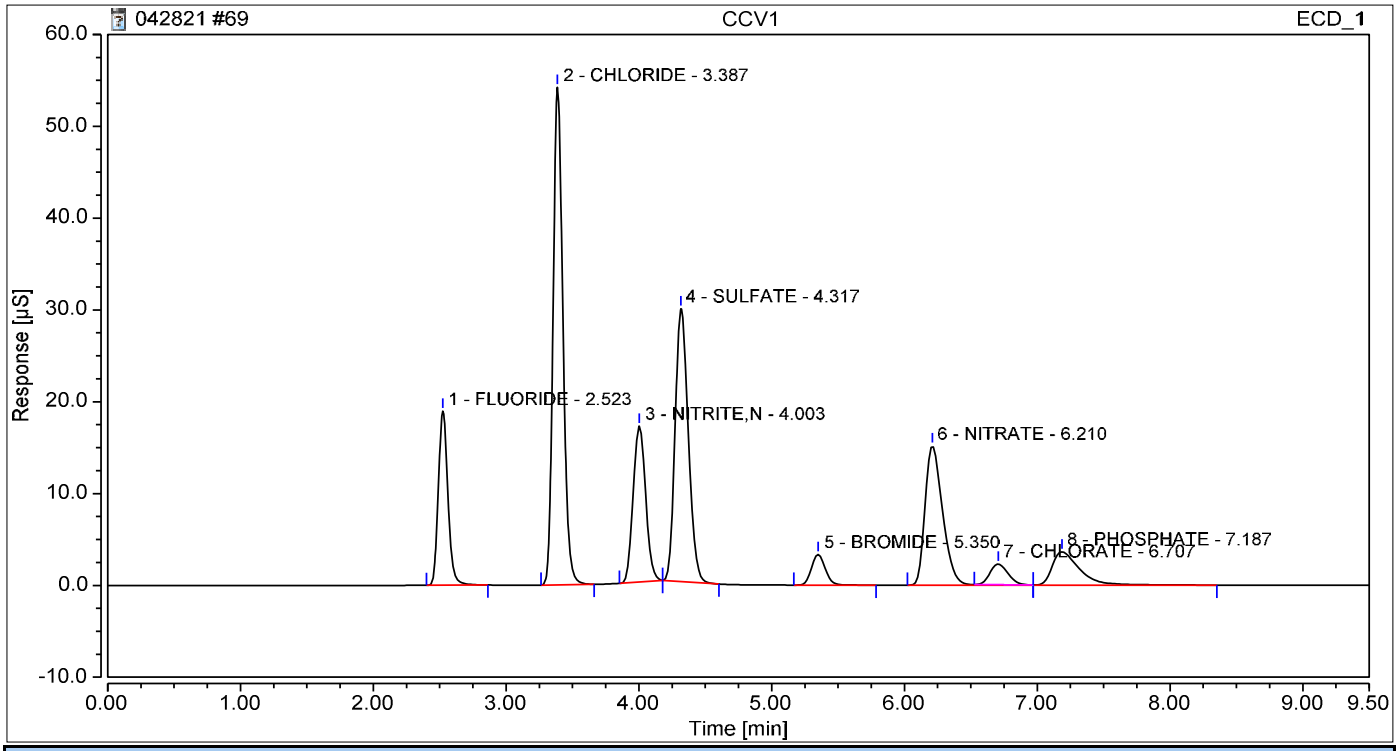
No.	Peak Name	Retention Time min	Area µS*min	Height µS	Relative Area %	Relative Height %	Amount
n.a.	FLUORIDE	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1		2.810	0.001	0.013	0.08	0.12	n.a.
2	CHLORIDE	3.427	0.120	1.427	9.74	12.75	694.8732
3		3.783	0.013	0.065	1.07	0.58	n.a.
n.a.	NITRITE,N	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
4	SULFATE	4.297	1.093	9.685	89.10	86.55	7887.5759
n.a.	BROMIDE	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	NITRATE	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	CHLORATE	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	PHOSPHATE	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**1.227**	**11.190**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV1**	***Run Time (min):***	**9.50**
Vial Number:	**G3**	***Injection Volume:***	**10.00**
Injection Type:	**Unknown**	***Channel:***	**ECD_1**
Calibration Level:		***Wavelength:***	**n.a.**
Instrument Method:	**ICS2100ISO39**	***Bandwidth:***	**n.a.**
Processing Method:	**Anion Processing Method ISO39**	***Dilution Factor:***	**1.0000**
Injection Date/Time:	**29/Apr/21 00:16**	***Sample Weight:***	**1.0000**

Chromatogram



Integration Results

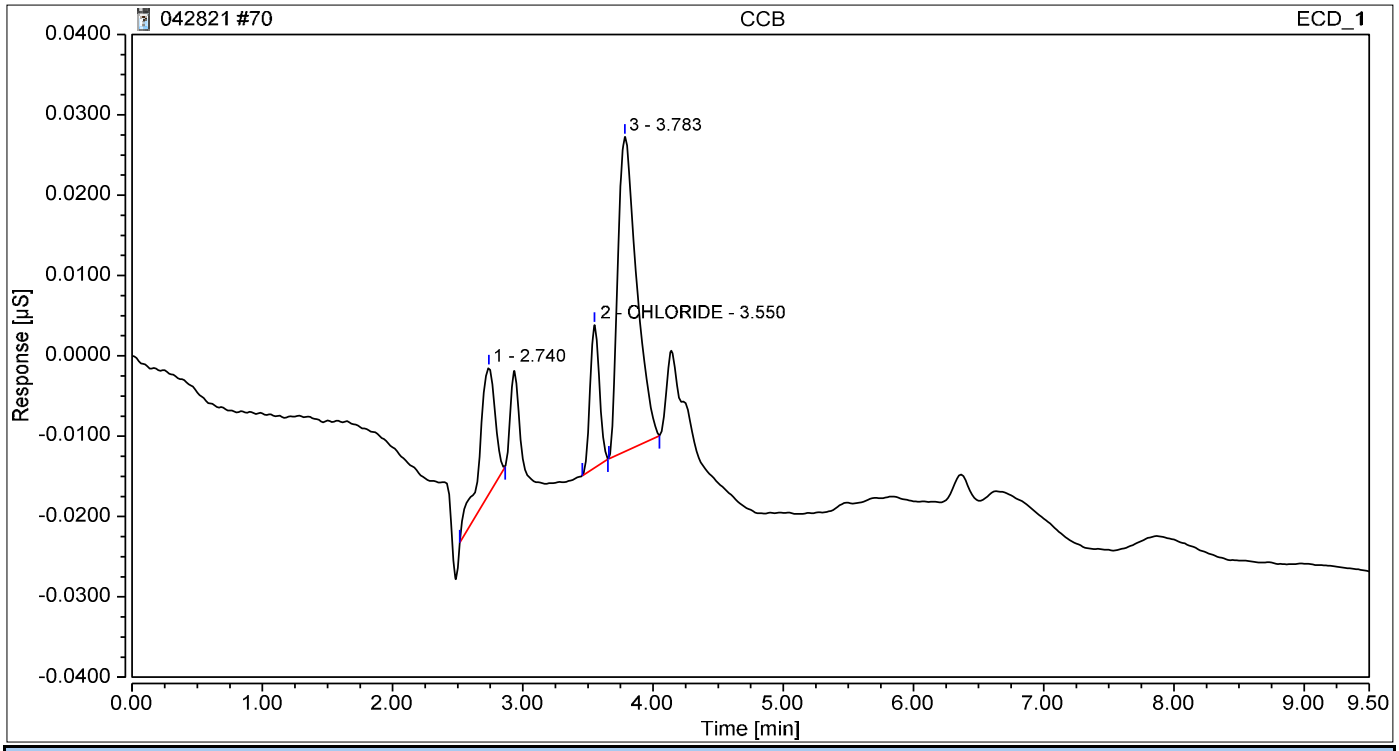
No.	Peak Name	Retention Time min	Area µS*min	Height µS	Relative Area %	Relative Height %	Amount
1	FLUORIDE	2.523	1.573	18.962	10.18	13.15	10.3883
2	CHLORIDE	3.387	4.659	54.205	30.15	37.58	49.8153
3	NITRITE,N	4.003	1.857	16.988	12.02	11.78	9.8333
4	SULFATE	4.317	3.406	29.705	22.04	20.59	48.7838
5	BROMIDE	5.350	0.399	3.335	2.58	2.31	10.1581
6	NITRATE	6.210	2.335	15.173	15.11	10.52	10.0350
7	CHLORATE	6.707	0.354	2.250	2.29	1.56	9.9451
8	PHOSPHATE	7.187	0.869	3.622	5.62	2.51	9.5368
Total:			**15.453**	**144.240**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB**	***Run Time (min):***	**9.50**
Vial Number:	**G7**	***Injection Volume:***	**10.00**
Injection Type:	**Unknown**	***Channel:***	**ECD_1**
Calibration Level:		***Wavelength:***	**n.a.**
Instrument Method:	**ICS2100ISO39**	***Bandwidth:***	**n.a.**
Processing Method:	**Anion Processing Method ISO39**	***Dilution Factor:***	**1.0000**
Injection Date/Time:	**29/Apr/21 00:29**	***Sample Weight:***	**1.0000**

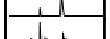
Chromatogram



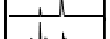
Integration Results

No.	Peak Name	Retention Time min	Area µS*min	Height µS	Relative Area %	Relative Height %	Amount
n.a.	FLUORIDE	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1		2.740	0.002	0.016	22.13	21.64	n.a.
2	CHLORIDE	3.550	0.001	0.018	14.20	24.48	0.1301
3		3.783	0.007	0.039	63.67	53.89	n.a.
n.a.	NITRITE,N	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	SULFATE	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	BROMIDE	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	NITRATE	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	CHLORATE	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	PHOSPHATE	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.010**	**0.073**	**100.00**	**100.00**	

Sequence: 042921
Last Update Operator: alshs.nouser

CD	Name	Comment	Type	Position	Dilution	Level	Instrument Method	Processing Method
	STD1		Calibration	BE1	1.00	1	Anions Program 06022020.1	Anions Processing Method
	STD2		Calibration	BE2	1.00	2	Anions Program 06022020.1	Anions Processing Method
	STD3		Calibration	BE3	1.00	3	Anions Program 06022020.1	Anions Processing Method
	STD4		Calibration	BE4	1.00	4	Anions Program 06022020.1	Anions Processing Method
	STD5		Calibration	BE5	1.00	5	Anions Program 06022020.1	Anions Processing Method
	STD6		Calibration	BE6	1.00	6	Anions Program 06022020.1	Anions Processing Method
	ICV		Unknown	BE7	1.00		Anions Program 06022020.1	Anions Processing Method
	ICB		Unknown	BE8	1.00		Anions Program 06022020.1	Anions Processing Method
	CCV		Unknown	R1	1.00		Anions Program 06022020.1	Anions Processing Method
	CCB		Unknown	R4	1.00		Anions Program 06022020.1	Anions Processing Method
	MBLK-		Unknown	R5	1.00		Anions Program 06022020.1	Anions Processing Method
	LCS-		Unknown	R2	1.00		Anions Program 06022020.1	Anions Processing Method
	HS21041522-01DF5		Unknown	GC1	5.00		Anions Program 06022020.1	Anions Processing Method
	HS21041522-01MSDF5		Unknown	GC2	5.00		Anions Program 06022020.1	Anions Processing Method
	HS21041522-01MSDDF5		Unknown	GC3	5.00		Anions Program 06022020.1	Anions Processing Method
	CCV1		Unknown	R3	1.00		Anions Program 06022020.1	Anions Processing Method
	CCB		Unknown	R7	1.00		Anions Program 06022020.1	Anions Processing Method
	CCV1		Unknown	R3	1.00		Anions Program 06022020.1	Anions Processing Method
	CCB		Unknown	R8	1.00		Anions Program 06022020.1	Anions Processing Method
	HS21040859-10DF20		Unknown	RE8	20.00		Anions Program 06022020.1	Anions Processing Method
	CCV		Unknown	R1	1.00		Anions Program 06022020.1	Anions Processing Method
	CCB		Unknown	R4	1.00		Anions Program 06022020.1	Anions Processing Method

Sequence: 042921
Last Update Operator: alshs.nouser

CD	Name	Volume	Status	Inject Time
	STD1	5.0	Finished	4/20/2021 9:54:11 AM -05:00
	STD2	5.0	Finished	4/20/2021 10:12:33 AM -05:00
	STD3	5.0	Finished	4/20/2021 10:30:56 AM -05:00
	STD4	5.0	Finished	4/20/2021 10:49:20 AM -05:00
	STD5	5.0	Finished	4/20/2021 11:07:48 AM -05:00
	STD6	5.0	Finished	4/20/2021 11:28:05 AM -05:00
	ICV	5.0	Finished	4/20/2021 11:46:31 AM -05:00
	ICB	5.0	Finished	4/20/2021 12:25:13 PM -05:00
	CCV	5.0	Finished	4/29/2021 9:24:26 AM -05:00
	CCB	5.0	Finished	4/29/2021 9:42:51 AM -05:00
	MBLK-	5.0	Finished	4/29/2021 10:03:11 AM -05:00
	LCS-	5.0	Finished	4/29/2021 10:21:38 AM -05:00
	HS21041522-01DF5	5.0	Finished	4/29/2021 10:41:54 AM -05:00
	HS21041522-01MSDF5	5.0	Finished	4/29/2021 11:00:17 AM -05:00
	HS21041522-01MSDDF5	5.0	Finished	4/29/2021 11:20:35 AM -05:00
	CCV1	5.0	Finished	4/29/2021 1:17:03 PM -05:00
	CCB	5.0	Finished	4/29/2021 1:53:50 PM -05:00
	CCV1	5.0	Finished	4/30/2021 5:26:25 AM -05:00
	CCB	5.0	Finished	4/30/2021 6:03:13 AM -05:00
	HS21040859-10DF20	5.0	Finished	4/30/2021 9:41:13 AM -05:00
	CCV	5.0	Finished	4/30/2021 9:59:39 AM -05:00
	CCB	5.0	Finished	4/30/2021 10:36:59 AM -05:00

Sequence: 042921
Injection #6: STD6

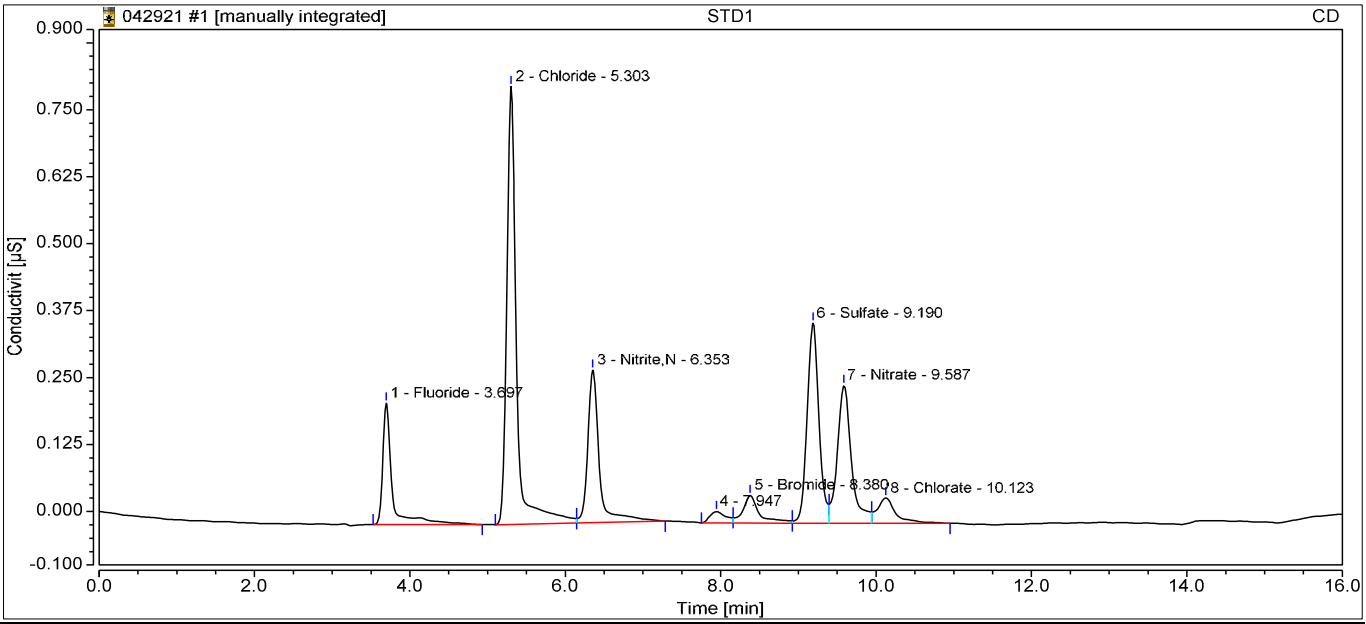
Calibration

Peak No.	Peak Name	Cal.Type	Eval.Type	Number of Points	Rel.Std.Dev. %	Coeff.of Determination	C0 (Offset)	C1 (Slope)	C2 (Curve)
1	*Fluoride*	*Lin, WithOffset, 1/*	*Area*	*6*	*18.7874*	*0.99804*	*0.0037*	*0.3228*	*0.0000*
2	Chloride	Lin, WithOffset, 1/	Area	6	4.4845	0.99989	0.0060	0.2088	0.0000
3	Nitrite,N	Lin, WithOffset, 1/	Area	6	23.2258	0.99660	0.0167	0.4015	0.0000
5	Bromide	Lin, WithOffset, 1/	Area	6	13.6081	0.99885	0.0031	0.0812	0.0000
6	Sulfate	Lin, WithOffset, 1/	Area	6	4.6885	0.99989	-0.0143	0.1515	0.0000
7	Nitrate	Lin, WithOffset, 1/	Area	6	5.2526	0.99986	-0.0011	0.5393	0.0000
8	Chlorate	Lin, WithOffset, 1/	Area	6	20.9413	0.99684	0.0071	0.0945	0.0000
11	Phosphate	Lin, WithOffset, 1/	Area	5	9.6125	0.99905	-0.0521	0.2007	0.0000
Maximum					**23.2258**	0.99989			
Minimum					4.4845	**0.99660**			

1 STD1

Sample Name:	**STD1**	*Injection Volume:*	**5.00**
Vial Number:	**BE1**	*Channel:*	**CD**
Sample Type:	**Calibration Standard**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**04/20/2021 09:54**	*Sample Weight:*	**1.0000**

Run Time:



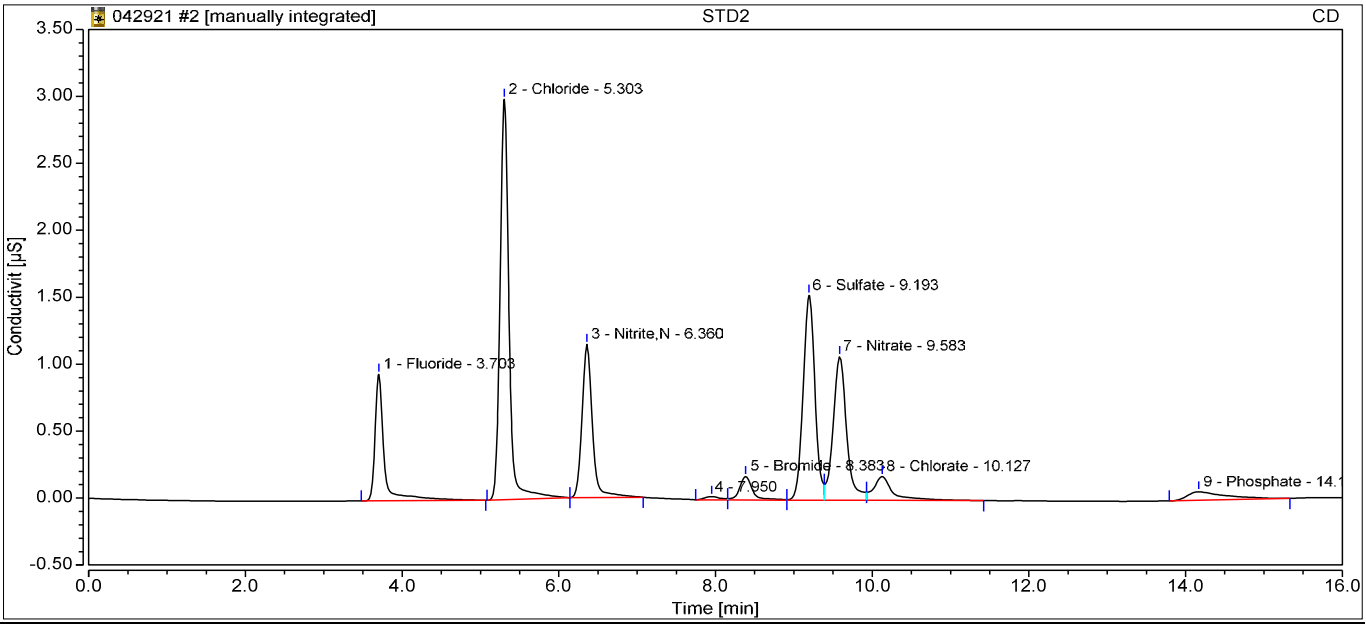
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.70	Fluoride	BMB	0.032	0.0880	0.0880	1.0000
2	5.30	Chloride	BM *	0.118	0.5381	0.5381	1.0000
3	6.35	Nitrite,N	MB*	0.049	0.0802	0.0802	1.0000
5	8.38	Bromide	M	0.013	0.1188	0.1188	1.0000
6	9.19	Sulfate	M	0.066	0.5285	0.5285	1.0000
7	9.59	Nitrate	M	0.054	0.1022	0.1022	1.0000
8	10.12	Chlorate	MB	0.013	0.0640	0.0640	1.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	1.0000
Total:			**0.000**	**0.345**		**1.52**	

2 STD2

Sample Name:	**STD2**	*Injection Volume:*	**5.00**
Vial Number:	**BE2**	*Channel:*	**CD**
Sample Type:	**Calibration Standard**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**04/20/2021 10:12**	*Sample Weight:*	**1.0000**

Run Time:



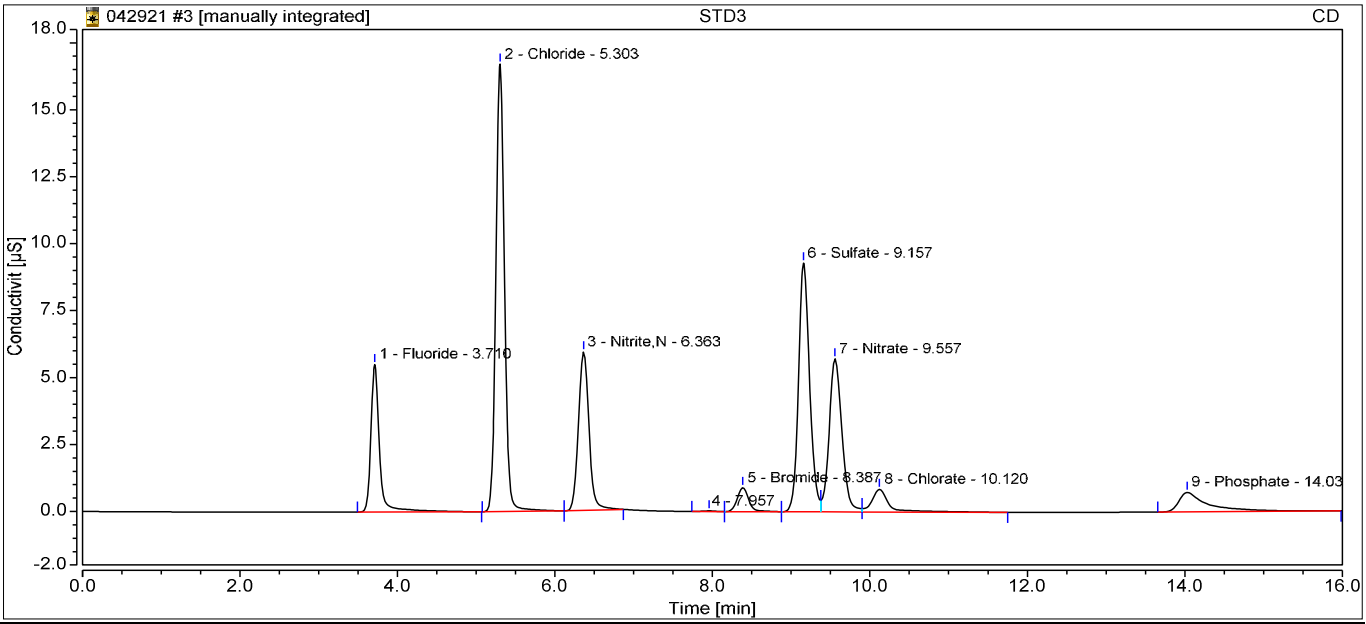
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.70	Fluoride	BMB	0.129	0.3886	0.3886	1.0000
2	5.30	Chloride	BMb*	0.393	1.8537	1.8537	1.0000
3	6.36	Nitrite,N	bMB*	0.176	0.3975	0.3975	1.0000
5	8.38	Bromide	M	0.033	0.3714	0.3714	1.0000
6	9.19	Sulfate	M	0.266	1.8512	1.8512	1.0000
7	9.58	Nitrate	M	0.213	0.3976	0.3976	1.0000
8	10.13	Chlorate	MB	0.052	0.4776	0.4776	1.0000
9	14.17	Phosphate	BMB	0.036	0.4401	0.4401	1.0000
Total:			**0.000**	**1.300**		**6.18**	

3 STD3

Sample Name:	**STD3**	*Injection Volume:*	**5.00**
Vial Number:	**BE3**	*Channel:*	**CD**
Sample Type:	**Calibration Standard**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**04/20/2021 10:30**	*Sample Weight:*	**1.0000**

Run Time:



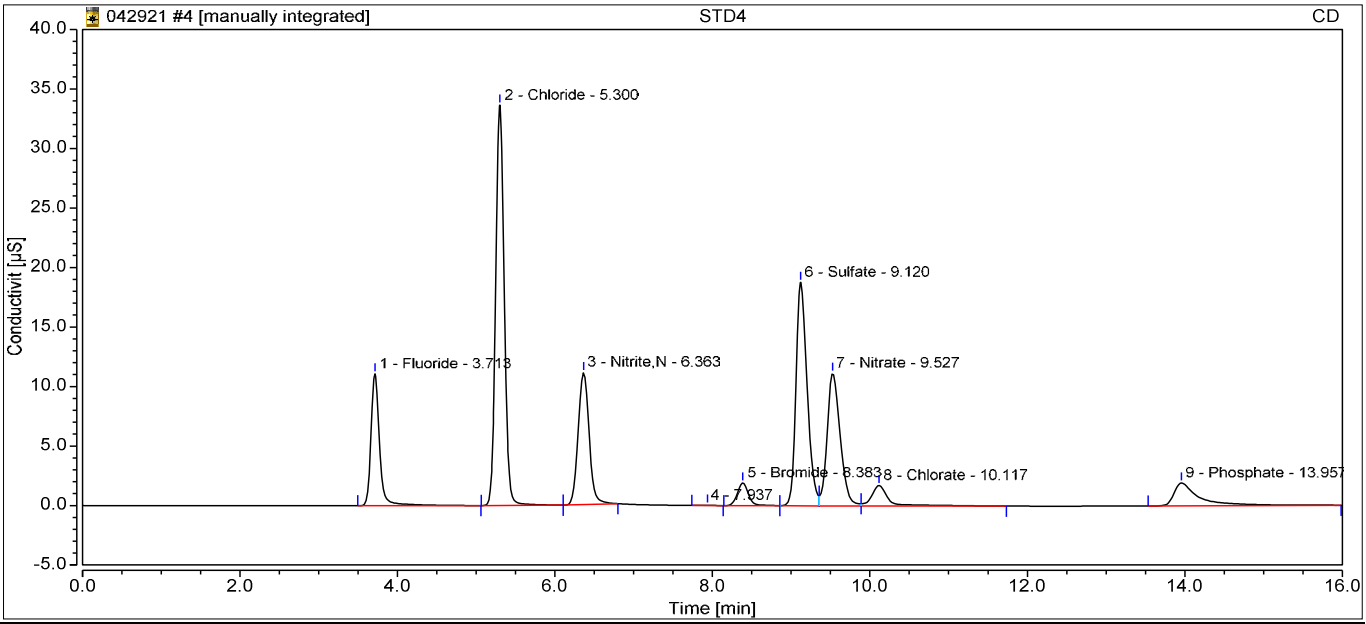
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.71	Fluoride	BMB	0.701	2.1586	2.1586	1.0000
2	5.30	Chloride	BMb*	2.082	9.9444	9.9444	1.0000
3	6.36	Nitrite,N	bMB*	0.918	2.2461	2.2461	1.0000
5	8.39	Bromide	M	0.152	1.8301	1.8301	1.0000
6	9.16	Sulfate	M	1.509	10.0487	10.0487	1.0000
7	9.56	Nitrate	M	1.072	1.9895	1.9895	1.0000
8	10.12	Chlorate	MB	0.216	2.2126	2.2126	1.0000
9	14.03	Phosphate	BMB	0.322	1.8648	1.8648	1.0000
Total:			**0.000**	**6.971**		**32.29**	

4 STD4

Sample Name:	**STD4**	*Injection Volume:*	**5.00**
Vial Number:	**BE4**	*Channel:*	**CD**
Sample Type:	**Calibration Standard**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**04/20/2021 10:49**	*Sample Weight:*	**1.0000**

Run Time:

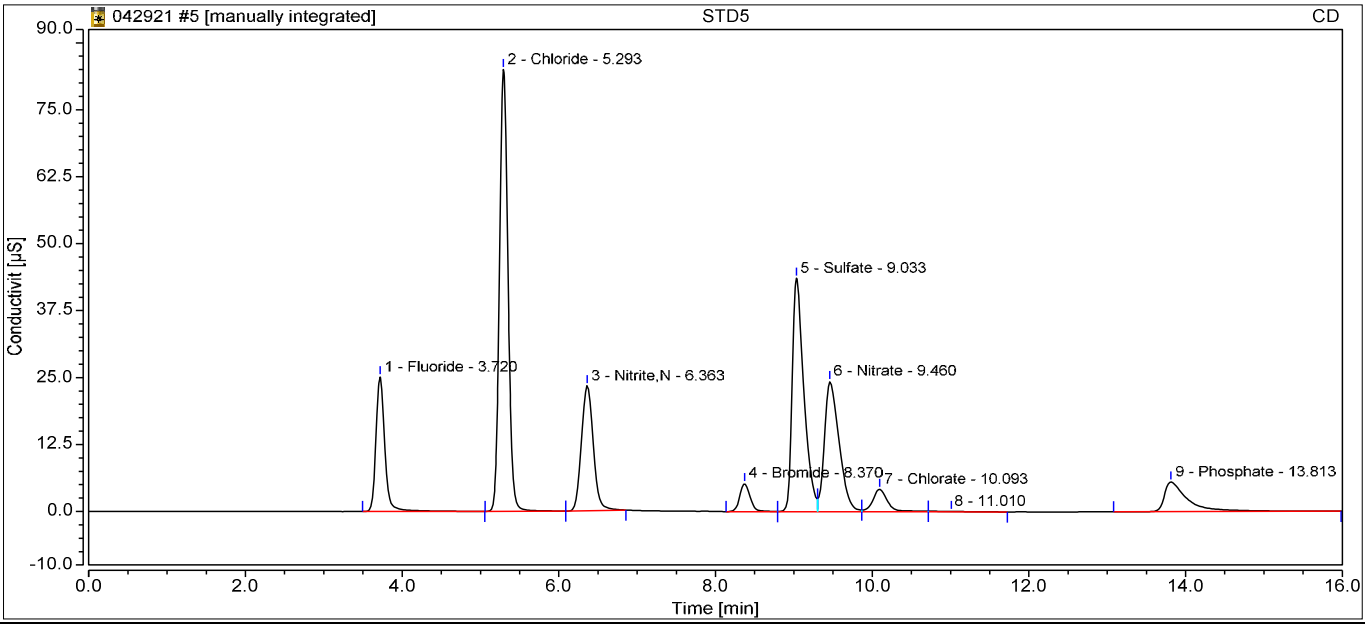


Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.71	Fluoride	BMB	1.403	4.3336	4.3336	1.0000
2	5.30	Chloride	BMb*	4.203	20.1063	20.1063	1.0000
3	6.36	Nitrite,N	bMB*	1.787	4.4092	4.4092	1.0000
5	8.38	Bromide	BM	0.313	3.8179	3.8179	1.0000
6	9.12	Sulfate	M	3.063	20.3070	20.3070	1.0000
7	9.53	Nitrate	M	2.148	3.9846	3.9846	1.0000
8	10.12	Chlorate	MB	0.424	4.4085	4.4085	1.0000
9	13.96	Phosphate	BMB	0.719	3.8422	3.8422	1.0000
Total:			**0.000**	**14.060**		**65.21**	

5 STD5			
Sample Name:	**STD5**	*Injection Volume:*	**5.00**
Vial Number:	**BE5**	*Channel:*	**CD**
Sample Type:	**Calibration Standard**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**04/20/2021 11:07**	*Sample Weight:*	**1.0000**

Run Time:



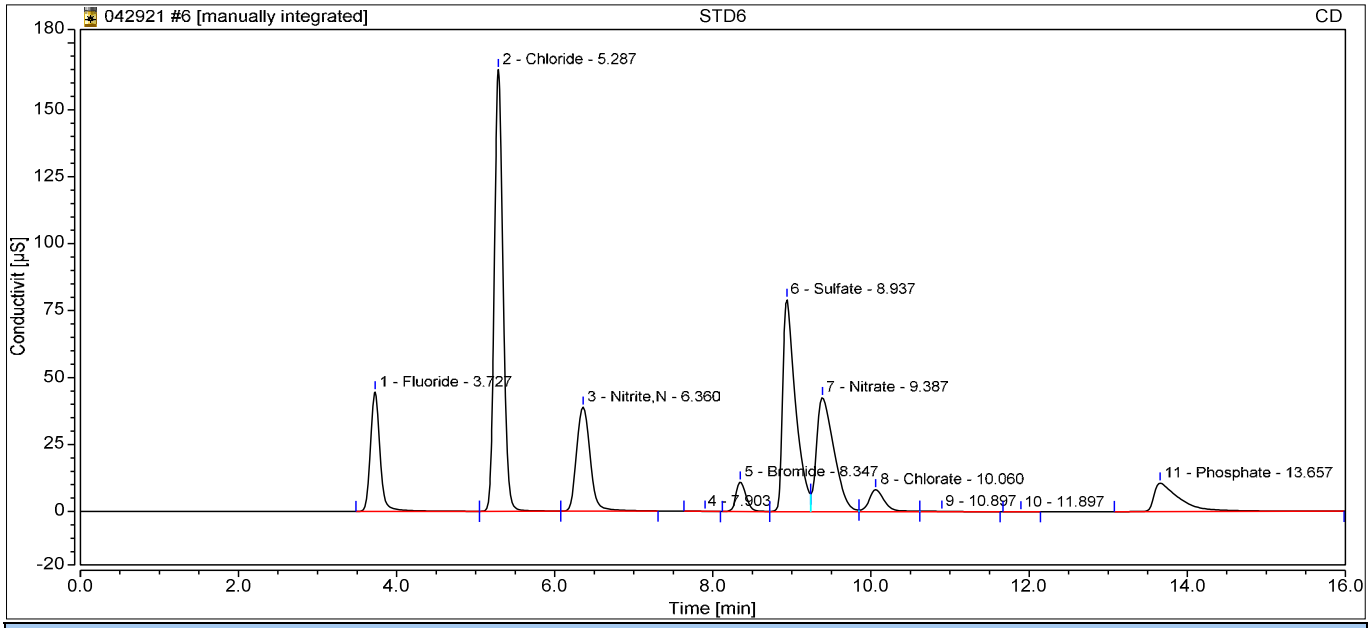
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.72	Fluoride	BMB	3.290	10.1807	10.1807	1.0000
2	5.29	Chloride	BMb*	10.372	49.6551	49.6551	1.0000
3	6.36	Nitrite,N	bMB*	4.114	10.2053	10.2053	1.0000
4	8.37	Bromide	BM	0.808	9.9156	9.9156	1.0000
5	9.03	Sulfate	M	7.557	49.9615	49.9615	1.0000
6	9.46	Nitrate	M	5.301	9.8318	9.8318	1.0000
7	10.09	Chlorate	M	0.936	9.8243	9.8243	1.0000
9	13.81	Phosphate	BMB	1.932	9.8822	9.8822	1.0000
Total:			**0.000**	**34.310**		**159.46**	

6 STD6

Sample Name:	**STD6**	*Injection Volume:*	**5.00**
Vial Number:	**BE6**	*Channel:*	**CD**
Sample Type:	**Calibration Standard**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**04/20/2021 11:28**	*Sample Weight:*	**1.0000**

Run Time:



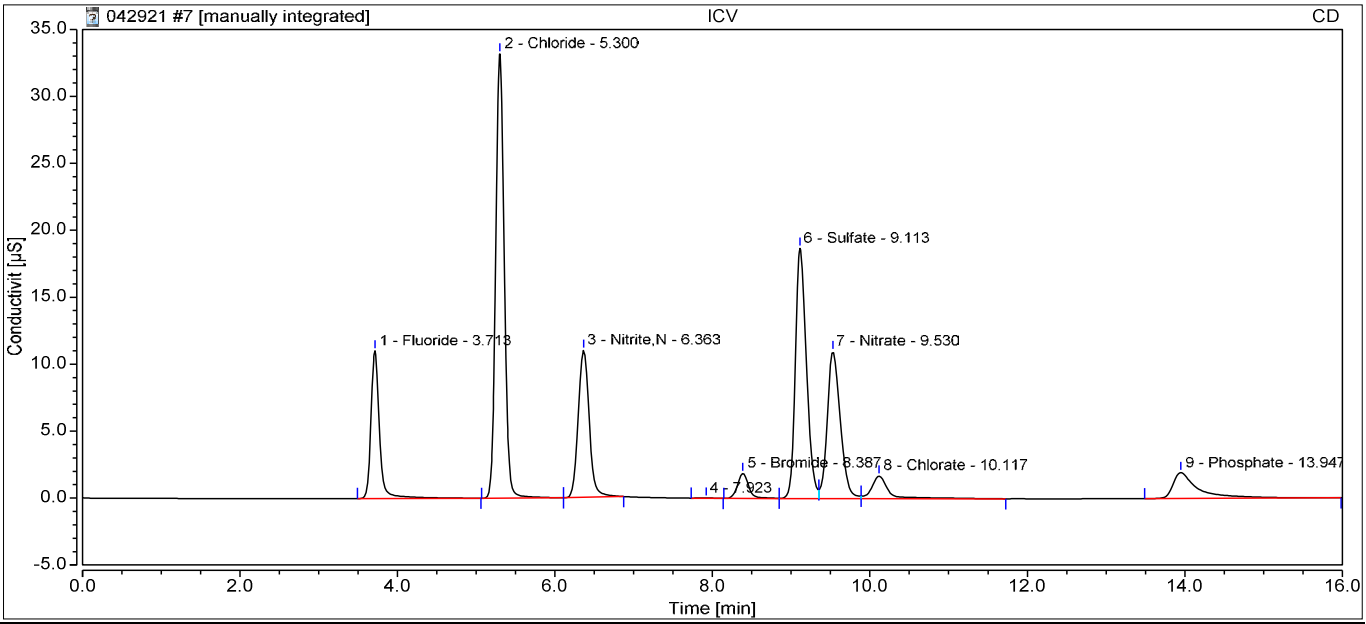
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.73	Fluoride	BMB	6.250	19.3505	19.3505	1.0000
2	5.29	Chloride	BMb*	20.966	100.4024	100.4024	1.0000
3	6.36	Nitrite,N	bMB*	7.710	19.1617	19.1617	1.0000
5	8.35	Bromide	BM	1.662	20.4462	20.4462	1.0000
6	8.94	Sulfate	M	15.110	99.8032	99.8032	1.0000
7	9.39	Nitrate	M	10.889	20.1943	20.1943	1.0000
8	10.06	Chlorate	M	1.852	19.5130	19.5130	1.0000
11	13.66	Phosphate	BMB	4.037	20.3707	20.3707	1.0000
Total:			**0.000**	**68.477**		**319.24**	

7 ICV

Sample Name:	**ICV**	*Injection Volume:*	**5.00**
Vial Number:	**BE7**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**04/20/2021 11:46**	*Sample Weight:*	**1.0000**

Run Time:



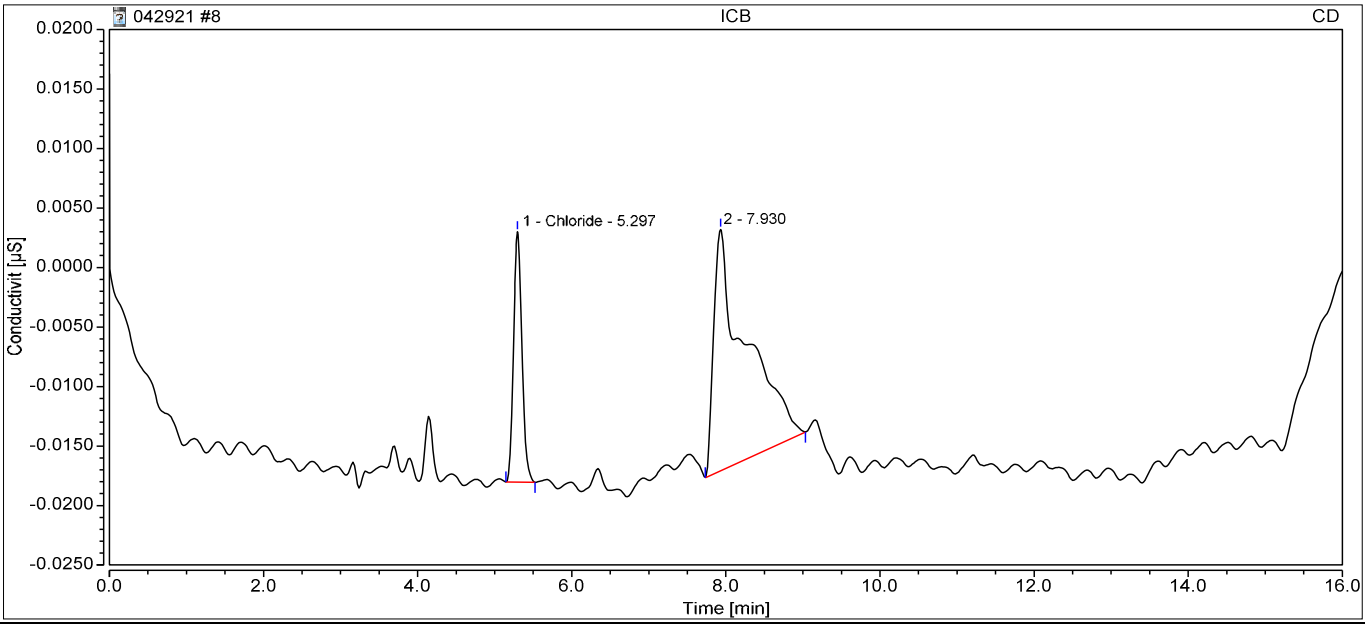
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.71	Fluoride	BMB	1.384	4.2770	4.2770	1.0000
2	5.30	Chloride	BMb*	4.144	19.8205	19.8205	1.0000
3	6.36	Nitrite,N	bMB*	1.777	4.3839	4.3839	1.0000
5	8.39	Bromide	BM	0.309	3.7640	3.7640	1.0000
6	9.11	Sulfate	M	3.024	20.0510	20.0510	1.0000
7	9.53	Nitrate	M	2.119	3.9305	3.9305	1.0000
8	10.12	Chlorate	MB	0.422	4.3868	4.3868	1.0000
9	13.95	Phosphate	BMB	0.725	3.8706	3.8706	1.0000
Total:			**0.000**	**13.903**		**64.48**	

8 ICB

Sample Name:	**ICB**	*Injection Volume:*	**5.00**
Vial Number:	**BE8**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**04/20/2021 12:25**	*Sample Weight:*	**1.0000**

Run Time:



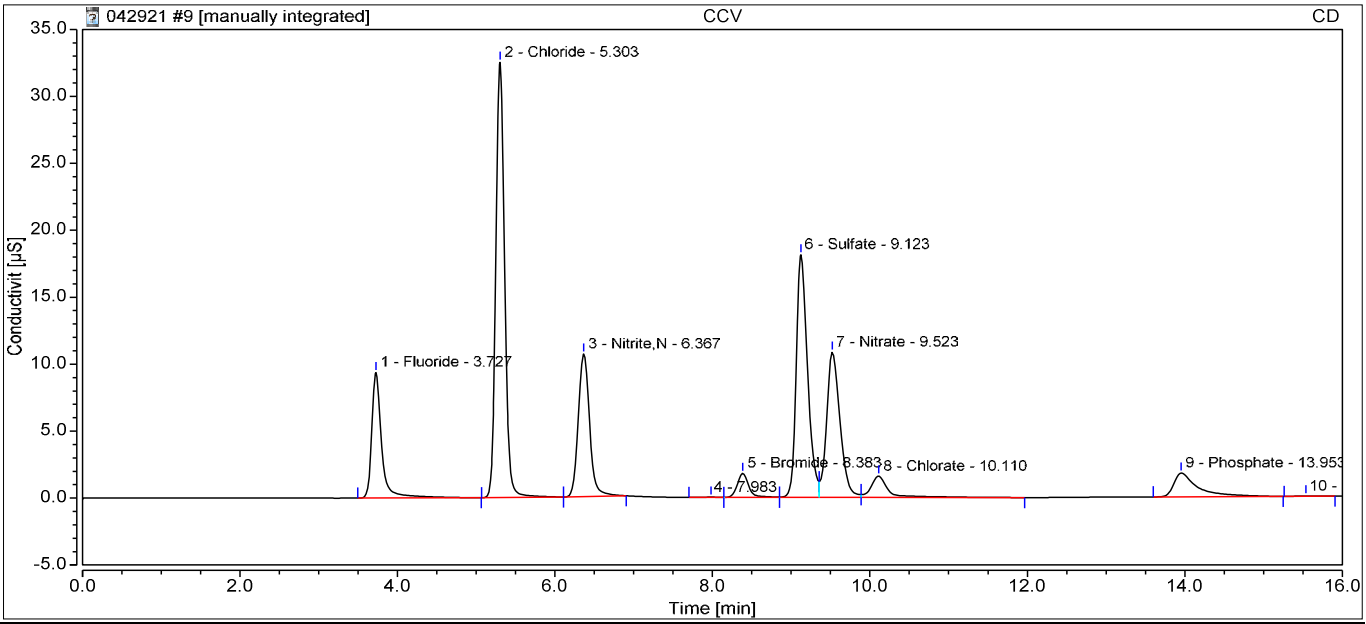
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	1.0000
1	5.30	Chloride	BMB	0.003	n.a.	n.a.	1.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Nitrate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	1.0000
Total:			**0.000**	**0.003**		**0.00**	

9 CCV

Sample Name:	**CCV**	*Injection Volume:*	**5.00**
Vial Number:	**R1**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**04/29/2021 09:24**	*Sample Weight:*	**1.0000**

Run Time:



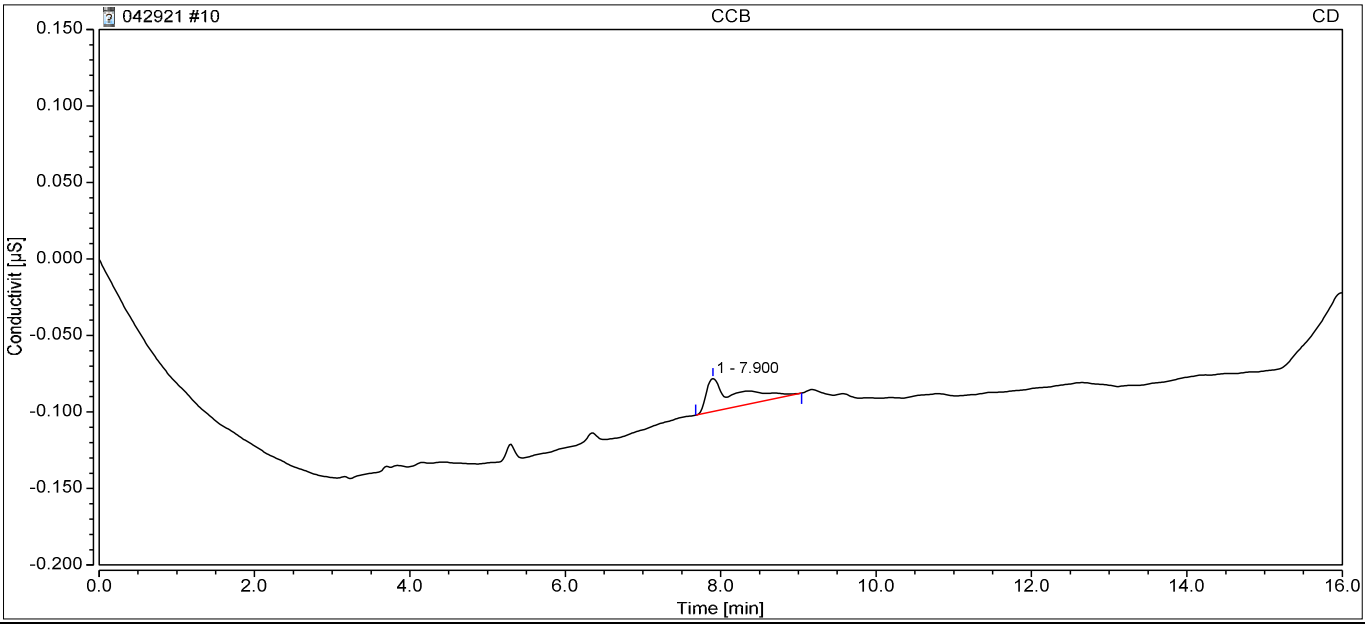
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.73	Fluoride	BMB	1.367	4.2231	4.2231	1.0000
2	5.30	Chloride	BMb*	4.184	20.0128	20.0128	1.0000
3	6.37	Nitrite,N	bMB*	1.768	4.3634	4.3634	1.0000
5	8.38	Bromide	M	0.306	3.7323	3.7323	1.0000
6	9.12	Sulfate	M	3.004	19.9155	19.9155	1.0000
7	9.52	Nitrate	M	2.148	3.9843	3.9843	1.0000
8	10.11	Chlorate	MB	0.416	4.3194	4.3194	1.0000
9	13.95	Phosphate	BMB	0.627	3.3841	3.3841	1.0000
Total:			**0.000**	**13.819**		**63.93**	

10 CCB

Sample Name:	**CCB**	*Injection Volume:*	**5.00**
Vial Number:	**R4**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**04/29/2021 09:42**	*Sample Weight:*	**1.0000**

Run Time:



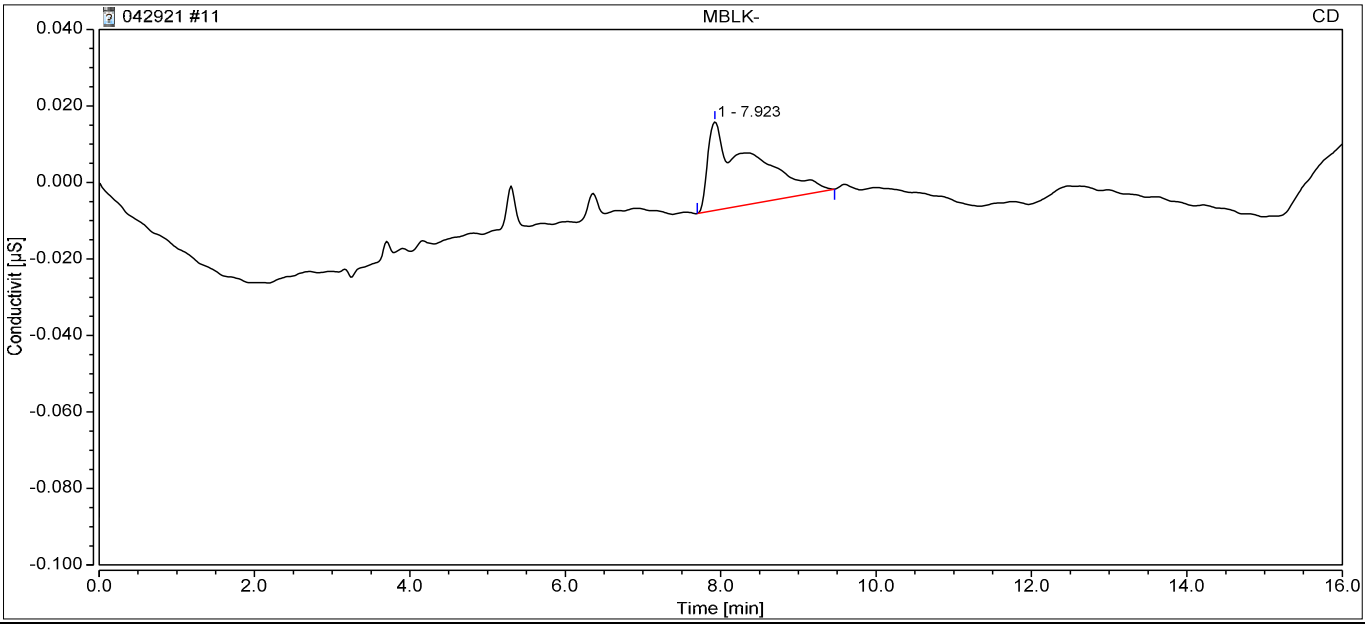
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Chloride	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Nitrate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	1.0000
Total:			**0.000**	**0.000**		**0.00**	

11 MBLK-

Sample Name:	**MBLK-**	*Injection Volume:*	**5.00**
Vial Number:	**R5**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**04/29/2021 10:03**	*Sample Weight:*	**1.0000**

Run Time:



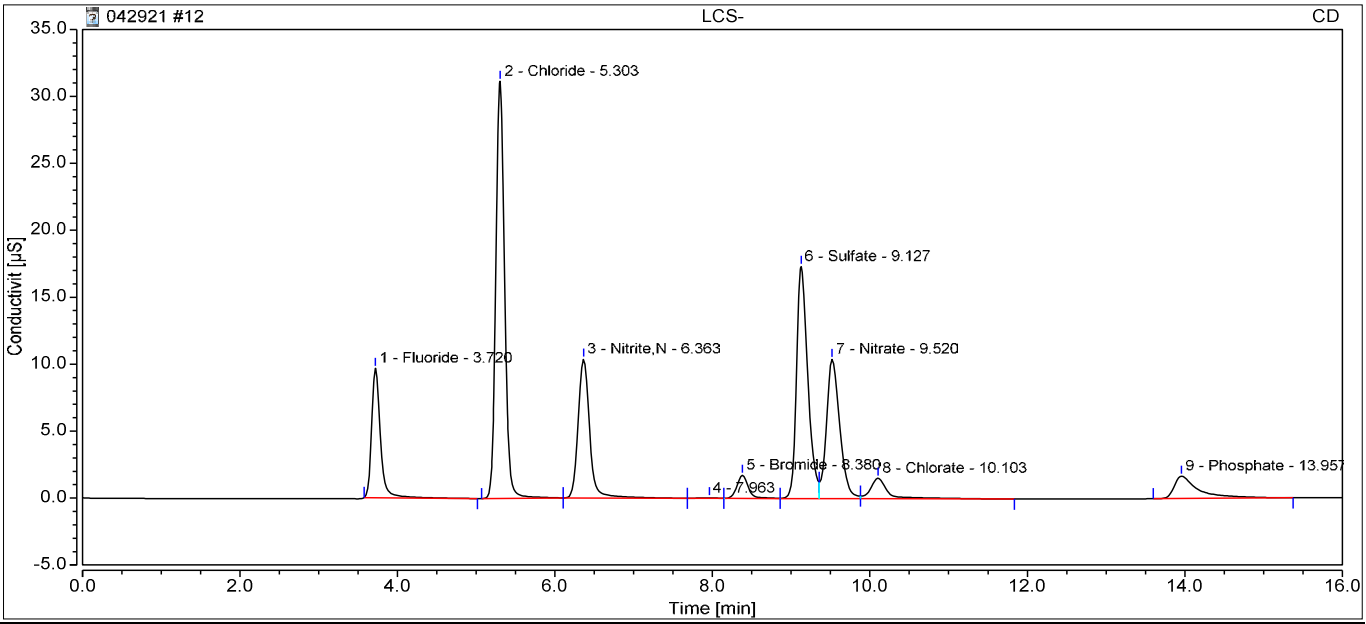
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Chloride	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Nitrate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	1.0000
Total:			**0.000**	**0.000**		**0.00**	

12 LCS-

Sample Name:	**LCS-**	*Injection Volume:*	**5.00**
Vial Number:	**R2**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**04/29/2021 10:21**	*Sample Weight:*	**1.0000**

Run Time:



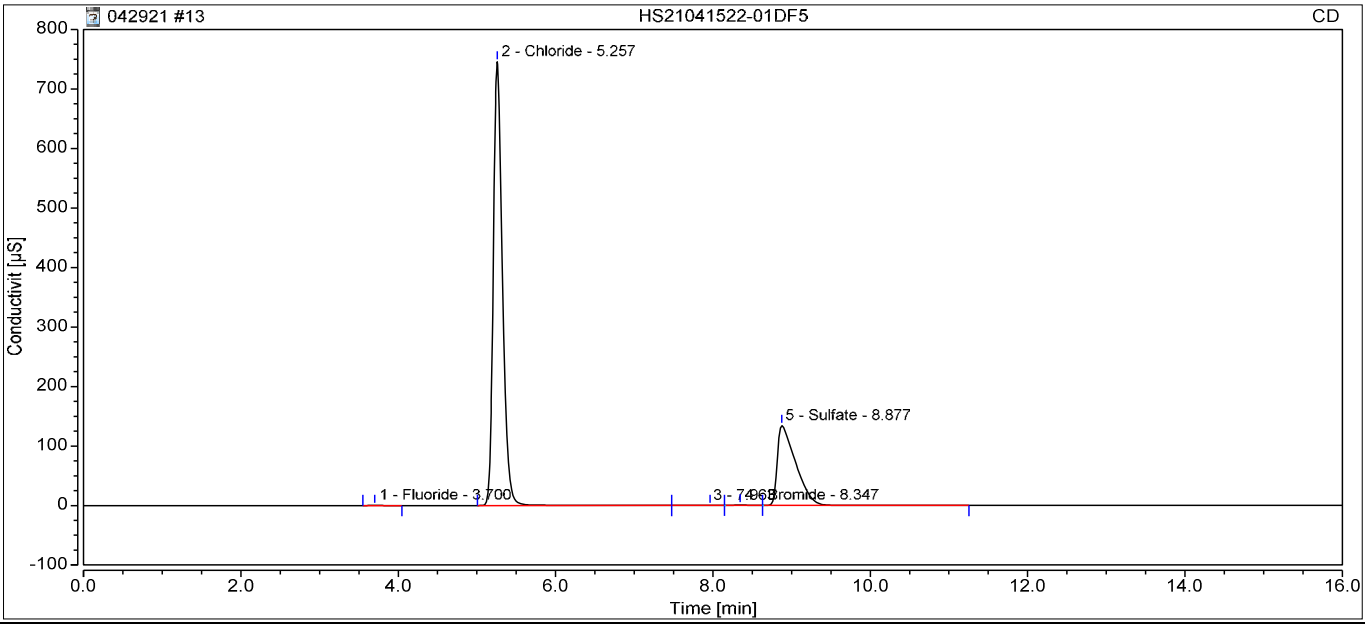
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.72	Fluoride	BMB	1.245	3.8462	3.8462	1.0000
2	5.30	Chloride	BMB	3.989	19.0802	19.0802	1.0000
3	6.36	Nitrite,N	BMB	1.760	4.3418	4.3418	1.0000
5	8.38	Bromide	M	0.290	3.5345	3.5345	1.0000
6	9.13	Sulfate	M	2.860	18.9699	18.9699	1.0000
7	9.52	Nitrate	M	2.046	3.7952	3.7952	1.0000
8	10.10	Chlorate	MB	0.395	4.1023	4.1023	1.0000
9	13.96	Phosphate	BMB	0.603	3.2631	3.2631	1.0000
Total:			**0.000**	**13.188**		**60.93**	

13 HS21041522-01DF5

Sample Name:	**HS21041522-01DF5**	*Injection Volume:*	**5.00**
Vial Number:	**GC1**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**5.0000**
Recording Time:	**04/29/2021 10:41**	*Sample Weight:*	**1.0000**

Run Time:



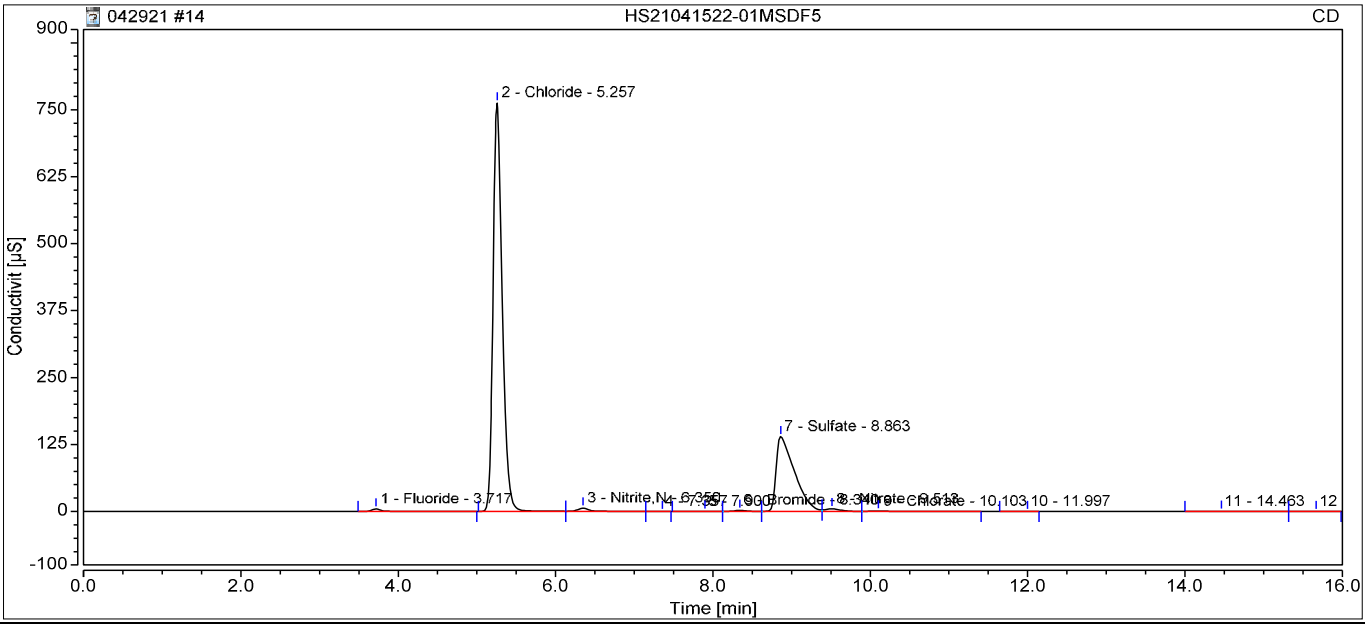
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.70	Fluoride	BMB	0.008	0.0119	0.0597	5.0000
2	5.26	Chloride	BMB	100.108	479.5022	2397.5111	5.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	5.0000
4	8.35	Bromide	M	0.175	2.1199	10.5994	5.0000
5	8.88	Sulfate	MB	36.243	239.2534	1196.2668	5.0000
n.a.	n.a.	Nitrate	n.a.	n.a.	n.a.	n.a.	5.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	5.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	5.0000
Total:			**0.000**	**136.534**		**3604.44**	

14 HS21041522-01MSDF5

Sample Name:	**HS21041522-01MSDF5**	*Injection Volume:*	**5.00**
Vial Number:	**GC2**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**5.0000**
Recording Time:	**04/29/2021 11:00**	*Sample Weight:*	**1.0000**

Run Time:



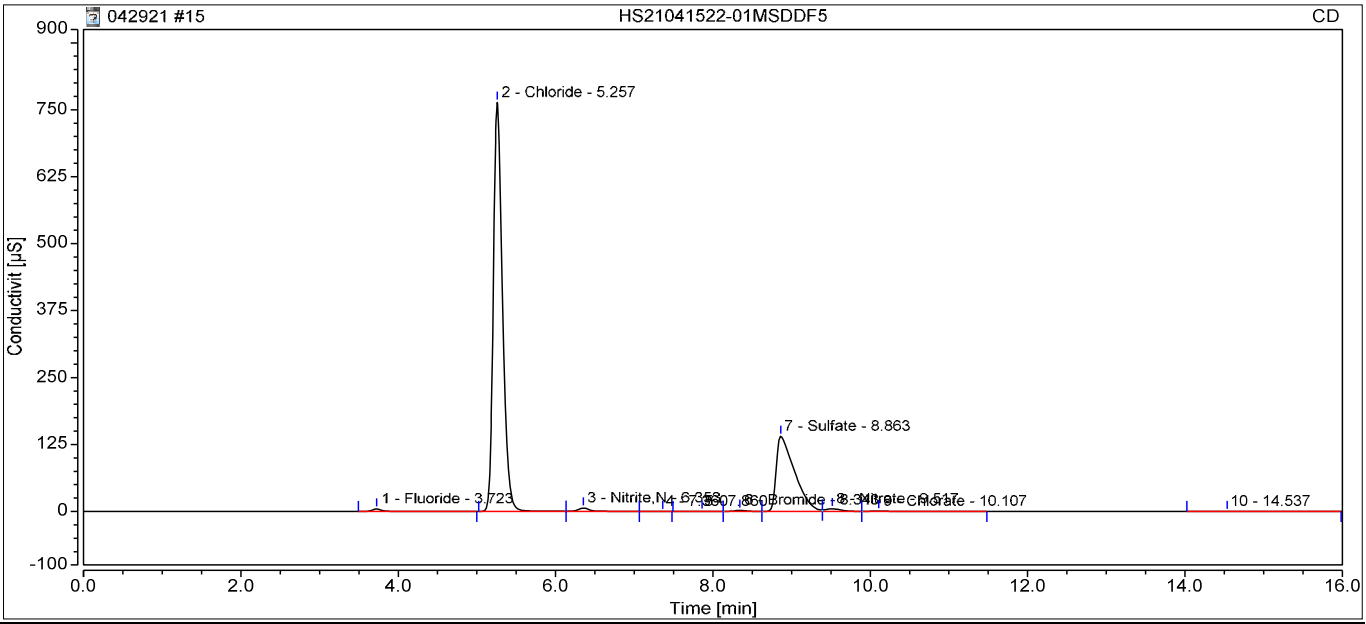
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.72	Fluoride	BMB	0.684	2.1080	10.5400	5.0000
2	5.26	Chloride	BMB	102.689	491.8648	2459.3242	5.0000
3	6.35	Nitrite,N	BMB	0.936	2.2894	11.4469	5.0000
6	8.34	Bromide	M	0.340	4.1487	20.7433	5.0000
7	8.86	Sulfate	M	37.684	248.7584	1243.7918	5.0000
8	9.51	Nitrate	M	1.137	2.1113	10.5563	5.0000
9	10.10	Chlorate	MB	0.227	2.3261	11.6307	5.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	5.0000
Total:			**0.000**	**143.696**		**3768.03**	

15 HS21041522-01MSDDF5

Sample Name:	**HS21041522-01MSDDF5**	*Injection Volume:*	**5.00**
Vial Number:	**GC3**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**5.0000**
Recording Time:	**04/29/2021 11:20**	*Sample Weight:*	**1.0000**

Run Time:



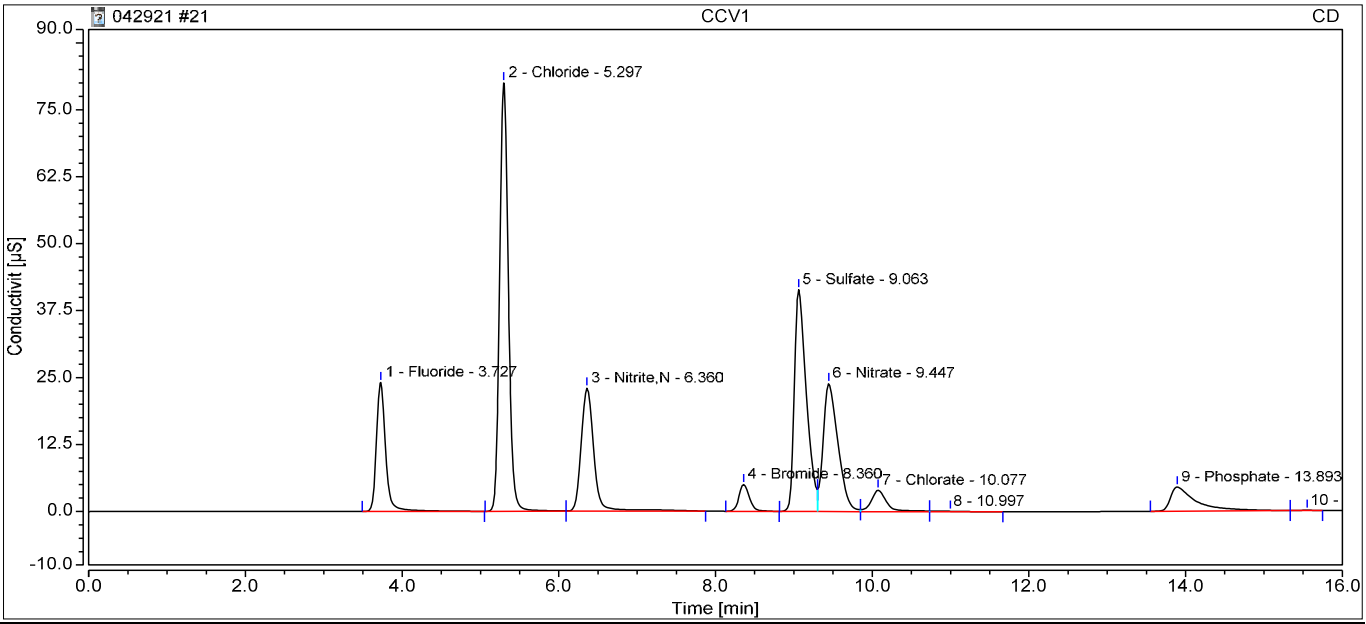
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.72	Fluoride	BMB	0.689	2.1240	10.6201	5.0000
2	5.26	Chloride	BMB	102.854	492.6567	2463.2833	5.0000
3	6.35	Nitrite,N	BMB	0.945	2.3120	11.5601	5.0000
6	8.34	Bromide	M	0.331	4.0407	20.2035	5.0000
7	8.86	Sulfate	M	37.759	249.2550	1246.2750	5.0000
8	9.52	Nitrate	M	1.142	2.1203	10.6016	5.0000
9	10.11	Chlorate	MB	0.222	2.2768	11.3840	5.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	5.0000
Total:			**0.000**	**143.943**		**3773.93**	

21 CCV1

Sample Name:	**CCV1**	*Injection Volume:*	**5.00**
Vial Number:	**R3**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**04/29/2021 13:17**	*Sample Weight:*	**1.0000**

Run Time:



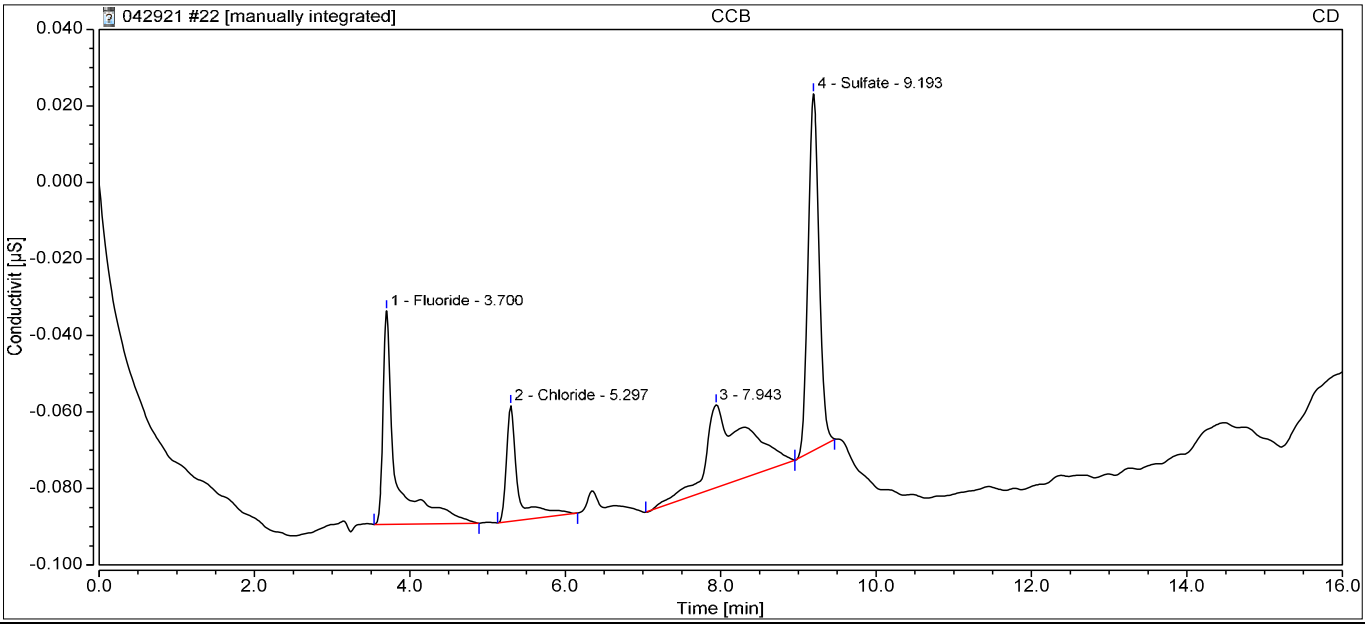
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.73	Fluoride	BMB	3.282	10.1563	10.1563	1.0000
2	5.30	Chloride	BMB	10.300	49.3073	49.3073	1.0000
3	6.36	Nitrite,N	BMB	4.310	10.6939	10.6939	1.0000
4	8.36	Bromide	BMB	0.781	9.5905	9.5905	1.0000
5	9.06	Sulfate	BM	7.387	48.8368	48.8368	1.0000
6	9.45	Nitrate	M	5.241	9.7205	9.7205	1.0000
7	10.08	Chlorate	M	0.923	9.6839	9.6839	1.0000
9	13.89	Phosphate	BMB	1.704	8.7478	8.7478	1.0000
Total:			**0.000**	**33.927**		**156.74**	

22 CCB

Sample Name:	**CCB**	*Injection Volume:*	**5.00**
Vial Number:	**R7**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**04/29/2021 13:53**	*Sample Weight:*	**1.0000**

Run Time:



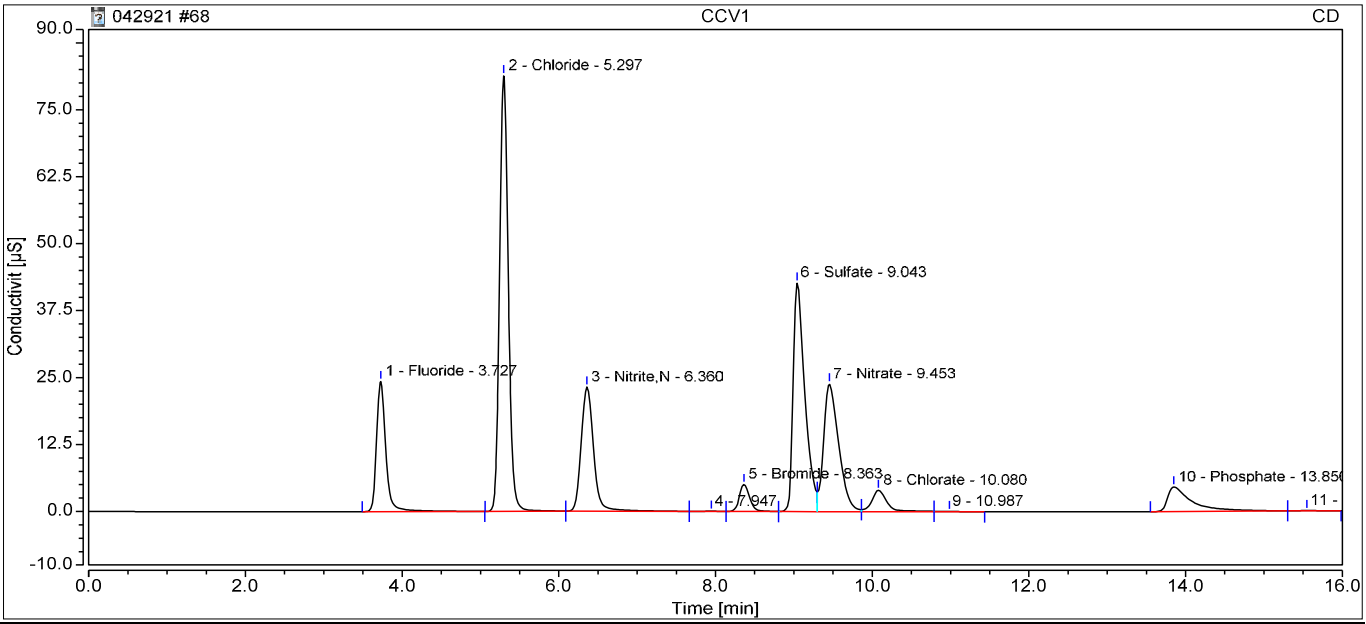
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.70	Fluoride	BMB	0.011	0.0220	0.0220	1.0000
2	5.30	Chloride	BMB	0.005	n.a.	n.a.	1.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	1.0000
4	9.19	Sulfate	bM *	0.015	0.1946	0.1946	1.0000
n.a.	n.a.	Nitrate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	1.0000
Total:			**0.000**	**0.031**		**0.22**	

68 CCV1

Sample Name:	**CCV1**	*Injection Volume:*	**5.00**
Vial Number:	**R3**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**04/30/2021 05:26**	*Sample Weight:*	**1.0000**

Run Time:



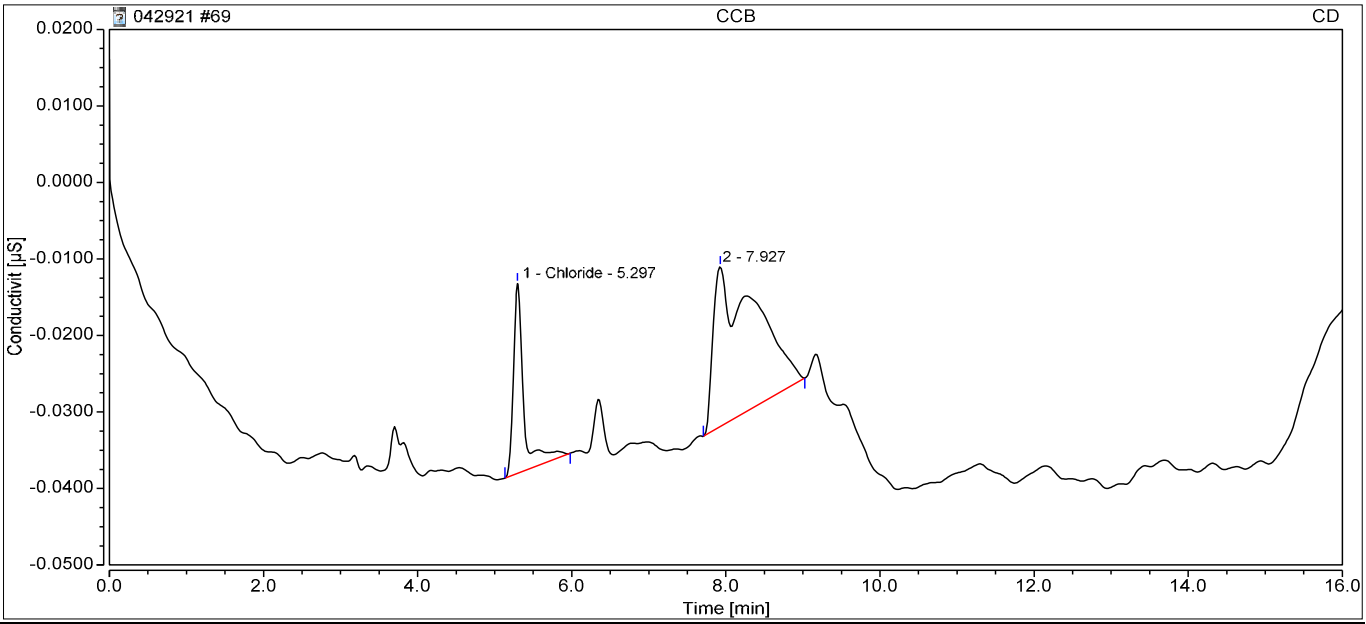
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.73	Fluoride	BMB	3.330	10.3033	10.3033	1.0000
2	5.30	Chloride	BMB	10.472	50.1336	50.1336	1.0000
3	6.36	Nitrite,N	BMB	4.248	10.5397	10.5397	1.0000
5	8.36	Bromide	BM	0.773	9.4895	9.4895	1.0000
6	9.04	Sulfate	M	7.431	49.1284	49.1284	1.0000
7	9.45	Nitrate	M	5.336	9.8974	9.8974	1.0000
8	10.08	Chlorate	M	0.907	9.5202	9.5202	1.0000
10	13.85	Phosphate	BMB	1.661	8.5333	8.5333	1.0000
Total:			**0.000**	**34.158**		**157.55**	

69 CCB

Sample Name:	**CCB**	*Injection Volume:*	**5.00**
Vial Number:	**R8**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**04/30/2021 06:03**	*Sample Weight:*	**1.0000**

Run Time:



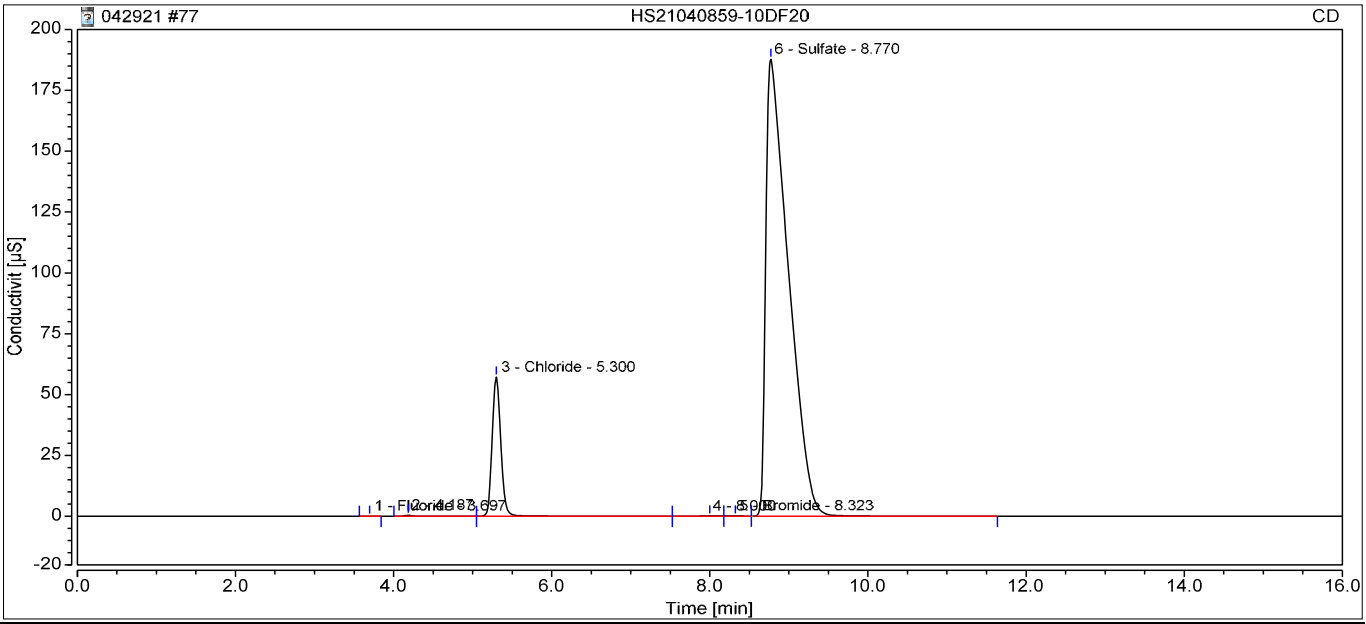
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	1.0000
1	5.30	Chloride	BMB	0.004	n.a.	n.a.	1.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Nitrate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	1.0000
Total:			**0.000**	**0.004**		**0.00**	

77 HS21040859-10DF20

Sample Name:	**HS21040859-10DF20**	*Injection Volume:*	**5.00**
Vial Number:	**RE8**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**20.0000**
Recording Time:	**04/30/2021 09:41**	*Sample Weight:*	**1.0000**

Run Time:



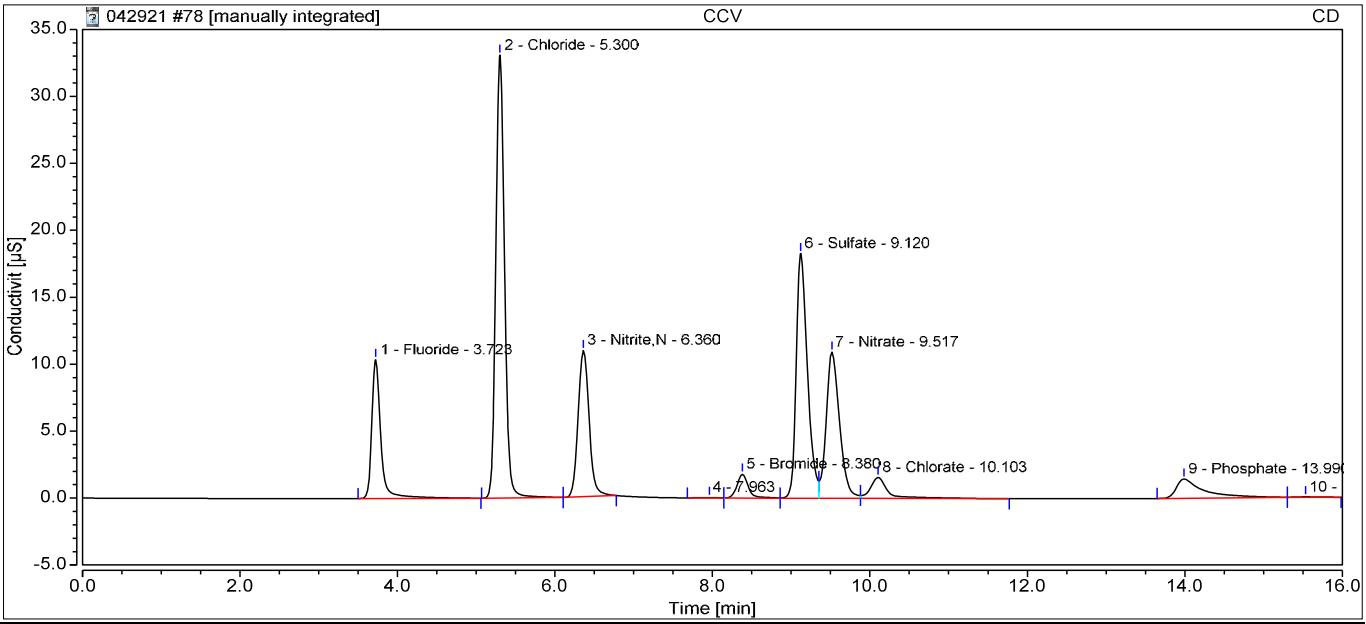
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.70	Fluoride	BMB	0.002	n.a.	n.a.	20.0000
3	5.30	Chloride	BMB	7.296	34.9206	698.4120	20.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	20.0000
5	8.32	Bromide	M	0.043	0.4894	9.7885	20.0000
6	8.77	Sulfate	MB	61.807	407.9401	8158.8021	20.0000
n.a.	n.a.	Nitrate	n.a.	n.a.	n.a.	n.a.	20.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	20.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	20.0000
Total:			**0.000**	**69.148**		**8867.00**	

78 CCV

Sample Name:	**CCV**	*Injection Volume:*	**5.00**
Vial Number:	**R1**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**04/30/2021 09:59**	*Sample Weight:*	**1.0000**

Run Time:



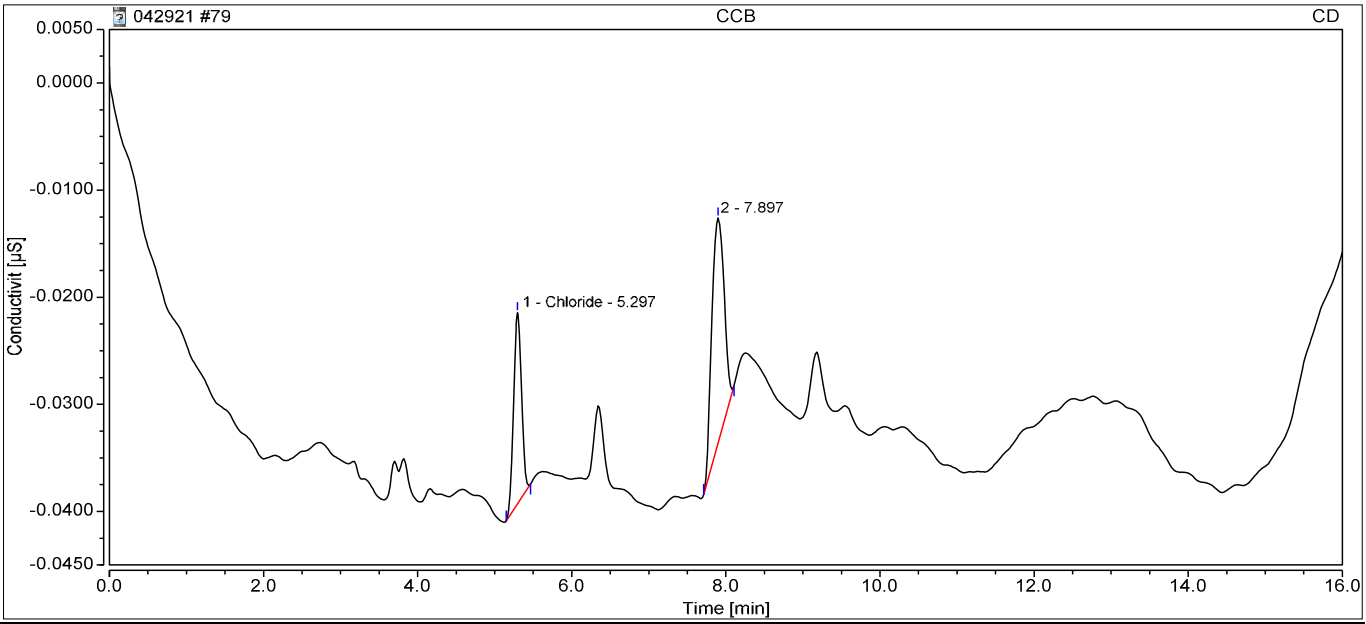
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.72	Fluoride	BMB	1.381	4.2675	4.2675	1.0000
2	5.30	Chloride	BMb*	4.208	20.1291	20.1291	1.0000
3	6.36	Nitrite,N	bMB*	1.763	4.3507	4.3507	1.0000
5	8.38	Bromide	M	0.298	3.6305	3.6305	1.0000
6	9.12	Sulfate	M	2.998	19.8805	19.8805	1.0000
7	9.52	Nitrate	M	2.154	3.9963	3.9963	1.0000
8	10.10	Chlorate	MB	0.411	4.2719	4.2719	1.0000
9	13.99	Phosphate	BMB	0.578	3.1390	3.1390	1.0000
Total:			**0.000**	**13.792**		**63.67**	

79 CCB

Sample Name:	**CCB**	*Injection Volume:*	**5.00**
Vial Number:	**R4**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**04/30/2021 10:36**	*Sample Weight:*	**1.0000**

Run Time:



Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	1.0000
1	5.30	Chloride	BMB	0.002	n.a.	n.a.	1.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Nitrate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	1.0000
Total:			**0.000**	**0.002**		**0.00**	

HS21040859 - Sub Perch Level IV (E2100485)

ALS WO# HS21040859

May 7, 2021 Service Request No:E2100485

RJ Modashia
ALS Laboratory Group
10450 Stancliff Road
Suite 210
Houston, TX 77099-4338

Laboratory Results for: HS21040859

Dear RJ,

Enclosed are the results of the sample(s) submitted to our laboratory April 19, 2021
For your reference, these analyses have been assigned our service request number **E2100485.**

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current TNI standards, where applicable, and except as noted in the laboratory case narrative provided. All results are intended to be considered in their entirety and ALS Environmental is not responsible for use of less than the complete final report. Results apply only to the items submitted to the laboratory, as received for analysis. In accordance with the current TNI Standard, a statement on the estimated uncertainty of measurement of any quantitative analysis will be supplied upon request.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental



Corey Grandits
Project Manager

ADDRESS 10450 Stancliff Rd., Suite 210, Houston, TX 77099
PHONE +1 281 530 5656 | FAX +1 281 530 5887
ALS Group USA, Corp.
dba ALS Environmental

Certificate of Analysis

ALS Environmental - Houston HRMS
10450 Stancliff Rd, Suite 210, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

ALS Environmental

Client:	ALS Houston	**Service Request No.:**	E2100485
Project:	HS21040859	**Date Received:**	04/19/21
Sample Matrix:	W		

CASE NARRATIVE

All analyses were performed in adherence to the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier IV. When appropriate to the method, method blank results have been reported with each analytical test.

Sample Receipt

Fourteen samples were received for analysis at ALS Environmental in Houston on 04/19/21.

The samples were received in good condition and are consistent with the accompanying chain of custody form. The samples were stored in a refrigerator at 4°C upon receipt at the laboratory.

Data Validation Notes and Discussion

Precision and Accuracy:

EQ2100238 & EQ2100244: Laboratory Control Spike/Duplicate Laboratory Control Spike DLCS recoveries are within QC limits. EQ2100244 MSD recovery was above the upper control limit. QC limits. EQ2100238 a LCS/DLCS was reported in lieu of a MS/MSD.

DoD certification is held for the method/matrix/analytes provided in this report.

The results of analyses are given in the attached laboratory report. All results are intended to be considered in their entirety, and ALS Environmental (ALS) is not responsible for utilization of less than the complete report.

Use of ALS group USA Corp dba ALS Environmental (ALS)'s Name. Client shall not use ALS's name or trademark in any marketing or reporting materials, press releases or in any other manner ("Materials") whatsoever and shall not attribute to ALS any test result, tolerance or specification derived from ALS's data ("Attribution") without ALS's prior written consent, which may be withheld by ALS for any reason in its sole discretion. To request ALS's consent, Client shall provide copies of the proposed Materials or Attribution and describe in writing Client's proposed use of such Materials or Attribution. If ALS has not provided written approval of the Materials or Attribution within ten (10) days of receipt from Client, Client's request to use ALS's name or trademark in any Materials or Attribution shall be deemed denied. ALS may, in its discretion, reasonably charge Client for its time in reviewing Materials or Attribution requests. Client acknowledges and agrees that the unauthorized use of ALS's name or trademark may cause ALS to incur irreparable harm for which the recovery of money damages will be inadequate. Accordingly, Client acknowledges and agrees that a violation shall justify preliminary injunctive relief. For questions contact the laboratory.

Client: ALS Environmental - US **Service Request:**E2100485
Project: HS21040859

SAMPLE CROSS-REFERENCE

SAMPLE #	CLIENT SAMPLE ID	DATE	TIME
E2100485-001	16PM02-210414	4/14/2021	1030
E2100485-002	16PM03-210414	4/14/2021	1120
E2100485-003	16PM03-210414-FD	4/14/2021	1120
E2100485-004	16RW01-210414	4/14/2021	1210
E2100485-005	16RW04-210414	4/14/2021	1255
E2100485-006	16RW02-210414	4/14/2021	1340
E2100485-007	16WW16-210415	4/15/2021	0725
E2100485-008	16WW56-210415	4/15/2021	0815
E2100485-009	16WW22-210415	4/15/2021	0910
E2100485-010	16WW41-210415	4/15/2021	1000
E2100485-011	16WW21-210415	4/15/2021	1045
E2100485-012	16WW39-210415	4/15/2021	1130
E2100485-013	16WW51-210415	4/15/2021	1215
E2100485-014	16EW07-210415	4/15/2021	1300

Service Request Summary

Folder #: **E2100485**
Client Name: ALS Environmental - US
Project Name: HS21040859
Project Number:

Report To: RJ Modashia
ALS Laboratory Group
10450 Stancliff Road
Houston, TX 77099-4338
USA
Phone Number: 281-530-5656
Cell Number:
Fax Number: 281-530-5887
E-mail: rj.modashia@alsglobal.com

Project Chemist: Corey Grandits
Originating Lab: HOUSTON
Logged By: CGRANDITS
Date Received: 04/19/21
Internal Due Date: 4/30/2021
QAP: LAB QAP
Qualifier Set: Lab Standard
Formset: Lab Standard
Merged?: Y
Report to MDL?: Y
P.O. Number: HS21040859
EDD: No EDD Specified

13 120 mL-Plastic Bottle Natural WM Unpreserved
2 4 oz-Glass Jar WM AMBER Teflon Liner Unpreserved
Location: SMO
Pressure Gas:

Lab Samp No.	Client Samp No	Matrix	Collected	HOUSTON ClO4 DOD/6850
E2100485-001	16PM02-210414	Ground Water	04/14/21 1030	II
E2100485-002	16PM03-210414	Ground Water	04/14/21 1120	II
E2100485-003	16PM03-210414-FD	Ground Water	04/14/21 1120	II
E2100485-004	16RW01-210414	Ground Water	04/14/21 1210	II
E2100485-005	16RW04-210414	Ground Water	04/14/21 1255	II
E2100485-006	16RW02-210414	Ground Water	04/14/21 1340	II
E2100485-007	16WW16-210415	Ground Water	04/15/21 0725	II
E2100485-008	16WW56-210415	Ground Water	04/15/21 0815	II
E2100485-009	16WW22-210415	Ground Water	04/15/21 0910	II
E2100485-010	16WW41-210415	Ground Water	04/15/21 1000	II
E2100485-011	16WW21-210415	Ground Water	04/15/21 1045	II
E2100485-012	16WW39-210415	Ground Water	04/15/21 1130	II
E2100485-013	16WW51-210415	Ground Water	04/15/21 1215	II
E2100485-014	16EW07-210415	Misc. Solid	04/15/21 1300	II

Service Request Summary

Folder #: **E2100485**
Client Name: ALS Environmental - US
Project Name: HS21040859
Project Number:

Report To: RJ Modashia
ALS Laboratory Group
10450 Stancliff Road
Houston, TX 77099-4338
USA
Phone Number: 281-530-5656
Cell Number:
Fax Number: 281-530-5887
E-mail: rj.modashia@alsglobal.com

Project Chemist: Corey Grandits
Originating Lab: HOUSTON
Logged By: CGRANDITS
Date Received: 04/19/21
Internal Due Date: 4/30/2021
QAP: LAB QAP
Qualifier Set: Lab Standard
Formset: Lab Standard
Merged?: Y
Report to MDL?: Y
P.O. Number: HS21040859
EDD: No EDD Specified

13 120 mL-Plastic Bottle Natural WM Unpreserved
2 4 oz-Glass Jar WM AMBER Teflon Liner Unpreserved
Location: SMO
Pressure Gas:

Lab Samp No.	Client Samp No	Matrix	Collected	HOUSTON ClO4 DOD/6850
E2100485-001	16PM02-210414	Ground Water	04/14/21 1030	II
E2100485-002	16PM03-210414	Ground Water	04/14/21 1120	II
E2100485-003	16PM03-210414-FD	Ground Water	04/14/21 1120	II
E2100485-004	16RW01-210414	Ground Water	04/14/21 1210	II
E2100485-005	16RW04-210414	Ground Water	04/14/21 1255	II
E2100485-006	16RW02-210414	Ground Water	04/14/21 1340	II
E2100485-007	16WW16-210415	Ground Water	04/15/21 0725	II
E2100485-008	16WW56-210415	Ground Water	04/15/21 0815	II
E2100485-009	16WW22-210415	Ground Water	04/15/21 0910	II
E2100485-010	16WW41-210415	Ground Water	04/15/21 1000	II
E2100485-011	16WW21-210415	Ground Water	04/15/21 1045	II
E2100485-012	16WW39-210415	Ground Water	04/15/21 1130	II
E2100485-013	16WW51-210415	Ground Water	04/15/21 1215	II
E2100485-014	16EW07-210415	Misc. Solid	04/15/21 1300	II

Service Request Summary

Folder #: **E2100485**
Client Name: ALS Environmental - US
Project Name: HS21040859
Project Number:

Report To: RJ Modashia
ALS Laboratory Group
10450 Stancliff Road
Houston, TX 77099-4338
USA
Phone Number: 281-530-5656
Cell Number:
Fax Number: 281-530-5887
E-mail: rj.modashia@alsglobal.com

Project Chemist: Corey Grandits
Originating Lab: HOUSTON
Logged By: CGRANDITS
Date Received: 04/19/21
Internal Due Date: 4/30/2021
QAP: LAB QAP
Qualifier Set: Lab Standard
Formset: Lab Standard
Merged?: Y
Report to MDL?: Y
P.O. Number: HS21040859
EDD: No EDD Specified

13 120 mL-Plastic Bottle Natural WM Unpreserved
2 4 oz-Glass Jar WM AMBER Teflon Liner Unpreserved
Location: SMO
Pressure Gas:

Test Comments:

Group	Test/Method	Samples	Comments
Semivoa GCMS	ClO4 DOD/6850	1	MS/MSD

Data Qualifiers

Lab Standard

+	Possible Tedlar bag artifact.
A	TIC is a suspected aldol-condensation product
B	Analyte found in the associated method blank as well as in the sample.
BC	Reported results are not blank corrected.
BH	The back section of the tube yielded higher results than the front.
BT	Results indicated possible breakthrough; back section >=10% front section.
C	Result identification confirmed.
D	Compound identified in an analysis at a secondary dilution factor
D	Spike was diluted out
DE	Reported results are corrected for desorption efficiency.
E	Estimated value. Concentration above calibration range
E	The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
F	The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
H	The chromatographic fingerprint of the sample resembles a petroleum product but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
H1	Sample analysis performed past holding time. See case narrative.
H2	Initial analysis within holding time. Reanalysis for the required dilution was past holding time.
H3	Sample was received and analyzed past holding time.
H4	Sample was extracted past required extraction holding time, but analyzed within analysis holding time. See case narrative.
I	Internal standard not within the specified limits. See case narrative.
J	Estimated Value. Concentration found below MRL.
K	A deflection in the QC ion may indicate interference with the quantitation of this ion. The concentration of this analyte should be considered as an estimate.
K	Analyte was detected above the method reporting limit prior to normalization.
K	The reference ion ratio was outside acceptance criteria, which may indicate a potential bias to this result.
L	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
L1	Laboratory control sample recovery outside the specified limits; results may be biased high.
L2	Laboratory control sample recovery outside the specified limits; results may be biased low.
L3	Laboratory control sample recovery outside the specified limits.
M	Matrix interference; results may be biased high.
M	The duplicate injection precision not met.
M1	Matrix interference due to coelution with a non-target compound; results may be biased high.
N	Presumptive evidence of a compound for TICs that have been identified based on a mass spectral library search.
N	The Matrix Spike sample recovery is not within control limits. See case narrative.

Data Qualifiers

Lab Standard

O	The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
P	Indicates chlorodiphenyl ether interference present at the retention time of the target compound.
P	Pesticide/Aroclor target analyte > 40% difference for detected concentrations between GC columns
Q	Indicates as estimated value because the P and P + 2 theoretical abundance ratio does not meet method criteria.
R	Duplicate Precision not met.
R1	Duplicate precision not within the specified limits; however, the results are below the MRL and considered estimated.
S	Surrogate recovery not within specified limits.
S	The reported value was determined by the Method of Standard Additions (MSA).
T	Analyte is a tentatively identified compound, result is estimated.
U	Compound was analyzed for, but was not detected (ND).
V1	The continuing calibration verification standard was outside (biased high) the specified limits for this compound.
V2	The continuing calibration verification standard was outside (biased low) the specified limits for this compound.
W	Result quantified, but the corresponding peak was detected outside the generated retention time window.
W	The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
X	See case narrative.
Y	Recovery outside limits
Y	The chromatogram resembles a petroleum product but does not match the calibration standard.
Z	The chromatogram does not resemble a petroleum product.
i	The MRL/MDL has been elevated due to a matrix interference.

ALS Laboratory Group

Acronyms

Cal	Calibration
Conc	CONCentration
Dioxin(s)	Polychlorinated dibenzo-p-dioxin(s)
EDL	Estimated Detection Limit
EMPC	Estimated Maximum Possible Concentration
Flags	Data qualifiers
Furan(s)	Polychlorinated dibenzofuran(s)
g	Grams
ICAL	Initial CALibration
ID	IDentifier
Ions	Masses monitored for the analyte during data acquisition
L	Liter (s)
LCS	Laboratory Control Sample
DLCS	Duplicate Laboratory Control Sample
MB	Method Blank
MCL	Method Calibration Limit
MDL	Method Detection Limit
mL	Milliliters
MS	Matrix Spiked sample
DMS	Duplicate Matrix Spiked sample
NO	Number of peaks meeting all identification criteria
PCDD(s)	Polychlorinated dibenzo-p-dioxin(s)
PCDF(s)	Polychlorinated dibenzofuran(s)
ppb	Parts per billion
ppm	Parts per million
ppq	Parts per quadrillion
ppt	Parts per trillion
QA	Quality Assurance
QC	Quality Control
Ratio	Ratio of areas from monitored ions for an analyte
% Rec.	Percent recovery
RPD	Relative Percent Difference
RRF	Relative Response Factor
RT	Retention Time
SDG	Sample Delivery Group
S/N	Signal-to-noise ratio
TEF	Toxicity Equivalence Factor
TEQ	Toxicity Equivalence Quotient

10450 Stancliff Rd, Houston, TX 77099 | 281-530-5656 | www.alsglobal.com

ALS Environmental

State Certifications, Accreditations, and Licenses

Agency	Number	Expire Date
American Association for Laboratory Accreditation	2897.01 2020	11/30/2021
Arizona Department of Health Services	AZ0793-2020	5/27/2021
Arkansas Department of Environmental Quality	21-022-0	3/26/2022
Department of Defense	A2LA 2897.01	11/30/2021
Florida Department of Health	E87611-2020	6/30/2021
Illinois Environmental Protection Agency	2000322020-4	5/9/2021
Kansas Department of Health and Environment	E-10352-2020	7/31/2021
Louisiana Department of Environmental Quality	03087-2020	6/30/2021
Louisiana Department of Health and Hospitals	LA028-2021	12/31/2021
Maine Department of Health and Human Services	2020016	6/5/2022
Maryland Department of the Environment	343-2020	6/30/2021
Nevada Department of Concervation and Natural Resources	TX026932021-1	7/31/2021
New Jersey Department of Environmental Protection	TX008	6/30/2021
Oklahoma Department of Environmental Quality	2020-123	8/31/2021
Pennsylvania Department of Environmental Protection	014	6/30/2021
United States Department of Agriculture	P330-19-00299	10/10/2022

Chain of Custody

ALS Environmental - Houston HRMS
10450 Stancliff Rd, Suite 210, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

10450 Stancliff Rd, Ste 210
Houston, TX 77099
T: +1 281 530 5656
F: +1 281 530 5887
www.alsglobal.com

Subcontract Chain of Custody

SAMPLING STATE: **Dept of Defense** **COC ID:** **15943**

SUBCONTRACT TO:

ALS Environmental
10450 Stancliff RoadSuite 210
Houston, TX 77084

Phone: +1 281 530 5656

CUSTOMER INFORMATION:

Company:	ALS Houston
Contact:	RJ Modashia
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Email:	RJ.Modashia@alsglobal.com
Alternate Contact:	Jumoke M. Lawal
Email:	jumoke.lawal@alsglobal.com

INVOICE INFORMATION:

Company:	ALS Houston
Contact:	Accounts Payable
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Reference:	HS21040859
TSR:	Sonia West

	LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
	ANALYSIS REQUESTED			DUE DATE
1.	**HS21040859-01**	**16PM02-210414**	**Groundwater**	**14 Apr 2021 10:30**
	Level II and Level IV reports on a seperate pdf. Send WOA to Vicki Graves.			30 Apr 2021
2.	**HS21040859-02**	**16PM03-210414**	**Groundwater**	**14 Apr 2021 11:20**
	Level II and Level IV reports on a seperate pdf. Send WOA to Vicki Graves.			30 Apr 2021
3.	**HS21040859-03**	**16PM03-210414-FD**	**Groundwater**	**14 Apr 2021 11:20**
	Level II and Level IV reports on a seperate pdf. Send WOA to Vicki Graves.			30 Apr 2021
4.	**HS21040859-04**	**16RW01-210414**	**Groundwater**	**14 Apr 2021 12:10**
	Level II and Level IV reports on a seperate pdf. Send WOA to Vicki Graves.			30 Apr 2021
5.	**HS21040859-05**	**16RW04-210414**	**Groundwater**	**14 Apr 2021 12:55**
	Level II and Level IV reports on a seperate pdf. Send WOA to Vicki Graves.			30 Apr 2021
6.	**HS21040859-06**	**16RW02-210414**	**Groundwater**	**14 Apr 2021 13:40**
	Level II and Level IV reports on a seperate pdf. Send WOA to Vicki Graves.			30 Apr 2021
7.	**HS21040859-07**	**16WW16-210415**	**Groundwater**	**15 Apr 2021 07:25**
	Level II and Level IV reports on a seperate pdf. Send WOA to Vicki Graves.			30 Apr 2021
8.	**HS21040859-08**	**16WW56-210415**	**Groundwater**	**15 Apr 2021 08:15**

Subcontract Chain of Custody

SAMPLING STATE: **Dept of Defense** **COC ID: 15943**

	LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
	ANALYSIS REQUESTED			DUE DATE
	Level II and Level IV reports on a seperate pdf. Send WOA to Vicki Graves.			30 Apr 2021
9.	**HS21040859-09**	**16WW22-210415**	**Groundwater**	**15 Apr 2021 09:10**
	Level II and Level IV reports on a seperate pdf. Send WOA to Vicki Graves.			30 Apr 2021
10.	**HS21040859-10**	**16WW41-210415**	**Groundwater**	**15 Apr 2021 10:00**
	Level II and Level IV reports on a seperate pdf. Send WOA to Vicki Graves.			30 Apr 2021
11.	**HS21040859-11**	**16WW21-210415**	**Groundwater**	**15 Apr 2021 10:45**
	Level II and Level IV reports on a seperate pdf. Send WOA to Vicki Graves.			30 Apr 2021
12.	**HS21040859-12**	**16WW39-210415**	**Groundwater**	**15 Apr 2021 11:30**
	Level II and Level IV reports on a seperate pdf. Send WOA to Vicki Graves.			30 Apr 2021
13.	**HS21040859-13**	**16WW51-210415**	**Groundwater**	**15 Apr 2021 12:15**
	Level II and Level IV reports on a seperate pdf. Send WOA to Vicki Graves.			30 Apr 2021
14.	**HS21040859-14**	**16EW07-210415**	**Groundwater**	**15 Apr 2021 13:00**
	Level II and Level IV reports on a seperate pdf. Send WOA to Vicki Graves.			30 Apr 2021

Comments: Please analyze for the analysis listed above.
Send report to the emails shown above.

HS21040856-08 MS/MSD

QC Level: DOD IV (DoD Data Package)

Relinquished By: J. Mangum Date/Time: 4/19/21

Received By: Libby A Date/Time: 4/19/21 1712

Cooler ID(s): Temperature(s):

ALS Environmental

Cooler Receipt Form

Project Chemist CG

Client/Project ALS-HI

Thermometer ID 1771

Date/Time Received: 4/16/21 Initials: CG Date/Time Logged in: 4/16/21 Initials CG

1. Method of delivery: ○ US Mail ○ Fed Ex ○ UPS ○ DHL ✓ ALS Courier ○ Client

2. Samples received in: ✓ Cooler ○ Box ○ Envelope ○ Other

3. Were custody seals on coolers? ○ Yes ✓ No
   Were they intact? ○ Yes ○ No ✓ N/A
   Were they signed and dated? ○ Yes ○ No ✓ N/A
   If yes, how many and where?

4. Packing Material: ○ Inserts ✓ Baggies ○ Bubble Wrap ○ Gel Packs ✓ Wet Ice ○ Sleeves ○ Other

5. Foreign or Regulated Soil? ○ Yes ○ No Location of Sampling:

Cooler Tracking Number	COC ID	Date Opened	Time Opened	Opened By	Temp. °C	Temp Blank?
NA		4/16/21	1712	CG	4.4	☑
						☐
						☐
						☐

6. Were custody papers properly filled out (ink, signed, dated, etc)? ✓ Yes ○ No
7. Did all bottles arrive in good condition (not broken, no signs of leakage)? ✓ Yes ○ No
8. Were all sample labels complete (i.e., sample ID, analysis, preservation, etc)? ✓ Yes ○ No
9. Were appropriate bottles/containers and volumes received for the requested tests? ✓ Yes ○ No
10. Did sample labels and tags agree with custody documents? ✓ Yes ○ No

Notes, Discrepancies, & Resolutions:

Service request Label:

HS-HRMSCoolerReceipt R1.0

ALS Environmental - Houston HRMS

10450 Stancliff Rd., Suite 210
Houston, TX 77099
T: +1 713 266 1599
F: +1 713 266 1599
www.alsglobal.com

SAMPLE ACCEPTANCE POLICY

This policy outlines the criteria samples must meet to be accepted by ALS Environmental – Houston HRMS.

Cooler Custody Seals (desirable, mandatory if specified in SAP):

- ✓ Intact on outside of cooler, signed and dated

Chain-of-Custody (COC) documentation (mandatory):

The following is required on each COC:

- ✓ Sample ID, the location, date and time of collection, collector's name, preservation type, sample type, and any other special remarks concerning the sampleThe COC must be completed in ink.
- ✓ Signature and date of relinquishing party.

In the absence of a COC at sample receipt, the COC will be requested from the client.

Sample Integrity (mandatory):

Samples are inspected upon arrival to ensure that sample integrity was not compromised during transfer to the laboratory.

- ✓ Sample containers must arrive in good condition (not broken or leaking).
- ✓ Samples must be labeled appropriately, including Sample IDs, and requested test using durable labels and indelible ink.
- ✓ The correct type of sample bottle must be used for the method requested.
- ✓ An appropriate sample volume, or weight, must be received.
- ✓ Sample IDs and number of containers must reconcile with the COC.
- ✓ Samples must be received within the method defined holding time.

Temperature Requirement (varies by sample matrix):

- ✓ Aqueous and Non-aqueous samples must be shipped and stored cold, at 0 to 6ºC.
- ✓ Tissue samples must be shipped and stored frozen, at -20 to -10ºC.
- ✓ Air samples are shipped and stored cold, at 0 to 6ºC
- ✓ The sample temperature must be recorded on the COC

All cooler inspections are documented on the Cooler Receipt Form (CRF). A separate CRF is completed for each service request. Any samples not meeting the above criteria are noted on the CRF and the Project Manager notified. The Project Manager must resolve any sample integrity issues with the client prior to proceeding with the analysis. Such resolutions are documented in writing and filed with the project folder. Data associated with samples received outside of this acceptance policy will be qualified on the case narrative of the final report

Preparation Information Benchsheets

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 210, Houston, TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

Preparation Information Benchsheet

Prep Run#: 377991 **Prep WorkFlow:** Gen CLO4 **Status:** Prepped
Team: Semivoa GCMS/GRIVERA **Prep Method:** Method **Prep Date/Time:** 4/22/21 09:30

#	Lab Code	Client ID	B#	Method /Test	pH	Cl	Matrix	Amt. Ext.	Sample Description
1	E2100485-014	16EW07-210415	.02	6850/ClO4 DOD			Misc. Solid	1.086g	
2	EQ2100238-01	MB		6850/ClO4 DOD			Solid	1.036g	
3	EQ2100238-02	LCS		6850/ClO4 DOD			Solid	1.051g	
4	EQ2100238-03	DLCS		6850/ClO4 DOD			Solid	1.031g	
5	R2103213-001	45MI40014	.15	6850/ClO4 DOD			Soil	1.001g	
6	R2103213-002	45MI40025	.15	6850/ClO4 DOD			Soil	1.058g	
7	R2103213-004	45MI40017	.21	6850/ClO4 DOD			Soil	1.065g	
8	R2103213-005	45MI40026	.15	6850/ClO4 DOD			Soil	1.043g	
9	R2103213-006	45MI40024	.15	6850/ClO4 DOD			Soil	1.019g	
10	R2103213-007	45MI40023	.15	6850/ClO4 DOD			Soil	1.023g	
11	R2103213-008	45MI40022	.15	6850/ClO4 DOD			Soil	1.054g	
12	R2103213-009	45MI40021	.15	6850/ClO4 DOD			Soil	1.053g	
13	R2103213-010	45MI40018	.15	6850/ClO4 DOD			Soil	1.080g	
14	R2103379-002	45MI40015	.08	6850/ClO4 DOD			Soil	1.084g	
15	R2103379-003	45MI40016	.08	6850/ClO4 DOD			Soil	1.089g	
16	R2103379-004	45MI40020	.08	6850/ClO4 DOD			Soil	1.087g	
17	R2103379-005	45MI40019	.08	6850/ClO4 DOD			Soil	1.009g	

Spiking Solutions

Name: Perchlorate Intermediate Stock1 Inventory ID 214035 Logbook Ref: Perchlorate Expires On: 05/23/2021

EQ2100238-02 100.00µL EQ2100238-03 100.00µL

Name: Perchlorate Internal Standard 1ug/mL Inventory ID 214820 Logbook Ref: Perchlorate Internal Standard Expires On: 07/03/2021

E2100485-014	100.00µL	EQ2100238-01	100.00µL	EQ2100238-02	100.00µL	EQ2100238-03	100.00µL	R2103213-001	100.00µL	R2103213-002	100.00µL
R2103213-004	100.00µL	R2103213-005	100.00µL	R2103213-006	100.00µL	R2103213-007	100.00µL	R2103213-008	100.00µL	R2103213-009	100.00µL
R2103213-010	100.00µL	R2103379-002	100.00µL	R2103379-003	100.00µL	R2103379-004	100.00µL	R2103379-005	100.00µL		

Preparation Steps

Step: Extraction
Started: 4/22/21 09:30
Finished: 4/22/21 11:00
By: GRIVERA
Comments

Preparation Information Benchsheet

Prep Run#: 377991
Team: Semivoa GCMS/GRIVERA
Prep WorkFlow: Gen CLO4
Prep Method: Method
Status: Prepped
Prep Date/Time: 4/22/21 09:30

Comments:

Reviewed By: GR Date: 4/22/21

Chain of Custody

Relinquished By:		Date:		Extracts Examined
Received By:		Date:		Yes No

Preparation Information Benchsheet

Prep Run#: 378052 **Prep WorkFlow:** GenExt28Day **Status:** Prepped
Team: Semivoa GCMS/GRIVERA **Prep Method:** Method **Prep Date/Time:** 4/23/21 12:17

#	Lab Code	Client ID	B#	Method /Test	pH	Cl	Matrix	Amt. Ext.	Sample Description
1	E2100412-011	16WW58-210413	.01	6850/ClO4 DOD			Ground Water	10mL	
2	E2100412-012	16WW57-210413	.01	6850/ClO4 DOD			Ground Water	10mL	
3	E2100412-013	16WW35-210413	.01	6850/ClO4 DOD			Ground Water	10mL	
4	E2100412-014	16WW36-210413	.01	6850/ClO4 DOD			Ground Water	10mL	
5	E2100412-015	16PM09-210413	.01	6850/ClO4 DOD			Ground Water	10mL	
6	E2100412-016	16PM06-210413	.01	6850/ClO4 DOD			Ground Water	10mL	
7	E2100412-017	16PM14-210413	.01	6850/ClO4 DOD			Ground Water	10mL	
8	E2100485-001	16PM02-210414	.01	6850/ClO4 DOD			Ground Water	10mL	
9	E2100485-002	16PM03-210414	.01	6850/ClO4 DOD			Ground Water	10mL	
10	E2100485-003	16PM03-210414-FD	.01	6850/ClO4 DOD			Ground Water	10mL	
11	E2100485-004	16RW01-210414	.01	6850/ClO4 DOD			Ground Water	10mL	
12	E2100485-005	16RW04-210414	.01	6850/ClO4 DOD			Ground Water	10mL	
13	E2100485-006	16RW02-210414	.01	6850/ClO4 DOD			Ground Water	10mL	
14	E2100485-007	16WW16-210415	.01	6850/ClO4 DOD			Ground Water	10mL	
15	E2100485-008	16WW56-210415	.01	6850/ClO4 DOD			Ground Water	10mL	
16	E2100485-009	16WW22-210415	.01	6850/ClO4 DOD			Ground Water	10mL	
17	E2100485-010	16WW41-210415	.01	6850/ClO4 DOD			Ground Water	10mL	
18	E2100485-011	16WW21-210415	.01	6850/ClO4 DOD			Ground Water	10mL	
19	E2100485-012	16WW39-210415	.01	6850/ClO4 DOD			Ground Water	10mL	
20	E2100485-013	16WW51-210415	.01	6850/ClO4 DOD			Ground Water	10mL	
21	EQ2100244-01	MB		6850/ClO4 DOD			Liquid	10mL	
22	EQ2100244-02	LCS		6850/ClO4 DOD			Liquid	10mL	
23	EQ2100244-03	DLCS		6850/ClO4 DOD			Liquid	10mL	
24	EQ2100244-04	16WW56-210415 MS	.01	6850/ClO4 DOD			Liquid	10mL	
25	EQ2100244-05	16WW56-210415 DMS	.01	6850/ClO4 DOD			Liquid	10mL	

Spiking Solutions

Name: Perchlorate Intermediate Stock1 Inventory ID 214035 Logbook Ref: Perchlorate Expires On: 05/23/2021

EQ2100244-02 1.00µL EQ2100244-03 1.00µL EQ2100244-04 1.00µL EQ2100244-05 1.00µL

Name: Perchlorate Internal Standard 1ug/mL Inventory ID 214820 Logbook Ref: Perchlorate Internal Standard Expires On: 07/03/2021

E2100412-011 100.00µL E2100412-012 100.00µL E2100412-013 100.00µL E2100412-014 100.00µL E2100412-015 100.00µL E2100412-016 100.00µL
E2100412-017 100.00µL E2100485-001 100.00µL E2100485-002 100.00µL E2100485-003 100.00µL E2100485-004 100.00µL E2100485-005 100.00µL
E2100485-006 100.00µL E2100485-007 100.00µL E2100485-008 100.00µL E2100485-009 100.00µL E2100485-010 100.00µL E2100485-011 100.00µL

Preparation Information Benchsheet

Prep Run#: 378052 **Prep WorkFlow:** GenExt28Day **Status:** Prepped
Team: Semivoa GCMS/GRIVERA **Prep Method:** Method **Prep Date/Time:** 4/23/21 12:17

E2100485-012	100.00µL	E2100485-013	100.00µL	EQ2100244-01	100.00µL	EQ2100244-02	100.00µL	EQ2100244-03	100.00µL	EQ2100244-04	100.00µL
EQ2100244-05	100.00µL										

Preparation Steps

Step: Preparation
Started: 4/23/21 12:17
Finished: 4/23/21 13:30
By: GRIVERA
Comments

Comments: _____

Reviewed By: GR Date: 4/23/21

Chain of Custody

Relinquished By:		Date:		Extracts Examined
Received By:		Date:		Yes No

Analytical Results

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 210, Houston, TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100485
Project:	HS21040859	**Date Collected:**	4/14/21 1030
Sample Matrix:	Ground Water	**Date Received:**	4/19/21
Sample Name:	16PM02-210414	**Units:**	µg/L
Lab Code:	E2100485-001	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.0372**	J	0.100	0.0500	0.0250	1	4/23/21	4/29/21 00:03	378052	721483	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100485
Project:	HS21040859	**Date Collected:**	4/14/21 1120
Sample Matrix:	Ground Water	**Date Received:**	4/19/21
Sample Name:	16PM03-210414	**Units:**	µg/L
Lab Code:	E2100485-002	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**193**		1.00	0.500	0.250	10	4/23/21	4/28/21 22:57	378052	721483	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100485
Project:	HS21040859	**Date Collected:**	4/14/21 1120
Sample Matrix:	Ground Water	**Date Received:**	4/19/21
Sample Name:	16PM03-210414-FD	**Units:**	µg/L
Lab Code:	E2100485-003	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**189**		1.00	0.500	0.250	10	4/23/21	4/28/21 23:07	378052	721483	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100485
Project:	HS21040859	**Date Collected:**	4/14/21 1210
Sample Matrix:	Ground Water	**Date Received:**	4/19/21
Sample Name:	16RW01-210414	**Units:**	µg/L
Lab Code:	E2100485-004	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.0618**	J	0.100	0.0500	0.0250	1	4/23/21	4/29/21 00:12	378052	721483	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100485
Project:	HS21040859	**Date Collected:**	4/14/21 1255
Sample Matrix:	Ground Water	**Date Received:**	4/19/21
Sample Name:	16RW04-210414	**Units:**	µg/L
Lab Code:	E2100485-005	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	0.100	0.0500	0.0250	1	4/23/21	4/29/21 00:22	378052	721483	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100485
Project:	HS21040859	**Date Collected:**	4/14/21 1340
Sample Matrix:	Ground Water	**Date Received:**	4/19/21
Sample Name:	16RW02-210414	**Units:**	µg/L
Lab Code:	E2100485-006	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.0612**	J	0.200	0.100	0.0500	2	4/23/21	4/29/21 16:19	378052	721582	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100485
Project:	HS21040859	**Date Collected:**	4/15/21 0725
Sample Matrix:	Ground Water	**Date Received:**	4/19/21
Sample Name:	16WW16-210415	**Units:**	µg/L
Lab Code:	E2100485-007	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**288**		1.00	0.500	0.250	10	4/23/21	4/28/21 23:16	378052	721483	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100485
Project:	HS21040859	**Date Collected:**	4/15/21 0815
Sample Matrix:	Ground Water	**Date Received:**	4/19/21
Sample Name:	16WW56-210415	**Units:**	µg/L
Lab Code:	E2100485-008	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.0783**	J	0.100	0.0500	0.0250	1	4/23/21	4/29/21 00:50	378052	721483	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100485
Project:	HS21040859	**Date Collected:**	4/15/21 0910
Sample Matrix:	Ground Water	**Date Received:**	4/19/21
Sample Name:	16WW22-210415	**Units:**	µg/L
Lab Code:	E2100485-009	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.471**		0.100	0.0500	0.0250	1	4/23/21	4/29/21 00:59	378052	721483	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100485
Project:	HS21040859	**Date Collected:**	4/15/21 1000
Sample Matrix:	Ground Water	**Date Received:**	4/19/21
Sample Name:	16WW41-210415	**Units:**	µg/L
Lab Code:	E2100485-010	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**212**		1.00	0.500	0.250	10	4/23/21	4/28/21 23:25	378052	721483	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100485
Project:	HS21040859	**Date Collected:**	4/15/21 1045
Sample Matrix:	Ground Water	**Date Received:**	4/19/21
Sample Name:	16WW21-210415	**Units:**	µg/L
Lab Code:	E2100485-011	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	0.100	0.0500	0.0250	1	4/23/21	4/29/21 01:09	378052	721483	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100485
Project:	HS21040859	**Date Collected:**	4/15/21 1130
Sample Matrix:	Ground Water	**Date Received:**	4/19/21
Sample Name:	16WW39-210415	**Units:**	µg/L
Lab Code:	E2100485-012	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**7.87**		1.00	0.500	0.250	10	4/23/21	4/29/21 12:06	378052	721582	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100485
Project:	HS21040859	**Date Collected:**	4/15/21 1215
Sample Matrix:	Ground Water	**Date Received:**	4/19/21
Sample Name:	16WW51-210415	**Units:**	µg/L
Lab Code:	E2100485-013	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.306**		0.100	0.0500	0.0250	1	4/23/21	4/29/21 01:27	378052	721483	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100485
Project:	HS21040859	**Date Collected:**	4/15/21 1300
Sample Matrix:	Misc. Solid	**Date Received:**	4/19/21
Sample Name:	16EW07-210415	**Units:**	µg/Kg
Lab Code:	E2100485-014	**Basis:**	As Received

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.375**	J	0.921	0.750	0.300	1	4/22/21	4/26/21 21:59	377991	721147	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100485
Project:	HS21040859	**Date Collected:**	NA
Sample Matrix:	Misc. Solid	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	µg/Kg
Lab Code:	EQ2100238-01	**Basis:**	As Received

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	0.965	0.750	0.300	1	4/22/21	4/26/21 19:45	377991	721147	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100485
Project:	HS21040859	**Date Collected:**	NA
Sample Matrix:	Ground Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	EQ2100244-01	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	0.100	0.0500	0.0250	1	4/23/21	4/28/21 20:27	378052	721483	

Accuracy & Precision

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 210, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS21040859
Sample Matrix: Misc. Solid

Service Request: E2100485
Date Analyzed: 4/26/21

Lab Control Sample Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Units: µg/Kg
Basis: As Received

Extraction Lot: 377991

	Lab Control Sample EQ2100238-02			Duplicate Lab Control Sample EQ2100238-03					
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Perchlorate	89.4	95.1	94	92.7	97.0	96	84 - 121	4	15

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100485
Project:	HS21040859	**Date Collected:**	NA
Sample Matrix:	Misc. Solid	**Date Received:**	NA
Sample Name:	Lab Control Sample	**Units:**	µg/Kg
Lab Code:	EQ2100238-02	**Basis:**	As Received

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**89.4**		0.951	0.750	0.300	1	4/22/21	4/26/21 19:53	377991	721147	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100485
Project:	HS21040859	**Date Collected:**	NA
Sample Matrix:	Misc. Solid	**Date Received:**	NA
Sample Name:	Duplicate Lab Control Sample	**Units:**	µg/Kg
Lab Code:	EQ2100238-03	**Basis:**	As Received

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**92.7**		0.970	0.750	0.300	1	4/22/21	4/26/21 20:01	377991	721147	

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS21040859
Sample Matrix: Ground Water

Service Request: E2100485
Date Analyzed: 4/28/21

Lab Control Sample Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Units: µg/L
Basis: NA

Extraction Lot: 378052

	Lab Control Sample EQ2100244-02			Duplicate Lab Control Sample EQ2100244-03					
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Perchlorate	0.0857	0.100	86	0.0977	0.100	98	84 - 119	13	15

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100485
Project:	HS21040859	**Date Collected:**	NA
Sample Matrix:	Ground Water	**Date Received:**	NA
Sample Name:	Lab Control Sample	**Units:**	µg/L
Lab Code:	EQ2100244-02	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.0857**	J	0.100	0.0500	0.0250	1	4/23/21	4/28/21 20:37	378052	721483	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100485
Project:	HS21040859	**Date Collected:**	NA
Sample Matrix:	Ground Water	**Date Received:**	NA
Sample Name:	Duplicate Lab Control Sample	**Units:**	µg/L
Lab Code:	EQ2100244-03	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.0977**	J	0.100	0.0500	0.0250	1	4/23/21	4/28/21 20:46	378052	721483	

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2100485
Project:	HS21040859	**Date Collected:**	4/15/21
Sample Matrix:	Ground Water	**Date Received:**	4/19/21
		Date Analyzed:	4/29/21

Matrix Spike Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Sample Name:	16WW56-210415	**Units:**	µg/L
Lab Code:	E2100485-008	**Basis:**	NA

Analytical Method: 6850
Prep Method: Method

		16WW56-210415MS				16WW56-210415DMS					
		Matrix Spike				**Duplicate Matrix Spike**					
		EQ2100244-04				EQ2100244-05					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**% Rec**		**Result**	**Spike Amount**	**% Rec**		**% Rec Limits**	**RPD**	**RPD Limit**
Perchlorate	0.0783	0.170	0.100	92		0.146	0.100	68	*	84 - 119	15	15

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100485
Project:	HS21040859	**Date Collected:**	4/15/21 0815
Sample Matrix:	Ground Water	**Date Received:**	4/19/21
Sample Name:	16WW56-210415	**Units:**	µg/L
Lab Code:	EQ2100244-04	**Basis:**	NA
Run Type:	Matrix Spike		

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.170**		0.100	0.0500	0.0250	1	4/23/21	4/29/21 01:37	378052	721483	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100485
Project:	HS21040859	**Date Collected:**	4/15/21 0815
Sample Matrix:	Ground Water	**Date Received:**	4/19/21
Sample Name:	16WW56-210415	**Units:**	µg/L
Lab Code:	EQ2100244-05	**Basis:**	NA
Run Type:	Duplicate Matrix Spike		

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.146**		0.100	0.0500	0.0250	1	4/23/21	4/29/21 01:46	378052	721483	

Initial Calibration

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 210, Houston, TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

20210426

1st Review: Grivera
2nd Review: Kneir

Injection Log
LCMS01 -Shimadzu 8050

ICAL Date: 4/26/2021
Cal. Std. xp: 5/20/2021
ICAL ID: **EC2100021**

Mobile Phases **A:** 0.75% Formic Acid/Water 3100807-09 **B:** MeOH 3100802-01

			File Name	Acquisition Method	Dilution	R	Comments	Date/Time
1	PERCHLORATE1		20210426_016	Perchlorate6850b.lcm	1x	☒	3100808-05	4/26/2021 12:22
2	PERCHLORATE2		20210426_017	Perchlorate6850b.lcm	1x	☒	3100808-06	4/26/2021 12:30
3	PERCHLORATE3		20210426_018	Perchlorate6850b.lcm	1x	☒	3100808-07	4/26/2021 12:38
4	PERCHLORATE4		20210426_019	Perchlorate6850b.lcm	1x	☒	3100808-08	4/26/2021 12:46
5	PERCHLORATE5		20210426_020	Perchlorate6850b.lcm	1x	☒	3100808-09	4/26/2021 12:54
6	PERCHLORATE6		20210426_021	Perchlorate6850b.lcm	1x	☒	3100809-01	4/26/2021 13:02
7	PERCHLORATE7		20210426_022	Perchlorate6850b.lcm	1x	☒	3100809-02	4/26/2021 13:10
8	PERCHLORATE8		20210426_023	Perchlorate6850b.lcm	1x	☒	3100809-03	4/26/2021 13:18
9	PERCHLORATE9		20210426_024	Perchlorate6850b.lcm	1x	☒	3100809-04	4/26/2021 13:26
10	PERCHLORATE10		20210426_025	Perchlorate6850b.lcm	1x	☒	3100809-05	4/26/2021 13:33
11	PERCHLORATEICV		20210426_026	Perchlorate6850b.lcm	1x	☒	3100809-06	4/26/2021 14:13
12	ICS		20210426_027	Perchlorate6850b.lcm	1x	☒		4/26/2021 14:21
13	LODV		20210426_028	Perchlorate6850b.lcm	1x	☒		4/26/2021 14:29
14	PERCHLORATE7		20210426_029	Perchlorate6850b.lcm	1x	☒	3100809-02	4/26/2021 14:37
15	R2103214-010DNU		20210426_030	Perchlorate6850b.lcm	1x	☒		4/26/2021 14:45
16	E2100411-001DNU		20210426_031	Perchlorate6850b.lcm	1x	☒		4/26/2021 14:52
17	E2100412-001DNU		20210426_032	Perchlorate6850b.lcm	1x	☒		4/26/2021 15:00
18	E2100412-003X10DNU		20210426_033	Perchlorate6850b.lcm	1x	☒		4/26/2021 15:08
19	E2100412-010X10DNU		20210426_034	Perchlorate6850b.lcm	1x	☒		4/26/2021 15:16
20	E2100410-001X500		20210426_035	Perchlorate6850b.lcm	1x	☒		4/26/2021 15:24
21	PERCHLORATE7		20210426_036	Perchlorate6850b.lcm	1x	☒	3100809-02	4/26/2021 15:32
22	IB		20210426_053	Perchlorate6850b.lcm	1x	☒		4/26/2021 17:55
23	IB		20210426_054	Perchlorate6850b.lcm	1x	☒		4/26/2021 18:02
24	IB		20210426_055	Perchlorate6850b.lcm	1x	☒		4/26/2021 18:10
25	PERCHLORATE7		20210426_056	Perchlorate6850b.lcm	1x	☒	3100809-02	4/26/2021 18:18
26	E2100402-001X1000DNU		20210426_057	Perchlorate6850b.lcm	1x	☒		4/26/2021 18:26
27	E2100402-002X1000		20210426_058	Perchlorate6850b.lcm	1x	☒		4/26/2021 18:34
28	E2100402-003X1000		20210426_059	Perchlorate6850b.lcm	1x	☒		4/26/2021 18:42
29	E2100402-004X1000DNU		20210426_060	Perchlorate6850b.lcm	1x	☒		4/26/2021 18:50
30	E2100402-005X1000		20210426_061	Perchlorate6850b.lcm	1x	☒		4/26/2021 18:58
31	PERCHLORATE7		20210426_062	Perchlorate6850b.lcm	1x	☒	3100809-02	4/26/2021 19:06
32	IB		20210426_063	Perchlorate6850b.lcm	1x	☒		4/26/2021 19:14
33	IB		20210426_064	Perchlorate6850b.lcm	1x	☒		4/26/2021 19:21
34	IB		20210426_065	Perchlorate6850b.lcm	1x	☒		4/26/2021 19:29
35	PERCHLORATE7		20210426_066	Perchlorate6850b.lcm	1x	☒	3100809-02	4/26/2021 19:37
36	EQ2100238-01		20210426_067	Perchlorate6850b.lcm	1x	☒		4/26/2021 19:45
37	EQ2100238-02		20210426_068	Perchlorate6850b.lcm	1x	☒		4/26/2021 19:53
38	EQ2100238-03		20210426_069	Perchlorate6850b.lcm	1x	☒		4/26/2021 20:01
39	R2103213-001		20210426_070	Perchlorate6850b.lcm	1x	☒		4/26/2021 20:09
40	R2103213-002DNU		20210426_071	Perchlorate6850b.lcm	1x	☒	DNU: INST failed	4/26/2021 20:17
41	R2103213-004		20210426_072	Perchlorate6850b.lcm	1x	☒		4/26/2021 20:24
42	R2103213-005		20210426_073	Perchlorate6850b.lcm	1x	☒		4/26/2021 20:32
43	R2103213-006		20210426_074	Perchlorate6850b.lcm	1x	☒		4/26/2021 20:40
44	R2103213-007DNU		20210426_075	Perchlorate6850b.lcm	1x	☒	DNU: INST failed	4/26/2021 20:48
45	R2103213-008		20210426_076	Perchlorate6850b.lcm	1x	☒		4/26/2021 20:56
46	PERCHLORATE7		20210426_077	Perchlorate6850b.lcm	1x	☒	3100809-02	4/26/2021 21:04
47	R2103213-009DNU		20210426_078	Perchlorate6850b.lcm	1x	☒	DNU: INST failed	4/26/2021 21:12
48	R2103213-010		20210426_079	Perchlorate6850b.lcm	1x	☒		4/26/2021 21:19
49	R2103379-002		20210426_080	Perchlorate6850b.lcm	1x	☒		4/26/2021 21:27
50	R2103379-003		20210426_081	Perchlorate6850b.lcm	1x	☒		4/26/2021 21:35
51	R2103379-004		20210426_082	Perchlorate6850b.lcm	1x	☒		4/26/2021 21:43
52	R2103379-005		20210426_083	Perchlorate6850b.lcm	1x	☒		4/26/2021 21:51
53	E2100439-014		20210426_084	Perchlorate6850b.lcm	1x	☒		4/26/2021 21:59
54	PERCHLORATE7		20210426_085	Perchlorate6850b.lcm	1x	☒	3100809-02	4/26/2021 22:07

Initial Calibration - Detailed Report

Calibration ID: EC2100021 **Instrument ID:** E-LCMS-01
Column Name: 1

#	Lab Code	Sample Name	File Location	Aquisition Date
01	EC2100021-01	PERCHLORATE1	20210426_016	04/26/2021 12:22
02	EC2100021-02	PERCHLORATE2	20210426_017	04/26/2021 12:30
03	EC2100021-03	PERCHLORATE3	20210426_018	04/26/2021 12:38
04	EC2100021-04	PERCHLORATE4	20210426_019	04/26/2021 12:46
05	EC2100021-05	PERCHLORATE5	20210426_020	04/26/2021 12:54
06	EC2100021-06	PERCHLORATE6	20210426_021	04/26/2021 13:02
07	EC2100021-07	PERCHLORATE7	20210426_022	04/26/2021 13:10
08	EC2100021-08	PERCHLORATE8	20210426_023	04/26/2021 13:18
09	EC2100021-09	PERCHLORATE9	20210426_024	04/26/2021 13:26
10	EC2100021-10	PERCHLORATE10	20210426_025	04/26/2021 13:33

Analyte **Curve Fit** **Weighting**

Perchlorate **Average RF** **RSD = 9.452** **Average RF = 0.1156**

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.1000	0.1325	02	0.5000	0.1326	03	0.7000	0.1213	04	1.0000	0.1151
05	2.0000	0.1186	06	5.0000	0.1159	07	10.0000	0.1079	08	20.0000	0.1043
09	30.0000	0.1034	10	50.0000	0.1046						

Analyte

Perchlorate

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	0.1000	0.115	14.6	02	0.5000	0.574	14.7	03	0.7000	0.734	4.9
04	1.0000	0.995	-0.5	05	2.0000	2.05	2.6	06	5.0000	5.01	0.2
07	10.0000	9.33	-6.7	08	20.0000	18.0	-9.8	09	30.0000	26.8	-10.5
10	50.0000	45.2	-9.5								

Initial Calibration Verification Summary Report

Calibration ID:	EC2100021	**Instrument ID:**	E-LCMS-01
Datafile ID:	20210426_026	**Column Name:**	1

Analyte	Lab Code	Type	Curve Fit	True Value	Calc Conc	Units	Result	Criteria
Perchlorate	EC2100021-11	T	Average RF	10	9.660	ng/mL	-3.4	<= 15

Insight Report

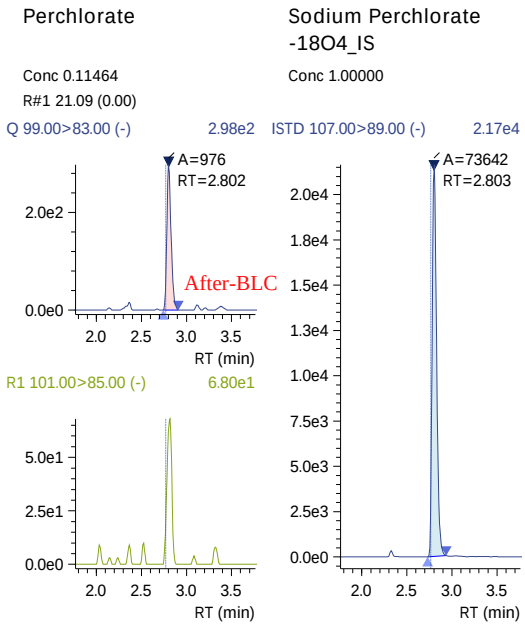
Printed at 4/26/2021 3:02:17 PM

Method File: I:\LCMS01\DATA\20210426\20210426.lcm
Project File: I:\LCMS01\DATA\20210426\20210426-ICAL.damlp

20210426_016

Sample ID: PERCHLORATE1
Date Acquired: 4/26/2021 12:22:41 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210426\20210426_016.lcd
Vial: 22 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	M	2.802	976	73642	1	0.11464	ng/mL	0.1000	21.09
Sodium Perchlorate-18O4 _IS	Auto	2.803	73642	73642	1	1.00000	ng/mL	1.0000	----



Insight Report

Printed at 4/27/2021 3:42:43 PM

Method File: I:\LCMS01\METHODS\Perchlorate6850c_divert.lcm

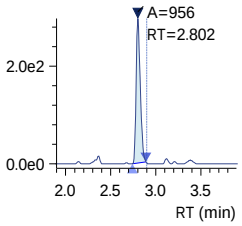
20210426_016

Sample ID: PERCHLORATE1
Date Acquired: 4/26/2021 12:22:41 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210426\Before\20210426_016.lcd
Vial: 22 | Inj. Volume: 25.0000uL | Tray: 1

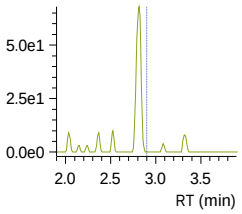
Perchlorate

Conc 0.00000
R#1 21.23 (0.00)

Q 99.00>83.00 (-) 2.98e2



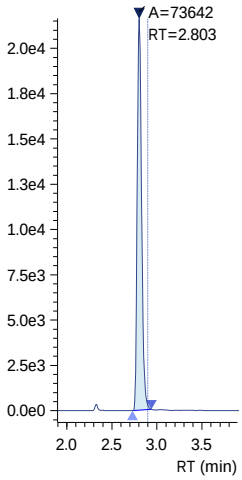
R1 101.00>85.00 (-) 6.80e1



Sodium Perchlorate -18O4_IS

Conc 1.00000

ISTD 107.00>89.00 (-) 2.17e4



Insight Report

Printed at 4/26/2021 3:02:17 PM

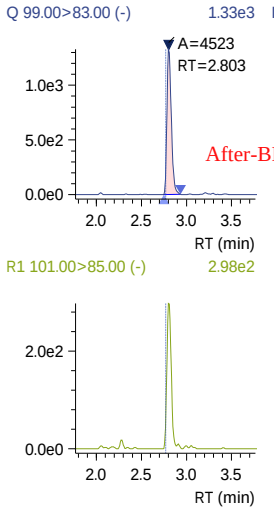
20210426_017

Sample ID: PERCHLORATE2
Date Acquired: 4/26/2021 12:30:37 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210426\20210426_017.lcd
Vial: 23 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	M	2.803	4523	68212	1	0.57348	ng/mL	0.5000	22.48
Sodium Perchlorate-18O4 _IS	Auto	2.802	68212	68212	1	1.00000	ng/mL	1.0000	----

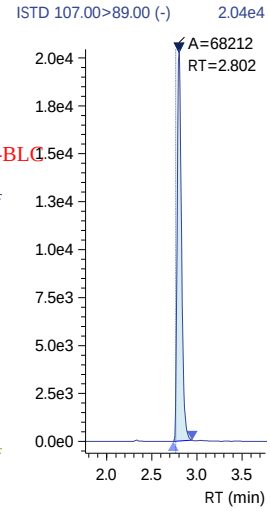
Perchlorate

Conc 0.57348
R#1 22.48 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.00000



After-BLC

Insight Report

Printed at 4/27/2021 3:42:43 PM

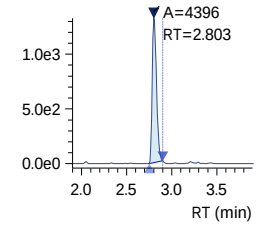
20210426_017

Sample ID: PERCHLORATE2
Date Acquired: 4/26/2021 12:30:37 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210426\Before\20210426_017.lcd
Vial: 23 | Inj. Volume: 25.0000uL | Tray: 1

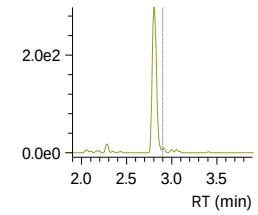
Perchlorate

Conc 0.00000
R#1 22.46 (0.00)

Q 99.00>83.00 (-) 1.33e3



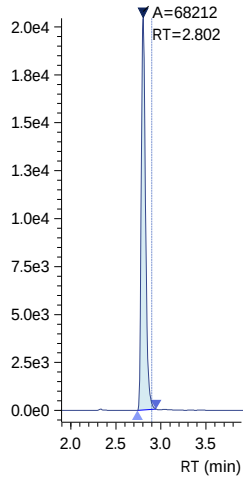
R1 101.00>85.00 (-) 2.98e2



Sodium Perchlorate -18O4_IS

Conc 1.00000

ISTD 107.00>89.00 (-) 2.04e4



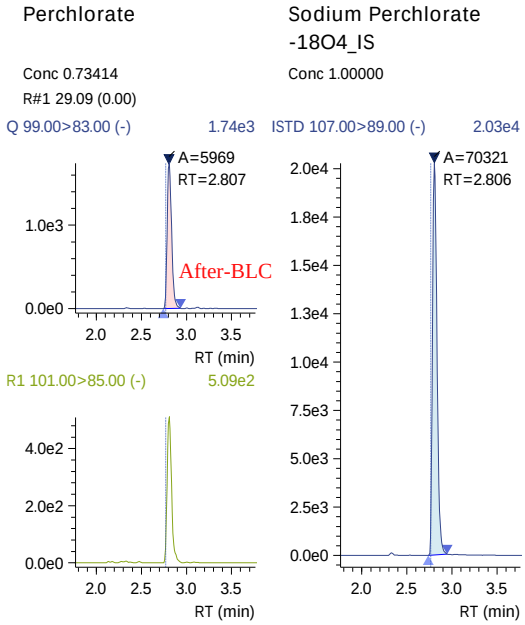
Insight Report

Printed at 4/26/2021 3:02:17 PM

20210426_018

Sample ID: PERCHLORATE3
Date Acquired: 4/26/2021 12:38:30 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210426\20210426_018.lcd
Vial: 24 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	M	2.807	5969	70321	1	0.73414	ng/mL	0.7000	29.09
Sodium Perchlorate-18O4 _IS	Auto	2.806	70321	70321	1	1.00000	ng/mL	1.0000	----



Insight Report

Printed at 4/27/2021 3:42:43 PM

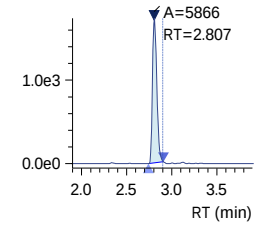
20210426_018

Sample ID: PERCHLORATE3
Date Acquired: 4/26/2021 12:38:30 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210426\Before\20210426_018.lcd
Vial: 24 | Inj. Volume: 25.0000uL | Tray: 1

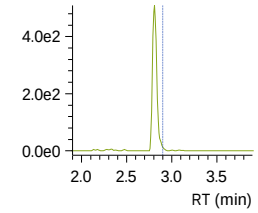
Perchlorate

Conc 0.00000
R#1 29.07 (0.00)

Q 99.00>83.00 (-) 1.74e3



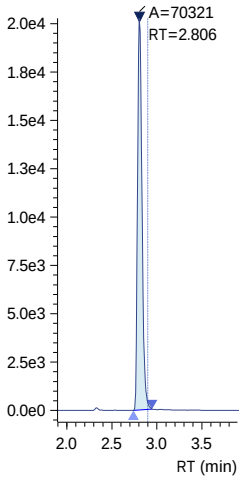
R1 101.00>85.00 (-) 5.09e2



Sodium Perchlorate -18O4_IS

Conc 1.00000

ISTD 107.00>89.00 (-) 2.03e4



Insight Report

Printed at 4/26/2021 3:02:17 PM

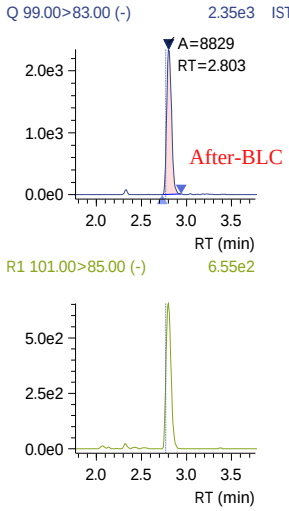
20210426_019

Sample ID: PERCHLORATE4
Date Acquired: 4/26/2021 12:46:27 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210426\20210426_019.lcd
Vial: 25 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	M	2.803	8829	76726	1	0.99528	ng/mL	1.0000	28.10
Sodium Perchlorate-18O4 _IS	Auto	2.802	76726	76726	1	1.00000	ng/mL	1.0000	----

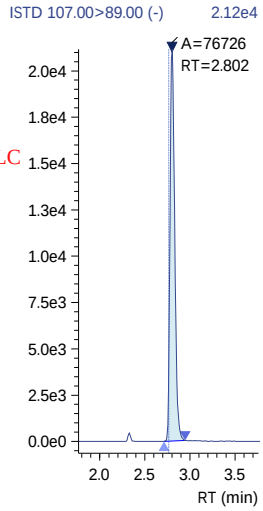
Perchlorate

Conc 0.99528
R#1 28.10 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.00000



Insight Report

Printed at 4/27/2021 3:42:43 PM

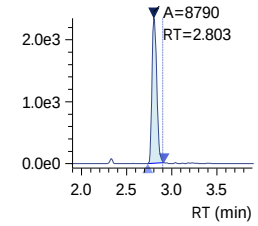
20210426_019

Sample ID: PERCHLORATE4
Date Acquired: 4/26/2021 12:46:27 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210426\Before\20210426_019.lcd
Vial: 25 | Inj. Volume: 25.0000uL | Tray: 1

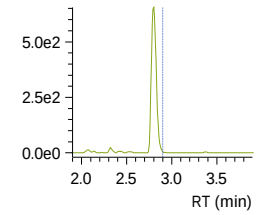
Perchlorate

Conc 0.00000
R#1 28.09 (0.00)

Q 99.00>83.00 (-) 2.35e3



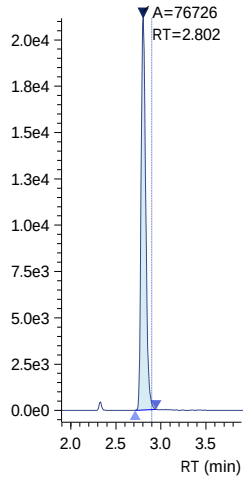
R1 101.00>85.00 (-) 6.55e2



Sodium Perchlorate -18O4_IS

Conc 1.00000

ISTD 107.00>89.00 (-) 2.12e4



Insight Report

Printed at 4/26/2021 3:02:17 PM

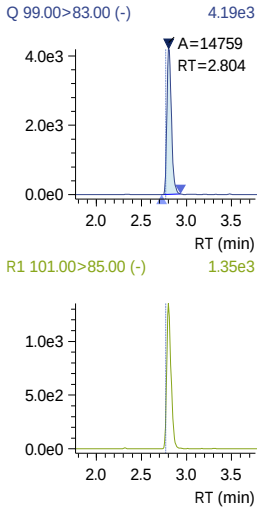
20210426_020

Sample ID: PERCHLORATE5
Date Acquired: 4/26/2021 12:54:23 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210426\20210426_020.lcd
Vial: 26 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.804	14759	62213	1	2.05194	ng/mL	2.0000	32.17
Sodium Perchlorate-18O4 _IS	Auto	2.803	62213	62213	1	1.00000	ng/mL	1.0000	----

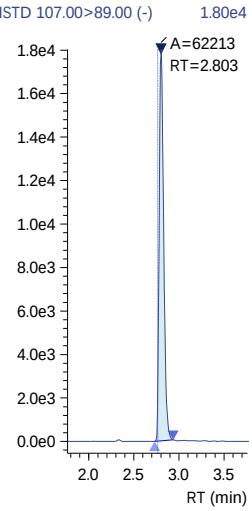
Perchlorate

Conc 2.05194
R#1 32.17 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.00000



Insight Report

Printed at 4/27/2021 3:42:43 PM

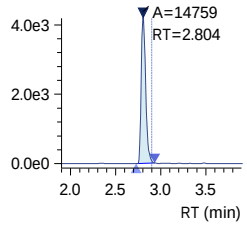
20210426_020

Sample ID: PERCHLORATE5
Date Acquired: 4/26/2021 12:54:23 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210426\Before\20210426_020.lcd
Vial: 26 | Inj. Volume: 25.0000uL | Tray: 1

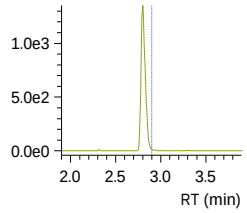
Perchlorate

Conc 0.00000
R#1 32.17 (0.00)

Q 99.00>83.00 (-) 4.19e3



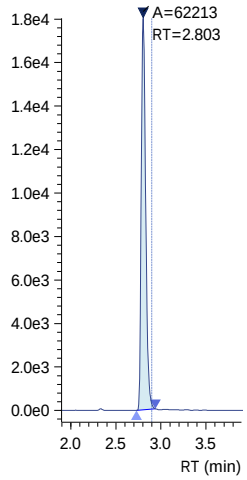
R1 101.00>85.00 (-) 1.35e3



Sodium Perchlorate -18O4_IS

Conc 1.00000

ISTD 107.00>89.00 (-) 1.80e4



Insight Report

Printed at 4/26/2021 3:02:17 PM

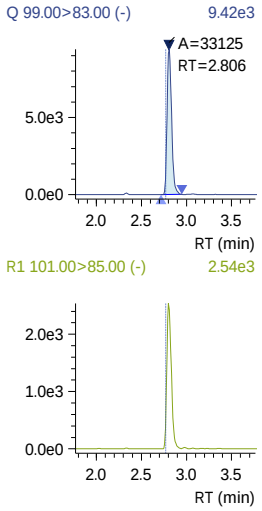
20210426_021

Sample ID: PERCHLORATE6
Date Acquired: 4/26/2021 1:02:15 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210426\20210426_021.lcd
Vial: 27 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.806	33125	57185	1	5.01041	ng/mL	5.0000	27.68
Sodium Perchlorate-18O4 _IS	Auto	2.804	57185	57185	1	1.00000	ng/mL	1.0000	----

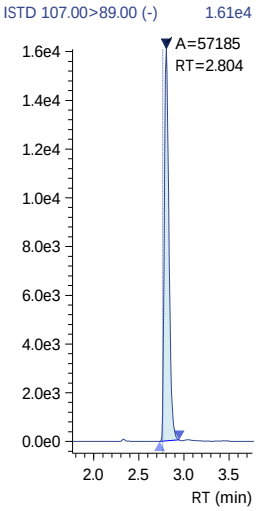
Perchlorate

Conc 5.01041
R#1 27.68 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.00000



Insight Report

Printed at 4/27/2021 3:42:43 PM

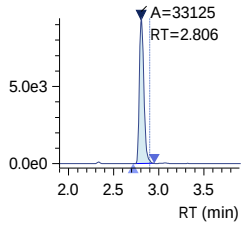
20210426_021

Sample ID: PERCHLORATE6
Date Acquired: 4/26/2021 1:02:15 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210426\Before\20210426_021.lcd
Vial: 27 | Inj. Volume: 25.0000uL | Tray: 1

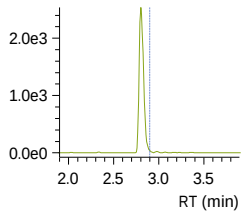
Perchlorate

Conc 0.00000
R#1 27.68 (0.00)

Q 99.00>83.00 (-) 9.42e3



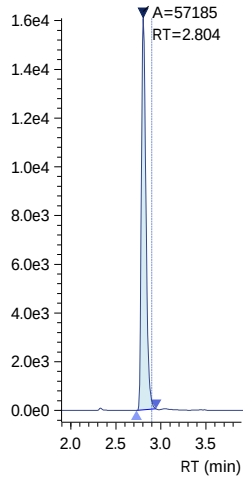
R1 101.00>85.00 (-) 2.54e3



Sodium Perchlorate -18O4_IS

Conc 1.00000

ISTD 107.00>89.00 (-) 1.61e4



Insight Report

Printed at 4/26/2021 3:02:17 PM

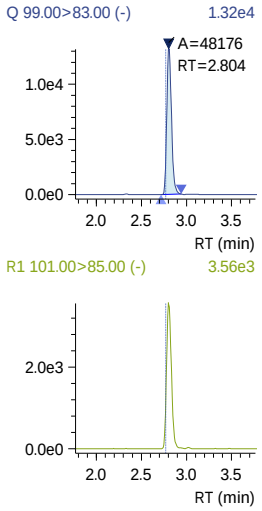
20210426_022

Sample ID: PERCHLORATE7
Date Acquired: 4/26/2021 1:10:10 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210426\20210426_022.lcd
Vial: 21 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.804	48176	44644	1	9.33399	ng/mL	10.0000	27.13
Sodium Perchlorate-18O4 _IS	Auto	2.802	44644	44644	1	1.00000	ng/mL	1.0000	----

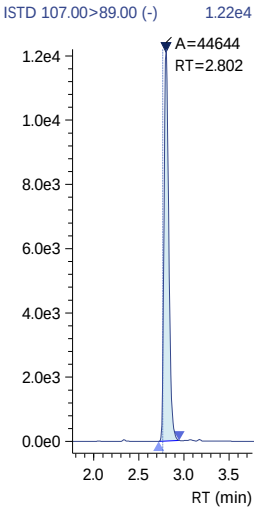
Perchlorate

Conc 9.33399
R#1 27.13 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.00000



Insight Report

Printed at 4/27/2021 3:42:43 PM

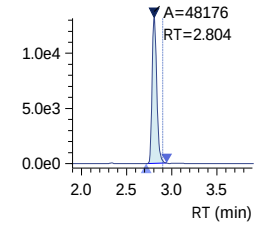
20210426_022

Sample ID: PERCHLORATE7
Date Acquired: 4/26/2021 1:10:10 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210426\Before\20210426_022.lcd
Vial: 21 | Inj. Volume: 25.0000uL | Tray: 1

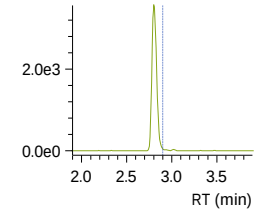
Perchlorate

Conc 0.00000
R#1 27.13 (0.00)

Q 99.00>83.00 (-) 1.32e4



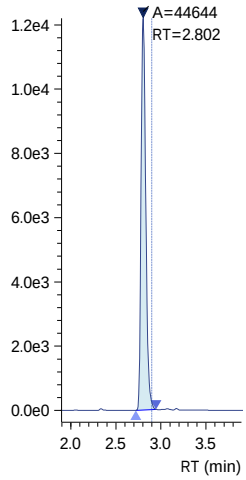
R1 101.00>85.00 (-) 3.56e3



Sodium Perchlorate -18O4_IS

Conc 1.00000

ISTD 107.00>89.00 (-) 1.22e4



Insight Report

Printed at 4/26/2021 3:02:17 PM

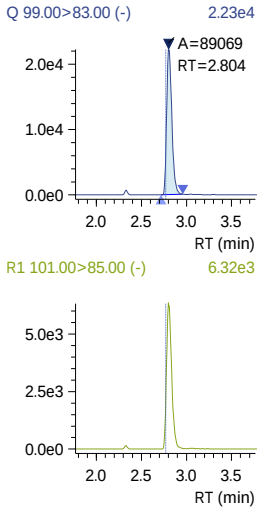
20210426_023

Sample ID: PERCHLORATE8
Date Acquired: 4/26/2021 1:18:05 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210426\20210426_023.lcd
Vial: 28 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.804	89069	42717	1	18.03548	ng/mL	20.0000	28.43
Sodium Perchlorate-18O4_IS	Auto	2.803	42717	42717	1	1.00000	ng/mL	1.0000	----

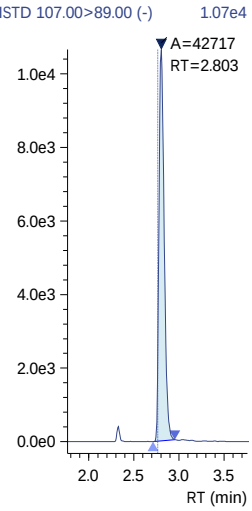
Perchlorate

Conc 18.03548
R#1 28.43 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.00000



Insight Report

Printed at 4/27/2021 3:42:43 PM

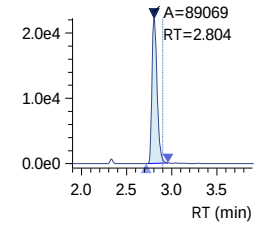
20210426_023

Sample ID: PERCHLORATE8
Date Acquired: 4/26/2021 1:18:05 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210426\Before\20210426_023.lcd
Vial: 28 | Inj. Volume: 25.0000uL | Tray: 1

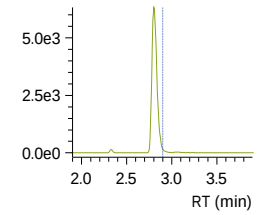
Perchlorate

Conc 0.00000
R#1 28.43 (0.00)

Q 99.00>83.00 (-) 2.23e4



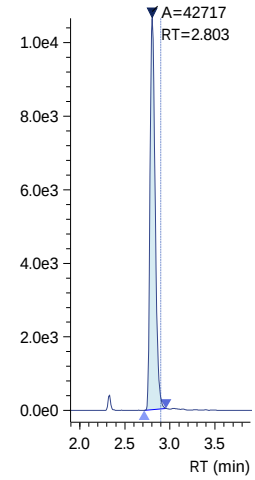
R1 101.00>85.00 (-) 6.32e3



Sodium Perchlorate -18O4_IS

Conc 1.00000

ISTD 107.00>89.00 (-) 1.07e4



Insight Report

Printed at 4/26/2021 3:02:17 PM

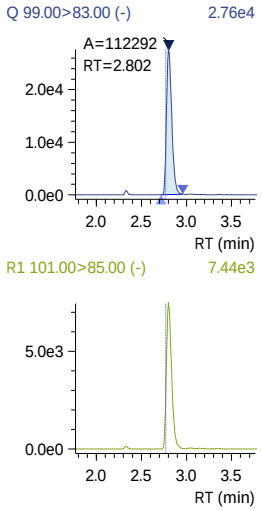
20210426_024

Sample ID: PERCHLORATE9
Date Acquired: 4/26/2021 1:26:01 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210426\20210426_024.lcd
Vial: 29 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.802	112292	36190	1	26.83895	ng/mL	30.0000	26.92
Sodium Perchlorate-18O4_IS	Auto	2.799	36190	36190	1	1.00000	ng/mL	1.0000	----

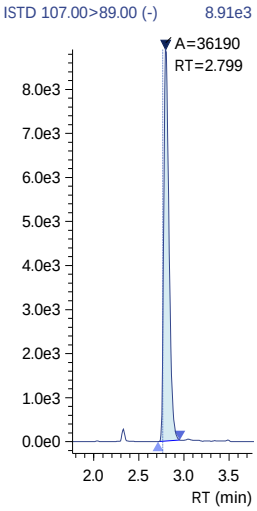
Perchlorate

Conc 26.83895
R#1 26.92 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.00000



Insight Report

Printed at 4/27/2021 3:42:43 PM

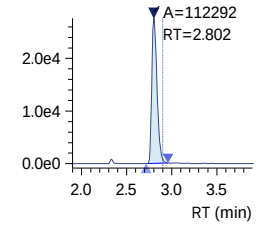
20210426_024

Sample ID: PERCHLORATE9
Date Acquired: 4/26/2021 1:26:01 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210426\Before\20210426_024.lcd
Vial: 29 | Inj. Volume: 25.0000uL | Tray: 1

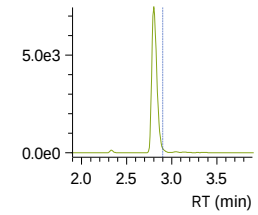
Perchlorate

Conc 0.00000
R#1 26.92 (0.00)

Q 99.00>83.00 (-) 2.76e4



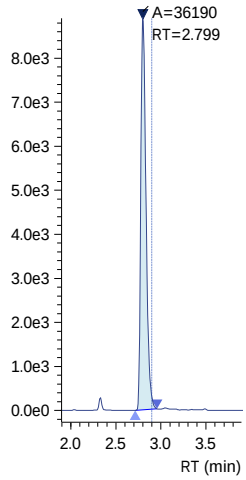
R1 101.00>85.00 (-) 7.44e3



Sodium Perchlorate -18O4_IS

Conc 1.00000

ISTD 107.00>89.00 (-) 8.91e3



Insight Report

Printed at 4/26/2021 3:02:17 PM

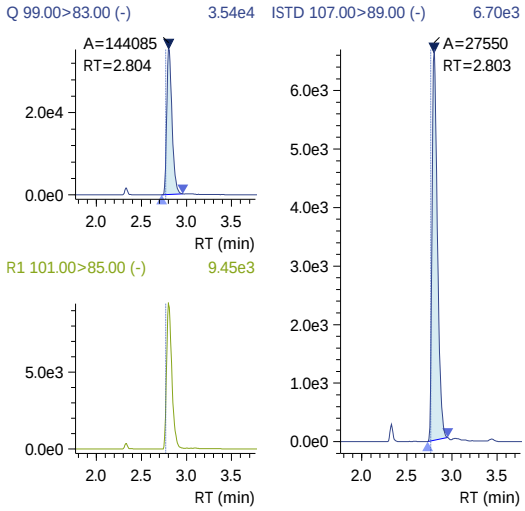
20210426_025

Sample ID: PERCHLORATE10
Date Acquired: 4/26/2021 1:33:56 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210426\20210426_025.lcd
Vial: 30 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.804	144085	27550	1	45.23802	ng/mL	50.0000	26.75
Sodium Perchlorate-18O4_IS	Auto	2.803	27550	27550	1	1.00000	ng/mL	1.0000	----

Perchlorate

Conc 45.23802
R#1 26.75 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.00000

Insight Report

Printed at 4/27/2021 3:42:43 PM

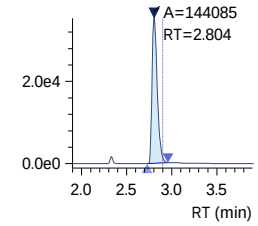
20210426_025

Sample ID: PERCHLORATE10
Date Acquired: 4/26/2021 1:33:56 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210426\Before\20210426_025.lcd
Vial: 30 | Inj. Volume: 25.0000uL | Tray: 1

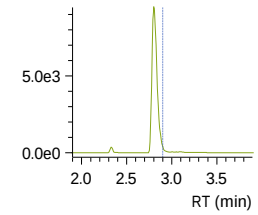
Perchlorate

Conc 0.00000
R#1 26.75 (0.00)

Q 99.00>83.00 (-) 3.54e4



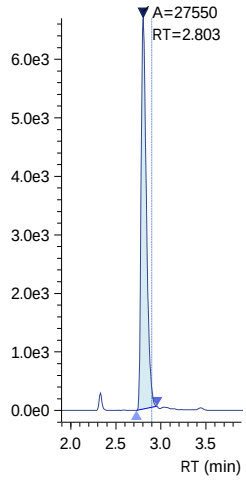
R1 101.00>85.00 (-) 9.45e3



Sodium Perchlorate -18O4_IS

Conc 1.00000

ISTD 107.00>89.00 (-) 6.70e3



Insight Report

Printed at 4/26/2021 3:02:17 PM

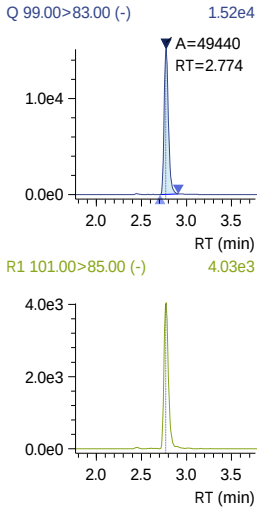
20210426_026

Sample ID: PERCHLORATEICV
Date Acquired: 4/26/2021 2:13:31 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210426\20210426_026.lcd
Vial: 31 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.774	49440	44268	1	9.66014	ng/mL	10.0000	27.34
Sodium Perchlorate-18O4 _IS	Auto	2.772	44268	44268	1	1.00000	ng/mL	1.0000	----

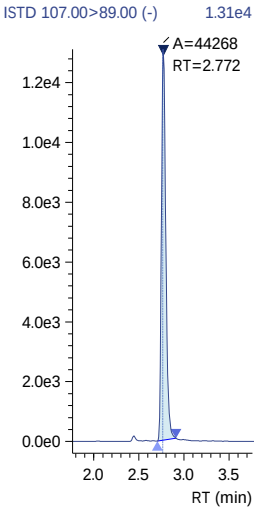
Perchlorate

Conc 9.66014
R#1 27.34 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.00000



Insight Report

Printed at 4/27/2021 3:42:43 PM

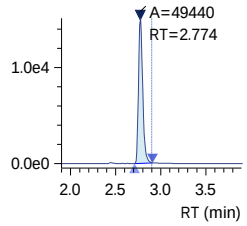
20210426_026

Sample ID: PERCHLORATEICV
Date Acquired: 4/26/2021 2:13:31 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210426\Before\20210426_026.lcd
Vial: 31 | Inj. Volume: 25.0000uL | Tray: 1

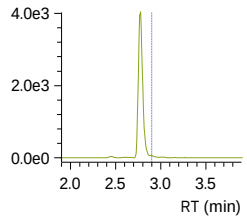
Perchlorate

Conc 0.00000
R#1 27.34 (0.00)

Q 99.00>83.00 (-) 1.52e4



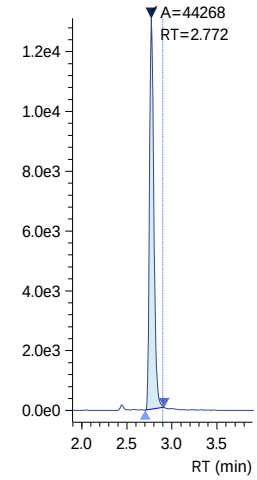
R1 101.00>85.00 (-) 4.03e3



Sodium Perchlorate -18O4_IS

Conc 1.00000

ISTD 107.00>89.00 (-) 1.31e4



20210428

ALS Environmental

1st Review: Grivera
2nd Review: Kneir

Injection Log
LCMS01 -Shimadzu 8050

ICAL Date: 4/28/2021
Cal. Std. xp: 5/20/2021
ICAL ID: **EC2100026**

Mobile Phases **A:** 0.75% Formic Acid/Water 3100809-07 **B:** MeOH 216350

			File Name	Acquisition Method	Dilution	R	Comments	Date/Time
1	PERCHLORATE1		20210428_044	Perchlorate6850b.lcm	1x	☒	3100808-05	4/28/2021 18:16
2	PERCHLORATE2		20210428_045	Perchlorate6850b.lcm	1x	☒	3100808-06	4/28/2021 18:25
3	PERCHLORATE3		20210428_046	Perchlorate6850b.lcm	1x	☒	3100808-07	4/28/2021 18:34
4	PERCHLORATE4		20210428_047	Perchlorate6850b.lcm	1x	☒	3100808-08	4/28/2021 18:44
5	PERCHLORATE5		20210428_048	Perchlorate6850b.lcm	1x	☒	3100808-09	4/28/2021 18:53
6	PERCHLORATE6		20210428_049	Perchlorate6850b.lcm	1x	☒	3100809-01	4/28/2021 19:03
7	PERCHLORATE7		20210428_050	Perchlorate6850b.lcm	1x	☒	3100809-02	4/28/2021 19:12
8	PERCHLORATE8		20210428_051	Perchlorate6850b.lcm	1x	☒	3100809-03	4/28/2021 19:22
9	PERCHLORATE9		20210428_052	Perchlorate6850b.lcm	1x	☒	3100809-04	4/28/2021 19:31
10	PERCHLORATEICV		20210428_054	Perchlorate6850b.lcm	1x	☒	3100809-06	4/28/2021 19:50
11	ICS		20210428_055	Perchlorate6850b.lcm	1x	☒		4/28/2021 19:59
12	LODV		20210428_056	Perchlorate6850b.lcm	1x	☒		4/28/2021 20:08
13	PERCHLORATE7		20210428_057	Perchlorate6850b.lcm	1x	☒	3100809-02	4/28/2021 20:18
14	EQ2100244-01		20210428_058	Perchlorate6850b.lcm	1x	☒		4/28/2021 20:27
15	EQ2100244-02		20210428_059	Perchlorate6850b.lcm	1x	☒		4/28/2021 20:37
16	EQ2100244-03		20210428_060	Perchlorate6850b.lcm	1x	☒		4/28/2021 20:46
17	E2100412-016X10		20210428_061	Perchlorate6850b.lcm	10X	☒		4/28/2021 20:55
18	E2100412-017X10		20210428_062	Perchlorate6850b.lcm	10X	☒		4/28/2021 21:05
19	E2100412-011X10DNU		20210428_063	Perchlorate6850b.lcm	10X	☒	DNU:Report 1X	4/28/2021 21:14
20	E2100412-012X10DNU		20210428_064	Perchlorate6850b.lcm	10X	☒	Bad injection: Reanalyze	4/28/2021 21:24
21	E2100412-013X10DNU		20210428_065	Perchlorate6850b.lcm	10X	☒	Over ICAL: Run 50X	4/28/2021 21:33
22	E2100412-014X10DNU		20210428_066	Perchlorate6850b.lcm	10X	☒	Bad injection: Reanalyze	4/28/2021 21:42
23	E2100412-015X10DNU		20210428_067	Perchlorate6850b.lcm	10X	☒	DNU:Report 1X	4/28/2021 21:52
24	PERCHLORATE7		20210428_068	Perchlorate6850b.lcm	1x	☒	3100809-02	4/28/2021 22:01
25	E2100411-001		20210428_069	Perchlorate6850b.lcm	1x	☒		4/28/2021 22:10
26	E2100412-003X10		20210428_070	Perchlorate6850b.lcm	10X	☒		4/28/2021 22:20
27	E2100412-010X10		20210428_071	Perchlorate6850b.lcm	10X	☒		4/28/2021 22:29
28	R2103214-010		20210428_072	Perchlorate6850b.lcm	1x	☒		4/28/2021 22:38
29	PERCHLORATE7		20210428_073	Perchlorate6850b.lcm	1x	☒	3100809-02	4/28/2021 22:48
30	E2100485-002X10		20210428_074	Perchlorate6850b.lcm	10X	☒		4/28/2021 22:57
31	E2100485-003X10		20210428_075	Perchlorate6850b.lcm	10X	☒		4/28/2021 23:07
32	E2100485-007X10		20210428_076	Perchlorate6850b.lcm	10X	☒		4/28/2021 23:16
33	E2100485-010X10		20210428_077	Perchlorate6850b.lcm	10X	☒		4/28/2021 23:25
34	EQ2100244-04X10DNU		20210428_078	Perchlorate6850b.lcm	10X	☒	DNU: report 1X	4/28/2021 23:35
35	EQ2100244-05X10DNU		20210428_079	Perchlorate6850b.lcm	10X	☒	DNU: report 1X	4/28/2021 23:44
36	PERCHLORATE7		20210428_080	Perchlorate6850b.lcm	1x	☒	3100809-02	4/28/2021 23:54
37	E2100485-001		20210428_081	Perchlorate6850b.lcm	1x	☒		4/29/2021 0:03
38	E2100485-004		20210428_082	Perchlorate6850b.lcm	1x	☒		4/29/2021 0:12
39	E2100485-005		20210428_083	Perchlorate6850b.lcm	1x	☒		4/29/2021 0:22
40	E2100485-006DNU		20210428_084	Perchlorate6850b.lcm	1x	☒	DNU: INST failed	4/29/2021 0:31
41	PERCHLORATE7		20210428_085	Perchlorate6850b.lcm	1x	☒	3100809-02	4/29/2021 0:40
42	E2100485-008		20210428_086	Perchlorate6850b.lcm	1x	☒		4/29/2021 0:50
43	E2100485-009		20210428_087	Perchlorate6850b.lcm	1x	☒		4/29/2021 0:59
44	E2100485-011		20210428_088	Perchlorate6850b.lcm	1x	☒		4/29/2021 1:09
45	E2100485-012DNU		20210428_089	Perchlorate6850b.lcm	1x	☒	DNU-low INST	4/29/2021 1:18
46	E2100485-013		20210428_090	Perchlorate6850b.lcm	1x	☒		4/29/2021 1:27
47	EQ2100244-04		20210428_091	Perchlorate6850b.lcm	1x	☒		4/29/2021 1:37
48	EQ2100244-05		20210428_092	Perchlorate6850b.lcm	1x	☒		4/29/2021 1:46
49	PERCHLORATE7		20210428_093	Perchlorate6850b.lcm	1x	☒	3100809-02	4/29/2021 1:56
50								
51								

Initial Calibration - Detailed Report

Calibration ID: EC2100026 **Instrument ID:** E-LCMS-01
Column Name: 1

#	Lab Code	Sample Name	File Location	Aquisition Date
01	EC2100026-01	PERCHLORATE1	20210428_044	04/28/2021 18:16
02	EC2100026-02	PERCHLORATE2	20210428_045	04/28/2021 18:25
03	EC2100026-03	PERCHLORATE3	20210428_046	04/28/2021 18:34
04	EC2100026-04	PERCHLORATE4	20210428_047	04/28/2021 18:44
05	EC2100026-05	PERCHLORATE5	20210428_048	04/28/2021 18:53
06	EC2100026-06	PERCHLORATE6	20210428_049	04/28/2021 19:03
07	EC2100026-07	PERCHLORATE7	20210428_050	04/28/2021 19:12
08	EC2100026-08	PERCHLORATE8	20210428_051	04/28/2021 19:22
10	EC2100026-10	PERCHLORATE9	20210428_052	04/28/2021 19:31

Analyte **Curve Fit** **Weighting**

Perchlorate **Average RF** **RSD = 13.94** **Average RF = 0.1168**

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.1000	0.1516	02	0.5000	0.1269	03	0.7000	0.1246	04	1.0000	0.1032
05	2.0000	0.1172	06	5.0000	0.1124	07	10.0000	0.1144	08	20.0000	0.09843
10	30.0000	0.1026									

Analyte

Perchlorate

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	0.1000	0.130	29.8	02	0.5000	0.543	8.6	03	0.7000	0.746	6.6
04	1.0000	0.883	-11.7	05	2.0000	2.01	0.3	06	5.0000	4.81	-3.8
07	10.0000	9.79	-2.1	08	20.0000	16.9	-15.7	10	30.0000	26.4	-12.1

Initial Calibration Verification Summary Report

Calibration ID:	EC2100026	**Instrument ID:**	E-LCMS-01
Datafile ID:	20210428_054	**Column Name:**	1

Analyte	Lab Code	Type	Curve Fit	True Value	Calc Conc	Units	Result	Criteria
Perchlorate	EC2100026-09	T	Average RF	10	9.455	ng/mL	-5.4	<= 15

Insight Report

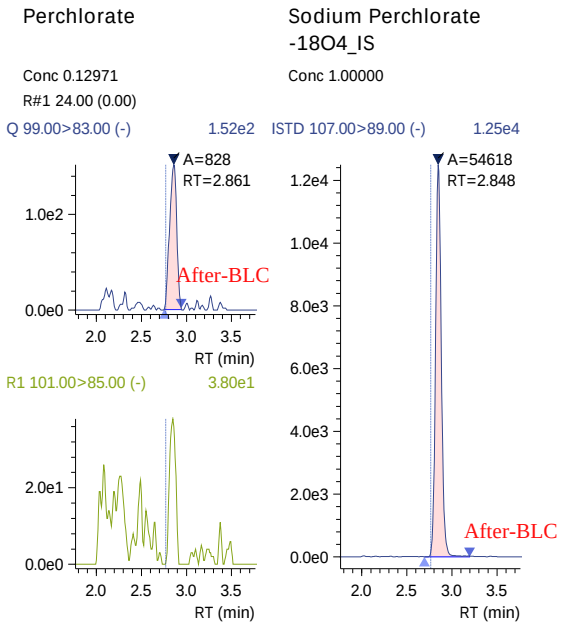
Printed at 4/29/2021 1:26:51 PM

Method File: I:\LCMS01\DATA\20210428\20210428.lcm
Project File: I:\LCMS01\DATA\20210428\20210428-ICAL.damlp

20210428_044

Sample ID: PERCHLORATE1
Date Acquired: 4/28/2021 6:16:06 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210428\20210428_044.lcd
Vial: 22 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	M	2.861	828	54618	1	0.12971	ng/mL	0.1000	24.00
Sodium Perchlorate-18O4 _IS	M	2.848	54618	54618	1	1.00000	ng/mL	1.0000	----



Insight Report

Printed at 4/29/2021 1:28:28 PM

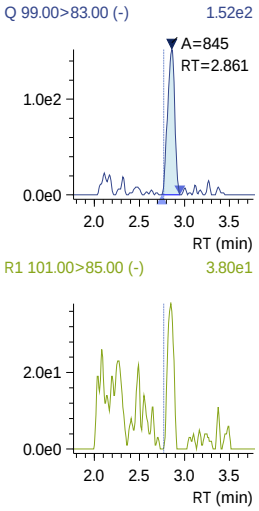
Method File: I:\LCMS01\DATA\20210428\Before\20210426.lcm

20210428_044

Sample ID: PERCHLORATE1
Date Acquired: 4/28/2021 6:16:06 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210428\Before\20210428_044.lcd
Vial: 22 | Inj. Volume: 25.0000uL | Tray: 1

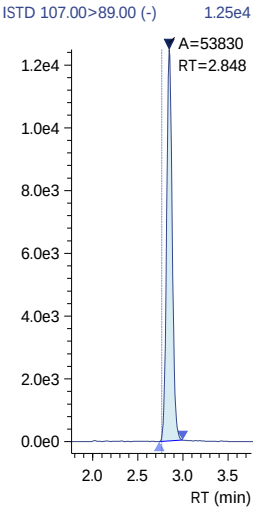
Perchlorate

Conc 0.13578
R#1 23.68 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.00000



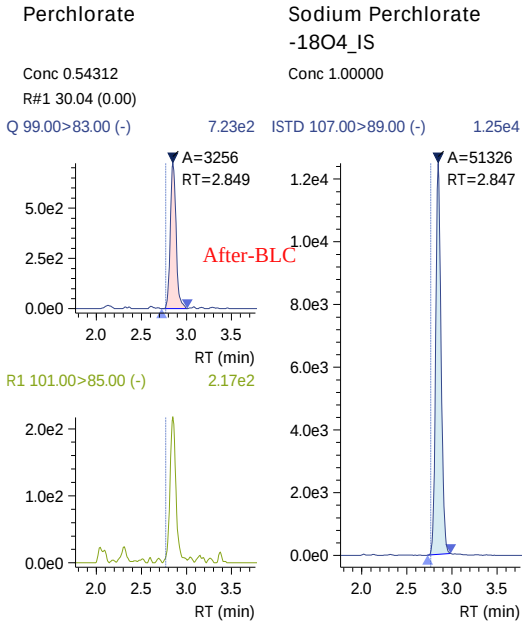
Insight Report

Printed at 4/29/2021 1:26:51 PM

20210428_045

Sample ID: PERCHLORATE2
Date Acquired: 4/28/2021 6:25:33 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210428\20210428_045.lcd
Vial: 23 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	M	2.849	3256	51326	1	0.54312	ng/mL	0.5000	30.04
Sodium Perchlorate-18O4 _IS	Auto	2.847	51326	51326	1	1.00000	ng/mL	1.0000	----



Insight Report

Printed at 4/29/2021 1:28:28 PM

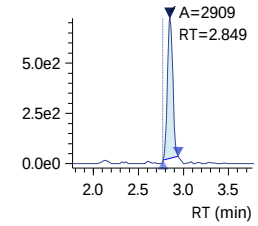
20210428_045

Sample ID: PERCHLORATE2
Date Acquired: 4/28/2021 6:25:33 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210428\Before\20210428_045.lcd
Vial: 23 | Inj. Volume: 25.0000uL | Tray: 1

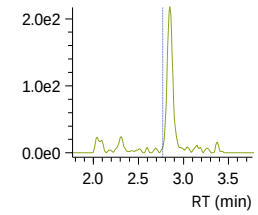
Perchlorate

Conc 0.49019
R#1 29.78 (0.00)

Q 99.00>83.00 (-) 7.23e2



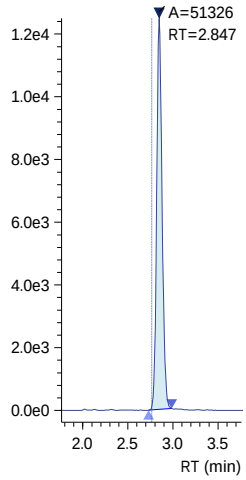
R1 101.00>85.00 (-) 2.17e2



Sodium Perchlorate -18O4_IS

Conc 1.00000

ISTD 107.00>89.00 (-) 1.25e4



Insight Report

Printed at 4/29/2021 1:26:51 PM

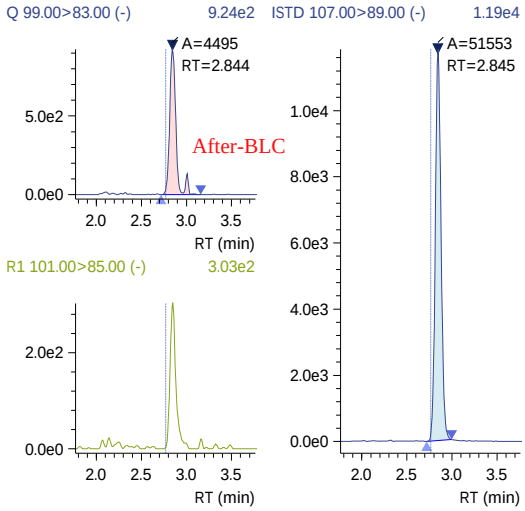
20210428_046

Sample ID: PERCHLORATE3
Date Acquired: 4/28/2021 6:34:56 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210428\20210428_046.lcd
Vial: 24 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	M	2.844	4495	51553	1	0.74640	ng/mL	0.7000	31.37
Sodium Perchlorate-18O4 _IS	Auto	2.845	51553	51553	1	1.00000	ng/mL	1.0000	----

Perchlorate

Conc 0.74640
R#1 31.37 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.00000

Insight Report

Printed at 4/29/2021 1:28:28 PM

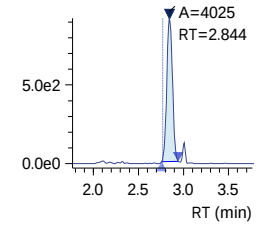
20210428_046

Sample ID: PERCHLORATE3
Date Acquired: 4/28/2021 6:34:56 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210428\Before\20210428_046.lcd
Vial: 24 | Inj. Volume: 25.0000uL | Tray: 1

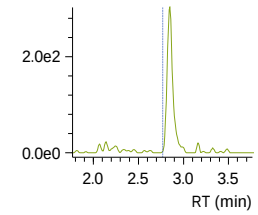
Perchlorate

Conc 0.67532
R#1 31.38 (0.00)

Q 99.00>83.00 (-) 9.24e2



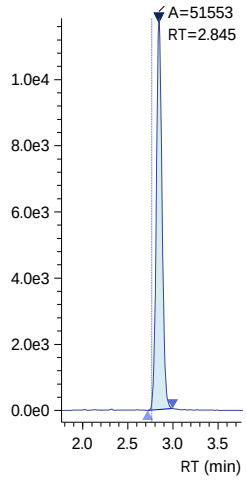
R1 101.00>85.00 (-) 3.03e2



Sodium Perchlorate -18O4_IS

Conc 1.00000

ISTD 107.00>89.00 (-) 1.19e4



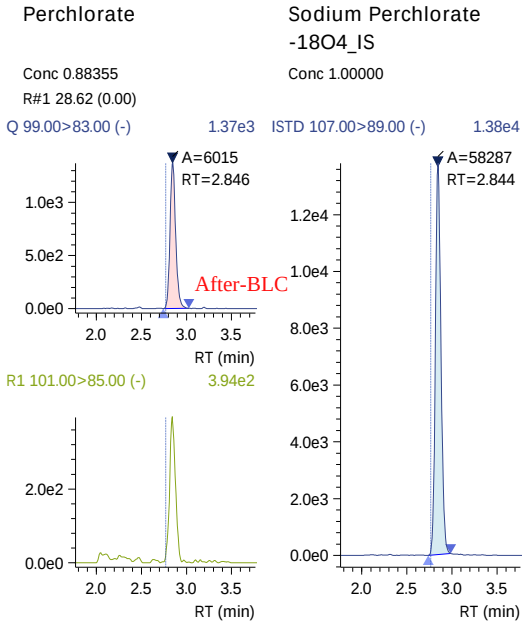
Insight Report

Printed at 4/29/2021 1:26:51 PM

20210428_047

Sample ID: PERCHLORATE4
Date Acquired: 4/28/2021 6:44:22 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210428\20210428_047.lcd
Vial: 25 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	M	2.846	6015	58287	1	0.88355	ng/mL	1.0000	28.62
Sodium Perchlorate-18O4 _IS	Auto	2.844	58287	58287	1	1.00000	ng/mL	1.0000	----



Insight Report

Printed at 4/29/2021 1:28:28 PM

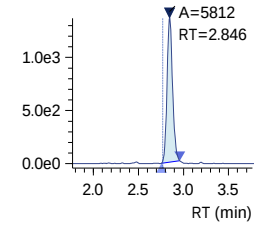
20210428_047

Sample ID: PERCHLORATE4
Date Acquired: 4/28/2021 6:44:22 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210428\Before\20210428_047.lcd
Vial: 25 | Inj. Volume: 25.0000uL | Tray: 1

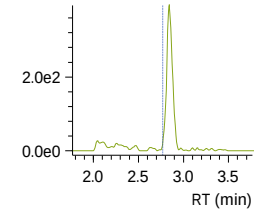
Perchlorate

Conc 0.86245
R#1 28.86 (0.00)

Q 99.00>83.00 (-) 1.37e3



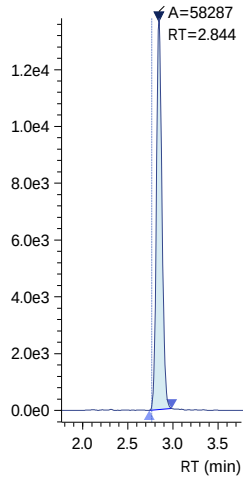
R1 101.00>85.00 (-) 3.94e2



Sodium Perchlorate -18O4_IS

Conc 1.00000

ISTD 107.00>89.00 (-) 1.38e4



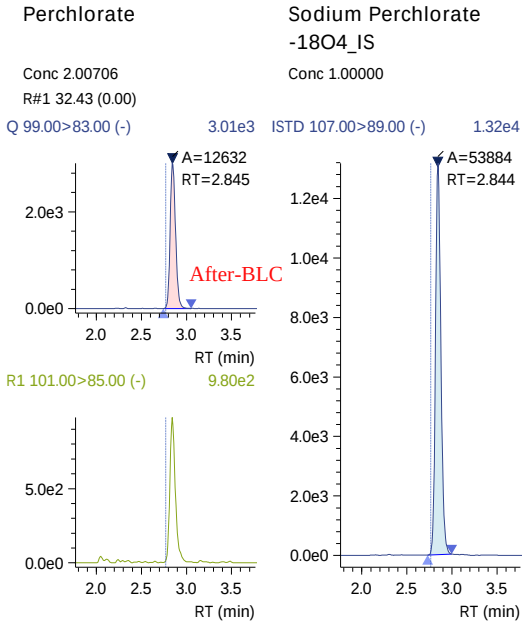
Insight Report

Printed at 4/29/2021 1:26:51 PM

20210428_048

Sample ID: PERCHLORATE5
Date Acquired: 4/28/2021 6:53:45 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210428\20210428_048.lcd
Vial: 26 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	M	2.845	12632	53884	1	2.00706	ng/mL	2.0000	32.43
Sodium Perchlorate-18O4 _IS	Auto	2.844	53884	53884	1	1.00000	ng/mL	1.0000	----



Insight Report

Printed at 4/29/2021 1:28:28 PM

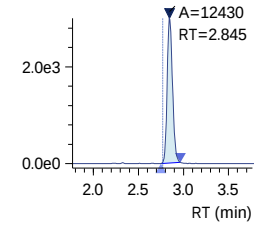
20210428_048

Sample ID: PERCHLORATE5
Date Acquired: 4/28/2021 6:53:45 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210428\Before\20210428_048.lcd
Vial: 26 | Inj. Volume: 25.0000uL | Tray: 1

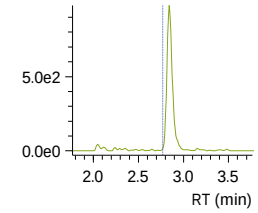
Perchlorate

Conc 1.99532
R#1 32.28 (0.00)

Q 99.00>83.00 (-) 3.01e3



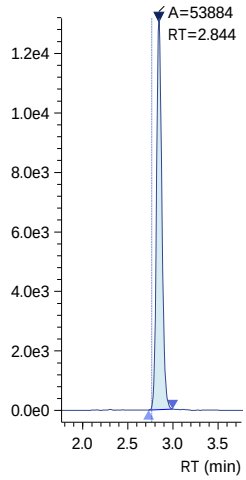
R1 101.00>85.00 (-) 9.80e2



Sodium Perchlorate -18O4_IS

Conc 1.00000

ISTD 107.00>89.00 (-) 1.32e4



Insight Report

Printed at 4/29/2021 1:26:51 PM

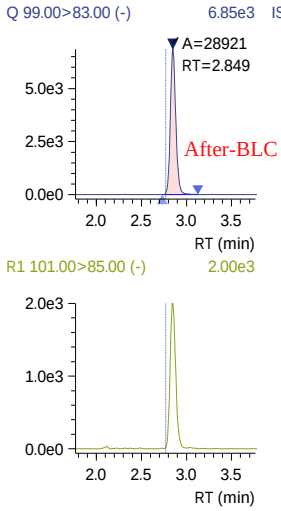
20210428_049

Sample ID: PERCHLORATE6
Date Acquired: 4/28/2021 7:03:12 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210428\20210428_049.lcd
Vial: 27 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	M	2.849	28921	51456	1	4.81188	ng/mL	5.0000	30.04
Sodium Perchlorate-18O4 _IS	Auto	2.846	51456	51456	1	1.00000	ng/mL	1.0000	----

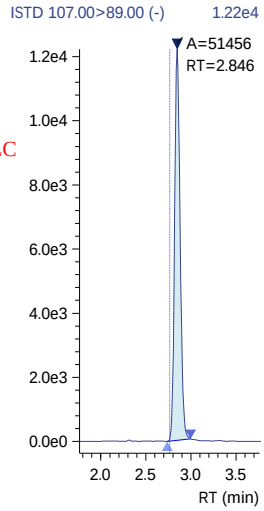
Perchlorate

Conc 4.81188
R#1 30.04 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.00000



Insight Report

Printed at 4/29/2021 1:28:28 PM

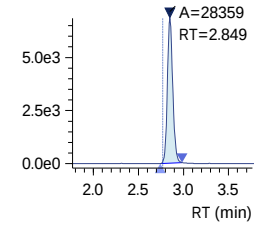
20210428_049

Sample ID: PERCHLORATE6
Date Acquired: 4/28/2021 7:03:12 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210428\Before\20210428_049.lcd
Vial: 27 | Inj. Volume: 25.0000uL | Tray: 1

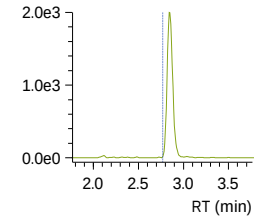
Perchlorate

Conc 4.76710
R#1 30.13 (0.00)

Q 99.00>83.00 (-) 6.85e3



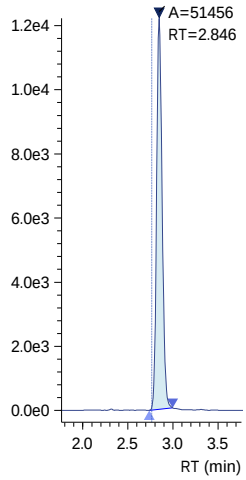
R1 101.00>85.00 (-) 2.00e3



Sodium Perchlorate -18O4_IS

Conc 1.00000

ISTD 107.00>89.00 (-) 1.22e4



Insight Report

Printed at 4/29/2021 1:26:51 PM

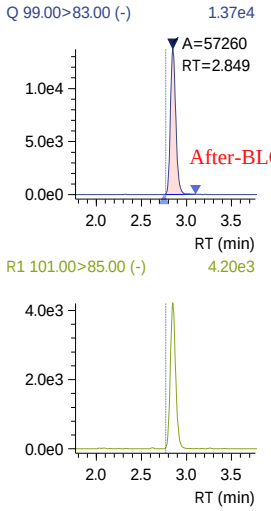
20210428_050

Sample ID: PERCHLORATE7
Date Acquired: 4/28/2021 7:12:36 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210428\20210428_050.lcd
Vial: 21 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	M	2.849	57260	50051	1	9.79458	ng/mL	10.0000	30.74
Sodium Perchlorate-18O4 _IS	Auto	2.848	50051	50051	1	1.00000	ng/mL	1.0000	----

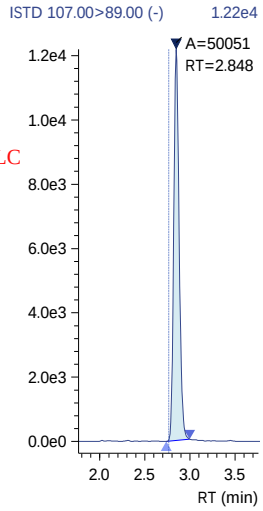
Perchlorate

Conc 9.79458
R#1 30.74 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.00000



Insight Report

Printed at 4/29/2021 1:28:28 PM

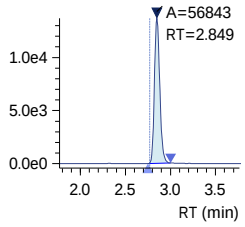
20210428_050

Sample ID: PERCHLORATE7
Date Acquired: 4/28/2021 7:12:36 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210428\Before\20210428_050.lcd
Vial: 21 | Inj. Volume: 25.0000uL | Tray: 1

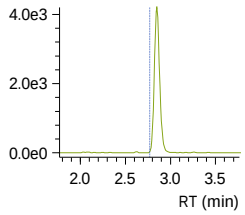
Perchlorate

Conc 9.82335
R#1 30.77 (0.00)

Q 99.00>83.00 (-) 1.37e4



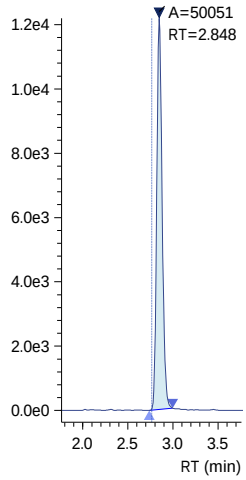
R1 101.00>85.00 (-) 4.20e3



Sodium Perchlorate -18O4_IS

Conc 1.00000

ISTD 107.00>89.00 (-) 1.22e4



Insight Report

Printed at 4/29/2021 1:26:51 PM

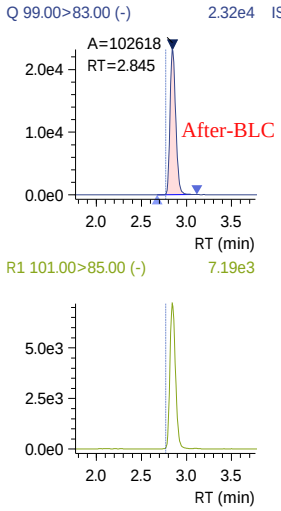
20210428_051

Sample ID: PERCHLORATE8
Date Acquired: 4/28/2021 7:22:01 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210428\20210428_051.lcd
Vial: 28 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	M	2.845	102618	52128	1	16.85388	ng/mL	20.0000	30.96
Sodium Perchlorate-18O4_IS	Auto	2.844	52128	52128	1	1.00000	ng/mL	1.0000	----

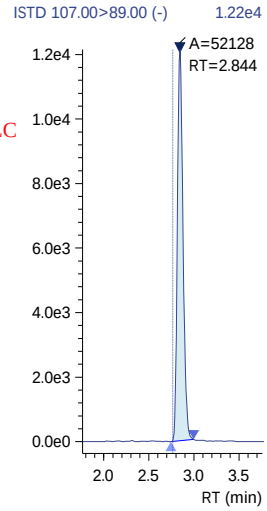
Perchlorate

Conc 16.85388
R#1 30.96 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.00000



Insight Report

Printed at 4/29/2021 1:28:28 PM

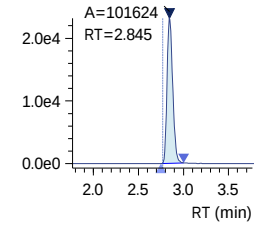
20210428_051

Sample ID: PERCHLORATE8
Date Acquired: 4/28/2021 7:22:01 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210428\Before\20210428_051.lcd
Vial: 28 | Inj. Volume: 25.0000uL | Tray: 1

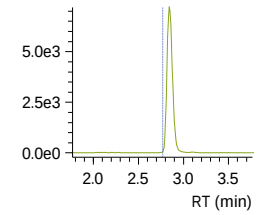
Perchlorate

Conc 16.86268
R#1 30.97 (0.00)

Q 99.00>83.00 (-) 2.32e4



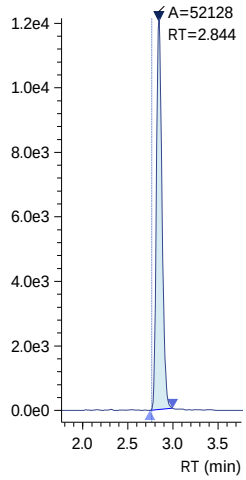
R1 101.00>85.00 (-) 7.19e3



Sodium Perchlorate -18O4_IS

Conc 1.00000

ISTD 107.00>89.00 (-) 1.22e4



Insight Report

Printed at 4/29/2021 1:26:51 PM

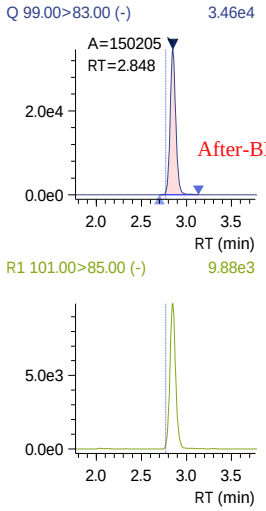
20210428_052

Sample ID: PERCHLORATE9
Date Acquired: 4/28/2021 7:31:24 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210428\20210428_052.lcd
Vial: 29 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	M	2.848	150205	48780	1	26.36258	ng/mL	30.0000	29.04
Sodium Perchlorate-18O4_IS	Auto	2.846	48780	48780	1	1.00000	ng/mL	1.0000	----

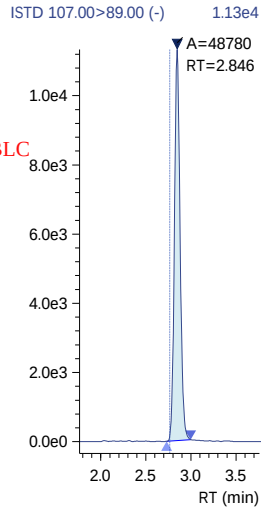
Perchlorate

Conc 26.36258
R#1 29.04 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.00000



Insight Report

Printed at 4/29/2021 1:28:28 PM

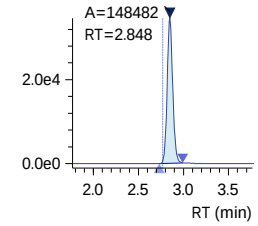
20210428_052

Sample ID: PERCHLORATE9
Date Acquired: 4/28/2021 7:31:24 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210428\Before\20210428_052.lcd
Vial: 29 | Inj. Volume: 25.0000uL | Tray: 1

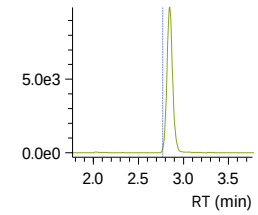
Perchlorate

Conc 26.32873
R#1 29.04 (0.00)

Q 99.00>83.00 (-) 3.46e4



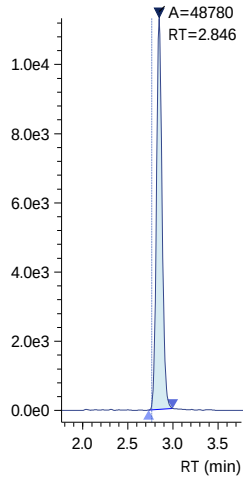
R1 101.00>85.00 (-) 9.88e3



Sodium Perchlorate -18O4_IS

Conc 1.00000

ISTD 107.00>89.00 (-) 1.13e4



Insight Report

Printed at 4/29/2021 1:26:51 PM

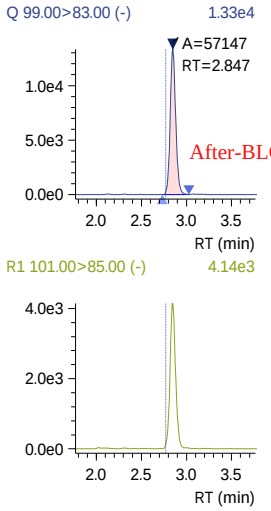
20210428_054

Sample ID: PERCHLORATEICV
Date Acquired: 4/28/2021 7:50:10 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210428\20210428_054.lcd
Vial: 31 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	M	2.847	57147	51740	1	9.45615	ng/mL	10.0000	31.56
Sodium Perchlorate-18O4 _IS	Auto	2.847	51740	51740	1	1.00000	ng/mL	1.0000	----

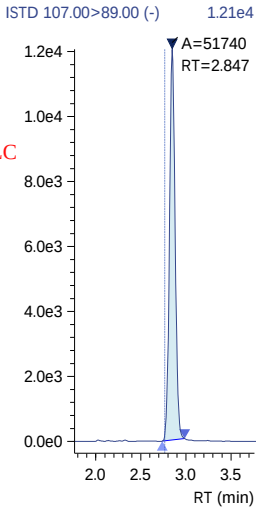
Perchlorate

Conc 9.45615
R#1 31.56 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.00000



Insight Report

Printed at 4/29/2021 1:28:28 PM

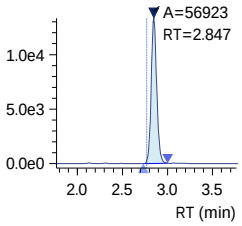
20210428_054

Sample ID: PERCHLORATEICV
Date Acquired: 4/28/2021 7:50:10 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210428\Before\20210428_054.lcd
Vial: 31 | Inj. Volume: 25.0000uL | Tray: 1

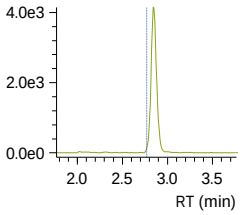
Perchlorate

Conc 9.51618
R#1 31.56 (0.00)

Q 99.00>83.00 (-) 1.33e4



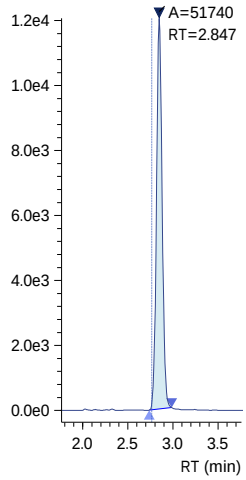
R1 101.00>85.00 (-) 4.14e3



Sodium Perchlorate -18O4_IS

Conc 1.00000

ISTD 107.00>89.00 (-) 1.21e4



Chromatograms and Selected Ion Monitoring

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 320, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

20210426

1st Review: Grivera
2nd Review: Kneir

Injection Log
LCMS01 -Shimadzu 8050

ICAL Date: 4/26/2021
Cal. Std. xp: 5/20/2021
ICAL ID: **EC2100021**

Mobile Phases **A:** 0.75% Formic Acid/Water 3100807-09 **B:** MeOH 3100802-01

			File Name	Acquisition Method	Dilution	R	Comments	Date/Time
1	PERCHLORATE1		20210426_016	Perchlorate6850b.lcm	1x	☒	3100808-05	4/26/2021 12:22
2	PERCHLORATE2		20210426_017	Perchlorate6850b.lcm	1x	☒	3100808-06	4/26/2021 12:30
3	PERCHLORATE3		20210426_018	Perchlorate6850b.lcm	1x	☒	3100808-07	4/26/2021 12:38
4	PERCHLORATE4		20210426_019	Perchlorate6850b.lcm	1x	☒	3100808-08	4/26/2021 12:46
5	PERCHLORATE5		20210426_020	Perchlorate6850b.lcm	1x	☒	3100808-09	4/26/2021 12:54
6	PERCHLORATE6		20210426_021	Perchlorate6850b.lcm	1x	☒	3100809-01	4/26/2021 13:02
7	PERCHLORATE7		20210426_022	Perchlorate6850b.lcm	1x	☒	3100809-02	4/26/2021 13:10
8	PERCHLORATE8		20210426_023	Perchlorate6850b.lcm	1x	☒	3100809-03	4/26/2021 13:18
9	PERCHLORATE9		20210426_024	Perchlorate6850b.lcm	1x	☒	3100809-04	4/26/2021 13:26
10	PERCHLORATE10		20210426_025	Perchlorate6850b.lcm	1x	☒	3100809-05	4/26/2021 13:33
11	PERCHLORATEICV		20210426_026	Perchlorate6850b.lcm	1x	☒	3100809-06	4/26/2021 14:13
12	ICS		20210426_027	Perchlorate6850b.lcm	1x	☒		4/26/2021 14:21
13	LODV		20210426_028	Perchlorate6850b.lcm	1x	☒		4/26/2021 14:29
14	PERCHLORATE7		20210426_029	Perchlorate6850b.lcm	1x	☒	3100809-02	4/26/2021 14:37
15	R2103214-010DNU		20210426_030	Perchlorate6850b.lcm	1x	☒		4/26/2021 14:45
16	E2100411-001DNU		20210426_031	Perchlorate6850b.lcm	1x	☒		4/26/2021 14:52
17	E2100412-001DNU		20210426_032	Perchlorate6850b.lcm	1x	☒		4/26/2021 15:00
18	E2100412-003X10DNU		20210426_033	Perchlorate6850b.lcm	1x	☒		4/26/2021 15:08
19	E2100412-010X10DNU		20210426_034	Perchlorate6850b.lcm	1x	☒		4/26/2021 15:16
20	E2100410-001X500		20210426_035	Perchlorate6850b.lcm	1x	☒		4/26/2021 15:24
21	PERCHLORATE7		20210426_036	Perchlorate6850b.lcm	1x	☒	3100809-02	4/26/2021 15:32
22	IB		20210426_053	Perchlorate6850b.lcm	1x	☒		4/26/2021 17:55
23	IB		20210426_054	Perchlorate6850b.lcm	1x	☒		4/26/2021 18:02
24	IB		20210426_055	Perchlorate6850b.lcm	1x	☒		4/26/2021 18:10
25	PERCHLORATE7		20210426_056	Perchlorate6850b.lcm	1x	☒	3100809-02	4/26/2021 18:18
26	E2100402-001X1000DNU		20210426_057	Perchlorate6850b.lcm	1x	☒		4/26/2021 18:26
27	E2100402-002X1000		20210426_058	Perchlorate6850b.lcm	1x	☒		4/26/2021 18:34
28	E2100402-003X1000		20210426_059	Perchlorate6850b.lcm	1x	☒		4/26/2021 18:42
29	E2100402-004X1000DNU		20210426_060	Perchlorate6850b.lcm	1x	☒		4/26/2021 18:50
30	E2100402-005X1000		20210426_061	Perchlorate6850b.lcm	1x	☒		4/26/2021 18:58
31	PERCHLORATE7		20210426_062	Perchlorate6850b.lcm	1x	☒	3100809-02	4/26/2021 19:06
32	IB		20210426_063	Perchlorate6850b.lcm	1x	☒		4/26/2021 19:14
33	IB		20210426_064	Perchlorate6850b.lcm	1x	☒		4/26/2021 19:21
34	IB		20210426_065	Perchlorate6850b.lcm	1x	☒		4/26/2021 19:29
35	PERCHLORATE7		20210426_066	Perchlorate6850b.lcm	1x	☒	3100809-02	4/26/2021 19:37
36	EQ2100238-01		20210426_067	Perchlorate6850b.lcm	1x	☒		4/26/2021 19:45
37	EQ2100238-02		20210426_068	Perchlorate6850b.lcm	1x	☒		4/26/2021 19:53
38	EQ2100238-03		20210426_069	Perchlorate6850b.lcm	1x	☒		4/26/2021 20:01
39	R2103213-001		20210426_070	Perchlorate6850b.lcm	1x	☒		4/26/2021 20:09
40	R2103213-002DNU		20210426_071	Perchlorate6850b.lcm	1x	☒	DNU: INST failed	4/26/2021 20:17
41	R2103213-004		20210426_072	Perchlorate6850b.lcm	1x	☒		4/26/2021 20:24
42	R2103213-005		20210426_073	Perchlorate6850b.lcm	1x	☒		4/26/2021 20:32
43	R2103213-006		20210426_074	Perchlorate6850b.lcm	1x	☒		4/26/2021 20:40
44	R2103213-007DNU		20210426_075	Perchlorate6850b.lcm	1x	☒	DNU: INST failed	4/26/2021 20:48
45	R2103213-008		20210426_076	Perchlorate6850b.lcm	1x	☒		4/26/2021 20:56
46	PERCHLORATE7		20210426_077	Perchlorate6850b.lcm	1x	☒	3100809-02	4/26/2021 21:04
47	R2103213-009DNU		20210426_078	Perchlorate6850b.lcm	1x	☒	DNU: INST failed	4/26/2021 21:12
48	R2103213-010		20210426_079	Perchlorate6850b.lcm	1x	☒		4/26/2021 21:19
49	R2103379-002		20210426_080	Perchlorate6850b.lcm	1x	☒		4/26/2021 21:27
50	R2103379-003		20210426_081	Perchlorate6850b.lcm	1x	☒		4/26/2021 21:35
51	R2103379-004		20210426_082	Perchlorate6850b.lcm	1x	☒		4/26/2021 21:43
52	R2103379-005		20210426_083	Perchlorate6850b.lcm	1x	☒		4/26/2021 21:51
53	E2100439-014		20210426_084	Perchlorate6850b.lcm	1x	☒		4/26/2021 21:59
54	PERCHLORATE7		20210426_085	Perchlorate6850b.lcm	1x	☒	3100809-02	4/26/2021 22:07

20210428

1st Review: Grivera
2nd Review: Kneir

ALS Environmental

Injection Log
LCMS01 -Shimadzu 8050

ICAL Date: 4/28/2021
Cal. Std. xp: 5/20/2021
ICAL ID: **EC2100026**

Mobile Phases **A:** 0.75% Formic Acid/Water 3100809-07 **B:** MeOH 216350

			File Name	Acquisition Method	Dilution	R	Comments	Date/Time
1	PERCHLORATE1		20210428_044	Perchlorate6850b.lcm	1x	☒	3100808-05	4/28/2021 18:16
2	PERCHLORATE2		20210428_045	Perchlorate6850b.lcm	1x	☒	3100808-06	4/28/2021 18:25
3	PERCHLORATE3		20210428_046	Perchlorate6850b.lcm	1x	☒	3100808-07	4/28/2021 18:34
4	PERCHLORATE4		20210428_047	Perchlorate6850b.lcm	1x	☒	3100808-08	4/28/2021 18:44
5	PERCHLORATE5		20210428_048	Perchlorate6850b.lcm	1x	☒	3100808-09	4/28/2021 18:53
6	PERCHLORATE6		20210428_049	Perchlorate6850b.lcm	1x	☒	3100809-01	4/28/2021 19:03
7	PERCHLORATE7		20210428_050	Perchlorate6850b.lcm	1x	☒	3100809-02	4/28/2021 19:12
8	PERCHLORATE8		20210428_051	Perchlorate6850b.lcm	1x	☒	3100809-03	4/28/2021 19:22
9	PERCHLORATE9		20210428_052	Perchlorate6850b.lcm	1x	☒	3100809-04	4/28/2021 19:31
10	PERCHLORATEICV		20210428_054	Perchlorate6850b.lcm	1x	☒	3100809-06	4/28/2021 19:50
11	ICS		20210428_055	Perchlorate6850b.lcm	1x	☒		4/28/2021 19:59
12	LODV		20210428_056	Perchlorate6850b.lcm	1x	☒		4/28/2021 20:08
13	PERCHLORATE7		20210428_057	Perchlorate6850b.lcm	1x	☒	3100809-02	4/28/2021 20:18
14	EQ2100244-01		20210428_058	Perchlorate6850b.lcm	1x	☒		4/28/2021 20:27
15	EQ2100244-02		20210428_059	Perchlorate6850b.lcm	1x	☒		4/28/2021 20:37
16	EQ2100244-03		20210428_060	Perchlorate6850b.lcm	1x	☒		4/28/2021 20:46
17	E2100412-016X10		20210428_061	Perchlorate6850b.lcm	10X	☒		4/28/2021 20:55
18	E2100412-017X10		20210428_062	Perchlorate6850b.lcm	10X	☒		4/28/2021 21:05
19	E2100412-011X10DNU		20210428_063	Perchlorate6850b.lcm	10X	☒	DNU:Report 1X	4/28/2021 21:14
20	E2100412-012X10DNU		20210428_064	Perchlorate6850b.lcm	10X	☒	Bad injection: Reanalyze	4/28/2021 21:24
21	E2100412-013X10DNU		20210428_065	Perchlorate6850b.lcm	10X	☒	Over ICAL: Run 50X	4/28/2021 21:33
22	E2100412-014X10DNU		20210428_066	Perchlorate6850b.lcm	10X	☒	Bad injection: Reanalyze	4/28/2021 21:42
23	E2100412-015X10DNU		20210428_067	Perchlorate6850b.lcm	10X	☒	DNU:Report 1X	4/28/2021 21:52
24	PERCHLORATE7		20210428_068	Perchlorate6850b.lcm	1x	☒	3100809-02	4/28/2021 22:01
25	E2100411-001		20210428_069	Perchlorate6850b.lcm	1x	☒		4/28/2021 22:10
26	E2100412-003X10		20210428_070	Perchlorate6850b.lcm	10X	☒		4/28/2021 22:20
27	E2100412-010X10		20210428_071	Perchlorate6850b.lcm	10X	☒		4/28/2021 22:29
28	R2103214-010		20210428_072	Perchlorate6850b.lcm	1x	☒		4/28/2021 22:38
29	PERCHLORATE7		20210428_073	Perchlorate6850b.lcm	1x	☒	3100809-02	4/28/2021 22:48
30	E2100485-002X10		20210428_074	Perchlorate6850b.lcm	10X	☒		4/28/2021 22:57
31	E2100485-003X10		20210428_075	Perchlorate6850b.lcm	10X	☒		4/28/2021 23:07
32	E2100485-007X10		20210428_076	Perchlorate6850b.lcm	10X	☒		4/28/2021 23:16
33	E2100485-010X10		20210428_077	Perchlorate6850b.lcm	10X	☒		4/28/2021 23:25
34	EQ2100244-04X10DNU		20210428_078	Perchlorate6850b.lcm	10X	☒	DNU: report 1X	4/28/2021 23:35
35	EQ2100244-05X10DNU		20210428_079	Perchlorate6850b.lcm	10X	☒	DNU: report 1X	4/28/2021 23:44
36	PERCHLORATE7		20210428_080	Perchlorate6850b.lcm	1x	☒	3100809-02	4/28/2021 23:54
37	E2100485-001		20210428_081	Perchlorate6850b.lcm	1x	☒		4/29/2021 0:03
38	E2100485-004		20210428_082	Perchlorate6850b.lcm	1x	☒		4/29/2021 0:12
39	E2100485-005		20210428_083	Perchlorate6850b.lcm	1x	☒		4/29/2021 0:22
40	E2100485-006DNU		20210428_084	Perchlorate6850b.lcm	1x	☒	DNU: INST failed	4/29/2021 0:31
41	PERCHLORATE7		20210428_085	Perchlorate6850b.lcm	1x	☒	3100809-02	4/29/2021 0:40
42	E2100485-008		20210428_086	Perchlorate6850b.lcm	1x	☒		4/29/2021 0:50
43	E2100485-009		20210428_087	Perchlorate6850b.lcm	1x	☒		4/29/2021 0:59
44	E2100485-011		20210428_088	Perchlorate6850b.lcm	1x	☒		4/29/2021 1:09
45	E2100485-012DNU		20210428_089	Perchlorate6850b.lcm	1x	☒	DNU-low INST	4/29/2021 1:18
46	E2100485-013		20210428_090	Perchlorate6850b.lcm	1x	☒		4/29/2021 1:27
47	EQ2100244-04		20210428_091	Perchlorate6850b.lcm	1x	☒		4/29/2021 1:37
48	EQ2100244-05		20210428_092	Perchlorate6850b.lcm	1x	☒		4/29/2021 1:46
49	PERCHLORATE7		20210428_093	Perchlorate6850b.lcm	1x	☒	3100809-02	4/29/2021 1:56
50								
51								

20210429

1st Review: Grivera
2nd Review: Kneir

Injection Log
LCMS01 -Shimadzu 8050

ICAL Date: 4/28/2021
Cal. Std. xp: 5/20/2021
ICAL ID: **EC2100026**

Mobile Phases **A:** 0.75% Formic Acid/Water 3100809-07 **B:** MeOH 216350

			File Name	Acquisition Method	Dilution	R	Comments	Date/Time
1	null		20210429_001	Perchlorate6850b.lcm	1x	☒		4/29/2021 9:14
2	null		20210429_002	Perchlorate6850b.lcm	1x	☒		4/29/2021 9:20
3	IB		20210429_003	Perchlorate6850b.lcm	1x	☒		4/29/2021 9:27
4	IB		20210429_004	Perchlorate6850b.lcm	1x	☒		4/29/2021 9:36
5	ICS		20210429_005	Perchlorate6850b.lcm	1x	☒		4/29/2021 9:45
6	LODV		20210429_006	Perchlorate6850b.lcm	1x	☒		4/29/2021 9:55
7	PERCHLORATE7		20210429_007	Perchlorate6850b.lcm	1x	☒	3100809-02	4/29/2021 10:04
8	E2100412-014		20210429_009	Perchlorate6850b.lcm	1x	☒		4/29/2021 10:44
9	E2100412-011		20210429_010	Perchlorate6850b.lcm	1x	☒		4/29/2021 10:54
10	E2100412-015		20210429_011	Perchlorate6850b.lcm	1x	☒		4/29/2021 11:03
11	E2100412-016DNU		20210429_012	Perchlorate6850b.lcm	1x	☒	DNU:low INST	4/29/2021 11:13
12	E2100412-017DNU		20210429_013	Perchlorate6850b.lcm	1x	☒	DNU:low INST	4/29/2021 11:22
13	PERCHLORATE7		20210429_014	Perchlorate6850b.lcm	1x	☒	3100809-02	4/29/2021 11:31
14	E2100485-012X10		20210429_015	Perchlorate6850b.lcm	10X	☒		4/29/2021 12:06
15	E2100412-001		20210429_016	Perchlorate6850b.lcm	1x	☒		4/29/2021 12:16
16	PERCHLORATE7		20210429_018	Perchlorate6850b.lcm	1x	☒	3100809-02	4/29/2021 12:34
17	PERCHLORATE7		20210429_019	Perchlorate6850b.lcm	1x	☒	3100809-02	4/29/2021 14:45
18	E2100412-012DNU		20210429_020	Perchlorate6850b.lcm	1x	☒	DNU:low INST	4/29/2021 15:13
19	E2100412-013X50		20210429_021	Perchlorate6850b.lcm	50X	☒		4/29/2021 15:23
20	E2100412-012X10DNU		20210429_022	Perchlorate6850b.lcm	10X	☒	DNU: INST failed	4/29/2021 15:42
21	E2100485-006DNU		20210429_024	Perchlorate6850b.lcm	1x	☒	DNU: INST failed	4/29/2021 16:00
22	E2100412-012X5		20210429_025	Perchlorate6850b.lcm	5X	☒		4/29/2021 16:10
23	E2100485-006X2		20210429_026	Perchlorate6850b.lcm	2X	☒		4/29/2021 16:19
24	PERCHLORATE7		20210429_027	Perchlorate6850b.lcm	1x	☒	3100809-02	4/29/2021 16:29
25								
26								
27								
28								
29								
30								
31								
32								
33								
34								
35								

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS21040859

Service Request: E2100485
Date Analyzed: 4/26/21

Continuing Calibration Verification Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
File ID: I:\LCMS01\DATA\20210426\20210426_066

Calibration Date: 4/26/21
Calibration ID: EC2100021
Analysis Lot: 721147
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	9.59	0.1156	0.1108	-4.1	NA	± 15 %	Average RF

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS21040859

Service Request: E2100485
Date Analyzed: 4/26/21

Continuing Calibration Verification Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
File ID: I:\LCMS01\DATA\20210426\20210426_077

Calibration Date: 4/26/21
Calibration ID: EC2100021
Analysis Lot: 721147
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	9.82	0.1156	0.1136	-1.8	NA	± 15 %	Average RF

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS21040859

Service Request: E2100485
Date Analyzed: 4/26/21

Continuing Calibration Verification Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
File ID: I:\LCMS01\DATA\20210426\20210426_085

Calibration Date: 4/26/21
Calibration ID: EC2100021
Analysis Lot: 721147
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	9.95	0.1156	0.1151	-0.5	NA	± 15 %	Average RF

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS21040859

Service Request: E2100485
Date Analyzed: 4/28/21

Continuing Calibration Verification Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
File ID: I:\LCMS01\DATA\20210428\20210428_057

Calibration Date: 4/28/21
Calibration ID: EC2100026
Analysis Lot: 721483
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	9.73	0.1168	0.1137	-2.7	NA	± 15 %	Average RF

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2100485
Project:	HS21040859	**Date Analyzed:**	4/28/21

Continuing Calibration Verification Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method:	6850	**Calibration Date:**	4/28/21
File ID:	I:\LCMS01\DATA\20210428\20210428_068	**Calibration ID:**	EC2100026
		Analysis Lot:	721483
		Units:	ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	9.57	0.1168	0.1118	-4.3	NA	± 15 %	Average RF

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS21040859

Service Request: E2100485
Date Analyzed: 4/28/21

Continuing Calibration Verification Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
File ID: I:\LCMS01\DATA\20210428\20210428_073

Calibration Date: 4/28/21
Calibration ID: EC2100026
Analysis Lot: 721483
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	9.70	0.1168	0.1133	-3.0	NA	± 15 %	Average RF

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS21040859

Service Request: E2100485
Date Analyzed: 4/28/21

Continuing Calibration Verification Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
File ID: I:\LCMS01\DATA\20210428\20210428_080

Calibration Date: 4/28/21
Calibration ID: EC2100026
Analysis Lot: 721483
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	9.34	0.1168	0.1091	-6.6	NA	± 15 %	Average RF

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS21040859

Service Request: E2100485
Date Analyzed: 4/29/21

Continuing Calibration Verification Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
File ID: I:\LCMS01\DATA\20210428\20210428_085

Calibration Date: 4/28/21
Calibration ID: EC2100026
Analysis Lot: 721483
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	9.68	0.1168	0.1130	-3.2	NA	± 15 %	Average RF

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS21040859

Service Request: E2100485
Date Analyzed: 4/29/21

Continuing Calibration Verification Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
File ID: I:\LCMS01\DATA\20210428\20210428_093

Calibration Date: 4/28/21
Calibration ID: EC2100026
Analysis Lot: 721483
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	9.67	0.1168	0.1130	-3.3	NA	± 15 %	Average RF

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS21040859

Service Request: E2100485
Date Analyzed: 4/29/21

Continuing Calibration Verification Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
File ID: I:\LCMS01\DATA\20210429\20210429_007

Calibration Date: 4/28/21
Calibration ID: EC2100026
Analysis Lot: 721582
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	9.68	0.1168	0.1131	-3.2	NA	± 15 %	Average RF

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS21040859

Service Request: E2100485
Date Analyzed: 4/29/21

Continuing Calibration Verification Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
File ID: I:\LCMS01\DATA\20210429\20210429_014

Calibration Date: 4/28/21
Calibration ID: EC2100026
Analysis Lot: 721582
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	9.66	0.1168	0.1128	-3.4	NA	± 15 %	Average RF

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2100485
Project:	HS21040859	**Date Analyzed:**	4/29/21

Continuing Calibration Verification Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method:	6850	**Calibration Date:**	4/28/21
File ID:	I:\LCMS01\DATA\20210429\20210429_018	**Calibration ID:**	EC2100026
		Analysis Lot:	721582
		Units:	ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	9.63	0.1168	0.1125	-3.7	NA	± 15 %	Average RF

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2100485
Project:	HS21040859	**Date Analyzed:**	4/26/21 19:37

Internal Standard Area and RT Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

File ID:	I:\LCMS01\DATA\20210426\20210426_066	**Lab Code:**	EQ2100248-01
Instrument ID:	E-LCMS-01	**Analysis Lot:**	721147
Analytical Method:	6850	**Signal ID:**	1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	55,940	2.80
	Upper Limit ==>	83,910	4.80
	Lower Limit ==>	27,970	0.80
Associated Analyses			
Continuing Calibration Verification	EQ2100248-01	48,655	2.79
Method Blank	EQ2100238-01	61,950	2.79
Lab Control Sample	EQ2100238-02	44,461	2.80
Duplicate Lab Control Sample	EQ2100238-03	48,869	2.79

Results flagged with an asterisk (*) indicate values outside control criteria.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2100485
Project:	HS21040859	**Date Analyzed:**	4/26/21 21:04

Internal Standard Area and RT Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

File ID:	I:\LCMS01\DATA\20210426\20210426_077	**Lab Code:**	EQ2100248-02
Instrument ID:	E-LCMS-01	**Analysis Lot:**	721147
Analytical Method:	6850	**Signal ID:**	1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	55,940	2.80
	Upper Limit ==>	83,910	4.80
	Lower Limit ==>	27,970	0.80
Associated Analyses			
Continuing Calibration Verification	EQ2100248-02	48,847	2.80
16EW07-210415	E2100485-014	57,400	2.80

Results flagged with an asterisk (*) indicate values outside control criteria.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2100485
Project:	HS21040859	**Date Analyzed:**	4/26/21 22:07

Internal Standard Area and RT Summary

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

File ID:	I:\LCMS01\DATA\20210426\20210426_085	**Lab Code:**	EQ2100248-03
Instrument ID:	E-LCMS-01	**Analysis Lot:**	721147
Analytical Method:	6850	**Signal ID:**	1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	55,940	2.80
	Upper Limit ==>	83,910	4.80
	Lower Limit ==>	27,970	0.80
Associated Analyses			
Continuing Calibration Verification	EQ2100248-03	46,808	2.80

Results flagged with an asterisk (*) indicate values outside control criteria.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2100485
Project:	HS21040859	**Date Analyzed:**	4/28/21 20:18

Internal Standard Area and RT Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

File ID:	I:\LCMS01\DATA\20210428\20210428_057	**Lab Code:**	EQ2100258-01
Instrument ID:	E-LCMS-01	**Analysis Lot:**	721483
Analytical Method:	6850	**Signal ID:**	1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	52,454	2.85
	Upper Limit ==>	78,681	4.85
	Lower Limit ==>	26,227	0.85
Associated Analyses			
Continuing Calibration Verification	EQ2100258-01	54,358	2.85
Method Blank	EQ2100244-01	62,052	2.84
Lab Control Sample	EQ2100244-02	62,495	2.85
Duplicate Lab Control Sample	EQ2100244-03	63,156	2.85

Results flagged with an asterisk (*) indicate values outside control criteria.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS21040859

Service Request: E2100485
Date Analyzed: 4/28/21 22:01

Internal Standard Area and RT Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

File ID: I:\LCMS01\DATA\20210428\20210428_068
Instrument ID: E-LCMS-01
Analytical Method: 6850

Lab Code: EQ2100258-02
Analysis Lot: 721483
Signal ID: 1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	52,454	2.85
	Upper Limit ==>	78,681	4.85
	Lower Limit ==>	26,227	0.85
Associated Analyses			
Continuing Calibration Verification	EQ2100258-02	49,259	2.85

Results flagged with an asterisk (*) indicate values outside control criteria.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2100485
Project:	HS21040859	**Date Analyzed:**	4/28/21 22:48

Internal Standard Area and RT Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

File ID:	I:\LCMS01\DATA\20210428\20210428_073	**Lab Code:**	EQ2100258-03
Instrument ID:	E-LCMS-01	**Analysis Lot:**	721483
Analytical Method:	6850	**Signal ID:**	1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	52,454	2.85
	Upper Limit ==>	78,681	4.85
	Lower Limit ==>	26,227	0.85
Associated Analyses			
Continuing Calibration Verification	EQ2100258-03	43,925	2.85
16PM03-210414	E2100485-002	74,644	2.85
16PM03-210414-FD	E2100485-003	65,803	2.85
16WW16-210415	E2100485-007	64,335	2.85
16WW41-210415	E2100485-010	43,790	2.86

Results flagged with an asterisk (*) indicate values outside control criteria.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS21040859

Service Request: E2100485
Date Analyzed: 4/28/21 23:54

Internal Standard Area and RT Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

File ID: I:\LCMS01\DATA\20210428\20210428_080
Instrument ID: E-LCMS-01
Analytical Method: 6850

Lab Code: EQ2100258-04
Analysis Lot: 721483
Signal ID: 1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	52,454	2.85
	Upper Limit ==>	78,681	4.85
	Lower Limit ==>	26,227	0.85
Associated Analyses			
Continuing Calibration Verification	EQ2100258-04	46,305	2.85
16PM02-210414	E2100485-001	60,436	2.86
16RW01-210414	E2100485-004	49,712	2.86
16RW04-210414	E2100485-005	54,816	2.86

Results flagged with an asterisk (*) indicate values outside control criteria.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS21040859

Service Request: E2100485
Date Analyzed: 4/29/21 00:40

Internal Standard Area and RT Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

File ID: I:\LCMS01\DATA\20210428\20210428_085
Instrument ID: E-LCMS-01
Analytical Method: 6850

Lab Code: EQ2100258-05
Analysis Lot: 721483
Signal ID: 1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	52,454	2.85
	Upper Limit ==>	78,681	4.85
	Lower Limit ==>	26,227	0.85
Associated Analyses			
Continuing Calibration Verification	EQ2100258-05	48,328	2.85
16WW56-210415	E2100485-008	50,554	2.84
16WW22-210415	E2100485-009	36,774	2.85
16WW21-210415	E2100485-011	52,148	2.84
16WW51-210415	E2100485-013	41,827	2.85
16WW56-210415MS	EQ2100244-04	55,133	2.85
16WW56-210415DMS	EQ2100244-05	53,598	2.85

Results flagged with an asterisk (*) indicate values outside control criteria.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS21040859

Service Request: E2100485
Date Analyzed: 4/29/21 01:56

Internal Standard Area and RT Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

File ID: I:\LCMS01\DATA\20210428\20210428_093
Instrument ID: E-LCMS-01
Analytical Method: 6850

Lab Code: EQ2100258-06
Analysis Lot: 721483
Signal ID: 1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	52,454	2.85
	Upper Limit ==>	78,681	4.85
	Lower Limit ==>	26,227	0.85
Associated Analyses			
Continuing Calibration Verification	EQ2100258-06	43,314	2.85

Results flagged with an asterisk (*) indicate values outside control criteria.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2100485
Project:	HS21040859	**Date Analyzed:**	4/29/21 10:04

Internal Standard Area and RT Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

File ID:	I:\LCMS01\DATA\20210429\20210429_007	**Lab Code:**	EQ2100259-01
Instrument ID:	E-LCMS-01	**Analysis Lot:**	721582
Analytical Method:	6850	**Signal ID:**	1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	52,454	2.85
	Upper Limit ==>	78,681	4.85
	Lower Limit ==>	26,227	0.85
Associated Analyses			
Continuing Calibration Verification	EQ2100259-01	49,173	2.85

Results flagged with an asterisk (*) indicate values outside control criteria.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2100485
Project:	HS21040859	**Date Analyzed:**	4/29/21 11:31

Internal Standard Area and RT Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

File ID:	I:\LCMS01\DATA\20210429\20210429_014	**Lab Code:**	EQ2100259-02
Instrument ID:	E-LCMS-01	**Analysis Lot:**	721582
Analytical Method:	6850	**Signal ID:**	1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	52,454	2.85
	Upper Limit ==>	78,681	4.85
	Lower Limit ==>	26,227	0.85
Associated Analyses			
Continuing Calibration Verification	EQ2100259-02	55,375	2.85
16WW39-210415	E2100485-012	74,137	2.72

Results flagged with an asterisk (*) indicate values outside control criteria.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2100485
Project:	HS21040859	**Date Analyzed:**	4/29/21 12:34

Internal Standard Area and RT Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

File ID:	I:\LCMS01\DATA\20210429\20210429_018	**Lab Code:**	EQ2100259-03
Instrument ID:	E-LCMS-01	**Analysis Lot:**	721582
Analytical Method:	6850	**Signal ID:**	1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	52,454	2.85
	Upper Limit ==>	78,681	4.85
	Lower Limit ==>	26,227	0.85
Associated Analyses			
Continuing Calibration Verification	EQ2100259-03	54,333	2.85

Results flagged with an asterisk (*) indicate values outside control criteria.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2100485
Project:	HS21040859	**Date Analyzed:**	4/29/21 14:45

Internal Standard Area and RT Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

File ID:	I:\LCMS01\DATA\20210429\20210429_019	**Lab Code:**	EQ2100259-04
Instrument ID:	E-LCMS-01	**Analysis Lot:**	721582
Analytical Method:	6850	**Signal ID:**	1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	52,454	2.85
	Upper Limit ==>	78,681	4.85
	Lower Limit ==>	26,227	0.85
Associated Analyses			
Continuing Calibration Verification	EQ2100259-04	60,412	2.72
16RW02-210414	E2100485-006	73,898	2.85

Results flagged with an asterisk (*) indicate values outside control criteria.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2100485
Project:	HS21040859	**Date Analyzed:**	4/29/21 16:29

Internal Standard Area and RT Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

File ID:	I:\LCMS01\DATA\20210429\20210429_027	**Lab Code:**	EQ2100259-05
Instrument ID:	E-LCMS-01	**Analysis Lot:**	721582
Analytical Method:	6850	**Signal ID:**	1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	52,454	2.85
	Upper Limit ==>	78,681	4.85
	Lower Limit ==>	26,227	0.85
Associated Analyses			
Continuing Calibration Verification	EQ2100259-05	51,614	2.85

Results flagged with an asterisk (*) indicate values outside control criteria.

Insight Report

Printed at 4/27/2021 9:27:17 AM

Method File: I:\LCMS01\DATA\20210426\20210426.lcm
Project File: I:\LCMS01\DATA\20210426\20210426.damlp

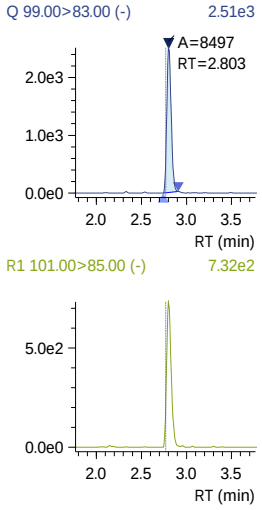
20210426_027

Sample ID: ICS
Date Acquired: 4/26/2021 2:21:26 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210426\20210426_027.lcd
Vial: 32 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.803	8497	69989	1	1.05008	ng/mL	----	29.14
Sodium Perchlorate-18O4 _IS	Auto	2.801	69989	69989	1	1.00000	ng/mL	----	----

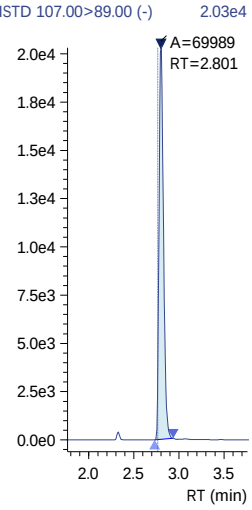
Perchlorate

Conc 1.05008
R#1 29.14 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.00000



Insight Report

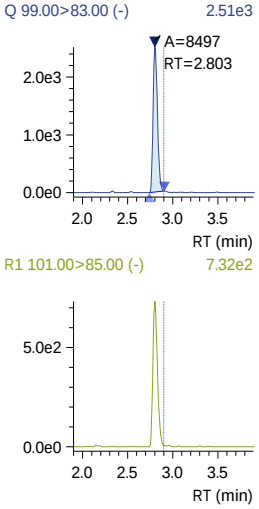
Printed at 4/27/2021 3:42:43 PM

20210426_027

Sample ID: ICS
Date Acquired: 4/26/2021 2:21:26 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210426\Before\20210426_027.lcd
Vial: 32 | Inj. Volume: 25.0000uL | Tray: 1

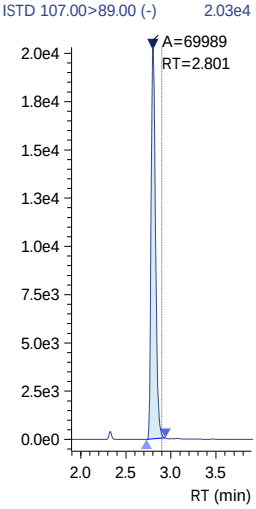
Perchlorate

Conc 0.00000
R#1 29.14 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.00000



Insight Report

Printed at 4/27/2021 9:27:17 AM

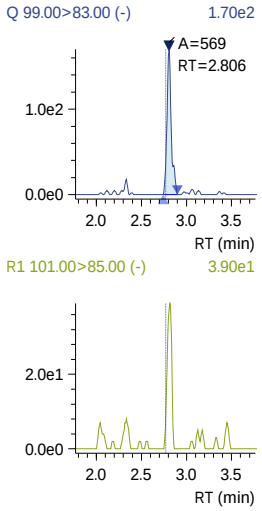
20210426_028

Sample ID: LODV
Date Acquired: 4/26/2021 2:29:19 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210426\20210426_028.lcd
Vial: 20 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.806	569	76083	1	0.06463	ng/mL	----	21.74
Sodium Perchlorate-18O4 _IS	Auto	2.802	76083	76083	1	1.00000	ng/mL	----	----

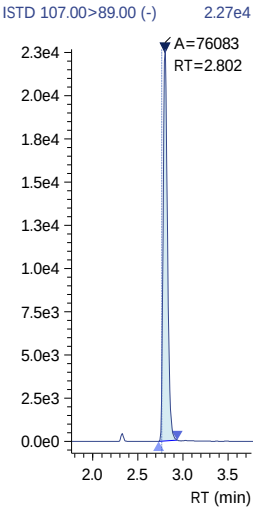
Perchlorate

Conc 0.06463
R#1 21.74 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.00000



Insight Report

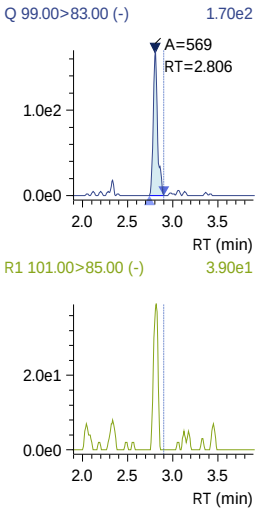
Printed at 4/27/2021 3:42:43 PM

20210426_028

Sample ID: LODV
Date Acquired: 4/26/2021 2:29:19 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210426\Before\20210426_028.lcd
Vial: 20 | Inj. Volume: 25.0000uL | Tray: 1

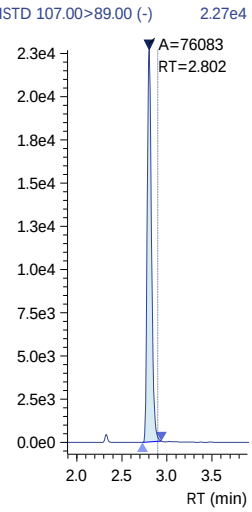
Perchlorate

Conc 0.00000
R#1 21.74 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.00000



Insight Report

Printed at 4/27/2021 9:27:17 AM

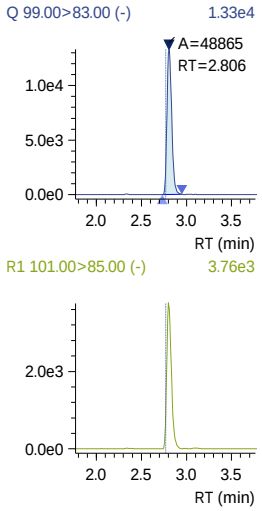
20210426_029

Sample ID: PERCHLORATE7
Date Acquired: 4/26/2021 2:37:15 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210426\20210426_029.lcd
Vial: 21 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.806	48865	44211	1	9.56035	ng/mL	10.0000	28.86
Sodium Perchlorate-18O4 _IS	Auto	2.805	44211	44211	1	1.00000	ng/mL	1.0000	----

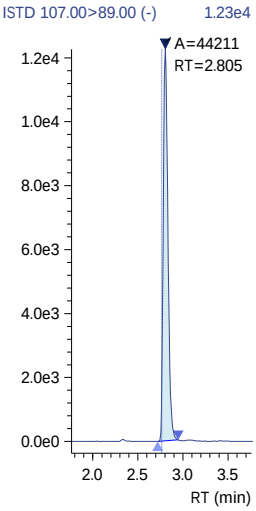
Perchlorate

Conc 9.56035
R#1 28.86 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.00000



Insight Report

Printed at 4/27/2021 3:42:43 PM

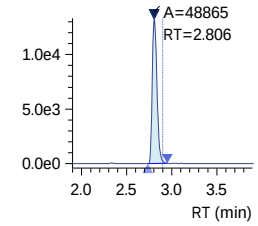
20210426_029

Sample ID: PERCHLORATE7
Date Acquired: 4/26/2021 2:37:15 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210426\Before\20210426_029.lcd
Vial: 21 | Inj. Volume: 25.0000uL | Tray: 1

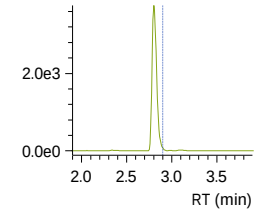
Perchlorate

Conc 0.00000
R#1 28.86 (0.00)

Q 99.00>83.00 (-) 1.33e4



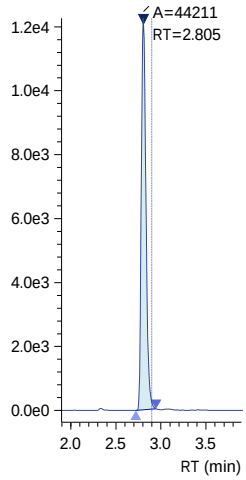
R1 101.00>85.00 (-) 3.76e3



Sodium Perchlorate -18O4_IS

Conc 1.00000

ISTD 107.00>89.00 (-) 1.23e4



Insight Report

Printed at 5/6/2021 2:03:15 PM

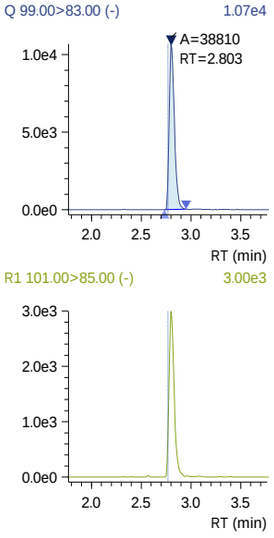
20210426_036

Sample ID: PERCHLORATE7
Date Acquired: 4/26/2021 3:32:14 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210426\20210426_036.lcd
Vial: 21 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.803	38810	35911	1	9.34794	ng/mL	10.0000	28.03
Sodium Perchlorate-18O4_IS	Auto	2.801	35911	35911	1	1.00000	ng/mL	1.0000	----

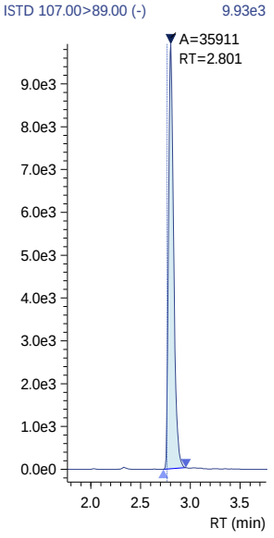
Perchlorate

Conc 9.34794
R#1 28.03 (0.00)



Sodium Perchlorate-18O4_IS

Conc 1.00000



Insight Report

Printed at 5/6/2021 2:08:40 PM

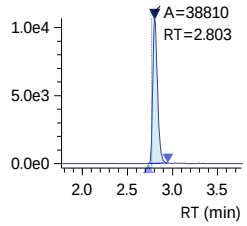
20210426_036

Sample ID: PERCHLORATE7
Date Acquired: 4/26/2021 3:32:14 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210426\Before\20210426_036.lcd
Vial: 21 | Inj. Volume: 25.0000uL | Tray: 1

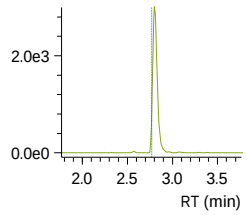
Perchlorate

Conc 9.42123
R#1 28.03 (0.00)

Q 99.00>83.00 (-) 1.07e4



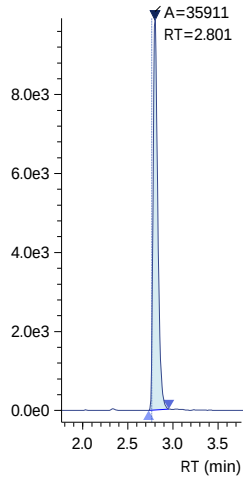
R1 101.00>85.00 (-) 3.00e3



Sodium Perchlorate -18O4_IS

Conc 1.00000

ISTD 107.00>89.00 (-) 9.93e3



Insight Report

Printed at 4/27/2021 9:27:17 AM

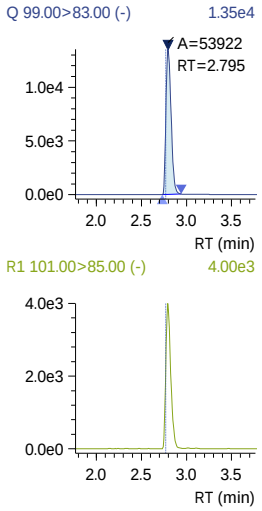
20210426_066

Sample ID: PERCHLORATE7
Date Acquired: 4/26/2021 7:37:43 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210426\20210426_066.lcd
Vial: 21 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.795	53922	48655	1	9.58596	ng/mL	10.0000	29.52
Sodium Perchlorate-18O4 _IS	Auto	2.794	48655	48655	1	1.00000	ng/mL	1.0000	----

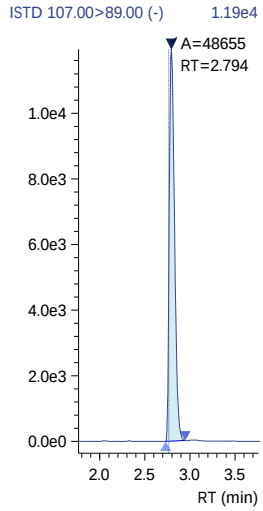
Perchlorate

Conc 9.58596
R#1 29.52 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.00000



Insight Report

Printed at 4/27/2021 3:42:43 PM

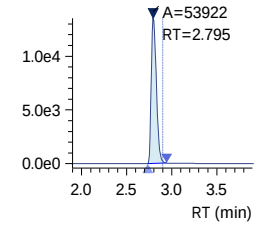
20210426_066

Sample ID: PERCHLORATE7
Date Acquired: 4/26/2021 7:37:43 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210426\Before\20210426_066.lcd
Vial: 21 | Inj. Volume: 25.0000uL | Tray: 1

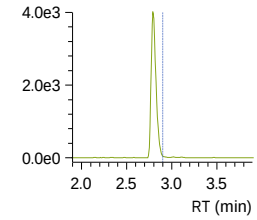
Perchlorate

Conc 0.00000
R#1 29.52 (0.00)

Q 99.00>83.00 (-) 1.35e4



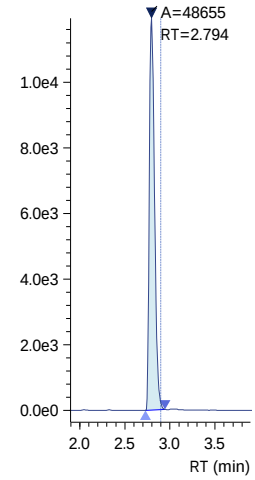
R1 101.00>85.00 (-) 4.00e3



Sodium Perchlorate -18O4_IS

Conc 1.00000

ISTD 107.00>89.00 (-) 1.19e4



Insight Report

Printed at 4/27/2021 9:27:17 AM

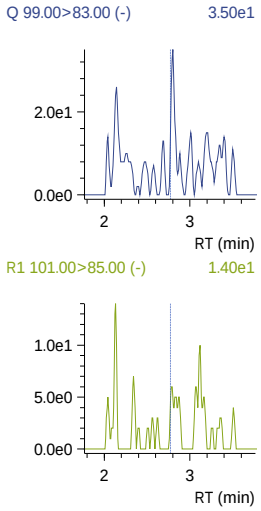
20210426_067

Sample ID: EQ2100238-01
Date Acquired: 4/26/2021 7:45:33 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210426\20210426_067.lcd
Vial: 34 | Inj. Volume: 25.0000uL | Tray: 5

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	ND(W/B)	----	----	61950	1	----	ng/mL	----	----
Sodium Perchlorate-18O4_IS	Auto	2.794	61950	61950	1	1.00000	ng/mL	----	----

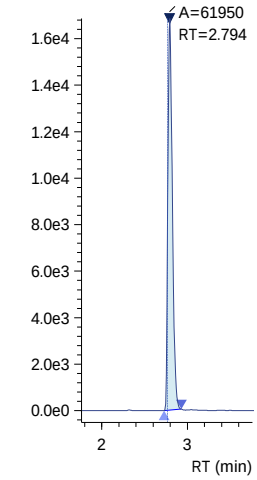
Perchlorate

Conc ----
R#1 ---- (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.00000



Insight Report

Printed at 4/27/2021 3:42:43 PM

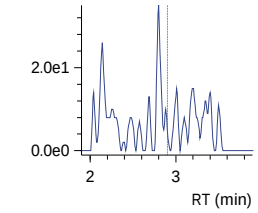
20210426_067

Sample ID: EQ2100238-01
Date Acquired: 4/26/2021 7:45:33 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210426\Before\20210426_067.lcd
Vial: 34 | Inj. Volume: 25.0000uL | Tray: 5

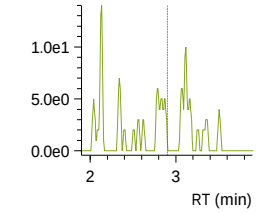
Perchlorate

Conc ----
R#1 ---- (0.00)

Q 99.00>83.00 (-) 3.50e1



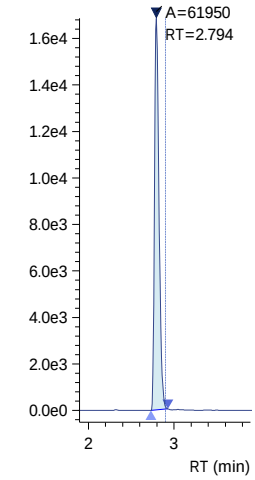
R1 101.00>85.00 (-) 1.40e1



Sodium Perchlorate -18O4_IS

Conc 1.00000

ISTD 107.00>89.00 (-) 1.69e4



Insight Report

Printed at 4/27/2021 9:27:17 AM

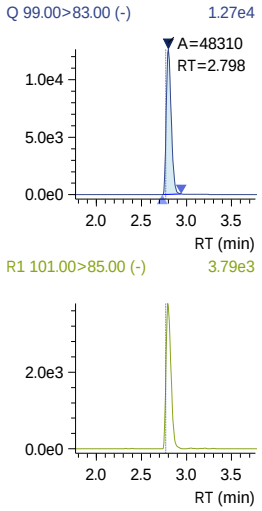
20210426_068

Sample ID: EQ2100238-02
Date Acquired: 4/26/2021 7:53:28 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210426\20210426_068.lcd
Vial: 35 | Inj. Volume: 25.0000uL | Tray: 5

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.798	48310	44461	1	9.39852	ng/mL	----	30.71
Sodium Perchlorate-18O4 _IS	Auto	2.796	44461	44461	1	1.00000	ng/mL	----	----

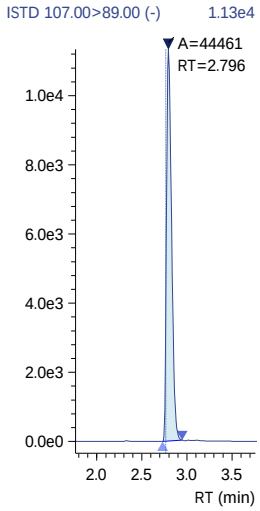
Perchlorate

Conc 9.39852
R#1 30.71 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.00000



Insight Report

Printed at 4/27/2021 3:42:43 PM

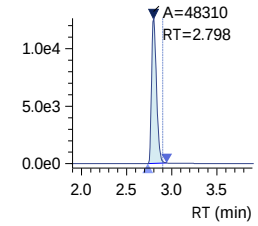
20210426_068

Sample ID: EQ2100238-02
Date Acquired: 4/26/2021 7:53:28 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210426\Before\20210426_068.lcd
Vial: 35 | Inj. Volume: 25.0000uL | Tray: 5

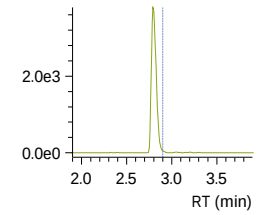
Perchlorate

Conc 0.00000
R#1 30.71 (0.00)

Q 99.00>83.00 (-) 1.27e4



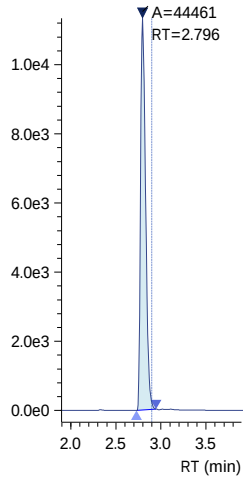
R1 101.00>85.00 (-) 3.79e3



Sodium Perchlorate -18O4_IS

Conc 1.00000

ISTD 107.00>89.00 (-) 1.13e4



Insight Report

Printed at 4/27/2021 9:27:17 AM

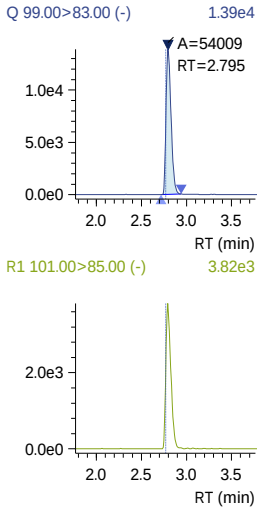
20210426_069

Sample ID: EQ2100238-03
Date Acquired: 4/26/2021 8:01:18 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210426\20210426_069.lcd
Vial: 36 | Inj. Volume: 25.0000uL | Tray: 5

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.795	54009	48869	1	9.55929	ng/mL	----	27.45
Sodium Perchlorate-18O4 _IS	Auto	2.793	48869	48869	1	1.00000	ng/mL	----	----

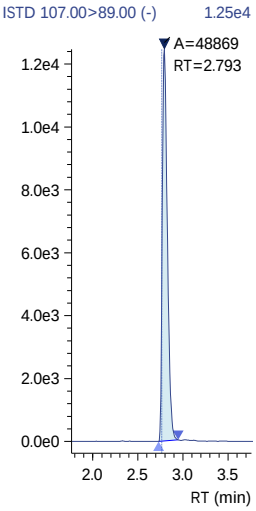
Perchlorate

Conc 9.55929
R#1 27.45 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.00000



Insight Report

Printed at 4/27/2021 3:42:43 PM

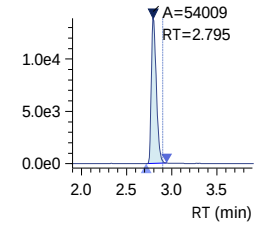
20210426_069

Sample ID: EQ2100238-03
Date Acquired: 4/26/2021 8:01:18 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210426\Before\20210426_069.lcd
Vial: 36 | Inj. Volume: 25.0000uL | Tray: 5

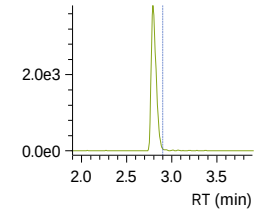
Perchlorate

Conc 0.00000
R#1 27.45 (0.00)

Q 99.00>83.00 (-) 1.39e4



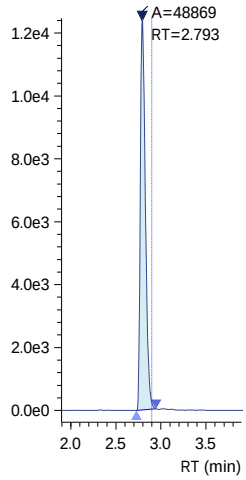
R1 101.00>85.00 (-) 3.82e3



Sodium Perchlorate -18O4_IS

Conc 1.00000

ISTD 107.00>89.00 (-) 1.25e4



Insight Report

Printed at 4/27/2021 9:27:17 AM

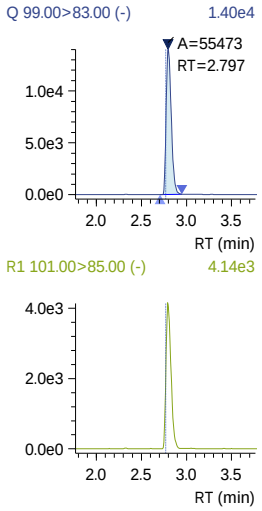
20210426_077

Sample ID: PERCHLORATE7
Date Acquired: 4/26/2021 9:04:12 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210426\20210426_077.lcd
Vial: 21 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.797	55473	48847	1	9.82292	ng/mL	10.0000	29.79
Sodium Perchlorate-18O4 _IS	Auto	2.796	48847	48847	1	1.00000	ng/mL	1.0000	----

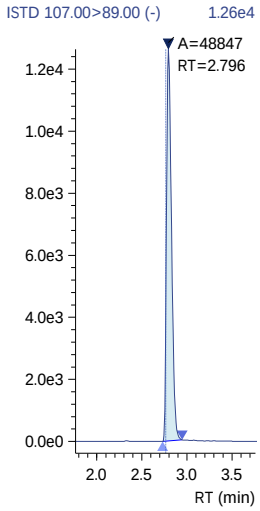
Perchlorate

Conc 9.82292
R#1 29.79 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.00000



Insight Report

Printed at 4/27/2021 3:42:43 PM

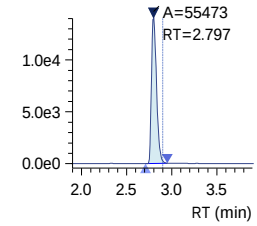
20210426_077

Sample ID: PERCHLORATE7
Date Acquired: 4/26/2021 9:04:12 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210426\Before\20210426_077.lcd
Vial: 21 | Inj. Volume: 25.0000uL | Tray: 1

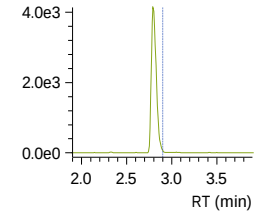
Perchlorate

Conc 0.00000
R#1 29.79 (0.00)

Q 99.00>83.00 (-) 1.40e4



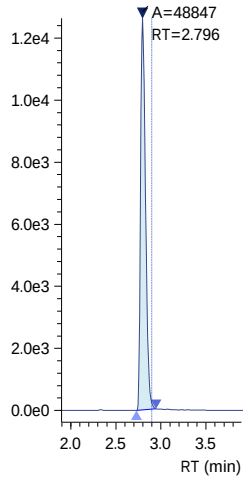
R1 101.00>85.00 (-) 4.14e3



Sodium Perchlorate -18O4_IS

Conc 1.00000

ISTD 107.00>89.00 (-) 1.26e4



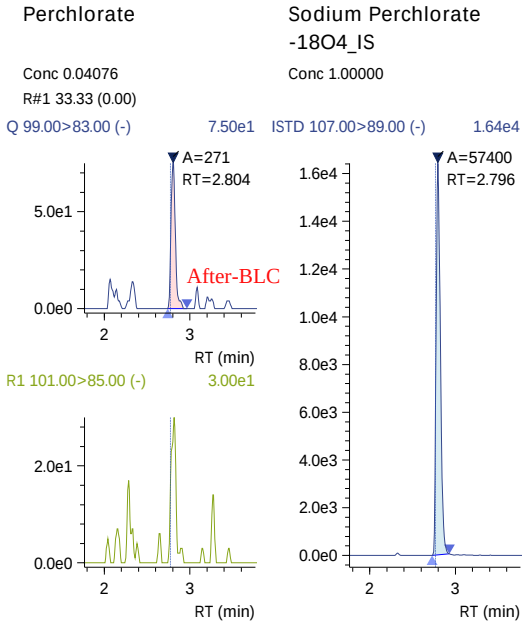
Insight Report

Printed at 4/27/2021 9:27:17 AM

20210426_084

Sample ID: E2100485-014
Date Acquired: 4/26/2021 9:59:17 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210426\20210426_084.lcd
Vial: 50 | Inj. Volume: 25.0000uL | Tray: 5

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	M	2.804	271	57400	1	0.04076	ng/mL	----	33.33
Sodium Perchlorate-18O4 _IS	Auto	2.796	57400	57400	1	1.00000	ng/mL	----	----



Insight Report

Printed at 4/27/2021 3:42:43 PM

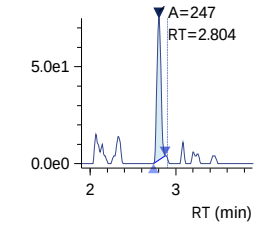
20210426_084

Sample ID: E2100485-014
Date Acquired: 4/26/2021 9:59:17 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210426\Before\20210426_084.lcd
Vial: 50 | Inj. Volume: 25.0000uL | Tray: 5

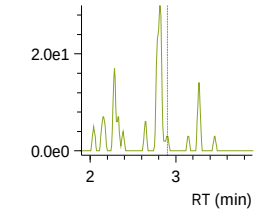
Perchlorate

Conc 0.00000
R#1 32.88 (0.00)

Q 99.00>83.00 (-) 7.50e1



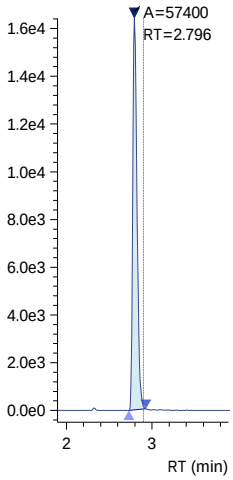
R1 101.00>85.00 (-) 3.00e1



Sodium Perchlorate -18O4_IS

Conc 1.00000

ISTD 107.00>89.00 (-) 1.64e4



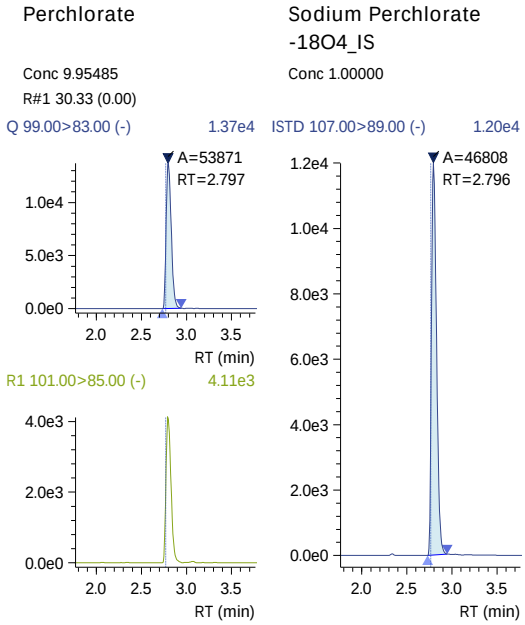
Insight Report

Printed at 4/27/2021 9:27:17 AM

20210426_085

Sample ID: PERCHLORATE7
Date Acquired: 4/26/2021 10:07:08 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210426\20210426_085.lcd
Vial: 21 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.797	53871	46808	1	9.95485	ng/mL	10.0000	30.33
Sodium Perchlorate-18O4 _IS	Auto	2.796	46808	46808	1	1.00000	ng/mL	1.0000	----



Insight Report

Printed at 4/27/2021 3:42:43 PM

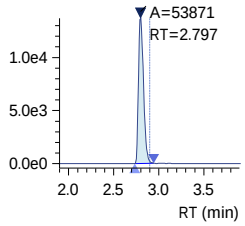
20210426_085

Sample ID: PERCHLORATE7
Date Acquired: 4/26/2021 10:07:08 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210426\Before\20210426_085.lcd
Vial: 21 | Inj. Volume: 25.0000uL | Tray: 1

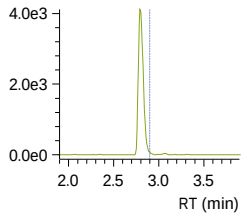
Perchlorate

Conc 0.00000
R#1 30.33 (0.00)

Q 99.00>83.00 (-) 1.37e4



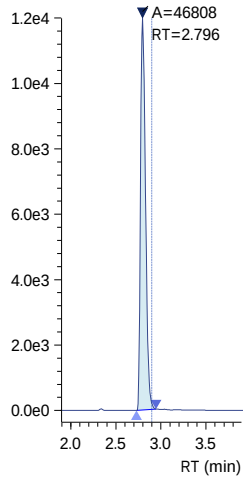
R1 101.00>85.00 (-) 4.11e3



Sodium Perchlorate -18O4_IS

Conc 1.00000

ISTD 107.00>89.00 (-) 1.20e4



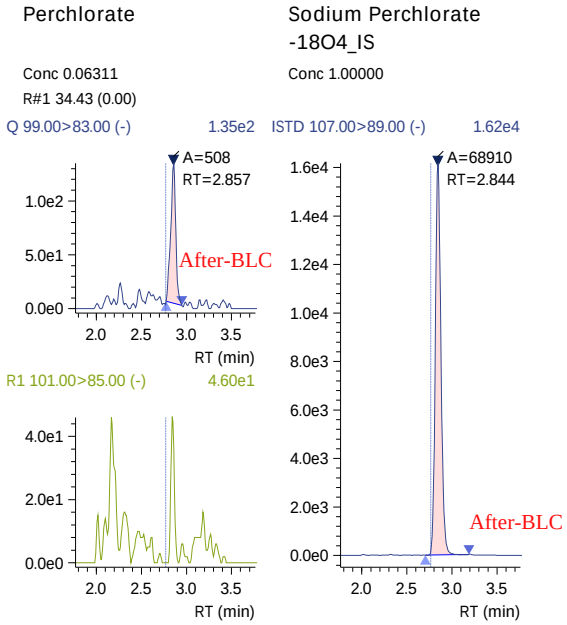
Insight Report

Printed at 4/29/2021 1:32:13 PM

20210428_056

Sample ID: LODV
Date Acquired: 4/28/2021 8:08:56 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210428\20210428_056.lcd
Vial: 20 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	M	2.857	508	68910	1	0.06311	ng/mL	----	34.43
Sodium Perchlorate-18O4 _IS	M	2.844	68910	68910	1	1.00000	ng/mL	----	----



Insight Report

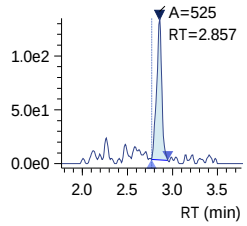
20210428_056

Sample ID: LODV
Date Acquired: 4/28/2021 8:08:56 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210428\Before\20210428_056.lcd
Vial: 20 | Inj. Volume: 25.0000uL | Tray: 1

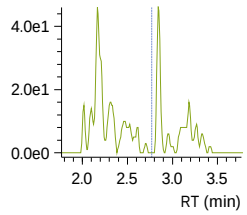
Perchlorate

Conc 0.06565
R#1 33.87 (0.00)

Q 99.00>83.00 (-) 1.35e2



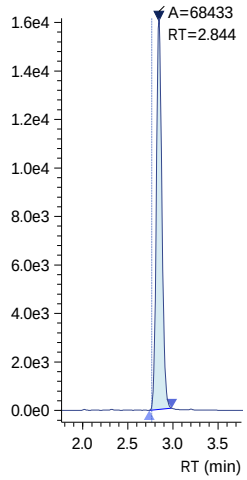
R1 101.00>85.00 (-) 4.60e1



Sodium Perchlorate -18O4_IS

Conc 1.00000

ISTD 107.00>89.00 (-) 1.62e4



Insight Report

Printed at 4/29/2021 1:32:13 PM

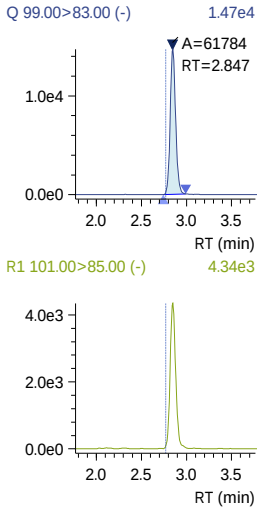
20210428_057

Sample ID: PERCHLORATE7
Date Acquired: 4/28/2021 8:18:20 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210428\20210428_057.lcd
Vial: 21 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.847	61784	54358	1	9.73105	ng/mL	10.0000	29.51
Sodium Perchlorate-18O4 _IS	Auto	2.846	54358	54358	1	1.00000	ng/mL	1.0000	----

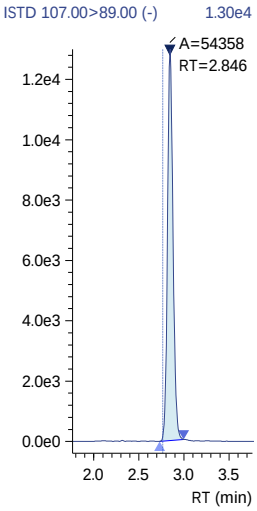
Perchlorate

Conc 9.73105
R#1 29.51 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.00000



Insight Report

Printed at 4/29/2021 1:34:11 PM

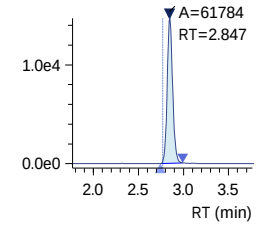
20210428_057

Sample ID: PERCHLORATE7
Date Acquired: 4/28/2021 8:18:20 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210428\Before\20210428_057.lcd
Vial: 21 | Inj. Volume: 25.0000uL | Tray: 1

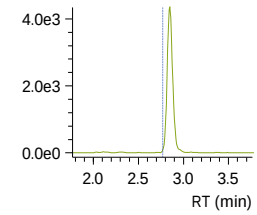
Perchlorate

Conc 9.73105
R#1 29.51 (0.00)

Q 99.00>83.00 (-) 1.47e4



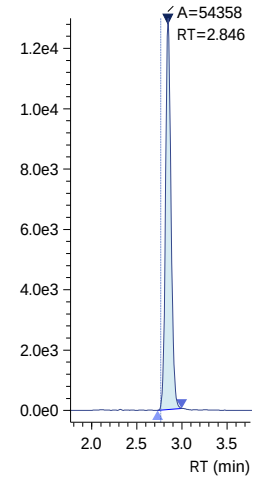
R1 101.00>85.00 (-) 4.34e3



Sodium Perchlorate -18O4_IS

Conc 1.00000

ISTD 107.00>89.00 (-) 1.30e4



Insight Report

Printed at 4/29/2021 1:32:13 PM

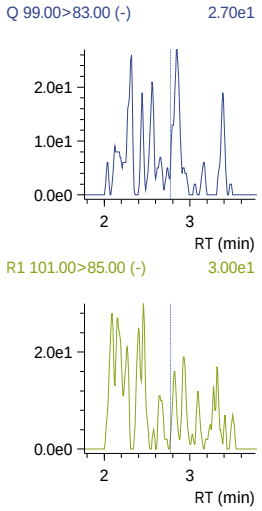
20210428_058

Sample ID: EQ2100244-01
Date Acquired: 4/28/2021 8:27:44 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210428\20210428_058.lcd
Vial: 10 | Inj. Volume: 25.0000uL | Tray: 5

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	ND(W/B)	----	----	62052	1	----	ng/mL	----	----
Sodium Perchlorate-18O4_IS	Auto	2.844	62052	62052	1	1.00000	ng/mL	----	----

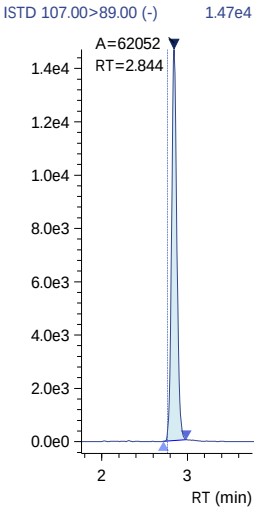
Perchlorate

Conc ----
R#1 ---- (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.00000



Insight Report

Printed at 4/29/2021 1:34:11 PM

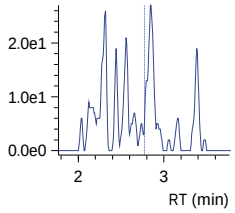
20210428_058

Sample ID: EQ2100244-01
Date Acquired: 4/28/2021 8:27:44 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210428\Before\20210428_058.lcd
Vial: 10 | Inj. Volume: 25.0000uL | Tray: 5

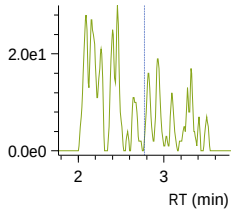
Perchlorate

Conc ----
R#1 ---- (0.00)

Q 99.00>83.00 (-) 2.70e1



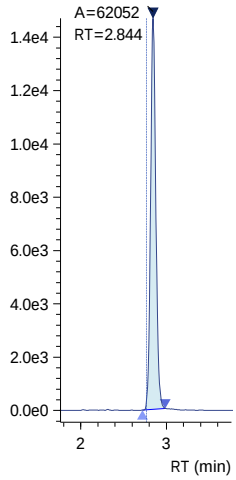
R1 101.00>85.00 (-) 3.00e1



Sodium Perchlorate -18O4_IS

Conc 1.00000

ISTD 107.00>89.00 (-) 1.47e4



Insight Report

Printed at 4/29/2021 1:32:13 PM

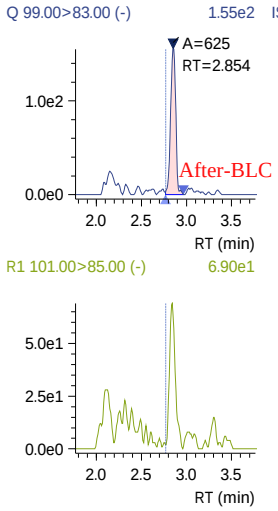
20210428_059

Sample ID: EQ2100244-02
Date Acquired: 4/28/2021 8:37:06 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210428\20210428_059.lcd
Vial: 11 | Inj. Volume: 25.0000uL | Tray: 5

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	M	2.854	625	62495	1	0.08566	ng/mL	----	41.06
Sodium Perchlorate-18O4 _IS	Auto	2.846	62495	62495	1	1.00000	ng/mL	----	----

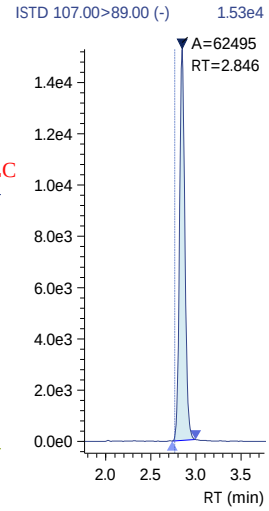
Perchlorate

Conc 0.08566
R#1 41.06 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.00000



Insight Report

Printed at 4/29/2021 1:34:11 PM

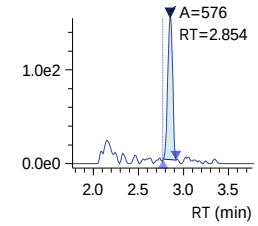
20210428_059

Sample ID: EQ2100244-02
Date Acquired: 4/28/2021 8:37:06 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210428\Before\20210428_059.lcd
Vial: 11 | Inj. Volume: 25.0000uL | Tray: 5

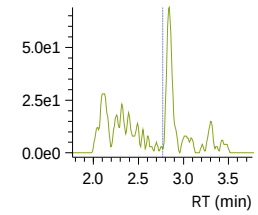
Perchlorate

Conc 0.07884
R#1 38.93 (0.00)

Q 99.00>83.00 (-) 1.55e2



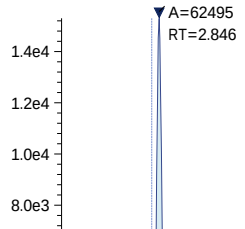
R1 101.00>85.00 (-) 6.90e1



Sodium Perchlorate -18O4_IS

Conc 1.00000

ISTD 107.00>89.00 (-) 1.53e4



Insight Report

Printed at 4/29/2021 1:32:13 PM

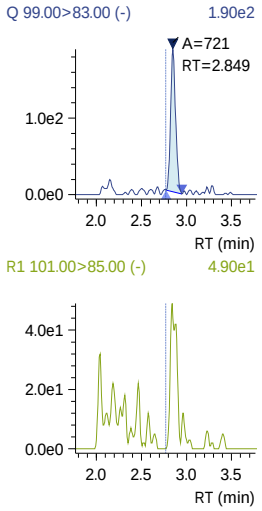
20210428_060

Sample ID: EQ2100244-03
Date Acquired: 4/28/2021 8:46:27 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210428\20210428_060.lcd
Vial: 12 | Inj. Volume: 25.0000uL | Tray: 5

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.849	721	63156	1	0.09767	ng/mL	----	25.71
Sodium Perchlorate-18O4 _IS	Auto	2.846	63156	63156	1	1.00000	ng/mL	----	----

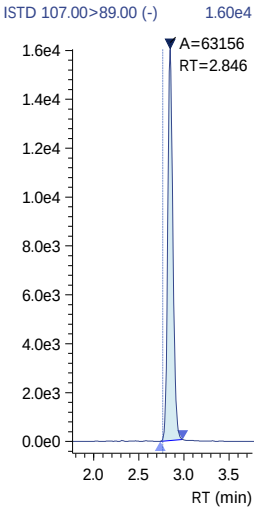
Perchlorate

Conc 0.09767
R#1 25.71 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.00000



Insight Report

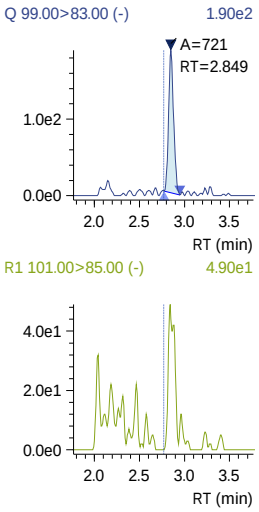
Printed at 4/29/2021 1:34:11 PM

20210428_060

Sample ID: EQ2100244-03
Date Acquired: 4/28/2021 8:46:27 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210428\Before\20210428_060.lcd
Vial: 12 | Inj. Volume: 25.0000uL | Tray: 5

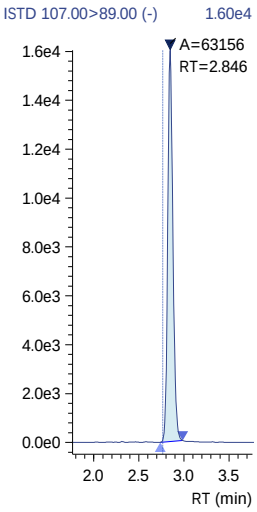
Perchlorate

Conc 0.09767
R#1 25.71 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.00000



Insight Report

Printed at 4/29/2021 1:32:13 PM

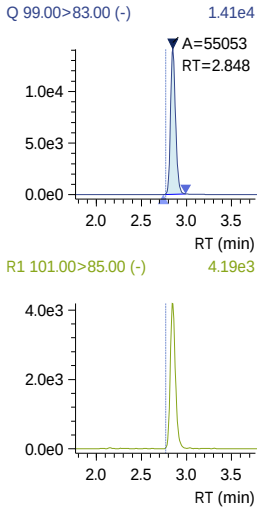
20210428_068

Sample ID: PERCHLORATE7
Date Acquired: 4/28/2021 10:01:30 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210428\20210428_068.lcd
Vial: 21 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.848	55053	49259	1	9.56857	ng/mL	10.0000	30.43
Sodium Perchlorate-18O4 _IS	Auto	2.847	49259	49259	1	1.00000	ng/mL	1.0000	----

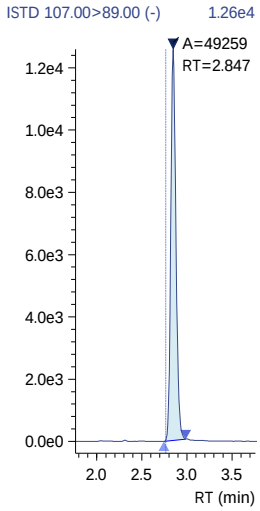
Perchlorate

Conc 9.56857
R#1 30.43 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.00000



Insight Report

Printed at 4/29/2021 1:34:11 PM

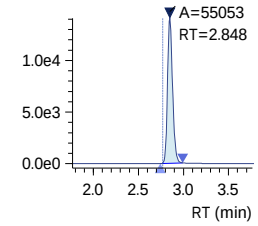
20210428_068

Sample ID: PERCHLORATE7
Date Acquired: 4/28/2021 10:01:30 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210428\Before\20210428_068.lcd
Vial: 21 | Inj. Volume: 25.0000uL | Tray: 1

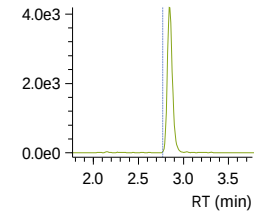
Perchlorate

Conc 9.56857
R#1 30.43 (0.00)

Q 99.00>83.00 (-) 1.41e4



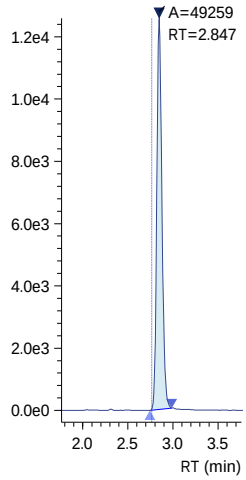
R1 101.00>85.00 (-) 4.19e3



Sodium Perchlorate -18O4_IS

Conc 1.00000

ISTD 107.00>89.00 (-) 1.26e4



Insight Report

Printed at 4/29/2021 1:32:13 PM

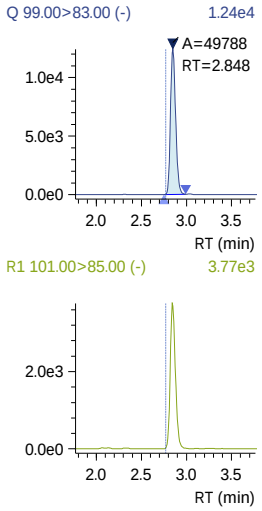
20210428_073

Sample ID: PERCHLORATE7
Date Acquired: 4/28/2021 10:48:21 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210428\20210428_073.lcd
Vial: 21 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.848	49788	43925	1	9.70407	ng/mL	10.0000	31.09
Sodium Perchlorate-18O4 _IS	Auto	2.846	43925	43925	1	1.00000	ng/mL	1.0000	----

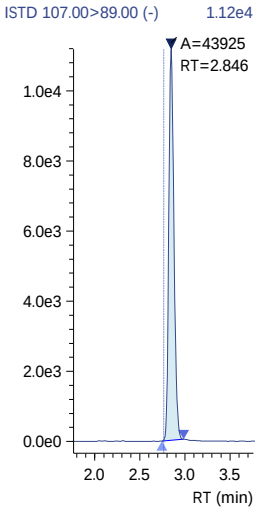
Perchlorate

Conc 9.70407
R#1 31.09 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.00000



Insight Report

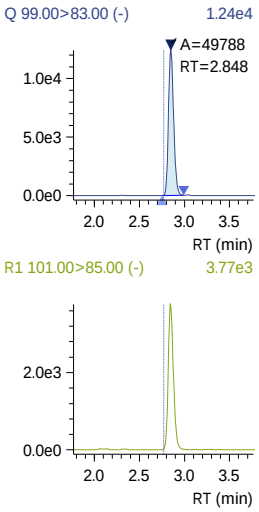
Printed at 4/29/2021 1:34:11 PM

20210428_073

Sample ID: PERCHLORATE7
Date Acquired: 4/28/2021 10:48:21 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210428\Before\20210428_073.lcd
Vial: 21 | Inj. Volume: 25.0000uL | Tray: 1

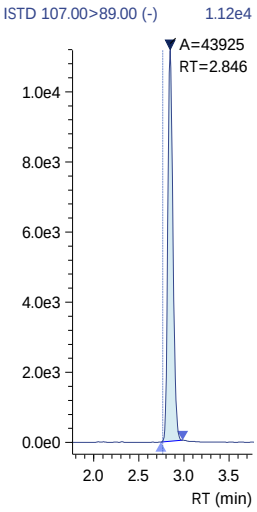
Perchlorate

Conc 9.70407
R#1 31.09 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.00000



Insight Report

Printed at 4/29/2021 1:32:13 PM

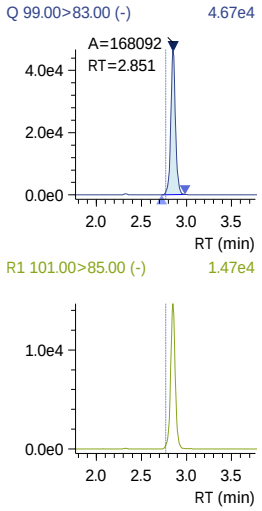
20210428_074

Sample ID: E2100485-002X10
Date Acquired: 4/28/2021 10:57:46 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210428\20210428_074.lcd
Vial: 22 | Inj. Volume: 25.0000uL | Tray: 5

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.851	168092	74644	1	19.27971	ng/mL	----	31.40
Sodium Perchlorate-18O4_IS	Auto	2.850	74644	74644	1	1.00000	ng/mL	----	----

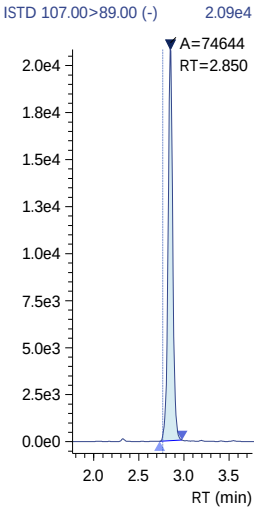
Perchlorate

Conc 19.27971
R#1 31.40 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.00000



Insight Report

Printed at 4/29/2021 2:37:57 PM

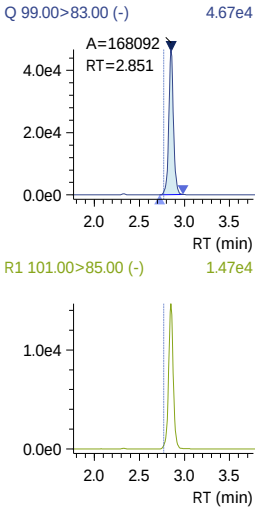
Method File: I:\LCMS01\DATA\20210428\Before\20210428.lcm

20210428_074

Sample ID: E2100485-002X10
Date Acquired: 4/28/2021 10:57:46 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210428\Before\20210428_074.lcd
Vial: 22 | Inj. Volume: 25.0000uL | Tray: 5

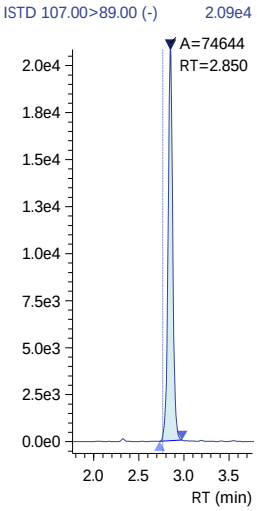
Perchlorate

Conc 19.27971
R#1 31.40 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.00000



Insight Report

Printed at 4/29/2021 1:32:13 PM

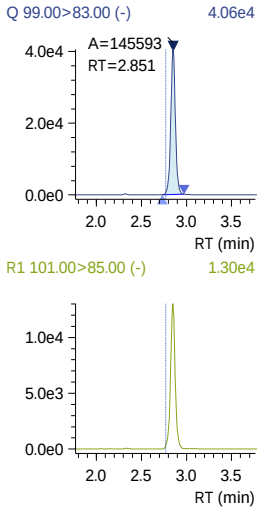
20210428_075

Sample ID: E2100485-003X10
Date Acquired: 4/28/2021 11:07:09 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210428\20210428_075.lcd
Vial: 23 | Inj. Volume: 25.0000uL | Tray: 5

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.851	145593	65803	1	18.94263	ng/mL	----	32.14
Sodium Perchlorate-18O4_IS	Auto	2.850	65803	65803	1	1.00000	ng/mL	----	----

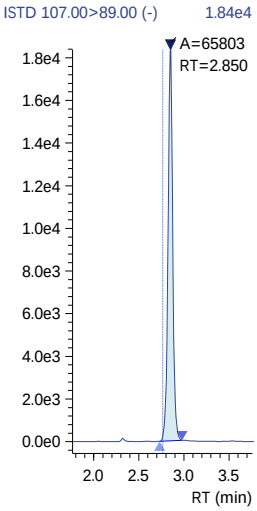
Perchlorate

Conc 18.94263
R#1 32.14 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.00000



Insight Report

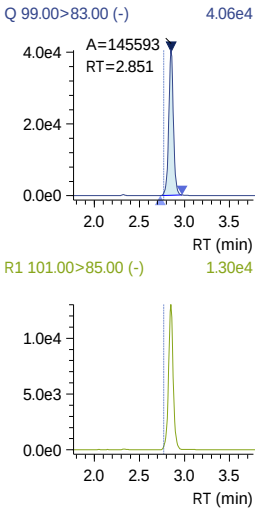
Printed at 4/29/2021 2:37:57 PM

20210428_075

Sample ID: E2100485-003X10
Date Acquired: 4/28/2021 11:07:09 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210428\Before\20210428_075.lcd
Vial: 23 | Inj. Volume: 25.0000uL | Tray: 5

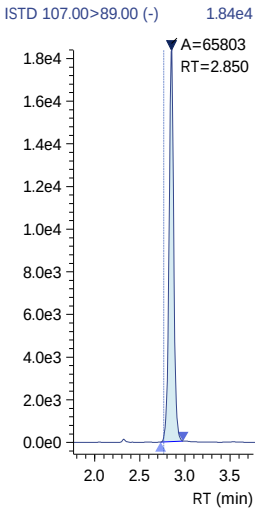
Perchlorate

Conc 18.94263
R#1 32.14 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.00000



Insight Report

Printed at 4/29/2021 1:32:13 PM

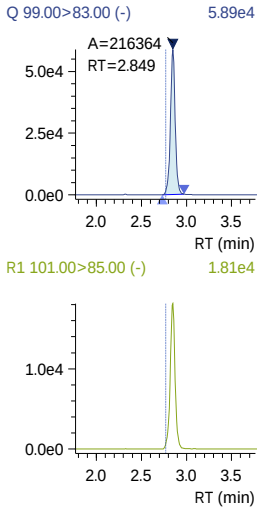
20210428_076

Sample ID: E2100485-007X10
Date Acquired: 4/28/2021 11:16:32 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210428\20210428_076.lcd
Vial: 27 | Inj. Volume: 25.0000uL | Tray: 5

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.849	216364	64335	1	28.79263	ng/mL	----	31.86
Sodium Perchlorate-18O4_IS	Auto	2.847	64335	64335	1	1.00000	ng/mL	----	----

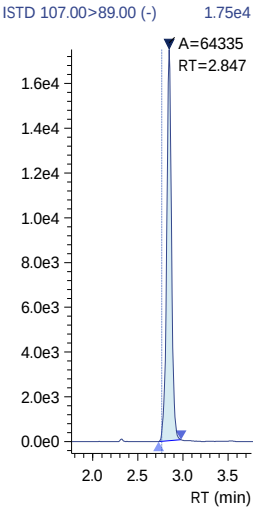
Perchlorate

Conc 28.79263
R#1 31.86 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.00000



Insight Report

Printed at 4/29/2021 2:37:57 PM

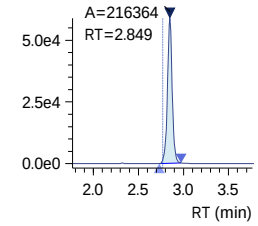
20210428_076

Sample ID: E2100485-007X10
Date Acquired: 4/28/2021 11:16:32 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210428\Before\20210428_076.lcd
Vial: 27 | Inj. Volume: 25.0000uL | Tray: 5

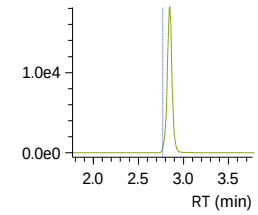
Perchlorate

Conc 28.79263
R#1 31.86 (0.00)

Q 99.00>83.00 (-) 5.89e4



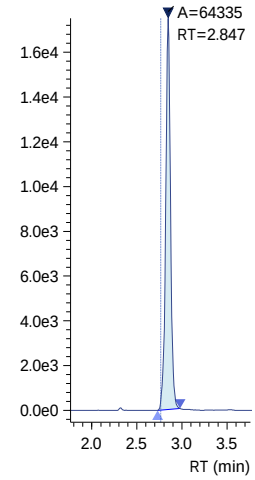
R1 101.00>85.00 (-) 1.81e4



Sodium Perchlorate -18O4_IS

Conc 1.00000

ISTD 107.00>89.00 (-) 1.75e4



Insight Report

Printed at 4/29/2021 1:32:13 PM

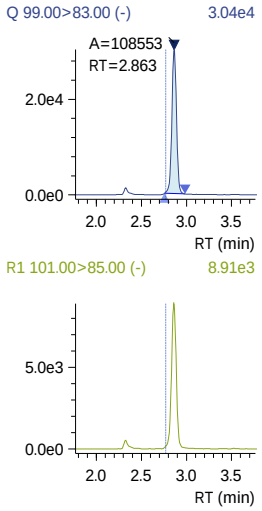
20210428_077

Sample ID: E2100485-010X10
Date Acquired: 4/28/2021 11:25:55 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210428\20210428_077.lcd
Vial: 30 | Inj. Volume: 25.0000uL | Tray: 5

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.863	108553	43790	1	21.22317	ng/mL	----	29.66
Sodium Perchlorate-18O4_IS	Auto	2.861	43790	43790	1	1.00000	ng/mL	----	----

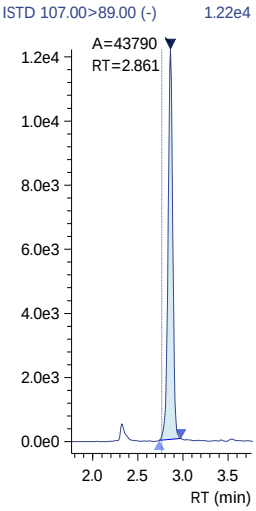
Perchlorate

Conc 21.22317
R#1 29.66 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.00000



Insight Report

Printed at 4/29/2021 2:37:57 PM

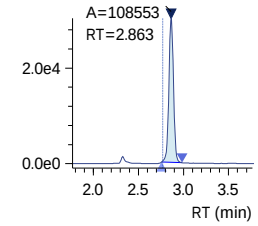
20210428_077

Sample ID: E2100485-010X10
Date Acquired: 4/28/2021 11:25:55 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210428\Before\20210428_077.lcd
Vial: 30 | Inj. Volume: 25.0000uL | Tray: 5

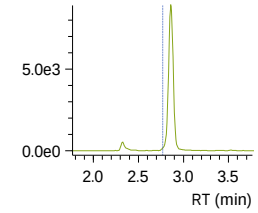
Perchlorate

Conc 21.22317
R#1 29.66 (0.00)

Q 99.00>83.00 (-) 3.04e4



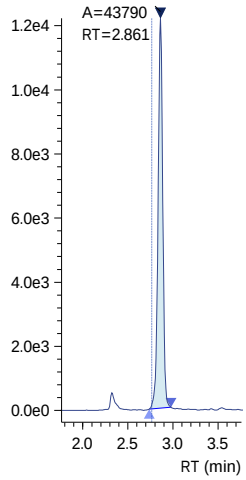
R1 101.00>85.00 (-) 8.91e3



Sodium Perchlorate -18O4_IS

Conc 1.00000

ISTD 107.00>89.00 (-) 1.22e4



Insight Report

Printed at 4/29/2021 1:32:13 PM

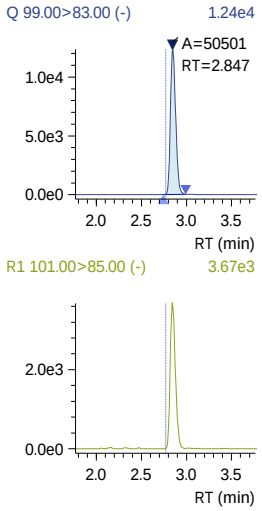
20210428_080

Sample ID: PERCHLORATE7
Date Acquired: 4/28/2021 11:54:04 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210428\20210428_080.lcd
Vial: 21 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.847	50501	46305	1	9.33723	ng/mL	10.0000	30.15
Sodium Perchlorate-18O4 _IS	Auto	2.845	46305	46305	1	1.00000	ng/mL	1.0000	----

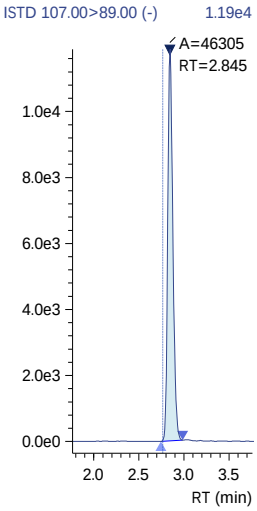
Perchlorate

Conc 9.33723
R#1 30.15 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.00000



Insight Report

Printed at 4/29/2021 1:34:11 PM

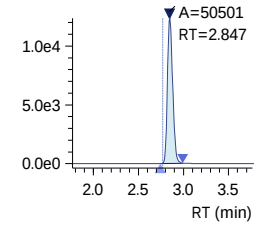
20210428_080

Sample ID: PERCHLORATE7
Date Acquired: 4/28/2021 11:54:04 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210428\Before\20210428_080.lcd
Vial: 21 | Inj. Volume: 25.0000uL | Tray: 1

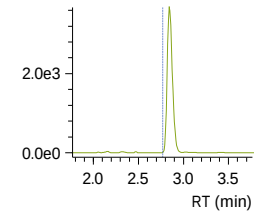
Perchlorate

Conc 9.33723
R#1 30.15 (0.00)

Q 99.00>83.00 (-) 1.24e4



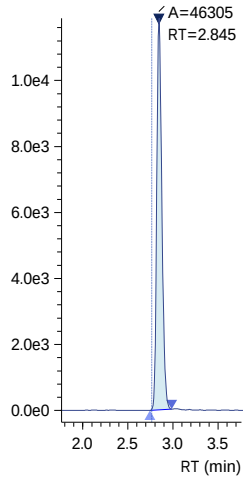
R1 101.00>85.00 (-) 3.67e3



Sodium Perchlorate -18O4_IS

Conc 1.00000

ISTD 107.00>89.00 (-) 1.19e4



Insight Report

Printed at 4/29/2021 1:32:13 PM

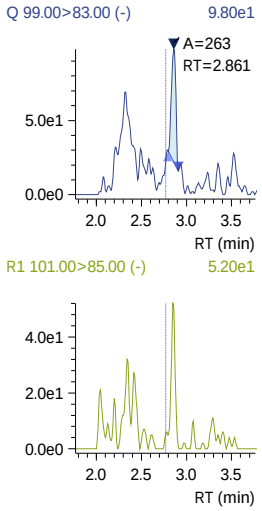
20210428_081

Sample ID: E2100485-001
Date Acquired: 4/29/2021 12:03:25 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210428\20210428_081.lcd
Vial: 21 | Inj. Volume: 25.0000uL | Tray: 5

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.861	263	60436	1	0.03719	ng/mL	----	60.53
Sodium Perchlorate-18O4 _IS	Auto	2.859	60436	60436	1	1.00000	ng/mL	----	----

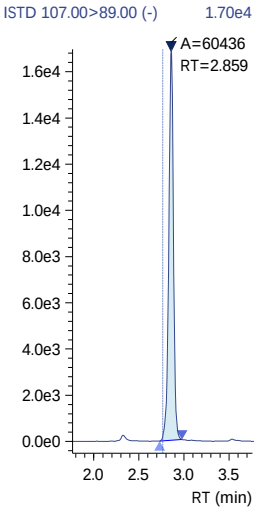
Perchlorate

Conc 0.03719
R#1 60.53 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.00000



Insight Report

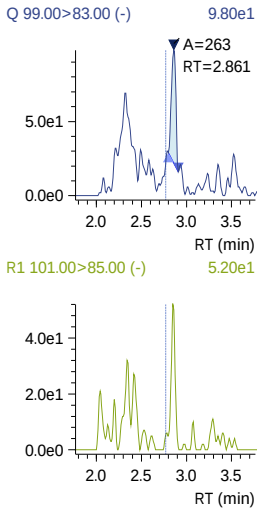
Printed at 4/29/2021 2:37:57 PM

20210428_081

Sample ID: E2100485-001
Date Acquired: 4/29/2021 12:03:25 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210428\Before\20210428_081.lcd
Vial: 21 | Inj. Volume: 25.0000uL | Tray: 5

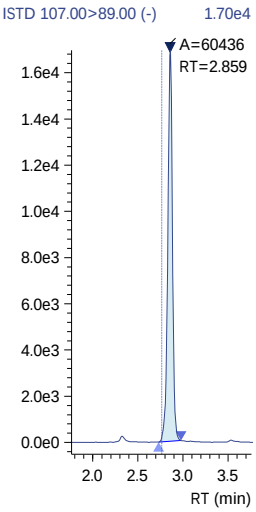
Perchlorate

Conc 0.03719
R#1 60.53 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.00000



Insight Report

Printed at 4/29/2021 1:32:13 PM

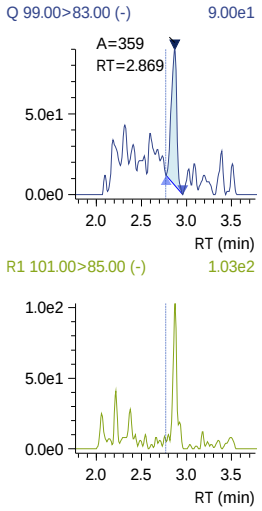
20210428_082

Sample ID: E2100485-004
Date Acquired: 4/29/2021 12:12:49 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210428\20210428_082.lcd
Vial: 24 | Inj. Volume: 25.0000uL | Tray: 5

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.869	359	49712	1	0.06183	ng/mL	----	109.64
Sodium Perchlorate-18O4 _IS	M	2.863	49712	49712	1	1.00000	ng/mL	----	----

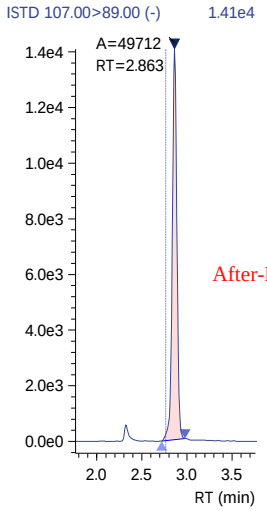
Perchlorate

Conc 0.06183
R#1 109.64 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.00000



After-BLC

Insight Report

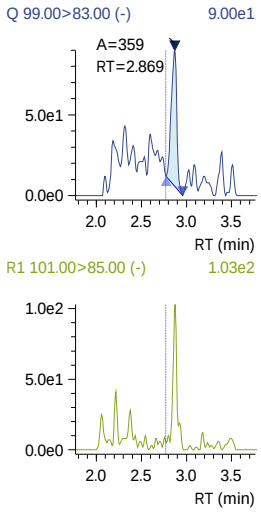
Printed at 4/29/2021 2:37:57 PM

20210428_082

Sample ID: E2100485-004
Date Acquired: 4/29/2021 12:12:49 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210428\Before\20210428_082.lcd
Vial: 24 | Inj. Volume: 25.0000uL | Tray: 5

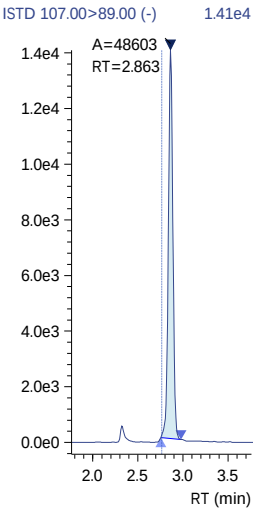
Perchlorate

Conc 0.06324
R#1 109.64 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.00000



Insight Report

Printed at 4/29/2021 1:32:13 PM

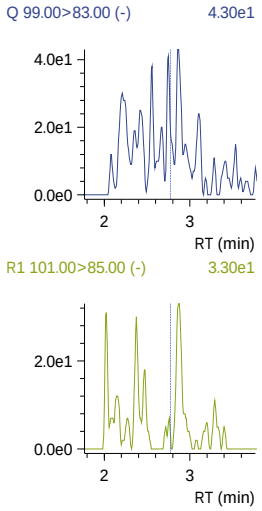
20210428_083

Sample ID: E2100485-005
Date Acquired: 4/29/2021 12:22:12 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210428\20210428_083.lcd
Vial: 25 | Inj. Volume: 25.0000uL | Tray: 5

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	ND(W/B)	----	----	54816	1	----	ng/mL	----	----
Sodium Perchlorate-18O4_IS	Auto	2.863	54816	54816	1	1.00000	ng/mL	----	----

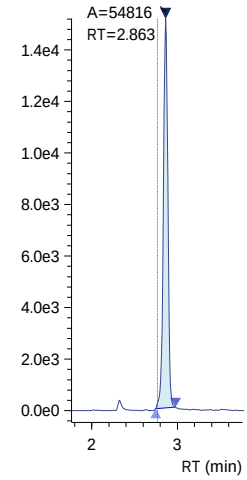
Perchlorate

Conc ----
R#1 ---- (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.00000



Insight Report

Printed at 4/29/2021 2:37:57 PM

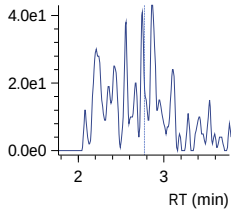
20210428_083

Sample ID: E2100485-005
Date Acquired: 4/29/2021 12:22:12 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210428\Before\20210428_083.lcd
Vial: 25 | Inj. Volume: 25.0000uL | Tray: 5

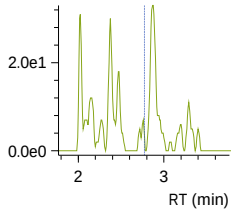
Perchlorate

Conc ----
R#1 ---- (0.00)

Q 99.00>83.00 (-) 4.30e1



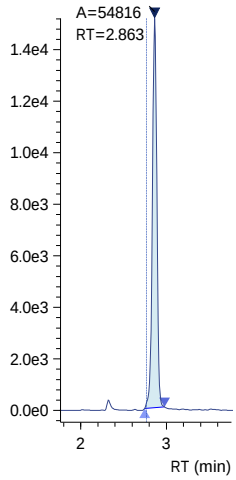
R1 101.00>85.00 (-) 3.30e1



Sodium Perchlorate -18O4_IS

Conc 1.00000

ISTD 107.00>89.00 (-) 1.52e4



Insight Report

Printed at 4/29/2021 1:32:13 PM

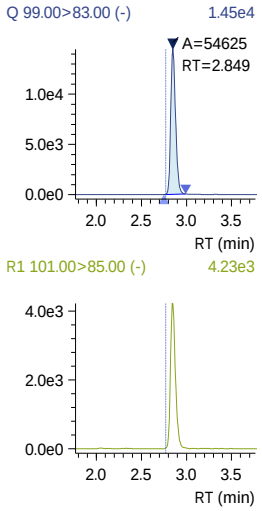
20210428_085

Sample ID: PERCHLORATE7
Date Acquired: 4/29/2021 12:40:57 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210428\20210428_085.lcd
Vial: 21 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.849	54625	48328	1	9.67689	ng/mL	10.0000	30.29
Sodium Perchlorate-18O4 _IS	Auto	2.847	48328	48328	1	1.00000	ng/mL	1.0000	----

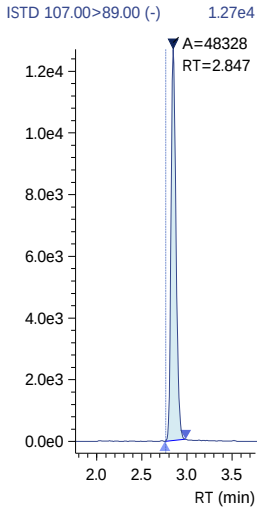
Perchlorate

Conc 9.67689
R#1 30.29 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.00000



Insight Report

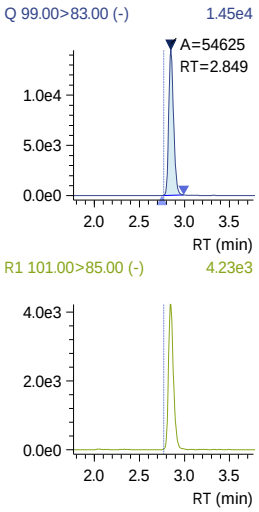
Printed at 4/29/2021 1:34:11 PM

20210428_085

Sample ID: PERCHLORATE7
Date Acquired: 4/29/2021 12:40:57 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210428\Before\20210428_085.lcd
Vial: 21 | Inj. Volume: 25.0000uL | Tray: 1

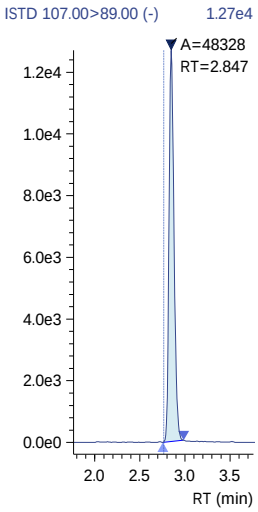
Perchlorate

Conc 9.67689
R#1 30.29 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.00000



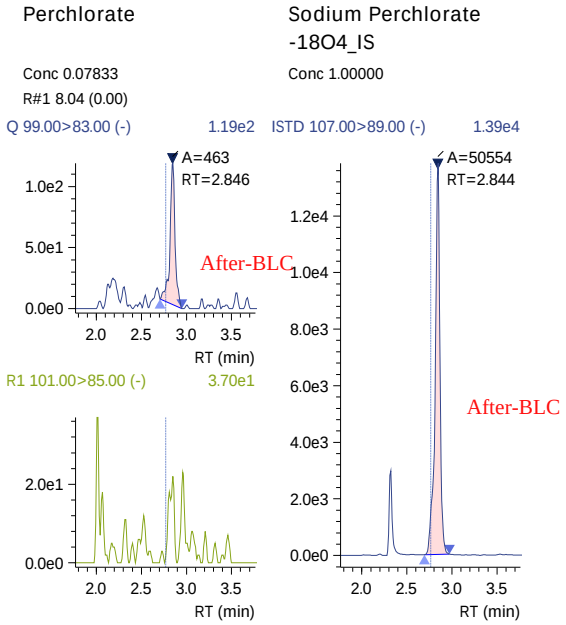
Insight Report

Printed at 4/29/2021 1:32:13 PM

20210428_086

Sample ID: E2100485-008
Date Acquired: 4/29/2021 12:50:18 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210428\20210428_086.lcd
Vial: 28 | Inj. Volume: 25.0000uL | Tray: 5

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	M	2.846	463	50554	1	0.07833	ng/mL	----	8.04
Sodium Perchlorate-18O4 _IS	M	2.844	50554	50554	1	1.00000	ng/mL	----	----



Insight Report

Printed at 4/29/2021 2:37:57 PM

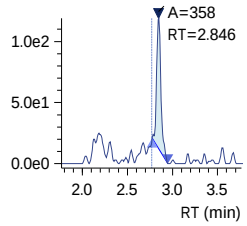
20210428_086

Sample ID: E2100485-008
Date Acquired: 4/29/2021 12:50:18 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210428\Before\20210428_086.lcd
Vial: 28 | Inj. Volume: 25.0000uL | Tray: 5

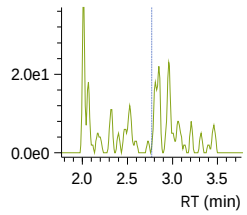
Perchlorate

Conc 0.07393
R#1 10.78 (0.00)

Q 99.00>83.00 (-) 1.19e2



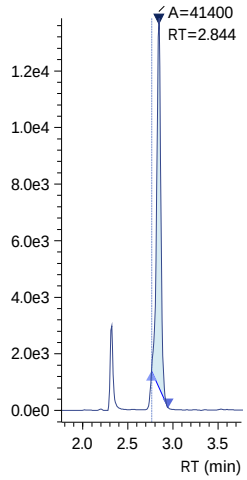
R1 101.00>85.00 (-) 3.70e1



Sodium Perchlorate -18O4_IS

Conc 1.00000

ISTD 107.00>89.00 (-) 1.39e4



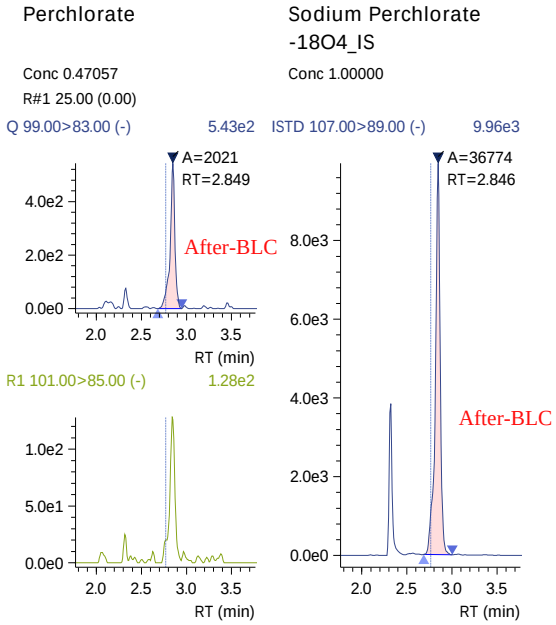
Insight Report

Printed at 4/29/2021 1:32:13 PM

20210428_087

Sample ID: E2100485-009
Date Acquired: 4/29/2021 12:59:43 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210428\20210428_087.lcd
Vial: 29 | Inj. Volume: 25.0000uL | Tray: 5

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	M	2.849	2021	36774	1	0.47057	ng/mL	----	25.00
Sodium Perchlorate-18O4 _IS	M	2.846	36774	36774	1	1.00000	ng/mL	----	----



Insight Report

Printed at 4/29/2021 2:37:57 PM

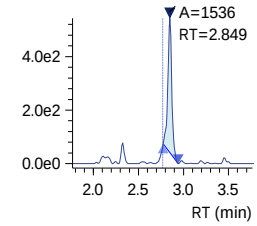
20210428_087

Sample ID: E2100485-009
Date Acquired: 4/29/2021 12:59:43 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210428\Before\20210428_087.lcd
Vial: 29 | Inj. Volume: 25.0000uL | Tray: 5

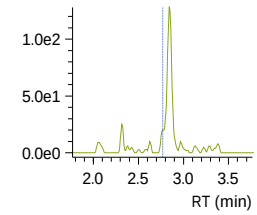
Perchlorate

Conc 0.46198
R#1 24.78 (0.00)

Q 99.00>83.00 (-) 5.43e2



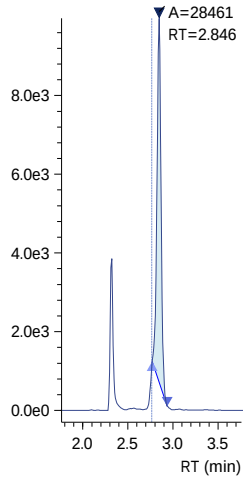
R1 101.00>85.00 (-) 1.28e2



Sodium Perchlorate -18O4_IS

Conc 1.00000

ISTD 107.00>89.00 (-) 9.96e3



Insight Report

Printed at 4/29/2021 1:32:13 PM

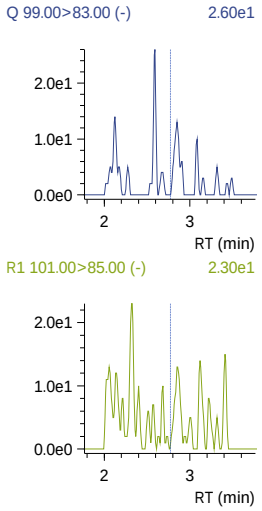
20210428_088

Sample ID: E2100485-011
Date Acquired: 4/29/2021 1:09:08 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210428\20210428_088.lcd
Vial: 31 | Inj. Volume: 25.0000uL | Tray: 5

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	ND(W/B)	----	----	52148	1	----	ng/mL	----	----
Sodium Perchlorate-18O4_IS	Auto	2.840	52148	52148	1	1.00000	ng/mL	----	----

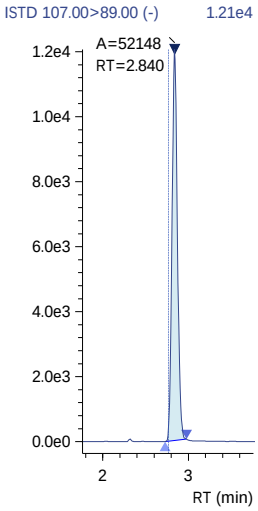
Perchlorate

Conc ----
R#1 ---- (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.00000



Insight Report

Printed at 4/29/2021 2:37:57 PM

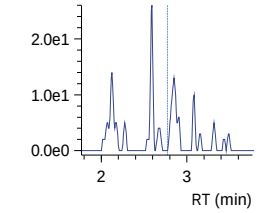
20210428_088

Sample ID: E2100485-011
Date Acquired: 4/29/2021 1:09:08 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210428\Before\20210428_088.lcd
Vial: 31 | Inj. Volume: 25.0000uL | Tray: 5

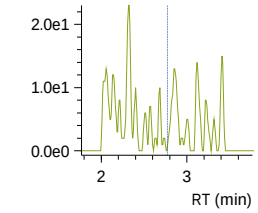
Perchlorate

Conc ----
R#1 ---- (0.00)

Q 99.00>83.00 (-) 2.60e1



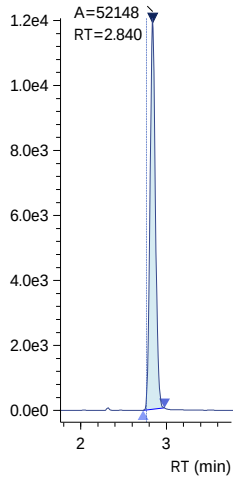
R1 101.00>85.00 (-) 2.30e1



Sodium Perchlorate -18O4_IS

Conc 1.00000

ISTD 107.00>89.00 (-) 1.21e4



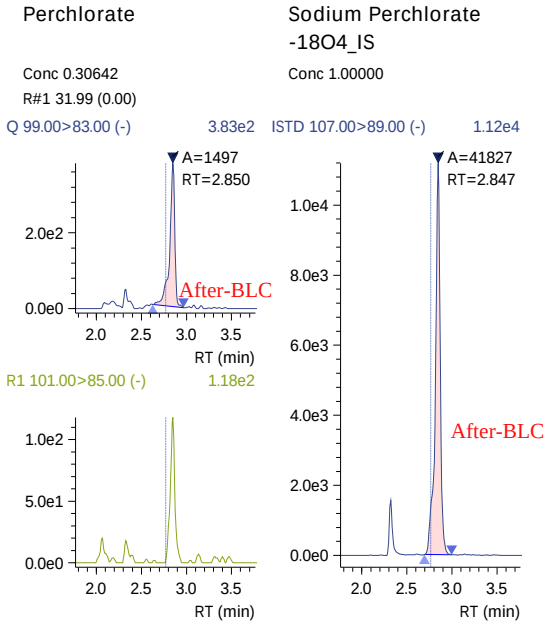
Insight Report

Printed at 4/29/2021 1:32:13 PM

20210428_090

Sample ID: E2100485-013
Date Acquired: 4/29/2021 1:27:53 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210428\20210428_090.lcd
Vial: 33 | Inj. Volume: 25.0000uL | Tray: 5

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	M	2.850	1497	41827	1	0.30642	ng/mL	----	31.99
Sodium Perchlorate-18O4 _IS	M	2.847	41827	41827	1	1.00000	ng/mL	----	----



Insight Report

Printed at 4/29/2021 2:37:57 PM

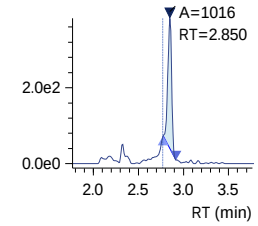
20210428_090

Sample ID: E2100485-013
Date Acquired: 4/29/2021 1:27:53 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210428\Before\20210428_090.lcd
Vial: 33 | Inj. Volume: 25.0000uL | Tray: 5

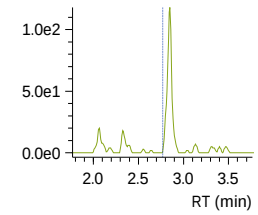
Perchlorate

Conc 0.26342
R#1 34.74 (0.00)

Q 99.00>83.00 (-) 3.83e2



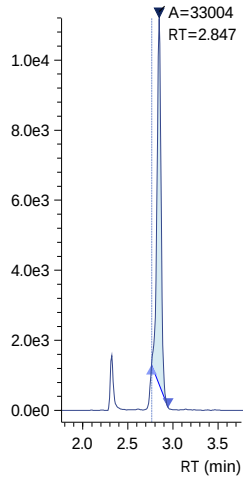
R1 101.00>85.00 (-) 1.18e2



Sodium Perchlorate -18O4_IS

Conc 1.00000

ISTD 107.00>89.00 (-) 1.12e4



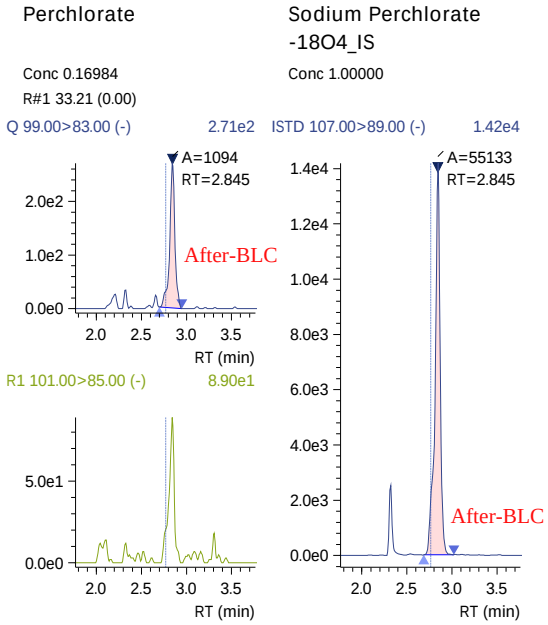
Insight Report

Printed at 4/29/2021 1:32:13 PM

20210428_091

Sample ID: EQ2100244-04
Date Acquired: 4/29/2021 1:37:20 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210428\20210428_091.lcd
Vial: 6 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	M	2.845	1094	55133	1	0.16984	ng/mL	----	33.21
Sodium Perchlorate-18O4 _IS	M	2.845	55133	55133	1	1.00000	ng/mL	----	----



Insight Report

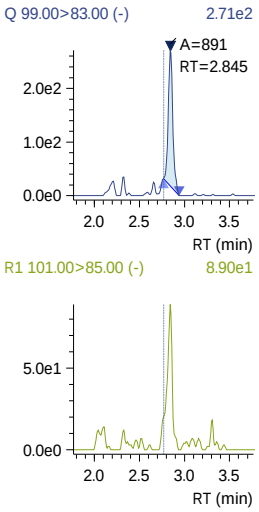
Printed at 4/29/2021 1:34:11 PM

20210428_091

Sample ID: EQ2100244-04
Date Acquired: 4/29/2021 1:37:20 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210428\Before\20210428_091.lcd
Vial: 6 | Inj. Volume: 25.0000uL | Tray: 1

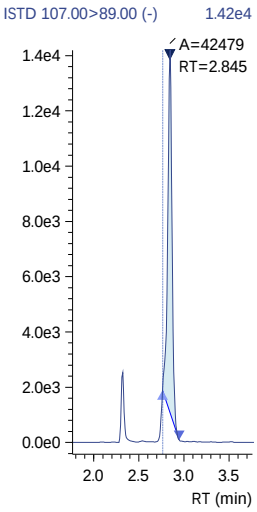
Perchlorate

Conc 0.17958
R#1 30.65 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.00000



Insight Report

Printed at 4/29/2021 1:32:13 PM

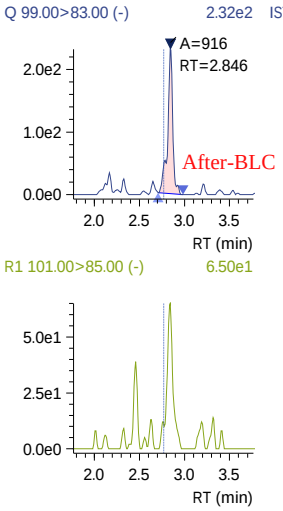
20210428_092

Sample ID: EQ2100244-05
Date Acquired: 4/29/2021 1:46:42 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210428\20210428_092.lcd
Vial: 7 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	M	2.846	916	53598	1	0.14624	ng/mL	----	28.76
Sodium Perchlorate-18O4 _IS	M	2.845	53598	53598	1	1.00000	ng/mL	----	----

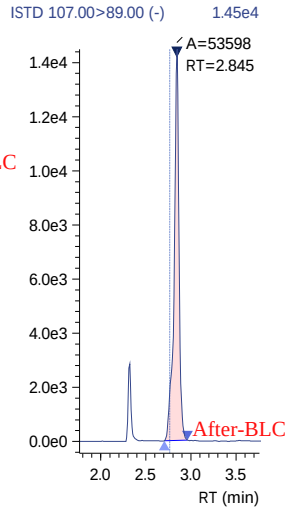
Perchlorate

Conc 0.14624
R#1 28.76 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.00000



Insight Report

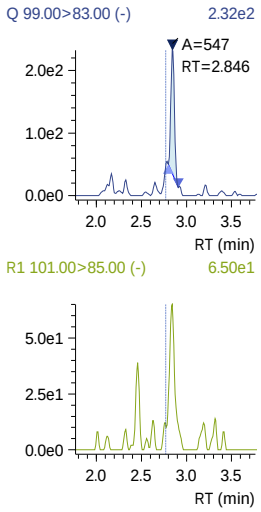
Printed at 4/29/2021 1:34:11 PM

20210428_092

Sample ID: EQ2100244-05
Date Acquired: 4/29/2021 1:46:42 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210428\Before\20210428_092.lcd
Vial: 7 | Inj. Volume: 25.0000uL | Tray: 1

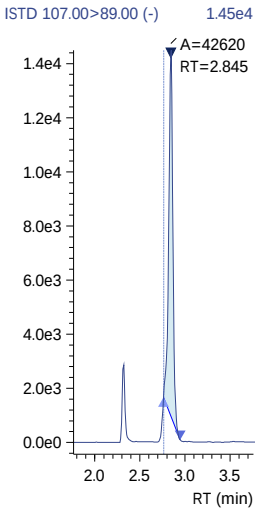
Perchlorate

Conc 0.10988
R#1 23.20 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.00000



Insight Report

Printed at 4/29/2021 1:32:13 PM

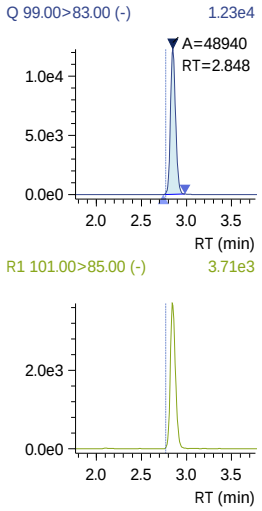
20210428_093

Sample ID: PERCHLORATE7
Date Acquired: 4/29/2021 1:56:06 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210428\20210428_093.lcd
Vial: 21 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.848	48940	43314	1	9.67345	ng/mL	10.0000	30.96
Sodium Perchlorate-18O4 _IS	Auto	2.847	43314	43314	1	1.00000	ng/mL	1.0000	----

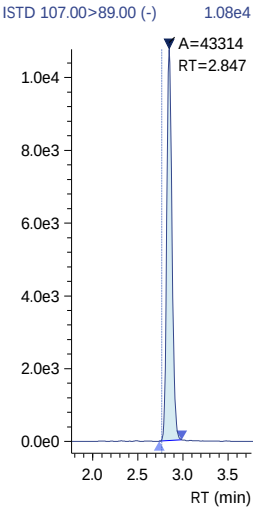
Perchlorate

Conc 9.67345
R#1 30.96 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.00000



Insight Report

Printed at 4/29/2021 1:34:11 PM

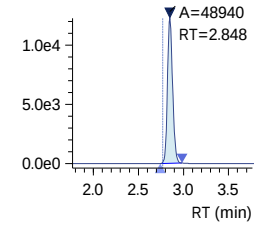
20210428_093

Sample ID: PERCHLORATE7
Date Acquired: 4/29/2021 1:56:06 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210428\Before\20210428_093.lcd
Vial: 21 | Inj. Volume: 25.0000uL | Tray: 1

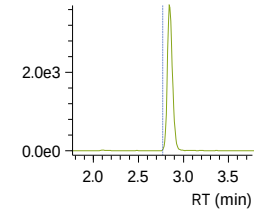
Perchlorate

Conc 9.67345
R#1 30.96 (0.00)

Q 99.00>83.00 (-) 1.23e4



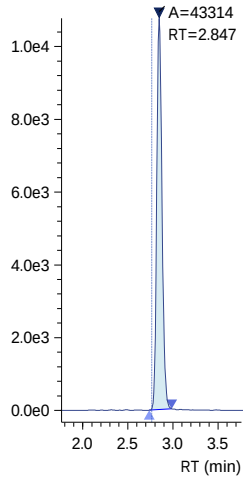
R1 101.00>85.00 (-) 3.71e3



Sodium Perchlorate -18O4_IS

Conc 1.00000

ISTD 107.00>89.00 (-) 1.08e4



Insight Report

Printed at 4/29/2021 1:36:30 PM

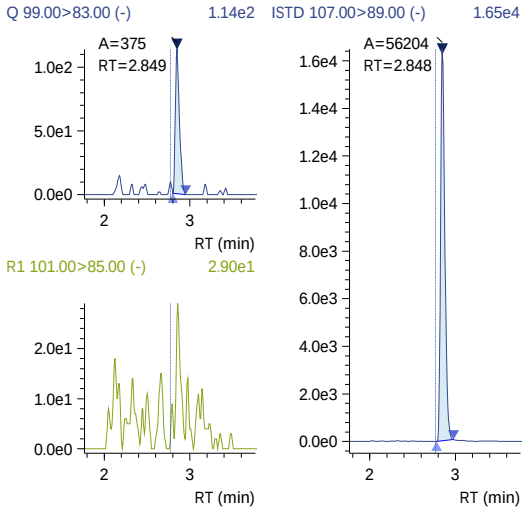
20210429_006

Sample ID: LODV
Date Acquired: 4/29/2021 9:55:24 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210429\20210429_006.lcd
Vial: 20 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.849	375	56204	1	0.05716	ng/mL	----	11.32
Sodium Perchlorate-18O4 _IS	Auto	2.848	56204	56204	1	1.00000	ng/mL	----	----

Perchlorate

Conc 0.05716
R#1 11.32 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.00000

Insight Report

Printed at 4/29/2021 1:37:47 PM

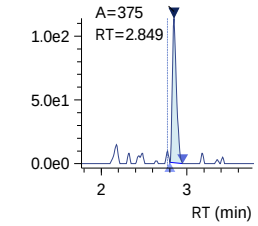
20210429_006

Sample ID: LODV
Date Acquired: 4/29/2021 9:55:24 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210429\Before\20210429_006.lcd
Vial: 20 | Inj. Volume: 25.0000uL | Tray: 1

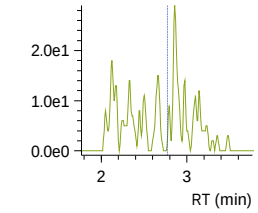
Perchlorate

Conc 0.05716
R#1 11.32 (0.00)

Q 99.00>83.00 (-) 1.14e2



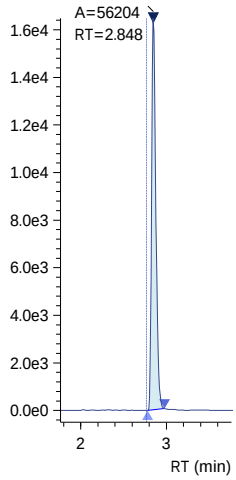
R1 101.00>85.00 (-) 2.90e1



Sodium Perchlorate -18O4_IS

Conc 1.00000

ISTD 107.00>89.00 (-) 1.65e4



Insight Report

Printed at 4/29/2021 1:36:30 PM

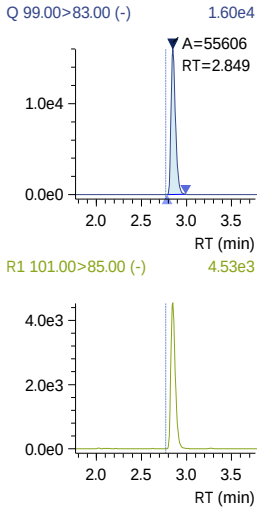
20210429_007

Sample ID: PERCHLORATE7
Date Acquired: 4/29/2021 10:04:45 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210429\20210429_007.lcd
Vial: 21 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.849	55606	49173	1	9.68155	ng/mL	10.0000	29.55
Sodium Perchlorate-18O4 _IS	Auto	2.847	49173	49173	1	1.00000	ng/mL	1.0000	----

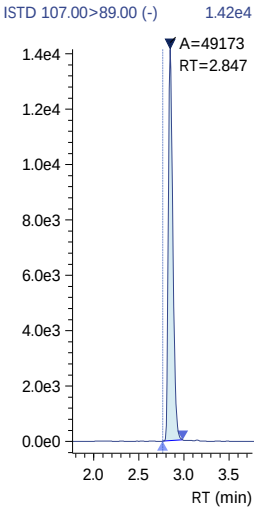
Perchlorate

Conc 9.68155
R#1 29.55 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.00000



Insight Report

Printed at 4/29/2021 1:37:47 PM

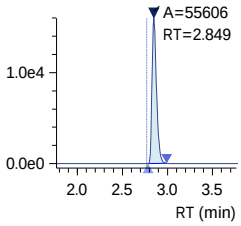
20210429_007

Sample ID: PERCHLORATE7
Date Acquired: 4/29/2021 10:04:45 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210429\Before\20210429_007.lcd
Vial: 21 | Inj. Volume: 25.0000uL | Tray: 1

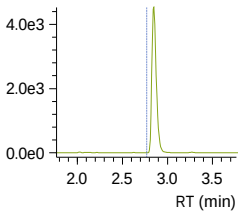
Perchlorate

Conc 9.68155
R#1 29.55 (0.00)

Q 99.00>83.00 (-) 1.60e4



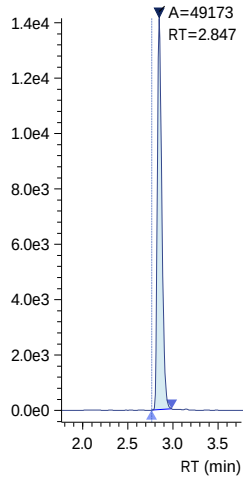
R1 101.00>85.00 (-) 4.53e3



Sodium Perchlorate -18O4_IS

Conc 1.00000

ISTD 107.00>89.00 (-) 1.42e4



Insight Report

Printed at 4/29/2021 1:36:30 PM

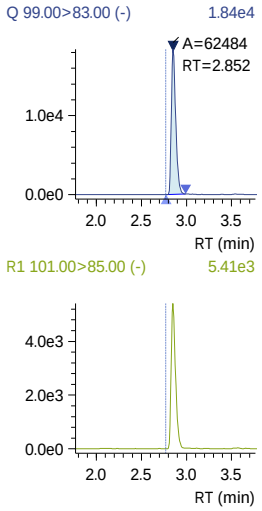
20210429_014

Sample ID: PERCHLORATE7
Date Acquired: 4/29/2021 11:31:55 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210429\20210429_014.lcd
Vial: 21 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.852	62484	55375	1	9.66061	ng/mL	10.0000	29.36
Sodium Perchlorate-18O4 _IS	Auto	2.851	55375	55375	1	1.00000	ng/mL	1.0000	----

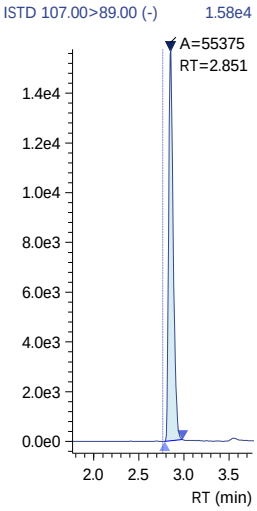
Perchlorate

Conc 9.66061
R#1 29.36 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.00000



Insight Report

Printed at 4/29/2021 1:37:47 PM

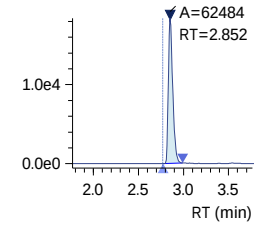
20210429_014

Sample ID: PERCHLORATE7
Date Acquired: 4/29/2021 11:31:55 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210429\Before\20210429_014.lcd
Vial: 21 | Inj. Volume: 25.0000uL | Tray: 1

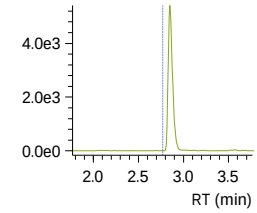
Perchlorate

Conc 9.66061
R#1 29.36 (0.00)

Q 99.00>83.00 (-) 1.84e4



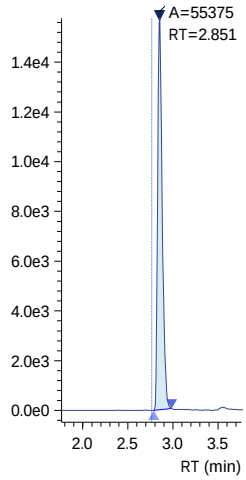
R1 101.00>85.00 (-) 5.41e3



Sodium Perchlorate -18O4_IS

Conc 1.00000

ISTD 107.00>89.00 (-) 1.58e4



Insight Report

Printed at 4/29/2021 1:36:30 PM

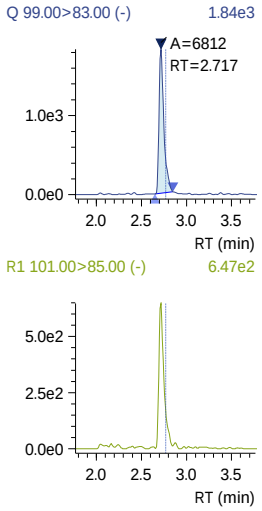
20210429_015

Sample ID: E2100485-012X10
Date Acquired: 4/29/2021 12:06:36 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210429\20210429_015.lcd
Vial: 32 | Inj. Volume: 25.0000uL | Tray: 5

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.717	6812	74137	1	0.78663	ng/mL	----	36.37
Sodium Perchlorate-18O4 _IS	Auto	2.715	74137	74137	1	1.00000	ng/mL	----	----

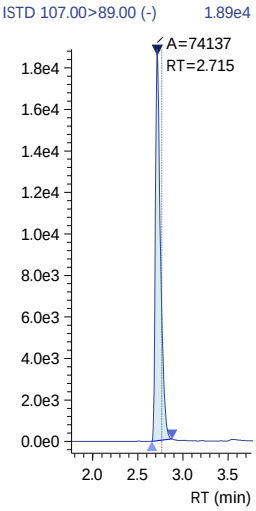
Perchlorate

Conc 0.78663
R#1 36.37 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.00000



Insight Report

Printed at 4/30/2021 11:40:42 AM

Method File: I:\LCMS01\DATA\20210429\Before\20210428.lcm

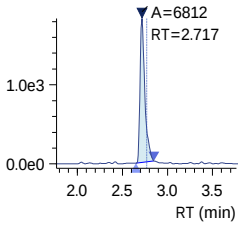
20210429_015

Sample ID: E2100485-012X10
Date Acquired: 4/29/2021 12:06:36 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210429\Before\20210429_015.lcd
Vial: 32 | Inj. Volume: 25.0000uL | Tray: 5

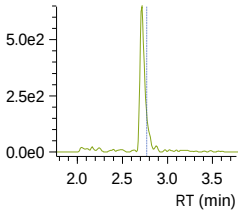
Perchlorate

Conc 0.78663
R#1 36.37 (0.00)

Q 99.00>83.00 (-) 1.84e3



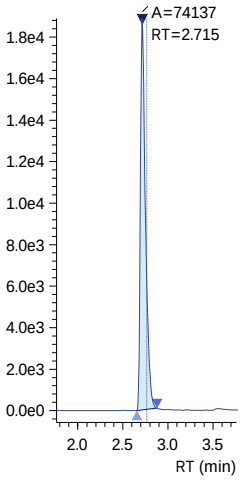
R1 101.00>85.00 (-) 6.47e2



Sodium Perchlorate -18O4_IS

Conc 1.00000

ISTD 107.00>89.00 (-) 1.89e4



Insight Report

Printed at 4/29/2021 1:36:30 PM

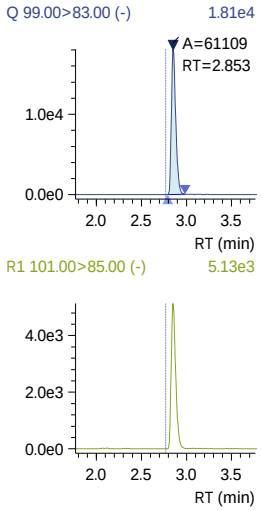
20210429_018

Sample ID: PERCHLORATE7
Date Acquired: 4/29/2021 12:34:48 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210429\20210429_018.lcd
Vial: 21 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.853	61109	54333	1	9.62913	ng/mL	10.0000	28.43
Sodium Perchlorate-18O4 _IS	Auto	2.851	54333	54333	1	1.00000	ng/mL	1.0000	----

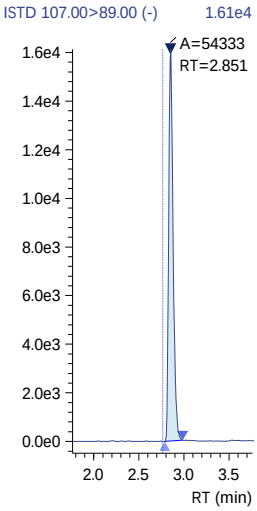
Perchlorate

Conc 9.62913
R#1 28.43 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.00000



Insight Report

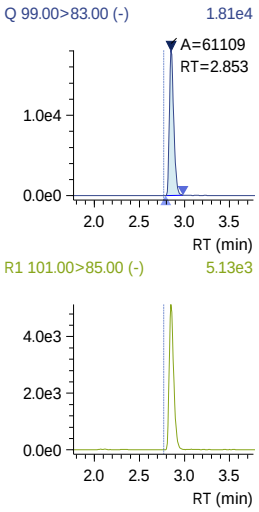
Printed at 4/29/2021 1:37:47 PM

20210429_018

Sample ID: PERCHLORATE7
Date Acquired: 4/29/2021 12:34:48 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210429\Before\20210429_018.lcd
Vial: 21 | Inj. Volume: 25.0000uL | Tray: 1

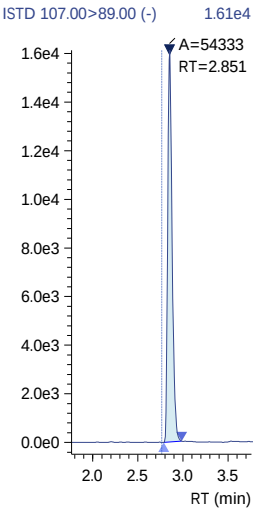
Perchlorate

Conc 9.62913
R#1 28.43 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.00000



Insight Report

Printed at 4/29/2021 4:35:03 PM

Method File: I:\LCMS01\DATA\20210429\20210428.lcm
Project File: I:\LCMS01\DATA\20210429\20210429.damlp

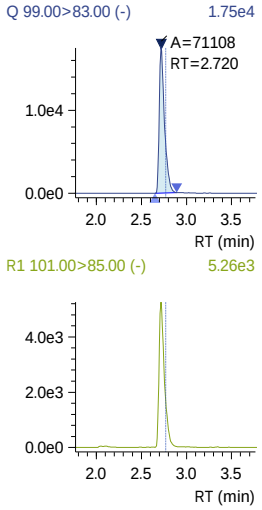
20210429_019

Sample ID: PERCHLORATE7
Date Acquired: 4/29/2021 2:45:44 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210429\20210429_019.lcd
Vial: 21 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.720	71108	60412	1	10.07723	ng/mL	10.0000	30.06
Sodium Perchlorate-18O4_IS	Auto	2.719	60412	60412	1	1.00000	ng/mL	1.0000	----

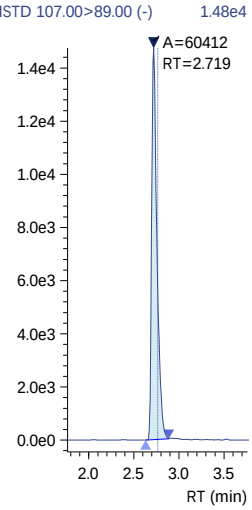
Perchlorate

Conc 10.07723
R#1 30.06 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.00000



Insight Report

Printed at 4/29/2021 4:36:44 PM

Method File: I:\LCMS01\DATA\20210429\Before\20210428.lcm

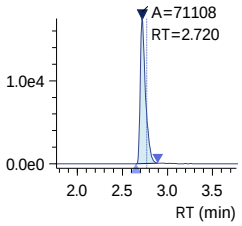
20210429_019

Sample ID: PERCHLORATE7
Date Acquired: 4/29/2021 2:45:44 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210429\Before\20210429_019.lcd
Vial: 21 | Inj. Volume: 25.0000uL | Tray: 1

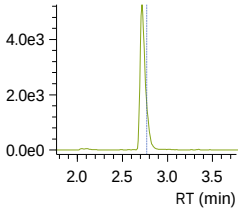
Perchlorate

Conc 10.07723
R#1 30.06 (0.00)

Q 99.00>83.00 (-) 1.75e4



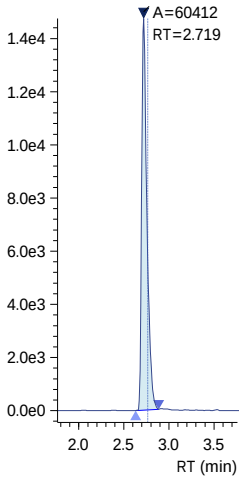
R1 101.00>85.00 (-) 5.26e3



Sodium Perchlorate -18O4_IS

Conc 1.00000

ISTD 107.00>89.00 (-) 1.48e4



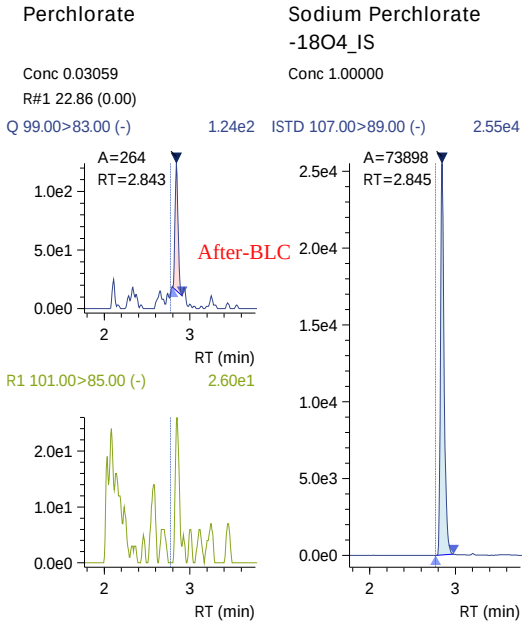
Insight Report

Printed at 4/29/2021 4:35:03 PM

20210429_026

Sample ID: E2100485-006X2
Date Acquired: 4/29/2021 4:19:50 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210429\20210429_026.lcd
Vial: 14 | Inj. Volume: 25.0000uL | Tray: 2

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	M	2.843	264	73898	1	0.03059	ng/mL	----	22.86
Sodium Perchlorate-18O4 _IS	Auto	2.845	73898	73898	1	1.00000	ng/mL	----	----



Insight Report

Printed at 4/29/2021 4:36:44 PM

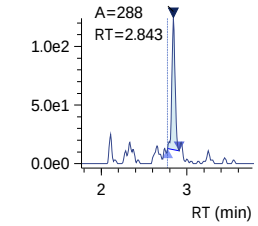
20210429_026

Sample ID: E2100485-006X2
Date Acquired: 4/29/2021 4:19:50 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210429\Before\20210429_026.lcd
Vial: 14 | Inj. Volume: 25.0000uL | Tray: 2

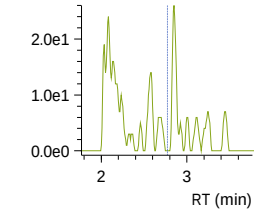
Perchlorate

Conc 0.03337
R#1 21.10 (0.00)

Q 99.00>83.00 (-) 1.24e2



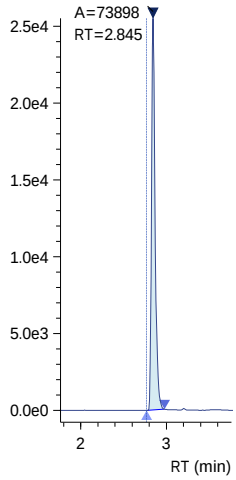
R1 101.00>85.00 (-) 2.60e1



Sodium Perchlorate -18O4_IS

Conc 1.00000

ISTD 107.00>89.00 (-) 2.55e4



Insight Report

Printed at 4/29/2021 4:35:03 PM

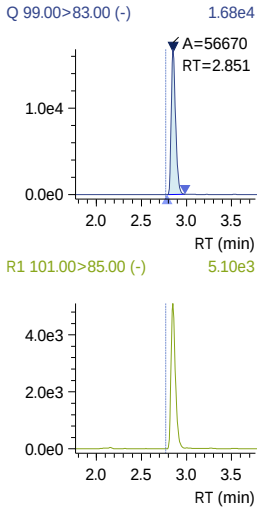
20210429_027

Sample ID: PERCHLORATE7
Date Acquired: 4/29/2021 4:29:16 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210429\20210429_027.lcd
Vial: 21 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.851	56670	51614	1	9.40011	ng/mL	10.0000	30.31
Sodium Perchlorate-18O4 _IS	Auto	2.849	51614	51614	1	1.00000	ng/mL	1.0000	----

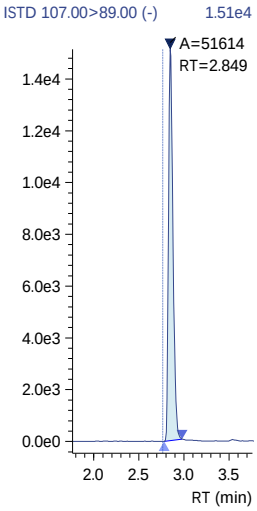
Perchlorate

Conc 9.40011
R#1 30.31 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.00000



Insight Report

Printed at 4/29/2021 4:36:44 PM

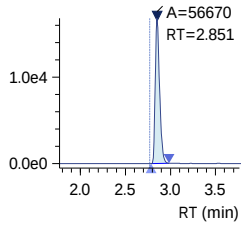
20210429_027

Sample ID: PERCHLORATE7
Date Acquired: 4/29/2021 4:29:16 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210429\Before\20210429_027.lcd
Vial: 21 | Inj. Volume: 25.0000uL | Tray: 1

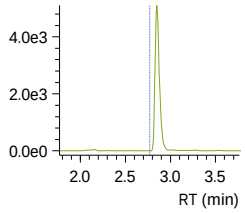
Perchlorate

Conc 9.40011
R#1 30.31 (0.00)

Q 99.00>83.00 (-) 1.68e4



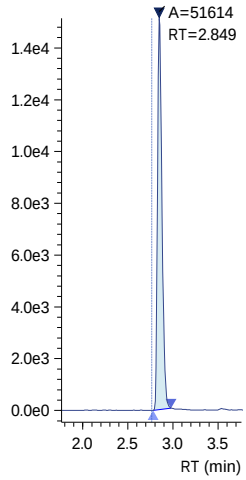
R1 101.00>85.00 (-) 5.10e3



Sodium Perchlorate -18O4_IS

Conc 1.00000

ISTD 107.00>89.00 (-) 1.51e4



10450 Stancliff Rd. Suite 210
Houston, TX 77099
T: +1 281 530 5656
F: +1 281 530 5887
www.alsglobal.com

WorkOrder: HS21041102

Longhorn Army Ammunition Plant 16 April 2021

Aptim Environmental & Infrastucture, Inc.

Vicki Graves
10333 Richmond Ave Ste 1030
Houston TX 77042

20-May-2021

ALS Environmental
ALS Group USA, Corp
10450 Stancliff Road, Suite 210
Houston, TX 77099
T : +1 281 530 5656
F : +1 281 530 5887
www.alsglobal.com

Table of Contents

HS21041102 Cover Page
- CoverPage
- HS21041102 Longhorn Army Ammunition Plant 16 April 2021 Final
  - CoverLetter
  - Sample Summary
  - CaseNarrative
  - 16WW25-210420
  - 16WW25-210420-FD
  - 16WW26-210420
  - 16WW29-210420
  - 16WW29-210420-FD
  - 16WW30-210420
  - 16WW55-210420
  - 16RW10-210420
  - 16RW09-210420
  - 16IW03-210420
  - Trip Blank-210420
  - Dates Report
  - QC
  - Acronyms
  - Certifications
  - SampleReceiptCheckList

Table of Contents (continued)

COC

HS21041102 - Sub Perch Data II (E2100459)

HS21041102 8260_W_DOD Raw Data

HS21041102 RSK175 Raw Data

HS21041102 Wet Chem Raw Data (ALK_W 2320B)

HS21041102 Wet Chem Raw Data (TOC_W 5310B)

HS21041102 Wet Chem Raw Data (9056_anions_W)

HS21041102 - Sub Perch Data IV (E2100459)

CoverLetter

Certificate of Analysis

Chain of Custody

Preparation Sheets

Analytical Results

Accuracy and Precision

Initial Calibration

Chromatogram

HS21041102 Longhorn Army Ammunition Plant
16 April 2021 Final

ALS WO# HS21041102

10450 Stancliff Rd. Suite 210
Houston, TX 77099
T: +1 281 530 5656
F: +1 281 530 5887

May 05, 2021

Vicki Graves
Aptim Environmental & Infrastucture, Inc.
2500 City West Blvd., Suite 1700
Houston, TX 77042

Work Order: **HS21041102**

Laboratory Results for: **Longhorn Army Ammunition Plant 16 April 2021**

Dear Vicki Graves ,

ALS Environmental received 11 sample(s) on Apr 21, 2021 for the analysis presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

Generated By: JUMOKE.LAWAL
RJ Modashia
Project Manager

ALS Houston, US Date: 05-May-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant 16 April 2021
Work Order: HS21041102

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS21041102-01	16WW25-210420	Groundwater		20-Apr-2021 07:25	21-Apr-2021 10:40	☐
HS21041102-02	16WW25-210420-FD	Groundwater		20-Apr-2021 07:25	21-Apr-2021 10:40	☐
HS21041102-03	16WW26-210420	Groundwater		20-Apr-2021 08:20	21-Apr-2021 10:40	☐
HS21041102-04	16WW29-210420	Groundwater		20-Apr-2021 09:10	21-Apr-2021 10:40	☐
HS21041102-05	16WW29-210420-FD	Groundwater		20-Apr-2021 09:10	21-Apr-2021 10:40	☐
HS21041102-06	16WW30-210420	Groundwater		20-Apr-2021 10:00	21-Apr-2021 10:40	☐
HS21041102-07	16WW55-210420	Groundwater		20-Apr-2021 10:45	21-Apr-2021 10:40	☐
HS21041102-08	16RW10-210420	Groundwater		20-Apr-2021 11:30	21-Apr-2021 10:40	☐
HS21041102-09	16RW09-210420	Groundwater		20-Apr-2021 12:15	21-Apr-2021 10:40	☐
HS21041102-10	16IW03-210420	Groundwater		20-Apr-2021 13:05	21-Apr-2021 10:40	☐
HS21041102-11	Trip Blank-210420	Water	CG-121520-1069	20-Apr-2021 00:00	21-Apr-2021 10:40	☐

ALS Houston, US Date: 05-May-21

Client: Aptim Environmental & Infrastucture, Inc. **CASE NARRATIVE**
Project: Longhorn Army Ammunition Plant 16 April 2021
Work Order: HS21041102

Work Order Comments

• The analysis for Perchlorate was subcontracted our ALS Houston TX, High Resolution Lab. Final report attached.

GC Semivolatiles by Method RSK-175

Batch ID: R382623

• The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

GCMS Volatiles by Method SW8260

Batch ID: R382250,R382319

• The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

WetChemistry by Method SM5310B

Batch ID: R382811,R382818

• The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

Batch ID: R382895

Sample ID: HS21041169-03MS

• MS is for an unrelated sample

WetChemistry by Method SW9056

Batch ID: R382206

Sample ID: 16IW03-210420 (HS21041102-10)

• Sample ran at 5X due to sample matrix

Sample ID: 16WW25-210420 (HS21041102-01)

• Sample ran at 5X due to high concentration of Sulfate

Sample ID: 16WW25-210420-FD (HS21041102-02)

• Sample ran at 5X due to high concentration of Sulfate

Sample ID: 16WW26-210420 (HS21041102-03)

• Sample ran at 5X due to high concentration of Sulfate

Sample ID: 16WW26-210420 (HS21041102-03MS)

• The MS and/or MSD recovery was outside of the control limits; however, the result in the parent sample is greater than 4x the spike amount. (Sulfate)

Sample ID: 16WW29-210420 (HS21041102-04)

• Sample ran at 5X due to high concentration of Sulfate

Sample ID: 16WW29-210420-FD (HS21041102-05)

• Sample ran at 5X due to high concentration of Sulfate

ALS Houston, US Date: 05-May-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant 16 April 2021
Work Order: HS21041102

CASE NARRATIVE

WetChemistry by Method SW9056

Batch ID: R382206

Sample ID: 16WW55-210420 (HS21041102-07)

- Sample ran at 5X due to high concentration of Sulfate

Batch ID: R382840

Sample ID: HS21041595-02MSD

- MSD is for an unrelated sample (Sulfate)

WetChemistry by Method SM2320B

Batch ID: R382121

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

ALS Houston, US Date: 05-May-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant 16 April 2021
Sample ID: 16WW25-210420
Collection Date: 20-Apr-2021 07:25

ANALYTICAL REPORT
WorkOrder:HS21041102
Lab ID:HS21041102-01
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
1,1,2-Trichloroethane	1.0	U	0.30	1.0	1.0	ug/L	1	22-Apr-2021 13:44
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	22-Apr-2021 13:44
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	22-Apr-2021 13:44
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	22-Apr-2021 13:44
Methylene chloride	2.0	U	0.40	2.0	2.0	ug/L	1	22-Apr-2021 13:44
Trichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	22-Apr-2021 13:44
Vinyl chloride	0.50	U	0.20	0.50	1.0	ug/L	1	22-Apr-2021 13:44
Surr: 1,2-Dichloroethane-d4	*98.5*			**0**	*81-118*	*%REC*	*1*	*22-Apr-2021 13:44*
Surr: 4-Bromofluorobenzene	*91.7*			**0**	*85-114*	*%REC*	*1*	*22-Apr-2021 13:44*
Surr: Dibromofluoromethane	*91.9*			**0**	*80-119*	*%REC*	*1*	*22-Apr-2021 13:44*
Surr: Toluene-d8	*108*			**0**	*89-112*	*%REC*	*1*	*22-Apr-2021 13:44*
DISSOLVED GASES BY RSK-175		**Method:RSK-175**						Analyst: PPM
Ethane	0.000500	U	0.000144	0.000500	0.00100	mg/L	1	27-Apr-2021 10:58
Ethene	0.000500	U	0.000234	0.000500	0.00100	mg/L	1	27-Apr-2021 10:58
Methane	**0.0167**		**0.000107**	**0.000500**	**0.000500**	**mg/L**	1	27-Apr-2021 10:58
ALKALINITY BY SM2320B		**Method:SM2320B**						Analyst: TH
Alkalinity, Total (As CaCO3)	**86.5**		**5.00**	**5.00**	**5.00**	**mg/L**	1	21-Apr-2021 22:55
TOTAL ORGANIC CARBON - SM5310B		**Method:SM5310B**						Analyst: MZD
Organic Carbon, Total	**39.1**		**0.500**	**0.500**	**1.00**	**mg/L**	1	30-Apr-2021 20:01
ANIONS BY SW9056A		**Method:SW9056**						Analyst: YP
Bromide	**3.13**		**0.300**	**1.00**	**1.00**	**mg/L**	10	01-May-2021 00:28
Nitrogen, Nitrate (As N)	0.500	U	0.150	0.500	0.500	mg/L	5	21-Apr-2021 16:16
Sulfate	**5,500**		**20.0**	**50.0**	**50.0**	**mg/L**	100	01-May-2021 00:46
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: SUB
Subcontract Analysis	See Attached		0	0		NA	1	05-May-2021 16:22

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 05-May-21

Client: Aptim Environmental & Infrastucture, Inc. **ANALYTICAL REPORT**
Project: Longhorn Army Ammunition Plant 16 April 2021 WorkOrder:HS21041102
Sample ID: 16WW25-210420-FD Lab ID:HS21041102-02
Collection Date: 20-Apr-2021 07:25 Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
1,1,2-Trichloroethane	1.0	U	0.30	1.0	1.0	ug/L	1	22-Apr-2021 14:05
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	22-Apr-2021 14:05
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	22-Apr-2021 14:05
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	22-Apr-2021 14:05
Methylene chloride	2.0	U	0.40	2.0	2.0	ug/L	1	22-Apr-2021 14:05
Trichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	22-Apr-2021 14:05
Vinyl chloride	0.50	U	0.20	0.50	1.0	ug/L	1	22-Apr-2021 14:05
Surr: 1,2-Dichloroethane-d4	*97.2*			**0**	*81-118*	*%REC*	*1*	*22-Apr-2021 14:05*
Surr: 4-Bromofluorobenzene	*91.1*			**0**	*85-114*	*%REC*	*1*	*22-Apr-2021 14:05*
Surr: Dibromofluoromethane	*92.8*			**0**	*80-119*	*%REC*	*1*	*22-Apr-2021 14:05*
Surr: Toluene-d8	*107*			**0**	*89-112*	*%REC*	*1*	*22-Apr-2021 14:05*
DISSOLVED GASES BY RSK-175		**Method:RSK-175**						Analyst: PPM
Ethane	0.000500	U	0.000144	0.000500	0.00100	mg/L	1	27-Apr-2021 11:11
Ethene	0.000500	U	0.000234	0.000500	0.00100	mg/L	1	27-Apr-2021 11:11
Methane	**0.0153**		**0.000107**	**0.000500**	**0.000500**	**mg/L**	1	27-Apr-2021 11:11
ALKALINITY BY SM2320B		**Method:SM2320B**						Analyst: TH
Alkalinity, Total (As CaCO3)	**77.5**		**5.00**	**5.00**	**5.00**	**mg/L**	1	21-Apr-2021 23:01
TOTAL ORGANIC CARBON - SM5310B		**Method:SM5310B**						Analyst: MZD
Organic Carbon, Total	**37.0**		**0.500**	**0.500**	**1.00**	**mg/L**	1	30-Apr-2021 20:16
ANIONS BY SW9056A		**Method:SW9056**						Analyst: YP
Bromide	**2.75**		**0.300**	**1.00**	**1.00**	**mg/L**	10	01-May-2021 01:06
Nitrogen, Nitrate (As N)	0.500	U	0.150	0.500	0.500	mg/L	5	21-Apr-2021 16:34
Sulfate	**5,560**		**20.0**	**50.0**	**50.0**	**mg/L**	100	01-May-2021 01:25
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: SUB
Subcontract Analysis	See Attached		0	0		NA	1	05-May-2021 16:22

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 05-May-21

Client: Aptim Environmental & Infrastucture, Inc. **ANALYTICAL REPORT**
Project: Longhorn Army Ammunition Plant 16 April 2021 WorkOrder:HS21041102
Sample ID: 16WW26-210420 Lab ID:HS21041102-03
Collection Date: 20-Apr-2021 08:20 Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
1,1,2-Trichloroethane	1.0	U	0.30	1.0	1.0	ug/L	1	22-Apr-2021 15:29
1,1-Dichloroethene	**0.70**	J	**0.20**	**0.50**	**1.0**	**ug/L**	1	22-Apr-2021 15:29
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	22-Apr-2021 15:29
cis-1,2-Dichloroethene	**8.7**		**0.20**	**0.50**	**1.0**	**ug/L**	1	22-Apr-2021 15:29
Methylene chloride	2.0	U	0.40	2.0	2.0	ug/L	1	22-Apr-2021 15:29
Trichloroethene	**130**		**0.20**	**0.50**	**1.0**	**ug/L**	1	22-Apr-2021 15:29
Vinyl chloride	0.50	U	0.20	0.50	1.0	ug/L	1	22-Apr-2021 15:29
Surr: 1,2-Dichloroethane-d4	*101*			**0**	*81-118*	*%REC*	*1*	*22-Apr-2021 15:29*
Surr: 4-Bromofluorobenzene	*92.5*			**0**	*85-114*	*%REC*	*1*	*22-Apr-2021 15:29*
Surr: Dibromofluoromethane	*94.3*			**0**	*80-119*	*%REC*	*1*	*22-Apr-2021 15:29*
Surr: Toluene-d8	*106*			**0**	*89-112*	*%REC*	*1*	*22-Apr-2021 15:29*
DISSOLVED GASES BY RSK-175		**Method:RSK-175**						Analyst: PPM
Ethane	0.000500	U	0.000144	0.000500	0.00100	mg/L	1	27-Apr-2021 11:23
Ethene	0.000500	U	0.000234	0.000500	0.00100	mg/L	1	27-Apr-2021 11:23
Methane	**0.00118**		**0.000107**	**0.000500**	**0.000500**	**mg/L**	1	27-Apr-2021 11:23
ALKALINITY BY SM2320B		**Method:SM2320B**						Analyst: TH
Alkalinity, Total (As CaCO3)	5.00	U	5.00	5.00	5.00	mg/L	1	21-Apr-2021 23:05
TOTAL ORGANIC CARBON - SM5310B		**Method:SM5310B**						Analyst: MZD
Organic Carbon, Total	**3.54**		**0.500**	**0.500**	**1.00**	**mg/L**	1	30-Apr-2021 20:32
ANIONS BY SW9056A		**Method:SW9056**						Analyst: YP
Bromide	**1.52**		**0.150**	**0.500**	**0.500**	**mg/L**	5	21-Apr-2021 16:55
Nitrogen, Nitrate (As N)	0.500	U	0.150	0.500	0.500	mg/L	5	21-Apr-2021 16:55
Sulfate	**749**		**10.0**	**25.0**	**25.0**	**mg/L**	50	30-Apr-2021 14:24
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: SUB
Subcontract Analysis	See Attached		0	0		NA	1	05-May-2021 16:22

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 05-May-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant 16 April 2021
Sample ID: 16WW29-210420
Collection Date: 20-Apr-2021 09:10

ANALYTICAL REPORT
WorkOrder:HS21041102
Lab ID:HS21041102-04
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
1,1,2-Trichloroethane	1.0	U	0.30	1.0	1.0	ug/L	1	22-Apr-2021 14:26
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	22-Apr-2021 14:26
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	22-Apr-2021 14:26
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	22-Apr-2021 14:26
Methylene chloride	2.0	U	0.40	2.0	2.0	ug/L	1	22-Apr-2021 14:26
Trichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	22-Apr-2021 14:26
Vinyl chloride	0.50	U	0.20	0.50	1.0	ug/L	1	22-Apr-2021 14:26
Surr: 1,2-Dichloroethane-d4	*98.5*			**0**	*81-118*	*%REC*	*1*	*22-Apr-2021 14:26*
Surr: 4-Bromofluorobenzene	*94.6*			**0**	*85-114*	*%REC*	*1*	*22-Apr-2021 14:26*
Surr: Dibromofluoromethane	*94.6*			**0**	*80-119*	*%REC*	*1*	*22-Apr-2021 14:26*
Surr: Toluene-d8	*109*			**0**	*89-112*	*%REC*	*1*	*22-Apr-2021 14:26*
DISSOLVED GASES BY RSK-175		**Method:RSK-175**						Analyst: PPM
Ethane	0.000500	U	0.000144	0.000500	0.00100	mg/L	1	27-Apr-2021 11:35
Ethene	0.000500	U	0.000234	0.000500	0.00100	mg/L	1	27-Apr-2021 11:35
Methane	**0.0306**		**0.000107**	**0.000500**	**0.000500**	**mg/L**	1	27-Apr-2021 11:35
ALKALINITY BY SM2320B		**Method:SM2320B**						Analyst: TH
Alkalinity, Total (As CaCO3)	**41.4**		**5.00**	**5.00**	**5.00**	**mg/L**	1	21-Apr-2021 23:11
TOTAL ORGANIC CARBON - SM5310B		**Method:SM5310B**						Analyst: MZD
Organic Carbon, Total	**16.9**		**0.500**	**0.500**	**1.00**	**mg/L**	1	30-Apr-2021 22:01
ANIONS BY SW9056A		**Method:SW9056**						Analyst: YP
Bromide	**2.35**		**0.150**	**0.500**	**0.500**	**mg/L**	5	21-Apr-2021 17:13
Nitrogen, Nitrate (As N)	0.500	U	0.150	0.500	0.500	mg/L	5	21-Apr-2021 17:13
Sulfate	**1,800**		**10.0**	**25.0**	**25.0**	**mg/L**	50	30-Apr-2021 20:34
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: SUB
Subcontract Analysis	See Attached		0	0		NA	1	05-May-2021 16:22

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 05-May-21

Client: Aptim Environmental & Infrastucture, Inc. **ANALYTICAL REPORT**
Project: Longhorn Army Ammunition Plant 16 April 2021 WorkOrder:HS21041102
Sample ID: 16WW29-210420-FD Lab ID:HS21041102-05
Collection Date: 20-Apr-2021 09:10 Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
1,1,2-Trichloroethane	1.0	U	0.30	1.0	1.0	ug/L	1	22-Apr-2021 14:47
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	22-Apr-2021 14:47
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	22-Apr-2021 14:47
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	22-Apr-2021 14:47
Methylene chloride	2.0	U	0.40	2.0	2.0	ug/L	1	22-Apr-2021 14:47
Trichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	22-Apr-2021 14:47
Vinyl chloride	0.50	U	0.20	0.50	1.0	ug/L	1	22-Apr-2021 14:47
Surr: 1,2-Dichloroethane-d4	*99.2*			**0**	*81-118*	*%REC*	*1*	*22-Apr-2021 14:47*
Surr: 4-Bromofluorobenzene	*93.5*			**0**	*85-114*	*%REC*	*1*	*22-Apr-2021 14:47*
Surr: Dibromofluoromethane	*91.6*			**0**	*80-119*	*%REC*	*1*	*22-Apr-2021 14:47*
Surr: Toluene-d8	*107*			**0**	*89-112*	*%REC*	*1*	*22-Apr-2021 14:47*
DISSOLVED GASES BY RSK-175		**Method:RSK-175**						Analyst: PPM
Ethane	0.000500	U	0.000144	0.000500	0.00100	mg/L	1	27-Apr-2021 12:01
Ethene	**0.00136**		**0.000234**	**0.000500**	**0.00100**	**mg/L**	1	27-Apr-2021 12:01
Methane	**0.0302**		**0.000107**	**0.000500**	**0.000500**	**mg/L**	1	27-Apr-2021 12:01
ALKALINITY BY SM2320B		**Method:SM2320B**						Analyst: TH
Alkalinity, Total (As CaCO3)	**35.4**		**5.00**	**5.00**	**5.00**	**mg/L**	1	21-Apr-2021 23:16
TOTAL ORGANIC CARBON - SM5310B		**Method:SM5310B**						Analyst: MZD
Organic Carbon, Total	**16.9**		**0.500**	**0.500**	**1.00**	**mg/L**	1	30-Apr-2021 22:16
ANIONS BY SW9056A		**Method:SW9056**						Analyst: YP
Bromide	**2.23**		**0.150**	**0.500**	**0.500**	**mg/L**	5	21-Apr-2021 17:34
Nitrogen, Nitrate (As N)	0.500	U	0.150	0.500	0.500	mg/L	5	21-Apr-2021 17:34
Sulfate	**1,850**		**10.0**	**25.0**	**25.0**	**mg/L**	50	30-Apr-2021 20:53
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: SUB
Subcontract Analysis	See Attached		0	0		NA	1	05-May-2021 16:22

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 05-May-21

Client: Aptim Environmental & Infrastucture, Inc. **ANALYTICAL REPORT**
Project: Longhorn Army Ammunition Plant 16 April 2021 WorkOrder:HS21041102
Sample ID: 16WW30-210420 Lab ID:HS21041102-06
Collection Date: 20-Apr-2021 10:00 Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
1,1,2-Trichloroethane	1.0	U	0.30	1.0	1.0	ug/L	1	22-Apr-2021 15:08
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	22-Apr-2021 15:08
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	22-Apr-2021 15:08
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	22-Apr-2021 15:08
Methylene chloride	2.0	U	0.40	2.0	2.0	ug/L	1	22-Apr-2021 15:08
Trichloroethene	**11**		**0.20**	**0.50**	**1.0**	**ug/L**	1	22-Apr-2021 15:08
Vinyl chloride	0.50	U	0.20	0.50	1.0	ug/L	1	22-Apr-2021 15:08
Surr: 1,2-Dichloroethane-d4	*99.2*			**0**	*81-118*	*%REC*	*1*	*22-Apr-2021 15:08*
Surr: 4-Bromofluorobenzene	*90.9*			**0**	*85-114*	*%REC*	*1*	*22-Apr-2021 15:08*
Surr: Dibromofluoromethane	*95.4*			**0**	*80-119*	*%REC*	*1*	*22-Apr-2021 15:08*
Surr: Toluene-d8	*109*			**0**	*89-112*	*%REC*	*1*	*22-Apr-2021 15:08*
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: SUB
Subcontract Analysis	See Attached		0	0		NA	1	05-May-2021 16:22

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 05-May-21

Client: Aptim Environmental & Infrastucture, Inc. **ANALYTICAL REPORT**
Project: Longhorn Army Ammunition Plant 16 April 2021 WorkOrder:HS21041102
Sample ID: 16WW55-210420 Lab ID:HS21041102-07
Collection Date: 20-Apr-2021 10:45 Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
1,1,2-Trichloroethane	5.0	U	1.5	5.0	5.0	ug/L	5	22-Apr-2021 19:42
1,1-Dichloroethene	**5.4**		**1.0**	**2.5**	**5.0**	**ug/L**	5	22-Apr-2021 19:42
1,2-Dichloroethane	**3.6**	J	**1.0**	**2.5**	**5.0**	**ug/L**	5	22-Apr-2021 19:42
cis-1,2-Dichloroethene	**270**		**1.0**	**2.5**	**5.0**	**ug/L**	5	22-Apr-2021 19:42
Methylene chloride	10	U	2.0	10	10	ug/L	5	22-Apr-2021 19:42
Trichloroethene	**2,200**		**10**	**25**	**50**	**ug/L**	50	22-Apr-2021 20:03
Vinyl chloride	**18**		**1.0**	**2.5**	**5.0**	**ug/L**	5	22-Apr-2021 19:42
Surr: 1,2-Dichloroethane-d4	*96.3*			**0**	*81-118*	*%REC*	*50*	*22-Apr-2021 20:03*
Surr: 1,2-Dichloroethane-d4	*99.6*			**0**	*81-118*	*%REC*	*5*	*22-Apr-2021 19:42*
Surr: 4-Bromofluorobenzene	*92.9*			**0**	*85-114*	*%REC*	*50*	*22-Apr-2021 20:03*
Surr: 4-Bromofluorobenzene	*95.1*			**0**	*85-114*	*%REC*	*5*	*22-Apr-2021 19:42*
Surr: Dibromofluoromethane	*93.9*			**0**	*80-119*	*%REC*	*5*	*22-Apr-2021 19:42*
Surr: Dibromofluoromethane	*91.0*			**0**	*80-119*	*%REC*	*50*	*22-Apr-2021 20:03*
Surr: Toluene-d8	*107*			**0**	*89-112*	*%REC*	*5*	*22-Apr-2021 19:42*
Surr: Toluene-d8	*107*			**0**	*89-112*	*%REC*	*50*	*22-Apr-2021 20:03*
DISSOLVED GASES BY RSK-175		**Method:RSK-175**						Analyst: PPM
Ethane	0.000500	U	0.000144	0.000500	0.00100	mg/L	1	27-Apr-2021 12:15
Ethene	0.000500	U	0.000234	0.000500	0.00100	mg/L	1	27-Apr-2021 12:15
Methane	**0.00709**		**0.000107**	**0.000500**	**0.000500**	**mg/L**	1	27-Apr-2021 12:15
ALKALINITY BY SM2320B		**Method:SM2320B**						Analyst: TH
Alkalinity, Total (As CaCO3)	**321**		**5.00**	**5.00**	**5.00**	**mg/L**	1	21-Apr-2021 23:22
TOTAL ORGANIC CARBON - SM5310B		**Method:SM5310B**						Analyst: MZD
Organic Carbon, Total	**6.21**		**0.500**	**0.500**	**1.00**	**mg/L**	1	30-Apr-2021 22:33
ANIONS BY SW9056A		**Method:SW9056**						Analyst: YP
Bromide	**7.73**		**0.150**	**0.500**	**0.500**	**mg/L**	5	21-Apr-2021 17:52
Nitrogen, Nitrate (As N)	**1.10**		**0.150**	**0.500**	**0.500**	**mg/L**	5	21-Apr-2021 17:52
Sulfate	**862**		**10.0**	**25.0**	**25.0**	**mg/L**	50	30-Apr-2021 21:13
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: SUB
Subcontract Analysis	See Attached		0	0		NA	1	05-May-2021 16:22

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 05-May-21

Client: Aptim Environmental & Infrastucture, Inc. **ANALYTICAL REPORT**
Project: Longhorn Army Ammunition Plant 16 April 2021 WorkOrder:HS21041102
Sample ID: 16RW10-210420 Lab ID:HS21041102-08
Collection Date: 20-Apr-2021 11:30 Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
1,1,2-Trichloroethane	5.0	U	1.5	5.0	5.0	ug/L	5	23-Apr-2021 16:04
1,1-Dichloroethene	**14**		**1.0**	**2.5**	**5.0**	**ug/L**	5	23-Apr-2021 16:04
1,2-Dichloroethane	**24**		**1.0**	**2.5**	**5.0**	**ug/L**	5	23-Apr-2021 16:04
cis-1,2-Dichloroethene	**710**		**1.0**	**2.5**	**5.0**	**ug/L**	5	23-Apr-2021 16:04
Methylene chloride	**8.7**	J	**2.0**	**10**	**10**	**ug/L**	5	23-Apr-2021 16:04
Trichloroethene	**2,400**		**10**	**25**	**50**	**ug/L**	50	23-Apr-2021 17:07
Vinyl chloride	**93**		**1.0**	**2.5**	**5.0**	**ug/L**	5	23-Apr-2021 16:04
Surr: 1,2-Dichloroethane-d4	*101*			**0**	*81-118*	*%REC*	*5*	*23-Apr-2021 16:04*
Surr: 1,2-Dichloroethane-d4	*97.3*			**0**	*81-118*	*%REC*	*50*	*23-Apr-2021 17:07*
Surr: 4-Bromofluorobenzene	*93.0*			**0**	*85-114*	*%REC*	*5*	*23-Apr-2021 16:04*
Surr: 4-Bromofluorobenzene	*94.2*			**0**	*85-114*	*%REC*	*50*	*23-Apr-2021 17:07*
Surr: Dibromofluoromethane	*93.5*			**0**	*80-119*	*%REC*	*5*	*23-Apr-2021 16:04*
Surr: Dibromofluoromethane	*92.0*			**0**	*80-119*	*%REC*	*50*	*23-Apr-2021 17:07*
Surr: Toluene-d8	*110*			**0**	*89-112*	*%REC*	*5*	*23-Apr-2021 16:04*
Surr: Toluene-d8	*107*			**0**	*89-112*	*%REC*	*50*	*23-Apr-2021 17:07*
DISSOLVED GASES BY RSK-175		**Method:RSK-175**						Analyst: PPM
Ethane	0.000500	U	0.000144	0.000500	0.00100	mg/L	1	27-Apr-2021 12:27
Ethene	**0.0261**		**0.000234**	**0.000500**	**0.00100**	**mg/L**	1	27-Apr-2021 12:27
Methane	**0.330**		**0.00268**	**0.0125**	**0.0125**	**mg/L**	25	27-Apr-2021 12:58
TOTAL ORGANIC CARBON - SM5310B		**Method:SM5310B**						Analyst: MZD
Organic Carbon, Total	**4.84**		**0.500**	**0.500**	**1.00**	**mg/L**	1	30-Apr-2021 22:49
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: SUB
Subcontract Analysis	See Attached		0	0		NA	1	05-May-2021 16:22

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 05-May-21

Client: Aptim Environmental & Infrastucture, Inc. **ANALYTICAL REPORT**
Project: Longhorn Army Ammunition Plant 16 April 2021 WorkOrder:HS21041102
Sample ID: 16RW09-210420 Lab ID:HS21041102-09
Collection Date: 20-Apr-2021 12:15 Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
1,1,2-Trichloroethane	1.0	U	0.30	1.0	1.0	ug/L	1	22-Apr-2021 15:50
1,1-Dichloroethene	**4.8**		**0.20**	**0.50**	**1.0**	**ug/L**	1	22-Apr-2021 15:50
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	22-Apr-2021 15:50
cis-1,2-Dichloroethene	**160**		**0.20**	**0.50**	**1.0**	**ug/L**	1	22-Apr-2021 15:50
Methylene chloride	2.0	U	0.40	2.0	2.0	ug/L	1	22-Apr-2021 15:50
Trichloroethene	**810**		**5.0**	**12**	**25**	**ug/L**	25	23-Apr-2021 17:28
Vinyl chloride	**33**		**0.20**	**0.50**	**1.0**	**ug/L**	1	22-Apr-2021 15:50
Surr: 1,2-Dichloroethane-d4	*101*			**0**	*81-118*	*%REC*	*1*	*22-Apr-2021 15:50*
Surr: 1,2-Dichloroethane-d4	*99.5*			**0**	*81-118*	*%REC*	*25*	*23-Apr-2021 17:28*
Surr: 4-Bromofluorobenzene	*93.5*			**0**	*85-114*	*%REC*	*1*	*22-Apr-2021 15:50*
Surr: 4-Bromofluorobenzene	*92.9*			**0**	*85-114*	*%REC*	*25*	*23-Apr-2021 17:28*
Surr: Dibromofluoromethane	*95.1*			**0**	*80-119*	*%REC*	*1*	*22-Apr-2021 15:50*
Surr: Dibromofluoromethane	*93.1*			**0**	*80-119*	*%REC*	*25*	*23-Apr-2021 17:28*
Surr: Toluene-d8	*109*			**0**	*89-112*	*%REC*	*1*	*22-Apr-2021 15:50*
Surr: Toluene-d8	*106*			**0**	*89-112*	*%REC*	*25*	*23-Apr-2021 17:28*
DISSOLVED GASES BY RSK-175		**Method:RSK-175**						Analyst: PPM
Ethane	0.000500	U	0.000144	0.000500	0.00100	mg/L	1	27-Apr-2021 12:38
Ethene	**0.00197**		**0.000234**	**0.000500**	**0.00100**	**mg/L**	1	27-Apr-2021 12:38
Methane	**0.144**		**0.00107**	**0.00500**	**0.00500**	**mg/L**	10	27-Apr-2021 13:08
TOTAL ORGANIC CARBON - SM5310B		**Method:SM5310B**						Analyst: MZD
Organic Carbon, Total	**2.28**		**0.500**	**0.500**	**1.00**	**mg/L**	1	30-Apr-2021 23:23
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: SUB
Subcontract Analysis	See Attached		0	0		NA	1	05-May-2021 16:22

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 05-May-21

Client: Aptim Environmental & Infrastucture, Inc. **ANALYTICAL REPORT**
Project: Longhorn Army Ammunition Plant 16 April 2021 WorkOrder:HS21041102
Sample ID: 16IW03-210420 Lab ID:HS21041102-10
Collection Date: 20-Apr-2021 13:05 Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
1,1,2-Trichloroethane	10	U	3.0	10	10	ug/L	10	22-Apr-2021 20:24
1,1-Dichloroethene	**46**		**2.0**	**5.0**	**10**	**ug/L**	10	22-Apr-2021 20:24
1,2-Dichloroethane	**6.2**	J	**2.0**	**5.0**	**10**	**ug/L**	10	22-Apr-2021 20:24
cis-1,2-Dichloroethene	**11,000**		**20**	**50**	**100**	**ug/L**	100	22-Apr-2021 20:45
Methylene chloride	**17**	J	**4.0**	**20**	**20**	**ug/L**	10	22-Apr-2021 20:24
Trichloroethene	**8,900**		**20**	**50**	**100**	**ug/L**	100	22-Apr-2021 20:45
Vinyl chloride	**3,700**		**20**	**50**	**100**	**ug/L**	100	22-Apr-2021 20:45
Surr: 1,2-Dichloroethane-d4	*97.6*			**0**	*81-118*	*%REC*	*10*	*22-Apr-2021 20:24*
Surr: 1,2-Dichloroethane-d4	*96.3*			**0**	*81-118*	*%REC*	*100*	*22-Apr-2021 20:45*
Surr: 4-Bromofluorobenzene	*93.8*			**0**	*85-114*	*%REC*	*10*	*22-Apr-2021 20:24*
Surr: 4-Bromofluorobenzene	*93.8*			**0**	*85-114*	*%REC*	*100*	*22-Apr-2021 20:45*
Surr: Dibromofluoromethane	*92.7*			**0**	*80-119*	*%REC*	*10*	*22-Apr-2021 20:24*
Surr: Dibromofluoromethane	*91.6*			**0**	*80-119*	*%REC*	*100*	*22-Apr-2021 20:45*
Surr: Toluene-d8	*110*			**0**	*89-112*	*%REC*	*10*	*22-Apr-2021 20:24*
Surr: Toluene-d8	*106*			**0**	*89-112*	*%REC*	*100*	*22-Apr-2021 20:45*
DISSOLVED GASES BY RSK-175		**Method:RSK-175**						Analyst: PPM
Ethane	0.000500	U	0.000144	0.000500	0.00100	mg/L	1	27-Apr-2021 12:48
Ethene	**0.819**		**0.0234**	**0.0500**	**0.100**	**mg/L**	100	27-Apr-2021 13:58
Methane	**1.33**		**0.0107**	**0.0500**	**0.0500**	**mg/L**	100	27-Apr-2021 13:58
ALKALINITY BY SM2320B		**Method:SM2320B**						Analyst: TH
Alkalinity, Total (As CaCO3)	**1,700**		**5.00**	**5.00**	**5.00**	**mg/L**	1	21-Apr-2021 23:35
TOTAL ORGANIC CARBON - SM5310B		**Method:SM5310B**						Analyst: MZD
Organic Carbon, Total	**2,860**		**50.0**	**50.0**	**100**	**mg/L**	100	03-May-2021 17:11
ANIONS BY SW9056A		**Method:SW9056**						Analyst: YP
Bromide	**6.60**		**0.150**	**0.500**	**0.500**	**mg/L**	5	21-Apr-2021 18:13
Nitrogen, Nitrate (As N)	0.500	U	0.150	0.500	0.500	mg/L	5	21-Apr-2021 18:13
Sulfate	**44.3**		**1.00**	**2.50**	**2.50**	**mg/L**	5	21-Apr-2021 18:13
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: SUB
Subcontract Analysis	See Attached		0	0		NA	1	05-May-2021 16:22

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 05-May-21

Client: Aptim Environmental & Infrastucture, Inc. **ANALYTICAL REPORT**
Project: Longhorn Army Ammunition Plant 16 April 2021 WorkOrder:HS21041102
Sample ID: Trip Blank-210420 Lab ID:HS21041102-11
Collection Date: 20-Apr-2021 00:00 Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,2-Trichloroethane	1.0	U	0.30	1.0	1.0	ug/L	1	22-Apr-2021 13:22
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	22-Apr-2021 13:22
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	22-Apr-2021 13:22
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	22-Apr-2021 13:22
Methylene chloride	2.0	U	0.40	2.0	2.0	ug/L	1	22-Apr-2021 13:22
Trichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	22-Apr-2021 13:22
Vinyl chloride	0.50	U	0.20	0.50	1.0	ug/L	1	22-Apr-2021 13:22
Surr: 1,2-Dichloroethane-d4	*95.5*			**0**	*81-118*	*%REC*	*1*	*22-Apr-2021 13:22*
Surr: 4-Bromofluorobenzene	*94.7*			**0**	*85-114*	*%REC*	*1*	*22-Apr-2021 13:22*
Surr: Dibromofluoromethane	*91.1*			**0**	*80-119*	*%REC*	*1*	*22-Apr-2021 13:22*
Surr: Toluene-d8	*108*			**0**	*89-112*	*%REC*	*1*	*22-Apr-2021 13:22*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 05-May-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant 16 April 2021
WorkOrder: HS21041102

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: R382121 (0)	**Test Name :** ALKALINITY BY SM2320B				**Matrix:** Groundwater	
HS21041102-01	16WW25-210420	20 Apr 2021 07:25			21 Apr 2021 22:55	1
HS21041102-02	16WW25-210420-FD	20 Apr 2021 07:25			21 Apr 2021 23:01	1
HS21041102-03	16WW26-210420	20 Apr 2021 08:20			21 Apr 2021 23:05	1
HS21041102-04	16WW29-210420	20 Apr 2021 09:10			21 Apr 2021 23:11	1
HS21041102-05	16WW29-210420-FD	20 Apr 2021 09:10			21 Apr 2021 23:16	1
HS21041102-07	16WW55-210420	20 Apr 2021 10:45			21 Apr 2021 23:22	1
HS21041102-10	16IW03-210420	20 Apr 2021 13:05			21 Apr 2021 23:35	1
Batch ID: R382206 (0)	**Test Name :** ANIONS BY SW9056A				**Matrix:** Groundwater	
HS21041102-01	16WW25-210420	20 Apr 2021 07:25			21 Apr 2021 16:16	5
HS21041102-02	16WW25-210420-FD	20 Apr 2021 07:25			21 Apr 2021 16:34	5
HS21041102-03	16WW26-210420	20 Apr 2021 08:20			21 Apr 2021 16:55	5
HS21041102-04	16WW29-210420	20 Apr 2021 09:10			21 Apr 2021 17:13	5
HS21041102-05	16WW29-210420-FD	20 Apr 2021 09:10			21 Apr 2021 17:34	5
HS21041102-07	16WW55-210420	20 Apr 2021 10:45			21 Apr 2021 17:52	5
HS21041102-10	16IW03-210420	20 Apr 2021 13:05			21 Apr 2021 18:13	5
Batch ID: R382250 (0)	**Test Name :** VOLATILES ORGANICS BY METHOD 8260C				**Matrix:** Water	
HS21041102-11	Trip Blank-210420	20 Apr 2021 00:00			22 Apr 2021 13:22	1
Batch ID: R382250 (0)	**Test Name :** VOLATILES ORGANICS BY METHOD 8260C				**Matrix:** Groundwater	
HS21041102-01	16WW25-210420	20 Apr 2021 07:25			22 Apr 2021 13:44	1
HS21041102-02	16WW25-210420-FD	20 Apr 2021 07:25			22 Apr 2021 14:05	1
HS21041102-03	16WW26-210420	20 Apr 2021 08:20			22 Apr 2021 15:29	1
HS21041102-04	16WW29-210420	20 Apr 2021 09:10			22 Apr 2021 14:26	1
HS21041102-05	16WW29-210420-FD	20 Apr 2021 09:10			22 Apr 2021 14:47	1
HS21041102-06	16WW30-210420	20 Apr 2021 10:00			22 Apr 2021 15:08	1
HS21041102-07	16WW55-210420	20 Apr 2021 10:45			22 Apr 2021 20:03	50
HS21041102-07	16WW55-210420	20 Apr 2021 10:45			22 Apr 2021 19:42	5
HS21041102-09	16RW09-210420	20 Apr 2021 12:15			22 Apr 2021 15:50	1
HS21041102-10	16IW03-210420	20 Apr 2021 13:05			22 Apr 2021 20:45	100
HS21041102-10	16IW03-210420	20 Apr 2021 13:05			22 Apr 2021 20:24	10
Batch ID: R382319 (0)	**Test Name :** VOLATILES ORGANICS BY METHOD 8260C				**Matrix:** Groundwater	
HS21041102-08	16RW10-210420	20 Apr 2021 11:30			23 Apr 2021 17:07	50
HS21041102-08	16RW10-210420	20 Apr 2021 11:30			23 Apr 2021 16:04	5
HS21041102-09	16RW09-210420	20 Apr 2021 12:15			23 Apr 2021 17:28	25

ALS Houston, US Date: 05-May-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant 16 April 2021
WorkOrder: HS21041102

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: R382623 (0)	**Test Name :** DISSOLVED GASES BY RSK-175				**Matrix:** Groundwater	
HS21041102-01	16WW25-210420	20 Apr 2021 07:25			27 Apr 2021 10:58	1
HS21041102-02	16WW25-210420-FD	20 Apr 2021 07:25			27 Apr 2021 11:11	1
HS21041102-03	16WW26-210420	20 Apr 2021 08:20			27 Apr 2021 11:23	1
HS21041102-04	16WW29-210420	20 Apr 2021 09:10			27 Apr 2021 11:35	1
HS21041102-05	16WW29-210420-FD	20 Apr 2021 09:10			27 Apr 2021 12:01	1
HS21041102-07	16WW55-210420	20 Apr 2021 10:45			27 Apr 2021 12:15	1
HS21041102-08	16RW10-210420	20 Apr 2021 11:30			27 Apr 2021 12:58	25
HS21041102-08	16RW10-210420	20 Apr 2021 11:30			27 Apr 2021 12:27	1
HS21041102-09	16RW09-210420	20 Apr 2021 12:15			27 Apr 2021 13:08	10
HS21041102-09	16RW09-210420	20 Apr 2021 12:15			27 Apr 2021 12:38	1
HS21041102-10	16IW03-210420	20 Apr 2021 13:05			27 Apr 2021 13:58	100
HS21041102-10	16IW03-210420	20 Apr 2021 13:05			27 Apr 2021 12:48	1
Batch ID: R382811 (0)	**Test Name :** TOTAL ORGANIC CARBON - SM5310B				**Matrix:** Groundwater	
HS21041102-01	16WW25-210420	20 Apr 2021 07:25			30 Apr 2021 20:01	1
HS21041102-02	16WW25-210420-FD	20 Apr 2021 07:25			30 Apr 2021 20:16	1
HS21041102-03	16WW26-210420	20 Apr 2021 08:20			30 Apr 2021 20:32	1
Batch ID: R382818 (0)	**Test Name :** TOTAL ORGANIC CARBON - SM5310B				**Matrix:** Groundwater	
HS21041102-04	16WW29-210420	20 Apr 2021 09:10			30 Apr 2021 22:01	1
HS21041102-05	16WW29-210420-FD	20 Apr 2021 09:10			30 Apr 2021 22:16	1
HS21041102-07	16WW55-210420	20 Apr 2021 10:45			30 Apr 2021 22:33	1
HS21041102-08	16RW10-210420	20 Apr 2021 11:30			30 Apr 2021 22:49	1
HS21041102-09	16RW09-210420	20 Apr 2021 12:15			30 Apr 2021 23:23	1
Batch ID: R382840 (0)	**Test Name :** ANIONS BY SW9056A				**Matrix:** Groundwater	
HS21041102-01	16WW25-210420	20 Apr 2021 07:25			01 May 2021 00:46	100
HS21041102-01	16WW25-210420	20 Apr 2021 07:25			01 May 2021 00:28	10
HS21041102-02	16WW25-210420-FD	20 Apr 2021 07:25			01 May 2021 01:25	100
HS21041102-02	16WW25-210420-FD	20 Apr 2021 07:25			01 May 2021 01:06	10
HS21041102-03	16WW26-210420	20 Apr 2021 08:20			30 Apr 2021 14:24	50
HS21041102-04	16WW29-210420	20 Apr 2021 09:10			30 Apr 2021 20:34	50
HS21041102-05	16WW29-210420-FD	20 Apr 2021 09:10			30 Apr 2021 20:53	50
HS21041102-07	16WW55-210420	20 Apr 2021 10:45			30 Apr 2021 21:13	50
Batch ID: R382895 (0)	**Test Name :** TOTAL ORGANIC CARBON - SM5310B				**Matrix:** Groundwater	
HS21041102-10	16IW03-210420	20 Apr 2021 13:05			03 May 2021 17:11	100

ALS Houston, US Date: 05-May-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant 16 April 2021
WorkOrder: HS21041102

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: R383059 (0)	**Test Name :** SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)				**Matrix:** Groundwater	
HS21041102-01	16WW25-210420	20 Apr 2021 07:25			05 May 2021 16:22	1
HS21041102-02	16WW25-210420-FD	20 Apr 2021 07:25			05 May 2021 16:22	1
HS21041102-03	16WW26-210420	20 Apr 2021 08:20			05 May 2021 16:22	1
HS21041102-04	16WW29-210420	20 Apr 2021 09:10			05 May 2021 16:22	1
HS21041102-05	16WW29-210420-FD	20 Apr 2021 09:10			05 May 2021 16:22	1
HS21041102-06	16WW30-210420	20 Apr 2021 10:00			05 May 2021 16:22	1
HS21041102-07	16WW55-210420	20 Apr 2021 10:45			05 May 2021 16:22	1
HS21041102-08	16RW10-210420	20 Apr 2021 11:30			05 May 2021 16:22	1
HS21041102-09	16RW09-210420	20 Apr 2021 12:15			05 May 2021 16:22	1
HS21041102-10	16IW03-210420	20 Apr 2021 13:05			05 May 2021 16:22	1

ALS Houston, US Date: 05-May-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant 16 April 2021
WorkOrder: HS21041102

QC BATCH REPORT

Batch ID: R382623 (0) **Instrument: FID-4** **Method: DISSOLVED GASES BY RSK-175**

MBLK Sample ID: **MBLK-210427** Units: **mg/L** Analysis Date: **27-Apr-2021 09:48**
Client ID: Run ID: **FID-4_382623** SeqNo: **6067727** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ethane	0.000500	0.00100								U
Ethene	0.000500	0.00100								U
Methane	0.000500	0.000500								U

LCS Sample ID: **LCS-210427** Units: **mg/L** Analysis Date: **27-Apr-2021 09:57**
Client ID: Run ID: **FID-4_382623** SeqNo: **6067728** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ethane	0.0214	0.00100	0.01804	0	119	75 - 125				
Ethene	0.0184	0.00100	0.0168	0	109	75 - 125				
Methane	0.00936	0.000500	0.009647	0	97.0	75 - 125				

LCSD Sample ID: **LCSD-210427** Units: **mg/L** Analysis Date: **27-Apr-2021 10:08**
Client ID: Run ID: **FID-4_382623** SeqNo: **6067729** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ethane	0.0209	0.00100	0.01804	0	116	75 - 125	0.02138	2.36	30	
Ethene	0.0178	0.00100	0.0168	0	106	75 - 125	0.01836	3.2	30	
Methane	0.00980	0.000500	0.009647	0	102	75 - 125	0.009361	4.55	30	

DUP Sample ID: **HS21041132-05DUP** Units: **mg/L** Analysis Date: **27-Apr-2021 10:35**
Client ID: Run ID: **FID-4_382623** SeqNo: **6067731** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ethane	0.000500	0.00100					0	0	30	U
Ethene	0.000500	0.00100					0	0	30	U
Methane	0.00353	0.000500					0.003447	2.5	30	

The following samples were analyzed in this batch:

HS21041102-01	HS21041102-02	HS21041102-03	HS21041102-04
HS21041102-05	HS21041102-07	HS21041102-08	HS21041102-09
HS21041102-10			

ALS Houston, US Date: 05-May-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant 16 April 2021
WorkOrder: HS21041102

QC BATCH REPORT

Batch ID: R382250 (0) **Instrument: VOA6** **Method: VOLATILES ORGANICS BY METHOD 8260C**

MBLK Sample ID: **VBLKW-210422** Units: **ug/L** Analysis Date: **22-Apr-2021 13:01**
Client ID: Run ID: **VOA6_382250** SeqNo: **6058085** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,2-Trichloroethane	1.0	1.0								U
1,1-Dichloroethene	0.50	1.0								U
1,2-Dichloroethane	0.50	1.0								U
cis-1,2-Dichloroethene	0.50	1.0								U
Methylene chloride	2.0	2.0								U
Trichloroethene	0.50	1.0								U
Vinyl chloride	0.50	1.0								U
Surr: 1,2-Dichloroethane-d4	*47.94*	*1.0*	*50*	*0*	*95.9*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*46*	*1.0*	*50*	*0*	*92.0*	*85 - 114*				
Surr: Dibromofluoromethane	*46.53*	*1.0*	*50*	*0*	*93.1*	*80 - 119*				
Surr: Toluene-d8	*53.88*	*1.0*	*50*	*0*	*108*	*89 - 112*				

LCS Sample ID: **VLCSW-210422** Units: **ug/L** Analysis Date: **22-Apr-2021 12:19**
Client ID: Run ID: **VOA6_382250** SeqNo: **6058084** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,2-Trichloroethane	21.25	1.0	20	0	106	80 - 119				
1,1-Dichloroethene	19.24	1.0	20	0	96.2	71 - 131				
1,2-Dichloroethane	20.08	1.0	20	0	100	73 - 128				
cis-1,2-Dichloroethene	19.96	1.0	20	0	99.8	78 - 123				
Methylene chloride	21.99	2.0	20	0	110	74 - 124				
Trichloroethene	19.95	1.0	20	0	99.8	79 - 123				
Vinyl chloride	21.2	1.0	20	0	106	58 - 137				
Surr: 1,2-Dichloroethane-d4	*52.73*	*1.0*	*50*	*0*	*105*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*50.13*	*1.0*	*50*	*0*	*100*	*85 - 114*				
Surr: Dibromofluoromethane	*50.82*	*1.0*	*50*	*0*	*102*	*80 - 119*				
Surr: Toluene-d8	*51.32*	*1.0*	*50*	*0*	*103*	*89 - 112*				

ALS Houston, US Date: 05-May-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant 16 April 2021
WorkOrder: HS21041102

QC BATCH REPORT

Batch ID: R382250 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MS Sample ID: **HS21041102-04MS** Units: **ug/L** Analysis Date: **22-Apr-2021 16:11**
Client ID: **16WW29-210420** Run ID: **VOA6_382250** SeqNo: **6058094** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,2-Trichloroethane	18.97	1.0	20	0	94.9	80 - 119				
1,1-Dichloroethene	18.74	1.0	20	0	93.7	71 - 131				
1,2-Dichloroethane	18.28	1.0	20	0	91.4	73 - 128				
cis-1,2-Dichloroethene	18.74	1.0	20	0	93.7	78 - 123				
Methylene chloride	19.38	2.0	20	0	96.9	74 - 124				
Trichloroethene	21.57	1.0	20	0	108	79 - 123				
Vinyl chloride	21.18	1.0	20	0	106	58 - 137				
Surr: 1,2-Dichloroethane-d4	*47.79*	*1.0*	*50*	*0*	*95.6*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*51.4*	*1.0*	*50*	*0*	*103*	*85 - 114*				
Surr: Dibromofluoromethane	*46.01*	*1.0*	*50*	*0*	*92.0*	*80 - 119*				
Surr: Toluene-d8	*52.35*	*1.0*	*50*	*0*	*105*	*89 - 112*				

MSD Sample ID: **HS21041102-04MSD** Units: **ug/L** Analysis Date: **22-Apr-2021 16:32**
Client ID: **16WW29-210420** Run ID: **VOA6_382250** SeqNo: **6058095** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,2-Trichloroethane	18.82	1.0	20	0	94.1	80 - 119	18.97	0.84	20	
1,1-Dichloroethene	18.2	1.0	20	0	91.0	71 - 131	18.74	2.92	20	
1,2-Dichloroethane	18.15	1.0	20	0	90.7	73 - 128	18.28	0.746	20	
cis-1,2-Dichloroethene	17.77	1.0	20	0	88.8	78 - 123	18.74	5.33	20	
Methylene chloride	18.45	2.0	20	0	92.3	74 - 124	19.38	4.9	20	
Trichloroethene	19.89	1.0	20	0	99.4	79 - 123	21.57	8.11	20	
Vinyl chloride	20.69	1.0	20	0	103	58 - 137	21.18	2.31	20	
Surr: 1,2-Dichloroethane-d4	*46.31*	*1.0*	*50*	*0*	*92.6*	*81 - 118*	*47.79*	*3.15*	*20*	
Surr: 4-Bromofluorobenzene	*48.8*	*1.0*	*50*	*0*	*97.6*	*85 - 114*	*51.4*	*5.19*	*20*	
Surr: Dibromofluoromethane	*46.46*	*1.0*	*50*	*0*	*92.9*	*80 - 119*	*46.01*	*0.96*	*20*	
Surr: Toluene-d8	*52.24*	*1.0*	*50*	*0*	*104*	*89 - 112*	*52.35*	*0.205*	*20*	

The following samples were analyzed in this batch:

HS21041102-01	HS21041102-02	HS21041102-03	HS21041102-04
HS21041102-05	HS21041102-06	HS21041102-07	HS21041102-09
HS21041102-10	HS21041102-11		

ALS Houston, US Date: 05-May-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant 16 April 2021
WorkOrder: HS21041102

QC BATCH REPORT

Batch ID: R382319 (0) **Instrument: VOA6** **Method: VOLATILES ORGANICS BY METHOD 8260C**

MBLK Sample ID: **VBLKW-210423** Units: **ug/L** Analysis Date: **23-Apr-2021 12:54**
Client ID: Run ID: **VOA6_382319** SeqNo: **6059743** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,2-Trichloroethane	1.0	1.0								U
1,1-Dichloroethene	0.50	1.0								U
1,2-Dichloroethane	0.50	1.0								U
cis-1,2-Dichloroethene	0.50	1.0								U
Methylene chloride	2.0	2.0								U
Trichloroethene	0.50	1.0								U
Vinyl chloride	0.50	1.0								U
Surr: 1,2-Dichloroethane-d4	*48.59*	*1.0*	*50*	*0*	*97.2*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*45.27*	*1.0*	*50*	*0*	*90.5*	*85 - 114*				
Surr: Dibromofluoromethane	*45.98*	*1.0*	*50*	*0*	*92.0*	*80 - 119*				
Surr: Toluene-d8	*53.8*	*1.0*	*50*	*0*	*108*	*89 - 112*				

LCS Sample ID: **VLCSW-210423** Units: **ug/L** Analysis Date: **23-Apr-2021 12:12**
Client ID: Run ID: **VOA6_382319** SeqNo: **6059742** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,2-Trichloroethane	22.45	1.0	20	0	112	80 - 119				
1,1-Dichloroethene	21.76	1.0	20	0	109	71 - 131				
1,2-Dichloroethane	21.06	1.0	20	0	105	73 - 128				
cis-1,2-Dichloroethene	22.4	1.0	20	0	112	78 - 123				
Methylene chloride	23.68	2.0	20	0	118	74 - 124				
Trichloroethene	21.93	1.0	20	0	110	79 - 123				
Vinyl chloride	23.85	1.0	20	0	119	58 - 137				
Surr: 1,2-Dichloroethane-d4	*54.43*	*1.0*	*50*	*0*	*109*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*53.54*	*1.0*	*50*	*0*	*107*	*85 - 114*				
Surr: Dibromofluoromethane	*53.15*	*1.0*	*50*	*0*	*106*	*80 - 119*				
Surr: Toluene-d8	*52.72*	*1.0*	*50*	*0*	*105*	*89 - 112*				

ALS Houston, US Date: 05-May-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant 16 April 2021
WorkOrder: HS21041102

QC BATCH REPORT

Batch ID: R382319 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MS Sample ID: **HS21041135-03MS** Units: **ug/L** Analysis Date: **23-Apr-2021 16:25**
Client ID: Run ID: **VOA6_382319** SeqNo: **6059753** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,2-Trichloroethane	17.84	1.0	20	0	89.2	80 - 119				
1,1-Dichloroethene	19	1.0	20	0	95.0	71 - 131				
1,2-Dichloroethane	18.35	1.0	20	0	91.8	73 - 128				
cis-1,2-Dichloroethene	17.91	1.0	20	0	89.6	78 - 123				
Methylene chloride	18.11	2.0	20	0	90.5	74 - 124				
Trichloroethene	20.15	1.0	20	0	101	79 - 123				
Vinyl chloride	21.08	1.0	20	0	105	58 - 137				
Surr: 1,2-Dichloroethane-d4	*46.37*	*1.0*	*50*	*0*	*92.7*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*50.46*	*1.0*	*50*	*0*	*101*	*85 - 114*				
Surr: Dibromofluoromethane	*45.85*	*1.0*	*50*	*0*	*91.7*	*80 - 119*				
Surr: Toluene-d8	*51.29*	*1.0*	*50*	*0*	*103*	*89 - 112*				

MSD Sample ID: **HS21041135-03MSD** Units: **ug/L** Analysis Date: **23-Apr-2021 16:46**
Client ID: Run ID: **VOA6_382319** SeqNo: **6059754** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,2-Trichloroethane	17.92	1.0	20	0	89.6	80 - 119	17.84	0.443	20	
1,1-Dichloroethene	17.94	1.0	20	0	89.7	71 - 131	19	5.74	20	
1,2-Dichloroethane	17.62	1.0	20	0	88.1	73 - 128	18.35	4.06	20	
cis-1,2-Dichloroethene	17.03	1.0	20	0	85.2	78 - 123	17.91	5.03	20	
Methylene chloride	18.42	2.0	20	0	92.1	74 - 124	18.11	1.71	20	
Trichloroethene	18.81	1.0	20	0	94.1	79 - 123	20.15	6.88	20	
Vinyl chloride	19.65	1.0	20	0	98.3	58 - 137	21.08	7	20	
Surr: 1,2-Dichloroethane-d4	*47.83*	*1.0*	*50*	*0*	*95.7*	*81 - 118*	*46.37*	*3.12*	*20*	
Surr: 4-Bromofluorobenzene	*49.66*	*1.0*	*50*	*0*	*99.3*	*85 - 114*	*50.46*	*1.6*	*20*	
Surr: Dibromofluoromethane	*45.54*	*1.0*	*50*	*0*	*91.1*	*80 - 119*	*45.85*	*0.68*	*20*	
Surr: Toluene-d8	*51.67*	*1.0*	*50*	*0*	*103*	*89 - 112*	*51.29*	*0.733*	*20*	

The following samples were analyzed in this batch: HS21041102-08 HS21041102-09

ALS Houston, US Date: 05-May-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant 16 April 2021
WorkOrder: HS21041102

QC BATCH REPORT

Batch ID: R382121 (0) **Instrument: ManTech01** **Method: ALKALINITY BY SM2320B**

MBLK Sample ID: **WBLKW2-210421** Units: **mg/L** Analysis Date: **21-Apr-2021 21:43**
Client ID: Run ID: **ManTech01_382121** SeqNo: **6054847** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Alkalinity, Total (As CaCO3)	5.00	5.00								U

LCS Sample ID: **LCS2-210421** Units: **mg/L** Analysis Date: **21-Apr-2021 21:52**
Client ID: Run ID: **ManTech01_382121** SeqNo: **6054848** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Alkalinity, Total (As CaCO3)	1027	5.00	1000	0	103	85 - 115				

LCSD Sample ID: **LCSD2-210421** Units: **mg/L** Analysis Date: **21-Apr-2021 22:01**
Client ID: Run ID: **ManTech01_382121** SeqNo: **6054849** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Alkalinity, Total (As CaCO3)	1059	5.00	1000	0	106	85 - 115	1027	3.1	20	

DUP Sample ID: **HS21040859-08DUP** Units: **mg/L** Analysis Date: **21-Apr-2021 22:12**
Client ID: Run ID: **ManTech01_382121** SeqNo: **6054851** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Alkalinity, Total (As CaCO3)	168.4	5.00					169.7	0.769	20	

The following samples were analyzed in this batch:

HS21041102-01	HS21041102-02	HS21041102-03	HS21041102-04
HS21041102-05	HS21041102-07	HS21041102-10	

ALS Houston, US Date: 05-May-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant 16 April 2021
WorkOrder: HS21041102

QC BATCH REPORT

Batch ID: R382206 (0) **Instrument: ICS-Integrion** **Method: ANIONS BY SW9056A**

MBLK Sample ID: **MBLK-** Units: **mg/L** Analysis Date: **21-Apr-2021 15:37**
Client ID: Run ID: **ICS-Integrion_382206** SeqNo: **6056702** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Bromide	0.100	0.100								U
Nitrogen, Nitrate (As N)	0.100	0.100								U
Sulfate	0.500	0.500								U

LCS Sample ID: **LCS-** Units: **mg/L** Analysis Date: **21-Apr-2021 15:56**
Client ID: Run ID: **ICS-Integrion_382206** SeqNo: **6056703** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Bromide	3.66	0.100	4	0	91.5	80 - 120				
Nitrogen, Nitrate (As N)	3.753	0.100	4	0	93.8	80 - 120				
Sulfate	19.12	0.500	20	0	95.6	80 - 120				

MS Sample ID: **HS21041102-03MS** Units: **mg/L** Analysis Date: **21-Apr-2021 19:30**
Client ID: **16WW26-210420** Run ID: **ICS-Integrion_382206** SeqNo: **6056713** PrepDate: DF: **5**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Bromide	10.42	0.500	10	1.517	89.0	80 - 120				
Nitrogen, Nitrate (As N)	10.22	0.500	10	0	102	80 - 120				
Sulfate	667.8	2.50	50	644.6	46.4	80 - 120				SEO

MSD Sample ID: **HS21041102-03MSD** Units: **mg/L** Analysis Date: **21-Apr-2021 19:48**
Client ID: **16WW26-210420** Run ID: **ICS-Integrion_382206** SeqNo: **6056714** PrepDate: DF: **5**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Bromide	10.44	0.500	10	1.517	89.2	80 - 120	10.42	0.249	20	
Nitrogen, Nitrate (As N)	10.22	0.500	10	0	102	80 - 120	10.22	0.0196	20	
Sulfate	671.8	2.50	50	644.6	54.4	80 - 120	667.8	0.597	20	SEO

The following samples were analyzed in this batch:

HS21041102-01	HS21041102-02	HS21041102-03	HS21041102-04
HS21041102-05	HS21041102-07	HS21041102-10	

ALS Houston, US Date: 05-May-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant 16 April 2021
WorkOrder: HS21041102

QC BATCH REPORT

Batch ID: R382811 (0) **Instrument: TOC_04** **Method: TOTAL ORGANIC CARBON - SM5310B**

MBLK Sample ID: **MBLK-04302021** Units: **mg/L** Analysis Date: **30-Apr-2021 16:40**
Client ID: Run ID: **TOC_04_382811** SeqNo: **6071176** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Organic Carbon, Total	0.500	1.00								U

LCS Sample ID: **LCS-04302021** Units: **mg/L** Analysis Date: **30-Apr-2021 16:55**
Client ID: Run ID: **TOC_04_382811** SeqNo: **6071177** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Organic Carbon, Total	9.507	1.00	10	0	95.1	85 - 115				

LCSD Sample ID: **LCSD-04302021** Units: **mg/L** Analysis Date: **30-Apr-2021 17:10**
Client ID: Run ID: **TOC_04_382811** SeqNo: **6071178** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Organic Carbon, Total	9.413	1.00	10	0	94.1	85 - 115	9.507	0.994	20	

MS Sample ID: **HS21041369-01MS** Units: **mg/L** Analysis Date: **30-Apr-2021 17:39**
Client ID: Run ID: **TOC_04_382811** SeqNo: **6071180** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Organic Carbon, Total	22.25	1.00	10	11.56	107	80 - 120				

The following samples were analyzed in this batch: HS21041102-01 HS21041102-02 HS21041102-03

ALS Houston, US Date: 05-May-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant 16 April 2021
WorkOrder: HS21041102

QC BATCH REPORT

Batch ID: R382818 (0) **Instrument: TOC_04** **Method: TOTAL ORGANIC CARBON - SM5310B**

MBLK Sample ID: **MBLK2-04302021** Units: **mg/L** Analysis Date: **30-Apr-2021 21:16**
Client ID: Run ID: **TOC_04_382818** SeqNo: **6071454** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Organic Carbon, Total	0.500	1.00								U

LCS Sample ID: **LCS2-04302021** Units: **mg/L** Analysis Date: **30-Apr-2021 21:31**
Client ID: Run ID: **TOC_04_382818** SeqNo: **6071455** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Organic Carbon, Total	9.629	1.00	10	0	96.3	85 - 115				

LCSD Sample ID: **LCSD2-04302021** Units: **mg/L** Analysis Date: **30-Apr-2021 21:46**
Client ID: Run ID: **TOC_04_382818** SeqNo: **6071456** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Organic Carbon, Total	9.621	1.00	10	0	96.2	85 - 115	9.629	0.0831	20	

MS Sample ID: **HS21041102-08MS** Units: **mg/L** Analysis Date: **30-Apr-2021 23:07**
Client ID: **16RW10-210420** Run ID: **TOC_04_382818** SeqNo: **6071461** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Organic Carbon, Total	15.48	1.00	10	4.841	106	80 - 120				

The following samples were analyzed in this batch: HS21041102-04 HS21041102-05 HS21041102-07 HS21041102-08 HS21041102-09

ALS Houston, US Date: 05-May-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant 16 April 2021
WorkOrder: HS21041102

QC BATCH REPORT

Batch ID: R382840 (0) **Instrument: ICS-Integrion** **Method: ANIONS BY SW9056A**

MBLK Sample ID: **MBLK-** Units: **mg/L** Analysis Date: **01-May-2021 08:23**
Client ID: Run ID: **ICS-Integrion_382840** SeqNo: **6071997** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Bromide	0.100	0.100								U
Sulfate	0.500	0.500								U

LCS Sample ID: **LCS-** Units: **mg/L** Analysis Date: **01-May-2021 08:41**
Client ID: Run ID: **ICS-Integrion_382840** SeqNo: **6071998** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Bromide	3.528	0.100	4	0	88.2	80 - 120				
Sulfate	19.12	0.500	20	0	95.6	80 - 120				

MS Sample ID: **HS21041595-02MS** Units: **mg/L** Analysis Date: **30-Apr-2021 13:47**
Client ID: Run ID: **ICS-Integrion_382840** SeqNo: **6072007** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Bromide	2.772	0.100	2	0.8359	96.8	80 - 120				
Sulfate	294.5	0.500	10	285	95.1	80 - 120				EO

MSD Sample ID: **HS21041595-02MSD** Units: **mg/L** Analysis Date: **30-Apr-2021 14:06**
Client ID: Run ID: **ICS-Integrion_382840** SeqNo: **6072033** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Bromide	2.929	0.100	2	0.8359	105	80 - 120	2.772	5.52	20	
Sulfate	298.2	0.500	10	285	132	80 - 120	294.5	1.25	20	SEO

The following samples were analyzed in this batch: HS21041102-01 HS21041102-02 HS21041102-03 HS21041102-04 HS21041102-05 HS21041102-07

ALS Houston, US Date: 05-May-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant 16 April 2021
WorkOrder: HS21041102

QC BATCH REPORT

Batch ID: R382895 (0) **Instrument: TOC_04** **Method: TOTAL ORGANIC CARBON - SM5310B**

MBLK Sample ID: **MBLK-05032021** Units: **mg/L** Analysis Date: **03-May-2021 16:25**
Client ID: Run ID: **TOC_04_382895** SeqNo: **6073620** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Organic Carbon, Total	0.500	1.00								U

LCS Sample ID: **LCS-05032021** Units: **mg/L** Analysis Date: **03-May-2021 16:41**
Client ID: Run ID: **TOC_04_382895** SeqNo: **6073621** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Organic Carbon, Total	10.38	1.00	10	0	104	85 - 115				

LCSD Sample ID: **LCSD-05032021** Units: **mg/L** Analysis Date: **03-May-2021 16:57**
Client ID: Run ID: **TOC_04_382895** SeqNo: **6073622** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Organic Carbon, Total	10.36	1.00	10	0	104	85 - 115	10.38	0.193	20	

MS Sample ID: **HS21041169-03MS** Units: **mg/L** Analysis Date: **03-May-2021 19:50**
Client ID: Run ID: **TOC_04_382895** SeqNo: **6073633** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Organic Carbon, Total	780.7	1.00	10	784.1	-34.0	80 - 120				SEO

The following samples were analyzed in this batch: HS21041102-10

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant 16 April 2021
WorkOrder: **HS21041102**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL/SDL

Acronym	Description
DCS	Detectability Check Study
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitaion Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

Unit Reported	Description
mg/L	Milligrams per Liter

CERTIFICATIONS,ACCREDITATIONS & LICENSES

Agency	Number	Expire Date
Arkansas	21-022-0	26-Mar-2022
Dept of Defense	PJLA L20-507-R2	22-Dec-2021
Florida	E87611-30-07/01/2020	30-Jun-2021
Illinois	2000322020-4	09-May-2021
Kansas	E-10352 2020-2021	31-Jul-2021
Kentucky	123043, 2021-2022	30-Apr-2022
Louisiana	03087, 2020-2021	30-Jun-2021
North Carolina	624-2021	31-Dec-2021
Oklahoma	2020-165	31-Aug-2021
Texas	T104704231-21-27	30-Apr-2022

ALS Houston, US Date: 05-May-21

Sample Receipt Checklist

Work Order ID: HS21041102 **Date/Time Received:** 21-Apr-2021 10:40

Client Name: CBI-Houston **Received by:** Jared R. Makan

Completed By: /S/ Paresh M. Giga (eSignature) 21-Apr-2021 15:23 (Date/Time) **Reviewed by:** /S/ RJ Modashia (eSignature) 21-Apr-2021 21:30 (Date/Time)

Matrices: GW/Water Carrier name: FedEx

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
VOA/TX1005/TX1006 Solids in hermetically sealed vials?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	2 Page(s)
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	COC IDs:None
Samplers name present on COC?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	1.8C U/c	IR31	
Cooler(s)/Kit(s):	46602		
Date/Time sample(s) sent to storage:	4/21/2021 15:45		
Water - VOA vials have zero headspace?	Yes ☑	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑
pH adjusted?	Yes ☐	No ☐	N/A ☑
pH adjusted by:			

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

Corrective Action:

CHAIN OF CUSTODY

Name Of Lab Shipping To: ALS 10450 Stancliff Rd. Suite 210 Houston, TX. 77099 (281) 530-5656 ATTN: RJ Modashia

Project: APTIM
LONGHORN ARMY AMMN. PLANT (LHAAP)
GROUNDWATER TREATMENT PLANT (GWTP)
KARNACK, TEXAS

Project No. 501032

Job: **LHAAP 16 April 2021**

Prepared By: Scott Beesinger

P.O. Number

Field Sample I.D. / Time	Sample Matrix	Date /	MS / MSD	No. OF CONTAINERS	VOC by SW 8260B	TOC by SM5310C	MEE by RSK 175	Anions (bromide, sulfate, nitrate) by SW9056 and Alkalinity by SM2320	Bromide by SW9056	Perchlorate by SW6850	Metals (arsenic, chromium, manganese, nickel, thallium) by SW6020				Remarks (Preservatives, etc.)
16WW25-210420	WG	4/20/21/0725		10	X	X	X	X	X	X					
16WW25-210420-FD	WG	4/20/21/0725		10	X	X	X	X	X	X					
16WW26-210420	WG	4/20/21/0820		10	X	X	X	X	X	X					
16WW29-210420	WG	4/20/21/0910		10	X	X	X	X	X	X					
16WW29-210420-FD	WG	4/20/21/0910		10	X	X	X	X	X	X					
16WW30-210420	WG	4/20/21/1000		4	X					X					
16WW55-210420	WG	4/20/21/1045		10	X	X	X	X	X	X					
16RW10-210420	WG	4/20/21/1130		9	X	X	X		48 X	X					

Additional Remarks: Standard TAT on all parameters. Please email results to Vicki.Graves@aptim.com and invoices to fedinvoices@aptim.com

Relinquished By:	Date	Time	Received By:	Date	Time	Relinquished By:	Date	Time	Received By:	Date	Time
Scott Beesinger	4/20/21	1430									

For Lab Use Only

Received At Lab By:	Date	Time	Airbill No.	Opened By:	Date	Time	Temp of Container	Seal No.	Condition
J. Hunsaker	4/21/21	1013							

Remarks: Color 0.66 2 1427
Temp 1.8°C CF0

HS21041102

Aptim Environmental & Infrastructure, Inc.
Longhorn Army Ammunition Plant 16 April 202-

(Word) S:\I-ces\Forms\Chain of Custody - BiWeekly

CHAIN OF CUSTODY

Name Of Lab Shipping To: ALS 10450 Stancliff Rd. Suite 210 Houston, TX. 77099 (281) 530-5656 ATTN: RJ Modashia

Page 1 of 1

Project: APTIM LONGHORN ARMY AMMN. PLANT (LHAAP) GROUNDWATER TREATMENT PLANT (GWTP) KARNACK, TEXAS	Project No. 501032
Job: **LHAAP 16 April 2021**	
Prepared By: Scott Beesinger	P.O. Number

Field Sample I.D.	Sample Matrix	Date / Time	MS / MSD	No. OF CONTAINERS	Analyses: VOC by SW 8260B	TOC by SM5310C	MEE by RSK 175	Anions (bromide, sulfate, nitrate) by SW9056 and Alkalinity by SM2320	Bromide by SW9056	Perchlorate by SW6850	Metals (arsenic, chromium, manganese, nickel, thallium) by SW6020	Remarks (Preserv etc.)
16RW09-210420	WG	4/20/21/1215		9	X	X	X		SB	X		
16IW03-210420	WG	4/20/21/1305		10	X	X	X	X	X	X		
TRIPBLANK-210420	W	4/20/21		2	X							

HS21041102

Aptim Environmental & Infrastructure, Inc.
Longhorn Army Ammunition Plant 16 April 2021

Additional Remarks: Standard TAT on all parameters. Please email results to Vicki.Graves@aptim.com and invoices to fedinvoices@aptim.com

Relinquished By:	Date	Time	Received By:	Date	Time	Relinquished By:	Date	Time	Received By:	Date	Time
Scott Beesinger	4/20/21	1430									

For Lab Use Only

Received At Lab By:	Date	Time	Airbill No.	Opened By:	Date	Time	Temp of Container	Seal No.	Condition
5 WRIGHT	4/21/21	10:00							

Remarks:

(Word) S:\M-ces\Forms\Chain of Custody - BiWeekly

ALS
10450 Stancli Rd., Suite 210
Houston, Tex. 77099
Tel. +1 281 530 5656
Fax. +1 281 530 5687

CUSTODY SEAL

Date: 4/20/21 Time: 1435
Name: Scott Beesinger
Company: Bloys

Seal Broken By:

Date:

ALS

ORIGIN ID:SGRA (903) 930-6193
SCOTT BEESINGER
APTIM ENVIROMENTAL & INFASTRUCTURE
1203-B EAST GRAND AVE
PMB 202
MARSHALL, TX 75670
UNITED STATES US

SHIP DATE: 29MAR21
ACTWGT: 1.00 LB MAN
CAD: 0221247/CAFE3409
DIMS: 26x14x14 IN

TO CLIENT SERVICES
ALS LABORATORY GROUP
10450 STANCLIFF ROAD
SUITE 210
HOUSTON TX 77099
(281) 530-5656
REF: LHAAP-80 77443-RJ

RMA:

FedEx Express

FedEx
TRK# 0221 9473 0841 7384

RETURNS MON-SAT
WED - 21 APR AA
PRIORITY OVERNIGHT

May 05, 2021 Service Request No:E2100459

RJ Modashia
ALS Laboratory Group
10450 Stancliff Road
Suite 210
Houston, TX 77099-4338

Laboratory Results for: HS21041102

Dear RJ,

Enclosed are the results of the sample(s) submitted to our laboratory April 21, 2021
For your reference, these analyses have been assigned our service request number **E2100459.**

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current TNI standards, where applicable, and except as noted in the laboratory case narrative provided. All results are intended to be considered in their entirety and ALS Environmental is not responsible for use of less than the complete final report. Results apply only to the items submitted to the laboratory, as received for analysis. In accordance with the current TNI Standard, a statement on the estimated uncertainty of measurement of any quantitative analysis will be supplied upon request.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental



Corey Grandits
Project Manager

ADDRESS 10450 Stancliff Rd., Suite 210, Houston, TX 77099
PHONE +1 281 530 5656 | FAX +1 281 530 5887
ALS Group USA, Corp.
dba ALS Environmental

Certificate of Analysis

ALS Environmental - Houston HRMS
10450 Stancliff Rd, Suite 210, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

ALS Environmental

Client:	ALS Houston	**Service Request No.:**	E2100459
Project:	HS21041102	**Date Received:**	04/21/21
Sample Matrix:	W		

CASE NARRATIVE

All analyses were performed in adherence to the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier II. When appropriate to the method, method blank results have been reported with each analytical test.

Sample Receipt

Ten samples were received for analysis at ALS Environmental in Houston on 04/21/21.

The samples were received in good condition and are consistent with the accompanying chain of custody form. The samples were stored in a refrigerator at 4°C upon receipt at the laboratory.

Data Validation Notes and Discussion

Precision and Accuracy:

EQ2100261: Laboratory Control Spike/Duplicate Laboratory Control Spike (LCS/DLCS) samples were analyzed and reported in addition to a MS/MSD for this extraction batch. The MS/MSD was performed on an unrelated sample. The LCS/DLCS recoveries are within QC limits.

DoD certification is held for the method/matrix/analytes provided in this report.

The results of analyses are given in the attached laboratory report. All results are intended to be considered in their entirety, and ALS Environmental (ALS) is not responsible for utilization of less than the complete report.

Use of ALS group USA Corp dba ALS Environmental (ALS)'s Name. Client shall not use ALS's name or trademark in any marketing or reporting materials, press releases or in any other manner ("Materials") whatsoever and shall not attribute to ALS any test result, tolerance or specification derived from ALS's data ("Attribution") without ALS's prior written consent, which may be withheld by ALS for any reason in its sole discretion. To request ALS's consent, Client shall provide copies of the proposed Materials or Attribution and describe in writing Client's proposed use of such Materials or Attribution. If ALS has not provided written approval of the Materials or Attribution within ten (10) days of receipt from Client, Client's request to use ALS's name or trademark in any Materials or Attribution shall be deemed denied. ALS may, in its discretion, reasonably charge Client for its time in reviewing Materials or Attribution requests. Client acknowledges and agrees that the unauthorized use of ALS's name or trademark may cause ALS to incur irreparable harm for which the recovery of money damages will be inadequate. Accordingly, Client acknowledges and agrees that a violation shall justify preliminary injunctive relief. For questions contact the laboratory.

Client: ALS Environmental - US **Service Request:**E2100459
Project: HS21041102

SAMPLE CROSS-REFERENCE

SAMPLE #	CLIENT SAMPLE ID	DATE	TIME
E2100459-001	16WW25-210420	4/20/2021	0725
E2100459-002	16WW25-210420-FD	4/20/2021	0725
E2100459-003	16WW26-210420	4/20/2021	0820
E2100459-004	16WW29-210420	4/20/2021	0910
E2100459-005	16WW29-210420-FD	4/20/2021	0910
E2100459-006	16WW30-210420	4/20/2021	1000
E2100459-007	16WW55-210420	4/20/2021	1045
E2100459-008	16RW10-210420	4/20/2021	1130
E2100459-009	16RW09-210420	4/20/2021	1215
E2100459-010	16IW03-210420	4/20/2021	1305

Service Request Summary

Folder #: **E2100459**
Client Name: ALS Environmental - US
Project Name: HS21041102
Project Number:

Report To: RJ Modashia
ALS Laboratory Group
10450 Stancliff Road
Houston, TX 77099-4338
USA
Phone Number: 281-530-5656
Cell Number:
Fax Number: 281-530-5887
E-mail: rj.modashia@alsglobal.com

Project Chemist: Corey Grandits
Originating Lab: HOUSTON
Logged By: CGRANDITS
Date Received: 04/21/21
Internal Due Date: 5/5/2021
QAP: LAB QAP
Qualifier Set: Lab Standard
Formset: Lab Standard
Merged?: Y
Report to MDL?: Y
P.O. Number: HS21041102
EDD: No EDD Specified

10 125 mL-Plastic Bottle Plastic
Location: EHRMS-AirArch 1
Pressure Gas:

Lab Samp No.	Client Samp No	Matrix	Collected	HOUSTON ClO4 DOD/6850
E2100459-001	16WW25-210420	Ground Water	04/20/21 0725	**IV**
E2100459-002	16WW25-210420-FD	Ground Water	04/20/21 0725	**IV**
E2100459-003	16WW26-210420	Ground Water	04/20/21 0820	**IV**
E2100459-004	16WW29-210420	Ground Water	04/20/21 0910	**IV**
E2100459-005	16WW29-210420-FD	Ground Water	04/20/21 0910	**IV**
E2100459-006	16WW30-210420	Ground Water	04/20/21 1000	**IV**
E2100459-007	16WW55-210420	Ground Water	04/20/21 1045	**IV**
E2100459-008	16RW10-210420	Ground Water	04/20/21 1130	**IV**
E2100459-009	16RW09-210420	Ground Water	04/20/21 1215	**IV**
E2100459-010	16IW03-210420	Ground Water	04/20/21 1305	**IV**

Service Request Summary

Folder #: **E2100459**
Client Name: ALS Environmental - US
Project Name: HS21041102
Project Number:

Report To: RJ Modashia
ALS Laboratory Group
10450 Stancliff Road
Houston, TX 77099-4338
USA
Phone Number: 281-530-5656
Cell Number:
Fax Number: 281-530-5887
E-mail: rj.modashia@alsglobal.com

Project Chemist: Corey Grandits
Originating Lab: HOUSTON
Logged By: CGRANDITS
Date Received: 04/21/21
Internal Due Date: 5/5/2021
QAP: LAB QAP
Qualifier Set: Lab Standard
Formset: Lab Standard
Merged?: Y
Report to MDL?: Y
P.O. Number: HS21041102
EDD: No EDD Specified

10 125 mL-Plastic Bottle Plastic
Location: EHRMS-AirArch 1
Pressure Gas:

Test Comments:

Group	Test/Method	Samples	Comments
Semivoa GCMS	ClO4 DOD/6850	10	Level II due 5/5, IV due 5/12

Data Qualifiers

Lab Standard

+	Possible Tedlar bag artifact.
A	TIC is a suspected aldol-condensation product
B	Analyte found in the associated method blank as well as in the sample.
BC	Reported results are not blank corrected.
BH	The back section of the tube yielded higher results than the front.
BT	Results indicated possible breakthrough; back section >=10% front section.
C	Result identification confirmed.
D	Compound identified in an analysis at a secondary dilution factor
D	Spike was diluted out
DE	Reported results are corrected for desorption efficiency.
E	Estimated value. Concentration above calibration range
E	The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
F	The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
H	The chromatographic fingerprint of the sample resembles a petroleum product but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
H1	Sample analysis performed past holding time. See case narrative.
H2	Initial analysis within holding time. Reanalysis for the required dilution was past holding time.
H3	Sample was received and analyzed past holding time.
H4	Sample was extracted past required extraction holding time, but analyzed within analysis holding time. See case narrative.
I	Internal standard not within the specified limits. See case narrative.
J	Estimated Value. Concentration found below MRL.
K	A deflection in the QC ion may indicate interference with the quantitation of this ion. The concentration of this analyte should be considered as an estimate.
K	Analyte was detected above the method reporting limit prior to normalization.
K	The reference ion ratio was outside acceptance criteria, which may indicate a potential bias to this result.
L	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
L1	Laboratory control sample recovery outside the specified limits; results may be biased high.
L2	Laboratory control sample recovery outside the specified limits; results may be biased low.
L3	Laboratory control sample recovery outside the specified limits.
M	Matrix interference; results may be biased high.
M	The duplicate injection precision not met.
M1	Matrix interference due to coelution with a non-target compound; results may be biased high.
N	Presumptive evidence of a compound for TICs that have been identified based on a mass spectral library search.
N	The Matrix Spike sample recovery is not within control limits. See case narrative.

Data Qualifiers

Lab Standard

O	The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
P	Indicates chlorodiphenyl ether interference present at the retention time of the target compound.
P	Pesticide/Aroclor target analyte > 40% difference for detected concentrations between GC columns
Q	Indicates as estimated value because the P and P + 2 theoretical abundance ratio does not meet method criteria.
R	Duplicate Precision not met.
R1	Duplicate precision not within the specified limits; however, the results are below the MRL and considered estimated.
S	Surrogate recovery not within specified limits.
S	The reported value was determined by the Method of Standard Additions (MSA).
T	Analyte is a tentatively identified compound, result is estimated.
U	Compound was analyzed for, but was not detected (ND).
V1	The continuing calibration verification standard was outside (biased high) the specified limits for this compound.
V2	The continuing calibration verification standard was outside (biased low) the specified limits for this compound.
W	Result quantified, but the corresponding peak was detected outside the generated retention time window.
W	The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
X	See case narrative.
Y	Recovery outside limits
Y	The chromatogram resembles a petroleum product but does not match the calibration standard.
Z	The chromatogram does not resemble a petroleum product.
i	The MRL/MDL has been elevated due to a matrix interference.

ALS Laboratory Group

Acronyms

Cal	Calibration
Conc	CONCentration
Dioxin(s)	Polychlorinated dibenzo-p-dioxin(s)
EDL	Estimated Detection Limit
EMPC	Estimated Maximum Possible Concentration
Flags	Data qualifiers
Furan(s)	Polychlorinated dibenzofuran(s)
g	Grams
ICAL	Initial CALibration
ID	IDentifier
Ions	Masses monitored for the analyte during data acquisition
L	Liter (s)
LCS	Laboratory Control Sample
DLCS	Duplicate Laboratory Control Sample
MB	Method Blank
MCL	Method Calibration Limit
MDL	Method Detection Limit
mL	Milliliters
MS	Matrix Spiked sample
DMS	Duplicate Matrix Spiked sample
NO	Number of peaks meeting all identification criteria
PCDD(s)	Polychlorinated dibenzo-p-dioxin(s)
PCDF(s)	Polychlorinated dibenzofuran(s)
ppb	Parts per billion
ppm	Parts per million
ppq	Parts per quadrillion
ppt	Parts per trillion
QA	Quality Assurance
QC	Quality Control
Ratio	Ratio of areas from monitored ions for an analyte
% Rec.	Percent recovery
RPD	Relative Percent Difference
RRF	Relative Response Factor
RT	Retention Time
SDG	Sample Delivery Group
S/N	Signal-to-noise ratio
TEF	Toxicity Equivalence Factor
TEQ	Toxicity Equivalence Quotient

10450 Stancliff Rd, Houston, TX 77099 | 281-530-5656 | www.alsglobal.com

ALS Environmental

State Certifications, Accreditations, and Licenses

Agency	Number	Expire Date
American Association for Laboratory Accreditation	2897.01 2020	11/30/2021
Arizona Department of Health Services	AZ0793-2020	5/27/2021
Arkansas Department of Environmental Quality	21-022-0	3/26/2022
Department of Defense	A2LA 2897.01	11/30/2021
Florida Department of Health	E87611-2020	6/30/2021
Hawaii Department of Health	2021-2022	4/30/2022
Illinois Environmental Protection Agency	2000322020-4	5/9/2021
Kansas Department of Health and Environment	E-10352-2020	7/31/2021
Louisiana Department of Environmental Quality	03087-2020	6/30/2021
Louisiana Department of Health and Hospitals	LA028-2021	12/31/2021
Maine Department of Health and Human Services	2020016	6/5/2022
Maryland Department of the Environment	343-2020	6/30/2021
Minnesota Department of Health	2021671	12/31/2021
Nevada Department of Concervation and Natural Resources	TX026932021-4	7/31/2021
New Hampshire Environmental Laboratory Accreditation Program	209421	4/24/2022
New Jersey Department of Environmental Protection	TX008	6/30/2021
Oklahoma Department of Environmental Quality	2020-123	8/31/2021
Pennsylvania Department of Environmental Protection	014	6/30/2021
Tennessee Department of Environment and Concervation	04016-2021	4/30/2022
United States Department of Agriculture	P330-19-00299	10/10/2022

Chain of Custody

ALS Environmental - Houston HRMS
10450 Stancliff Rd, Suite 210, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

10450 Stancliff Rd, Ste 210
Houston, TX 77099
T: +1 281 530 5656
F: +1 281 530 5887
www.alsglobal.com

Subcontract Chain of Custody

SAMPLING STATE: **Dept of Defense** **COC ID:** **15963**

SUBCONTRACT TO:

ALS Environmental
10450 Stancliff RoadSuite 210
Houston, TX 77084

Phone: +1 281 530 5656

CUSTOMER INFORMATION:

Company:	ALS Houston
Contact:	RJ Modashia
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Email:	RJ.Modashia@alsglobal.com
Alternate Contact:	
Email:	

INVOICE INFORMATION:

Company:	ALS Houston
Contact:	Accounts Payable
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Reference:	HS21041102
TSR:	Sonia West

	LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
	ANALYSIS REQUESTED			DUE DATE
1.	**HS21041102-01**	**16WW25-210420**	**Groundwater**	**20 Apr 2021 07:25**
	Level II and Level IV reports on a seperate pdf. Send WOA to Vicki Graves.			05 May 2021
2.	**HS21041102-02**	**16WW25-210420-FD**	**Groundwater**	**20 Apr 2021 07:25**
	Level II and Level IV reports on a seperate pdf. Send WOA to Vicki Graves.			05 May 2021
3.	**HS21041102-03**	**16WW26-210420**	**Groundwater**	**20 Apr 2021 08:20**
	Level II and Level IV reports on a seperate pdf. Send WOA to Vicki Graves.			05 May 2021
4.	**HS21041102-04**	**16WW29-210420**	**Groundwater**	**20 Apr 2021 09:10**
	Level II and Level IV reports on a seperate pdf. Send WOA to Vicki Graves.			05 May 2021
5.	**HS21041102-05**	**16WW29-210420-FD**	**Groundwater**	**20 Apr 2021 09:10**
	Level II and Level IV reports on a seperate pdf. Send WOA to Vicki Graves.			05 May 2021
6.	**HS21041102-06**	**16WW30-210420**	**Groundwater**	**20 Apr 2021 10:00**
	Level II and Level IV reports on a seperate pdf. Send WOA to Vicki Graves.			05 May 2021
7.	**HS21041102-07**	**16WW55-210420**	**Groundwater**	**20 Apr 2021 10:45**
	Level II and Level IV reports on a seperate pdf. Send WOA to Vicki Graves.			05 May 2021
8.	**HS21041102-08**	**16RW10-210420**	**Groundwater**	**20 Apr 2021 11:30**

Subcontract Chain of Custody

SAMPLING STATE: **Dept of Defense** **COC ID: 15963**

	LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
	ANALYSIS REQUESTED			DUE DATE
	Level II and Level IV reports on a seperate pdf. Send WOA to Vicki Graves.			05 May 2021
9.	**HS21041102-09**	**16RW09-210420**	**Groundwater**	**20 Apr 2021 12:15**
	Level II and Level IV reports on a seperate pdf. Send WOA to Vicki Graves.			05 May 2021
10.	**HS21041102-10**	**16IW03-210420**	**Groundwater**	**20 Apr 2021 13:05**
	Level II and Level IV reports on a seperate pdf. Send WOA to Vicki Graves.			05 May 2021

Comments: Please analyze for the analysis listed above.
Send report to the emails shown above.

QC Level: DOD IV (DoD Data Package)

Relinquished By: _____ Date/Time: _____

Received By: _____ Date/Time: 4/21/21 1496

Cooler ID(s): _____ Temperature(s): _____

Cooler Receipt Form

ALS Environmental

Project Chemist: CK

Client/Project: ALS-H

Thermometer ID: IR51

Date/Time Received: 4/21/21 Initials: CK

Date/Time Logged in: 4/21/21 Initials: CK

1. Method of delivery: ○ US Mail ○ Fed Ex ○ UPS ○ DHL ✓ ALS Courier ○ Client

2. Samples received in: ✓ Cooler ○ Box ○ Envelope ○ Other

3. Were custody seals on coolers? ○ Yes ✓ No
   Were they intact? ○ Yes ○ No ✓ N/A
   Were they signed and dated? ○ Yes ○ No ✓ N/A
   If yes, how many and where?

4. Packing Material: ○ Inserts ✓ Baggies ○ Bubble Wrap ○ Gel Packs ✓ Wet Ice ○ Sleeves ○ Other

5. Foreign or Regulated Soil? ○ Yes ○ No Location of Sampling:

Cooler Tracking Number	COC ID	Date Opened	Time Opened	Opened By	Temp. °C	Temp Blank?
NA		4/21/21	1440	CK	0.8	☑
						☐
						☐
						☐

6. Were custody papers properly filled out (ink, signed, dated, etc)? ✓ Yes ○ No
7. Did all bottles arrive in good condition (not broken, no signs of leakage)? ✓ Yes ○ No
8. Were all sample labels complete (i.e., sample ID, analysis, preservation, etc)? ✓ Yes ○ No
9. Were appropriate bottles/containers and volumes received for the requested tests? ✓ Yes ○ No
10. Did sample labels and tags agree with custody documents? ✓ Yes ○ No

Notes, Discrepancies, & Resolutions:

Service request Label:

HS-HRMSCoolerReceipt R1.0

ALS Environmental - Houston HRMS

10450 Stancliff Rd., Suite 210
Houston, TX 77099
T: +1 713 266 1599
F: +1 713 266 1599
www.alsglobal.com

SAMPLE ACCEPTANCE POLICY

This policy outlines the criteria samples must meet to be accepted by ALS Environmental – Houston HRMS.

Cooler Custody Seals (desirable, mandatory if specified in SAP):

- ✓ Intact on outside of cooler, signed and dated

Chain-of-Custody (COC) documentation (mandatory):

The following is required on each COC:

- ✓ Sample ID, the location, date and time of collection, collector's name, preservation type, sample type, and any other special remarks concerning the sampleThe COC must be completed in ink.
- ✓ Signature and date of relinquishing party.

In the absence of a COC at sample receipt, the COC will be requested from the client.

Sample Integrity (mandatory):

Samples are inspected upon arrival to ensure that sample integrity was not compromised during transfer to the laboratory.

- ✓ Sample containers must arrive in good condition (not broken or leaking).
- ✓ Samples must be labeled appropriately, including Sample IDs, and requested test using durable labels and indelible ink.
- ✓ The correct type of sample bottle must be used for the method requested.
- ✓ An appropriate sample volume, or weight, must be received.
- ✓ Sample IDs and number of containers must reconcile with the COC.
- ✓ Samples must be received within the method defined holding time.

Temperature Requirement (varies by sample matrix):

- ✓ Aqueous and Non-aqueous samples must be shipped and stored cold, at 0 to 6ºC.
- ✓ Tissue samples must be shipped and stored frozen, at -20 to -10ºC.
- ✓ Air samples are shipped and stored cold, at 0 to 6ºC
- ✓ The sample temperature must be recorded on the COC

All cooler inspections are documented on the Cooler Receipt Form (CRF). A separate CRF is completed for each service request. Any samples not meeting the above criteria are noted on the CRF and the Project Manager notified. The Project Manager must resolve any sample integrity issues with the client prior to proceeding with the analysis. Such resolutions are documented in writing and filed with the project folder. Data associated with samples received outside of this acceptance policy will be qualified on the case narrative of the final report

Preparation Information Benchsheets

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 210, Houston, TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

Preparation Information Benchsheet

Prep Run#: 378422 **Prep WorkFlow:** GenExt28Day **Status:** Prepped
Team: Semivoa GCMS/GRIVERA **Prep Method:** Method **Prep Date/Time:** 4/30/21 10:00

#	Lab Code	Client ID	B#	Method /Test	pH	Cl	Matrix	Amt. Ext.	Sample Description
1	E2100458-001	LH18/24-SP650_042021_BIX	.01	6850/ClO4 DOD			Ground Water	10mL	
2	E2100459-001	16WW25-210420	.01	6850/ClO4 DOD			Ground Water	10mL	
3	E2100459-002	16WW25-210420-FD	.01	6850/ClO4 DOD			Ground Water	10mL	
4	E2100459-003	16WW26-210420	.01	6850/ClO4 DOD			Ground Water	10mL	
5	E2100459-004	16WW29-210420	.01	6850/ClO4 DOD			Ground Water	10mL	
6	E2100459-005	16WW29-210420-FD	.01	6850/ClO4 DOD			Ground Water	10mL	
7	E2100459-006	16WW30-210420	.01	6850/ClO4 DOD			Ground Water	10mL	
8	E2100459-007	16WW55-210420	.01	6850/ClO4 DOD			Ground Water	10mL	
9	E2100459-008	16RW10-210420	.01	6850/ClO4 DOD			Ground Water	10mL	
10	E2100459-009	16RW09-210420	.01	6850/ClO4 DOD			Ground Water	10mL	
11	E2100459-010	16IW03-210420	.01	6850/ClO4 DOD			Ground Water	10mL	
12	E2100486-001	43MW03	.01	6850/ClO4 DOD			Ground Water	10mL	
13	E2100486-002	43MW03-DUP	.01	6850/ClO4 DOD			Ground Water	10mL	
14	E2100486-003	43MW04	.01	6850/ClO4 DOD			Ground Water	10mL	
15	E2100486-004	43MW05	.01	6850/ClO4 DOD			Ground Water	10mL	
16	E2100486-005	43MW06	.01	6850/ClO4 DOD			Ground Water	10mL	
17	E2100486-006	EB041621	.01	6850/ClO4 DOD			Ground Water	10mL	
18	E2100486-007	43MW01	.01	6850/ClO4 DOD			Ground Water	10mL	
19	EQ2100261-01	MB		6850/ClO4 DOD			Liquid	10mL	
20	EQ2100261-02	LCS		6850/ClO4 DOD			Liquid	10mL	
21	EQ2100261-03	DLCS		6850/ClO4 DOD			Liquid	10mL	
22	EQ2100261-04	43MW01 MS	.01	6850/ClO4 DOD			Liquid	10mL	
23	EQ2100261-05	43MW01 DMS	.01	6850/ClO4 DOD			Liquid	10mL	

Spiking Solutions

Name: Perchlorate Intermediate Stock1 Inventory ID 214035 Logbook Ref: Perchlorate Expires On: 05/23/2021

EQ2100261-02	1.00µL	EQ2100261-03	1.00µL	EQ2100261-04	1.00µL	EQ2100261-05	1.00µL

Name: Perchlorate Internal Standard 1ug/mL Inventory ID 214820 Logbook Ref: Perchlorate Internal Standard Expires On: 07/03/2021

E2100458-001	100.00µL	E2100459-001	100.00µL	E2100459-002	100.00µL	E2100459-003	100.00µL	E2100459-004	100.00µL	E2100459-005	100.00µL
E2100459-006	100.00µL	E2100459-007	100.00µL	E2100459-008	100.00µL	E2100459-009	100.00µL	E2100459-010	100.00µL	E2100486-001	100.00µL
E2100486-002	100.00µL	E2100486-003	100.00µL	E2100486-004	100.00µL	E2100486-005	100.00µL	E2100486-006	100.00µL	E2100486-007	100.00µL
EQ2100261-01	100.00µL	EQ2100261-02	100.00µL	EQ2100261-03	100.00µL	EQ2100261-04	100.00µL	EQ2100261-05	100.00µL		

Preparation Information Benchsheet

Prep Run#: 378422 **Prep WorkFlow:** GenExt28Day **Status:** Prepped
Team: Semivoa GCMS/GRIVERA **Prep Method:** Method **Prep Date/Time:** 4/30/21 10:00

Preparation Steps

Step: Preparation
Started: 4/30/21 10:00
Finished: 4/30/21 12:00
By: KBROWN
Comments

Comments: _____

Reviewed By: KB Date: 4/30/21

Chain of Custody

Relinquished By: _____ Date: _____ Extracts Examined

Received By: _____ Date: _____ Yes No

Analytical Results

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 210, Houston, TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100459
Project:	HS21041102	**Date Collected:**	4/20/21 0725
Sample Matrix:	Ground Water	**Date Received:**	4/21/21
Sample Name:	16WW25-210420	**Units:**	µg/L
Lab Code:	E2100459-001	**Basis:**	As Received

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	0.500	0.250	0.125	5	4/30/21	5/1/21 13:14	378422	722220	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100459
Project:	HS21041102	**Date Collected:**	4/20/21 0725
Sample Matrix:	Ground Water	**Date Received:**	4/21/21
Sample Name:	16WW25-210420-FD	**Units:**	µg/L
Lab Code:	E2100459-002	**Basis:**	As Received

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	0.500	0.250	0.125	5	4/30/21	5/1/21 13:23	378422	722220	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100459
Project:	HS21041102	**Date Collected:**	4/20/21 0820
Sample Matrix:	Ground Water	**Date Received:**	4/21/21
Sample Name:	16WW26-210420	**Units:**	µg/L
Lab Code:	E2100459-003	**Basis:**	As Received

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	0.100	0.0500	0.0250	1	4/30/21	4/30/21 16:19	378422	722059	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100459
Project:	HS21041102	**Date Collected:**	4/20/21 0910
Sample Matrix:	Ground Water	**Date Received:**	4/21/21
Sample Name:	16WW29-210420	**Units:**	µg/L
Lab Code:	E2100459-004	**Basis:**	As Received

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	0.100	0.0500	0.0250	1	4/30/21	4/30/21 16:29	378422	722059	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100459
Project:	HS21041102	**Date Collected:**	4/20/21 0910
Sample Matrix:	Ground Water	**Date Received:**	4/21/21
Sample Name:	16WW29-210420-FD	**Units:**	µg/L
Lab Code:	E2100459-005	**Basis:**	As Received

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	0.100	0.0500	0.0250	1	4/30/21	4/30/21 16:47	378422	722059	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100459
Project:	HS21041102	**Date Collected:**	4/20/21 1000
Sample Matrix:	Ground Water	**Date Received:**	4/21/21
Sample Name:	16WW30-210420	**Units:**	µg/L
Lab Code:	E2100459-006	**Basis:**	As Received

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	0.100	0.0500	0.0250	1	4/30/21	4/30/21 16:57	378422	722059	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100459
Project:	HS21041102	**Date Collected:**	4/20/21 1045
Sample Matrix:	Ground Water	**Date Received:**	4/21/21
Sample Name:	16WW55-210420	**Units:**	µg/L
Lab Code:	E2100459-007	**Basis:**	As Received

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**198**		1.00	0.500	0.250	10	4/30/21	5/1/21 13:32	378422	722220	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100459
Project:	HS21041102	**Date Collected:**	4/20/21 1130
Sample Matrix:	Ground Water	**Date Received:**	4/21/21
Sample Name:	16RW10-210420	**Units:**	µg/L
Lab Code:	E2100459-008	**Basis:**	As Received

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**36.5**		0.200	0.100	0.0500	2	4/30/21	5/1/21 13:42	378422	722220	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100459
Project:	HS21041102	**Date Collected:**	4/20/21 1215
Sample Matrix:	Ground Water	**Date Received:**	4/21/21
Sample Name:	16RW09-210420	**Units:**	µg/L
Lab Code:	E2100459-009	**Basis:**	As Received

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.241**		0.100	0.0500	0.0250	1	4/30/21	4/30/21 17:25	378422	722059	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100459
Project:	HS21041102	**Date Collected:**	4/20/21 1305
Sample Matrix:	Ground Water	**Date Received:**	4/21/21
Sample Name:	16IW03-210420	**Units:**	µg/L
Lab Code:	E2100459-010	**Basis:**	As Received

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.754**	J	1.00	0.500	0.250	10	4/30/21	5/1/21 13:51	378422	722220	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100459
Project:	HS21041102	**Date Collected:**	NA
Sample Matrix:	Ground Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	EQ2100261-01	**Basis:**	As Received

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	0.100	0.0500	0.0250	1	4/30/21	4/30/21 15:04	378422	722059	

Accuracy & Precision

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 210, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2100459
Project:	HS21041102	**Date Analyzed:**	4/30/21
Sample Matrix:	Ground Water		

Lab Control Sample Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method:	6850	**Units:**	µg/L
Prep Method:	Method	**Basis:**	As Received
		Extraction Lot:	378422

	Lab Control Sample EQ2100261-02			Duplicate Lab Control Sample EQ2100261-03					
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Perchlorate	0.104	0.100	104	0.109	0.100	109	84 - 119	5	15

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100459
Project:	HS21041102	**Date Collected:**	NA
Sample Matrix:	Ground Water	**Date Received:**	NA
Sample Name:	Lab Control Sample	**Units:**	µg/L
Lab Code:	EQ2100261-02	**Basis:**	As Received

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.104**		0.100	0.0500	0.0250	1	4/30/21	4/30/21 15:13	378422	722059	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100459
Project:	HS21041102	**Date Collected:**	NA
Sample Matrix:	Ground Water	**Date Received:**	NA
Sample Name:	Duplicate Lab Control Sample	**Units:**	µg/L
Lab Code:	EQ2100261-03	**Basis:**	As Received

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.109**		0.100	0.0500	0.0250	1	4/30/21	4/30/21 15:23	378422	722059	

HS21041102 8260_W_DOD Raw Data

ALS WO# HS21041102

MSVOA06 -Logbook

Batch: 44312 **Analyst:** Presenta Cabascango

Date: 04-02-2021 **Reviewer:**

Method: 8260 **Laboratory:** Houston

Comments:

#	Samp ID	Type	Analyzed	DF	Init Wt/Vol	Final Vol	File ID	Matrix	Status	pH
1	BFB	TUNE	04-02-2021 10:32 am	1.00	50 mL	50 mL	X040201.D	Liquid	Y	NA
2	VSTD000.25	ICAL1	04-02-2021 10:53 am	1.00	50 mL	50 mL	X040202.D	Liquid	Y	NA
3	VSTD000.5	ICAL2	04-02-2021 11:35 am	1.00	50 mL	50 mL	X040203.D	Liquid	Y	NA
4	VSTD001	ICAL3	04-02-2021 11:56 am	1.00	50 mL	50 mL	X040204.D	Liquid	Y	NA
5	VSTD002	ICAL4	04-02-2021 12:17 pm	1.00	50 mL	50 mL	X040205.D	Liquid	Y	NA
6	VSTD005	ICAL5	04-02-2021 12:38 pm	1.00	50 mL	50 mL	X040206.D	Liquid	Y	NA
7	VSTD020	ICAL6	04-02-2021 12:59 pm	1.00	50 mL	50 mL	X040207.D	Liquid	Y	NA
8	VSTD050	ICAL7	04-02-2021 01:20 pm	1.00	50 mL	50 mL	X040208.D	Liquid	Y	NA
9	VSTD100	ICAL8	04-02-2021 01:41 pm	1.00	50 mL	50 mL	X040209.D	Liquid	Y	NA
10	VSTD150	ICAL9	04-02-2021 02:02 pm	1.00	50 mL	50 mL	X040210.D	Liquid	Y	NA
11	VSTD200	ICAL	04-02-2021 02:23 pm	1.00	50 mL	50 mL	X040211.D	Liquid	Y	NA
12	BLANK	SAMP	04-02-2021 02:44 pm	1.00	50 mL	50 mL	X040212.D	Liquid	Y	NA
13	CCV	SAMP	04-02-2021 03:05 pm	1.00	50 mL	50 mL	X040213.D	Liquid	Y	NA
14	CCV	CCV	04-02-2021 03:26 pm	1.00	50 mL	50 mL	X040214.D	Liquid	Y	NA
15	CCB	SAMP	04-02-2021 03:47 pm	1.00	50 mL	50 mL	X040215.D	Liquid	Y	NA
16	VLCSW-210402	LCS	04-02-2021 04:08 pm	1.00	50 mL	50 mL	X040216.D	Liquid	Y	NA
17	BLANK	SAMP	04-02-2021 04:29 pm	1.00	50 mL	50 mL	X040217.D	Liquid	Y	NA
18	BLANK	SAMP	04-02-2021 04:50 pm	1.00	50 mL	50 mL	X040218.D	Liquid	Y	NA
19	VBLKW-210402	MBLK	04-02-2021 05:11 pm	1.00	50 mL	50 mL	X040219.D	Liquid	Y	NA
20	HS21031390-28	SAMP	04-02-2021 05:32 pm	1.00	50 mL	50 mL	X040220.D	Liquid	Y	NA
21	HS21031390-01	SAMP	04-02-2021 05:53 pm	1.00	50 mL	50 mL	X040221.D	Liquid	Y	NA
22	HS21031390-02	SAMP	04-02-2021 06:14 pm	1.00	50 mL	50 mL	X040222.D	Liquid	Y	NA
23	HS21031390-08	SAMP	04-02-2021 06:35 pm	1.00	50 mL	50 mL	X040223.D	Liquid	Y	NA
24	HS21031390-14	SAMP	04-02-2021 06:56 pm	1.00	50 mL	50 mL	X040224.D	Liquid	Y	NA
25	HS21031390-06	SAMP	04-02-2021 07:17 pm	10.00	5 mL	50 mL	X040225.D	Liquid	Y	NA
26	HS21031390-09	SAMP	04-02-2021 07:38 pm	5.00	10 mL	50 mL	X040226.D	Liquid	Y	NA
27	HS21031390-28MS	MS	04-02-2021 07:59 pm	1.00	50 mL	50 mL	X040227.D	Liquid	Y	NA
28	HS21031390-28MSD	MSD	04-02-2021 08:20 pm	1.00	50 mL	50 mL	X040228.D	Liquid	Y	NA
29	HS21031390-06	SAMP	04-02-2021 08:41 pm	100.0(	500 µL	50 mL	X040229.D	Liquid	Y	NA
30	HS21031390-09	SAMP	04-02-2021 09:03 pm	25.00	2 mL	50 mL	X040230.D	Liquid	Y	NA
31	HS21031318-29	SAMP	04-02-2021 09:24 pm	1.00	50 mL	50 mL	X040231.D	Liquid	Y	NA
32	HS21040032-03	SAMP	04-02-2021 09:45 pm	1.00	50 mL	50 mL	X040232.D	Liquid	Y	NA
33	BFB	TUNE	04-02-2021 10:06 pm	1.00	50 mL	50 mL	Y040201.D	Liquid	Y	NA
34	CCV	CCV	04-02-2021 10:27 pm	1.00	50 mL	50 mL	Y040202a.D	Liquid	Y	NA
35	CCV	CCV	04-02-2021 10:48 pm	1.00	50 mL	50 mL	Y040203.D	Liquid	Y	NA
36	CCB	SAMP	04-02-2021 11:09 pm	1.00	50 mL	50 mL	Y040204.D	Liquid	Y	NA
37	VLCSW-210402	LCS	04-02-2021 11:30 pm	1.00	50 mL	50 mL	Y040205.D	Liquid	Y	NA
38	BLANK	SAMP	04-02-2021 11:51 pm	1.00	50 mL	50 mL	Y040206.D	Liquid	Y	NA
39	VBLKW-210402	MBLK	04-03-2021 12:12 am	1.00	50 mL	50 mL	Y040207.D	Liquid	Y	NA
40	HS21031399-49	SAMP	04-03-2021 12:33 am	1.00	50 mL	50 mL	Y040208.D	Liquid	Y	NA
41	HS21031390-31	SAMP	04-03-2021 12:54 am	1.00	50 mL	50 mL	Y040209.D	Liquid	Y	NA

MSVOA06 -Logbook

#	Samp ID	Type	Analyzed	DF	Init Wt/Vol	Final Vol	File ID	Matrix	Status	pH
42	HS21031390-33	SAMP	04-03-2021 01:15 am	1.00	50 mL	50 mL	Y040210.D	Liquid	Y	NA
43	HS21031390-31MS	MS	04-03-2021 01:36 am	1.00	50 mL	50 mL	Y040211.D	Liquid	Y	NA
44	HS21031390-31MSD	MSD	04-03-2021 01:57 am	1.00	50 mL	50 mL	Y040212.D	Liquid	Y	NA
45	BLANK	SAMP	04-03-2021 02:18 am	1.00	50 mL	50 mL	Y040213.D	Liquid	Y	NA
46	BLANK	SAMP	04-03-2021 02:39 am	1.00	50 mL	50 mL	Y040214.D	Liquid	Y	NA
47	HS21031399-38	SAMP	04-03-2021 03:00 am	1.00	50 mL	50 mL	Y040215.D	Liquid	Y	NA
48	HS21031399-39	SAMP	04-03-2021 03:21 am	1.00	50 mL	50 mL	Y040216.D	Liquid	Y	NA
49	HS21031399-41	SAMP	04-03-2021 03:43 am	1.00	50 mL	50 mL	Y040217.D	Liquid	Y	NA
50	HS21031399-42	SAMP	04-03-2021 04:04 am	1.00	50 mL	50 mL	Y040218.D	Liquid	Y	NA
51	HS21031399-43	SAMP	04-03-2021 04:25 am	1.00	50 mL	50 mL	Y040219.D	Liquid	Y	NA
52	HS21031399-44	SAMP	04-03-2021 04:46 am	1.00	50 mL	50 mL	Y040220.D	Liquid	Y	NA
53	HS21031399-45	SAMP	04-03-2021 05:07 am	1.00	50 mL	50 mL	Y040221.D	Liquid	Y	NA
54	HS21031399-46	SAMP	04-03-2021 05:28 am	1.00	50 mL	50 mL	Y040222.D	Liquid	Y	NA
55	HS21031565-01	SAMP	04-03-2021 05:49 am	1.00	50 mL	50 mL	Y040223.D	Liquid	Y	NA
56	HS21031565-05	SAMP	04-03-2021 06:10 am	1.00	50 mL	50 mL	Y040224.D	Liquid	Y	NA
57	HS21031565-06	SAMP	04-03-2021 06:31 am	1.00	50 mL	50 mL	Y040225.D	Liquid	Y	NA
58	HS21031565-07	SAMP	04-03-2021 06:52 am	1.00	50 mL	50 mL	Y040226.D	Liquid	Y	NA
59	HS21031565-08	SAMP	04-03-2021 07:13 am	1.00	50 mL	50 mL	Y040227.D	Liquid	Y	NA
60	HS21031565-11	SAMP	04-03-2021 07:35 am	1.00	50 mL	50 mL	Y040228.D	Liquid	Y	NA
61	HS21031565-14	SAMP	04-03-2021 07:56 am	1.00	50 mL	50 mL	Y040229.D	Liquid	Y	NA
62	HS21031565-15	SAMP	04-03-2021 08:17 am	1.00	50 mL	50 mL	Y040230.D	Liquid	Y	NA
63	HS21031390-32	SAMP	04-03-2021 08:38 am	1.00	50 mL	50 mL	Y040231.D	Liquid	Y	NA
64	BLANJ	SAMP	04-03-2021 08:59 am	1.00	50 mL	50 mL	Y040240.D	Liquid	Y	NA

FORM 3
WATER VOLATILE METHOD SPIKE RECOVERY

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS21041102

Matrix Spike - Sample No.: ICV

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE AMOUNT ()	% REC #	QC. LIMITS REC.
Vinyl Chloride	50.00	46.17	92	80-120
Methylene Chloride	50.00	45.57	91	80-120
1,1-Dichloroethene	50.00	46.21	92	80-120
1,2-Dichloroethane	50.00	47.48	95	80-120
cis-1,2-Dichloroethene	50.00	46.33	93	80-120
1,1,2-Trichloroethane	50.00	48.15	96	80-120
Trichloroethene	50.00	50.43	101	80-120

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

COMMENTS: _____

_____

FORM III VOA

FORM 5
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS21041102

Lab File ID: X040201 BFB Injection Date: 04/02/21

Instrument ID: VOA6 BFB Injection Time: 1032

GC Column: DB624 ID: 0.25 (mm) Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	22.5
75	30.0 - 60.0% of mass 95	53.3
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.5
173	Less than 2.0% of mass 174	1.1 (1.3)1
174	Greater than 50.0% of mass 95	83.8
175	5.0 - 9.0% of mass 174	6.3 (7.6)1
176	95.0 - 101.0% of mass 174	81.4 (97.1)1
177	5.0 - 9.0% of mass 176	4.4 (5.4)2

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

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD000.25	VSTD000.25	X040202	04/02/21	1053
02	VSTD000.5	VSTD000.5	X040203	04/02/21	1135
03	VSTD001	VSTD001	X040204	04/02/21	1156
04	VSTD002	VSTD002	X040205	04/02/21	1217
05	VSTD005	VSTD005	X040206	04/02/21	1238
06	VSTD020	VSTD020	X040207	04/02/21	1259
07	VSTD050	VSTD050	X040208	04/02/21	1320
08	VSTD100	VSTD100	X040209	04/02/21	1341
09	VSTD150	VSTD150	X040210	04/02/21	1402
10	VSTD200	VSTD200	X040211	04/02/21	1423
11	ICV	ICV	X040214	04/02/21	1526
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

FORM V VOA

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS21041102

Instrument ID: VOA6 Calibration Date(s): 04/02/21 04/02/21

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1053 1423

LAB FILE ID: RF0.25: X040202 RF0.5: X040203 RF1: X040204
RF2: X040205 RF5: X040206 RF20: X040207

COMPOUND	RF0.25	RF0.5	RF1	RF2	RF5	RF20
Vinyl Chloride		0.844	0.943	0.758	0.756	0.736
Methylene Chloride		2167	4155	7271	17205	63925
1,1-Dichloroethene		0.748	0.754	0.752	0.776	0.659
1,2-Dichloroethane		0.560	0.634	0.506	0.530	0.475
cis-1,2-Dichloroethene		0.588	0.711	0.624	0.604	0.542
1,1,2-Trichloroethane		0.276	0.355	0.300	0.320	0.251
Trichloroethene		0.263	0.401	0.364	0.376	0.308
Dibromofluoromethane		1934	3862	6870	17824	68668
1,2-Dichloroethane-d4		2323	4438	7506	20809	80475
Toluene-d8		6330	12313	22274	56112	218999
4-Bromofluorobenzene		2889	4647	7732	19193	81621

FORM VI VOA

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS2104110

Instrument ID: VOA6 Calibration Date(s): 04/02/21 04/02/21

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1053 1423

LAB FILE ID: RF50: X040208 RF100: X040209 RF150: X040210
RF200: X040211

COMPOUND	RF50	RF100	RF150	RF200
Vinyl Chloride	0.712	0.681	0.664	0.652
Methylene Chloride	173954	420832	703062	1013494
1,1-Dichloroethene	0.668	0.684	0.663	0.702
1,2-Dichloroethane	0.517	0.525	0.513	0.503
cis-1,2-Dichloroethene	0.580	0.612	0.608	0.631
1,1,2-Trichloroethane	0.265	0.281	0.281	0.284
Trichloroethene	0.345	0.350	0.337	0.337
Dibromofluoromethane	201590	476731	758989	1061294
1,2-Dichloroethane-d4	243778	568806	919399	1266674
Toluene-d8	658700	1733824	2714142	3949224
4-Bromofluorobenzene	267013	624362	1011725	1473828

FORM VI VOA

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS2104110

Instrument ID: VOA6 Calibration Date(s): 04/02/21 04/02/21

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1053 1423

COMPOUND	CURVE	COEFFICENTS A0	COEFFICENTS A1	%RSD OR R^2	MAX %RSD OR R^2
Vinyl Chloride	AVRG		0.74959896	12.472	15.000
Methylene Chloride	LINR	2.966e-002	1.78818120	0.9978871	0.9900000
1,1-Dichloroethene	AVRG		0.71193342	6.418	15.000
1,2-Dichloroethane	AVRG		0.52923847	8.569	15.000
cis-1,2-Dichloroethene	AVRG		0.61120734	7.506	15.000
1,1,2-Trichloroethane	AVRG		0.29044925	10.722	15.000
Trichloroethene	AVRG		0.34228157	11.637	15.000
Dibromofluoromethane	LINR	8.656e-003	1.68407127	0.9996746	0.9900000
1,2-Dichloroethane-d4	LINR	9.666e-003	1.40410549	0.9998489	0.9900000
Toluene-d8	LINR	3.71e-002	0.74922718	0.9979532	0.9900000
4-Bromofluorobenzene	LINR	3.301e-002	2.01663185	0.9986184	0.9900000

FORM VI VOA

Data File: \\NAHSTWS005\Target\chem\voa6.i\X210402.b\X040201.D

Date : 02-APR-2021 10:32

Client ID: BFB

Instrument: voa6.i

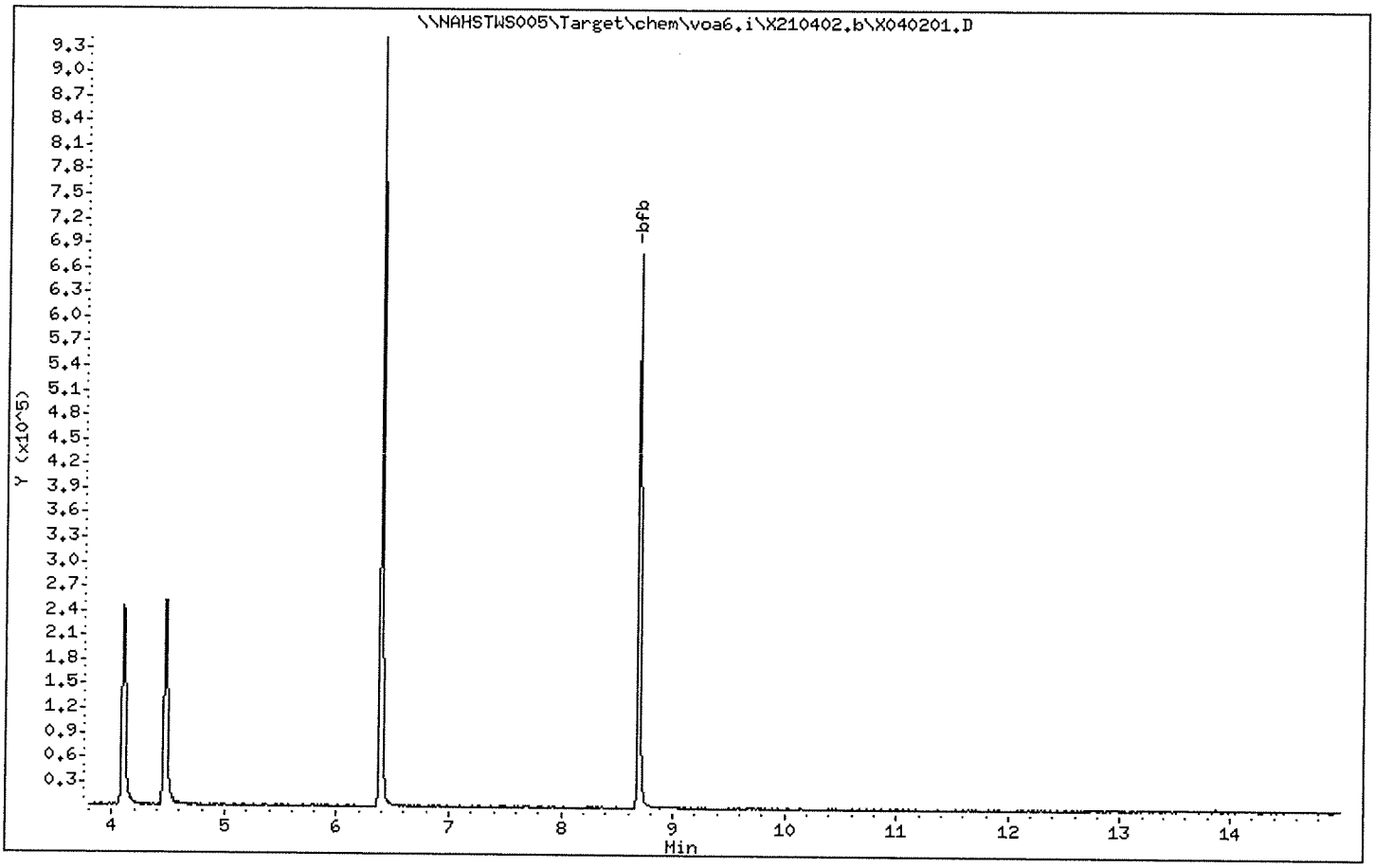
Sample Info: BFB;BFB;3;;BFB

Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

Column diameter: 0.25



Data File: \\NAHSTWS005\Target\chem\voa6.i\X210402.b\X040201.D

Date : 02-APR-2021 10:32

Client ID: BFB

Instrument: voa6.i

Sample Info: BFB;BFB;3;;BFB

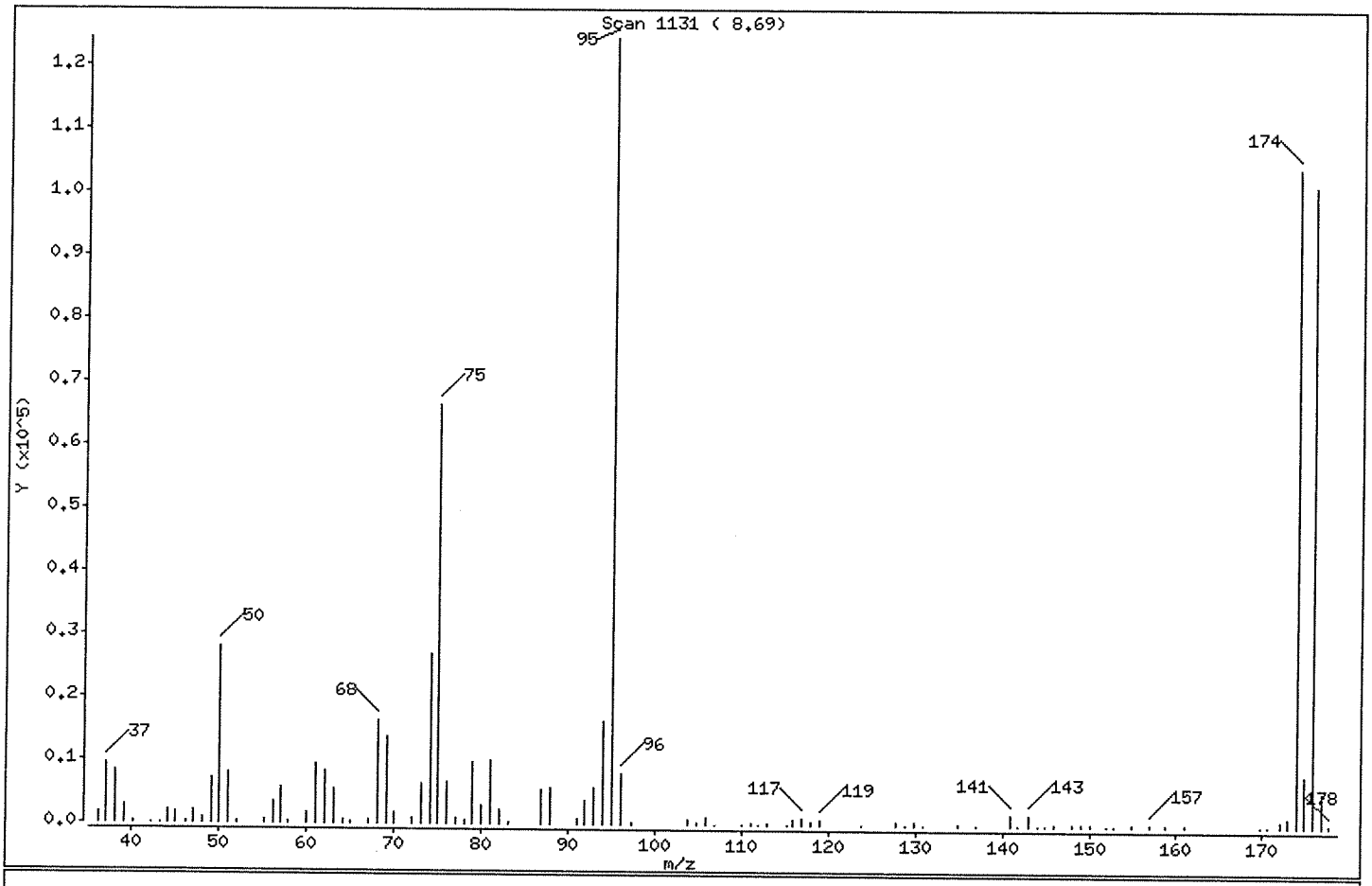
Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

Column diameter: 0.25

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	22.51
75	30.00 - 60.00% of mass 95	53.31
96	5.00 - 9.00% of mass 95	6.51
173	Less than 2.00% of mass 174	1.06 (1.26)
174	Greater than 50.00% of mass 95	83.79
175	5.00 - 9.00% of mass 174	6.34 (7.56)
176	95.00 - 101.00% of mass 174	81.37 (97.11)
177	5.00 - 9.00% of mass 176	4.40 (5.40)

Data File: \\NAHSTWS005\Target\chem\voa6.i\X210402.b\X040201.D

Date : 02-APR-2021 10:32

Client ID: BFB

Instrument: voa6.i

Sample Info: BFB;BFB;3;;BFB

Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

Column diameter: 0.25

Data File: X040201.D
Spectrum: Scan 1131 (8.69)
Location of Maximum: 95.00
Number of points: 95

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.10	1732	64.00	599	95.00	124200	141.70	84
37.00	9290	65.00	153	96.00	8090	142.90	1576
38.00	8308	67.00	500	97.20	217	143.90	75
39.00	2929	68.00	16384	103.70	740	144.80	94
40.10	424	69.00	13717	104.80	164	145.90	148
42.20	74	70.00	1785	105.80	1029	147.90	250
43.20	72	72.10	777	106.90	112	148.90	155
44.00	2050	73.00	6328	109.90	136	150.00	286
45.00	1795	74.00	26912	111.00	268	151.80	52
46.10	242	75.00	66216	111.90	85	152.70	124
47.00	1874	76.00	6620	112.90	237	154.80	284
48.00	988	77.10	800	115.10	59	156.80	312
49.00	7094	78.10	446	115.80	811	158.80	260
50.00	27952	78.90	9818	116.90	1154	161.00	258
51.00	7947	79.90	2794	117.80	635	169.80	139
51.90	391	80.90	10133	118.90	930	170.60	140
55.20	631	82.00	2269	123.70	57	172.20	893
56.10	3391	83.00	193	127.70	679	172.90	1311
57.00	5690	86.90	5298	128.70	113	173.90	104064
57.90	400	87.90	5776	129.70	519	174.90	7871
59.90	1604	90.90	805	130.80	68	175.90	101056
61.00	9323	91.90	3707	134.80	220	176.90	5459
62.00	8245	92.90	5610	136.80	123	177.80	373
63.00	5418	94.00	16192	140.90	1678		

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X210402.b\X040202.D
Lab Smp Id: VSTD000.25 Client Smp ID: VSTD000.25
Inj Date : 02-APR-2021 10:53
Operator : PC Inst ID: voa6.i
Smp Info : VSTD000.25;VSTD000.25;1;1;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X210402.b\8260W.m
Meth Date : 04-May-2021 11:39 voa6.i Quant Type: ISTD
Cal Date : 02-APR-2021 14:23 Cal File: X040211.D
Als bottle: 2 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBI_short1.sub
Target Version: 4.14
Processing Host: NAHSTW7066

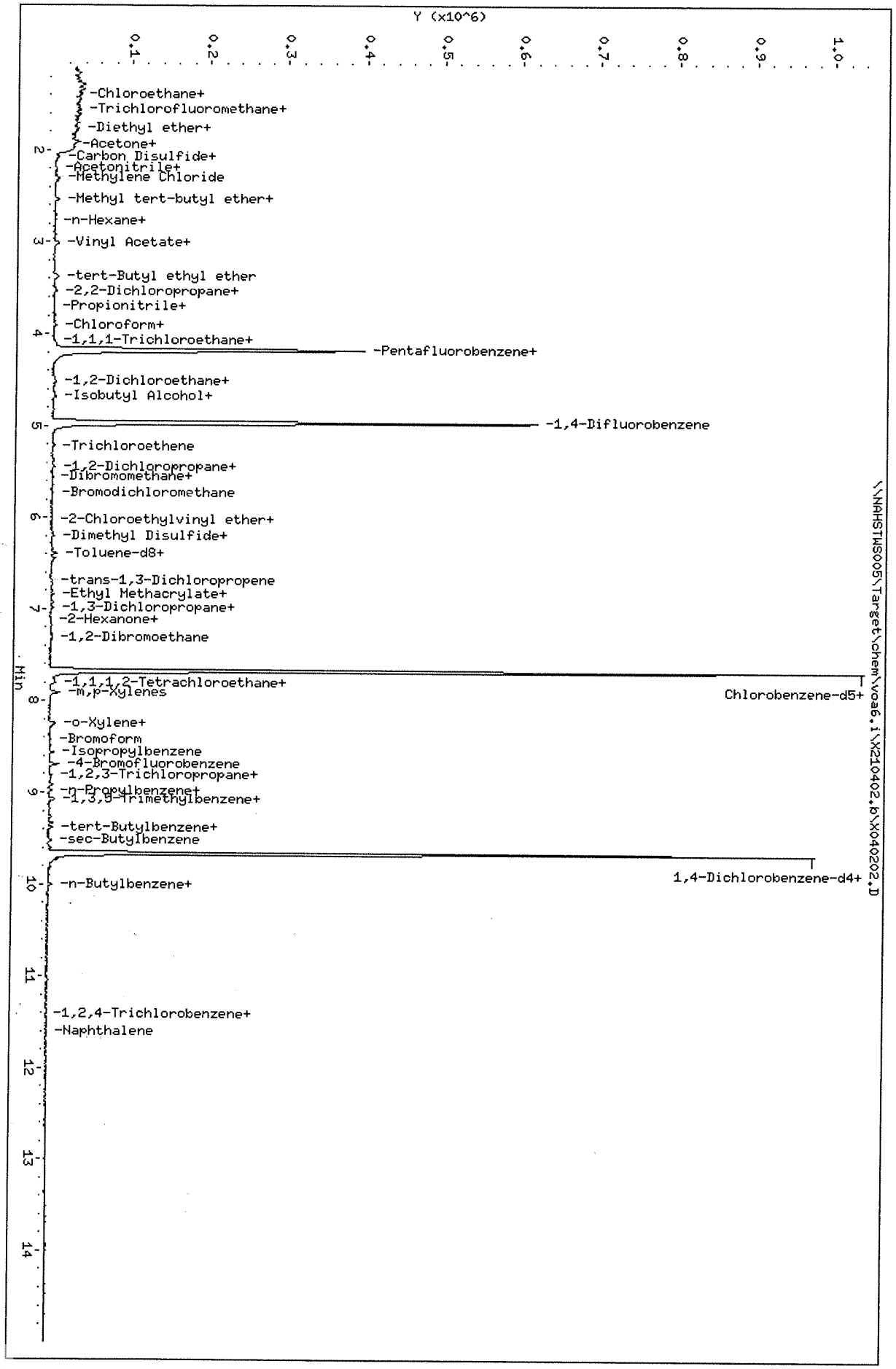
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
*	1 Pentafluorobenzene	168	4.182	4.182	(1.000)	311555	50.0000	
*	36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	505232	50.0000	
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	450629	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	197083	50.0000	
$	30 Dibromofluoromethane	113	4.103	4.103	(0.981)	968	0.25000	0.69(M)
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	1238	0.25000	0.76(TM)
$	48 Toluene-d8	98	6.396	6.396	(0.834)	4819	0.25000	2.25
$	69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	3592	0.25000	2.45
	53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	995	0.25000	0.38(a)
	11 1,1-Dichloroethene	96	1.904	1.904	(0.455)	1567	0.25000	0.35(aM)
	33 1,2-Dichloroethane	62	4.562	4.562	(0.919)	1597	0.25000	0.29(a)
	27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	893	0.25000	0.23(M)
	17 Methylene Chloride	84	2.305	2.305	(0.551)	2054	0.25000	2.07(aM)
	38 Trichloroethene	130	5.221	5.221	(1.052)	988	0.25000	0.28(M)
	5 Vinyl Chloride	62	1.145	1.145	(0.274)	1614	0.25000	0.34(M)

QC Flag Legend

T - Target compound detected outside RT window.
a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.



Data File: \\NAHSTWS005\Target\chem\voa6.i\X210402.b\X040202.D
Date : 02-APR-2021 10:53
Client ID: VSTD000.25
Sample Info: VSTD000.25;VSTD000.25;1;1;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X210402.b\X040203.D
Lab Smp Id: VSTD000.5 Client Smp ID: VSTD000.5
Inj Date : 02-APR-2021 11:35
Operator : PC Inst ID: voa6.i
Smp Info : VSTD000.5;VSTD000.5;1;2;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X210402.b\8260W.m
Meth Date : 04-May-2021 11:39 voa6.i Quant Type: ISTD
Cal Date : 02-APR-2021 10:53 Cal File: X040202.D
Als bottle: 4 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBI_short1.sub
Target Version: 4.14
Processing Host: NAHSTW7066

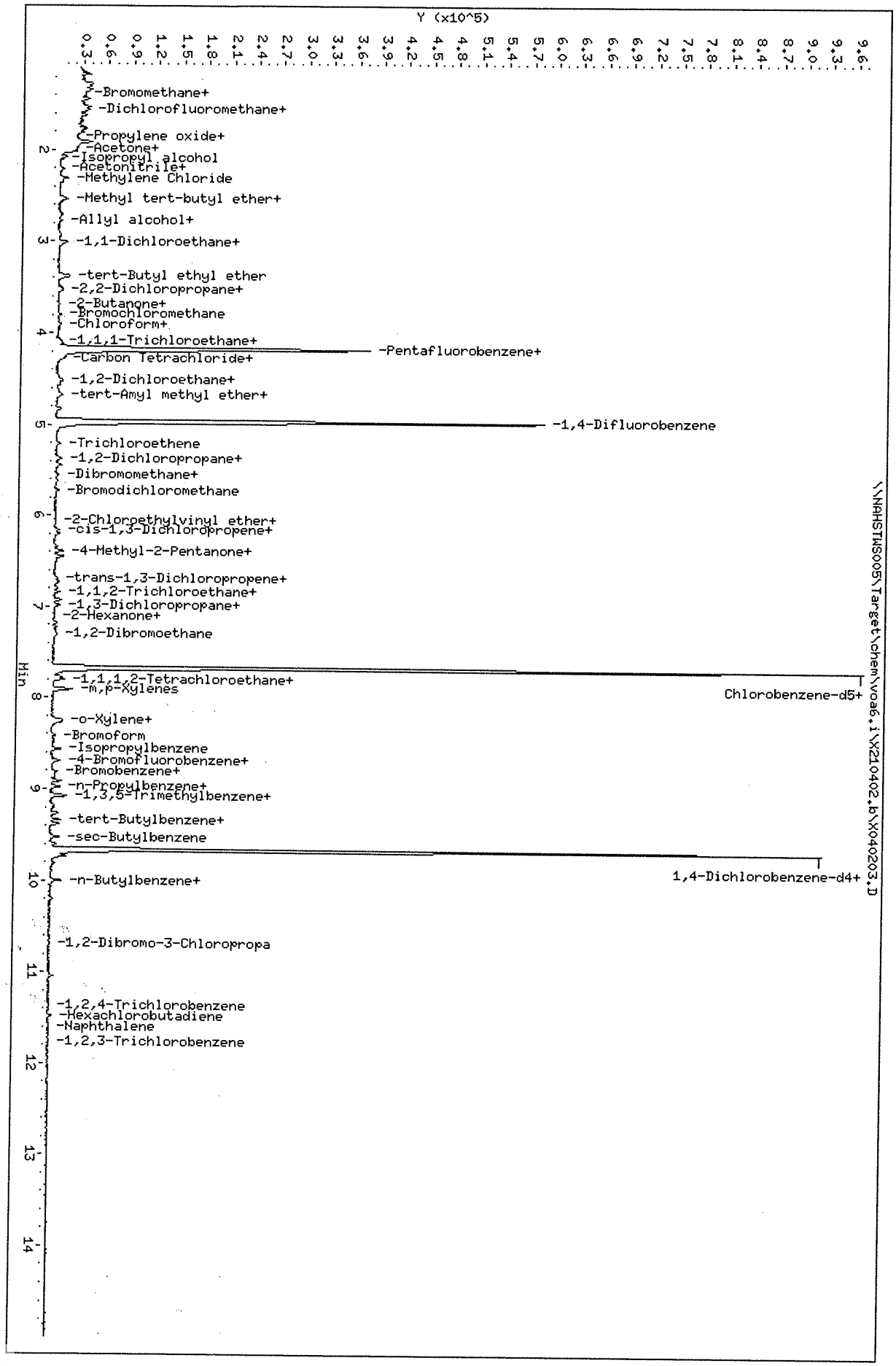
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	292480	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	476531	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	420545	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	191809	50.0000	
$ 30 Dibromofluoromethane	113	4.118	4.118	(0.985)	1934	0.50000	0.98
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	2323	0.50000	1.04(T)
$ 48 Toluene-d8	98	6.389	6.389	(0.833)	6330	0.50000	2.41(T)
$ 69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	2889	0.50000	2.34
53 1,1,2-Trichloroethane	83	6.847	6.847	(0.893)	1162	0.50000	0.47(a)
11 1,1-Dichloroethene	96	1.926	1.926	(0.461)	2188	0.50000	0.52(aM)
33 1,2-Dichloroethane	62	4.562	4.562	(0.918)	2669	0.50000	0.52(aM)
27 cis-1,2-Dichloroethene	96	3.545	3.545	(0.848)	1721	0.50000	0.48
17 Methylene Chloride	84	2.306	2.306	(0.551)	2167	0.50000	2.14(aM)
38 Trichloroethene	130	5.214	5.214	(1.049)	1254	0.50000	0.38
5 Vinyl Chloride	62	1.145	1.145	(0.274)	2470	0.50000	0.56

QC Flag Legend

T - Target compound detected outside RT window.
a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.

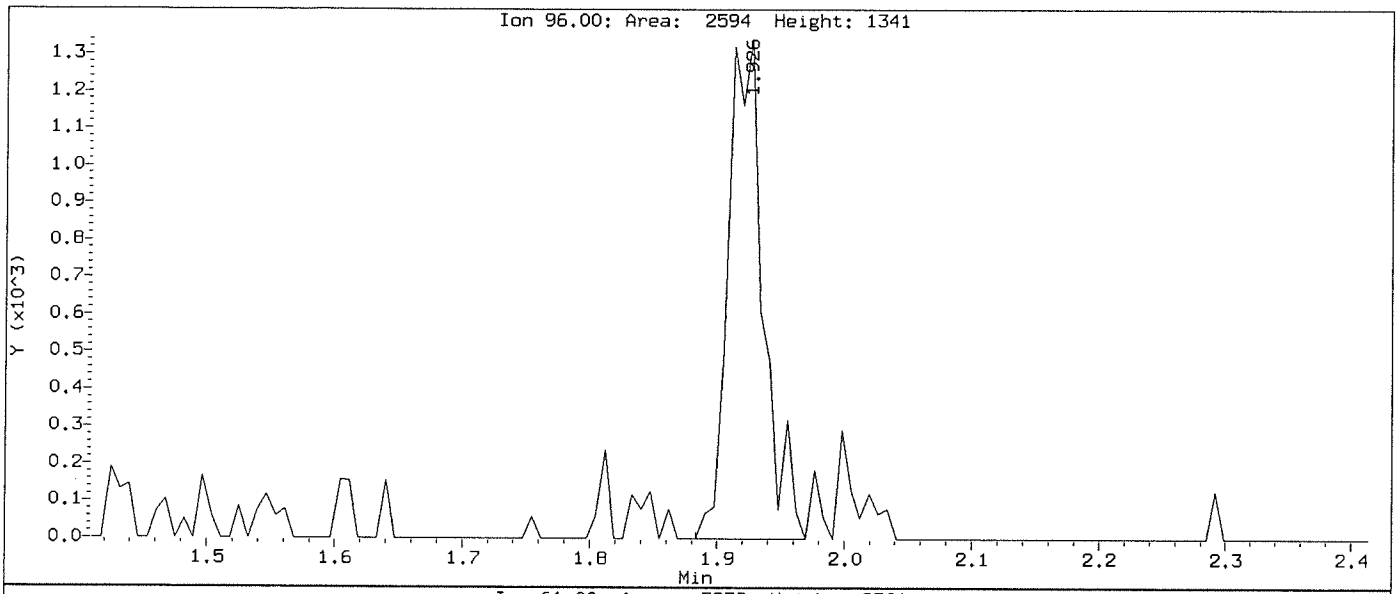


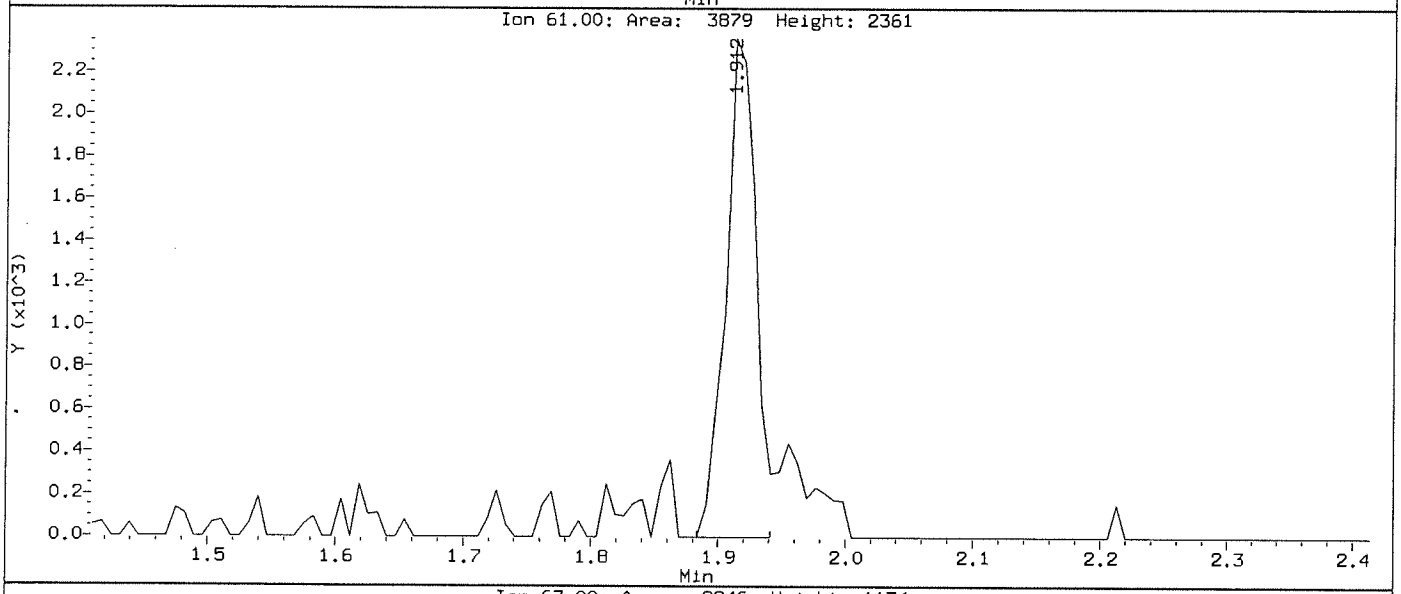
Data File: \\NAHSTWS005\Target\chem\voa6.i\X210402.b\X040203.D
Date : 02-APR-2021 11:35
Client ID: VSTD000.5
Sample Info: VSTD000.5;VSTD000.5;1;2;;
Purge Volume: 5.0
Column phase: DB624

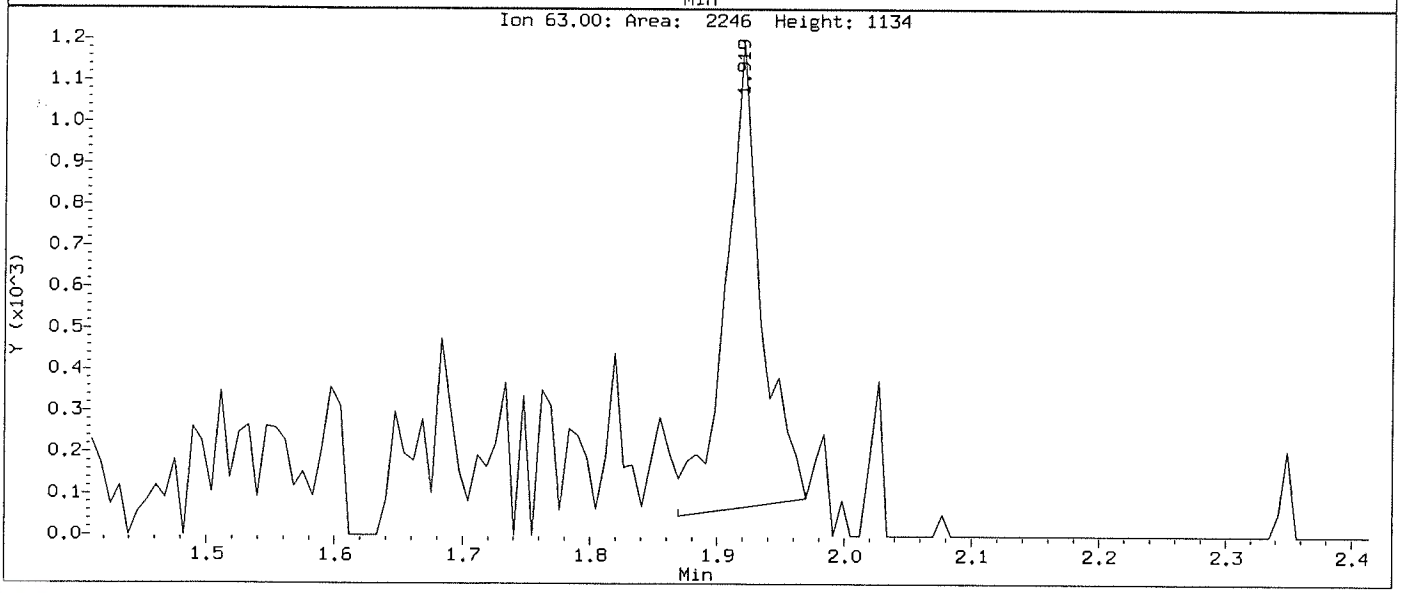
Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\NAHSTWS005\Target\chem\voa6.i\X210402.b\Before6\X040203.D
Injection Date: 02-APR-2021 11:35
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: 1,1-Dichloroethene
CAS Number: 75-35-4

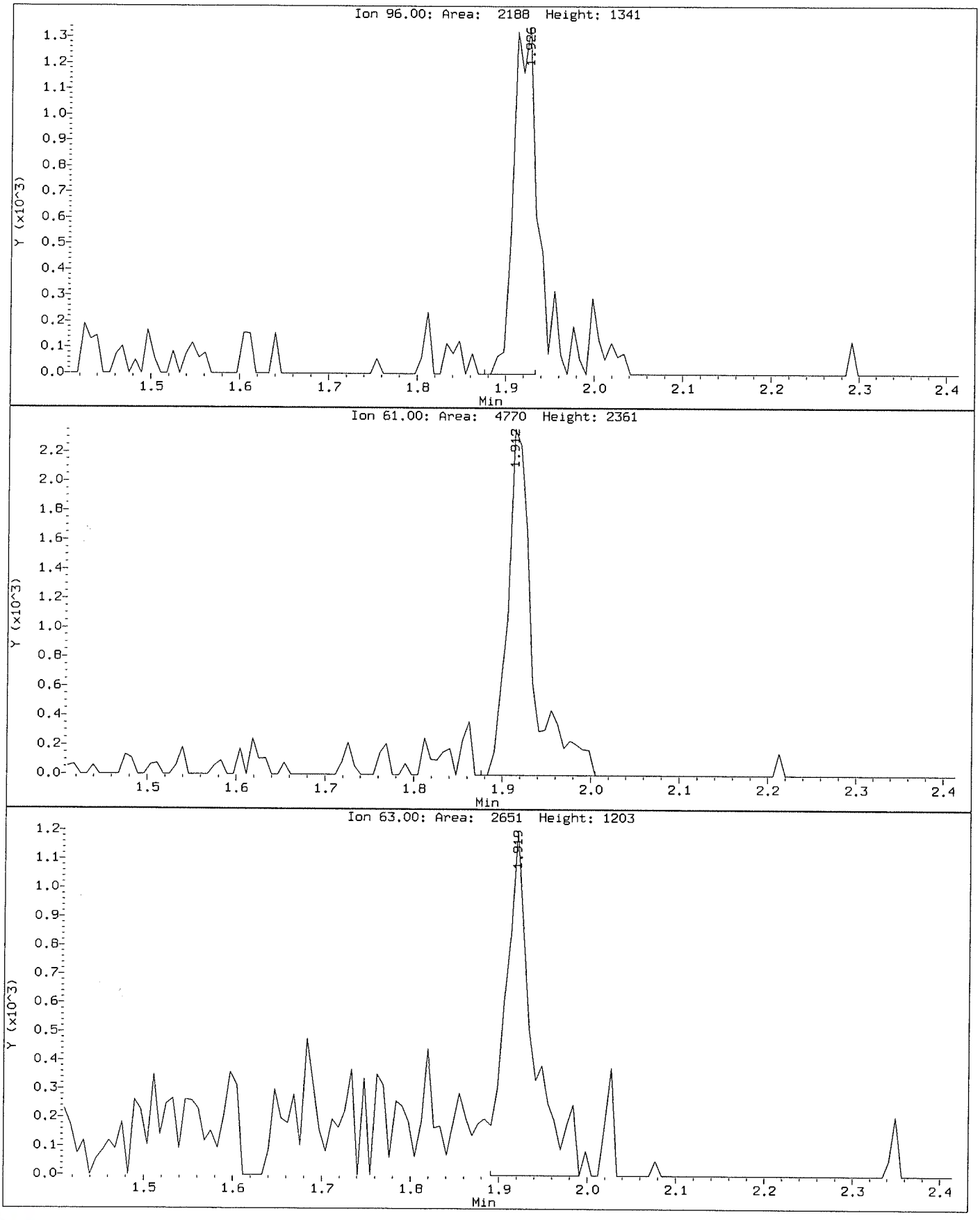






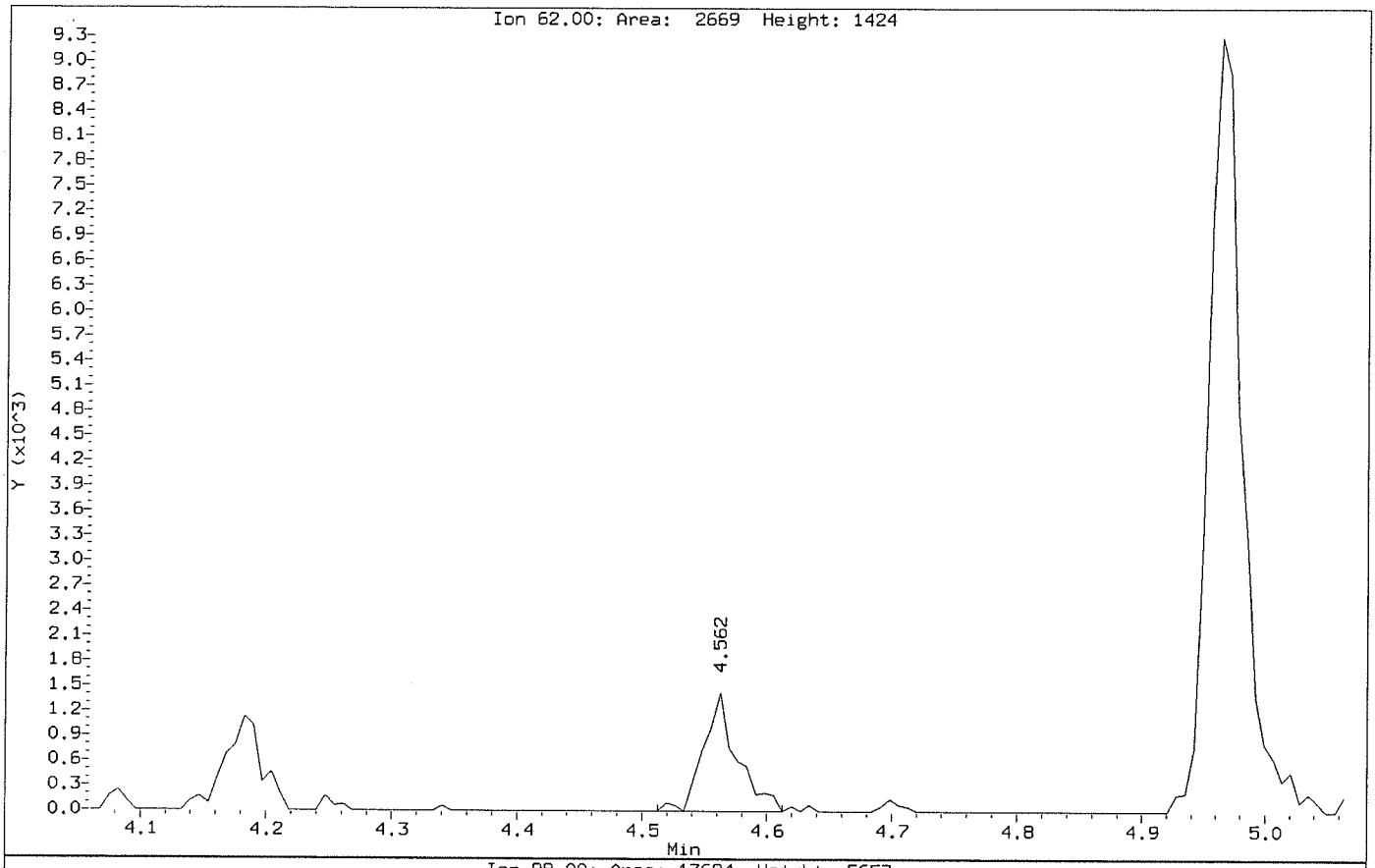
Data File: \\NAHSTWS005\Target\chem\voa6.i\X210402.b\X040203.D
Injection Date: 02-APR-2021 11:35
Instrument: voa6.i
Client Sample ID: VSTD000.5

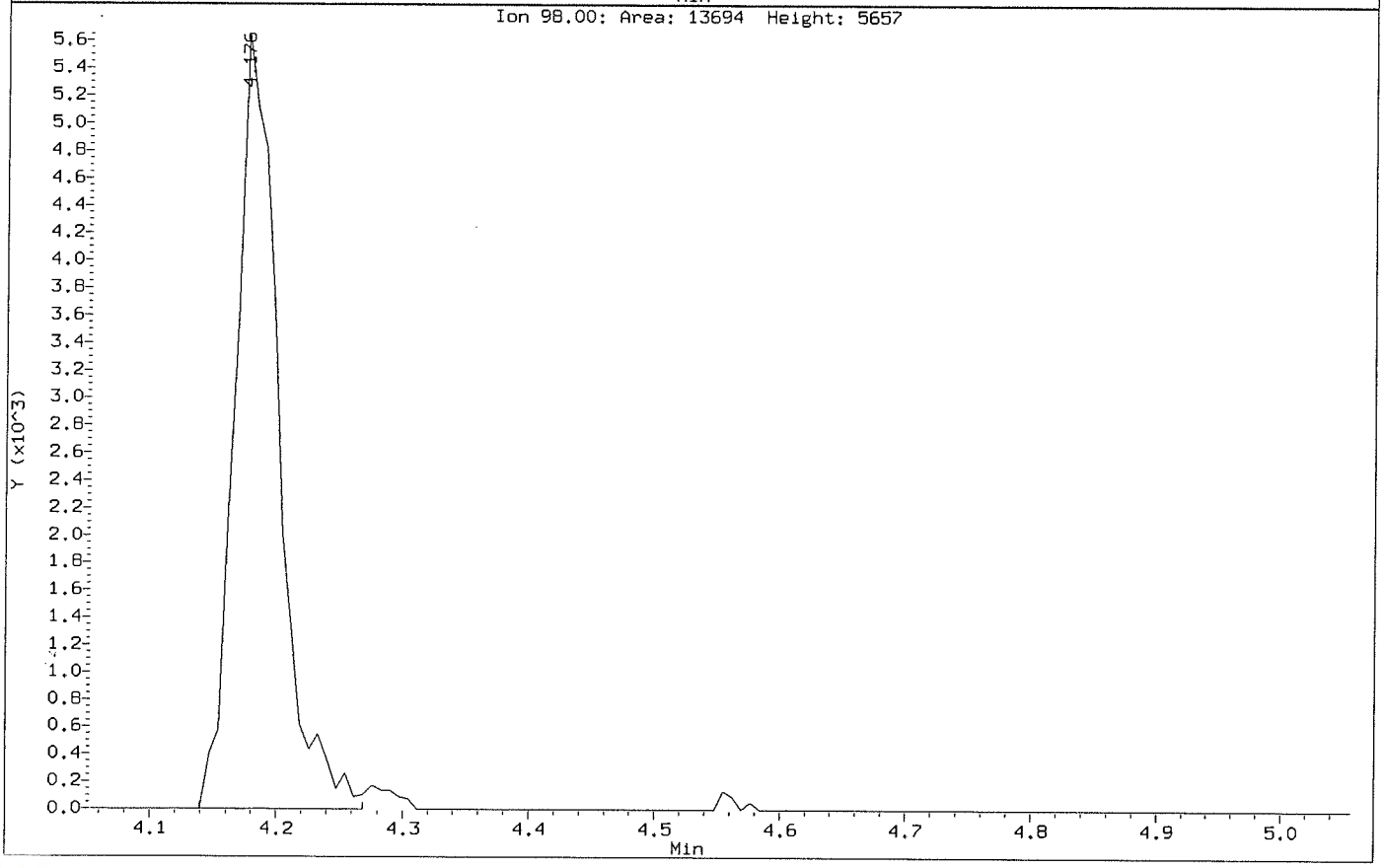
Compound: 1,1-Dichloroethene
CAS Number: 75-35-4



Data File: \\NAHSTWS005\Target\chem\voa6.i\X210402.b\Before6\X040203.D
Injection Date: 02-APR-2021 11:35
Instrument: voa6.i
Client Sample ID: VSTD000.5

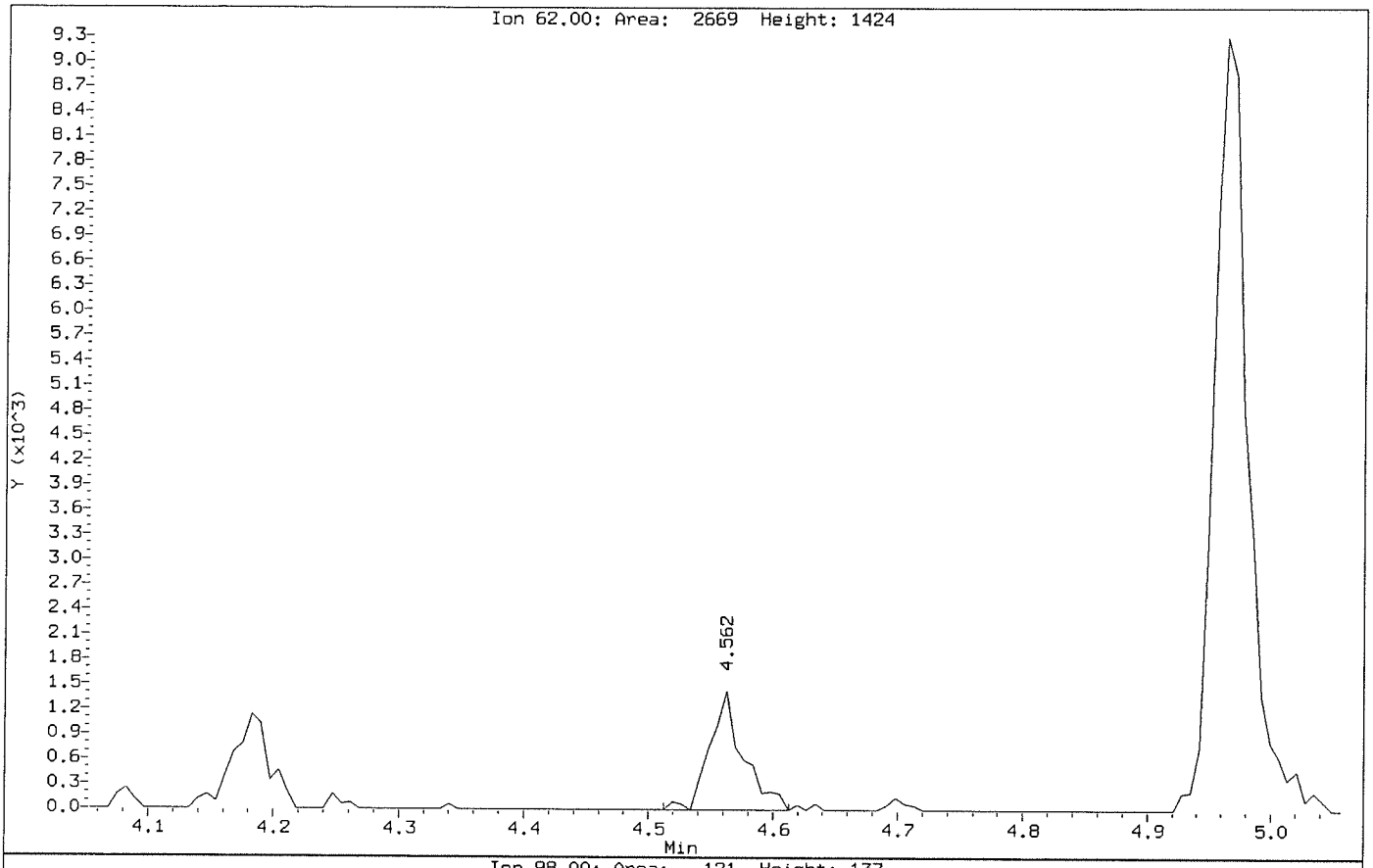
Compound: 1,2-Dichloroethane
CAS Number: 107-06-2

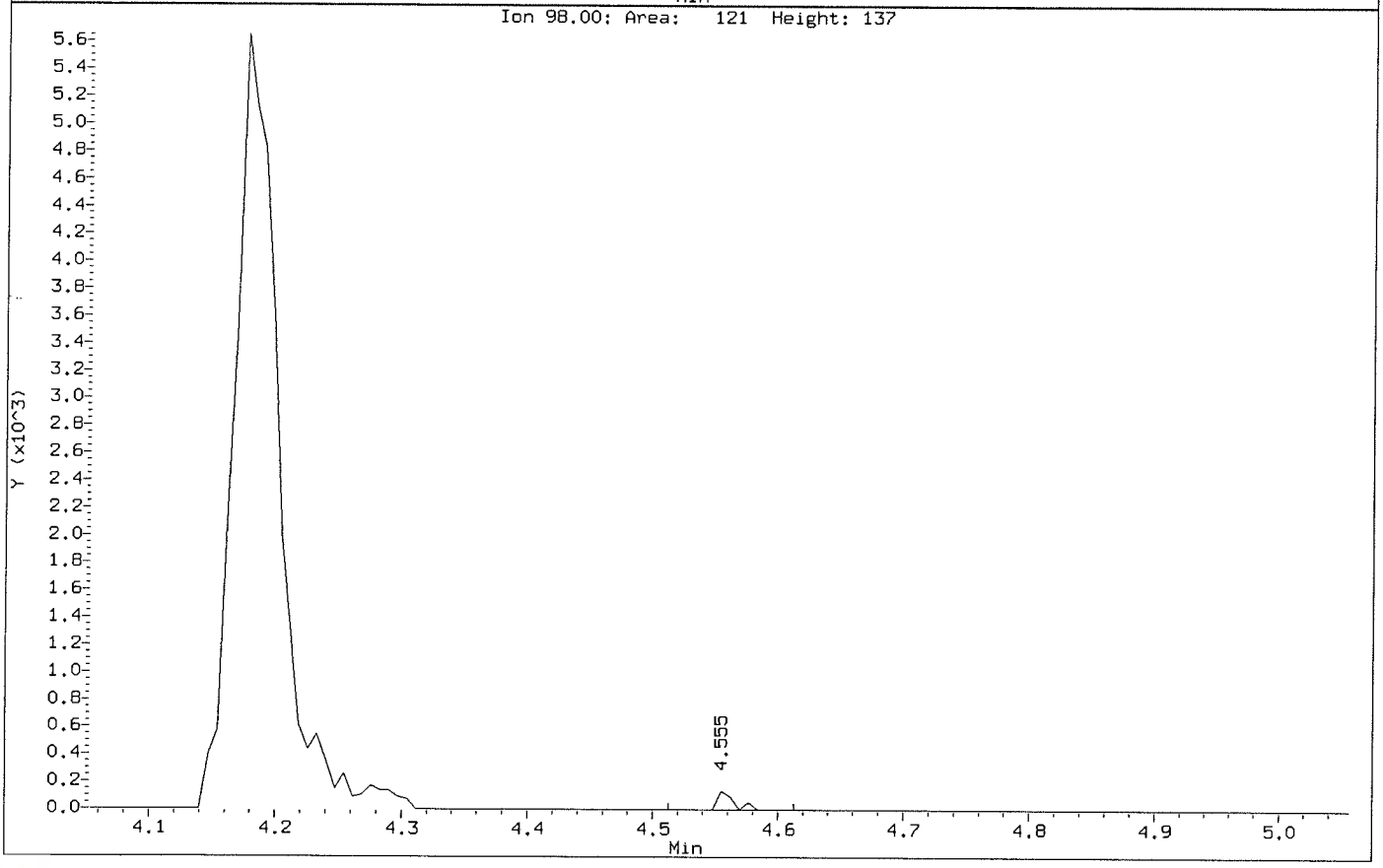




Data File: \\NAHSTWS005\Target\chem\voa6.i\X210402.b\X040203.D
Injection Date: 02-APR-2021 11:35
Instrument: voa6.i
Client Sample ID: VSTD000.5

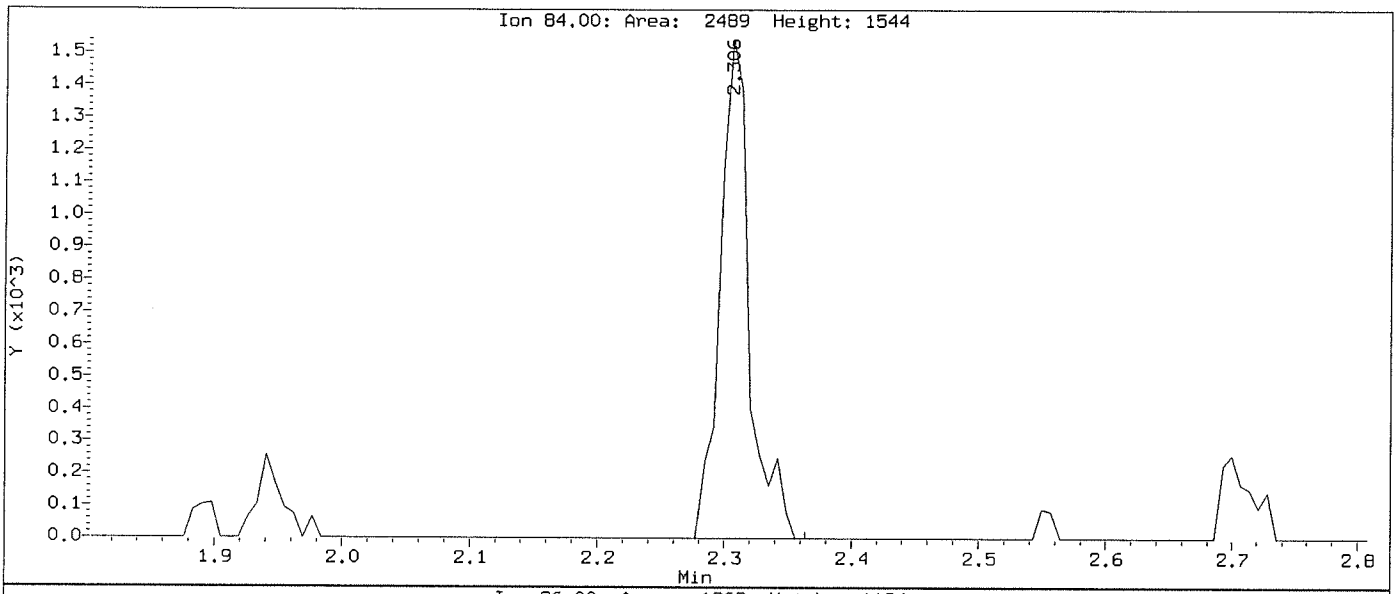
Compound: 1,2-Dichloroethane
CAS Number: 107-06-2

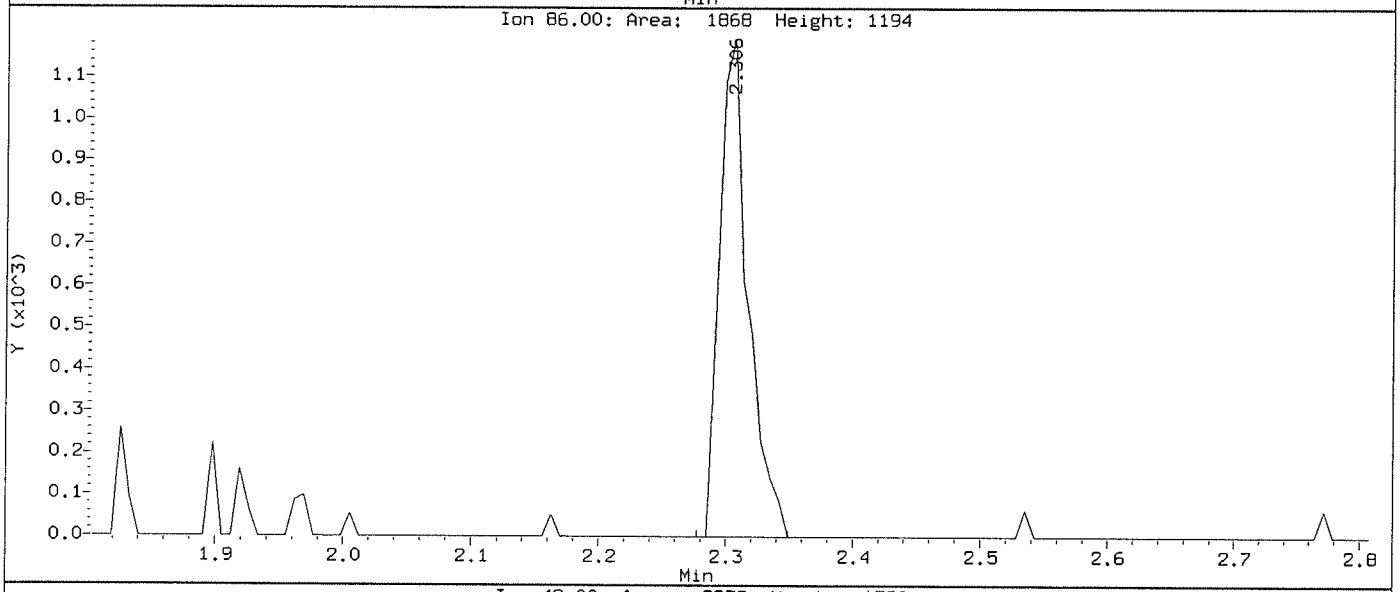


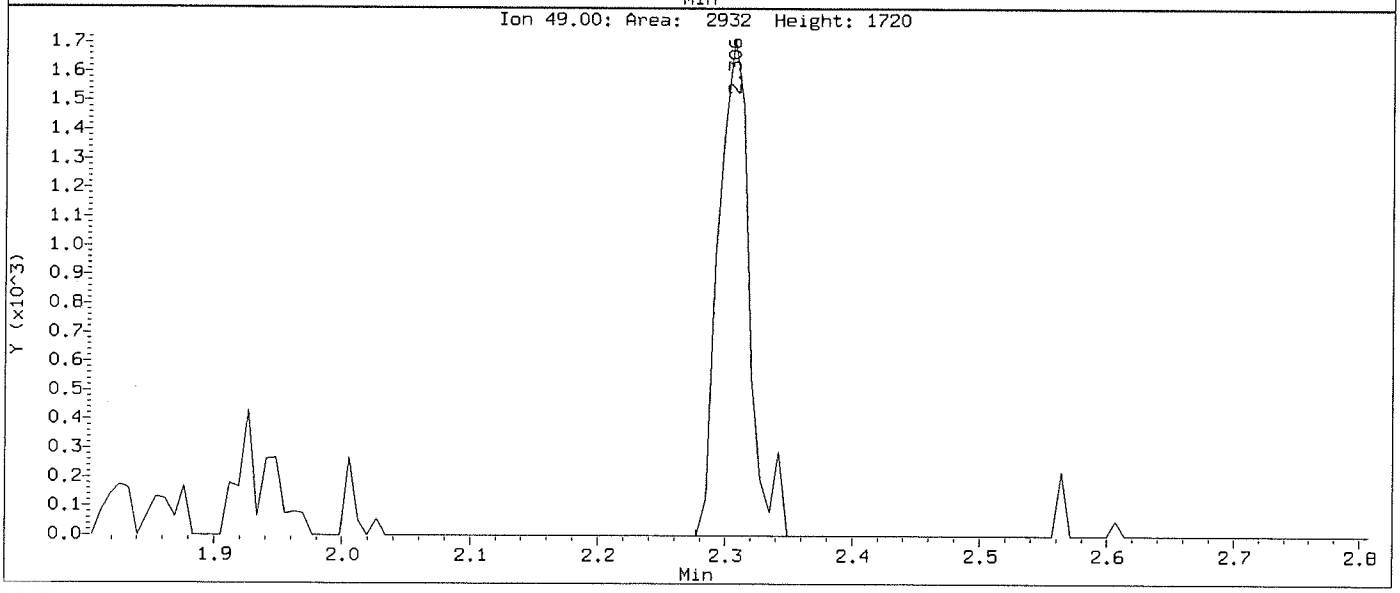


Data File: \\NAHSTWS005\Target\chem\voa6.i\X210402.b\Before6\X040203.D
Injection Date: 02-APR-2021 11:35
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Methylene Chloride
CAS Number: 75-09-2

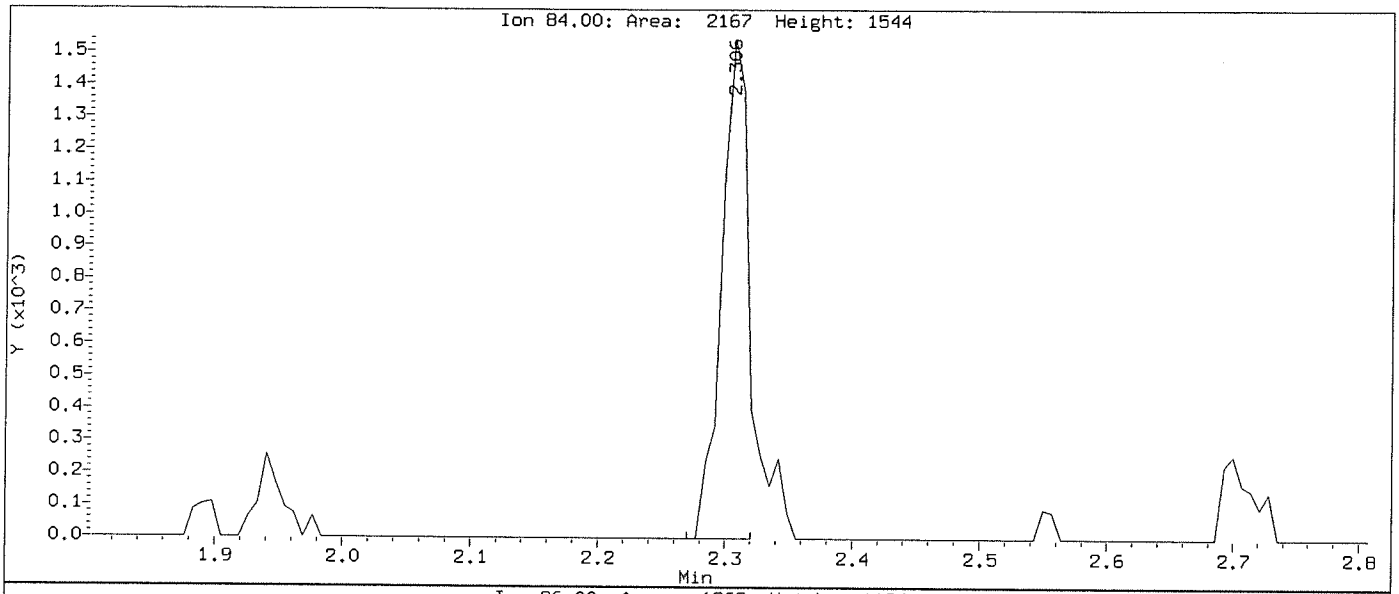


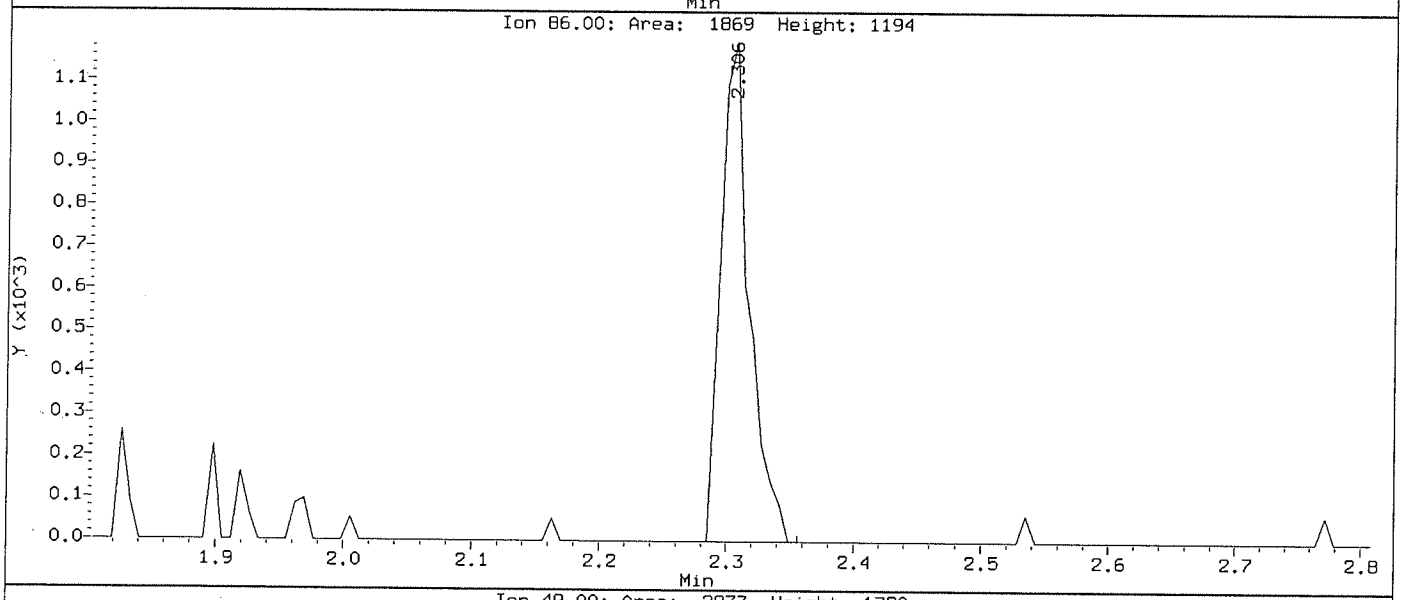


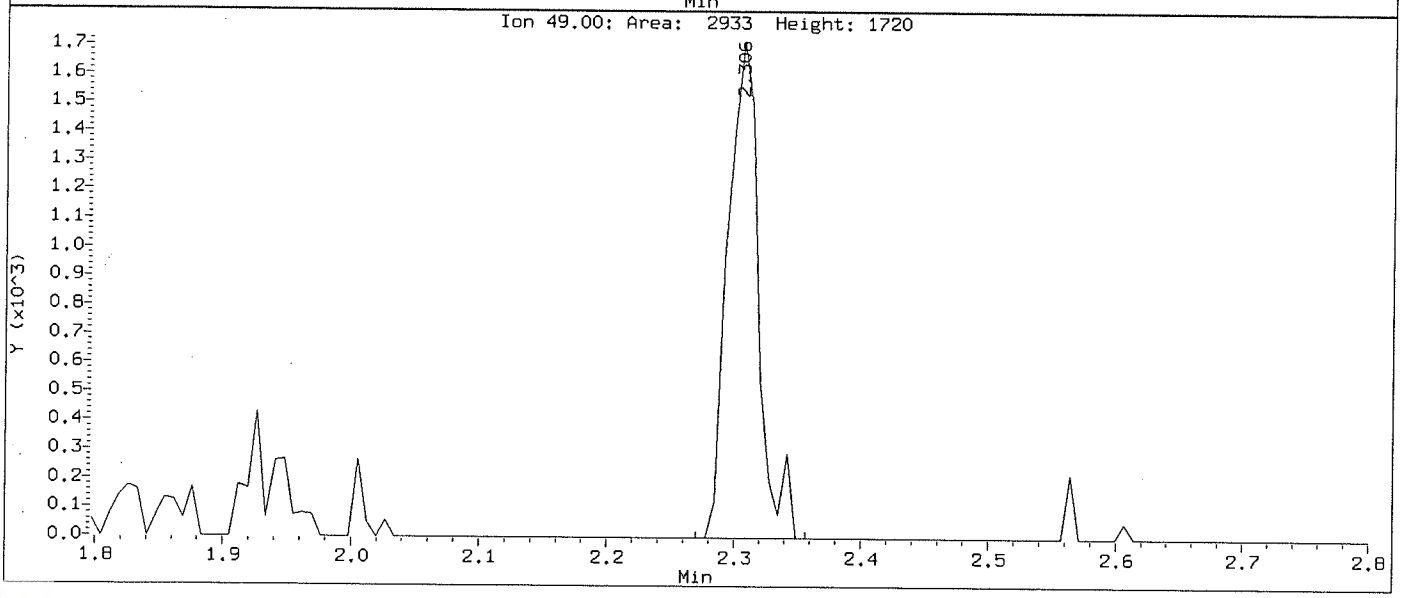


Data File: \\NAHSTWS005\Target\chem\voa6.i\X210402.b\X040203.D
Injection Date: 02-APR-2021 11:35
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Methylene Chloride
CAS Number: 75-09-2







ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X210402.b\X040204.D
Lab Smp Id: VSTD001 Client Smp ID: VSTD001
Inj Date : 02-APR-2021 11:56
Operator : PC Inst ID: voa6.i
Smp Info : VSTD001;VSTD001;1;3;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X210402.b\8260W.m
Meth Date : 04-May-2021 11:39 voa6.i Quant Type: ISTD
Cal Date : 02-APR-2021 11:35 Cal File: X040203.D
Als bottle: 5 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBI_short1.sub
Target Version: 4.14
Processing Host: NAHSTW7066

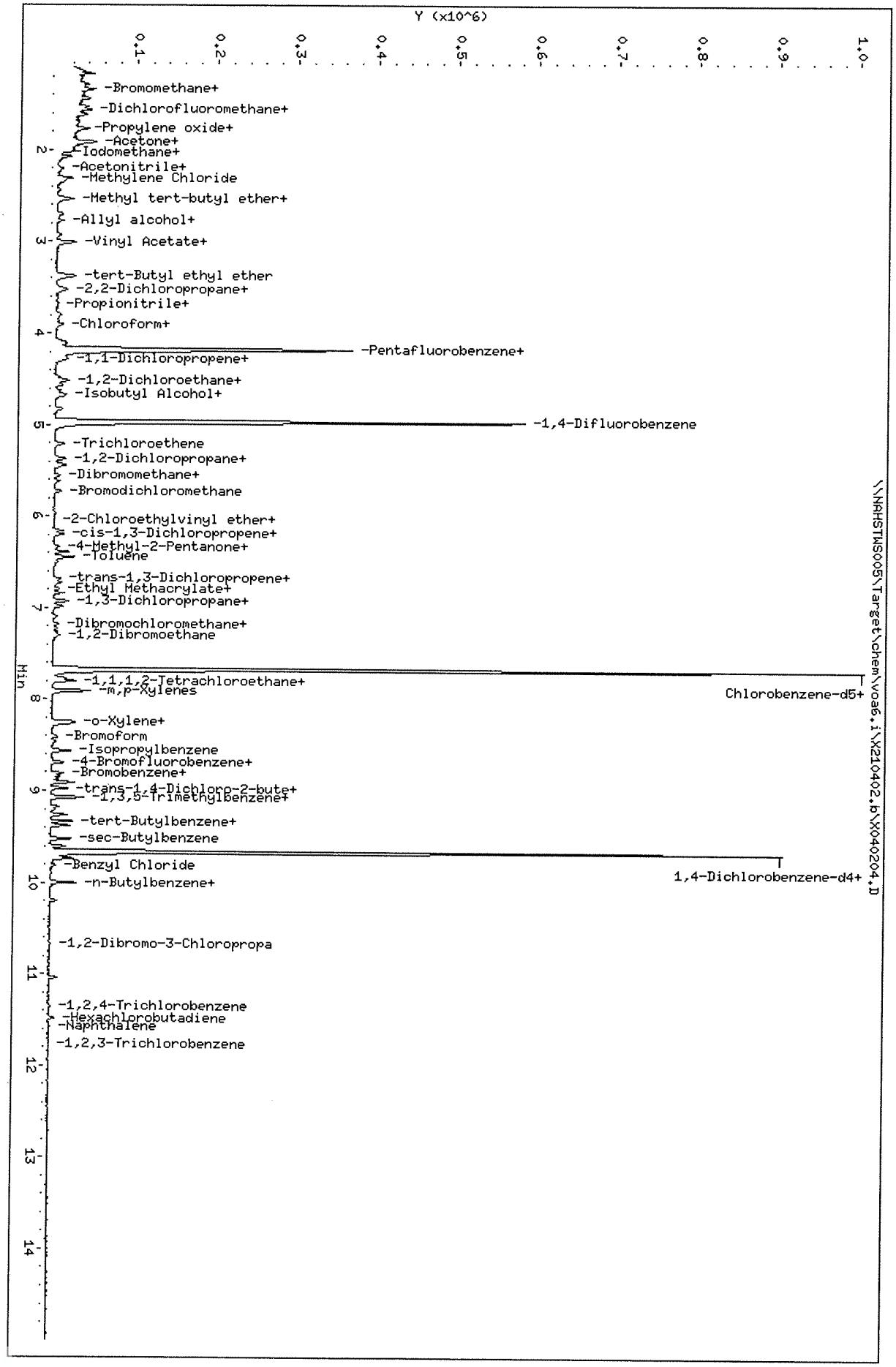
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
*	1 Pentafluorobenzene	168	4.182	4.182	(1.000)	278422	50.0000	
*	36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	467952	50.0000	
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	425730	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	185938	50.0000	
$	30 Dibromofluoromethane	113	4.103	4.103	(0.981)	3862	1.00000	1.60
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	4438	1.00000	1.60
$	48 Toluene-d8	98	6.388	6.388	(0.833)	12313	1.00000	2.93
$	69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	4647	1.00000	2.75
	53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	3024	1.00000	1.22(a)
	11 1,1-Dichloroethene	96	1.919	1.919	(0.459)	4199	1.00000	1.05(aM)
	33 1,2-Dichloroethane	62	4.562	4.562	(0.919)	5931	1.00000	1.19(aM)
	27 cis-1,2-Dichloroethene	96	3.538	3.538	(0.846)	3959	1.00000	1.16
	17 Methylene Chloride	84	2.298	2.298	(0.550)	4155	1.00000	2.81(aM)
	38 Trichloroethene	130	5.207	5.207	(1.049)	3757	1.00000	1.17(M)
	5 Vinyl Chloride	62	1.145	1.145	(0.274)	5253	1.00000	1.25(M)

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.

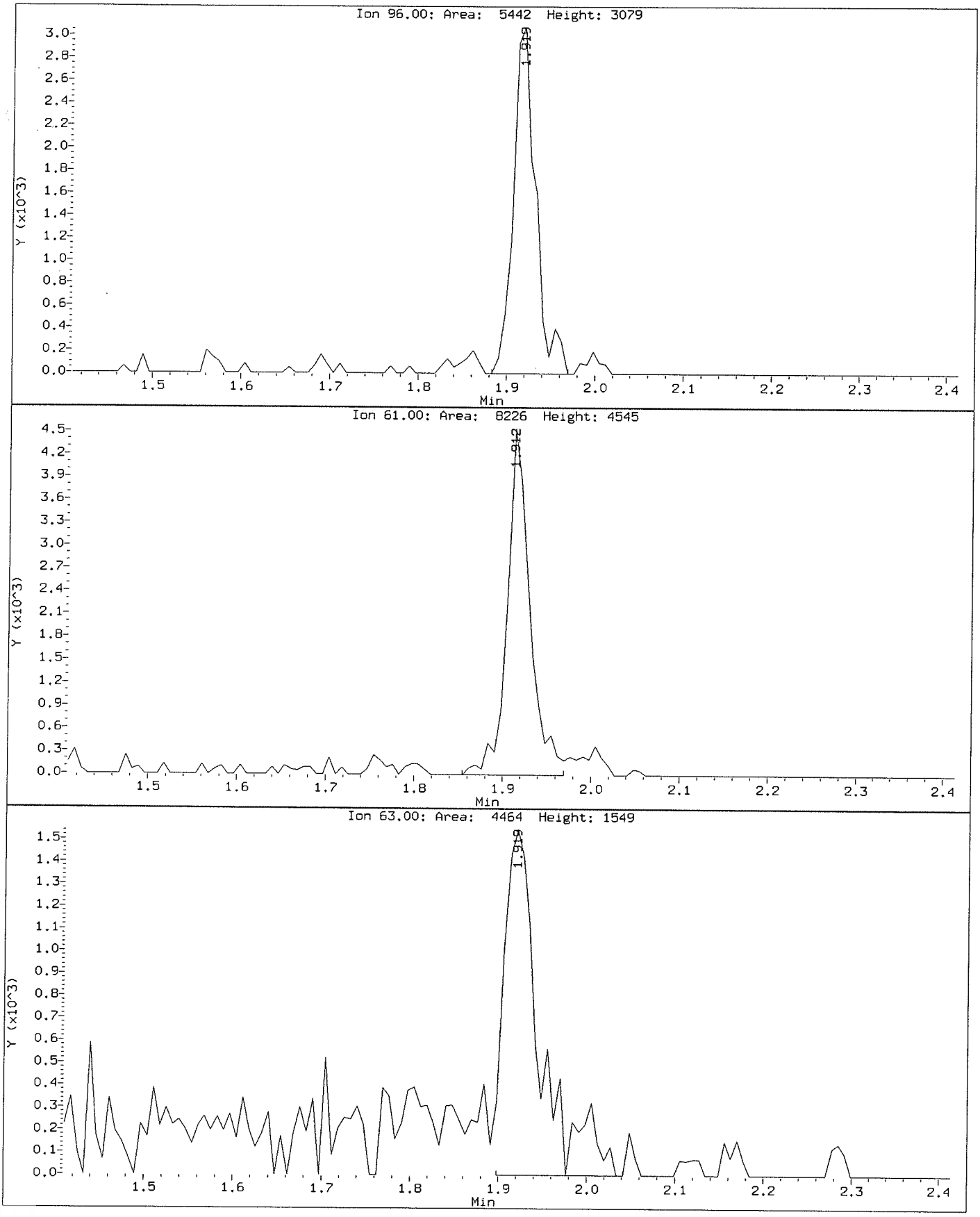


Data File: \\NAHSTWS005\Target\chem\voa6.i\X210402.b\X040204.D
Date : 02-APR-2021 11:56
Client ID: VSTD001
Sample Info: VSTD001;VSTD001;1;3;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

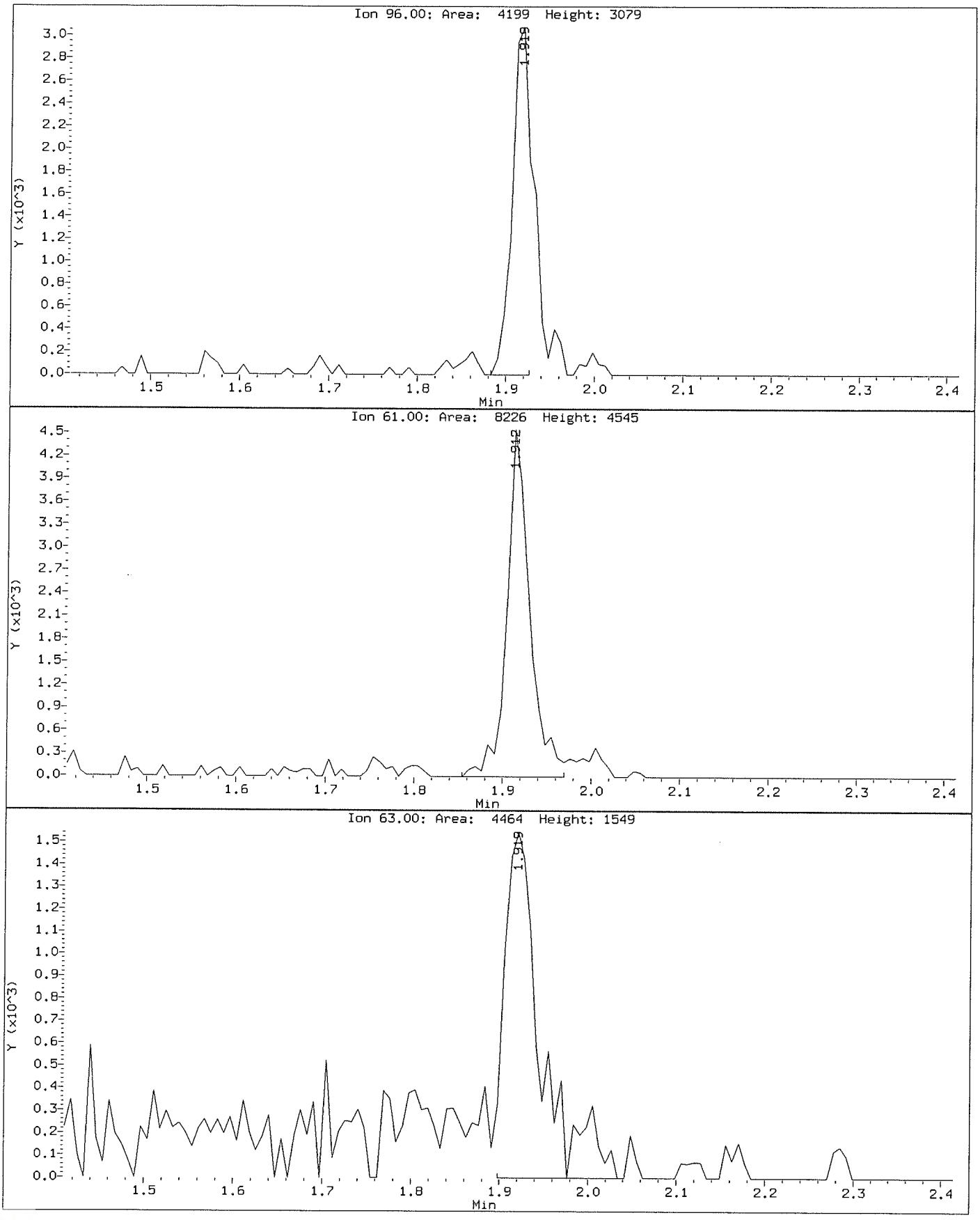
Data File: \\NAHSTWS005\Target\chem\voa6.i\X210402.b\Before6\X040204.D
Injection Date: 02-APR-2021 11:56
Instrument: voa6.i
Client Sample ID: VSTD001

Compound: 1,1-Dichloroethene
CAS Number: 75-35-4



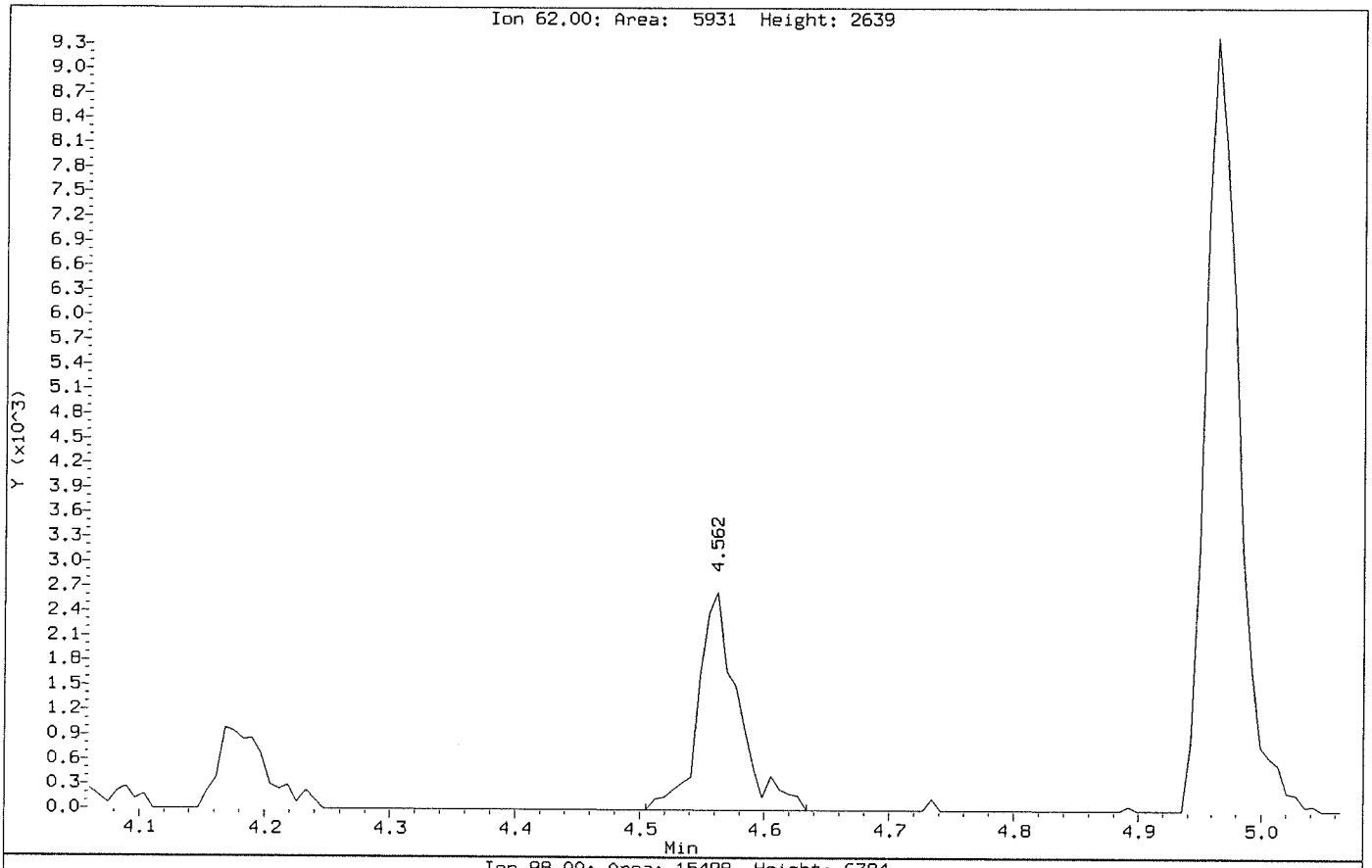
Data File: \\NAHSTWS005\Target\chem\voa6.i\X210402.b\X040204.D
Injection Date: 02-APR-2021 11:56
Instrument: voa6.i
Client Sample ID: VSTD001

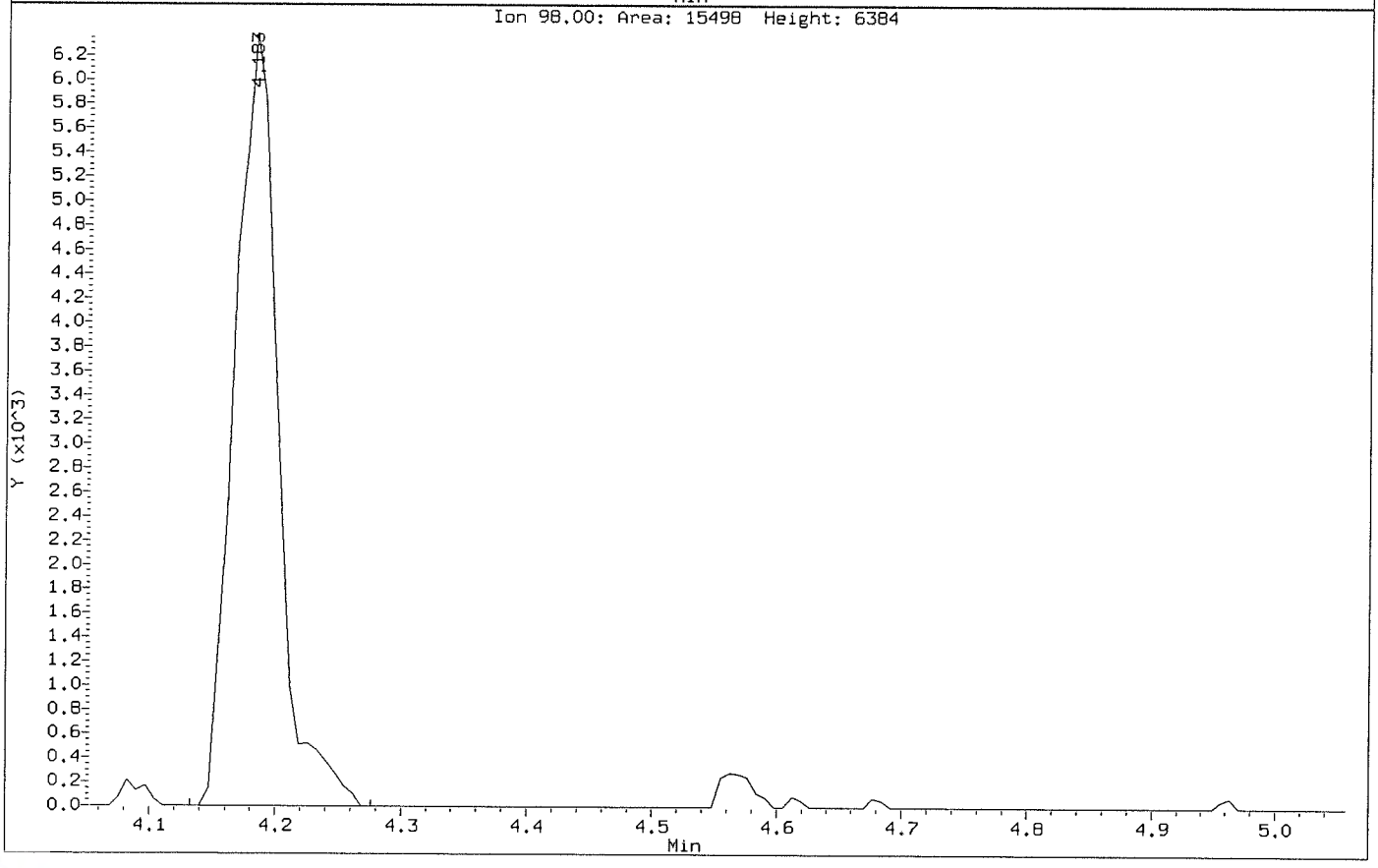
Compound: 1,1-Dichloroethene
CAS Number: 75-35-4



Data File: \\NAHSTWS005\Target\chem\voa6.i\X210402.b\Before6\X040204.D
Injection Date: 02-APR-2021 11:56
Instrument: voa6.i
Client Sample ID: VSTD001

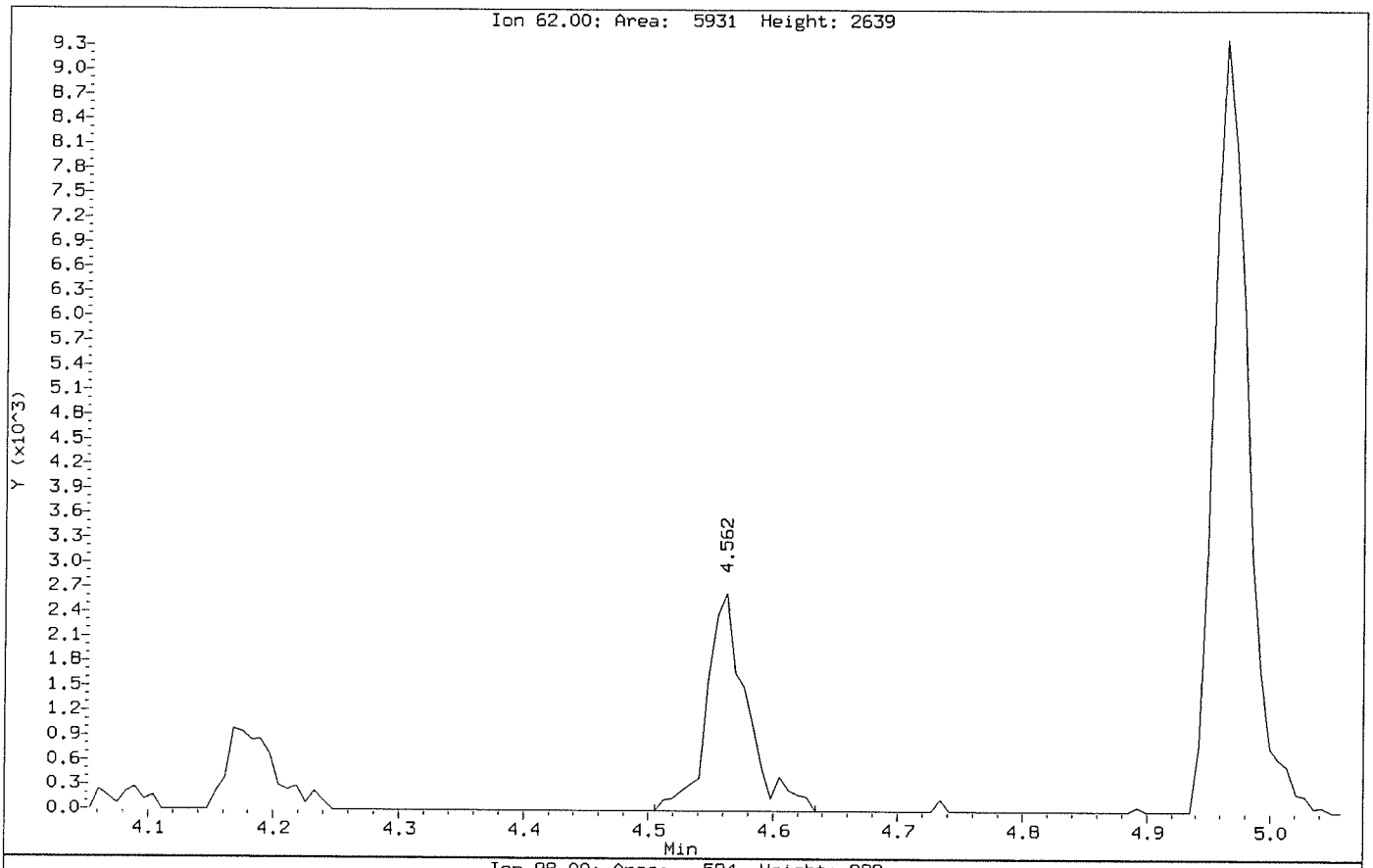
Compound: 1,2-Dichloroethane
CAS Number: 107-06-2

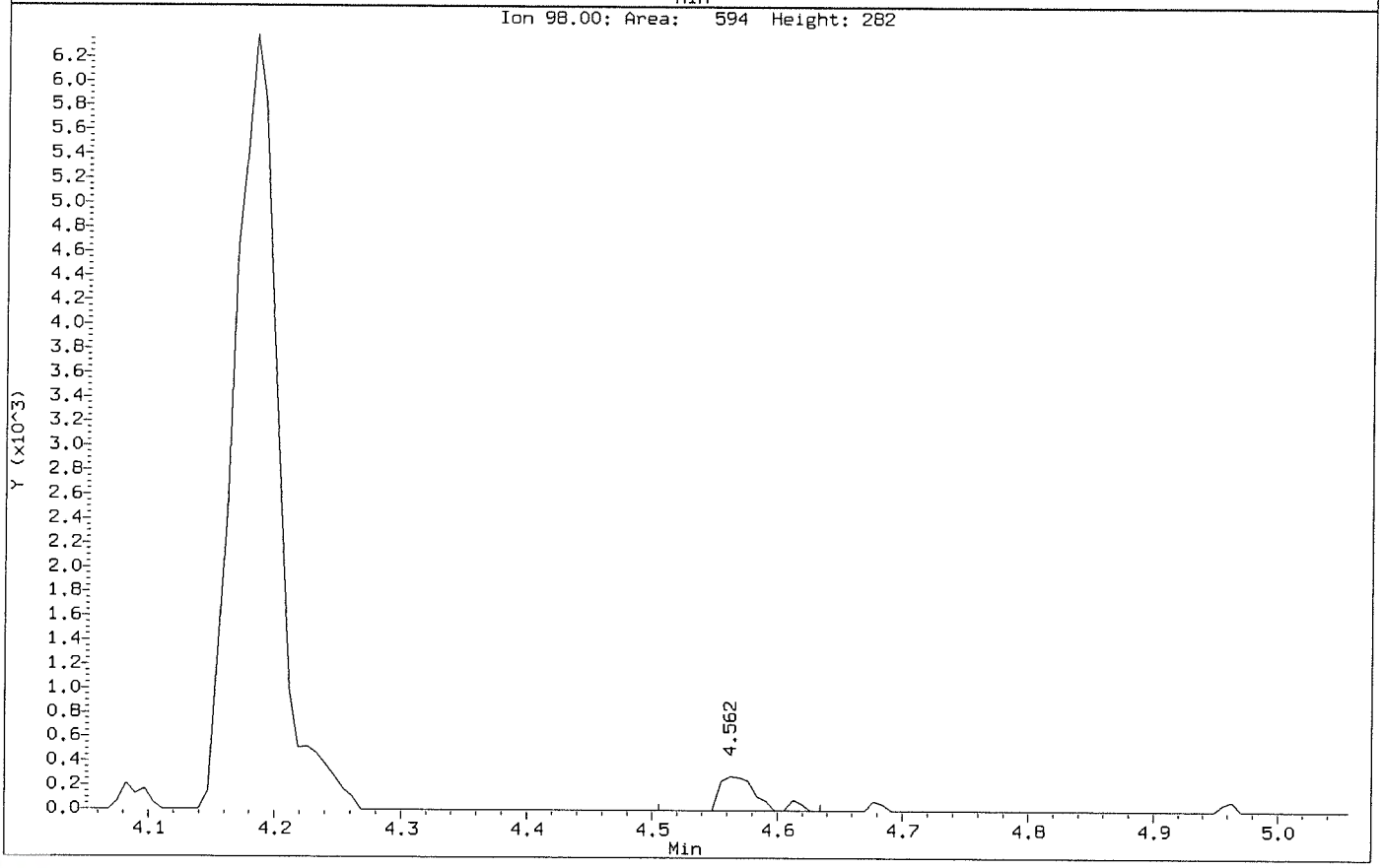




Data File: \\NAHSTWS005\Target\chem\voa6.i\X210402.b\X040204.D
Injection Date: 02-APR-2021 11:56
Instrument: voa6.i
Client Sample ID: VSTD001

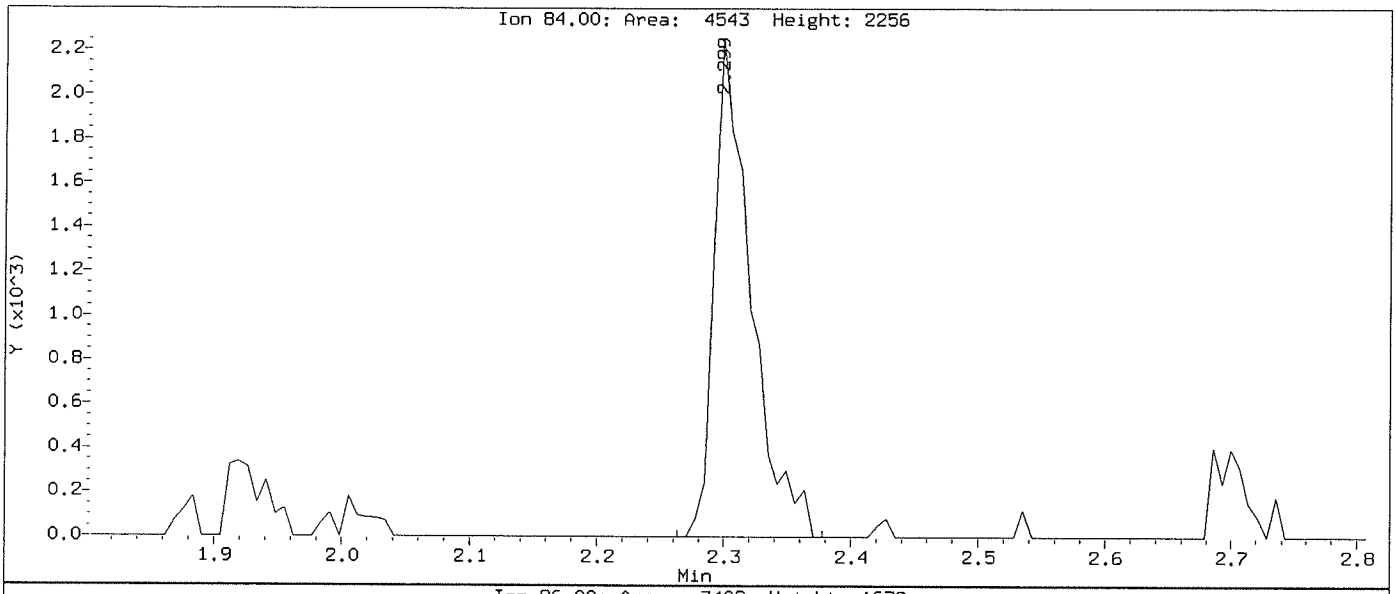
Compound: 1,2-Dichloroethane
CAS Number: 107-06-2

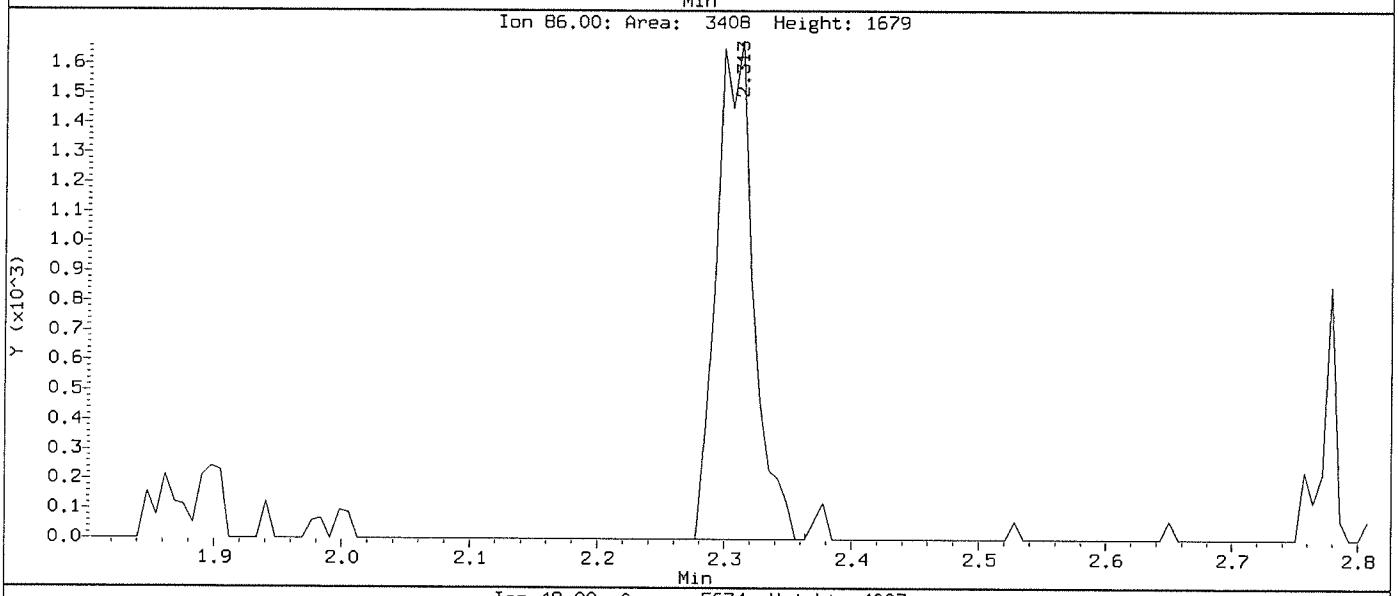


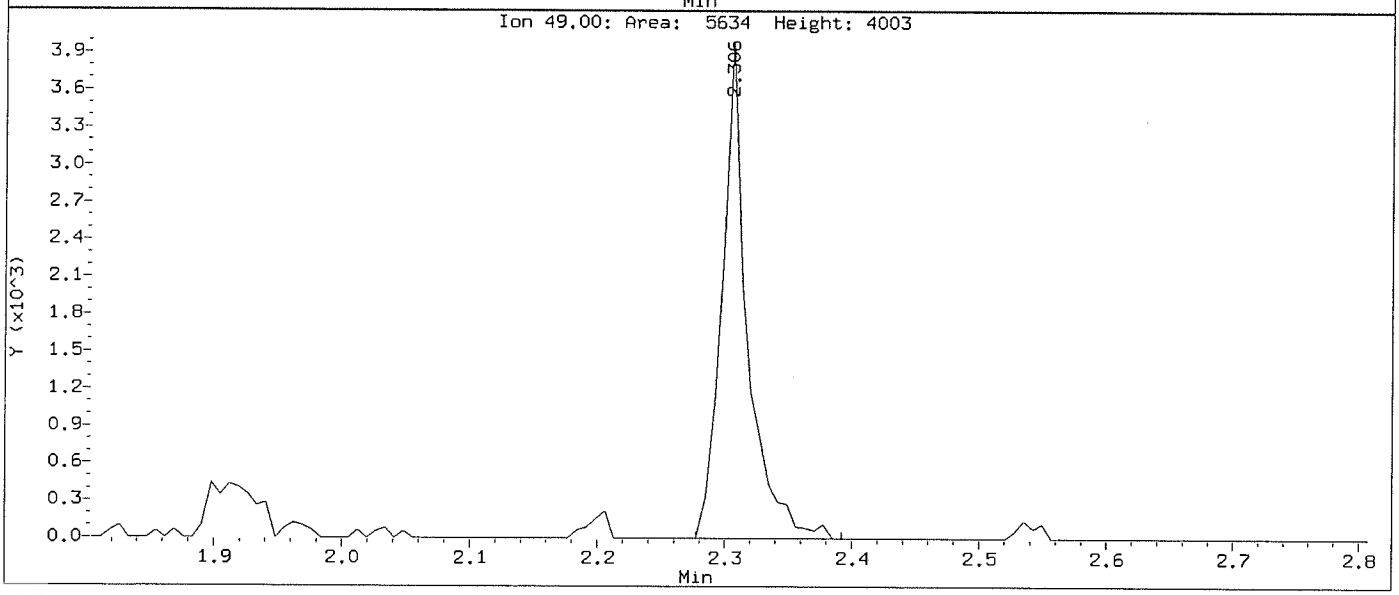


Data File: \\NAHSTWS005\Target\chem\voa6.i\X210402.b\Before6\X040204.D
Injection Date: 02-APR-2021 11:56
Instrument: voa6.i
Client Sample ID: VSTD001

Compound: Methylene Chloride
CAS Number: 75-09-2

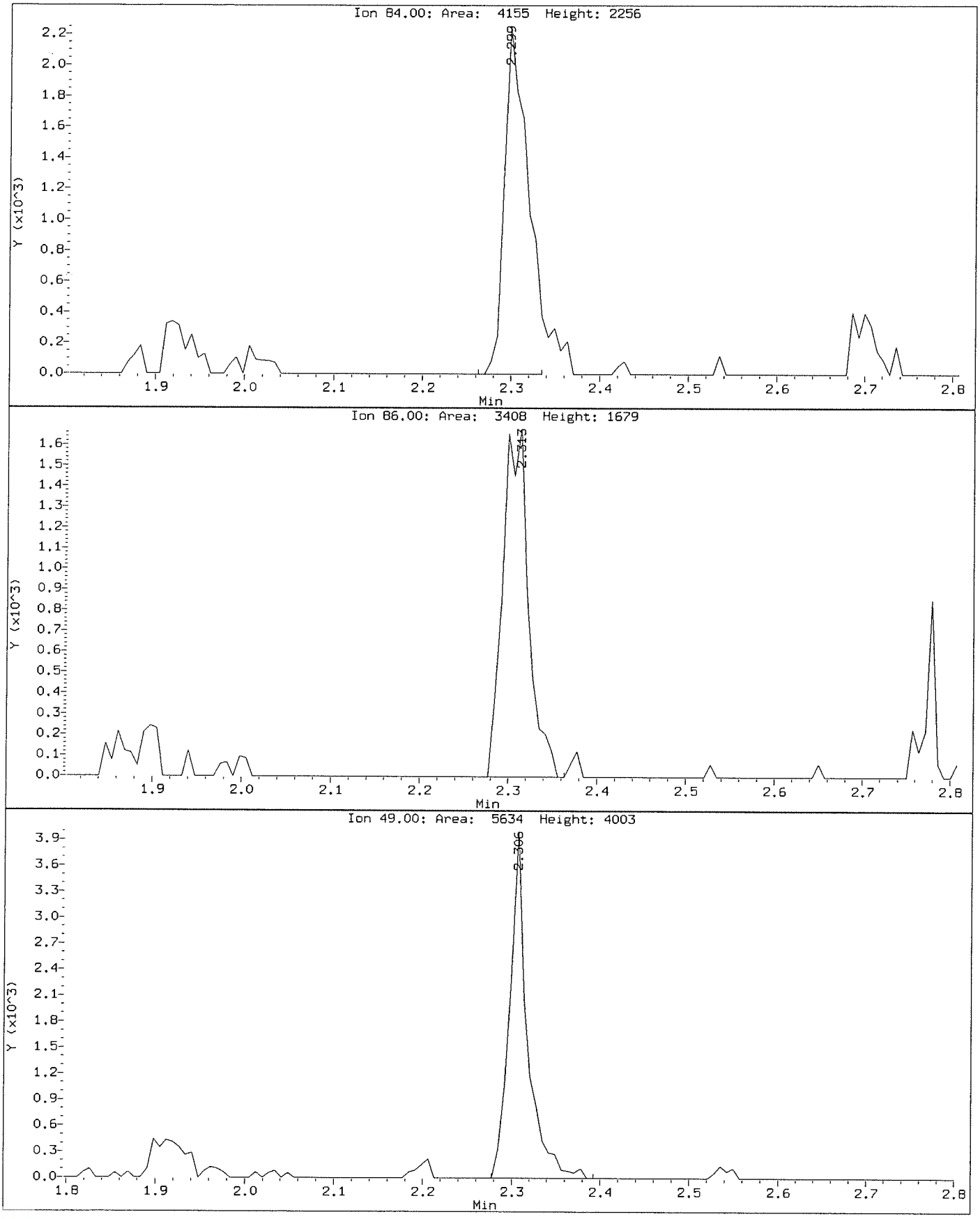






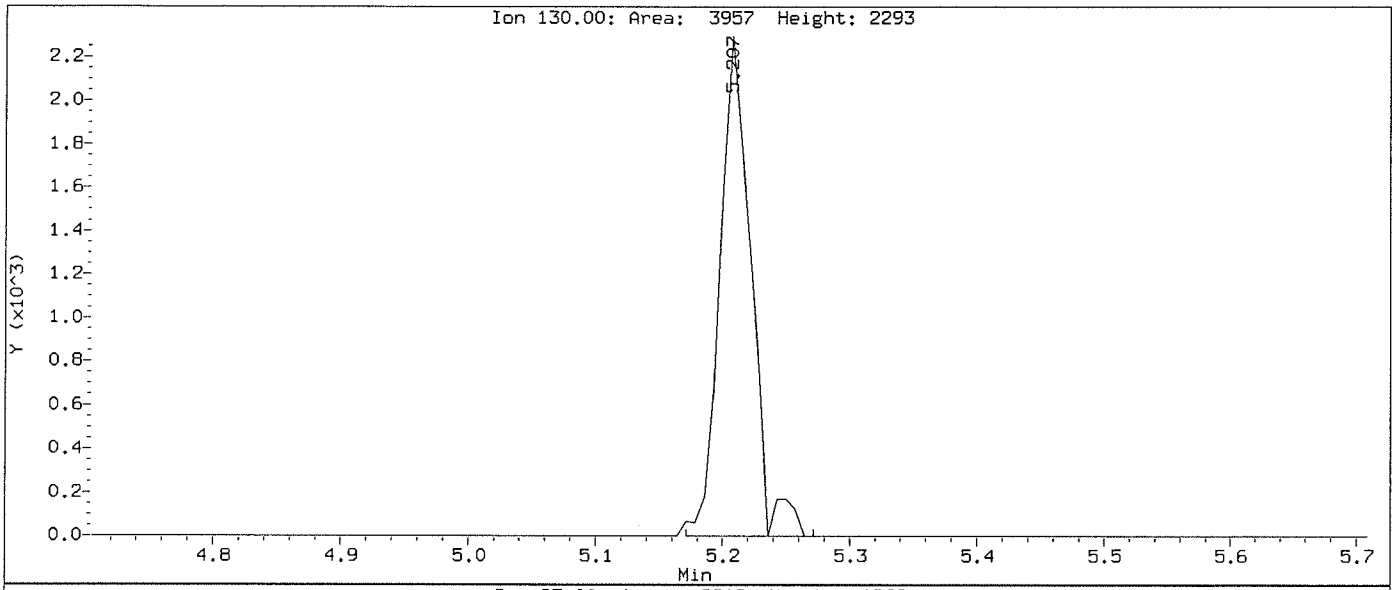
Data File: \\NAHSTWS005\Target\chem\voa6.i\X210402.b\X040204.D
Injection Date: 02-APR-2021 11:56
Instrument: voa6.i
Client Sample ID: VSTD001

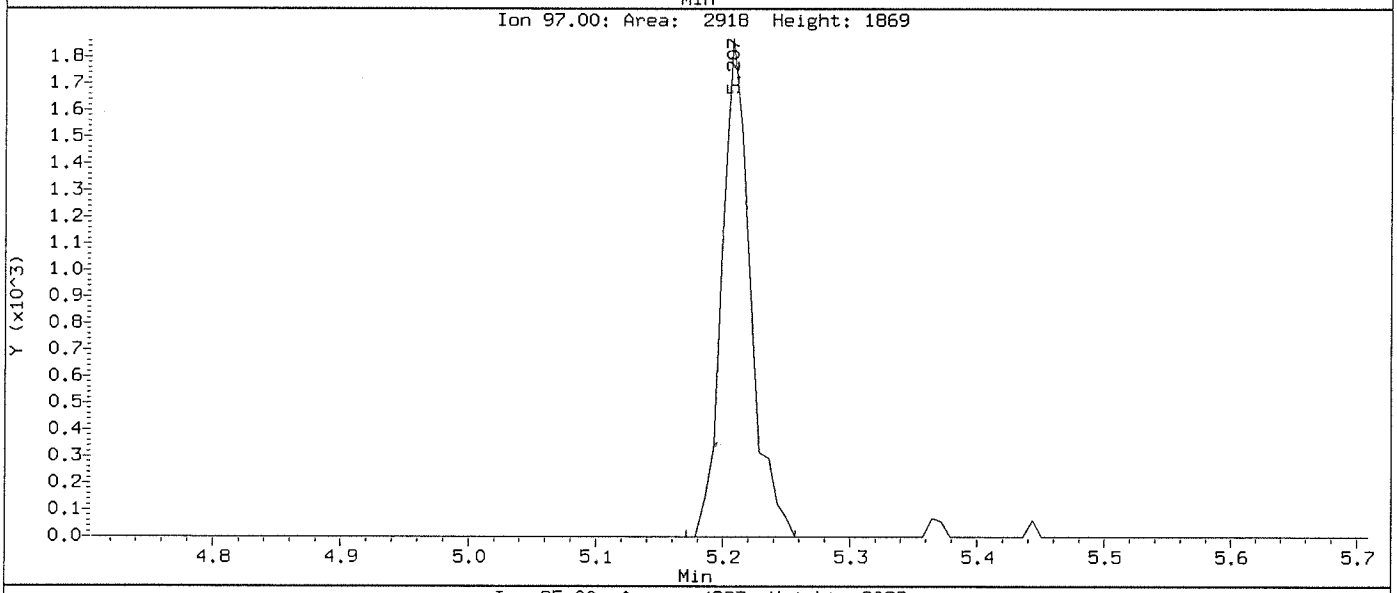
Compound: Methylene Chloride
CAS Number: 75-09-2

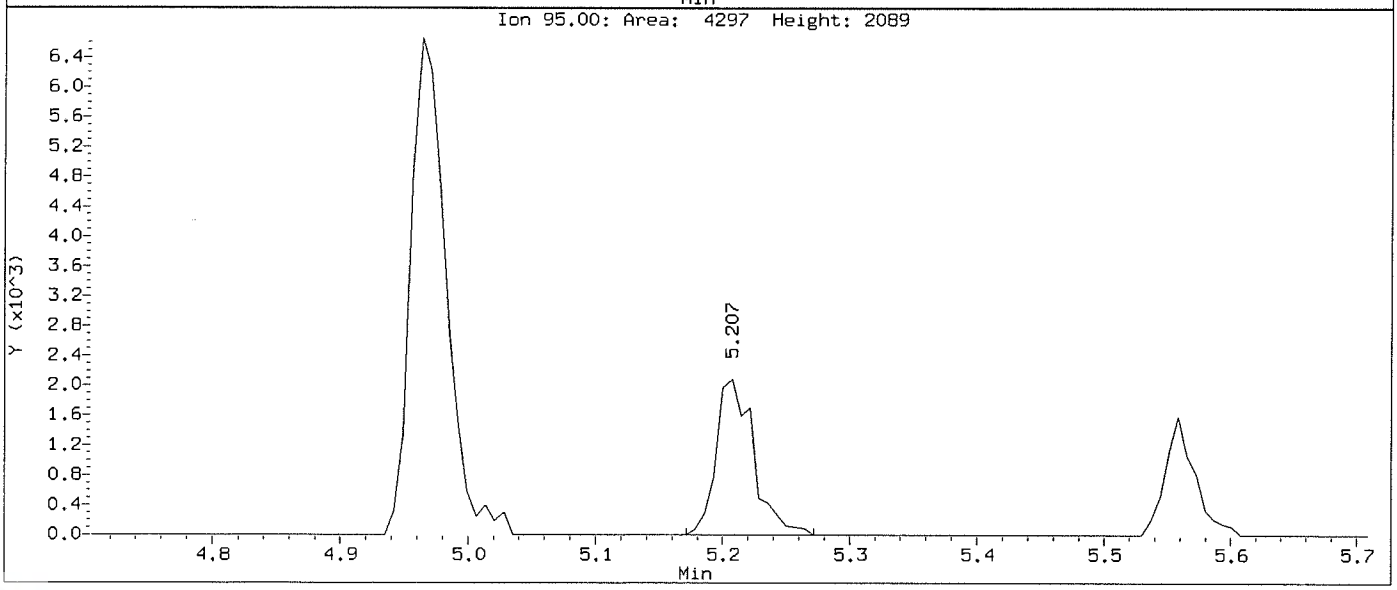


Data File: \\NAHSTWS005\Target\chem\voa6.i\X210402.b\Before6\X040204.D
Injection Date: 02-APR-2021 11:56
Instrument: voa6.i
Client Sample ID: VSTD001

Compound: Trichloroethene
CAS Number: 79-01-6

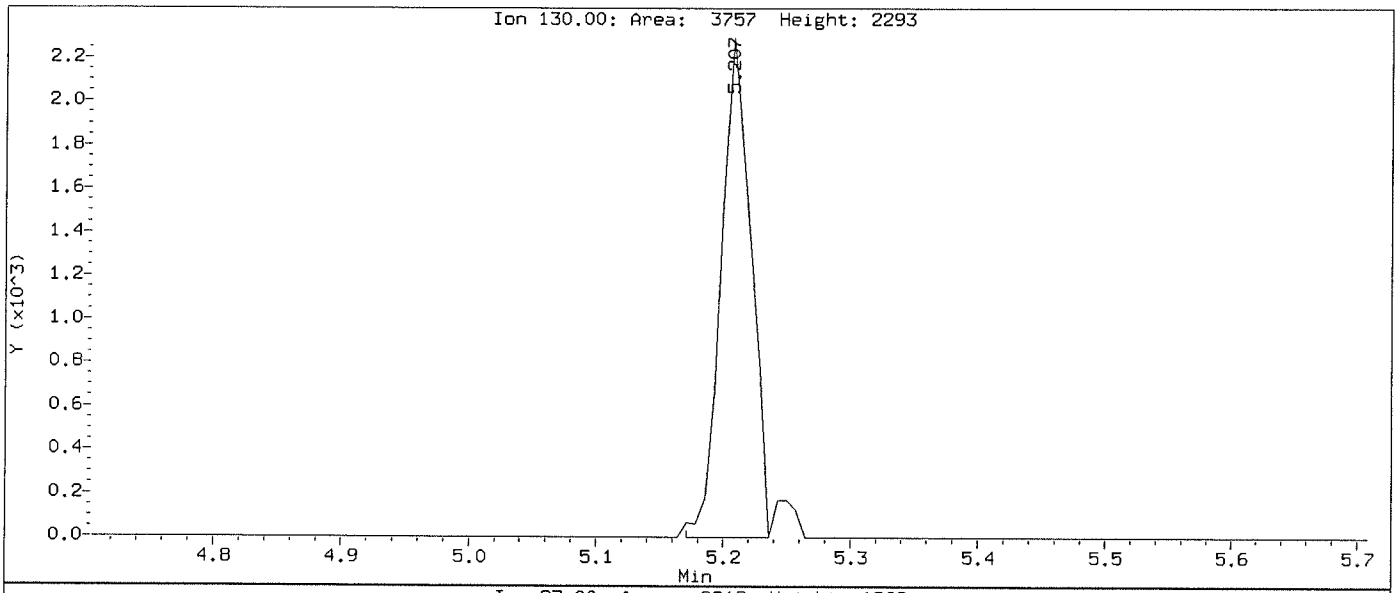


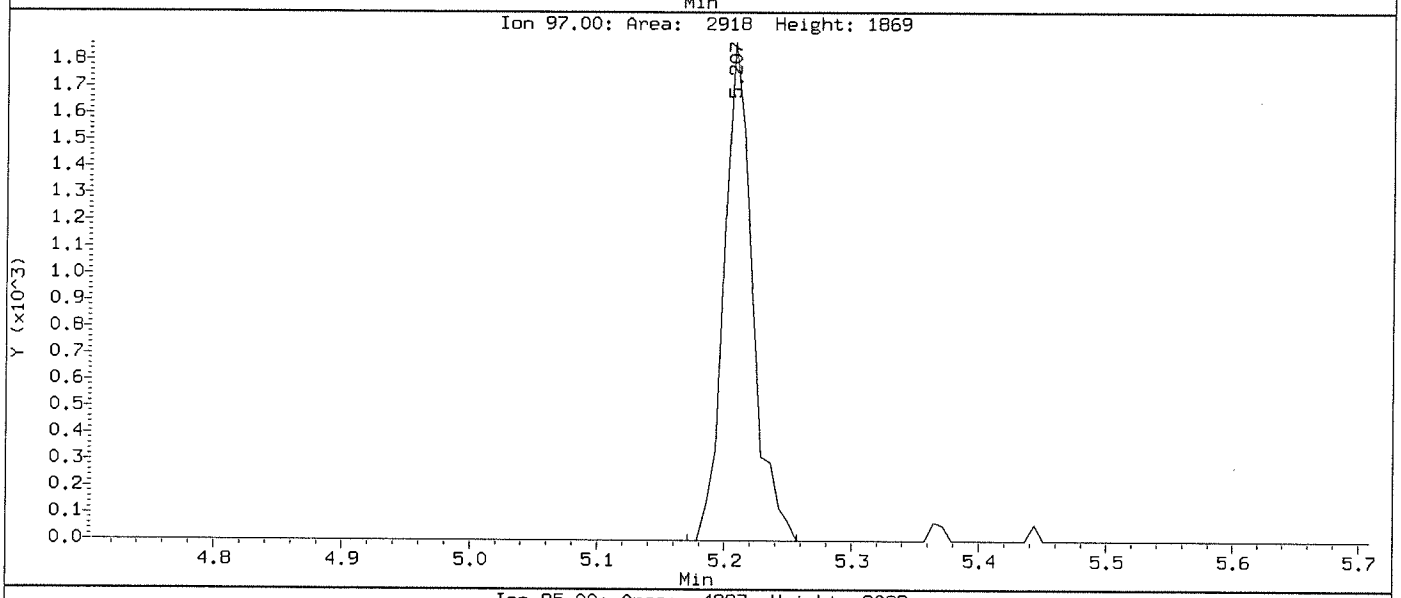


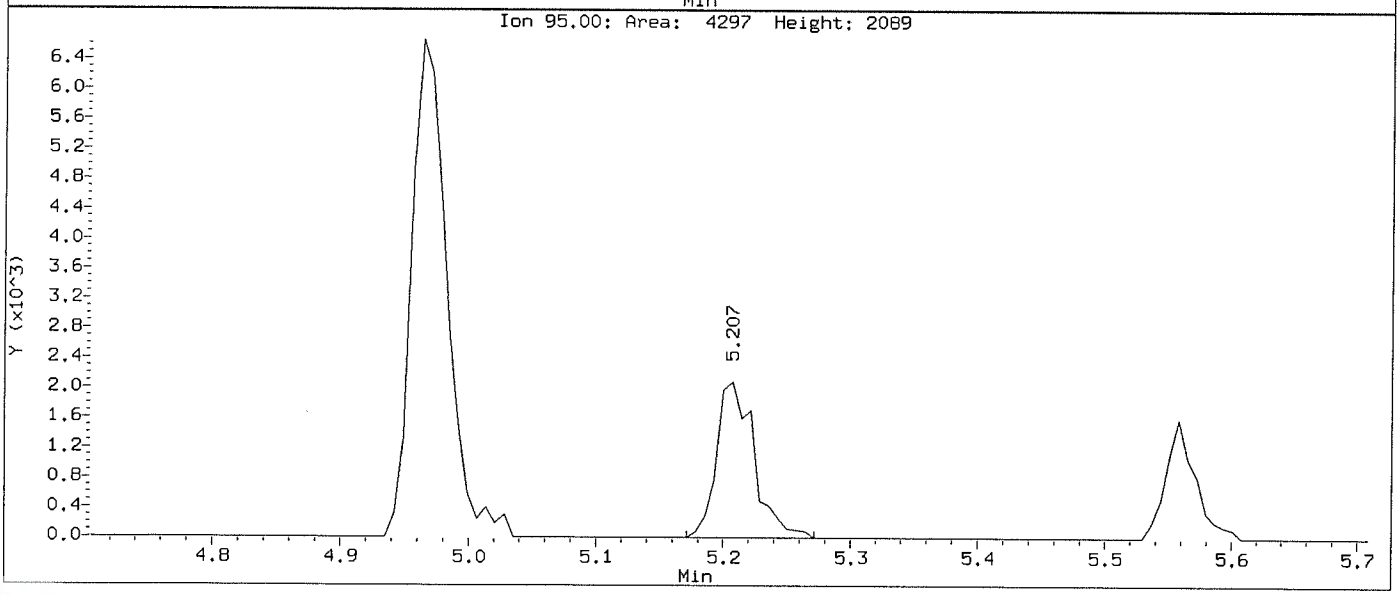


Data File: \\NAHSTWS005\Target\chem\voa6.i\X210402.b\X040204.D
Injection Date: 02-APR-2021 11:56
Instrument: voa6.i
Client Sample ID: VSTD001

Compound: Trichloroethene
CAS Number: 79-01-6

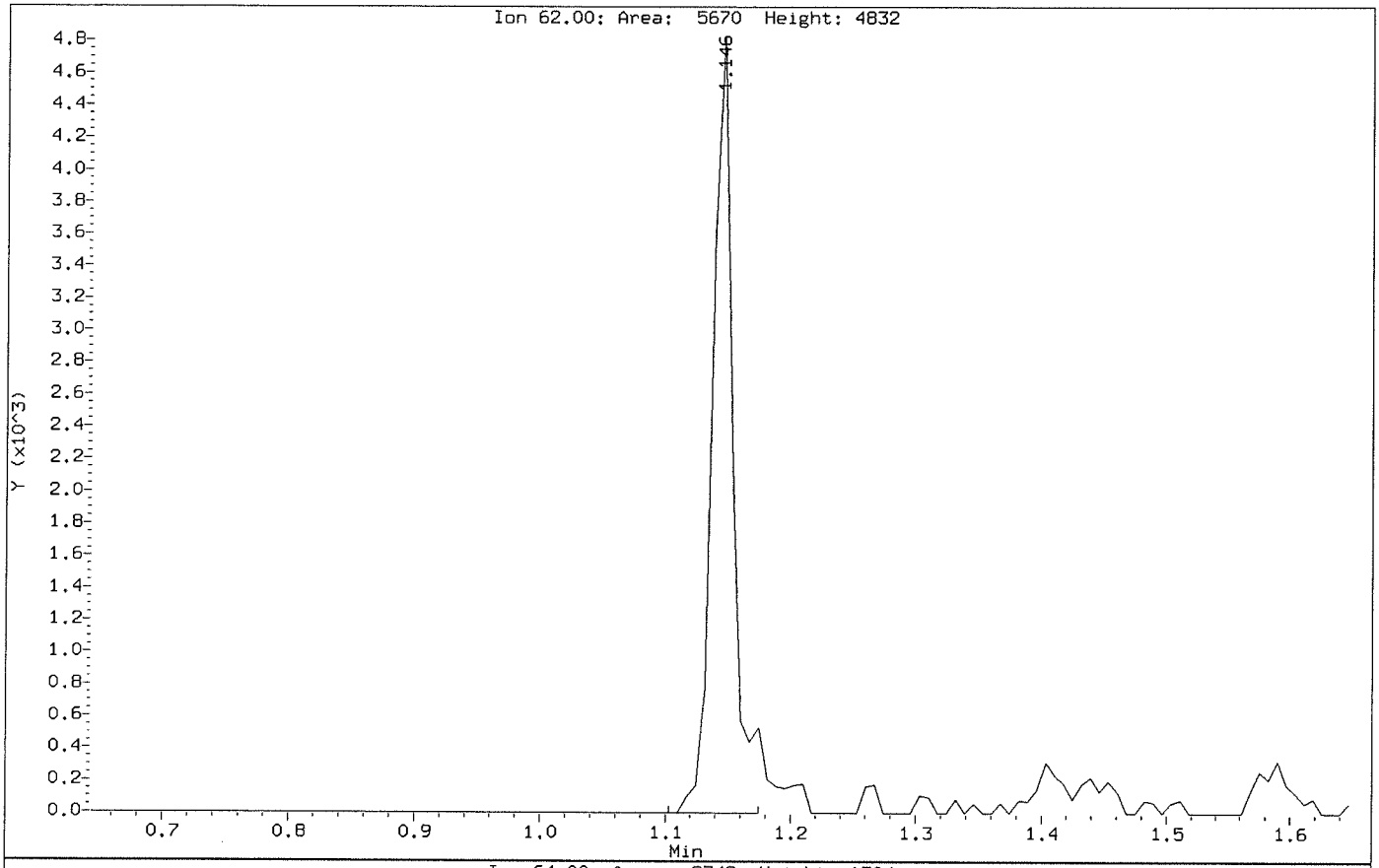


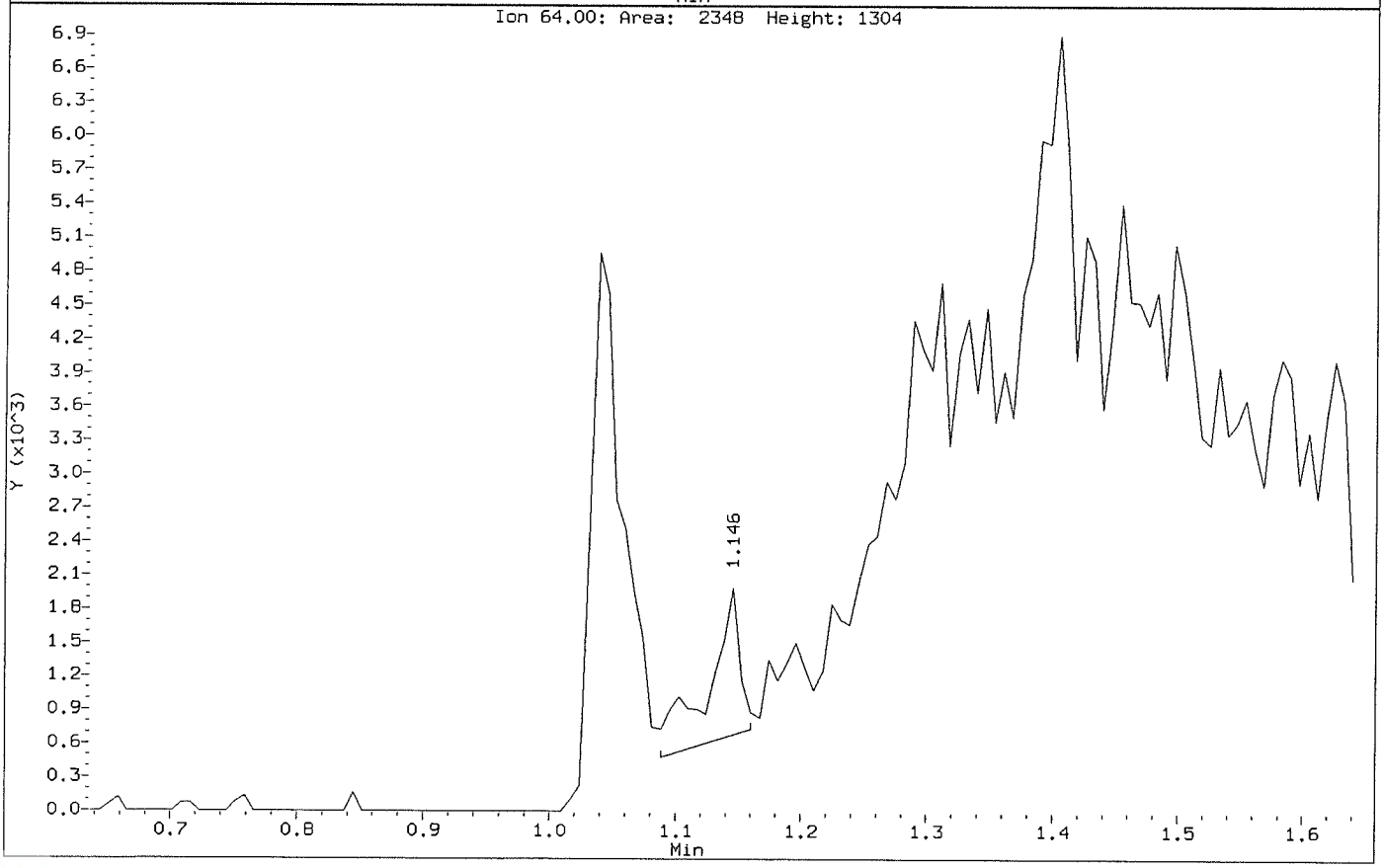




Data File: \\NAHSTWS005\Target\chem\voa6.i\X210402.b\Before6\X040204.D
Injection Date: 02-APR-2021 11:56
Instrument: voa6.i
Client Sample ID: VSTD001

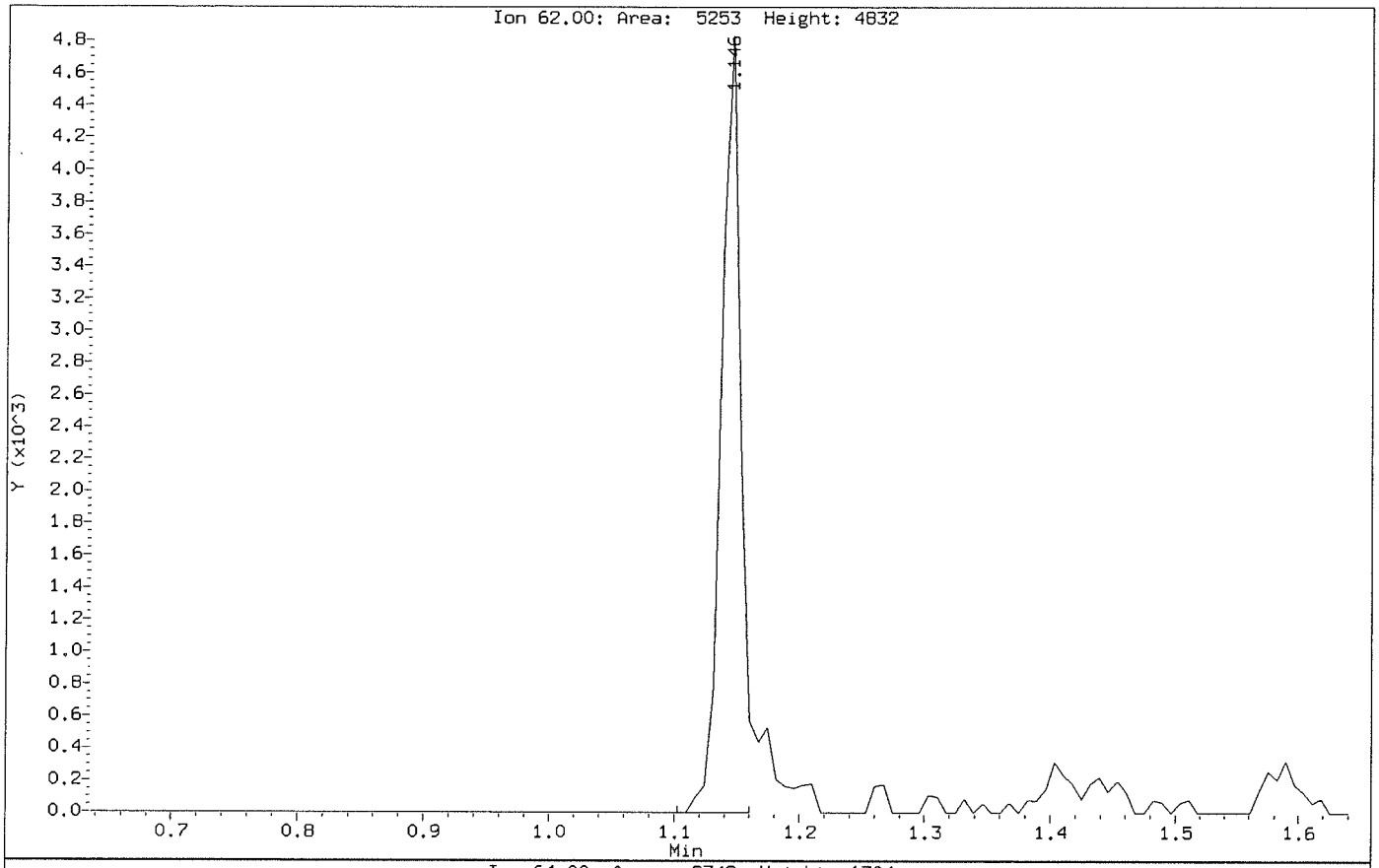
Compound: Vinyl Chloride
CAS Number: 75-01-4

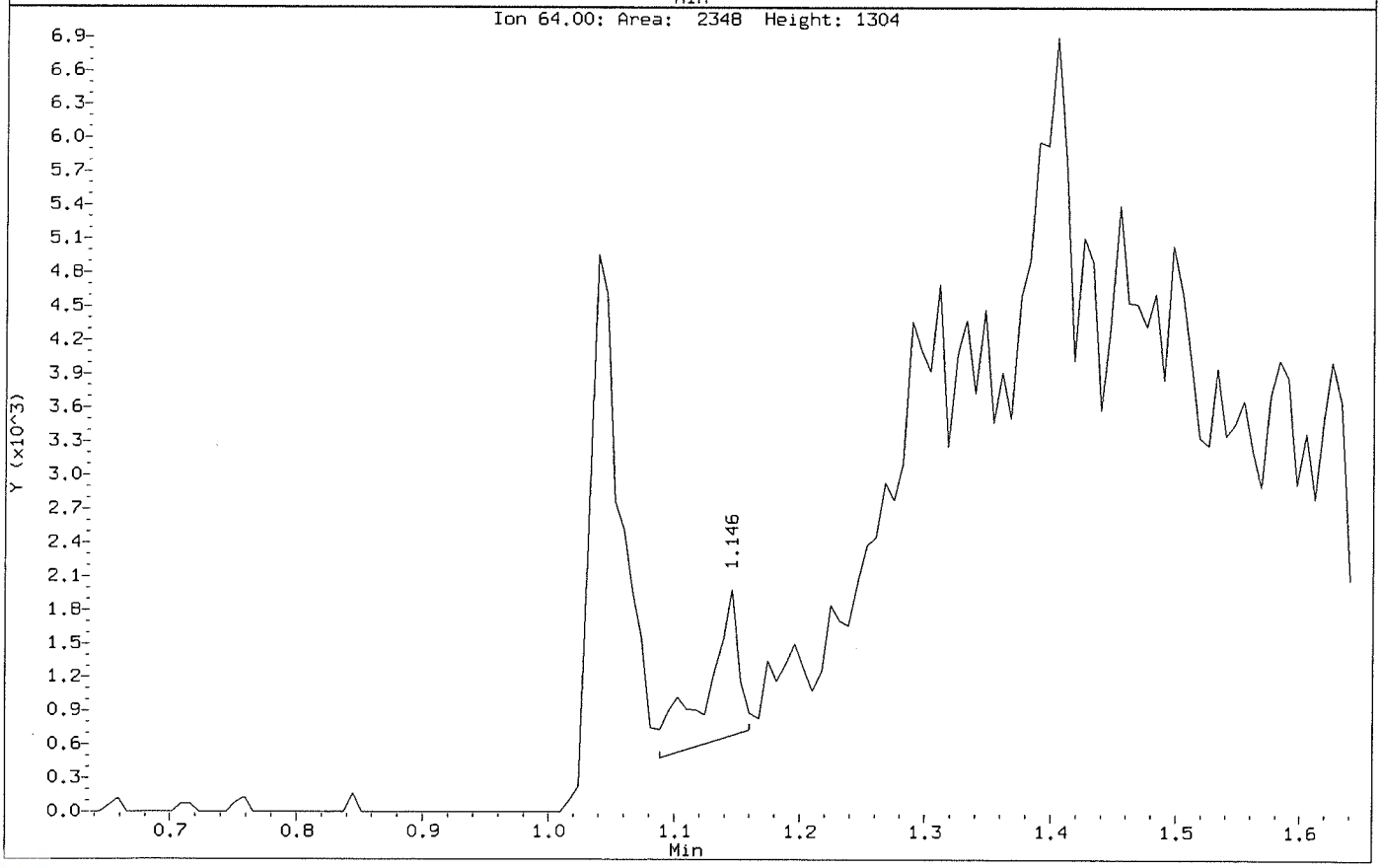




Data File: \\NAHSTWS005\Target\chem\voa6.i\X210402.b\X040204.D
Injection Date: 02-APR-2021 11:56
Instrument: voa6.i
Client Sample ID: VSTD001

Compound: Vinyl Chloride
CAS Number: 75-01-4





ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X210402.b\X040205.D
Lab Smp Id: VSTD002 Client Smp ID: VSTD002
Inj Date : 02-APR-2021 12:17
Operator : PC Inst ID: voa6.i
Smp Info : VSTD002;VSTD002;1;4;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X210402.b\8260W.m
Meth Date : 04-May-2021 11:39 voa6.i Quant Type: ISTD
Cal Date : 02-APR-2021 11:56 Cal File: X040204.D
Als bottle: 6 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBI_short1.sub
Target Version: 4.14
Processing Host: NAHSTW7066

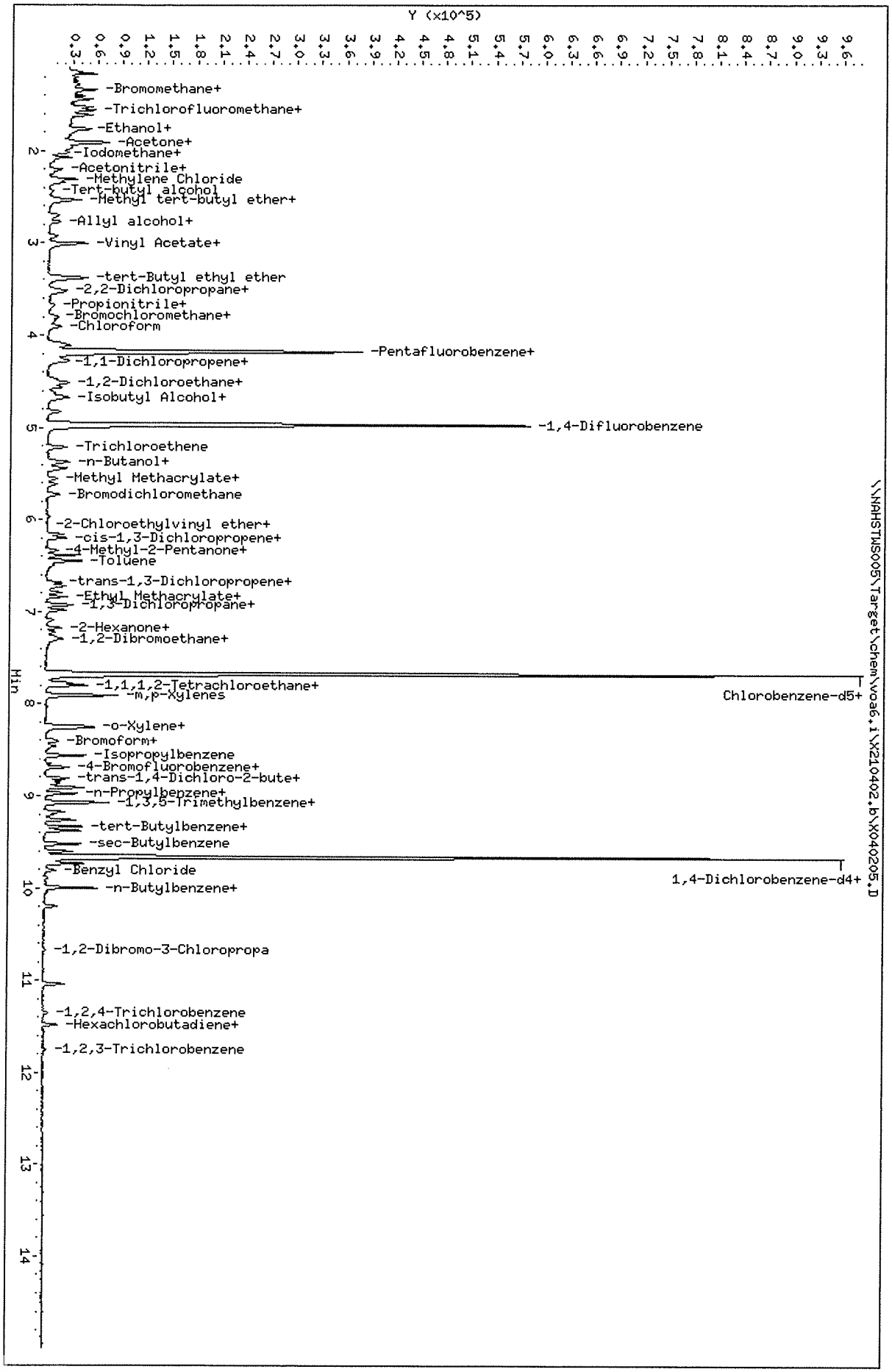
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	278535	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	469682	50.0000	
* 47 Chlorobenzene-d5	117	7.670	7.670	(1.000)	424642	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	187429	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	6870	2.00000	2.50
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	7506	2.00000	2.37
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	22274	2.00000	3.81
$ 69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	7732	2.00000	3.48
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	5102	2.00000	2.06(a)
11 1,1-Dichloroethene	96	1.911	1.911	(0.457)	8383	2.00000	2.11(aM)
33 1,2-Dichloroethane	62	4.562	4.562	(0.918)	9508	2.00000	1.91(aM)
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	6948	2.00000	2.04
17 Methylene Chloride	84	2.305	2.305	(0.551)	7271	2.00000	3.81(a)
38 Trichloroethene	130	5.206	5.206	(1.048)	6830	2.00000	2.12
5 Vinyl Chloride	62	1.145	1.145	(0.274)	8442	2.00000	2.02(M)

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.

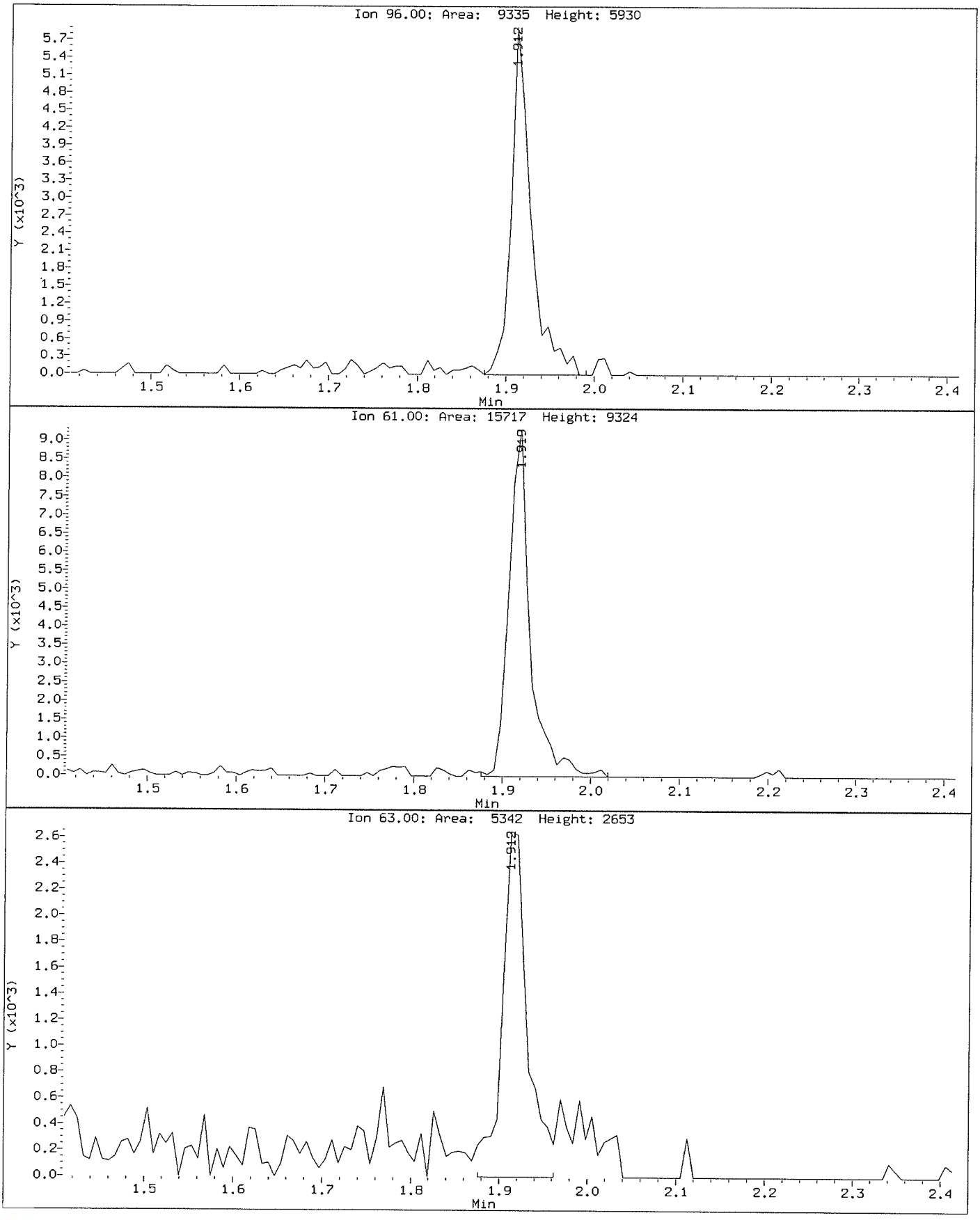


Data File: \\NAHSTWS005\Target\chem\voa6.i\X210402.b\X040205.D
Date : 02-APR-2021 12:17
Client ID: VSTD002
Sample Info: VSTD002;VSTD002;1;4;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

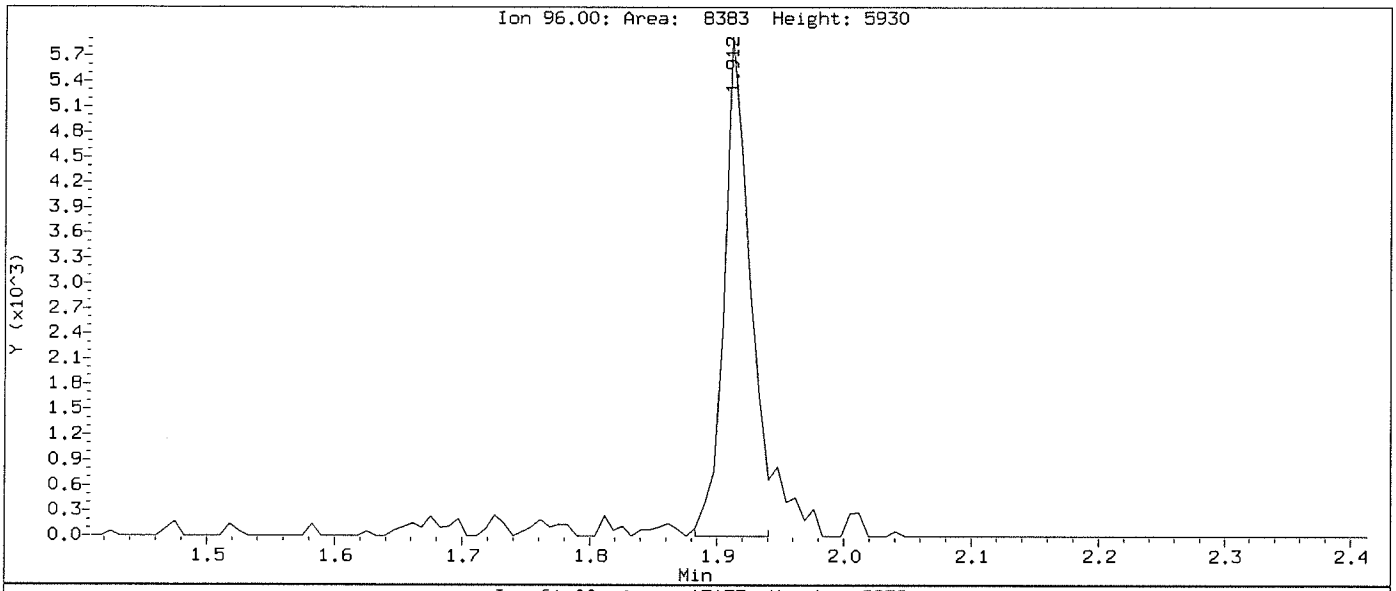
Data File: \\NAHSTWS005\Target\chem\voa6.i\X210402.b\Before6\X040205.D
Injection Date: 02-APR-2021 12:17
Instrument: voa6.i
Client Sample ID: VSTD002

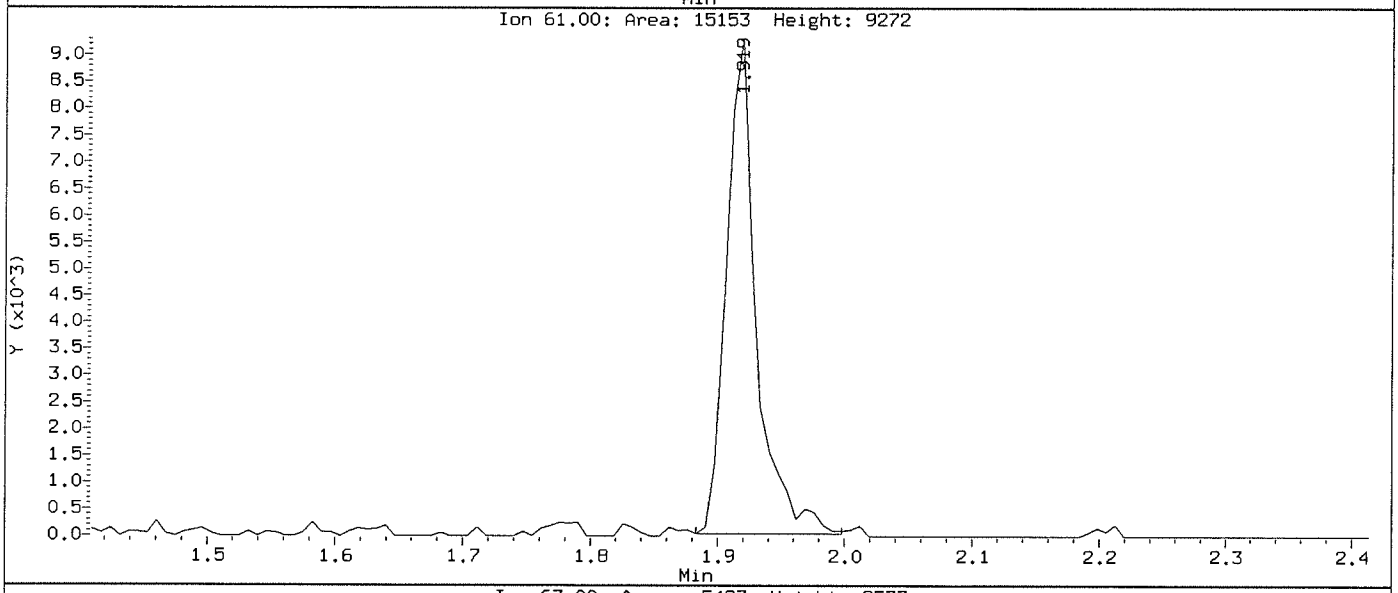
Compound: 1,1-Dichloroethene
CAS Number: 75-35-4

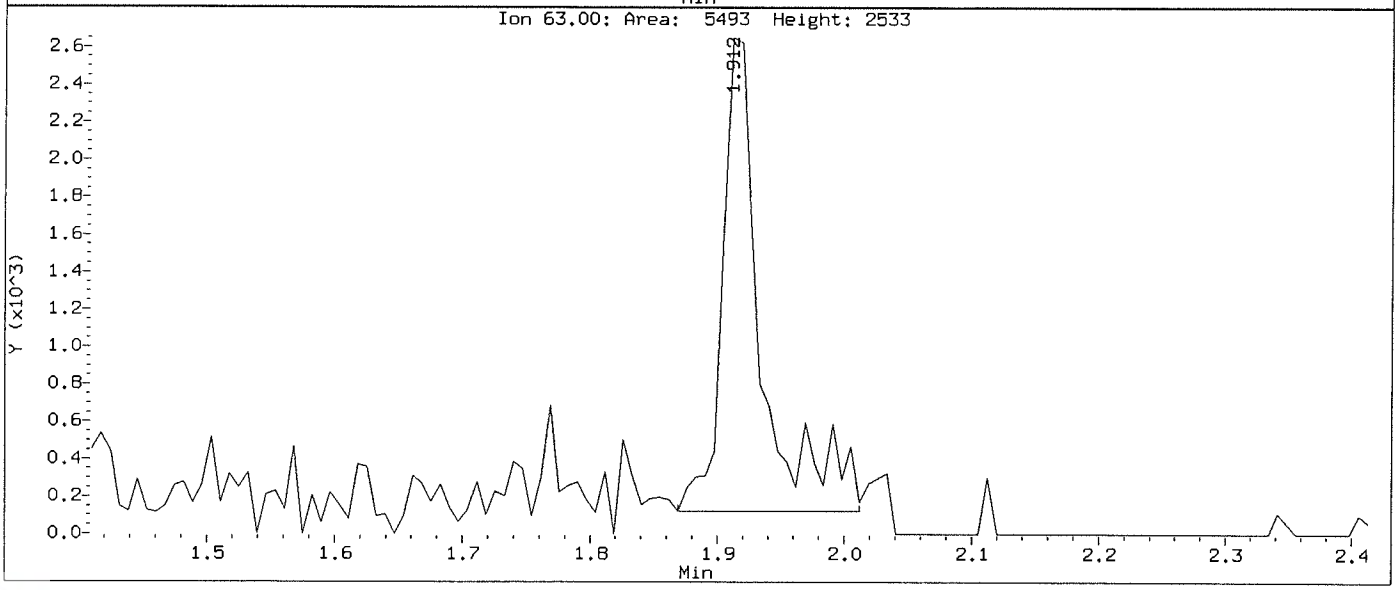


Data File: \\NAHSTWS005\Target\chem\voa6.i\X210402.b\X040205.D
Injection Date: 02-APR-2021 12:17
Instrument: voa6.i
Client Sample ID: VSTD002

Compound: 1,1-Dichloroethene
CAS Number: 75-35-4

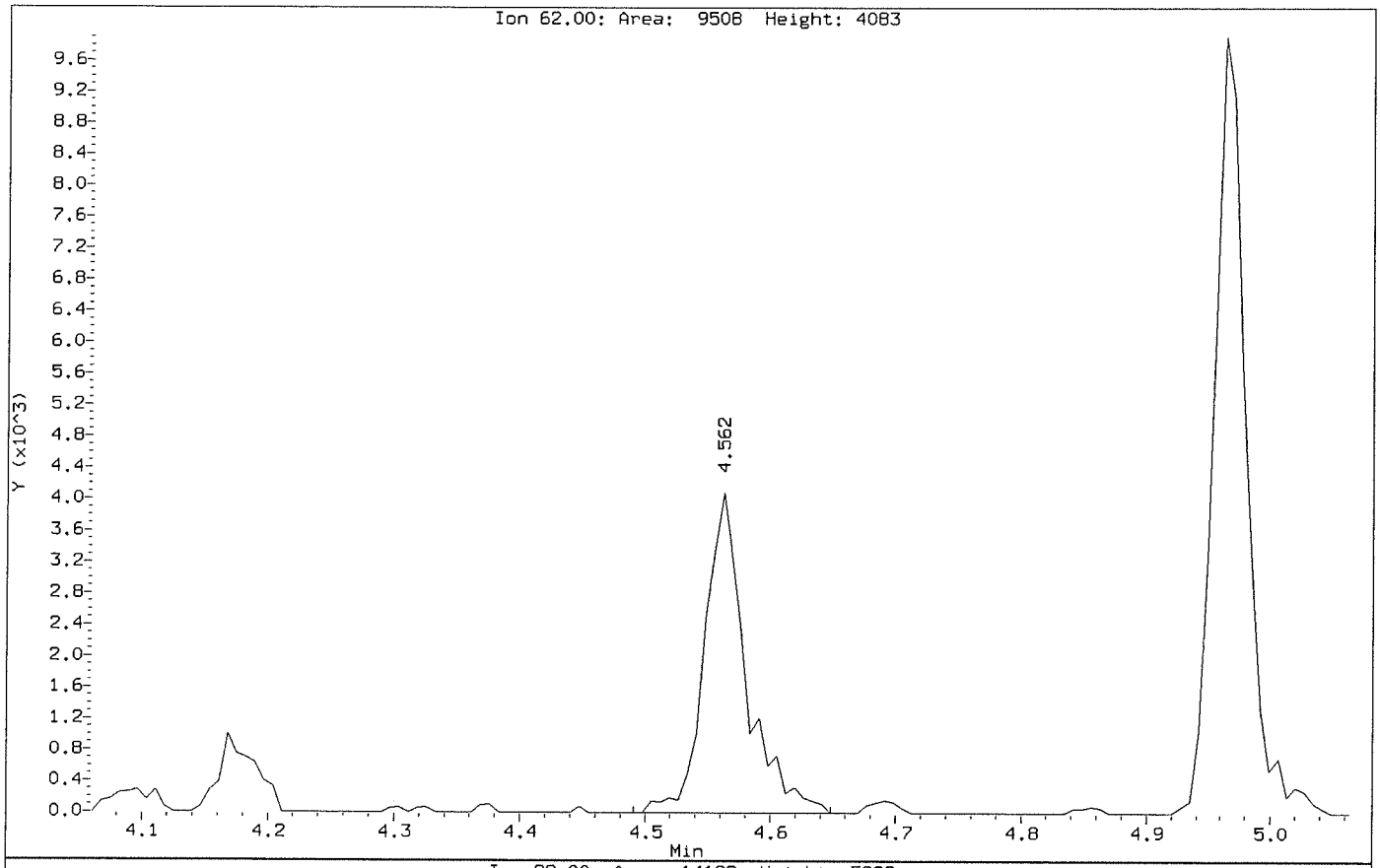


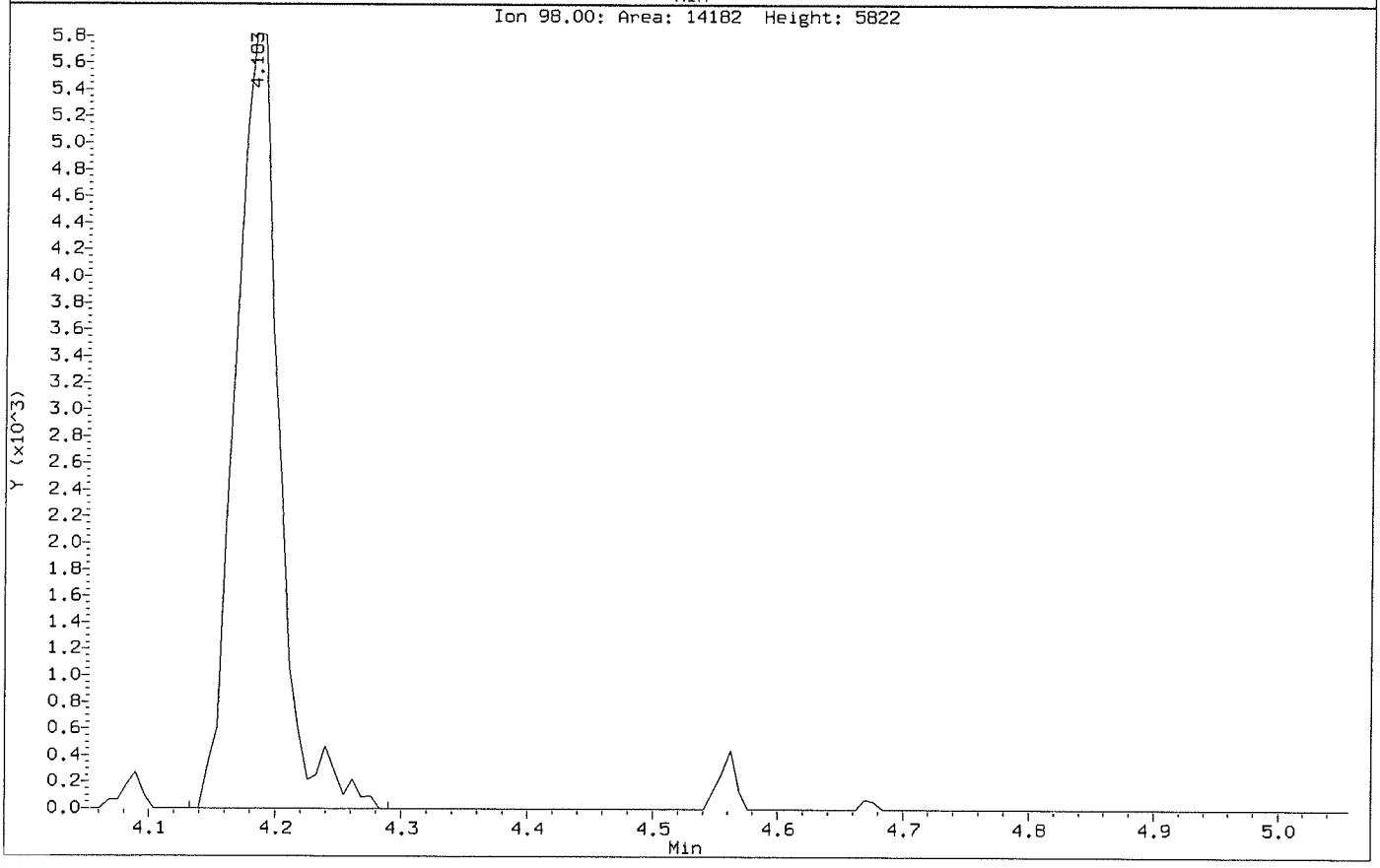




Data File: \\NAHSTWS005\Target\chem\voa6.i\X210402.b\Before6\X040205.D
Injection Date: 02-APR-2021 12:17
Instrument: voa6.i
Client Sample ID: VSTD002

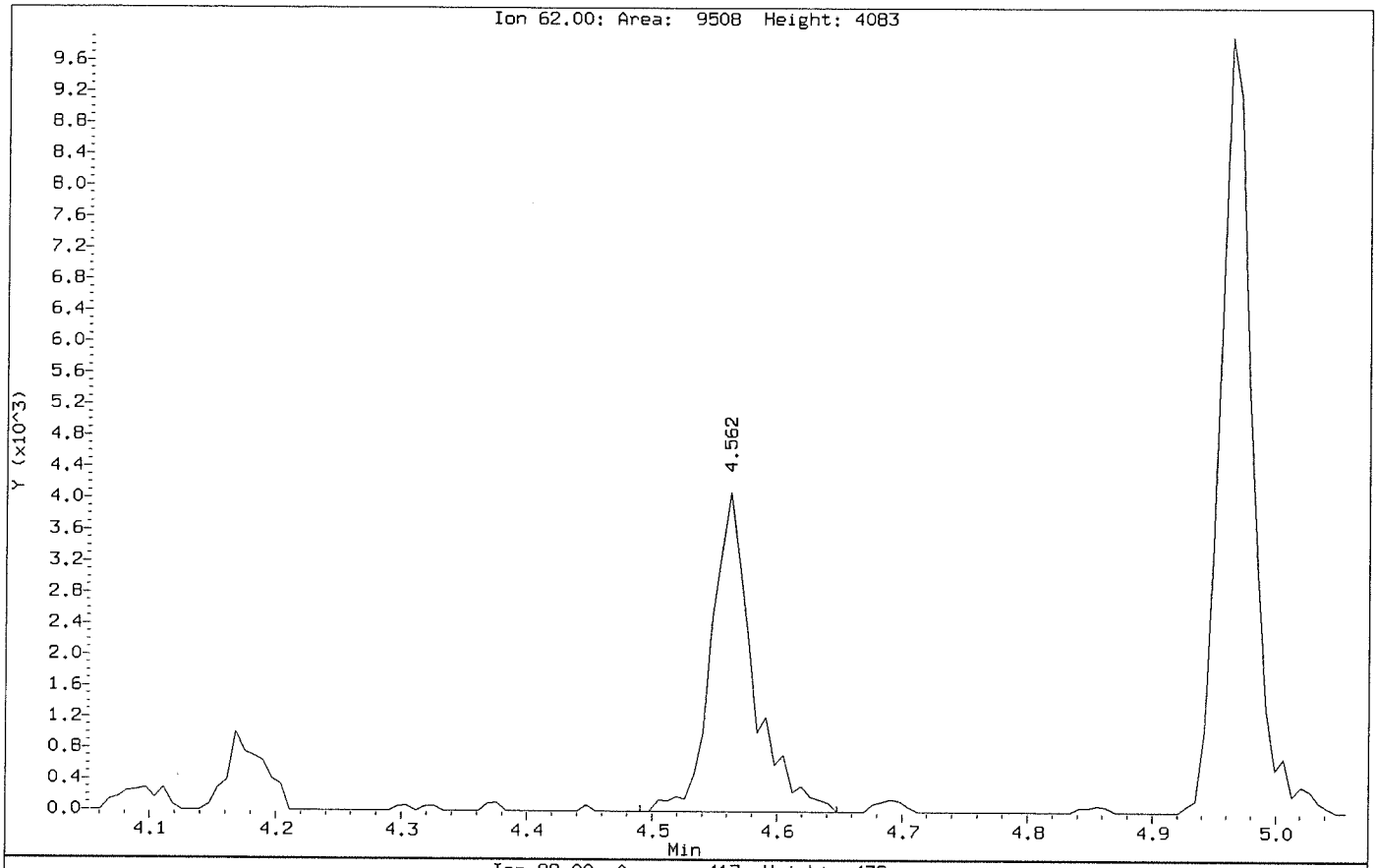
Compound: 1,2-Dichloroethane
CAS Number: 107-06-2

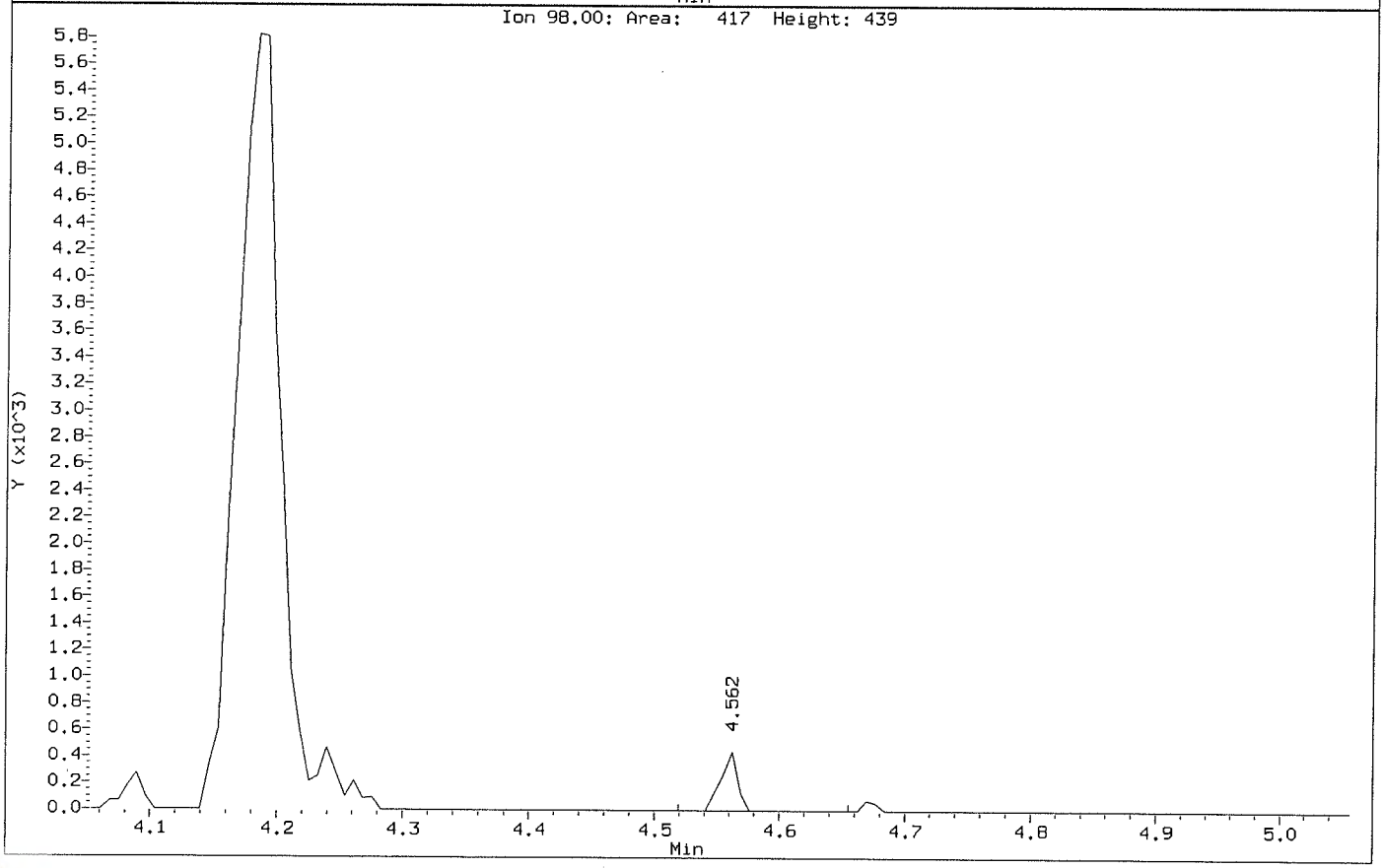




Data File: \\NAHSTWS005\Target\chem\voa6.i\X210402.b\X040205.D
Injection Date: 02-APR-2021 12:17
Instrument: voa6.i
Client Sample ID: VSTD002

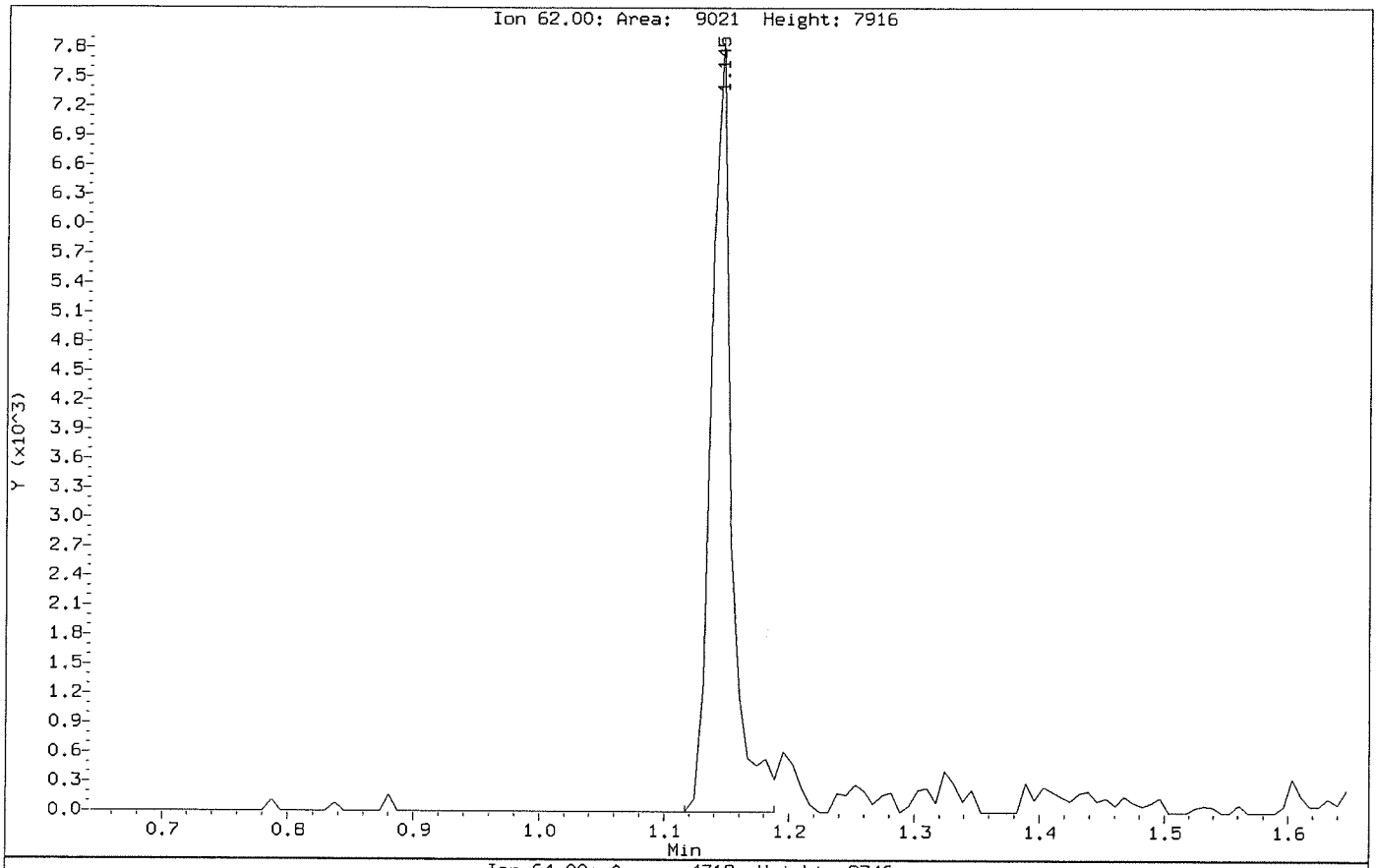
Compound: 1,2-Dichloroethane
CAS Number: 107-06-2

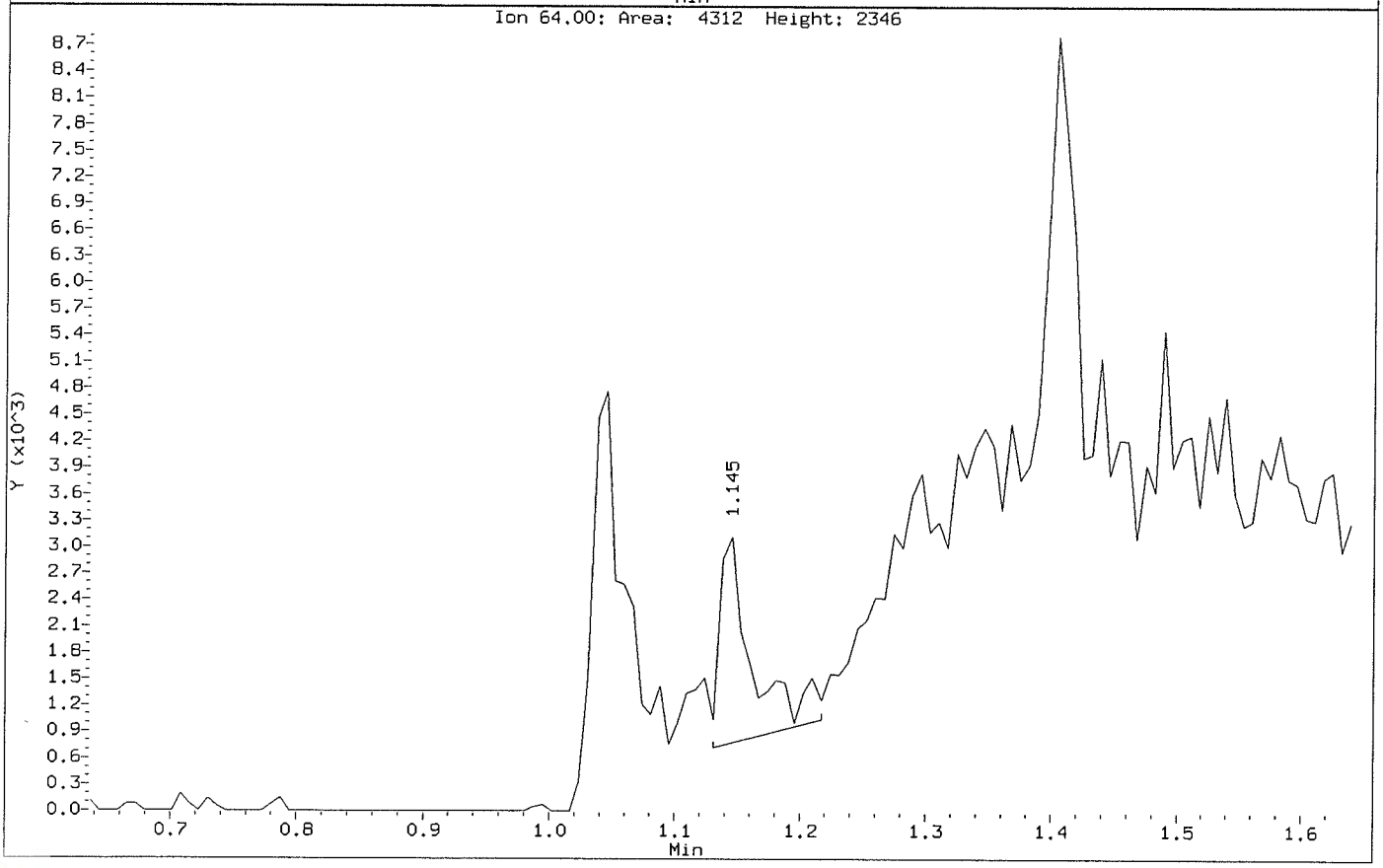




Data File: \\NAHSTWS005\Target\chem\voa6.i\X210402.b\Before6\X040205.D
Injection Date: 02-APR-2021 12:17
Instrument: voa6.i
Client Sample ID: VSTD002

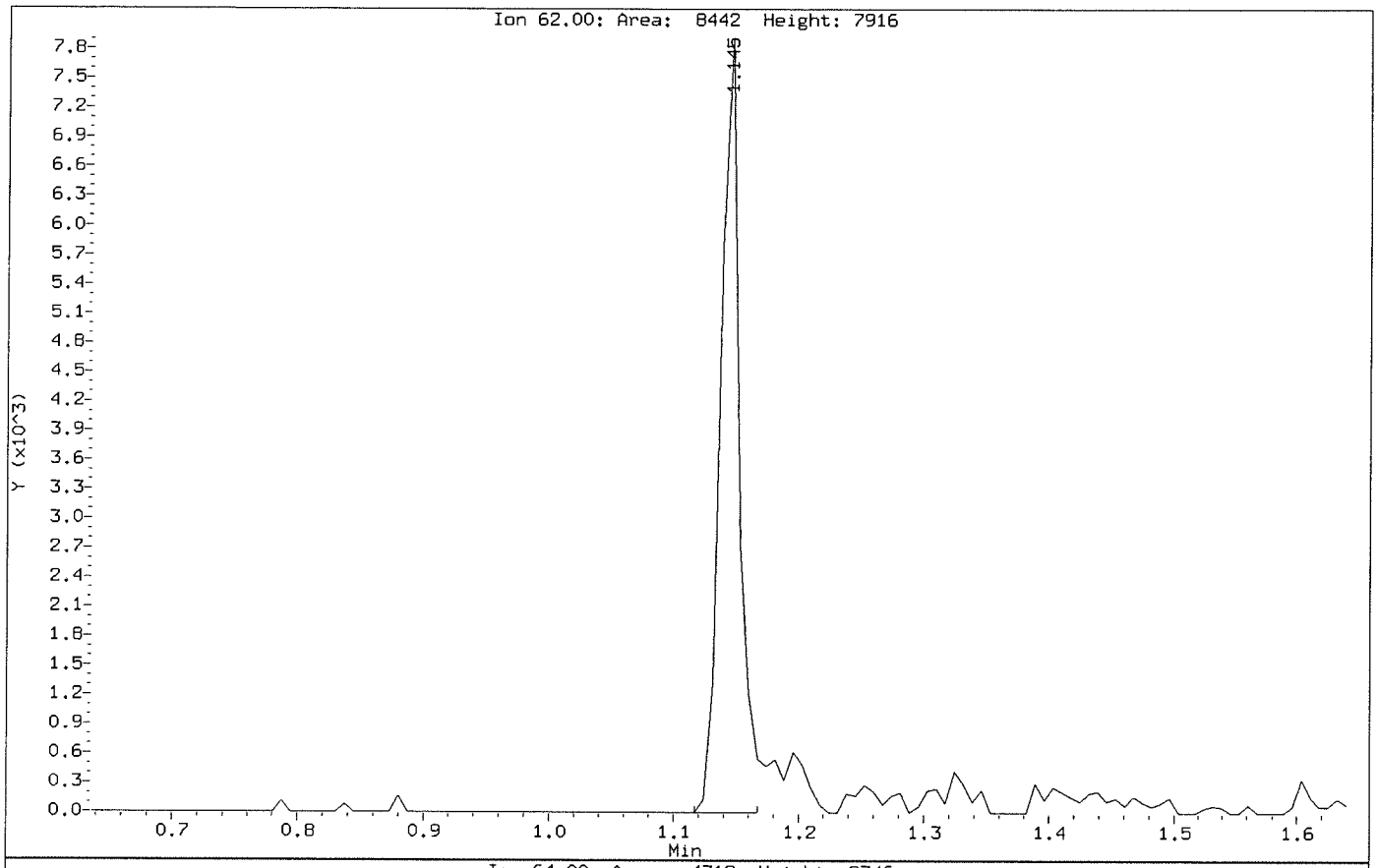
Compound: Vinyl Chloride
CAS Number: 75-01-4

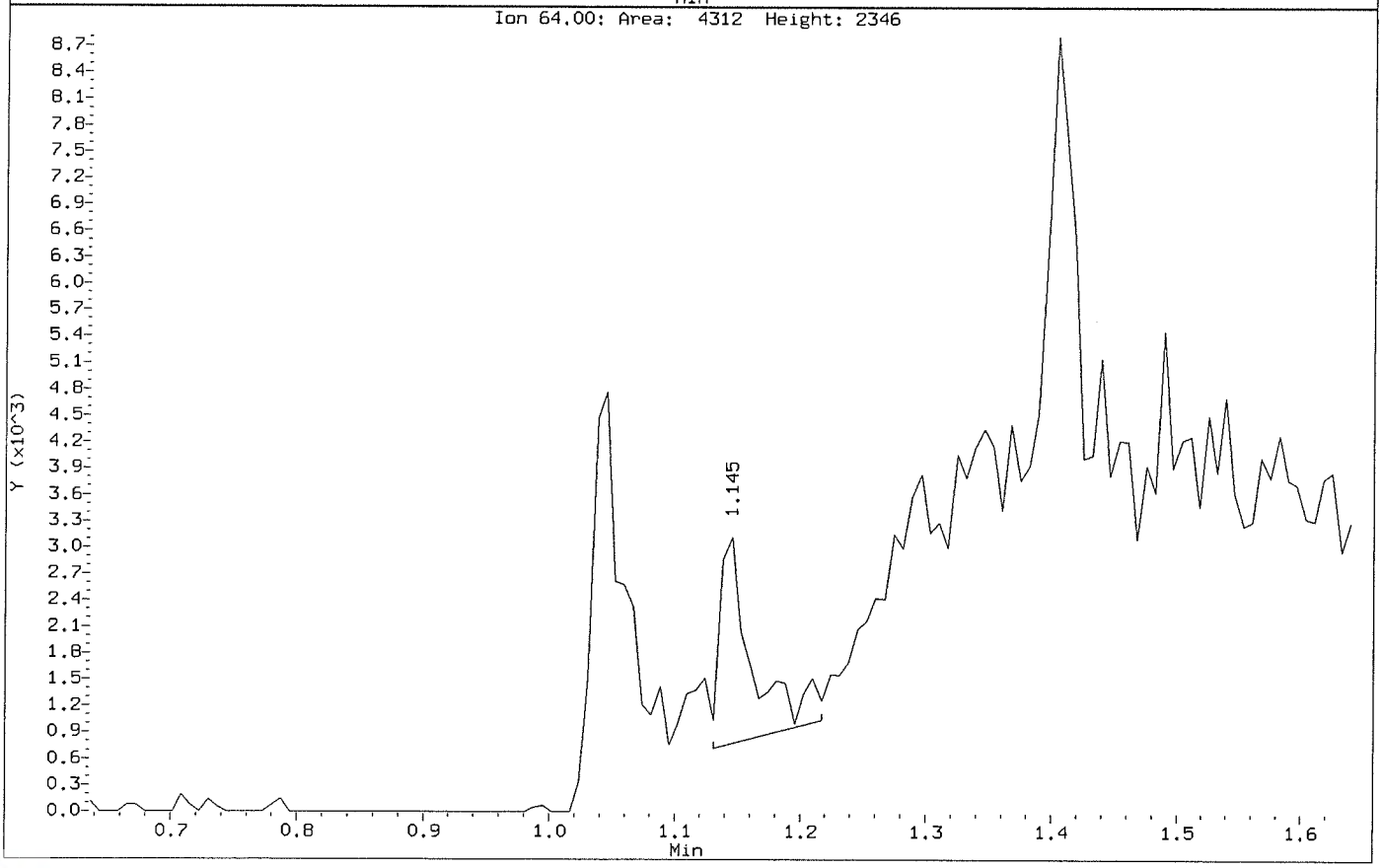




Data File: \\NAHSTWS005\Target\chem\voa6.i\X210402.b\X040205.D
Injection Date: 02-APR-2021 12:17
Instrument: voa6.i
Client Sample ID: VSTD002

Compound: Vinyl Chloride
CAS Number: 75-01-4





ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X210402.b\X040206.D
Lab Smp Id: VSTD005 Client Smp ID: VSTD005
Inj Date : 02-APR-2021 12:38
Operator : PC Inst ID: voa6.i
Smp Info : VSTD005;VSTD005;1;5;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X210402.b\8260W.m
Meth Date : 04-May-2021 11:39 voa6.i Quant Type: ISTD
Cal Date : 02-APR-2021 12:17 Cal File: X040205.D
Als bottle: 7 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBI_short1.sub
Target Version: 4.14
Processing Host: NAHSTW7066

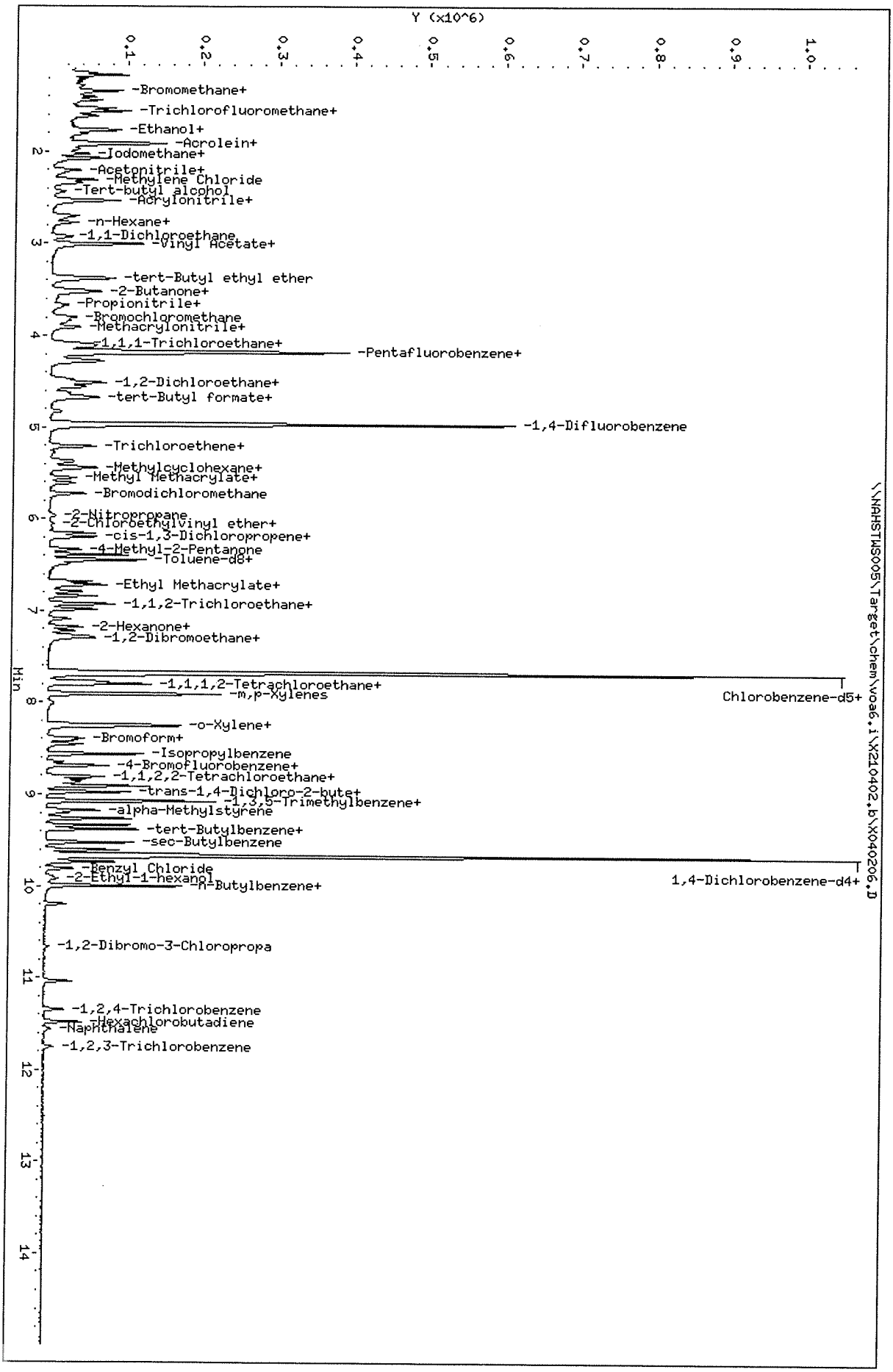
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	291823	50.0000	
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	482057	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	440939	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	205433	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	17824	5.00000	5.57
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	20809	5.00000	5.48
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	56112	5.00000	6.62
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	19193	5.00000	6.03
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	14112	5.00000	5.50
11 1,1-Dichloroethene	96	1.912	1.912	(0.457)	22632	5.00000	5.44
33 1,2-Dichloroethane	62	4.562	4.562	(0.919)	25538	5.00000	5.00
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	17639	5.00000	4.94
17 Methylene Chloride	84	2.306	2.306	(0.551)	17205	5.00000	6.75
38 Trichloroethene	130	5.207	5.207	(1.049)	18140	5.00000	5.49
5 Vinyl Chloride	62	1.145	1.145	(0.274)	22066	5.00000	5.04(M)

QC Flag Legend

M - Compound response manually integrated.

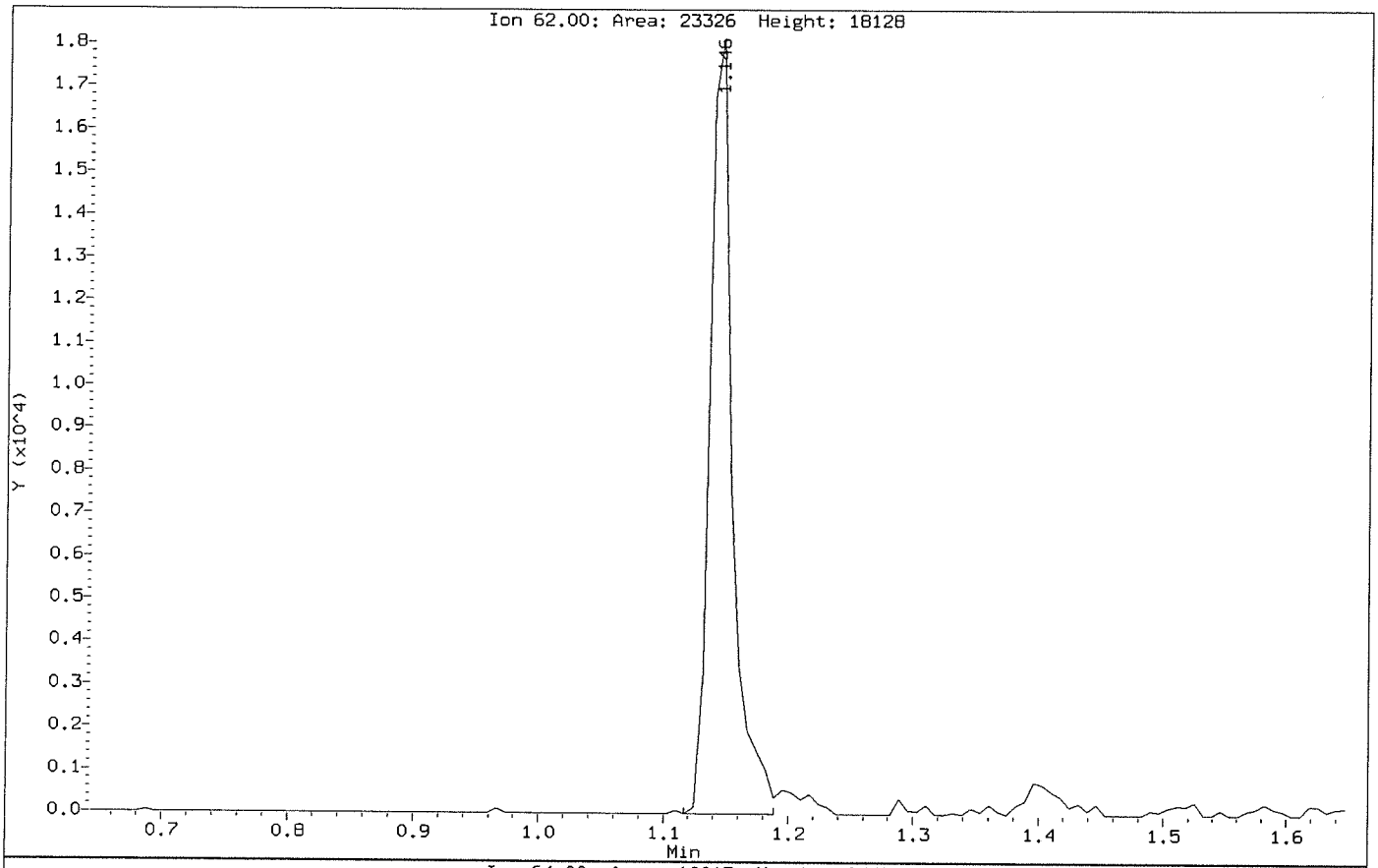


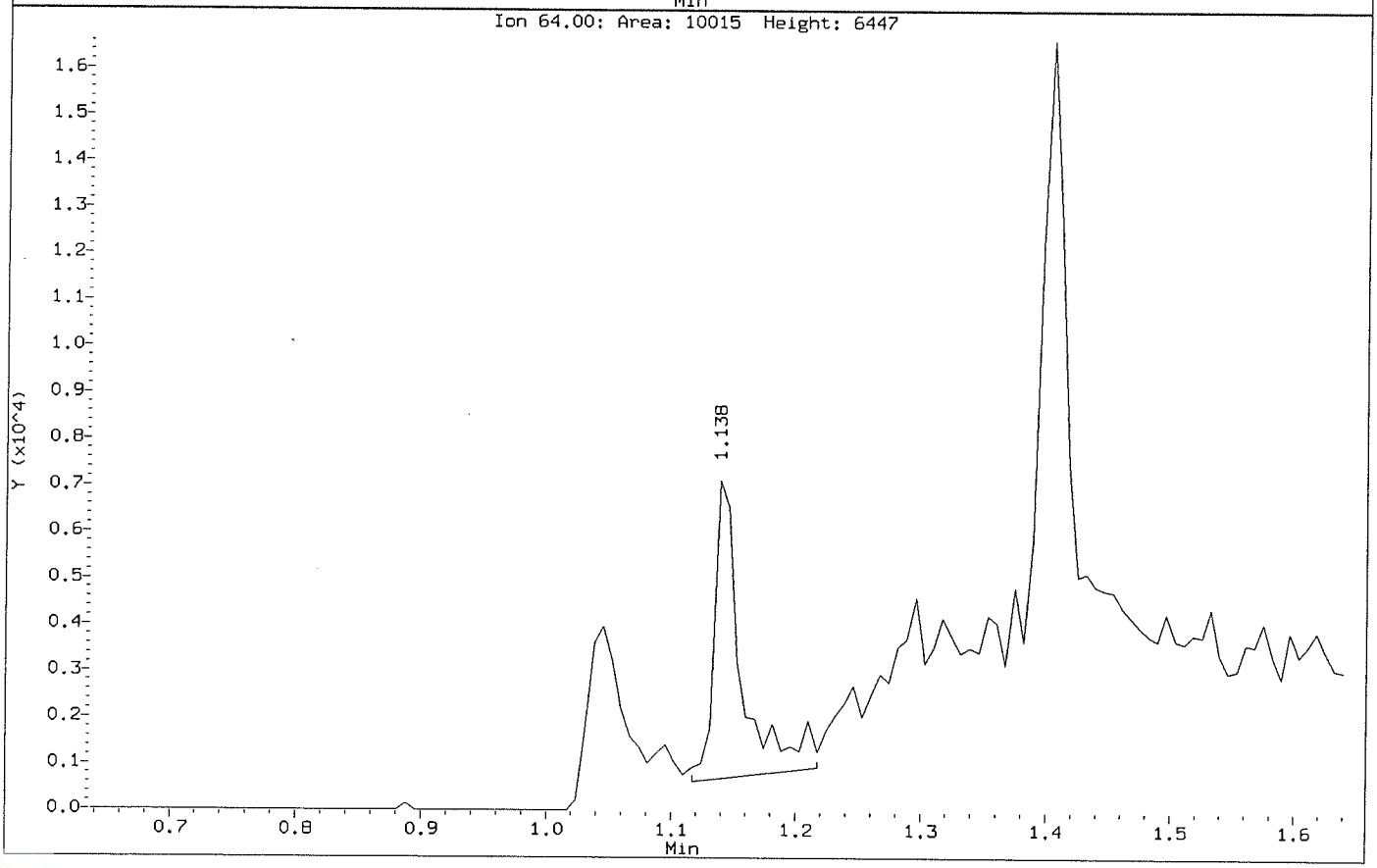
Data File: \\NAHSTWS005\Target\chem\voa6.i\X210402.b\X040206.D
Date : 02-APR-2021 12:38
Client ID: VSTD005
Sample Info: VSTD005;VSTD005;1;5;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\NAHSTWS005\Target\chem\voa6.i\X210402.b\Before6\X040206.D
Injection Date: 02-APR-2021 12:38
Instrument: voa6.i
Client Sample ID: VSTD005

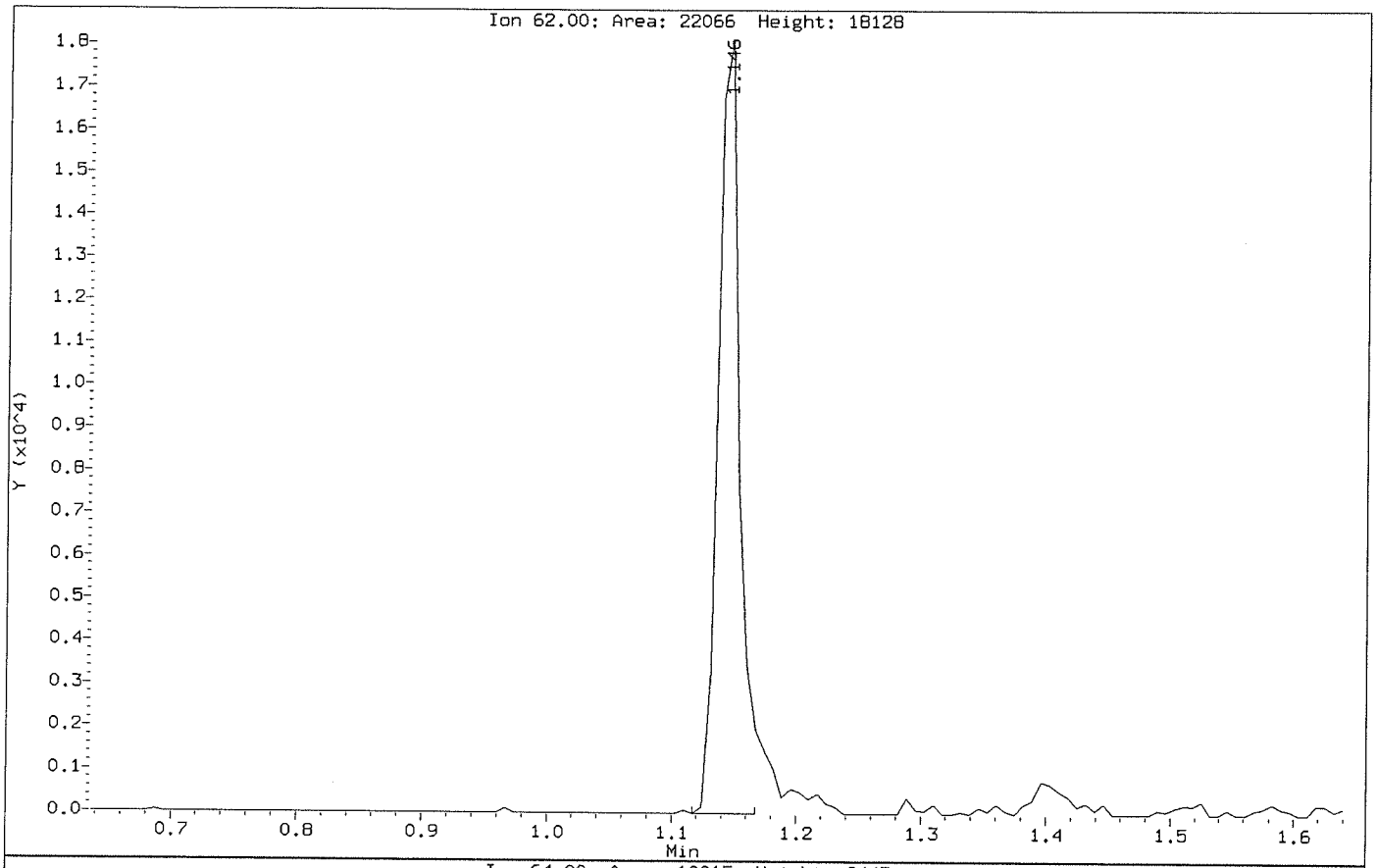
Compound: Vinyl Chloride
CAS Number: 75-01-4

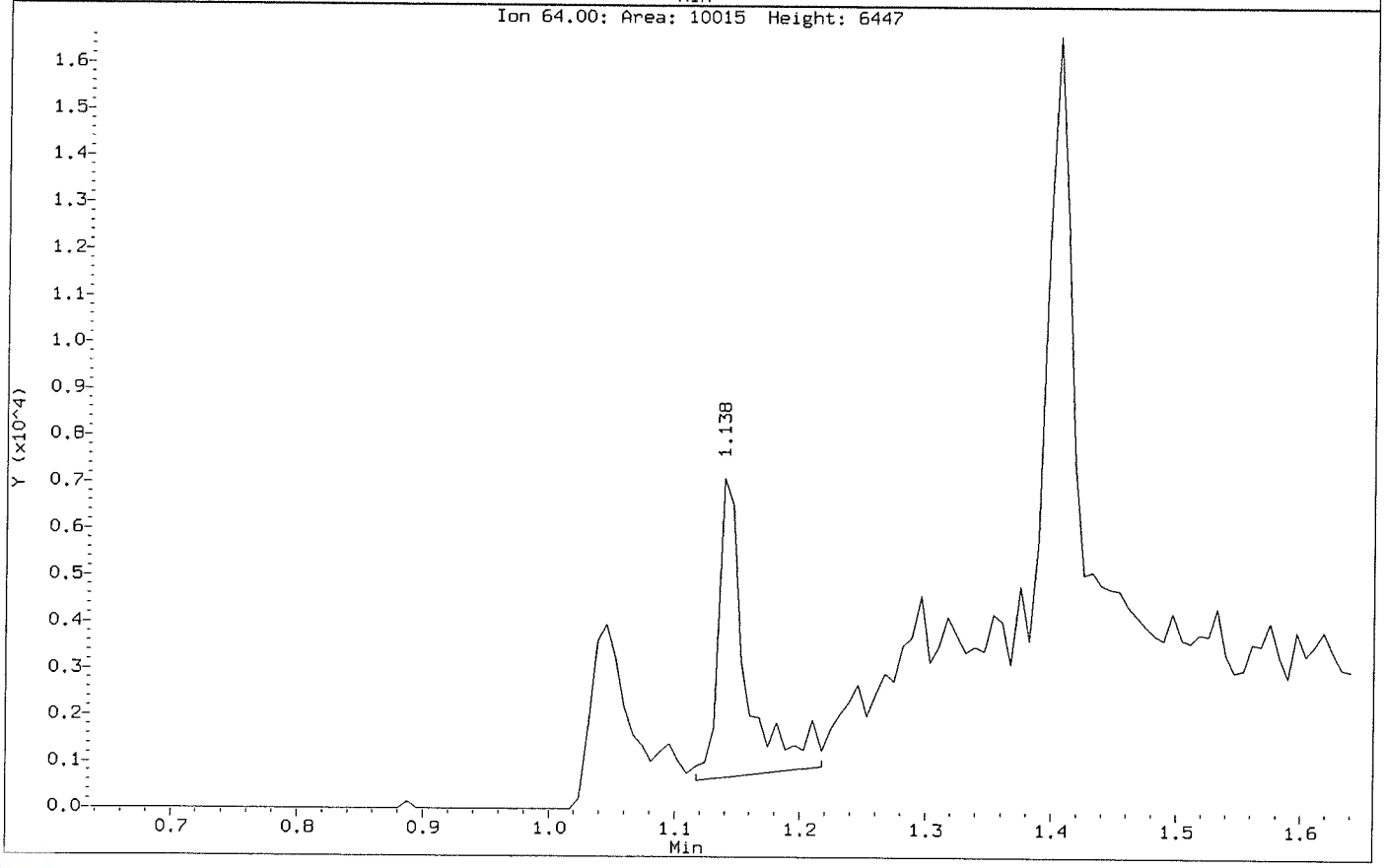




Data File: \\NAHSTWS005\Target\chem\voa6.i\X210402.b\X040206.D
Injection Date: 02-APR-2021 12:38
Instrument: voa6.i
Client Sample ID: VSTD005

Compound: Vinyl Chloride
CAS Number: 75-01-4





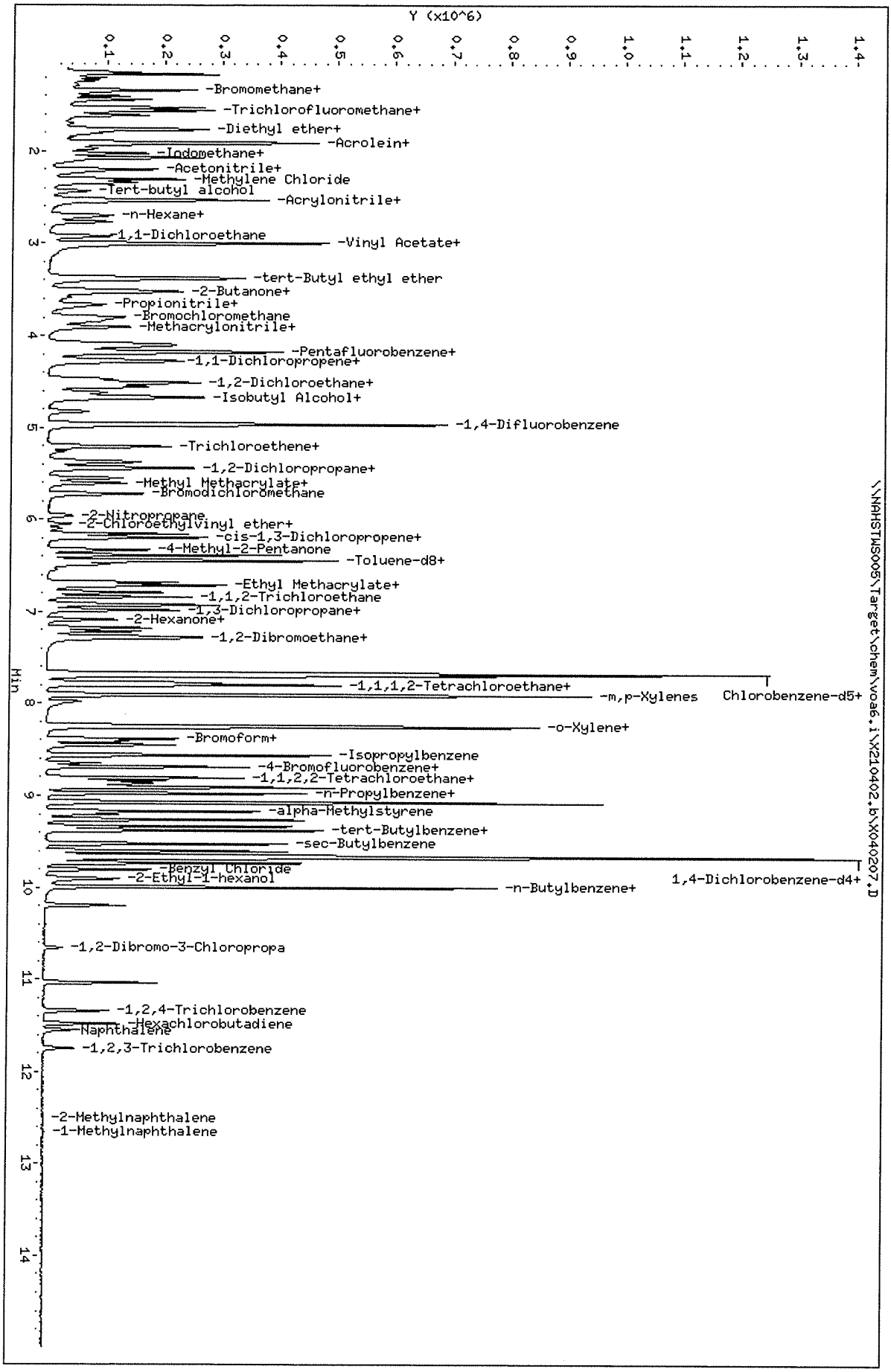
ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X210402.b\X040207.D
Lab Smp Id: VSTD020 Client Smp ID: VSTD020
Inj Date : 02-APR-2021 12:59
Operator : PC Inst ID: voa6.i
Smp Info : VSTD020;VSTD020;1;6;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X210402.b\8260W.m
Meth Date : 04-May-2021 11:39 voa6.i Quant Type: ISTD
Cal Date : 02-APR-2021 12:38 Cal File: X040206.D
Als bottle: 8 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBI_short1.sub
Target Version: 4.14
Processing Host: NAHSTW7066

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	303845	50.0000	
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	500849	50.0000	
* 47 Chlorobenzene-d5	117	7.670	7.670	(1.000)	505360	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	244406	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	68668	20.0000	19.46
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	80475	20.0000	19.07
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	218999	20.0000	18.08
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	81621	20.0000	17.93
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	50828	20.0000	17.31
11 1,1-Dichloroethene	96	1.919	1.919	(0.459)	80105	20.0000	18.51
33 1,2-Dichloroethane	62	4.555	4.555	(0.918)	95203	20.0000	17.95
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	65903	20.0000	17.74
17 Methylene Chloride	84	2.305	2.305	(0.551)	63925	20.0000	20.29
38 Trichloroethene	130	5.206	5.206	(1.049)	61652	20.0000	17.98
5 Vinyl Chloride	62	1.145	1.145	(0.274)	89514	20.0000	19.65



Data File: \\NAHSTWS005\Target\chem\voa6.i\X210402.b\X040207.D
Date : 02-APR-2021 12:59
Client ID: VSTD020
Sample Info: VSTD020;VSTD020;1;6;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

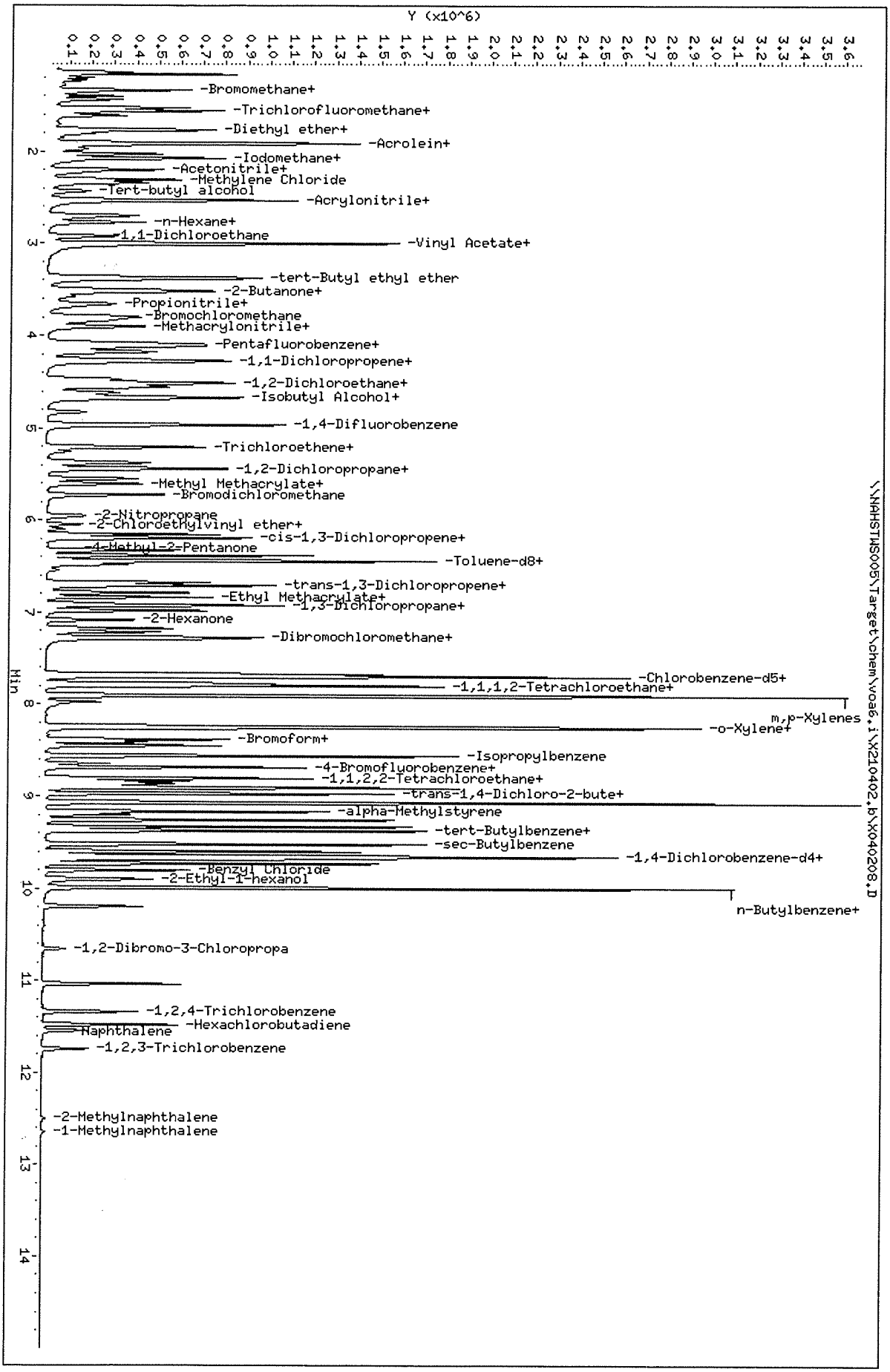
ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X210402.b\X040208.D
Lab Smp Id: VSTD050 Client Smp ID: VSTD050
Inj Date : 02-APR-2021 13:20
Operator : PC Inst ID: voa6.i
Smp Info : VSTD050;VSTD050;1;7;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X210402.b\8260W.m
Meth Date : 04-May-2021 11:39 voa6.i Quant Type: ISTD
Cal Date : 02-APR-2021 12:59 Cal File: X040207.D
Als bottle: 9 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBI_short1.sub
Target Version: 4.14
Processing Host: NAHSTW7066

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
*	1 Pentafluorobenzene	168	4.182	4.182	(1.000)	359684	50.0000	
*	36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	598485	50.0000	
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	588191	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	309539	50.0000	
$	30 Dibromofluoromethane	113	4.096	4.096	(0.979)	201590	50.0000	47.62
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	243778	50.0000	48.06
$	48 Toluene-d8	98	6.388	6.388	(0.833)	658700	50.0000	43.80
$	69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	267013	50.0000	47.42
	53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	155825	50.0000	45.60
	11 1,1-Dichloroethene	96	1.911	1.911	(0.457)	240341	50.0000	46.92
	33 1,2-Dichloroethane	62	4.555	4.555	(0.918)	309702	50.0000	48.88
	27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	208514	50.0000	47.42
	17 Methylene Chloride	84	2.305	2.305	(0.551)	173954	50.0000	44.72
	38 Trichloroethene	130	5.206	5.206	(1.049)	206412	50.0000	50.38
	5 Vinyl Chloride	62	1.145	1.145	(0.274)	256013	50.0000	47.47



Data File: \\NAHSTWS005\Target\chem\voa6.i\X210402.b\X040208.D
Date : 02-APR-2021 13:20
Client ID: VSTD050
Sample Info: VSTD050;VSTD050;1;7;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

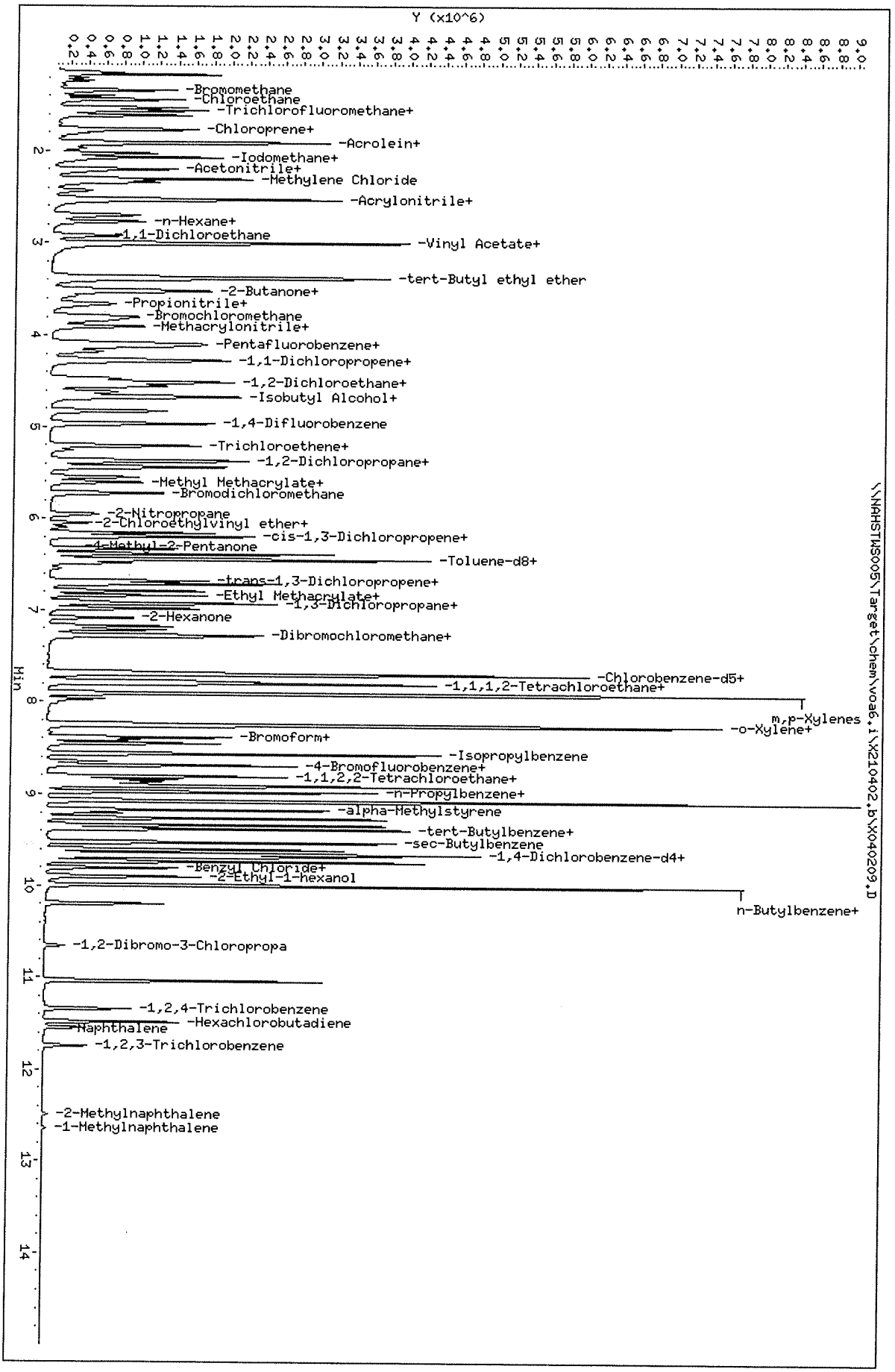
ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X210402.b\X040209.D
Lab Smp Id: VSTD100 Client Smp ID: VSTD100
Inj Date : 02-APR-2021 13:41
Operator : PC Inst ID: voa6.i
Smp Info : VSTD100;VSTD100;1;8;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X210402.b\8260W.m
Meth Date : 04-May-2021 11:39 voa6.i Quant Type: ISTD
Cal Date : 02-APR-2021 13:20 Cal File: X040208.D
Als bottle: 10 Calibration Sample, Level: 8
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBI_short1.sub
Target Version: 4.14
Processing Host: NAHSTW7066

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	397825	50.0000	
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	683502	50.0000	
* 47 Chlorobenzene-d5	117	7.670	7.670	(1.000)	652649	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	339759	50.0000	
$ 30 Dibromofluoromethane	113	4.096	4.096	(0.979)	476731	100.000	101.33
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	568806	100.000	100.86
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	1733824	100.000	101.37
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	624362	100.000	98.11
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	366869	100.000	96.76
11 1,1-Dichloroethene	96	1.911	1.911	(0.457)	544587	100.000	96.14
33 1,2-Dichloroethane	62	4.555	4.555	(0.918)	718135	100.000	99.26
27 cis-1,2-Dichloroethene	96	3.523	3.523	(0.842)	487101	100.000	100.16
17 Methylene Chloride	84	2.305	2.305	(0.551)	420832	100.000	96.06
38 Trichloroethene	130	5.206	5.206	(1.049)	478548	100.000	102.27
5 Vinyl Chloride	62	1.145	1.145	(0.274)	541798	100.000	90.84



Data File: \\NAHSTWS005\Target\chem\voa6.i\X210402.b\X040209.D
Date : 02-APR-2021 13:41
Client ID: VSTD100
Sample Info: VSTD100;VSTD100;1;8;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\NAHSTWS005\Target\chem\voa6.i\X210402.b\X040210.D Page 1
Report Date: 04-May-2021 11:39

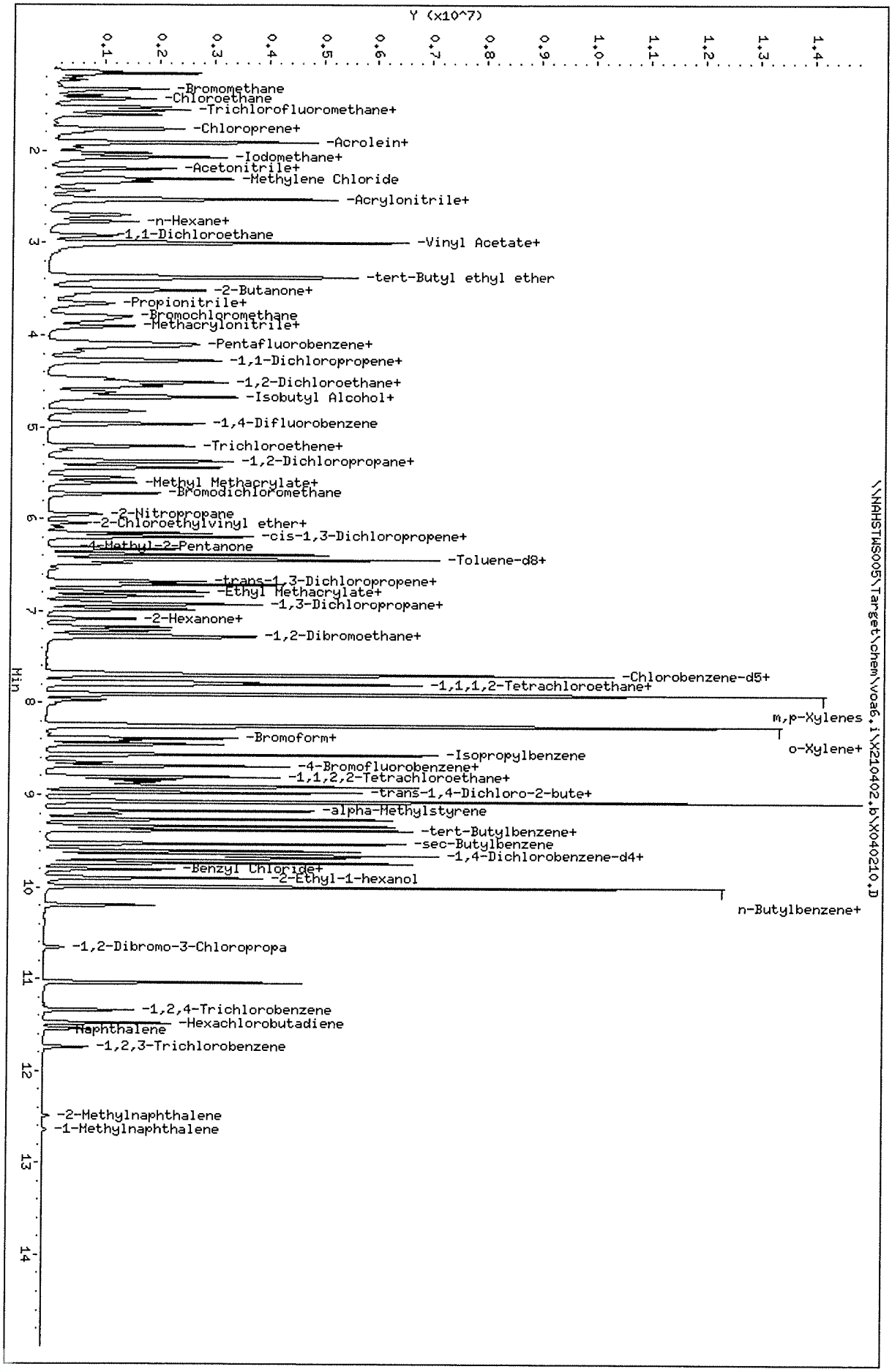
ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X210402.b\X040210.D
Lab Smp Id: VSTD150 Client Smp ID: VSTD150
Inj Date : 02-APR-2021 14:02
Operator : PC Inst ID: voa6.i
Smp Info : VSTD150;VSTD150;1;9;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X210402.b\8260W.m
Meth Date : 04-May-2021 11:39 voa6.i Quant Type: ISTD
Cal Date : 02-APR-2021 13:41 Cal File: X040209.D
Als bottle: 11 Calibration Sample, Level: 9
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBI_short1.sub
Target Version: 4.14
Processing Host: NAHSTW7066

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	432906	50.0000	
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	745206	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	707197	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	375287	50.0000	
$ 30 Dibromofluoromethane	113	4.096	4.096	(0.979)	758989	150.000	148.06
$ 35 1,2-Dichloroethane-d4	65	4.469	4.469	(1.068)	919399	150.000	149.58
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	2714142	150.000	145.62
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	1011725	150.000	145.90
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	595658	150.000	144.99
11 1,1-Dichloroethene	96	1.912	1.912	(0.457)	861197	150.000	139.71
33 1,2-Dichloroethane	62	4.555	4.555	(0.918)	1146217	150.000	145.31
27 cis-1,2-Dichloroethene	96	3.523	3.523	(0.842)	789545	150.000	149.19
17 Methylene Chloride	84	2.298	2.298	(0.550)	703062	150.000	146.68
38 Trichloroethene	130	5.207	5.207	(1.049)	752757	150.000	147.55
5 Vinyl Chloride	62	1.138	1.138	(0.272)	862204	150.000	132.84



Data File: \\NAHSTWS005\Target\chem\voa6.i\X210402.b\X040210.D
Date : 02-APR-2021 14:02
Client ID: VSTD150
Sample Info: VSTD150;VSTD150;1;9;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X210402.b\X040211.D
Lab Smp Id: VSTD200 Client Smp ID: VSTD200
Inj Date : 02-APR-2021 14:23
Operator : PC Inst ID: voa6.i
Smp Info : VSTD200;VSTD200;1;10;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X210402.b\8260W.m
Meth Date : 04-May-2021 11:39 voa6.i Quant Type: ISTD
Cal Date : 02-APR-2021 14:02 Cal File: X040210.D
Als bottle: 12 Calibration Sample, Level: 10
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBI_short1.sub
Target Version: 4.14
Processing Host: NAHSTW7066

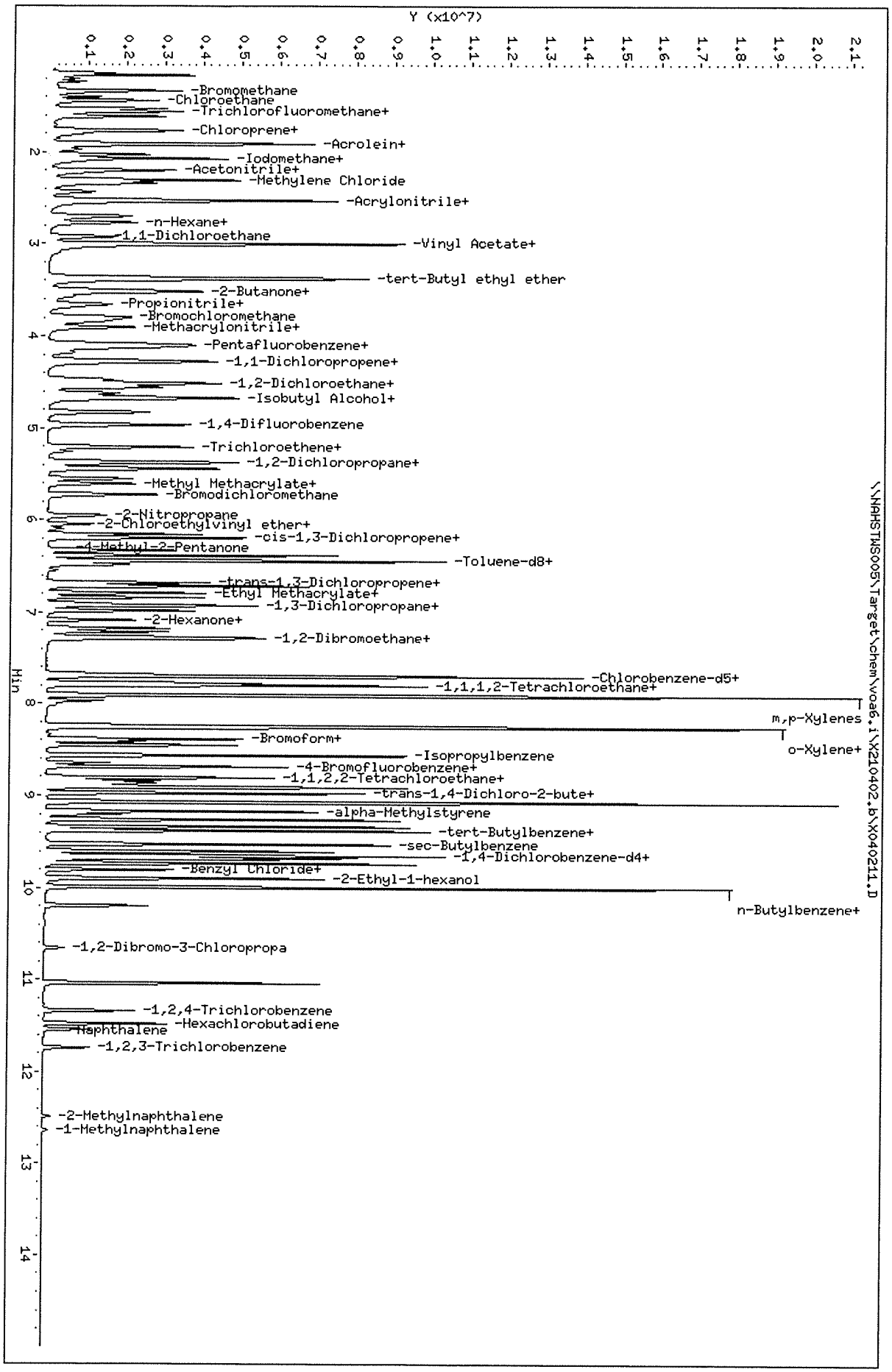
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	444815	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	788136	50.0000	
* 47 Chlorobenzene-d5	117	7.670	7.670	(1.000)	732576	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	399401	50.0000	
$ 30 Dibromofluoromethane	113	4.096	4.096	(0.979)	1061294	200.000	201.33(A)
$ 35 1,2-Dichloroethane-d4	65	4.469	4.469	(1.069)	1266674	200.000	200.40(A)
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	3949224	200.000	203.80(A)
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	1473828	200.000	204.50(A)
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	832139	200.000	195.54
11 1,1-Dichloroethene	96	1.911	1.911	(0.457)	1249794	200.000	197.32
33 1,2-Dichloroethane	62	4.555	4.555	(0.916)	1584950	200.000	189.99
27 cis-1,2-Dichloroethene	96	3.523	3.523	(0.842)	1123271	200.000	206.57(A)
17 Methylene Chloride	84	2.305	2.305	(0.551)	1013494	200.000	205.19(A)
38 Trichloroethene	130	5.206	5.206	(1.048)	1061444	200.000	196.73
5 Vinyl Chloride	62	1.138	1.138	(0.272)	1159290	200.000	173.84

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.



Data File: \\NAHSTWS005\Target\chem\voa6.i\X210402.b\X040211.D
Date : 02-APR-2021 14:23
Client ID: VSTD200
Sample Info: VSTD200;VSTD200;1;10;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

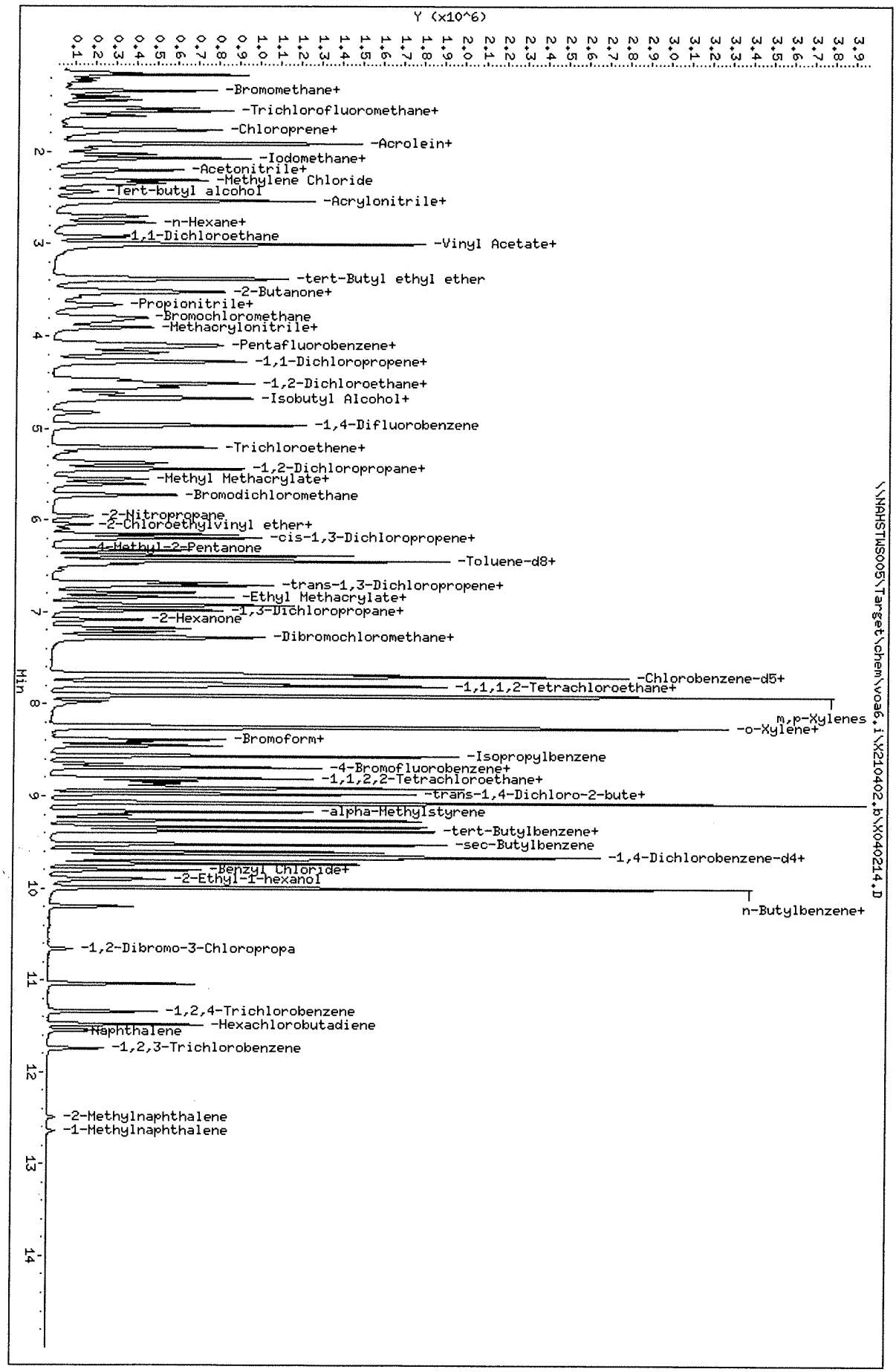
ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X210402.b\X040214.D
Lab Smp Id: ICV Client Smp ID: ICV
Inj Date : 02-APR-2021 15:26
Operator : PC Inst ID: voa6.i
Smp Info : CCV;CCV;2;;ICV
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X210402.b\8260W.m
Meth Date : 04-May-2021 11:39 voa6.i Quant Type: ISTD
Cal Date : 02-APR-2021 14:23 Cal File: X040211.D
Als bottle: 15 QC Sample: METHSPIKE
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBI_short1.sub
Target Version: 4.14
Processing Host: NAHSTW7066

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	403237	50.0000	
* 36 1,4-Difluorobenzene	114	4.963	4.970	(1.000)	674704	50.0000	
* 47 Chlorobenzene-d5	117	7.670	7.670	(1.000)	639311	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	322985	50.0000	
$ 30 Dibromofluoromethane	113	4.096	4.096	(0.979)	233448	49.1812	49.18
$ 35 1,2-Dichloroethane-d4	65	4.469	4.469	(1.069)	278339	48.9433	48.94
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	812891	49.4873	49.48
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	292882	47.8435	47.84
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	178830	48.1535	48.15
11 1,1-Dichloroethene	96	1.919	1.911	(0.459)	265347	46.2152	46.21
33 1,2-Dichloroethane	62	4.555	4.555	(0.918)	339122	47.4855	47.48
27 cis-1,2-Dichloroethene	96	3.530	3.523	(0.844)	228412	46.3383	46.33
17 Methylene Chloride	84	2.305	2.305	(0.551)	198869	45.5779	45.57
38 Trichloroethene	130	5.206	5.206	(1.049)	232943	50.4339	50.43
5 Vinyl Chloride	62	1.145	1.138	(0.274)	279152	46.1765	46.17



Data File: \\NAHSTWS005\Target\chem\voa6.i\X210402.b\X040214.D
Date : 02-APR-2021 15:26
Client ID: ICV
Sample Info: CCV;CCV;2;;ICV
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

MSVOA06 -Logbook

Batch: 44543 **Analyst:** Presenta Cabascango

Date: 04-22-2021 **Reviewer:**

Method: 8260 **Laboratory:** Houston

Comments:

#	Samp ID	Type	Analyzed	DF	Init Wt/Vol	Final Vol	File ID	Matrix	Status	pH
1	BFB	TUNE	04-22-2021 10:55 am	1.00	50 mL	50 mL	X042201.D	Liquid	Y	NA
2	CCV	CCV	04-22-2021 11:16 am	1.00	50 mL	50 mL	X042202a.D	Liquid	Y	NA
3	CCV	CCV	04-22-2021 11:37 am	1.00	50 mL	50 mL	X042203.D	Liquid	Y	NA
4	CCB	SAMP	04-22-2021 11:58 am	1.00	50 mL	50 mL	X042204.D	Liquid	Y	NA
5	VLCSW-210422	LCS	04-22-2021 12:19 pm	1.00	50 mL	50 mL	X042205.D	Liquid	Y	NA
6	BLANK	SAMP	04-22-2021 12:40 pm	1.00	50 mL	50 mL	X042206.D	Liquid	Y	NA
7	VBLKW-210422	MBLK	04-22-2021 01:01 pm	1.00	50 mL	50 mL	X042207.D	Liquid	Y	NA
8	HS21041102-11	SAMP	04-22-2021 01:22 pm	1.00	50 mL	50 mL	X042208.D	Liquid	Y	NA
9	HS21041102-01	SAMP	04-22-2021 01:44 pm	1.00	50 mL	50 mL	X042209.D	Liquid	Y	NA
10	HS21041102-02	SAMP	04-22-2021 02:05 pm	1.00	50 mL	50 mL	X042210.D	Liquid	Y	NA
11	HS21041102-04	SAMP	04-22-2021 02:26 pm	1.00	50 mL	50 mL	X042211.D	Liquid	Y	NA
12	HS21041102-05	SAMP	04-22-2021 02:47 pm	1.00	50 mL	50 mL	X042212.D	Liquid	Y	NA
13	HS21041102-06	SAMP	04-22-2021 03:08 pm	1.00	50 mL	50 mL	X042213.D	Liquid	Y	NA
14	HS21041102-03	SAMP	04-22-2021 03:29 pm	1.00	50 mL	50 mL	X042214.D	Liquid	Y	NA
15	HS21041102-09	SAMP	04-22-2021 03:50 pm	1.00	50 mL	50 mL	X042215.D	Liquid	Y	NA
16	HS21041102-04MS	MS	04-22-2021 04:11 pm	1.00	50 mL	50 mL	X042216.D	Liquid	Y	NA
17	HS21041102-04MSD	MSD	04-22-2021 04:32 pm	1.00	50 mL	50 mL	X042217.D	Liquid	Y	NA
18	HS21040967-07	SAMP	04-22-2021 04:53 pm	25.00	2 mL	50 mL	X042218.D	Liquid	Y	NA
19	HS21040996-02	SAMP	04-22-2021 05:14 pm	10.00	5 mL	50 mL	X042219.D	Liquid	Y	NA
20	HS21041025-05	SAMP	04-22-2021 05:35 pm	1.00	50 mL	50 mL	X042220.D	Liquid	Y	NA
21	HS21041096-05	SAMP	04-22-2021 05:56 pm	1.00	50 mL	50 mL	X042221.D	Liquid	Y	NA
22	HS21041121-06	SAMP	04-22-2021 06:17 pm	1.00	50 mL	50 mL	X042222.D	Liquid	Y	NA
23	HS21041122-02	SAMP	04-22-2021 06:38 pm	1.00	50 mL	50 mL	X042223.D	Liquid	Y	NA
24	HS21041182-02	SAMP	04-22-2021 06:59 pm	1.00	50 mL	50 mL	X042224.D	Liquid	Y	NA
25	HS21041189-03	SAMP	04-22-2021 07:20 pm	1.00	50 mL	50 mL	X042225.D	Liquid	Y	NA
26	HS21041102-07	SAMP	04-22-2021 07:42 pm	5.00	10 mL	50 mL	X042226.D	Liquid	Y	NA
27	HS21041102-07	SAMP	04-22-2021 08:03 pm	50.00	1 mL	50 mL	X042227.D	Liquid	Y	NA
28	HS21041102-10	SAMP	04-22-2021 08:24 pm	10.00	5 mL	50 mL	X042228.D	Liquid	Y	NA
29	HS21041102-10	SAMP	04-22-2021 08:45 pm	100.0(	500 µL	50 mL	X042229.D	Liquid	Y	NA
30	CCV-END	CCV	04-22-2021 09:06 pm	1.00	50 mL	50 mL	X042230.D	Liquid	Y	NA
31	BLANK	SAMP	04-22-2021 09:27 pm	1.00	50 mL	50 mL	X042231.D	Liquid	Y	NA

FORM 2
WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS21041102

	CLIENT SAMPLE NO.	SMC1 #	SMC2 (DCE) #	SMC3 (TOL) #	OTHER #	TOT OUT
01	VLCSW-210422	102	105	103	100	0
02	VBLKW-210422	93	96	108	92	0
03	HS21041102-11	91	96	108	95	0
04	HS21041102-01	92	98	108	92	0
05	HS21041102-02	93	97	107	91	0
06	HS21041102-04	94	98	109	94	0
07	HS21041102-05	92	99	107	94	0
08	HS21041102-06	95	99	109	91	0
09	HS21041102-03	94	101	106	92	0
10	HS21041102-09	95	101	109	93	0
11	HS21041102-04MS	92	96	105	103	0
12	HS21041102-04MSD	93	93	104	98	0
13	HS21041102-07	94	100	107	95	0
14	HS21041102-07	91	96	107	93	0
15	HS21041102-10	93	98	110	94	0
16	HS21041102-10	92	96	106	94	0
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						
28						

		QC LIMITS
SMC1	= Dibromofluoromethane	(0-130)
SMC2 (DCE)	= 1,2-Dichloroethane-d4	(0-130)
SMC3 (TOL)	= Toluene-d8	(0-130)
OTHER	= 4-Bromofluorobenzene	(0-130)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D System Monitoring Compound diluted out

FORM 4
VOLATILE METHOD BLANK SUMMARY

CLIENT SAMPLE NO.

VBLKW-210422

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS21041102

Lab File ID: X042207 Lab Sample ID: VBLKW-210422

Date Analyzed: 04/22/21 Time Analyzed: 1301

GC Column: DB624 ID: 0.18 (mm) Heated Purge: (Y/N) N

Instrument ID: VOA6

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	VLCSW-210422	VLCSW-210422	X042205	1219
02	HS21041102-11	HS21041102-11	X042208	1322
03	HS21041102-01	HS21041102-01	X042209	1344
04	HS21041102-02	HS21041102-02	X042210	1405
05	HS21041102-04	HS21041102-04	X042211	1426
06	HS21041102-05	HS21041102-05	X042212	1447
07	HS21041102-06	HS21041102-06	X042213	1508
08	HS21041102-03	HS21041102-03	X042214	1529
09	HS21041102-09	HS21041102-09	X042215	1550
10	HS21041102-04MS	HS21041102-04MS	X042216	1611
11	HS21041102-04MSD	HS21041102-04MSD	X042217	1632
12	HS21041102-07	HS21041102-07	X042226	1942
13	HS21041102-07	HS21041102-07	X042227	2003
14	HS21041102-10	HS21041102-10	X042228	2024
15	HS21041102-10	HS21041102-10	X042229	2045
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				

COMMENTS:

FORM 5
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS21041102

Lab File ID: X042201 BFB Injection Date: 04/22/21

Instrument ID: VOA6 BFB Injection Time: 1055

GC Column: DB624 ID: 0.25 (mm) Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	17.6
75	30.0 - 60.0% of mass 95	52.3
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	5.9
173	Less than 2.0% of mass 174	0.8 (0.8)1
174	Greater than 50.0% of mass 95	92.8
175	5.0 - 9.0% of mass 174	7.0 (7.5)1
176	95.0 - 101.0% of mass 174	89.0 (95.9)1
177	5.0 - 9.0% of mass 176	5.8 (6.6)2

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

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	CCV	CCV	X042203	04/22/21	1137
02	VLCSW-210422	VLCSW-210422	X042205	04/22/21	1219
03	VBLKW-210422	VBLKW-210422	X042207	04/22/21	1301
04	HS21041102-11	HS21041102-11	X042208	04/22/21	1322
05	HS21041102-01	HS21041102-01	X042209	04/22/21	1344
06	HS21041102-02	HS21041102-02	X042210	04/22/21	1405
07	HS21041102-04	HS21041102-04	X042211	04/22/21	1426
08	HS21041102-05	HS21041102-05	X042212	04/22/21	1447
09	HS21041102-06	HS21041102-06	X042213	04/22/21	1508
10	HS21041102-03	HS21041102-03	X042214	04/22/21	1529
11	HS21041102-09	HS21041102-09	X042215	04/22/21	1550
12	HS21041102-04MS	HS21041102-04MS	X042216	04/22/21	1611
13	HS21041102-04MSD	HS21041102-04MSD	X042217	04/22/21	1632
14	HS21041102-07	HS21041102-07	X042226	04/22/21	1942
15	HS21041102-07	HS21041102-07	X042227	04/22/21	2003
16	HS21041102-10	HS21041102-10	X042228	04/22/21	2024
17	HS21041102-10	HS21041102-10	X042229	04/22/21	2045
18	CCV-END	CCV-END	X042230	04/22/21	2106
19					
20					
21					
22					

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS21041102

Instrument ID: VOA6 Calibration Date: 04/22/21 Time: 1137

Lab File ID: X042203 Init. Calib. Date(s): 04/02/21 04/02/21

Init. Calib. Times: 1053 1423

GC Column: DB624 ID: 0.18 (mm)

COMPOUND	RRF or AMOUNT	RRF50.000 or AMOUNT	CCAL RRF50.000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Vinyl Chloride	0.7500000	0.6884119	0.6884119	0.1	8.21	20.00	AVRG
Methylene Chloride	50.275700	50.000000	0.5457247	0.1	-0.55	20.00	LINR
1,1-Dichloroethene	0.7120000	0.5837186	0.5837186	0.1	18.02	20.00	AVRG
1,2-Dichloroethane	0.5290000	0.5170866	0.5170866	0.1	2.25	20.00	AVRG
cis-1,2-Dichloroethene	0.6110000	0.6151114	0.6151114	0.1	-0.67	20.00	AVRG
1,1,2-Trichloroethane	0.2900000	0.2809036	0.2809036	0.1	3.14	20.00	AVRG
Trichloroethene	0.3420000	0.3321103	0.3321103	0.2	2.89	20.00	AVRG
Dibromofluoromethane	53.000047	50.000000	0.6242874	0.1	-6.00	20.00	LINR
1,2-Dichloroethane-d4	55.401745	50.000000	0.7822550	0.1	-10.80	20.00	LINR
Toluene-d8	51.171320	50.000000	1.3164643	0.1	-2.34	20.00	LINR
4-Bromofluorobenzene	54.018680	50.000000	0.5193638	0.1	-8.04	20.00	LINR

FORM VII VOA

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS21041102

Instrument ID: VOA6 Calibration Date: 04/22/21 Time: 2106

Lab File ID: X042230 Init. Calib. Date(s): 04/02/21 04/02/21

Init. Calib. Times: 1053 1423

GC Column: DB624 ID: 0.18 (mm)

COMPOUND	RRF or AMOUNT	RRF50.000 or AMOUNT	CCAL RRF50.000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Vinyl Chloride	0.7500000	0.7279059	0.7279059	0.1	2.94	50.00	AVRG
Methylene Chloride	48.098754	50.000000	0.5213765	0.1	3.80	50.00	LINR
1,1-Dichloroethene	0.7120000	0.6486059	0.6486059	0.1	8.90	50.00	AVRG
1,2-Dichloroethane	0.5290000	0.5338904	0.5338904	0.1	-0.92	50.00	AVRG
cis-1,2-Dichloroethene	0.6110000	0.6251298	0.6251298	0.1	-2.31	50.00	AVRG
1,1,2-Trichloroethane	0.2900000	0.3060680	0.3060680	0.1	-5.54	50.00	AVRG
Trichloroethene	0.3420000	0.3423655	0.3423655	0.2	-0.11	50.00	AVRG
Dibromofluoromethane	55.250991	50.000000	0.6510196	0.1	-10.50	50.00	LINR
1,2-Dichloroethane-d4	57.221058	50.000000	0.8081692	0.1	-14.44	50.00	LINR
Toluene-d8	53.933143	50.000000	1.3901889	0.1	-7.87	50.00	LINR
4-Bromofluorobenzene	56.547852	50.000000	0.5444469	0.1	-13.10	50.00	LINR

FORM VII VOA

FORM 8
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS21041102

Lab File ID (Standard): X042203 Date Analyzed: 04/22/21

Instrument ID: VOA6 Time Analyzed: 1137

GC Column: DB624 ID: 0.18 (mm) Heated Purge: (Y/N) N

		IS1 AREA #	RT #	IS2(DFB) AREA #	RT #	IS3(CBZ) AREA #	RT #
	12 HOUR STD	408565	4.18	695019	4.97	681426	7.67
	UPPER LIMIT	817130	4.68	1390038	5.47	1362852	8.17
	LOWER LIMIT	204283	3.68	347510	4.47	340713	7.17
	CLIENT SAMPLE NO.						
01	VLCSW-210422	358537	4.18	636756	4.96	600316	7.67
02	VBLKW-210422	421522	4.18	674454	4.96	611492	7.67
03	HS21041102-11	420709	4.18	661236	4.97	599673	7.67
04	HS21041102-01	416837	4.18	664678	4.97	588947	7.67
05	HS21041102-02	412956	4.18	655054	4.97	585888	7.67
06	HS21041102-04	400016	4.18	642629	4.97	553384	7.67
07	HS21041102-05	415116	4.18	659499	4.97	573147	7.67
08	HS21041102-06	405754	4.18	657416	4.96	566279	7.67
09	HS21041102-03	404751	4.18	660470	4.96	583368	7.67
10	HS21041102-09	403538	4.18	655033	4.96	584716	7.67
11	HS21041102-04MS	432353	4.18	711082	4.96	673269	7.67
12	HS21041102-04MSD	445681	4.18	731690	4.97	668607	7.67
13	HS21041102-07	399062	4.18	640580	4.96	564303	7.67
14	HS21041102-07	396192	4.18	629041	4.96	548308	7.67
15	HS21041102-10	406017	4.18	645796	4.96	577118	7.67
16	HS21041102-10	402048	4.18	633352	4.96	556135	7.67
17							
18							
19							
20							

IS1 = Pentafluorobenzene
IS2 (DFB) = 1,4-Difluorobenzene
IS3 (CBZ) = Chlorobenzene-d5

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

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

FORM 8
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS21041102

Lab File ID (Standard): X042203 Date Analyzed: 04/22/21

Instrument ID: VOA6 Time Analyzed: 1137

GC Column: DB624 ID: 0.18 (mm) Heated Purge: (Y/N) N

		IS4 (DCB) AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	322637	9.66				
	UPPER LIMIT	645274	10.16				
	LOWER LIMIT	161319	9.16				
	CLIENT SAMPLE NO.						
01	VLCSW-210422	275578	9.66				
02	VBLKW-210422	253936	9.66				
03	HS21041102-11	248618	9.66				
04	HS21041102-01	252471	9.66				
05	HS21041102-02	239943	9.66				
06	HS21041102-04	230998	9.66				
07	HS21041102-05	243495	9.66				
08	HS21041102-06	233013	9.66				
09	HS21041102-03	248592	9.66				
10	HS21041102-09	236221	9.66				
11	HS21041102-04MS	316393	9.66				
12	HS21041102-04MSD	291106	9.66				
13	HS21041102-07	250229	9.66				
14	HS21041102-07	229331	9.66				
15	HS21041102-10	258108	9.66				
16	HS21041102-10	236770	9.66				
17							
18							
19							
20							

IS4 (DCB) = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

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

Data File: \\NAHSTWS005\Target\chem\voa6.i\X210422.b\X042201.D

Date : 22-APR-2021 10:55

Client ID: BFB

Instrument: voa6.i

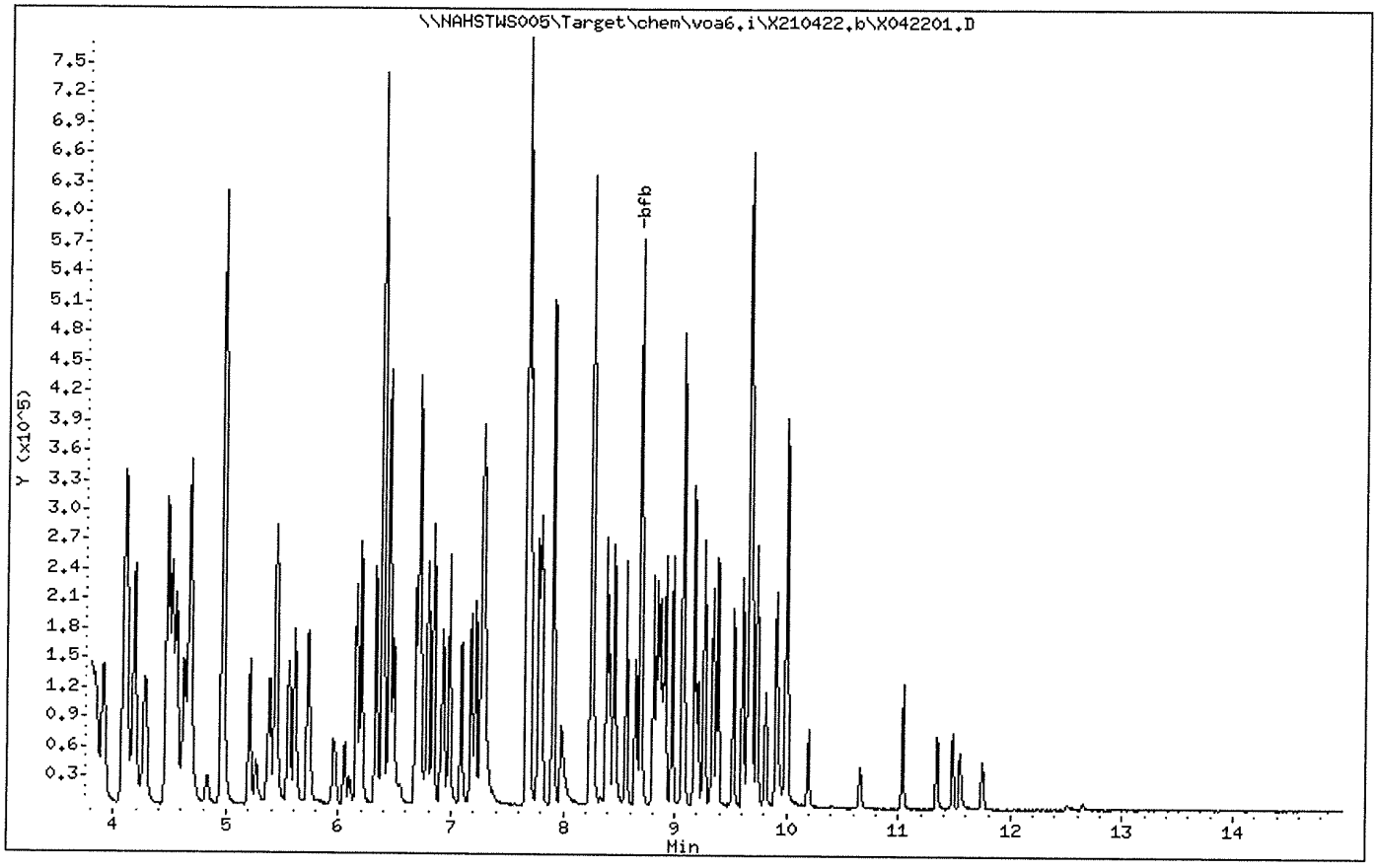
Sample Info: BFB;BFB;3;;BFB

Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

Column diameter: 0.25



Data File: \\NAHSTWS005\Target\chem\voa6.i\X210422.b\X042201.D

Date : 22-APR-2021 10:55

Client ID: BFB

Instrument: voa6.i

Sample Info: BFB;BFB;3;;BFB

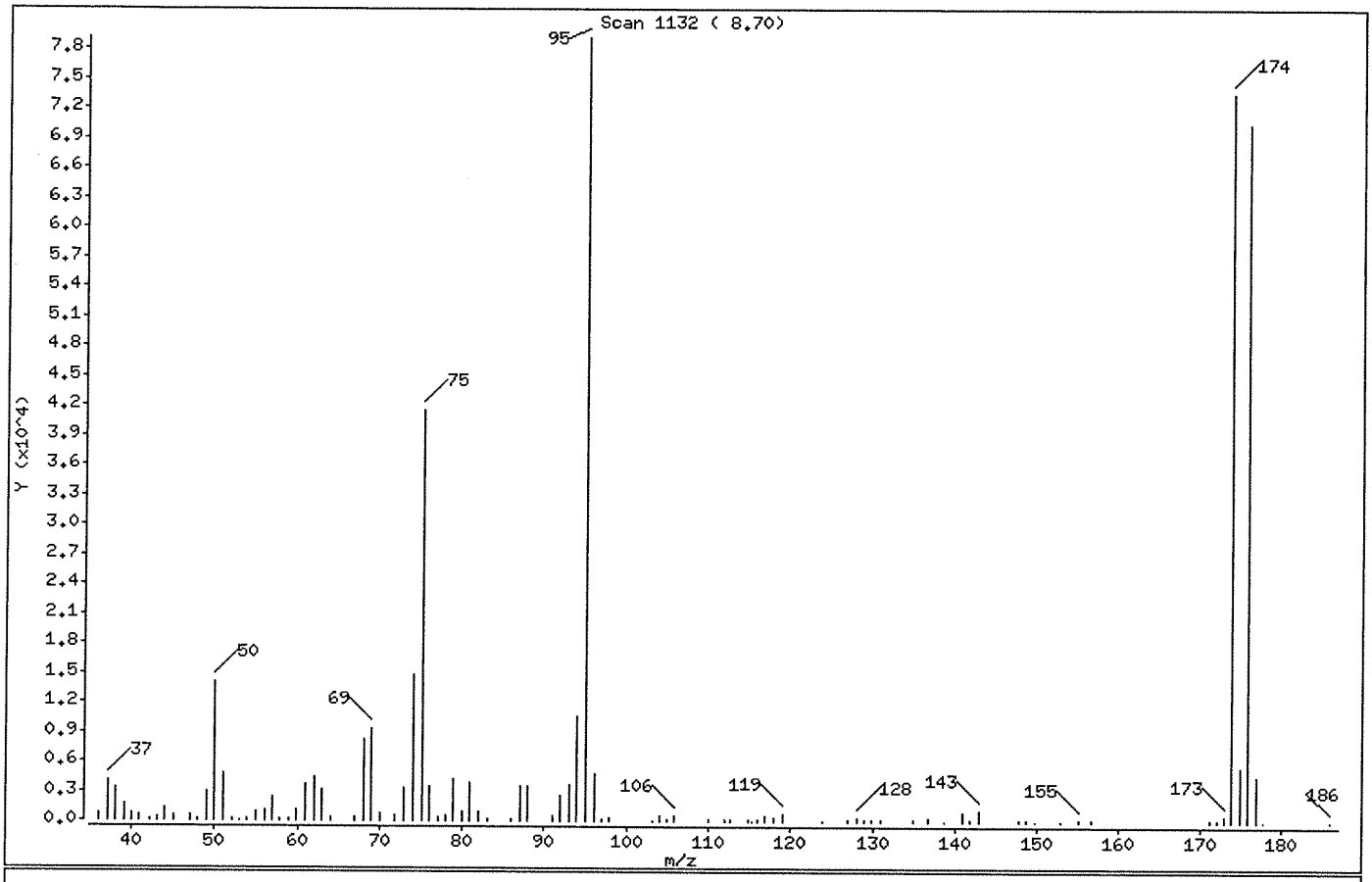
Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

Column diameter: 0.25

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	17.64
75	30.00 - 60.00% of mass 95	52.32
96	5.00 - 9.00% of mass 95	5.94
173	Less than 2.00% of mass 174	0.77 (0.84)
174	Greater than 50.00% of mass 95	92.79
175	5.00 - 9.00% of mass 174	6.99 (7.53)
176	95.00 - 101.00% of mass 174	88.96 (95.87)
177	5.00 - 9.00% of mass 176	5.84 (6.57)

Data File: \\NAHSTWS005\Target\chem\voa6.i\X210422.b\X042201.D

Date : 22-APR-2021 10:55

Client ID: BFB

Instrument: voa6.i

Sample Info: BFB;BFB;3;;BFB

Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

Column diameter: 0.25

Data File: X042201.D
Spectrum: Scan 1132 (8.70)
Location of Maximum: 95.00
Number of points: 95

m/z	Y	m/z	Y	m/z	Y	m/z	Y
35.90	800	61.00	3714	92.00	2596	129.90	269
37.10	3977	62.00	4369	93.00	3623	131.00	138
38.00	3220	63.00	3175	93.90	10487	135.00	243
39.00	1692	64.00	325	95.00	79112	136.80	298
40.00	676	66.90	323	96.00	4699	138.80	50
40.90	627	68.00	8258	97.00	190	140.90	987
42.20	250	69.00	9339	97.90	372	141.80	104
43.00	338	70.00	760	103.10	66	143.00	1082
44.00	1256	71.90	513	104.00	602	147.70	144
45.00	610	73.00	3269	104.90	253	148.60	91
47.10	491	74.00	14765	105.80	615	149.70	82
48.00	250	75.00	41392	109.90	94	152.80	77
49.00	2871	75.90	3514	111.90	148	155.00	124
50.00	13955	77.10	363	112.70	139	156.70	101
51.00	4670	77.90	574	114.80	224	171.30	98
52.10	185	78.90	4126	115.30	86	172.00	221
53.10	54	80.00	932	116.00	246	173.00	613
53.90	97	80.90	3836	116.80	493	173.90	73408
55.10	897	81.90	849	118.00	430	174.90	5530
56.00	1155	83.00	192	119.00	794	175.90	70376
57.10	2319	86.00	181	123.90	72	177.00	4622
57.90	143	87.00	3479	127.00	111	177.90	76
59.00	258	87.90	3437	128.10	323	186.10	74
59.90	1011	91.00	510	128.90	209		

Data File: \\NAHSTWS005\Target\chem\voa6.i\X210422.b\X042203.D Page 1
Report Date: 12-May-2021 14:27

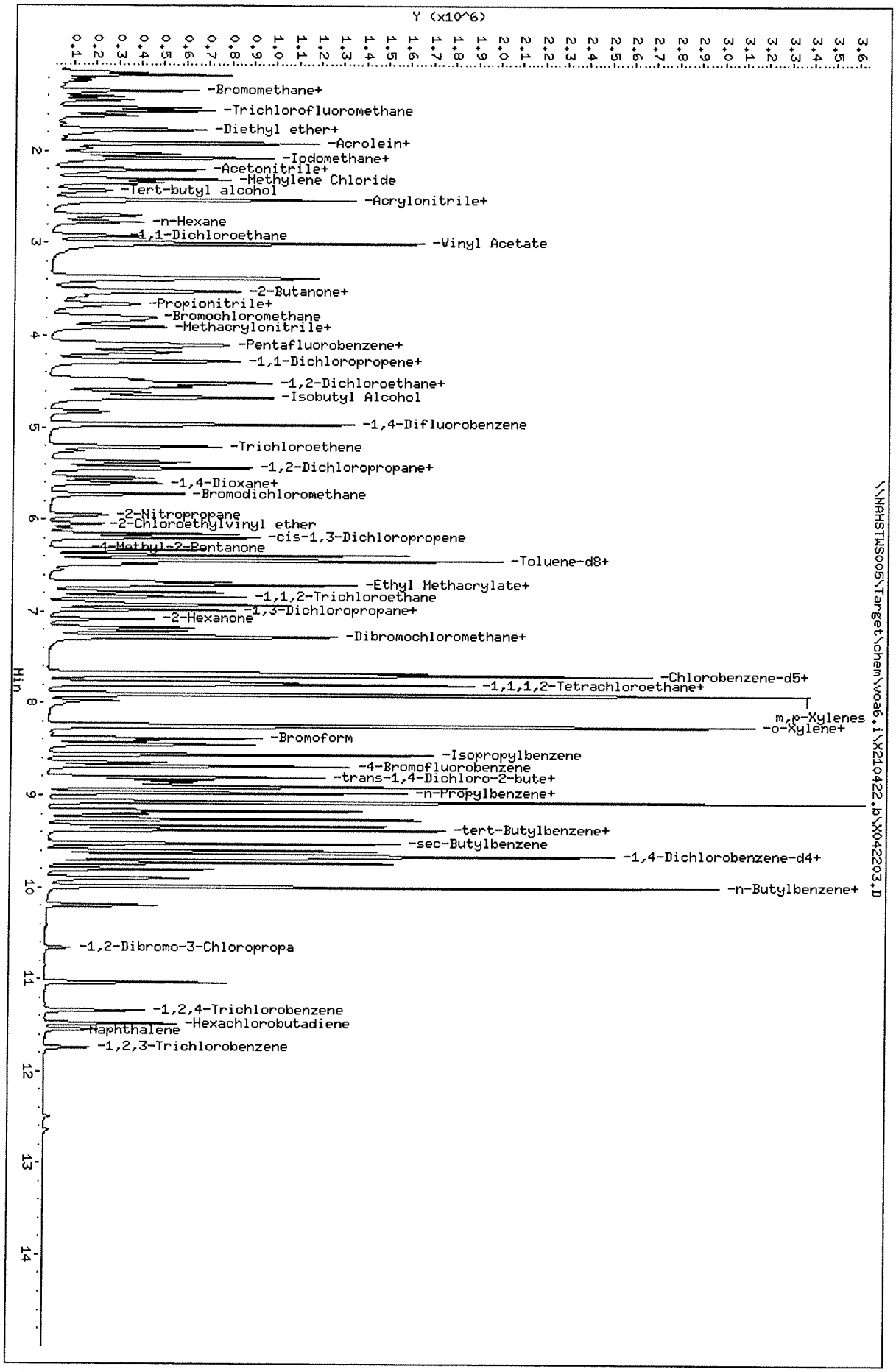
ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X210422.b\X042203.D
Lab Smp Id: CCV Client Smp ID: CCV
Inj Date : 22-APR-2021 11:37
Operator : PC Inst ID: voa6.i
Smp Info : CCV;CCV;2;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X210422.b\8260W.m
Meth Date : 12-May-2021 14:27 voa6.i Quant Type: ISTD
Cal Date : 02-APR-2021 13:20 Cal File: X040208.D
Als bottle: 3 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBI_short1.sub
Target Version: 4.14
Processing Host: NAHSTW7066

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	408565	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	695019	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	681426	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	322637	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	255062	50.0000	53.00
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	319602	50.0000	55.40
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	897073	50.0000	51.17
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	353908	50.0000	54.01
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	191415	50.0000	48.35
11 1,1-Dichloroethene	96	1.919	1.919	(0.459)	238487	50.0000	40.99
33 1,2-Dichloroethane	62	4.555	4.555	(0.916)	359385	50.0000	48.85
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	251313	50.0000	50.31
17 Methylene Chloride	84	2.305	2.305	(0.551)	222964	50.0000	50.27
38 Trichloroethene	130	5.207	5.207	(1.048)	230823	50.0000	48.51
5 Vinyl Chloride	62	1.145	1.145	(0.274)	281261	50.0000	45.91



Data File: \\MAHSTWS005\Target\chem\voa6.i\X210422.b\X042203.D
Date : 22-APR-2021 11:37
Client ID: CCV
Sample Info: CCV;CCV;2;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\NAHSTWS005\Target\chem\voa6.i\X210422.b\X042205.D Page 1
Report Date: 12-May-2021 14:27

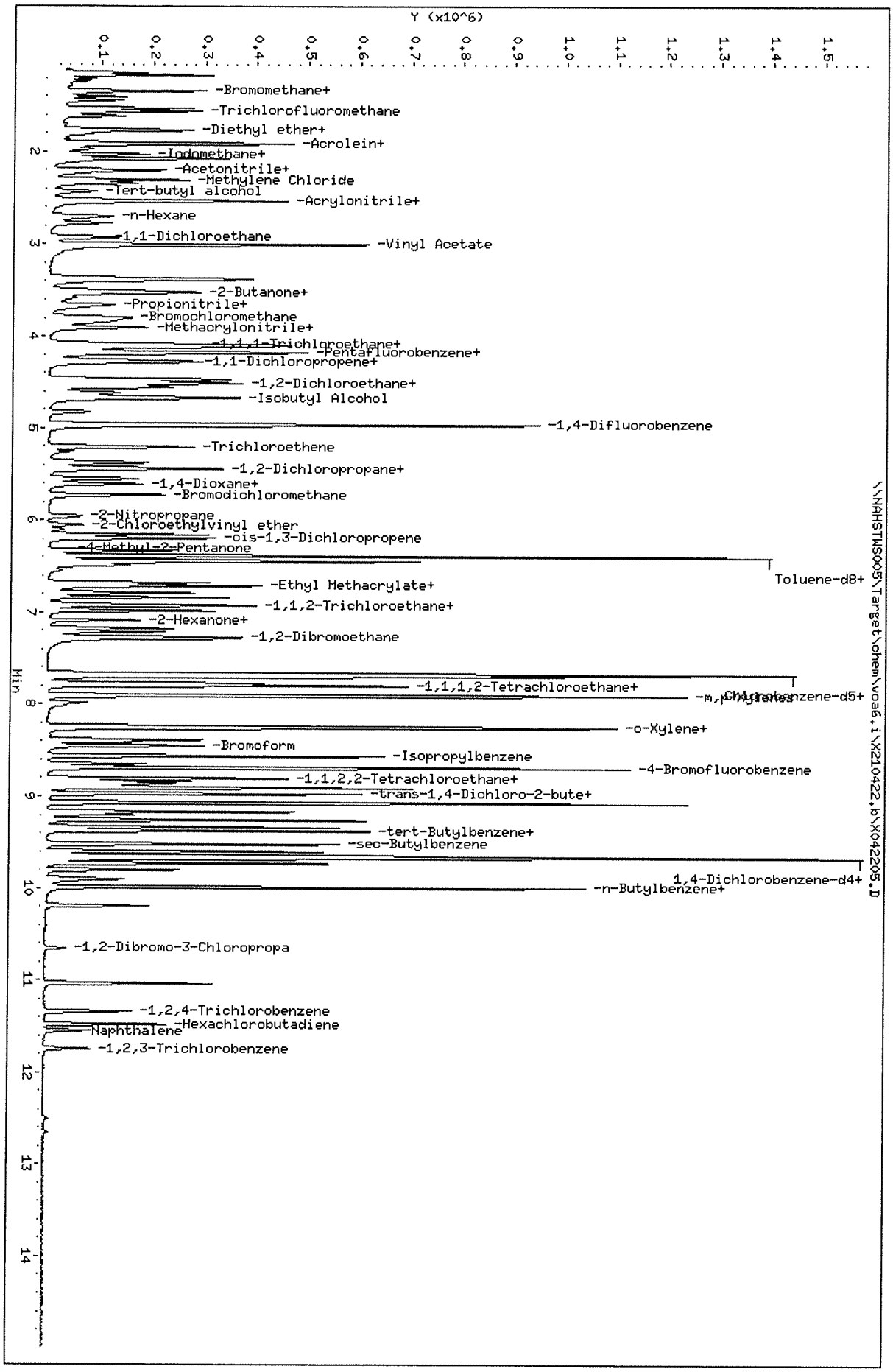
ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X210422.b\X042205.D
Lab Smp Id: VLCSW-210422 Client Smp ID: VLCSW-210422
Inj Date : 22-APR-2021 12:19
Operator : PC Inst ID: voa6.i
Smp Info : VLCSW-210422;VLCSW-210422;3;;LCS
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X210422.b\8260W.m
Meth Date : 12-May-2021 14:27 voa6.i Quant Type: ISTD
Cal Date : 02-APR-2021 13:20 Cal File: X040208.D
Als bottle: 5 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBI_short1.sub
Target Version: 4.14
Processing Host: NAHSTW7066

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
*	1 Pentafluorobenzene	168	4.182	4.182	(1.000)	358537	50.0000	
*	36 1,4-Difluorobenzene	114	4.963	4.970	(1.000)	636756	50.0000	
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	600316	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	275578	50.0000	
$	30 Dibromofluoromethane	113	4.103	4.103	(0.981)	214560	50.8229	50.82
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	266810	52.7275	52.72
$	48 Toluene-d8	98	6.389	6.388	(0.833)	792746	51.3243	51.32
$	69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	288603	50.1254	50.12
	53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	74105	21.2504	21.25
	11 1,1-Dichloroethene	96	1.919	1.919	(0.459)	98246	19.2447	19.24
	33 1,2-Dichloroethane	62	4.555	4.555	(0.918)	135353	20.0823	20.08
	27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	87459	19.9550	19.95
	17 Methylene Chloride	84	2.306	2.305	(0.551)	82218	21.9858	21.98
	38 Trichloroethene	130	5.207	5.207	(1.049)	86979	19.9539	19.95
	5 Vinyl Chloride	62	1.145	1.145	(0.274)	113971	21.2032	21.20



Data File: \\NAHSTWS005\Target\chem\voa6.i\X210422.b\X042205.D
Date : 22-APR-2021 12:19
Client ID: VLCSW-210422
Sample Info: VLCSW-210422,VLCSW-210422,3,,LCS
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X210422.b\X042207.D
Lab Smp Id: VBLKW-210422 Client Smp ID: VBLKW-210422
Inj Date : 22-APR-2021 13:01
Operator : PC Inst ID: voa6.i
Smp Info : VBLKW-210422;VBLKW-210422;3;;BLANK
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X210422.b\8260W.m
Meth Date : 12-May-2021 14:27 voa6.i Quant Type: ISTD
Cal Date : 02-APR-2021 13:20 Cal File: X040208.D
Als bottle: 7 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBI_short1.sub
Target Version: 4.14
Processing Host: NAHSTW7066

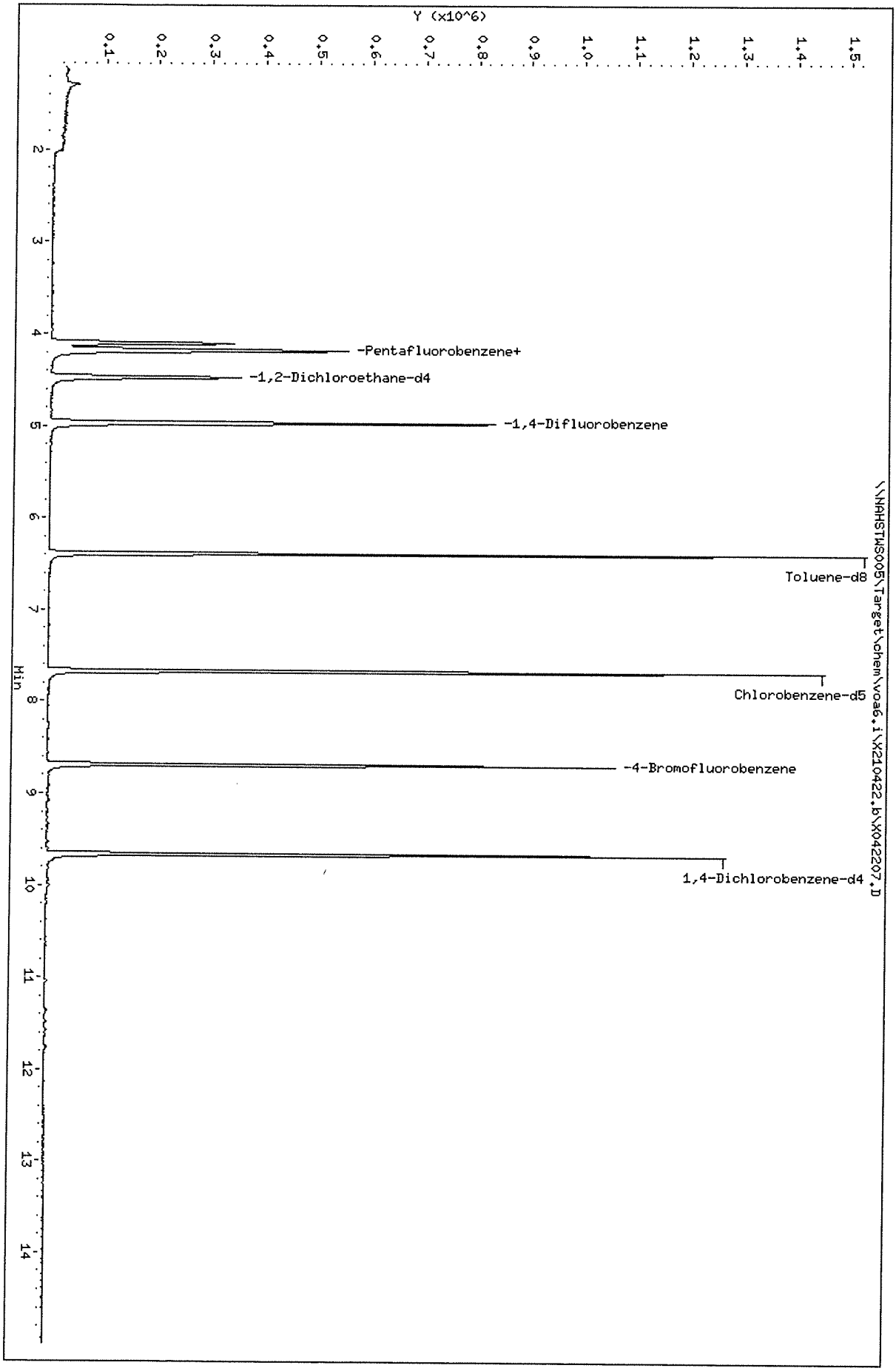
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	421522	50.0000	
* 36 1,4-Difluorobenzene	114	4.963	4.970	(1.000)	674454	50.0000	
* 47 Chlorobenzene-d5	117	7.670	7.671	(1.000)	611492	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	253936	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	230771	46.5318	46.53
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	284914	47.9363	47.93
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	849294	53.8844	53.88
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	268937	45.9966	45.99

Data File: \\NAHSTWS005\Target\chem\voa6.i\X210422.b\X042207.D
Date : 22-APR-2021 13:01
Client ID: VBLKW-210422
Sample Info: VBLKW-210422;VBLKW-210422;3;;BLANK
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18



Data File: \\NAHSTWS005\Target\chem\voa6.i\X210422.b\X042208.D Page 1
Report Date: 12-May-2021 14:28

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X210422.b\X042208.D
Lab Smp Id: HS21041102-11 Client Smp ID: HS21041102-11
Inj Date : 22-APR-2021 13:22
Operator : PC Inst ID: voa6.i
Smp Info : HS21041102-11;HS21041102-11;;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X210422.b\8260W.m
Meth Date : 12-May-2021 14:28 Qin.Xu Quant Type: ISTD
Cal Date : 02-APR-2021 13:20 Cal File: X040208.D
Als bottle: 8
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBI_short1.sub
Target Version: 4.14
Processing Host: NAHSTW7066

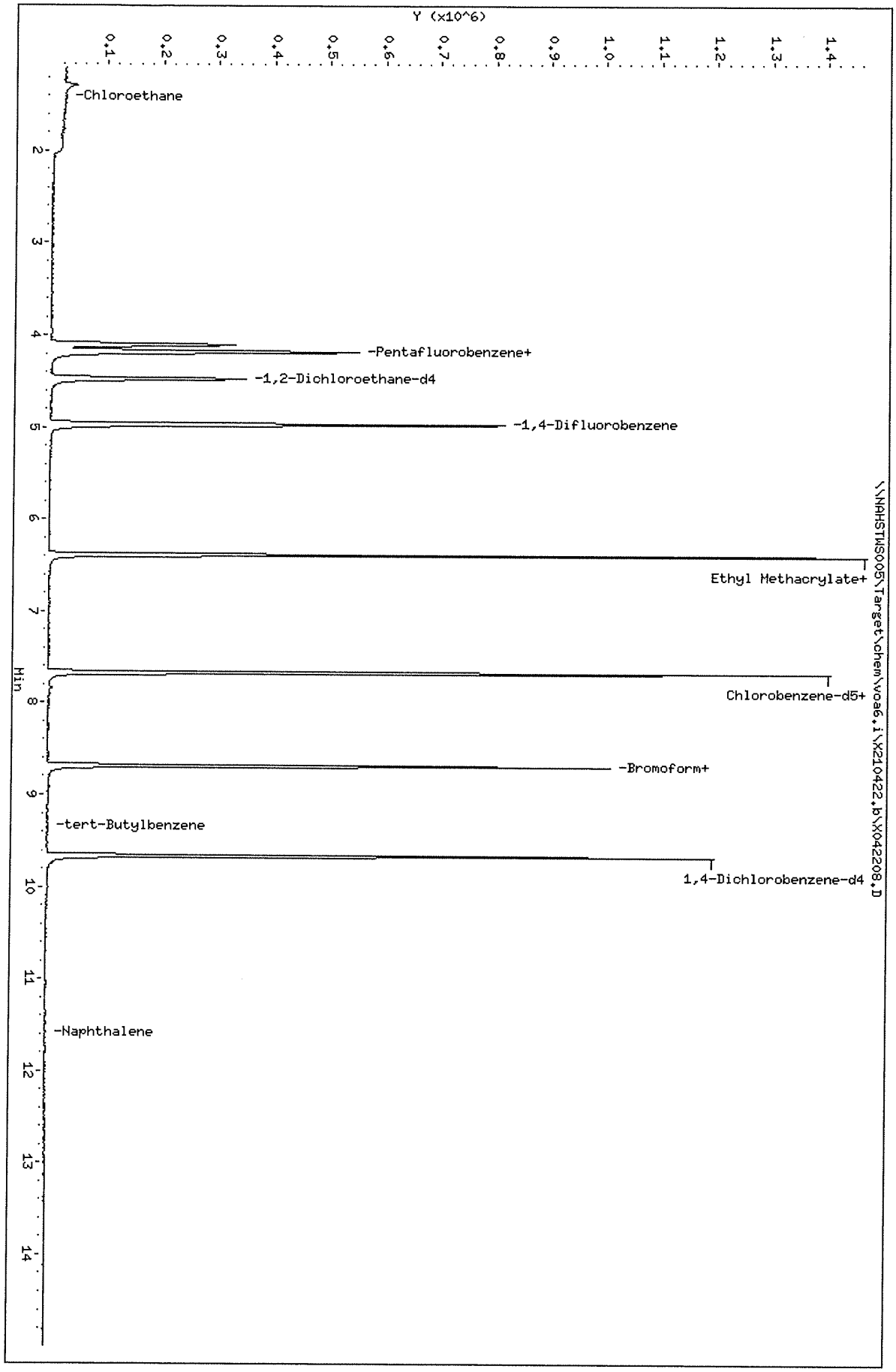
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	420709	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.963	(1.000)	661236	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	599673	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	248618	50.0000	
$ 30 Dibromofluoromethane	113	4.096	4.103	(0.979)	225417	45.5493	45.54
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	283374	47.7710	47.77
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	835637	54.0567	54.05
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	271719	47.3384	47.33

Data File: \\NAHSTWS005\Target\chem\voa6.i\X210422.b\X042208.D
Date : 22-APR-2021 13:22
Client ID: HS21041102-11
Sample Info: HS21041102-11;HS21041102-11;;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18



Data File: \\NAHSTWS005\Target\chem\voa6.i\X210422.b\X042209.D Page 1
Report Date: 12-May-2021 14:28

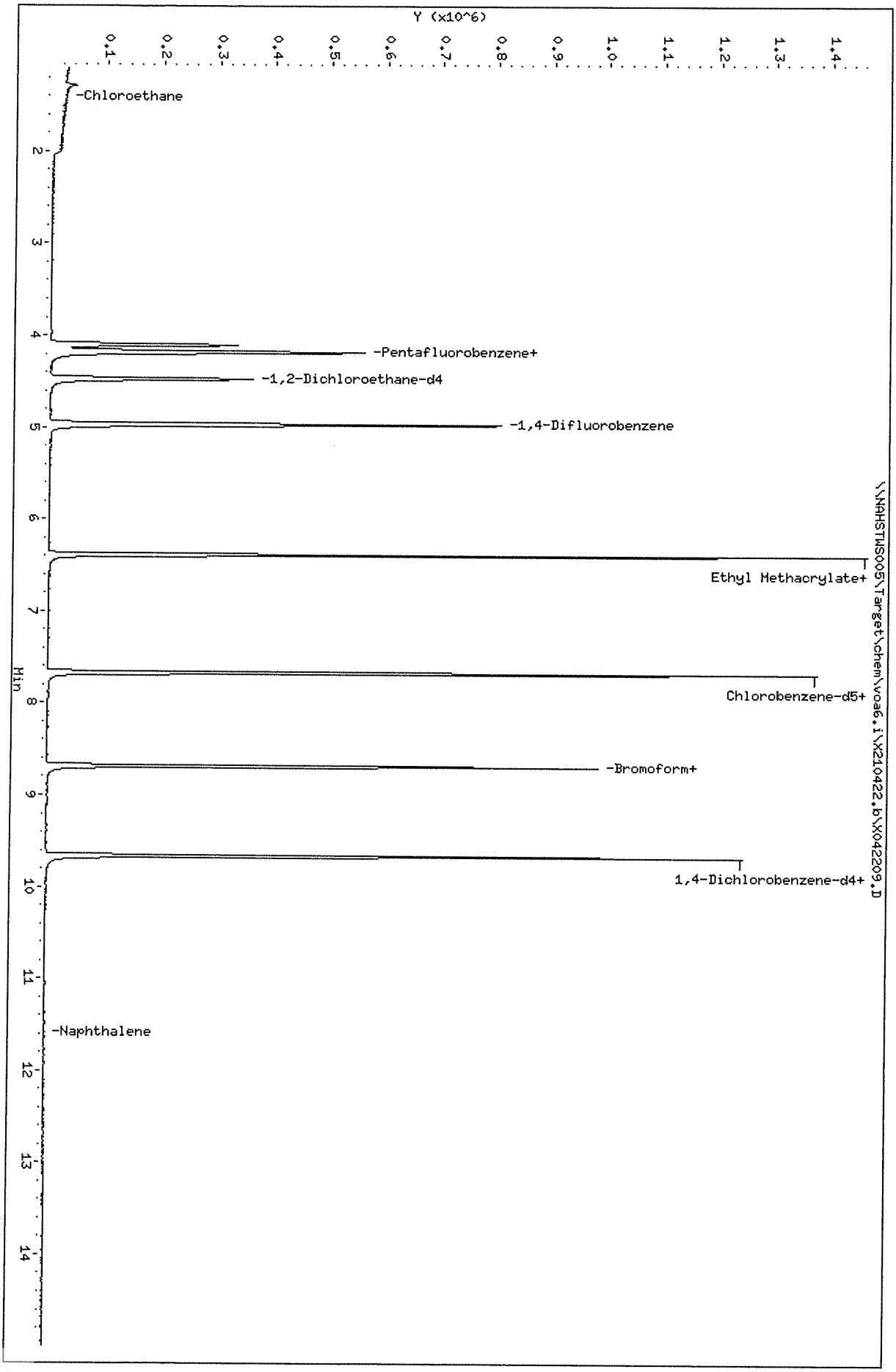
ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X210422.b\X042209.D
Lab Smp Id: HS21041102-01 Client Smp ID: HS21041102-01
Inj Date : 22-APR-2021 13:44
Operator : PC Inst ID: voa6.i
Smp Info : HS21041102-01;HS21041102-01;;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X210422.b\8260W.m
Meth Date : 12-May-2021 14:28 Qin.Xu Quant Type: ISTD
Cal Date : 02-APR-2021 13:20 Cal File: X040208.D
Als bottle: 9
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBI_short1.sub
Target Version: 4.14
Processing Host: NAHSTW7066

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	416837	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.963	(1.000)	664678	50.0000	
* 47 Chlorobenzene-d5	117	7.670	7.671	(1.000)	588947	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	252471	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	225287	45.9421	45.94
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	289458	49.2349	49.23
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	823320	54.2240	54.22
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	258154	45.8481	45.84



Data File: \\NAHSTWS005\Target\chem\voa6.i\X210422.b\X042209.D
Date : 22-APR-2021 13:44
Client ID: HS21041102-01
Sample Info: HS21041102-01;HS21041102-01;;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\NAHSTWS005\Target\chem\voa6.i\X210422.b\X042210.D Page 1
Report Date: 12-May-2021 14:28

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X210422.b\X042210.D
Lab Smp Id: HS21041102-02 Client Smp ID: HS21041102-02
Inj Date : 22-APR-2021 14:05
Operator : PC Inst ID: voa6.i
Smp Info : HS21041102-02;HS21041102-02;;;
Misc Info : HS18090001;WATER;0;1;
Comment   :
Method   : \\NAHSTWS005\Target\chem\voa6.i\X210422.b\8260W.m
Meth Date : 12-May-2021 14:28 Qin.Xu Quant Type: ISTD
Cal Date : 02-APR-2021 13:20 Cal File: X040208.D
Als bottle: 10
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBI_short1.sub
Target Version: 4.14
Processing Host: NAHSTW7066

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

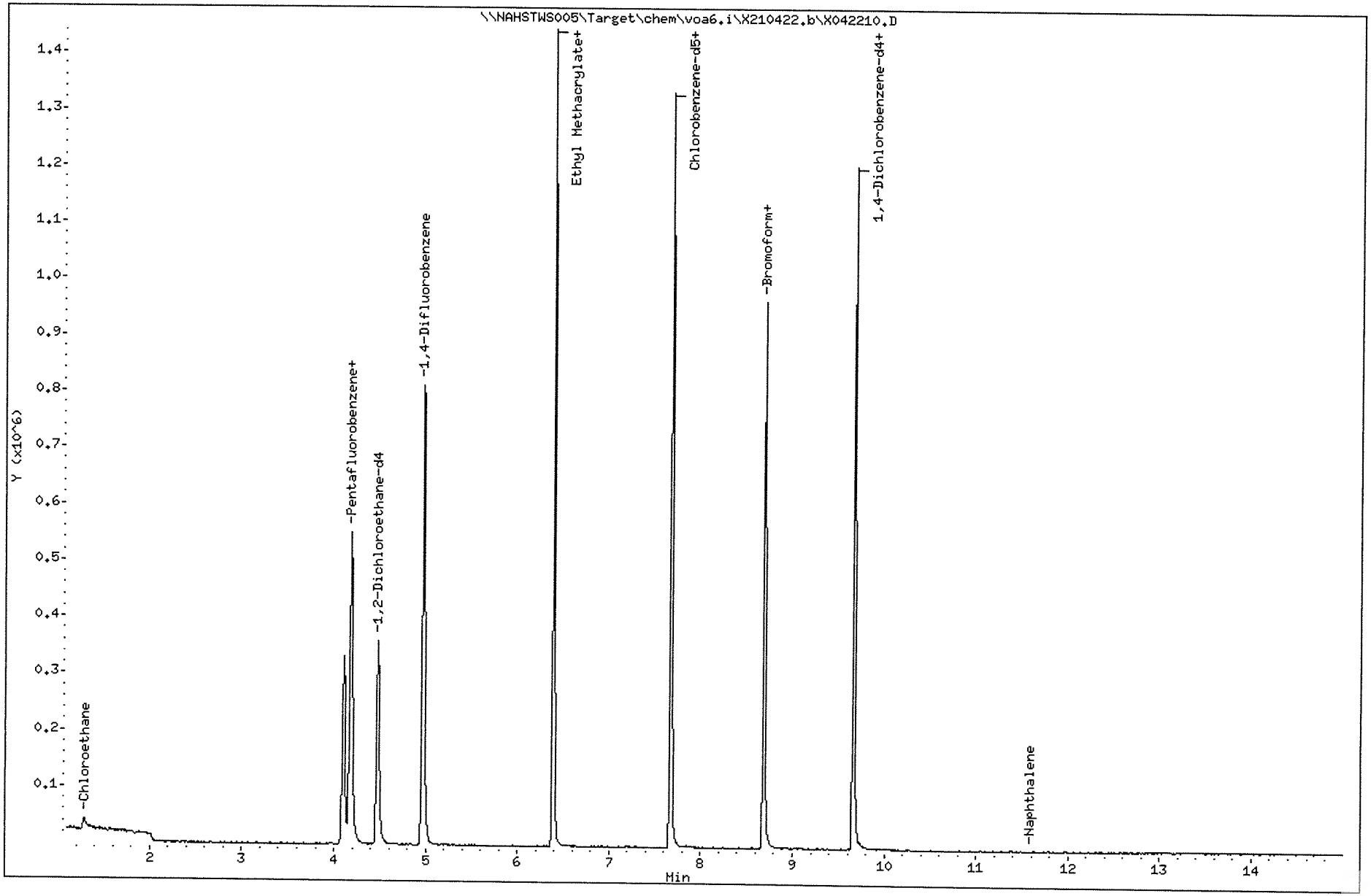
Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	412956	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.963	(1.000)	655054	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	585888	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	239943	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	225487	46.4106	46.41
$ 35 1,2-Dichloroethane-d4	65	4.469	4.476	(1.069)	283037	48.6015	48.60
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	804638	53.3029	53.30
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	254953	45.5279	45.52

Data File: \\NAHSTWS005\Target\chem\voa6.i\X210422.b\X042210.D
Date : 22-APR-2021 14:05
Client ID: HS21041102-02
Sample Info: HS21041102-02;HS21041102-02;;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i

Operator: PC
Column diameter: 0.18



ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X210422.b\X042211.D
Lab Smp Id: HS21041102-04 Client Smp ID: HS21041102-04
Inj Date : 22-APR-2021 14:26
Operator : PC Inst ID: voa6.i
Smp Info : HS21041102-04;HS21041102-04;;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X210422.b\8260W.m
Meth Date : 12-May-2021 14:28 Qin.Xu Quant Type: ISTD
Cal Date : 02-APR-2021 13:20 Cal File: X040208.D
Als bottle: 11
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBI_short1.sub
Target Version: 4.14
Processing Host: NAHSTW7066

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

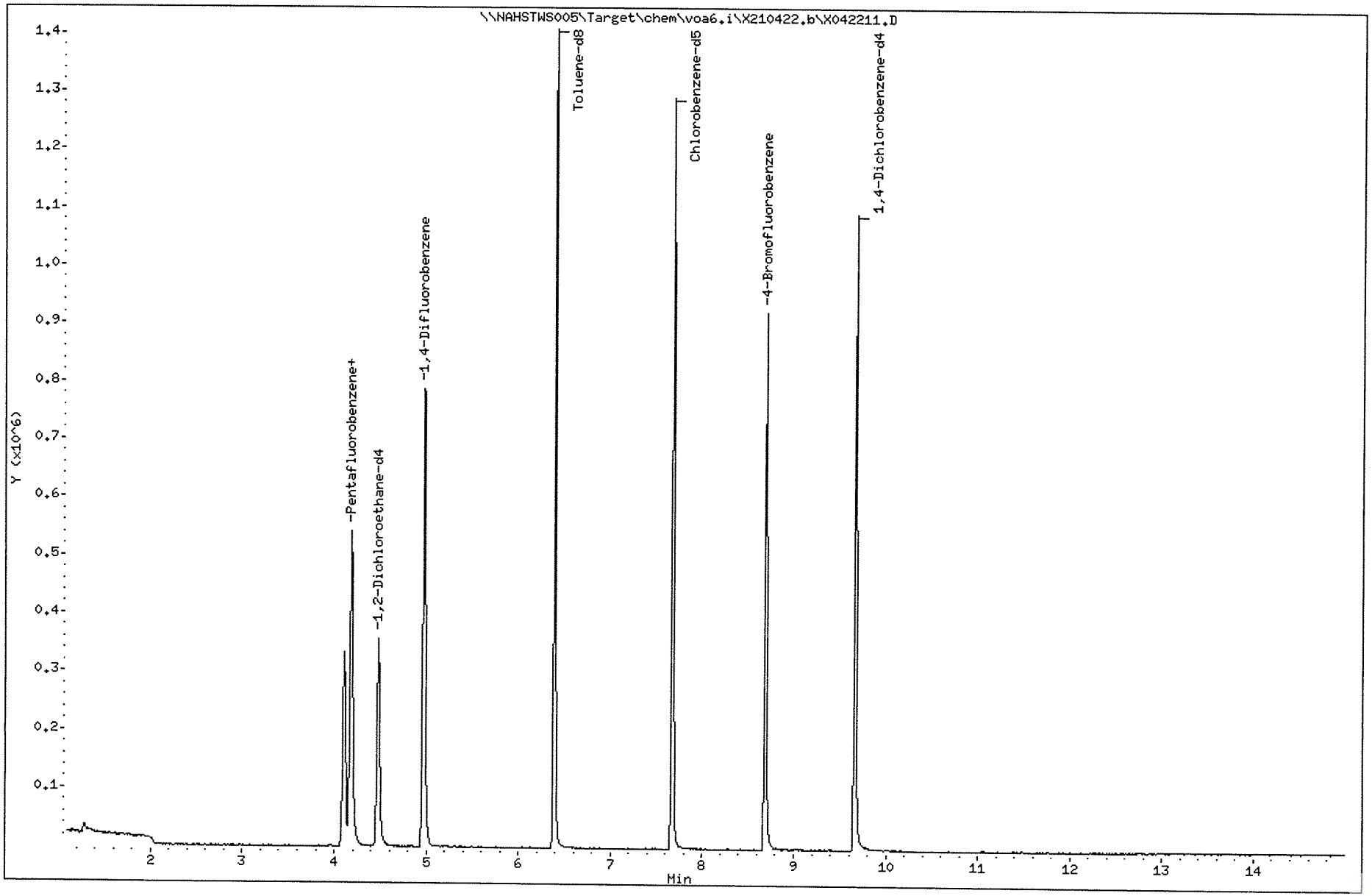
Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	400016	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.963	(1.000)	642629	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	553384	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	230998	50.0000	
$ 30 Dibromofluoromethane	113	4.104	4.103	(0.981)	222615	47.2934	47.29
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	277876	49.2523	49.25
$ 48 Toluene-d8	98	6.389	6.388	(0.833)	780870	54.7158	54.71
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	250495	47.2929	47.29

Data File: \\NAHSTWS005\Target\chem\voa6.i\X210422.b\X042211.D
Date : 22-APR-2021 14:26
Client ID: HS21041102-04
Sample Info: HS21041102-04;HS21041102-04;;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i

Operator: PC
Column diameter: 0.18



ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X210422.b\X042212.D
Lab Smp Id: HS21041102-05 Client Smp ID: HS21041102-05
Inj Date : 22-APR-2021 14:47
Operator : PC Inst ID: voa6.i
Smp Info : HS21041102-05;HS21041102-05;;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X210422.b\8260W.m
Meth Date : 12-May-2021 14:28 Qin.Xu Quant Type: ISTD
Cal Date : 02-APR-2021 13:20 Cal File: X040208.D
Als bottle: 12
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBI_short1.sub
Target Version: 4.14
Processing Host: NAHSTW7066

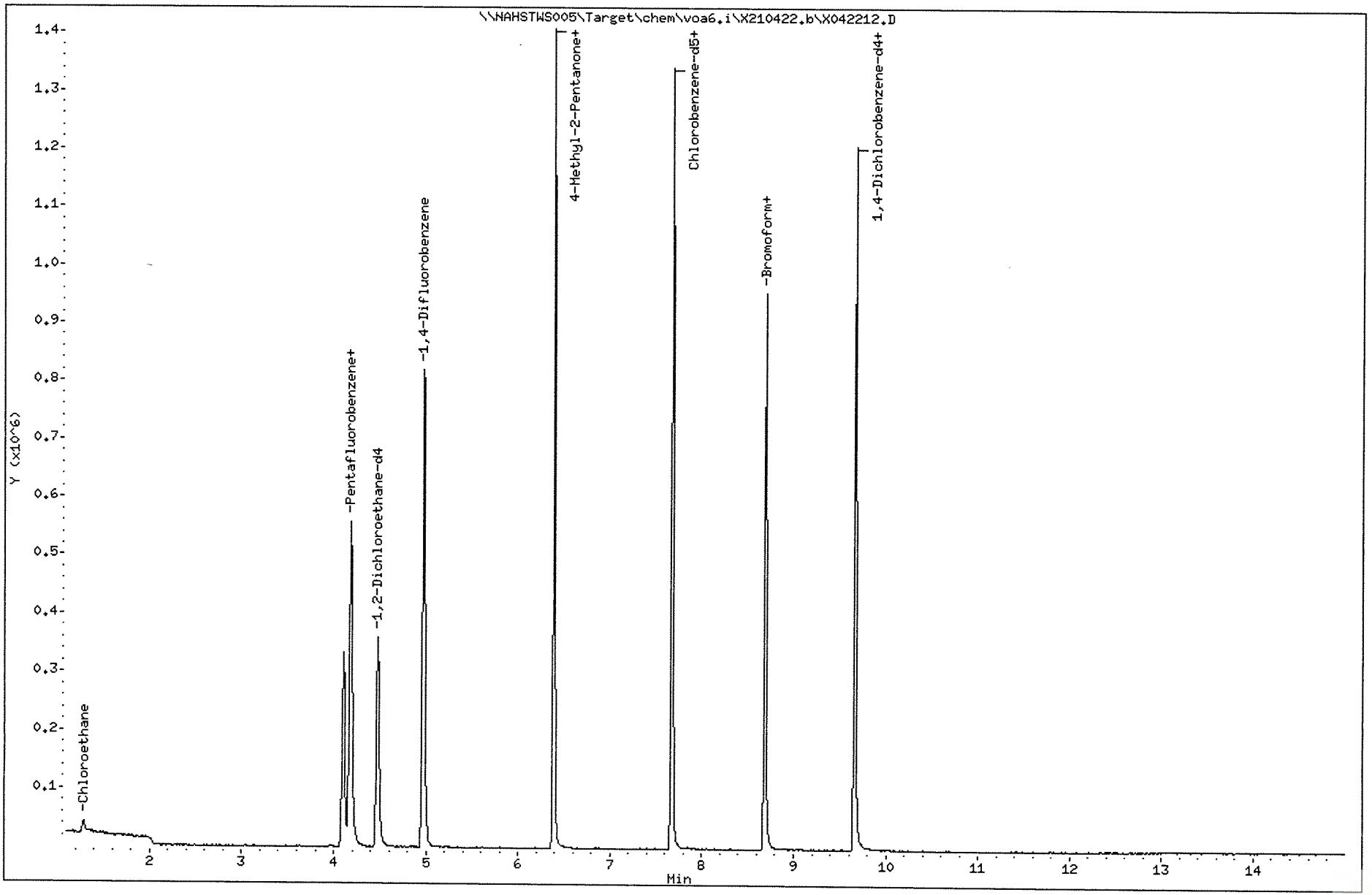
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	415116	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.963	(1.000)	659499	50.0000	
* 47 Chlorobenzene-d5	117	7.670	7.671	(1.000)	573147	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	243495	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	223740	45.8170	45.81
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	290548	49.6214	49.62
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	791312	53.5756	53.57
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	256374	46.7533	46.75

Data File: \\NAHSTWS005\Target\chem\voa6.i\X210422.b\X042212.D
Date : 22-APR-2021 14:47
Client ID: HS21041102-05
Sample Info: HS21041102-05;HS21041102-05;;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18



Data File: \\NAHSTWS005\Target\chem\voa6.i\X210422.b\X042213.D Page 1
Report Date: 12-May-2021 14:28

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X210422.b\X042213.D
Lab Smp Id: HS21041102-06 Client Smp ID: HS21041102-06
Inj Date : 22-APR-2021 15:08
Operator : PC Inst ID: voa6.i
Smp Info : HS21041102-06;HS21041102-06;;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X210422.b\8260W.m
Meth Date : 12-May-2021 14:28 Qin.Xu Quant Type: ISTD
Cal Date : 02-APR-2021 13:20 Cal File: X040208.D
Als bottle: 13
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBI_short1.sub
Target Version: 4.14
Processing Host: NAHSTW7066

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

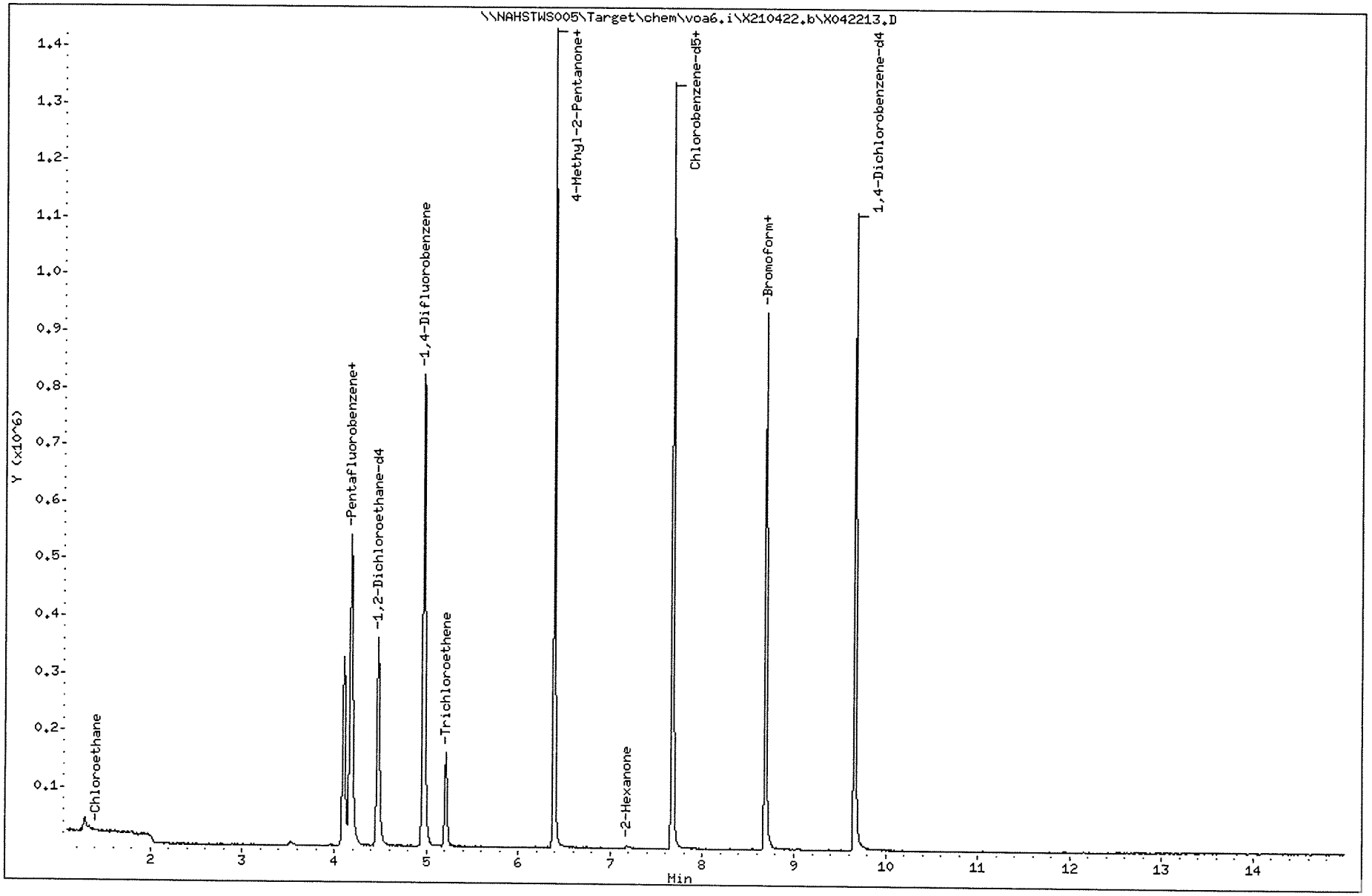
Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	405754	50.0000	
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	657416	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	566279	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	233013	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	227667	47.6791	47.67
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	283843	49.5950	49.59
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	793157	54.3249	54.32
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	245961	45.4462	45.44
38 Trichloroethene	130	5.206	5.207	(1.049)	49129	10.9165	10.91

Data File: \\NAHSTWS005\Target\chem\voa6.i\X210422.b\X042213.D
Date : 22-APR-2021 15:08
Client ID: HS21041102-06
Sample Info: HS21041102-06;HS21041102-06;;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i

Operator: PC
Column diameter: 0.18



Data File: \\NAHSTWS005\Target\chem\voa6.i\X210422.b\X042213.D

Date : 22-APR-2021 15:08

Client ID: HS21041102-06

Instrument: voa6.i

Sample Info: HS21041102-06;HS21041102-06;;;

Purge Volume: 5.0

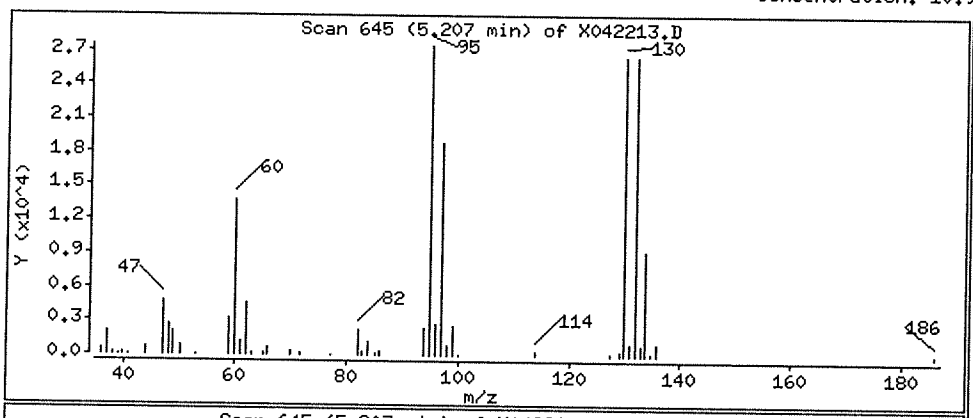
Operator: PC

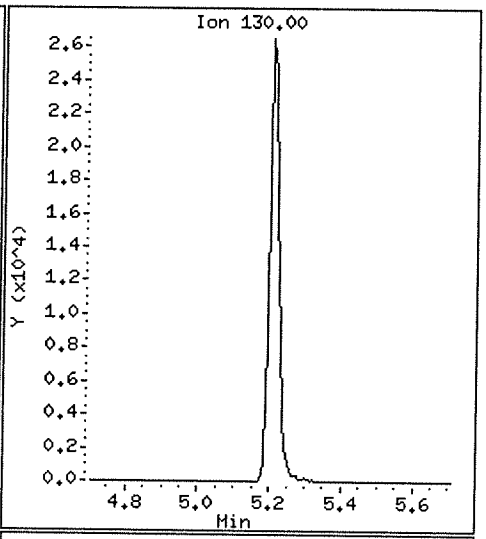
Column phase: DB624

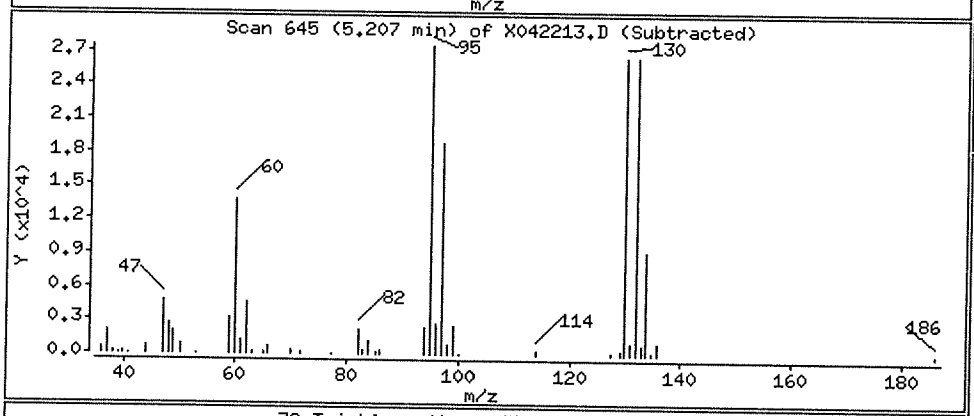
Column diameter: 0.18

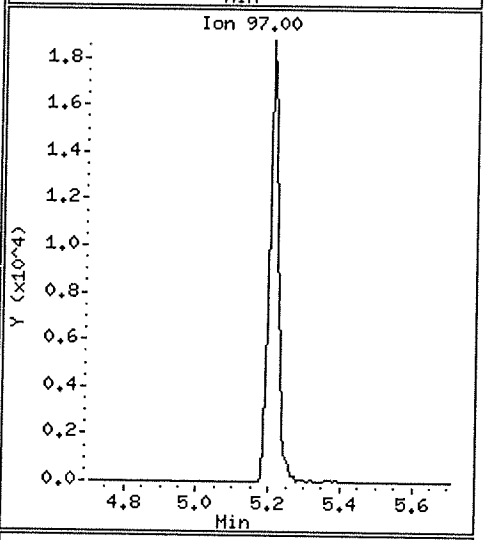
38 Trichloroethene

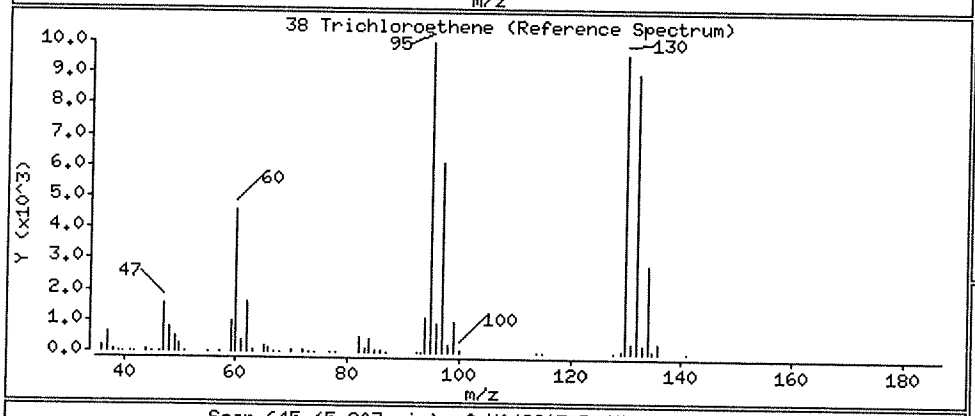
Concentration: 10.91 ug/l

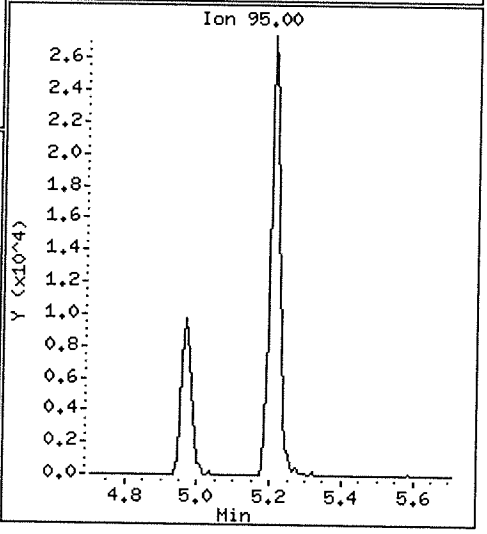


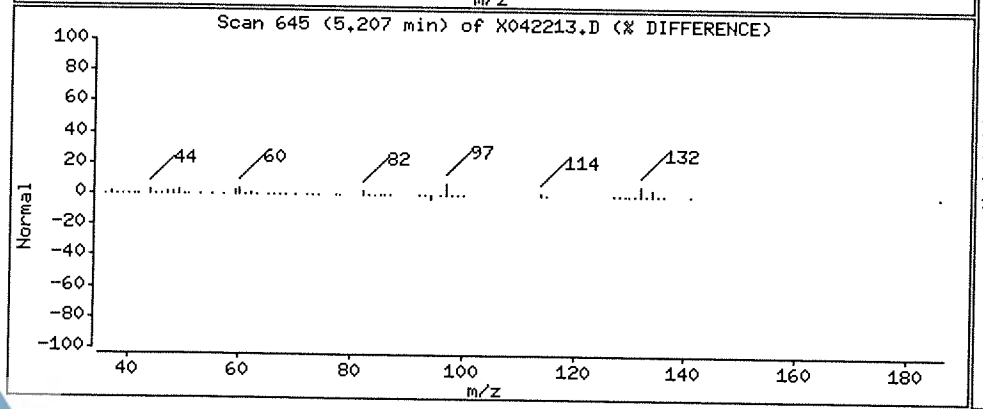












ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X210422.b\X042214.D
Lab Smp Id: HS21041102-03 Client Smp ID: HS21041102-03
Inj Date : 22-APR-2021 15:29
Operator : PC Inst ID: voa6.i
Smp Info : HS21041102-03;HS21041102-03;;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X210422.b\8260W.m
Meth Date : 12-May-2021 14:28 Qin.Xu Quant Type: ISTD
Cal Date : 02-APR-2021 13:20 Cal File: X040208.D
Als bottle: 14
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBI_short1.sub
Target Version: 4.14
Processing Host: NAHSTW7066

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

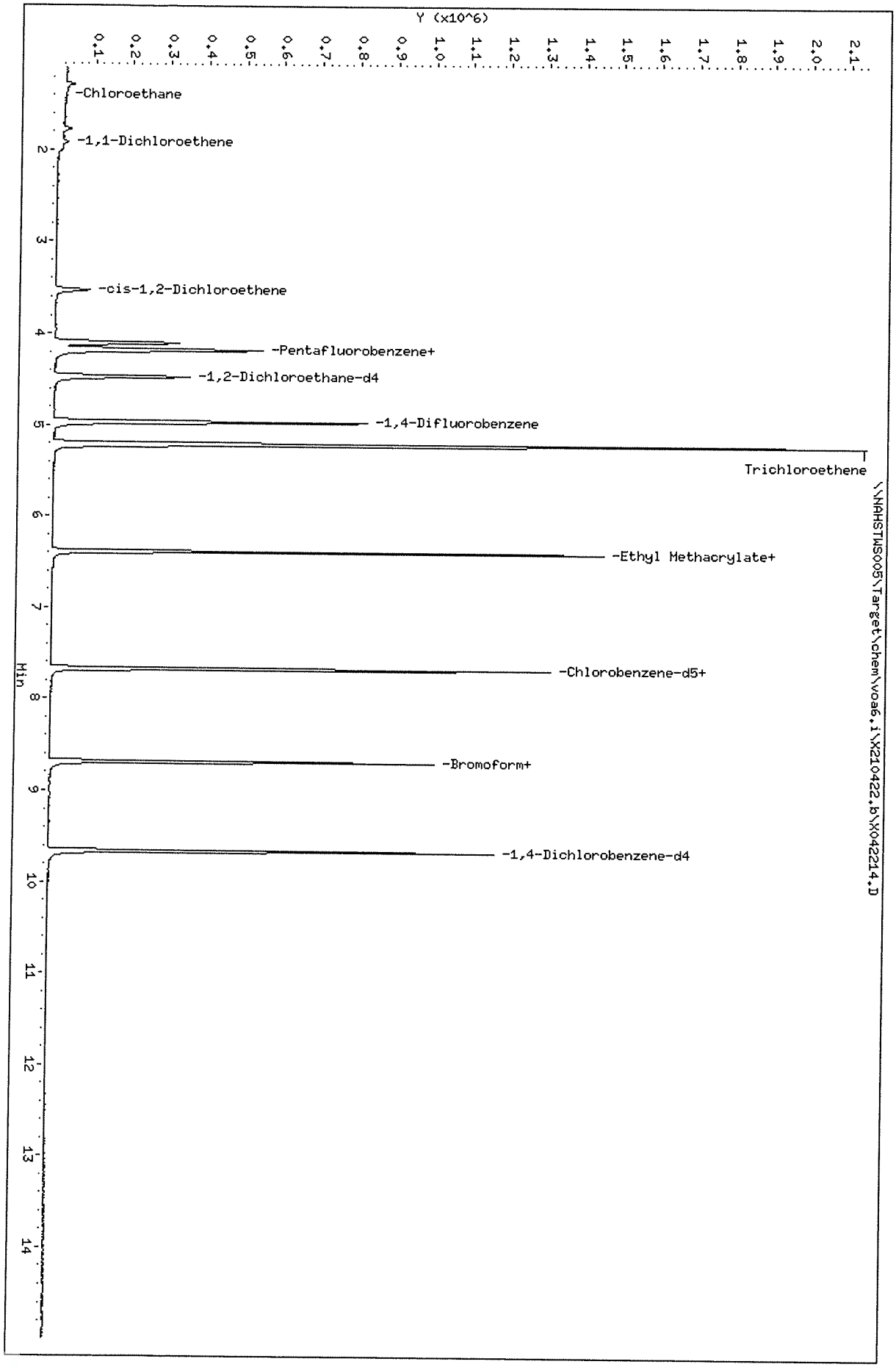
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	404751	50.0000	
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	660470	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	583368	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	248592	50.0000	
$ 30 Dibromofluoromethane	113	4.096	4.103	(0.979)	224632	47.1648	47.16
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	288102	50.4555	50.45
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	795466	52.9361	52.93
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	257930	46.2320	46.23
11 1,1-Dichloroethene	96	1.912	1.919	(0.457)	4018	0.69719	0.69(a)
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	43276	8.74663	8.74
38 Trichloroethene	130	5.207	5.207	(1.049)	609484	134.802	134.80

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).

Data File: \\NAHSTWS005\Target\chem\voa6.i\X210422.b\X042214.D
Date : 22-APR-2021 15:29
Client ID: HS21041102-03
Sample Info: HS21041102-03;HS21041102-03;;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18



Data File: \\NAHSTWS005\Target\chem\voa6.i\X210422.b\X042214.D

Date : 22-APR-2021 15:29

Client ID: HS21041102-03

Instrument: voa6.i

Sample Info: HS21041102-03;HS21041102-03;;;

Purge Volume: 5.0

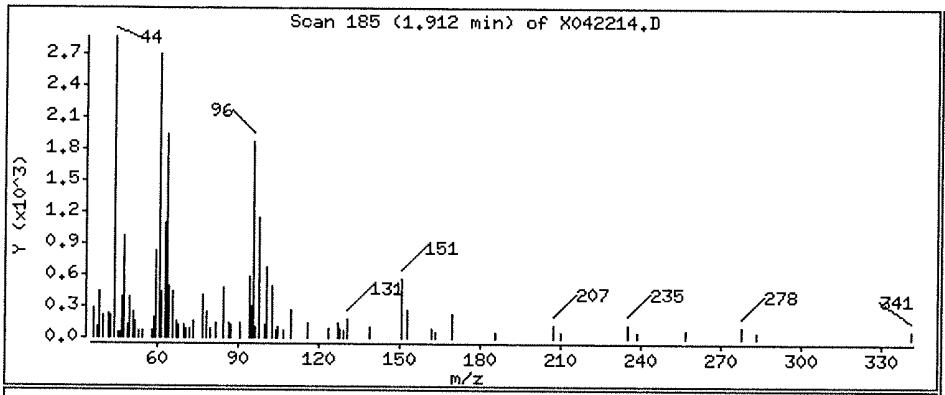
Operator: PC

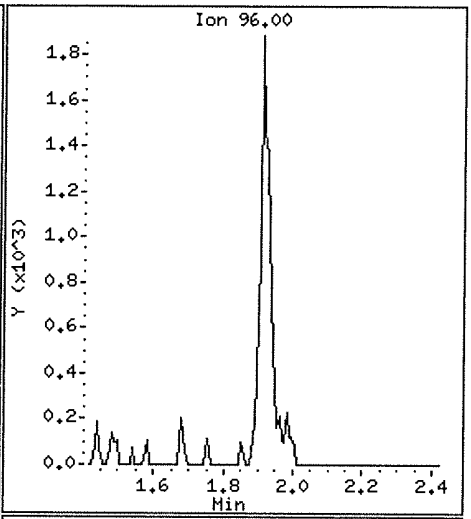
Column phase: DB624

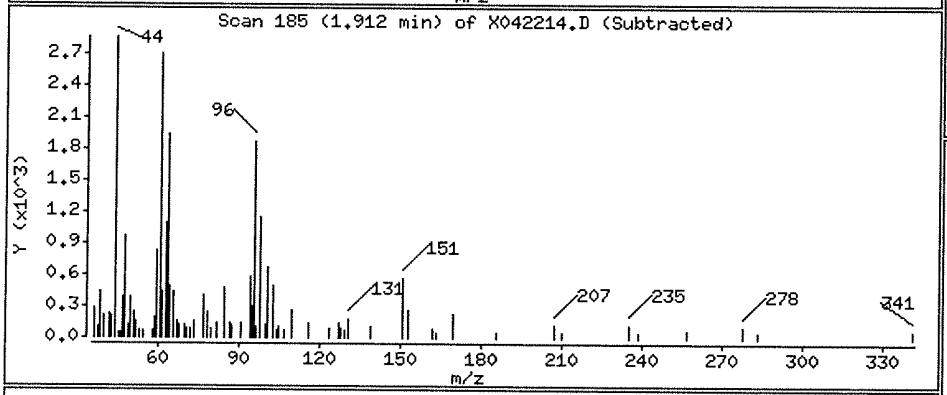
Column diameter: 0.18

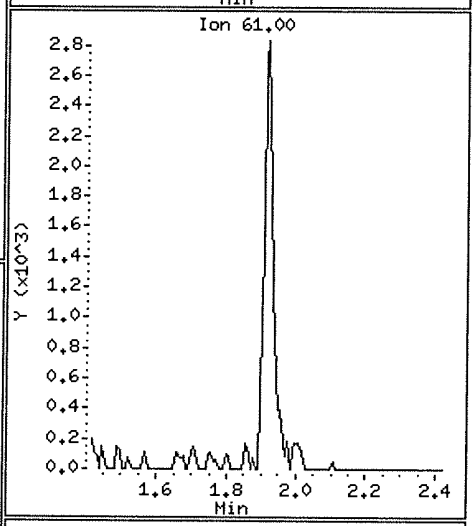
11 1,1-Dichloroethene

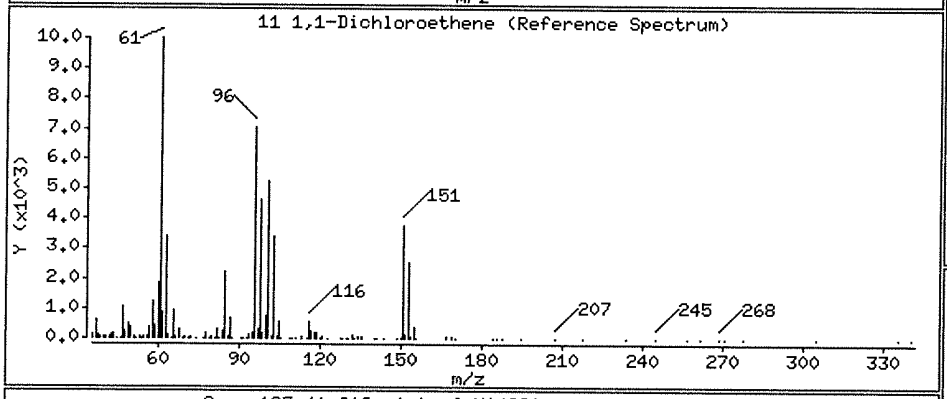
Concentration: 0.69 ug/l

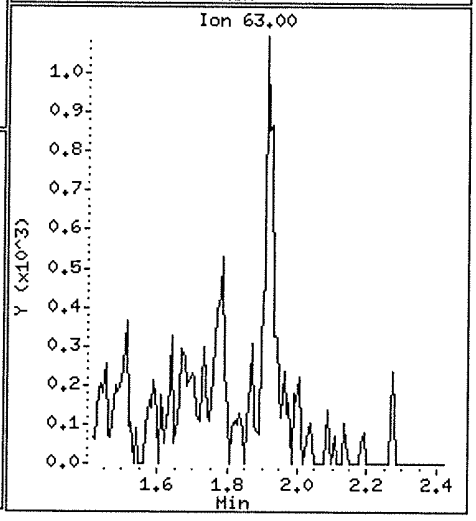


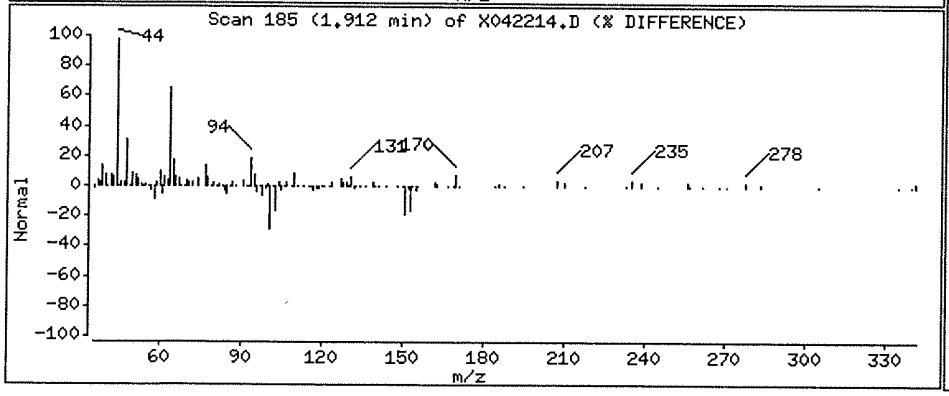












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210422.b\X042214.D

Date : 22-APR-2021 15:29

Client ID: HS21041102-03

Instrument: voa6.i

Sample Info: HS21041102-03;HS21041102-03;;;

Purge Volume: 5.0

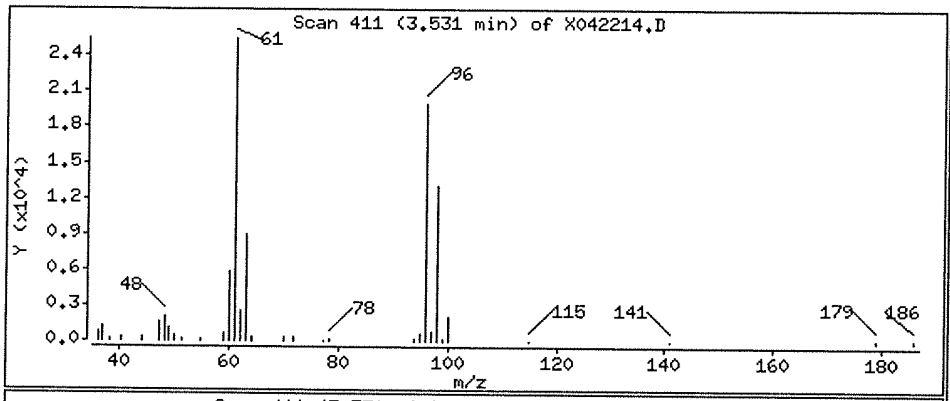
Operator: PC

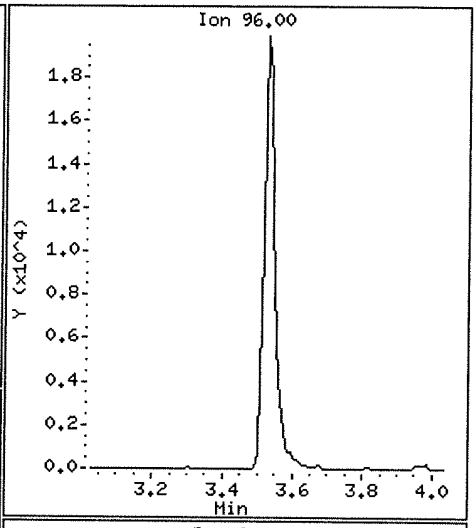
Column phase: DB624

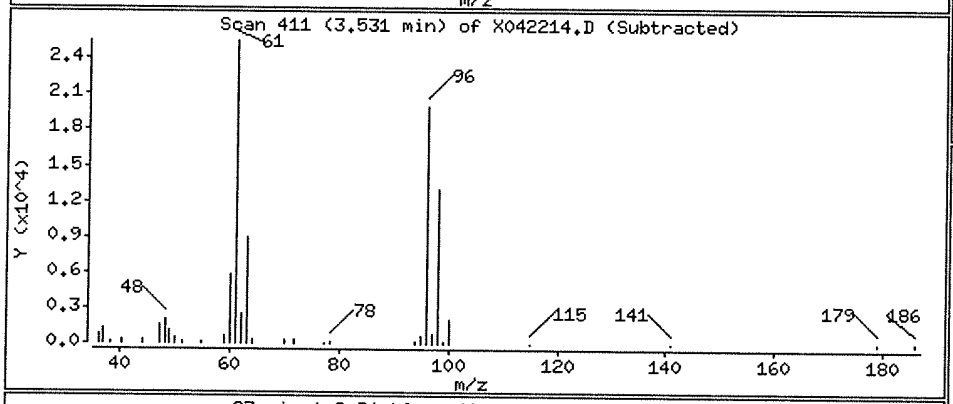
Column diameter: 0.18

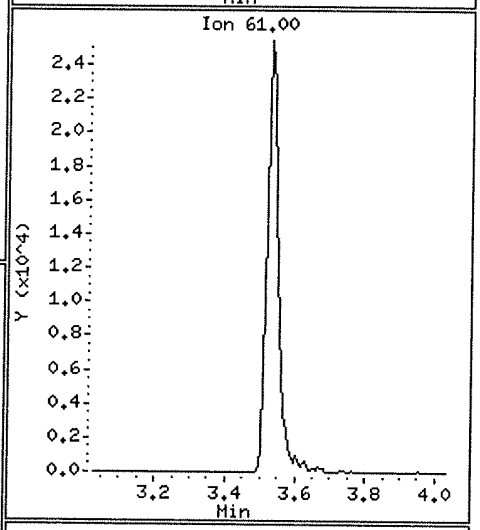
27 cis-1,2-Dichloroethene

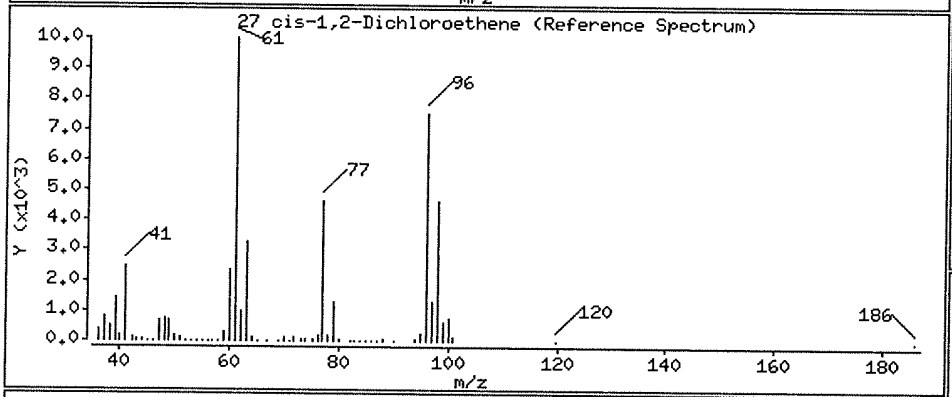
Concentration: 8.74 ug/l

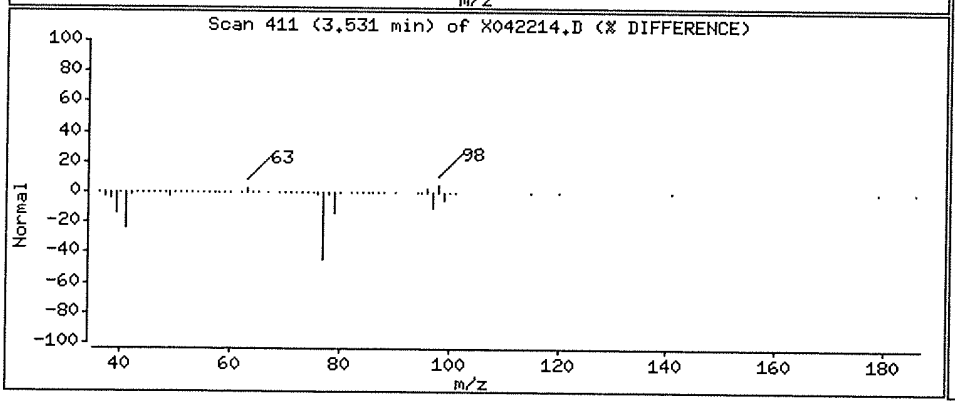


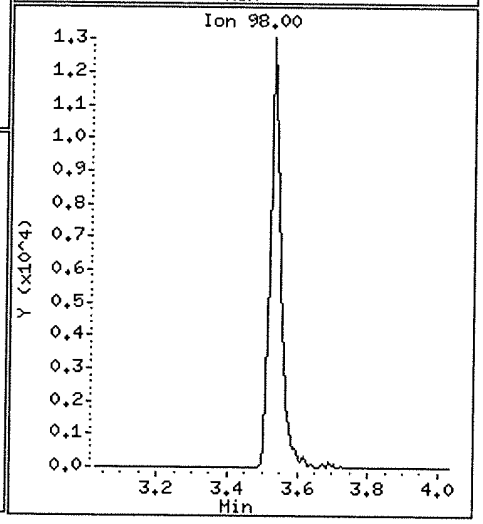












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210422.b\X042214.D

Date : 22-APR-2021 15:29

Client ID: HS21041102-03

Instrument: voa6.i

Sample Info: HS21041102-03;HS21041102-03;;;

Purge Volume: 5.0

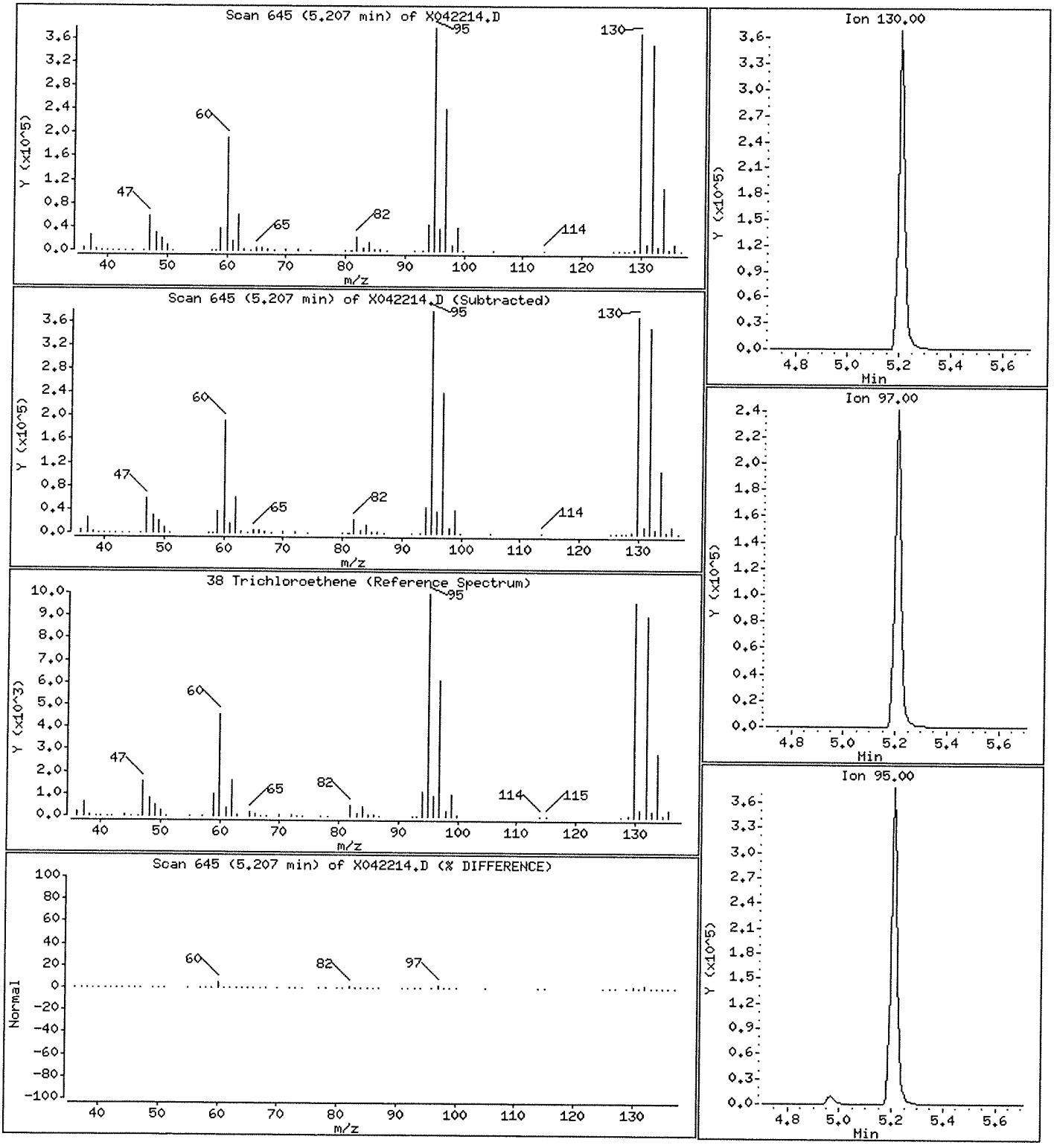
Operator: PC

Column phase: DB624

Column diameter: 0.18

38 Trichloroethene

Concentration: 134.80 ug/l



Data File: \\NAHSTWS005\Target\chem\voa6.i\X210422.b\X042215.D Page 1
Report Date: 12-May-2021 14:28

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X210422.b\X042215.D
Lab Smp Id: HS21041102-09 Client Smp ID: HS21041102-09
Inj Date : 22-APR-2021 15:50
Operator : PC Inst ID: voa6.i
Smp Info : HS21041102-09;HS21041102-09;;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X210422.b\8260W.m
Meth Date : 12-May-2021 14:28 Qin.Xu Quant Type: ISTD
Cal Date : 02-APR-2021 13:20 Cal File: X040208.D
Als bottle: 15
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBI_short1.sub
Target Version: 4.14
Processing Host: NAHSTW7066

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

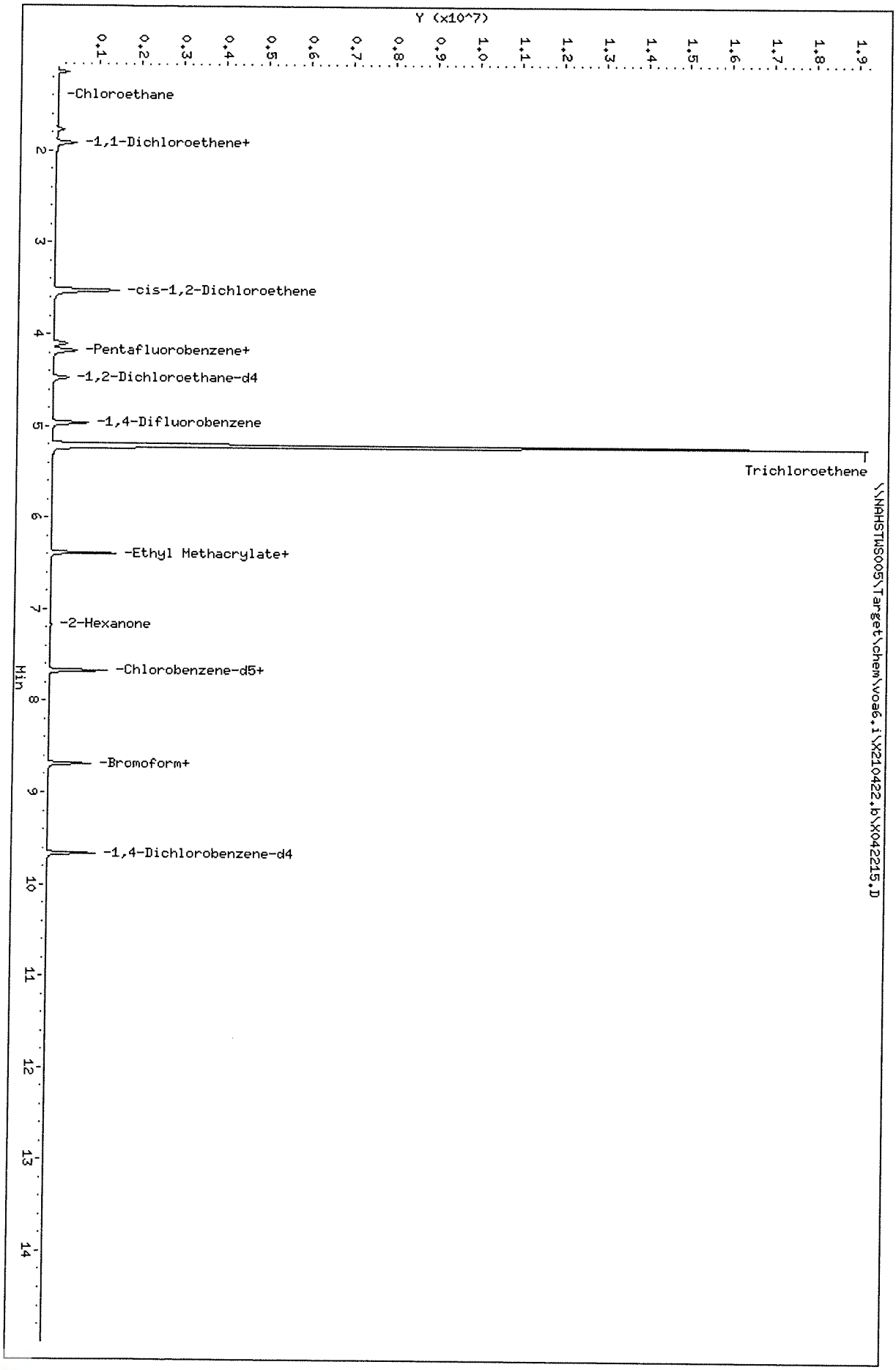
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	403538	50.0000	
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	655033	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	584716	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	236221	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	225766	47.5419	47.54
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	287795	50.5523	50.55
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	823322	54.6031	54.60
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	261389	46.7257	46.72
11 1,1-Dichloroethene	96	1.919	1.919	(0.459)	27651	4.81235	4.81(a)
27 cis-1,2-Dichloroethene	96	3.523	3.530	(0.842)	765832	155.250	155.24
38 Trichloroethene	130	5.207	5.207	(1.049)	5250347	1170.88	1170.87(A)
5 Vinyl Chloride	62	1.145	1.145	(0.274)	197697	32.6781	32.67

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).
A - Target compound detected but, quantitated amount exceeded maximum amount.

Data File: \\NAHSTWS005\Target\chem\voa6.i\X210422.b\X042215.D
Date : 22-APR-2021 15:50
Client ID: HS21041102-09
Sample Info: HS21041102-09;HS21041102-09;;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18



Data File: \\NAHSTWS005\Target\chem\voa6.i\X210422.b\X042215.D

Date : 22-APR-2021 15:50

Client ID: HS21041102-09

Instrument: voa6.i

Sample Info: HS21041102-09;HS21041102-09;;;

Purge Volume: 5.0

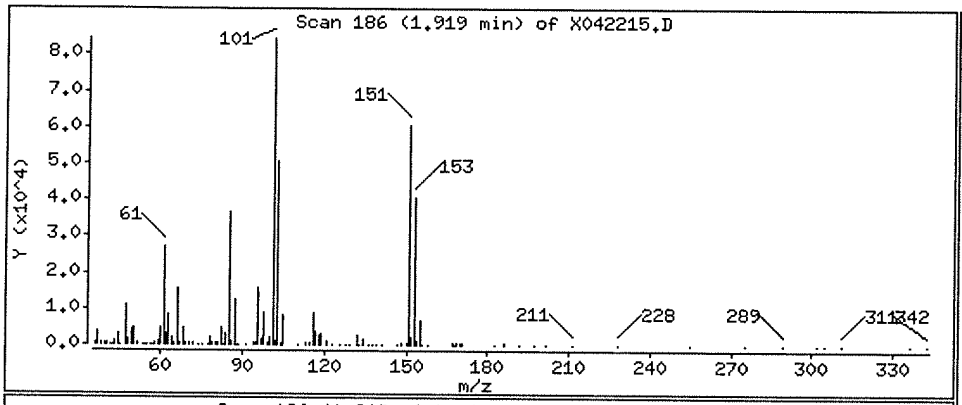
Operator: PC

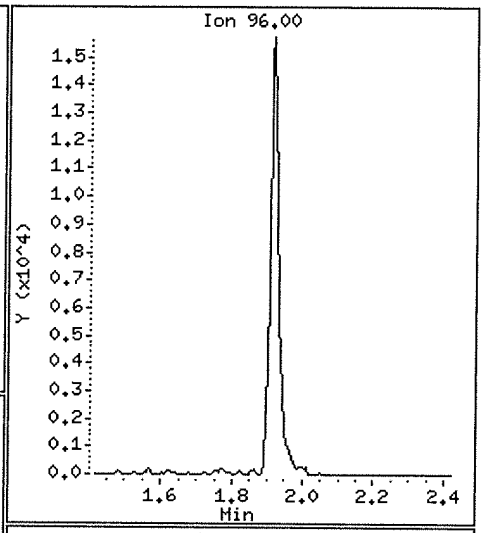
Column phase: DB624

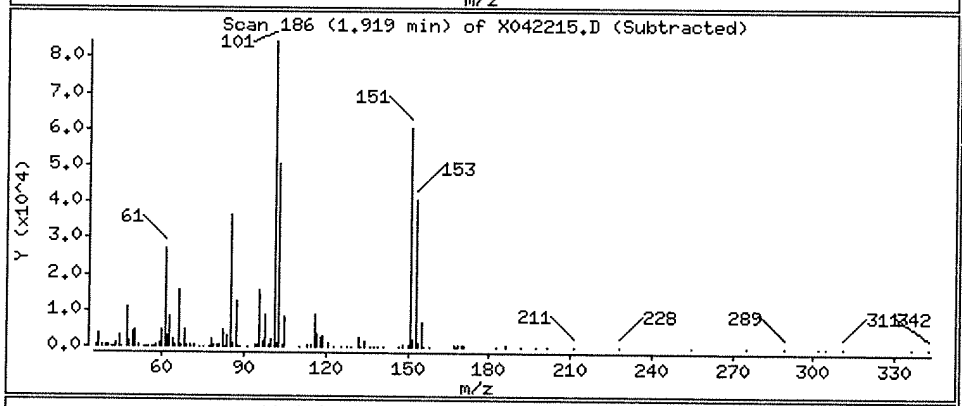
Column diameter: 0.18

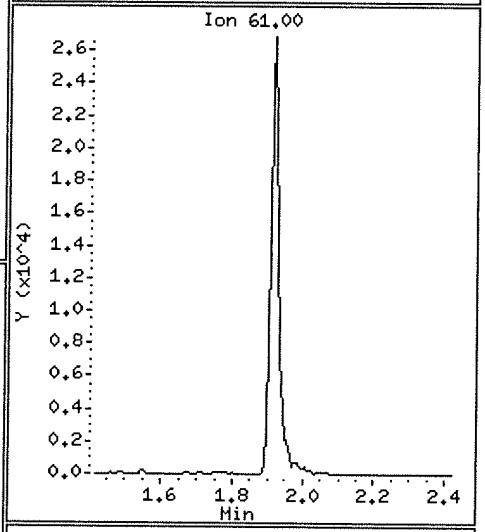
11 1,1-Dichloroethene

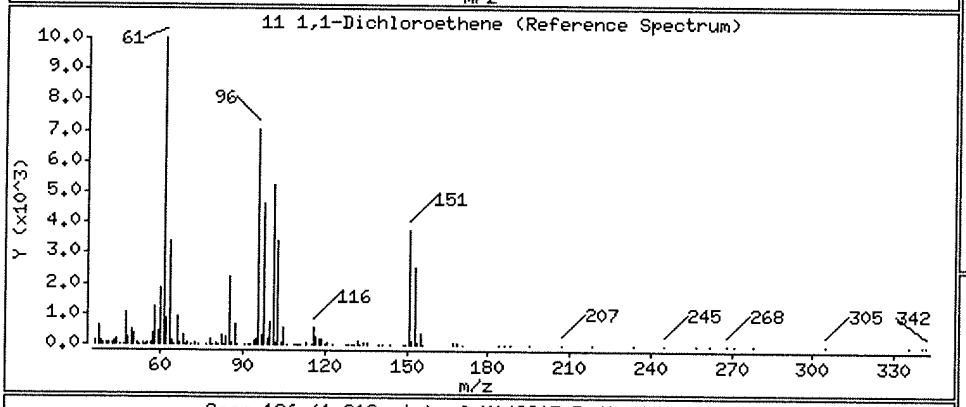
Concentration: 4.81 ug/l

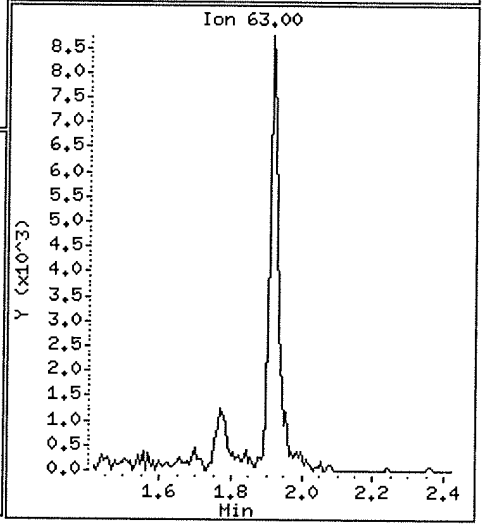


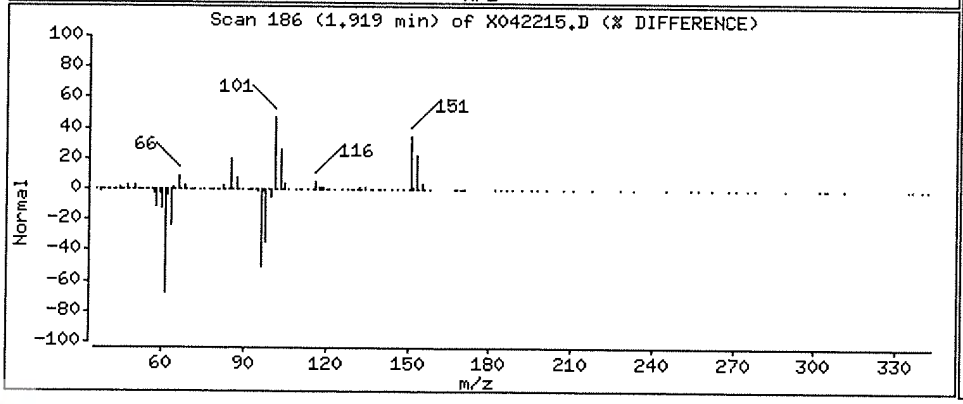












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210422.b\X042215.D

Date : 22-APR-2021 15:50

Client ID: HS21041102-09

Instrument: voa6.i

Sample Info: HS21041102-09;HS21041102-09;;;

Purge Volume: 5.0

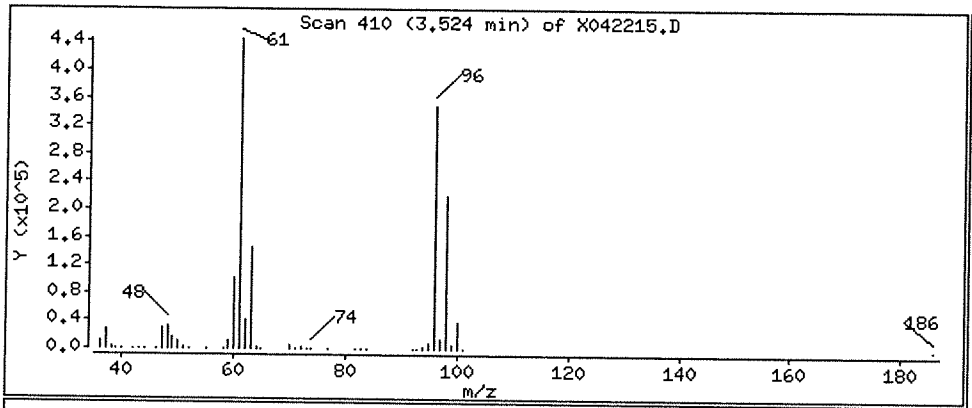
Operator: PC

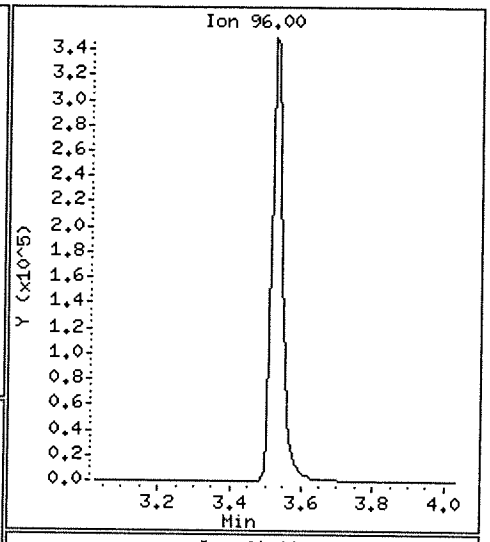
Column phase: DB624

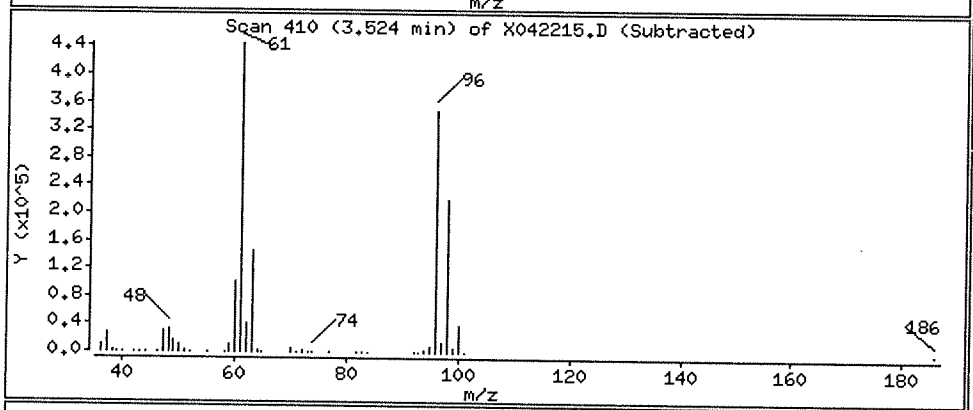
Column diameter: 0.18

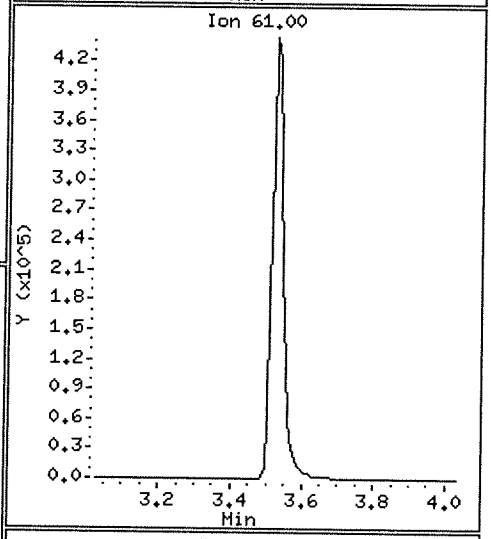
27 cis-1,2-Dichloroethene

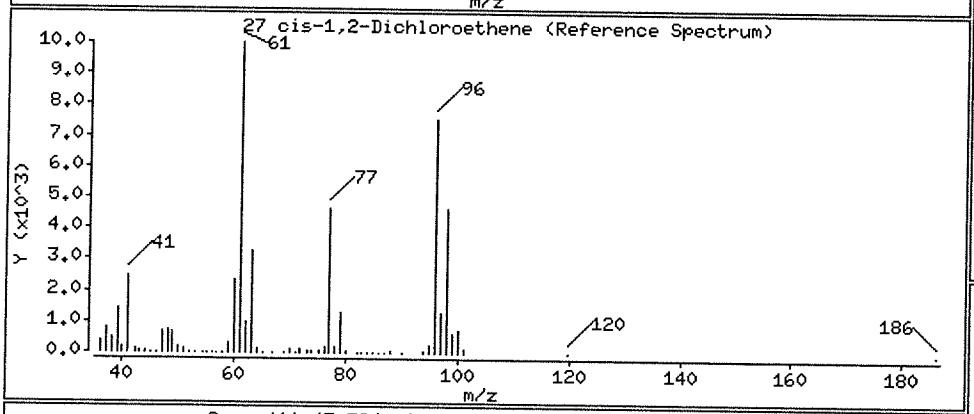
Concentration: 155.24 ug/l

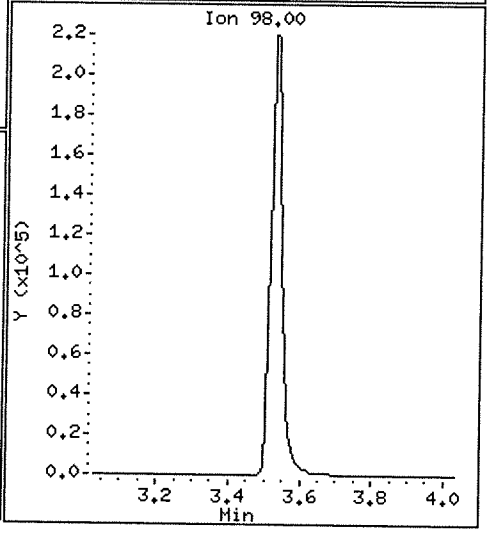


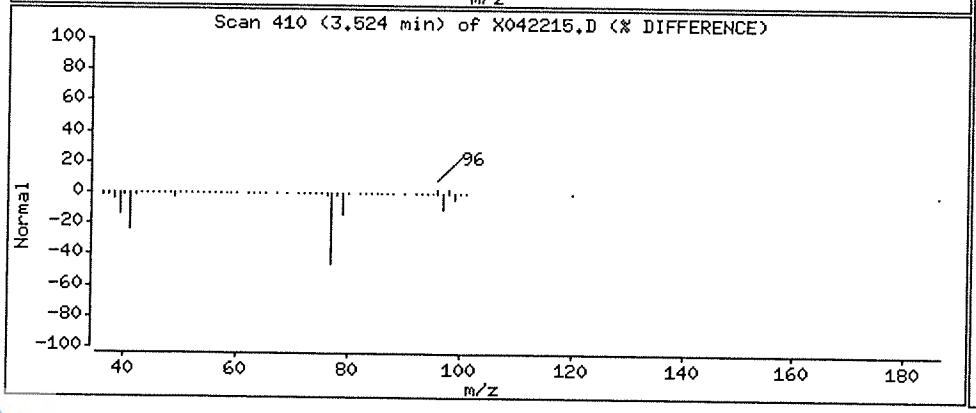












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210422.b\X042215.D

Date : 22-APR-2021 15:50

Client ID: HS21041102-09

Instrument: voa6.i

Sample Info: HS21041102-09;HS21041102-09;;;

Purge Volume: 5.0

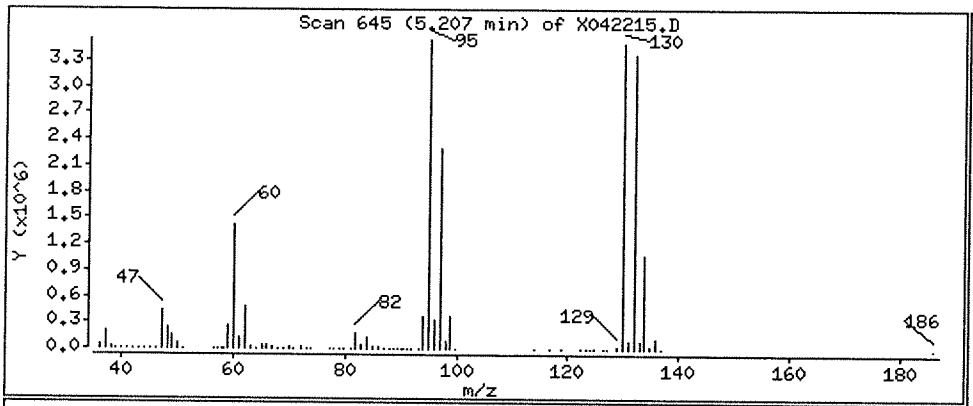
Operator: PC

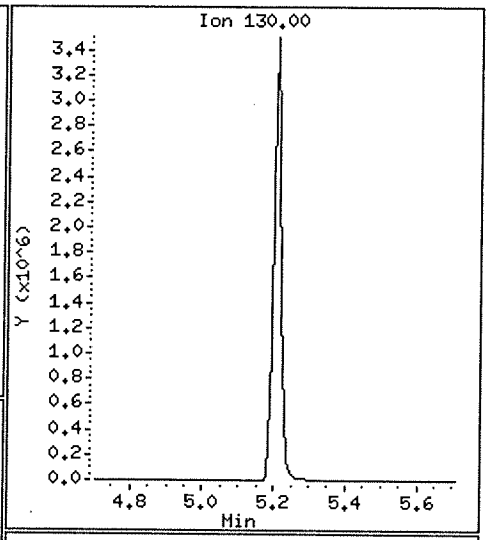
Column phase: DB624

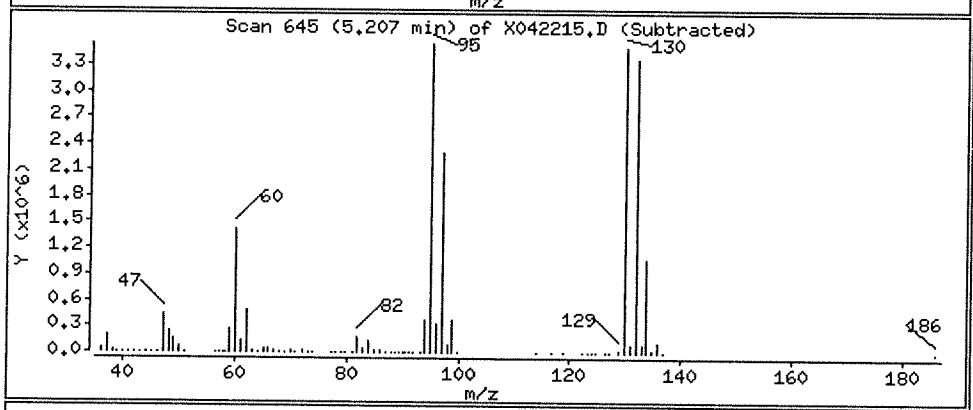
Column diameter: 0.18

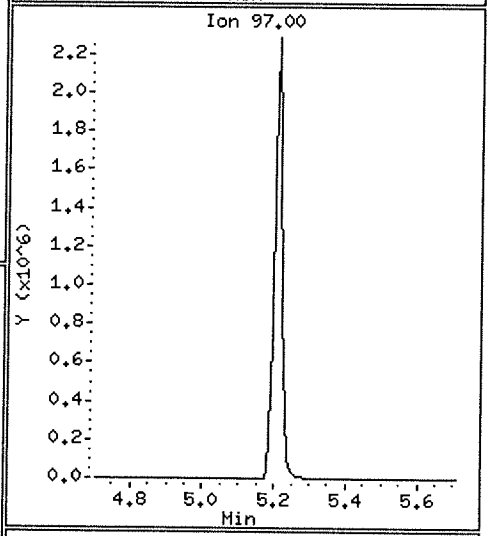
38 Trichloroethene

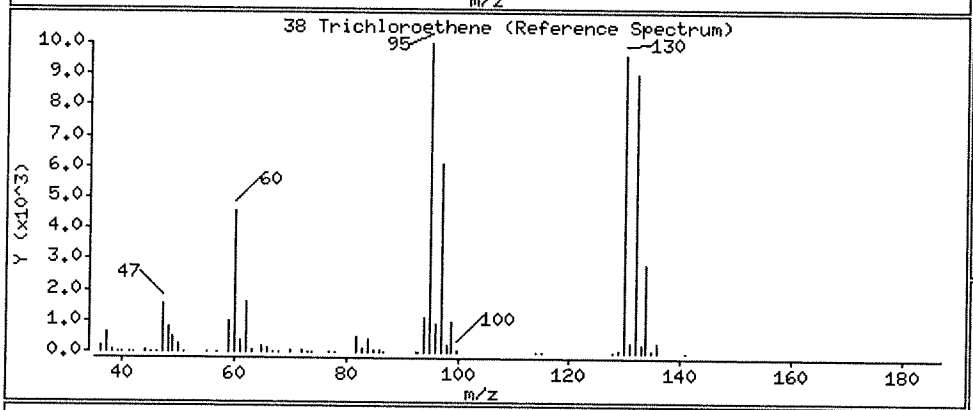
Concentration: 1170.87 ug/l

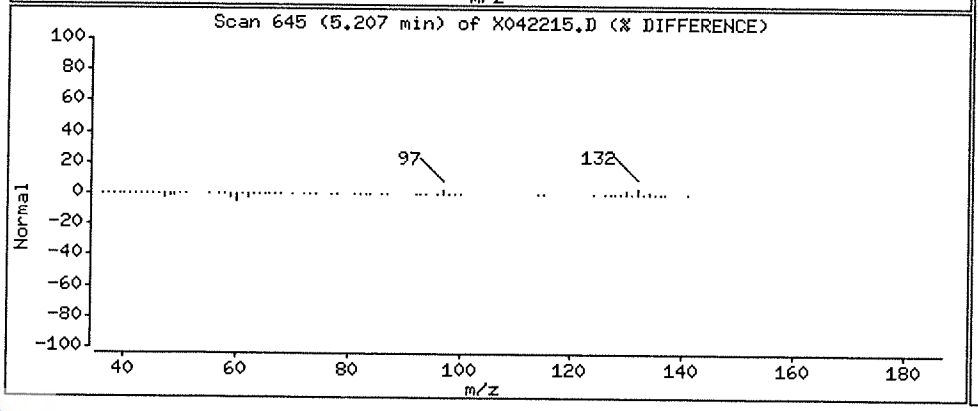


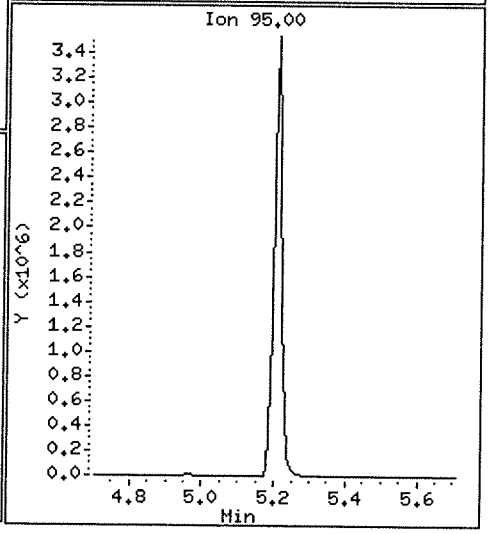












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210422.b\X042215.D

Date : 22-APR-2021 15:50

Client ID: HS21041102-09

Instrument: voa6.i

Sample Info: HS21041102-09;HS21041102-09;;;

Purge Volume: 5.0

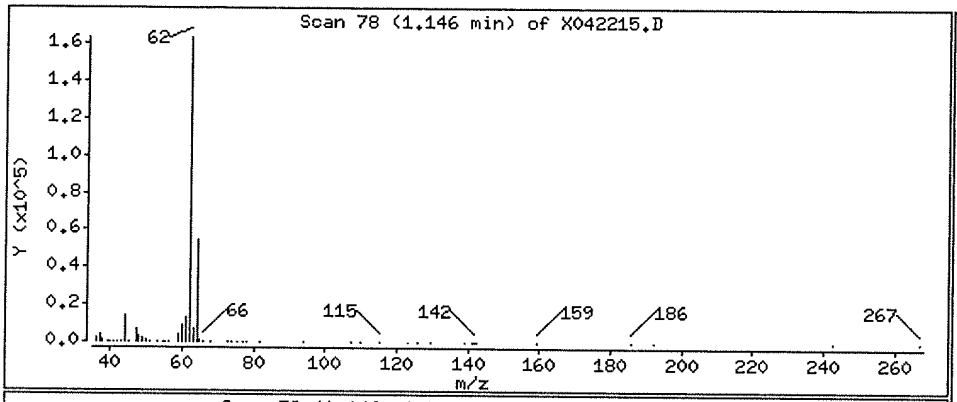
Operator: PC

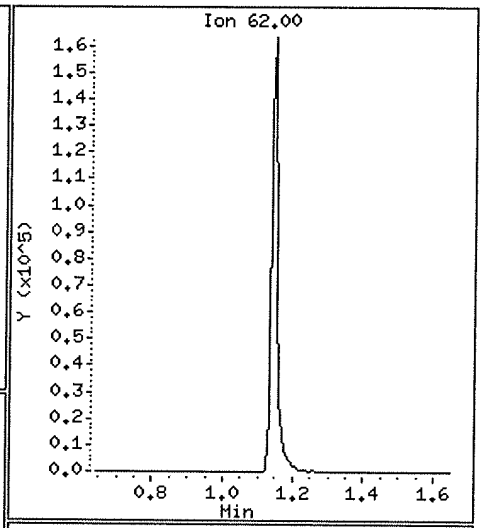
Column phase: DB624

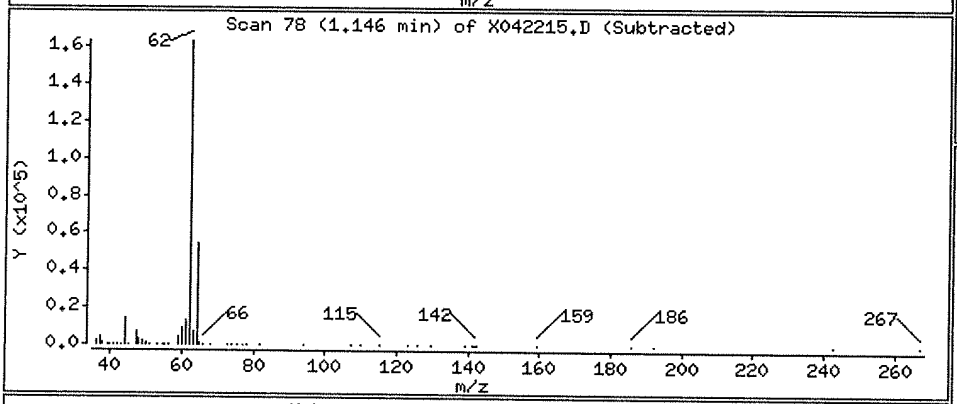
Column diameter: 0.18

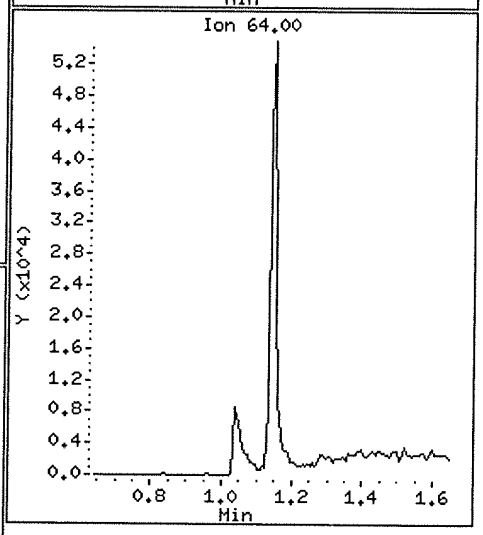
5 Vinyl Chloride

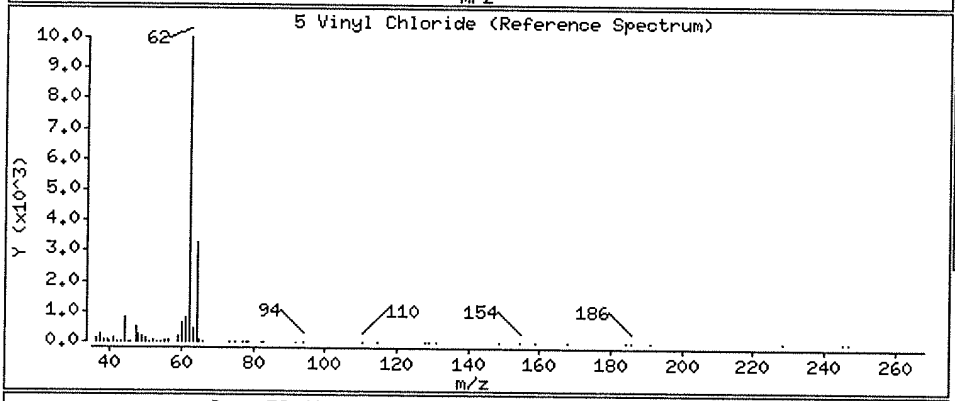
Concentration: 32.67 ug/l

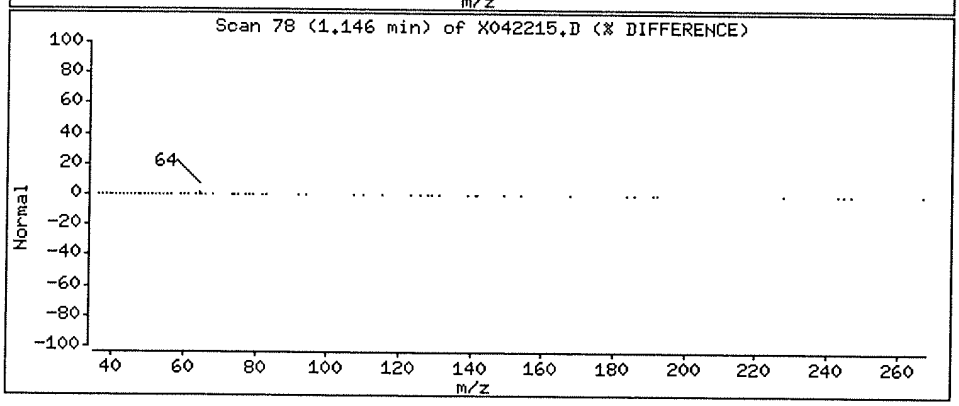












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210422.b\X042216.D Page 1
Report Date: 12-May-2021 14:27

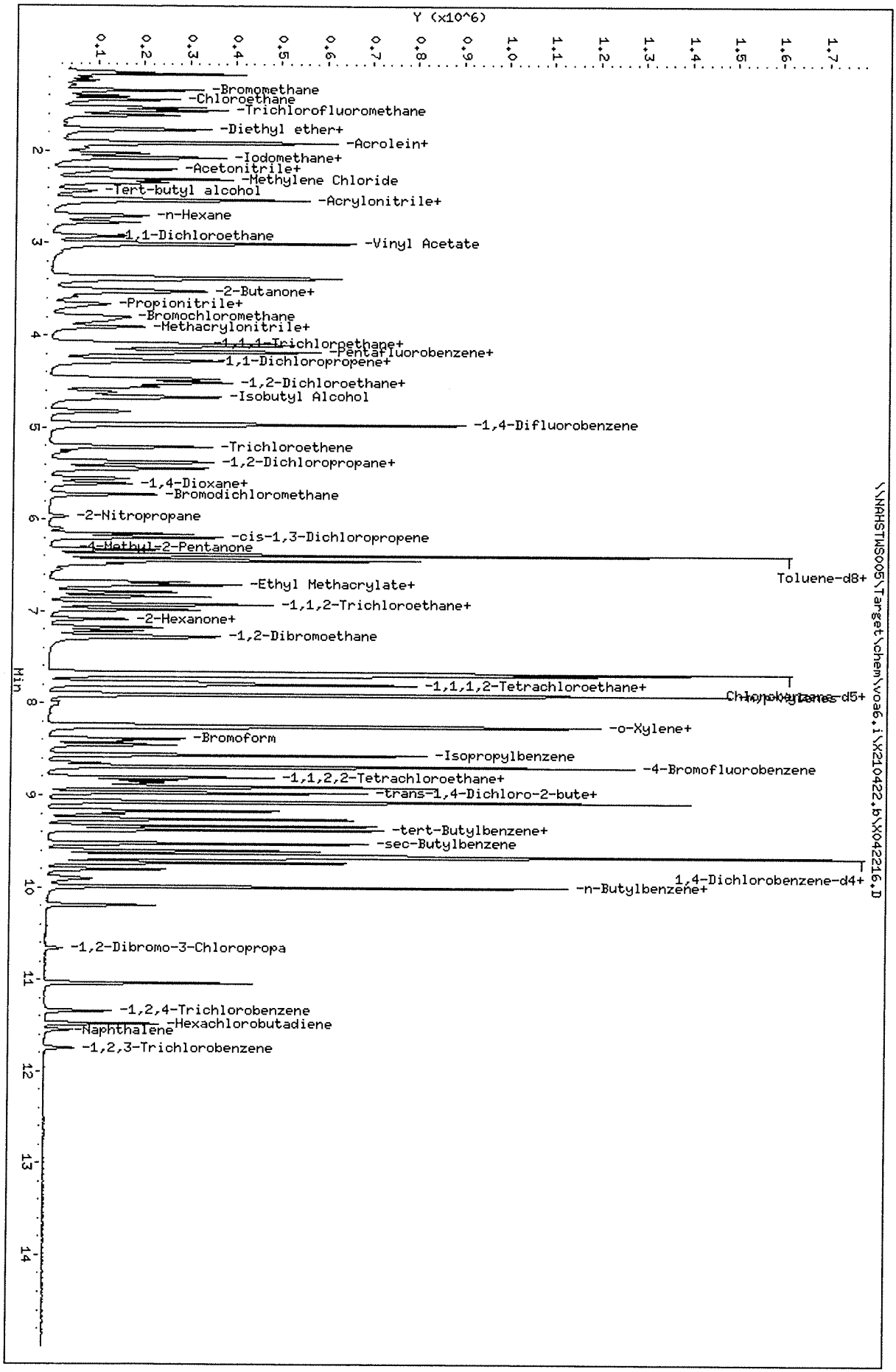
ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X210422.b\X042216.D
Lab Smp Id: HS21041102-04MS Client Smp ID: HS21041102-04MS
Inj Date : 22-APR-2021 16:11
Operator : PC Inst ID: voa6.i
Smp Info : HS21041102-04MS;HS21041102-04MS;3;;MS
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X210422.b\8260W.m
Meth Date : 12-May-2021 14:27 voa6.i Quant Type: ISTD
Cal Date : 02-APR-2021 13:20 Cal File: X040208.D
Als bottle: 16 QC Sample: MS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBI_short1.sub
Target Version: 4.14
Processing Host: NAHSTW7066

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	432353	50.0000	
* 36 1,4-Difluorobenzene	114	4.963	4.970	(1.000)	711082	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	673269	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	316393	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	234031	46.0119	46.01
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	291315	47.7869	47.78
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	907433	52.3453	52.34
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	332179	51.3989	51.39
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	74211	18.9749	18.97
11 1,1-Dichloroethene	96	1.919	1.919	(0.459)	115373	18.7412	18.74
33 1,2-Dichloroethane	62	4.555	4.555	(0.918)	137595	18.2811	18.28
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	99035	18.7384	18.73
17 Methylene Chloride	84	2.305	2.305	(0.551)	86542	19.3795	19.37
38 Trichloroethene	130	5.206	5.207	(1.049)	104982	21.5666	21.56
5 Vinyl Chloride	62	1.145	1.145	(0.274)	137261	21.1763	21.17



Data File: \\NAHSTWS005\Target\chem\voa6.i\X210422.b\X042216.D
Date : 22-APR-2021 16:11
Client ID: HS21041102-04HS
Sample Info: HS21041102-04HS;HS21041102-04HS;3;;HS
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\NAHSTWS005\Target\chem\voa6.i\X210422.b\X042217.D Page 1
Report Date: 12-May-2021 14:27

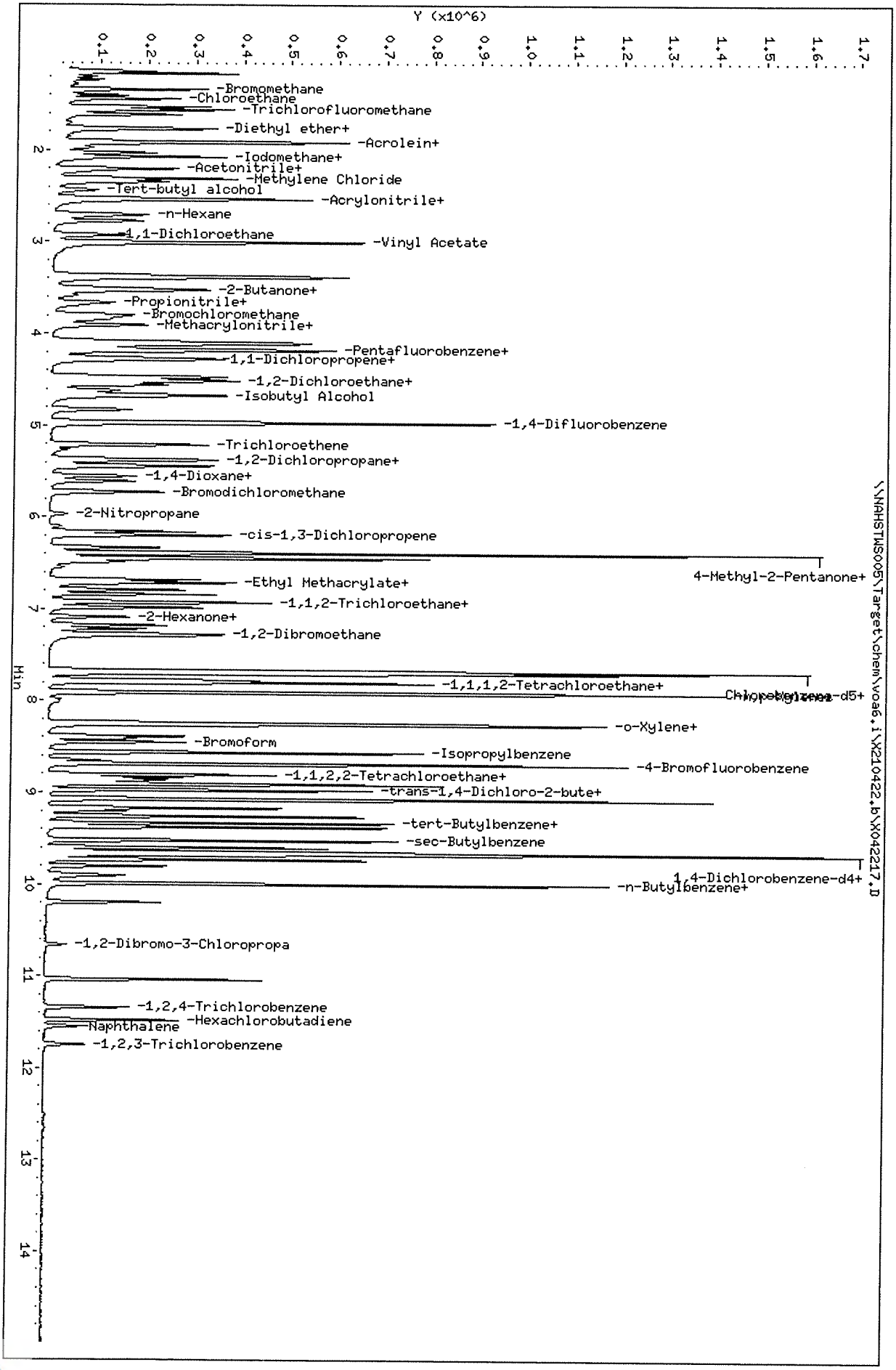
ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X210422.b\X042217.D
Lab Smp Id: HS21041102-04MSD Client Smp ID: HS21041102-04MSD
Inj Date : 22-APR-2021 16:32
Operator : PC Inst ID: voa6.i
Smp Info : HS21041102-04MSD;HS21041102-04MSD;3;;MSD
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X210422.b\8260W.m
Meth Date : 12-May-2021 14:27 voa6.i Quant Type: ISTD
Cal Date : 02-APR-2021 13:20 Cal File: X040208.D
Als bottle: 16 QC Sample: MSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBI_short1.sub
Target Version: 4.14
Processing Host: NAHSTW7066

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	445681	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	731690	50.0000	
* 47 Chlorobenzene-d5	117	7.670	7.671	(1.000)	668607	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	291106	50.0000	
$ 30 Dibromofluoromethane	113	4.096	4.103	(0.979)	243595	46.4558	46.45
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	290900	46.3069	46.30
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	899240	52.2383	52.23
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	312651	48.8008	48.80
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	73081	18.8163	18.81
11 1,1-Dichloroethene	96	1.919	1.919	(0.459)	115506	18.2017	18.20
33 1,2-Dichloroethane	62	4.555	4.555	(0.916)	140530	18.1451	18.14
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	96789	17.7657	17.76
17 Methylene Chloride	84	2.305	2.305	(0.551)	84594	18.4536	18.45
38 Trichloroethene	130	5.206	5.207	(1.048)	99607	19.8861	19.88
5 Vinyl Chloride	62	1.145	1.145	(0.274)	138257	20.6921	20.69



Data File: \\NAHSTWS005\Target\chem\voa6.i\X210422.b\X042217.D
Date : 22-APR-2021 16:32
Client ID: HS21041102-04HSD
Sample Info: HS21041102-04HSD;HS21041102-04HSD;3;;HSD
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\NAHSTWS005\Target\chem\voa6.i\X210422.b\X042226.D Page 1
Report Date: 12-May-2021 14:28

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X210422.b\X042226.D
Lab Smp Id: HS21041102-07 Client Smp ID: HS21041102-07
Inj Date : 22-APR-2021 19:42
Operator : PC Inst ID: voa6.i
Smp Info : HS21041102-07;HS21041102-07;;;
Misc Info : HS18090001;WATER;0;5;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X210422.b\8260W.m
Meth Date : 12-May-2021 14:28 Qin.Xu Quant Type: ISTD
Cal Date : 02-APR-2021 13:20 Cal File: X040208.D
Als bottle: 25
Dil Factor: 5.00000
Integrator: HP RTE Compound Sublist: CBI_short1.sub
Target Version: 4.14
Processing Host: NAHSTW7066

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

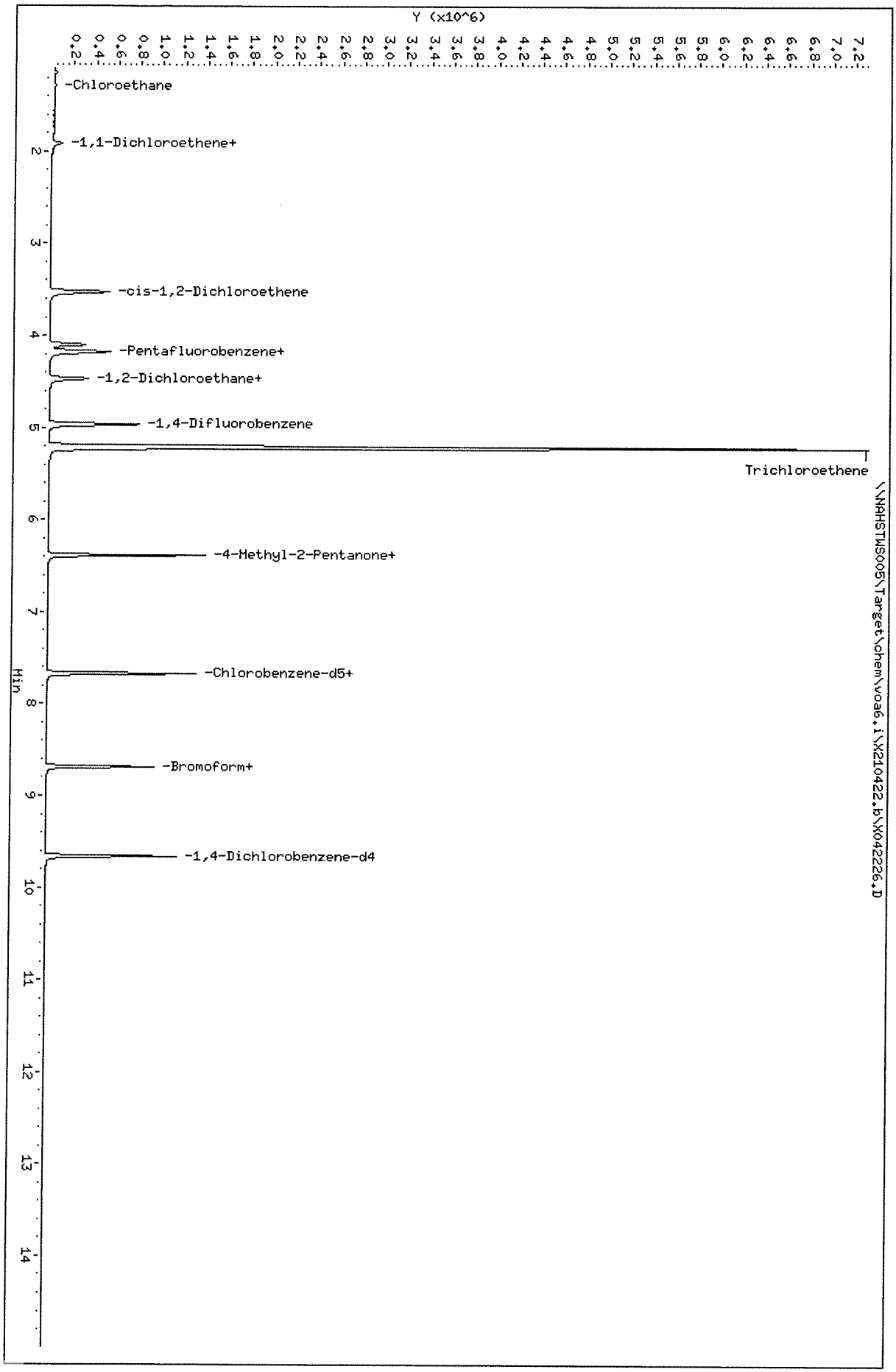
Name	Value	Description
DF	5.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	399062	50.0000	
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	640580	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	564303	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	250229	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	220456	46.9499	46.94
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	280201	49.7779	49.77
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	777076	53.4411	53.44
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	256807	47.5376	47.53
11 1,1-Dichloroethene	96	1.912	1.919	(0.457)	6179	1.08745	5.43(a)
33 1,2-Dichloroethane	62	4.569	4.555	(0.921)	4850	0.71530	3.57(a)
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	261761	53.6594	268.29
38 Trichloroethene	130	5.207	5.207	(1.049)	2095899	477.951	2389.75(A)
5 Vinyl Chloride	62	1.145	1.145	(0.274)	21678	3.62343	18.11

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).
A - Target compound detected but, quantitated amount exceeded maximum amount.

Data File: \\NAHSTWS005\Target\chem\voa6.i\X210422.b\X042226.D
Date : 22-APR-2021 19:42
Client ID: HS21041102-07
Instrument: voa6.i
Sample Info: HS21041102-07;HS21041102-07;;;
Purge Volume: 5.0
Operator: PC
Column phase: DB624
Column diameter: 0.18



Data File: \\NAHSTWS005\Target\chem\voa6.i\X210422.b\X042226.D

Date : 22-APR-2021 19:42

Client ID: HS21041102-07

Instrument: voa6.i

Sample Info: HS21041102-07;HS21041102-07;;;

Purge Volume: 5.0

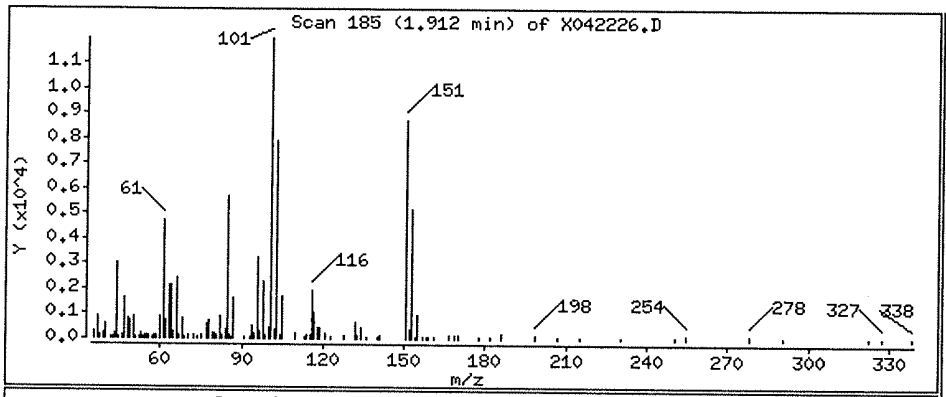
Operator: PC

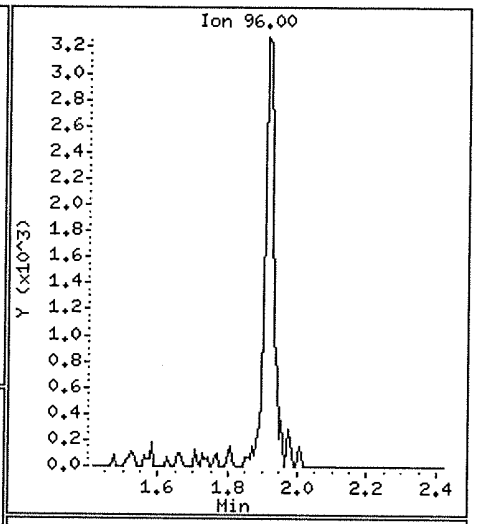
Column phase: DB624

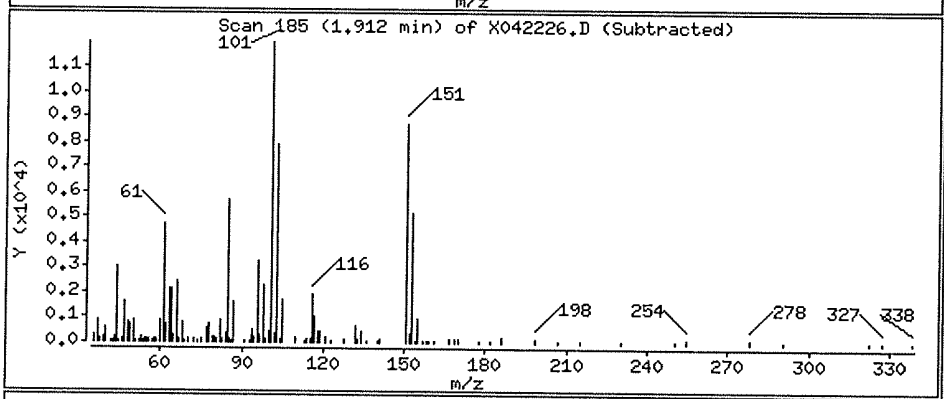
Column diameter: 0.18

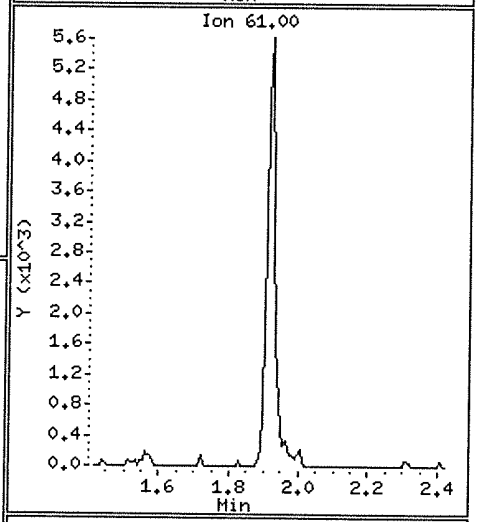
11 1,1-Dichloroethene

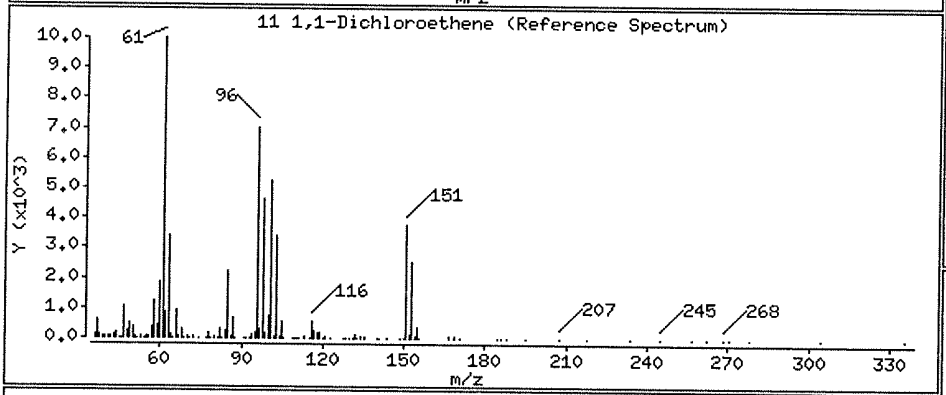
Concentration: 5.43 ug/l

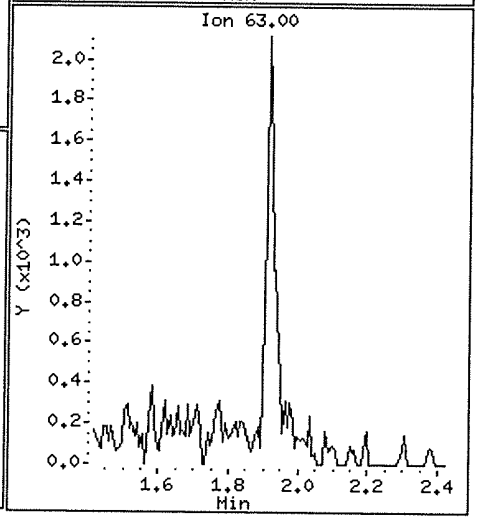


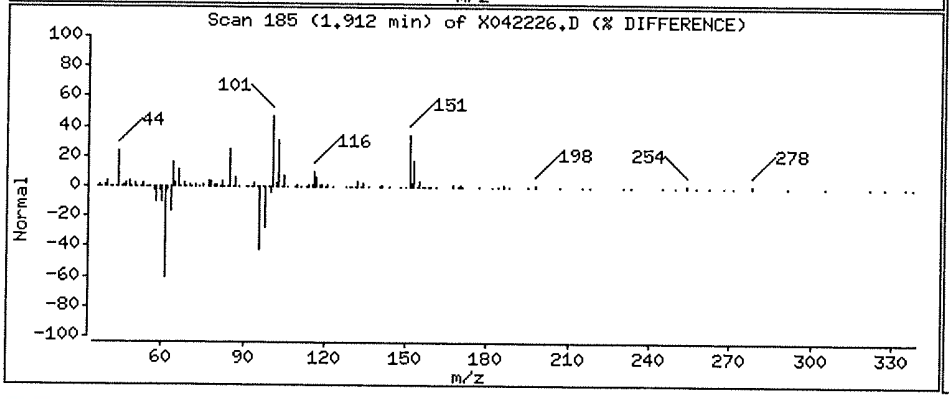












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210422.b\X042226.D

Date : 22-APR-2021 19:42

Client ID: HS21041102-07

Instrument: voa6.i

Sample Info: HS21041102-07;HS21041102-07;;;

Purge Volume: 5.0

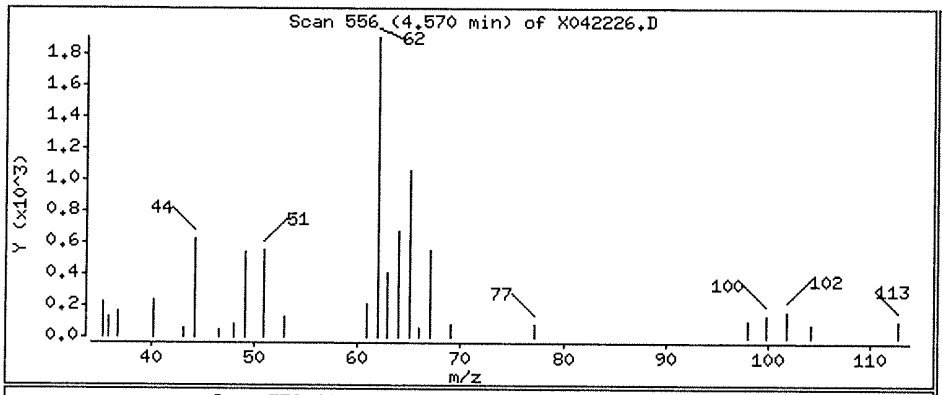
Operator: PC

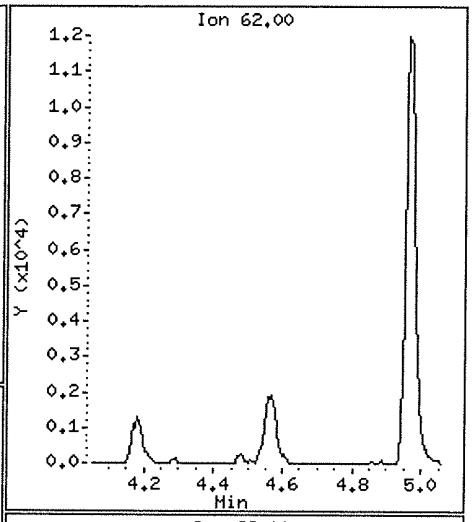
Column phase: DB624

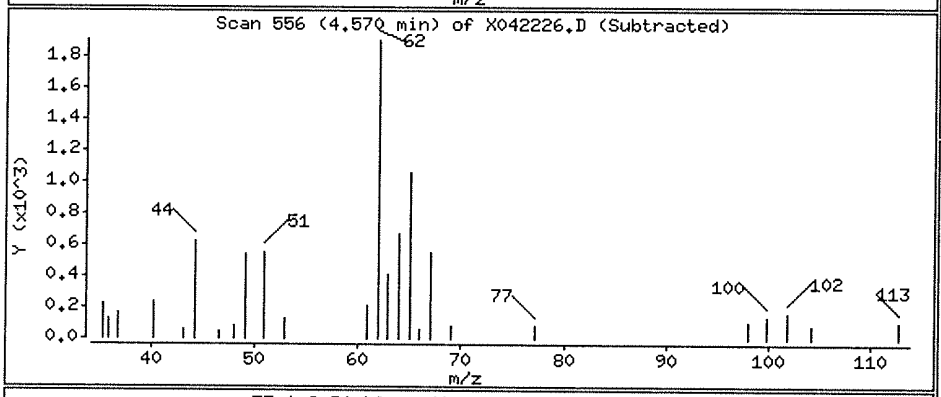
Column diameter: 0.18

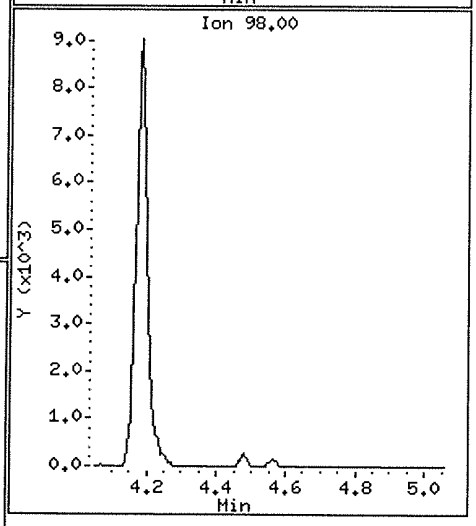
33 1,2-Dichloroethane

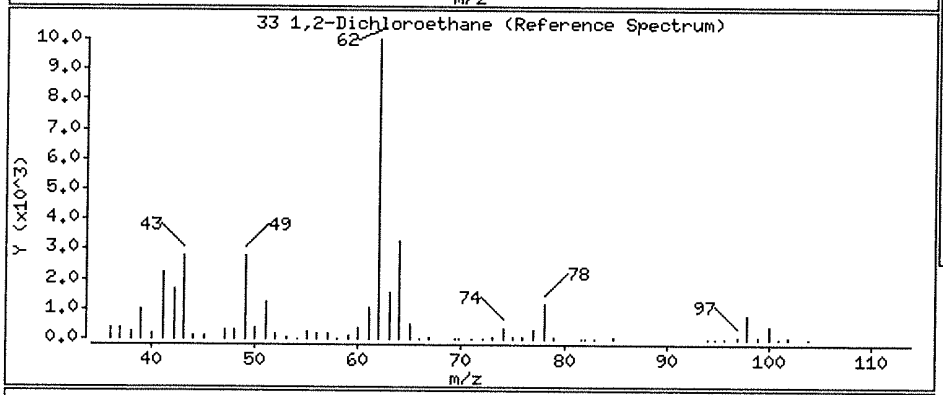
Concentration: 3.57 ug/l

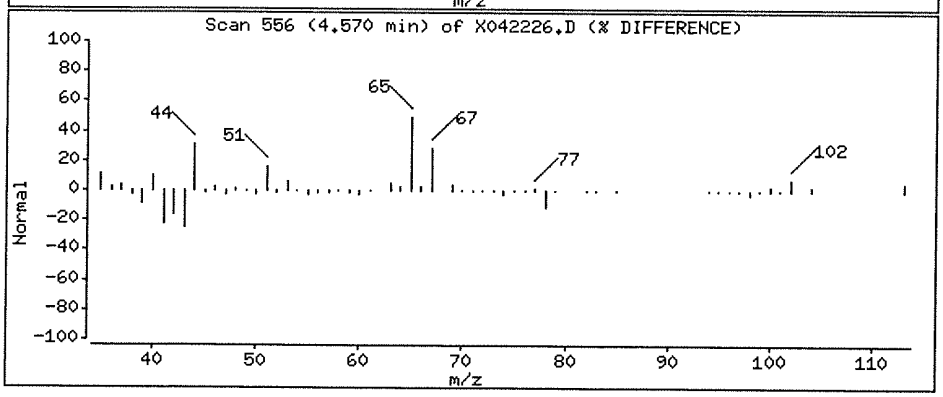












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210422.b\X042226.D

Date : 22-APR-2021 19:42

Client ID: HS21041102-07

Instrument: voa6.i

Sample Info: HS21041102-07;HS21041102-07;;;

Purge Volume: 5.0

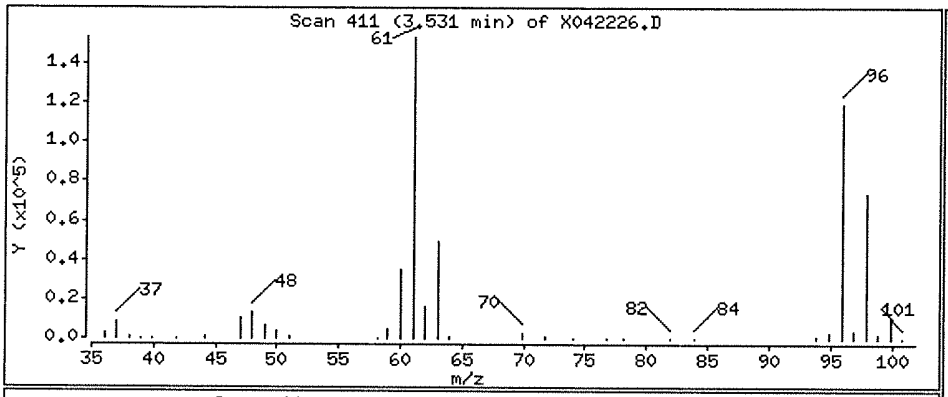
Operator: PC

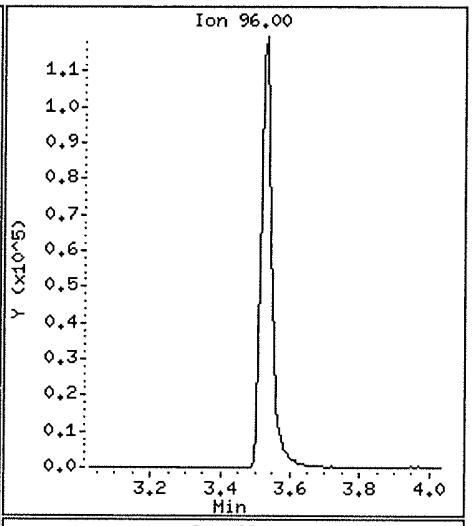
Column phase: DB624

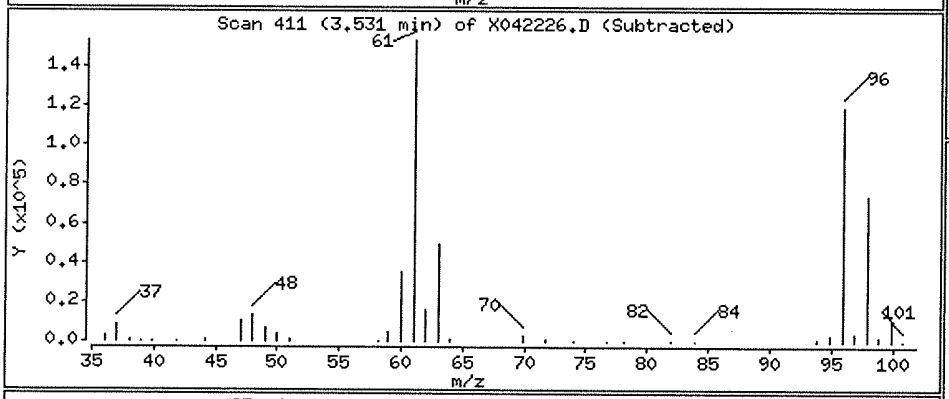
Column diameter: 0.18

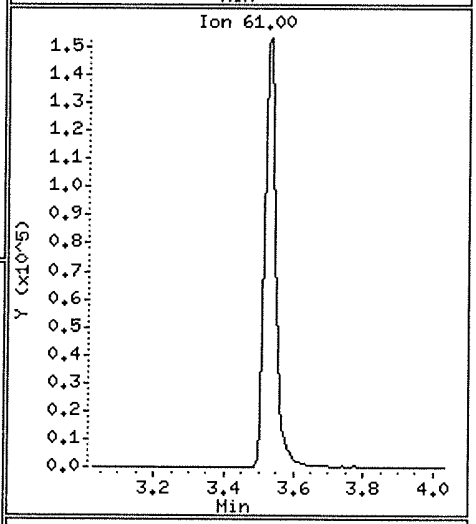
27 cis-1,2-Dichloroethene

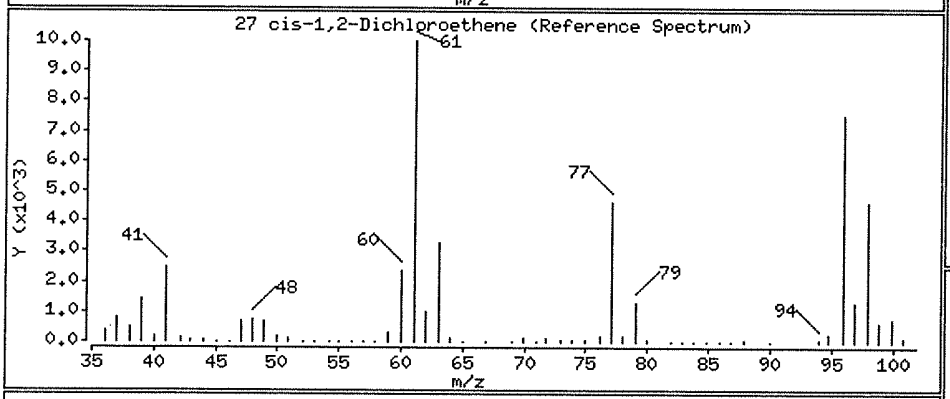
Concentration: 268.29 ug/l

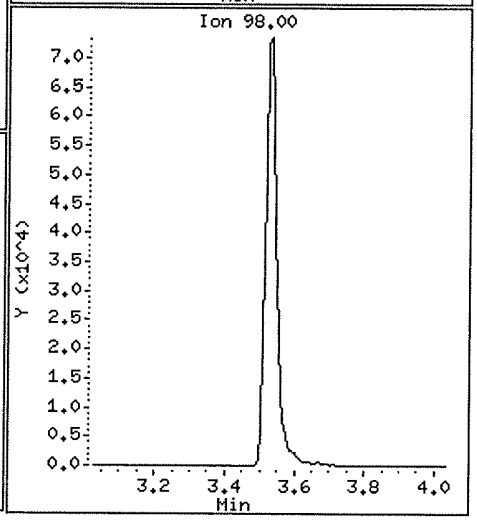


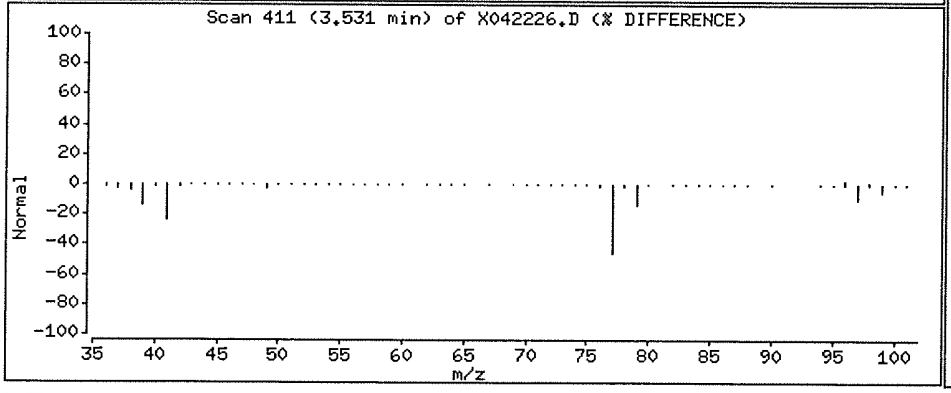












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210422.b\X042226.D

Date : 22-APR-2021 19:42

Client ID: HS21041102-07

Instrument: voa6.i

Sample Info: HS21041102-07;HS21041102-07;;;

Purge Volume: 5.0

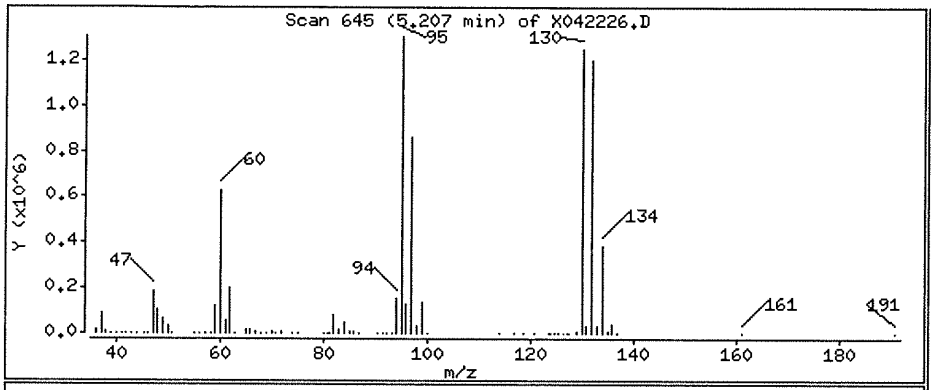
Operator: PC

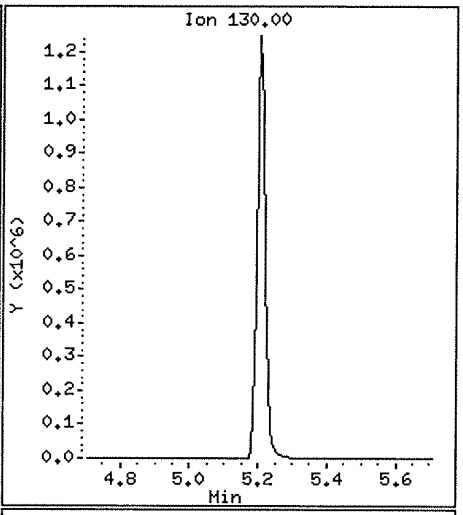
Column phase: DB624

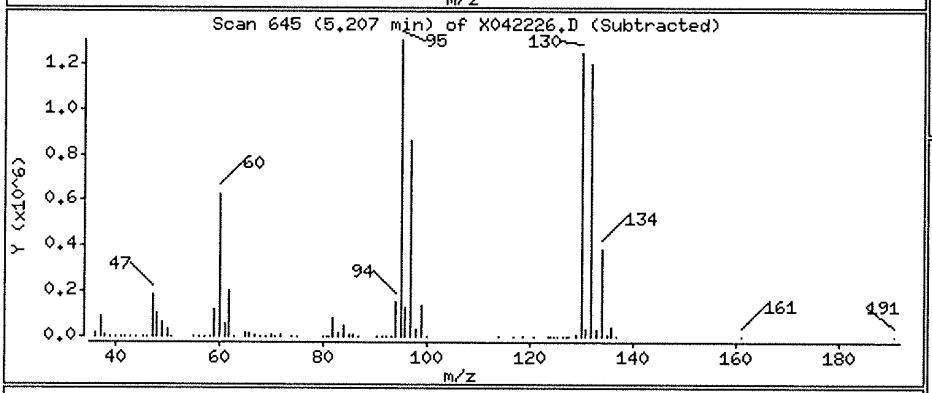
Column diameter: 0.18

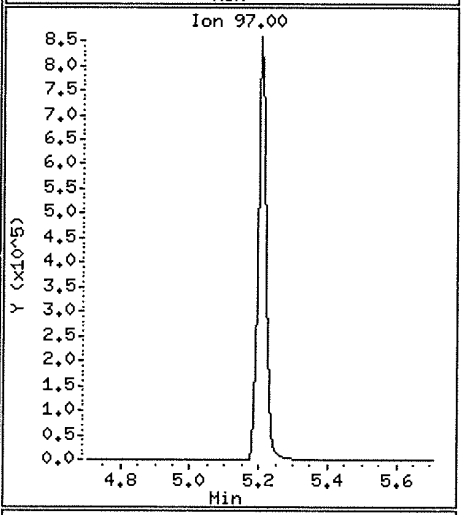
38 Trichloroethene

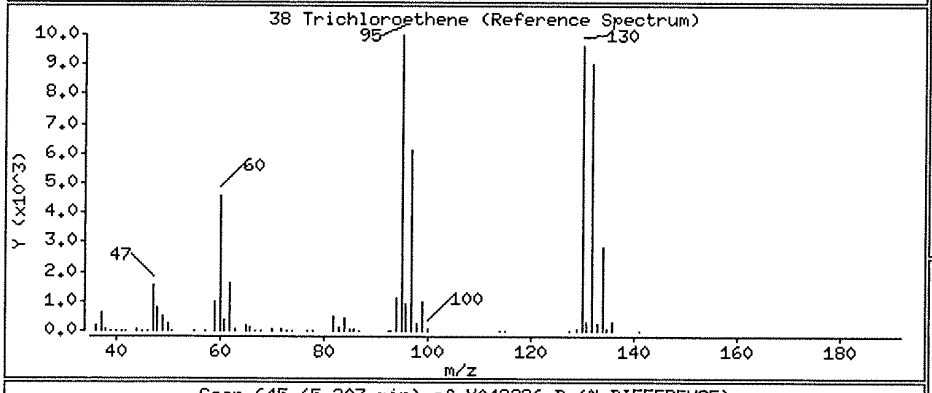
Concentration: 2389.75 ug/l

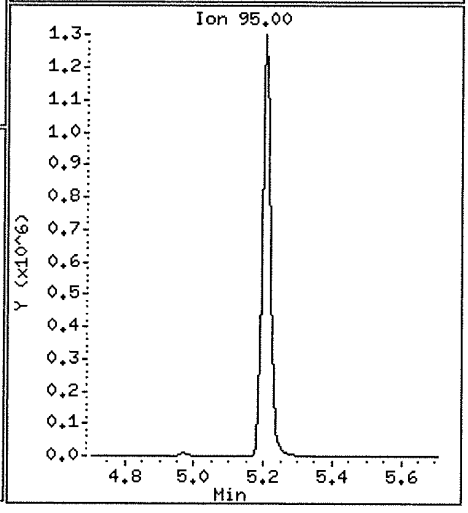


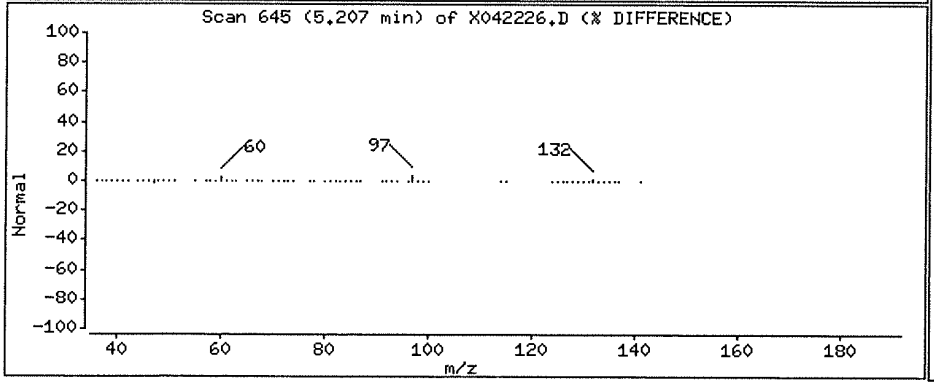












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210422.b\X042226.D

Date : 22-APR-2021 19:42

Client ID: HS21041102-07

Instrument: voa6.i

Sample Info: HS21041102-07;HS21041102-07;;;

Purge Volume: 5.0

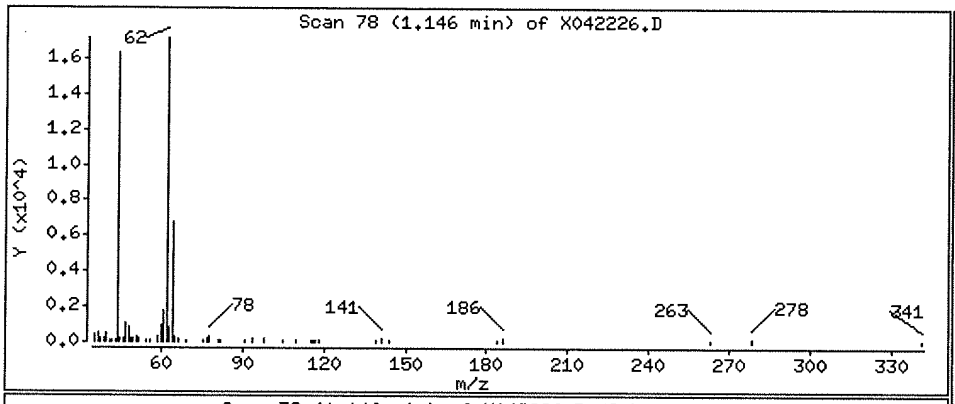
Operator: PC

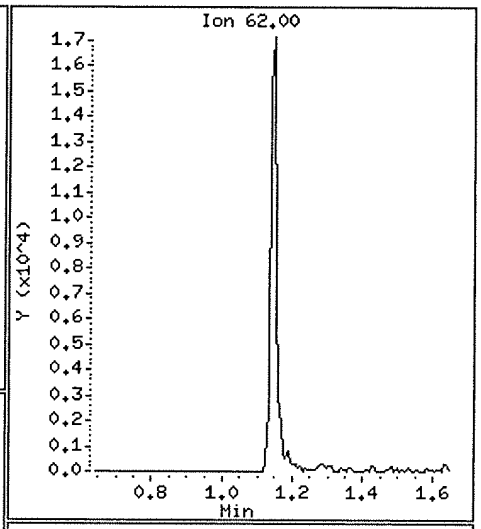
Column phase: DB624

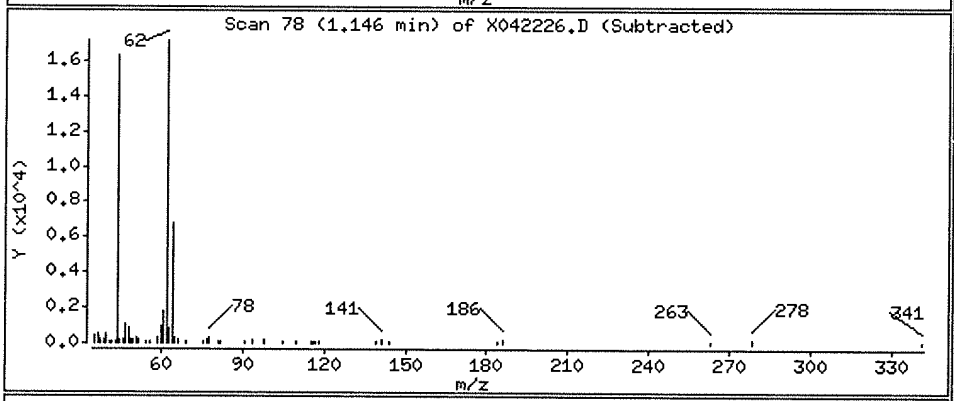
Column diameter: 0.18

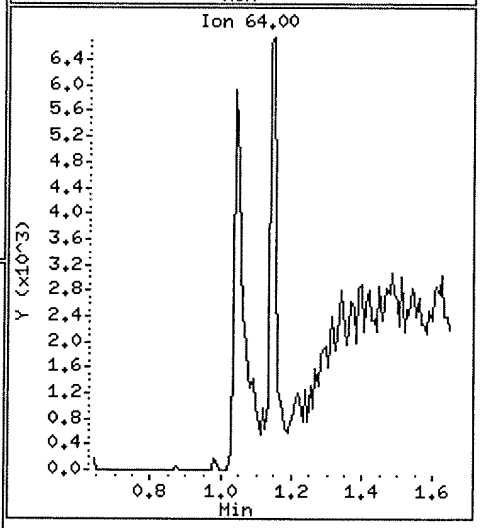
5 Vinyl Chloride

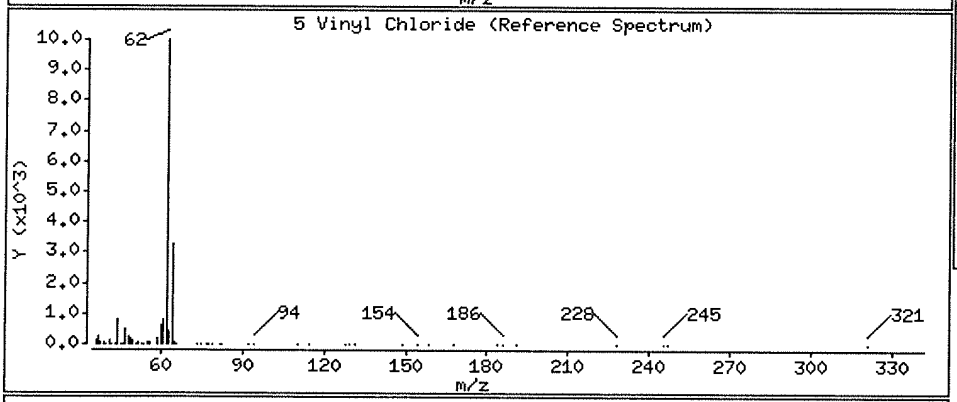
Concentration: 18.11 ug/l

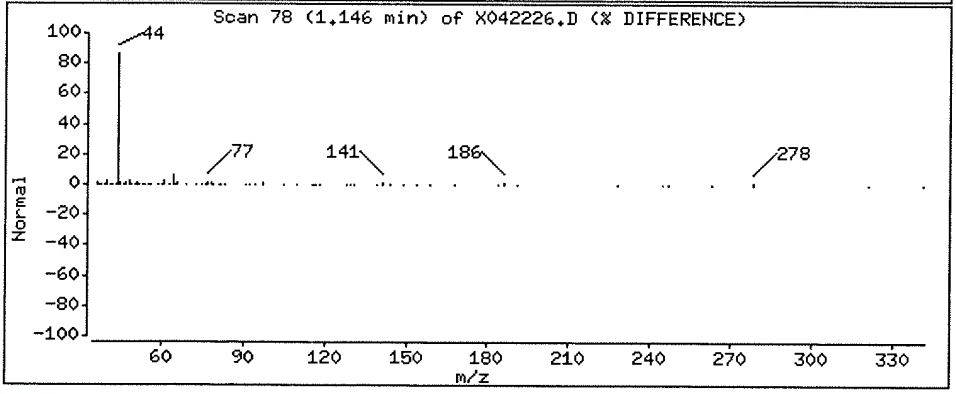












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210422.b\X042227.D Page 1
Report Date: 12-May-2021 14:29

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X210422.b\X042227.D
Lab Smp Id: HS21041102-07 Client Smp ID: HS21041102-07
Inj Date : 22-APR-2021 20:03
Operator : PC Inst ID: voa6.i
Smp Info : HS21041102-07;HS21041102-07;;;
Misc Info : HS18090001;WATER;0;50;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X210422.b\8260W.m
Meth Date : 12-May-2021 14:28 Qin.Xu Quant Type: ISTD
Cal Date : 02-APR-2021 13:20 Cal File: X040208.D
Als bottle: 26
Dil Factor: 50.00000
Integrator: HP RTE Compound Sublist: CBI_short1.sub
Target Version: 4.14
Processing Host: NAHSTW7066

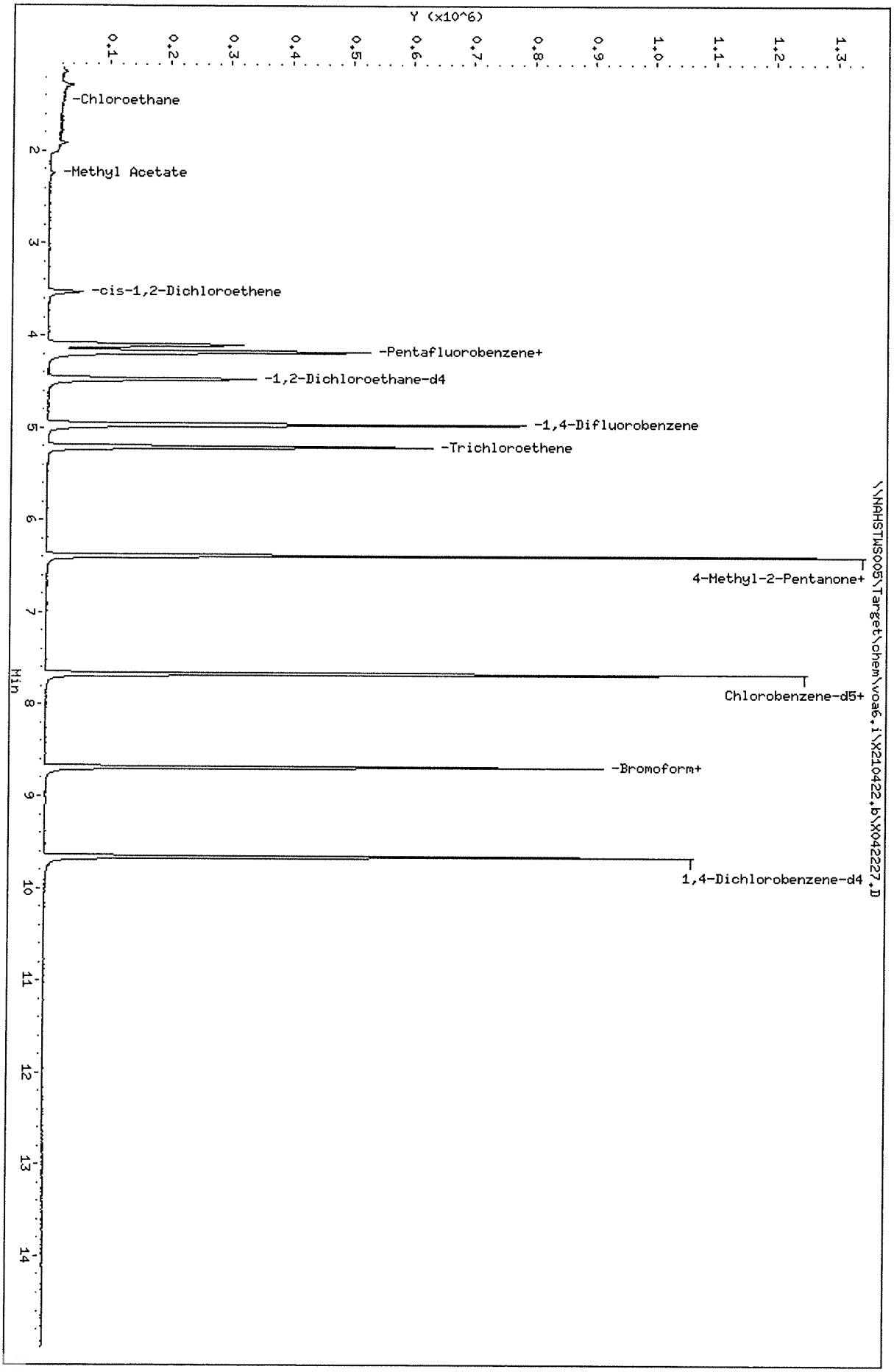
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	50.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
*	1 Pentafluorobenzene	168	4.182	4.182	(1.000)	396192	50.0000	
*	36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	629041	50.0000	
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	548308	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	229331	50.0000	
$	30 Dibromofluoromethane	113	4.104	4.103	(0.981)	212010	45.4918	45.49
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	269116	48.1707	48.17
$	48 Toluene-d8	98	6.389	6.388	(0.833)	757188	53.5872	53.58
$	69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	243506	46.4302	46.43
	27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	27008	5.57658	278.82
	38 Trichloroethene	130	5.207	5.207	(1.049)	187875	43.6291	2181.45

Data File: \\NAHSTWS005\Target\chem\voa6.i\X210422.b\X042227.D
Date : 22-APR-2021 20:03
Client ID: HS21041102-07
Sample Info: HS21041102-07;HS21041102-07;;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18



Data File: \\NAHSTWS005\Target\chem\voa6.i\X210422.b\X042227.D

Date : 22-APR-2021 20:03

Client ID: HS21041102-07

Instrument: voa6.i

Sample Info: HS21041102-07;HS21041102-07;;;

Purge Volume: 5.0

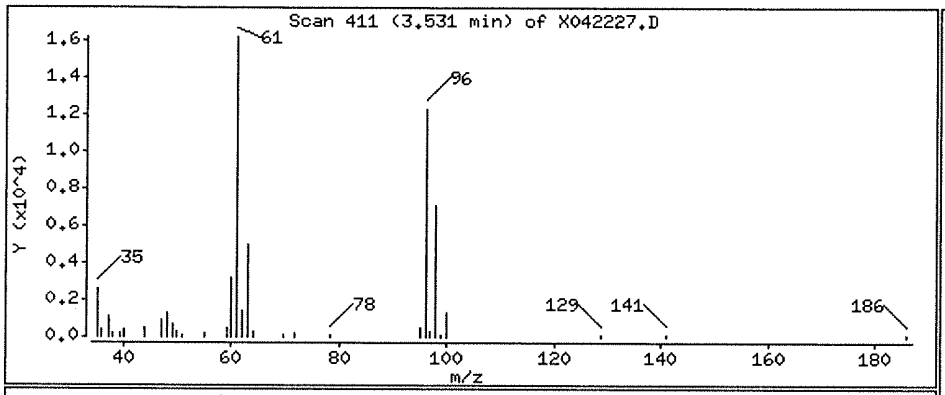
Operator: PC

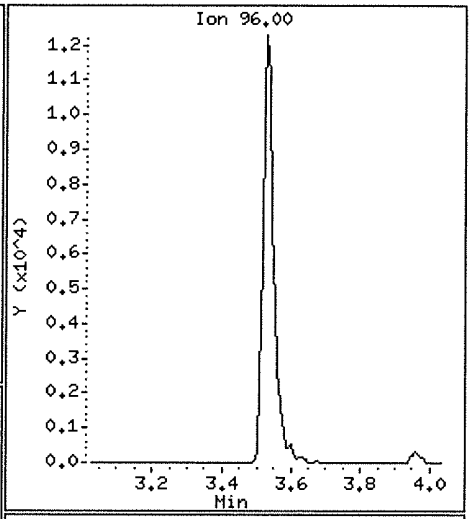
Column phase: DB624

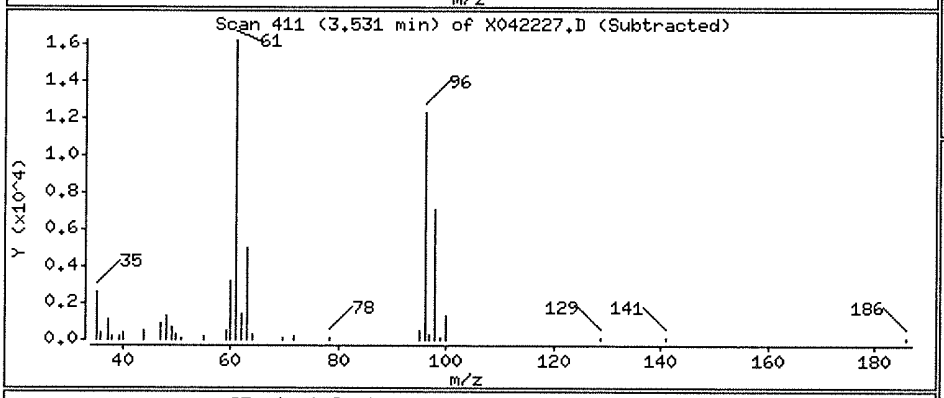
Column diameter: 0.18

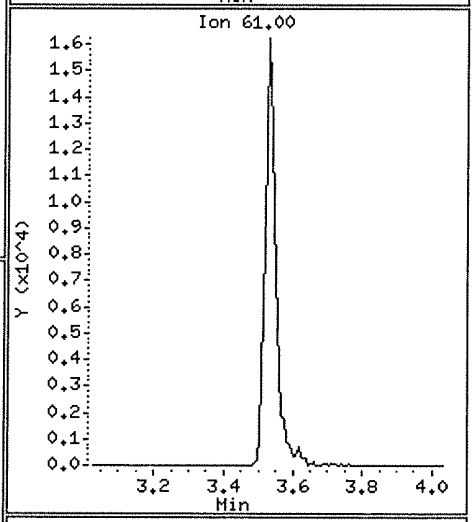
27 cis-1,2-Dichloroethene

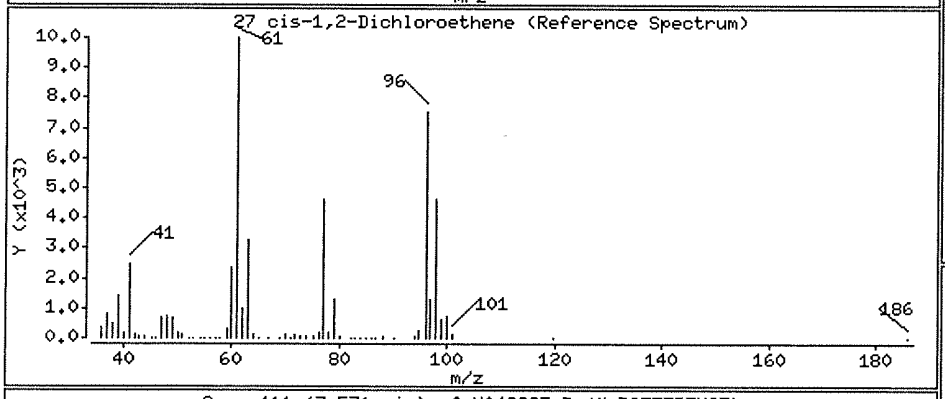
Concentration: 278.82 ug/l

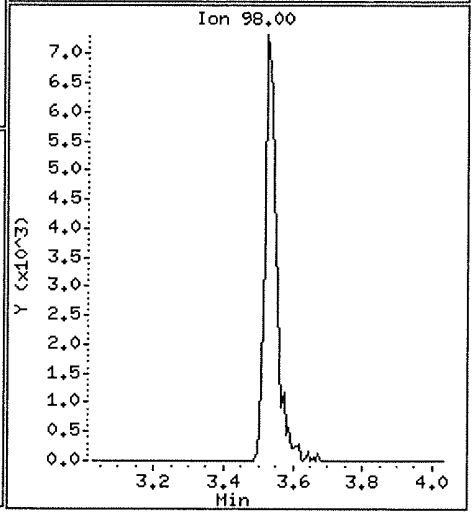


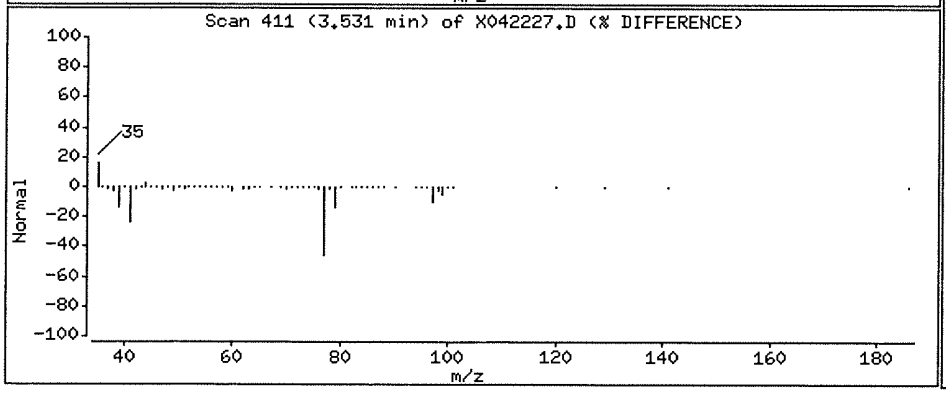












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210422.b\X042227.D

Date : 22-APR-2021 20:03

Client ID: HS21041102-07

Instrument: voa6.i

Sample Info: HS21041102-07;HS21041102-07;;;

Purge Volume: 5.0

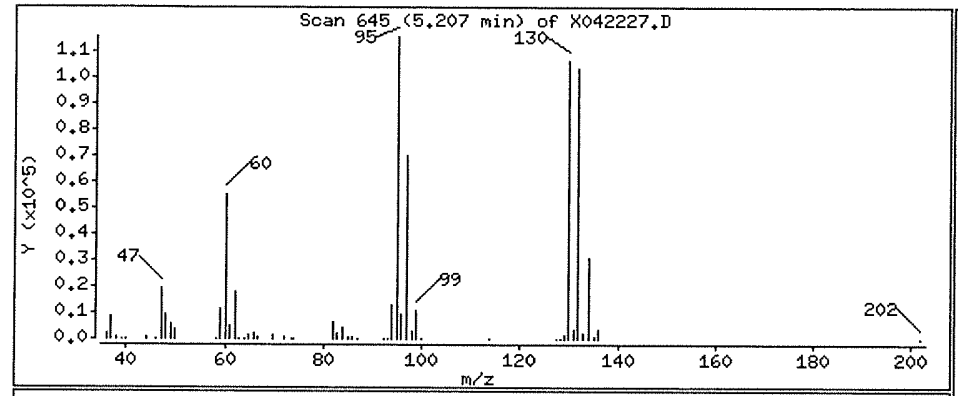
Operator: PC

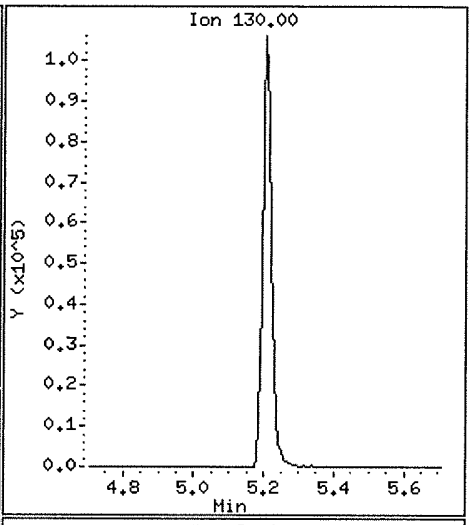
Column phase: DB624

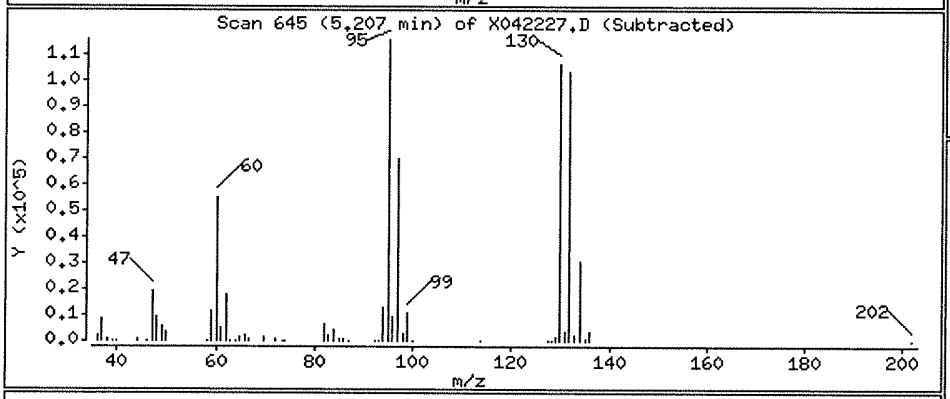
Column diameter: 0.18

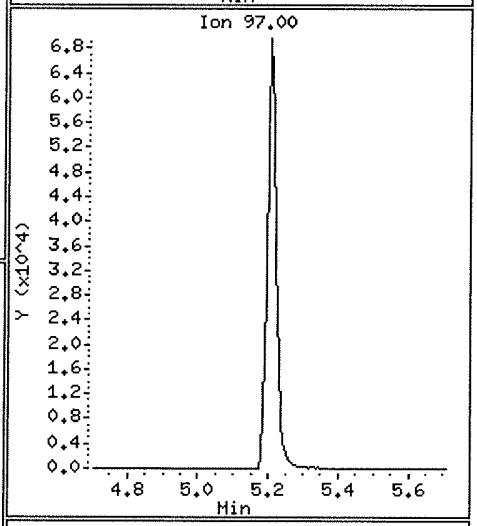
38 Trichloroethene

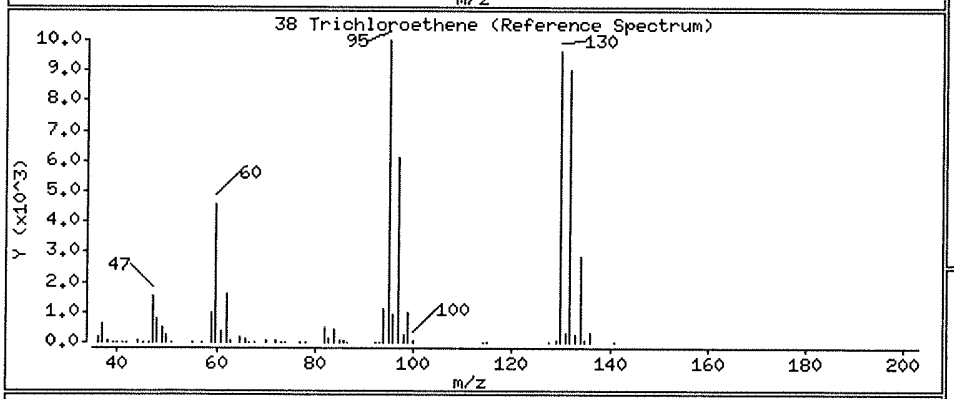
Concentration: 2181.45 ug/l

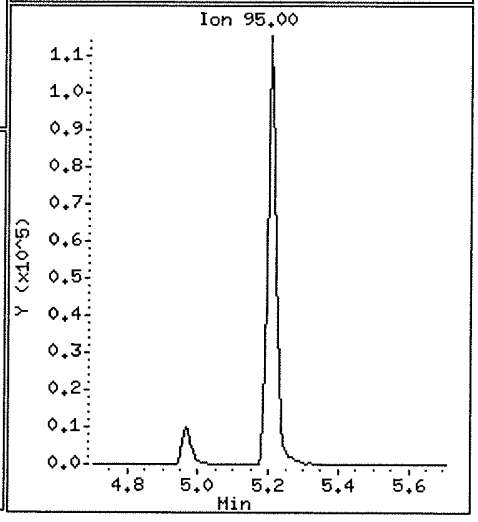


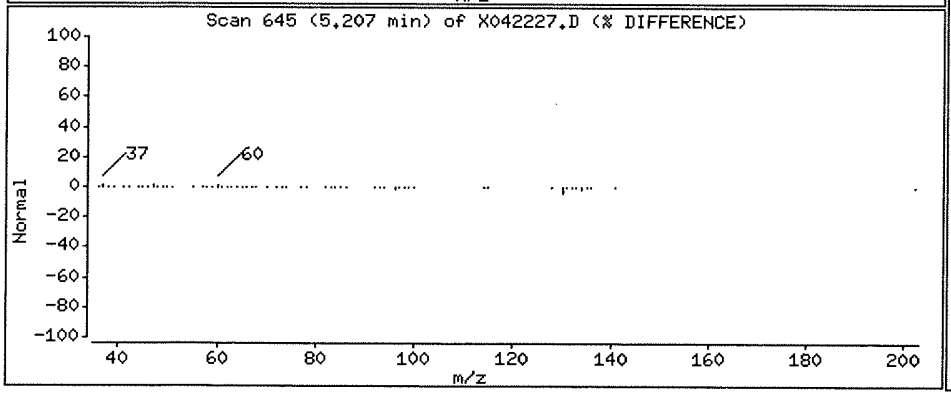












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210422.b\X042228.D Page 1
Report Date: 12-May-2021 14:29

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X210422.b\X042228.D
Lab Smp Id: HS21041102-10 Client Smp ID: HS21041102-10
Inj Date : 22-APR-2021 20:24
Operator : PC Inst ID: voa6.i
Smp Info : HS21041102-10;HS21041102-10;;;
Misc Info : HS18090001;WATER;0;10;
Comment   :
Method   : \\NAHSTWS005\Target\chem\voa6.i\X210422.b\8260W.m
Meth Date : 12-May-2021 14:28 Qin.Xu Quant Type: ISTD
Cal Date : 02-APR-2021 13:20 Cal File: X040208.D
Als bottle: 27
Dil Factor: 10.00000
Integrator: HP RTE Compound Sublist: CBI_short1.sub
Target Version: 4.14
Processing Host: NAHSTW7066

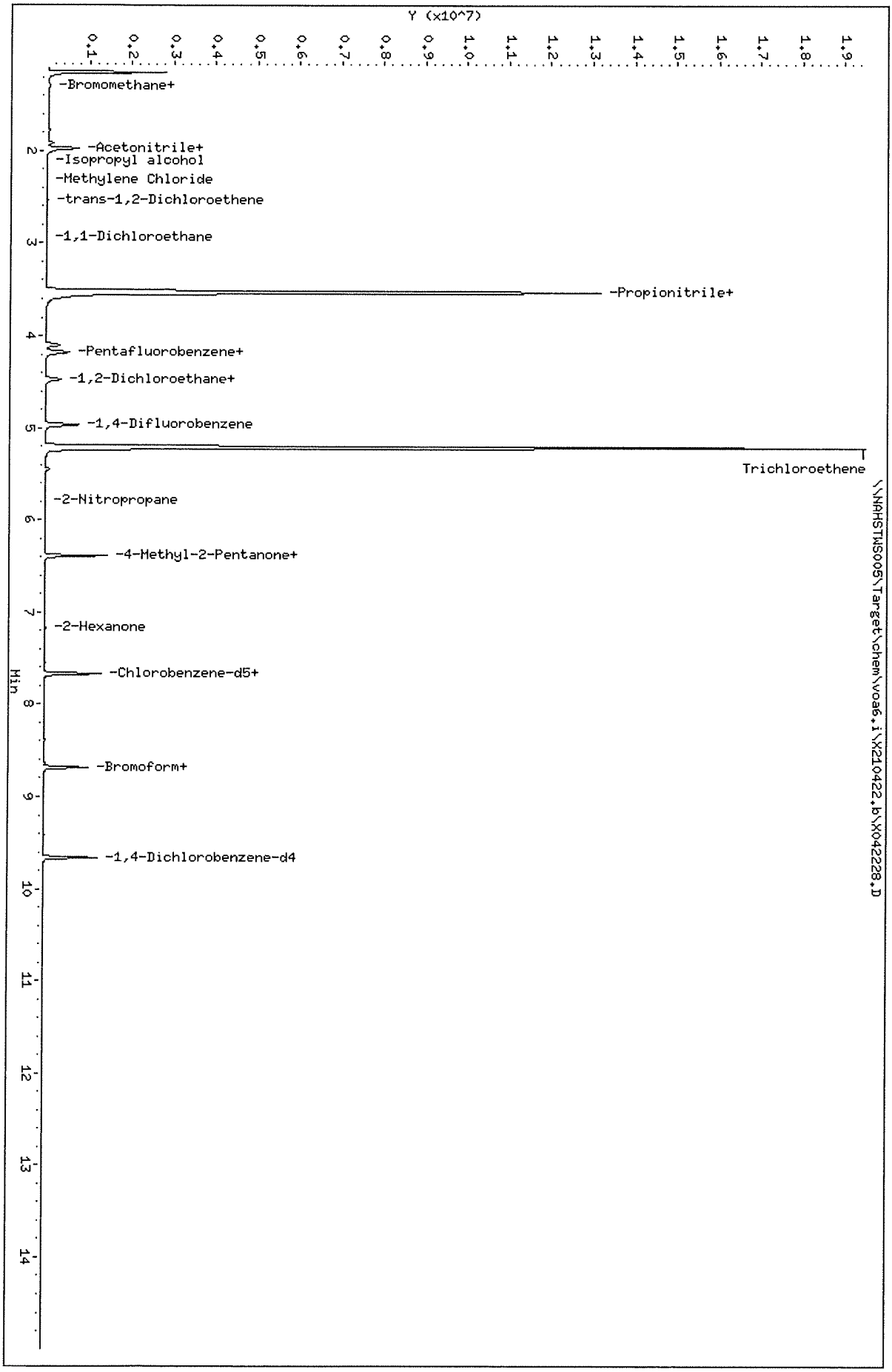
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	10.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	406017	50.0000	
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	645796	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	577118	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	258108	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	221512	46.3720	46.37
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	279355	48.7872	48.78
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	815339	54.7793	54.77
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	259084	46.9165	46.91
11 1,1-Dichloroethene	96	1.912	1.919	(0.457)	26639	4.60791	46.07(a)
33 1,2-Dichloroethane	62	4.569	4.555	(0.921)	4222	0.61765	6.17(a)
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	6322380	1273.85	12738.48(A)
17 Methylene Chloride	84	2.305	2.305	(0.551)	912	1.68380	16.83(a)
38 Trichloroethene	130	5.207	5.207	(1.049)	5351468	1210.50	12104.97(A)
5 Vinyl Chloride	62	1.145	1.145	(0.274)	2087285	342.909	3429.08(A)

QC Flag Legend

a - Target compound detected but, quantitated amount
    Below Limit Of Quantitation(BLOQ).
A - Target compound detected but, quantitated amount
    exceeded maximum amount.



Data File: \\NAHSTWS005\Target\chem\voa6.i\X210422.b\X042228.D
Date : 22-APR-2021 20:24
Client ID: HS21041102-10
Sample Info: HS21041102-10;HS21041102-10;;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\NAHSTWS005\Target\chem\voa6.i\X210422.b\X042228.D

Date : 22-APR-2021 20:24

Client ID: HS21041102-10

Instrument: voa6.i

Sample Info: HS21041102-10;HS21041102-10;;;

Purge Volume: 5.0

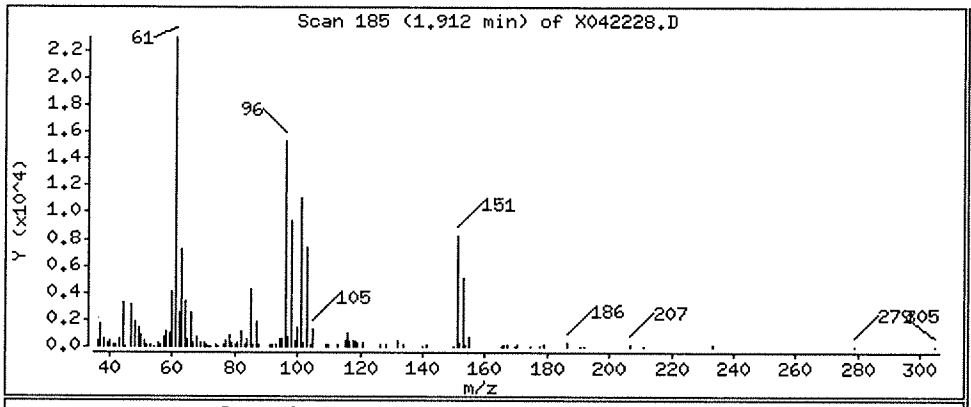
Operator: PC

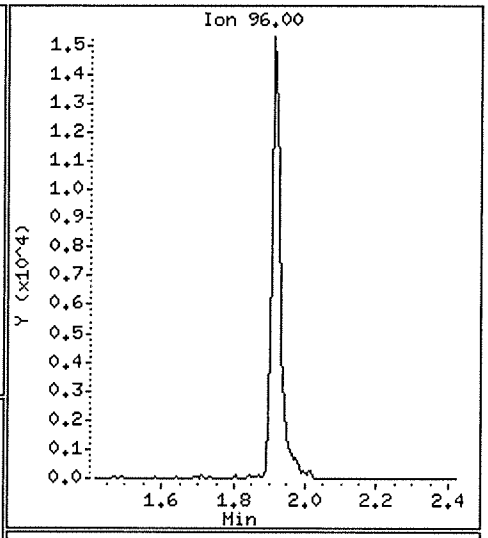
Column phase: DB624

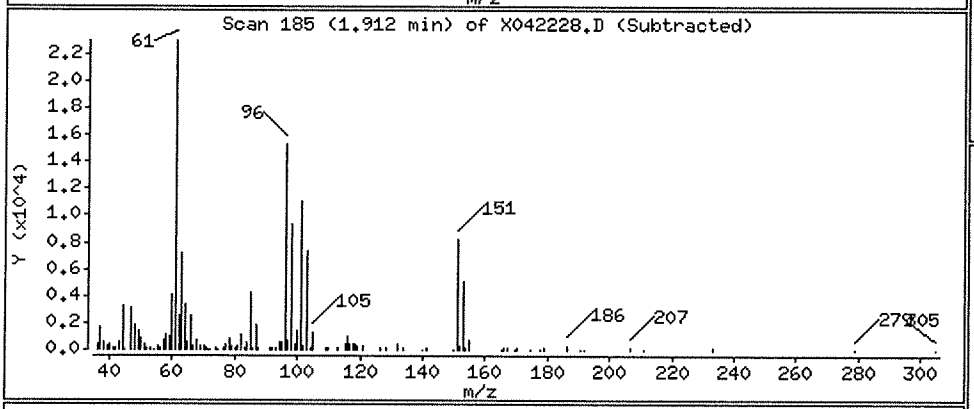
Column diameter: 0.18

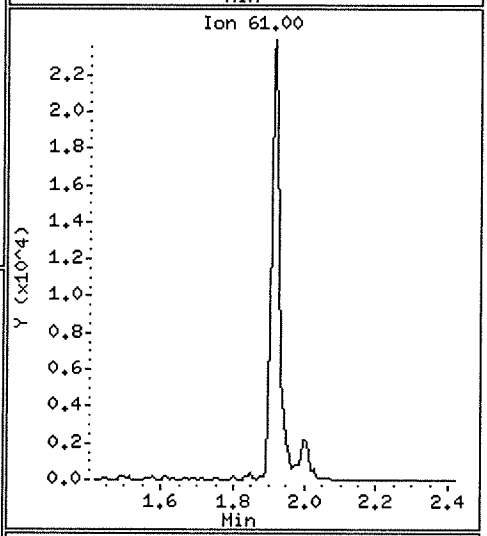
11 1,1-Dichloroethene

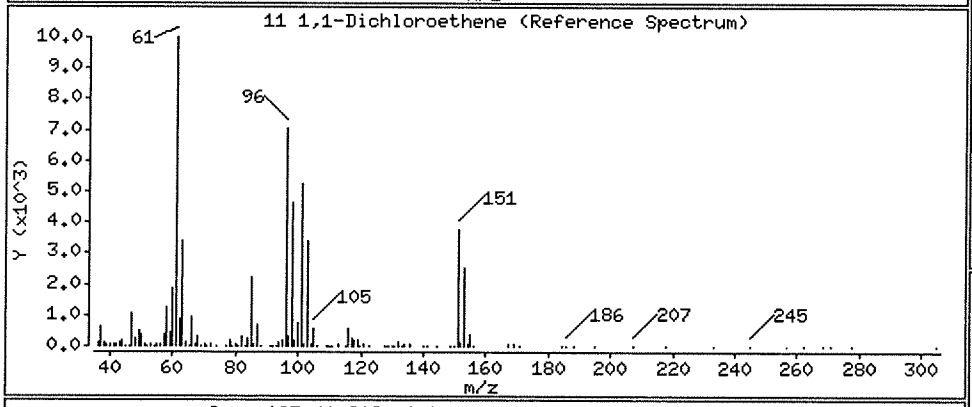
Concentration: 46.07 ug/l

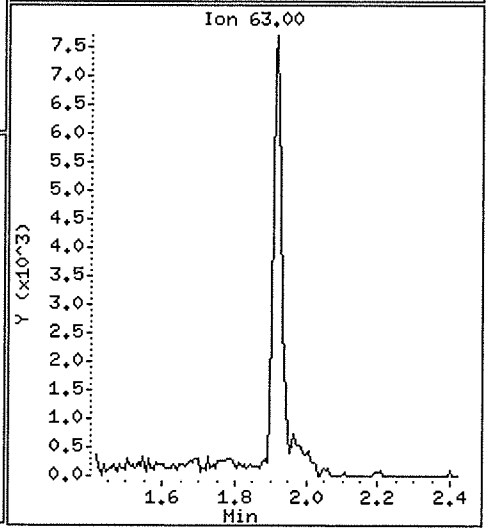


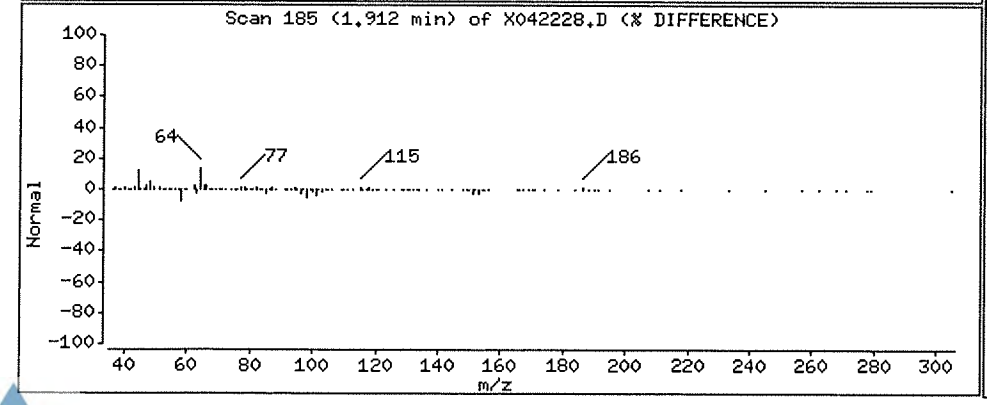












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210422.b\X042228.D

Date : 22-APR-2021 20:24

Client ID: HS21041102-10

Instrument: voa6.i

Sample Info: HS21041102-10;HS21041102-10;;;

Purge Volume: 5.0

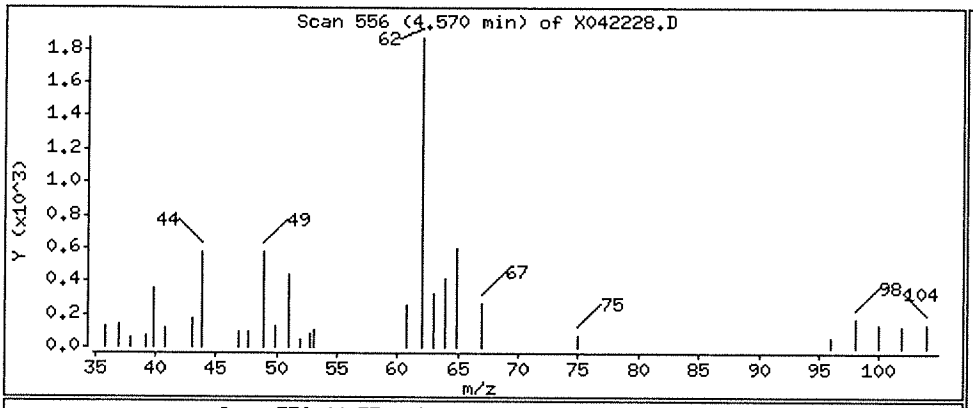
Operator: PC

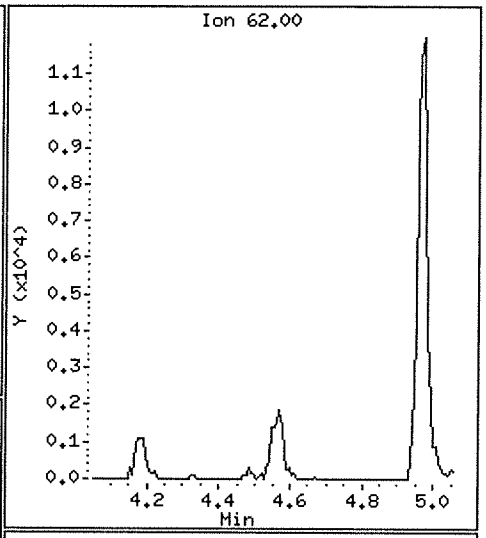
Column phase: DB624

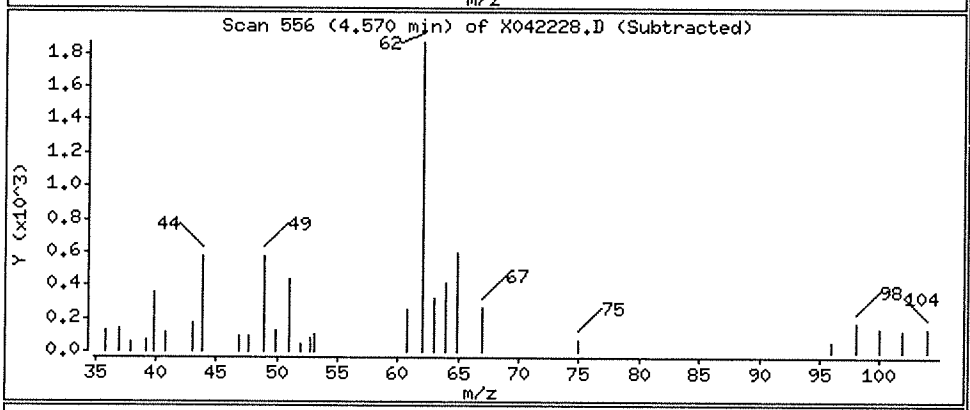
Column diameter: 0.18

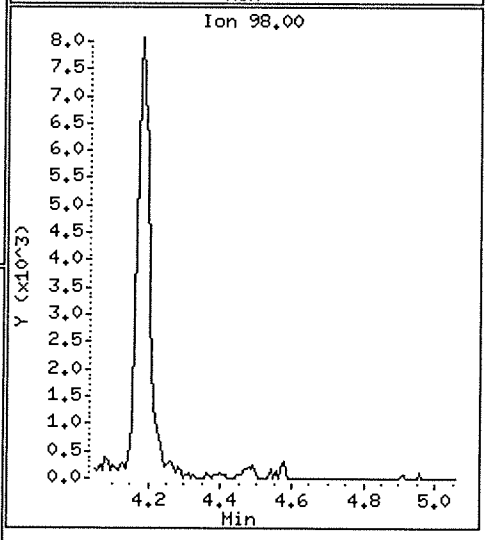
33 1,2-Dichloroethane

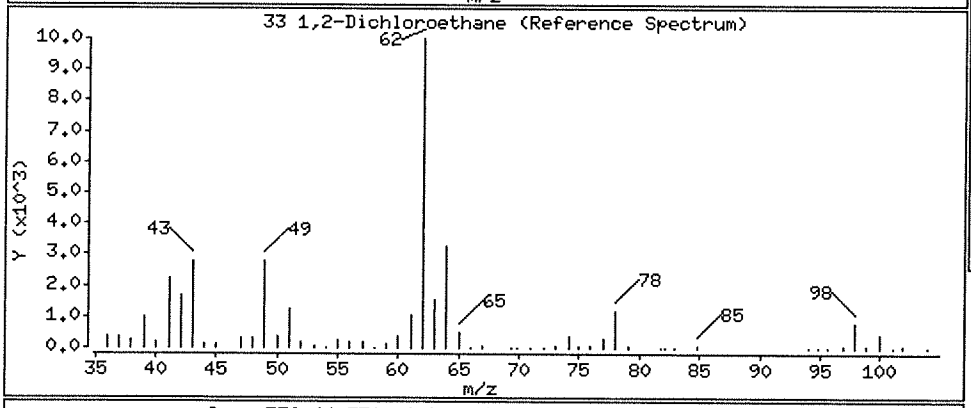
Concentration: 6.17 ug/l

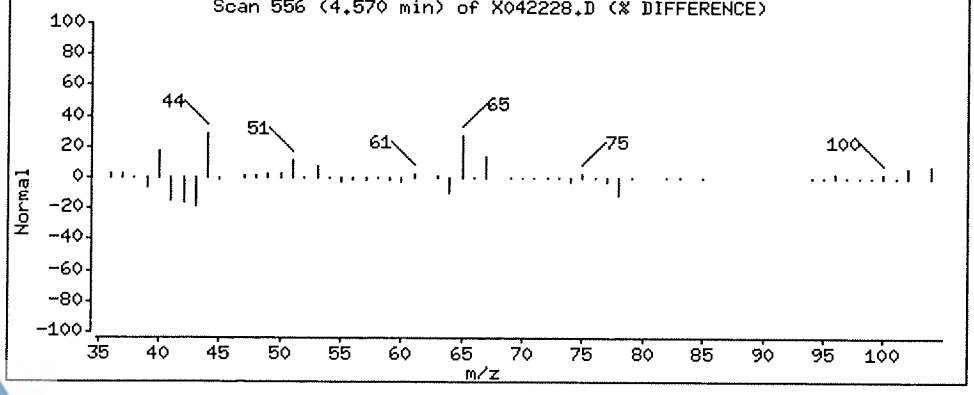












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210422.b\X042228.D

Date : 22-APR-2021 20:24

Client ID: HS21041102-10

Instrument: voa6.i

Sample Info: HS21041102-10;HS21041102-10;;;

Purge Volume: 5.0

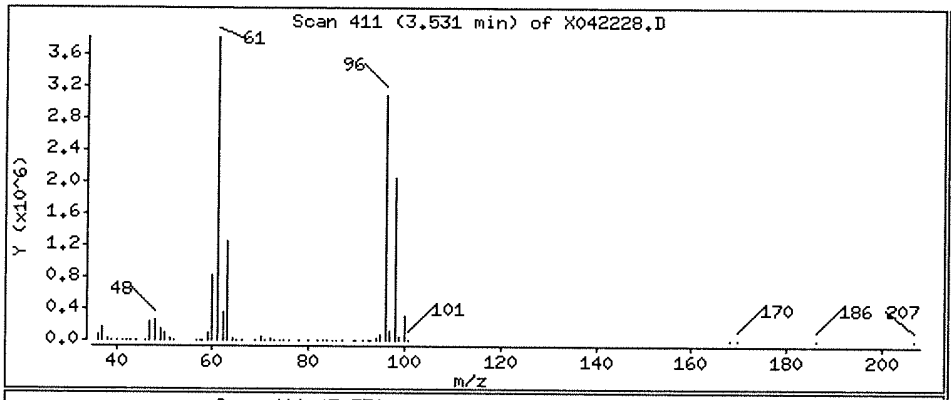
Operator: PC

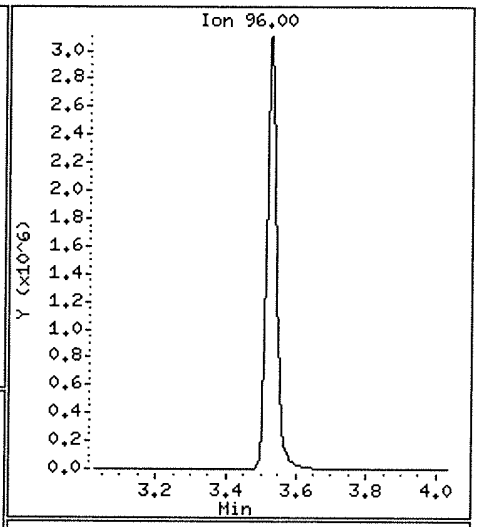
Column phase: DB624

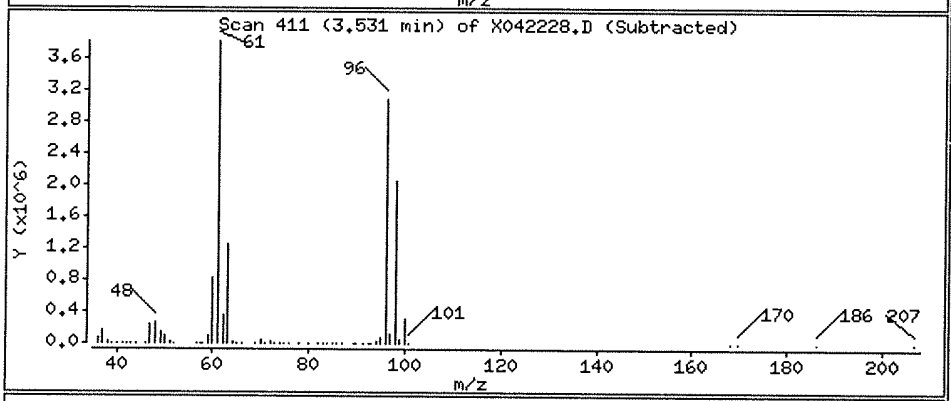
Column diameter: 0.18

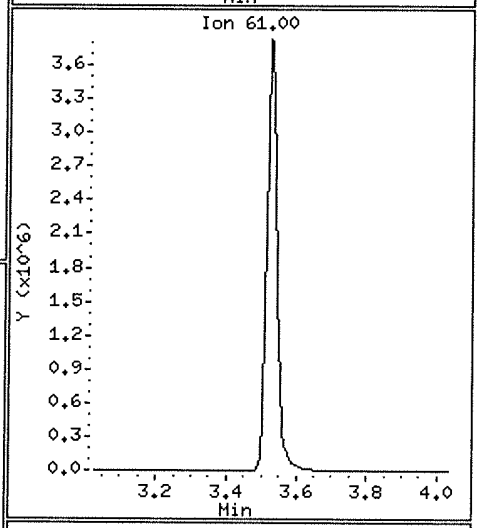
27 cis-1,2-Dichloroethene

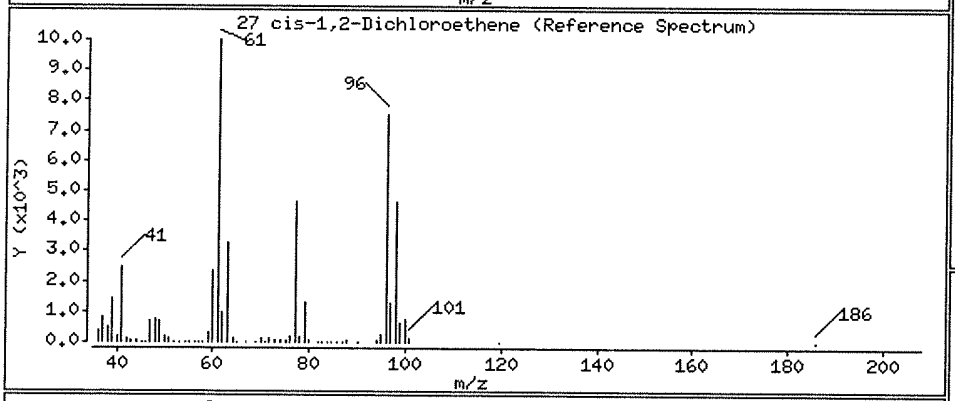
Concentration: 12738.48 ug/l

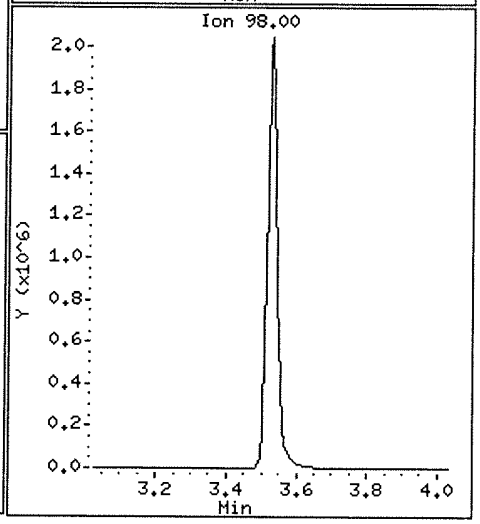


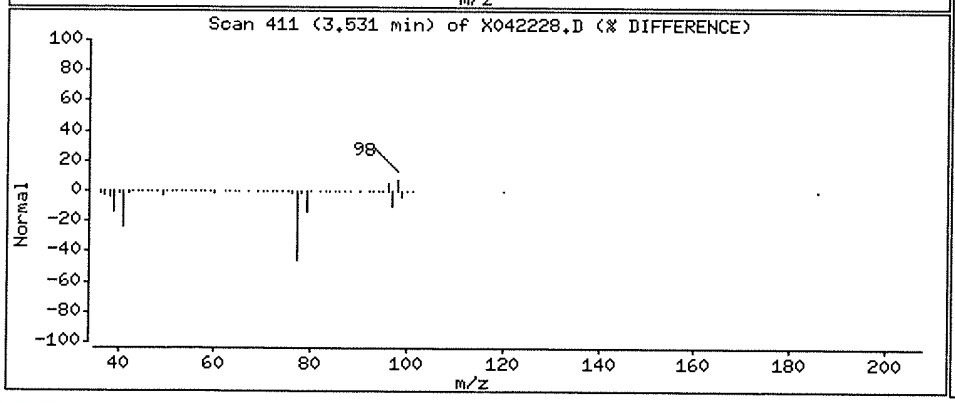












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210422.b\X042228.D

Date : 22-APR-2021 20:24

Client ID: HS21041102-10

Instrument: voa6.i

Sample Info: HS21041102-10;HS21041102-10;;;

Purge Volume: 5.0

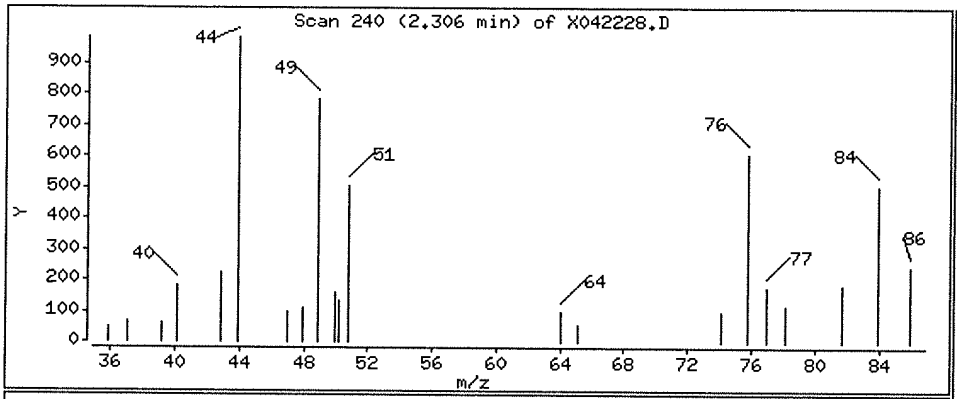
Operator: PC

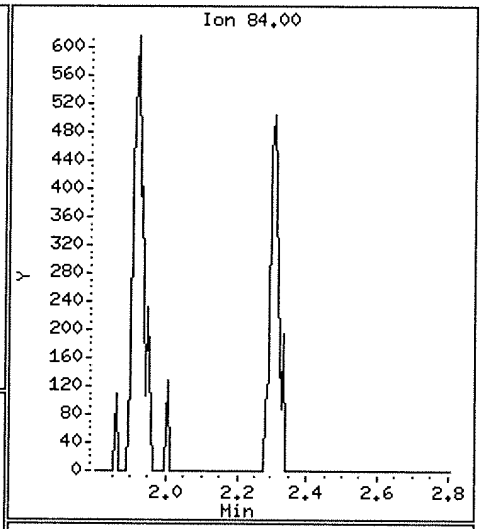
Column phase: DB624

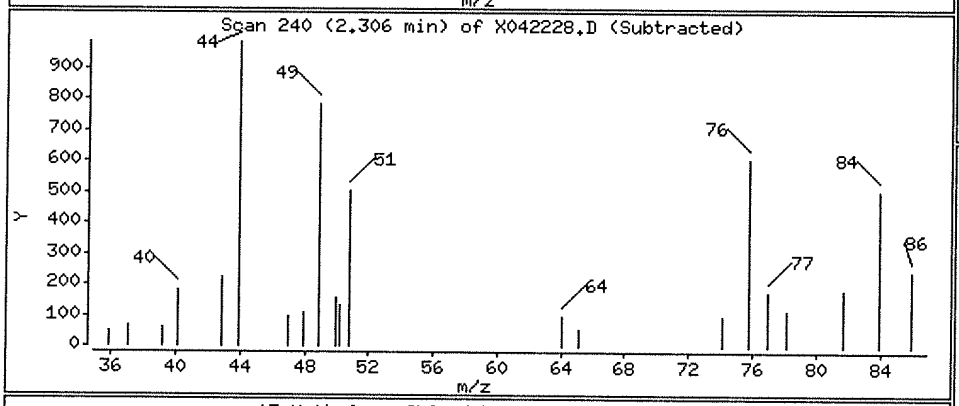
Column diameter: 0.18

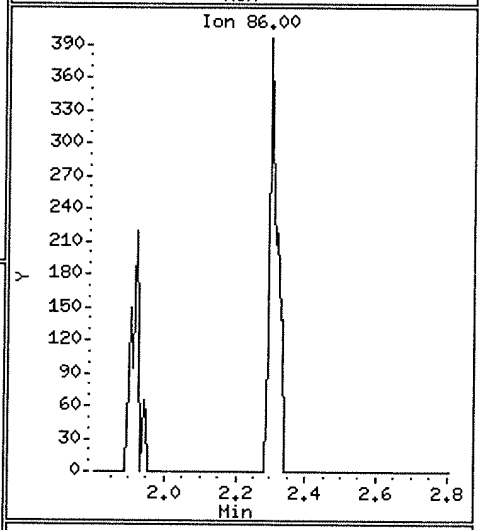
17 Methylene Chloride

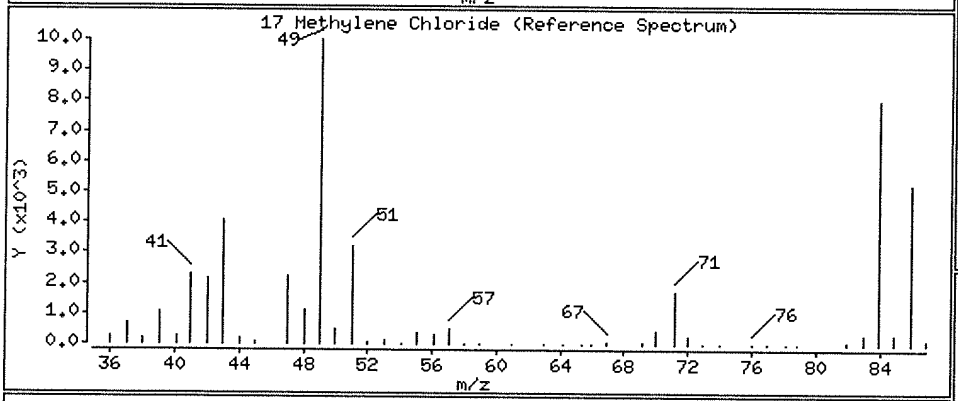
Concentration: 16.83 ug/l

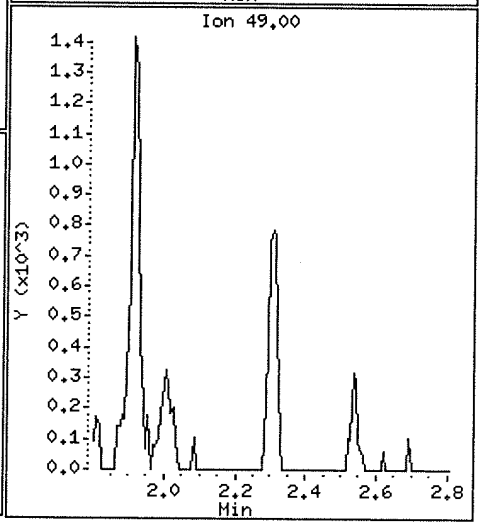


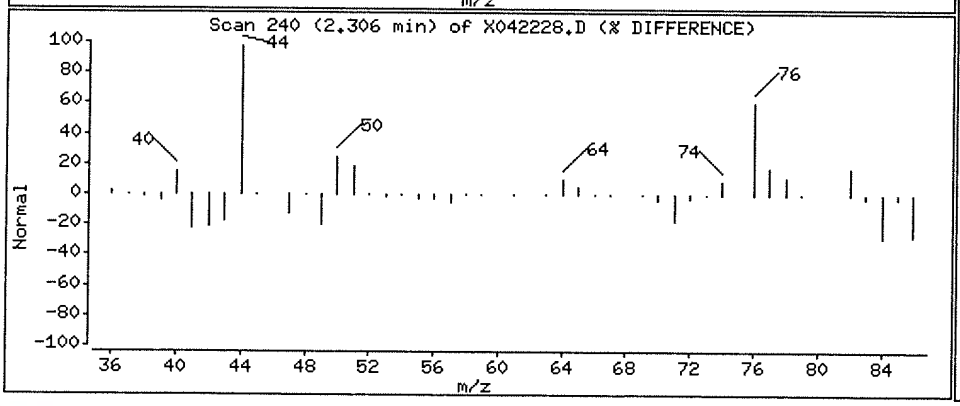












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210422.b\X042228.D

Date : 22-APR-2021 20:24

Client ID: HS21041102-10

Instrument: voa6.i

Sample Info: HS21041102-10;HS21041102-10;;;

Purge Volume: 5.0

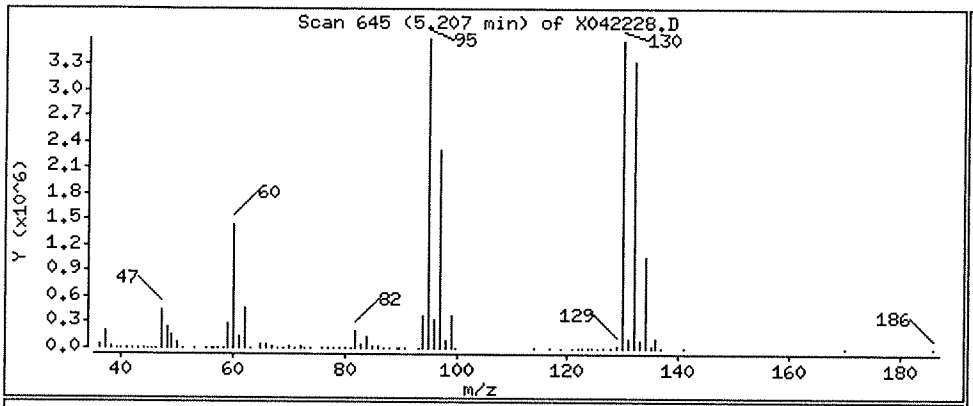
Operator: PC

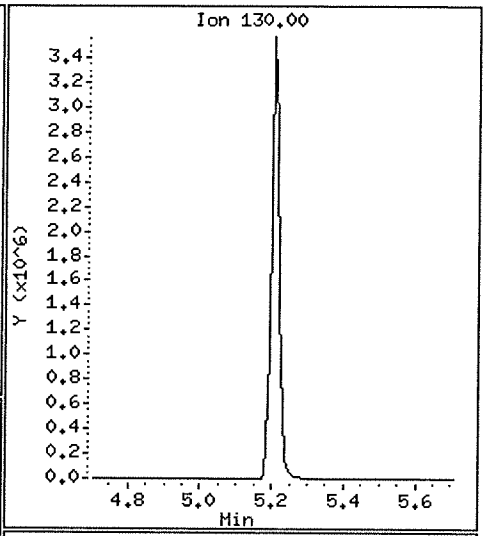
Column phase: DB624

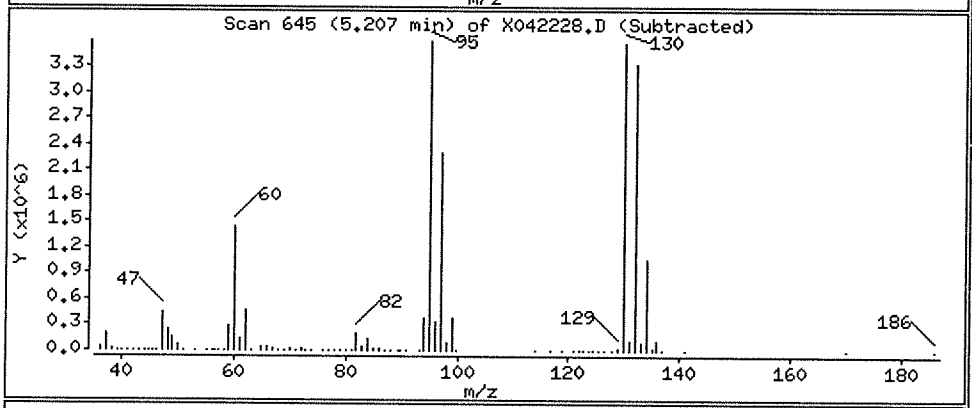
Column diameter: 0.18

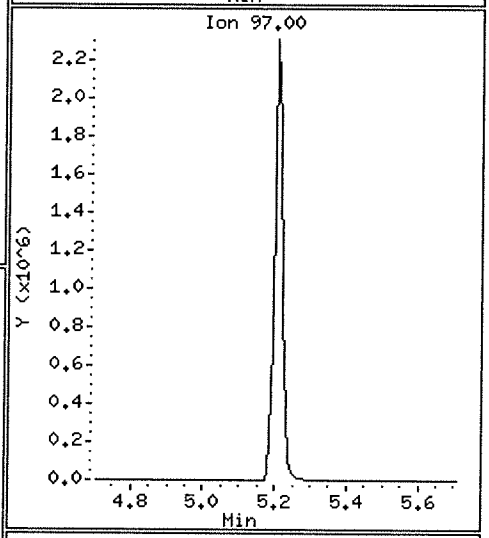
38 Trichloroethene

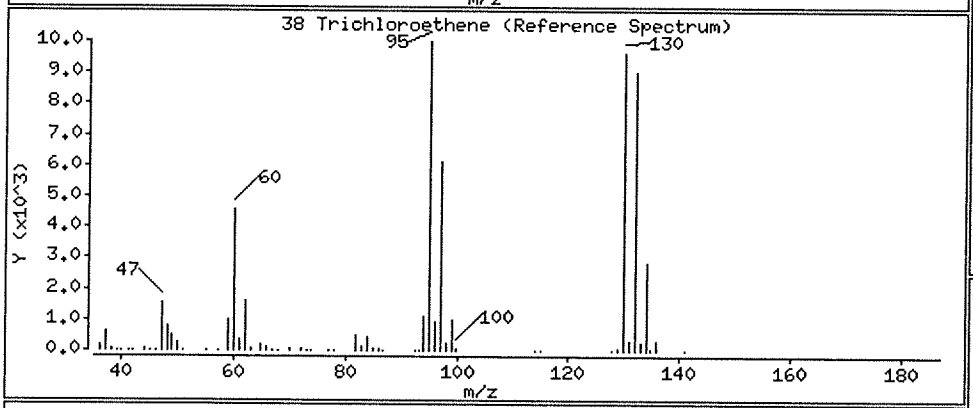
Concentration: 12104.97 ug/l

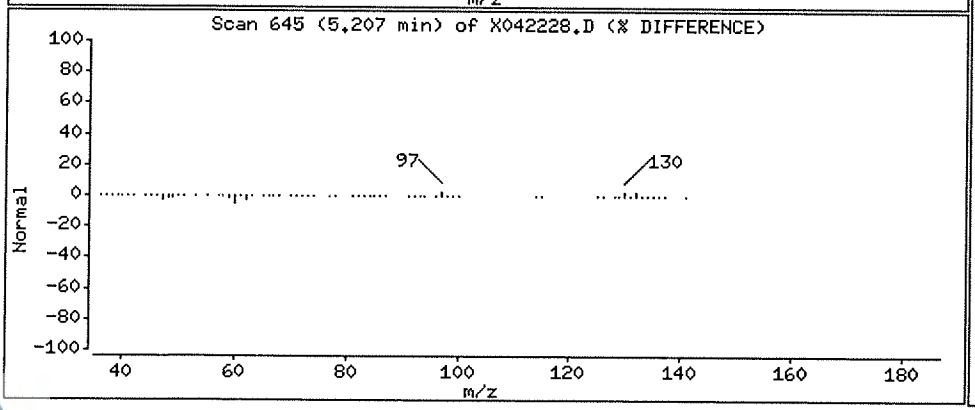


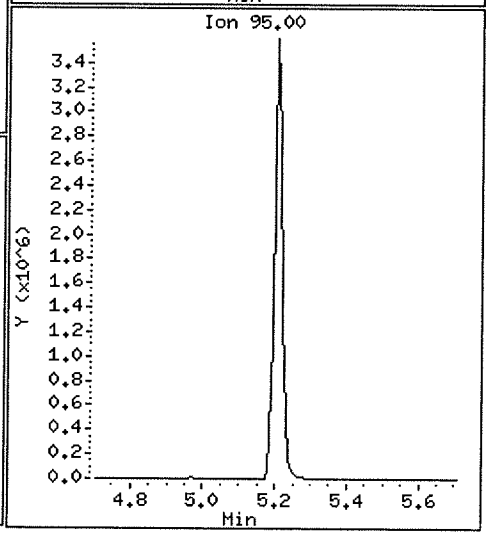












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210422.b\X042228.D

Date : 22-APR-2021 20:24

Client ID: HS21041102-10

Instrument: voa6.i

Sample Info: HS21041102-10;HS21041102-10;;;

Purge Volume: 5.0

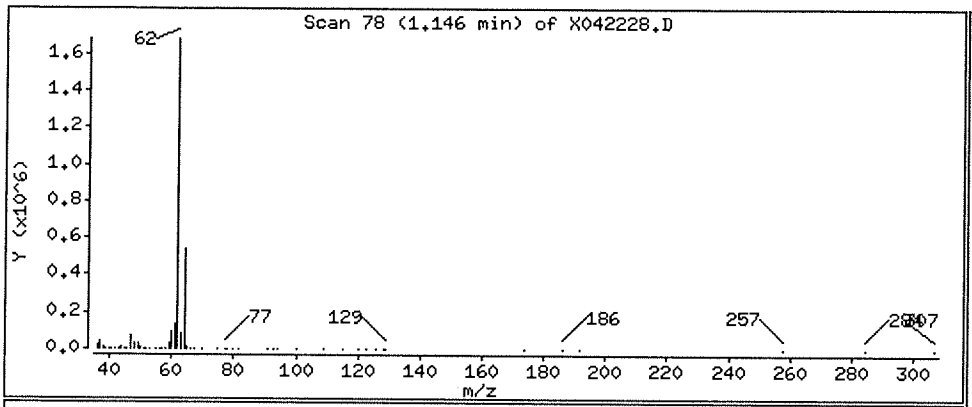
Operator: PC

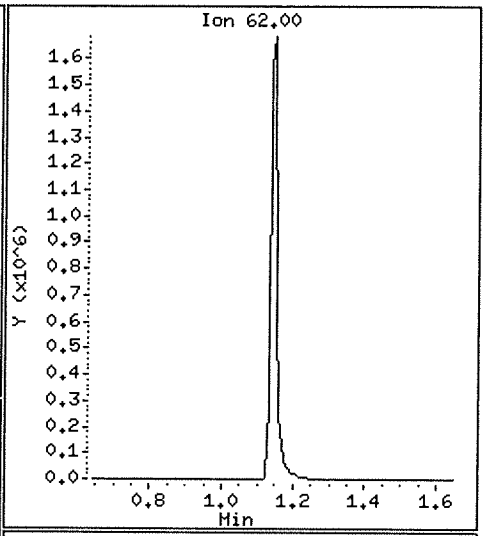
Column phase: DB624

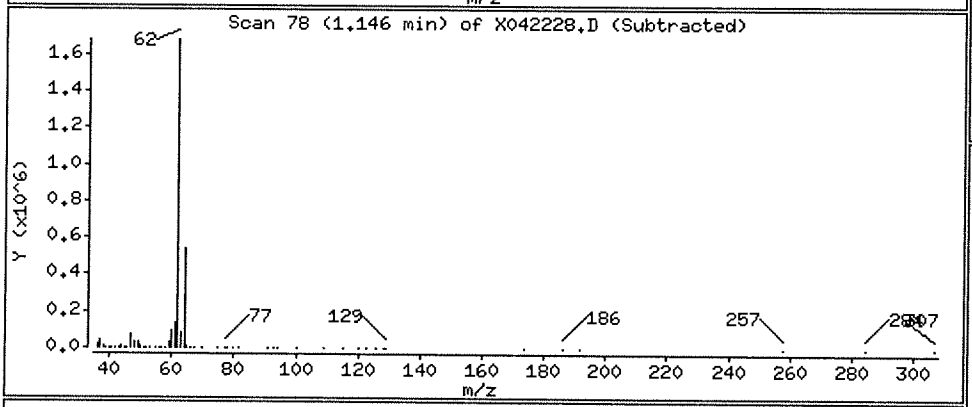
Column diameter: 0.18

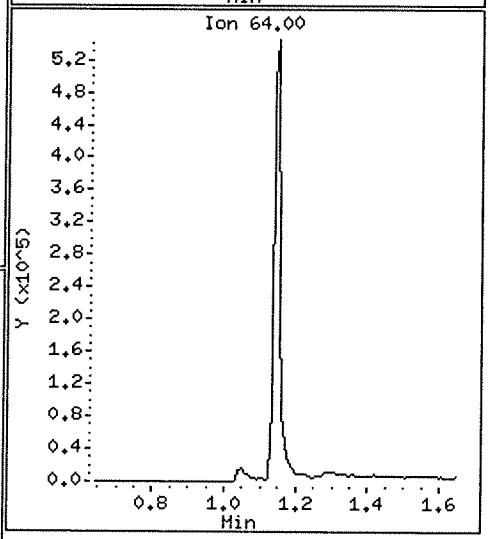
5 Vinyl Chloride

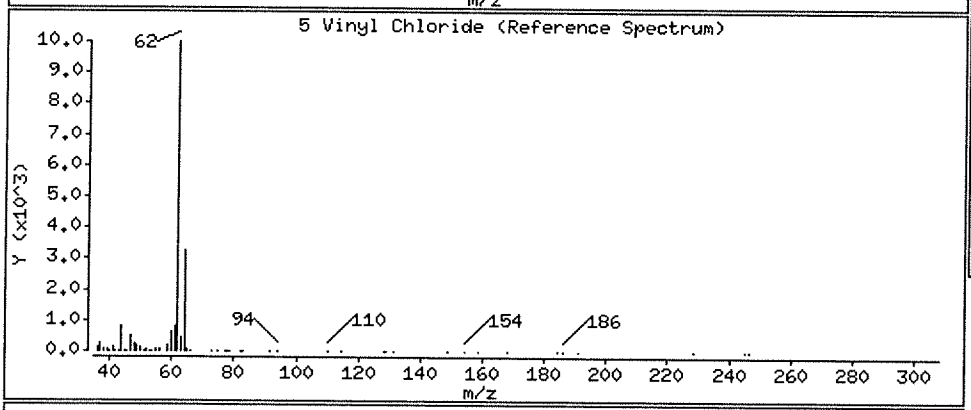
Concentration: 3429.08 ug/l

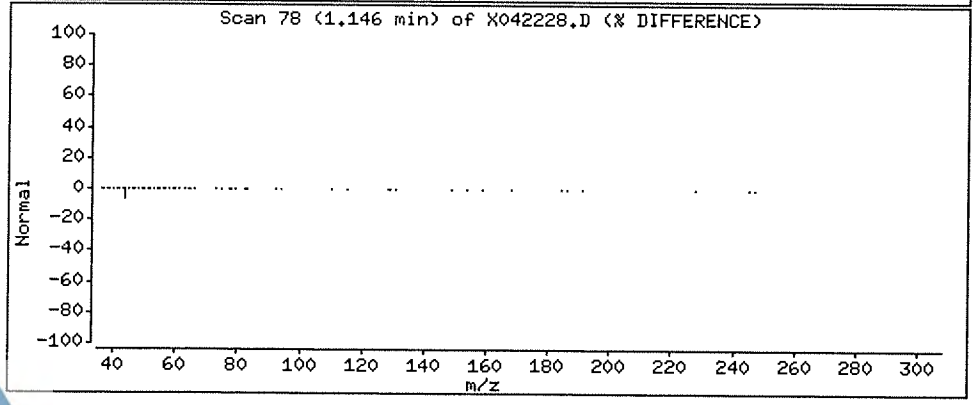












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210422.b\X042229.D Page 1
Report Date: 12-May-2021 14:29

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X210422.b\X042229.D
Lab Smp Id: HS21041102-10 Client Smp ID: HS21041102-10
Inj Date : 22-APR-2021 20:45
Operator : PC Inst ID: voa6.i
Smp Info : HS21041102-10;HS21041102-10;;;
Misc Info : HS18090001;WATER;0;100;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X210422.b\8260W.m
Meth Date : 12-May-2021 14:28 Qin.Xu Quant Type: ISTD
Cal Date : 02-APR-2021 13:20 Cal File: X040208.D
Als bottle: 28
Dil Factor: 100.00000
Integrator: HP RTE Compound Sublist: CBI_short1.sub
Target Version: 4.14
Processing Host: NAHSTW7066

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	100.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

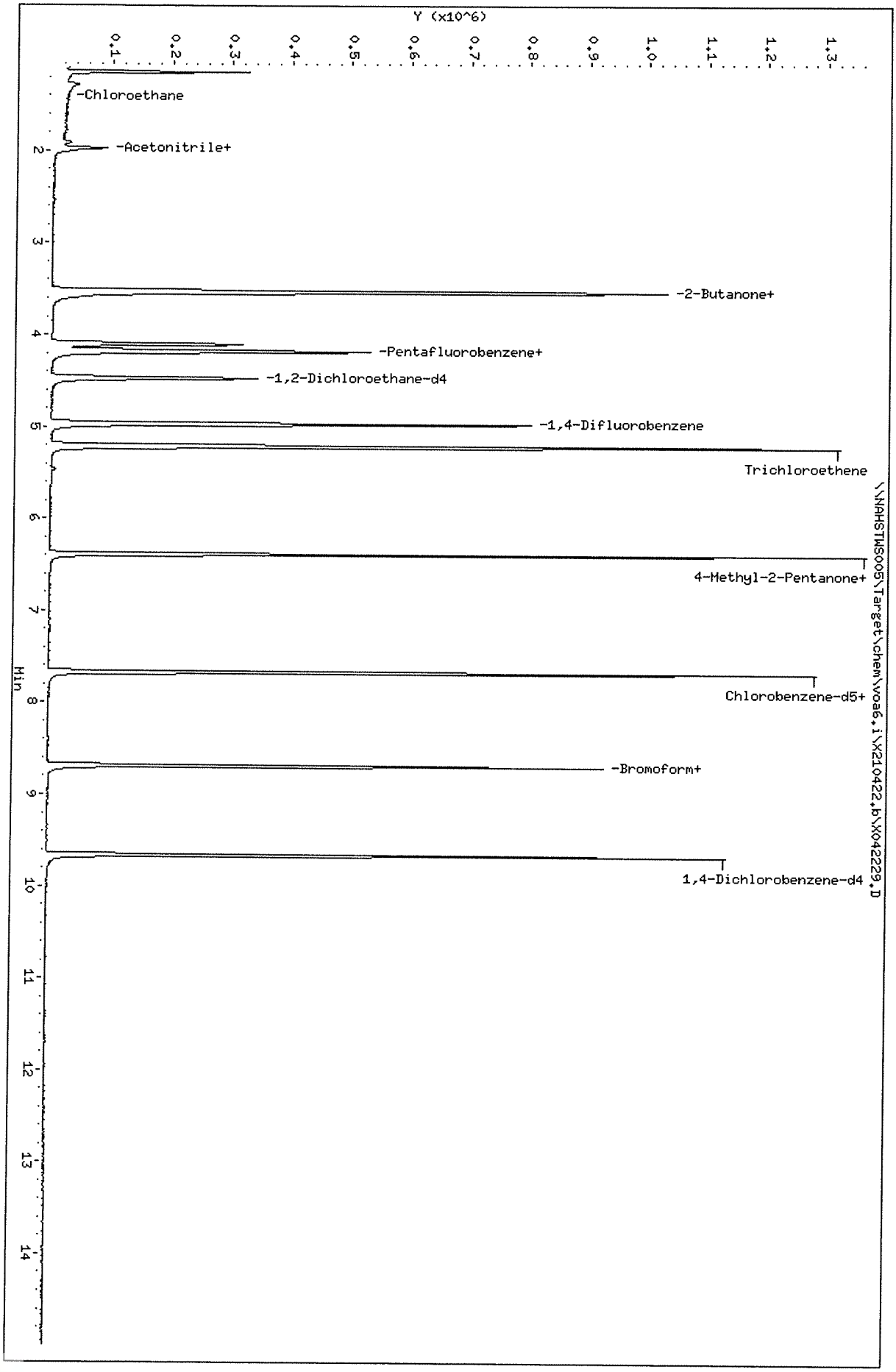
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	402048	50.0000	
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	633352	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	556135	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	236770	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	216656	45.8085	45.80
$ 35 1,2-Dichloroethane-d4	65	4.469	4.476	(1.069)	272904	48.1376	48.13
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	762369	53.2081	53.20
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	249532	46.8925	46.89
11 1,1-Dichloroethene	96	1.911	1.919	(0.457)	3352	0.58554	58.55(a)
27 cis-1,2-Dichloroethene	96	3.523	3.530	(0.842)	527144	107.259	10725.87
38 Trichloroethene	130	5.206	5.207	(1.049)	385264	88.8587	8885.86
5 Vinyl Chloride	62	1.145	1.145	(0.274)	220866	36.6431	3664.30

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Data File: \\NAHSTWS005\Target\chem\voa6.i\X210422.b\X042229.D
Date : 22-APR-2021 20:45
Client ID: HS21041102-10
Sample Info: HS21041102-10;HS21041102-10;;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18



Data File: \\NAHSTWS005\Target\chem\voa6.i\X210422.b\X042229.D

Date : 22-APR-2021 20:45

Client ID: HS21041102-10

Instrument: voa6.i

Sample Info: HS21041102-10;HS21041102-10;;;

Purge Volume: 5.0

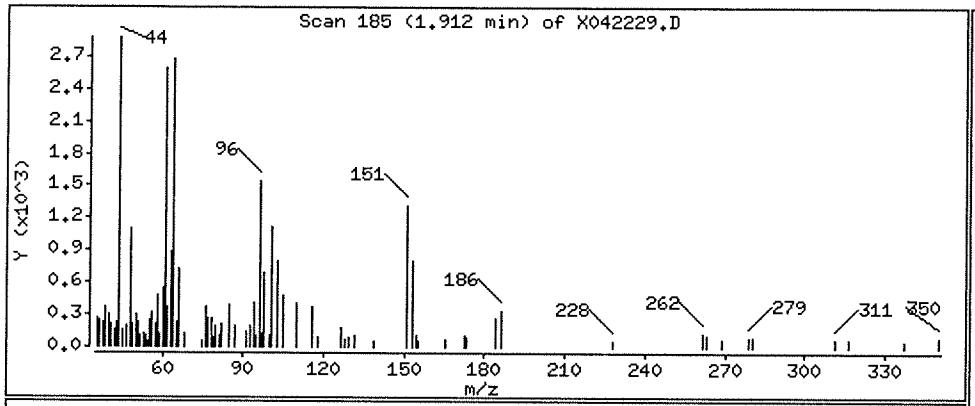
Operator: PC

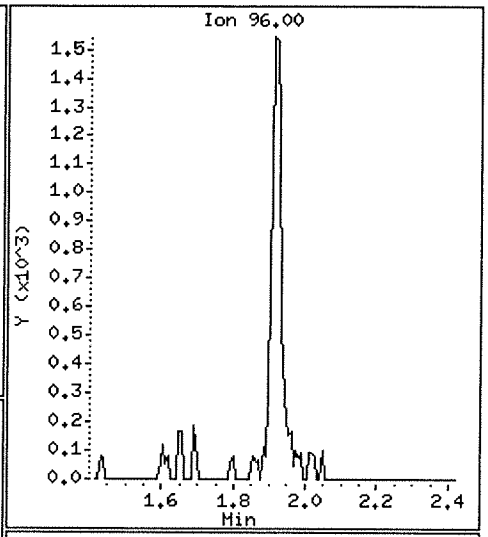
Column phase: DB624

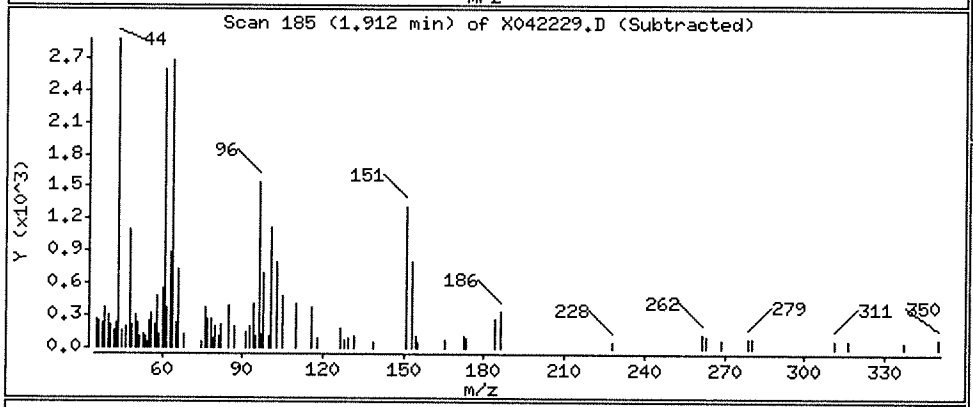
Column diameter: 0.18

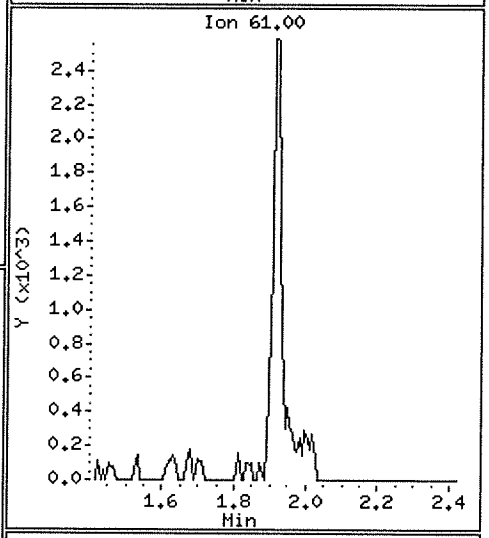
11 1,1-Dichloroethene

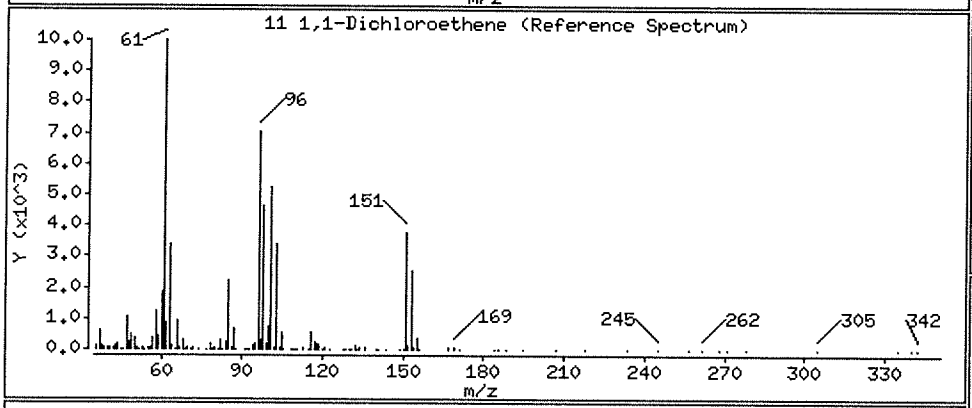
Concentration: 58.55 ug/l

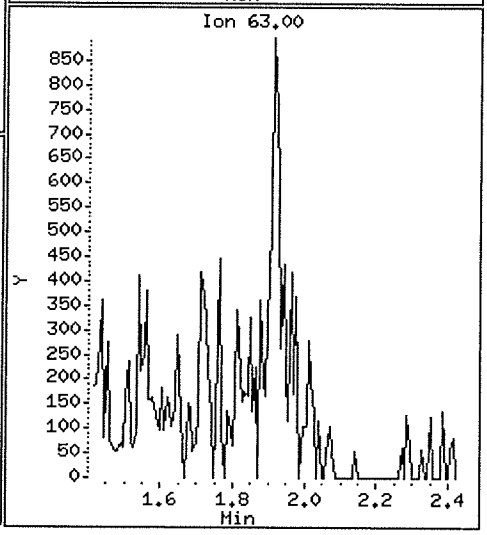


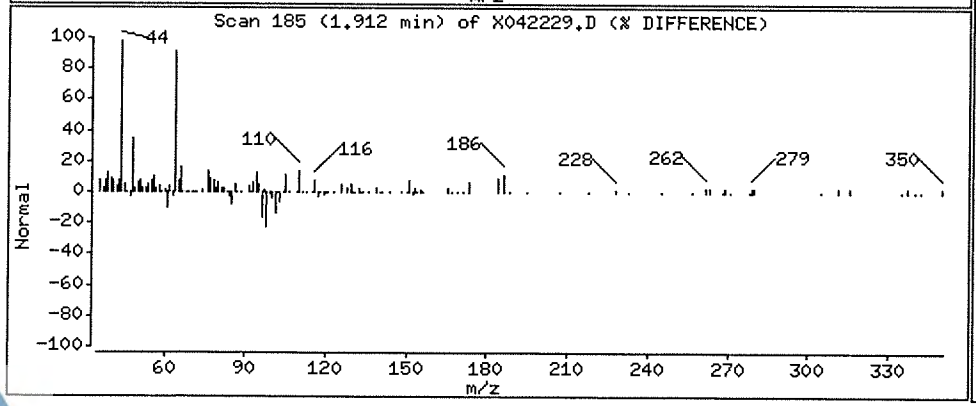












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210422.b\X042229.D

Date : 22-APR-2021 20:45

Client ID: HS21041102-10

Instrument: voa6.i

Sample Info: HS21041102-10;HS21041102-10;;;

Purge Volume: 5.0

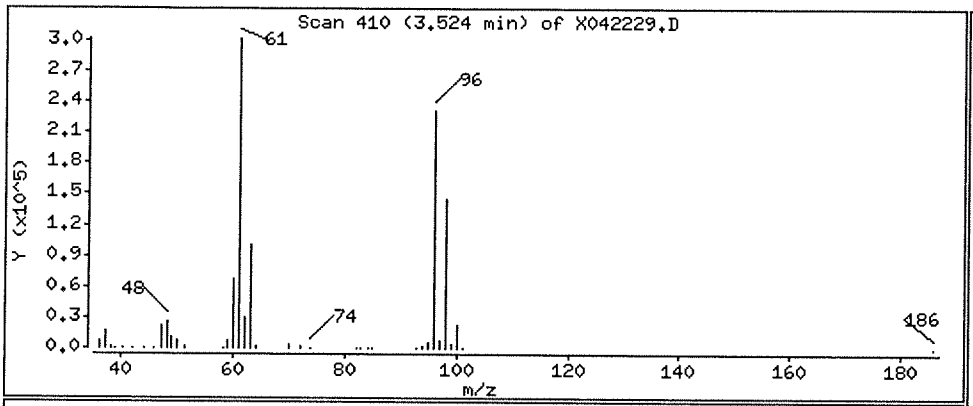
Operator: PC

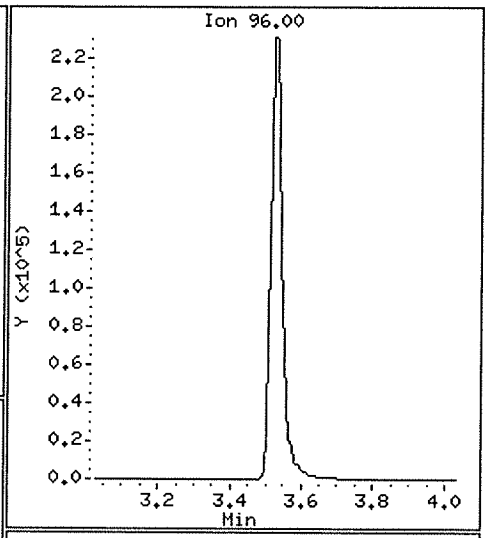
Column phase: DB624

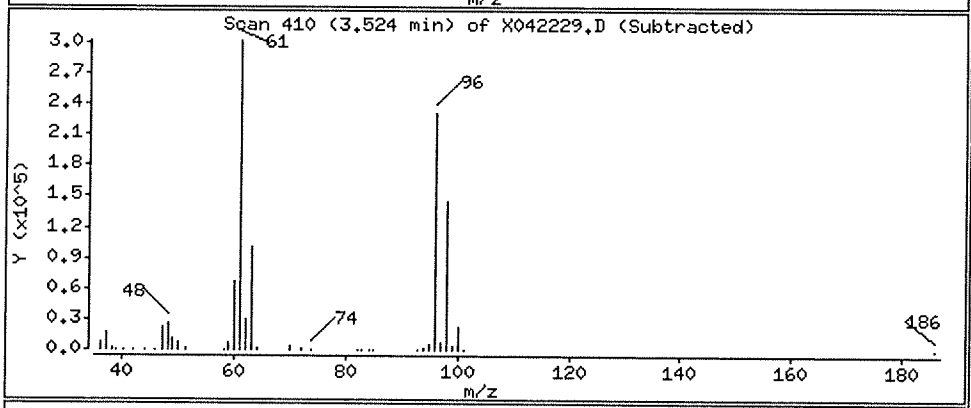
Column diameter: 0.18

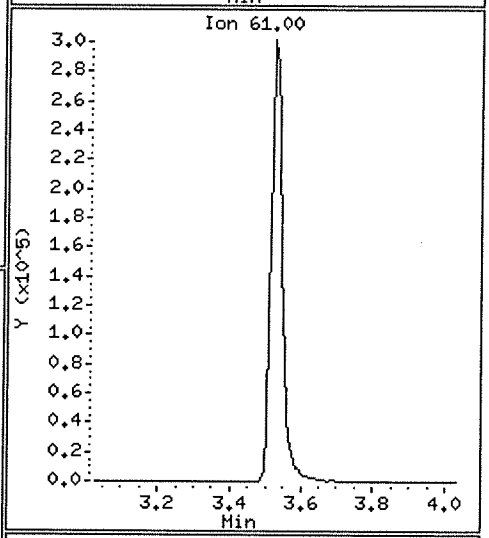
27 cis-1,2-Dichloroethene

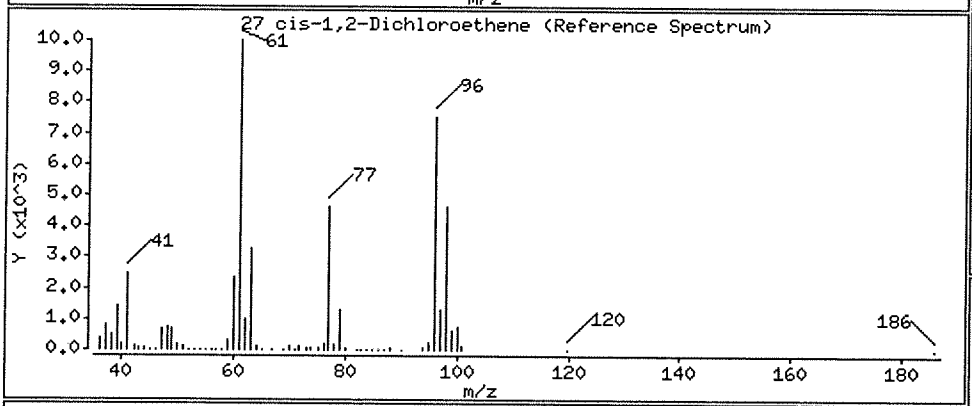
Concentration: 10725.87 ug/l

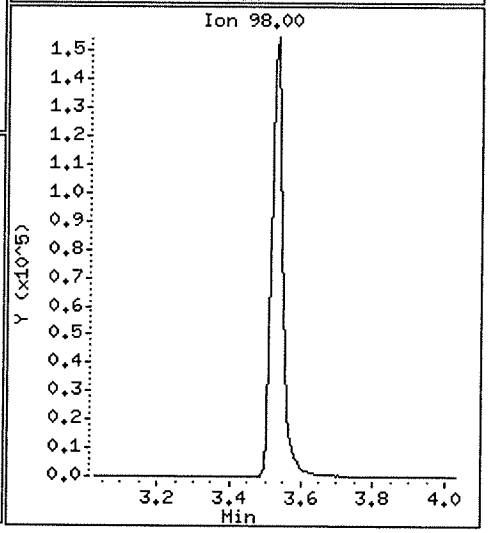


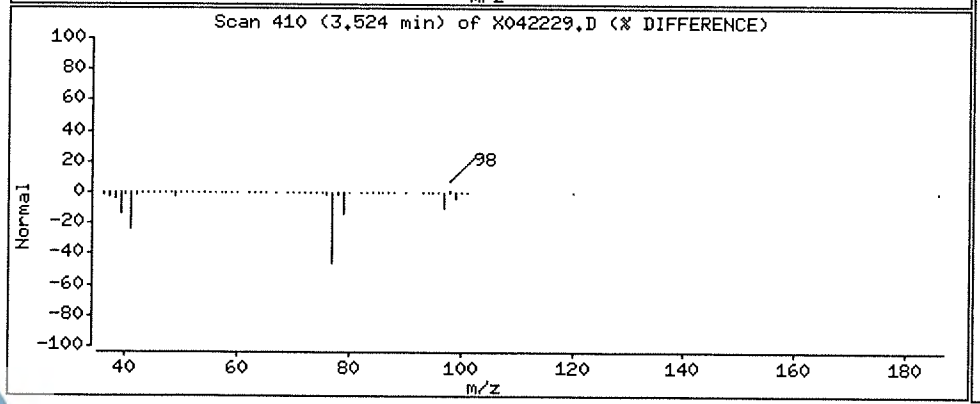












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210422.b\X042229.D

Date : 22-APR-2021 20:45

Client ID: HS21041102-10

Instrument: voa6.i

Sample Info: HS21041102-10;HS21041102-10;;;

Purge Volume: 5.0

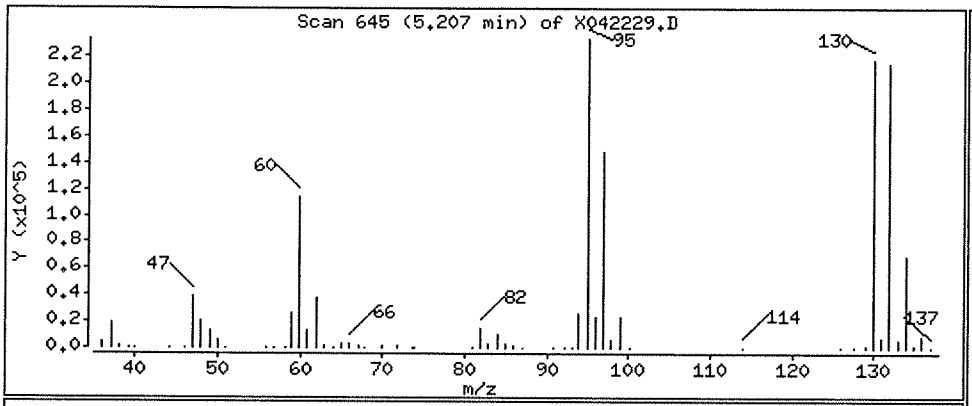
Operator: PC

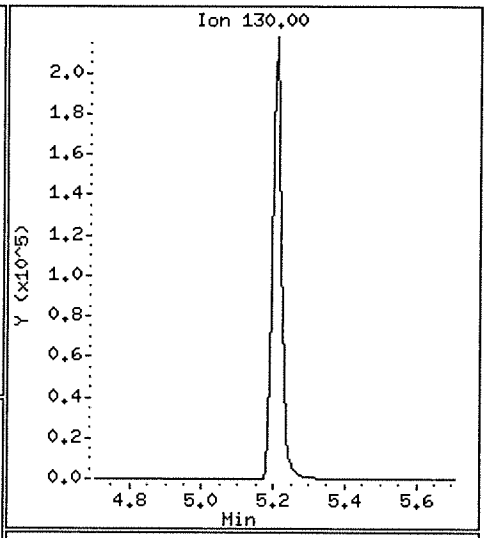
Column phase: DB624

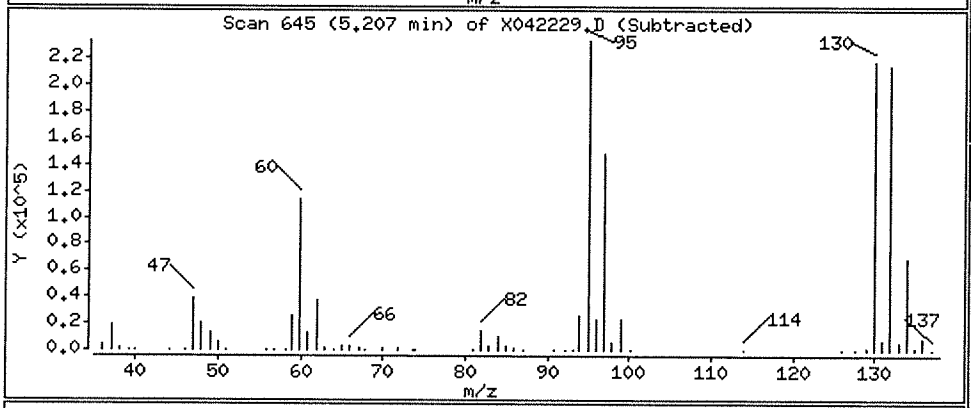
Column diameter: 0.18

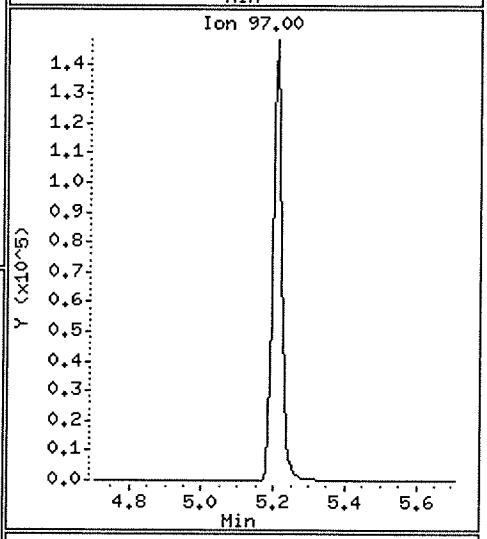
38 Trichloroethene

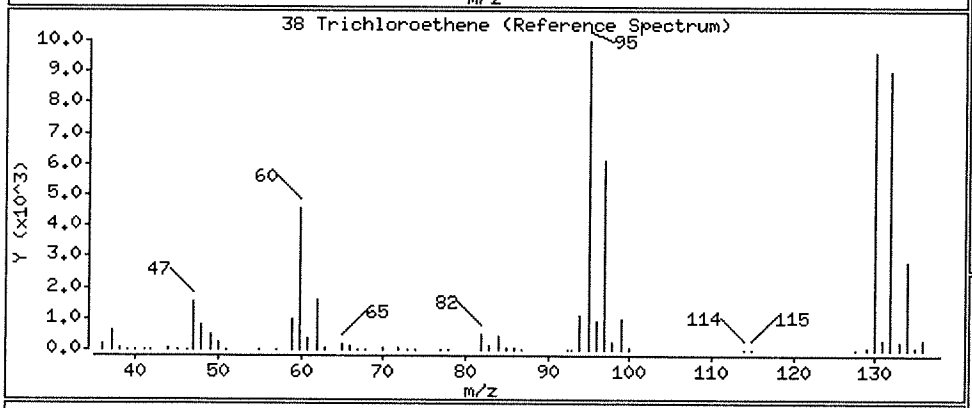
Concentration: 8885.86 ug/l

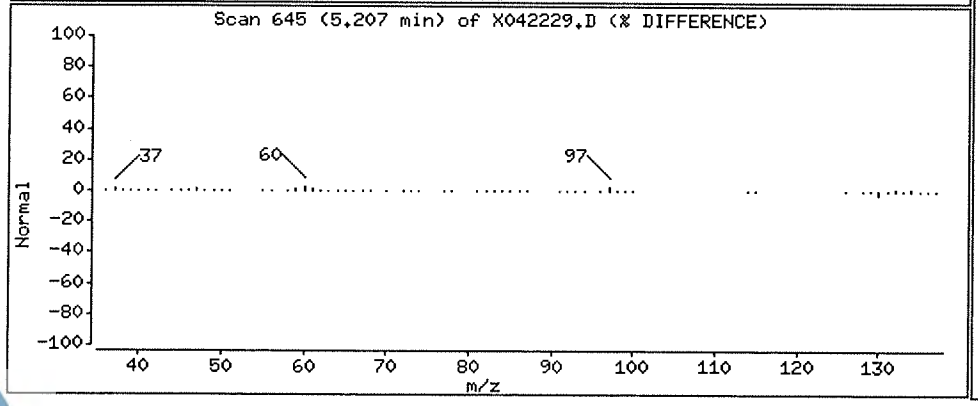


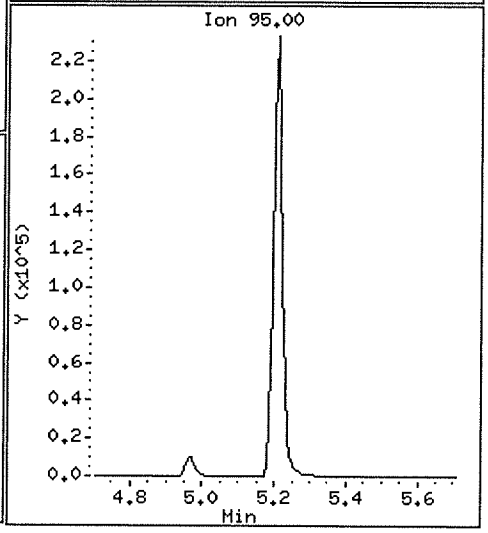












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210422.b\X042229.D

Date : 22-APR-2021 20:45

Client ID: HS21041102-10

Instrument: voa6.i

Sample Info: HS21041102-10;HS21041102-10;;;

Purge Volume: 5.0

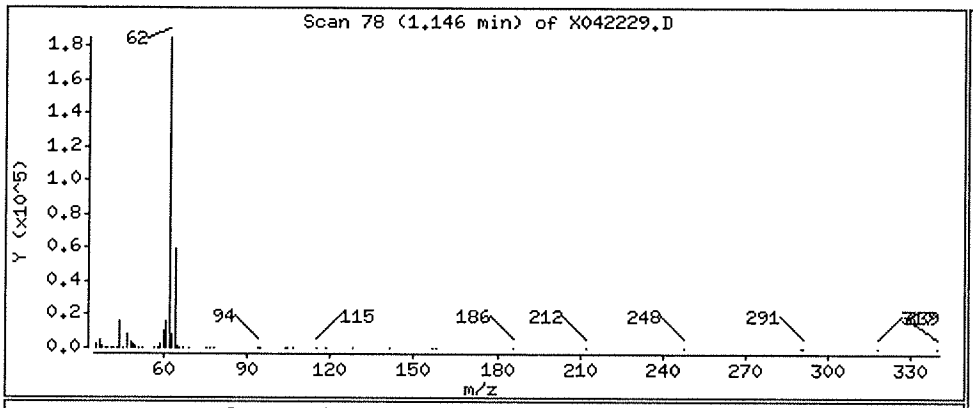
Operator: PC

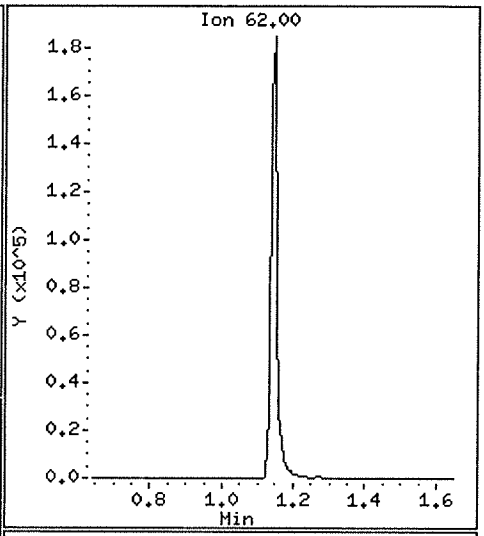
Column phase: DB624

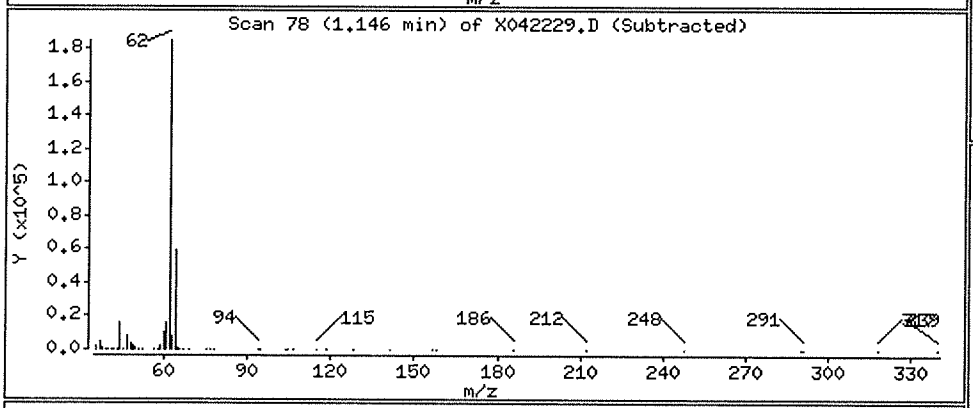
Column diameter: 0.18

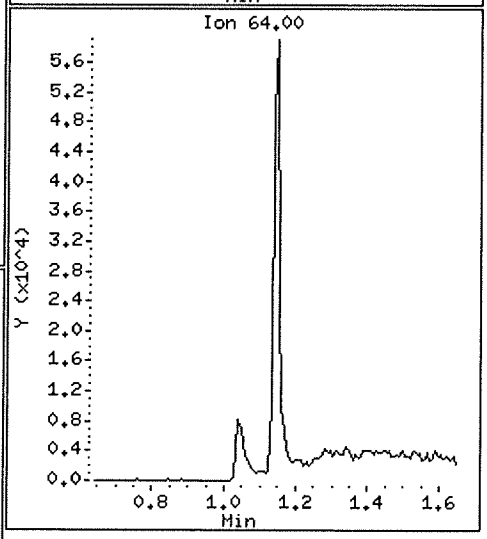
5 Vinyl Chloride

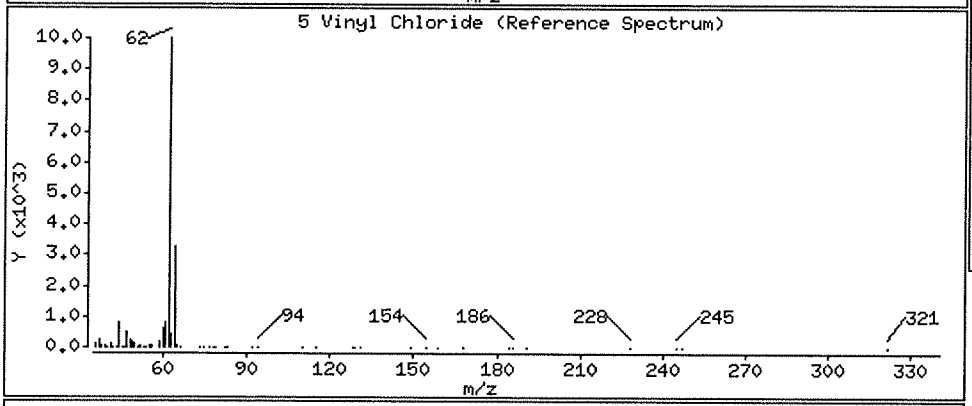
Concentration: 3664.30 ug/l

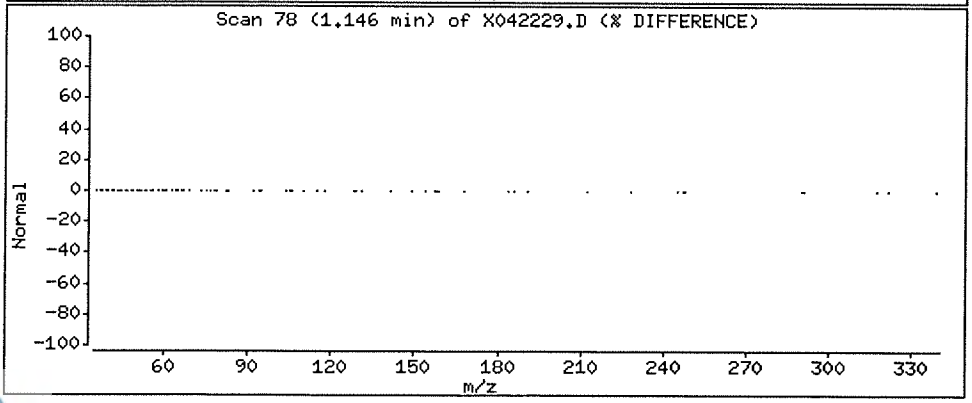












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210422.b\X042230.D Page 1
Report Date: 12-May-2021 14:27

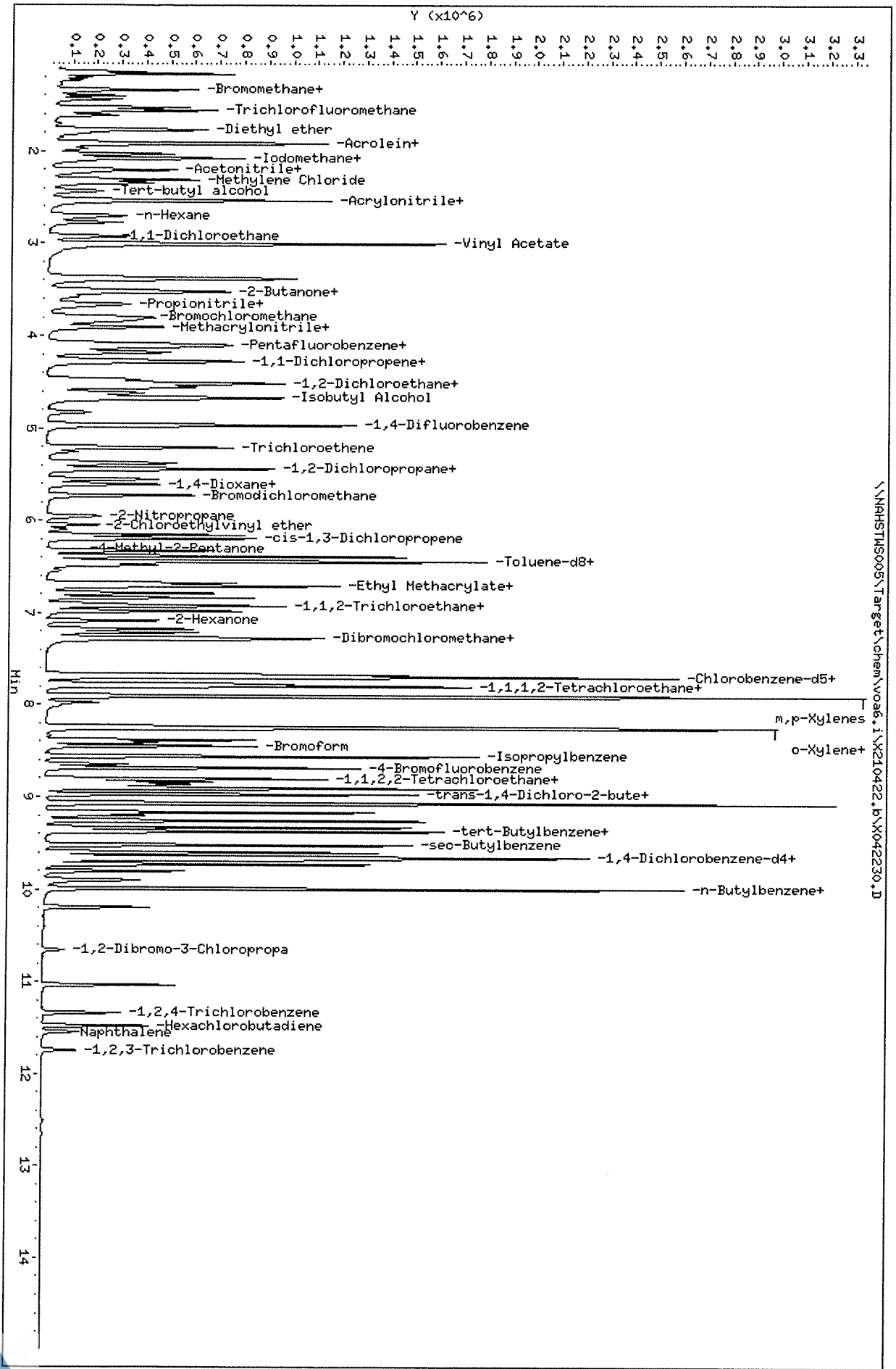
ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X210422.b\X042230.D
Lab Smp Id: CCV-END Client Smp ID: CCV-END
Inj Date : 22-APR-2021 21:06
Operator : PC Inst ID: voa6.i
Smp Info : CCV-END;CCV-END;2;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X210422.b\8260W.m
Meth Date : 12-May-2021 14:27 voa6.i Quant Type: ISTD
Cal Date : 02-APR-2021 13:20 Cal File: X040208.D
Als bottle: 29 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBI_short1.sub
Target Version: 4.14
Processing Host: NAHSTW7066

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	361261	50.0000	
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	654108	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	608636	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	294473	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	235188	50.0000	55.25
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	291960	50.0000	57.22
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	846119	50.0000	53.93
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	331370	50.0000	56.54
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	186284	50.0000	52.68
11 1,1-Dichloroethene	96	1.919	1.919	(0.459)	234316	50.0000	45.55
33 1,2-Dichloroethane	62	4.555	4.555	(0.918)	349222	50.0000	50.43
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	225835	50.0000	51.13
17 Methylene Chloride	84	2.305	2.305	(0.551)	188353	50.0000	48.09
38 Trichloroethene	130	5.207	5.207	(1.049)	223944	50.0000	50.01
5 Vinyl Chloride	62	1.145	1.145	(0.274)	262964	50.0000	48.55



Data File: \\NAHSTWS005\Target\chem\voa6.i\X210422.b\X042230.D
Date : 22-APR-2021 21:06
Client ID: CCV-END
Sample Info: CCV-END;CCV-END;2;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

MSVOA06 -Logbook

Batch: 44544 **Analyst:** Presenta Cabascango

Date: 04-23-2021 **Reviewer:**

Method: 8260 **Laboratory:** Houston

Comments:

#	Samp ID	Type	Analyzed	DF	Init Wt/Vol	Final Vol	File ID	Matrix	Status	pH
1	BFB	TUNE	04-23-2021 10:40 am	1.00	50 mL	50 mL	X042301.D	Liquid	Y	NA
2	CCV	CCV	04-23-2021 11:01 am	1.00	50 mL	50 mL	X042302a.D	Liquid	Y	NA
3	CCV	CCV	04-23-2021 11:22 am	1.00	50 mL	50 mL	X042303.D	Liquid	Y	NA
4	CCB	SAMP	04-23-2021 11:43 am	1.00	50 mL	50 mL	X042304.D	Liquid	Y	NA
5	VLCSW-210423	LCS	04-23-2021 12:12 pm	1.00	50 mL	50 mL	X042305.D	Liquid	Y	NA
6	BLANK	SAMP	04-23-2021 12:33 pm	1.00	50 mL	50 mL	X042306.D	Liquid	Y	NA
7	VBLKW-210423	MBLK	04-23-2021 12:54 pm	1.00	50 mL	50 mL	X042307.D	Liquid	Y	NA
8	HS21041135-05	SAMP	04-23-2021 01:15 pm	1.00	50 mL	50 mL	X042308.D	Liquid	Y	NA
9	HS21041135-03	SAMP	04-23-2021 01:36 pm	1.00	50 mL	50 mL	X042309.D	Liquid	Y	NA
10	HS21041135-01	SAMP	04-23-2021 01:58 pm	1.00	50 mL	50 mL	X042310.D	Liquid	Y	NA
11	HS21041135-02	SAMP	04-23-2021 02:19 pm	1.00	50 mL	50 mL	X042311.D	Liquid	Y	NA
12	HS21041135-04	SAMP	04-23-2021 02:40 pm	1.00	50 mL	50 mL	X042312.D	Liquid	Y	NA
13	HS21041132-03	SAMP	04-23-2021 03:01 pm	1.00	50 mL	50 mL	X042313.D	Liquid	Y	NA
14	HS21041132-04	SAMP	04-23-2021 03:22 pm	1.00	50 mL	50 mL	X042314.D	Liquid	Y	NA
15	HS21041132-05	SAMP	04-23-2021 03:43 pm	1.00	50 mL	50 mL	X042315.D	Liquid	Y	NA
16	HS21041102-08	SAMP	04-23-2021 04:04 pm	5.00	10 mL	50 mL	X042316.D	Liquid	Y	NA
17	HS21041135-03MS	MS	04-23-2021 04:25 pm	1.00	50 mL	50 mL	X042317.D	Liquid	Y	NA
18	HS21041135-03MSD	MSD	04-23-2021 04:46 pm	1.00	50 mL	50 mL	X042318.D	Liquid	Y	NA
19	HS21041102-08	SAMP	04-23-2021 05:07 pm	50.00	1 mL	50 mL	X042319.D	Liquid	Y	NA
20	HS21041102-09	SAMP	04-23-2021 05:28 pm	25.00	2 mL	50 mL	X042320.D	Liquid	Y	NA
21	HS21041132-06	SAMP	04-23-2021 05:49 pm	1.00	50 mL	50 mL	X042321.D	Liquid	Y	NA
22	HS21041132-07	SAMP	04-23-2021 06:10 pm	1.00	50 mL	50 mL	X042322.D	Liquid	Y	NA
23	HS21041169-06	SAMP	04-23-2021 06:31 pm	1.00	50 mL	50 mL	X042323.D	Liquid	Y	NA
24	HS21041132-08	SAMP	04-23-2021 06:52 pm	1.00	50 mL	50 mL	X042324.D	Liquid	Y	NA
25	HS21041132-08	SAMP	04-23-2021 07:13 pm	25.00	2 mL	50 mL	X042325.D	Liquid	Y	NA
26	HS21041132-02	SAMP	04-23-2021 07:35 pm	10.00	5 mL	50 mL	X042326.D	Liquid	Y	NA
27	HS21041132-02	SAMP	04-23-2021 07:56 pm	100.0(	500 µL	50 mL	X042327.D	Liquid	Y	NA
28	HS21041132-01	SAMP	04-23-2021 08:17 pm	25.00	2 mL	50 mL	X042328.D	Liquid	Y	NA
29	HS21041132-01	SAMP	04-23-2021 08:38 pm	250.0(	200 µL	50 mL	X042329.D	Liquid	Y	NA
30	CCV-END	CCV	04-23-2021 08:59 pm	1.00	50 mL	50 mL	X042330.D	Liquid	Y	NA
31	BLANK	SAMP	04-23-2021 09:20 pm	1.00	50 mL	50 mL	X042340.D	Liquid	Y	NA

FORM 2
WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS21041102

	CLIENT SAMPLE NO.	SMC1 #	SMC2 (DCE)#	SMC3 (TOL)#	OTHER #	TOT OUT
01	VLCSW-210423	106	109	105	107	0
02	VBLKW-210423	92	97	108	90	0
03	HS21041102-08	94	101	110	93	0
04	HS21041135-03MS	92	93	102	101	0
05	HS21041135-03MSD	91	96	103	99	0
06	HS21041102-08	92	97	107	94	0
07	HS21041102-09	93	99	106	93	0
08						
09						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						
28						

		QC LIMITS
SMC1	= Dibromofluoromethane	(0-130)
SMC2 (DCE)	= 1,2-Dichloroethane-d4	(0-130)
SMC3 (TOL)	= Toluene-d8	(0-130)
OTHER	= 4-Bromofluorobenzene	(0-130)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D System Monitoring Compound diluted out

FORM 4
VOLATILE METHOD BLANK SUMMARY

CLIENT SAMPLE NO.

VBLKW-210423

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS21041102

Lab File ID: X042307 Lab Sample ID: VBLKW-210423

Date Analyzed: 04/23/21 Time Analyzed: 1254

GC Column: DB624 ID: 0.18 (mm) Heated Purge: (Y/N) N

Instrument ID: VOA6

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	VLCSW-210423	VLCSW-210423	X042305	1212
02	HS21041102-08	HS21041102-08	X042316	1604
03	HS21041135-03MS	HS21041135-03MS	X042317	1625
04	HS21041135-03MSD	HS21041135-03MSD	X042318	1646
05	HS21041102-08	HS21041102-08	X042319	1707
06	HS21041102-09	HS21041102-09	X042320	1728
07				
08				
09				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				

COMMENTS:

FORM 5
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS21041102

Lab File ID: X042301 BFB Injection Date: 04/23/21

Instrument ID: VOA6 BFB Injection Time: 1040

GC Column: DB624 ID: 0.25 (mm) Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	18.3
75	30.0 - 60.0% of mass 95	46.4
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	5.7
173	Less than 2.0% of mass 174	1.0 (1.2)1
174	Greater than 50.0% of mass 95	80.9
175	5.0 - 9.0% of mass 174	6.4 (7.9)1
176	95.0 - 101.0% of mass 174	81.0 (100.1)1
177	5.0 - 9.0% of mass 176	5.0 (6.2)2

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

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	CCV	CCV	X042303	04/23/21	1122
02	VLCSW-210423	VLCSW-210423	X042305	04/23/21	1212
03	VBLKW-210423	VBLKW-210423	X042307	04/23/21	1254
04	HS21041102-08	HS21041102-08	X042316	04/23/21	1604
05	HS21041135-03MS	HS21041135-03MS	X042317	04/23/21	1625
06	HS21041135-03MSD	HS21041135-03MSD	X042318	04/23/21	1646
07	HS21041102-08	HS21041102-08	X042319	04/23/21	1707
08	HS21041102-09	HS21041102-09	X042320	04/23/21	1728
09	CCV-END	CCV-END	X042330	04/23/21	2059
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS21041102

Instrument ID: VOA6 Calibration Date: 04/23/21 Time: 1122

Lab File ID: X042303 Init. Calib. Date(s): 04/02/21 04/02/21

Init. Calib. Times: 1053 1423

GC Column: DB624 ID: 0.18 (mm)

COMPOUND	RRF or AMOUNT	RRF50.000 or AMOUNT	CCAL RRF50.000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Vinyl Chloride	0.7500000	0.7001918	0.7001918	0.1	6.64	20.00	AVRG
Methylene Chloride	51.071347	50.000000	0.5546236	0.1	-2.14	20.00	LINR
1,1-Dichloroethene	0.7120000	0.6009898	0.6009898	0.1	15.59	20.00	AVRG
1,2-Dichloroethane	0.5290000	0.5157407	0.5157407	0.1	2.51	20.00	AVRG
cis-1,2-Dichloroethene	0.6110000	0.6212177	0.6212177	0.1	-1.67	20.00	AVRG
1,1,2-Trichloroethane	0.2900000	0.2816699	0.2816699	0.1	2.87	20.00	AVRG
Trichloroethene	0.3420000	0.3334702	0.3334702	0.2	2.49	20.00	AVRG
Dibromofluoromethane	53.554194	50.000000	0.6308685	0.1	-7.11	20.00	LINR
1,2-Dichloroethane-d4	55.278480	50.000000	0.7804992	0.1	-10.56	20.00	LINR
Toluene-d8	51.331948	50.000000	1.3207521	0.1	-2.66	20.00	LINR
4-Bromofluorobenzene	55.429836	50.000000	0.5333590	0.1	-10.86	20.00	LINR

FORM VII VOA

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS21041102

Instrument ID: VOA6 Calibration Date: 04/23/21 Time: 2059

Lab File ID: X042330 Init. Calib. Date(s): 04/02/21 04/02/21

Init. Calib. Times: 1053 1423

GC Column: DB624 ID: 0.18 (mm)

COMPOUND	RRF or AMOUNT	RRF50.000 or AMOUNT	CCAL RRF50.000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Vinyl Chloride	0.7500000	0.8171111	0.8171111	0.1	-8.95	50.00	AVRG
Methylene Chloride	52.875514	50.000000	0.5748024	0.1	-5.75	50.00	LINR
1,1-Dichloroethene	0.7120000	0.7128928	0.7128928	0.1	-0.12	50.00	AVRG
1,2-Dichloroethane	0.5290000	0.5464335	0.5464335	0.1	-3.30	50.00	AVRG
cis-1,2-Dichloroethene	0.6110000	0.6501990	0.6501990	0.1	-6.42	50.00	AVRG
1,1,2-Trichloroethane	0.2900000	0.3180305	0.3180305	0.1	-9.66	50.00	AVRG
Trichloroethene	0.3420000	0.3401588	0.3401588	0.2	0.54	50.00	AVRG
Dibromofluoromethane	59.574229	50.000000	0.7023623	0.1	-19.15	50.00	LINR
1,2-Dichloroethane-d4	59.629610	50.000000	0.8424764	0.1	-19.26	50.00	LINR
Toluene-d8	54.576488	50.000000	1.4073624	0.1	-9.15	50.00	LINR
4-Bromofluorobenzene	56.179253	50.000000	0.5407913	0.1	-12.36	50.00	LINR

FORM VII VOA

FORM 8
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS21041102

Lab File ID (Standard): X042303 Date Analyzed: 04/23/21

Instrument ID: VOA6 Time Analyzed: 1122

GC Column: DB624 ID: 0.18 (mm) Heated Purge: (Y/N) N

		IS1 AREA #	RT #	IS2(DFB) AREA #	RT #	IS3(CBZ) AREA #	RT #
	12 HOUR STD	400486	4.18	674651	4.97	644744	7.67
	UPPER LIMIT	800972	4.68	1349302	5.47	1289488	8.17
	LOWER LIMIT	200243	3.68	337326	4.47	322372	7.17
	CLIENT SAMPLE NO.						
01	VLCSW-210423	334958	4.18	589014	4.96	564684	7.67
02	VBLKW-210423	410293	4.18	656250	4.97	591009	7.67
03	HS21041102-08	405433	4.18	647356	4.96	571820	7.67
04	HS21041135-03MS	426612	4.18	684424	4.96	663475	7.67
05	HS21041135-03MSD	432945	4.18	697264	4.97	666027	7.67
06	HS21041102-08	417291	4.18	660098	4.96	589228	7.67
07	HS21041102-09	401831	4.18	641477	4.97	563110	7.67
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							

IS1 = Pentafluorobenzene
IS2 (DFB) = 1,4-Difluorobenzene
IS3 (CBZ) = Chlorobenzene-d5

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

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

FORM VIII VOA

FORM 8
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS21041102

Lab File ID (Standard): X042303 Date Analyzed: 04/23/21

Instrument ID: VOA6 Time Analyzed: 1122

GC Column: DB624 ID: 0.18 (mm) Heated Purge: (Y/N) N

		IS4 (DCB) AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	312454	9.66				
	UPPER LIMIT	624908	10.16				
	LOWER LIMIT	156227	9.16				
	CLIENT SAMPLE NO.						
01	VLCSW-210423	258969	9.66				
02	VBLKW-210423	249819	9.66				
03	HS21041102-08	241700	9.66				
04	HS21041135-03MS	305215	9.66				
05	HS21041135-03MSD	298080	9.66				
06	HS21041102-08	247280	9.66				
07	HS21041102-09	245346	9.66				
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							

IS4 (DCB) = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

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

FORM VIII VOA

Data File: \\NAHSTWS005\Target\chem\voa6.i\X210423.b\X042301.D

Date : 23-APR-2021 10:40

Client ID: BFB

Instrument: voa6.i

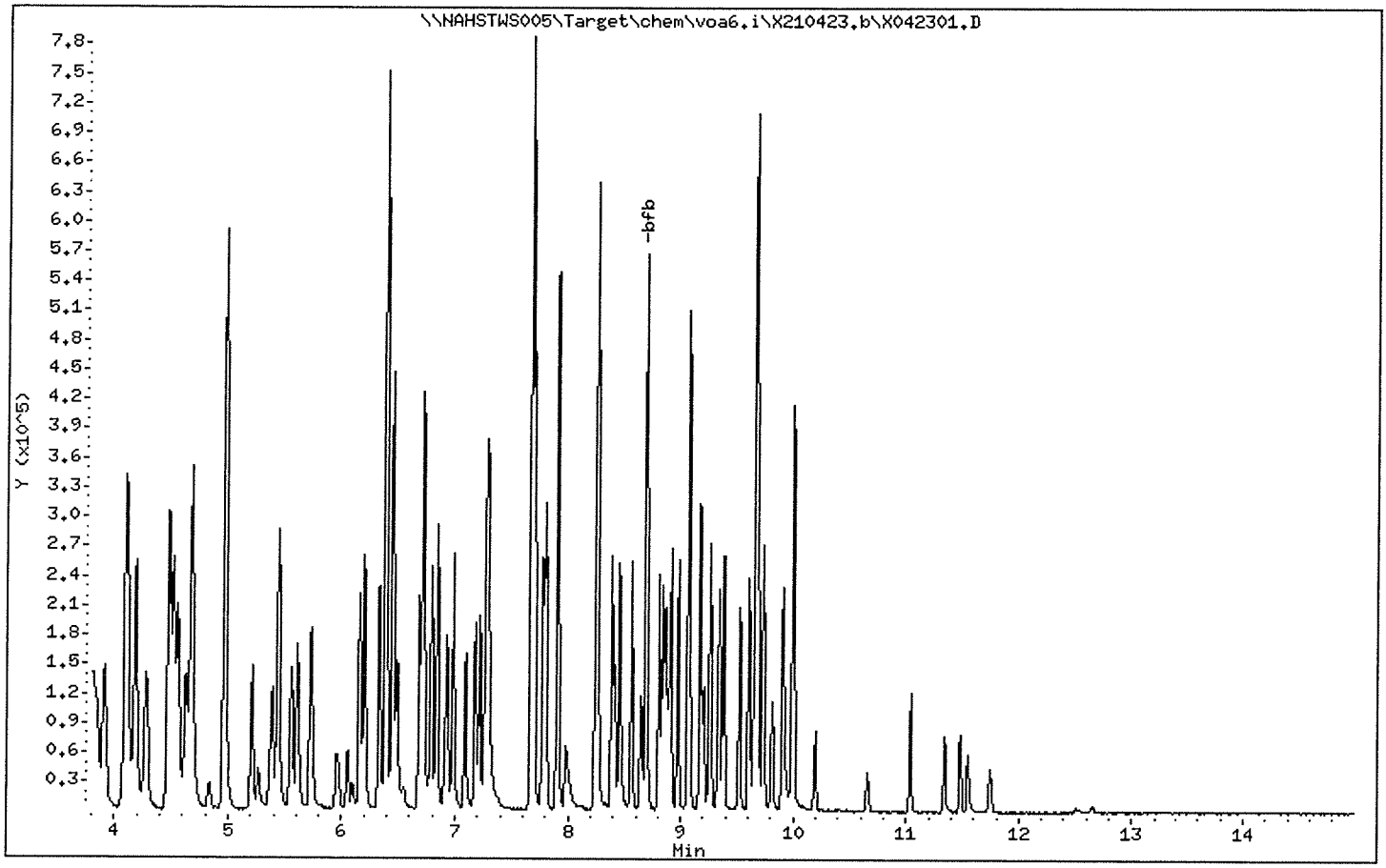
Sample Info: BFB;BFB;3;;BFB

Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

Column diameter: 0.25



Data File: \\NAHSTWS005\Target\chem\voa6.i\X210423.b\X042301.D

Date : 23-APR-2021 10:40

Client ID: BFB

Instrument: voa6.i

Sample Info: BFB;BFB;3;;BFB

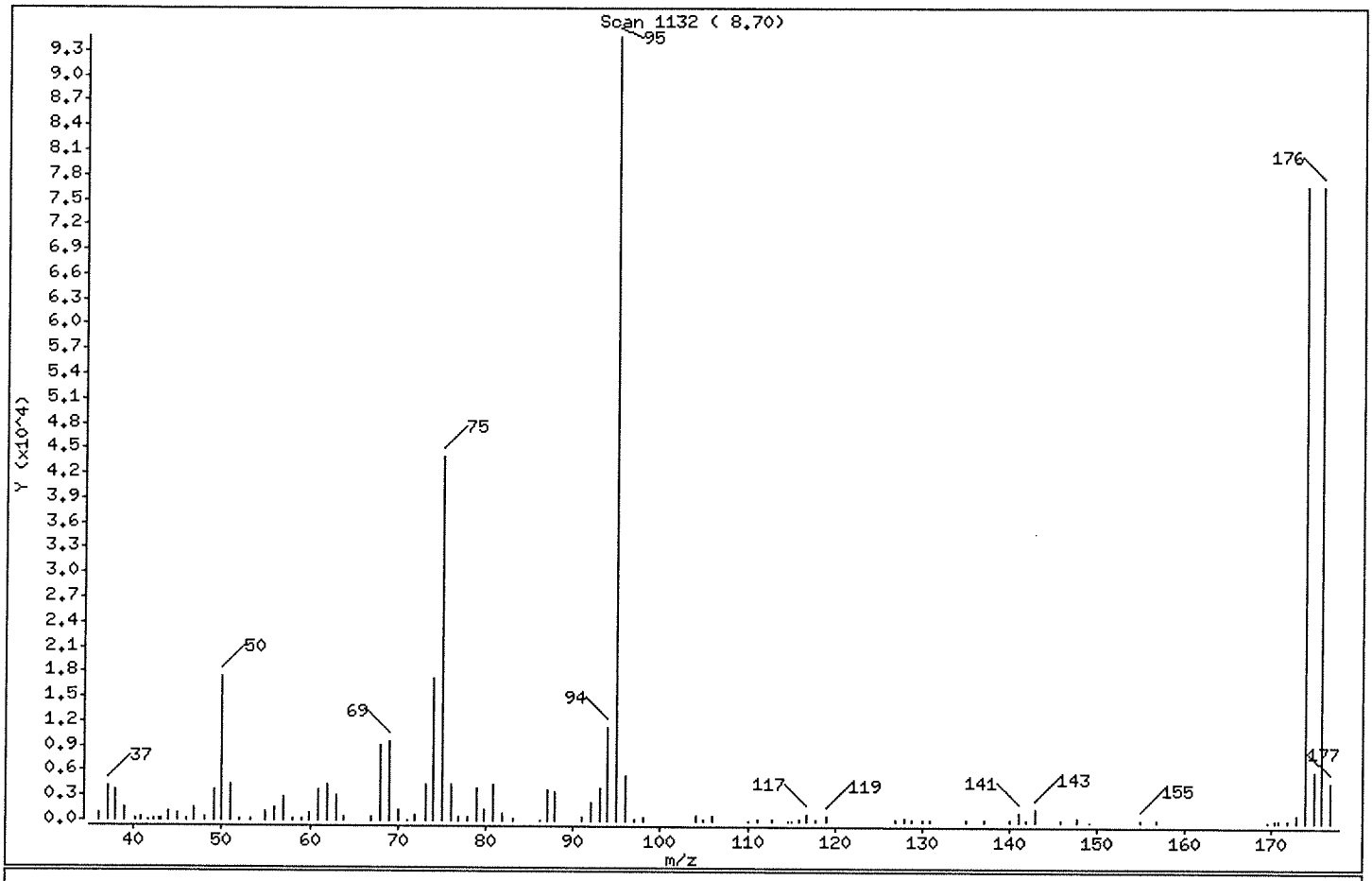
Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

Column diameter: 0.25

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	18.34
75	30.00 - 60.00% of mass 95	46.36
96	5.00 - 9.00% of mass 95	5.70
173	Less than 2.00% of mass 174	0.96 (1.18)
174	Greater than 50.00% of mass 95	80.86
175	5.00 - 9.00% of mass 174	6.41 (7.92)
176	95.00 - 101.00% of mass 174	80.97 (100.14)
177	5.00 - 9.00% of mass 176	5.05 (6.23)

Data File: \\NAHSTWS005\Target\chem\voa6.i\X210423.b\X042301.D

Date : 23-APR-2021 10:40

Client ID: BFB

Instrument: voa6.i

Sample Info: BFB;BFB;3;;BFB

Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

Column diameter: 0.25

Data File: X042301.D
Spectrum: Scan 1132 (8.70)
Location of Maximum: 95.00
Number of points: 95

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	799	59.00	190	87.00	3716	128.80	144
37.00	4109	59.90	859	87.90	3417	129.90	296
38.00	3758	61.00	3800	91.00	406	130.90	149
39.00	1543	62.00	4356	92.00	2110	134.90	173
40.10	281	63.00	2980	93.00	3935	137.00	121
40.90	451	63.90	383	93.90	11332	140.00	149
41.70	66	67.00	487	95.00	94728	141.00	1108
42.20	124	68.00	9063	96.00	5404	141.80	143
42.90	203	69.00	9667	97.00	219	142.90	1418
43.10	202	70.00	1275	98.10	331	145.70	147
44.00	1074	71.10	71	104.00	724	147.70	336
44.90	975	72.00	682	104.90	192	149.00	81
46.00	123	73.10	4276	105.90	733	154.80	134
46.90	1431	74.00	17304	110.00	100	156.80	122
48.00	494	75.00	43912	111.10	132	169.70	63
49.00	3728	76.00	4248	112.80	181	170.50	138
50.00	17376	76.90	459	114.70	61	170.90	144
51.00	4321	78.00	470	115.10	52	171.80	175
52.00	290	78.90	4004	115.80	302	173.00	906
53.20	123	79.90	1335	116.70	849	173.90	76600
55.00	1005	80.90	4280	117.80	206	174.90	6070
56.00	1421	81.90	763	118.90	557	175.90	76704
57.00	2789	83.10	124	126.80	201	176.90	4782
58.10	125	86.20	80	128.00	474		

Data File: \\NAHSTWS005\Target\chem\voa6.i\X210423.b\X042303.D Page 1
Report Date: 12-May-2021 14:49

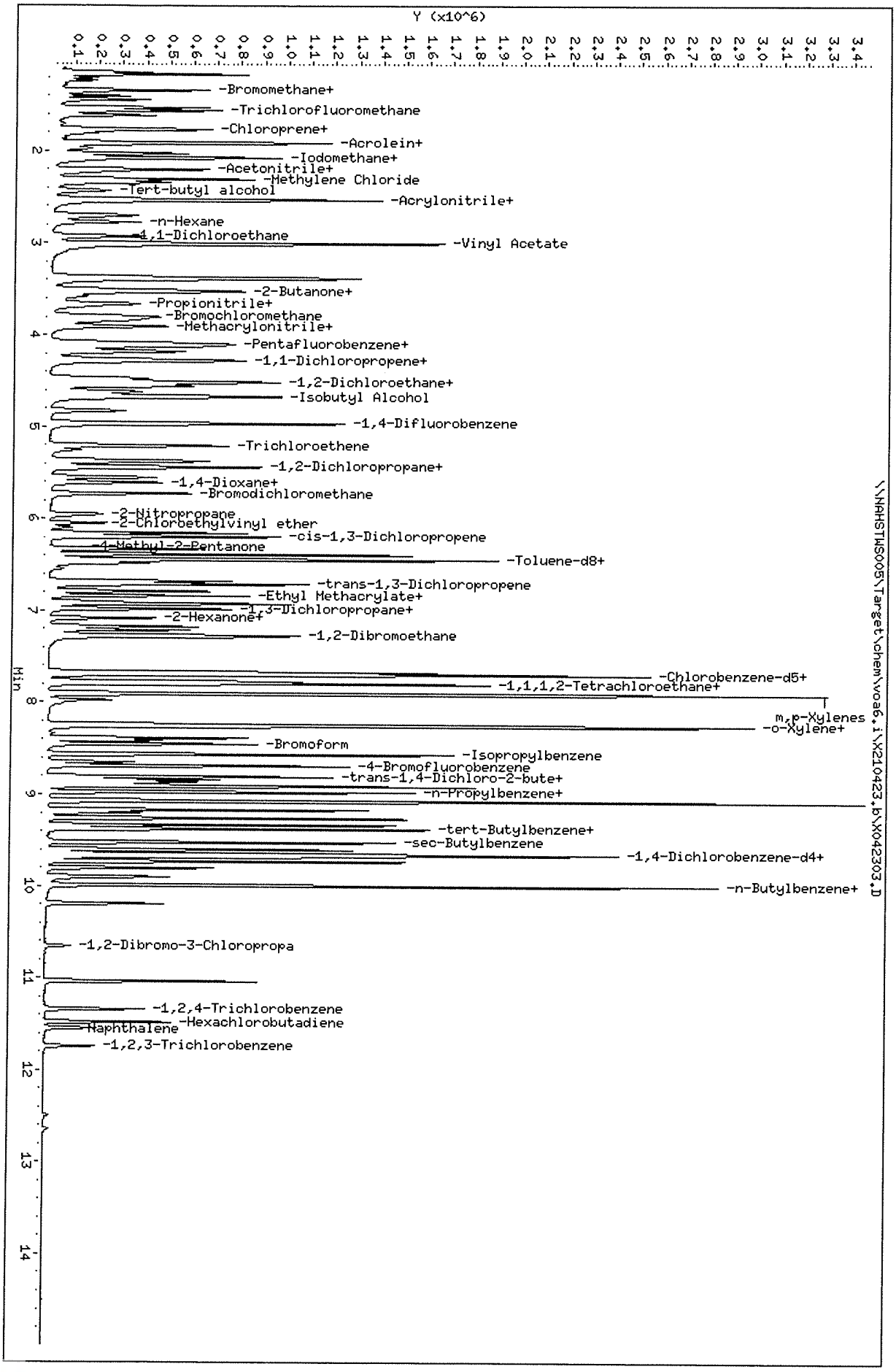
ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X210423.b\X042303.D
Lab Smp Id: CCV Client Smp ID: CCV
Inj Date : 23-APR-2021 11:22
Operator : PC Inst ID: voa6.i
Smp Info : CCV;CCV;2;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X210423.b\8260W.m
Meth Date : 12-May-2021 14:49 voa6.i Quant Type: ISTD
Cal Date : 02-APR-2021 13:20 Cal File: X040208.D
Als bottle: 3 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBI_short1.sub
Target Version: 4.14
Processing Host: NAHSTW7066

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
*	1 Pentafluorobenzene	168	4.182	4.182	(1.000)	400486	50.0000	
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	674651	50.0000	
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	644744	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	312454	50.0000	
$	30 Dibromofluoromethane	113	4.103	4.103	(0.981)	252654	50.0000	53.55
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	312579	50.0000	55.27
$	48 Toluene-d8	98	6.388	6.388	(0.833)	851547	50.0000	51.33
$	69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	343880	50.0000	55.42
	53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	181605	50.0000	48.48
	11 1,1-Dichloroethene	96	1.919	1.919	(0.459)	240688	50.0000	42.20
	33 1,2-Dichloroethane	62	4.555	4.555	(0.916)	347945	50.0000	48.72
	27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	248789	50.0000	50.81
	17 Methylene Chloride	84	2.306	2.306	(0.551)	222119	50.0000	51.07
	38 Trichloroethene	130	5.207	5.207	(1.048)	224976	50.0000	48.71
	5 Vinyl Chloride	62	1.145	1.145	(0.274)	280417	50.0000	46.70



Data File: \\NAHSTWS005\Target\chem\voa6.i\X210423.b\X042303.D
Date : 23-APR-2021 11:22
Client ID: CCV
Sample Info: CCV;CCV;2;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\NAHSTWS005\Target\chem\voa6.i\X210423.b\X042305.D Page 1
Report Date: 12-May-2021 14:49

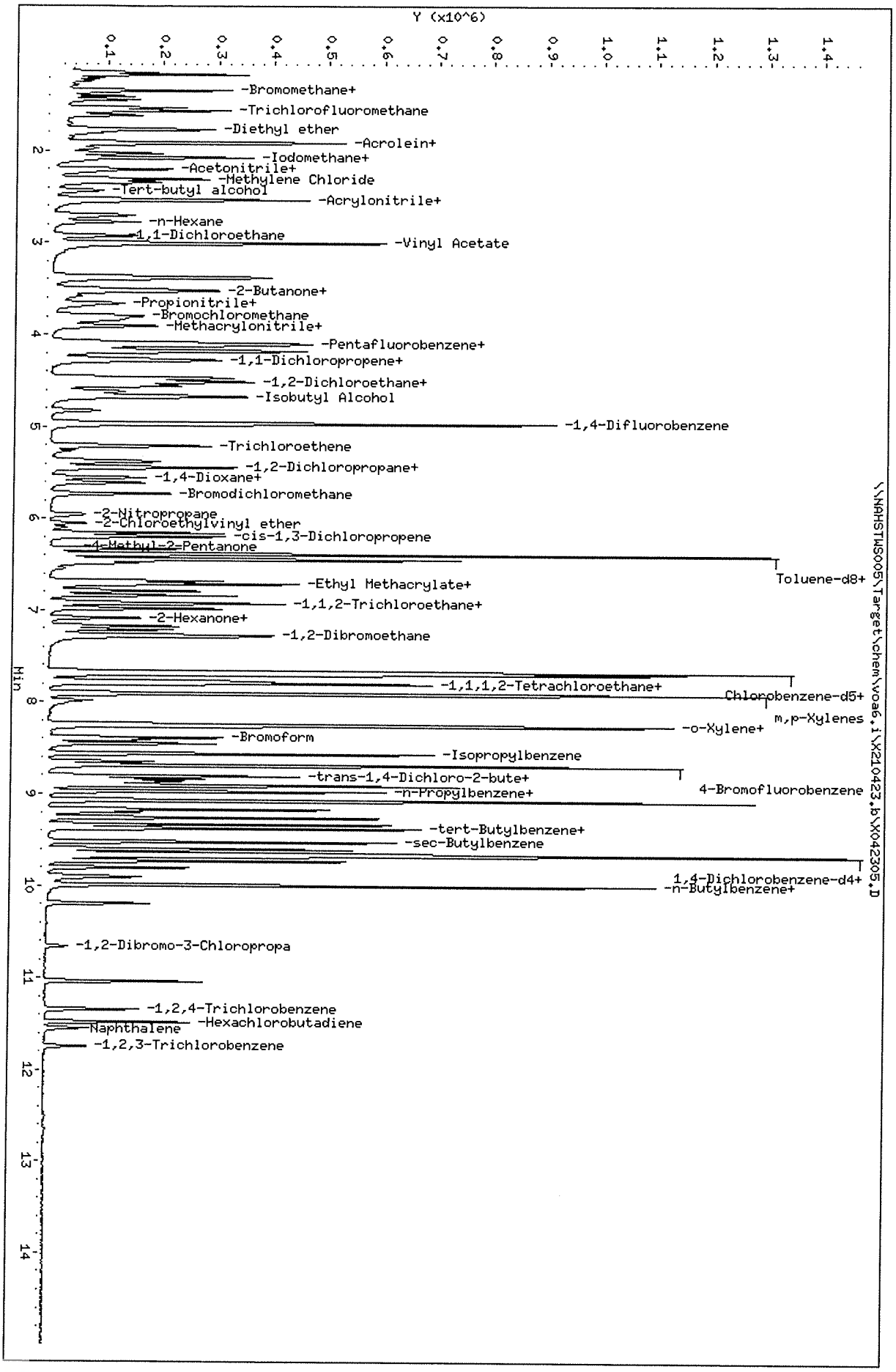
ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X210423.b\X042305.D
Lab Smp Id: VLCSW-210423 Client Smp ID: VLCSW-210423
Inj Date : 23-APR-2021 12:12
Operator : PC Inst ID: voa6.i
Smp Info : VLCSW-210423;VLCSW-210423;3;;LCS
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X210423.b\8260W.m
Meth Date : 12-May-2021 14:49 voa6.i Quant Type: ISTD
Cal Date : 02-APR-2021 13:20 Cal File: X040208.D
Als bottle: 5 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBI_short1.sub
Target Version: 4.14
Processing Host: NAHSTW7066

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	334958	50.0000	
* 36 1,4-Difluorobenzene	114	4.963	4.970	(1.000)	589014	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	564684	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	258969	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	209698	53.1478	53.14
$ 35 1,2-Dichloroethane-d4	65	4.469	4.476	(1.068)	257389	54.4306	54.43
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	766805	52.7249	52.72
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	290578	53.5368	53.53
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	73641	22.4499	22.44
11 1,1-Dichloroethene	96	1.912	1.919	(0.457)	103799	21.7637	21.76
33 1,2-Dichloroethane	62	4.555	4.555	(0.918)	131313	21.0621	21.06
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	91706	22.3969	22.39
17 Methylene Chloride	84	2.306	2.306	(0.551)	83158	23.6800	23.68
38 Trichloroethene	130	5.207	5.207	(1.049)	88438	21.9331	21.93
5 Vinyl Chloride	62	1.145	1.145	(0.274)	119780	23.8526	23.85



Data File: \\NAHSTWS005\Target\chem\voa6.i\X210423.b\X042305.D
Date : 23-APR-2021 12:12
Client ID: VLCSW-210423
Sample Info: VLCSW-210423;VLCSW-210423;3;;LCS
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\NAHSTWS005\Target\chem\voa6.i\X210423.b\X042307.D Page 1
Report Date: 12-May-2021 14:49

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X210423.b\X042307.D
Lab Smp Id: VBLKW-210423 Client Smp ID: VBLKW-210423
Inj Date : 23-APR-2021 12:54
Operator : PC Inst ID: voa6.i
Smp Info : VBLKW-210423;VBLKW-210423;3;;BLANK
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X210423.b\8260W.m
Meth Date : 12-May-2021 14:49 voa6.i Quant Type: ISTD
Cal Date : 02-APR-2021 13:20 Cal File: X040208.D
Als bottle: 7 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBI_short1.sub
Target Version: 4.14
Processing Host: NAHSTW7066

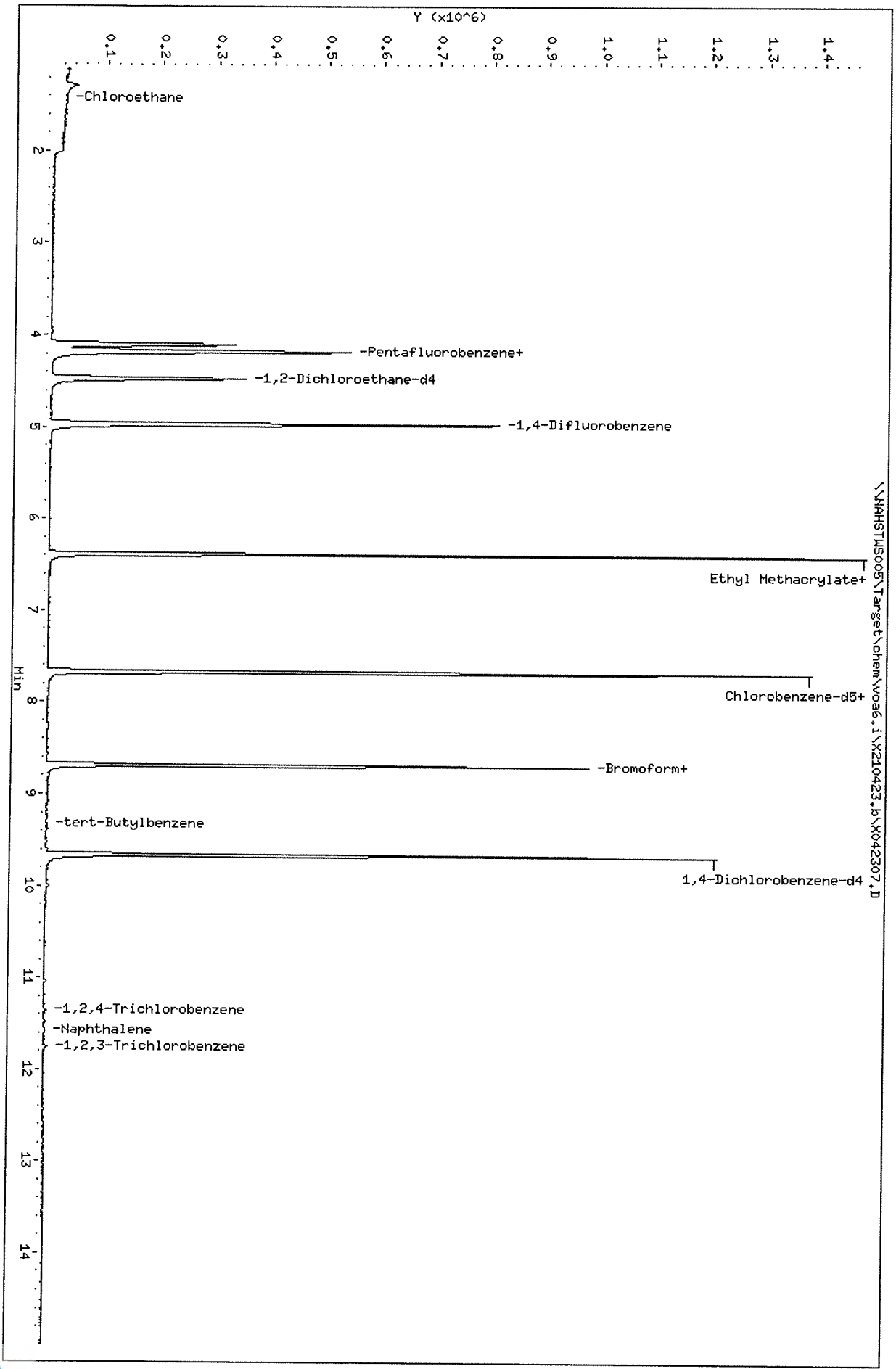
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	410293	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	656250	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	591009	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	249819	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	221934	45.9799	45.97
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	281168	48.5940	48.59
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	819568	53.8034	53.80
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	255661	45.2685	45.26

Data File: \\NAHSTWS005\Target\chem\voa6.i\X210423.b\X042307.D
Date : 23-APR-2021 12:54
Client ID: VBLKW-210423
Sample Info: VBLKW-210423;VBLKW-210423;3;;BLANK
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18



Data File: \\NAHSTWS005\Target\chem\voa6.i\X210423.b\X042316.D Page 1
Report Date: 12-May-2021 14:52

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X210423.b\X042316.D
Lab Smp Id: HS21041102-08 Client Smp ID: HS21041102-08
Inj Date : 23-APR-2021 16:04
Operator : PC Inst ID: voa6.i
Smp Info : HS21041102-08;HS21041102-08;;;
Misc Info : HS18090001;WATER;0;5;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X210423.b\8260W.m
Meth Date : 12-May-2021 14:51 Qin.Xu Quant Type: ISTD
Cal Date : 02-APR-2021 13:20 Cal File: X040208.D
Als bottle: 16
Dil Factor: 5.00000
Integrator: HP RTE Compound Sublist: CBI_short1.sub
Target Version: 4.14
Processing Host: NAHSTW7066

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	5.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

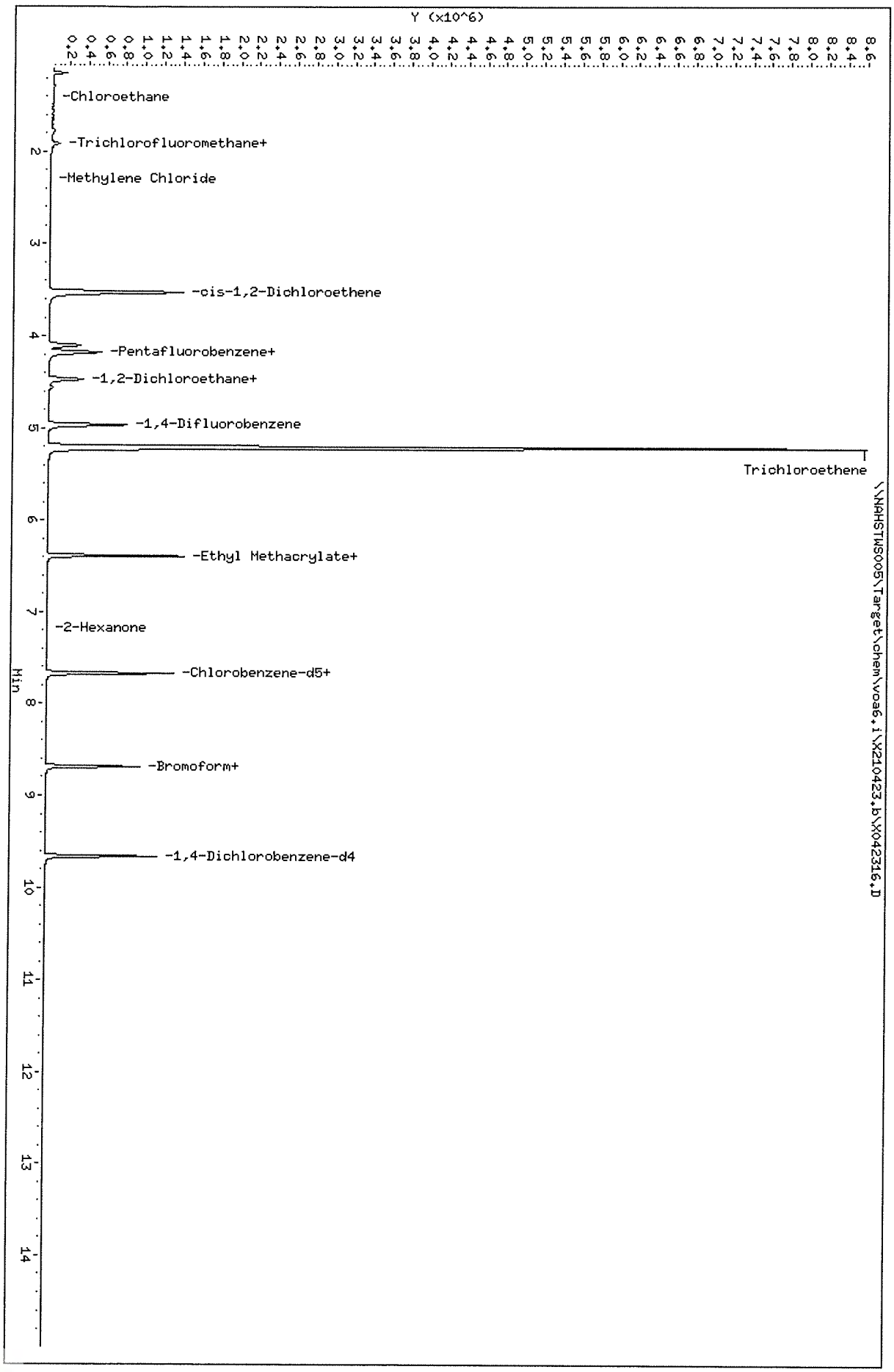
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
*	1 Pentafluorobenzene	168	4.182	4.182	(1.000)	405433	50.0000	
*	36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	647356	50.0000	
*	47 Chlorobenzene-d5	117	7.671	7.670	(1.000)	571820	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	241700	50.0000	
$	30 Dibromofluoromethane	113	4.103	4.103	(0.981)	223049	46.7574	46.75
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	288781	50.4890	50.48
$	48 Toluene-d8	98	6.388	6.388	(0.833)	810031	54.9219	54.92
$	69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	254460	46.5205	46.52
	11 1,1-Dichloroethene	96	1.919	1.919	(0.459)	15830	2.74216	13.71(a)
	33 1,2-Dichloroethane	62	4.555	4.555	(0.918)	32490	4.74160	23.70(a)
	27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	707057	142.665	713.32
	17 Methylene Chloride	84	2.298	2.305	(0.550)	1132	1.73261	8.66(a)
	38 Trichloroethene	130	5.207	5.206	(1.049)	2413762	544.675	2723.37(A)
	5 Vinyl Chloride	62	1.145	1.145	(0.274)	113630	18.6945	93.47

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).
A - Target compound detected but, quantitated amount exceeded maximum amount.

Data File: \\NAHSTWS005\Target\chem\voa6.i\X210423.b\X042316.D
Date : 23-APR-2021 16:04
Client ID: HS21041102-08
Sample Info: HS21041102-08;HS21041102-08;;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18



Data File: \\NAHSTWS005\Target\chem\voa6.i\X210423.b\X042316.D

Date : 23-APR-2021 16:04

Client ID: HS21041102-08

Instrument: voa6.i

Sample Info: HS21041102-08;HS21041102-08;;;

Purge Volume: 5.0

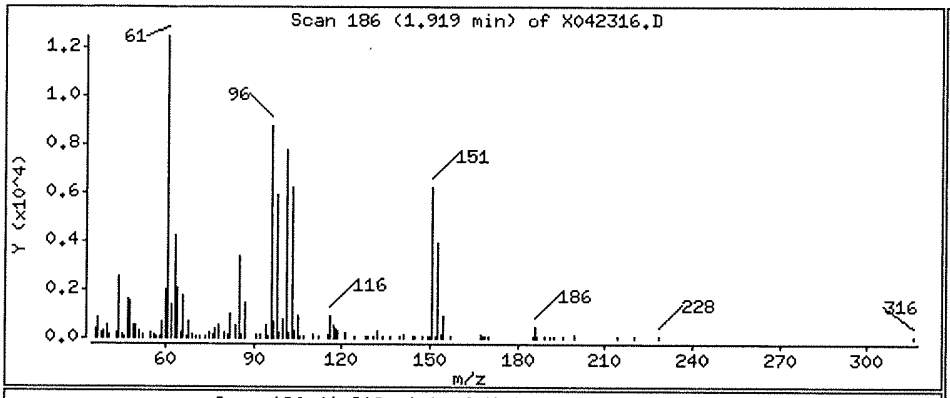
Operator: PC

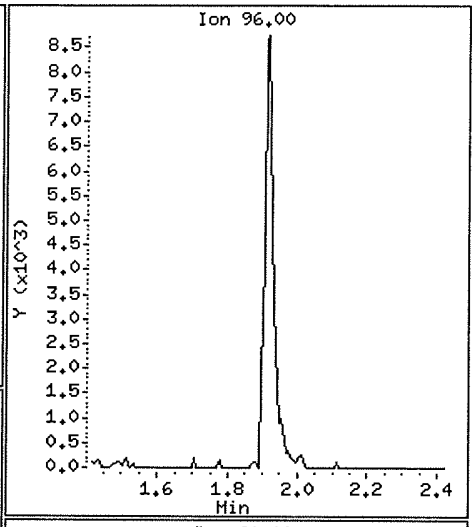
Column phase: DB624

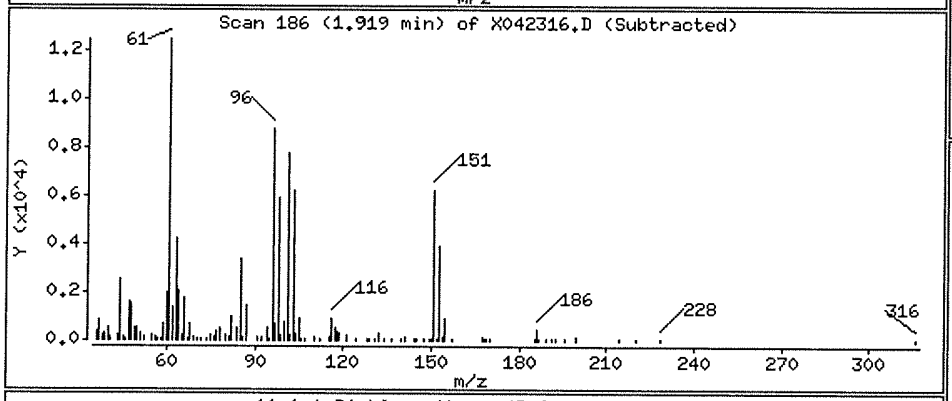
Column diameter: 0.18

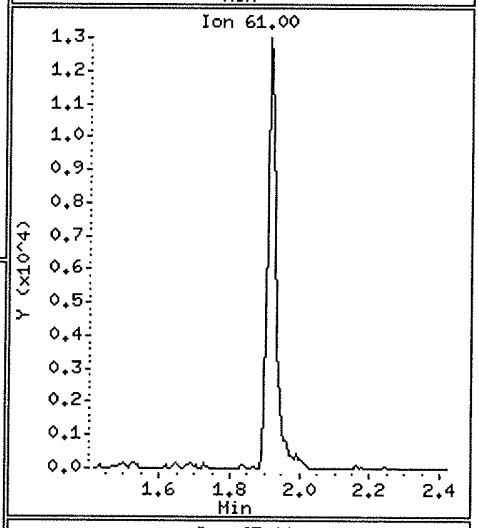
11 1,1-Dichloroethene

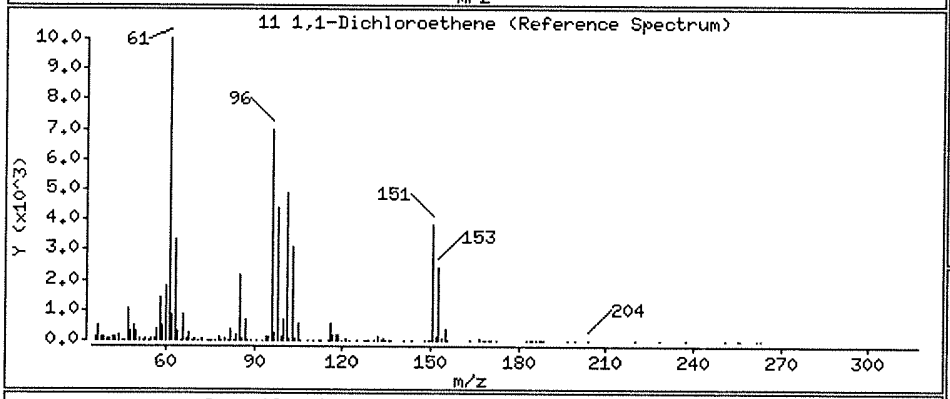
Concentration: 13.71 ug/l

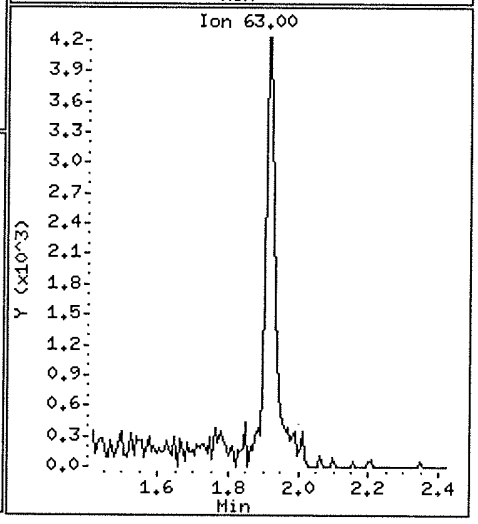


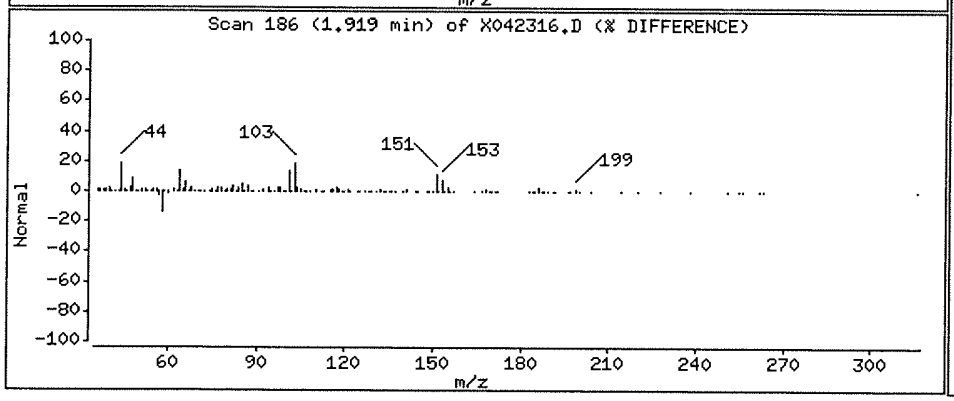












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210423.b\X042316.D

Date : 23-APR-2021 16:04

Client ID: HS21041102-08

Instrument: voa6.i

Sample Info: HS21041102-08;HS21041102-08;;;

Purge Volume: 5.0

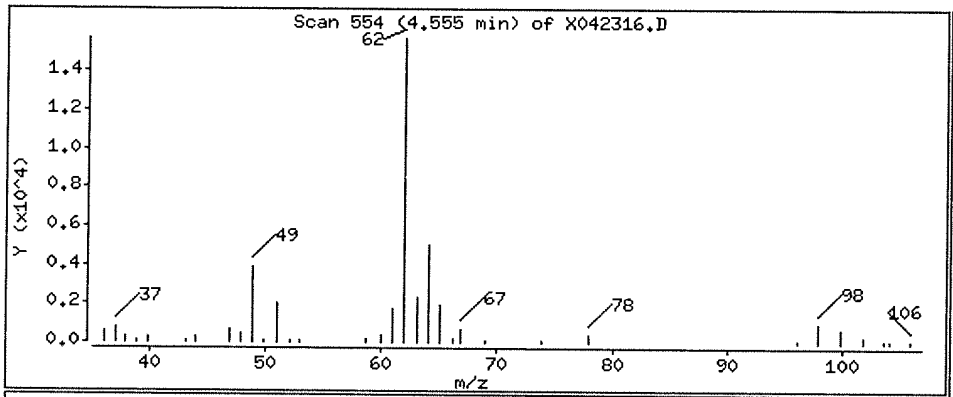
Operator: PC

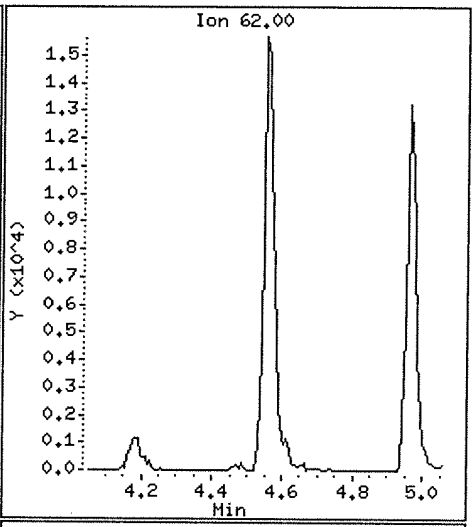
Column phase: DB624

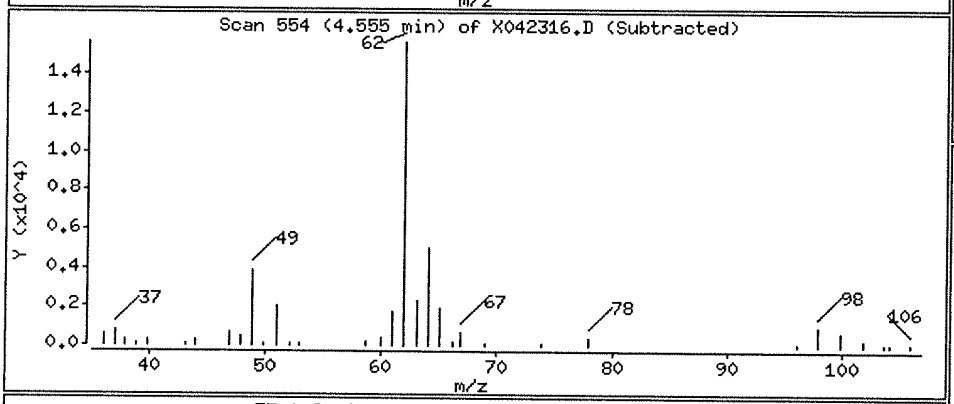
Column diameter: 0.18

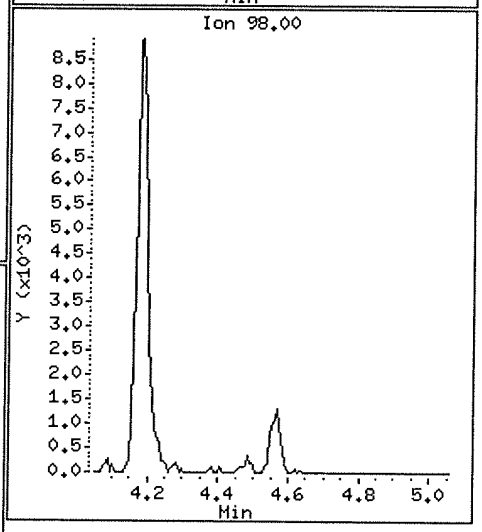
33 1,2-Dichloroethane

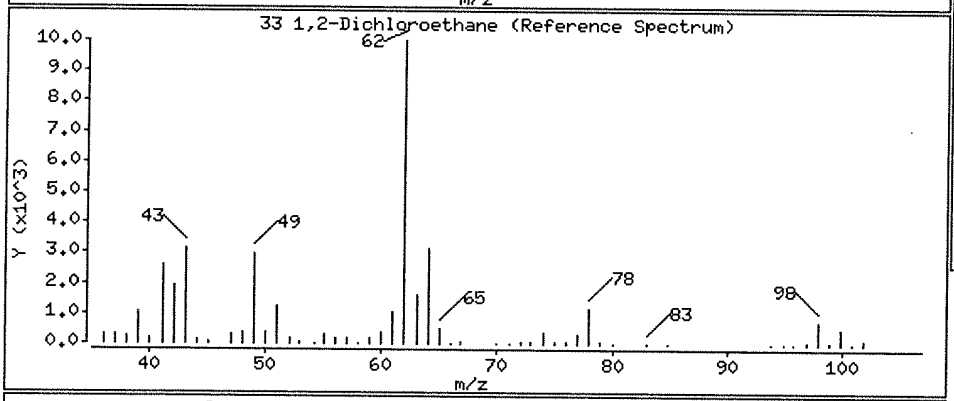
Concentration: 23.70 ug/l

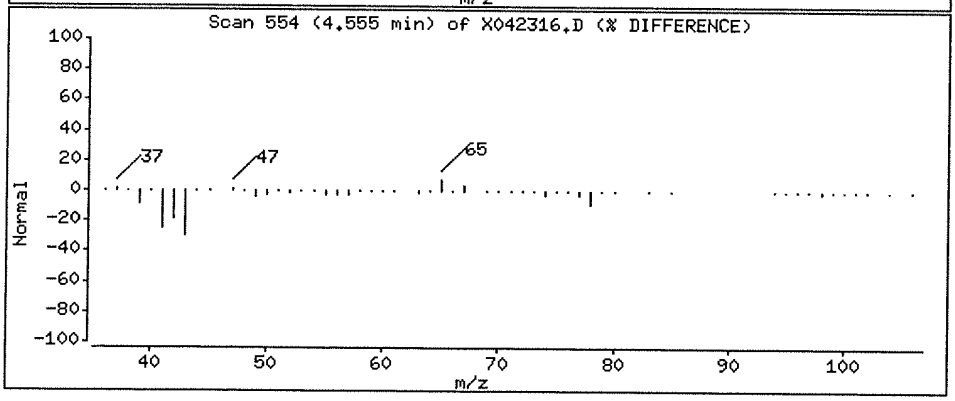












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210423.b\X042316.D

Date : 23-APR-2021 16:04

Client ID: HS21041102-08

Instrument: voa6.i

Sample Info: HS21041102-08;HS21041102-08;;;

Purge Volume: 5.0

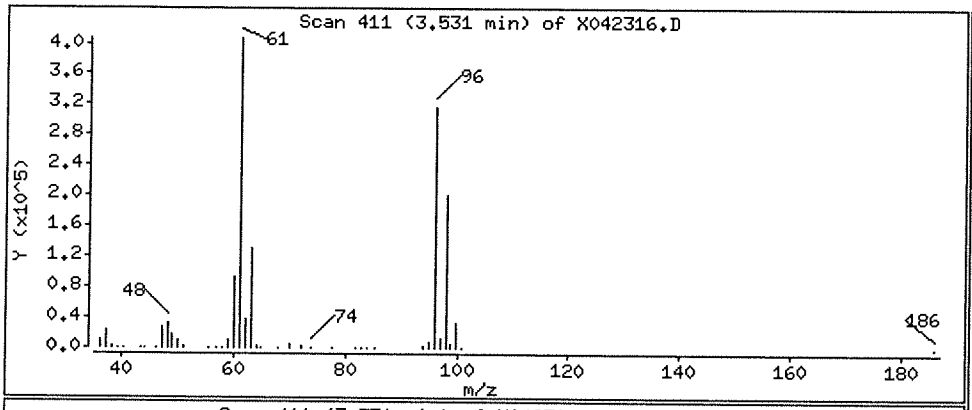
Operator: PC

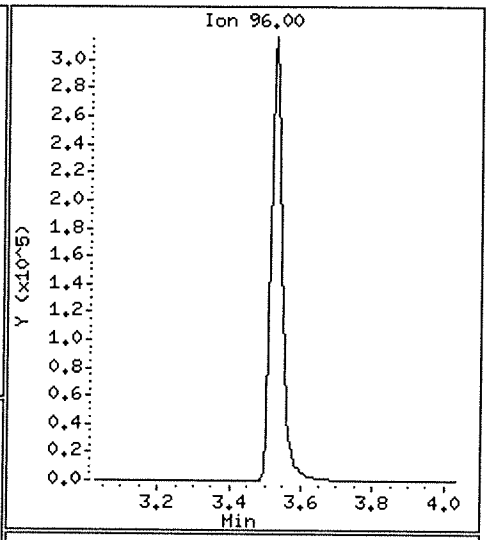
Column phase: DB624

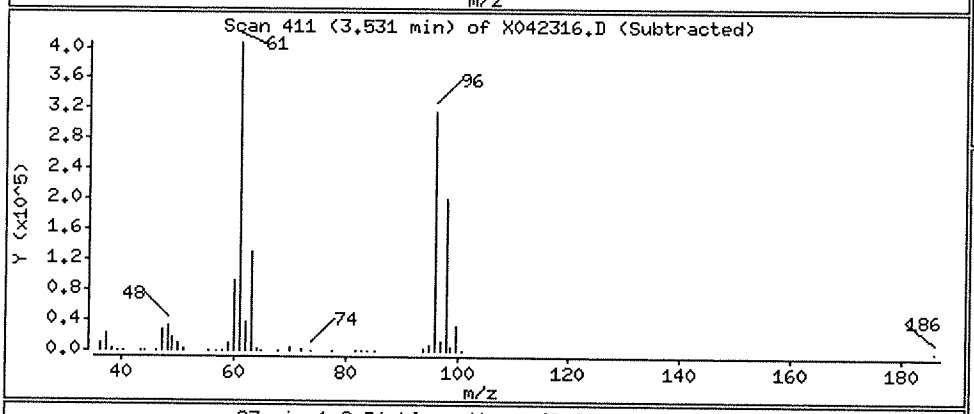
Column diameter: 0.18

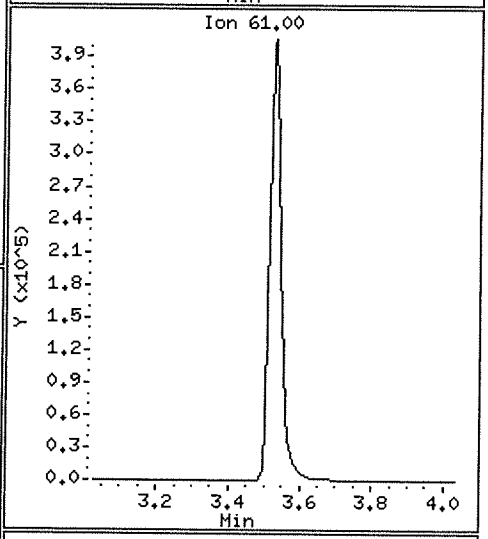
27 cis-1,2-Dichloroethene

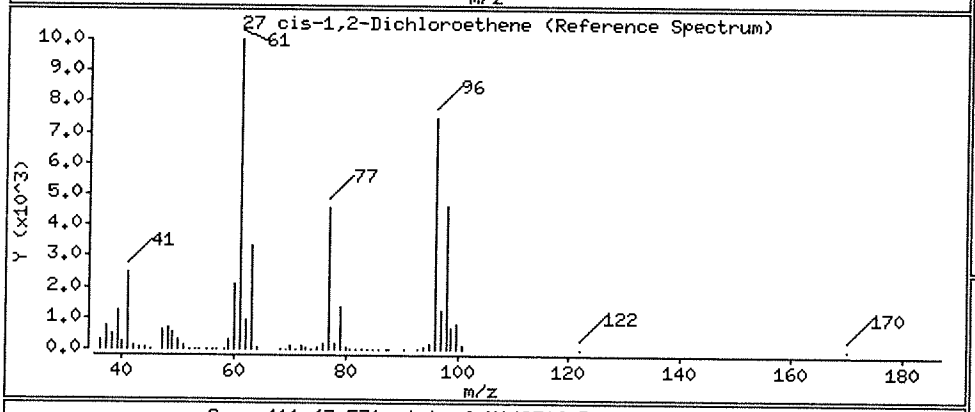
Concentration: 713.32 ug/l

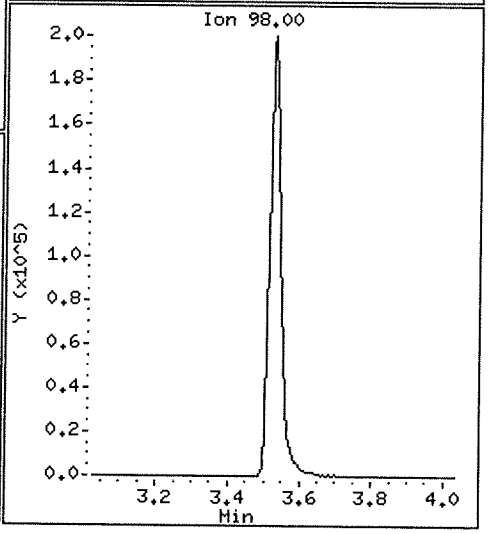


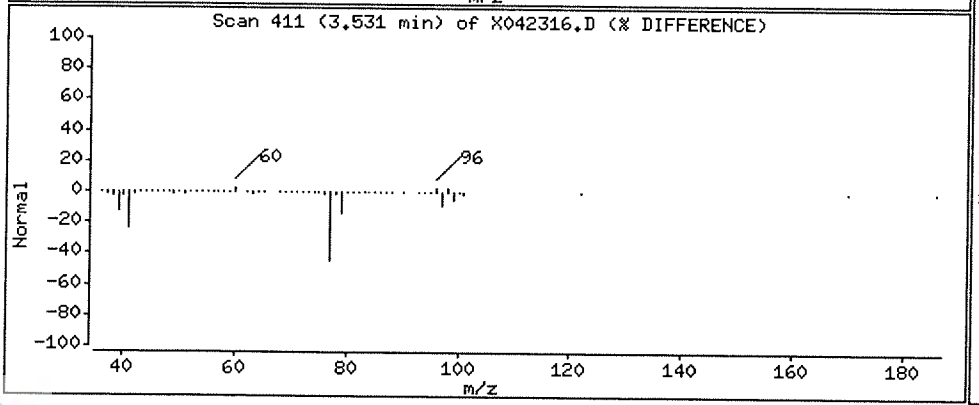












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210423.b\X042316.D

Date : 23-APR-2021 16:04

Client ID: HS21041102-08

Instrument: voa6.i

Sample Info: HS21041102-08;HS21041102-08;;;

Purge Volume: 5.0

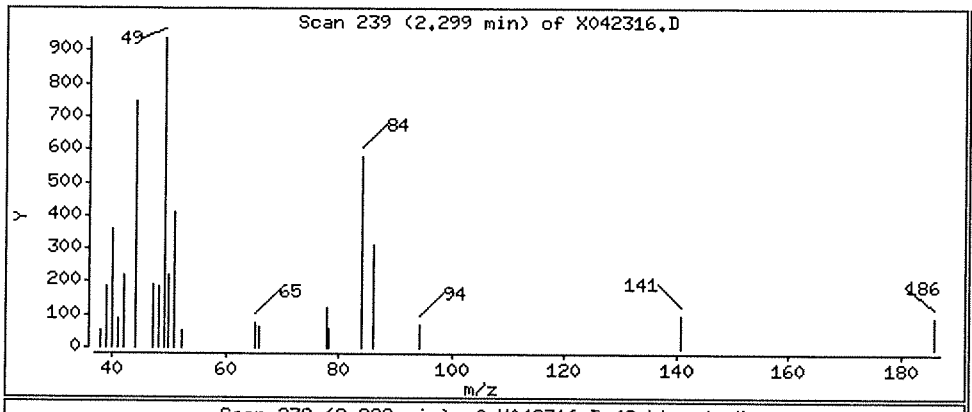
Operator: PC

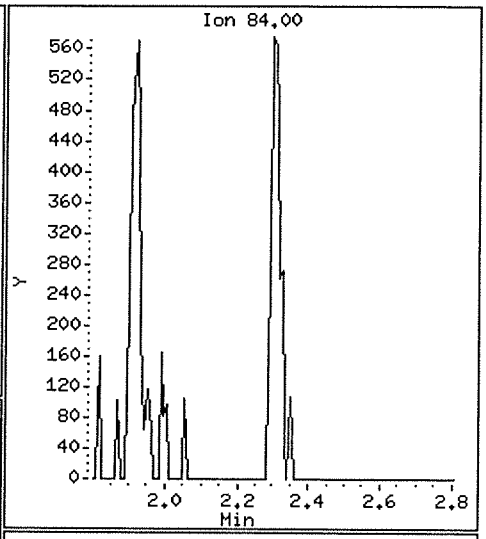
Column phase: DB624

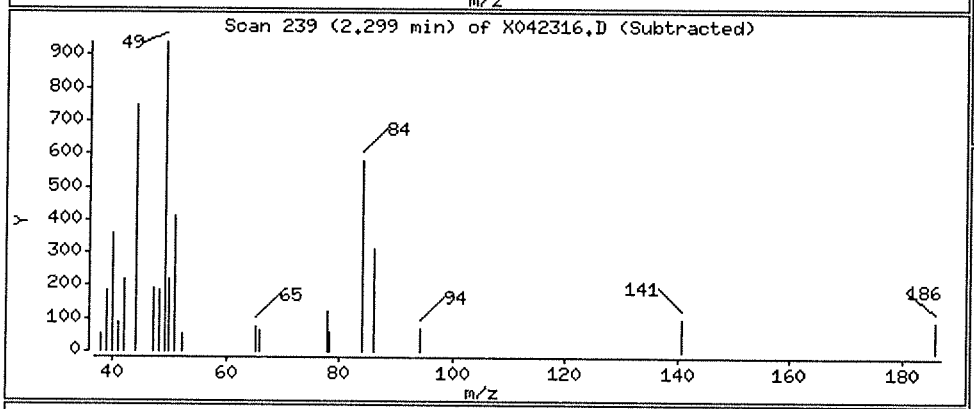
Column diameter: 0.18

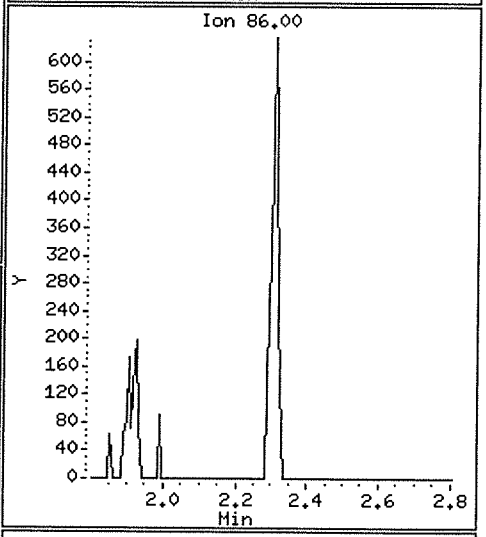
17 Methylene Chloride

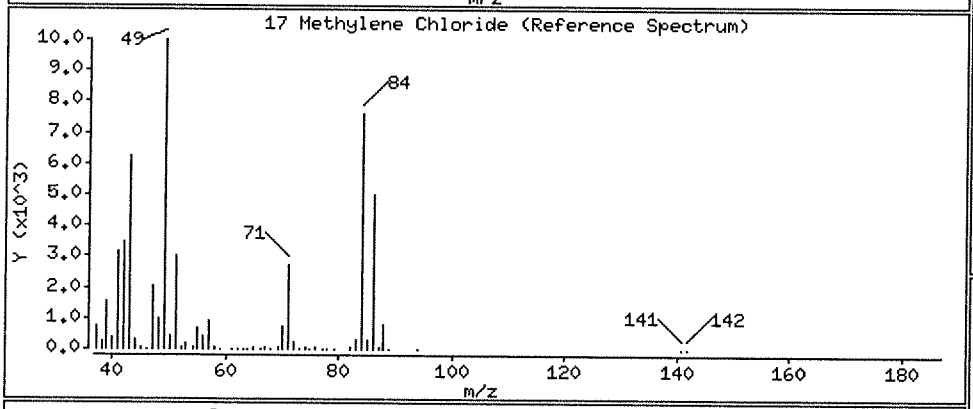
Concentration: 8.66 ug/l

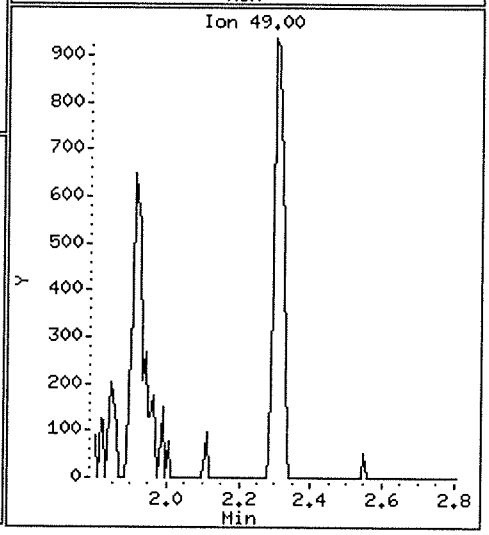


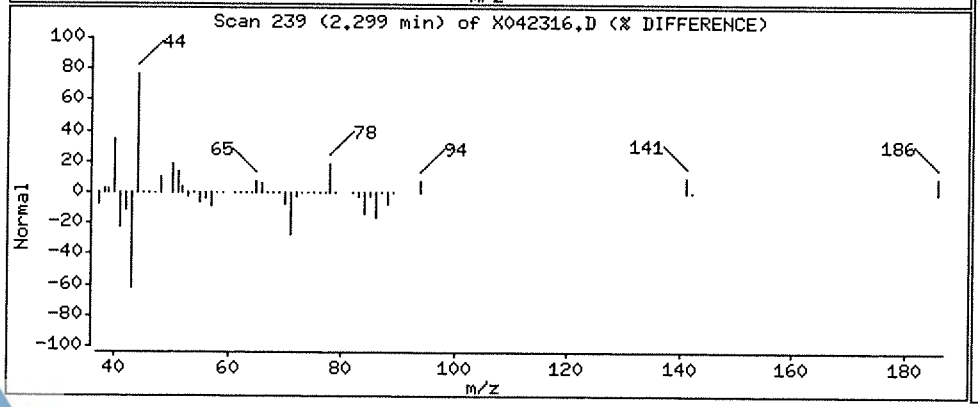












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210423.b\X042316.D

Date : 23-APR-2021 16:04

Client ID: HS21041102-08

Instrument: voa6.i

Sample Info: HS21041102-08;HS21041102-08;;;

Purge Volume: 5.0

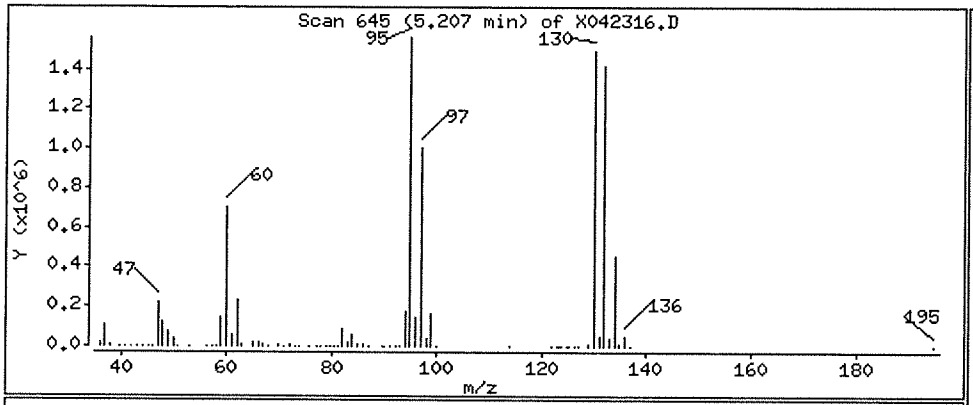
Operator: PC

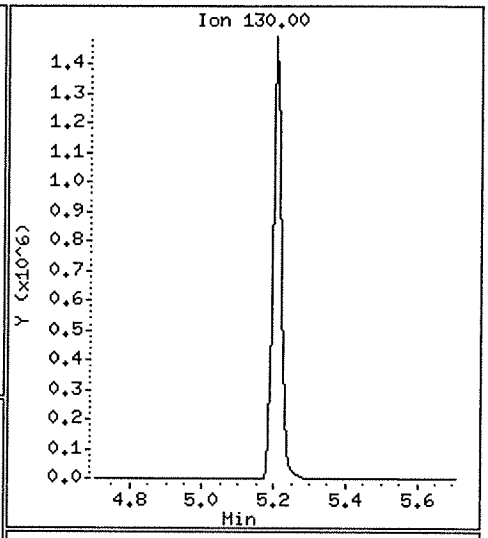
Column phase: DB624

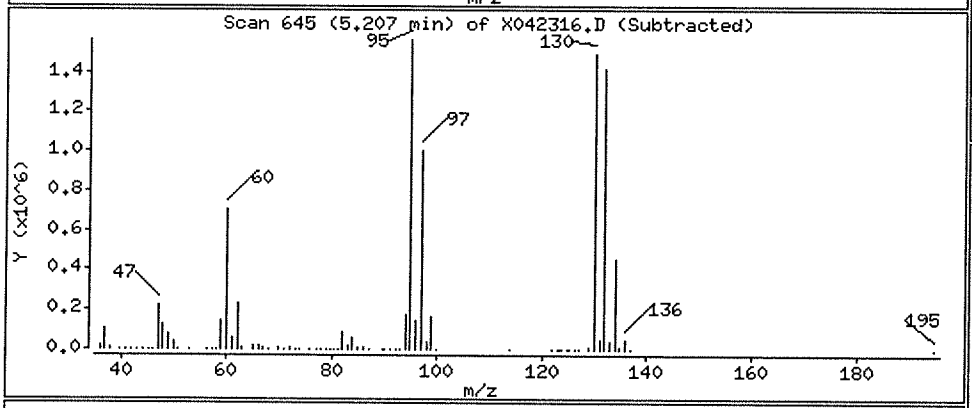
Column diameter: 0.18

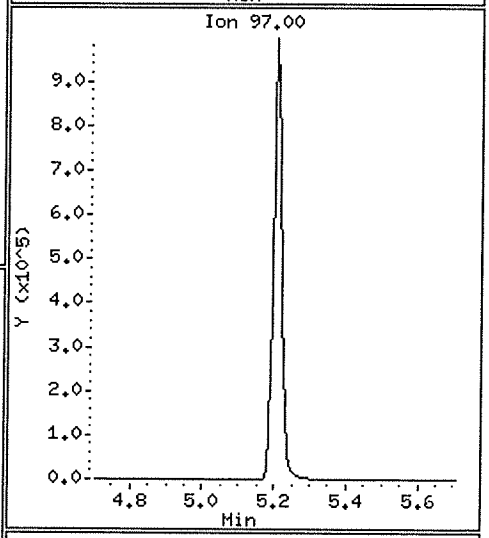
38 Trichloroethene

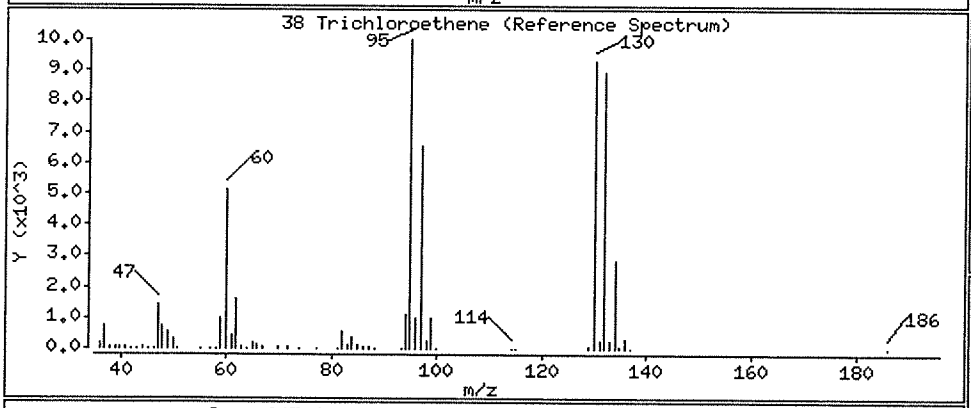
Concentration: 2723.37 ug/l

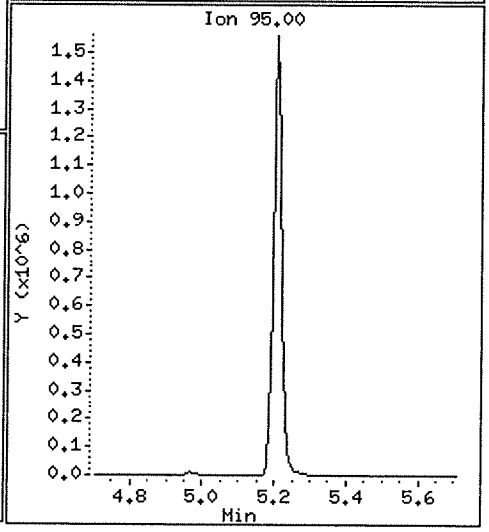


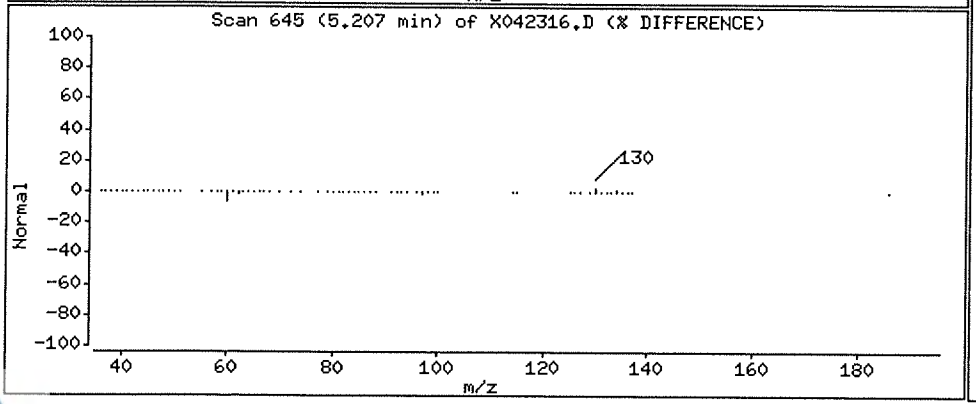












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210423.b\X042316.D

Date : 23-APR-2021 16:04

Client ID: HS21041102-08

Instrument: voa6.i

Sample Info: HS21041102-08;HS21041102-08;;;

Purge Volume: 5.0

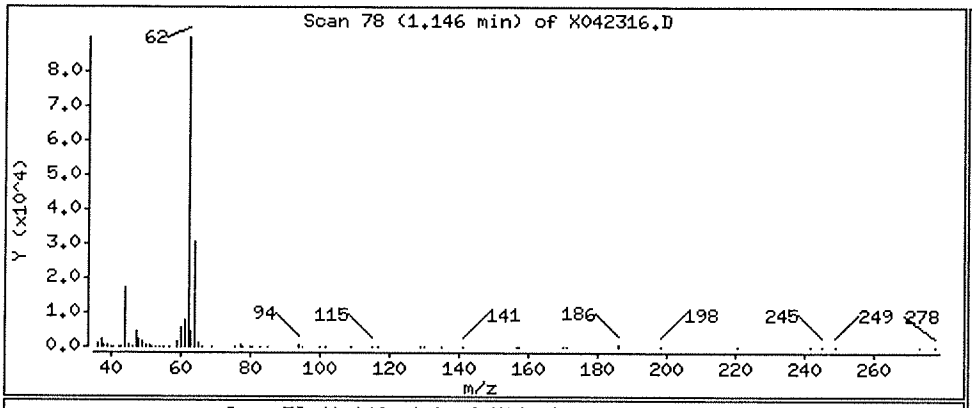
Operator: PC

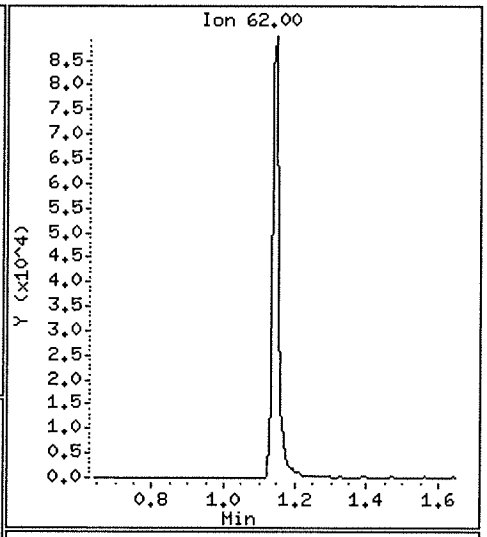
Column phase: DB624

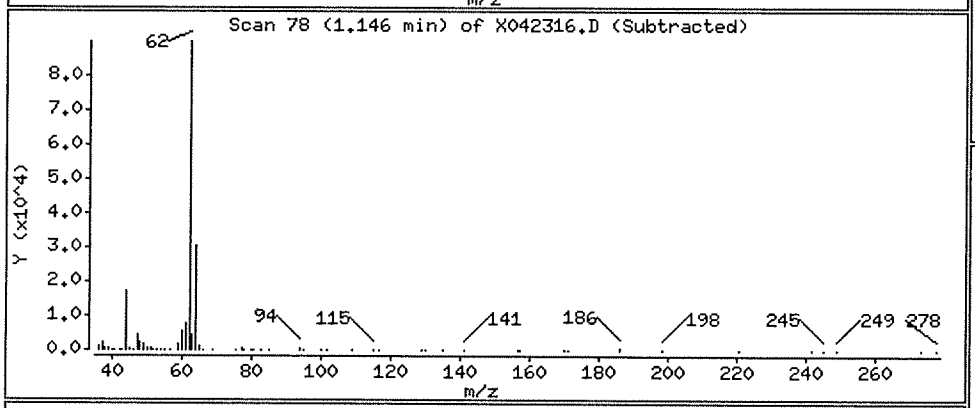
Column diameter: 0.18

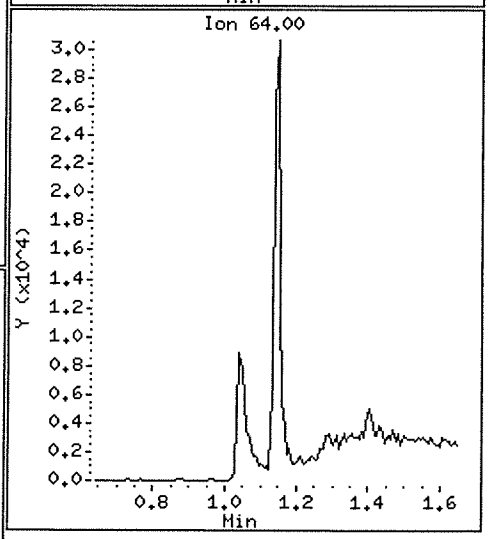
5 Vinyl Chloride

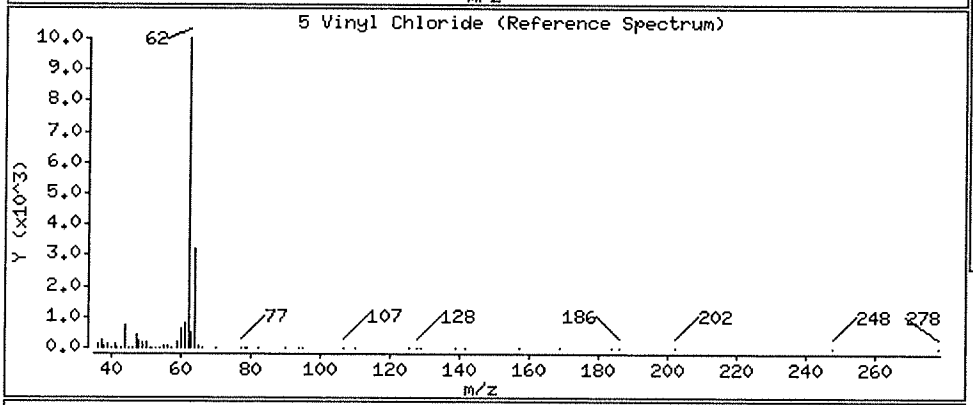
Concentration: 93.47 ug/l

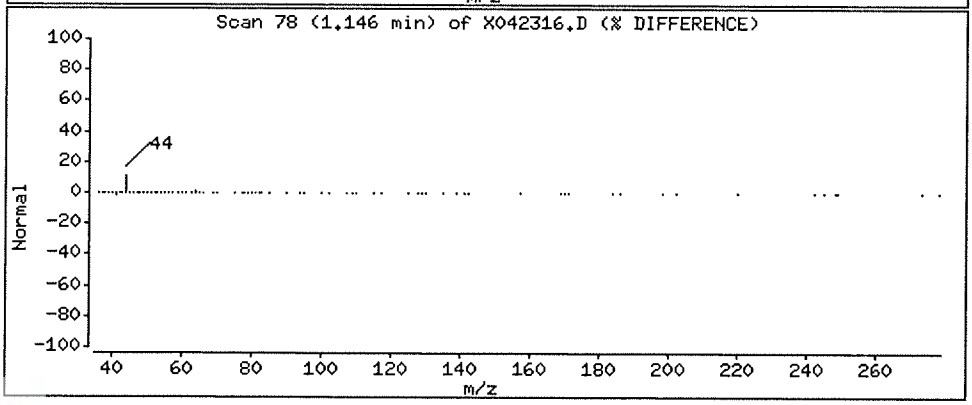












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210423.b\X042317.D Page 1
Report Date: 12-May-2021 14:49

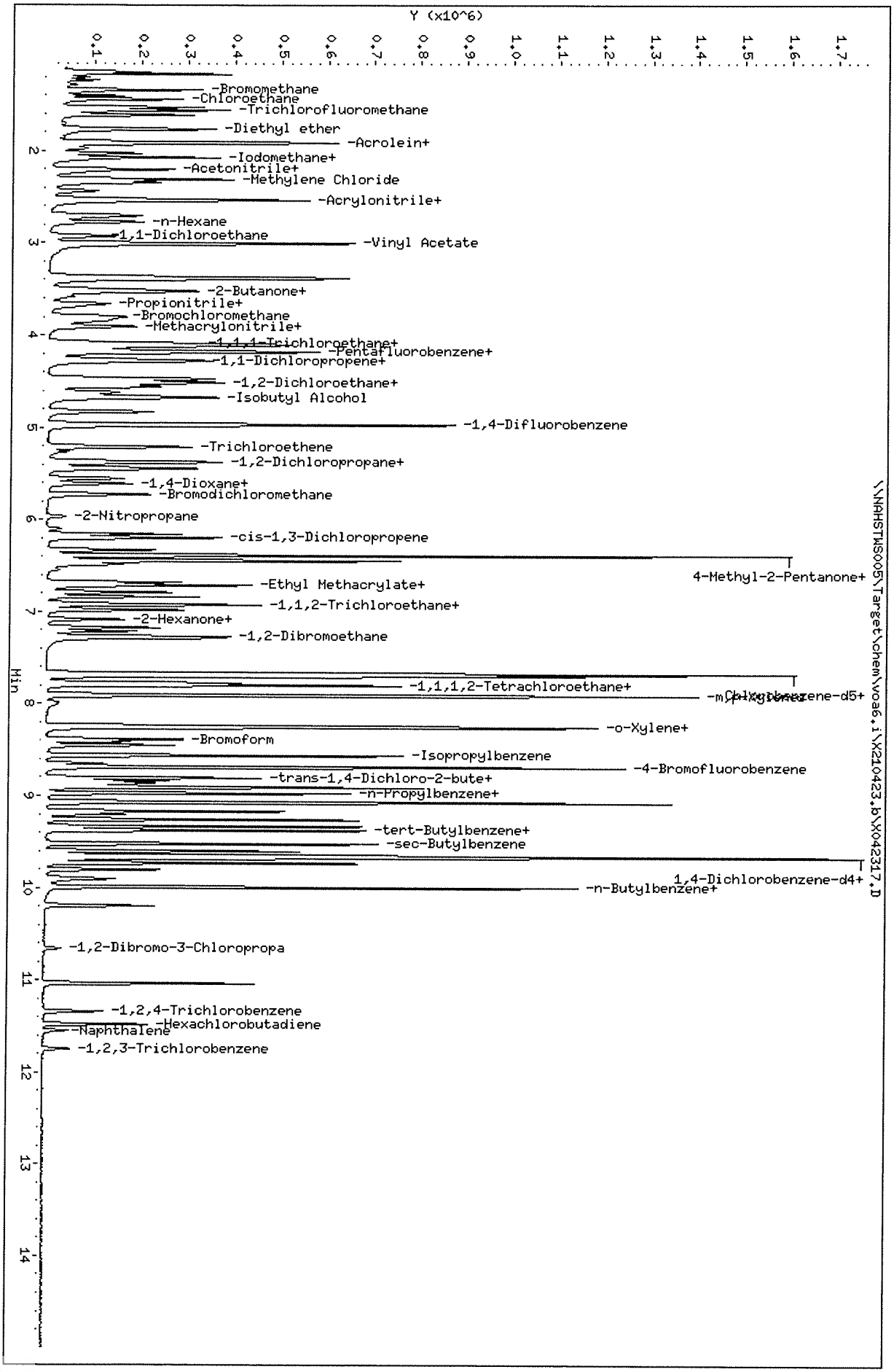
ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X210423.b\X042317.D
Lab Smp Id: HS21041135-03MS Client Smp ID: HS21041135-03MS
Inj Date : 23-APR-2021 16:25
Operator : PC Inst ID: voa6.i
Smp Info : HS21041135-03MS;HS21041135-03MS;3;;MS
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X210423.b\8260W.m
Meth Date : 12-May-2021 14:49 voa6.i Quant Type: ISTD
Cal Date : 02-APR-2021 13:20 Cal File: X040208.D
Als bottle: 17 QC Sample: MS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBI_short1.sub
Target Version: 4.14
Processing Host: NAHSTW7066

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	426612	50.0000	
* 36 1,4-Difluorobenzene	114	4.963	4.970	(1.000)	684424	50.0000	
* 47 Chlorobenzene-d5	117	7.670	7.671	(1.000)	663475	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	305215	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	230082	45.8458	45.84
$ 35 1,2-Dichloroethane-d4	65	4.469	4.476	(1.069)	278807	46.3651	46.36
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	875607	51.2936	51.29
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	321175	50.4610	50.46
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	68767	17.8425	17.84
11 1,1-Dichloroethene	96	1.919	1.919	(0.459)	115385	18.9953	18.99
33 1,2-Dichloroethane	62	4.555	4.555	(0.918)	132951	18.3521	18.35
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	93405	17.9109	17.91
17 Methylene Chloride	84	2.305	2.306	(0.551)	79332	18.1093	18.10
38 Trichloroethene	130	5.206	5.207	(1.049)	94432	20.1549	20.15
5 Vinyl Chloride	62	1.145	1.145	(0.274)	134815	21.0788	21.07



Data File: \\NAHSTWS005\Target\chem\voa6,i\X210423,b\X042317.D
Date : 23-APR-2021 16:25
Client ID: HS2104135-03MS
Sample Info: HS2104135-03MS;HS2104135-03MS;3;;MS
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6,i
Operator: PC
Column diameter: 0.18

Data File: \\NAHSTWS005\Target\chem\voa6.i\X210423.b\X042318.D Page 1
Report Date: 12-May-2021 14:49

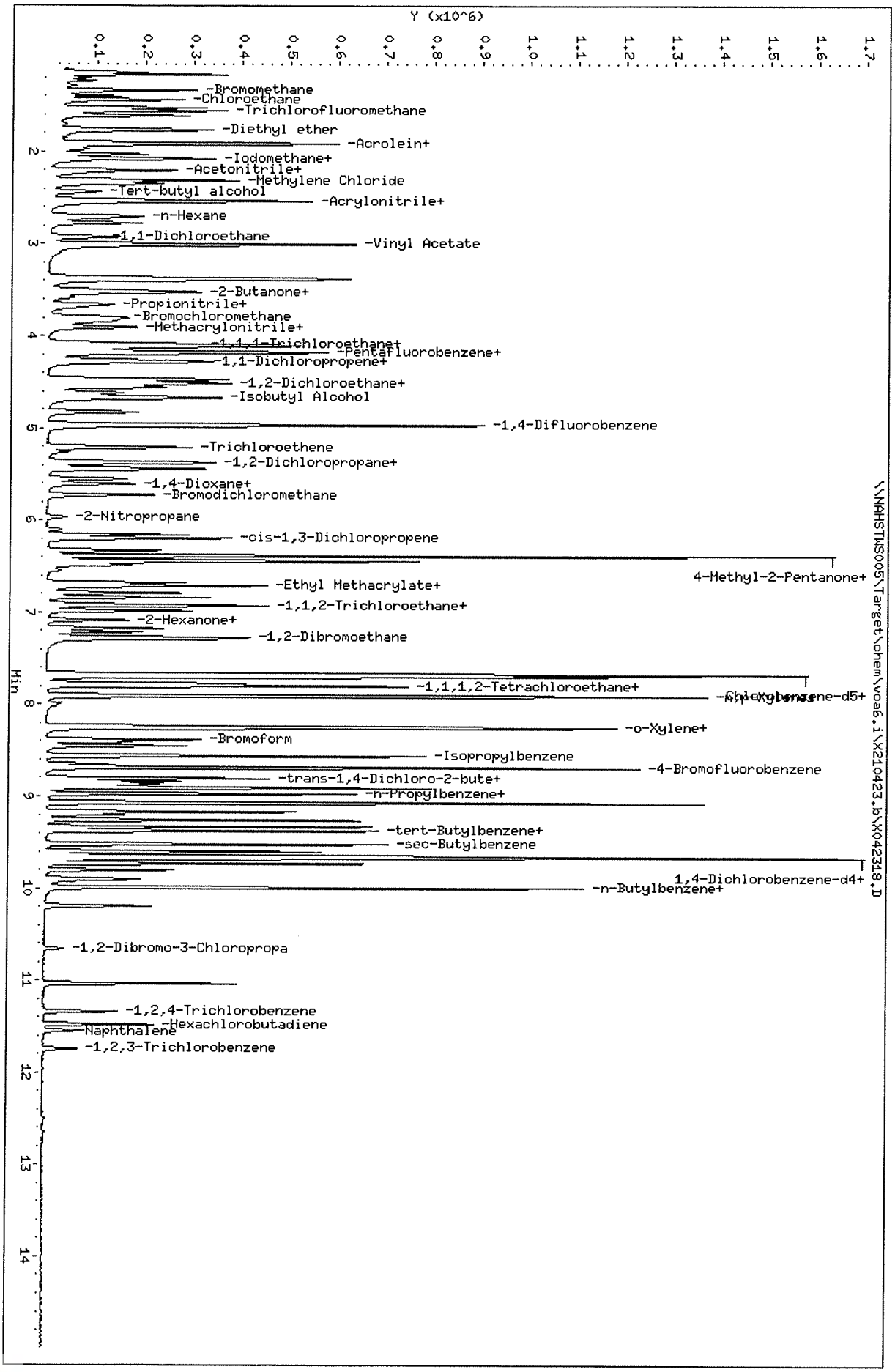
ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X210423.b\X042318.D
Lab Smp Id: HS21041135-03MSD Client Smp ID: HS21041135-03MSD
Inj Date : 23-APR-2021 16:46
Operator : PC Inst ID: voa6.i
Smp Info : HS21041135-03MSD;HS21041135-03MSD;3;;MSD
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X210423.b\8260W.m
Meth Date : 12-May-2021 14:49 voa6.i Quant Type: ISTD
Cal Date : 02-APR-2021 13:20 Cal File: X040208.D
Als bottle: 17 QC Sample: MSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBI_short1.sub
Target Version: 4.14
Processing Host: NAHSTW7066

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	432945	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	697264	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	666027	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	298080	50.0000	
$ 30 Dibromofluoromethane	113	4.096	4.103	(0.979)	231900	45.5351	45.53
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	292010	47.8349	47.83
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	885680	51.6707	51.67
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	317112	49.6588	49.65
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	69338	17.9217	17.92
11 1,1-Dichloroethene	96	1.919	1.919	(0.459)	110565	17.9356	17.93
33 1,2-Dichloroethane	62	4.555	4.555	(0.916)	130057	17.6220	17.62
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	90140	17.0320	17.03
17 Methylene Chloride	84	2.306	2.306	(0.551)	82026	18.4225	18.42
38 Trichloroethene	130	5.207	5.207	(1.048)	89805	18.8144	18.81
5 Vinyl Chloride	62	1.145	1.145	(0.274)	127563	19.6532	19.65



Data File: \\NAHSTWS005\Target\chem\voa6.i\X210423.b\X042318.D
Date : 23-APR-2021 16:46
Client ID: HS21041135-03MSD
Sample Info: HS21041135-03MSD;HS21041135-03MSD;3;;MSD
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\NAHSTWS005\Target\chem\voa6.i\X210423.b\X042319.D Page 1
Report Date: 12-May-2021 14:52

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X210423.b\X042319.D
Lab Smp Id: HS21041102-08 Client Smp ID: HS21041102-08
Inj Date : 23-APR-2021 17:07
Operator : PC Inst ID: voa6.i
Smp Info : HS21041102-08;HS21041102-08;;;
Misc Info : HS18090001;WATER;0;50;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X210423.b\8260W.m
Meth Date : 12-May-2021 14:51 Qin.Xu Quant Type: ISTD
Cal Date : 02-APR-2021 13:20 Cal File: X040208.D
Als bottle: 18
Dil Factor: 50.00000
Integrator: HP RTE Compound Sublist: CBI_short1.sub
Target Version: 4.14
Processing Host: NAHSTW7066

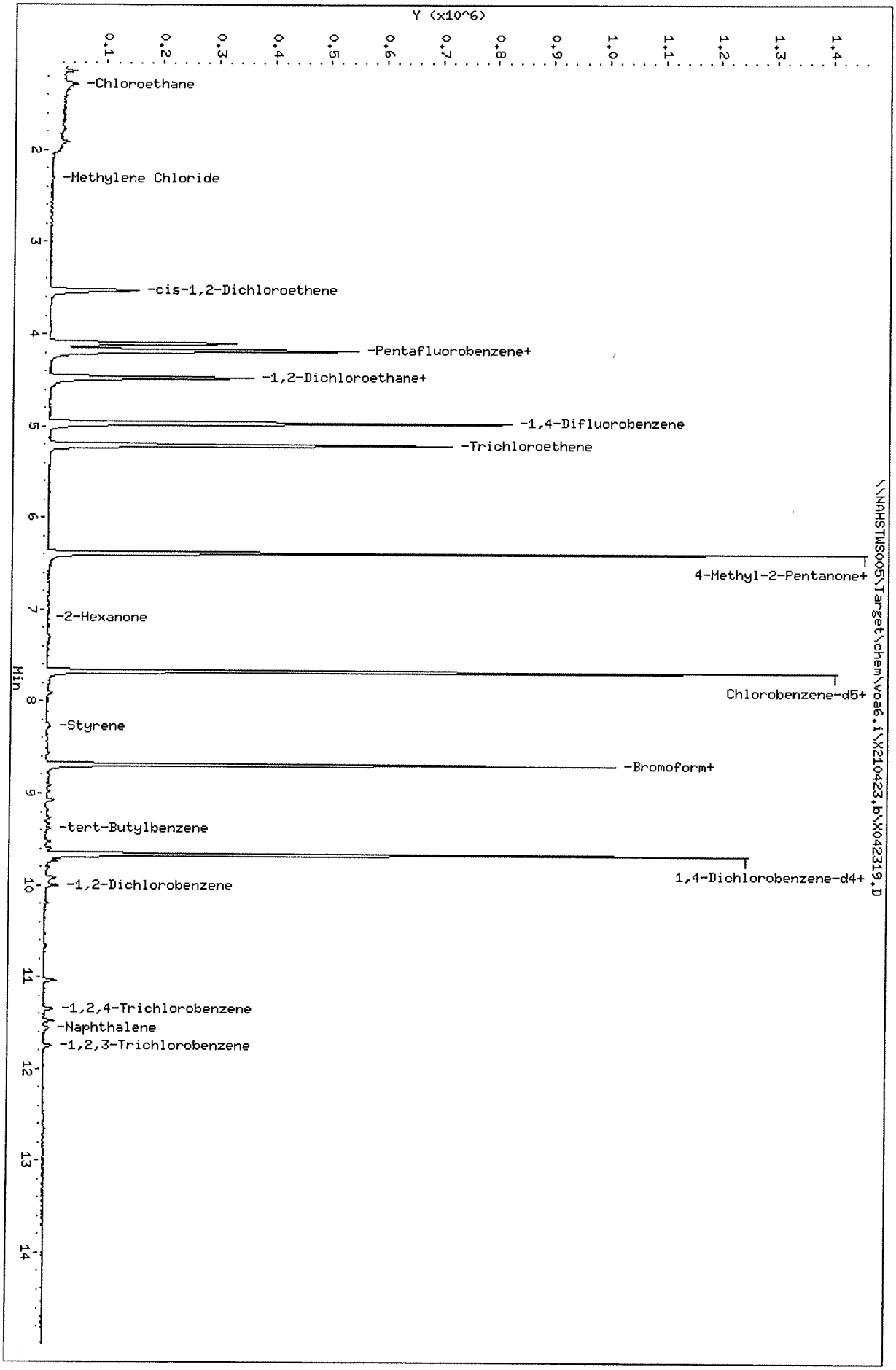
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	50.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	417291	50.0000	
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	660098	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.670	(1.000)	589228	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	247280	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	225896	46.0155	46.01
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	286174	48.6294	48.62
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	814150	53.6160	53.61
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	265609	47.1027	47.10
33 1,2-Dichloroethane	62	4.562	4.555	(0.919)	4421	0.63275	31.63(a)
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	73508	14.4104	720.52
17 Methylene Chloride	84	2.313	2.305	(0.553)	1935	1.89756	94.87(a)
38 Trichloroethene	130	5.206	5.206	(1.049)	214498	47.4680	2373.40
5 Vinyl Chloride	62	1.138	1.145	(0.272)	13068	2.08887	104.44

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).



Data File: \\NAHSTWS005\Target\chem\voa6.i\X210423.b\X042319.D
Date : 23-APR-2021 17:07
Client ID: HS21041102-08
Sample Info: HS21041102-08;HS21041102-08;;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\NAHSTWS005\Target\chem\voa6.i\X210423.b\X042319.D

Date : 23-APR-2021 17:07

Client ID: HS21041102-08

Instrument: voa6.i

Sample Info: HS21041102-08;HS21041102-08;;;

Purge Volume: 5.0

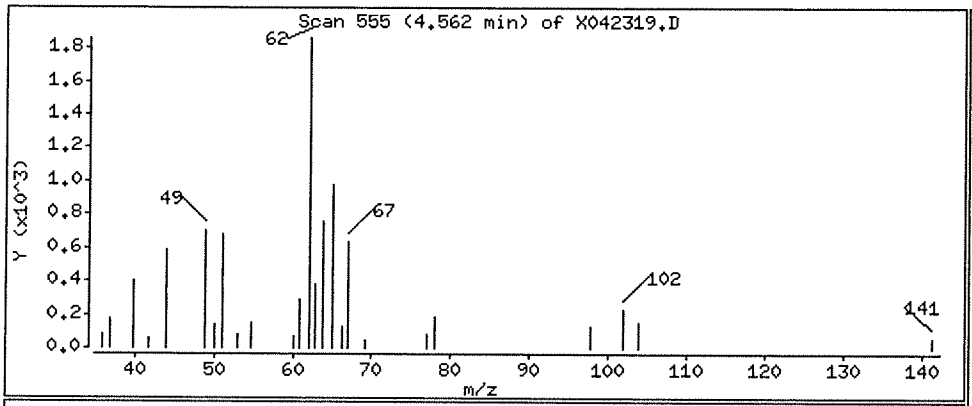
Operator: PC

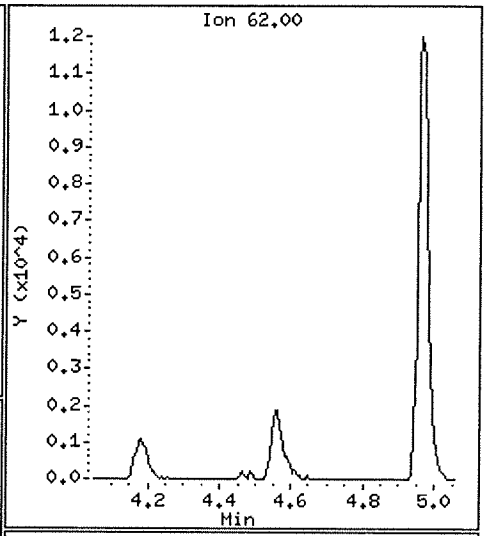
Column phase: DB624

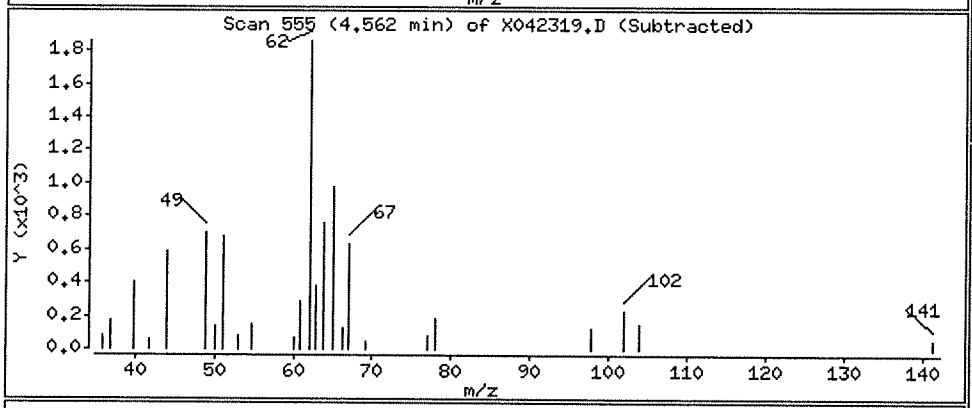
Column diameter: 0.18

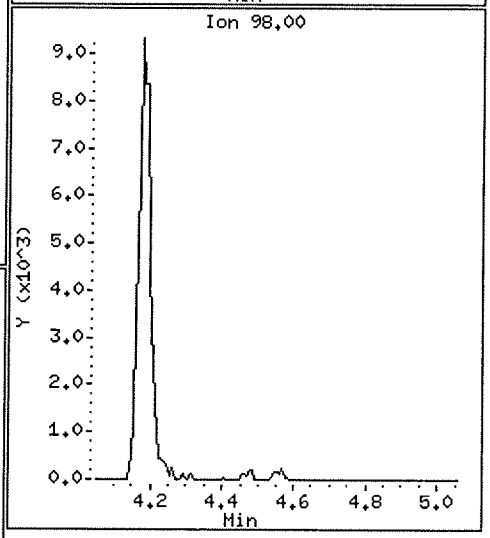
33 1,2-Dichloroethane

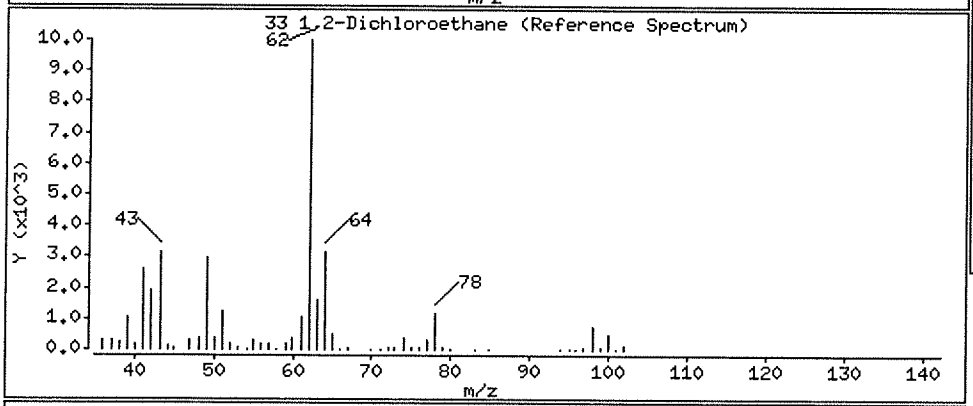
Concentration: 31.63 ug/l

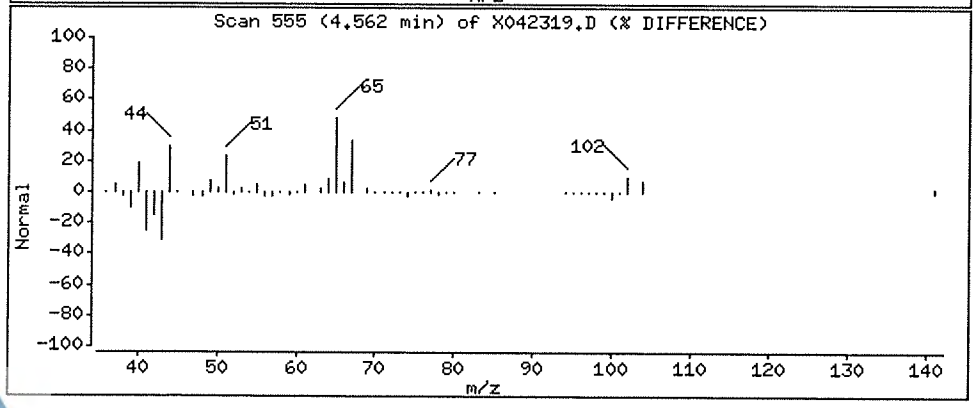












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210423.b\X042319.D

Date : 23-APR-2021 17:07

Client ID: HS21041102-08

Instrument: voa6.i

Sample Info: HS21041102-08;HS21041102-08;;;

Purge Volume: 5.0

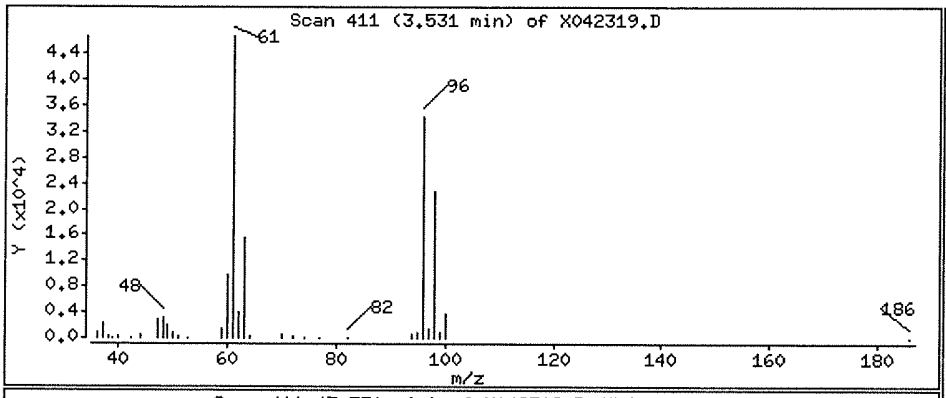
Operator: PC

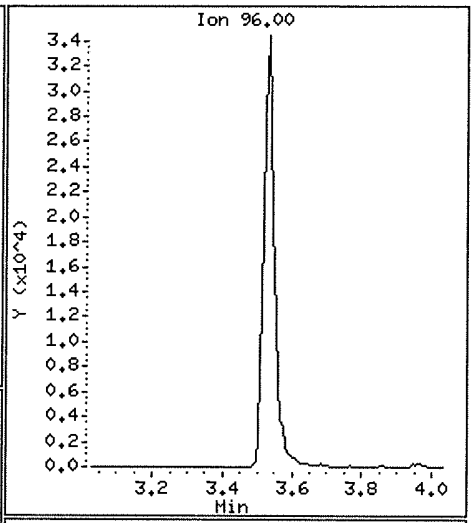
Column phase: DB624

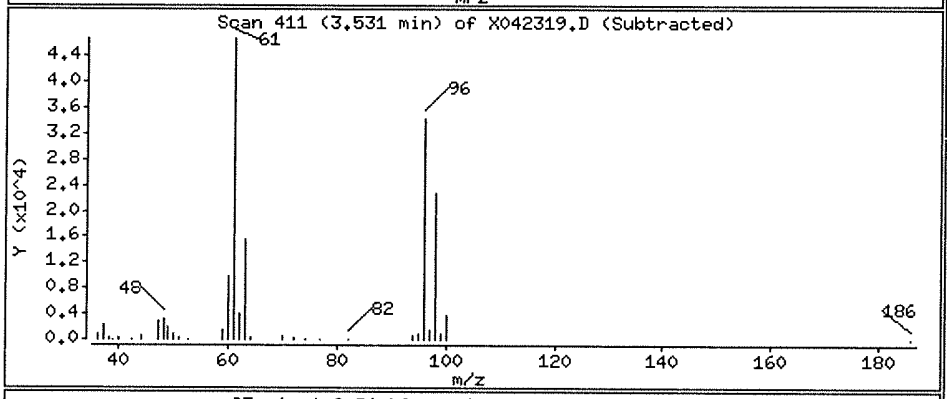
Column diameter: 0.18

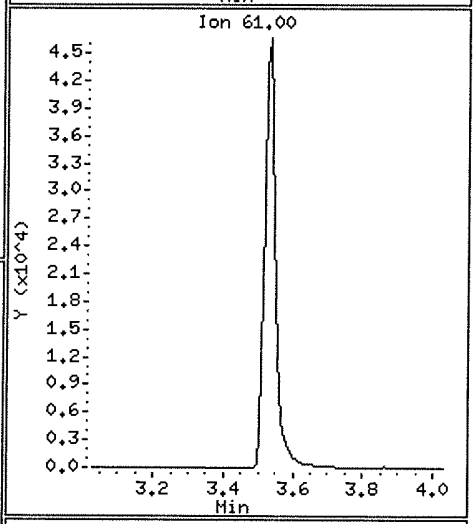
27 cis-1,2-Dichloroethene

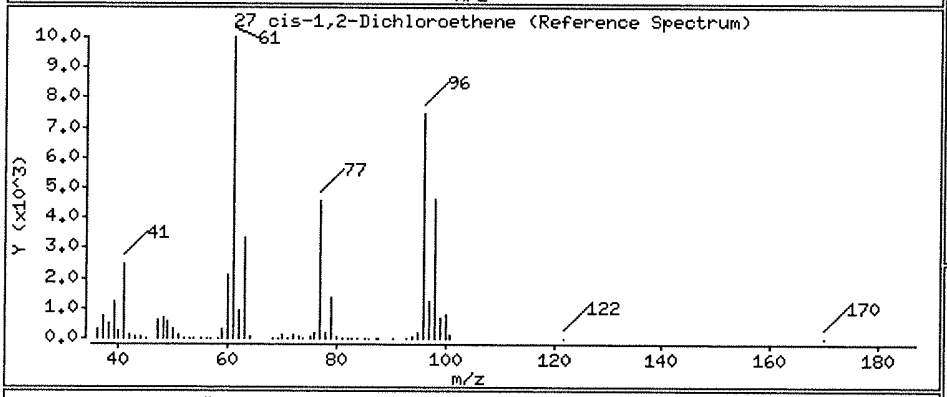
Concentration: 720.52 ug/l

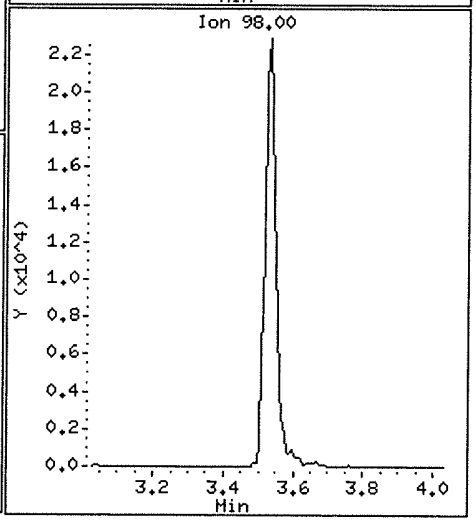


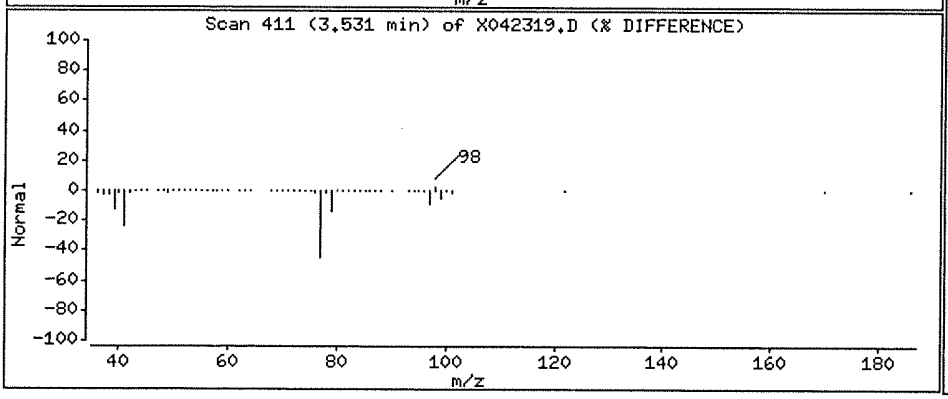












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210423.b\X042319.D

Date : 23-APR-2021 17:07

Client ID: HS21041102-08

Instrument: voa6.i

Sample Info: HS21041102-08;HS21041102-08;;;

Purge Volume: 5.0

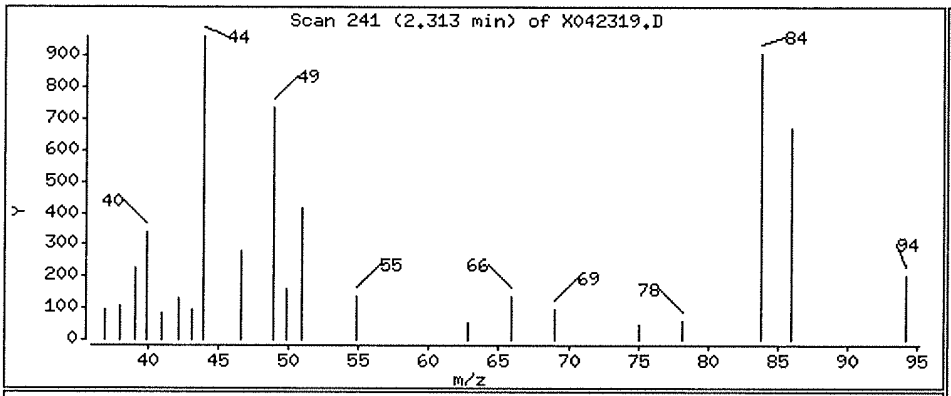
Operator: PC

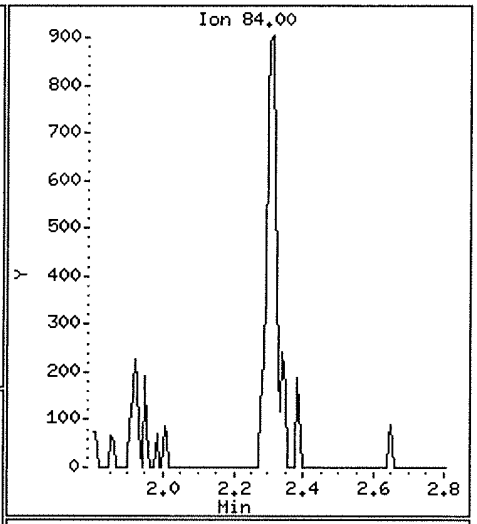
Column phase: DB624

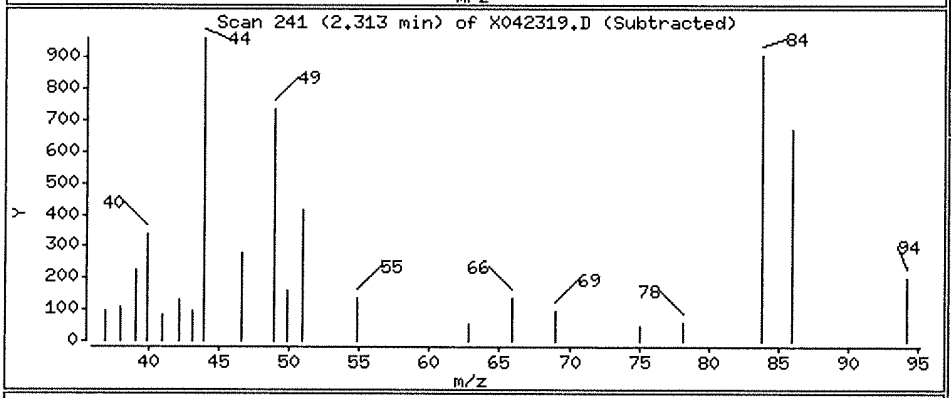
Column diameter: 0.18

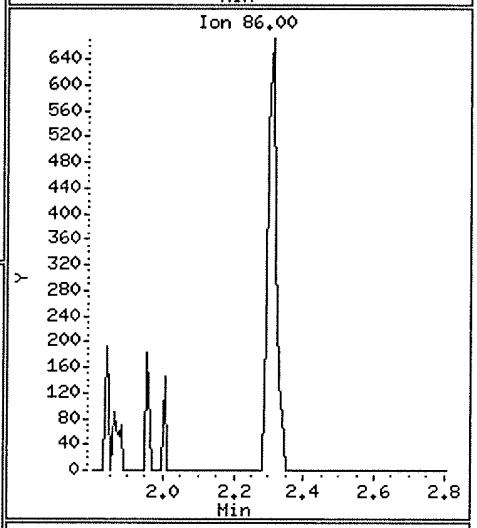
17 Methylene Chloride

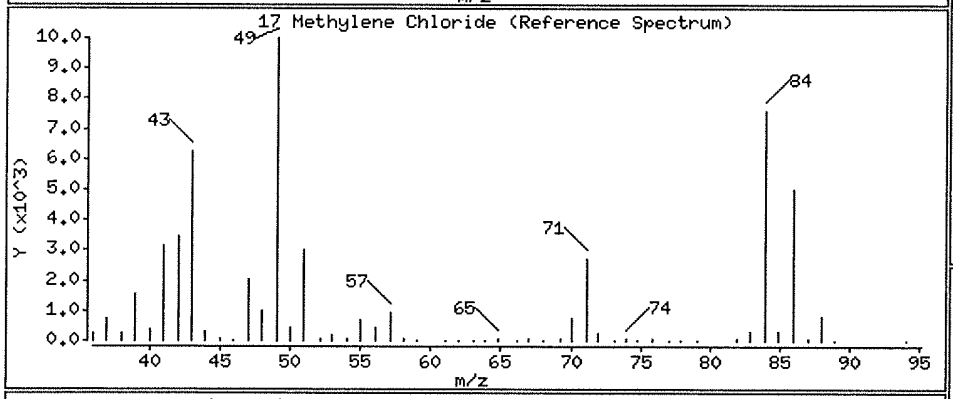
Concentration: 94.87 ug/l

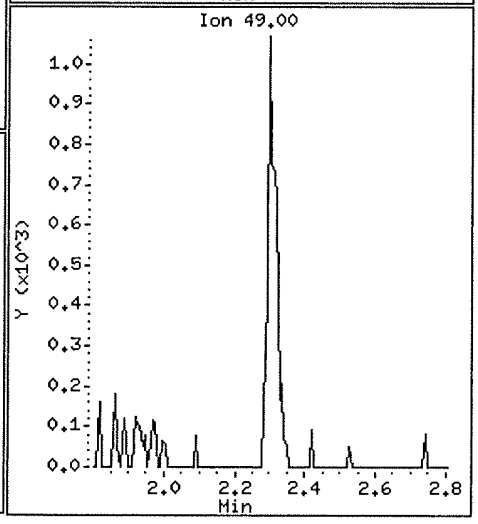


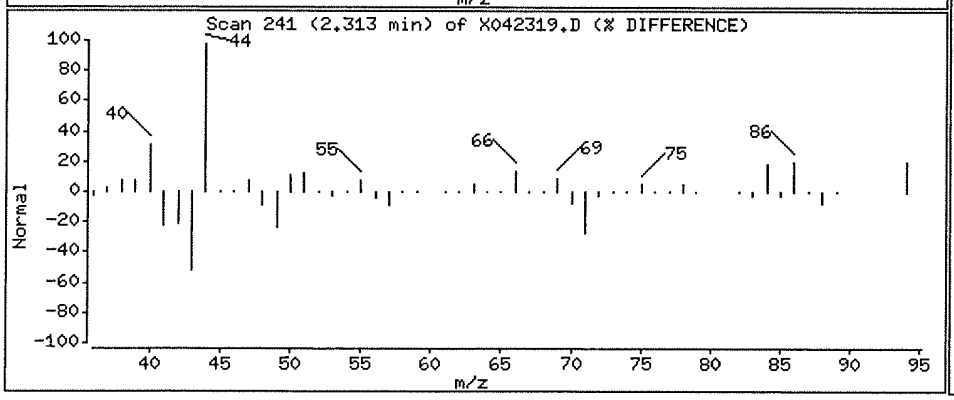












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210423.b\X042319.D

Date : 23-APR-2021 17:07

Client ID: HS21041102-08

Instrument: voa6.i

Sample Info: HS21041102-08;HS21041102-08;;;

Purge Volume: 5.0

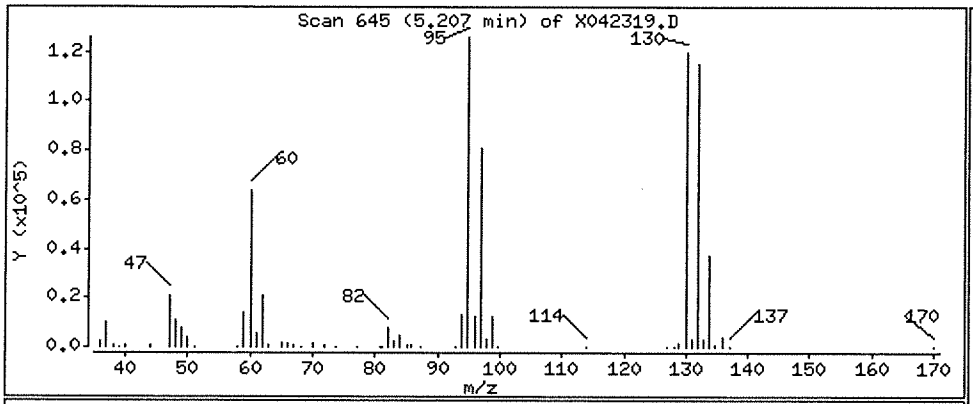
Operator: PC

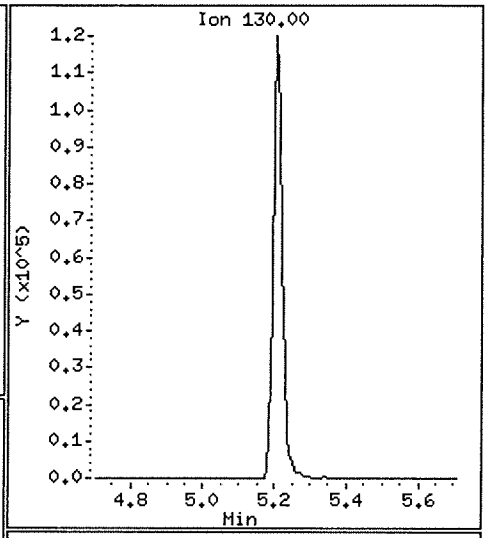
Column phase: DB624

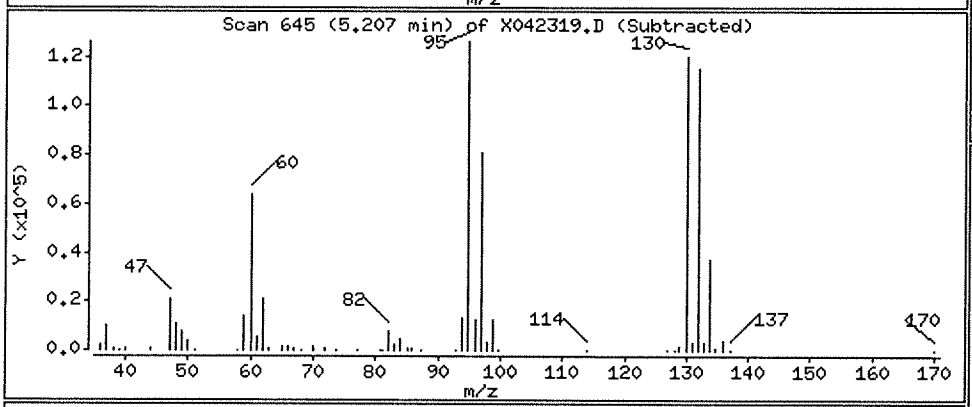
Column diameter: 0.18

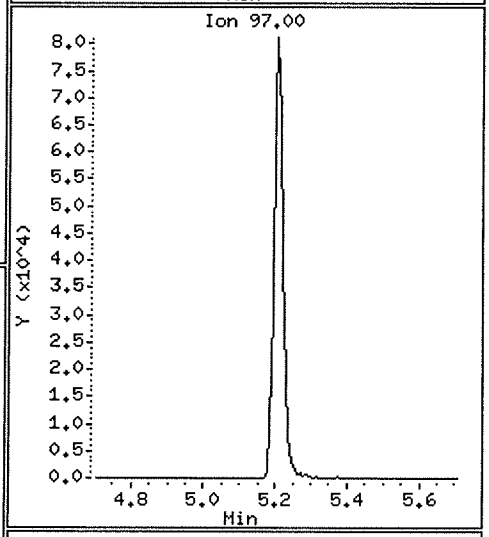
38 Trichloroethene

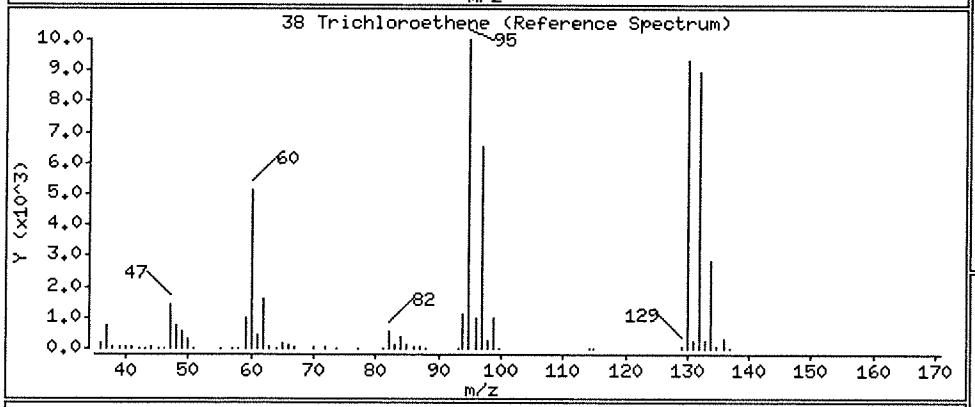
Concentration: 2373.40 ug/l

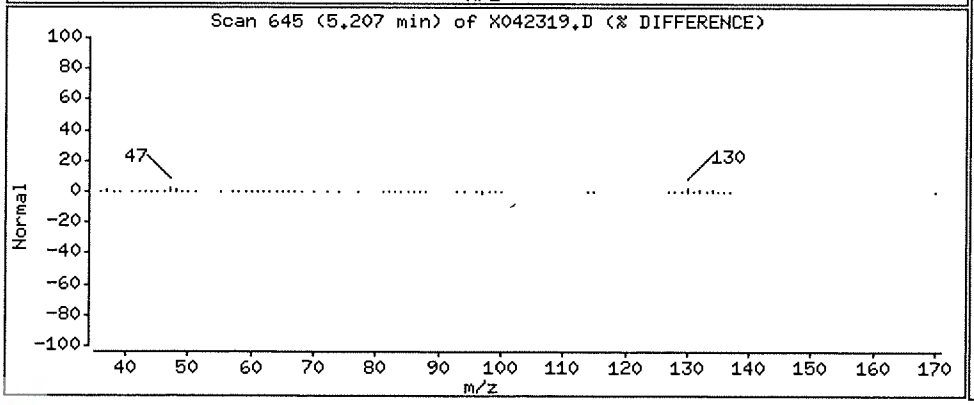


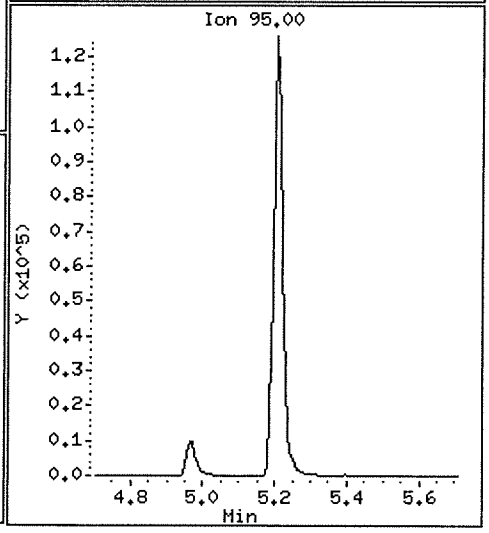












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210423.b\X042319.D

Date : 23-APR-2021 17:07

Client ID: HS21041102-08

Instrument: voa6.i

Sample Info: HS21041102-08;HS21041102-08;;;

Purge Volume: 5.0

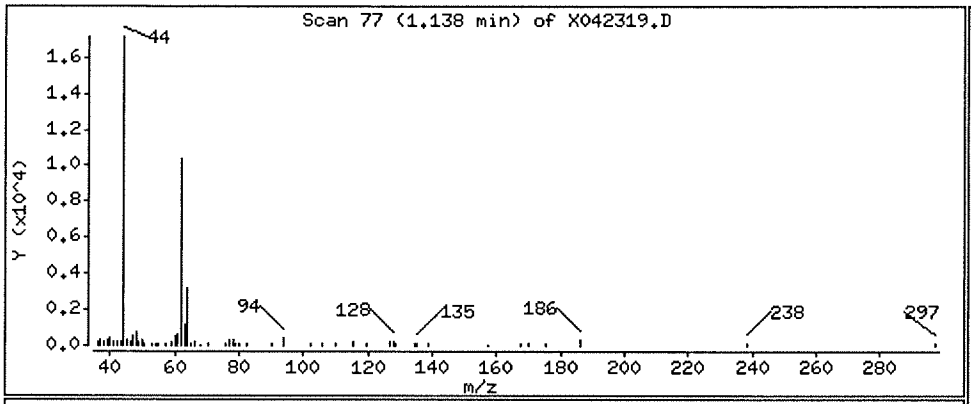
Operator: PC

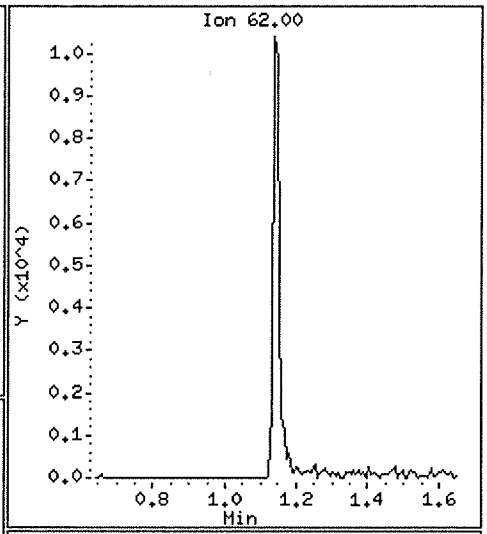
Column phase: DB624

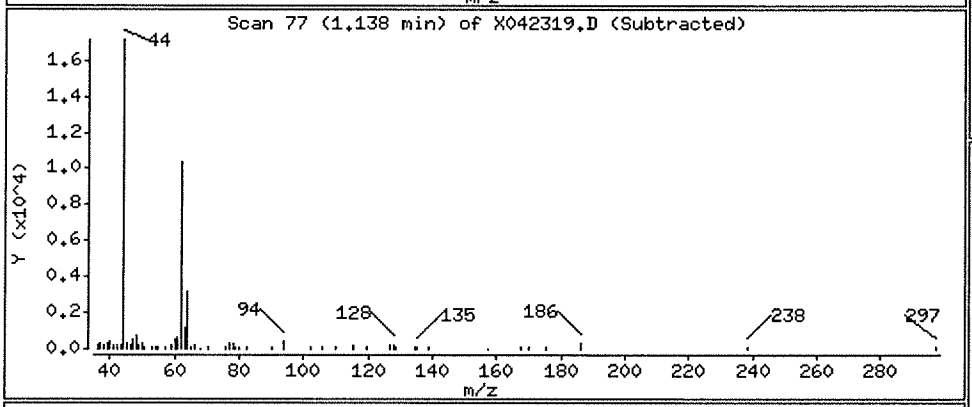
Column diameter: 0.18

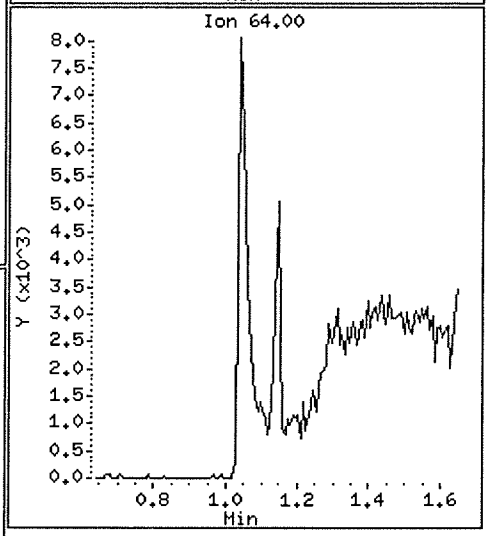
5 Vinyl Chloride

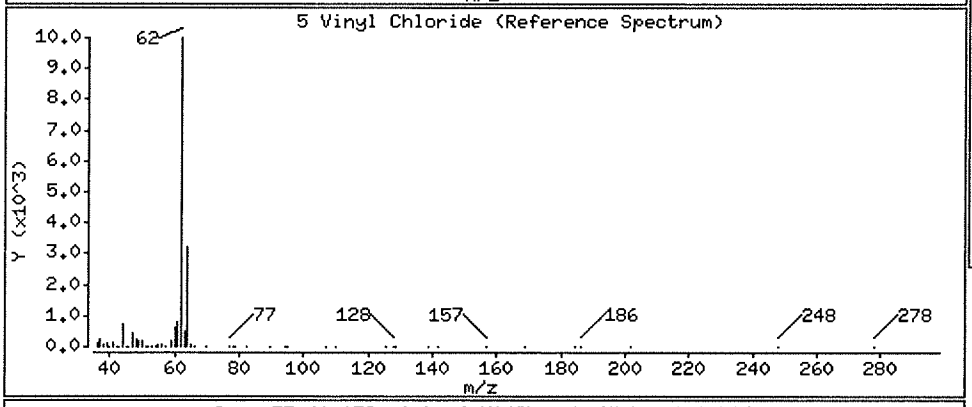
Concentration: 104.44 ug/l

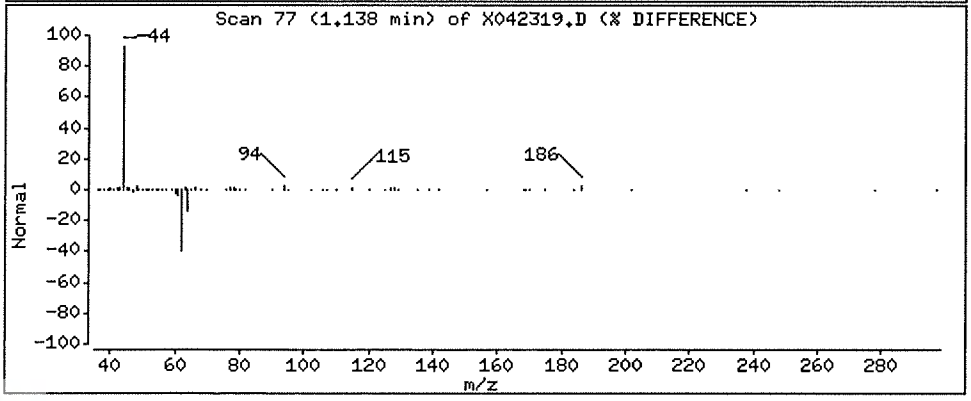












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210423.b\X042319.D

Date : 23-APR-2021 17:07

Client ID: HS21041102-08

Instrument: voa6.i

Sample Info: HS21041102-08;HS21041102-08;;;

Purge Volume: 5.0

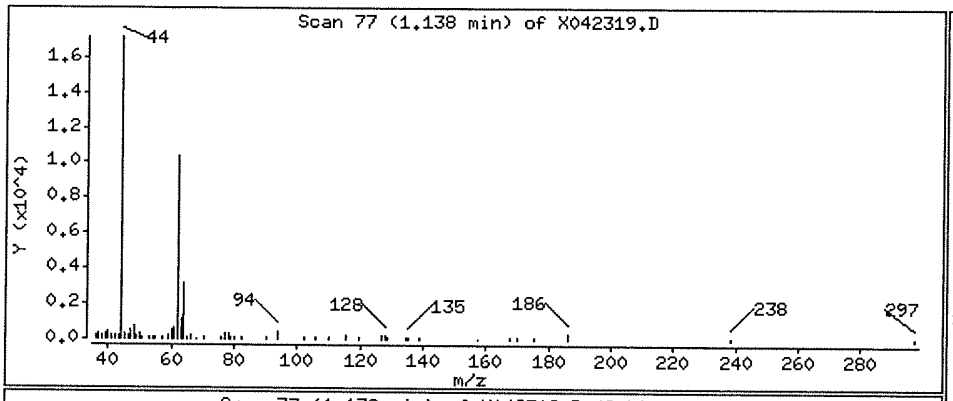
Operator: PC

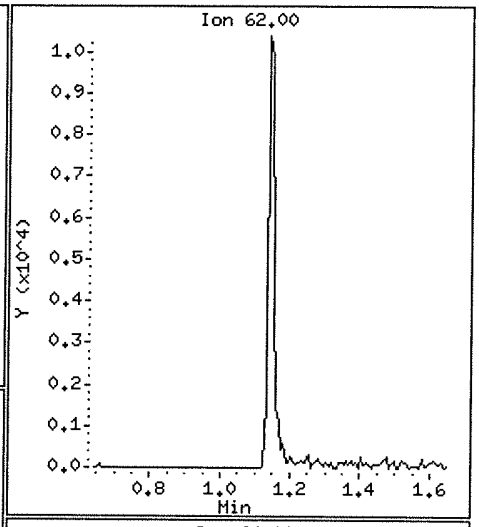
Column phase: DB624

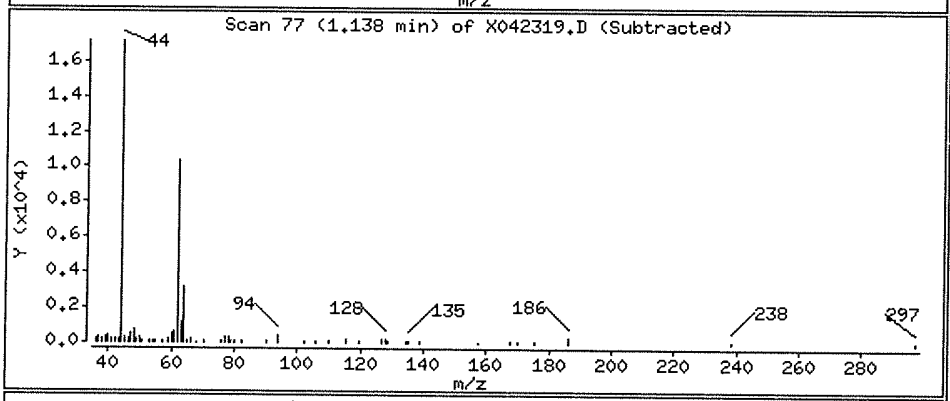
Column diameter: 0.18

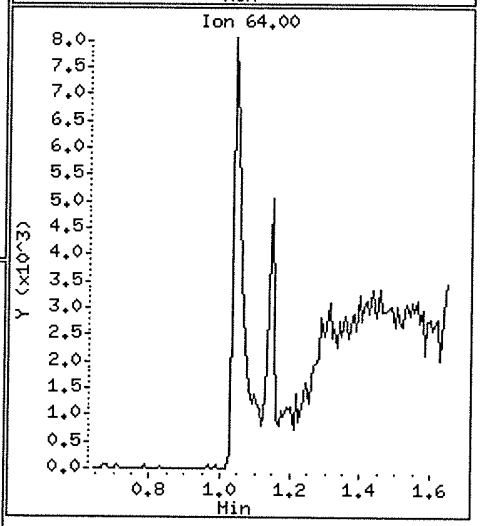
5 Vinyl Chloride

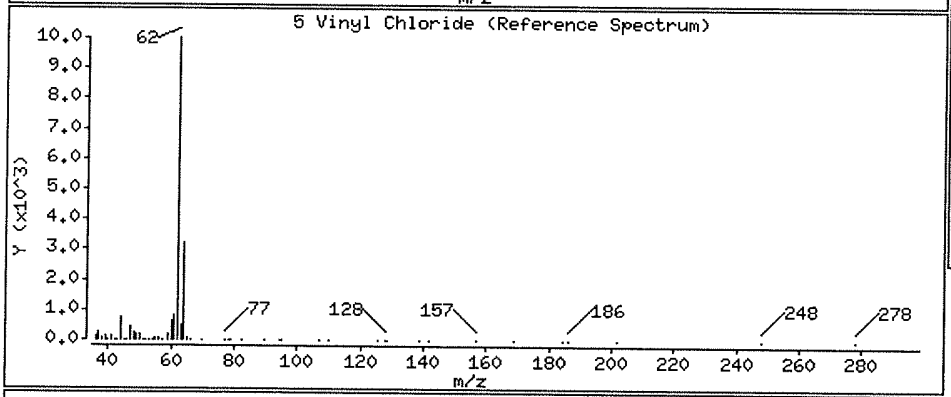
Concentration: 104.44 ug/l

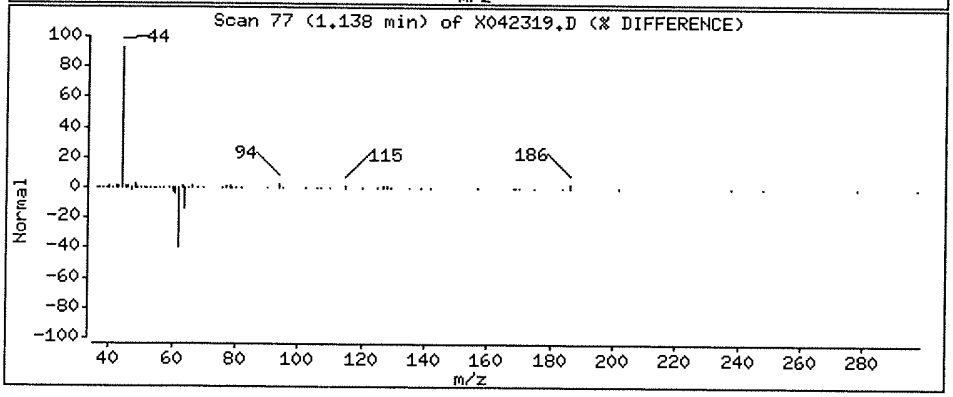












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210423.b\X042320.D Page 1
Report Date: 12-May-2021 14:52

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X210423.b\X042320.D
Lab Smp Id: HS21041102-09 Client Smp ID: HS21041102-09
Inj Date : 23-APR-2021 17:28
Operator : PC Inst ID: voa6.i
Smp Info : HS21041102-09;HS21041102-09;;;
Misc Info : HS18090001;WATER;0;25;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X210423.b\8260W.m
Meth Date : 12-May-2021 14:51 Qin.Xu Quant Type: ISTD
Cal Date : 02-APR-2021 13:20 Cal File: X040208.D
Als bottle: 19
Dil Factor: 25.00000
Integrator: HP RTE Compound Sublist: CBI_short1.sub
Target Version: 4.14
Processing Host: NAHSTW7066

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	25.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

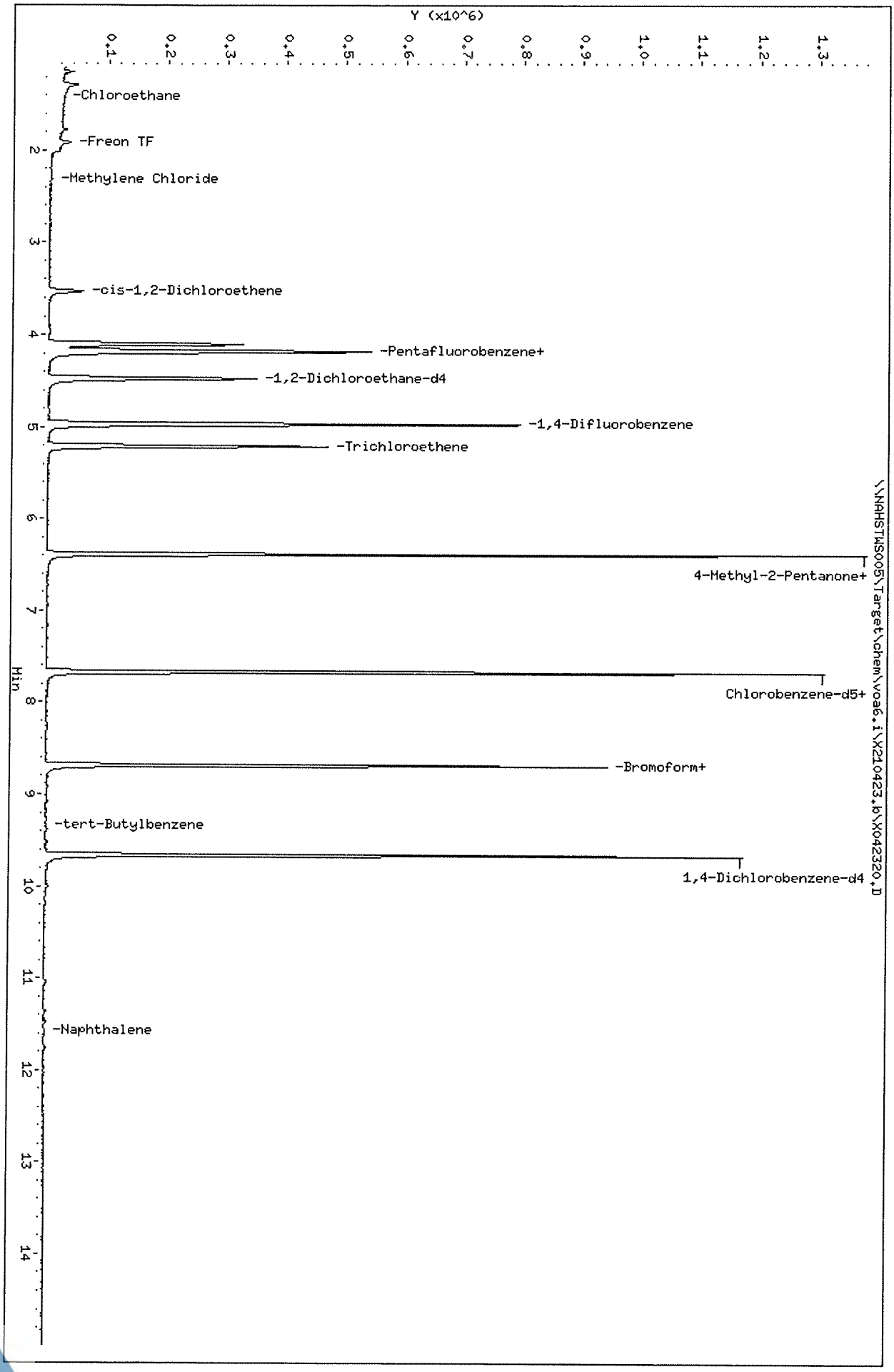
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	401831	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.963	(1.000)	641477	50.0000	
* 47 Chlorobenzene-d5	117	7.670	7.670	(1.000)	563110	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	245346	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	220121	46.5591	46.55
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	281907	49.7363	49.73
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	771602	53.1862	53.18
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	250141	46.4411	46.44
27 cis-1,2-Dichloroethene	96	3.537	3.530	(0.846)	29419	5.98916	149.72
17 Methylene Chloride	84	2.298	2.305	(0.550)	1112	1.73039	43.25(a)
38 Trichloroethene	130	5.206	5.206	(1.048)	141497	32.2220	805.55
5 Vinyl Chloride	62	1.145	1.145	(0.274)	8215	1.36366	34.09

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Data File: \\NAHSTWS005\Target\chem\voa6.i\X210423.b\X042320.D
Date : 23-APR-2021 17:28
Client ID: HS21041102-09
Sample Info: HS21041102-09;HS21041102-09;;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18



Data File: \\NAHSTWS005\Target\chem\voa6.i\X210423.b\X042320.D

Date : 23-APR-2021 17:28

Client ID: HS21041102-09

Instrument: voa6.i

Sample Info: HS21041102-09;HS21041102-09;;;

Purge Volume: 5.0

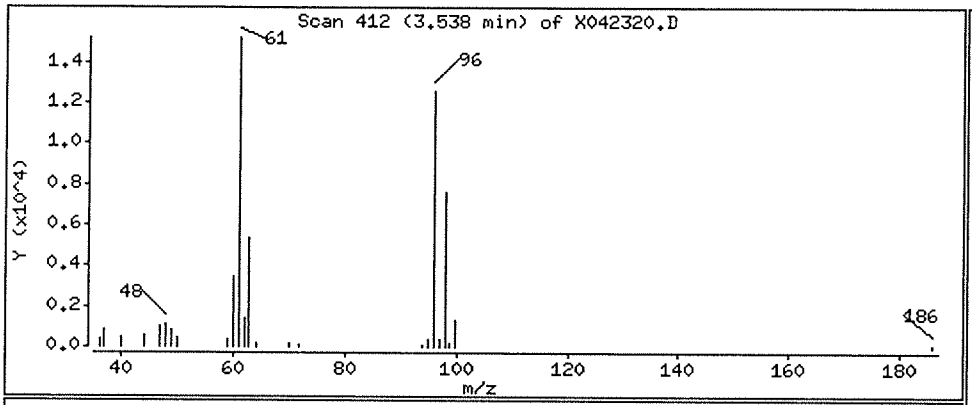
Operator: PC

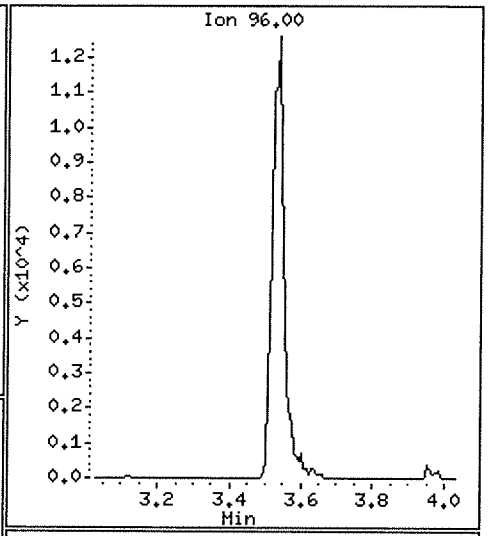
Column phase: DB624

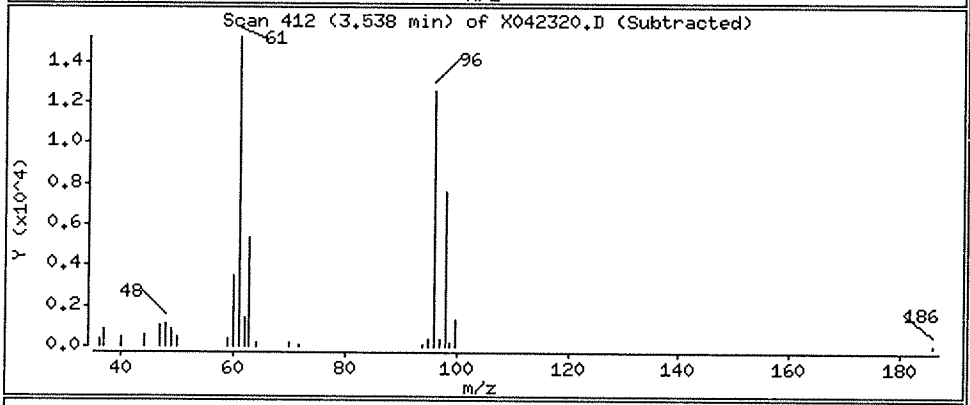
Column diameter: 0.18

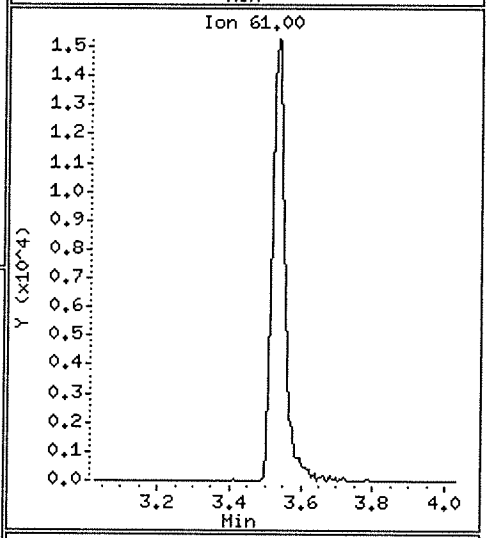
27 cis-1,2-Dichloroethene

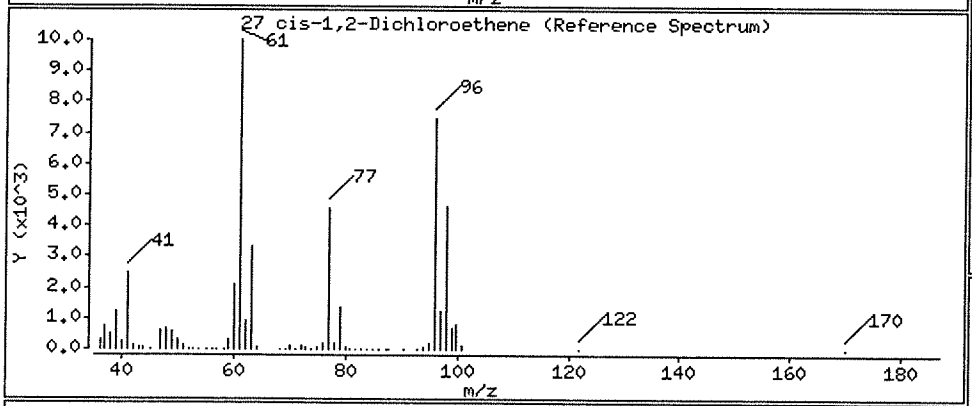
Concentration: 149.72 ug/l

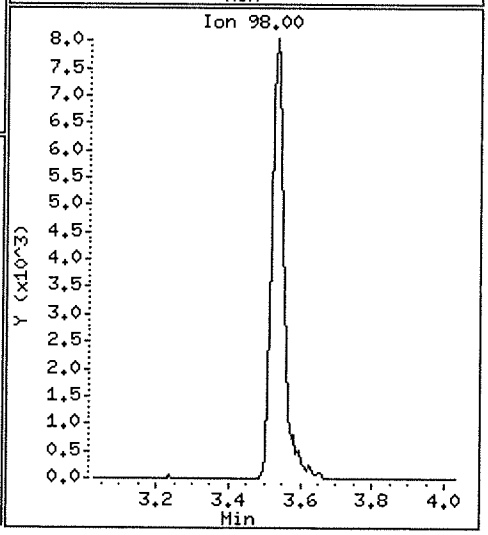


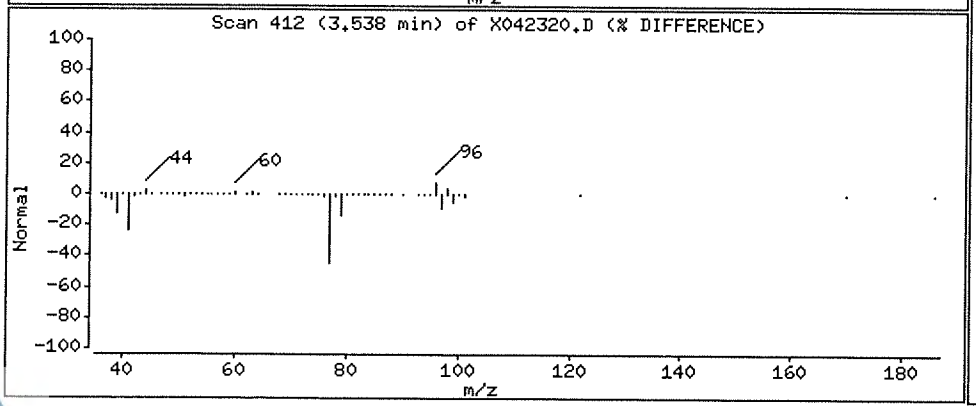












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210423.b\X042320.D

Date : 23-APR-2021 17:28

Client ID: HS21041102-09

Instrument: voa6.i

Sample Info: HS21041102-09;HS21041102-09;;;

Purge Volume: 5.0

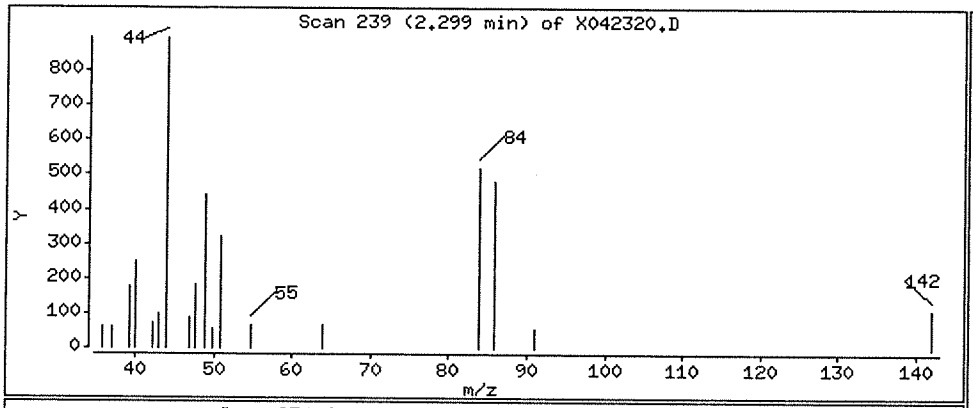
Operator: PC

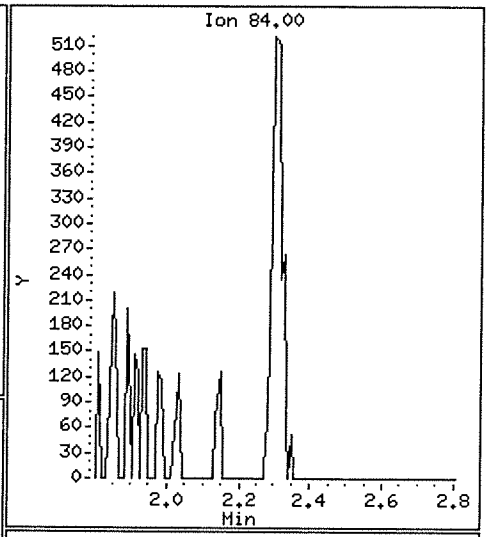
Column phase: DB624

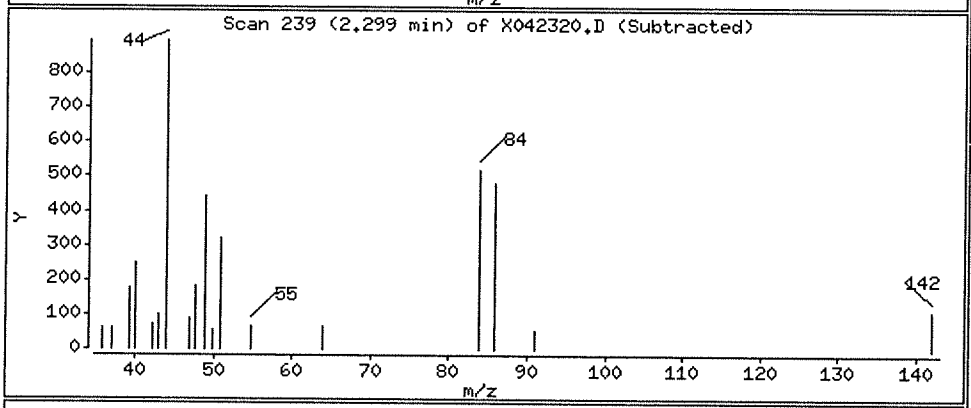
Column diameter: 0.18

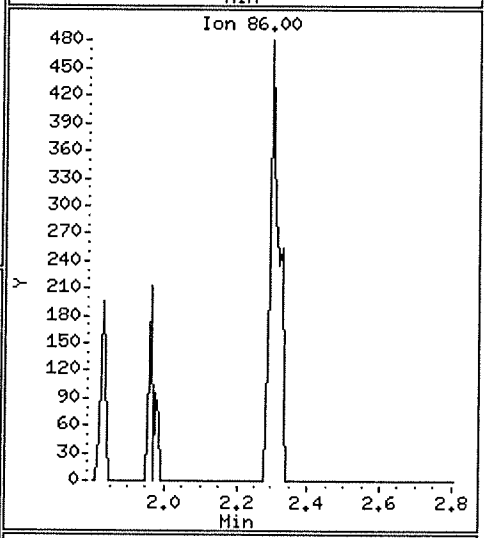
17 Methylene Chloride

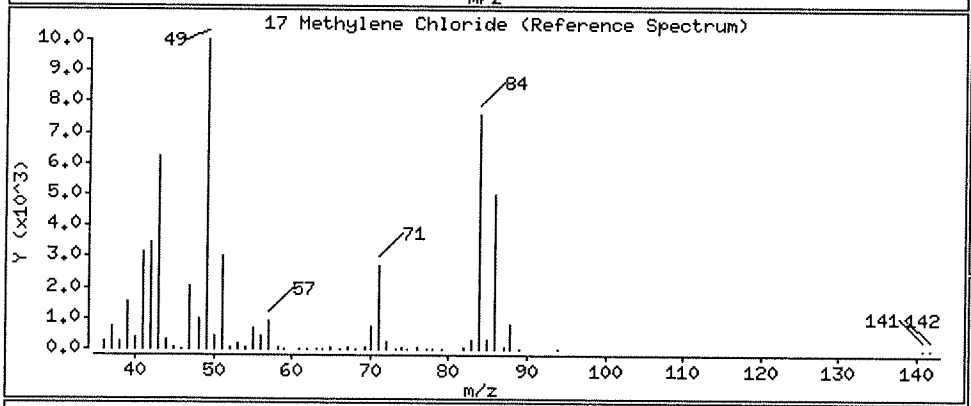
Concentration: 43.25 ug/l

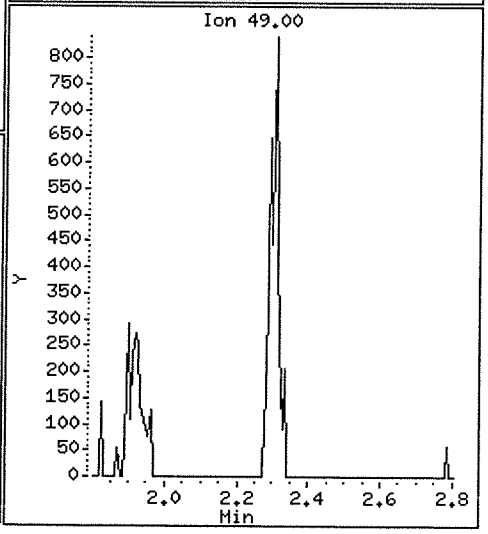


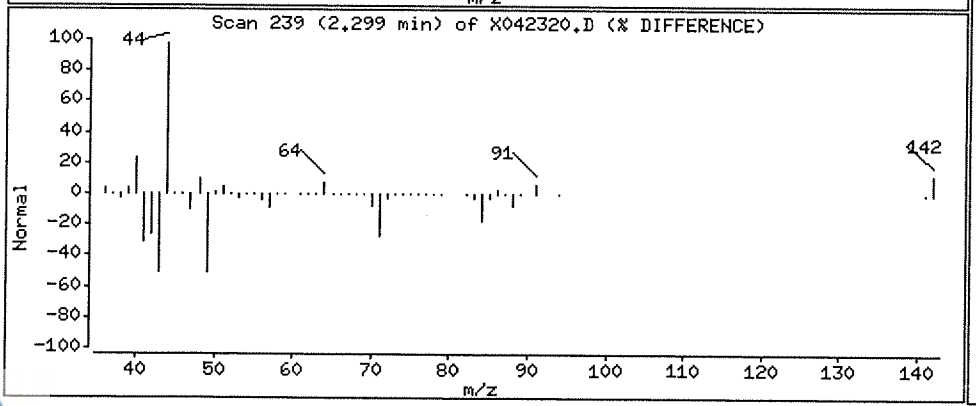












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210423.b\X042320.D

Date : 23-APR-2021 17:28

Client ID: HS21041102-09

Instrument: voa6.i

Sample Info: HS21041102-09;HS21041102-09;;;

Purge Volume: 5.0

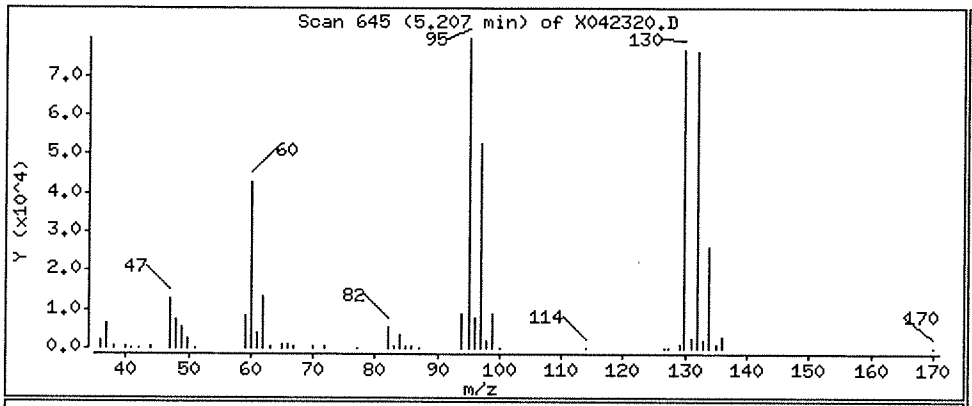
Operator: PC

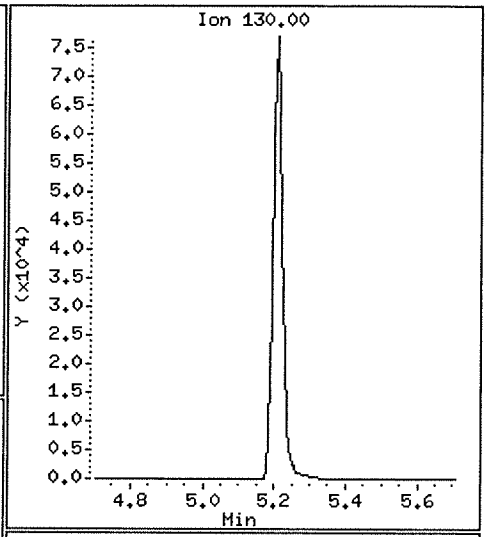
Column phase: DB624

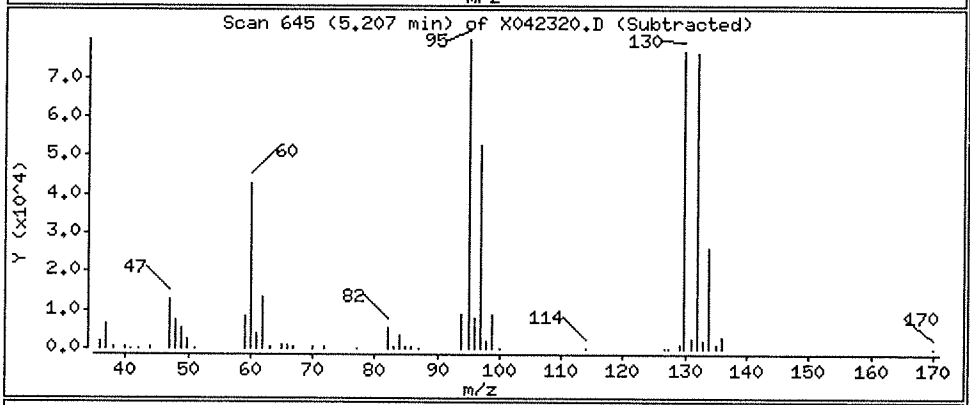
Column diameter: 0.18

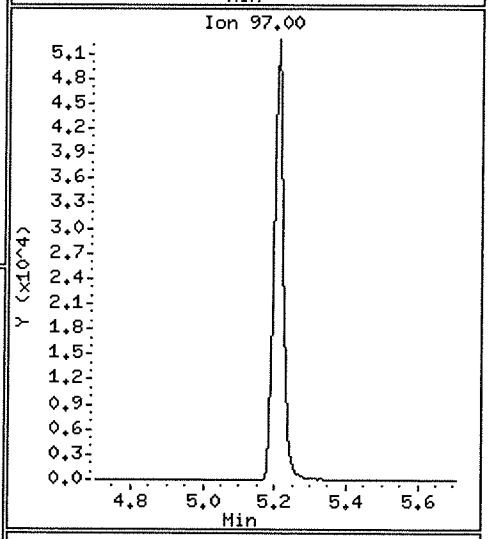
38 Trichloroethene

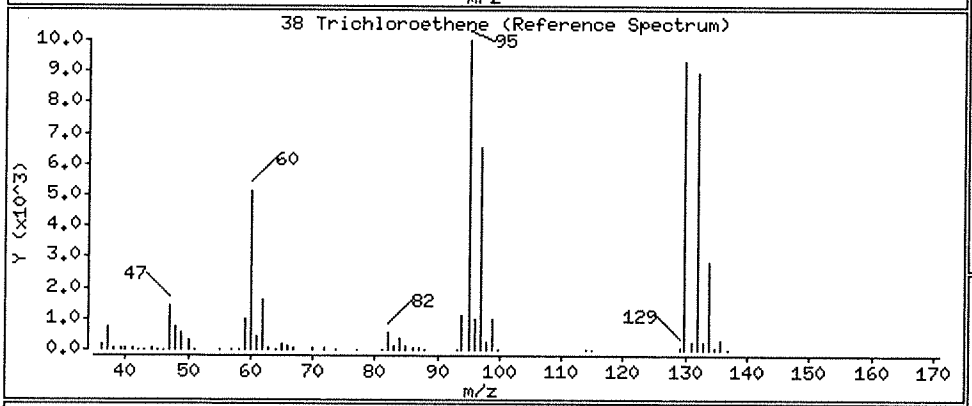
Concentration: 805.55 ug/l

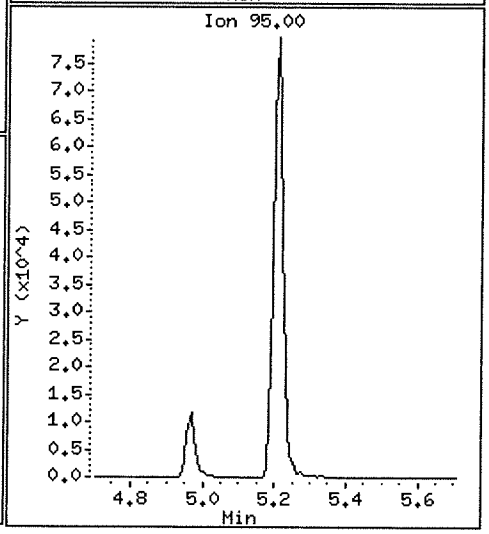


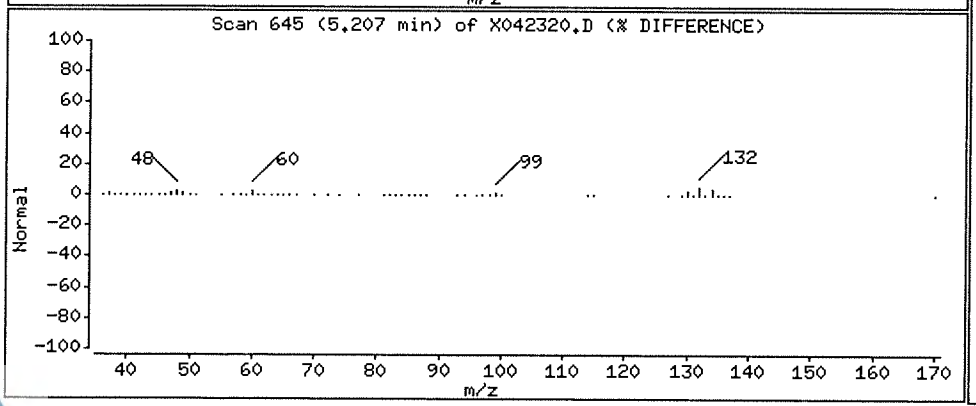












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210423.b\X042320.D

Date : 23-APR-2021 17:28

Client ID: HS21041102-09

Instrument: voa6.i

Sample Info: HS21041102-09;HS21041102-09;;;

Purge Volume: 5.0

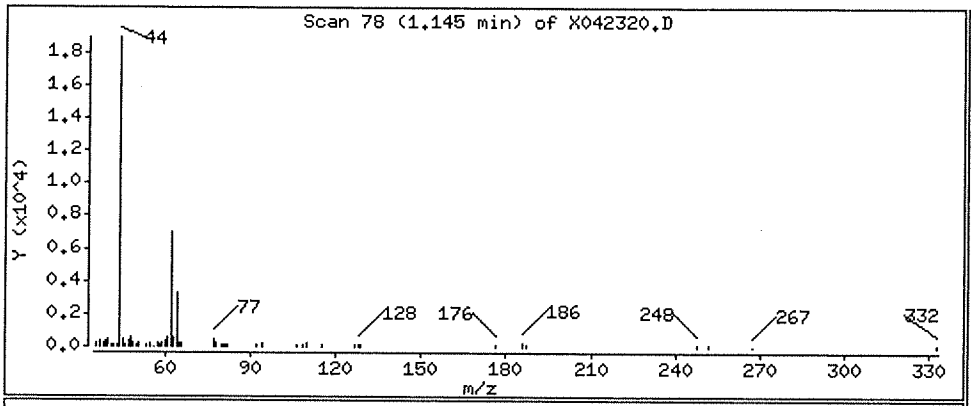
Operator: PC

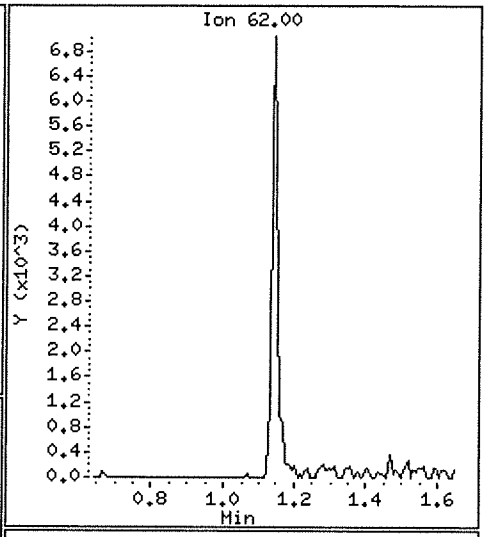
Column phase: DB624

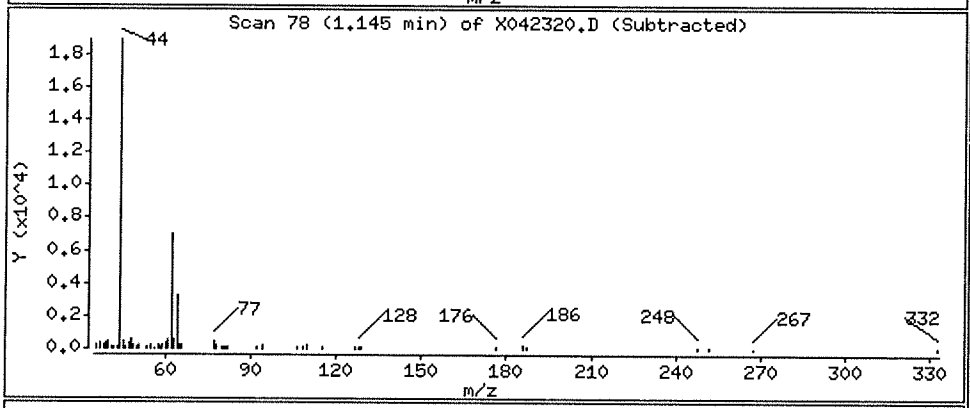
Column diameter: 0.18

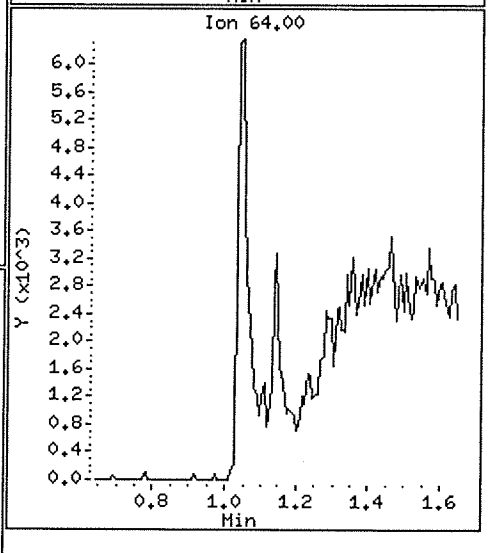
5 Vinyl Chloride

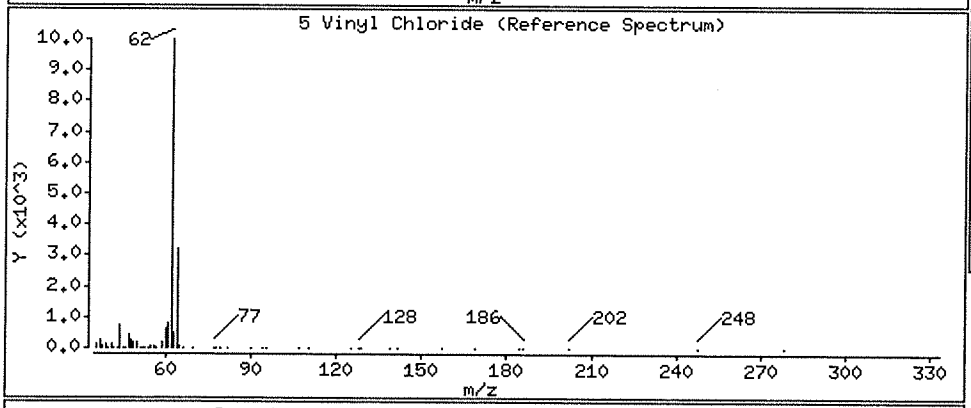
Concentration: 34.09 ug/l

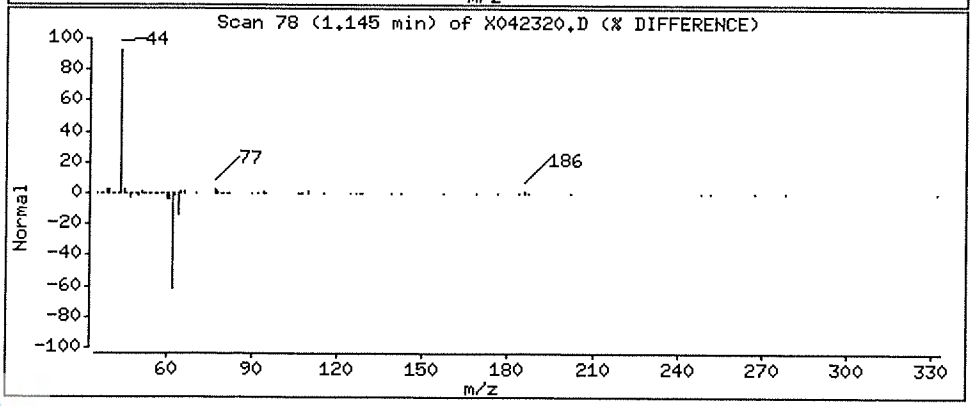












Data File: \\NAHSTWS005\Target\chem\voa6.i\X210423.b\X042330.D Page 1
Report Date: 12-May-2021 14:49

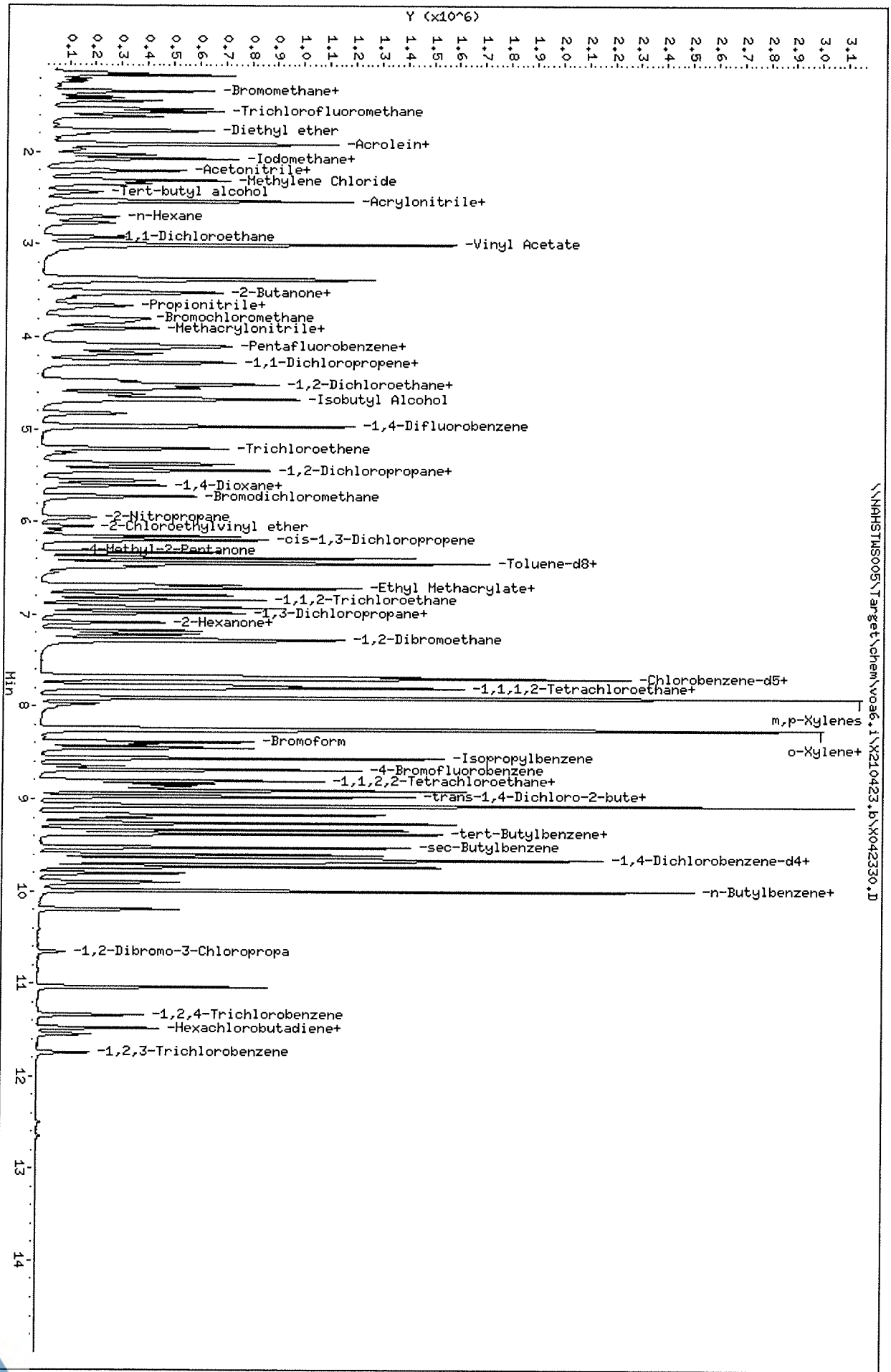
ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X210423.b\X042330.D
Lab Smp Id: CCV-END Client Smp ID: CCV-END
Inj Date : 23-APR-2021 20:59
Operator : PC Inst ID: voa6.i
Smp Info : CCV-END;CCV-END;2;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X210423.b\8260W.m
Meth Date : 12-May-2021 14:49 voa6.i Quant Type: ISTD
Cal Date : 02-APR-2021 13:20 Cal File: X040208.D
Als bottle: 29 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBI_short1.sub
Target Version: 4.14
Processing Host: NAHSTW7066

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	323158	50.0000	
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	607966	50.0000	
* 47 Chlorobenzene-d5	117	7.670	7.670	(1.000)	579020	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	290005	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	226974	50.0000	59.57
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	272253	50.0000	59.62
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	814891	50.0000	54.57
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	313129	50.0000	56.17
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	184146	50.0000	54.74
11 1,1-Dichloroethene	96	1.919	1.919	(0.459)	230377	50.0000	50.06
33 1,2-Dichloroethane	62	4.555	4.555	(0.918)	332213	50.0000	51.62
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	210117	50.0000	53.18
17 Methylene Chloride	84	2.305	2.305	(0.551)	185752	50.0000	52.87
38 Trichloroethene	130	5.206	5.206	(1.049)	206805	50.0000	49.68
5 Vinyl Chloride	62	1.145	1.145	(0.274)	264056	50.0000	54.50



Data File: \\NAHSTWS005\Target\chem\voa6.i\X210423.b\X042330.D
Date : 23-APR-2021 20:59
Client ID: CCV-END
Sample Info: CCV-END;CCV-END;2;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

HS21041102 RSK175 Raw Data

ALS WO# HS21041102

FID04 -Logbook

Batch: 26730 **Analyst:** Nosa Izekor

Date: 01-24-2017 **Reviewer:**

Method: RSK 175 ICAL **Laboratory:** Houston

Comments: Target Sequence 170124

#	Samp ID	Type	Analyzed	DF	Init Wt/Vol	Final Vol	File ID	Matrix	Status	pH
1	ICAL1	CALIB_1	01-24-2017 09:06 am	1.00	0.00 mL	0.00 mL	001.D	Liquid	Y	NA
2	ICAL2	CALIB_2	01-24-2017 09:30 am	1.00	0.00 mL	0.00 mL	002.D	Liquid	Y	NA
3	ICAL3	CALIB_3	01-24-2017 09:59 am	1.00	0.00 mL	0.00 mL	003.D	Liquid	Y	NA
4	ICAL4	CALIB_4	01-24-2017 10:15 am	1.00	0.00 mL	0.00 mL	004.D	Liquid	Y	NA
5	ICAL5	CALIB_5	01-24-2017 10:39 am	1.00	0.00 mL	0.00 mL	005.D	Liquid	Y	NA
6	ICAL6	CALIB_6	01-24-2017 10:57 am	1.00	0.00 mL	0.00 mL	006.D	Liquid	Y	NA
7	ICAL7	CALIB_7	01-24-2017 11:13 am	1.00	0.00 mL	0.00 mL	007.D	Liquid	Y	NA
8	ICV	METHSPIKI	01-24-2017 12:05 pm	1.00	0.00 mL	0.00 mL	008.D	Liquid	Y	NA
9	LCS-170124	LCS	01-24-2017 12:24 pm	1.00	0.00 mL	0.00 mL	009.D	Liquid	Y	NA
10	LCSD-170124	LCSD	01-24-2017 12:40 pm	1.00	0.00 mL	0.00 mL	010.D	Liquid	Y	NA
11	MBLK-170124	MBLK	01-24-2017 12:57 pm	1.00	0.00 mL	0.00 mL	011.D	Liquid	Y	NA
12	HS17010778-01	SAMP	01-24-2017 01:14 pm	1.00	0.00 mL	0.00 mL	012.D	Liquid	Y	NA
13	HS17010779-01	SAMP	01-24-2017 01:31 pm	1.00	0.00 mL	0.00 mL	013.D	Liquid	Y	NA
14	HS17010779-01DUP	SAMP	01-24-2017 01:47 pm	1.00	0.00 mL	0.00 mL	014.D	Liquid	Y	NA
15	CCV	CCV	01-24-2017 02:01 pm	1.00	0.00 mL	0.00 mL	015.D	Liquid	Y	NA

Chemical	Value
ICAL STD ID	30010700217
ICV STD ID	30010700610

FORM 3
WATER GASES METHOD SPIKE RECOVERY

Lab Name: ALS HOUSTON Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS21041102

Matrix Spike - ENG SC Sample No.: ICV

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE AMOUNT ()	% REC #	QC. LIMITS REC.
Ethene	16.800	19.090	114	75-125
Methane	9.647	9.597	99	75-125
Ethane	18.043	19.657	109	75-125
Propane	26.463	27.238	103	75-125
N-Butane	34.955	36.010	103	75-125

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

COMMENTS: _____

_____

FORM III GASES

FORM 6
GASES INITIAL CALIBRATION DATA

Lab Name: ALS HOUSTON Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS21041102

Instrument ID: FID-4 Calibration Date(s): 01/24/17 01/24/17

Column: RTX-PLOT ID: 0.53 (mm) Calibration Time(s): 0906 1113

LAB FILE ID: RF10: 001 RF25: 002 RF50: 003
RF100: 004 RF250: 005 RF500: 006

COMPOUND	RF10	RF25	RF50	RF100	RF250	RF500
Ethene	535.608	567.359	564.985	516.024	665.282	425.678
Methane	968.912	978.238	1019.699	880.798	960.713	930.704
Ethane	602.493	670.177	658.908	597.201	808.513	817.630
Propane	500	1279	2602	4785	18294	38286
N-Butane	438	936	2034	3864	18446	42817

FORM VI GASES

FORM 6
GASES INITIAL CALIBRATION DATA

Lab Name: ALS HOUSTON Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS2104110

Instrument ID: FID-4 Calibration Date(s): 01/24/17 01/24/17

Column: RTX-PLOT ID: 0.53 (mm) Calibration Time(s): 0906 1113

RF1000: 007

COMPOUND	RF1000	CURVE	COEFFICENTS A0	A1	A2	%RSD OR R^2	MA
Ethene	828.858	AVRG		586.256273		21.932	
Methane	1081.580	AVRG		974.377787		6.550	
Ethane	999.335	AVRG		736.322546		19.885	
Propane	96509	2ORDR	0.97987006	1.529e-003	-4.58e-009	0.9991365	0
N-Butane	114164	2ORDR	2.46870151	1.834e-003	-5.54e-009	0.9980766	0

FORM VI GASES

Data File: \\NAHSTWS005\Target\chem\FID-4.i\170124A.b\001.D Page 1
Report Date: 08-Apr-2020 12:18

ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\NAHSTWS005\Target\chem\FID-4.i\170124A.b\001.D
Lab Smp Id: ICAL1 Client Smp ID: ICAL1
Inj Date : 24-JAN-2017 09:06
Operator : JA Inst ID: FID-4.i
Smp Info : ICAL1;ICAL1;;;
Misc Info :
Comment :
Method : \\nahstws005\Target\chem\FID-4.i\170124A.b\RSKNI2.m
Meth Date : 26-Feb-2020 16:33 Purvi.lad Quant Type: ESTD
Cal Date : 24-JAN-2017 09:06 Cal File: 001.D
Als bottle: 1 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: stdNIP2.sub
Target Version: 4.14

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
1 Methane	1.043	1.030	0.013	374	0.38600	0.383(a)
2 Ethene	1.553	1.556	-0.003	361	0.67400	0.615(a)
3 Ethane	1.716	1.723	-0.007	435	0.72200	0.590(a)
4 Propane	4.073	4.113	-0.040	500	1.05900	1.743
5 N-Butane	7.640	7.690	-0.050	438	1.39800	3.271

QC Flag Legend

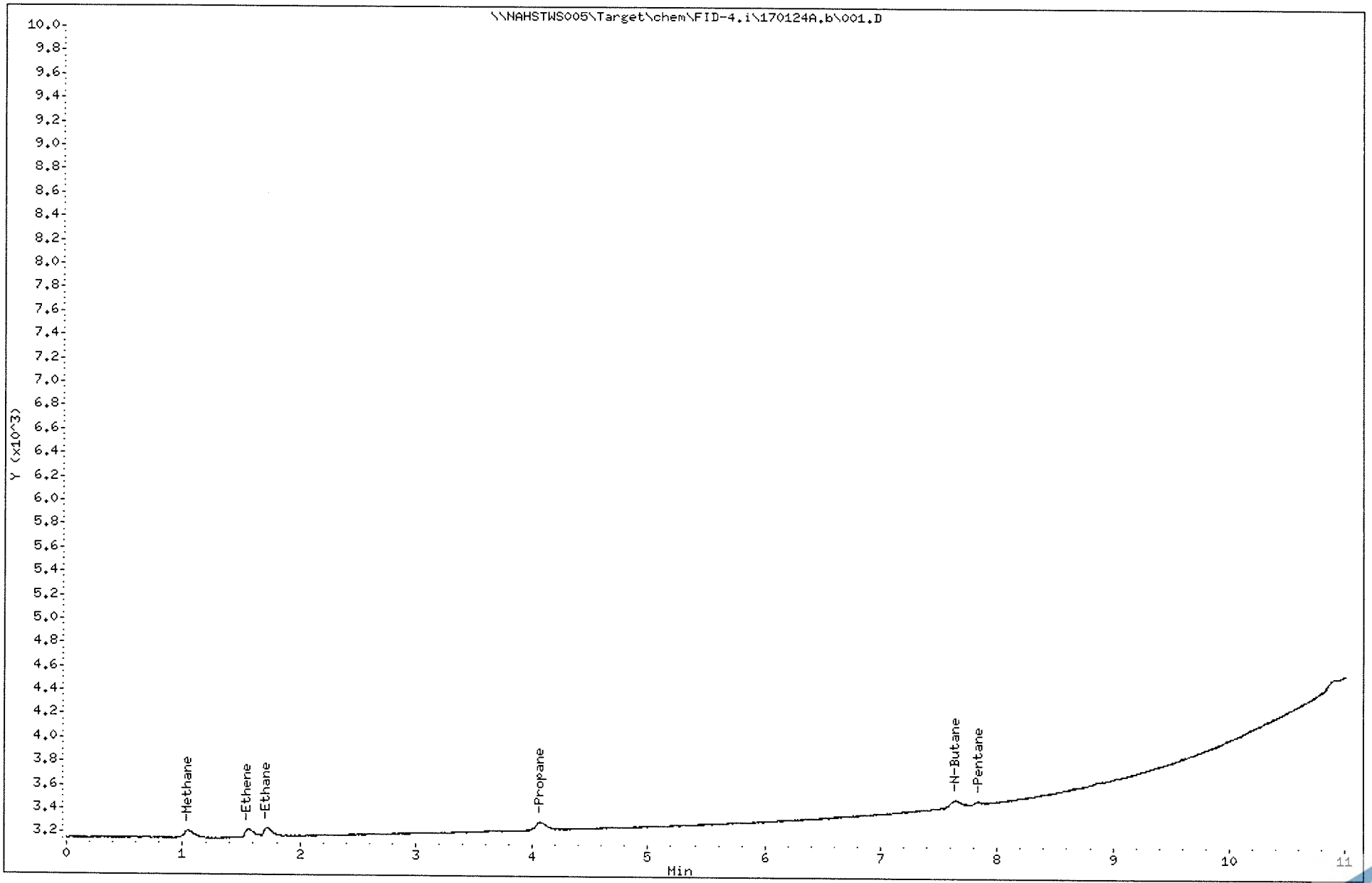
a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Data File: \\NAHSTWS005\Target\chem\FID-4.i\170124A.b\001.D
Date : 24-JAN-2017 09:06
Client ID: ICAL1
Sample Info: ICAL1;ICAL1;;;

Column phase: Rtx-PLOT

Instrument: FID-4.i

Operator: JA
Column diameter: 0.53



ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\NAHSTWS005\Target\chem\FID-4.i\170124A.b\002.D
Lab Smp Id: ICAL2 Client Smp ID: ICAL2
Inj Date : 24-JAN-2017 09:30
Operator : MA Inst ID: FID-4.i
Smp Info : ICAL2;ICAL2;;;
Misc Info : ;1;0;1
Comment :
Method : \\nahstws005\Target\chem\FID-4.i\170124A.b\RSKNI2.m
Meth Date : 26-Feb-2020 16:33 Purvi.lad Quant Type: ESTD
Cal Date : 24-JAN-2017 09:59 Cal File: 003.D
Als bottle: 2 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: stdNIP2.sub
Target Version: 4.14

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

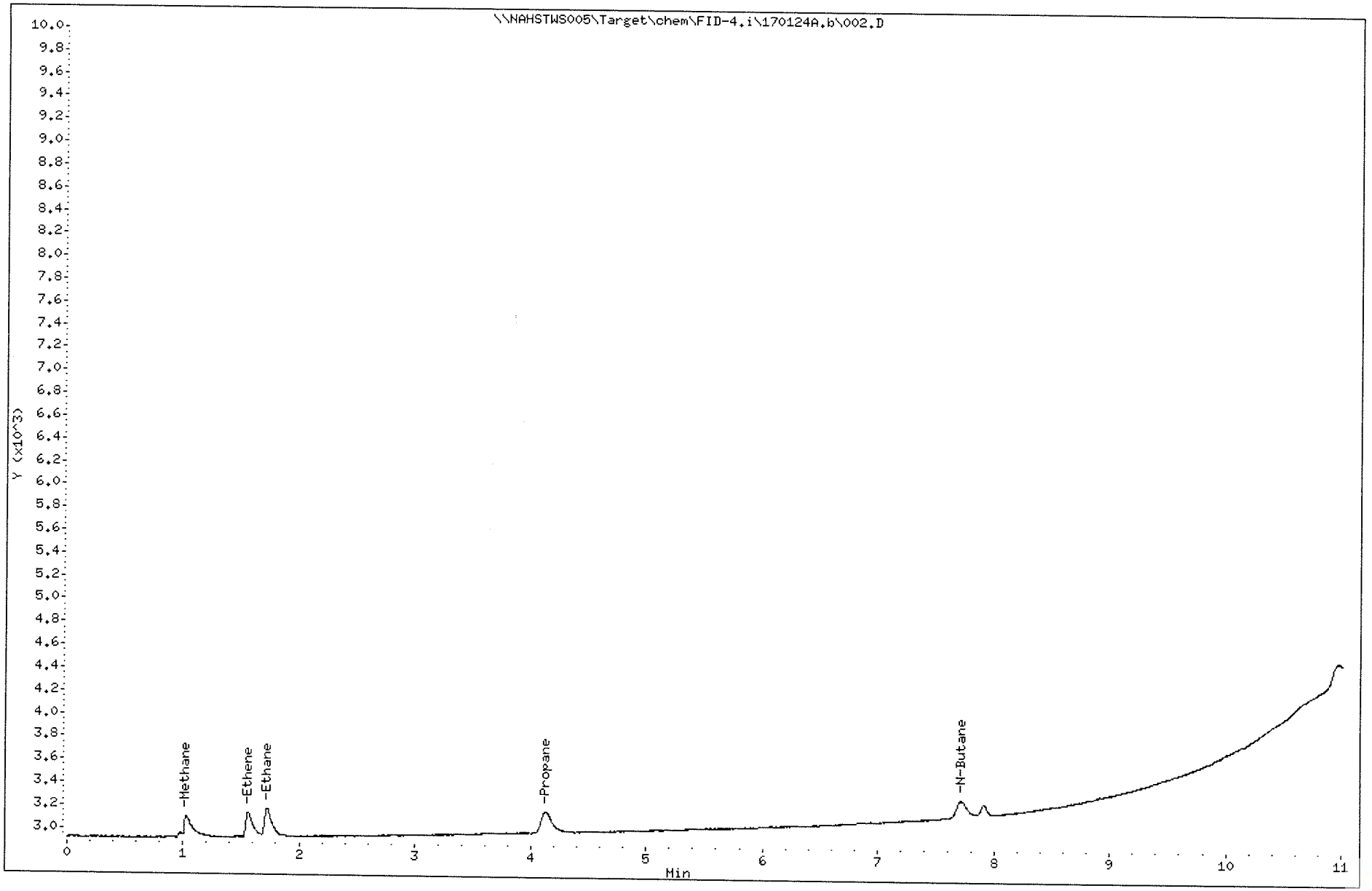
Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
1 Methane	1.023	1.030	-0.007	944	0.96500	0.968
2 Ethene	1.560	1.556	0.004	956	1.68500	1.630
3 Ethane	1.723	1.723	0.000	1209	1.80400	1.641
4 Propane	4.123	4.113	0.010	1279	2.64600	2.927
5 N-Butane	7.716	7.690	0.026	936	3.49600	4.180

Data File: \\NAHSTWS005\Target\chem\FID-4.i\170124A.b\002.D
Date : 24-JAN-2017 09:30
Client ID: ICAL2
Sample Info: ICAL2;ICAL2;;;

Column phase: Rtx-PLOT

Instrument: FID-4.i

Operator: MA
Column diameter: 0.53



Data File: \\NAHSTWS005\Target\chem\FID-4.i\170124A.b\003.D Page 1
Report Date: 08-Apr-2020 12:18

ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\NAHSTWS005\Target\chem\FID-4.i\170124A.b\003.D
Lab Smp Id: ICAL3 Client Smp ID: ICAL3
Inj Date : 24-JAN-2017 09:59
Operator : MA Inst ID: FID-4.i
Smp Info : ICAL3;ICAL3;;;
Misc Info : ;1;0;1
Comment :
Method : \\nahstws005\Target\chem\FID-4.i\170124A.b\RSKNI2.m
Meth Date : 26-Feb-2020 16:33 Purvi.lad Quant Type: ESTD
Cal Date : 24-JAN-2017 11:13 Cal File: 007.D
Als bottle: 3 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: stdNIP2.sub
Target Version: 4.14

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

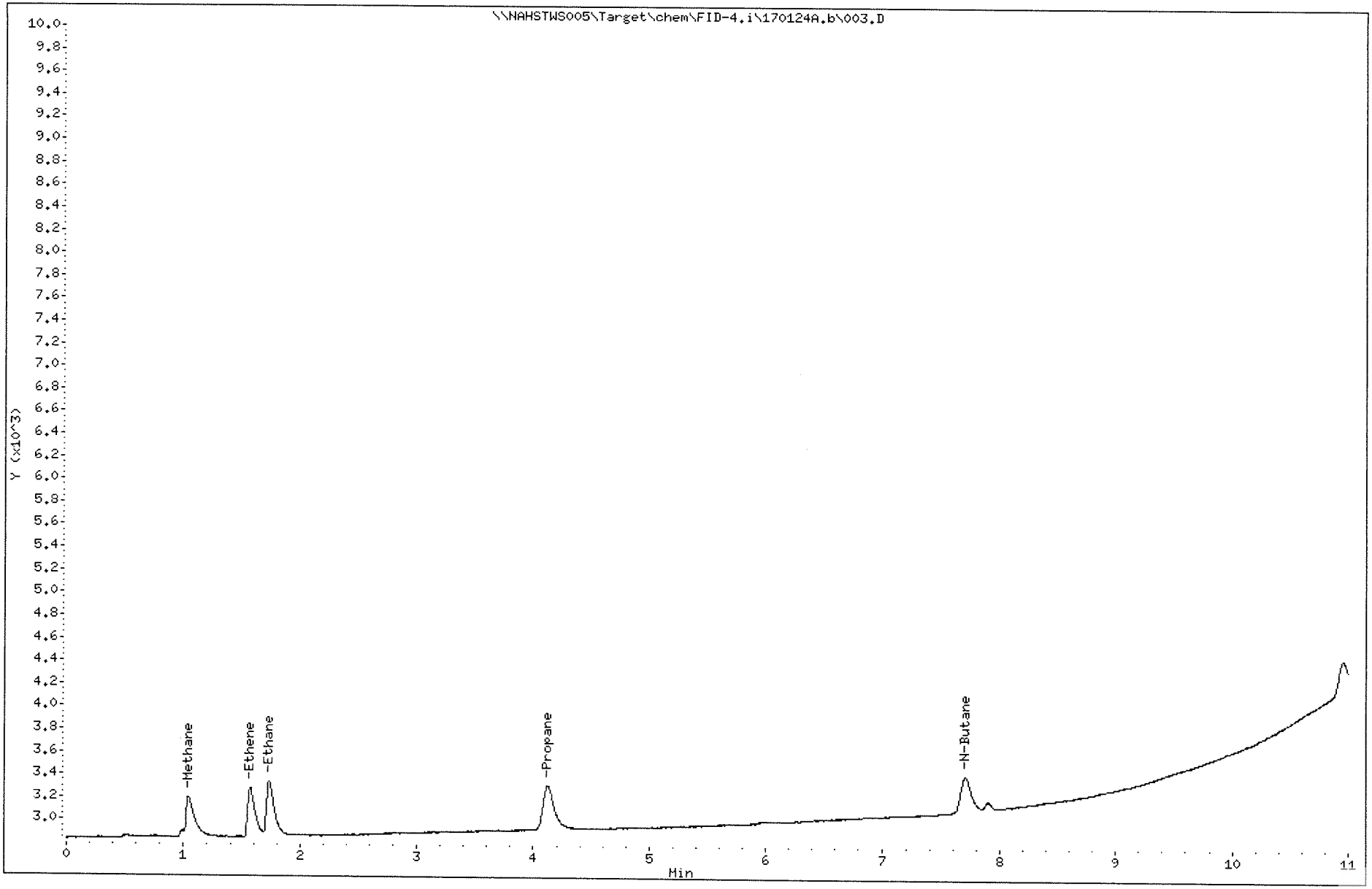
Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
1 Methane	1.043	1.030	0.013	1967	1.92900	2.018
2 Ethene	1.570	1.556	0.014	1904	3.37000	3.247
3 Ethane	1.736	1.723	0.013	2378	3.60900	3.229
4 Propane	4.123	4.113	0.010	2602	5.29300	4.926
5 N-Butane	7.703	7.690	0.013	2034	6.99100	6.176

Data File: \\NAHSTWS005\Target\chem\FID-4.i\170124A.b\003.D
Date : 24-JAN-2017 09:59
Client ID: ICAL3
Sample Info: ICAL3;ICAL3;;;

Column phase: Rtx-PLOT

Instrument: FID-4.i

Operator: MA
Column diameter: 0.53



ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\NAHSTWS005\Target\chem\FID-4.i\170124A.b\004.D
Lab Smp Id: ICAL4 Client Smp ID: ICAL4
Inj Date : 24-JAN-2017 10:15
Operator : MA Inst ID: FID-4.i
Smp Info : ICAL4;ICAL4;;;
Misc Info : ;1;0;1
Comment :
Method : \\nahstws005\Target\chem\FID-4.i\170124A.b\RSKNI2.m
Meth Date : 26-Feb-2020 16:33 Purvi.lad Quant Type: ESTD
Cal Date : 24-JAN-2017 09:30 Cal File: 002.D
Als bottle: 4 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: stdNIP2.sub
Target Version: 4.14

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

					AMOUNTS	
					CAL-AMT	ON-COL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/L)	(ug/L)
1 Methane	1.033	1.030	0.003	3399	3.85900	3.488
2 Ethene	1.563	1.556	0.007	3478	6.74000	5.932
3 Ethane	1.726	1.723	0.003	4310	7.21700	5.853
4 Propane	4.120	4.113	0.007	4785	10.5850	8.190
5 N-Butane	7.703	7.690	0.013	3864	13.9820	9.473(M)

QC Flag Legend

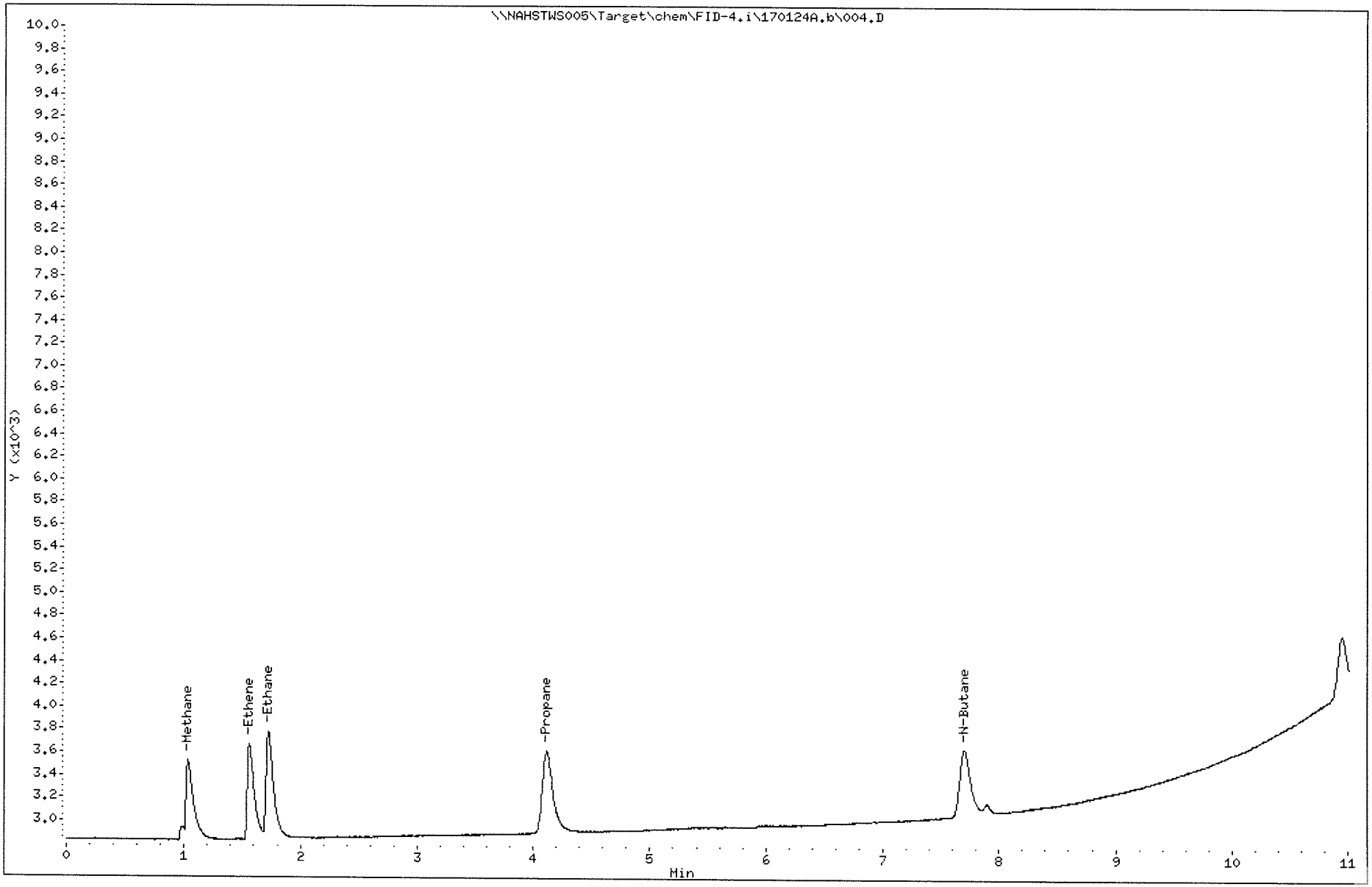
M - Compound response manually integrated.

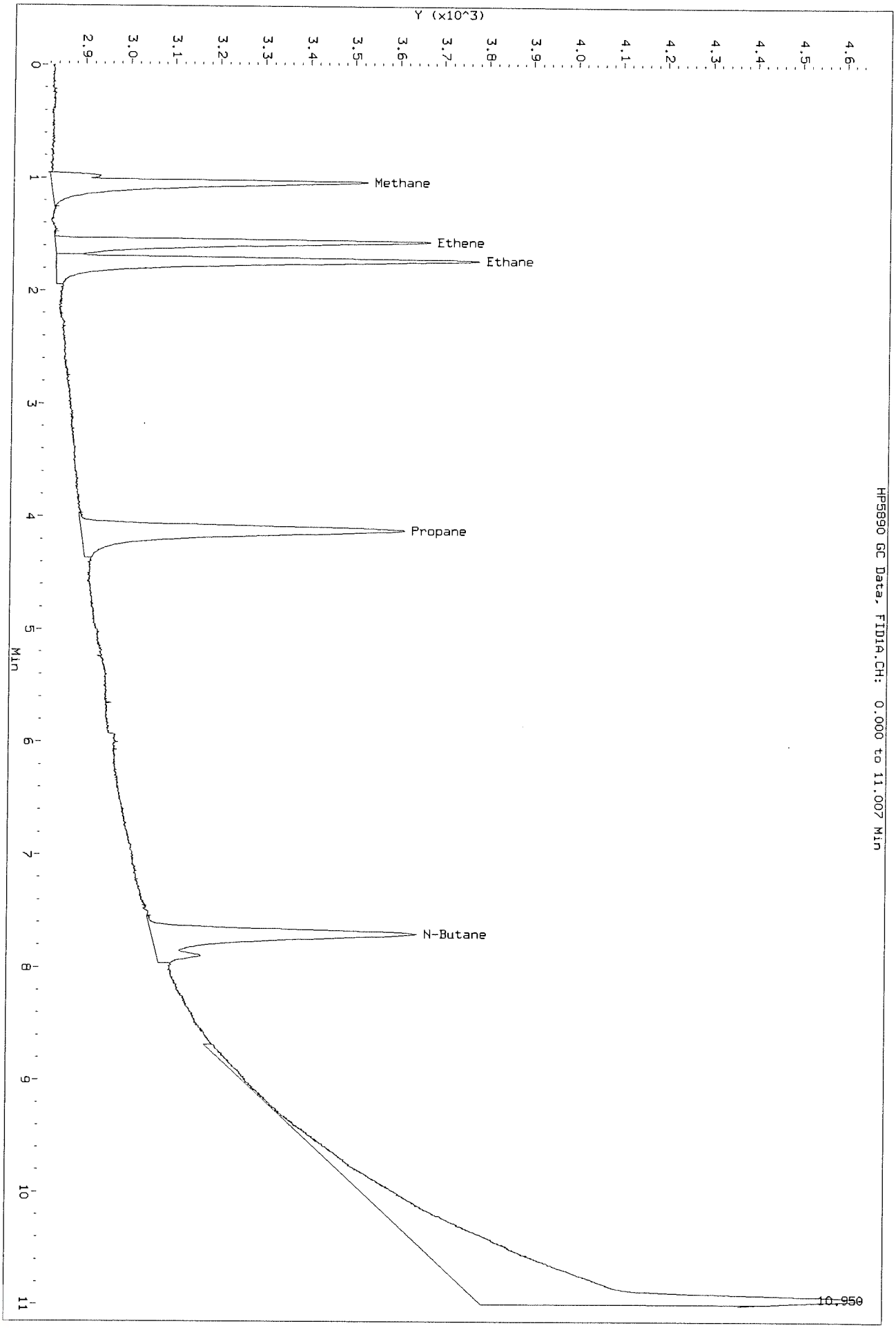
Data File: \\NAHSTWS005\Target\chem\FID-4.i\170124A.b\004.D
Date : 24-JAN-2017 10:15
Client ID: ICAL4
Sample Info: ICAL4;ICAL4;;;

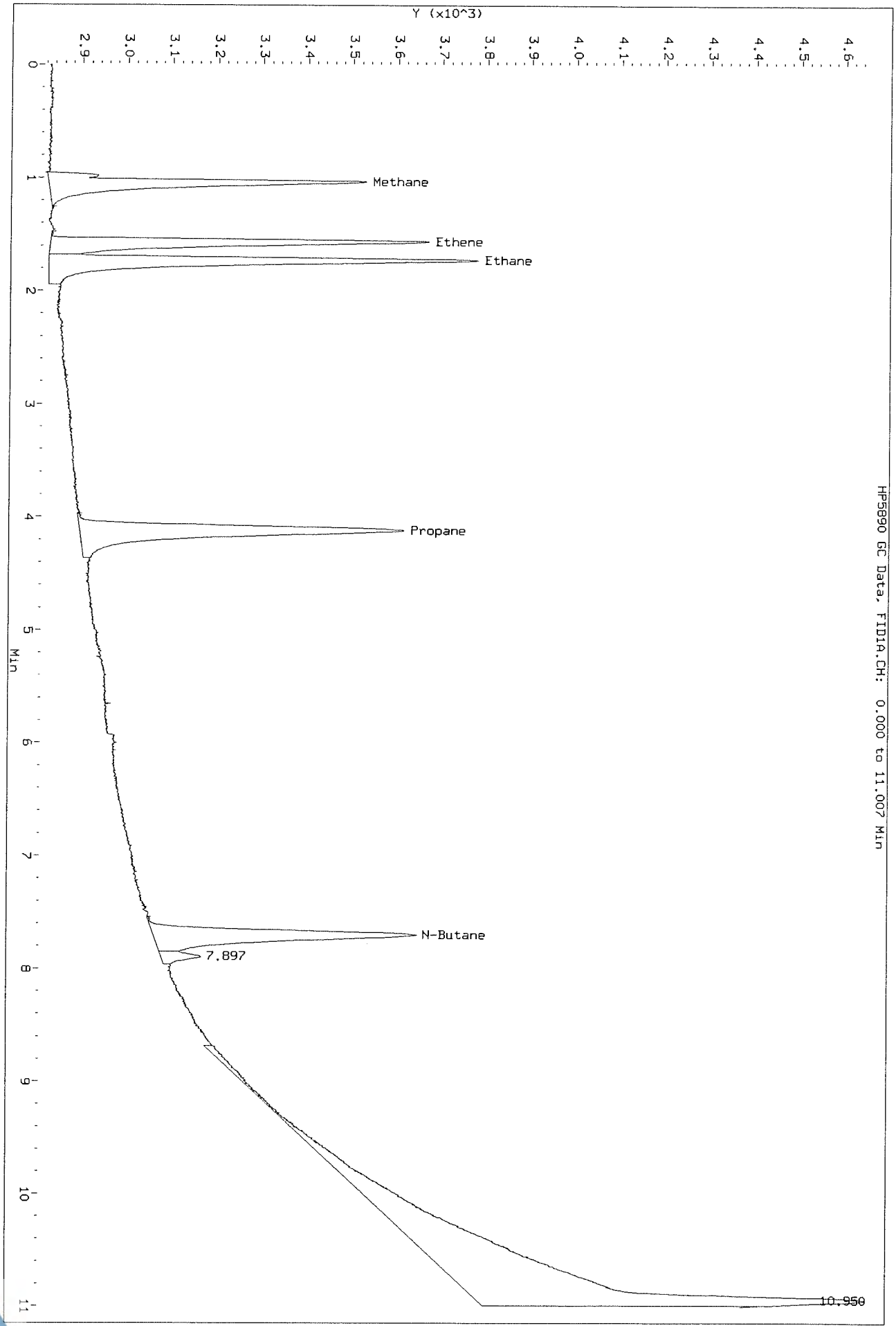
Column phase: Rtx-PLOT

Instrument: FID-4.i

Operator: MA
Column diameter: 0.53




Data File: \\nahstws005\Target\chem\FID-4.i\2017-ICAL\170124.b\BEFORE\004.D
Injection Date: 24-JAN-2017 10:15
Instrument: FID-4.i
Client Sample ID: ICAL4
HP5890 GC Data, FID1A.CH: 0.000 to 11.007 Min
Y (x10^3)
Min
Methane
Ethene
Ethane
Propane
N-Butane
10.950


Data File: \\nahstws005\Target\chem\FID-4.i\2017-ICAL\170124.b\004.D
Injection Date: 24-JAN-2017 10:15
Instrument: FID-4.i
Client Sample ID: ICAL4
HP5890 GC Data, FID1A.CH: 0.000 to 11.007 Min
Y (x10^3)
Min
Methane
Ethene
Ethane
Propane
N-Butane
7.897
10.950

Data File: \\NAHSTWS005\Target\chem\FID-4.i\170124A.b\005.D Page 1
Report Date: 08-Apr-2020 12:18

ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\NAHSTWS005\Target\chem\FID-4.i\170124A.b\005.D
Lab Smp Id: ICAL5 Client Smp ID: ICAL5
Inj Date : 24-JAN-2017 10:39
Operator : MA Inst ID: FID-4.i
Smp Info : ICAL5;ICAL5;;;
Misc Info : ;1;0;1
Comment :
Method : \\nahstws005\Target\chem\FID-4.i\170124A.b\RSKNI2.m
Meth Date : 26-Feb-2020 16:33 Purvi.lad Quant Type: ESTD
Cal Date : 24-JAN-2017 10:39 Cal File: 005.D
Als bottle: 5 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: stdNIP2.sub
Target Version: 4.14

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
1 Methane	1.043	1.030	0.013	9268	9.64700	9.511
2 Ethene	1.570	1.556	0.014	11210	16.8500	19.121
3 Ethane	1.733	1.723	0.010	14588	18.0430	19.811
4 Propane	4.120	4.113	0.007	18294	26.4630	27.415
5 N-Butane	7.700	7.690	0.010	18446	34.9550	34.419(M)

QC Flag Legend

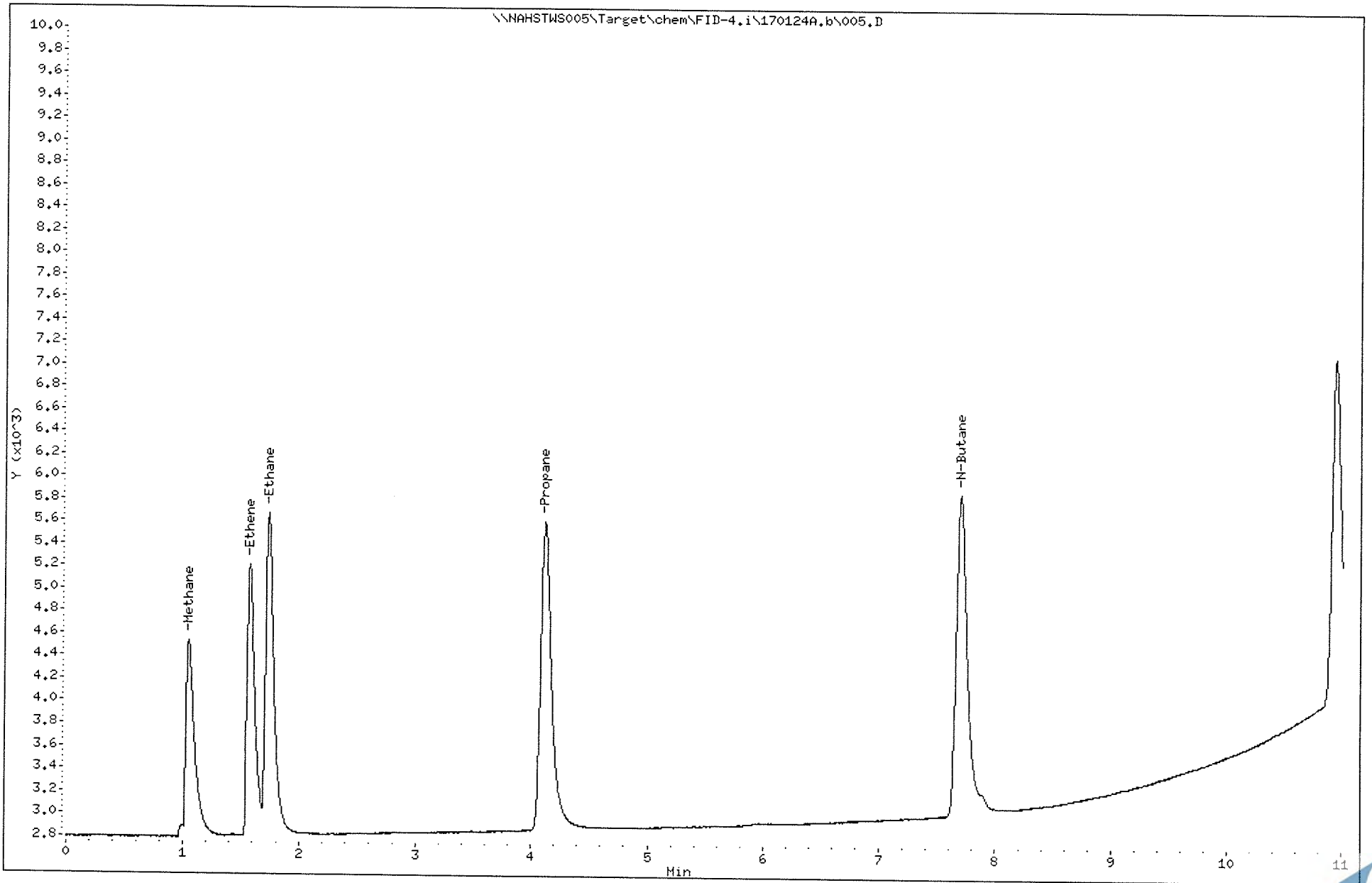
M - Compound response manually integrated.

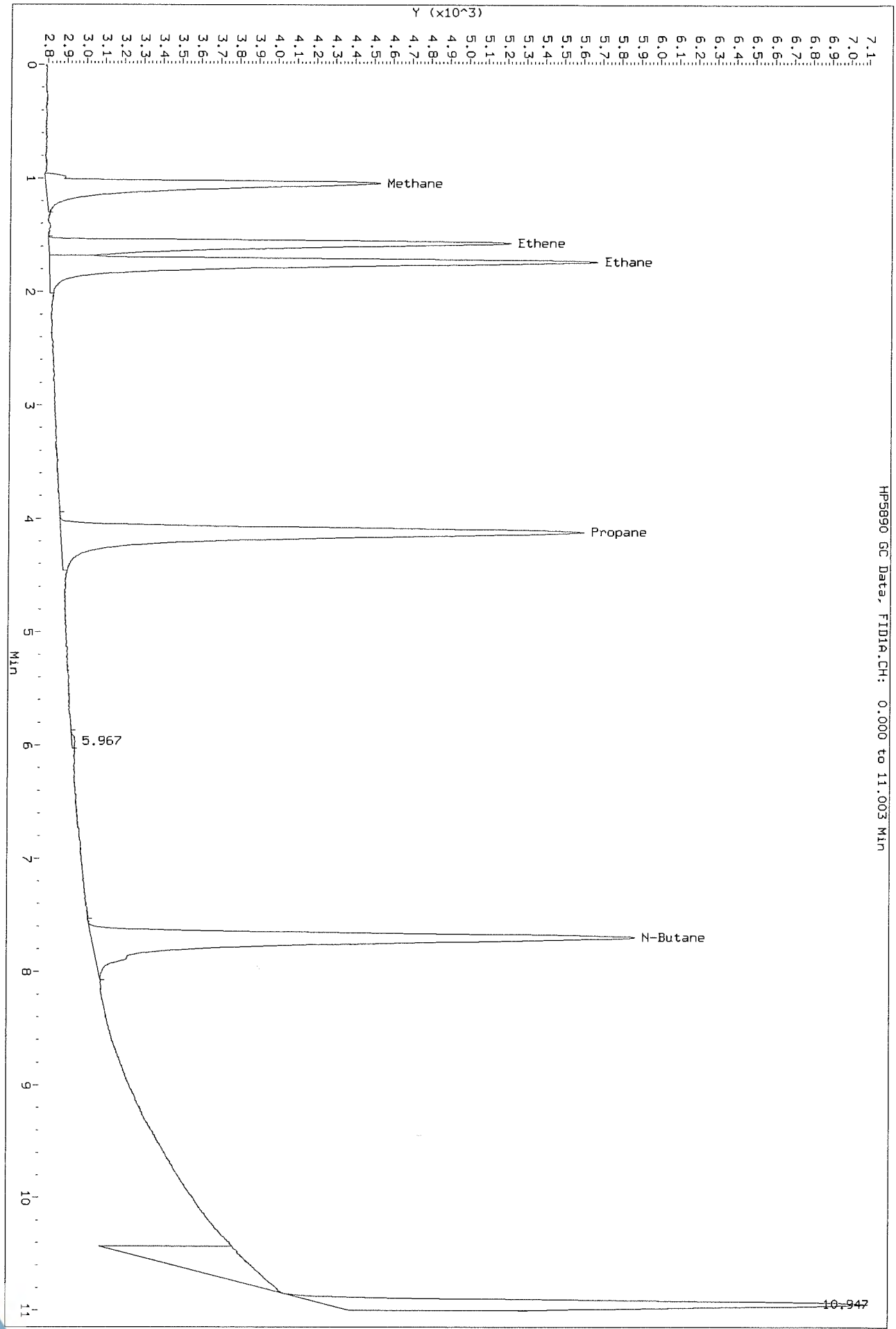
Data File: \\NAHSTWS005\Target\chem\FID-4.i\170124A.b\005.D
Date : 24-JAN-2017 10:39
Client ID: ICAL5
Sample Info: ICAL5;ICAL5;;;

Column phase: Rtx-PLOT

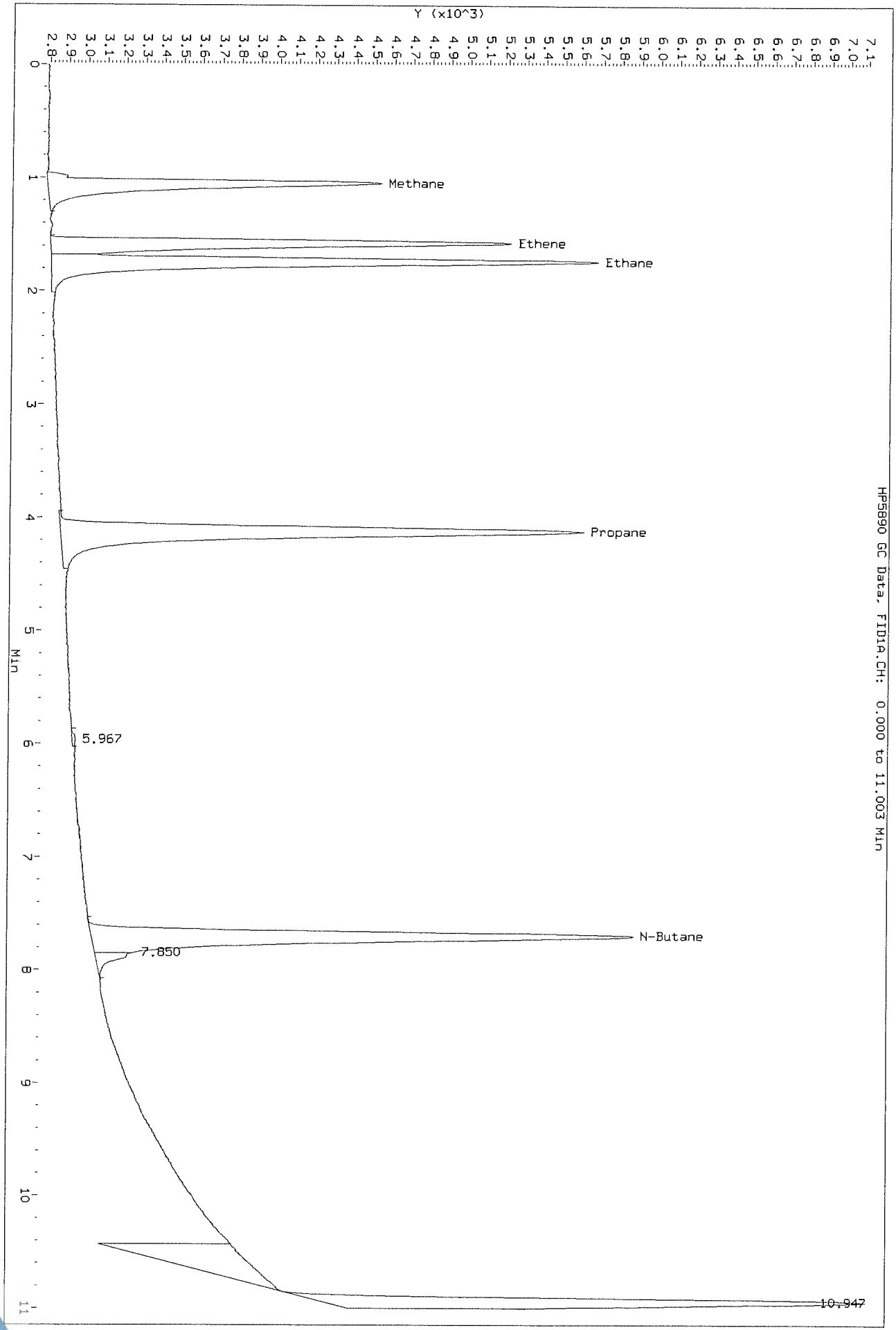
Instrument: FID-4.i

Operator: MA
Column diameter: 0.53




Data File: \\nahstws005\Target\chem\FID-4.i\2017-ICAL\170124.b\BEFORE\005.D
Injection Date: 24-JAN-2017 10:39
Instrument: FID-4.i
Client Sample ID: ICAL5
HP5890 GC Data, FID1A.CH; 0.000 to 11.003 Min
Y (x10^3)
Min
Methane
Ethene
Ethane
Propane
5.967
N-Butane
10.947

Data File: \\nahstws005\Target\chem\FID-4.i\2017-ICAL\170124.b\005.D
Injection Date: 24-JAN-2017 10:39
Instrument: FID-4.i
Client Sample ID: ICAL5



Data File: \\NAHSTWS005\Target\chem\FID-4.i\170124A.b\006.D Page 1
Report Date: 08-Apr-2020 12:18

ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\NAHSTWS005\Target\chem\FID-4.i\170124A.b\006.D
Lab Smp Id: ICAL6 Client Smp ID: ICAL6
Inj Date : 24-JAN-2017 10:57
Operator : MA Inst ID: FID-4.i
Smp Info : ICAL6;ICAL6;;;
Misc Info : ;1;0;1
Comment :
Method : \\nahstws005\Target\chem\FID-4.i\170124A.b\RSKNI2.m
Meth Date : 26-Feb-2020 16:33 Purvi.lad Quant Type: ESTD
Cal Date : 24-JAN-2017 10:39 Cal File: 005.D
Als bottle: 6 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: stdNIP2.sub
Target Version: 4.14

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

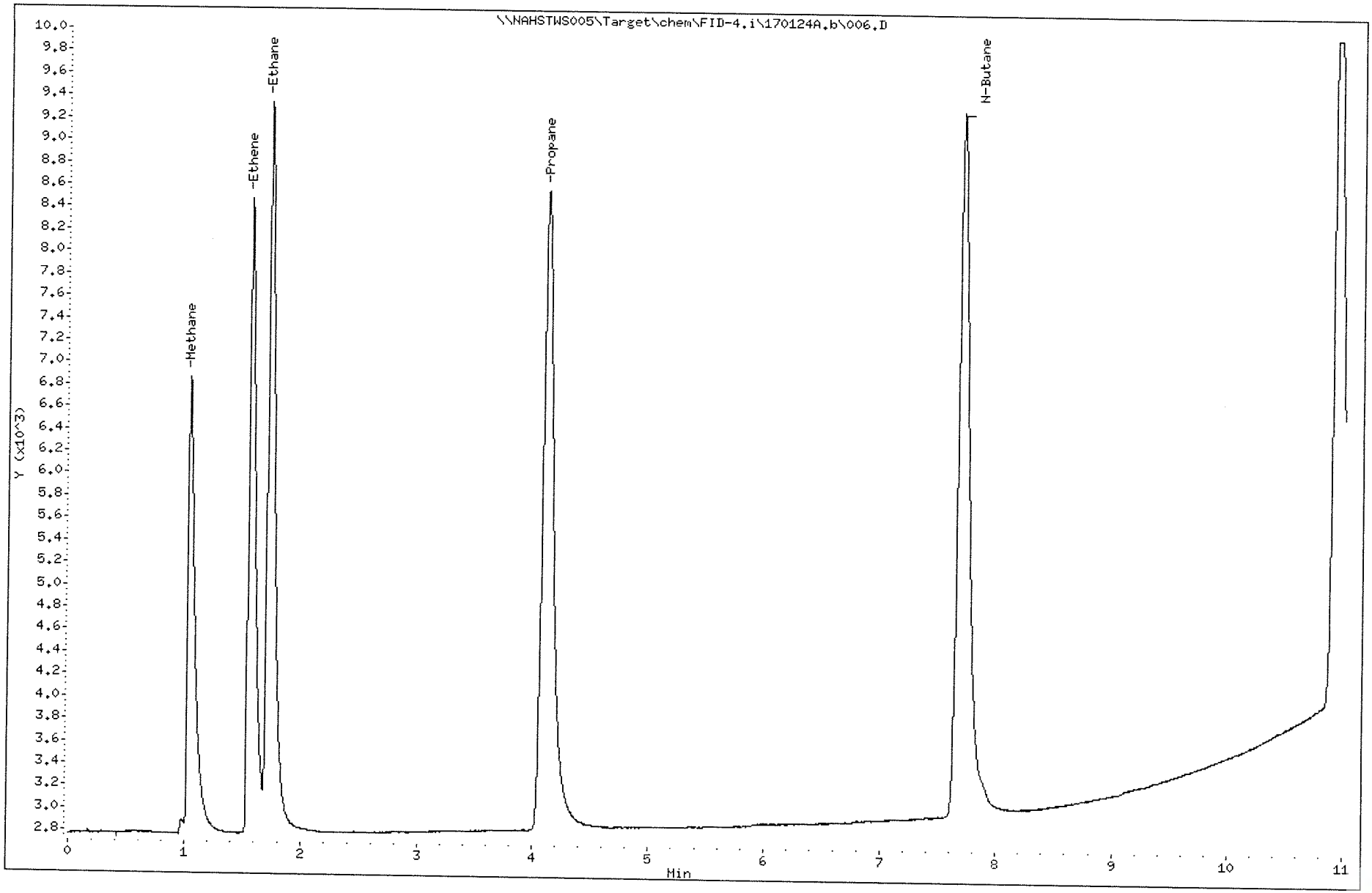
Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
1 Methane	1.023	1.030	-0.007	17957	19.2940	18.429
2 Ethene	1.550	1.556	-0.006	22910	53.8200	39.078
3 Ethane	1.716	1.723	-0.007	29505	36.0860	40.070
4 Propane	4.110	4.113	-0.003	38286	52.9260	52.796
5 N-Butane	7.696	7.690	0.006	42817	69.9110	70.855

Data File: \\NAHSTWS005\Target\chem\FID-4.i\170124A.b\006.D
Date : 24-JAN-2017 10:57
Client ID: ICAL6
Sample Info: ICAL6;ICAL6;;;

Column phase: Rtx-PLOT

Instrument: FID-4.i

Operator: MA
Column diameter: 0.53



Data File: \\NAHSTWS005\Target\chem\FID-4.i\170124A.b\007.D Page 1
Report Date: 08-Apr-2020 12:18

ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\NAHSTWS005\Target\chem\FID-4.i\170124A.b\007.D
Lab Smp Id: ICAL7 Client Smp ID: ICAL7
Inj Date : 24-JAN-2017 11:13
Operator : MA Inst ID: FID-4.i
Smp Info : ICAL7;ICAL7;;;
Misc Info : ;1;0;1
Comment :
Method : \\nahstws005\Target\chem\FID-4.i\170124A.b\RSKNI2.m
Meth Date : 26-Feb-2020 16:33 Purvi.lad Quant Type: ESTD
Cal Date : 24-JAN-2017 10:57 Cal File: 006.D
Als bottle: 7 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: stdNIP2.sub
Target Version: 4.14

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
1 Methane	1.030	1.030	0.000	41736	38.5880	42.833(A)
2 Ethene	1.556	1.556	0.000	55865	67.4000	95.291(A)
3 Ethane	1.723	1.723	0.000	72124	72.1720	97.951(A)
4 Propane	4.113	4.113	0.000	96509	105.852	105.844
5 N-Butane	7.690	7.690	0.000	114164	139.821	139.707

QC Flag Legend

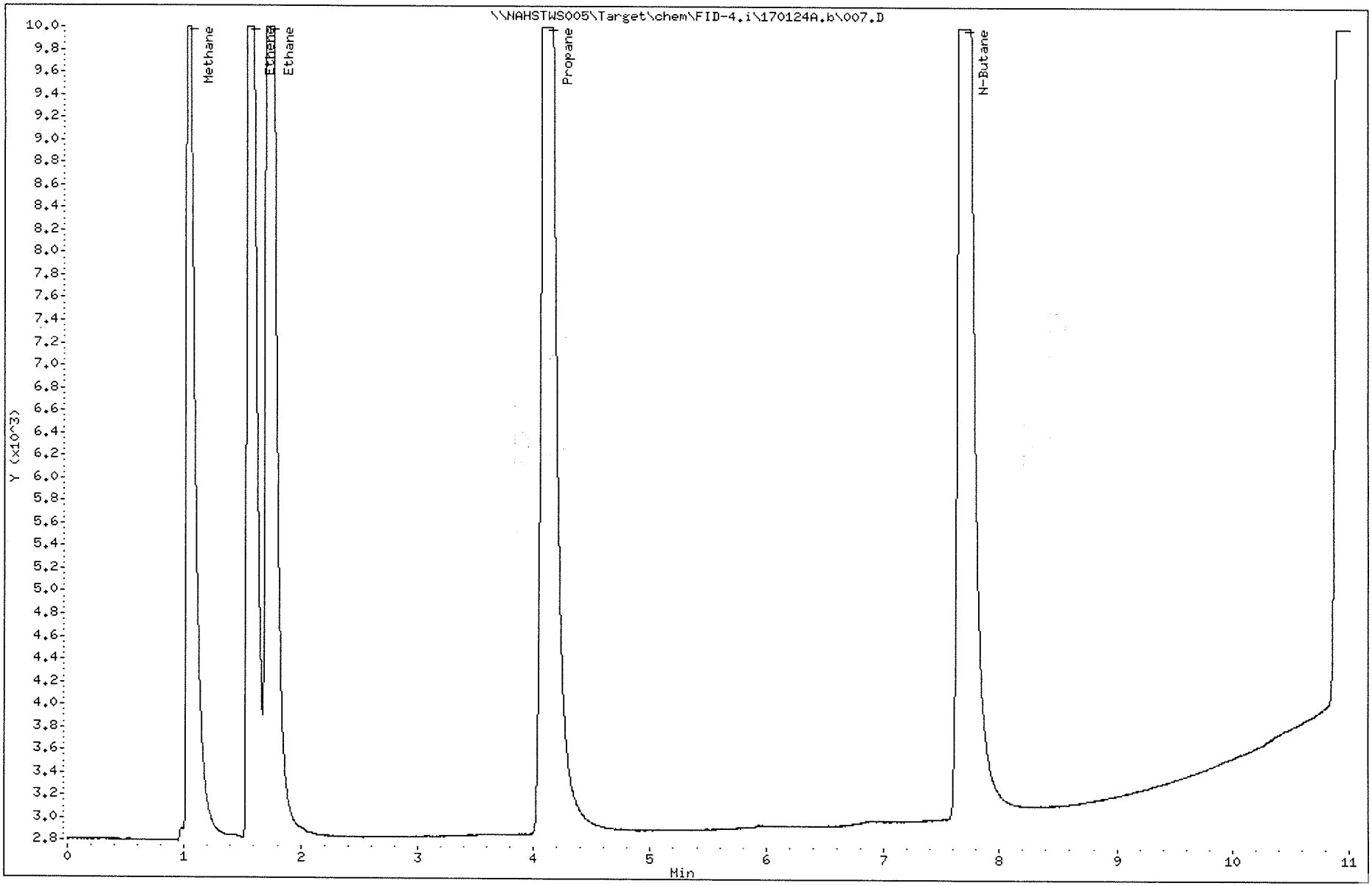
A - Target compound detected but, quantitated amount exceeded maximum amount.

Data File: \\NAHSTWS005\Target\chem\FID-4.i\170124A.b\007.D
Date : 24-JAN-2017 11:13
Client ID: ICAL7
Sample Info: ICAL7;ICAL7;;;

Column phase: Rtx-PLOT

Instrument: FID-4.i

Operator: MA
Column diameter: 0.53



Data File: \\NAHSTWS005\Target\chem\FID-4.i\170124A.b\008.D
Report Date: 08-Apr-2020 12:18

ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\NAHSTWS005\Target\chem\FID-4.i\170124A.b\008.D
Lab Smp Id: ICV Client Smp ID: ICV
Inj Date : 24-JAN-2017 12:05
Operator : MA Inst ID: FID-4.i
Smp Info : ICV;ICV;;;
Misc Info : ;1;0;1
Comment :
Method : \\NAHSTWS005\Target\chem\FID-4.i\170124A.b\RSKNI2.m
Meth Date : 26-Feb-2020 16:33 Purvi.lad Quant Type: ESTD
Cal Date : 24-JAN-2017 11:13 Cal File: 007.D
Als bottle: 8 QC Sample: METHSPIKE
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: stdNIP2.sub
Target Version: 4.14

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

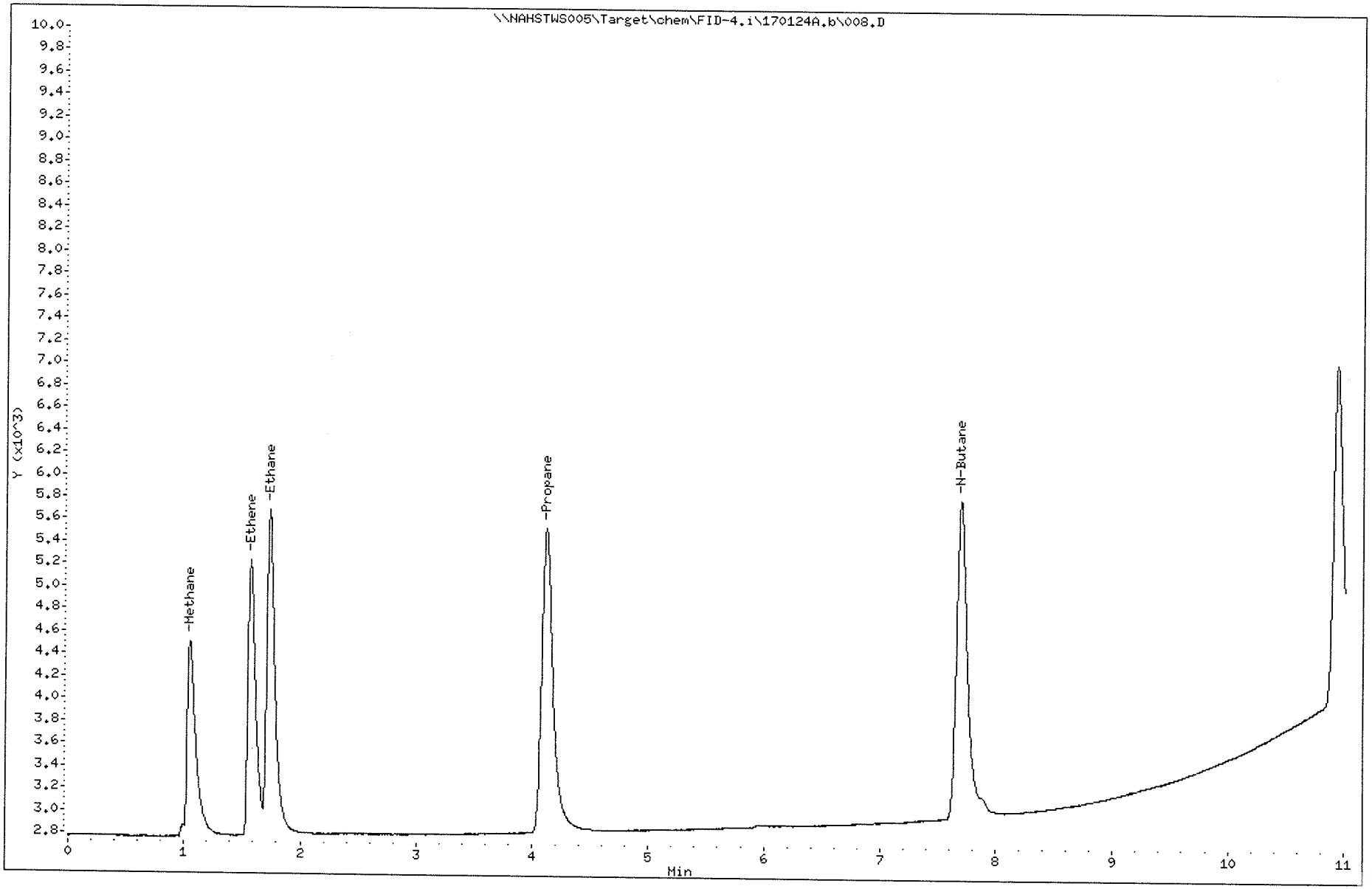
Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)
1 Methane	1.046	1.030	0.016	9352	9.59792	9.597
2 Ethene	1.573	1.556	0.017	11192	19.0906	19.090
3 Ethane	1.736	1.723	0.013	14474	19.6571	19.657
4 Propane	4.116	4.113	0.003	18164	27.2381	27.238
5 N-Butane	7.696	7.690	0.006	19425	36.0103	36.010

Data File: \\NAHSTWS005\Target\chem\FID-4.i\170124A.b\008.D
Date : 24-JAN-2017 12:05
Client ID: ICV
Sample Info: ICV;ICV;;;

Column phase: Rtx-PLOT

Instrument: FID-4.i

Operator: MA
Column diameter: 0.53



FID04 -Logbook

Batch: 44621 **Analyst:** Purvi Lad

Date: 04-27-2021 **Reviewer:**

Method: rsk175 dod **Laboratory:** Houston

Comments:

#	Samp ID	Type	Analyzed	DF	Init Wt/Vol	Final Vol	File ID	Matrix	Status	pH
1	RSK-CCV	CCV	04-27-2021 09:31 am	1.00	0.00 mL	0.00 mL	001.D	Liquid	Y	NA
2	MBLK-210427	MBLK	04-27-2021 09:48 am	1.00	0.00 mL	0.00 mL	002.D	Liquid	Y	NA
3	LCS-210427	LCS	04-27-2021 09:57 am	1.00	0.00 mL	0.00 mL	003.D	Liquid	Y	NA
4	LCSD-210427	LCSD	04-27-2021 10:08 am	1.00	0.00 mL	0.00 mL	004.D	Liquid	Y	NA
5	HS21041132-05	SAMP	04-27-2021 10:23 am	1.00	0.00 mL	0.00 mL	005.D	Liquid	Y	NA
6	HS21041132-05DUP	SAMP	04-27-2021 10:35 am	1.00	0.00 mL	0.00 mL	006.D	Liquid	Y	NA
7	HS21041102-01	SAMP	04-27-2021 10:58 am	1.00	0.00 mL	0.00 mL	007.D	Liquid	Y	NA
8	HS21041102-02	SAMP	04-27-2021 11:11 am	1.00	0.00 mL	0.00 mL	008.D	Liquid	Y	NA
9	HS21041102-03	SAMP	04-27-2021 11:23 am	1.00	0.00 mL	0.00 mL	009.D	Liquid	Y	NA
10	HS21041102-04	SAMP	04-27-2021 11:35 am	1.00	0.00 mL	0.00 mL	010.D	Liquid	Y	NA
11	RSK-CCV	CCV	04-27-2021 11:46 am	1.00	0.00 mL	0.00 mL	011.D	Liquid	Y	NA
12	HS21041102-05	SAMP	04-27-2021 12:01 pm	1.00	0.00 mL	0.00 mL	012.D	Liquid	Y	NA
13	HS21041102-07	SAMP	04-27-2021 12:15 pm	1.00	0.00 mL	0.00 mL	013.D	Liquid	Y	NA
14	HS21041102-08	SAMP	04-27-2021 12:27 pm	1.00	0.00 mL	0.00 mL	014.D	Liquid	Y	NA
15	HS21041102-09	SAMP	04-27-2021 12:38 pm	1.00	0.00 mL	0.00 mL	015.D	Liquid	Y	NA
16	HS21041102-10	SAMP	04-27-2021 12:48 pm	1.00	0.00 mL	0.00 mL	016.D	Liquid	Y	NA
17	HS21041102-08	SAMP	04-27-2021 12:58 pm	25.00	0.00 mL	0.00 mL	017.D	Liquid	Y	NA
18	HS21041102-09	SAMP	04-27-2021 01:08 pm	10.00	0.00 mL	0.00 mL	018.D	Liquid	Y	NA
19	HS21041102-10	SAMP	04-27-2021 01:58 pm	100.0(	0.00 mL	0.00 mL	019.D	Liquid	Y	NA
20	HS21041276-09	SAMP	04-27-2021 02:15 pm	1.00	0.00 mL	0.00 mL	020.D	Liquid	Y	NA
21	HS21041276-10	SAMP	04-27-2021 02:22 pm	1.00	0.00 mL	0.00 mL	021.D	Liquid	Y	NA
22	RSK-CCV	CCV	04-27-2021 02:34 pm	1.00	0.00 mL	0.00 mL	022.D	Liquid	Y	NA
23	HS21041276-13	SAMP	04-27-2021 02:44 pm	1.00	0.00 mL	0.00 mL	023.D	Liquid	Y	NA
24	HS21041276-16	SAMP	04-27-2021 02:59 pm	1.00	0.00 mL	0.00 mL	024.D	Liquid	Y	NA
25	HS21041276-19	SAMP	04-27-2021 03:07 pm	1.00	0.00 mL	0.00 mL	025.D	Liquid	Y	NA
26	HS21041276-25	SAMP	04-27-2021 03:24 pm	1.00	0.00 mL	0.00 mL	026.D	Liquid	Y	NA
27	HS21041276-10	SAMP	04-27-2021 03:38 pm	1.00	0.00 mL	0.00 mL	027.D	Liquid	Y	NA
28	HS21041197-01	SAMP	04-27-2021 03:50 pm	1.00	0.00 mL	0.00 mL	028.D	Liquid	Y	NA
29	HS21041255-05	SAMP	04-27-2021 04:00 pm	1.00	0.00 mL	0.00 mL	029.D	Liquid	Y	NA
30	HS21041255-07	SAMP	04-27-2021 04:08 pm	1.00	0.00 mL	0.00 mL	030.D	Liquid	Y	NA
31	HS21041197-01	SAMP	04-27-2021 04:22 pm	1.00	0.00 mL	0.00 mL	031.D	Liquid	Y	NA
32	HS21041255-05	SAMP	04-27-2021 04:49 pm	200.0(	0.00 mL	0.00 mL	032.D	Liquid	Y	NA
33	RSK-CCV	CCV	04-27-2021 05:02 pm	1.00	0.00 mL	0.00 mL	033.D	Liquid	Y	NA

Chemical	Value
pH Paper	300107057-07
CCV/LC/LSD/MS/MSD	300107043-11

FORM 7B
GASES CALIBRATION VERIFICATION SUMMARY

Lab Name: ALS HOUSTON Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS21041102

Instrument ID: FID-4 Calibration Date: 04/27/21 Time: 0931

Lab File ID: 001 Init. Calib. Date(s): 01/24/17 01/24/17

Init. Calib. Times: 0906 1113

GC Column: RTX-PLOT ID: 0.53 (mm)

COMPOUND	RRF OR AMOUNT	RRF250.00 OR AMOUNT	MIN RRF	%D OR %DRIFT	MAX %D OR %DRIFT	CURV TYPE
Ethane	719.48900	859.39145	0.01	-19.44	20.00	AVRG
Methane	974.99200	959.46927	0.01	1.59	20.00	AVRG
Ethene	585.76000	633.41246	0.01	-8.14	20.00	AVRG

FORM VII GASES

FORM 7B
GASES CALIBRATION VERIFICATION SUMMARY

Lab Name: ALS HOUSTON Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS21041102

Instrument ID: FID-4 Calibration Date: 04/27/21 Time: 1146

Lab File ID: 011 Init. Calib. Date(s): 01/24/17 01/24/17

Init. Calib. Times: 0906 1113

GC Column: RTX-PLOT ID: 0.53 (mm)

COMPOUND	RRF OR AMOUNT	RRF250.00 OR AMOUNT	MIN RRF	%D OR %DRIFT	MAX %D OR %DRIFT	CURV TYPE
Ethane	719.48900	816.21682	0.01	-13.44	20.00	AVRG
Methane	974.99200	928.78615	0.01	4.74	20.00	AVRG
Ethene	585.76000	608.24926	0.01	-3.84	20.00	AVRG

FORM VII GASES

FORM 7B
GASES CALIBRATION VERIFICATION SUMMARY

Lab Name: ALS HOUSTON Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS21041102

Instrument ID: FID-4 Calibration Date: 04/27/21 Time: 1434

Lab File ID: 022 Init. Calib. Date(s): 01/24/17 01/24/17

Init. Calib. Times: 0906 1113

GC Column: RTX-PLOT ID: 0.53 (mm)

COMPOUND	RRF OR AMOUNT	RRF250.00 OR AMOUNT	MIN RRF	%D OR %DRIFT	MAX %D OR %DRIFT	CURV TYPE
Ethane	719.48900	807.73707	0.01	-12.26	20.00	AVRG
Methane	974.99200	936.24961	0.01	3.97	20.00	AVRG
Ethene	585.76000	611.45401	0.01	-4.39	20.00	AVRG

FORM VII GASES

ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\nahstws005\Target\chem\FID-4.i\210427.b\001.D
Lab Smp Id: RSK-CCV Client Smp ID: RSK-CCV
Inj Date : 27-APR-2021 09:31
Operator : PL Inst ID: FID-4.i
Smp Info : RSK-CCV;RSK-CCV;2;4
Misc Info : ;1;0;1
Comment :
Method : \\nahstws005\Target\chem\FID-4.i\210427.b\RSKNI3.m
Meth Date : 20-May-2021 12:45 FID-4.i Quant Type: ESTD
Cal Date : 24-JAN-2017 10:15 Cal File: 004.D
Als bottle: 1 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: RSK175.sub
Target Version: 4.14
Processing Host: NAHSTW7056

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

					AMOUNTS	
					CAL-AMT	ON-COL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/L)	(ug/L)
1 Methane	0.460	0.460	0.000	9256	9.64700	9.493
2 Ethene	0.703	0.703	0.000	10673	16.8500	18.220(M)
3 Ethane	0.783	0.783	0.000	15506	18.0430	21.551

QC Flag Legend

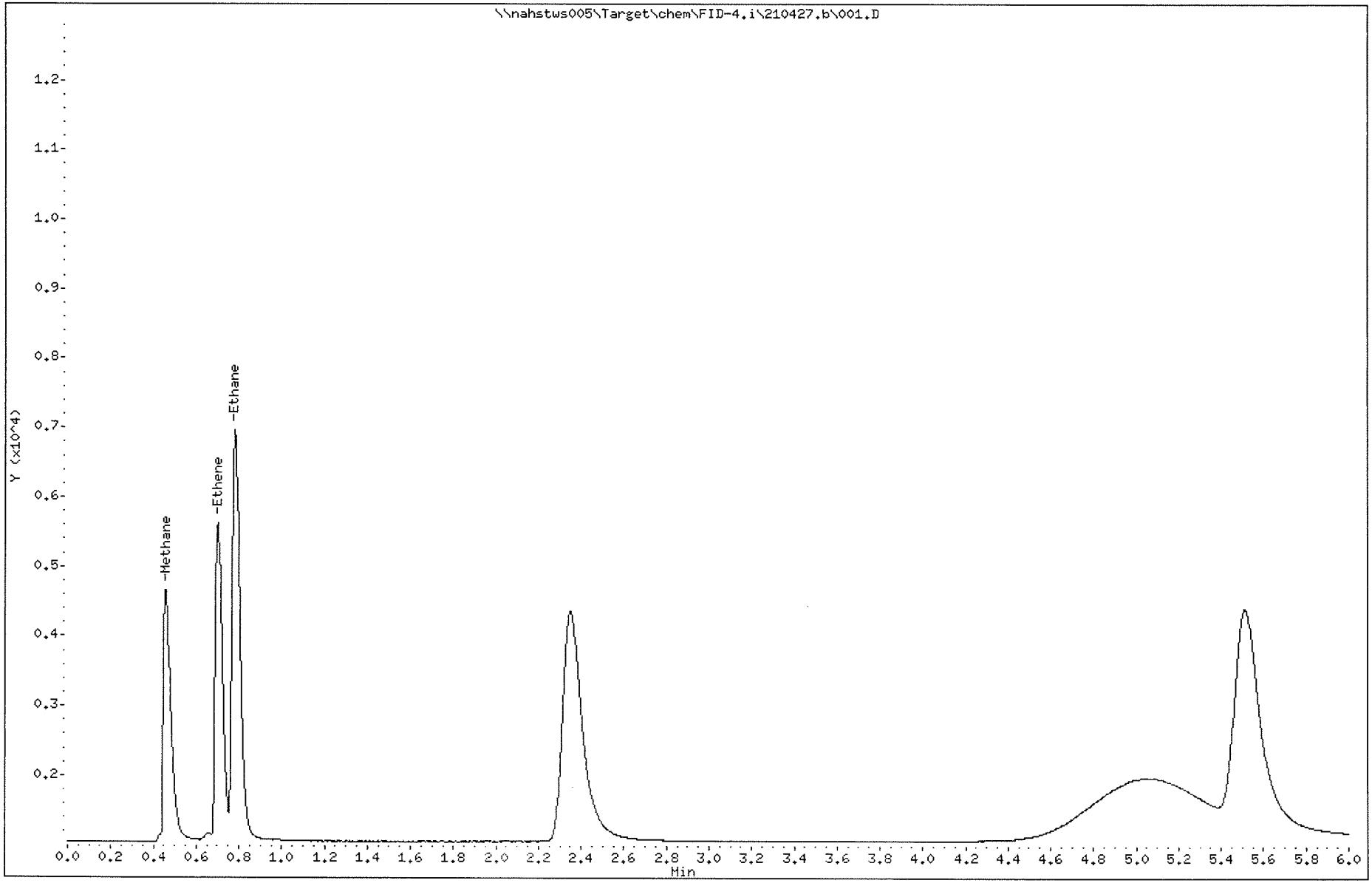
M - Compound response manually integrated.

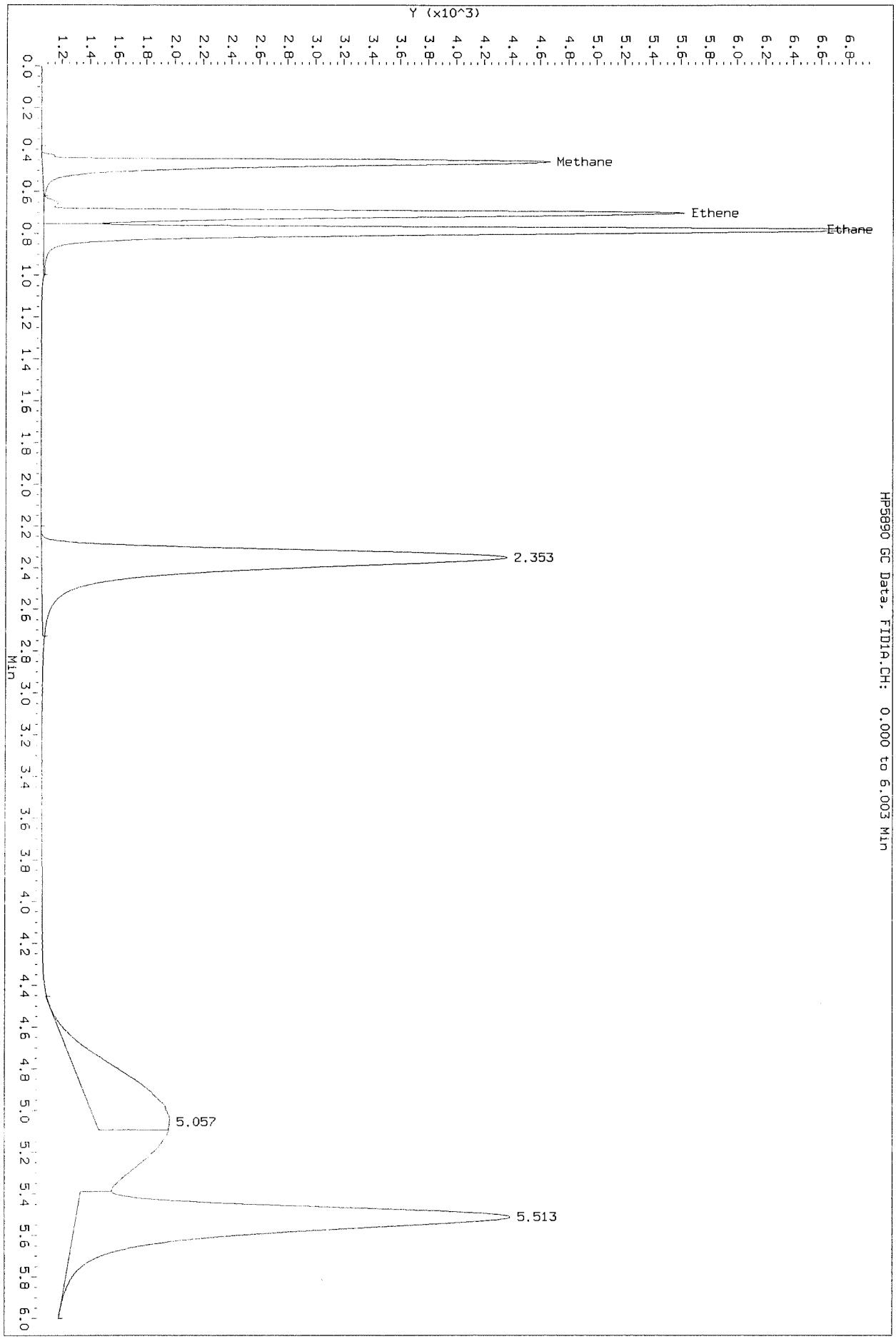
Data File: \\nahstws005\Target\chem\FID-4.i\210427.b\001.D
Date : 27-APR-2021 09:31
Client ID: RSK-CCV
Sample Info: RSK-CCV;RSK-CCV;2;4

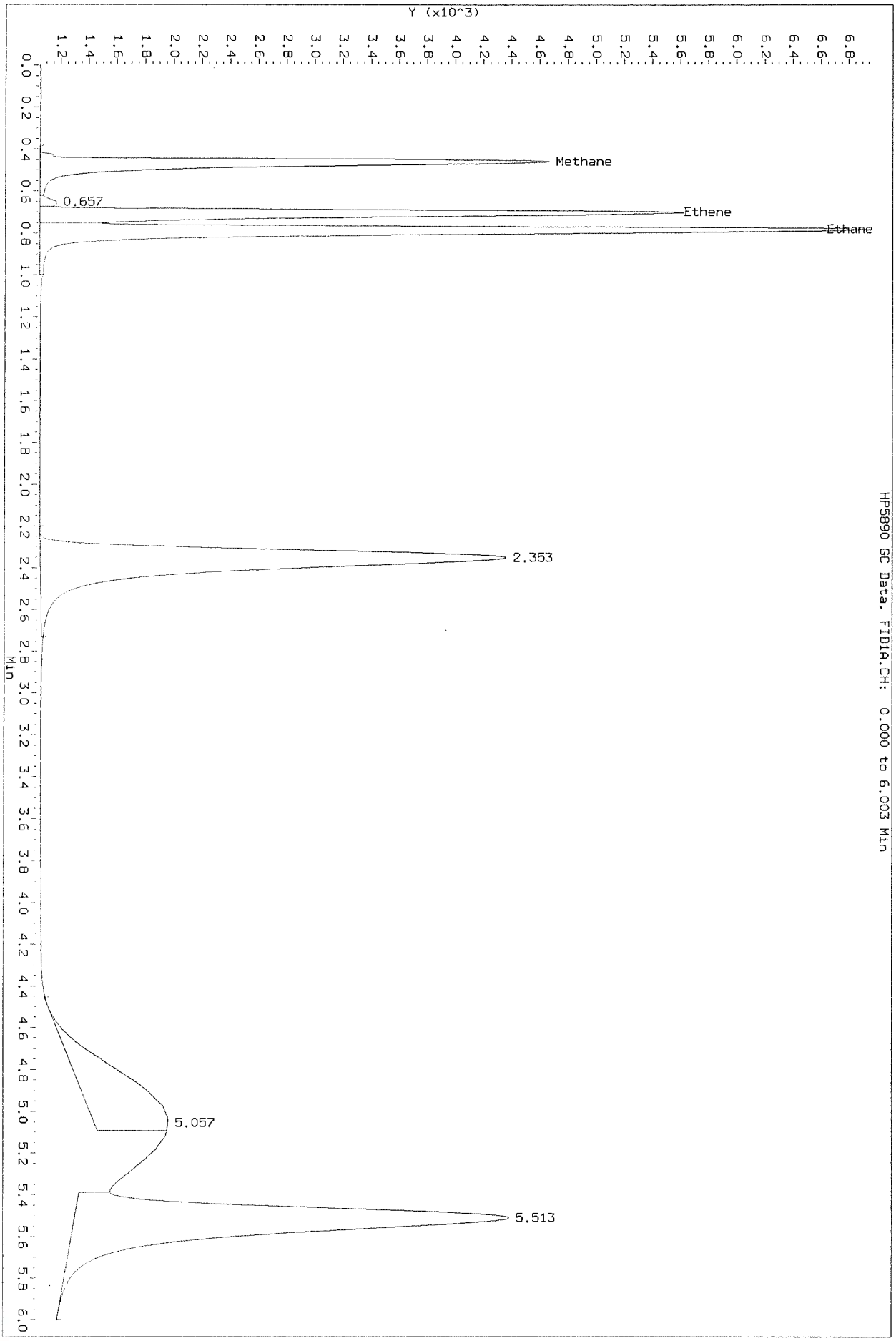
Column phase: Rtx-PLOT

Instrument: FID-4.i

Operator: PL
Column diameter: 0.53




Data File: \\nahstws005\Target\chem\FID-4.i\210427.b\Before\001.D
Injection Date: 27-APR-2021 09:31
Instrument: FID-4.i
Client Sample ID: RSK-CCV
HP5890 GC Data, FID1A.CH: 0.000 to 6.003 Min
Y (x10^3)
Min
Methane
Ethene
Ethane
2.353
5.057
5.513


Data File: \\nahstws005\Target\chem\FID-4.i\210427.b\001.D
Injection Date: 27-APR-2021 09:31
Instrument: FID-4.i
Client Sample ID: RSK-CCV
HP5890 GC Data, FID1A.CH: 0.000 to 6.003 Min
Y (x10^3)
Min
Methane
0.657
Ethene
Ethane
2.353
5.057
5.513

ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\nahstws005\Target\chem\FID-4.i\210427.b\002.D
Lab Smp Id: MBLK-210427 Client Smp ID: MBLK-210427
Inj Date : 27-APR-2021 09:48
Operator : PL Inst ID: FID-4.i
Smp Info : MBLK-210427;MBLK-210427;3;;BLANK
Misc Info : ;1;0;1
Comment :
Method : \\nahstws005\Target\chem\FID-4.i\210427.b\RSKNI3.m
Meth Date : 20-May-2021 12:45 FID-4.i Quant Type: ESTD
Cal Date : 24-JAN-2017 10:15 Cal File: 004.D
Als bottle: 2 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: RSK175.sub
Target Version: 4.14
Processing Host: NAHSTW7056

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

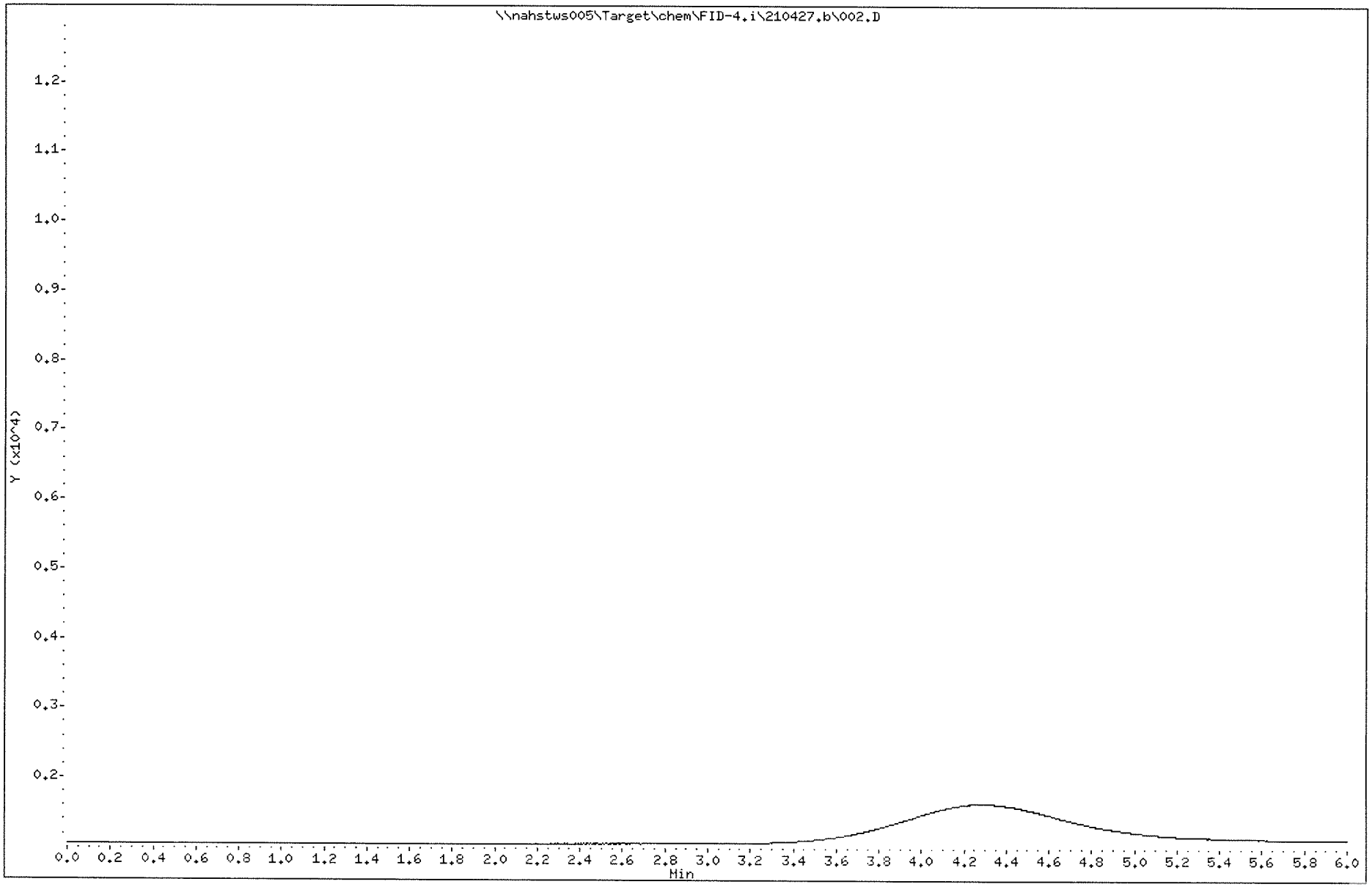
Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)

Data File: \\nahstws005\Target\chem\FID-4.i\210427.b\002.D
Date : 27-APR-2021 09:48
Client ID: MBLK-210427
Sample Info: MBLK-210427;MBLK-210427;3;;BLANK

Column phase: Rtx-PLOT

Instrument: FID-4.i

Operator: PL
Column diameter: 0.53



ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\nahstws005\Target\chem\FID-4.i\210427.b\003.D
Lab Smp Id: LCS-210427 Client Smp ID: LCS-210427
Inj Date : 27-APR-2021 09:57
Operator : PL Inst ID: FID-4.i
Smp Info : LCS-210427;LCS-210427;3;;LCS
Misc Info : ;1;0;1
Comment :
Method : \\nahstws005\Target\chem\FID-4.i\210427.b\RSKNI3.m
Meth Date : 20-May-2021 12:45 FID-4.i Quant Type: ESTD
Cal Date : 24-JAN-2017 10:15 Cal File: 004.D
Als bottle: 3 QC Sample: LCS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: RSK175.sub
Target Version: 4.14
Processing Host: NAHSTW7056

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

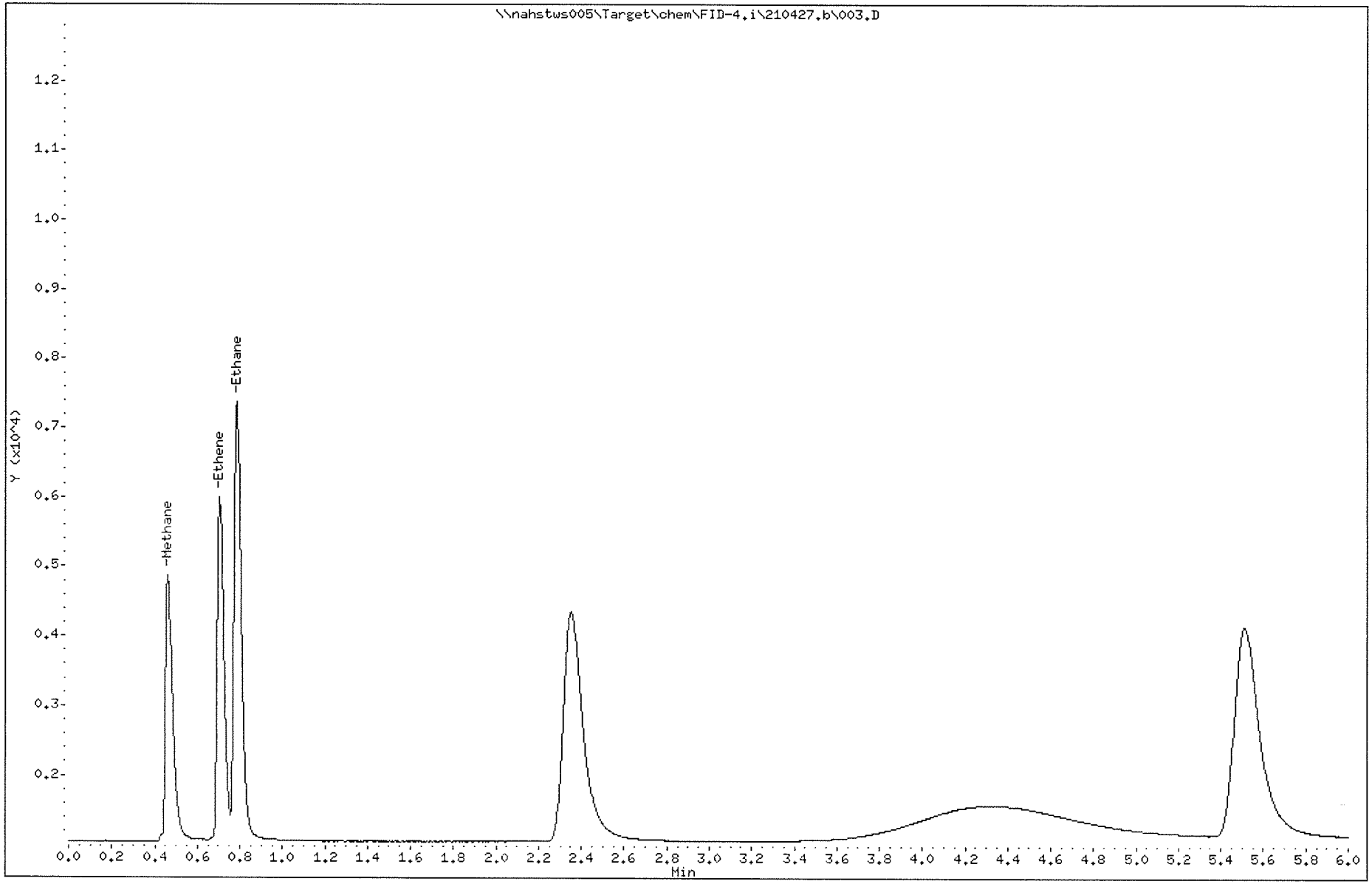
Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)
1 Methane	0.463	0.460	0.003	9127	9.36110	9.361
2 Ethene	0.706	0.703	0.003	10755	18.3607	18.360
3 Ethane	0.786	0.783	0.003	15384	21.3818	21.381

Data File: \\nahstws005\Target\chem\FID-4.i\210427.b\003.D
Date : 27-APR-2021 09:57
Client ID: LCS-210427
Sample Info: LCS-210427;LCS-210427;3;;LCS

Column phase: Rtx-PLOT

Instrument: FID-4.i

Operator: PL
Column diameter: 0.53



ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\nahstws005\Target\chem\FID-4.i\210427.b\004.D
Lab Smp Id: LCSD-210427 Client Smp ID: LCSD-210427
Inj Date : 27-APR-2021 10:08
Operator : PL Inst ID: FID-4.i
Smp Info : LCSD-210427;LCSD-210427;3;;LCSD
Misc Info : ;1;0;1
Comment :
Method : \\nahstws005\Target\chem\FID-4.i\210427.b\RSKNI3.m
Meth Date : 20-May-2021 12:45 FID-4.i Quant Type: ESTD
Cal Date : 24-JAN-2017 10:15 Cal File: 004.D
Als bottle: 4 QC Sample: LCSD
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: RSK175.sub
Target Version: 4.14
Processing Host: NAHSTW7056

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
1 Methane	0.470	0.460	0.010	9552	9.79700	9.797
2 Ethene	0.713	0.703	0.010	10416	17.7820	17.782(M)
3 Ethane	0.793	0.783	0.010	15025	20.8829	20.882

QC Flag Legend

M - Compound response manually integrated.

Data File: \\nahstws005\Target\chem\FID-4.i\210427.b\004.D

Date : 27-APR-2021 10:08

Client ID: LCSD-210427

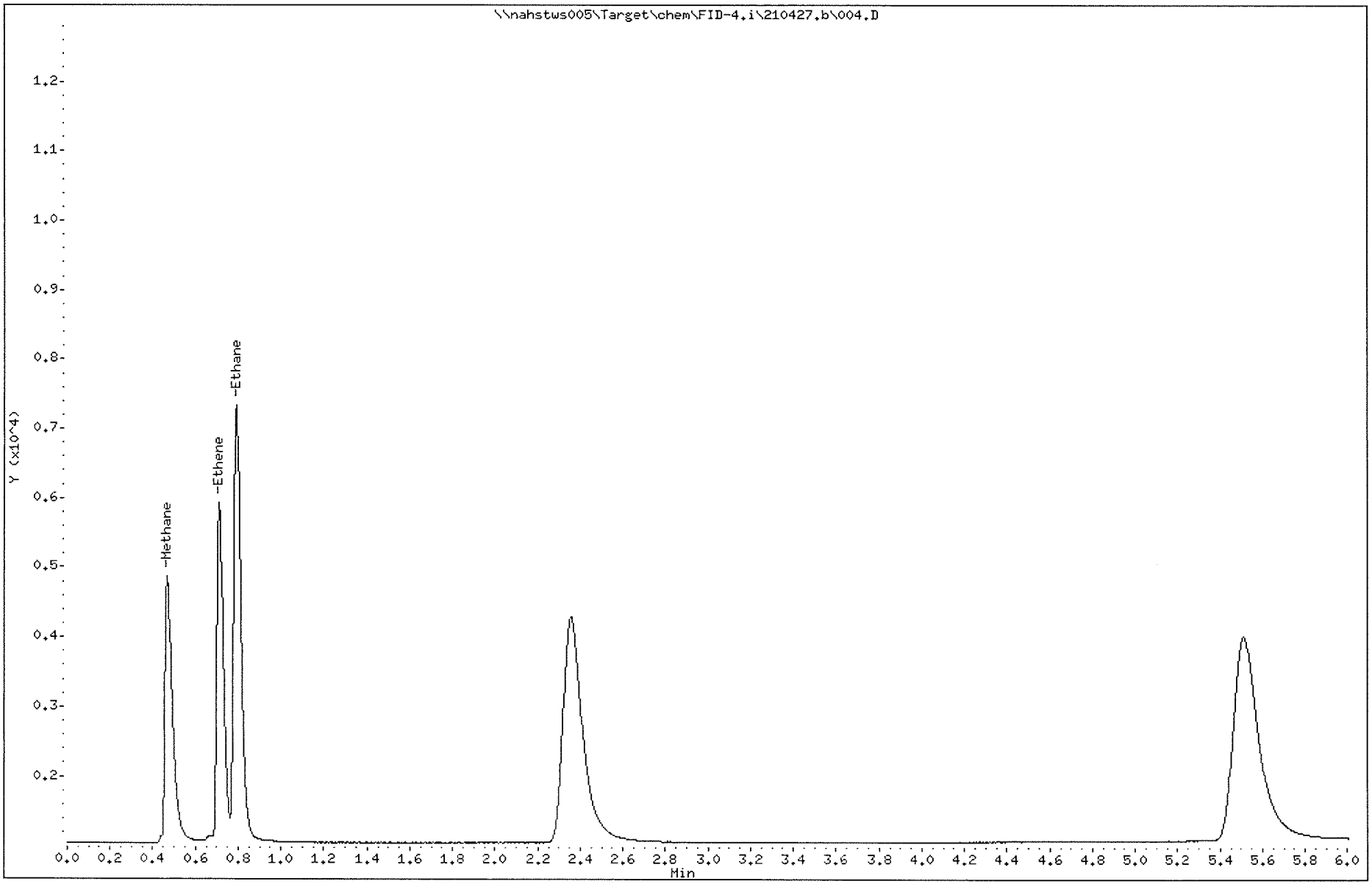
Instrument: FID-4.i

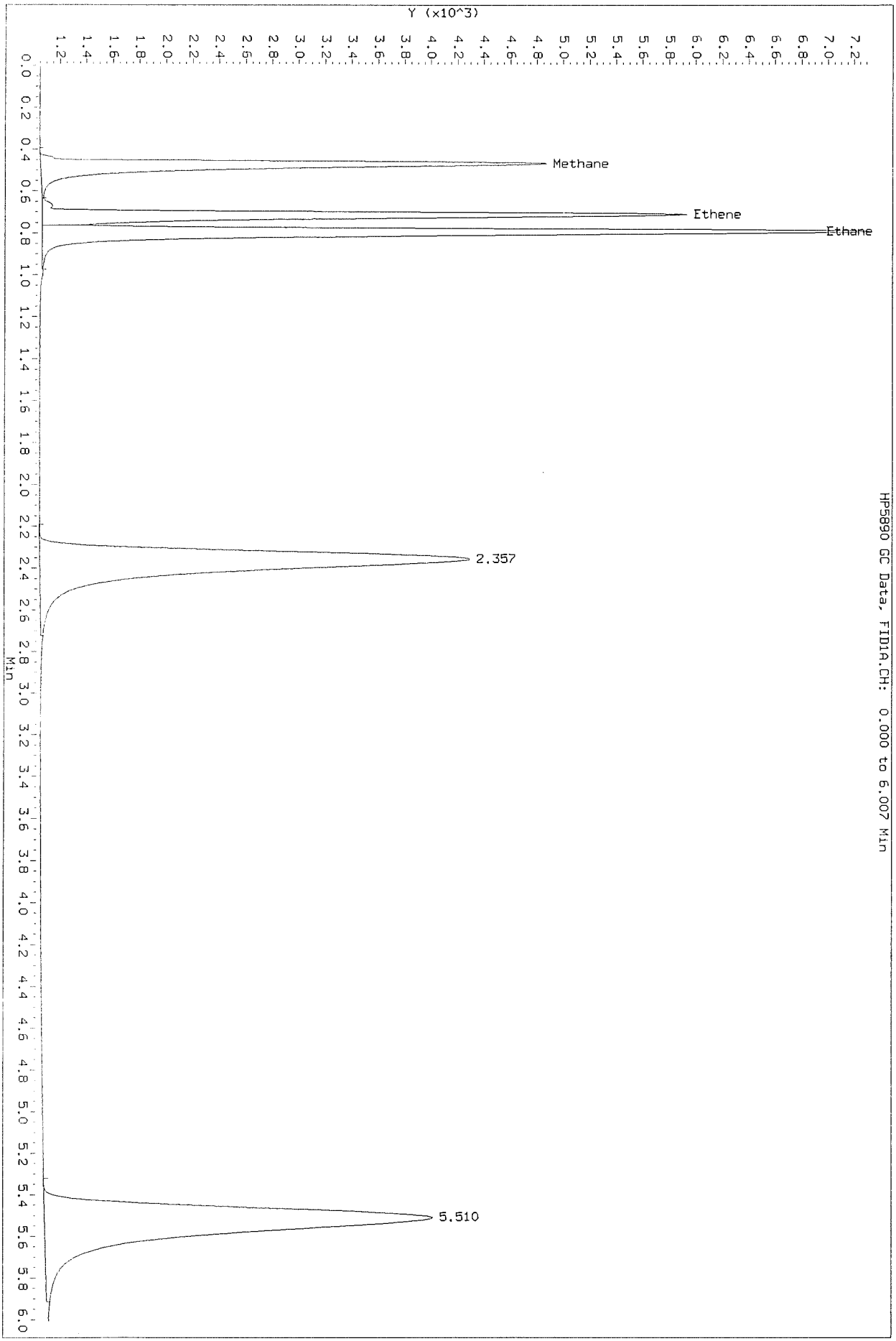
Sample Info: LCSD-210427;LCSD-210427;3;;LCSD

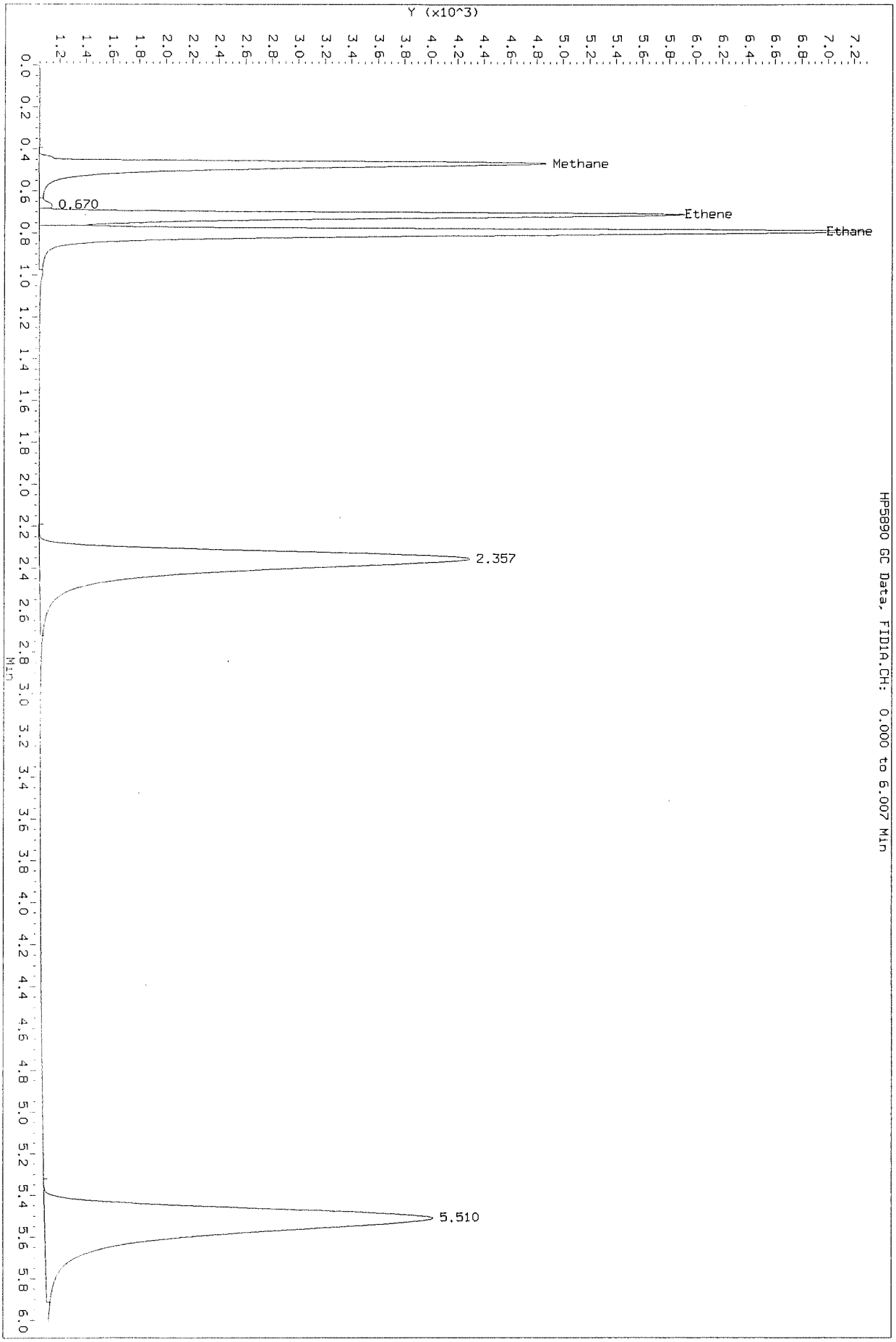
Operator: PL

Column phase: Rtx-PLOT

Column diameter: 0.53




Data File: \\nahstws005\Target\chem\FID-4.i\210427.b\Before\004.D
Injection Date: 27-APR-2021 10:08
Instrument: FID-4.i
Client Sample ID: LCSD-210427
HP5890 GC Data, FIDIA.CH: 0.000 to 6.007 Min
Y (x10^3)
Methane
Ethene
Ethane
2.357
5.510
Min


Data File: \\nahstws005\Target\chem\FID-4.i\210427.b\004.D
Injection Date: 27-APR-2021 10:08
Instrument: FID-4.i
Client Sample ID: LCSD-210427
HP5890 GC Data, FID1A.CH: 0.000 to 6.007 Min
Y (x10^3)
Min
Methane
0.670
Ethene
Ethane
2.357
5.510

ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\nahstws005\Target\chem\FID-4.i\210427.b\007.D
Lab Smp Id: HS21041102-01 Client Smp ID: HS21041102-01
Inj Date : 27-APR-2021 10:58
Operator : PL Inst ID: FID-4.i
Smp Info : HS21041102-01;HS21041102-01
Misc Info : ;1;0;1
Comment :
Method : \\nahstws005\Target\chem\FID-4.i\210427.b\RSKNI3.m
Meth Date : 20-May-2021 12:45 FID-4.i Quant Type: ESTD
Cal Date : 24-JAN-2017 10:15 Cal File: 004.D
Als bottle: 7
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: RSK175.sub
Target Version: 4.14
Processing Host: NAHSTW7056

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

					CONCENTRATIONS	
					ON-COLUMN	FINAL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/L)	(ug/L)
1 Methane	0.463	0.460	0.003	16319	16.7376	16.737(M)

QC Flag Legend

M - Compound response manually integrated.

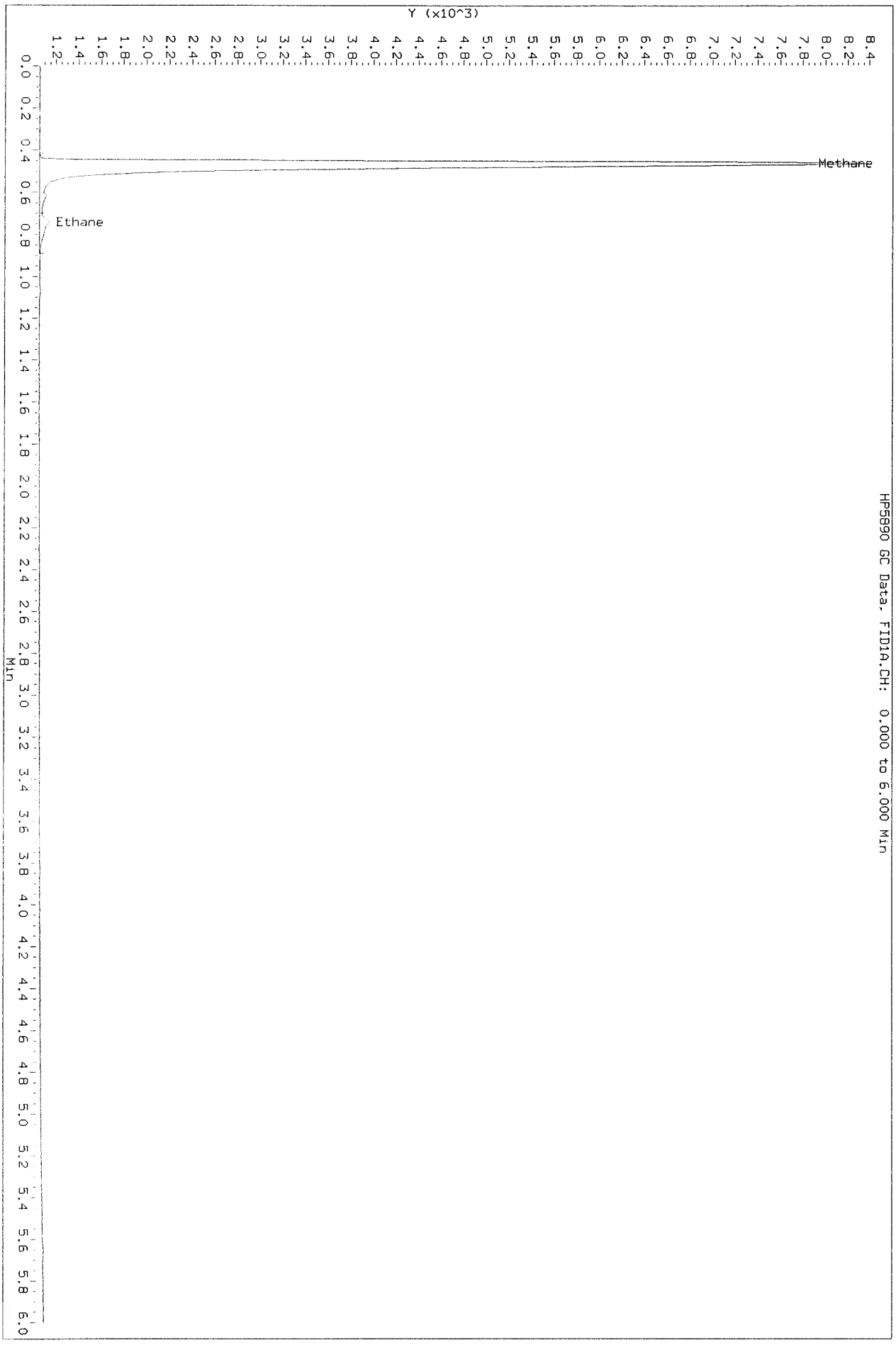
Data File: \\nahstws005\Target\chem\FID-4.i\210427.b\007.D
Date : 27-APR-2021 10:58
Client ID: HS21041102-01
Sample Info: HS21041102-01;HS21041102-01

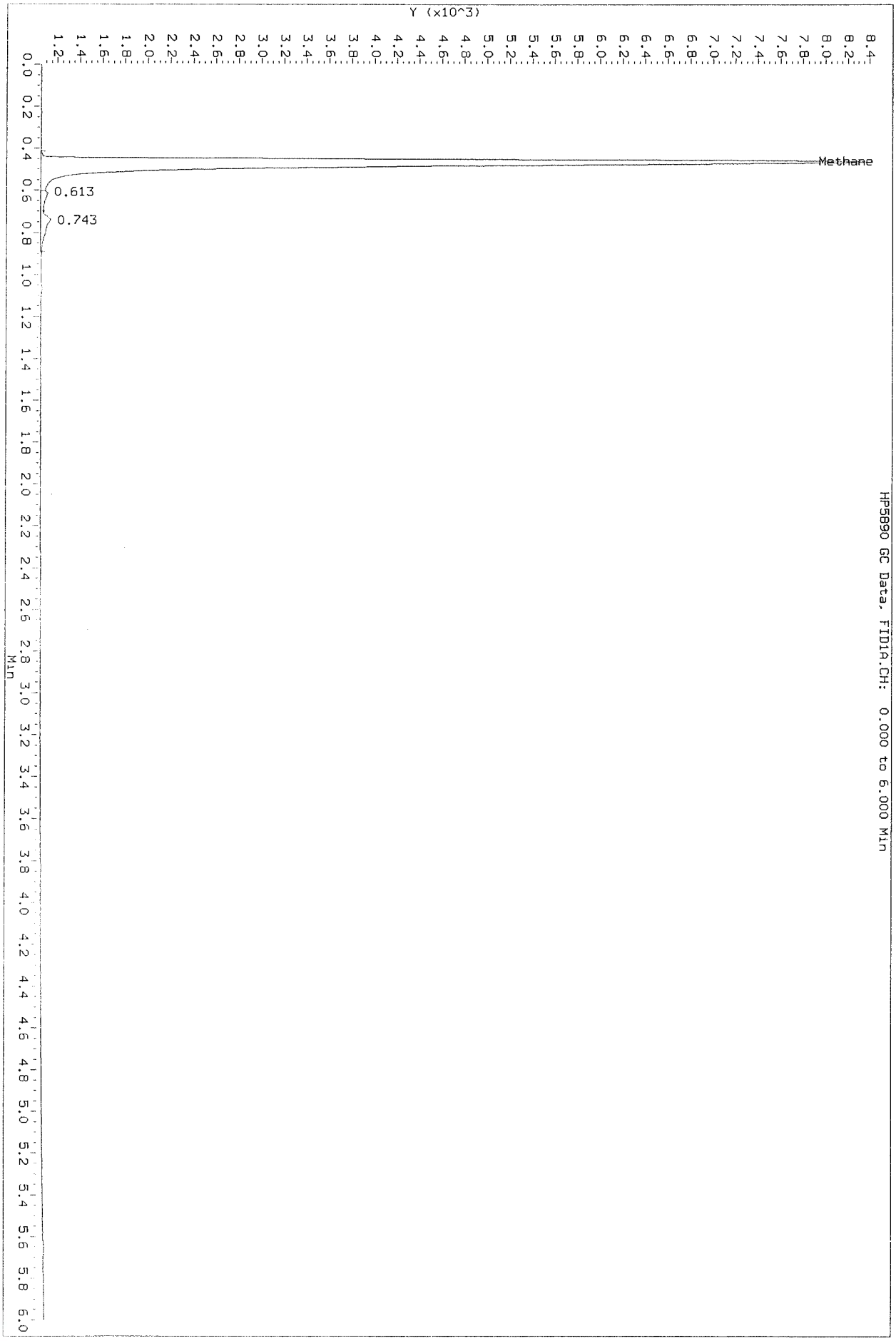
Column phase: Rtx-PLOT

Instrument: FID-4.i

Operator: PL
Column diameter: 0.53




Data File: \\nahstws005\Target\chem\FID-4.i\210427.b\Before\007.D
Injection Date: 27-APR-2021 10:58
Instrument: FID-4.i
Client Sample ID: HS21041102-01
HP5890 GC Data, FID1A.CH: 0.000 to 6.000 Min
Y (x10^3)
Methane
Ethane
Min


Data File: \\nahstws005\Target\chem\FID-4.i\210427.b\007.D
Injection Date: 27-APR-2021 10:58
Instrument: FID-4.i
Client Sample ID: HS2104110Z-01
HP5890 GC Data, FID1A.CH: 0.000 to 6.000 Min
Y (x10^3)
Min
Methane
0.613
0.743

ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\nahstws005\Target\chem\FID-4.i\210427.b\008.D
Lab Smp Id: HS21041102-02 Client Smp ID: HS21041102-02
Inj Date : 27-APR-2021 11:11
Operator : PL Inst ID: FID-4.i
Smp Info : HS21041102-02;HS21041102-02
Misc Info : ;1;0;1
Comment :
Method : \\nahstws005\Target\chem\FID-4.i\210427.b\RSKNI3.m
Meth Date : 20-May-2021 12:45 FID-4.i Quant Type: ESTD
Cal Date : 24-JAN-2017 10:15 Cal File: 004.D
Als bottle: 8
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: RSK175.sub
Target Version: 4.14
Processing Host: NAHSTW7056

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)
1 Methane	0.460	0.460	0.000	14935	15.3181	15.318(M)

QC Flag Legend

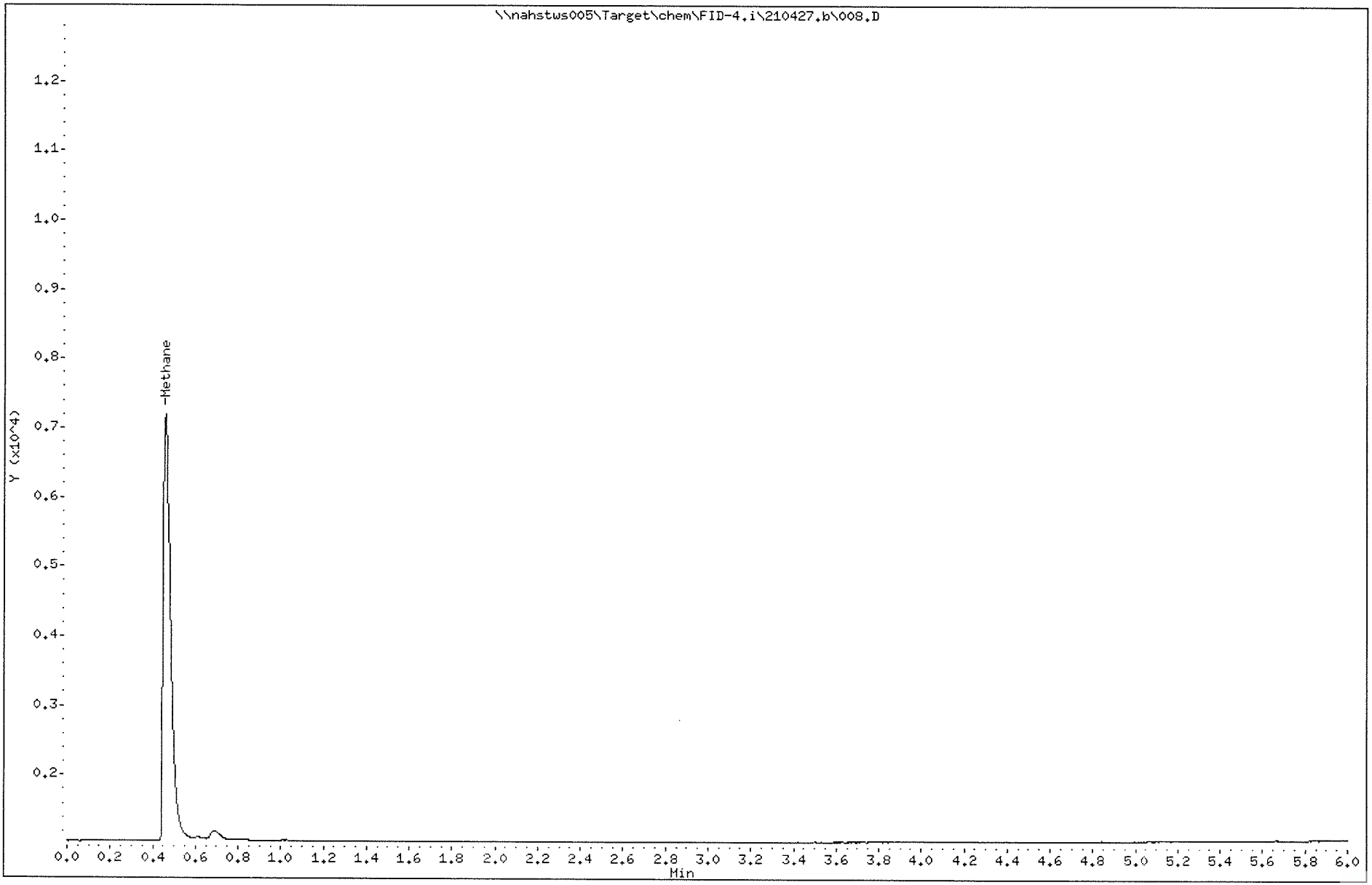
M - Compound response manually integrated.

Data File: \\nahstws005\Target\chem\FID-4.i\210427.b\008.D
Date : 27-APR-2021 11:11
Client ID: HS21041102-02
Sample Info: HS21041102-02;HS21041102-02

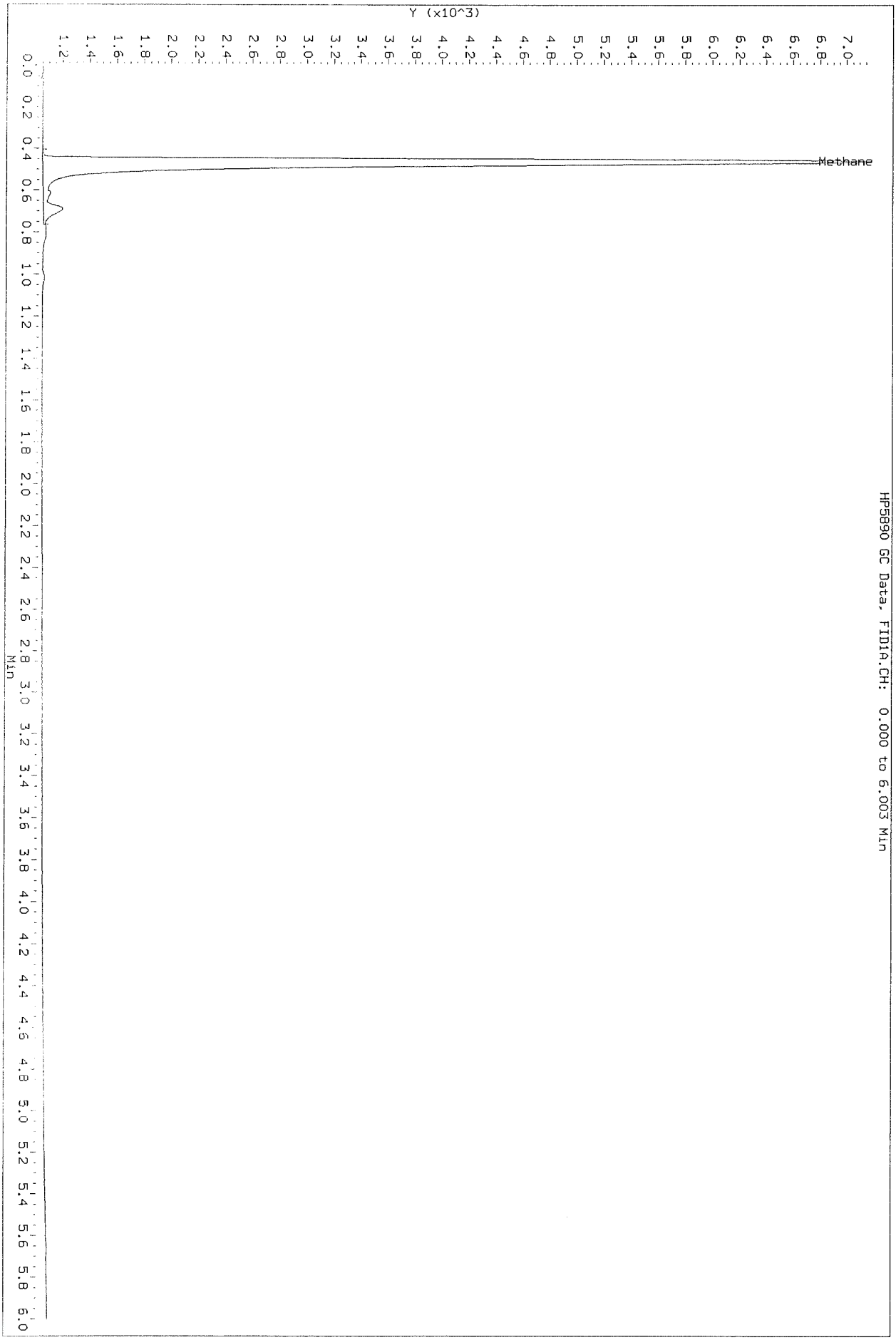
Column phase: Rtx-PLOT

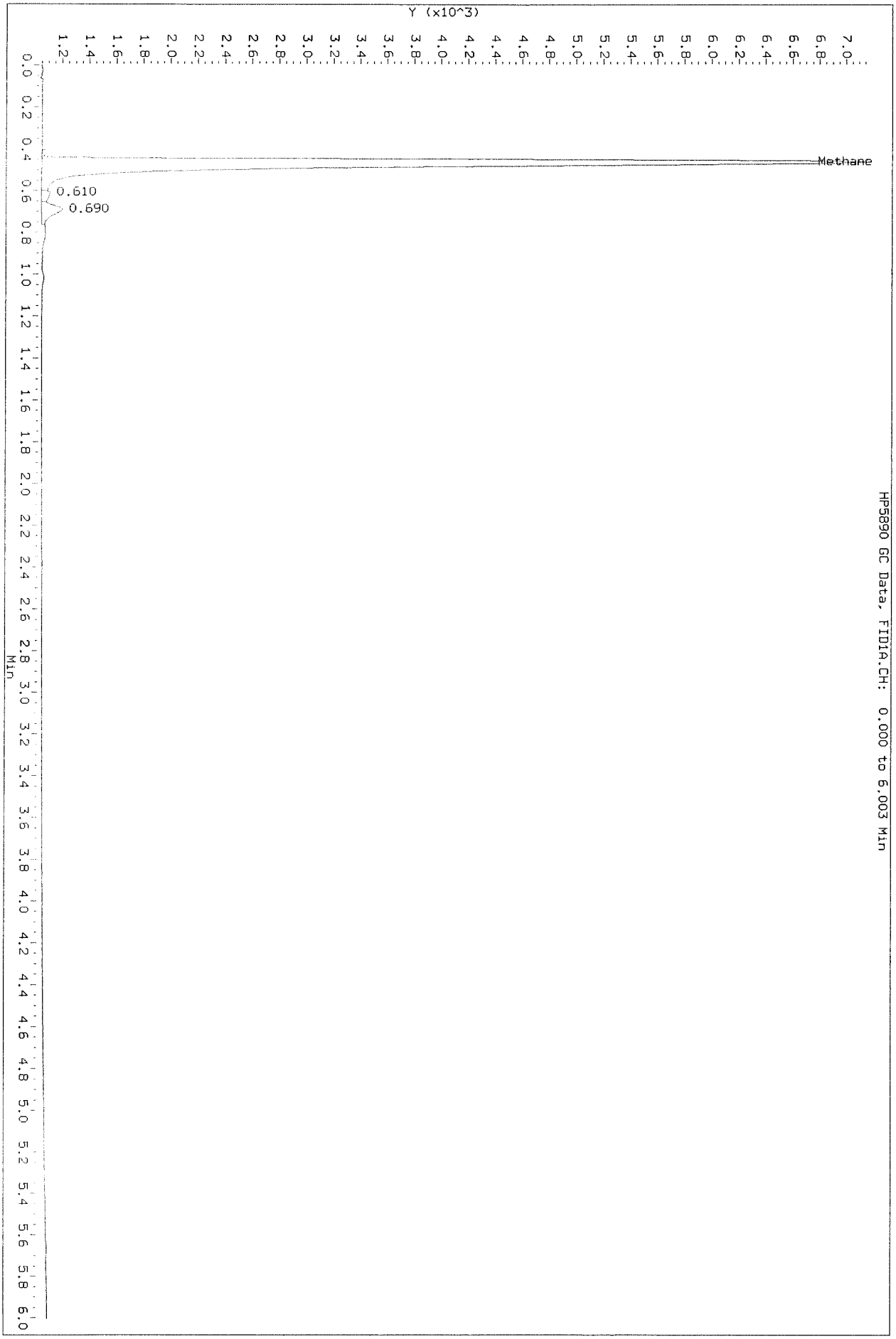
Instrument: FID-4.i

Operator: PL
Column diameter: 0.53



Data File: \\nahstws005\Target\chem\FID-4.i\210427.b\Before\00B.D
Injection Date: 27-APR-2021 11:11
Instrument: FID-4.i
Client Sample ID: HS21041102-02




Data File: \\nahstws005\Target\chem\FID-4.i\210427.b\008.D
Injection Date: 27-APR-2021 11:11
Instrument: FID-4.i
Client Sample ID: HS21041102-02
HP5890 GC Data, FID1A.CH: 0.000 to 6.003 Min
Y (x10^3)
Methane
0.610
0.690
Min

ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\nahstws005\Target\chem\FID-4.i\210427.b\009.D
Lab Smp Id: HS21041102-03 Client Smp ID: HS21041102-03
Inj Date : 27-APR-2021 11:23
Operator : PL Inst ID: FID-4.i
Smp Info : HS21041102-03;HS21041102-03
Misc Info : ;1;0;1
Comment :
Method : \\nahstws005\Target\chem\FID-4.i\210427.b\RSKNI3.m
Meth Date : 20-May-2021 12:45 FID-4.i Quant Type: ESTD
Cal Date : 24-JAN-2017 10:15 Cal File: 004.D
Als bottle: 9
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: RSK175.sub
Target Version: 4.14
Processing Host: NAHSTW7056

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)
1 Methane	0.493	0.460	0.033	1148	1.17745	1.177(M)

QC Flag Legend

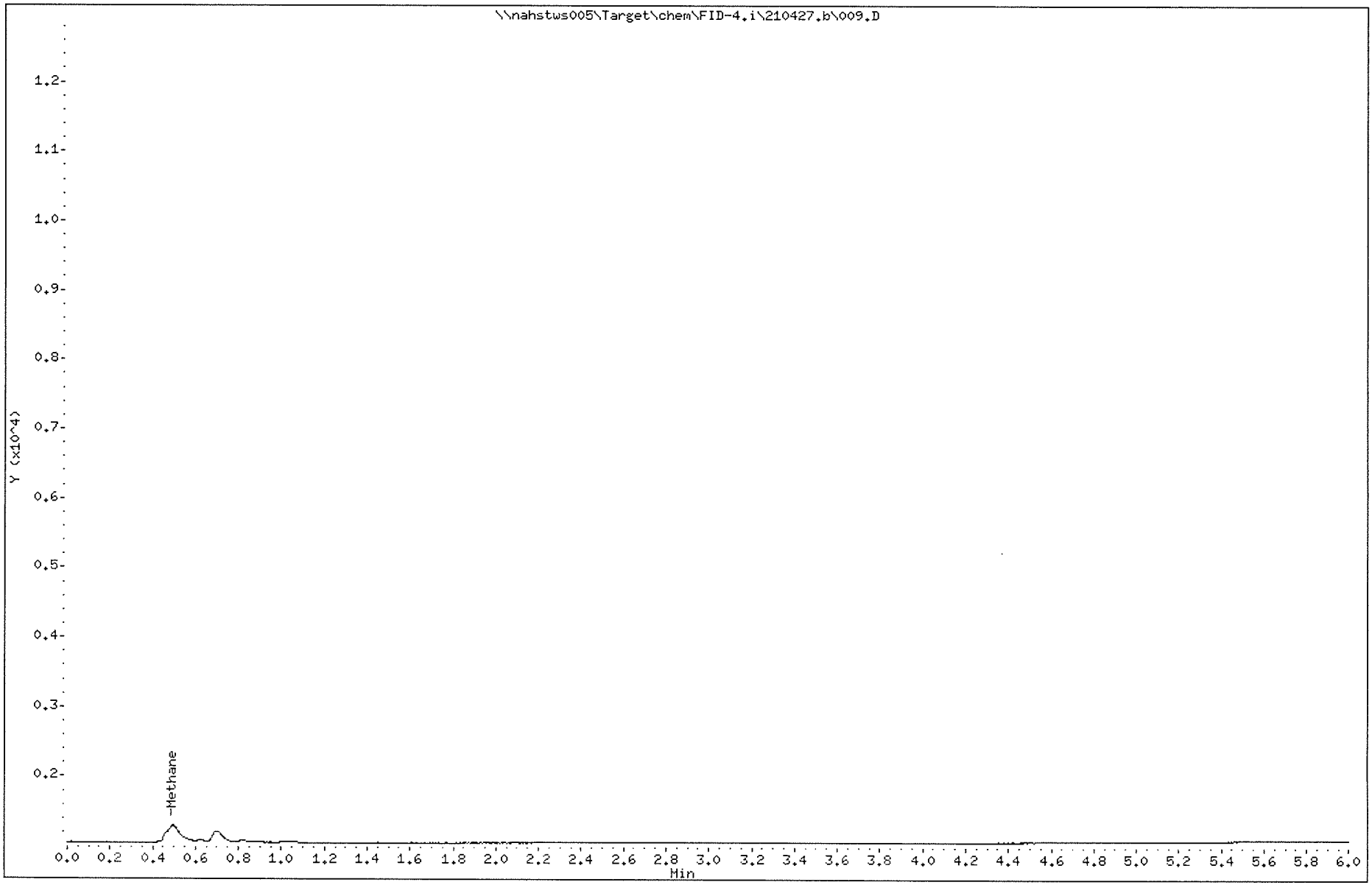
M - Compound response manually integrated.

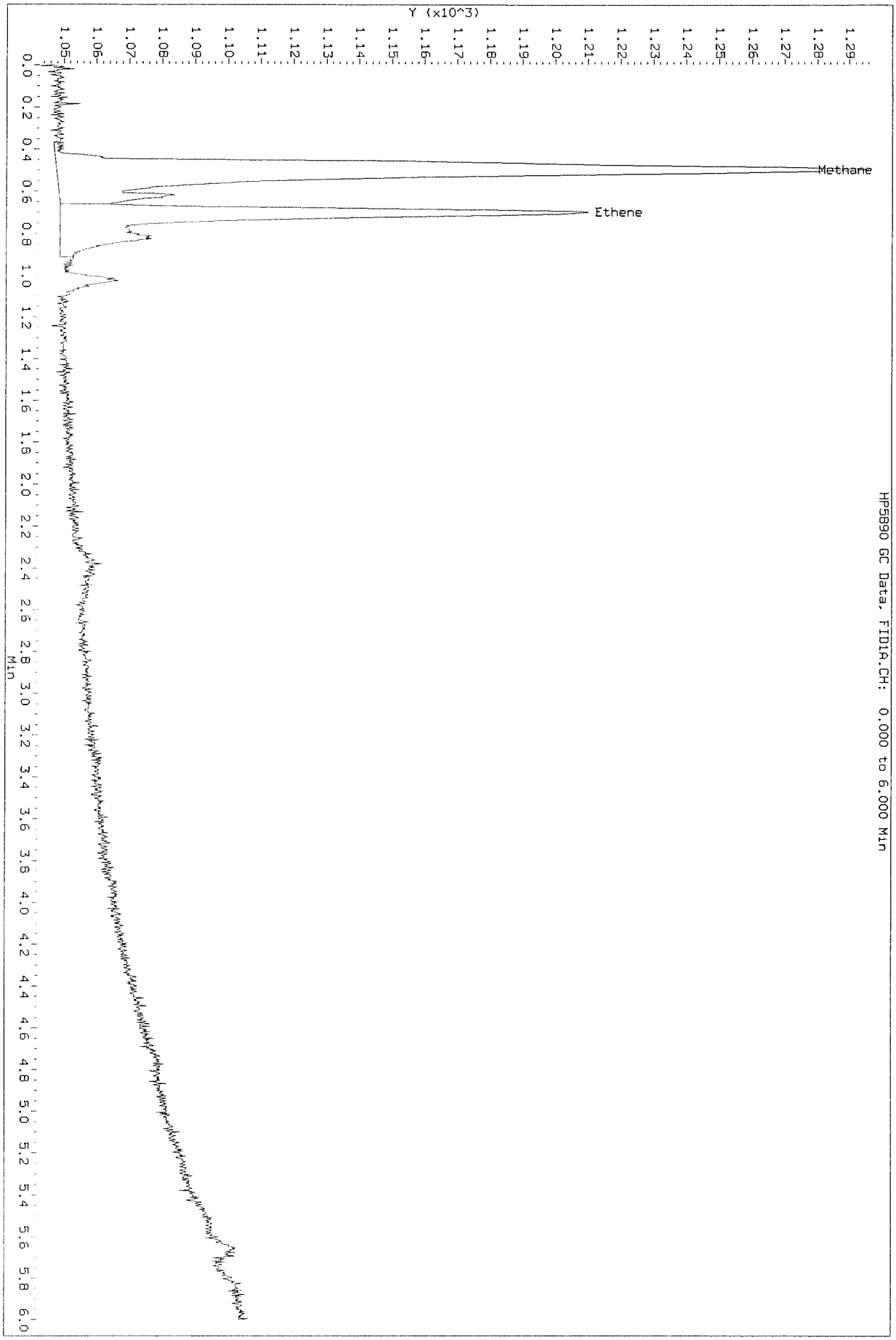
Data File: \\nahstws005\Target\chem\FID-4.i\210427.b\009.D
Date : 27-APR-2021 11:23
Client ID: HS21041102-03
Sample Info: HS21041102-03;HS21041102-03

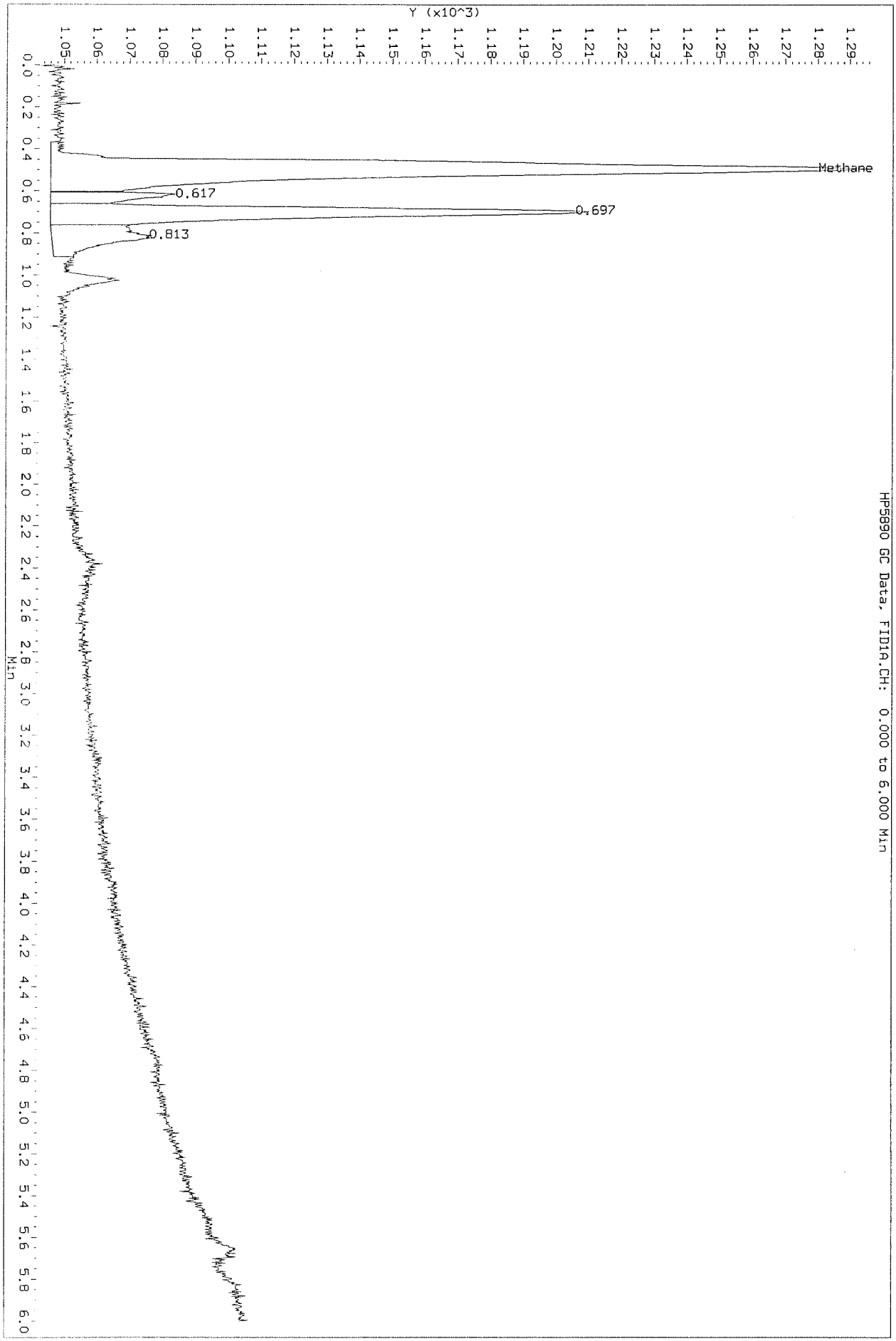
Column phase: Rtx-PLOT

Instrument: FID-4.i

Operator: PL
Column diameter: 0.53




Data File: \\nahstws005\Target\chem\FID-4.i\210427.b\Before\009.D
Injection Date: 27-APR-2021 11:23
Instrument: FID-4.i
Client Sample ID: HS21041102-03
HP5890 GC Data, FID1A.CH: 0.000 to 6.000 Min
Y (x10^3)
Methane
Ethene
Min


Data File: \\nahstws005\Target\chem\FID-4.i\210427.b\009.D
Injection Date: 27-APR-2021 11:23
Instrument: FID-4.i
Client Sample ID: HS21041102-03
HP5890 GC Data, FID1A.CH: 0.000 to 6.000 Min
Y (x10^3)
Min
Methane
0.617
0.697
0.813

ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\nahstws005\Target\chem\FID-4.i\210427.b\010.D
Lab Smp Id: HS21041102-04 Client Smp ID: HS21041102-04
Inj Date : 27-APR-2021 11:35
Operator : PL Inst ID: FID-4.i
Smp Info : HS21041102-04;HS21041102-04
Misc Info : ;1;0;1
Comment :
Method : \\nahstws005\Target\chem\FID-4.i\210427.b\RSKNI3.m
Meth Date : 20-May-2021 12:45 FID-4.i Quant Type: ESTD
Cal Date : 24-JAN-2017 10:15 Cal File: 004.D
Als bottle: 10
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: RSK175.sub
Target Version: 4.14
Processing Host: NAHSTW7056

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)
1 Methane	0.470	0.460	0.010	29807	30.5715	30.571(M)

QC Flag Legend

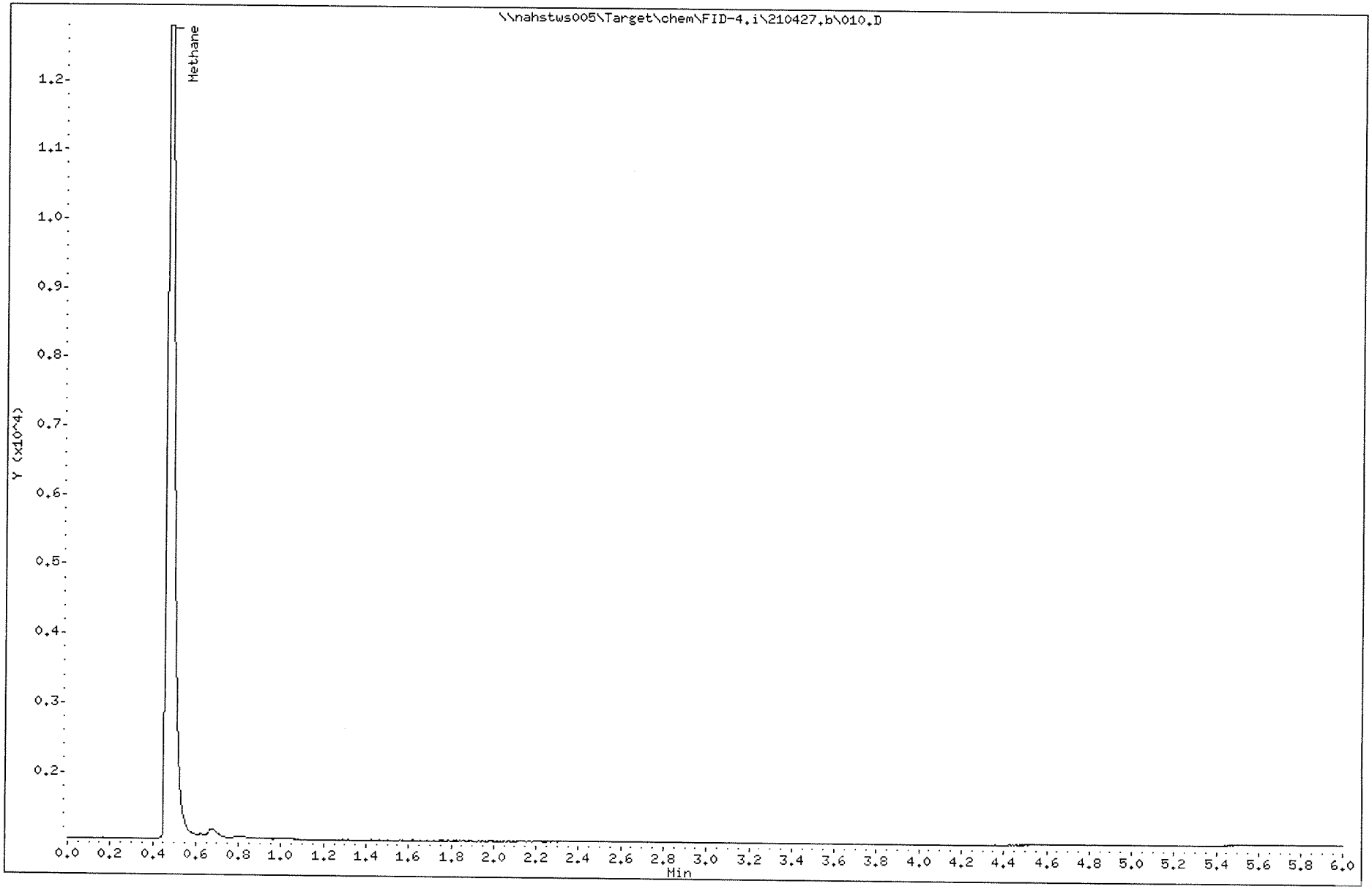
M - Compound response manually integrated.

Data File: \\nahstws005\Target\chem\FID-4.i\210427.b\010.D
Date : 27-APR-2021 11:35
Client ID: HS21041102-04
Sample Info: HS21041102-04;HS21041102-04

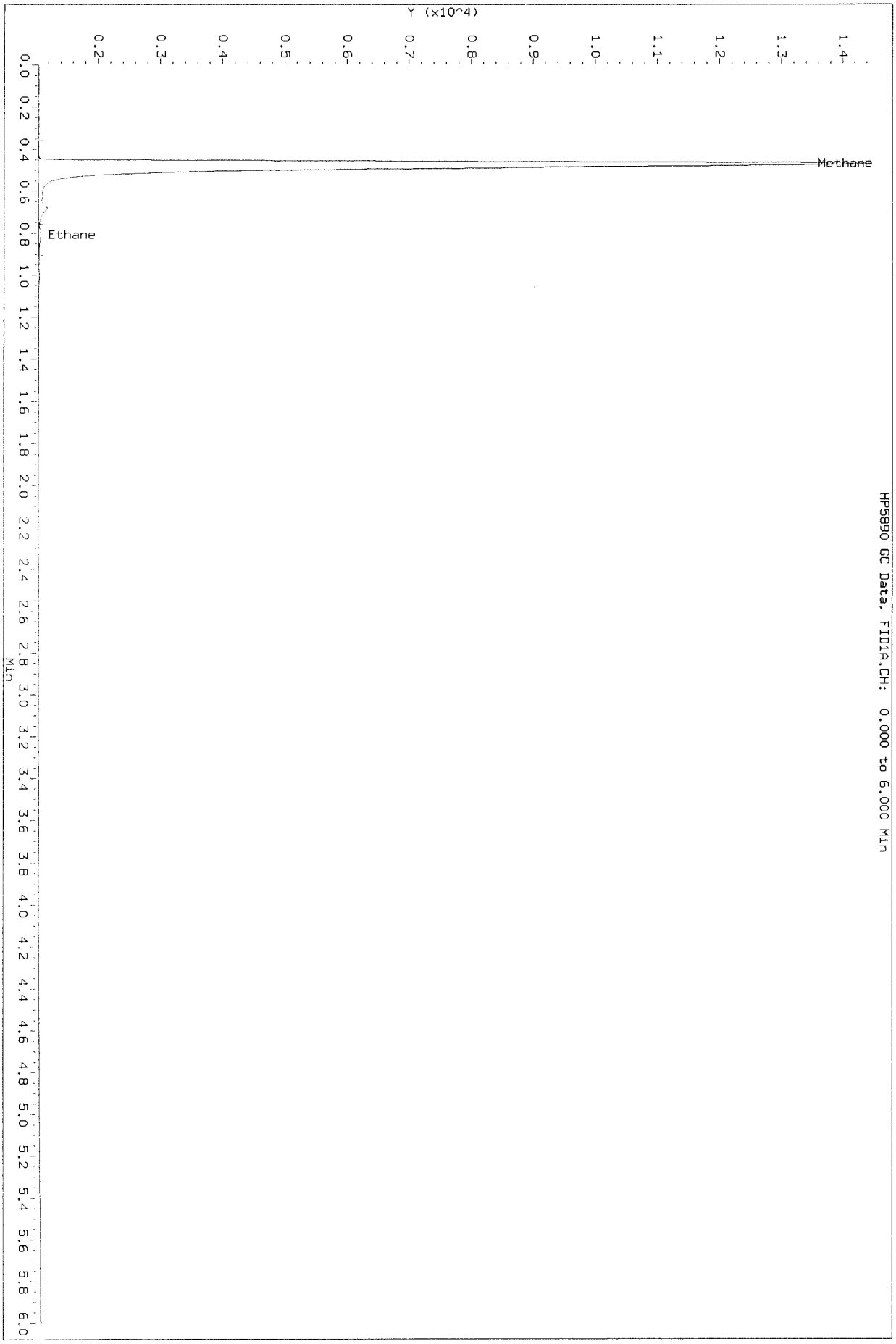
Column phase: Rtx-PLOT

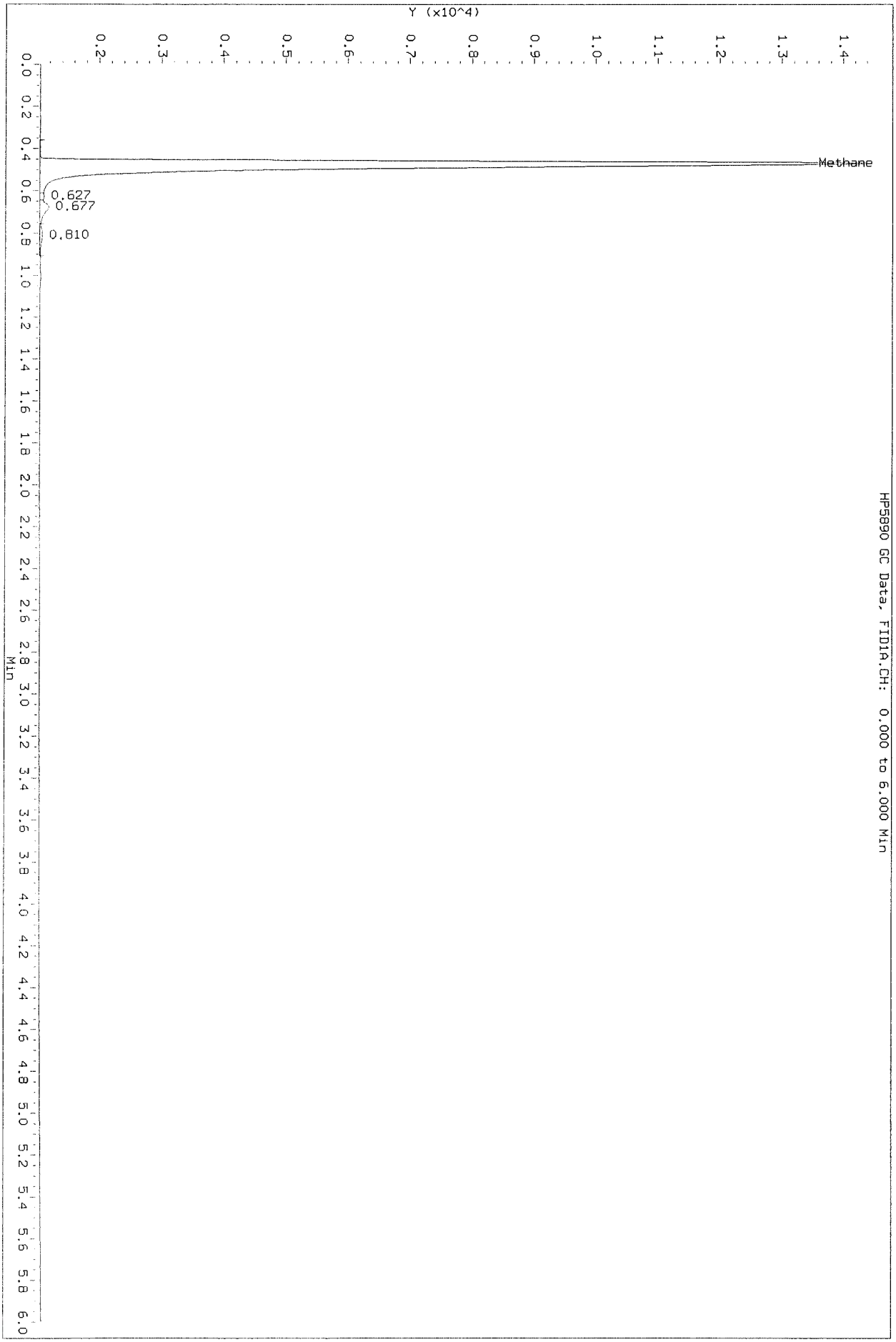
Instrument: FID-4.i

Operator: PL
Column diameter: 0.53



Data File: \\nahstws005\Target\chem\FID-4.i\210427.b\Before\010.D
Injection Date: 27-APR-2021 11:35
Instrument: FID-4.i
Client Sample ID: HS21041102-04




Data File: \\nahstws005\Target\chem\FID-4.i\210427.b\010.D
Injection Date: 27-APR-2021 11:35
Instrument: FID-4.i
Client Sample ID: HS21041102-04
HP5890 GC Data, FID1A.CH: 0.000 to 6.000 Min
Y (x10^4)
Methane
0.627
0.677
0.810
Min

ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\nahstws005\Target\chem\FID-4.i\210427.b\011.D
Lab Smp Id: RSK-CCV Client Smp ID: RSK-CCV
Inj Date : 27-APR-2021 11:46
Operator : PL Inst ID: FID-4.i
Smp Info : RSK-CCV;RSK-CCV;2;4
Misc Info : ;1;0;1
Comment :
Method : \\nahstws005\Target\chem\FID-4.i\210427.b\RSKNI3.m
Meth Date : 20-May-2021 12:45 FID-4.i Quant Type: ESTD
Cal Date : 24-JAN-2017 10:15 Cal File: 004.D
Als bottle: 11 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: RSK175.sub
Target Version: 4.14
Processing Host: NAHSTW7056

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

					AMOUNTS	
					CAL-AMT	ON-COL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/L)	(ug/L)
1 Methane	0.463	0.463	0.000	8960	9.64700	9.189
2 Ethene	0.710	0.710	0.000	10249	16.8500	17.496
3 Ethane	0.790	0.790	0.000	14727	18.0430	20.468

Data File: \\nahstws005\Target\chem\FID-4.i\210427.b\011.D

Date : 27-APR-2021 11:46

Client ID: RSK-CCV

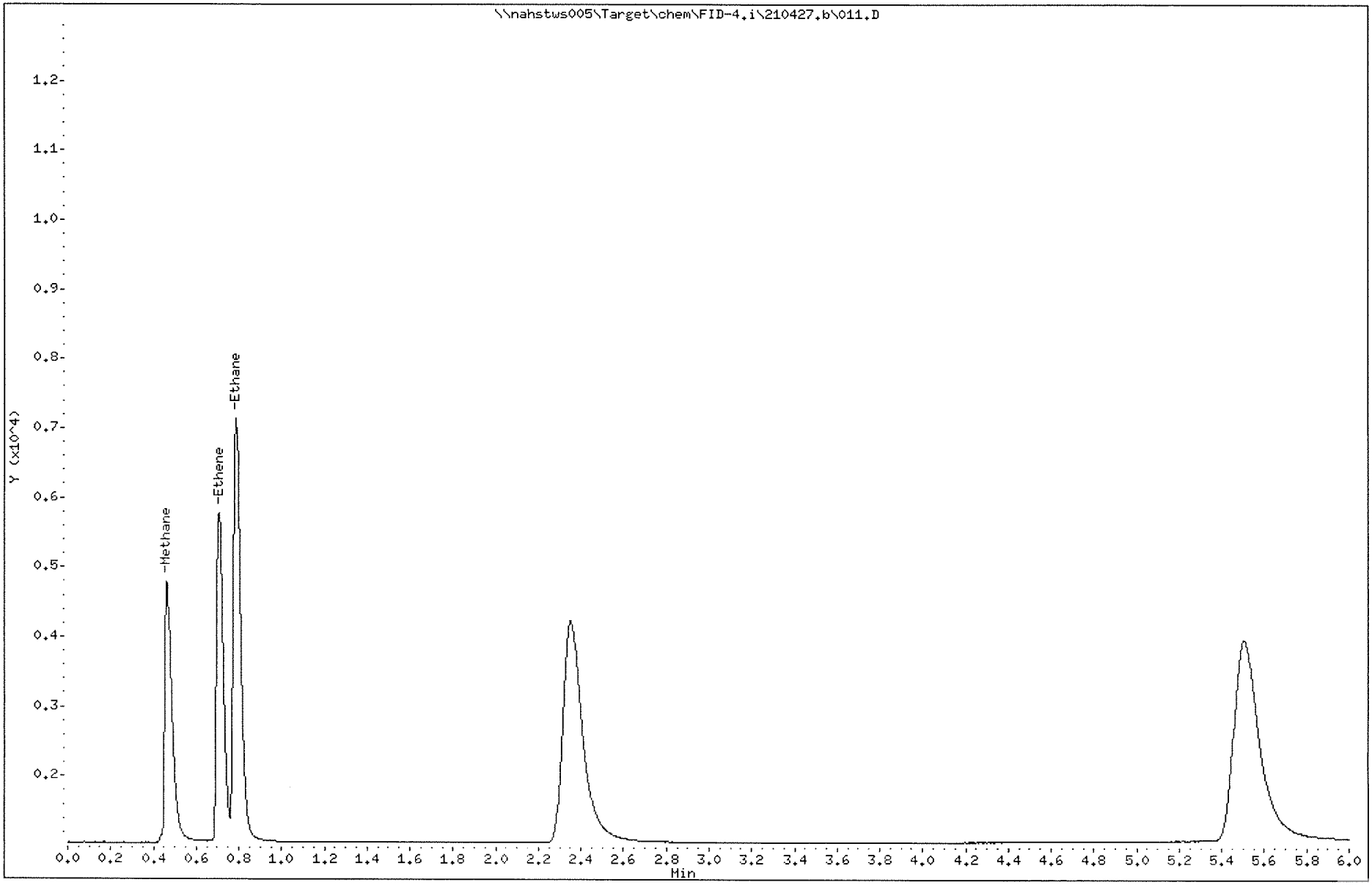
Instrument: FID-4.i

Sample Info: RSK-CCV;RSK-CCV;2;4

Operator: PL

Column phase: Rtx-PLOT

Column diameter: 0.53



Data File: \\nahstws005\Target\chem\FID-4.i\210427.b\012.D Page 1
Report Date: 20-May-2021 12:45

ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\nahstws005\Target\chem\FID-4.i\210427.b\012.D
Lab Smp Id: HS21041102-05 Client Smp ID: HS21041102-05
Inj Date : 27-APR-2021 12:01
Operator : PL Inst ID: FID-4.i
Smp Info : HS21041102-05;HS21041102-05
Misc Info : ;1;0;1
Comment :
Method : \\nahstws005\Target\chem\FID-4.i\210427.b\RSKNI3.m
Meth Date : 20-May-2021 12:45 FID-4.i Quant Type: ESTD
Cal Date : 24-JAN-2017 10:15 Cal File: 004.D
Als bottle: 12
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: RSK175.sub
Target Version: 4.14
Processing Host: NAHSTW7056

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)
1 Methane	0.463	0.463	0.000	29486	30.2423	30.242(M)
2 Ethene	0.680	0.710	-0.030	794	1.35550	1.355(M)

QC Flag Legend

M - Compound response manually integrated.

Data File: \\nahstws005\Target\chem\FID-4.i\210427.b\012.D

Date : 27-APR-2021 12:01

Client ID: HS21041102-05

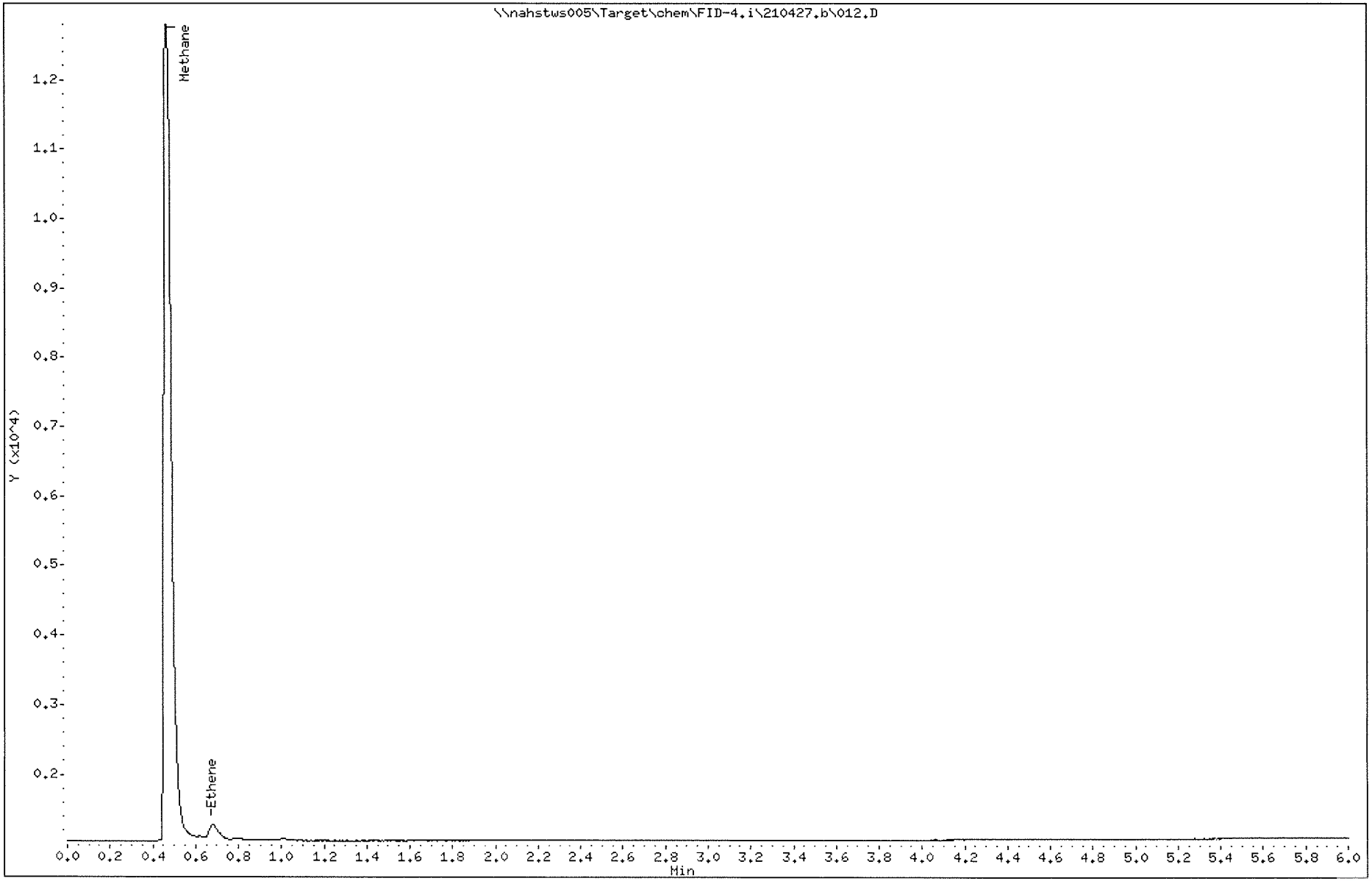
Instrument: FID-4.i

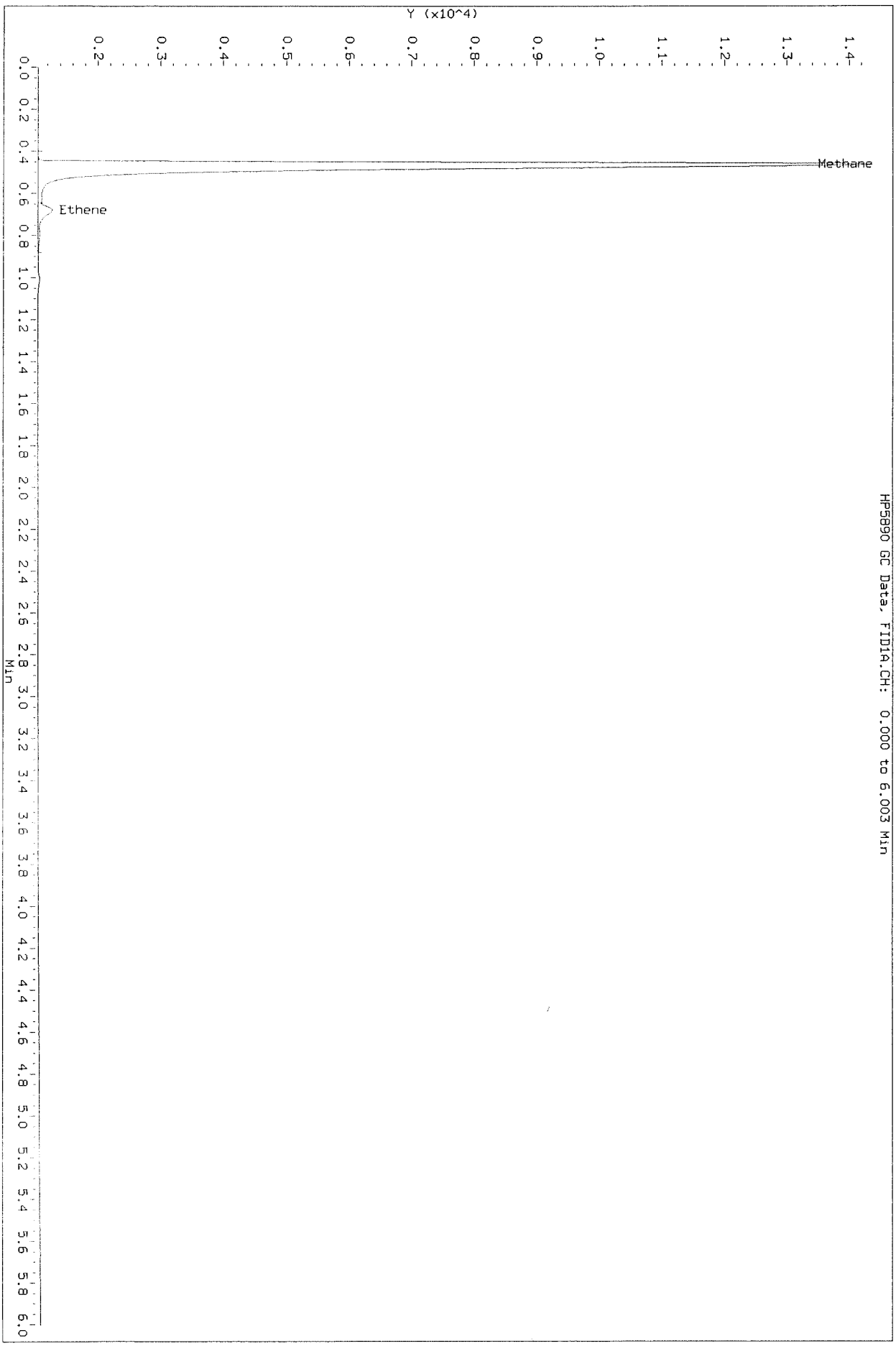
Sample Info: HS21041102-05;HS21041102-05

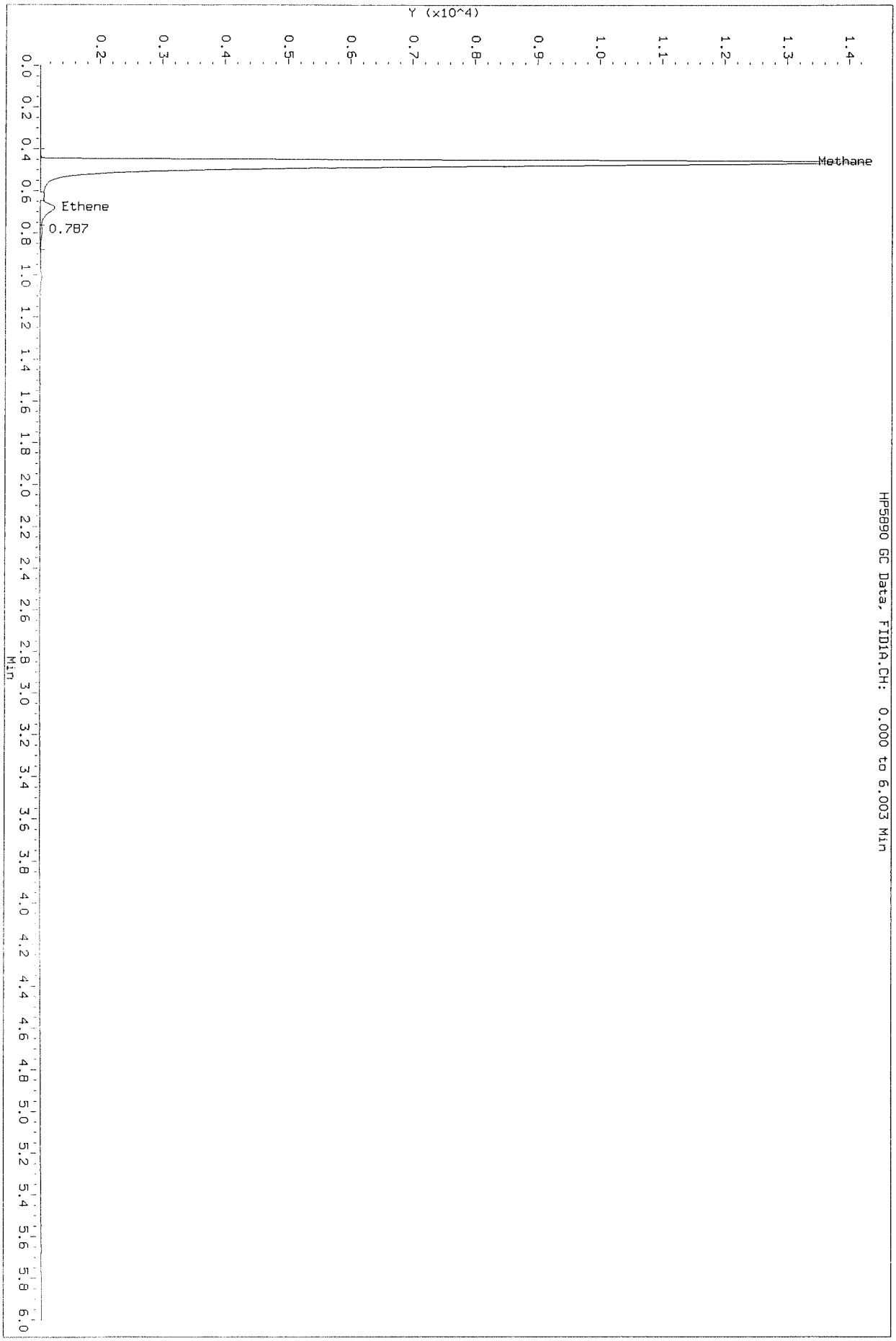
Operator: PL

Column phase: Rtx-PLOT

Column diameter: 0.53




Data File: \\nahstws005\Target\chem\FID-4.i\210427.b\Before\012.D
Injection Date: 27-APR-2021 12:01
Instrument: FID-4.i
Client Sample ID: HS21041102-05
HP5890 GC Data, FID1A.CH: 0.000 to 6.003 Min
Y (x10^4)
Methane
Ethene
Min


Data File: \\nahstws005\Target\chem\FID-4.i\210427.b\012.D
Injection Date: 27-APR-2021 12:01
Instrument: FID-4.i
Client Sample ID: HS21041102-05
HP5890 GC Data, FIDiA.CH: 0.000 to 6.003 Min
Y (x10^4)
Methane
Ethene
0.787
Min

Data File: \\nahstws005\Target\chem\FID-4.i\210427.b\013.D Page 1
Report Date: 20-May-2021 12:45

ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\nahstws005\Target\chem\FID-4.i\210427.b\013.D
Lab Smp Id: HS21041102-07 Client Smp ID: HS21041102-07
Inj Date : 27-APR-2021 12:15
Operator : PL Inst ID: FID-4.i
Smp Info : HS21041102-07;HS21041102-07
Misc Info : ;1;0;1
Comment :
Method : \\nahstws005\Target\chem\FID-4.i\210427.b\RSKNI3.m
Meth Date : 20-May-2021 12:45 FID-4.i Quant Type: ESTD
Cal Date : 24-JAN-2017 10:15 Cal File: 004.D
Als bottle: 13
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: RSK175.sub
Target Version: 4.14
Processing Host: NAHSTW7056

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

					CONCENTRATIONS	
					ON-COLUMN	FINAL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/L)	(ug/L)
1 Methane	0.470	0.463	0.007	6910	7.08724	7.087

Data File: \\nahstws005\Target\chem\FID-4.i\210427.b\013.D

Date : 27-APR-2021 12:15

Client ID: HS21041102-07

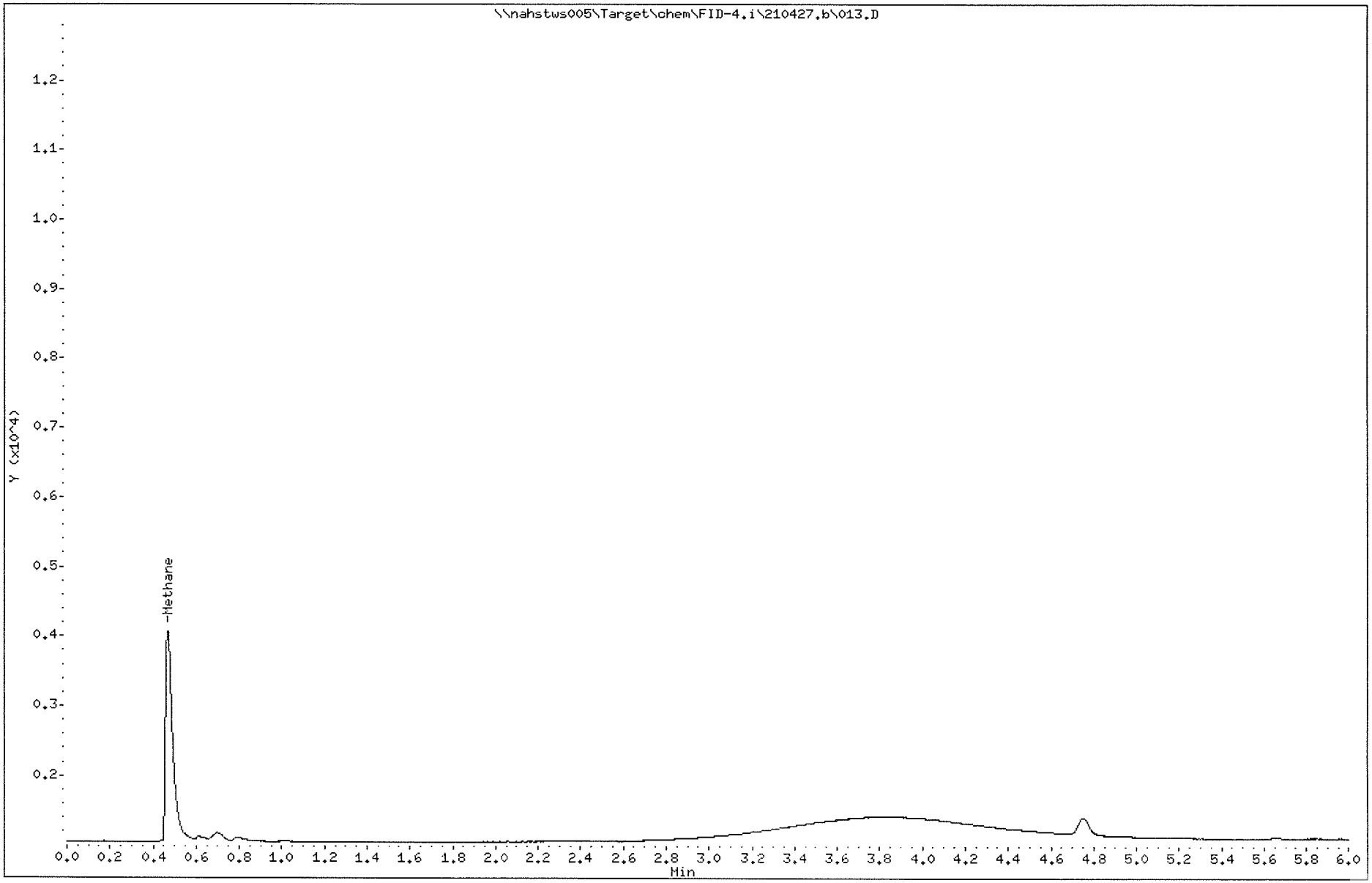
Sample Info: HS21041102-07;HS21041102-07

Column phase: Rtx-PLOT

Instrument: FID-4.i

Operator: PL

Column diameter: 0.53



ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\nahstws005\Target\chem\FID-4.i\210427.b\014.D
Lab Smp Id: HS21041102-08 Client Smp ID: HS21041102-08
Inj Date : 27-APR-2021 12:27
Operator : PL Inst ID: FID-4.i
Smp Info : HS21041102-08;HS21041102-08
Misc Info : ;1;0;1
Comment :
Method : \\nahstws005\Target\chem\FID-4.i\210427.b\RSKNI3.m
Meth Date : 20-May-2021 12:45 FID-4.i Quant Type: ESTD
Cal Date : 24-JAN-2017 10:15 Cal File: 004.D
Als bottle: 14
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: RSK175.sub
Target Version: 4.14
Processing Host: NAHSTW7056

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)
1 Methane	0.463	0.463	0.000	374287	383.887	383.887(A)
2 Ethene	0.700	0.710	-0.010	15303	26.1250	26.125(M)

QC Flag Legend

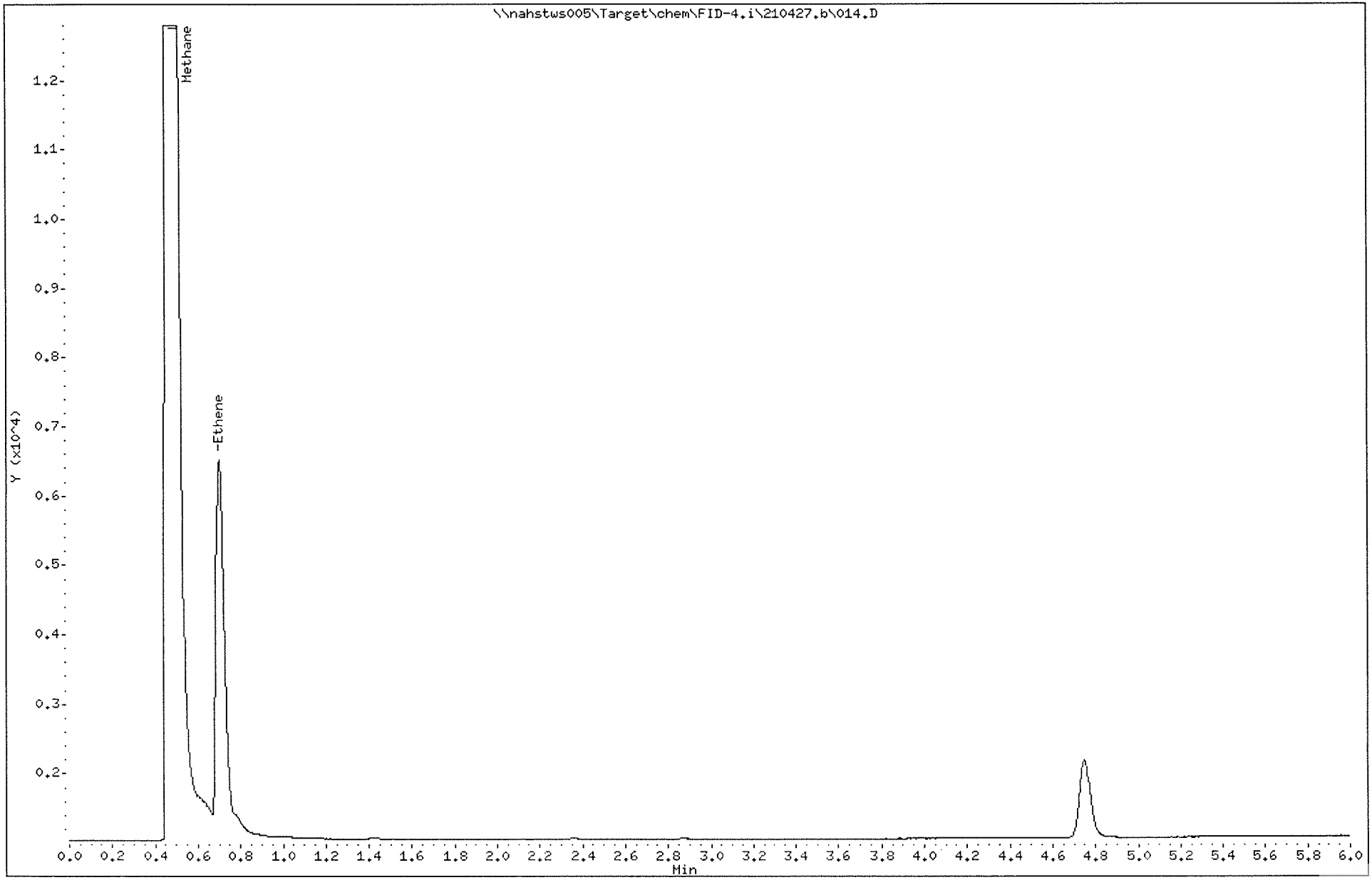
A - Target compound detected but, quantitated amount exceeded maximum amount.
M - Compound response manually integrated.

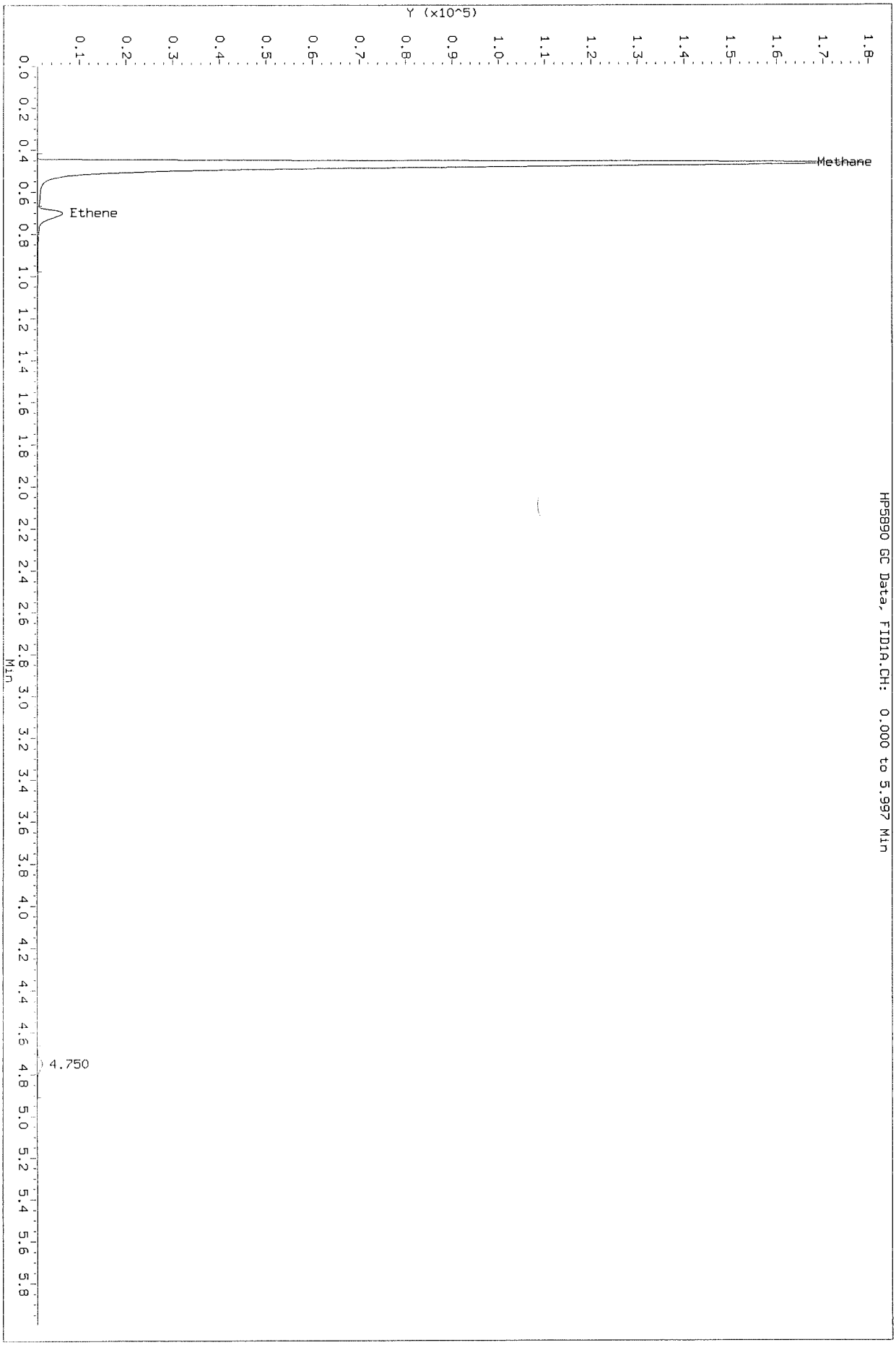
Data File: \\nahstws005\Target\chem\FID-4.i\210427.b\014.D
Date : 27-APR-2021 12:27
Client ID: HS21041102-08
Sample Info: HS21041102-08;HS21041102-08

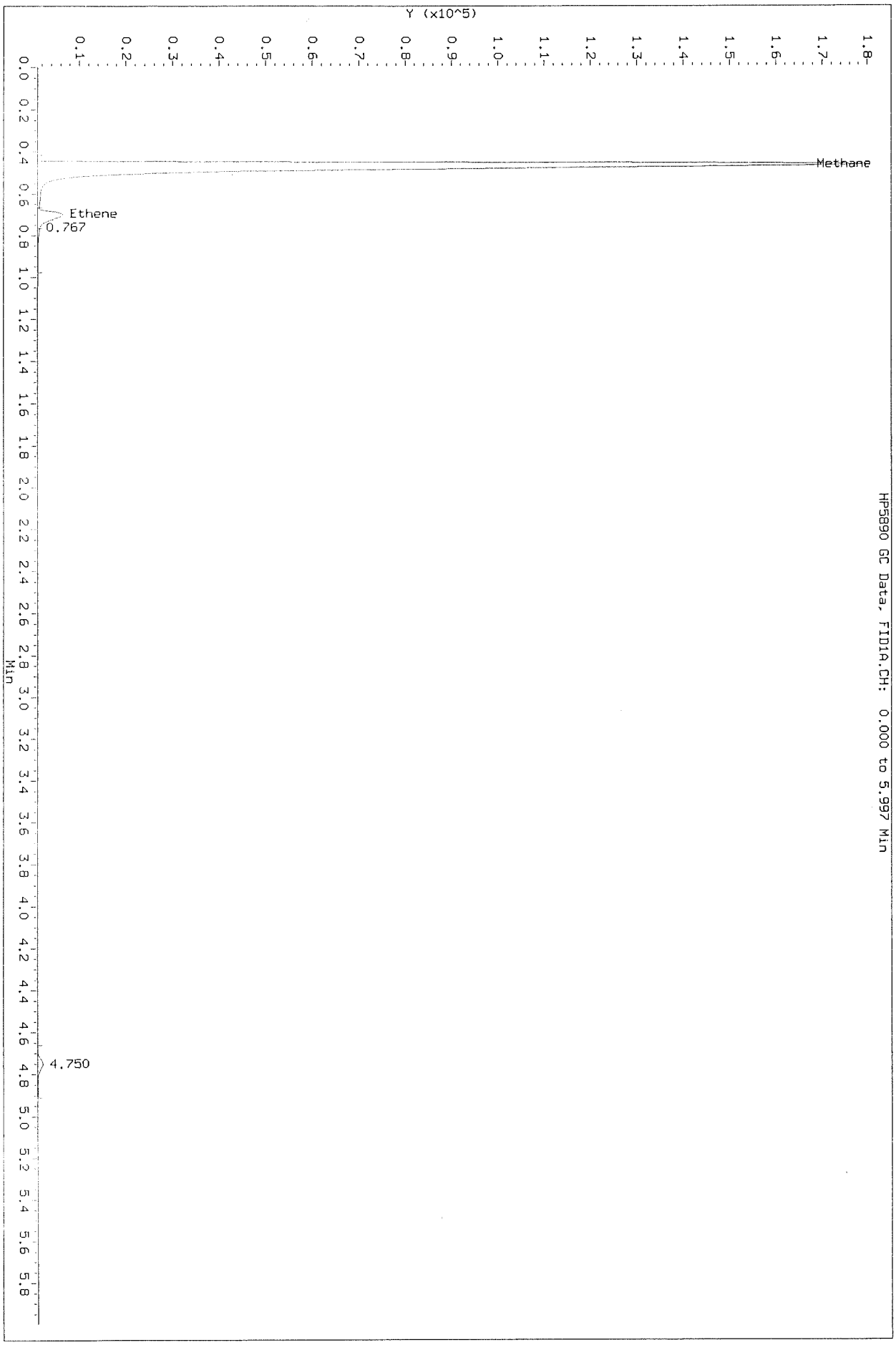
Column phase: Rtx-PLOT

Instrument: FID-4.i

Operator: PL
Column diameter: 0.53




Data File: \\nahstws005\Target\chem\FID-4.i\210427.b\Before\014.D
Injection Date: 27-APR-2021 12:27
Instrument: FID-4.i
Client Sample ID: HS21041102-08
Y (x10^5)
Methane
Ethene
4.750
Min
HP5890 GC Data, FID1A.CH: 0.000 to 5.997 Min


Data File: \\nahstws005\Target\chem\FID-4.i\210427.b\014.D
Injection Date: 27-APR-2021 12:27
Instrument: FID-4.i
Client Sample ID: HS21041102-08
HP5890 GC Data, FID1A.CH: 0.000 to 5.997 Min
Y (x10^5)
Methane
Ethene
0.767
4.750
Min

ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\nahstws005\Target\chem\FID-4.i\210427.b\015.D
Lab Smp Id: HS21041102-09 Client Smp ID: HS21041102-09
Inj Date : 27-APR-2021 12:38
Operator : PL Inst ID: FID-4.i
Smp Info : HS21041102-09;HS21041102-09
Misc Info : ;1;0;1
Comment :
Method : \\nahstws005\Target\chem\FID-4.i\210427.b\RSKNI3.m
Meth Date : 20-May-2021 12:45 FID-4.i Quant Type: ESTD
Cal Date : 24-JAN-2017 10:15 Cal File: 004.D
Als bottle: 15
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: RSK175.sub
Target Version: 4.14
Processing Host: NAHSTW7056

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

					CONCENTRATIONS	
					ON-COLUMN	FINAL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/L)	(ug/L)
1 Methane	0.466	0.463	0.003	137259	140.780	140.779(AM)
2 Ethene	0.700	0.710	-0.010	1154	1.97009	1.970(M)

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.
M - Compound response manually integrated.

Data File: \\nahstws005\Target\chem\FID-4.i\210427.b\015.D

Date : 27-APR-2021 12:38

Client ID: HS21041102-09

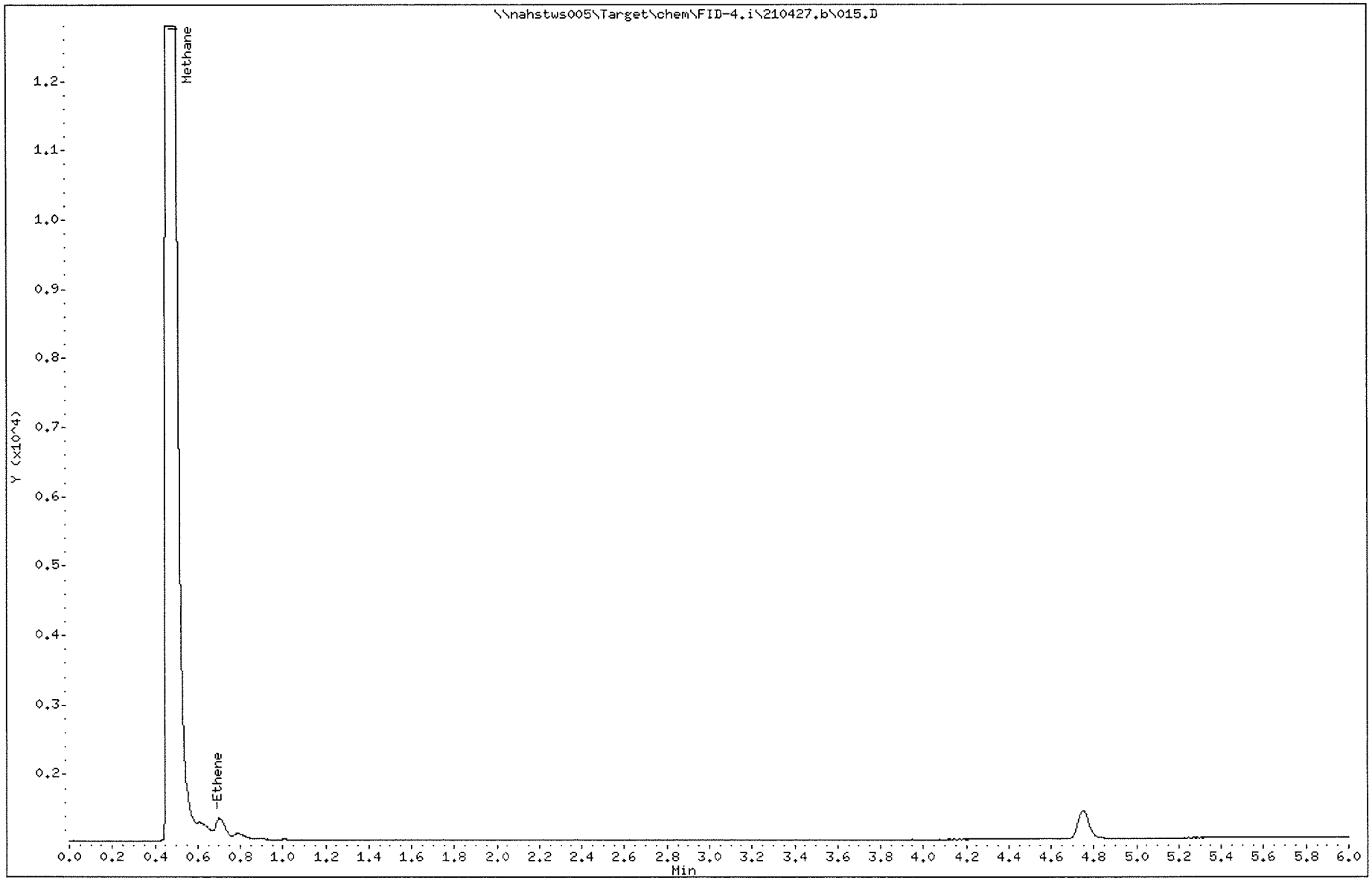
Instrument: FID-4.i

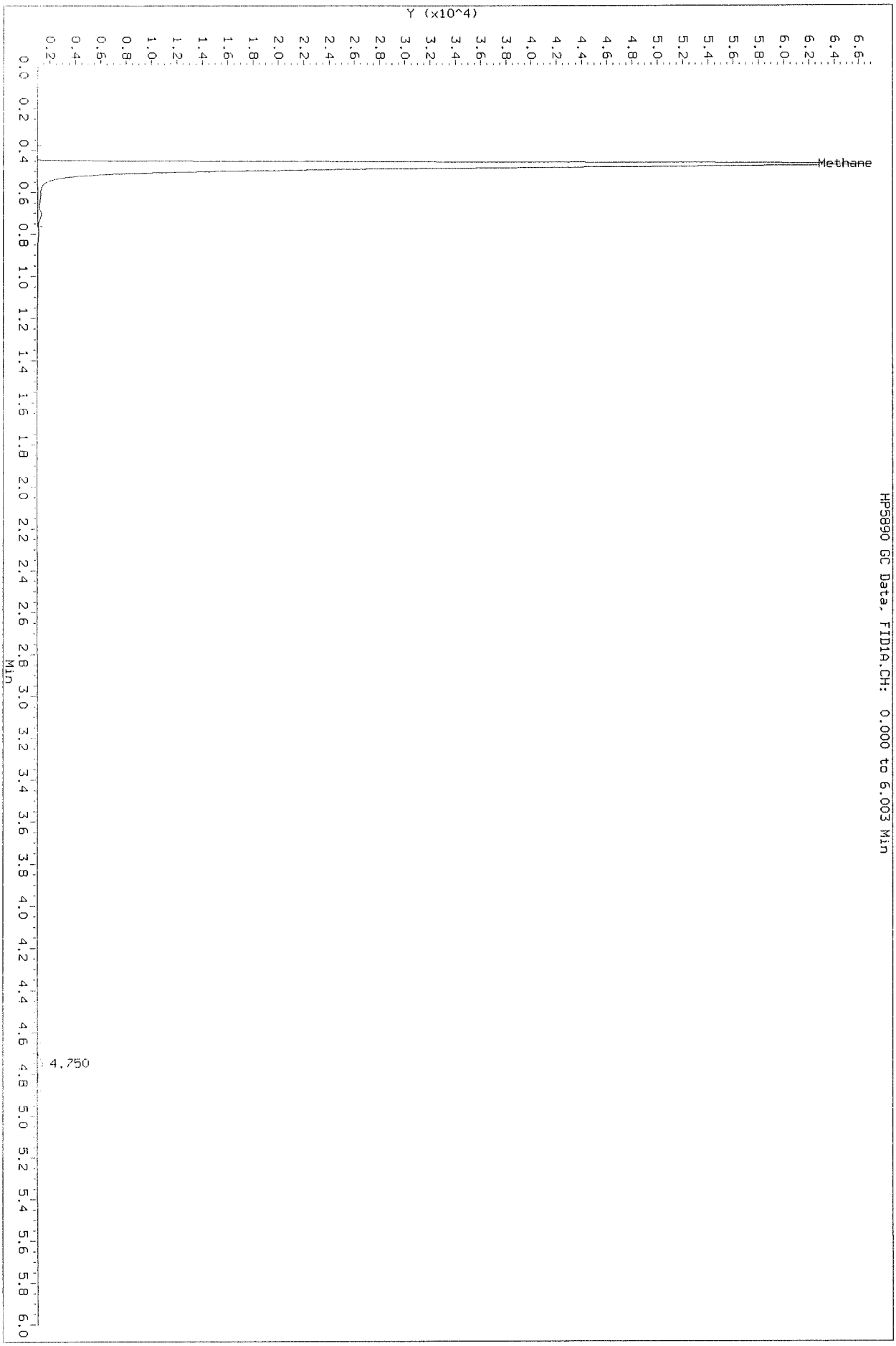
Sample Info: HS21041102-09;HS21041102-09

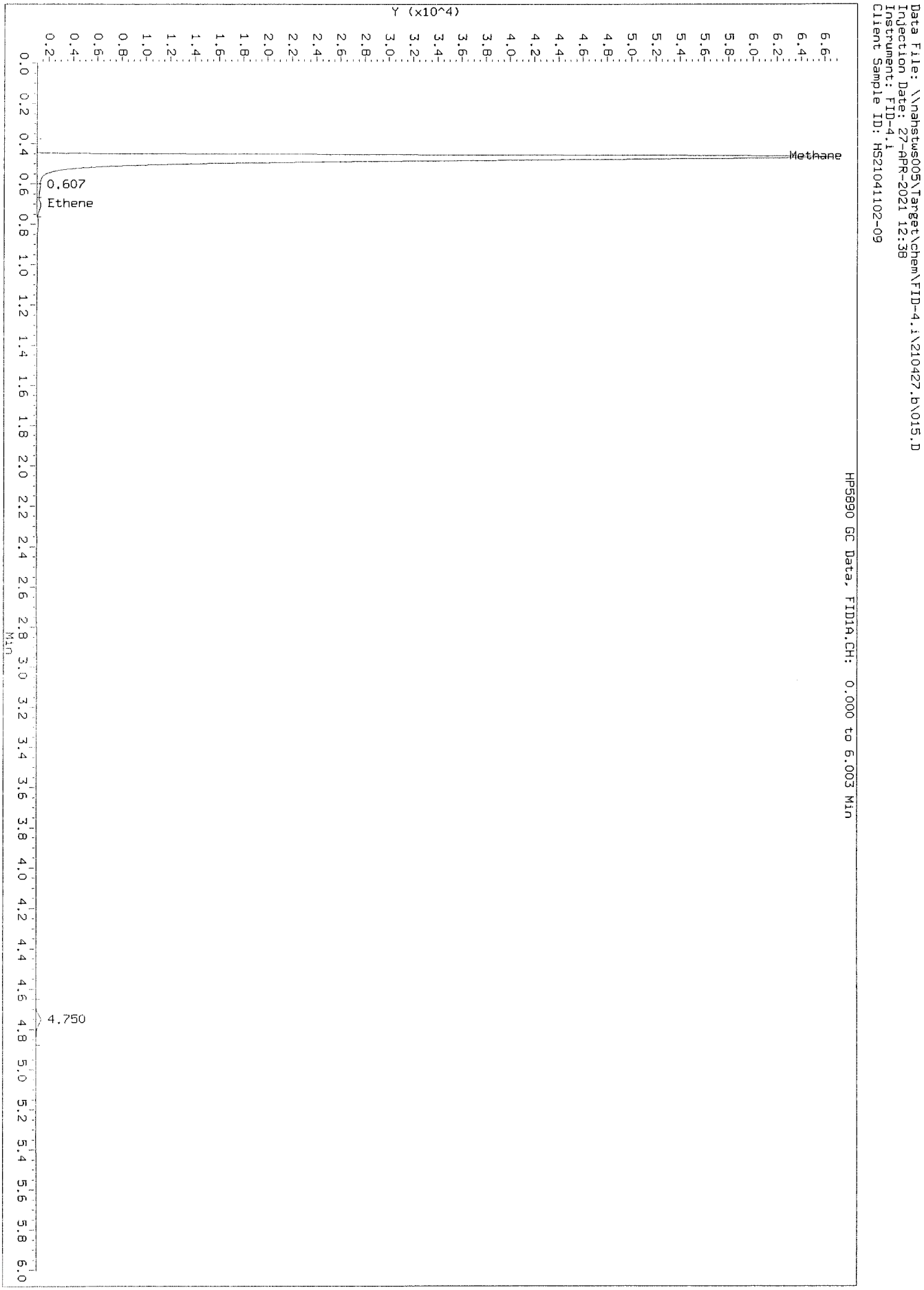
Operator: PL

Column phase: Rtx-PLOT

Column diameter: 0.53




Data File: \\nahstws005\Target\chem\FID-4.i\210427.b\Before\015.D
Injection Date: 27-APR-2021 12:38
Instrument: FID-4.i
Client Sample ID: HS210411O2-09
HP5890 GC Data, FID1A.CH: 0.000 to 6.003 Min
Y (x10^4)
Methane
4.750
Min


Data File: \\nahstws005\Target\chem\FID-4.i\210427.b\015.D
Injection Date: 27-APR-2021 12:38
Instrument: FID-4.i
Client Sample ID: HS21041102-09
HP5890 GC Data, FID1A.CH: 0.000 to 6.003 Min
Y (x10^4)
Methane
0.607
Ethene
4.750
Min

Data File: \\nahstws005\Target\chem\FID-4.i\210427.b\016.D Page 1
Report Date: 20-May-2021 12:45

ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\nahstws005\Target\chem\FID-4.i\210427.b\016.D
Lab Smp Id: HS21041102-10 Client Smp ID: HS21041102-10
Inj Date : 27-APR-2021 12:48
Operator : PL Inst ID: FID-4.i
Smp Info : HS21041102-10;HS21041102-10
Misc Info : ;1;0;1
Comment :
Method : \\nahstws005\Target\chem\FID-4.i\210427.b\RSKNI3.m
Meth Date : 20-May-2021 12:45 FID-4.i Quant Type: ESTD
Cal Date : 24-JAN-2017 10:15 Cal File: 004.D
Als bottle: 16
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: RSK175.sub
Target Version: 4.14
Processing Host: NAHSTW7056

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
1 Methane	0.466	0.463	0.003	1586650	1627.35	1627.346(A)
2 Ethene	0.706	0.710	-0.004	596873	1018.97	1018.971(A)

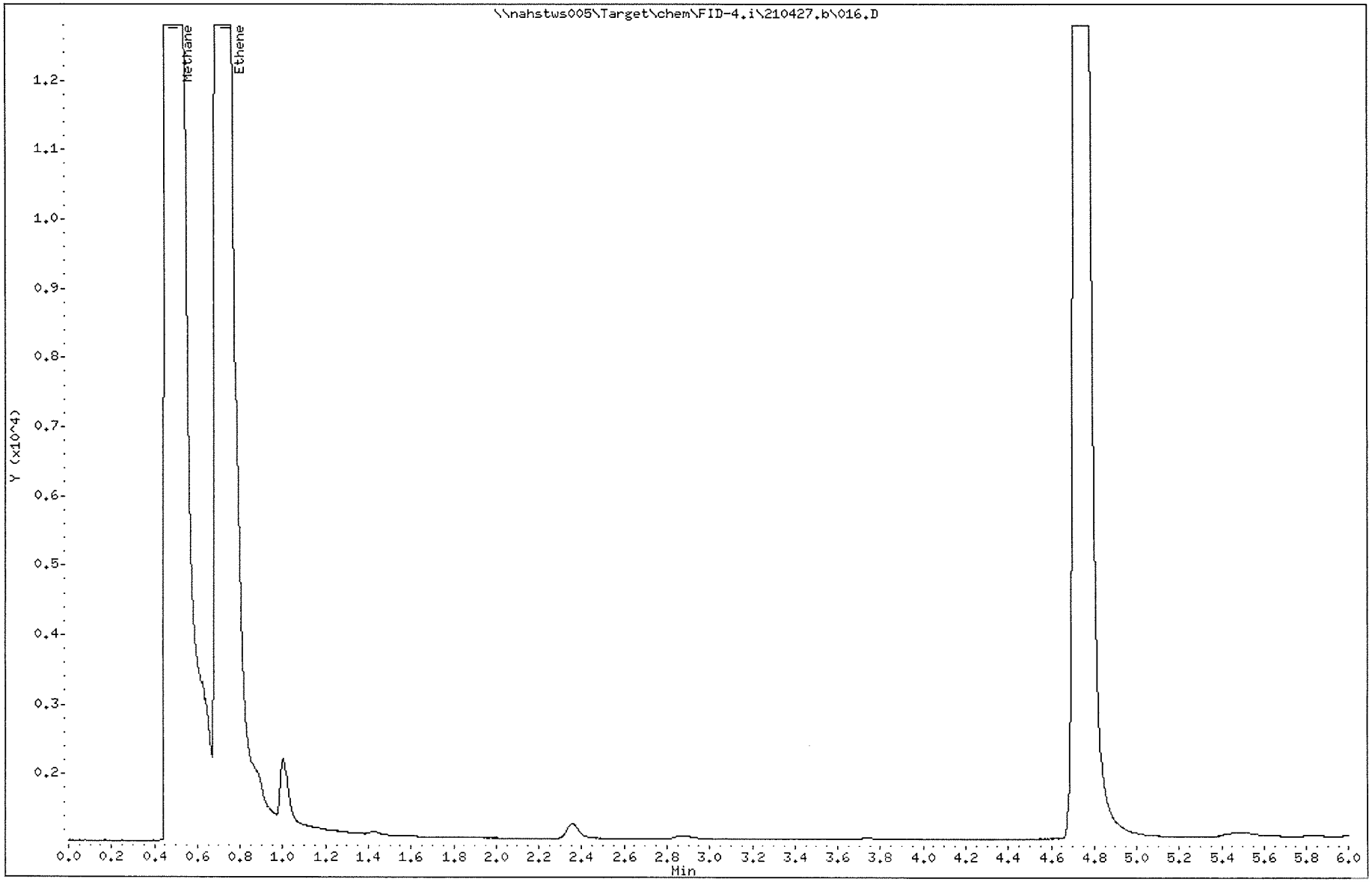
QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.

Data File: \\nahstws005\Target\chem\FID-4.i\210427.b\016.D
Date : 27-APR-2021 12:48
Client ID: HS21041102-10
Sample Info: HS21041102-10;HS21041102-10

Instrument: FID-4.i
Operator: PL
Column diameter: 0.53

Column phase: Rtx-PLOT



ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\nahstws005\Target\chem\FID-4.i\210427.b\017.D
Lab Smp Id: HS21041102-08 Client Smp ID: HS21041102-08
Inj Date : 27-APR-2021 12:58
Operator : PL Inst ID: FID-4.i
Smp Info : HS21041102-08;HS21041102-08
Misc Info : ;1;0;25
Comment :
Method : \\nahstws005\Target\chem\FID-4.i\210427.b\RSKNI3.m
Meth Date : 20-May-2021 12:45 FID-4.i Quant Type: ESTD
Cal Date : 24-JAN-2017 10:15 Cal File: 004.D
Als bottle: 17
Dil Factor: 25.00000
Integrator: Falcon Compound Sublist: RSK175.sub
Target Version: 4.14
Processing Host: NAHSTW7056

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
1 Methane	0.480	0.463	0.017	12883	13.2134	330.335
2 Ethene	0.723	0.710	0.013	666	1.13698	28.424(M)

QC Flag Legend

M - Compound response manually integrated.

Data File: \\nahstws005\Target\chem\FID-4.i\210427.b\017.D

Date : 27-APR-2021 12:58

Client ID: HS21041102-08

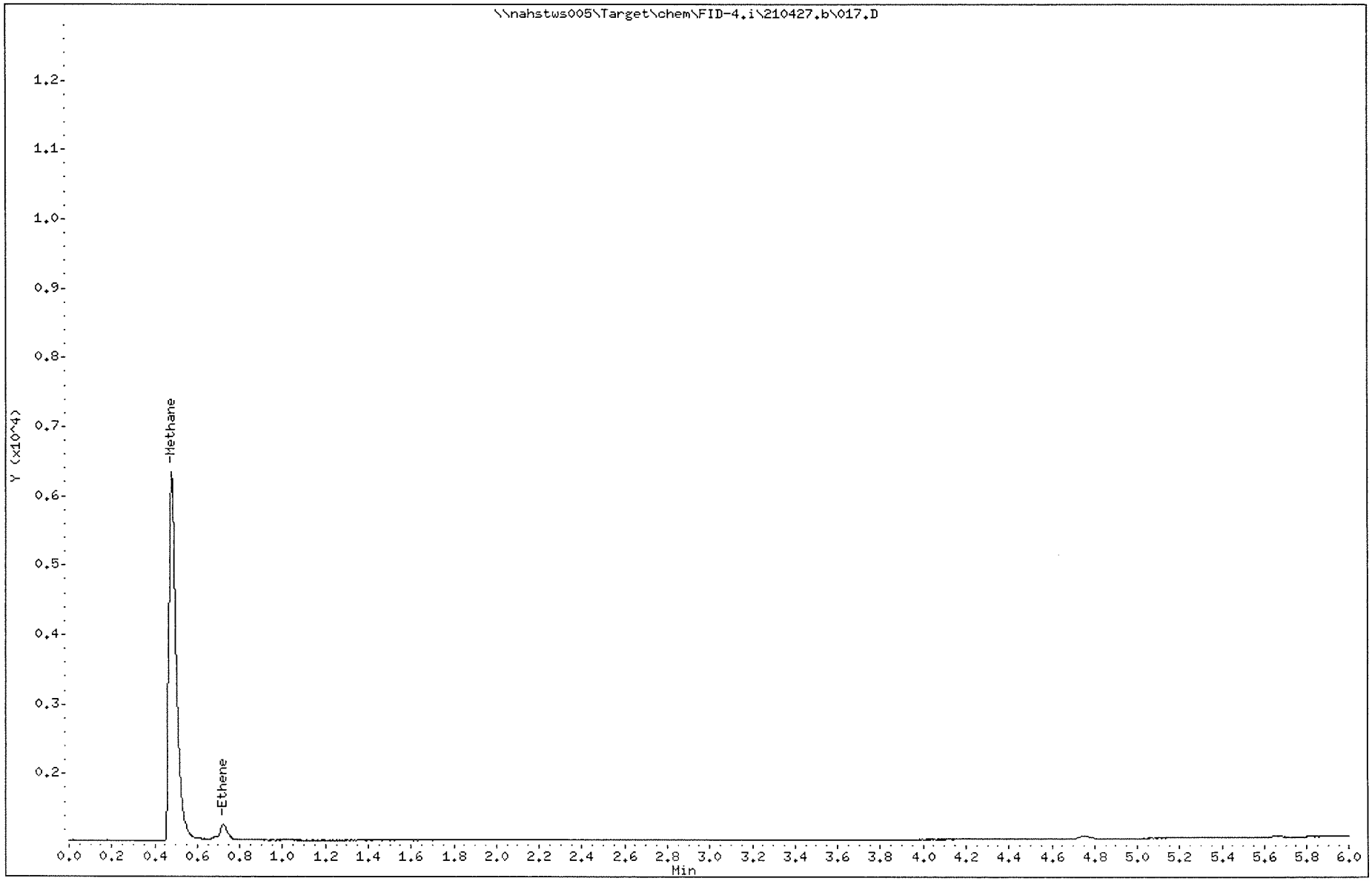
Instrument: FID-4.i

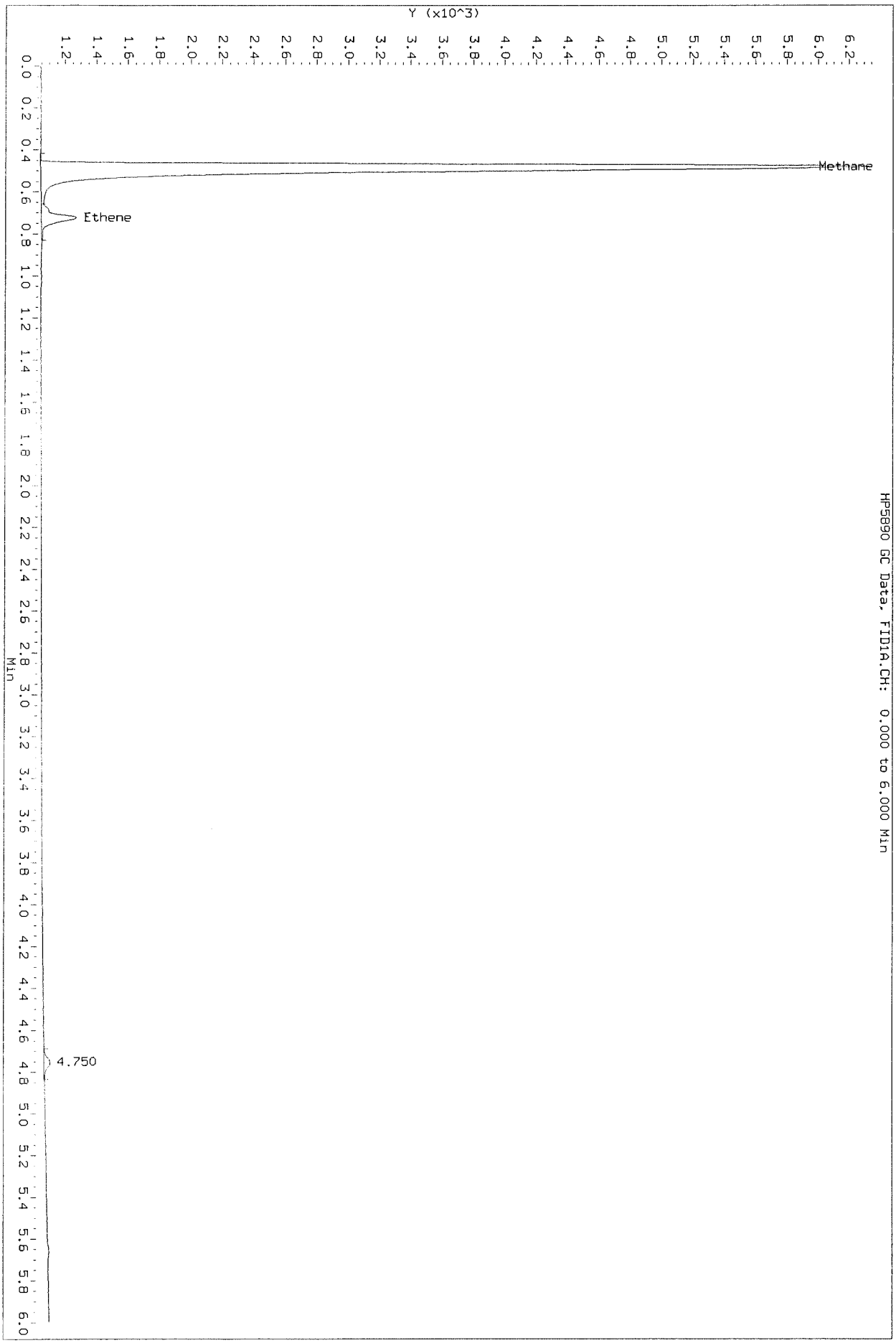
Sample Info: HS21041102-08;HS21041102-08

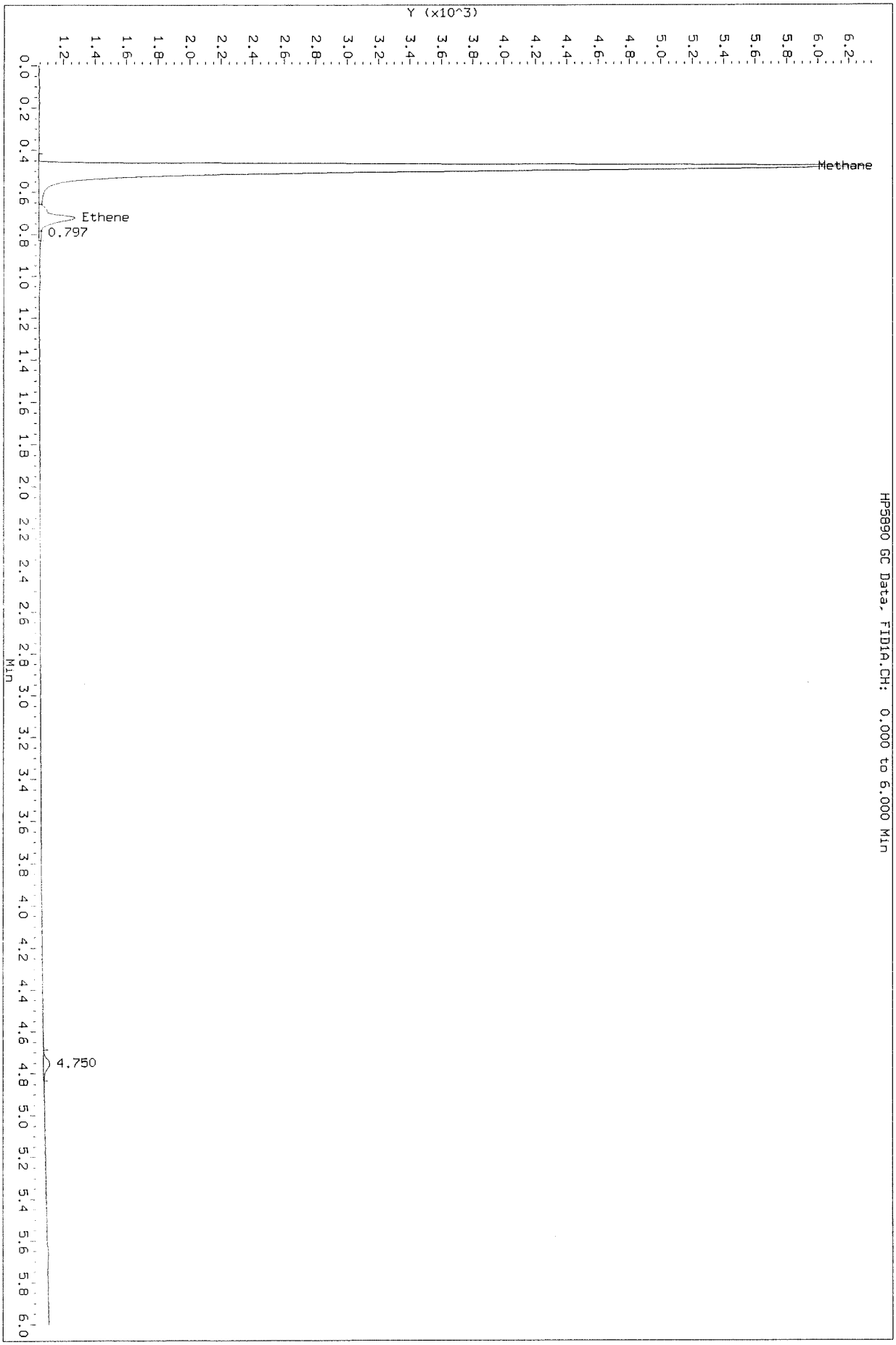
Operator: PL

Column phase: Rtx-PLOT

Column diameter: 0.53




Data File: \\nahstws005\Target\chem\FID-4.i\210427.b\Before\017.D
Injection Date: 27-APR-2021 12:58
Instrument: FID-4.i
Client Sample ID: HS21041102-08
HP5890 GC Data, FID1A.CH: 0.000 to 6.000 Min
Y (x10^3)
Methane
Ethene
4.750
Min


Data File: \\nahstws005\Target\chem\FID-4.i\210427.b\017.D
Injection Date: 27-APR-2021 12:58
Instrument: FID-4.i
Client Sample ID: HS21041102-08
HP5890 GC Data, FID1A.CH: 0.000 to 6.000 Min
Y (x10^3)
Methane
Ethene
0.797
4.750
Min

ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\nahstws005\Target\chem\FID-4.i\210427.b\018.D
Lab Smp Id: HS21041102-09 Client Smp ID: HS21041102-09
Inj Date : 27-APR-2021 13:08
Operator : PL Inst ID: FID-4.i
Smp Info : HS21041102-09;HS21041102-09
Misc Info : ;1;0;10
Comment :
Method : \\nahstws005\Target\chem\FID-4.i\210427.b\RSKNI3.m
Meth Date : 20-May-2021 12:45 FID-4.i Quant Type: ESTD
Cal Date : 24-JAN-2017 10:15 Cal File: 004.D
Als bottle: 18
Dil Factor: 10.00000
Integrator: Falcon Compound Sublist: RSK175.sub
Target Version: 4.14
Processing Host: NAHSTW7056

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
1 Methane	0.470	0.463	0.007	14079	14.4401	144.401(M)

QC Flag Legend

M - Compound response manually integrated.

Data File: \\nahstws005\Target\chem\FID-4.i\210427.b\018.D

Date : 27-APR-2021 13:08

Client ID: HS21041102-09

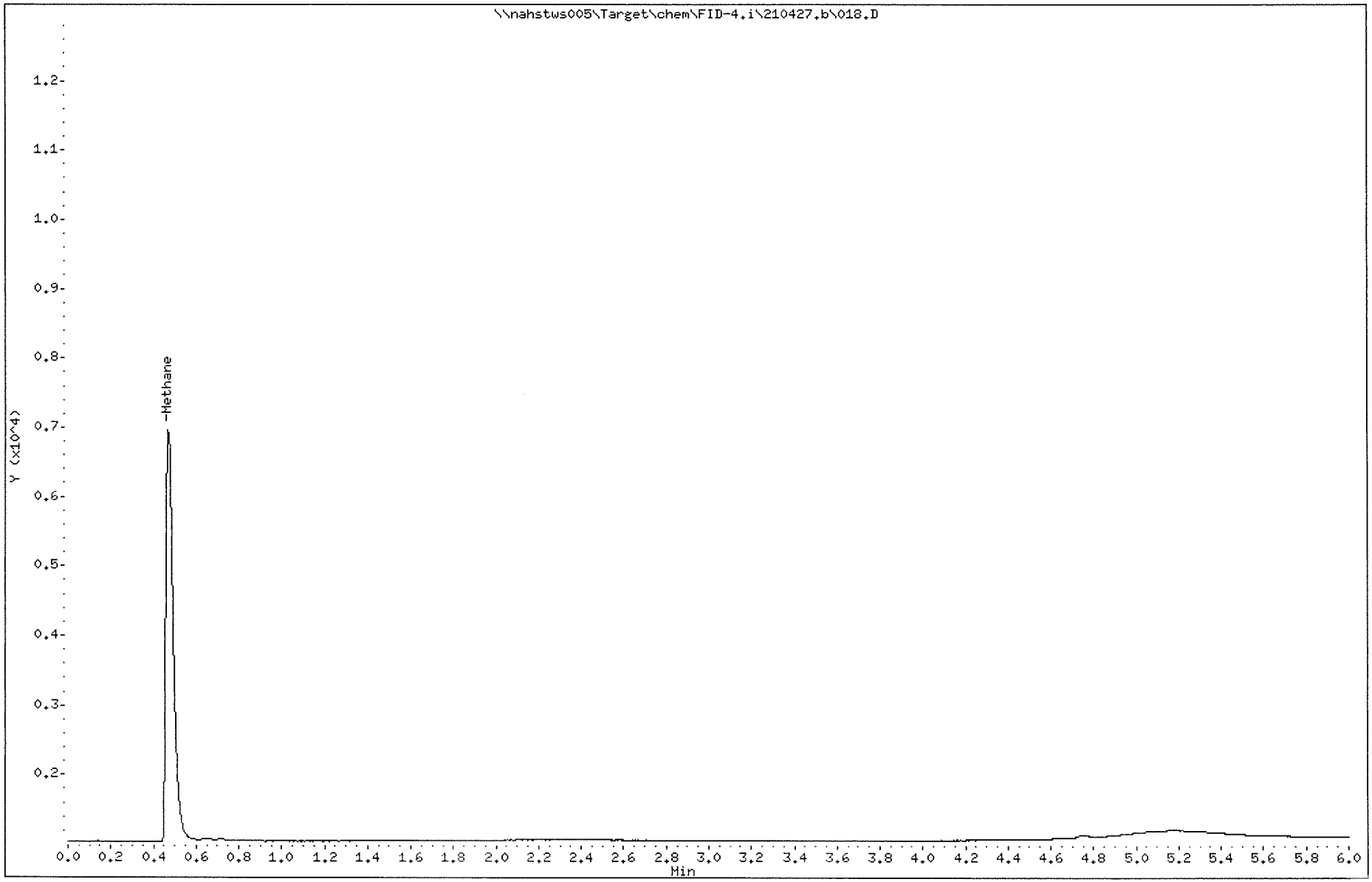
Instrument: FID-4.i

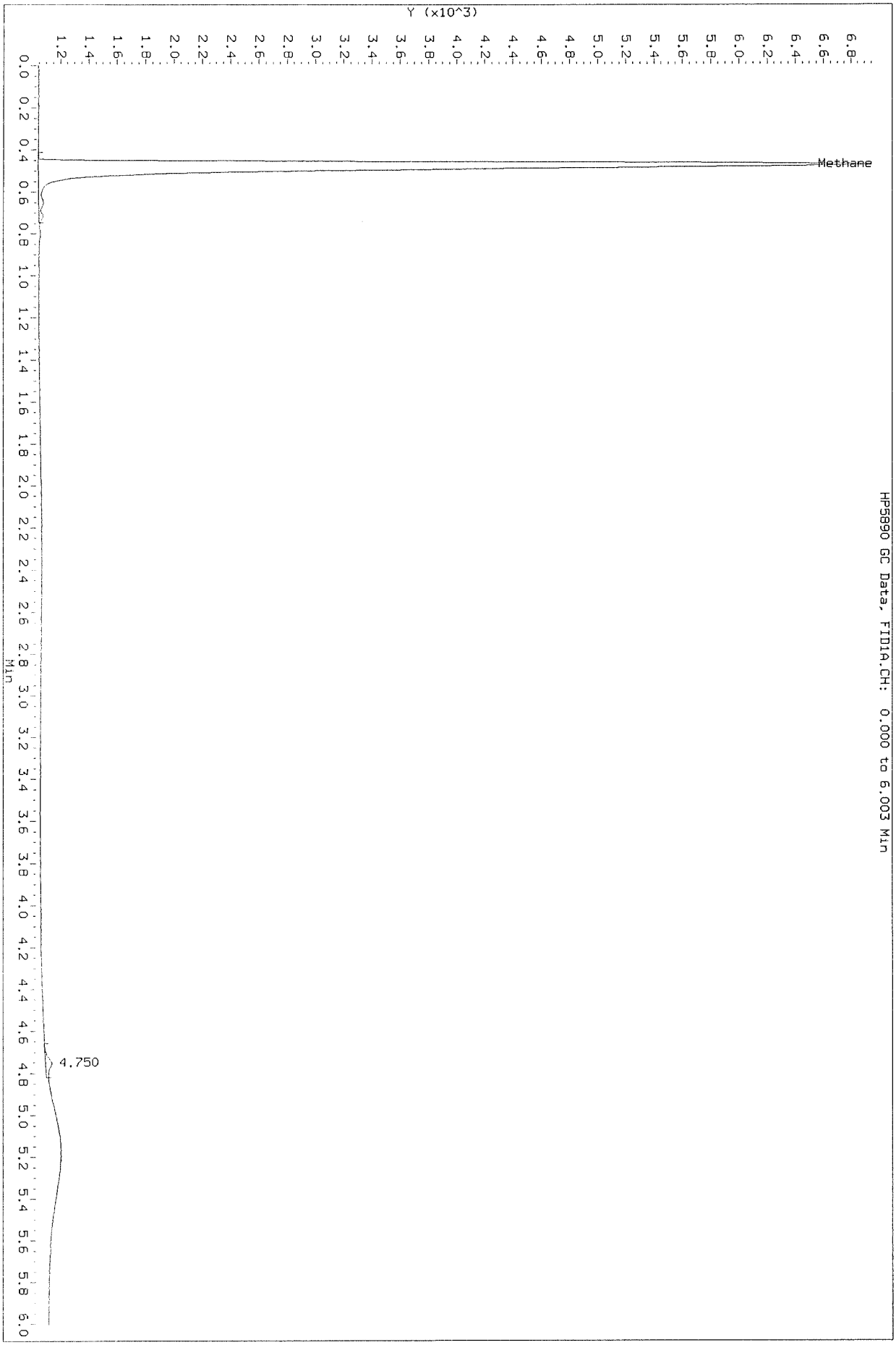
Sample Info: HS21041102-09;HS21041102-09

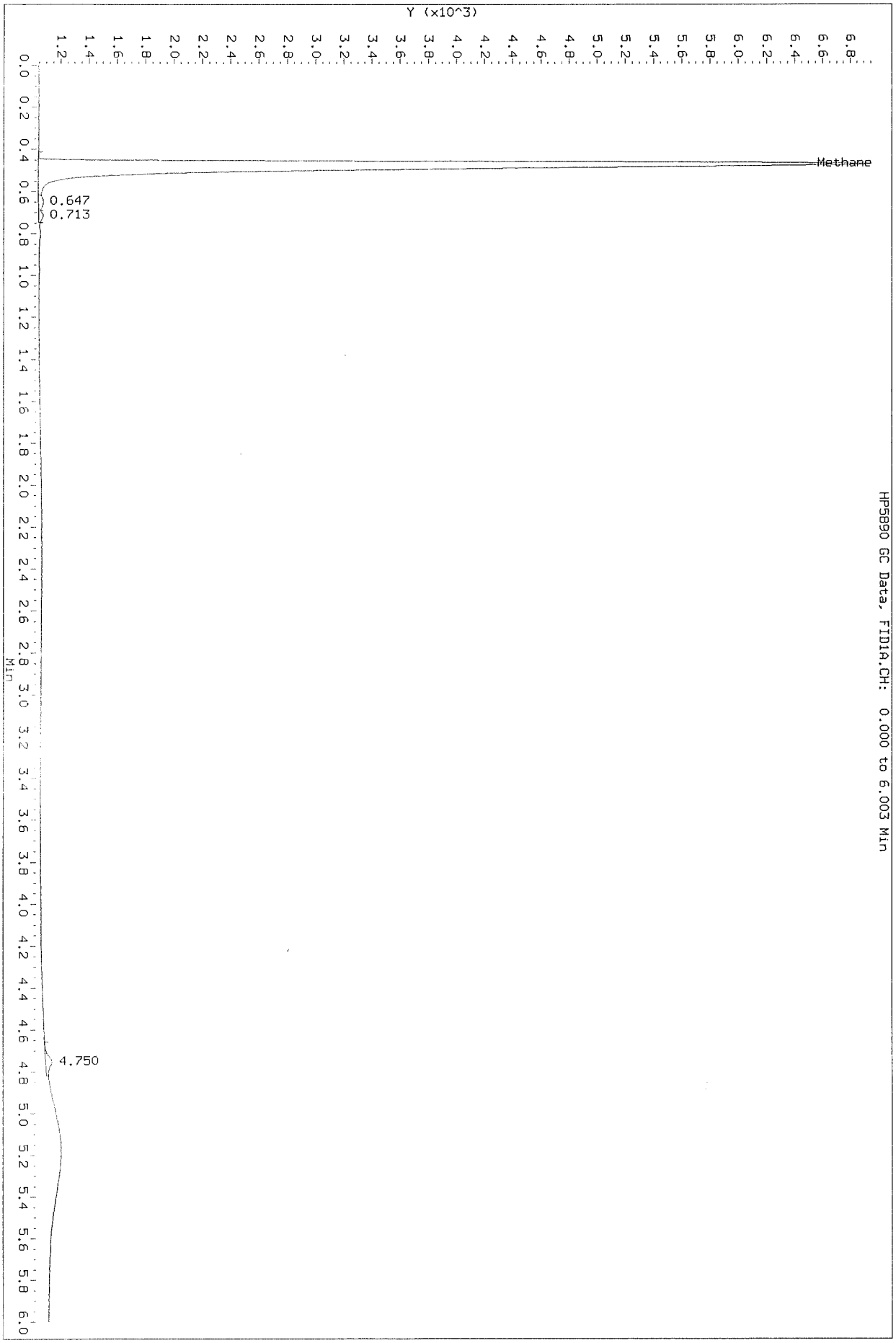
Operator: PL

Column phase: Rtx-PLOT

Column diameter: 0.53




Data File: \\nahstws005\Target\chem\FID-4.i\210427.b\Before\018.D
Injection Date: 27-APR-2021 13:08
Instrument: FID-4.i
Client Sample ID: HS21041102-09
HP5890 GC Data, FID1A.CH: 0.000 to 6.003 Min
Y (x10^3)
Methane
4.750
Min


Data File: \\nahstws005\Target\Chem\FID-4.i\210427.b\018.D
Injection Date: 27-APR-2021 13:08
Instrument: FID-4.i
Client Sample ID: HS21041102-09
HP5890 GC Data, FIDIA.CH: 0.000 to 6.003 Min
Y (x10^3)
Min
Methane
0.647
0.713
4.750

ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\nahstws005\Target\chem\FID-4.i\210427.b\019.D
Lab Smp Id: HS21041102-10 Client Smp ID: HS21041102-10
Inj Date : 27-APR-2021 13:58
Operator : PL Inst ID: FID-4.i
Smp Info : HS21041102-10;HS21041102-10
Misc Info : ;1;0;100
Comment :
Method : \\nahstws005\Target\chem\FID-4.i\210427.b\RSKNI3.m
Meth Date : 20-May-2021 12:45 FID-4.i Quant Type: ESTD
Cal Date : 24-JAN-2017 10:15 Cal File: 004.D
Als bottle: 19
Dil Factor: 100.00000
Integrator: Falcon Compound Sublist: RSK175.sub
Target Version: 4.14
Processing Host: NAHSTW7056

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)
1 Methane	0.476	0.463	0.013	12996	13.3293	1332.933
2 Ethene	0.720	0.710	0.010	4798	8.19106	819.106

Data File: \\nahstws005\Target\chem\FID-4.i\210427.b\019.D

Date : 27-APR-2021 13:58

Client ID: HS21041102-10

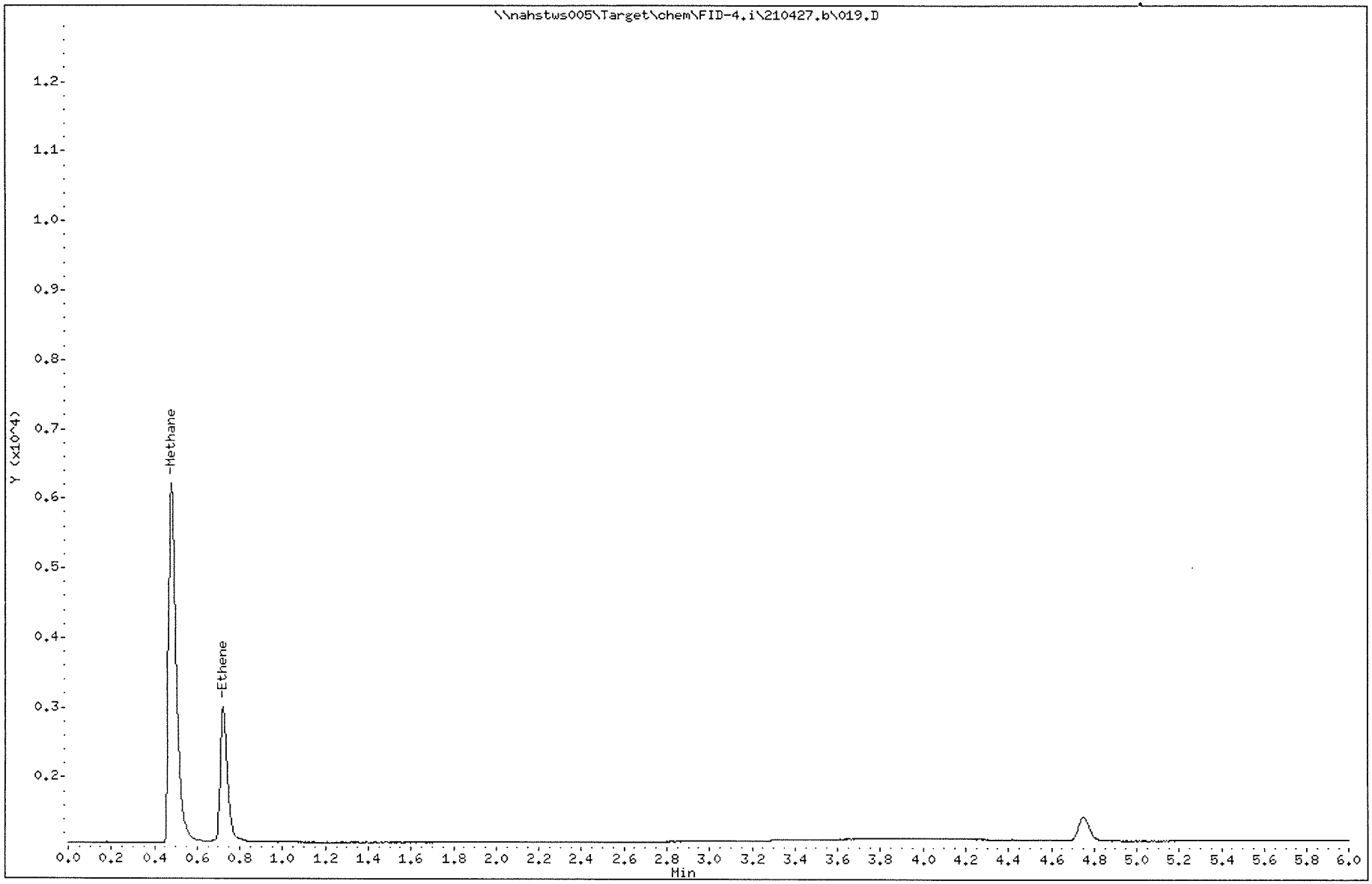
Instrument: FID-4.i

Sample Info: HS21041102-10;HS21041102-10

Operator: PL

Column phase: Rtx-PLOT

Column diameter: 0.53



ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\nahstws005\Target\chem\FID-4.i\210427.b\022.D
Lab Smp Id: RSK-CCV Client Smp ID: RSK-CCV
Inj Date : 27-APR-2021 14:34
Operator : PL Inst ID: FID-4.i
Smp Info : RSK-CCV;RSK-CCV;2;4
Misc Info : ;1;0;1
Comment :
Method : \\nahstws005\Target\chem\FID-4.i\210427.b\RSKNI3.m
Meth Date : 20-May-2021 12:45 FID-4.i Quant Type: ESTD
Cal Date : 24-JAN-2017 10:15 Cal File: 004.D
Als bottle: 22 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: RSK175.sub
Target Version: 4.14
Processing Host: NAHSTW7056

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

					AMOUNTS	
					CAL-AMT	ON-COL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/L)	(ug/L)
1 Methane	0.466	0.466	0.000	9032	9.64700	9.263
2 Ethene	0.710	0.710	0.000	10303	16.8500	17.589
3 Ethane	0.790	0.790	0.000	14574	18.0430	20.256

Data File: \\nahstws005\Target\chem\FID-4.i\210427.b\022.D

Date : 27-APR-2021 14:34

Client ID: RSK-CCV

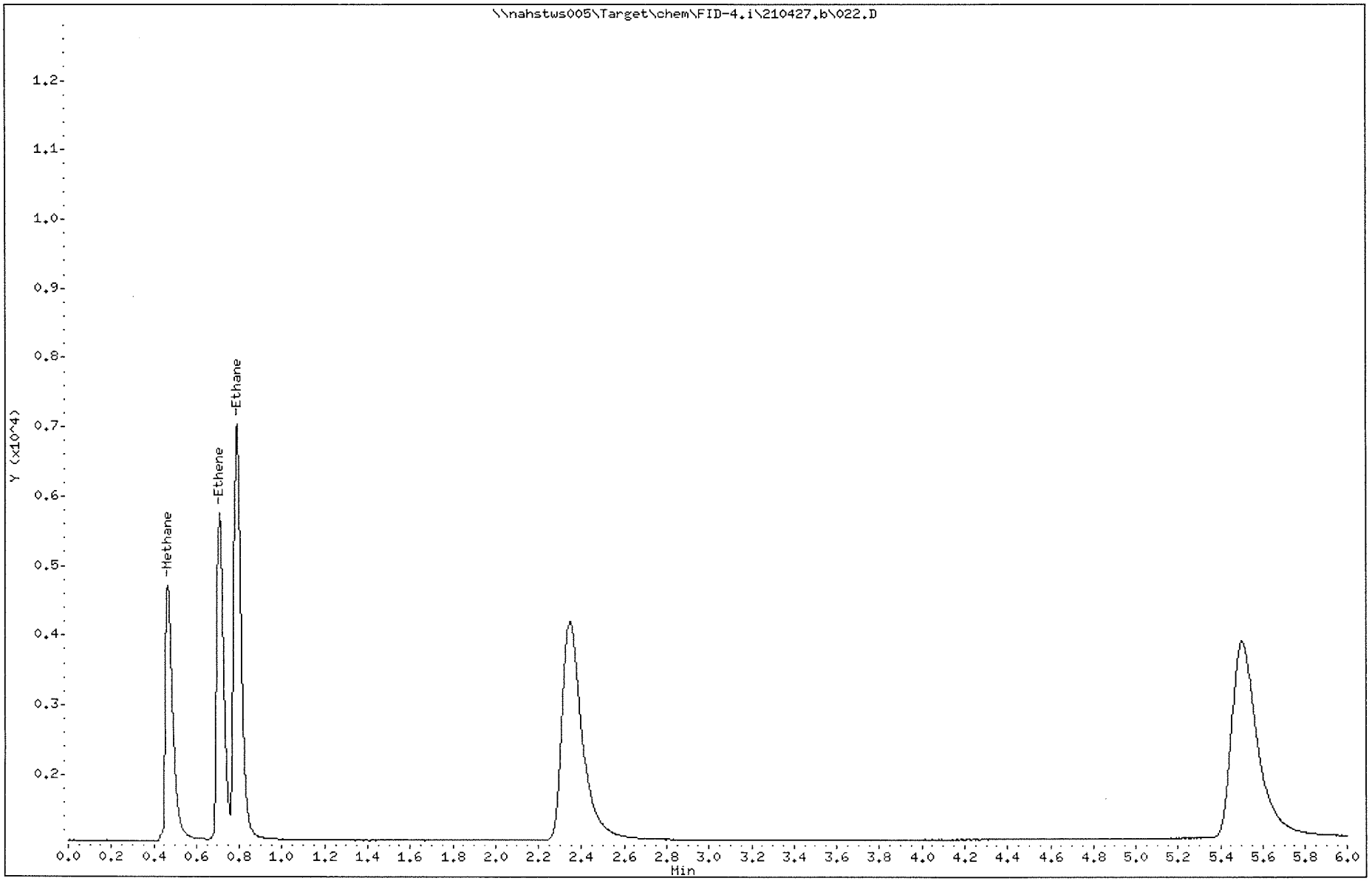
Instrument: FID-4.i

Sample Info: RSK-CCV;RSK-CCV;2;4

Operator: PL

Column phase: Rtx-PLOT

Column diameter: 0.53



HS21041102 Wet Chem Raw Data (ALK_W 2320B)

ALS WO# HS21041102

Report Date: 04/21/2021 : 6:23

PC-TitratION PLUS
Calibration Report

Calibration Record # 2353

Calibration Settings

Calibration ID	PH CAL 4-7-10	Date	04/21/2021
Channel	1	Time	6:23 PM
Probe Type	pH	Temperature	295.58 K 22.43 C
Probe ID	PH ELECTRODE	Analysis Type	Single Line Fit

Calibration Results

Slope	-58.247	CorrCoeff	0.9998
Intercept	-0.650	Equation:	Y = (-58.247) X + (-0.650)

Calibration Validity True Operator

	Result	Minimum	Maximum
Slope	-58.247	-65.00	-53.00
Intercept	-0.650	-100.00	100.00
Correlation Coefficient	0.9998	0.99	1.00

Note: "True" means the calibration was within the specified ranges
"False" means the calibration was NOT within the specified ranges

Calibration Data	Standard	Reading
	4.00	176.02
	7.00	-4.51
	10.00	-173.46

#382120 (A)

#382121 (B)

RE 4/22/2021.

Copyright Hinterland Software Ltd.

Report Date: 4/21/2021 11:54 PM

PC-TitratION PLUS
Water Analysis Report

Run Number 4071 **Order Number** 20210421-3

SampleID	RunDate	RunTime	Temp	cond (uS)	pH	palk-ppm	talk-ppm	bcarb-ppm	carb-ppm	hydr-ppm	mLs @ 8.3	mLs @ 4.5	mLs @ 4.2
ICV-PH	4/21/2021	6:54 PM	21.83	-1.00	6.04	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
TAP WATER	4/21/2021	7:01 PM	21.83	-1.00	7.86	.00	152.51	152.51	.00	.00	.00	1.45	1.45
WBLKW1-210421	4/21/2021	7:06 PM	21.40	-1.00	5.57	.00	.71	.71	.00	.00	.00	.02	.02
LCS1-210421	4/21/2021	7:15 PM	21.47	-1.00	10.91	533.86	1,034.54	.00	1,001.37	33.17	5.08	9.85	9.85
LCSD1-210421	4/21/2021	7:23 PM	21.02	-1.00	10.92	535.12	1,037.50	.00	1,004.74	32.75	5.10	9.88	9.88
HS21040846-01	4/21/2021	7:30 PM	20.91	-1.00	7.78	.00	234.25	234.25	.00	.00	.00	2.23	2.23
HS21040846-01DUP	4/21/2021	7:37 PM	21.27	-1.00	7.78	.00	249.33	249.33	.00	.00	.00	2.37	2.37
HS21040846-02	4/21/2021	7:44 PM	21.53	-1.00	7.79	.00	231.07	231.07	.00	.00	.00	2.20	2.20
HS21040846-03	4/21/2021	7:50 PM	21.71	-1.00	7.71	.00	229.44	229.44	.00	.00	.00	2.19	2.19
HS21040846-04	4/21/2021	7:57 PM	21.90	-1.00	7.77	.00	231.46	231.46	.00	.00	.00	2.20	2.20
HS21040846-05	4/21/2021	8:04 PM	22.13	-1.00	7.80	.00	230.20	230.20	.00	.00	.00	2.19	2.19
CCV-PH	4/21/2021	8:07 PM	22.52	-1.00	7.08	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
CCV-ALK	4/21/2021	8:15 PM	22.37	-1.00	10.87	524.70	1,023.06	.00	996.72	26.34	5.00	9.74	9.74
DI RINSE	4/21/2021	8:20 PM	22.49	-1.00	5.93	.00	1.07	1.07	.00	.00	.00	.03	.03
HS21041007-01	4/21/2021	8:26 PM	22.46	-1.00	5.58	.00	.42	.42	.00	.00	.00	.02	.02
WBLKW1-210421	4/21/2021	8:31 PM	22.48	-1.00	5.55	.00	.62	.62	.00	.00	.00	.02	.02
HS21040863-01	4/21/2021	8:37 PM	22.07	-1.00	8.03	.00	135.81	135.81	.00	.00	.00	1.29	1.29
HS21040840-01DF2	4/21/2021	8:45 PM	21.61	-1.00	10.25	252.12	420.53	.00	336.81	83.71	2.40	4.01	4.01
HS21040842-01DF2	4/21/2021	8:54 PM	21.24	-1.00	10.77	149.19	350.22	51.83	298.39	.00	1.42	3.34	3.34
HS21040848-01DF2	4/21/2021	9:03 PM	20.98	-1.00	10.87	111.92	277.53	53.70	223.83	.00	1.07	2.64	2.64
HS21040845-01DF2	4/21/2021	9:11 PM	21.09	-1.00	10.03	198.52	336.76	.00	276.47	60.29	1.89	3.21	3.21
HS21040875-01DF2	4/21/2021	9:20 PM	21.47	-1.00	10.37	144.52	499.10	210.07	289.03	.00	1.38	4.75	4.75
CCV-PH	4/21/2021	9:23 PM	21.66	-1.00	7.12	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
CCV-ALK	4/21/2021	9:32 PM	21.56	-1.00	10.93	516.86	1,042.36	8.64	1,033.72	.00	4.92	9.93	9.93
DI RINSE	4/21/2021	9:38 PM	21.90	-1.00	6.03	.00	.86	.86	.00	.00	.00	.03	.03
WBLKW2-210421	4/21/2021	9:43 PM	21.96	-1.00	5.71	.00	.63	.63	.00	.00	.00	.03	.03
LCS2-210421	4/21/2021	9:52 PM	22.03	-1.00	10.91	521.63	1,027.12	.00	1,010.98	16.14	4.97	9.78	9.78

Copyright Hinterland Software Ltd.

Run Number 4071 **Order Number** 20210421-3

SampleID	RunDate	RunTime	Temp	cond (uS)	pH	palk-ppm	talk-ppm	bcarb-ppm	carb-ppm	hydr-ppm	mLs @ 8.3	mLs @ 4.5	mLs @ 4.2
LCSD2-210421	4/21/2021	10:01 PM	22.19	-1.00	10.89	525.30	1,059.44	8.84	1,050.60	.00	5.00	10.09	10.09
HS21040859-08	4/21/2021	10:07 PM	22.48	-1.00	6.38	.00	169.72	169.72	.00	.00	.00	1.62	1.62
HS21040859-08DUP	4/21/2021	10:12 PM	22.35	-1.00	6.29	.00	168.42	168.42	.00	.00	.00	1.60	1.60
HS21040859-07	4/21/2021	10:18 PM	22.39	-1.00	6.62	.00	337.92	337.92	.00	.00	.00	3.22	3.22
HS21040859-09	4/21/2021	10:24 PM	22.45	-1.00	6.73	.00	251.67	251.67	.00	.00	.00	2.40	2.40
CCV-PH	4/21/2021	10:27 PM	22.43	-1.00	7.09	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
CCV-ALK	4/21/2021	10:35 PM	22.19	-1.00	10.84	518.47	1,027.89	.00	1,018.83	9.05	4.94	9.79	9.79
DI RINSE	4/21/2021	10:40 PM	22.48	-1.00	5.90	.00	.92	.92	.00	.00	.00	.03	.03
HS21040859-10	4/21/2021	10:50 PM	22.52	-1.00	7.39	.00	1,043.04	1,043.04	.00	.00	.00	9.93	9.93
HS21041102-01	4/21/2021	10:55 PM	22.66	-1.00	6.26	.00	86.50	86.50	.00	.00	.00	.82	.82
HS21041102-02	4/21/2021	11:01 PM	22.70	-1.00	6.20	.00	77.50	77.50	.00	.00	.00	.74	.74
HS21041102-03	4/21/2021	11:05 PM	22.70	-1.00	5.04	.00	2.88	2.88	.00	.00	.00	.05	.05
HS21041102-04	4/21/2021	11:11 PM	22.75	-1.00	6.24	.00	41.40	41.40	.00	.00	.00	.39	.39
HS21041102-05	4/21/2021	11:16 PM	22.78	-1.00	6.20	.00	35.44	35.44	.00	.00	.00	.34	.34
HS21041102-07	4/21/2021	11:22 PM	22.77	-1.00	6.34	.00	320.84	320.84	.00	.00	.00	3.06	3.06
HS21041102-10	4/21/2021	11:35 PM	22.74	-1.00	5.21	.00	1,696.09	1,696.09	.00	.00	.00	16.15	16.15
CCV-PH	4/21/2021	11:39 PM	22.84	-1.00	7.08	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
CCV-ALK	4/21/2021	11:47 PM	22.69	-1.00	10.78	515.54	1,032.90	1.82	1,031.07	.00	4.91	9.84	9.84
DI RINSE	4/21/2021	11:52 PM	22.92	-1.00	5.89	.00	.91	.91	.00	.00	.00	.03	.03

Copyright Hinterland Software Ltd.

Batch ID Exception Report

Batch ID: R382120
QC Group: 0

Sample ID	Seq No	Sample Type	Test Code	Analyzed Date	Dilution Factor
	Analyte Type	Analyte		Qualifier	
SAMP	0	SAMP		22 Apr 2021 7:56 AM	1

X No exceptions found

Batch ID Exception Report

Batch ID: R382121
QC Group: 0

Sample ID	Seq No	Sample Type	Test Code	Analyzed Date	Dilution Factor
	Analyte Type	Analyte		Qualifier	
SAMP	0	SAMP		22 Apr 2021 8:01 AM	1

X No exceptions found

HS21041102 Wet Chem Raw Data (TOC_W 5310B)

ALS WO# HS21041102

C:\TOC-L\Data\2021_02_25_001.tlx

	Type	Analysis	Sample Name	Sample ID	Origin	Result
1	Standard	NPOC	CAL	3150171(01-07)	02_25_2021_CAL.2021_02_	
2	Unknown	NPOC	ICV	315017108	02_25_2021_CAL.cal	NPOC:10.14mg/L
3	Unknown	NPOC	ICB		02_25_2021_CAL.cal	NPOC:-0.1140mg/L
4	Unknown	NPOC	CCV	315017106	02_25_2021_CAL.cal	NPOC:25.02mg/L
5	Unknown	NPOC	CCB		02_25_2021_CAL.cal	NPOC:-0.07587mg/L
6	Unknown	NPOC	MBLK-02252021		02_25_2021_CAL.cal	NPOC:-0.1214mg/L
7	Unknown	NPOC	LCS-02252021		02_25_2021_CAL.cal	NPOC:10.15mg/L
8	Unknown	NPOC	LCSD02252021		02_25_2021_CAL.cal	NPOC:10.16mg/L
9	Unknown	NPOC	HS21020689-01		02_25_2021_CAL.cal	NPOC:22.48mg/L
10	Unknown	NPOC	HS21020689-02		02_25_2021_CAL.cal	NPOC:17.34mg/L
11	Unknown	NPOC	HS21020689-02MS		02_25_2021_CAL.cal	NPOC:28.25mg/L
12	Unknown	NPOC	HS21020689-03		02_25_2021_CAL.cal	NPOC:10.22mg/L
13	Unknown	NPOC	HS21020538-01		02_25_2021_CAL.cal	NPOC:20.36mg/L
14	Unknown	NPOC	HS21020538-02		02_25_2021_CAL.cal	NPOC:4.452mg/L
15	Unknown	NPOC	HS21020793-02DF10		02_25_2021_CAL.cal	NPOC:17.50mg/L
16	Unknown	NPOC	CCV		02_25_2021_CAL.cal	NPOC:25.46mg/L
17	Unknown	NPOC	CCB		02_25_2021_CAL.cal	NPOC:0.08018mg/L

	Notes	Status	Date / Time	Vial
1		Completed	2/25/2021 1	1, 2, 3, 4, 5,
2		Completed	2/25/2021 1	8
3		Completed	2/25/2021 1	9
4		Completed	2/25/2021 1	10
5		Completed	2/25/2021 1	11
6		Completed	2/25/2021 1	12
7		Completed	2/25/2021 1	13
8		Completed	2/25/2021 1:	14
9		Completed	2/25/2021 1:	15
10		Completed	2/25/2021 1:	16
11		Completed	2/25/2021 1:	17
12		Completed	2/25/2021 2:	18
13		Completed	2/25/2021 2:	19
14		Completed	2/25/2021 2:	20
15		Completed	2/25/2021 2:	21
16		Completed	2/25/2021 3:	22
17		Completed	2/25/2021 3:	23

TOC-Control L Report

2021_02_25_001.tlx

Instr.Information

Instrument Options	TOC/ASI/IC Unit/
Catalyst	Regular Sensitivity

Cal. Curve

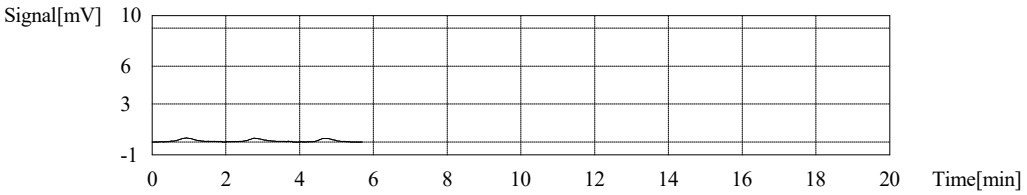
Sample Name:	CAL
Sample ID:	3150171(01-07)
Cal. Curve:	02_25_2021_CAL.2021_02_25_09_13_02.cal
Status	Completed

Type	Anal.
Standard	NPOC

Conc: 0.000mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	0.7577	50uL	1.000	*******		2/25/2021 9:21:39 AM
2	0.6368	50uL	1.000	*******		2/25/2021 9:23:47 AM
3	0.6500	50uL	1.000	*******		2/25/2021 9:25:55 AM

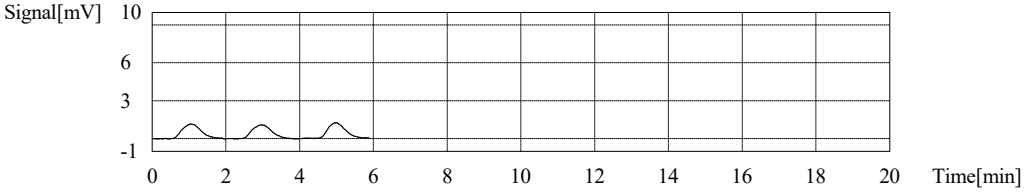
Acid Add.	0.000%
Sparge Gas Flow	80mL/min
Sp. Time	180.0sec
Mean Area	0.6815



Conc: 1.000mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	4.063	50uL	1.000	*******		2/25/2021 9:34:44 AM
2	3.946	50uL	1.000	*******		2/25/2021 9:37:02 AM
3	3.886	50uL	1.000	*******		2/25/2021 9:39:10 AM

Acid Add.	0.000%
Sparge Gas Flow	80mL/min
Sp. Time	180.0sec
Mean Area	3.965

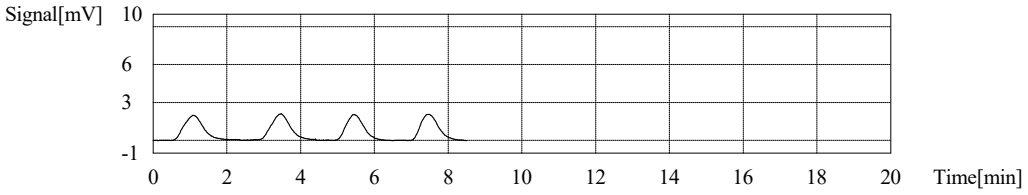


Conc: 2.000mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	7.014	50uL	1.000	*******		2/25/2021 9:48:25 AM
2	6.976	50uL	1.000	*******		2/25/2021 9:50:44 AM
3	6.738	50uL	1.000	*******	E	2/25/2021 9:53:02 AM
4	6.989	50uL	1.000	*******		2/25/2021 9:55:18 AM

TOC-Control L Report

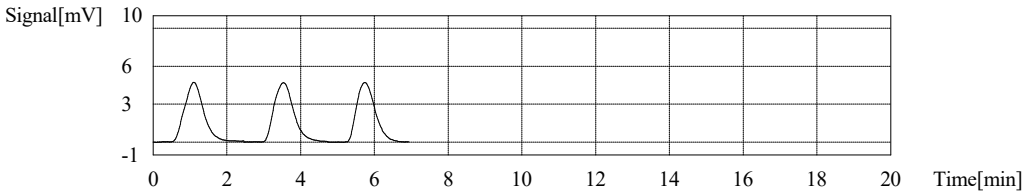
Acid Add. 0.000%
Sparge Gas Flow 80mL/min
Sp. Time 180.0sec
Mean Area 6.993



Conc: 5.000mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	16.70	50uL	1.000	*******		2/25/2021 10:04:35 AM
2	16.99	50uL	1.000	*******		2/25/2021 10:07:06 AM
3	16.40	50uL	1.000	*******		2/25/2021 10:09:32 AM

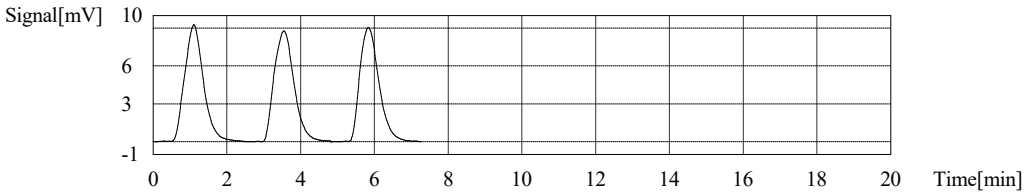
Acid Add. 0.000%
Sparge Gas Flow 80mL/min
Sp. Time 180.0sec
Mean Area 16.70



Conc: 10.00mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	32.33	50uL	1.000	*******		2/25/2021 10:18:54 AM
2	32.41	50uL	1.000	*******		2/25/2021 10:21:29 AM
3	32.27	50uL	1.000	*******		2/25/2021 10:24:10 AM

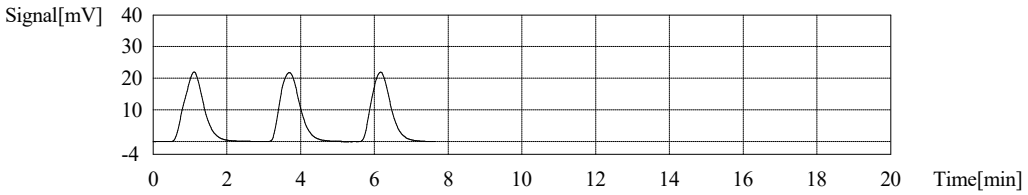
Acid Add. 0.000%
Sparge Gas Flow 80mL/min
Sp. Time 180.0sec
Mean Area 32.34



Conc: 25.00mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	79.83	50uL	1.000	*******		2/25/2021 10:33:42 AM
2	80.51	50uL	1.000	*******		2/25/2021 10:36:25 AM
3	79.09	50uL	1.000	*******		2/25/2021 10:39:12 AM

Acid Add. 0.000%
Sparge Gas Flow 80mL/min
Sp. Time 180.0sec
Mean Area 79.81



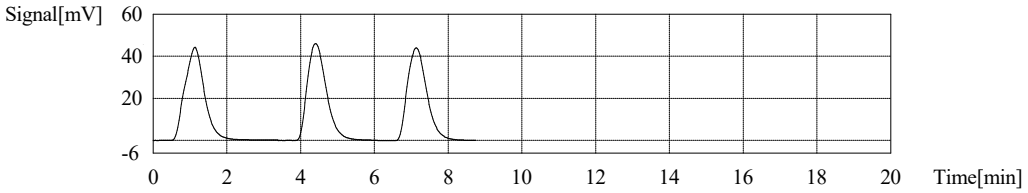
Conc: 50.00mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	162.4	50uL	1.000	*******		2/25/2021 10:49:29 AM
2	163.8	50uL	1.000	*******		2/25/2021 10:52:26 AM
3	159.9	50uL	1.000	*******		2/25/2021 10:55:21 AM

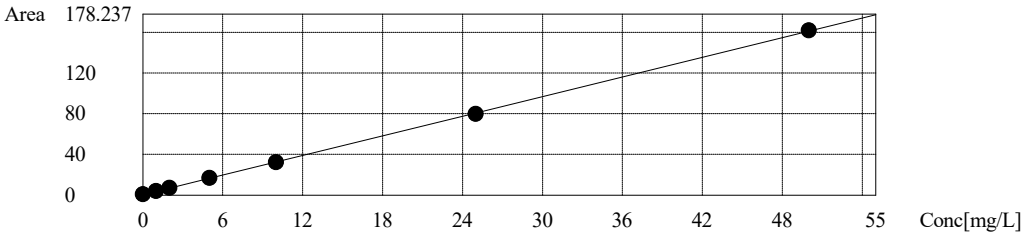
TOC-Control L Report

2021_02_25_001.tlx

Acid Add.	0.000%
Sparge Gas Flow	80mL/min
Sp. Time	180.0sec
Mean Area	162.0



Slope:	3.220
Intercept	0.4365
r^2	0.9999
r	1.0000
RSE(%)	N/A
Zero Shift	No



Sample

Sample Name:	ICV
Sample ID:	315017108
Origin:	02_25_2021_CAL.cal
Status	Completed
Chk. Result	

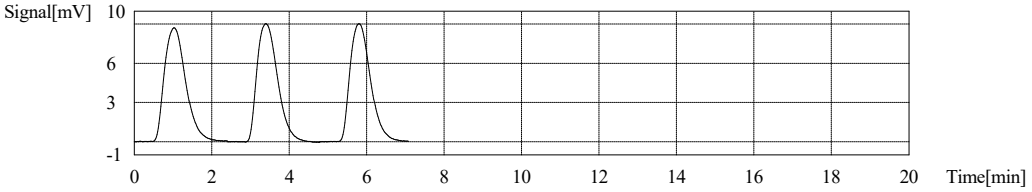
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:10.14mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	33.04	10.13mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	2/25/2021 11:32:06 AM
2	33.24	10.19mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	2/25/2021 11:34:44 AM
3	32.98	10.11mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	2/25/2021 11:37:17 AM

Mean Area	33.09
Mean Conc.	10.14mg/L



Sample

Sample Name:	ICB
Sample ID:	
Origin:	02_25_2021_CAL.cal
Status	Completed
Chk. Result	

Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:-0.1140mg/L

1. Det

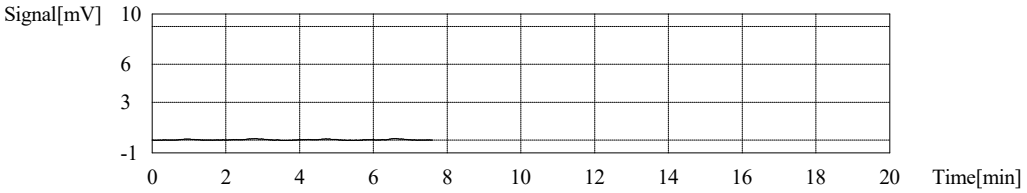
TOC-Control L Report

2021_02_25_001.tlx

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.000	-0.1356mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	2/25/2021 11:46:05 AM
2	0.2080	-0.07096mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	2/25/2021 11:48:13 AM
3	0.000	-0.1356mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	2/25/2021 11:50:20 AM
4	0.2102	-0.07028mg/L	50uL	1.000	E	02_25_2021_CAL.2021_02_25_09_13_02.cal	2/25/2021 11:52:27 AM

Mean Area 0.06933
Mean Conc. -0.1140mg/L



C:\TOC-L\Data\2021_04_30_001.tlx

	Type	Analysis	Sample Name	Sample ID	Origin	Result	Notes	Status
1	Unknown	NPOC	CCV	316132910	02_25_2021	NPOC:24.03mg/L		Completed
2	Unknown	NPOC	CCB		02_25_2021	NPOC:-0.08626mg/L		Completed
3	Unknown	NPOC	MBLK-04302021		02_25_2021	NPOC:-0.1203mg/L		Completed
4	Unknown	NPOC	LCS-04302021		02_25_2021	NPOC:9.507mg/L		Completed
5	Unknown	NPOC	LCSD-04302021	TOC_W 5310B	02_25_2021	NPOC:9.413mg/L		Completed
6	Unknown	NPOC	HS21041369-01		02_25_2021	NPOC:11.56mg/L		Completed
7	Unknown	NPOC	HS21041369-01MS		02_25_2021	NPOC:22.25mg/L		Completed
8	Unknown	NPOC	HS21041176-01		02_25_2021	NPOC:10.03mg/L		Completed
9	Unknown	NPOC	HS21041337-01		02_25_2021	NPOC:13.32mg/L		Completed
10	Unknown	NPOC	HS21041339-01		02_25_2021	NPOC:9.585mg/L		Completed
11	Unknown	NPOC	HS21041362-01		02_25_2021	NPOC:17.53mg/L		Completed
12	Unknown	NPOC	HS21041367-01		02_25_2021	NPOC:6.603mg/L		Completed
13	Unknown	NPOC	CCV	316132910	02_25_2021	NPOC:24.38mg/L		Completed
14	Unknown	NPOC	CCB		02_25_2021	NPOC:-0.02605mg/L		Completed
15	Unknown	NPOC	HS21041024-01		02_25_2021	NPOC:926.6mg/L		Completed
16	Unknown	NPOC	HS21041102-01		02_25_2021	NPOC:39.08mg/L		Completed
17	Unknown	NPOC	HS21041102-02		02_25_2021	NPOC:36.98mg/L		Completed
18	Unknown	NPOC	HS21041102-03		02_25_2021	NPOC:3.539mg/L		Completed
19	Unknown	NPOC	CCV	316132910	02_25_2021	NPOC:25.13mg/L		Completed
20	Unknown	NPOC	CCB		02_25_2021	NPOC:0.04909mg/L		Completed
21	Unknown	NPOC	MBLK2-04302021		02_25_2021	NPOC:-0.01664mg/L		Completed
22	Unknown	NPOC	LCS2-04302021		02_25_2021	NPOC:9.629mg/L		Completed
23	Unknown	NPOC	LCSD2-04302021	TOC_W 5310B	02_25_2021	NPOC:9.621mg/L		Completed
24	Unknown	NPOC	HS21041102-04		02_25_2021	NPOC:16.88mg/L		Completed
25	Unknown	NPOC	HS21041102-05		02_25_2021	NPOC:16.91mg/L		Completed
26	Unknown	NPOC	HS21041102-07		02_25_2021	NPOC:6.214mg/L		Completed
27	Unknown	NPOC	HS21041102-08		02_25_2021	NPOC:4.841mg/L		Completed
28	Unknown	NPOC	HS21041102-08MS		02_25_2021	NPOC:15.48mg/L		Completed
29	Unknown	NPOC	HS21041102-09		02_25_2021	NPOC:2.281mg/L		Completed
30	Unknown	NPOC	HS21041102-10		02_25_2021	NPOC:1738mg/L		Completed
31	Unknown	NPOC	CCV	316132910	02_25_2021	NPOC:26.43mg/L		Completed
32	Unknown	NPOC	CCB		02_25_2021	NPOC:0.1328mg/L		Completed
33	Unknown	NPOC	HS21041132-05		02_25_2021	NPOC:2.552mg/L		Completed
34	Unknown	NPOC	HS21041466-01		02_25_2021	NPOC:14.74mg/L		Completed
35	Unknown	NPOC	HS21041480-01		02_25_2021	NPOC:2.136mg/L		Completed
36	Unknown	NPOC	CCV	316132910	02_25_2021	NPOC:24.61mg/L		Completed
37	Unknown	NPOC	CCB		02_25_2021	NPOC:-0.04789mg/L		Completed

	Date / Time	Vial
1	4/30/2021 4:	1
2	4/30/2021 4:	2
3	4/30/2021 4:	3
4	4/30/2021 4:	4
5	4/30/2021 5:	5
6	4/30/2021 5:	6
7	4/30/2021 5:	7
8	4/30/2021 5:	8
9	4/30/2021 6:	9
10	4/30/2021 6:	10
11	4/30/2021 6:	11
12	4/30/2021 6:	12
13	4/30/2021 7:	13
14	4/30/2021 7:	14
15	4/30/2021 7:	15
16	4/30/2021 8:	16
17	4/30/2021 8:	17
18	4/30/2021 8:	18
19	4/30/2021 8:	1
20	4/30/2021 9:	2
21	4/30/2021 9:	3
22	4/30/2021 9:	4
23	4/30/2021 9:	5
24	4/30/2021 1	19
25	4/30/2021 1	20
26	4/30/2021 1	21
27	4/30/2021 1	22
28	4/30/2021 1	23
29	4/30/2021 1	24
30	4/30/2021 1	25
31	5/1/2021 12:	13
32	5/1/2021 12:	14
33	5/1/2021 12:	26
34	5/1/2021 12:	27
35	5/1/2021 1:0	28
36	5/1/2021 1:1	1
37	5/1/2021 1:3	2

TOC-Control L Report

Instr.Information

Instrument Options TOC/ASI/IC Unit/
Catalyst Regular Sensitivity

Sample

Sample Name: CCV
Sample ID: 316132910
Origin: 02_25_2021_CAL.cal
Status Completed
Chk. Result

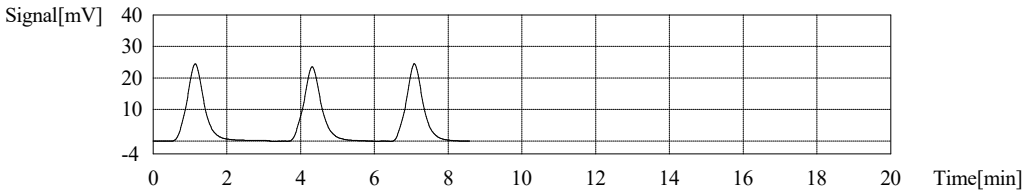
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:24.03mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	78.55	24.26mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/30/2021 4:06:27 PM
2	77.74	24.01mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/30/2021 4:09:28 PM
3	77.19	23.84mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/30/2021 4:12:22 PM

Mean Area 77.83
Mean Conc. 24.03mg/L



Sample

Sample Name: CCB
Sample ID:
Origin: 02_25_2021_CAL.cal
Status Completed
Chk. Result

Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:-0.08626mg/L

1. Det

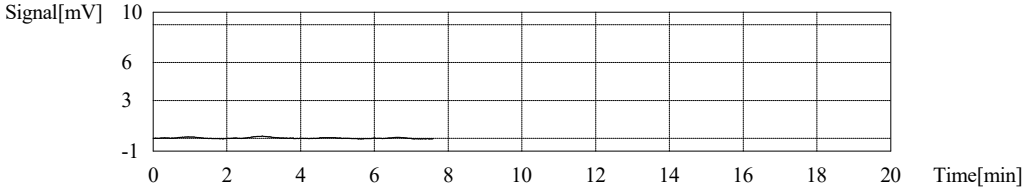
Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.3171	-0.03708mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/30/2021 4:21:11 PM
2	0.4899	0.01658mg/L	50uL	1.000	E	02_25_2021_CAL.2021_02_25_09_13_02.cal	4/30/2021 4:23:19 PM
3	0.000	-0.1356mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/30/2021 4:25:27 PM
4	0.1591	-0.08615mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/30/2021 4:27:35 PM

TOC-Control L Report

2021_04_30_001.tlx

Mean Area 0.1587
Mean Conc. -0.08626mg/L



Sample

Sample Name: MBLK-04302021
Sample ID:
Origin: 02_25_2021_CAL.cal
Status Completed
Chk. Result

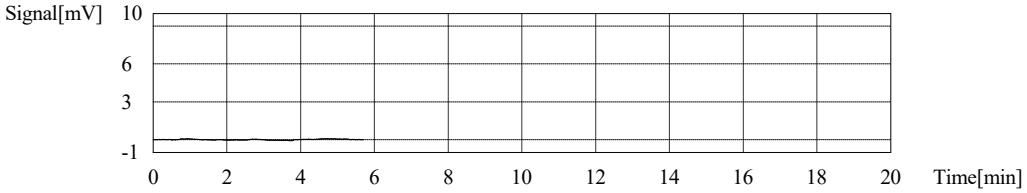
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:-0.1203mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.1475	-0.08975mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/30/2021 4:36:19 PM
2	0.000	-0.1356mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/30/2021 4:38:27 PM
3	0.000	-0.1356mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/30/2021 4:40:35 PM

Mean Area 0.04917
Mean Conc. -0.1203mg/L



Sample

Sample Name: LCS-04302021
Sample ID:
Origin: 02_25_2021_CAL.cal
Status Completed
Chk. Result

Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:9.507mg/L

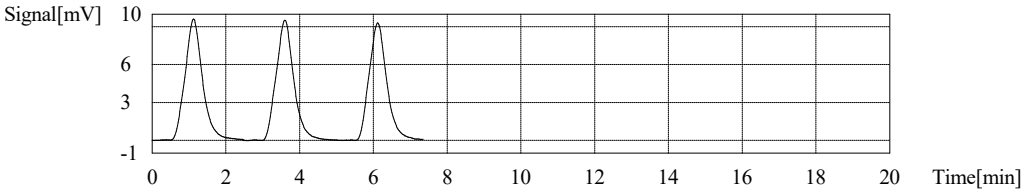
1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	31.26	9.572mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/30/2021 4:49:58 PM
2	31.48	9.641mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/30/2021 4:52:46 PM
3	30.41	9.309mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/30/2021 4:55:20 PM

TOC-Control L Report

Mean Area 31.05
Mean Conc. 9.507mg/L



Sample

Sample Name: LCSD-04302021
Sample ID: TOC_W 5310B
Origin: 02_25_2021_CAL.cal
Status Completed
Chk. Result

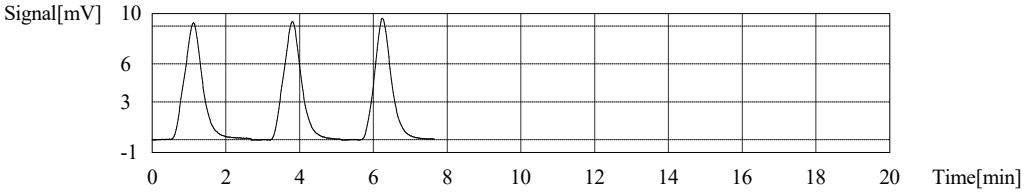
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:9.413mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	30.75	9.414mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/30/2021 5:04:56 PM
2	31.19	9.551mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/30/2021 5:07:38 PM
3	30.30	9.274mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/30/2021 5:10:24 PM

Mean Area 30.75
Mean Conc. 9.413mg/L



Sample

Sample Name: HS21041369-01
Sample ID:
Origin: 02_25_2021_CAL.cal
Status Completed
Chk. Result

Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:11.56mg/L

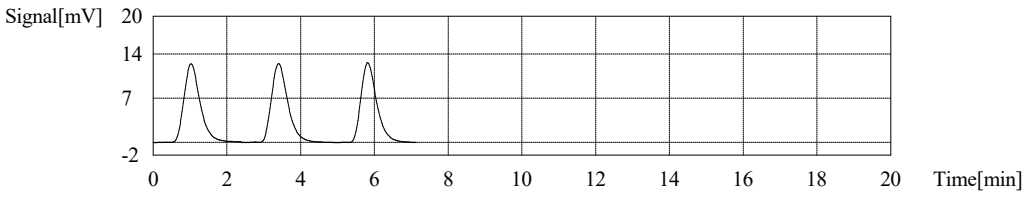
1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	37.34	11.46mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/30/2021 5:19:41 PM
2	38.31	11.76mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/30/2021 5:22:22 PM
3	37.37	11.47mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/30/2021 5:24:55 PM

TOC-Control L Report

Mean Area 37.67
Mean Conc. 11.56mg/L



Sample

Sample Name: HS21041369-01MS
Sample ID:
Origin: 02_25_2021_CAL.cal
Status Completed
Chk. Result

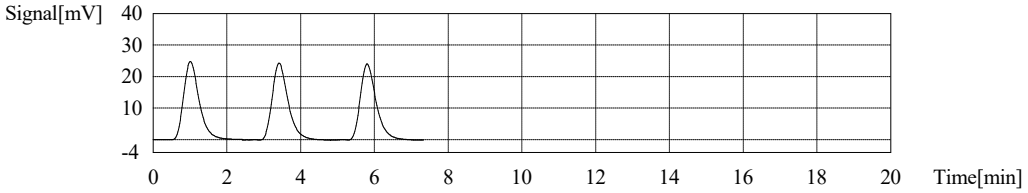
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:22.25mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	72.16	22.27mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/30/2021 5:34:14 PM
2	72.44	22.36mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/30/2021 5:36:52 PM
3	71.67	22.12mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/30/2021 5:39:38 PM

Mean Area 72.09
Mean Conc. 22.25mg/L



Sample

Sample Name: CCV
Sample ID: 316132910
Origin: 02_25_2021_CAL.cal
Status Completed
Chk. Result

Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:24.38mg/L

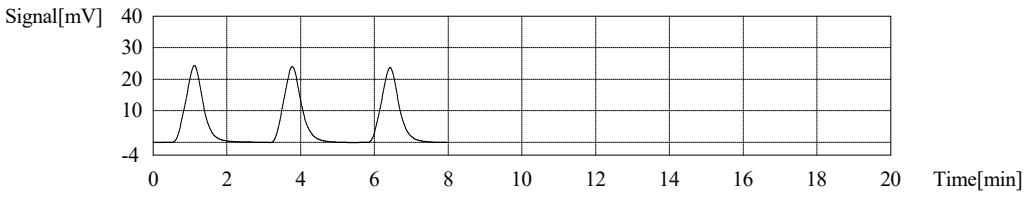
1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	78.95	24.38mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/30/2021 7:04:09 PM
2	79.68	24.61mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/30/2021 7:07:02 PM
3	78.22	24.16mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/30/2021 7:09:55 PM

TOC-Control L Report

Mean Area 78.95
Mean Conc. 24.38mg/L



Sample

Sample Name: CCB
Sample ID:
Origin: 02_25_2021_CAL.cal
Status Completed
Chk. Result

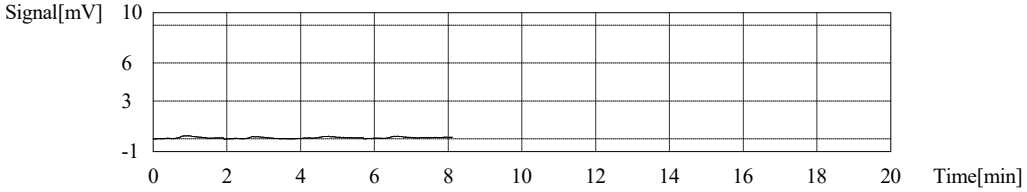
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:-0.02605mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.5850	0.04612mg/L	50uL	1.000	E	02_25_2021_CAL.2021_02_25_09_13_02.cal	4/30/2021 7:18:43 PM
2	0.4625	0.00807mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/30/2021 7:20:53 PM
3	0.2520	-0.05730mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/30/2021 7:23:01 PM
4	0.3434	-0.02891mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/30/2021 7:25:41 PM

Mean Area 0.3526
Mean Conc. -0.02605mg/L



Sample

Sample Name: HS21041102-01
Sample ID:
Origin: 02_25_2021_CAL.cal
Status Completed
Chk. Result

Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:39.08mg/L

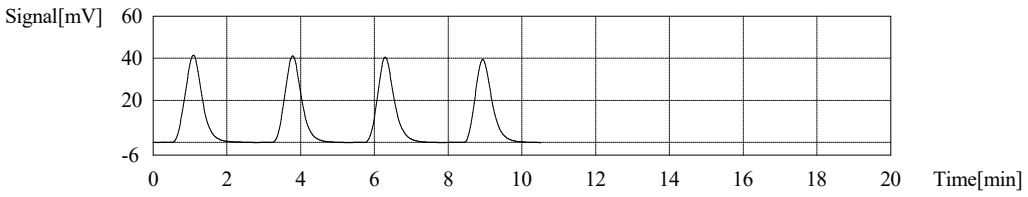
1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	132.6	41.04mg/L	50uL	1.000	E	02_25_2021_CAL.2021_02_25_09_13_02.cal	4/30/2021 7:52:42 PM
2	128.2	39.68mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/30/2021 7:55:28 PM
3	126.6	39.18mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/30/2021 7:58:22 PM
4	124.0	38.37mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/30/2021 8:01:14 PM

TOC-Control L Report

Mean Area 126.3
Mean Conc. 39.08mg/L



Sample

Sample Name: HS21041102-02
Sample ID:
Origin: 02_25_2021_CAL.cal
Status Completed
Chk. Result

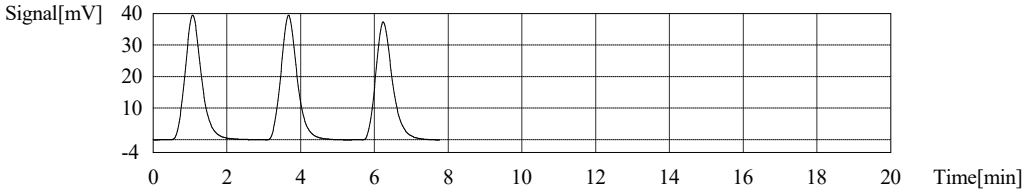
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:36.98mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	121.1	37.47mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/30/2021 8:10:38 PM
2	120.3	37.22mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/30/2021 8:13:29 PM
3	117.1	36.23mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/30/2021 8:16:17 PM

Mean Area 119.5
Mean Conc. 36.98mg/L



Sample

Sample Name: HS21041102-03
Sample ID:
Origin: 02_25_2021_CAL.cal
Status Completed
Chk. Result

Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:3.539mg/L

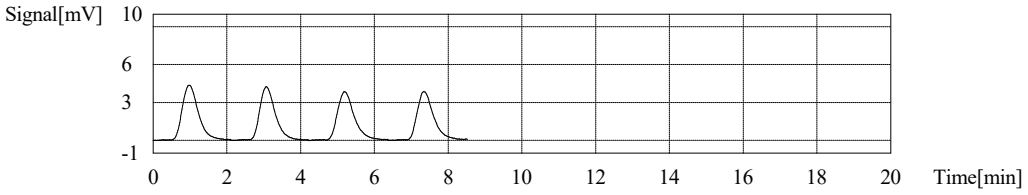
1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	12.83	3.849mg/L	50uL	1.000	E	02_25_2021_CAL.2021_02_25_09_13_02.cal	4/30/2021 8:25:17 PM
2	12.20	3.653mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/30/2021 8:27:38 PM
3	11.79	3.526mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/30/2021 8:30:01 PM
4	11.51	3.439mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/30/2021 8:32:24 PM

TOC-Control L Report

Mean Area 11.83
Mean Conc. 3.539mg/L



Sample

Sample Name: CCV
Sample ID: 316132910
Origin: 02_25_2021_CAL.cal
Status Completed
Chk. Result

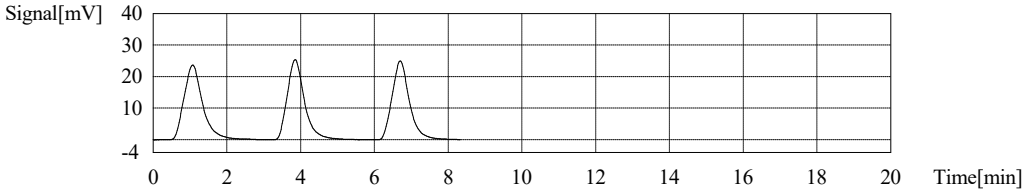
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:25.13mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	81.73	25.25mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/30/2021 8:42:06 PM
2	81.65	25.22mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/30/2021 8:45:09 PM
3	80.69	24.92mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/30/2021 8:48:09 PM

Mean Area 81.36
Mean Conc. 25.13mg/L



Sample

Sample Name: CCB
Sample ID:
Origin: 02_25_2021_CAL.cal
Status Completed
Chk. Result

Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.04909mg/L

1. Det

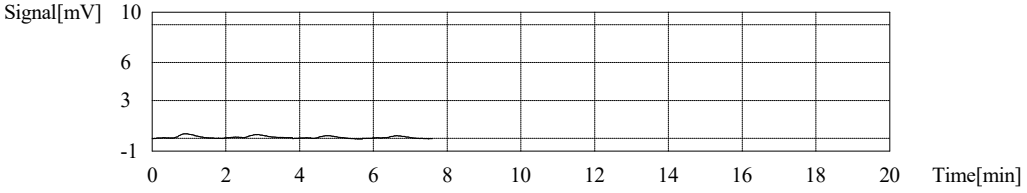
Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1.055	0.1921mg/L	50uL	1.000	E	02_25_2021_CAL.2021_02_25_09_13_02.cal	4/30/2021 8:56:57 PM
2	0.6319	0.06068mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/30/2021 8:59:04 PM
3	0.6656	0.07115mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/30/2021 9:01:13 PM
4	0.4862	0.01543mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/30/2021 9:03:20 PM

TOC-Control L Report

2021_04_30_001.tlx

Mean Area 0.5946
Mean Conc. 0.04909mg/L



Sample

Sample Name: MBLK2-04302021
Sample ID:
Origin: 02_25_2021_CAL.cal
Status Completed
Chk. Result

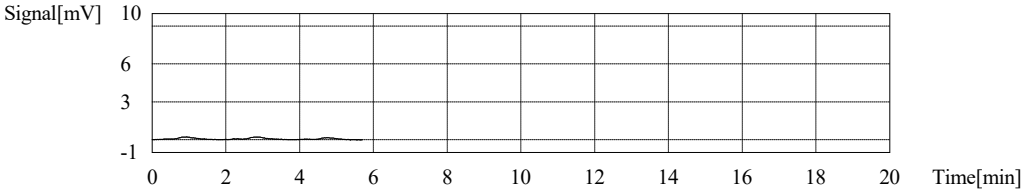
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:-0.01664mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.4250	-0.00357mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/30/2021 9:12:03 PM
2	0.3857	-0.01578mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/30/2021 9:14:10 PM
3	0.3381	-0.03056mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/30/2021 9:16:17 PM

Mean Area 0.3829
Mean Conc. -0.01664mg/L



Sample

Sample Name: LCS2-04302021
Sample ID:
Origin: 02_25_2021_CAL.cal
Status Completed
Chk. Result

Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:9.629mg/L

1. Det

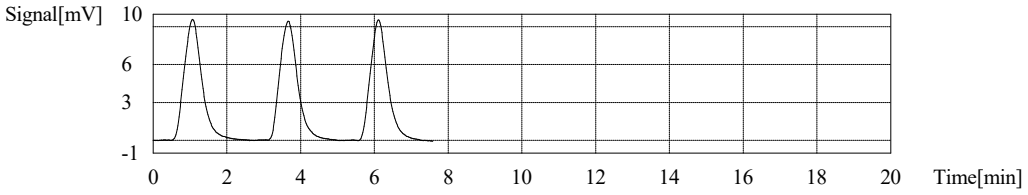
Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	31.83	9.750mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/30/2021 9:25:47 PM
2	31.32	9.591mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/30/2021 9:28:27 PM
3	31.18	9.548mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/30/2021 9:31:12 PM

TOC-Control L Report

2021_04_30_001.tlx

Mean Area 31.44
Mean Conc. 9.629mg/L



Sample

Sample Name: LCSD2-04302021
Sample ID: TOC_W 5310B
Origin: 02_25_2021_CAL.cal
Status Completed
Chk. Result

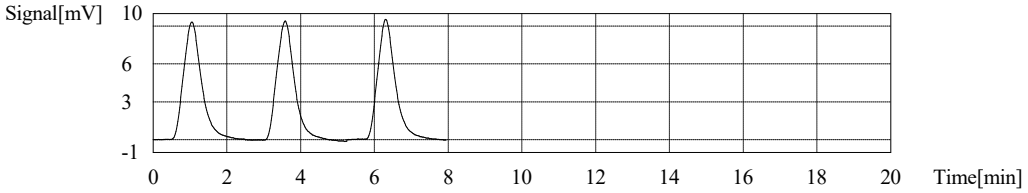
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:9.621mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	31.21	9.557mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/30/2021 9:40:36 PM
2	31.79	9.737mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/30/2021 9:43:34 PM
3	31.25	9.569mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/30/2021 9:46:31 PM

Mean Area 31.42
Mean Conc. 9.621mg/L



Sample

Sample Name: HS21041102-04
Sample ID:
Origin: 02_25_2021_CAL.cal
Status Completed
Chk. Result

Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:16.88mg/L

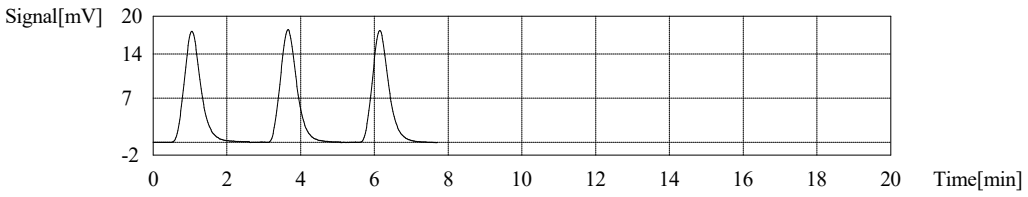
1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	54.40	16.76mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/30/2021 9:56:10 PM
2	55.42	17.08mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/30/2021 9:58:54 PM
3	54.55	16.81mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/30/2021 10:01:45 PM

TOC-Control L Report

Mean Area 54.79
Mean Conc. 16.88mg/L



Sample

Sample Name: HS21041102-05
Sample ID:
Origin: 02_25_2021_CAL.cal
Status Completed
Chk. Result

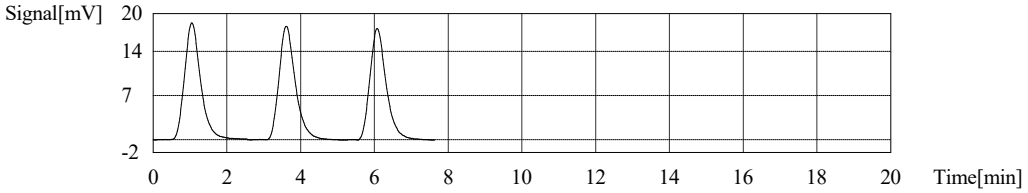
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:16.91mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	55.62	17.14mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/30/2021 10:11:13 PM
2	55.12	16.98mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/30/2021 10:13:56 PM
3	53.88	16.60mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/30/2021 10:16:45 PM

Mean Area 54.87
Mean Conc. 16.91mg/L



Sample

Sample Name: HS21041102-07
Sample ID:
Origin: 02_25_2021_CAL.cal
Status Completed
Chk. Result

Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:6.214mg/L

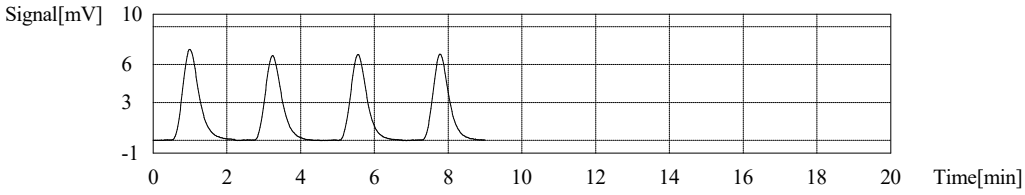
1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	21.87	6.656mg/L	50uL	1.000	E	02_25_2021_CAL.2021_02_25_09_13_02.cal	4/30/2021 10:25:52 PM
2	20.72	6.299mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/30/2021 10:28:25 PM
3	20.48	6.225mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/30/2021 10:30:52 PM
4	20.14	6.119mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/30/2021 10:33:20 PM

TOC-Control L Report

Mean Area 20.45
Mean Conc. 6.214mg/L



Sample

Sample Name: HS21041102-08
Sample ID:
Origin: 02_25_2021_CAL.cal
Status Completed
Chk. Result

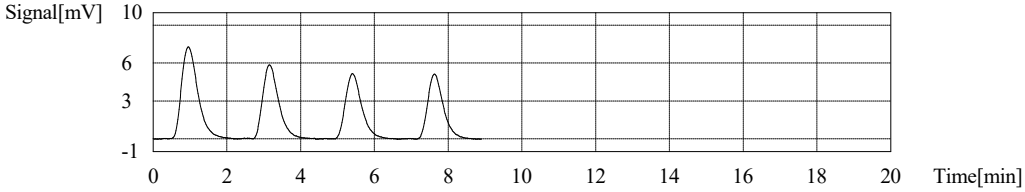
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:4.841mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	22.19	6.756mg/L	50uL	1.000	E	02_25_2021_CAL.2021_02_25_09_13_02.cal	4/30/2021 10:42:20 PM
2	17.33	5.246mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/30/2021 10:44:49 PM
3	15.80	4.771mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/30/2021 10:47:18 PM
4	14.94	4.504mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/30/2021 10:49:47 PM

Mean Area 16.02
Mean Conc. 4.841mg/L



Sample

Sample Name: HS21041102-08MS
Sample ID:
Origin: 02_25_2021_CAL.cal
Status Completed
Chk. Result

Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:15.48mg/L

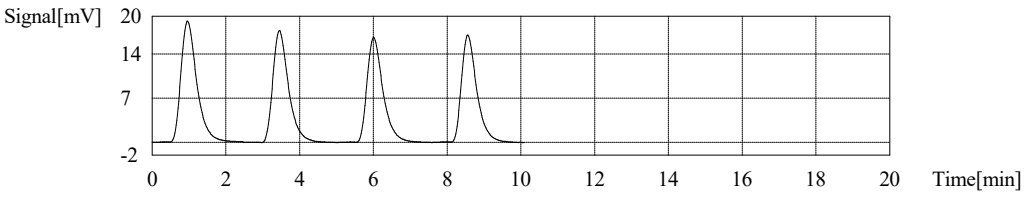
1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	56.87	17.53mg/L	50uL	1.000	E	02_25_2021_CAL.2021_02_25_09_13_02.cal	4/30/2021 10:59:04 PM
2	52.43	16.15mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/30/2021 11:01:53 PM
3	49.70	15.30mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/30/2021 11:04:40 PM
4	48.76	15.01mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/30/2021 11:07:22 PM

TOC-Control L Report

Mean Area 50.30
Mean Conc. 15.48mg/L



Sample

Sample Name: HS21041102-09
Sample ID:
Origin: 02_25_2021_CAL.cal
Status Completed
Chk. Result

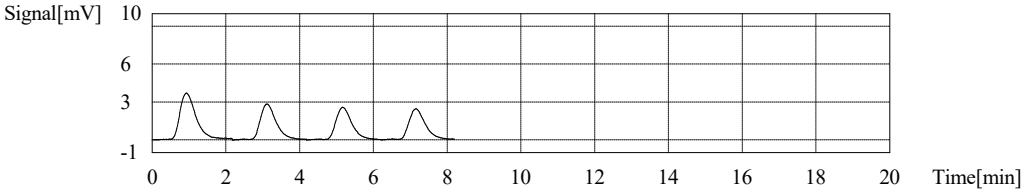
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:2.281mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	10.67	3.178mg/L	50uL	1.000	E	02_25_2021_CAL.2021_02_25_09_13_02.cal	4/30/2021 11:16:21 PM
2	8.403	2.474mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/30/2021 11:18:37 PM
3	7.483	2.188mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/30/2021 11:20:52 PM
4	7.455	2.180mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/30/2021 11:23:08 PM

Mean Area 7.780
Mean Conc. 2.281mg/L



Sample

Sample Name: HS21041102-10
Sample ID:
Origin: 02_25_2021_CAL.cal
Status Completed
Chk. Result

Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:1738mg/L

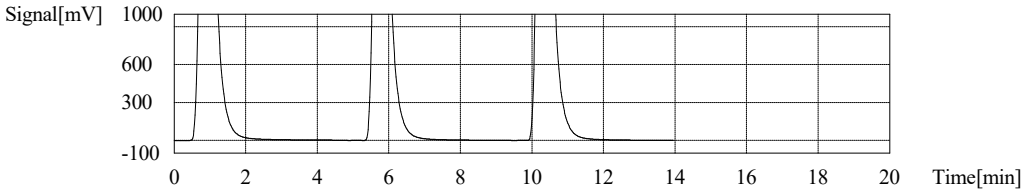
1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	5554	1725mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/30/2021 11:34:49 PM
2	5588	1735mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/30/2021 11:39:43 PM
3	5650	1755mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/30/2021 11:44:30 PM

TOC-Control L Report

Mean Area 5597
Mean Conc. 1738mg/L



Sample

Sample Name: CCV
Sample ID: 316132910
Origin: 02_25_2021_CAL.cal
Status Completed
Chk. Result

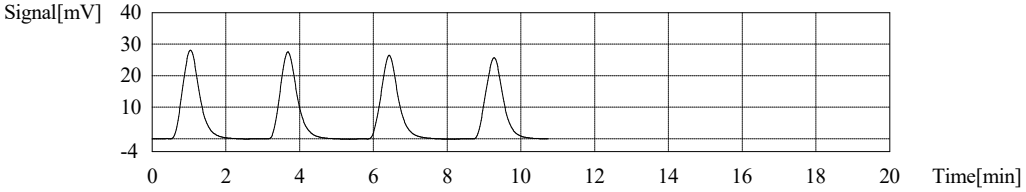
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:26.43mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	90.07	27.84mg/L	50uL	1.000	E	02_25_2021_CAL.2021_02_25_09_13_02.cal	4/30/2021 11:54:12 PM
2	87.64	27.08mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	4/30/2021 11:57:09 PM
3	85.43	26.40mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	5/1/2021 12:00:15 AM
4	83.60	25.83mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	5/1/2021 12:03:03 AM

Mean Area 85.56
Mean Conc. 26.43mg/L



Sample

Sample Name: CCB
Sample ID:
Origin: 02_25_2021_CAL.cal
Status Completed
Chk. Result

Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.1328mg/L

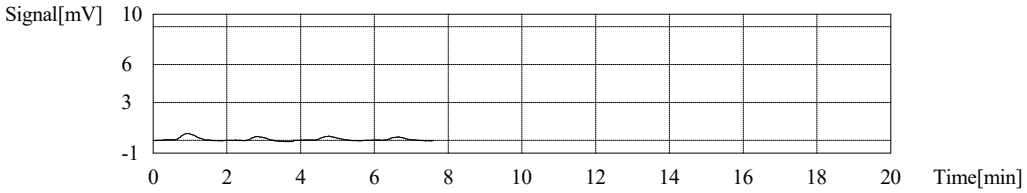
1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1.451	0.3151mg/L	50uL	1.000	E	02_25_2021_CAL.2021_02_25_09_13_02.cal	5/1/2021 12:11:46 AM
2	0.9733	0.1667mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	5/1/2021 12:13:54 AM
3	0.9690	0.1654mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	5/1/2021 12:16:03 AM
4	0.6505	0.06646mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	5/1/2021 12:18:11 AM

Report

Mean Area	0.8643
Mean Conc.	0.1328mg/L



C:\TOC-L\Data\2021_05_03_001.tlx

	Type	Analysis	Sample Name	Sample ID	Origin	Result	Notes	Status
1	Unknown	NPOC	CCV	316132910	02_25_2021	NPOC:23.12mg/L		Completed
2	Unknown	NPOC	CCB		02_25_2021	NPOC:-0.02147mg/L		Completed
3	Unknown	NPOC	MBLK-05032021		02_25_2021	NPOC:-0.1356mg/L		Completed
4	Unknown	NPOC	LCS-05032021		02_25_2021	NPOC:10.38mg/L		Completed
5	Unknown	NPOC	LCSD-05032021	TOC_W 531	02_25_2021	NPOC:10.36mg/L		Completed
6	Unknown	NPOC	HS21041102-10DF100		02_25_2021	NPOC:28.55mg/L		Completed
7	Unknown	NPOC	HS21041482-01		02_25_2021	NPOC:14.11mg/L		Completed
8	Unknown	NPOC	HS21041024-01DF100		02_25_2021	NPOC:8.084mg/L		Completed
9	Unknown	NPOC	HS21041485-01		02_25_2021	NPOC:9.790mg/L		Completed
10	Unknown	NPOC	HS21041493-02		02_25_2021	NPOC:0.7184mg/L		Completed
11	Unknown	NPOC	HS21041169-01		02_25_2021	NPOC:16.78mg/L		Completed
12	Unknown	NPOC	HS21041169-02		02_25_2021	NPOC:12.16mg/L		Completed
13	Unknown	NPOC	CCV	316132910	02_25_2021	NPOC:24.33mg/L		Completed
14	Unknown	NPOC	CCB		02_25_2021	NPOC:0.06393mg/L		Completed
15	Unknown	NPOC	HS21041169-03		02_25_2021	NPOC:784.1mg/L		Completed
16	Unknown	NPOC	HS21041169-03MS		02_25_2021	NPOC:780.7mg/L		Completed
17	Unknown	NPOC	HS21041169-06		02_25_2021	NPOC:10.56mg/L		Completed
18	Unknown	NPOC	HS21041197-01		02_25_2021	NPOC:11.31mg/L		Completed
19	Unknown	NPOC	CCV	316132910	02_25_2021	NPOC:24.48mg/L		Completed
20	Unknown	NPOC	CCB		02_25_2021	NPOC:0.1052mg/L		Completed
21	Unknown	NPOC	MBLK2-05032021		02_25_2021	NPOC:-0.03418mg/L		Completed
22	Unknown	NPOC	LCS2-05032021		02_25_2021	NPOC:10.48mg/L		Completed
23	Unknown	NPOC	LCSD2-05032021	TOC_W 531	02_25_2021	NPOC:10.43mg/L		Completed
24	Unknown	NPOC	HS21041255-05		02_25_2021	NPOC:644.8mg/L		Completed
25	Unknown	NPOC	HS21041255-07		02_25_2021	NPOC:13.16mg/L		Completed
26	Unknown	NPOC	HS21041275-01		02_25_2021	NPOC:15.97mg/L		Completed
27	Unknown	NPOC	HS21041275-02		02_25_2021	NPOC:15.70mg/L		Completed
28	Unknown	NPOC	HS21041275-03		02_25_2021	NPOC:15.54mg/L		Completed
29	Unknown	NPOC	HS21041275-03MS		02_25_2021	NPOC:20.34mg/L		Completed
30	Unknown	NPOC	HS21041275-04		02_25_2021	NPOC:10.22mg/L		Completed
31	Unknown	NPOC	CCV	316132910	02_25_2021	NPOC:24.10mg/L		Completed
32	Unknown	NPOC	CCB		02_25_2021	NPOC:-0.02555mg/L		Completed
33	Unknown	NPOC	HS21041275-05		02_25_2021	NPOC:10.23mg/L		Completed
34	Unknown	NPOC	HS21041275-06		02_25_2021	NPOC:9.732mg/L		Completed
35	Unknown	NPOC	HS21041275-07		02_25_2021	NPOC:21.67mg/L		Completed
36	Unknown	NPOC	HS21041275-08		02_25_2021	NPOC:21.26mg/L		Completed
37	Unknown	NPOC	CCV	316132910	02_25_2021	NPOC:23.52mg/L		Completed
38	Unknown	NPOC	CCB		02_25_2021	NPOC:-0.07846mg/L		Completed

	Date / Time	Vial
1	5/3/2021 3:5	1
2	5/3/2021 4:1	2
3	5/3/2021 4:2	3
4	5/3/2021 4:4	4
5	5/3/2021 4:5	5
6	5/3/2021 5:1	6
7	5/3/2021 5:2	7
8	5/3/2021 5:4	8
9	5/3/2021 5:5	9
10	5/3/2021 6:0	10
11	5/3/2021 6:2	11
12	5/3/2021 6:4	12
13	5/3/2021 6:5	13
14	5/3/2021 7:1	14
15	5/3/2021 7:3	15
16	5/3/2021 7:5	16
17	5/3/2021 8:0	17
18	5/3/2021 8:2	18
19	5/3/2021 8:4	1
20	5/3/2021 8:5	2
21	5/3/2021 9:1	3
22	5/3/2021 9:2	4
23	5/3/2021 9:4	5
24	5/3/2021 10:	19
25	5/3/2021 10:	20
26	5/3/2021 10:	21
27	5/3/2021 10:	22
28	5/3/2021 11:	23
29	5/3/2021 11:	24
30	5/3/2021 11:	25
31	5/3/2021 11:	13
32	5/4/2021 12:	14
33	5/4/2021 12:	26
34	5/4/2021 12:	27
35	5/4/2021 12:	28
36	5/4/2021 1:0	29
37	5/4/2021 1:1	1
38	5/4/2021 1:3	2

TOC-Control L Report

Instr.Information

Instrument Options TOC/ASI/IC Unit/
Catalyst Regular Sensitivity

Sample

Sample Name: CCV
Sample ID: 316132910
Origin: 02_25_2021_CAL.cal
Status Completed
Chk. Result

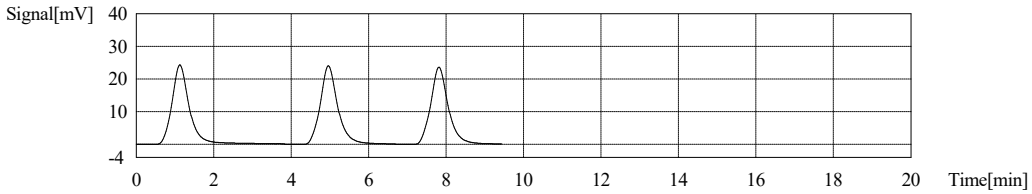
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:23.12mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	75.54	23.32mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	5/3/2021 3:49:28 PM
2	74.81	23.10mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	5/3/2021 3:52:34 PM
3	74.31	22.94mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	5/3/2021 3:55:36 PM

Mean Area 74.89
Mean Conc. 23.12mg/L



Sample

Sample Name: CCB
Sample ID:
Origin: 02_25_2021_CAL.cal
Status Completed
Chk. Result

Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:-0.02147mg/L

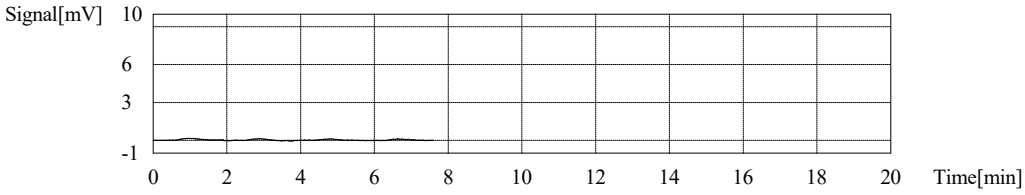
1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.4322	-0.00134mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	5/3/2021 4:04:23 PM
2	0.3624	-0.02301mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	5/3/2021 4:06:32 PM
3	0.1674	-0.08357mg/L	50uL	1.000	E	02_25_2021_CAL.2021_02_25_09_13_02.cal	5/3/2021 4:08:40 PM
4	0.3075	-0.04006mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	5/3/2021 4:10:48 PM

TOC-Control L Report

Mean Area 0.3674
Mean Conc. -0.02147mg/L



Sample

Sample Name: MBLK-05032021
Sample ID:
Origin: 02_25_2021_CAL.cal
Status Completed
Chk. Result

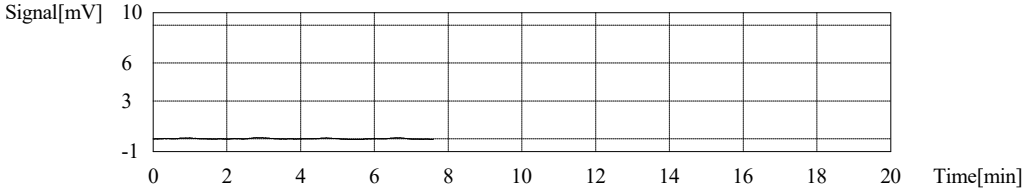
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:-0.1356mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.000	-0.1356mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	5/3/2021 4:19:31 PM
2	0.1892	-0.07680mg/L	50uL	1.000	E	02_25_2021_CAL.2021_02_25_09_13_02.cal	5/3/2021 4:21:40 PM
3	0.000	-0.1356mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	5/3/2021 4:23:48 PM
4	0.000	-0.1356mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	5/3/2021 4:25:56 PM

Mean Area 0.000
Mean Conc. -0.1356mg/L



Sample

Sample Name: LCS-05032021
Sample ID:
Origin: 02_25_2021_CAL.cal
Status Completed
Chk. Result

Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:10.38mg/L

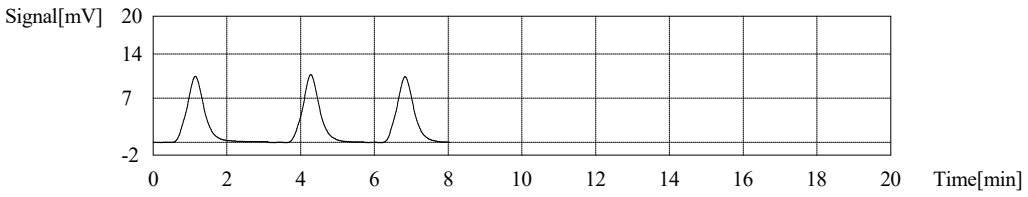
1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	34.11	10.46mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	5/3/2021 4:35:52 PM
2	34.10	10.45mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	5/3/2021 4:38:42 PM
3	33.33	10.22mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	5/3/2021 4:41:19 PM

TOC-Control L Report

Mean Area 33.85
Mean Conc. 10.38mg/L



Sample

Sample Name: LCSD-05032021
Sample ID: TOC_W 5310B
Origin: 02_25_2021_CAL.cal
Status Completed
Chk. Result

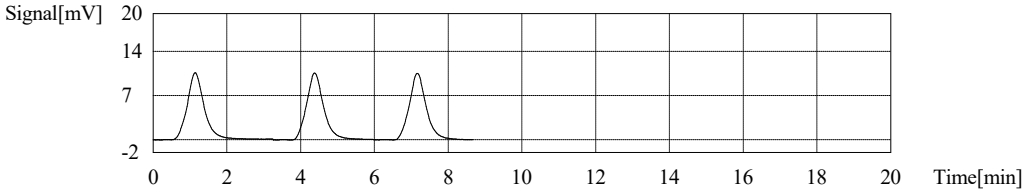
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:10.36mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	33.98	10.42mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	5/3/2021 4:51:27 PM
2	34.02	10.43mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	5/3/2021 4:54:28 PM
3	33.41	10.24mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	5/3/2021 4:57:22 PM

Mean Area 33.80
Mean Conc. 10.36mg/L



Sample

Sample Name: HS21041102-10DF100
Sample ID:
Origin: 02_25_2021_CAL.cal
Status Completed
Chk. Result

Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:28.55mg/L

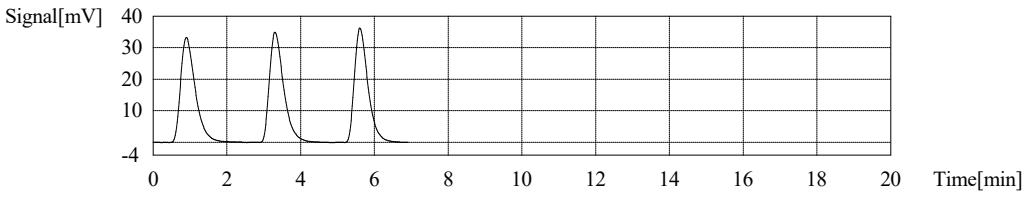
1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	91.76	28.36mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	5/3/2021 5:06:41 PM
2	93.41	28.87mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	5/3/2021 5:09:14 PM
3	91.90	28.40mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	5/3/2021 5:11:40 PM

TOC-Control L Report

Mean Area 92.36
Mean Conc. 28.55mg/L



Sample

Sample Name: CCV
Sample ID: 316132910
Origin: 02_25_2021_CAL.cal
Status Completed
Chk. Result

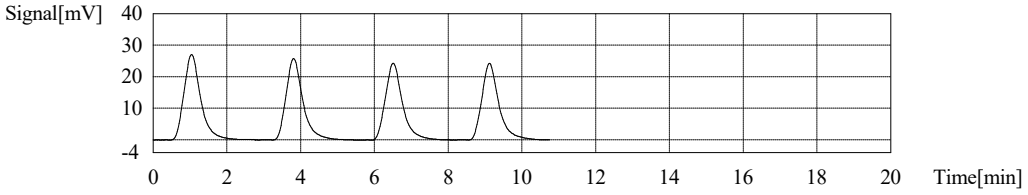
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:24.33mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	84.91	26.23mg/L	50uL	1.000	E	02_25_2021_CAL.2021_02_25_09_13_02.cal	5/3/2021 6:51:09 PM
2	81.29	25.11mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	5/3/2021 6:54:05 PM
3	78.02	24.09mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	5/3/2021 6:56:56 PM
4	77.01	23.78mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	5/3/2021 6:59:51 PM

Mean Area 78.77
Mean Conc. 24.33mg/L



Sample

Sample Name: CCB
Sample ID:
Origin: 02_25_2021_CAL.cal
Status Completed
Chk. Result

Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.06393mg/L

1. Det

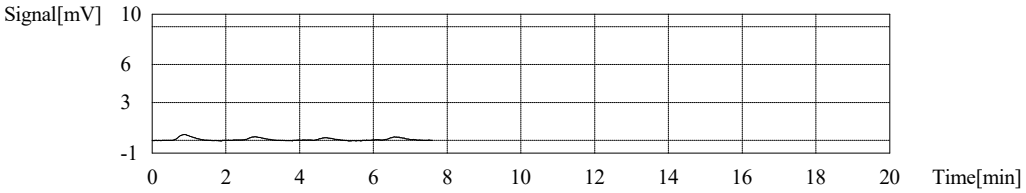
Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1.209	0.2399mg/L	50uL	1.000	E	02_25_2021_CAL.2021_02_25_09_13_02.cal	5/3/2021 7:08:34 PM
2	0.6801	0.07565mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	5/3/2021 7:10:41 PM
3	0.5587	0.03795mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	5/3/2021 7:12:47 PM
4	0.6883	0.07820mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	5/3/2021 7:14:54 PM

TOC-Control L Report

2021_05_03_001.tlx

Mean Area 0.6424
Mean Conc. 0.06393mg/L



Sample

Sample Name: HS21041169-03
Sample ID:
Origin: 02_25_2021_CAL.cal
Status Completed
Chk. Result

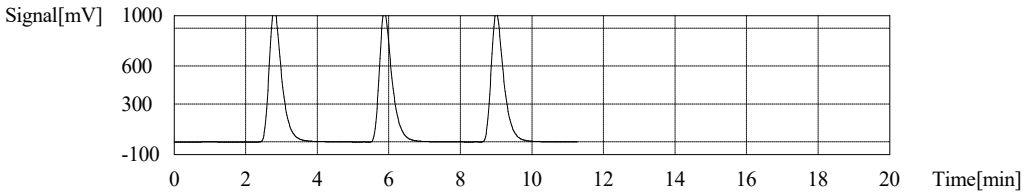
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:784.1mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.5053	0.02137mg/L	50uL	1.000	E	02_25_2021_CAL.2021_02_25_09_13_02.cal	5/3/2021 7:23:39 PM
2	2564	796.1mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	5/3/2021 7:26:58 PM
3	2517	781.5mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	5/3/2021 7:30:21 PM
4	2495	774.7mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	5/3/2021 7:33:46 PM

Mean Area 2525
Mean Conc. 784.1mg/L



Sample

Sample Name: HS21041169-03MS
Sample ID:
Origin: 02_25_2021_CAL.cal
Status Completed
Chk. Result

Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:780.7mg/L

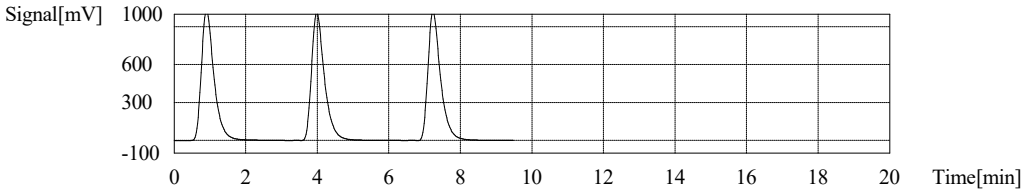
1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	2514	780.6mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	5/3/2021 7:43:40 PM
2	2532	786.2mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	5/3/2021 7:47:10 PM
3	2497	775.3mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	5/3/2021 7:50:35 PM

TOC-Control L Report

Mean Area 2514
Mean Conc. 780.7mg/L



Sample

Sample Name: CCV
Sample ID: 316132910
Origin: 02_25_2021_CAL.cal
Status Completed
Chk. Result

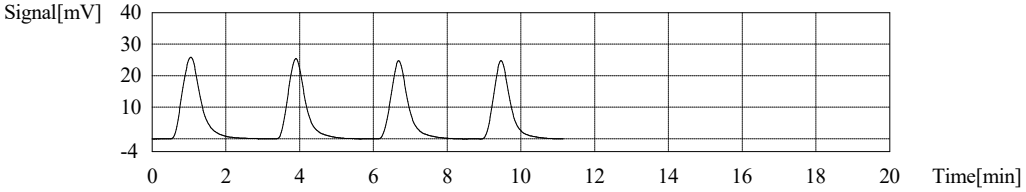
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:24.48mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	89.07	27.53mg/L	50uL	1.000	E	02_25_2021_CAL.2021_02_25_09_13_02.cal	5/3/2021 8:33:24 PM
2	81.98	25.32mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	5/3/2021 8:36:25 PM
3	79.13	24.44mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	5/3/2021 8:39:27 PM
4	76.72	23.69mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	5/3/2021 8:42:25 PM

Mean Area 79.28
Mean Conc. 24.48mg/L



Sample

Sample Name: CCB
Sample ID:
Origin: 02_25_2021_CAL.cal
Status Completed
Chk. Result

Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.1052mg/L

1. Det

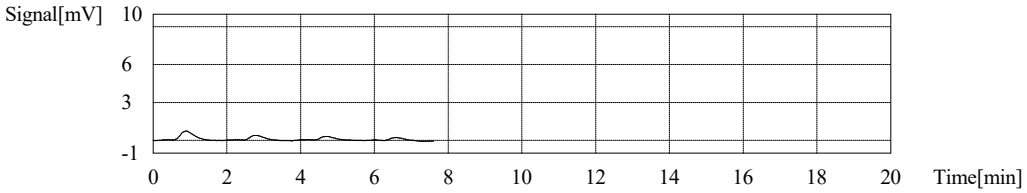
Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1.843	0.4368mg/L	50uL	1.000	E	02_25_2021_CAL.2021_02_25_09_13_02.cal	5/3/2021 8:51:08 PM
2	0.9525	0.1602mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	5/3/2021 8:53:16 PM
3	0.7192	0.08779mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	5/3/2021 8:55:24 PM
4	0.6536	0.06742mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	5/3/2021 8:57:32 PM

TOC-Control L Report

2021_05_03_001.tlx

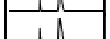
Mean Area	0.7751
Mean Conc.	0.1052mg/L



HS21041102 Wet Chem Raw Data (9056_anions_W)

ALS WO# HS21041102

Sequence: 042121
Last Update Operator: alshs.nouser

CD	Name	Comment	Type	Position	Dilution	Level	Instrument Method	Processing Method
	STD1		Calibration	BE1	1.00	1	Anions Program 06022020.1	Anions Processing Method
	STD2		Calibration	BE2	1.00	2	Anions Program 06022020.1	Anions Processing Method
	STD3		Calibration	BE3	1.00	3	Anions Program 06022020.1	Anions Processing Method
	STD4		Calibration	BE4	1.00	4	Anions Program 06022020.1	Anions Processing Method
	STD5		Calibration	BE5	1.00	5	Anions Program 06022020.1	Anions Processing Method
	STD6		Calibration	BE6	1.00	6	Anions Program 06022020.1	Anions Processing Method
	ICV		Unknown	BE7	1.00		Anions Program 06022020.1	Anions Processing Method
	ICB		Unknown	BE8	1.00		Anions Program 06022020.1	Anions Processing Method
	CCV		Unknown	R1	1.00		Anions Program 06022020.1	Anions Processing Method
	CCB		Unknown	R4	1.00		Anions Program 06022020.1	Anions Processing Method
	MBLK-		Unknown	R5	1.00		Anions Program 06022020.1	Anions Processing Method
	LCS-		Unknown	R2	1.00		Anions Program 06022020.1	Anions Processing Method
	HS21041102-01DF5		Unknown	RA1	5.00		Anions Program 06022020.1	Anions Processing Method
	HS21041102-02DF5		Unknown	RA2	5.00		Anions Program 06022020.1	Anions Processing Method
	HS21041102-03DF5		Unknown	RA3	5.00		Anions Program 06022020.1	Anions Processing Method
	HS21041102-04DF5		Unknown	RA4	5.00		Anions Program 06022020.1	Anions Processing Method
	HS21041102-05DF5		Unknown	RA5	5.00		Anions Program 06022020.1	Anions Processing Method
	HS21041102-07DF5		Unknown	RA6	5.00		Anions Program 06022020.1	Anions Processing Method
	HS21041102-10DF5		Unknown	RA7	5.00		Anions Program 06022020.1	Anions Processing Method
	CCV1		Unknown	R3	1.00		Anions Program 06022020.1	Anions Processing Method
	CCB		Unknown	R7	1.00		Anions Program 06022020.1	Anions Processing Method
	HS21041102-03MSDF5		Unknown	RA8	5.00		Anions Program 06022020.1	Anions Processing Method
	HS21041102-03MSDDF5		Unknown	RB1	5.00		Anions Program 06022020.1	Anions Processing Method
	CCV		Unknown	R1	1.00		Anions Program 06022020.1	Anions Processing Method
	CCB		Unknown	R4	1.00		Anions Program 06022020.1	Anions Processing Method

Sequence: 042121
Last Update Operator: alshs.nouser

CD	Name	me	Status	Inject Time
	STD1	5.0	Finished	4/20/2021 9:54:11 AM -05:00
	STD2	5.0	Finished	4/20/2021 10:12:33 AM -05:00
	STD3	5.0	Finished	4/20/2021 10:30:56 AM -05:00
	STD4	5.0	Finished	4/20/2021 10:49:20 AM -05:00
	STD5	5.0	Finished	4/20/2021 11:07:48 AM -05:00
	STD6	5.0	Finished	4/20/2021 11:28:05 AM -05:00
	ICV	5.0	Finished	4/20/2021 11:46:31 AM -05:00
	ICB	5.0	Finished	4/20/2021 12:25:13 PM -05:00
	CCV	5.0	Finished	4/21/2021 2:36:40 PM -05:00
	CCB	5.0	Finished	4/21/2021 3:17:25 PM -05:00
	MBLK-	5.0	Finished	4/21/2021 3:37:42 PM -05:00
	LCS-	5.0	Finished	4/21/2021 3:56:08 PM -05:00
	HS21041102-01DF5	5.0	Finished	4/21/2021 4:16:28 PM -05:00
	HS21041102-02DF5	5.0	Finished	4/21/2021 4:34:57 PM -05:00
	HS21041102-03DF5	5.0	Finished	4/21/2021 4:55:19 PM -05:00
	HS21041102-04DF5	5.0	Finished	4/21/2021 5:13:48 PM -05:00
	HS21041102-05DF5	5.0	Finished	4/21/2021 5:34:17 PM -05:00
	HS21041102-07DF5	5.0	Finished	4/21/2021 5:52:46 PM -05:00
	HS21041102-10DF5	5.0	Finished	4/21/2021 6:13:01 PM -05:00
	CCV1	5.0	Finished	4/21/2021 6:31:27 PM -05:00
	CCB	5.0	Finished	4/21/2021 7:10:10 PM -05:00
	HS21041102-03MSDF5	5.0	Finished	4/21/2021 7:30:24 PM -05:00
	HS21041102-03MSDDF5	5.0	Finished	4/21/2021 7:48:50 PM -05:00
	CCV	5.0	Finished	4/21/2021 10:43:47 PM -05:00
	CCB	5.0	Finished	4/21/2021 11:02:12 PM -05:00

Sequence: 042121
Injection #6: STD6

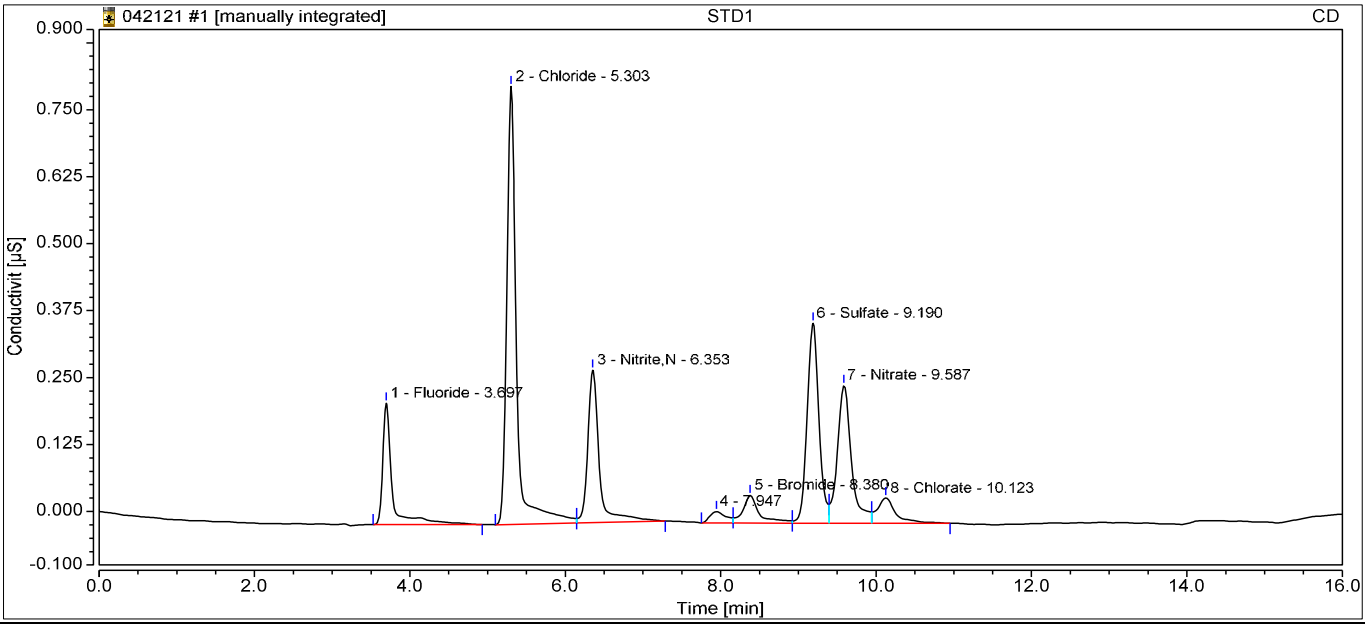
Calibration

Peak No.	Peak Name	Cal.Type	Eval.Type	Number of Points	Rel.Std.Dev. %	Coeff.of Determination	C0 (Offset)	C1 (Slope)	C2 (Curve)
1	***Fluoride***	***Lin, WithOffset, 1/***	***Area***	***6***	***18.7874***	***0.99804***	***0.0037***	***0.3228***	***0.0000***
2	Chloride	Lin, WithOffset, 1/	Area	6	4.4845	0.99989	0.0060	0.2088	0.0000
3	Nitrite,N	Lin, WithOffset, 1/	Area	6	23.2258	0.99660	0.0167	0.4015	0.0000
5	Bromide	Lin, WithOffset, 1/	Area	6	13.6081	0.99885	0.0031	0.0812	0.0000
6	Sulfate	Lin, WithOffset, 1/	Area	6	4.6885	0.99989	-0.0143	0.1515	0.0000
7	Nitrate	Lin, WithOffset, 1/	Area	6	5.2526	0.99986	-0.0011	0.5393	0.0000
8	Chlorate	Lin, WithOffset, 1/	Area	6	20.9413	0.99684	0.0071	0.0945	0.0000
11	Phosphate	Lin, WithOffset, 1/	Area	5	9.6125	0.99905	-0.0521	0.2007	0.0000
Maximum					**23.2258**	0.99989			
Minimum					4.4845	**0.99660**			

1 STD1

Sample Name:	**STD1**	*Injection Volume:*	**5.00**
Vial Number:	**BE1**	*Channel:*	**CD**
Sample Type:	**Calibration Standard**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**04/20/2021 09:54**	*Sample Weight:*	**1.0000**

Run Time:



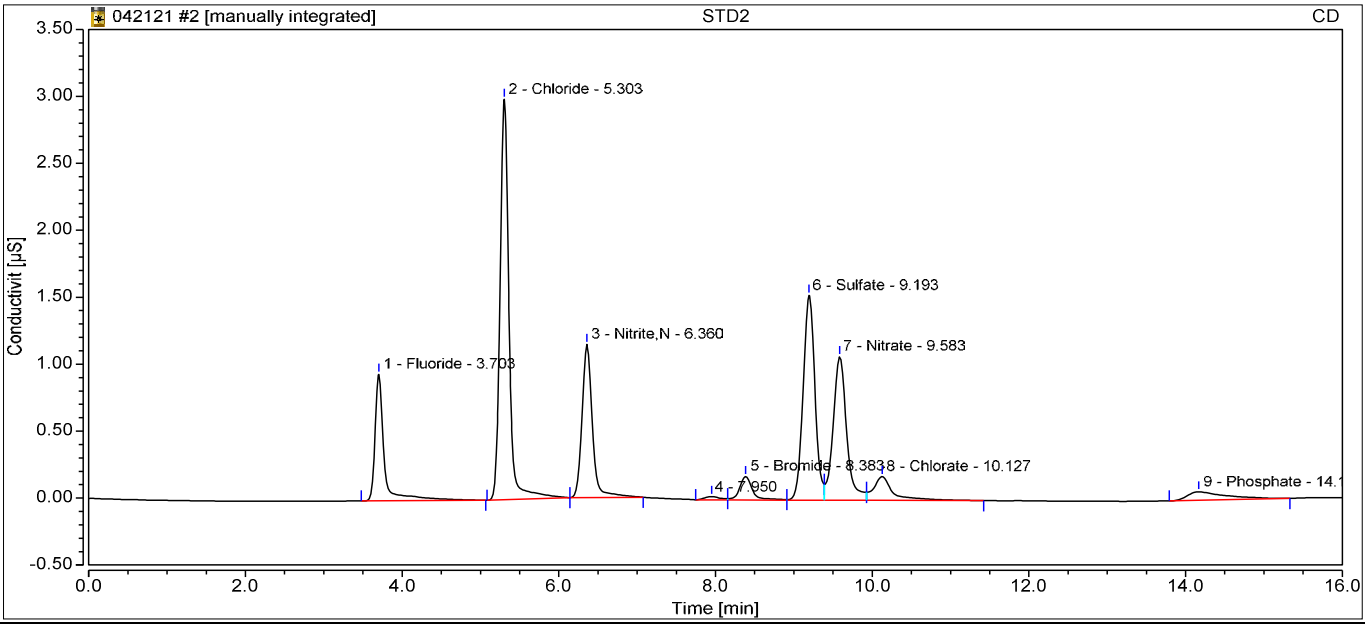
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.70	Fluoride	BMB	0.032	0.0880	0.0880	1.0000
2	5.30	Chloride	BM *	0.118	0.5381	0.5381	1.0000
3	6.35	Nitrite,N	MB*	0.049	0.0802	0.0802	1.0000
5	8.38	Bromide	M	0.013	0.1188	0.1188	1.0000
6	9.19	Sulfate	M	0.066	0.5285	0.5285	1.0000
7	9.59	Nitrate	M	0.054	0.1022	0.1022	1.0000
8	10.12	Chlorate	MB	0.013	0.0640	0.0640	1.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	1.0000
Total:			**0.000**	**0.345**		**1.52**	

2 STD2

Sample Name:	**STD2**	*Injection Volume:*	**5.00**
Vial Number:	**BE2**	*Channel:*	**CD**
Sample Type:	**Calibration Standard**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**04/20/2021 10:12**	*Sample Weight:*	**1.0000**

Run Time:



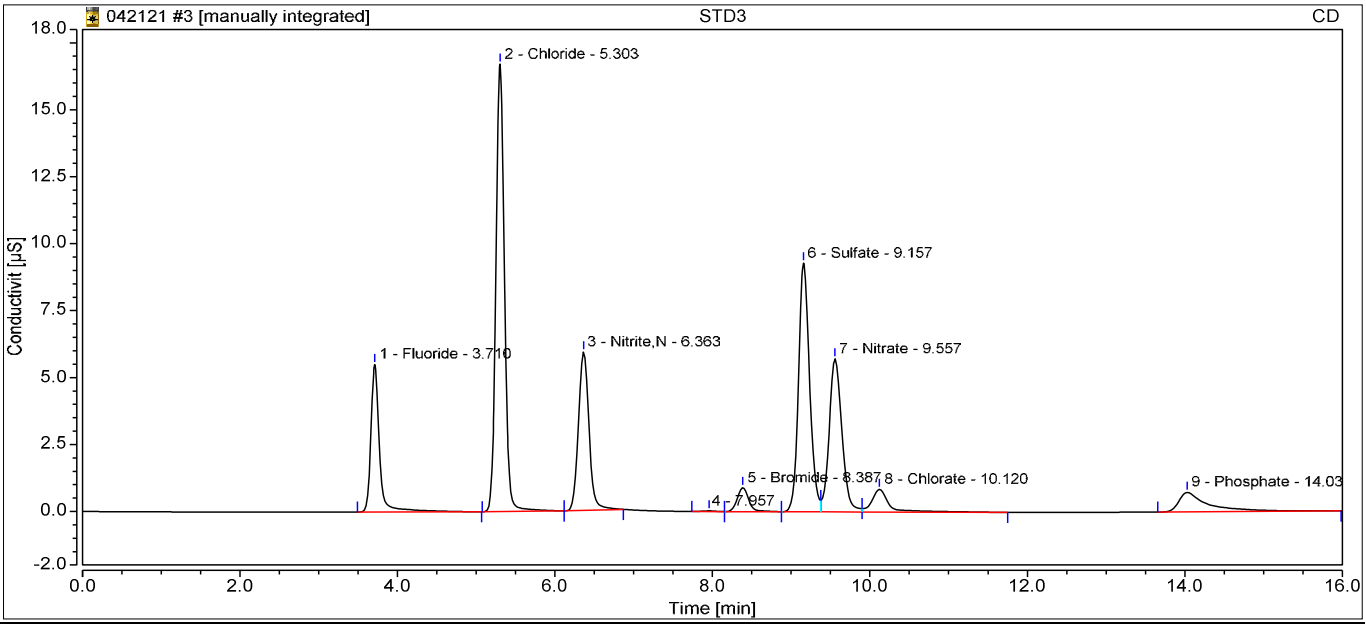
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.70	Fluoride	BMB	0.129	0.3886	0.3886	1.0000
2	5.30	Chloride	BMb*	0.393	1.8537	1.8537	1.0000
3	6.36	Nitrite,N	bMB*	0.176	0.3975	0.3975	1.0000
5	8.38	Bromide	M	0.033	0.3714	0.3714	1.0000
6	9.19	Sulfate	M	0.266	1.8512	1.8512	1.0000
7	9.58	Nitrate	M	0.213	0.3976	0.3976	1.0000
8	10.13	Chlorate	MB	0.052	0.4776	0.4776	1.0000
9	14.17	Phosphate	BMB	0.036	0.4401	0.4401	1.0000
Total:			**0.000**	**1.300**		**6.18**	

3 STD3

Sample Name:	**STD3**	*Injection Volume:*	**5.00**
Vial Number:	**BE3**	*Channel:*	**CD**
Sample Type:	**Calibration Standard**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**04/20/2021 10:30**	*Sample Weight:*	**1.0000**

Run Time:



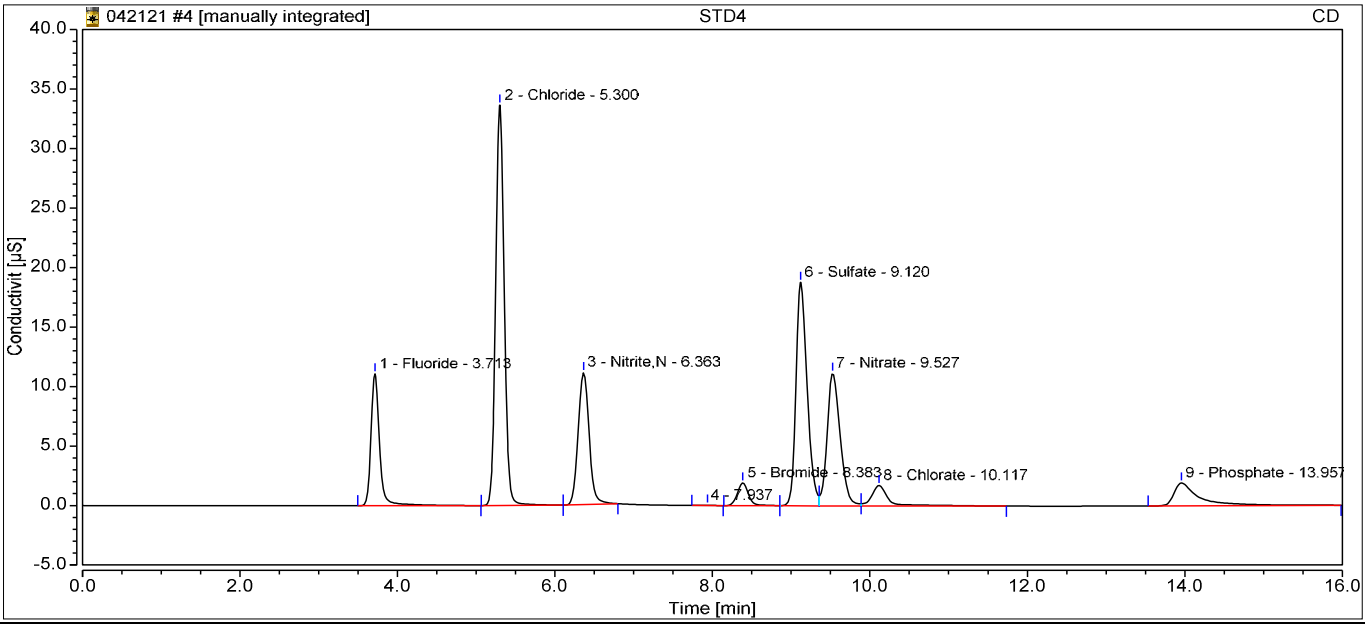
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.71	Fluoride	BMB	0.701	2.1586	2.1586	1.0000
2	5.30	Chloride	BMb*	2.082	9.9444	9.9444	1.0000
3	6.36	Nitrite,N	bMB*	0.918	2.2461	2.2461	1.0000
5	8.39	Bromide	M	0.152	1.8301	1.8301	1.0000
6	9.16	Sulfate	M	1.509	10.0487	10.0487	1.0000
7	9.56	Nitrate	M	1.072	1.9895	1.9895	1.0000
8	10.12	Chlorate	MB	0.216	2.2126	2.2126	1.0000
9	14.03	Phosphate	BMB	0.322	1.8648	1.8648	1.0000
Total:			**0.000**	**6.971**		**32.29**	

4 STD4

Sample Name:	**STD4**	*Injection Volume:*	**5.00**
Vial Number:	**BE4**	*Channel:*	**CD**
Sample Type:	**Calibration Standard**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**04/20/2021 10:49**	*Sample Weight:*	**1.0000**

Run Time:



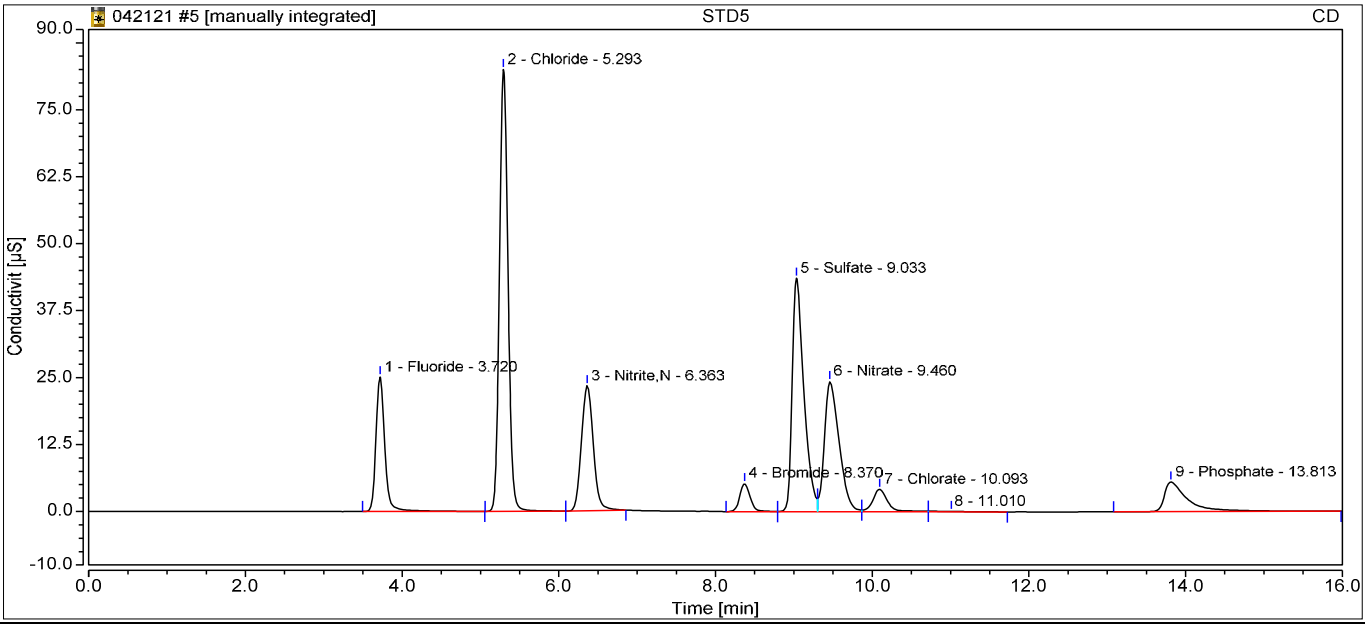
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.71	Fluoride	BMB	1.403	4.3336	4.3336	1.0000
2	5.30	Chloride	BMb*	4.203	20.1063	20.1063	1.0000
3	6.36	Nitrite,N	bMB*	1.787	4.4092	4.4092	1.0000
5	8.38	Bromide	BM	0.313	3.8179	3.8179	1.0000
6	9.12	Sulfate	M	3.063	20.3070	20.3070	1.0000
7	9.53	Nitrate	M	2.148	3.9846	3.9846	1.0000
8	10.12	Chlorate	MB	0.424	4.4085	4.4085	1.0000
9	13.96	Phosphate	BMB	0.719	3.8422	3.8422	1.0000
Total:			**0.000**	**14.060**		**65.21**	

5 STD5

Sample Name:	**STD5**	*Injection Volume:*	**5.00**
Vial Number:	**BE5**	*Channel:*	**CD**
Sample Type:	**Calibration Standard**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**04/20/2021 11:07**	*Sample Weight:*	**1.0000**

Run Time:



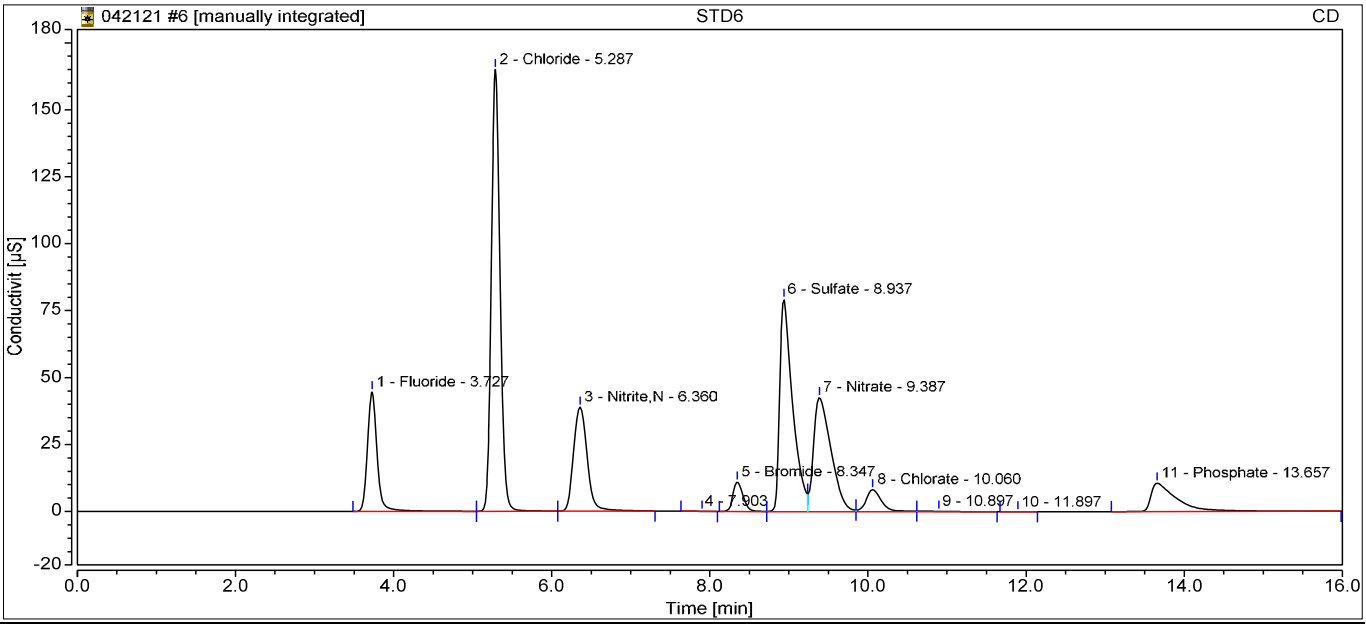
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.72	Fluoride	BMB	3.290	10.1807	10.1807	1.0000
2	5.29	Chloride	BMb*	10.372	49.6551	49.6551	1.0000
3	6.36	Nitrite,N	bMB*	4.114	10.2053	10.2053	1.0000
4	8.37	Bromide	BM	0.808	9.9156	9.9156	1.0000
5	9.03	Sulfate	M	7.557	49.9615	49.9615	1.0000
6	9.46	Nitrate	M	5.301	9.8318	9.8318	1.0000
7	10.09	Chlorate	M	0.936	9.8243	9.8243	1.0000
9	13.81	Phosphate	BMB	1.932	9.8822	9.8822	1.0000
Total:			**0.000**	**34.310**		**159.46**	

6 STD6

Sample Name:	**STD6**	*Injection Volume:*	**5.00**
Vial Number:	**BE6**	*Channel:*	**CD**
Sample Type:	**Calibration Standard**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**04/20/2021 11:28**	*Sample Weight:*	**1.0000**

Run Time:



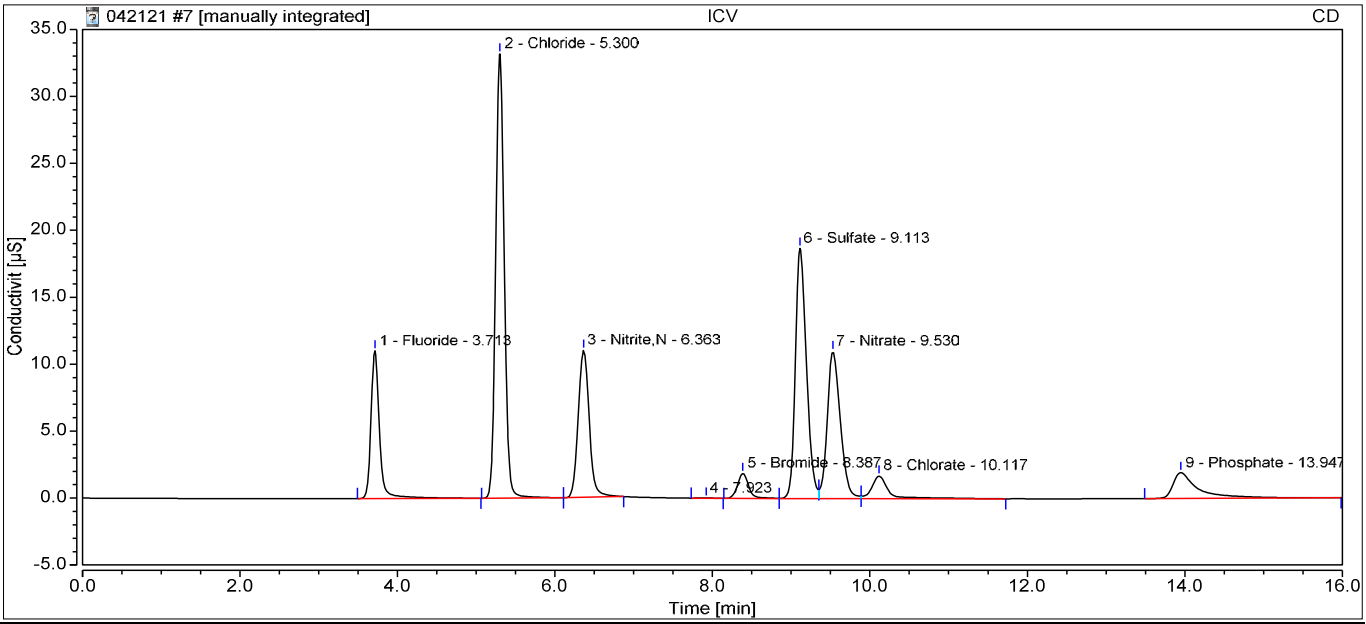
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.73	Fluoride	BMB	6.250	19.3505	19.3505	1.0000
2	5.29	Chloride	BMb*	20.966	100.4024	100.4024	1.0000
3	6.36	Nitrite,N	bMB*	7.710	19.1617	19.1617	1.0000
5	8.35	Bromide	BM	1.662	20.4462	20.4462	1.0000
6	8.94	Sulfate	M	15.110	99.8032	99.8032	1.0000
7	9.39	Nitrate	M	10.889	20.1943	20.1943	1.0000
8	10.06	Chlorate	M	1.852	19.5130	19.5130	1.0000
11	13.66	Phosphate	BMB	4.037	20.3707	20.3707	1.0000
Total:			**0.000**	**68.477**		**319.24**	

7 ICV

Sample Name:	**ICV**	*Injection Volume:*	**5.00**
Vial Number:	**BE7**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**04/20/2021 11:46**	*Sample Weight:*	**1.0000**

Run Time:



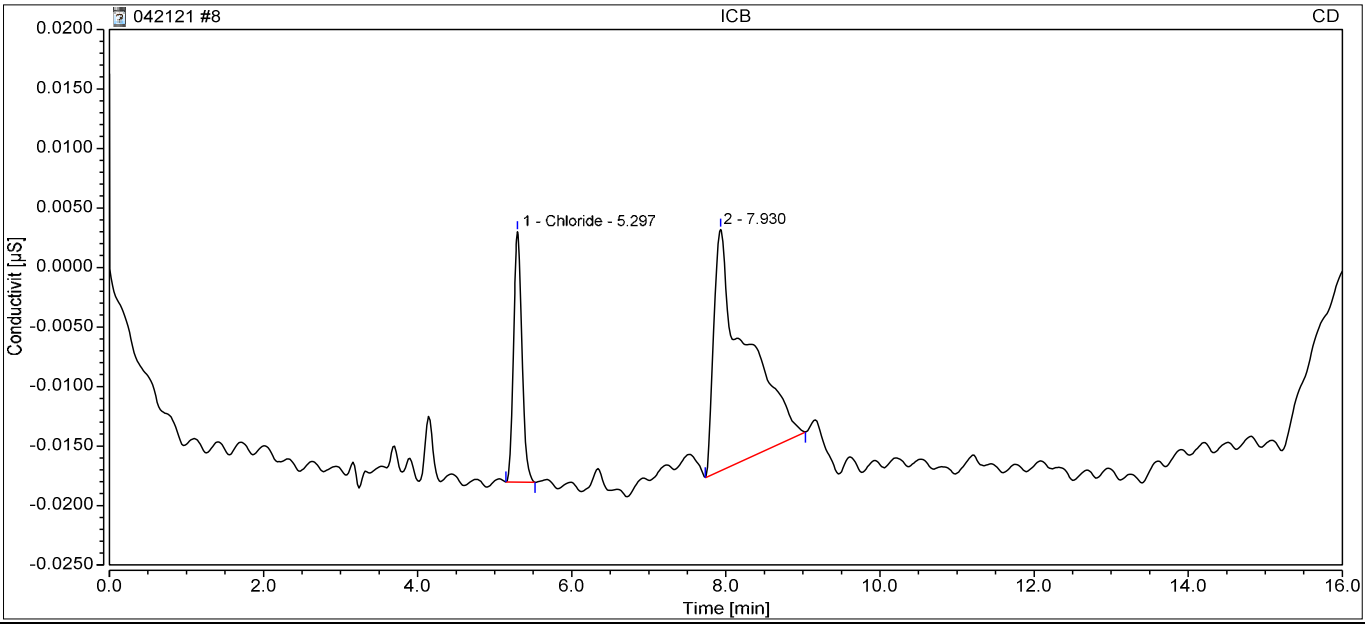
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.71	Fluoride	BMB	1.384	4.2770	4.2770	1.0000
2	5.30	Chloride	BMb*	4.144	19.8205	19.8205	1.0000
3	6.36	Nitrite,N	bMB*	1.777	4.3839	4.3839	1.0000
5	8.39	Bromide	BM	0.309	3.7640	3.7640	1.0000
6	9.11	Sulfate	M	3.024	20.0510	20.0510	1.0000
7	9.53	Nitrate	M	2.119	3.9305	3.9305	1.0000
8	10.12	Chlorate	MB	0.422	4.3868	4.3868	1.0000
9	13.95	Phosphate	BMB	0.725	3.8706	3.8706	1.0000
Total:			**0.000**	**13.903**		**64.48**	

8 ICB

Sample Name:	**ICB**	*Injection Volume:*	**5.00**
Vial Number:	**BE8**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**04/20/2021 12:25**	*Sample Weight:*	**1.0000**

Run Time:

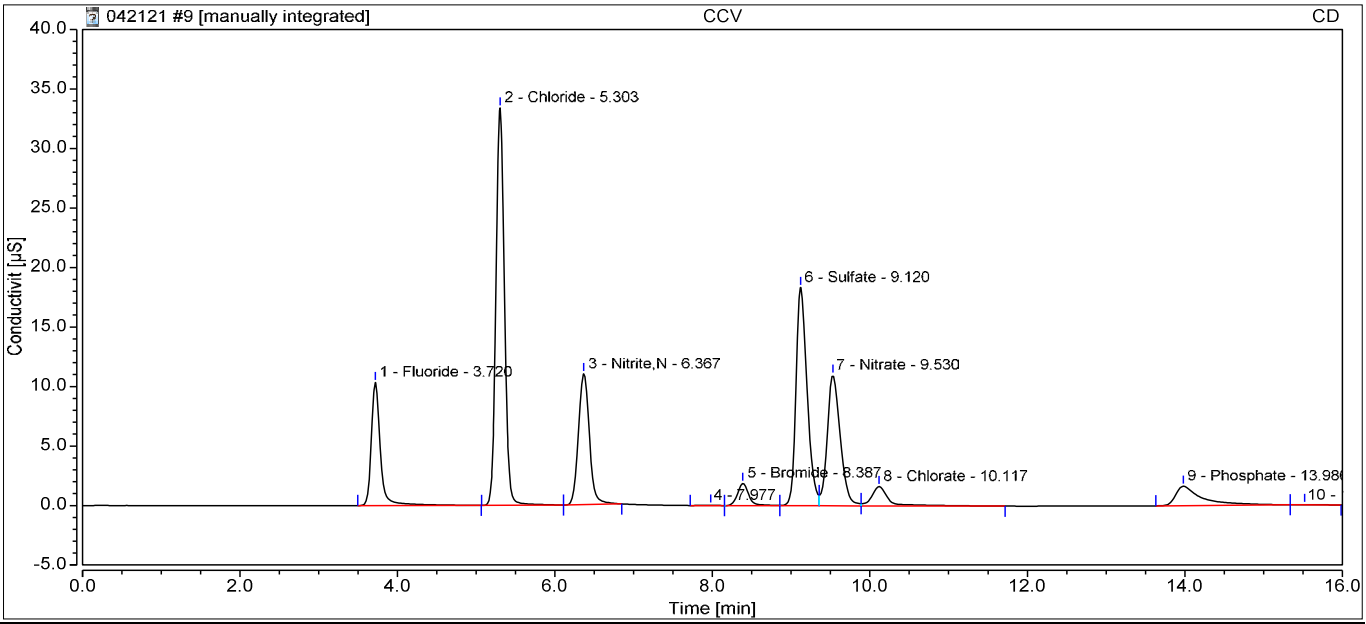


Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	1.0000
1	5.30	Chloride	BMB	0.003	n.a.	n.a.	1.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Nitrate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	1.0000
Total:			**0.000**	**0.003**		**0.00**	

9 CCV			
Sample Name:	**CCV**	*Injection Volume:*	**5.00**
Vial Number:	**R1**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**04/21/2021 14:36**	*Sample Weight:*	**1.0000**

Run Time:



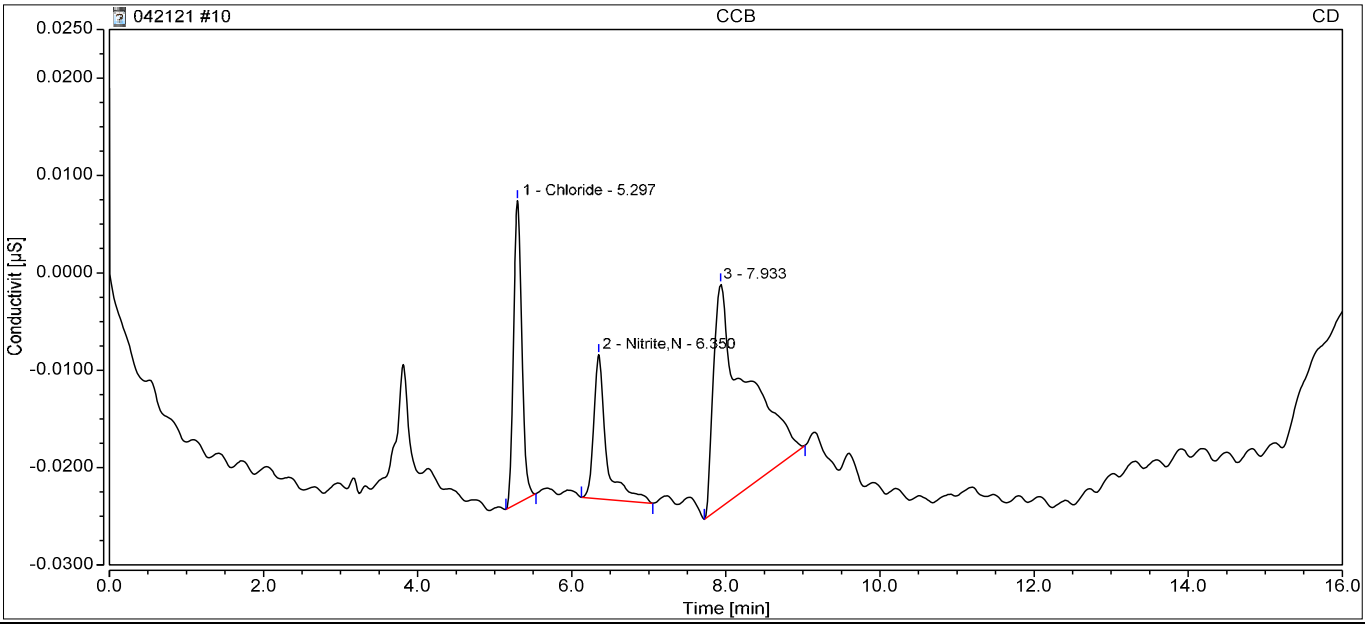
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.72	Fluoride	BMB	1.381	4.2677	4.2677	1.0000
2	5.30	Chloride	BMb*	4.149	19.8471	19.8471	1.0000
3	6.37	Nitrite,N	bMB*	1.772	4.3718	4.3718	1.0000
5	8.39	Bromide	M	0.309	3.7652	3.7652	1.0000
6	9.12	Sulfate	M	2.986	19.7960	19.7960	1.0000
7	9.53	Nitrate	M	2.113	3.9196	3.9196	1.0000
8	10.12	Chlorate	MB	0.403	4.1886	4.1886	1.0000
9	13.98	Phosphate	BMB	0.628	3.3857	3.3857	1.0000
Total:			**0.000**	**13.740**		**63.54**	

10 CCB

Sample Name:	**CCB**	*Injection Volume:*	**5.00**
Vial Number:	**R4**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**04/21/2021 15:17**	*Sample Weight:*	**1.0000**

Run Time:



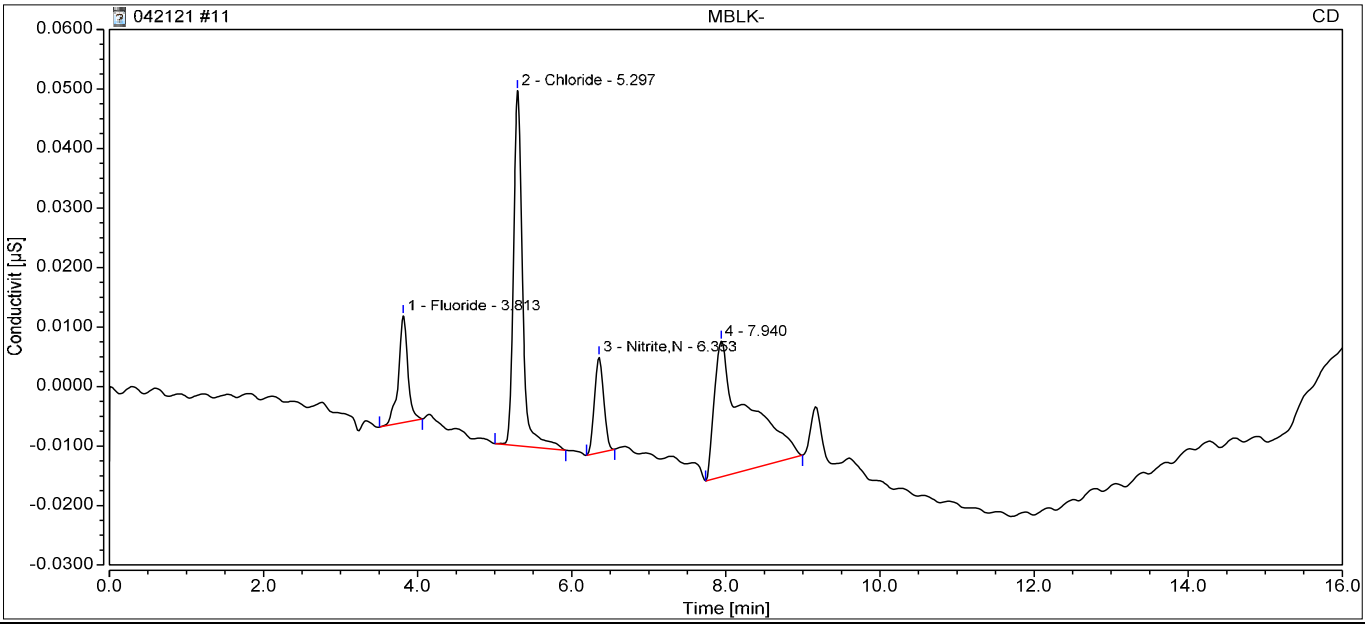
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	1.0000
1	5.30	Chloride	BMB	0.004	n.a.	n.a.	1.0000
2	6.35	Nitrite,N	BMB	0.003	n.a.	n.a.	1.0000
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Nitrate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	1.0000
Total:			**0.000**	**0.007**		**0.00**	

11 MBLK-

Sample Name:	**MBLK-**	*Injection Volume:*	**5.00**
Vial Number:	**R5**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**04/21/2021 15:37**	*Sample Weight:*	**1.0000**

Run Time:



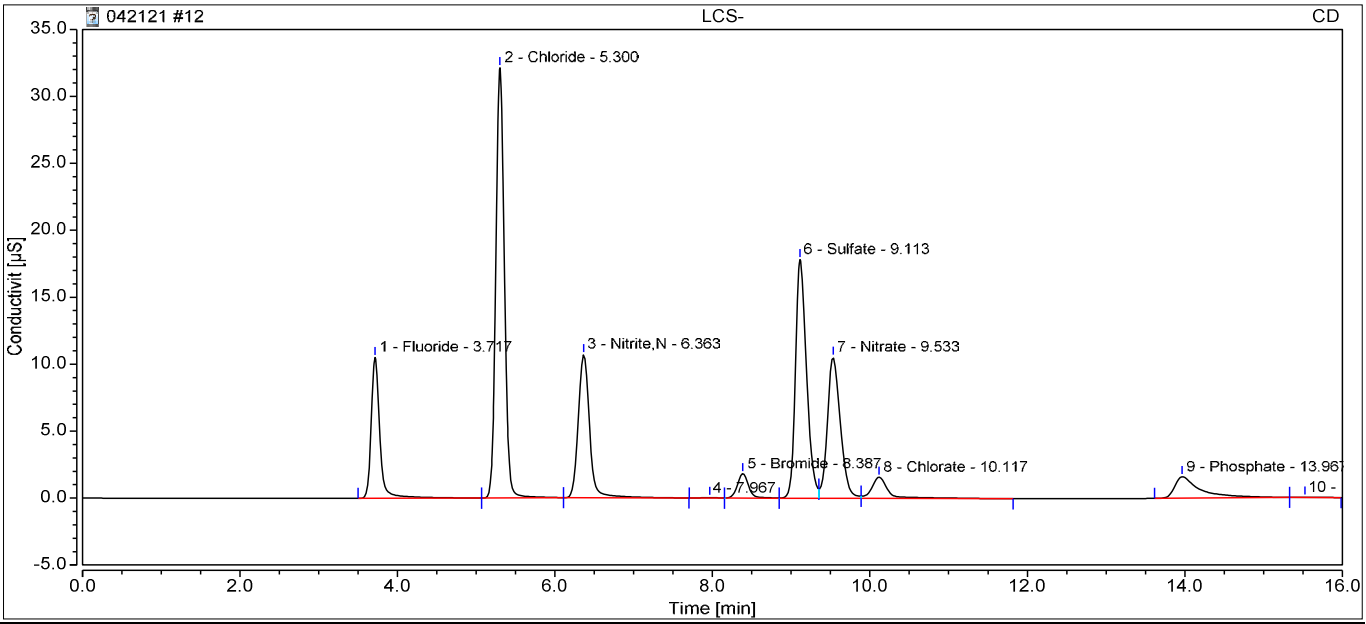
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.81	Fluoride	BMB	0.003	n.a.	n.a.	1.0000
2	5.30	Chloride	BMB	0.008	0.0101	0.0101	1.0000
3	6.35	Nitrite,N	BMB	0.002	n.a.	n.a.	1.0000
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Nitrate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	1.0000
Total:			**0.000**	**0.013**		**0.01**	

12 LCS-

Sample Name:	**LCS-**	*Injection Volume:*	**5.00**
Vial Number:	**R2**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**04/21/2021 15:56**	*Sample Weight:*	**1.0000**

Run Time:



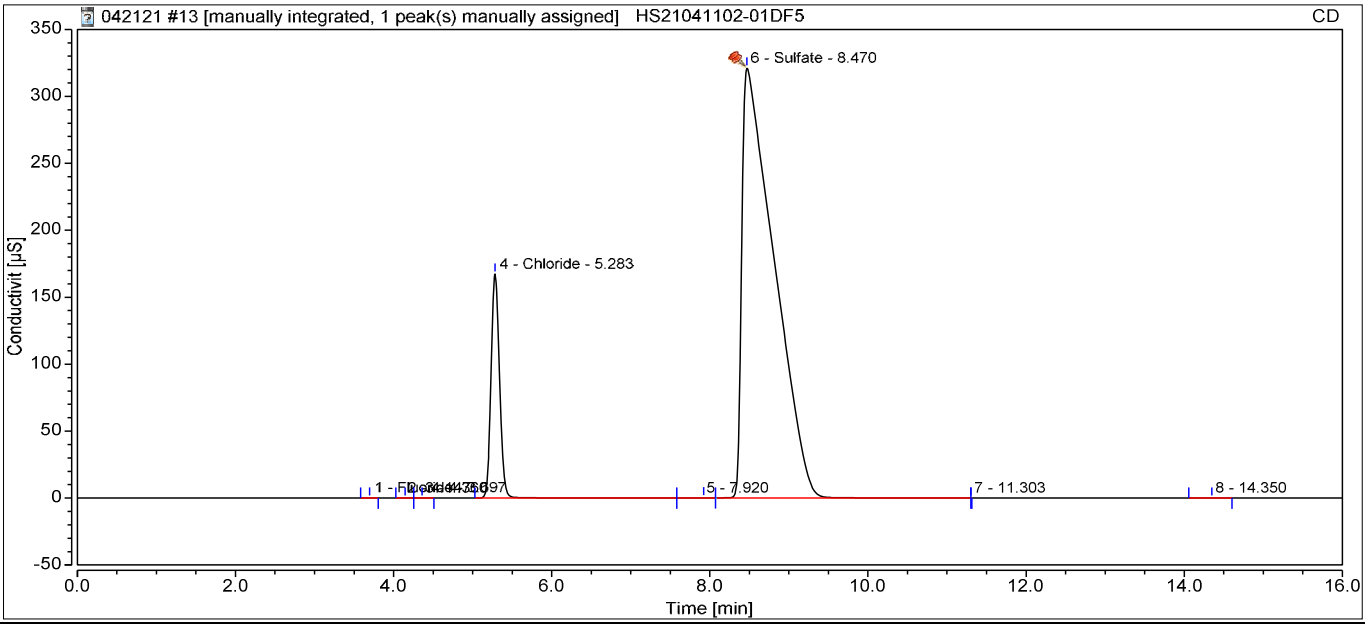
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.72	Fluoride	BMB	1.336	4.1257	4.1257	1.0000
2	5.30	Chloride	BMB	3.999	19.1282	19.1282	1.0000
3	6.36	Nitrite,N	BMB	1.781	4.3948	4.3948	1.0000
5	8.39	Bromide	M	0.300	3.6599	3.6599	1.0000
6	9.11	Sulfate	M	2.883	19.1215	19.1215	1.0000
7	9.53	Nitrate	M	2.023	3.7529	3.7529	1.0000
8	10.12	Chlorate	MB	0.392	4.0719	4.0719	1.0000
9	13.97	Phosphate	BMB	0.607	3.2827	3.2827	1.0000
Total:			**0.000**	**13.321**		**61.54**	

13 HS21041102-01DF5

Sample Name:	**HS21041102-01DF5**	*Injection Volume:*	**5.00**
Vial Number:	**RA1**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**5.0000**
Recording Time:	**04/21/2021 16:16**	*Sample Weight:*	**1.0000**

Run Time:



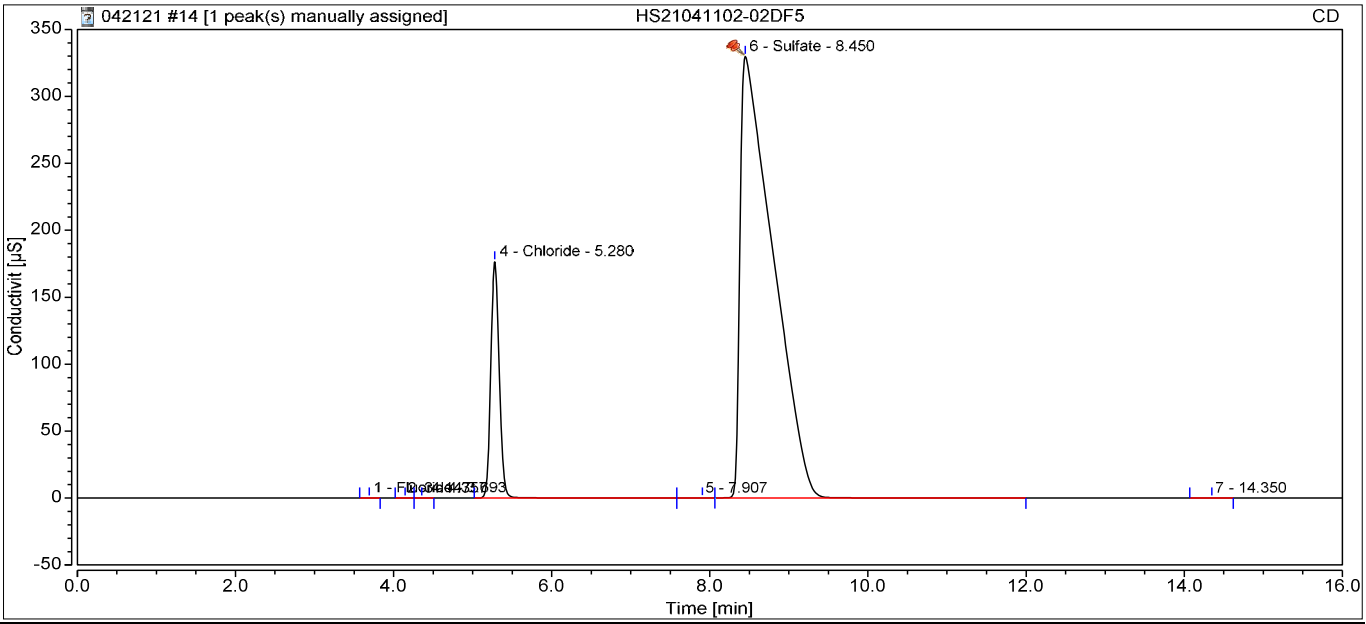
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.70	Fluoride	BMB	0.003	n.a.	n.a.	5.0000
4	5.28	Chloride	BMB	20.773	99.4750	497.3749	5.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	5.0000
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	5.0000
6	8.47	Sulfate	M *^	150.756	994.8930	4974.4648	5.0000
n.a.	n.a.	Nitrate	n.a.	n.a.	n.a.	n.a.	5.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	5.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	5.0000
Total:			**0.000**	**171.531**		**5471.84**	

14 HS21041102-02DF5

Sample Name:	**HS21041102-02DF5**	*Injection Volume:*	**5.00**
Vial Number:	**RA2**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**5.0000**
Recording Time:	**04/21/2021 16:34**	*Sample Weight:*	**1.0000**

Run Time:



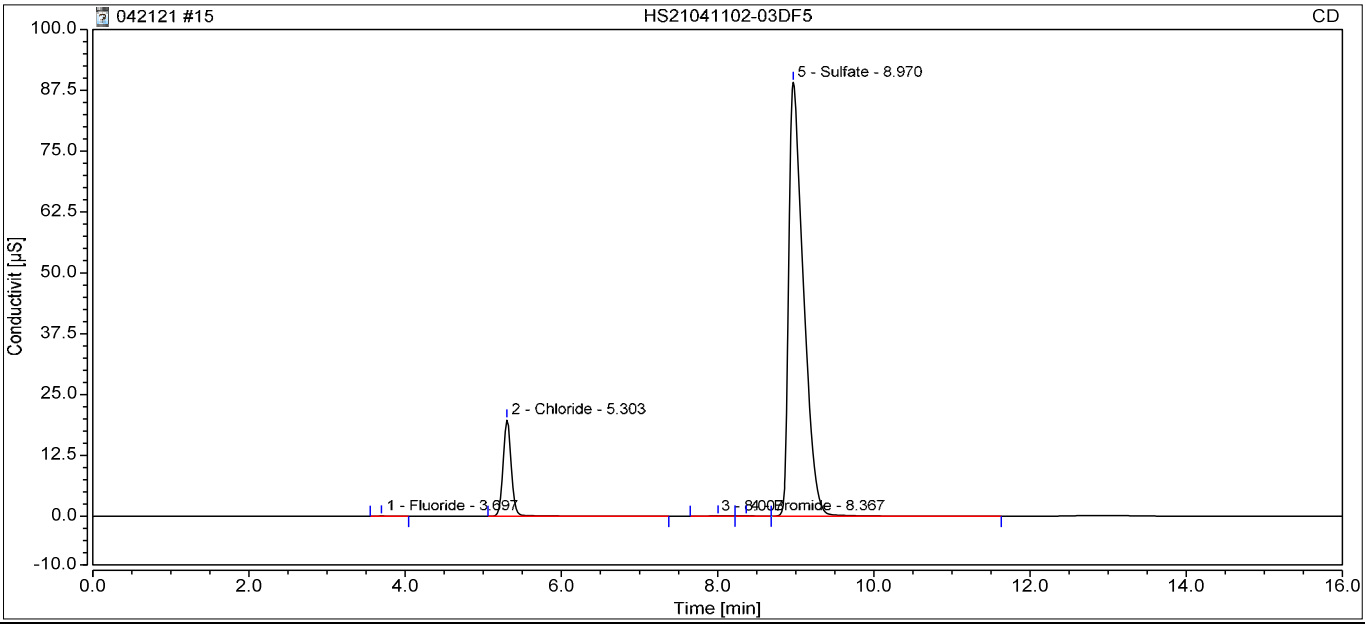
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.69	Fluoride	BMB	0.003	n.a.	n.a.	5.0000
4	5.28	Chloride	BMB	21.929	105.0142	525.0709	5.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	5.0000
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	5.0000
6	8.45	Sulfate	MB^	157.941	1042.3082	5211.5412	5.0000
n.a.	n.a.	Nitrate	n.a.	n.a.	n.a.	n.a.	5.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	5.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	5.0000
Total:			**0.000**	**179.874**		**5736.61**	

15 HS21041102-03DF5

Sample Name:	**HS21041102-03DF5**	*Injection Volume:*	**5.00**
Vial Number:	**RA3**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**5.0000**
Recording Time:	**04/21/2021 16:55**	*Sample Weight:*	**1.0000**

Run Time:



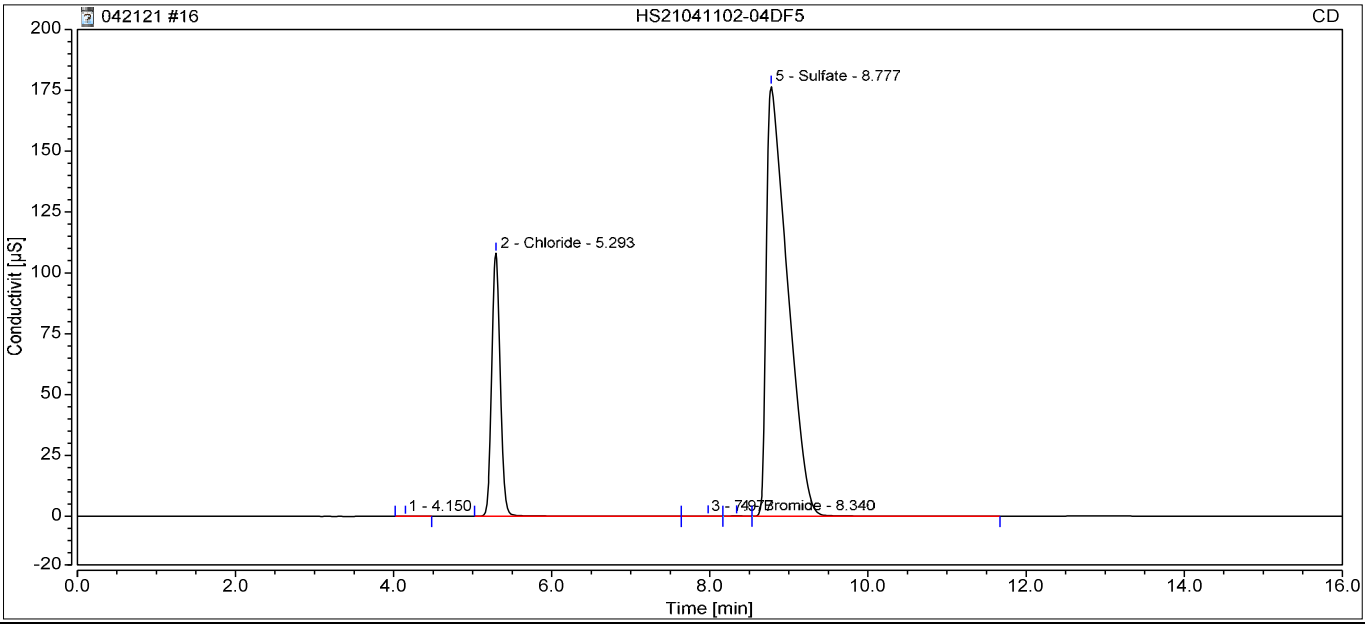
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.70	Fluoride	BMB	0.009	0.0159	0.0795	5.0000
2	5.30	Chloride	BMB	2.463	11.7704	58.8519	5.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	5.0000
4	8.37	Bromide	M	0.028	0.3034	1.5169	5.0000
5	8.97	Sulfate	MB	19.523	128.9242	644.6210	5.0000
n.a.	n.a.	Nitrate	n.a.	n.a.	n.a.	n.a.	5.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	5.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	5.0000
Total:			**0.000**	**22.023**		**705.07**	

16 HS21041102-04DF5

Sample Name:	**HS21041102-04DF5**	*Injection Volume:*	**5.00**
Vial Number:	**RA4**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**5.0000**
Recording Time:	**04/21/2021 17:13**	*Sample Weight:*	**1.0000**

Run Time:



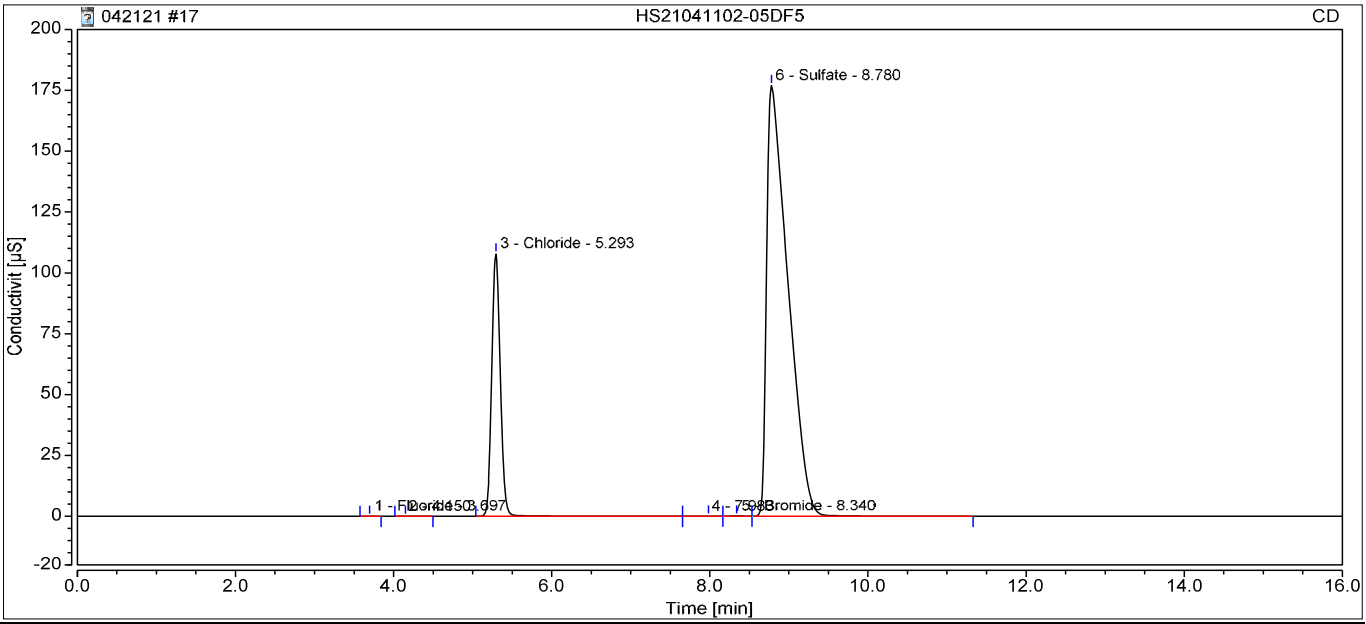
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	5.0000
2	5.29	Chloride	BMB	13.490	64.5917	322.9585	5.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	5.0000
4	8.34	Bromide	M	0.041	0.4693	2.3466	5.0000
5	8.78	Sulfate	MB	54.828	361.8920	1809.4600	5.0000
n.a.	n.a.	Nitrate	n.a.	n.a.	n.a.	n.a.	5.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	5.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	5.0000
Total:			**0.000**	**68.360**		**2134.77**	

17 HS21041102-05DF5

Sample Name:	**HS21041102-05DF5**	*Injection Volume:*	**5.00**
Vial Number:	**RA5**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**5.0000**
Recording Time:	**04/21/2021 17:34**	*Sample Weight:*	**1.0000**

Run Time:



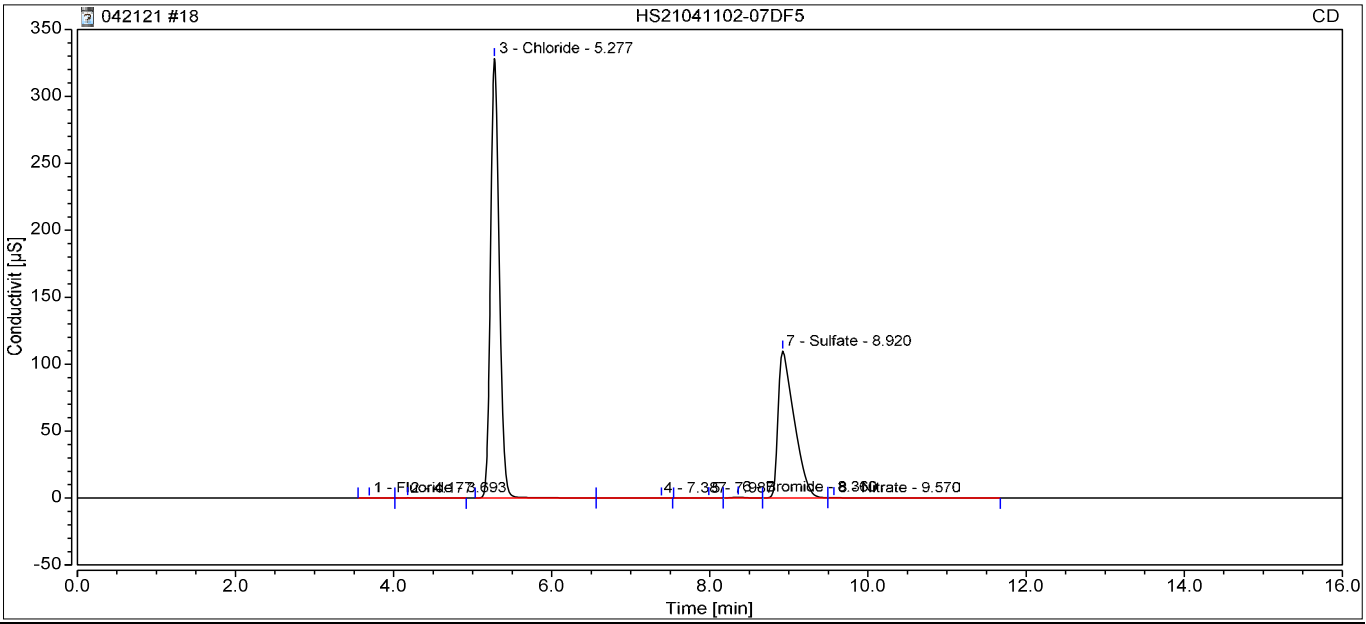
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.70	Fluoride	BMB	0.003	n.a.	n.a.	5.0000
3	5.29	Chloride	BMB	13.495	64.6150	323.0748	5.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	5.0000
5	8.34	Bromide	M	0.039	0.4456	2.2280	5.0000
6	8.78	Sulfate	MB	54.877	362.2108	1811.0539	5.0000
n.a.	n.a.	Nitrate	n.a.	n.a.	n.a.	n.a.	5.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	5.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	5.0000
Total:			**0.000**	**68.414**		**2136.36**	

18 HS21041102-07DF5

Sample Name:	**HS21041102-07DF5**	*Injection Volume:*	**5.00**
Vial Number:	**RA6**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**5.0000**
Recording Time:	**04/21/2021 17:52**	*Sample Weight:*	**1.0000**

Run Time:



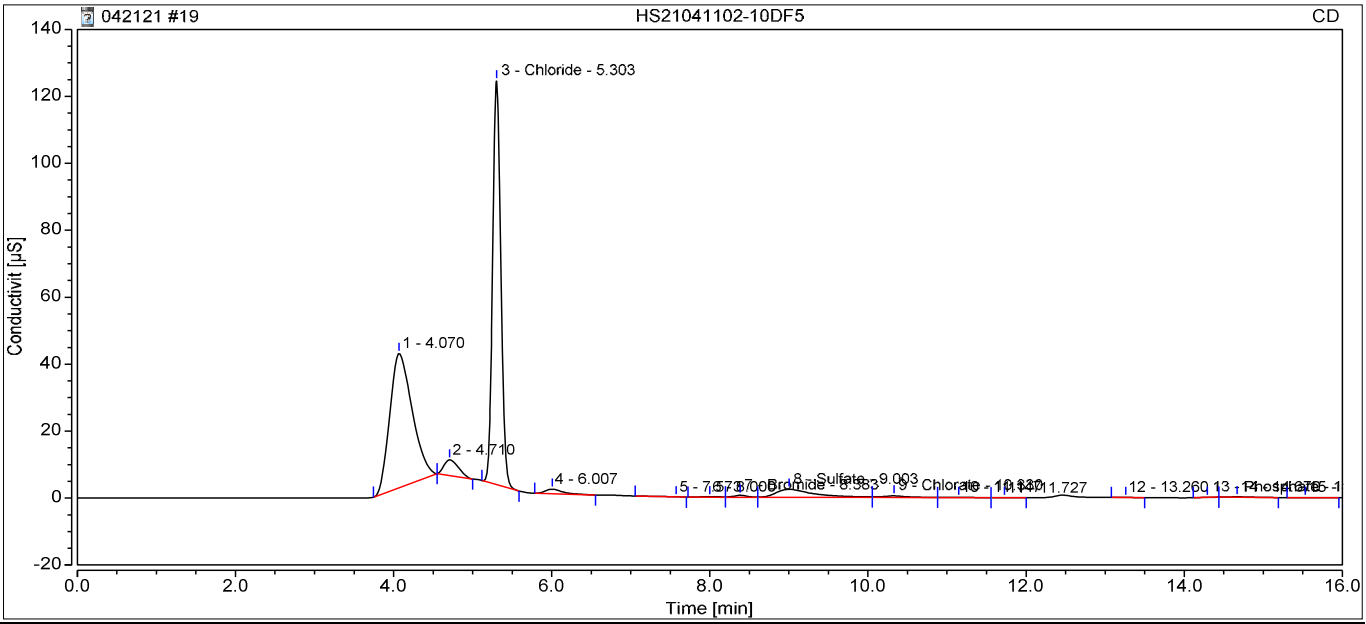
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.69	Fluoride	BMB	0.010	0.0194	0.0970	5.0000
3	5.28	Chloride	BMB	41.955	200.9407	1004.7037	5.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	5.0000
6	8.36	Bromide	M	0.129	1.5463	7.7315	5.0000
7	8.92	Sulfate	M	26.113	172.4048	862.0240	5.0000
8	9.57	Nitrate	MB	0.118	0.2210	1.1052	5.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	5.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	5.0000
Total:			**0.000**	**68.324**		**1875.66**	

19 HS21041102-10DF5

Sample Name:	**HS21041102-10DF5**	*Injection Volume:*	**5.00**
Vial Number:	**RA7**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**5.0000**
Recording Time:	**04/21/2021 18:13**	*Sample Weight:*	**1.0000**

Run Time:



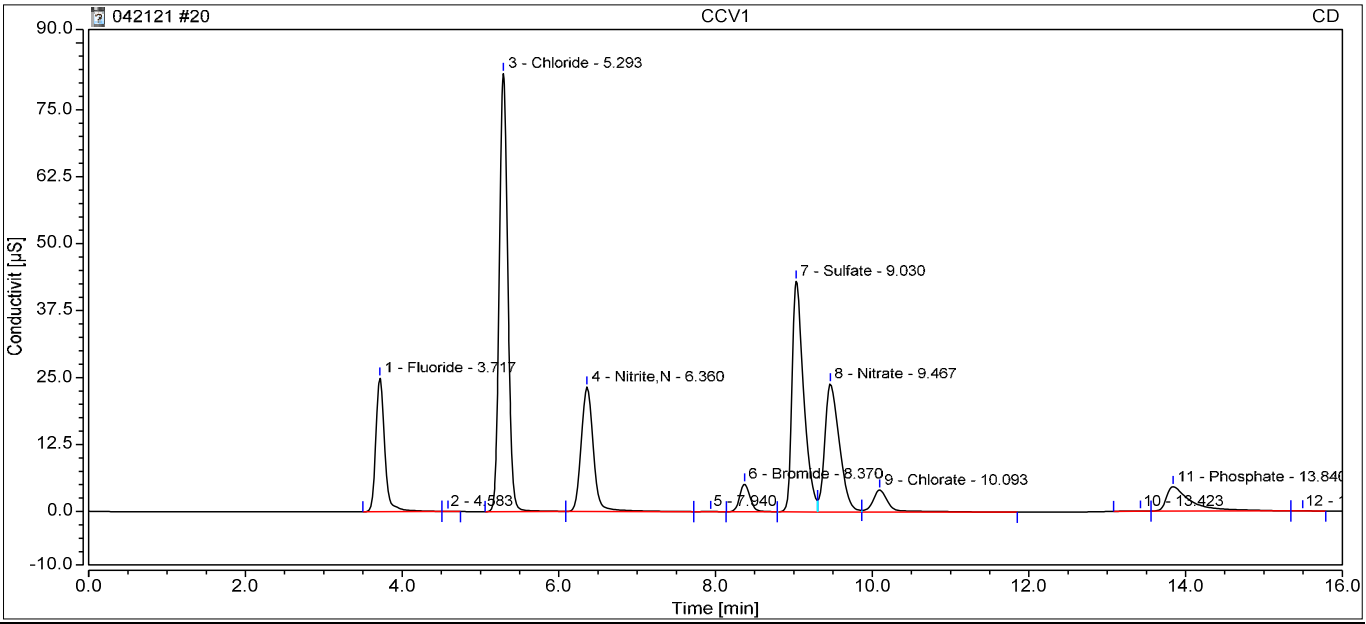
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	5.0000
3	5.30	Chloride	BMB	14.441	69.1466	345.7328	5.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	5.0000
7	8.38	Bromide	M	0.110	1.3196	6.5981	5.0000
8	9.00	Sulfate	M	1.329	8.8655	44.3277	5.0000
n.a.	n.a.	Nitrate	n.a.	n.a.	n.a.	n.a.	5.0000
9	10.33	Chlorate	M	0.182	1.8472	9.2358	5.0000
13	14.29	Phosphate	BMB	0.006	0.2869	1.4345	5.0000
Total:			**0.000**	**16.068**		**407.33**	

20 CCV1

Sample Name:	**CCV1**	*Injection Volume:*	**5.00**
Vial Number:	**R3**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**04/21/2021 18:31**	*Sample Weight:*	**1.0000**

Run Time:



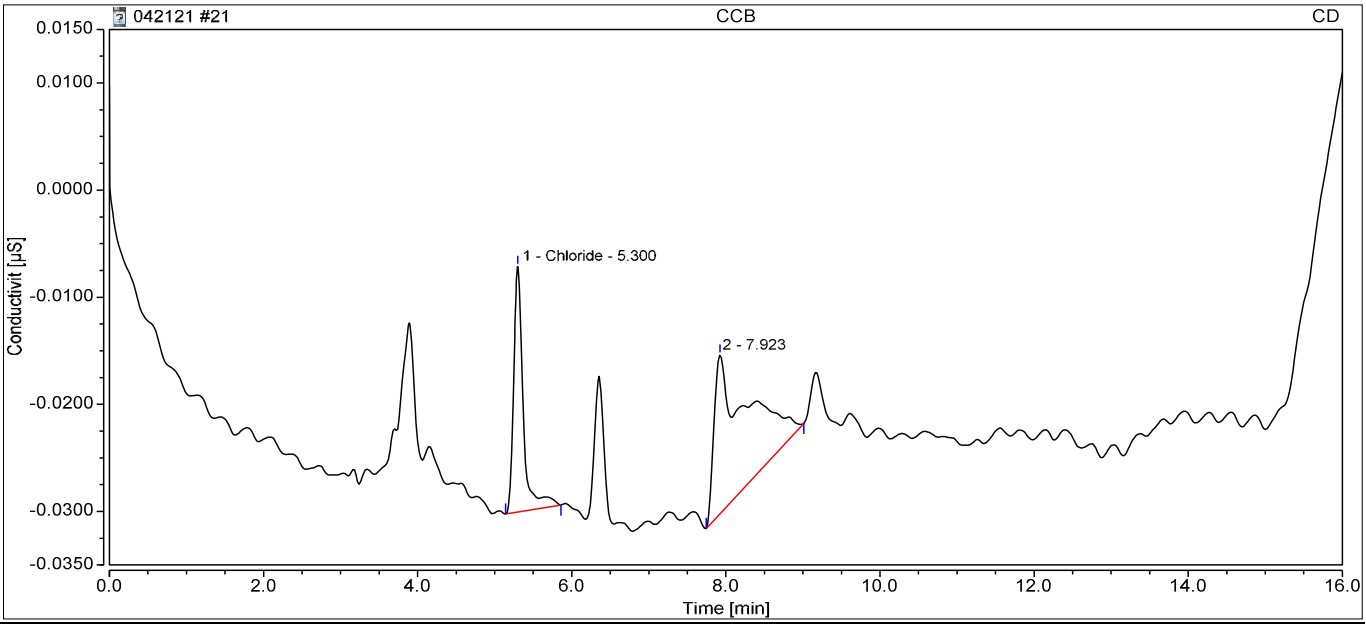
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.72	Fluoride	BMB	3.266	10.1064	10.1064	1.0000
3	5.29	Chloride	BMB	10.282	49.2242	49.2242	1.0000
4	6.36	Nitrite,N	BMB	4.197	10.4126	10.4126	1.0000
6	8.37	Bromide	BM	0.802	9.8450	9.8450	1.0000
7	9.03	Sulfate	M	7.437	49.1689	49.1689	1.0000
8	9.47	Nitrate	M	5.192	9.6290	9.6290	1.0000
9	10.09	Chlorate	MB	0.978	10.2730	10.2730	1.0000
11	13.84	Phosphate	BMB	1.648	8.4702	8.4702	1.0000
Total:			**0.000**	**33.803**		**157.13**	

21 CCB

Sample Name:	**CCB**	*Injection Volume:*	**5.00**
Vial Number:	**R7**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**04/21/2021 19:10**	*Sample Weight:*	**1.0000**

Run Time:



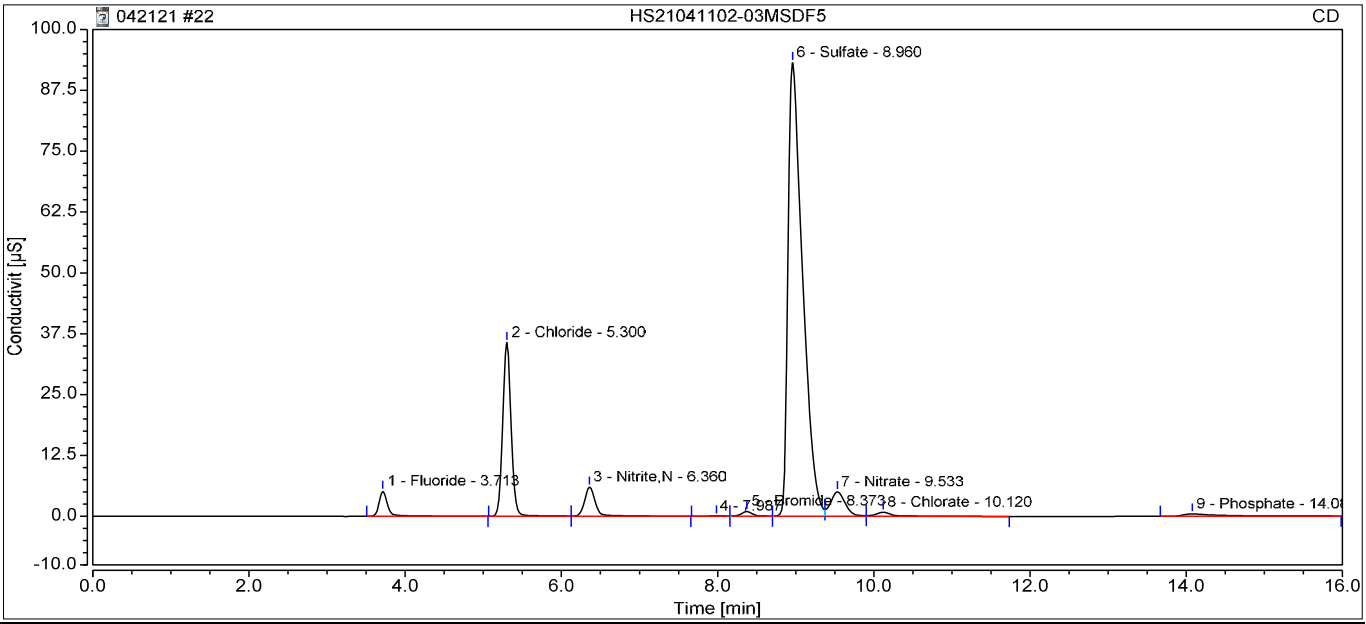
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	1.0000
1	5.30	Chloride	BMB	0.003	n.a.	n.a.	1.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Nitrate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	1.0000
Total:			**0.000**	**0.003**		**0.00**	

22 HS21041102-03MSDF5

Sample Name:	**HS21041102-03MSDF5**	*Injection Volume:*	**5.00**
Vial Number:	**RA8**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**5.0000**
Recording Time:	**04/21/2021 19:30**	*Sample Weight:*	**1.0000**

Run Time:



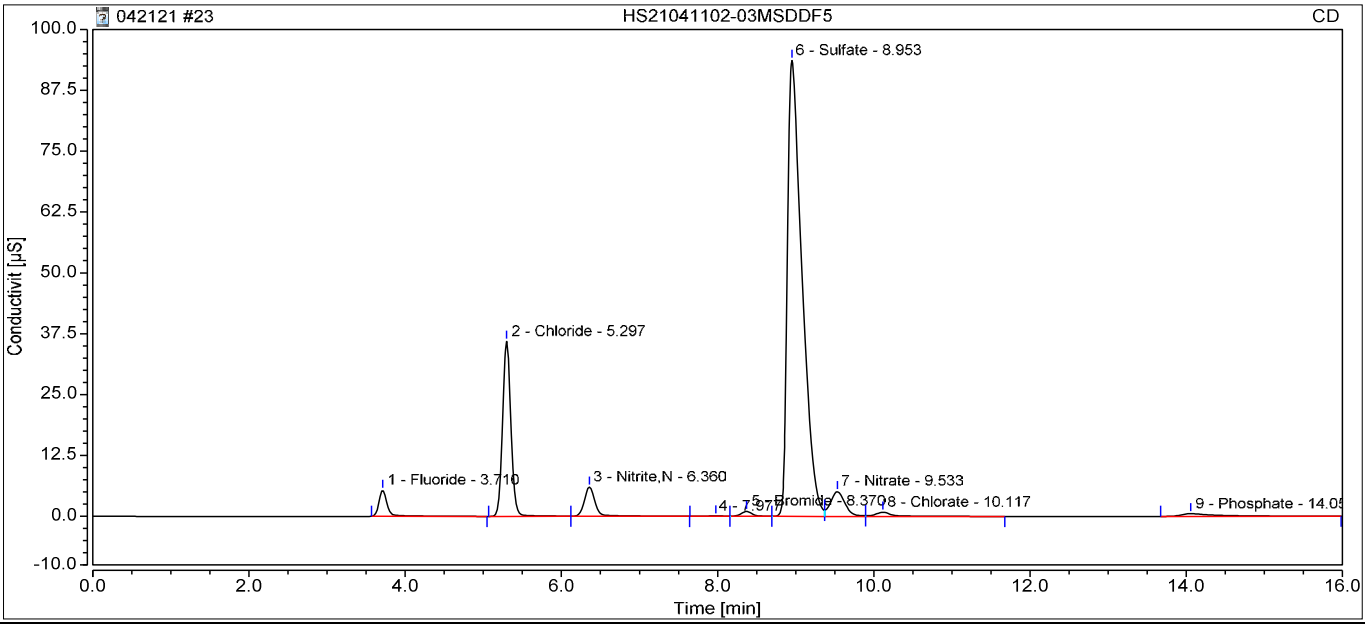
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.71	Fluoride	BMB	0.682	2.1001	10.5005	5.0000
2	5.30	Chloride	BMB	4.451	21.2900	106.4502	5.0000
3	6.36	Nitrite,N	BMB	0.957	2.3424	11.7120	5.0000
5	8.37	Bromide	M	0.172	2.0830	10.4148	5.0000
6	8.96	Sulfate	M	20.227	133.5675	667.8376	5.0000
7	9.53	Nitrate	M	1.101	2.0433	10.2167	5.0000
8	10.12	Chlorate	MB	0.231	2.3625	11.8127	5.0000
9	14.08	Phosphate	BMB	0.271	1.6114	8.0569	5.0000
Total:			**0.000**	**28.091**		**837.00**	

23 HS21041102-03MSDDF5

Sample Name:	**HS21041102-03MSDDF5**	*Injection Volume:*	**5.00**
Vial Number:	**RB1**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**5.0000**
Recording Time:	**04/21/2021 19:48**	*Sample Weight:*	**1.0000**

Run Time:



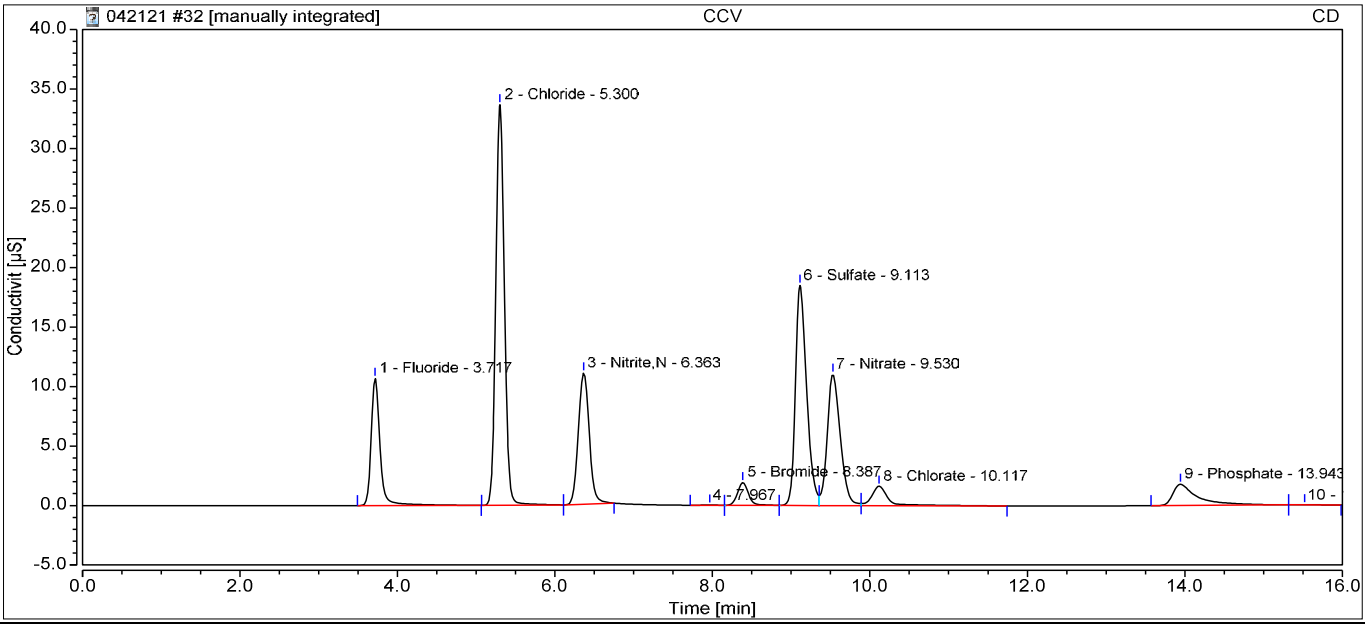
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.71	Fluoride	BMB	0.659	2.0313	10.1564	5.0000
2	5.30	Chloride	BMB	4.469	21.3785	106.8923	5.0000
3	6.36	Nitrite,N	BMB	0.963	2.3566	11.7831	5.0000
5	8.37	Bromide	M	0.173	2.0882	10.4409	5.0000
6	8.95	Sulfate	M	20.348	134.3676	671.8382	5.0000
7	9.53	Nitrate	M	1.101	2.0437	10.2185	5.0000
8	10.12	Chlorate	MB	0.233	2.3840	11.9201	5.0000
9	14.06	Phosphate	BMB	0.291	1.7077	8.5386	5.0000
Total:			**0.000**	**28.236**		**841.79**	

32 CCV

Sample Name:	**CCV**	*Injection Volume:*	**5.00**
Vial Number:	**R1**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**04/21/2021 22:43**	*Sample Weight:*	**1.0000**

Run Time:



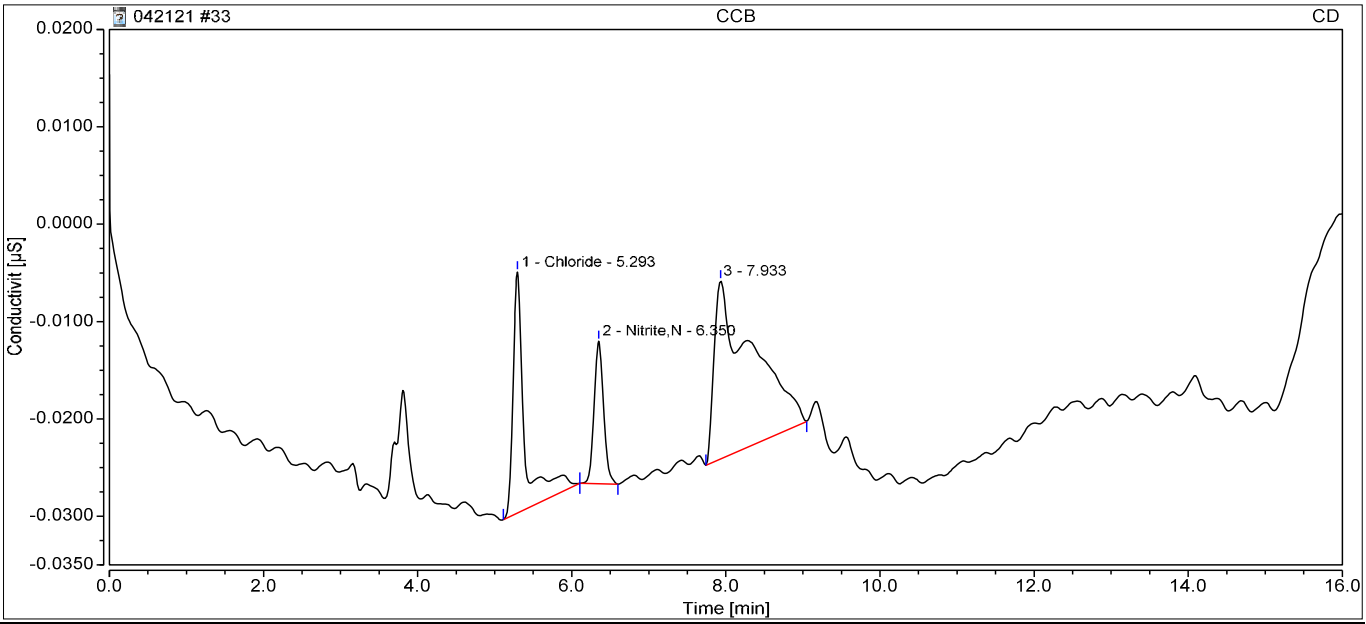
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.72	Fluoride	BMB	1.402	4.3332	4.3332	1.0000
2	5.30	Chloride	BMb*	4.216	20.1657	20.1657	1.0000
3	6.36	Nitrite,N	bMB*	1.771	4.3686	4.3686	1.0000
5	8.39	Bromide	M	0.312	3.8110	3.8110	1.0000
6	9.11	Sulfate	M	3.034	20.1118	20.1118	1.0000
7	9.53	Nitrate	M	2.128	3.9487	3.9487	1.0000
8	10.12	Chlorate	MB	0.404	4.2002	4.2002	1.0000
9	13.94	Phosphate	BMB	0.659	3.5440	3.5440	1.0000
Total:			**0.000**	**13.927**		**64.48**	

33 CCB

Sample Name:	**CCB**	*Injection Volume:*	**5.00**
Vial Number:	**R4**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**04/21/2021 23:02**	*Sample Weight:*	**1.0000**

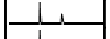
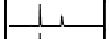
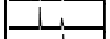
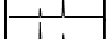
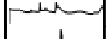
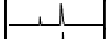
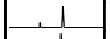
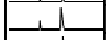
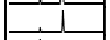
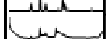
Run Time:



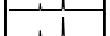
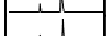
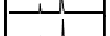
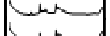
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	1.0000
1	5.29	Chloride	BMB	0.004	n.a.	n.a.	1.0000
2	6.35	Nitrite,N	BMB	0.002	n.a.	n.a.	1.0000
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Nitrate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	1.0000
Total:			**0.000**	**0.006**		**0.00**	

Sequence: 043021
Last Update Operator: alshs.nouser

CD	Name	Comment	Type	Position	Dilution	Level	Instrument Method	Processing Method
	STD1		Calibration	BE1	1.00	1	Anions Program 06022020.1	Anions Processing Method
	STD2		Calibration	BE2	1.00	2	Anions Program 06022020.1	Anions Processing Method
	STD3		Calibration	BE3	1.00	3	Anions Program 06022020.1	Anions Processing Method
	STD4		Calibration	BE4	1.00	4	Anions Program 06022020.1	Anions Processing Method
	STD5		Calibration	BE5	1.00	5	Anions Program 06022020.1	Anions Processing Method
	STD6		Calibration	BE6	1.00	6	Anions Program 06022020.1	Anions Processing Method
	ICV		Unknown	BE7	1.00		Anions Program 06022020.1	Anions Processing Method
	ICB		Unknown	BE8	1.00		Anions Program 06022020.1	Anions Processing Method
	CCV		Unknown	R1	1.00		Anions Program 06022020.1	Anions Processing Method
	CCB		Unknown	R4	1.00		Anions Program 06022020.1	Anions Processing Method
	HS21041595-02		Unknown	RA4	1.00		Anions Program 06022020.1	Anions Processing Method
	HS21041595-02MS		Unknown	RA5	1.00		Anions Program 06022020.1	Anions Processing Method
	HS21041595-02MSD		Unknown	RA6	1.00		Anions Program 06022020.1	Anions Processing Method
	HS21041102-03DF50		Unknown	RA7	50.00		Anions Program 06022020.1	Anions Processing Method
	CCV1		Unknown	R3	1.00		Anions Program 06022020.1	Anions Processing Method
	CCB		Unknown	R8	1.00		Anions Program 06022020.1	Anions Processing Method
	CCV		Unknown	R1	1.00		Anions Program 06022020.1	Anions Processing Method
	CCB		Unknown	R4	1.00		Anions Program 06022020.1	Anions Processing Method
	HS21041102-04DF50		Unknown	RA8	50.00		Anions Program 06022020.1	Anions Processing Method
	HS21041102-05DF50		Unknown	RB1	50.00		Anions Program 06022020.1	Anions Processing Method
	HS21041102-07DF50		Unknown	RB2	50.00		Anions Program 06022020.1	Anions Processing Method
	CCV1		Unknown	R3	1.00		Anions Program 06022020.1	Anions Processing Method
	CCB		Unknown	R6	1.00		Anions Program 06022020.1	Anions Processing Method
	HS21041102-01DF10		Unknown	RC7	10.00		Anions Program 06022020.1	Anions Processing Method
	HS21041102-01DF100		Unknown	RC8	100.00		Anions Program 06022020.1	Anions Processing Method
	HS21041102-02DF10		Unknown	RD1	10.00		Anions Program 06022020.1	Anions Processing Method
	HS21041102-02DF100		Unknown	RD2	100.00		Anions Program 06022020.1	Anions Processing Method
	CCV		Unknown	R1	1.00		Anions Program 06022020.1	Anions Processing Method
	CCB		Unknown	R4	1.00		Anions Program 06022020.1	Anions Processing Method
	CCV1		Unknown	R3	1.00		Anions Program 06022020.1	Anions Processing Method
	CCB		Unknown	R8	1.00		Anions Program 06022020.1	Anions Processing Method
	MBLK-		Unknown	R5	1.00		Anions Program 06022020.1	Anions Processing Method
	LCS-		Unknown	R2	1.00		Anions Program 06022020.1	Anions Processing Method
	CCV		Unknown	R1	1.00		Anions Program 06022020.1	Anions Processing Method
	CCB		Unknown	R4	1.00		Anions Program 06022020.1	Anions Processing Method

Sequence: 043021
Last Update Operator: alshs.nouser

CD	Name	Volume	Status	Inject Time
	STD1	5.0	Finished	4/20/2021 9:54:11 AM -05:00
	STD2	5.0	Finished	4/20/2021 10:12:33 AM -05:00
	STD3	5.0	Finished	4/20/2021 10:30:56 AM -05:00
	STD4	5.0	Finished	4/20/2021 10:49:20 AM -05:00
	STD5	5.0	Finished	4/20/2021 11:07:48 AM -05:00
	STD6	5.0	Finished	4/20/2021 11:28:05 AM -05:00
	ICV	5.0	Finished	4/20/2021 11:46:31 AM -05:00
	ICB	5.0	Finished	4/20/2021 12:25:13 PM -05:00
	CCV	5.0	Finished	4/30/2021 11:19:48 AM -05:00
	CCB	5.0	Finished	4/30/2021 11:38:13 AM -05:00
	HS21041595-02	5.0	Finished	4/30/2021 1:29:07 PM -05:00
	HS21041595-02MS	5.0	Finished	4/30/2021 1:47:31 PM -05:00
	HS21041595-02MSD	5.0	Finished	4/30/2021 2:06:02 PM -05:00
	HS21041102-03DF50	5.0	Finished	4/30/2021 2:24:28 PM -05:00
	CCV1	5.0	Finished	4/30/2021 3:03:55 PM -05:00
	CCB	5.0	Finished	4/30/2021 3:42:37 PM -05:00
	CCV	5.0	Finished	4/30/2021 7:17:04 PM -05:00
	CCB	5.0	Finished	4/30/2021 7:35:30 PM -05:00
	HS21041102-04DF50	5.0	Finished	4/30/2021 8:34:54 PM -05:00
	HS21041102-05DF50	5.0	Finished	4/30/2021 8:53:20 PM -05:00
	HS21041102-07DF50	5.0	Finished	4/30/2021 9:13:39 PM -05:00
	CCV1	5.0	Finished	4/30/2021 11:10:08 PM -05:00
	CCB	5.0	Finished	4/30/2021 11:48:52 PM -05:00
	HS21041102-01DF10	5.0	Finished	5/1/2021 12:28:02 AM -05:00
	HS21041102-01DF100	5.0	Finished	5/1/2021 12:46:26 AM -05:00
	HS21041102-02DF10	5.0	Finished	5/1/2021 1:06:41 AM -05:00
	HS21041102-02DF100	5.0	Finished	5/1/2021 1:25:06 AM -05:00
	CCV	5.0	Finished	5/1/2021 3:21:07 AM -05:00
	CCB	5.0	Finished	5/1/2021 3:59:52 AM -05:00
	CCV1	5.0	Finished	5/1/2021 7:27:37 AM -05:00
	CCB	5.0	Finished	5/1/2021 7:46:01 AM -05:00
	MBLK-	5.0	Finished	5/1/2021 8:23:11 AM -05:00
	LCS-	5.0	Finished	5/1/2021 8:41:35 AM -05:00
	CCV	5.0	Finished	5/1/2021 10:51:13 AM -05:00
	CCB	5.0	Finished	5/1/2021 11:28:25 AM -05:00

Sequence: 042121
Injection #6: STD6

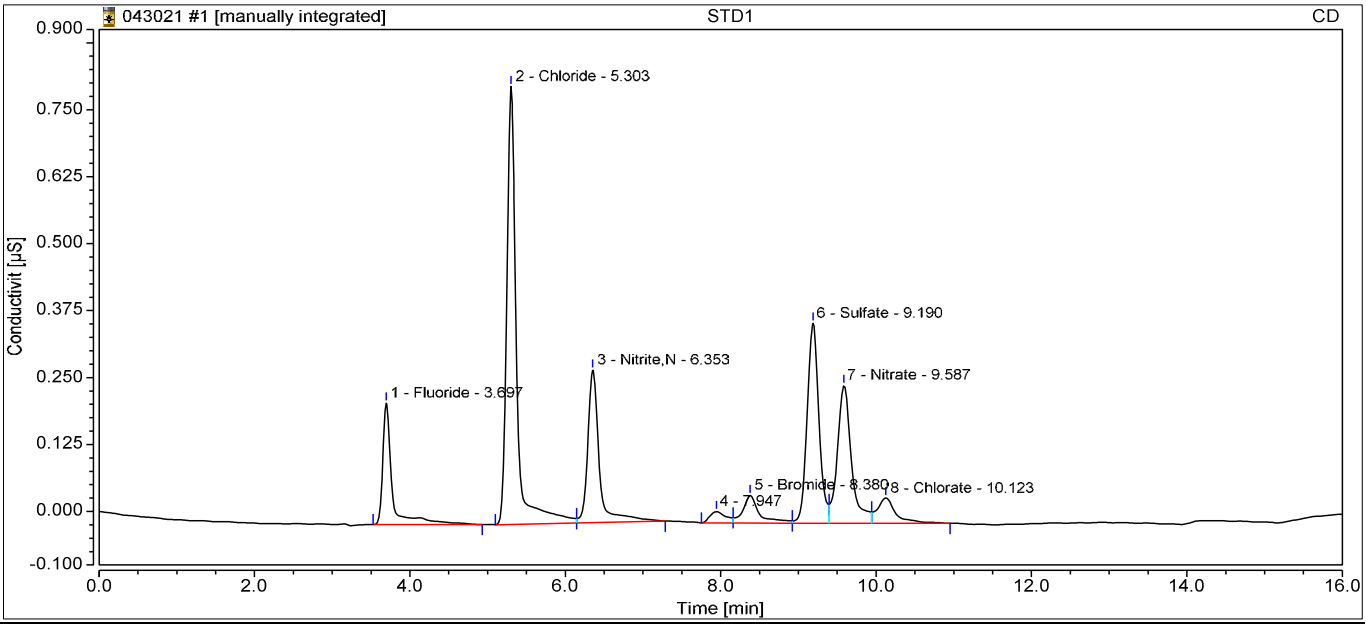
Calibration

Peak No.	Peak Name	Cal.Type	Eval.Type	Number of Points	Rel.Std.Dev. %	Coeff.of Determination	C0 (Offset)	C1 (Slope)	C2 (Curve)
1	***Fluoride***	***Lin, WithOffset, 1/***	***Area***	***6***	***18.7874***	***0.99804***	***0.0037***	***0.3228***	***0.0000***
2	Chloride	Lin, WithOffset, 1/	Area	6	4.4845	0.99989	0.0060	0.2088	0.0000
3	Nitrite,N	Lin, WithOffset, 1/	Area	6	23.2258	0.99660	0.0167	0.4015	0.0000
5	Bromide	Lin, WithOffset, 1/	Area	6	13.6081	0.99885	0.0031	0.0812	0.0000
6	Sulfate	Lin, WithOffset, 1/	Area	6	4.6885	0.99989	-0.0143	0.1515	0.0000
7	Nitrate	Lin, WithOffset, 1/	Area	6	5.2526	0.99986	-0.0011	0.5393	0.0000
8	Chlorate	Lin, WithOffset, 1/	Area	6	20.9413	0.99684	0.0071	0.0945	0.0000
11	Phosphate	Lin, WithOffset, 1/	Area	5	9.6125	0.99905	-0.0521	0.2007	0.0000
Maximum					**23.2258**	0.99989			
Minimum					4.4845	**0.99660**			

1 STD1

Sample Name:	**STD1**	*Injection Volume:*	**5.00**
Vial Number:	**BE1**	*Channel:*	**CD**
Sample Type:	**Calibration Standard**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**04/20/2021 09:54**	*Sample Weight:*	**1.0000**

Run Time:



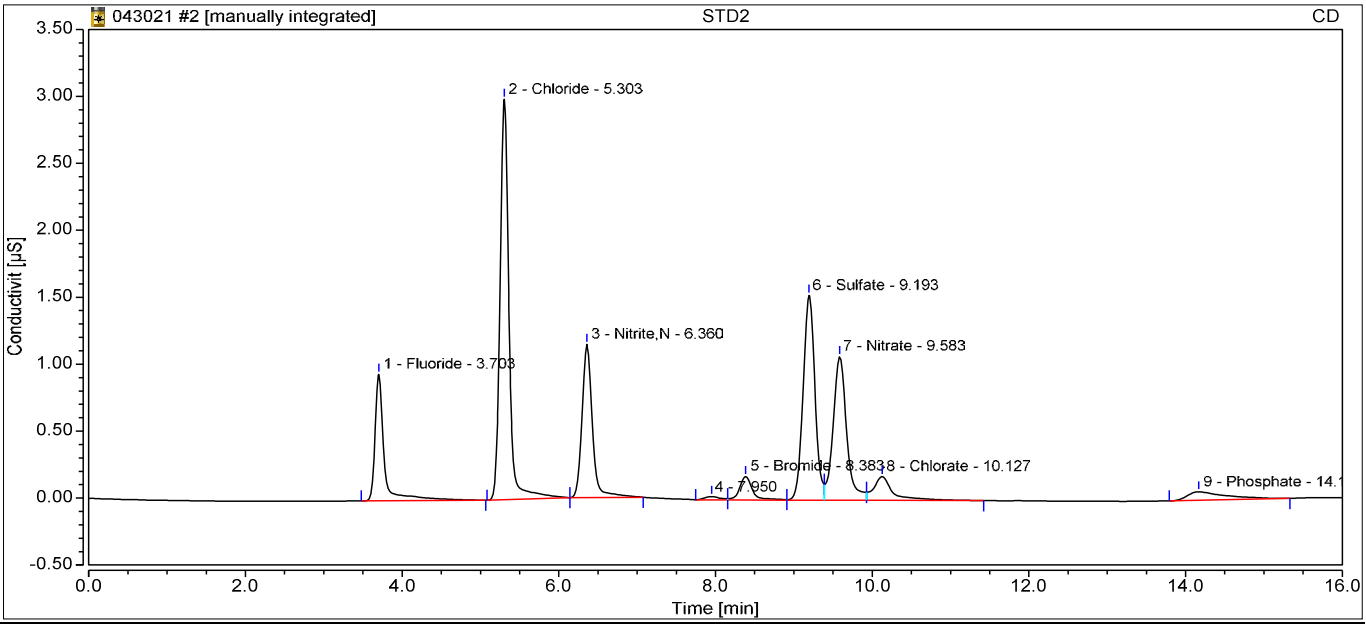
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.70	Fluoride	BMB	0.032	0.0880	0.0880	1.0000
2	5.30	Chloride	BM *	0.118	0.5381	0.5381	1.0000
3	6.35	Nitrite,N	MB*	0.049	0.0802	0.0802	1.0000
5	8.38	Bromide	M	0.013	0.1188	0.1188	1.0000
6	9.19	Sulfate	M	0.066	0.5285	0.5285	1.0000
7	9.59	Nitrate	M	0.054	0.1022	0.1022	1.0000
8	10.12	Chlorate	MB	0.013	0.0640	0.0640	1.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	1.0000
Total:			**0.000**	**0.345**		**1.52**	

2 STD2

Sample Name:	**STD2**	*Injection Volume:*	**5.00**
Vial Number:	**BE2**	*Channel:*	**CD**
Sample Type:	**Calibration Standard**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**04/20/2021 10:12**	*Sample Weight:*	**1.0000**

Run Time:



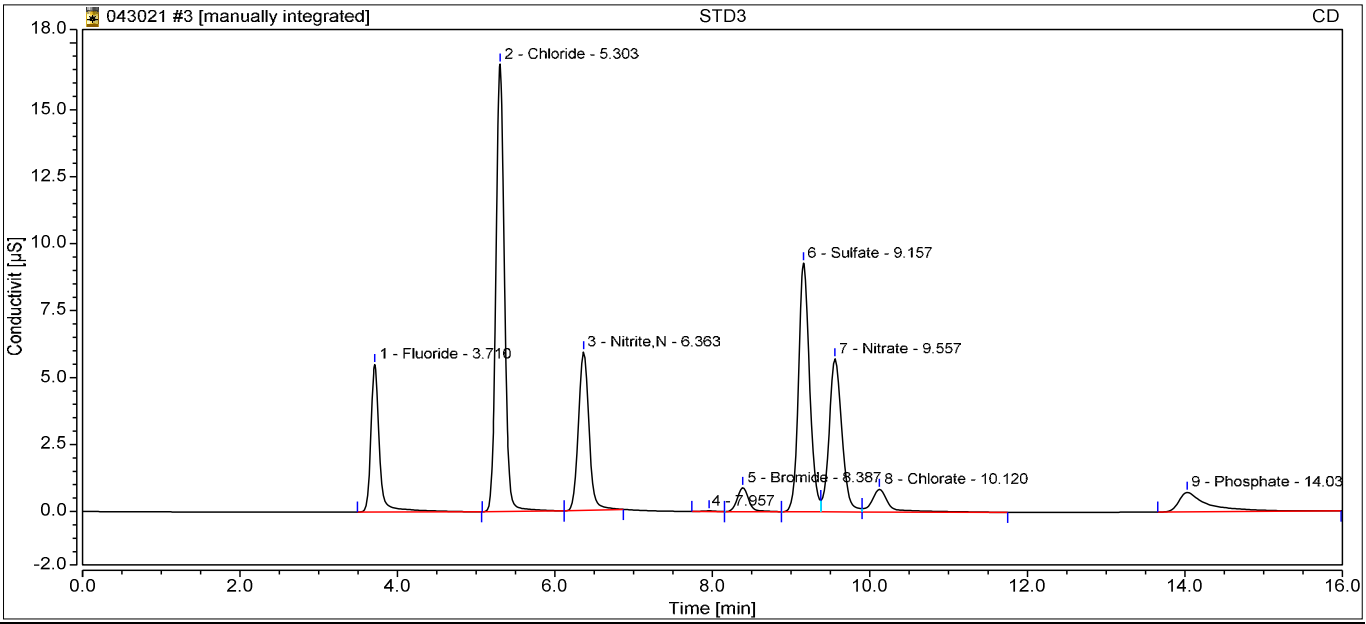
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.70	Fluoride	BMB	0.129	0.3886	0.3886	1.0000
2	5.30	Chloride	BMb*	0.393	1.8537	1.8537	1.0000
3	6.36	Nitrite,N	bMB*	0.176	0.3975	0.3975	1.0000
5	8.38	Bromide	M	0.033	0.3714	0.3714	1.0000
6	9.19	Sulfate	M	0.266	1.8512	1.8512	1.0000
7	9.58	Nitrate	M	0.213	0.3976	0.3976	1.0000
8	10.13	Chlorate	MB	0.052	0.4776	0.4776	1.0000
9	14.17	Phosphate	BMB	0.036	0.4401	0.4401	1.0000
Total:			**0.000**	**1.300**		**6.18**	

3 STD3

Sample Name:	**STD3**	*Injection Volume:*	**5.00**
Vial Number:	**BE3**	*Channel:*	**CD**
Sample Type:	**Calibration Standard**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**04/20/2021 10:30**	*Sample Weight:*	**1.0000**

Run Time:



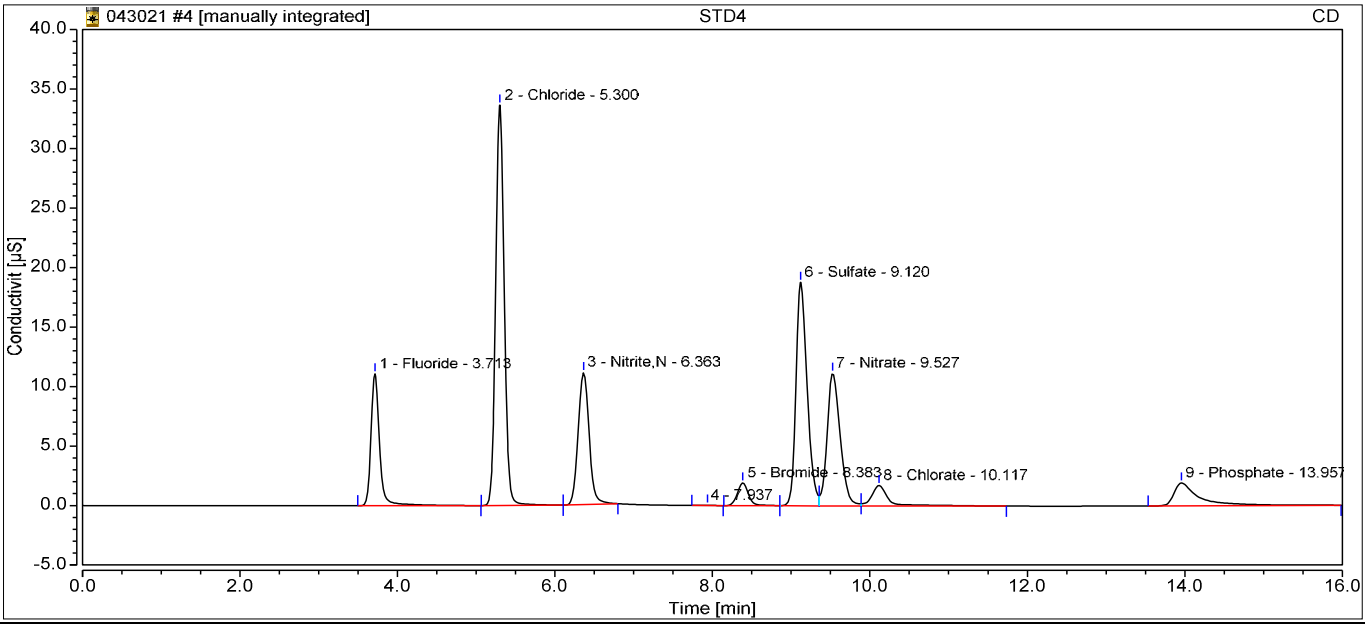
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.71	Fluoride	BMB	0.701	2.1586	2.1586	1.0000
2	5.30	Chloride	BMb*	2.082	9.9444	9.9444	1.0000
3	6.36	Nitrite,N	bMB*	0.918	2.2461	2.2461	1.0000
5	8.39	Bromide	M	0.152	1.8301	1.8301	1.0000
6	9.16	Sulfate	M	1.509	10.0487	10.0487	1.0000
7	9.56	Nitrate	M	1.072	1.9895	1.9895	1.0000
8	10.12	Chlorate	MB	0.216	2.2126	2.2126	1.0000
9	14.03	Phosphate	BMB	0.322	1.8648	1.8648	1.0000
Total:			**0.000**	**6.971**		**32.29**	

4 STD4

Sample Name:	**STD4**	*Injection Volume:*	**5.00**
Vial Number:	**BE4**	*Channel:*	**CD**
Sample Type:	**Calibration Standard**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**04/20/2021 10:49**	*Sample Weight:*	**1.0000**

Run Time:



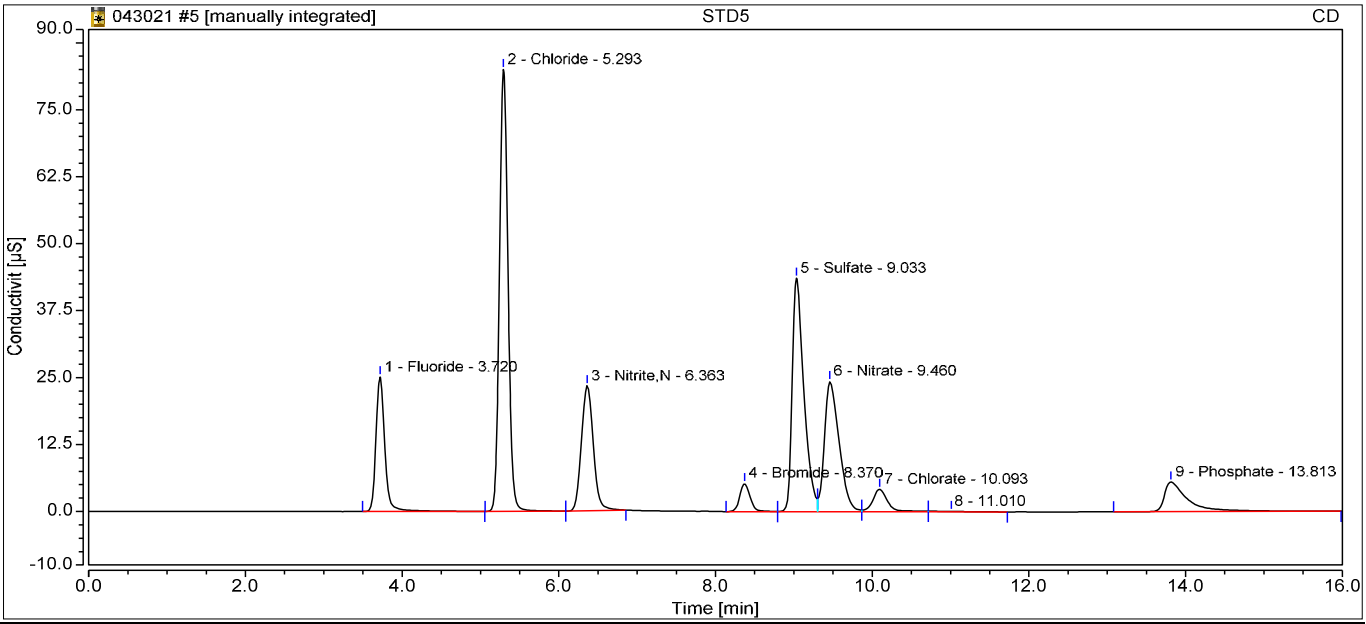
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.71	Fluoride	BMB	1.403	4.3336	4.3336	1.0000
2	5.30	Chloride	BMb*	4.203	20.1063	20.1063	1.0000
3	6.36	Nitrite,N	bMB*	1.787	4.4092	4.4092	1.0000
5	8.38	Bromide	BM	0.313	3.8179	3.8179	1.0000
6	9.12	Sulfate	M	3.063	20.3070	20.3070	1.0000
7	9.53	Nitrate	M	2.148	3.9846	3.9846	1.0000
8	10.12	Chlorate	MB	0.424	4.4085	4.4085	1.0000
9	13.96	Phosphate	BMB	0.719	3.8422	3.8422	1.0000
Total:			**0.000**	**14.060**		**65.21**	

5 STD5

Sample Name:	**STD5**	*Injection Volume:*	**5.00**
Vial Number:	**BE5**	*Channel:*	**CD**
Sample Type:	**Calibration Standard**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**04/20/2021 11:07**	*Sample Weight:*	**1.0000**

Run Time:



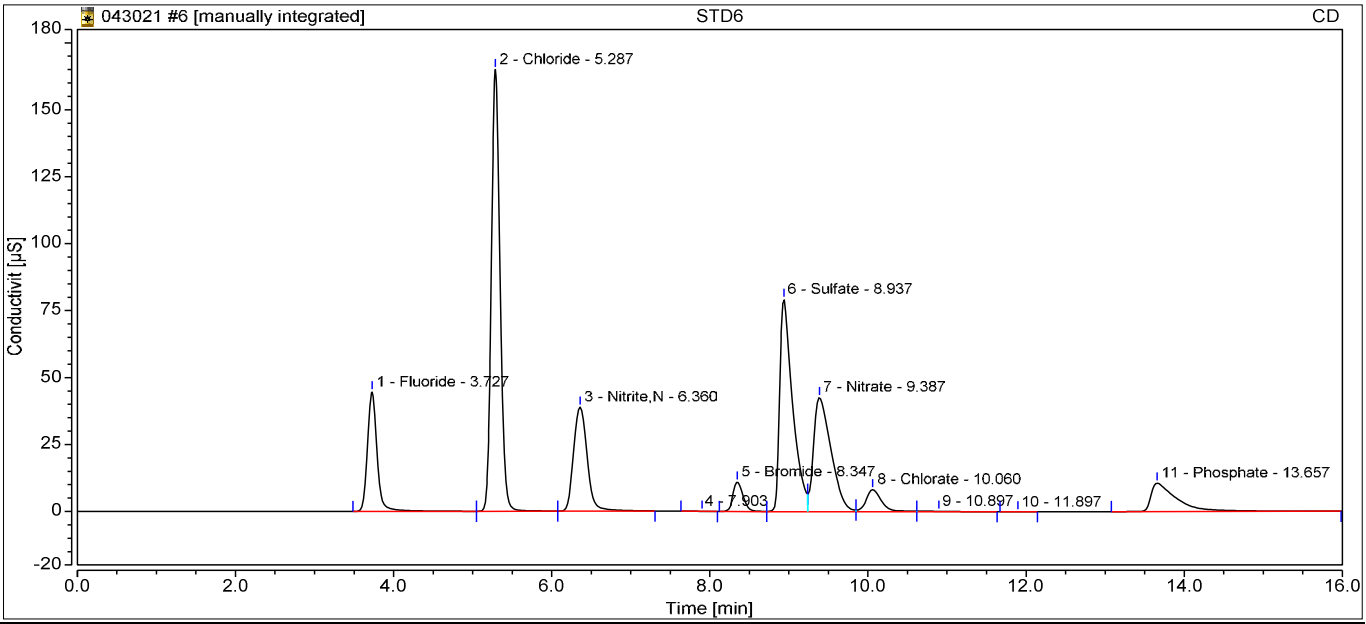
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.72	Fluoride	BMB	3.290	10.1807	10.1807	1.0000
2	5.29	Chloride	BMb*	10.372	49.6551	49.6551	1.0000
3	6.36	Nitrite,N	bMB*	4.114	10.2053	10.2053	1.0000
4	8.37	Bromide	BM	0.808	9.9156	9.9156	1.0000
5	9.03	Sulfate	M	7.557	49.9615	49.9615	1.0000
6	9.46	Nitrate	M	5.301	9.8318	9.8318	1.0000
7	10.09	Chlorate	M	0.936	9.8243	9.8243	1.0000
9	13.81	Phosphate	BMB	1.932	9.8822	9.8822	1.0000
Total:			**0.000**	**34.310**		**159.46**	

6 STD6

Sample Name:	**STD6**	*Injection Volume:*	**5.00**
Vial Number:	**BE6**	*Channel:*	**CD**
Sample Type:	**Calibration Standard**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**04/20/2021 11:28**	*Sample Weight:*	**1.0000**

Run Time:



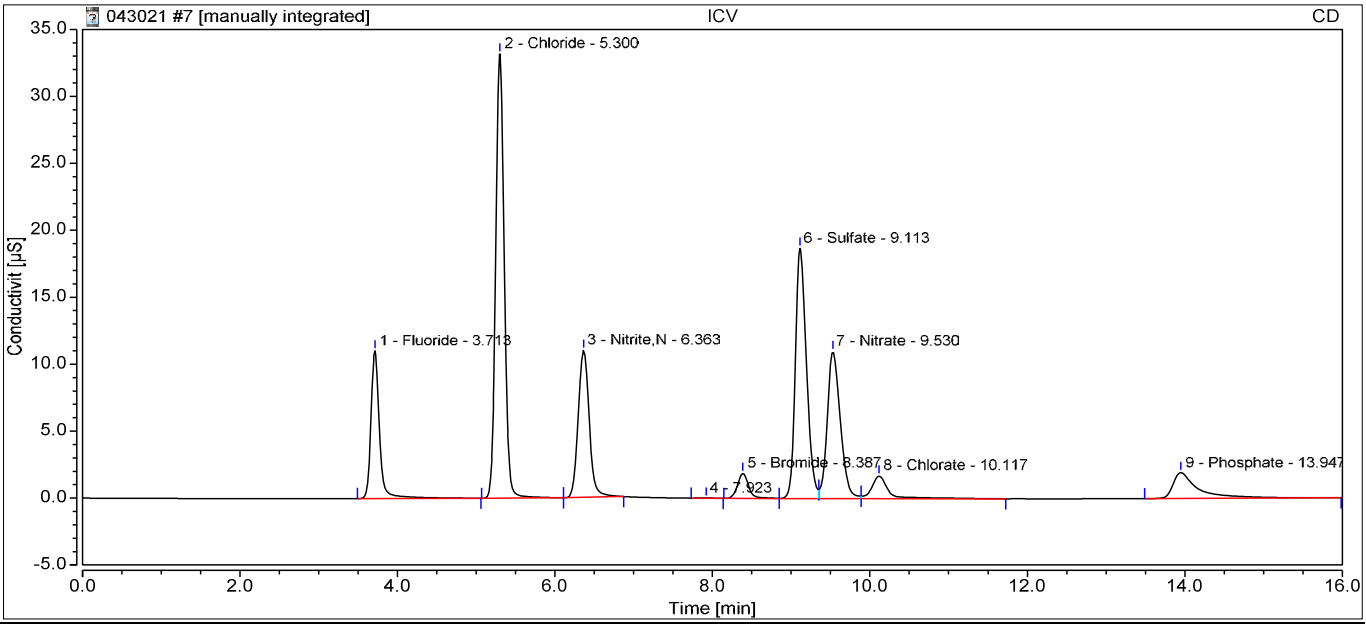
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.73	Fluoride	BMB	6.250	19.3505	19.3505	1.0000
2	5.29	Chloride	BMb*	20.966	100.4024	100.4024	1.0000
3	6.36	Nitrite,N	bMB*	7.710	19.1617	19.1617	1.0000
5	8.35	Bromide	BM	1.662	20.4462	20.4462	1.0000
6	8.94	Sulfate	M	15.110	99.8032	99.8032	1.0000
7	9.39	Nitrate	M	10.889	20.1943	20.1943	1.0000
8	10.06	Chlorate	M	1.852	19.5130	19.5130	1.0000
11	13.66	Phosphate	BMB	4.037	20.3707	20.3707	1.0000
Total:			**0.000**	**68.477**		**319.24**	

7 ICV

Sample Name:	**ICV**	*Injection Volume:*	**5.00**
Vial Number:	**BE7**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**04/20/2021 11:46**	*Sample Weight:*	**1.0000**

Run Time:



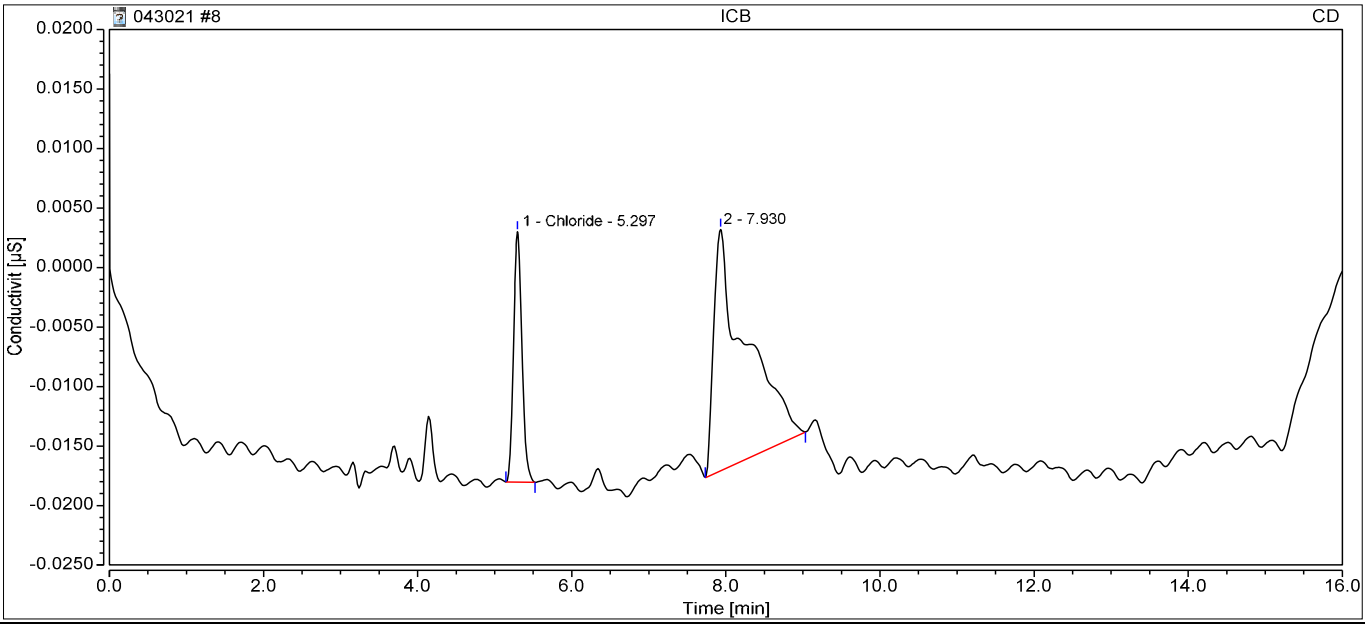
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.71	Fluoride	BMB	1.384	4.2770	4.2770	1.0000
2	5.30	Chloride	BMb*	4.144	19.8205	19.8205	1.0000
3	6.36	Nitrite,N	bMB*	1.777	4.3839	4.3839	1.0000
5	8.39	Bromide	BM	0.309	3.7640	3.7640	1.0000
6	9.11	Sulfate	M	3.024	20.0510	20.0510	1.0000
7	9.53	Nitrate	M	2.119	3.9305	3.9305	1.0000
8	10.12	Chlorate	MB	0.422	4.3868	4.3868	1.0000
9	13.95	Phosphate	BMB	0.725	3.8706	3.8706	1.0000
Total:			**0.000**	**13.903**		**64.48**	

8 ICB

Sample Name:	**ICB**	*Injection Volume:*	**5.00**
Vial Number:	**BE8**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**04/20/2021 12:25**	*Sample Weight:*	**1.0000**

Run Time:

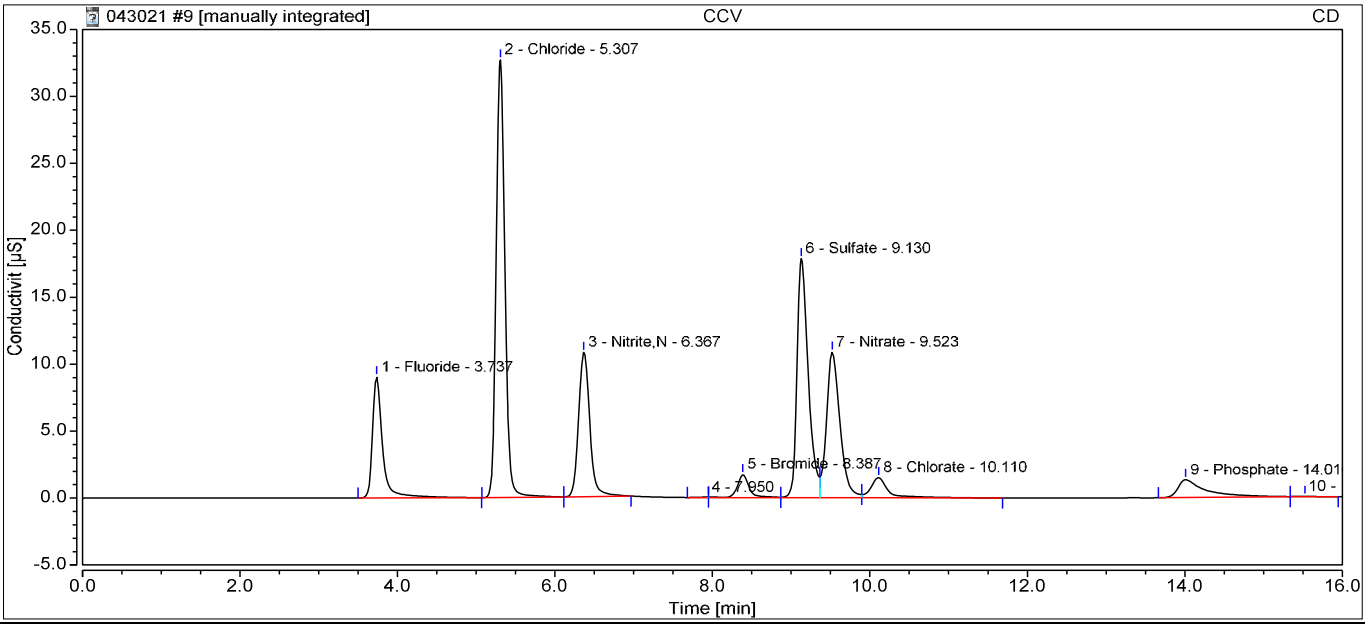


Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	1.0000
1	5.30	Chloride	BMB	0.003	n.a.	n.a.	1.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Nitrate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	1.0000
Total:			**0.000**	**0.003**		**0.00**	

9	*CCV*		
Sample Name:	**CCV**	*Injection Volume:*	**5.00**
Vial Number:	**R1**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**04/30/2021 11:19**	*Sample Weight:*	**1.0000**

Run Time:



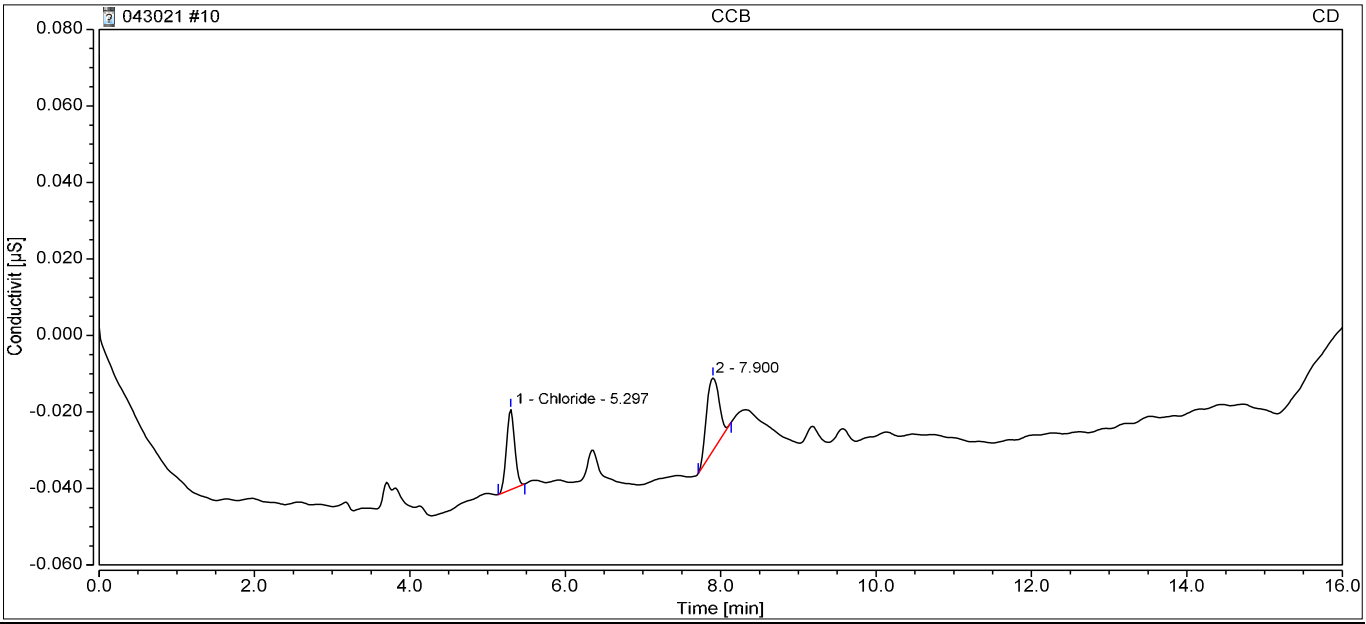
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.74	Fluoride	BMB	1.350	4.1710	4.1710	1.0000
2	5.31	Chloride	BMb*	4.172	19.9569	19.9569	1.0000
3	6.37	Nitrite,N	bMB*	1.774	4.3771	4.3771	1.0000
5	8.39	Bromide	M *	0.298	3.6345	3.6345	1.0000
6	9.13	Sulfate	M	2.940	19.4920	19.4920	1.0000
7	9.52	Nitrate	M	2.163	4.0135	4.0135	1.0000
8	10.11	Chlorate	MB	0.391	4.0597	4.0597	1.0000
9	14.01	Phosphate	BMB	0.548	2.9890	2.9890	1.0000
Total:			**0.000**	**13.636**		**62.69**	

10 CCB

Sample Name:	**CCB**	*Injection Volume:*	**5.00**
Vial Number:	**R4**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**04/30/2021 11:38**	*Sample Weight:*	**1.0000**

Run Time:



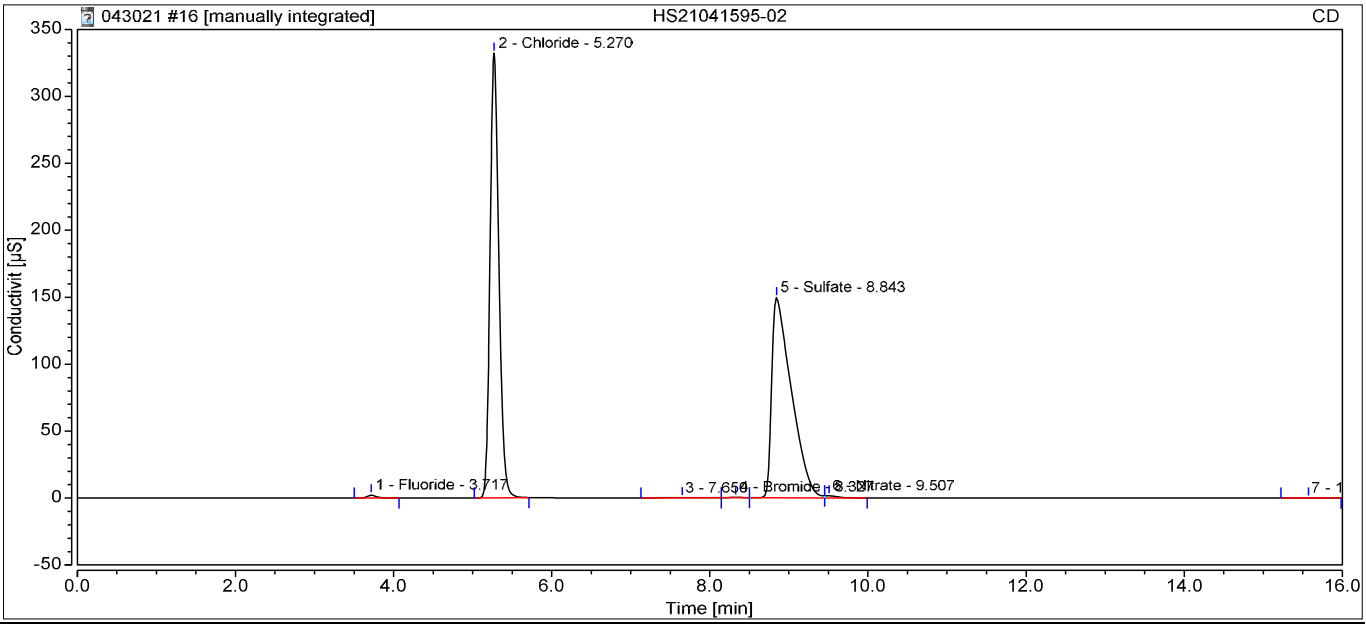
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	1.0000
1	5.30	Chloride	BMB	0.003	n.a.	n.a.	1.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Nitrate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	1.0000
Total:			**0.000**	**0.003**		**0.00**	

16 HS21041595-02

Sample Name:	**HS21041595-02**	*Injection Volume:*	**5.00**
Vial Number:	**RA4**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**04/30/2021 13:29**	*Sample Weight:*	**1.0000**

Run Time:



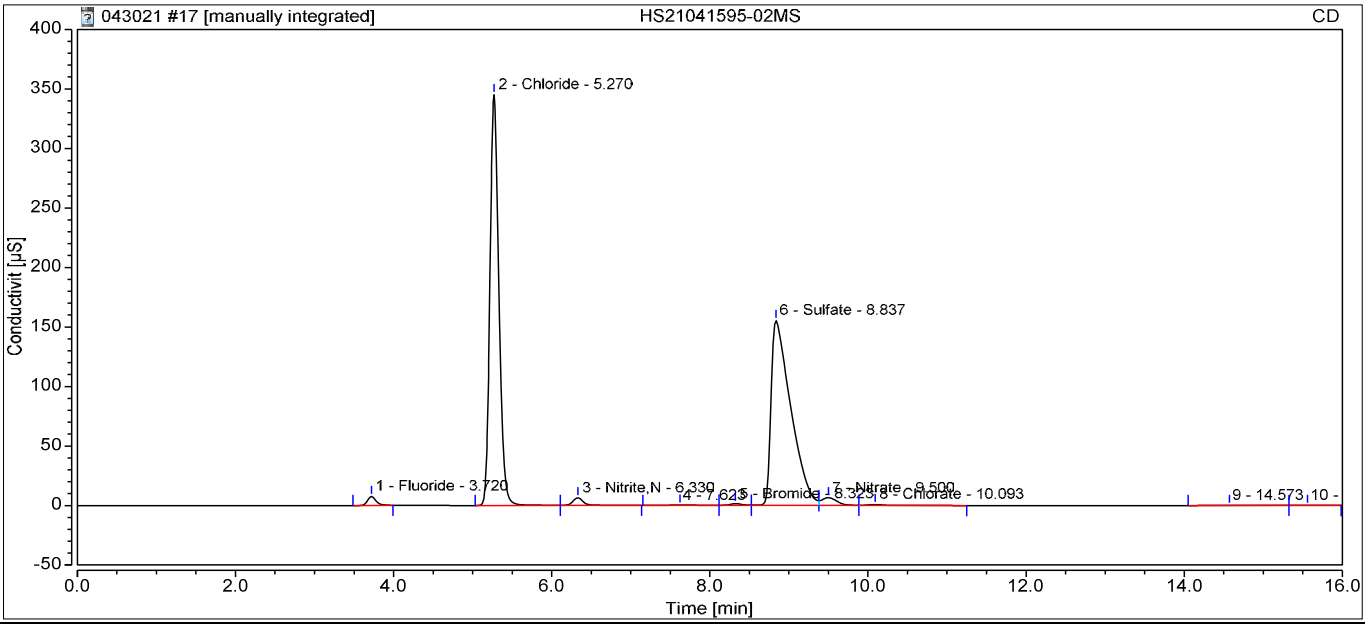
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.72	Fluoride	BMB*	0.291	0.8913	0.8913	1.0000
2	5.27	Chloride	BMB*	43.097	206.4146	206.4146	1.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	1.0000
4	8.33	Bromide	bM *	0.071	0.8359	0.8359	1.0000
5	8.84	Sulfate	M *	43.170	284.9607	284.9607	1.0000
6	9.51	Nitrate	MB*	0.285	0.5300	0.5300	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	1.0000
Total:			**0.000**	**86.914**		**493.63**	

17 HS21041595-02MS

Sample Name:	**HS21041595-02MS**	*Injection Volume:*	**5.00**
Vial Number:	**RA5**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**04/30/2021 13:47**	*Sample Weight:*	**1.0000**

Run Time:



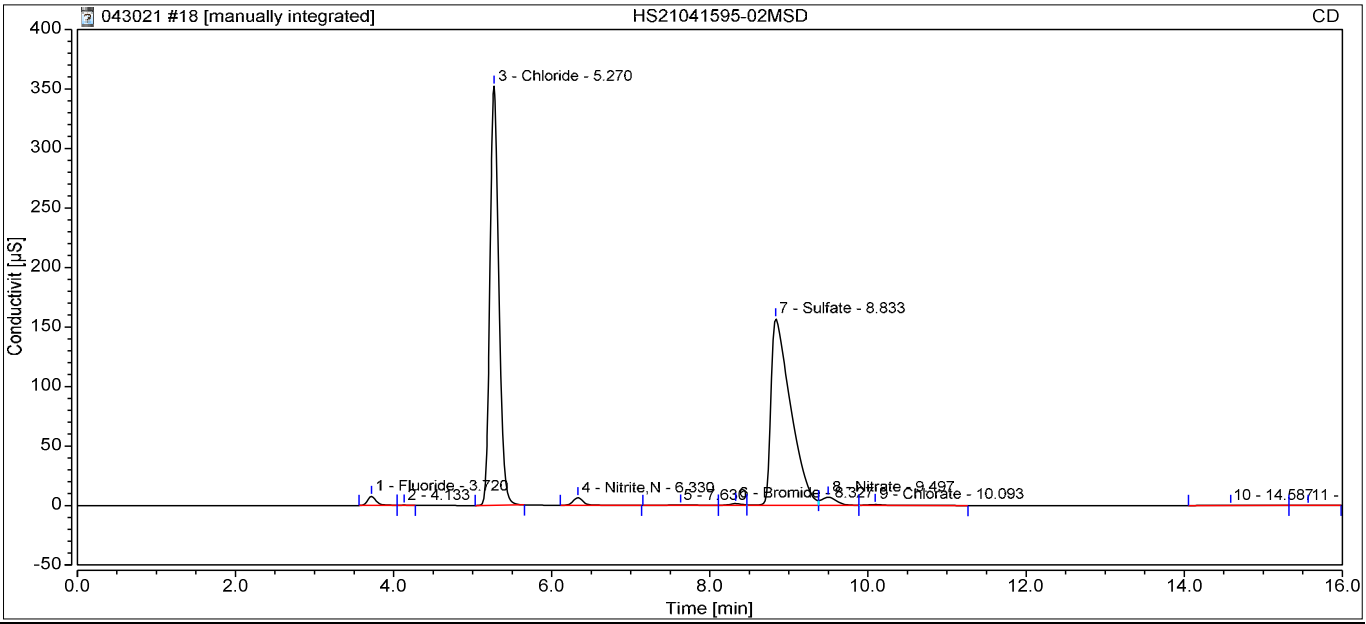
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.72	Fluoride	BMB*	0.939	2.8977	2.8977	1.0000
2	5.27	Chloride	BMB	45.053	215.7797	215.7797	1.0000
3	6.33	Nitrite,N	BMB	0.957	2.3417	2.3417	1.0000
5	8.32	Bromide	BM	0.228	2.7716	2.7716	1.0000
6	8.84	Sulfate	M	44.611	294.4713	294.4713	1.0000
7	9.50	Nitrate	M	1.445	2.6820	2.6820	1.0000
8	10.09	Chlorate	MB	0.177	1.7983	1.7983	1.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	1.0000
Total:			**0.000**	**93.410**		**522.74**	

18 HS21041595-02MSD

Sample Name:	**HS21041595-02MSD**	*Injection Volume:*	**5.00**
Vial Number:	**RA6**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**04/30/2021 14:06**	*Sample Weight:*	**1.0000**

Run Time:



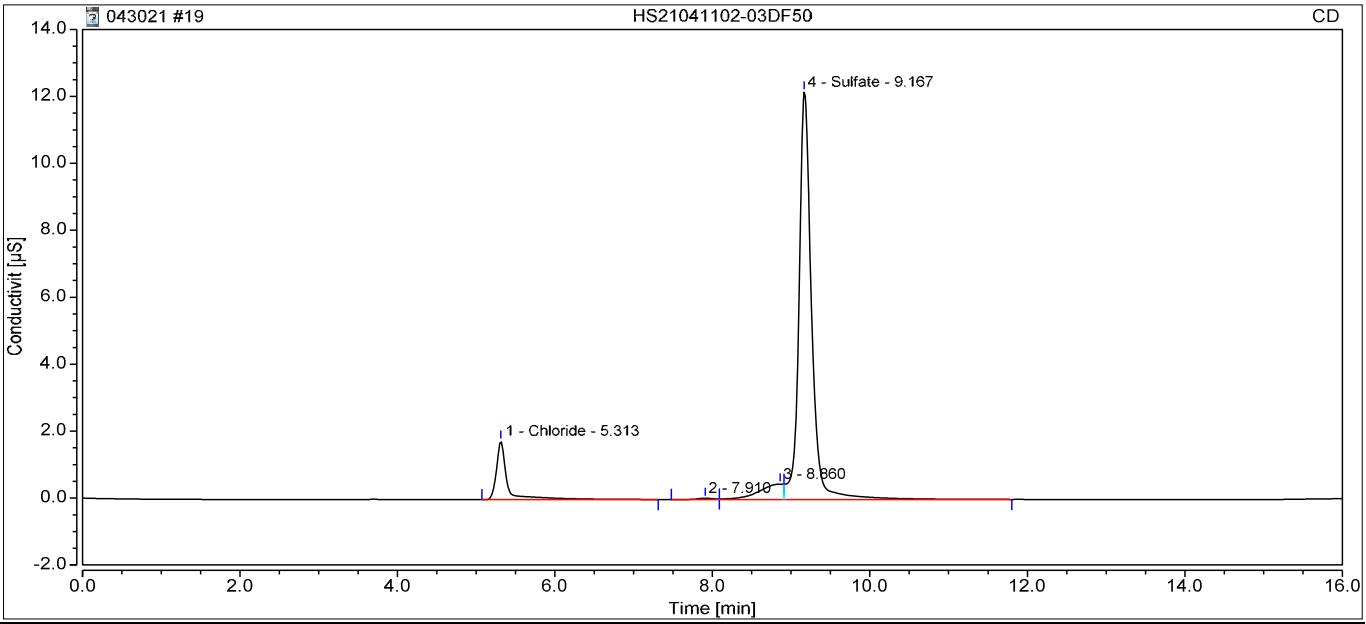
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.72	Fluoride	BMB	0.965	2.9784	2.9784	1.0000
3	5.27	Chloride	BMB*	45.840	219.5498	219.5498	1.0000
4	6.33	Nitrite,N	BMB	0.967	2.3681	2.3681	1.0000
6	8.33	Bromide	BM *	0.241	2.9288	2.9288	1.0000
7	8.83	Sulfate	M *	45.171	298.1674	298.1674	1.0000
8	9.50	Nitrate	M	1.529	2.8369	2.8369	1.0000
9	10.09	Chlorate	MB	0.181	1.8365	1.8365	1.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	1.0000
Total:			**0.000**	**94.894**		**530.67**	

19 HS21041102-03DF50

Sample Name:	**HS21041102-03DF50**	*Injection Volume:*	**5.00**
Vial Number:	**RA7**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**50.0000**
Recording Time:	**04/30/2021 14:24**	*Sample Weight:*	**1.0000**

Run Time:



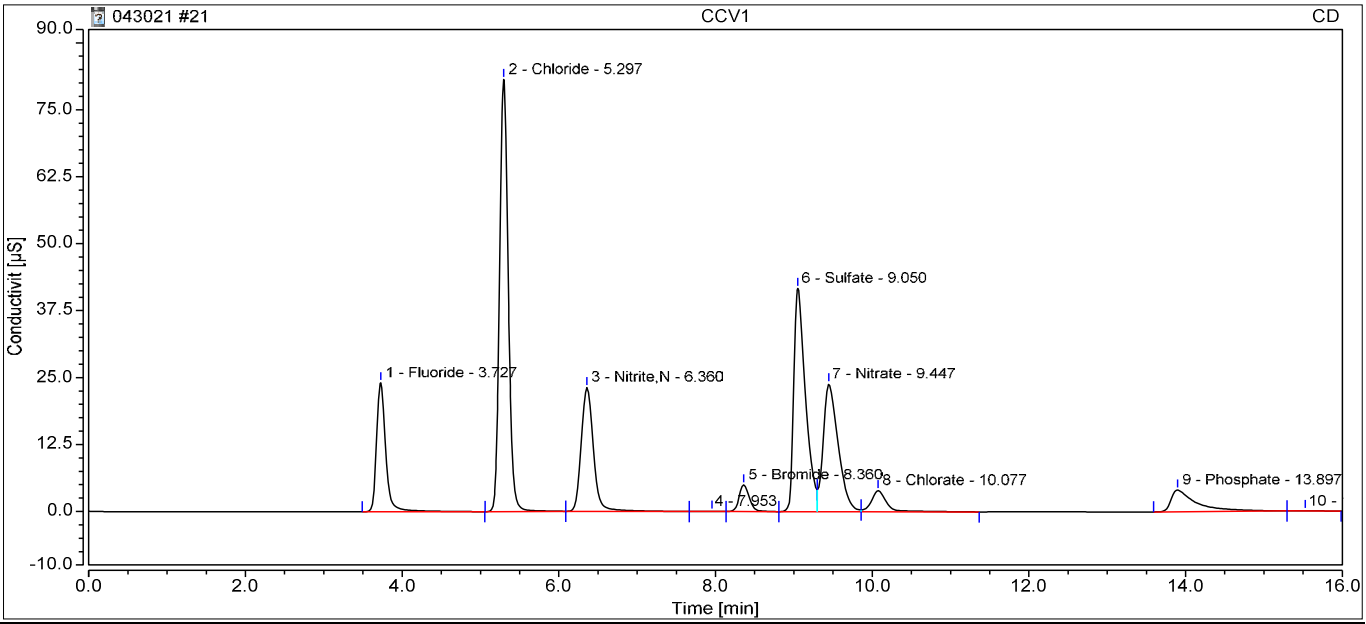
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	50.0000
1	5.31	Chloride	BMB	0.278	1.3046	65.2299	50.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	50.0000
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	50.0000
4	9.17	Sulfate	MB	2.257	14.9879	749.3941	50.0000
n.a.	n.a.	Nitrate	n.a.	n.a.	n.a.	n.a.	50.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	50.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	50.0000
Total:			**0.000**	**2.535**		**814.62**	

21 CCV1

Sample Name:	**CCV1**	*Injection Volume:*	**5.00**
Vial Number:	**R3**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**04/30/2021 15:03**	*Sample Weight:*	**1.0000**

Run Time:



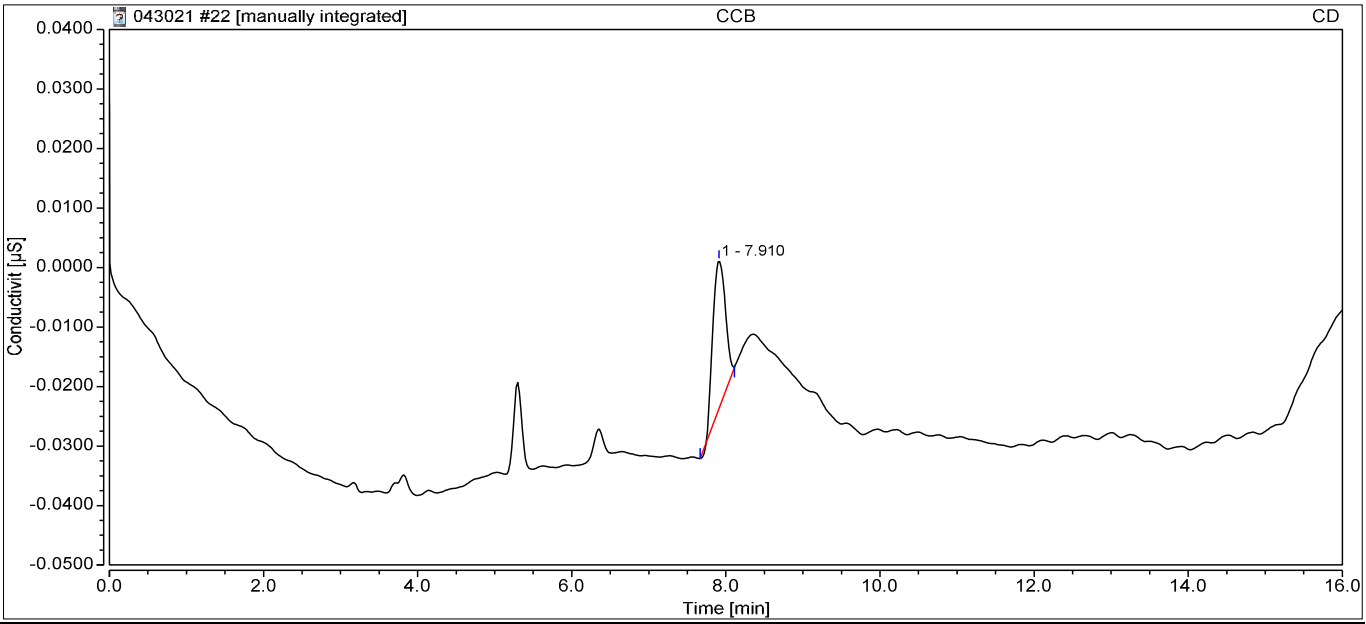
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.73	Fluoride	BMB	3.282	10.1554	10.1554	1.0000
2	5.30	Chloride	BMB	10.329	49.4475	49.4475	1.0000
3	6.36	Nitrite,N	BMB	4.202	10.4238	10.4238	1.0000
5	8.36	Bromide	MB	0.758	9.3004	9.3004	1.0000
6	9.05	Sulfate	BM	7.276	48.1039	48.1039	1.0000
7	9.45	Nitrate	M	5.298	9.8267	9.8267	1.0000
8	10.08	Chlorate	MB	0.906	9.5101	9.5101	1.0000
9	13.90	Phosphate	BMB	1.523	7.8454	7.8454	1.0000
Total:			**0.000**	**33.573**		**154.61**	

22 CCB

Sample Name:	**CCB**	*Injection Volume:*	**5.00**
Vial Number:	**R8**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**04/30/2021 15:42**	*Sample Weight:*	**1.0000**

Run Time:



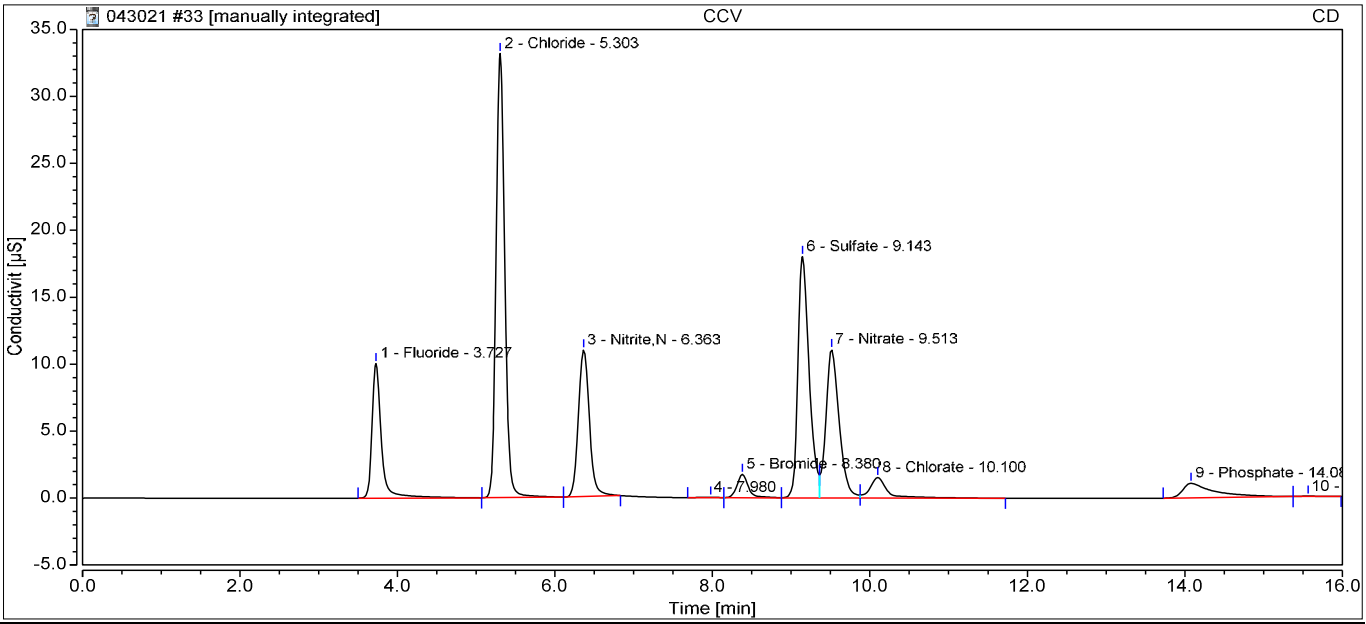
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Chloride	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Nitrate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	1.0000
Total:			**0.000**	**0.000**		**0.00**	

33 CCV

Sample Name:	**CCV**	*Injection Volume:*	**5.00**
Vial Number:	**R1**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**04/30/2021 19:17**	*Sample Weight:*	**1.0000**

Run Time:



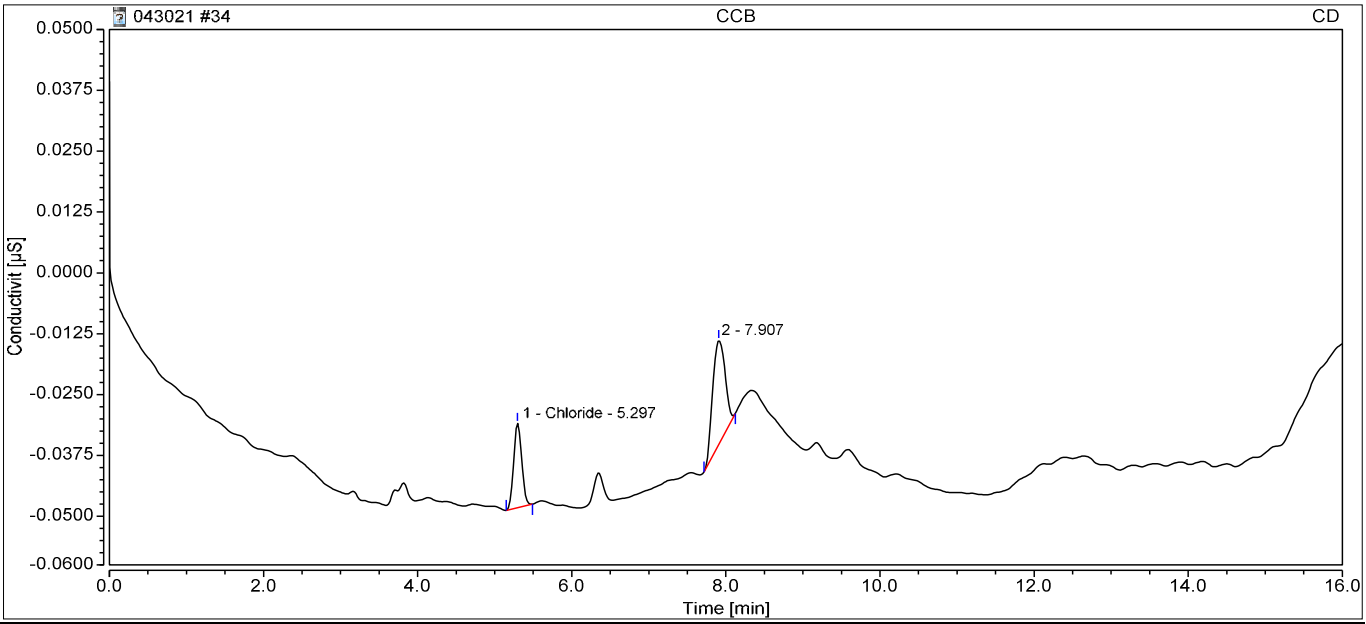
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.73	Fluoride	BMB	1.383	4.2718	4.2718	1.0000
2	5.30	Chloride	BMb*	4.210	20.1400	20.1400	1.0000
3	6.36	Nitrite,N	bMB*	1.773	4.3744	4.3744	1.0000
5	8.38	Bromide	M	0.295	3.6004	3.6004	1.0000
6	9.14	Sulfate	M	2.973	19.7147	19.7147	1.0000
7	9.51	Nitrate	M	2.172	4.0304	4.0304	1.0000
8	10.10	Chlorate	MB	0.402	4.1750	4.1750	1.0000
9	14.08	Phosphate	BMB	0.508	2.7907	2.7907	1.0000
Total:			**0.000**	**13.717**		**63.10**	

34 CCB

Sample Name:	**CCB**	*Injection Volume:*	**5.00**
Vial Number:	**R4**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**04/30/2021 19:35**	*Sample Weight:*	**1.0000**

Run Time:



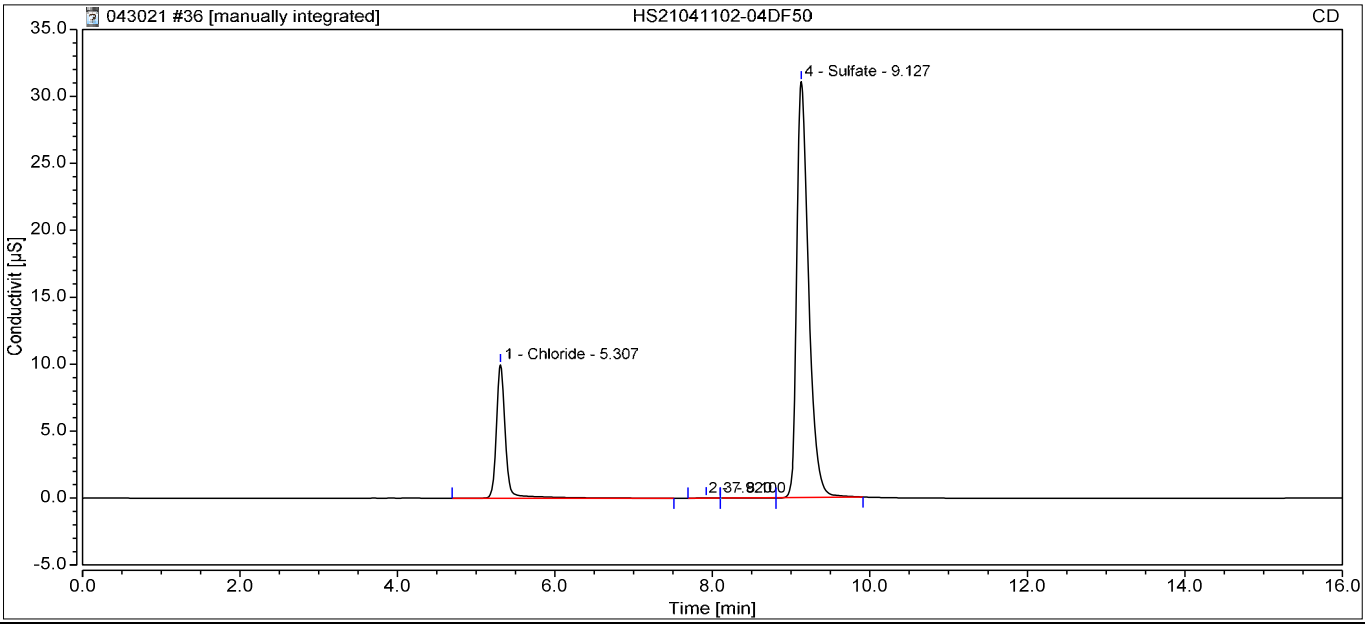
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	1.0000
1	5.30	Chloride	BMB	0.002	n.a.	n.a.	1.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Nitrate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	1.0000
Total:			**0.000**	**0.002**		**0.00**	

36 HS21041102-04DF50

Sample Name:	**HS21041102-04DF50**	*Injection Volume:*	**5.00**
Vial Number:	**RA8**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**50.0000**
Recording Time:	**04/30/2021 20:34**	*Sample Weight:*	**1.0000**

Run Time:



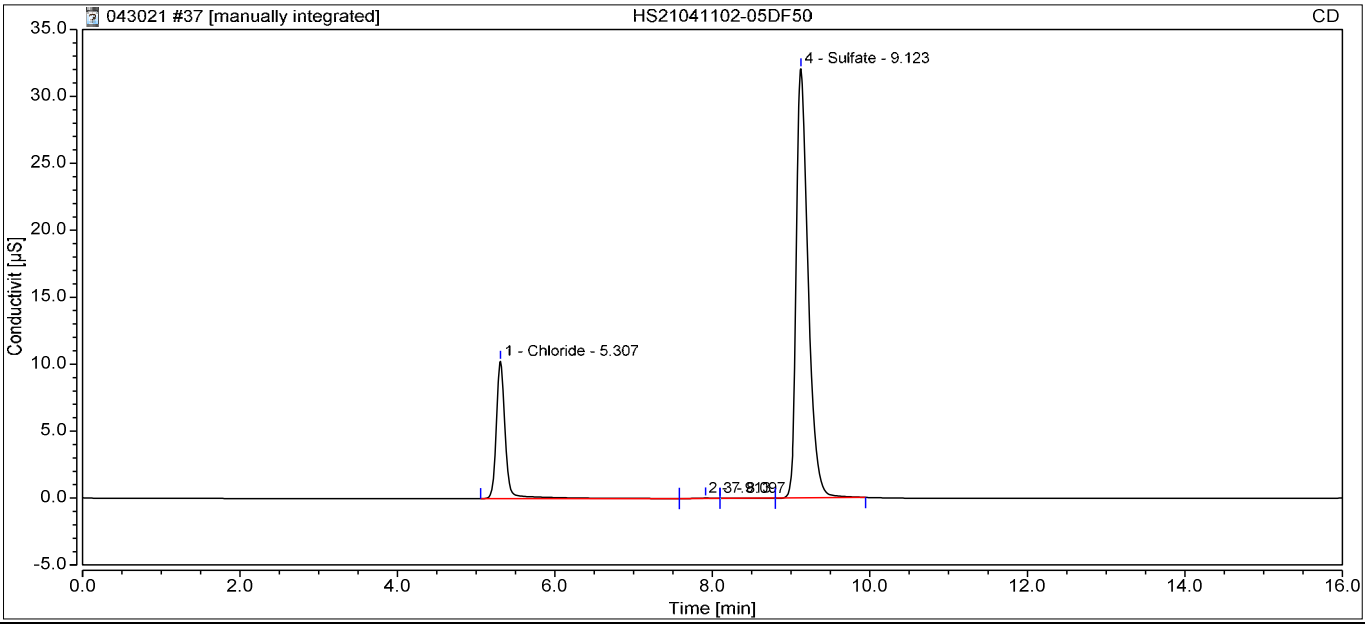
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	50.0000
1	5.31	Chloride	BMB	1.316	6.2755	313.7736	50.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	50.0000
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	50.0000
4	9.13	Sulfate	MB*	5.426	35.9009	1795.0458	50.0000
n.a.	n.a.	Nitrate	n.a.	n.a.	n.a.	n.a.	50.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	50.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	50.0000
Total:			**0.000**	**6.742**		**2108.82**	

37 HS21041102-05DF50

Sample Name:	**HS21041102-05DF50**	*Injection Volume:*	**5.00**
Vial Number:	**RB1**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**50.0000**
Recording Time:	**04/30/2021 20:53**	*Sample Weight:*	**1.0000**

Run Time:



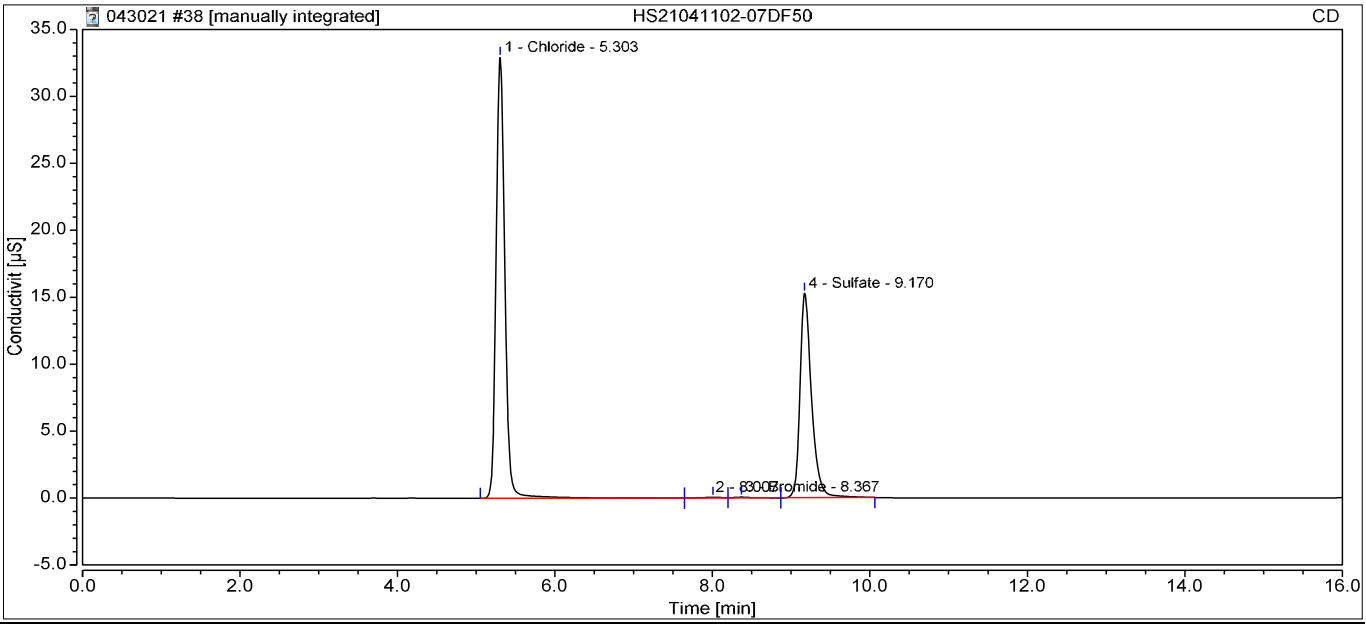
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	50.0000
1	5.31	Chloride	BMb*	1.345	6.4146	320.7286	50.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	50.0000
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	50.0000
4	9.12	Sulfate	MB*	5.603	37.0643	1853.2167	50.0000
n.a.	n.a.	Nitrate	n.a.	n.a.	n.a.	n.a.	50.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	50.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	50.0000
Total:			**0.000**	**6.948**		**2173.95**	

38 HS21041102-07DF50

Sample Name:	**HS21041102-07DF50**	*Injection Volume:*	**5.00**
Vial Number:	**RB2**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**50.0000**
Recording Time:	**04/30/2021 21:13**	*Sample Weight:*	**1.0000**

Run Time:



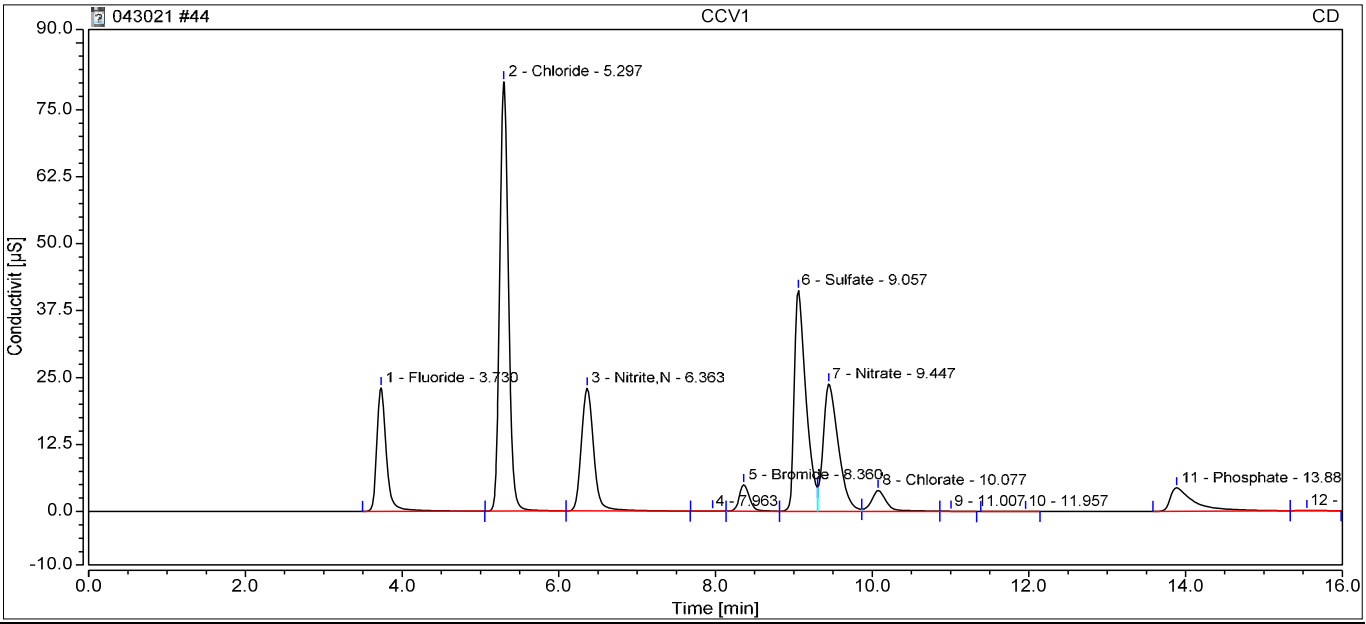
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	50.0000
1	5.30	Chloride	BMb*	4.230	20.2342	1011.7096	50.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	50.0000
3	8.37	Bromide	M *	0.014	0.1401	7.0056	50.0000
4	9.17	Sulfate	MB*	2.598	17.2360	861.8022	50.0000
n.a.	n.a.	Nitrate	n.a.	n.a.	n.a.	n.a.	50.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	50.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	50.0000
Total:			**0.000**	**6.842**		**1880.52**	

44 CCV1

Sample Name:	**CCV1**	*Injection Volume:*	**5.00**
Vial Number:	**R3**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**04/30/2021 23:10**	*Sample Weight:*	**1.0000**

Run Time:



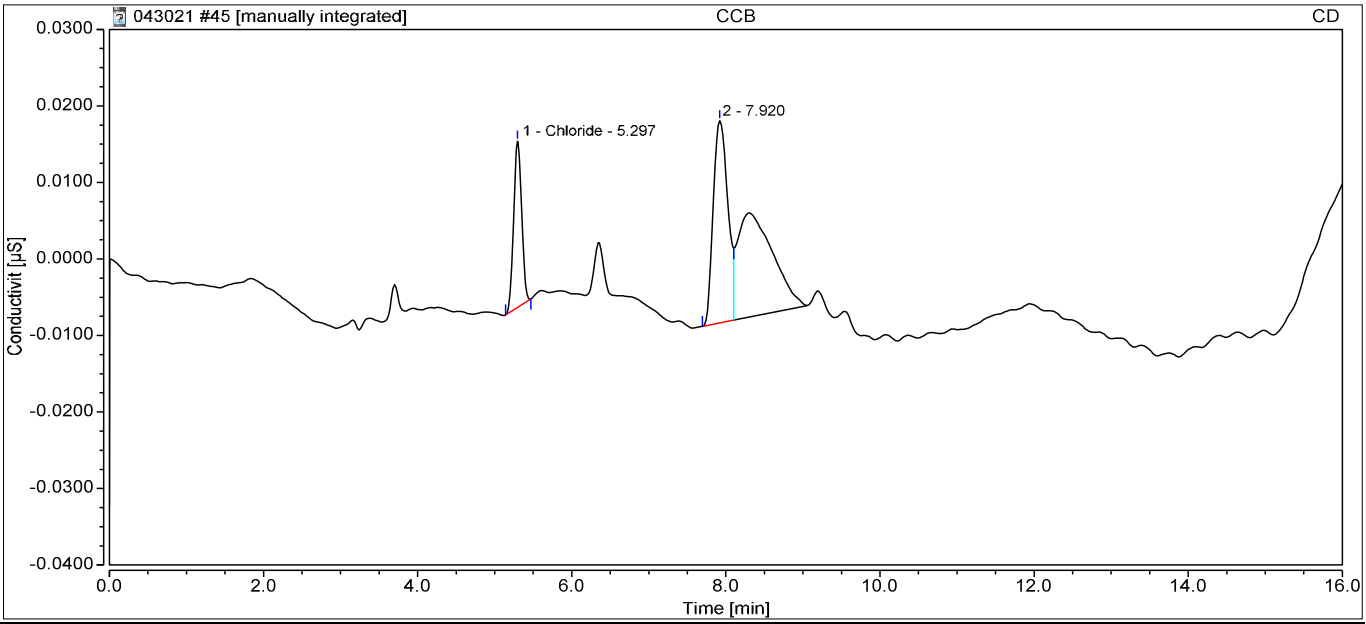
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.73	Fluoride	BMB	3.271	10.1227	10.1227	1.0000
2	5.30	Chloride	BMB	10.295	49.2881	49.2881	1.0000
3	6.36	Nitrite,N	BMB	4.198	10.4155	10.4155	1.0000
5	8.36	Bromide	MB	0.752	9.2330	9.2330	1.0000
6	9.06	Sulfate	BM	7.208	47.6596	47.6596	1.0000
7	9.45	Nitrate	M	5.339	9.9014	9.9014	1.0000
8	10.08	Chlorate	M	0.887	9.3007	9.3007	1.0000
11	13.88	Phosphate	BMB	1.560	8.0321	8.0321	1.0000
Total:			**0.000**	**33.511**		**153.95**	

45 CCB

Sample Name:	**CCB**	*Injection Volume:*	**5.00**
Vial Number:	**R6**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**04/30/2021 23:48**	*Sample Weight:*	**1.0000**

Run Time:



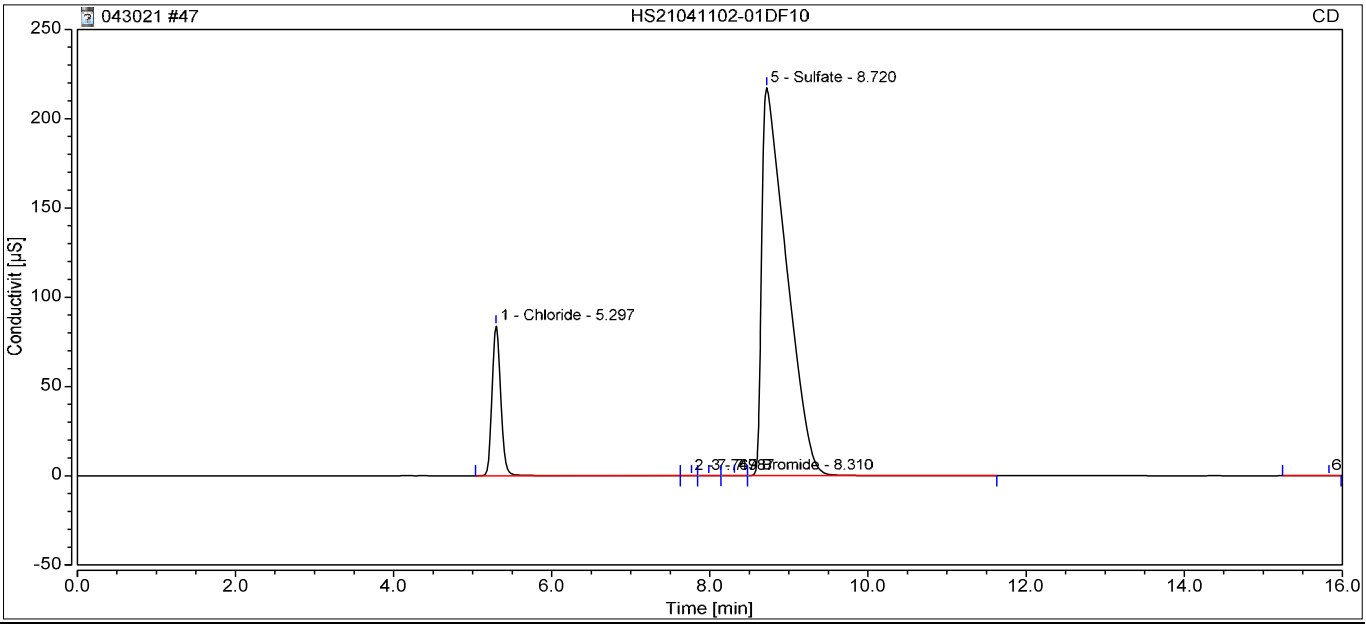
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	1.0000
1	5.30	Chloride	BMB	0.003	n.a.	n.a.	1.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Nitrate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	1.0000
Total:			**0.000**	**0.003**		**0.00**	

47 HS21041102-01DF10

Sample Name:	**HS21041102-01DF10**	*Injection Volume:*	**5.00**
Vial Number:	**RC7**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**10.0000**
Recording Time:	**05/01/2021 00:28**	*Sample Weight:*	**1.0000**

Run Time:



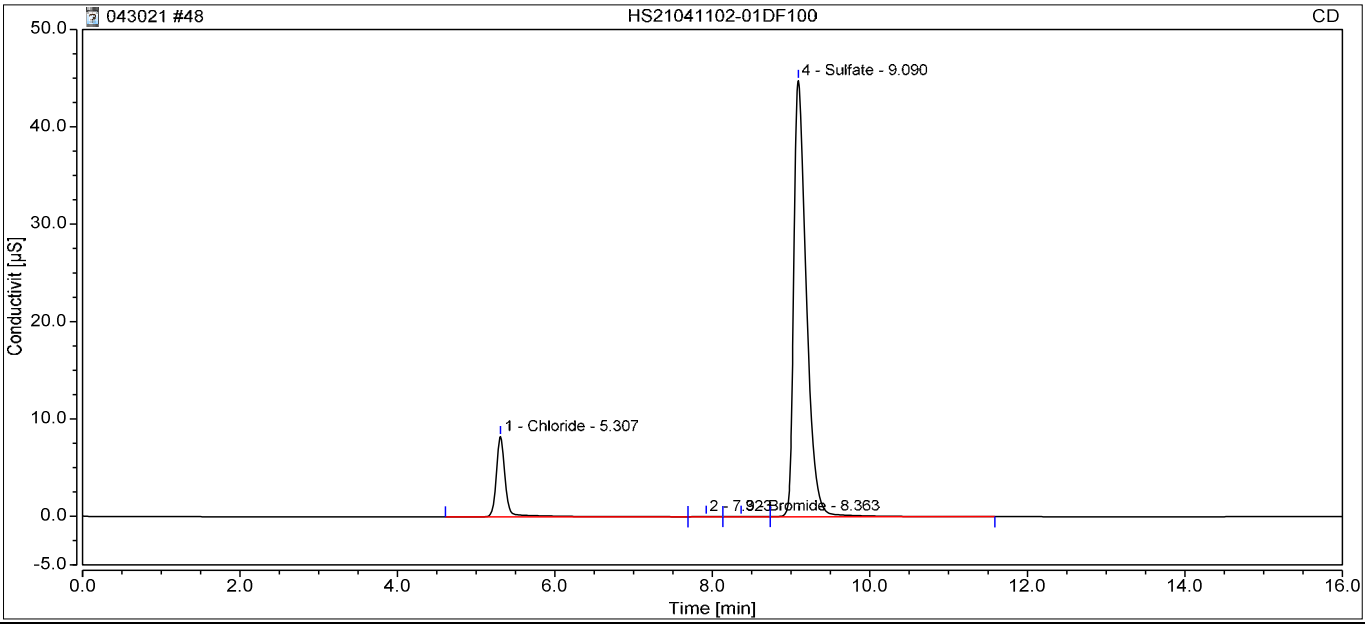
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	10.0000
1	5.30	Chloride	BMB	10.705	51.2505	512.5050	10.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	10.0000
4	8.31	Bromide	M	0.028	0.3130	3.1303	10.0000
5	8.72	Sulfate	MB	78.433	517.6526	5176.5262	10.0000
n.a.	n.a.	Nitrate	n.a.	n.a.	n.a.	n.a.	10.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	10.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	10.0000
Total:			**0.000**	**89.167**		**5692.16**	

48 HS21041102-01DF100

Sample Name:	**HS21041102-01DF100**	*Injection Volume:*	**5.00**
Vial Number:	**RC8**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**100.0000**
Recording Time:	**05/01/2021 00:46**	*Sample Weight:*	**1.0000**

Run Time:



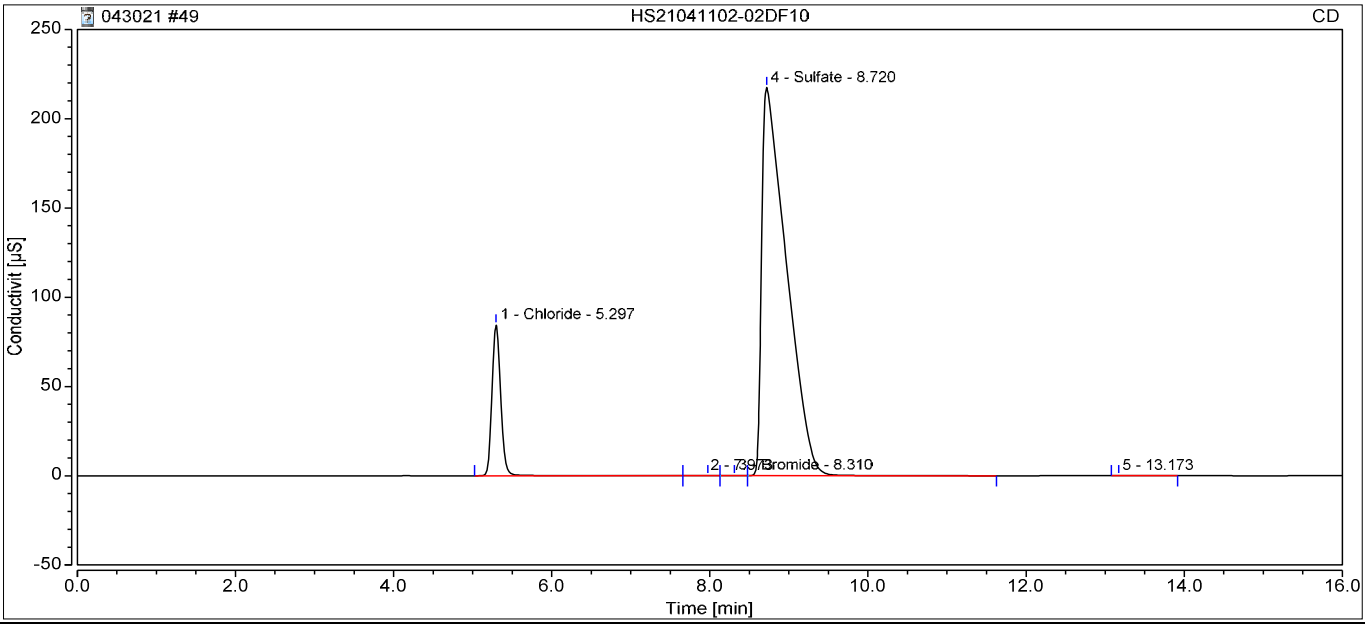
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	100.0000
1	5.31	Chloride	BMB	1.094	5.2097	520.9699	100.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	100.0000
3	8.36	Bromide	M	0.013	0.1224	12.2382	100.0000
4	9.09	Sulfate	MB	8.314	54.9565	5495.6464	100.0000
n.a.	n.a.	Nitrate	n.a.	n.a.	n.a.	n.a.	100.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	100.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	100.0000
Total:			**0.000**	**9.421**		**6028.85**	

49 HS21041102-02DF10

Sample Name:	**HS21041102-02DF10**	*Injection Volume:*	**5.00**
Vial Number:	**RD1**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**10.0000**
Recording Time:	**05/01/2021 01:06**	*Sample Weight:*	**1.0000**

Run Time:



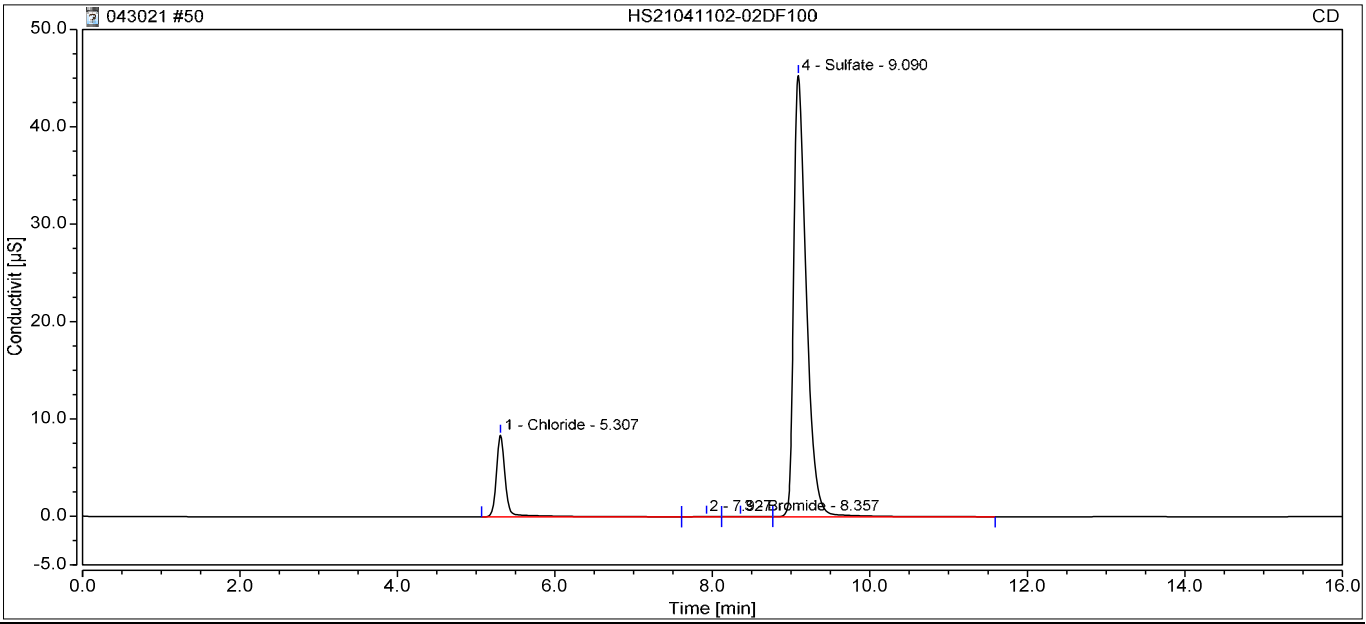
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	10.0000
1	5.30	Chloride	BMB	10.793	51.6705	516.7051	10.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	10.0000
3	8.31	Bromide	M	0.025	0.2751	2.7506	10.0000
4	8.72	Sulfate	MB	78.603	518.7768	5187.7676	10.0000
n.a.	n.a.	Nitrate	n.a.	n.a.	n.a.	n.a.	10.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	10.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	10.0000
Total:			**0.000**	**89.422**		**5707.22**	

50 HS21041102-02DF100

Sample Name:	**HS21041102-02DF100**	*Injection Volume:*	**5.00**
Vial Number:	**RD2**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**100.0000**
Recording Time:	**05/01/2021 01:25**	*Sample Weight:*	**1.0000**

Run Time:



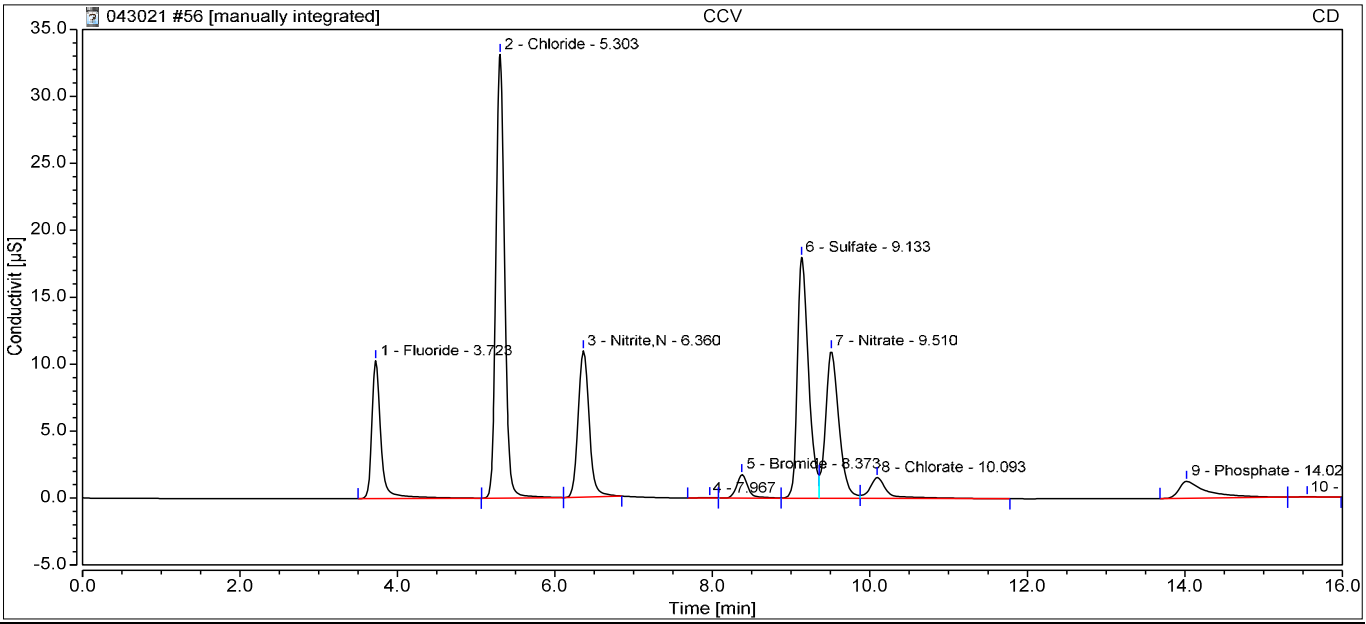
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	100.0000
1	5.31	Chloride	BMB	1.109	5.2815	528.1453	100.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	100.0000
3	8.36	Bromide	M	0.012	0.1124	11.2422	100.0000
4	9.09	Sulfate	MB	8.407	55.5667	5556.6679	100.0000
n.a.	n.a.	Nitrate	n.a.	n.a.	n.a.	n.a.	100.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	100.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	100.0000
Total:			**0.000**	**9.527**		**6096.06**	

56 CCV

Sample Name:	**CCV**	*Injection Volume:*	**5.00**
Vial Number:	**R1**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**05/01/2021 03:21**	*Sample Weight:*	**1.0000**

Run Time:



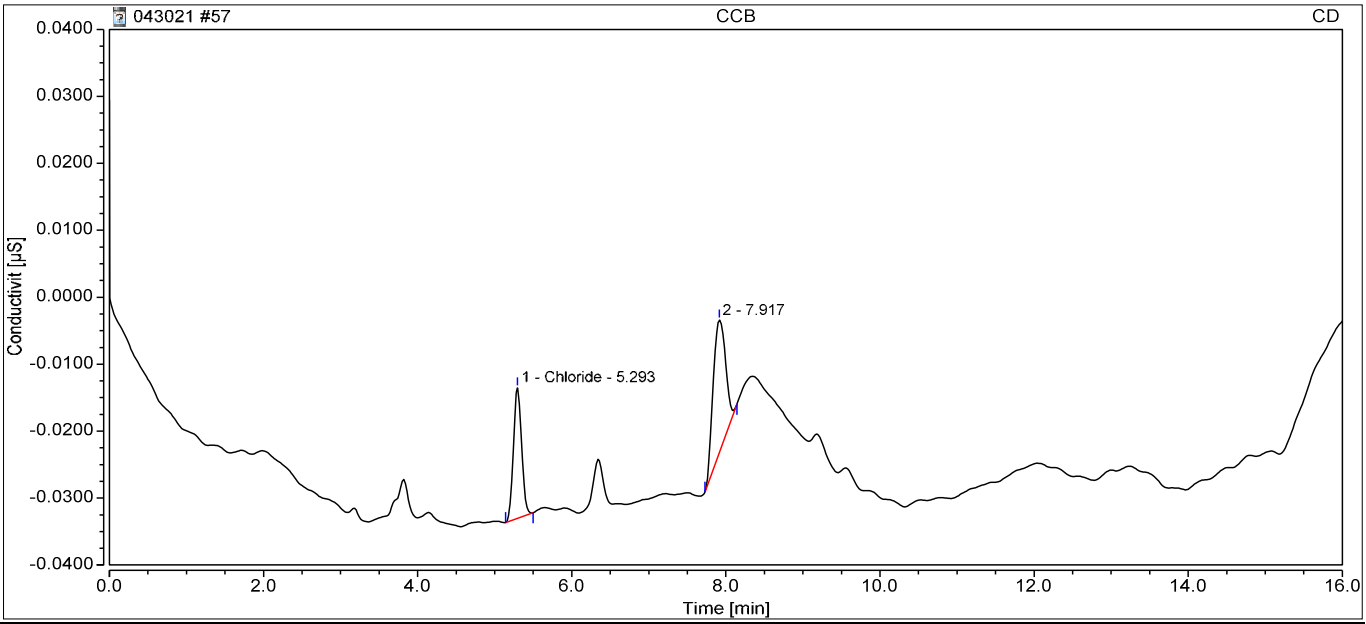
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.72	Fluoride	BMB	1.376	4.2518	4.2518	1.0000
2	5.30	Chloride	BMb*	4.207	20.1242	20.1242	1.0000
3	6.36	Nitrite,N	bMB*	1.767	4.3590	4.3590	1.0000
5	8.37	Bromide	M *	0.295	3.6032	3.6032	1.0000
6	9.13	Sulfate	M	2.960	19.6252	19.6252	1.0000
7	9.51	Nitrate	M	2.171	4.0271	4.0271	1.0000
8	10.09	Chlorate	MB	0.411	4.2761	4.2761	1.0000
9	14.02	Phosphate	BMB	0.522	2.8598	2.8598	1.0000
Total:			**0.000**	**13.709**		**63.13**	

57 CCB

Sample Name:	**CCB**	*Injection Volume:*	**5.00**
Vial Number:	**R4**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**05/01/2021 03:59**	*Sample Weight:*	**1.0000**

Run Time:



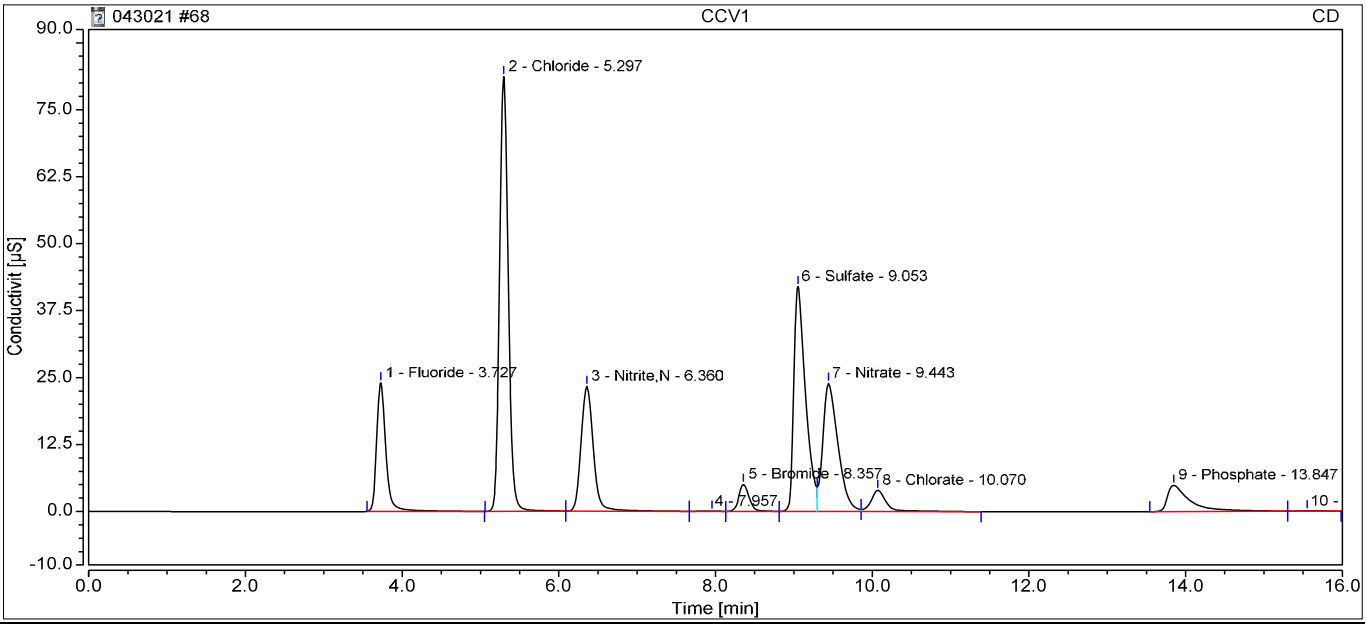
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	1.0000
1	5.29	Chloride	BMB	0.002	n.a.	n.a.	1.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Nitrate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	1.0000
Total:			**0.000**	**0.002**		**0.00**	

68 CCV1

Sample Name:	**CCV1**	*Injection Volume:*	**5.00**
Vial Number:	**R3**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**05/01/2021 07:27**	*Sample Weight:*	**1.0000**

Run Time:



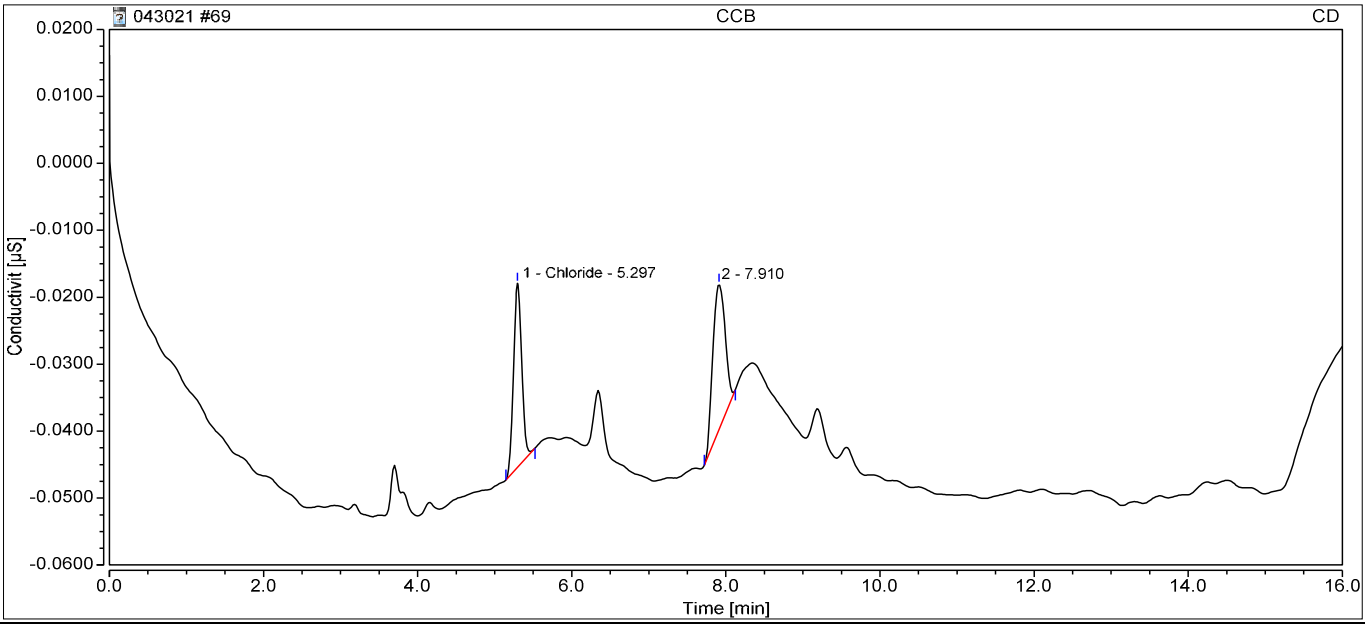
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.73	Fluoride	BMB	3.277	10.1390	10.1390	1.0000
2	5.30	Chloride	BMB	10.424	49.9025	49.9025	1.0000
3	6.36	Nitrite,N	BMB	4.235	10.5071	10.5071	1.0000
5	8.36	Bromide	MB	0.768	9.4294	9.4294	1.0000
6	9.05	Sulfate	BM	7.330	48.4626	48.4626	1.0000
7	9.44	Nitrate	M	5.383	9.9830	9.9830	1.0000
8	10.07	Chlorate	MB	0.921	9.6659	9.6659	1.0000
9	13.85	Phosphate	BMB	1.639	8.4236	8.4236	1.0000
Total:			**0.000**	**33.976**		**156.51**	

69 CCB

Sample Name:	**CCB**	*Injection Volume:*	**5.00**
Vial Number:	**R8**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**05/01/2021 07:46**	*Sample Weight:*	**1.0000**

Run Time:



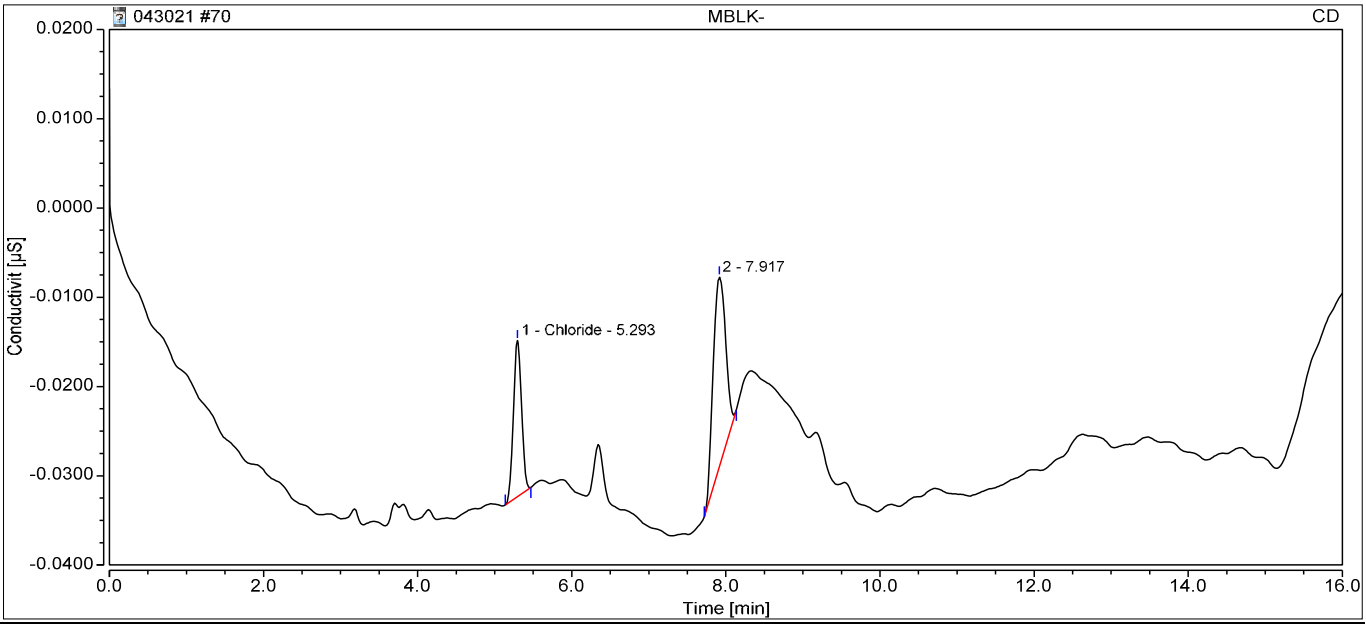
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	1.0000
1	5.30	Chloride	BMB	0.003	n.a.	n.a.	1.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Nitrate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	1.0000
Total:			**0.000**	**0.003**		**0.00**	

70 MBLK-

Sample Name:	**MBLK-**	*Injection Volume:*	**5.00**
Vial Number:	**R5**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**05/01/2021 08:23**	*Sample Weight:*	**1.0000**

Run Time:



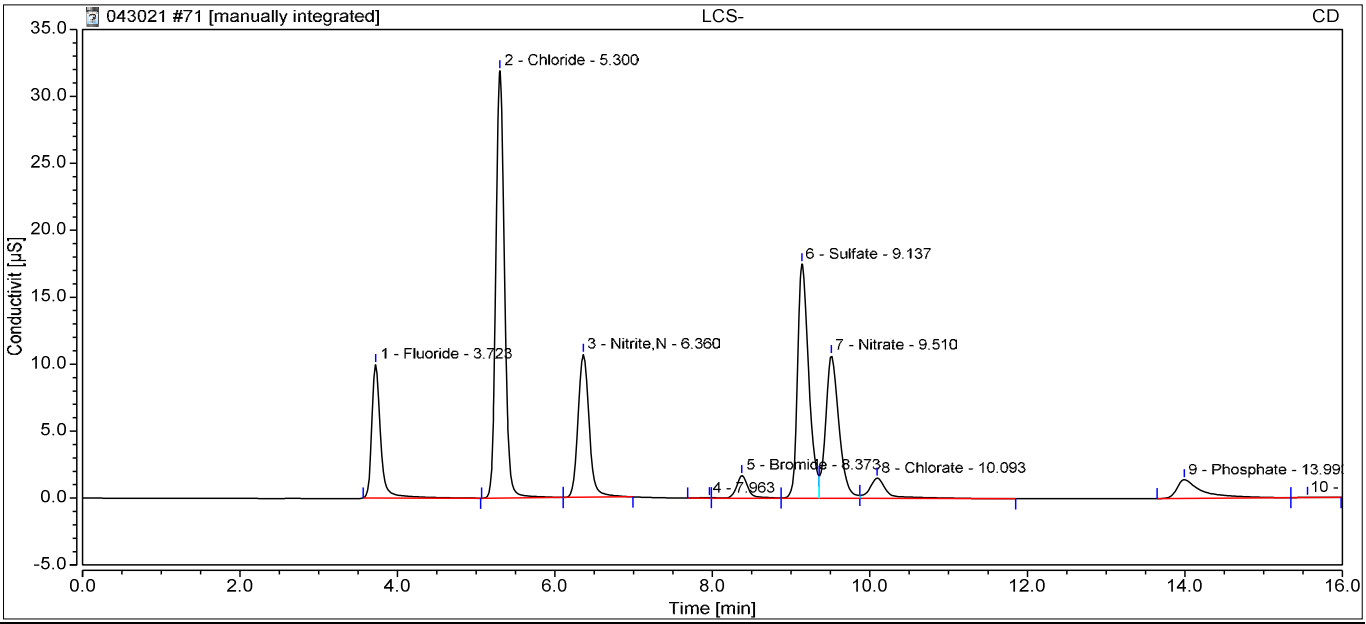
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	1.0000
1	5.29	Chloride	BMB	0.002	n.a.	n.a.	1.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Nitrate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	1.0000
Total:			**0.000**	**0.002**		**0.00**	

71 LCS-

Sample Name:	**LCS-**	*Injection Volume:*	**5.00**
Vial Number:	**R2**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**05/01/2021 08:41**	*Sample Weight:*	**1.0000**

Run Time:



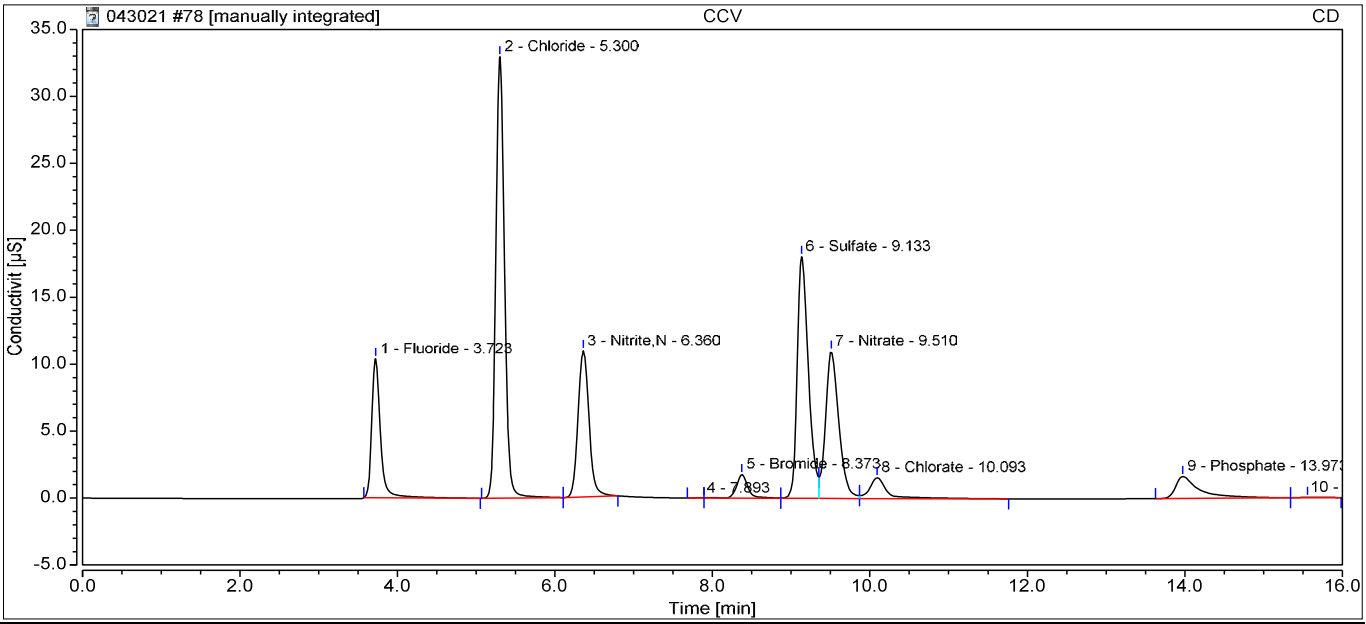
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.72	Fluoride	BMB	1.309	4.0428	4.0428	1.0000
2	5.30	Chloride	BMb*	4.048	19.3627	19.3627	1.0000
3	6.36	Nitrite,N	bMB*	1.749	4.3154	4.3154	1.0000
5	8.37	Bromide	M *	0.289	3.5282	3.5282	1.0000
6	9.14	Sulfate	M *	2.884	19.1235	19.1235	1.0000
7	9.51	Nitrate	M *	2.100	3.8953	3.8953	1.0000
8	10.09	Chlorate	MB*	0.403	4.1856	4.1856	1.0000
9	13.99	Phosphate	BMB	0.520	2.8487	2.8487	1.0000
Total:			**0.000**	**13.302**		**61.30**	

78 CCV

Sample Name:	**CCV**	*Injection Volume:*	**5.00**
Vial Number:	**R1**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**05/01/2021 10:51**	*Sample Weight:*	**1.0000**

Run Time:



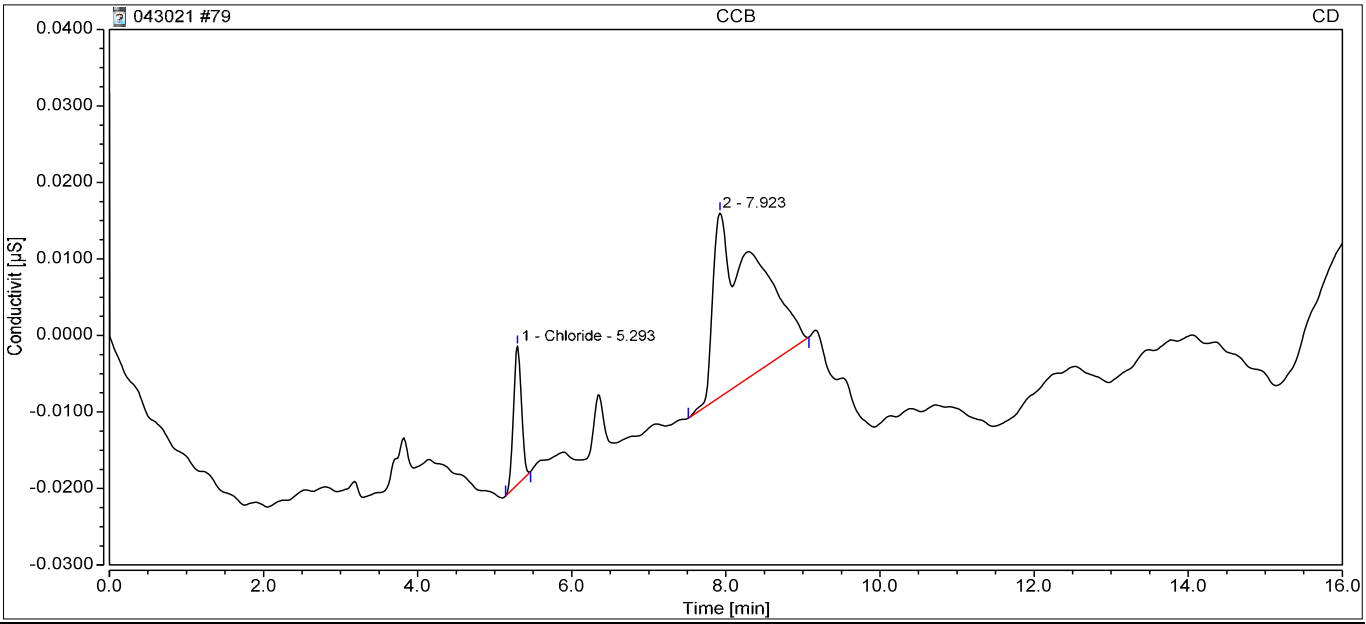
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.72	Fluoride	BMB	1.336	4.1284	4.1284	1.0000
2	5.30	Chloride	BMb*	4.184	20.0144	20.0144	1.0000
3	6.36	Nitrite,N	bMB*	1.765	4.3542	4.3542	1.0000
5	8.37	Bromide	M *	0.300	3.6607	3.6607	1.0000
6	9.13	Sulfate	M	2.969	19.6828	19.6828	1.0000
7	9.51	Nitrate	M	2.154	3.9960	3.9960	1.0000
8	10.09	Chlorate	MB	0.404	4.1946	4.1946	1.0000
9	13.97	Phosphate	BMB	0.589	3.1913	3.1913	1.0000
Total:			**0.000**	**13.700**		**63.22**	

79 CCB

Sample Name:	**CCB**	*Injection Volume:*	**5.00**
Vial Number:	**R4**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**05/01/2021 11:28**	*Sample Weight:*	**1.0000**

Run Time:



Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	1.0000
1	5.29	Chloride	BMB	0.002	n.a.	n.a.	1.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Nitrate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	1.0000
Total:			**0.000**	**0.002**		**0.00**	

HS21041102 - Sub Perch Data IV (E2100459)

ALS WO# HS21041102

May 05, 2021 Service Request No:E2100459

RJ Modashia
ALS Laboratory Group
10450 Stancliff Road
Suite 210
Houston, TX 77099-4338

Laboratory Results for: HS21041102

Dear RJ,

Enclosed are the results of the sample(s) submitted to our laboratory April 21, 2021
For your reference, these analyses have been assigned our service request number **E2100459.**

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current TNI standards, where applicable, and except as noted in the laboratory case narrative provided. All results are intended to be considered in their entirety and ALS Environmental is not responsible for use of less than the complete final report. Results apply only to the items submitted to the laboratory, as received for analysis. In accordance with the current TNI Standard, a statement on the estimated uncertainty of measurement of any quantitative analysis will be supplied upon request.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental



Corey Grandits
Project Manager

ADDRESS 10450 Stancliff Rd., Suite 210, Houston, TX 77099
PHONE +1 281 530 5656 | FAX +1 281 530 5887
ALS Group USA, Corp.
dba ALS Environmental

Certificate of Analysis

ALS Environmental - Houston HRMS
10450 Stancliff Rd, Suite 210, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

ALS Environmental

Client:	ALS Houston	**Service Request No.:**	E2100459
Project:	HS21041102	**Date Received:**	04/21/21
Sample Matrix:	W		

CASE NARRATIVE

All analyses were performed in adherence to the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier IV. When appropriate to the method, method blank results have been reported with each analytical test.

Sample Receipt

Ten samples were received for analysis at ALS Environmental in Houston on 04/21/21.

The samples were received in good condition and are consistent with the accompanying chain of custody form. The samples were stored in a refrigerator at 4°C upon receipt at the laboratory.

Data Validation Notes and Discussion

Precision and Accuracy:

EQ2100261: Laboratory Control Spike/Duplicate Laboratory Control Spike (LCS/DLCS) samples were analyzed and reported in addition to a MS/MSD for this extraction batch. The MS/MSD was performed on an unrelated sample. The LCS/DLCS recoveries are within QC limits.

DoD certification is held for the method/matrix/analytes provided in this report.

The results of analyses are given in the attached laboratory report. All results are intended to be considered in their entirety, and ALS Environmental (ALS) is not responsible for utilization of less than the complete report.

Use of ALS group USA Corp dba ALS Environmental (ALS)'s Name. Client shall not use ALS's name or trademark in any marketing or reporting materials, press releases or in any other manner ("Materials") whatsoever and shall not attribute to ALS any test result, tolerance or specification derived from ALS's data ("Attribution") without ALS's prior written consent, which may be withheld by ALS for any reason in its sole discretion. To request ALS's consent, Client shall provide copies of the proposed Materials or Attribution and describe in writing Client's proposed use of such Materials or Attribution. If ALS has not provided written approval of the Materials or Attribution within ten (10) days of receipt from Client, Client's request to use ALS's name or trademark in any Materials or Attribution shall be deemed denied. ALS may, in its discretion, reasonably charge Client for its time in reviewing Materials or Attribution requests. Client acknowledges and agrees that the unauthorized use of ALS's name or trademark may cause ALS to incur irreparable harm for which the recovery of money damages will be inadequate. Accordingly, Client acknowledges and agrees that a violation shall justify preliminary injunctive relief. For questions contact the laboratory.

Client: ALS Environmental - US **Service Request:**E2100459
Project: HS21041102

SAMPLE CROSS-REFERENCE

SAMPLE #	CLIENT SAMPLE ID	DATE	TIME
E2100459-001	16WW25-210420	4/20/2021	0725
E2100459-002	16WW25-210420-FD	4/20/2021	0725
E2100459-003	16WW26-210420	4/20/2021	0820
E2100459-004	16WW29-210420	4/20/2021	0910
E2100459-005	16WW29-210420-FD	4/20/2021	0910
E2100459-006	16WW30-210420	4/20/2021	1000
E2100459-007	16WW55-210420	4/20/2021	1045
E2100459-008	16RW10-210420	4/20/2021	1130
E2100459-009	16RW09-210420	4/20/2021	1215
E2100459-010	16IW03-210420	4/20/2021	1305

Service Request Summary

Folder #: **E2100459**
Client Name: ALS Environmental - US
Project Name: HS21041102
Project Number:

Report To: RJ Modashia
ALS Laboratory Group
10450 Stancliff Road
Houston, TX 77099-4338
USA
Phone Number: 281-530-5656
Cell Number:
Fax Number: 281-530-5887
E-mail: rj.modashia@alsglobal.com

Project Chemist: Corey Grandits
Originating Lab: HOUSTON
Logged By: CGRANDITS
Date Received: 04/21/21
Internal Due Date: 5/5/2021
QAP: LAB QAP
Qualifier Set: Lab Standard
Formset: Lab Standard
Merged?: Y
Report to MDL?: Y
P.O. Number: HS21041102
EDD: No EDD Specified

10 125 mL-Plastic Bottle Plastic
Location: EHRMS-AirArch 1
Pressure Gas:

Lab Samp No.	Client Samp No	Matrix	Collected	HOUSTON ClO4 DOD/6850
E2100459-001	16WW25-210420	Ground Water	04/20/21 0725	**IV**
E2100459-002	16WW25-210420-FD	Ground Water	04/20/21 0725	**IV**
E2100459-003	16WW26-210420	Ground Water	04/20/21 0820	**IV**
E2100459-004	16WW29-210420	Ground Water	04/20/21 0910	**IV**
E2100459-005	16WW29-210420-FD	Ground Water	04/20/21 0910	**IV**
E2100459-006	16WW30-210420	Ground Water	04/20/21 1000	**IV**
E2100459-007	16WW55-210420	Ground Water	04/20/21 1045	**IV**
E2100459-008	16RW10-210420	Ground Water	04/20/21 1130	**IV**
E2100459-009	16RW09-210420	Ground Water	04/20/21 1215	**IV**
E2100459-010	16IW03-210420	Ground Water	04/20/21 1305	**IV**

Service Request Summary

Folder #: **E2100459**
Client Name: ALS Environmental - US
Project Name: HS21041102
Project Number:

Report To: RJ Modashia
ALS Laboratory Group
10450 Stancliff Road
Houston, TX 77099-4338
USA
Phone Number: 281-530-5656
Cell Number:
Fax Number: 281-530-5887
E-mail: rj.modashia@alsglobal.com

Project Chemist: Corey Grandits
Originating Lab: HOUSTON
Logged By: CGRANDITS
Date Received: 04/21/21
Internal Due Date: 5/5/2021
QAP: LAB QAP
Qualifier Set: Lab Standard
Formset: Lab Standard
Merged?: Y
Report to MDL?: Y
P.O. Number: HS21041102
EDD: No EDD Specified

10 125 mL-Plastic Bottle Plastic
Location: EHRMS-AirArch 1
Pressure Gas:

Test Comments:

Group	Test/Method	Samples	Comments
Semivoa GCMS	ClO4 DOD/6850	10	Level II due 5/5, IV due 5/12

Data Qualifiers

Lab Standard

+	Possible Tedlar bag artifact.
A	TIC is a suspected aldol-condensation product
B	Analyte found in the associated method blank as well as in the sample.
BC	Reported results are not blank corrected.
BH	The back section of the tube yielded higher results than the front.
BT	Results indicated possible breakthrough; back section >=10% front section.
C	Result identification confirmed.
D	Compound identified in an analysis at a secondary dilution factor
D	Spike was diluted out
DE	Reported results are corrected for desorption efficiency.
E	Estimated value. Concentration above calibration range
E	The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
F	The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
H	The chromatographic fingerprint of the sample resembles a petroleum product but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
H1	Sample analysis performed past holding time. See case narrative.
H2	Initial analysis within holding time. Reanalysis for the required dilution was past holding time.
H3	Sample was received and analyzed past holding time.
H4	Sample was extracted past required extraction holding time, but analyzed within analysis holding time. See case narrative.
I	Internal standard not within the specified limits. See case narrative.
J	Estimated Value. Concentration found below MRL.
K	A deflection in the QC ion may indicate interference with the quantitation of this ion. The concentration of this analyte should be considered as an estimate.
K	Analyte was detected above the method reporting limit prior to normalization.
K	The reference ion ratio was outside acceptance criteria, which may indicate a potential bias to this result.
L	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
L1	Laboratory control sample recovery outside the specified limits; results may be biased high.
L2	Laboratory control sample recovery outside the specified limits; results may be biased low.
L3	Laboratory control sample recovery outside the specified limits.
M	Matrix interference; results may be biased high.
M	The duplicate injection precision not met.
M1	Matrix interference due to coelution with a non-target compound; results may be biased high.
N	Presumptive evidence of a compound for TICs that have been identified based on a mass spectral library search.
N	The Matrix Spike sample recovery is not within control limits. See case narrative.

Data Qualifiers

Lab Standard

O	The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
P	Indicates chlorodiphenyl ether interference present at the retention time of the target compound.
P	Pesticide/Aroclor target analyte > 40% difference for detected concentrations between GC columns
Q	Indicates as estimated value because the P and P + 2 theoretical abundance ratio does not meet method criteria.
R	Duplicate Precision not met.
R1	Duplicate precision not within the specified limits; however, the results are below the MRL and considered estimated.
S	Surrogate recovery not within specified limits.
S	The reported value was determined by the Method of Standard Additions (MSA).
T	Analyte is a tentatively identified compound, result is estimated.
U	Compound was analyzed for, but was not detected (ND).
V1	The continuing calibration verification standard was outside (biased high) the specified limits for this compound.
V2	The continuing calibration verification standard was outside (biased low) the specified limits for this compound.
W	Result quantified, but the corresponding peak was detected outside the generated retention time window.
W	The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
X	See case narrative.
Y	Recovery outside limits
Y	The chromatogram resembles a petroleum product but does not match the calibration standard.
Z	The chromatogram does not resemble a petroleum product.
i	The MRL/MDL has been elevated due to a matrix interference.

ALS Laboratory Group

Acronyms

Cal	Calibration
Conc	CONCentration
Dioxin(s)	Polychlorinated dibenzo-p-dioxin(s)
EDL	Estimated Detection Limit
EMPC	Estimated Maximum Possible Concentration
Flags	Data qualifiers
Furan(s)	Polychlorinated dibenzofuran(s)
g	Grams
ICAL	Initial CALibration
ID	IDentifier
Ions	Masses monitored for the analyte during data acquisition
L	Liter (s)
LCS	Laboratory Control Sample
DLCS	Duplicate Laboratory Control Sample
MB	Method Blank
MCL	Method Calibration Limit
MDL	Method Detection Limit
mL	Milliliters
MS	Matrix Spiked sample
DMS	Duplicate Matrix Spiked sample
NO	Number of peaks meeting all identification criteria
PCDD(s)	Polychlorinated dibenzo-p-dioxin(s)
PCDF(s)	Polychlorinated dibenzofuran(s)
ppb	Parts per billion
ppm	Parts per million
ppq	Parts per quadrillion
ppt	Parts per trillion
QA	Quality Assurance
QC	Quality Control
Ratio	Ratio of areas from monitored ions for an analyte
% Rec.	Percent recovery
RPD	Relative Percent Difference
RRF	Relative Response Factor
RT	Retention Time
SDG	Sample Delivery Group
S/N	Signal-to-noise ratio
TEF	Toxicity Equivalence Factor
TEQ	Toxicity Equivalence Quotient

10450 Stancliff Rd, Houston, TX 77099 | 281-530-5656 | www.alsglobal.com

State Certifications, Accreditations, and Licenses

Agency	Number	Expire Date
American Association for Laboratory Accreditation	2897.01 2020	11/30/2021
Arizona Department of Health Services	AZ0793-2020	5/27/2021
Arkansas Department of Environmental Quality	21-022-0	3/26/2022
Department of Defense	A2LA 2897.01	11/30/2021
Florida Department of Health	E87611-2020	6/30/2021
Hawaii Department of Health	2021-2022	4/30/2022
Illinois Environmental Protection Agency	2000322020-4	5/9/2021
Kansas Department of Health and Environment	E-10352-2020	7/31/2021
Louisiana Department of Environmental Quality	03087-2020	6/30/2021
Louisiana Department of Health and Hospitals	LA028-2021	12/31/2021
Maine Department of Health and Human Services	2020016	6/5/2022
Maryland Department of the Environment	343-2020	6/30/2021
Minnesota Department of Health	2021671	12/31/2021
Nevada Department of Concervation and Natural Resources	TX026932021-4	7/31/2021
New Hampshire Environmental Laboratory Accreditation Program	209421	4/24/2022
New Jersey Department of Environmental Protection	TX008	6/30/2021
Oklahoma Department of Environmental Quality	2020-123	8/31/2021
Pennsylvania Department of Environmental Protection	014	6/30/2021
Tennessee Department of Environment and Concervation	04016-2021	4/30/2022
United States Department of Agriculture	P330-19-00299	10/10/2022

Chain of Custody

ALS Environmental - Houston HRMS
10450 Stancliff Rd, Suite 210, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

10450 Stancliff Rd, Ste 210
Houston, TX 77099
T: +1 281 530 5656
F: +1 281 530 5887
www.alsglobal.com

Subcontract Chain of Custody

SAMPLING STATE: **Dept of Defense** **COC ID:** **15963**

SUBCONTRACT TO:

ALS Environmental
10450 Stancliff RoadSuite 210
Houston, TX 77084

Phone: +1 281 530 5656

CUSTOMER INFORMATION:

Company:	ALS Houston
Contact:	RJ Modashia
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Email:	RJ.Modashia@alsglobal.com
Alternate Contact:	
Email:	

INVOICE INFORMATION:

Company:	ALS Houston
Contact:	Accounts Payable
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Reference:	HS21041102
TSR:	Sonia West

	LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
	ANALYSIS REQUESTED			DUE DATE
1.	**HS21041102-01**	**16WW25-210420**	**Groundwater**	**20 Apr 2021 07:25**
	Level II and Level IV reports on a seperate pdf. Send WOA to Vicki Graves.			05 May 2021
2.	**HS21041102-02**	**16WW25-210420-FD**	**Groundwater**	**20 Apr 2021 07:25**
	Level II and Level IV reports on a seperate pdf. Send WOA to Vicki Graves.			05 May 2021
3.	**HS21041102-03**	**16WW26-210420**	**Groundwater**	**20 Apr 2021 08:20**
	Level II and Level IV reports on a seperate pdf. Send WOA to Vicki Graves.			05 May 2021
4.	**HS21041102-04**	**16WW29-210420**	**Groundwater**	**20 Apr 2021 09:10**
	Level II and Level IV reports on a seperate pdf. Send WOA to Vicki Graves.			05 May 2021
5.	**HS21041102-05**	**16WW29-210420-FD**	**Groundwater**	**20 Apr 2021 09:10**
	Level II and Level IV reports on a seperate pdf. Send WOA to Vicki Graves.			05 May 2021
6.	**HS21041102-06**	**16WW30-210420**	**Groundwater**	**20 Apr 2021 10:00**
	Level II and Level IV reports on a seperate pdf. Send WOA to Vicki Graves.			05 May 2021
7.	**HS21041102-07**	**16WW55-210420**	**Groundwater**	**20 Apr 2021 10:45**
	Level II and Level IV reports on a seperate pdf. Send WOA to Vicki Graves.			05 May 2021
8.	**HS21041102-08**	**16RW10-210420**	**Groundwater**	**20 Apr 2021 11:30**

Subcontract Chain of Custody

SAMPLING STATE: **Dept of Defense** **COC ID: 15963**

	LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
	ANALYSIS REQUESTED			DUE DATE
	Level II and Level IV reports on a seperate pdf. Send WOA to Vicki Graves.			05 May 2021
9.	**HS21041102-09**	**16RW09-210420**	**Groundwater**	**20 Apr 2021 12:15**
	Level II and Level IV reports on a seperate pdf. Send WOA to Vicki Graves.			05 May 2021
10.	**HS21041102-10**	**16IW03-210420**	**Groundwater**	**20 Apr 2021 13:05**
	Level II and Level IV reports on a seperate pdf. Send WOA to Vicki Graves.			05 May 2021

Comments: Please analyze for the analysis listed above.
Send report to the emails shown above.

QC Level: DOD IV (DoD Data Package)

Relinquished By: _____ Date/Time: _____

Received By: _____ Date/Time: 4/21/21 1946

Cooler ID(s): _____ Temperature(s): _____

Cooler Receipt Form

ALS Environmental

Project Chemist: CK

Client/Project: ALS-H

Thermometer ID: IR71

Date/Time Received: 4/21/21 Initials: CK

Date/Time Logged in: 4/21/21 Initials: CK

1. Method of delivery: ○ US Mail ○ Fed Ex ○ UPS ○ DHL ✓ ALS Courier ○ Client

2. Samples received in: ✓ Cooler ○ Box ○ Envelope ○ Other

3. Were custody seals on coolers? ○ Yes ✓ No

If yes, how many and where?

Were they intact? ○ Yes ○ No ✓ N/A

Were they signed and dated? ○ Yes ○ No ✓ N/A

4. Packing Material: ○ Inserts ✓ Baggies ○ Bubble Wrap ○ Gel Packs ✓ Wet Ice ○ Sleeves ○ Other

5. Foreign or Regulated Soil? ○ Yes ○ No Location of Sampling:

Cooler Tracking Number	COC ID	Date Opened	Time Opened	Opened By	Temp. °C	Temp Blank?
NA		4/21/21	1446	CK	0.8	☒
						☐
						☐
						☐

6. Were custody papers properly filled out (ink, signed, dated, etc)? ✓ Yes ○ No

7. Did all bottles arrive in good condition (not broken, no signs of leakage)? ✓ Yes ○ No

8. Were all sample labels complete (i.e., sample ID, analysis, preservation, etc)? ✓ Yes ○ No

9. Were appropriate bottles/containers and volumes received for the requested tests? ✓ Yes ○ No

10. Did sample labels and tags agree with custody documents? ✓ Yes ○ No

Notes, Discrepancies, & Resolutions:

Service request Label:

HS-HRMSCoolerReceipt R1.0

ALS Environmental - Houston HRMS

10450 Stancliff Rd., Suite 210
Houston, TX 77099
T: +1 713 266 1599
F: +1 713 266 1599
www.alsglobal.com

SAMPLE ACCEPTANCE POLICY

This policy outlines the criteria samples must meet to be accepted by ALS Environmental – Houston HRMS.

Cooler Custody Seals (desirable, mandatory if specified in SAP):

- ✓ Intact on outside of cooler, signed and dated

Chain-of-Custody (COC) documentation (mandatory):

The following is required on each COC:

- ✓ Sample ID, the location, date and time of collection, collector's name, preservation type, sample type, and any other special remarks concerning the sampleThe COC must be completed in ink.
- ✓ Signature and date of relinquishing party.

In the absence of a COC at sample receipt, the COC will be requested from the client.

Sample Integrity (mandatory):

Samples are inspected upon arrival to ensure that sample integrity was not compromised during transfer to the laboratory.

- ✓ Sample containers must arrive in good condition (not broken or leaking).
- ✓ Samples must be labeled appropriately, including Sample IDs, and requested test using durable labels and indelible ink.
- ✓ The correct type of sample bottle must be used for the method requested.
- ✓ An appropriate sample volume, or weight, must be received.
- ✓ Sample IDs and number of containers must reconcile with the COC.
- ✓ Samples must be received within the method defined holding time.

Temperature Requirement (varies by sample matrix):

- ✓ Aqueous and Non-aqueous samples must be shipped and stored cold, at 0 to 6ºC.
- ✓ Tissue samples must be shipped and stored frozen, at -20 to -10ºC.
- ✓ Air samples are shipped and stored cold, at 0 to 6ºC
- ✓ The sample temperature must be recorded on the COC

All cooler inspections are documented on the Cooler Receipt Form (CRF). A separate CRF is completed for each service request. Any samples not meeting the above criteria are noted on the CRF and the Project Manager notified. The Project Manager must resolve any sample integrity issues with the client prior to proceeding with the analysis. Such resolutions are documented in writing and filed with the project folder. Data associated with samples received outside of this acceptance policy will be qualified on the case narrative of the final report

Preparation Information Benchsheets

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 210, Houston, TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

Preparation Information Benchsheet

Prep Run#: 378422 **Prep WorkFlow:** GenExt28Day **Status:** Prepped
Team: Semivoa GCMS/GRIVERA **Prep Method:** Method **Prep Date/Time:** 4/30/21 10:00

#	Lab Code	Client ID	B#	Method /Test	pH	Cl	Matrix	Amt. Ext.	Sample Description
1	E2100458-001	LH18/24-SP650_042021_BIX	.01	6850/ClO4 DOD			Ground Water	10mL	
2	E2100459-001	16WW25-210420	.01	6850/ClO4 DOD			Ground Water	10mL	
3	E2100459-002	16WW25-210420-FD	.01	6850/ClO4 DOD			Ground Water	10mL	
4	E2100459-003	16WW26-210420	.01	6850/ClO4 DOD			Ground Water	10mL	
5	E2100459-004	16WW29-210420	.01	6850/ClO4 DOD			Ground Water	10mL	
6	E2100459-005	16WW29-210420-FD	.01	6850/ClO4 DOD			Ground Water	10mL	
7	E2100459-006	16WW30-210420	.01	6850/ClO4 DOD			Ground Water	10mL	
8	E2100459-007	16WW55-210420	.01	6850/ClO4 DOD			Ground Water	10mL	
9	E2100459-008	16RW10-210420	.01	6850/ClO4 DOD			Ground Water	10mL	
10	E2100459-009	16RW09-210420	.01	6850/ClO4 DOD			Ground Water	10mL	
11	E2100459-010	16IW03-210420	.01	6850/ClO4 DOD			Ground Water	10mL	
12	E2100486-001	43MW03	.01	6850/ClO4 DOD			Ground Water	10mL	
13	E2100486-002	43MW03-DUP	.01	6850/ClO4 DOD			Ground Water	10mL	
14	E2100486-003	43MW04	.01	6850/ClO4 DOD			Ground Water	10mL	
15	E2100486-004	43MW05	.01	6850/ClO4 DOD			Ground Water	10mL	
16	E2100486-005	43MW06	.01	6850/ClO4 DOD			Ground Water	10mL	
17	E2100486-006	EB041621	.01	6850/ClO4 DOD			Ground Water	10mL	
18	E2100486-007	43MW01	.01	6850/ClO4 DOD			Ground Water	10mL	
19	EQ2100261-01	MB		6850/ClO4 DOD			Liquid	10mL	
20	EQ2100261-02	LCS		6850/ClO4 DOD			Liquid	10mL	
21	EQ2100261-03	DLCS		6850/ClO4 DOD			Liquid	10mL	
22	EQ2100261-04	43MW01 MS	.01	6850/ClO4 DOD			Liquid	10mL	
23	EQ2100261-05	43MW01 DMS	.01	6850/ClO4 DOD			Liquid	10mL	

Spiking Solutions

Name: Perchlorate Intermediate Stock1 Inventory ID 214035 Logbook Ref: Perchlorate Expires On: 05/23/2021

EQ2100261-02	1.00µL	EQ2100261-03	1.00µL	EQ2100261-04	1.00µL	EQ2100261-05	1.00µL

Name: Perchlorate Internal Standard 1ug/mL Inventory ID 214820 Logbook Ref: Perchlorate Internal Standard Expires On: 07/03/2021

E2100458-001	100.00µL	E2100459-001	100.00µL	E2100459-002	100.00µL	E2100459-003	100.00µL	E2100459-004	100.00µL	E2100459-005	100.00µL
E2100459-006	100.00µL	E2100459-007	100.00µL	E2100459-008	100.00µL	E2100459-009	100.00µL	E2100459-010	100.00µL	E2100486-001	100.00µL
E2100486-002	100.00µL	E2100486-003	100.00µL	E2100486-004	100.00µL	E2100486-005	100.00µL	E2100486-006	100.00µL	E2100486-007	100.00µL
EQ2100261-01	100.00µL	EQ2100261-02	100.00µL	EQ2100261-03	100.00µL	EQ2100261-04	100.00µL	EQ2100261-05	100.00µL		

Preparation Information Benchsheet

Prep Run#: 378422 **Prep WorkFlow:** GenExt28Day **Status:** Prepped
Team: Semivoa GCMS/GRIVERA **Prep Method:** Method **Prep Date/Time:** 4/30/21 10:00

Preparation Steps

Step: Preparation
Started: 4/30/21 10:00
Finished: 4/30/21 12:00
By: KBROWN
Comments

Comments: _____

Reviewed By: KB Date: 4/30/21

Chain of Custody

Relinquished By: _____ Date: _____ Extracts Examined

Received By: _____ Date: _____ Yes No

Analytical Results

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 210, Houston, TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100459
Project:	HS21041102	**Date Collected:**	4/20/21 0725
Sample Matrix:	Ground Water	**Date Received:**	4/21/21
Sample Name:	16WW25-210420	**Units:**	µg/L
Lab Code:	E2100459-001	**Basis:**	As Received

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	0.500	0.250	0.125	5	4/30/21	5/1/21 13:14	378422	722220	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100459
Project:	HS21041102	**Date Collected:**	4/20/21 0725
Sample Matrix:	Ground Water	**Date Received:**	4/21/21
Sample Name:	16WW25-210420-FD	**Units:**	µg/L
Lab Code:	E2100459-002	**Basis:**	As Received

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	0.500	0.250	0.125	5	4/30/21	5/1/21 13:23	378422	722220	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100459
Project:	HS21041102	**Date Collected:**	4/20/21 0820
Sample Matrix:	Ground Water	**Date Received:**	4/21/21
Sample Name:	16WW26-210420	**Units:**	µg/L
Lab Code:	E2100459-003	**Basis:**	As Received

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	0.100	0.0500	0.0250	1	4/30/21	4/30/21 16:19	378422	722059	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100459
Project:	HS21041102	**Date Collected:**	4/20/21 0910
Sample Matrix:	Ground Water	**Date Received:**	4/21/21
Sample Name:	16WW29-210420	**Units:**	µg/L
Lab Code:	E2100459-004	**Basis:**	As Received

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	0.100	0.0500	0.0250	1	4/30/21	4/30/21 16:29	378422	722059	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100459
Project:	HS21041102	**Date Collected:**	4/20/21 0910
Sample Matrix:	Ground Water	**Date Received:**	4/21/21
Sample Name:	16WW29-210420-FD	**Units:**	µg/L
Lab Code:	E2100459-005	**Basis:**	As Received

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	0.100	0.0500	0.0250	1	4/30/21	4/30/21 16:47	378422	722059	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100459
Project:	HS21041102	**Date Collected:**	4/20/21 1000
Sample Matrix:	Ground Water	**Date Received:**	4/21/21
Sample Name:	16WW30-210420	**Units:**	µg/L
Lab Code:	E2100459-006	**Basis:**	As Received

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	0.100	0.0500	0.0250	1	4/30/21	4/30/21 16:57	378422	722059	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100459
Project:	HS21041102	**Date Collected:**	4/20/21 1045
Sample Matrix:	Ground Water	**Date Received:**	4/21/21
Sample Name:	16WW55-210420	**Units:**	µg/L
Lab Code:	E2100459-007	**Basis:**	As Received

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**198**		1.00	0.500	0.250	10	4/30/21	5/1/21 13:32	378422	722220	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100459
Project:	HS21041102	**Date Collected:**	4/20/21 1130
Sample Matrix:	Ground Water	**Date Received:**	4/21/21
Sample Name:	16RW10-210420	**Units:**	µg/L
Lab Code:	E2100459-008	**Basis:**	As Received

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**36.5**		0.200	0.100	0.0500	2	4/30/21	5/1/21 13:49	378422	722220	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100459
Project:	HS21041102	**Date Collected:**	4/20/21 1215
Sample Matrix:	Ground Water	**Date Received:**	4/21/21
Sample Name:	16RW09-210420	**Units:**	µg/L
Lab Code:	E2100459-009	**Basis:**	As Received

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.241**		0.100	0.0500	0.0250	1	4/30/21	4/30/21 17:25	378422	722059	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100459
Project:	HS21041102	**Date Collected:**	4/20/21 1305
Sample Matrix:	Ground Water	**Date Received:**	4/21/21
Sample Name:	16IW03-210420	**Units:**	µg/L
Lab Code:	E2100459-010	**Basis:**	As Received

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.754**	J	1.00	0.500	0.250	10	4/30/21	5/1/21 13:51	378422	722220	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100459
Project:	HS21041102	**Date Collected:**	NA
Sample Matrix:	Ground Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	EQ2100261-01	**Basis:**	As Received

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	0.100	0.0500	0.0250	1	4/30/21	4/30/21 15:04	378422	722059	

Accuracy & Precision

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 210, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS21041102
Sample Matrix: Ground Water

Service Request: E2100459
Date Analyzed: 4/30/21

Lab Control Sample Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Units: µg/L
Basis: As Received

Extraction Lot: 378422

	Lab Control Sample EQ2100261-02			Duplicate Lab Control Sample EQ2100261-03					
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Perchlorate	0.104	0.100	104	0.109	0.100	109	84 - 119	5	15

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100459
Project:	HS21041102	**Date Collected:**	NA
Sample Matrix:	Ground Water	**Date Received:**	NA
Sample Name:	Lab Control Sample	**Units:**	µg/L
Lab Code:	EQ2100261-02	**Basis:**	As Received

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.104**		0.100	0.0500	0.0250	1	4/30/21	4/30/21 15:13	378422	722059	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100459
Project:	HS21041102	**Date Collected:**	NA
Sample Matrix:	Ground Water	**Date Received:**	NA
Sample Name:	Duplicate Lab Control Sample	**Units:**	µg/L
Lab Code:	EQ2100261-03	**Basis:**	As Received

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.109**		0.100	0.0500	0.0250	1	4/30/21	4/30/21 15:23	378422	722059	

Initial Calibration

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 210, Houston, TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

20210428

ALS Environmental

1st Review: Grivera
2nd Review: Kneir

Injection Log
LCMS01 -Shimadzu 8050

ICAL Date: 4/28/2021
Cal. Std. xp: 5/20/2021
ICAL ID: **EC2100026**

Mobile Phases **A:** 0.75% Formic Acid/Water 3100809-07 **B:** MeOH 216350

			File Name	Acquisition Method	Dilution	R	Comments	Date/Time
1	PERCHLORATE1		20210428_044	Perchlorate6850b.lcm	1x	☒	3100808-05	4/28/2021 18:16
2	PERCHLORATE2		20210428_045	Perchlorate6850b.lcm	1x	☒	3100808-06	4/28/2021 18:25
3	PERCHLORATE3		20210428_046	Perchlorate6850b.lcm	1x	☒	3100808-07	4/28/2021 18:34
4	PERCHLORATE4		20210428_047	Perchlorate6850b.lcm	1x	☒	3100808-08	4/28/2021 18:44
5	PERCHLORATE5		20210428_048	Perchlorate6850b.lcm	1x	☒	3100808-09	4/28/2021 18:53
6	PERCHLORATE6		20210428_049	Perchlorate6850b.lcm	1x	☒	3100809-01	4/28/2021 19:03
7	PERCHLORATE7		20210428_050	Perchlorate6850b.lcm	1x	☒	3100809-02	4/28/2021 19:12
8	PERCHLORATE8		20210428_051	Perchlorate6850b.lcm	1x	☒	3100809-03	4/28/2021 19:22
9	PERCHLORATE9		20210428_052	Perchlorate6850b.lcm	1x	☒	3100809-04	4/28/2021 19:31
10	PERCHLORATEICV		20210428_054	Perchlorate6850b.lcm	1x	☒	3100809-06	4/28/2021 19:50
11	ICS		20210428_055	Perchlorate6850b.lcm	1x	☒		4/28/2021 19:59
12	LODV		20210428_056	Perchlorate6850b.lcm	1x	☒		4/28/2021 20:08
13	PERCHLORATE7		20210428_057	Perchlorate6850b.lcm	1x	☒	3100809-02	4/28/2021 20:18
14	EQ2100244-01		20210428_058	Perchlorate6850b.lcm	1x	☒		4/28/2021 20:27
15	EQ2100244-02		20210428_059	Perchlorate6850b.lcm	1x	☒		4/28/2021 20:37
16	EQ2100244-03		20210428_060	Perchlorate6850b.lcm	1x	☒		4/28/2021 20:46
17	E2100412-016X10		20210428_061	Perchlorate6850b.lcm	10X	☒		4/28/2021 20:55
18	E2100412-017X10		20210428_062	Perchlorate6850b.lcm	10X	☒		4/28/2021 21:05
19	E2100412-011X10DNU		20210428_063	Perchlorate6850b.lcm	10X	☒	DNU:Report 1X	4/28/2021 21:14
20	E2100412-012X10DNU		20210428_064	Perchlorate6850b.lcm	10X	☒	Bad injection: Reanalyze	4/28/2021 21:24
21	E2100412-013X10DNU		20210428_065	Perchlorate6850b.lcm	10X	☒	Over ICAL: Run 50X	4/28/2021 21:33
22	E2100412-014X10DNU		20210428_066	Perchlorate6850b.lcm	10X	☒	Bad injection: Reanalyze	4/28/2021 21:42
23	E2100412-015X10DNU		20210428_067	Perchlorate6850b.lcm	10X	☒	DNU:Report 1X	4/28/2021 21:52
24	PERCHLORATE7		20210428_068	Perchlorate6850b.lcm	1x	☒	3100809-02	4/28/2021 22:01
25	E2100411-001		20210428_069	Perchlorate6850b.lcm	1x	☒		4/28/2021 22:10
26	E2100412-003X10		20210428_070	Perchlorate6850b.lcm	10X	☒		4/28/2021 22:20
27	E2100412-010X10		20210428_071	Perchlorate6850b.lcm	10X	☒		4/28/2021 22:29
28	R2103214-010		20210428_072	Perchlorate6850b.lcm	1x	☒		4/28/2021 22:38
29	PERCHLORATE7		20210428_073	Perchlorate6850b.lcm	1x	☒	3100809-02	4/28/2021 22:48
30	E2100485-002X10		20210428_074	Perchlorate6850b.lcm	10X	☒		4/28/2021 22:57
31	E2100485-003X10		20210428_075	Perchlorate6850b.lcm	10X	☒		4/28/2021 23:07
32	E2100485-007X10		20210428_076	Perchlorate6850b.lcm	10X	☒		4/28/2021 23:16
33	E2100485-010X10		20210428_077	Perchlorate6850b.lcm	10X	☒		4/28/2021 23:25
34	EQ2100244-04X10DNU		20210428_078	Perchlorate6850b.lcm	10X	☒	DNU: report 1X	4/28/2021 23:35
35	EQ2100244-05X10DNU		20210428_079	Perchlorate6850b.lcm	10X	☒	DNU: report 1X	4/28/2021 23:44
36	PERCHLORATE7		20210428_080	Perchlorate6850b.lcm	1x	☒	3100809-02	4/28/2021 23:54
37	E2100485-001		20210428_081	Perchlorate6850b.lcm	1x	☒		4/29/2021 0:03
38	E2100485-004		20210428_082	Perchlorate6850b.lcm	1x	☒		4/29/2021 0:12
39	E2100485-005		20210428_083	Perchlorate6850b.lcm	1x	☒		4/29/2021 0:22
40	E2100485-006DNU		20210428_084	Perchlorate6850b.lcm	1x	☒	DNU: INST failed	4/29/2021 0:31
41	PERCHLORATE7		20210428_085	Perchlorate6850b.lcm	1x	☒	3100809-02	4/29/2021 0:40
42	E2100485-008		20210428_086	Perchlorate6850b.lcm	1x	☒		4/29/2021 0:50
43	E2100485-009		20210428_087	Perchlorate6850b.lcm	1x	☒		4/29/2021 0:59
44	E2100485-011		20210428_088	Perchlorate6850b.lcm	1x	☒		4/29/2021 1:09
45	E2100485-012DNU		20210428_089	Perchlorate6850b.lcm	1x	☒	DNU-low INST	4/29/2021 1:18
46	E2100485-013		20210428_090	Perchlorate6850b.lcm	1x	☒		4/29/2021 1:27
47	EQ2100244-04		20210428_091	Perchlorate6850b.lcm	1x	☒		4/29/2021 1:37
48	EQ2100244-05		20210428_092	Perchlorate6850b.lcm	1x	☒		4/29/2021 1:46
49	PERCHLORATE7		20210428_093	Perchlorate6850b.lcm	1x	☒	3100809-02	4/29/2021 1:56
50								
51								

Initial Calibration - Detailed Report

Calibration ID: EC2100026 **Instrument ID:** E-LCMS-01
Column Name: 1

#	Lab Code	Sample Name	File Location	Aquisition Date
01	EC2100026-01	PERCHLORATE1	20210428_044	04/28/2021 18:16
02	EC2100026-02	PERCHLORATE2	20210428_045	04/28/2021 18:25
03	EC2100026-03	PERCHLORATE3	20210428_046	04/28/2021 18:34
04	EC2100026-04	PERCHLORATE4	20210428_047	04/28/2021 18:44
05	EC2100026-05	PERCHLORATE5	20210428_048	04/28/2021 18:53
06	EC2100026-06	PERCHLORATE6	20210428_049	04/28/2021 19:03
07	EC2100026-07	PERCHLORATE7	20210428_050	04/28/2021 19:12
08	EC2100026-08	PERCHLORATE8	20210428_051	04/28/2021 19:22
10	EC2100026-10	PERCHLORATE9	20210428_052	04/28/2021 19:31

Analyte **Curve Fit** **Weighting**

Perchlorate **Average RF** **RSD = 13.94** **Average RF = 0.1168**

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.1000	0.1516	02	0.5000	0.1269	03	0.7000	0.1246	04	1.0000	0.1032
05	2.0000	0.1172	06	5.0000	0.1124	07	10.0000	0.1144	08	20.0000	0.09843
10	30.0000	0.1026									

Analyte

Perchlorate

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	0.1000	0.130	29.8	02	0.5000	0.543	8.6	03	0.7000	0.746	6.6
04	1.0000	0.883	-11.7	05	2.0000	2.01	0.3	06	5.0000	4.81	-3.8
07	10.0000	9.79	-2.1	08	20.0000	16.9	-15.7	10	30.0000	26.4	-12.1

Initial Calibration Verification Summary Report

Calibration ID:	EC2100026	**Instrument ID:**	E-LCMS-01
Datafile ID:	20210428_054	**Column Name:**	1

Analyte	Lab Code	Type	Curve Fit	True Value	Calc Conc	Units	Result	Criteria
Perchlorate	EC2100026-09	T	Average RF	10	9.455	ng/mL	-5.4	<= 15

Insight Report

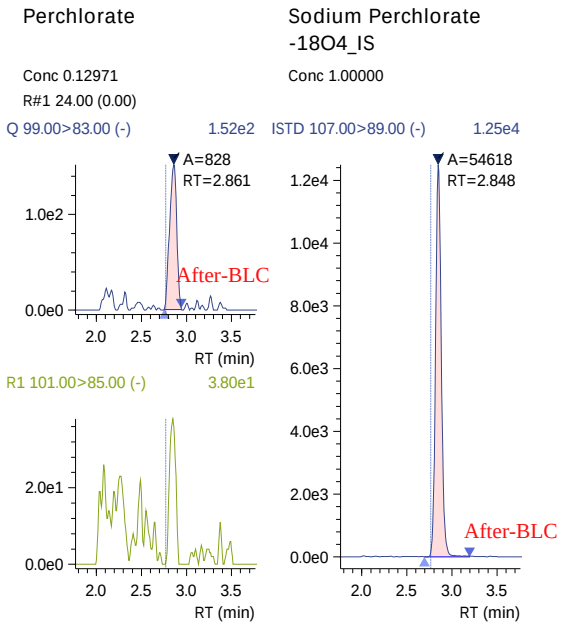
Printed at 4/29/2021 1:26:51 PM

Method File: I:\LCMS01\DATA\20210428\20210428.lcm
Project File: I:\LCMS01\DATA\20210428\20210428-ICAL.damlp

20210428_044

Sample ID: PERCHLORATE1
Date Acquired: 4/28/2021 6:16:06 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210428\20210428_044.lcd
Vial: 22 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	M	2.861	828	54618	1	0.12971	ng/mL	0.1000	24.00
Sodium Perchlorate-18O4 _IS	M	2.848	54618	54618	1	1.00000	ng/mL	1.0000	----



Insight Report

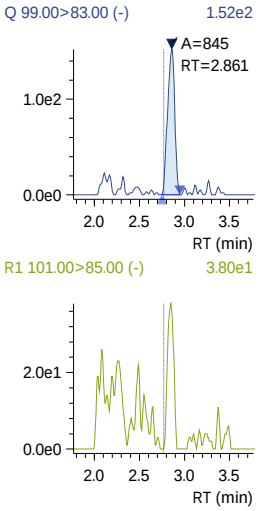
Method File: I:\LCMS01\DATA\20210428\Before\20210426.lcm

20210428_044

Sample ID: PERCHLORATE1
Date Acquired: 4/28/2021 6:16:06 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210428\Before\20210428_044.lcd
Vial: 22 | Inj. Volume: 25.0000uL | Tray: 1

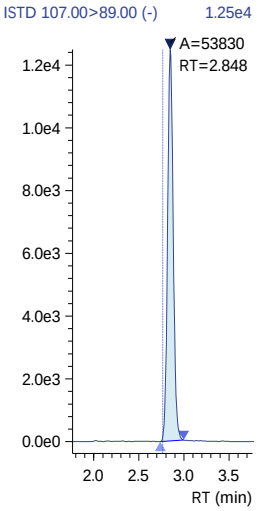
Perchlorate

Conc 0.13578
R#1 23.68 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.00000



Insight Report

Printed at 4/29/2021 1:26:51 PM

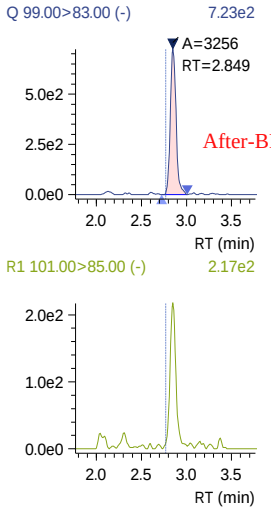
20210428_045

Sample ID: PERCHLORATE2
Date Acquired: 4/28/2021 6:25:33 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210428\20210428_045.lcd
Vial: 23 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	M	2.849	3256	51326	1	0.54312	ng/mL	0.5000	30.04
Sodium Perchlorate-18O4 _IS	Auto	2.847	51326	51326	1	1.00000	ng/mL	1.0000	----

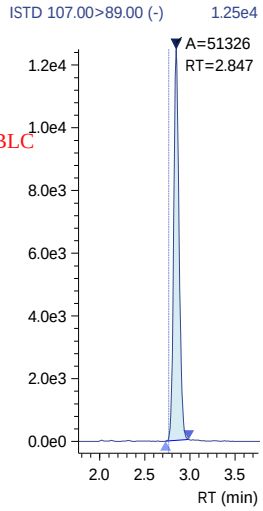
Perchlorate

Conc 0.54312
R#1 30.04 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.00000



After-BLC

Insight Report

Printed at 4/29/2021 1:28:28 PM

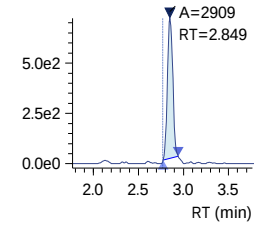
20210428_045

Sample ID: PERCHLORATE2
Date Acquired: 4/28/2021 6:25:33 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210428\Before\20210428_045.lcd
Vial: 23 | Inj. Volume: 25.0000uL | Tray: 1

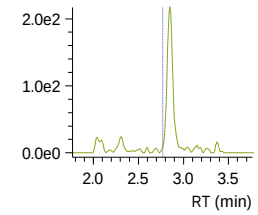
Perchlorate

Conc 0.49019
R#1 29.78 (0.00)

Q 99.00>83.00 (-) 7.23e2



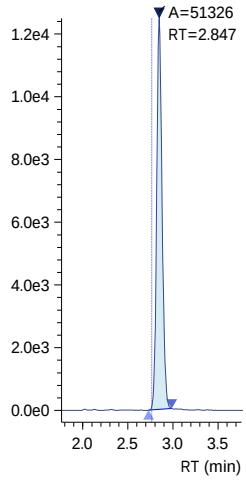
R1 101.00>85.00 (-) 2.17e2



Sodium Perchlorate -18O4_IS

Conc 1.00000

ISTD 107.00>89.00 (-) 1.25e4



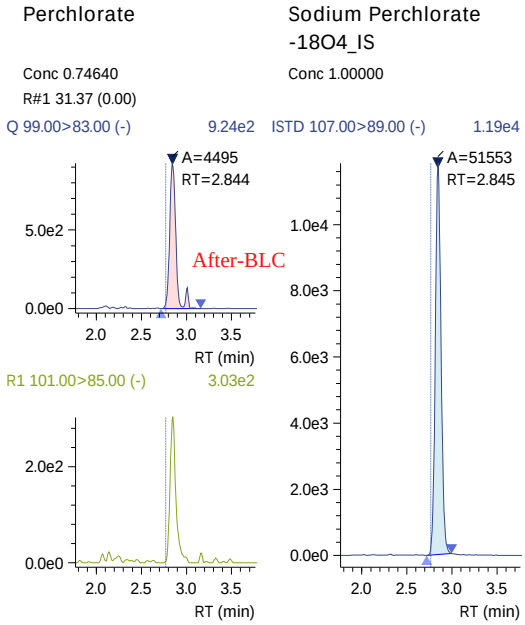
Insight Report

Printed at 4/29/2021 1:26:51 PM

20210428_046

Sample ID: PERCHLORATE3
Date Acquired: 4/28/2021 6:34:56 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210428\20210428_046.lcd
Vial: 24 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	M	2.844	4495	51553	1	0.74640	ng/mL	0.7000	31.37
Sodium Perchlorate-18O4 _IS	Auto	2.845	51553	51553	1	1.00000	ng/mL	1.0000	----



Insight Report

Printed at 4/29/2021 1:28:28 PM

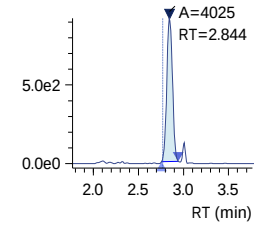
20210428_046

Sample ID: PERCHLORATE3
Date Acquired: 4/28/2021 6:34:56 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210428\Before\20210428_046.lcd
Vial: 24 | Inj. Volume: 25.0000uL | Tray: 1

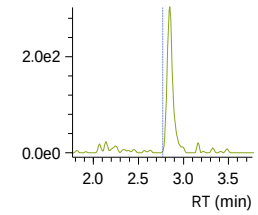
Perchlorate

Conc 0.67532
R#1 31.38 (0.00)

Q 99.00>83.00 (-) 9.24e2



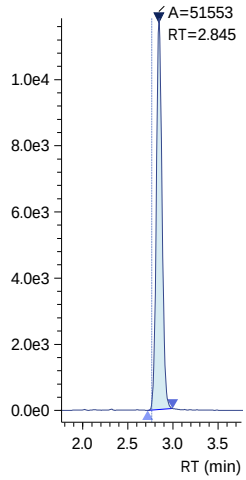
R1 101.00>85.00 (-) 3.03e2



Sodium Perchlorate -18O4_IS

Conc 1.00000

ISTD 107.00>89.00 (-) 1.19e4



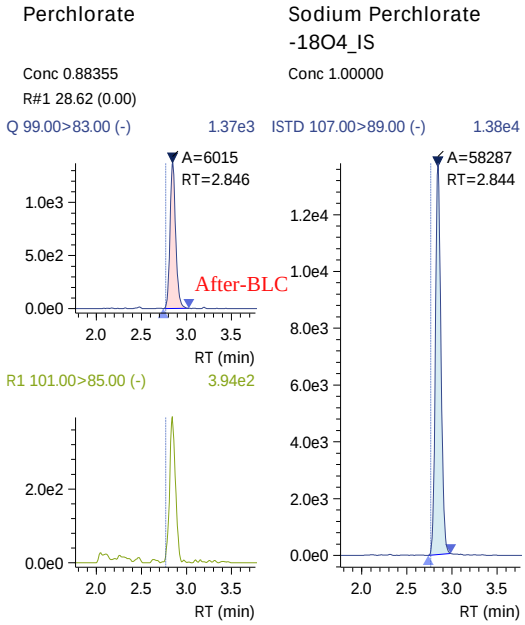
Insight Report

Printed at 4/29/2021 1:26:51 PM

20210428_047

Sample ID: PERCHLORATE4
Date Acquired: 4/28/2021 6:44:22 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210428\20210428_047.lcd
Vial: 25 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	M	2.846	6015	58287	1	0.88355	ng/mL	1.0000	28.62
Sodium Perchlorate-18O4 _IS	Auto	2.844	58287	58287	1	1.00000	ng/mL	1.0000	----



Insight Report

Printed at 4/29/2021 1:28:28 PM

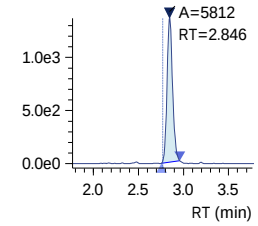
20210428_047

Sample ID: PERCHLORATE4
Date Acquired: 4/28/2021 6:44:22 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210428\Before\20210428_047.lcd
Vial: 25 | Inj. Volume: 25.0000uL | Tray: 1

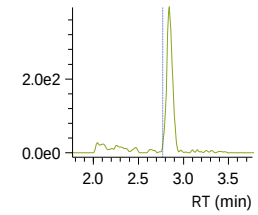
Perchlorate

Conc 0.86245
R#1 28.86 (0.00)

Q 99.00>83.00 (-) 1.37e3



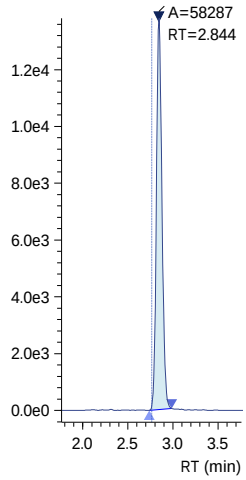
R1 101.00>85.00 (-) 3.94e2



Sodium Perchlorate -18O4_IS

Conc 1.00000

ISTD 107.00>89.00 (-) 1.38e4



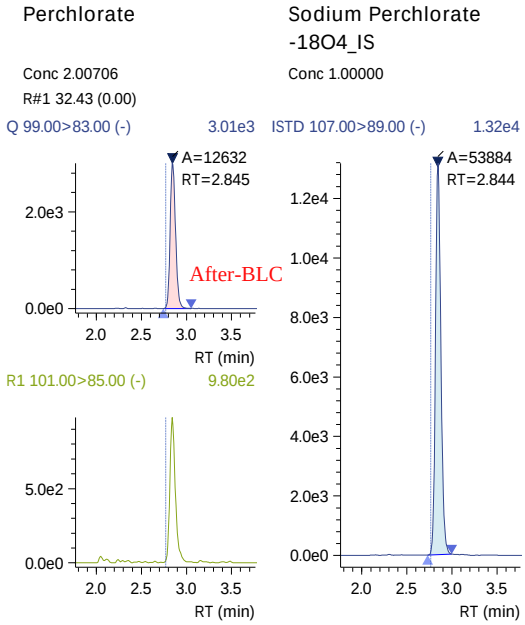
Insight Report

Printed at 4/29/2021 1:26:51 PM

20210428_048

Sample ID: PERCHLORATE5
Date Acquired: 4/28/2021 6:53:45 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210428\20210428_048.lcd
Vial: 26 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	M	2.845	12632	53884	1	2.00706	ng/mL	2.0000	32.43
Sodium Perchlorate-18O4 _IS	Auto	2.844	53884	53884	1	1.00000	ng/mL	1.0000	----



Insight Report

Printed at 4/29/2021 1:28:28 PM

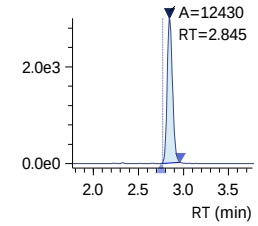
20210428_048

Sample ID: PERCHLORATE5
Date Acquired: 4/28/2021 6:53:45 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210428\Before\20210428_048.lcd
Vial: 26 | Inj. Volume: 25.0000uL | Tray: 1

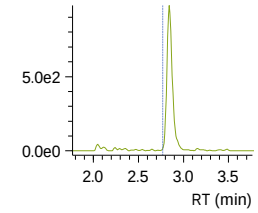
Perchlorate

Conc 1.99532
R#1 32.28 (0.00)

Q 99.00>83.00 (-) 3.01e3



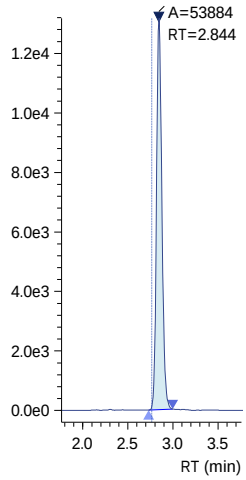
R1 101.00>85.00 (-) 9.80e2



Sodium Perchlorate -18O4_IS

Conc 1.00000

ISTD 107.00>89.00 (-) 1.32e4



Insight Report

Printed at 4/29/2021 1:26:51 PM

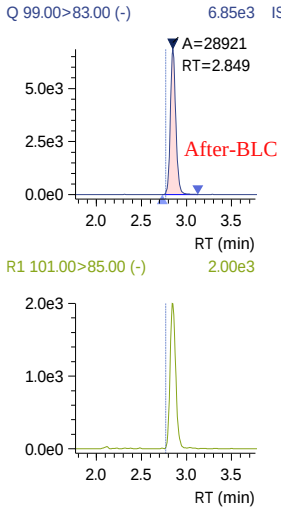
20210428_049

Sample ID: PERCHLORATE6
Date Acquired: 4/28/2021 7:03:12 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210428\20210428_049.lcd
Vial: 27 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	M	2.849	28921	51456	1	4.81188	ng/mL	5.0000	30.04
Sodium Perchlorate-18O4 _IS	Auto	2.846	51456	51456	1	1.00000	ng/mL	1.0000	----

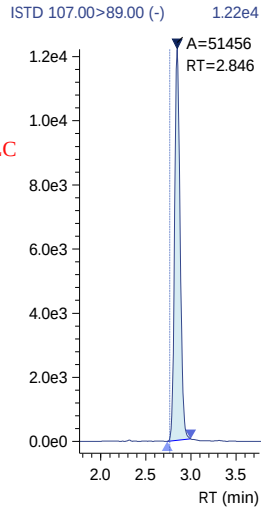
Perchlorate

Conc 4.81188
R#1 30.04 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.00000



Insight Report

Printed at 4/29/2021 1:28:28 PM

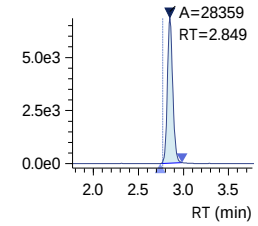
20210428_049

Sample ID: PERCHLORATE6
Date Acquired: 4/28/2021 7:03:12 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210428\Before\20210428_049.lcd
Vial: 27 | Inj. Volume: 25.0000uL | Tray: 1

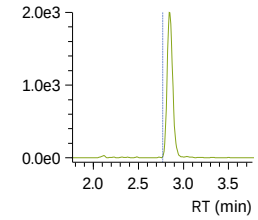
Perchlorate

Conc 4.76710
R#1 30.13 (0.00)

Q 99.00>83.00 (-) 6.85e3



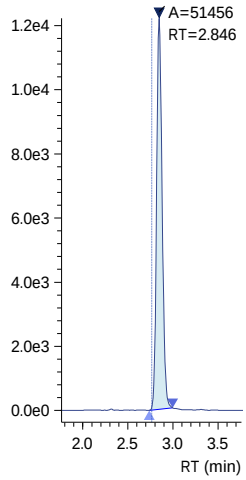
R1 101.00>85.00 (-) 2.00e3



Sodium Perchlorate -18O4_IS

Conc 1.00000

ISTD 107.00>89.00 (-) 1.22e4



Insight Report

Printed at 4/29/2021 1:26:51 PM

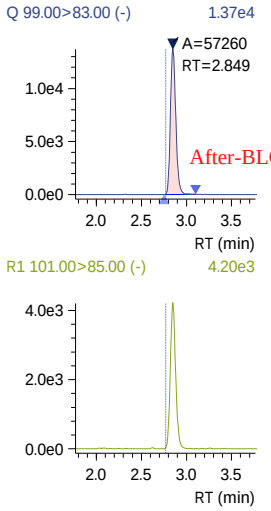
20210428_050

Sample ID: PERCHLORATE7
Date Acquired: 4/28/2021 7:12:36 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210428\20210428_050.lcd
Vial: 21 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	M	2.849	57260	50051	1	9.79458	ng/mL	10.0000	30.74
Sodium Perchlorate-18O4 _IS	Auto	2.848	50051	50051	1	1.00000	ng/mL	1.0000	----

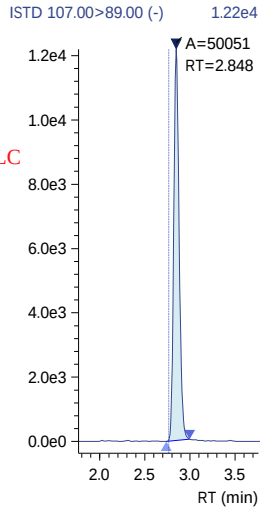
Perchlorate

Conc 9.79458
R#1 30.74 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.00000



Insight Report

Printed at 4/29/2021 1:28:28 PM

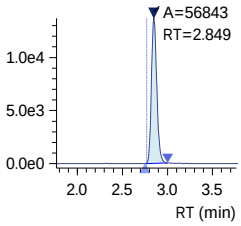
20210428_050

Sample ID: PERCHLORATE7
Date Acquired: 4/28/2021 7:12:36 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210428\Before\20210428_050.lcd
Vial: 21 | Inj. Volume: 25.0000uL | Tray: 1

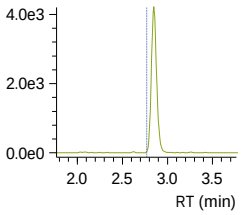
Perchlorate

Conc 9.82335
R#1 30.77 (0.00)

Q 99.00>83.00 (-) 1.37e4



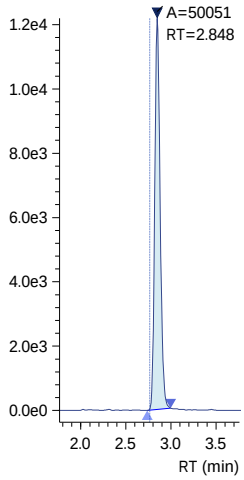
R1 101.00>85.00 (-) 4.20e3



Sodium Perchlorate -18O4_IS

Conc 1.00000

ISTD 107.00>89.00 (-) 1.22e4



Insight Report

Printed at 4/29/2021 1:26:51 PM

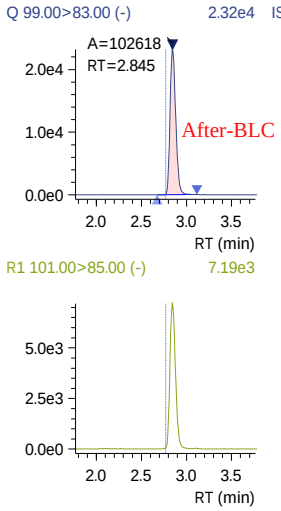
20210428_051

Sample ID: PERCHLORATE8
Date Acquired: 4/28/2021 7:22:01 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210428\20210428_051.lcd
Vial: 28 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	M	2.845	102618	52128	1	16.85388	ng/mL	20.0000	30.96
Sodium Perchlorate-18O4_IS	Auto	2.844	52128	52128	1	1.00000	ng/mL	1.0000	----

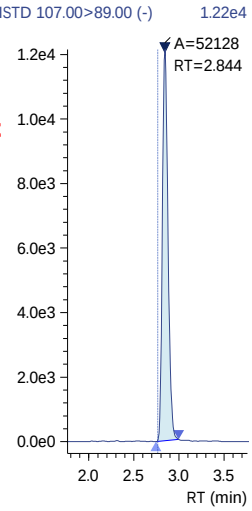
Perchlorate

Conc 16.85388
R#1 30.96 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.00000



Insight Report

Printed at 4/29/2021 1:28:28 PM

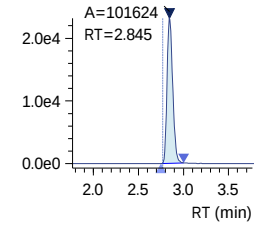
20210428_051

Sample ID: PERCHLORATE8
Date Acquired: 4/28/2021 7:22:01 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210428\Before\20210428_051.lcd
Vial: 28 | Inj. Volume: 25.0000uL | Tray: 1

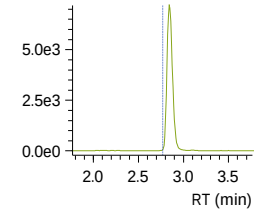
Perchlorate

Conc 16.86268
R#1 30.97 (0.00)

Q 99.00>83.00 (-) 2.32e4



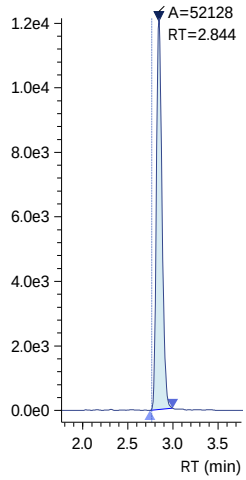
R1 101.00>85.00 (-) 7.19e3



Sodium Perchlorate -18O4_IS

Conc 1.00000

ISTD 107.00>89.00 (-) 1.22e4



Insight Report

Printed at 4/29/2021 1:26:51 PM

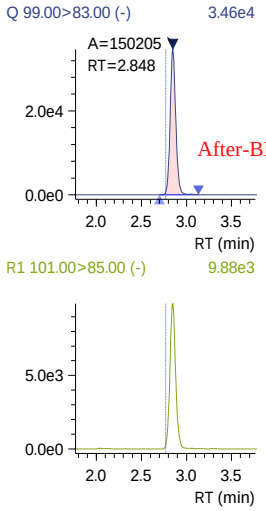
20210428_052

Sample ID: PERCHLORATE9
Date Acquired: 4/28/2021 7:31:24 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210428\20210428_052.lcd
Vial: 29 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	M	2.848	150205	48780	1	26.36258	ng/mL	30.0000	29.04
Sodium Perchlorate-18O4_IS	Auto	2.846	48780	48780	1	1.00000	ng/mL	1.0000	----

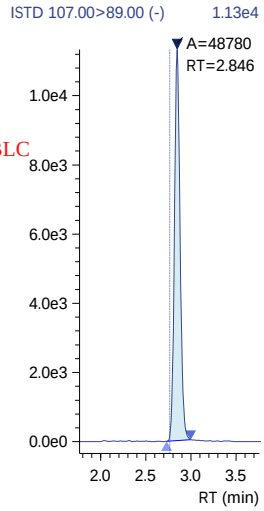
Perchlorate

Conc 26.36258
R#1 29.04 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.00000



Insight Report

Printed at 4/29/2021 1:28:28 PM

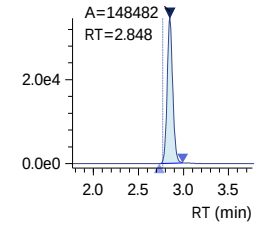
20210428_052

Sample ID: PERCHLORATE9
Date Acquired: 4/28/2021 7:31:24 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210428\Before\20210428_052.lcd
Vial: 29 | Inj. Volume: 25.0000uL | Tray: 1

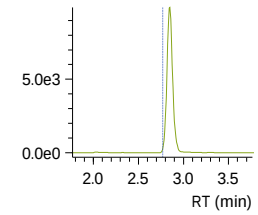
Perchlorate

Conc 26.32873
R#1 29.04 (0.00)

Q 99.00>83.00 (-) 3.46e4



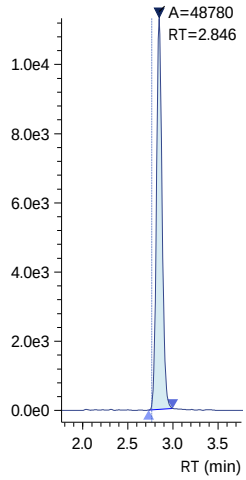
R1 101.00>85.00 (-) 9.88e3



Sodium Perchlorate -18O4_IS

Conc 1.00000

ISTD 107.00>89.00 (-) 1.13e4



Insight Report

Printed at 4/29/2021 1:26:51 PM

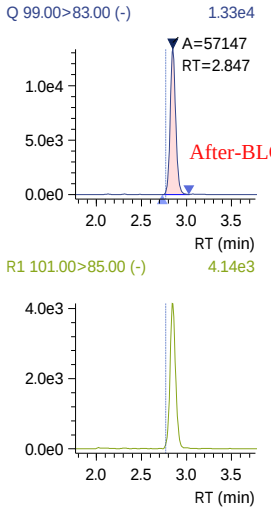
20210428_054

Sample ID: PERCHLORATEICV
Date Acquired: 4/28/2021 7:50:10 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210428\20210428_054.lcd
Vial: 31 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	M	2.847	57147	51740	1	9.45615	ng/mL	10.0000	31.56
Sodium Perchlorate-18O4 _IS	Auto	2.847	51740	51740	1	1.00000	ng/mL	1.0000	----

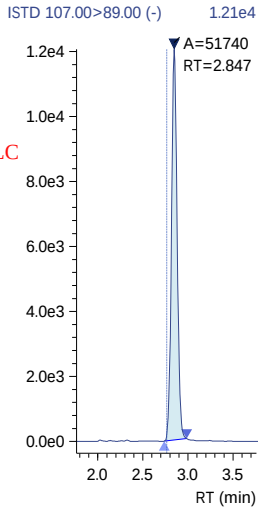
Perchlorate

Conc 9.45615
R#1 31.56 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.00000



Insight Report

Printed at 4/29/2021 1:28:28 PM

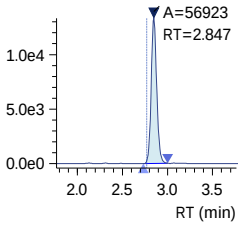
20210428_054

Sample ID: PERCHLORATEICV
Date Acquired: 4/28/2021 7:50:10 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210428\Before\20210428_054.lcd
Vial: 31 | Inj. Volume: 25.0000uL | Tray: 1

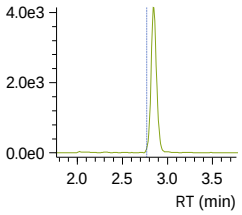
Perchlorate

Conc 9.51618
R#1 31.56 (0.00)

Q 99.00>83.00 (-) 1.33e4



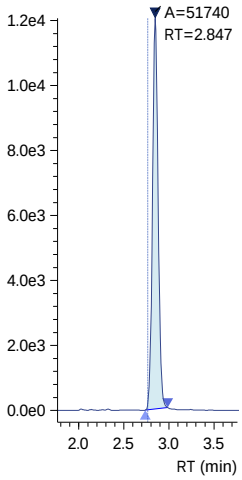
R1 101.00>85.00 (-) 4.14e3



Sodium Perchlorate -18O4_IS

Conc 1.00000

ISTD 107.00>89.00 (-) 1.21e4



Chromatograms and Selected Ion Monitoring

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 320, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

20210430

1st Review: Grivera
2nd Review: Kneir

Injection Log
LCMS01 -Shimadzu 8050

ICAL Date: 4/28/2021
Cal. Std. xp: 5/20/2021
ICAL ID: **EC2100026**

Mobile Phases **A:** 0.75% Formic Acid/Water 3100809-07 **B:** MeOH 216350

			File Name	Acquisition Method	Dilution	R	Comments	Date/Time
1	null		20210430_001	Perchlorate6850b.lcm	1x	☒		4/30/2021 13:53
2	null		20210430_002	Perchlorate6850b.lcm	1x	☒		4/30/2021 14:04
3	IB		20210430_003	Perchlorate6850b.lcm	1x	☒		4/30/2021 14:11
4	IB		20210430_004	Perchlorate6850b.lcm	1x	☒		4/30/2021 14:21
5	ICS		20210430_005	Perchlorate6850b.lcm	1x	☒		4/30/2021 14:30
6	LODV		20210430_006	Perchlorate6850b.lcm	1x	☒		4/30/2021 14:39
7	PERCHLORATE7		20210430_007	Perchlorate6850b.lcm	1x	☒	3100809-02	4/30/2021 14:49
8	EQ2100261-01		20210430_008	Perchlorate6850b.lcm	1x	☒		4/30/2021 15:04
9	EQ2100261-02		20210430_009	Perchlorate6850b.lcm	1x	☒		4/30/2021 15:13
10	EQ2100261-03		20210430_010	Perchlorate6850b.lcm	1x	☒		4/30/2021 15:23
11	EQ2100261-04		20210430_011	Perchlorate6850b.lcm	1x	☒		4/30/2021 15:32
12	EQ2100261-05		20210430_012	Perchlorate6850b.lcm	1x	☒		4/30/2021 15:42
13	E2100458-001		20210430_013	Perchlorate6850b.lcm	1x	☒		4/30/2021 15:51
14	E2100459-001DNU		20210430_014	Perchlorate6850b.lcm	1x	☒	DNU:INST failed	4/30/2021 16:00
15	E2100459-002DNU		20210430_015	Perchlorate6850b.lcm	1x	☒	DNU:INST failed	4/30/2021 16:10
16	E2100459-003		20210430_016	Perchlorate6850b.lcm	1x	☒		4/30/2021 16:19
17	E2100459-004		20210430_017	Perchlorate6850b.lcm	1x	☒		4/30/2021 16:29
18	PERCHLORATE7		20210430_018	Perchlorate6850b.lcm	1x	☒	3100809-02	4/30/2021 16:38
19	E2100459-005		20210430_019	Perchlorate6850b.lcm	1x	☒		4/30/2021 16:47
20	E2100459-006		20210430_020	Perchlorate6850b.lcm	1x	☒		4/30/2021 16:57
21	E2100459-007DNU		20210430_021	Perchlorate6850b.lcm	1x	☒	DNU:Over Ical Range	4/30/2021 17:06
22	E2100459-008DNU		20210430_022	Perchlorate6850b.lcm	1x	☒	DNU:Over Ical Range	4/30/2021 17:16
23	E2100459-009		20210430_023	Perchlorate6850b.lcm	1x	☒		4/30/2021 17:25
24	E2100459-010-DNU		20210430_024	Perchlorate6850b.lcm	1x	☒	DNU-INST failed	4/30/2021 17:34
25	E2100486-001		20210430_025	Perchlorate6850b.lcm	1x	☒		4/30/2021 17:44
26	E2100486-002		20210430_026	Perchlorate6850b.lcm	1x	☒		4/30/2021 17:53
27	E2100486-003		20210430_027	Perchlorate6850b.lcm	1x	☒		4/30/2021 18:02
28	PERCHLORATE7		20210430_028	Perchlorate6850b.lcm	1x	☒	3100809-02	4/30/2021 18:12
29	E2100486-004		20210430_029	Perchlorate6850b.lcm	1x	☒		4/30/2021 18:21
30	E2100486-005		20210430_030	Perchlorate6850b.lcm	1x	☒		4/30/2021 18:31
31	E2100486-006		20210430_031	Perchlorate6850b.lcm	1x	☒		4/30/2021 18:40
32	E2100486-007		20210430_032	Perchlorate6850b.lcm	1x	☒		4/30/2021 18:49
33	PERCHLORATE7		20210430_033	Perchlorate6850b.lcm	1x	☒	3100809-02	4/30/2021 18:59
34	EQ2100262-01		20210430_034	Perchlorate6850b.lcm	1x	☒		4/30/2021 19:08
35	EQ2100262-02		20210430_035	Perchlorate6850b.lcm	1x	☒		4/30/2021 19:18
36	EQ2100262-03		20210430_036	Perchlorate6850b.lcm	1x	☒		4/30/2021 19:27
37	EQ2100262-04DNU		20210430_037	Perchlorate6850b.lcm	1x	☒	DNU-INST failed	4/30/2021 19:36
38	EQ2100262-05DNU		20210430_038	Perchlorate6850b.lcm	1x	☒	DNU-INST failed	4/30/2021 19:46
39	E2100460-001		20210430_039	Perchlorate6850b.lcm	1x	☒		4/30/2021 19:55
40	E2100460-002		20210430_040	Perchlorate6850b.lcm	1x	☒		4/30/2021 20:05
41	E2100460-003		20210430_041	Perchlorate6850b.lcm	1x	☒		4/30/2021 20:14
42	E2100460-004		20210430_042	Perchlorate6850b.lcm	1x	☒		4/30/2021 20:23
43	E2100460-005		20210430_043	Perchlorate6850b.lcm	1x	☒		4/30/2021 20:33
44	PERCHLORATE7		20210430_044	Perchlorate6850b.lcm	1x	☒	3100809-02	4/30/2021 20:42
45	E2100460-006DNU		20210430_045	Perchlorate6850b.lcm	1x	☒	DNU-INST failed	4/30/2021 20:52
46	E2100460-007DNU		20210430_046	Perchlorate6850b.lcm	1x	☒	DNU-INST failed	4/30/2021 21:01
47	E2100460-008		20210430_047	Perchlorate6850b.lcm	1x	☒		4/30/2021 21:10
48	E2100461-001DNU		20210430_048	Perchlorate6850b.lcm	1x	☒	DNU-INST failed	4/30/2021 21:20
49	E2100461-002DNU		20210430_049	Perchlorate6850b.lcm	1x	☒	DNU-INST failed	4/30/2021 21:29
50	E2100461-003DNU		20210430_050	Perchlorate6850b.lcm	1x	☒	DNU-INST failed	4/30/2021 21:38
51	E2100461-004DNU		20210430_051	Perchlorate6850b.lcm	1x	☒	DNU-INST failed	4/30/2021 21:48
52	E2100464-001DNU		20210430_052	Perchlorate6850b.lcm	1x	☒	DNU-Over Ical Range	4/30/2021 21:57
53	E2100464-002		20210430_053	Perchlorate6850b.lcm	1x	☒		4/30/2021 22:07
54	E2100464-003DNU		20210430_054	Perchlorate6850b.lcm	1x	☒	DNU-INST failed	4/30/2021 22:16
55	PERCHLORATE7		20210430_055	Perchlorate6850b.lcm	1x	☒	3100809-02	4/30/2021 22:25
56	E2100464-004DNU		20210430_056	Perchlorate6850b.lcm	1x	☒	DNU-INST failed	4/30/2021 22:35
57	E2100464-005DNU		20210430_057	Perchlorate6850b.lcm	1x	☒	DNU-INST failed	4/30/2021 22:44
58	E2100464-006		20210430_058	Perchlorate6850b.lcm	1x	☒		4/30/2021 22:53
59	PERCHLORATE7		20210430_059	Perchlorate6850b.lcm	1x	☒	3100809-02	4/30/2021 23:03
60								

20210501

1st Review: Grivera
2nd Review: Kneir

ALS Environmental

Injection Log
LCMS01 -Shimadzu 8050

ICAL Date: 4/28/2021
Cal. Std. xp: 5/20/2021
ICAL ID: **EC2100026**

Mobile Phases **A:** 0.75% Formic Acid/Water 3100809-07 **B:** MeOH 216350

			File Name	Acquisition Method	Dilution	R	Comments	Date/Time
1	null		20210501_001	Perchlorate6850b.lcm	1x	☒		5/1/2021 12:07
2	null		20210501_002	Perchlorate6850b.lcm	1x	☒		5/1/2021 12:13
3	IB		20210501_003	Perchlorate6850b.lcm	1x	☒		5/1/2021 12:19
4	IB		20210501_004	Perchlorate6850b.lcm	1x	☒		5/1/2021 12:29
5	ICS		20210501_005	Perchlorate6850b.lcm	1x	☒		5/1/2021 12:38
6	LODV		20210501_006	Perchlorate6850b.lcm	1x	☒		5/1/2021 12:48
7	PERCHLORATE7		20210501_007	Perchlorate6850b.lcm	1x	☒	3100809-02	5/1/2021 13:04
8	E2100459-001X5		20210501_008	Perchlorate6850b.lcm	5x	☒		5/1/2021 13:14
9	E2100459-002X5		20210501_009	Perchlorate6850b.lcm	5x	☒		5/1/2021 13:23
10	E2100459-007X10		20210501_010	Perchlorate6850b.lcm	10x	☒		5/1/2021 13:32
11	E2100459-008X2		20210501_011	Perchlorate6850b.lcm	2x	☒		5/1/2021 13:42
12	E2100459-010X10		20210501_012	Perchlorate6850b.lcm	10x	☒		5/1/2021 13:51
13	PERCHLORATE7		20210501_013	Perchlorate6850b.lcm	1x	☒	3100809-02	5/1/2021 14:01
14	EQ2100262-04X5		20210501_014	Perchlorate6850b.lcm	5x	☒		5/1/2021 14:10
15	EQ2100262-05X5		20210501_015	Perchlorate6850b.lcm	5x	☒		5/1/2021 14:19
16	E2100460-006X2		20210501_016	Perchlorate6850b.lcm	2x	☒		5/1/2021 14:29
17	E2100460-007X2DNU		20210501_017	Perchlorate6850b.lcm	2x	☒	DNU:INST failed	5/1/2021 14:38
18	E2100461-001X5		20210501_018	Perchlorate6850b.lcm	5x	☒	3100809-02	5/1/2021 14:48
19	E2100461-002X5		20210501_019	Perchlorate6850b.lcm	5x	☒		5/1/2021 14:57
20	E2100461-003X5		20210501_020	Perchlorate6850b.lcm	5x	☒		5/1/2021 15:06
21	E2100461-004X5		20210501_021	Perchlorate6850b.lcm	5x	☒		5/1/2021 15:16
22	E2100464-001X2		20210501_022	Perchlorate6850b.lcm	2x	☒		5/1/2021 15:25
23	E2100464-003X2		20210501_023	Perchlorate6850b.lcm	2x	☒		5/1/2021 15:35
24	PERCHLORATE7		20210501_024	Perchlorate6850b.lcm	1x	☒	3100809-02	5/1/2021 15:44
25	E2100464-004X2		20210501_025	Perchlorate6850b.lcm	2x	☒		5/1/2021 15:53
26	E2100464-005X2		20210501_026	Perchlorate6850b.lcm	2x	☒		5/1/2021 16:03
27	PERCHLORATE7		20210501_027	Perchlorate6850b.lcm	1x	☒	3100809-02	5/1/2021 16:12
28	EQ2100263-01		20210501_028	Perchlorate6850b.lcm	1x	☒		5/1/2021 16:22
29	EQ2100263-02		20210501_029	Perchlorate6850b.lcm	1x	☒		5/1/2021 16:31
30	EQ2100263-03		20210501_030	Perchlorate6850b.lcm	1x	☒		5/1/2021 16:40
31	E2100469-001		20210501_031	Perchlorate6850b.lcm	1x	☒		5/1/2021 16:50
32	E2100469-002DNU		20210501_032	Perchlorate6850b.lcm	1x	☒	DNU:INST failed	5/1/2021 16:59
33	E2100469-003		20210501_033	Perchlorate6850b.lcm	1x	☒	3100809-02	5/1/2021 17:09
34	E2100469-004		20210501_034	Perchlorate6850b.lcm	1x	☒		5/1/2021 17:18
35	E2100469-005		20210501_035	Perchlorate6850b.lcm	1x	☒		5/1/2021 17:27
36	E2100469-006		20210501_036	Perchlorate6850b.lcm	1x	☒		5/1/2021 17:37
37	E2100469-007DNU		20210501_037	Perchlorate6850b.lcm	1x	☒	DNU-Over ICAL range	5/1/2021 17:46
38	PERCHLORATE7		20210501_038	Perchlorate6850b.lcm	1x	☒	3100809-02	5/1/2021 17:56
39	E2100470-001DNU		20210501_039	Perchlorate6850b.lcm	1x	☒	DNU:INST failed	5/1/2021 18:05
40	E2100470-002DNU		20210501_040	Perchlorate6850b.lcm	1x	☒	DNU-Over ICAL range	5/1/2021 18:14
41	E2100492-001-DNU		20210501_041	Perchlorate6850b.lcm	1x	☒		5/1/2021 18:24
42	E2100492-002-DNU		20210501_042	Perchlorate6850b.lcm	1x	☒		5/1/2021 18:33
43	E2100492-003-DNU		20210501_043	Perchlorate6850b.lcm	1x	☒		5/1/2021 18:43
44	E2100492-004-DNU		20210501_044	Perchlorate6850b.lcm	1x	☒		5/1/2021 18:52
45	E2100492-005-DNU		20210501_045	Perchlorate6850b.lcm	1x	☒		5/1/2021 19:01
46	E2100492-006-DNU		20210501_046	Perchlorate6850b.lcm	1x	☒		5/1/2021 19:11
47	E2100493-001-DNU		20210501_047	Perchlorate6850b.lcm	1x	☒		5/1/2021 19:20
48	PERCHLORATE7		20210501_048	Perchlorate6850b.lcm	1x	☒	3100809-02	5/1/2021 19:30
49								

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS21041102

Service Request: E2100459
Date Analyzed: 4/30/21

Continuing Calibration Verification Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
File ID: I:\LCMS01\DATA\20210430\20210430_007

Calibration Date: 4/28/21
Calibration ID: EC2100026
Analysis Lot: 722059
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	9.34	0.1168	0.1091	-6.6	NA	± 15 %	Average RF

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS21041102

Service Request: E2100459
Date Analyzed: 4/30/21

Continuing Calibration Verification Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
File ID: I:\LCMS01\DATA\20210430\20210430_018

Calibration Date: 4/28/21
Calibration ID: EC2100026
Analysis Lot: 722059
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	9.85	0.1168	0.1151	-1.5	NA	± 15 %	Average RF

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS21041102

Service Request: E2100459
Date Analyzed: 4/30/21

Continuing Calibration Verification Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
File ID: I:\LCMS01\DATA\20210430\20210430_028

Calibration Date: 4/28/21
Calibration ID: EC2100026
Analysis Lot: 722059
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	9.92	0.1168	0.1158	-0.9	NA	± 15 %	Average RF

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS21041102

Service Request: E2100459
Date Analyzed: 4/30/21

Continuing Calibration Verification Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
File ID: I:\LCMS01\DATA\20210430\20210430_033

Calibration Date: 4/28/21
Calibration ID: EC2100026
Analysis Lot: 722059
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	9.83	0.1168	0.1149	-1.7	NA	± 15 %	Average RF

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS21041102

Service Request: E2100459
Date Analyzed: 5/ 1/21

Continuing Calibration Verification Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
File ID: I:\LCMS01\DATA\20210501\20210501_007

Calibration Date: 4/28/21
Calibration ID: EC2100026
Analysis Lot: 722220
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	9.87	0.1168	0.1153	-1.3	NA	± 15 %	Average RF

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS21041102

Service Request: E2100459
Date Analyzed: 5/ 1/21

Continuing Calibration Verification Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
File ID: I:\LCMS01\DATA\20210501\20210501_013

Calibration Date: 4/28/21
Calibration ID: EC2100026
Analysis Lot: 722220
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	9.23	0.1168	0.1079	-7.7	NA	± 15 %	Average RF

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS21041102

Service Request: E2100459
Date Analyzed: 5/ 1/21

Continuing Calibration Verification Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
File ID: I:\LCMS01\DATA\20210501\20210501_024

Calibration Date: 4/28/21
Calibration ID: EC2100026
Analysis Lot: 722220
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	9.49	0.1168	0.1109	-5.1	NA	± 15 %	Average RF

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS21041102

Service Request: E2100459
Date Analyzed: 5/ 1/21

Continuing Calibration Verification Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
File ID: I:\LCMS01\DATA\20210501\20210501_027

Calibration Date: 4/28/21
Calibration ID: EC2100026
Analysis Lot: 722220
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	9.12	0.1168	0.1065	-8.8	NA	± 15 %	Average RF

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS21041102

Service Request: E2100459
Date Analyzed: 5/ 1/21

Continuing Calibration Verification Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
File ID: I:\LCMS01\DATA\20210501\20210501_038

Calibration Date: 4/28/21
Calibration ID: EC2100026
Analysis Lot: 722220
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	9.74	0.1168	0.1138	-2.6	NA	± 15 %	Average RF

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2100459
Project:	HS21041102	**Date Analyzed:**	4/30/21 14:49

Internal Standard Area and RT Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

File ID:	I:\LCMS01\DATA\20210430\20210430_007	**Lab Code:**	EQ2100269-01
Instrument ID:	E-LCMS-01	**Analysis Lot:**	722059
Analytical Method:	6850	**Signal ID:**	1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	52,454	2.85
	Upper Limit ==>	78,681	4.85
	Lower Limit ==>	26,227	0.85
Associated Analyses			
Continuing Calibration Verification	EQ2100269-01	56,664	2.85
Method Blank	EQ2100261-01	51,594	2.71
Lab Control Sample	EQ2100261-02	54,515	2.85
Duplicate Lab Control Sample	EQ2100261-03	53,357	2.84
16WW26-210420	E2100459-003	56,048	2.86
16WW29-210420	E2100459-004	30,126	2.86

Results flagged with an asterisk (*) indicate values outside control criteria.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2100459
Project:	HS21041102	**Date Analyzed:**	4/30/21 16:38

Internal Standard Area and RT Summary

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

File ID:	I:\LCMS01\DATA\20210430\20210430_018	**Lab Code:**	EQ2100269-02
Instrument ID:	E-LCMS-01	**Analysis Lot:**	722059
Analytical Method:	6850	**Signal ID:**	1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	52,454	2.85
	Upper Limit ==>	78,681	4.85
	Lower Limit ==>	26,227	0.85
Associated Analyses			
Continuing Calibration Verification	EQ2100269-02	48,870	2.84
16WW29-210420-FD	E2100459-005	31,301	2.86
16WW30-210420	E2100459-006	71,420	2.82
16RW09-210420	E2100459-009	60,268	2.84

Results flagged with an asterisk (*) indicate values outside control criteria.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2100459
Project:	HS21041102	**Date Analyzed:**	4/30/21 18:12

Internal Standard Area and RT Summary

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

File ID:	I:\LCMS01\DATA\20210430\20210430_028	**Lab Code:**	EQ2100269-03
Instrument ID:	E-LCMS-01	**Analysis Lot:**	722059
Analytical Method:	6850	**Signal ID:**	1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	52,454	2.85
	Upper Limit ==>	78,681	4.85
	Lower Limit ==>	26,227	0.85
Associated Analyses			
Continuing Calibration Verification	EQ2100269-03	49,766	2.84

Results flagged with an asterisk (*) indicate values outside control criteria.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2100459
Project:	HS21041102	**Date Analyzed:**	4/30/21 18:59

Internal Standard Area and RT Summary

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

File ID:	I:\LCMS01\DATA\20210430\20210430_033	**Lab Code:**	EQ2100269-04
Instrument ID:	E-LCMS-01	**Analysis Lot:**	722059
Analytical Method:	6850	**Signal ID:**	1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	52,454	2.85
	Upper Limit ==>	78,681	4.85
	Lower Limit ==>	26,227	0.85
Associated Analyses			
Continuing Calibration Verification	EQ2100269-04	52,539	2.84

Results flagged with an asterisk (*) indicate values outside control criteria.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS21041102

Service Request: E2100459
Date Analyzed: 5/1/21 13:04

Internal Standard Area and RT Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

File ID: I:\LCMS01\DATA\20210501\20210501_007
Instrument ID: E-LCMS-01
Analytical Method: 6850

Lab Code: EQ2100272-01
Analysis Lot: 722220
Signal ID: 1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	52,454	2.85
	Upper Limit ==>	78,681	4.85
	Lower Limit ==>	26,227	0.85
Associated Analyses			
Continuing Calibration Verification	EQ2100272-01	51,400	2.71
16WW25-210420	E2100459-001	39,830	2.87
16WW25-210420-FD	E2100459-002	38,598	2.87
16WW55-210420	E2100459-007	70,639	2.85
16RW10-210420	E2100459-008	58,479	2.86
16IW03-210420	E2100459-010	27,883	2.85

Results flagged with an asterisk (*) indicate values outside control criteria.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2100459
Project:	HS21041102	**Date Analyzed:**	5/1/21 14:01

Internal Standard Area and RT Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

File ID:	I:\LCMS01\DATA\20210501\20210501_013	**Lab Code:**	EQ2100272-02
Instrument ID:	E-LCMS-01	**Analysis Lot:**	722220
Analytical Method:	6850	**Signal ID:**	1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	52,454	2.85
	Upper Limit ==>	78,681	4.85
	Lower Limit ==>	26,227	0.85
Associated Analyses			
Continuing Calibration Verification	EQ2100272-02	46,369	2.84

Results flagged with an asterisk (*) indicate values outside control criteria.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2100459
Project:	HS21041102	**Date Analyzed:**	5/1/21 15:44

Internal Standard Area and RT Summary

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

File ID:	I:\LCMS01\DATA\20210501\20210501_024	**Lab Code:**	EQ2100272-03
Instrument ID:	E-LCMS-01	**Analysis Lot:**	722220
Analytical Method:	6850	**Signal ID:**	1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	52,454	2.85
	Upper Limit ==>	78,681	4.85
	Lower Limit ==>	26,227	0.85
Associated Analyses			
Continuing Calibration Verification	EQ2100272-03	45,961	2.85

Results flagged with an asterisk (*) indicate values outside control criteria.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2100459
Project:	HS21041102	**Date Analyzed:**	5/1/21 16:12

Internal Standard Area and RT Summary

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

File ID:	I:\LCMS01\DATA\20210501\20210501_027	**Lab Code:**	EQ2100272-04
Instrument ID:	E-LCMS-01	**Analysis Lot:**	722220
Analytical Method:	6850	**Signal ID:**	1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	52,454	2.85
	Upper Limit ==>	78,681	4.85
	Lower Limit ==>	26,227	0.85
Associated Analyses			
Continuing Calibration Verification	EQ2100272-04	41,773	2.85

Results flagged with an asterisk (*) indicate values outside control criteria.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2100459
Project:	HS21041102	**Date Analyzed:**	5/1/21 17:56

Internal Standard Area and RT Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

File ID:	I:\LCMS01\DATA\20210501\20210501_038	**Lab Code:**	EQ2100272-05
Instrument ID:	E-LCMS-01	**Analysis Lot:**	722220
Analytical Method:	6850	**Signal ID:**	1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	52,454	2.85
	Upper Limit ==>	78,681	4.85
	Lower Limit ==>	26,227	0.85
Associated Analyses			
Continuing Calibration Verification	EQ2100272-05	42,418	2.85

Results flagged with an asterisk (*) indicate values outside control criteria.

Insight Report

Printed at 5/3/2021 9:29:52 AM

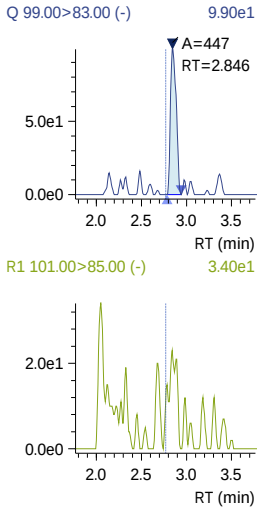
20210430_006

Sample ID: LODV
Date Acquired: 4/30/2021 2:39:54 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210430\20210430_006.lcd
Vial: 20 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.846	447	64733	1	0.05905	ng/mL	----	12.12
Sodium Perchlorate-18O4 _IS	Auto	2.845	64733	64733	1	1.00000	ng/mL	----	----

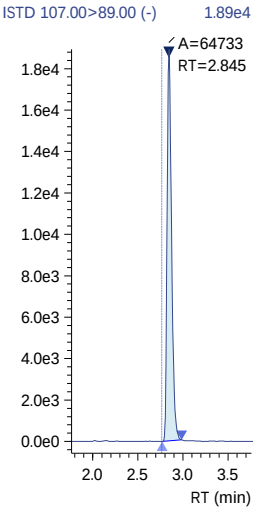
Perchlorate

Conc 0.05905
R#1 12.12 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.00000



Insight Report

Printed at 5/3/2021 9:31:38 AM

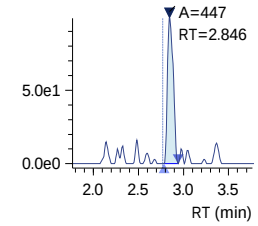
20210430_006

Sample ID: LODV
Date Acquired: 4/30/2021 2:39:54 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210430\Before\20210430_006.lcd
Vial: 20 | Inj. Volume: 25.0000uL | Tray: 1

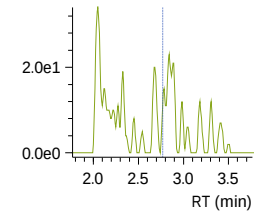
Perchlorate

Conc 0.05905
R#1 12.12 (0.00)

Q 99.00>83.00 (-) 9.90e1



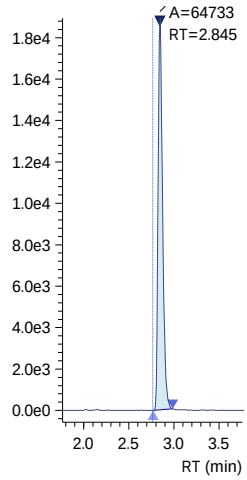
R1 101.00>85.00 (-) 3.40e1



Sodium Perchlorate -18O4_IS

Conc 1.00000

ISTD 107.00>89.00 (-) 1.89e4



Insight Report

Printed at 5/3/2021 9:29:52 AM

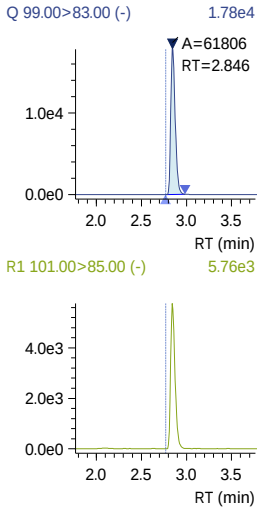
20210430_007

Sample ID: PERCHLORATE7
Date Acquired: 4/30/2021 2:49:18 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210430\20210430_007.lcd
Vial: 21 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.846	61806	56664	1	9.33832	ng/mL	10.0000	32.34
Sodium Perchlorate-18O4 _IS	Auto	2.845	56664	56664	1	1.00000	ng/mL	1.0000	----

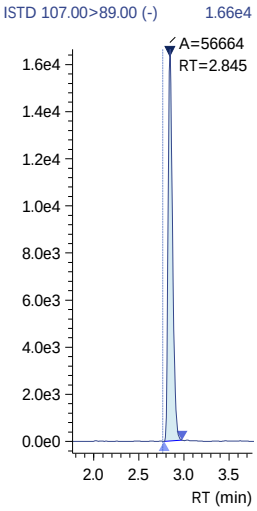
Perchlorate

Conc 9.33832
R#1 32.34 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.00000



Insight Report

Printed at 5/3/2021 9:31:38 AM

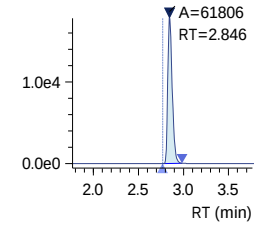
20210430_007

Sample ID: PERCHLORATE7
Date Acquired: 4/30/2021 2:49:18 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210430\Before\20210430_007.lcd
Vial: 21 | Inj. Volume: 25.0000uL | Tray: 1

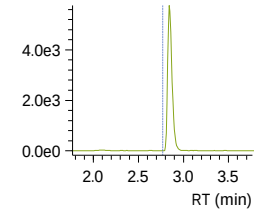
Perchlorate

Conc 9.33832
R#1 32.34 (0.00)

Q 99.00>83.00 (-) 1.78e4



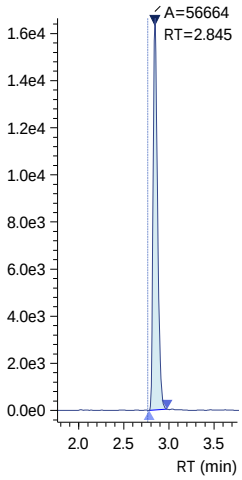
R1 101.00>85.00 (-) 5.76e3



Sodium Perchlorate -18O4_IS

Conc 1.00000

ISTD 107.00>89.00 (-) 1.66e4



Insight Report

Printed at 5/3/2021 9:29:52 AM

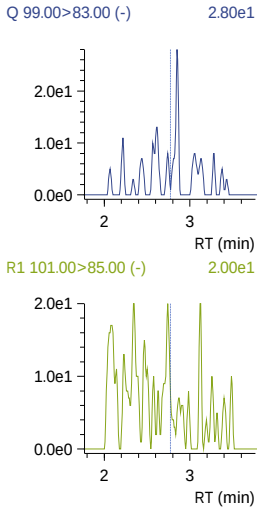
20210430_008

Sample ID: EQ2100261-01
Date Acquired: 4/30/2021 3:04:24 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210430\20210430_008.lcd
Vial: 16 | Inj. Volume: 25.0000uL | Tray: 2

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	ND(W/B)	----	----	51594	1	----	ng/mL	----	----
Sodium Perchlorate-18O4_IS	Auto	2.707	51594	51594	1	1.00000	ng/mL	----	----

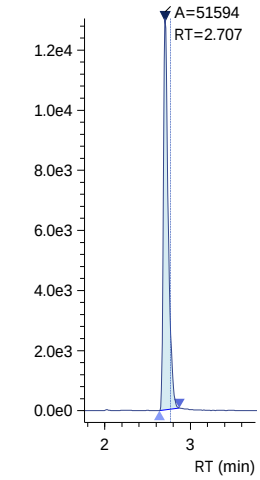
Perchlorate

Conc ----
R#1 ---- (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.00000



Insight Report

Printed at 5/3/2021 9:31:38 AM

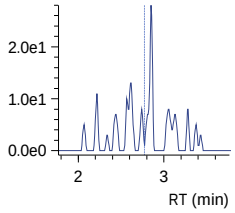
20210430_008

Sample ID: EQ2100261-01
Date Acquired: 4/30/2021 3:04:24 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210430\Before\20210430_008.lcd
Vial: 16 | Inj. Volume: 25.0000uL | Tray: 2

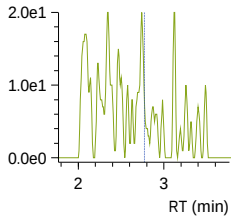
Perchlorate

Conc ----
R#1 ---- (0.00)

Q 99.00>83.00 (-) 2.80e1



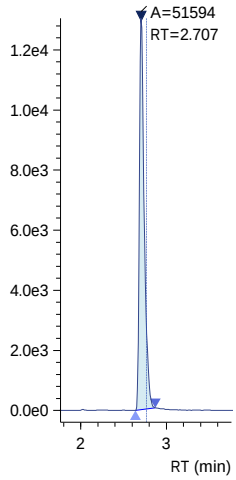
R1 101.00>85.00 (-) 2.00e1



Sodium Perchlorate -18O4_IS

Conc 1.00000

ISTD 107.00>89.00 (-) 1.31e4



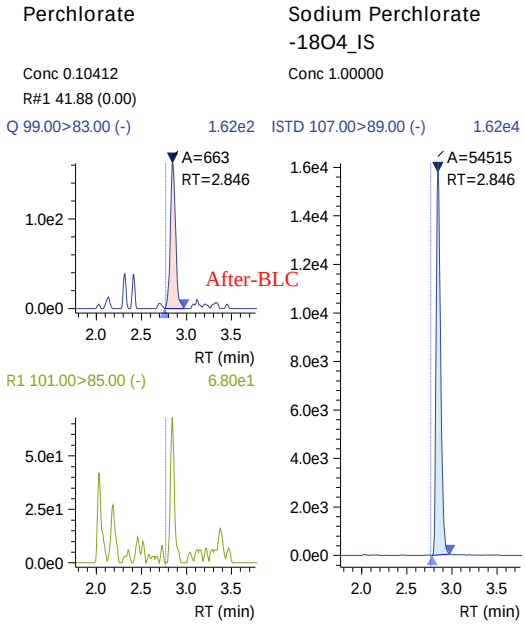
Insight Report

Printed at 5/3/2021 9:29:52 AM

20210430_009

Sample ID: EQ2100261-02
Date Acquired: 4/30/2021 3:13:49 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210430\20210430_009.lcd
Vial: 17 | Inj. Volume: 25.0000uL | Tray: 2

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	M	2.846	663	54515	1	0.10412	ng/mL	----	41.88
Sodium Perchlorate-18O4 _IS	Auto	2.846	54515	54515	1	1.00000	ng/mL	----	----



Insight Report

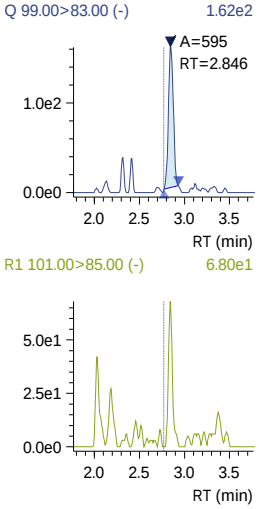
Printed at 5/3/2021 9:31:38 AM

20210430_009

Sample ID: EQ2100261-02
Date Acquired: 4/30/2021 3:13:49 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210430\Before\20210430_009.lcd
Vial: 17 | Inj. Volume: 25.0000uL | Tray: 2

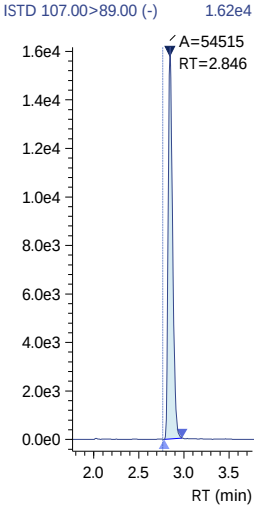
Perchlorate

Conc 0.09344
R#1 43.51 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.00000



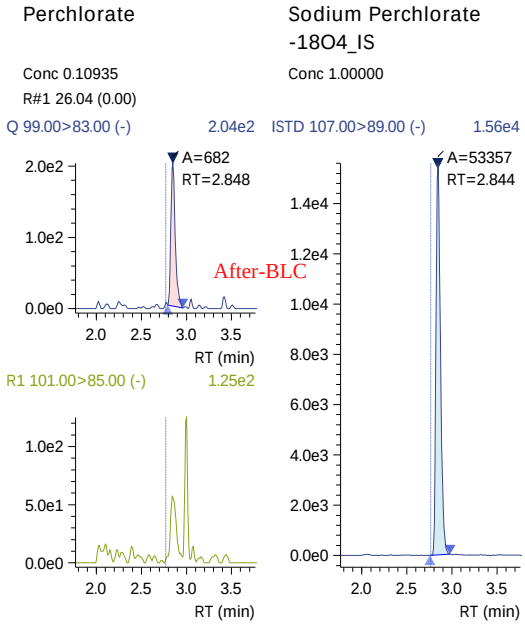
Insight Report

Printed at 5/3/2021 9:29:52 AM

20210430_010

Sample ID: EQ2100261-03
Date Acquired: 4/30/2021 3:23:13 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210430\20210430_010.lcd
Vial: 18 | Inj. Volume: 25.0000uL | Tray: 2

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	M	2.848	682	53357	1	0.10935	ng/mL	----	26.04
Sodium Perchlorate-18O4 _IS	Auto	2.844	53357	53357	1	1.00000	ng/mL	----	----



Insight Report

Printed at 5/3/2021 9:31:38 AM

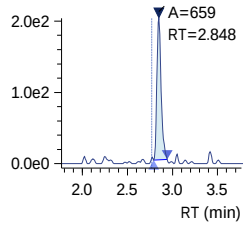
20210430_010

Sample ID: EQ2100261-03
Date Acquired: 4/30/2021 3:23:13 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210430\Before\20210430_010.lcd
Vial: 18 | Inj. Volume: 25.0000uL | Tray: 2

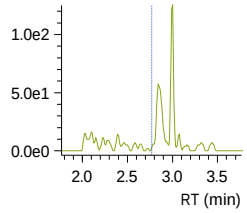
Perchlorate

Conc 0.10570
R#1 25.65 (0.00)

Q 99.00>83.00 (-) 2.04e2



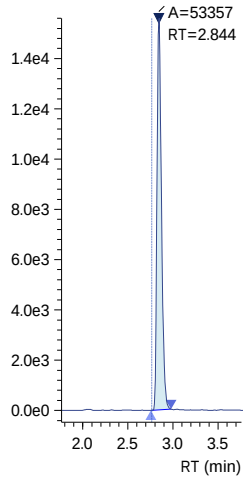
R1 101.00>85.00 (-) 1.25e2



Sodium Perchlorate -18O4_IS

Conc 1.00000

ISTD 107.00>89.00 (-) 1.56e4



Insight Report

Printed at 5/3/2021 9:29:52 AM

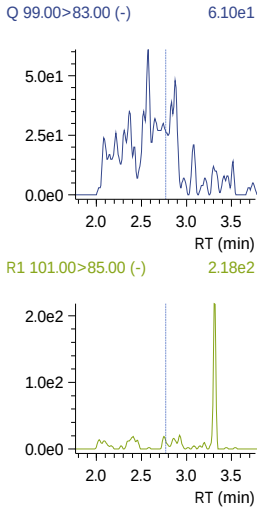
20210430_016

Sample ID: E2100459-003
Date Acquired: 4/30/2021 4:19:39 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210430\20210430_016.lcd
Vial: 24 | Inj. Volume: 25.0000uL | Tray: 2

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	ND(W/B)	----	----	56048	1	----	ng/mL	----	----
Sodium Perchlorate-18O4_IS	Auto	2.861	56048	56048	1	1.00000	ng/mL	----	----

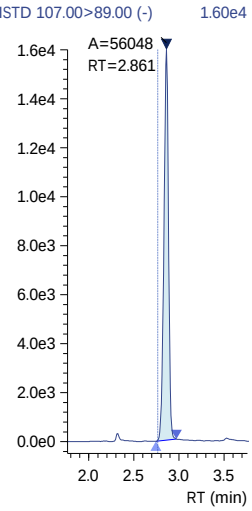
Perchlorate

Conc ----
R#1 ---- (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.00000



Insight Report

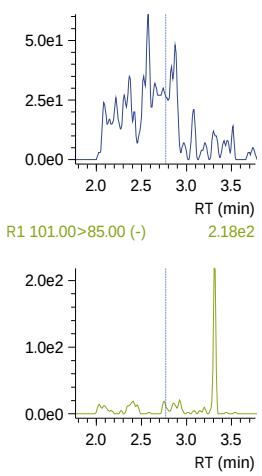
Printed at 5/3/2021 9:31:38 AM

20210430_016

Sample ID: E2100459-003
Date Acquired: 4/30/2021 4:19:39 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210430\Before\20210430_016.lcd
Vial: 24 | Inj. Volume: 25.0000uL | Tray: 2

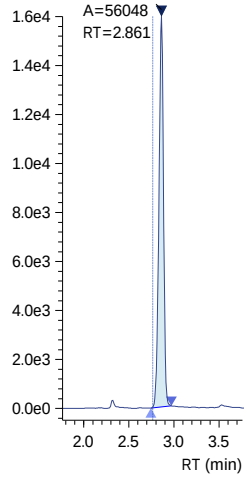
Perchlorate

Conc ----
R#1 ---- (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.00000



Insight Report

Printed at 5/3/2021 9:29:52 AM

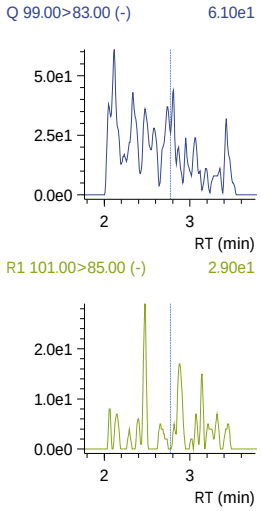
20210430_017

Sample ID: E2100459-004
Date Acquired: 4/30/2021 4:29:02 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210430\20210430_017.lcd
Vial: 25 | Inj. Volume: 25.0000uL | Tray: 2

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	ND(W/B)	----	----	30126	1	----	ng/mL	----	----
Sodium Perchlorate-18O4_IS	Auto	2.862	30126	30126	1	1.00000	ng/mL	----	----

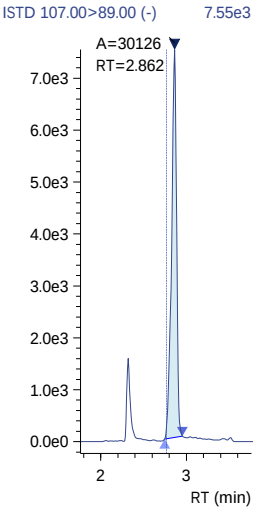
Perchlorate

Conc ----
R#1 ---- (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.00000



Insight Report

Printed at 5/3/2021 9:31:38 AM

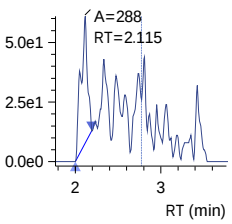
20210430_017

Sample ID: E2100459-004
Date Acquired: 4/30/2021 4:29:02 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210430\Before\20210430_017.lcd
Vial: 25 | Inj. Volume: 25.0000uL | Tray: 2

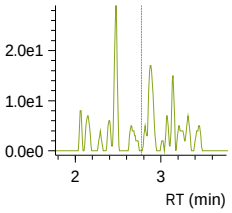
Perchlorate

Conc ----
R#1 ---- (0.00)

Q 99.00>83.00 (-) 6.10e1



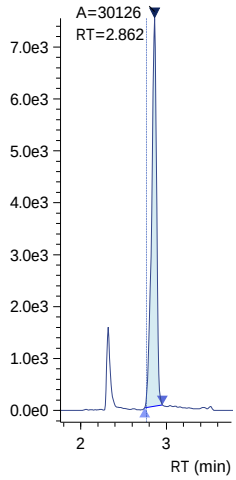
R1 101.00>85.00 (-) 2.90e1



Sodium Perchlorate -18O4_IS

Conc 1.00000

ISTD 107.00>89.00 (-) 7.55e3



Insight Report

Printed at 5/3/2021 9:29:52 AM

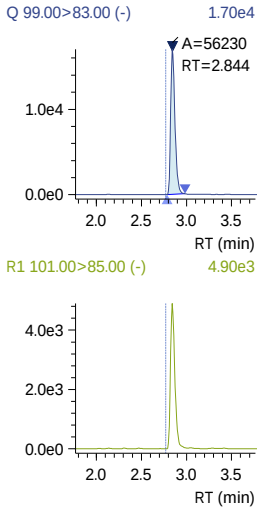
20210430_018

Sample ID: PERCHLORATE7
Date Acquired: 4/30/2021 4:38:26 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210430\20210430_018.lcd
Vial: 21 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.844	56230	48870	1	9.85065	ng/mL	10.0000	28.81
Sodium Perchlorate-18O4 _IS	Auto	2.844	48870	48870	1	1.00000	ng/mL	1.0000	----

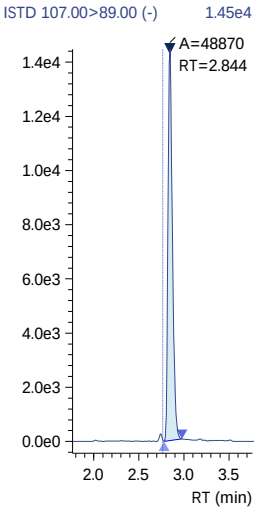
Perchlorate

Conc 9.85065
R#1 28.81 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.00000



Insight Report

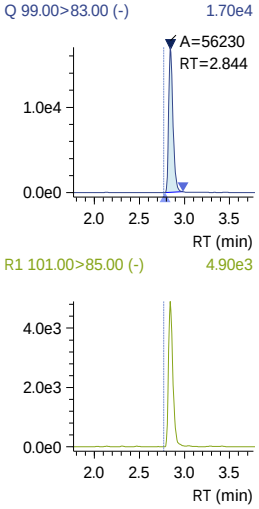
Printed at 5/3/2021 9:31:38 AM

20210430_018

Sample ID: PERCHLORATE7
Date Acquired: 4/30/2021 4:38:26 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210430\Before\20210430_018.lcd
Vial: 21 | Inj. Volume: 25.0000uL | Tray: 1

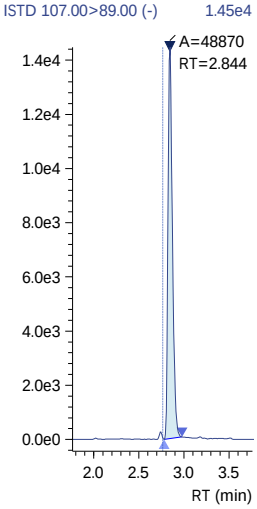
Perchlorate

Conc 9.85065
R#1 28.81 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.00000



Insight Report

Printed at 5/3/2021 9:29:52 AM

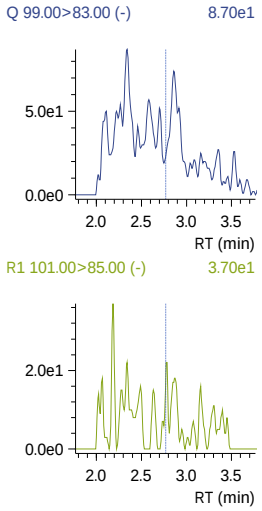
20210430_019

Sample ID: E2100459-005
Date Acquired: 4/30/2021 4:47:51 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210430\20210430_019.lcd
Vial: 26 | Inj. Volume: 25.0000uL | Tray: 2

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	ND(W/B)	----	----	31301	1	----	ng/mL	----	----
Sodium Perchlorate-18O4_IS	Auto	2.863	31301	31301	1	1.00000	ng/mL	----	----

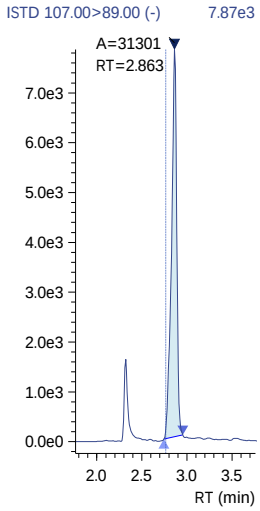
Perchlorate

Conc ----
R#1 ---- (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.00000



Insight Report

Printed at 5/3/2021 9:31:38 AM

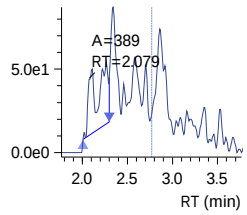
20210430_019

Sample ID: E2100459-005
Date Acquired: 4/30/2021 4:47:51 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210430\Before\20210430_019.lcd
Vial: 26 | Inj. Volume: 25.0000uL | Tray: 2

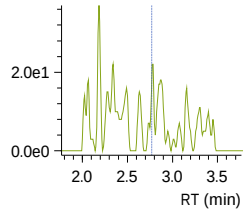
Perchlorate

Conc ----
R#1 ---- (0.00)

Q 99.00>83.00 (-) 8.70e1



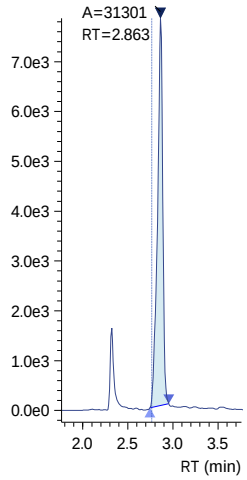
R1 101.00>85.00 (-) 3.70e1



Sodium Perchlorate -18O4_IS

Conc 1.00000

ISTD 107.00>89.00 (-) 7.87e3



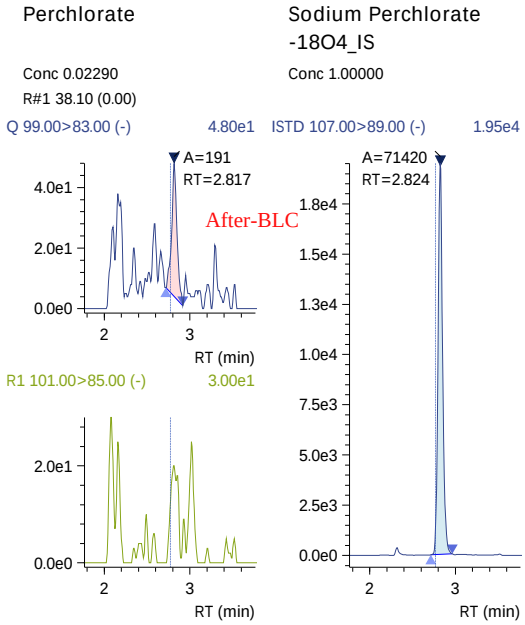
Insight Report

Printed at 5/3/2021 9:29:52 AM

20210430_020

Sample ID: E2100459-006
Date Acquired: 4/30/2021 4:57:13 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210430\20210430_020.lcd
Vial: 27 | Inj. Volume: 25.0000uL | Tray: 2

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	M	2.817	191	71420	1	0.02290	ng/mL	----	38.10
Sodium Perchlorate-18O4 _IS	Auto	2.824	71420	71420	1	1.00000	ng/mL	----	----



Insight Report

Printed at 5/3/2021 9:31:38 AM

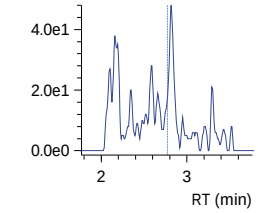
20210430_020

Sample ID: E2100459-006
Date Acquired: 4/30/2021 4:57:13 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210430\Before\20210430_020.lcd
Vial: 27 | Inj. Volume: 25.0000uL | Tray: 2

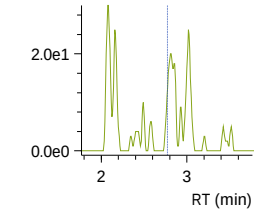
Perchlorate

Conc ----
R#1 ---- (0.00)

Q 99.00>83.00 (-) 4.80e1



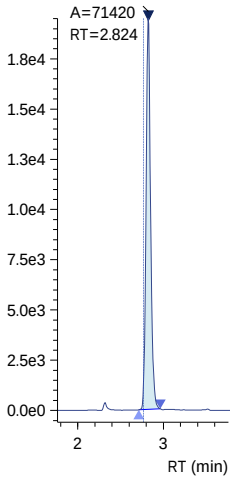
R1 101.00>85.00 (-) 3.00e1



Sodium Perchlorate -18O4_IS

Conc 1.00000

ISTD 107.00>89.00 (-) 1.95e4



Insight Report

Printed at 5/3/2021 9:29:52 AM

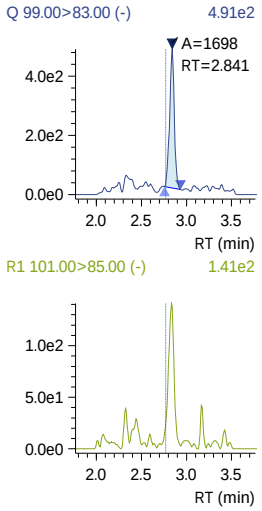
20210430_023

Sample ID: E2100459-009
Date Acquired: 4/30/2021 5:25:24 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210430\20210430_023.lcd
Vial: 30 | Inj. Volume: 25.0000uL | Tray: 2

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.841	1698	60268	1	0.24114	ng/mL	----	29.66
Sodium Perchlorate-18O4 _IS	Auto	2.838	60268	60268	1	1.00000	ng/mL	----	----

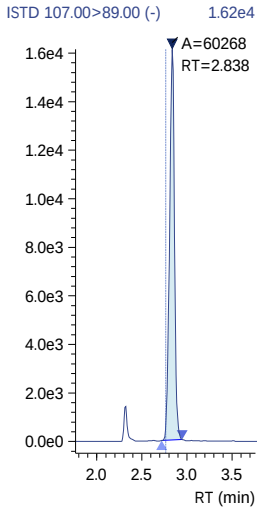
Perchlorate

Conc 0.24114
R#1 29.66 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.00000



Insight Report

Printed at 5/3/2021 9:31:38 AM

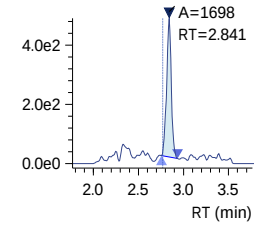
20210430_023

Sample ID: E2100459-009
Date Acquired: 4/30/2021 5:25:24 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210430\Before\20210430_023.lcd
Vial: 30 | Inj. Volume: 25.0000uL | Tray: 2

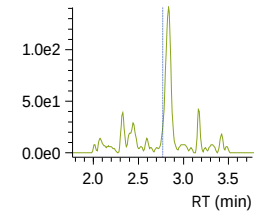
Perchlorate

Conc 0.24114
R#1 29.66 (0.00)

Q 99.00>83.00 (-) 4.91e2



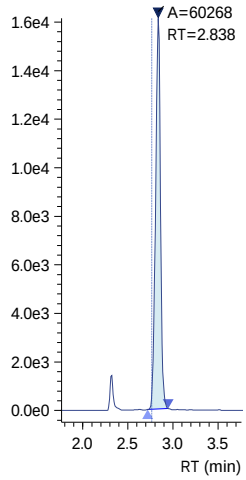
R1 101.00>85.00 (-) 1.41e2



Sodium Perchlorate -18O4_IS

Conc 1.00000

ISTD 107.00>89.00 (-) 1.62e4



Insight Report

Printed at 5/3/2021 9:29:52 AM

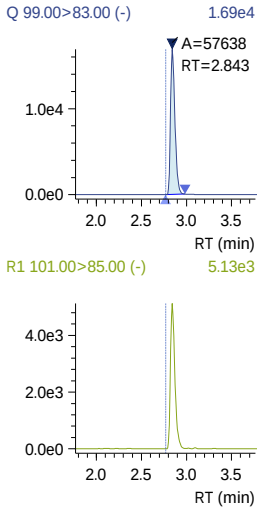
20210430_028

Sample ID: PERCHLORATE7
Date Acquired: 4/30/2021 6:12:16 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210430\20210430_028.lcd
Vial: 21 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.843	57638	49766	1	9.91571	ng/mL	10.0000	30.35
Sodium Perchlorate-18O4 _IS	Auto	2.843	49766	49766	1	1.00000	ng/mL	1.0000	----

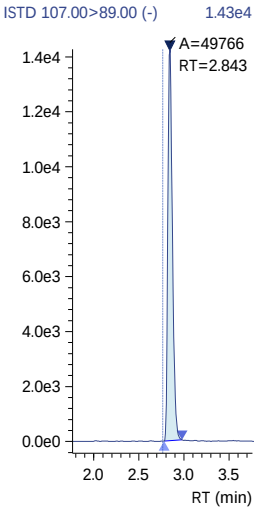
Perchlorate

Conc 9.91571
R#1 30.35 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.00000



Insight Report

Printed at 5/3/2021 9:31:38 AM

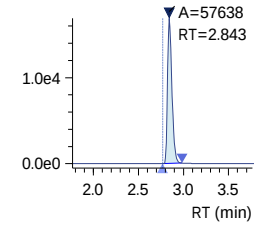
20210430_028

Sample ID: PERCHLORATE7
Date Acquired: 4/30/2021 6:12:16 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210430\Before\20210430_028.lcd
Vial: 21 | Inj. Volume: 25.0000uL | Tray: 1

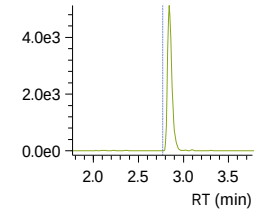
Perchlorate

Conc 9.91571
R#1 30.35 (0.00)

Q 99.00>83.00 (-) 1.69e4



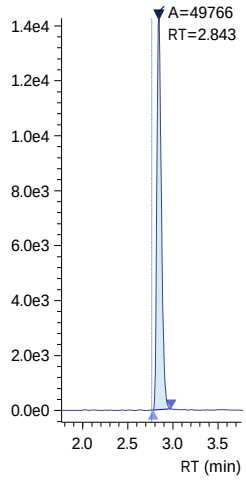
R1 101.00>85.00 (-) 5.13e3



Sodium Perchlorate -18O4_IS

Conc 1.00000

ISTD 107.00>89.00 (-) 1.43e4



Insight Report

Printed at 5/3/2021 9:25:34 AM

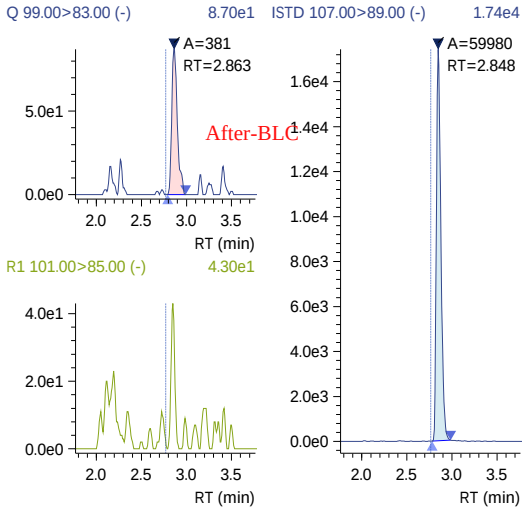
20210501_006

Sample ID: LODV
Date Acquired: 5/1/2021 12:48:08 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210501\20210501_006.lcd
Vial: 20 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	M	2.863	381	59980	1	0.05431	ng/mL	----	40.70
Sodium Perchlorate-18O4 _IS	Auto	2.848	59980	59980	1	1.00000	ng/mL	----	----

Perchlorate

Conc 0.05431
R#1 40.70 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.00000

After-BLC

Insight Report

Printed at 5/3/2021 9:27:25 AM

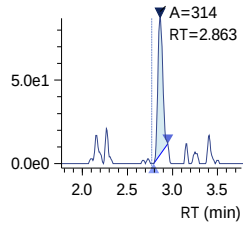
20210501_006

Sample ID: LODV
Date Acquired: 5/1/2021 12:48:08 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210501\Before\20210501_006.lcd
Vial: 20 | Inj. Volume: 25.0000uL | Tray: 1

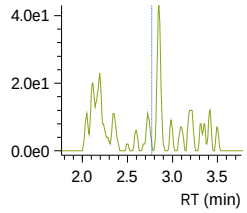
Perchlorate

Conc 0.04482
R#1 46.91 (0.00)

Q 99.00>83.00 (-) 8.70e1



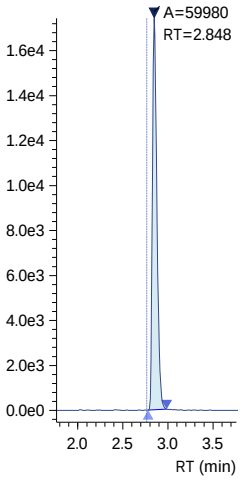
R1 101.00>85.00 (-) 4.30e1



Sodium Perchlorate -18O4_IS

Conc 1.00000

ISTD 107.00>89.00 (-) 1.74e4



Insight Report

Printed at 5/3/2021 9:25:34 AM

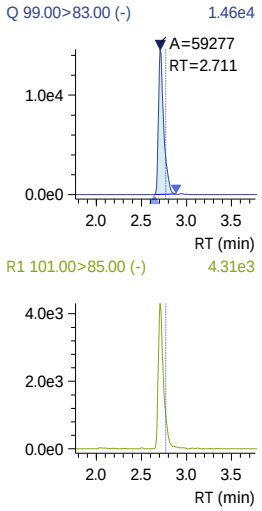
20210501_007

Sample ID: PERCHLORATE7
Date Acquired: 5/1/2021 1:04:45 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210501\20210501_007.lcd
Vial: 21 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.711	59277	51400	1	9.87331	ng/mL	10.0000	29.40
Sodium Perchlorate-18O4 _IS	Auto	2.710	51400	51400	1	1.00000	ng/mL	1.0000	----

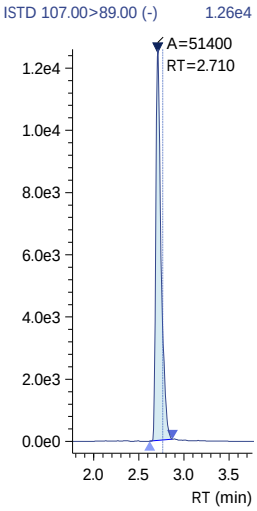
Perchlorate

Conc 9.87331
R#1 29.40 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.00000



Insight Report

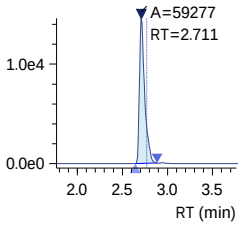
20210501_007

Sample ID: PERCHLORATE7
Date Acquired: 5/1/2021 1:04:45 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210501\Before\20210501_007.lcd
Vial: 21 | Inj. Volume: 25.0000uL | Tray: 1

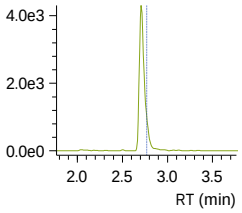
Perchlorate

Conc 9.87331
R#1 29.40 (0.00)

Q 99.00>83.00 (-) 1.46e4



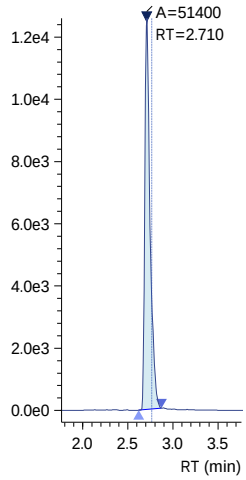
R1 101.00>85.00 (-) 4.31e3



Sodium Perchlorate -18O4_IS

Conc 1.00000

ISTD 107.00>89.00 (-) 1.26e4



Insight Report

Printed at 5/3/2021 9:25:34 AM

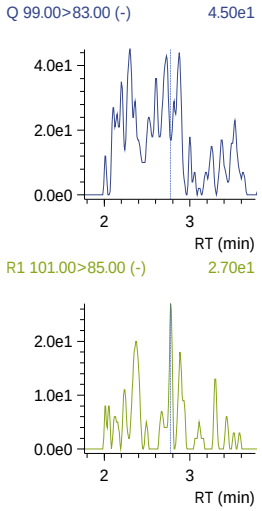
20210501_008

Sample ID: E2100459-001X5
Date Acquired: 5/1/2021 1:14:11 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210501\20210501_008.lcd
Vial: 22 | Inj. Volume: 25.0000uL | Tray: 2

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	ND(W/B)	----	----	39830	1	----	ng/mL	----	----
Sodium Perchlorate-18O4_IS	Auto	2.868	39830	39830	1	1.00000	ng/mL	----	----

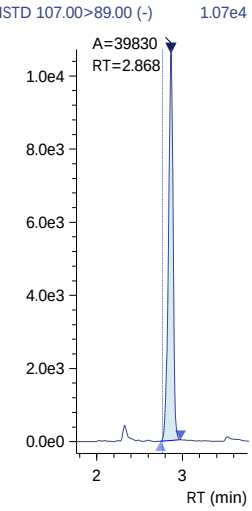
Perchlorate

Conc ----
R#1 ---- (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.00000



Insight Report

Printed at 5/3/2021 9:27:25 AM

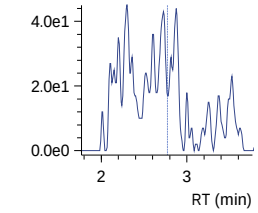
20210501_008

Sample ID: E2100459-001X5
Date Acquired: 5/1/2021 1:14:11 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210501\Before\20210501_008.lcd
Vial: 22 | Inj. Volume: 25.0000uL | Tray: 2

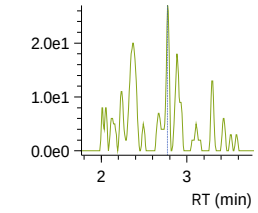
Perchlorate

Conc ----
R#1 ---- (0.00)

Q 99.00>83.00 (-) 4.50e1



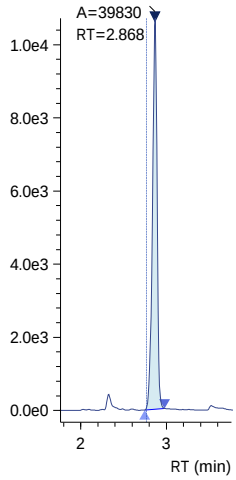
R1 101.00>85.00 (-) 2.70e1



Sodium Perchlorate -18O4_IS

Conc 1.00000

ISTD 107.00>89.00 (-) 1.07e4



Insight Report

Printed at 5/3/2021 9:25:34 AM

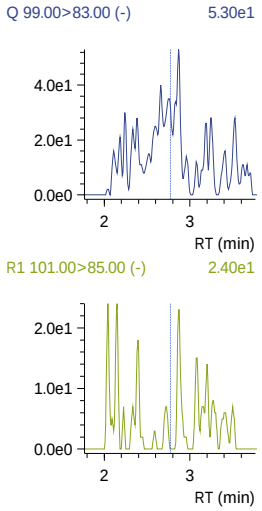
20210501_009

Sample ID: E2100459-002X5
Date Acquired: 5/1/2021 1:23:35 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210501\20210501_009.lcd
Vial: 23 | Inj. Volume: 25.0000uL | Tray: 2

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	ND(W/B)	----	----	38598	1	----	ng/mL	----	----
Sodium Perchlorate-18O4_IS	Auto	2.869	38598	38598	1	1.00000	ng/mL	----	----

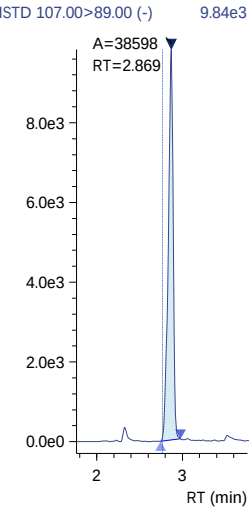
Perchlorate

Conc ----
R#1 ---- (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.00000



Insight Report

Printed at 5/3/2021 9:27:25 AM

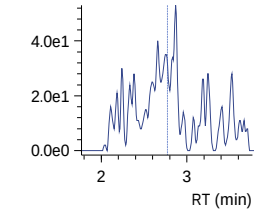
20210501_009

Sample ID: E2100459-002X5
Date Acquired: 5/1/2021 1:23:35 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210501\Before\20210501_009.lcd
Vial: 23 | Inj. Volume: 25.0000uL | Tray: 2

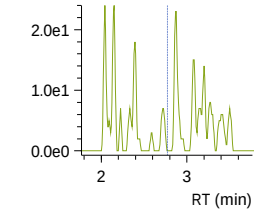
Perchlorate

Conc ----
R#1 ---- (0.00)

Q 99.00>83.00 (-) 5.30e1



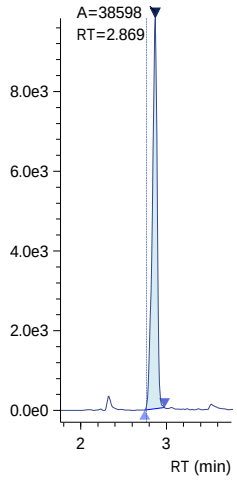
R1 101.00>85.00 (-) 2.40e1



Sodium Perchlorate -18O4_IS

Conc 1.00000

ISTD 107.00>89.00 (-) 9.84e3



Insight Report

Printed at 5/3/2021 9:25:34 AM

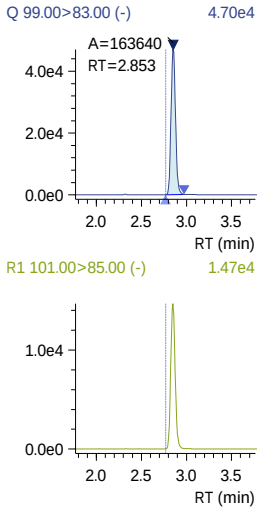
20210501_010

Sample ID: E2100459-007X10
Date Acquired: 5/1/2021 1:32:59 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210501\20210501_010.lcd
Vial: 28 | Inj. Volume: 25.0000uL | Tray: 2

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.853	163640	70639	1	19.83302	ng/mL	----	31.18
Sodium Perchlorate-18O4_IS	Auto	2.851	70639	70639	1	1.00000	ng/mL	----	----

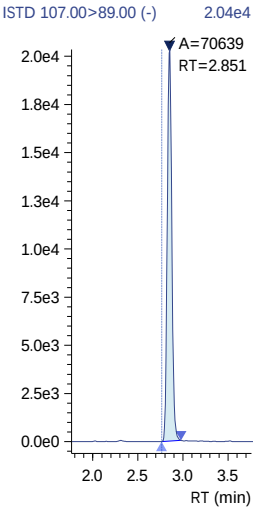
Perchlorate

Conc 19.83302
R#1 31.18 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.00000



Insight Report

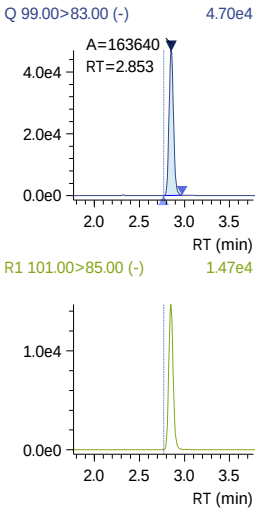
Printed at 5/3/2021 9:27:25 AM

20210501_010

Sample ID: E2100459-007X10
Date Acquired: 5/1/2021 1:32:59 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210501\Before\20210501_010.lcd
Vial: 28 | Inj. Volume: 25.0000uL | Tray: 2

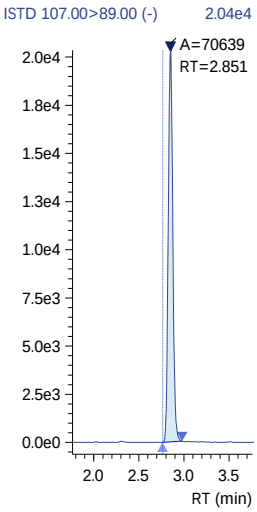
Perchlorate

Conc 19.83302
R#1 31.18 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.00000



Insight Report

Printed at 5/3/2021 9:25:34 AM

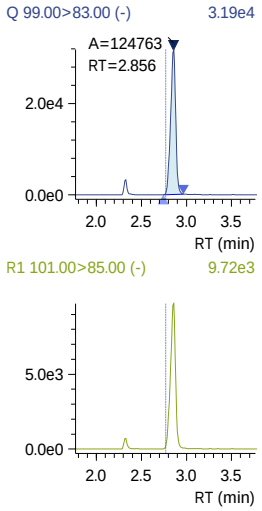
20210501_011

Sample ID: E2100459-008X2
Date Acquired: 5/1/2021 1:42:24 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210501\20210501_011.lcd
Vial: 29 | Inj. Volume: 25.0000uL | Tray: 2

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.856	124763	58479	1	18.26541	ng/mL	----	30.84
Sodium Perchlorate-18O4_IS	Auto	2.855	58479	58479	1	1.00000	ng/mL	----	----

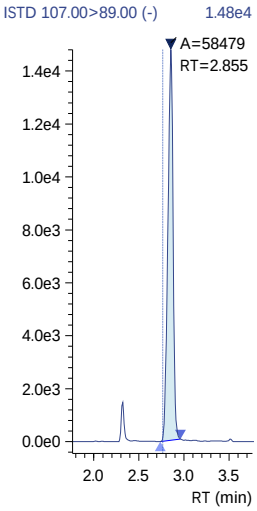
Perchlorate

Conc 18.26541
R#1 30.84 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.00000



Insight Report

Printed at 5/3/2021 9:27:25 AM

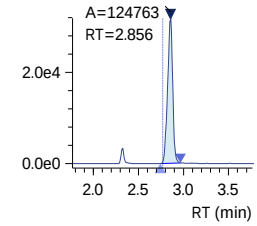
20210501_011

Sample ID: E2100459-008X2
Date Acquired: 5/1/2021 1:42:24 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210501\Before\20210501_011.lcd
Vial: 29 | Inj. Volume: 25.0000uL | Tray: 2

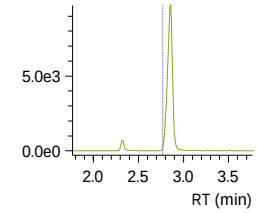
Perchlorate

Conc 18.26541
R#1 30.84 (0.00)

Q 99.00>83.00 (-) 3.19e4



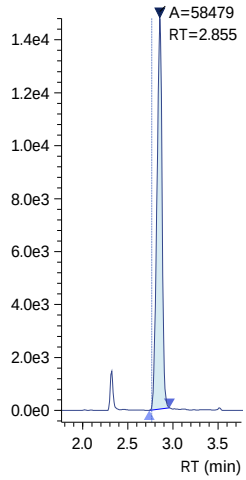
R1 101.00>85.00 (-) 9.72e3



Sodium Perchlorate -18O4_IS

Conc 1.00000

ISTD 107.00>89.00 (-) 1.48e4



Insight Report

Printed at 5/3/2021 9:25:34 AM

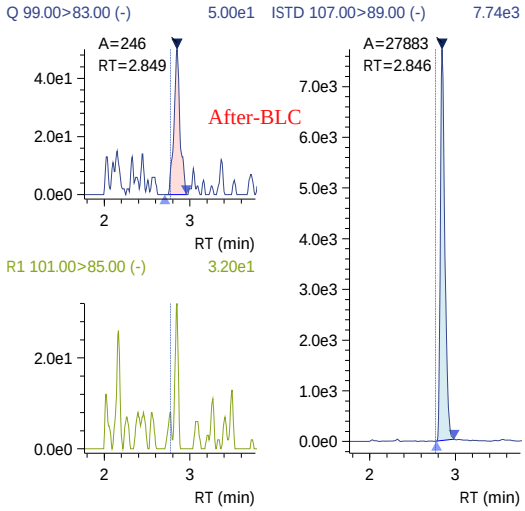
20210501_012

Sample ID: E2100459-010X10
Date Acquired: 5/1/2021 1:51:47 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210501\20210501_012.lcd
Vial: 31 | Inj. Volume: 25.0000uL | Tray: 2

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	M	2.849	246	27883	1	0.07538	ng/mL	----	62.50
Sodium Perchlorate-18O4 _IS	Auto	2.846	27883	27883	1	1.00000	ng/mL	----	----

Perchlorate

Conc 0.07538
R#1 62.50 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.00000

Insight Report

Printed at 5/3/2021 9:27:25 AM

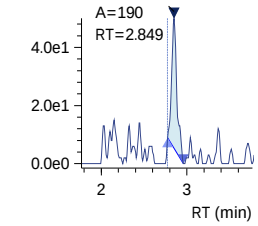
20210501_012

Sample ID: E2100459-010X10
Date Acquired: 5/1/2021 1:51:47 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210501\Before\20210501_012.lcd
Vial: 31 | Inj. Volume: 25.0000uL | Tray: 2

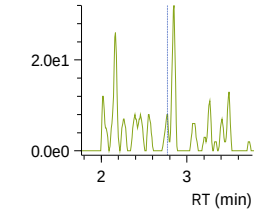
Perchlorate

Conc 0.05826
R#1 56.10 (0.00)

Q 99.00>83.00 (-) 5.00e1



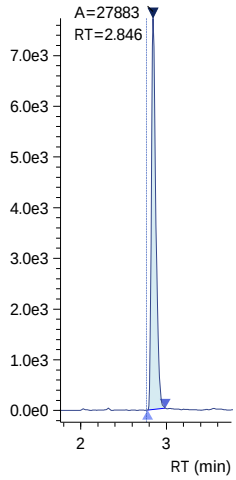
R1 101.00>85.00 (-) 3.20e1



Sodium Perchlorate -18O4_IS

Conc 1.00000

ISTD 107.00>89.00 (-) 7.74e3



Insight Report

Printed at 5/3/2021 9:25:34 AM

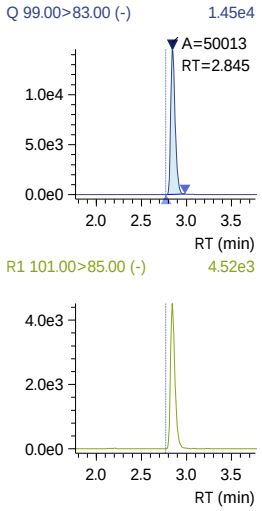
20210501_013

Sample ID: PERCHLORATE7
Date Acquired: 5/1/2021 2:01:11 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210501\20210501_013.lcd
Vial: 21 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.845	50013	46369	1	9.23433	ng/mL	10.0000	31.00
Sodium Perchlorate-18O4 _IS	Auto	2.844	46369	46369	1	1.00000	ng/mL	1.0000	----

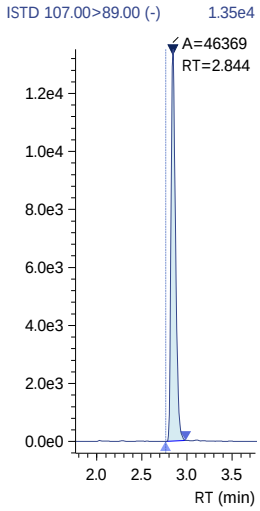
Perchlorate

Conc 9.23433
R#1 31.00 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.00000



Insight Report

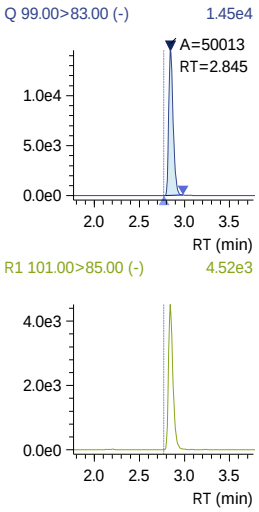
Printed at 5/3/2021 9:27:25 AM

20210501_013

Sample ID: PERCHLORATE7
Date Acquired: 5/1/2021 2:01:11 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210501\Before\20210501_013.lcd
Vial: 21 | Inj. Volume: 25.0000uL | Tray: 1

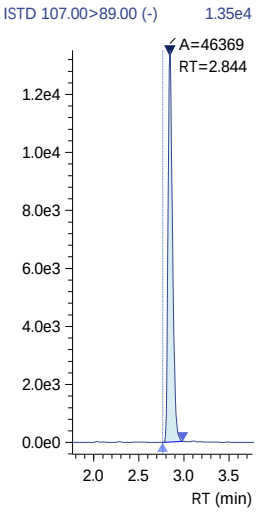
Perchlorate

Conc 9.23433
R#1 31.00 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.00000



10450 Stancliff Rd. Suite 210
Houston, TX 77099
T: +1 281 530 5656
F: +1 281 530 5887
www.alsglobal.com

WorkOrder: HS21041132

Longhorn Army Ammunition Plant LHAAP 16 April 2021

Aptim Environmental & Infrastucture, Inc.

Vicki Graves
10333 Richmond Ave Ste 1030
Houston TX 77042

20-May-2021

ALS Environmental
ALS Group USA, Corp
10450 Stancliff Road, Suite 210
Houston, TX 77099
T : +1 281 530 5656
F : +1 281 530 5887
www.alsglobal.com

Table of Contents

HS21041132 Cover Page
- CoverPage
- HS21041132 Longhorn Army Ammunition Plant LHAAP 16 April 2021 Final
  - CoverLetter
  - Sample Summary
  - CaseNarrative
  - 16EW02-210419
  - 16EW04-210419
  - 16EW08-210419
  - 16WW13-210419
  - 16WW42-210419
  - 16RW05-210419
  - 16RW06-210419
  - 16RW07-210419
  - Dates Report
  - QC
  - Acronyms
  - Certifications
  - Sample Tracking Record
  - SampleReceiptCheckList
  - COC
  - HS21041132 - Sub Perch Data II (E2100460)

Table of Contents (continued)

HS21041132 8260_W_DOD Raw Data

HS21041132 RSK175 Raw Data

HS21041132 Wet Chem Raw Data (TOC_W 5310B)

HS21041132 - Sub Perch Data IV (E2100460)

- CoverLetter
- Certificate of Analysis
- Chain of Custody
- Preparation Sheets
- Analytical Results
- Accuracy and Precision
- Initial Calibration
- Chromatogram

HS21041132 Longhorn Army Ammunition Plant
LHAAP 16 April 2021 Final

ALS WO# HS21041132

10450 Stancliff Rd. Suite 210
Houston, TX 77099
T: +1 281 530 5656
F: +1 281 530 5887

May 10, 2021

Vicki Graves
Aptim Environmental & Infrastucture, Inc.
10333 Richmond Ave
Ste 1030
Houston, TX 77042

Work Order: **HS21041132**

Laboratory Results for: **Longhorn Army Ammunition Plant LHAAP 16 April 2021**

Dear Vicki Graves ,

ALS Environmental received 8 sample(s) on Apr 21, 2021 for the analysis presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

Generated By: JUMOKE.LAWAL
RJ Modashia
Project Manager

ALS Houston, US Date: 10-May-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP 16 April 2021
Work Order: HS21041132

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS21041132-01	16EW02-210419	Groundwater		19-Apr-2021 07:35	21-Apr-2021 10:40	☐
HS21041132-02	16EW04-210419	Groundwater		19-Apr-2021 08:20	21-Apr-2021 10:40	☐
HS21041132-03	16EW08-210419	Groundwater		19-Apr-2021 09:05	21-Apr-2021 10:40	☐
HS21041132-04	16WW13-210419	Groundwater		19-Apr-2021 09:50	21-Apr-2021 10:40	☐
HS21041132-05	16WW42-210419	Groundwater		19-Apr-2021 10:30	21-Apr-2021 10:40	☐
HS21041132-06	16RW05-210419	Groundwater		19-Apr-2021 11:15	21-Apr-2021 10:40	☐
HS21041132-07	16RW06-210419	Groundwater		19-Apr-2021 12:00	21-Apr-2021 10:40	☐
HS21041132-08	16RW07-210419	Groundwater		19-Apr-2021 12:40	21-Apr-2021 10:40	☐

ALS Houston, US Date: 10-May-21

Client: Aptim Environmental & Infrastucture, Inc. **CASE NARRATIVE**
Project: Longhorn Army Ammunition Plant LHAAP 16 April 2021
Work Order: HS21041132

Work Order Comments

- The analysis for Perchlorate was subcontracted our ALS Houston TX, High Resolution Lab. Final report attached.

GC Semivolatiles by Method RSK-175

Batch ID: R382623

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

GCMS Volatiles by Method SW8260

Batch ID: R382319

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

WetChemistry by Method SM5310B

Batch ID: R382818

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

ALS Houston, US Date: 10-May-21

Client: Aptim Environmental & Infrastucture, Inc. **ANALYTICAL REPORT**
Project: Longhorn Army Ammunition Plant LHAAP 16 April 2021 WorkOrder:HS21041132
Sample ID: 16EW02-210419 Lab ID:HS21041132-01
Collection Date: 19-Apr-2021 07:35 Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
1,1,2-Trichloroethane	25	U	7.5	25	25	ug/L	25	23-Apr-2021 20:17
1,1-Dichloroethene	**64**		**5.0**	**12**	**25**	**ug/L**	25	23-Apr-2021 20:17
1,2-Dichloroethane	**35**		**5.0**	**12**	**25**	**ug/L**	25	23-Apr-2021 20:17
cis-1,2-Dichloroethene	**18,000**		**50**	**120**	**250**	**ug/L**	250	23-Apr-2021 20:38
Methylene chloride	**41**	J	**10**	**50**	**50**	**ug/L**	25	23-Apr-2021 20:17
Trichloroethene	**23,000**		**50**	**120**	**250**	**ug/L**	250	23-Apr-2021 20:38
Vinyl chloride	**45**		**5.0**	**12**	**25**	**ug/L**	25	23-Apr-2021 20:17
Surr: 1,2-Dichloroethane-d4	*96.8*			**0**	*81-118*	*%REC*	*25*	*23-Apr-2021 20:17*
Surr: 1,2-Dichloroethane-d4	*96.3*			**0**	*81-118*	*%REC*	*250*	*23-Apr-2021 20:38*
Surr: 4-Bromofluorobenzene	*94.6*			**0**	*85-114*	*%REC*	*25*	*23-Apr-2021 20:17*
Surr: 4-Bromofluorobenzene	*92.0*			**0**	*85-114*	*%REC*	*250*	*23-Apr-2021 20:38*
Surr: Dibromofluoromethane	*92.6*			**0**	*80-119*	*%REC*	*25*	*23-Apr-2021 20:17*
Surr: Dibromofluoromethane	*91.2*			**0**	*80-119*	*%REC*	*250*	*23-Apr-2021 20:38*
Surr: Toluene-d8	*108*			**0**	*89-112*	*%REC*	*25*	*23-Apr-2021 20:17*
Surr: Toluene-d8	*106*			**0**	*89-112*	*%REC*	*250*	*23-Apr-2021 20:38*
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: SUB
Subcontract Analysis	See Attached		0	0		NA	1	10-May-2021 17:37

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 10-May-21

Client: Aptim Environmental & Infrastucture, Inc. **ANALYTICAL REPORT**
Project: Longhorn Army Ammunition Plant LHAAP 16 April 2021 WorkOrder:HS21041132
Sample ID: 16EW04-210419 Lab ID:HS21041132-02
Collection Date: 19-Apr-2021 08:20 Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
1,1,2-Trichloroethane	10	U	3.0	10	10	ug/L	10	23-Apr-2021 19:35
1,1-Dichloroethene	**11**		**2.0**	**5.0**	**10**	**ug/L**	10	23-Apr-2021 19:35
1,2-Dichloroethane	**6.2**	J	**2.0**	**5.0**	**10**	**ug/L**	10	23-Apr-2021 19:35
cis-1,2-Dichloroethene	**2,600**		**20**	**50**	**100**	**ug/L**	100	23-Apr-2021 19:56
Methylene chloride	**17**	J	**4.0**	**20**	**20**	**ug/L**	10	23-Apr-2021 19:35
Trichloroethene	**9,500**		**20**	**50**	**100**	**ug/L**	100	23-Apr-2021 19:56
Vinyl chloride	**11**		**2.0**	**5.0**	**10**	**ug/L**	10	23-Apr-2021 19:35
Surr: 1,2-Dichloroethane-d4	*99.5*			**0**	*81-118*	*%REC*	*10*	*23-Apr-2021 19:35*
Surr: 1,2-Dichloroethane-d4	*100*			**0**	*81-118*	*%REC*	*100*	*23-Apr-2021 19:56*
Surr: 4-Bromofluorobenzene	*94.1*			**0**	*85-114*	*%REC*	*10*	*23-Apr-2021 19:35*
Surr: 4-Bromofluorobenzene	*93.2*			**0**	*85-114*	*%REC*	*100*	*23-Apr-2021 19:56*
Surr: Dibromofluoromethane	*92.8*			**0**	*80-119*	*%REC*	*10*	*23-Apr-2021 19:35*
Surr: Dibromofluoromethane	*94.5*			**0**	*80-119*	*%REC*	*100*	*23-Apr-2021 19:56*
Surr: Toluene-d8	*108*			**0**	*89-112*	*%REC*	*10*	*23-Apr-2021 19:35*
Surr: Toluene-d8	*108*			**0**	*89-112*	*%REC*	*100*	*23-Apr-2021 19:56*
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: SUB
Subcontract Analysis	See Attached		0	0		NA	1	10-May-2021 17:37

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 10-May-21

Client: Aptim Environmental & Infrastucture, Inc. **ANALYTICAL REPORT**
Project: Longhorn Army Ammunition Plant LHAAP 16 April 2021 WorkOrder:HS21041132
Sample ID: 16EW08-210419 Lab ID:HS21041132-03
Collection Date: 19-Apr-2021 09:05 Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
1,1,2-Trichloroethane	1.0	U	0.30	1.0	1.0	ug/L	1	23-Apr-2021 15:01
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	23-Apr-2021 15:01
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	23-Apr-2021 15:01
cis-1,2-Dichloroethene	**0.84**	J	**0.20**	**0.50**	**1.0**	**ug/L**	1	23-Apr-2021 15:01
Methylene chloride	2.0	U	0.40	2.0	2.0	ug/L	1	23-Apr-2021 15:01
Trichloroethene	**2.6**		**0.20**	**0.50**	**1.0**	**ug/L**	1	23-Apr-2021 15:01
Vinyl chloride	0.50	U	0.20	0.50	1.0	ug/L	1	23-Apr-2021 15:01
Surr: 1,2-Dichloroethane-d4	*99.0*			**0**	*81-118*	*%REC*	*1*	*23-Apr-2021 15:01*
Surr: 4-Bromofluorobenzene	*95.6*			**0**	*85-114*	*%REC*	*1*	*23-Apr-2021 15:01*
Surr: Dibromofluoromethane	*93.4*			**0**	*80-119*	*%REC*	*1*	*23-Apr-2021 15:01*
Surr: Toluene-d8	*107*			**0**	*89-112*	*%REC*	*1*	*23-Apr-2021 15:01*
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: SUB
Subcontract Analysis	See Attached		0	0		NA	1	10-May-2021 17:37

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 10-May-21

Client: Aptim Environmental & Infrastucture, Inc. **ANALYTICAL REPORT**
Project: Longhorn Army Ammunition Plant LHAAP 16 April 2021 WorkOrder:HS21041132
Sample ID: 16WW13-210419 Lab ID:HS21041132-04
Collection Date: 19-Apr-2021 09:50 Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
1,1,2-Trichloroethane	1.0	U	0.30	1.0	1.0	ug/L	1	23-Apr-2021 15:22
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	23-Apr-2021 15:22
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	23-Apr-2021 15:22
cis-1,2-Dichloroethene	**140**		**0.20**	**0.50**	**1.0**	**ug/L**	1	23-Apr-2021 15:22
Methylene chloride	2.0	U	0.40	2.0	2.0	ug/L	1	23-Apr-2021 15:22
Trichloroethene	**22**		**0.20**	**0.50**	**1.0**	**ug/L**	1	23-Apr-2021 15:22
Vinyl chloride	**0.87**	J	**0.20**	**0.50**	**1.0**	**ug/L**	1	23-Apr-2021 15:22
Surr: 1,2-Dichloroethane-d4	*98.4*			**0**	*81-118*	*%REC*	*1*	*23-Apr-2021 15:22*
Surr: 4-Bromofluorobenzene	*90.4*			**0**	*85-114*	*%REC*	*1*	*23-Apr-2021 15:22*
Surr: Dibromofluoromethane	*92.4*			**0**	*80-119*	*%REC*	*1*	*23-Apr-2021 15:22*
Surr: Toluene-d8	*105*			**0**	*89-112*	*%REC*	*1*	*23-Apr-2021 15:22*
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: SUB
Subcontract Analysis	See Attached		0	0		NA	1	10-May-2021 17:37

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 10-May-21

Client: Aptim Environmental & Infrastucture, Inc. **ANALYTICAL REPORT**
Project: Longhorn Army Ammunition Plant LHAAP 16 April 2021 WorkOrder:HS21041132
Sample ID: 16WW42-210419 Lab ID:HS21041132-05
Collection Date: 19-Apr-2021 10:30 Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
1,1,2-Trichloroethane	1.0	U	0.30	1.0	1.0	ug/L	1	23-Apr-2021 15:43
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	23-Apr-2021 15:43
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	23-Apr-2021 15:43
cis-1,2-Dichloroethene	**66**		**0.20**	**0.50**	**1.0**	**ug/L**	1	23-Apr-2021 15:43
Methylene chloride	2.0	U	0.40	2.0	2.0	ug/L	1	23-Apr-2021 15:43
Trichloroethene	**0.97**	J	**0.20**	**0.50**	**1.0**	**ug/L**	1	23-Apr-2021 15:43
Vinyl chloride	0.50	U	0.20	0.50	1.0	ug/L	1	23-Apr-2021 15:43
Surr: 1,2-Dichloroethane-d4	*99.0*			**0**	*81-118*	*%REC*	*1*	*23-Apr-2021 15:43*
Surr: 4-Bromofluorobenzene	*96.3*			**0**	*85-114*	*%REC*	*1*	*23-Apr-2021 15:43*
Surr: Dibromofluoromethane	*92.9*			**0**	*80-119*	*%REC*	*1*	*23-Apr-2021 15:43*
Surr: Toluene-d8	*104*			**0**	*89-112*	*%REC*	*1*	*23-Apr-2021 15:43*
DISSOLVED GASES BY RSK-175		**Method:RSK-175**						Analyst: PPM
Ethane	0.000500	U	0.000144	0.000500	0.00100	mg/L	1	27-Apr-2021 10:23
Ethene	0.000500	U	0.000234	0.000500	0.00100	mg/L	1	27-Apr-2021 10:23
Methane	**0.00345**		**0.000107**	**0.000500**	**0.000500**	**mg/L**	1	27-Apr-2021 10:23
TOTAL ORGANIC CARBON - SM5310B		**Method:SM5310B**						Analyst: MZD
Organic Carbon, Total	**2.55**		**0.500**	**0.500**	**1.00**	**mg/L**	1	01-May-2021 00:31
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: SUB
Subcontract Analysis	See Attached		0	0		NA	1	10-May-2021 17:37

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 10-May-21

Client: Aptim Environmental & Infrastucture, Inc. **ANALYTICAL REPORT**
Project: Longhorn Army Ammunition Plant LHAAP 16 April 2021 WorkOrder:HS21041132
Sample ID: 16RW05-210419 Lab ID:HS21041132-06
Collection Date: 19-Apr-2021 11:15 Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
1,1,2-Trichloroethane	1.0	U	0.30	1.0	1.0	ug/L	1	23-Apr-2021 17:49
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	23-Apr-2021 17:49
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	23-Apr-2021 17:49
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	23-Apr-2021 17:49
Methylene chloride	2.0	U	0.40	2.0	2.0	ug/L	1	23-Apr-2021 17:49
Trichloroethene	**0.52**	J	**0.20**	**0.50**	**1.0**	**ug/L**	1	23-Apr-2021 17:49
Vinyl chloride	0.50	U	0.20	0.50	1.0	ug/L	1	23-Apr-2021 17:49
Surr: 1,2-Dichloroethane-d4	*96.5*			**0**	*81-118*	*%REC*	*1*	*23-Apr-2021 17:49*
Surr: 4-Bromofluorobenzene	*95.4*			**0**	*85-114*	*%REC*	*1*	*23-Apr-2021 17:49*
Surr: Dibromofluoromethane	*92.0*			**0**	*80-119*	*%REC*	*1*	*23-Apr-2021 17:49*
Surr: Toluene-d8	*107*			**0**	*89-112*	*%REC*	*1*	*23-Apr-2021 17:49*
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: SUB
Subcontract Analysis	See Attached		0	0		NA	1	10-May-2021 17:37

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 10-May-21

Client: Aptim Environmental & Infrastucture, Inc. **ANALYTICAL REPORT**
Project: Longhorn Army Ammunition Plant LHAAP 16 April 2021 WorkOrder:HS21041132
Sample ID: 16RW06-210419 Lab ID:HS21041132-07
Collection Date: 19-Apr-2021 12:00 Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
1,1,2-Trichloroethane	1.0	U	0.30	1.0	1.0	ug/L	1	23-Apr-2021 18:10
1,1-Dichloroethene	**0.82**	J	**0.20**	**0.50**	**1.0**	**ug/L**	1	23-Apr-2021 18:10
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	23-Apr-2021 18:10
cis-1,2-Dichloroethene	**1.7**		**0.20**	**0.50**	**1.0**	**ug/L**	1	23-Apr-2021 18:10
Methylene chloride	2.0	U	0.40	2.0	2.0	ug/L	1	23-Apr-2021 18:10
Trichloroethene	**60**		**0.20**	**0.50**	**1.0**	**ug/L**	1	23-Apr-2021 18:10
Vinyl chloride	0.50	U	0.20	0.50	1.0	ug/L	1	23-Apr-2021 18:10
Surr: 1,2-Dichloroethane-d4	*97.8*			**0**	*81-118*	*%REC*	*1*	*23-Apr-2021 18:10*
Surr: 4-Bromofluorobenzene	*94.9*			**0**	*85-114*	*%REC*	*1*	*23-Apr-2021 18:10*
Surr: Dibromofluoromethane	*90.6*			**0**	*80-119*	*%REC*	*1*	*23-Apr-2021 18:10*
Surr: Toluene-d8	*107*			**0**	*89-112*	*%REC*	*1*	*23-Apr-2021 18:10*
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: SUB
Subcontract Analysis	See Attached		0	0		NA	1	10-May-2021 17:37

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 10-May-21

Client: Aptim Environmental & Infrastucture, Inc. **ANALYTICAL REPORT**
Project: Longhorn Army Ammunition Plant LHAAP 16 April 2021 WorkOrder:HS21041132
Sample ID: 16RW07-210419 Lab ID:HS21041132-08
Collection Date: 19-Apr-2021 12:40 Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
1,1,2-Trichloroethane	1.0	U	0.30	1.0	1.0	ug/L	1	23-Apr-2021 18:52
1,1-Dichloroethene	**4.8**		**0.20**	**0.50**	**1.0**	**ug/L**	1	23-Apr-2021 18:52
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	23-Apr-2021 18:52
cis-1,2-Dichloroethene	**46**		**0.20**	**0.50**	**1.0**	**ug/L**	1	23-Apr-2021 18:52
Methylene chloride	2.0	U	0.40	2.0	2.0	ug/L	1	23-Apr-2021 18:52
Trichloroethene	**900**		**5.0**	**12**	**25**	**ug/L**	25	23-Apr-2021 19:13
Vinyl chloride	**29**		**0.20**	**0.50**	**1.0**	**ug/L**	1	23-Apr-2021 18:52
Surr: 1,2-Dichloroethane-d4	*99.4*			**0**	*81-118*	*%REC*	*1*	*23-Apr-2021 18:52*
Surr: 1,2-Dichloroethane-d4	*97.6*			**0**	*81-118*	*%REC*	*25*	*23-Apr-2021 19:13*
Surr: 4-Bromofluorobenzene	*93.7*			**0**	*85-114*	*%REC*	*1*	*23-Apr-2021 18:52*
Surr: 4-Bromofluorobenzene	*93.7*			**0**	*85-114*	*%REC*	*25*	*23-Apr-2021 19:13*
Surr: Dibromofluoromethane	*93.9*			**0**	*80-119*	*%REC*	*1*	*23-Apr-2021 18:52*
Surr: Dibromofluoromethane	*92.8*			**0**	*80-119*	*%REC*	*25*	*23-Apr-2021 19:13*
Surr: Toluene-d8	*109*			**0**	*89-112*	*%REC*	*1*	*23-Apr-2021 18:52*
Surr: Toluene-d8	*107*			**0**	*89-112*	*%REC*	*25*	*23-Apr-2021 19:13*
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: SUB
Subcontract Analysis	See Attached		0	0		NA	1	10-May-2021 17:37

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP 16 April 2021
WorkOrder: HS21041132

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: R382319 (0)	**Test Name :** VOLATILES ORGANICS BY METHOD 8260C				**Matrix:** Groundwater	
HS21041132-01	16EW02-210419	19 Apr 2021 07:35			23 Apr 2021 20:38	250
HS21041132-01	16EW02-210419	19 Apr 2021 07:35			23 Apr 2021 20:17	25
HS21041132-02	16EW04-210419	19 Apr 2021 08:20			23 Apr 2021 19:56	100
HS21041132-02	16EW04-210419	19 Apr 2021 08:20			23 Apr 2021 19:35	10
HS21041132-03	16EW08-210419	19 Apr 2021 09:05			23 Apr 2021 15:01	1
HS21041132-04	16WW13-210419	19 Apr 2021 09:50			23 Apr 2021 15:22	1
HS21041132-05	16WW42-210419	19 Apr 2021 10:30			23 Apr 2021 15:43	1
HS21041132-06	16RW05-210419	19 Apr 2021 11:15			23 Apr 2021 17:49	1
HS21041132-07	16RW06-210419	19 Apr 2021 12:00			23 Apr 2021 18:10	1
HS21041132-08	16RW07-210419	19 Apr 2021 12:40			23 Apr 2021 19:13	25
HS21041132-08	16RW07-210419	19 Apr 2021 12:40			23 Apr 2021 18:52	1
Batch ID: R382623 (0)	**Test Name :** DISSOLVED GASES BY RSK-175				**Matrix:** Groundwater	
HS21041132-05	16WW42-210419	19 Apr 2021 10:30			27 Apr 2021 10:23	1
Batch ID: R382818 (0)	**Test Name :** TOTAL ORGANIC CARBON - SM5310B				**Matrix:** Groundwater	
HS21041132-05	16WW42-210419	19 Apr 2021 10:30			01 May 2021 00:31	1
Batch ID: R383321 (0)	**Test Name :** SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)				**Matrix:** Groundwater	
HS21041132-01	16EW02-210419	19 Apr 2021 07:35			10 May 2021 17:37	1
HS21041132-02	16EW04-210419	19 Apr 2021 08:20			10 May 2021 17:37	1
HS21041132-03	16EW08-210419	19 Apr 2021 09:05			10 May 2021 17:37	1
HS21041132-04	16WW13-210419	19 Apr 2021 09:50			10 May 2021 17:37	1
HS21041132-05	16WW42-210419	19 Apr 2021 10:30			10 May 2021 17:37	1
HS21041132-06	16RW05-210419	19 Apr 2021 11:15			10 May 2021 17:37	1
HS21041132-07	16RW06-210419	19 Apr 2021 12:00			10 May 2021 17:37	1
HS21041132-08	16RW07-210419	19 Apr 2021 12:40			10 May 2021 17:37	1

ALS Houston, US Date: 10-May-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP 16 April 2021
WorkOrder: HS21041132

QC BATCH REPORT

Batch ID: R382623 (0) **Instrument:** FID-4 **Method:** DISSOLVED GASES BY RSK-175

MBLK Sample ID: **MBLK-210427** Units: **mg/L** Analysis Date: **27-Apr-2021 09:48**
Client ID: Run ID: **FID-4_382623** SeqNo: **6067727** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ethane	0.000500	0.00100								U
Ethene	0.000500	0.00100								U
Methane	0.000500	0.000500								U

LCS Sample ID: **LCS-210427** Units: **mg/L** Analysis Date: **27-Apr-2021 09:57**
Client ID: Run ID: **FID-4_382623** SeqNo: **6067728** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ethane	0.0214	0.00100	0.01804	0	119	75 - 125				
Ethene	0.0184	0.00100	0.0168	0	109	75 - 125				
Methane	0.00936	0.000500	0.009647	0	97.0	75 - 125				

LCSD Sample ID: **LCSD-210427** Units: **mg/L** Analysis Date: **27-Apr-2021 10:08**
Client ID: Run ID: **FID-4_382623** SeqNo: **6067729** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ethane	0.0209	0.00100	0.01804	0	116	75 - 125	0.02138	2.36	30	
Ethene	0.0178	0.00100	0.0168	0	106	75 - 125	0.01836	3.2	30	
Methane	0.00980	0.000500	0.009647	0	102	75 - 125	0.009361	4.55	30	

DUP Sample ID: **HS21041132-05DUP** Units: **mg/L** Analysis Date: **27-Apr-2021 10:35**
Client ID: **16WW42-210419** Run ID: **FID-4_382623** SeqNo: **6067731** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ethane	0.000500	0.00100					0	0	30	U
Ethene	0.000500	0.00100					0	0	30	U
Methane	0.00353	0.000500					0.003447	2.5	30	

The following samples were analyzed in this batch: HS21041132-05

ALS Houston, US Date: 10-May-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP 16 April 2021
WorkOrder: HS21041132

QC BATCH REPORT

Batch ID: R382319 (0) **Instrument: VOA6** **Method: VOLATILES ORGANICS BY METHOD 8260C**

MBLK Sample ID: **VBLKW-210423** Units: **ug/L** Analysis Date: **23-Apr-2021 12:54**
Client ID: Run ID: **VOA6_382319** SeqNo: **6059743** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,2-Trichloroethane	1.0	1.0								U
1,1-Dichloroethene	0.50	1.0								U
1,2-Dichloroethane	0.50	1.0								U
cis-1,2-Dichloroethene	0.50	1.0								U
Methylene chloride	2.0	2.0								U
Trichloroethene	0.50	1.0								U
Vinyl chloride	0.50	1.0								U
Surr: 1,2-Dichloroethane-d4	*48.59*	*1.0*	*50*	*0*	*97.2*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*45.27*	*1.0*	*50*	*0*	*90.5*	*85 - 114*				
Surr: Dibromofluoromethane	*45.98*	*1.0*	*50*	*0*	*92.0*	*80 - 119*				
Surr: Toluene-d8	*53.8*	*1.0*	*50*	*0*	*108*	*89 - 112*				

LCS Sample ID: **VLCSW-210423** Units: **ug/L** Analysis Date: **23-Apr-2021 12:12**
Client ID: Run ID: **VOA6_382319** SeqNo: **6059742** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,2-Trichloroethane	22.45	1.0	20	0	112	80 - 119				
1,1-Dichloroethene	21.76	1.0	20	0	109	71 - 131				
1,2-Dichloroethane	21.06	1.0	20	0	105	73 - 128				
cis-1,2-Dichloroethene	22.4	1.0	20	0	112	78 - 123				
Methylene chloride	23.68	2.0	20	0	118	74 - 124				
Trichloroethene	21.93	1.0	20	0	110	79 - 123				
Vinyl chloride	23.85	1.0	20	0	119	58 - 137				
Surr: 1,2-Dichloroethane-d4	*54.43*	*1.0*	*50*	*0*	*109*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*53.54*	*1.0*	*50*	*0*	*107*	*85 - 114*				
Surr: Dibromofluoromethane	*53.15*	*1.0*	*50*	*0*	*106*	*80 - 119*				
Surr: Toluene-d8	*52.72*	*1.0*	*50*	*0*	*105*	*89 - 112*				

ALS Houston, US Date: 10-May-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP 16 April 2021
WorkOrder: HS21041132

QC BATCH REPORT

Batch ID: R382319 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MS Sample ID: **HS21041135-03MS** Units: **ug/L** Analysis Date: **23-Apr-2021 16:25**
Client ID: Run ID: **VOA6_382319** SeqNo: **6059753** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,2-Trichloroethane	17.84	1.0	20	0	89.2	80 - 119				
1,1-Dichloroethene	19	1.0	20	0	95.0	71 - 131				
1,2-Dichloroethane	18.35	1.0	20	0	91.8	73 - 128				
cis-1,2-Dichloroethene	17.91	1.0	20	0	89.6	78 - 123				
Methylene chloride	18.11	2.0	20	0	90.5	74 - 124				
Trichloroethene	20.15	1.0	20	0	101	79 - 123				
Vinyl chloride	21.08	1.0	20	0	105	58 - 137				
Surr: 1,2-Dichloroethane-d4	*46.37*	*1.0*	*50*	*0*	*92.7*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*50.46*	*1.0*	*50*	*0*	*101*	*85 - 114*				
Surr: Dibromofluoromethane	*45.85*	*1.0*	*50*	*0*	*91.7*	*80 - 119*				
Surr: Toluene-d8	*51.29*	*1.0*	*50*	*0*	*103*	*89 - 112*				

MSD Sample ID: **HS21041135-03MSD** Units: **ug/L** Analysis Date: **23-Apr-2021 16:46**
Client ID: Run ID: **VOA6_382319** SeqNo: **6059754** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,2-Trichloroethane	17.92	1.0	20	0	89.6	80 - 119	17.84	0.443	20	
1,1-Dichloroethene	17.94	1.0	20	0	89.7	71 - 131	19	5.74	20	
1,2-Dichloroethane	17.62	1.0	20	0	88.1	73 - 128	18.35	4.06	20	
cis-1,2-Dichloroethene	17.03	1.0	20	0	85.2	78 - 123	17.91	5.03	20	
Methylene chloride	18.42	2.0	20	0	92.1	74 - 124	18.11	1.71	20	
Trichloroethene	18.81	1.0	20	0	94.1	79 - 123	20.15	6.88	20	
Vinyl chloride	19.65	1.0	20	0	98.3	58 - 137	21.08	7	20	
Surr: 1,2-Dichloroethane-d4	*47.83*	*1.0*	*50*	*0*	*95.7*	*81 - 118*	*46.37*	*3.12*	*20*	
Surr: 4-Bromofluorobenzene	*49.66*	*1.0*	*50*	*0*	*99.3*	*85 - 114*	*50.46*	*1.6*	*20*	
Surr: Dibromofluoromethane	*45.54*	*1.0*	*50*	*0*	*91.1*	*80 - 119*	*45.85*	*0.68*	*20*	
Surr: Toluene-d8	*51.67*	*1.0*	*50*	*0*	*103*	*89 - 112*	*51.29*	*0.733*	*20*	

The following samples were analyzed in this batch:

HS21041132-01	HS21041132-02	HS21041132-03	HS21041132-04
HS21041132-05	HS21041132-06	HS21041132-07	HS21041132-08

ALS Houston, US Date: 10-May-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP 16 April 2021
WorkOrder: HS21041132

QC BATCH REPORT

Batch ID: R382818 (0) **Instrument: TOC_04** **Method: TOTAL ORGANIC CARBON - SM5310B**

MBLK Sample ID: **MBLK2-04302021** Units: **mg/L** Analysis Date: **30-Apr-2021 21:16**
Client ID: Run ID: **TOC_04_382818** SeqNo: **6071454** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Organic Carbon, Total	0.500	1.00								U

LCS Sample ID: **LCS2-04302021** Units: **mg/L** Analysis Date: **30-Apr-2021 21:31**
Client ID: Run ID: **TOC_04_382818** SeqNo: **6071455** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Organic Carbon, Total	9.629	1.00	10	0	96.3	85 - 115				

LCSD Sample ID: **LCSD2-04302021** Units: **mg/L** Analysis Date: **30-Apr-2021 21:46**
Client ID: Run ID: **TOC_04_382818** SeqNo: **6071456** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Organic Carbon, Total	9.621	1.00	10	0	96.2	85 - 115	9.629	0.0831	20	

MS Sample ID: **HS21041102-08MS** Units: **mg/L** Analysis Date: **30-Apr-2021 23:07**
Client ID: Run ID: **TOC_04_382818** SeqNo: **6071461** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Organic Carbon, Total	15.48	1.00	10	4.841	106	80 - 120				

The following samples were analyzed in this batch: HS21041132-05

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP 16 April 2021
WorkOrder: **HS21041132**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL/SDL

Acronym	Description
DCS	Detectability Check Study
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitaion Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

Unit Reported	Description
mg/L	Milligrams per Liter

CERTIFICATIONS,ACCREDITATIONS & LICENSES

Agency	Number	Expire Date
Arkansas	21-022-0	26-Mar-2022
Dept of Defense	PJLA L20-507-R2	22-Dec-2021
Florida	E87611-30-07/01/2020	30-Jun-2021
Kansas	E-10352 2020-2021	31-Jul-2021
Kentucky	123043, 2021-2022	30-Apr-2022
Louisiana	03087, 2020-2021	30-Jun-2021
North Carolina	624-2021	31-Dec-2021
Oklahoma	2020-165	31-Aug-2021
Texas	T104704231-21-27	30-Apr-2022

ALS Houston, US Date: 10-May-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP 16 April 2021
Work Order: HS21041132

SAMPLE TRACKING

Lab Samp ID	Client Sample ID	Action	Date	Person	New Location
HS21041132-01	16EW02-210419	Login	4/21/2021 6:27:31 PM	NDR	Sub
HS21041132-01	16EW02-210419	Login	4/21/2021 6:27:31 PM	NDR	VOA237