LONGHORN ARMY AMMUNITION PLANT KARNACK, TEXAS

ADMINISTRATIVE RECORD

Volume 31

2020

Bate Stamp Numbers
01002779 – 01004626

Prepared for

Department of the Army
Longhorn Army Ammunition Plant

1976–2020

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

VOLUME 31

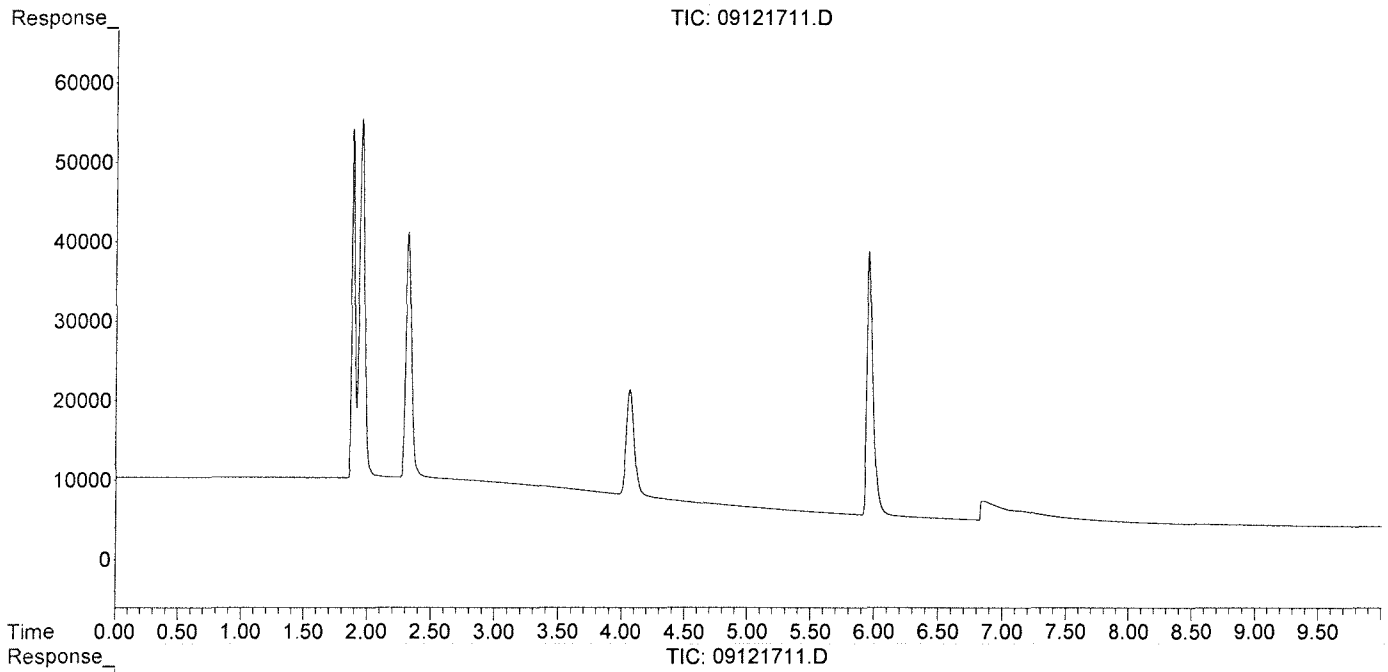
2020

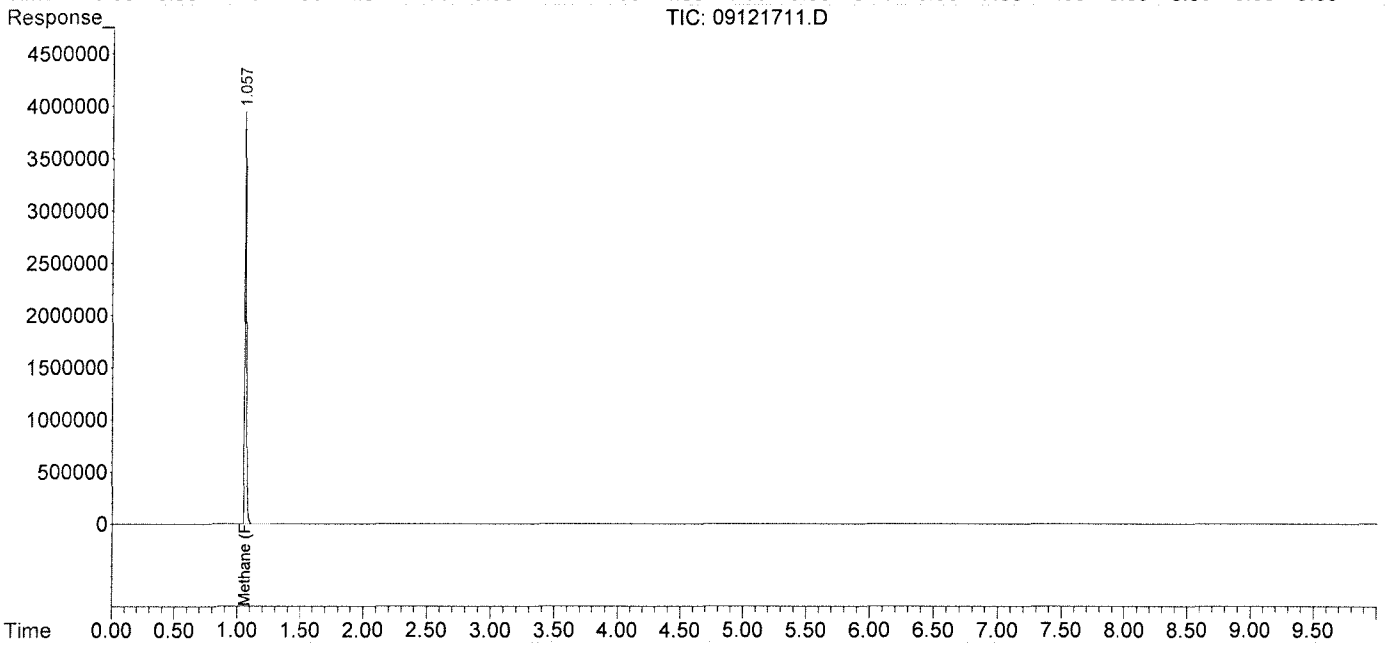
A. Title: Report – (cont'd) Appendix F Lab Results to Draft Final 6th Annual Remedial Action Operations Report (September 2018-August 2019), LHAAP-35A (58), Shops Area, Longhorn Army Ammunition Plant, Karnack, Texas, December 2020
Author(s): Department of the Army
Recipient: U.S. Environmental Protection Agency and Texas Commission on Environmental Quality
Date: December 9, 2020
Bate Stamp: 01002779 – 01004626

Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121711.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 14:48
Operator : MC
Sample : 4000ppm 0.1ml s32-08231701
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 11:13:37 2017
Quant Method : J:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:13:29 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121712.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 15:21
Operator : MC
Sample : 20000ppm 0.5ml s32-08231701
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 11:14:17 2017
Quant Method : J:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:13:29 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

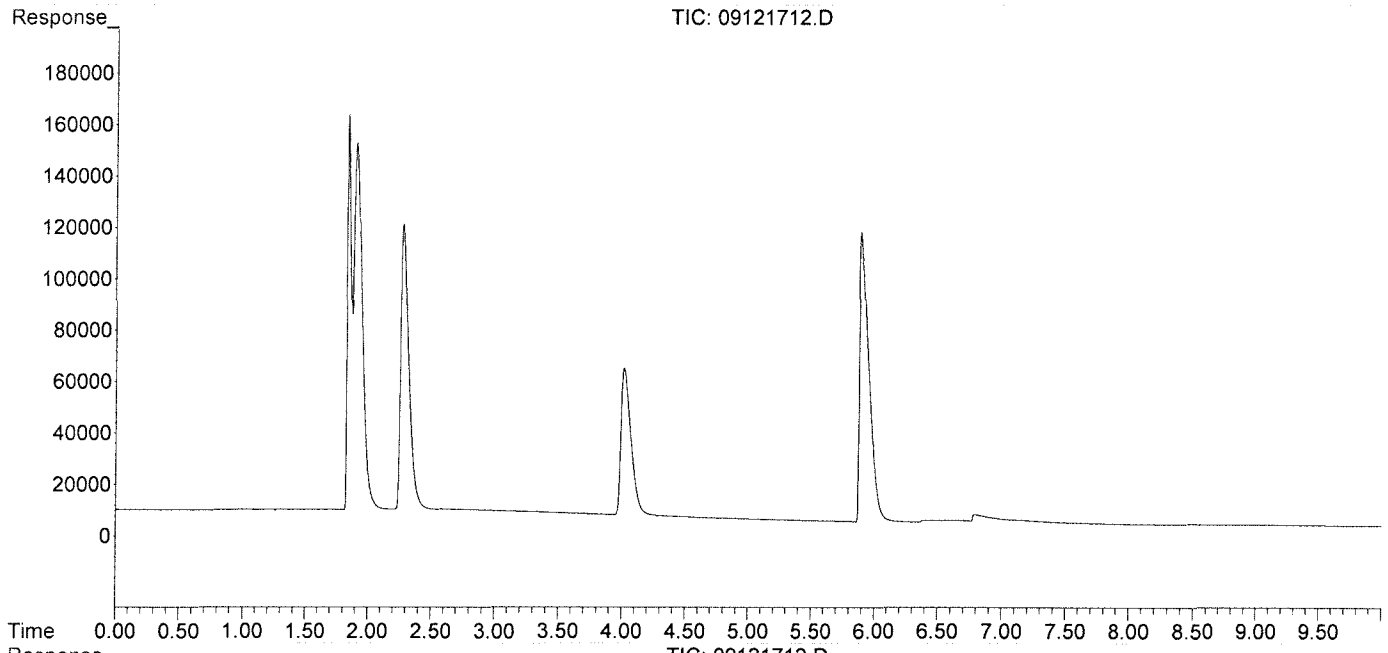
	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1)	Oxygen/Argon	0.000	0	N.D.	ppm	d
2)	Carbon monoxide	1.836	3190788	N.D.	ppm	
3)	Methane (TCD)	0.000	0	N.D.	ppm	d
4)	Carbon dioxide	0.000	0	N.D.	ppm	d
6)	Methane (FID)	1.034	169009160	18492.064	ppm	
7)	Ethylene	0.000	0	N.D.	ppm	
8)	Ethane	0.000	0	N.D.	ppm	
9)	Propylene	0.000	0	N.D.	ppm	
10)	Propane	0.000	0	N.D.	ppm	
11)	Isobutylene	0.000	0	N.D.	ppm	
12)	Isobutane	0.000	0	N.D.	ppm	
13)	n-Butane	0.000	0	N.D.	ppm	

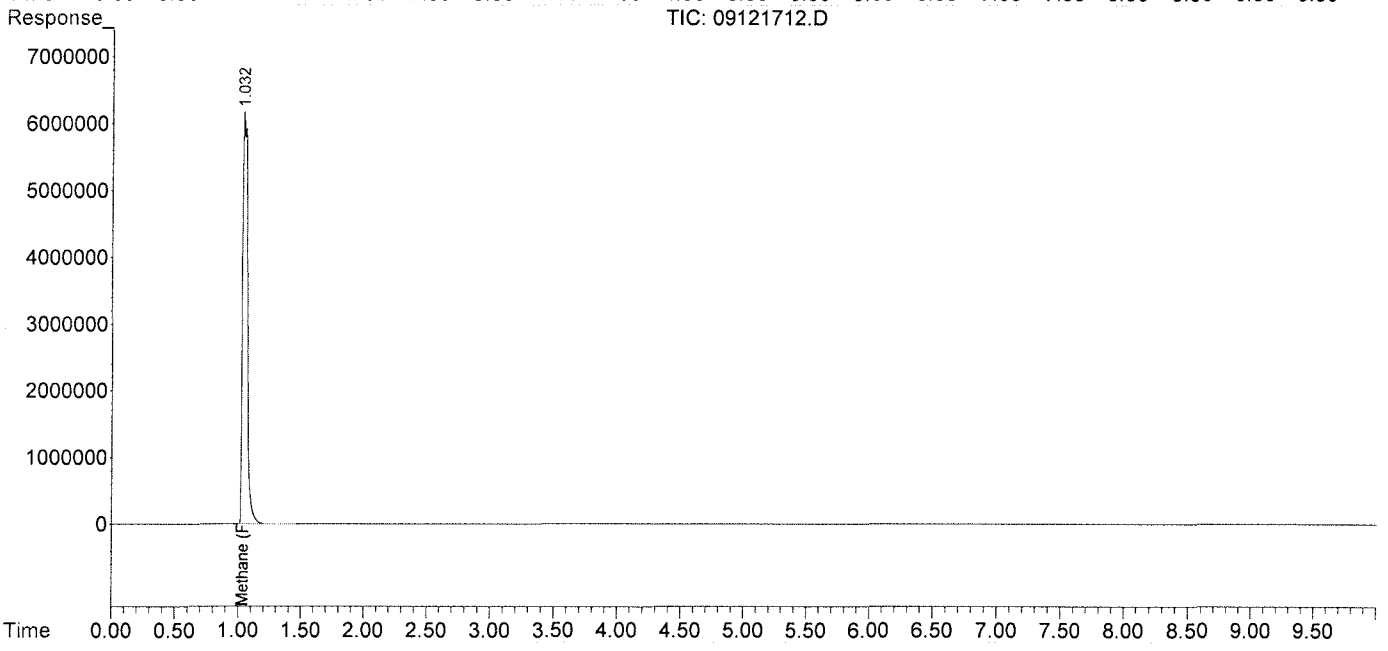
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121712.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 15:21
Operator : MC
Sample : 20000ppm 0.5ml s32-08231701
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 11:14:17 2017
Quant Method : J:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:13:29 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121715.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 16:15
Operator : MC
Sample : icv s30-05241604
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 11:15:11 2017
Quant Method : J:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:13:29 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1)	Oxygen/Argon	1.843	2922459	3.687	ppm	
2)	Carbon monoxide	1.843	2922459	N.D.	ppm	
3)	Methane (TCD)	0.000	0	N.D.	ppm	actual %D
4)	Carbon dioxide	0.000	0	N.D.	ppm	
6)	Methane (FID)	1.063	13748	1.516	ppm	~~1510~~ 1.50 101.1
7)	Ethylene	1.598	24153	1.443	ppm	~~1510~~ 1.50 96.2
8)	Ethane	1.850	24488	1.445	ppm	~~1510~~ 1.50 96.3
9)	Propylene	4.221	36004	1.537	ppm	~~1510~~ 1.50 102.5
10)	Propane	4.350	37738	1.517	ppm	~~1511~~ 1.51 100.5
11)	Isobutylene	0.000	0	N.D.	ppm	
12)	Isobutane	6.579f	48019	1.804	ppm	9/14/17
13)	n-Butane	6.579f	48019	1.804	ppm	

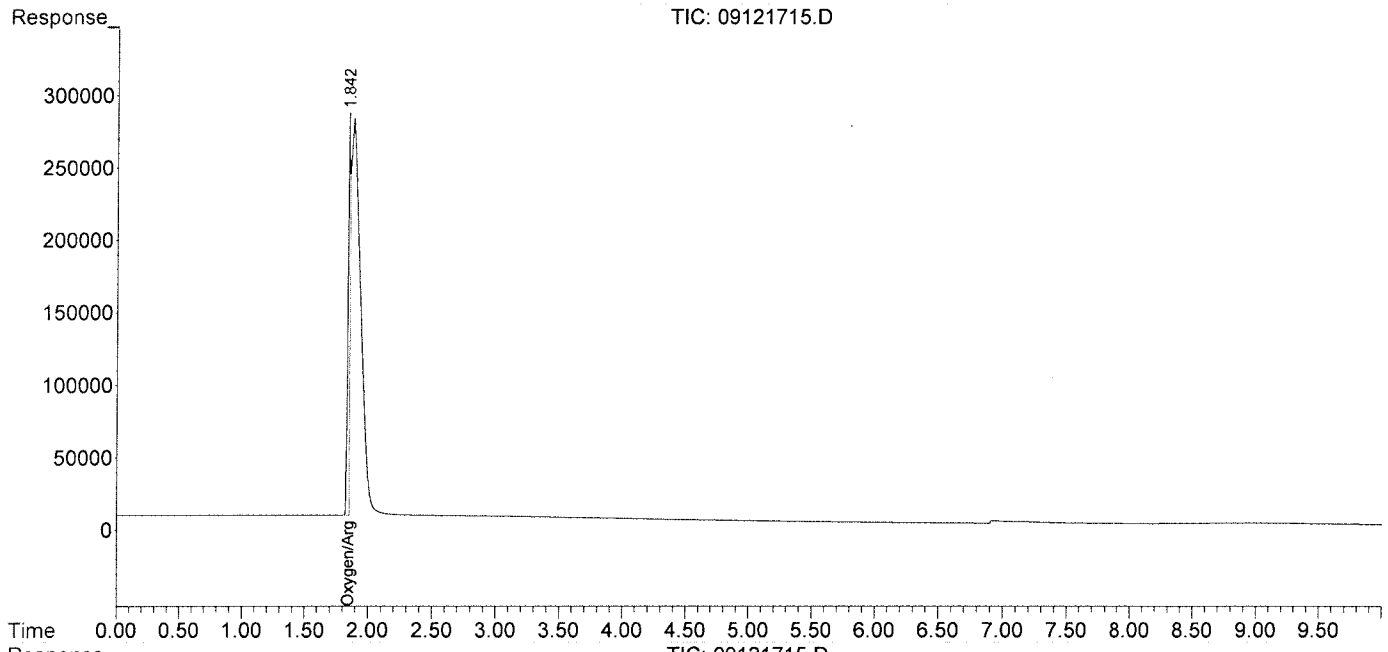
(f)=RT Delta > 1/2 Window (m)=manual int.

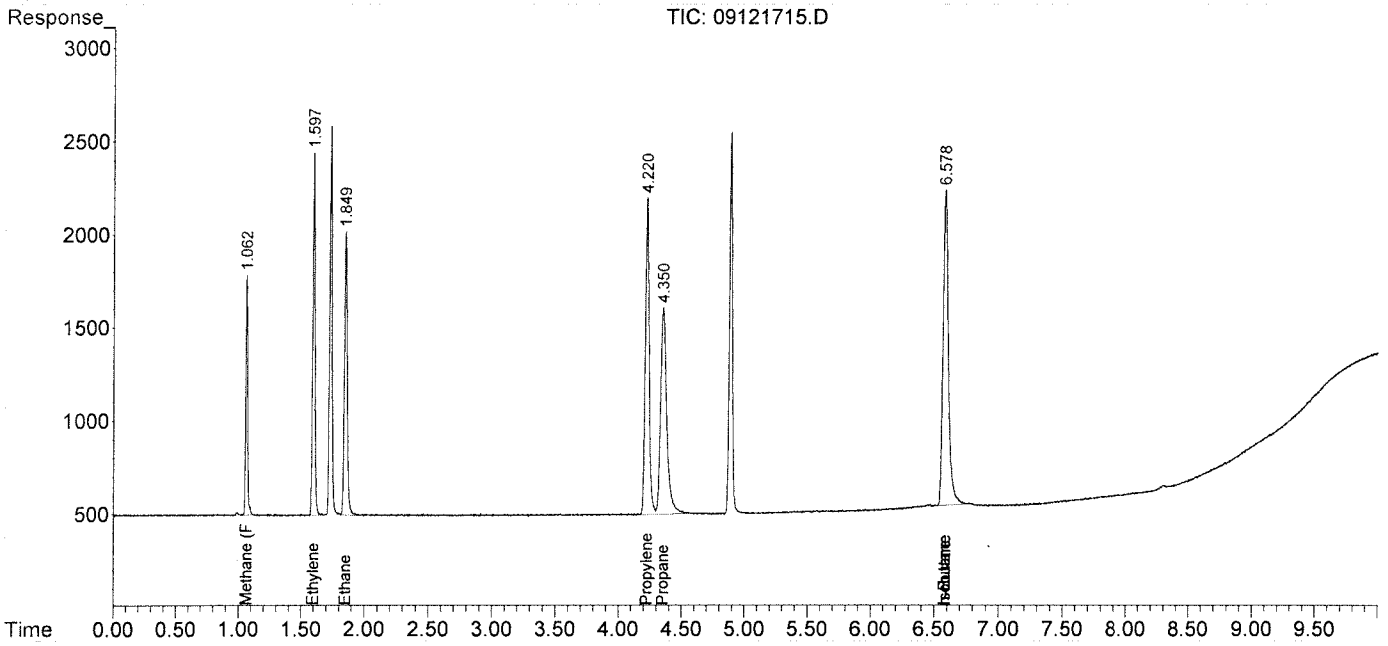
9/14/17

Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121715.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 16:15
Operator : MC
Sample : icv s30-05241604
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 11:15:11 2017
Quant Method : J:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:13:29 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Dissolved Gases by RSK175

ALS Environmental

Method : RSK175 Headspace Method for Dissolved Hydrocarbon in Water by FID/TCD
Client : ALS Laboratory Group
Service Request: P2003560
Sample Vol. (ml) : 32.00 ml
Analyst : LD
Date Analysis : 07/01/20
Head Space Vol.(ml) : 8.00 ml
Instrument : GC#10
Detector : FID#10, TCD#10
Gas Constant : 24.05684 (20°C)

HEAD SPACE RESULT (ppm)

Sample ID	Inj. Vol.	Methane	Ethylene	Ethane
STD S32-05221901	0.100	95.229	101.520	101.160
ACTUAL		101.50	100.90	101.40
%Difference		6.2%	0.6%	0.2%
MCS 0.1ml	0.100	0.000	0.000	0.000
RB 0.1ml	0.100	0.131	0.000	0.000
LCS FID 0.1ml	0.100	1.430	1.054	1.201
LCSD FID 0.1ml	0.100	1.417	1.036	1.165
P2003560-001 0.1ml	0.100	1.014	0.000	0.000
P2003560-002 0.1ml	0.100	334.891	0.104	0.000
P2003560-003 0.1ml	0.100	769.772	2.727	0.000
P2003560-004 0.1ml	0.100	540.986	0.000	0.000

FINAL HEAD SPACE RESULT (ppm)

	Methane	Ethylene	Ethane
WWt.	16.04	28.05	30.07
HENRY'S CONSTANT	3.76E+04	1.02E+04	2.63E+04
RL	1.30	1.00	0.60
MCS 0.1ml	0.000	0.000	0.000
LCS FID 0.1ml	14.300	10.540	12.010
LCSD FID 0.1ml	14.170	10.360	11.650
P2003560-001 0.1ml	10.140	0.000	0.000
P2003560-002 0.1ml	3348.910	1.040	0.000
P2003560-003 0.1ml	7697.720	27.270	0.000
P2003560-004 0.1ml	5409.860	0.000	0.000

STD S32-05221901	88.197	93.300	92.540
ACTUAL	101.50	100.90	101.40
%Difference	13.1%	7.5%	8.7%

VP 07/01

Quantitation Report (QT Reviewed)

Data Path : I:\GC10\DATA\RSK_FID\2020_07\01\
Data File : 07012001.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 01-Jul-2020, 12:25:59
Operator : LD
Sample : STD S32-05221901
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Jul 01 12:50:08 2020
Quant Method : I:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:14:47 2017
Response via : Initial Calibration
Integrator: ChemStation

LD 07/01

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

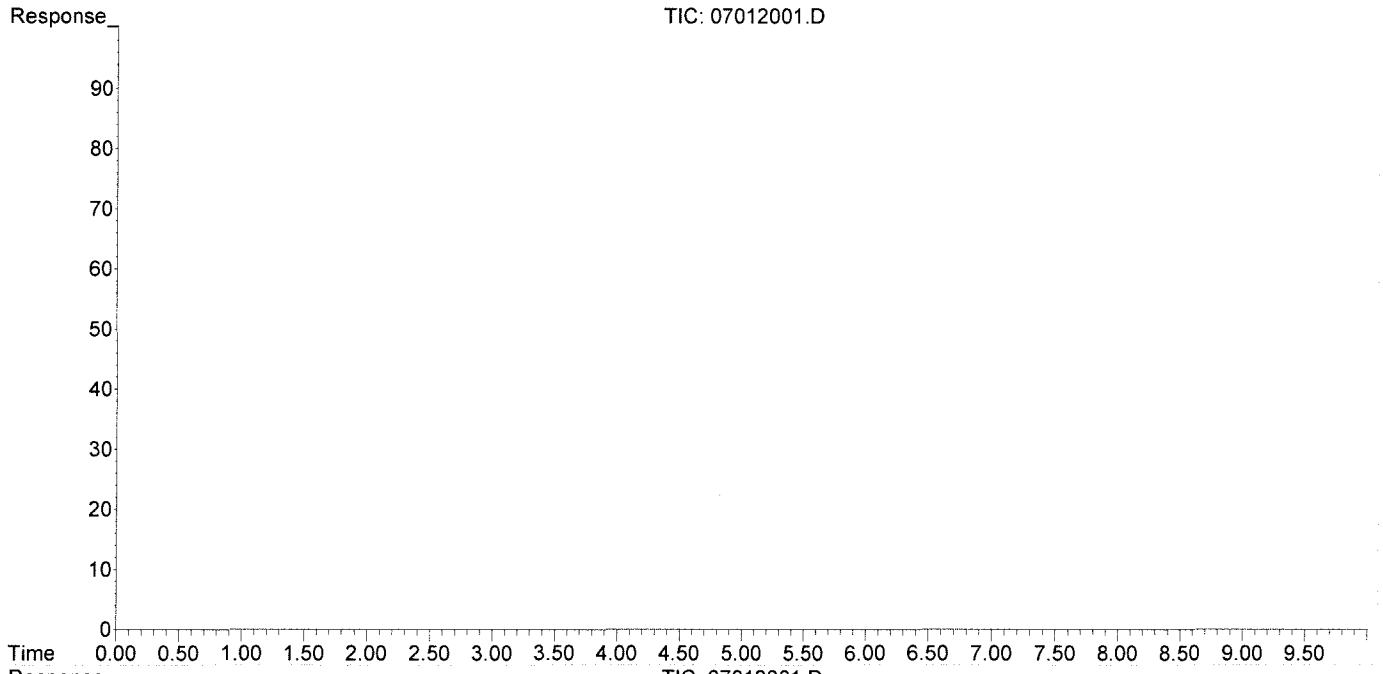
	Compound	R.T.	Response	Conc	Units
Target Compounds					
1)	Oxygen/Argon	0.000	0	N.D.	ppm
2)	Carbon monoxide	0.000	0	N.D.	ppm
3)	Methane (TCD)	0.000	0	N.D.	ppm
4)	Carbon dioxide	0.000	0	N.D.	ppm
6)	Methane (FID)	1.094	863792	95.229	ppm
7)	Ethylene	1.657	1698867	101.520	ppm
8)	Ethane	1.920	1714674	101.160	ppm
9)	Propylene	4.305	2500360	106.709	ppm
10)	Propane	4.427	2577356	103.591	ppm
11)	Isobutylene	0.000	0	N.D.	ppm
12)	Isobutane	0.000	0	N.D.	ppm
13)	n-Butane	0.000	0	N.D.	ppm

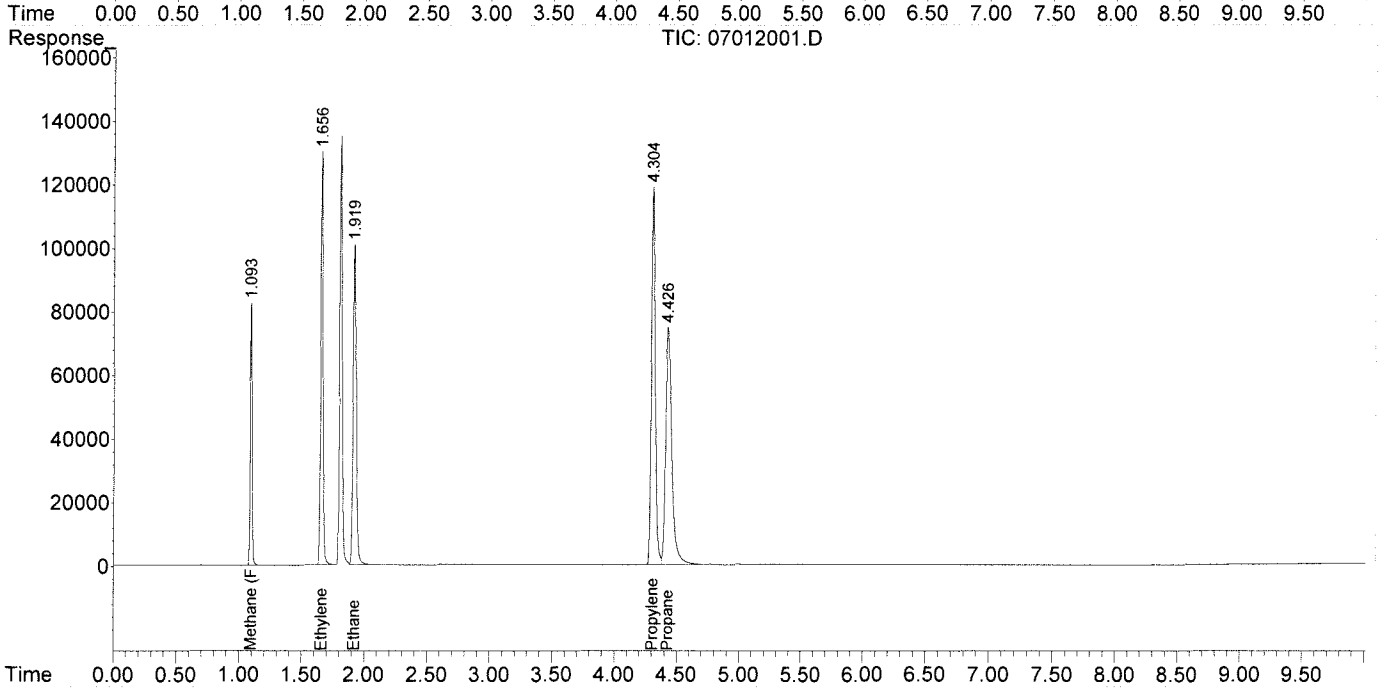
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : I:\GC10\DATA\RSK_FID\2020_07\01\
Data File : 07012001.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 01-Jul-2020, 12:25:59
Operator : LD
Sample : STD S32-05221901
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Jul 01 12:50:08 2020
Quant Method : I:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:14:47 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





01002787

Data Path : I:\GC10\DATA\RSK_FID\2020_07\01\
Data File : 07012015.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 01-Jul-2020, 16:56:52
Operator : LD
Sample : STD S32-05221901
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Jul 01 17:17:22 2020
Quant Method : I:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:14:47 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

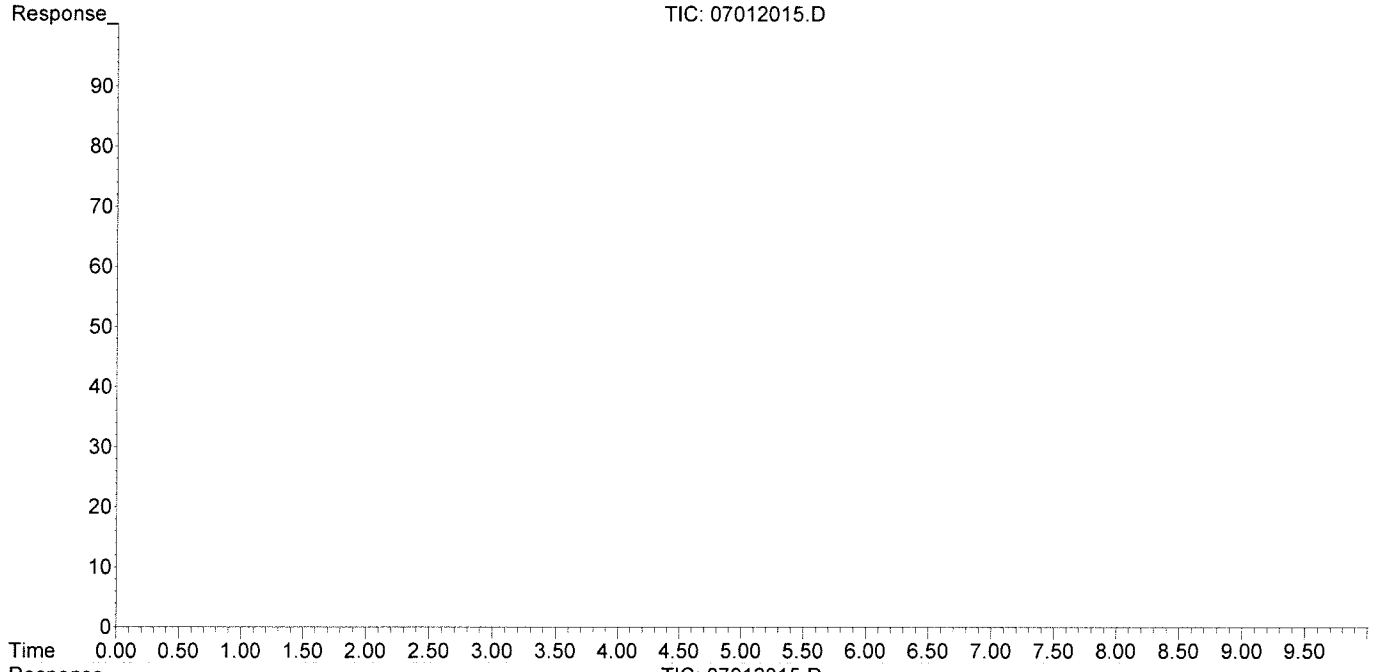
	Compound	R.T.	Response	Conc	Units
Target Compounds					
1)	Oxygen/Argon	0.000	0	N.D.	ppm
2)	Carbon monoxide	0.000	0	N.D.	ppm
3)	Methane (TCD)	0.000	0	N.D.	ppm
4)	Carbon dioxide	0.000	0	N.D.	ppm
6)	Methane (FID)	1.100	800006	88.197	ppm
7)	Ethylene	1.666	1561310	93.300	ppm
8)	Ethane	1.929	1568578	92.540	ppm
9)	Propylene	4.305	2269738	96.867	ppm
10)	Propane	4.427	2334081	93.813	ppm
11)	Isobutylene	0.000	0	N.D.	ppm
12)	Isobutane	0.000	0	N.D.	ppm
13)	n-Butane	0.000	0	N.D.	ppm

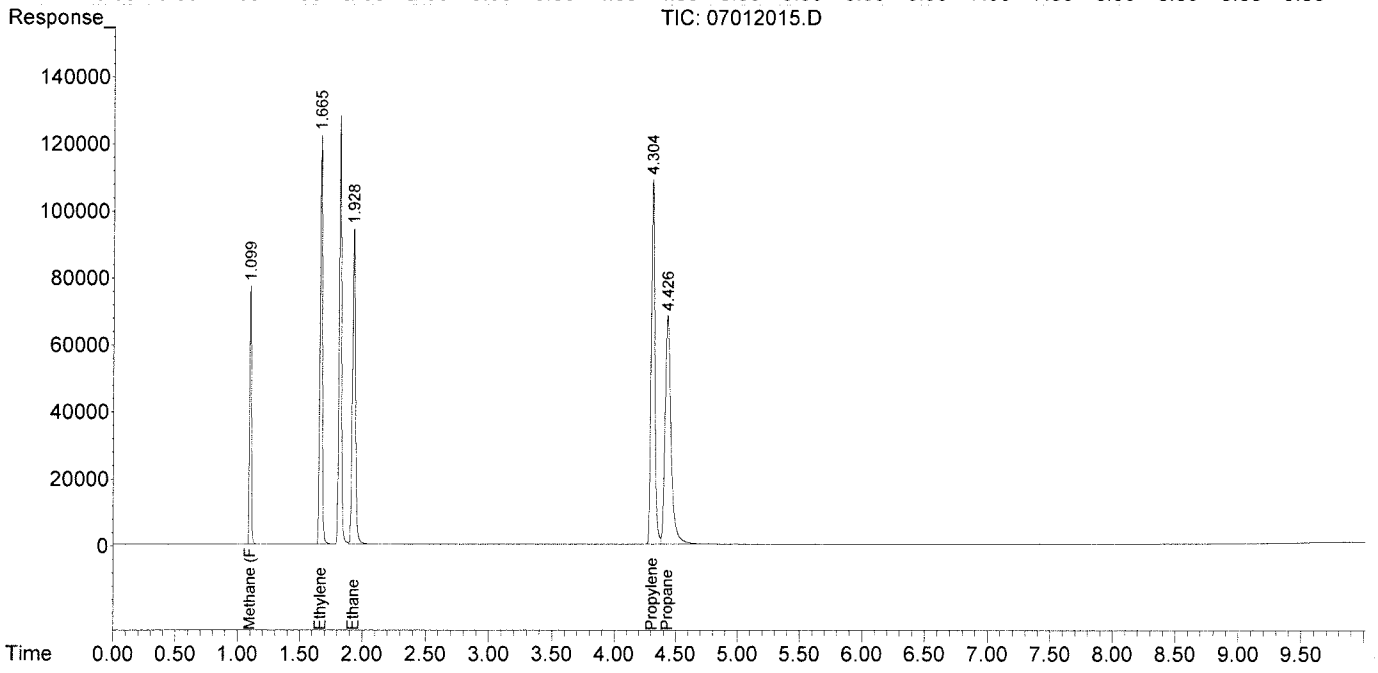
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : I:\GC10\DATA\RSK_FID\2020_07\01\
Data File : 07012015.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 01-Jul-2020, 16:56:52
Operator : LD
Sample : STD S32-05221901
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Jul 01 17:17:22 2020
Quant Method : I:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:14:47 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Injection Log

Directory: I:\GC10\DATA\RSK_FID\2017_09\12\

	Date/Time	File Name	Sample ID	Misc Info	Operator	Acquisition Method	Comments
1	12-Sep-17, 08:38:08	09121701.D	test		MC	RSKBOTH.M	
2	12-Sep-17, 10:52:40	09121702.D	0.151ppm 0.250ml s32-09121702		MC	RSKBOTH.M	Curve
3	12-Sep-17, 11:05:49	09121703.D	0.302ppm 0.5ml s32-09121702		MC	RSKBOTH.M	Curve
4	12-Sep-17, 11:45:34	09121704.D	1.51ppm 0.1ml s32-09051701		MC	RSKBOTH.M	Curve
5	12-Sep-17, 12:09:33	09121705.D	4.53ppm 0.3ml s32-09051701		MC	RSKBOTH.M	Curve
6	12-Sep-17, 12:30:23	09121706.D	10.57ppm 0.7ml s32-09051701		MC	RSKBOTH.M	Curve
7	12-Sep-17, 12:47:18	09121707.D	200ppm 0.1ml s32-09121701		MC	RSKBOTH.M	Curve
8	12-Sep-17, 13:00:22	09121708.D	600ppm 0.3ml s32-09121701		MC	RSKBOTH.M	Curve
9	12-Sep-17, 13:47:48	09121709.D	1000ppm 0.5ml s32-09121701		MC	RSKBOTH.M	Curve
10	12-Sep-17, 14:07:58	09121710.D	2000ppm 1ml s32-09121701		MC	RSKBOTH.M	Curve
11	12-Sep-17, 14:48:48	09121711.D	4000ppm 0.1ml s32-08231701		MC	RSKBOTH.M	Curve
12	12-Sep-17, 15:21:51	09121712.D	20000ppm 0.5ml s32-08231701		MC	RSKBOTH.M	Curve
13	12-Sep-17, 15:38:59	09121713.D	mb 0.5ml		MC	RSKBOTH.M	Pass
14	12-Sep-17, 15:55:35	09121714.D	mb 0.1ml		MC	RSKBOTH.M	Pass
15	12-Sep-17, 16:15:26	09121715.D	icv s30-05241604		MC	RSKBOTH.M	Pass

Injection Log

Directory: I:\GC10\DATA\RSK_FID\2020_07\01\

	Date/Time	File Name	Sample ID	Misc Info	Operator	Acquisition Method	Comments
1	01-Jul-20, 12:25:59	07012001.D	STD S32-05221901		LD	RSKBOTH.M	pass
2	01-Jul-20, 12:54:01	07012002.D	RB 0.1ml		LD	RSKBOTH.M	pass
3	01-Jul-20, 13:48:06	07012003.D	MCS 0.1ml		LD	RSKBOTH.M	pass
4	01-Jul-20, 14:01:52	07012004.D	LCS FID 0.1ml		LD	RSKBOTH.M	pass
5	01-Jul-20, 14:21:34	07012005.D	LCSD FID 0.1ml		LD	RSKBOTH.M	pass
6	01-Jul-20, 14:41:02	07012006.D	P2003560-001 0.1ml		LD	RSKBOTH.M	
7	01-Jul-20, 14:54:52	07012007.D	P2003560-002 0.1ml		LD	RSKBOTH.M	
8	01-Jul-20, 15:07:49	07012008.D	P2003560-003 0.1ml		LD	RSKBOTH.M	
9	01-Jul-20, 15:27:11	07012009.D	P2003560-004 0.1ml		LD	RSKBOTH.M	
10	01-Jul-20, 15:43:08	07012010.D	P2003597-001 0.1ml		LD	RSKBOTH.M	
11	01-Jul-20, 15:56:30	07012011.D	P2003597-002 0.1ml		LD	RSKBOTH.M	
12	01-Jul-20, 16:09:40	07012012.D	P2003597-003 0.1ml		LD	RSKBOTH.M	
13	01-Jul-20, 16:22:41	07012013.D	P2003597-004 0.1ml		LD	RSKBOTH.M	
14	01-Jul-20, 16:38:47	07012014.D	P2003597-005 0.1ml		LD	RSKBOTH.M	
15	01-Jul-20, 16:56:52	07012015.D	STD S32-05221901		LD	RSKBOTH.M	pass
16	01-Jul-20, 17:18:36	07012016.D	J2003335-054 0.1ml		LD	RSKBOTH.M	
17	01-Jul-20, 17:34:03	07012017.D	J2003335-055 0.1ml		LD	RSKBOTH.M	
18	01-Jul-20, 17:47:00	07012018.D	J2003335-056 0.1ml		LD	RSKBOTH.M	
19	01-Jul-20, 18:04:34	07012019.D	J2003335-057 0.1ml		LD	RSKBOTH.M	
20	01-Jul-20, 18:17:48	07012020.D	STD S32-05221901		LD	RSKBOTH.M	pass

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

Client: RJ Modashia
ALS Laboratory Group
10450 Stancliff Rd
Suite 210
Houston, TX 77040

Phone: 281-575-2279

Fax:

Identifier: 088RF **Date Rec:** 06/24/2020 **Report Date:** 07/01/2020

Client Project #: NW01312.0150 **Client Project Name:** LHAAP-58

Purchase Order #:

Analysis Requested: CENSUS

Reviewed By:



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

CENSUS

Client: **ALS Laboratory Group**
Project: LHAAP-58

MI Project Number: **088RF**
Date Received: 06/24/2020

Sample Information

Client Sample ID:	**03WW01_06232 0**	**35AWW08_062 320**	**35AWW11_062 320**
Sample Date:	06/23/2020	06/23/2020	06/23/2020
Units:	cells/mL	cells/mL	cells/mL
Analyst/Reviewer:	HT	HT	HT

Dechlorinating Bacteria

Dehalococcoides	*DHC*	**6.50E+03**	**5.94E+05**	**3.82E+02**
tceA Reductase	TCE	**7.42E+02**	**2.56E+05**	**7.82E+01**
BAV1 Vinyl Chloride Reductase	BVC	<5.00E-01	<1.00E+00	<1.10E+00
Vinyl Chloride Reductase	VCR	**2.41E+03**	**9.20E+04**	**1.99E+02**
Dehalobacter spp.	*DHBt*	**6.99E+02**	**2.95E+04**	**4.11E+04**

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

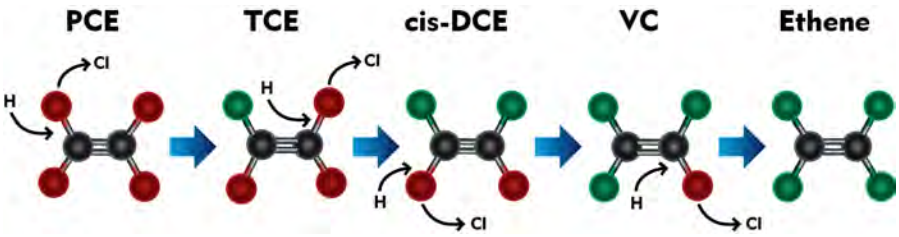
Samples Received **6/24/2020**

Component	Date Prepared	Date Analyzed	Arrival Temperature	Positive Control	Extraction Blank	Negative Control
DHC	06/24/2020	07/01/2020	1 °C	99%	non-detect	non-detect
BVC	06/24/2020	07/01/2020	1 °C	100%	non-detect	non-detect
DHBt	06/24/2020	07/01/2020	1 °C	106%	non-detect	non-detect
TCE	06/24/2020	07/01/2020	1 °C	100%	non-detect	non-detect
VCR	06/24/2020	07/01/2020	1 °C	100%	non-detect	non-detect

DHC Interpretation

Dehalococcoides 16S rRNA gene (qDHC)

Under anaerobic conditions, tetrachloroethene (PCE) and trichloroethene (TCE) can undergo sequential reductive dechlorination through the daughter products *cis*-dichloroethene (*cis*-DCE) and vinyl chloride to nontoxic ethene (1,2).



While a number of bacterial cultures capable of utilizing PCE and TCE as growth supporting electron acceptors have been isolated (3-7), *Dehalococcoides* spp. may be the most important because they are the only bacterial group that has been isolated to date which is capable of complete reductive dechlorination of PCE to ethene (8). In fact, the presence of *Dehalococcoides* spp. has been associated with complete dechlorination to ethene at sites across North America and Europe (9).

Status	*Dehalococcoides spp.*	Observation
	**≥ 10^4** (cells/mL)	Lu et al. proposed that a concentration of 1 x 10^4 DHC cells/mL could be used as a screening criterion to identify sites where reductive dechlorination will yield a generally useful biodegradation rate (10). Similarly, in an internal study conducted with nearly 1000 groundwater samples obtained from sites across the US, ethene production was observed in approximately 80% of samples in which CENSUS® qDHC results were greater than or equal to 10^4 DHC cells/mL.
	**10^1 to < 10^4** (cells/mL)	When vinyl chloride reductase genes (See DHC functional genes discussion below) are also detected, complete reductive dechlorination of PCE and TCE to ethene may still occur even with moderate DHC concentrations. When the DHC population is below the 10^4 cells/mL criterion proposed by Lu et al. (10), project managers should carefully consider other site-specific data to determine whether subsurface conditions may be limiting reductive dechlorination. For example, the addition of an electron donor may be able to stimulate DHC growth and enhance anaerobic bioremediation.
	**< 10^1** (cells/mL)	DHC concentrations are low suggesting that complete reductive dechlorination of PCE and TCE to ethene is unlikely to occur under existing conditions. Enhanced anaerobic bioremediation options (biostimulation or bioaugmentation) may need to be considered.

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DHC Interpretation

DHC Functional Genes (*tce*A, *bvc*A, *vcr*A)

A "stall" where daughter products *cis*-DCE and vinyl chloride accumulate can occur at PCE- and TCE-impacted sites especially under MNA conditions. The accumulation of vinyl chloride, generally considered more carcinogenic than the parent compounds, is particularly problematic. Although elevated *Dehalococcoides* concentrations correspond to ethene production in numerous studies, the range of chlorinated ethenes metabolized and cometabolized varies among species and strains within the *Dehalococcoides* genus. For example, *Dehalococcoides ethenogenes* str. 195 metabolizes PCE, TCE, and *cis*-DCE and cometabolizes vinyl chloride (8) to produce ethene. Conversely, *Dehalococcoides* sp. CBDB1 utilizes PCE and TCE but does not cometabolize additional chloroethenes (11). Other *Dehalococcoides* strains, such as BAV1, GT and VS, are known to fully dechlorinate cis-DCE and VC to ethene (14,16,19). Quantification of reductive dehalogenase genes is used to more definitively confirm the potential for reductive dechlorination of TCE, cis-DCE, and vinyl chloride (12-15).

Functional Gene	Observation
TCE Reductase	
***tce*A gene**	The *tce*A gene encodes the enzyme responsible for reductive dechlorination of TCE to *cis*-DCE in some strains of *Dehalococcoides*. Absence of *tce*A does not preclude the potential for reductive dechlorination of TCE in the field since the *tce*A gene is not universally distributed among all DHC and is not present in other microorganisms capable of reductive dechlorination of TCE (e.g. *Dehalobacter*). Detection of the *tce*A gene provides an additional line of evidence indicating the potential for dechlorination of TCE.
Vinyl Chloride Reductase	
***bvc*A gene**	The *bvc*A gene encodes the vinyl chloride reductase enzyme responsible for reductive dechlorination of vinyl chloride to ethene by *Dehalococcoides* sp. str. BAV1 (16). Presence of *bvc*A gene indicates the potential for reductive dechlorination of VC to ethene. Absence of both *bvc*A and *vcr*A genes suggests VC may accumulate. An internal study with ~1,000 samples showed ethene production was observed in 80% of the samples that the DHC population was greater than or equal to 10^4 cells/mL. The *bvc*A gene was detected in over 50% of these samples. Van Der Zaan et al (17) noted that the bvcA gene was the only VC reductase gene detected at three of their sites. Alfred Spormann's laboratory at Stanford University (18) reported that the *bvc*A gene was the most abundant and active at the outflow of a PCE fed column study. This section of the column was in the DCE to VC stages of reductive dechlorination thus confirming the importance of the *bvc*A gene for complete reductive dechlorination.
***vcr*A gene**	The *vcr*A gene encodes the vinyl chloride reductase enzyme responsible for reductive dechlorination of *cis*-DCE and vinyl chloride by *Dehalococcoides* sp. strain VS (14). Presence of *vcr*A gene indicates the potential for reductive dechlorination of DCE and/or VC to ethene. Absence of both *bvc*A and *vcr*A genes suggest VC may accumulate. As with the *bvc*A gene, detection of the *vcr*A gene is associated with ethene production in internal studies (67%) and vinyl chloride reduction in independent studies (14, 17).

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ALS

DHC Interpretation

Reporting

Microbial Insights can provide a variety of data packages and reporting levels to suit the needs of any project. Data packages range from simple analytical reports with results only to more complex data packages that include a report narrative, analytical results, QC data, and supporting materials including all raw data and chain-of-custody documentation. The figure below shows our standard report and explains the way values are reported.

Microbial Insights, Inc.

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CENSUS

Client: Company Name
Project: Your Project Name

MI Project Number: Unique Laboratory Identifier
Date Received: Date Samples Arrived

Sample Information

Client Sample ID:		Sample A	Sample B	Sample C
Sample Date:		00/00/0000	00/00/0000	00/00/0000
Units:		cells/mL	cells/mL	cells/mL
Analyst:		Intials	Intials	Intials
Dechlorinating Bacteria				
Dehalococcoides spp.	DHC	**1.84E+05**	**2.76E+02**	**2.28E+01 (J)**
Functional Genes				
tceA Reductase	TCE	**6.00E+01**	**3.23E+01**	<4.00E-01
bvcA Reductase	BVC	**1.17E+04**	**1.81E+01**	<4.00E-01
vcrA Reducatase	VCR	**8.42E+04**	**1.74E+02**	<4.00E-01

"J" value
Result is an estimated value. This data qualifier (flag) is used when the target gene is detected but at a concentration or abundance below the practical quantification limit (PQL).

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

< value
The target gene was not detected at the limit of quantitation (LOQ) reported for that sample.

"I" value
QA Procedure indicated that the sample may have exhibited PCR inhibition. Although relatively rare, PCR inhibition can occur due to the presence of metals or humic acids at high concentrations in the sample.

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Quality Assurance

Microbial Insights' comprehensive Quality Assurance (QA) Program is the foundation of all laboratory analyses, ensuring that our clients receive high-quality analytical services that are timely, reliable, and meet their intended purpose in a cost effective manner. MI is committed to providing quality data that surpasses regulatory and industry standards, thus enabling the client to make well-informed decisions. MI maintains strict standard operating procedures and QA/QC measures throughout all of the analyses offered. The following Table details specific QA/QC procedures that are used for CENSUS.

QA/QC	Description
Date of Extraction	DNA and RNA extractions are performed the day the samples are received by MI to minimize the possibility of any changes to the microbial community prior to analysis.
Laboratory Method Blanks	An extraction blank (no sample added) is processed alongside each set of field samples from DNA extraction through CENSUS® analysis to ensure that cross contamination has not occurred. Although MI has never experienced this issue, the detection of the CENSUS® target (e.g. *Dehalococcoides*) in an extraction blank is direct evidence of cross contamination with a sample or contamination of a reagent and would invalidate the results. If this were to occur, MI would re-extract the sample. If not possible to re-extract, MI would contact the client immediately and notate it on the laboratory report.
Laboratory Control Samples (LCS)	A laboratory control sample (LCS) or positive control (target DNA) is included with each CENSUS® plate to confirm amplification and as a continuing calibration check.
Negative Controls	A negative control (no DNA) is included with each CENSUS plate to ensure that cross contamination has not occurred during amplification. As with the extraction blank, detection of CENSUS target (e.g. DHC) in a negative control is direct evidence of contamination and would invalidate the results. If this were to occur, MI would rerun the analysis.

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How to Retrieve and Use Estimated Percentile Ranks from the Microbial Insights Database

The MI Database

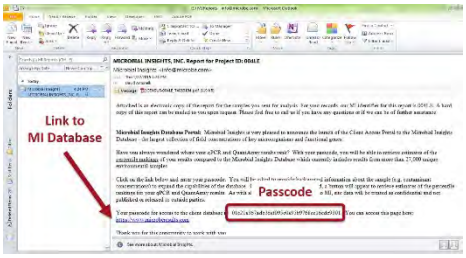
The Microbial Insights Database is the largest collection of field concentrations of key microorganisms and functional genes currently containing qPCR and QuantArray results for more than 40,000 unique groundwater, soil, and sediment samples from all 50 states and 33 countries worldwide.

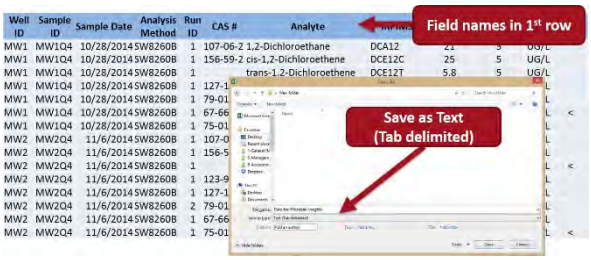
Is that low, medium or high?

In practice, biodegradation depends not just on the presence but the actual concentrations of the contaminant degrading microorganisms. The estimated percentile ranks retrieved from the MI Database answer the question "Is that low, medium or high?" by comparing your results to those of the literally thousands of other environmental samples submitted to MI for analysis over the last 20+ years.

Retrieving Estimated Percentile Ranks

With your report, you were emailed a passcode and link enabling you to login to the Client Portal. Just enter basic information about the sample (e.g. contaminant concentrations) to aid in understanding the links between environmental conditions and microbial populations and you can retrieve estimates of the percentile ranks of your results based on those compiled in the MI database at no additional charge.





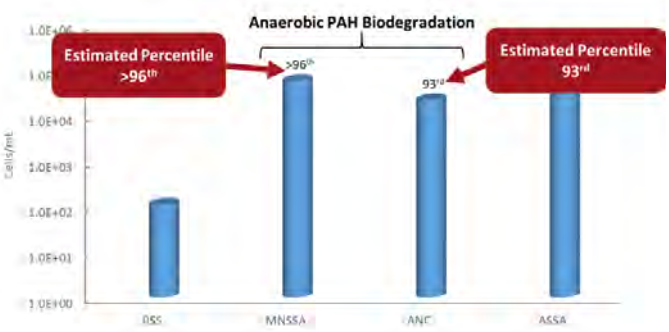
All site specific data will be treated as confidential and uploading is easy.

You can even upload chemical and geochemical data from EDDs. Just save as a Tab Delimited text file.

Example - Using Estimated Percentile for MNA Assessment at an MGP Site

CENSUS® qPCR was performed to quantify anaerobic naphthalene carboxylase (ANC) and naphthyl-2-methylsuccinate synthase (MNSSA) to assess anaerobic biodegradation of naphthalene and methyl-naphthalene under existing site conditions.

- Not only were ANC and MNSSA genes detected, but these functional genes responsible for anaerobic biodegradation of PAHs were present at concentrations "far better than average" based on the estimated percentile ranks.
- Demonstrating high concentrations of ANC and MNSSA gave an additional line of evidence indicating growth substantial populations of anaerobic PAH degraders and suggested a greater probability that monitored natural attenuation (MNA) will be successful.



How to Use Estimated Percentile Ranks from the Microbial Insights Database

The MI Database and Client Portal

The Microbial Insights Database is the largest collection of field concentrations of key microorganisms and functional genes currently containing qPCR and QuantArray results for more than 32,000 unique groundwater, soil, and sediment samples from all 50 states and 33 countries worldwide. Driven by field samples, the database reflects the impacts of common contaminants, geochemical conditions, and site management practices on critical microbial populations.

With your report, you received a passcode enabling you to retrieve estimates of the percentile ranks of your results based on those compiled in the MI database at no additional charge. When accessing the database, you will be asked to provide background information about the sample (e.g. contaminant concentrations) to aid in understanding the links between environmental conditions and microbial populations. As with all client information provided to MI, site specific data will be treated as confidential.

Is that low, medium or high?

In practice, biodegradation depends not just on the presence but the actual concentrations of the contaminant degrading microorganisms. Simply put, qPCR and QuantArray results demonstrating high concentrations of target microorganisms or functional genes suggest in situ selection, enrichment and growth of those specific contaminant degraders and therefore a greater probability that monitored natural attenuation (MNA) or bioremediation will be successful.

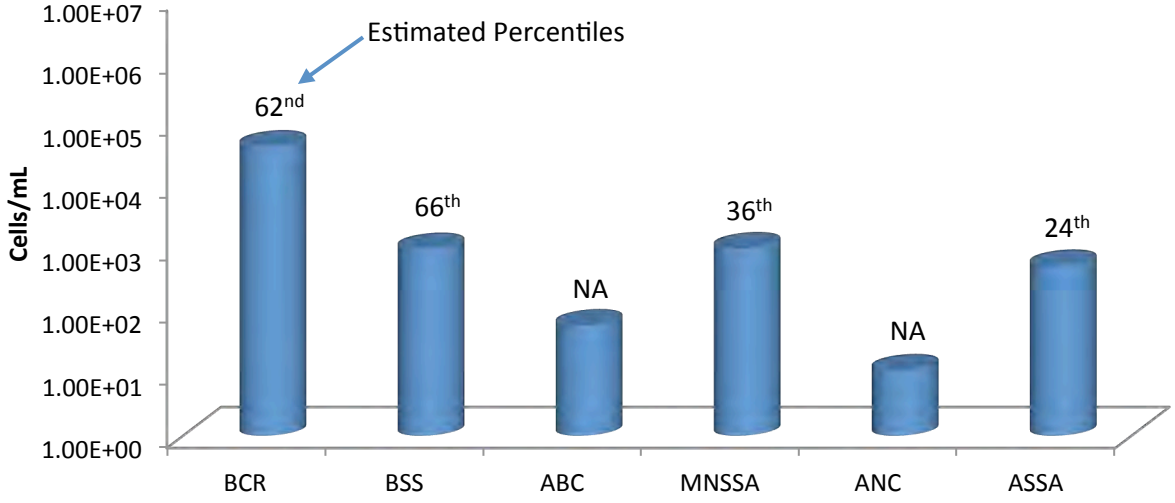
Is that a low, medium, or high concentration? The estimated percentile ranks retrieved from the MI Database answer that question by comparing your qPCR and QuantArray results to those of the literally thousands of other environmental samples submitted to MI for analysis over the last 20+ years.

Using the Estimated Percentile - Interpretation Examples

MNA Assessment – Petroleum Hydrocarbon Site:

Whenever possible, interpretation of qPCR and QuantArray results should include comparisons between samples obtained from background and impacted wells. The estimated percentile ranks however provide an additional avenue for comparison and evaluation of treatment options as shown below.

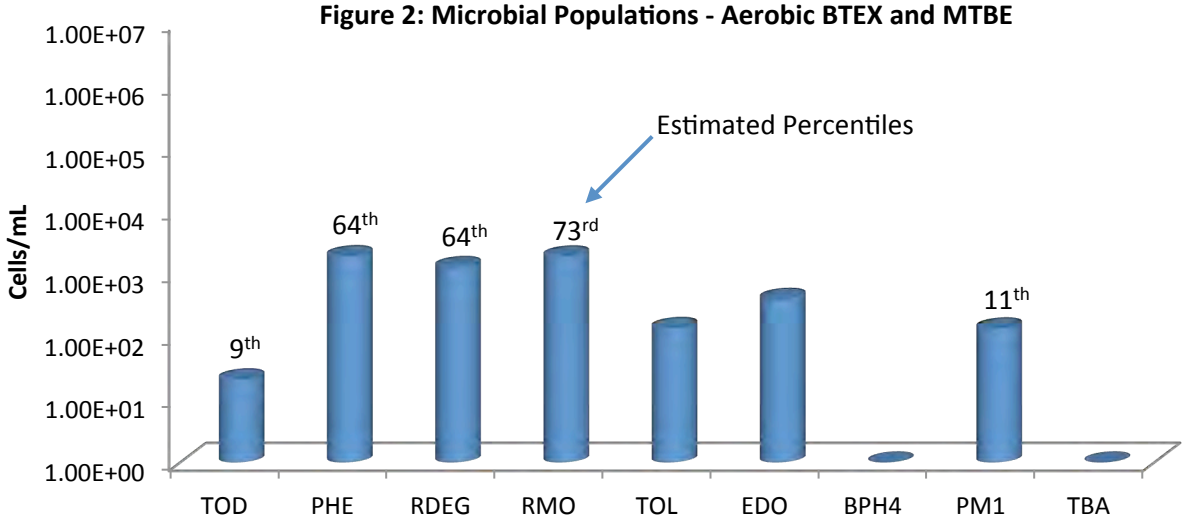
Figure 1: Microbial Populations - Anaerobic BTEX and PAHs



Anaerobic BTEX and PAH Biodegradation (Figure 1):

- With moderate concentrations of functional genes involved in anaerobic BTEX metabolism detected, the QuantArray-Petro® results were encouraging in terms of evaluating biodegradation potential under existing site conditions.
- More specifically, benzylsuccinate synthase (BSS) was detected on the order of nearly 10^3 cells/mL indicating the presence of a substantial population (66th percentile) capable of anaerobic biodegradation of toluene and other alkyl substituted benzenes.
- Naphthyl-2-methylsuccinate synthase (MNSSA) and alkylsuccinate synthase (ASSA) genes were also detected indicating the potential for anaerobic biodegradation of 2-methylnaphthalene and normal alkanes.
- The concentration of MNSSA genes would be considered modest with an estimated percentile of 36th.
- While the percentile rank for MNSSA would be "below average", a number of additional factors should be considered.
    - First, anaerobic hydrocarbon degraders are less prevalent than aerobic BTEX degraders and overall detection frequencies for many genes involved in anaerobic hydrocarbon biodegradation are less than 50%.
    - Therefore, the detection of genes like BSS, MNSSA, ASSA, anaerobic benzene carboxylase (ABC), and anaerobic naphthalene carboxylase (ANC) even at low concentrations is certainly noteworthy and inherently "better than average".
    - The estimated percentiles for all assays are based only on samples where the concentration of the target gene was greater than the practical quantitation limit (PQL).
    - For less commonly detected targets like many of the genes involved in anaerobic hydrocarbon biodegradation this is an especially important consideration.
    - Excluding samples where a gene target is below the PQL ensured that the median concentrations of less commonly detected targets would not be unduly biased low by the fact that the gene is not detected in most samples.
- Anaerobic benzene carboxylase (ABC) and naphthalene carboxylase (ANC) genes were also detected indicating the presence of bacterial populations capable of anaerobic biodegradation of benzene and naphthalene.
- For newly identified genes like ABC and ANC, estimated percentile ranks are not yet available due to the limited number of field samples that have been analyzed to date.
- However, like MNSSA and other genes involved in anaerobic hydrocarbon biodegradation, ABC and ANC detection frequencies are relatively low so the detection of these genes even at low concentrations should be considered when evaluating biodegradation potential under existing site conditions.

Figure 2: Microbial Populations - Aerobic BTEX and MTBE



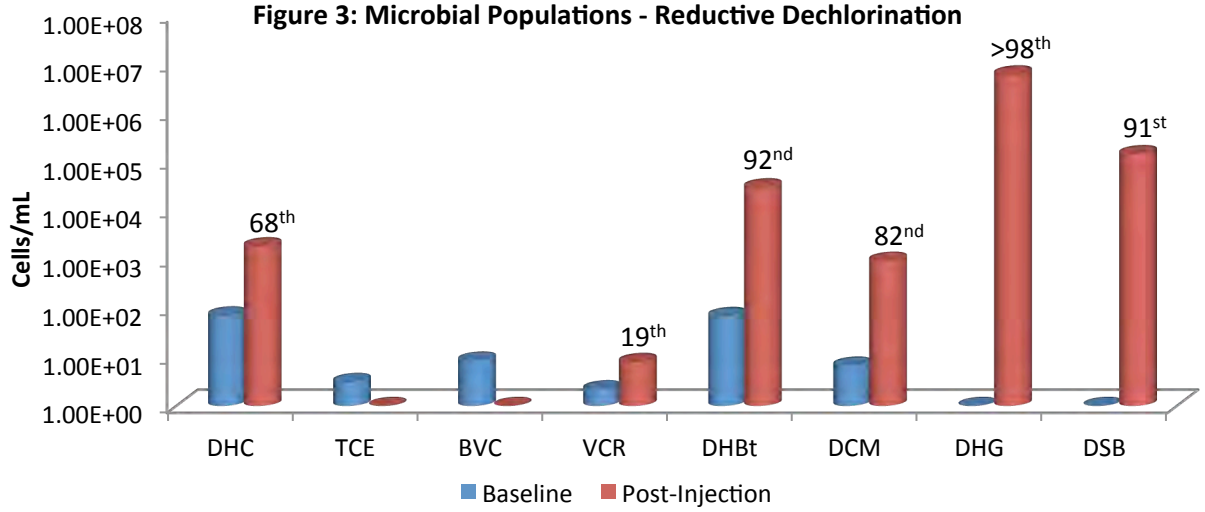
Aerobic BTEX and MTBE Biodegradation (Figure 2):

- With growing evidence that aromatic oxygenases function at low dissolved oxygen concentrations, aerobic BTEX biodegradation pathways should also be evaluated when considering MNA.
- Again, the QuantArray-Petro results were encouraging – genes encoding the first step in multiple pathways for aerobic BTEX biodegradation were detected indicating the presence of a diverse population of aerobic BTEX degraders.
- However, aerobic BTEX degraders are often considered ubiquitous. Therefore answering the question "Is that low, medium or high?" becomes especially important when evaluating aerobic BTEX biodegradation at petroleum hydrocarbon sites.
- In this case, the estimated percentile ranks of the concentrations of toluene/benzene monooxygenase (RMO and RDEG) and phenol hydroxylase (PHE) genes ranged from the 64th to 73rd percentile.
- In other words, the concentrations of RMO, RDEG, and PHE detected in this groundwater sample were greater than the concentrations detected in 64% to 73% of all other groundwater samples where these genes were analyzed and detected above the PQL.
- Aerobic BTEX degraders are common in the environment, but in this sample concentrations of toluene/benzene monooxygenase genes could be viewed as "better than average" when compared to the MI Database.

Biostimulation – Chlorinated Solvent Site:

Whenever possible, interpretation of qPCR and QuantArray results should include comparisons between baseline and post-injection monitoring events as shown below (Figure 3). The estimated percentile ranks however provide an additional avenue for comparison and evaluation of remedy performance.

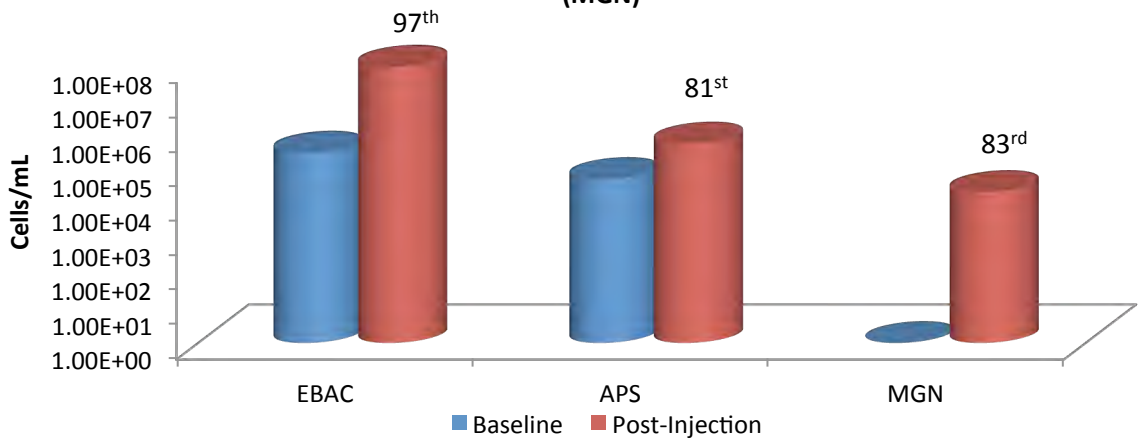
Figure 3: Microbial Populations - Reductive Dechlorination



- During the baseline groundwater sampling event, *Dehalococcoides* and vinyl chloride reductase genes were detected indicating the potential for complete reductive dechlorination of PCE and TCE to ethene.
- However, the *Dehalococcoides* concentration was well below the 10^4 cells/mL recommended by Lu et al. (2006) for generally effective rates of reductive dechlorination.
- Based on qPCR results as well as traditional groundwater monitoring, biostimulation with electron donor addition was selected as the site management plan.
- By the first monitoring event after injection, populations of halorespiring bacteria had increased substantially in response to electron donor addition.
    - *Dehalobacter* populations increased by more than two orders of magnitude to post-injection concentrations greater than 10^4 cells/mL (92nd percentile).
    - *Dehalogenimonas* (10^6 cells/mL) and *Desulfitobacterium* (10^5 cells/mL) which had not been detected prior electron donor addition were present at concentrations greater than observed in over 90% of other groundwater samples where these halorespiring bacteria were detected.
- After injection, *Dehalococcoides* populations increased by more than an order of magnitude to a concentration of over 10^3 cells/mL (68th percentile) demonstrating growth of this key group of halorespiring bacteria.
- Despite a substantial increase and a "better than average" concentration, the *Dehalococcoides* population was still below the 10^4 cells/mL threshold and vinyl chloride reductase gene copies were low (19th percentile).
    - In terms of electron donors and acceptors, the metabolic capabilities of *Dehalococcoides* are rather specialized (hydrogen utilizing obligate halorespiring bacteria) so the median concentration is low. With a low median concentration across the database, a "better than average" *Dehalococcoides* concentration in a given sample may not exceed the 10^4 cells/mL threshold established for effective reductive dechlorination (Lu et al. 2006) and ethene production (Microbial Insights, unpublished data).

- In this case, the initial growth of *Dehalococcoides* was substantial but may have been somewhat hindered by competition with sulfate reducing bacteria (Figure 4 below).
    - The baseline population of sulfate reducing bacteria was moderate (10^4 cells/mL; 63rd percentile). Consistent with an observed decreased in dissolved sulfate concentrations, populations of sulfate reducing bacteria increased and were detected at a relatively high concentration (81st percentile) after electron donor addition.
    - After injection, methanogen populations also increased to a relatively high concentration (83rd percentile) suggesting generation of methanogenic conditions.
- With sulfate depletion and generation of highly anaerobic conditions more conducive to reductive dechlorination, *Dehalococcoides* populations may continue to increase and exceed the 10^4 *Dehalococcoides* cells/mL threshold in subsequent monitoring events.
- Overall, QuantArray analysis conclusively demonstrated that electron donor addition stimulated growth of halorespiring bacteria with the estimated percentiles retrieved from the MI Database providing the "low, medium or high" perspective to the observed changes in microbial populations.

Figure 4: Total Bacteria (EBAC), Sulfate Reducering Bacteria (APS) and Methanogens (MGN)



References

Lu, X., J.T. Wilson, and D.H. Kampbell. 2006. Relationship between *Dehalococcoides* DNA in ground water and rates of reductive dechlorination at field scale. *Water Research* 40 no. 16: 3131-3140.

REPORT TO:
Name: MARCIA OLIVA
Company: BHATE ENVIRONMENTAL
Address:
email: molive@bhate.com
Phone: 303-725-7631
Fax:

INVOICE TO: (For invoices paid by a third party it is imperative that all information be provided)
Name:
Company:
Address:
email:
Phone:
Fax:

microbialinsights
10515 Research Dr
Knoxville, TN 37932
865-573-8188
www.microbe.com

Project Manager: Kim Nemmers
Project Name: LHAAP-58
Project No.: NW01312.0150

Purchase Order No.
Subcontract No.
MI Quote No.

Please Check One:
☒ More samples to follow
☐ No Additional Samples

Report Type: ☒ Standard (default) ☐ Microbial Insights Level III raw data(15% surcharge) ☐ Microbial Insights Level IV (25% surcharge) ☐ Comprehensive Interpretive(15%) ☐ Historical Interpretive (30%)
EDD type: ☐ Microbial Insights Standard (default) ☐ All other available EDDs (5% surcharge) Specify EDD Type:

Please contact us with any questions about the analyses or filling out the COC at (865) 573-8188 (9:00 am to 5:00 pm EST, M-F). After hours email: customerservice@microbe.com

Sample Information					Analyses					CENSUS: Please select the target organism/gene																								
MI ID (Laboratory Use Only)	Sample Name	Date Sampled	Time Sampled	Matrix	PLFA	DGGE+3ID	DGGE+5ID	QuantArray Chlor	QuantArray Petro	DHC (Dehalococcoides)	DHC Functional genes (bvc, tca, vcr)	DHBt (Dehalobacter)	DSM (Desulfuromonas)	DSB (Desulfitobacterium)	EBAC (Total)	SRB (Sulfate Reducing Bacteria-APS)	MGM (Methanogens)	MOB (Methanotrophs)	SMMO	DNF (Denitrifiers-nirS and nirK)	AOB (ammonia oxidizing bacteria)	PMM (MTBE aerobic)	RMO (Toluene Monooxygenase)	RDEG (Toluene Monooxygenase)	PHE (Phenol Hydroxylase)	NAH (Naphthalene-aerobic)	BSSA (Toluene/Xylene-Anaerobic)	add. qPCR:	add. qPCR:	RNA (Expression Option)*	Other:	Other:	Other:
088RF1	03WW01-062320	6/23/20	1100	WG							X	X																						
2	35AWW08-062320	6/23/20	1105	WG							X	X																						
3	35AWW11-062320	6/23/20	1325	WG							X	X																						

Relinquished by: [signature] 6/23/20 1430 Received by: [signature] Date 6/24/2020 940

It is vital that chain of custody is filled out correctly & that all relative information is provided.
Failure to provide sufficient and/or correct information regarding reporting, invoicing & analyses requested information may result in delays for which MI will not be liable.

HS20061178 8260 Raw Data

ALS WO# HS20061178

MSVOA06 -Logbook

Batch: 40919 **Analyst:** Devak Giga

Date: 06-19-2020 **Reviewer:**

Method: 8260 **Laboratory:** Houston

Comments:

#	Samp ID	Type	Analyzed	DF	Init Wt/Vol	Final Vol	File ID	Matrix	Status	pH
1	BFB	TUNE	06-19-2020 11:06 am	1.00	0.00 mL	0.00 mL	X061901.D	Liquid	Y	NA
2	VSTD000.25	ICAL1	06-19-2020 11:30 am	1.00	5.00 mL	0.00 mL	X061902.D	Liquid	Y	NA
3	VSTD000.5	ICAL2	06-19-2020 12:18 pm	1.00	5.00 mL	0.00 mL	X061903.D	Liquid	Y	NA
4	VSTD001	ICAL3	06-19-2020 12:42 pm	1.00	5.00 mL	0.00 mL	X061904.D	Liquid	Y	NA
5	VSTD002	ICAL4	06-19-2020 01:06 pm	1.00	5.00 mL	0.00 mL	X061905.D	Liquid	Y	NA
6	VSTD005	ICAL5	06-19-2020 01:29 pm	1.00	5.00 mL	0.00 mL	X061906.D	Liquid	Y	NA
7	VSTD020	ICAL6	06-19-2020 01:53 pm	1.00	5.00 mL	0.00 mL	X061907.D	Liquid	Y	NA
8	VSTD050	ICAL7	06-19-2020 02:17 pm	1.00	5.00 mL	0.00 mL	X061908.D	Liquid	Y	NA
9	VSTD100	ICAL8	06-19-2020 02:41 pm	1.00	5.00 mL	0.00 mL	X061909.D	Liquid	Y	NA
10	VSTD150	ICAL9	06-19-2020 03:05 pm	1.00	5.00 mL	0.00 mL	X061910.D	Liquid	Y	NA
11	VSTD200	ICAL	06-19-2020 03:29 pm	1.00	5.00 mL	0.00 mL	X061911.D	Liquid	Y	NA
12	BLANK	SAMP	06-19-2020 03:53 pm	1.00	5.00 mL	0.00 mL	X061912.D	Liquid	Y	NA
13	ICV	ICV	06-19-2020 04:41 pm	1.00	5.00 mL	0.00 mL	X061913.D	Liquid	Y	NA
14	BFB	TUNE	06-19-2020 05:15 pm	1.00	0.00 mL	0.00 mL	Y061901.D	Liquid	Y	NA
15	CCV	CCV	06-19-2020 05:39 pm	1.00	5.00 mL	0.00 mL	Y061902a.D	Liquid	Y	NA
16	CCV	CCV	06-19-2020 06:03 pm	1.00	5.00 mL	0.00 mL	Y061903.D	Liquid	Y	NA
17	CCB	SAMP	06-19-2020 06:27 pm	1.00	5.00 mL	0.00 mL	Y061904.D	Liquid	Y	NA
18	VLCSW-200619	LCS	06-19-2020 06:51 pm	1.00	5.00 mL	0.00 mL	Y061905.D	Liquid	Y	NA
19	BLANK	SAMP	06-19-2020 07:15 pm	1.00	5.00 mL	0.00 mL	Y061906.D	Liquid	Y	NA
20	BLANK	SAMP	06-19-2020 07:39 pm	1.00	5.00 mL	0.00 mL	Y061907.D	Liquid	Y	NA
21	VBLKW-200619	MBLK	06-19-2020 08:03 pm	1.00	5.00 mL	0.00 mL	Y061908.D	Liquid	Y	NA
22	HS20060545-07	SAMP	06-19-2020 08:27 pm	1.00	5.00 mL	0.00 mL	Y061909.D	Liquid	Y	NA
23	HS20060545-03	SAMP	06-19-2020 08:51 pm	1.00	5.00 mL	0.00 mL	Y061910.D	Liquid	Y	NA
24	HS20060545-06	SAMP	06-19-2020 09:15 pm	1.00	5.00 mL	0.00 mL	Y061911.D	Liquid	Y	NA
25	HS20060547-08	SAMP	06-19-2020 09:39 pm	1.00	5.00 mL	0.00 mL	Y061912.D	Liquid	Y	NA
26	HS20060545-01	SAMP	06-19-2020 10:03 pm	20.00	5.00 mL	0.00 mL	Y061913.D	Liquid	Y	NA
27	HS20060545-02	SAMP	06-19-2020 10:26 pm	20.00	5.00 mL	0.00 mL	Y061914.D	Liquid	Y	NA
28	HS20060547-08MS	MS	06-19-2020 10:50 pm	1.00	5.00 mL	0.00 mL	Y061915.D	Liquid	Y	NA
29	HS20060547-08MSD	MSD	06-19-2020 11:14 pm	1.00	5.00 mL	0.00 mL	Y061916.D	Liquid	Y	NA
30	HS20060545-01n/r	SAMP	06-19-2020 11:38 pm	200.0(	5.00 mL	0.00 mL	Y061917.D	Liquid	Y	NA
31	HS20060545-02n/r	SAMP	06-20-2020 12:02 am	200.0(	5.00 mL	0.00 mL	Y061918.D	Liquid	Y	NA
32	HS20060545-04c/o	SAMP	06-20-2020 12:26 am	5.00	5.00 mL	0.00 mL	Y061919.D	Liquid	Y	NA
33	HS20060547-01	SAMP	06-20-2020 12:50 am	1.00	5.00 mL	0.00 mL	Y061920.D	Liquid	Y	NA
34	HS20060547-06	SAMP	06-20-2020 01:14 am	1.00	5.00 mL	0.00 mL	Y061921.D	Liquid	Y	NA
35	HS20060545-05	SAMP	06-20-2020 01:38 am	1.00	5.00 mL	0.00 mL	Y061922.D	Liquid	Y	NA
36	HS20060545-05	SAMP	06-20-2020 02:02 am	5.00	5.00 mL	0.00 mL	Y061923.D	Liquid	Y	NA
37	HS20060547-02	SAMP	06-20-2020 02:26 am	1.00	5.00 mL	0.00 mL	Y061924.D	Liquid	Y	NA
38	HS20060547-03	SAMP	06-20-2020 02:50 am	1.00	5.00 mL	0.00 mL	Y061925.D	Liquid	Y	NA
39	HS20060547-04	SAMP	06-20-2020 03:14 am	1.00	5.00 mL	0.00 mL	Y061926.D	Liquid	Y	NA
40	HS20060547-05	SAMP	06-20-2020 03:38 am	1.00	5.00 mL	0.00 mL	Y061927.D	Liquid	Y	NA
41	CCV-END	CCV	06-20-2020 04:01 am	1.00	5.00 mL	0.00 mL	Y061928.D	Liquid	Y	NA

MSVOA06 -Logbook

#	Samp ID	Type	Analyzed	DF	Init Wt/Vol	Final Vol	File ID	Matrix	Status	pH
42	HS20060965-01	SAMP	06-20-2020 04:25 am	1.00	5.00 mL	0.00 mL	Y061929.D	Liquid	Y	NA
43	HS20060965-02	SAMP	06-20-2020 04:50 am	1.00	5.00 mL	0.00 mL	Y061930.D	Liquid	Y	NA
44	HS20060965-03	SAMP	06-20-2020 05:14 am	1.00	5.00 mL	0.00 mL	Y061931.D	Liquid	Y	NA
45	BLANK	SAMP	06-20-2020 05:38 am	1.00	5.00 mL	0.00 mL	Y061932.D	Liquid	Y	NA

Chemical	Value
CAL STD ID	31106-33-01/02
IS ID	31106-30-06
SURR SPK ID	31106-30-06
BFB ID	31106-30-06
pH Paper	634-64-11

FORM 3

WATER VOLATILE METHOD SPIKE RECOVERY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20061178

Matrix Spike - Sample No.: ICV

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE AMOUNT ()	% REC #	QC. LIMITS REC.
cis-1,3-Dichloropropene	50.00	51.09	102	80-120
trans-1,3-Dichloroprope	50.00	50.76	102	80-120
1,3-Dichlorobenzene	50.00	50.93	102	80-120
2,2-Dichloropropane	50.00	49.36	99	80-120
1,1-Dichloropropene	50.00	47.50	95	80-120
Dibromomethane	50.00	50.18	100	80-120
1,2-Dibromoethane	50.00	50.37	101	80-120
trans-1,2-Dichloroethen	50.00	49.64	99	80-120
1,1,1,2-Tetrachloroetha	50.00	50.93	102	80-120
1,1,1-Trichloroethane	50.00	48.48	97	80-120
1,1,2,2-Tetrachloroetha	50.00	50.76	102	80-120
1,1,2-Trichloroethane	50.00	49.88	100	80-120
1,1-Dichloroethane	50.00	47.71	95	80-120
1,1-Dichloroethene	50.00	49.10	98	80-120
Trichloroethene	50.00	50.35	101	80-120
1,2,3-Trichlorobenzene	50.00	56.65	113	80-120
Trichlorofluoromethane	50.00	49.95	100	80-120
1,2,4-Trichlorobenzene	50.00	47.34	95	80-120
1,2,4-Trimethylbenzene	50.00	50.19	100	80-120
Tetrachloroethene	50.00	49.52	99	80-120
1,2-Dichlorobenzene	50.00	50.59	101	80-120
1,2-Dichloroethane	50.00	50.82	102	80-120
1,2-Dichloropropane	50.00	51.92	104	80-120
1,3,5-Trimethylbenzene	50.00	51.10	102	80-120
1,3-Dichloropropane	50.00	49.31	99	80-120
1,4-Dichlorobenzene	50.00	50.06	100	80-120
Toluene	50.00	50.29	100	80-120
2-Butanone	100.00	98.13	98	80-120

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

* Values outside of QC limits

COMMENTS: _____

_____

FORM 3
WATER VOLATILE METHOD SPIKE RECOVERY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20061178

Matrix Spike - Sample No.: ICV

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE AMOUNT ()	% REC #	QC. LIMITS REC.
2-Chlorotoluene	50.00	49.45	99	80-120
2-Hexanone	100.00	103.29	103	80-120
4-Chlorotoluene	50.00	50.09	100	80-120
tert-Butylbenzene	50.00	49.35	99	80-120
4-Methyl-2-Pentanone	100.00	101.74	102	80-120
Acetone	100.00	104.88	105	80-120
Benzene	50.00	50.62	101	80-120
Bromobenzene	50.00	49.70	99	80-120
Bromochloromethane	50.00	46.68	93	80-120
Bromodichloromethane	50.00	51.91	104	80-120
Bromoform	50.00	52.14	104	80-120
Bromomethane	50.00	48.28	96	80-120
Carbon Disulfide	100.00	99.73	100	80-120
Carbon Tetrachloride	50.00	47.72	95	80-120
Chlorobenzene	50.00	49.63	99	80-120
Chloroethane	50.00	47.35	95	80-120
Chloroform	50.00	48.20	96	80-120
Chloromethane	50.00	49.64	99	80-120
cis-1,2-Dichloroethene	50.00	49.56	99	80-120
Dibromochloromethane	50.00	50.91	102	80-120
Dichlorodifluoromethane	50.00	44.85	90	80-120
Ethylbenzene	50.00	49.01	98	80-120
Hexachlorobutadiene	50.00	48.46	97	80-120
Isopropylbenzene	50.00	50.52	101	80-120
m,p-Xylenes	100.00	102.01	102	80-120
Methylene Chloride	50.00	48.90	98	80-120
n-Butylbenzene	50.00	49.94	100	80-120
n-Propylbenzene	50.00	50.23	100	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 3

WATER VOLATILE METHOD SPIKE RECOVERY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20061178

Matrix Spike - Sample No.: ICV

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE AMOUNT ()	% REC #	QC. LIMITS REC.
Naphthalene	50.00	54.77	110	80-120
o-Xylene	50.00	50.84	102	80-120
sec-Butylbenzene	50.00	49.55	99	80-120
Styrene	50.00	50.93	102	80-120
Vinyl Chloride	50.00	47.50	95	80-120
1,2,3-Trichloropropane	50.00	49.09	98	80-120
p-Isopropyltoluene	50.00	50.27	100	80-120
1,2-Dibromo-3-Chloropro	50.00	49.18	98	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: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20061178

Lab File ID: X061901 BFB Injection Date: 06/19/20

Instrument ID: VOA6 BFB Injection Time: 1106

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	30.7
75	30.0 - 60.0% of mass 95	49.8
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	7.2
173	Less than 2.0% of mass 174	0.7 (1.0)1
174	Greater than 50.0% of mass 95	66.5
175	5.0 - 9.0% of mass 174	5.1 (7.6)1
176	95.0 - 101.0% of mass 174	66.7 (100.3)1
177	5.0 - 9.0% of mass 176	4.6 (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	VSTD000.25	VSTD000.25	X061902	06/19/20	1130
02	VSTD000.5	VSTD000.5	X061903	06/19/20	1218
03	VSTD001	VSTD001	X061904	06/19/20	1242
04	VSTD002	VSTD002	X061905	06/19/20	1306
05	VSTD005	VSTD005	X061906	06/19/20	1329
06	VSTD020	VSTD020	X061907	06/19/20	1353
07	VSTD050	VSTD050	X061908	06/19/20	1417
08	VSTD100	VSTD100	X061909	06/19/20	1441
09	VSTD150	VSTD150	X061910	06/19/20	1505
10	VSTD200	VSTD200	X061911	06/19/20	1529
11	ICV	ICV	X061913	06/19/20	1641
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20061178

Instrument ID: VOA6 Calibration Date(s): 06/19/20 06/19/20

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1130 1529

LAB FILE ID: RF0.25: X061902 RF0.5: X061903 RF1: X061904
RF2: X061905 RF5: X061906 RF20: X061907

COMPOUND	RF0.25	RF0.5	RF1	RF2	RF5	RF20
cis-1,3-Dichloropropene		0.441	0.578	0.603	0.659	0.637
trans-1,3-Dichloropropene		0.416	0.562	0.574	0.605	0.588
1,3-Dichlorobenzene		1.322	1.408	1.515	1.558	1.554
2,2-Dichloropropane		0.967	0.989	1.071	1.008	0.980
1,1-Dichloropropene		0.389	0.532	0.450	0.452	0.448
Dibromomethane		0.196	0.283	0.271	0.280	0.268
1,2-Dibromoethane		0.254	0.410	0.427	0.441	0.415
trans-1,2-Dichloroethene		0.404	0.561	0.568	0.593	0.610
1,1,1,2-Tetrachloroethane		0.278	0.341	0.372	0.399	0.375
1,1,1-Trichloroethane		0.676	0.887	0.917	0.994	0.991
1,1,2,2-Tetrachloroethane		0.743	1.011	1.060	1.088	1.029
1,1,2-Trichloroethane		0.244	0.339	0.332	0.341	0.348
1,1-Dichloroethane		1.332	1.756	1.544	1.614	1.576
1,1-Dichloroethene		0.410	0.432	0.533	0.488	0.505
Trichloroethene		0.245	0.328	0.340	0.338	0.340
1,2,3-Trichlorobenzene			396	1037	2744	9328
Trichlorofluoromethane		0.615	0.839	0.887	0.884	0.948
1,2,4-Trichlorobenzene		380	924	1872	4935	20427
1,2,4-Trimethylbenzene		2.304	2.689	2.689	2.868	2.843
Tetrachloroethene		0.219	0.258	0.274	0.264	0.265
1,2-Dichlorobenzene		1.059	1.314	1.439	1.475	1.433
1,2-Dichloroethane		0.471	0.660	0.694	0.725	0.699
1,2-Dichloropropane		0.375	0.457	0.435	0.500	0.504
1,3,5-Trimethylbenzene		2.088	2.435	2.588	2.662	2.670
1,3-Dichloropropane		0.586	0.690	0.685	0.728	0.708
1,4-Dichlorobenzene		1.388	1.489	1.566	1.566	1.557
Toluene		1.139	1.544	1.543	1.594	1.558
2-Butanone		1071	3155	8300	24314	105606
2-Chlorotoluene		1.944	2.406	2.611	2.485	2.414
2-Hexanone		0.358	0.510	0.510	0.542	0.557
4-Chlorotoluene		2.124	2.890	2.765	3.043	2.814
tert-Butylbenzene		1.605	2.032	2.120	2.019	2.108
4-Methyl-2-Pentanone		0.555	0.746	0.742	0.816	0.800
Acetone		3329	6211	9014	19913	73115
Benzene		1.142	1.463	1.382	1.441	1.454
Bromobenzene		0.767	0.976	0.991	0.970	0.964
Bromochloromethane		0.353	0.418	0.423	0.392	0.392
Bromodichloromethane		0.359	0.476	0.509	0.542	0.546
Bromoform		0.214	0.245	0.254	0.269	0.285
Bromomethane		0.440	0.524	0.519	0.500	0.455
Carbon Disulfide		1.259	1.554	1.687	1.587	1.656
Carbon Tetrachloride		0.373	0.470	0.466	0.435	0.423
Chlorobenzene		0.830	0.984	1.025	1.016	0.984
Chloroethane		0.524	0.534	0.508	0.531	0.548

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS2006117

Instrument ID: VOA6 Calibration Date(s): 06/19/20 06/19/20

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1130 1529

LAB FILE ID: RF0.25: X061902 RF0.5: X061903 RF1: X061904
RF2: X061905 RF5: X061906 RF20: X061907

COMPOUND	RF0.25	RF0.5	RF1	RF2	RF5	RF20
Chloroform		0.978	1.245	1.284	1.299	1.282
Chloromethane		1.070	1.338	1.342	1.217	1.206
cis-1,2-Dichloroethene		0.583	0.732	0.736	0.752	0.755
Dibromochloromethane		0.336	0.370	0.402	0.433	0.413
Dichlorodifluoromethane		1002	2447	5236	14314	55369
Ethylbenzene		0.452	0.487	0.501	0.520	0.505
Hexachlorobutadiene		599	715	1548	3265	14133
Isopropylbenzene		1.073	1.389	1.415	1.420	1.464
m,p-Xylenes		0.464	0.544	0.610	0.609	0.601
Methylene Chloride		4889	7032	9989	20893	70514
n-Butylbenzene		2.062	1.988	2.211	2.136	2.340
n-Propylbenzene		2.862	3.624	3.744	3.678	3.882
Naphthalene		836	1790	3269	8543	31109
o-Xylene		0.471	0.598	0.602	0.630	0.609
sec-Butylbenzene		2.308	2.687	2.938	2.824	3.024
Styrene		0.792	0.991	1.075	1.142	1.094
Vinyl Chloride		0.989	0.815	1.053	0.983	0.972
1,2,3-Trichloropropane		0.810	1.055	0.976	0.951	0.942
p-Isopropyltoluene		2.177	2.281	2.369	2.464	2.580
1,2-Dibromo-3-Chloropropane		85	254	659	1368	5621
1,2-Dichloroethane-d4		2528	5023	9197	23826	85524
Dibromofluoromethane		0.406	0.708	0.687	0.720	0.674
Toluene-d8		0.947	1.371	1.299	1.393	1.253
4-Bromofluorobenzene		0.421	0.601	0.557	0.557	0.496

FORM VI VOA

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS2006117

Instrument ID: VOA6 Calibration Date(s): 06/19/20 06/19/20

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1130 1529

LAB FILE ID: RF50: X061908 RF100: X061909 RF150: X061910
RF200: X061911

COMPOUND	RF50	RF100	RF150	RF200
cis-1,3-Dichloropropene	0.612	0.655	0.656	0.628
trans-1,3-Dichloropropene	0.551	0.593	0.597	0.585
1,3-Dichlorobenzene	1.445	1.545	1.560	1.500
2,2-Dichloropropane	0.920	0.965	0.944	0.890
1,1-Dichloropropene	0.417	0.460	0.461	0.443
Dibromomethane	0.258	0.272	0.269	0.260
1,2-Dibromoethane	0.396	0.409	0.406	0.391
trans-1,2-Dichloroethene	0.600	0.605	0.605	0.567
1,1,1,2-Tetrachloroethane	0.368	0.388	0.386	0.369
1,1,1-Trichloroethane	0.934	1.005	1.006	0.950
1,1,2,2-Tetrachloroethane	0.984	1.006	1.020	1.002
1,1,2-Trichloroethane	0.319	0.331	0.326	0.311
1,1-Dichloroethane	1.531	1.573	1.567	1.482
1,1-Dichloroethene	0.490	0.518	0.522	0.496
Trichloroethene	0.334	0.354	0.354	0.339
1,2,3-Trichlorobenzene	21693	37141	55004	76925
Trichlorofluoromethane	0.905	0.989	1.007	0.943
1,2,4-Trichlorobenzene	47111	74244	111992	153582
1,2,4-Trimethylbenzene	2.682	2.857	2.846	2.762
Tetrachloroethene	0.251	0.273	0.270	0.256
1,2-Dichlorobenzene	1.348	1.394	1.383	1.350
1,2-Dichloroethane	0.665	0.670	0.668	0.644
1,2-Dichloropropane	0.486	0.505	0.500	0.477
1,3,5-Trimethylbenzene	2.526	2.765	2.740	2.665
1,3-Dichloropropane	0.660	0.688	0.668	0.643
1,4-Dichlorobenzene	1.471	1.556	1.560	1.499
Toluene	1.483	1.552	1.529	1.450
2-Butanone	252176	497494	710305	913703
2-Chlorotoluene	2.301	2.431	2.435	2.346
2-Hexanone	0.533	0.556	0.545	0.536
4-Chlorotoluene	2.658	2.858	2.847	2.771
tert-Butylbenzene	1.924	2.156	2.150	2.059
4-Methyl-2-Pentanone	0.762	0.807	0.786	0.767
Acetone	181029	338254	483263	631240
Benzene	1.385	1.455	1.453	1.398
Bromobenzene	0.919	0.957	0.966	0.934
Bromochloromethane	0.368	0.378	0.377	0.347
Bromodichloromethane	0.520	0.551	0.547	0.529
Bromoform	0.274	0.289	0.287	0.280
Bromomethane	0.430	0.468	0.462	0.415
Carbon Disulfide	1.618	1.723	1.730	1.638
Carbon Tetrachloride	0.404	0.449	0.459	0.441
Chlorobenzene	0.946	0.998	0.988	0.942
Chloroethane	0.524	0.553	0.546	0.514

FORM 6

VOLATILE INITIAL CALIBRATION DATA

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS2006117

Instrument ID: VOA6 Calibration Date(s): 06/19/20 06/19/20

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1130 1529

LAB FILE ID: RF50: X061908 RF100: X061909 RF150: X061910
RF200: X061911

COMPOUND	RF50	RF100	RF150	RF200
Chloroform	1.229	1.264	1.247	1.191
Chloromethane	1.138	1.261	1.349	1.322
cis-1,2-Dichloroethene	0.727	0.741	0.745	0.702
Dibromochloromethane	0.395	0.423	0.423	0.406
Dichlorodifluoromethane	136419	288320	435763	549993
Ethylbenzene	0.471	0.513	0.509	0.485
Hexachlorobutadiene	31540	51077	73978	101440
Isopropylbenzene	1.369	1.506	1.498	1.411
m,p-Xylenes	0.566	0.620	0.612	0.582
Methylene Chloride	157708	305432	442721	557175
n-Butylbenzene	2.161	2.393	2.380	2.266
n-Propylbenzene	3.586	3.958	3.981	3.828
Naphthalene	72724	130246	197970	268406
o-Xylene	0.583	0.620	0.608	0.584
sec-Butylbenzene	2.767	3.108	3.112	2.974
Styrene	1.054	1.100	1.087	1.048
Vinyl Chloride	0.963	1.023	1.077	1.023
1,2,3-Trichloropropane	0.882	0.923	0.901	0.874
p-Isopropyltoluene	2.388	2.651	2.651	2.555
1,2-Dibromo-3-Chloropropane	13384	25675	37264	49492
1,2-Dichloroethane-d4	200469	391220	571773	739559
Dibromofluoromethane	0.643	0.649	0.652	0.632
Toluene-d8	1.225	1.247	1.247	1.212
4-Bromofluorobenzene	0.481	0.496	0.494	0.481

FORM VI VOA

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS2006117

Instrument ID: VOA6 Calibration Date(s): 06/19/20 06/19/20

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1130 1529

COMPOUND	CURVE	COEFFICENTS A0	COEFFICENTS A1	COEFFICENTS A2	%RSD OR R^2	MAX %RSD OR R^2
cis-1,3-Dichloropropene	AVRG		0.60756766		11.228	15.000
trans-1,3-Dichloropropene	AVRG		0.56337888		10.303	15.000
1,3-Dichlorobenzene	AVRG		1.48973595		5.536	15.000
2,2-Dichloropropane	AVRG		0.97044237		5.382	15.000
1,1-Dichloropropene	AVRG		0.45010852		8.510	15.000
Dibromomethane	AVRG		0.26190050		9.880	15.000
1,2-Dibromoethane	AVRG		0.39438785		13.878	15.000
trans-1,2-Dichloroethene	AVRG		0.56824126		11.289	15.000
1,1,1,2-Tetrachloroethane	AVRG		0.36409028		9.968	15.000
1,1,1-Trichloroethane	AVRG		0.92890975		11.174	15.000
1,1,2,2-Tetrachloroethane	AVRG		0.99371693		9.983	15.000
1,1,2-Trichloroethane	AVRG		0.32112664		9.718	15.000
1,1-Dichloroethane	AVRG		1.55274351		7.220	15.000
1,1-Dichloroethene	AVRG		0.48819257		8.469	15.000
Trichloroethene	AVRG		0.33037316		10.018	15.000
1,2,3-Trichlorobenzene	2ORDR	-4.97e-002	9.53679840	-2.1206979	0.9982825	0.9900000
Trichlorofluoromethane	AVRG		0.89086065		13.049	15.000
1,2,4-Trichlorobenzene	LINR	-2.44e-002	4.27878456		0.9968032	0.9900000
1,2,4-Trimethylbenzene	AVRG		2.72674592		6.480	15.000
Tetrachloroethene	AVRG		0.25875930		6.482	15.000
1,2-Dichlorobenzene	AVRG		1.35505464		9.002	15.000
1,2-Dichloroethane	AVRG		0.65519420		11.160	15.000
1,2-Dichloropropane	AVRG		0.47118851		9.178	15.000
1,3,5-Trimethylbenzene	AVRG		2.57096184		8.104	15.000
1,3-Dichloropropane	AVRG		0.67301965		6.109	15.000
1,4-Dichlorobenzene	AVRG		1.51687810		4.027	15.000
Toluene	AVRG		1.48816393		9.249	15.000
2-Butanone	LINR	-1.57e-002	1.74003610		0.9990460	0.9900000
2-Chlorotoluene	AVRG		2.37494788		7.725	15.000
2-Hexanone	AVRG		0.51625507		12.004	15.000
4-Chlorotoluene	AVRG		2.75228867		9.364	15.000
tert-Butylbenzene	AVRG		2.01929629		8.512	15.000
4-Methyl-2-Pentanone	AVRG		0.75356284		10.459	15.000
Acetone	LINR	-5.11e-002	2.54862207		0.9995136	0.9900000
Benzene	AVRG		1.39692996		7.214	15.000
Bromobenzene	AVRG		0.93817117		7.216	15.000
Bromochloromethane	AVRG		0.38317081		6.774	15.000
Bromodichloromethane	AVRG		0.50877057		11.966	15.000
Bromoform	AVRG		0.26641048		9.275	15.000
Bromomethane	AVRG		0.46807997		8.288	15.000
Carbon Disulfide	AVRG		1.60582106		8.890	15.000
Carbon Tetrachloride	AVRG		0.43564891		7.240	15.000
Chlorobenzene	AVRG		0.96807774		6.042	15.000
Chloroethane	AVRG		0.53142326		2.907	15.000

FORM VI VOA

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS2006117

Instrument ID: VOA6 Calibration Date(s): 06/19/20 06/19/20

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1130 1529

COMPOUND	CURVE	COEFFICENTS A0	A1	A2	%RSD OR R^2	MAX %RSD OR R^2
Chloroform	AVRG		1.22439995		8.005	15.000
Chloromethane	AVRG		1.24922751		7.978	15.000
cis-1,2-Dichloroethene	AVRG		0.71911714		7.420	15.000
Dibromochloromethane	AVRG		0.40014299		7.593	15.000
Dichlorodifluoromethane	LINR	1.803e-002	1.43674232		0.9984887	0.9900000
Ethylbenzene	AVRG		0.49367686		4.418	15.000
Hexachlorobutadiene	LINR	-4.04e-002	6.47658536		0.9972664	0.9900000
Isopropylbenzene	AVRG		1.39403780		9.264	15.000
m,p-Xylenes	AVRG		0.57872055		8.608	15.000
Methylene Chloride	LINR	-4.06e-002	1.42946167		0.9985605	0.9900000
n-Butylbenzene	AVRG		2.21531450		6.402	15.000
n-Propylbenzene	AVRG		3.68266590		9.189	15.000
Naphthalene	2ORDR	-2.49e-002	2.65325213	-0.1433690	0.9994325	0.9900000
o-Xylene	AVRG		0.58938914		7.935	15.000
sec-Butylbenzene	AVRG		2.86035781		8.879	15.000
Styrene	AVRG		1.04251135		9.855	15.000
Vinyl Chloride	AVRG		0.98875456		7.619	15.000
1,2,3-Trichloropropane	AVRG		0.92384795		7.533	15.000
p-Isopropyltoluene	AVRG		2.45721360		6.776	15.000
1,2-Dibromo-3-Chloropropane	LINR	-2.79e-003	13.0321288		0.9998956	0.9900000
1,2-Dichloroethane-d4	LINR	-1.25e-002	1.08358472		0.9995852	0.9900000
Dibromofluoromethane	AVRG		0.64119782		14.538	15.000
Toluene-d8	AVRG		1.24382653		10.295	15.000
4-Bromofluorobenzene	AVRG		0.50935765		10.522	15.000

FORM VI VOA

Data File: \\nahstws005\Target\chem\voa6.i\X200619.b\X061901.D

Date : 19-JUN-2020 11:06

Client ID: BFB

Instrument: voa6.i

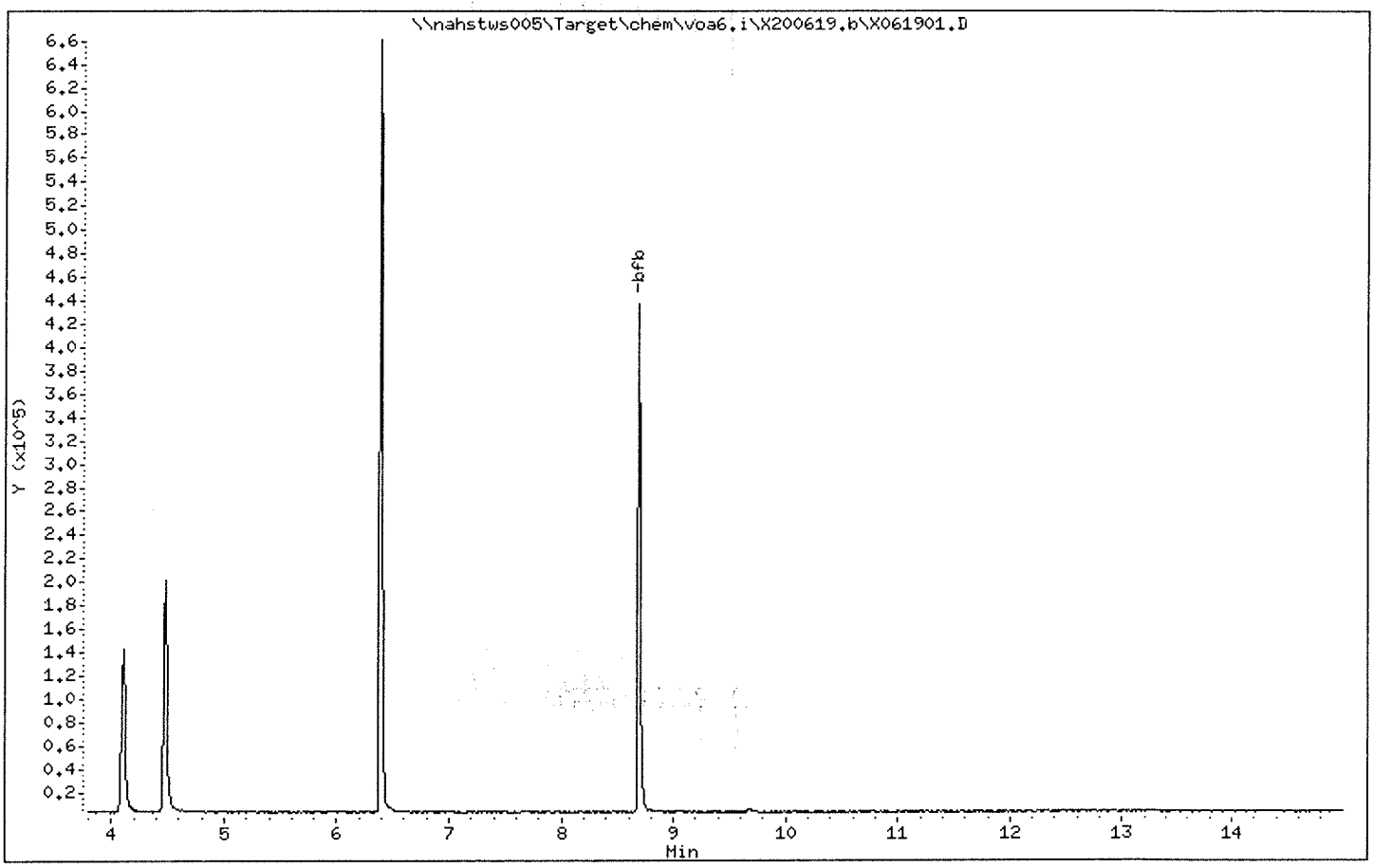
Sample Info: BFB;BFB;3;;BFB

Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

Column diameter: 0.25



Data File: \\nahstws005\Target\chem\voa6.i\X200619.b\X061901.D

Date : 19-JUN-2020 11:06

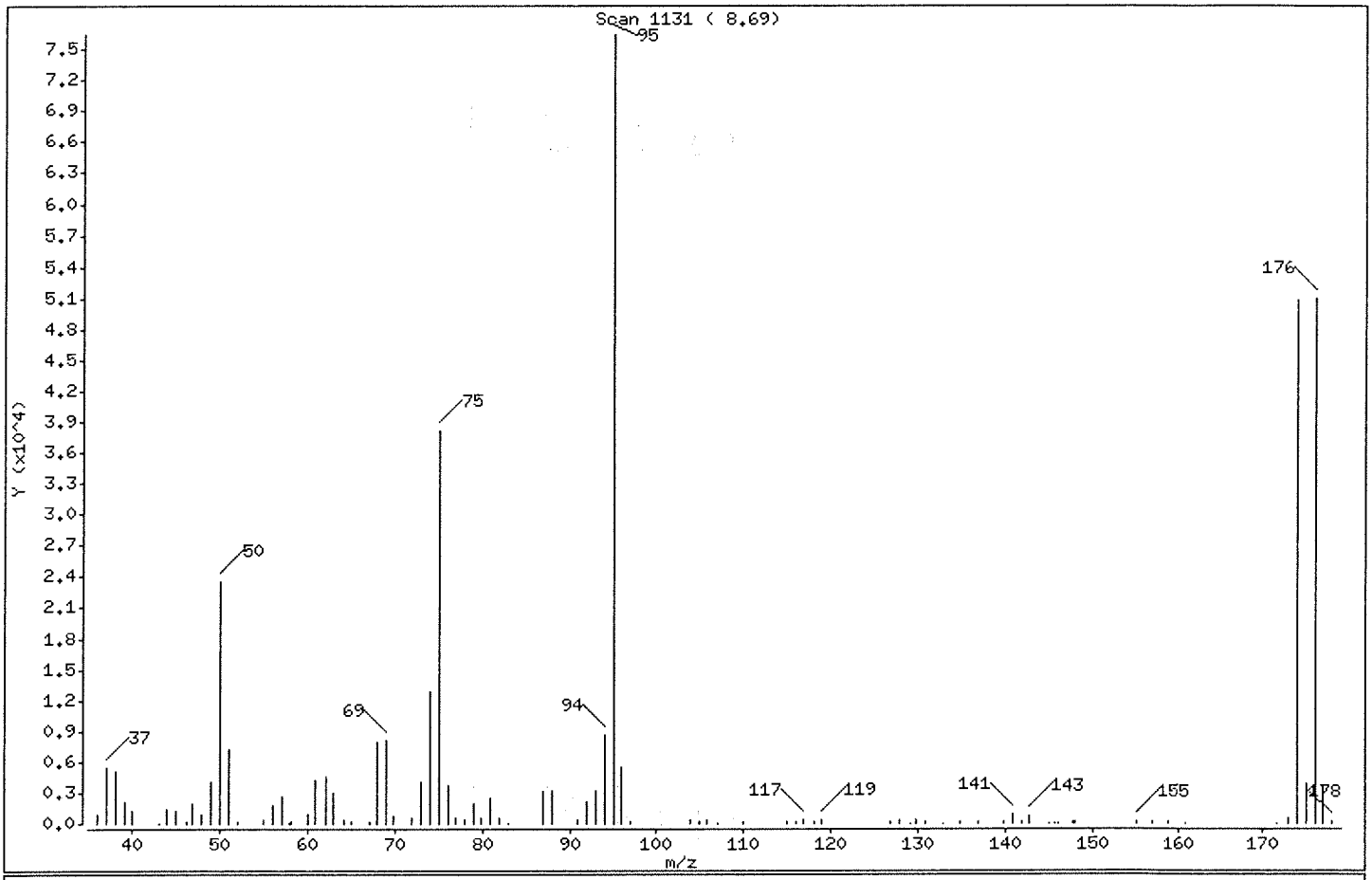
Client ID: BFB Instrument: voa6.i

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	30.74
75	30.00 - 60.00% of mass 95	49.81
96	5.00 - 9.00% of mass 95	7.20
173	Less than 2.00% of mass 174	0.68 (1.03)
174	Greater than 50.00% of mass 95	66.54
175	5.00 - 9.00% of mass 174	5.07 (7.61)
176	95.00 - 101.00% of mass 174	66.75 (100.31)
177	5.00 - 9.00% of mass 176	4.56 (6.84)

Data File: \\nahstws005\Target\chem\voa6.i\X200619.b\X061901.D

Date : 19-JUN-2020 11:06

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: X061901.D
Spectrum: Scan 1131 (8.69)
Location of Maximum: 95.00
Number of points: 89

m/z	Y	m/z	Y	m/z	Y	m/z	Y
35.90	934	62.90	3017	93.00	3228	139.90	91
37.00	5521	64.10	337	94.00	8571	140.90	888
38.00	5042	64.90	120	95.00	76432	141.90	153
39.00	2154	67.00	196	96.00	5501	142.80	714
39.90	1193	68.00	7929	97.00	228	145.00	60
43.00	73	69.00	8137	103.90	271	145.60	77
43.90	1491	69.90	739	104.90	106	146.10	74
45.00	1155	71.90	549	105.80	317	147.70	123
46.20	105	73.00	3972	107.00	70	148.00	108
46.90	1944	74.00	12787	109.90	93	155.00	141
47.90	843	75.00	38072	115.00	128	157.00	107
49.00	4041	76.00	3671	115.90	232	158.80	100
50.00	23496	77.00	520	116.80	396	161.00	54
51.00	7126	77.90	280	118.00	259	171.50	85
52.00	239	78.90	1976	118.90	379	172.90	522
55.00	352	79.90	547	126.90	107	173.90	50856
56.00	1731	80.90	2398	127.80	329	174.90	3872
57.00	2697	81.90	606	129.10	83	175.90	51016
57.80	87	82.90	53	129.80	325	176.90	3488
58.20	123	86.90	3136	130.90	92	177.90	98
59.90	854	87.90	3208	133.00	55		
60.90	4227	90.90	325	134.70	143		
62.00	4550	91.90	2191	136.80	130		

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200619.b\X061902.D
Lab Smp Id: VSTD000.25 Client Smp ID: VSTD000.25
Inj Date : 19-JUN-2020 11:30
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\X200619.b\8260W.m
Meth Date : 09-Jul-2020 09:58 voa6.i Quant Type: ISTD
Cal Date : 19-JUN-2020 11:30 Cal File: X061902.D
Als bottle: 2 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14

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

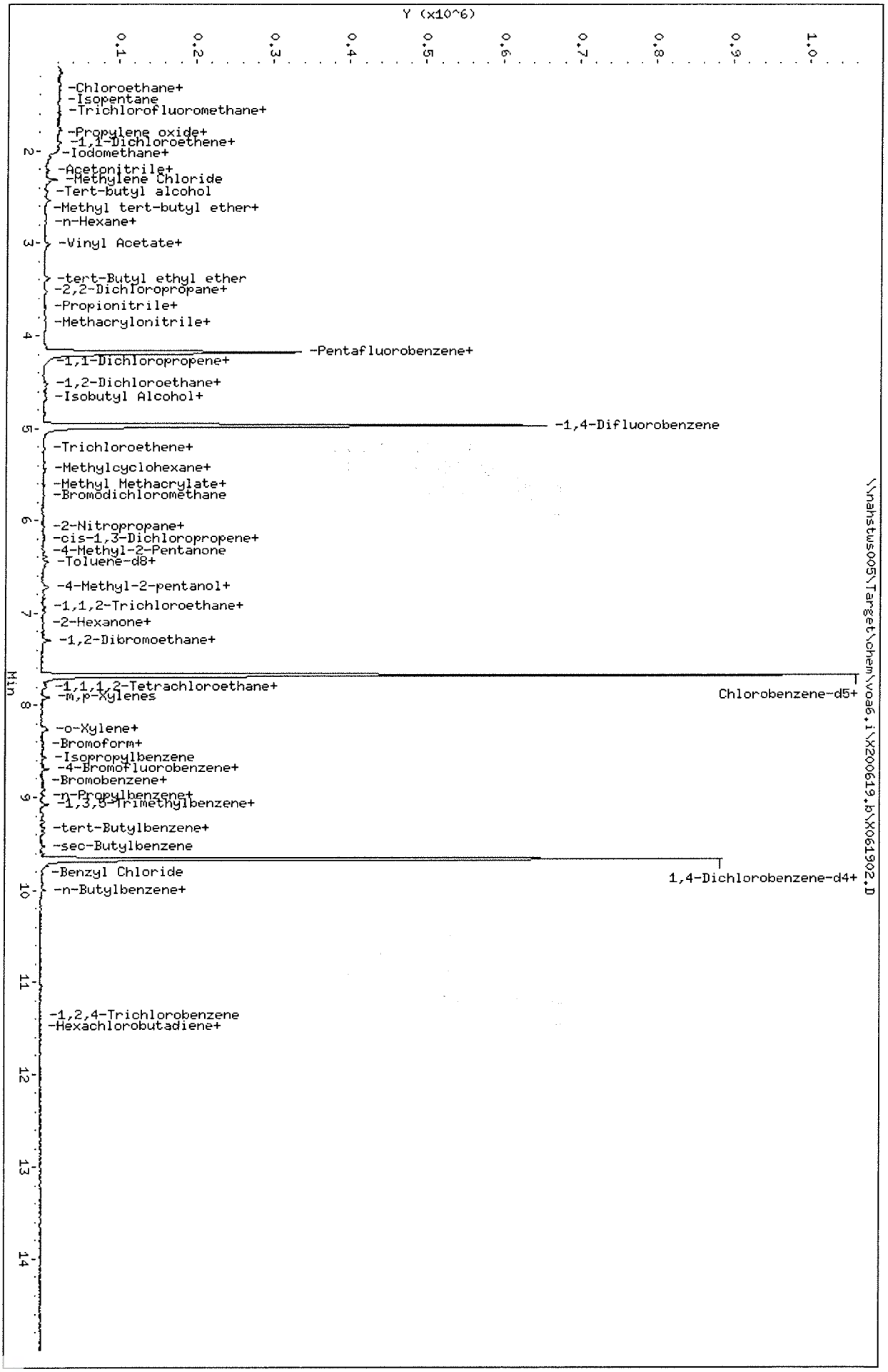
Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.189	4.189	(1.000)	253104	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	478031	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	438879	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	193205	50.0000	
$ 30 Dibromofluoromethane	113	4.118	4.103	(0.983)	1078	0.25000	0.33(a)
$ 35 1,2-Dichloroethane-d4	65	4.483	4.476	(1.070)	1525	0.25000	(TaM)
$ 48 Toluene-d8	98	6.396	6.388	(0.834)	4101	0.25000	0.37(Ta)
$ 69 4-Bromofluorobenzene	95	8.702	8.695	(1.134)	3337	0.25000	0.74(a)
60 1,1,1,2-Tetrachloroethane	131	7.785	7.778	(1.015)	722	0.25000	0.22(a)
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.976)	1091	0.25000	0.23(a)
68 1,1,2,2-Tetrachloroethane	83	8.845	8.845	(0.915)	1213	0.25000	0.31(aM)
53 1,1,2-Trichloroethane	83	6.847	6.847	(0.893)	746	0.25000	0.26(a)
22 1,1-Dichloroethane	63	2.929	2.921	(0.699)	2275	0.25000	0.28(TaM)
11 1,1-Dichloroethene	96	1.919	1.911	(0.458)	692	0.25000	0.28(aM)
32 1,1-Dichloropropene	75	4.283	4.282	(0.862)	1192	0.25000	0.27(a)
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	751	0.25000	0.21(aM)
90 1,2,4-Trichlorobenzene	180	11.367	11.338	(1.176)	204	0.25000	(aM)
79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.970)	2757	0.25000	0.26(a)
57 1,2-Dibromoethane	107	7.270	7.262	(0.948)	1002	0.25000	0.28(a)
88 1,2-Dichlorobenzene	146	10.006	9.999	(1.035)	1350	0.25000	0.25(a)
33 1,2-Dichloroethane	62	4.569	4.562	(0.919)	1840	0.25000	0.29(a)
42 1,2-Dichloropropane	63	5.450	5.443	(1.097)	1267	0.25000	0.28(aM)
75 1,3,5-Trimethylbenzene	105	9.075	9.075	(0.939)	2602	0.25000	0.26(a)

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
83 1,3-Dichlorobenzene	146	9.612	9.612	(0.994)	1524	0.25000	0.26(a)
54 1,3-Dichloropropane	76	6.990	6.983	(0.911)	1821	0.25000	0.30(a)
84 1,4-Dichlorobenzene	146	9.691	9.683	(1.002)	1836	0.25000	0.31(a)
26 2,2-Dichloropropane	77	3.509	3.516	(0.838)	1488	0.25000	0.30(aM)
24 2-Butanone	43	3.638	3.580	(0.868)	1436	0.50000	(aM)
76 2-Chlorotoluene	91	8.981	8.981	(0.929)	2497	0.25000	0.27(a)
52 2-Hexanone	43	7.105	7.090	(0.926)	2209	0.50000	0.48(a)
77 4-Chlorotoluene	91	9.082	9.075	(0.939)	3173	0.25000	0.29(a)
82 p-Isopropyltoluene	119	9.655	9.655	(0.999)	2355	0.25000	0.24(a)
45 4-Methyl-2-Pentanone	43	6.331	6.331	(0.825)	3607	0.50000	0.54(a)
10 Acetone	43	1.976	1.976	(0.472)	3214	0.50000	(aM)
37 Benzene	78	4.519	4.519	(0.909)	3680	0.25000	0.27(aM)
74 Bromobenzene	156	8.810	8.809	(0.911)	915	0.25000	0.25(a)
29 Bromochloromethane	128	3.810	3.795	(0.909)	458	0.25000	0.23(aM)
39 Bromodichloromethane	83	5.729	5.729	(1.153)	1085	0.25000	0.22(aM)
66 Bromoform	173	8.416	8.416	(1.097)	553	0.25000	0.23(aM)
6 Bromomethane	94	1.339	1.331	(0.320)	932	0.25000	0.39(aM)
19 Carbon Disulfide	76	2.069	2.069	(0.494)	4764	0.50000	0.58(a)
34 Carbon Tetrachloride	117	4.268	4.268	(0.859)	833	0.25000	0.20(aM)
59 Chlorobenzene	112	7.699	7.699	(1.004)	2352	0.25000	0.27(a)
7 Chloroethane	64	1.403	1.396	(0.335)	671	0.25000	0.24(a)
28 Chloroform	83	3.917	3.910	(0.935)	1632	0.25000	0.26(a)
3 Chloromethane	50	1.081	1.081	(0.258)	1853	0.25000	0.29(aM)
27 cis-1,2-Dichloroethene	96	3.538	3.530	(0.844)	941	0.25000	0.25(aM)
46 cis-1,3-Dichloropropene	75	6.174	6.159	(1.242)	1611	0.25000	0.27(a)
55 Dibromochloromethane	129	7.184	7.183	(0.937)	945	0.25000	0.26(a)
44 Dibromomethane	93	5.565	5.557	(1.120)	666	0.25000	0.26(aM)
2 Dichlorodifluoromethane	85	0.973	0.973	(0.232)	762	0.25000	1.11(aM)
61 Ethylbenzene	106	7.807	7.807	(1.018)	1073	0.25000	0.24(a)
91 Hexachlorobutadiene	225	11.489	11.481	(1.188)	113	0.25000	(aM)
67 Isopropylbenzene	105	8.566	8.566	(1.117)	3257	0.25000	0.26(a)
62 m,p-Xylenes	106	7.907	7.907	(1.031)	2440	0.50000	0.48(a)
17 Methylene Chloride	84	2.313	2.305	(0.552)	4165	0.25000	(aM)
87 n-Butylbenzene	91	10.006	9.999	(1.035)	2416	0.25000	0.28(a)
73 n-Propylbenzene	91	8.917	8.917	(0.922)	3688	0.25000	0.25(a)
92 Naphthalene	128	11.582	11.546	(1.198)	469	0.25000	(aM)
63 o-Xylene	106	8.251	8.244	(1.076)	1371	0.25000	0.26(a)
81 sec-Butylbenzene	105	9.526	9.526	(0.985)	2767	0.25000	0.25(a)
64 Styrene	104	8.272	8.265	(1.078)	2041	0.25000	0.22(a)
78 tert-Butylbenzene	119	9.340	9.340	(0.966)	1914	0.25000	0.24(a)
56 Tetrachloroethene	164	6.940	6.933	(0.905)	648	0.25000	0.28(a)
50 Toluene	91	6.453	6.453	(0.841)	3765	0.25000	0.28(a)
20 trans-1,2-Dichloroethene	96	2.535	2.527	(0.605)	722	0.25000	0.25(Ta)
51 trans-1,3-Dichloropropene	75	6.696	6.682	(1.347)	1511	0.25000	0.28(aM)
38 Trichloroethene	130	5.214	5.206	(1.049)	781	0.25000	0.24(aM)
8 Trichlorofluoromethane	101	1.568	1.560	(0.374)	1273	0.25000	0.28(a)
5 Vinyl Chloride	62	1.138	1.138	(0.272)	1437	0.25000	0.28(a)

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.



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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\X200619.b\X061903.D
Lab Smp Id: VSTD000.5 Client Smp ID: VSTD000.5
Inj Date : 19-JUN-2020 12:18
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\X200619.b\8260W.m
Meth Date : 09-Jul-2020 09:58 voa6.i Quant Type: ISTD
Cal Date : 19-JUN-2020 12:18 Cal File: X061903.D
Als bottle: 4 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14

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	4.189	4.189	(1.000)	232838	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	439833	50.0000	
* 47 Chlorobenzene-d5	117	7.670	7.671	(1.000)	407331	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	183423	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.979)	945	0.50000	0.31(a)
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	2528	0.50000	(TaM)
$ 48 Toluene-d8	98	6.395	6.388	(0.834)	3857	0.50000	0.38(Ta)
$ 69 4-Bromofluorobenzene	95	8.702	8.695	(1.134)	1716	0.50000	0.41(a)
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	1131	0.50000	0.38(a)
31 1,1,1-Trichloroethane	97	4.096	4.089	(0.978)	1574	0.50000	0.36(a)
68 1,1,2,2-Tetrachloroethane	83	8.845	8.845	(0.915)	1363	0.50000	0.37(aM)
53 1,1,2-Trichloroethane	83	6.847	6.847	(0.893)	992	0.50000	0.37(a)
22 1,1-Dichloroethane	63	2.929	2.921	(0.699)	3101	0.50000	0.42(Ta)
11 1,1-Dichloroethene	96	1.919	1.911	(0.458)	954	0.50000	0.41(a)
32 1,1-Dichloropropene	75	4.282	4.282	(0.862)	1712	0.50000	0.43(a)
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	1486	0.50000	0.43(aM)
90 1,2,4-Trichlorobenzene	180	11.367	11.338	(1.176)	380	0.50000	(aM)
79 1,2,4-Trimethylbenzene	105	9.382	9.383	(0.970)	4226	0.50000	0.42(a)
89 1,2-Dibromo-3-Chloropropane	155	10.672	10.658	(1.104)	85	0.50000	0.16(aM)
57 1,2-Dibromoethane	107	7.277	7.262	(0.949)	1035	0.50000	0.32(a)
88 1,2-Dichlorobenzene	146	9.998	9.999	(1.034)	1943	0.50000	0.39(a)
33 1,2-Dichloroethane	62	4.569	4.562	(0.919)	2073	0.50000	0.35(a)
42 1,2-Dichloropropane	63	5.450	5.443	(1.097)	1649	0.50000	0.39(aM)

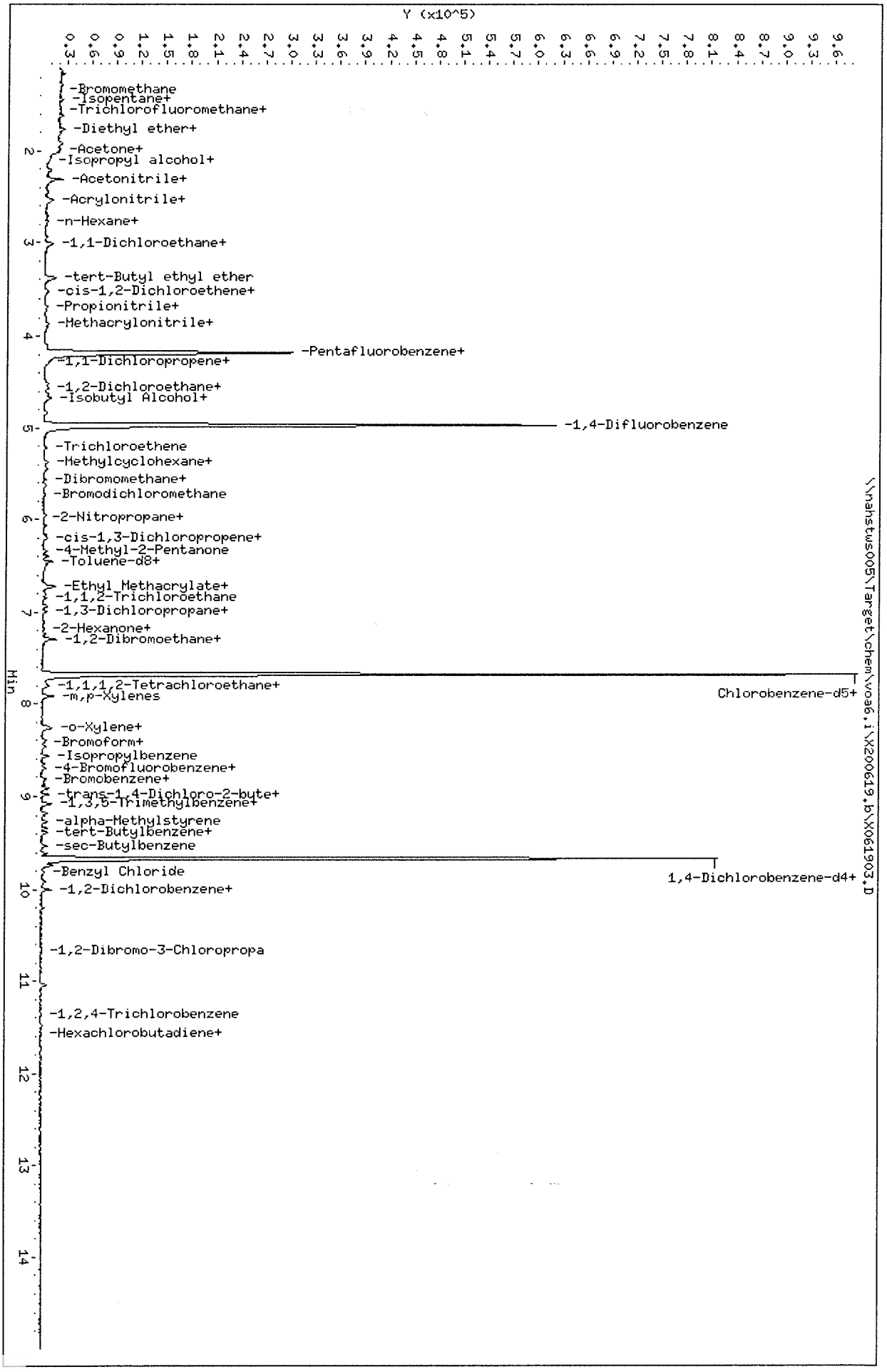
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
75 1,3,5-Trimethylbenzene	105	9.074	9.075	(0.939)	3830	0.50000	0.40(a)
83 1,3-Dichlorobenzene	146	9.612	9.612	(0.994)	2424	0.50000	0.44(a)
54 1,3-Dichloropropane	76	6.990	6.983	(0.911)	2387	0.50000	0.43(a)
84 1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	2545	0.50000	0.45(a)
26 2,2-Dichloropropane	77	3.516	3.516	(0.839)	2251	0.50000	0.49(aM)
24 2-Butanone	43	3.623	3.580	(0.865)	1071	1.00000	(aM)
76 2-Chlorotoluene	91	8.981	8.981	(0.929)	3566	0.50000	0.40(a)
52 2-Hexanone	43	7.105	7.090	(0.926)	2913	1.00000	0.69(a)
77 4-Chlorotoluene	91	9.082	9.075	(0.939)	3896	0.50000	0.38(a)
82 p-Isopropyltoluene	119	9.655	9.655	(0.999)	3994	0.50000	0.44(a)
45 4-Methyl-2-Pentanone	43	6.338	6.331	(0.826)	4525	1.00000	0.73(a)
10 Acetone	43	1.983	1.976	(0.473)	3329	1.00000	(a)
37 Benzene	78	4.519	4.519	(0.909)	5024	0.50000	0.40(a)
74 Bromobenzene	156	8.817	8.809	(0.912)	1407	0.50000	0.40(a)
29 Bromochloromethane	128	3.802	3.795	(0.908)	823	0.50000	0.46(a)
39 Bromodichloromethane	83	5.736	5.729	(1.154)	1581	0.50000	0.35(aM)
66 Bromoform	173	8.415	8.416	(1.097)	872	0.50000	0.40(aM)
6 Bromomethane	94	1.338	1.331	(0.320)	1024	0.50000	0.46(a)
19 Carbon Disulfide	76	2.076	2.069	(0.496)	5861	1.00000	0.78(aM)
34 Carbon Tetrachloride	117	4.275	4.268	(0.860)	1641	0.50000	0.42(aH)
59 Chlorobenzene	112	7.699	7.699	(1.004)	3383	0.50000	0.42(a)
7 Chloroethane	64	1.403	1.396	(0.335)	1221	0.50000	0.49(aM)
28 Chloroform	83	3.917	3.910	(0.935)	2277	0.50000	0.39(a)
3 Chloromethane	50	1.080	1.081	(0.258)	2491	0.50000	0.42(a)
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.843)	1358	0.50000	0.40(a)
46 cis-1,3-Dichloropropene	75	6.166	6.159	(1.241)	1939	0.50000	0.36(a)
55 Dibromochloromethane	129	7.183	7.183	(0.937)	1368	0.50000	0.41(a)
44 Dibromomethane	93	5.565	5.557	(1.120)	864	0.50000	0.37(a)
2 Dichlorodifluoromethane	85	0.973	0.973	(0.232)	1002	0.50000	1.21(aM)
61 Ethylbenzene	106	7.799	7.807	(1.017)	1843	0.50000	0.45(a)
91 Hexachlorobutadiene	225	11.488	11.481	(1.188)	599	0.50000	(aM)
67 Isopropylbenzene	105	8.566	8.566	(1.117)	4371	0.50000	0.38(a)
62 m,p-Xylenes	106	7.914	7.907	(1.032)	3776	1.00000	0.80(a)
17 Methylene Chloride	84	2.305	2.305	(0.550)	4889	0.50000	(aM)
87 n-Butylbenzene	91	9.998	9.999	(1.034)	3783	0.50000	0.46(aM)
73 n-Propylbenzene	91	8.917	8.917	(0.922)	5249	0.50000	0.38(a)
92 Naphthalene	128	11.574	11.546	(1.197)	836	0.50000	(aM)
63 o-Xylene	106	8.244	8.244	(1.075)	1920	0.50000	0.39(a)
81 sec-Butylbenzene	105	9.526	9.526	(0.985)	4233	0.50000	0.40(a)
64 Styrene	104	8.272	8.265	(1.078)	3225	0.50000	0.37(a)
78 tert-Butylbenzene	119	9.339	9.340	(0.966)	2944	0.50000	0.39(a)
56 Tetrachloroethene	164	6.926	6.933	(0.903)	893	0.50000	0.42(a)
50 Toluene	91	6.453	6.453	(0.841)	4639	0.50000	0.38(a)
20 trans-1,2-Dichloroethene	96	2.535	2.527	(0.605)	942	0.50000	0.35(a)
51 trans-1,3-Dichloropropene	75	6.696	6.682	(1.347)	1828	0.50000	0.36(a)
38 Trichloroethene	130	5.214	5.206	(1.049)	1078	0.50000	0.37(a)
8 Trichlorofluoromethane	101	1.560	1.560	(0.373)	1432	0.50000	0.34(a)
5 Vinyl Chloride	62	1.145	1.138	(0.273)	2302	0.50000	0.49(a)

QC Flag Legend

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

QC Flag Legend

M - Compound response manually integrated.
H - Operator selected an alternate compound hit.



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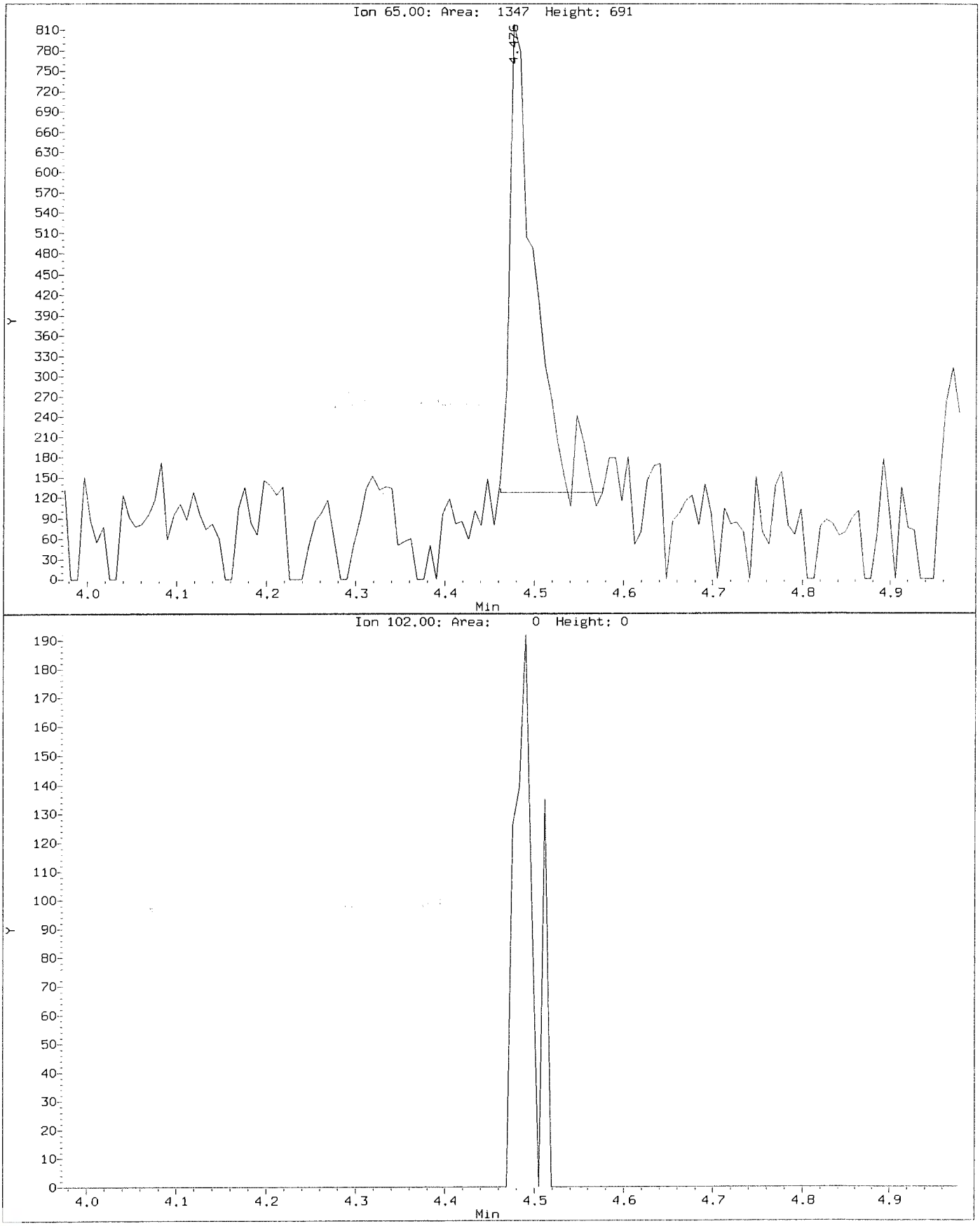
Sample Info: VSTD000.5;VSTD000.5;1;2;
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\nahstws005\Target\chem\voa6.i\X200619.b\Before\X061903.D
Injection Date: 19-JUN-2020 12:18
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: 1,2-Dichloroethane-d4
CAS Number: 17060-07-0



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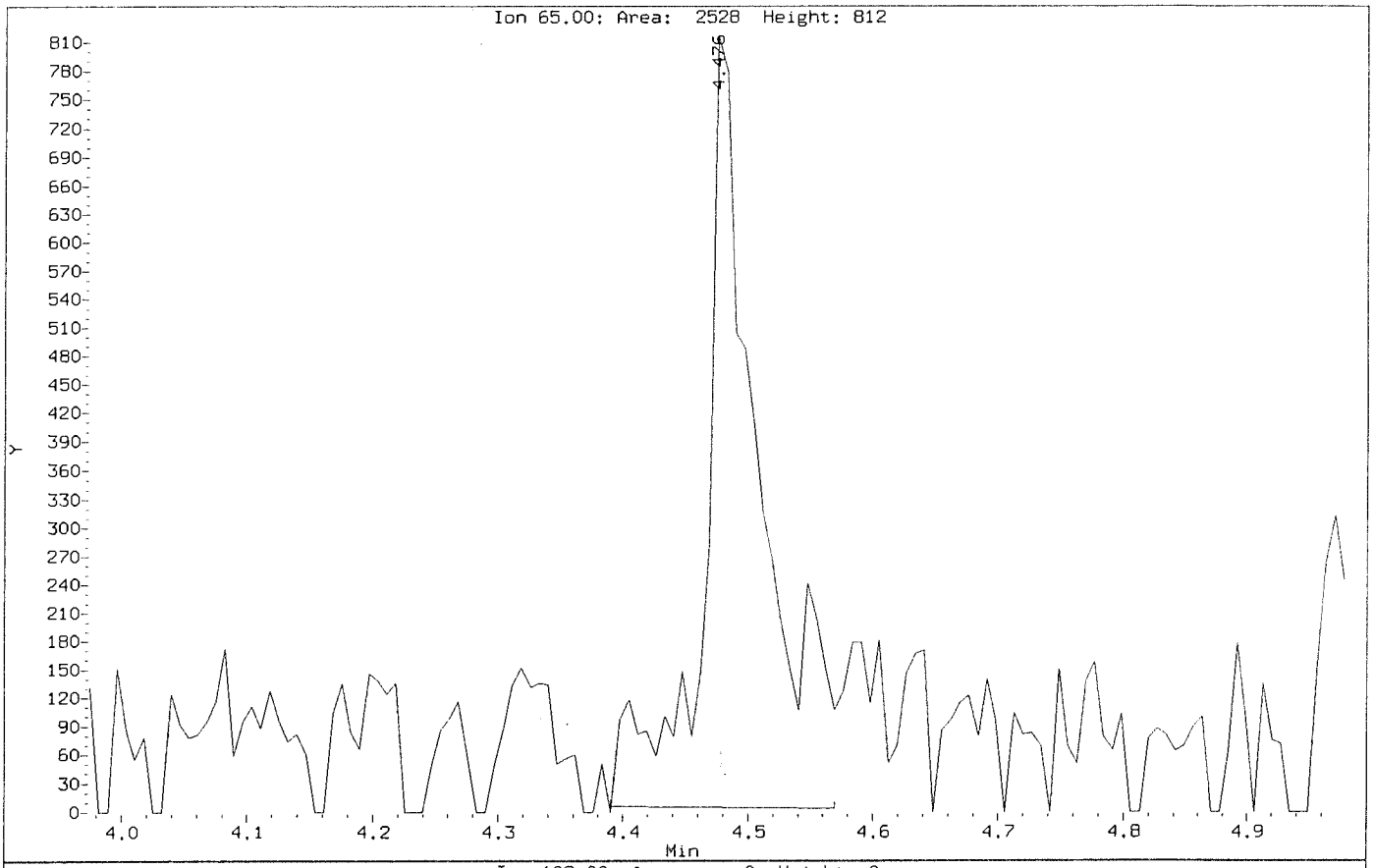
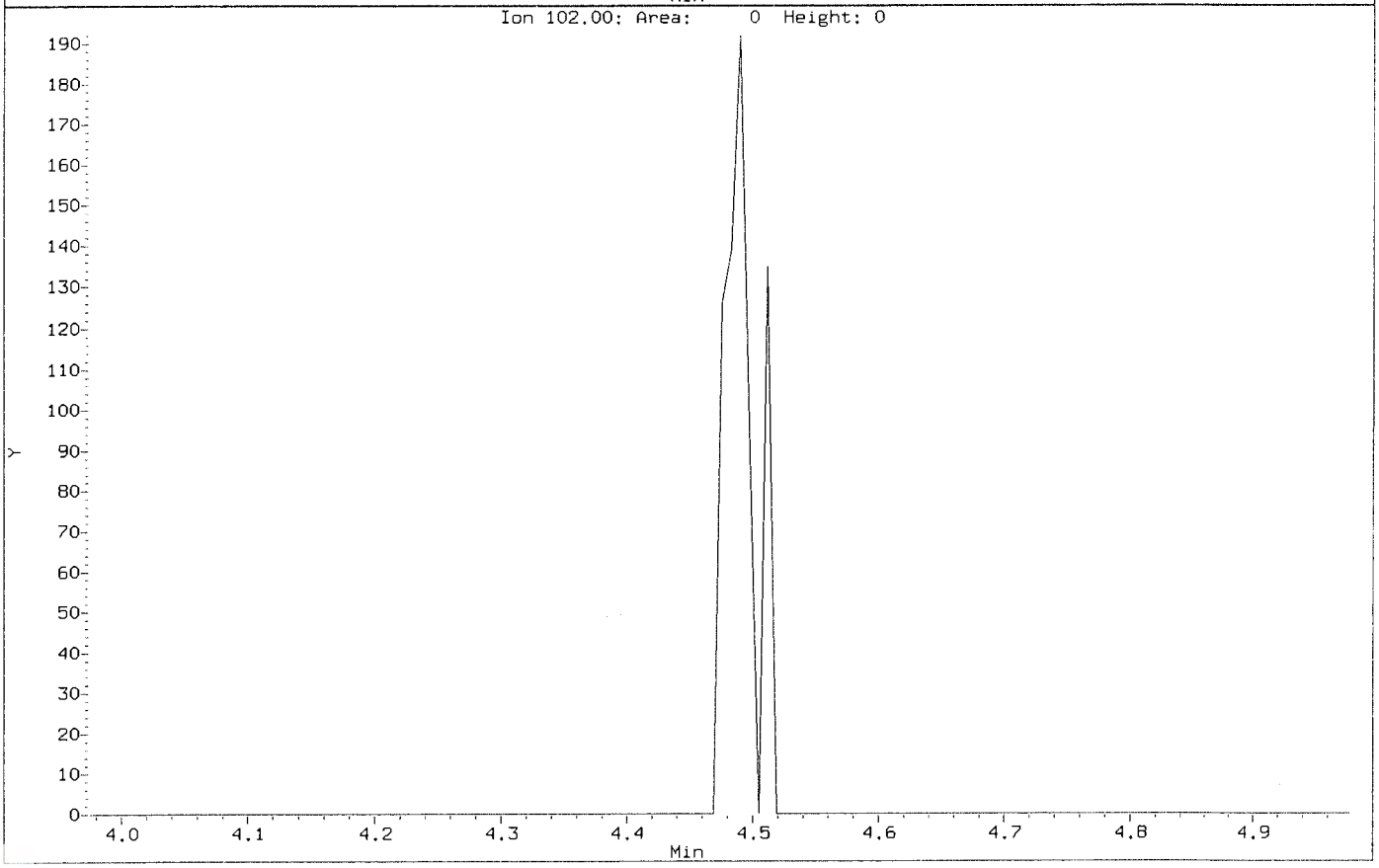
Injection Date: 19-JUN-2020 12:18
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: 1,2-Dichloroethane-d4
CAS Number: 17060-07-0





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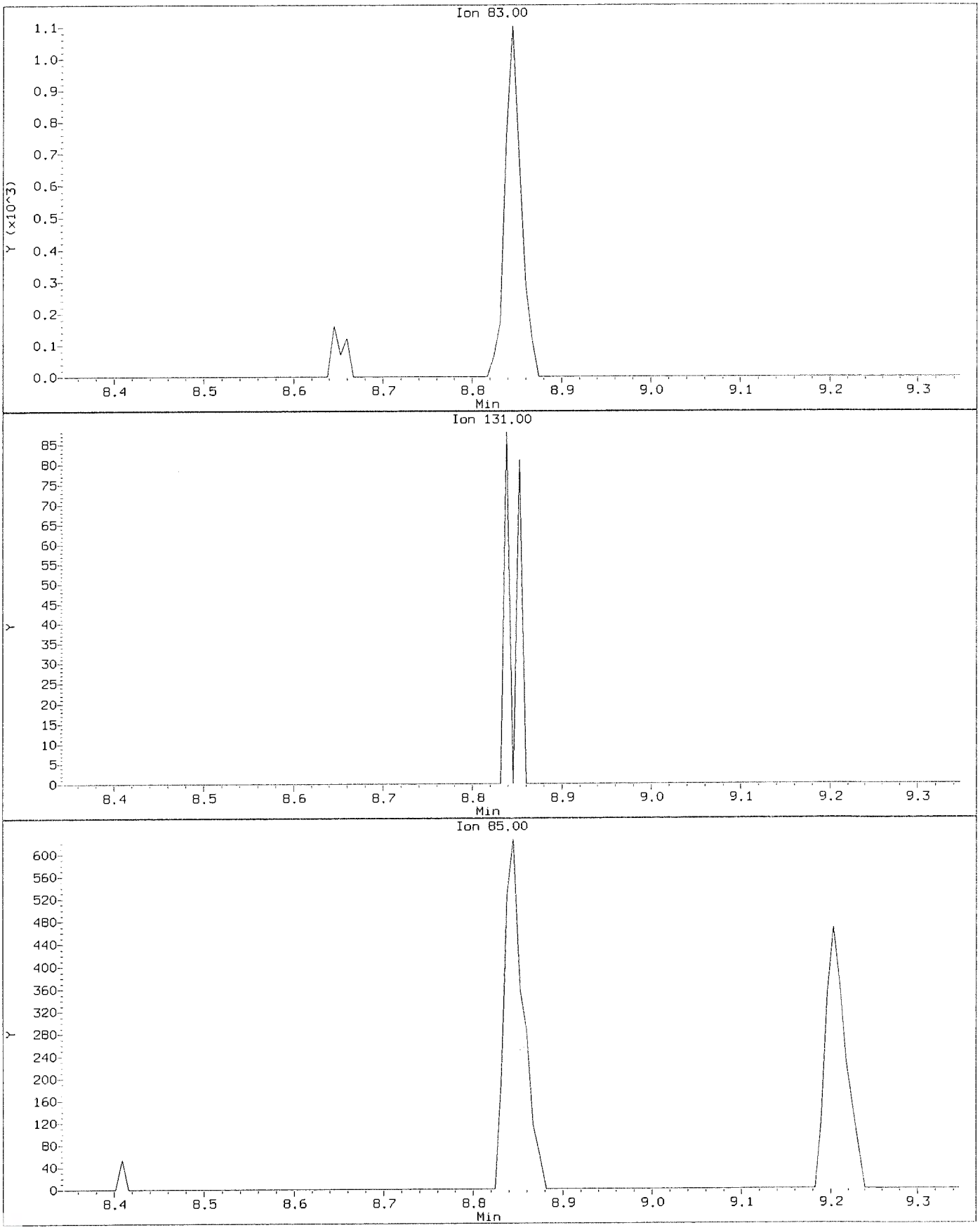
Injection Date: 19-JUN-2020 12:18
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: 1,1,2,2-Tetrachloroethane
CAS Number: 79-34-5



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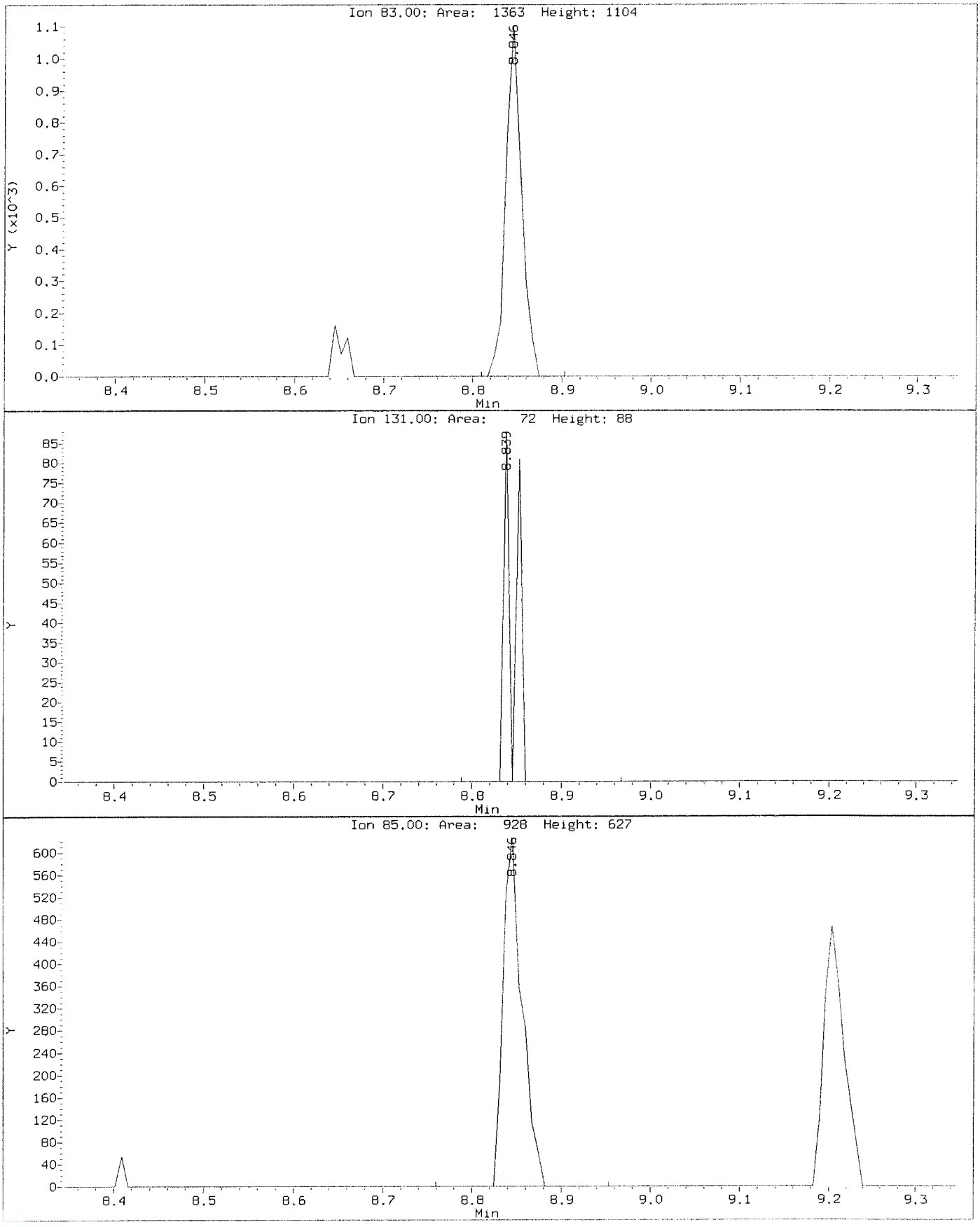
Injection Date: 19-JUN-2020 12:18
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: 1,1,2,2-Tetrachloroethane
CAS Number: 79-34-5



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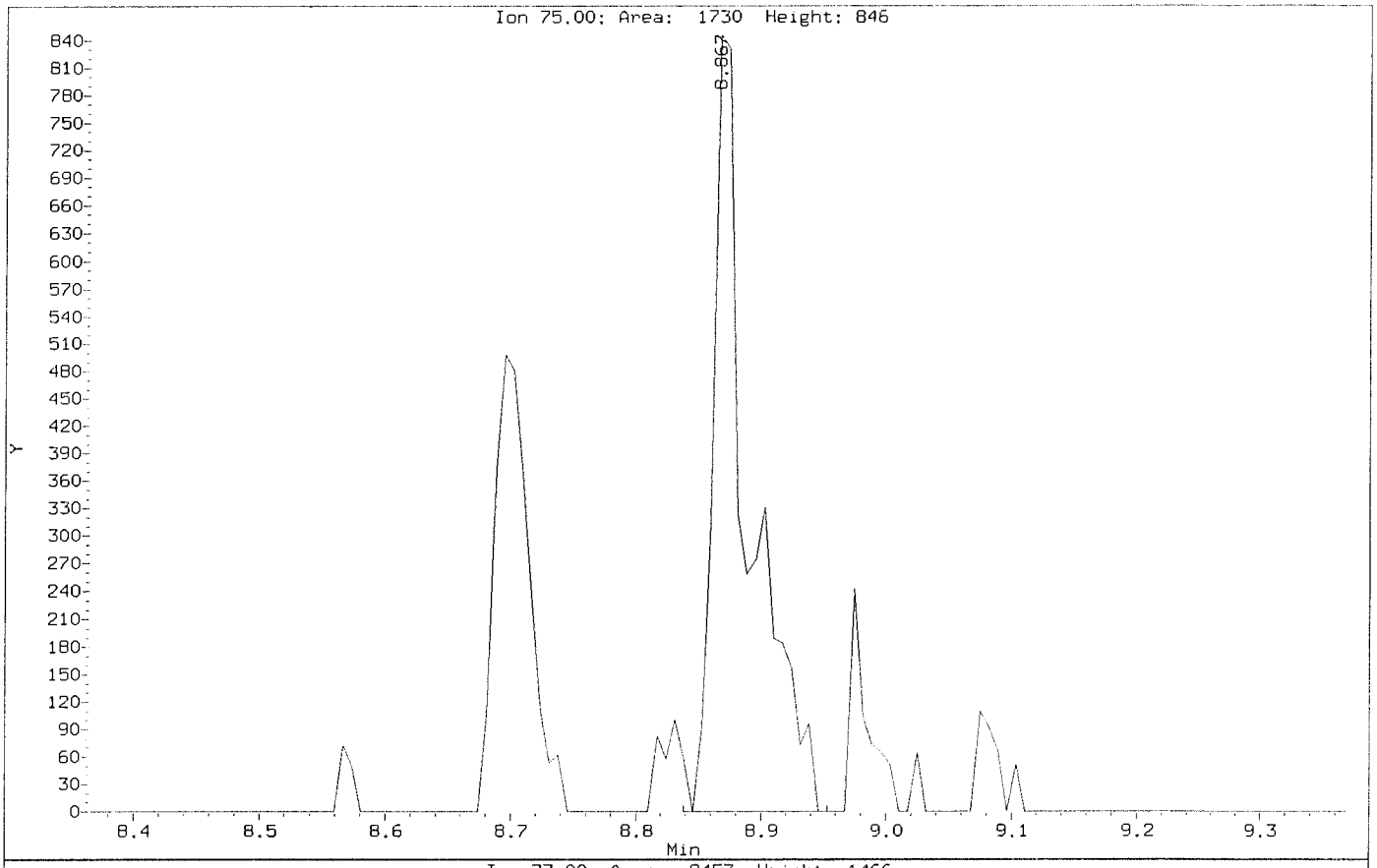
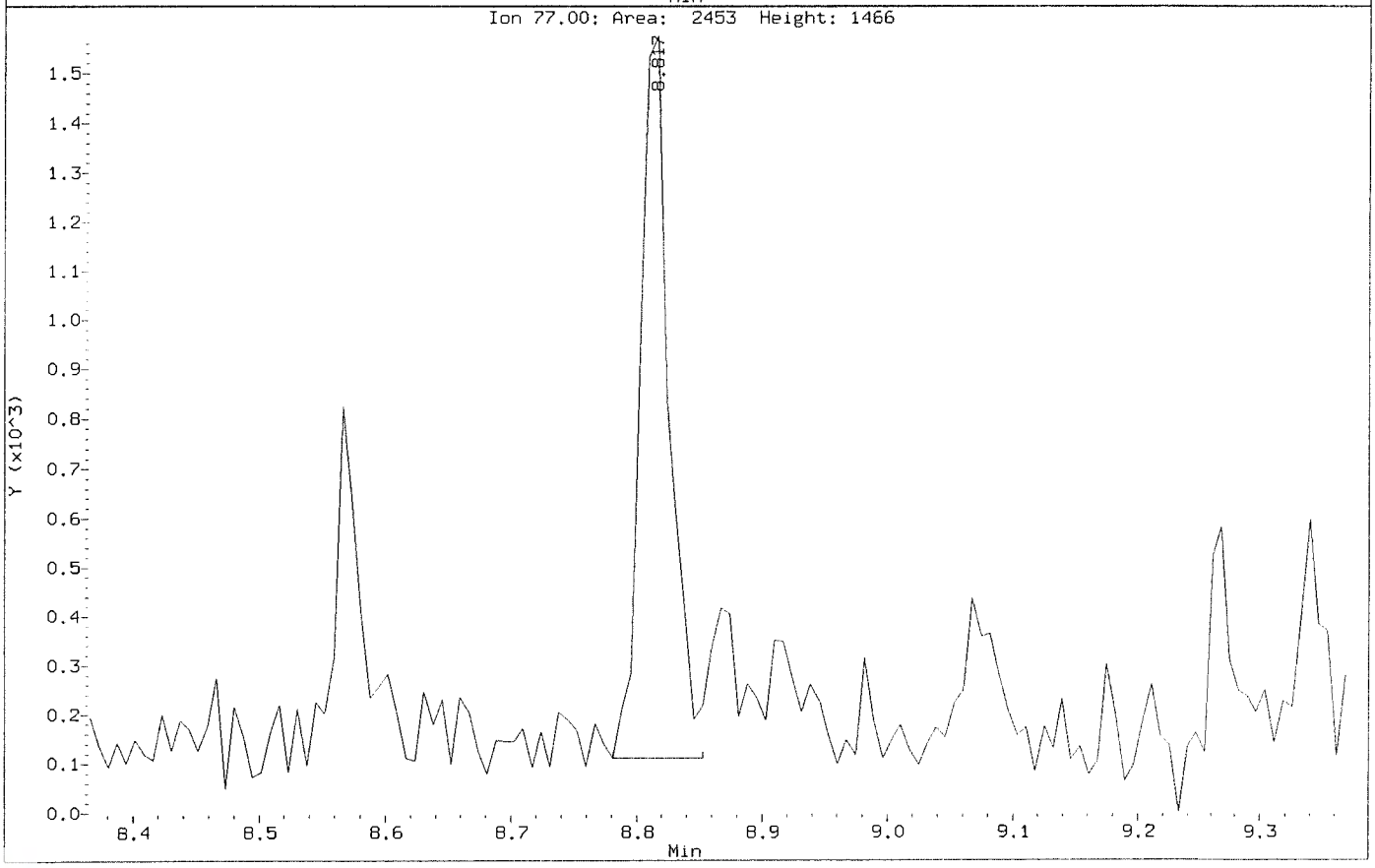
Injection Date: 19-JUN-2020 12:18
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





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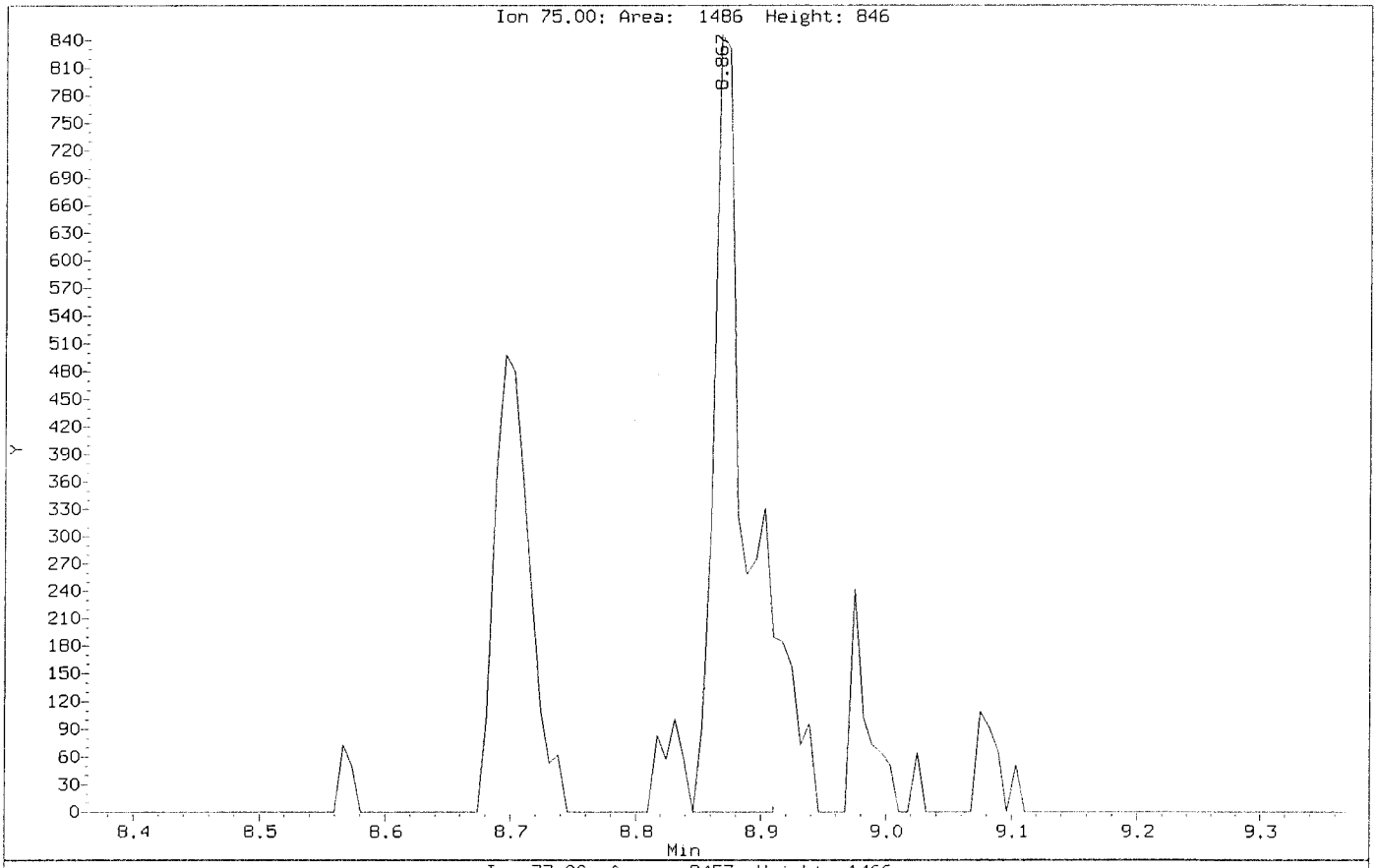
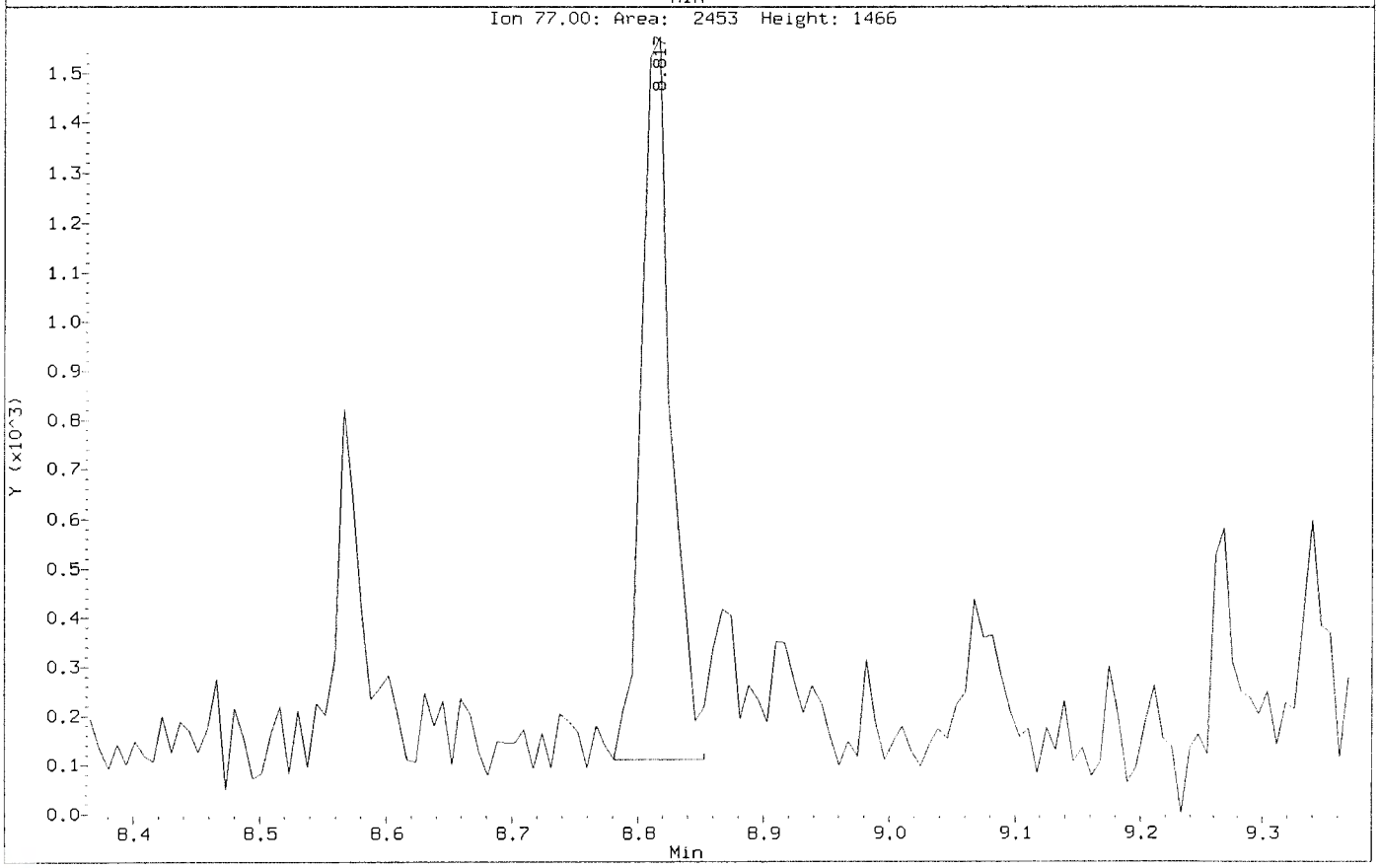
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





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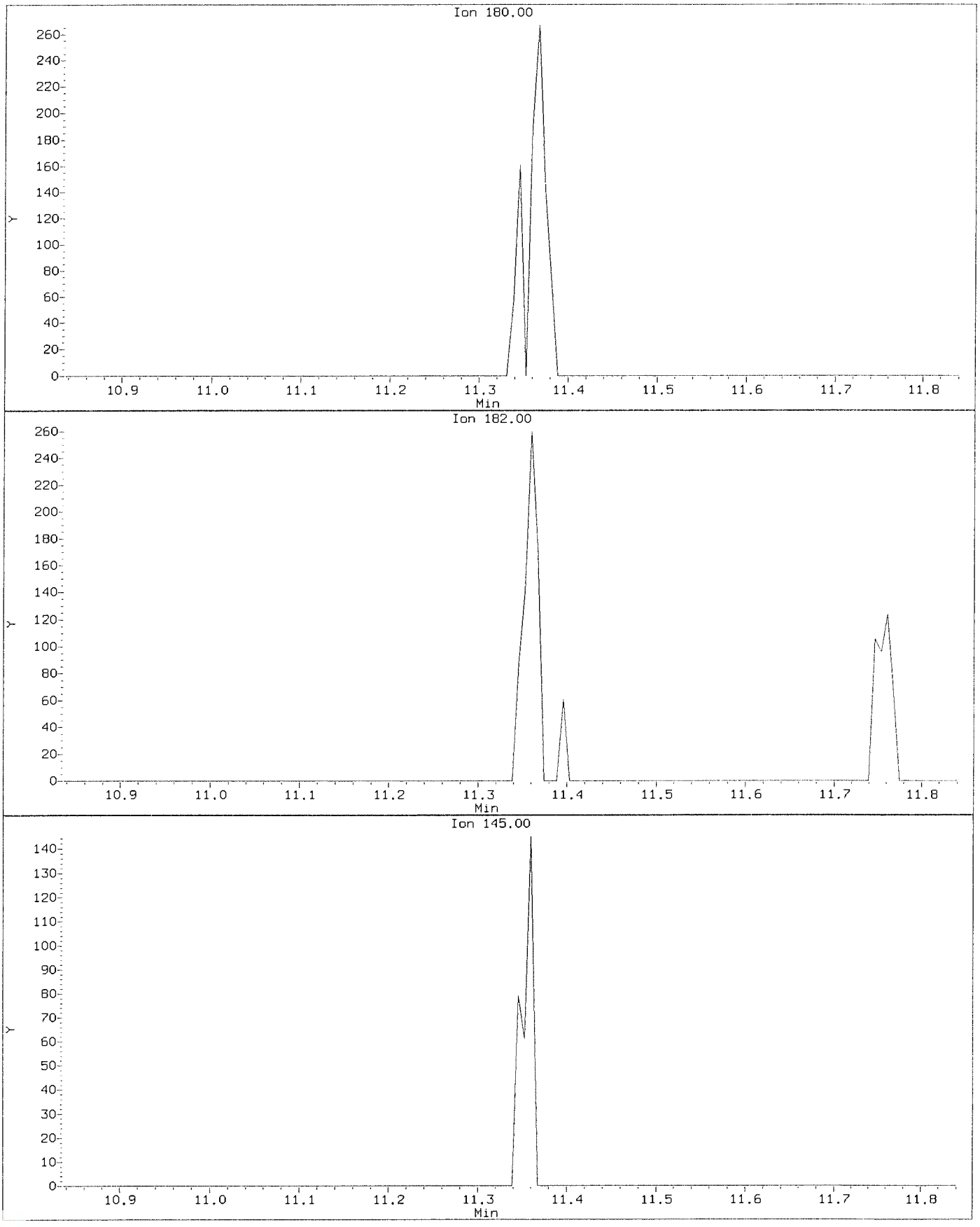
Injection Date: 19-JUN-2020 12:18
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: 1,2,4-Trichlorobenzene
CAS Number: 120-82-1



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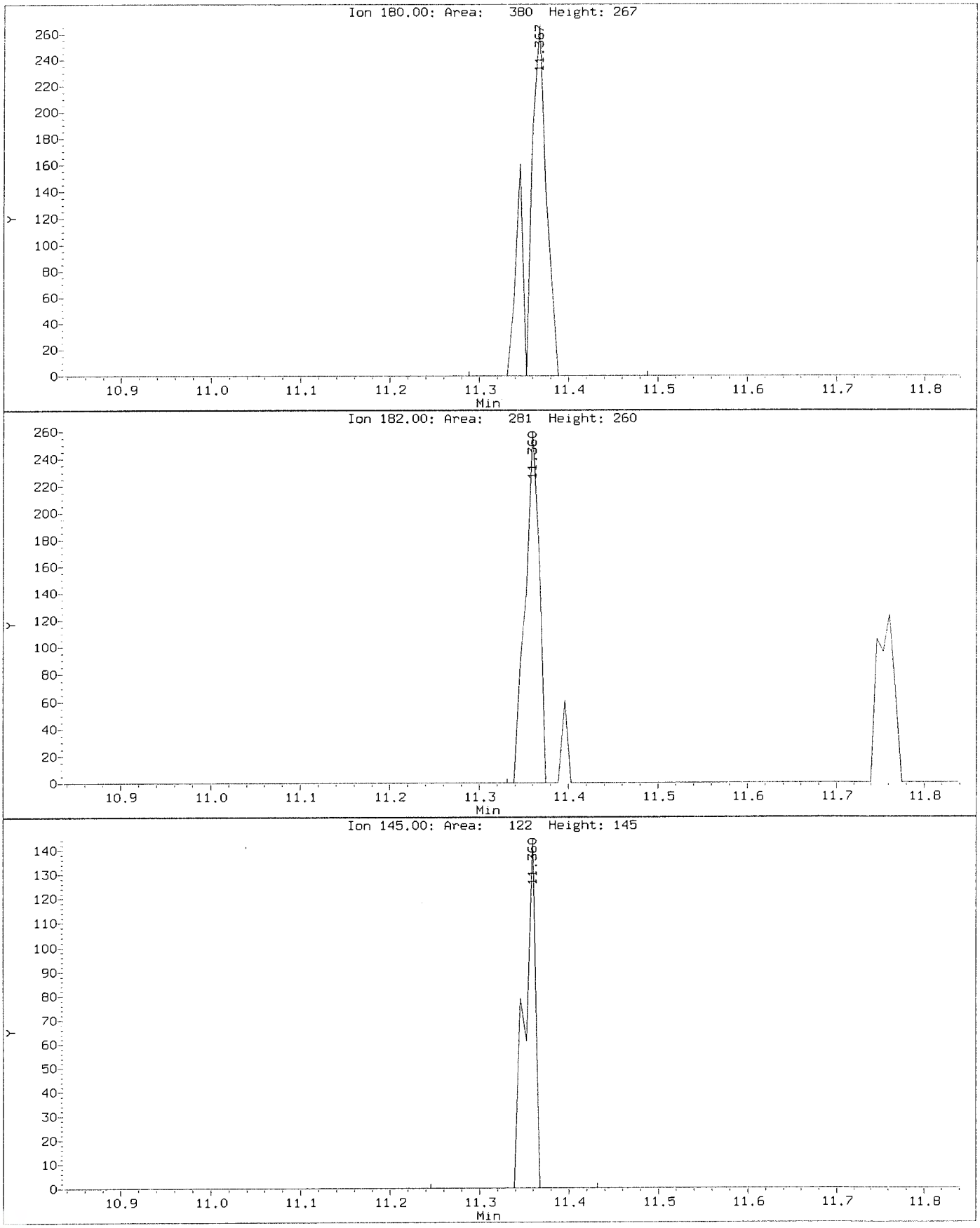
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: 1,2,4-Trichlorobenzene
CAS Number: 120-82-1



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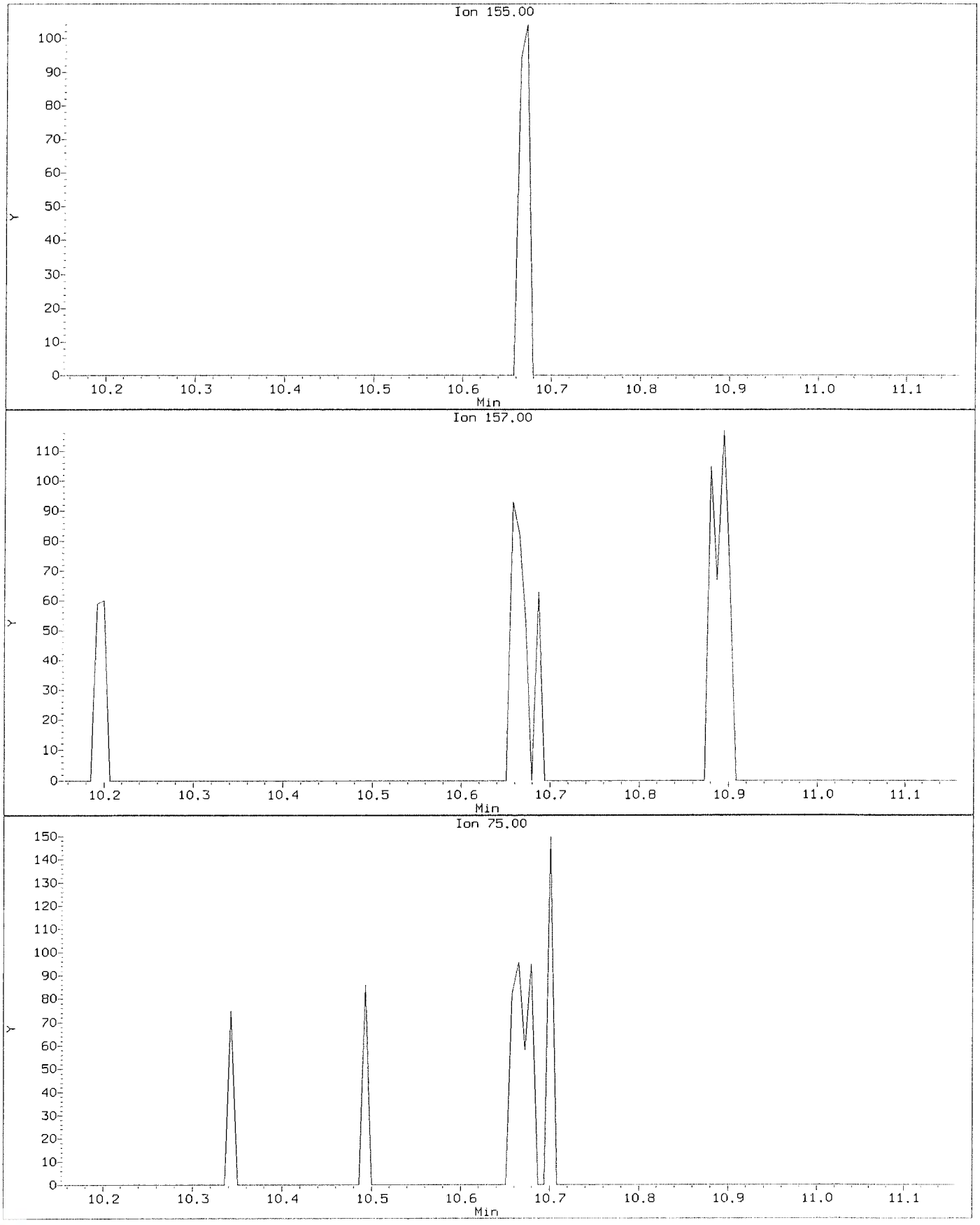
Client Sample ID: VSTD000.5

Compound: 1,2-Dibromo-3-Chloropropane
CAS Number: 96-12-8



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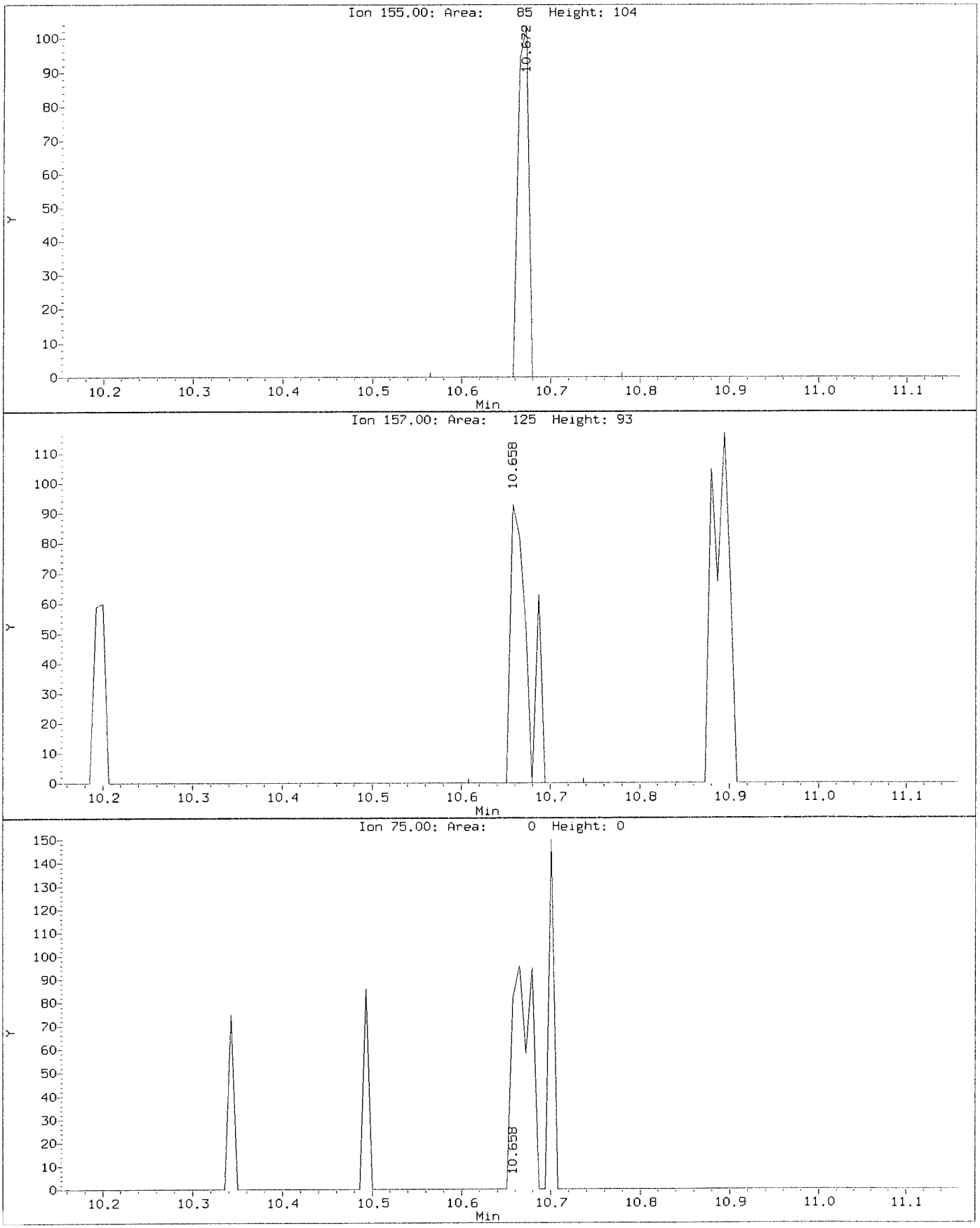
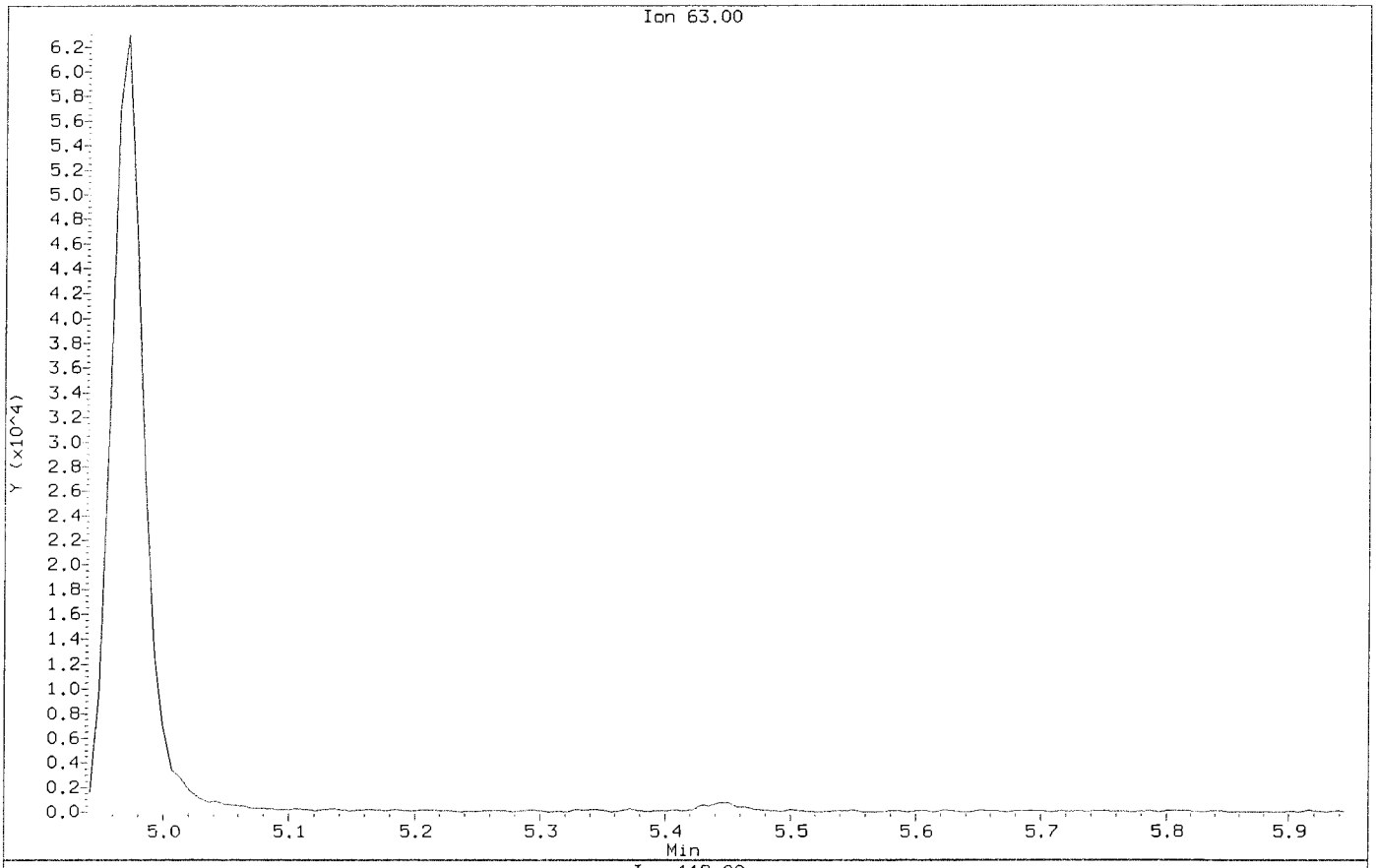
Injection Date: 19-JUN-2020 12:18
Instrument: voa6.i
Client Sample ID: VSTD000.5

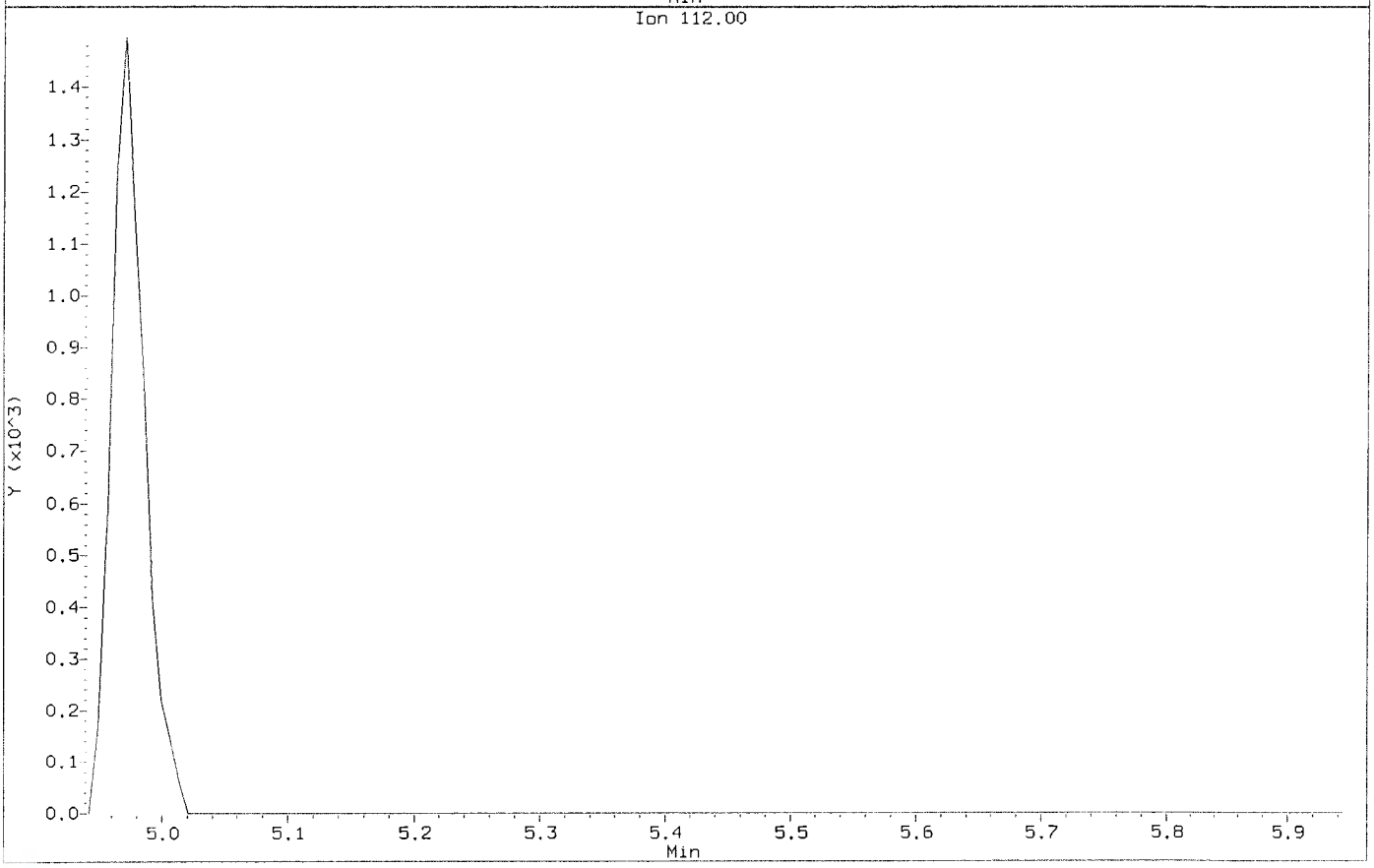
Compound: 1,2-Dibromo-3-Chloropropane
CAS Number: 96-12-8



Data File: \\nahstws005\Target\chem\voa6.i\X200619.b\Before\X061903.D
Injection Date: 19-JUN-2020 12:18
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: 1,2-Dichloropropane
CAS Number: 78-87-5





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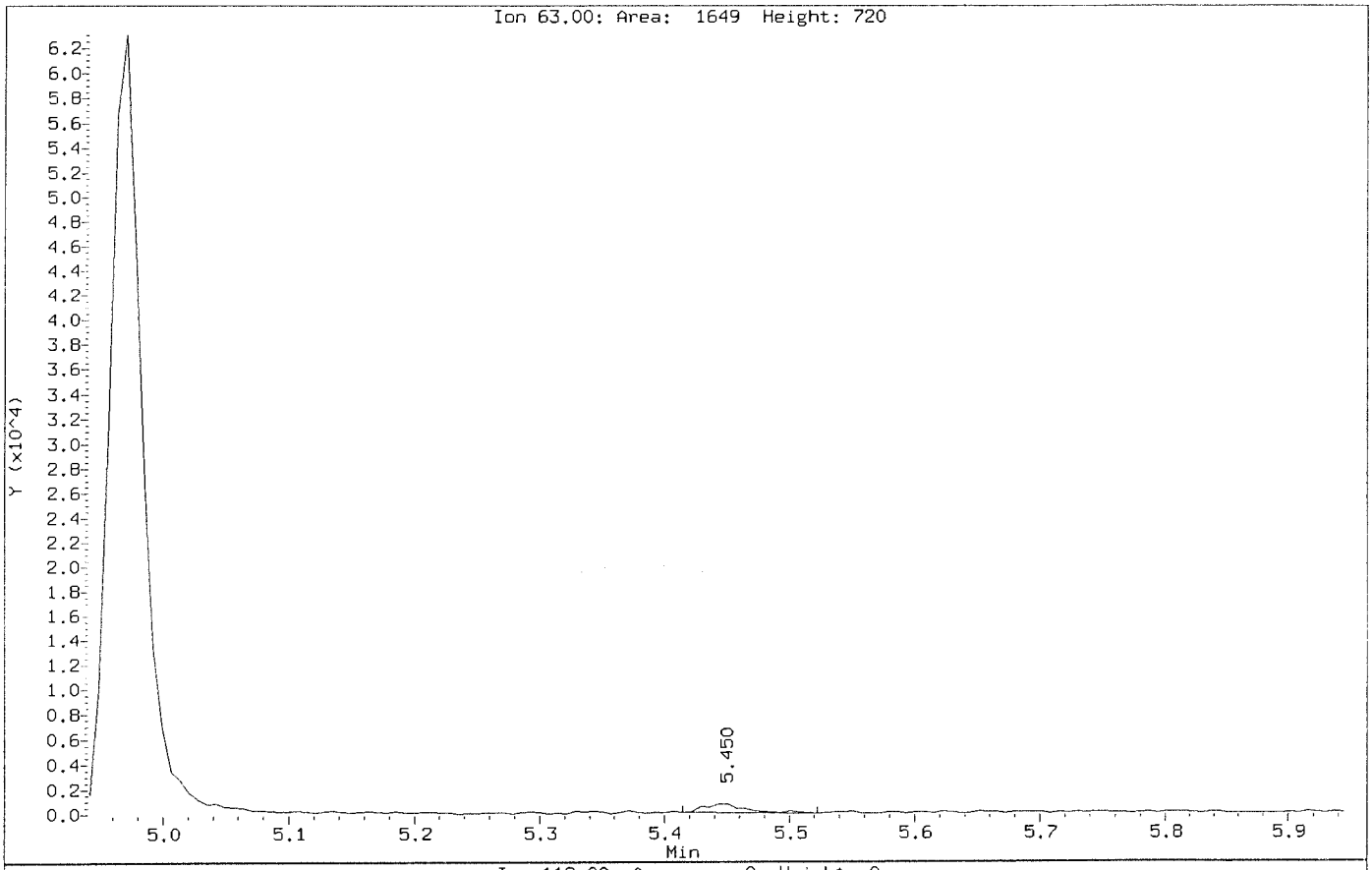
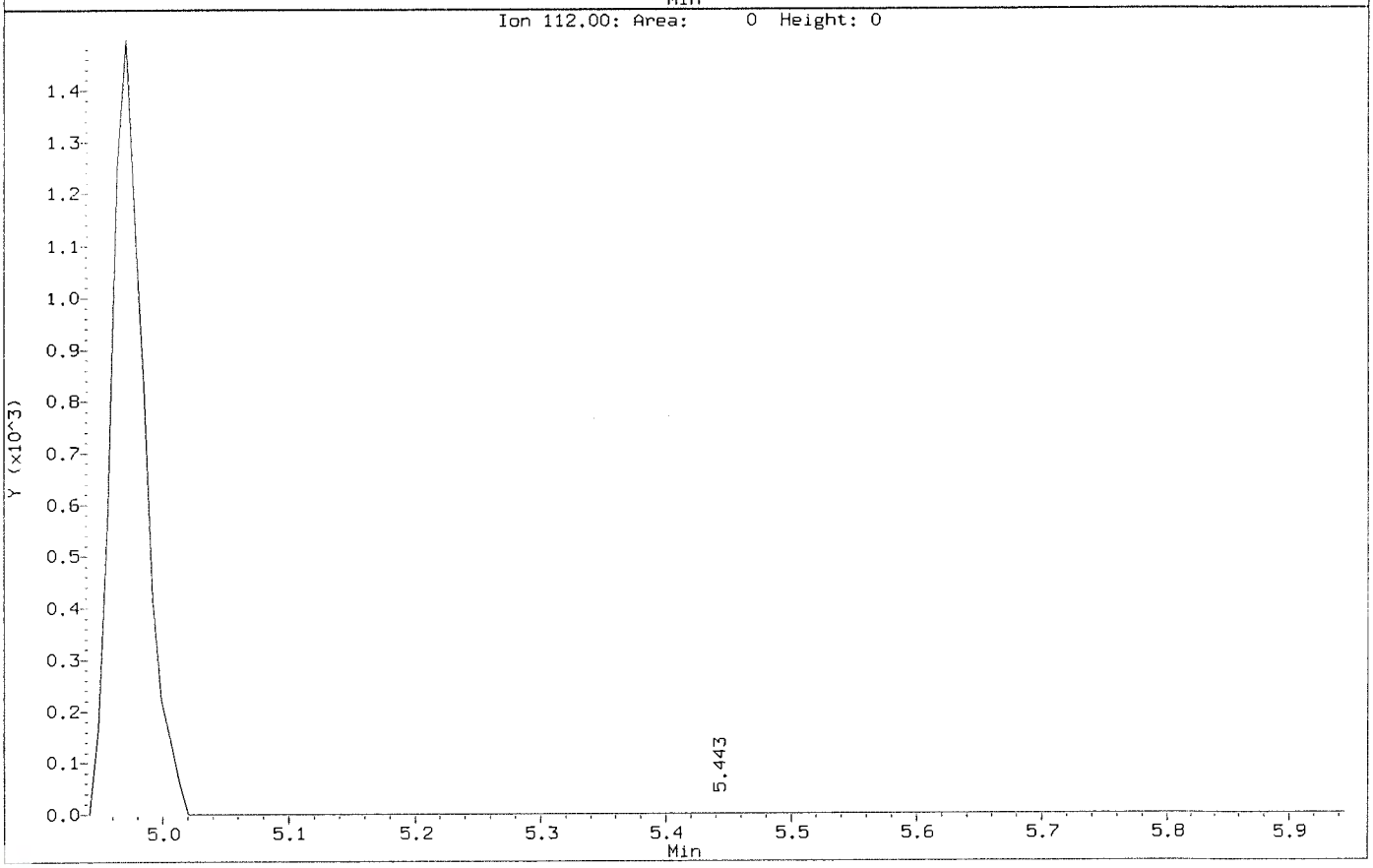
Injection Date: 19-JUN-2020 12:18
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: 1,2-Dichloropropane
CAS Number: 78-87-5





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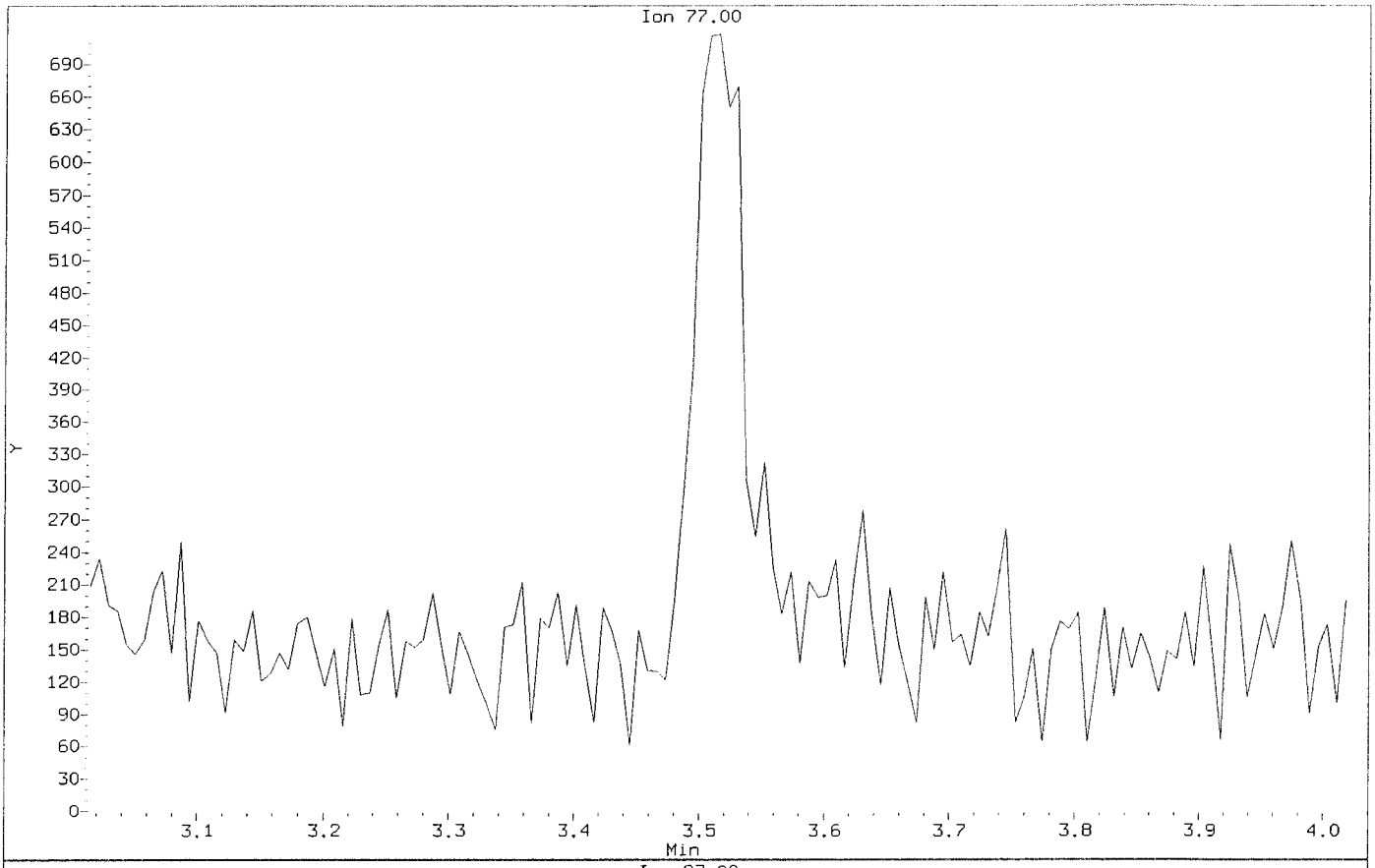
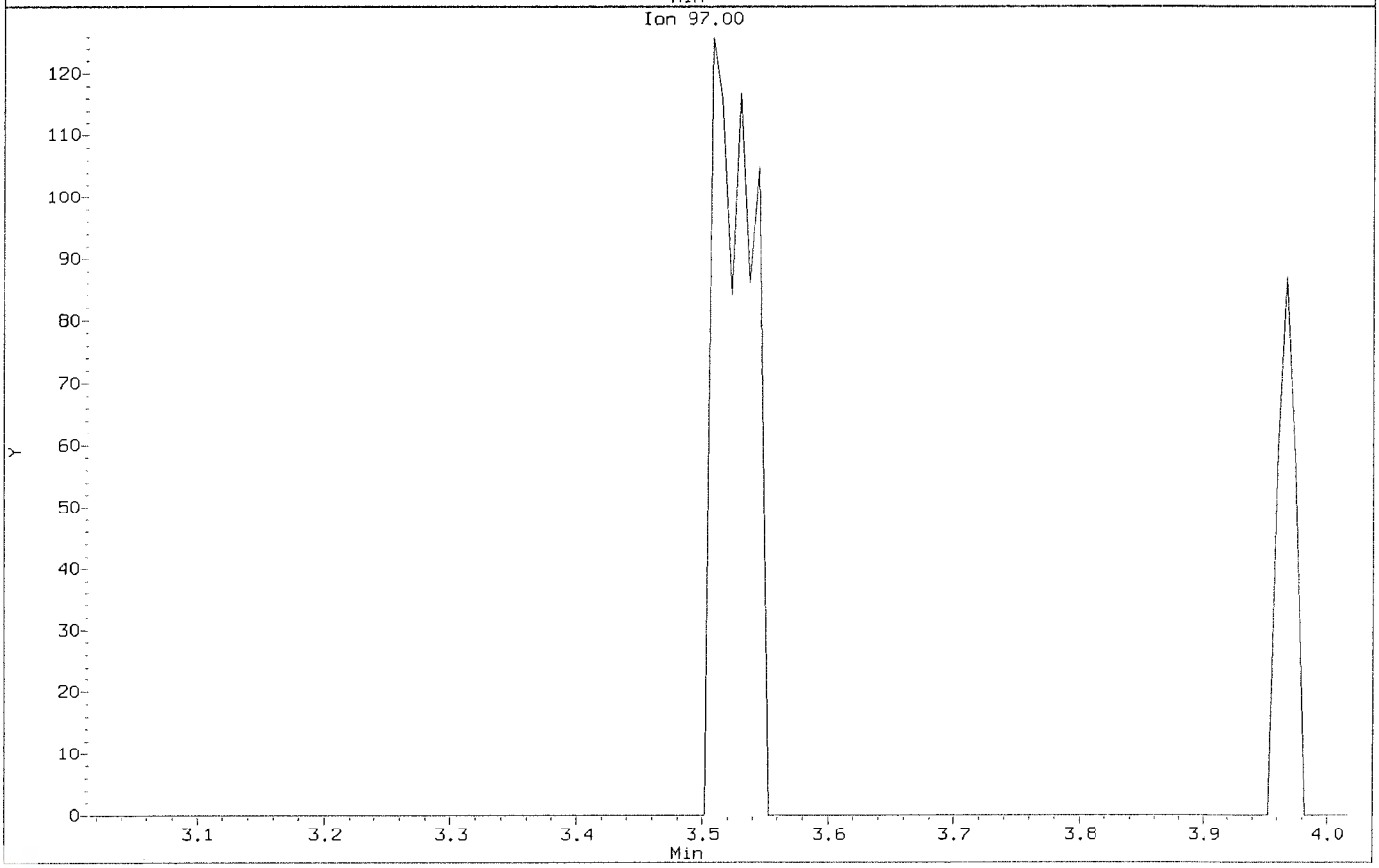
Injection Date: 19-JUN-2020 12:18
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: 2,2-Dichloropropane
CAS Number: 594-20-7





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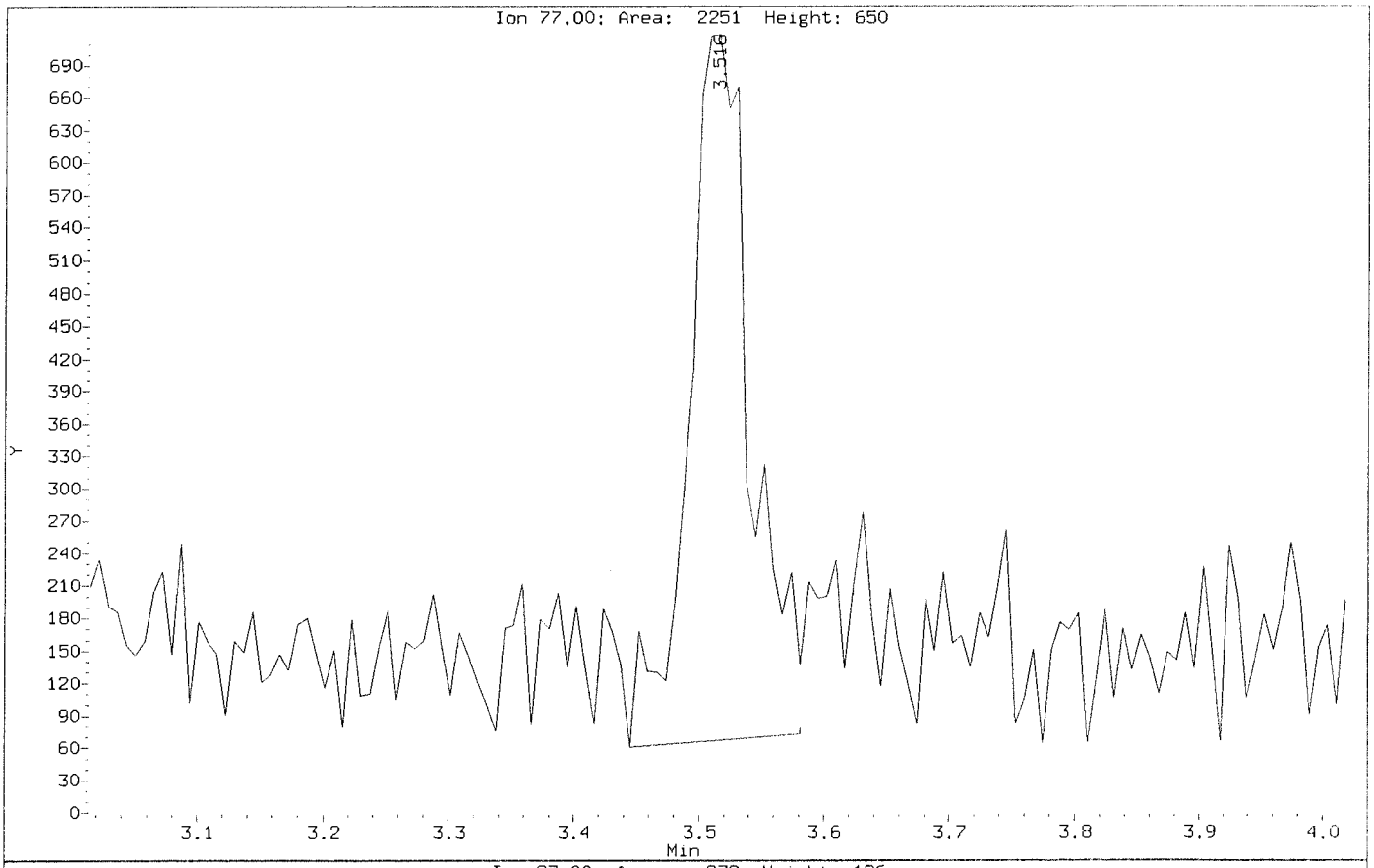
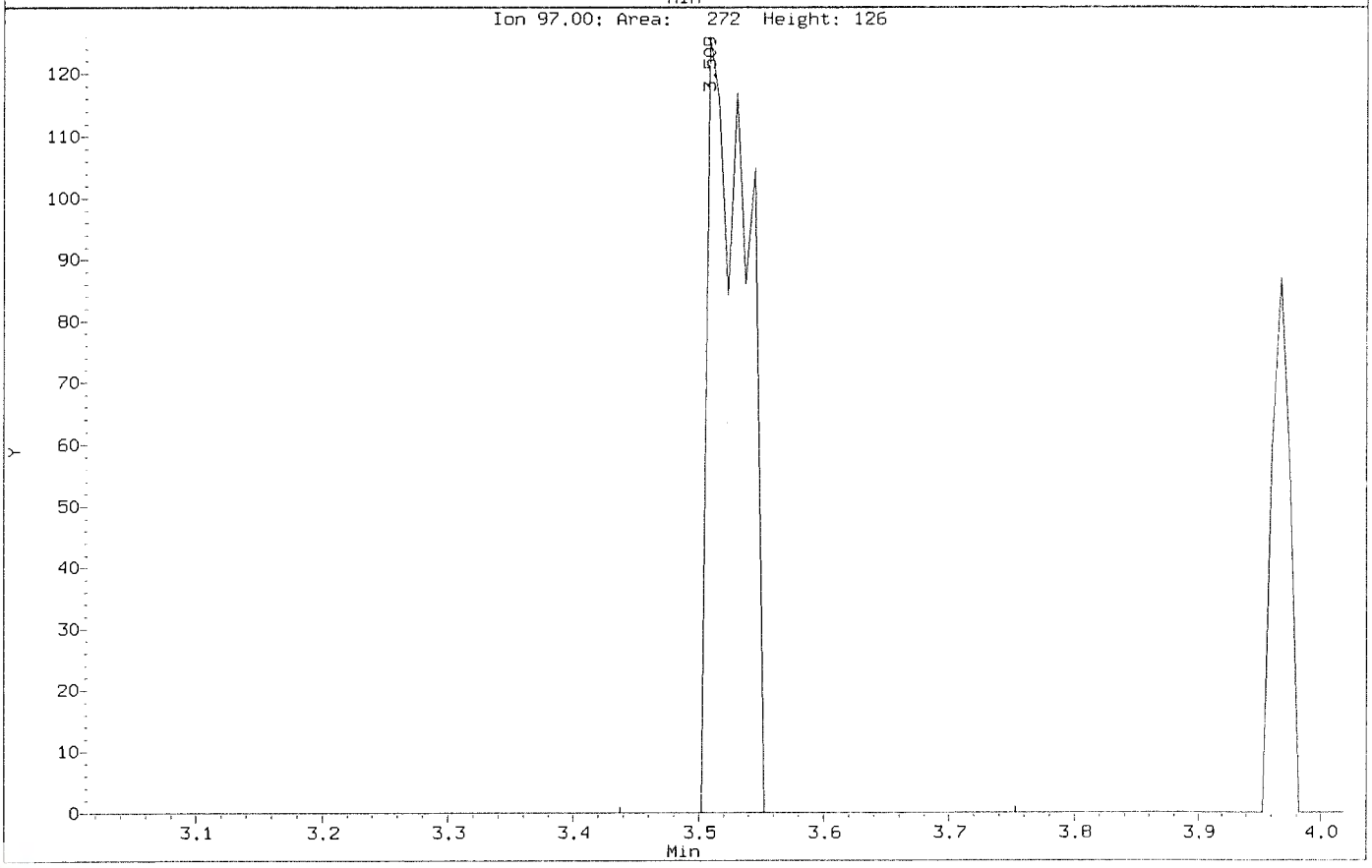
Injection Date: 19-JUN-2020 12:18
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: 2,2-Dichloropropane
CAS Number: 594-20-7





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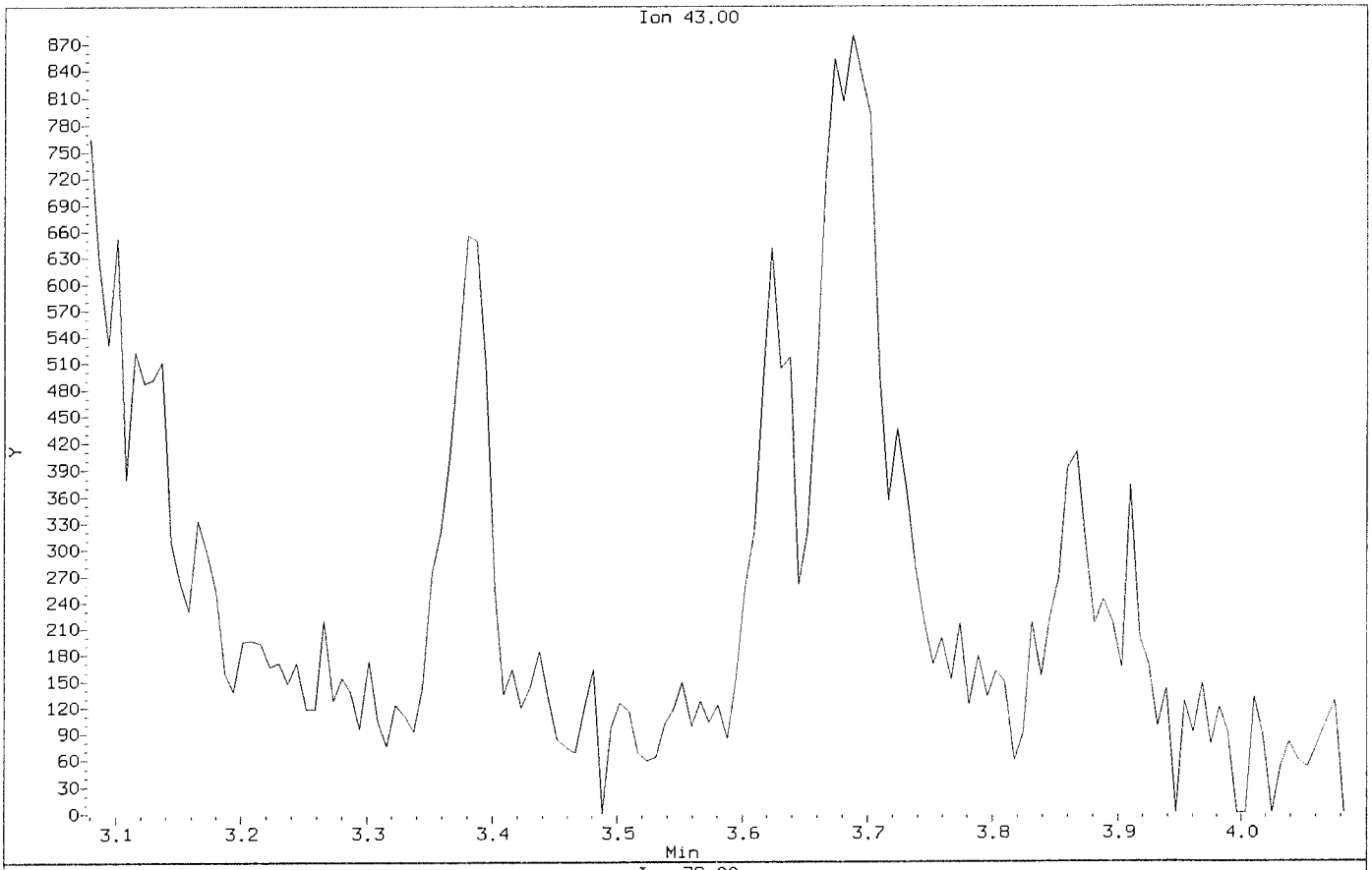
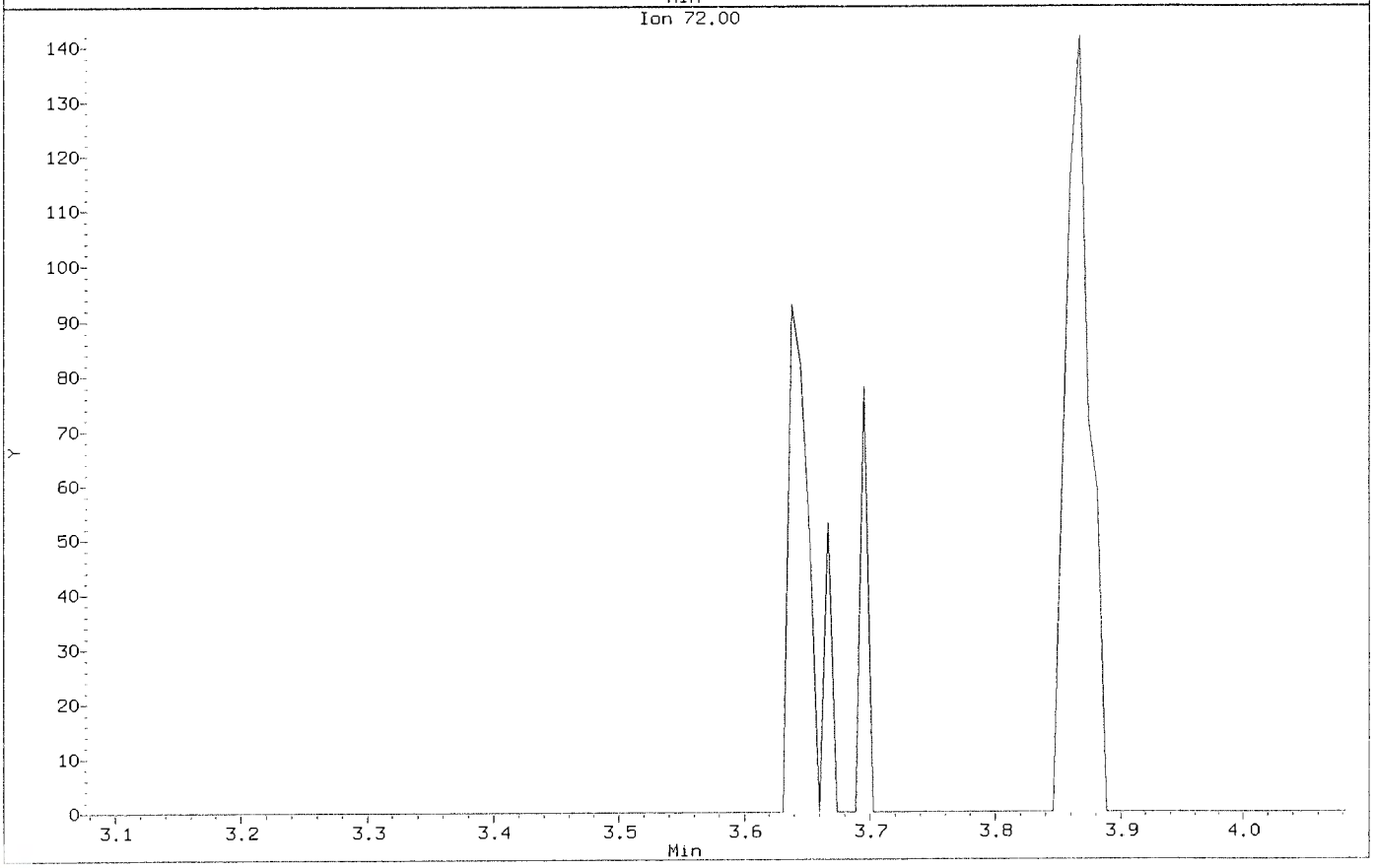
Injection Date: 19-JUN-2020 12:18
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: 2-Butanone
CAS Number: 78-93-3





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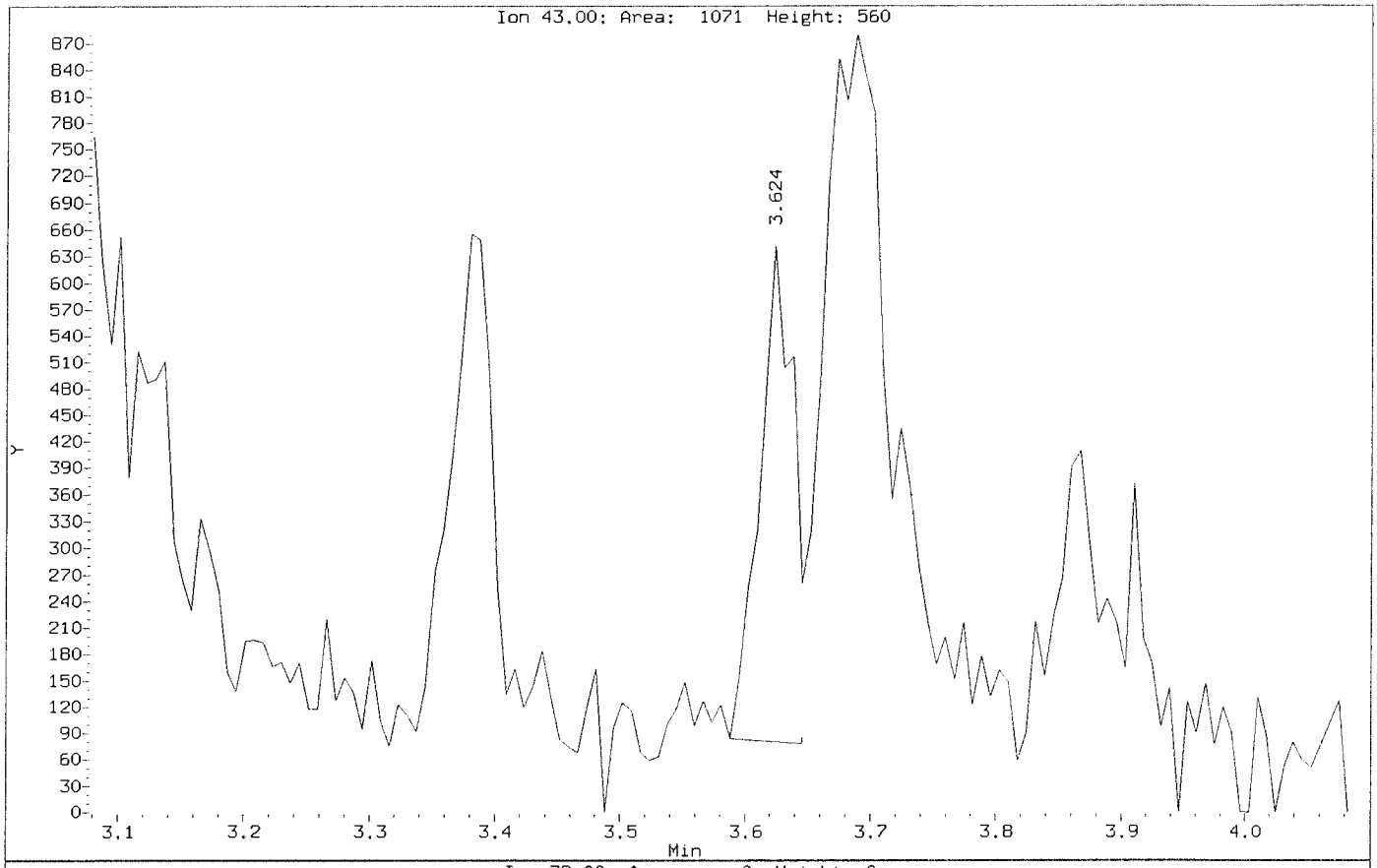
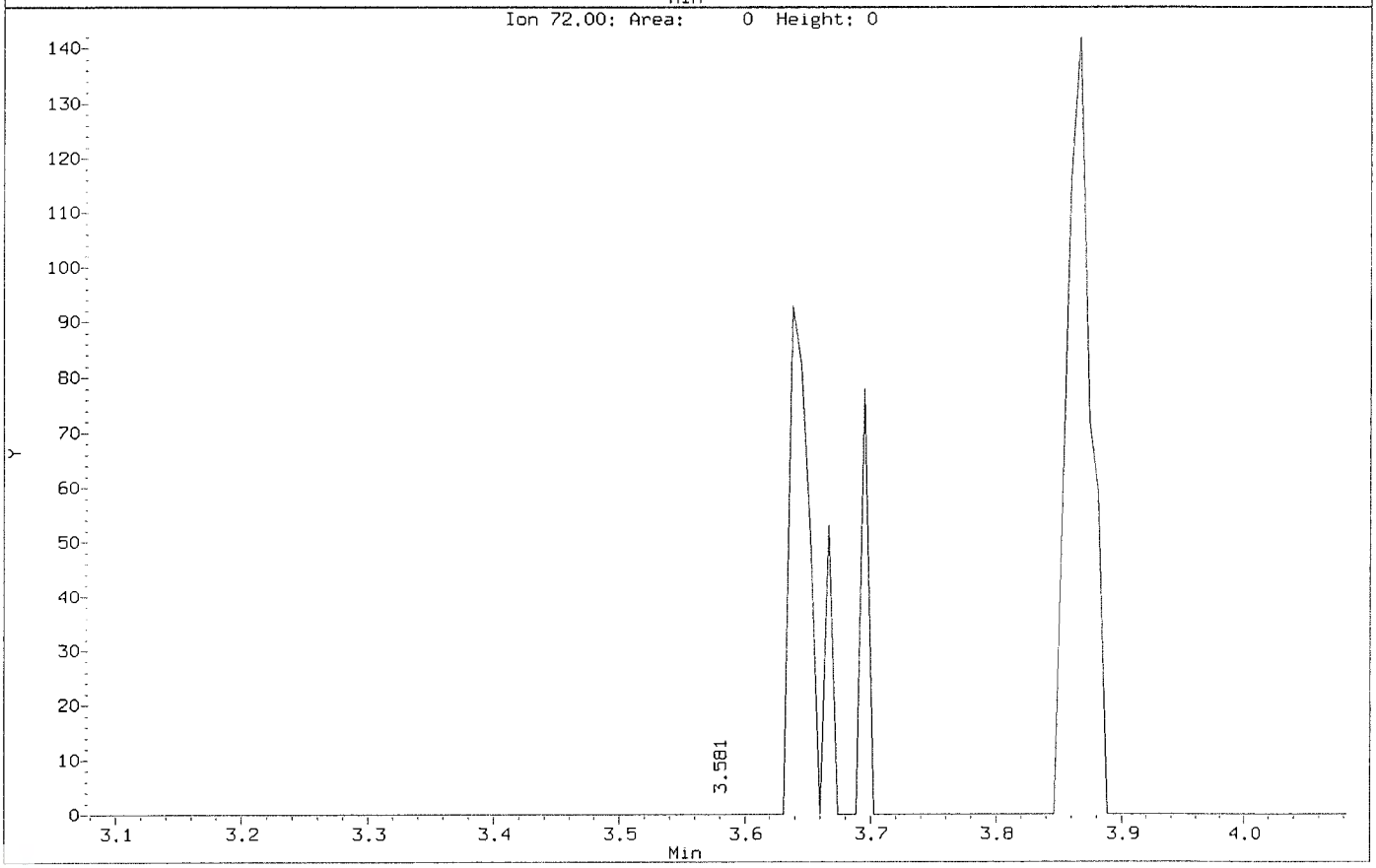
Injection Date: 19-JUN-2020 12:18
Instrument: voa6.i
Client Sample ID: VSTD000.5

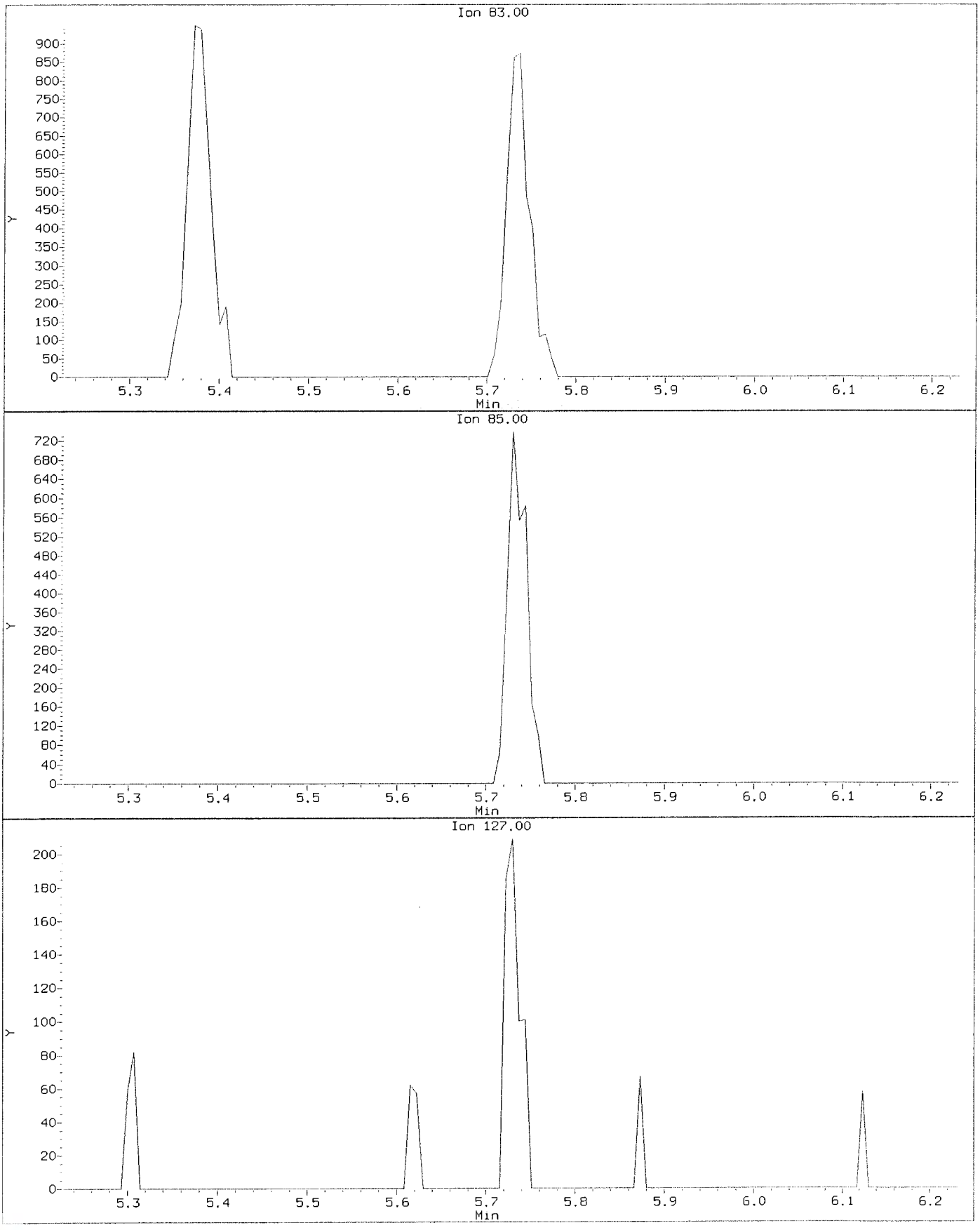
Compound: 2-Butanone
CAS Number: 78-93-3





Data File: \\nahstws005\Target\chem\voa6.i\X200619.b\Before\X061903.D
Injection Date: 19-JUN-2020 12:18
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Bromodichloromethane
CAS Number: 75-27-4



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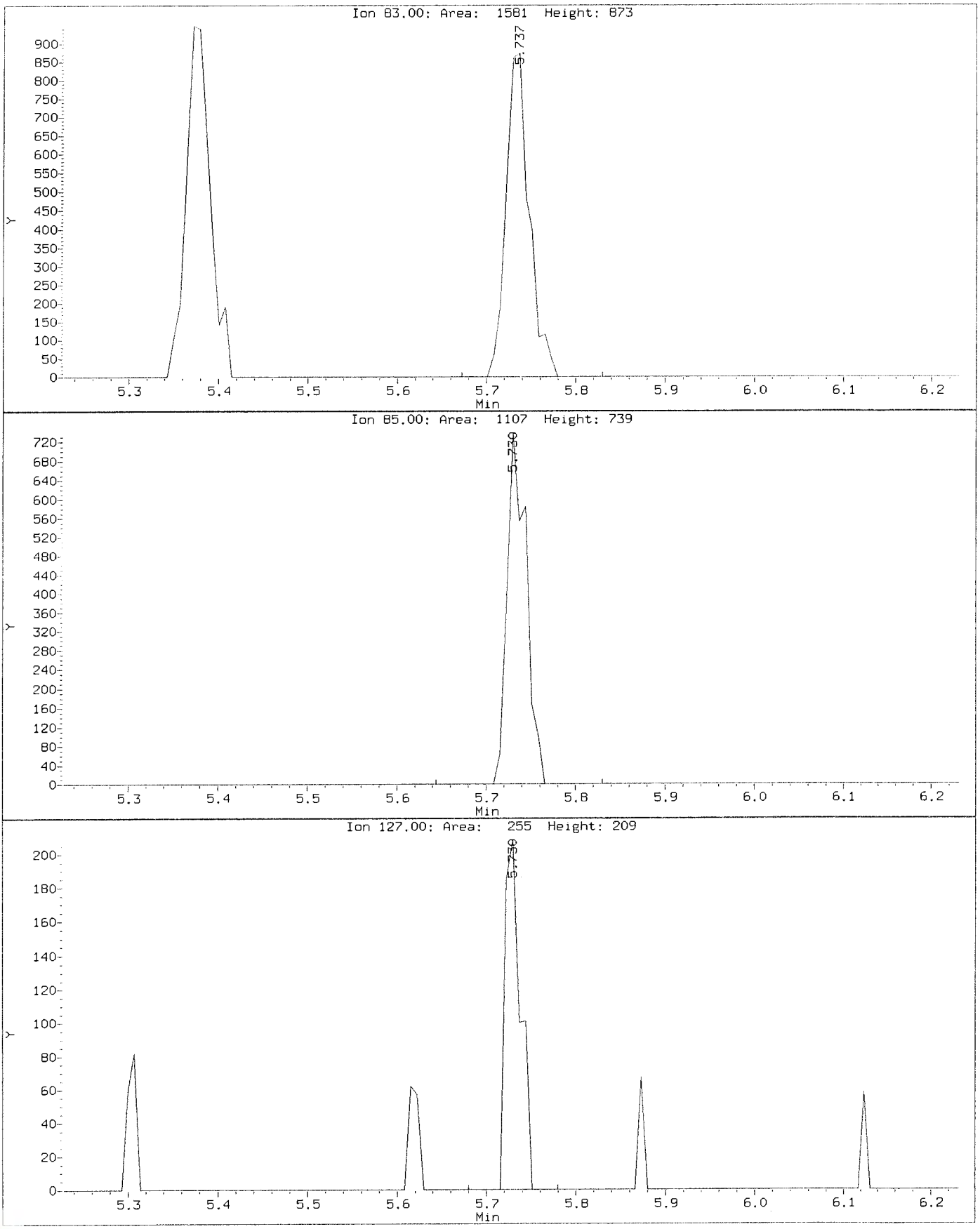
Injection Date: 19-JUN-2020 12:18
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Bromodichloromethane
CAS Number: 75-27-4



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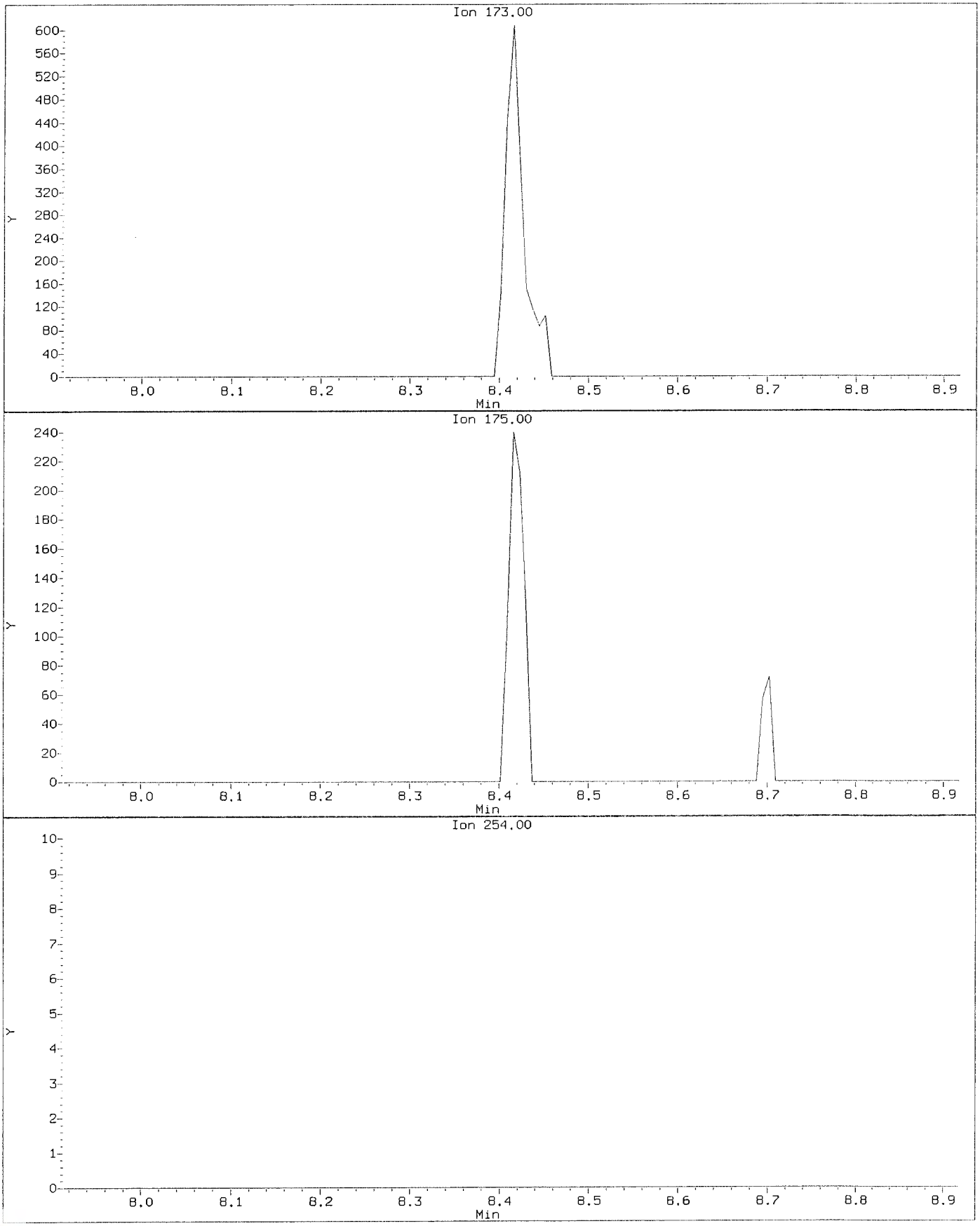
Injection Date: 19-JUN-2020 12:18
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Bromoform
CAS Number: 75-25-2



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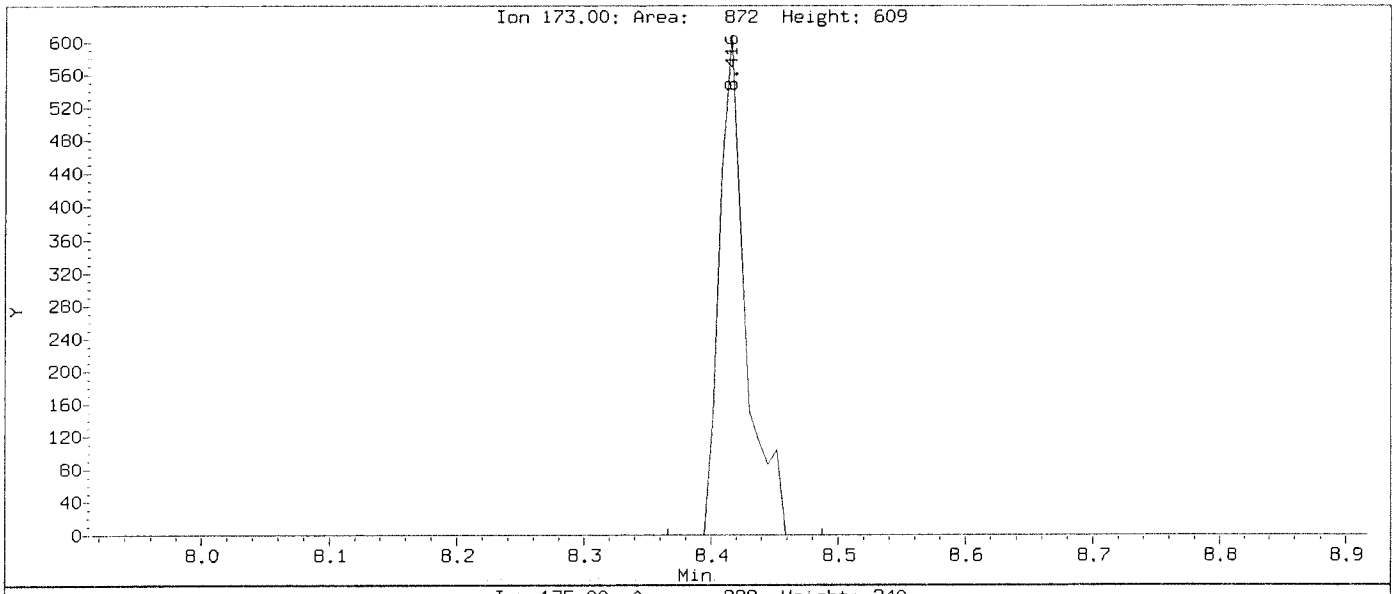
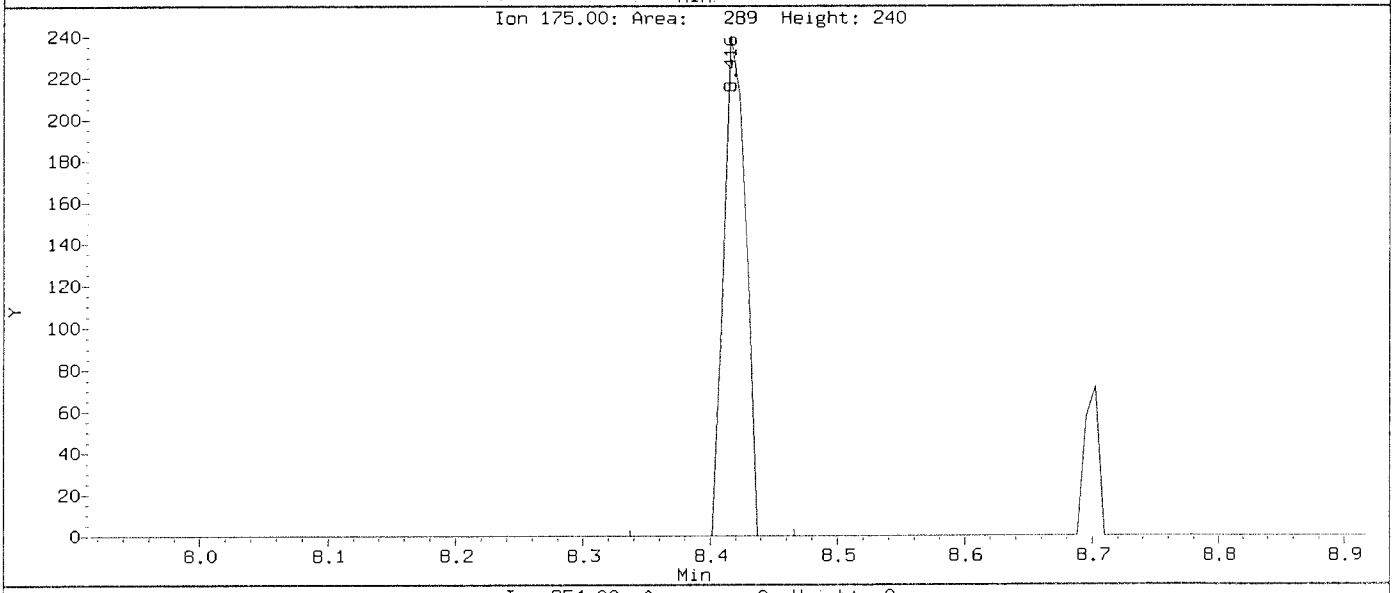
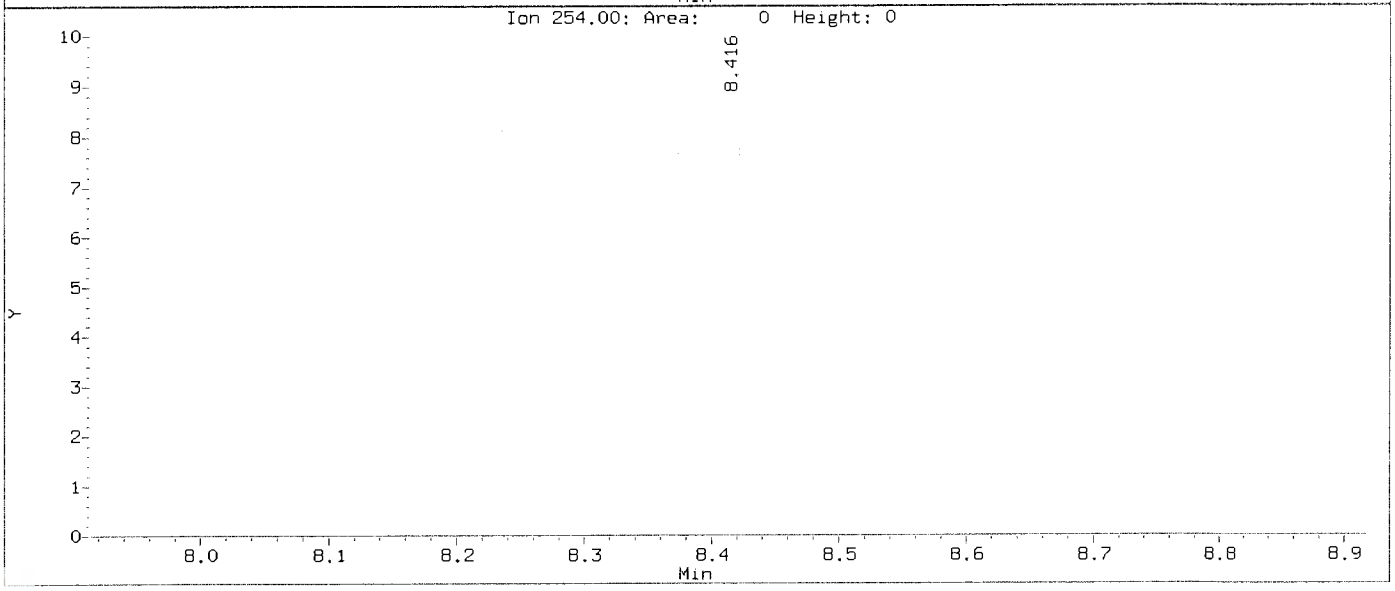
Injection Date: 19-JUN-2020 12:18
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Bromoform
CAS Number: 75-25-2

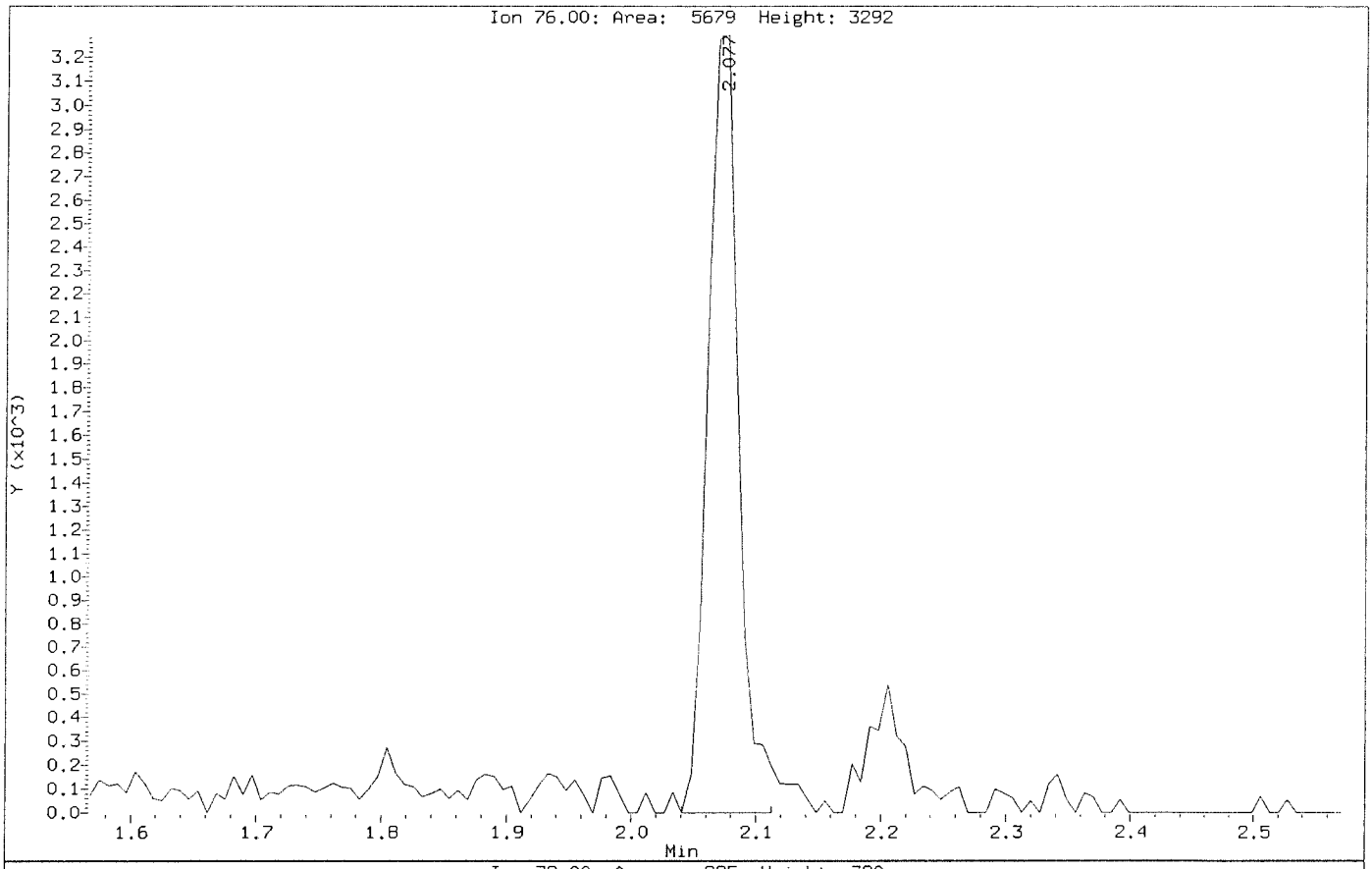


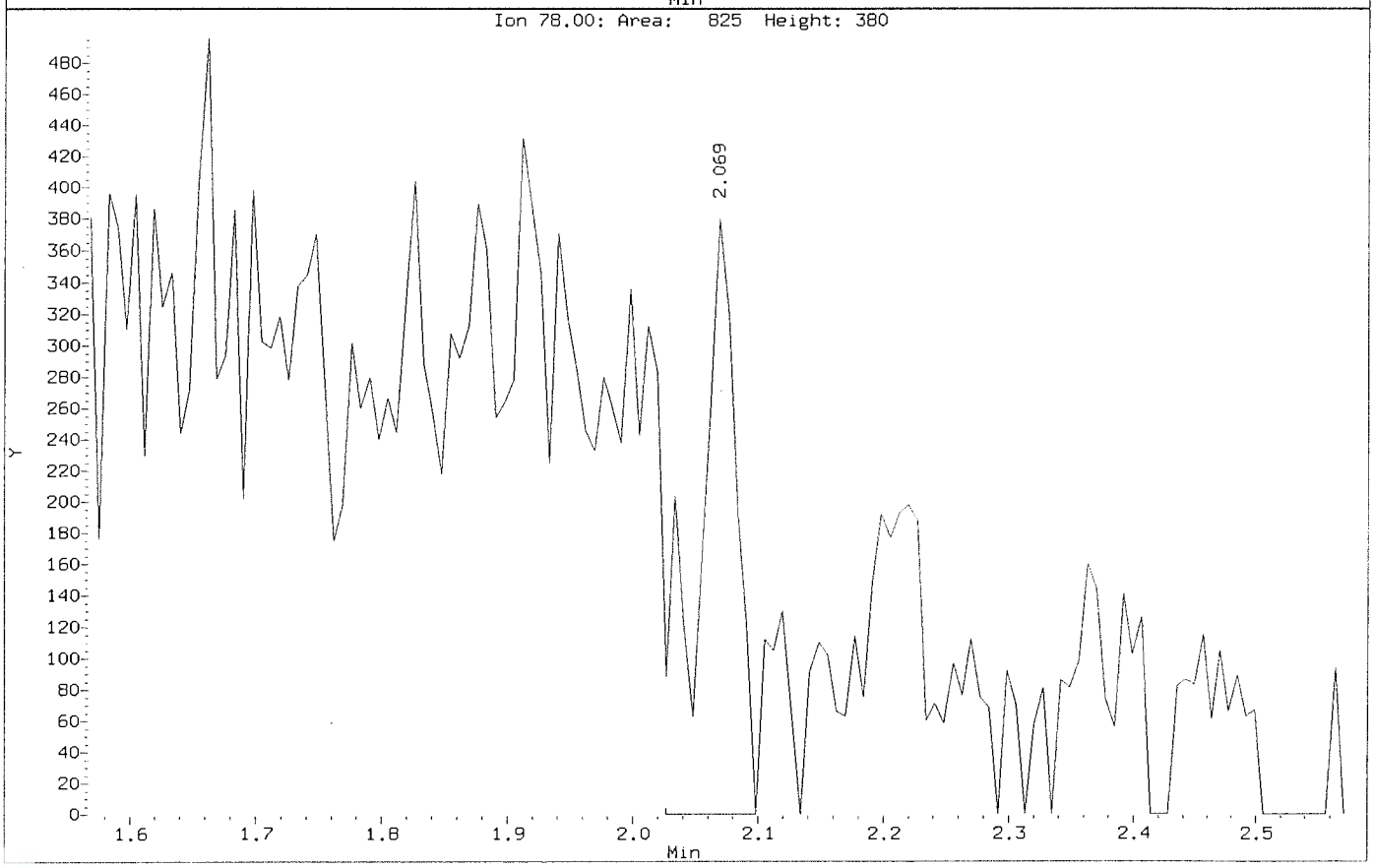




Data File: \\nahstws005\Target\chem\voa6.i\X200619.b\Before\X061903.D
Injection Date: 19-JUN-2020 12:18
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Carbon Disulfide
CAS Number: 75-15-0





Data File: \\nahstws005\Target\chem\voa6.i\X200619.b\X061903.D
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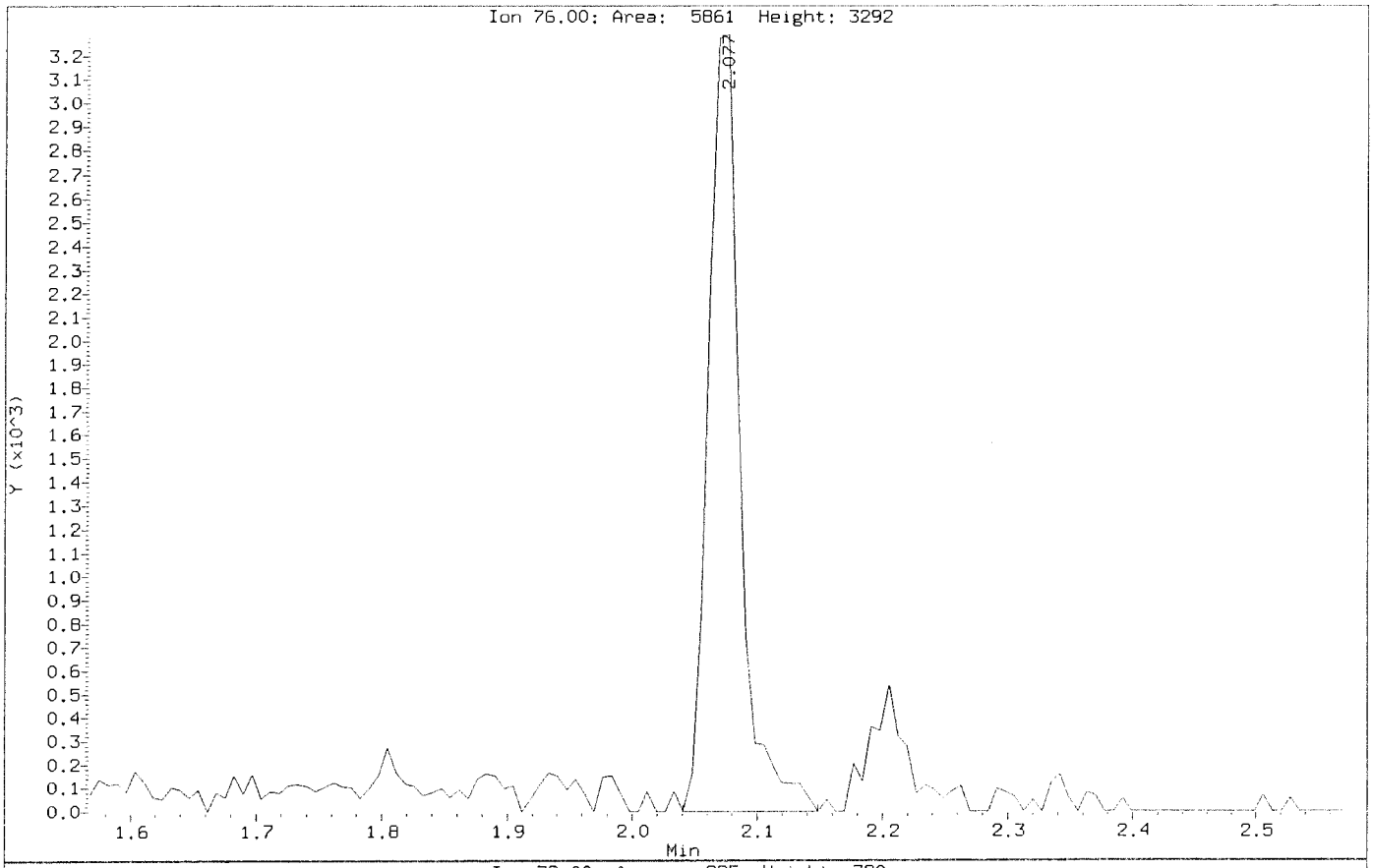
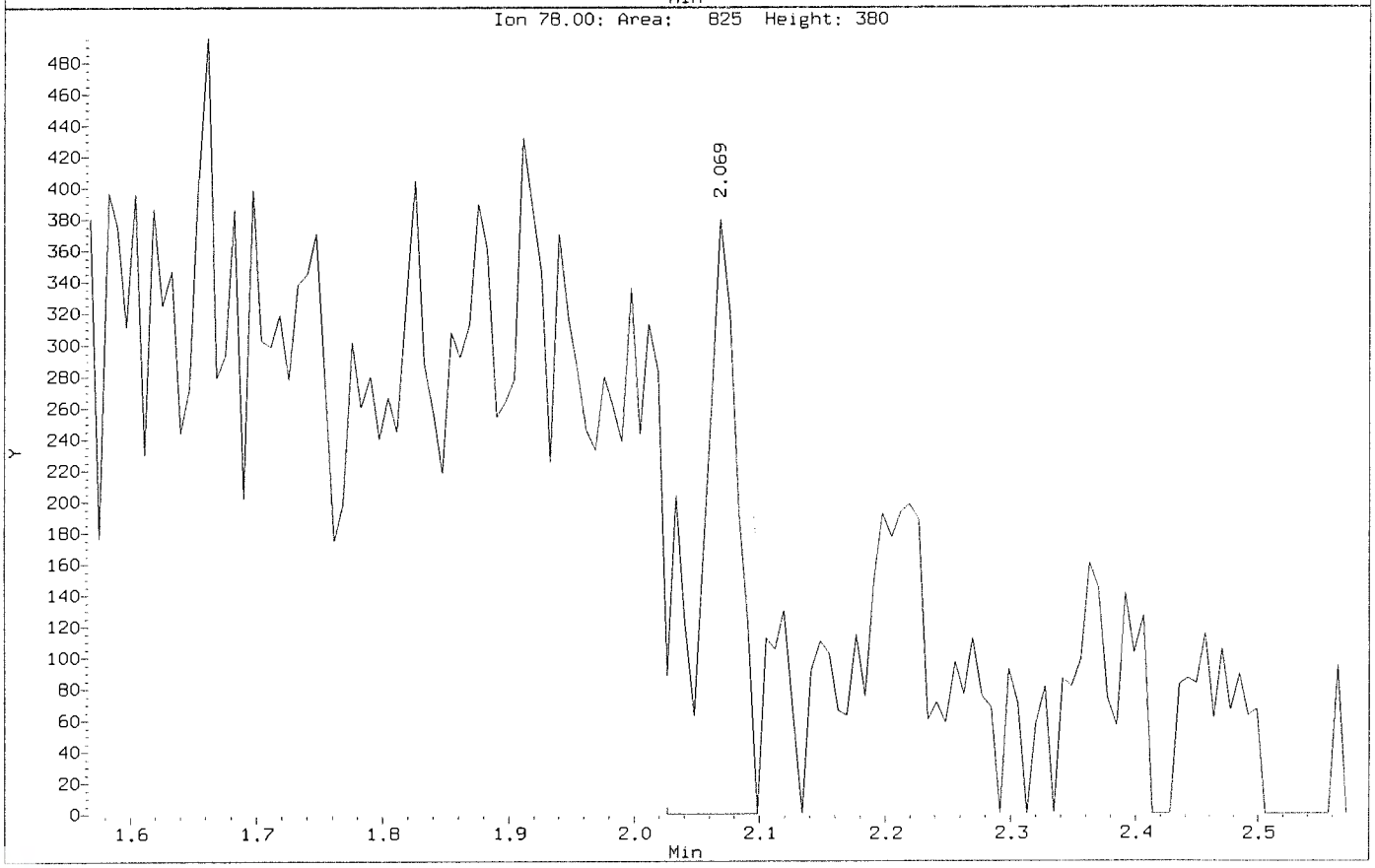
Instrument: voa6.i
Client Sample ID: VSTD000.5

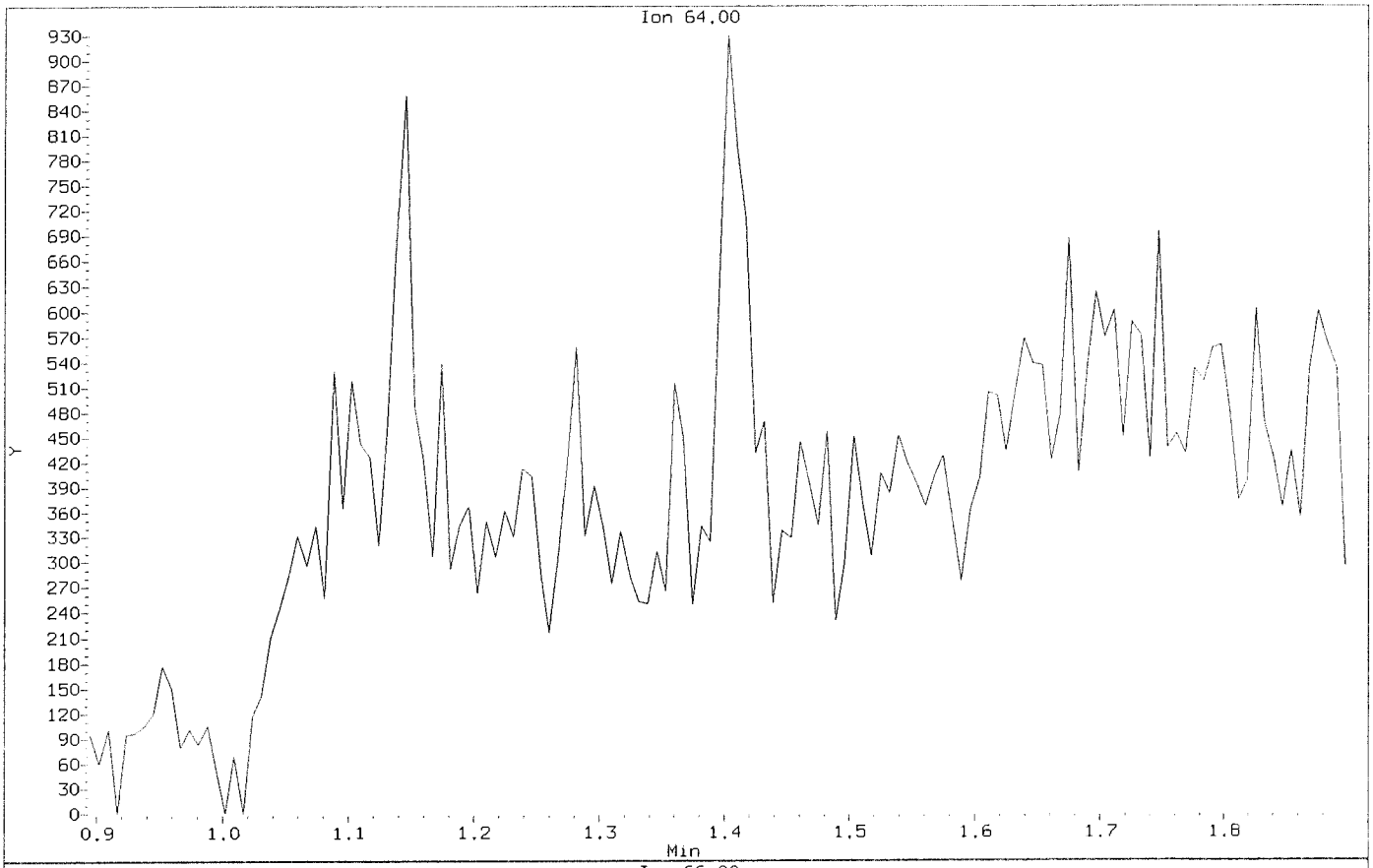
Compound: Carbon Disulfide
CAS Number: 75-15-0

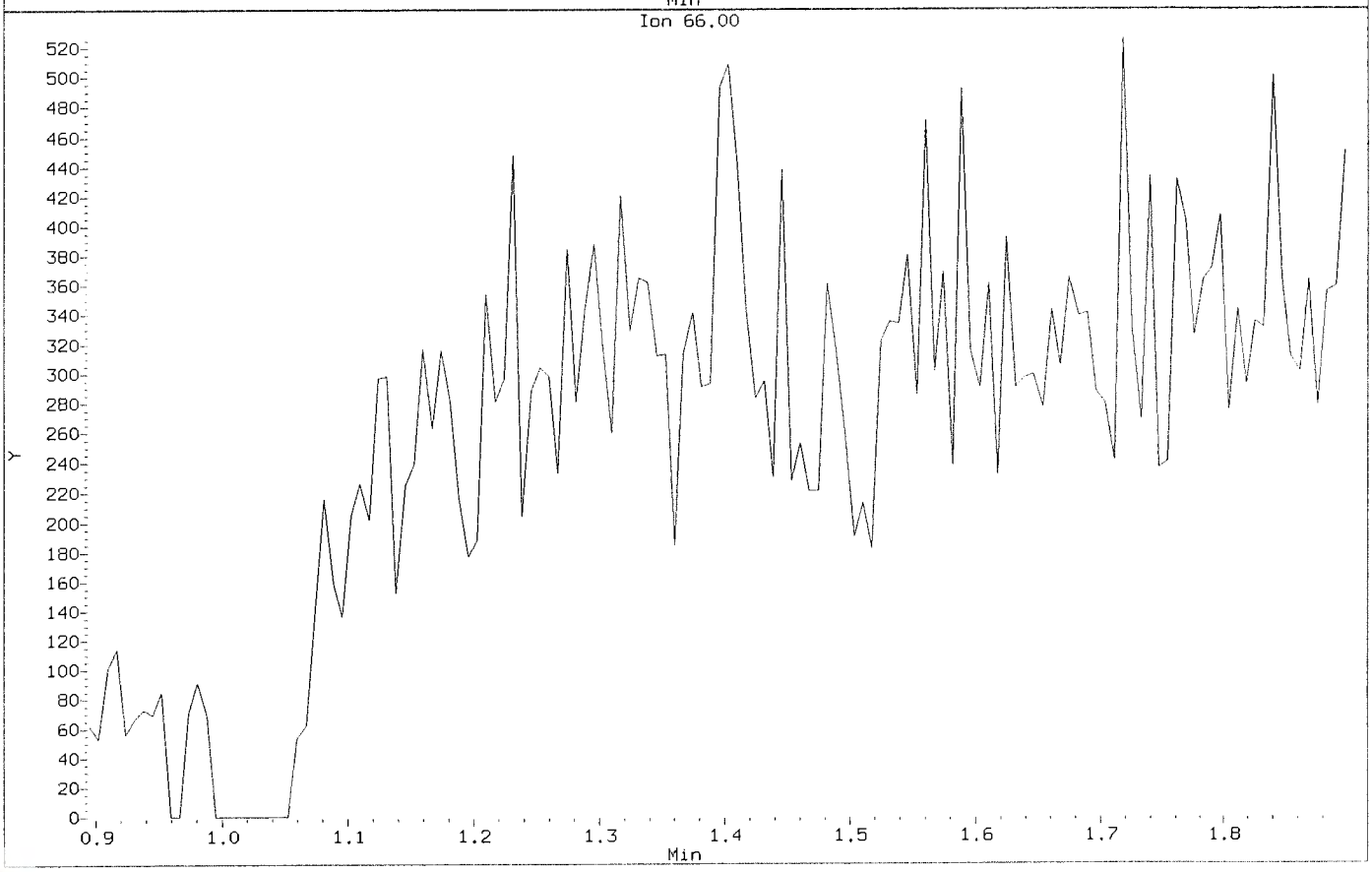




Data File: \\nahstws005\Target\chem\voa6.i\X200619.b\Before\X061903.D
Injection Date: 19-JUN-2020 12:18
Instrument: voa6.i
Client Sample ID: VSTD000.5

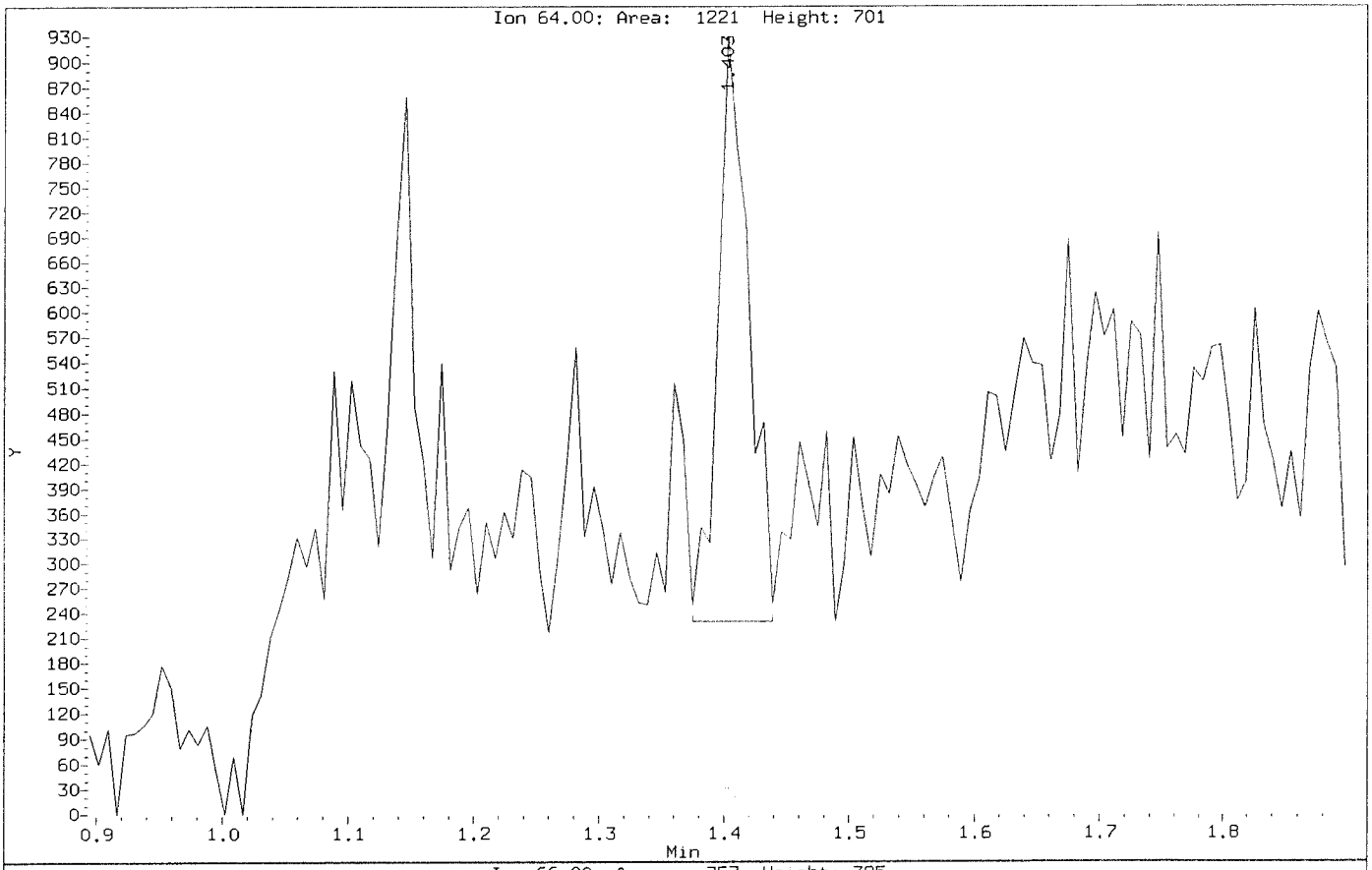
Compound: Chloroethane
CAS Number: 75-00-3

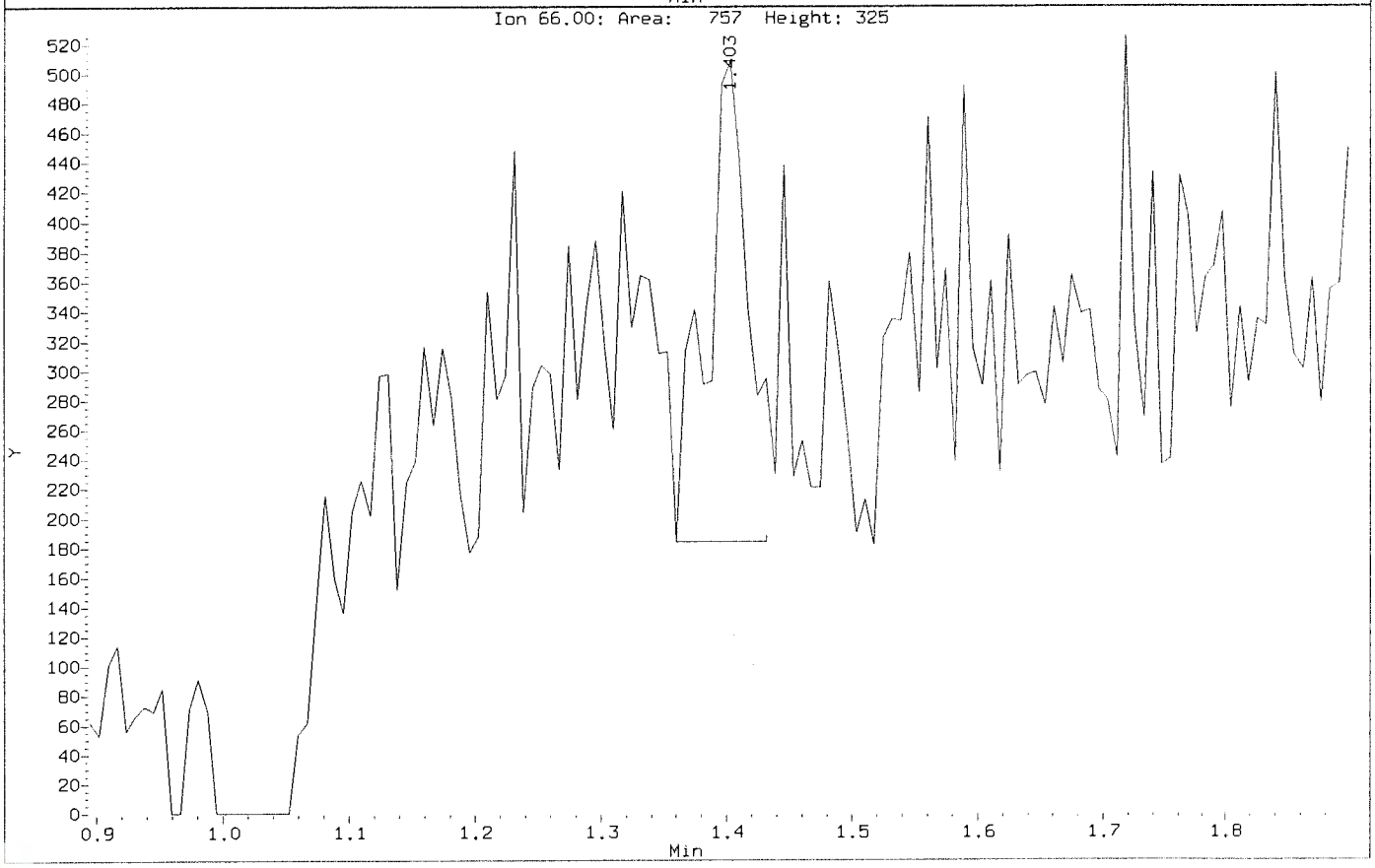




Data File: \\nahstws005\Target\chem\voa6.i\X200619.b\X061903.D
Injection Date: 19-JUN-2020 12:18
Instrument: voa6.i
Client Sample ID: VSTD000.5

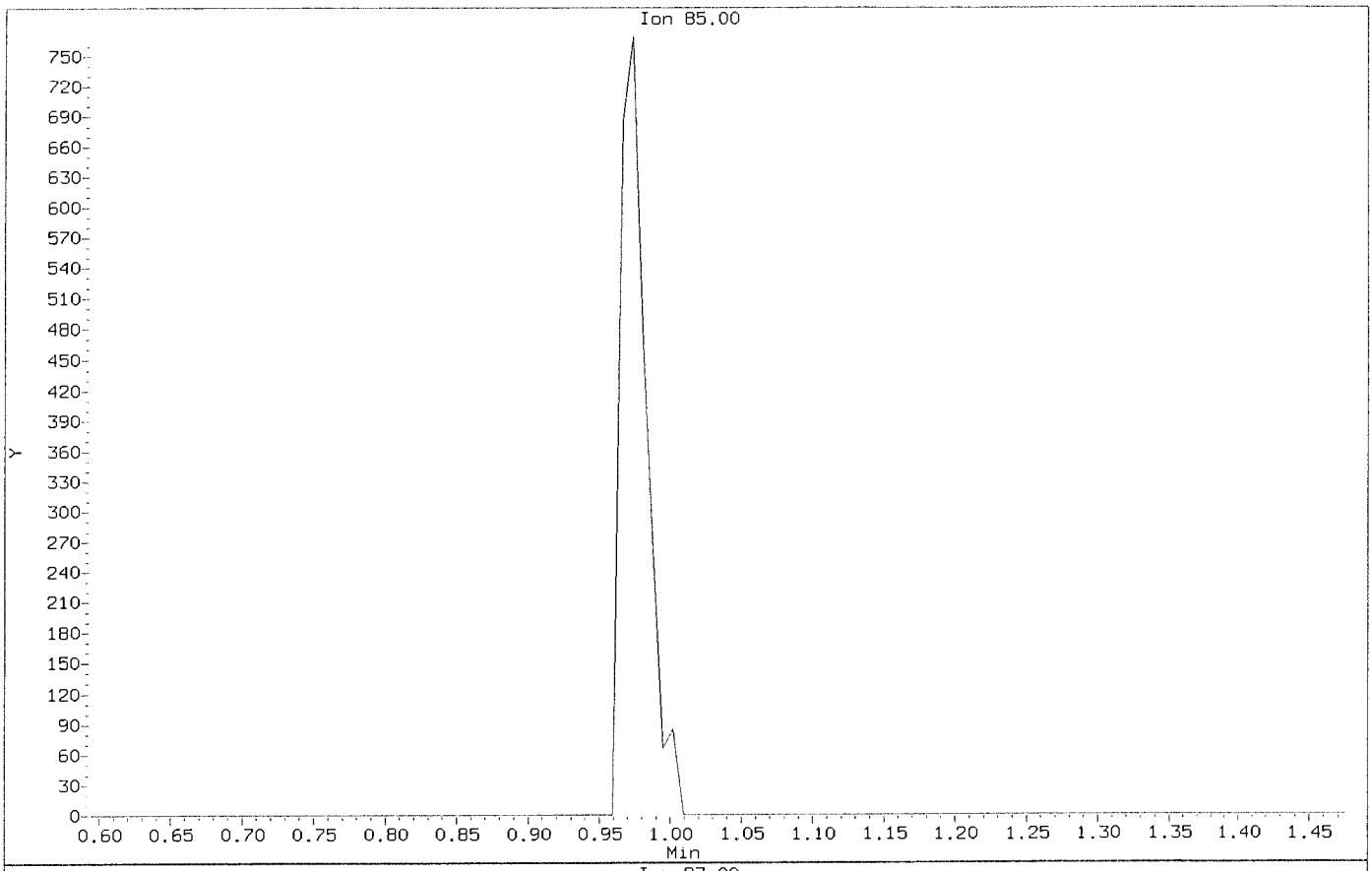
Compound: Chloroethane
CAS Number: 75-00-3

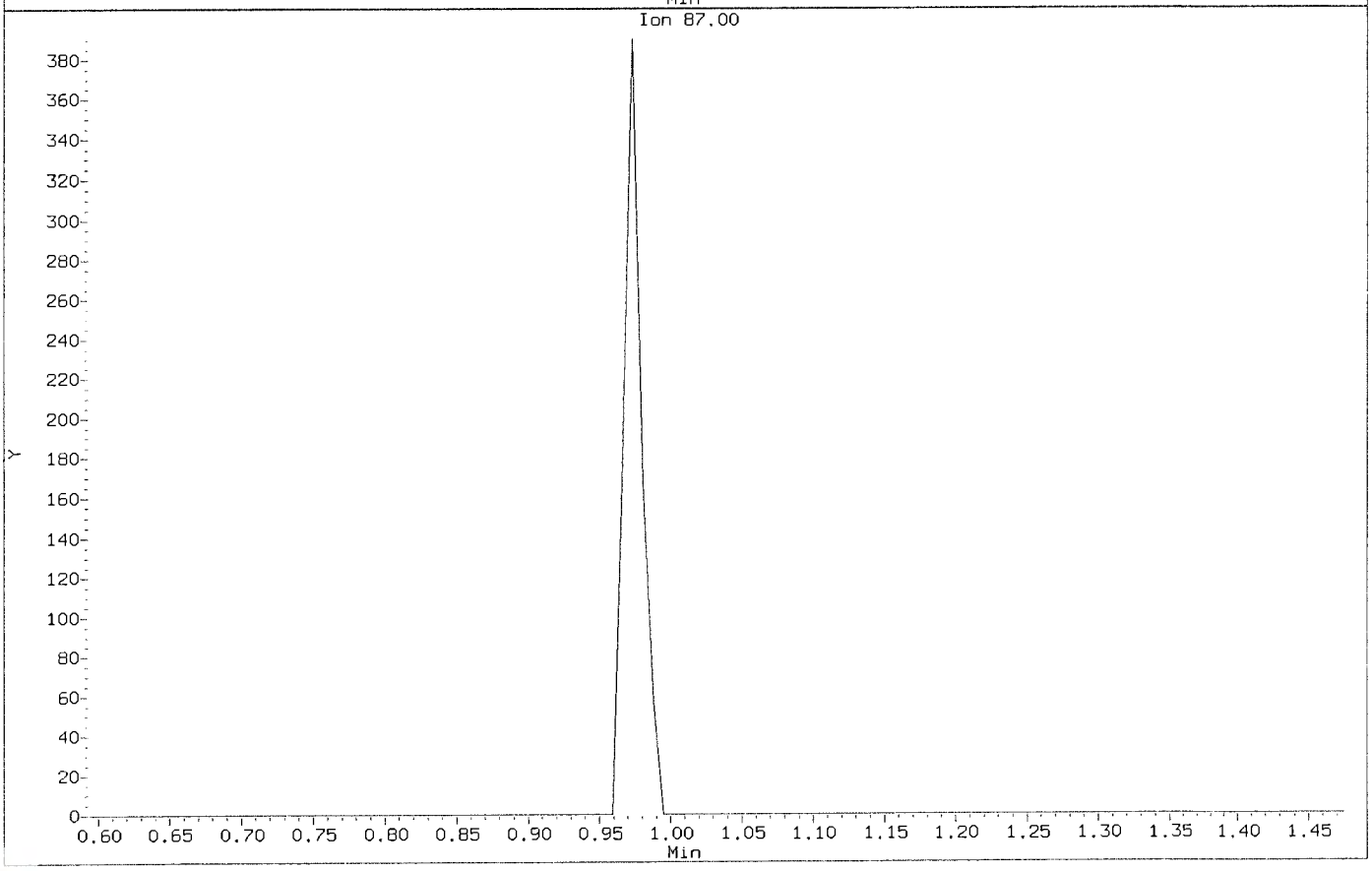




Data File: \\nahstws005\Target\chem\voa6.i\X200619.b\Before\X061903.D
Injection Date: 19-JUN-2020 12:18
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Dichlorodifluoromethane
CAS Number: 75-71-8





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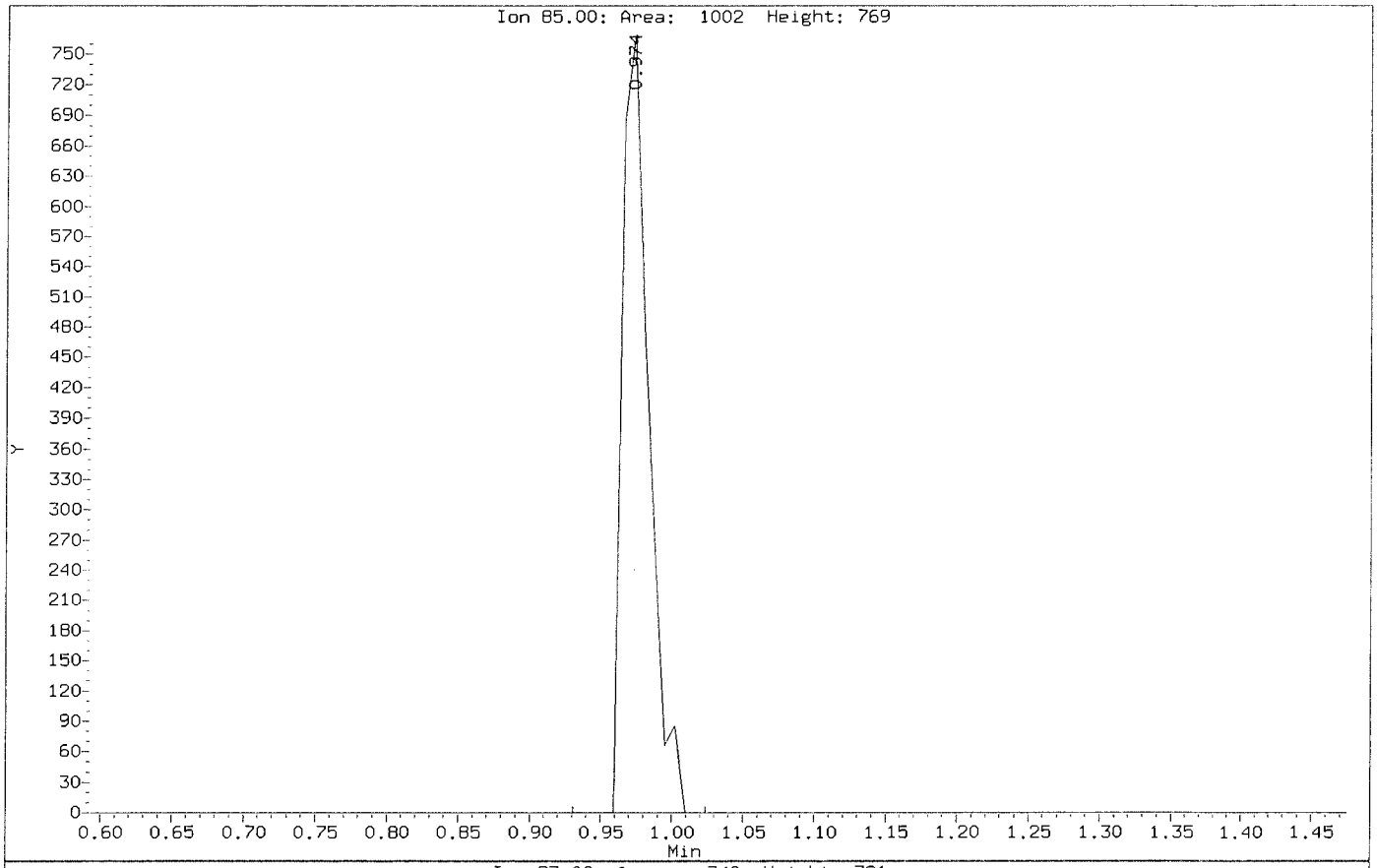
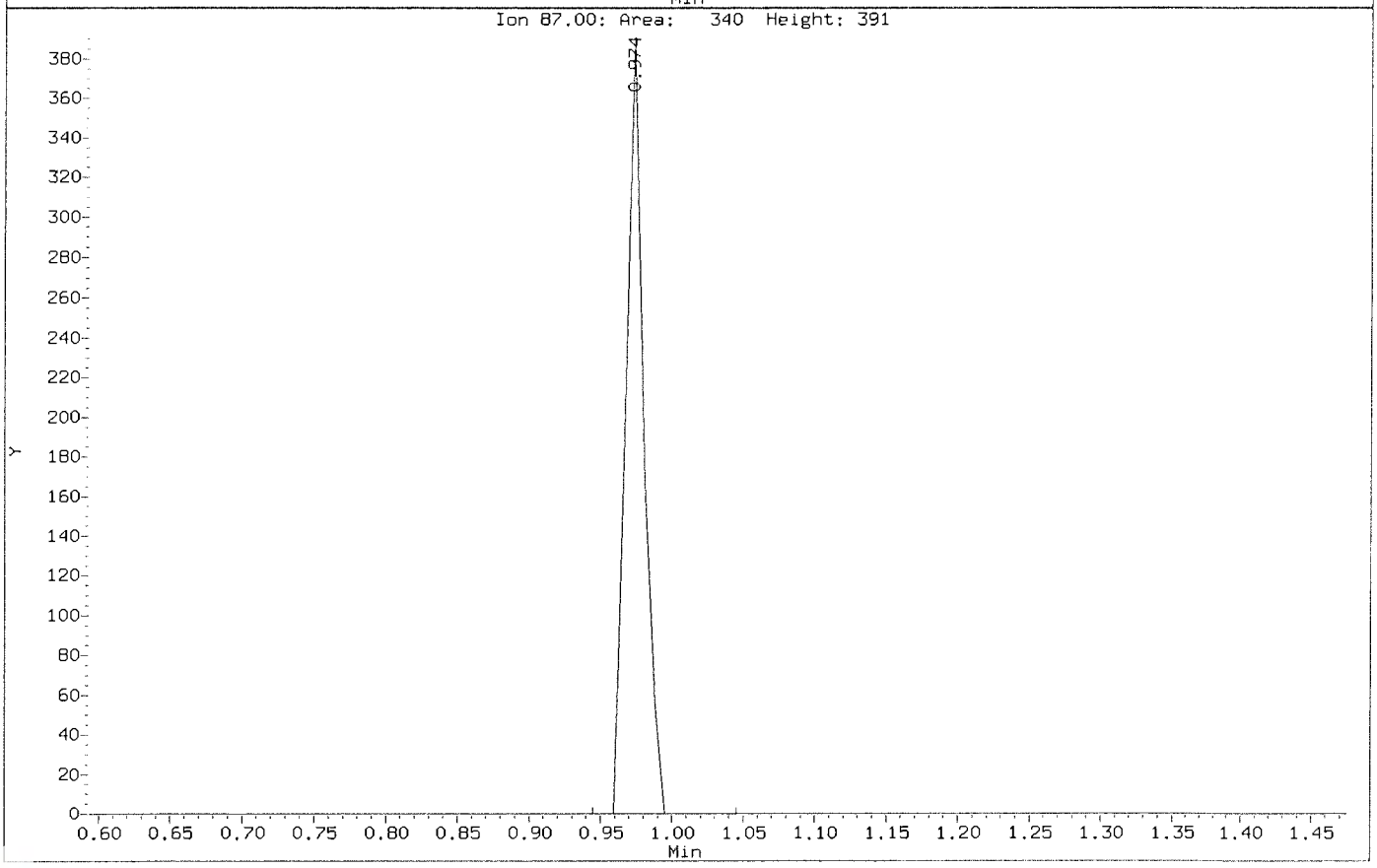
Injection Date: 19-JUN-2020 12:18
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Dichlorodifluoromethane
CAS Number: 75-71-8





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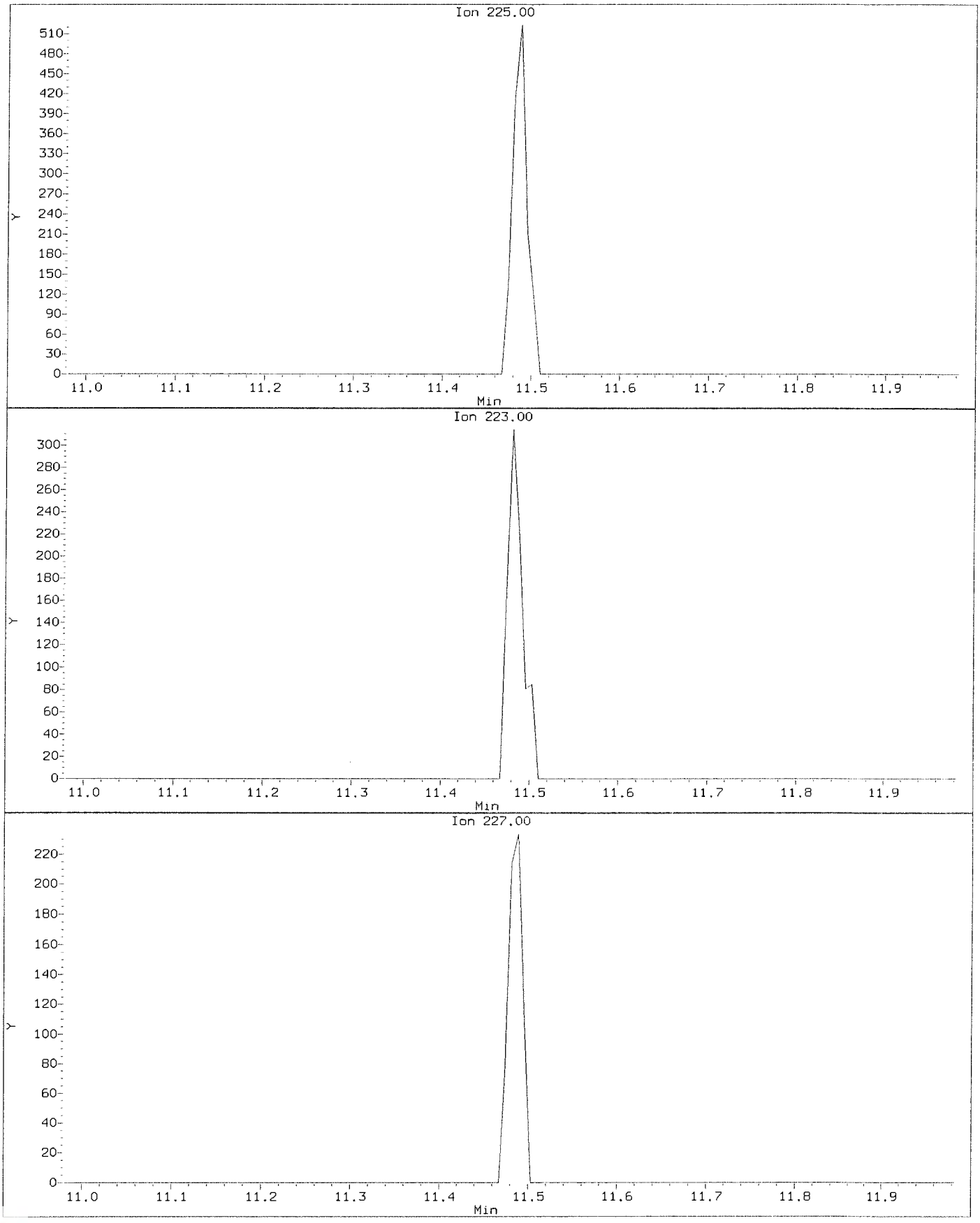
Injection Date: 19-JUN-2020 12:18
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Hexachlorobutadiene
CAS Number: 87-68-3



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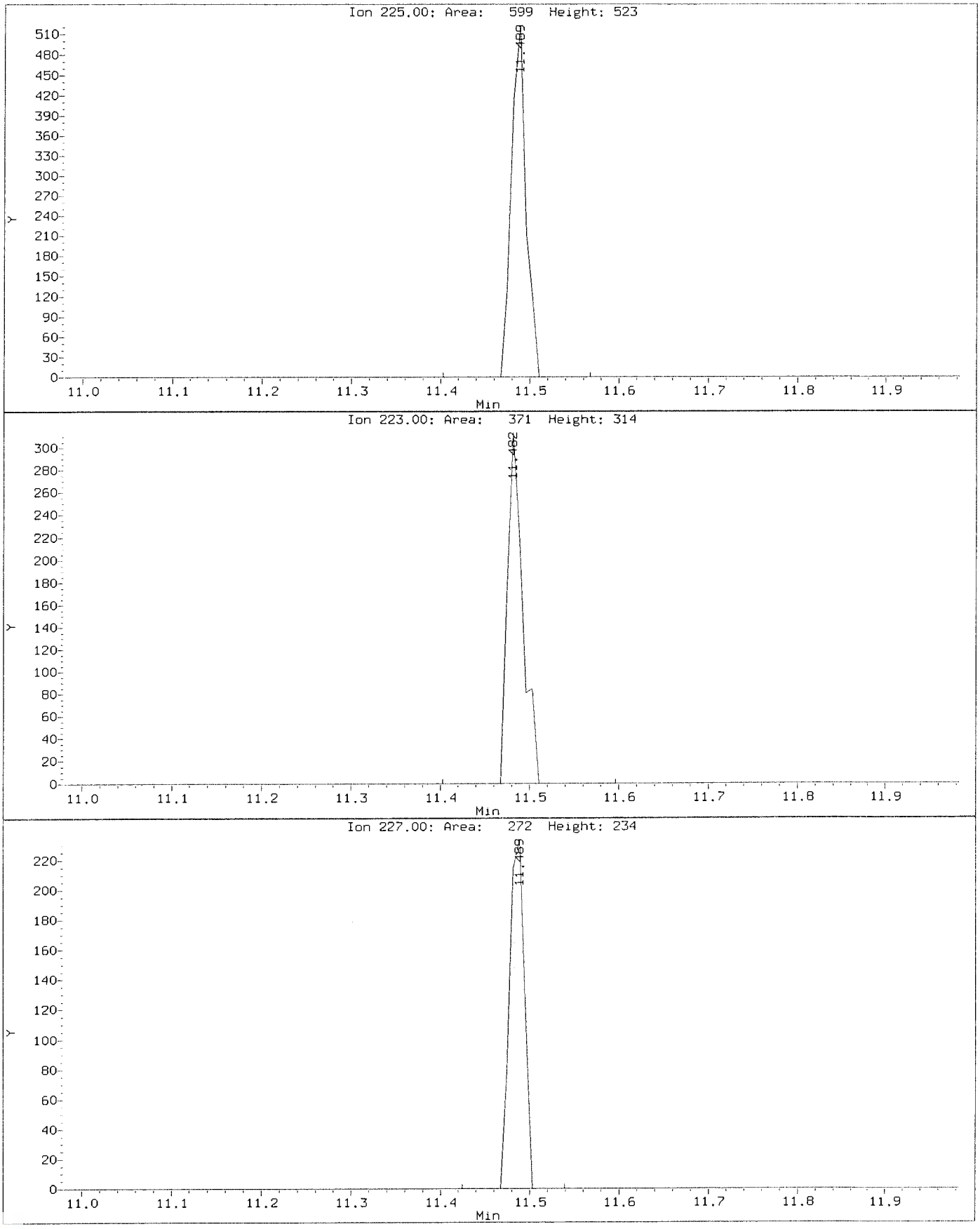
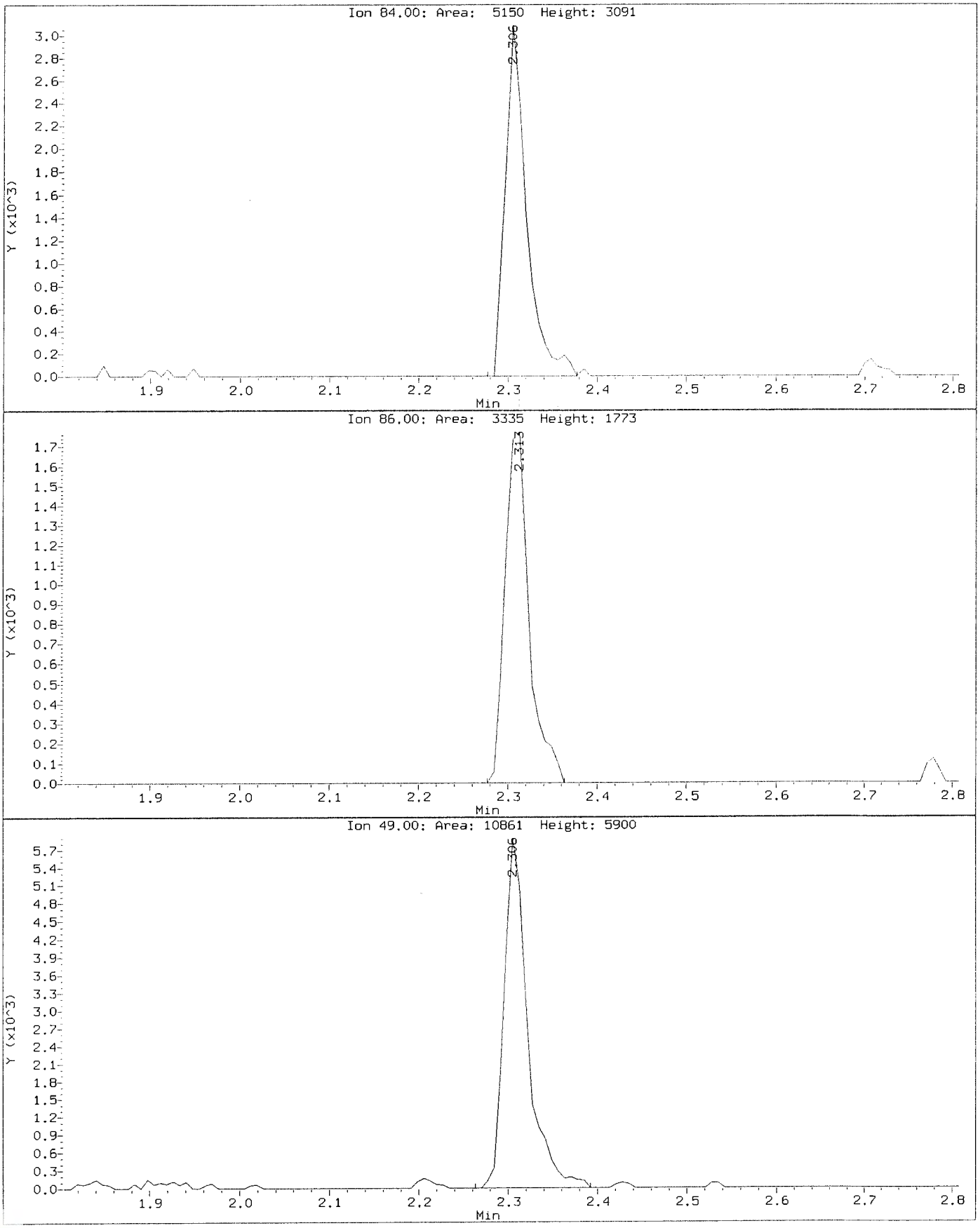
Injection Date: 19-JUN-2020 12:18
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Hexachlorobutadiene
CAS Number: 87-68-3



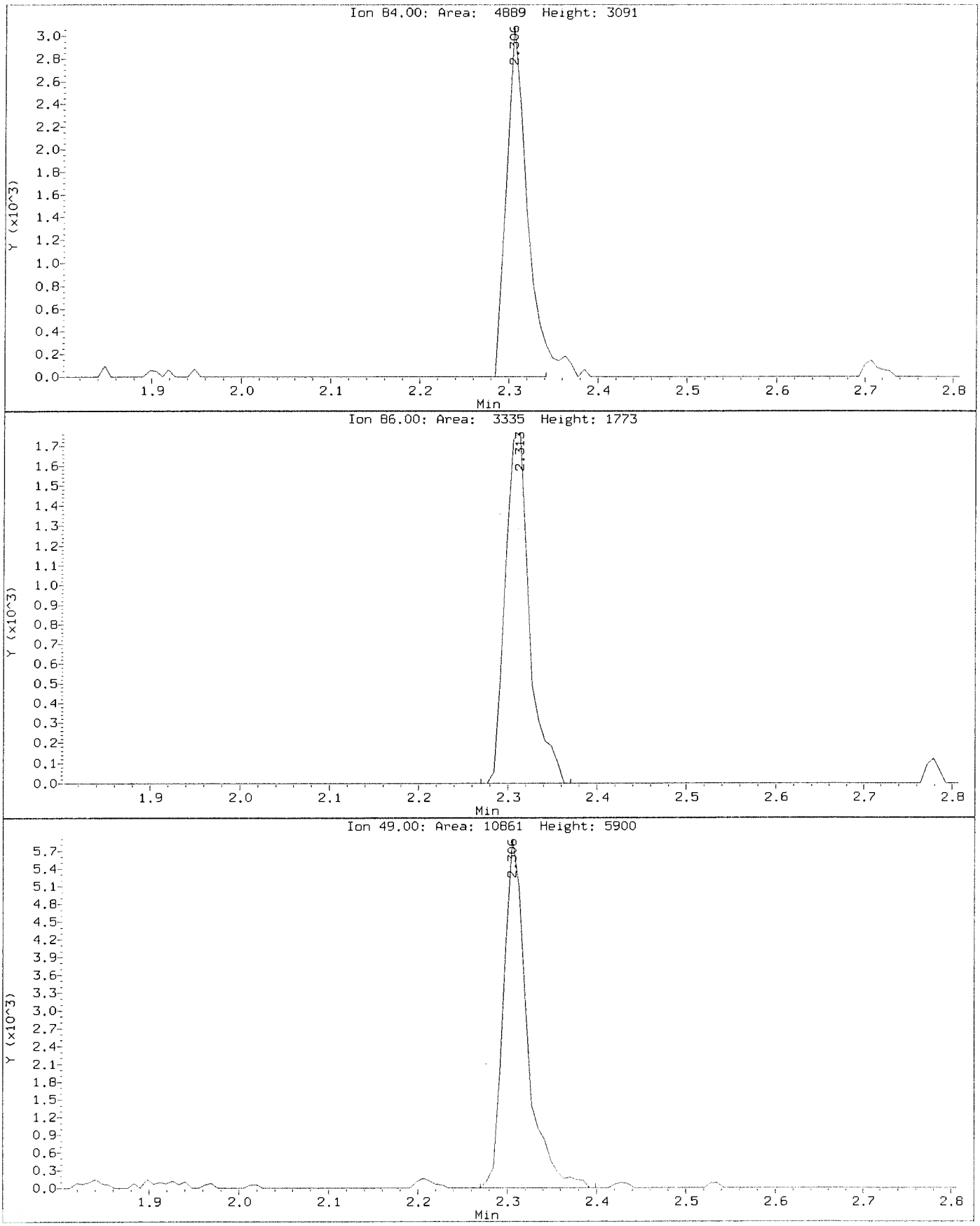
Data File: \\nahstws005\Target\chem\voa6.i\X200619.b\Before\X061903.D
Injection Date: 19-JUN-2020 12:18
Instrument: voa6.i
Client Sample ID: VSTD000.5

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



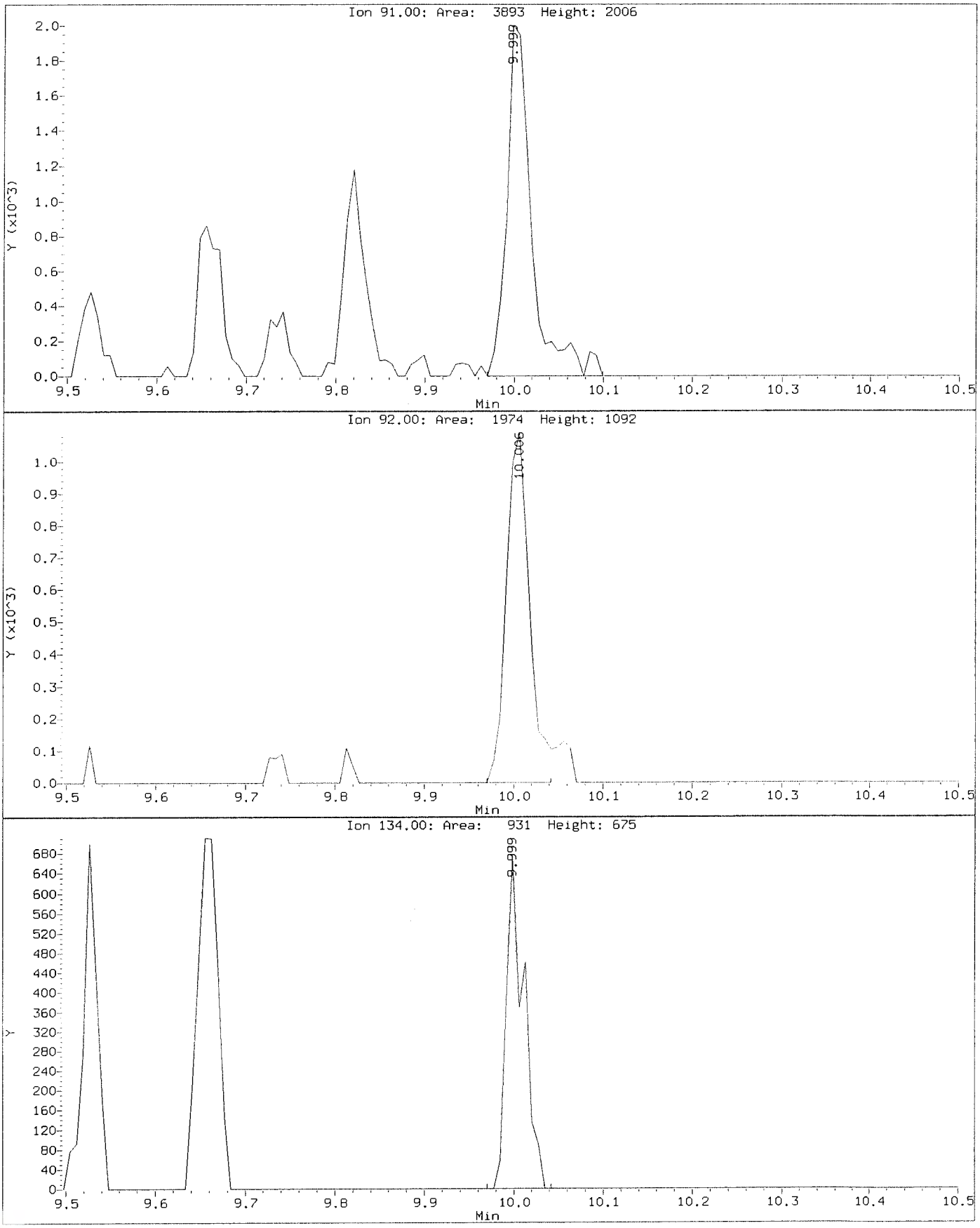
Data File: \\nahstws005\Target\chem\voa6.i\X200619.b\X061903.D
Injection Date: 19-JUN-2020 12:18
Instrument: voa6.i
Client Sample ID: VSTD000.5

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



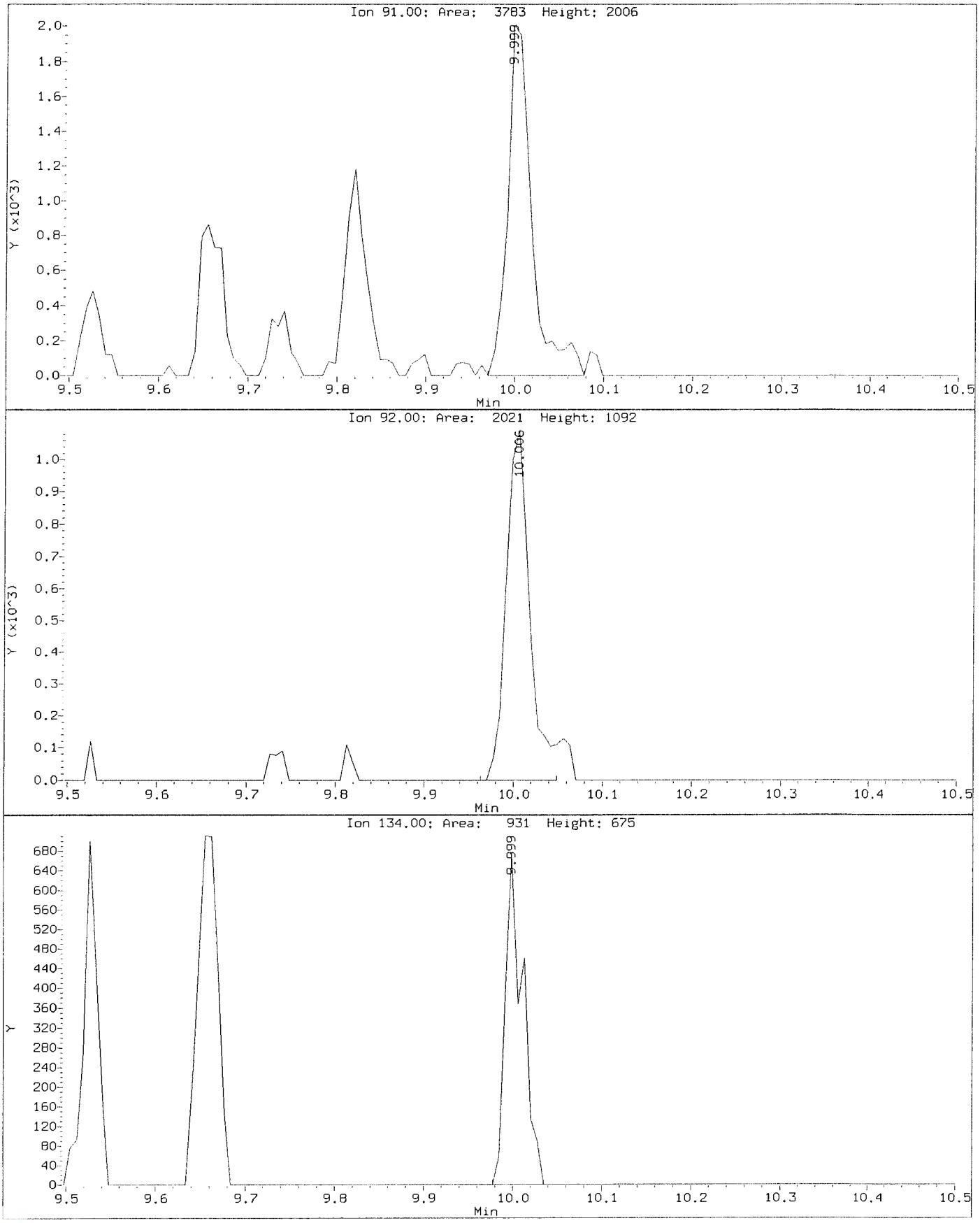
Data File: \\nahstws005\Target\chem\voa6.i\X200619.b\Before\X061903.D
Injection Date: 19-JUN-2020 12:18
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: n-Butylbenzene
CAS Number: 104-51-8



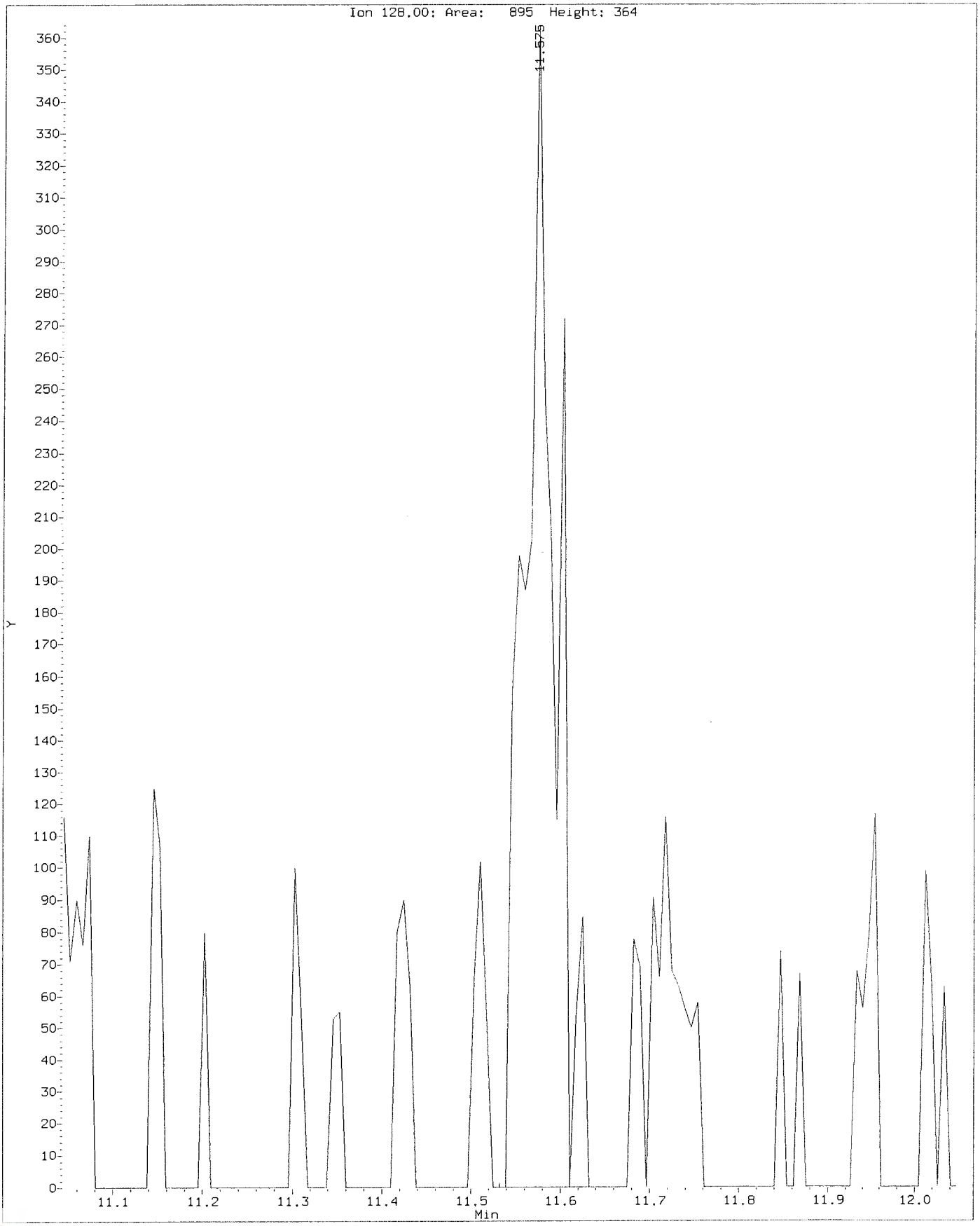
Data File: \\nahstws005\Target\chem\voa6.i\X200619.b\X061903.D
Injection Date: 19-JUN-2020 12:18
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: n-Butylbenzene
CAS Number: 104-51-8



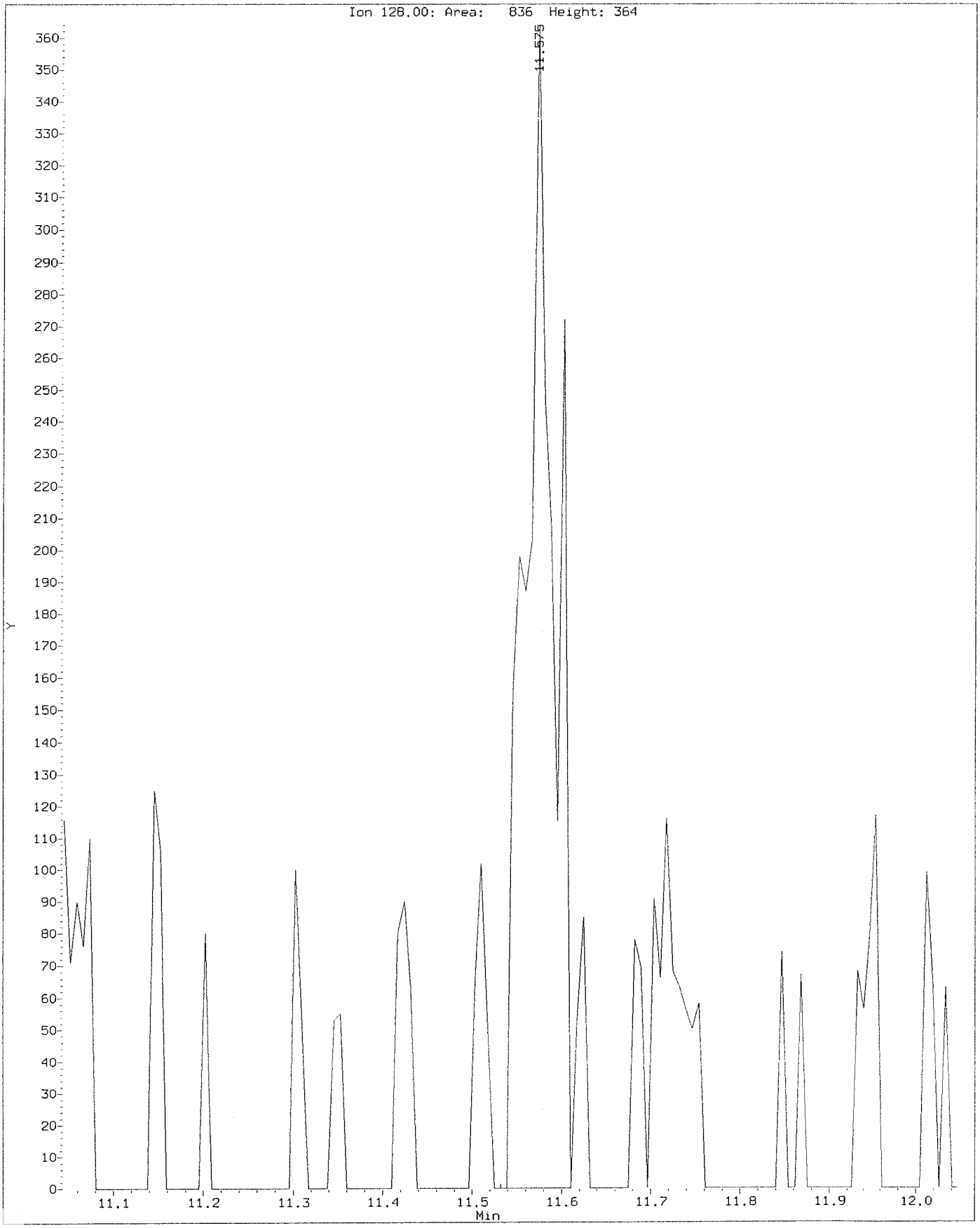
Data File: \\nahstws005\Target\chem\voa6.i\X200619.b\Before\X061903.D
Injection Date: 19-JUN-2020 12:18
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Naphthalene
CAS Number: 91-20-3



Data File: \\nahstws005\Target\chem\voa6.i\X200619.b\X061903.D
Injection Date: 19-JUN-2020 12:18
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Naphthalene
CAS Number: 91-20-3



ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200619.b\X061904.D
Lab Smp Id: VSTD001 Client Smp ID: VSTD001
Inj Date : 19-JUN-2020 12:42
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\X200619.b\8260W.m
Meth Date : 09-Jul-2020 09:58 voa6.i Quant Type: ISTD
Cal Date : 19-JUN-2020 12:42 Cal File: X061904.D
Als bottle: 5 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14

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	4.189	(1.000)	231955	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	435541	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	400914	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	179647	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	3287	1.00000	1.10(a)
$ 35 1,2-Dichloroethane-d4	65	4.483	4.476	(1.072)	5023	1.00000	0.54(a)
$ 48 Toluene-d8	98	6.396	6.388	(0.834)	10991	1.00000	1.10(a)
$ 69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	4821	1.00000	1.18(a)
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	2733	1.00000	0.93(a)
31 1,1,1-Trichloroethane	97	4.082	4.089	(0.976)	4115	1.00000	0.95(a)
68 1,1,2,2-Tetrachloroethane	83	8.845	8.845	(0.915)	3633	1.00000	1.01(aM)
53 1,1,2-Trichloroethane	83	6.847	6.847	(0.893)	2717	1.00000	1.05(a)
22 1,1-Dichloroethane	63	2.929	2.921	(0.700)	8145	1.00000	1.13(a)
11 1,1-Dichloroethene	96	1.919	1.911	(0.459)	2005	1.00000	0.88(a)
32 1,1-Dichloropropene	75	4.290	4.282	(0.863)	4633	1.00000	1.18(a)
93 1,2,3-Trichlorobenzene	180	11.754	11.746	(1.216)	396	1.00000	(aM)
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	3791	1.00000	1.14(aM)
90 1,2,4-Trichlorobenzene	180	11.345	11.338	(1.173)	924	1.00000	(aM)
79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.970)	9662	1.00000	0.98(a)
89 1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.102)	254	1.00000	0.78(aM)
57 1,2-Dibromoethane	107	7.270	7.262	(0.948)	3287	1.00000	1.03(a)
88 1,2-Dichlorobenzene	146	9.999	9.999	(1.034)	4722	1.00000	0.96(a)
33 1,2-Dichloroethane	62	4.562	4.562	(0.918)	5751	1.00000	1.00(a)

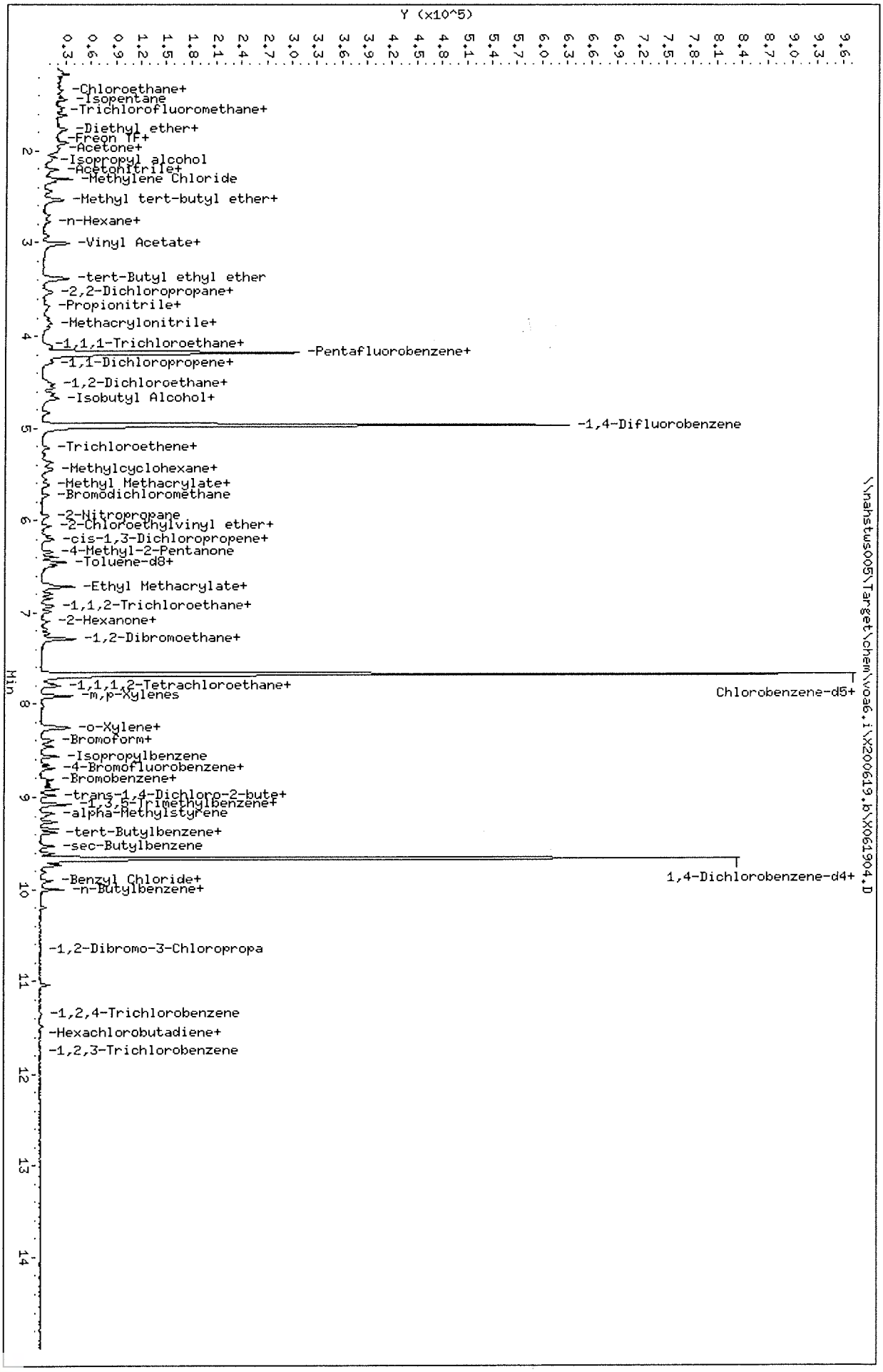
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
42	1,2-Dichloropropane	63	5.443	5.443	(1.095)	3985	1.00000	0.97(aM)
75	1,3,5-Trimethylbenzene	105	9.075	9.075	(0.939)	8748	1.00000	0.94(a)
83	1,3-Dichlorobenzene	146	9.612	9.612	(0.994)	5061	1.00000	0.94(a)
54	1,3-Dichloropropane	76	6.990	6.983	(0.911)	5536	1.00000	1.02(a)
84	1,4-Dichlorobenzene	146	9.684	9.683	(1.001)	5349	1.00000	0.98(a)
26	2,2-Dichloropropane	77	3.523	3.516	(0.842)	4588	1.00000	1.01(a)
24	2-Butanone	43	3.609	3.580	(0.863)	3155	2.00000	0.39(a)
76	2-Chlorotoluene	91	8.982	8.981	(0.929)	8644	1.00000	1.01(a)
52	2-Hexanone	43	7.098	7.090	(0.925)	8171	2.00000	1.97(a)
77	4-Chlorotoluene	91	9.075	9.075	(0.939)	10382	1.00000	1.04(a)
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	8195	1.00000	0.92(a)
45	4-Methyl-2-Pentanone	43	6.331	6.331	(0.825)	11960	2.00000	1.97(a)
10	Acetone	43	1.976	1.976	(0.473)	6211	2.00000	0.85(a)
37	Benzene	78	4.519	4.519	(0.909)	12741	1.00000	1.04(a)
74	Bromobenzene	156	8.810	8.809	(0.911)	3505	1.00000	1.03(a)
29	Bromochloromethane	128	3.803	3.795	(0.909)	1937	1.00000	1.08(a)
39	Bromodichloromethane	83	5.730	5.729	(1.153)	4142	1.00000	0.93(aM)
66	Bromoform	173	8.416	8.416	(1.097)	1965	1.00000	0.91(Ta)
6	Bromomethane	94	1.339	1.331	(0.320)	2431	1.00000	1.11(aM)
19	Carbon Disulfide	76	2.069	2.069	(0.495)	14420	2.00000	1.93(a)
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	4091	1.00000	1.07(aH)
59	Chlorobenzene	112	7.699	7.699	(1.004)	7889	1.00000	1.01(a)
7	Chloroethane	64	1.403	1.396	(0.336)	2480	1.00000	1.00(a)
28	Chloroform	83	3.917	3.910	(0.937)	5775	1.00000	1.01(a)
3	Chloromethane	50	1.081	1.081	(0.258)	6208	1.00000	1.07(a)
27	cis-1,2-Dichloroethene	96	3.538	3.530	(0.846)	3394	1.00000	1.01(a)
46	cis-1,3-Dichloropropene	75	6.166	6.159	(1.241)	5032	1.00000	0.95(a)
55	Dibromochloromethane	129	7.184	7.183	(0.937)	2968	1.00000	0.92(a)
44	Dibromomethane	93	5.565	5.557	(1.120)	2467	1.00000	1.08(a)
2	Dichlorodifluoromethane	85	0.973	0.973	(0.233)	2447	1.00000	1.65(a)
61	Ethylbenzene	106	7.807	7.807	(1.018)	3902	1.00000	0.98(a)
91	Hexachlorobutadiene	225	11.489	11.481	(1.188)	715	1.00000	(aM)
67	Isopropylbenzene	105	8.566	8.566	(1.117)	11136	1.00000	0.99(a)
62	m,p-Xylenes	106	7.914	7.907	(1.032)	8720	2.00000	1.87(a)
17	Methylene Chloride	84	2.306	2.305	(0.551)	7032	1.00000	0.13(a)
87	n-Butylbenzene	91	9.999	9.999	(1.034)	7144	1.00000	0.89(a)
73	n-Propylbenzene	91	8.917	8.917	(0.922)	13022	1.00000	0.98(a)
92	Naphthalene	128	11.560	11.546	(1.196)	1790	1.00000	0.07(aM)
63	o-Xylene	106	8.244	8.244	(1.075)	4795	1.00000	1.01(a)
81	sec-Butylbenzene	105	9.526	9.526	(0.985)	9655	1.00000	0.93(a)
64	Styrene	104	8.265	8.265	(1.078)	7950	1.00000	0.95(a)
78	tert-Butylbenzene	119	9.340	9.340	(0.966)	7301	1.00000	1.00(a)
56	Tetrachloroethene	164	6.933	6.933	(0.904)	2071	1.00000	0.99(a)
50	Toluene	91	6.453	6.453	(0.841)	12385	1.00000	1.03(a)
20	trans-1,2-Dichloroethene	96	2.535	2.527	(0.606)	2601	1.00000	0.98(a)
51	trans-1,3-Dichloropropene	75	6.689	6.682	(1.346)	4893	1.00000	0.99(a)
38	Trichloroethene	130	5.214	5.206	(1.049)	2855	1.00000	0.99(a)
8	Trichlorofluoromethane	101	1.561	1.560	(0.373)	3894	1.00000	0.94(a)
5	Vinyl Chloride	62	1.138	1.138	(0.272)	3781	1.00000	0.82(a)

QC Flag Legend

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

QC Flag Legend

M - Compound response manually integrated.
H - Operator selected an alternate compound hit.



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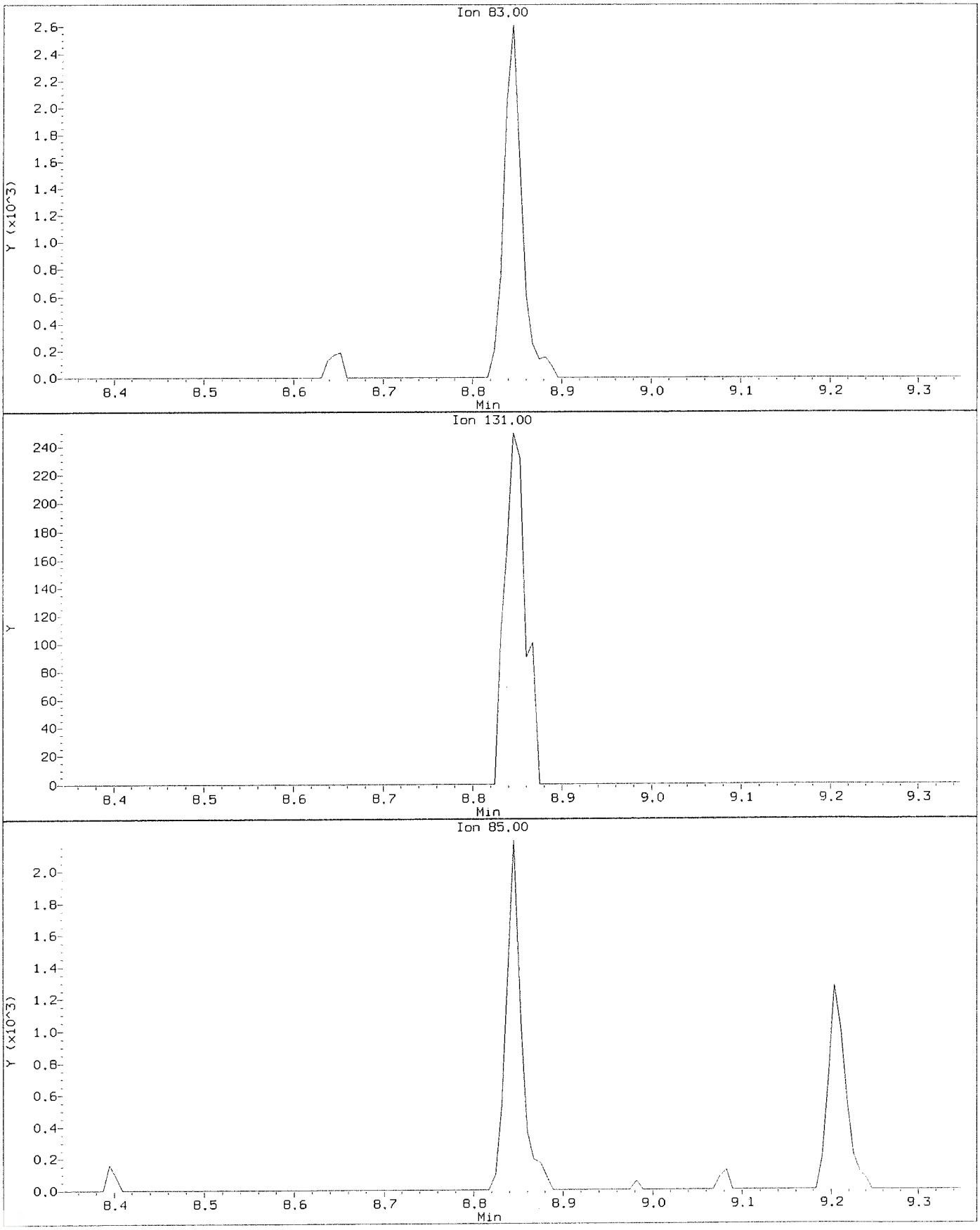
Client ID: VSTD001
Sample Info: VSTD001;VSTD001;1;3;
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\nahstws005\Target\chem\voa6.i\X200619.b\Before\X061904.D
Injection Date: 19-JUN-2020 12:42
Instrument: voa6.i
Client Sample ID: VSTD001

Compound: 1,1,2,2-Tetrachloroethane
CAS Number: 79-34-5



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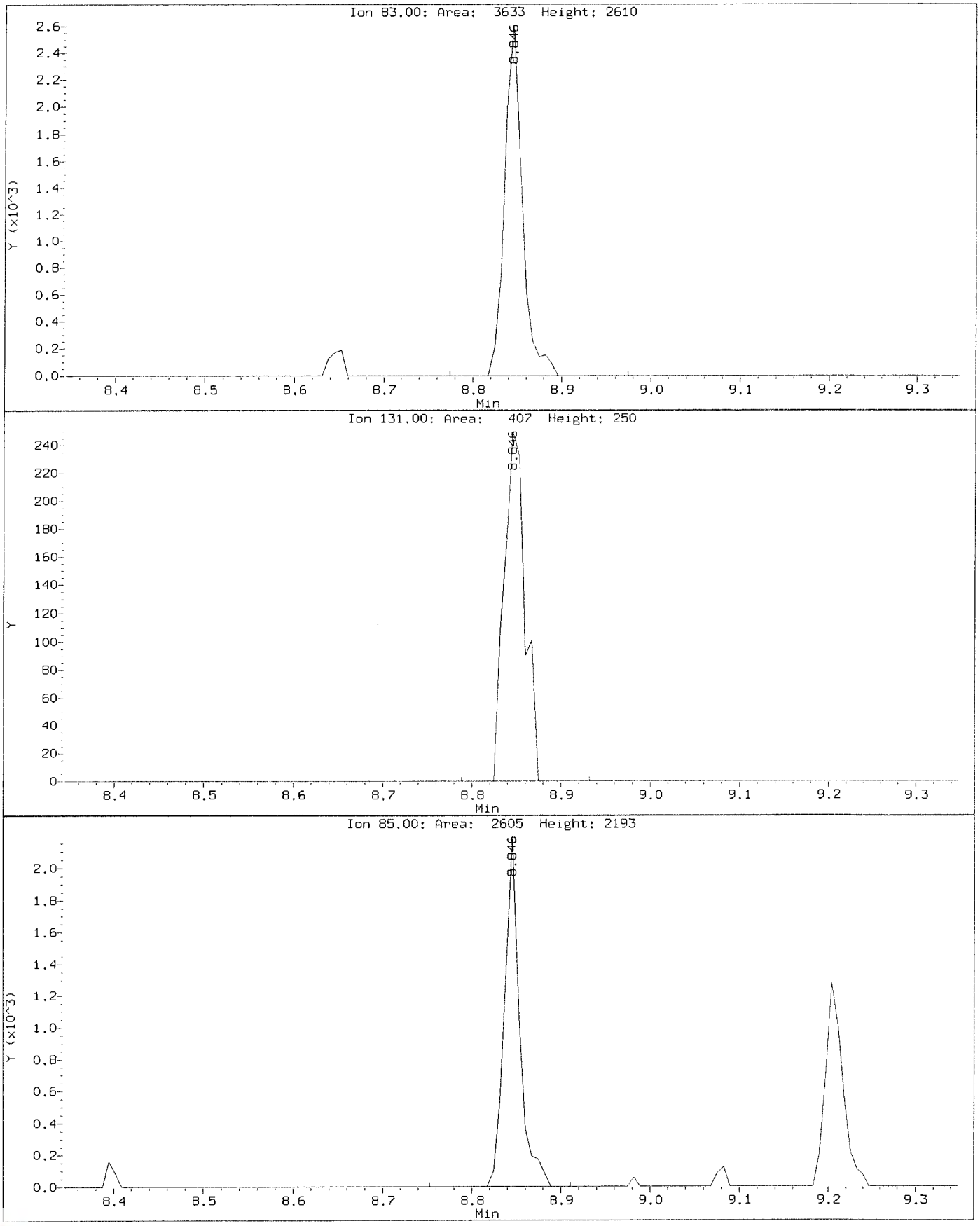
Compound: 1,1,2,2-Tetrachloroethane
CAS Number: 79-34-5



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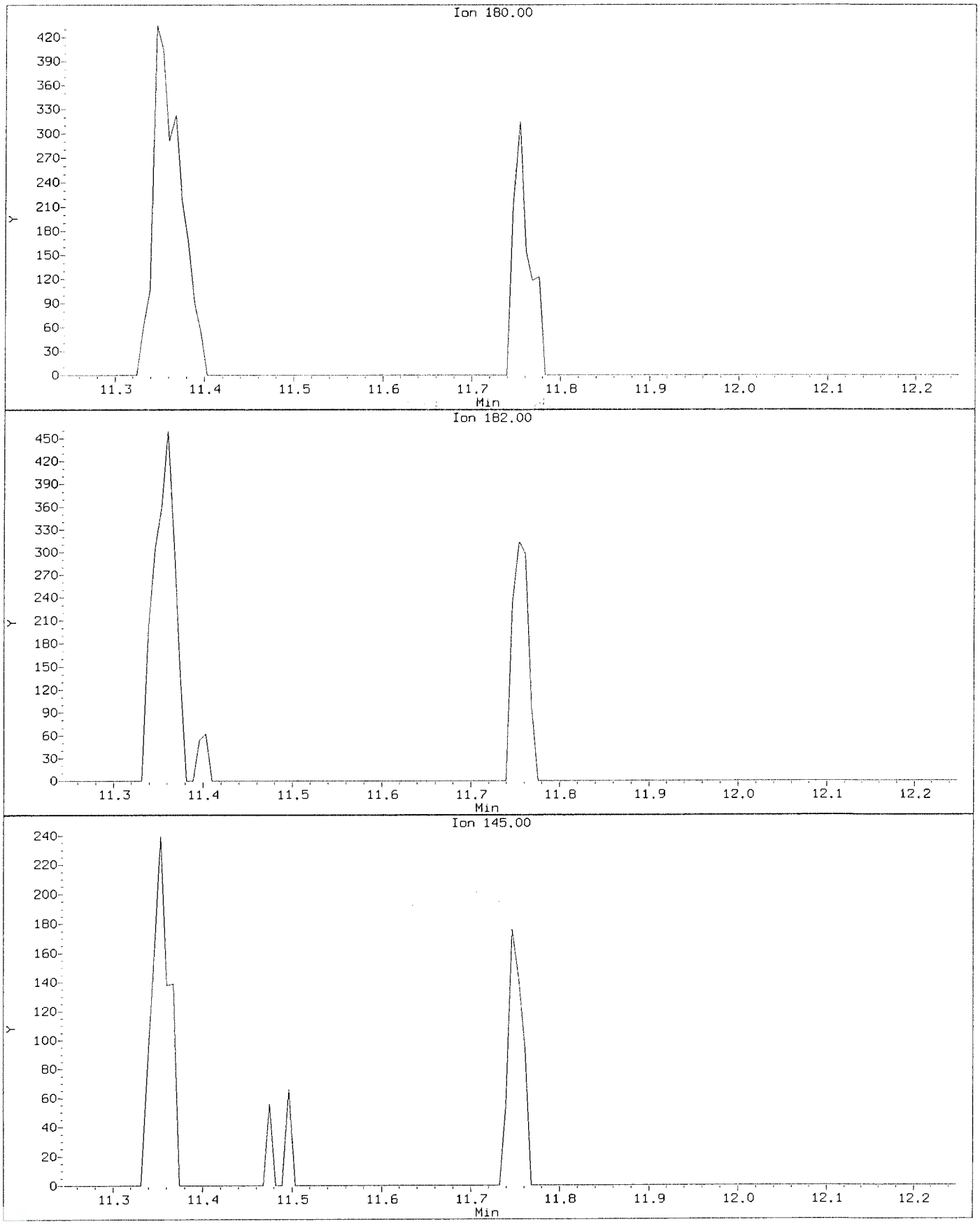
Client Sample ID: VSTD001

Compound: 1,2,3-Trichlorobenzene
CAS Number: 87-61-6



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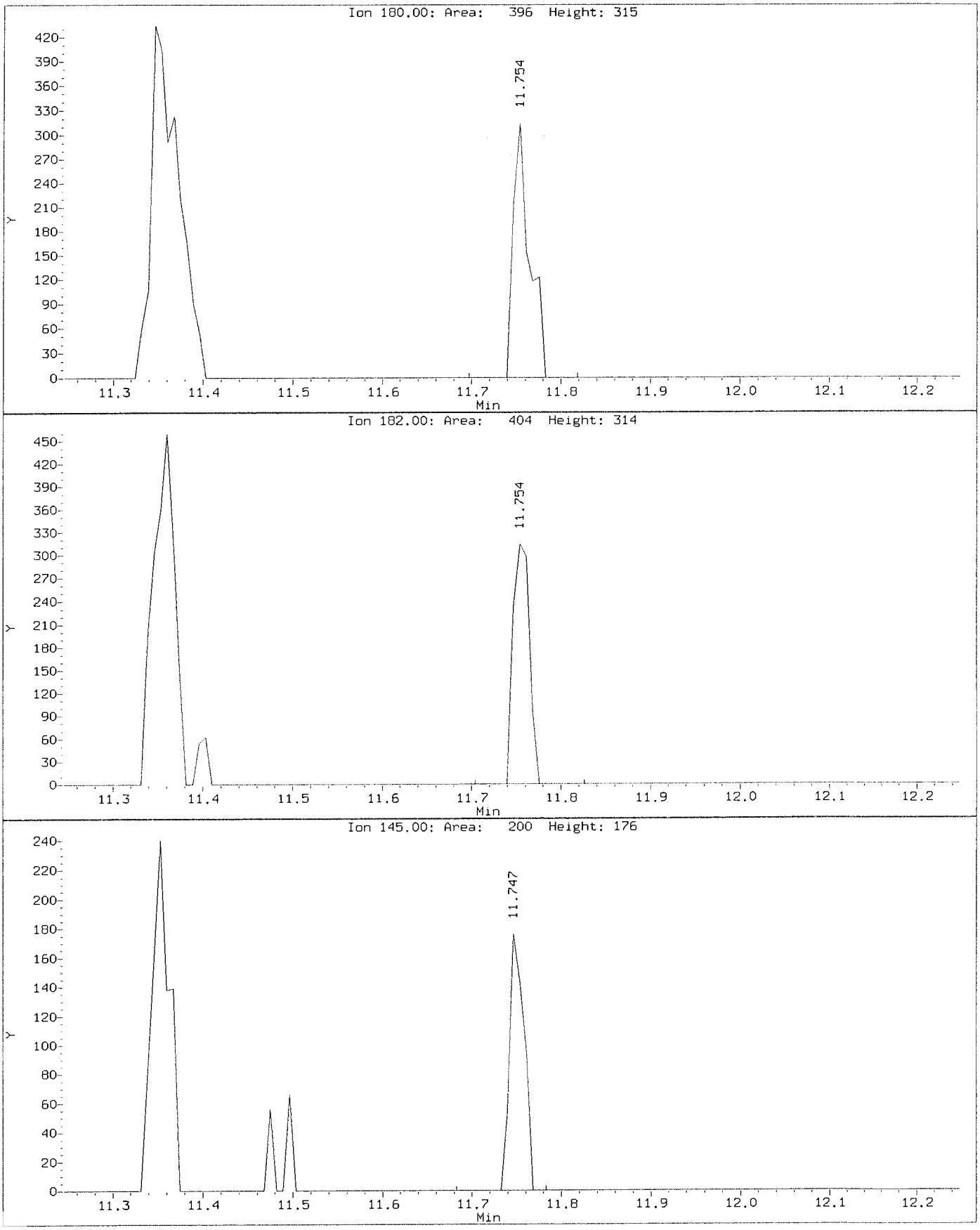
Client Sample ID: VSTD001

Compound: 1,2,3-Trichlorobenzene
CAS Number: 87-61-6



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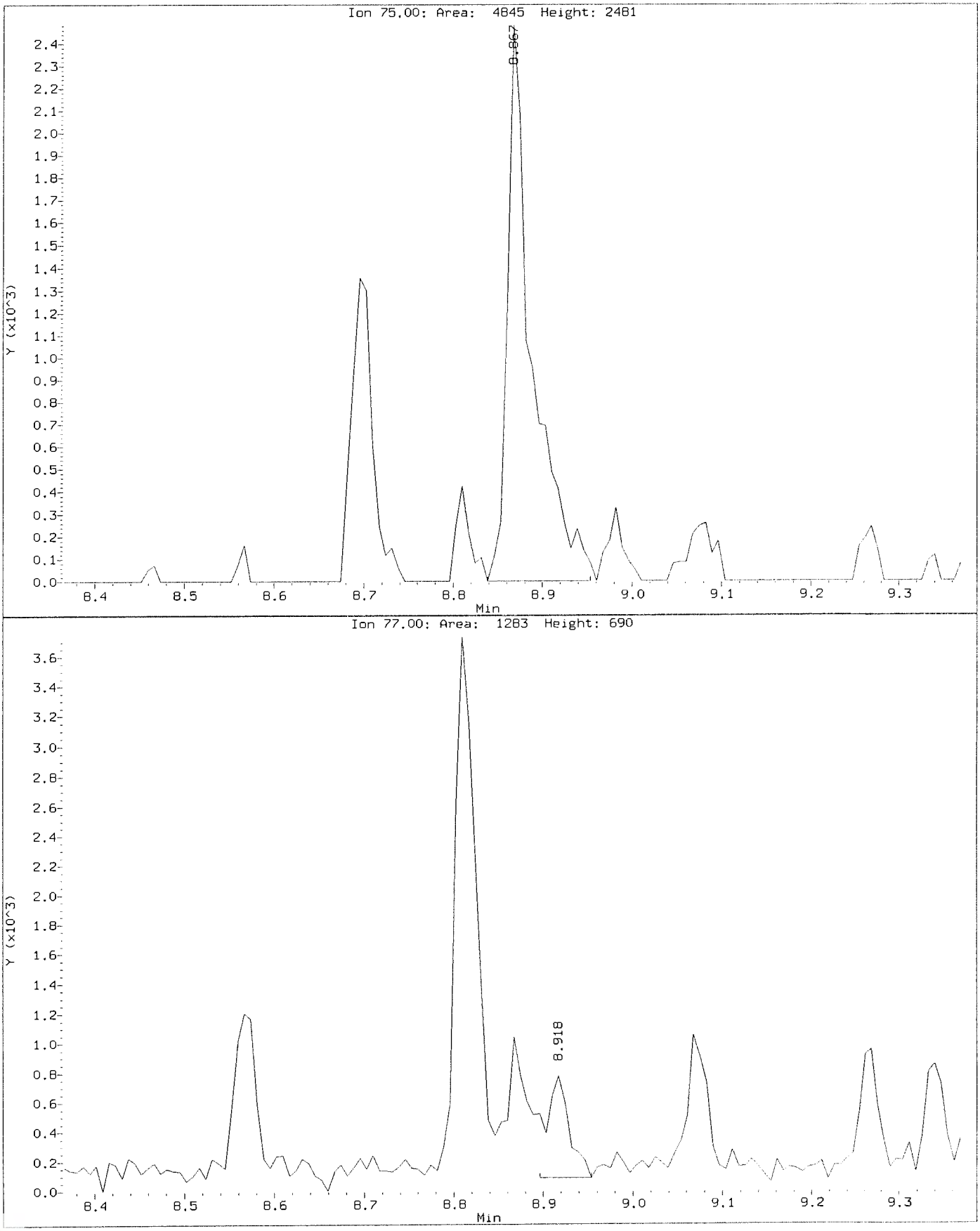
Instrument: voa6.i
Client Sample ID: VSTD001

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4



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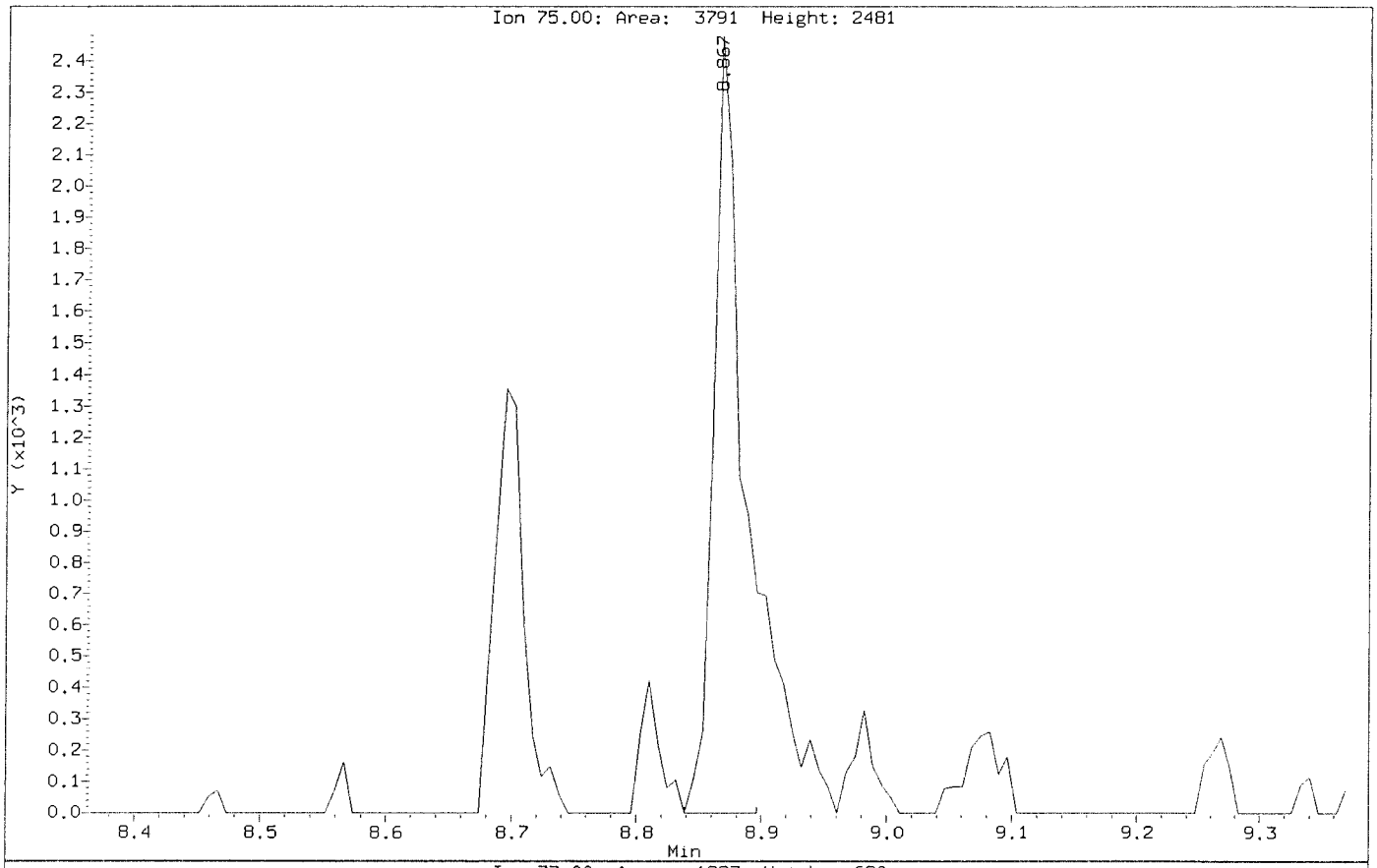
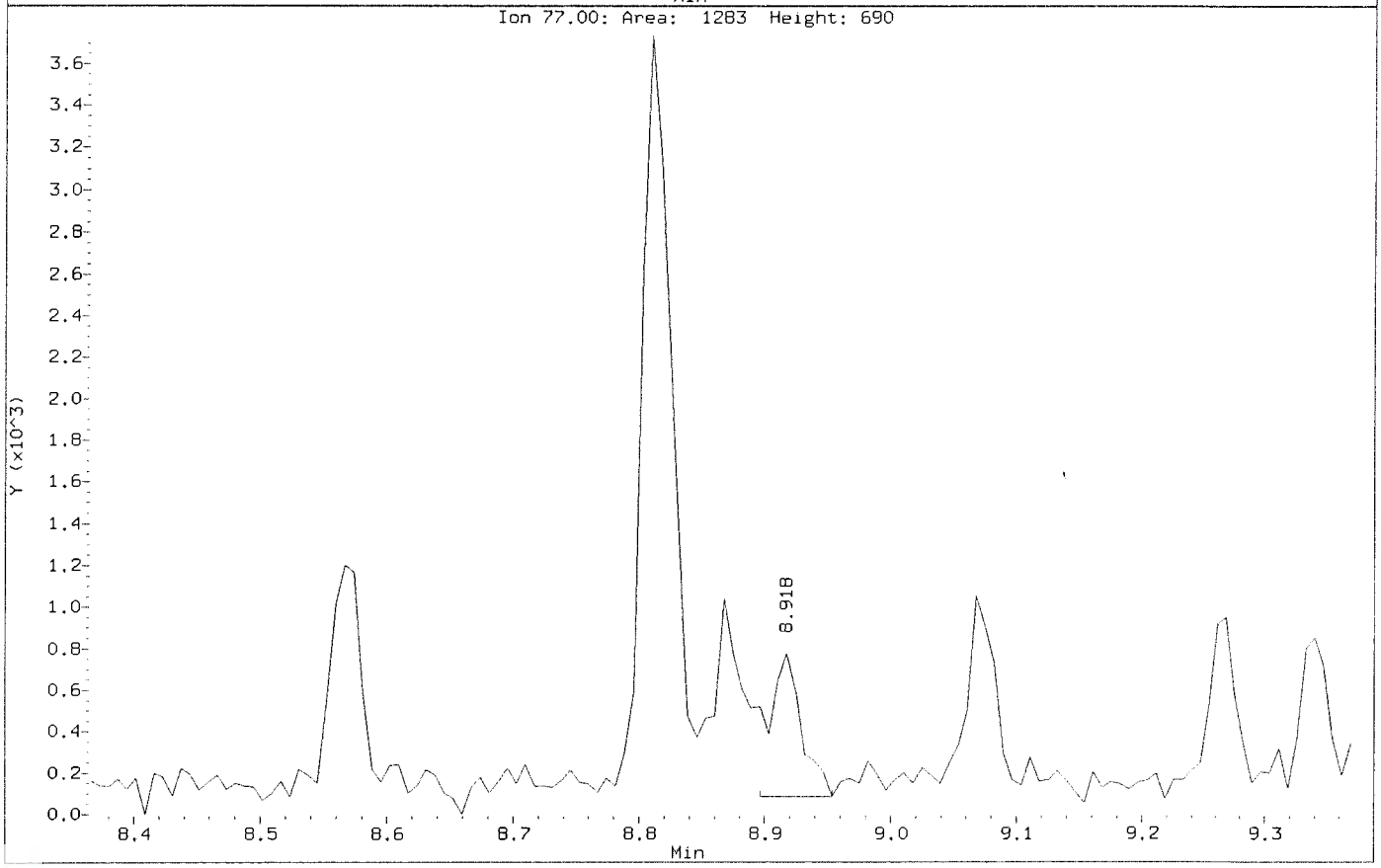
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





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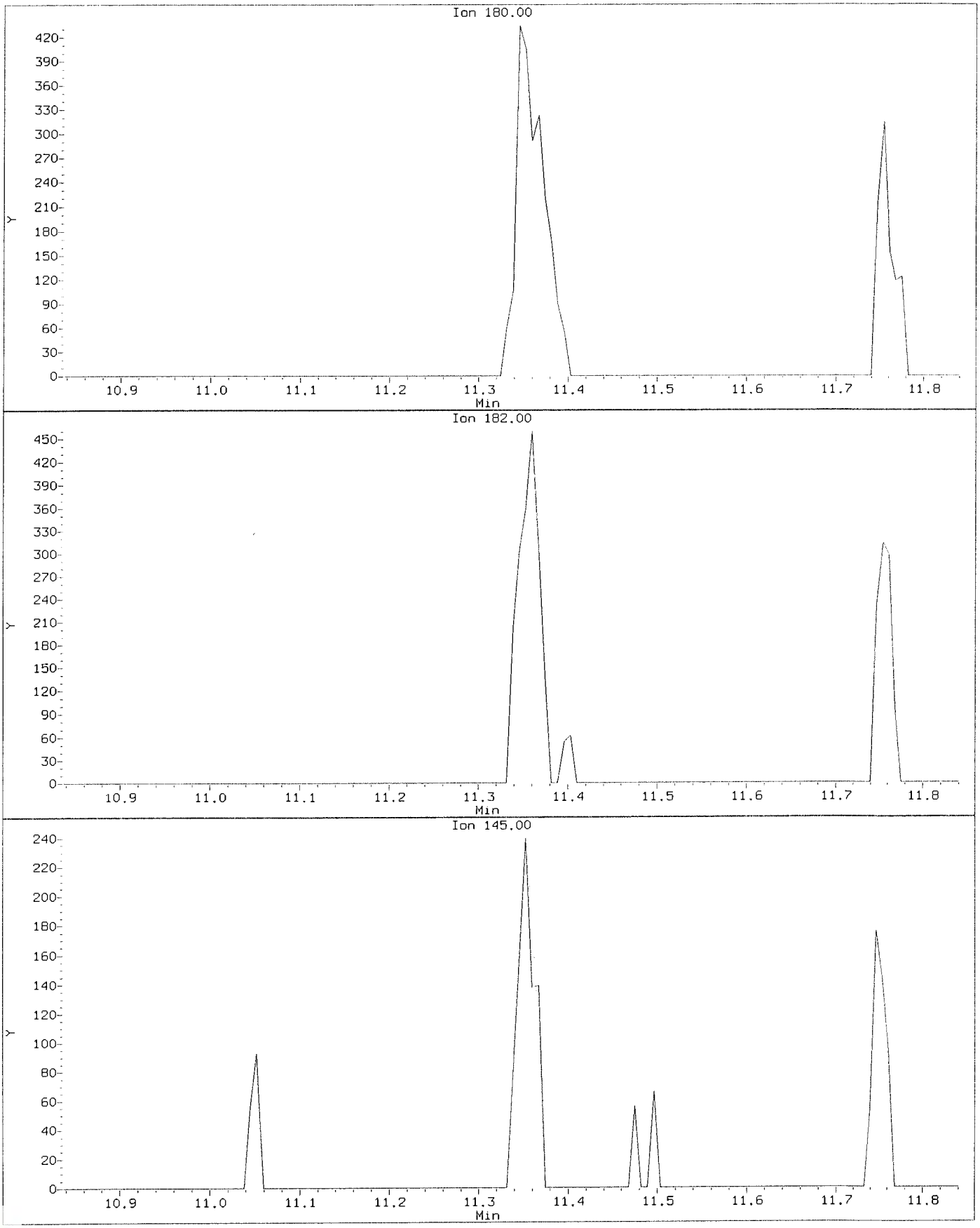
Instrument: voa6.i
Client Sample ID: VSTD001

Compound: 1,2,4-Trichlorobenzene
CAS Number: 120-82-1



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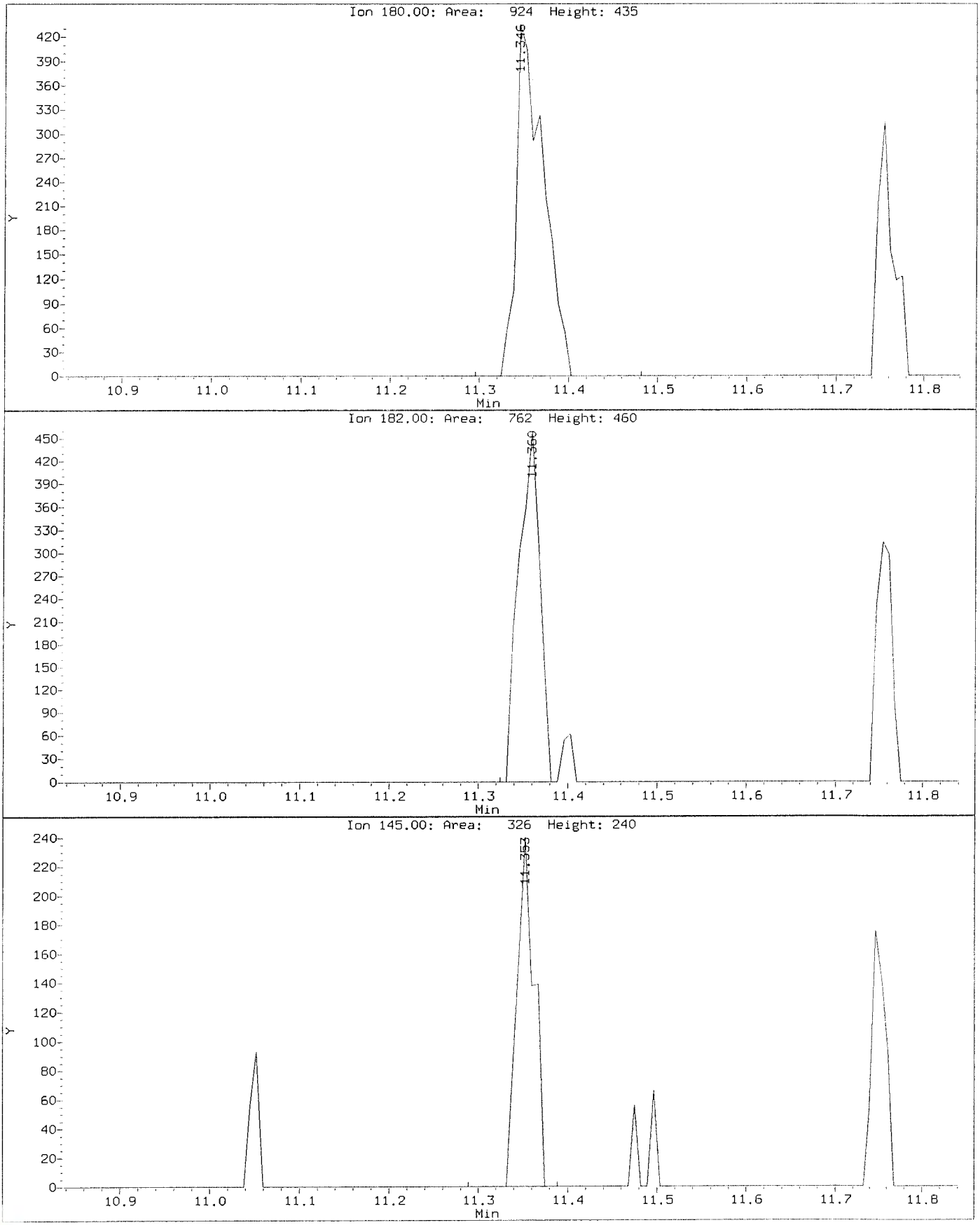
Compound: 1,2,4-Trichlorobenzene
CAS Number: 120-82-1



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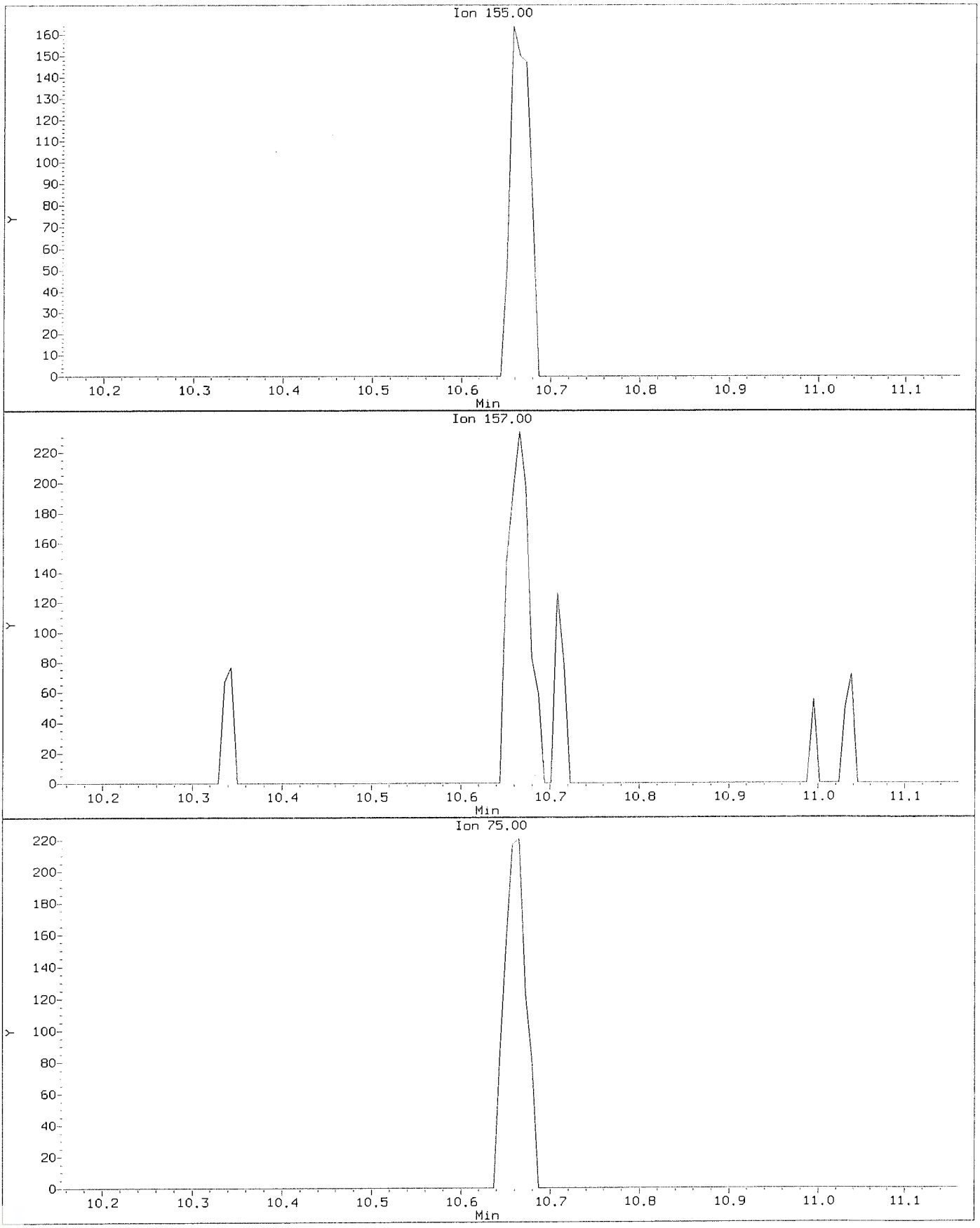
Instrument: voa6.i
Client Sample ID: VSTD001

Compound: 1,2-Dibromo-3-Chloropropane
CAS Number: 96-12-8



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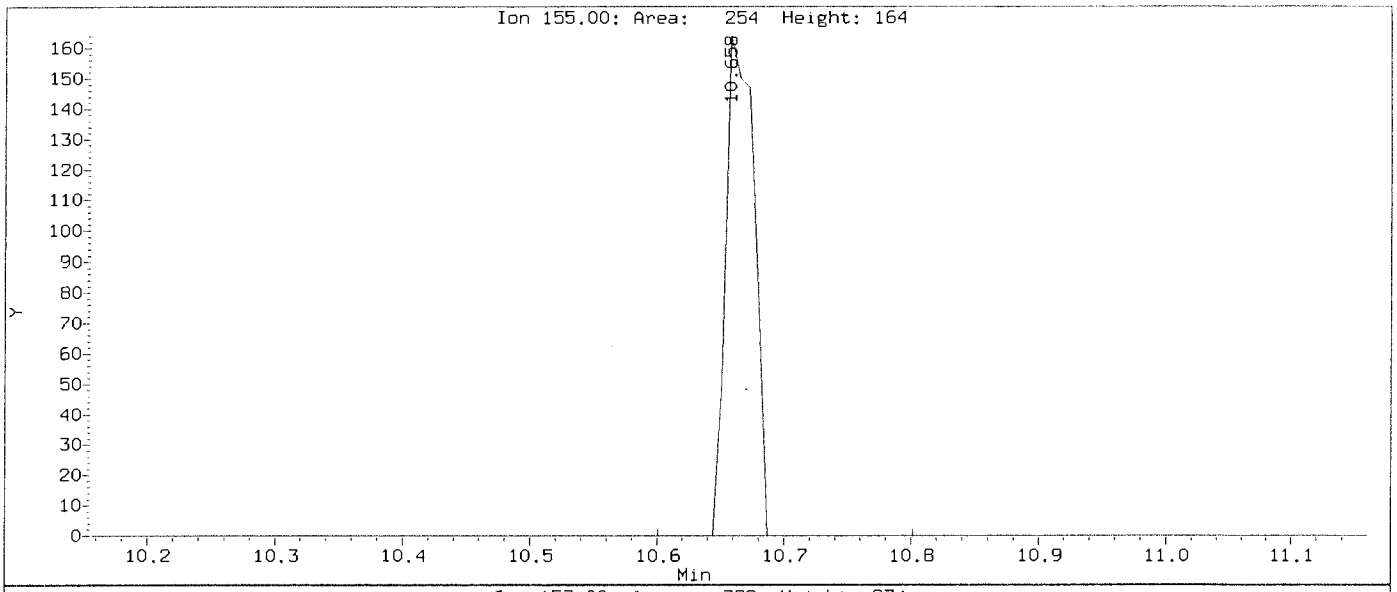
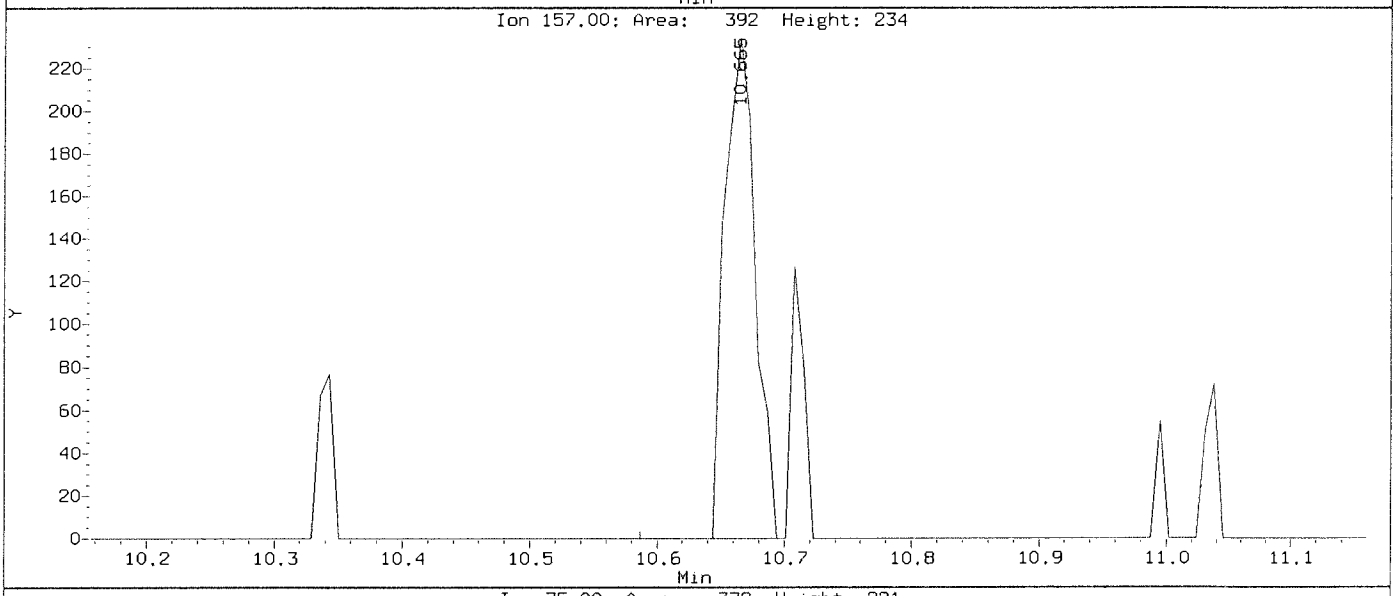
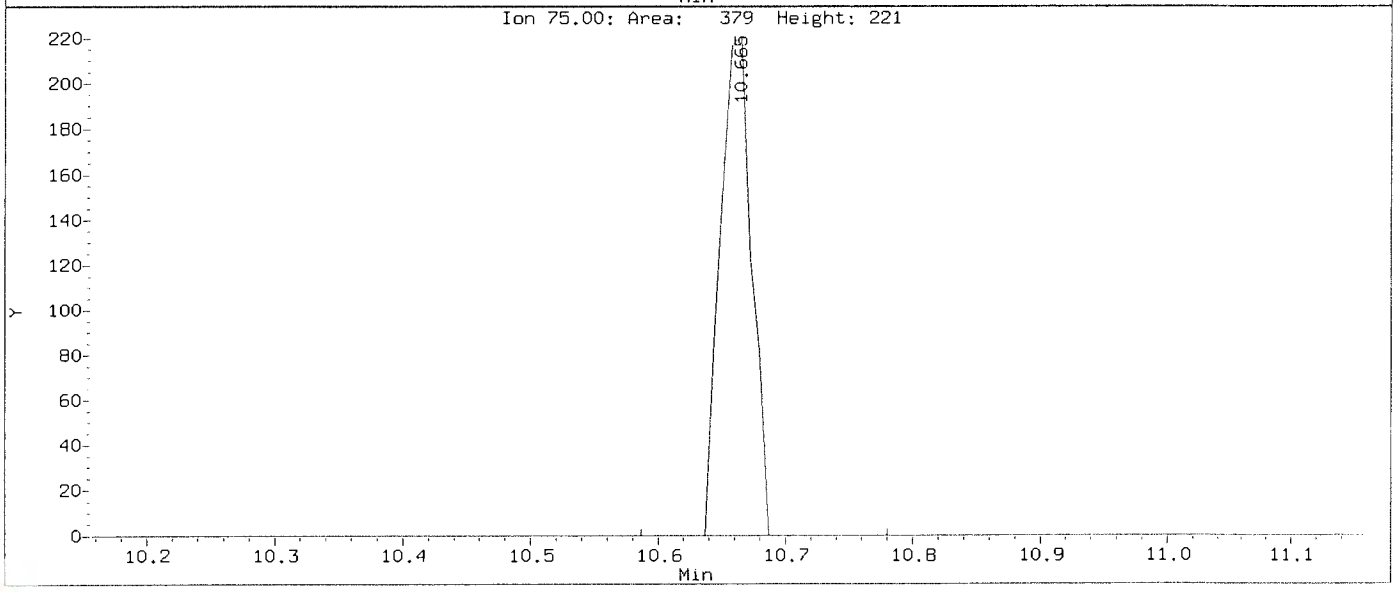
Compound: 1,2-Dibromo-3-Chloropropane
CAS Number: 96-12-8







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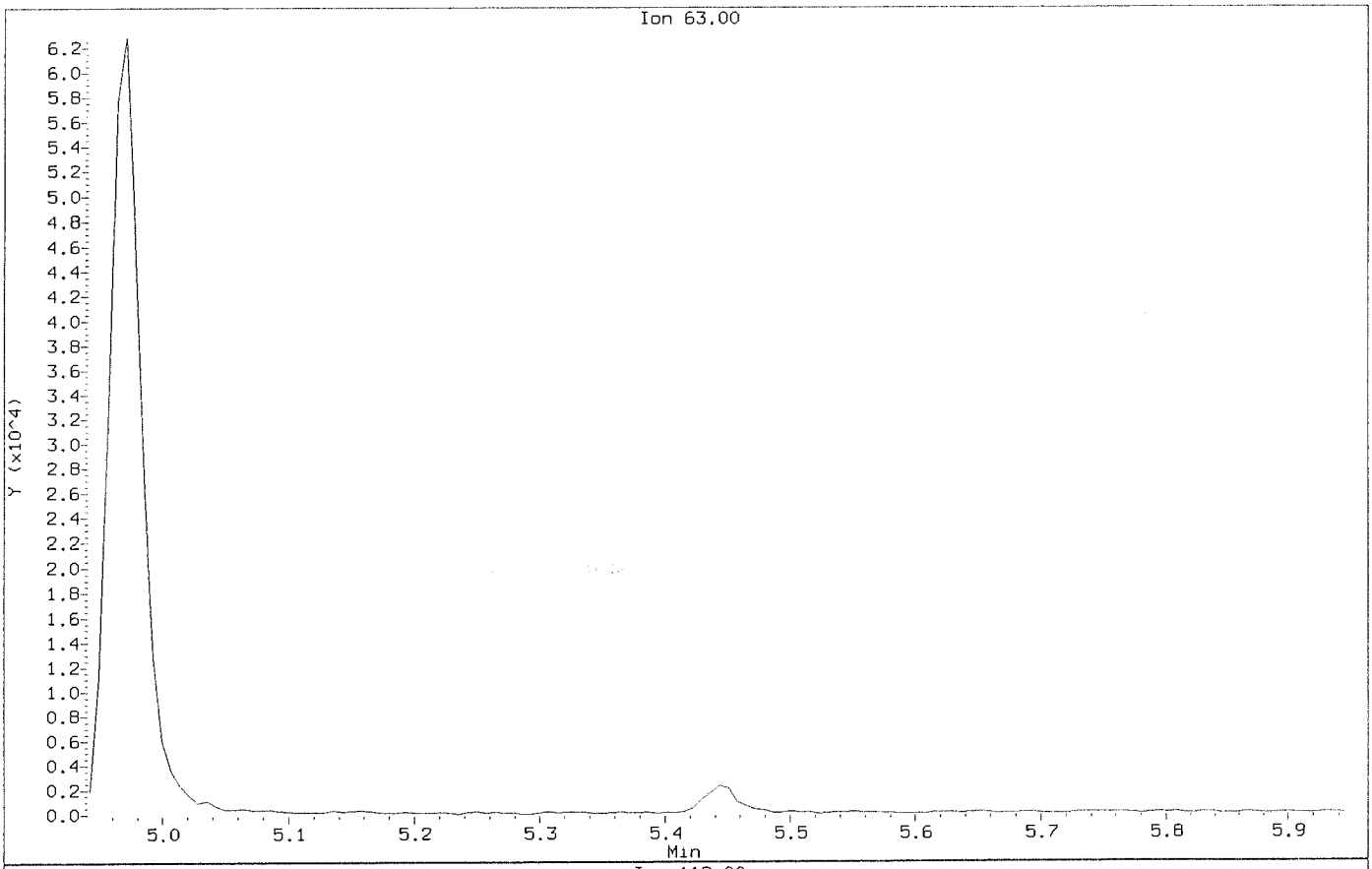
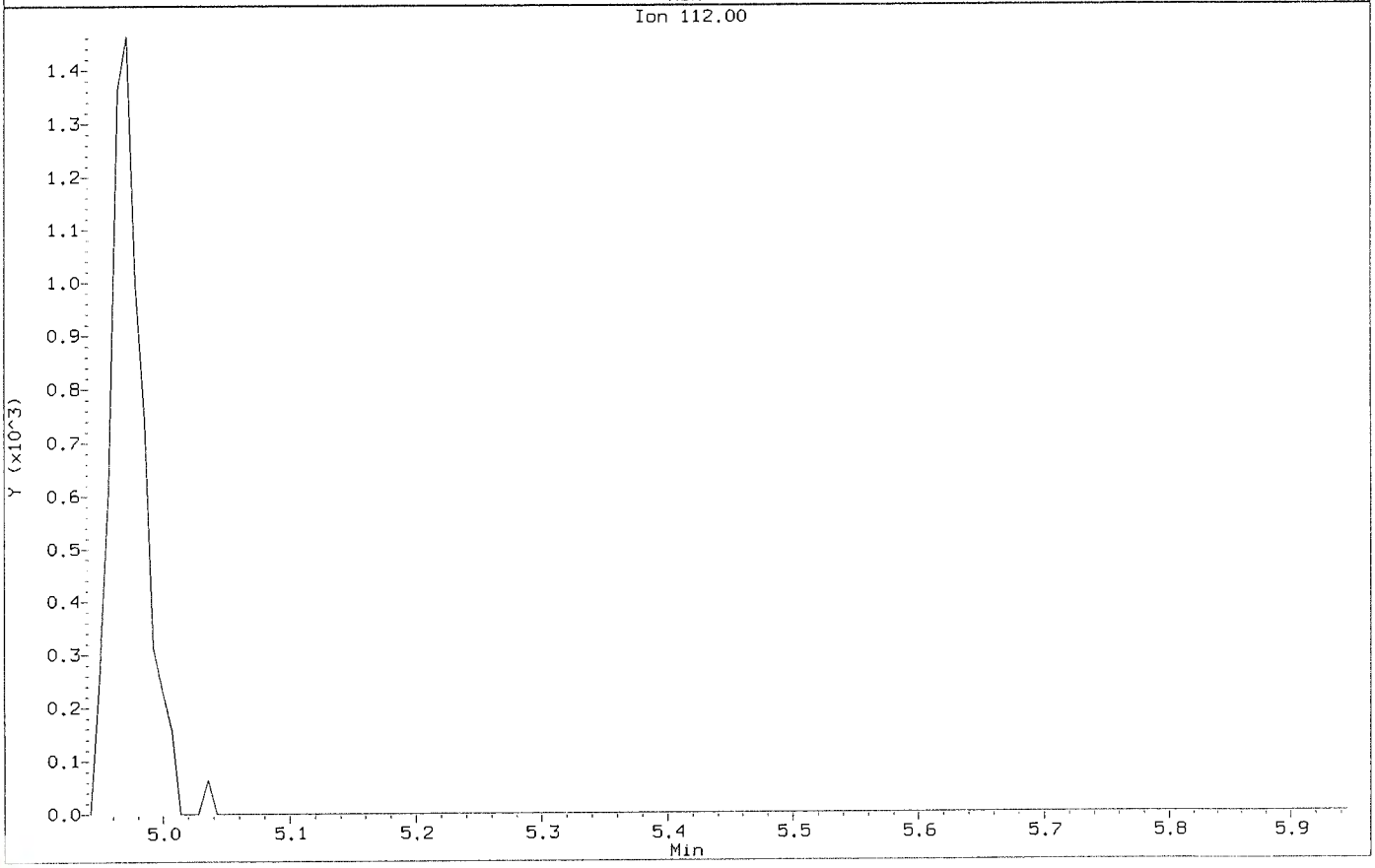
Instrument: voa6.i
Client Sample ID: VSTD001

Compound: 1,2-Dichloropropane
CAS Number: 78-87-5





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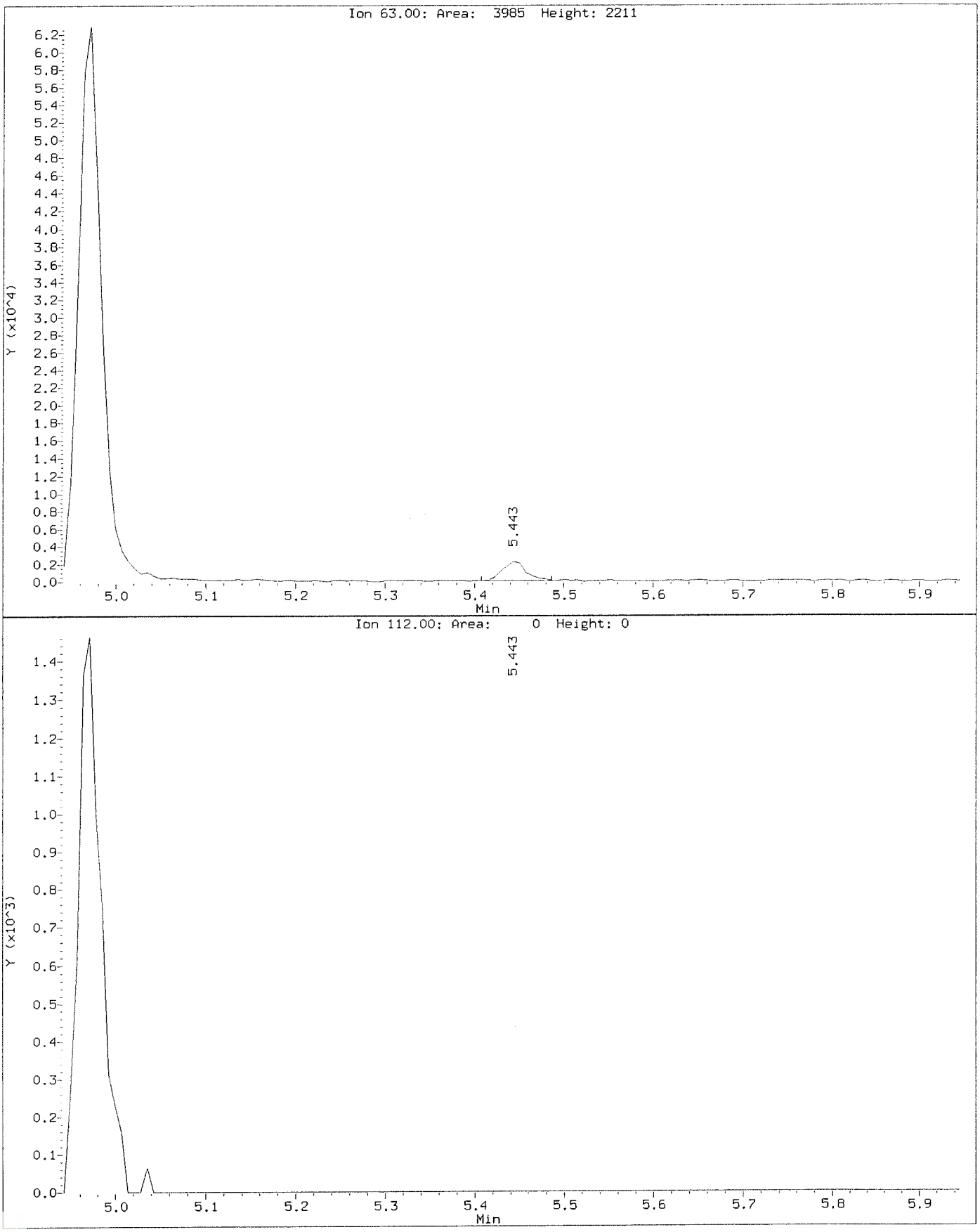
Client Sample ID: VSTD001

Compound: 1,2-Dichloropropane
CAS Number: 78-87-5



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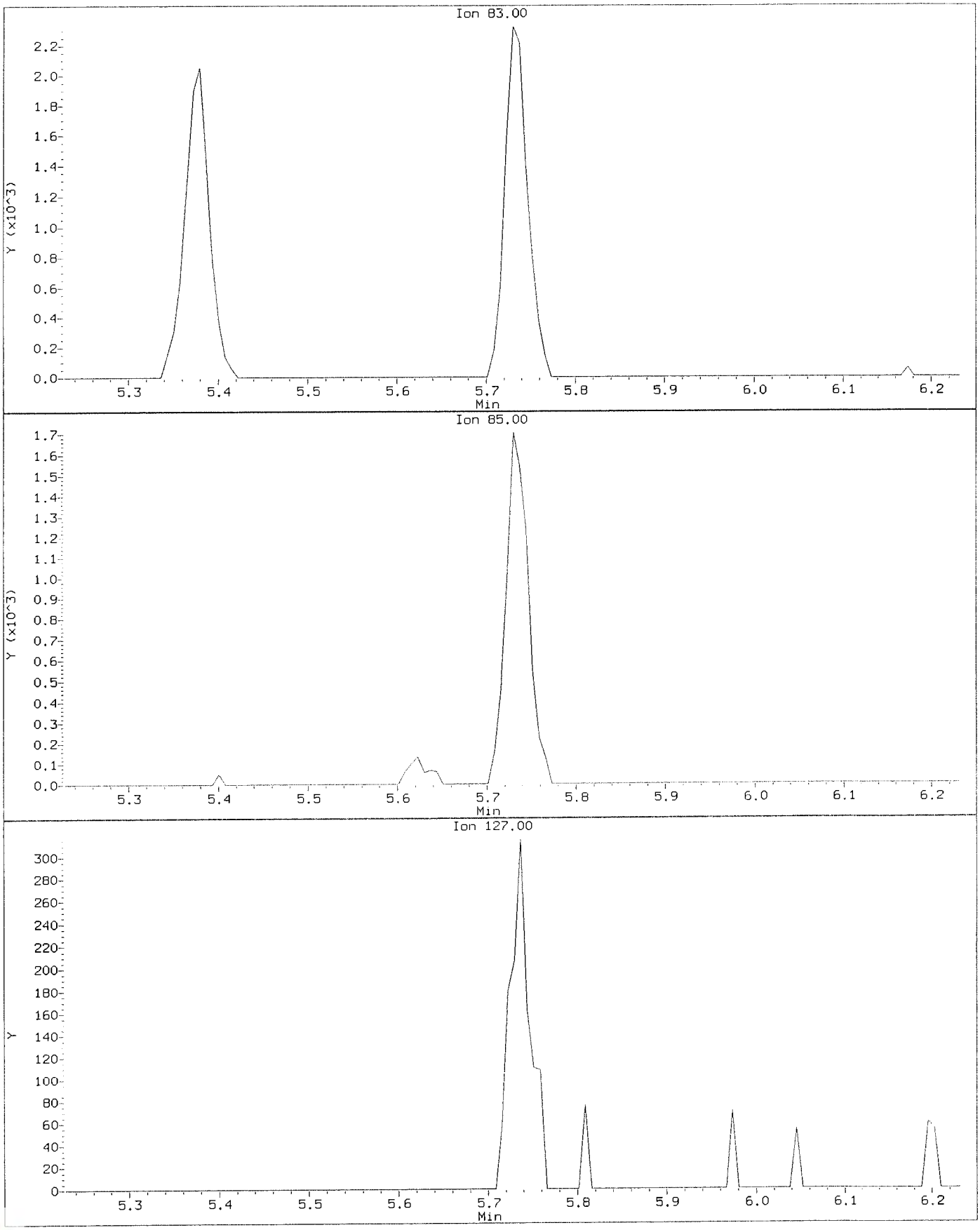
Client Sample ID: VSTD001

Compound: Bromodichloromethane
CAS Number: 75-27-4



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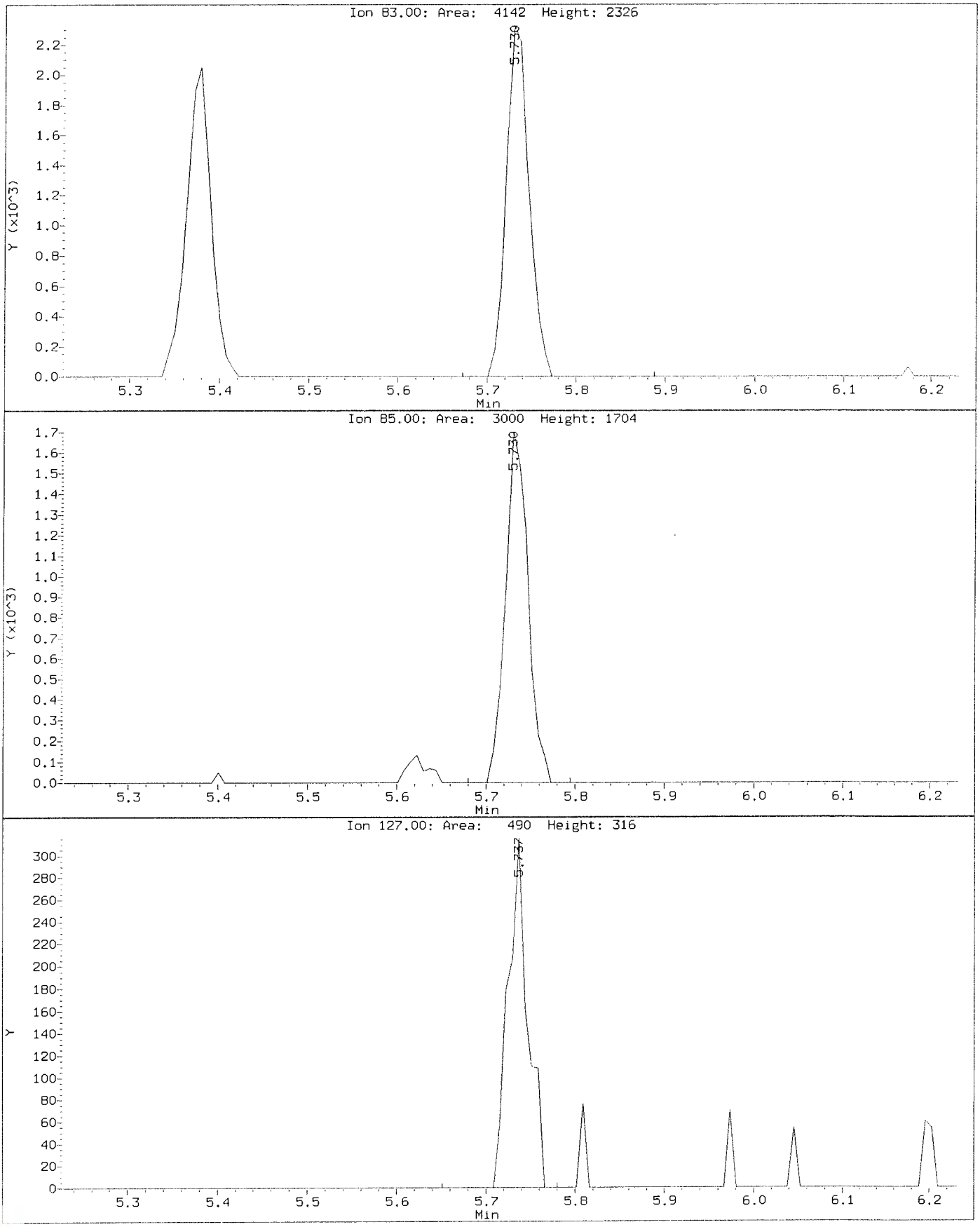
Compound: Bromodichloromethane
CAS Number: 75-27-4



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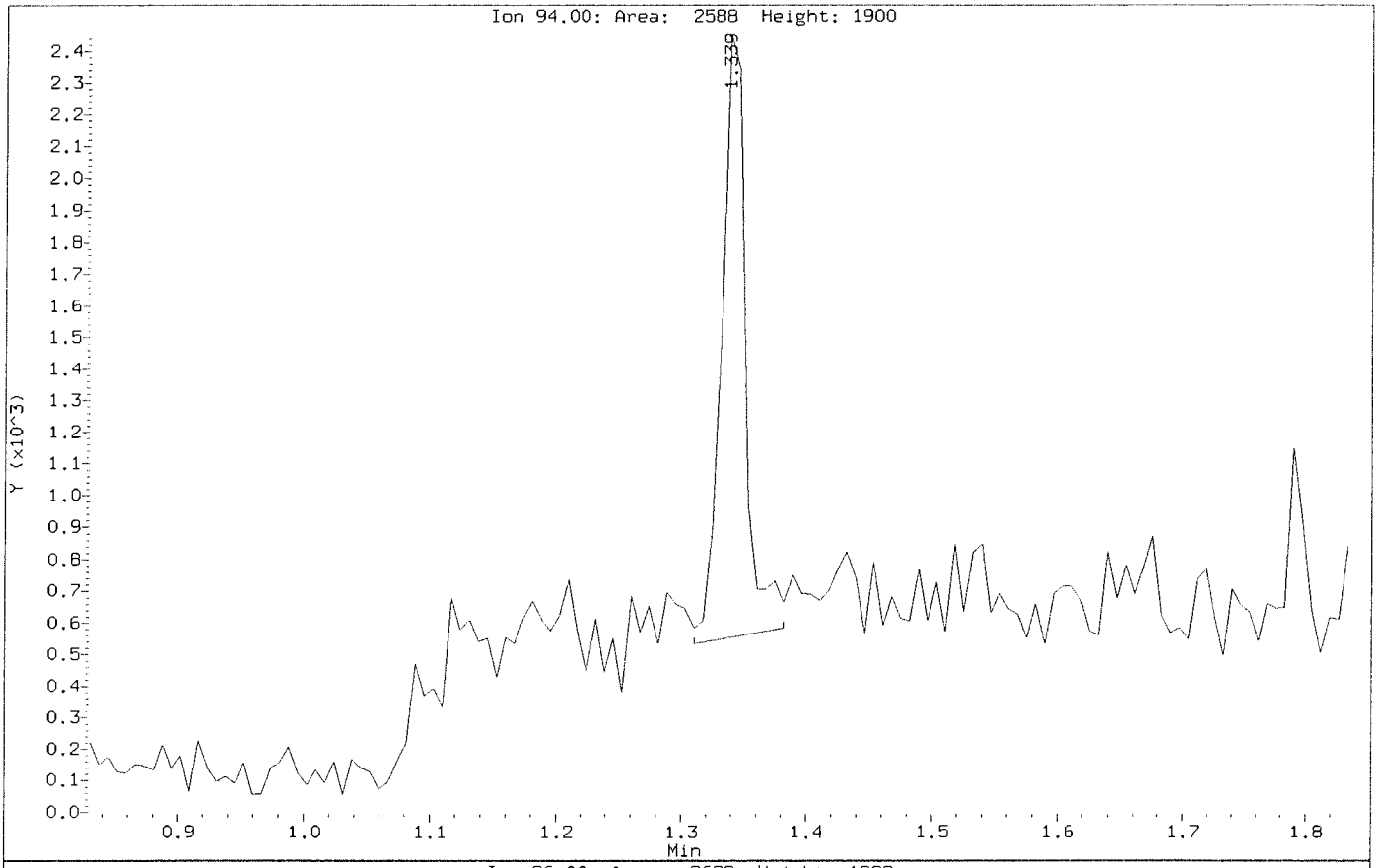
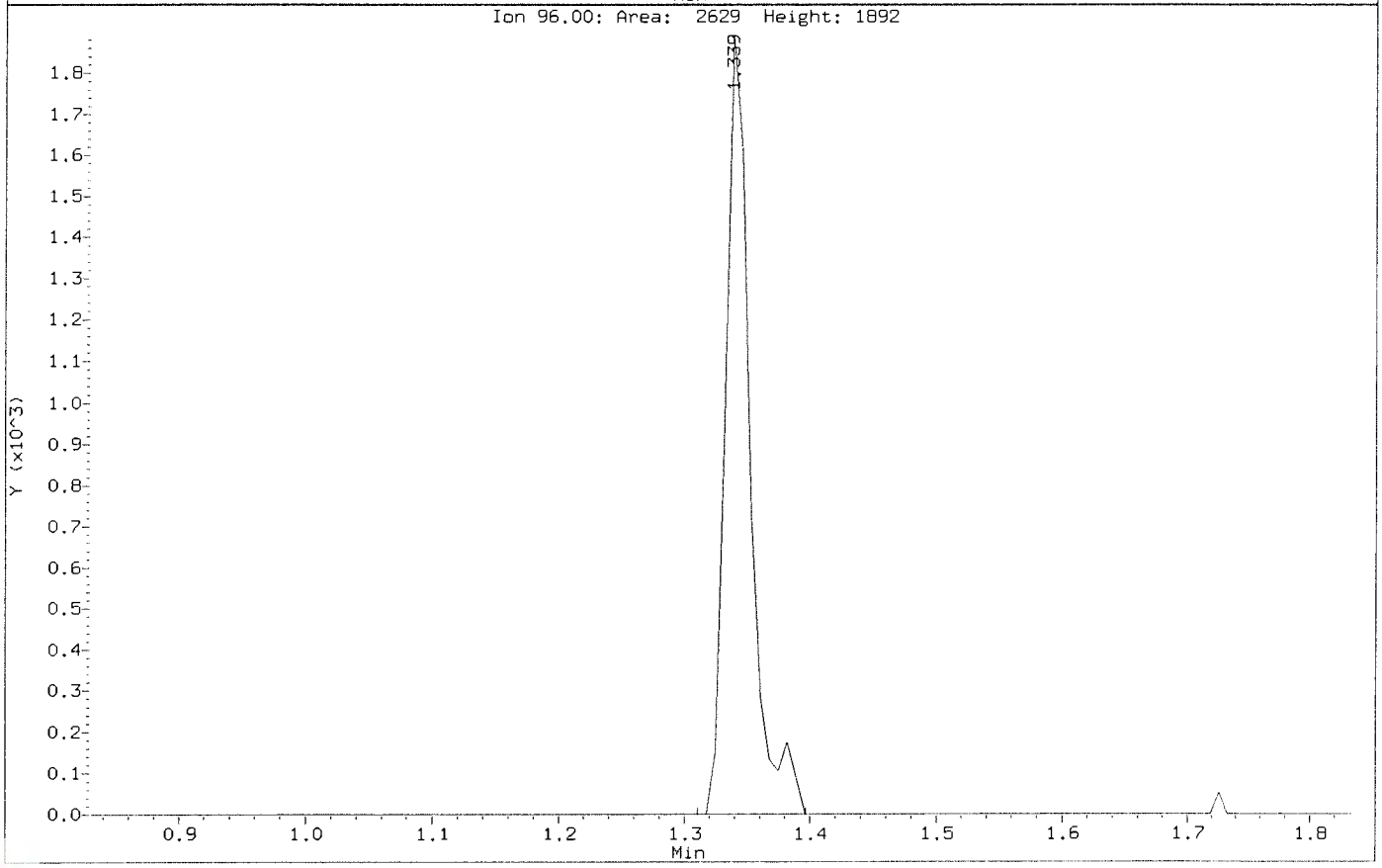
Compound: Bromomethane
CAS Number: 74-83-9





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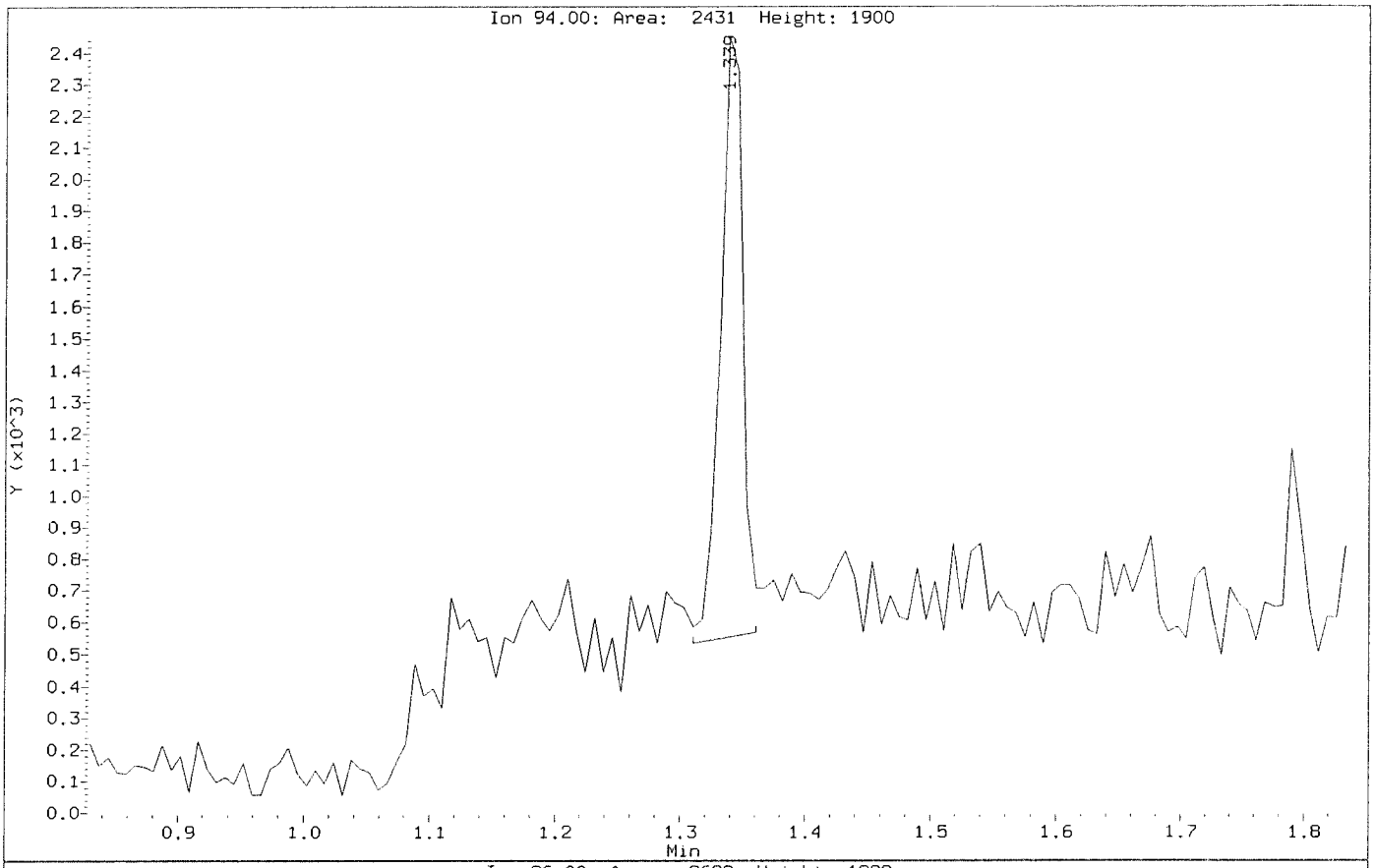
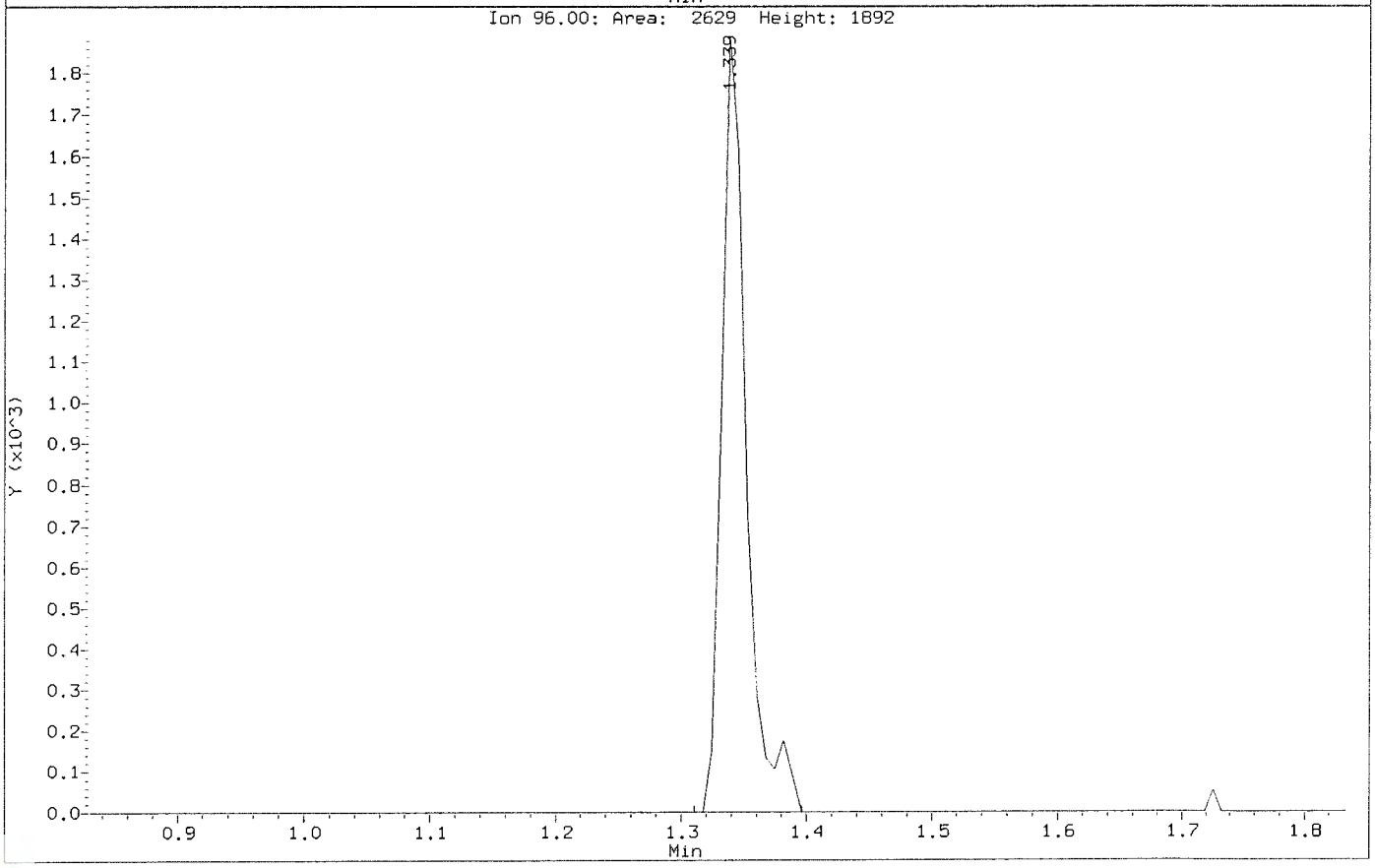
Compound: Bromomethane
CAS Number: 74-83-9





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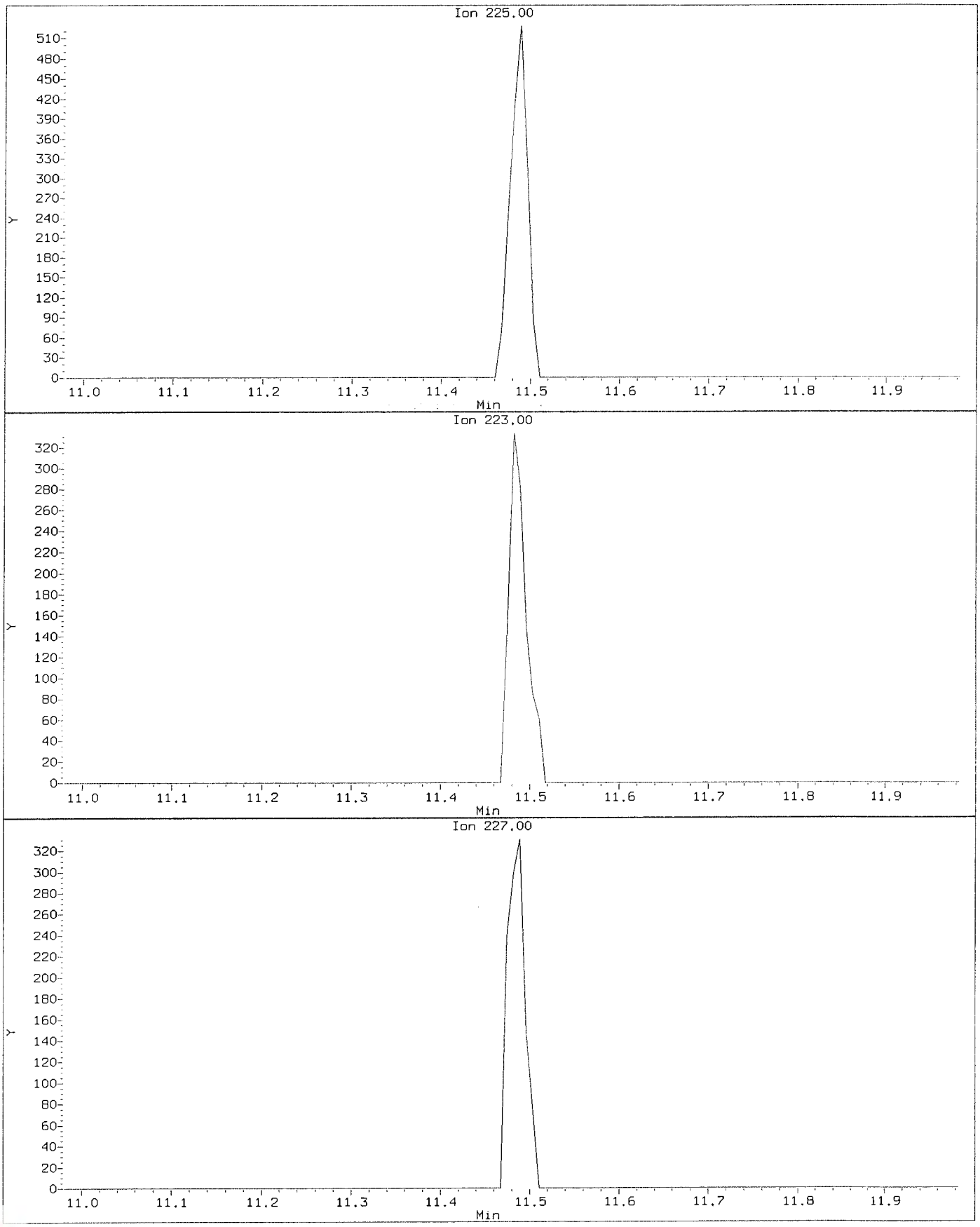
Instrument: voa6.i
Client Sample ID: VSTD001

Compound: Hexachlorobutadiene
CAS Number: 87-68-3



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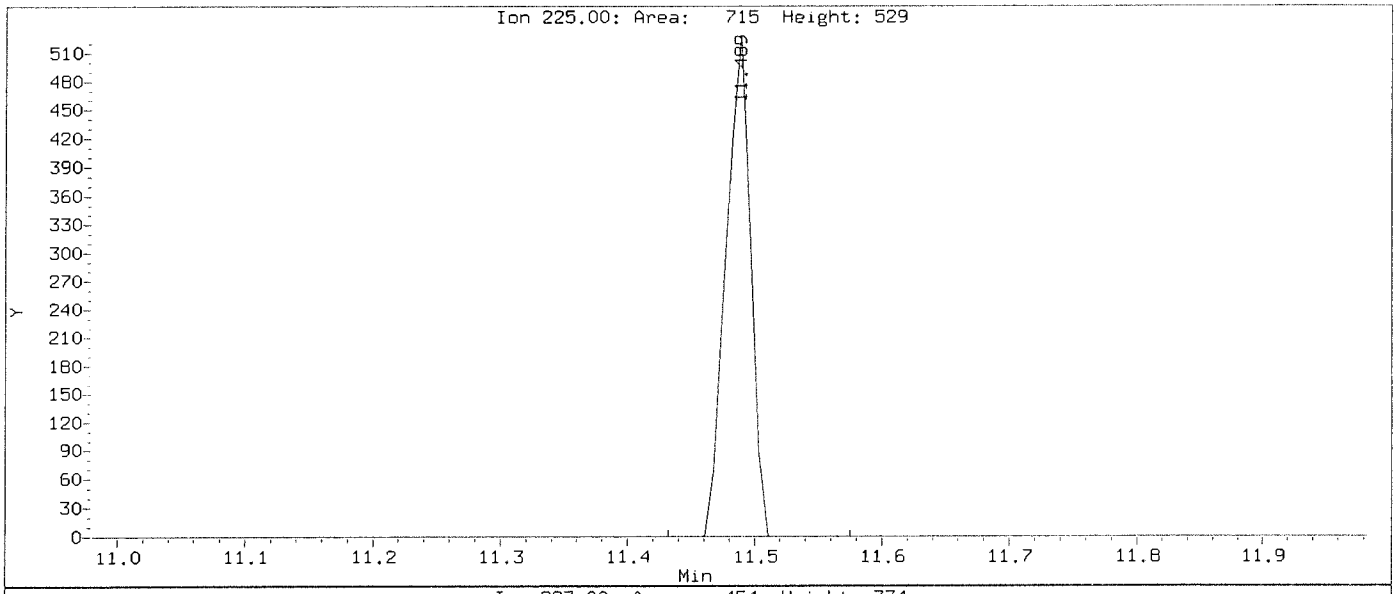
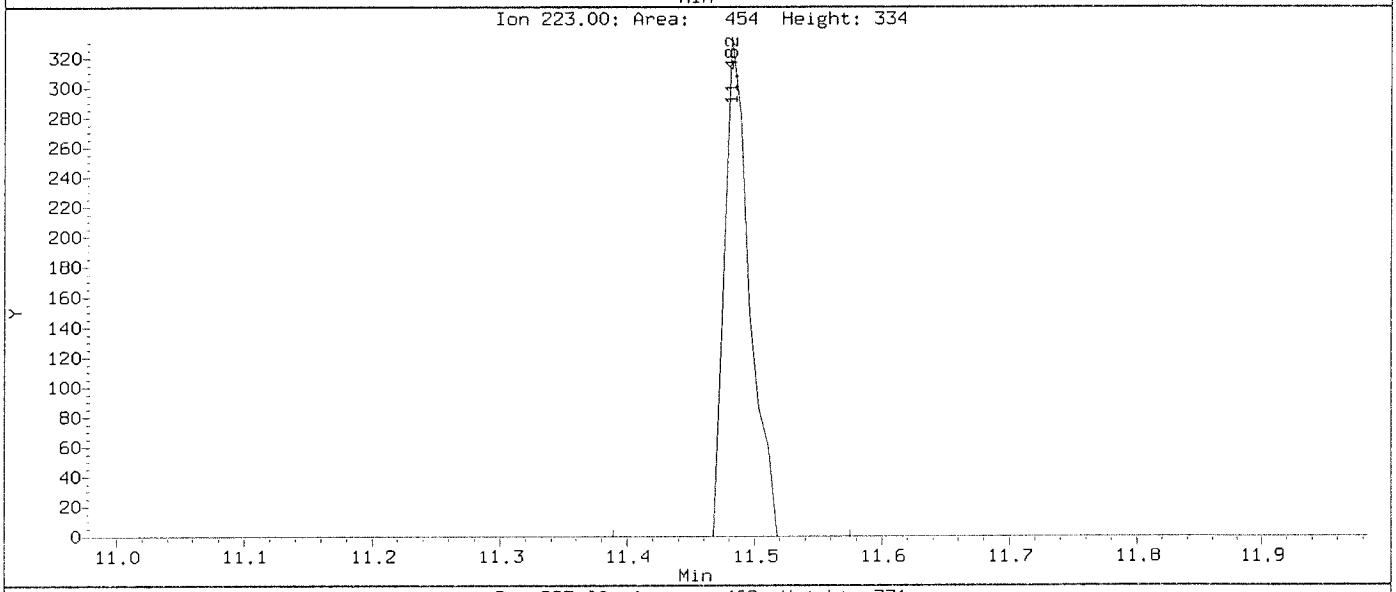
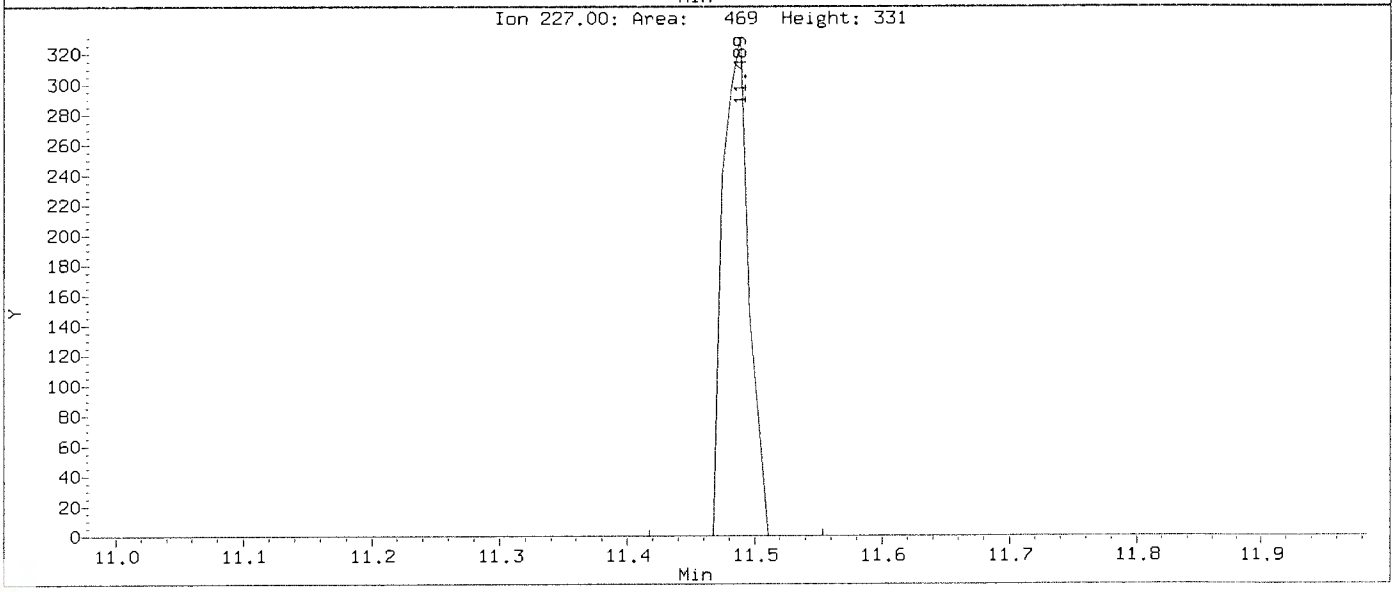
Client Sample ID: VSTD001

Compound: Hexachlorobutadiene
CAS Number: 87-68-3







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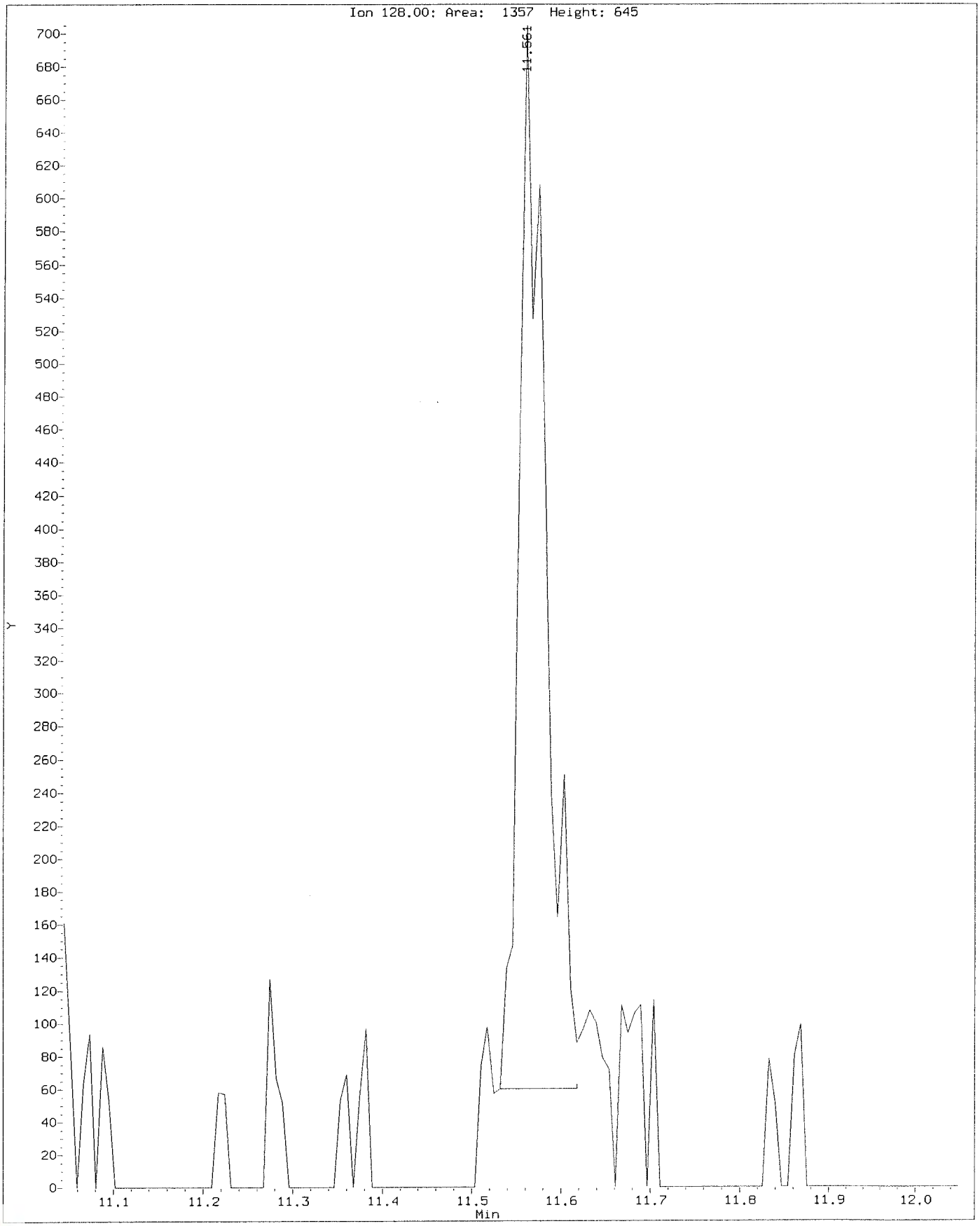
Injection Date: 19-JUN-2020 12:42
Instrument: voa6.i
Client Sample ID: VSTD001

Compound: Naphthalene
CAS Number: 91-20-3



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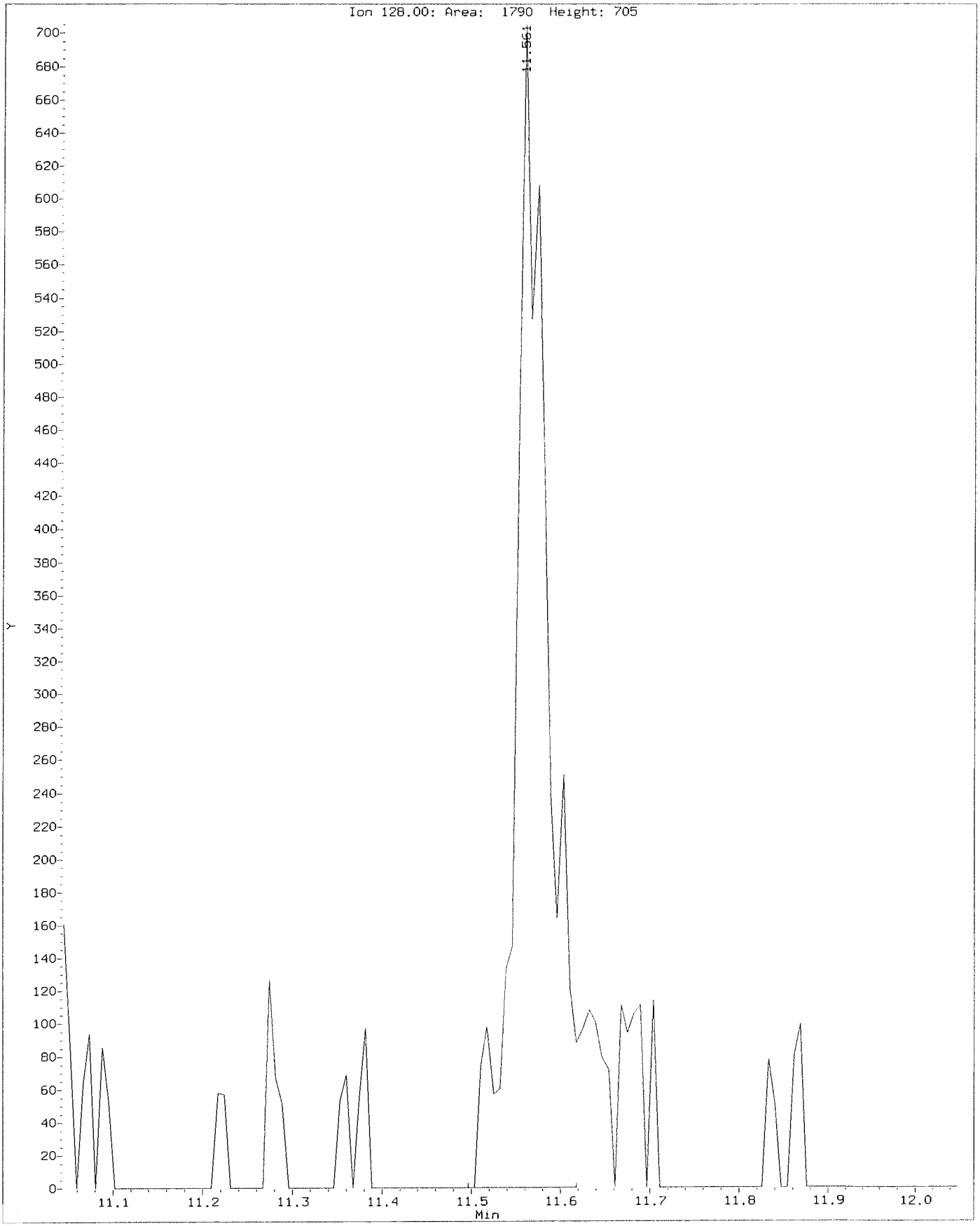
Instrument: voa6.i
Client Sample ID: VSTD001

Compound: Naphthalene
CAS Number: 91-20-3



ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200619.b\X061905.D
Lab Smp Id: VSTD002 Client Smp ID: VSTD002
Inj Date : 19-JUN-2020 13:06
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\X200619.b\8260W.m
Meth Date : 09-Jul-2020 09:58 voa6.i Quant Type: ISTD
Cal Date : 19-JUN-2020 13:06 Cal File: X061905.D
Als bottle: 6 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14

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	4.189	4.189	(1.000)	223525	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	430493	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	397296	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	177042	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.979)	6139	2.00000	2.14(a)
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	9197	2.00000	1.60(a)
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	20643	2.00000	2.08(a)
$ 69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	8849	2.00000	2.18(a)
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	5915	2.00000	2.04(a)
31 1,1,1-Trichloroethane	97	4.082	4.089	(0.974)	8196	2.00000	1.97(a)
68 1,1,2,2-Tetrachloroethane	83	8.845	8.845	(0.915)	7509	2.00000	2.13(a)
53 1,1,2-Trichloroethane	83	6.847	6.847	(0.893)	5285	2.00000	2.07(a)
22 1,1-Dichloroethane	63	2.929	2.921	(0.699)	13801	2.00000	1.98(a)
11 1,1-Dichloroethene	96	1.919	1.911	(0.458)	4769	2.00000	2.18(a)
32 1,1-Dichloropropene	75	4.290	4.282	(0.863)	7742	2.00000	1.99(a)
93 1,2,3-Trichlorobenzene	180	11.753	11.746	(1.216)	1037	2.00000	0.30(aM)
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	6910	2.00000	2.11(aM)
90 1,2,4-Trichlorobenzene	180	11.352	11.338	(1.174)	1872	2.00000	1.04(aM)
79 1,2,4-Trimethylbenzene	105	9.382	9.383	(0.970)	19042	2.00000	1.97(a)
89 1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.102)	659	2.00000	2.28(a)
57 1,2-Dibromoethane	107	7.269	7.262	(0.948)	6790	2.00000	2.16(a)
88 1,2-Dichlorobenzene	146	9.999	9.999	(1.034)	10189	2.00000	2.12(a)
33 1,2-Dichloroethane	62	4.569	4.562	(0.919)	11954	2.00000	2.11(a)

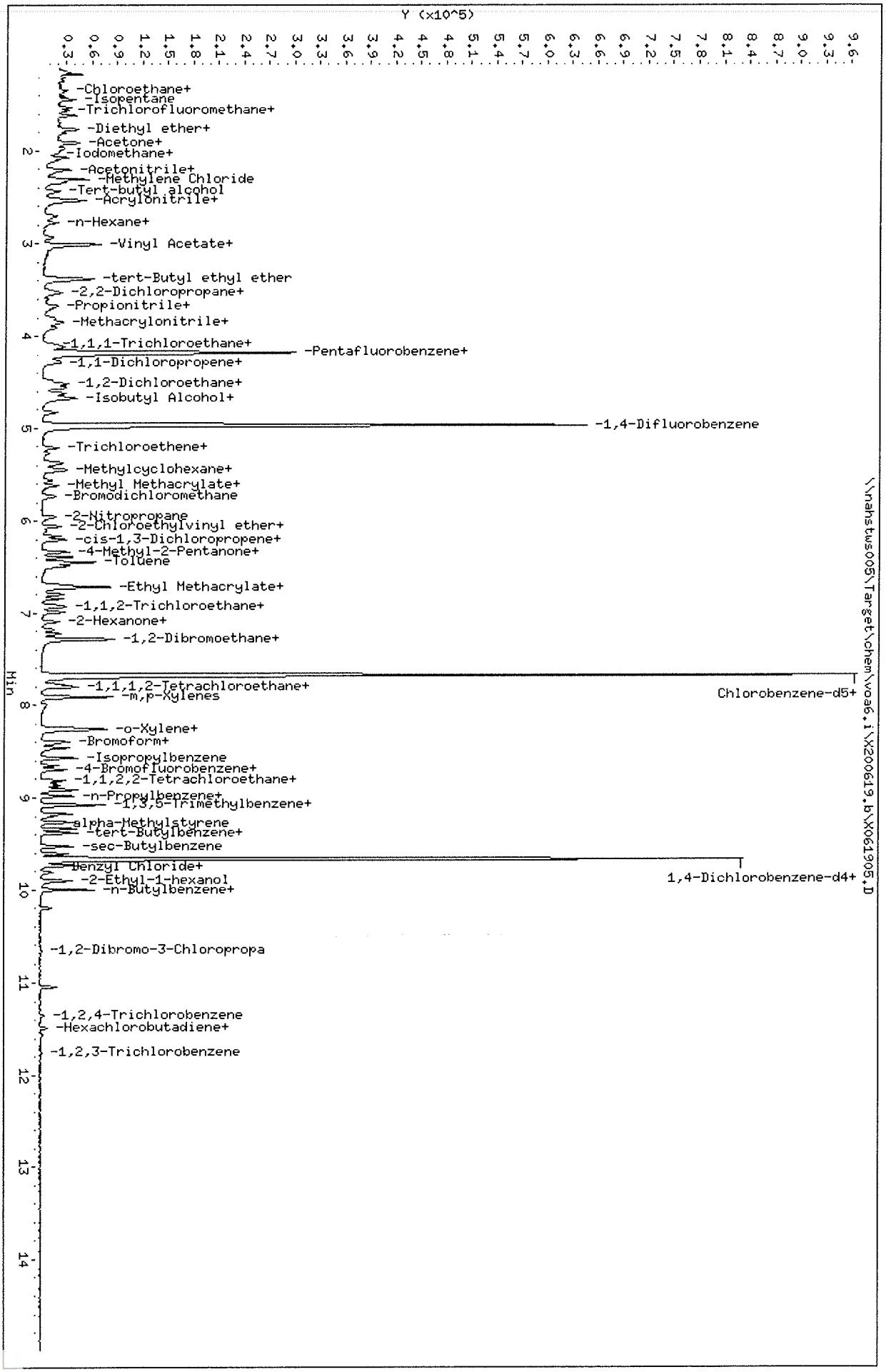
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)
42	1,2-Dichloropropane	63	5.436	5.443	(1.094)	7496	2.00000	1.84(aM)
75	1,3,5-Trimethylbenzene	105	9.074	9.075	(0.939)	18329	2.00000	2.01(a)
83	1,3-Dichlorobenzene	146	9.612	9.612	(0.994)	10726	2.00000	2.03(a)
54	1,3-Dichloropropane	76	6.990	6.983	(0.911)	10892	2.00000	2.03(a)
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	11094	2.00000	2.06(a)
26	2,2-Dichloropropane	77	3.516	3.516	(0.839)	9579	2.00000	2.20(a)
24	2-Butanone	43	3.602	3.580	(0.860)	8300	4.00000	2.44(a)
76	2-Chlorotoluene	91	8.981	8.981	(0.929)	18492	2.00000	2.19(a)
52	2-Hexanone	43	7.097	7.090	(0.925)	16198	4.00000	3.94(a)
77	4-Chlorotoluene	91	9.074	9.075	(0.939)	19584	2.00000	2.00(a)
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	16774	2.00000	1.92(a)
45	4-Methyl-2-Pentanone	43	6.331	6.331	(0.825)	23589	4.00000	3.93(a)
10	Acetone	43	1.976	1.976	(0.472)	9014	4.00000	2.58(a)
37	Benzene	78	4.519	4.519	(0.909)	23799	2.00000	1.97(a)
74	Bromobenzene	156	8.809	8.809	(0.911)	7018	2.00000	2.11(a)
29	Bromochloromethane	128	3.802	3.795	(0.908)	3782	2.00000	2.20(a)
39	Bromodichloromethane	83	5.729	5.729	(1.153)	8770	2.00000	2.00(a)
66	Bromoform	173	8.415	8.416	(1.097)	4039	2.00000	1.90(Ta)
6	Bromomethane	94	1.338	1.331	(0.320)	4643	2.00000	2.21(aM)
19	Carbon Disulfide	76	2.069	2.069	(0.494)	30171	4.00000	4.20(a)
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	8033	2.00000	2.14(aH)
59	Chlorobenzene	112	7.699	7.699	(1.004)	16287	2.00000	2.11(a)
7	Chloroethane	64	1.403	1.396	(0.335)	4545	2.00000	1.91(a)
28	Chloroform	83	3.917	3.910	(0.935)	11482	2.00000	2.09(a)
3	Chloromethane	50	1.081	1.081	(0.258)	12004	2.00000	2.14(a)
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.843)	6582	2.00000	2.04(a)
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	10377	2.00000	1.98(a)
55	Dibromochloromethane	129	7.183	7.183	(0.937)	6386	2.00000	2.00(a)
44	Dibromomethane	93	5.557	5.557	(1.118)	4661	2.00000	2.06(a)
2	Dichlorodifluoromethane	85	0.973	0.973	(0.232)	5236	2.00000	2.58(a)
61	Ethylbenzene	106	7.807	7.807	(1.018)	7960	2.00000	2.02(a)
91	Hexachlorobutadiene	225	11.488	11.481	(1.188)	1548	2.00000	0.80(a)
67	Isopropylbenzene	105	8.566	8.566	(1.117)	22491	2.00000	2.03(a)
62	m,p-Xylenes	106	7.907	7.907	(1.031)	19374	4.00000	4.21(a)
17	Methylene Chloride	84	2.305	2.305	(0.550)	9989	2.00000	1.16(a)
87	n-Butylbenzene	91	9.999	9.999	(1.034)	15661	2.00000	1.99(a)
73	n-Propylbenzene	91	8.917	8.917	(0.922)	26513	2.00000	2.03(a)
92	Naphthalene	128	11.553	11.546	(1.195)	3269	2.00000	1.20(aM)
63	o-Xylene	106	8.244	8.244	(1.075)	9559	2.00000	2.04(a)
81	sec-Butylbenzene	105	9.526	9.526	(0.985)	20810	2.00000	2.05(a)
64	Styrene	104	8.265	8.265	(1.078)	17087	2.00000	2.06(a)
78	tert-Butylbenzene	119	9.340	9.340	(0.966)	15013	2.00000	2.09(a)
56	Tetrachloroethene	164	6.933	6.933	(0.904)	4352	2.00000	2.11(a)
50	Toluene	91	6.453	6.453	(0.841)	24528	2.00000	2.07(a)
20	trans-1,2-Dichloroethene	96	2.535	2.527	(0.605)	5083	2.00000	2.00(a)
51	trans-1,3-Dichloropropene	75	6.689	6.682	(1.346)	9892	2.00000	2.03(a)
38	Trichloroethene	130	5.214	5.206	(1.049)	5856	2.00000	2.05(a)
8	Trichlorofluoromethane	101	1.560	1.560	(0.373)	7935	2.00000	1.99(a)
5	Vinyl Chloride	62	1.138	1.138	(0.272)	9412	2.00000	2.12(a)

QC Flag Legend

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

QC Flag Legend

M - Compound response manually integrated.
H - Operator selected an alternate compound hit.



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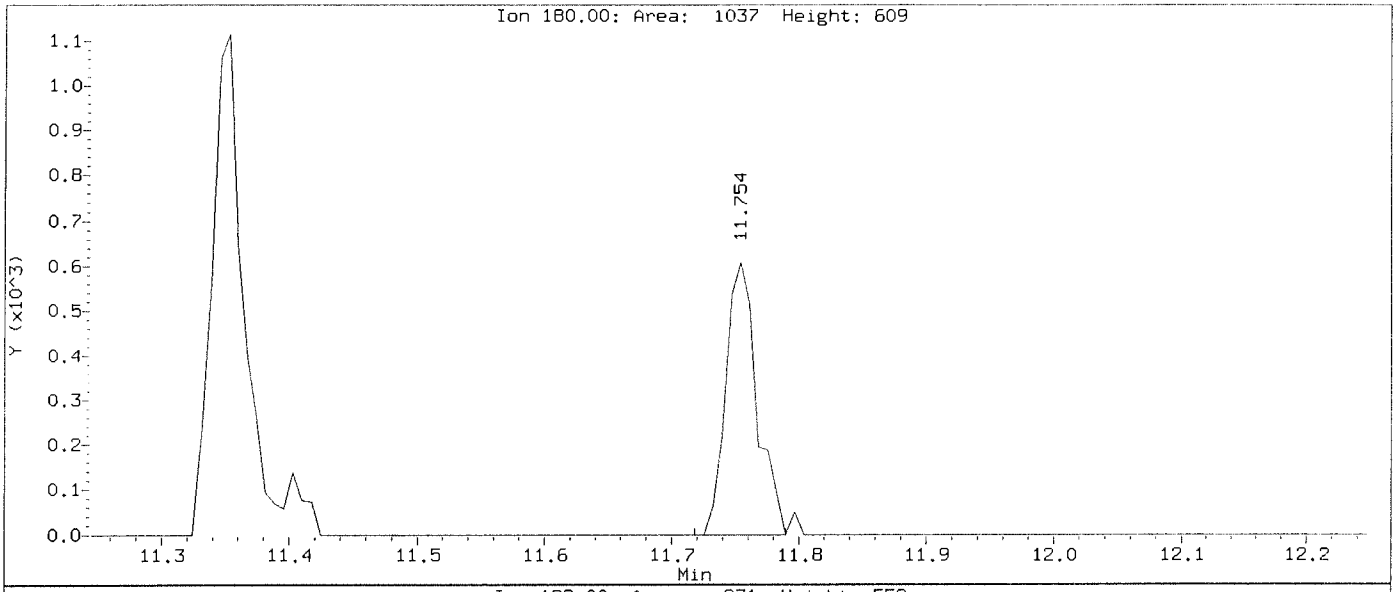
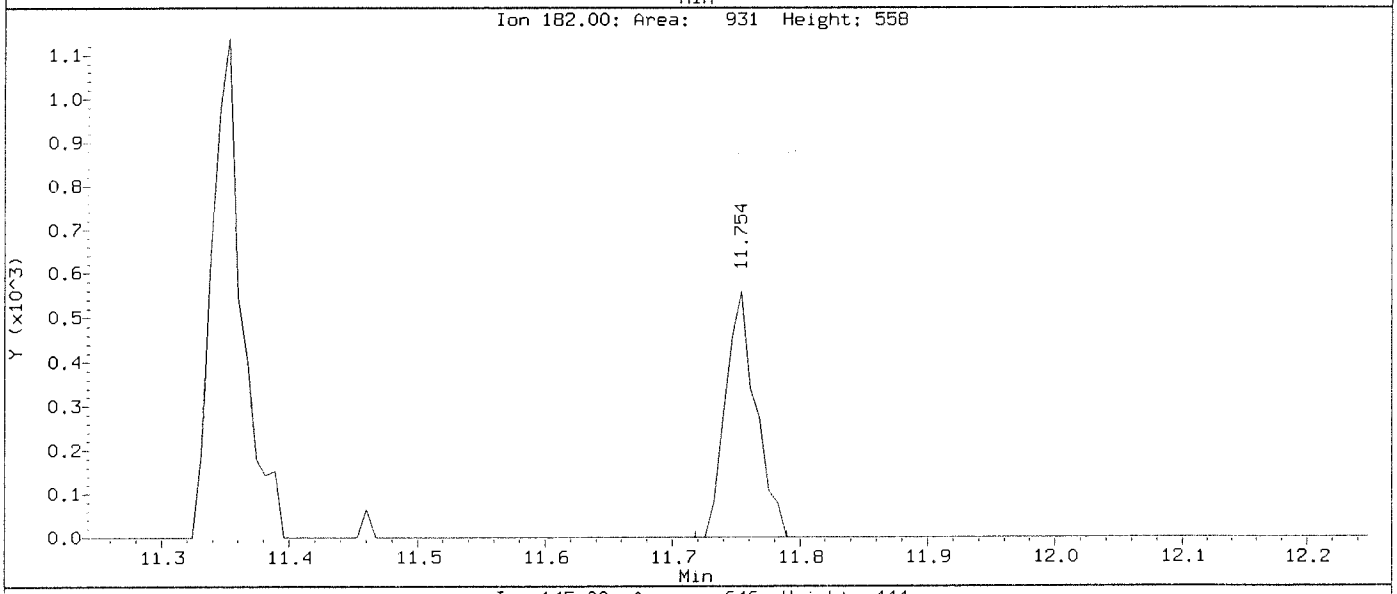
Date : 19-JUN-2020 13:06
Client ID: VSTD002
Sample Info: VSTD002;VSTD002;1;4;
Purge Volume: 5.0
Column phase: DB624

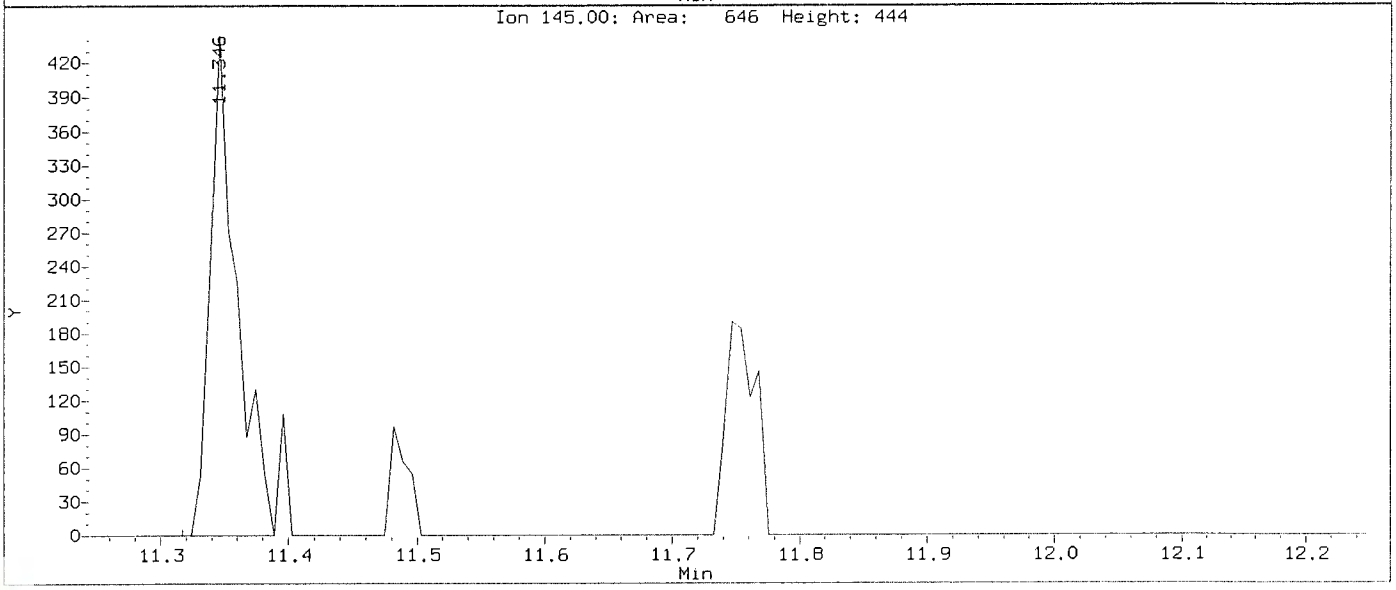
Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\nahstws005\Target\chem\voa6.i\X200619.b\Before\X061905.D
Injection Date: 19-JUN-2020 13:06
Instrument: voa6.i
Client Sample ID: VSTD002

Compound: 1,2,3-Trichlorobenzene
CAS Number: 87-61-6







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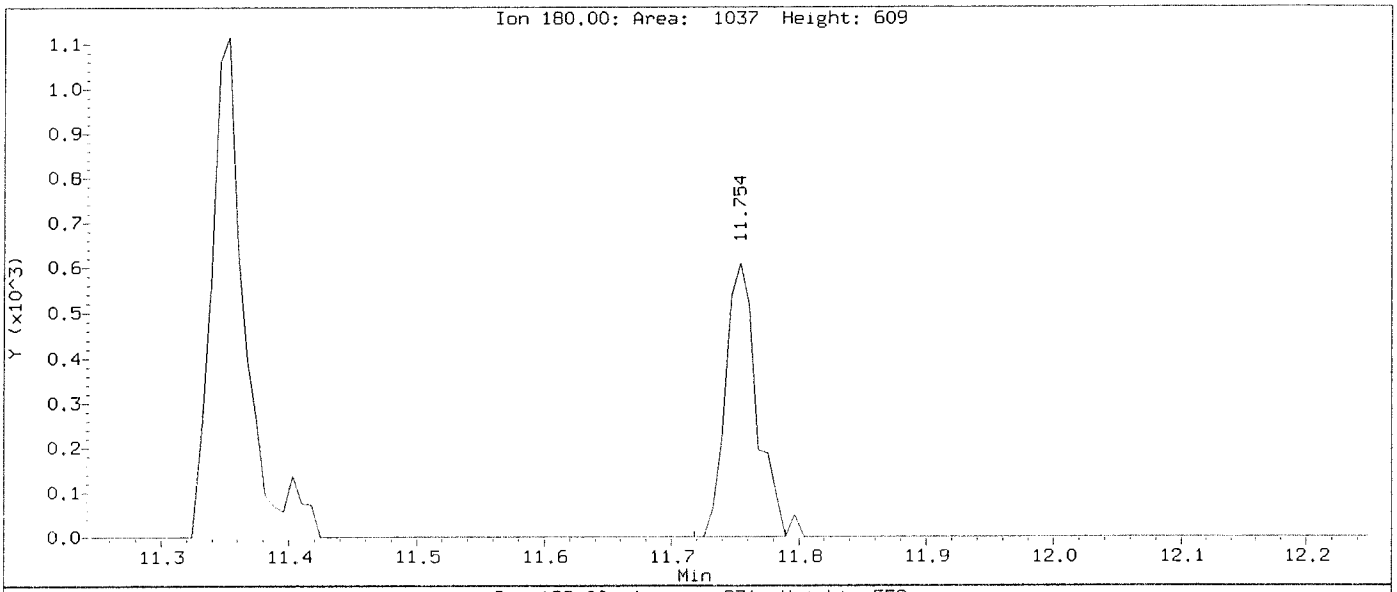
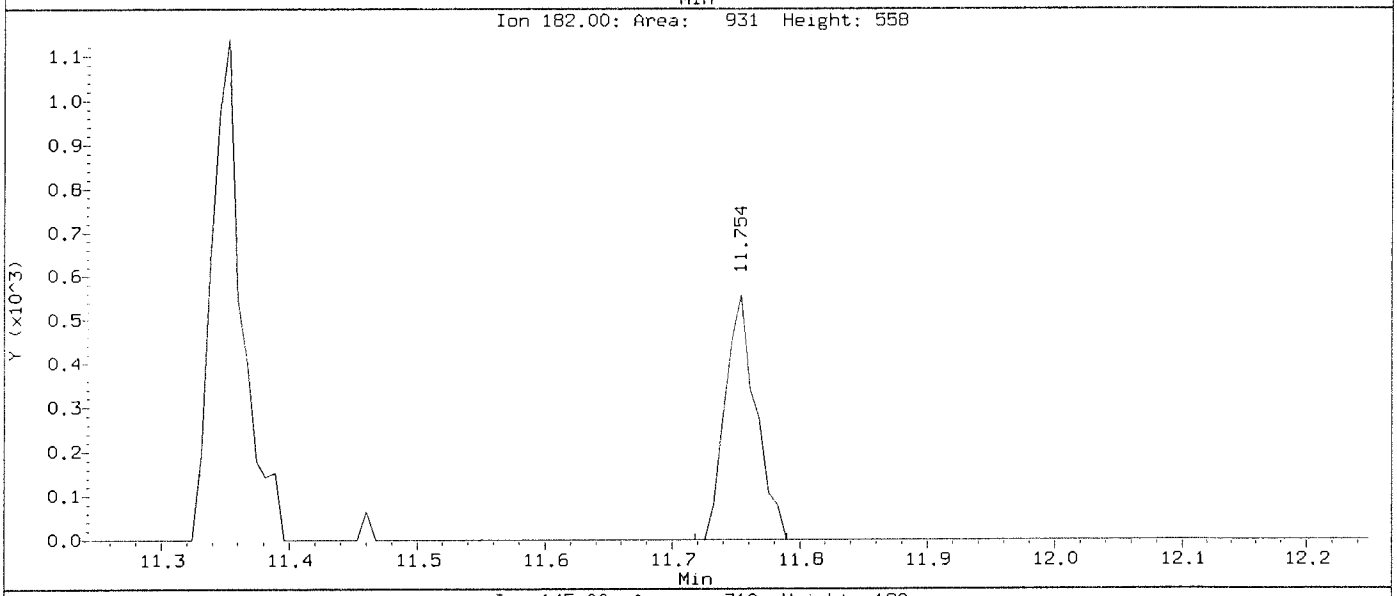
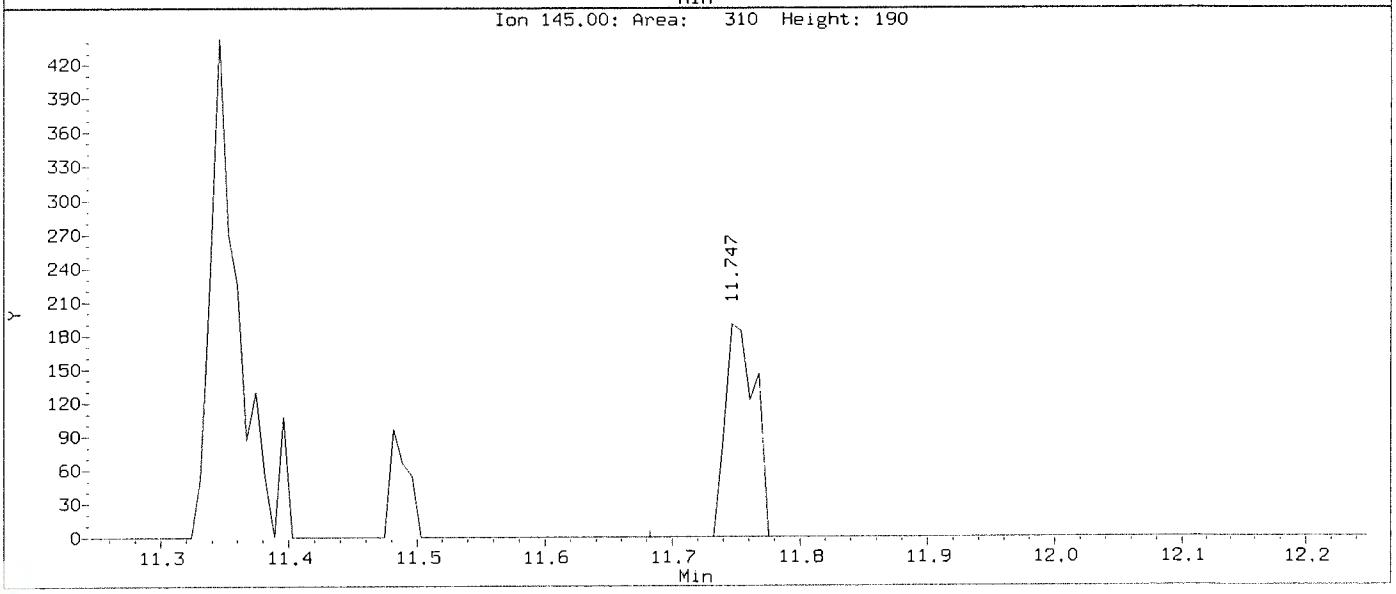
Instrument: voa6.i
Client Sample ID: VSTD002

Compound: 1,2,3-Trichlorobenzene
CAS Number: 87-61-6







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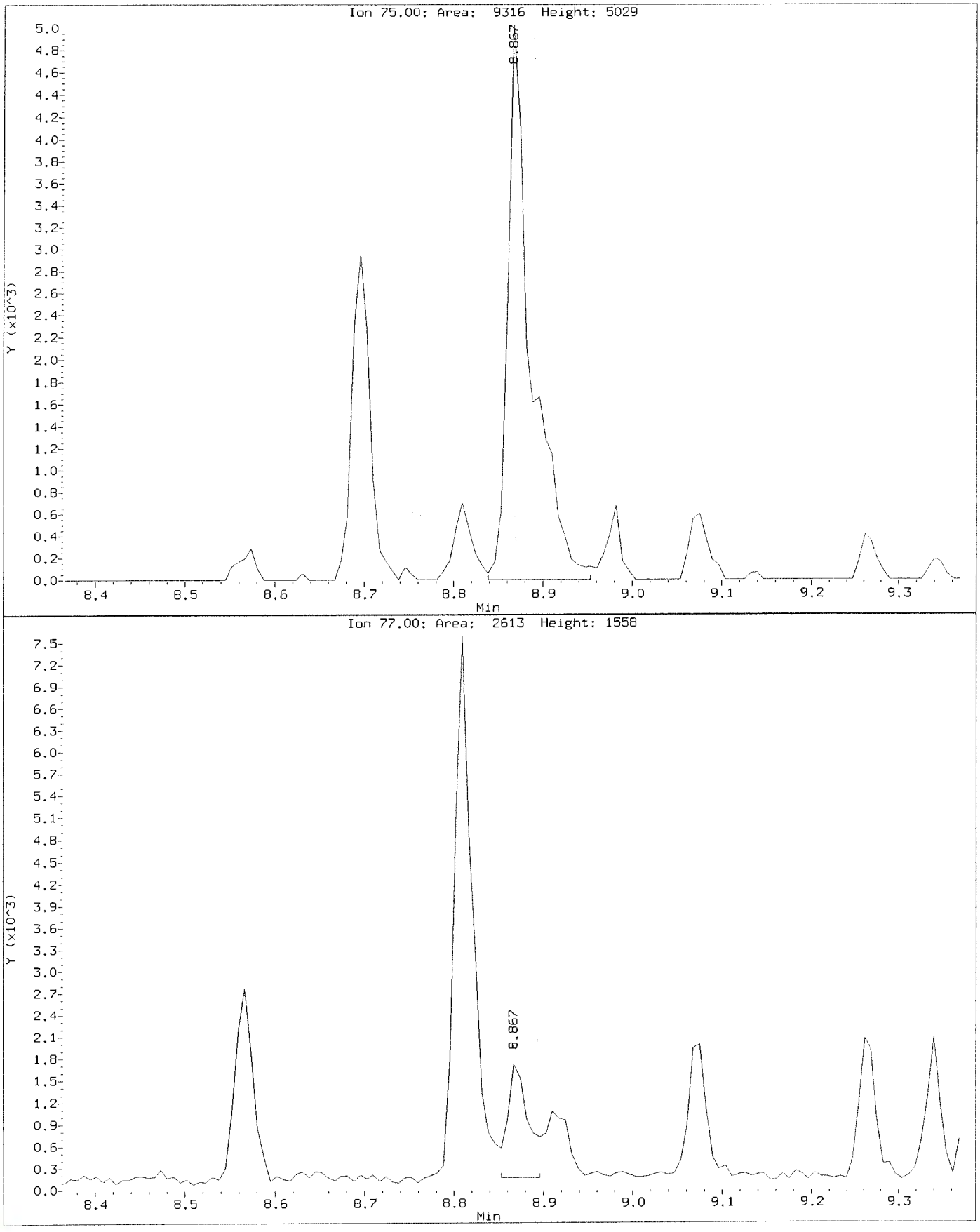
Injection Date: 19-JUN-2020 13:06
Instrument: voa6.i
Client Sample ID: VSTD002

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4



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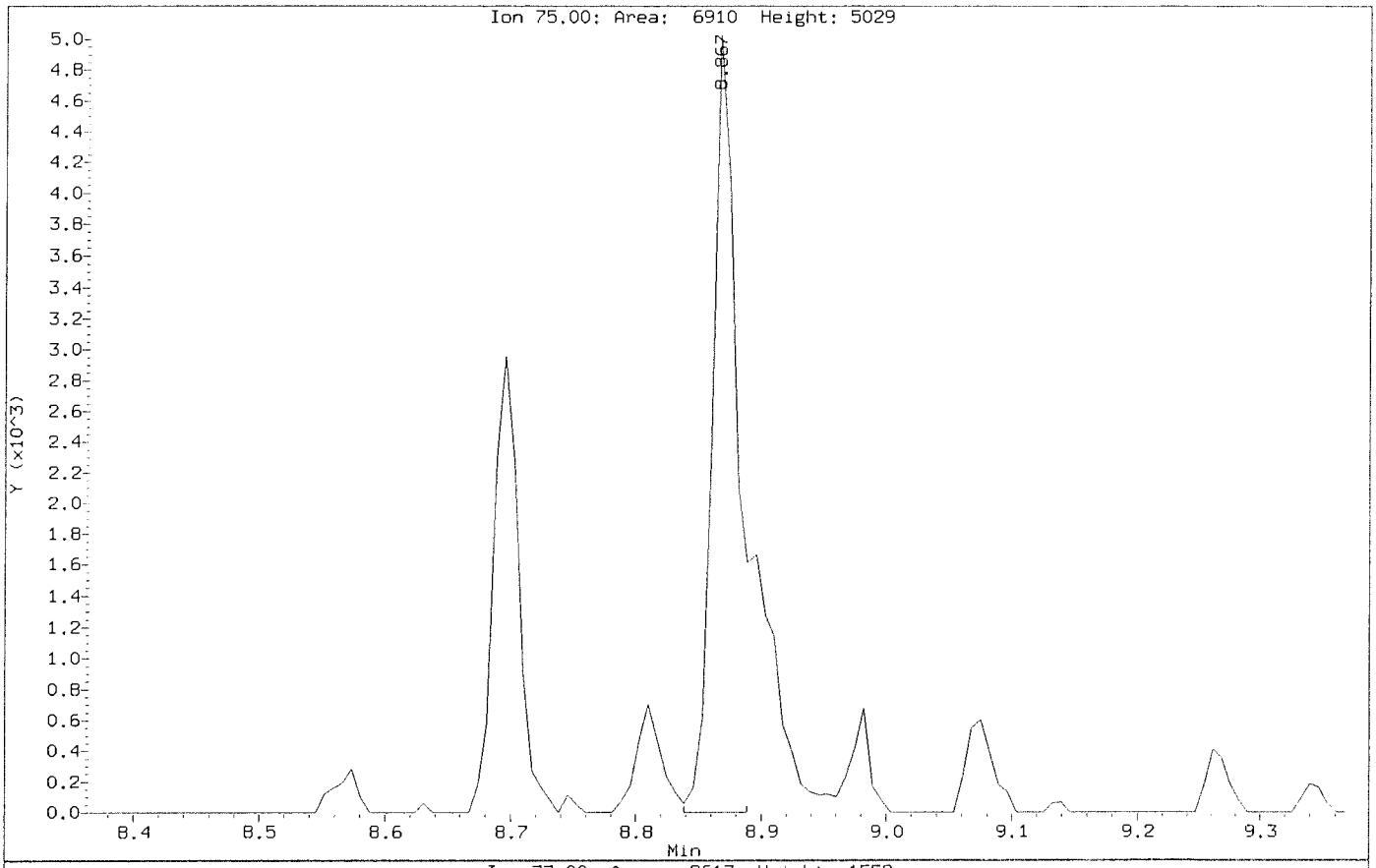
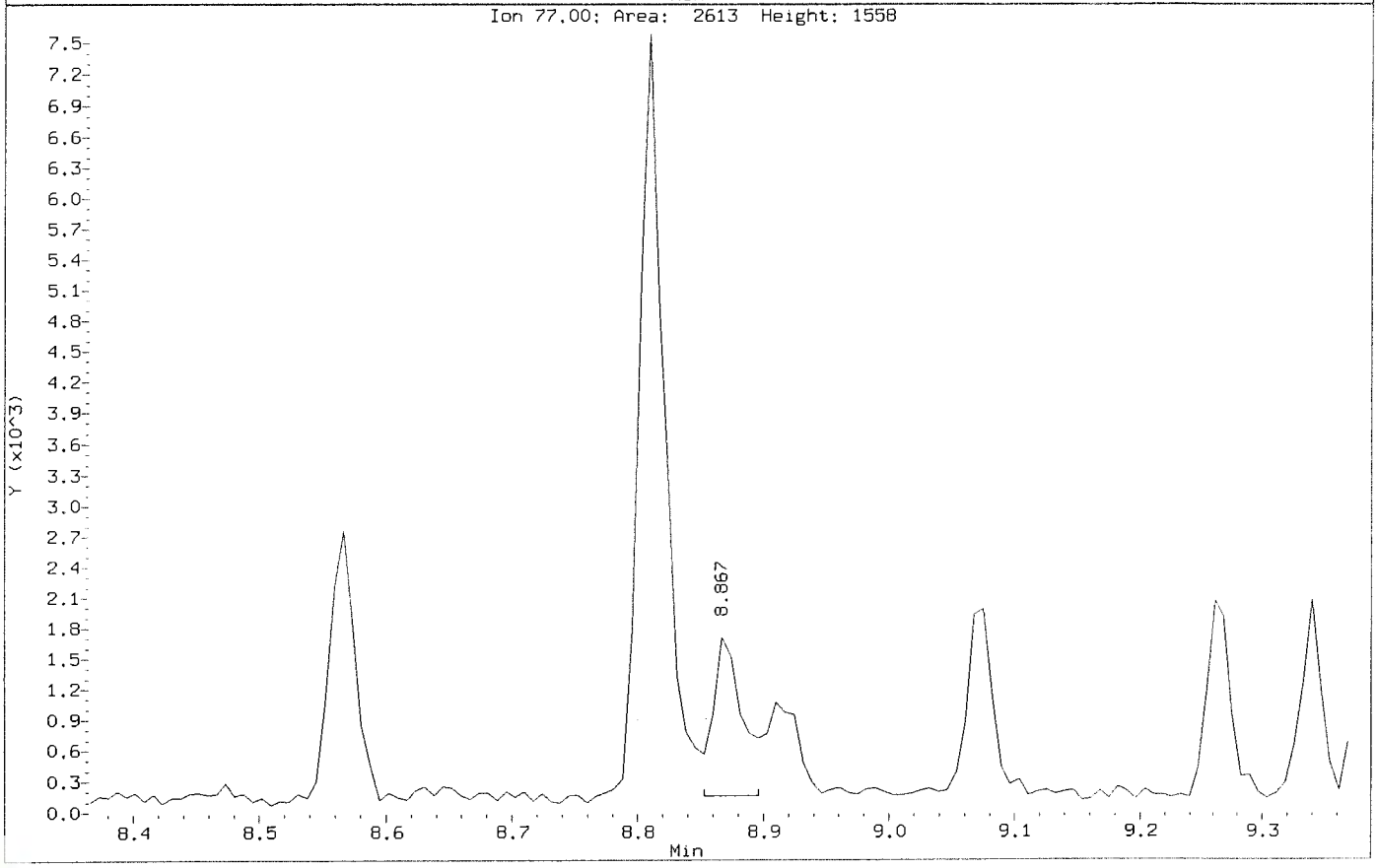
Injection Date: 19-JUN-2020 13:06
Instrument: voa6.i
Client Sample ID: VSTD002

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





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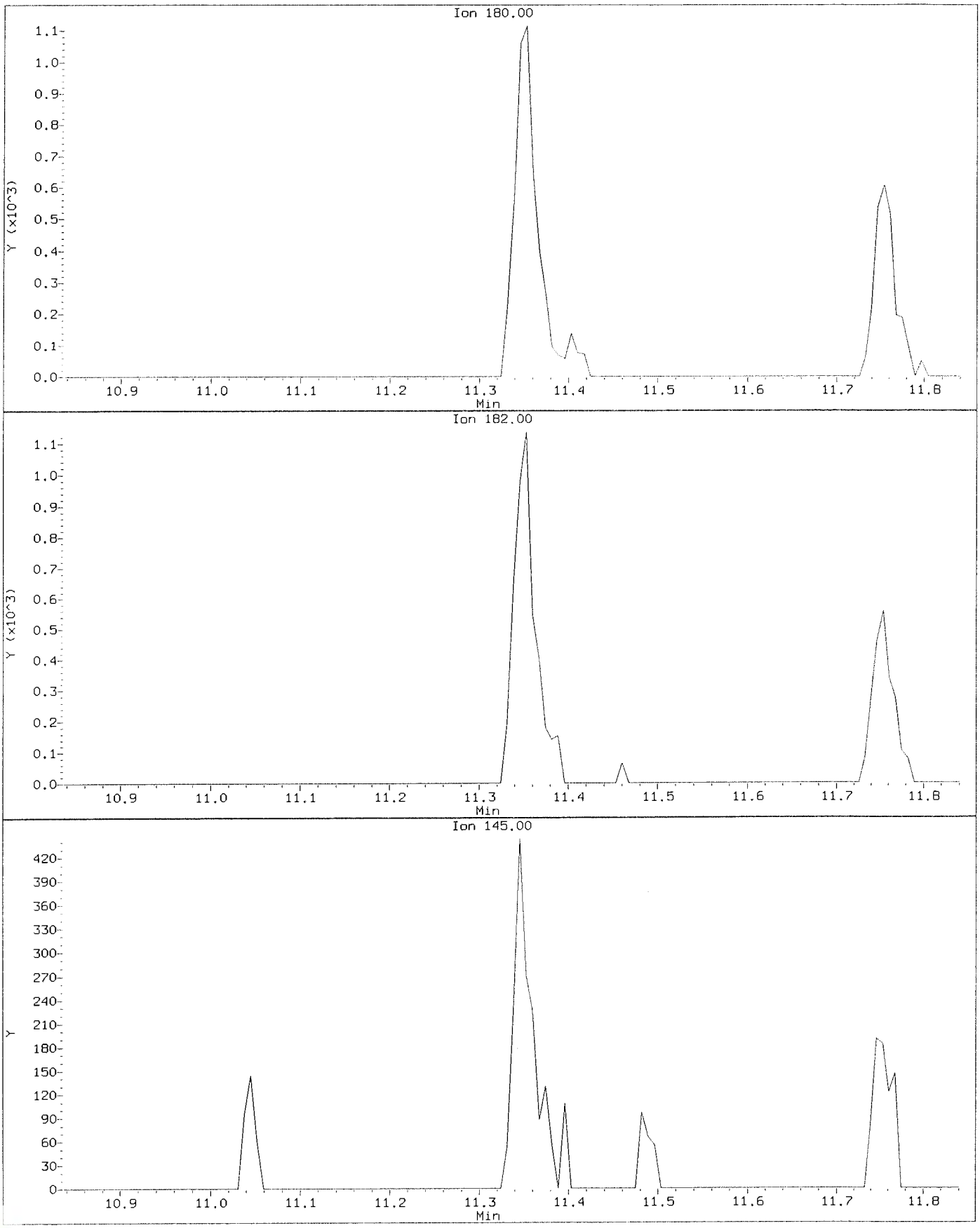
Injection Date: 19-JUN-2020 13:06
Instrument: voa6.i
Client Sample ID: VSTD002

Compound: 1,2,4-Trichlorobenzene
CAS Number: 120-82-1



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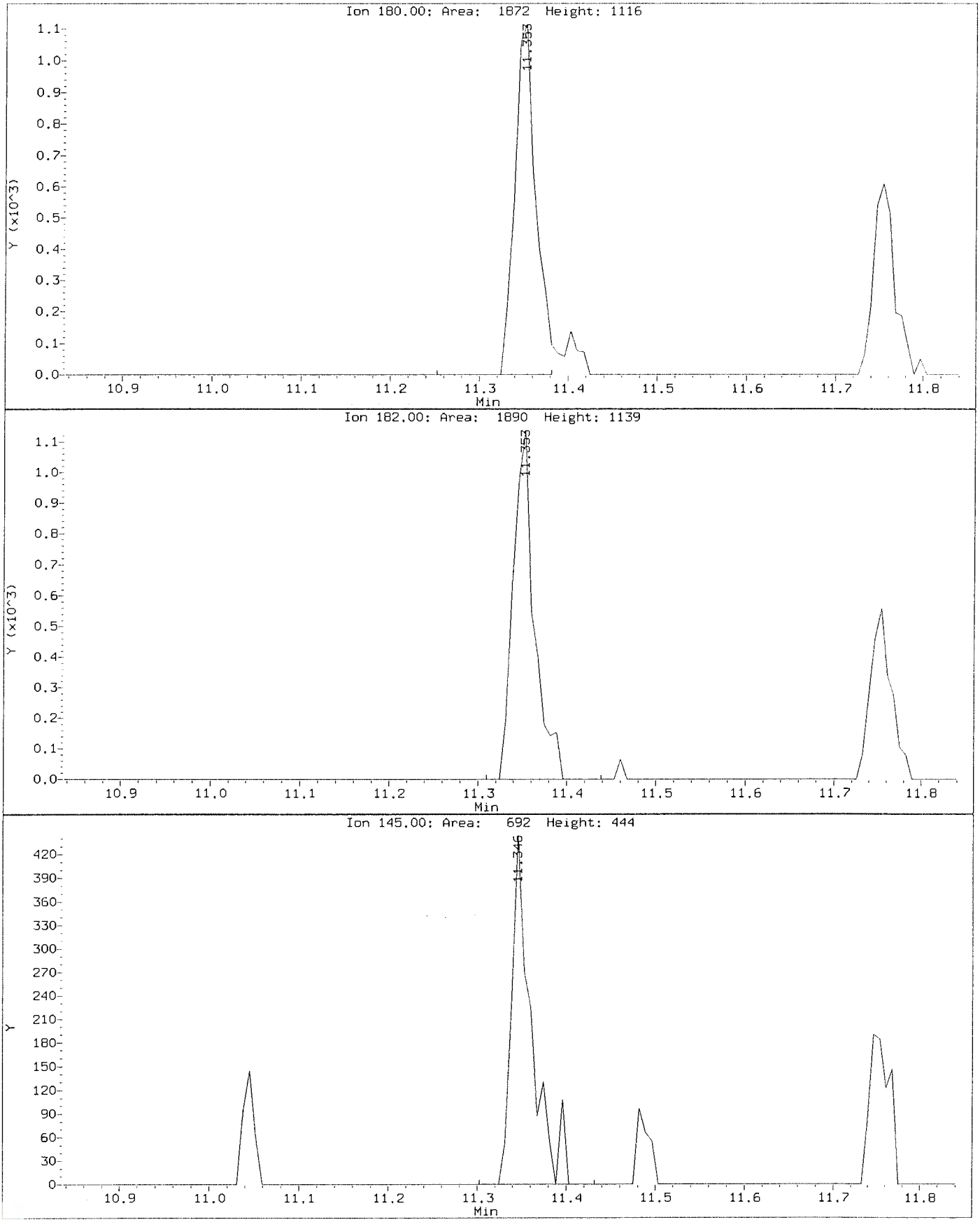
Instrument: voa6.i
Client Sample ID: VSTD002

Compound: 1,2,4-Trichlorobenzene
CAS Number: 120-82-1



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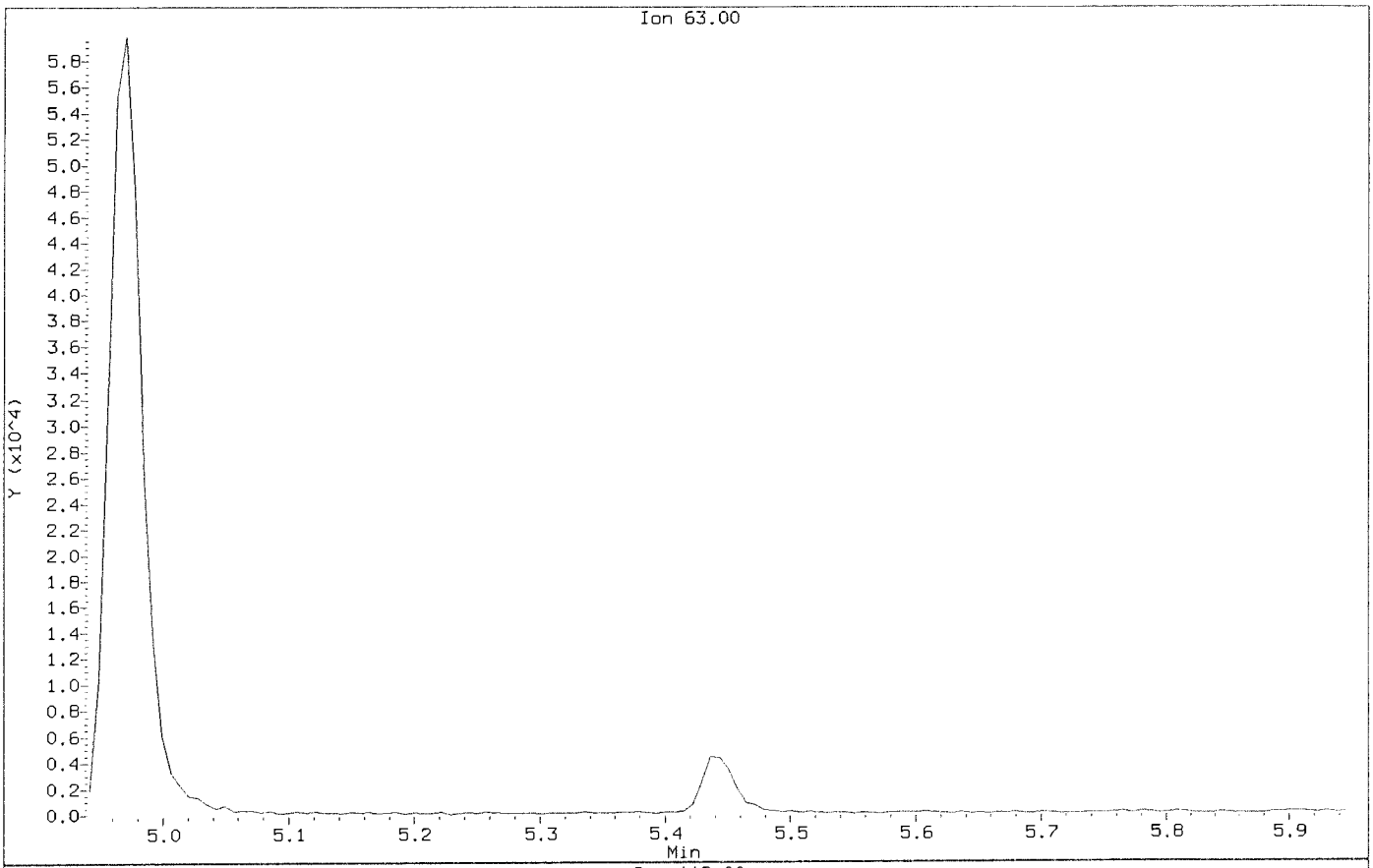
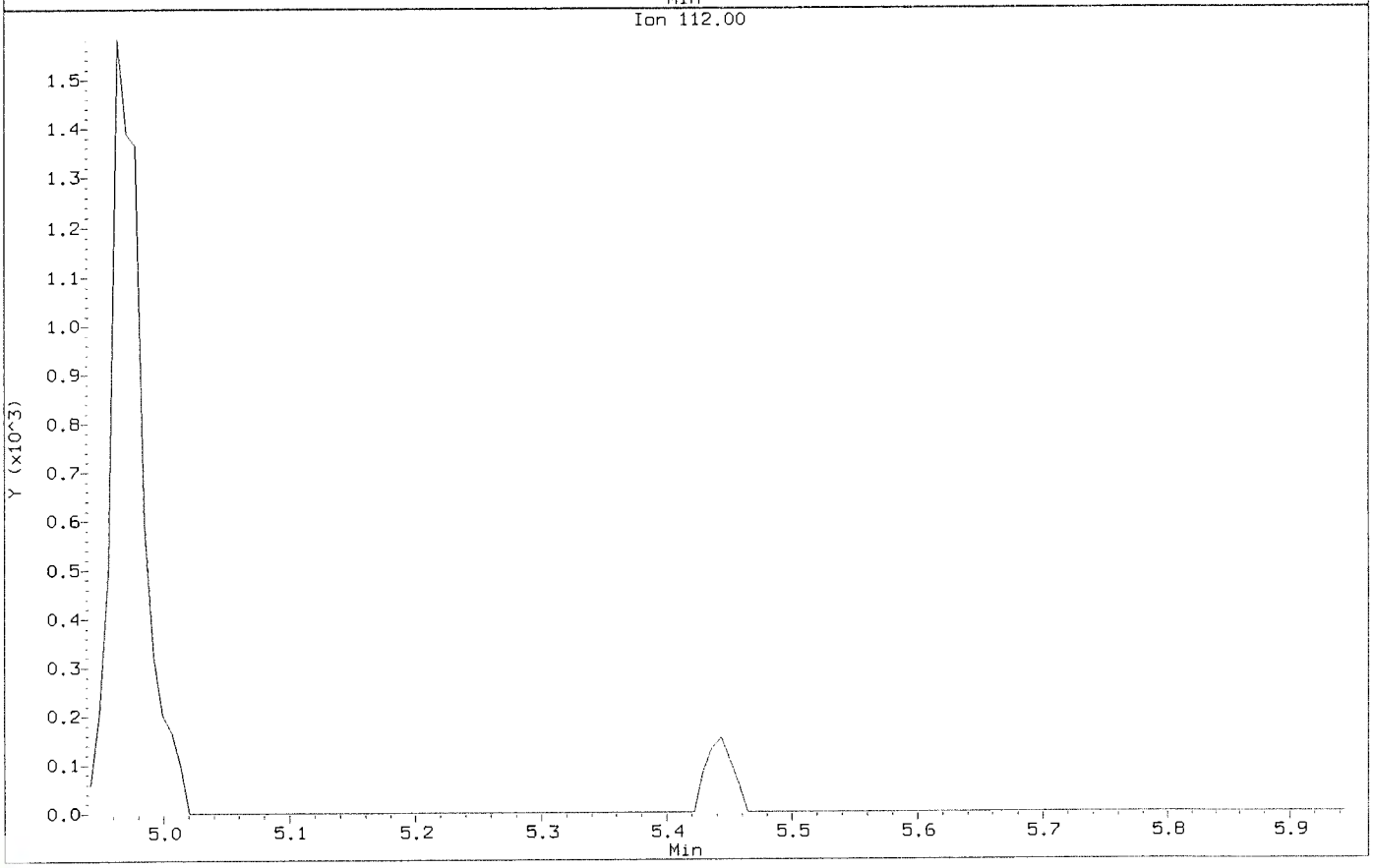
Injection Date: 19-JUN-2020 13:06
Instrument: voa6.i
Client Sample ID: VSTD002

Compound: 1,2-Dichloropropane
CAS Number: 78-87-5





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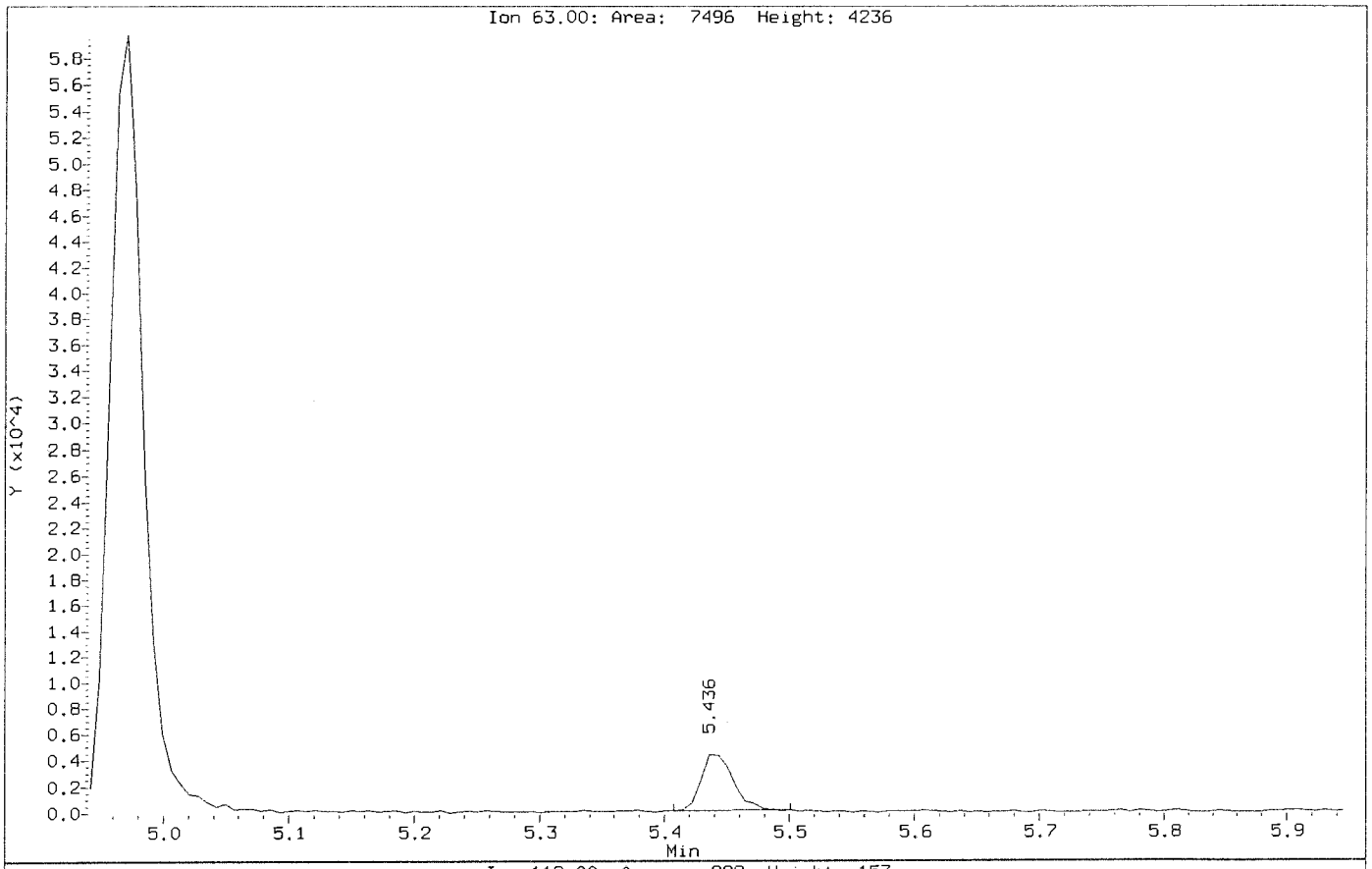
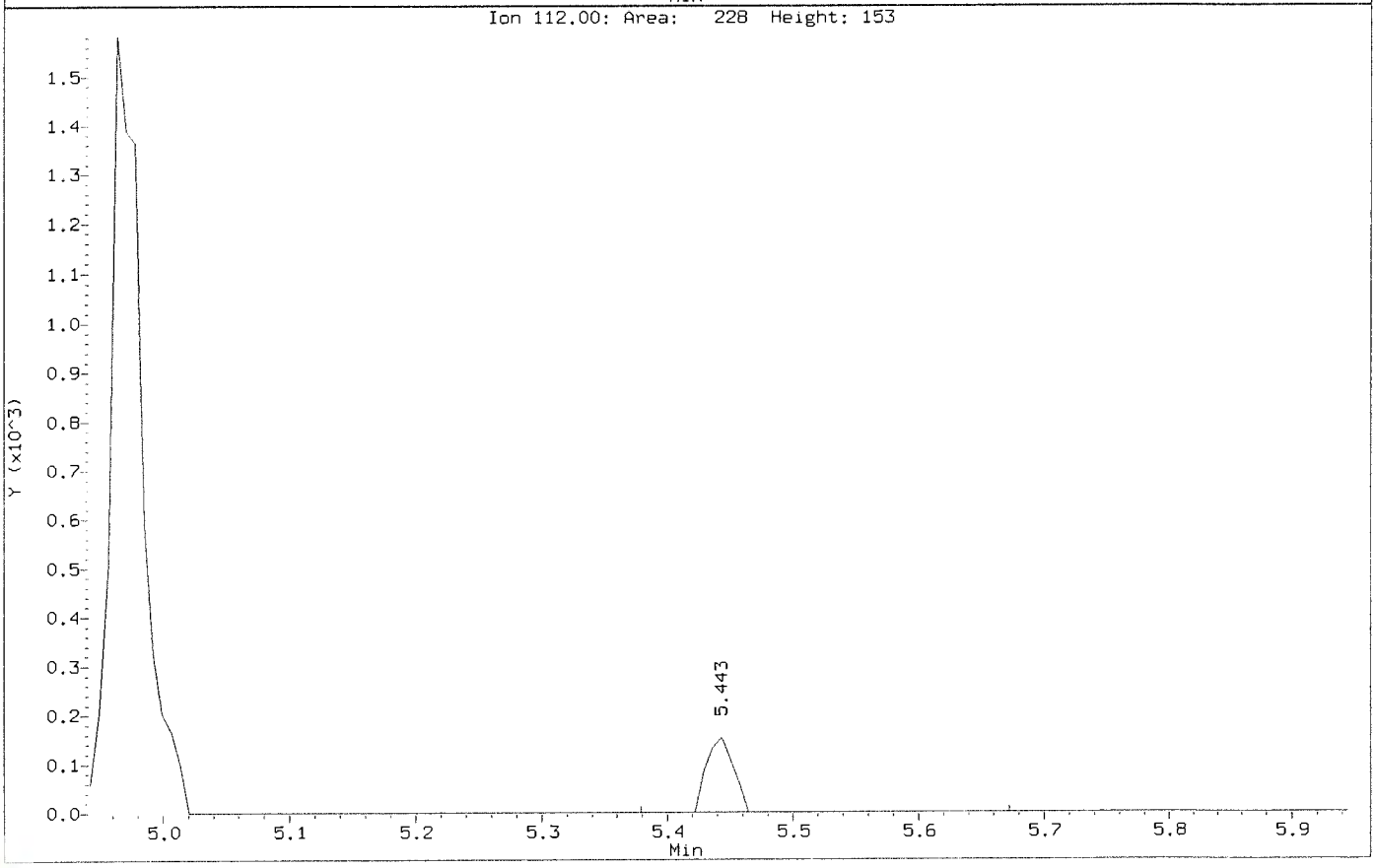
Instrument: voa6.i
Client Sample ID: VSTD002

Compound: 1,2-Dichloropropane
CAS Number: 78-87-5





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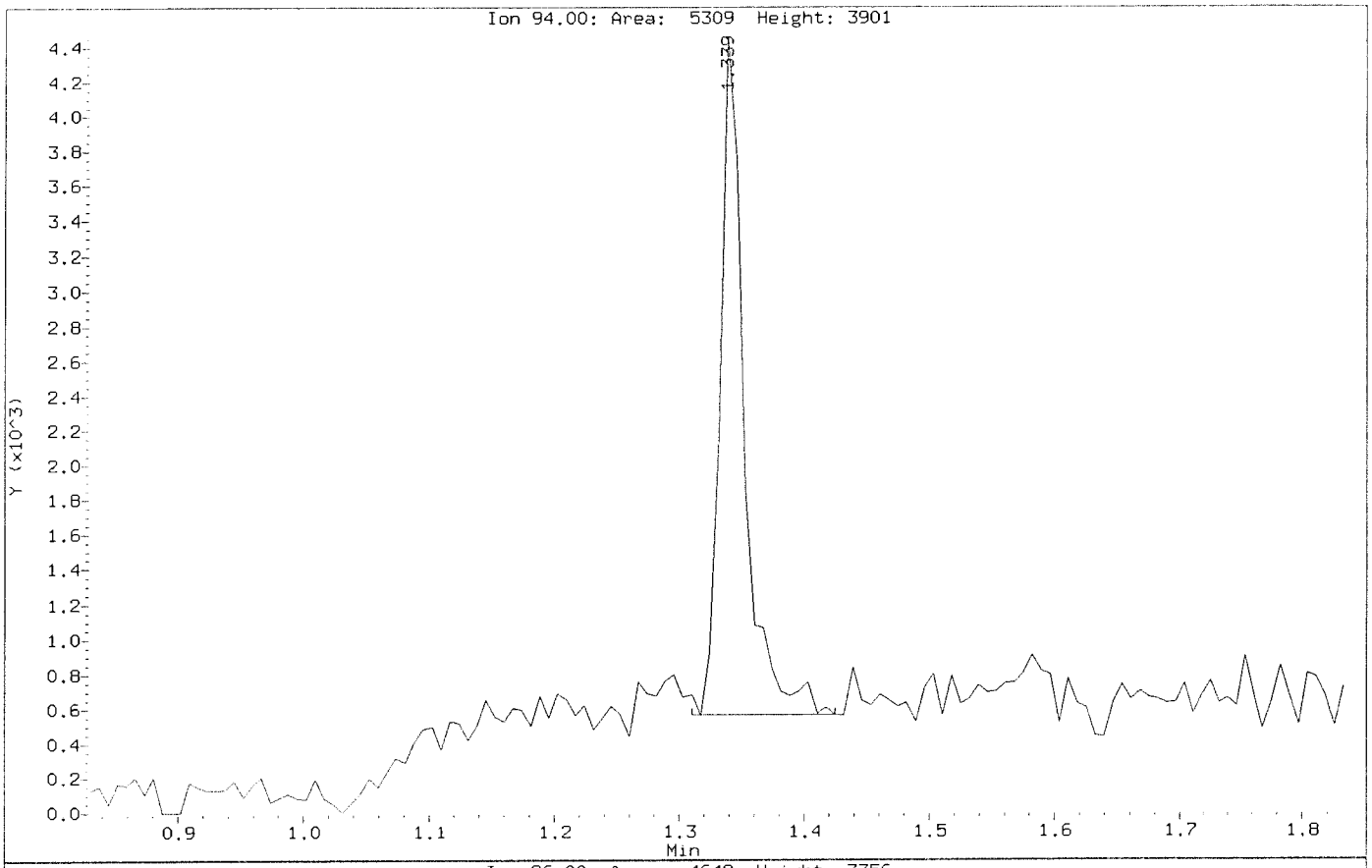
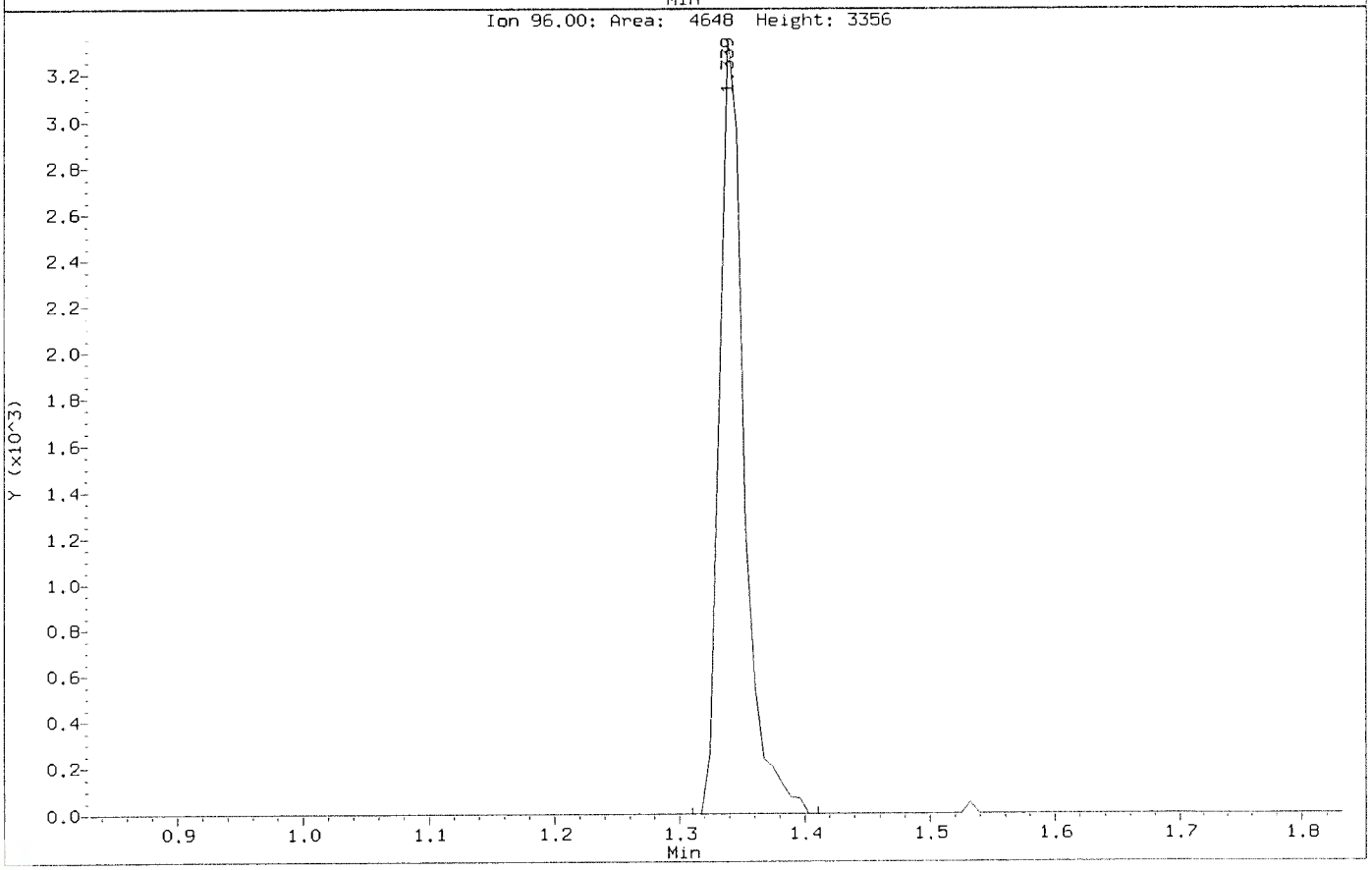
Injection Date: 19-JUN-2020 13:06
Instrument: voa6.i
Client Sample ID: VSTD002

Compound: Bromomethane
CAS Number: 74-83-9





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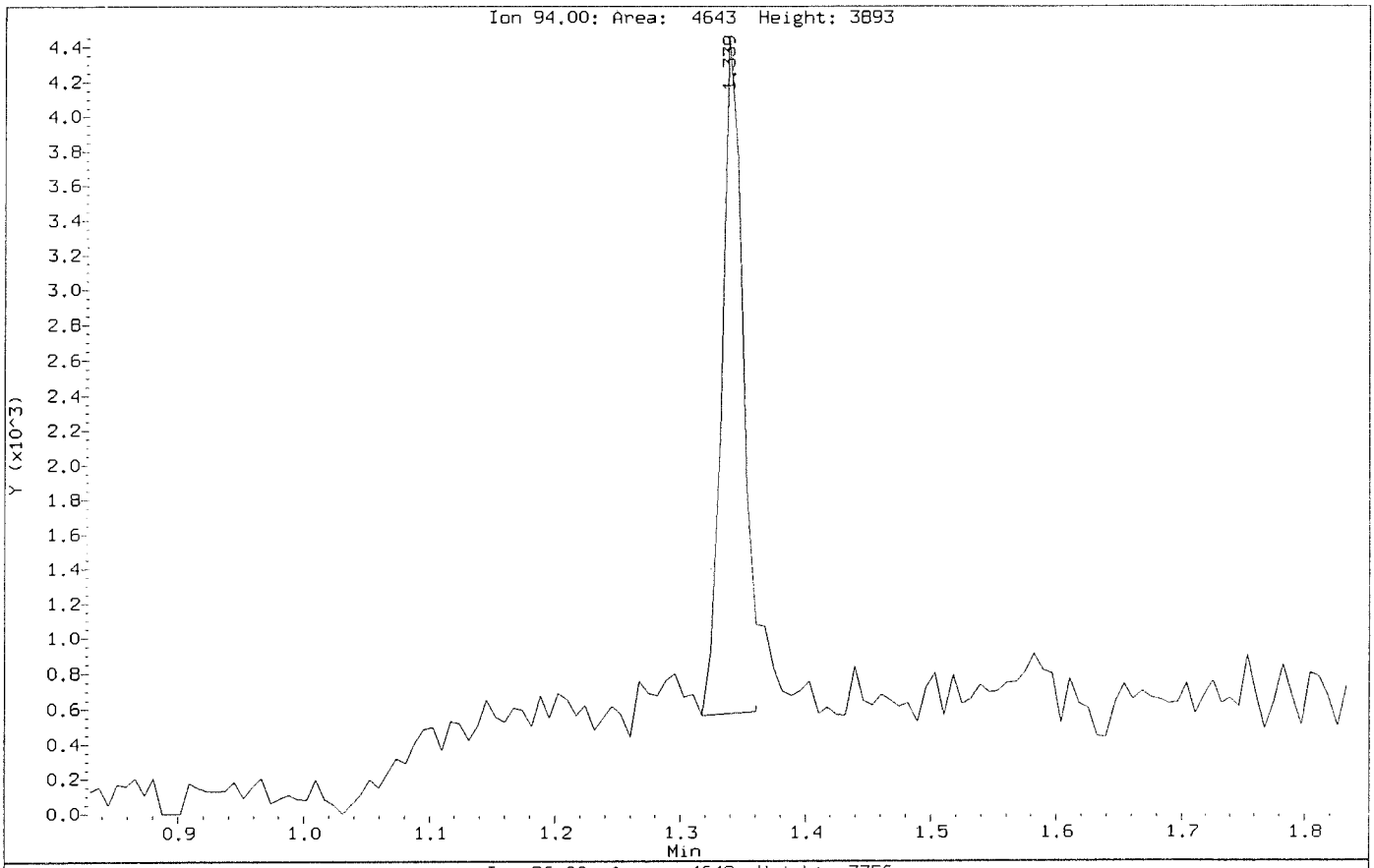
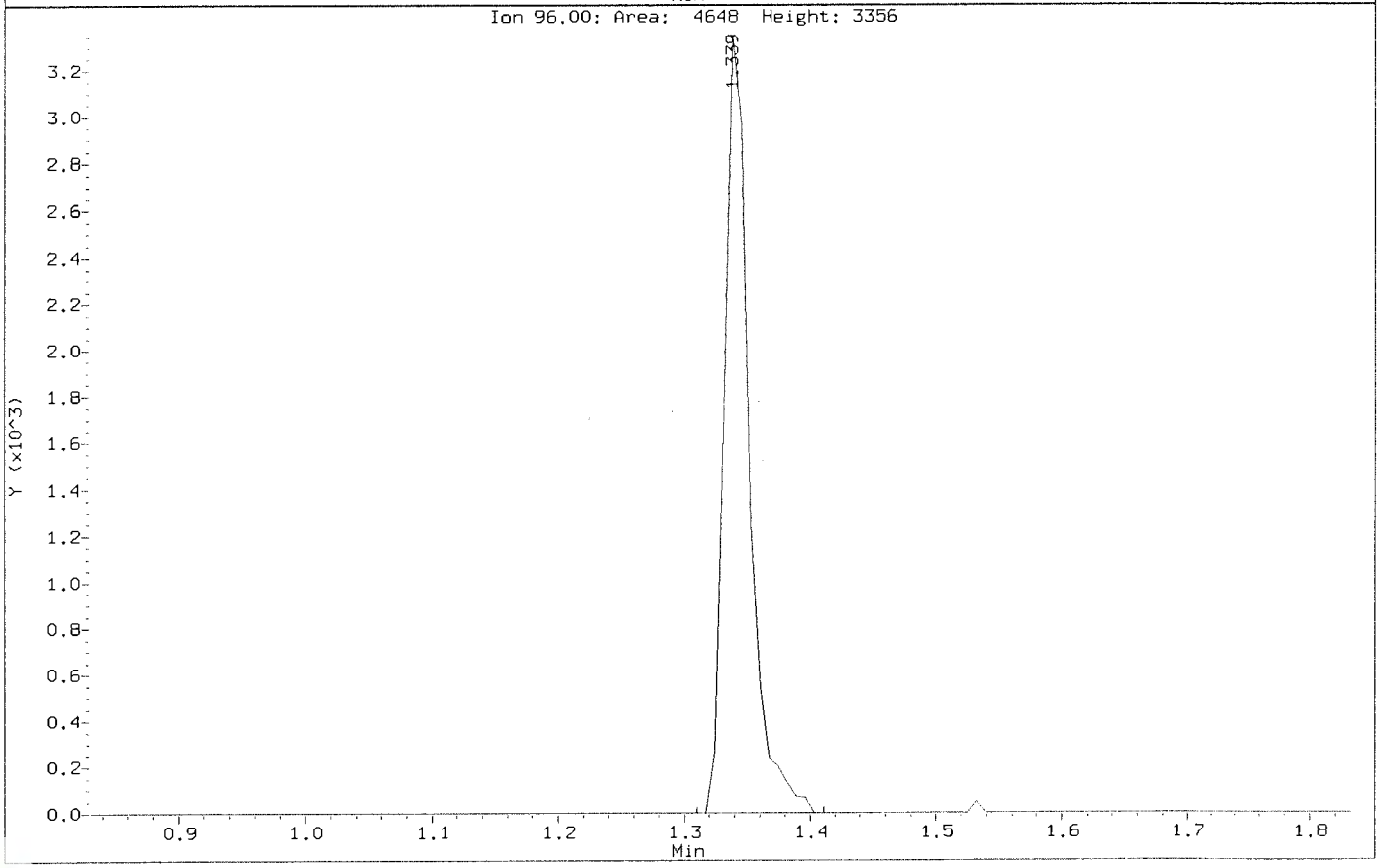
Injection Date: 19-JUN-2020 13:06
Instrument: voa6.i
Client Sample ID: VSTD002

Compound: Bromomethane
CAS Number: 74-83-9





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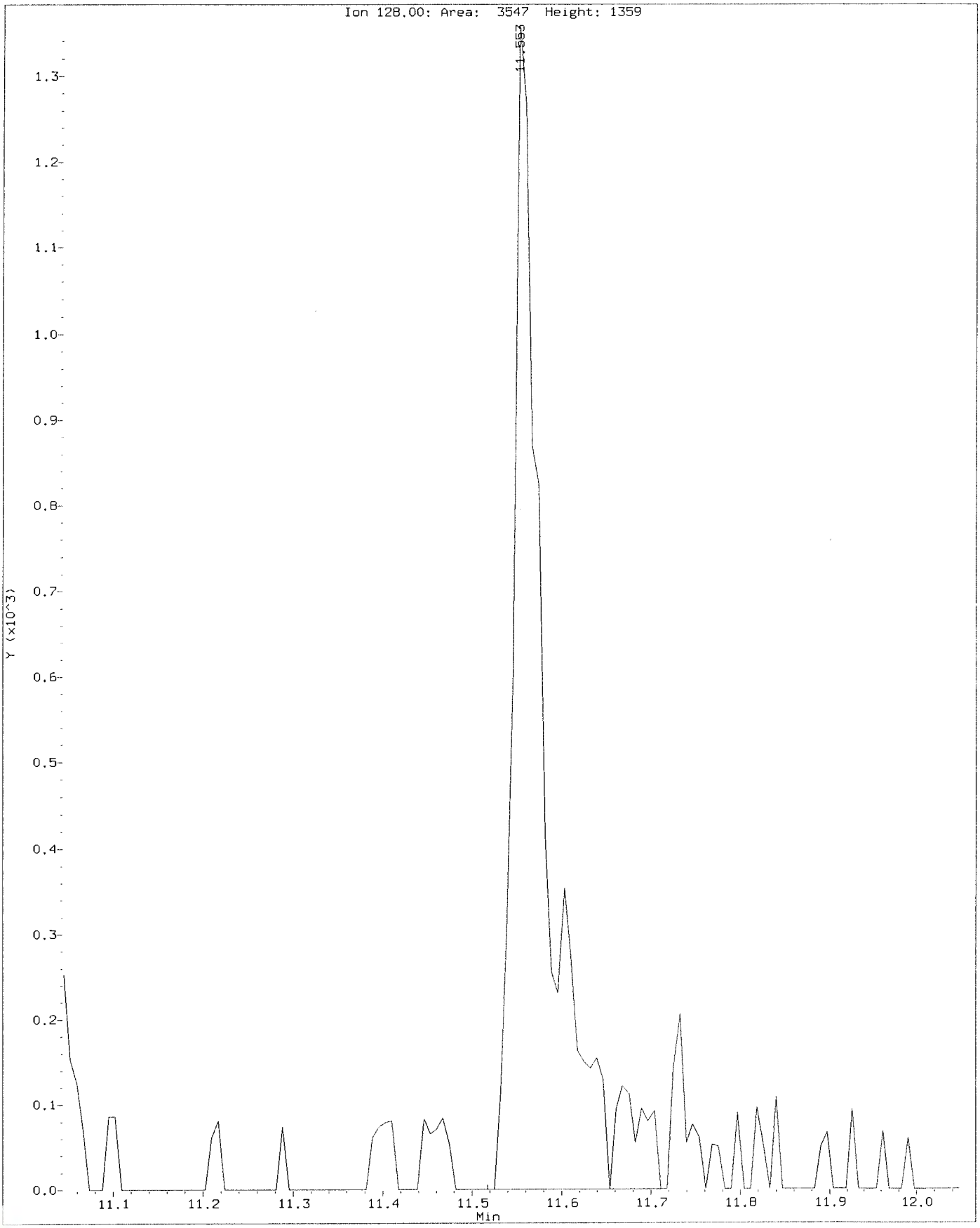
Injection Date: 19-JUN-2020 13:06
Instrument: voa6.i
Client Sample ID: VSTD002

Compound: Naphthalene
CAS Number: 91-20-3



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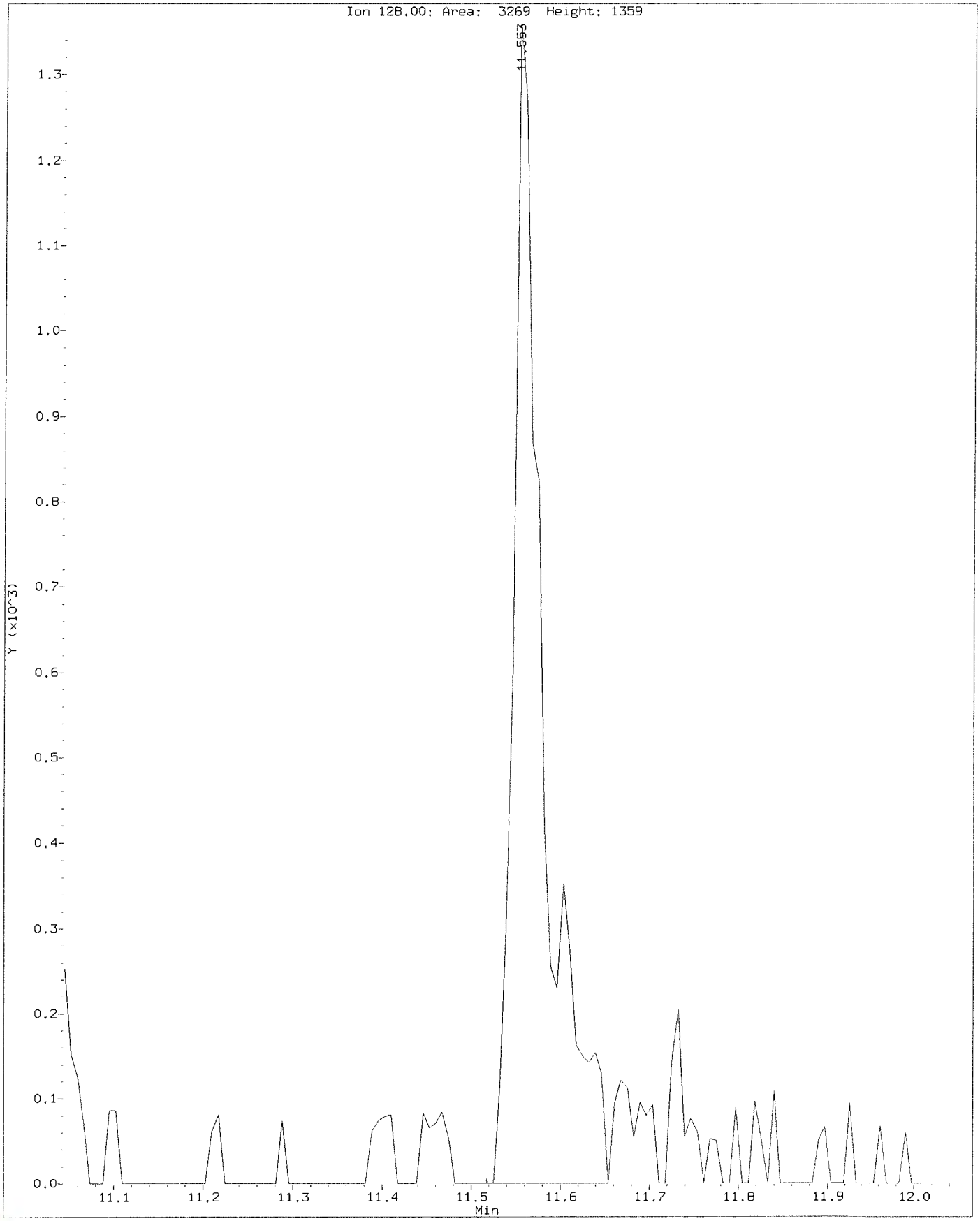
Injection Date: 19-JUN-2020 13:06
Instrument: voa6.i
Client Sample ID: VSTD002

Compound: Naphthalene
CAS Number: 91-20-3



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Data file : \\nahstws005\Target\chem\voa6.i\X200619.b\X061906.D
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Inj Date : 19-JUN-2020 13:29
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\X200619.b\8260W.m
Meth Date : 09-Jul-2020 09:58 voa6.i Quant Type: ISTD
Cal Date : 19-JUN-2020 13:29 Cal File: X061906.D
Als bottle: 7 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14

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	4.189	(1.000)	232139	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	435154	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	403441	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.669	(1.000)	182222	50.0000	
$ 30 Dibromofluoromethane	113	4.111	4.103	(0.983)	16708	5.00000	5.61
$ 35 1,2-Dichloroethane-d4	65	4.483	4.476	(1.072)	23826	5.00000	4.93(aM)
$ 48 Toluene-d8	98	6.389	6.388	(0.833)	56214	5.00000	5.60
$ 69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	22486	5.00000	5.47
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	16110	5.00000	5.48
31 1,1,1-Trichloroethane	97	4.082	4.089	(0.976)	23080	5.00000	5.35
68 1,1,2,2-Tetrachloroethane	83	8.838	8.845	(0.915)	19832	5.00000	5.47
53 1,1,2-Trichloroethane	83	6.840	6.847	(0.892)	13752	5.00000	5.30
22 1,1-Dichloroethane	63	2.929	2.921	(0.700)	37479	5.00000	5.19
11 1,1-Dichloroethene	96	1.919	1.911	(0.459)	11331	5.00000	4.99(a)
32 1,1-Dichloropropene	75	4.283	4.282	(0.862)	19654	5.00000	5.01
93 1,2,3-Trichlorobenzene	180	11.754	11.746	(1.216)	2744	5.00000	4.66(a)
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.918)	17335	5.00000	5.14(M)
90 1,2,4-Trichlorobenzene	180	11.345	11.338	(1.174)	4935	5.00000	4.57(aM)
79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.971)	52272	5.00000	5.26
89 1,2-Dibromo-3-Chloropropane	155	10.665	10.658	(1.104)	1368	5.00000	4.75(a)
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	17784	5.00000	5.58
88 1,2-Dichlorobenzene	146	9.999	9.999	(1.035)	26878	5.00000	5.44
33 1,2-Dichloroethane	62	4.562	4.562	(0.918)	31544	5.00000	5.53

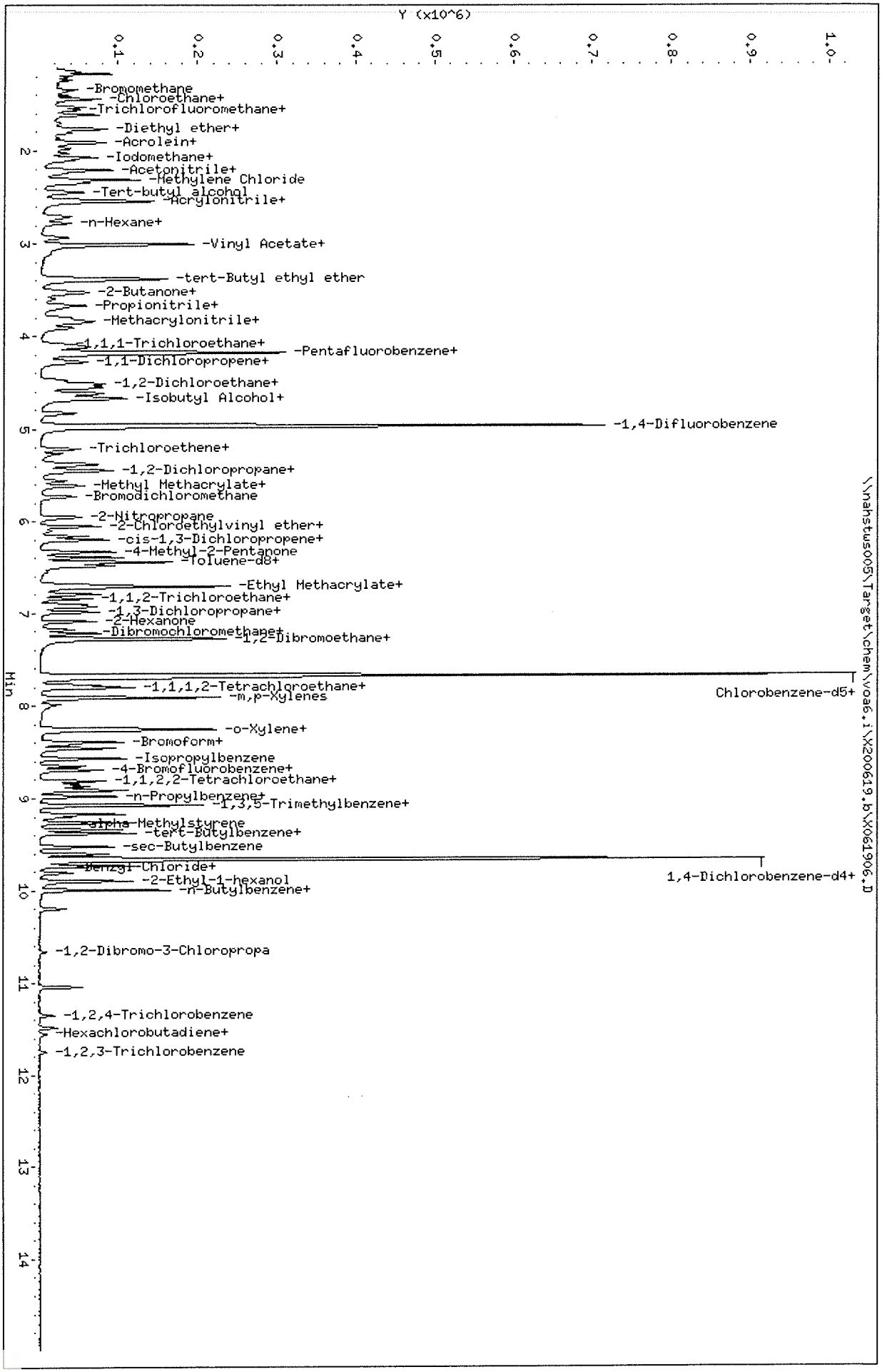
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
42 1,2-Dichloropropane	63	5.443	5.443	(1.095)	21779	5.00000	5.31
75 1,3,5-Trimethylbenzene	105	9.068	9.075	(0.938)	48501	5.00000	5.17
83 1,3-Dichlorobenzene	146	9.612	9.612	(0.995)	28398	5.00000	5.23
54 1,3-Dichloropropane	76	6.983	6.983	(0.910)	29366	5.00000	5.40
84 1,4-Dichlorobenzene	146	9.684	9.683	(1.002)	28544	5.00000	5.16
26 2,2-Dichloropropane	77	3.516	3.516	(0.841)	23392	5.00000	5.19
24 2-Butanone	43	3.588	3.580	(0.858)	24314	10.0000	8.32
76 2-Chlorotoluene	91	8.974	8.981	(0.929)	45287	5.00000	5.23
52 2-Hexanone	43	7.091	7.090	(0.924)	43780	10.0000	10.50
77 4-Chlorotoluene	91	9.075	9.075	(0.939)	55452	5.00000	5.52
82 p-Isopropyltoluene	119	9.655	9.655	(0.999)	44893	5.00000	5.01
45 4-Methyl-2-Pentanone	43	6.331	6.331	(0.825)	65858	10.0000	10.83
10 Acetone	43	1.976	1.976	(0.473)	19913	10.0000	8.37
37 Benzene	78	4.519	4.519	(0.909)	62696	5.00000	5.15
74 Bromobenzene	156	8.810	8.809	(0.912)	17680	5.00000	5.17
29 Bromochloromethane	128	3.803	3.795	(0.909)	9107	5.00000	5.11
39 Bromodichloromethane	83	5.730	5.729	(1.153)	23592	5.00000	5.32
66 Bromoform	173	8.416	8.416	(1.097)	10854	5.00000	5.04
6 Bromomethane	94	1.339	1.331	(0.320)	11610	5.00000	5.34
19 Carbon Disulfide	76	2.069	2.069	(0.495)	73696	10.0000	9.88
34 Carbon Tetrachloride	117	4.268	4.268	(0.859)	18948	5.00000	4.99(aH)
59 Chlorobenzene	112	7.699	7.699	(1.004)	40971	5.00000	5.24
7 Chloroethane	64	1.403	1.396	(0.336)	12334	5.00000	4.99(a)
28 Chloroform	83	3.910	3.910	(0.935)	30151	5.00000	5.30
3 Chloromethane	50	1.081	1.081	(0.258)	28247	5.00000	4.87(a)
27 cis-1,2-Dichloroethene	96	3.531	3.530	(0.844)	17456	5.00000	5.22
46 cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	28688	5.00000	5.42
55 Dibromochloromethane	129	7.184	7.183	(0.937)	17481	5.00000	5.41
44 Dibromomethane	93	5.558	5.557	(1.118)	12167	5.00000	5.33
2 Dichlorodifluoromethane	85	0.973	0.973	(0.233)	14314	5.00000	5.33
61 Ethylbenzene	106	7.800	7.807	(1.017)	20970	5.00000	5.26
91 Hexachlorobutadiene	225	11.482	11.481	(1.188)	3265	5.00000	3.78(a)
67 Isopropylbenzene	105	8.566	8.566	(1.117)	57298	5.00000	5.09
62 m,p-Xylenes	106	7.907	7.907	(1.031)	49146	10.0000	10.52
17 Methylene Chloride	84	2.306	2.305	(0.551)	20893	5.00000	4.40(a)
87 n-Butylbenzene	91	9.999	9.999	(1.035)	38916	5.00000	4.82(a)
73 n-Propylbenzene	91	8.917	8.917	(0.923)	67027	5.00000	4.99(a)
92 Naphthalene	128	11.553	11.546	(1.196)	8543	5.00000	4.95(a)
63 o-Xylene	106	8.244	8.244	(1.075)	25419	5.00000	5.34
81 sec-Butylbenzene	105	9.526	9.526	(0.986)	51466	5.00000	4.93(a)
64 Styrene	104	8.265	8.265	(1.078)	46059	5.00000	5.47
78 tert-Butylbenzene	119	9.340	9.340	(0.967)	36787	5.00000	4.99(a)
56 Tetrachloroethene	164	6.933	6.933	(0.904)	10643	5.00000	5.09
50 Toluene	91	6.453	6.453	(0.841)	64321	5.00000	5.35
20 trans-1,2-Dichloroethene	96	2.535	2.527	(0.606)	13762	5.00000	5.21
51 trans-1,3-Dichloropropene	75	6.689	6.682	(1.346)	26342	5.00000	5.37
38 Trichloroethene	130	5.214	5.206	(1.049)	14733	5.00000	5.12
8 Trichlorofluoromethane	101	1.561	1.560	(0.373)	20527	5.00000	4.96(a)
5 Vinyl Chloride	62	1.138	1.138	(0.272)	22820	5.00000	4.97(a)

QC Flag Legend

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

QC Flag Legend

M - Compound response manually integrated.
H - Operator selected an alternate compound hit.



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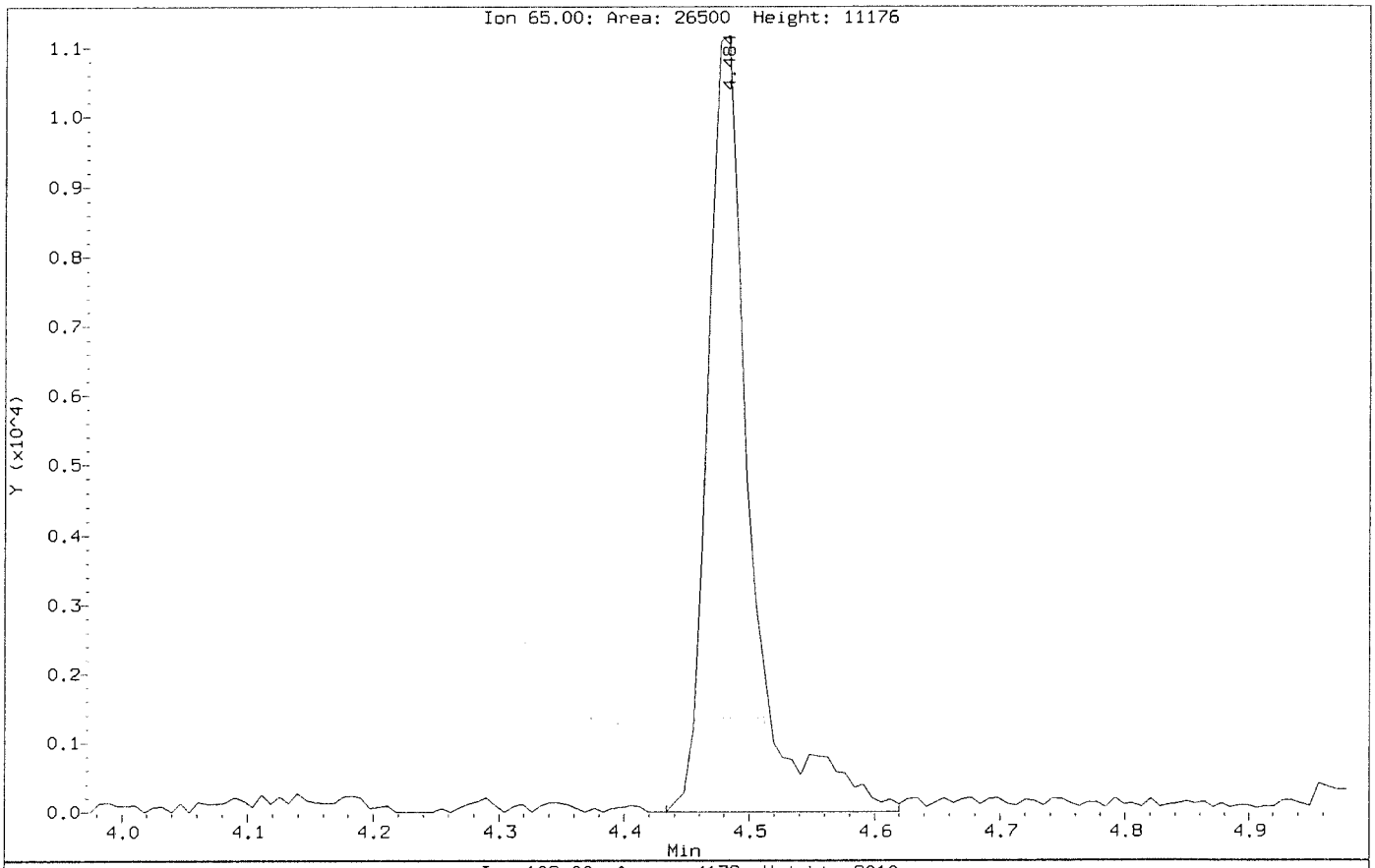
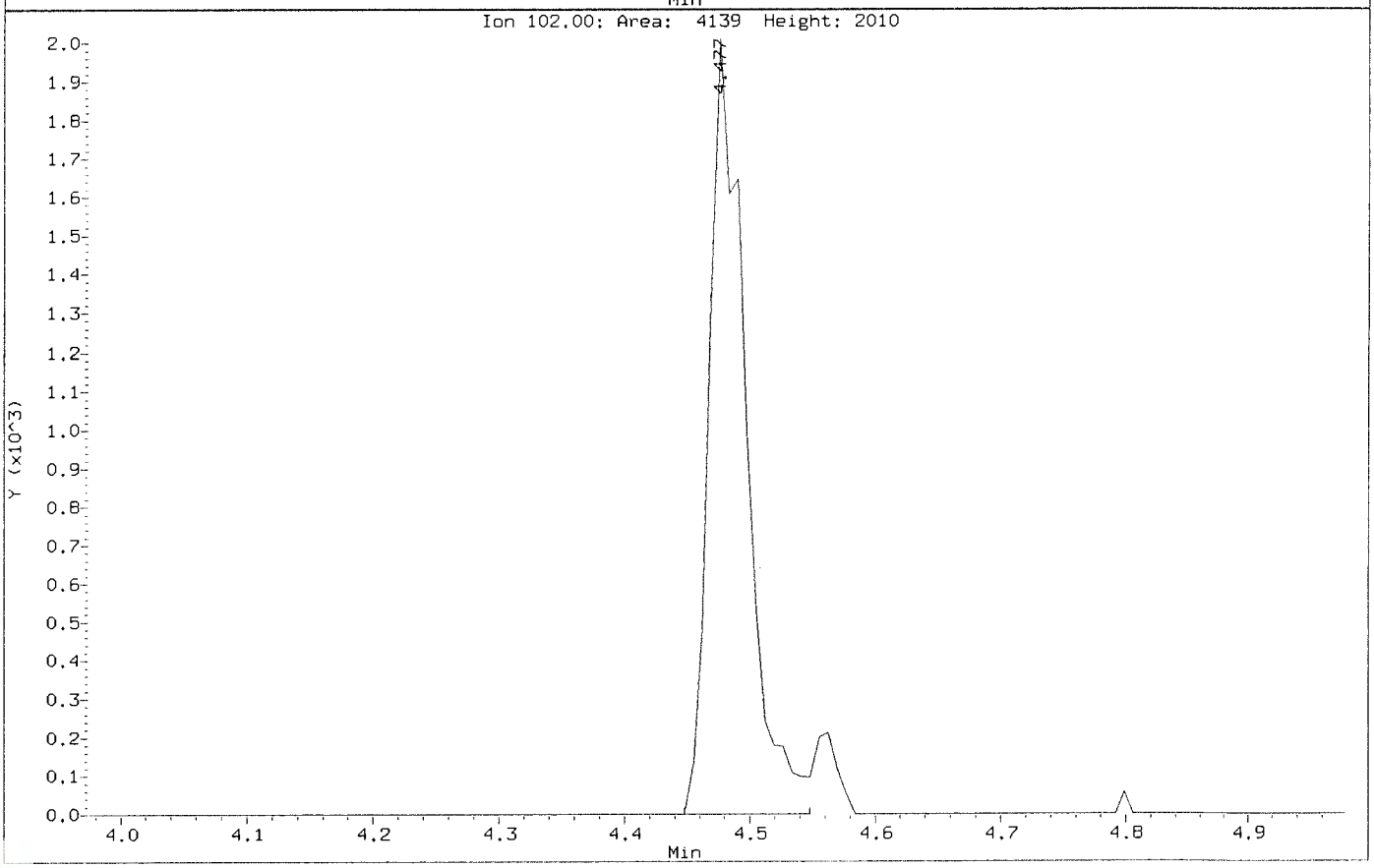
Sample Info: VSTD005;VSTD005;1;5;
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\nahstws005\Target\chem\voa6.i\X200619.b\Before\X061906.D
Injection Date: 19-JUN-2020 13:29
Instrument: voa6.i
Client Sample ID: VSTD005

Compound: 1,2-Dichloroethane-d4
CAS Number: 17060-07-0





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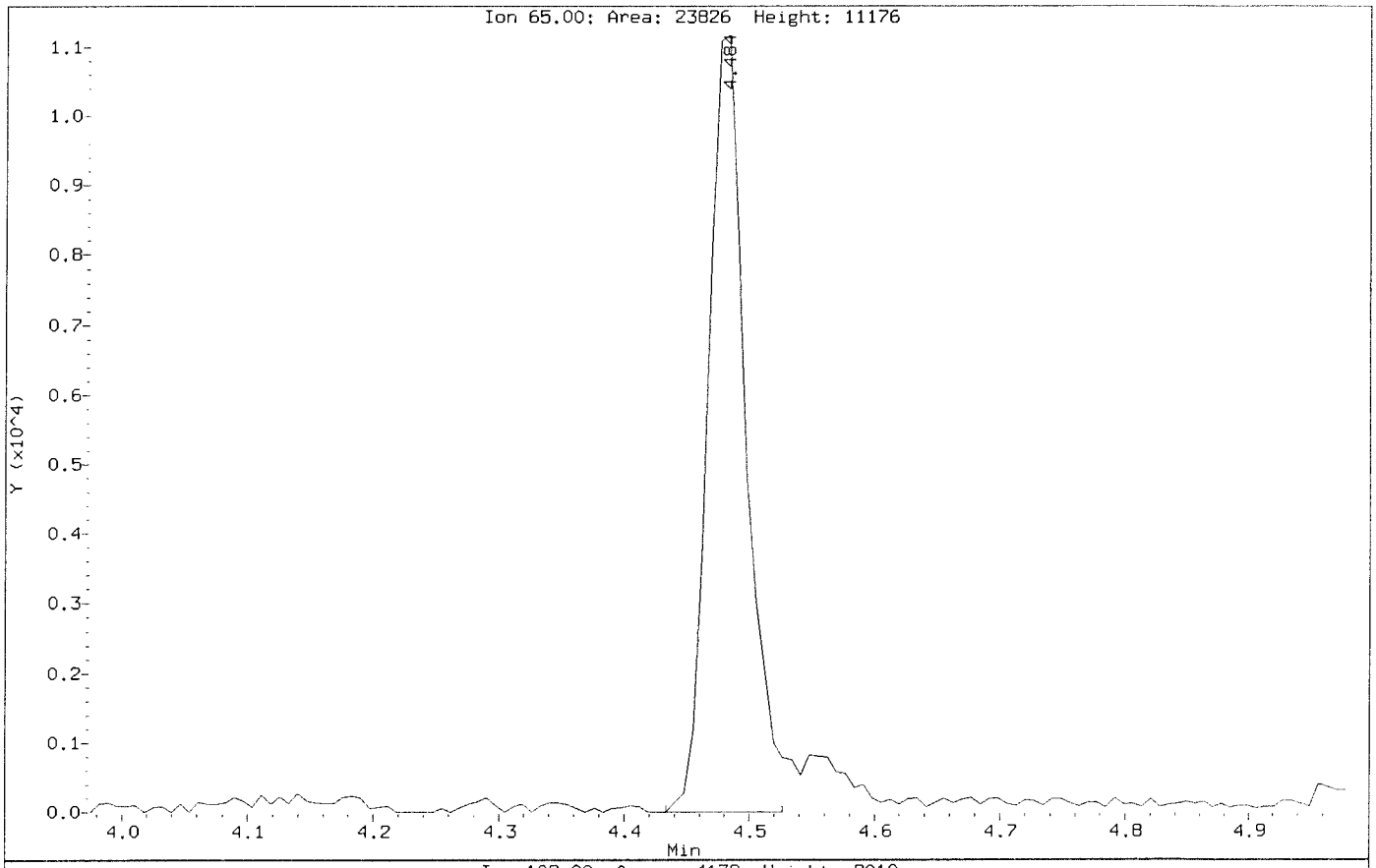
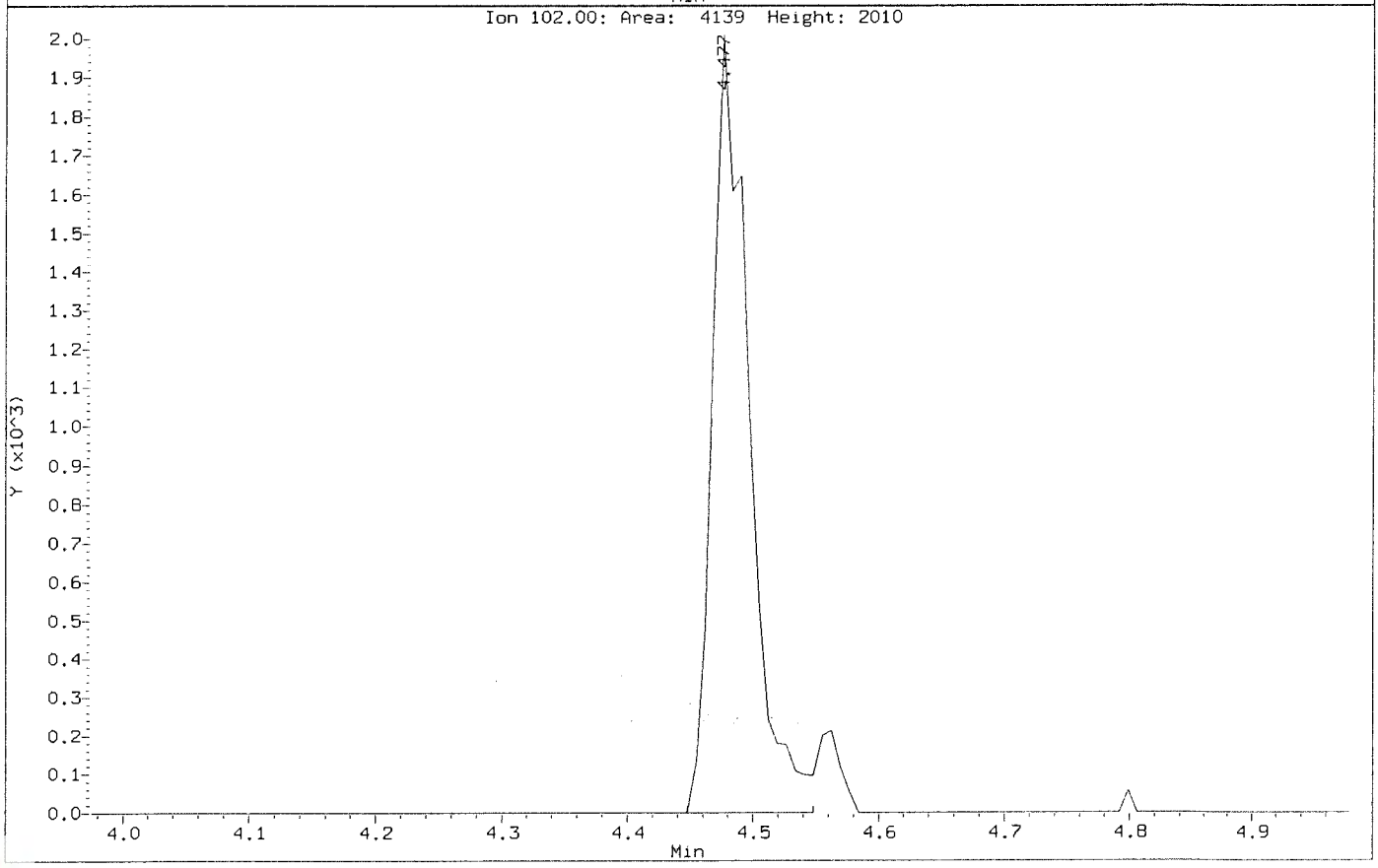
Instrument: voa6.i
Client Sample ID: VSTD005

Compound: 1,2-Dichloroethane-d4
CAS Number: 17060-07-0





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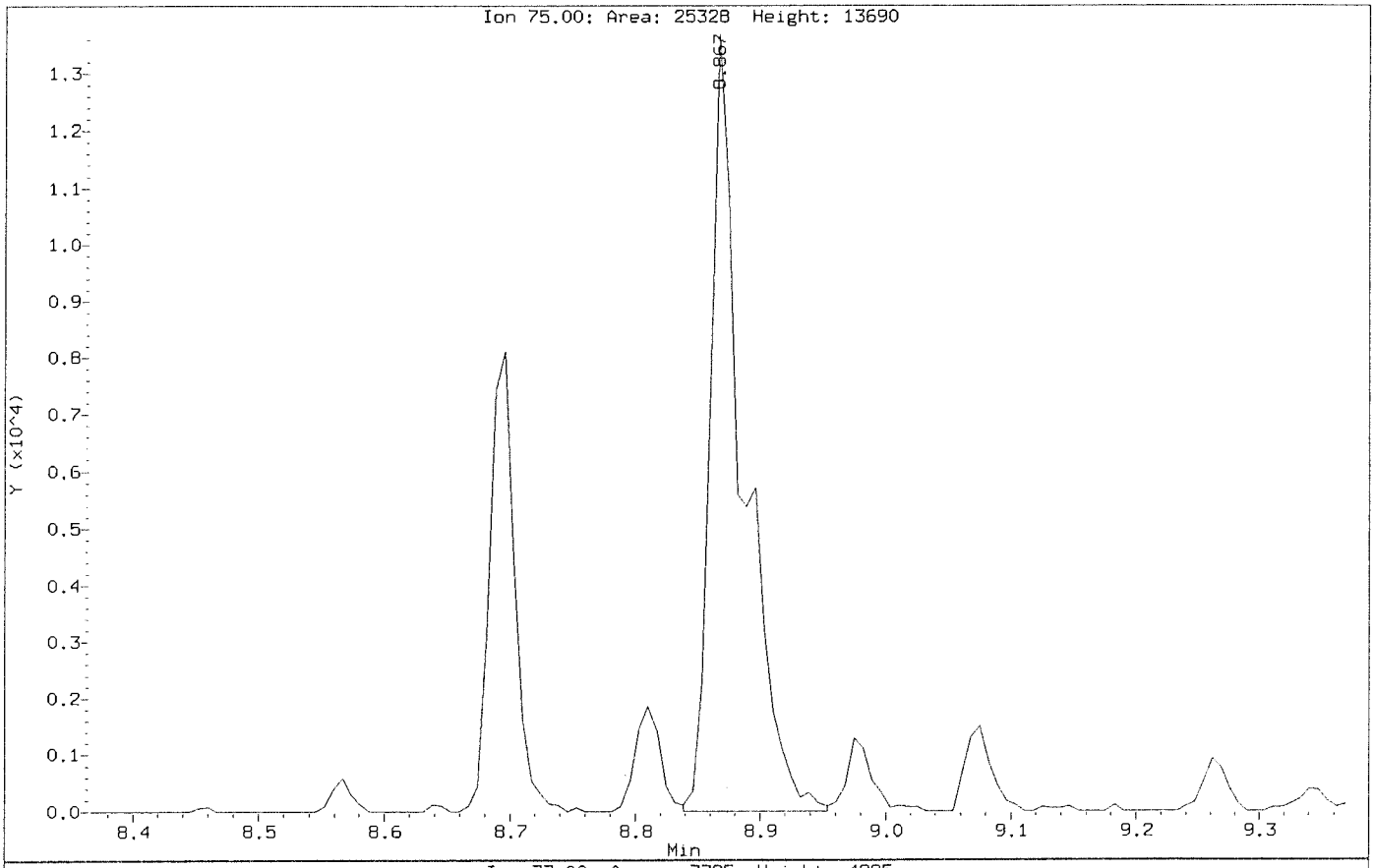
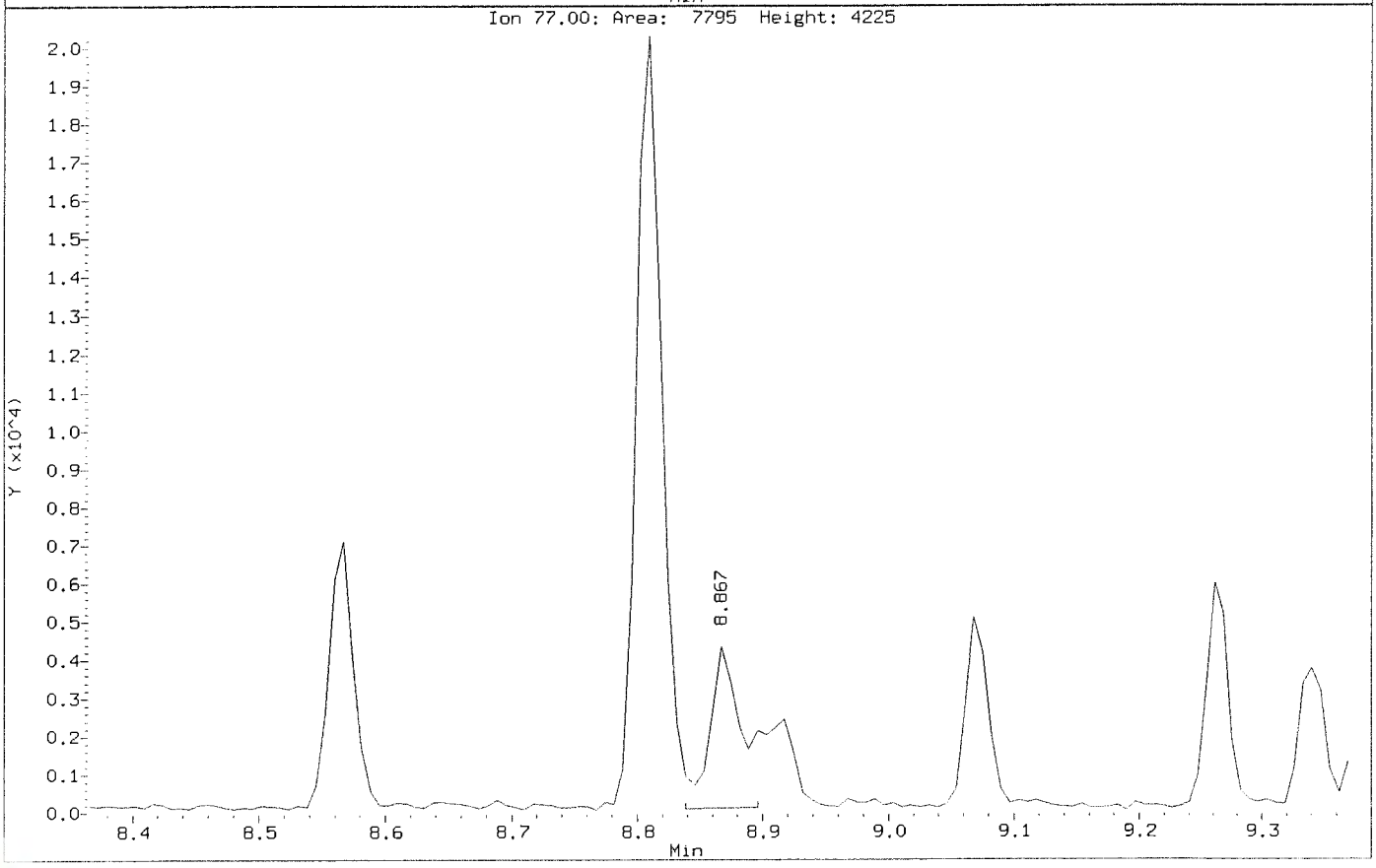
Injection Date: 19-JUN-2020 13:29
Instrument: voa6.i
Client Sample ID: VSTD005

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





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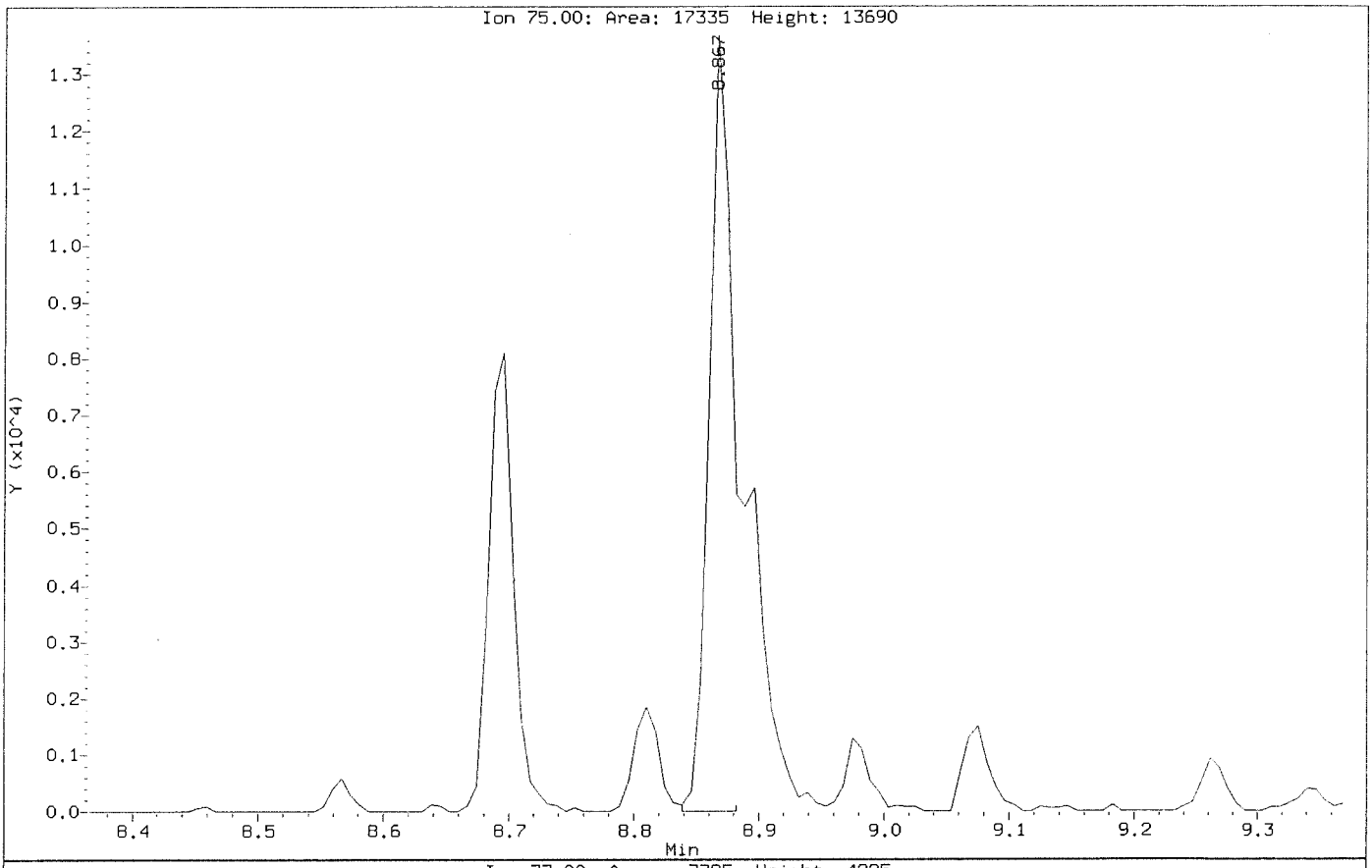
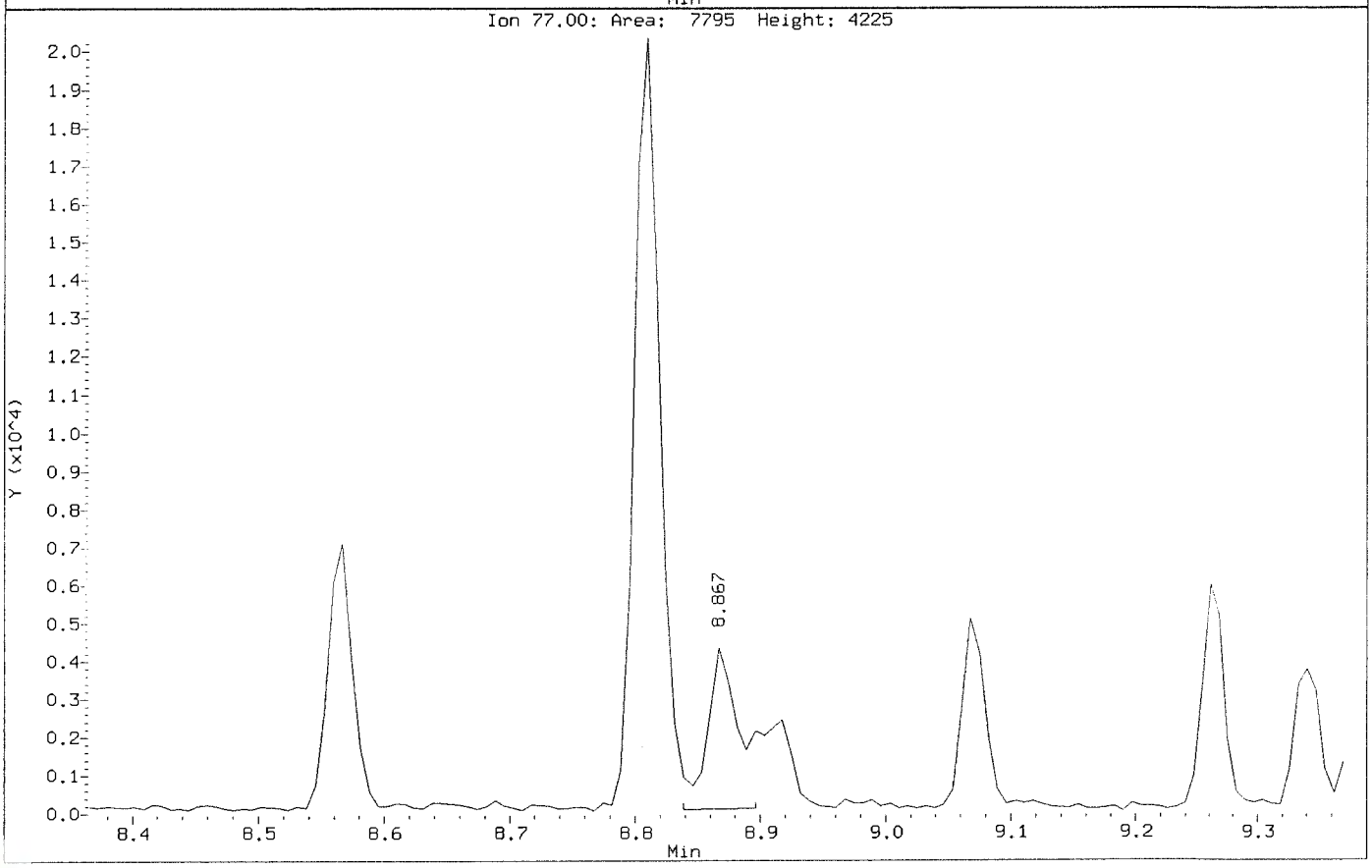
Instrument: voa6.i
Client Sample ID: VSTD005

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





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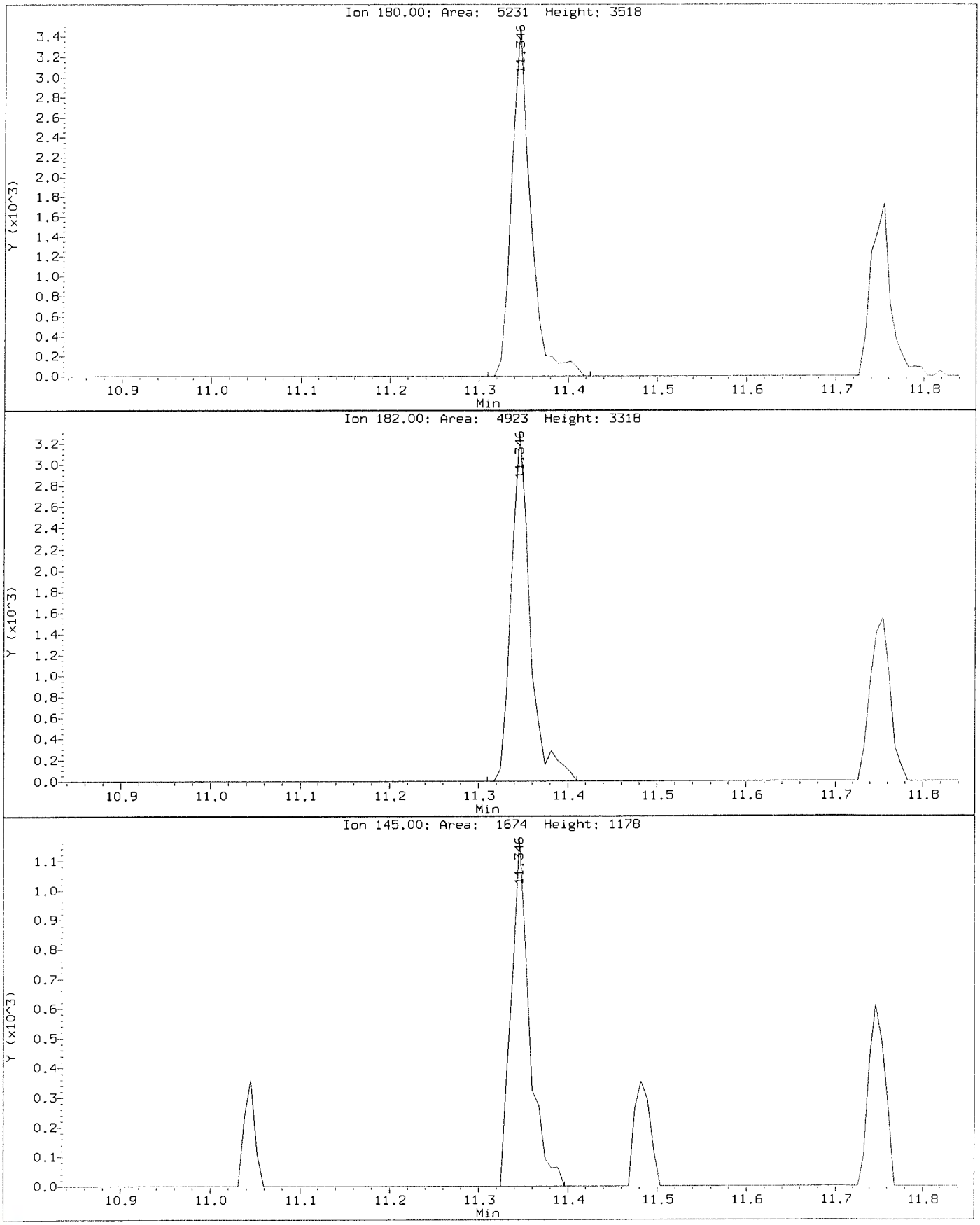
Injection Date: 19-JUN-2020 13:29
Instrument: voa6.i
Client Sample ID: VSTD005

Compound: 1,2,4-Trichlorobenzene
CAS Number: 120-82-1



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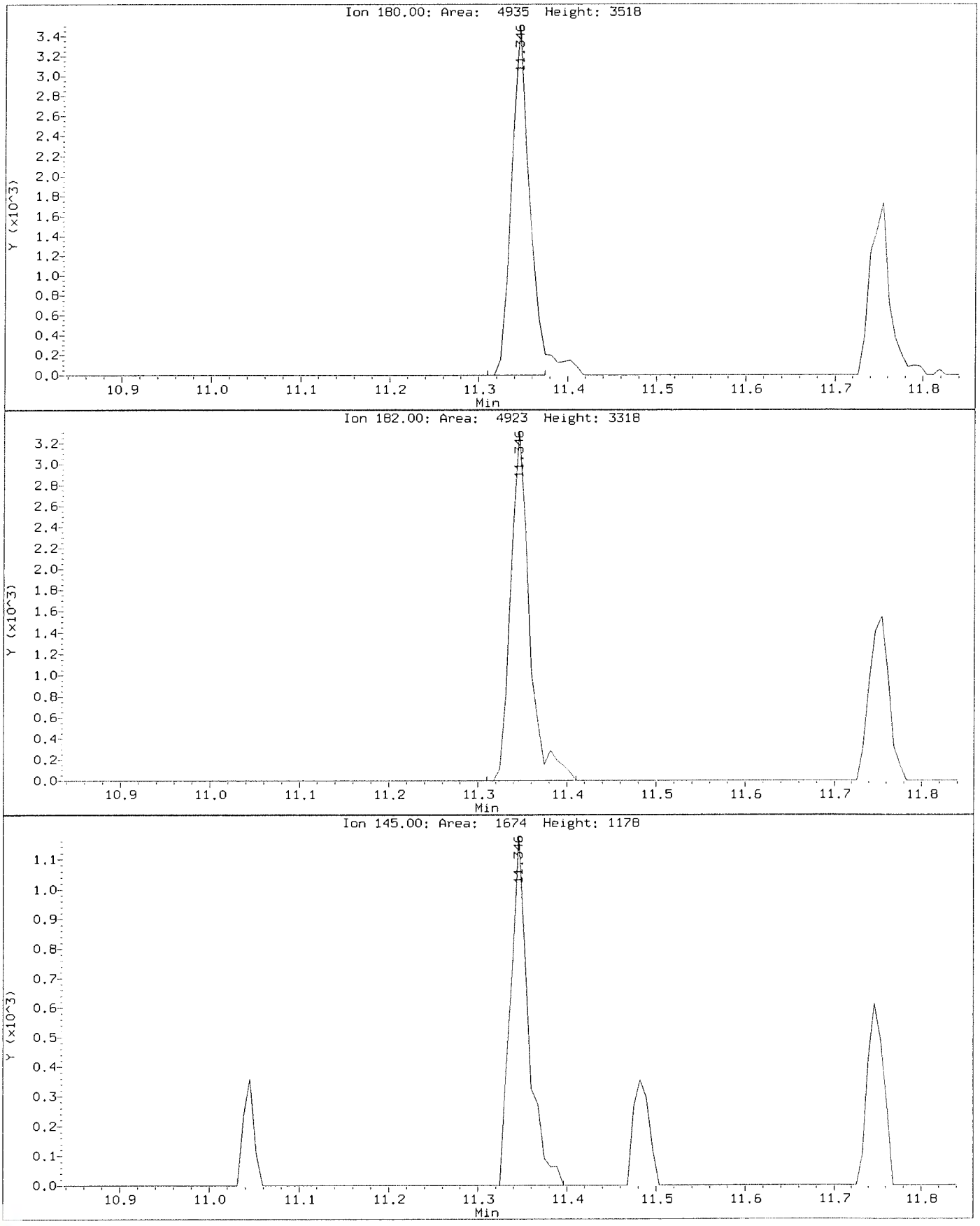
Instrument: voa6.i
Client Sample ID: VSTD005

Compound: 1,2,4-Trichlorobenzene
CAS Number: 120-82-1



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Data file : \\nahstws005\Target\chem\voa6.i\X200619.b\X061907.D
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Inj Date : 19-JUN-2020 13:53
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\X200619.b\8260W.m
Meth Date : 09-Jul-2020 09:58 voa6.i Quant Type: ISTD
Cal Date : 19-JUN-2020 13:53 Cal File: X061907.D
Als bottle: 8 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14

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

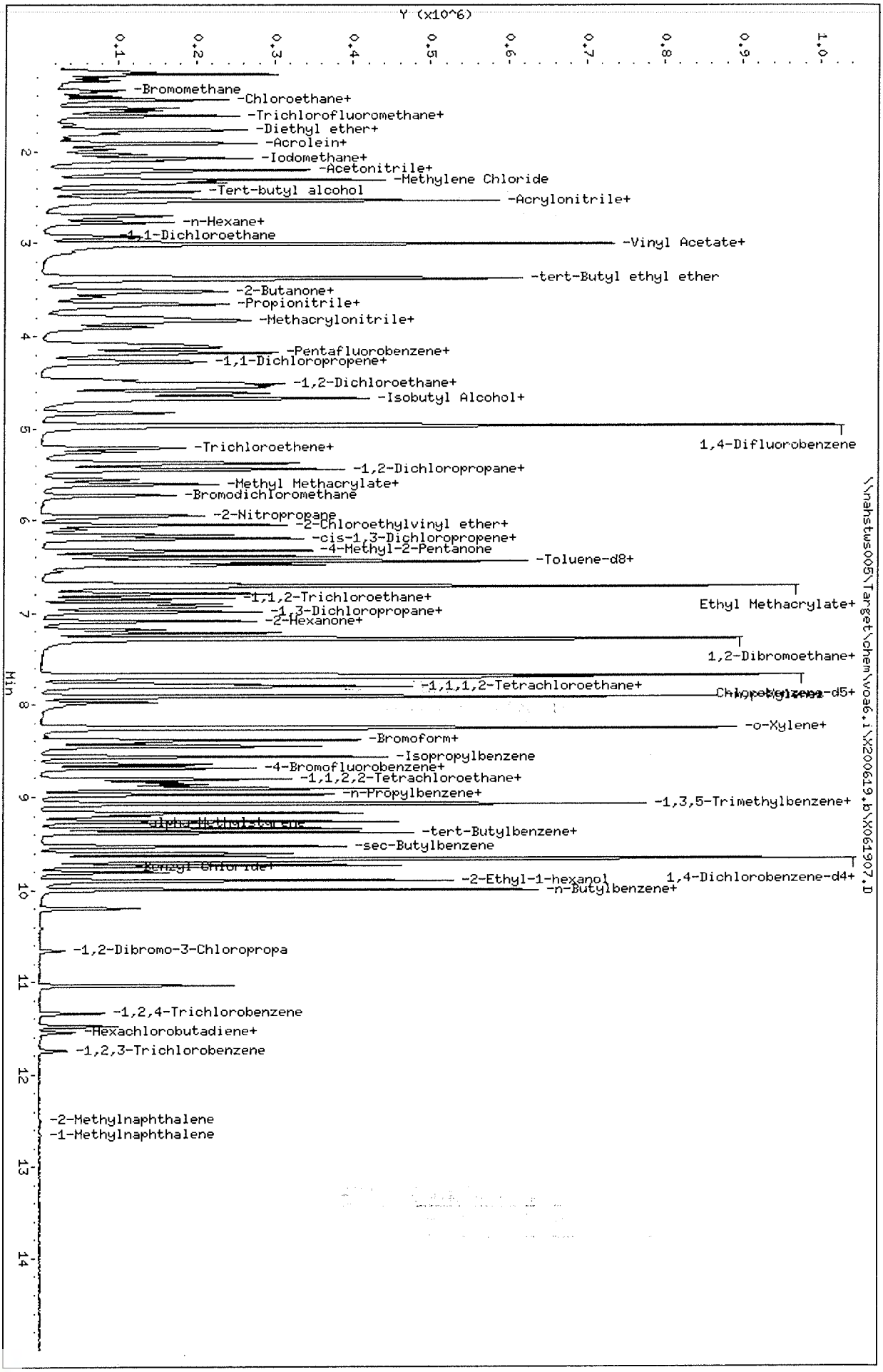
Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.189	4.189	(1.000)	219092	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	408687	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	381406	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	172819	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.979)	59094	20.0000	21.03
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	85524	20.0000	20.52
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	191219	20.0000	20.15
$ 69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	75623	20.0000	19.46
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	57221	20.0000	20.60
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.976)	86875	20.0000	21.34
68 1,1,2,2-Tetrachloroethane	83	8.845	8.845	(0.915)	71126	20.0000	20.70
53 1,1,2-Trichloroethane	83	6.840	6.847	(0.892)	53058	20.0000	21.65
22 1,1-Dichloroethane	63	2.929	2.921	(0.699)	138147	20.0000	20.30
11 1,1-Dichloroethene	96	1.912	1.911	(0.456)	44280	20.0000	20.69
32 1,1-Dichloropropene	75	4.283	4.282	(0.862)	73179	20.0000	19.89
93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.215)	9328	20.0000	22.94
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	65154	20.0000	20.40(M)
90 1,2,4-Trichlorobenzene	180	11.345	11.338	(1.173)	20427	20.0000	24.06
79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.970)	196549	20.0000	20.85
89 1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.102)	5621	20.0000	21.05
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	63355	20.0000	21.05
88 1,2-Dichlorobenzene	146	9.999	9.999	(1.034)	99093	20.0000	21.15
33 1,2-Dichloroethane	62	4.562	4.562	(0.918)	114326	20.0000	21.34

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
42 1,2-Dichloropropane	63	5.443	5.443	(1.095)	82487	20.0000	21.41
75 1,3,5-Trimethylbenzene	105	9.067	9.075	(0.938)	184546	20.0000	20.76
83 1,3-Dichlorobenzene	146	9.612	9.612	(0.994)	107441	20.0000	20.86
54 1,3-Dichloropropane	76	6.983	6.983	(0.910)	107964	20.0000	21.02
84 1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	107642	20.0000	20.53
26 2,2-Dichloropropane	77	3.516	3.516	(0.839)	85915	20.0000	20.20
24 2-Butanone	43	3.581	3.580	(0.855)	105606	40.0000	41.15
76 2-Chlorotoluene	91	8.974	8.981	(0.928)	166898	20.0000	20.33
52 2-Hexanone	43	7.090	7.090	(0.924)	169963	40.0000	43.15
77 4-Chlorotoluene	91	9.075	9.075	(0.939)	194510	20.0000	20.44
82 p-Isopropyltoluene	119	9.655	9.655	(0.999)	178353	20.0000	20.99
45 4-Methyl-2-Pentanone	43	6.324	6.331	(0.824)	244091	40.0000	42.46
10 Acetone	43	1.976	1.976	(0.472)	73115	40.0000	39.97
37 Benzene	78	4.519	4.519	(0.909)	237693	20.0000	20.81
74 Bromobenzene	156	8.810	8.809	(0.911)	66643	20.0000	20.55
29 Bromochloromethane	128	3.803	3.795	(0.908)	34327	20.0000	20.44
39 Bromodichloromethane	83	5.729	5.729	(1.153)	89199	20.0000	21.44
66 Bromoform	173	8.416	8.416	(1.097)	43483	20.0000	21.39
6 Bromomethane	94	1.339	1.331	(0.320)	39876	20.0000	19.44
19 Carbon Disulfide	76	2.069	2.069	(0.494)	290228	40.0000	41.24
34 Carbon Tetrachloride	117	4.268	4.268	(0.859)	69197	20.0000	19.43(H)
59 Chlorobenzene	112	7.699	7.699	(1.004)	150141	20.0000	20.33
7 Chloroethane	64	1.403	1.396	(0.335)	47984	20.0000	20.60
28 Chloroform	83	3.910	3.910	(0.933)	112365	20.0000	20.94
3 Chloromethane	50	1.081	1.081	(0.258)	105695	20.0000	19.30
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.843)	66161	20.0000	20.99
46 cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	104107	20.0000	20.96
55 Dibromochloromethane	129	7.176	7.183	(0.936)	63043	20.0000	20.65
44 Dibromomethane	93	5.558	5.557	(1.118)	43900	20.0000	20.50
2 Dichlorodifluoromethane	85	0.973	0.973	(0.232)	55369	20.0000	19.05
61 Ethylbenzene	106	7.800	7.807	(1.017)	77010	20.0000	20.44
91 Hexachlorobutadiene	225	11.481	11.481	(1.187)	14133	20.0000	24.46
67 Isopropylbenzene	105	8.566	8.566	(1.117)	223337	20.0000	21.00
62 m,p-Xylenes	106	7.907	7.907	(1.031)	183514	40.0000	41.57
17 Methylene Chloride	84	2.306	2.305	(0.550)	70514	20.0000	20.97
87 n-Butylbenzene	91	9.999	9.999	(1.034)	161786	20.0000	21.12
73 n-Propylbenzene	91	8.917	8.917	(0.922)	268386	20.0000	21.08
92 Naphthalene	128	11.546	11.546	(1.194)	31109	20.0000	22.40
63 o-Xylene	106	8.244	8.244	(1.075)	92857	20.0000	20.65
81 sec-Butylbenzene	105	9.526	9.526	(0.985)	209056	20.0000	21.14
64 Styrene	104	8.265	8.265	(1.078)	166828	20.0000	20.97
78 tert-Butylbenzene	119	9.340	9.340	(0.966)	145705	20.0000	20.87
56 Tetrachloroethene	164	6.933	6.933	(0.904)	40380	20.0000	20.45
50 Toluene	91	6.446	6.453	(0.840)	237760	20.0000	20.94
20 trans-1,2-Dichloroethene	96	2.535	2.527	(0.605)	53483	20.0000	21.47
51 trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	96064	20.0000	20.86
38 Trichloroethene	130	5.214	5.206	(1.049)	55553	20.0000	20.57
8 Trichlorofluoromethane	101	1.561	1.560	(0.373)	83059	20.0000	21.27
5 Vinyl Chloride	62	1.138	1.138	(0.272)	85214	20.0000	19.66

QC Flag Legend

M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

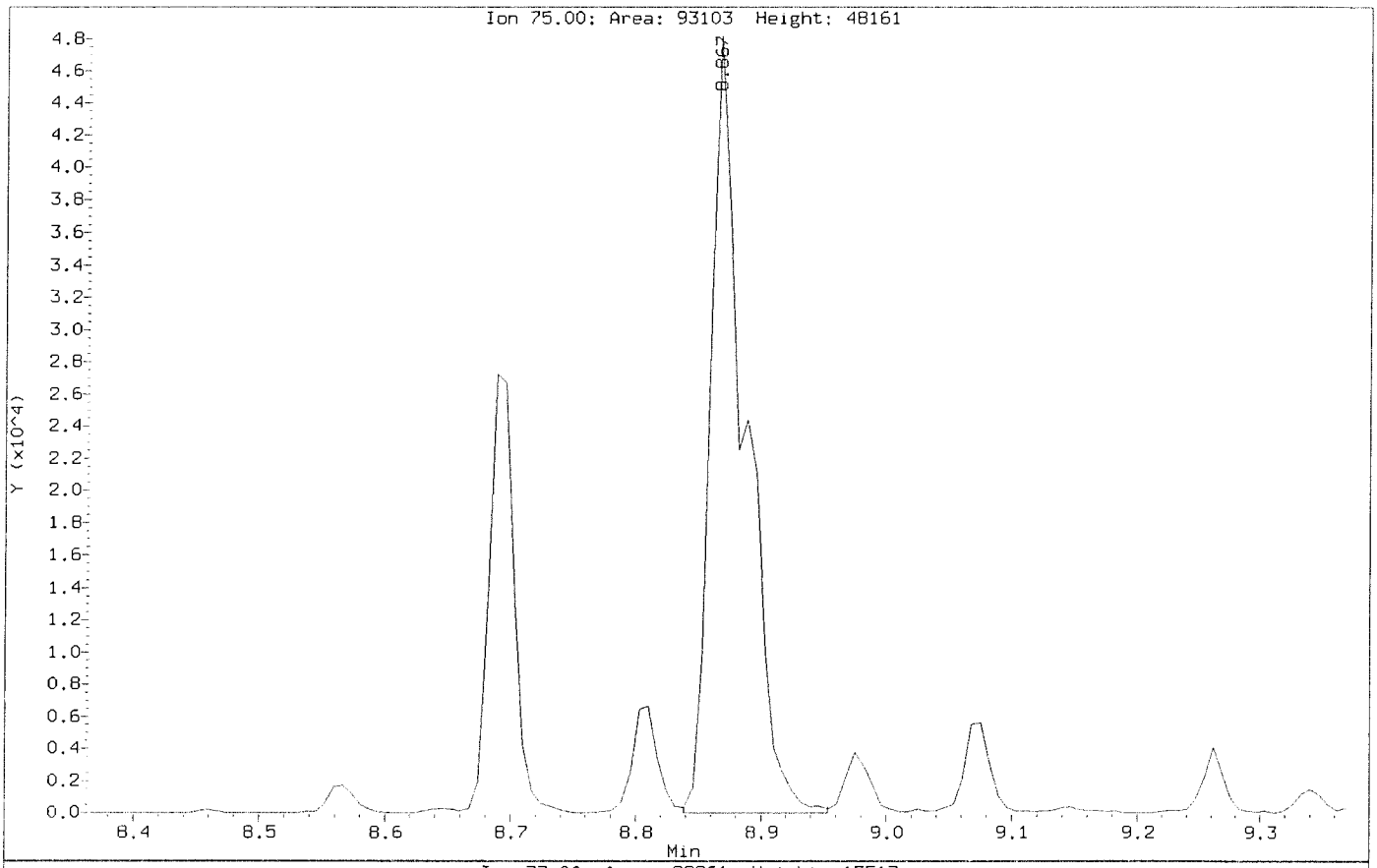


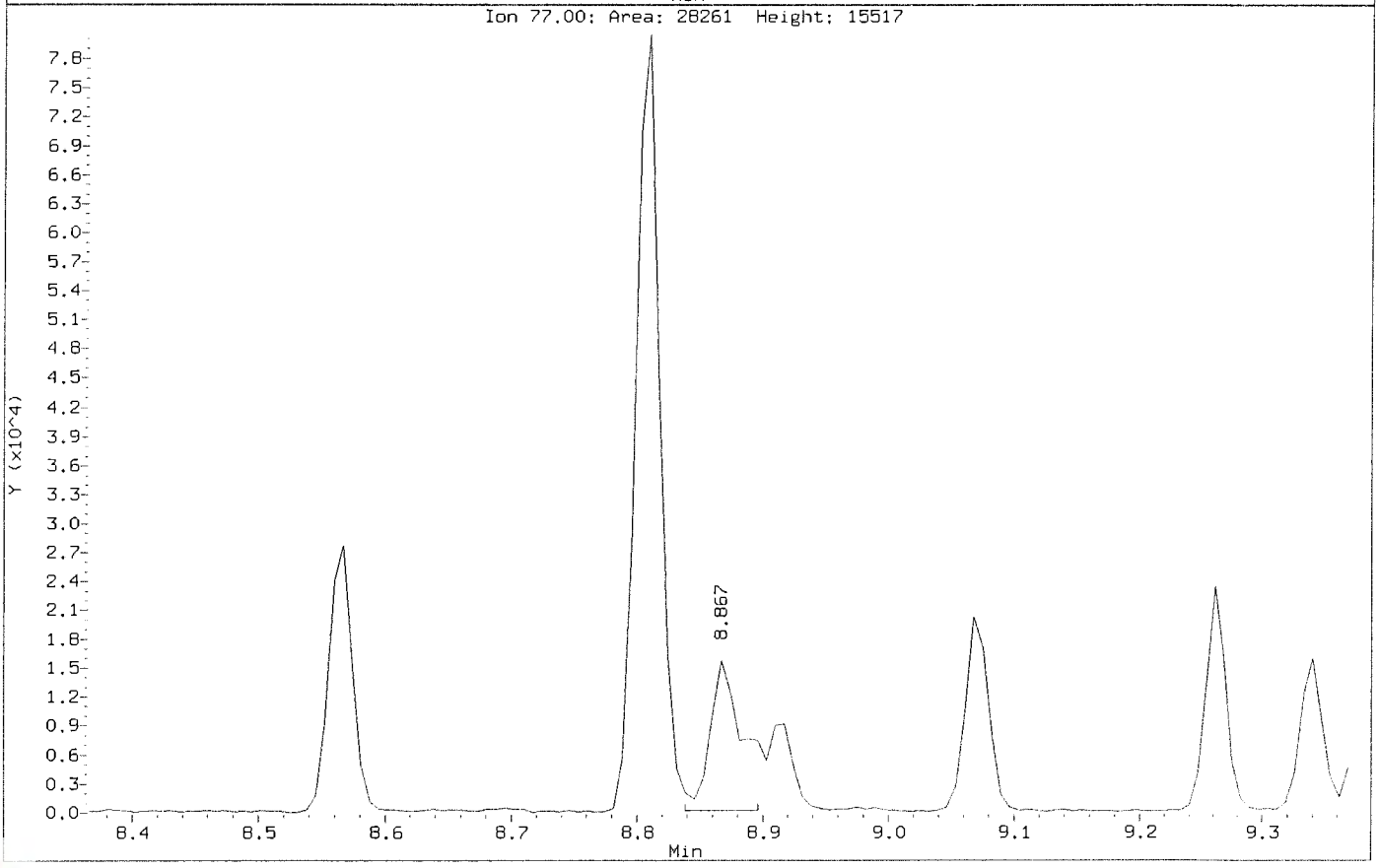
Data File: \\nahstws005\Target\chem\voa6.i\X200619.b\X061907.D
Date : 19-JUN-2020 13:53
Client ID: VSTD020
Sample Info: VSTD020;VSTD020;1;6;
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\nahstws005\Target\chem\voa6.i\X200619.b\Before\X061907.D
Injection Date: 19-JUN-2020 13:53
Instrument: voa6.i
Client Sample ID: VSTD020

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





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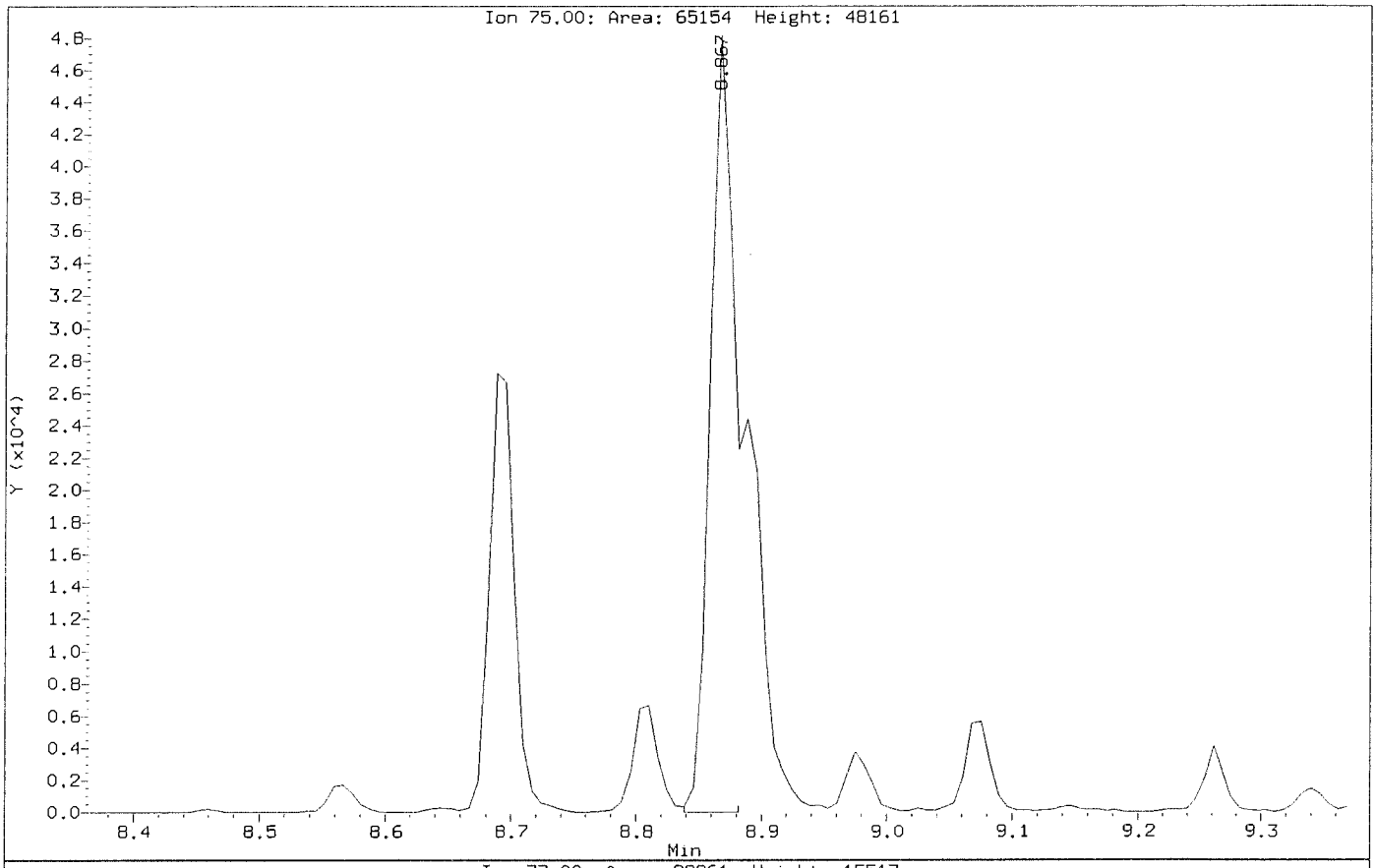
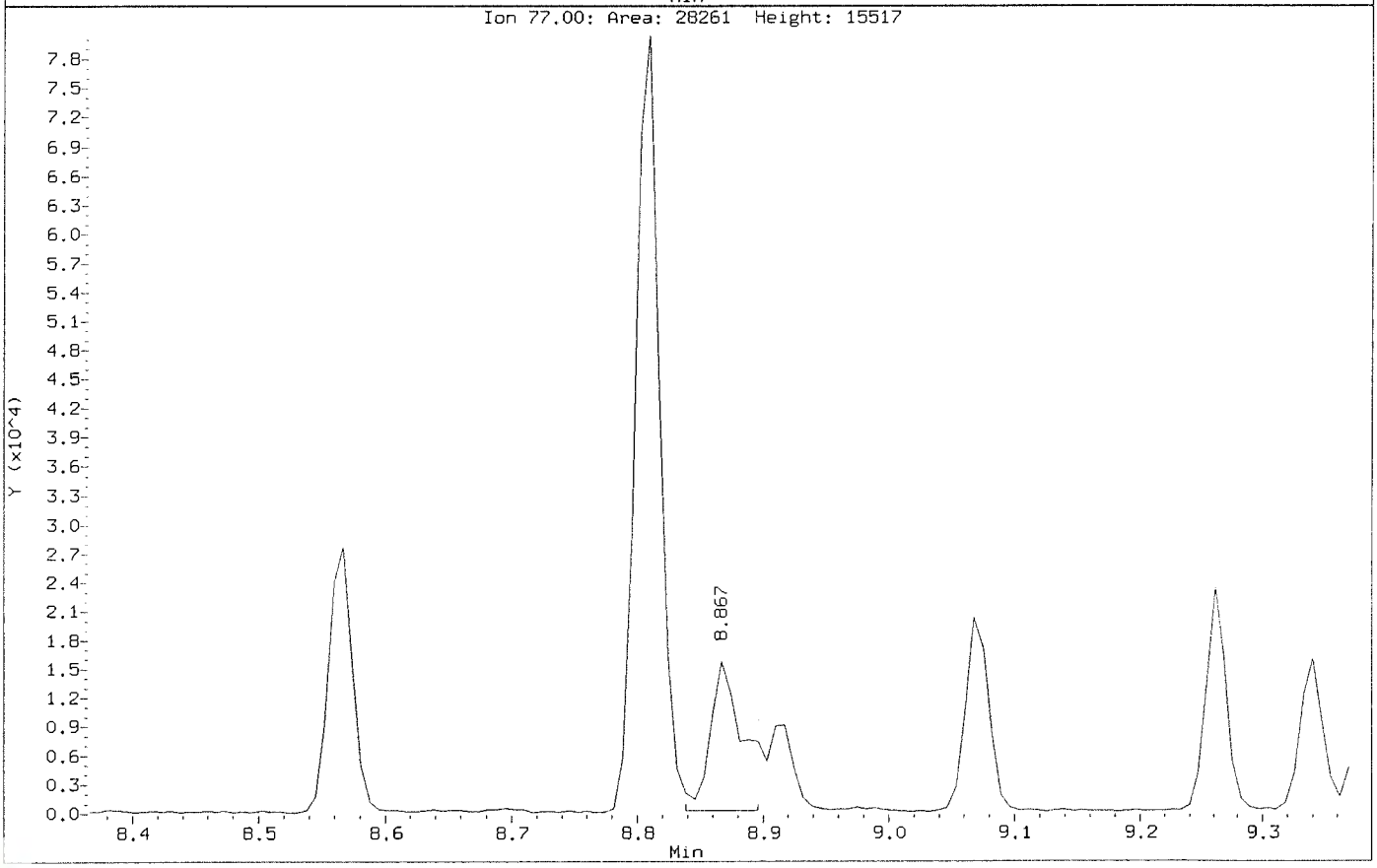
Instrument: voa6.i
Client Sample ID: VSTD020

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





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Data file : \\nahstws005\Target\chem\voa6.i\X200619.b\X061908.D
Lab Smp Id: VSTD050 Client Smp ID: VSTD050
Inj Date : 19-JUN-2020 14:17
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\X200619.b\8260W.m
Meth Date : 09-Jul-2020 09:58 voa6.i Quant Type: ISTD
Cal Date : 19-JUN-2020 14:17 Cal File: X061908.D
Als bottle: 9 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14

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

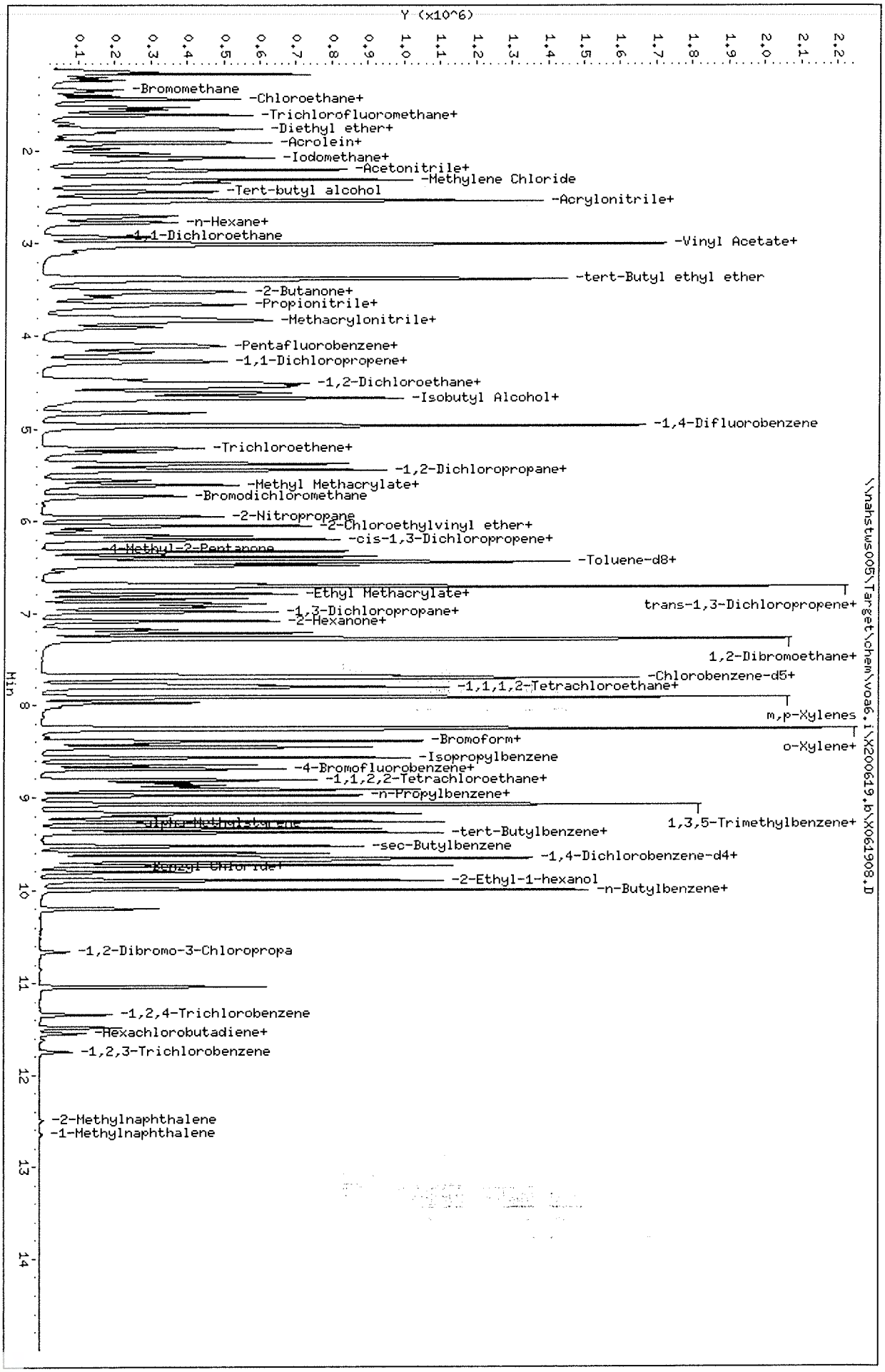
Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.189	4.189	(1.000)	217032	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	404243	50.0000	
* 47 Chlorobenzene-d5	117	7.670	7.671	(1.000)	377860	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	173644	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.979)	139554	50.0000	50.14
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	200469	50.0000	49.41
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	462779	50.0000	49.23
$ 69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	181727	50.0000	47.21
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	139216	50.0000	50.59
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.976)	202713	50.0000	50.27
68 1,1,2,2-Tetrachloroethane	83	8.838	8.845	(0.914)	170866	50.0000	49.51
53 1,1,2-Trichloroethane	83	6.840	6.847	(0.892)	120471	50.0000	49.64
22 1,1-Dichloroethane	63	2.921	2.921	(0.697)	332209	50.0000	49.28
11 1,1-Dichloroethene	96	1.911	1.911	(0.456)	106312	50.0000	50.16
32 1,1-Dichloropropene	75	4.282	4.282	(0.862)	168723	50.0000	46.36
93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.215)	21693	50.0000	55.42
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	153198	50.0000	47.74(M)
90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	47111	50.0000	56.82
79 1,2,4-Trimethylbenzene	105	9.382	9.383	(0.970)	465662	50.0000	49.17
89 1,2-Dibromo-3-Chloropropane	155	10.657	10.658	(1.102)	13384	50.0000	50.08
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	149730	50.0000	50.23
88 1,2-Dichlorobenzene	146	9.998	9.999	(1.034)	234108	50.0000	49.74
33 1,2-Dichloroethane	62	4.562	4.562	(0.918)	268864	50.0000	50.75

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)
42	1,2-Dichloropropane	63	5.443	5.443	(1.095)	196424	50.0000	51.56
75	1,3,5-Trimethylbenzene	105	9.067	9.075	(0.938)	438555	50.0000	49.11
83	1,3-Dichlorobenzene	146	9.605	9.612	(0.993)	250973	50.0000	48.50
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	249577	50.0000	49.06
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	255457	50.0000	48.49
26	2,2-Dichloropropane	77	3.516	3.516	(0.839)	199632	50.0000	47.39
24	2-Butanone	43	3.580	3.580	(0.855)	252176	100.000	100.30
76	2-Chlorotoluene	91	8.974	8.981	(0.928)	399548	50.0000	48.44
52	2-Hexanone	43	7.090	7.090	(0.924)	402559	100.000	103.18
77	4-Chlorotoluene	91	9.074	9.075	(0.939)	461628	50.0000	48.29
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	414592	50.0000	48.58
45	4-Methyl-2-Pentanone	43	6.324	6.331	(0.824)	576050	100.000	101.15
10	Acetone	43	1.976	1.976	(0.472)	181029	100.000	103.73
37	Benzene	78	4.519	4.519	(0.909)	559895	50.0000	49.57
74	Bromobenzene	156	8.809	8.809	(0.911)	159521	50.0000	48.96
29	Bromochloromethane	128	3.795	3.795	(0.906)	79902	50.0000	48.04
39	Bromodichloromethane	83	5.729	5.729	(1.153)	210222	50.0000	51.10
66	Bromoform	173	8.415	8.416	(1.097)	103619	50.0000	51.46
6	Bromomethane	94	1.338	1.331	(0.320)	93224	50.0000	45.88
19	Carbon Disulfide	76	2.069	2.069	(0.494)	702232	100.000	100.74
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	163161	50.0000	46.32(H)
59	Chlorobenzene	112	7.699	7.699	(1.004)	357442	50.0000	48.85
7	Chloroethane	64	1.403	1.396	(0.335)	113731	50.0000	49.30
28	Chloroform	83	3.910	3.910	(0.933)	266770	50.0000	50.19
3	Chloromethane	50	1.080	1.081	(0.258)	246924	50.0000	45.53
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.843)	157722	50.0000	50.52
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	247638	50.0000	50.41
55	Dibromochloromethane	129	7.176	7.183	(0.936)	149385	50.0000	49.40
44	Dibromomethane	93	5.557	5.557	(1.118)	104098	50.0000	49.16
2	Dichlorodifluoromethane	85	0.973	0.973	(0.232)	136419	50.0000	46.05
61	Ethylbenzene	106	7.799	7.807	(1.017)	177956	50.0000	47.69
91	Hexachlorobutadiene	225	11.481	11.481	(1.187)	31540	50.0000	56.79
67	Isopropylbenzene	105	8.566	8.566	(1.117)	517379	50.0000	49.11
62	m,p-Xylenes	106	7.907	7.907	(1.031)	428174	100.000	97.90
17	Methylene Chloride	84	2.305	2.305	(0.550)	157708	50.0000	49.90
87	n-Butylbenzene	91	9.998	9.999	(1.034)	375250	50.0000	48.77
73	n-Propylbenzene	91	8.917	8.917	(0.922)	622769	50.0000	48.69
92	Naphthalene	128	11.546	11.546	(1.194)	72724	50.0000	53.05
63	o-Xylene	106	8.244	8.244	(1.075)	220442	50.0000	49.49
81	sec-Butylbenzene	105	9.526	9.526	(0.985)	480420	50.0000	48.36
64	Styrene	104	8.258	8.265	(1.077)	398324	50.0000	50.55
78	tert-Butylbenzene	119	9.339	9.340	(0.966)	334095	50.0000	47.64
56	Tetrachloroethene	164	6.933	6.933	(0.904)	94700	50.0000	48.42
50	Toluene	91	6.446	6.453	(0.840)	560410	50.0000	49.83
20	trans-1,2-Dichloroethene	96	2.535	2.527	(0.605)	130246	50.0000	52.80
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	222592	50.0000	48.86
38	Trichloroethene	130	5.206	5.206	(1.048)	135132	50.0000	50.59
8	Trichlorofluoromethane	101	1.560	1.560	(0.373)	196349	50.0000	50.77
5	Vinyl Chloride	62	1.145	1.138	(0.273)	209102	50.0000	48.72

QC Flag Legend

M - Compound response manually integrated.
H - Operator selected an alternate compound hit.



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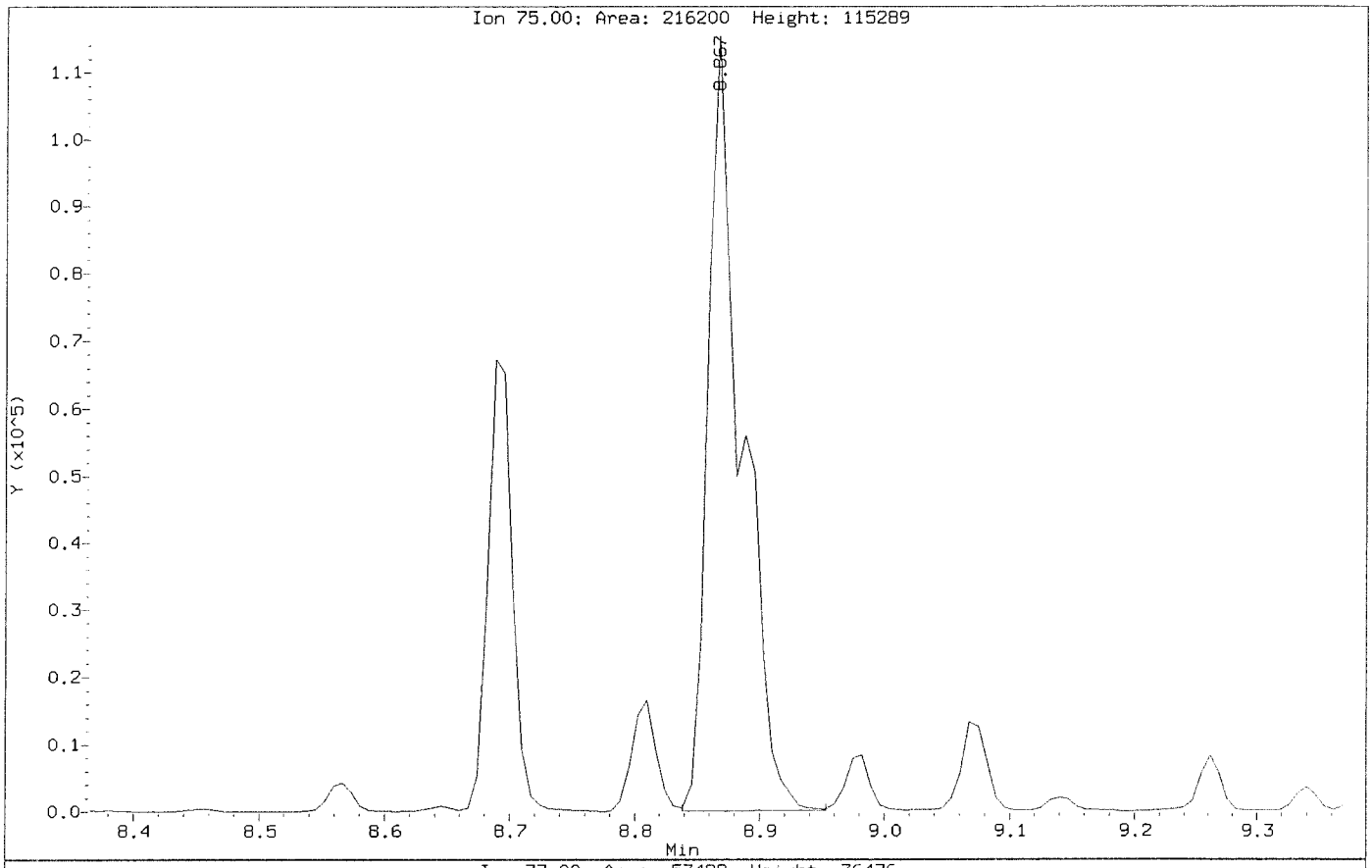
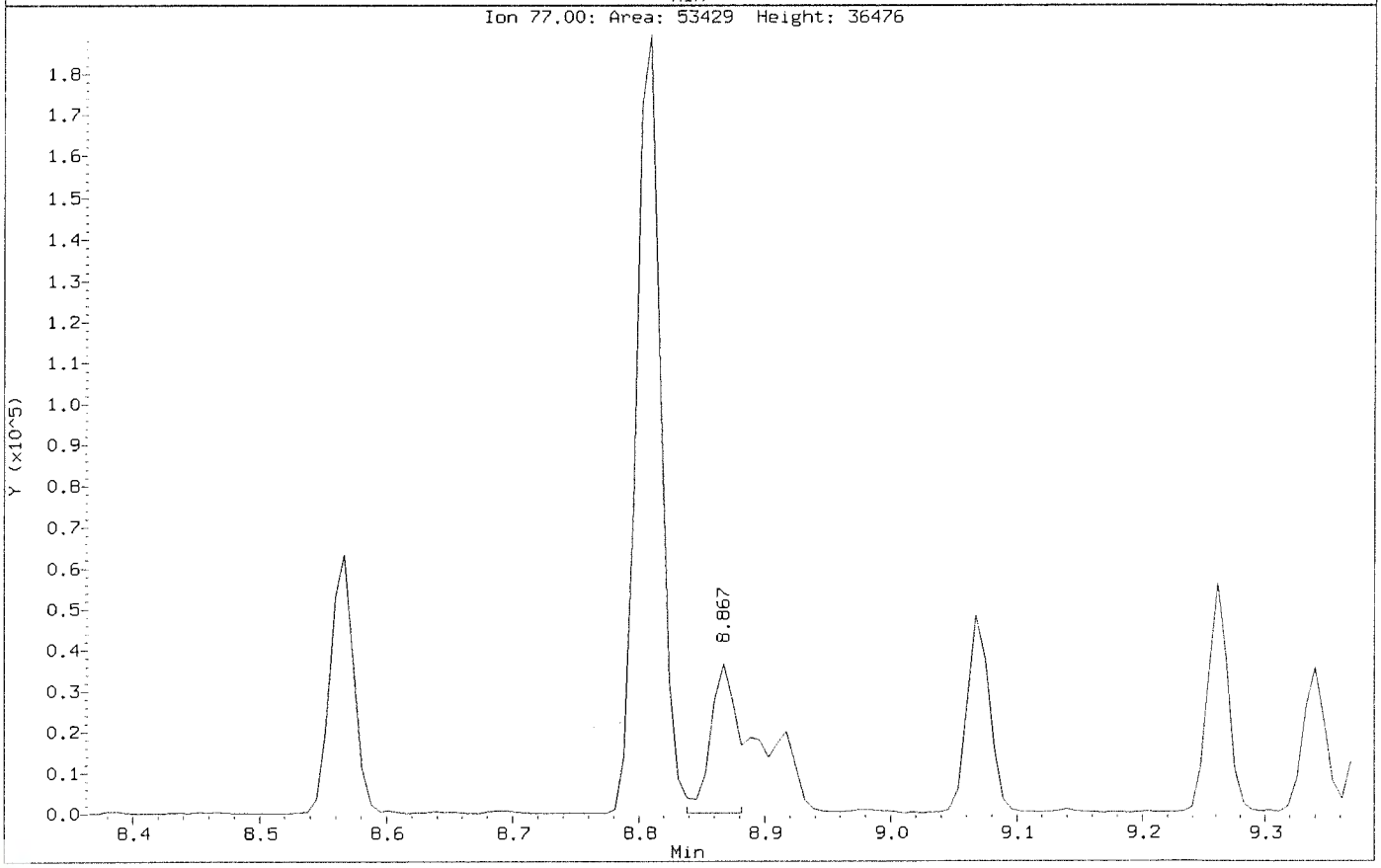
Date : 19-JUN-2020 14:17
Client ID: VSTD050
Sample Info: VSTD050;VSTD050;1;7;
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\nahstws005\Target\chem\voa6.i\X200619.b\Before\X061908.D
Injection Date: 19-JUN-2020 14:17
Instrument: voa6.i
Client Sample ID: VSTD050

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





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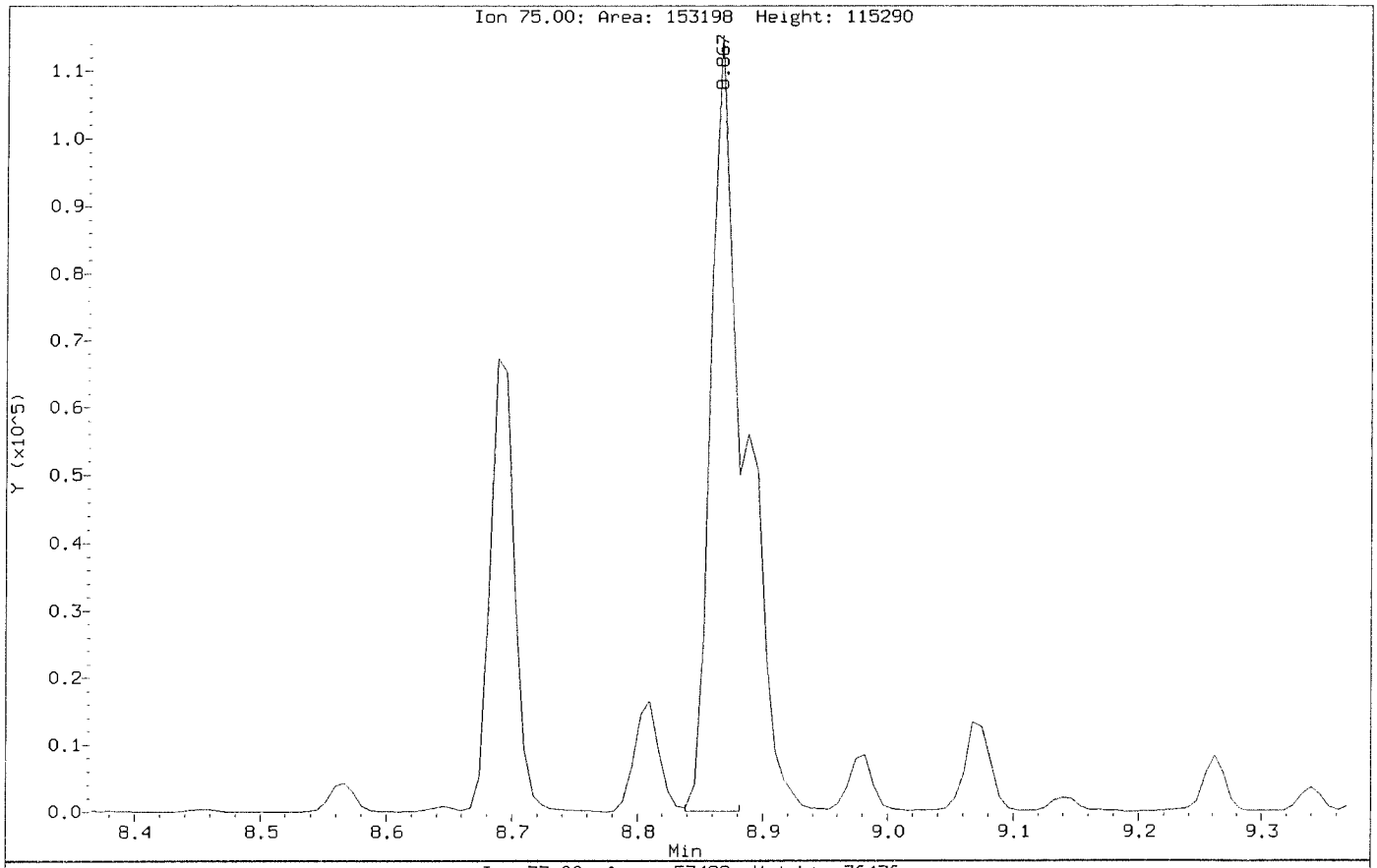
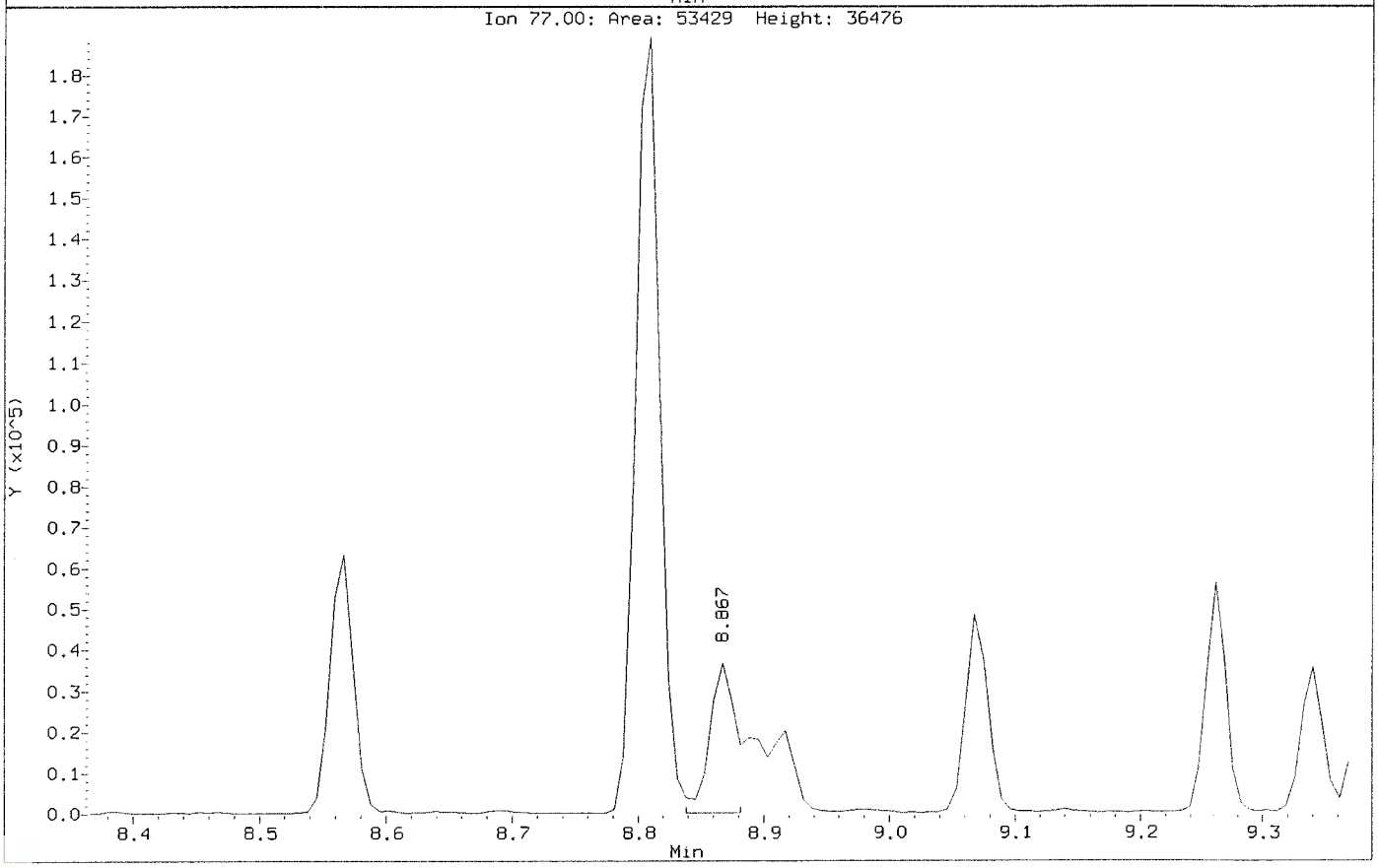
Instrument: voa6.i
Client Sample ID: VSTD050

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





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Data file : \\nahstws005\Target\chem\voa6.i\X200619.b\X061909.D
Lab Smp Id: VSTD100 Client Smp ID: VSTD100
Inj Date : 19-JUN-2020 14:41
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\X200619.b\8260W.m
Meth Date : 09-Jul-2020 09:58 voa6.i Quant Type: ISTD
Cal Date : 19-JUN-2020 14:41 Cal File: X061909.D
Als bottle: 10 Calibration Sample, Level: 8
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14

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	4.189	(1.000)	207107	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	380261	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	359910	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	167459	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	268669	100.000	101.15
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	391220	100.000	101.71
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	897632	100.000	100.25
$ 69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	357049	100.000	97.38
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	279590	100.000	106.68
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.978)	416318	100.000	108.19
68 1,1,2,2-Tetrachloroethane	83	8.845	8.845	(0.915)	337077	100.000	101.28
53 1,1,2-Trichloroethane	83	6.840	6.847	(0.892)	238253	100.000	103.07
22 1,1-Dichloroethane	63	2.921	2.921	(0.699)	651535	100.000	101.30
11 1,1-Dichloroethene	96	1.911	1.911	(0.457)	214361	100.000	106.00
32 1,1-Dichloropropene	75	4.282	4.282	(0.862)	349531	100.000	102.10
93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.215)	37141	100.000	98.05
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	309185	100.000	99.92(M)
90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	74244	100.000	93.62
79 1,2,4-Trimethylbenzene	105	9.382	9.383	(0.970)	956837	100.000	104.77
89 1,2-Dibromo-3-Chloropropane	155	10.657	10.658	(1.102)	25675	100.000	99.76
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	294384	100.000	103.69
88 1,2-Dichlorobenzene	146	9.991	9.999	(1.033)	466908	100.000	102.88
33 1,2-Dichloroethane	62	4.562	4.562	(0.918)	509750	100.000	102.29

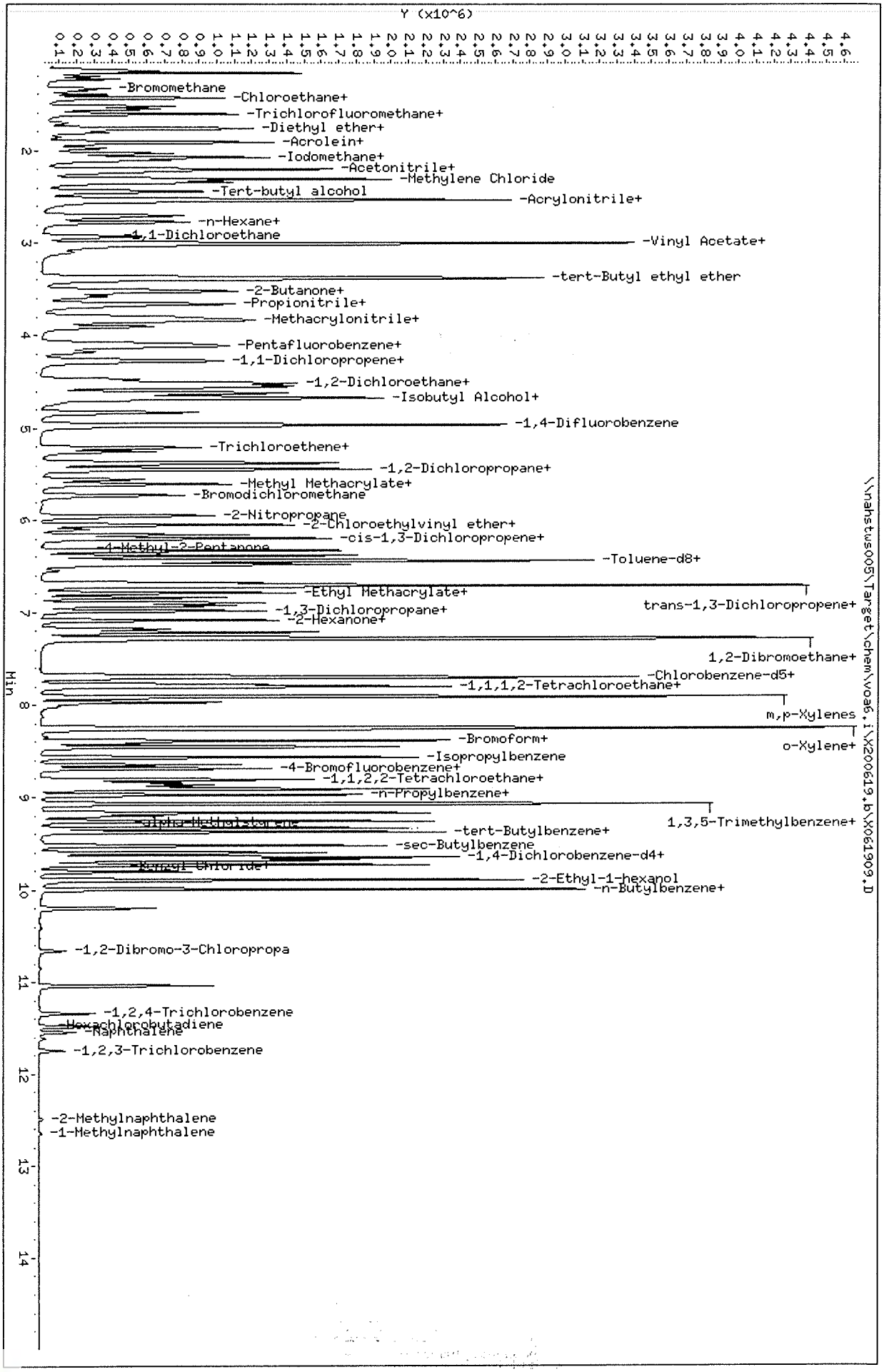
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
42	1,2-Dichloropropane	63	5.443	5.443	(1.095)	384174	100.000	107.20
75	1,3,5-Trimethylbenzene	105	9.067	9.075	(0.938)	926080	100.000	107.55
83	1,3-Dichlorobenzene	146	9.605	9.612	(0.993)	517382	100.000	103.69
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	495057	100.000	102.18
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	520981	100.000	102.54
26	2,2-Dichloropropane	77	3.516	3.516	(0.841)	399811	100.000	99.46
24	2-Butanone	43	3.580	3.580	(0.856)	497494	200.000	208.20(A)
76	2-Chlorotoluene	91	8.974	8.981	(0.928)	814329	100.000	102.37
52	2-Hexanone	43	7.090	7.090	(0.924)	801051	200.000	215.56(A)
77	4-Chlorotoluene	91	9.074	9.075	(0.939)	957320	100.000	103.85
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	887855	100.000	107.88
45	4-Methyl-2-Pentanone	43	6.331	6.331	(0.825)	1162046	200.000	214.22(A)
10	Acetone	43	1.976	1.976	(0.473)	338254	200.000	205.57(A)
37	Benzene	78	4.519	4.519	(0.909)	1106574	100.000	104.15
74	Bromobenzene	156	8.809	8.809	(0.911)	320495	100.000	102.00
29	Bromochloromethane	128	3.795	3.795	(0.908)	156658	100.000	98.70
39	Bromodichloromethane	83	5.729	5.729	(1.153)	418766	100.000	108.22
66	Bromoform	173	8.415	8.416	(1.097)	208317	100.000	108.62
6	Bromomethane	94	1.338	1.331	(0.320)	193653	100.000	99.88
19	Carbon Disulfide	76	2.069	2.069	(0.495)	1427464	200.000	214.60(A)
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	341231	100.000	102.99(H)
59	Chlorobenzene	112	7.699	7.699	(1.004)	718616	100.000	103.12
7	Chloroethane	64	1.403	1.396	(0.336)	229245	100.000	104.14
28	Chloroform	83	3.910	3.910	(0.935)	523676	100.000	103.25
3	Chloromethane	50	1.081	1.081	(0.258)	522443	100.000	100.96
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	306975	100.000	103.05
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	498016	100.000	107.77
55	Dibromochloromethane	129	7.176	7.183	(0.936)	304242	100.000	105.62
44	Dibromomethane	93	5.557	5.557	(1.118)	207265	100.000	104.05
2	Dichlorodifluoromethane	85	0.973	0.973	(0.233)	288320	100.000	100.90
61	Ethylbenzene	106	7.799	7.807	(1.017)	369349	100.000	103.93
91	Hexachlorobutadiene	225	11.481	11.481	(1.187)	51077	100.000	96.74
67	Isopropylbenzene	105	8.566	8.566	(1.117)	1084132	100.000	108.03
62	m,p-Xylenes	106	7.907	7.907	(1.031)	892171	200.000	214.16(A)
17	Methylene Chloride	84	2.305	2.305	(0.551)	305432	100.000	103.37
87	n-Butylbenzene	91	9.998	9.999	(1.034)	801382	100.000	108.01
73	n-Propylbenzene	91	8.917	8.917	(0.922)	1325497	100.000	107.46
92	Naphthalene	128	11.546	11.546	(1.194)	130246	100.000	97.59
63	o-Xylene	106	8.244	8.244	(1.075)	446070	100.000	105.14
81	sec-Butylbenzene	105	9.526	9.526	(0.985)	1040993	100.000	108.66
64	Styrene	104	8.258	8.265	(1.077)	791949	100.000	105.53
78	tert-Butylbenzene	119	9.339	9.340	(0.966)	722187	100.000	106.78
56	Tetrachloroethene	164	6.933	6.933	(0.904)	196445	100.000	105.46
50	Toluene	91	6.446	6.453	(0.840)	1116826	100.000	104.25
20	trans-1,2-Dichloroethene	96	2.527	2.527	(0.604)	250651	100.000	106.49
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	450760	100.000	105.20
38	Trichloroethene	130	5.206	5.206	(1.048)	269624	100.000	107.31
8	Trichlorofluoromethane	101	1.560	1.560	(0.373)	409693	100.000	111.02
5	Vinyl Chloride	62	1.138	1.138	(0.272)	423795	100.000	103.47

QC Flag Legend

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

QC Flag Legend

M - Compound response manually integrated.
H - Operator selected an alternate compound hit.



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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

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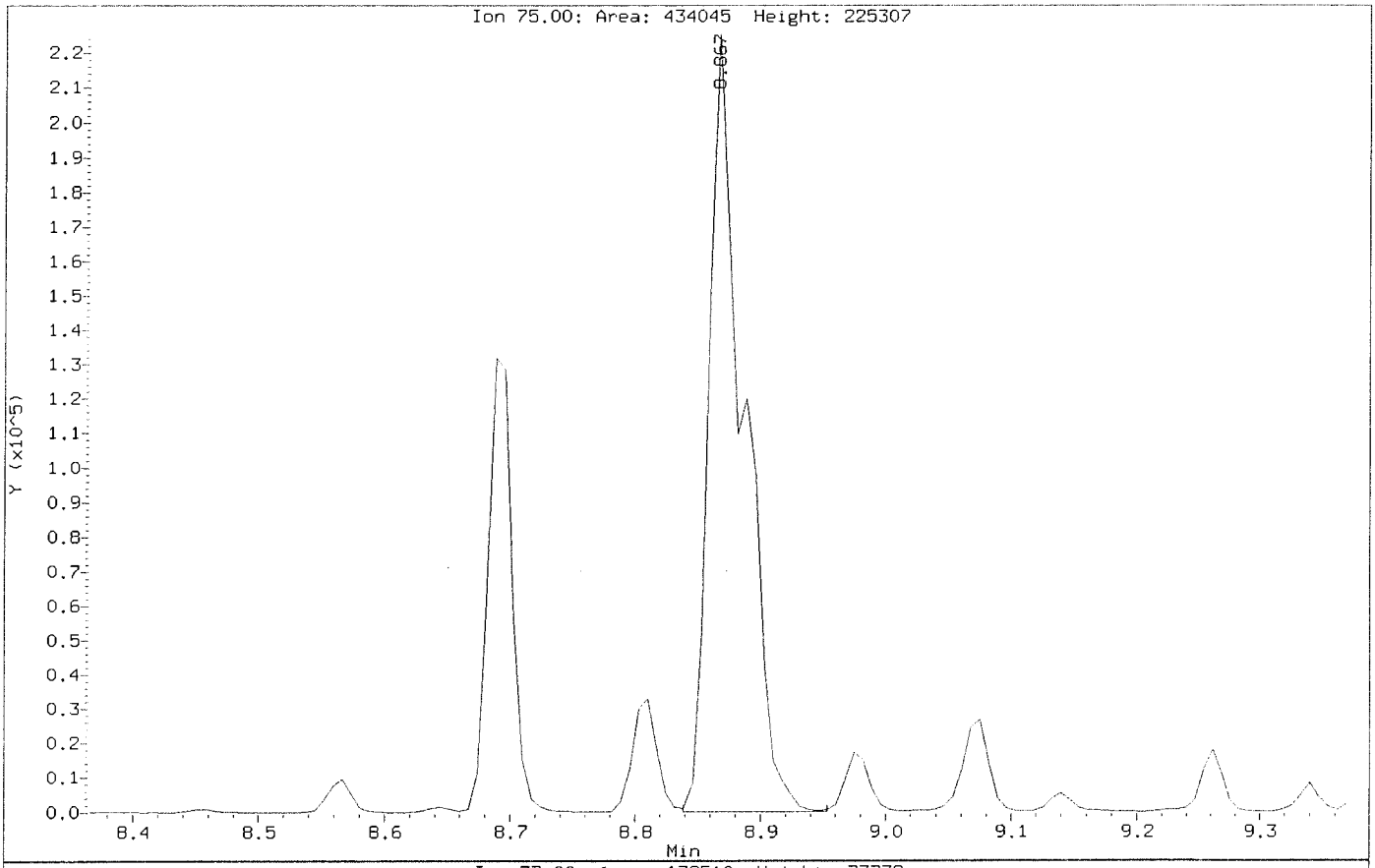
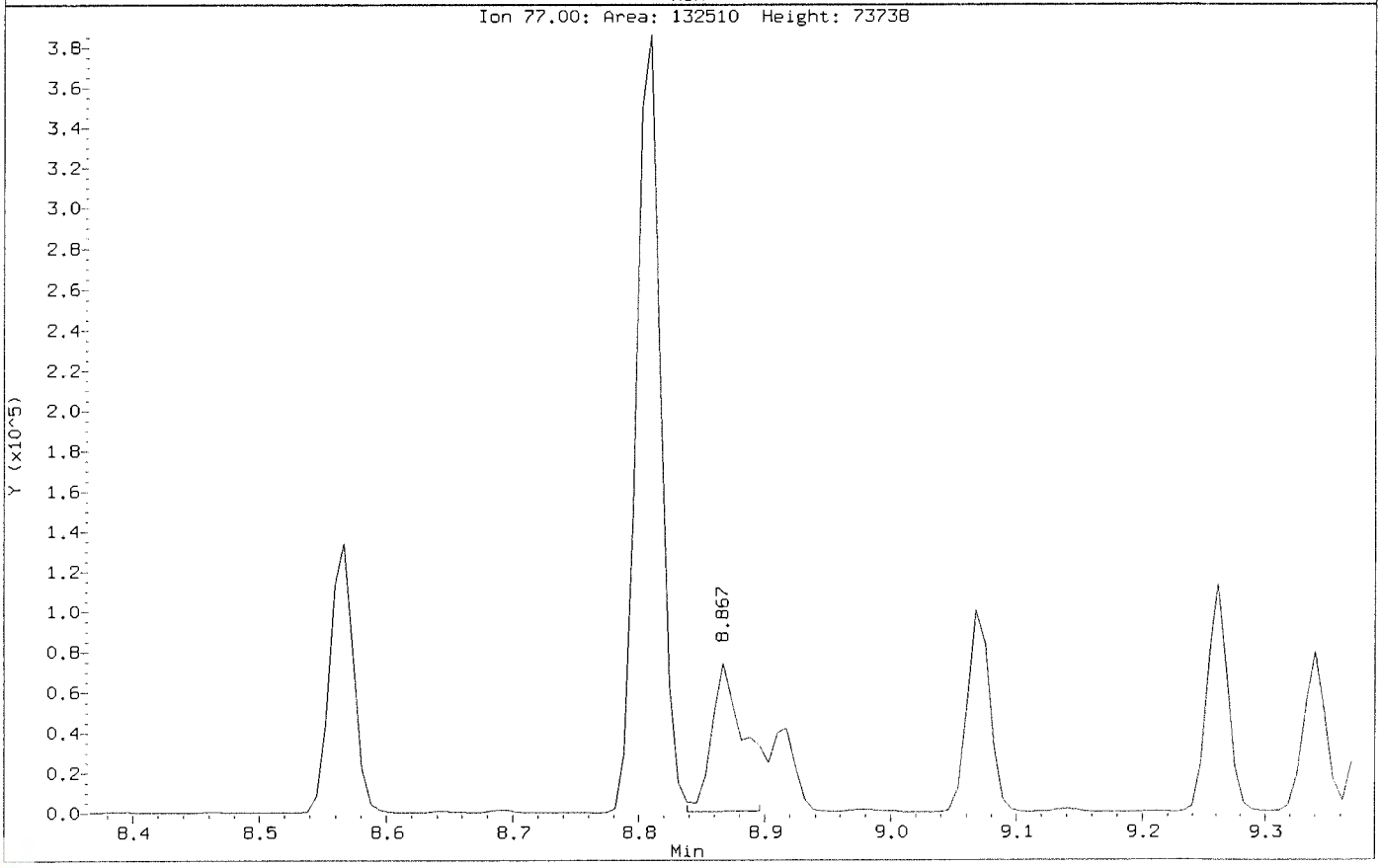
Data File: \\nahstws005\Target\chem\voa6.i\X200619.b\Before\X061909.D
Injection Date: 19-JUN-2020 14:41
Instrument: voa6.i
Client Sample ID: VSTD100

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





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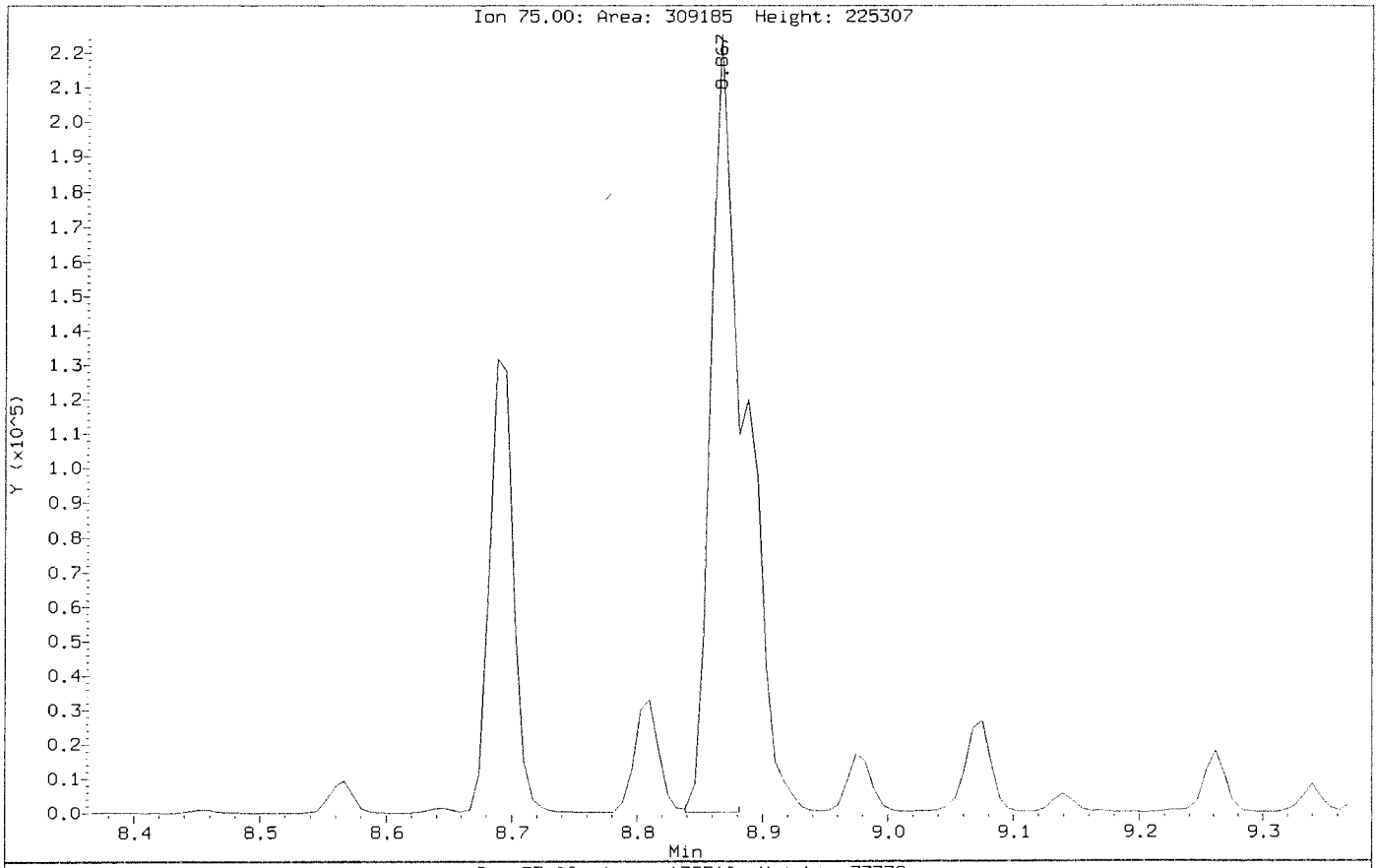
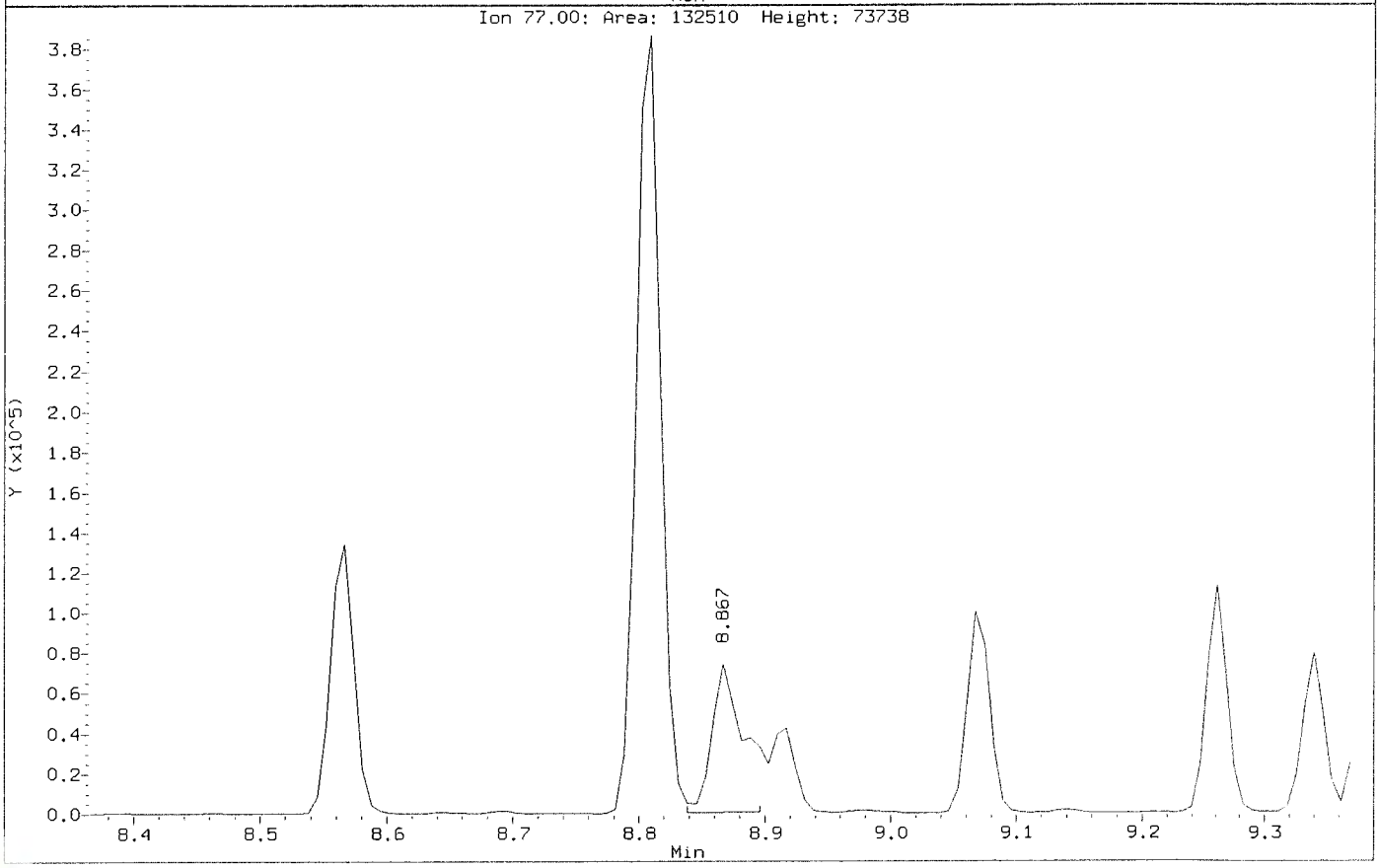
Instrument: voa6.i
Client Sample ID: VSTD100

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





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Data file : \\nahstws005\Target\chem\voa6.i\X200619.b\X061910.D
Lab Smp Id: VSTD150 Client Smp ID: VSTD150
Inj Date : 19-JUN-2020 15:05
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\X200619.b\8260W.m
Meth Date : 09-Jul-2020 09:58 voa6.i Quant Type: ISTD
Cal Date : 19-JUN-2020 15:05 Cal File: X061910.D
Als bottle: 11 Calibration Sample, Level: 9
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14

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	4.189	4.189	(1.000)	202230	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	373068	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	356112	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	163286	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.979)	395758	150.000	152.60
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	571773	150.000	152.55
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	1332723	150.000	150.44
$ 69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	527693	150.000	145.45
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	411945	150.000	158.85
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.976)	610074	150.000	162.38
68 1,1,2,2-Tetrachloroethane	83	8.845	8.845	(0.915)	499427	150.000	153.89
53 1,1,2-Trichloroethane	83	6.840	6.847	(0.892)	347972	150.000	152.14
22 1,1-Dichloroethane	63	2.922	2.921	(0.697)	950646	150.000	151.37
11 1,1-Dichloroethene	96	1.912	1.911	(0.456)	316563	150.000	160.32
32 1,1-Dichloropropene	75	4.283	4.282	(0.862)	516270	150.000	153.72
93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.215)	55004	150.000	146.10
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	441241	150.000	146.25 (M)
90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	111992	150.000	145.51
79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.970)	1394095	150.000	156.55
89 1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.102)	37264	150.000	148.56
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	433930	150.000	154.48
88 1,2-Dichlorobenzene	146	9.999	9.999	(1.034)	677286	150.000	153.05
33 1,2-Dichloroethane	62	4.562	4.562	(0.918)	747213	150.000	152.84

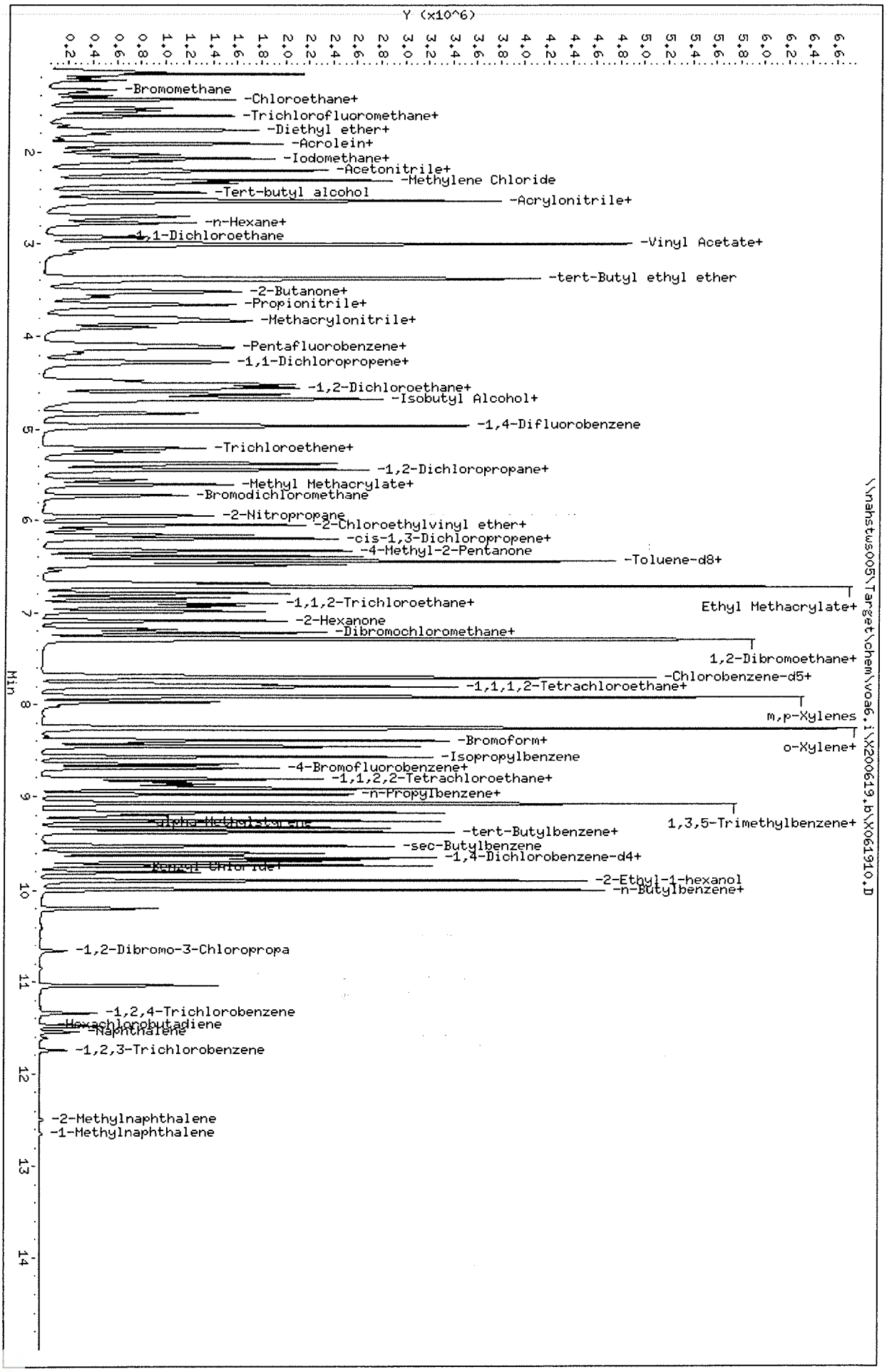
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
42	1,2-Dichloropropane	63	5.443	5.443	(1.095)	559872	150.000	159.24
75	1,3,5-Trimethylbenzene	105	9.067	9.075	(0.938)	1342272	150.000	159.86
83	1,3-Dichlorobenzene	146	9.612	9.612	(0.994)	764168	150.000	157.07
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	714020	150.000	148.95
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	764161	150.000	154.26
26	2,2-Dichloropropane	77	3.516	3.516	(0.839)	572730	150.000	145.91
24	2-Butanone	43	3.581	3.580	(0.855)	710305	300.000	304.79(A)
76	2-Chlorotoluene	91	8.974	8.981	(0.928)	1193024	150.000	153.82
52	2-Hexanone	43	7.090	7.090	(0.924)	1164749	300.000	316.77(A)
77	4-Chlorotoluene	91	9.075	9.075	(0.939)	1394583	150.000	155.15
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	1298626	150.000	161.83
45	4-Methyl-2-Pentanone	43	6.331	6.331	(0.825)	1678794	300.000	312.79(A)
10	Acetone	43	1.976	1.976	(0.472)	483263	300.000	301.96(A)
37	Benzene	78	4.519	4.519	(0.909)	1626209	150.000	156.02
74	Bromobenzene	156	8.810	8.809	(0.911)	473068	150.000	154.40
29	Bromochloromethane	128	3.795	3.795	(0.906)	228714	150.000	147.57
39	Bromodichloromethane	83	5.729	5.729	(1.153)	612641	150.000	161.38
66	Bromoform	173	8.416	8.416	(1.097)	306306	150.000	161.43
6	Bromomethane	94	1.331	1.331	(0.318)	280237	150.000	148.02
19	Carbon Disulfide	76	2.069	2.069	(0.494)	2098944	300.000	323.16(A)
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	513987	150.000	158.12(H)
59	Chlorobenzene	112	7.699	7.699	(1.004)	1055002	150.000	153.01
7	Chloroethane	64	1.396	1.396	(0.333)	330987	150.000	153.99
28	Chloroform	83	3.910	3.910	(0.933)	756598	150.000	152.77
3	Chloromethane	50	1.081	1.081	(0.258)	818258	150.000	161.94
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.843)	451807	150.000	155.33
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	733988	150.000	161.91
55	Dibromochloromethane	129	7.176	7.183	(0.936)	451676	150.000	158.48
44	Dibromomethane	93	5.558	5.557	(1.118)	300741	150.000	153.89
2	Dichlorodifluoromethane	85	0.973	0.973	(0.232)	435763	150.000	155.69
61	Ethylbenzene	106	7.800	7.807	(1.017)	543875	150.000	154.68
91	Hexachlorobutadiene	225	11.481	11.481	(1.187)	73978	150.000	144.69
67	Isopropylbenzene	105	8.566	8.566	(1.117)	1600797	150.000	161.22
62	m,p-Xylenes	106	7.907	7.907	(1.031)	1308193	300.000	317.38(A)
17	Methylene Chloride	84	2.306	2.305	(0.550)	442721	150.000	154.44
87	n-Butylbenzene	91	9.999	9.999	(1.034)	1165725	150.000	161.13
73	n-Propylbenzene	91	8.917	8.917	(0.922)	1949966	150.000	162.13
92	Naphthalene	128	11.546	11.546	(1.194)	197970	150.000	149.05
63	o-Xylene	106	8.244	8.244	(1.075)	649359	150.000	154.69
81	sec-Butylbenzene	105	9.526	9.526	(0.985)	1524362	150.000	163.18
64	Styrene	104	8.265	8.265	(1.078)	1161143	150.000	156.38
78	tert-Butylbenzene	119	9.340	9.340	(0.966)	1053367	150.000	159.73
56	Tetrachloroethene	164	6.933	6.933	(0.904)	288302	150.000	156.43
50	Toluene	91	6.453	6.453	(0.841)	1633150	150.000	154.08
20	trans-1,2-Dichloroethene	96	2.528	2.527	(0.603)	366859	150.000	159.62
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	668669	150.000	159.07
38	Trichloroethene	130	5.207	5.206	(1.048)	396102	150.000	160.68
8	Trichlorofluoromethane	101	1.561	1.560	(0.373)	611090	150.000	169.59
5	Vinyl Chloride	62	1.138	1.138	(0.272)	653551	150.000	163.42

QC Flag Legend

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

QC Flag Legend

M - Compound response manually integrated.
H - Operator selected an alternate compound hit.



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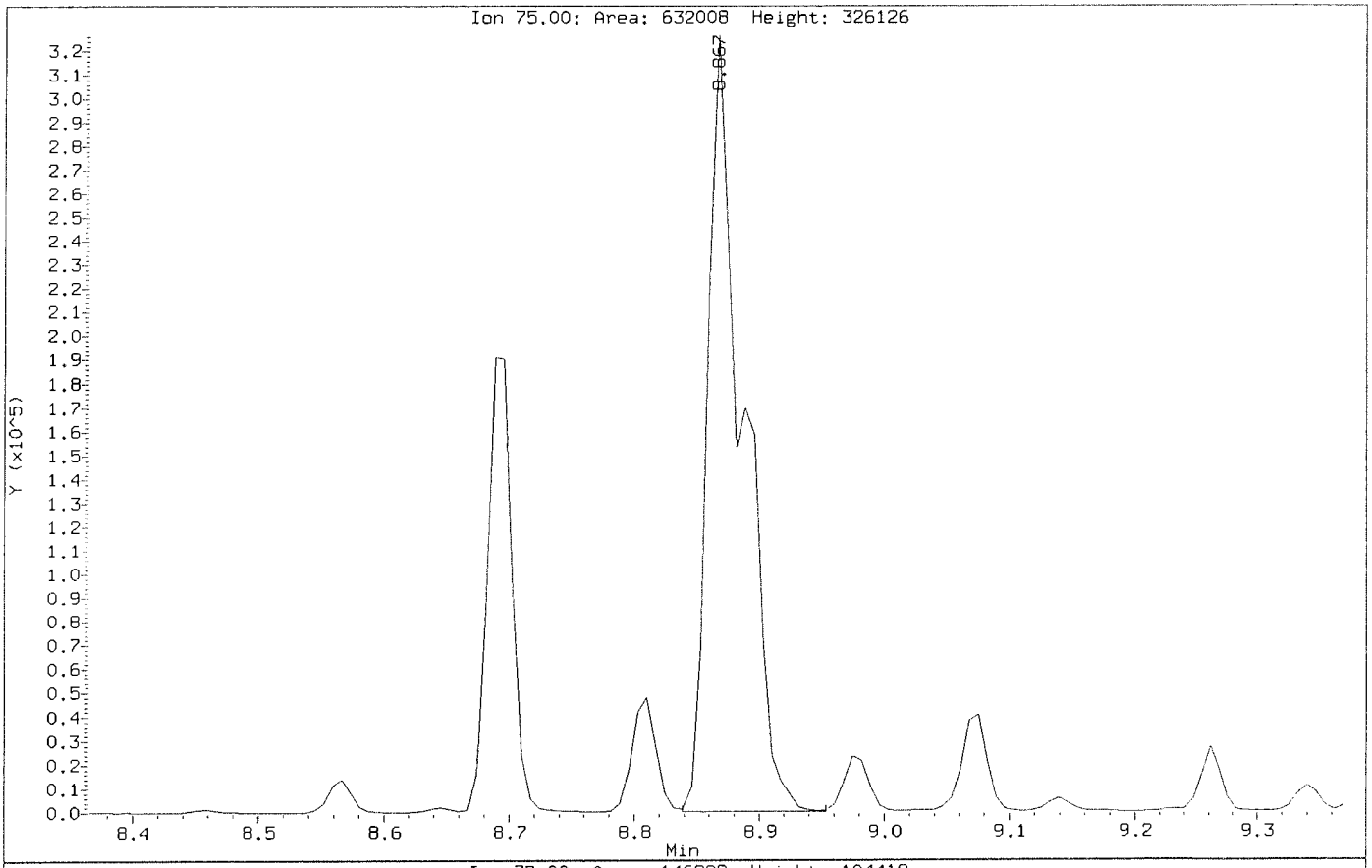
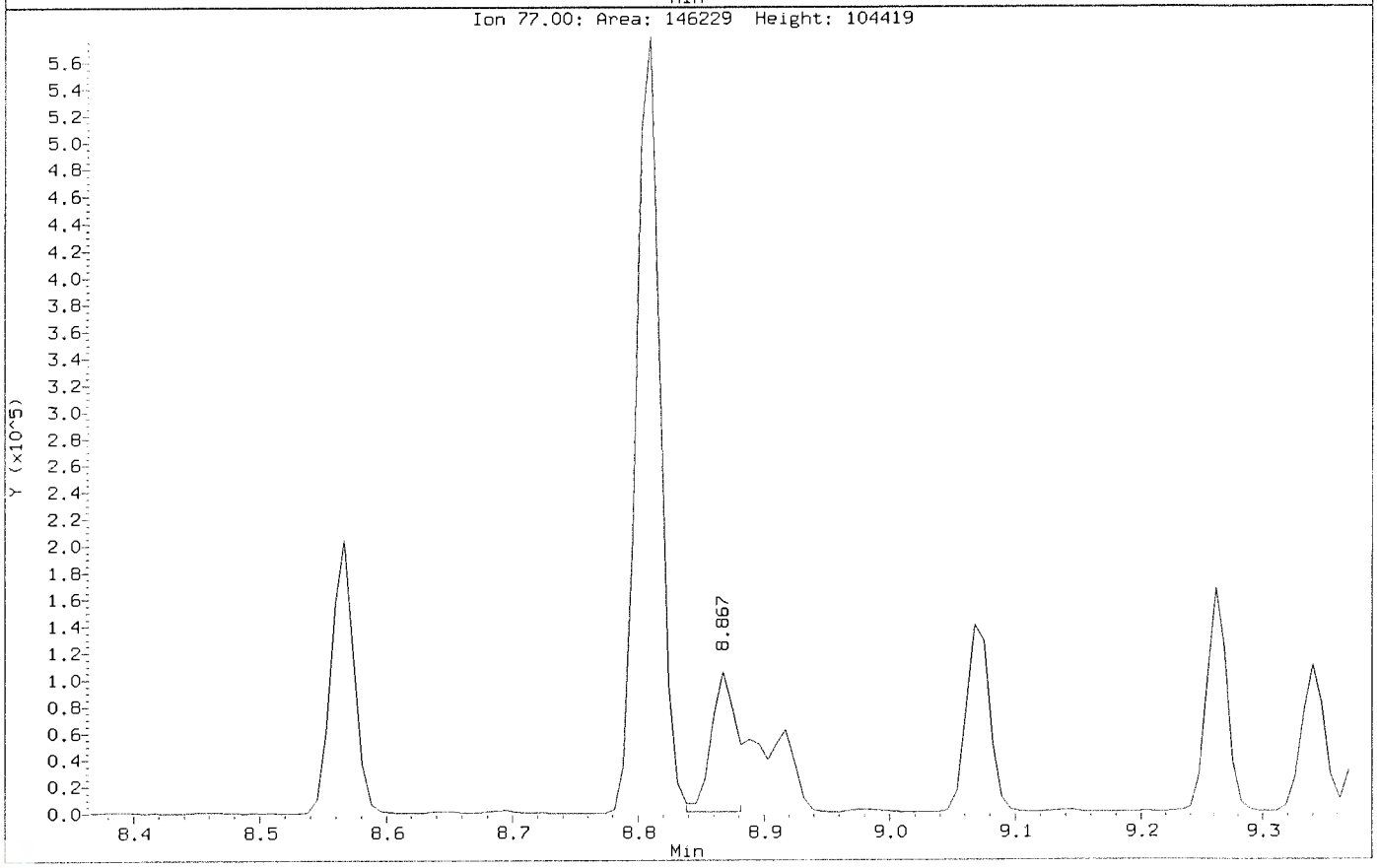
Client ID: VSTD150
Sample Info: VSTD150;VSTD150;1;9;
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\nahstws005\Target\chem\voa6.i\X200619.b\Before\X061910.D
Injection Date: 19-JUN-2020 15:05
Instrument: voa6.i
Client Sample ID: VSTD150

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





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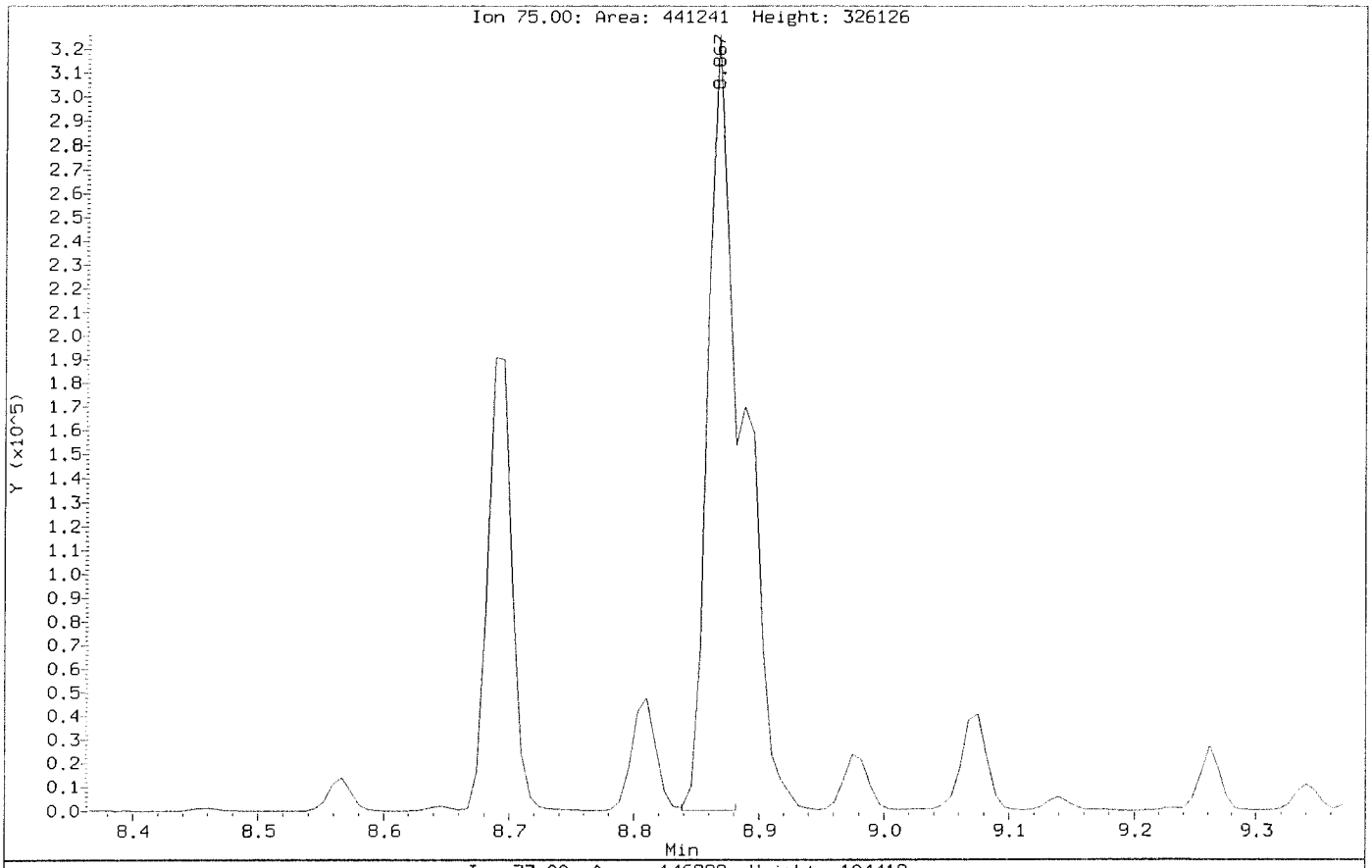
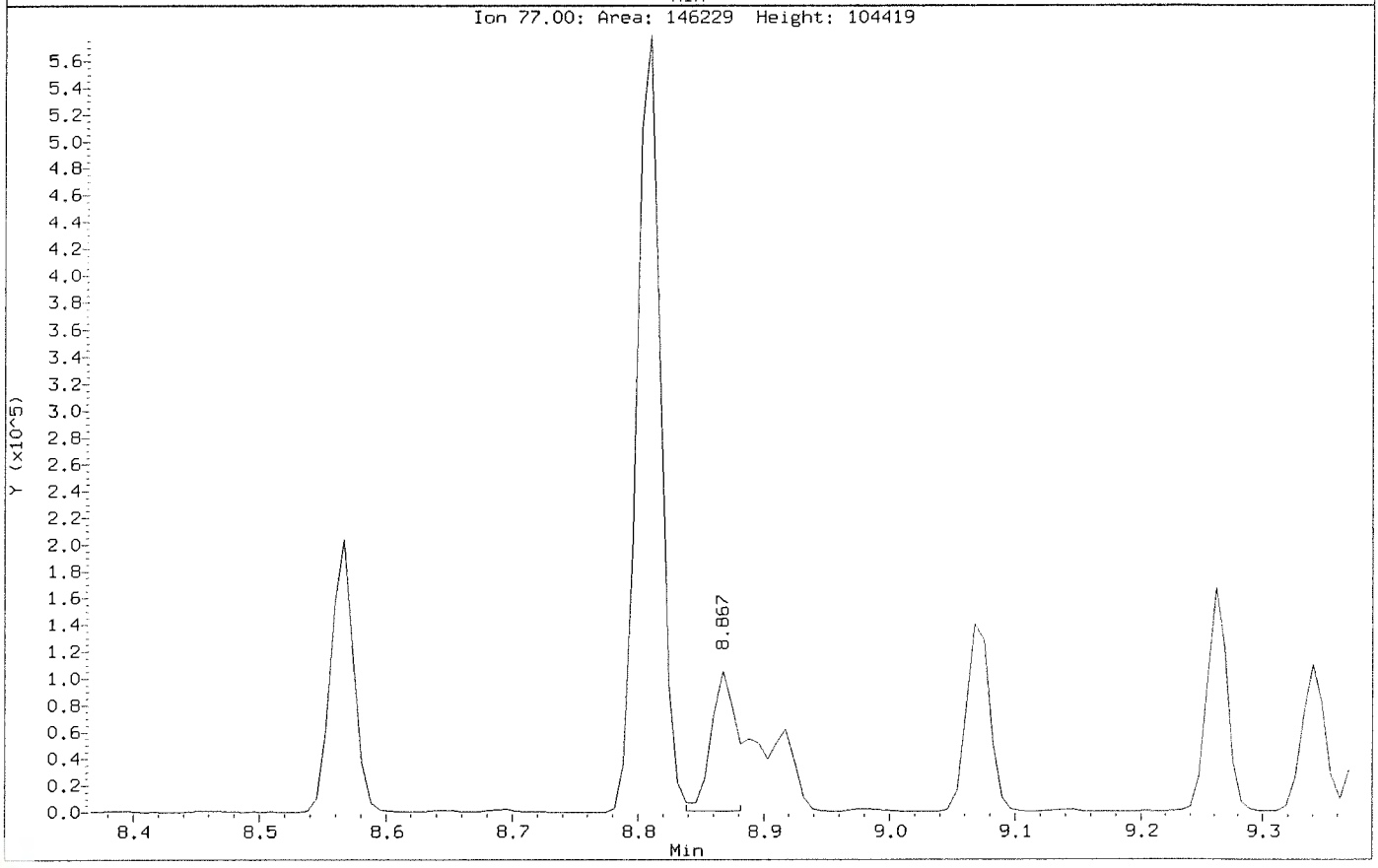
Injection Date: 19-JUN-2020 15:05
Instrument: voa6.i
Client Sample ID: VSTD150

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





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Data file : \\nahstws005\Target\chem\voa6.i\X200619.b\X061911.D
Lab Smp Id: VSTD200 Client Smp ID: VSTD200
Inj Date : 19-JUN-2020 15:29
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\X200619.b\8260W.m
Meth Date : 09-Jul-2020 09:58 voa6.i Quant Type: ISTD
Cal Date : 19-JUN-2020 15:29 Cal File: X061911.D
Als bottle: 12 Calibration Sample, Level: 10
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14

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	4.189	4.189	(1.000)	202512	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	369920	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	355446	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	160294	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.979)	511755	200.000	197.05
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	739559	200.000	197.23
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	1722990	200.000	194.85
$ 69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	683763	200.000	188.83
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	525031	200.000	202.84(A)
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.976)	769756	200.000	204.59(A)
68 1,1,2,2-Tetrachloroethane	83	8.845	8.845	(0.915)	642225	200.000	201.59(A)
53 1,1,2-Trichloroethane	83	6.847	6.847	(0.893)	442199	200.000	193.70
22 1,1-Dichloroethane	63	2.921	2.921	(0.697)	1200600	200.000	190.90
11 1,1-Dichloroethene	96	1.911	1.911	(0.456)	401703	200.000	203.15(A)
32 1,1-Dichloropropene	75	4.282	4.282	(0.862)	655069	200.000	196.71
93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.215)	76925	200.000	201.92(A)
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	560130	200.000	189.12(M)
90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	153582	200.000	203.75(A)
79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.970)	1771094	200.000	202.60(A)
89 1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.102)	49492	200.000	201.04(A)
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	555512	200.000	198.13
88 1,2-Dichlorobenzene	146	9.999	9.999	(1.034)	865428	200.000	199.21
33 1,2-Dichloroethane	62	4.562	4.562	(0.918)	952582	200.000	196.51

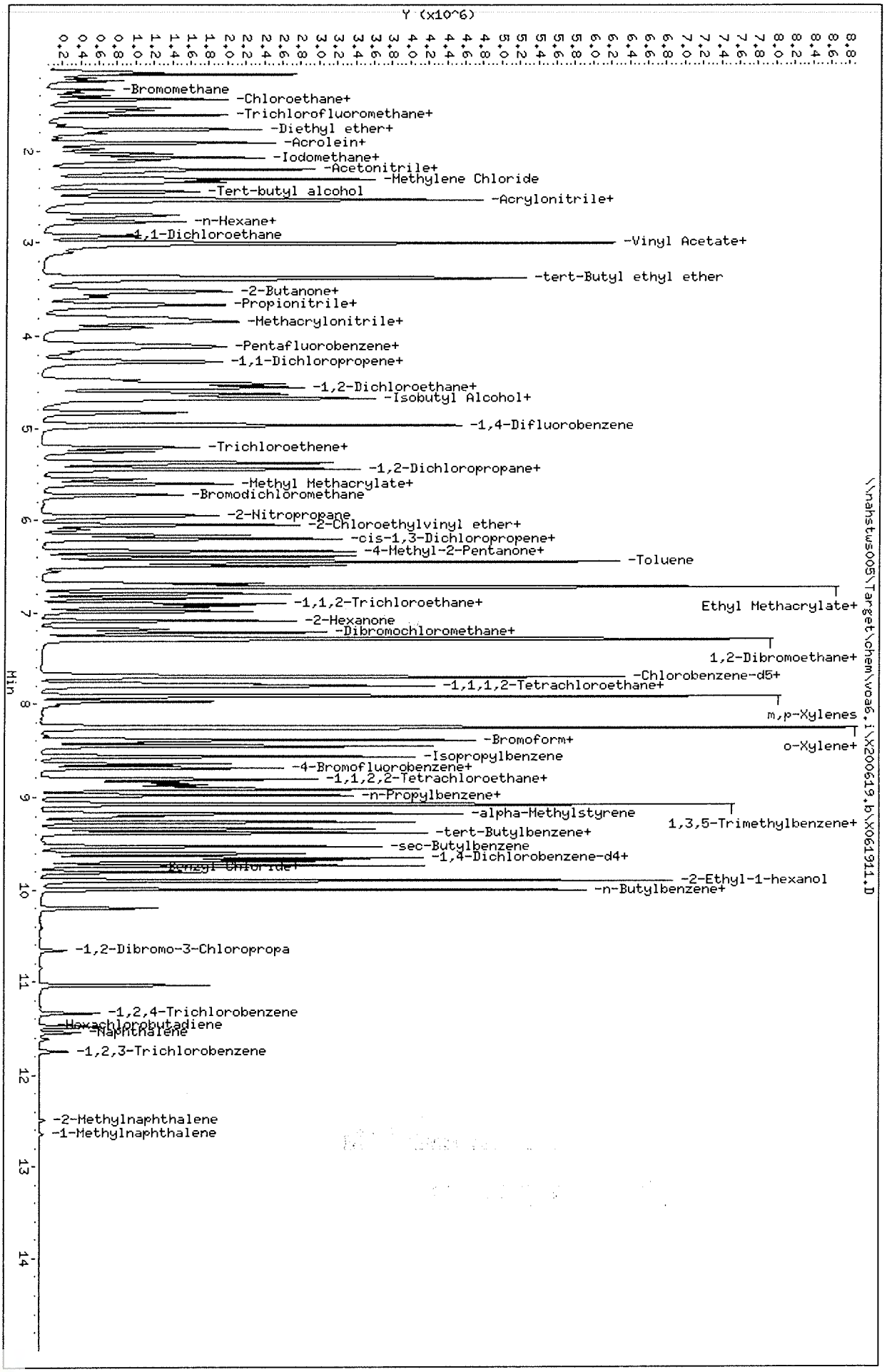
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
42	1,2-Dichloropropane	63	5.443	5.443	(1.095)	705249	200.000	202.30(A)
75	1,3,5-Trimethylbenzene	105	9.075	9.075	(0.939)	1709042	200.000	207.35(A)
83	1,3-Dichlorobenzene	146	9.612	9.612	(0.994)	961827	200.000	201.39(A)
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	914494	200.000	191.13
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	961003	200.000	197.61
26	2,2-Dichloropropane	77	3.516	3.516	(0.839)	720755	200.000	183.37
24	2-Butanone	43	3.580	3.580	(0.855)	913703	400.000	391.75(A)
76	2-Chlorotoluene	91	8.981	8.981	(0.929)	1504114	200.000	197.55
52	2-Hexanone	43	7.090	7.090	(0.924)	1523378	400.000	415.08(A)
77	4-Chlorotoluene	91	9.075	9.075	(0.939)	1776637	200.000	201.35(A)
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	1637980	200.000	207.93(A)
45	4-Methyl-2-Pentanone	43	6.331	6.331	(0.825)	2181984	400.000	407.31(A)
10	Acetone	43	1.976	1.976	(0.472)	631240	400.000	394.65(A)
37	Benzene	78	4.519	4.519	(0.909)	2067890	200.000	200.08(A)
74	Bromobenzene	156	8.809	8.809	(0.911)	599050	200.000	199.17
29	Bromochloromethane	128	3.795	3.795	(0.906)	281237	200.000	181.21
39	Bromodichloromethane	83	5.729	5.729	(1.153)	782492	200.000	207.88(A)
66	Bromoform	173	8.416	8.416	(1.097)	398104	200.000	210.20(A)
6	Bromomethane	94	1.331	1.331	(0.318)	336571	200.000	177.53
19	Carbon Disulfide	76	2.069	2.069	(0.494)	2654462	400.000	408.13(A)
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	653032	200.000	202.60(AH)
59	Chlorobenzene	112	7.699	7.699	(1.004)	1339251	200.000	194.60
7	Chloroethane	64	1.396	1.396	(0.333)	416043	200.000	193.29
28	Chloroform	83	3.910	3.910	(0.933)	964837	200.000	194.55
3	Chloromethane	50	1.081	1.081	(0.258)	1070738	200.000	211.62(A)
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.843)	568336	200.000	195.13
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	928679	200.000	206.60(A)
55	Dibromochloromethane	129	7.183	7.183	(0.937)	577426	200.000	202.99(A)
44	Dibromomethane	93	5.557	5.557	(1.118)	384538	200.000	198.45
2	Dichlorodifluoromethane	85	0.973	0.973	(0.232)	549993	200.000	196.00
61	Ethylbenzene	106	7.807	7.807	(1.018)	690131	200.000	196.64
91	Hexachlorobutadiene	225	11.481	11.481	(1.187)	101440	200.000	202.90(A)
67	Isopropylbenzene	105	8.566	8.566	(1.117)	2006543	200.000	202.47(A)
62	m,p-Xylenes	106	7.907	7.907	(1.031)	1656625	400.000	402.67(A)
17	Methylene Chloride	84	2.305	2.305	(0.550)	557175	200.000	194.61
87	n-Butylbenzene	91	9.999	9.999	(1.034)	1452908	200.000	204.57(A)
73	n-Propylbenzene	91	8.917	8.917	(0.922)	2454727	200.000	207.91(A)
92	Naphthalene	128	11.546	11.546	(1.194)	268406	200.000	200.79(A)
63	o-Xylene	106	8.244	8.244	(1.075)	830335	200.000	198.17
81	sec-Butylbenzene	105	9.526	9.526	(0.985)	1907084	200.000	207.97(A)
64	Styrene	104	8.265	8.265	(1.078)	1489716	200.000	201.01(A)
78	tert-Butylbenzene	119	9.340	9.340	(0.966)	1320413	200.000	203.96(A)
56	Tetrachloroethene	164	6.933	6.933	(0.904)	363394	200.000	197.55
50	Toluene	91	6.453	6.453	(0.841)	2062267	200.000	194.93
20	trans-1,2-Dichloroethene	96	2.527	2.527	(0.603)	459599	200.000	199.69
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	865391	200.000	207.62(A)
38	Trichloroethene	130	5.206	5.206	(1.048)	502082	200.000	205.41(A)
8	Trichlorofluoromethane	101	1.560	1.560	(0.373)	763711	200.000	211.65(A)
5	Vinyl Chloride	62	1.138	1.138	(0.272)	828837	200.000	206.96(A)

QC Flag Legend

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

QC Flag Legend

M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

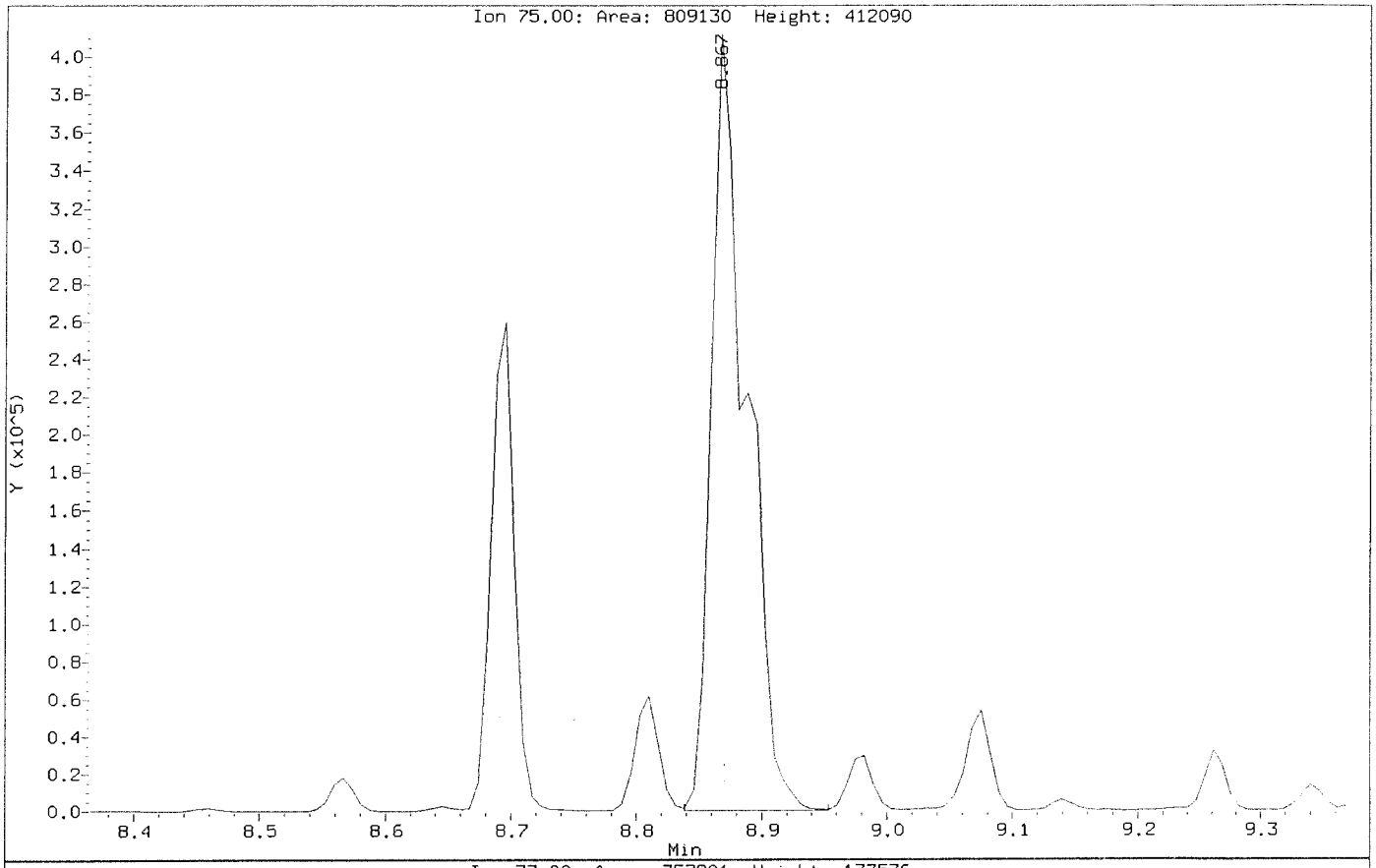


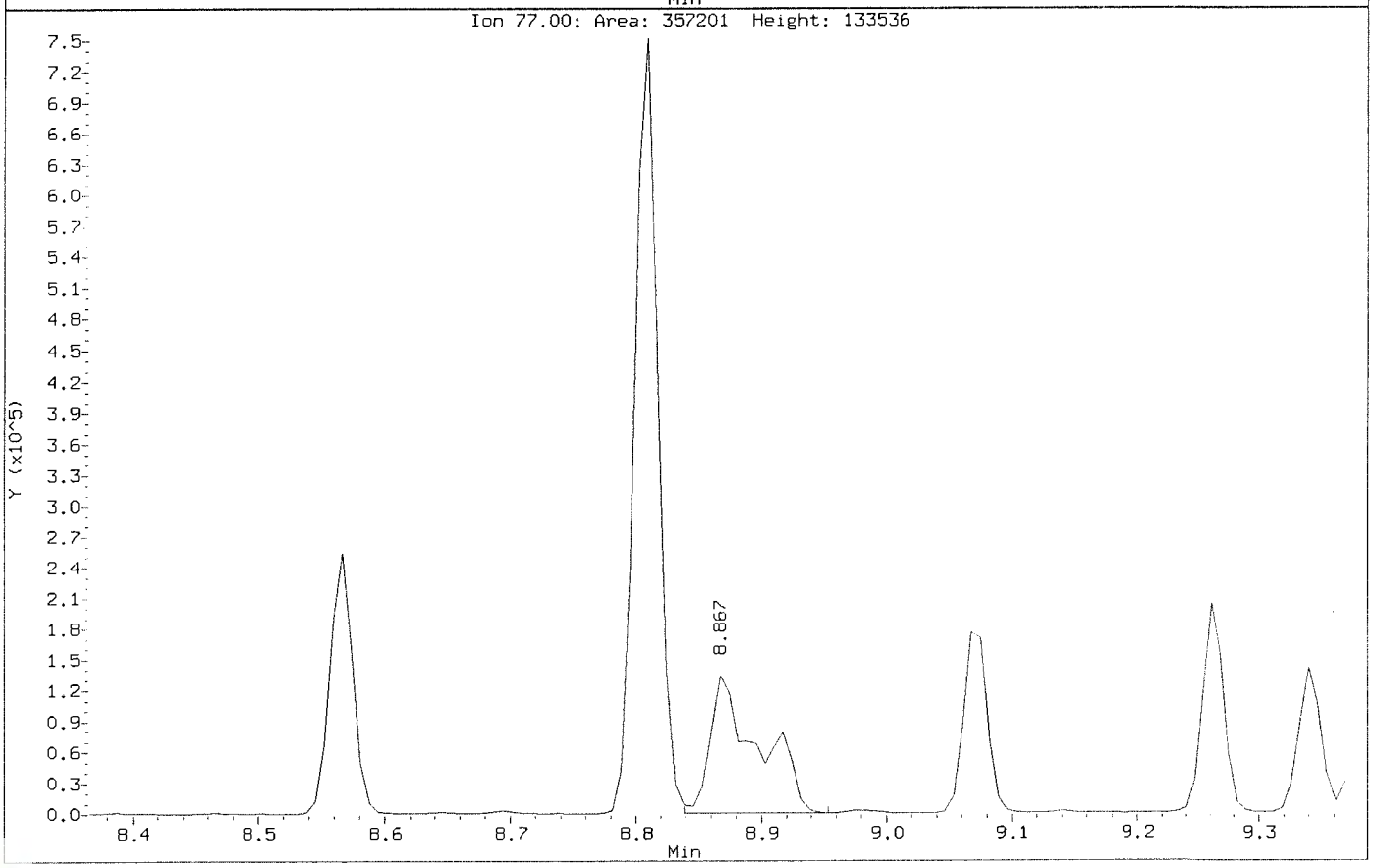
Data File: \\nahstws005\Target\chem\voa6.i\X200619.b\X061911.D
Date : 19-JUN-2020 15:29
Client ID: VSTD200
Sample Info: VSTD200;VSTD200;1;10;
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\nahstws005\Target\chem\voa6.i\X200619.b\Before\X061911.D
Injection Date: 19-JUN-2020 15:29
Instrument: voa6.i
Client Sample ID: VSTD200

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





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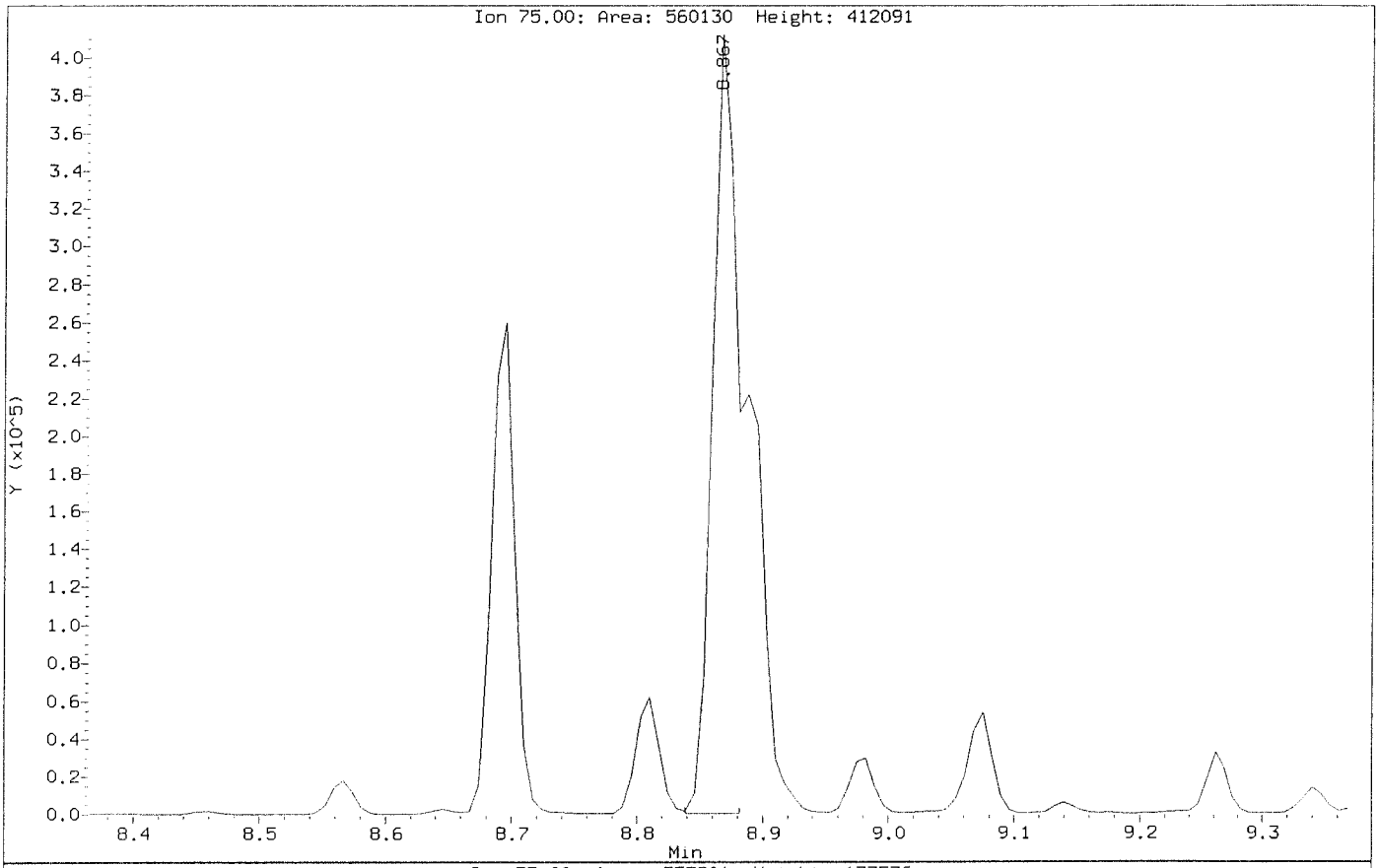
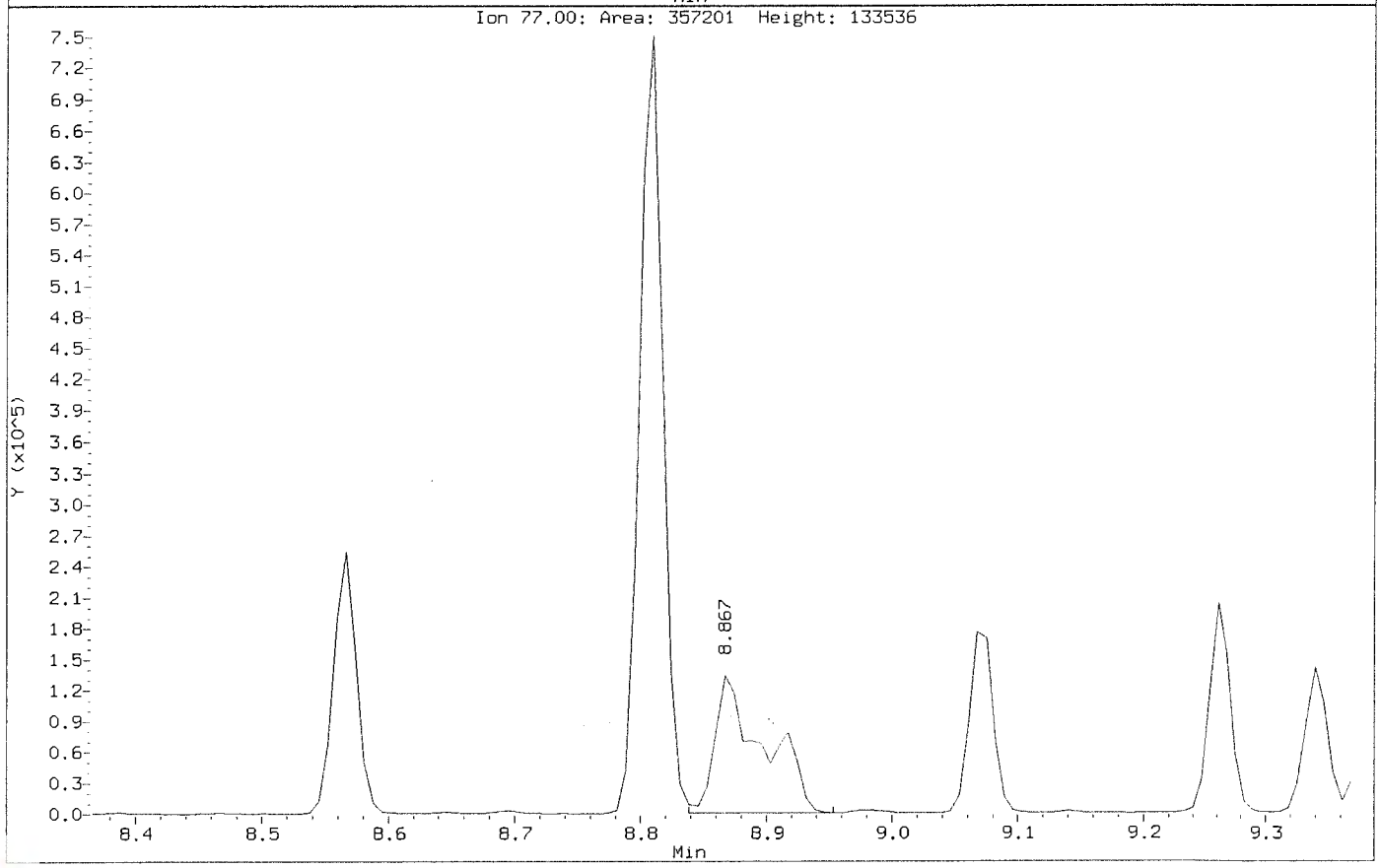
Injection Date: 19-JUN-2020 15:29
Instrument: voa6.i
Client Sample ID: VSTD200

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200619.b\X061913.D
Lab Smp Id: ICV Client Smp ID: ICV
Inj Date : 19-JUN-2020 16:41
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\X200619.b\8260W.m
Meth Date : 09-Jul-2020 09:58 voa6.i Quant Type: ISTD
Cal Date : 19-JUN-2020 12:42 Cal File: X061904.D
Als bottle: 15 QC Sample: METHSPIKE
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14

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

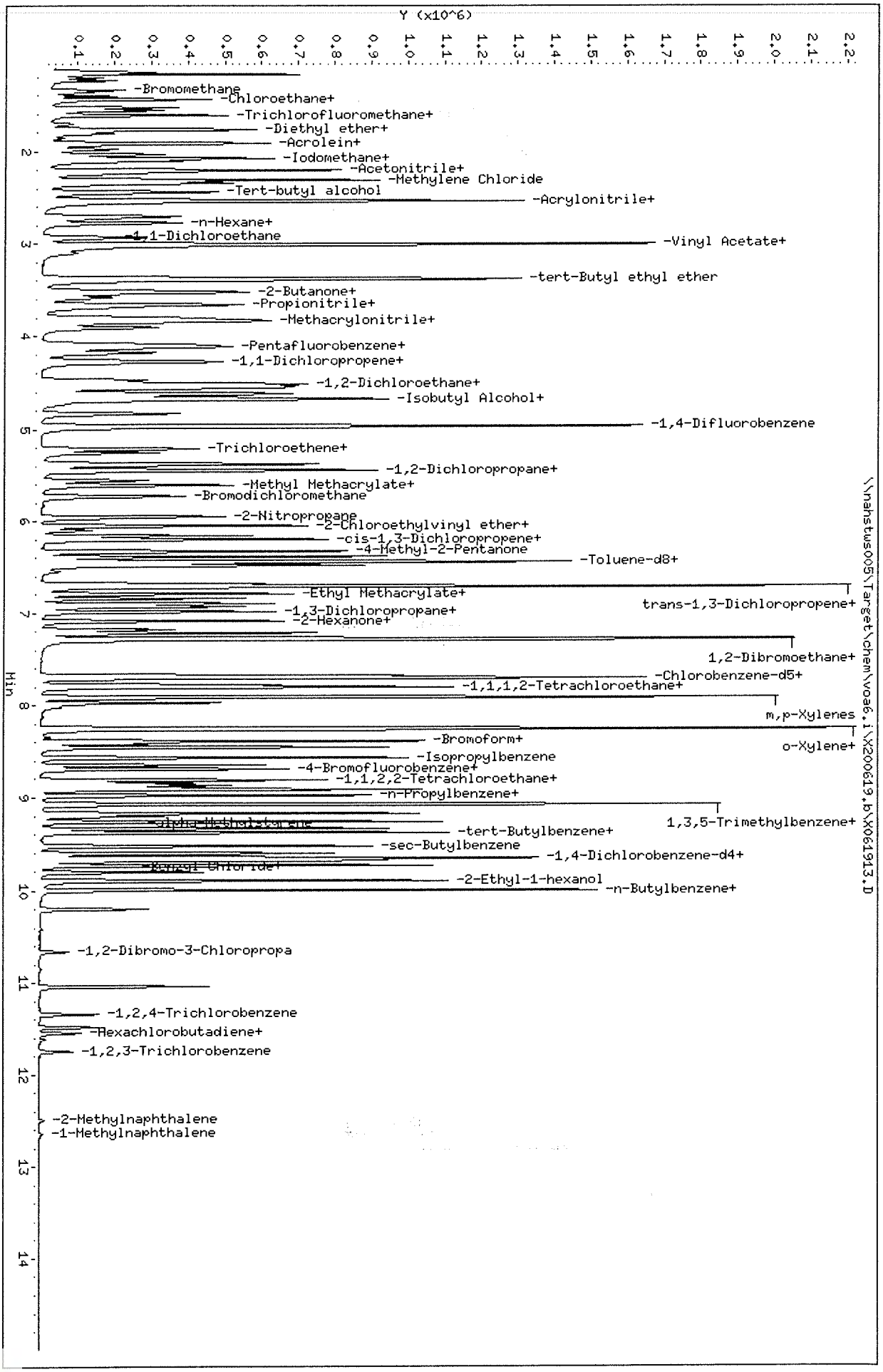
Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.189	(1.000)	217753	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	389267	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	368251	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.669	(1.000)	169551	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	141002	50.4939	50.49
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	201011	49.3881	49.38
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	471370	51.4551	51.45
$ 69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	188335	50.2035	50.20
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	136580	50.9336	50.93
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.978)	196161	48.4892	48.48
68 1,1,2,2-Tetrachloroethane	83	8.838	8.845	(0.915)	171061	50.7642	50.76
53 1,1,2-Trichloroethane	83	6.840	6.847	(0.892)	117980	49.8836	49.88
22 1,1-Dichloroethane	63	2.929	2.921	(0.700)	322682	47.7179	47.71
11 1,1-Dichloroethene	96	1.911	1.911	(0.457)	104413	49.1099	49.10
32 1,1-Dichloropropene	75	4.282	4.282	(0.862)	166469	47.5049	47.50
93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.216)	21643	56.6536	56.65
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.918)	153791	49.0908	49.09(M)
90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	38492	47.3474	47.34
79 1,2,4-Trimethylbenzene	105	9.382	9.383	(0.971)	464138	50.1963	50.19
89 1,2-Dibromo-3-Chloropropane	155	10.657	10.658	(1.103)	12835	49.1869	49.18
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	146314	50.3719	50.37
88 1,2-Dichlorobenzene	146	9.998	9.999	(1.035)	232499	50.5981	50.59
33 1,2-Dichloroethane	62	4.562	4.562	(0.918)	259269	50.8280	50.82

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
42	1,2-Dichloropropane	63	5.443	5.443	(1.095)	190470	51.9223	51.92
75	1,3,5-Trimethylbenzene	105	9.067	9.075	(0.938)	445542	51.1049	51.10
83	1,3-Dichlorobenzene	146	9.605	9.612	(0.994)	257302	50.9335	50.93
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	244447	49.3155	49.31
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.002)	257515	50.0635	50.06
26	2,2-Dichloropropane	77	3.516	3.516	(0.841)	208622	49.3624	49.36
24	2-Butanone	43	3.580	3.580	(0.856)	247582	98.1352	98.13
76	2-Chlorotoluene	91	8.974	8.981	(0.929)	398262	49.4521	49.45
52	2-Hexanone	43	7.090	7.090	(0.924)	392765	103.299	103.29
77	4-Chlorotoluene	91	9.074	9.075	(0.939)	467563	50.0975	50.09
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	418927	50.2765	50.27
45	4-Methyl-2-Pentanone	43	6.324	6.331	(0.824)	564690	101.746	101.74
10	Acetone	43	1.976	1.976	(0.473)	183595	104.889	104.88
37	Benzene	78	4.512	4.519	(0.908)	550524	50.6202	50.62
74	Bromobenzene	156	8.809	8.809	(0.912)	158127	49.7043	49.70
29	Bromochloromethane	128	3.795	3.795	(0.908)	77904	46.6846	46.68
39	Bromodichloromethane	83	5.729	5.729	(1.153)	205637	51.9161	51.91
66	Bromoform	173	8.415	8.416	(1.097)	102310	52.1426	52.14
6	Bromomethane	94	1.338	1.331	(0.320)	98421	48.2807	48.28
19	Carbon Disulfide	76	2.069	2.069	(0.495)	697482	99.7336	99.73
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	161866	47.7245	47.72
59	Chlorobenzene	112	7.699	7.699	(1.004)	353886	49.6340	49.63
7	Chloroethane	64	1.403	1.396	(0.336)	109592	47.3526	47.35
28	Chloroform	83	3.910	3.910	(0.935)	257019	48.2001	48.20
3	Chloromethane	50	1.081	1.081	(0.258)	270110	49.6484	49.64
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	155243	49.5699	49.56
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	241681	51.0940	51.09
55	Dibromochloromethane	129	7.176	7.183	(0.936)	150053	50.9161	50.91
44	Dibromomethane	93	5.557	5.557	(1.118)	102329	50.1863	50.18
2	Dichlorodifluoromethane	85	0.973	0.973	(0.233)	133236	44.8561	44.85
61	Ethylbenzene	106	7.799	7.807	(1.017)	178201	49.0110	49.01
91	Hexachlorobutadiene	225	11.488	11.481	(1.189)	26433	48.4630	48.46
67	Isopropylbenzene	105	8.566	8.566	(1.117)	518763	50.5267	50.52
62	m,p-Xylenes	106	7.907	7.907	(1.031)	434832	102.018	102.01
17	Methylene Chloride	84	2.305	2.305	(0.551)	155161	48.9004	48.90
87	n-Butylbenzene	91	9.998	9.999	(1.035)	375190	49.9443	49.94
73	n-Propylbenzene	91	8.917	8.917	(0.923)	627313	50.2333	50.23
92	Naphthalene	128	11.546	11.546	(1.195)	73307	54.7715	54.77
63	o-Xylene	106	8.244	8.244	(1.075)	220708	50.8443	50.84
81	sec-Butylbenzene	105	9.526	9.526	(0.986)	480626	49.5515	49.55
64	Styrene	104	8.258	8.265	(1.077)	391072	50.9333	50.93
78	tert-Butylbenzene	119	9.339	9.340	(0.967)	337929	49.3509	49.35
56	Tetrachloroethene	164	6.933	6.933	(0.904)	94392	49.5297	49.52
50	Toluene	91	6.446	6.453	(0.840)	551212	50.2914	50.29
20	trans-1,2-Dichloroethene	96	2.535	2.527	(0.606)	122861	49.6463	49.64
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	222656	50.7640	50.76
38	Trichloroethene	130	5.206	5.206	(1.048)	129527	50.3591	50.35
8	Trichlorofluoromethane	101	1.560	1.560	(0.373)	193823	49.9576	49.95
5	Vinyl Chloride	62	1.145	1.138	(0.274)	204555	47.5037	47.50

QC Flag Legend

M - Compound response manually integrated.



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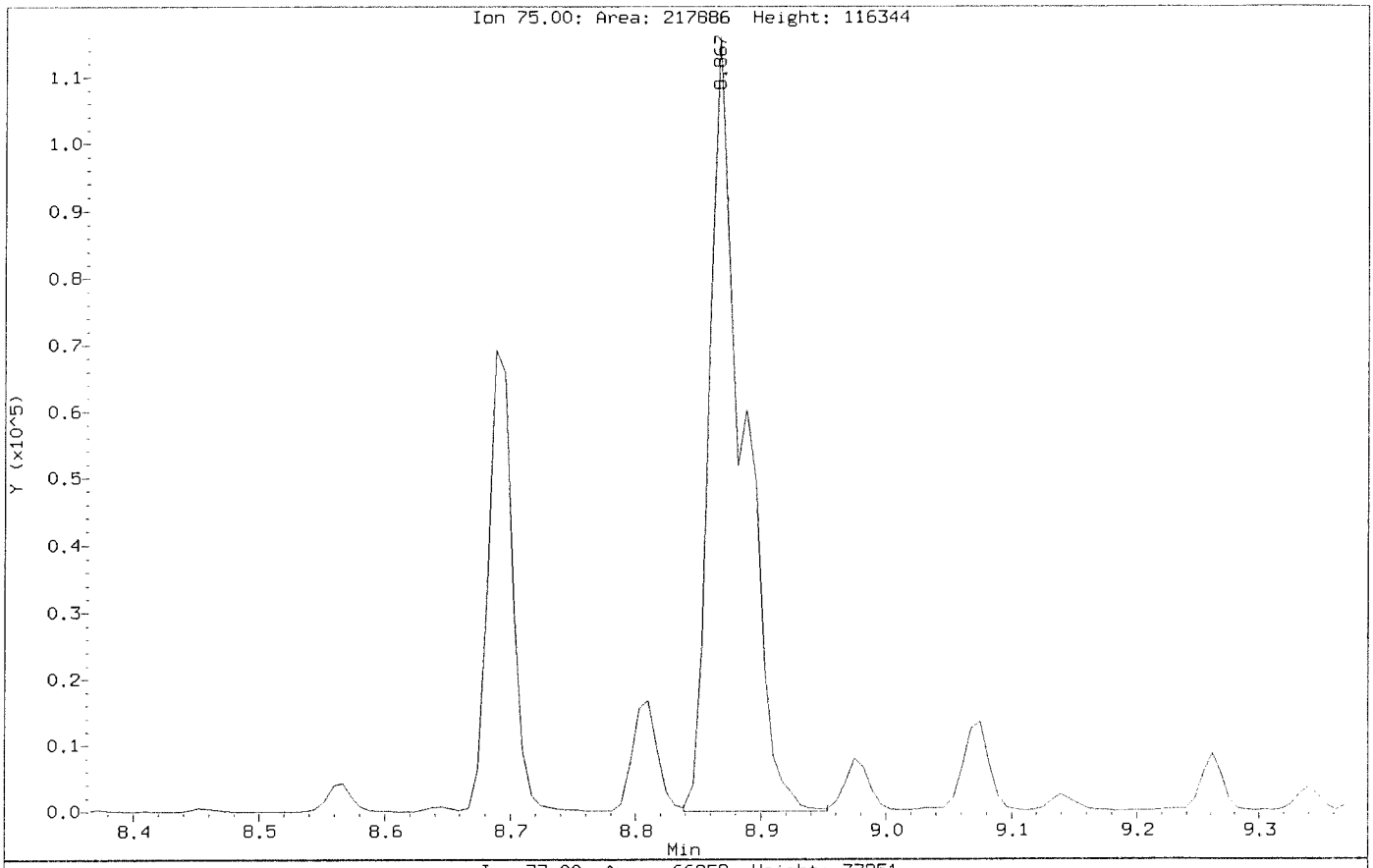
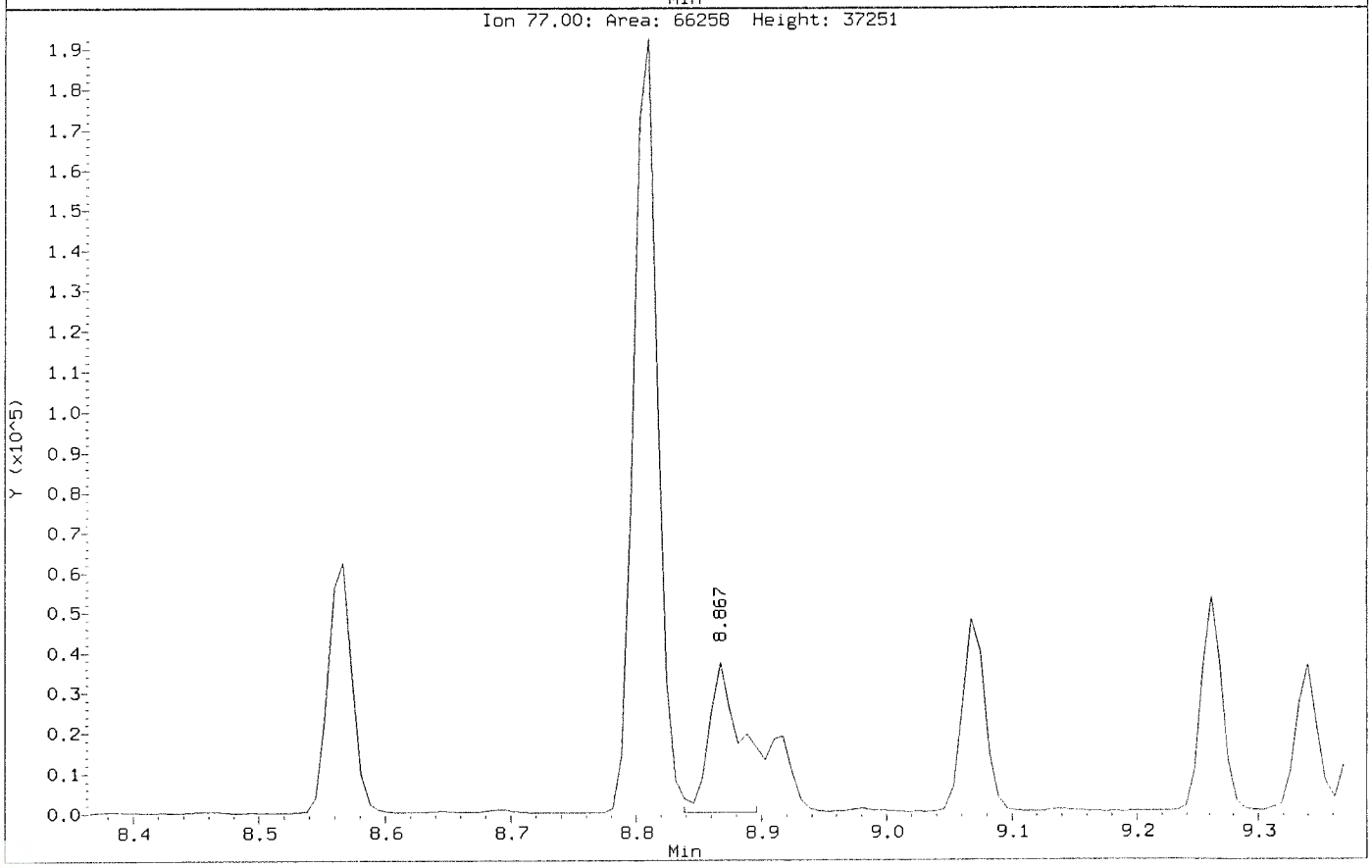
Date : 19-JUN-2020 16:41
Client ID: ICV
Sample Info: CCV;CCV;2;;;ICV
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\nahstws005\Target\chem\voa6.i\X200619.b\Before\X061913.D
Injection Date: 19-JUN-2020 16:41
Instrument: voa6.i
Client Sample ID: ICV

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





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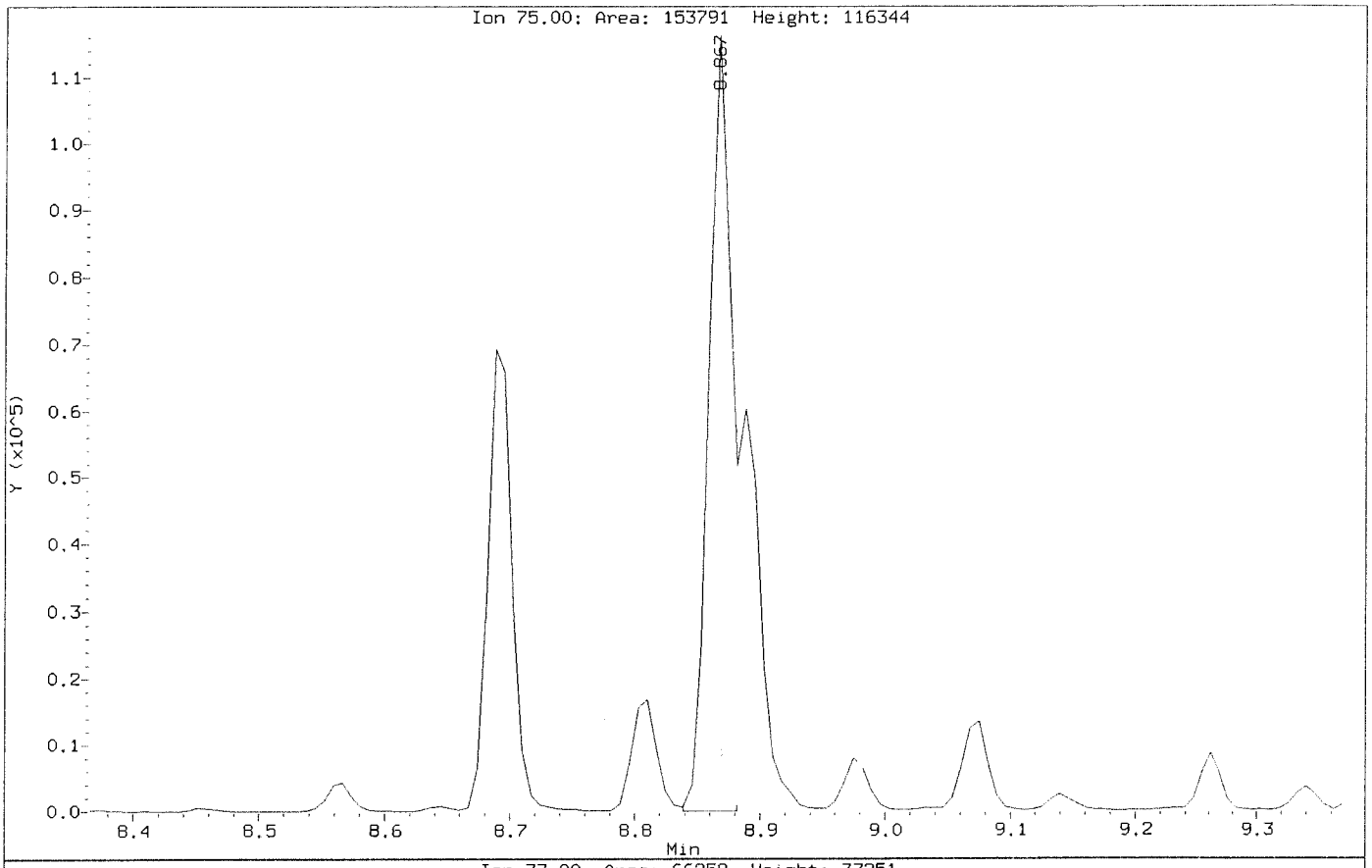
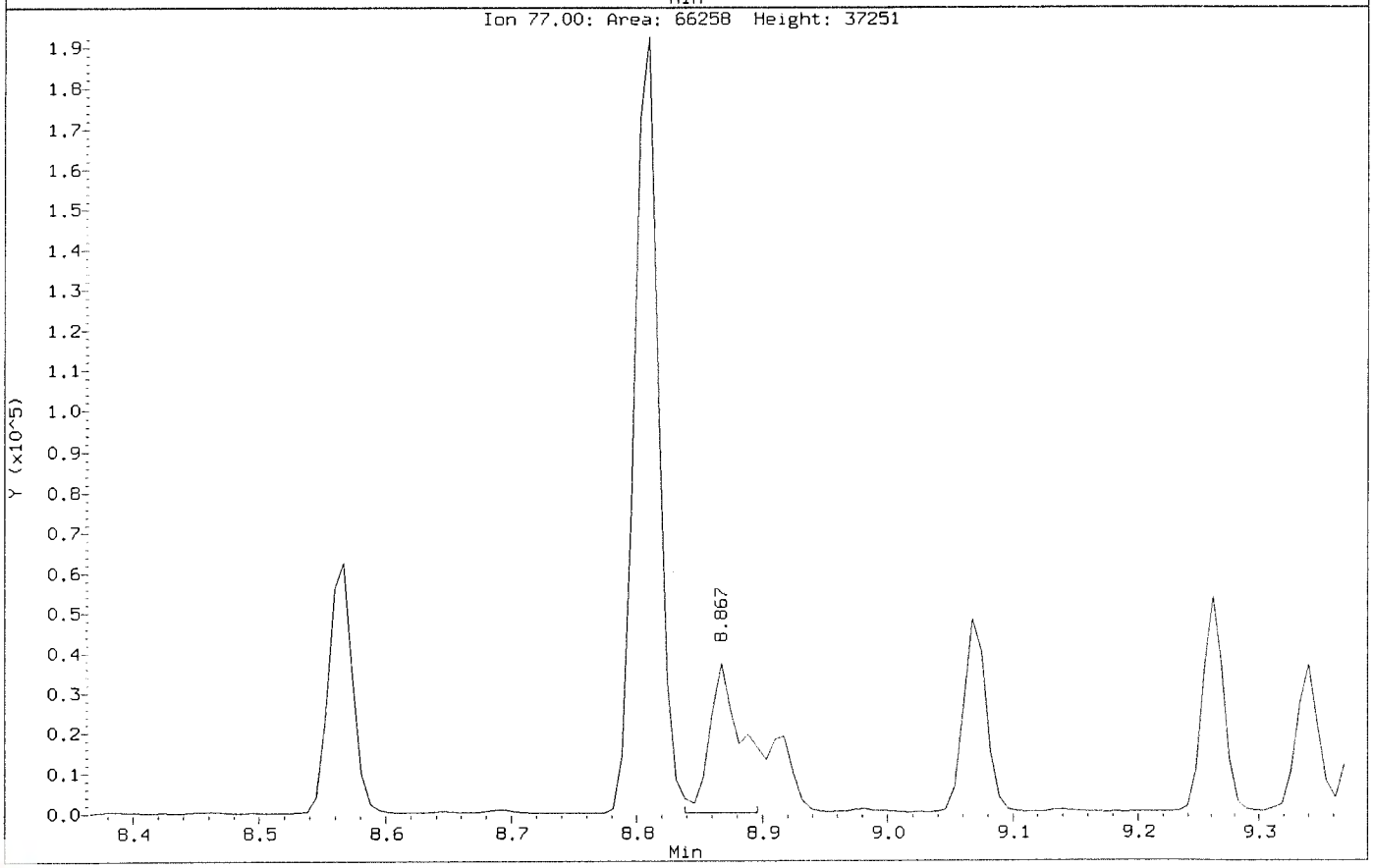
Instrument: voa6.i
Client Sample ID: ICV

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





MSVOA06 -Logbook

Batch: 40932
Date: 06-26-2020
Method: 8260
Comments:

Analyst: Devak Giga
Reviewer:
Laboratory: Houston

#	Samp ID	Type	Analyzed	DF	Init Wt/Vol	Final Vol	File ID	Matrix	Status	pH
1	BFB	TUNE	06-26-2020 11:33 am	1.00	0.00 mL	0.00 mL	X062601.D	Liquid	Y	NA
2	CCV	CCV	06-26-2020 11:57 am	1.00	5.00 mL	0.00 mL	X062602.D	Liquid	Y	NA
3	CCV	CCV	06-26-2020 12:21 pm	1.00	5.00 mL	0.00 mL	X062603a.D	Liquid	Y	NA
4	CCB	SAMP	06-26-2020 12:45 pm	1.00	5.00 mL	0.00 mL	X062604.D	Liquid	Y	NA
5	VLCSW-200626	LCS	06-26-2020 01:09 pm	1.00	5.00 mL	0.00 mL	X062605.D	Liquid	Y	NA
6	BLANK	SAMP	06-26-2020 01:33 pm	1.00	5.00 mL	0.00 mL	X062606.D	Liquid	Y	NA
7	VBLKW-200626	MBLK	06-26-2020 01:57 pm	1.00	5.00 mL	0.00 mL	X062607.D	Liquid	Y	NA
8	HS20050797-05	SAMP	06-26-2020 02:20 pm	1.00	5.00 mL	0.00 mL	X062608.D	Liquid	Y	NA
9	HS20061206-07	SAMP	06-26-2020 02:44 pm	1.00	5.00 mL	0.00 mL	X062609.D	Liquid	Y	NA
10	HS20061206-01	SAMP	06-26-2020 03:08 pm	1.00	5.00 mL	0.00 mL	X062610.D	Liquid	Y	NA
11	HS20061206-02	SAMP	06-26-2020 03:32 pm	1.00	5.00 mL	0.00 mL	X062611.D	Liquid	Y	NA
12	HS20061206-03	SAMP	06-26-2020 03:56 pm	1.00	5.00 mL	0.00 mL	X062612.D	Liquid	Y	NA
13	HS20061206-04	SAMP	06-26-2020 04:20 pm	1.00	5.00 mL	0.00 mL	X062613.D	Liquid	Y	NA
14	HS20061206-05	SAMP	06-26-2020 04:44 pm	1.00	5.00 mL	0.00 mL	X062614.D	Liquid	Y	NA
15	HS20061206-06	SAMP	06-26-2020 05:08 pm	1.00	5.00 mL	0.00 mL	X062615.D	Liquid	Y	NA
16	HS20061178-01	SAMP	06-26-2020 05:32 pm	1.00	5.00 mL	0.00 mL	X062616.D	Liquid	Y	NA
17	HS20061206-02MS	MS	06-26-2020 05:56 pm	1.00	5.00 mL	0.00 mL	X062617.D	Liquid	Y	NA
18	HS20061206-02MDS	MSD	06-26-2020 06:19 pm	1.00	5.00 mL	0.00 mL	X062618.D	Liquid	Y	NA
19	HS20061178-01	SAMP	06-26-2020 06:43 pm	20.00	5.00 mL	0.00 mL	X062619.D	Liquid	Y	NA
20	HS20061179-02	SAMP	06-26-2020 07:07 pm	1.00	5.00 mL	0.00 mL	X062620.D	Liquid	Y	NA
21	HS20061178-05	SAMP	06-26-2020 07:31 pm	1.00	5.00 mL	0.00 mL	X062621.D	Liquid	Y	NA
22	HS20061179-01	SAMP	06-26-2020 07:55 pm	1.00	5.00 mL	0.00 mL	X062622.D	Liquid	Y	NA
23	HS20061178-04	SAMP	06-26-2020 08:19 pm	1.00	5.00 mL	0.00 mL	X062623.D	Liquid	Y	NA
24	HS20061178-02	SAMP	06-26-2020 08:43 pm	5.00	5.00 mL	0.00 mL	X062624.D	Liquid	Y	NA
25	HS20061178-03n/r	SAMP	06-26-2020 09:07 pm	5.00	5.00 mL	0.00 mL	X062625.D	Liquid	Y	NA
26	CCV-END	CCV	06-26-2020 09:31 pm	1.00	5.00 mL	0.00 mL	X062626.D	Liquid	Y	NA
27	HS20061133-23	SAMP	06-26-2020 09:55 pm	1.00	5.00 mL	0.00 mL	X062627.D	Liquid	Y	NA
28	HS20061192-21	SAMP	06-26-2020 10:19 pm	1.00	5.00 mL	0.00 mL	X062628.D	Liquid	Y	NA
29	HS20061192-22	SAMP	06-26-2020 10:43 pm	1.00	5.00 mL	0.00 mL	X062629.D	Liquid	Y	NA
30	HS20061192-23	SAMP	06-26-2020 11:07 pm	1.00	5.00 mL	0.00 mL	X062630.D	Liquid	Y	NA
31	BFB	TUNE	06-26-2020 11:31 pm	1.00	0.00 mL	0.00 mL	Y062601.D	Liquid	Y	NA
32	CCV	CCV	06-26-2020 11:55 pm	1.00	5.00 mL	0.00 mL	Y062602a.D	Liquid	Y	NA
33	CCV	CCV	06-27-2020 12:19 am	1.00	5.00 mL	0.00 mL	Y062603.D	Liquid	Y	NA
34	CCB	SAMP	06-27-2020 12:43 am	1.00	5.00 mL	0.00 mL	Y062604.D	Liquid	Y	NA
35	VLCSW-200626	LCS	06-27-2020 01:07 am	1.00	5.00 mL	0.00 mL	Y062605.D	Liquid	Y	NA
36	BLANK	SAMP	06-27-2020 01:31 am	1.00	5.00 mL	0.00 mL	Y062606.D	Liquid	Y	NA
37	VBLKW-200626	MBLK	06-27-2020 01:55 am	1.00	5.00 mL	0.00 mL	Y062607.D	Liquid	Y	NA
38	HS20061133-24	SAMP	06-27-2020 02:19 am	1.00	5.00 mL	0.00 mL	Y062608.D	Liquid	Y	NA
39	HS20061133-25	SAMP	06-27-2020 02:43 am	1.00	5.00 mL	0.00 mL	Y062609.D	Liquid	Y	NA
40	HS20061133-26	SAMP	06-27-2020 03:07 am	1.00	5.00 mL	0.00 mL	Y062610.D	Liquid	Y	NA
41	HS20061133-26MS	MS	06-27-2020 03:31 am	1.00	5.00 mL	0.00 mL	Y062611.D	Liquid	Y	NA

MSVOA06 -Logbook

#	Samp ID	Type	Analyzed	DF	Init Wt/Vol	Final Vol	File ID	Matrix	Status	pH
42	HS20061133-26MSD	MSD	06-27-2020 03:55 am	1.00	5.00 mL	0.00 mL	Y062612.D	Liquid	Y	NA
43	HS20061133-27	SAMP	06-27-2020 04:19 am	1.00	5.00 mL	0.00 mL	Y062613.D	Liquid	Y	NA
44	HS20061133-28	SAMP	06-27-2020 04:43 am	1.00	5.00 mL	0.00 mL	Y062614.D	Liquid	Y	NA
45	HS20061133-29	SAMP	06-27-2020 05:07 am	1.00	5.00 mL	0.00 mL	Y062615.D	Liquid	Y	NA
46	HS20061133-30	SAMP	06-27-2020 05:31 am	1.00	5.00 mL	0.00 mL	Y062616.D	Liquid	Y	NA
47	HS20061133-31	SAMP	06-27-2020 05:55 am	1.00	5.00 mL	0.00 mL	Y062617.D	Liquid	Y	NA
48	HS20061133-32	SAMP	06-27-2020 06:19 am	1.00	5.00 mL	0.00 mL	Y062618.D	Liquid	Y	NA
49	HS20061133-33	SAMP	06-27-2020 06:43 am	1.00	5.00 mL	0.00 mL	Y062619.D	Liquid	Y	NA
50	HS20061133-34	SAMP	06-27-2020 07:07 am	1.00	5.00 mL	0.00 mL	Y062620.D	Liquid	Y	NA
51	HS20061133-35	SAMP	06-27-2020 07:32 am	1.00	5.00 mL	0.00 mL	Y062621.D	Liquid	Y	NA
52	HS20061133-36	SAMP	06-27-2020 07:56 am	1.00	5.00 mL	0.00 mL	Y062622.D	Liquid	Y	NA
53	HS20061133-37	SAMP	06-27-2020 08:20 am	1.00	5.00 mL	0.00 mL	Y062623.D	Liquid	Y	NA
54	HS20061133-39	SAMP	06-27-2020 08:44 am	1.00	5.00 mL	0.00 mL	Y062624.D	Liquid	Y	NA
55	HS20061133-41	SAMP	06-27-2020 09:08 am	1.00	5.00 mL	0.00 mL	Y062625.D	Liquid	Y	NA
56	HS20061133-42	SAMP	06-27-2020 09:32 am	1.00	5.00 mL	0.00 mL	Y062626.D	Liquid	Y	NA
57	HS20061133-44	SAMP	06-27-2020 09:56 am	1.00	5.00 mL	0.00 mL	Y062627.D	Liquid	Y	NA
58	HS20061133-43	SAMP	06-27-2020 10:20 am	1.00	5.00 mL	0.00 mL	Y062628.D	Liquid	Y	NA
59	HS20061133-38	SAMP	06-27-2020 10:44 am	1.00	5.00 mL	0.00 mL	Y062629.D	Liquid	Y	NA
60	BLANK	SAMP	06-27-2020 11:08 am	1.00	5.00 mL	0.00 mL	Y062630.D	Liquid	Y	NA

Chemical	Value
SURR SPK ID	31106-30-06
IS ID	31106-30-06
CAL STD ID	31106-33-01/02
BFB ID	31106-30-06
pH Paper	634-64-11

FORM 2
WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20061178

	CLIENT SAMPLE NO.	SMC1 (DCE)#	SMC2 #	SMC3 (TOL)#	OTHER #	TOT OUT
01	VLCSW-200626	96	98	97	94	0
02	VBLKW-200626	90	94	102	96	0
03	HS20061178-01	90	91	103	96	0
04	HS20061178-01	108	107	112	109	0
05	HS20061178-05	100	103	108	103	0
06	HS20061178-04	98	99	113	105	0
07	HS20061178-02	106	105	109	106	0
08						
09						
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		QC LIMITS
SMC1 (DCE)	= 1,2-Dichloroethane-d4	(0-130)
SMC2	= Dibromofluoromethane	(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-200626

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20061178

Lab File ID: X062607 Lab Sample ID: VBLKW-200626

Date Analyzed: 06/26/20 Time Analyzed: 1357

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-200626	VLCSW-200626	X062605	1309
02	HS20061178-0	HS20061178-01	X062616	1732
03	HS20061206-0	HS20061206-02M	X062617	1756
04	HS20061206-0	HS20061206-02M	X062618	1819
05	HS20061178-0	HS20061178-01	X062619	1843
06	HS20061178-0	HS20061178-05	X062621	1931
07	HS20061178-0	HS20061178-04	X062623	2019
08	HS20061178-0	HS20061178-02	X062624	2043
09				
10				
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COMMENTS:

FORM 5
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20061178

Lab File ID: X062601 BFB Injection Date: 06/26/20

Instrument ID: VOA6 BFB Injection Time: 1133

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	31.6
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	7.4
173	Less than 2.0% of mass 174	0.8 (1.4)1
174	Greater than 50.0% of mass 95	56.9
175	5.0 - 9.0% of mass 174	4.3 (7.5)1
176	95.0 - 101.0% of mass 174	54.8 (96.4)1
177	5.0 - 9.0% of mass 176	4.2 (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	X062602	06/26/20	1157
02	VLCSW-200626	VLCSW-200626	X062605	06/26/20	1309
03	VBLKW-200626	VBLKW-200626	X062607	06/26/20	1357
04	HS20061178-0	HS20061178-01	X062616	06/26/20	1732
05	HS20061206-0	HS20061206-02M	X062617	06/26/20	1756
06	HS20061206-0	HS20061206-02M	X062618	06/26/20	1819
07	HS20061178-0	HS20061178-01	X062619	06/26/20	1843
08	HS20061178-0	HS20061178-05	X062621	06/26/20	1931
09	HS20061178-0	HS20061178-04	X062623	06/26/20	2019
10	HS20061178-0	HS20061178-02	X062624	06/26/20	2043
11	CCV-END	CCV-END	X062626	06/26/20	2131
12					
13					
14					
15					
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17					
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19					
20					
21					
22					

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20061178

Instrument ID: VOA6 Calibration Date: 06/26/20 Time: 1157

Lab File ID: X062602 Init. Calib. Date(s): 06/19/20 06/19/20

Init. Calib. Times: 1130 1529

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
cis-1,3-Dichloropropene	0.6080000	0.6199083	0.6199083	0.2	-1.96	20.00	AVRG
trans-1,3-Dichloropropene	0.5630000	0.5607388	0.5607388	0.1	0.40	20.00	AVRG
1,3-Dichlorobenzene	1.4900000	1.4706473	1.4706473	0.6	1.30	20.00	AVRG
2,2-Dichloropropane	0.9700000	0.9000067	0.9000067	0.1	7.22	20.00	AVRG
1,1-Dichloropropene	0.4500000	0.4096014	0.4096014	0.1	8.98	20.00	AVRG
Dibromomethane	0.2620000	0.2601757	0.2601757	0.1	0.70	20.00	AVRG
1,2-Dibromoethane	0.3940000	0.3993069	0.3993069	0.1	-1.35	20.00	AVRG
trans-1,2-Dichloroethene	0.5680000	0.5447194	0.5447194	0.1	4.10	20.00	AVRG
1,1,1,2-Tetrachloroethane	0.3640000	0.3664125	0.3664125	0.1	-0.66	20.00	AVRG
1,1,1-Trichloroethane	0.9290000	0.8792075	0.8792075	0.1	5.36	20.00	AVRG
1,1,2,2-Tetrachloroethane	0.9940000	0.9846083	0.9846083	0.3	0.94	20.00	AVRG
1,1,2-Trichloroethane	0.3210000	0.3238462	0.3238462	0.1	-0.89	20.00	AVRG
1,1-Dichloroethane	1.5530000	1.4131841	1.4131841	0.2	9.00	20.00	AVRG
1,1-Dichloroethene	0.4880000	0.4491822	0.4491822	0.1	7.95	20.00	AVRG
Trichloroethene	0.3300000	0.3340709	0.3340709	0.2	-1.23	20.00	AVRG
1,2,3-Trichlorobenzene	57.344577	50.000000	0.1291857	0.01	-14.69	20.00	2RDR
Trichlorofluoromethane	0.8910000	0.8463371	0.8463371	0.1	5.01	20.00	AVRG
1,2,4-Trichlorobenzene	53.596099	50.000000	0.2562311	0.1	-7.19	20.00	LINR
1,2,4-Trimethylbenzene	2.7270000	2.6610933	2.6610933	0.1	2.42	20.00	AVRG
Tetrachloroethene	0.2590000	0.2490073	0.2490073	0.2	3.86	20.00	AVRG
1,2-Dichlorobenzene	1.3550000	1.3739199	1.3739199	0.4	-1.40	20.00	AVRG
1,2-Dichloroethane	0.6550000	0.6431820	0.6431820	0.1	1.80	20.00	AVRG
1,2-Dichloropropane	0.4710000	0.4812051	0.4812051	0.1	-2.17	20.00	AVRG
1,3,5-Trimethylbenzene	2.5710000	2.5259291	2.5259291	0.1	1.75	20.00	AVRG
1,3-Dichloropropane	0.6730000	0.6694176	0.6694176	0.1	0.53	20.00	AVRG
1,4-Dichlorobenzene	1.5170000	1.4916143	1.4916143	0.4	1.67	20.00	AVRG
Toluene	1.4880000	1.4730511	1.4730511	0.4	1.00	20.00	AVRG
2-Butanone	96.282060	100.00000	0.5578429	0.1	3.72	20.00	LINR
2-Chlorotoluene	2.3750000	2.2597000	2.2597000	0.1	4.85	20.00	AVRG
2-Hexanone	0.5160000	0.5380520	0.5380520	0.1	-4.27	20.00	AVRG
4-Chlorotoluene	2.7520000	2.6457697	2.6457697	0.1	3.86	20.00	AVRG
tert-Butylbenzene	2.0190000	1.8966980	1.8966980	0.1	6.06	20.00	AVRG
4-Methyl-2-Pentanone	0.7530000	0.7762873	0.7762873	0.1	-3.09	20.00	AVRG
Acetone	99.962326	100.00000	0.4022370	0.1	0.04	20.00	LINR
Benzene	1.3970000	1.3893670	1.3893670	0.5	0.55	20.00	AVRG
Bromobenzene	0.9380000	0.9164159	0.9164159	0.1	2.30	20.00	AVRG
Bromochloromethane	0.3830000	0.3460387	0.3460387	0.1	9.65	20.00	AVRG
Bromodichloromethane	0.5090000	0.5183524	0.5183524	0.2	-1.84	20.00	AVRG
Bromoform	0.2660000	0.2825856	0.2825856	0.1	-6.24	20.00	AVRG
Bromomethane	0.4680000	0.4270233	0.4270233	0.1	8.76	20.00	AVRG
Carbon Disulfide	1.6060000	1.5061612	1.5061612	0.1	6.22	20.00	AVRG
Carbon Tetrachloride	0.4360000	0.3942603	0.3942603	0.1	9.57	20.00	AVRG

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS2006117

Instrument ID: VOA6 Calibration Date: 06/26/20 Time: 1157

Lab File ID: X062602 Init. Calib. Date(s): 06/19/20 06/19/20

Init. Calib. Times: 1130 1529

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
Chlorobenzene	0.9680000	0.9578122	0.9578122	0.5	1.05	20.00	AVRG
Chloroethane	0.5310000	0.4944378	0.4944378	0.1	6.88	20.00	AVRG
Chloroform	1.2240000	1.1491126	1.1491126	0.2	6.12	20.00	AVRG
Chloromethane	1.2490000	1.0735534	1.0735534	0.1	14.05	20.00	AVRG
cis-1,2-Dichloroethene	0.7190000	0.6779107	0.6779107	0.1	5.71	20.00	AVRG
Dibromochloromethane	0.4000000	0.4049619	0.4049619	0.1	-1.24	20.00	AVRG
Dichlorodifluoromethane	41.983350	50.000000	0.5718773	0.1	16.03	20.00	LINR
Ethylbenzene	0.4940000	0.4827905	0.4827905	0.1	2.27	20.00	AVRG
Hexachlorobutadiene	50.484837	50.000000	0.1621436	0.1	-0.97	20.00	LINR
Isopropylbenzene	1.3940000	1.3686885	1.3686885	0.1	1.82	20.00	AVRG
m,p-Xylenes	0.5790000	0.5810048	0.5810048	0.1	-0.35	20.00	AVRG
Methylene Chloride	46.466252	50.000000	0.6784985	0.1	7.07	20.00	LINR
n-Butylbenzene	2.2150000	2.1709040	2.1709040	0.5	1.99	20.00	AVRG
n-Propylbenzene	3.6820000	3.4947143	3.4947143	0.1	5.09	20.00	AVRG
Naphthalene	56.852345	50.000000	0.4488287	0.2	-13.70	20.00	2RDR
o-Xylene	0.5890000	0.5899211	0.5899211	0.3	-0.16	20.00	AVRG
sec-Butylbenzene	2.8600000	2.7178796	2.7178796	0.1	4.97	20.00	AVRG
Styrene	1.0420000	1.0551331	1.0551331	0.3	-1.26	20.00	AVRG
Vinyl Chloride	0.9890000	0.8883753	0.8883753	0.1	10.17	20.00	AVRG
1,2,3-Trichloropropane	0.9240000	0.8955909	0.8955909	0.1	3.07	20.00	AVRG
p-Isopropyltoluene	2.4570000	2.3560698	2.3560698	0.1	4.11	20.00	AVRG
1,2-Dibromo-3-Chloropropane	51.438670	50.000000	7.92e-002	0.05	-2.88	20.00	LINR
1,2-Dichloroethane-d4	46.221490	50.000000	0.8646683	0.1	7.56	20.00	LINR
Dibromofluoromethane	0.6410000	0.6114295	0.6114295	0.1	4.61	20.00	AVRG
Toluene-d8	1.2440000	1.2220841	1.2220841	0.1	1.76	20.00	AVRG
4-Bromofluorobenzene	0.5090000	0.4862802	0.4862802	0.1	4.46	20.00	AVRG

FORM VII VOA

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20061178

Instrument ID: VOA6 Calibration Date: 06/26/20 Time: 2131

Lab File ID: X062626 Init. Calib. Date(s): 06/19/20 06/19/20

Init. Calib. Times: 1130 1529

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
cis-1,3-Dichloropropene	0.6080000	0.6667818	0.6667818	0.2	-9.67	50.00	AVRG
trans-1,3-Dichloropropene	0.5630000	0.6077957	0.6077957	0.1	-7.96	50.00	AVRG
1,3-Dichlorobenzene	1.4900000	1.5769622	1.5769622	0.6	-5.84	50.00	AVRG
2,2-Dichloropropane	0.9700000	0.9333085	0.9333085	0.1	3.78	50.00	AVRG
1,1-Dichloropropene	0.4500000	0.4705478	0.4705478	0.1	-4.57	50.00	AVRG
Dibromomethane	0.2620000	0.2850259	0.2850259	0.1	-8.79	50.00	AVRG
1,2-Dibromoethane	0.3940000	0.4287758	0.4287758	0.1	-8.83	50.00	AVRG
trans-1,2-Dichloroethene	0.5680000	0.6525452	0.6525452	0.1	-14.88	50.00	AVRG
1,1,1,2-Tetrachloroethane	0.3640000	0.4001209	0.4001209	0.1	-9.92	50.00	AVRG
1,1,1-Trichloroethane	0.9290000	1.0291270	1.0291270	0.1	-10.78	50.00	AVRG
1,1,2,2-Tetrachloroethane	0.9940000	1.0466095	1.0466095	0.3	-5.29	50.00	AVRG
1,1,2-Trichloroethane	0.3210000	0.3542080	0.3542080	0.1	-10.34	50.00	AVRG
1,1-Dichloroethane	1.5530000	1.6590854	1.6590854	0.2	-6.83	50.00	AVRG
1,1-Dichloroethene	0.4880000	0.5404939	0.5404939	0.1	-10.76	50.00	AVRG
Trichloroethene	0.3300000	0.3771736	0.3771736	0.2	-14.30	50.00	AVRG
1,2,3-Trichlorobenzene	46.427507	50.000000	0.1050332	0.01	7.14	50.00	2RDR
Trichlorofluoromethane	0.8910000	0.9995490	0.9995490	0.1	-12.18	50.00	AVRG
1,2,4-Trichlorobenzene	46.141013	50.000000	0.2213843	0.1	7.72	50.00	LINR
1,2,4-Trimethylbenzene	2.7270000	2.8786133	2.8786133	0.1	-5.56	50.00	AVRG
Tetrachloroethene	0.2590000	0.2792458	0.2792458	0.2	-7.82	50.00	AVRG
1,2-Dichlorobenzene	1.3550000	1.4505036	1.4505036	0.4	-7.05	50.00	AVRG
1,2-Dichloroethane	0.6550000	0.7145064	0.7145064	0.1	-9.08	50.00	AVRG
1,2-Dichloropropane	0.4710000	0.5307358	0.5307358	0.1	-12.68	50.00	AVRG
1,3,5-Trimethylbenzene	2.5710000	2.7420593	2.7420593	0.1	-6.65	50.00	AVRG
1,3-Dichloropropane	0.6730000	0.7189291	0.7189291	0.1	-6.82	50.00	AVRG
1,4-Dichlorobenzene	1.5170000	1.5899869	1.5899869	0.4	-4.81	50.00	AVRG
Toluene	1.4880000	1.6428010	1.6428010	0.4	-10.40	50.00	AVRG
2-Butanone	105.57291	100.00000	0.6112375	0.1	-5.57	50.00	LINR
2-Chlorotoluene	2.3750000	2.4879981	2.4879981	0.1	-4.76	50.00	AVRG
2-Hexanone	0.5160000	0.5695977	0.5695977	0.1	-10.39	50.00	AVRG
4-Chlorotoluene	2.7520000	2.8999237	2.8999237	0.1	-5.38	50.00	AVRG
tert-Butylbenzene	2.0190000	2.1077386	2.1077386	0.1	-4.40	50.00	AVRG
4-Methyl-2-Pentanone	0.7530000	0.8202807	0.8202807	0.1	-8.94	50.00	AVRG
Acetone	115.19281	100.00000	0.4619967	0.1	-15.19	50.00	LINR
Benzene	1.3970000	1.5649200	1.5649200	0.5	-12.02	50.00	AVRG
Bromobenzene	0.9380000	0.9918656	0.9918656	0.1	-5.74	50.00	AVRG
Bromochloromethane	0.3830000	0.3993352	0.3993352	0.1	-4.26	50.00	AVRG
Bromodichloromethane	0.5090000	0.5741147	0.5741147	0.2	-12.79	50.00	AVRG
Bromoform	0.2660000	0.2982828	0.2982828	0.1	-12.14	50.00	AVRG
Bromomethane	0.4680000	0.4230496	0.4230496	0.1	9.60	50.00	AVRG
Carbon Disulfide	1.6060000	1.7947703	1.7947703	0.1	-11.75	50.00	AVRG
Carbon Tetrachloride	0.4360000	0.4536515	0.4536515	0.1	-4.05	50.00	AVRG

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS2006117

Instrument ID: VOA6 Calibration Date: 06/26/20 Time: 2131

Lab File ID: X062626 Init. Calib. Date(s): 06/19/20 06/19/20

Init. Calib. Times: 1130 1529

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
Chlorobenzene	0.9680000	1.0448305	1.0448305	0.5	-7.94	50.00	AVRG
Chloroethane	0.5310000	0.6533052	0.6533052	0.1	-23.03	50.00	AVRG
Chloroform	1.2240000	1.3286823	1.3286823	0.2	-8.55	50.00	AVRG
Chloromethane	1.2490000	1.1671872	1.1671872	0.1	6.55	50.00	AVRG
cis-1,2-Dichloroethene	0.7190000	0.7903505	0.7903505	0.1	-9.92	50.00	AVRG
Dibromochloromethane	0.4000000	0.4399482	0.4399482	0.1	-9.99	50.00	AVRG
Dichlorodifluoromethane	49.696362	50.000000	0.6792454	0.1	0.61	50.00	LINR
Ethylbenzene	0.4940000	0.5359971	0.5359971	0.1	-8.50	50.00	AVRG
Hexachlorobutadiene	45.853471	50.000000	0.1478417	0.1	8.29	50.00	LINR
Isopropylbenzene	1.3940000	1.5291860	1.5291860	0.1	-9.70	50.00	AVRG
m,p-Xylenes	0.5790000	0.6408579	0.6408579	0.1	-10.68	50.00	AVRG
Methylene Chloride	54.572089	50.000000	0.7919096	0.1	-9.14	50.00	LINR
n-Butylbenzene	2.2150000	2.2774415	2.2774415	0.5	-2.82	50.00	AVRG
n-Propylbenzene	3.6820000	3.8752481	3.8752481	0.1	-5.25	50.00	AVRG
Naphthalene	44.797555	50.000000	0.3538408	0.2	10.40	50.00	2RDR
o-Xylene	0.5890000	0.6503865	0.6503865	0.3	-10.42	50.00	AVRG
sec-Butylbenzene	2.8600000	2.9598303	2.9598303	0.1	-3.49	50.00	AVRG
Styrene	1.0420000	1.1830817	1.1830817	0.3	-13.54	50.00	AVRG
Vinyl Chloride	0.9890000	1.0786051	1.0786051	0.1	-9.06	50.00	AVRG
1,2,3-Trichloropropane	0.9240000	0.9397666	0.9397666	0.1	-1.71	50.00	AVRG
p-Isopropyltoluene	2.4570000	2.5702077	2.5702077	0.1	-4.61	50.00	AVRG
1,2-Dibromo-3-Chloropropane	51.859029	50.000000	7.98e-002	0.05	-3.72	50.00	LINR
1,2-Dichloroethane-d4	53.790066	50.000000	1.0043634	0.1	-7.58	50.00	LINR
Dibromofluoromethane	0.6410000	0.7134516	0.7134516	0.1	-11.30	50.00	AVRG
Toluene-d8	1.2440000	1.3815416	1.3815416	0.1	-11.06	50.00	AVRG
4-Bromofluorobenzene	0.5090000	0.5390860	0.5390860	0.1	-5.91	50.00	AVRG

FORM 8
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20061178

Lab File ID (Standard): X062602 Date Analyzed: 06/26/20

Instrument ID: VOA6 Time Analyzed: 1157

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

		IS1(CBZ) AREA #	RT #	IS2(DFB) AREA #	RT #	IS3(DCB) AREA #	RT #
	12 HOUR STD	369941	7.67	393192	4.97	176134	9.67
	UPPER LIMIT	739882	8.17	786384	5.47	352268	10.17
	LOWER LIMIT	184971	7.17	196596	4.47	88067	9.17
	CLIENT SAMPLE NO.						
01	VLCSW-200626	378125	7.67	401427	4.97	174362	9.67
02	VBLKW-200626	451043	7.67	499909	4.97	201957	9.67
03	HS20061178-01	435647	7.67	495990	4.97	198055	9.67
04	HS20061206-02	388697	7.67	429630	4.97	178569	9.67
05	HS20061206-02	405604	7.67	451434	4.97	187784	9.67
06	HS20061178-01	348654	7.67	385765	4.97	149319	9.67
07	HS20061178-05	445305	7.67	491113	4.97	196836	9.67
08	HS20061178-04	304989	7.67	343709	4.97	135609	9.67
09	HS20061178-02	384318	7.67	408844	4.97	173231	9.67
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							

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

Lab Code: Case No.: SAS No.: SDG No.: HS20061178

Lab File ID (Standard): X062602 Date Analyzed: 06/26/20

Instrument ID: VOA6 Time Analyzed: 1157

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

		IS4 AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	222845	4.19				
	UPPER LIMIT	445690	4.69				
	LOWER LIMIT	111423	3.69				
	CLIENT SAMPLE NO.						
01	VLCSW-200626	221839	4.19				
02	VBLKW-200626	281258	4.19				
03	HS20061178-01	282936	4.19				
04	HS20061206-02	234036	4.19				
05	HS20061206-02	253755	4.19				
06	HS20061178-01	216089	4.19				
07	HS20061178-05	271729	4.19				
08	HS20061178-04	194833	4.19				
09	HS20061178-02	226190	4.19				
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							

IS4 = Pentafluorobenzene

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\X200626.b\X062601.D

Date : 26-JUN-2020 11:33

Client ID: BFB

Instrument: voa6.i

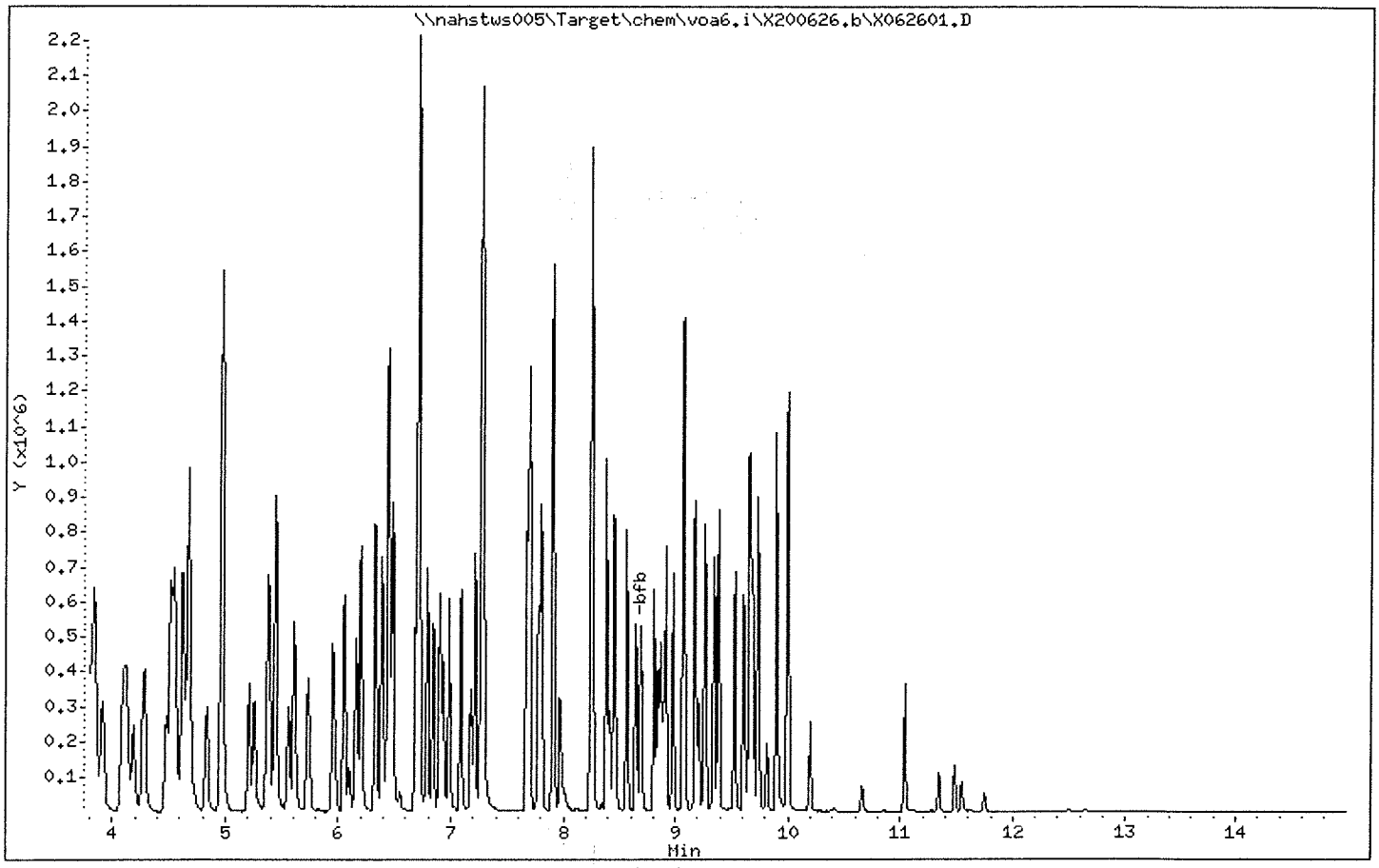
Sample Info: BFB;BFB;3;;BFB

Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

Column diameter: 0.25



Data File: \\nahstws005\Target\chem\voa6.i\X200626.b\X062601.D

Date : 26-JUN-2020 11:33

Client ID: BFB

Instrument: voa6.i

Sample Info: BFB;BFB;3;;BFB

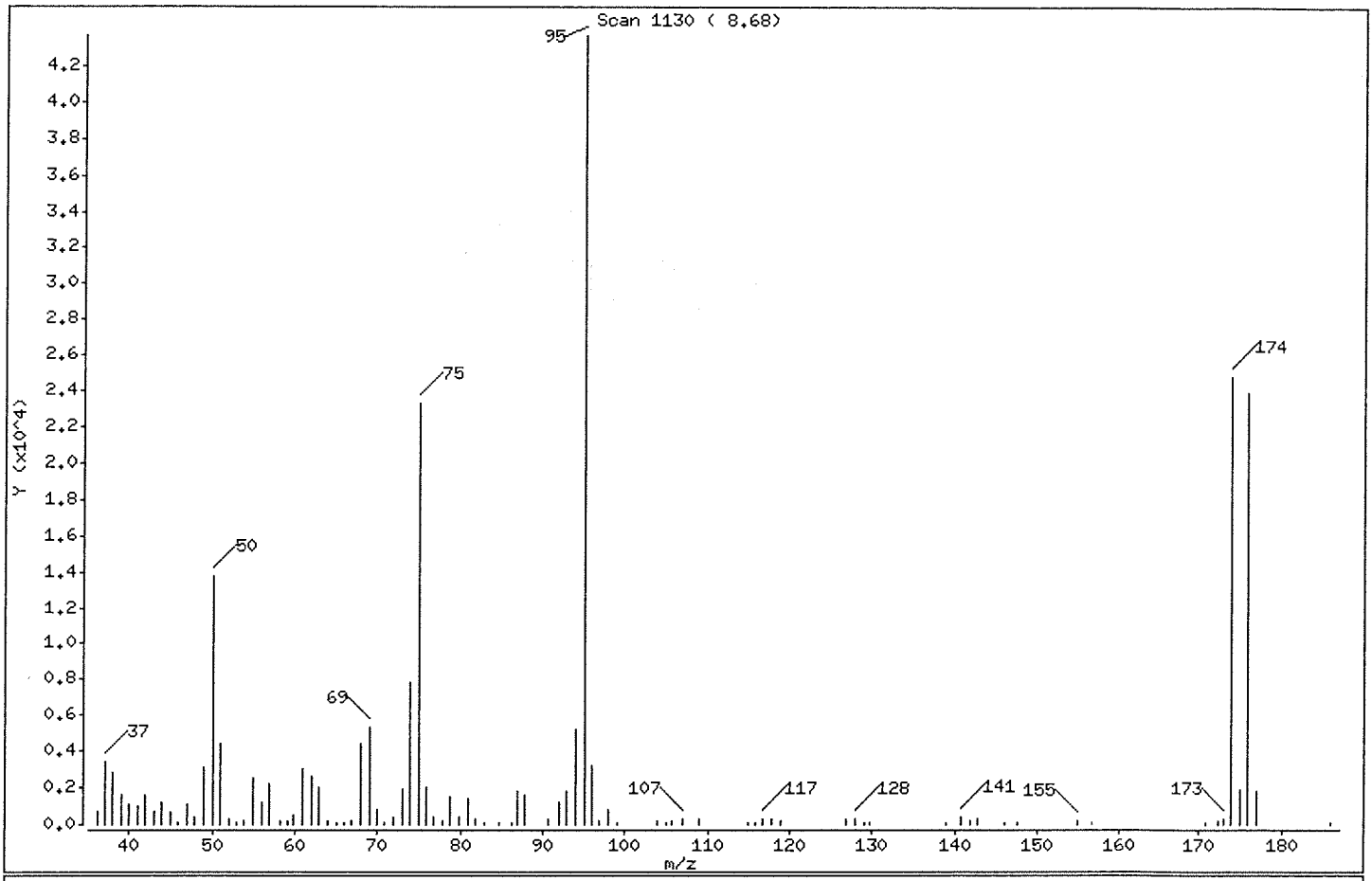
Volume Injected (uL): 2.0

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	31.61
75	30.00 - 60.00% of mass 95	53.31
96	5.00 - 9.00% of mass 95	7.44
173	Less than 2.00% of mass 174	0.77 (1.35)
174	Greater than 50.00% of mass 95	56.88
175	5.00 - 9.00% of mass 174	4.29 (7.54)
176	95.00 - 101.00% of mass 174	54.82 (96.36)
177	5.00 - 9.00% of mass 176	4.16 (7.59)

Data File: \\nahstws005\Target\chem\voa6.i\X200626.b\X062601.D

Date : 26-JUN-2020 11:33

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: X062601.D
Spectrum: Scan 1130 (8.68)
Location of Maximum: 95.00
Number of points: 91

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.10	753	59.10	236	81.80	282	117.80	266
37.00	3436	59.90	500	83.00	131	118.90	209
38.00	2764	60.90	2979	84.80	85	126.90	274
39.00	1607	62.00	2585	86.20	106	128.00	295
40.00	1066	63.00	2041	86.90	1846	129.00	59
41.00	988	64.00	223	87.90	1606	129.80	116
42.00	1567	65.00	148	90.70	262	139.10	58
43.10	702	65.90	102	92.10	1169	140.80	355
43.90	1208	66.80	189	92.90	1778	141.90	168
45.00	747	68.00	4449	93.90	5233	142.80	282
46.00	64	69.00	5309	95.00	43696	146.00	59
47.00	1078	70.00	780	96.00	3253	147.70	55
47.90	392	70.80	115	96.90	238	154.90	187
49.00	3139	72.00	411	98.00	774	156.70	63
50.00	13811	73.00	1871	99.10	122	170.80	52
51.00	4407	74.00	7881	104.00	248	172.40	210
52.00	313	75.00	23296	105.00	142	172.90	336
52.90	120	76.00	2027	105.80	169	173.90	24856
53.90	166	76.90	407	107.00	303	174.90	1874
55.00	2558	77.80	235	109.00	302	175.90	23952
56.00	1238	78.80	1526	114.90	118	176.90	1817
56.90	2255	79.90	406	115.80	139	186.10	124
58.20	233	80.90	1442	116.70	276		

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200626.b\X062602.D
Lab Smp Id: CCV Client Smp ID: CCV
Inj Date : 26-JUN-2020 11:57
Operator : PC Inst ID: voa6.i
Smp Info : CCV;CCV;2;;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200626.b\8260W.m
Meth Date : 20-Jul-2020 12:33 voa6.i Quant Type: ISTD
Cal Date : 19-JUN-2020 14:17 Cal File: X061908.D
Als bottle: 2 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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

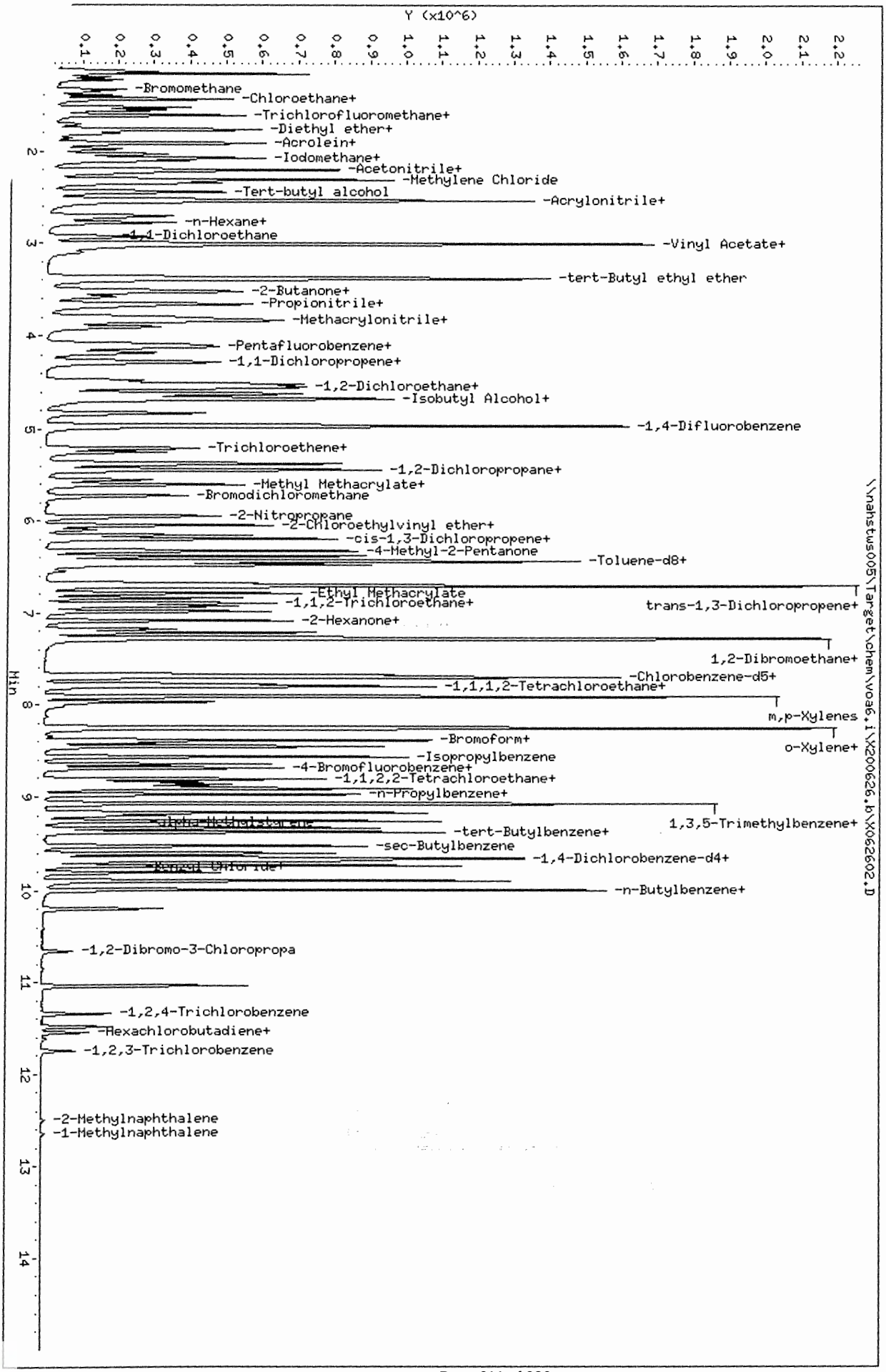
Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)
* 1	Pentafluorobenzene	168	4.189	4.189	(1.000)	222845	50.0000	
* 36	1,4-Difluorobenzene	114	4.970	4.970	(1.000)	393192	50.0000	
* 47	Chlorobenzene-d5	117	7.671	7.671	(1.000)	369941	50.0000	
* 70	1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	176134	50.0000	
$ 30	Dibromofluoromethane	113	4.103	4.103	(0.979)	136254	50.0000	47.67
$ 35	1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	192687	50.0000	46.22
$ 48	Toluene-d8	98	6.388	6.388	(0.833)	452099	50.0000	49.12
$ 69	4-Bromofluorobenzene	95	8.695	8.695	(1.134)	179895	50.0000	47.73
60	1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	135551	50.0000	50.31
31	1,1,1-Trichloroethane	97	4.089	4.089	(0.976)	195927	50.0000	47.32
68	1,1,2,2-Tetrachloroethane	83	8.845	8.845	(0.915)	173423	50.0000	49.54
53	1,1,2-Trichloroethane	83	6.847	6.847	(0.893)	119804	50.0000	50.42
22	1,1-Dichloroethane	63	2.929	2.929	(0.699)	314921	50.0000	45.50
11	1,1-Dichloroethene	96	1.919	1.919	(0.458)	100098	50.0000	46.00
32	1,1-Dichloropropene	75	4.282	4.282	(0.862)	161052	50.0000	45.50
93	1,2,3-Trichlorobenzene	180	11.746	11.746	(1.215)	22754	50.0000	57.34
71	1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	157744	50.0000	48.47(M)
90	1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	45131	50.0000	53.59
79	1,2,4-Trimethylbenzene	105	9.383	9.383	(0.970)	468709	50.0000	48.79
89	1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.102)	13942	50.0000	51.43
57	1,2-Dibromoethane	107	7.262	7.262	(0.947)	147720	50.0000	50.62
88	1,2-Dichlorobenzene	146	9.999	9.999	(1.034)	241994	50.0000	50.69

pounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
33 1,2-Dichloroethane	62	4.562	4.562	(0.918)	252894	50.0000	49.08
42 1,2-Dichloropropane	63	5.443	5.443	(1.095)	189206	50.0000	51.06
75 1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	444902	50.0000	49.12
83 1,3-Dichlorobenzene	146	9.605	9.605	(0.993)	259031	50.0000	49.35
54 1,3-Dichloropropane	76	6.983	6.983	(0.910)	247645	50.0000	49.73
84 1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	262724	50.0000	49.16
26 2,2-Dichloropropane	77	3.516	3.516	(0.839)	200562	50.0000	46.37
24 2-Butanone	43	3.580	3.580	(0.855)	248625	100.000	96.28
76 2-Chlorotoluene	91	8.974	8.974	(0.928)	398010	50.0000	47.57
52 2-Hexanone	43	7.090	7.090	(0.924)	398095	100.000	104.22
77 4-Chlorotoluene	91	9.075	9.075	(0.939)	466010	50.0000	48.06
82 p-Isopropyltoluene	119	9.655	9.655	(0.999)	414984	50.0000	47.94
45 4-Methyl-2-Pentanone	43	6.331	6.331	(0.825)	574361	100.000	103.01
10 Acetone	43	1.976	1.976	(0.472)	179273	100.000	99.96
37 Benzene	78	4.519	4.519	(0.909)	546288	50.0000	49.72
74 Bromobenzene	156	8.809	8.809	(0.911)	161412	50.0000	48.84
29 Bromochloromethane	128	3.803	3.803	(0.908)	77113	50.0000	45.15
39 Bromodichloromethane	83	5.729	5.729	(1.153)	203812	50.0000	50.94
66 Bromoform	173	8.416	8.416	(1.097)	104540	50.0000	53.03
6 Bromomethane	94	1.338	1.338	(0.320)	95160	50.0000	45.61
19 Carbon Disulfide	76	2.069	2.069	(0.494)	671281	100.000	93.79
34 Carbon Tetrachloride	117	4.268	4.268	(0.859)	155020	50.0000	45.24
59 Chlorobenzene	112	7.699	7.699	(1.004)	354334	50.0000	49.46
7 Chloroethane	64	1.403	1.403	(0.335)	110183	50.0000	46.52
28 Chloroform	83	3.910	3.910	(0.933)	256074	50.0000	46.92
3 Chloromethane	50	1.081	1.081	(0.258)	239236	50.0000	42.96
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.843)	151069	50.0000	47.13
46 cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	243743	50.0000	51.01
55 Dibromochloromethane	129	7.176	7.176	(0.936)	149812	50.0000	50.60
44 Dibromomethane	93	5.557	5.557	(1.118)	102299	50.0000	49.67
2 Dichlorodifluoromethane	85	0.973	0.973	(0.232)	127440	50.0000	41.98
61 Ethylbenzene	106	7.800	7.800	(1.017)	178604	50.0000	48.89
91 Hexachlorobutadiene	225	11.488	11.488	(1.188)	28559	50.0000	50.48
67 Isopropylbenzene	105	8.566	8.566	(1.117)	506334	50.0000	49.09
62 m,p-Xylenes	106	7.907	7.907	(1.031)	429875	100.000	100.39
17 Methylene Chloride	84	2.305	2.305	(0.550)	151200	50.0000	46.46
87 n-Butylbenzene	91	9.999	9.999	(1.034)	382370	50.0000	48.99
73 n-Propylbenzene	91	8.917	8.917	(0.922)	615538	50.0000	47.44
92 Naphthalene	128	11.546	11.546	(1.194)	79054	50.0000	56.85
63 o-Xylene	106	8.244	8.244	(1.075)	218236	50.0000	50.04
81 sec-Butylbenzene	105	9.526	9.526	(0.985)	478711	50.0000	47.50
64 Styrene	104	8.265	8.265	(1.078)	390337	50.0000	50.60
78 tert-Butylbenzene	119	9.340	9.340	(0.966)	334073	50.0000	46.96
56 Tetrachloroethene	164	6.933	6.933	(0.904)	92118	50.0000	48.11
50 Toluene	91	6.453	6.453	(0.841)	544942	50.0000	49.49
20 trans-1,2-Dichloroethene	96	2.535	2.535	(0.605)	121388	50.0000	47.93
51 trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	220478	50.0000	49.76
38 Trichloroethene	130	5.214	5.214	(1.049)	131354	50.0000	50.55
8 Trichlorofluoromethane	101	1.560	1.560	(0.373)	188602	50.0000	47.50
5 Vinyl Chloride	62	1.145	1.145	(0.273)	197970	50.0000	44.92

Flag Legend

- Compound response manually integrated.



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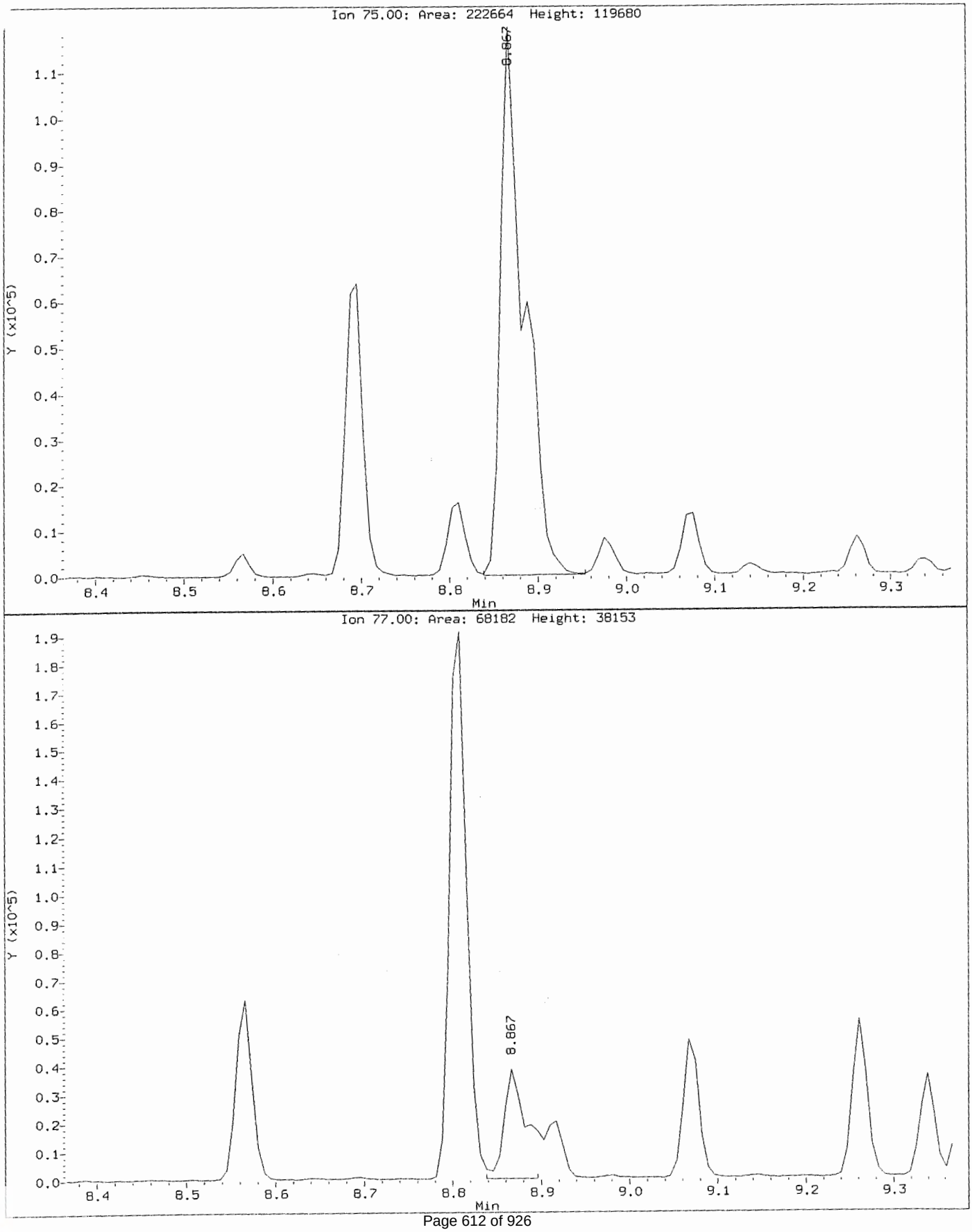
Date : 26-JUN-2020 11:57
Client ID: CCV
Sample Info: CCV;CCV;2;;;
Purge Volume: 5.0
Column phase: DB624

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

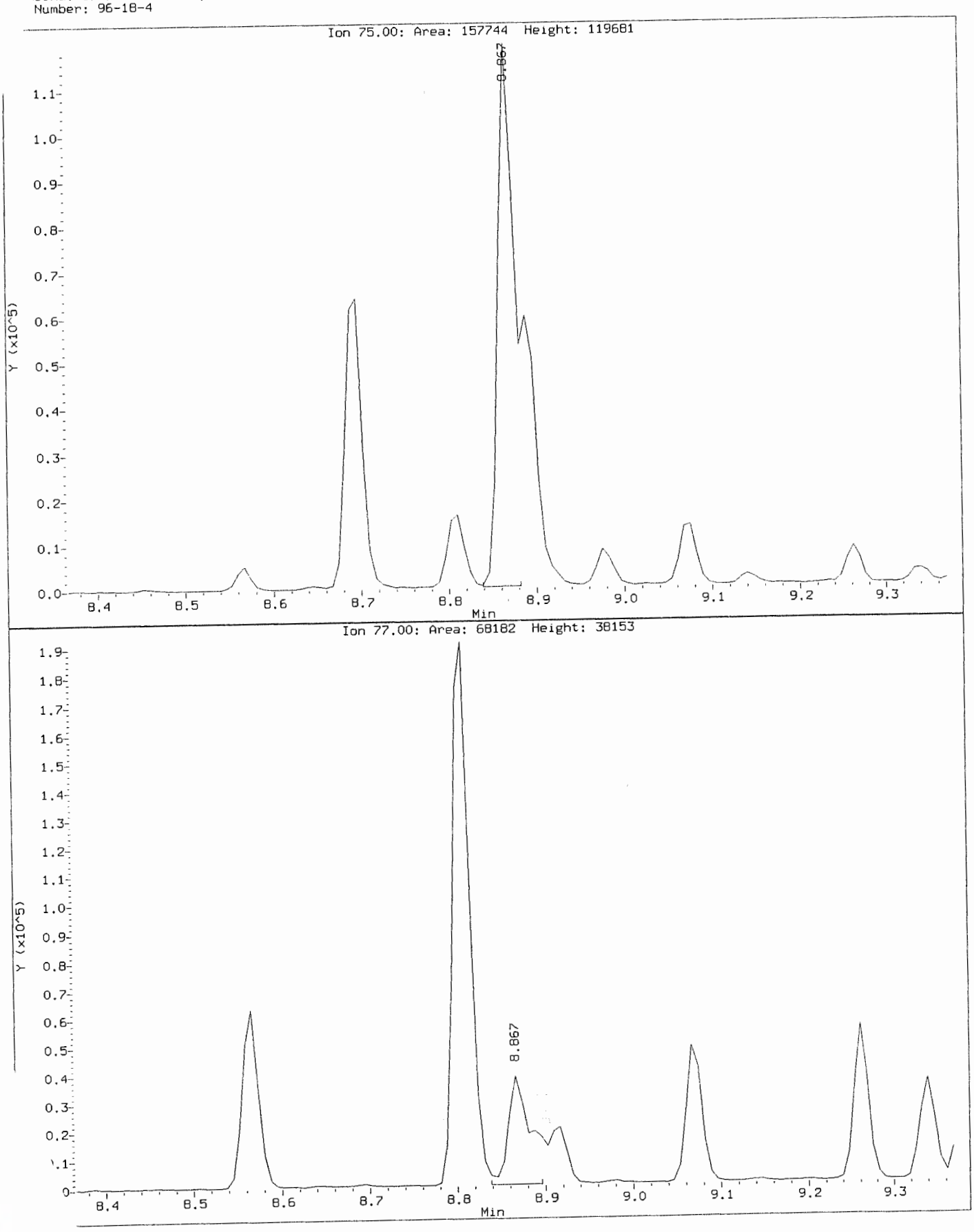
File: \\nahstws005\Target\chem\voa6.i\X200626.b\Before\X062602.D
ction Date: 26-JUN-2020 11:57
;rument: voa6.i
ent Sample ID: CCV

mpound: 1,2,3-Trichloropropane
:S Number: 96-18-4



.le: \\nahstws005\Target\chem\voa6.i\X200626.b\X062602.D
ion Date: 26-JUN-2020 11:57
ıment: voa6.i
.t Sample ID: CCV

ound: 1,2,3-Trichloropropane
Number: 96-18-4



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Data file : \\nahstws005\Target\chem\voa6.i\X200626.b\X062605.D
Lab Smp Id: VLCSW-200626 Client Smp ID: VLCSW-200626
Inj Date : 26-JUN-2020 13:09
Operator : PC Inst ID: voa6.i
Smp Info : VLCSW-200626;VLCSW-200626;3;;LCS
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200626.b\8260W.m
Meth Date : 20-Jul-2020 12:33 voa6.i Quant Type: ISTD
Cal Date : 19-JUN-2020 14:17 Cal File: X061908.D
Als bottle: 5 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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

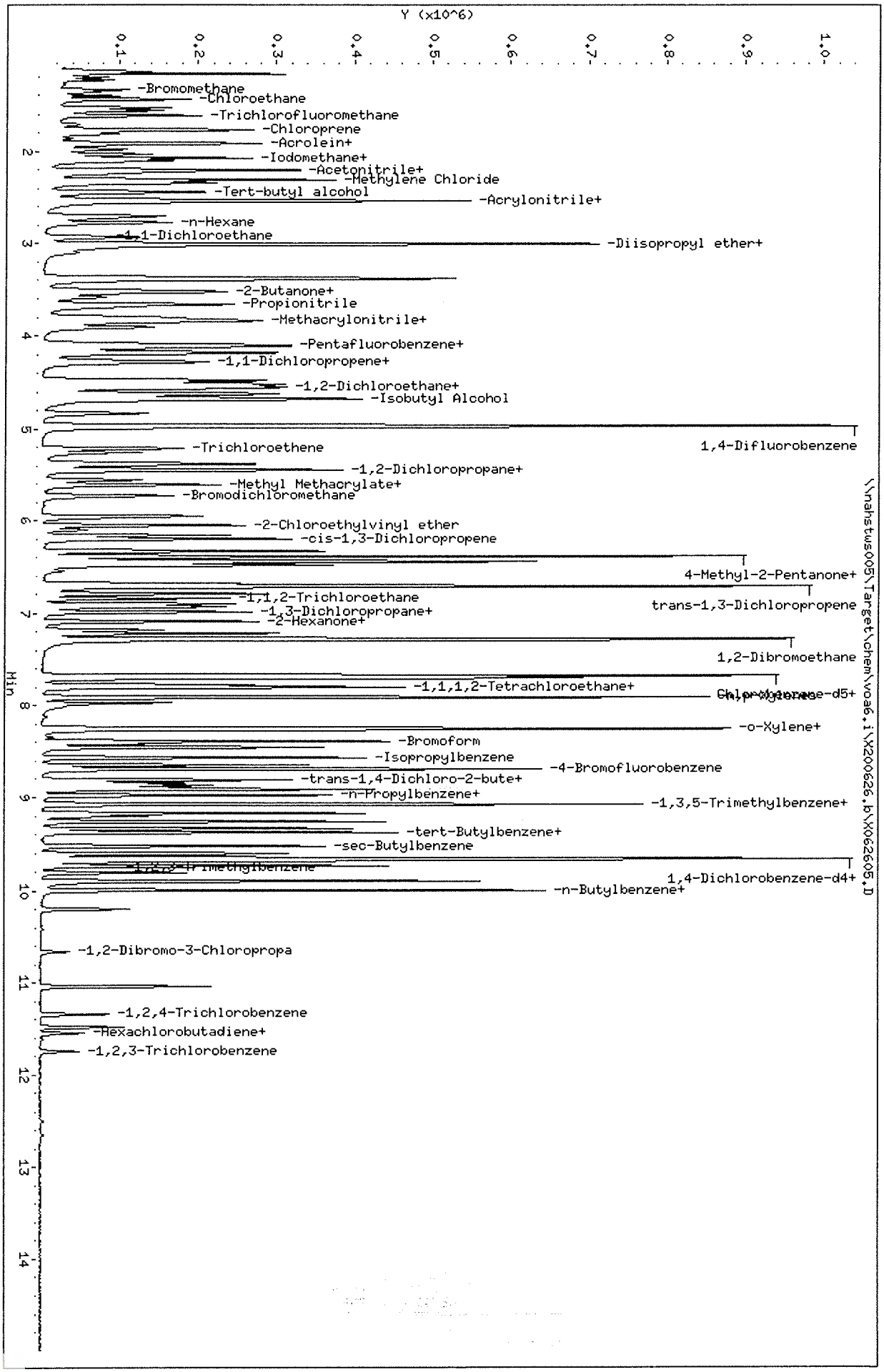
Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
*	1 Pentafluorobenzene	168	4.189	4.189	(1.000)	221839	50.0000	
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	401427	50.0000	
*	47 Chlorobenzene-d5	117	7.670	7.671	(1.000)	378125	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	174362	50.0000	
$	30 Dibromofluoromethane	113	4.103	4.103	(0.979)	140241	49.2964	49.29
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	199562	48.1130	48.11
$	48 Toluene-d8	98	6.388	6.388	(0.833)	456331	48.5126	48.51
$	69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	180633	46.8931	46.89
	60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	56783	20.6226	20.62
	31 1,1,1-Trichloroethane	97	4.089	4.089	(0.976)	84529	20.5099	20.50
	68 1,1,2,2-Tetrachloroethane	83	8.838	8.845	(0.914)	74502	21.4993	21.49
	53 1,1,2-Trichloroethane	83	6.840	6.847	(0.892)	50848	20.9379	20.93
	22 1,1-Dichloroethane	63	2.929	2.929	(0.699)	137478	19.9556	19.95
	11 1,1-Dichloroethene	96	1.919	1.919	(0.458)	43664	20.1588	20.15
	32 1,1-Dichloropropene	75	4.282	4.282	(0.862)	71339	19.7412	19.74
	93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.215)	11421	28.2921	28.29
	71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	66909	20.7684	20.76(M)
	90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	23130	27.1583	27.15
	79 1,2,4-Trimethylbenzene	105	9.382	9.383	(0.970)	190405	20.0240	20.02
	89 1,2-Dibromo-3-Chloropropane	155	10.657	10.658	(1.102)	6167	22.9070	22.90
	57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	62848	21.0718	21.07
	8 1,2-Dichlorobenzene	146	9.998	9.999	(1.034)	100030	21.1686	21.16

pounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
33 1,2-Dichloroethane	62	4.562	4.562	(0.918)	109221	20.7635	20.76
42 1,2-Dichloropropane	63	5.443	5.443	(1.095)	80638	21.3161	21.31
75 1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	179836	20.0585	20.05
83 1,3-Dichlorobenzene	146	9.612	9.605	(0.994)	105989	20.4019	20.40
54 1,3-Dichloropropane	76	6.983	6.983	(0.910)	106415	20.9079	20.90
84 1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	109093	20.6236	20.62
26 2,2-Dichloropropane	77	3.516	3.516	(0.839)	89777	20.8510	20.85
24 2-Butanone	43	3.580	3.580	(0.855)	103424	39.7767	39.77
76 2-Chlorotoluene	91	8.974	8.974	(0.928)	164924	19.9135	19.91
52 2-Hexanone	43	7.090	7.090	(0.924)	170218	43.5989	43.59
77 4-Chlorotoluene	91	9.074	9.075	(0.939)	192283	20.0339	20.03
82 p-Isopropyltoluene	119	9.655	9.655	(0.999)	166453	19.4253	19.42
45 4-Methyl-2-Pentanone	43	6.331	6.331	(0.825)	248230	43.5581	43.55
10 Acetone	43	1.976	1.976	(0.472)	89552	48.8887	48.88
37 Benzene	78	4.519	4.519	(0.909)	233311	20.8029	20.80
74 Bromobenzene	156	8.809	8.809	(0.911)	66604	20.3581	20.35
29 Bromochloromethane	128	3.802	3.803	(0.908)	34037	20.0212	20.02
39 Bromodichloromethane	83	5.729	5.729	(1.153)	86166	21.0949	21.09
66 Bromoform	173	8.415	8.416	(1.097)	42926	21.3061	21.30
6 Bromomethane	94	1.338	1.338	(0.320)	42061	20.2531	20.25
19 Carbon Disulfide	76	2.069	2.069	(0.494)	290285	40.7436	40.74
34 Carbon Tetrachloride	117	4.268	4.268	(0.859)	68104	19.4715	19.47
59 Chlorobenzene	112	7.699	7.699	(1.004)	151213	20.6544	20.65
7 Chloroethane	64	1.403	1.403	(0.335)	49370	20.9389	20.93
28 Chloroform	83	3.910	3.910	(0.933)	110582	20.3560	20.35
3 Chloromethane	50	1.080	1.081	(0.258)	110594	19.9536	19.95
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.843)	65362	20.4860	20.48
46 cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	102598	21.0333	21.03
55 Dibromochloromethane	129	7.176	7.176	(0.936)	63352	20.9353	20.93
44 Dibromomethane	93	5.557	5.557	(1.118)	44435	21.1326	21.13
2 Dichlorodifluoromethane	85	0.973	0.973	(0.232)	55136	18.7558	18.75
61 Ethylbenzene	106	7.807	7.800	(1.018)	75774	20.2961	20.29
91 Hexachlorobutadiene	225	11.481	11.488	(1.187)	15612	26.9730	26.97
67 Isopropylbenzene	105	8.566	8.566	(1.117)	212305	20.1382	20.13
62 m,p-Xylenes	106	7.907	7.907	(1.031)	182193	41.6291	41.62
17 Methylene Chloride	84	2.305	2.305	(0.550)	68164	19.9333	19.93
87 n-Butylbenzene	91	9.998	9.999	(1.034)	152070	19.6846	19.68
73 n-Propylbenzene	91	8.917	8.917	(0.922)	255858	19.9230	19.92
92 Naphthalene	128	11.546	11.546	(1.194)	35884	25.7522	25.75
63 o-Xylene	106	8.244	8.244	(1.075)	91479	20.5236	20.52
81 sec-Butylbenzene	105	9.526	9.526	(0.985)	194679	19.5172	19.51
64 Styrene	104	8.265	8.265	(1.078)	167496	21.2451	21.24
78 tert-Butylbenzene	119	9.339	9.340	(0.966)	136523	19.3876	19.38
56 Tetrachloroethene	164	6.933	6.933	(0.904)	39551	20.2114	20.21
50 Toluene	91	6.453	6.453	(0.841)	231689	20.5868	20.58
20 trans-1,2-Dichloroethene	96	2.527	2.535	(0.603)	53699	21.2993	21.29
51 trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	96649	21.3678	21.36
38 Trichloroethene	130	5.214	5.214	(1.049)	55858	21.0593	21.05
8 Trichlorofluoromethane	101	1.560	1.560	(0.373)	84082	21.2728	21.27
5 Vinyl Chloride	62	1.145	1.145	(0.273)	82923	18.9025	18.90

QC Flag Legend

M - Compound response manually integrated.



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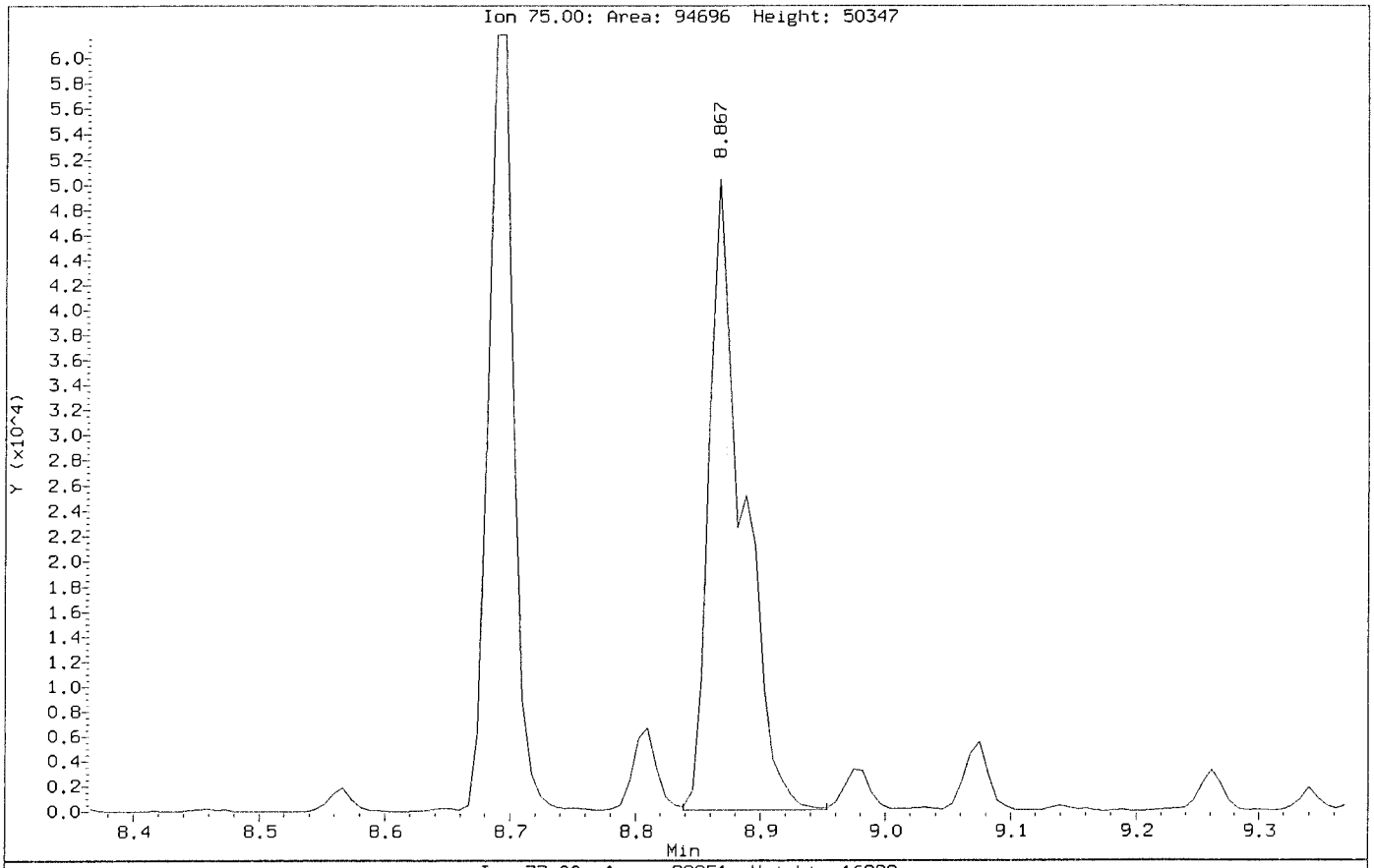
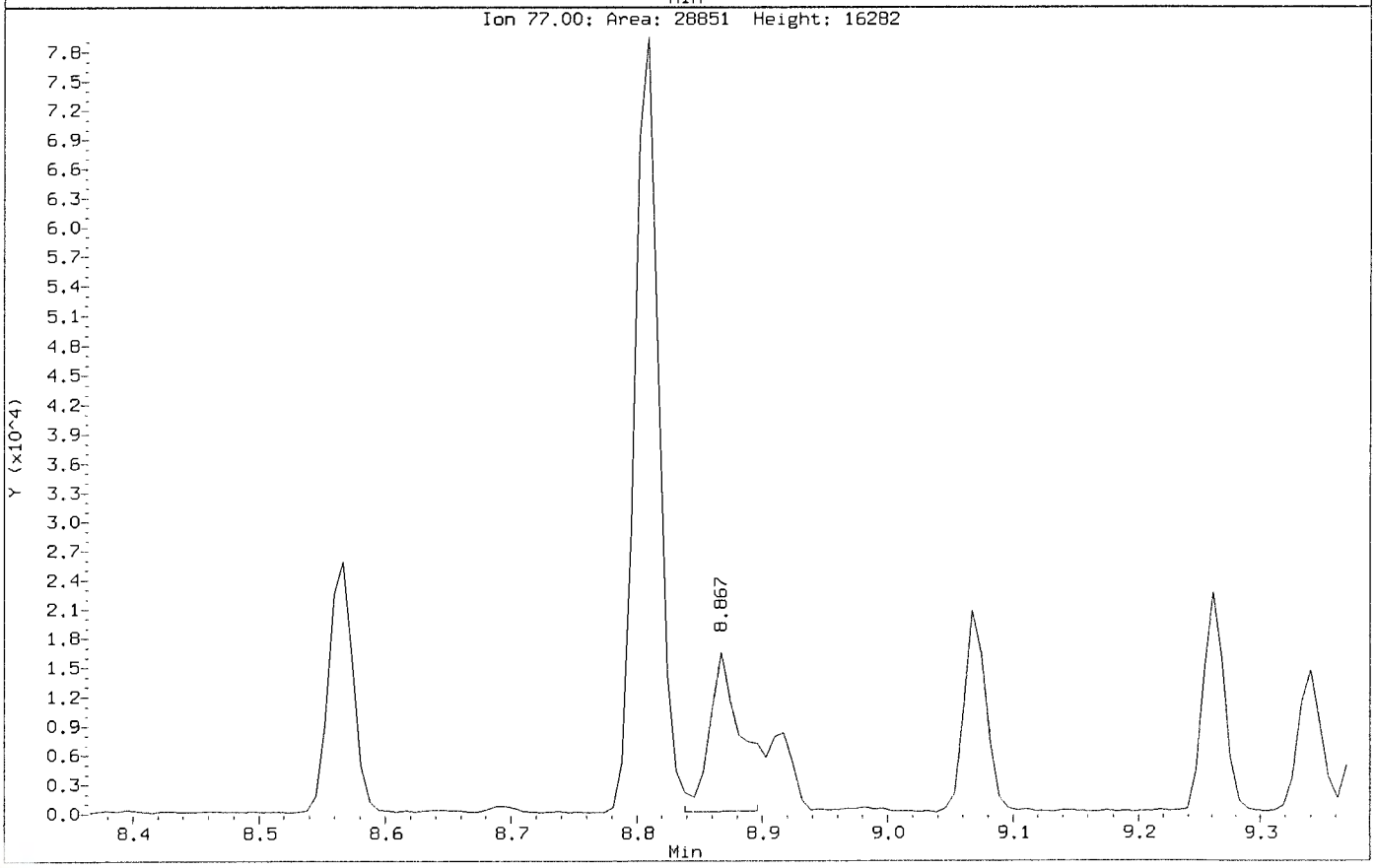
Client ID: VLCSW-200626
Sample Info: VLCSW-200626;VLCSW-200626;3;;LCS
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\nahstws005\Target\chem\voa6.i\X200626.b\Before\X062605.D
Injection Date: 26-JUN-2020 13:09
Instrument: voa6.i
Client Sample ID: VLCSW-200626

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





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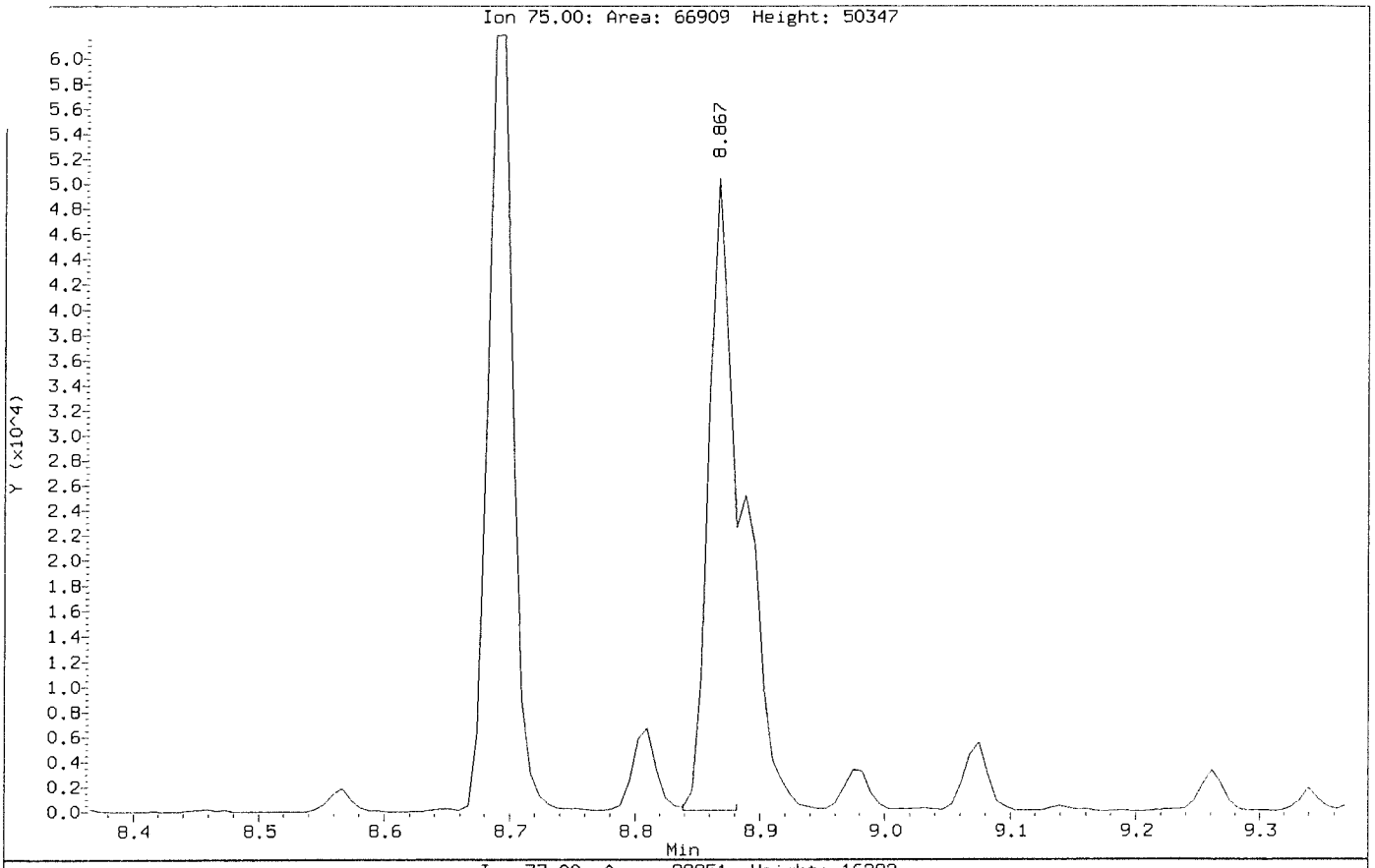
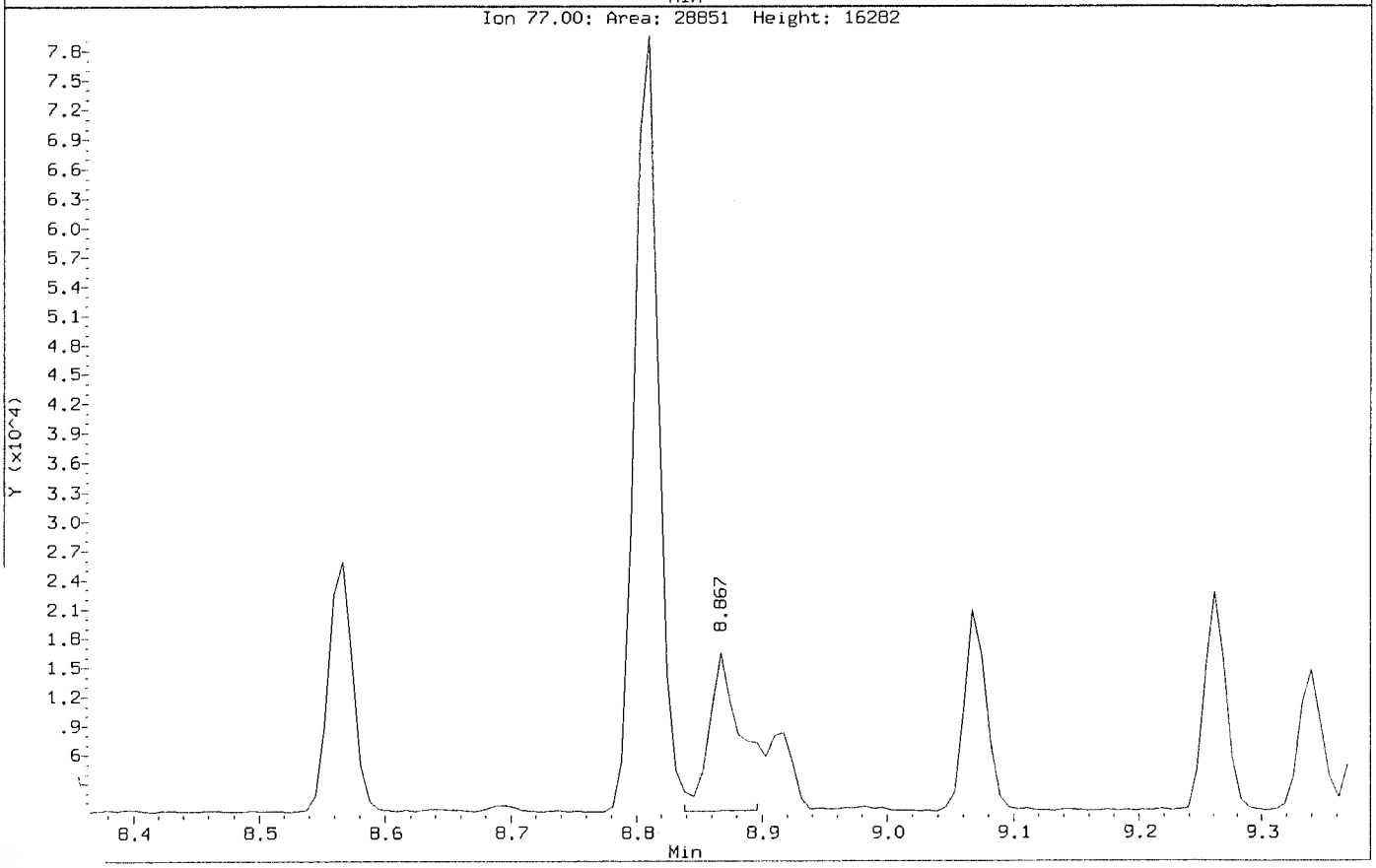
on Date: 26-JUN-2020 13:09
ient: voa6.i
Sample ID: VLCSW-200626

.und: 1,2,3-Trichloropropane
Number: 96-18-4





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Data file : \\nahstws005\Target\chem\voa6.i\X200626.b\X062607.D
Lab Smp Id: VBLKW-200626 Client Smp ID: VBLKW-200626
Inj Date : 26-JUN-2020 13:57
Operator : PC Inst ID: voa6.i
Smp Info : VBLKW-200626;VBLKW-200626;3;;BLANK
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200626.b\8260W.m
Meth Date : 20-Jul-2020 12:33 voa6.i Quant Type: ISTD
Cal Date : 19-JUN-2020 14:17 Cal File: X061908.D
Als bottle: 7 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

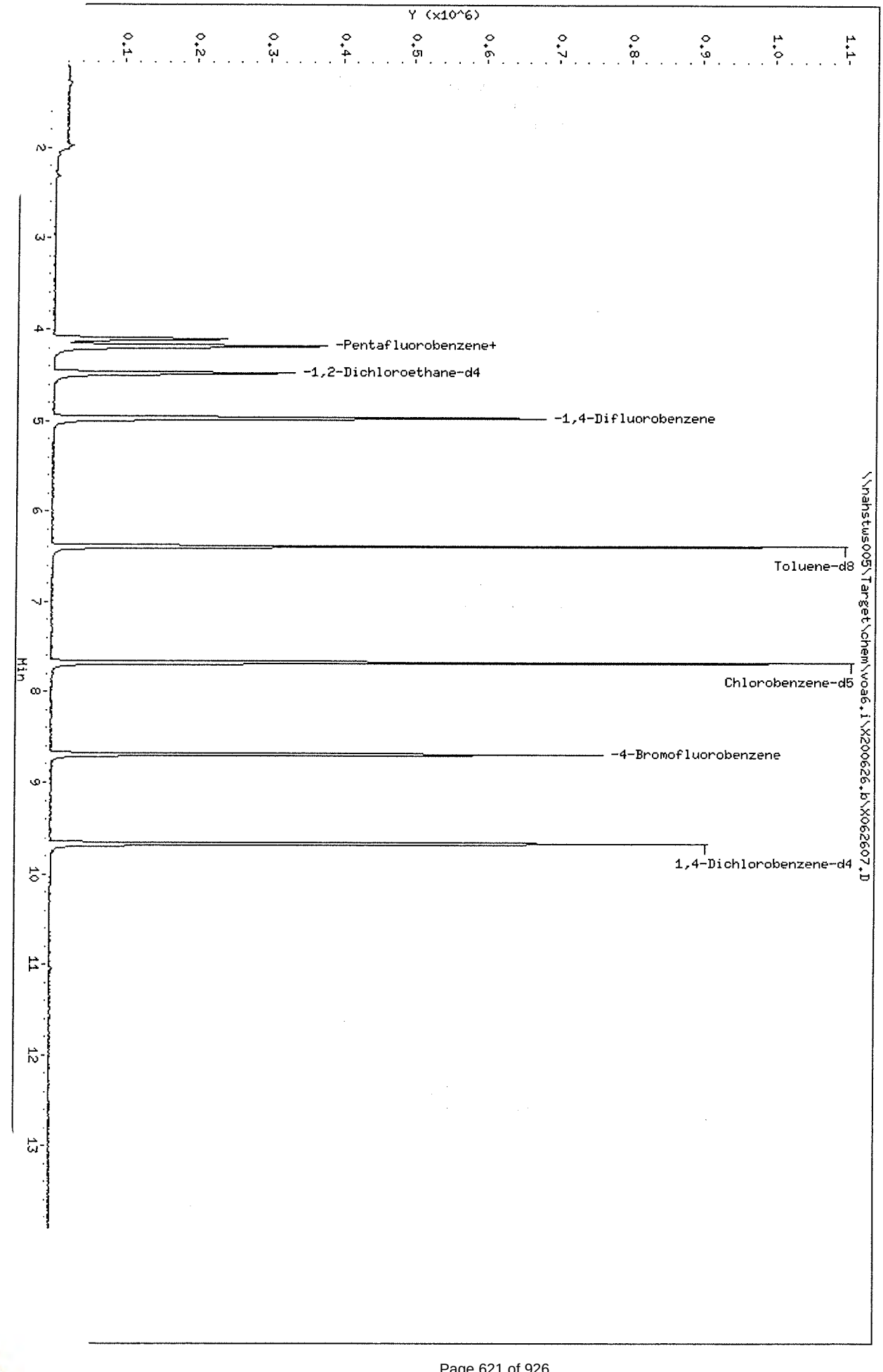
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

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	4.189	4.189	(1.000)	281258	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	499909	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	451043	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	201957	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.979)	169439	46.9771	46.97
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	237681	45.1593	45.15
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	571479	50.9322	50.93
$ 69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	220092	47.8998	47.89

Data File: \\nahstws005\Target\chem\voa6.i\X200626.b\X062607.D
Date : 26-JUN-2020 13:57
Client ID: VBLKW-200626
Sample Info: VBLKW-200626;VBLKW-200626;3;;BLANK
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\X200626.b\X062616.D
Lab Smp Id: HS20061178-01 Client Smp ID: HS20061178-01
Inj Date : 26-JUN-2020 17:32
Operator : PC Inst ID: voa6.i
Smp Info : HS20061178-01;HS20061178-01;;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200626.b\8260W.m
Meth Date : 20-Jul-2020 12:27 voa6.i Quant Type: ISTD
Cal Date : 19-JUN-2020 14:17 Cal File: X061908.D
Als bottle: 16
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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

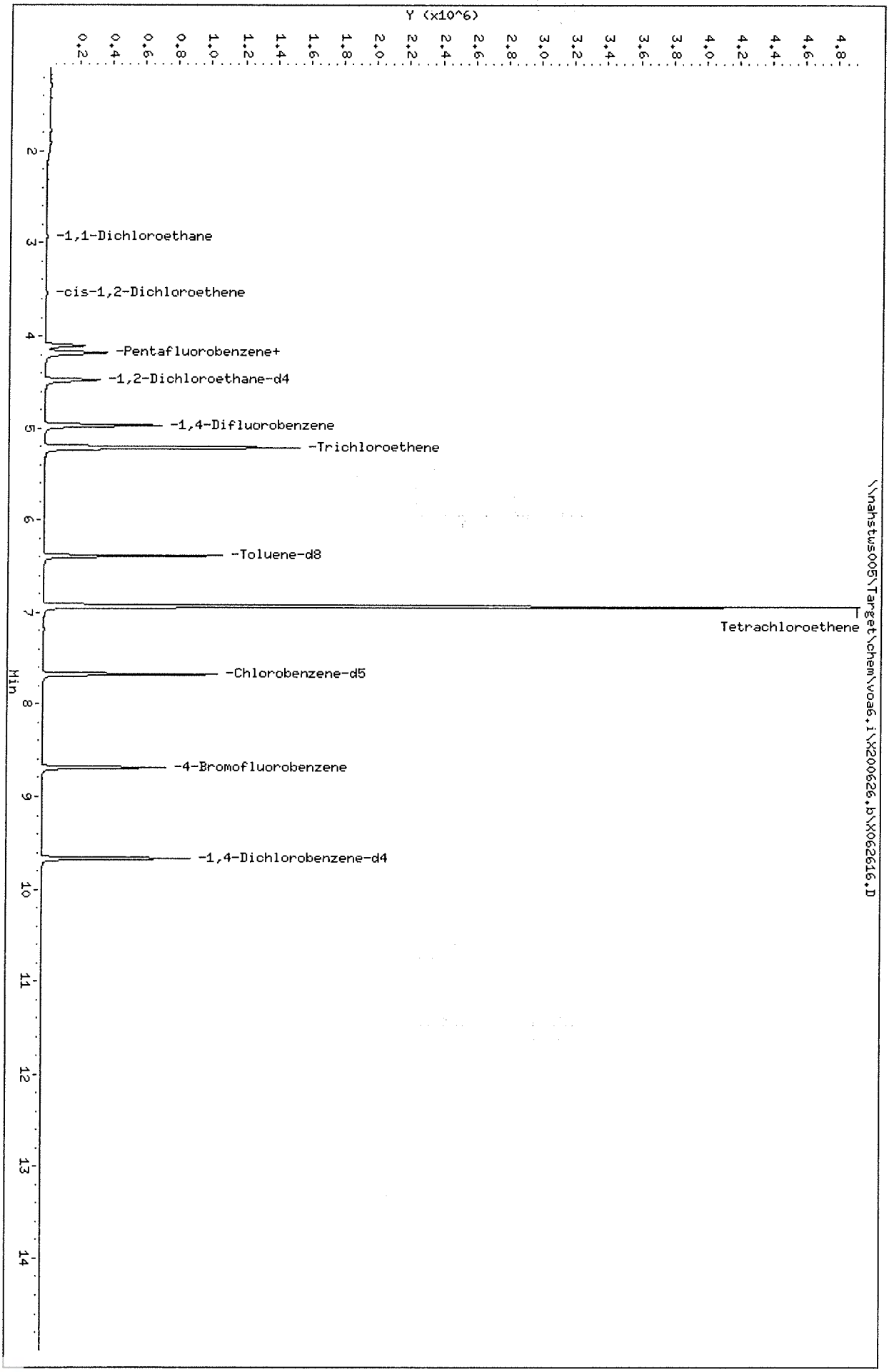
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.189	4.189	(1.000)	282936	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	495990	50.0000	
* 47 Chlorobenzene-d5	117	7.670	7.670	(1.000)	435647	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	198055	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.979)	165458	45.6013	45.60
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	238292	45.0048	45.00
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	557716	51.4622	51.46
$ 69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	212896	47.9711	47.97
22 1,1-Dichloroethane	63	2.929	2.929	(0.699)	6759	0.76924	0.76(a)
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.843)	4411	1.08397	1.08(a)
56 Tetrachloroethene	164	6.933	6.933	(0.904)	889290	394.442	394.44(A)
38 Trichloroethene	130	5.206	5.214	(1.048)	460578	140.539	140.53

QC Flag Legend

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

Data File: \\nahstws005\Target\chem\voa6.i\X200626.b\X062616.D
Date : 26-JUN-2020 17:32
Client ID: HS20061178-01
Sample Info: HS20061178-01;HS20061178-01;;;
Purge Volume: 5.0
Column phase: DB624

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



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Date : 26-JUN-2020 17:32

Client ID: HS20061178-01

Instrument: voa6.i

Sample Info: HS20061178-01;HS20061178-01;;;

Purge Volume: 5.0

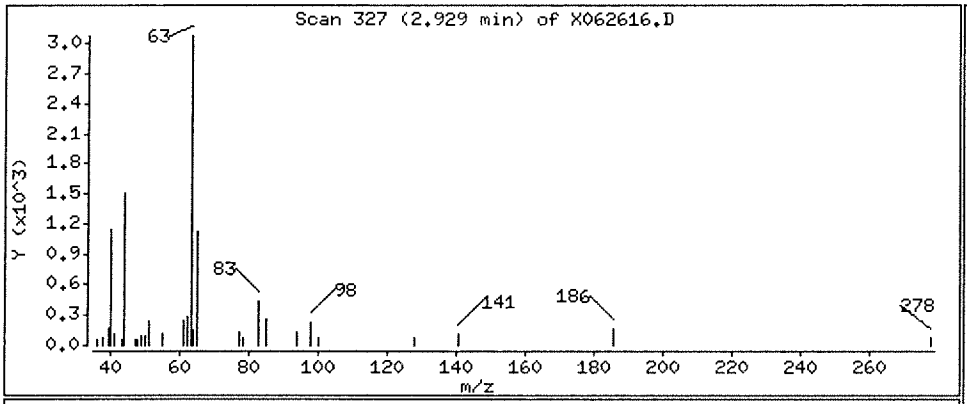
Operator: PC

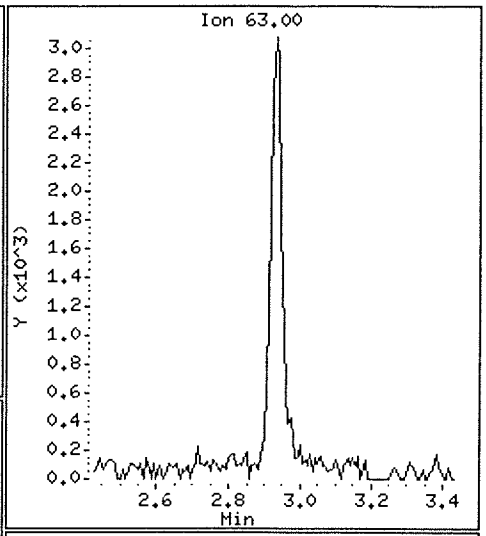
Column phase: DB624

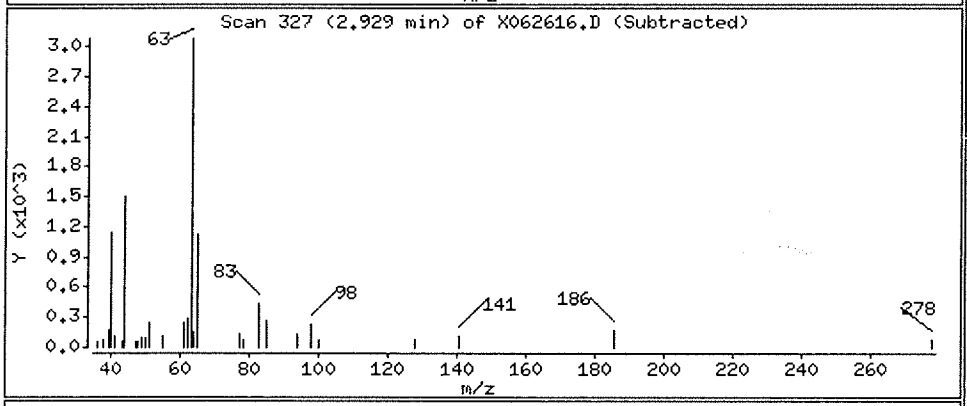
Column diameter: 0.18

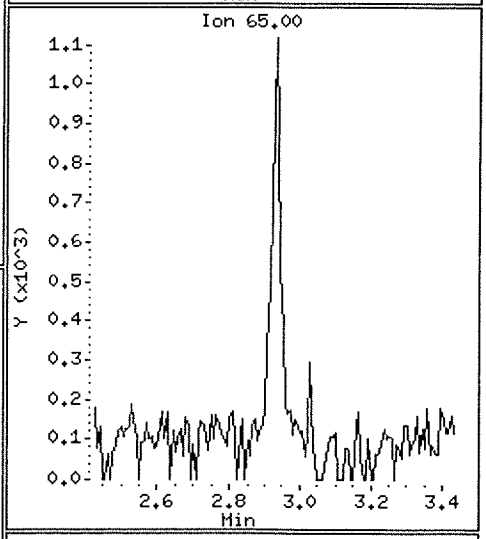
22 1,1-Dichloroethane

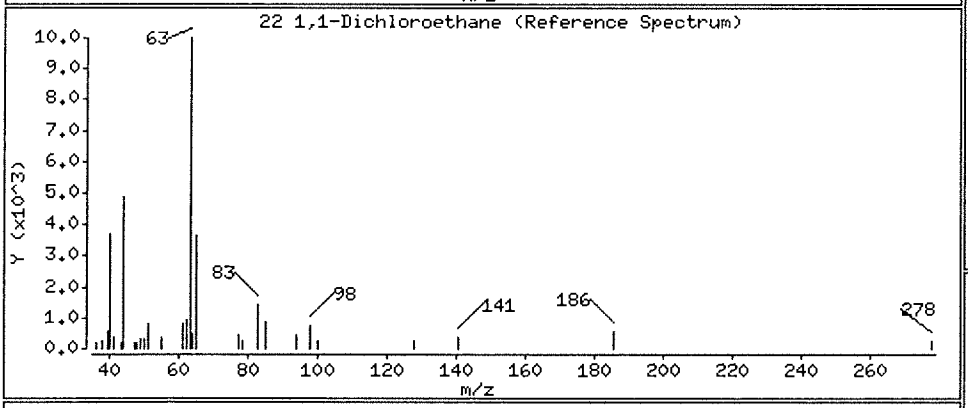
Concentration: 0.76 ug/l

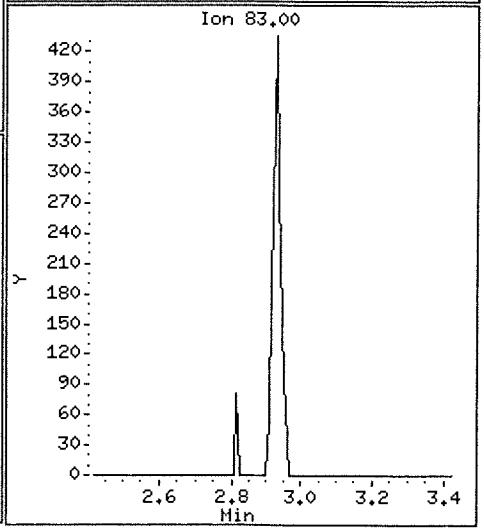


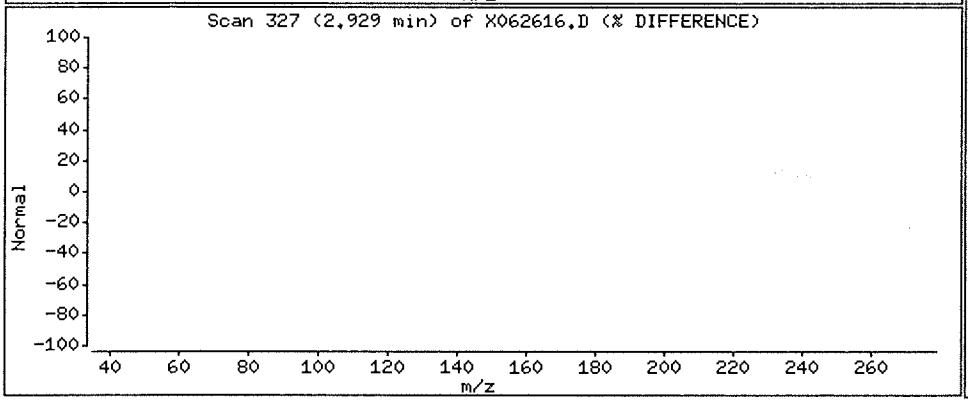












Data File: \\nahstws005\Target\chem\voa6.i\X200626.b\X062616.D

Date : 26-JUN-2020 17:32

Client ID: HS20061178-01

Instrument: voa6.i

Sample Info: HS20061178-01;HS20061178-01;;;

Purge Volume: 5.0

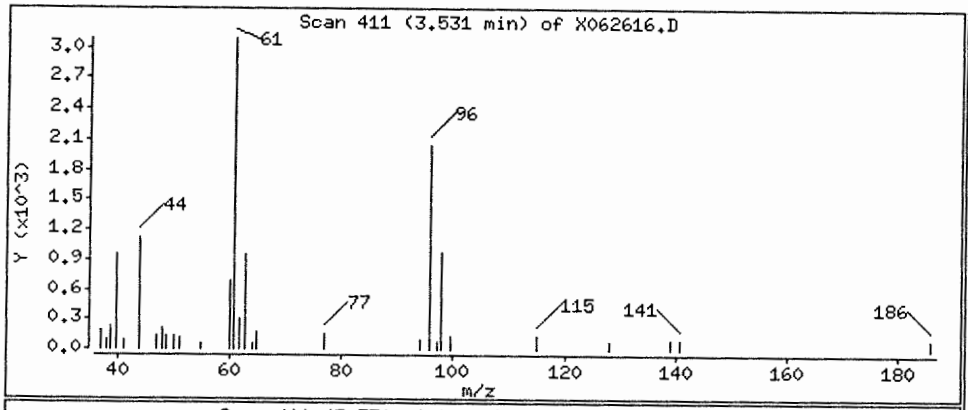
Operator: PC

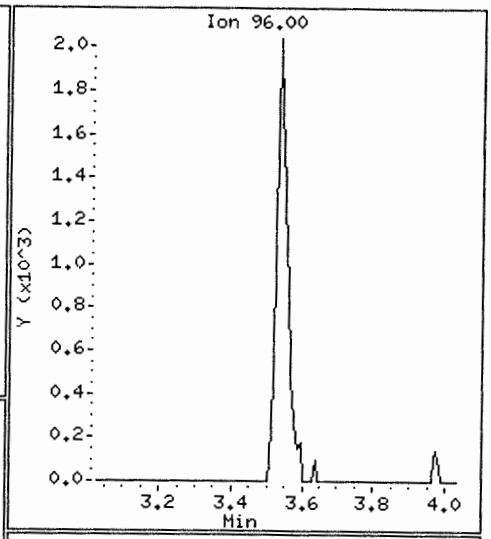
Column phase: DB624

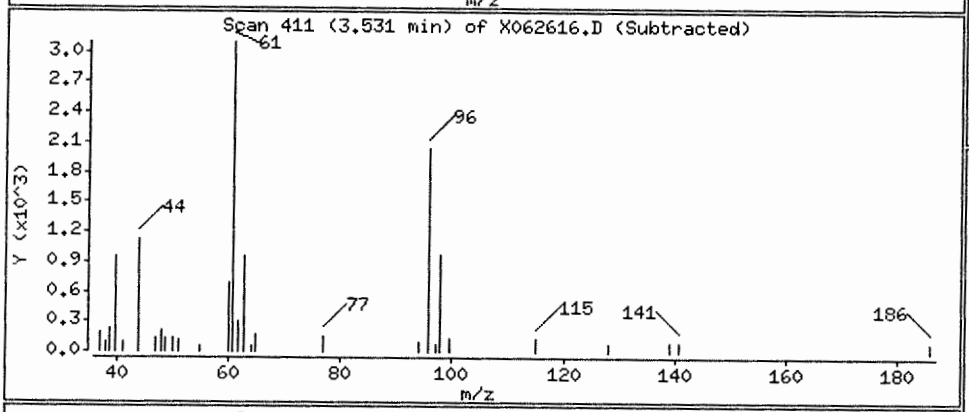
Column diameter: 0.18

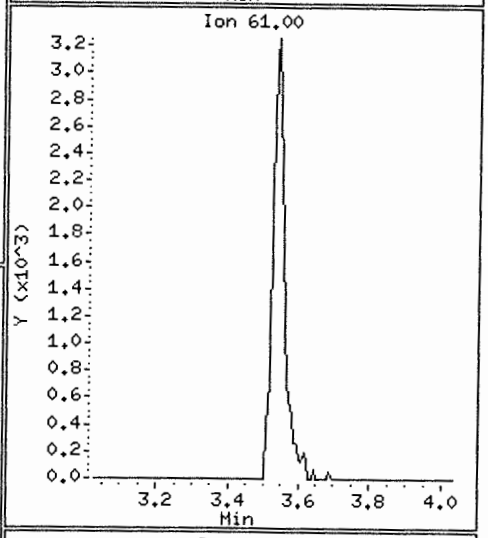
27 cis-1,2-Dichloroethene

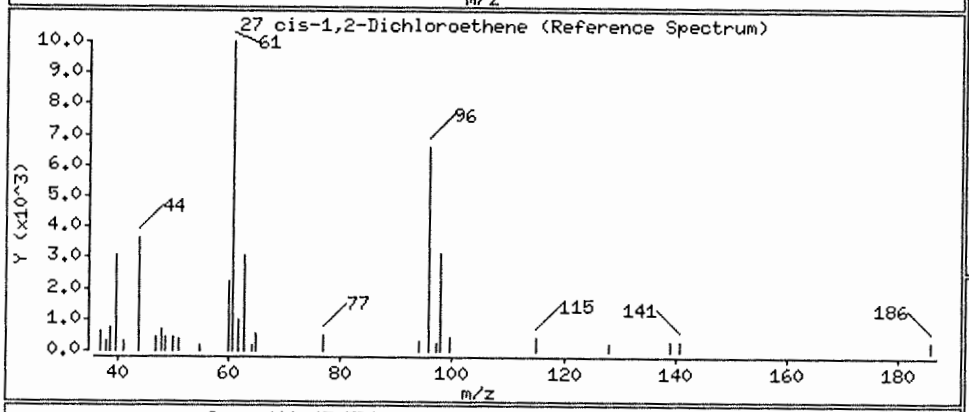
Concentration: 1.08 ug/l

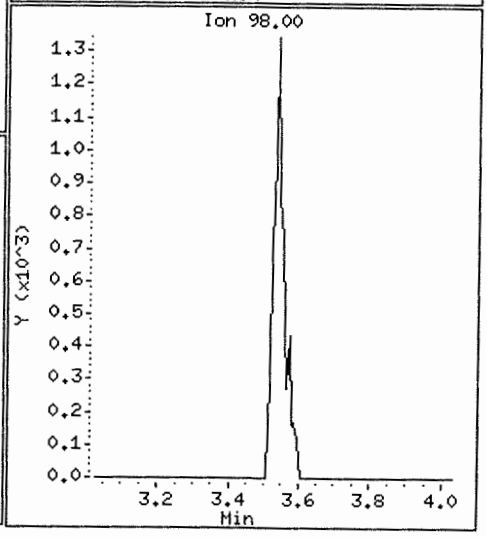


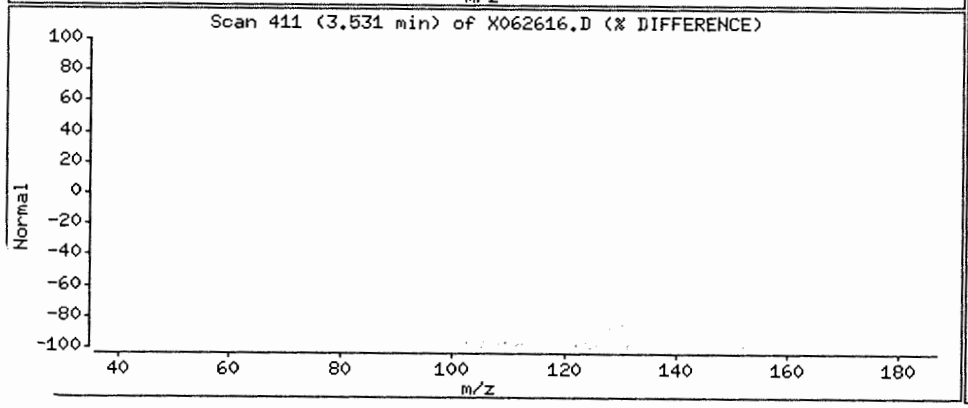












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Date : 26-JUN-2020 17:32

Client ID: HS20061178-01

Instrument: voa6.i

Sample Info: HS20061178-01;HS20061178-01;;;

Purge Volume: 5.0

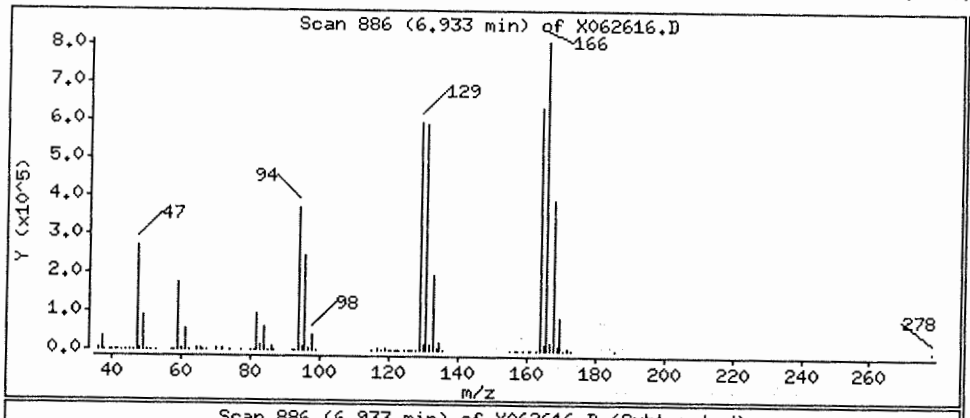
Operator: PC

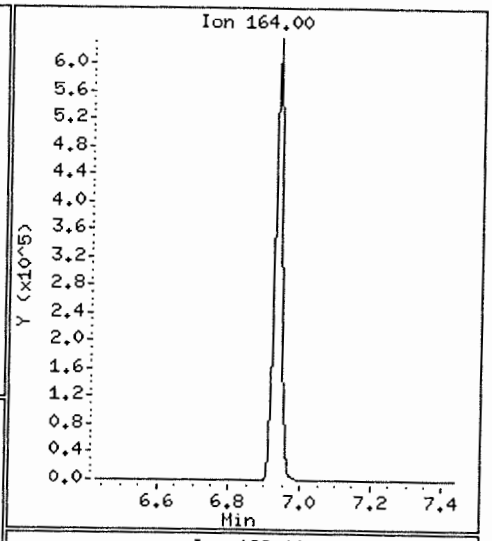
Column phase: DB624

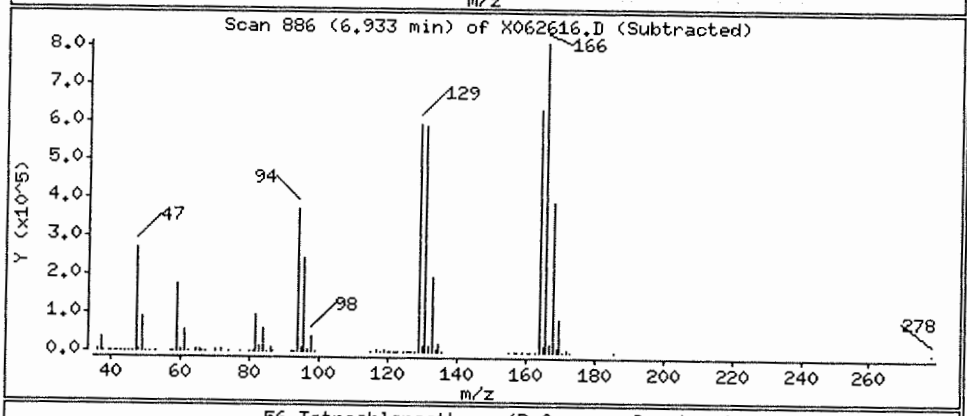
Column diameter: 0.18

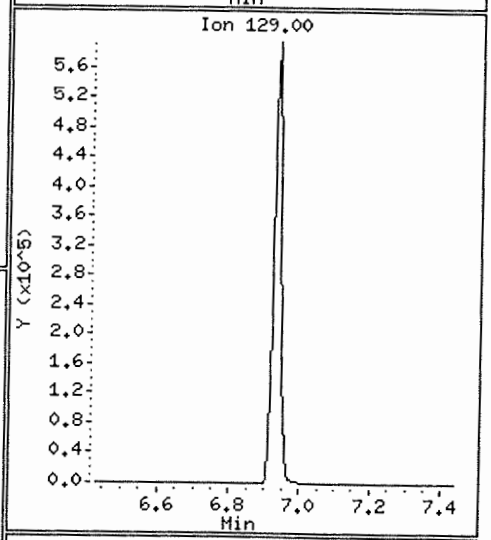
56 Tetrachloroethene

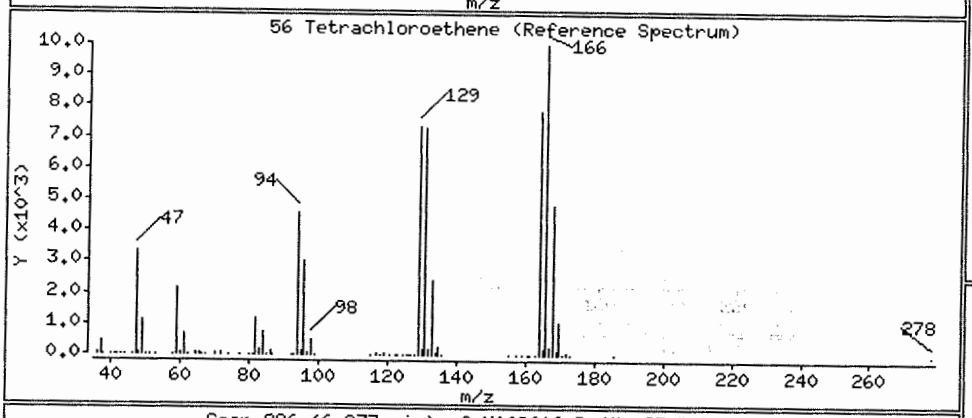
Concentration: 394.44 ug/l

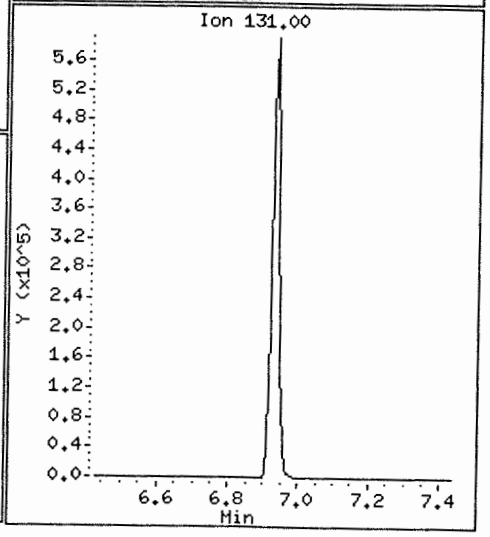


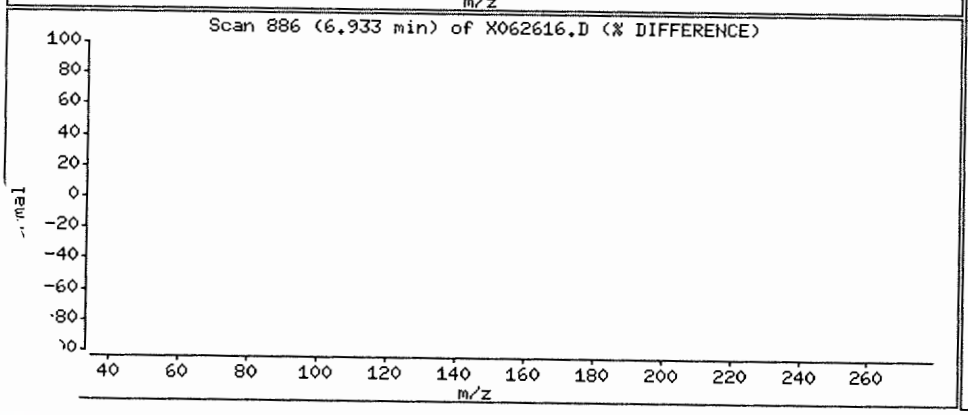












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ate : 26-JUN-2020 17:32

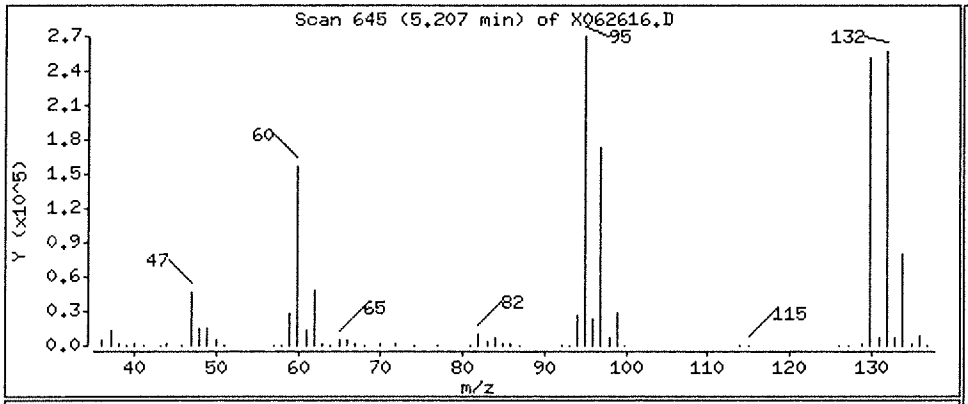
Client ID: HS20061178-01 Instrument: voa6.i

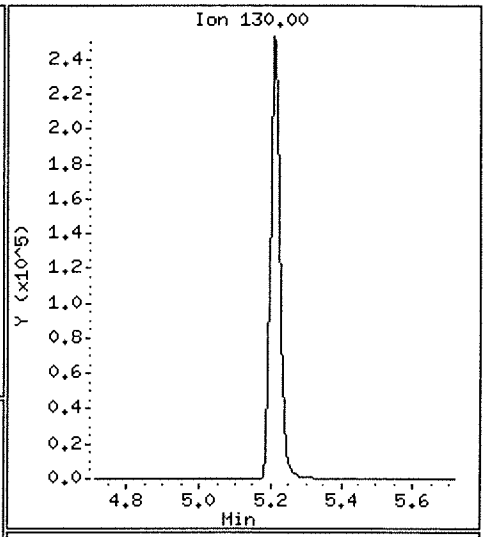
Sample Info: HS20061178-01;HS20061178-01;;;

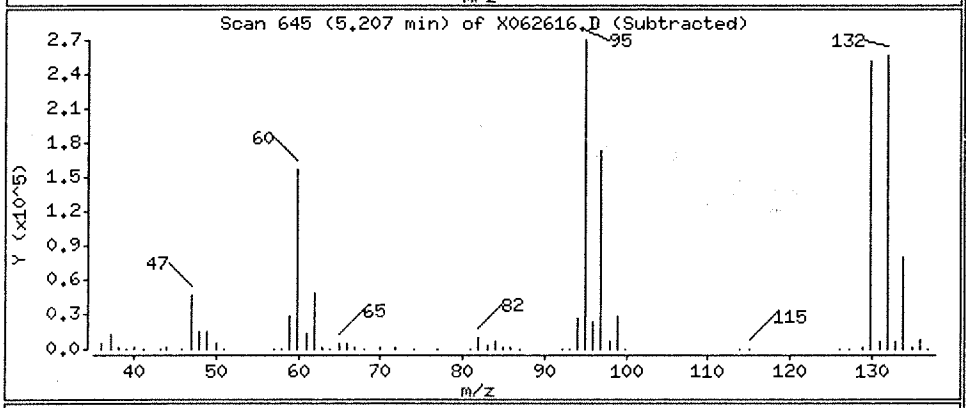
Purge Volume: 5.0 Operator: PC

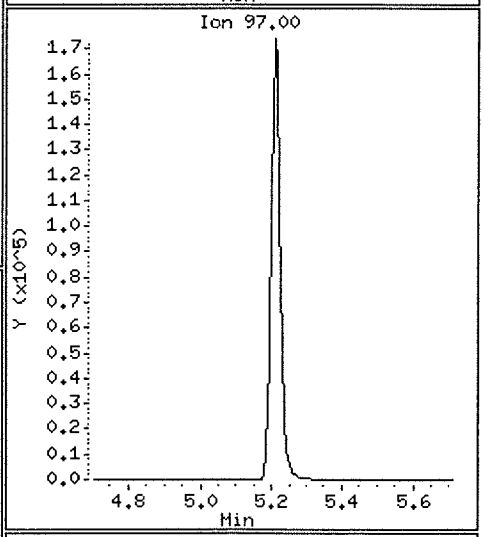
Column phase: DB624 Column diameter: 0.18

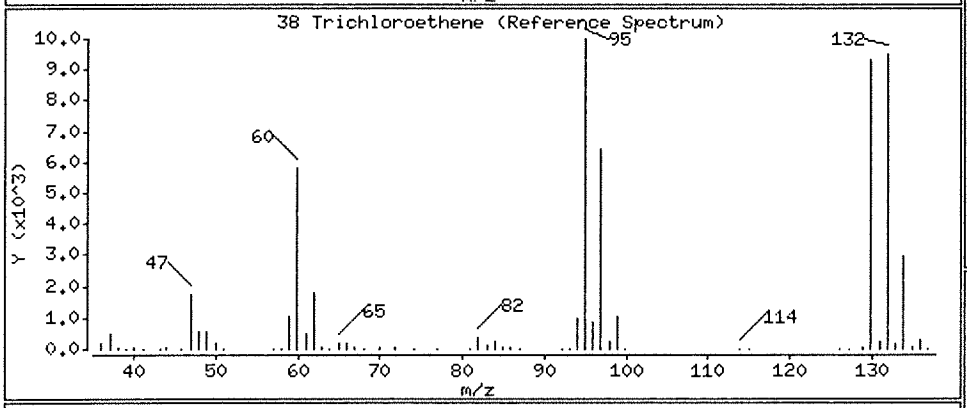
38 Trichloroethene Concentration: 140.53 ug/l

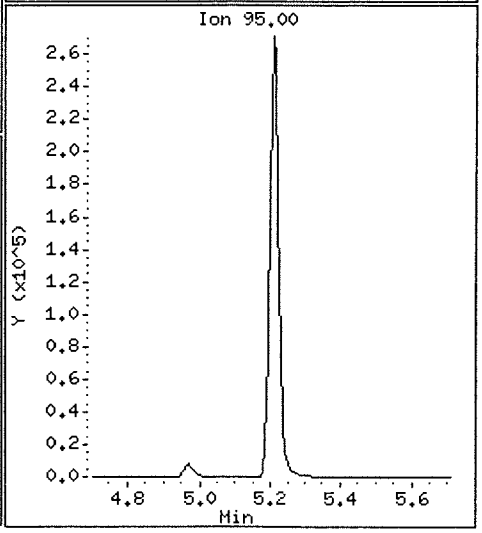


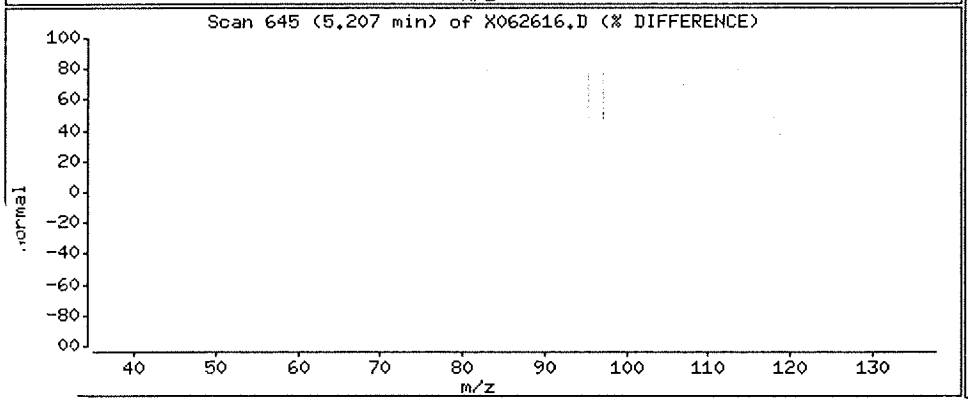












Data File: \\nahstws005\Target\chem\voa6.i\X200626.b\X062617.D Page 1
Report Date: 20-Jul-2020 12:33

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200626.b\X062617.D
Lab Smp Id: HS20061206-02MS Client Smp ID: HS20061206-02MS
Inj Date : 26-JUN-2020 17:56
Operator : PC Inst ID: voa6.i
Smp Info : HS20061206-02MS;HS20061206-02MS;3;;MS
Misc Info : HS18090001;WATER;0;1;
Comment   :
Method   : \\nahstws005\Target\chem\voa6.i\X200626.b\8260W.m
Meth Date : 20-Jul-2020 12:33 voa6.i Quant Type: ISTD
Cal Date : 19-JUN-2020 14:17 Cal File: X061908.D
Als bottle: 17 QC Sample: MS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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

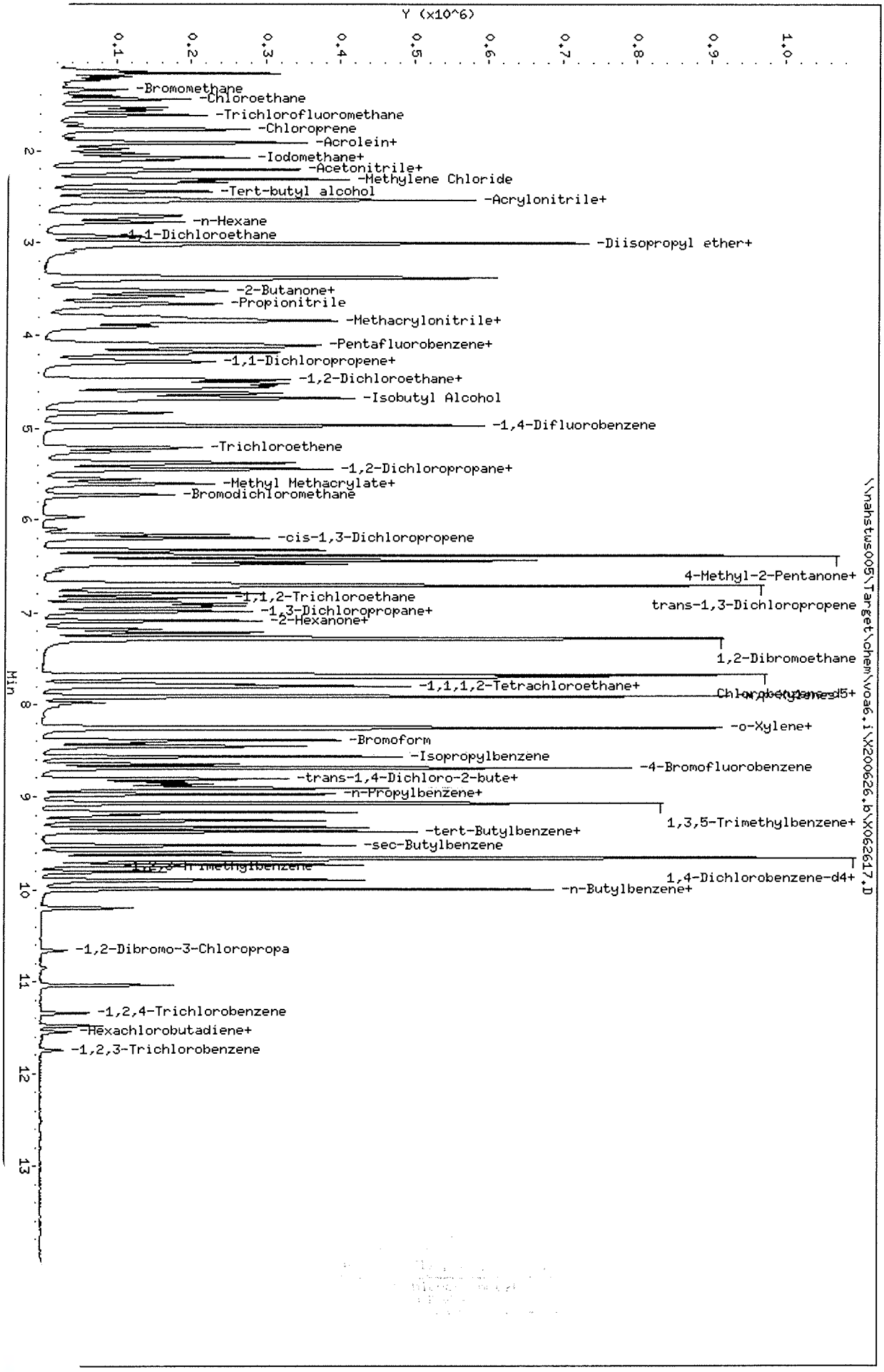
Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.189	4.189	(1.000)	234036	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	429630	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	388697	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	178569	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.979)	162954	54.2951	54.29
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	238113	54.4975	54.49
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	543782	56.2372	56.23
$ 69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	213112	53.8200	53.82
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	60456	21.3594	21.35
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.976)	93209	21.4374	21.43
68 1,1,2,2-Tetrachloroethane	83	8.838	8.845	(0.914)	78833	22.2131	22.21
53 1,1,2-Trichloroethane	83	6.840	6.847	(0.892)	53828	21.5621	21.56
22 1,1-Dichloroethane	63	2.929	2.929	(0.699)	145512	20.0210	20.02
11 1,1-Dichloroethene	96	1.912	1.919	(0.456)	46807	20.4836	20.48
32 1,1-Dichloropropene	75	4.283	4.282	(0.862)	78663	20.3390	20.33
93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.215)	7574	17.5477	17.54
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	69368	21.0244	21.02(M)
90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	16313	18.3224	18.32
79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.970)	207939	21.3528	21.35
89 1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.102)	6163	22.3494	22.34
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	66824	21.7955	21.79
88 1,2-Dichlorobenzene	146	9.999	9.999	(1.034)	104351	21.5627	21.56

pounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
33 1,2-Dichloroethane	62	4.562	4.562	(0.918)	115505	20.5166	20.51
42 1,2-Dichloropropane	63	5.443	5.443	(1.095)	83984	20.7433	20.74
75 1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	200802	21.8694	21.86
83 1,3-Dichlorobenzene	146	9.605	9.605	(0.993)	113398	21.3138	21.31
54 1,3-Dichloropropane	76	6.983	6.983	(0.910)	109560	20.9403	20.94
84 1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	114194	21.0793	21.07
26 2,2-Dichloropropane	77	3.516	3.516	(0.839)	89996	19.8126	19.81
24 2-Butanone	43	3.581	3.580	(0.855)	252343	93.0227	93.02
76 2-Chlorotoluene	91	8.974	8.974	(0.928)	180506	21.2815	21.28
52 2-Hexanone	43	7.090	7.090	(0.924)	176666	44.0197	44.01
77 4-Chlorotoluene	91	9.075	9.075	(0.939)	208544	21.2162	21.21
82 p-Isopropyltoluene	119	9.655	9.655	(0.999)	190833	21.7458	21.74
45 4-Methyl-2-Pentanone	43	6.331	6.331	(0.825)	258557	44.1363	44.13
10 Acetone	43	1.976	1.976	(0.472)	87387	45.0290	45.02
37 Benzene	78	4.519	4.519	(0.909)	248792	20.7270	20.72
74 Bromobenzene	156	8.810	8.809	(0.911)	70039	20.9036	20.90
29 Bromochloromethane	128	3.803	3.803	(0.908)	34156	19.0442	19.04
39 Bromodichloromethane	83	5.729	5.729	(1.153)	91373	20.9012	20.90
66 Bromoform	173	8.416	8.416	(1.097)	44260	21.3707	21.37
6 Bromomethane	94	1.339	1.338	(0.320)	40189	18.3432	18.34
19 Carbon Disulfide	76	2.069	2.069	(0.494)	302106	40.1929	40.19
34 Carbon Tetrachloride	117	4.268	4.268	(0.859)	75814	20.2529	20.25
59 Chlorobenzene	112	7.699	7.699	(1.004)	157075	20.8716	20.87
7 Chloroethane	64	1.403	1.403	(0.335)	48292	19.4143	19.41
28 Chloroform	83	3.910	3.910	(0.933)	118946	20.7546	20.75
3 Chloromethane	50	1.081	1.081	(0.258)	95927	16.4054	16.40
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.843)	71443	21.2250	21.22
46 cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	108132	20.7126	20.71
55 Dibromochloromethane	129	7.176	7.176	(0.936)	66794	21.4724	21.47
44 Dibromomethane	93	5.558	5.557	(1.118)	45679	20.2981	20.29
2 Dichlorodifluoromethane	85	0.973	0.973	(0.232)	41525	13.6474	13.64
61 Ethylbenzene	106	7.800	7.800	(1.017)	82363	21.4609	21.46
91 Hexachlorobutadiene	225	11.481	11.488	(1.187)	12093	19.9083	19.90
67 Isopropylbenzene	105	8.566	8.566	(1.117)	238714	22.0273	22.02
62 m,p-Xylenes	106	7.907	7.907	(1.031)	196886	43.7628	43.76
17 Methylene Chloride	84	2.306	2.305	(0.550)	69644	19.2407	19.24
87 n-Butylbenzene	91	9.999	9.999	(1.034)	170263	21.5203	21.52
73 n-Propylbenzene	91	8.917	8.917	(0.922)	285608	21.7156	21.71
92 Naphthalene	128	11.546	11.546	(1.194)	28737	19.9173	19.91
63 o-Xylene	106	8.244	8.244	(1.075)	97107	21.1937	21.19
81 sec-Butylbenzene	105	9.526	9.526	(0.985)	223794	21.9075	21.90
64 Styrene	104	8.258	8.265	(1.077)	175624	21.6701	21.67
78 tert-Butylbenzene	119	9.340	9.340	(0.966)	159130	22.0656	22.06
56 Tetrachloroethene	164	6.933	6.933	(0.904)	45291	22.5151	22.51
50 Toluene	91	6.453	6.453	(0.841)	253095	21.8772	21.87
20 trans-1,2-Dichloroethene	96	2.535	2.535	(0.605)	56488	21.2379	21.23
51 trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	97042	20.0463	20.04
38 Trichloroethene	130	5.214	5.214	(1.049)	65610	23.1122	23.11
8 Trichlorofluoromethane	101	1.561	1.560	(0.373)	85844	20.5867	20.58
5 Vinyl Chloride	62	1.138	1.145	(0.272)	86946	18.7866	18.78

QC Flag Legend

M - Compound response manually integrated.



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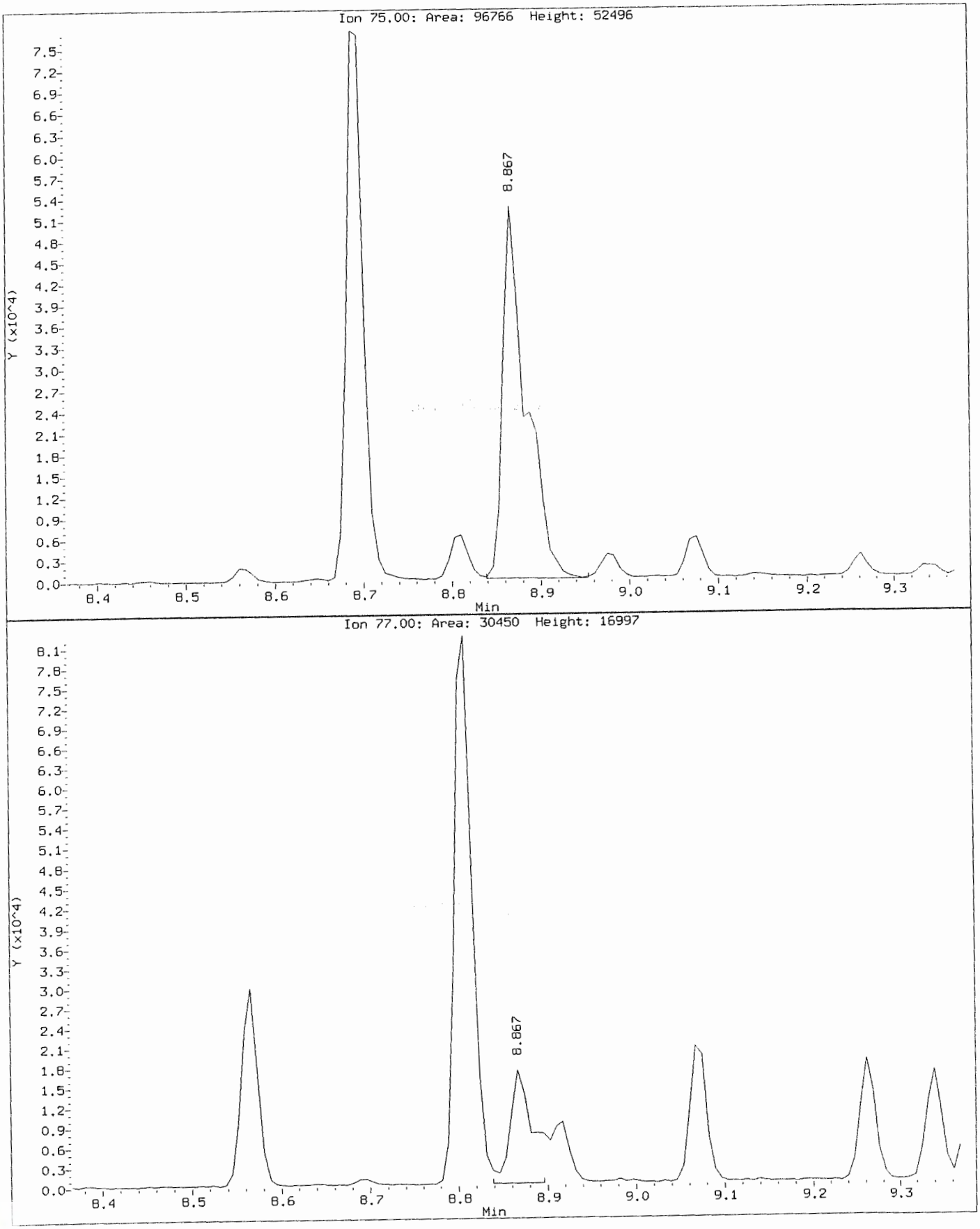
Client ID: HS20061206-02MS
Sample Info: HS20061206-02MS;HS20061206-02MS;3;;MS
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\nahstws005\Target\chem\voa6.i\X200626.b\Before\X062617.D
Injection Date: 26-JUN-2020 17:56
Instrument: voa6.i
Client Sample ID: HS20061206-02MS

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4



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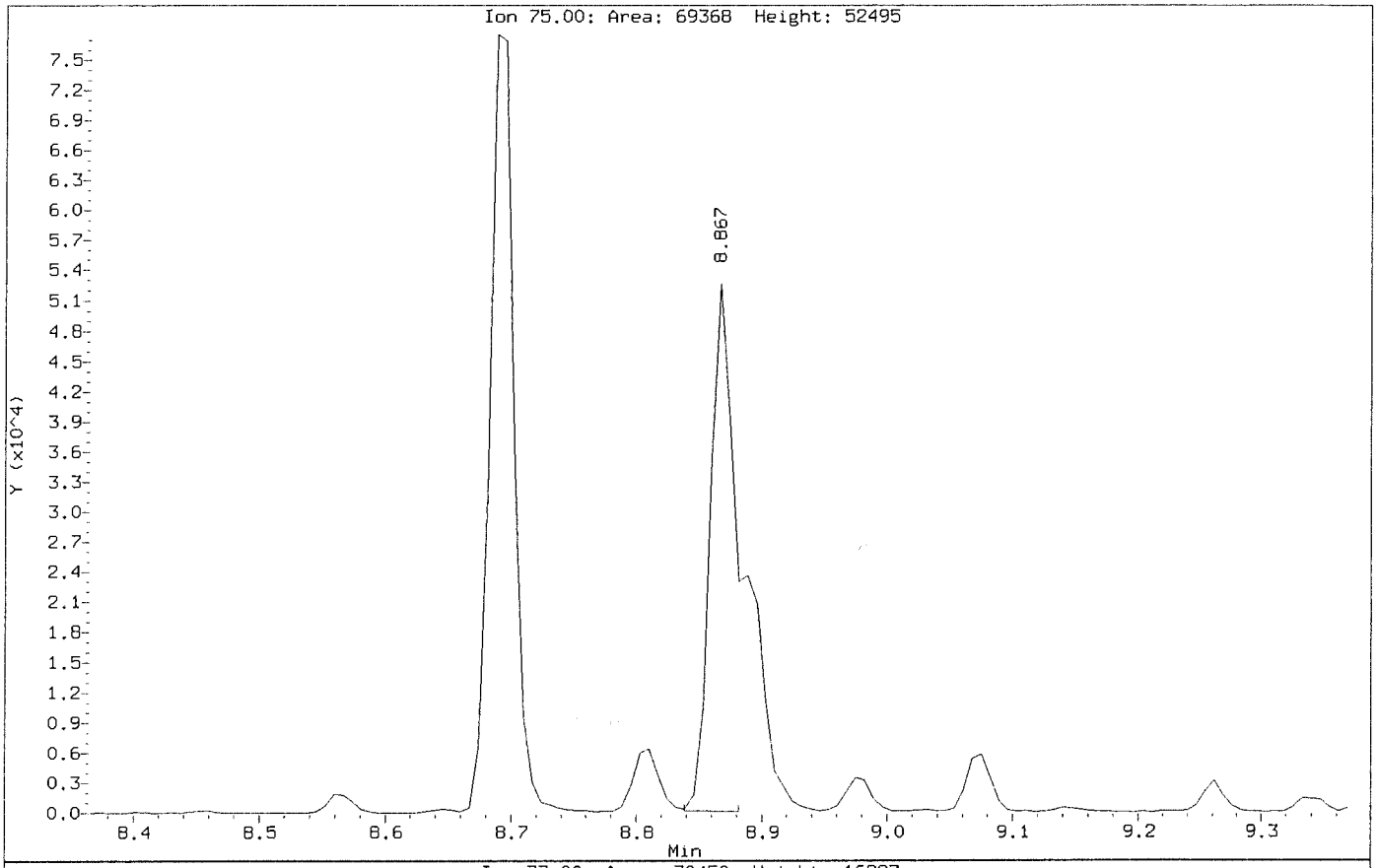
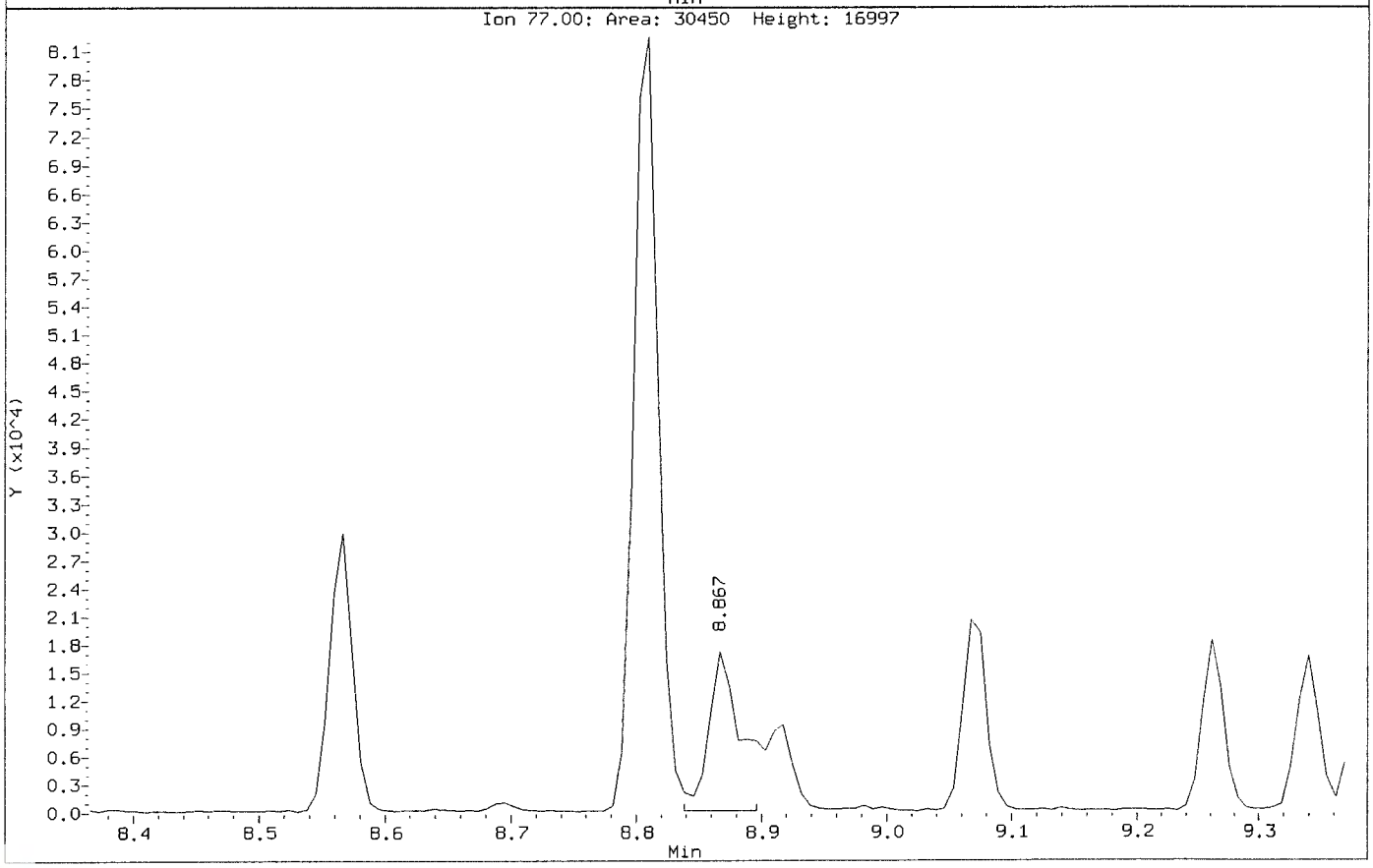
Injection Date: 26-JUN-2020 17:56
Instrument: voa6.i
Client Sample ID: HS20061206-02MS

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200626.b\X062618.D
Lab Smp Id: HS20061206-02MDS Client Smp ID: HS20061206-02MSD
Inj Date : 26-JUN-2020 18:19
Operator : PC Inst ID: voa6.i
Smp Info : HS20061206-02MDS;HS20061206-02MSD;3;;MSD
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200626.b\8260W.m
Meth Date : 20-Jul-2020 12:33 voa6.i Quant Type: ISTD
Cal Date : 19-JUN-2020 14:17 Cal File: X061908.D
Als bottle: 17 QC Sample: MSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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

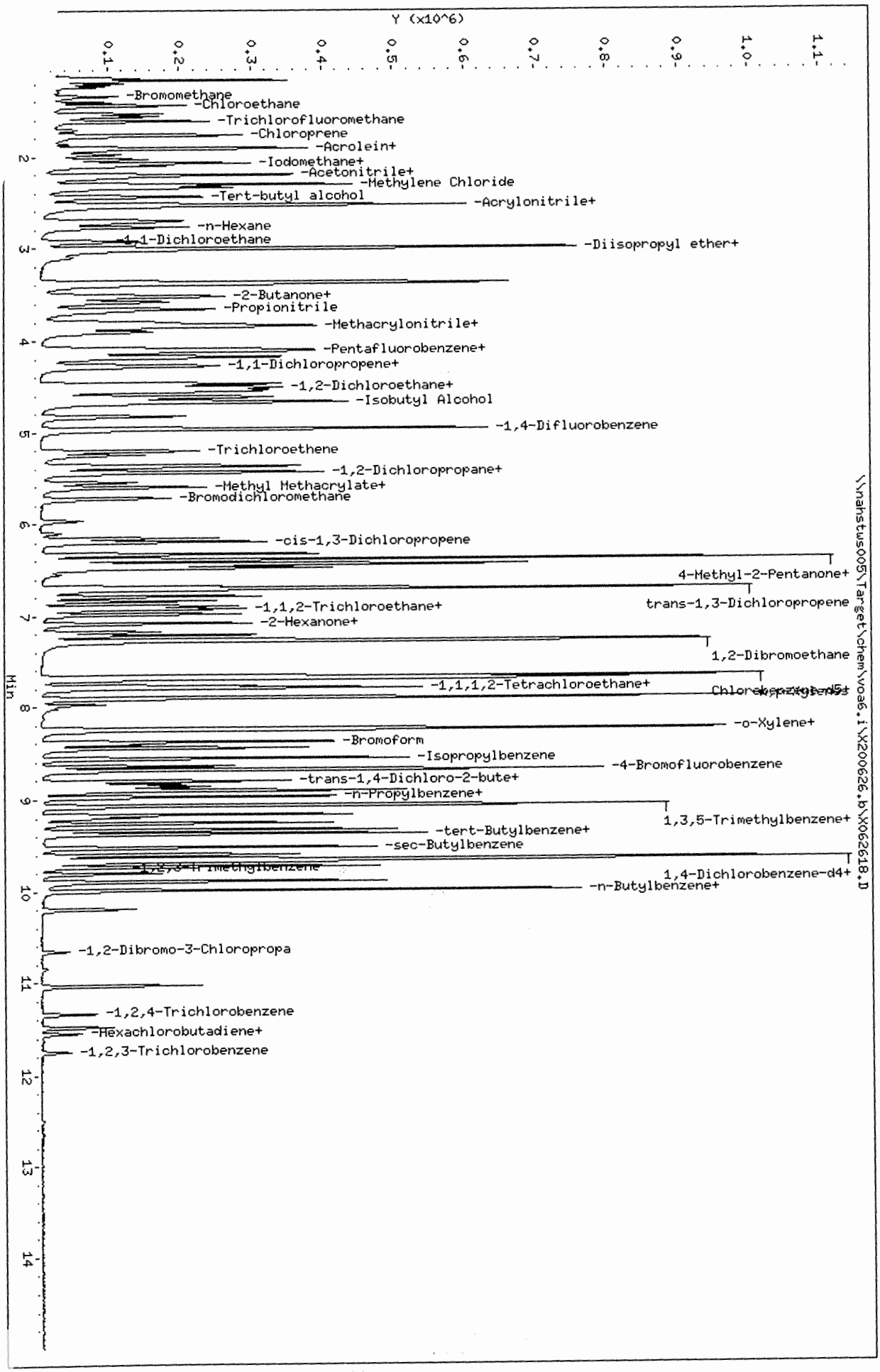
Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.189	4.189	(1.000)	253755	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	451434	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	405604	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	187784	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.979)	167187	51.3767	51.37
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	235162	49.5839	49.58
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	564325	55.9290	55.92
$ 69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	220524	53.3704	53.37
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	63391	21.4628	21.46
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.976)	99892	21.1891	21.18
68 1,1,2,2-Tetrachloroethane	83	8.845	8.845	(0.915)	81826	21.9250	21.92
53 1,1,2-Trichloroethane	83	6.847	6.847	(0.893)	55490	21.3013	21.30
22 1,1-Dichloroethane	63	2.929	2.929	(0.699)	152801	19.3902	19.39
11 1,1-Dichloroethene	96	1.912	1.919	(0.456)	51791	20.9035	20.90
32 1,1-Dichloropropene	75	4.283	4.282	(0.862)	84715	20.8458	20.84
93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.215)	10357	23.4903	23.49
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	70164	20.2221	20.22(M)
90 1,2,4-Trichlorobenzene	180	11.345	11.338	(1.173)	19901	21.4511	21.45
79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.970)	223621	21.8363	21.83
9 1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.102)	6166	21.2562	21.25
7 1,2-Dibromoethane	107	7.262	7.262	(0.947)	67452	21.0833	21.08
1,2-Dichlorobenzene	146	9.999	9.999	(1.034)	108708	21.3607	21.36

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
33	1,2-Dichloroethane	62	4.562	4.562	(0.918)	118674	20.0614	20.06
42	1,2-Dichloropropane	63	5.443	5.443	(1.095)	89165	20.9592	20.95
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	217320	22.5069	22.50
83	1,3-Dichlorobenzene	146	9.612	9.605	(0.994)	119879	21.4262	21.42
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	113423	20.7750	20.77
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	121075	21.2528	21.25
26	2,2-Dichloropropane	77	3.516	3.516	(0.839)	94077	19.1016	19.10
24	2-Butanone	43	3.581	3.580	(0.855)	247406	84.0404	84.04
76	2-Chlorotoluene	91	8.974	8.974	(0.928)	189628	21.2598	21.25
52	2-Hexanone	43	7.090	7.090	(0.924)	180819	43.1765	43.17
77	4-Chlorotoluene	91	9.075	9.075	(0.939)	219077	21.1941	21.19
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	209691	22.7221	22.72
45	4-Methyl-2-Pentanone	43	6.331	6.331	(0.825)	260640	42.6373	42.63
10	Acetone	43	1.976	1.976	(0.472)	88931	42.1068	42.10
37	Benzene	78	4.519	4.519	(0.909)	261188	20.7088	20.70
74	Bromobenzene	156	8.810	8.809	(0.911)	73908	20.9759	20.97
29	Bromochloromethane	128	3.803	3.803	(0.908)	37329	19.1959	19.19
39	Bromodichloromethane	83	5.729	5.729	(1.153)	95205	20.7259	20.72
66	Bromoform	173	8.416	8.416	(1.097)	45671	21.1328	21.13
6	Bromomethane	94	1.339	1.338	(0.320)	43437	18.2850	18.28
19	Carbon Disulfide	76	2.069	2.069	(0.494)	324714	39.8437	39.84
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	83640	21.2644	21.26
59	Chlorobenzene	112	7.699	7.699	(1.004)	166271	21.1726	21.17
7	Chloroethane	64	1.403	1.403	(0.335)	51990	19.2768	19.27
28	Chloroform	83	3.910	3.910	(0.933)	123778	19.9194	19.91
3	Chloromethane	50	1.081	1.081	(0.258)	102715	16.2012	16.20
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.843)	74238	20.3415	20.34
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	109598	19.9795	19.97
55	Dibromochloromethane	129	7.176	7.176	(0.936)	67976	20.9415	20.94
44	Dibromomethane	93	5.558	5.557	(1.118)	47582	20.1225	20.12
2	Dichlorodifluoromethane	85	0.973	0.973	(0.232)	47068	14.2261	14.22
61	Ethylbenzene	106	7.800	7.800	(1.017)	88360	22.0638	22.06
91	Hexachlorobutadiene	225	11.481	11.488	(1.187)	13922	21.9862	21.98
67	Isopropylbenzene	105	8.566	8.566	(1.117)	260998	23.0797	23.07
62	m,p-Xylenes	106	7.907	7.907	(1.031)	208459	44.4037	44.40
17	Methylene Chloride	84	2.306	2.305	(0.550)	72774	18.4695	18.46
87	n-Butylbenzene	91	9.999	9.999	(1.034)	191876	23.0620	23.06
73	n-Propylbenzene	91	8.917	8.917	(0.922)	315421	22.8055	22.80
92	Naphthalene	128	11.546	11.546	(1.194)	36418	24.2120	24.21
63	o-Xylene	106	8.244	8.244	(1.075)	101811	21.2942	21.29
81	sec-Butylbenzene	105	9.526	9.526	(0.985)	252988	23.5500	23.55
64	Styrene	104	8.265	8.265	(1.078)	183973	21.7541	21.75
78	tert-Butylbenzene	119	9.340	9.340	(0.966)	175398	23.1279	23.12
56	Tetrachloroethene	164	6.933	6.933	(0.904)	48526	23.1178	23.11
50	Toluene	91	6.453	6.453	(0.841)	266288	22.0581	22.05
20	trans-1,2-Dichloroethene	96	2.535	2.535	(0.605)	59158	20.5133	20.51
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	99281	19.5183	19.51
38	Trichloroethene	130	5.214	5.214	(1.049)	70138	23.5139	23.51
8	Trichlorofluoromethane	101	1.561	1.560	(0.373)	93180	20.6095	20.60
5	Vinyl Chloride	62	1.145	1.145	(0.273)	88666	17.6695	17.66

QC Flag Legend

M - Compound response manually integrated.



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Date : 26-JUN-2020 18:19
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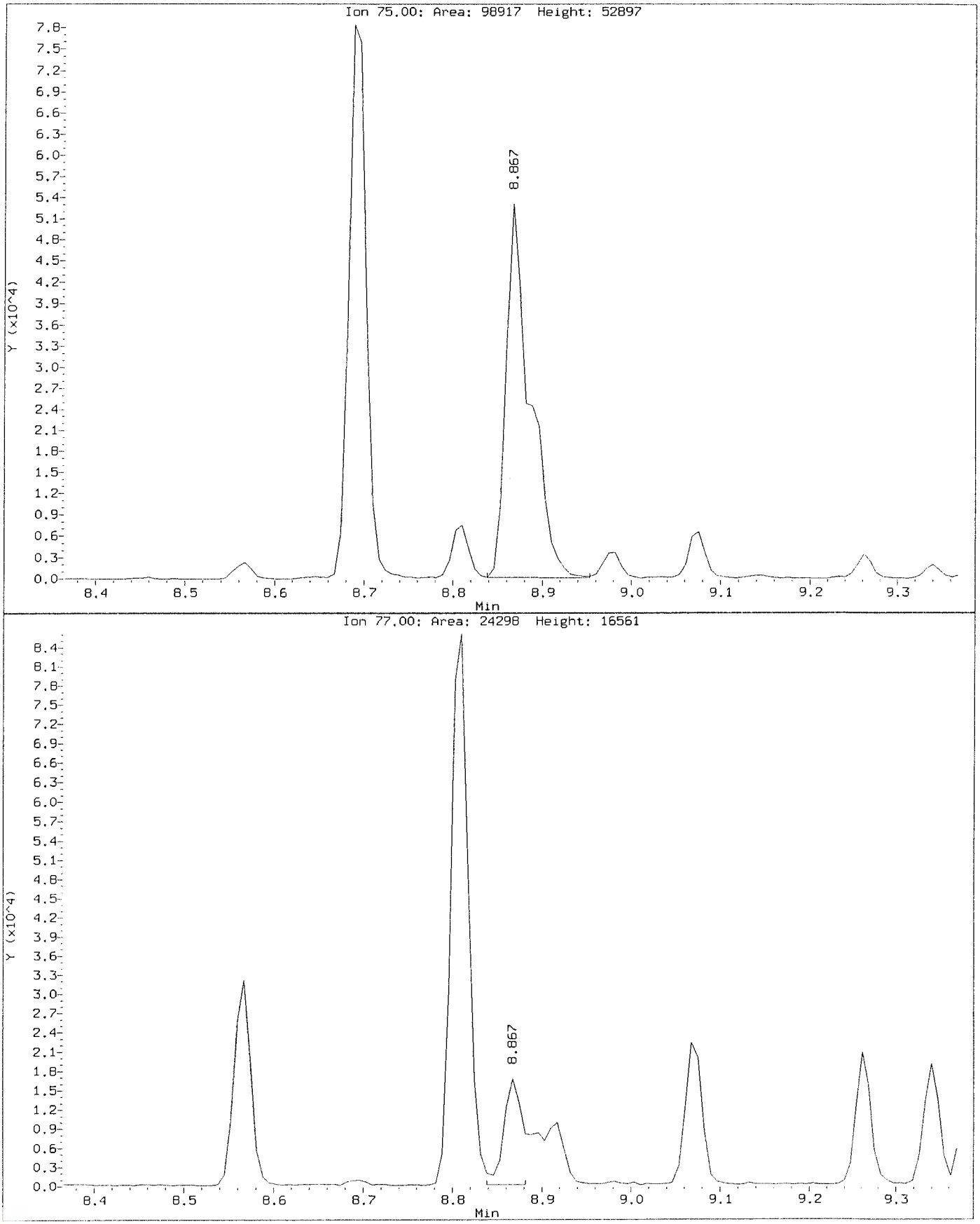
Sample Info: HS200612O6-02MDS;HS200612O6-02MSD;3;;HSD
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\nahstws005\Target\chem\voa6.i\X200626.b\Before\X062618.D
Injection Date: 26-JUN-2020 18:19
Instrument: voa6.i
Client Sample ID: HS20061206-02MSD

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4



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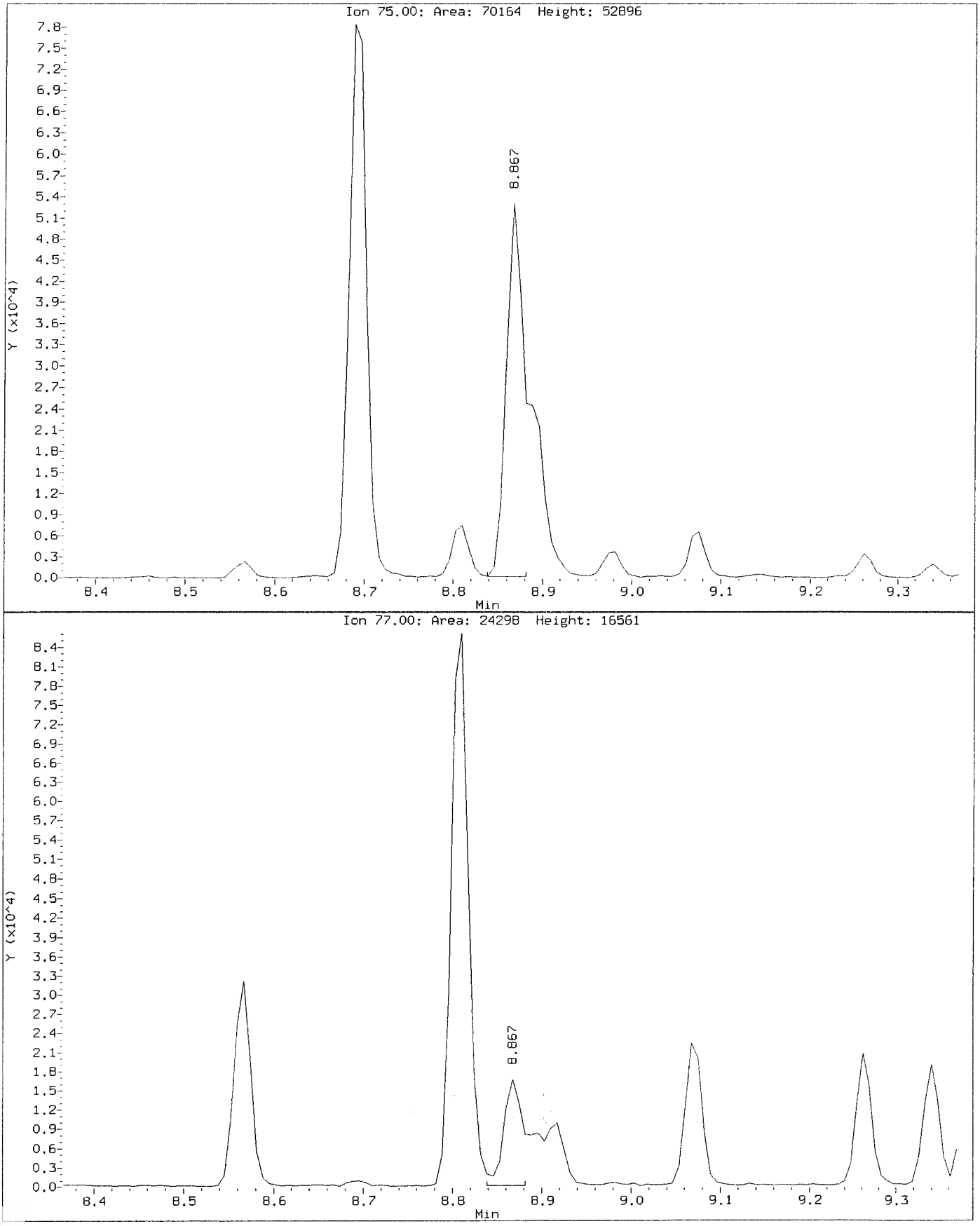
Injection Date: 26-JUN-2020 18:19
Instrument: voa6.i
Client Sample ID: HS20061206-02MSD

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4



ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200626.b\X062619.D
Lab Smp Id: HS20061178-01 Client Smp ID: HS20061178-01
Inj Date : 26-JUN-2020 18:43
Operator : PC Inst ID: voa6.i
Smp Info : HS20061178-01;HS20061178-01;;;
Misc Info : HS18090001;WATER;0;20;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200626.b\8260W.m
Meth Date : 20-Jul-2020 12:27 voa6.i Quant Type: ISTD
Cal Date : 19-JUN-2020 14:17 Cal File: X061908.D
Als bottle: 18
Dil Factor: 20.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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

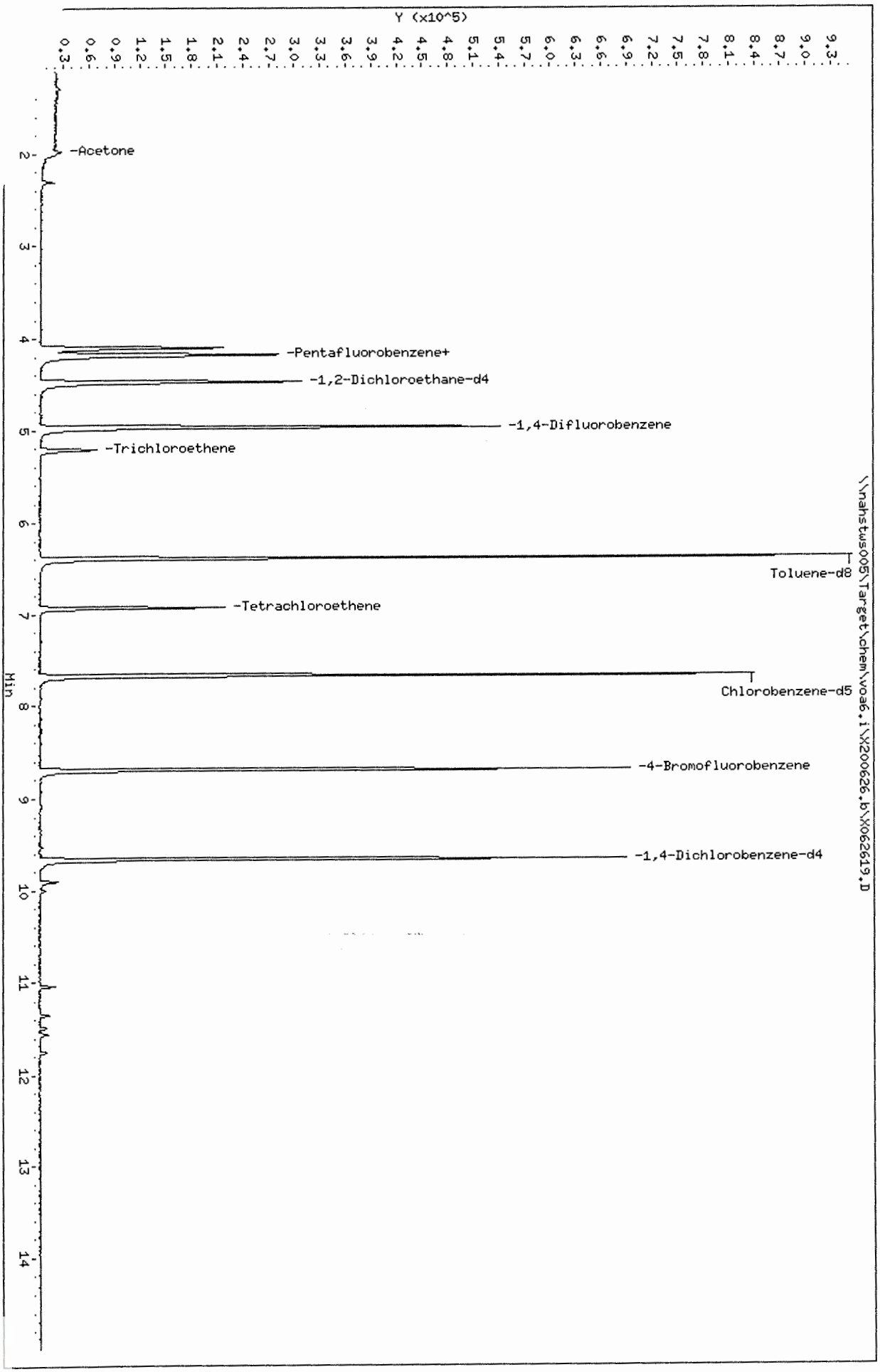
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
*	1 Pentafluorobenzene	168	4.189	4.189	(1.000)	216089	50.0000	
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	385765	50.0000	
*	47 Chlorobenzene-d5	117	7.671	7.670	(1.000)	348654	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	149319	50.0000	
$	30 Dibromofluoromethane	113	4.103	4.103	(0.979)	148214	53.4853	53.48
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	217882	54.0032	54.00
$	48 Toluene-d8	98	6.388	6.388	(0.833)	485690	55.9983	55.99(M)
$	69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	194192	54.6744	54.67
	10 Acetone	43	1.976	1.976	(0.472)	9638	3.13100	62.62(a)
	56 Tetrachloroethene	164	6.933	6.933	(0.904)	39659	21.9797	439.59
	38 Trichloroethene	130	5.214	5.214	(1.049)	20190	7.92098	158.41

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\X200626.b\X062619.D
Date : 26-JUN-2020 18:43
Client ID: HS20061178-01
Sample Info: HS20061178-01;HS20061178-01;;;
Purge Volume: 5.0
Column phase: DB624

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



Data File: \\nahstws005\Target\chem\voa6.i\X200626.b\X062619.D

Date : 26-JUN-2020 18:43

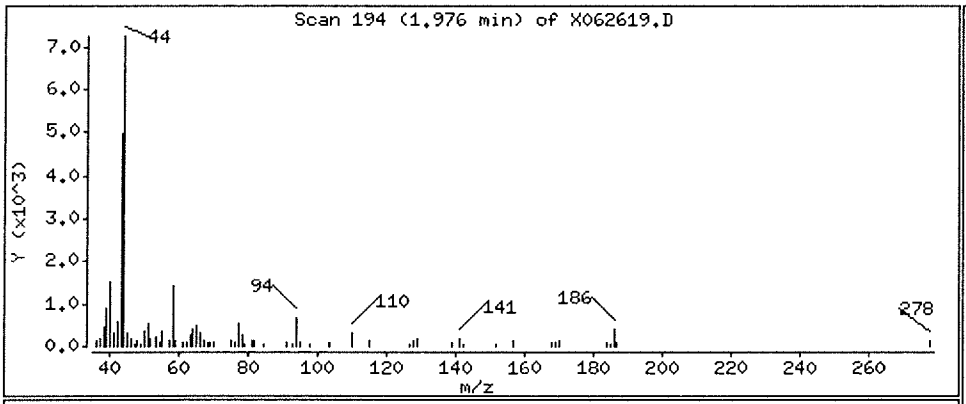
Client ID: HS20061178-01 Instrument: voa6.i

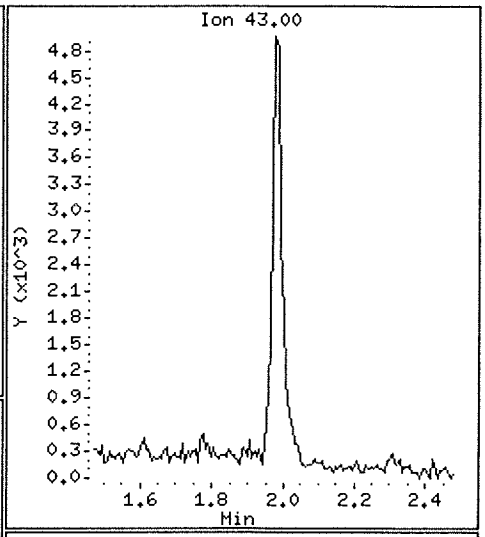
Sample Info: HS20061178-01;HS20061178-01;;;

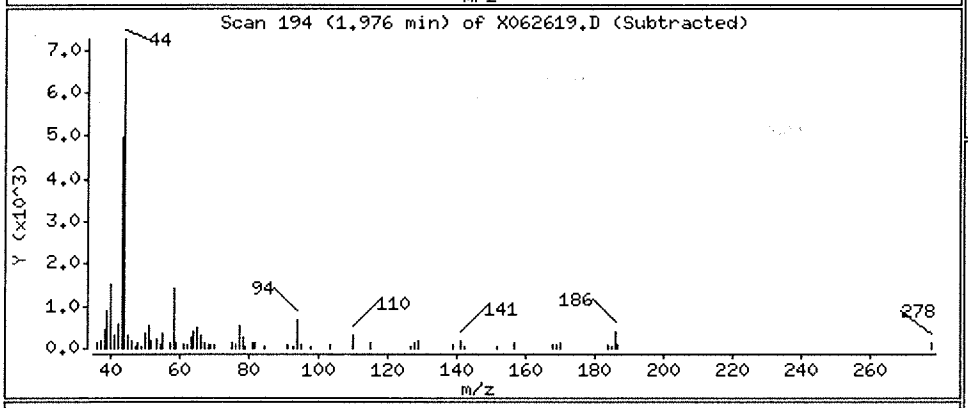
Purge Volume: 5.0 Operator: PC

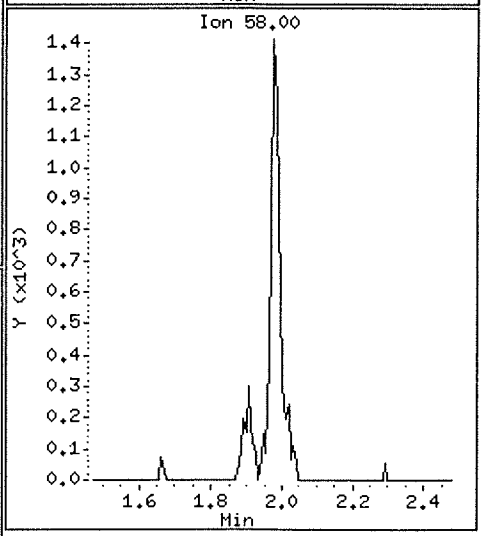
Column phase: DB624 Column diameter: 0.18

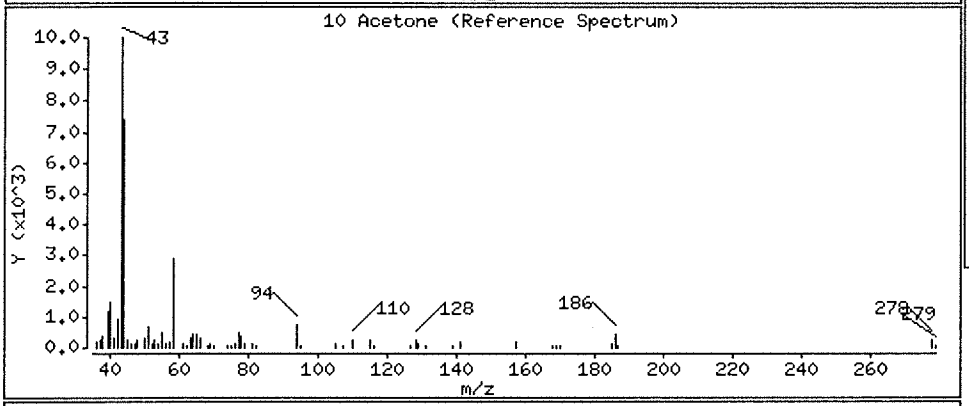
10 Acetone Concentration: 62.62 ug/l

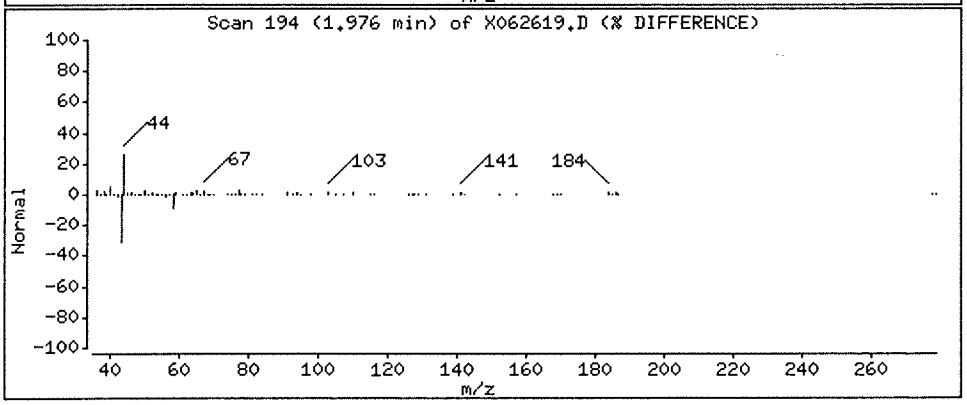












ta File: \\nahstws005\Target\chem\voa6.i\X200626.b\X062619.D

ate : 26-JUN-2020 18:43

Client ID: HS20061178-01

Instrument: voa6.i

Sample Info: HS20061178-01;HS20061178-01;;;

Purge Volume: 5.0

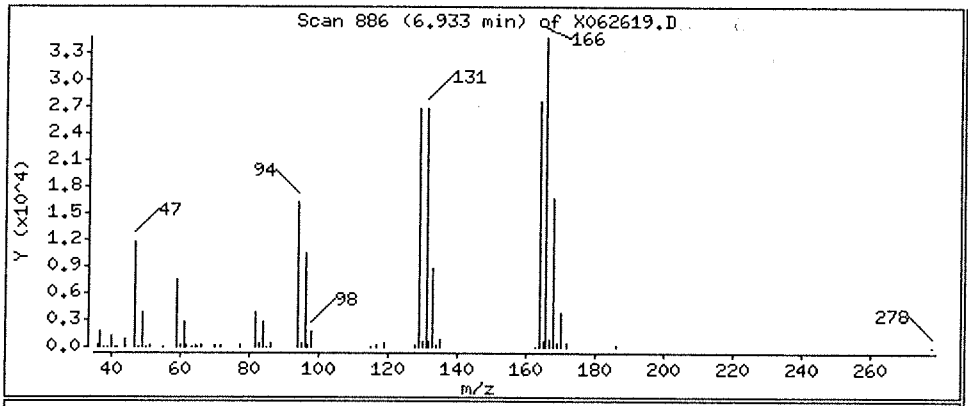
Operator: PC

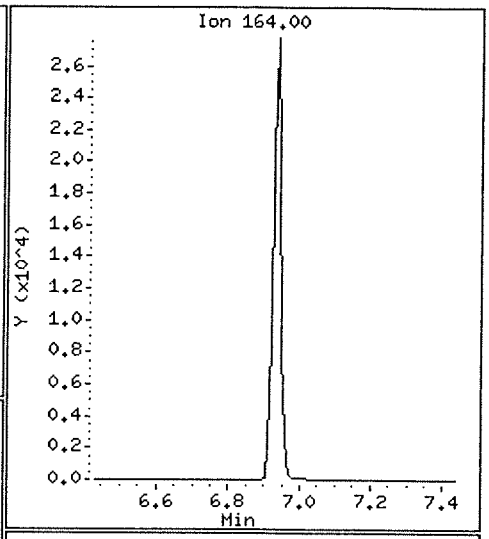
Column phase: DB624

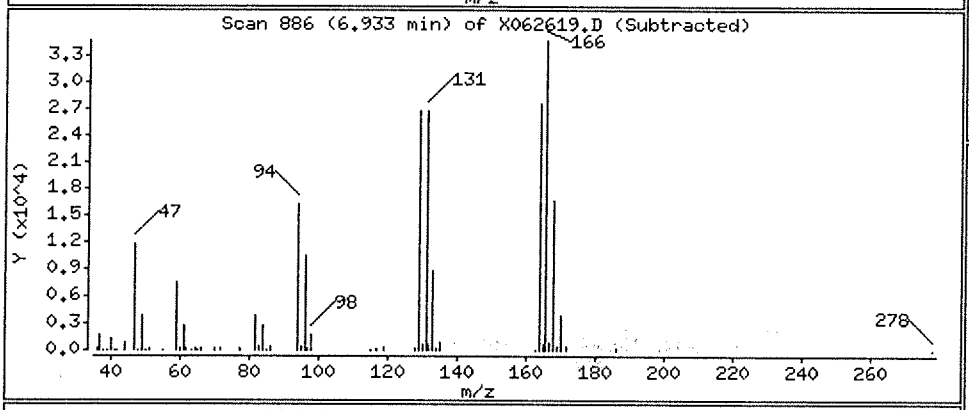
Column diameter: 0.18

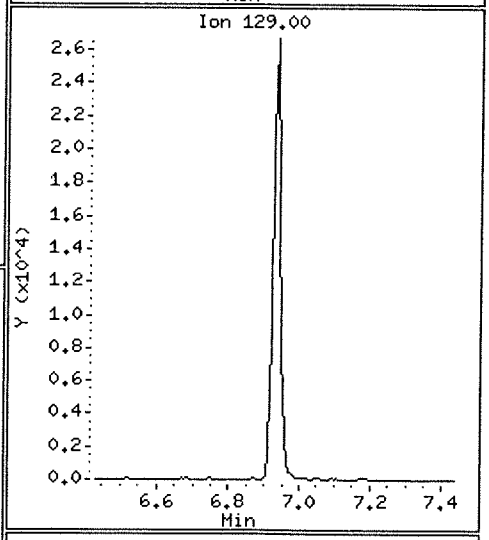
56 Tetrachloroethene

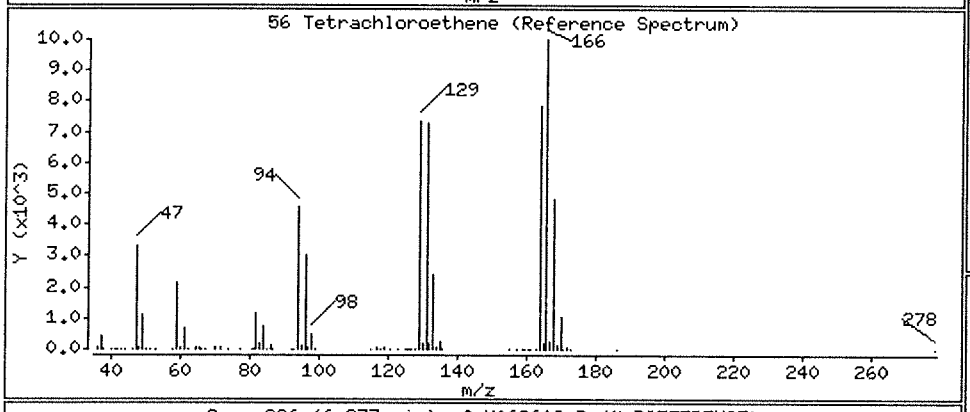
Concentration: 439.59 ug/l

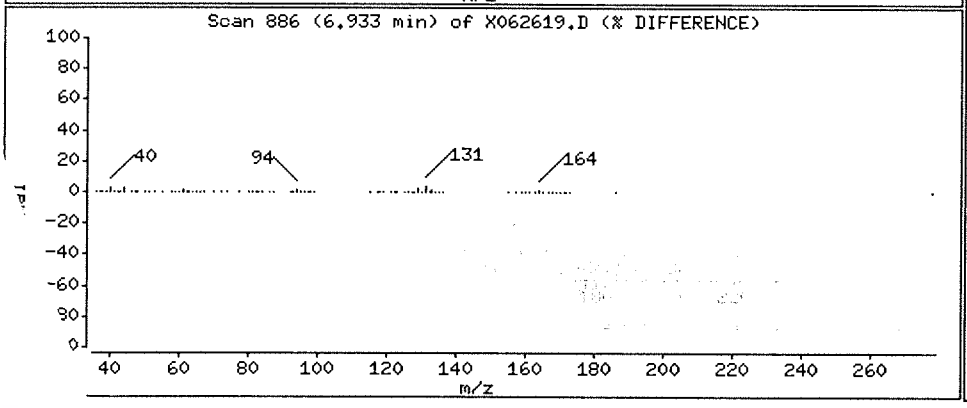


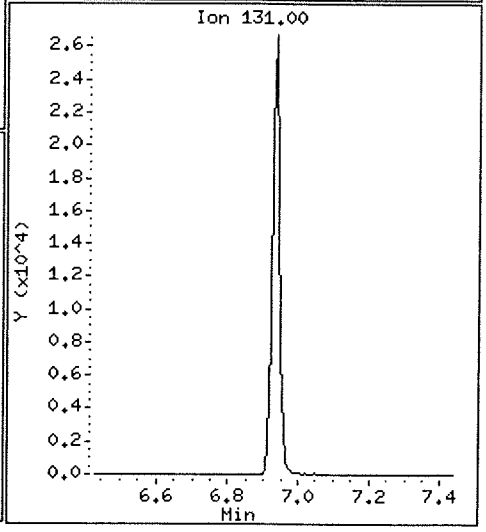












Data File: \\nahstws005\Target\chem\voa6.i\X200626.b\X062619.D

Date : 26-JUN-2020 18:43

Client ID: HS20061178-01

Instrument: voa6.i

Sample Info: HS20061178-01;HS20061178-01;;;

Purge Volume: 5.0

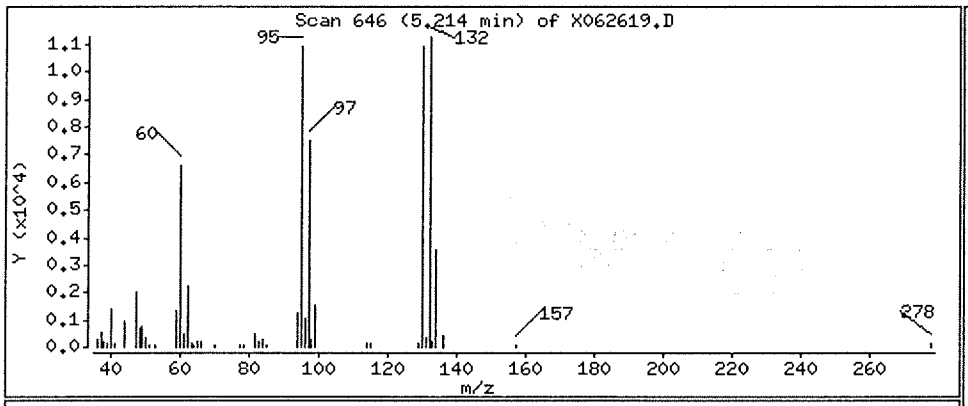
Operator: PC

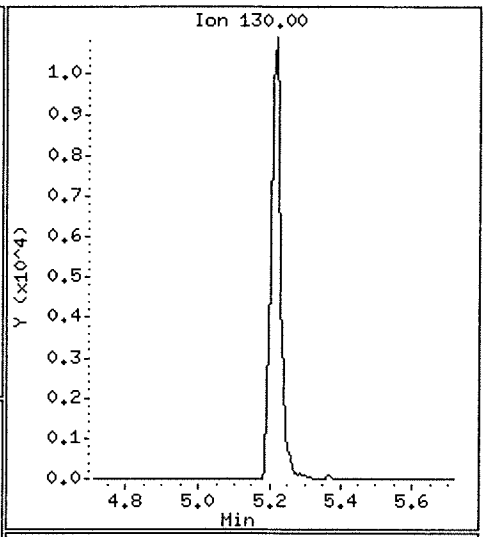
Column phase: DB624

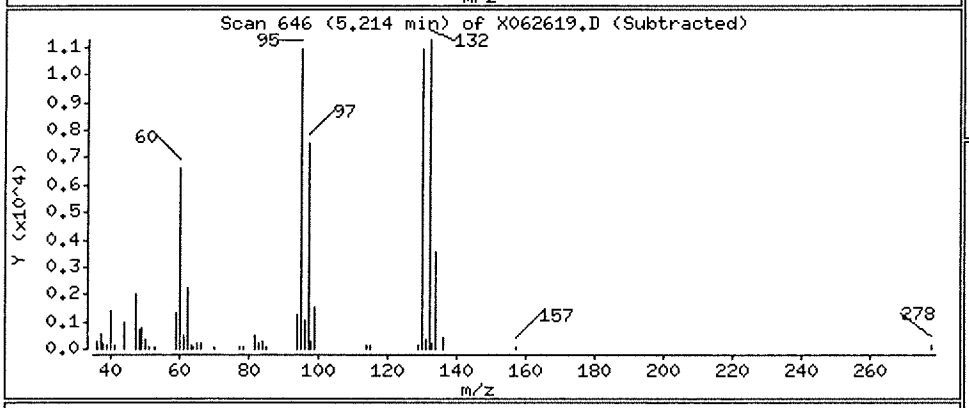
Column diameter: 0.18

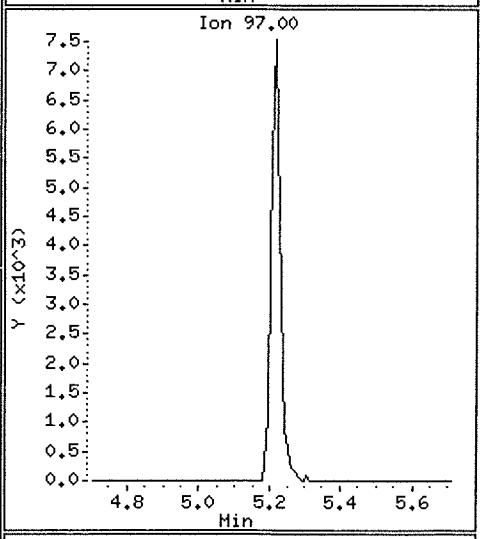
38 Trichloroethene

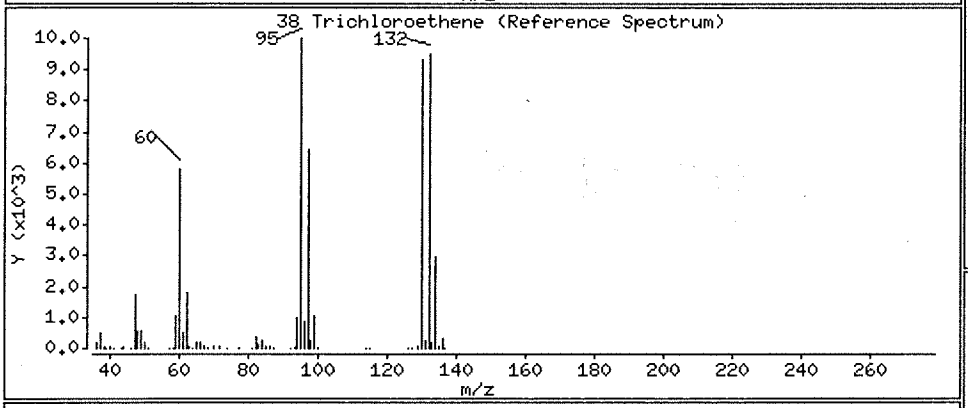
Concentration: 158.41 ug/l

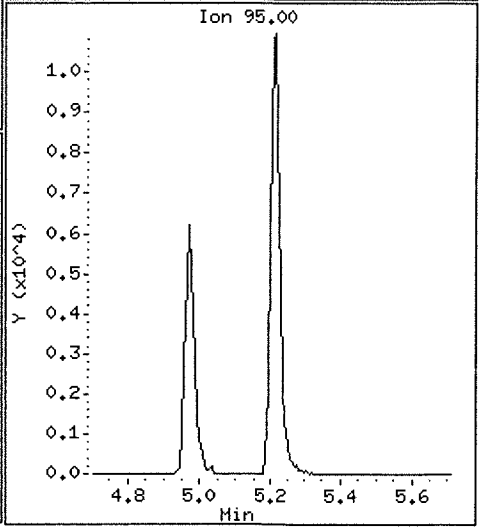


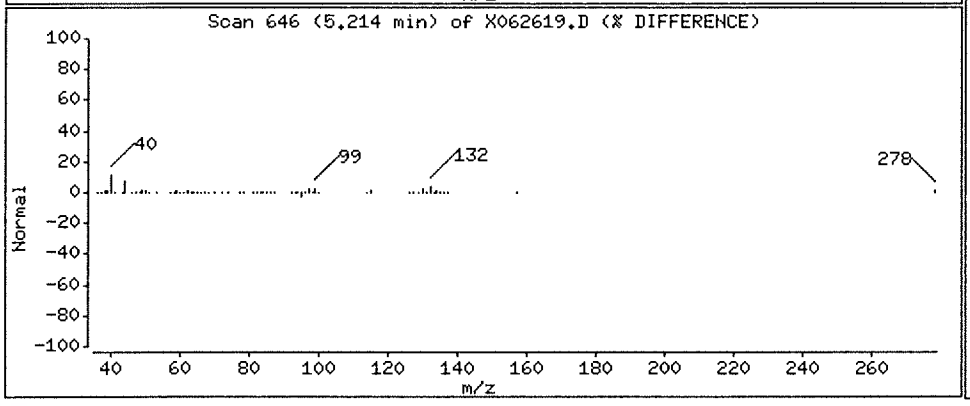












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Data file : \\nahstws005\Target\chem\voa6.i\X200626.b\X062621.D
Lab Smp Id: HS20061178-05 Client Smp ID: HS20061178-05
Inj Date : 26-JUN-2020 19:31
Operator : PC Inst ID: voa6.i
Smp Info : HS20061178-05;HS20061178-05;;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200626.b\8260W.m
Meth Date : 20-Jul-2020 12:27 voa6.i Quant Type: ISTD
Cal Date : 19-JUN-2020 14:17 Cal File: X061908.D
Als bottle: 20
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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	4.189	4.189	(1.000)	271729	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	491113	50.0000	
* 47 Chlorobenzene-d5	117	7.670	7.670	(1.000)	445305	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	196836	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.979)	179029	51.3766	51.37
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	254447	50.1079	50.10
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	599264	54.0967	54.09
$ 69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	233008	51.3642	51.36

Data File: \\nahstws005\Target\chem\voa6.i\X200626.b\X062621.D

Date : 26-JUN-2020 19:31

Client ID: HS20061178-05

Instrument: voa6.i

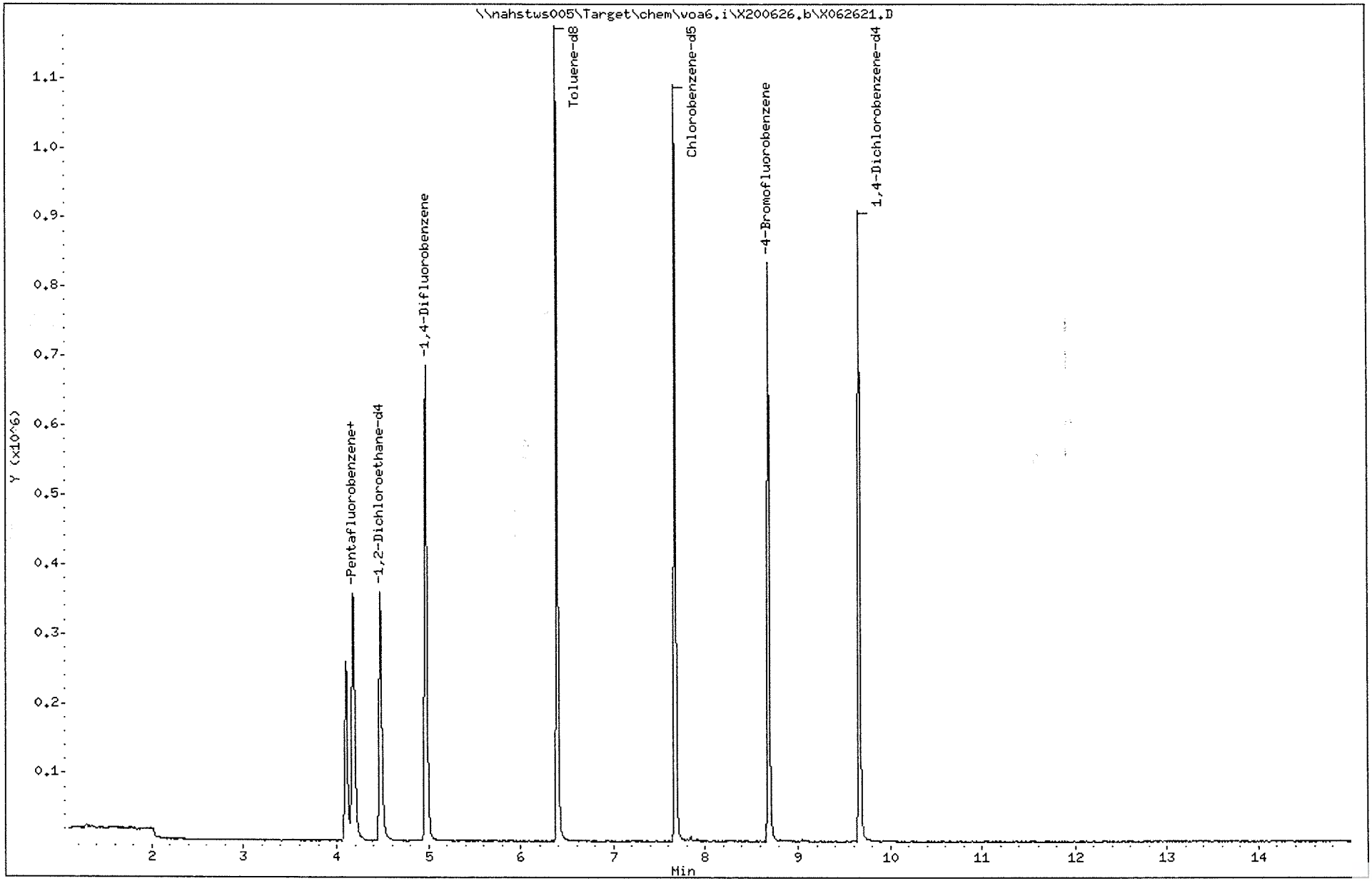
Sample Info: HS20061178-05;HS20061178-05;;;

Purge Volume: 5.0

Operator: PC

Column phase: DB624

Column diameter: 0.18



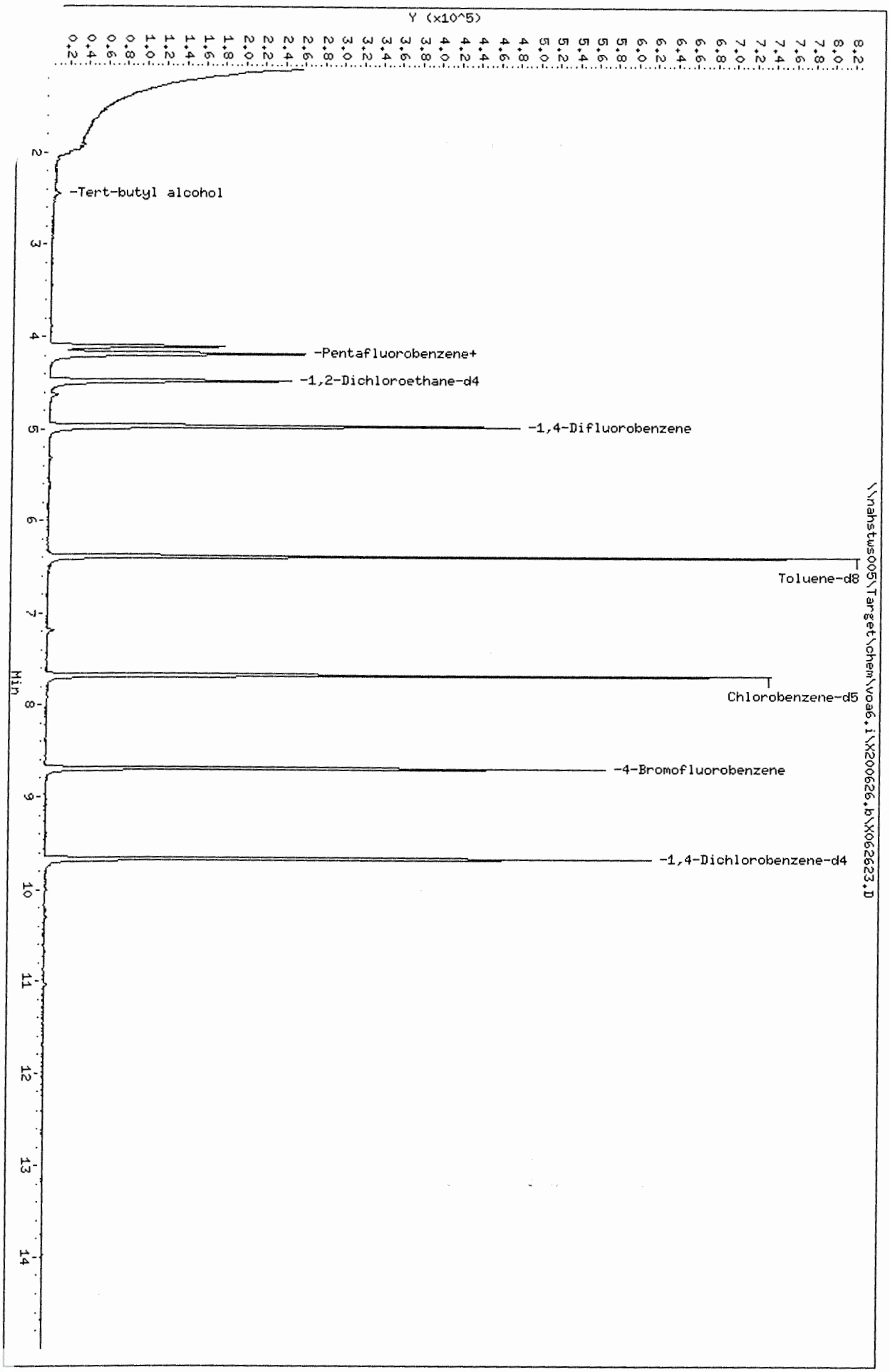
ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200626.b\X062623.D
Lab Smp Id: HS20061178-04 Client Smp ID: HS20061178-04
Inj Date : 26-JUN-2020 20:19
Operator : PC Inst ID: voa6.i
Smp Info : HS20061178-04;HS20061178-04;;;
Misc Info : HS18090001;WATER;0;1;
Comment   :
Method   : \\nahstws005\Target\chem\voa6.i\X200626.b\8260W.m
Meth Date : 20-Jul-2020 12:27 voa6.i Quant Type: ISTD
Cal Date : 19-JUN-2020 14:17 Cal File: X061908.D
Als bottle: 22
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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	4.189	4.189	(1.000)	194833	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	343709	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.670	(1.000)	304989	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	135609	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.979)	123534	49.4427	49.44
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	178609	49.0421	49.04
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	428194	56.4373	56.43
$ 69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	163007	52.4649	52.46



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Date : 26-JUN-2020 20:19
Client ID: HS20061178-04
Sample Info: HS20061178-04;HS20061178-04;;;
Purge Volume: 5.0
Column phase: DB624

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

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Data file : \\nahstws005\Target\chem\voa6.i\X200626.b\X062624.D
Lab Smp Id: HS20061178-02 Client Smp ID: HS20061178-02
Inj Date : 26-JUN-2020 20:43
Operator : PC Inst ID: voa6.i
Smp Info : HS20061178-02;HS20061178-02;;;
Misc Info : HS18090001;WATER;0;5;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200626.b\8260W.m
Meth Date : 20-Jul-2020 12:27 voa6.i Quant Type: ISTD
Cal Date : 19-JUN-2020 14:17 Cal File: X061908.D
Als bottle: 23
Dil Factor: 5.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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

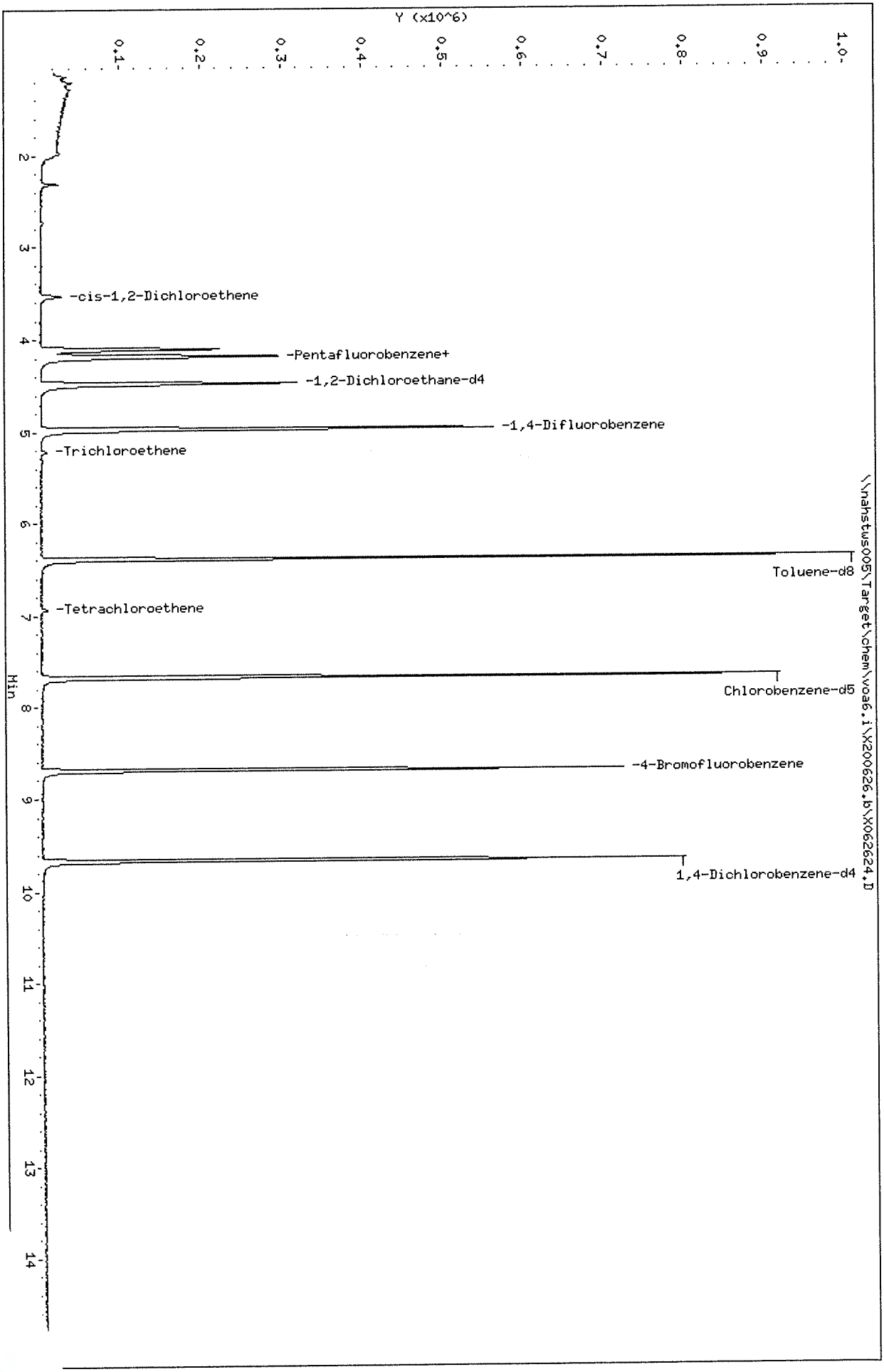
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.189	4.189	(1.000)	226190	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	408844	50.0000	
* 47 Chlorobenzene-d5	117	7.670	7.670	(1.000)	384318	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	173231	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.979)	151809	52.3362	52.33
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	224401	53.1251	53.12
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	520582	54.4513	54.45
$ 69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	208207	53.1804	53.18
27 cis-1,2-Dichloroethene	96	3.537	3.530	(0.844)	11208	3.44528	17.22(a)
56 Tetrachloroethene	164	6.933	6.933	(0.904)	1807	0.90853	4.54(a)
38 Trichloroethene	130	5.221	5.214	(1.050)	2427	0.89842	4.49(a)
5 Vinyl Chloride	62	1.145	1.145	(0.273)	6419	1.43508	7.17(a)

QC Flag Legend

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

Data File: \\nahstws005\Target\chem\voa6.i\X200626.b\X062624.D
Date : 26-JUN-2020 20:43
Client ID: HS200611178-02
Sample Info: HS200611178-02;HS200611178-02;;;
Purge Volume: 5.0
Column phase: DB624

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



Data File: \\nahstws005\Target\chem\voa6.i\X200626.b\X062624.D

Date : 26-JUN-2020 20:43

Client ID: HS20061178-02

Instrument: voa6.i

Sample Info: HS20061178-02;HS20061178-02;;;

Purge Volume: 5.0

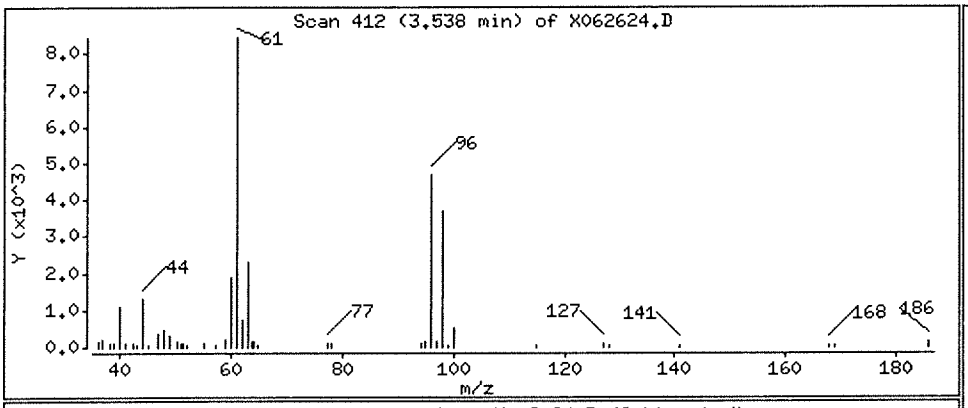
Operator: PC

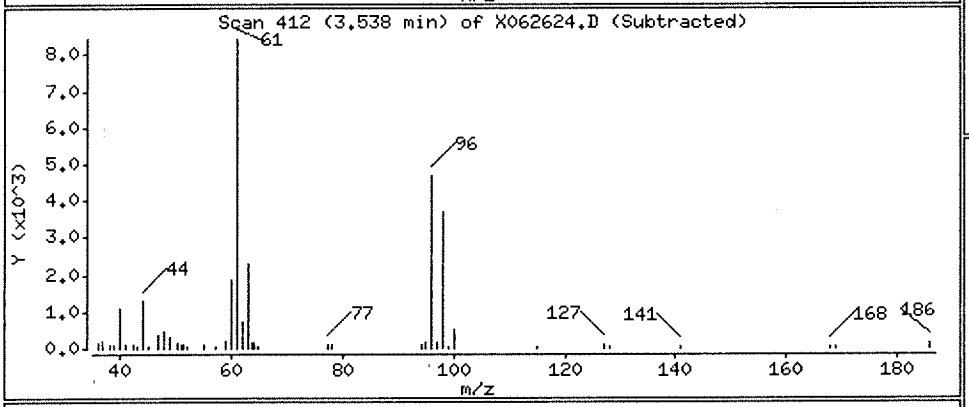
Column phase: DB624

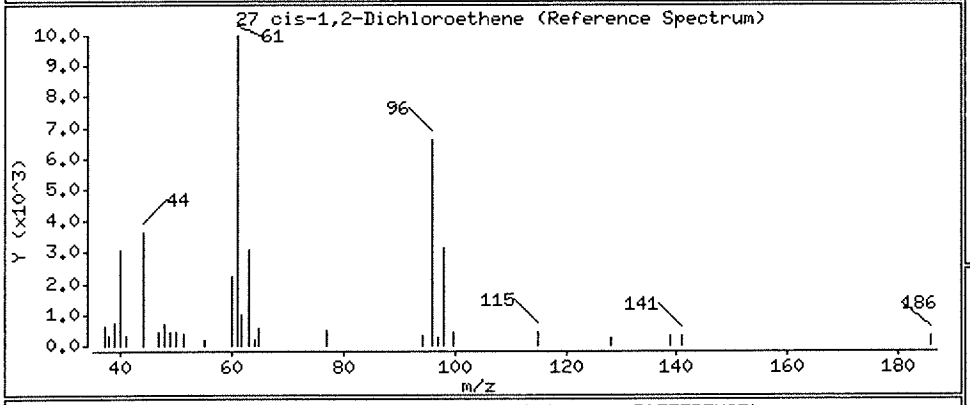
Column diameter: 0.18

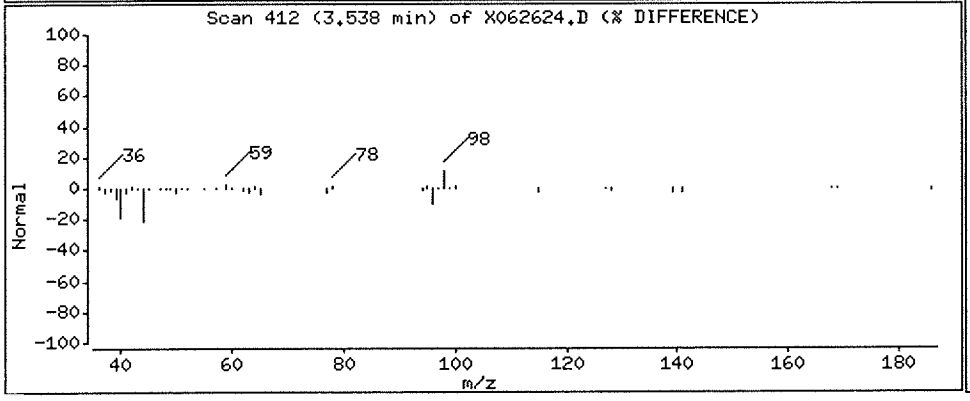
27 cis-1,2-Dichloroethene

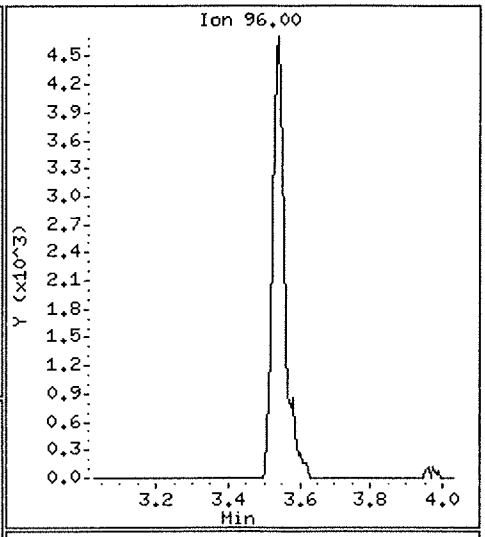
Concentration: 17.22 ug/l

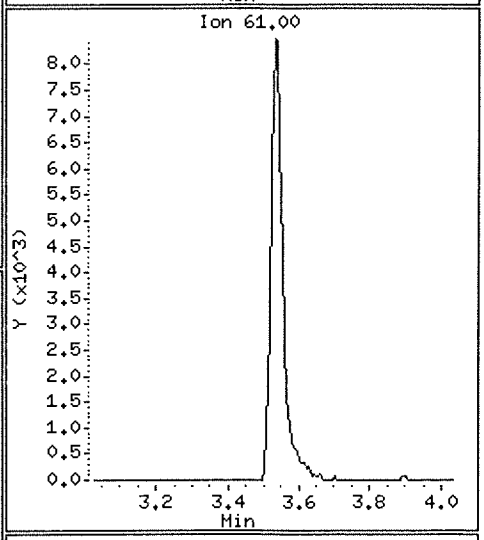


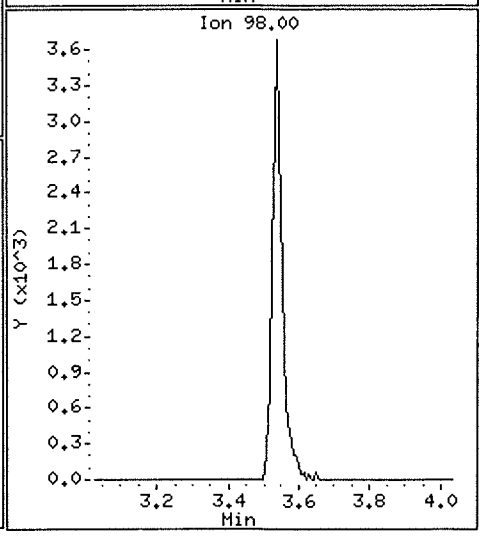












Data File: \\nahstws005\Target\chem\voa6.i\X200626.b\X062624.D Page 4

Date : 26-JUN-2020 20:43

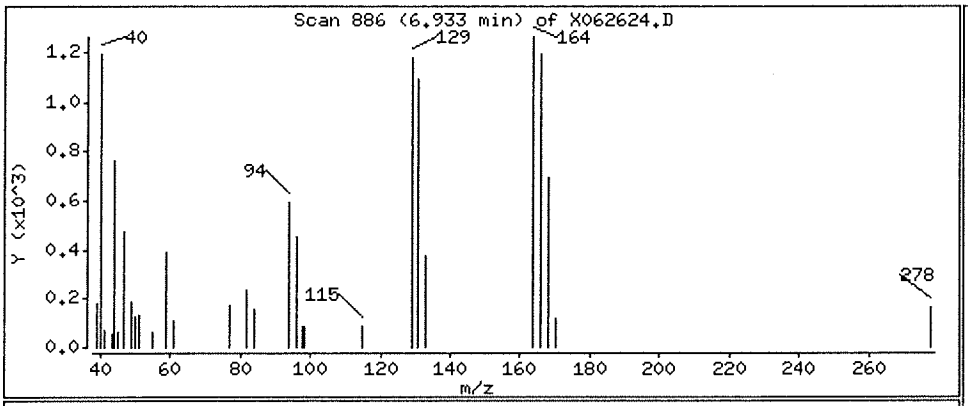
Client ID: HS20061178-02 Instrument: voa6.i

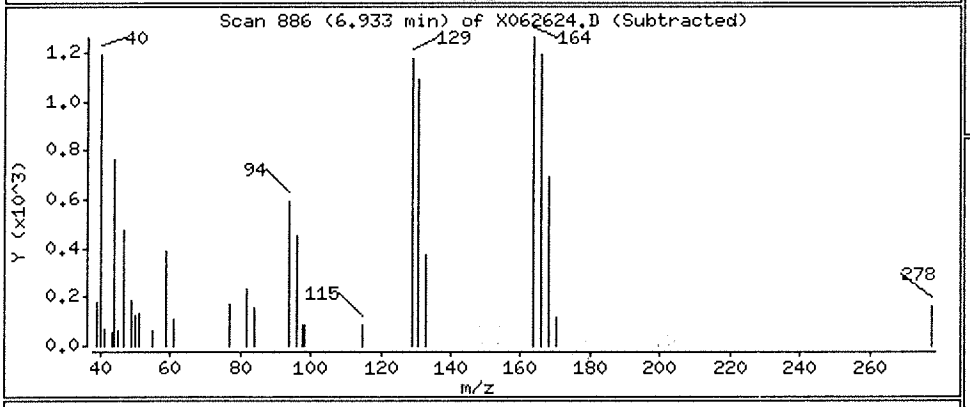
Sample Info: HS20061178-02;HS20061178-02;;;

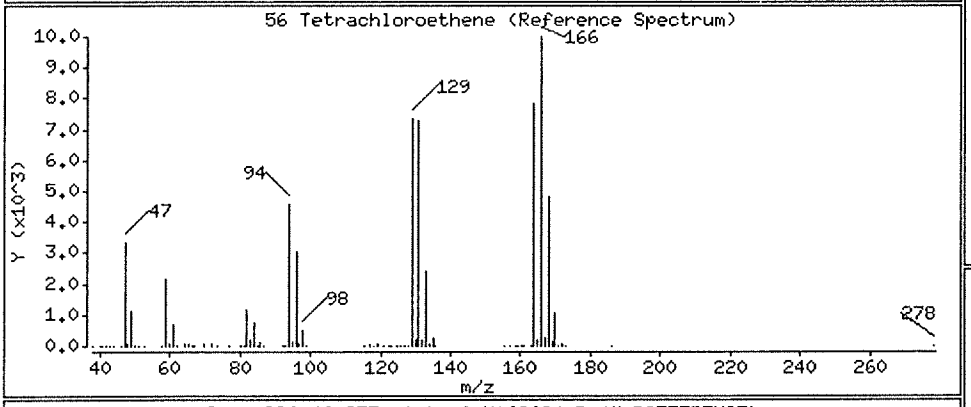
Purge Volume: 5.0 Operator: PC

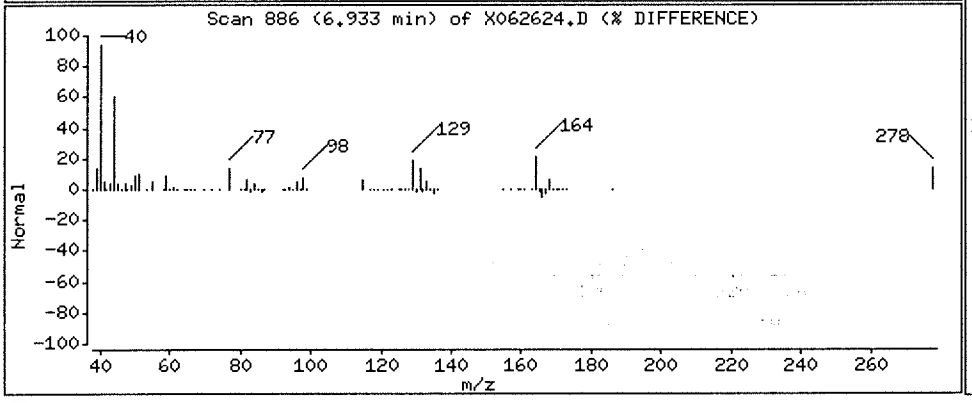
Column phase: DB624 Column diameter: 0.18

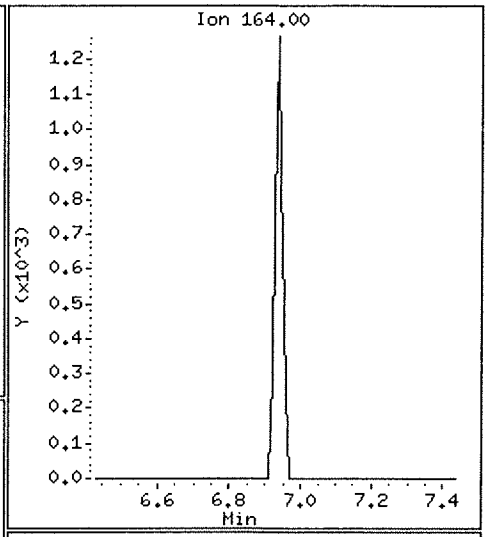
56 Tetrachloroethene Concentration: 4.54 ug/l

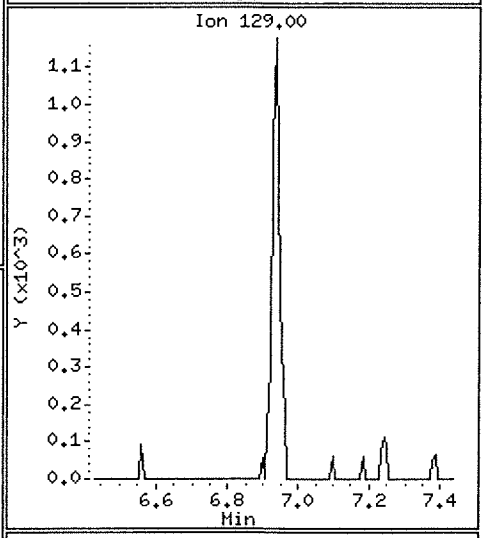


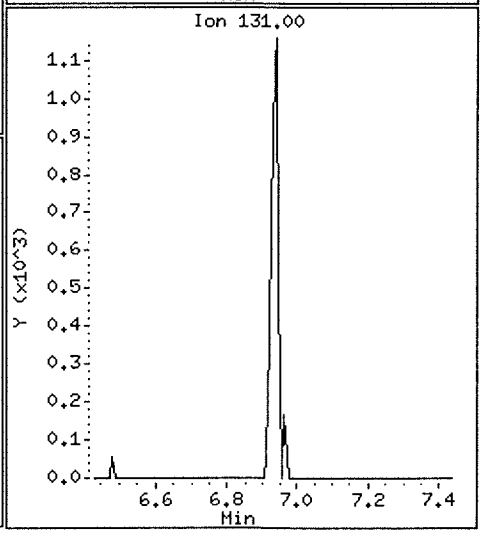












Data File: \\nahstws005\Target\chem\voa6.i\X200626.b\X062624.D

Date : 26-JUN-2020 20:43

Client ID: HS20061178-02

Instrument: voa6.i

Sample Info: HS20061178-02;HS20061178-02;;;

Purge Volume: 5.0

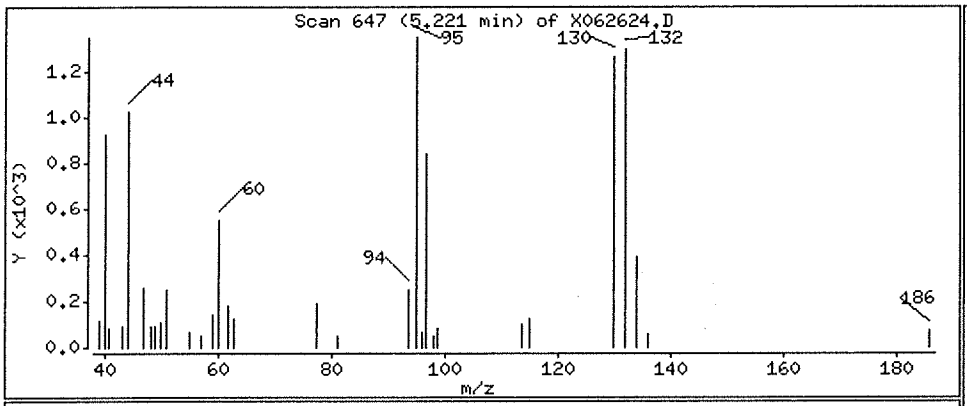
Operator: PC

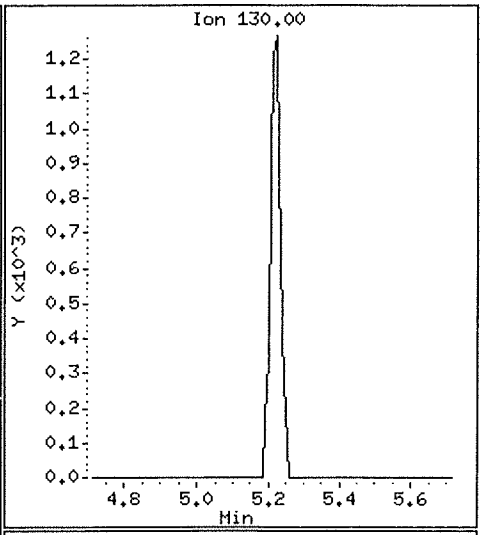
Column phase: DB624

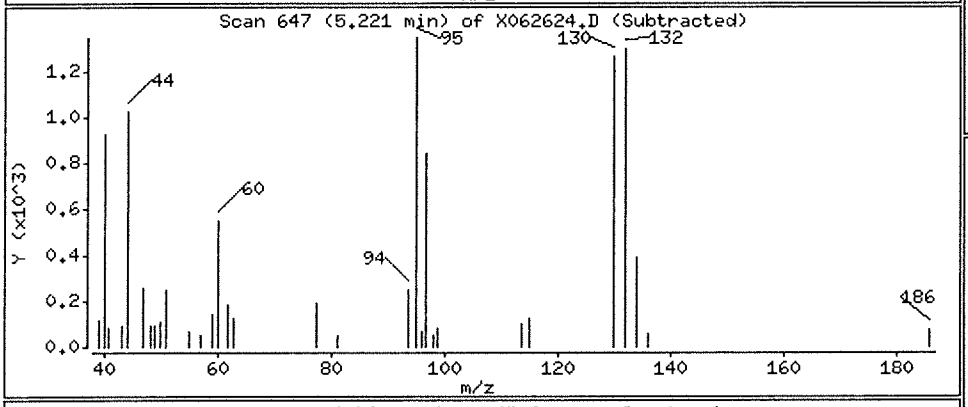
Column diameter: 0.18

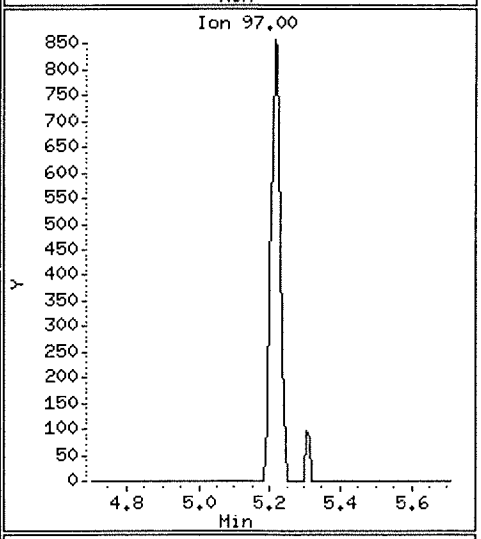
38 Trichloroethene

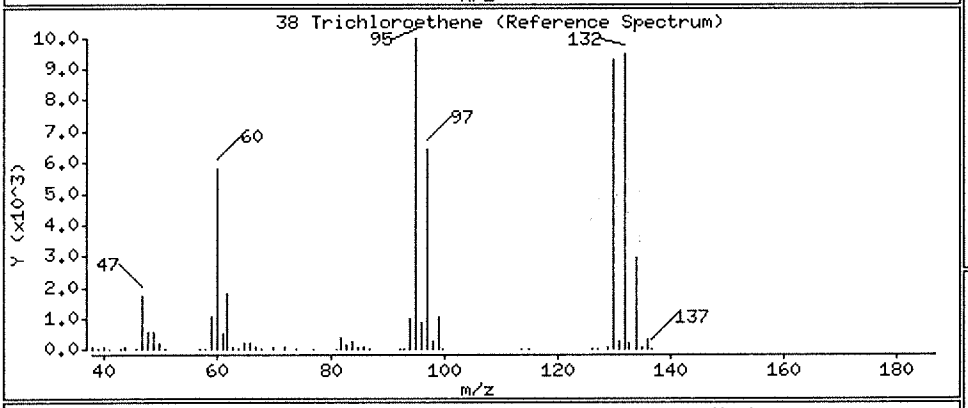
Concentration: 4.49 ug/l

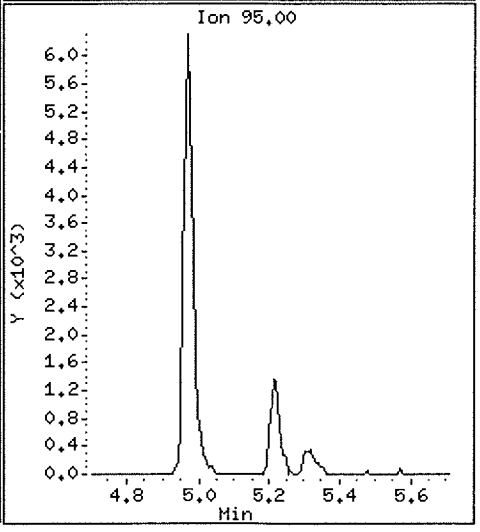


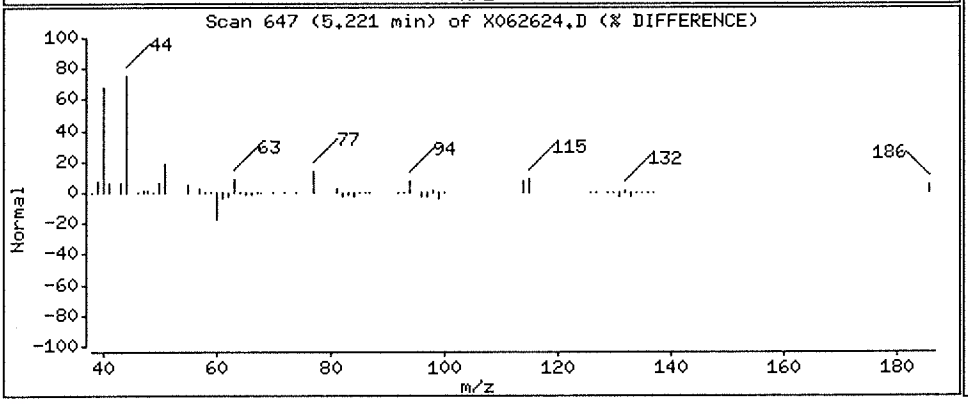












Data File: \\nahstws005\Target\chem\voa6.i\X200626.b\X062624.D

Date : 26-JUN-2020 20:43

Client ID: HS20061178-02

Instrument: voa6.i

Sample Info: HS20061178-02;HS20061178-02;;;

Purge Volume: 5.0

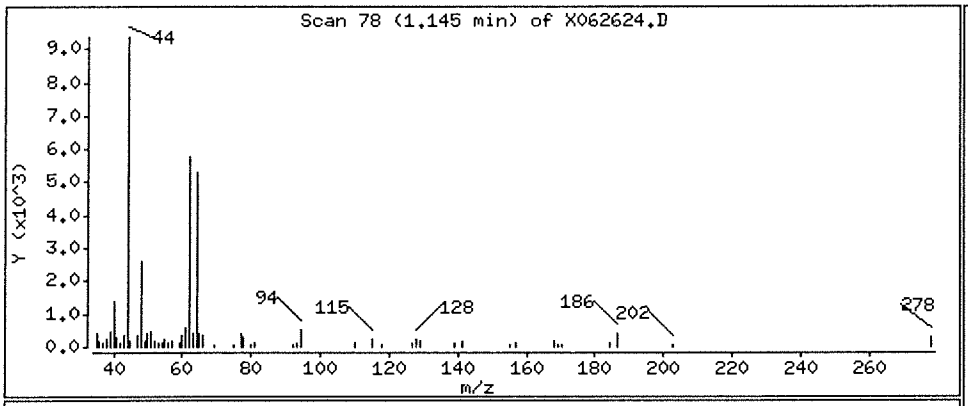
Operator: PC

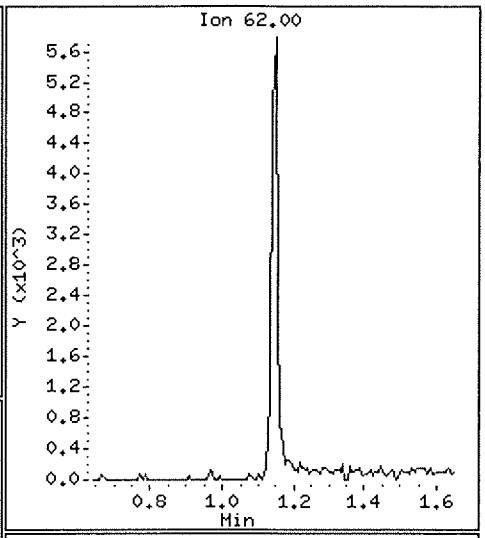
Column phase: DB624

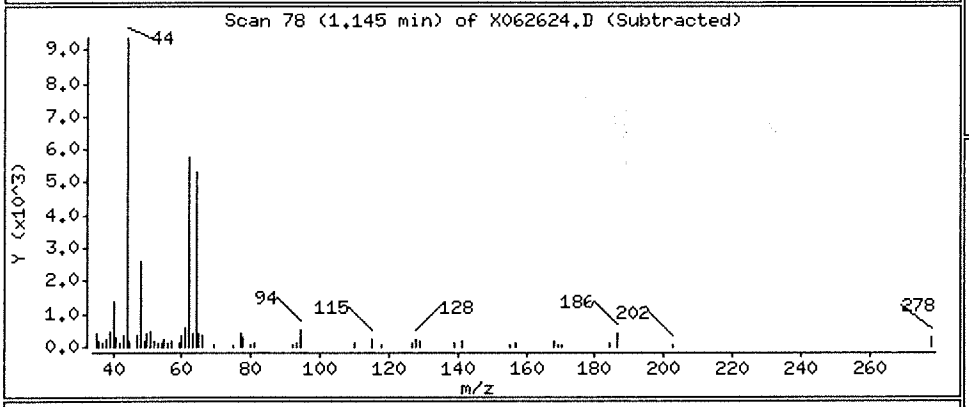
Column diameter: 0.18

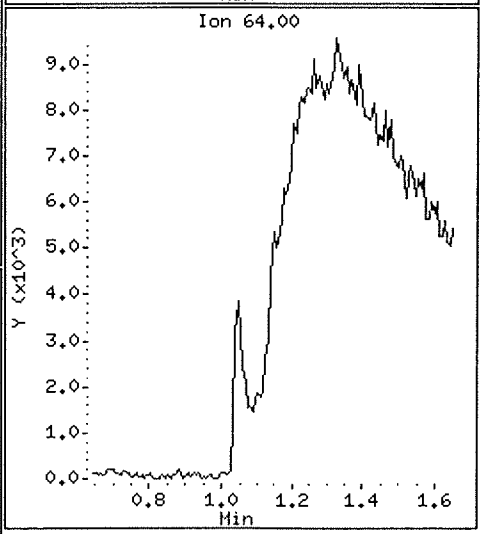
5 Vinyl Chloride

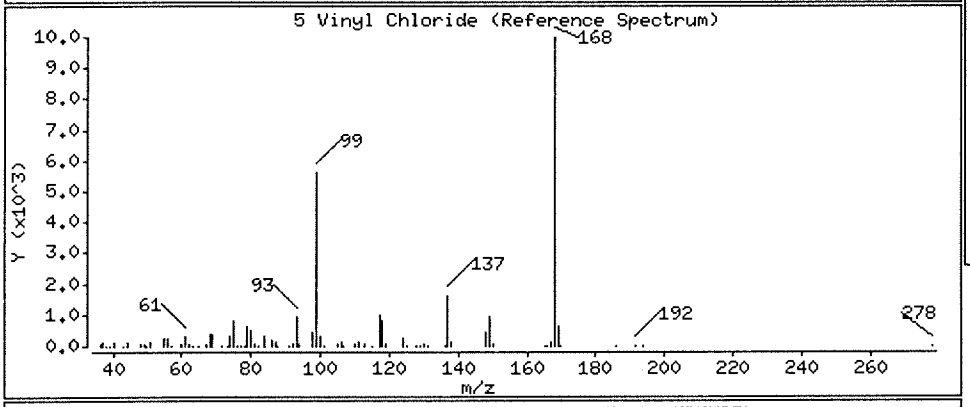
Concentration: 7.17 ug/l

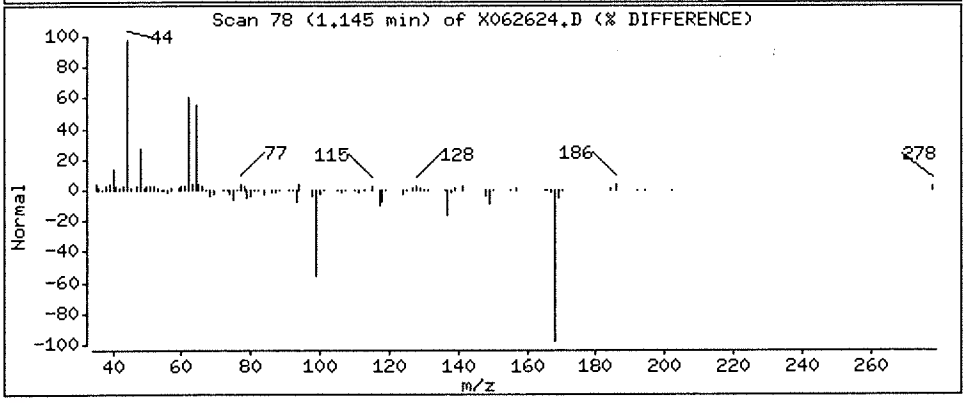












ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200626.b\X062626.D
Lab Smp Id: CCV-END Client Smp ID: CCV-END
Inj Date : 26-JUN-2020 21:31
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\X200626.b\8260W.m
Meth Date : 20-Jul-2020 12:33 voa6.i Quant Type: ISTD
Cal Date : 19-JUN-2020 14:17 Cal File: X061908.D
Als bottle: 25 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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

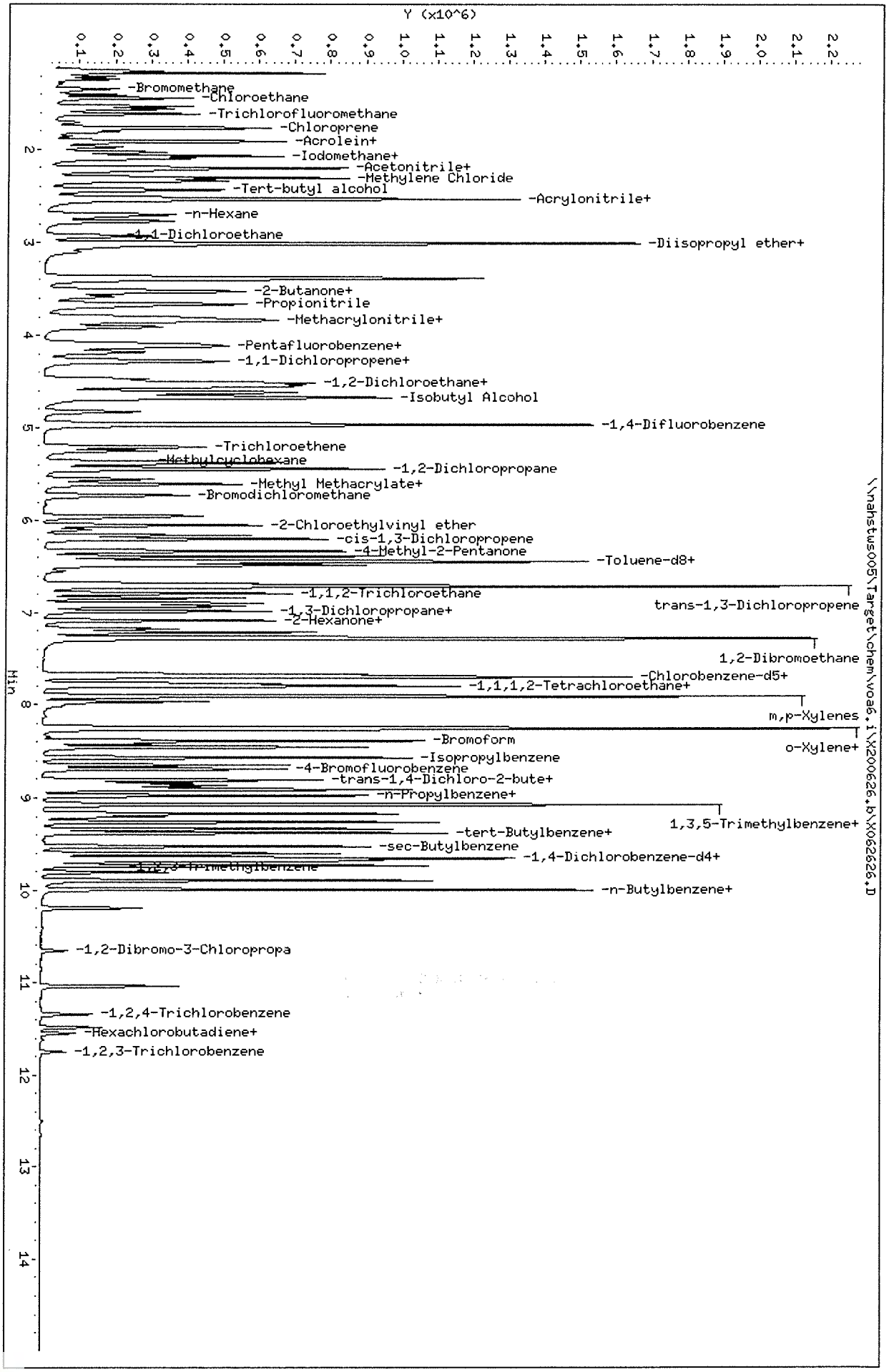
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.189	4.189	(1.000)	203969	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	367714	50.0000	
* 47 Chlorobenzene-d5	117	7.670	7.670	(1.000)	347375	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	165224	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.979)	145522	50.0000	55.63
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	204859	50.0000	53.79
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	479913	50.0000	55.53
$ 69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	187265	50.0000	52.91
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	138992	50.0000	54.94
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.976)	209910	50.0000	55.39
68 1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.914)	172925	50.0000	52.66
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	123043	50.0000	55.15
22 1,1-Dichloroethane	63	2.929	2.929	(0.699)	338402	50.0000	53.42
11 1,1-Dichloroethene	96	1.911	1.911	(0.456)	110244	50.0000	55.35
32 1,1-Dichloropropene	75	4.282	4.282	(0.862)	173027	50.0000	52.27
93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.215)	17354	50.0000	46.42
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	155272	50.0000	50.86(M)
90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	36578	50.0000	46.14
79 1,2,4-Trimethylbenzene	105	9.382	9.382	(0.970)	475616	50.0000	52.78
89 1,2-Dibromo-3-Chloropropane	155	10.657	10.657	(1.102)	13185	50.0000	51.85
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	148946	50.0000	54.35
88 1,2-Dichlorobenzene	146	9.998	9.998	(1.034)	239658	50.0000	53.52

Data File: \\nahstws005\Target\chem\voa6.i\X200626.b\X062626.D Page 2
Report Date: 20-Jul-2020 12:33

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
33	1,2-Dichloroethane	62	4.562	4.562	(0.918)	262734	50.0000	54.52
42	1,2-Dichloropropane	63	5.443	5.443	(1.095)	195159	50.0000	56.31
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	453054	50.0000	53.32
83	1,3-Dichlorobenzene	146	9.604	9.604	(0.993)	260552	50.0000	52.92
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	249738	50.0000	53.41
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	262704	50.0000	52.40
26	2,2-Dichloropropane	77	3.516	3.516	(0.839)	190366	50.0000	48.08
24	2-Butanone	43	3.580	3.580	(0.855)	249347	100.000	105.57
76	2-Chlorotoluene	91	8.974	8.974	(0.928)	411077	50.0000	52.38
52	2-Hexanone	43	7.090	7.090	(0.924)	395728	100.000	110.33
77	4-Chlorotoluene	91	9.074	9.074	(0.939)	479137	50.0000	52.68
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	424660	50.0000	52.29
45	4-Methyl-2-Pentanone	43	6.331	6.331	(0.825)	569890	100.000	108.85
10	Acetone	43	1.976	1.976	(0.472)	188466	100.000	115.19
37	Benzene	78	4.519	4.519	(0.909)	575443	50.0000	56.01
74	Bromobenzene	156	8.809	8.809	(0.911)	163880	50.0000	52.86
29	Bromochloromethane	128	3.802	3.802	(0.908)	81452	50.0000	52.10
39	Bromodichloromethane	83	5.729	5.729	(1.153)	211110	50.0000	56.42
66	Bromoform	173	8.415	8.415	(1.097)	103616	50.0000	55.98
6	Bromomethane	94	1.338	1.338	(0.320)	86289	50.0000	45.18
19	Carbon Disulfide	76	2.069	2.069	(0.494)	732155	100.000	111.76
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	166814	50.0000	52.06
59	Chlorobenzene	112	7.699	7.699	(1.004)	362948	50.0000	53.96
7	Chloroethane	64	1.403	1.403	(0.335)	133254	50.0000	61.46
28	Chloroform	83	3.910	3.910	(0.933)	271010	50.0000	54.25
3	Chloromethane	50	1.080	1.080	(0.258)	238070	50.0000	46.71
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.843)	161207	50.0000	54.95
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	245185	50.0000	54.87
55	Dibromochloromethane	129	7.176	7.176	(0.936)	152827	50.0000	54.97
44	Dibromomethane	93	5.557	5.557	(1.118)	104808	50.0000	54.41
2	Dichlorodifluoromethane	85	0.973	0.973	(0.232)	138545	50.0000	49.69
61	Ethylbenzene	106	7.799	7.799	(1.017)	186192	50.0000	54.28
91	Hexachlorobutadiene	225	11.481	11.481	(1.187)	24427	50.0000	45.85
67	Isopropylbenzene	105	8.566	8.566	(1.117)	531201	50.0000	54.84
62	m,p-Xylenes	106	7.907	7.907	(1.031)	445236	100.000	110.73
17	Methylene Chloride	84	2.305	2.305	(0.550)	161525	50.0000	54.57
87	n-Butylbenzene	91	9.998	9.998	(1.034)	376288	50.0000	51.40
73	n-Propylbenzene	91	8.917	8.917	(0.922)	640284	50.0000	52.61
92	Naphthalene	128	11.546	11.546	(1.194)	58463	50.0000	44.79
63	o-Xylene	106	8.244	8.244	(1.075)	225928	50.0000	55.17
81	sec-Butylbenzene	105	9.526	9.526	(0.985)	489035	50.0000	51.73
64	Styrene	104	8.258	8.258	(1.077)	410973	50.0000	56.74
78	tert-Butylbenzene	119	9.339	9.339	(0.966)	348249	50.0000	52.18
56	Tetrachloroethene	164	6.933	6.933	(0.904)	97003	50.0000	53.95
50	Toluene	91	6.446	6.446	(0.840)	570668	50.0000	55.19
20	trans-1,2-Dichloroethene	96	2.535	2.535	(0.605)	133099	50.0000	57.41
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	223495	50.0000	53.94
38	Trichloroethene	130	5.214	5.214	(1.049)	138692	50.0000	57.08
8	Trichlorofluoromethane	101	1.560	1.560	(0.373)	203877	50.0000	56.10
5	Vinyl Chloride	62	1.145	1.145	(0.273)	220002	50.0000	54.54

QC Flag Legend

M - Compound response manually integrated.



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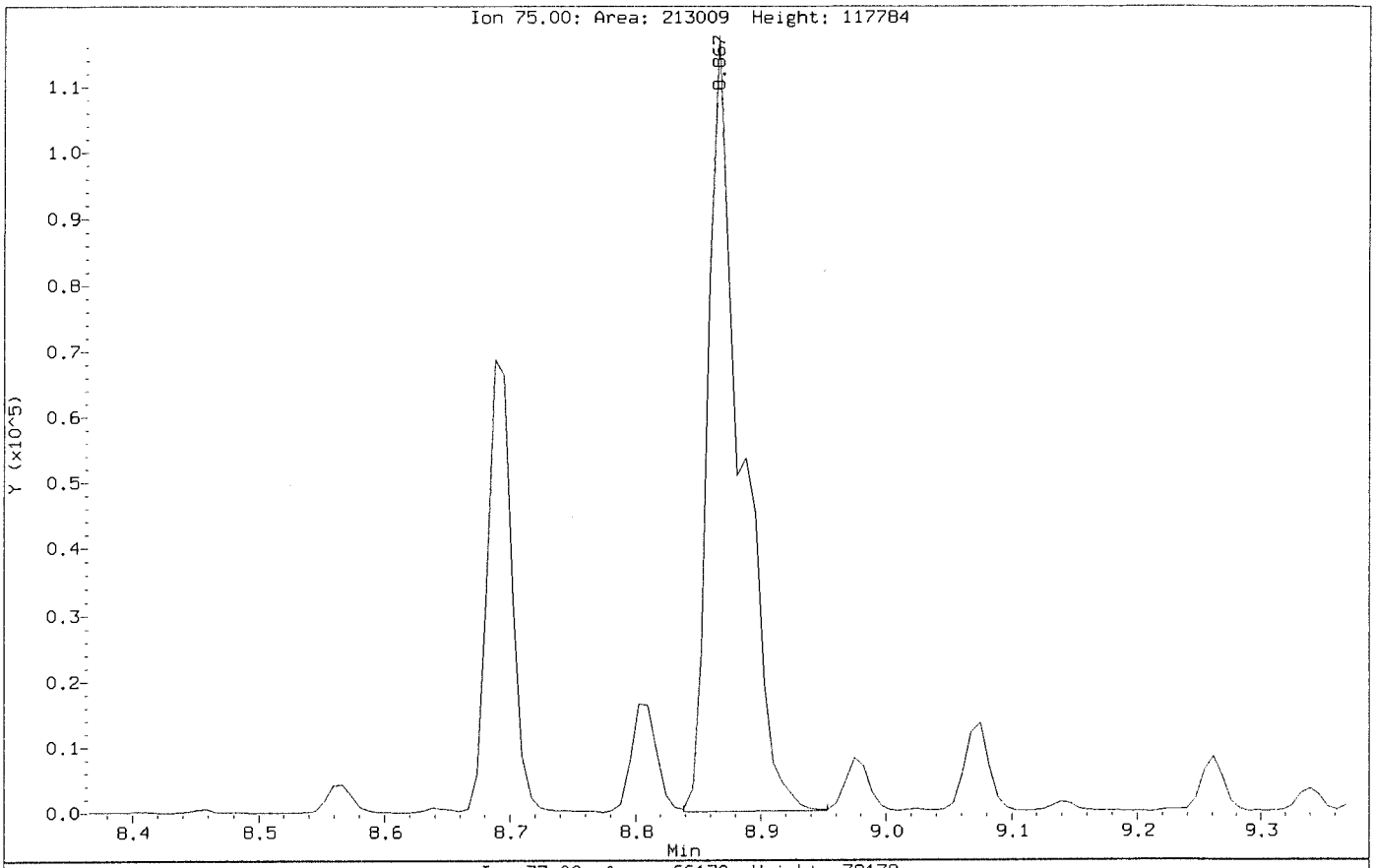
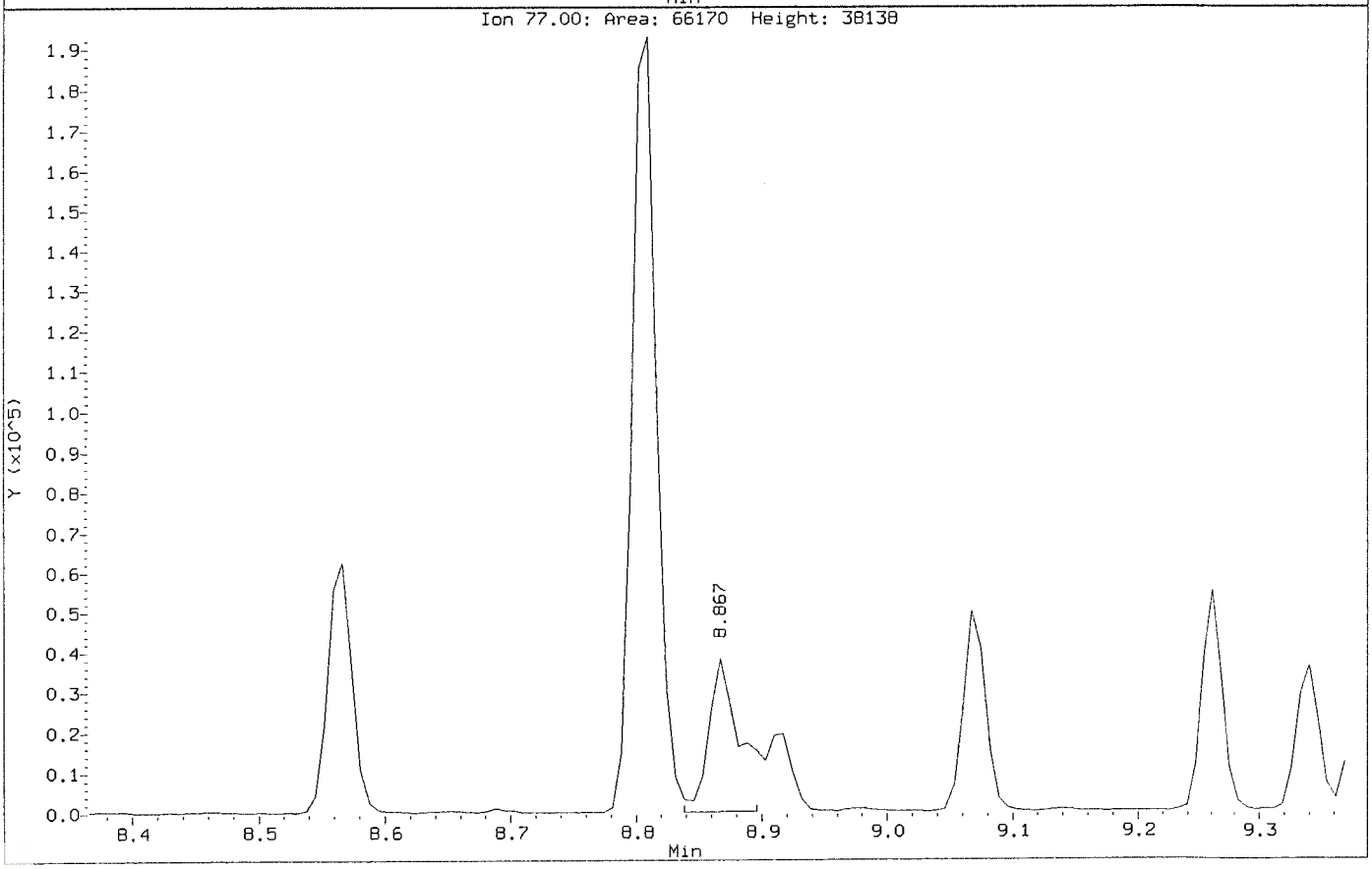
Client ID: CCV-END
Sample Info: CCV-END;CCV-END;2;;;
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\nahstws005\Target\chem\voa6.i\X200626.b\Before\X062626.D
Injection Date: 26-JUN-2020 21:31
Instrument: voa6.i
Client Sample ID: CCV-END

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





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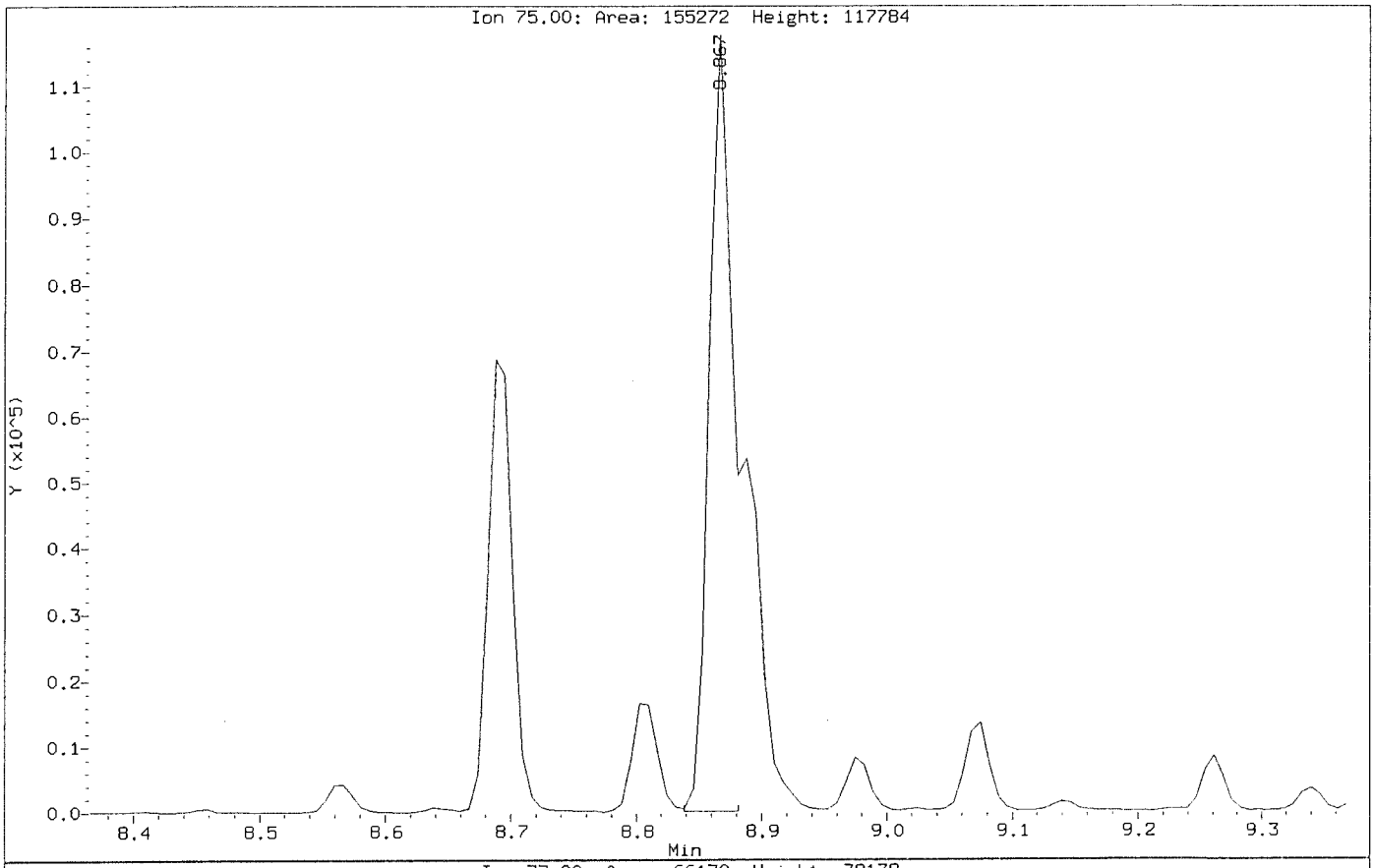
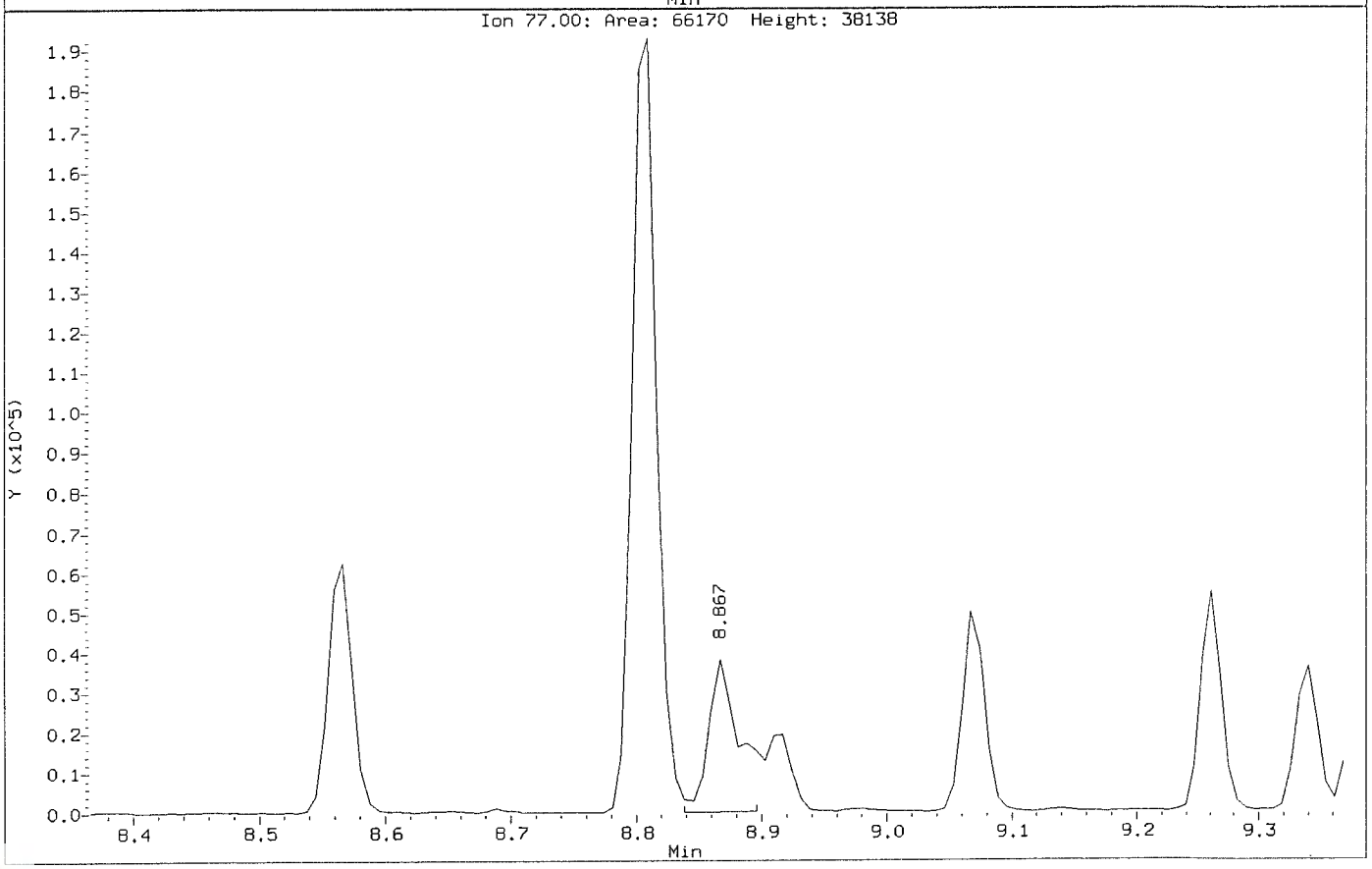
Injection Date: 26-JUN-2020 21:31
Instrument: voa6.i
Client Sample ID: CCV-END

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





MSVOA06 -Logbook

Batch: 41062 **Analyst:** Presenta Cabascango

Date: 06-29-2020 **Reviewer:**

Method: 8260 **Laboratory:** Houston

Comments:

#	Samp ID	Type	Analyzed	DF	Init Wt/Vol	Final Vol	File ID	Matrix	Status	pH
1	BFB	TUNE	06-29-2020 10:02 am	1.00	50 mL	50 mL	X062901.D	Liquid	Y	NA
	auto find/ purged									
2	CCV	CCV	06-29-2020 10:26 am	1.00	50 mL	50 mL	X062902a.D	Liquid	Y	NA
	10 uL cal std/50 mL DI									
3	CCV	CCV	06-29-2020 10:50 am	1.00	50 mL	50 mL	X062903.D	Liquid	Y	NA
	10 uL cal std/50 mL DI									
4	CCB	SAMP	06-29-2020 11:14 am	1.00	50 mL	50 mL	X062904.D	Liquid	Y	NA
5	VLCSW-200629	LCS	06-29-2020 11:38 am	1.00	50 mL	50 mL	X062905.D	Liquid	Y	NA
	4.0 uL cal std/50 mL DI									
6	BLANK	SAMP	06-29-2020 12:02 pm	1.00	50 mL	50 mL	X062906.D	Liquid	Y	NA
7	VBLKW-200629	MBLK	06-29-2020 12:26 pm	1.00	50 mL	50 mL	X062907.D	Liquid	Y	NA
8	HS20061208-15	SAMP	06-29-2020 12:50 pm	1.00	50 mL	50 mL	X062908.D	Liquid	Y	<2
9	HS20061208-01	SAMP	06-29-2020 01:14 pm	1.00	50 mL	50 mL	X062909.D	Liquid	Y	<2
10	HS20061208-06	SAMP	06-29-2020 01:38 pm	1.00	50 mL	50 mL	X062910.D	Liquid	Y	<2
11	HS20061208-15MS	MS	06-29-2020 02:02 pm	1.00	50 mL	50 mL	X062911.D	Liquid	Y	<2
	3.5 uL cal std/40 mL samp									
12	HS20061208-15MSD	MSD	06-29-2020 02:26 pm	1.00	50 mL	50 mL	X062912.D	Liquid	Y	<2
	3.5 uL cal std/40 mL samp									
13	HS20061208-03	SAMP	06-29-2020 02:50 pm	5.00	10 mL	50 mL	X062913.D	Liquid	Y	<2
14	HS20061284-03	SAMP	06-29-2020 03:14 pm	5.00	10 mL	50 mL	X062914.D	Liquid	Y	<2
15	HS20061178-03	SAMP	06-29-2020 03:38 pm	5.00	10 mL	50 mL	X062915.D	Liquid	Y	<2
16	CCV-END	CCV	06-29-2020 04:02 pm	1.00	50 mL	50 mL	X062916.D	Liquid	Y	na
	10 uL cal std/50 mL DI									
17	HS20061109-01	SAMP	06-29-2020 04:26 pm	1.00	50 mL	50 mL	X062917.D	Liquid	Y	<2
18	HS20061253-01	SAMP	06-29-2020 04:50 pm	500.0(	100 µL	50 mL	X062918.D	Liquid	Y	<2
19	HS20061216-05	SAMP	06-29-2020 05:14 pm	1.00	50 mL	50 mL	X062919.D	Liquid	Y	<2
20	HS20061208-17	SAMP	06-29-2020 05:38 pm	1.00	50 mL	50 mL	X062920.D	Liquid	Y	<2
21	HS20061208-19	SAMP	06-29-2020 06:02 pm	1.00	50 mL	50 mL	X062921.D	Liquid	Y	<2
22	HS20061208-18	SAMP	06-29-2020 06:26 pm	1.00	50 mL	50 mL	X062922.D	Liquid	Y	<2
23	HS20061208-25	SAMP	06-29-2020 06:50 pm	1.00	50 mL	50 mL	X062923.D	Liquid	Y	<2
24	HS20061208-26	SAMP	06-29-2020 07:14 pm	1.00	50 mL	50 mL	X062924.D	Liquid	Y	<2
25	HS20061208-20	SAMP	06-29-2020 07:38 pm	1.00	50 mL	50 mL	X062925.D	Liquid	Y	<2
26	HS20061208-20	SAMP	06-29-2020 08:02 pm	10.00	5 mL	50 mL	X062926.D	Liquid	Y	<2
27	HS20061208-23	SAMP	06-29-2020 08:26 pm	1.00	50 mL	50 mL	X062927.D	Liquid	Y	<2
28	HS20061208-21	SAMP	06-29-2020 08:50 pm	1.00	50 mL	50 mL	X062928.D	Liquid	Y	<2
29	HS20061208-16	SAMP	06-29-2020 09:14 pm	10.00	5 mL	50 mL	X062929.D	Liquid	Y	<2
30	HS20061208-16	SAMP	06-29-2020 09:38 pm	100.0(	500 µL	50 mL	X062930.D	Liquid	Y	<2
31	BFB	TUNE	06-29-2020 10:02 pm	1.00	50 mL	50 mL	Y062901.D	Liquid	Y	na
	Auto find/ purged									
32	CCV	CCV	06-29-2020 10:26 pm	1.00	50 mL	50 mL	Y062902a.D	Liquid	Y	na
	10 uL cal std/50 mL DI									
33	CCV	CCV	06-29-2020 10:50 pm	1.00	50 mL	50 mL	Y062903.D	Liquid	Y	na
	10 uL cal std/50 mL DI									
34	CCB	SAMP	06-29-2020 11:14 pm	1.00	50 mL	50 mL	Y062904.D	Liquid	Y	na
35	VLCSW-200629	LCS	06-29-2020 11:38 pm	1.00	50 mL	50 mL	Y062905.D	Liquid	Y	na
	4.0 uL cal std/50 mL DI									

MSVOA06 -Logbook

#	Samp ID	Type	Analyzed	DF	Init Wt/Vol	Final Vol	File ID	Matrix	Status	pH
36	BLANK	SAMP	06-30-2020 12:02 am	1.00	50 mL	50 mL	Y062906.D	Liquid	Y	na
37	VBLKW-200629	MBLK	06-30-2020 12:26 am	1.00	50 mL	50 mL	Y062907.D	Liquid	Y	na
38	HS20061208-28	SAMP	06-30-2020 12:50 am	1.00	50 mL	50 mL	Y062908.D	Liquid	Y	<2
39	HS20061208-27	SAMP	06-30-2020 01:14 am	1.00	50 mL	50 mL	Y062909.D	Liquid	Y	<2
40	HS20061208-28MS	MS	06-30-2020 01:38 am	1.00	50 mL	50 mL	Y062910.D	Liquid	Y	<2
	3.5 uL cal std/40 mL samp									
41	HS20061208-28MSD	MSD	06-30-2020 02:02 am	1.00	50 mL	50 mL	Y062911.D	Liquid	Y	<2
	3.5 uL cal std/40 mL samp									
42	MBLK-154830	MBLK	06-30-2020 02:26 am	20.00	2.5 mL	50 mL	Y062912.D	Liquid	Y	na
	tclps									
43	HS20061186-01	SAMP	06-30-2020 02:50 am	20.00	2.5 mL	50 mL	Y062913.D	Liquid	Y	na
44	HS20061214-01	SAMP	06-30-2020 03:14 am	20.00	2.5 mL	50 mL	Y062914.D	Liquid	Y	na
45	HS20061240-01	SAMP	06-30-2020 03:38 am	20.00	2.5 mL	50 mL	Y062915.D	Liquid	Y	na
46	HS20061239-01	SAMP	06-30-2020 04:02 am	20.00	2.5 mL	50 mL	Y062916.D	Liquid	Y	na
47	HS20061208-30	SAMP	06-30-2020 04:26 am	1.00	50 mL	50 mL	Y062917.D	Liquid	Y	<2
48	HS20061208-31	SAMP	06-30-2020 04:50 am	1.00	50 mL	50 mL	Y062918.D	Liquid	Y	<2
49	HS20061208-32	SAMP	06-30-2020 05:14 am	1.00	50 mL	50 mL	Y062919.D	Liquid	Y	<2
50	HS20061208-33	SAMP	06-30-2020 05:38 am	1.00	50 mL	50 mL	Y062920.D	Liquid	Y	<2
51	HS20061208-34	SAMP	06-30-2020 06:02 am	1.00	50 mL	50 mL	Y062921.D	Liquid	Y	<2
52	HS20061208-35	SAMP	06-30-2020 06:26 am	1.00	50 mL	50 mL	Y062922.D	Liquid	Y	<2
53	HS20061208-38	SAMP	06-30-2020 06:50 am	1.00	50 mL	50 mL	Y062923.D	Liquid	Y	<2
54	HS20061208-40	SAMP	06-30-2020 07:15 am	1.00	50 mL	50 mL	Y062924.D	Liquid	Y	<2
55	HS20061208-41	SAMP	06-30-2020 07:39 am	1.00	50 mL	50 mL	Y062925.D	Liquid	Y	<2
56	HS20061208-42	SAMP	06-30-2020 08:03 am	1.00	50 mL	50 mL	Y062926.D	Liquid	Y	<2
57	HS20061208-24	SAMP	06-30-2020 08:27 am	1.00	50 mL	50 mL	Y062927.D	Liquid	Y	<2
58	HS20061208-36	SAMP	06-30-2020 08:51 am	1.00	50 mL	50 mL	Y062928.D	Liquid	Y	<2
59	HS20061208-29	SAMP	06-30-2020 09:15 am	1.00	50 mL	50 mL	Y062929.D	Liquid	Y	<2
60	HS20061270-02	SAMP	06-30-2020 09:39 am	1.00	50 mL	50 mL	Y062930.D	Liquid	Y	<2

Chemical	Value
SURR SPK ID	31106-34-06
IS ID	31106-34-06
CAL STD ID	31106-36-01/02
BFB ID	31106-34-06

FORM 2
WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20061178

	CLIENT SAMPLE NO.	SMC1 (DCE) #	SMC2 #	SMC3 (TOL) #	OTHER #	TOT OUT
01	VLCSW-200629	89	91	95	91	0
02	VBLKW-200629	86	90	101	93	0
03	HS20061178-03	88	89	94	91	0
04						
05						
06						
07						
08						
09						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						
28						

		QC LIMITS
SMC1 (DCE)	= 1,2-Dichloroethane-d4	(0-130)
SMC2	= Dibromofluoromethane	(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-200629

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20061178

Lab File ID: X062907 Lab Sample ID: VBLKW-200629

Date Analyzed: 06/29/20 Time Analyzed: 1226

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-200629	VLCSW-200629	X062905	1138
02	HS20061208-1	HS20061208-15M	X062911	1402
03	HS20061208-1	HS20061208-15M	X062912	1426
04	HS20061178-0	HS20061178-03	X062915	1538
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COMMENTS:

FORM 5
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20061178

Lab File ID: X062901 BFB Injection Date: 06/29/20

Instrument ID: VOA6 BFB Injection Time: 1002

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	21.8
75	30.0 - 60.0% of mass 95	44.8
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.4
173	Less than 2.0% of mass 174	0.9 (0.9)1
174	Greater than 50.0% of mass 95	99.9
175	5.0 - 9.0% of mass 174	7.2 (7.2)1
176	95.0 - 101.0% of mass 174	95.3 (95.4)1
177	5.0 - 9.0% of mass 176	5.9 (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	X062903	06/29/20	1050
02	VLCSW-200629	VLCSW-200629	X062905	06/29/20	1138
03	VBLKW-200629	VBLKW-200629	X062907	06/29/20	1226
04	HS20061208-1	HS20061208-15M	X062911	06/29/20	1402
05	HS20061208-1	HS20061208-15M	X062912	06/29/20	1426
06	HS20061178-0	HS20061178-03	X062915	06/29/20	1538
07	CCV-END	CCV-END	X062916	06/29/20	1602
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FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20061178

Instrument ID: VOA6 Calibration Date: 06/29/20 Time: 1050

Lab File ID: X062903 Init. Calib. Date(s): 06/19/20 06/19/20

Init. Calib. Times: 1130 1529

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
cis-1,3-Dichloropropene	0.6080000	0.5983777	0.5983777	0.2	1.58	20.00	AVRG
trans-1,3-Dichloropropene	0.5630000	0.5418853	0.5418853	0.1	3.75	20.00	AVRG
1,3-Dichlorobenzene	1.4900000	1.4795808	1.4795808	0.6	0.70	20.00	AVRG
2,2-Dichloropropane	0.9700000	0.8922627	0.8922627	0.1	8.01	20.00	AVRG
1,1-Dichloropropene	0.4500000	0.4298457	0.4298457	0.1	4.48	20.00	AVRG
Dibromomethane	0.2620000	0.2489246	0.2489246	0.1	4.99	20.00	AVRG
1,2-Dibromoethane	0.3940000	0.3877496	0.3877496	0.1	1.59	20.00	AVRG
trans-1,2-Dichloroethene	0.5680000	0.5481184	0.5481184	0.1	3.50	20.00	AVRG
1,1,1,2-Tetrachloroethane	0.3640000	0.3675758	0.3675758	0.1	-0.98	20.00	AVRG
1,1,1-Trichloroethane	0.9290000	0.8757341	0.8757341	0.1	5.73	20.00	AVRG
1,1,2,2-Tetrachloroethane	0.9940000	0.9415968	0.9415968	0.3	5.27	20.00	AVRG
1,1,2-Trichloroethane	0.3210000	0.3155940	0.3155940	0.1	1.68	20.00	AVRG
1,1-Dichloroethane	1.5530000	1.3730682	1.3730682	0.2	11.59	20.00	AVRG
1,1-Dichloroethene	0.4880000	0.4716193	0.4716193	0.1	3.36	20.00	AVRG
Trichloroethene	0.3300000	0.3379493	0.3379493	0.2	-2.41	20.00	AVRG
1,2,3-Trichlorobenzene	58.760446	50.000000	0.1323384	0.01	-17.52	20.00	2RDR
Trichlorofluoromethane	0.8910000	0.8713512	0.8713512	0.1	2.20	20.00	AVRG
1,2,4-Trichlorobenzene	54.927429	50.000000	0.2624540	0.1	-9.85	20.00	LINR
1,2,4-Trimethylbenzene	2.7270000	2.6878819	2.6878819	0.1	1.43	20.00	AVRG
Tetrachloroethene	0.2590000	0.2662162	0.2662162	0.2	-2.79	20.00	AVRG
1,2-Dichlorobenzene	1.3550000	1.3287397	1.3287397	0.4	1.94	20.00	AVRG
1,2-Dichloroethane	0.6550000	0.6049969	0.6049969	0.1	7.63	20.00	AVRG
1,2-Dichloropropane	0.4710000	0.4605234	0.4605234	0.1	2.22	20.00	AVRG
1,3,5-Trimethylbenzene	2.5710000	2.5583517	2.5583517	0.1	0.49	20.00	AVRG
1,3-Dichloropropane	0.6730000	0.6419059	0.6419059	0.1	4.62	20.00	AVRG
1,4-Dichlorobenzene	1.5170000	1.4686678	1.4686678	0.4	3.19	20.00	AVRG
Toluene	1.4880000	1.4748014	1.4748014	0.4	0.89	20.00	AVRG
2-Butanone	89.501333	100.00000	0.5188740	0.1	10.50	20.00	LINR
2-Chlorotoluene	2.3750000	2.2570002	2.2570002	0.1	4.97	20.00	AVRG
2-Hexanone	0.5160000	0.5104147	0.5104147	0.1	1.08	20.00	AVRG
4-Chlorotoluene	2.7520000	2.6375997	2.6375997	0.1	4.16	20.00	AVRG
tert-Butylbenzene	2.0190000	1.9881112	1.9881112	0.1	1.53	20.00	AVRG
4-Methyl-2-Pentanone	0.7530000	0.7367310	0.7367310	0.1	2.16	20.00	AVRG
Acetone	106.52842	100.00000	0.4280003	0.1	-6.53	20.00	LINR
Benzene	1.3970000	1.3598774	1.3598774	0.5	2.66	20.00	AVRG
Bromobenzene	0.9380000	0.8934452	0.8934452	0.1	4.75	20.00	AVRG
Bromochloromethane	0.3830000	0.3345626	0.3345626	0.1	12.65	20.00	AVRG
Bromodichloromethane	0.5090000	0.4967960	0.4967960	0.2	2.40	20.00	AVRG
Bromoform	0.2660000	0.2705597	0.2705597	0.1	-1.71	20.00	AVRG
Bromomethane	0.4680000	0.4071908	0.4071908	0.1	12.99	20.00	AVRG
Carbon Disulfide	1.6060000	1.5059313	1.5059313	0.1	6.23	20.00	AVRG
Carbon Tetrachloride	0.4360000	0.4181667	0.4181667	0.1	4.09	20.00	AVRG

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS2006117

Instrument ID: VOA6 Calibration Date: 06/29/20 Time: 1050

Lab File ID: X062903 Init. Calib. Date(s): 06/19/20 06/19/20

Init. Calib. Times: 1130 1529

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
Chlorobenzene	0.9680000	0.9420721	0.9420721	0.5	2.68	20.00	AVRG
Chloroethane	0.5310000	0.4999105	0.4999105	0.1	5.85	20.00	AVRG
Chloroform	1.2240000	1.1086738	1.1086738	0.2	9.42	20.00	AVRG
Chloromethane	1.2490000	1.0545846	1.0545846	0.1	15.56	20.00	AVRG
cis-1,2-Dichloroethene	0.7190000	0.6652168	0.6652168	0.1	7.48	20.00	AVRG
Dibromochloromethane	0.4000000	0.3961423	0.3961423	0.1	0.96	20.00	AVRG
Dichlorodifluoromethane	43.170983	50.000000	0.5884096	0.1	13.66	20.00	LINR
Ethylbenzene	0.4940000	0.4906654	0.4906654	0.1	0.68	20.00	AVRG
Hexachlorobutadiene	53.873344	50.000000	0.1726075	0.1	-7.75	20.00	LINR
Isopropylbenzene	1.3940000	1.4212841	1.4212841	0.1	-1.96	20.00	AVRG
m,p-Xylenes	0.5790000	0.5850530	0.5850530	0.1	-1.04	20.00	AVRG
Methylene Chloride	44.689935	50.000000	0.6536456	0.1	10.62	20.00	LINR
n-Butylbenzene	2.2150000	2.2614998	2.2614998	0.5	-2.10	20.00	AVRG
n-Propylbenzene	3.6820000	3.6622718	3.6622718	0.1	0.54	20.00	AVRG
Naphthalene	58.333922	50.000000	0.4605739	0.2	-16.67	20.00	2RDR
o-Xylene	0.5890000	0.5892996	0.5892996	0.3	-0.05	20.00	AVRG
sec-Butylbenzene	2.8600000	2.8630536	2.8630536	0.1	-0.11	20.00	AVRG
Styrene	1.0420000	1.0349152	1.0349152	0.3	0.68	20.00	AVRG
Vinyl Chloride	0.9890000	0.8981607	0.8981607	0.1	9.18	20.00	AVRG
1,2,3-Trichloropropane	0.9240000	0.8683827	0.8683827	0.1	6.02	20.00	AVRG
p-Isopropyltoluene	2.4570000	2.4875880	2.4875880	0.1	-1.24	20.00	AVRG
1,2-Dibromo-3-Chloropropane	51.043130	50.000000	7.85e-002	0.05	-2.09	20.00	LINR
1,2-Dichloroethane-d4	44.010486	50.000000	0.8238592	0.1	11.98	20.00	LINR
Dibromofluoromethane	0.6410000	0.5894044	0.5894044	0.1	8.05	20.00	AVRG
Toluene-d8	1.2440000	1.2283280	1.2283280	0.1	1.26	20.00	AVRG
4-Bromofluorobenzene	0.5090000	0.4863374	0.4863374	0.1	4.45	20.00	AVRG

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20061178

Instrument ID: VOA6 Calibration Date: 06/29/20 Time: 1602

Lab File ID: X062916 Init. Calib. Date(s): 06/19/20 06/19/20

Init. Calib. Times: 1130 1529

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
cis-1,3-Dichloropropene	0.6080000	0.6059107	0.6059107	0.2	0.34	50.00	AVRG
trans-1,3-Dichloropropene	0.5630000	0.5476849	0.5476849	0.1	2.72	50.00	AVRG
1,3-Dichlorobenzene	1.4900000	1.5169859	1.5169859	0.6	-1.81	50.00	AVRG
2,2-Dichloropropane	0.9700000	0.8472476	0.8472476	0.1	12.65	50.00	AVRG
1,1-Dichloropropene	0.4500000	0.4328473	0.4328473	0.1	3.81	50.00	AVRG
Dibromomethane	0.2620000	0.2616026	0.2616026	0.1	0.15	50.00	AVRG
1,2-Dibromoethane	0.3940000	0.3975432	0.3975432	0.1	-0.90	50.00	AVRG
trans-1,2-Dichloroethene	0.5680000	0.5930617	0.5930617	0.1	-4.41	50.00	AVRG
1,1,1,2-Tetrachloroethane	0.3640000	0.3657291	0.3657291	0.1	-0.48	50.00	AVRG
1,1,1-Trichloroethane	0.9290000	0.9465150	0.9465150	0.1	-1.88	50.00	AVRG
1,1,2,2-Tetrachloroethane	0.9940000	1.0230702	1.0230702	0.3	-2.92	50.00	AVRG
1,1,2-Trichloroethane	0.3210000	0.3197282	0.3197282	0.1	0.40	50.00	AVRG
1,1-Dichloroethane	1.5530000	1.4855098	1.4855098	0.2	4.34	50.00	AVRG
1,1-Dichloroethene	0.4880000	0.5086717	0.5086717	0.1	-4.24	50.00	AVRG
Trichloroethene	0.3300000	0.3426523	0.3426523	0.2	-3.83	50.00	AVRG
1,2,3-Trichlorobenzene	58.543067	50.000000	0.1318540	0.01	-17.09	50.00	2RDR
Trichlorofluoromethane	0.8910000	0.9598571	0.9598571	0.1	-7.73	50.00	AVRG
1,2,4-Trichlorobenzene	54.872433	50.000000	0.2621969	0.1	-9.74	50.00	LINR
1,2,4-Trimethylbenzene	2.7270000	2.7664747	2.7664747	0.1	-1.45	50.00	AVRG
Tetrachloroethene	0.2590000	0.2638470	0.2638470	0.2	-1.87	50.00	AVRG
1,2-Dichlorobenzene	1.3550000	1.3994705	1.3994705	0.4	-3.28	50.00	AVRG
1,2-Dichloroethane	0.6550000	0.6469759	0.6469759	0.1	1.22	50.00	AVRG
1,2-Dichloropropane	0.4710000	0.4748305	0.4748305	0.1	-0.81	50.00	AVRG
1,3,5-Trimethylbenzene	2.5710000	2.6223442	2.6223442	0.1	-2.00	50.00	AVRG
1,3-Dichloropropane	0.6730000	0.6576217	0.6576217	0.1	2.28	50.00	AVRG
1,4-Dichlorobenzene	1.5170000	1.5238826	1.5238826	0.4	-0.45	50.00	AVRG
Toluene	1.4880000	1.4906392	1.4906392	0.4	-0.18	50.00	AVRG
2-Butanone	100.57153	100.00000	0.5824945	0.1	-0.57	50.00	LINR
2-Chlorotoluene	2.3750000	2.3191935	2.3191935	0.1	2.35	50.00	AVRG
2-Hexanone	0.5160000	0.5444171	0.5444171	0.1	-5.51	50.00	AVRG
4-Chlorotoluene	2.7520000	2.6903163	2.6903163	0.1	2.24	50.00	AVRG
tert-Butylbenzene	2.0190000	2.0734599	2.0734599	0.1	-2.70	50.00	AVRG
4-Methyl-2-Pentanone	0.7530000	0.7802093	0.7802093	0.1	-3.61	50.00	AVRG
Acetone	118.68787	100.00000	0.4757102	0.1	-18.69	50.00	LINR
Benzene	1.3970000	1.4078419	1.4078419	0.5	-0.78	50.00	AVRG
Bromobenzene	0.9380000	0.9242052	0.9242052	0.1	1.47	50.00	AVRG
Bromochloromethane	0.3830000	0.3623197	0.3623197	0.1	5.40	50.00	AVRG
Bromodichloromethane	0.5090000	0.5130061	0.5130061	0.2	-0.79	50.00	AVRG
Bromoform	0.2660000	0.2817471	0.2817471	0.1	-5.92	50.00	AVRG
Bromomethane	0.4680000	0.4339225	0.4339225	0.1	7.28	50.00	AVRG
Carbon Disulfide	1.6060000	1.6292413	1.6292413	0.1	-1.45	50.00	AVRG
Carbon Tetrachloride	0.4360000	0.4283264	0.4283264	0.1	1.76	50.00	AVRG

FORM VII VOA

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS2006117

Instrument ID: VOA6 Calibration Date: 06/29/20 Time: 1602

Lab File ID: X062916 Init. Calib. Date(s): 06/19/20 06/19/20

Init. Calib. Times: 1130 1529

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
Chlorobenzene	0.9680000	0.9441739	0.9441739	0.5	2.46	50.00	AVRG
Chloroethane	0.5310000	0.5494099	0.5494099	0.1	-3.47	50.00	AVRG
Chloroform	1.2240000	1.1889387	1.1889387	0.2	2.86	50.00	AVRG
Chloromethane	1.2490000	1.1052961	1.1052961	0.1	11.50	50.00	AVRG
cis-1,2-Dichloroethene	0.7190000	0.7153656	0.7153656	0.1	0.50	50.00	AVRG
Dibromochloromethane	0.4000000	0.4049620	0.4049620	0.1	-1.24	50.00	AVRG
Dichlorodifluoromethane	46.614312	50.000000	0.6363421	0.1	6.77	50.00	LINR
Ethylbenzene	0.4940000	0.4896420	0.4896420	0.1	0.88	50.00	AVRG
Hexachlorobutadiene	53.033092	50.000000	0.1700127	0.1	-6.07	50.00	LINR
Isopropylbenzene	1.3940000	1.4363168	1.4363168	0.1	-3.04	50.00	AVRG
m,p-Xylenes	0.5790000	0.5885653	0.5885653	0.1	-1.65	50.00	AVRG
Methylene Chloride	50.184423	50.000000	0.7305205	0.1	-0.37	50.00	LINR
n-Butylbenzene	2.2150000	2.2682528	2.2682528	0.5	-2.40	50.00	AVRG
n-Propylbenzene	3.6820000	3.7414502	3.7414502	0.1	-1.61	50.00	AVRG
Naphthalene	55.685441	50.000000	0.4395892	0.2	-11.37	50.00	2RDR
o-Xylene	0.5890000	0.5949593	0.5949593	0.3	-1.01	50.00	AVRG
sec-Butylbenzene	2.8600000	2.9503829	2.9503829	0.1	-3.16	50.00	AVRG
Styrene	1.0420000	1.0412142	1.0412142	0.3	0.08	50.00	AVRG
Vinyl Chloride	0.9890000	0.9928970	0.9928970	0.1	-0.39	50.00	AVRG
1,2,3-Trichloropropane	0.9240000	0.9174165	0.9174165	0.1	0.71	50.00	AVRG
p-Isopropyltoluene	2.4570000	2.5549401	2.5549401	0.1	-3.99	50.00	AVRG
1,2-Dibromo-3-Chloropropane	56.692857	50.000000	8.72e-002	0.05	-13.38	50.00	LINR
1,2-Dichloroethane-d4	48.985112	50.000000	0.9156772	0.1	2.03	50.00	LINR
Dibromofluoromethane	0.6410000	0.6414265	0.6414265	0.1	-0.07	50.00	AVRG
Toluene-d8	1.2440000	1.2493033	1.2493033	0.1	-0.43	50.00	AVRG
4-Bromofluorobenzene	0.5090000	0.4992731	0.4992731	0.1	1.91	50.00	AVRG

FORM VII VOA

FORM 8
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20061178

Lab File ID (Standard): X062903 Date Analyzed: 06/29/20

Instrument ID: VOA6 Time Analyzed: 1050

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

		IS1(CBZ) AREA #	RT #	IS2(DFB) AREA #	RT #	IS3(DCB) AREA #	RT #
	12 HOUR STD	387482	7.67	416817	4.97	184459	9.67
	UPPER LIMIT	774964	8.17	833634	5.47	368918	10.17
	LOWER LIMIT	193741	7.17	208409	4.47	92230	9.17
	CLIENT SAMPLE NO.						
01	VLCSW-200629	392569	7.67	428437	4.97	182871	9.67
02	VBLKW-200629	493659	7.67	543047	4.97	223800	9.67
03	HS20061208-15	420412	7.67	475728	4.97	195797	9.67
04	HS20061208-15	432201	7.67	486924	4.97	200052	9.67
05	HS20061178-03	414156	7.67	447195	4.97	189698	9.67
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IS1 (CBZ) = Chlorobenzene-d5
IS2 (DFB) = 1,4-Difluorobenzene
IS3 (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: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20061178

Lab File ID (Standard): X062903 Date Analyzed: 06/29/20

Instrument ID: VOA6 Time Analyzed: 1050

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

		IS4 AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	240251	4.19				
	UPPER LIMIT	480502	4.69				
	LOWER LIMIT	120126	3.69				
	CLIENT SAMPLE NO.						
01	VLCSW-200629	238934	4.19				
02	VBLKW-200629	315081	4.18				
03	HS20061208-15	295878	4.19				
04	HS20061208-15	300252	4.19				
05	HS20061178-03	248766	4.19				
06							
07							
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							

IS4 = Pentafluorobenzene

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\X200629.b\X062901.D

Date : 29-JUN-2020 10:02

Client ID: BFB

Instrument: voa6.i

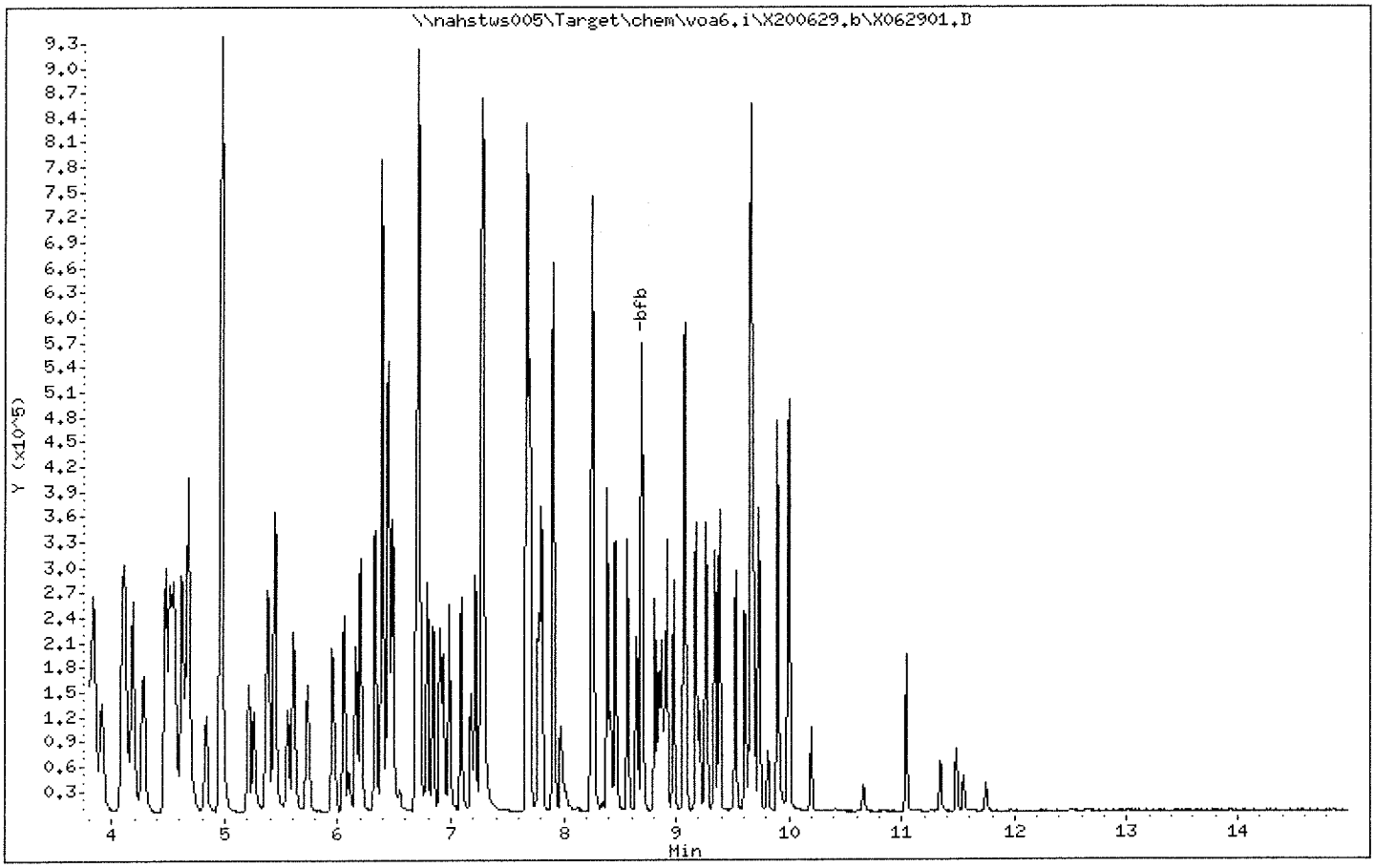
Sample Info: BFB;BFB;3;;BFB

Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

Column diameter: 0.25



Data File: \\nahstws005\Target\chem\voa6.i\X200629.b\X062901.D

Date : 29-JUN-2020 10:02

Client ID: BFB

Instrument: voa6.i

Sample Info: BFB;BFB;3;;BFB

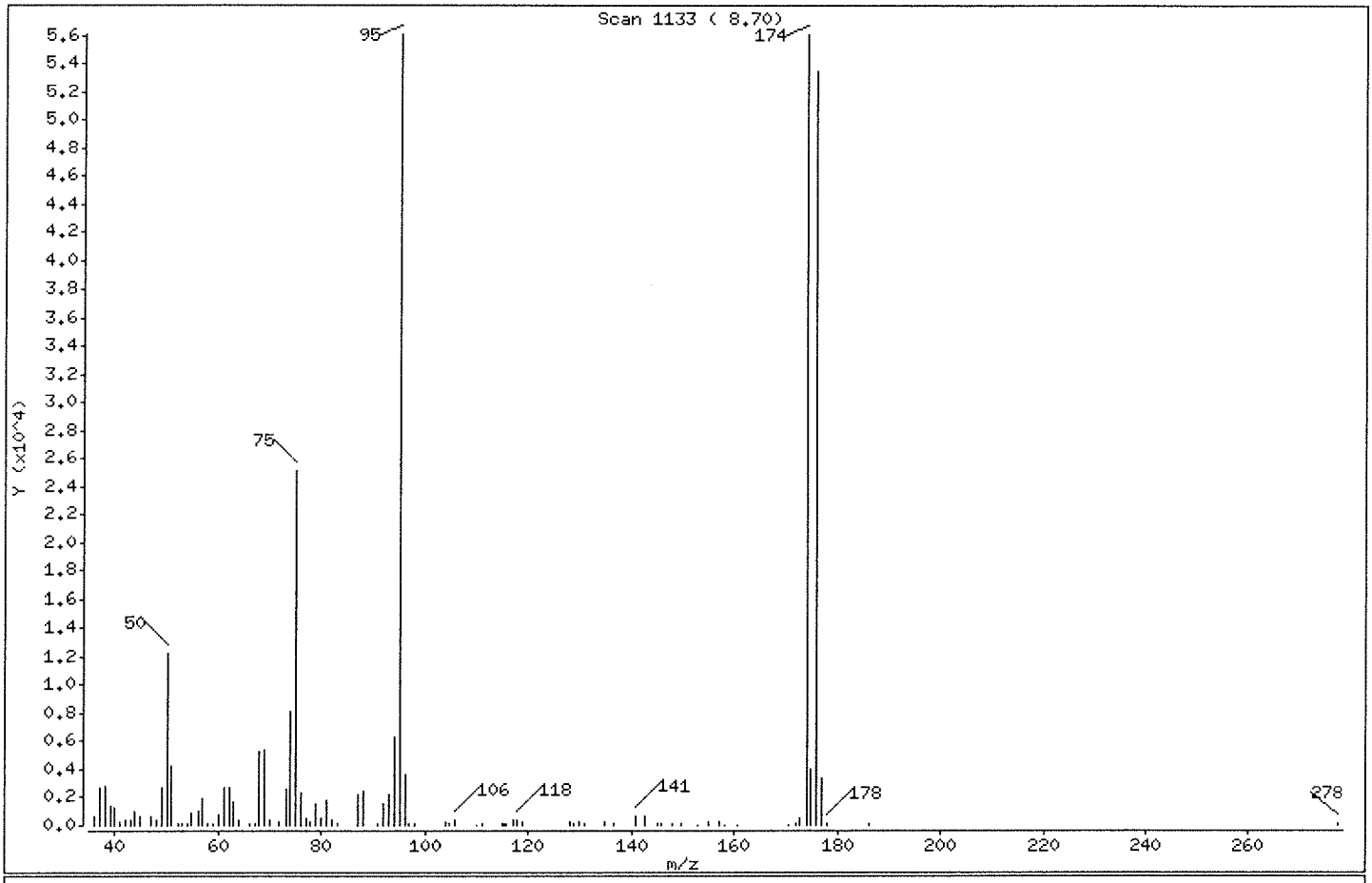
Volume Injected (uL): 2.0

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	21.84
75	30.00 - 60.00% of mass 95	44.84
96	5.00 - 9.00% of mass 95	6.36
173	Less than 2.00% of mass 174	0.93 (0.93)
174	Greater than 50.00% of mass 95	99.90
175	5.00 - 9.00% of mass 174	7.21 (7.22)
176	95.00 - 101.00% of mass 174	95.30 (95.39)
177	5.00 - 9.00% of mass 176	5.89 (6.18)

Data File: \\nahstws005\Target\chem\voa6.i\X200629.b\X062901.D

Date : 29-JUN-2020 10:02

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: X062901.D
Spectrum: Scan 1133 (8.70)
Location of Maximum: 95.00
Number of points: 93

m/z	Y	m/z	Y	m/z	Y	m/z	Y
35.90	653	61.00	2678	92.00	1604	140.90	690
37.00	2704	62.00	2733	92.90	2240	142.70	672
38.00	2805	63.00	1708	94.00	6265	145.10	82
39.00	1421	64.00	336	95.00	56112	145.70	91
39.90	1347	66.00	67	96.00	3567	148.00	163
41.00	281	67.00	129	96.90	84	149.70	80
42.00	377	68.00	5288	98.00	152	152.90	51
43.00	413	69.00	5433	104.00	284	154.80	245
43.90	1039	69.90	397	104.80	93	157.00	205
44.90	683	71.90	241	105.80	402	158.00	53
47.00	702	73.00	2541	110.10	50	160.70	51
47.90	440	74.00	8143	110.90	86	170.40	55
49.00	2769	75.00	25160	114.80	158	171.90	77
50.00	12256	76.00	2364	115.20	121	172.80	521
51.00	4224	77.00	511	115.80	160	173.90	56056
52.20	104	77.80	254	116.90	323	174.90	4047
53.00	82	78.90	1535	117.80	330	175.90	53472
54.10	123	79.90	562	118.90	243	176.90	3307
54.90	898	80.90	1862	127.90	319	177.80	119
56.00	990	81.90	425	128.90	136	186.00	68
57.00	1912	83.10	65	129.90	293	277.90	71
58.00	160	86.90	2133	131.00	117		
59.00	146	87.90	2465	134.90	215		
60.00	726	91.00	152	136.60	153		

Data File: \\nahstws005\Target\chem\voa6.i\X200629.b\X062903.D Page 1
Report Date: 20-Jul-2020 12:56

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200629.b\X062903.D
Lab Smp Id: CCV Client Smp ID: CCV
Inj Date : 29-JUN-2020 10:50
Operator : PC Inst ID: voa6.i
Smp Info : CCV;CCV;2;;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200629.b\8260W.m
Meth Date : 20-Jul-2020 12:56 voa6.i Quant Type: ISTD
Cal Date : 19-JUN-2020 14:17 Cal File: X061908.D
Als bottle: 3 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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

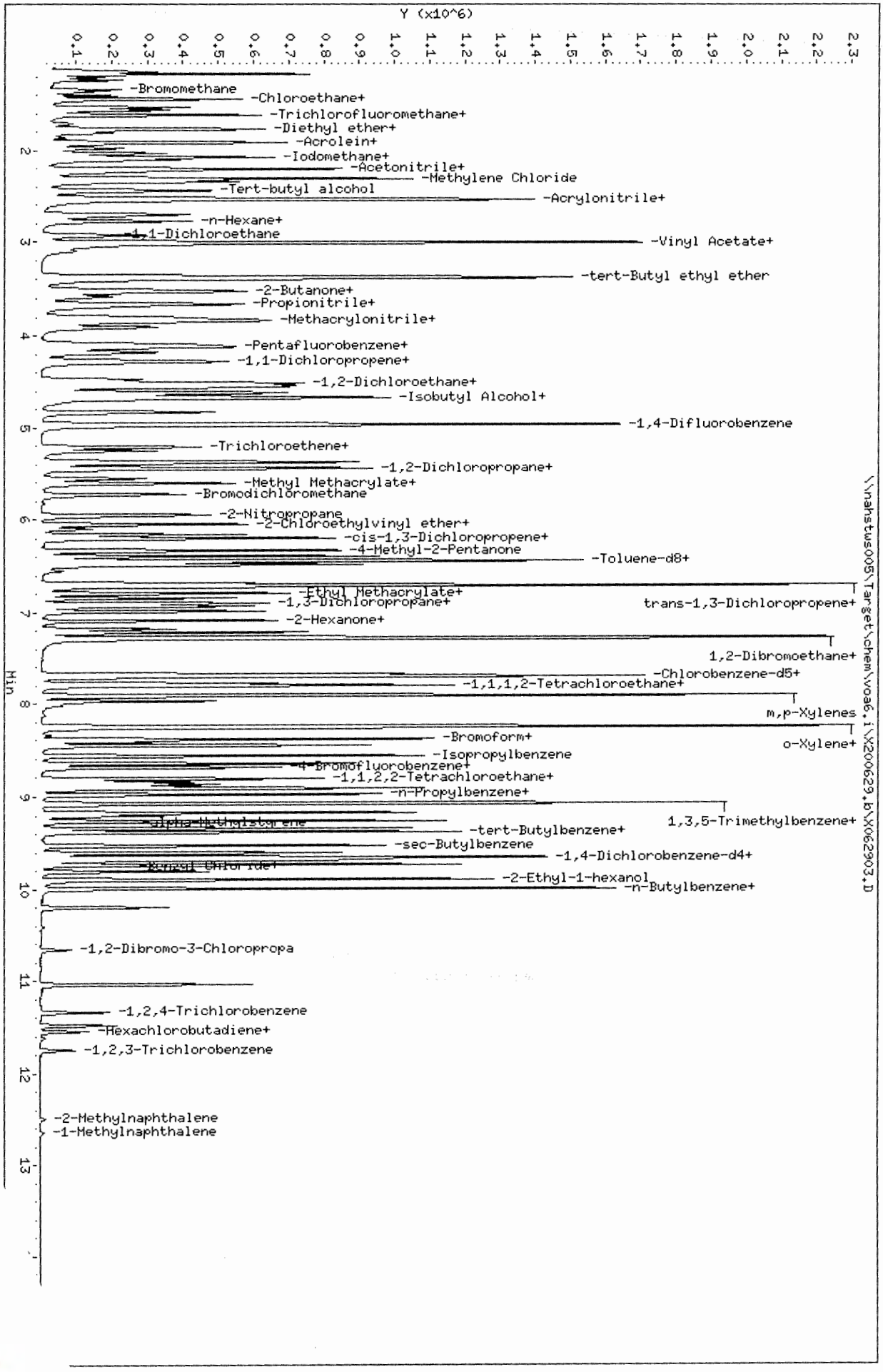
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.189	4.189	(1.000)	240251	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	416817	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	387482	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	184459	50.0000	
$ 30 Dibromofluoromethane	113	4.104	4.104	(0.979)	141605	50.0000	45.96
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	197933	50.0000	44.01
$ 48 Toluene-d8	98	6.389	6.389	(0.833)	475955	50.0000	49.37
$ 69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	188447	50.0000	47.74
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	142429	50.0000	50.47
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.976)	210396	50.0000	47.13
68 1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.914)	173686	50.0000	47.37
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	122287	50.0000	49.13
22 1,1-Dichloroethane	63	2.929	2.929	(0.699)	329881	50.0000	44.21
11 1,1-Dichloroethene	96	1.912	1.912	(0.456)	113307	50.0000	48.30
32 1,1-Dichloropropene	75	4.283	4.283	(0.862)	179167	50.0000	47.74
93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.215)	24411	50.0000	58.76
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	160181	50.0000	46.99(M)
90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	48412	50.0000	54.92
79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.970)	495804	50.0000	49.28
89 1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.102)	14489	50.0000	51.04
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	150246	50.0000	49.15
88 1,2-Dichlorobenzene	146	9.999	9.999	(1.034)	245098	50.0000	49.02

Data File: \\nahstws005\Target\chem\voa6.i\X200629.b\X062903.D Page 2
Report Date: 20-Jul-2020 12:56

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
33	1,2-Dichloroethane	62	4.562	4.562	(0.918)	252173	50.0000	46.16
42	1,2-Dichloropropane	63	5.443	5.443	(1.095)	191954	50.0000	48.86
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	471911	50.0000	49.75
83	1,3-Dichlorobenzene	146	9.612	9.612	(0.994)	272922	50.0000	49.65
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	248727	50.0000	47.68
84	1,4-Dichlorobenzene	146	9.684	9.684	(1.001)	270909	50.0000	48.41
26	2,2-Dichloropropane	77	3.516	3.516	(0.839)	214367	50.0000	45.97
24	2-Butanone	43	3.581	3.581	(0.855)	249320	100.000	89.50
76	2-Chlorotoluene	91	8.974	8.974	(0.928)	416324	50.0000	47.51
52	2-Hexanone	43	7.090	7.090	(0.924)	395553	100.000	98.86
77	4-Chlorotoluene	91	9.075	9.075	(0.939)	486529	50.0000	47.91
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	458858	50.0000	50.61
45	4-Methyl-2-Pentanone	43	6.331	6.331	(0.825)	570940	100.000	97.76
10	Acetone	43	1.976	1.976	(0.472)	205655	100.000	106.52
37	Benzene	78	4.519	4.519	(0.909)	566820	50.0000	48.67
74	Bromobenzene	156	8.810	8.810	(0.911)	164804	50.0000	47.61
29	Bromochloromethane	128	3.803	3.803	(0.908)	80379	50.0000	43.65
39	Bromodichloromethane	83	5.730	5.730	(1.153)	207073	50.0000	48.82
66	Bromoform	173	8.416	8.416	(1.097)	104837	50.0000	50.77
6	Bromomethane	94	1.339	1.339	(0.320)	97828	50.0000	43.49
19	Carbon Disulfide	76	2.069	2.069	(0.494)	723603	100.000	93.77
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	174299	50.0000	47.99
59	Chlorobenzene	112	7.699	7.699	(1.004)	365036	50.0000	48.65
7	Chloroethane	64	1.403	1.403	(0.335)	120104	50.0000	47.03
28	Chloroform	83	3.910	3.910	(0.933)	266360	50.0000	45.27
3	Chloromethane	50	1.081	1.081	(0.258)	253365	50.0000	42.20
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.843)	159819	50.0000	46.25
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	249414	50.0000	49.24
55	Dibromochloromethane	129	7.176	7.176	(0.936)	153498	50.0000	49.50
44	Dibromomethane	93	5.558	5.558	(1.118)	103756	50.0000	47.52
2	Dichlorodifluoromethane	85	0.973	0.973	(0.232)	141366	50.0000	43.17
61	Ethylbenzene	106	7.800	7.800	(1.017)	190124	50.0000	49.69
91	Hexachlorobutadiene	225	11.481	11.481	(1.187)	31839	50.0000	53.87
67	Isopropylbenzene	105	8.566	8.566	(1.117)	550722	50.0000	50.97
62	m,p-Xylenes	106	7.907	7.907	(1.031)	453395	100.000	101.09
17	Methylene Chloride	84	2.306	2.306	(0.550)	157039	50.0000	44.68
87	n-Butylbenzene	91	9.999	9.999	(1.034)	417154	50.0000	51.04
73	n-Propylbenzene	91	8.917	8.917	(0.922)	675539	50.0000	49.72
92	Naphthalene	128	11.546	11.546	(1.194)	84957	50.0000	58.33
63	o-Xylene	106	8.244	8.244	(1.075)	228343	50.0000	49.99
81	sec-Butylbenzene	105	9.526	9.526	(0.985)	528116	50.0000	50.04
64	Styrene	104	8.258	8.258	(1.077)	401011	50.0000	49.63
78	tert-Butylbenzene	119	9.340	9.340	(0.966)	366725	50.0000	49.22
56	Tetrachloroethene	164	6.933	6.933	(0.904)	103154	50.0000	51.44
50	Toluene	91	6.453	6.453	(0.841)	571459	50.0000	49.55
20	trans-1,2-Dichloroethene	96	2.528	2.528	(0.603)	131686	50.0000	48.22
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	225867	50.0000	48.09
38	Trichloroethene	130	5.207	5.207	(1.048)	140863	50.0000	51.14
8	Trichlorofluoromethane	101	1.561	1.561	(0.373)	209343	50.0000	48.90
5	Vinyl Chloride	62	1.145	1.145	(0.273)	215784	50.0000	45.41

QC Flag Legend

M - Compound response manually integrated.



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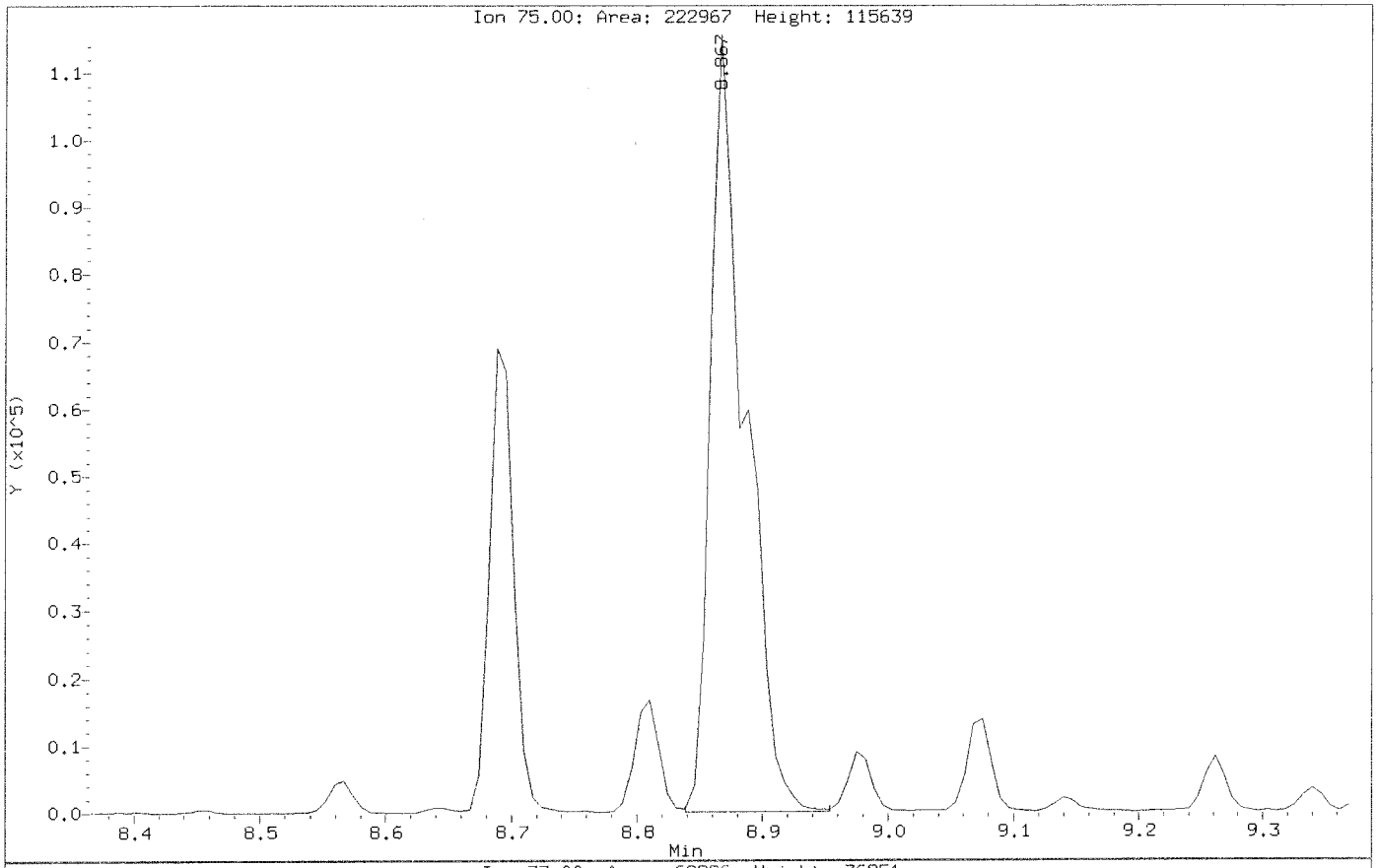
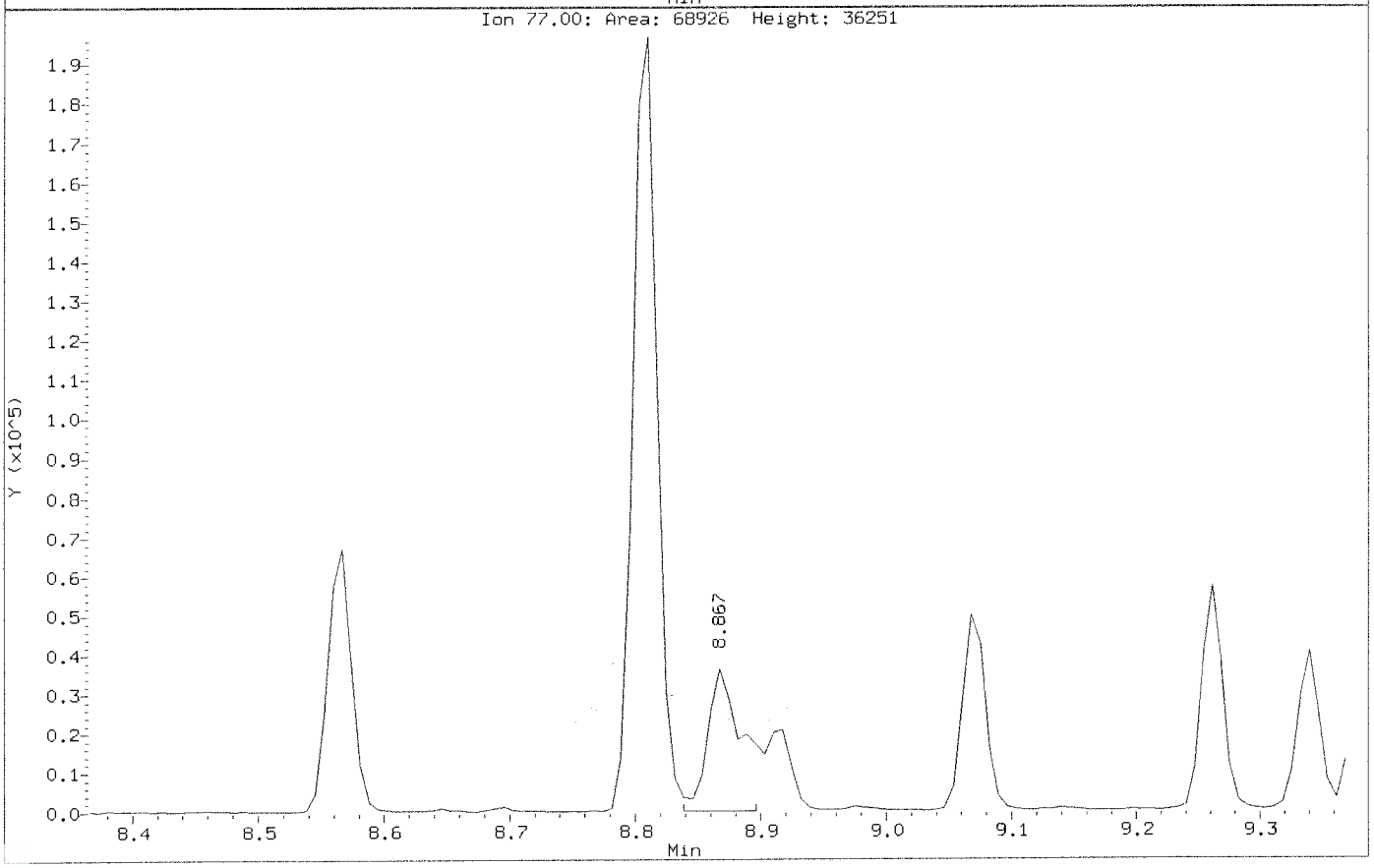
Date : 29-JUN-2020 10:50
Client ID: CCV
Sample Info: CCV;CCV;2;;;
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\nahstws005\Target\chem\voa6.i\X200629.b\Before\X062903.D
Injection Date: 29-JUN-2020 10:50
Instrument: voa6.i
Client Sample ID: CCV

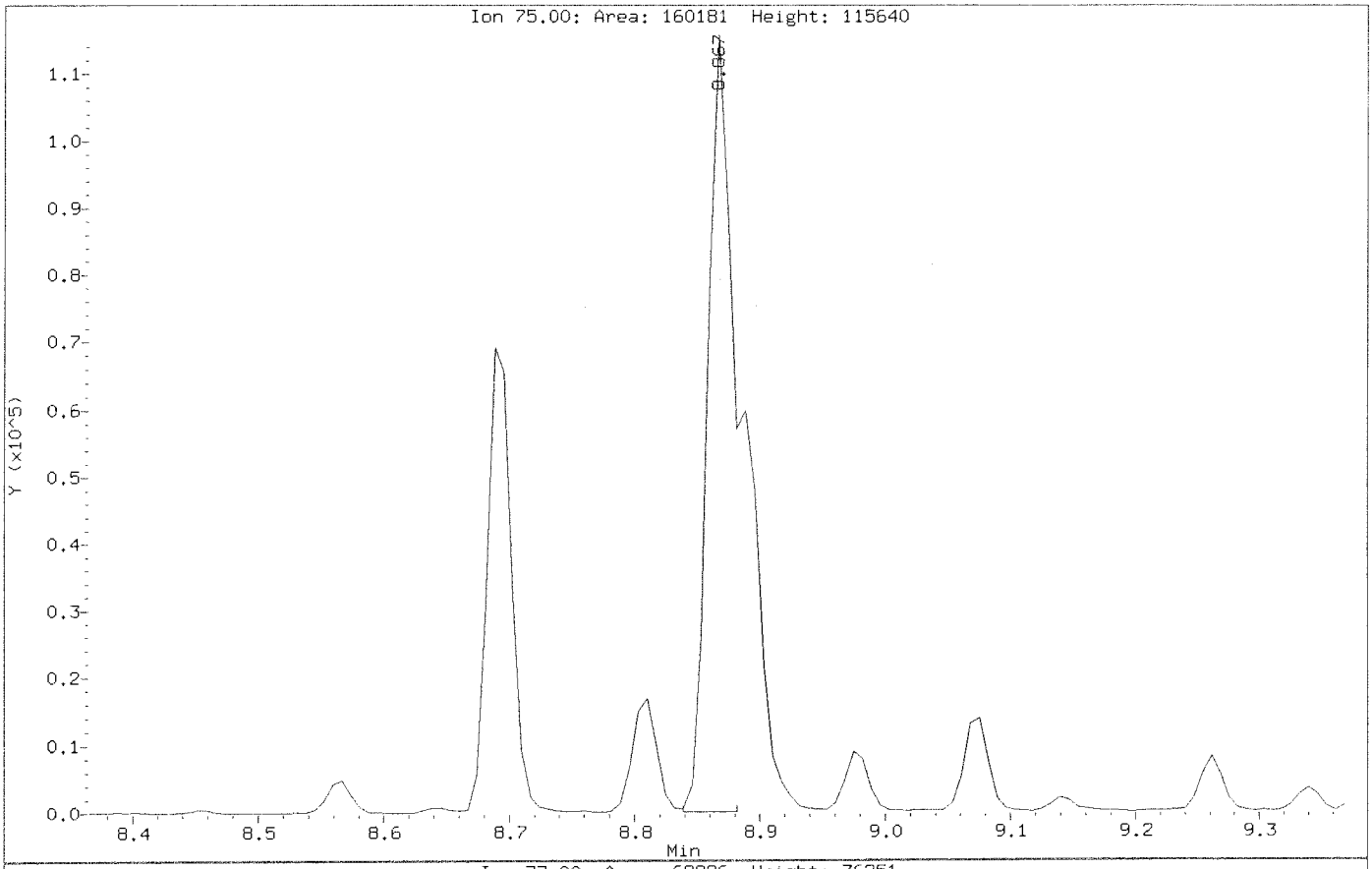
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

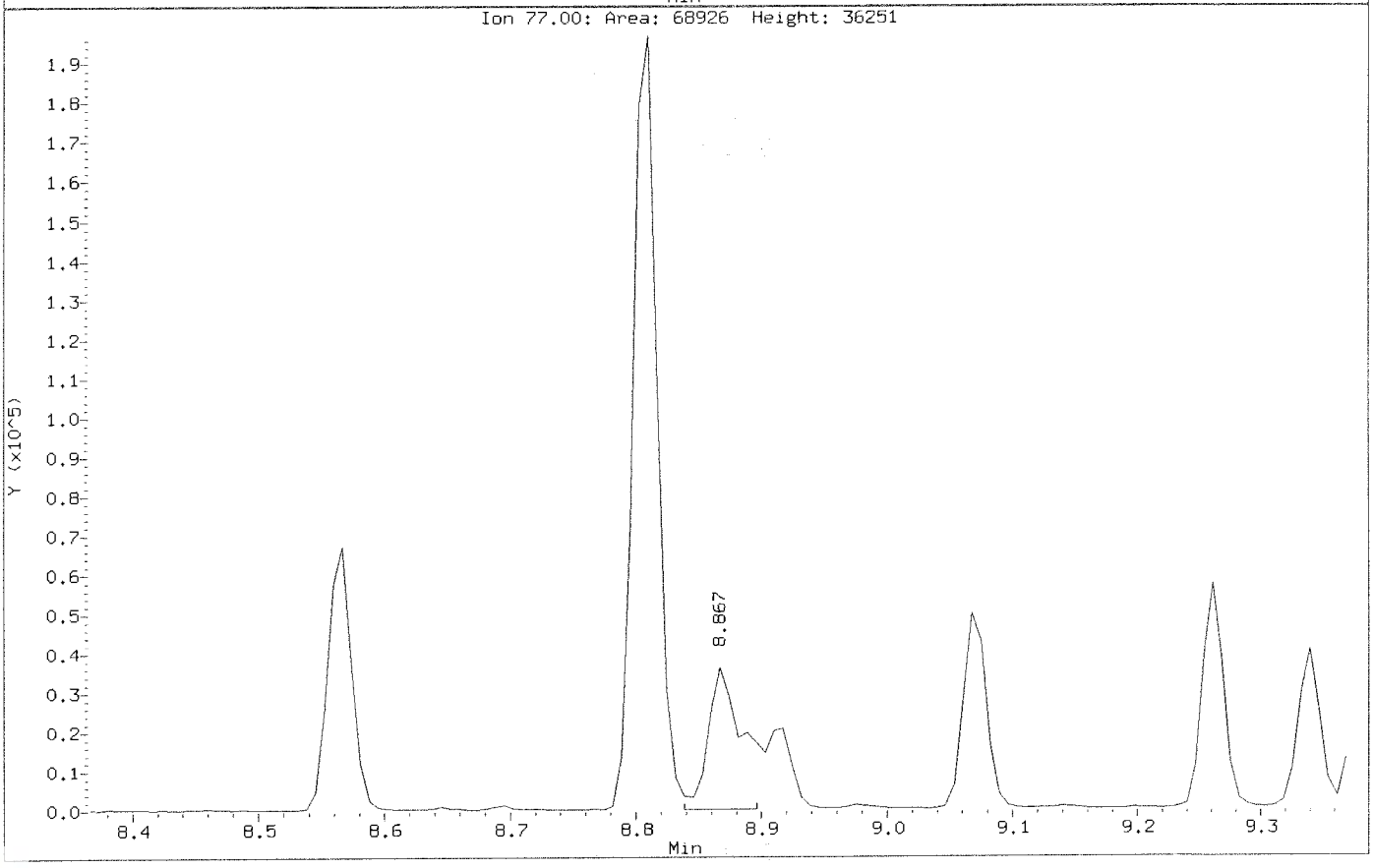




Data File: \\nahstws005\Target\chem\voa6.i\X200629.b\X062903.D
Injection Date: 29-JUN-2020 10:50
Instrument: voa6.i
Client Sample ID: CCV

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





Data File: \\nahstws005\Target\chem\voa6.i\X200629.b\X062905.D Page 1
Report Date: 20-Jul-2020 12:56

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200629.b\X062905.D
Lab Smp Id: VLCSW-200629 Client Smp ID: VLCSW-200629
Inj Date : 29-JUN-2020 11:38
Operator : PC Inst ID: voa6.i
Smp Info : VLCSW-200629;VLCSW-200629;3;;LCS
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200629.b\8260W.m
Meth Date : 20-Jul-2020 12:56 voa6.i Quant Type: ISTD
Cal Date : 19-JUN-2020 14:17 Cal File: X061908.D
Als bottle: 5 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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

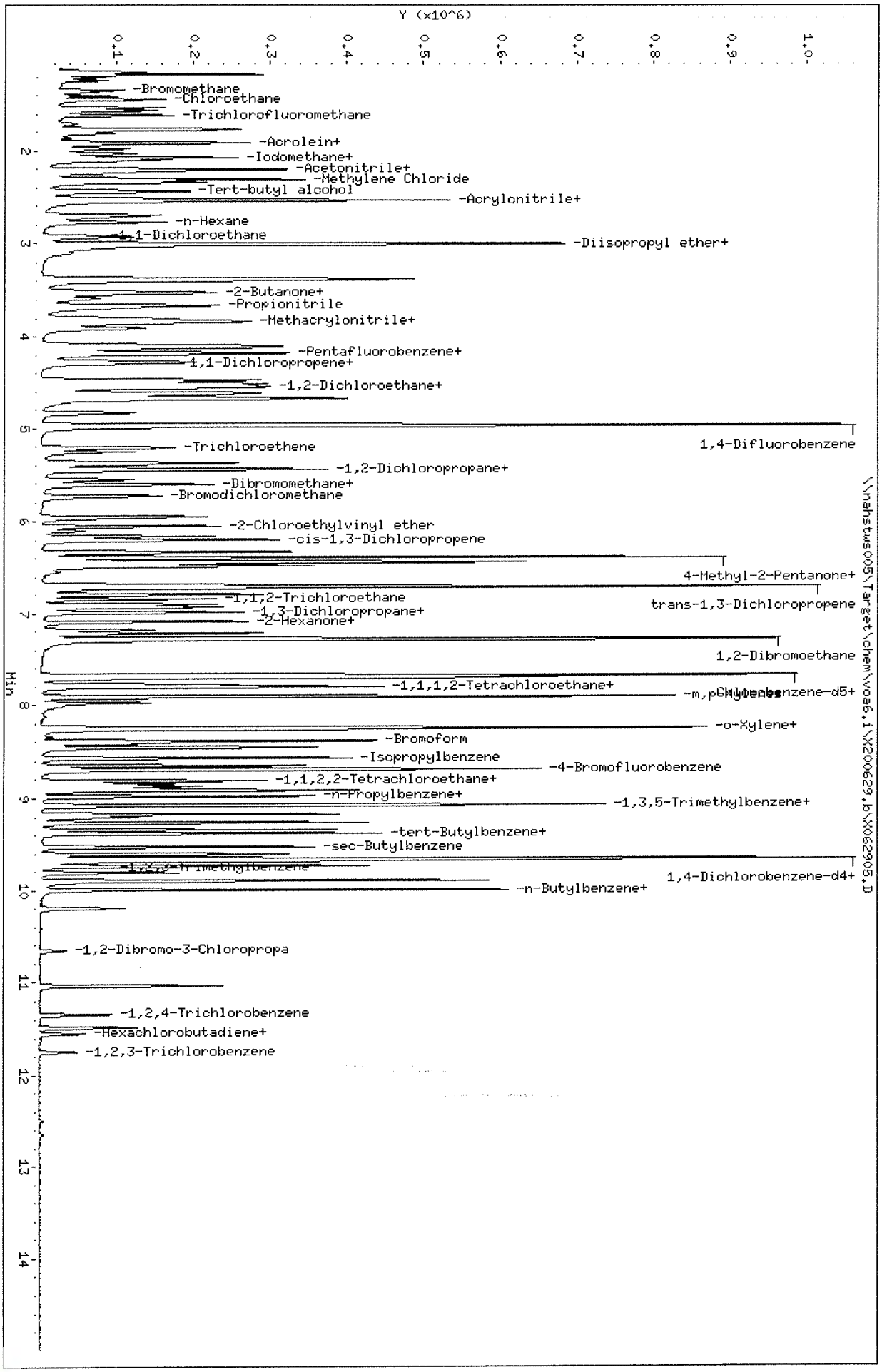
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
*	1 Pentafluorobenzene	168	4.189	4.189	(1.000)	238934	50.0000	
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	428437	50.0000	
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	392569	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	182871	50.0000	
$	30 Dibromofluoromethane	113	4.103	4.104	(0.979)	139938	45.6705	45.67
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	198753	44.4425	44.44
$	48 Toluene-d8	98	6.389	6.389	(0.833)	462964	47.4069	47.40
$	69 4-Bromofluorobenzene	95	8.688	8.695	(1.133)	181170	45.3020	45.30
	60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	54303	18.9963	18.99
	31 1,1,1-Trichloroethane	97	4.089	4.089	(0.976)	83803	18.8790	18.87
	68 1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.914)	71231	19.5989	19.59
	53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	48953	19.4159	19.41
	22 1,1-Dichloroethane	63	2.929	2.929	(0.699)	131408	17.7098	17.70
	11 1,1-Dichloroethene	96	1.919	1.912	(0.458)	43080	18.4662	18.46
	32 1,1-Dichloropropene	75	4.290	4.283	(0.863)	70621	18.3105	18.31
	93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.215)	12557	29.7560	29.75
	71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	63966	18.9310	18.93 (M)
	90 1,2,4-Trichlorobenzene	180	11.345	11.338	(1.173)	23539	26.3163	26.31
	79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.970)	186660	18.7168	18.71
	89 1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.102)	5953	21.0721	21.07
	57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	60545	19.5528	19.55
	88 1,2-Dichlorobenzene	146	9.992	9.999	(1.033)	97738	19.7211	19.72

Data File: \\nahstws005\Target\chem\voa6.i\X200629.b\X062905.D Page 2
Report Date: 20-Jul-2020 12:56

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
33	1,2-Dichloroethane	62	4.562	4.562	(0.918)	105077	18.7163	18.71
42	1,2-Dichloropropane	63	5.443	5.443	(1.095)	77969	19.3112	19.31
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	176737	18.7956	18.79
83	1,3-Dichlorobenzene	146	9.605	9.612	(0.993)	104524	19.1837	19.18
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	101156	19.1433	19.14
84	1,4-Dichlorobenzene	146	9.683	9.684	(1.001)	102767	18.5237	18.52
26	2,2-Dichloropropane	77	3.516	3.516	(0.839)	85485	18.4337	18.43
24	2-Butanone	43	3.581	3.581	(0.855)	97997	34.8985	34.89
76	2-Chlorotoluene	91	8.974	8.974	(0.928)	159719	18.3877	18.38
52	2-Hexanone	43	7.090	7.090	(0.924)	161415	39.8230	39.82
77	4-Chlorotoluene	91	9.075	9.075	(0.939)	185368	18.4148	18.41
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	167167	18.6009	18.60
45	4-Methyl-2-Pentanone	43	6.324	6.331	(0.824)	232115	39.2318	39.23
10	Acetone	43	1.976	1.976	(0.472)	98577	50.0216	50.02
37	Benzene	78	4.519	4.519	(0.909)	230590	19.2641	19.26
74	Bromobenzene	156	8.810	8.810	(0.911)	63013	18.3643	18.36
29	Bromochloromethane	128	3.803	3.803	(0.908)	32789	17.9072	17.90
39	Bromodichloromethane	83	5.730	5.730	(1.153)	82204	18.8562	18.85
66	Bromoform	173	8.416	8.416	(1.097)	41750	19.9599	19.95
6	Bromomethane	94	1.339	1.339	(0.320)	40321	18.0262	18.02
19	Carbon Disulfide	76	2.069	2.069	(0.494)	281650	36.7033	36.70
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	66764	17.8850	17.88
59	Chlorobenzene	112	7.699	7.699	(1.004)	142944	18.8066	18.80
7	Chloroethane	64	1.403	1.403	(0.335)	46854	18.4501	18.45
28	Chloroform	83	3.910	3.910	(0.933)	108530	18.5489	18.54
3	Chloromethane	50	1.081	1.081	(0.258)	101046	16.9266	16.92
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.843)	63622	18.5140	18.51
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	100696	19.3420	19.34
55	Dibromochloromethane	129	7.176	7.176	(0.936)	60963	19.4046	19.40
44	Dibromomethane	93	5.558	5.558	(1.118)	42461	18.9207	18.92
2	Dichlorodifluoromethane	85	0.973	0.973	(0.232)	54683	17.3421	17.34
61	Ethylbenzene	106	7.800	7.800	(1.017)	72969	18.8256	18.82
91	Hexachlorobutadiene	225	11.481	11.481	(1.187)	18287	30.3607	30.36
67	Isopropylbenzene	105	8.566	8.566	(1.117)	207157	18.9269	18.92
62	m,p-Xylenes	106	7.907	7.907	(1.031)	176608	38.8683	38.86
17	Methylene Chloride	84	2.306	2.306	(0.550)	66664	17.9133	17.91
87	n-Butylbenzene	91	9.999	9.999	(1.034)	154154	19.0259	19.02
73	n-Propylbenzene	91	8.917	8.917	(0.922)	250364	18.5881	18.58
92	Naphthalene	128	11.546	11.546	(1.194)	37517	25.6684	25.66
63	o-Xylene	106	8.244	8.244	(1.075)	88625	19.1517	19.15
81	sec-Butylbenzene	105	9.526	9.526	(0.985)	198278	18.9531	18.95
64	Styrene	104	8.265	8.258	(1.078)	160834	19.6495	19.64
78	tert-Butylbenzene	119	9.340	9.340	(0.966)	135078	18.2898	18.28
56	Tetrachloroethene	164	6.933	6.933	(0.904)	39841	19.6105	19.61
50	Toluene	91	6.446	6.453	(0.840)	227527	19.4731	19.47
20	trans-1,2-Dichloroethene	96	2.535	2.528	(0.605)	53056	19.5386	19.53
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	93133	19.2924	19.29
38	Trichloroethene	130	5.214	5.207	(1.049)	54691	19.3194	19.31
8	Trichlorofluoromethane	101	1.561	1.561	(0.373)	79465	18.6663	18.66
5	Vinyl Chloride	62	1.138	1.145	(0.272)	83856	17.7475	17.74

QC Flag Legend

M - Compound response manually integrated.



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Sample Info: VLCSW-200629;VLCSW-200629;3;;LCS
Purge Volume: 5.0
Column phase: DB624

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

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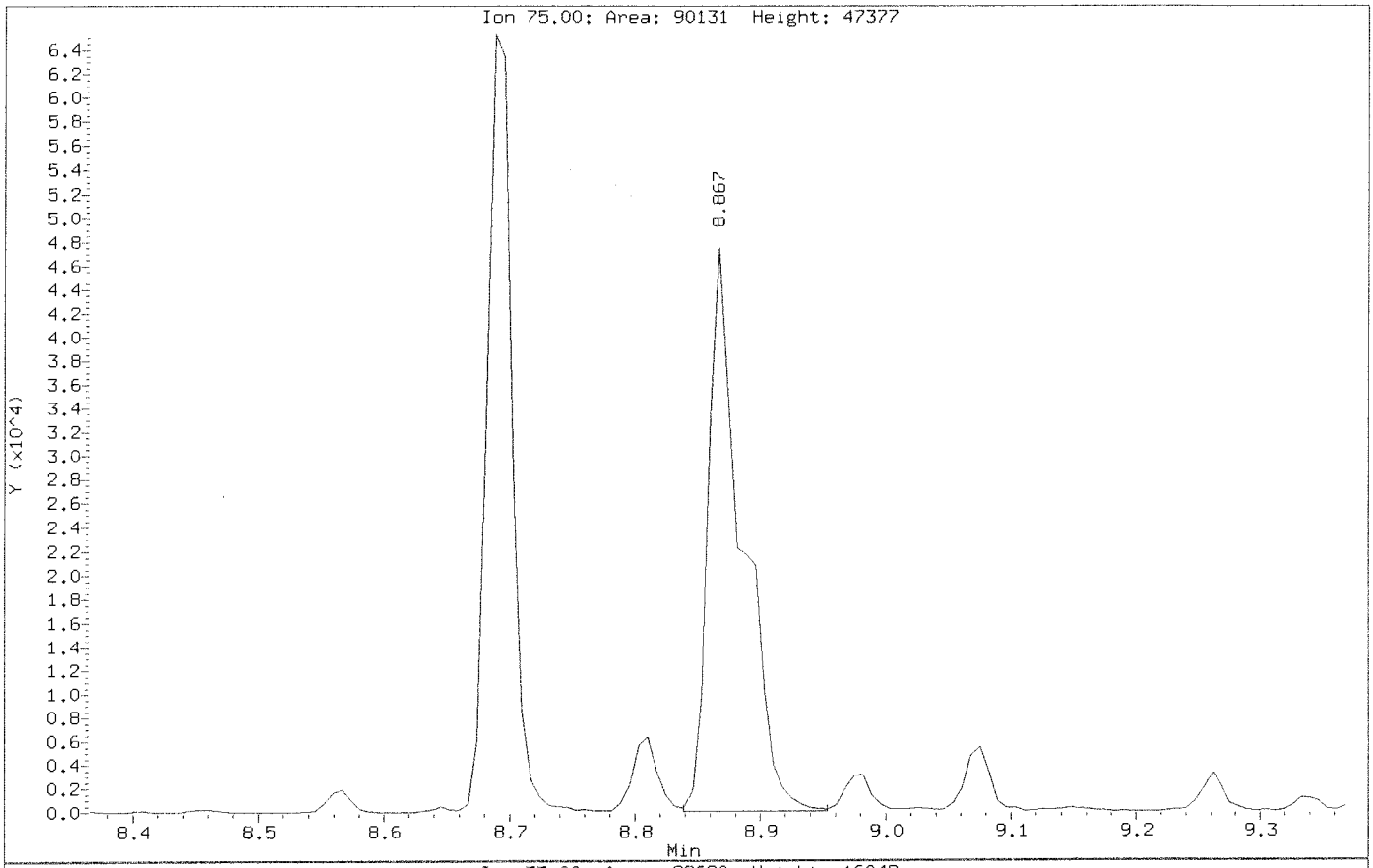
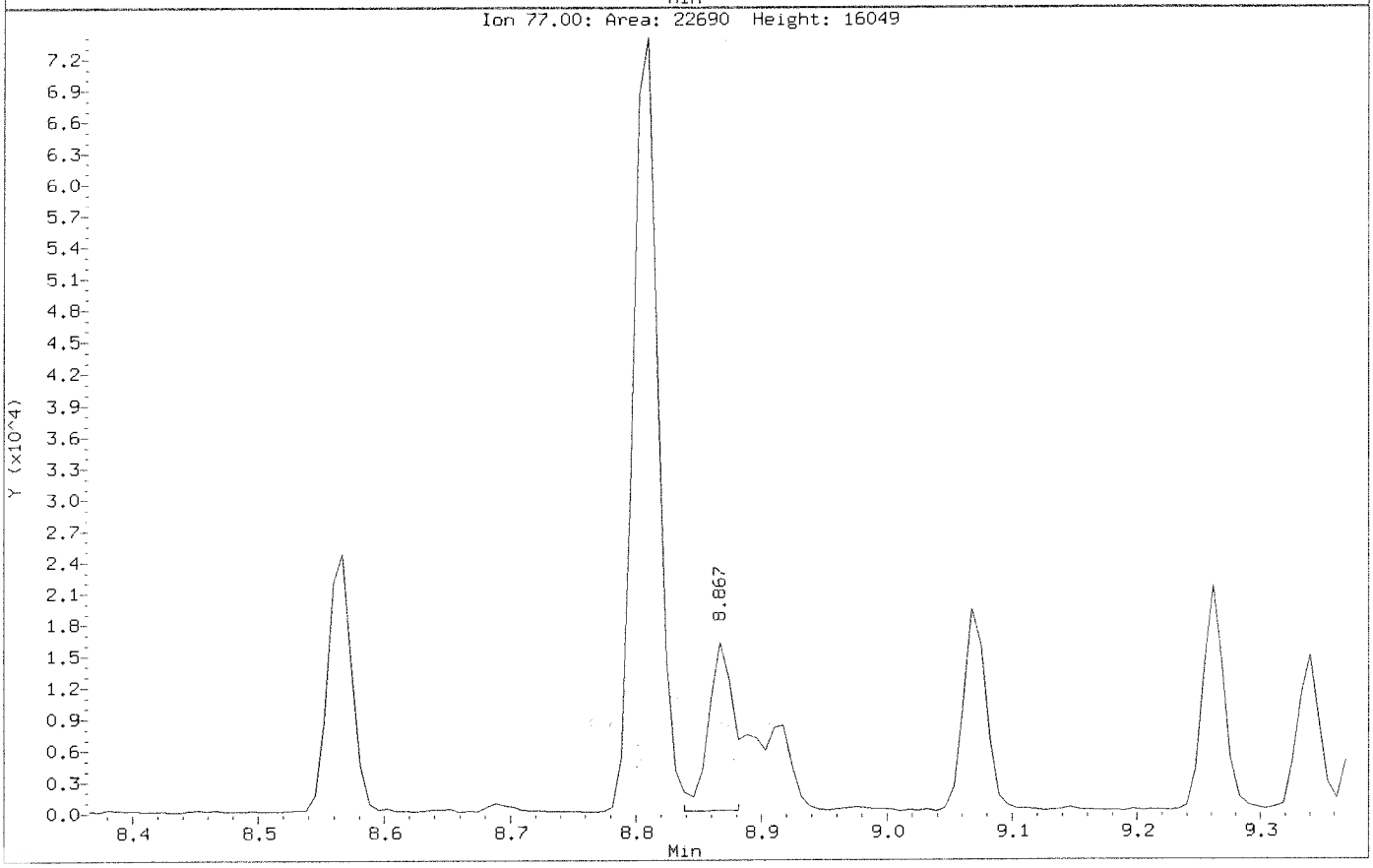
Injection Date: 29-JUN-2020 11:38
Instrument: voa6.i
Client Sample ID: VLCSW-200629

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





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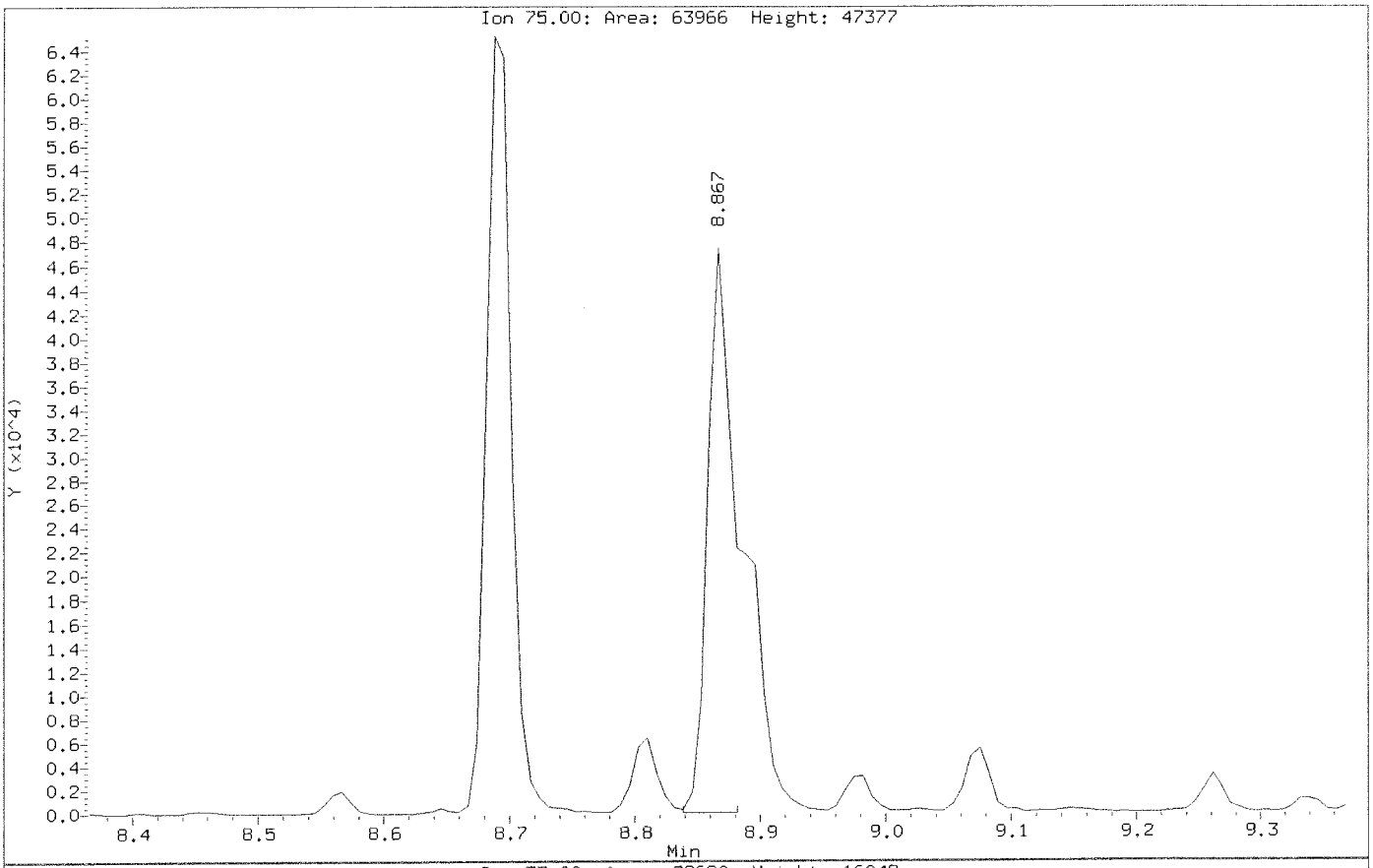
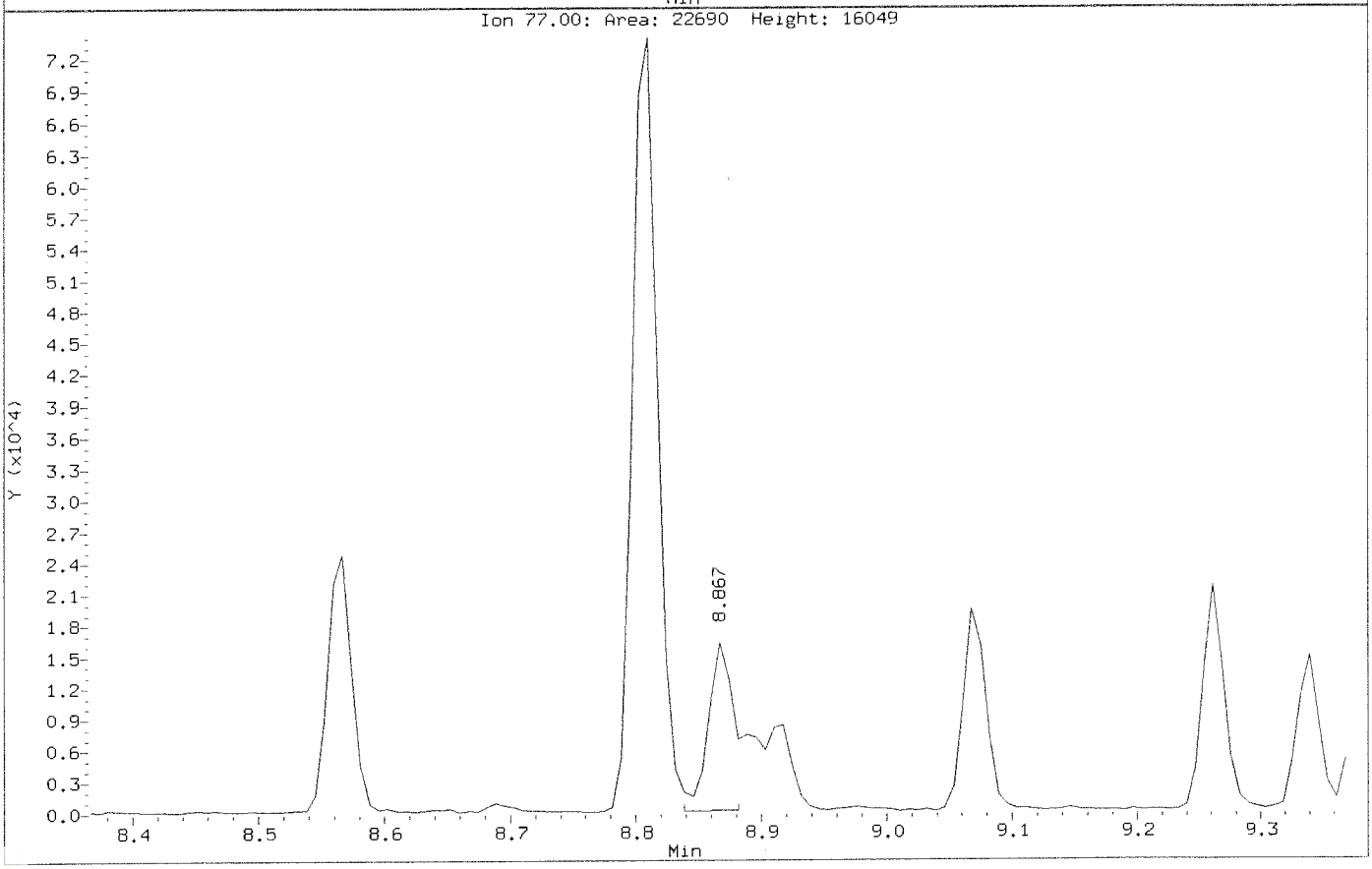
Instrument: voa6.i
Client Sample ID: VLCSW-200629

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





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Report Date: 20-Jul-2020 12:56

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Data file : \\nahstws005\Target\chem\voa6.i\X200629.b\X062907.D
Lab Smp Id: VBLKW-200629 Client Smp ID: VBLKW-200629
Inj Date : 29-JUN-2020 12:26
Operator : PC Inst ID: voa6.i
Smp Info : VBLKW-200629;VBLKW-200629;3;;BLANK
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200629.b\8260W.m
Meth Date : 20-Jul-2020 12:56 voa6.i Quant Type: ISTD
Cal Date : 19-JUN-2020 14:17 Cal File: X061908.D
Als bottle: 7 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

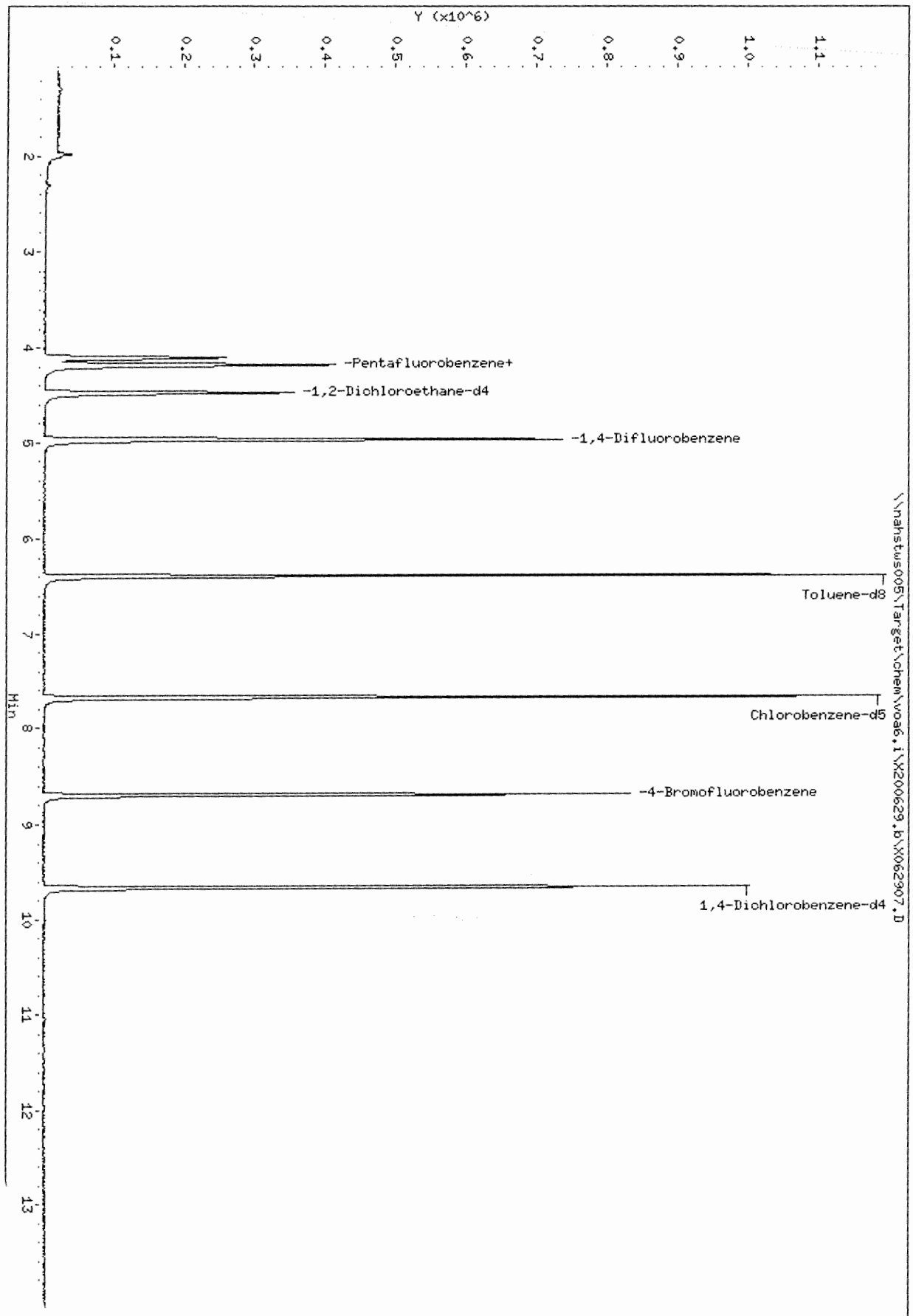
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

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	4.189	(1.000)	315081	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	543047	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	493659	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	223800	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.104	(0.981)	181088	44.8173	44.81
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	254227	43.0896	43.08
$ 48 Toluene-d8	98	6.388	6.389	(0.833)	622142	50.6609	50.66
$ 69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	234867	46.7027	46.70

Data File: \\nahstws005\Target\chem\voa6.i\X200629.b\X062907.D
Date : 29-JUN-2020 12:26
Client ID: VBLKW-200629
Sample Info: VBLKW-200629;VBLKW-200629;3;;BLANK
Purge Volume: 5.0
Column phase: DB624

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



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Report Date: 20-Jul-2020 12:56

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200629.b\X062911.D
Lab Smp Id: HS20061208-15MS Client Smp ID: HS20061208-15MS
Inj Date : 29-JUN-2020 14:02
Operator : PC Inst ID: voa6.i
Smp Info : HS20061208-15MS;HS20061208-15MS;3;;MS
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200629.b\8260W.m
Meth Date : 20-Jul-2020 12:56 voa6.i Quant Type: ISTD
Cal Date : 19-JUN-2020 14:17 Cal File: X061908.D
Als bottle: 11 QC Sample: MS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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

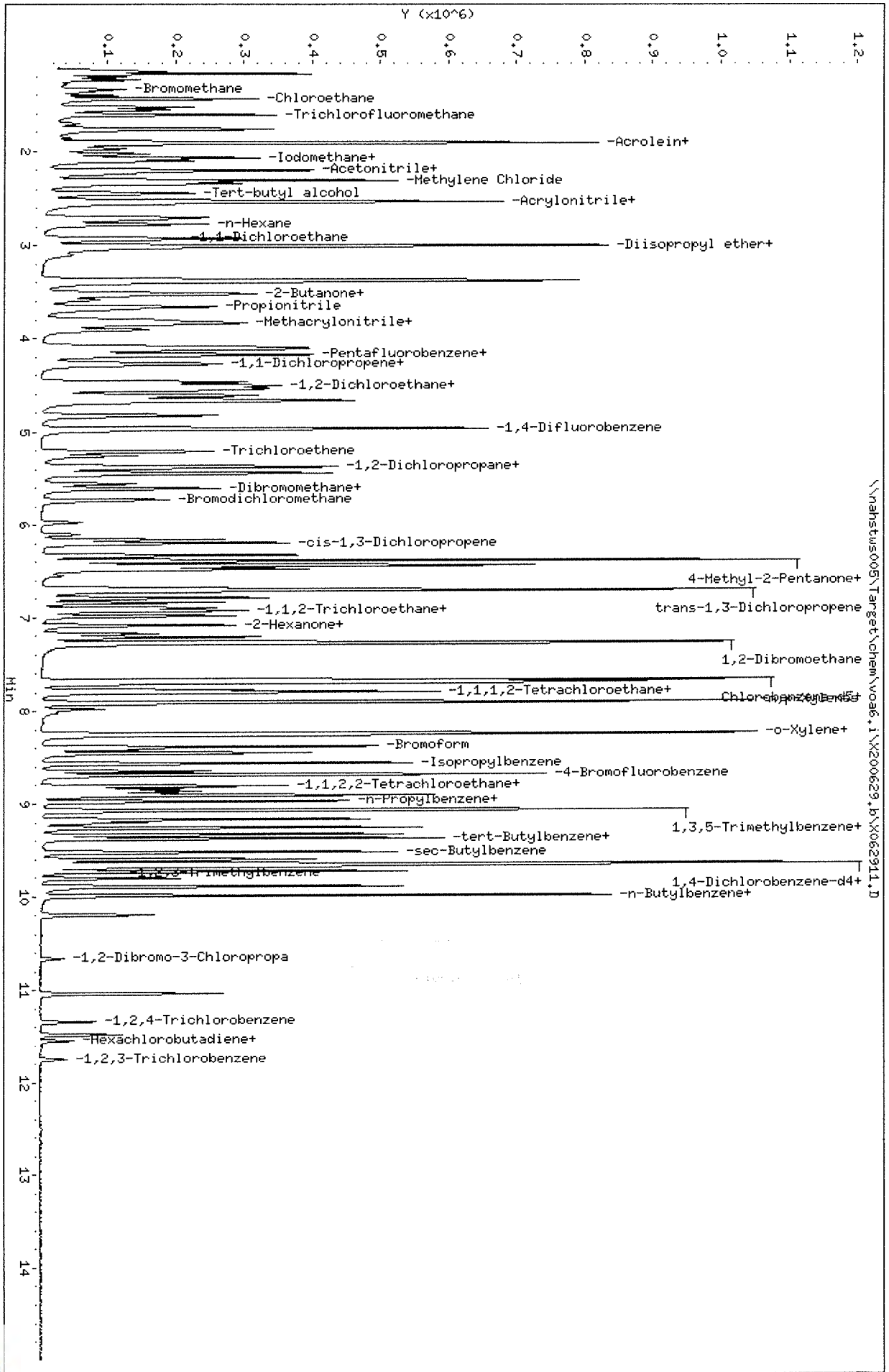
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
*	1 Pentafluorobenzene	168	4.189	4.189	(1.000)	295878	50.0000	
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	475728	50.0000	
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	420412	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	195797	50.0000	
$	30 Dibromofluoromethane	113	4.103	4.104	(0.979)	163136	42.9947	42.99
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	214555	38.6623	38.66
$	48 Toluene-d8	98	6.388	6.389	(0.833)	573451	54.8317	54.83
$	69 4-Bromofluorobenzene	95	8.688	8.695	(1.133)	206451	48.2047	48.20
	60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	65435	21.3745	21.37
	31 1,1,1-Trichloroethane	97	4.089	4.089	(0.976)	105452	19.1840	19.18
	68 1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.914)	83499	21.4577	21.45
	53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	55549	20.5729	20.57
	22 1,1-Dichloroethane	63	2.922	2.929	(0.697)	325477	35.4224	35.42
	11 1,1-Dichloroethene	96	1.912	1.912	(0.456)	173939	60.2092	60.20
	32 1,1-Dichloropropene	75	4.283	4.283	(0.862)	90461	21.1230	21.12
	93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.215)	10042	21.6904	21.69
	71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	70549	19.5009	19.50(M)
	90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	20882	21.5951	21.59
	79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.970)	245699	23.0103	23.01
	9 1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.102)	5960	19.6950	19.69
	1,2-Dibromoethane	107	7.262	7.262	(0.947)	70129	21.1480	21.14
	',2-Dichlorobenzene	146	9.999	9.999	(1.034)	117659	22.1734	22.17

Data File: \\nahstws005\Target\chem\voa6.i\X200629.b\X062911.D Page 2
Report Date: 20-Jul-2020 12:56

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
33 1,2-Dichloroethane	62	4.562	4.562	(0.918)	119888	19.2317	19.23
42 1,2-Dichloropropane	63	5.443	5.443	(1.095)	90221	20.1245	20.12
75 1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	236485	23.4894	23.48
83 1,3-Dichlorobenzene	146	9.612	9.612	(0.994)	132283	22.6756	22.67
54 1,3-Dichloropropane	76	6.983	6.983	(0.910)	113826	20.1145	20.11
84 1,4-Dichlorobenzene	146	9.683	9.684	(1.001)	130857	22.0298	22.02
26 2,2-Dichloropropane	77	3.516	3.516	(0.839)	108760	18.9390	18.93
24 2-Butanone	43	3.581	3.581	(0.855)	104872	30.0526	30.05
76 2-Chlorotoluene	91	8.974	8.974	(0.928)	205002	22.0429	22.04
52 2-Hexanone	43	7.090	7.090	(0.924)	176208	40.5935	40.59
77 4-Chlorotoluene	91	9.075	9.075	(0.939)	237881	22.0714	22.07
82 p-Isopropyltoluene	119	9.655	9.655	(0.999)	237752	24.7084	24.70
45 4-Methyl-2-Pentanone	43	6.324	6.331	(0.824)	252772	39.8937	39.89
10 Acetone	43	1.976	1.976	(0.472)	94829	38.2890	38.28
37 Benzene	78	4.519	4.519	(0.909)	270840	20.3774	20.37
74 Bromobenzene	156	8.810	8.810	(0.911)	77531	21.1036	21.10
29 Bromochloromethane	128	3.803	3.803	(0.908)	37412	16.4997	16.49
39 Bromodichloromethane	83	5.729	5.730	(1.153)	95645	19.7584	19.75
66 Bromoform	173	8.416	8.416	(1.097)	47000	20.9817	20.98
6 Bromomethane	94	1.339	1.339	(0.320)	43406	15.6707	15.67
19 Carbon Disulfide	76	2.069	2.069	(0.494)	354659	37.3225	37.32
34 Carbon Tetrachloride	117	4.268	4.268	(0.859)	88403	21.3276	21.32
59 Chlorobenzene	112	7.699	7.699	(1.004)	172547	21.1979	21.19
7 Chloroethane	64	1.403	1.403	(0.335)	67766	21.5491	21.54
28 Chloroform	83	3.910	3.910	(0.933)	127075	17.5386	17.53
3 Chloromethane	50	1.081	1.081	(0.258)	103331	13.9780	13.97
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.843)	92584	21.7567	21.75
46 cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	116203	20.1018	20.10
55 Dibromochloromethane	129	7.176	7.176	(0.936)	70433	20.9342	20.93
44 Dibromomethane	93	5.558	5.558	(1.118)	48229	19.3546	19.35
2 Dichlorodifluoromethane	85	0.973	0.973	(0.232)	51773	13.4715	13.47
61 Ethylbenzene	106	7.800	7.800	(1.017)	93641	22.5589	22.55
91 Hexachlorobutadiene	225	11.481	11.481	(1.187)	17208	26.4384	26.43
67 Isopropylbenzene	105	8.566	8.566	(1.117)	281744	24.0367	24.03
62 m,p-Xylenes	106	7.907	7.907	(1.031)	226280	46.5021	46.50
17 Methylene Chloride	84	2.306	2.306	(0.550)	73768	15.7915	15.79
87 n-Butylbenzene	91	9.999	9.999	(1.034)	218726	25.2133	25.21
73 n-Propylbenzene	91	8.917	8.917	(0.922)	347265	24.0803	24.08
92 Naphthalene	128	11.546	11.546	(1.194)	33258	21.0808	21.08
63 o-Xylene	106	8.244	8.244	(1.075)	112300	22.6607	22.66
81 sec-Butylbenzene	105	9.526	9.526	(0.985)	279812	24.9810	24.98
64 Styrene	104	8.265	8.258	(1.078)	193434	22.0672	22.06
78 tert-Butylbenzene	119	9.340	9.340	(0.966)	190896	24.1413	24.14
56 Tetrachloroethene	164	6.933	6.933	(0.904)	53377	24.5331	24.53
50 Toluene	91	6.446	6.453	(0.840)	277110	22.1461	22.14
20 trans-1,2-Dichloroethene	96	2.535	2.528	(0.605)	64063	19.0516	19.05
51 trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	104341	19.4655	19.46
38 Trichloroethene	130	5.214	5.207	(1.049)	78711	25.0404	25.04
8 Trichlorofluoromethane	101	1.561	1.561	(0.373)	102820	19.5041	19.50
5 Vinyl Chloride	62	1.138	1.145	(0.272)	108830	18.6002	18.60

QC Flag Legend

M - Compound response manually integrated.



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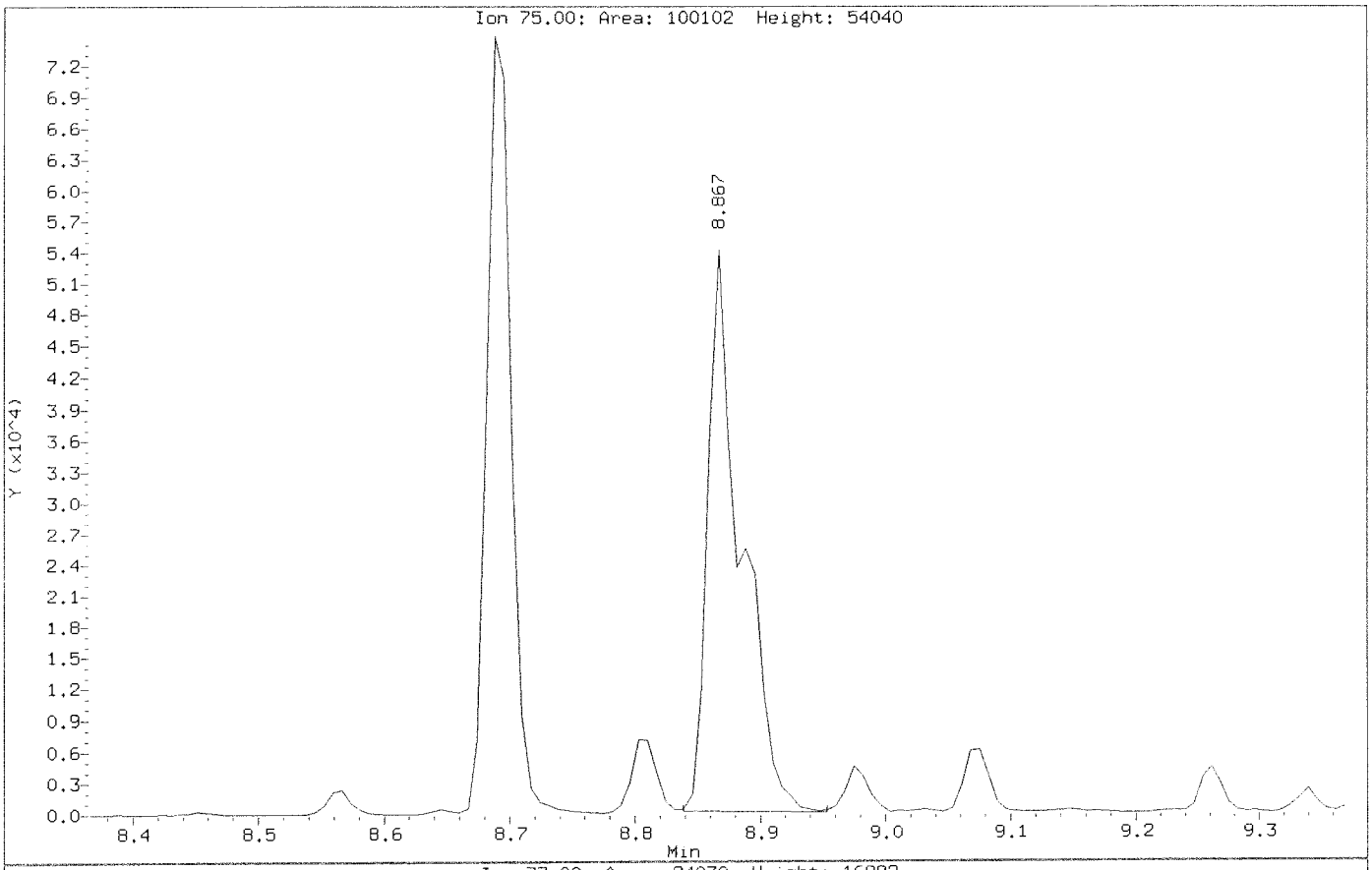
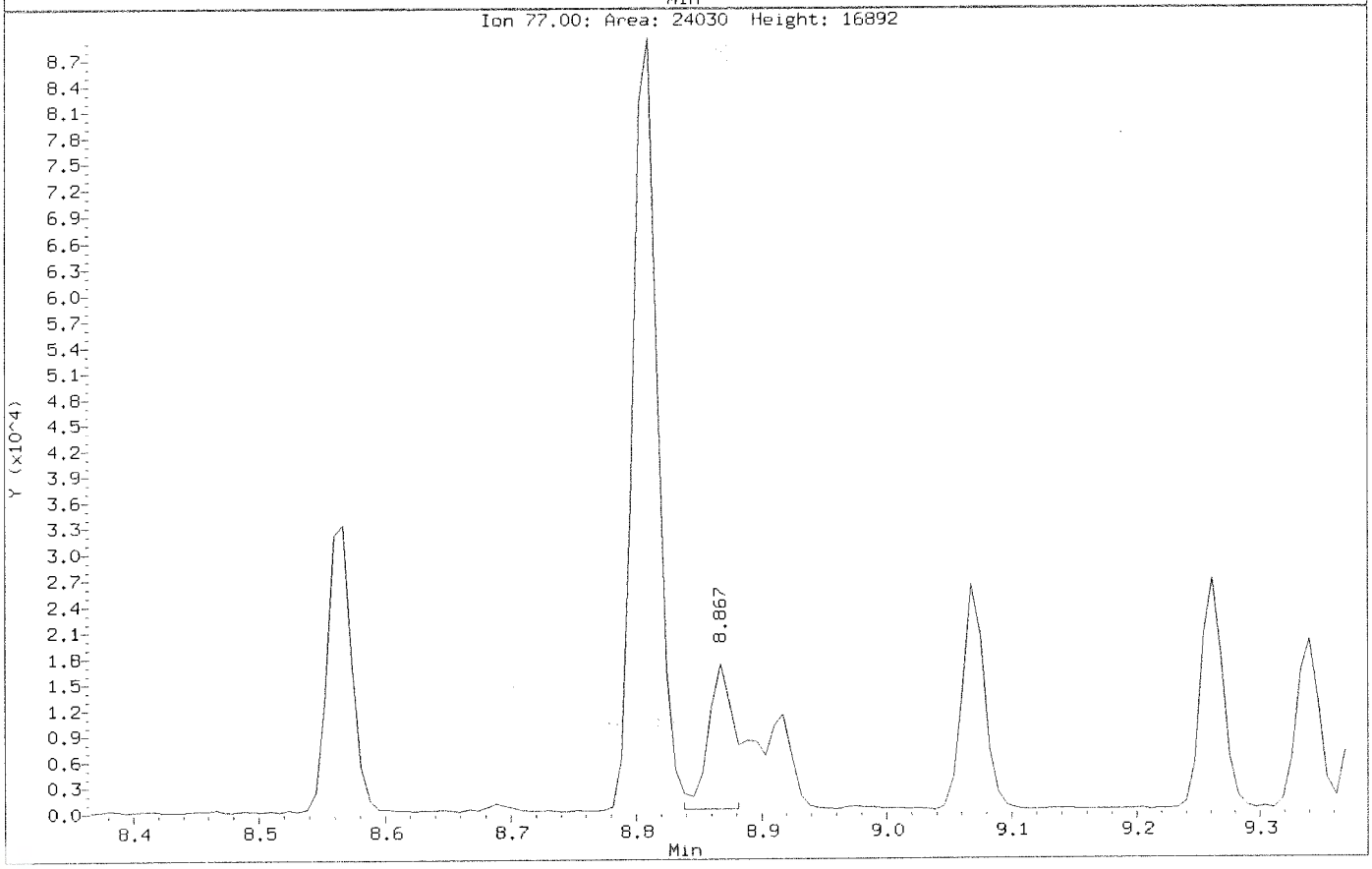
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\nahstws005\Target\chem\voa6.i\X200629.b\Before\X062911.D
Injection Date: 29-JUN-2020 14:02
Instrument: voa6.i
Client Sample ID: HS20061208-15MS

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





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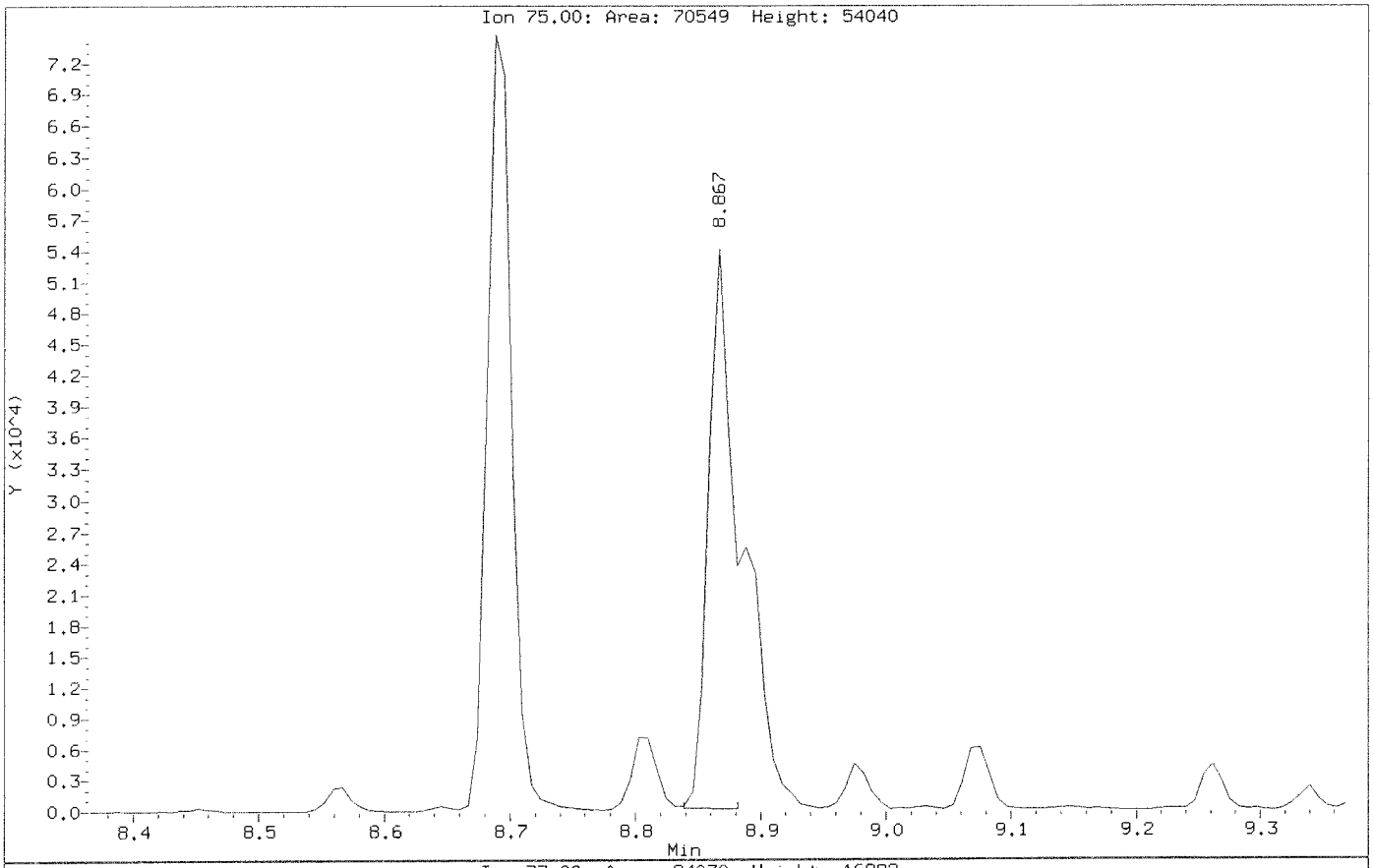
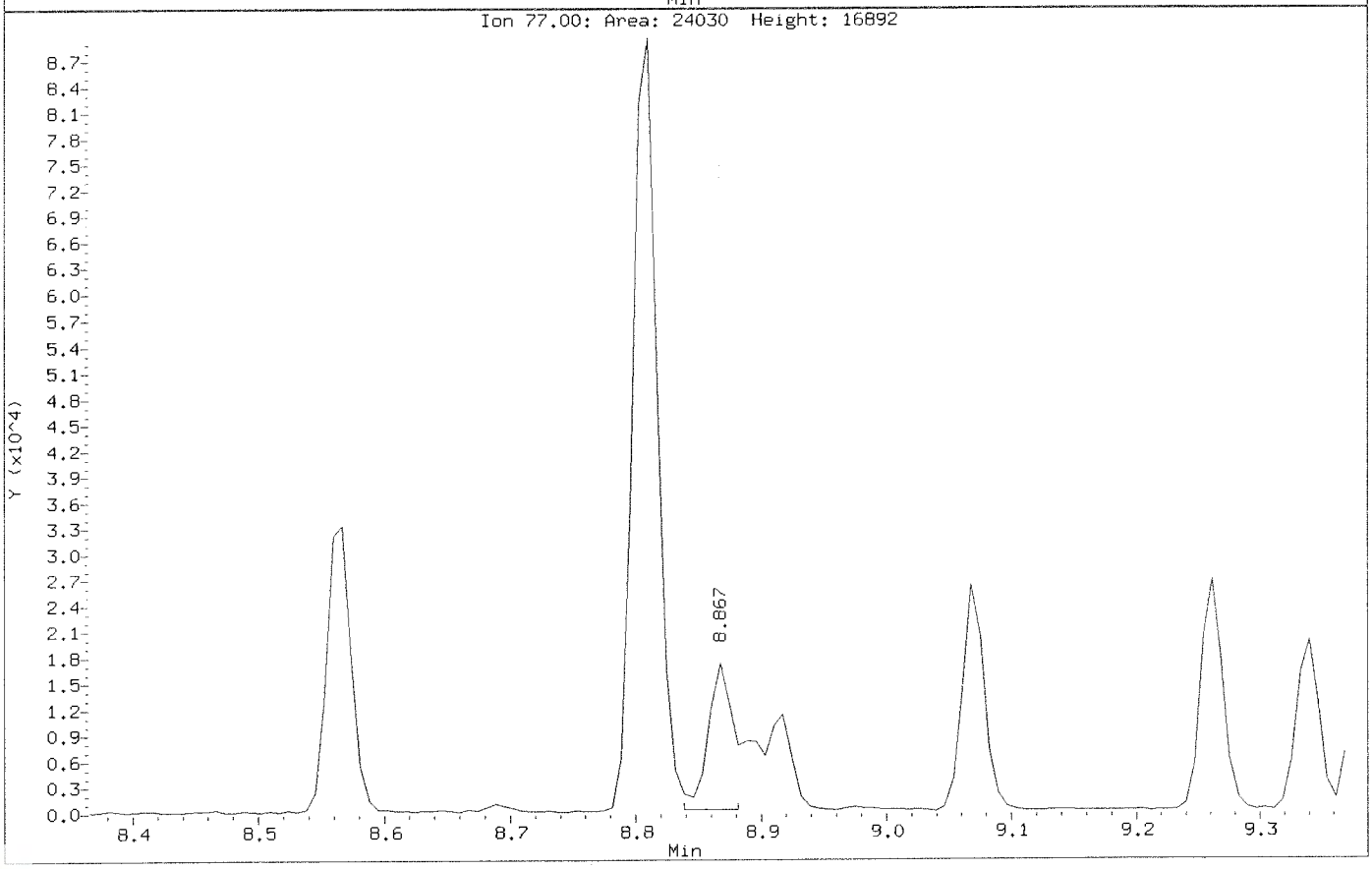
Injection Date: 29-JUN-2020 14:02
Instrument: voa6.i
Client Sample ID: HS20061208-15MS

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





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Report Date: 20-Jul-2020 12:56

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Misc Info : HS18090001;WATER;0;1;
Comment   :
Method   : \\nahstws005\Target\chem\voa6.i\X200629.b\8260W.m
Meth Date : 20-Jul-2020 12:56 voa6.i Quant Type: ISTD
Cal Date : 19-JUN-2020 14:17 Cal File: X061908.D
Als bottle: 11 QC Sample: MSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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

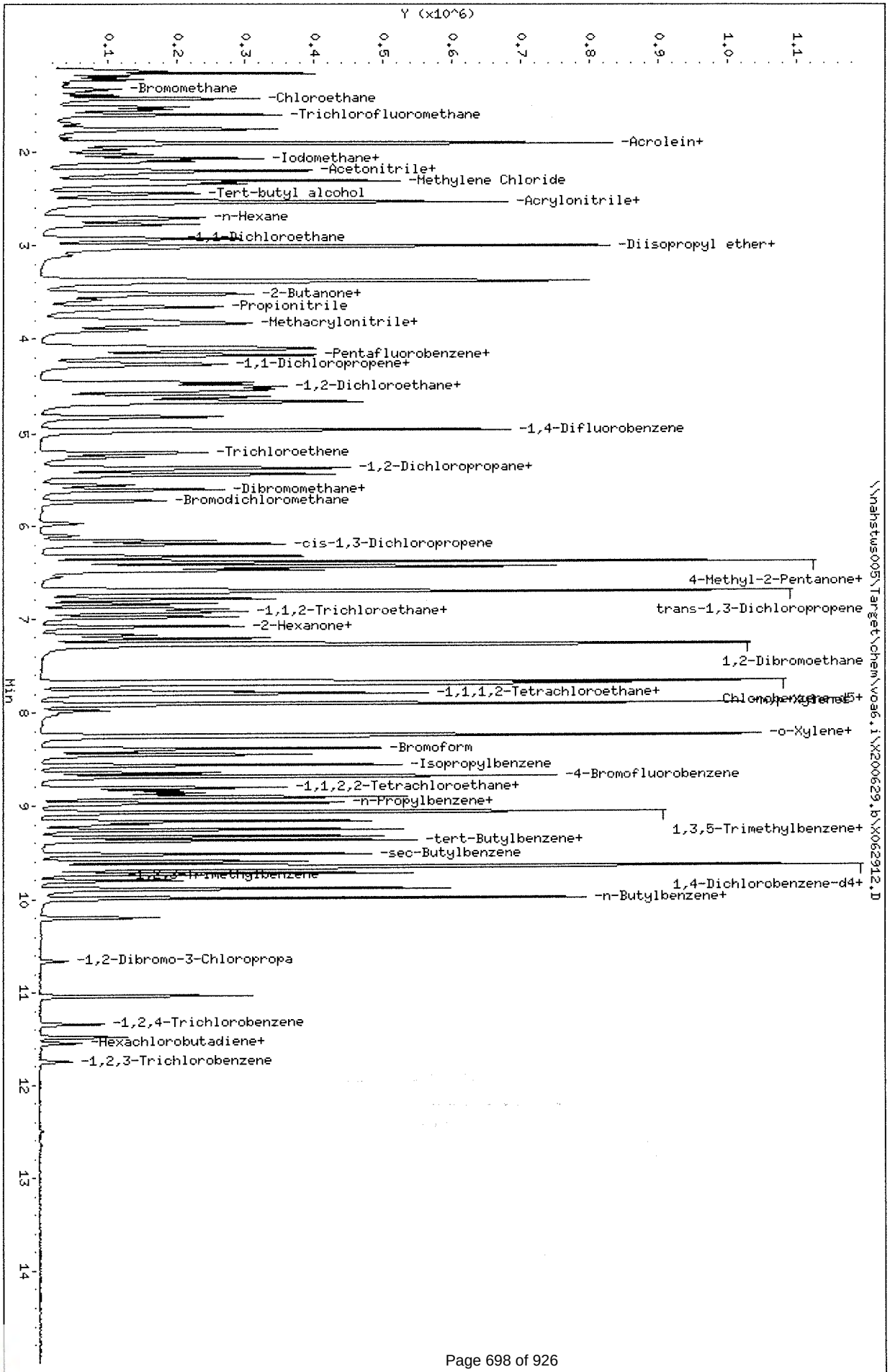
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.189	4.189	(1.000)	300252	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	486924	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	432201	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	200052	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.104	(0.979)	163918	42.5715	42.57
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	215635	38.2849	38.28
$ 48 Toluene-d8	98	6.388	6.389	(0.833)	583776	54.2964	54.29
$ 69 4-Bromofluorobenzene	95	8.688	8.695	(1.133)	215583	48.9639	48.96
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	64889	20.6180	20.61
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.976)	105299	18.8771	18.87
68 1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.914)	82470	20.7425	20.74
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	55420	19.9652	19.96
22 1,1-Dichloroethane	63	2.929	2.929	(0.699)	320161	34.3362	34.33
11 1,1-Dichloroethene	96	1.912	1.912	(0.456)	174815	59.6309	59.63
32 1,1-Dichloropropene	75	4.283	4.283	(0.862)	89649	20.4521	20.45
93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.215)	12127	26.0293	26.02
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	71917	19.4562	19.45 (M)
90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	23248	23.6401	23.64
79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.970)	230182	21.0986	21.09
89 1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.102)	6799	22.0059	22.00
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	69562	20.4048	20.40
88 1,2-Dichlorobenzene	146	9.999	9.999	(1.034)	114318	21.0855	21.08

Data File: \\nahstws005\Target\chem\voa6.i\X200629.b\X062912.D Page 2
Report Date: 20-Jul-2020 12:56

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
33	1,2-Dichloroethane	62	4.562	4.562	(0.918)	117522	18.4187	18.41
42	1,2-Dichloropropane	63	5.443	5.443	(1.095)	88042	19.1869	19.18
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	224500	21.8247	21.82
83	1,3-Dichlorobenzene	146	9.612	9.612	(0.994)	125135	20.9941	20.99
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	113922	19.5823	19.58
84	1,4-Dichlorobenzene	146	9.683	9.684	(1.001)	124129	20.4527	20.45
26	2,2-Dichloropropane	77	3.516	3.516	(0.839)	105875	18.1680	18.16
24	2-Butanone	43	3.581	3.581	(0.855)	108890	30.7676	30.76
76	2-Chlorotoluene	91	8.974	8.974	(0.928)	195991	20.6257	20.62
52	2-Hexanone	43	7.090	7.090	(0.924)	179807	40.2927	40.29
77	4-Chlorotoluene	91	9.075	9.075	(0.939)	227422	20.6522	20.65
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	222539	22.6355	22.63
45	4-Methyl-2-Pentanone	43	6.331	6.331	(0.825)	264000	40.5293	40.52
10	Acetone	43	1.976	1.976	(0.472)	94228	37.4390	37.43
37	Benzene	78	4.519	4.519	(0.909)	270514	19.8849	19.88
74	Bromobenzene	156	8.810	8.810	(0.911)	74875	19.9472	19.94
29	Bromochloromethane	128	3.803	3.803	(0.908)	36399	15.8191	15.81
39	Bromodichloromethane	83	5.729	5.730	(1.153)	94643	19.1018	19.10
66	Bromoform	173	8.416	8.416	(1.097)	45464	19.7424	19.74
6	Bromomethane	94	1.339	1.339	(0.320)	43404	15.4417	15.44
19	Carbon Disulfide	76	2.069	2.069	(0.494)	356674	36.9878	36.98
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	89806	21.1679	21.16
59	Chlorobenzene	112	7.699	7.699	(1.004)	171213	20.4602	20.46
7	Chloroethane	64	1.403	1.403	(0.335)	71724	22.4754	22.47
28	Chloroform	83	3.910	3.910	(0.933)	123866	16.8466	16.84
3	Chloromethane	50	1.081	1.081	(0.258)	101419	13.5195	13.51
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.843)	91050	21.0846	21.08
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	114857	19.4121	19.41
55	Dibromochloromethane	129	7.176	7.176	(0.936)	68536	19.8147	19.81
44	Dibromomethane	93	5.558	5.558	(1.118)	47471	18.6123	18.61
2	Dichlorodifluoromethane	85	0.973	0.973	(0.232)	53108	13.6077	13.60
61	Ethylbenzene	106	7.800	7.800	(1.017)	91169	21.3643	21.36
91	Hexachlorobutadiene	225	11.481	11.481	(1.187)	17977	27.0778	27.07
67	Isopropylbenzene	105	8.566	8.566	(1.117)	264276	21.9315	21.93
62	m,p-Xylenes	106	7.907	7.907	(1.031)	218289	43.6362	43.63
17	Methylene Chloride	84	2.306	2.306	(0.550)	71828	15.0701	15.07
87	n-Butylbenzene	91	9.999	9.999	(1.034)	206923	23.3454	23.34
73	n-Propylbenzene	91	8.917	8.917	(0.922)	322888	21.9137	21.91
92	Naphthalene	128	11.546	11.546	(1.194)	38512	24.0268	24.02
63	o-Xylene	106	8.244	8.244	(1.075)	106784	20.9599	20.95
81	sec-Butylbenzene	105	9.526	9.526	(0.985)	260069	22.7246	22.72
64	Styrene	104	8.265	8.258	(1.078)	188692	20.9390	20.93
78	tert-Butylbenzene	119	9.340	9.340	(0.966)	179362	22.2002	22.20
56	Tetrachloroethene	164	6.933	6.933	(0.904)	51758	23.1401	23.14
50	Toluene	91	6.446	6.453	(0.840)	276614	21.5034	21.50
20	trans-1,2-Dichloroethene	96	2.535	2.528	(0.605)	62777	18.3972	18.39
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	104591	19.0635	19.06
38	Trichloroethene	130	5.207	5.207	(1.048)	75029	23.3203	23.32
8	Trichlorofluoromethane	101	1.561	1.561	(0.373)	106160	19.8443	19.84
5	Vinyl Chloride	62	1.138	1.145	(0.272)	109951	18.5180	18.51

QC Flag Legend

M - Compound response manually integrated.



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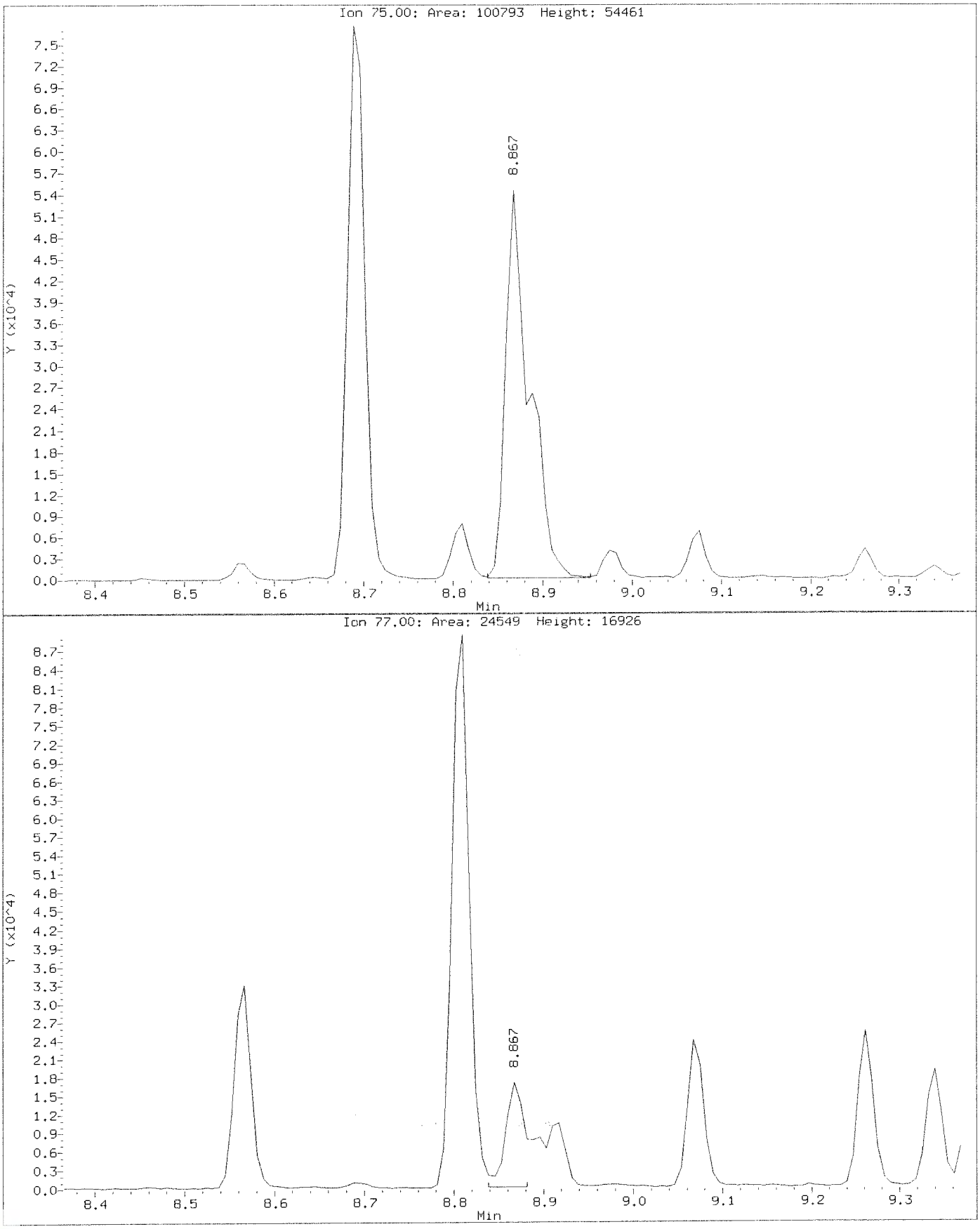
Client ID: HS20061208-15MSD
Sample Info: HS20061208-15MSD;HS20061208-15MSD;3;;MSD
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\nahstws005\Target\chem\voa6.i\X200629.b\Before\X062912.D
Injection Date: 29-JUN-2020 14:26
Instrument: voa6.i
Client Sample ID: HS20061208-15MSD

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4



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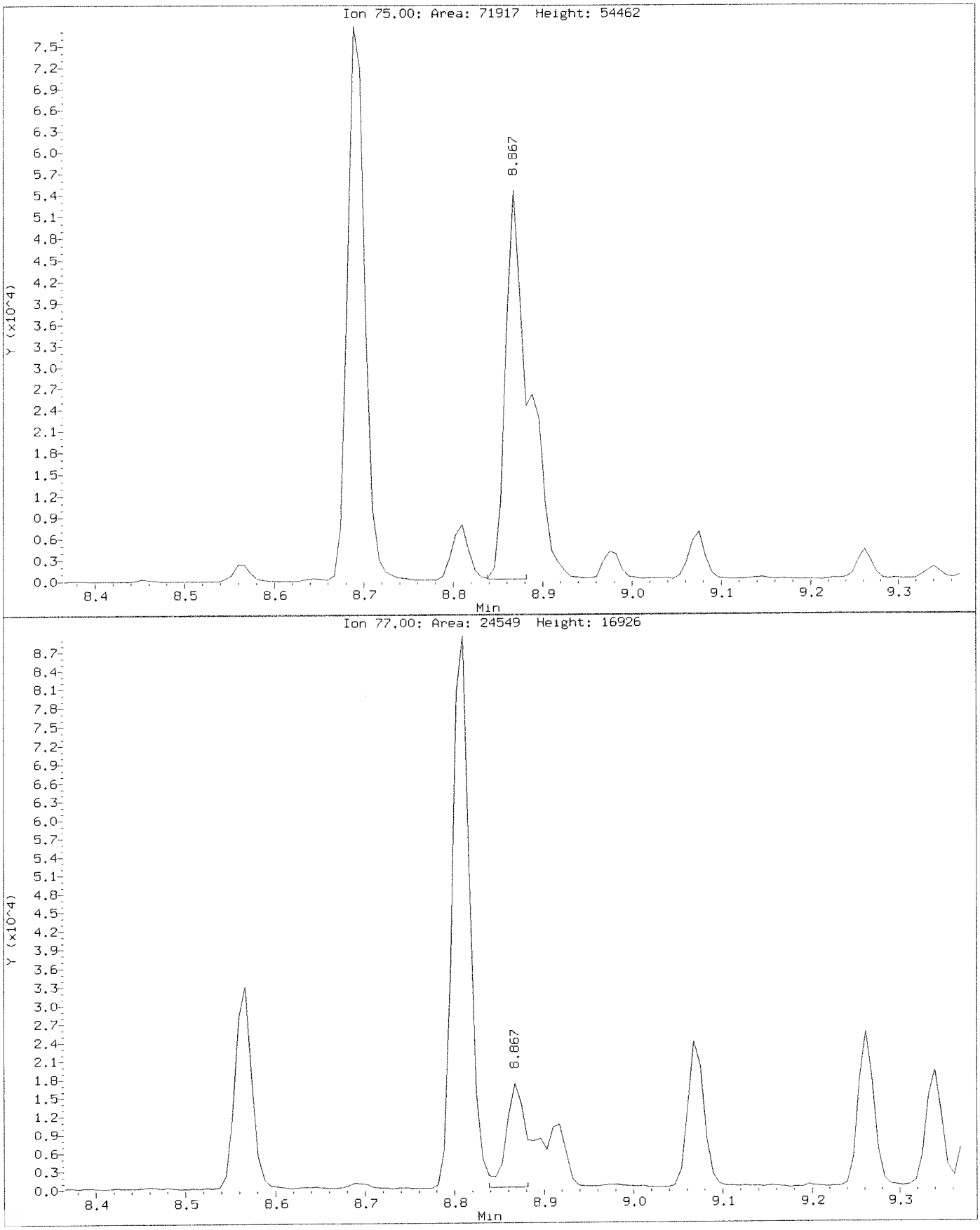
Injection Date: 29-JUN-2020 14:26
Instrument: voa6.i
Client Sample ID: HS20061208-15MSD

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4



ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200629.b\X062915.D
Lab Smp Id: HS20061178-03 Client Smp ID: HS20061178-03
Inj Date : 29-JUN-2020 15:38
Operator : PC Inst ID: voa6.i
Smp Info : HS20061178-03;HS20061178-03;;;
Misc Info : HS18090001;WATER;0;5;
Comment   :
Method   : \\nahstws005\Target\chem\voa6.i\X200629.b\8260W.m
Meth Date : 20-Jul-2020 12:49 Luke.Targe Quant Type: ISTD
Cal Date : 19-JUN-2020 14:17 Cal File: X061908.D
Als bottle: 14
Dil Factor: 5.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

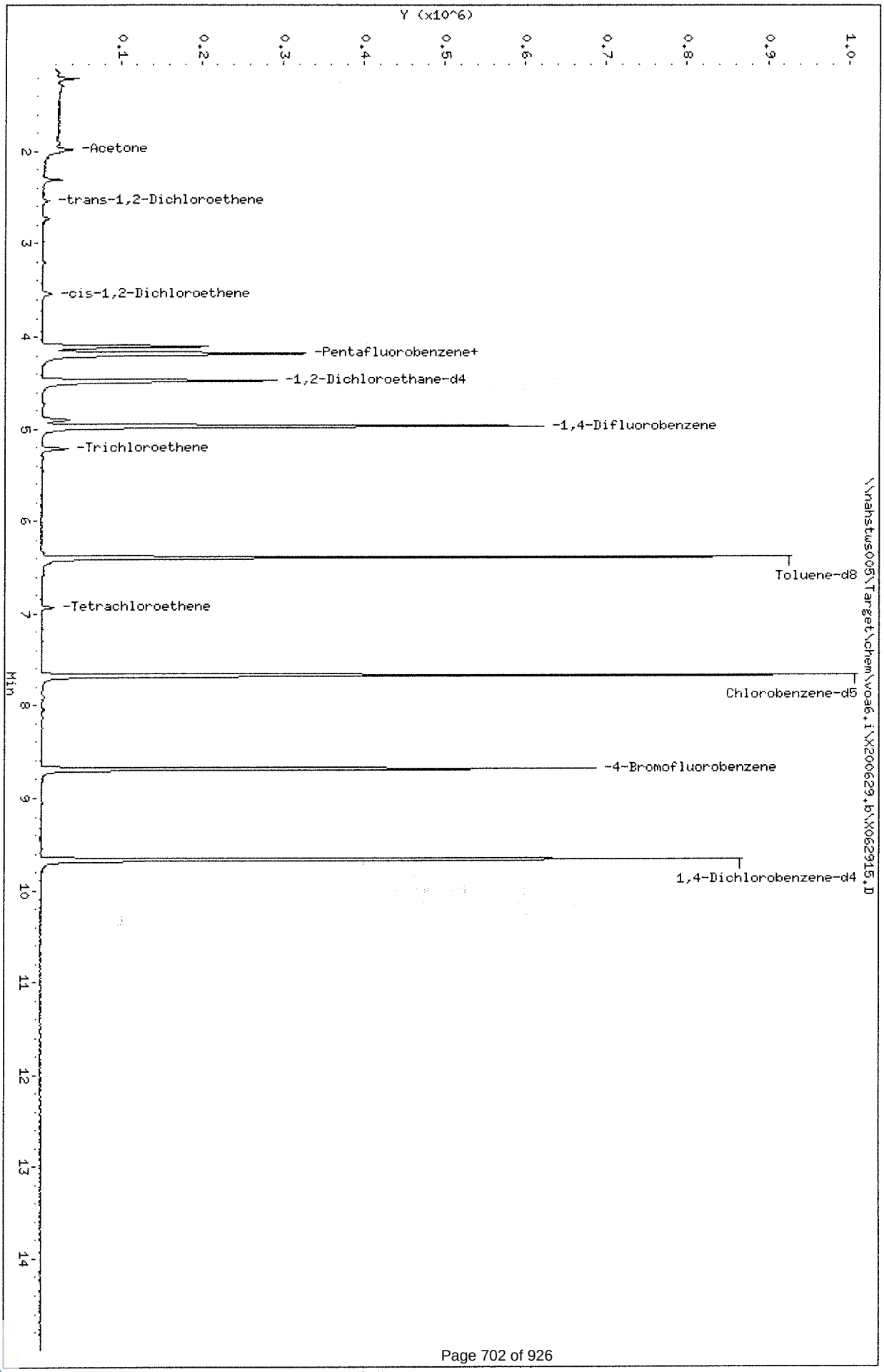
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

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	4.189	4.189	(1.000)	248766	50.0000	
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	447195	50.0000	
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	414156	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	189698	50.0000	
$	30 Dibromofluoromethane	113	4.103	4.103	(0.979)	142283	44.6005	44.60
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	204419	43.8952	43.89
$	48 Toluene-d8	98	6.388	6.389	(0.833)	485480	47.1213	47.12
$	69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	191800	45.4602	45.46
	10 Acetone	43	1.976	1.976	(0.472)	25950	10.7403	53.70
	27 cis-1,2-Dichloroethene	96	3.537	3.530	(0.844)	5198	1.45283	7.26(a)
	56 Tetrachloroethene	164	6.933	6.933	(0.904)	2892	1.34930	6.74(a)
	20 trans-1,2-Dichloroethene	96	2.535	2.535	(0.605)	2540	0.89842	4.49(a)
	38 Trichloroethene	130	5.214	5.214	(1.049)	10214	3.45672	17.28(a)

QC Flag Legend

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



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Date : 29-JUN-2020 15:38
Client ID: HS20061178-03
Sample Info: HS20061178-03;HS20061178-03;;;
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\nahstws005\Target\chem\voa6.i\X200629.b\X062915.D

Date : 29-JUN-2020 15:38

Client ID: HS20061178-03

Instrument: voa6.i

Sample Info: HS20061178-03;HS20061178-03;;;

Purge Volume: 5.0

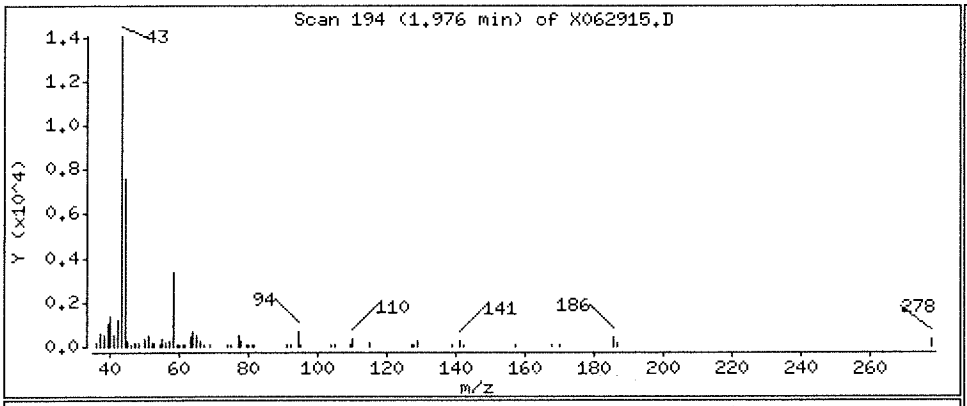
Operator: PC

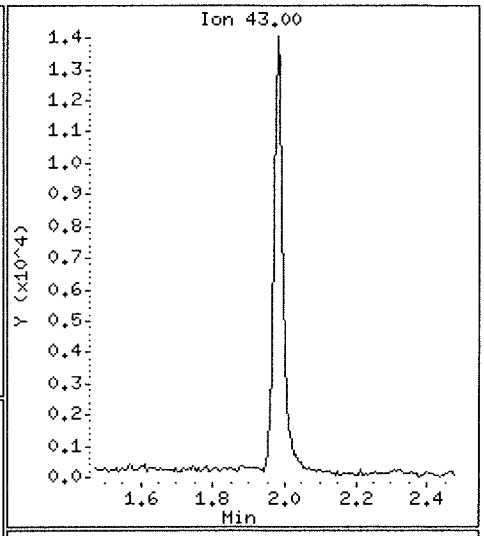
Column phase: DB624

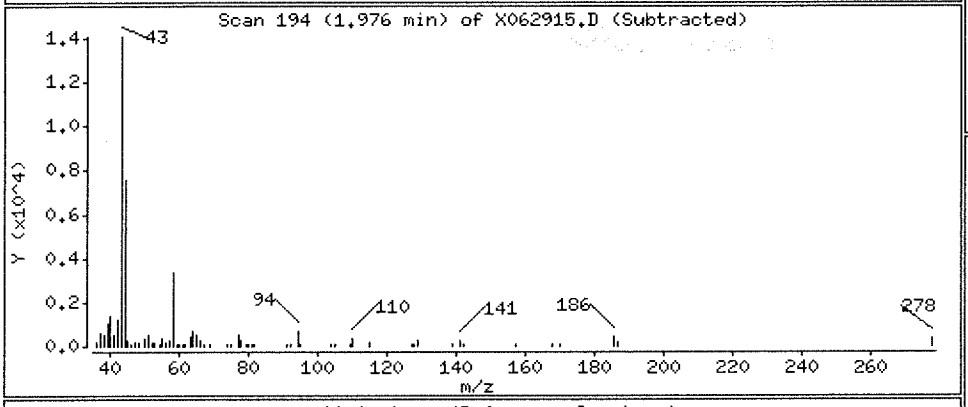
Column diameter: 0.18

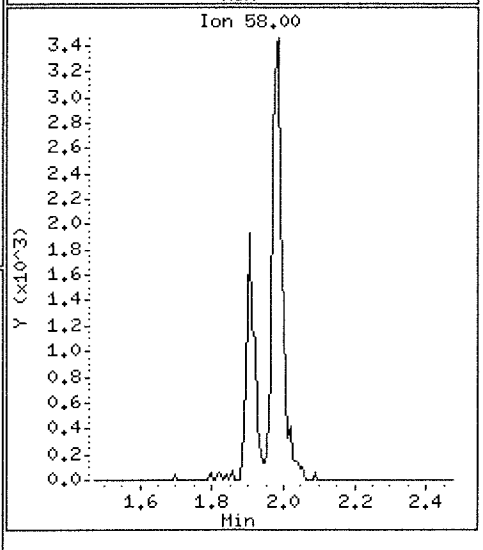
10 Acetone

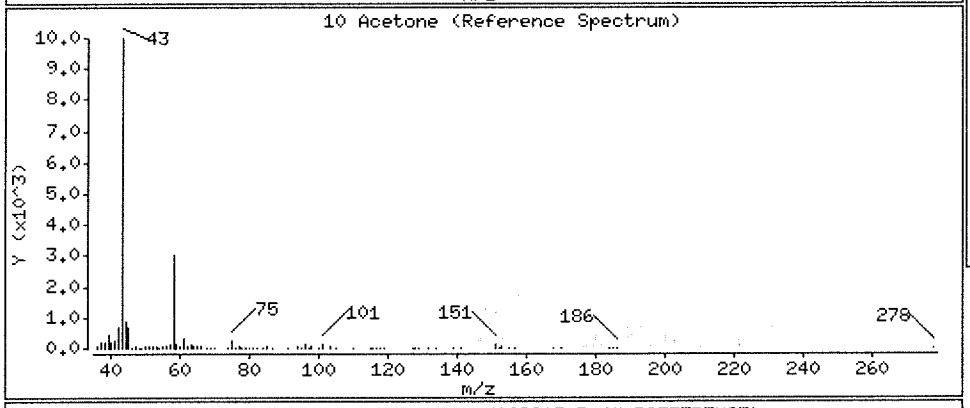
Concentration: 53.70 ug/l

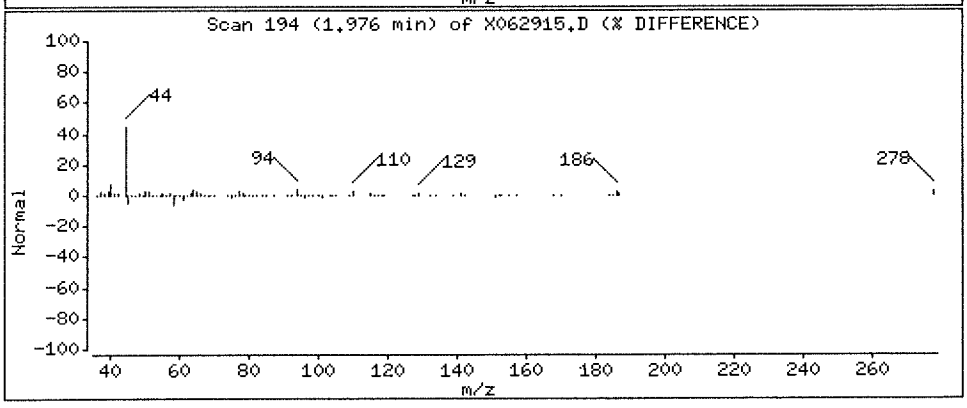












Data File: \\nahstws005\Target\chem\voa6.i\X200629.b\X062915.D

Date : 29-JUN-2020 15:38

Client ID: HS20061178-03

Instrument: voa6.i

Sample Info: HS20061178-03;HS20061178-03;;;

Purge Volume: 5.0

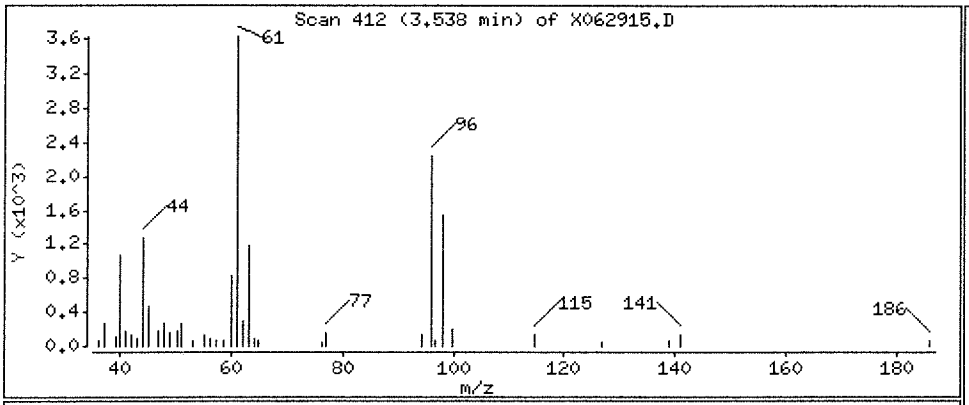
Operator: PC

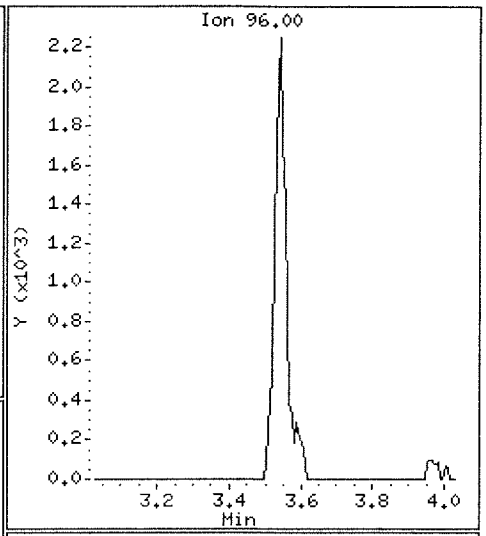
Column phase: DB624

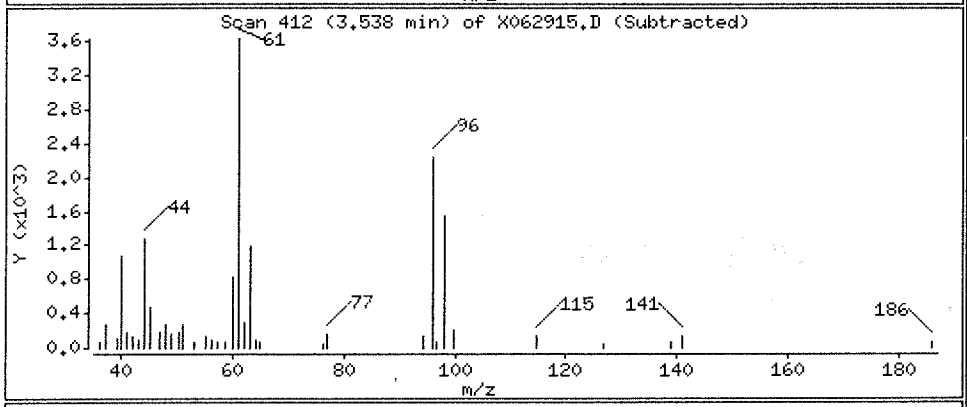
Column diameter: 0.18

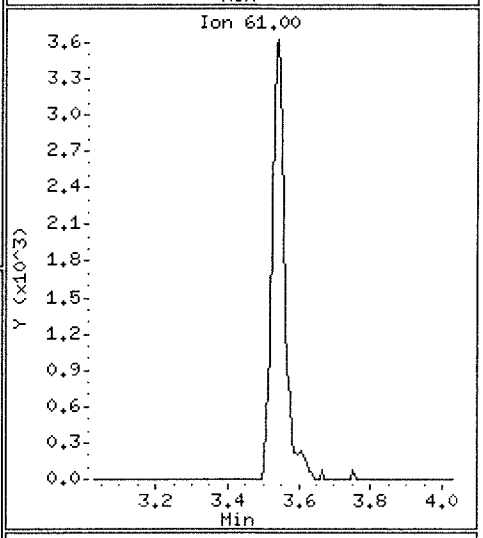
27 cis-1,2-Dichloroethene

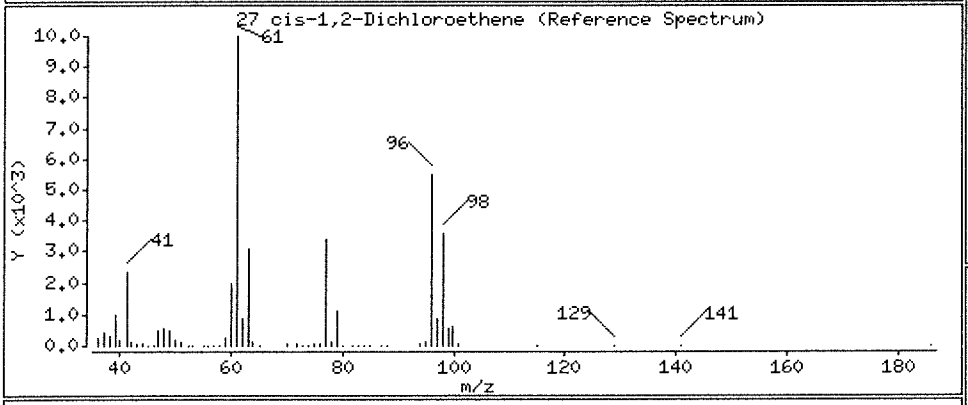
Concentration: 7.26 ug/l

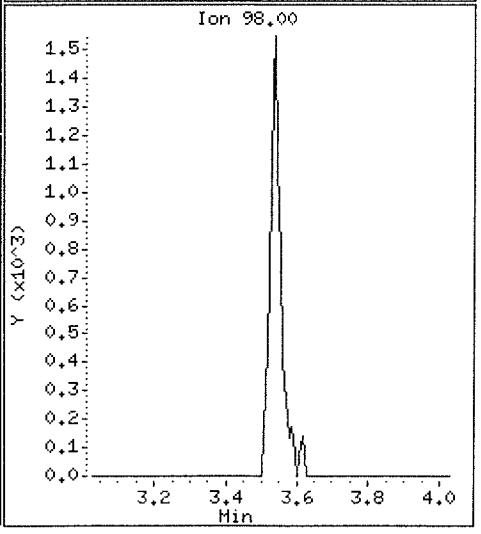


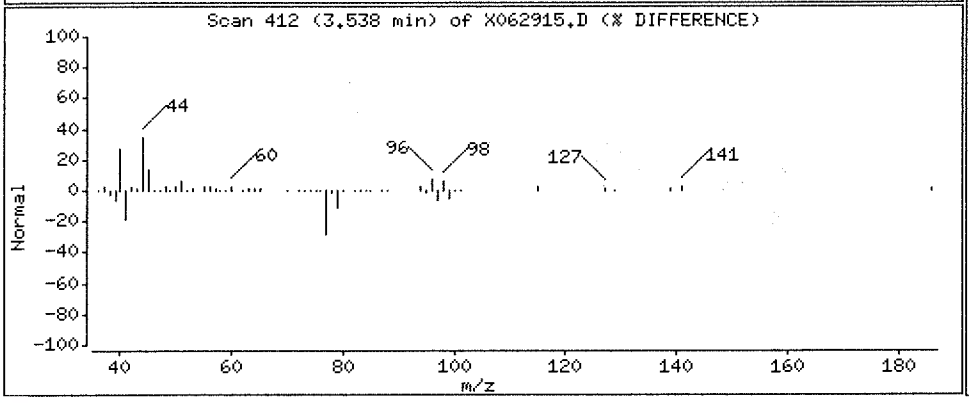












Data File: \\nahstws005\Target\chem\voa6.i\X200629.b\X062915.D

Date : 29-JUN-2020 15:38

Client ID: HS20061178-03

Instrument: voa6.i

Sample Info: HS20061178-03;HS20061178-03;;;

Purge Volume: 5.0

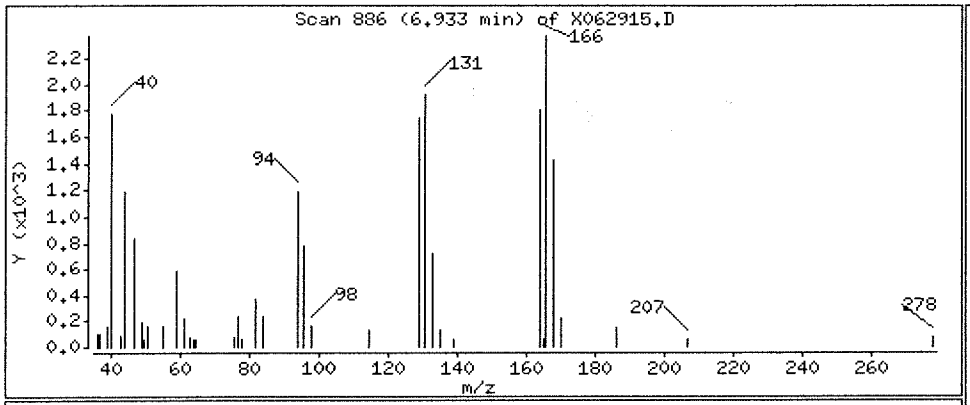
Operator: PC

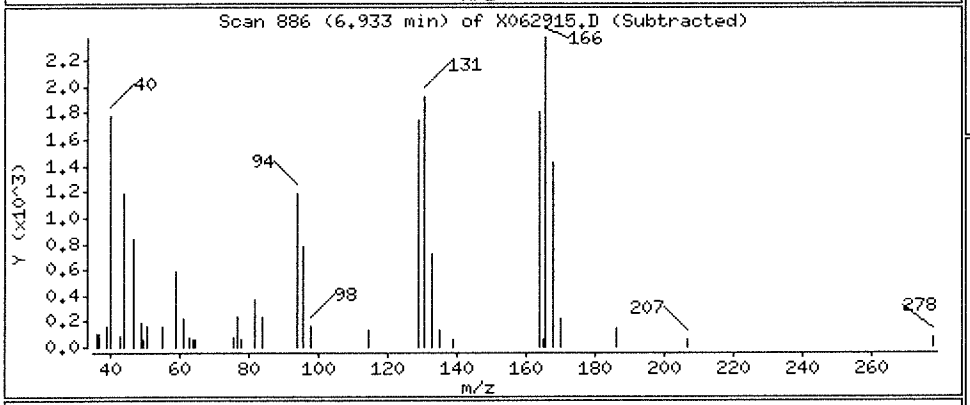
Column phase: DB624

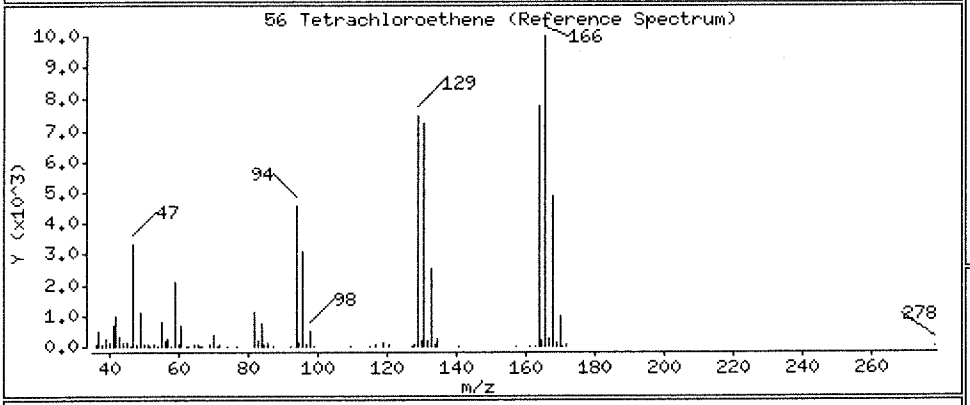
Column diameter: 0.18

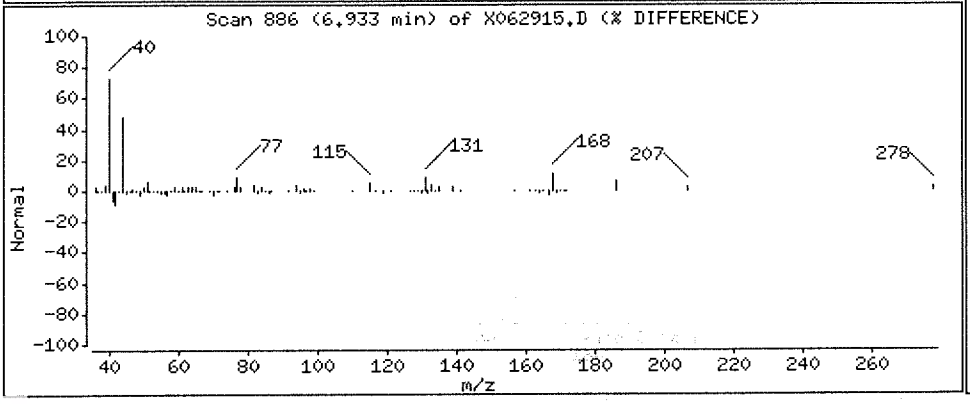
56 Tetrachloroethene

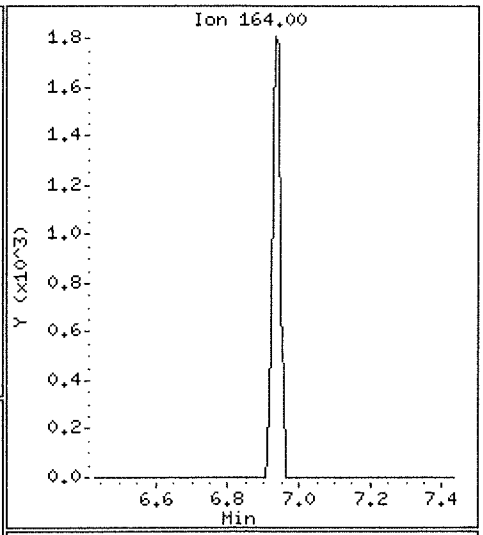
Concentration: 6.74 ug/l

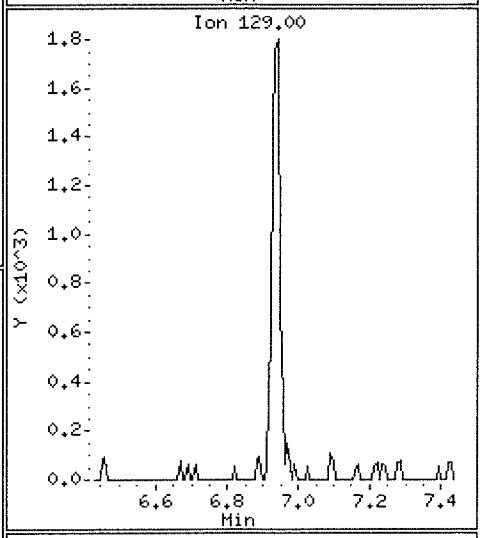


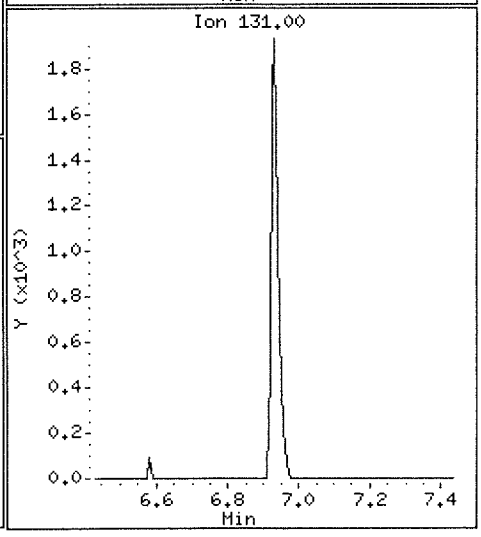












Data File: \\nahstws005\Target\chem\voa6.i\X200629.b\X062915.D

Date : 29-JUN-2020 15:38

Client ID: HS20061178-03

Instrument: voa6.i

Sample Info: HS20061178-03;HS20061178-03;;;

Purge Volume: 5.0

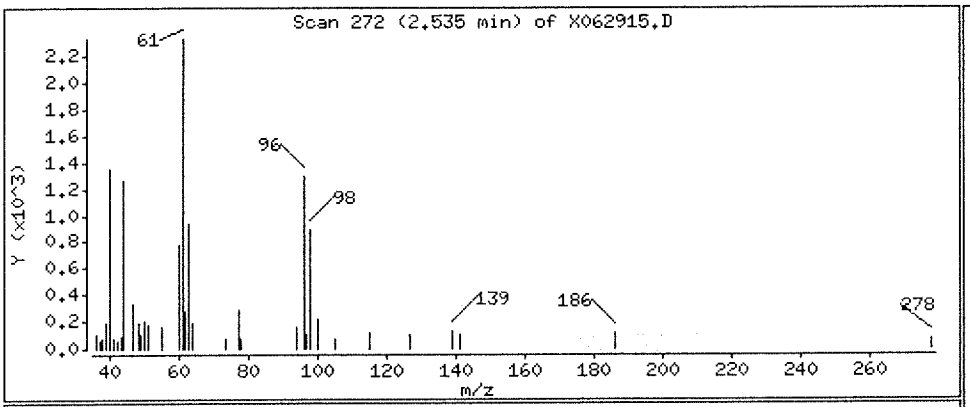
Operator: PC

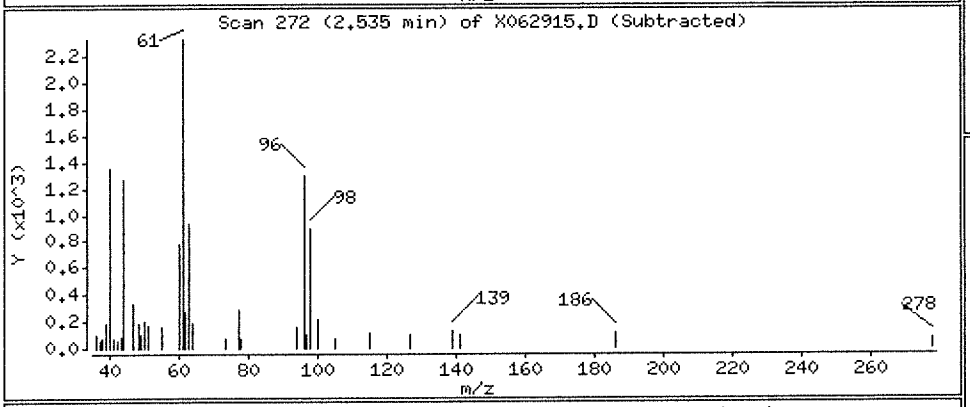
Column phase: DB624

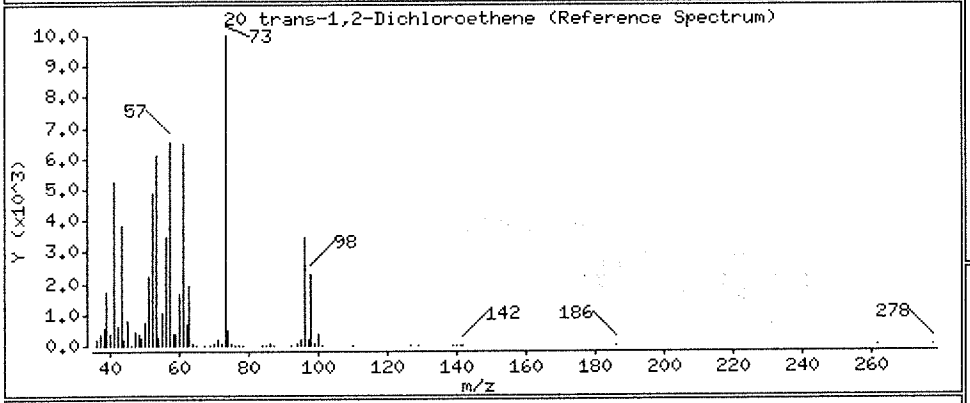
Column diameter: 0.18

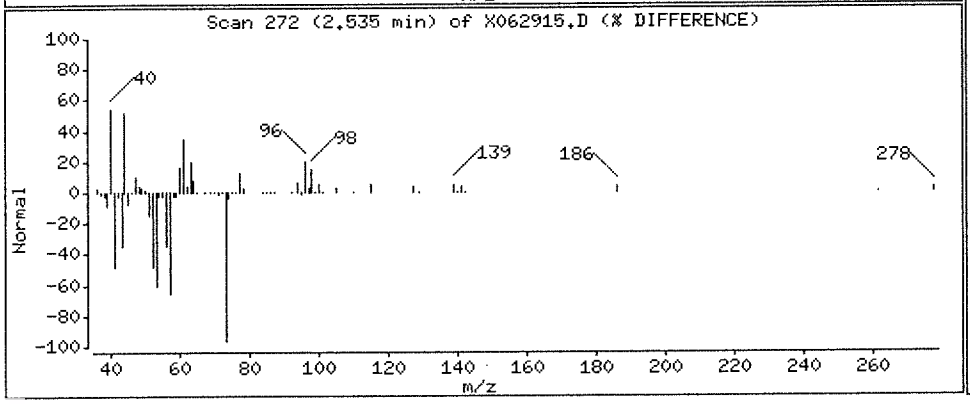
20 trans-1,2-Dichloroethene

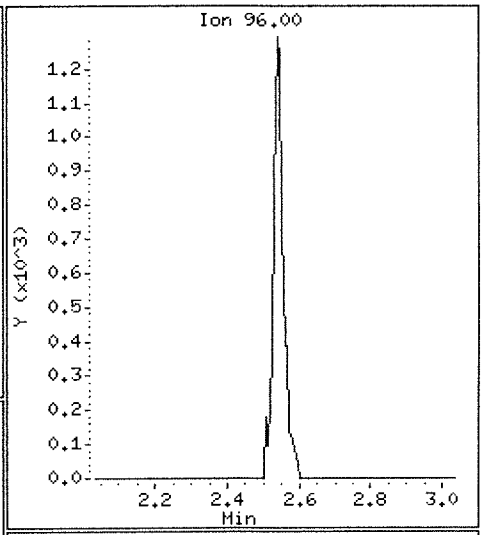
Concentration: 4.49 ug/l

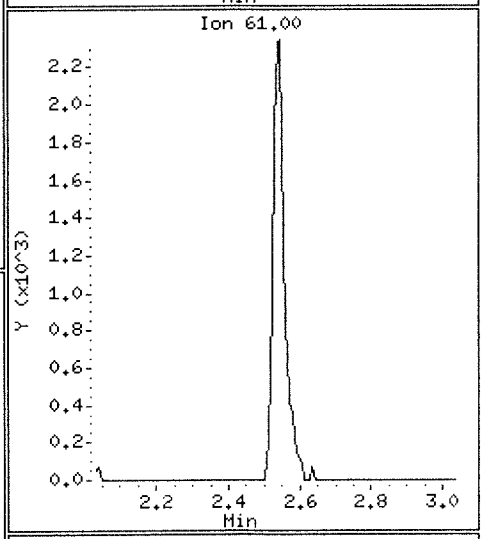


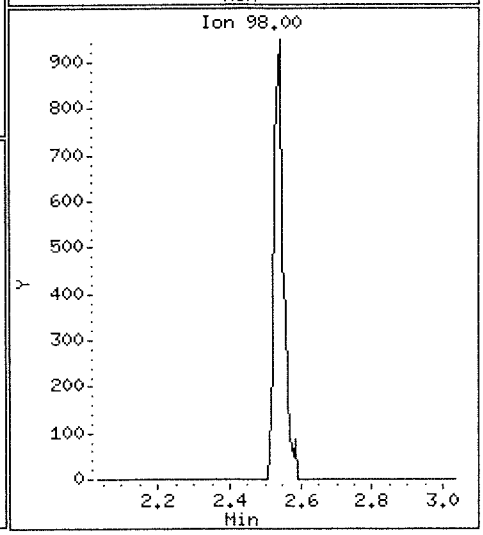












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Date : 29-JUN-2020 15:38

Client ID: HS20061178-03

Instrument: voa6.i

Sample Info: HS20061178-03;HS20061178-03;;;

Purge Volume: 5.0

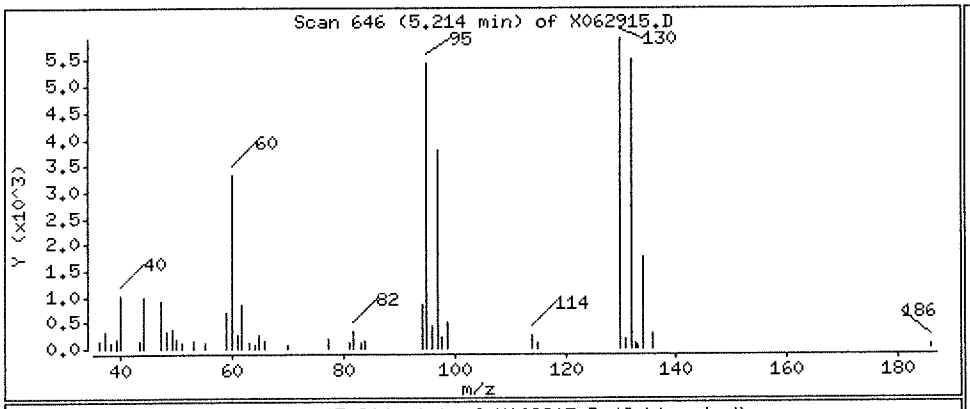
Operator: PC

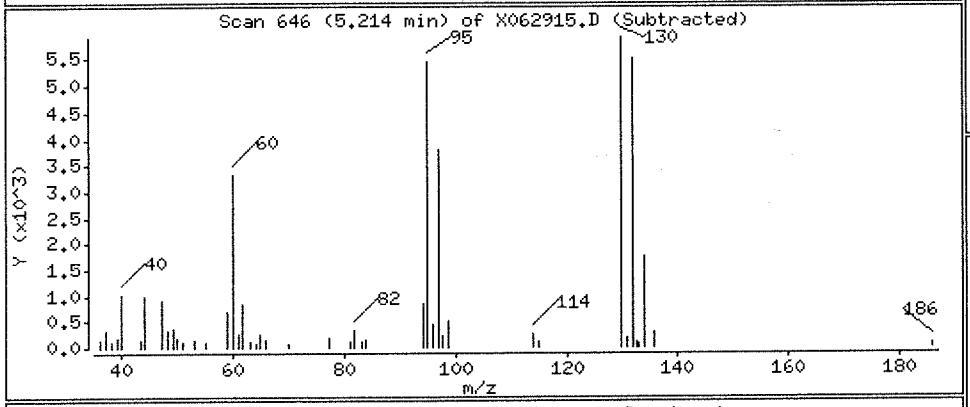
Column phase: DB624

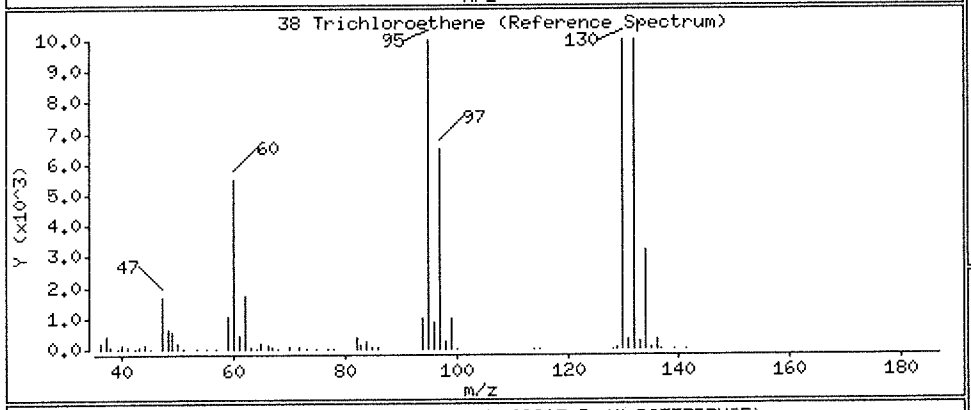
Column diameter: 0.18

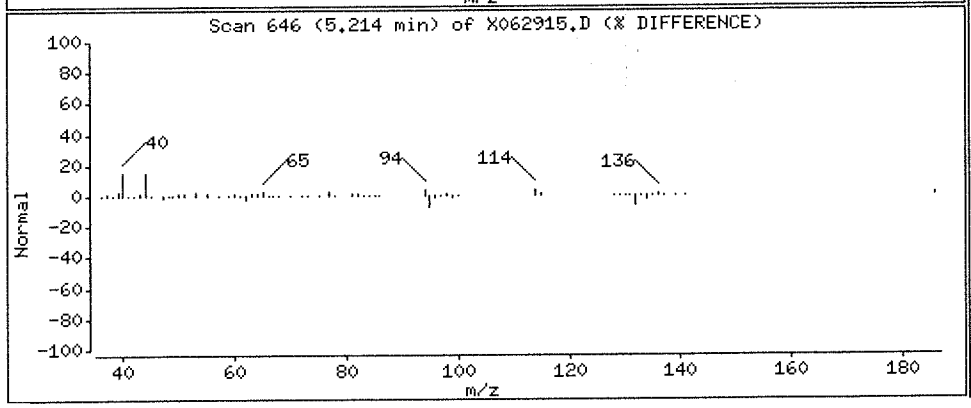
38 Trichloroethene

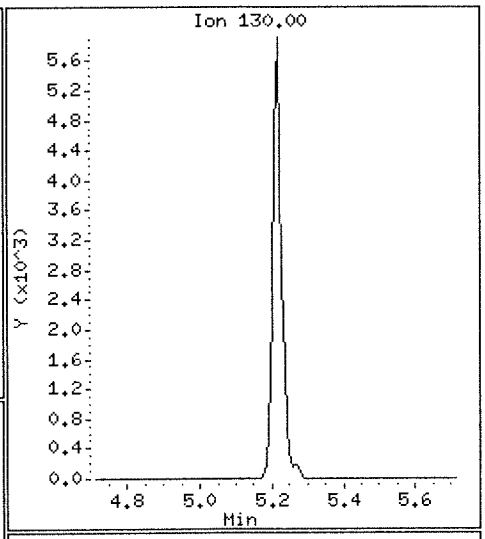
Concentration: 17.28 ug/l

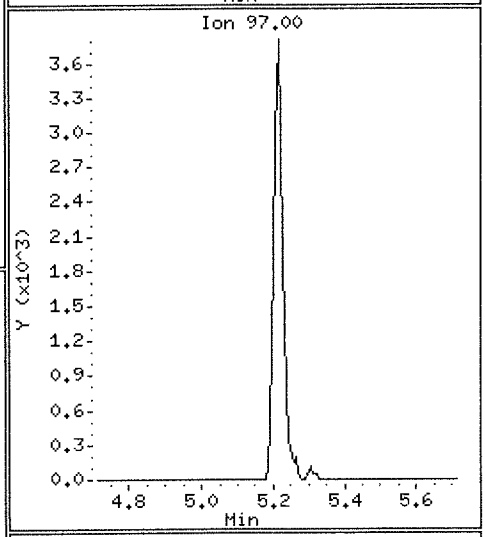


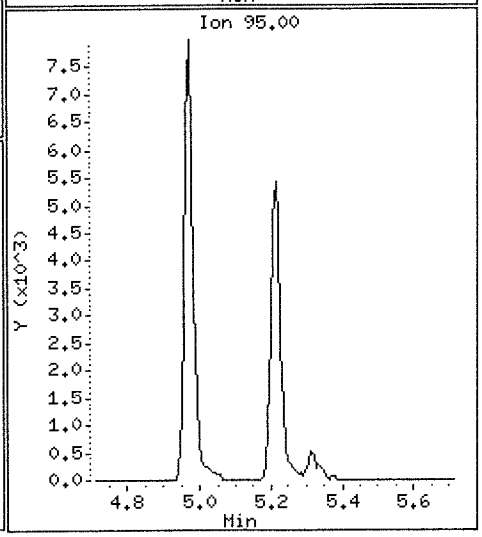












Data File: \\nahstws005\Target\chem\voa6.i\X200629.b\X062916.D Page 1
Report Date: 20-Jul-2020 12:56

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200629.b\X062916.D
Lab Smp Id: CCV-END Client Smp ID: CCV-END
Inj Date : 29-JUN-2020 16:02
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\X200629.b\8260W.m
Meth Date : 20-Jul-2020 12:56 voa6.i Quant Type: ISTD
Cal Date : 19-JUN-2020 14:17 Cal File: X061908.D
Als bottle: 15 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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

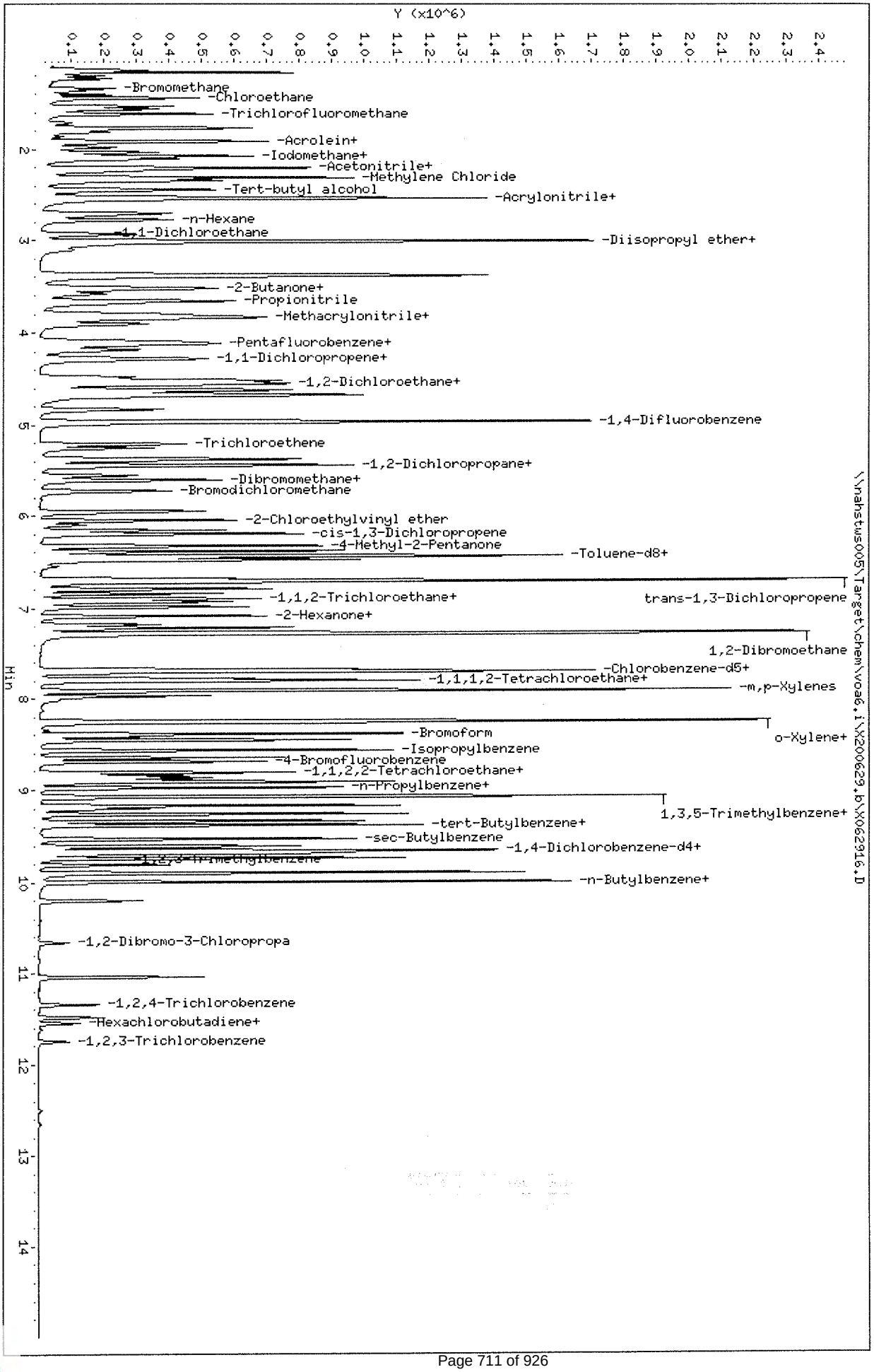
Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.189	4.189	(1.000)	223427	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	405233	50.0000	
* 47 Chlorobenzene-d5	117	7.670	7.670	(1.000)	381058	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	176028	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.979)	143312	50.0000	50.01
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	204587	50.0000	48.98
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	476057	50.0000	50.22
$ 69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	190252	50.0000	49.01
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	139364	50.0000	50.22
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.976)	211477	50.0000	50.94
68 1,1,2,2-Tetrachloroethane	83	8.845	8.845	(0.915)	180089	50.0000	51.47
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	121835	50.0000	49.78
22 1,1-Dichloroethane	63	2.929	2.929	(0.699)	331903	50.0000	47.83
11 1,1-Dichloroethene	96	1.911	1.911	(0.456)	113651	50.0000	52.09
32 1,1-Dichloropropene	75	4.282	4.282	(0.862)	175404	50.0000	48.08
93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.215)	23210	50.0000	58.54
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	161491	50.0000	49.65(M)
90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	46154	50.0000	54.87
79 1,2,4-Trimethylbenzene	105	9.382	9.382	(0.970)	486977	50.0000	50.72
89 1,2-Dibromo-3-Chloropropane	155	10.657	10.657	(1.102)	15353	50.0000	56.69
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	151487	50.0000	50.40
88 1,2-Dichlorobenzene	146	9.998	9.998	(1.034)	246346	50.0000	51.63

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
33	1,2-Dichloroethane	62	4.562	4.562	(0.918)	262176	50.0000	49.37
42	1,2-Dichloropropane	63	5.443	5.443	(1.095)	192417	50.0000	50.38
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	461606	50.0000	50.99
83	1,3-Dichlorobenzene	146	9.612	9.612	(0.994)	267032	50.0000	50.91
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	250592	50.0000	48.85
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	268246	50.0000	50.23
26	2,2-Dichloropropane	77	3.516	3.516	(0.839)	189298	50.0000	43.65
24	2-Butanone	43	3.580	3.580	(0.855)	260290	100.000	100.57
76	2-Chlorotoluene	91	8.974	8.974	(0.928)	408243	50.0000	48.82
52	2-Hexanone	43	7.090	7.090	(0.924)	414909	100.000	105.45
77	4-Chlorotoluene	91	9.074	9.074	(0.939)	473571	50.0000	48.87
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	449741	50.0000	51.98
45	4-Methyl-2-Pentanone	43	6.331	6.331	(0.825)	594610	100.000	103.53
10	Acetone	43	1.976	1.976	(0.472)	212573	100.000	118.68
37	Benzene	78	4.519	4.519	(0.909)	570504	50.0000	50.39
74	Bromobenzene	156	8.809	8.809	(0.911)	162686	50.0000	49.25
29	Bromochloromethane	128	3.802	3.802	(0.908)	80952	50.0000	47.27
39	Bromodichloromethane	83	5.729	5.729	(1.153)	207887	50.0000	50.41
66	Bromoform	173	8.415	8.415	(1.097)	107362	50.0000	52.87
6	Bromomethane	94	1.338	1.338	(0.320)	96950	50.0000	46.35
19	Carbon Disulfide	76	2.069	2.069	(0.494)	728033	100.000	101.45
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	173572	50.0000	49.15
59	Chlorobenzene	112	7.699	7.699	(1.004)	359785	50.0000	48.76
7	Chloroethane	64	1.403	1.403	(0.335)	122753	50.0000	51.69
28	Chloroform	83	3.910	3.910	(0.933)	265641	50.0000	48.55
3	Chloromethane	50	1.080	1.080	(0.258)	246953	50.0000	44.23
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.843)	159832	50.0000	49.73
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	245535	50.0000	49.86
55	Dibromochloromethane	129	7.176	7.176	(0.936)	154314	50.0000	50.60
44	Dibromomethane	93	5.557	5.557	(1.118)	106010	50.0000	49.94
2	Dichlorodifluoromethane	85	0.973	0.973	(0.232)	142176	50.0000	46.61
61	Ethylbenzene	106	7.799	7.799	(1.017)	186582	50.0000	49.59
91	Hexachlorobutadiene	225	11.481	11.481	(1.187)	29927	50.0000	53.03
67	Isopropylbenzene	105	8.566	8.566	(1.117)	547320	50.0000	51.51
62	m,p-Xylenes	106	7.907	7.907	(1.031)	448555	100.000	101.70
17	Methylene Chloride	84	2.305	2.305	(0.550)	163218	50.0000	50.18
87	n-Butylbenzene	91	9.998	9.998	(1.034)	399276	50.0000	51.19
73	n-Propylbenzene	91	8.917	8.917	(0.922)	658600	50.0000	50.79
92	Naphthalene	128	11.546	11.546	(1.194)	77380	50.0000	55.68
63	o-Xylene	106	8.244	8.244	(1.075)	226714	50.0000	50.47
81	sec-Butylbenzene	105	9.526	9.526	(0.985)	519350	50.0000	51.57
64	Styrene	104	8.265	8.265	(1.078)	396763	50.0000	49.93
78	tert-Butylbenzene	119	9.339	9.339	(0.966)	364987	50.0000	51.34
56	Tetrachloroethene	164	6.933	6.933	(0.904)	100541	50.0000	50.98
50	Toluene	91	6.453	6.453	(0.841)	568020	50.0000	50.08
20	trans-1,2-Dichloroethene	96	2.527	2.527	(0.603)	132506	50.0000	52.18
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	221940	50.0000	48.60
38	Trichloroethene	130	5.214	5.214	(1.049)	138854	50.0000	51.85
8	Trichlorofluoromethane	101	1.560	1.560	(0.373)	214458	50.0000	53.87
5	Vinyl Chloride	62	1.145	1.145	(0.273)	221840	50.0000	50.20

QC Flag Legend

M - Compound response manually integrated.



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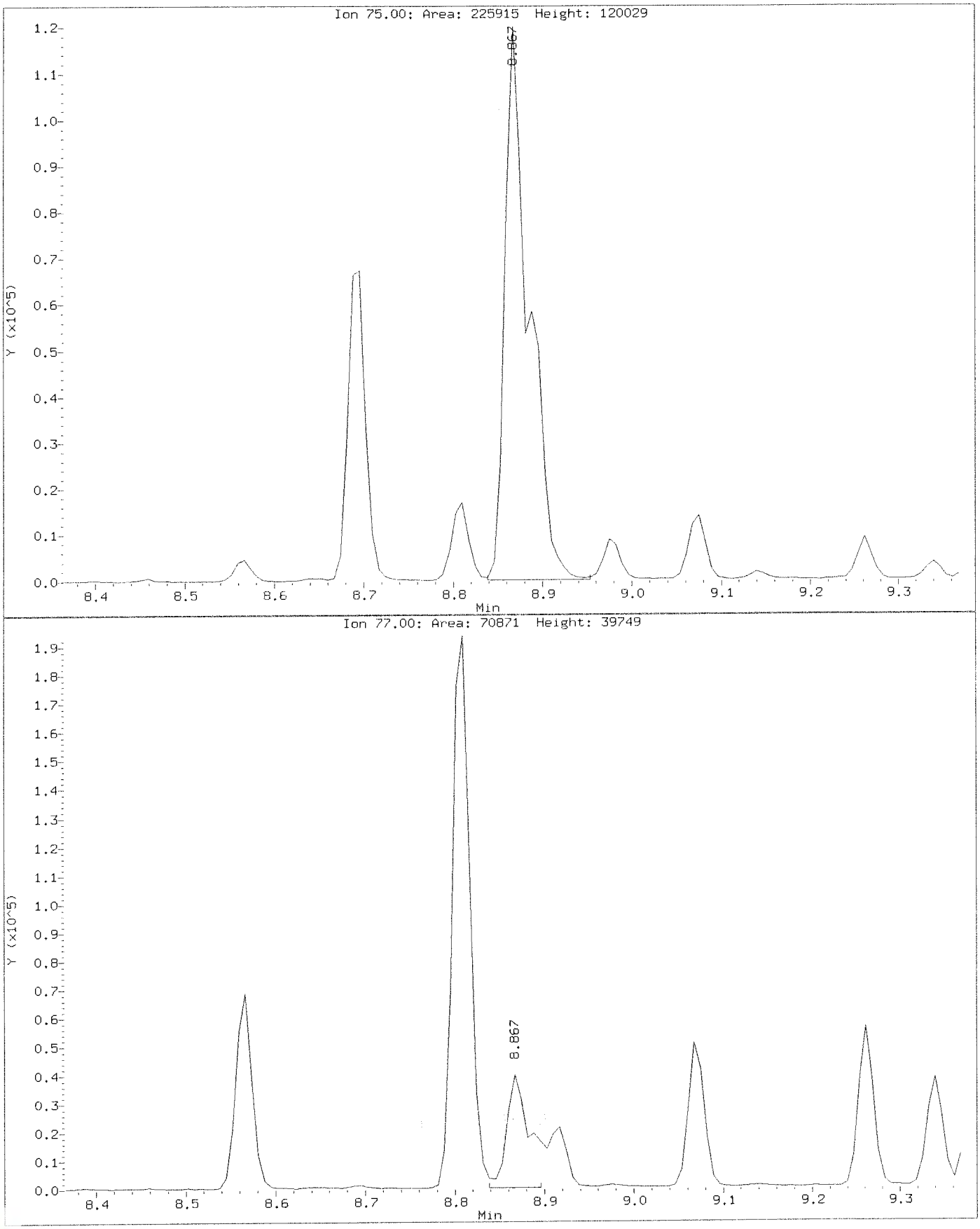
Date : 29-JUN-2020 16:02
Client ID: CCV-END
Sample Info: CCV-END;CCV-END;2;;;
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\nahstws005\Target\chem\voa6.i\X200629.b\Before\X062916.D
Injection Date: 29-JUN-2020 16:02
Instrument: voa6.i
Client Sample ID: CCV-END

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4



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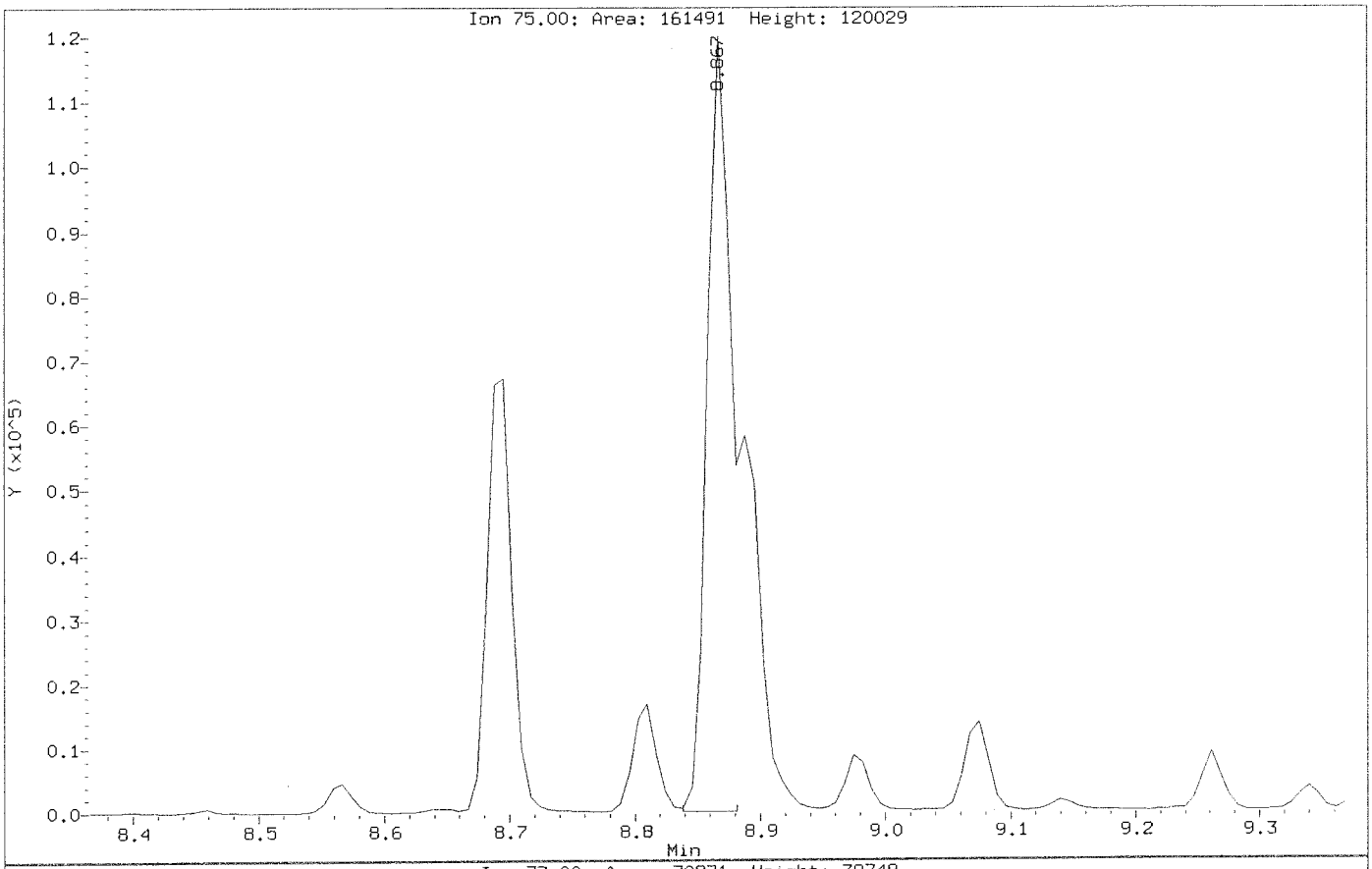
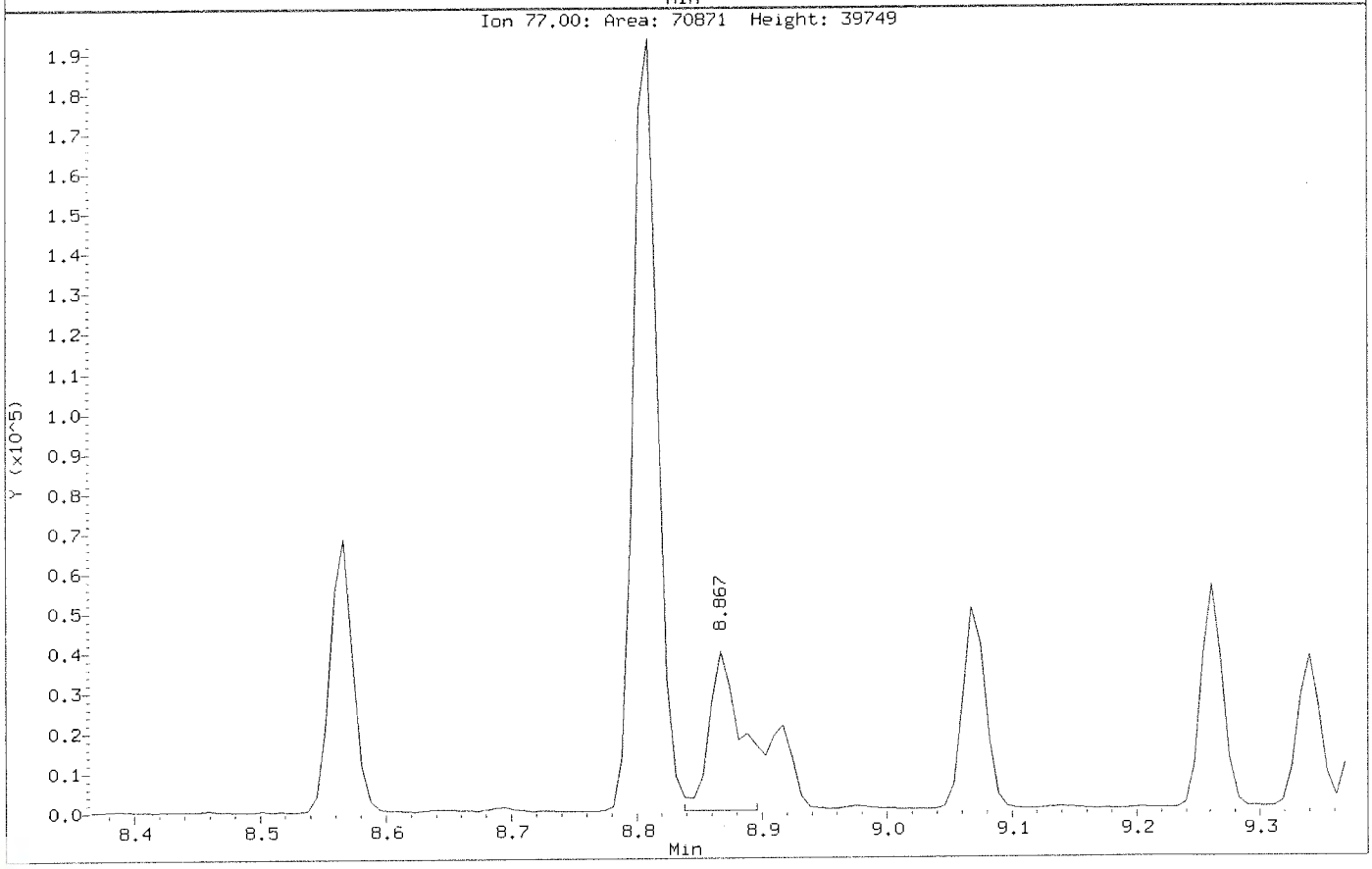
Injection Date: 29-JUN-2020 16:02
Instrument: voa6.i
Client Sample ID: CCV-END

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





HS20061178 - ME - ICP_W_DOD

ALS WO# HS20061178

ALS Houston, US Date: 15-Jul-20

FORM 12 - PREPARATION LOG

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
WorkOrder: HS20061178
Start Date: 29-Jun-2020 10:30 End Date: 29-Jun-2020 14:30

Batch ID: 154955
Prep Code: 3010A
Method: SW3010A
Technician:

SampID	ClientID	Matrix	Init Wt	Init Vol	FinalVol (mL)	PrepFac
HS20061178-01	35AWW09_062320	Groundwater		10	10	1
HS20061178-02	03WW01_062320	Groundwater		10	10	1
HS20061178-03	35AWW08_062320	Groundwater		10	10	1
HS20061218-02MS				10	10	1
HS20061218-02MSD				10	10	1
HS20061218-02PDS				10	10	1
HS20061218-02SD				10	10	1
LCS-154955				10	10	1
MBLK-154955				10	10	1

ALS Houston, US

Date: 15-Jul-20

FORM 13 - ANALYSIS RUN LOG

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
WorkOrder: HS20061178
Start Date: 02-Jul-2020 End Date: 02-Jul-2020

Run ID:ICPMS06_364391
Instrument:ICPMS06
Method:

Sample No.	D/F	Time	FileID	Analytes
ICPMS06_364391_Tune	1	02-Jul-2020 00:00	ICPMS06_364391_Tune_1	
CAL BLK	1	02-Jul-2020 11:19	011CALB.d_5647952	AS
2/10/200	1	02-Jul-2020 11:21	012CALS.d_5647953	AS
5/25/500	1	02-Jul-2020 11:23	013CALS.d_5647954	AS
10/50/100	1	02-Jul-2020 11:25	014CALS.d_5647955	AS
100/500/10K	1	02-Jul-2020 11:27	015CALS.d_5647956	AS
200/1000/20K	1	02-Jul-2020 11:29	016CALS.d_5647957	AS
ICV	1	02-Jul-2020 11:34	018_ICV.d_5647959	AS
LLICV5	1	02-Jul-2020 11:37	020LCV5.d_5647961	AS
ICB	1	02-Jul-2020 11:39	021_ICB.d_5647962	AS
LLICV2	1	02-Jul-2020 11:48	022LCV2.d_5647963	AS
ICSA	1	02-Jul-2020 11:50	023ICSA.d_5647964	AS
ICSAB	1	02-Jul-2020 11:52	024ICSB.d_5647965	AS
CCV 1	1	02-Jul-2020 12:20	033_CCV.d_5648601	AS
CCB 1	1	02-Jul-2020 12:22	034_CCB.d_5648602	AS
MBLK-154955	1	02-Jul-2020 12:25	035SMPL.d_5648603	AS
LCS-154955	1	02-Jul-2020 12:27	036SMPL.d_5648604	AS
ZZZZZZSD	5	02-Jul-2020 12:35	039SMPL.d_5648606	AS
ZZZZZZMS	1	02-Jul-2020 12:37	040SMPL.d_5648607	AS
ZZZZZZMSD	1	02-Jul-2020 12:39	041SMPL.d_5648608	AS
ZZZZZZPDS	1	02-Jul-2020 12:41	042SMPL.d_5648609	AS
CCV 2	1	02-Jul-2020 12:45	044_CCV.d_5648611	AS
CCB 2	1	02-Jul-2020 12:46	045_CCB.d_5648612	AS
35AWW09_062320	1	02-Jul-2020 12:54	049SMPL.d_5648616	AS
03WW01_062320	1	02-Jul-2020 12:56	050SMPL.d_5648617	AS
35AWW08_062320	2	02-Jul-2020 12:58	051SMPL.d_5648618	AS
CCV 3	1	02-Jul-2020 13:08	054_CCV.d_5648599	AS
CCB 3	1	02-Jul-2020 13:10	055_CCB.d_5648600	AS
CCV 4	1	02-Jul-2020 13:33	066_CCV.d_5648646	AS
CCB 4	1	02-Jul-2020 13:35	067_CCB.d_5648647	AS
CCV 5	1	02-Jul-2020 13:50	075_CCV.d_5648655	AS
CCB 5	1	02-Jul-2020 13:52	076_CCB.d_5648656	AS
CCV 6	1	02-Jul-2020 14:38	084_CCV.d_5648852	AS
CCB 6	1	02-Jul-2020 14:39	085_CCB.d_5648853	AS
CCV 7	1	02-Jul-2020 15:08	096_CCV.d_5648883	AS
CCB 7	1	02-Jul-2020 15:10	097_CCB.d_5648884	AS
CCV 8	1	02-Jul-2020 15:34	108_CCV.d_5648886	AS
CCB 8	1	02-Jul-2020 15:36	109_CCB.d_5648887	AS

ALS Houston, US

Date: 15-Jul-20

Form 2 - Initial and Continuing Calibration Verification

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
WorkOrder: HS20061178

Run ID: ICPMS06_364391
Instrument: ICPMS06
Method: SW6020

ICV	Date: 02-Jul-2020 11:34		Seq: 5647959	ICV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Arsenic	100	101.253	101	90-110	

CCV1	Date: 02-Jul-2020 12:20		Seq: 5648601	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Arsenic	100	99.887	100	90-110	

CCV2	Date: 02-Jul-2020 12:45		Seq: 5648611	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Arsenic	100	99.002	99	90-110	

CCV3	Date: 02-Jul-2020 13:08		Seq: 5648599	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Arsenic	100	98.371	98	90-110	

CCV4	Date: 02-Jul-2020 13:33		Seq: 5648646	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Arsenic	100	100.547	101	90-110	

CCV5	Date: 02-Jul-2020 13:50		Seq: 5648655	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Arsenic	100	98.837	99	90-110	

CCV6	Date: 02-Jul-2020 14:38		Seq: 5648852	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Arsenic	100	98.837	99	90-110	

CCV7	Date: 02-Jul-2020 15:08		Seq: 5648883	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Arsenic	100	99.407	99	90-110	

CCV8	Date: 02-Jul-2020 15:34		Seq: 5648886	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Arsenic	100	103.145	103	90-110	

Form 3 - BLANKS

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
WorkOrder: HS20061178

Run ID: ICPMS06_364391
Instrument: ICPMS06
Method: SW6020

ICB	Date: 02-Jul-2020 11:39	Seq: 5647962	ICB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**
Arsenic	5	0.4	5	U

CCB1	Date: 02-Jul-2020 12:22	Seq: 5648602	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**
Arsenic	2	0.4	2	U

MBLK-154955	Date: 02-Jul-2020 12:25	Seq: 5648603	MBLK	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**
Arsenic	5	0.4	5	U

CCB2	Date: 02-Jul-2020 12:46	Seq: 5648612	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**
Arsenic	2	0.4	2	U

CCB3	Date: 02-Jul-2020 13:10	Seq: 5648600	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**
Arsenic	2	0.4	2	U

CCB4	Date: 02-Jul-2020 13:35	Seq: 5648647	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**
Arsenic	2	0.4	2	U

CCB5	Date: 02-Jul-2020 13:52	Seq: 5648656	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**
Arsenic	2	0.4	2	U

CCB6	Date: 02-Jul-2020 14:39	Seq: 5648853	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**
Arsenic	2	0.4	2	U

CCB7	Date: 02-Jul-2020 15:10	Seq: 5648884	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**
Arsenic	2	0.4	2	U

CCB8	Date: 02-Jul-2020 15:36	Seq: 5648887	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**
Arsenic	2	0.4	2	U

ALS Houston, US Date: 15-Jul-20

Form 4 - ICP Interference Check Sample

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
WorkOrder: HS20061178

Run ID: ICPMS06_364391
Instrument: ICPMS06
Method: SW6020

ICSA	Date: 02-Jul-2020 11:50	Seq: 5647964	ICSA	Units: ug/L
Analyte	**True**	**Found**	**%R**	
Arsenic		0.056	0	

ICSAB	Date: 02-Jul-2020 11:52	Seq: 5647965	ICSAB	Units: ug/L
Analyte	**True**	**Found**	**%R**	
Arsenic	100	115	115	

ALS Houston, US Date: 15-Jul-20

Form 5A - Matrix Spike/Matrix Spike Duplicate Recovery

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
WorkOrder: HS20061178

Date Analyzed: 02-Jul-2020 12:39
Date Extracted: 29-Jun-2020 14:30
Units: ug/L

Matrix Spike: HS20061218-02MS
Client Sample ID:

Analysis Method: SW6020

Analyte	Sample Result	MS Result	Spike Amount	% Rec	MSD Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
Arsenic	1.189	49.66	50.00	96.9	48.75	50.00	95.1	84-116	1.85	20

ALS Houston, US Date: 15-Jul-20

Form 5B - Post Digest Sample Recovery

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
WorkOrder: HS20061178

Date Analyzed: 02-Jul-2020 12:41
Date Extracted: 29-Jun-2020 14:30
Units: ug/L

Lab Sample ID: HS20061218-02PDS
Client Sample ID:

Analysis Method: SW6020

Analyte	Sample Result	PDS Result	Spike Amount	% Rec	% Rec Limits
Arsenic	1.189	112.2	100	111	80-120

ALS Houston, US Date: 15-Jul-20

Form 7 - Laboratory Control Sample

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
WorkOrder: HS20061178

Date Analyzed: 02-Jul-2020 12:27
Date Extracted: 29-Jun-2020 14:30
Units: ug/L

Lab Sample ID: LCS-154955 Analysis Method: SW6020

Analyte	Spike Amount	LCS Result	% Rec	% Rec Limits
Arsenic	50	48.16	96	84-116

ALS Houston, US Date: 15-Jul-20

Form 8 - ICP Serial Dilutions

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
WorkOrder: HS20061178

Date Analyzed: 02-Jul-2020 12:35
Date Extracted: 29-Jun-2020 14:30
Units: ug/L

Lab Sample ID: HS20061218-02SD
Client Sample ID:

Analysis Method: SW6020

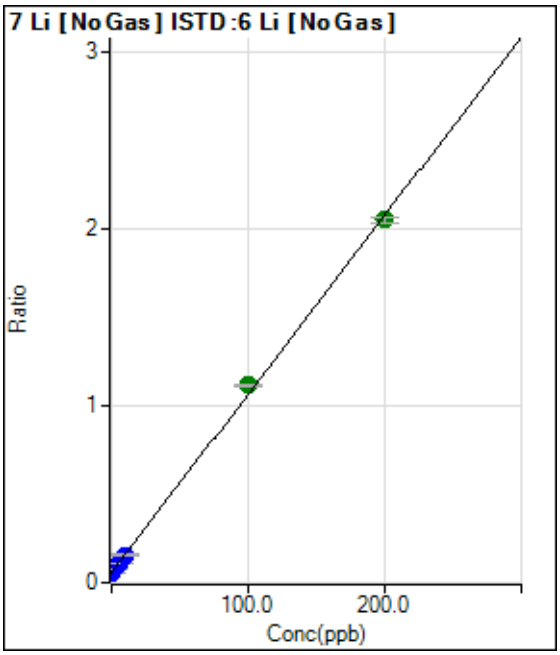
Analyte	Sample Result	C	SD Result	C	RPD	Q
Arsenic	1.189	J	0	U	0	

Calibration for 018_ICV.d

Batch Folder: C:\Agilent\ICPMH\1\DATA\070220A.b\
Analysis File: 070220A.batch.bin
DA Date-Time: 7/2/2020 9:54:05 PM
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	011CALB.d	CAL BLK	7/2/2020 11:19:56 AM
2	012CALS.d	2/10/200	7/2/2020 11:21:49 AM
3	013CALS.d	5/25/500	7/2/2020 11:23:40 AM
4	014CALS.d	10/50/100	7/2/2020 11:25:32 AM
5	015CALS.d	100/500/10K	7/2/2020 11:27:23 AM
6	016CALS.d	200/1000/20K	7/2/2020 11:29:05 AM

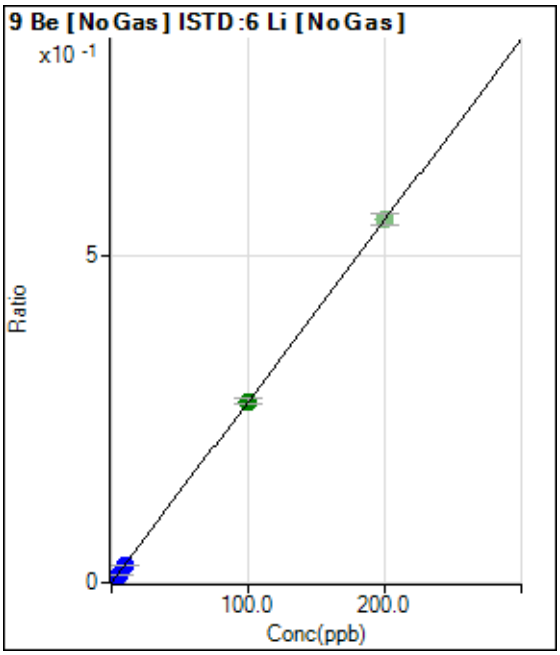
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	193582.19	0.0575	P	0.3
2	☐	2.000	1.971	253968.22	0.0774	P	1.0
3	☐	5.000	4.933	355153.27	0.1073	P	1.4
4	☐	10.000	9.781	519900.30	0.1562	P	3.0
5	☐	100.000	104.815	3600309.22	1.1155	A	1.1
6	☐	200.000	197.606	6465449.48	2.0521	A	1.6

y = 0.0101 * x + 0.0575
R = 0.9996
DL = 0.04621
BEC = 5.694

Weight: <None>
Min Conc: <None>

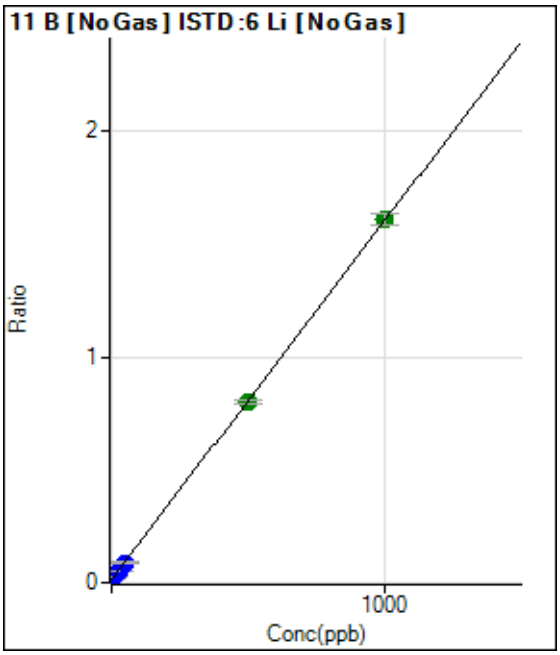


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	35.00	0.0000	P	52.9
2	☐	2.000	1.853	16860.18	0.0051	P	1.5
3	☐	5.000	4.632	42454.00	0.0128	P	1.2
4	☐	10.000	9.262	85300.79	0.0256	P	3.0
5	☐	100.000	100.095	893557.02	0.2769	A	3.1
6	☑	200.000		1745335.29	0.5540	A	3.0

y = 0.0028 * x + 1.0460E-005
R = 1.0000
DL = 0.005999
BEC = 0.003782

Weight: <None>
Min Conc: <None>

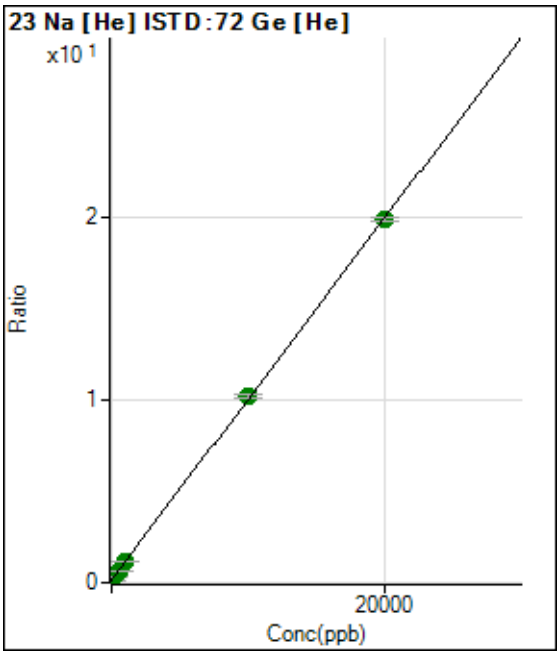
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	45704.31	0.0136	P	2.1
2	☐	10.000	9.074	91896.43	0.0280	P	2.1
3	☐	25.000	23.095	166431.73	0.0503	P	2.8
4	☐	50.000	47.022	293842.46	0.0883	P	3.6
5	☐	500.000	494.251	2578808.56	0.7991	A	2.5
6	☐	1000.000	1003.080	5065547.84	1.6077	A	3.1

y = 0.0016 * x + 0.0136
R = 1.0000
DL = 0.532
BEC = 8.541

Weight: <None>
Min Conc: <None>

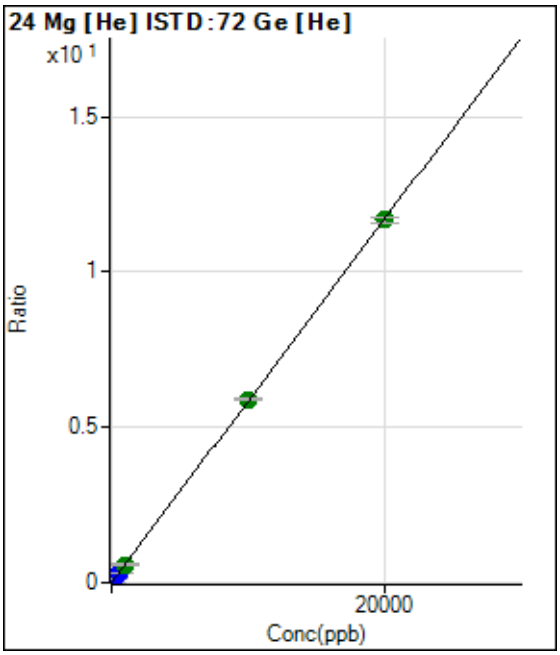


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	325832.34	0.1531	P	2.9
2	☐	200.000	191.530	723317.59	0.3430	A	3.9
3	☐	500.000	504.858	1351530.87	0.6537	A	0.6
4	☐	1000.000	981.632	2355171.27	1.1264	A	1.7
5	☐	10000.00	10176.32	21342974.68	10.2427	A	1.4
6	☐	20000.00	19912.72	40275192.73	19.8962	A	1.1

y = 9.9148E-004 * x + 0.1531
R = 0.9999
DL = 13.38
BEC = 154.4

Weight: <None>
Min Conc: <None>

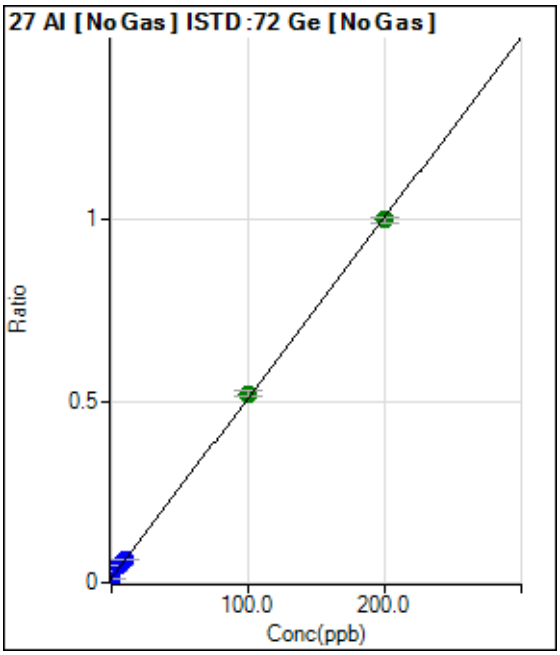
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1796.81	0.0008	P	7.3
2	☐	200.000	200.366	248901.78	0.1180	P	2.3
3	☐	500.000	512.242	621123.05	0.3004	P	1.4
4	☐	1000.000	1001.145	1226116.88	0.5863	A	2.6
5	☐	10000.00	10070.49	12273329.82	5.8903	A	1.3
6	☐	20000.00	19964.38	23635522.98	11.6765	A	1.3

y = 5.8482E-004 * x + 8.4497E-004
R = 1.0000
DL = 0.3144
BEC = 1.445

Weight: <None>
Min Conc: <None>

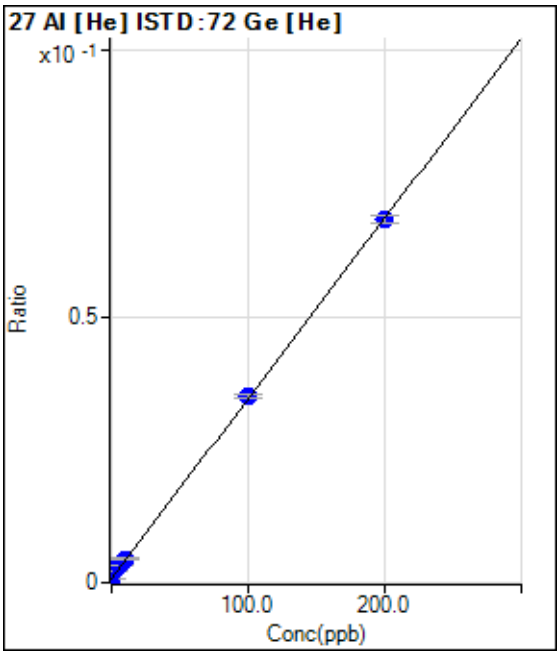


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	73457.45	0.0117	P	2.9
2	☐	2.000	4.564	216035.96	0.0344	P	10.3
3	☐	5.000	7.014	290954.61	0.0466	P	0.4
4	☐	10.000	10.161	397019.36	0.0622	P	1.5
5	☐	100.000	102.533	3250265.06	0.5210	A	2.9
6	☐	200.000	198.649	6049705.95	0.9984	A	1.8

y = 0.0050 * x + 0.0117
R = 0.9998
DL = 0.2041
BEC = 2.364

Weight: <None>
Min Conc: <None>

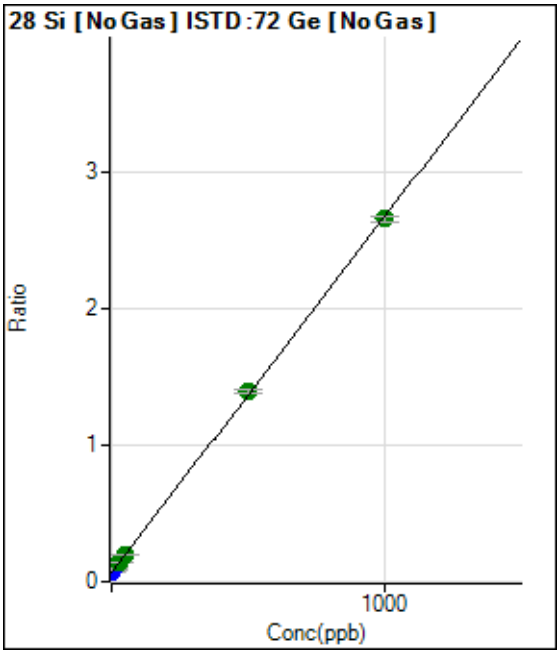
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1646.79	0.0008	P	2.6
2	☐	2.000	4.461	4820.95	0.0023	P	8.2
3	☐	5.000	6.948	6458.33	0.0031	P	3.3
4	☐	10.000	10.830	9277.09	0.0044	P	7.0
5	☐	100.000	101.275	73004.88	0.0350	P	1.9
6	☐	200.000	199.248	138007.11	0.0682	P	1.9

y = 3.3831E-004 * x + 7.7385E-004
R = 0.9999
DL = 0.1752
BEC = 2.287

Weight: <None>
Min Conc: <None>

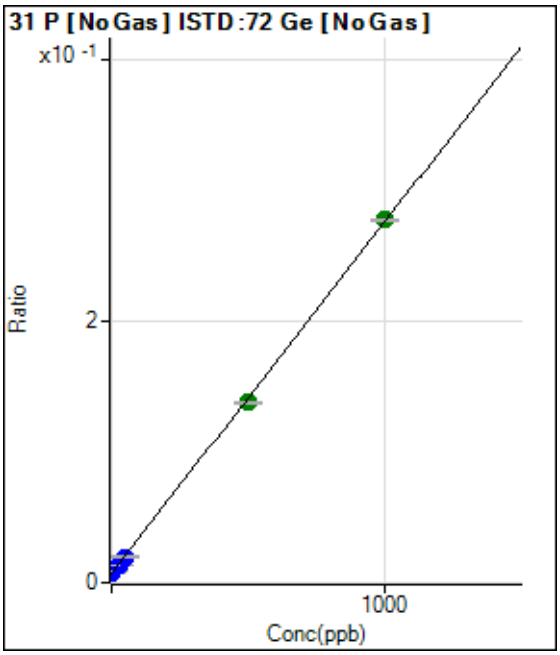


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	406074.31	0.0649	P	2.4
2	☐	10.000	10.482	579389.62	0.0922	P	2.1
3	☐	25.000	28.013	861068.37	0.1378	A	1.2
4	☐	50.000	50.289	1249930.71	0.1959	A	2.8
5	☐	500.000	510.910	8705232.16	1.3953	A	1.6
6	☐	1000.000	994.451	16083943.51	2.6545	A	1.3

y = 0.0026 * x + 0.0649
R = 0.9999
DL = 1.813
BEC = 24.92

Weight: <None>
Min Conc: <None>

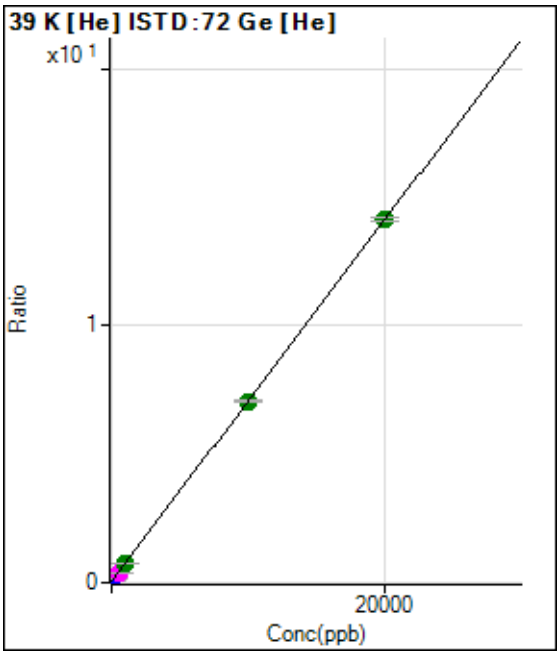
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	44849.37	0.0072	P	0.8
2	☐	10.000	9.124	60441.90	0.0096	P	2.6
3	☐	25.000	24.230	85452.02	0.0137	P	1.5
4	☐	50.000	47.140	126623.77	0.0198	P	0.5
5	☐	500.000	487.202	862145.17	0.1382	A	0.9
6	☐	1000.000	1006.570	1683351.90	0.2778	A	0.9

y = 2.6889E-004 * x + 0.0072
R = 0.9999
DL = 0.6243
BEC = 26.64

Weight: <None>
Min Conc: <None>

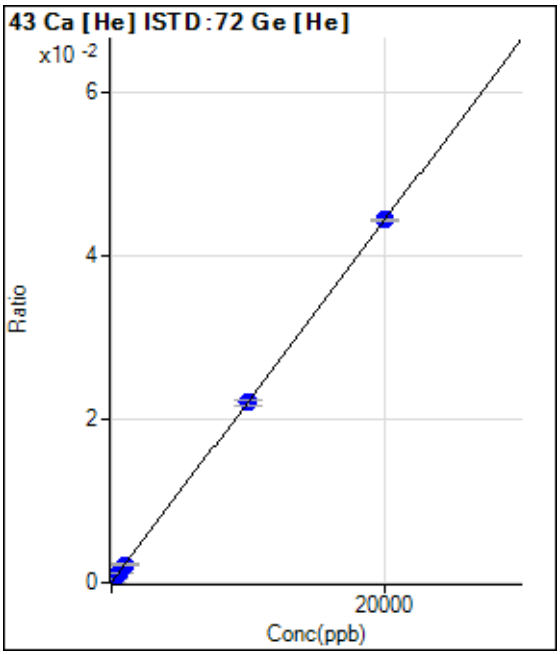


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	109136.12	0.0513	P	2.8
2	☐	200.000	195.217	397456.87	0.1885	P	2.4
3	☐	500.000	501.659	834994.75	0.4039	M	0.5
4	☐	1000.000	988.727	1560277.27	0.7462	A	1.9
5	☐	10000.00	9976.621	14716456.86	7.0629	A	1.3
6	☐	20000.00	20012.26	28573733.74	14.1159	A	1.2

y = 7.0280E-004 * x + 0.0513
R = 1.0000
DL = 6.207
BEC = 72.98

Weight: <None>
Min Conc: <None>

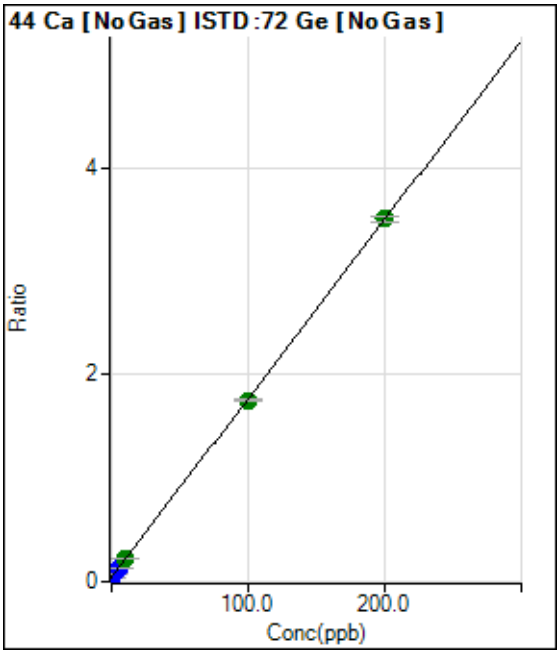
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	66.67	0.0000	P	8.6
2	☐	200.000	200.009	1000.05	0.0005	P	8.7
3	☐	500.000	497.996	2346.91	0.0011	P	3.9
4	☐	1000.000	965.224	4540.85	0.0022	P	8.4
5	☐	10000.00	9944.989	45973.93	0.0221	P	2.7
6	☐	20000.00	20029.29	89906.07	0.0444	P	0.7

y = 2.2158E-006 * x + 3.1321E-005
R = 1.0000
DL = 3.667
BEC = 14.14

Weight: <None>
Min Conc: <None>

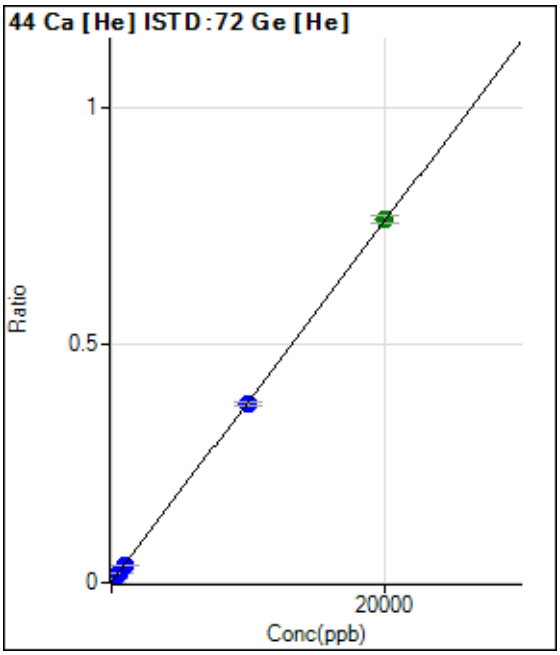


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	261358.00	0.0418	P	3.7
2	☐	2.000	1.951	474153.67	0.0755	P	2.8
3	☐	5.000	4.853	784394.44	0.1256	P	1.2
4	☐	10.000	10.362	1408377.38	0.2207	A	2.3
5	☐	100.000	99.025	10927582.76	1.7515	A	1.4
6	☐	200.000	200.473	21225239.69	3.5031	A	1.8

y = 0.0173 * x + 0.0418
R = 1.0000
DL = 0.2711
BEC = 2.42

Weight: <None>
Min Conc: <None>

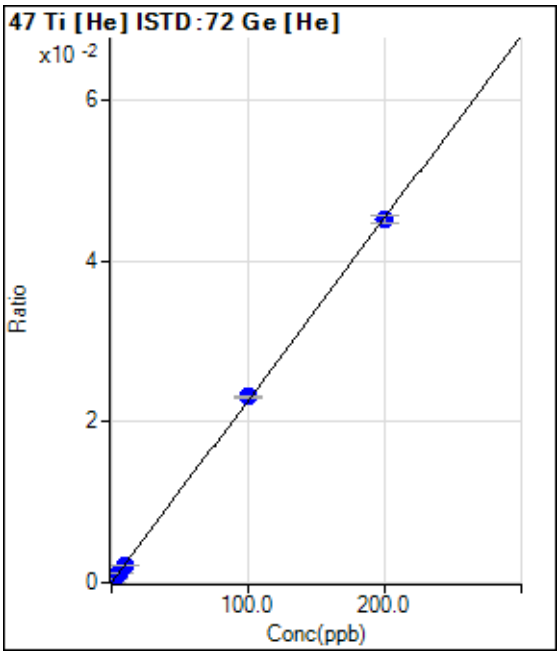
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2543.62	0.0012	P	5.8
2	☐	200.000	197.369	18319.17	0.0087	P	2.0
3	☐	500.000	488.379	40804.25	0.0197	P	1.6
4	☐	1000.000	959.461	78654.73	0.0376	P	0.4
5	☐	10000.00	9857.119	781917.02	0.3753	P	2.6
6	☐	20000.00	20073.78	1544859.20	0.7631	A	2.1

y = 3.7955E-005 * x + 0.0012
R = 1.0000
DL = 5.483
BEC = 31.5

Weight: <None>
Min Conc: <None>

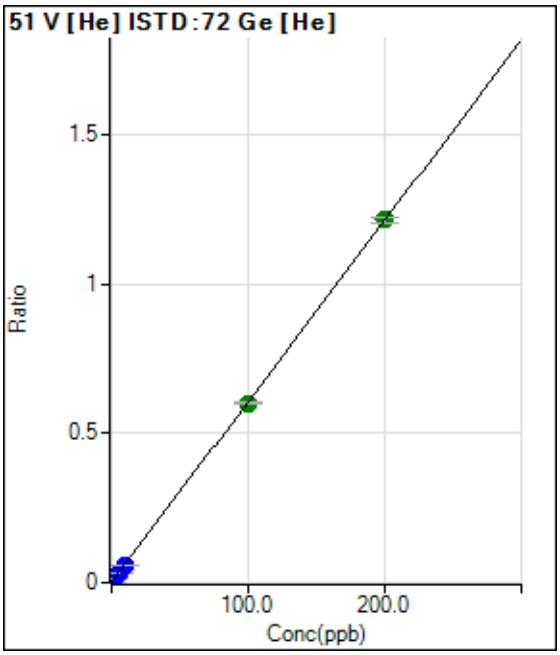


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	13.33	0.0000	P	86.6
2	☐	2.000	1.707	830.04	0.0004	P	5.1
3	☐	5.000	5.162	2433.60	0.0012	P	5.0
4	☐	10.000	9.366	4454.14	0.0021	P	7.4
5	☐	100.000	102.067	48225.43	0.0231	P	1.4
6	☐	200.000	198.997	91322.79	0.0451	P	2.1

y = 2.2670E-004 * x + 6.3445E-006
R = 0.9999
DL = 0.07272
BEC = 0.02799

Weight: <None>
Min Conc: <None>

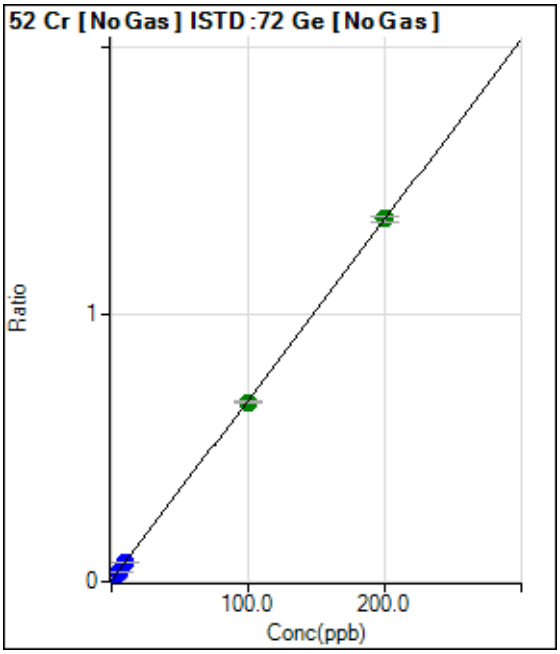
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2430.23	0.0011	P	1.9
2	☐	2.000	1.876	26326.39	0.0125	P	2.7
3	☐	5.000	4.780	62123.67	0.0301	P	1.9
4	☐	10.000	9.493	122430.15	0.0586	P	2.0
5	☐	100.000	99.121	1251485.92	0.6006	A	1.3
6	☐	200.000	200.471	2456660.88	1.2136	A	1.6

y = 0.0060 * x + 0.0011
R = 1.0000
DL = 0.0107
BEC = 0.1888

Weight: <None>
Min Conc: <None>

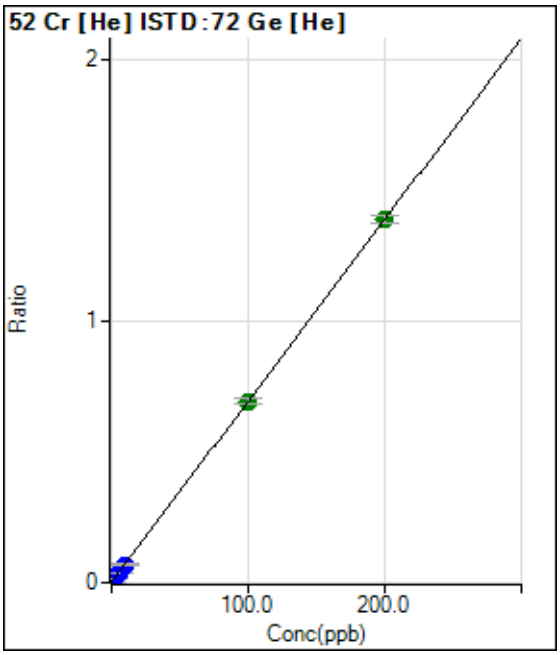


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	25083.23	0.0040	P	0.5
2	☐	2.000	1.956	108002.74	0.0172	P	1.6
3	☐	5.000	4.954	233455.23	0.0374	P	0.6
4	☐	10.000	9.658	440759.99	0.0691	P	1.1
5	☐	100.000	98.893	4180902.13	0.6701	A	1.3
6	☐	200.000	200.572	8209680.92	1.3550	A	1.9

y = 0.0067 * x + 0.0040
R = 1.0000
DL = 0.008085
BEC = 0.5949

Weight: <None>
Min Conc: <None>

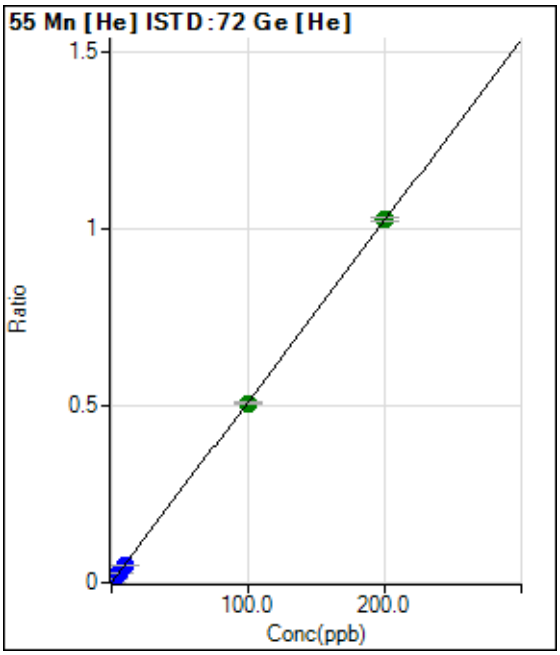
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2653.64	0.0012	P	3.3
2	☐	2.000	1.944	30985.47	0.0147	P	3.0
3	☐	5.000	4.850	71962.46	0.0348	P	2.0
4	☐	10.000	9.878	145498.43	0.0696	P	3.1
5	☐	100.000	100.062	1445189.25	0.6936	A	2.9
6	☐	200.000	199.979	2803288.09	1.3849	A	2.2

y = 0.0069 * x + 0.0012
R = 1.0000
DL = 0.01788
BEC = 0.1801

Weight: <None>
Min Conc: <None>

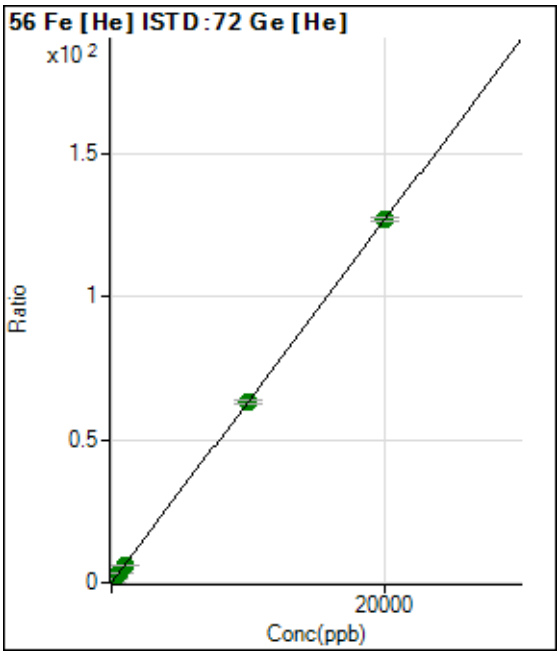


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1206.74	0.0006	P	6.1
2	☐	2.000	1.928	21967.99	0.0104	P	4.7
3	☐	5.000	4.899	52949.89	0.0256	P	1.3
4	☐	10.000	9.743	105311.84	0.0504	P	3.0
5	☐	100.000	99.212	1057849.41	0.5077	A	1.7
6	☐	200.000	200.410	2074905.28	1.0250	A	1.0

y = 0.0051 * x + 5.6715E-004
R = 1.0000
DL = 0.02022
BEC = 0.111

Weight: <None>
Min Conc: <None>

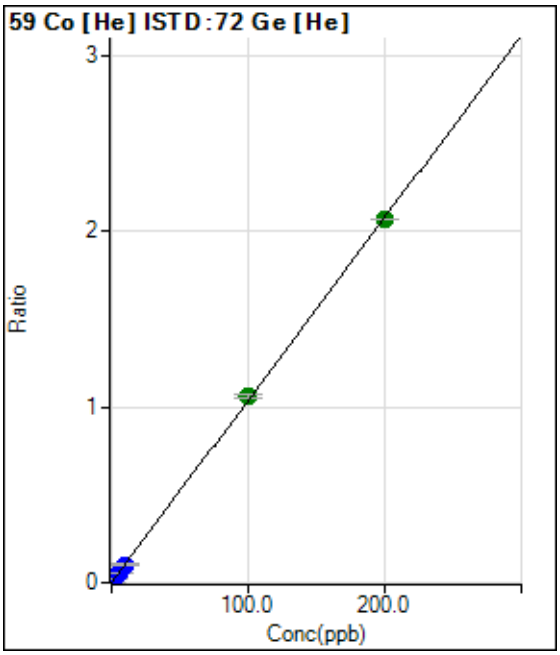
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	26173.96	0.0123	P	47.4
2	☐	200.000	196.550	2653096.47	1.2579	A	1.6
3	☐	500.000	487.388	6411675.32	3.1011	A	0.7
4	☐	1000.000	969.900	12877665.23	6.1590	A	1.8
5	☐	10000.00	9956.256	131489571.3	63.1100	A	1.9
6	☐	20000.00	20023.72	256913629.5	126.912	A	0.9

y = 0.0063 * x + 0.0123
R = 1.0000
DL = 2.764
BEC = 1.943

Weight: <None>
Min Conc: <None>

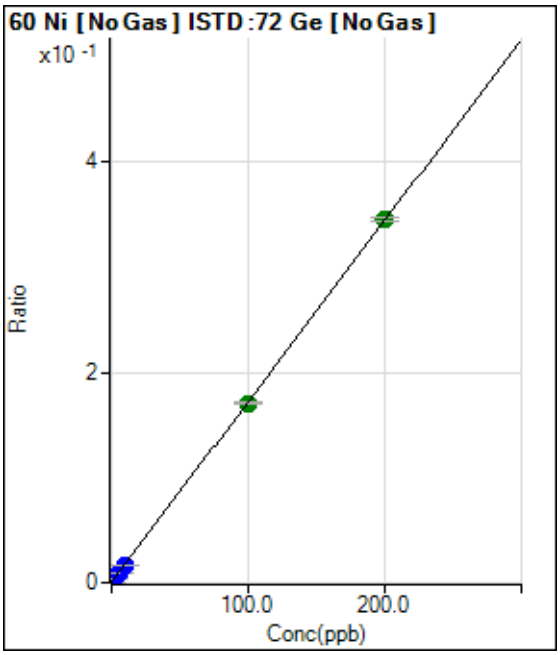


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	350.01	0.0002	P	13.8
2	☐	2.000	1.932	42677.07	0.0202	P	1.5
3	☐	5.000	5.006	107875.61	0.0522	P	2.1
4	☐	10.000	9.969	216894.91	0.1038	P	4.2
5	☐	100.000	102.221	2213459.34	1.0623	A	1.6
6	☐	200.000	198.892	4184088.48	2.0668	A	0.1

y = 0.0104 * x + 1.6453E-004
R = 0.9999
DL = 0.006568
BEC = 0.01583

Weight: <None>
Min Conc: <None>

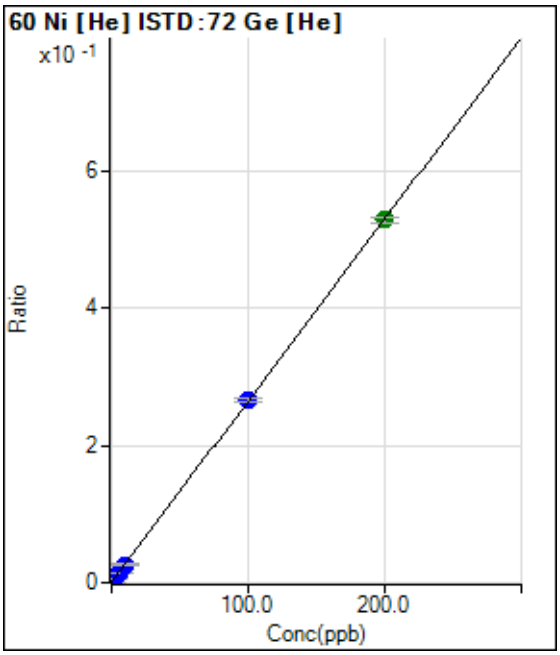
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2213.55	0.0004	P	4.8
2	☐	2.000	1.832	22041.45	0.0035	P	2.4
3	☐	5.000	4.877	54650.29	0.0087	P	1.3
4	☐	10.000	9.682	108625.57	0.0170	P	0.8
5	☐	100.000	99.203	1067767.85	0.1711	A	1.0
6	☐	200.000	200.419	2092542.37	0.3454	A	1.1

y = 0.0017 * x + 3.5343E-004
R = 1.0000
DL = 0.02927
BEC = 0.2053

Weight: <None>
Min Conc: <None>

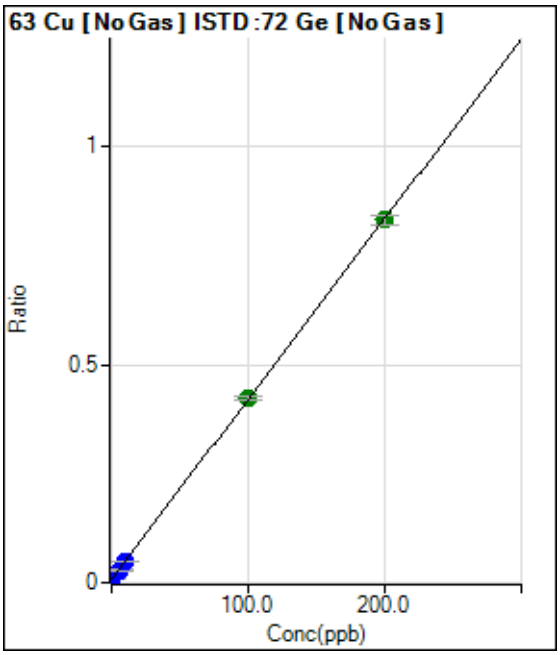


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	970.05	0.0005	P	11.2
2	☐	2.000	1.838	11234.88	0.0053	P	0.5
3	☐	5.000	4.913	27855.52	0.0135	P	2.3
4	☐	10.000	9.849	55500.19	0.0265	P	3.2
5	☐	100.000	100.574	556017.98	0.2669	P	2.6
6	☐	200.000	199.724	1071851.55	0.5295	A	1.4

y = 0.0026 * x + 4.5647E-004
R = 1.0000
DL = 0.05764
BEC = 0.1723

Weight: <None>
Min Conc: <None>

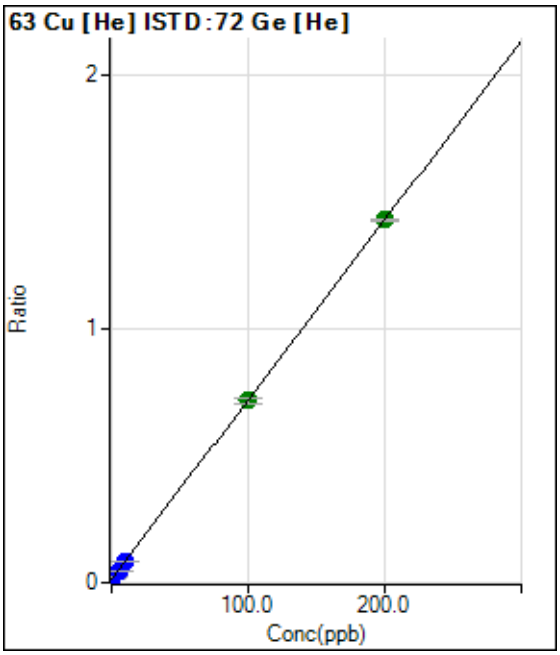
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	49493.41	0.0079	P	3.2
2	☐	2.000	1.951	100348.87	0.0160	P	0.5
3	☐	5.000	5.010	178602.70	0.0286	P	2.4
4	☐	10.000	9.782	308211.71	0.0483	P	2.1
5	☐	100.000	100.858	2647580.17	0.4243	A	1.8
6	☐	200.000	199.582	5039470.86	0.8318	A	2.6

y = 0.0041 * x + 0.0079
R = 1.0000
DL = 0.1821
BEC = 1.916

Weight: <None>
Min Conc: <None>

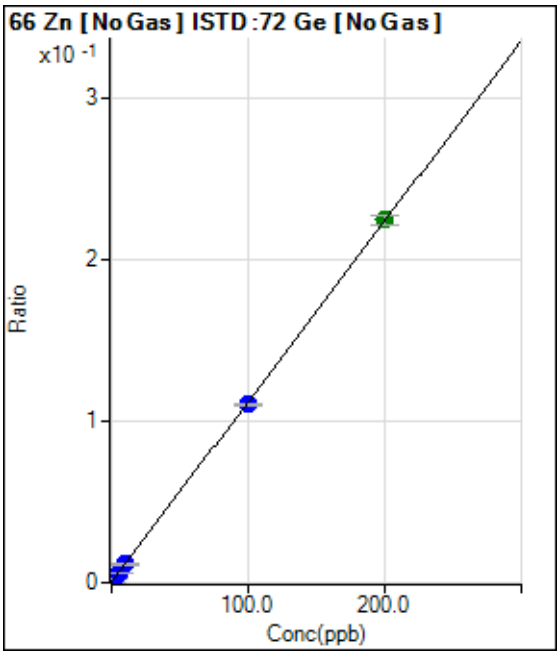


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	28443.48	0.0134	P	2.5
2	☐	2.000	1.870	56109.23	0.0266	P	3.1
3	☐	5.000	5.023	101188.67	0.0489	P	1.2
4	☐	10.000	9.829	173473.65	0.0830	P	3.0
5	☐	100.000	99.547	1496849.04	0.7184	A	3.5
6	☐	200.000	200.236	2897752.87	1.4315	A	0.8

y = 0.0071 * x + 0.0134
R = 1.0000
DL = 0.1426
BEC = 1.887

Weight: <None>
Min Conc: <None>

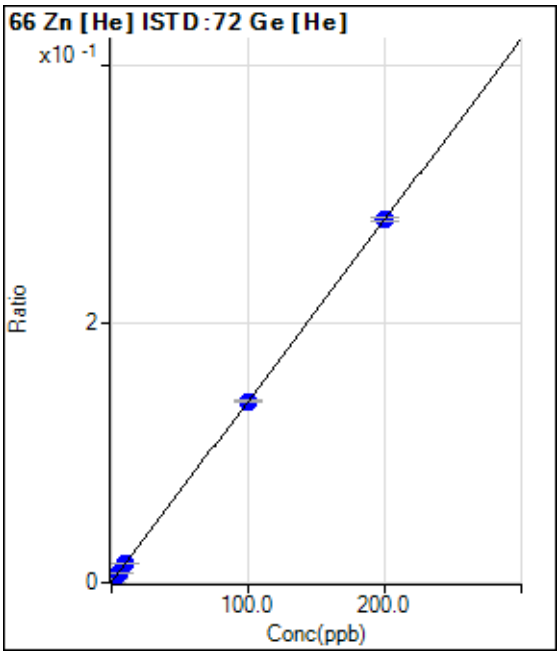
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1910.17	0.0003	P	10.7
2	☐	2.000	1.968	15749.36	0.0025	P	3.8
3	☐	5.000	5.039	37104.56	0.0059	P	2.0
4	☐	10.000	9.851	72235.78	0.0113	P	0.5
5	☐	100.000	98.542	689249.31	0.1105	P	1.0
6	☐	200.000	200.736	1361583.42	0.2247	A	2.5

y = 0.0011 * x + 3.0563E-004
R = 1.0000
DL = 0.08783
BEC = 0.2734

Weight: <None>
Min Conc: <None>

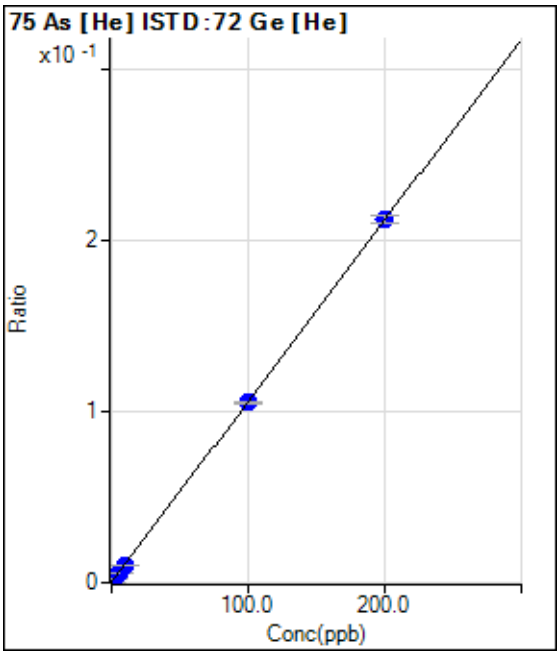


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	690.04	0.0003	P	8.9
2	☐	2.000	1.928	6381.58	0.0030	P	1.9
3	☐	5.000	5.010	15182.05	0.0073	P	3.0
4	☐	10.000	10.017	30016.84	0.0144	P	0.5
5	☐	100.000	99.935	292354.16	0.1403	P	0.9
6	☐	200.000	200.032	567817.41	0.2805	P	1.1

y = 0.0014 * x + 3.2392E-004
R = 1.0000
DL = 0.06164
BEC = 0.2313

Weight: <None>
Min Conc: <None>

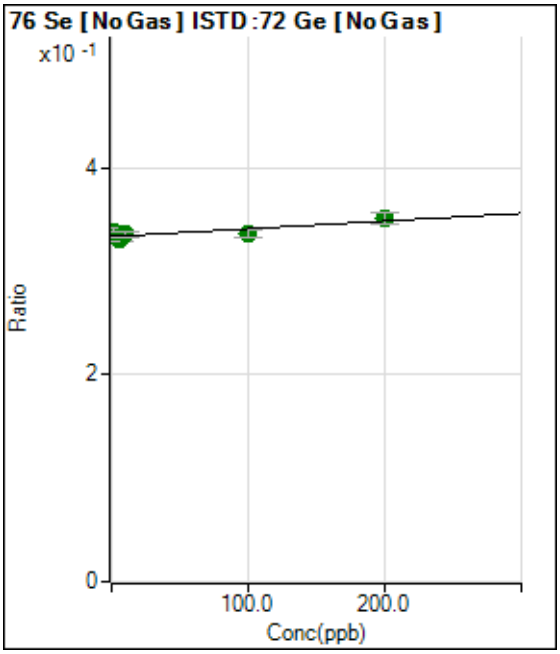
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	472.23	0.0002	P	12.5
2	☐	2.000	1.896	4699.73	0.0022	P	2.6
3	☐	5.000	4.956	11309.23	0.0055	P	0.5
4	☐	10.000	9.608	21737.54	0.0104	P	1.9
5	☐	100.000	99.439	219884.81	0.1055	P	1.3
6	☐	200.000	200.302	429800.32	0.2123	P	2.0

y = 0.0011 * x + 2.2140E-004
R = 1.0000
DL = 0.07818
BEC = 0.2091

Weight: <None>
Min Conc: <None>

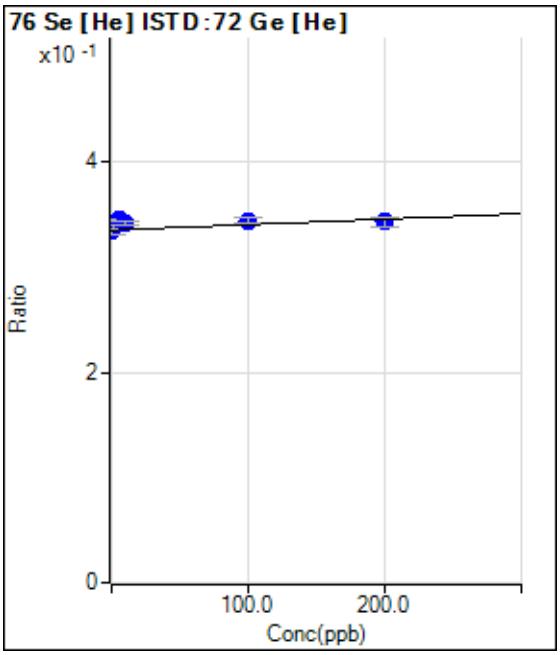


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2086182.16	0.3333	A	1.1
2	☐	2.000	68.416	2127032.73	0.3385	A	2.1
3	☐	5.000	-32.856	2067015.28	0.3309	A	1.1
4	☐	10.000	29.720	2141669.50	0.3356	A	1.9
5	☐	100.000	43.996	2100039.14	0.3366	A	2.4
6	☐	200.000	227.298	2122601.27	0.3503	A	3.1

y = 7.4663E-005 * x + 0.3333
R = 0.8705
DL = 150.5
BEC = 4465

Weight: <None>
Min Conc: <None>

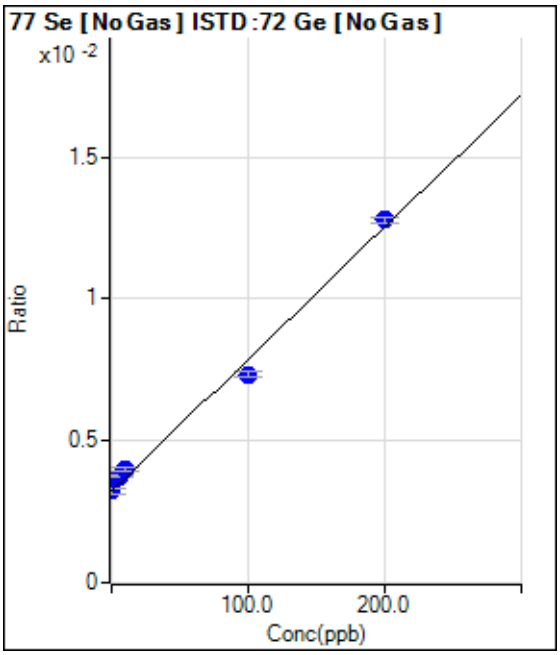
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	713776.08	0.3354	P	2.7
2	☐	2.000	126.825	721301.71	0.3421	P	2.8
3	☐	5.000	184.872	713613.61	0.3451	P	0.7
4	☐	10.000	114.716	713995.75	0.3415	P	0.9
5	☐	100.000	176.639	718235.59	0.3447	P	1.3
6	☐	200.000	150.700	694927.62	0.3433	P	2.4

y = 5.2442E-005 * x + 0.3354
R = 0.3749
DL = 520.7
BEC = 6396

Weight: <None>
Min Conc: <None>

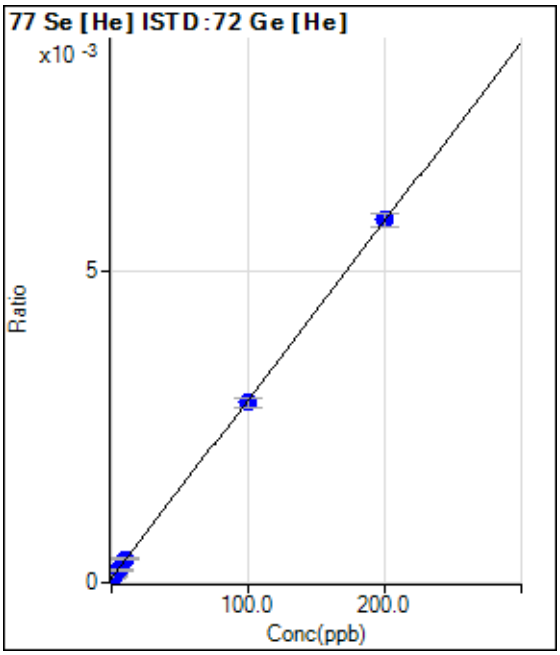


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	20182.14	0.0032	P	5.6
2	☐	2.000	9.616	23103.48	0.0037	P	1.8
3	☐	5.000	11.389	23474.13	0.0038	P	2.6
4	☐	10.000	16.691	25554.63	0.0040	P	2.2
5	☐	100.000	88.314	45784.66	0.0073	P	3.2
6	☐	200.000	205.273	77472.36	0.0128	P	1.4

y = 4.6571E-005 * x + 0.0032
R = 0.9960
DL = 11.67
BEC = 69.29

Weight: <None>
Min Conc: <None>

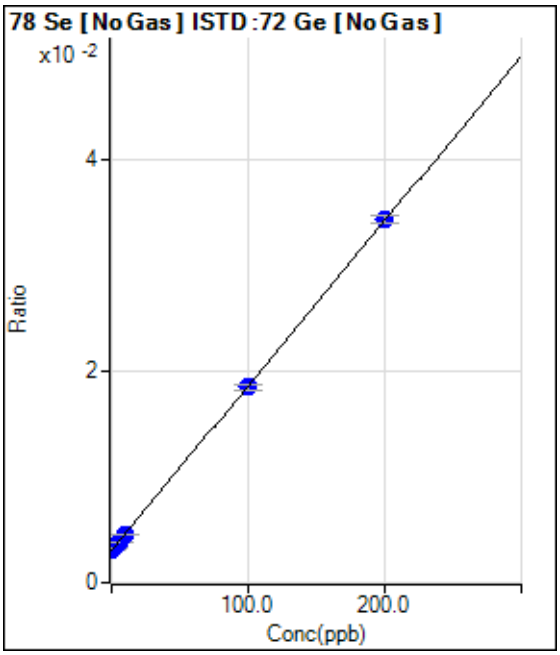
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	150.00	0.0001	P	45.9
2	☐	2.000	1.318	226.67	0.0001	P	23.1
3	☐	5.000	4.652	420.01	0.0002	P	15.1
4	☐	10.000	10.684	786.70	0.0004	P	10.4
5	☐	100.000	98.521	6024.80	0.0029	P	5.6
6	☐	200.000	200.721	11772.03	0.0058	P	3.7

y = 2.8628E-005 * x + 7.0068E-005
R = 0.9999
DL = 3.369
BEC = 2.448

Weight: <None>
Min Conc: <None>

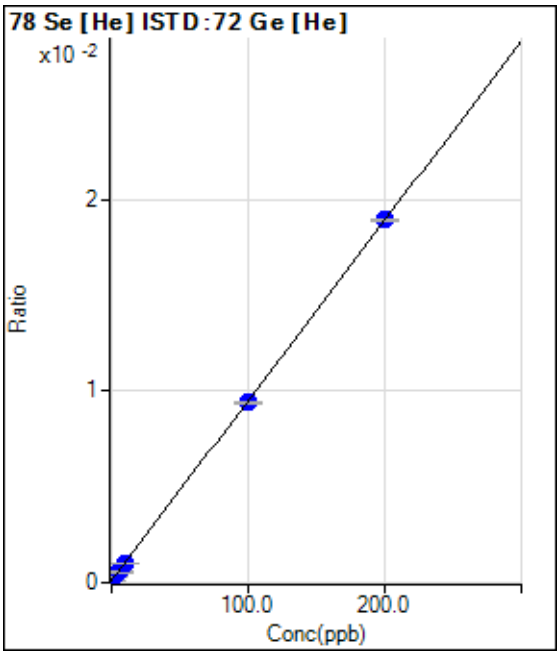


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	19100.41	0.0031	P	3.7
2	☐	2.000	1.679	20819.70	0.0033	P	5.5
3	☐	5.000	4.951	23881.49	0.0038	P	0.9
4	☐	10.000	9.356	28771.03	0.0045	P	2.6
5	☐	100.000	98.873	114978.71	0.0184	P	2.3
6	☐	200.000	200.600	207516.55	0.0342	P	2.0

y = 1.5552E-004 * x + 0.0031
R = 1.0000
DL = 2.201
BEC = 19.63

Weight: <None>
Min Conc: <None>

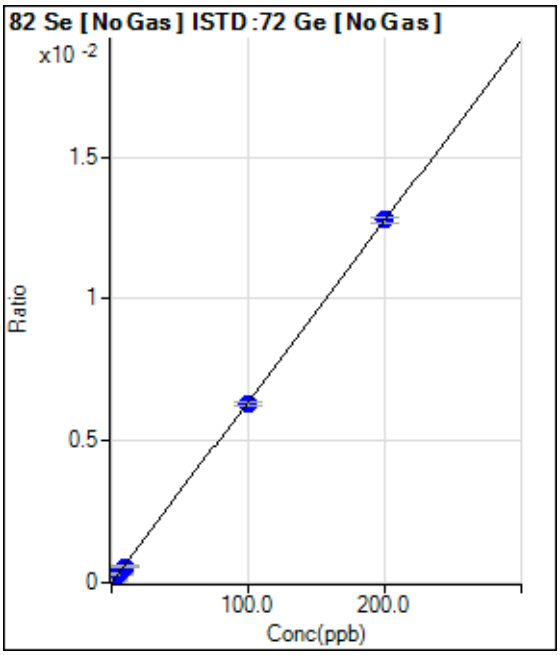
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	251.33	0.0001	P	6.9
2	☐	2.000	1.937	634.02	0.0003	P	10.3
3	☐	5.000	4.745	1165.39	0.0006	P	4.8
4	☐	10.000	9.424	2098.17	0.0010	P	1.0
5	☐	100.000	99.015	19624.27	0.0094	P	1.4
6	☐	200.000	200.528	38366.42	0.0190	P	0.7

y = 9.3926E-005 * x + 1.1812E-004
R = 1.0000
DL = 0.2598
BEC = 1.258

Weight: <None>
Min Conc: <None>

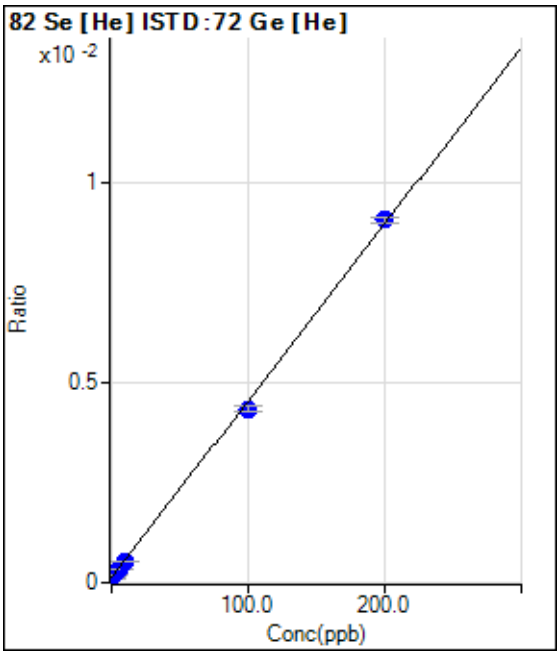


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	22.26	0.0000	P	577.3
2	☐	2.000	1.430	594.79	0.0001	P	51.3
3	☐	5.000	4.842	1949.44	0.0003	P	7.1
4	☐	10.000	8.727	3570.00	0.0006	P	9.3
5	☐	100.000	98.924	39333.07	0.0063	P	1.9
6	☐	200.000	200.611	77437.28	0.0128	P	1.5

y = 6.3692E-005 * x + 3.5704E-006
R = 1.0000
DL = 0.9708
BEC = 0.05606

Weight: <None>
Min Conc: <None>

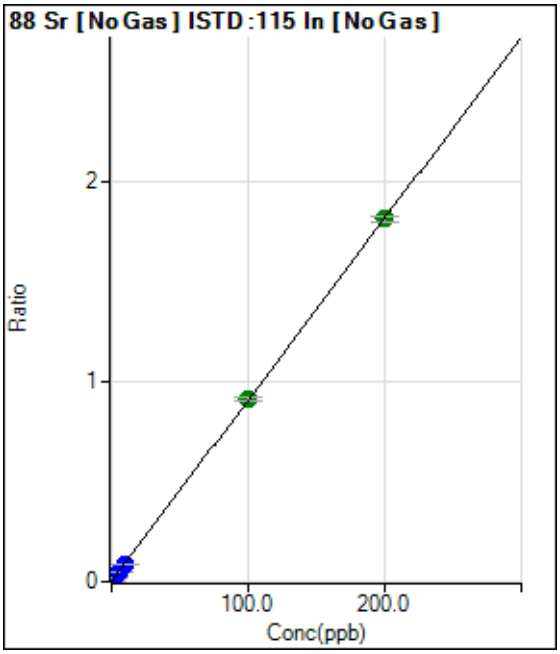
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	273.34	0.0001	P	30.9
2	☐	2.000	1.255	386.68	0.0002	P	8.2
3	☐	5.000	4.581	683.36	0.0003	P	9.2
4	☐	10.000	8.906	1090.06	0.0005	P	3.1
5	☐	100.000	95.401	9036.52	0.0043	P	3.3
6	☐	200.000	202.372	18339.50	0.0091	P	1.3

y = 4.4128E-005 * x + 1.2813E-004
R = 0.9997
DL = 2.694
BEC = 2.904

Weight: <None>
Min Conc: <None>

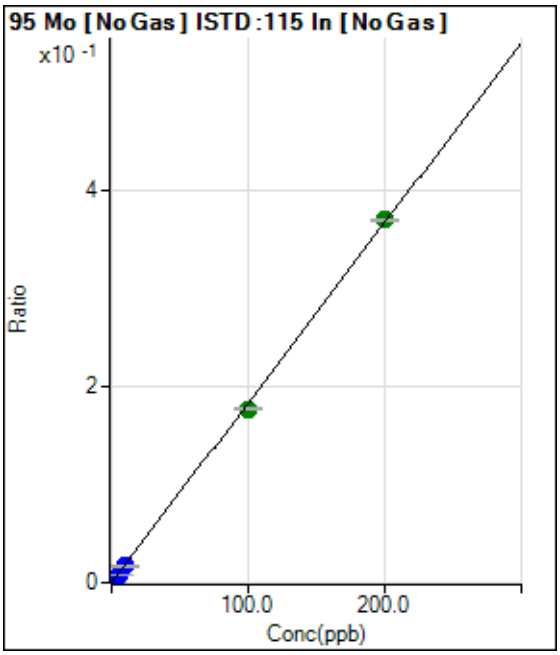


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	9743.72	0.0014	P	7.2
2	☐	2.000	1.998	128778.53	0.0196	P	3.6
3	☐	5.000	4.753	298416.08	0.0446	P	1.1
4	☐	10.000	9.215	582187.65	0.0852	P	4.3
5	☐	100.000	100.338	6057353.45	0.9134	A	2.4
6	☐	200.000	199.877	11730386.91	1.8182	A	1.6

y = 0.0091 * x + 0.0014
R = 1.0000
DL = 0.03402
BEC = 0.1571

Weight: <None>
Min Conc: <None>

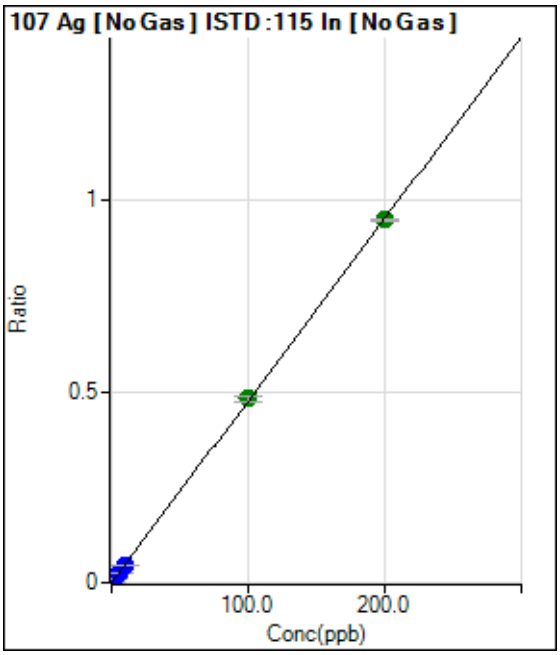
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	116.67	0.0000	P	22.4
2	☐	2.000	1.907	23113.89	0.0035	P	4.0
3	☐	5.000	4.618	56748.18	0.0085	P	4.6
4	☐	10.000	9.094	114127.09	0.0167	P	4.4
5	☐	100.000	96.699	1176764.46	0.1774	A	0.8
6	☐	200.000	201.707	2387861.89	0.3701	A	0.7

y = 0.0018 * x + 1.7092E-005
R = 0.9998
DL = 0.006257
BEC = 0.009316

Weight: <None>
Min Conc: <None>

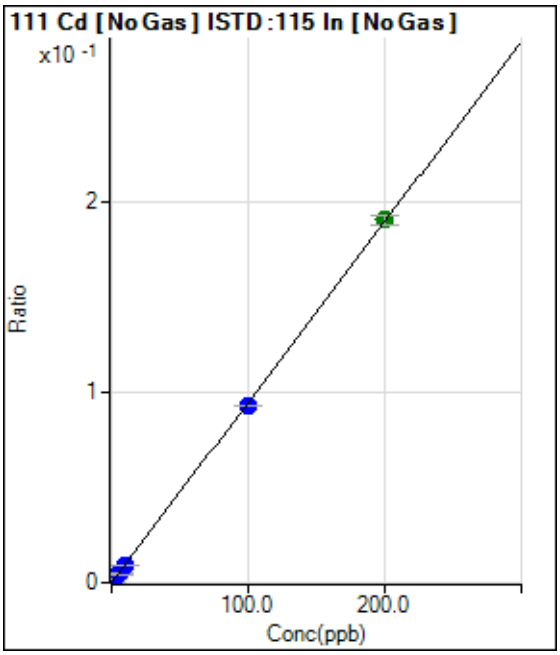


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	220.01	0.0000	P	18.3
2	☐	2.000	1.971	61912.23	0.0094	P	3.5
3	☐	5.000	4.886	155723.47	0.0233	P	0.8
4	☐	10.000	9.548	310872.54	0.0455	P	3.0
5	☐	100.000	100.999	3188539.75	0.4808	A	2.3
6	☐	200.000	199.526	6129250.12	0.9498	A	0.9

y = 0.0048 * x + 3.2147E-005
R = 1.0000
DL = 0.003716
BEC = 0.006753

Weight: <None>
Min Conc: <None>

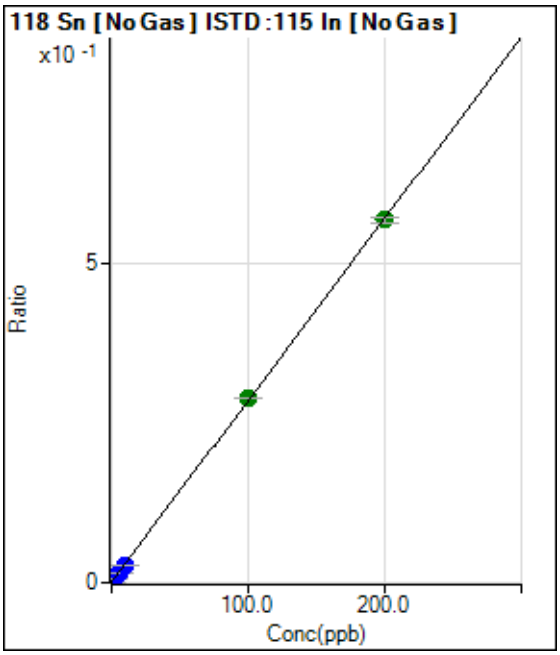
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	16.67	0.0000	P	127.1
2	☐	2.000	1.917	11948.96	0.0018	P	5.9
3	☐	5.000	4.796	30375.45	0.0045	P	3.8
4	☐	10.000	9.569	61975.73	0.0091	P	0.7
5	☐	100.000	97.914	614855.41	0.0927	P	0.8
6	☐	200.000	201.070	1228614.10	0.1904	A	2.9

y = 9.4682E-004 * x + 2.4559E-006
R = 0.9999
DL = 0.009893
BEC = 0.002594

Weight: <None>
Min Conc: <None>

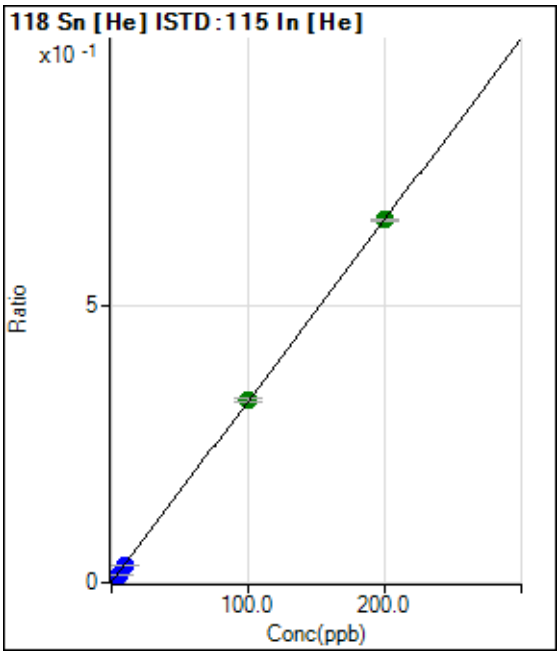


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	6088.15	0.0009	P	79.1
2	☐	2.000	1.674	37240.09	0.0057	P	2.6
3	☐	5.000	4.485	91301.39	0.0137	P	0.5
4	☐	10.000	9.134	183660.06	0.0269	P	3.5
5	☐	100.000	101.247	1915490.18	0.2888	A	0.8
6	☐	200.000	199.436	3665244.32	0.5680	A	1.9

y = 0.0028 * x + 9.0261E-004
R = 1.0000
DL = 0.7528
BEC = 0.3174

Weight: <None>
Min Conc: <None>

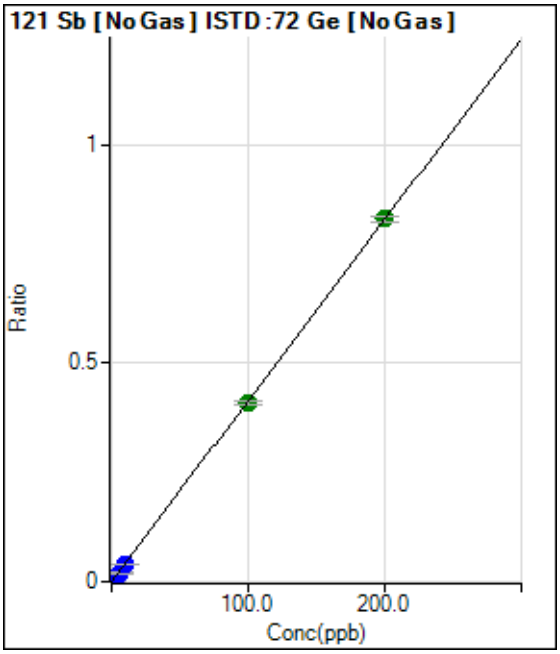
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2206.89	0.0006	P	10.3
2	☐	2.000	1.791	22519.72	0.0065	P	3.1
3	☐	5.000	4.426	54413.54	0.0151	P	3.2
4	☐	10.000	9.003	107993.10	0.0300	P	1.1
5	☐	100.000	100.177	1145544.80	0.3280	A	2.2
6	☐	200.000	199.978	2258057.99	0.6542	A	0.5

y = 0.0033 * x + 6.0136E-004
R = 1.0000
DL = 0.05706
BEC = 0.184

Weight: <None>
Min Conc: <None>

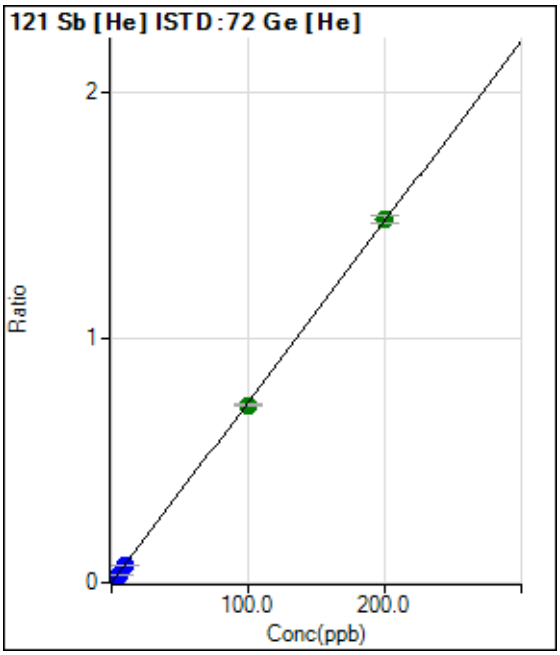


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1453.44	0.0002	P	10.7
2	☐	2.000	1.817	48747.69	0.0078	P	1.1
3	☐	5.000	4.725	123634.44	0.0198	P	1.7
4	☐	10.000	9.273	246483.40	0.0386	P	1.0
5	☐	100.000	98.839	2554253.71	0.4094	A	3.0
6	☐	200.000	200.625	5034347.43	0.8308	A	1.7

y = 0.0041 * x + 2.3205E-004
R = 1.0000
DL = 0.018
BEC = 0.05605

Weight: <None>
Min Conc: <None>

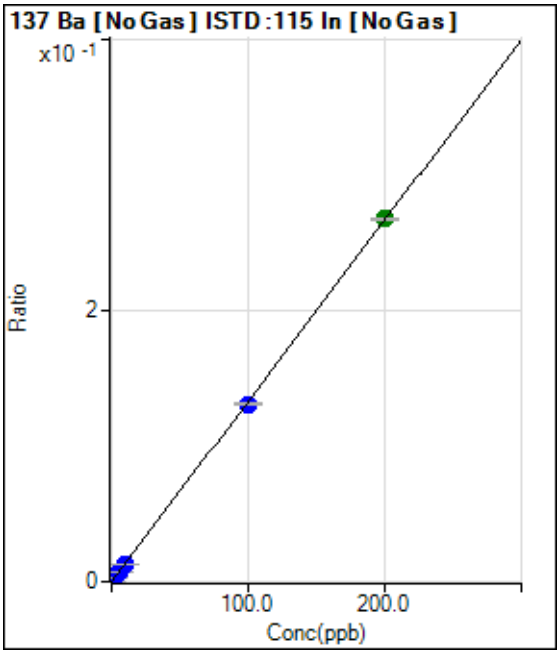
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	710.04	0.0003	P	18.5
2	☐	2.000	1.812	28848.74	0.0137	P	2.7
3	☐	5.000	4.634	71270.56	0.0345	P	1.6
4	☐	10.000	9.170	141956.76	0.0679	P	1.3
5	☐	100.000	98.367	1510935.40	0.7250	A	0.5
6	☐	200.000	200.869	2996542.77	1.4802	A	2.3

y = 0.0074 * x + 3.3314E-004
R = 1.0000
DL = 0.02515
BEC = 0.04522

Weight: <None>
Min Conc: <None>

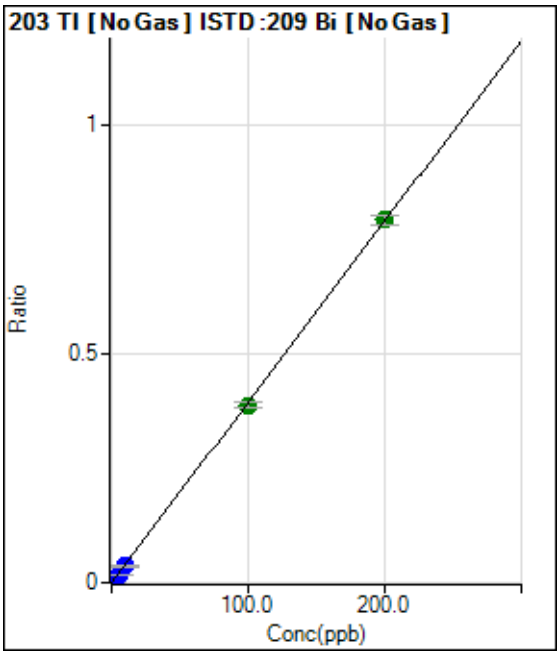


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1096.73	0.0002	P	11.8
2	☐	2.000	2.024	18743.93	0.0029	P	4.7
3	☐	5.000	4.917	44771.20	0.0067	P	0.9
4	☐	10.000	9.383	86324.78	0.0126	P	3.8
5	☐	100.000	98.134	866192.64	0.1306	P	1.3
6	☐	200.000	200.966	1724607.06	0.2673	A	0.4

y = 0.0013 * x + 1.6052E-004
R = 0.9999
DL = 0.04276
BEC = 0.1208

Weight: <None>
Min Conc: <None>

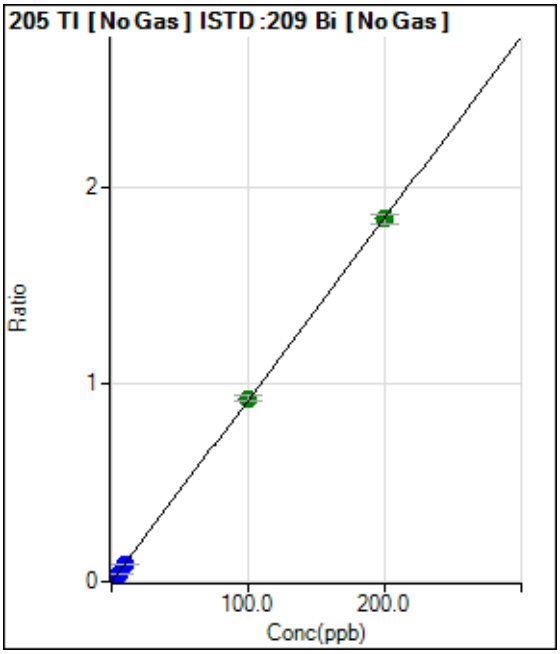
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	76.67	0.0000	P	32.6
2	☐	2.000	1.888	35664.93	0.0075	P	5.7
3	☐	5.000	4.474	85762.12	0.0177	P	2.1
4	☐	10.000	9.065	174784.91	0.0358	P	0.9
5	☐	100.000	98.458	1831350.96	0.3884	A	4.2
6	☐	200.000	200.832	3726763.38	0.7923	A	2.3

y = 0.0039 * x + 1.5905E-005
R = 1.0000
DL = 0.003949
BEC = 0.004032

Weight: <None>
Min Conc: <None>

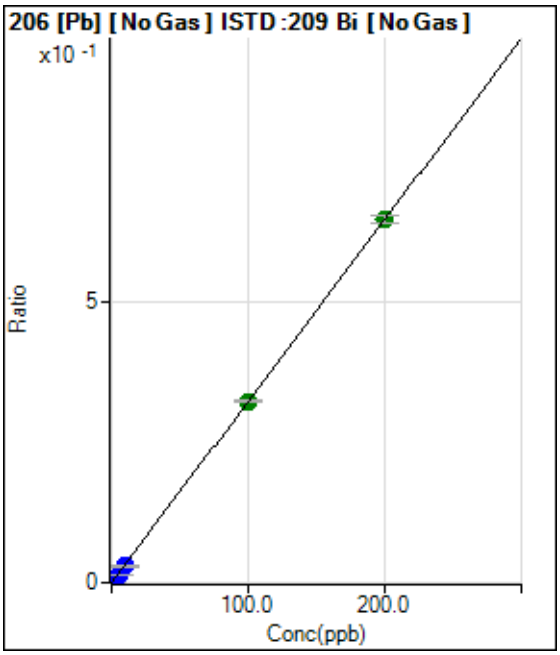


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	160.00	0.0000	P	25.1
2	☐	2.000	1.905	83960.96	0.0176	P	4.2
3	☐	5.000	4.633	207106.16	0.0427	P	2.6
4	☐	10.000	9.239	415436.74	0.0851	P	2.0
5	☐	100.000	100.716	4370727.64	0.9268	A	3.5
6	☐	200.000	199.690	8643389.25	1.8376	A	2.4

y = 0.0092 * x + 3.3211E-005
R = 1.0000
DL = 0.002716
BEC = 0.003609

Weight: <None>
Min Conc: <None>

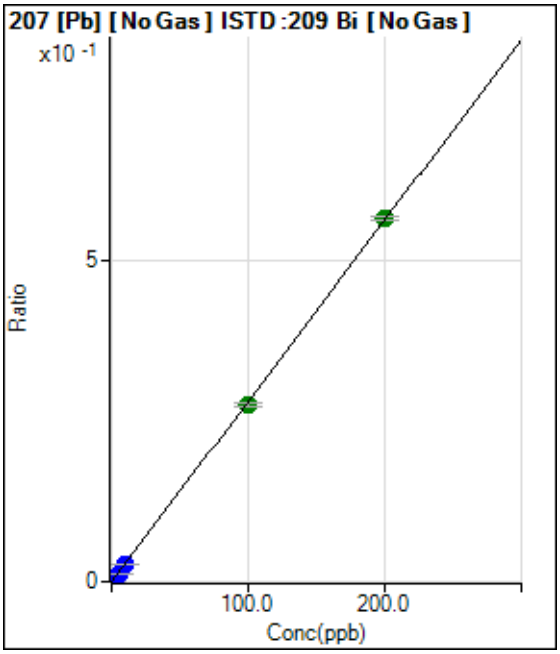
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	303.34	0.0001	P	13.5
2	☐	2.000	1.881	29421.94	0.0062	P	4.7
3	☐	5.000	4.520	71367.92	0.0147	P	3.6
4	☐	10.000	9.087	144067.70	0.0295	P	4.0
5	☐	100.000	100.048	1529653.62	0.3242	A	1.0
6	☐	200.000	200.035	3048607.14	0.6481	A	2.0

y = 0.0032 * x + 6.2959E-005
R = 1.0000
DL = 0.007885
BEC = 0.01943

Weight: <None>
Min Conc: <None>

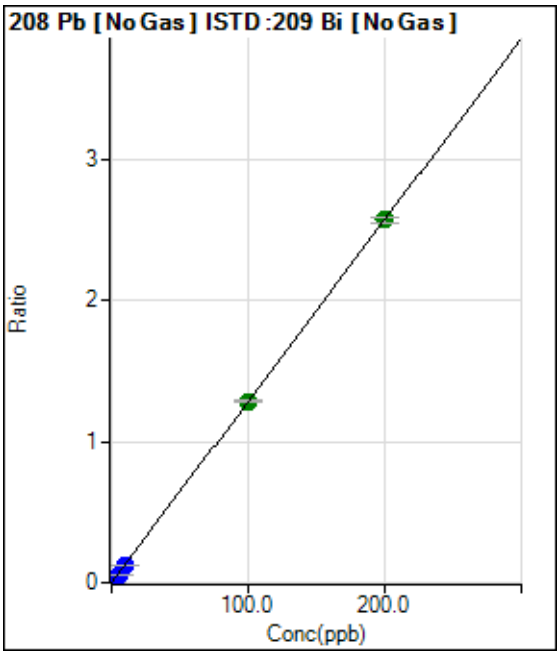


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	230.01	0.0000	P	26.0
2	☐	2.000	1.896	25643.64	0.0054	P	2.7
3	☐	5.000	4.635	63318.95	0.0130	P	0.8
4	☐	10.000	9.265	127054.22	0.0260	P	4.8
5	☐	100.000	98.147	1298122.95	0.2752	A	2.5
6	☐	200.000	200.974	2650809.13	0.5635	A	0.9

y = 0.0028 * x + 4.7686E-005
R = 0.9999
DL = 0.01329
BEC = 0.01701

Weight: <None>
Min Conc: <None>

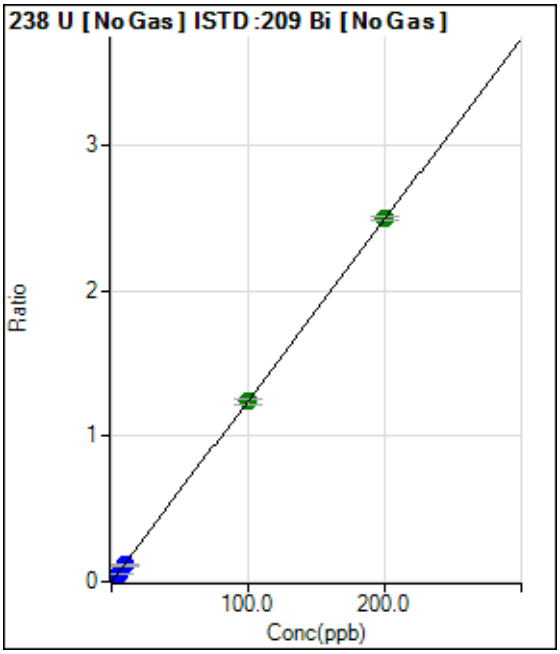
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1150.05	0.0002	P	3.7
2	☐	2.000	1.886	116953.70	0.0245	P	3.0
3	☐	5.000	4.600	287945.69	0.0593	P	0.9
4	☐	10.000	9.240	580557.46	0.1189	P	2.9
5	☐	100.000	99.932	6054525.90	1.2833	A	1.3
6	☐	200.000	200.083	12085835.55	2.5692	A	1.3

y = 0.0128 * x + 2.3863E-004
R = 1.0000
DL = 0.00208
BEC = 0.01859

Weight: <None>
Min Conc: <None>

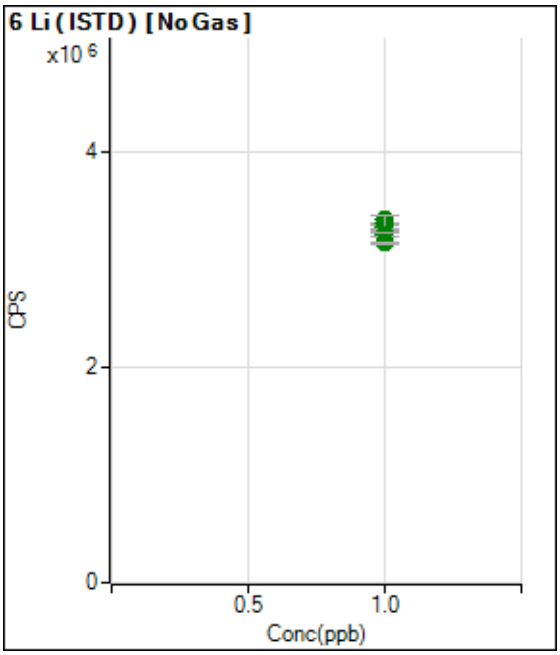


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	20.00	0.0000	P	0.5
2	☐	2.000	1.829	108859.24	0.0228	P	2.3
3	☐	5.000	4.518	273038.50	0.0562	P	0.2
4	☐	10.000	9.066	551270.46	0.1128	P	1.0
5	☐	100.000	99.365	5833204.29	1.2367	A	2.5
6	☐	200.000	200.378	11730613.57	2.4938	A	1.1

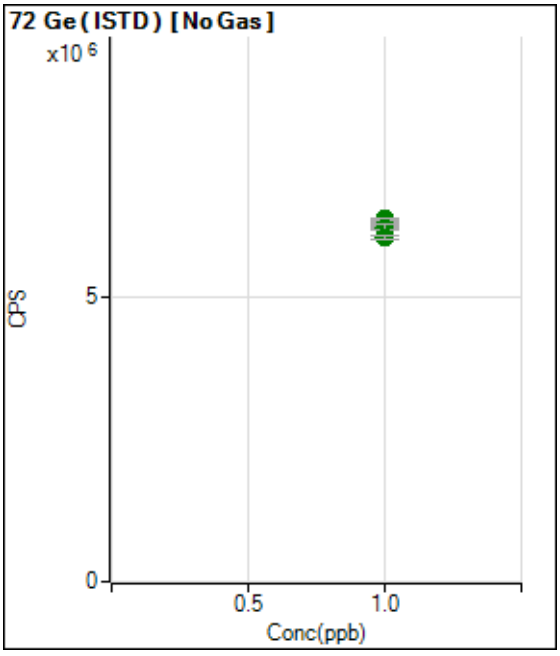
y = 0.0124 * x + 4.1502E-006
R = 1.0000
DL = 5.481E-06
BEC = 0.0003335

Weight: <None>
Min Conc: <None>

Calibration for 018_ICV.d

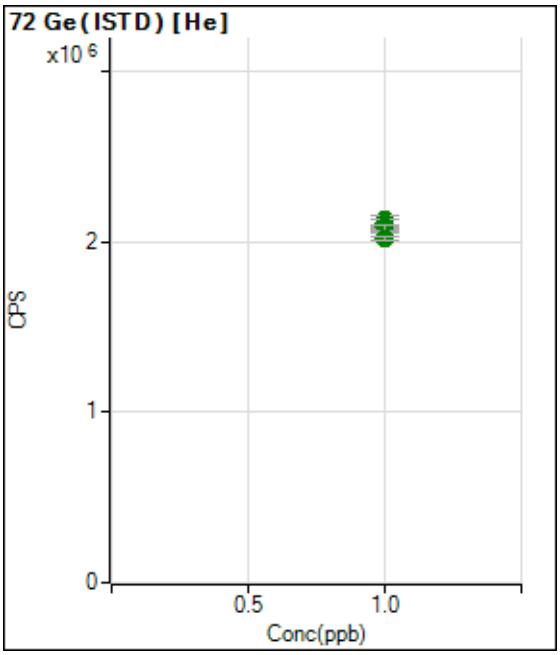


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		3367912.03		A	2.0
2	☐	1.000		3282944.31		A	1.8
3	☐	1.000		3311163.90		A	1.4
4	☐	1.000		3331060.60		A	4.3
5	☐	1.000		3227889.91		A	1.4
6	☐	1.000		3150844.63		A	0.6

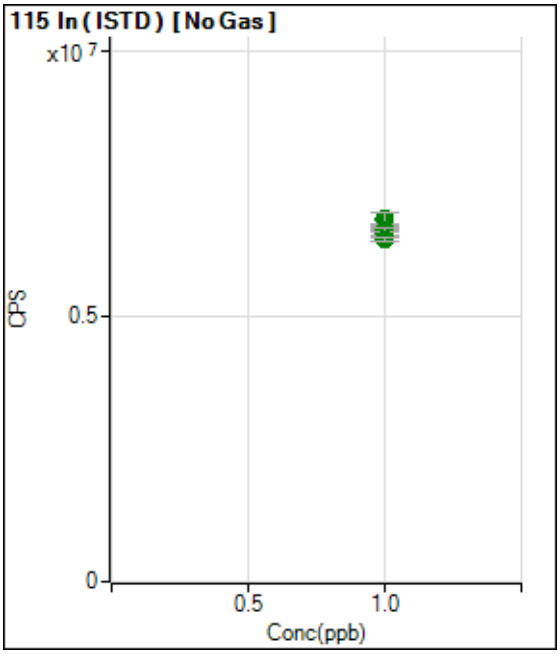


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		6259186.57		A	2.1
2	☐	1.000		6285838.24		A	1.8
3	☐	1.000		6246972.82		A	0.9
4	☐	1.000		6382107.61		A	0.3
5	☐	1.000		6239614.70		A	1.3
6	☐	1.000		6059339.28		A	0.9

Calibration for 018_ICV.d

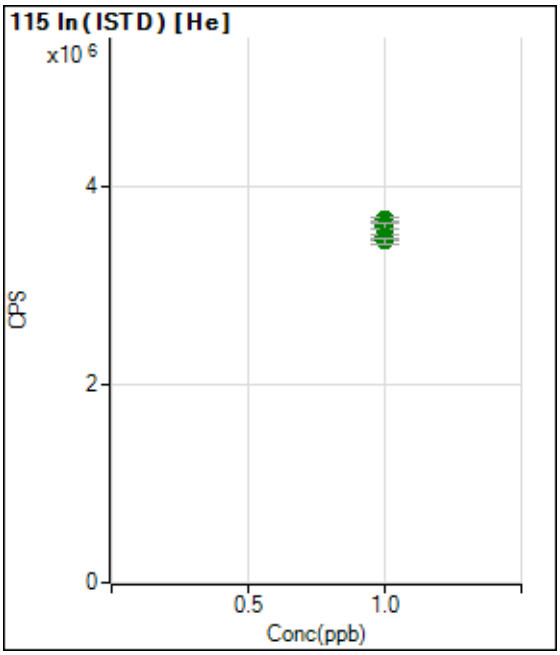


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		2128792.47		A	2.3
2	☐	1.000		2109518.72		A	2.5
3	☐	1.000		2067634.81		A	1.2
4	☐	1.000		2091168.41		A	1.2
5	☐	1.000		2083969.29		A	1.8
6	☐	1.000		2024410.34		A	1.2

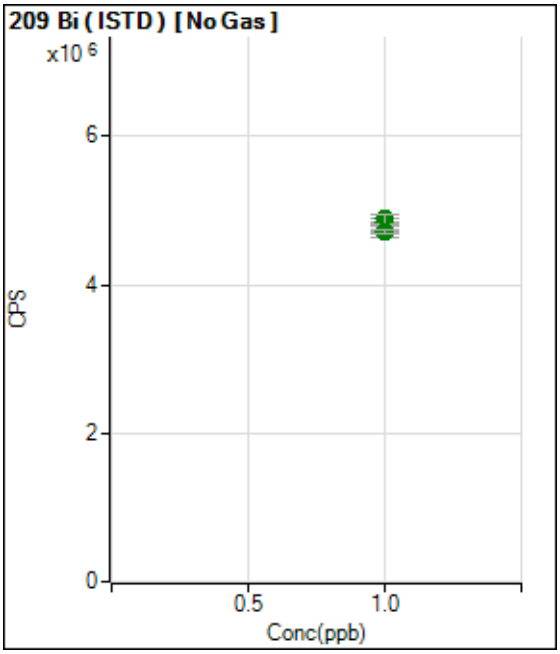


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		6832905.70		A	4.1
2	☐	1.000		6578216.25		A	1.8
3	☐	1.000		6686730.85		A	1.8
4	☐	1.000		6839438.66		A	3.3
5	☐	1.000		6632404.29		A	1.0
6	☐	1.000		6452380.02		A	1.3

Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		3666722.58		A	1.2
2	☐	1.000		3489822.74		A	1.4
3	☐	1.000		3613260.12		A	2.5
4	☐	1.000		3596745.54		A	1.6
5	☐	1.000		3492740.29		A	1.3
6	☐	1.000		3451331.86		A	1.8



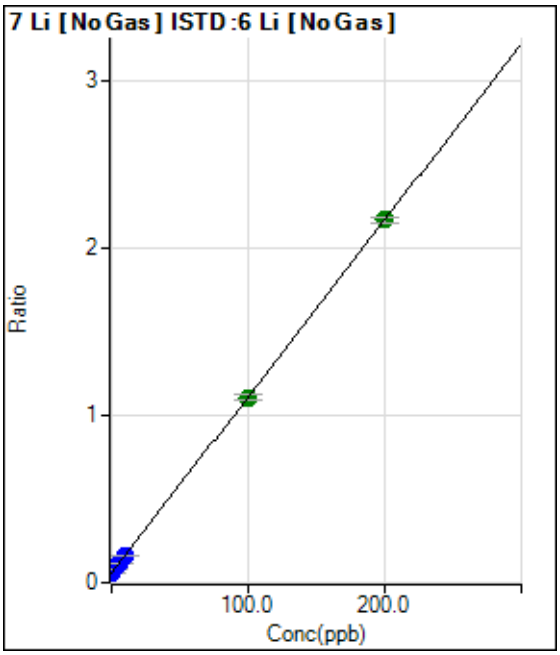
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		4819187.01		A	0.5
2	☐	1.000		4783999.51		A	2.7
3	☐	1.000		4855667.11		A	2.1
4	☐	1.000		4886188.78		A	2.8
5	☐	1.000		4718795.87		A	3.0
6	☐	1.000		4704128.47		A	1.2

Calibration for 197_ICV.d

Batch Folder: C:\Agilent\ICPMH\1\DATA\070220A.b\
Analysis File: 070220A.batch.bin
DA Date-Time: 7/2/2020 9:54:05 PM
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	190CALB.d	CAL BLK	7/2/2020 9:10:33 PM
2	191CALS.d	2/10/200	7/2/2020 9:12:32 PM
3	192CALS.d	5/25/500	7/2/2020 9:14:32 PM
4	193CALS.d	10/50/100	7/2/2020 9:16:23 PM
5	194CALS.d	100/500/10K	7/2/2020 9:18:15 PM
6	195CALS.d	200/1000/20K	7/2/2020 9:19:58 PM

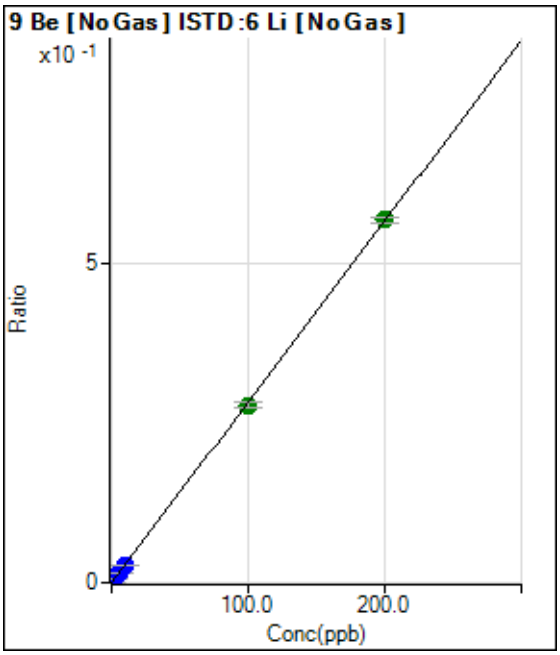
Calibration for 197_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	169837.52	0.0573	P	1.9
2	☐	2.000	2.302	241741.95	0.0815	P	3.0
3	☐	5.000	5.587	351805.61	0.1161	P	2.1
4	☐	10.000	10.053	490636.49	0.1632	P	0.5
5	☐	100.000	99.610	3154029.23	1.1065	A	3.5
6	☐	200.000	200.175	5892413.66	2.1657	A	1.7

y = 0.0105 * x + 0.0573
R = 1.0000
DL = 0.312
BEC = 5.437

Weight: <None>
Min Conc: <None>

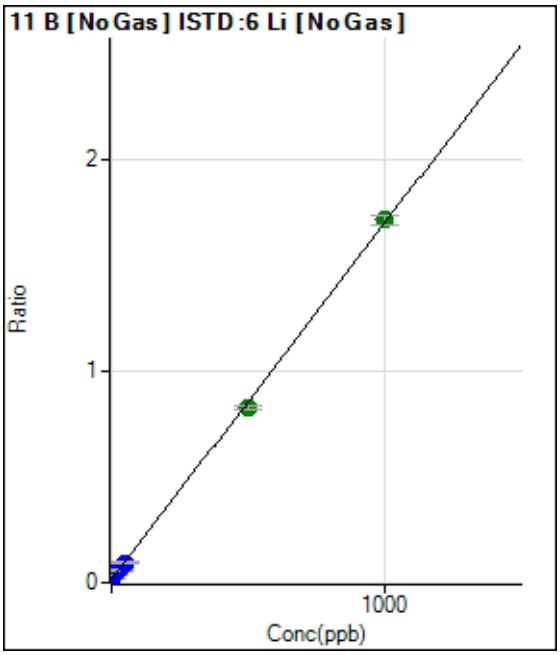


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	65.00	0.0000	P	36.5
2	☐	2.000	2.251	18987.87	0.0064	P	2.7
3	☐	5.000	5.435	46752.50	0.0154	P	1.6
4	☐	10.000	9.557	81531.30	0.0271	P	1.8
5	☐	100.000	98.414	795489.91	0.2790	A	2.3
6	☐	200.000	200.802	1548894.87	0.5693	A	1.7

y = 0.0028 * x + 2.1824E-005
R = 0.9999
DL = 0.008438
BEC = 0.007698

Weight: <None>
Min Conc: <None>

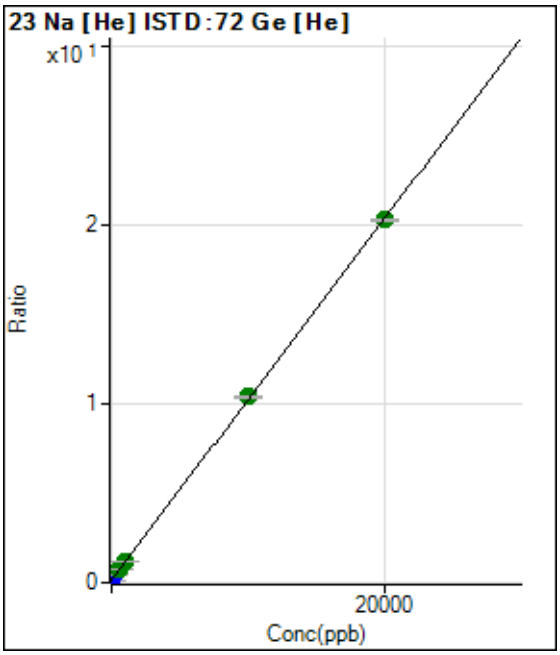
Calibration for 197_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	42612.71	0.0144	P	2.3
2	☐	10.000	10.851	96849.59	0.0327	P	4.2
3	☐	25.000	26.698	179977.94	0.0594	P	1.3
4	☐	50.000	48.090	287068.61	0.0955	P	2.4
5	☐	500.000	481.209	2355529.60	0.8260	A	1.7
6	☐	1000.000	1009.440	4670936.18	1.7169	A	2.4

y = 0.0017 * x + 0.0144
R = 0.9997
DL = 0.5986
BEC = 8.52

Weight: <None>
Min Conc: <None>

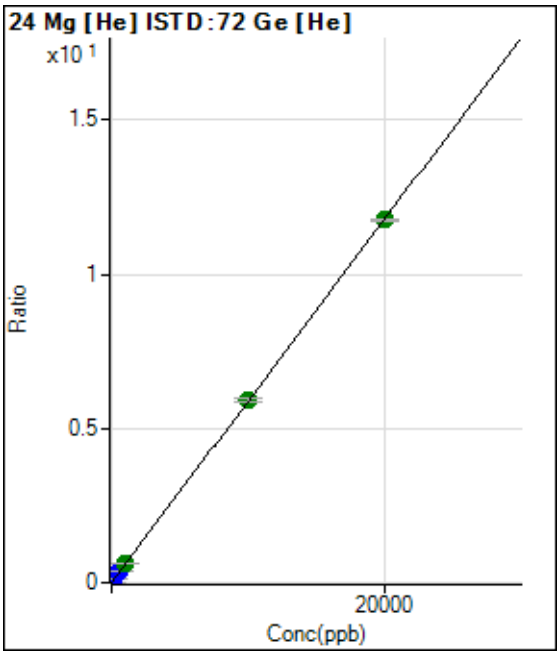


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	262320.50	0.1390	P	0.6
2	☐	200.000	246.511	722341.94	0.3880	P	1.8
3	☐	500.000	606.763	1384334.41	0.7520	A	1.4
4	☐	1000.000	1038.141	2242619.29	1.1878	A	2.9
5	☐	10000.00	10128.21	18751312.22	10.3712	A	0.5
6	☐	20000.00	19930.85	36040750.29	20.2745	A	0.2

y = 0.0010 * x + 0.1390
R = 1.0000
DL = 2.679
BEC = 137.6

Weight: <None>
Min Conc: <None>

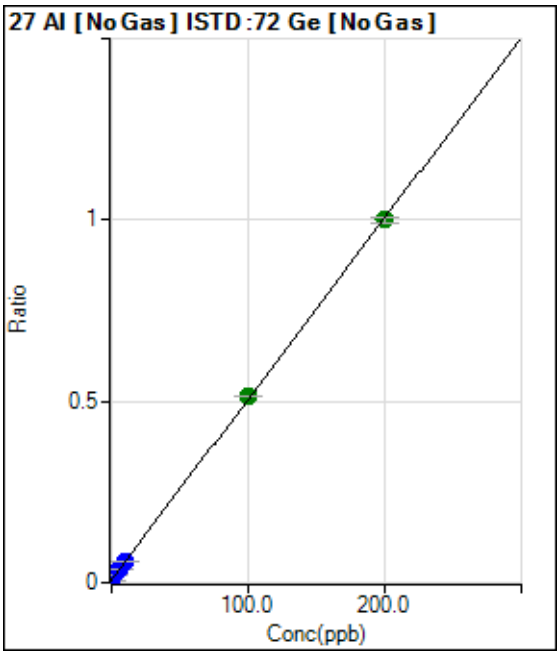
Calibration for 197_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1343.42	0.0007	P	17.2
2	☐	200.000	244.729	269529.66	0.1448	P	2.9
3	☐	500.000	603.154	655062.36	0.3558	P	1.1
4	☐	1000.000	1033.553	1150248.08	0.6093	A	1.6
5	☐	10000.00	10057.99	10709074.63	5.9228	A	2.2
6	☐	20000.00	19966.29	20899488.02	11.7568	A	0.7

y = 5.8880E-004 * x + 7.1239E-004
R = 1.0000
DL = 0.6245
BEC = 1.21

Weight: <None>
Min Conc: <None>

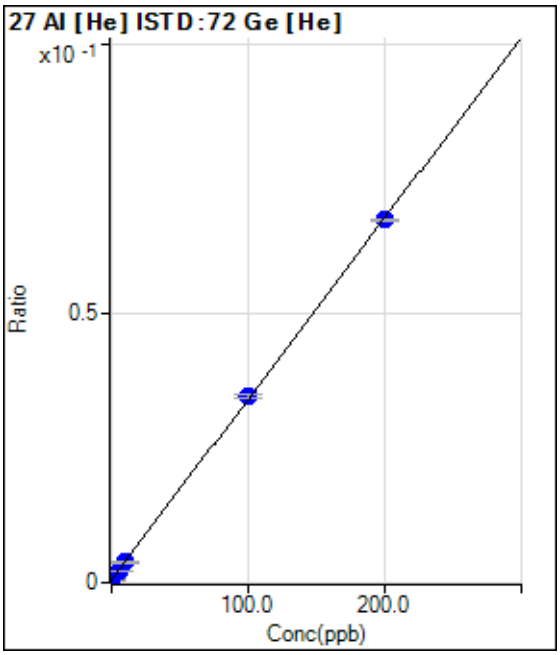


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	47675.15	0.0077	P	1.3
2	☐	2.000	2.330	121071.34	0.0193	P	1.7
3	☐	5.000	5.539	225279.36	0.0353	P	1.2
4	☐	10.000	9.779	356368.53	0.0564	P	0.8
5	☐	100.000	101.671	3189201.41	0.5146	A	0.5
6	☐	200.000	199.159	6080257.41	1.0006	A	1.5

y = 0.0050 * x + 0.0077
R = 0.9999
DL = 0.06036
BEC = 1.543

Weight: <None>
Min Conc: <None>

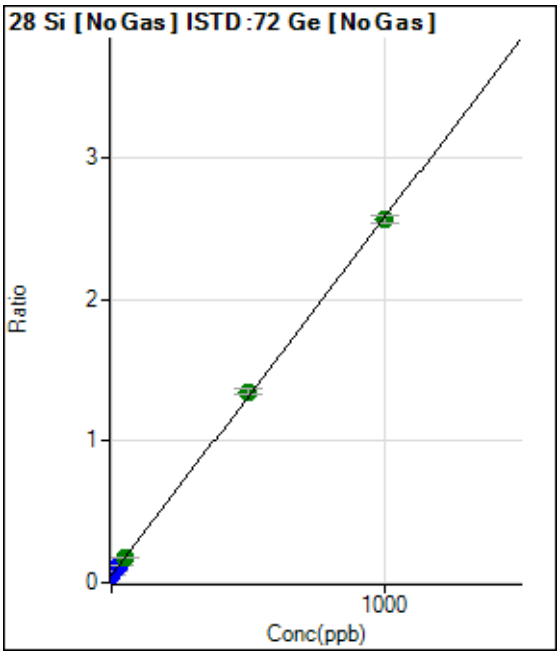
Calibration for 197_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	993.39	0.0005	P	6.5
2	☐	2.000	2.256	2386.92	0.0013	P	3.6
3	☐	5.000	5.234	4197.37	0.0023	P	2.6
4	☐	10.000	9.687	7121.99	0.0038	P	2.4
5	☐	100.000	101.592	62487.17	0.0346	P	1.6
6	☐	200.000	199.211	119574.25	0.0673	P	0.7

y = 3.3502E-004 * x + 5.2655E-004
R = 1.0000
DL = 0.3057
BEC = 1.572

Weight: <None>
Min Conc: <None>

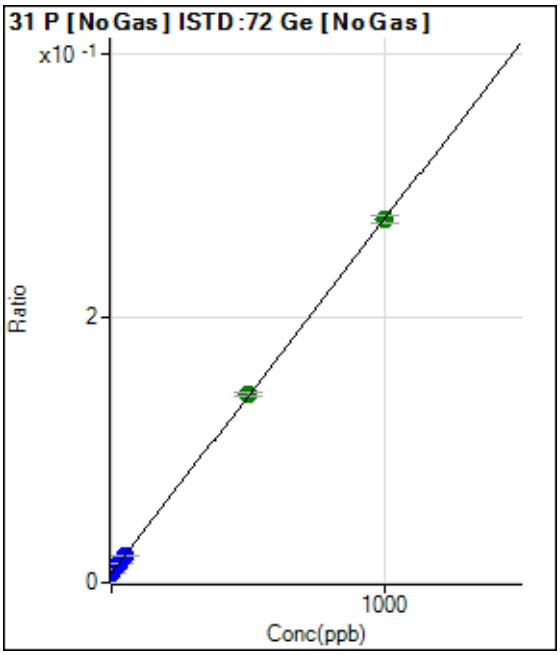


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	315161.78	0.0509	P	1.3
2	☐	10.000	10.981	492904.16	0.0786	P	2.2
3	☐	25.000	27.729	771635.38	0.1209	P	0.6
4	☐	50.000	51.018	1134893.45	0.1798	A	2.9
5	☐	500.000	512.320	8337010.29	1.3454	A	2.9
6	☐	1000.000	993.711	15566049.77	2.5617	A	2.0

y = 0.0025 * x + 0.0509
R = 0.9999
DL = 0.8001
BEC = 20.13

Weight: <None>
Min Conc: <None>

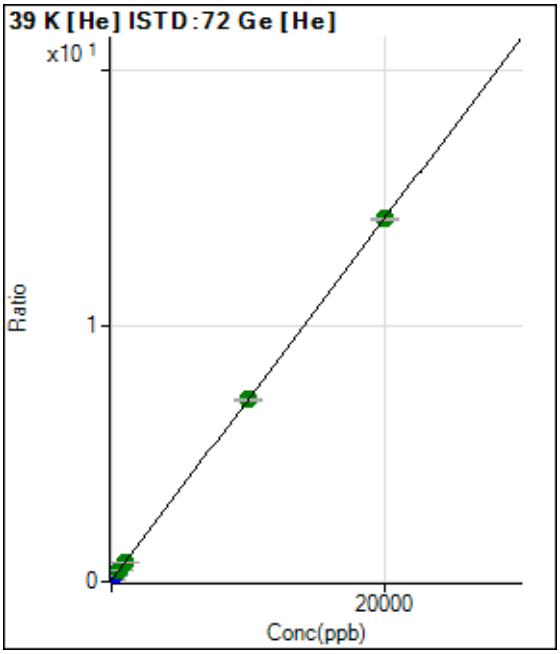
Calibration for 197_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	45558.27	0.0074	P	1.1
2	☐	10.000	11.379	65173.21	0.0104	P	1.8
3	☐	25.000	27.608	94000.17	0.0147	P	1.6
4	☐	50.000	49.080	129234.39	0.0205	P	1.7
5	☐	500.000	503.467	879507.30	0.1419	A	2.0
6	☐	1000.000	998.234	1665916.54	0.2742	A	2.2

y = 2.6728E-004 * x + 0.0074
R = 1.0000
DL = 0.8939
BEC = 27.51

Weight: <None>
Min Conc: <None>

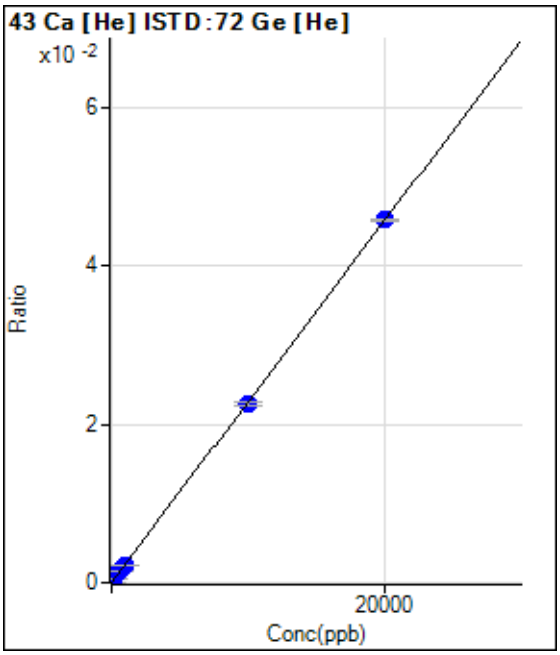


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	94267.37	0.0500	P	2.4
2	☐	200.000	238.644	407383.48	0.2188	P	1.5
3	☐	500.000	584.786	853763.71	0.4638	A	1.1
4	☐	1000.000	1036.018	1478550.03	0.7831	A	0.7
5	☐	10000.00	10008.78	12896542.73	7.1329	A	1.0
6	☐	20000.00	19991.30	25237654.62	14.1973	A	0.2

y = 7.0767E-004 * x + 0.0500
R = 1.0000
DL = 5.1
BEC = 70.59

Weight: <None>
Min Conc: <None>

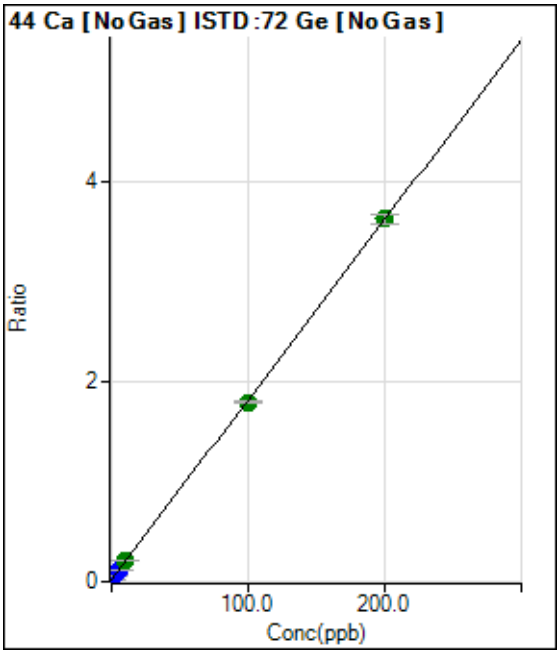
Calibration for 197_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	36.67	0.0000	P	83.3
2	☐	200.000	233.618	1030.06	0.0006	P	10.8
3	☐	500.000	588.224	2510.28	0.0014	P	2.2
4	☐	1000.000	977.410	4254.06	0.0023	P	3.8
5	☐	10000.00	9882.541	40864.25	0.0226	P	1.5
6	☐	20000.00	20057.31	81504.21	0.0458	P	0.6

y = 2.2850E-006 * x + 1.9371E-005
R = 1.0000
DL = 21.19
BEC = 8.478

Weight: <None>
Min Conc: <None>

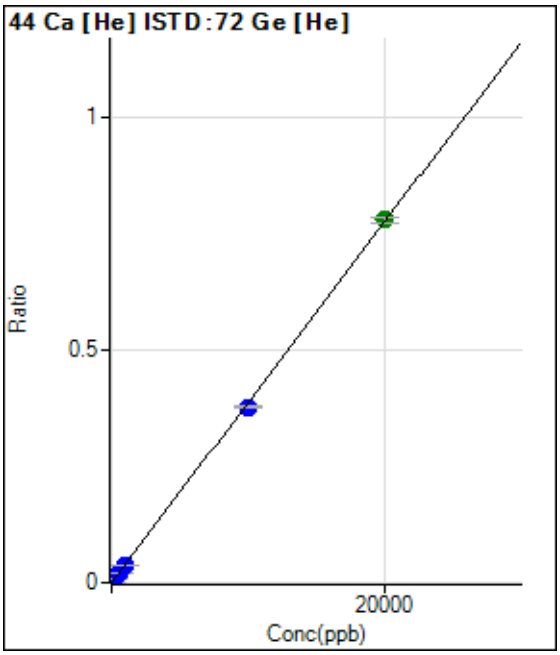


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	128815.91	0.0208	P	1.6
2	☐	2.000	2.311	391305.11	0.0624	P	0.9
3	☐	5.000	5.522	767270.40	0.1202	P	0.1
4	☐	10.000	10.550	1330900.50	0.2108	A	0.9
5	☐	100.000	98.761	11154373.58	1.7996	A	1.4
6	☐	200.000	200.576	22075384.67	3.6334	A	2.9

y = 0.0180 * x + 0.0208
R = 1.0000
DL = 0.0565
BEC = 1.154

Weight: <None>
Min Conc: <None>

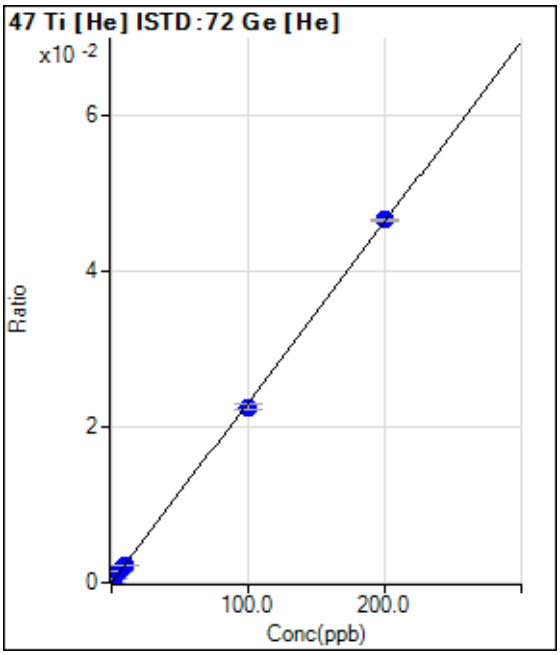
Calibration for 197_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1226.74	0.0007	P	18.4
2	☐	200.000	228.046	17668.26	0.0095	P	2.5
3	☐	500.000	548.882	40362.91	0.0219	P	2.2
4	☐	1000.000	966.187	71948.19	0.0381	P	1.5
5	☐	10000.00	9743.898	684078.53	0.3784	P	1.5
6	☐	20000.00	20128.23	1388203.26	0.7809	A	1.5

y = 3.8765E-005 * x + 6.5096E-004
R = 0.9999
DL = 9.286
BEC = 16.79

Weight: <None>
Min Conc: <None>

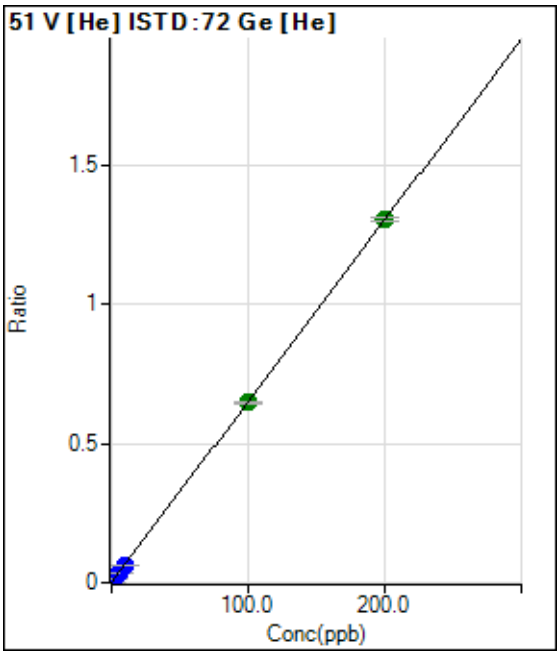


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	13.33	0.0000	P	86.6
2	☐	2.000	2.181	953.39	0.0005	P	3.7
3	☐	5.000	5.930	2540.29	0.0014	P	2.0
4	☐	10.000	9.531	4177.38	0.0022	P	3.5
5	☐	100.000	97.504	40814.41	0.0226	P	2.9
6	☐	200.000	201.246	82819.24	0.0466	P	0.5

y = 2.3147E-004 * x + 7.0198E-006
R = 0.9999
DL = 0.0788
BEC = 0.03033

Weight: <None>
Min Conc: <None>

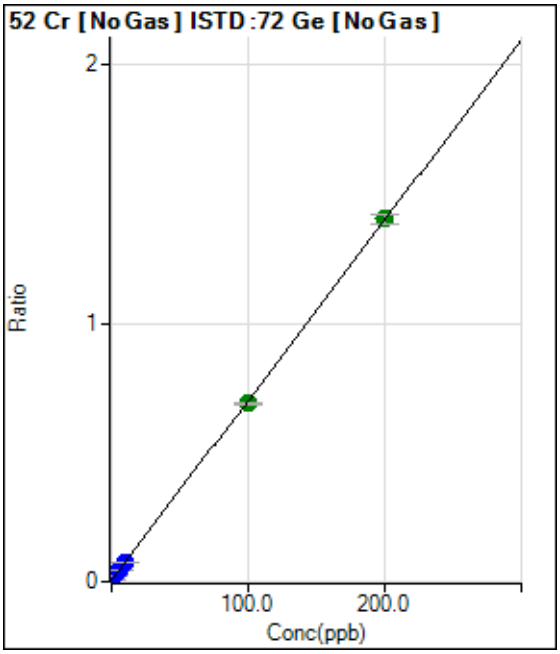
Calibration for 197_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2060.17	0.0011	P	5.3
2	☐	2.000	2.249	29261.25	0.0157	P	2.2
3	☐	5.000	5.468	67471.88	0.0367	P	1.9
4	☐	10.000	9.471	118363.45	0.0627	P	0.6
5	☐	100.000	99.535	1172470.99	0.6485	A	1.2
6	☐	200.000	200.245	2317249.77	1.3035	A	1.1

y = 0.0065 * x + 0.0011
R = 1.0000
DL = 0.02678
BEC = 0.1678

Weight: <None>
Min Conc: <None>

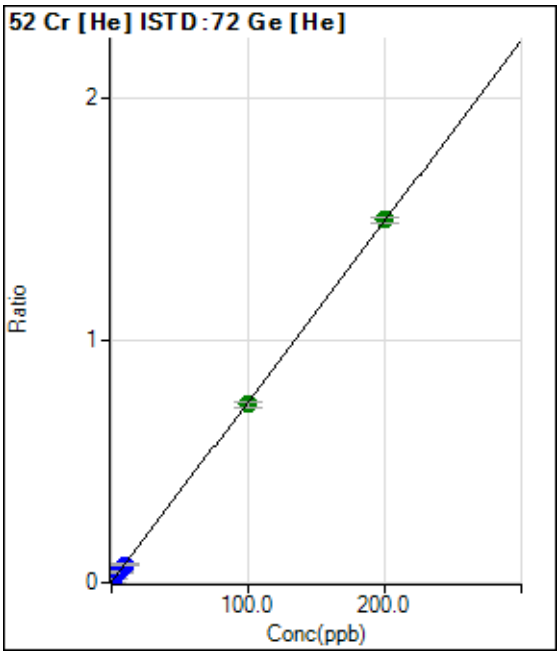


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	26205.35	0.0042	P	0.7
2	☐	2.000	2.182	121994.56	0.0195	P	0.8
3	☐	5.000	5.462	270155.15	0.0423	P	1.4
4	☐	10.000	9.917	463557.60	0.0734	P	0.8
5	☐	100.000	98.504	4285898.48	0.6915	A	1.1
6	☐	200.000	200.739	8535967.37	1.4049	A	2.7

y = 0.0070 * x + 0.0042
R = 1.0000
DL = 0.01243
BEC = 0.6061

Weight: <None>
Min Conc: <None>

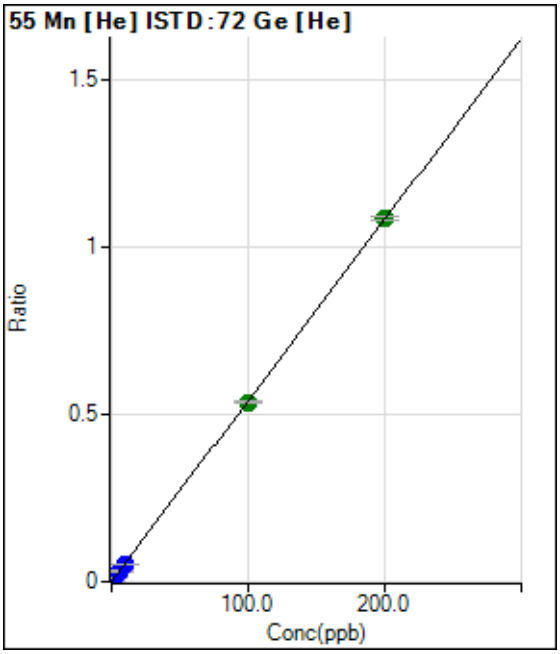
Calibration for 197_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3740.63	0.0020	P	7.5
2	☐	2.000	2.168	33748.75	0.0181	P	1.4
3	☐	5.000	5.613	80583.88	0.0438	P	0.7
4	☐	10.000	9.807	141597.80	0.0750	P	1.3
5	☐	100.000	98.610	1331022.98	0.7362	A	3.0
6	☐	200.000	200.688	2659996.94	1.4963	A	1.8

y = 0.0074 * x + 0.0020
R = 1.0000
DL = 0.05996
BEC = 0.266

Weight: <None>
Min Conc: <None>

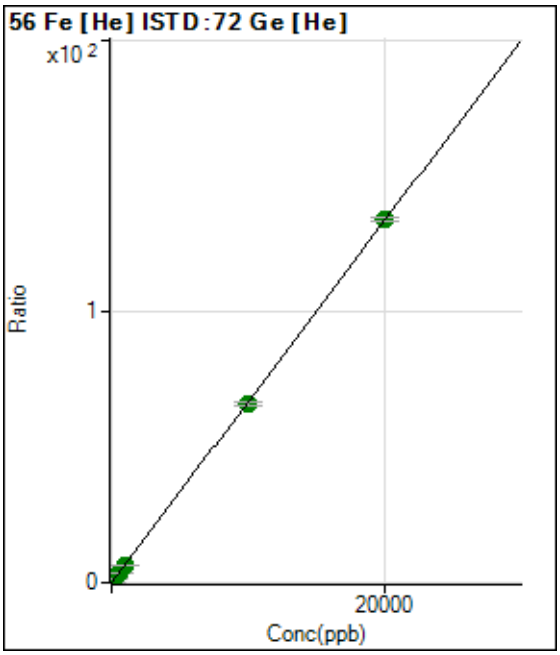


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1176.74	0.0006	P	9.8
2	☐	2.000	2.361	24933.06	0.0134	P	2.6
3	☐	5.000	5.701	57916.59	0.0315	P	3.0
4	☐	10.000	9.898	102255.30	0.0542	P	0.9
5	☐	100.000	99.063	969850.38	0.5364	A	1.7
6	☐	200.000	200.452	1928452.68	1.0848	A	0.9

y = 0.0054 * x + 6.2308E-004
R = 1.0000
DL = 0.03402
BEC = 0.1152

Weight: <None>
Min Conc: <None>

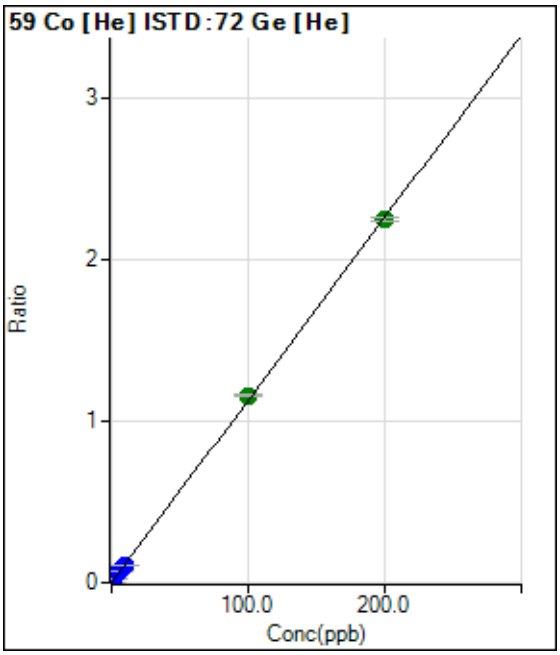
Calibration for 197_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	24495.90	0.0130	P	2.4
2	☐	200.000	234.525	2940319.43	1.5797	A	2.7
3	☐	500.000	571.305	7049828.44	3.8296	A	0.5
4	☐	1000.000	990.736	12520055.65	6.6315	A	0.2
5	☐	10000.00	9874.680	119287678.2	65.9803	A	1.8
6	☐	20000.00	20060.99	238260116.4	134.029	A	1.2

y = 0.0067 * x + 0.0130
R = 1.0000
DL = 0.137
BEC = 1.943

Weight: <None>
Min Conc: <None>

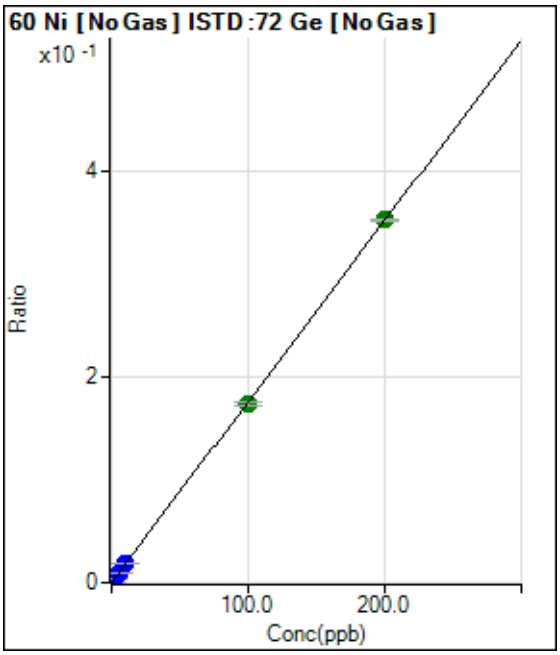


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	336.68	0.0002	P	9.3
2	☐	2.000	2.290	48463.37	0.0260	P	2.2
3	☐	5.000	5.839	121721.33	0.0661	P	0.6
4	☐	10.000	9.940	212257.65	0.1124	P	1.0
5	☐	100.000	102.298	2089117.78	1.1554	A	1.0
6	☐	200.000	198.830	3991795.88	2.2456	A	0.9

y = 0.0113 * x + 1.7843E-004
R = 0.9999
DL = 0.004425
BEC = 0.0158

Weight: <None>
Min Conc: <None>

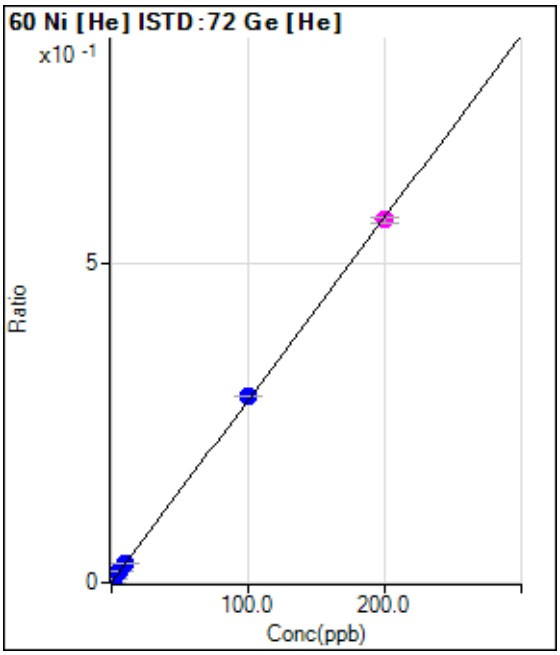
Calibration for 197_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1360.10	0.0002	P	8.9
2	☐	2.000	2.267	26295.73	0.0042	P	1.7
3	☐	5.000	5.563	63628.88	0.0100	P	2.3
4	☐	10.000	10.090	113054.61	0.0179	P	1.0
5	☐	100.000	98.744	1074135.71	0.1733	A	2.3
6	☐	200.000	200.607	2138782.36	0.3519	A	0.2

y = 0.0018 * x + 2.1962E-004
R = 1.0000
DL = 0.03351
BEC = 0.1253

Weight: <None>
Min Conc: <None>

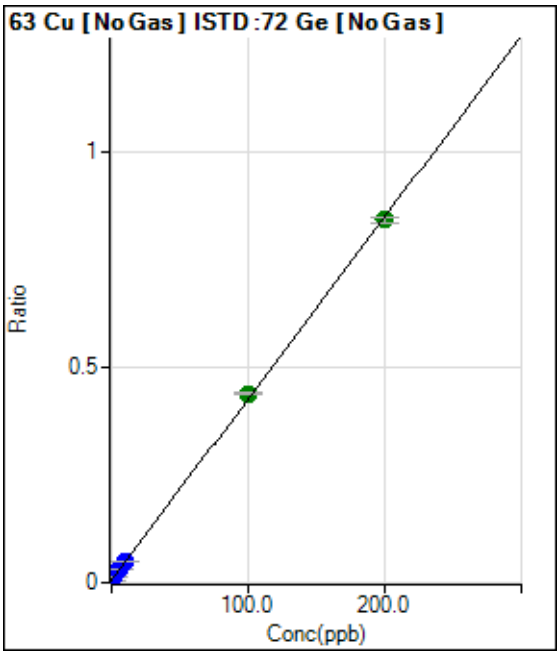


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	586.69	0.0003	P	20.0
2	☐	2.000	2.335	13013.12	0.0070	P	2.0
3	☐	5.000	5.861	31430.06	0.0171	P	3.7
4	☐	10.000	10.047	54847.54	0.0291	P	0.7
5	☐	100.000	102.338	529856.36	0.2931	P	0.4
6	☐	200.000	198.804	1011494.86	0.5690	M	1.5

y = 0.0029 * x + 3.1136E-004
R = 0.9999
DL = 0.06526
BEC = 0.1088

Weight: <None>
Min Conc: <None>

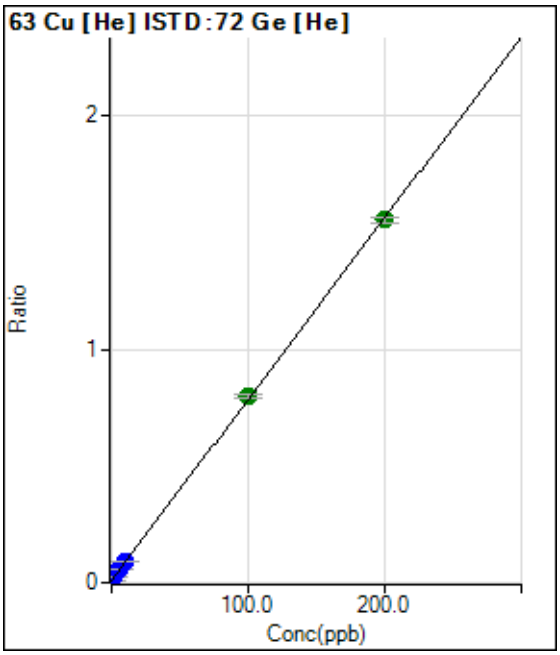
Calibration for 197_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	33618.47	0.0054	P	2.9
2	☐	2.000	2.365	96557.72	0.0154	P	0.4
3	☐	5.000	5.731	188785.27	0.0296	P	2.2
4	☐	10.000	10.214	306132.67	0.0485	P	0.5
5	☐	100.000	102.800	2719869.44	0.4389	A	1.2
6	☐	200.000	198.568	5120795.13	0.8426	A	1.2

y = 0.0042 * x + 0.0054
R = 0.9999
DL = 0.1111
BEC = 1.287

Weight: <None>
Min Conc: <None>

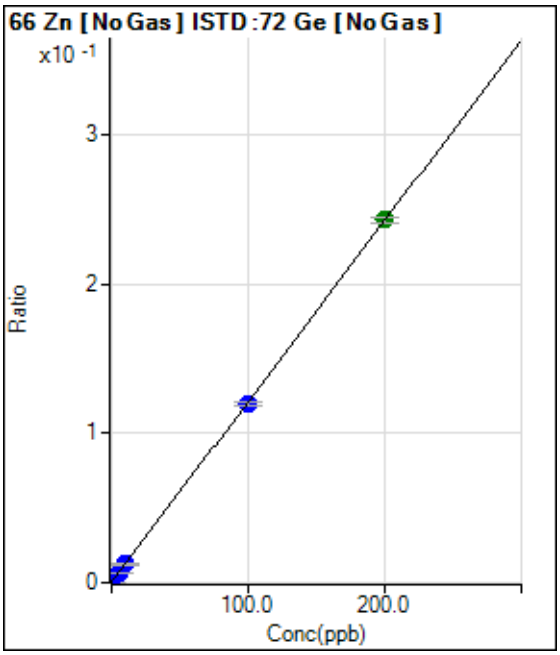


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	17478.12	0.0093	P	1.0
2	☐	2.000	2.383	51658.46	0.0277	P	1.3
3	☐	5.000	5.912	101484.60	0.0551	P	1.4
4	☐	10.000	10.168	166419.80	0.0882	P	1.1
5	☐	100.000	101.894	1446036.44	0.7998	A	1.4
6	☐	200.000	199.018	2761260.69	1.5534	A	1.4

y = 0.0078 * x + 0.0093
R = 0.9999
DL = 0.0369
BEC = 1.194

Weight: <None>
Min Conc: <None>

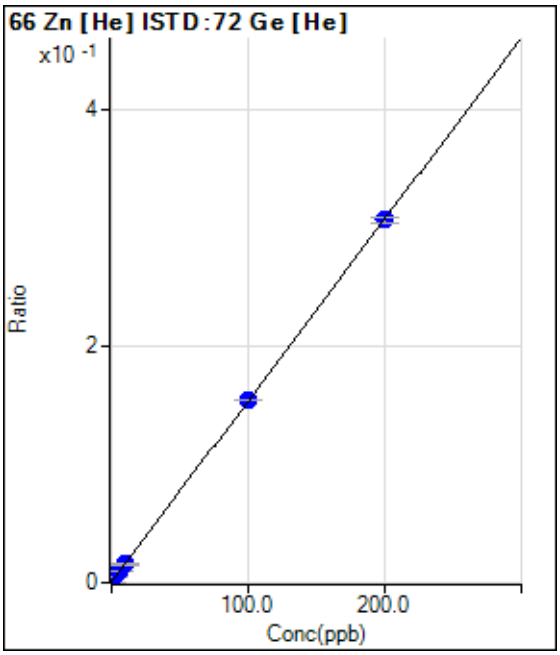
Calibration for 197_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2006.86	0.0003	P	6.0
2	☐	2.000	2.711	22565.72	0.0036	P	2.8
3	☐	5.000	5.484	44346.37	0.0069	P	3.4
4	☐	10.000	9.857	77229.14	0.0122	P	2.5
5	☐	100.000	98.821	741998.95	0.1197	P	1.4
6	☐	200.000	200.577	1474598.83	0.2427	A	1.7

y = 0.0012 * x + 3.2384E-004
R = 1.0000
DL = 0.04803
BEC = 0.268

Weight: <None>
Min Conc: <None>

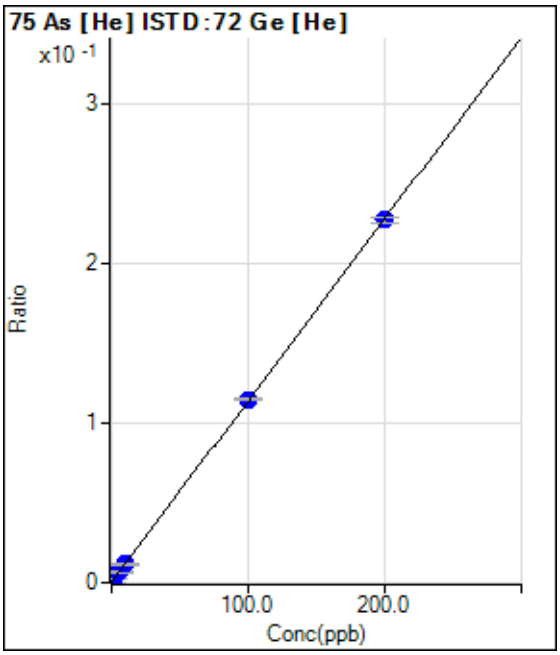


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	666.70	0.0004	P	12.5
2	☐	2.000	2.814	8679.65	0.0047	P	3.1
3	☐	5.000	5.852	17147.75	0.0093	P	1.5
4	☐	10.000	9.846	29134.86	0.0154	P	1.3
5	☐	100.000	100.458	278816.27	0.1542	P	0.4
6	☐	200.000	199.749	544430.46	0.3063	P	1.4

y = 0.0015 * x + 3.5295E-004
R = 1.0000
DL = 0.08652
BEC = 0.2305

Weight: <None>
Min Conc: <None>

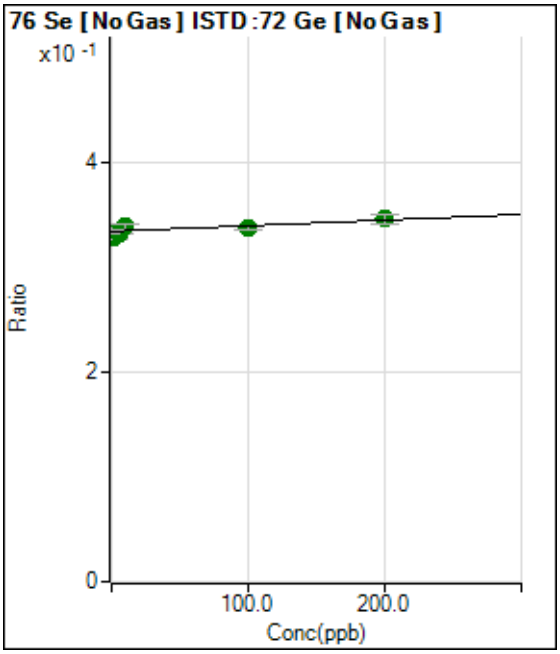
Calibration for 197_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	386.67	0.0002	P	4.2
2	☐	2.000	2.226	5086.54	0.0027	P	8.7
3	☐	5.000	5.703	12305.66	0.0067	P	2.8
4	☐	10.000	9.903	21632.91	0.0115	P	0.7
5	☐	100.000	100.730	207321.79	0.1147	P	0.8
6	☐	200.000	199.620	403592.30	0.2270	P	1.3

y = 0.0011 * x + 2.0492E-004
R = 1.0000
DL = 0.0229
BEC = 0.1803

Weight: <None>
Min Conc: <None>

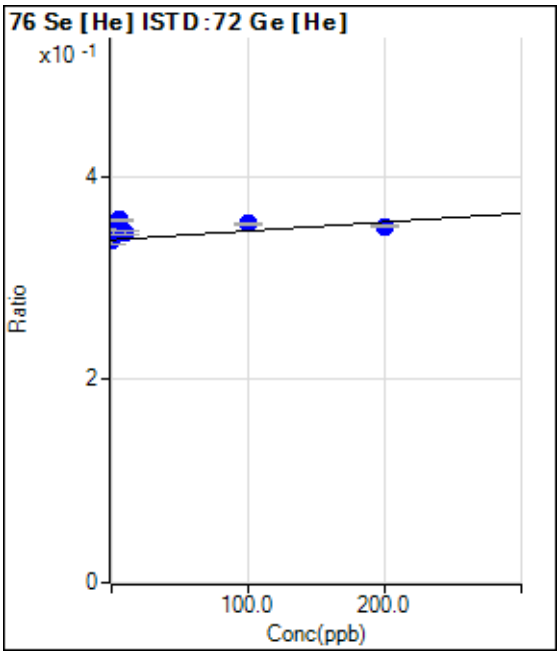


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2072167.21	0.3345	A	2.0
2	☐	2.000	-98.617	2063797.78	0.3291	A	1.1
3	☐	5.000	-42.071	2119660.13	0.3322	A	0.3
4	☐	10.000	78.108	2138264.45	0.3387	A	1.3
5	☐	100.000	58.326	2092370.44	0.3376	A	1.3
6	☐	200.000	219.614	2104253.56	0.3463	A	2.7

y = 5.3950E-005 * x + 0.3345
R = 0.8553
DL = 380
BEC = 6200

Weight: <None>
Min Conc: <None>

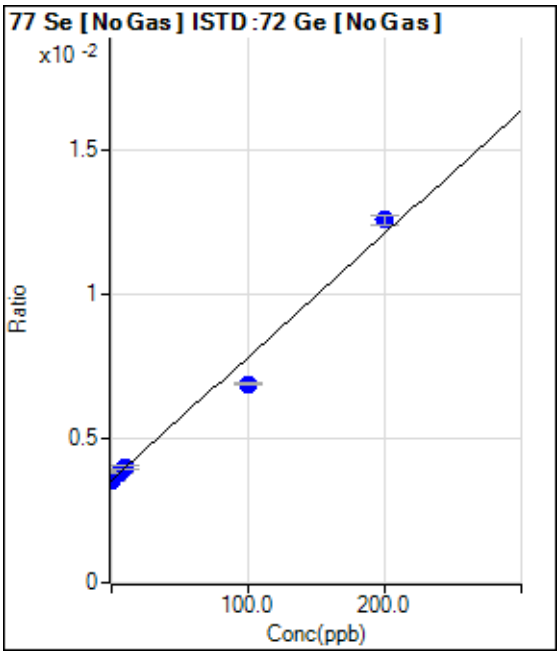
Calibration for 197_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	637807.28	0.3380	P	2.5
2	☐	2.000	91.730	644212.32	0.3461	P	2.1
3	☐	5.000	223.373	658382.59	0.3577	P	0.8
4	☐	10.000	71.313	649951.80	0.3443	P	1.2
5	☐	100.000	177.445	639355.39	0.3536	P	0.2
6	☐	200.000	151.855	624593.60	0.3514	P	0.7

y = 8.7929E-005 * x + 0.3380
R = 0.3735
DL = 285.7
BEC = 3844

Weight: <None>
Min Conc: <None>

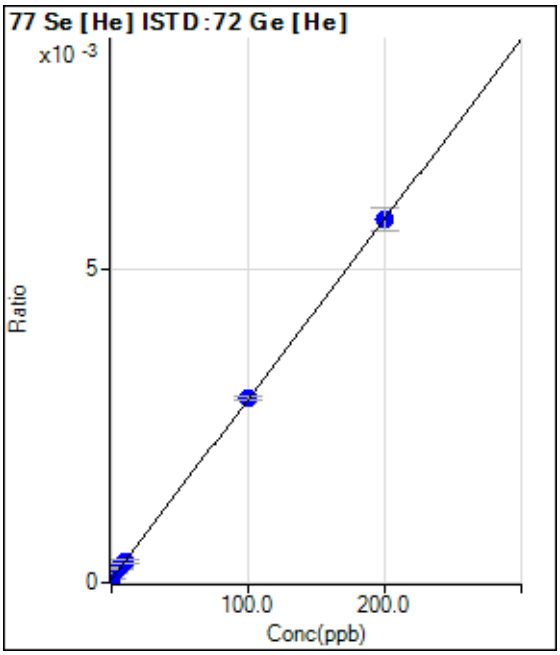


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	22108.45	0.0036	P	2.0
2	☐	2.000	3.176	23223.73	0.0037	P	2.2
3	☐	5.000	6.114	24435.95	0.0038	P	1.1
4	☐	10.000	9.605	25117.07	0.0040	P	3.6
5	☐	100.000	77.847	42758.17	0.0069	P	1.1
6	☐	200.000	211.057	76547.24	0.0126	P	2.7

y = 4.2787E-005 * x + 0.0036
R = 0.9915
DL = 5.093
BEC = 83.39

Weight: <None>
Min Conc: <None>

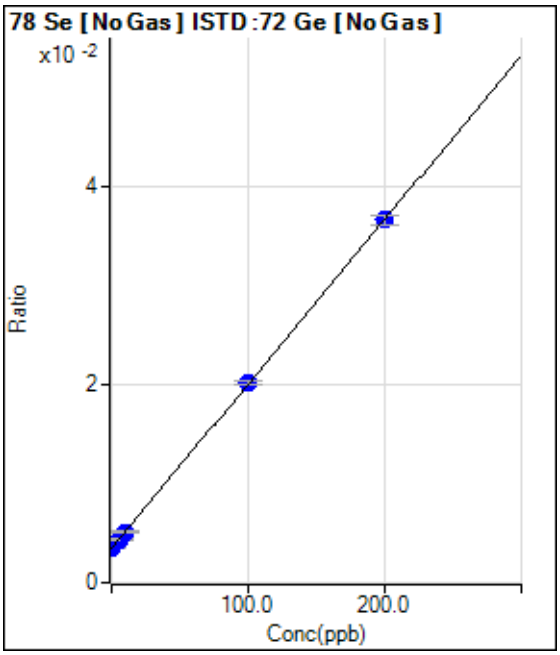
Calibration for 197_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	103.33	0.0001	P	31.1
2	☐	2.000	3.507	290.01	0.0002	P	7.3
3	☐	5.000	6.349	436.69	0.0002	P	14.2
4	☐	10.000	9.942	643.36	0.0003	P	14.3
5	☐	100.000	100.530	5327.83	0.0029	P	2.4
6	☐	200.000	199.689	10307.54	0.0058	P	6.5

y = 2.8765E-005 * x + 5.4760E-005
R = 1.0000
DL = 1.774
BEC = 1.904

Weight: <None>
Min Conc: <None>

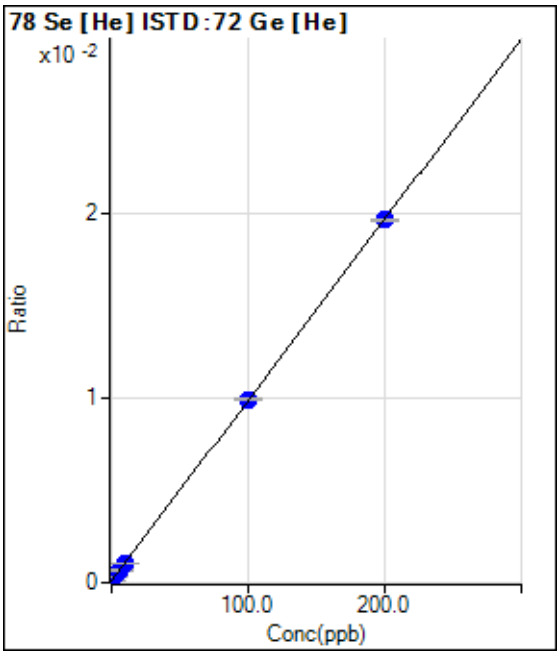


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	21587.62	0.0035	P	1.6
2	☐	2.000	2.129	24065.27	0.0038	P	1.1
3	☐	5.000	5.265	27812.37	0.0044	P	1.0
4	☐	10.000	9.517	31974.98	0.0051	P	3.5
5	☐	100.000	100.253	124801.43	0.0201	P	2.0
6	☐	200.000	199.890	222903.92	0.0367	P	3.0

y = 1.6611E-004 * x + 0.0035
R = 1.0000
DL = 0.9991
BEC = 20.98

Weight: <None>
Min Conc: <None>

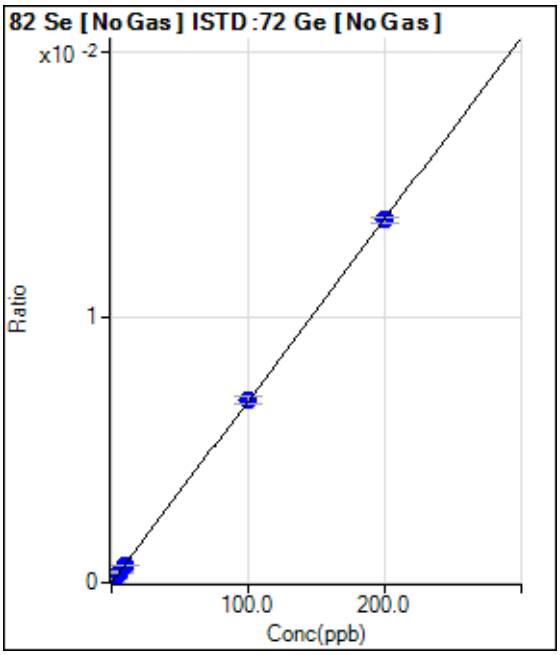
Calibration for 197_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	195.33	0.0001	P	15.3
2	☐	2.000	2.257	602.69	0.0003	P	5.7
3	☐	5.000	5.846	1242.06	0.0007	P	1.8
4	☐	10.000	9.994	2038.83	0.0011	P	1.0
5	☐	100.000	100.335	17911.89	0.0099	P	1.4
6	☐	200.000	199.809	34889.67	0.0196	P	0.5

y = 9.7711E-005 * x + 1.0341E-004
R = 1.0000
DL = 0.4853
BEC = 1.058

Weight: <None>
Min Conc: <None>

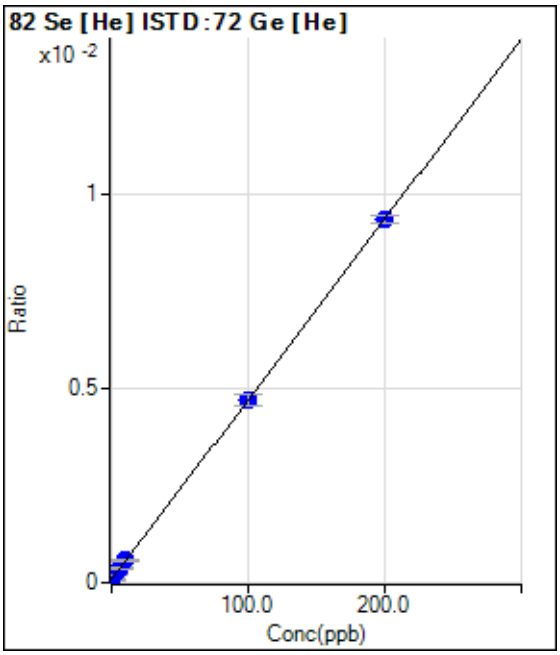


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	-24.07	0.0000	P	-732.2
2	☐	2.000	2.466	1032.65	0.0002	P	8.2
3	☐	5.000	5.598	2419.94	0.0004	P	11.9
4	☐	10.000	9.723	4177.15	0.0007	P	3.2
5	☐	100.000	100.585	42656.59	0.0069	P	3.8
6	☐	200.000	199.702	83071.19	0.0137	P	1.3

y = 6.8473E-005 * x - 4.1382E-006
R = 1.0000
DL = 1.328
BEC = -0.06044

Weight: <None>
Min Conc: <None>

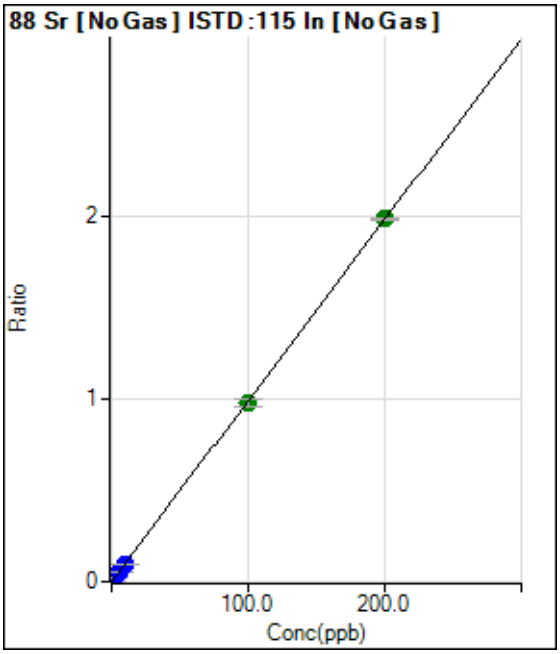
Calibration for 197_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	143.34	0.0001	P	57.4
2	☐	2.000	3.005	400.01	0.0002	P	31.7
3	☐	5.000	6.283	676.70	0.0004	P	5.3
4	☐	10.000	10.727	1083.40	0.0006	P	14.6
5	☐	100.000	100.260	8562.90	0.0047	P	6.2
6	☐	200.000	199.792	16643.92	0.0094	P	1.9

y = 4.6484E-005 * x + 7.5660E-005
R = 1.0000
DL = 2.805
BEC = 1.628

Weight: <None>
Min Conc: <None>

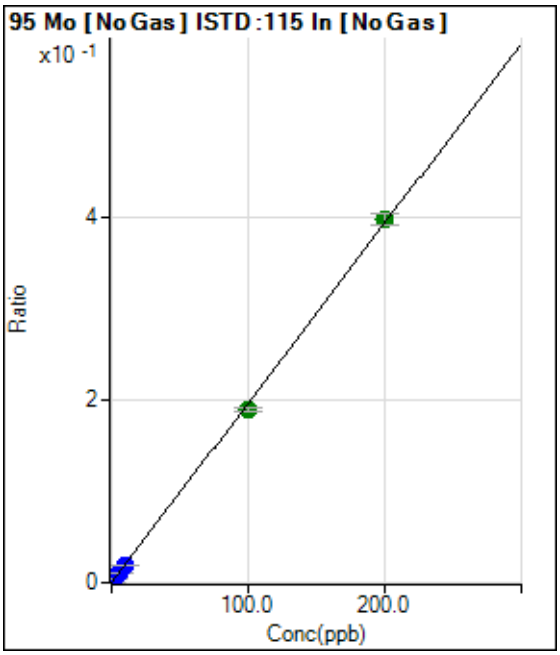


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	4694.25	0.0007	P	6.5
2	☐	2.000	2.275	158828.77	0.0232	P	2.4
3	☐	5.000	5.504	377690.70	0.0552	P	0.5
4	☐	10.000	9.626	662446.70	0.0961	P	2.1
5	☐	100.000	98.863	6569711.36	0.9806	A	3.3
6	☐	200.000	200.572	12982627.31	1.9886	A	0.8

y = 0.0099 * x + 6.8252E-004
R = 1.0000
DL = 0.01352
BEC = 0.06886

Weight: <None>
Min Conc: <None>

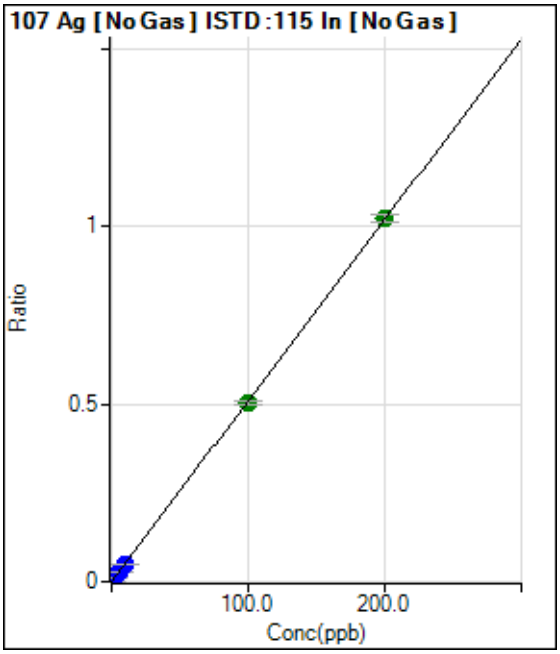
Calibration for 197_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	130.00	0.0000	P	12.9
2	☐	2.000	2.134	28741.53	0.0042	P	2.8
3	☐	5.000	5.253	70564.48	0.0103	P	1.8
4	☐	10.000	9.309	126002.07	0.0183	P	0.8
5	☐	100.000	95.980	1261193.44	0.1882	A	2.1
6	☐	200.000	202.037	2586431.94	0.3962	A	3.1

y = 0.0020 * x + 1.8897E-005
R = 0.9997
DL = 0.00373
BEC = 0.009636

Weight: <None>
Min Conc: <None>

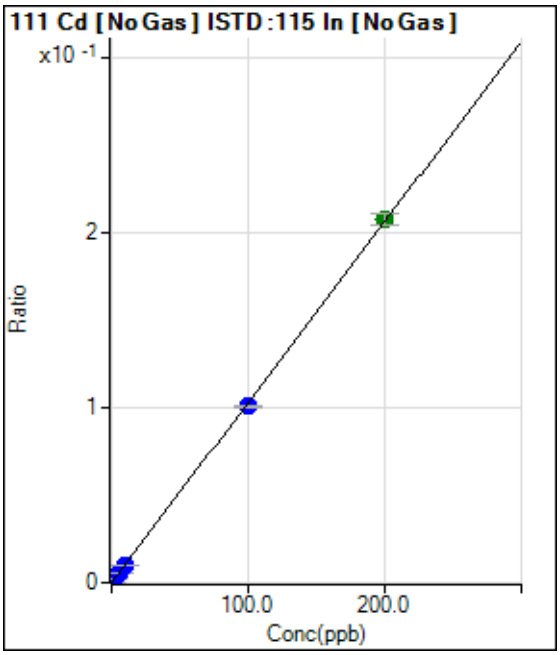


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	260.01	0.0000	P	20.0
2	☐	2.000	2.303	80475.50	0.0118	P	3.7
3	☐	5.000	5.533	192934.28	0.0282	P	1.2
4	☐	10.000	9.813	344812.70	0.0500	P	0.5
5	☐	100.000	98.703	3368303.39	0.5027	A	1.5
6	☐	200.000	200.641	6670603.23	1.0219	A	2.2

y = 0.0051 * x + 3.7850E-005
R = 1.0000
DL = 0.004449
BEC = 0.007432

Weight: <None>
Min Conc: <None>

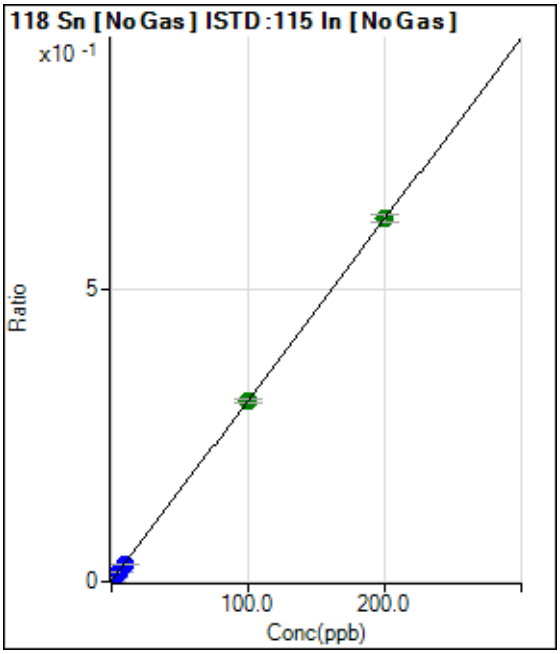
Calibration for 197_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	16.67	0.0000	P	34.3
2	☐	2.000	2.251	15859.89	0.0023	P	5.0
3	☐	5.000	5.556	39108.63	0.0057	P	0.4
4	☐	10.000	9.618	68257.04	0.0099	P	1.0
5	☐	100.000	97.609	672961.37	0.1004	P	1.7
6	☐	200.000	201.198	1351434.46	0.2070	A	3.1

y = 0.0010 * x + 2.4210E-006
R = 0.9999
DL = 0.002421
BEC = 0.002353

Weight: <None>
Min Conc: <None>

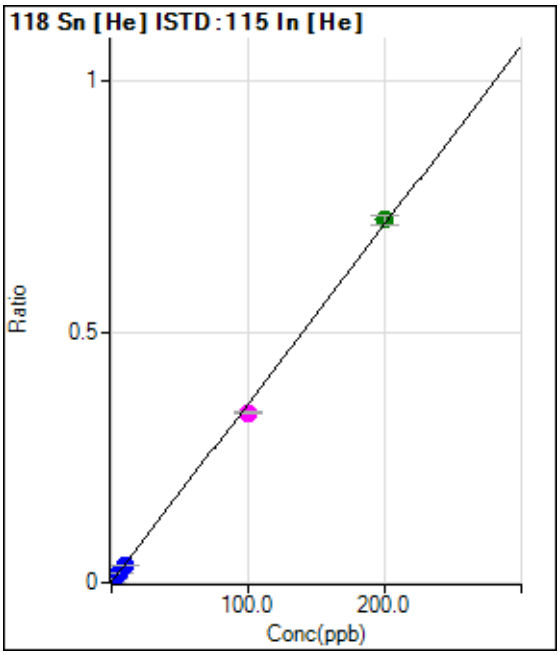


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	4971.06	0.0007	P	5.6
2	☐	2.000	2.131	50210.14	0.0073	P	4.5
3	☐	5.000	5.319	117858.83	0.0172	P	2.6
4	☐	10.000	9.558	209608.32	0.0304	P	1.1
5	☐	100.000	99.536	2075625.28	0.3098	A	2.1
6	☐	200.000	200.245	4063587.86	0.6225	A	2.3

y = 0.0031 * x + 7.2263E-004
R = 1.0000
DL = 0.03939
BEC = 0.2327

Weight: <None>
Min Conc: <None>

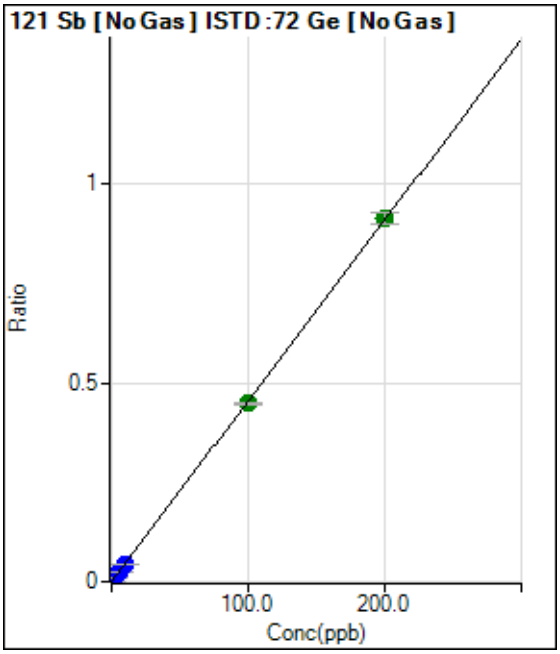
Calibration for 197_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2643.65	0.0008	P	4.8
2	☐	2.000	2.162	27449.18	0.0085	P	2.4
3	☐	5.000	5.177	63072.11	0.0193	P	1.1
4	☐	10.000	9.341	112171.78	0.0341	P	2.0
5	☐	100.000	94.682	1077034.12	0.3387	M	0.9
6	☐	200.000	202.686	2222744.66	0.7240	A	2.4

y = 0.0036 * x + 8.1515E-004
R = 0.9995
DL = 0.03298
BEC = 0.2284

Weight: <None>
Min Conc: <None>

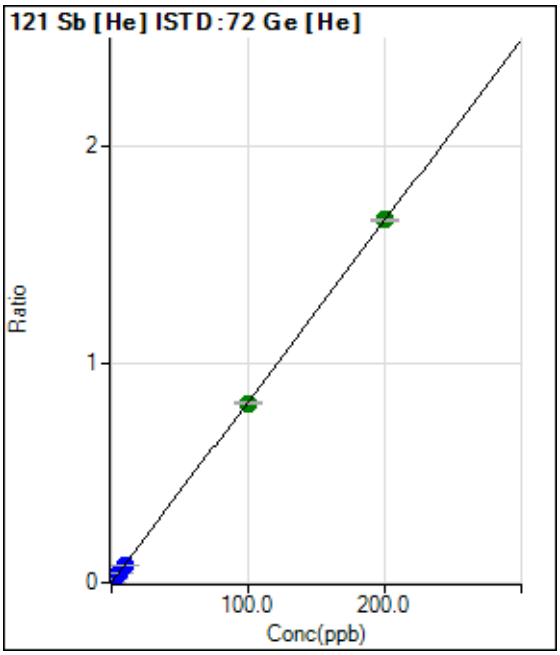


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1136.74	0.0002	P	9.0
2	☐	2.000	2.192	63618.17	0.0101	P	2.8
3	☐	5.000	5.313	155227.46	0.0243	P	1.6
4	☐	10.000	9.656	278177.73	0.0441	P	2.0
5	☐	100.000	98.484	2774783.50	0.4477	A	1.4
6	☐	200.000	200.766	5544034.50	0.9125	A	3.3

y = 0.0045 * x + 1.8347E-004
R = 1.0000
DL = 0.01093
BEC = 0.04037

Weight: <None>
Min Conc: <None>

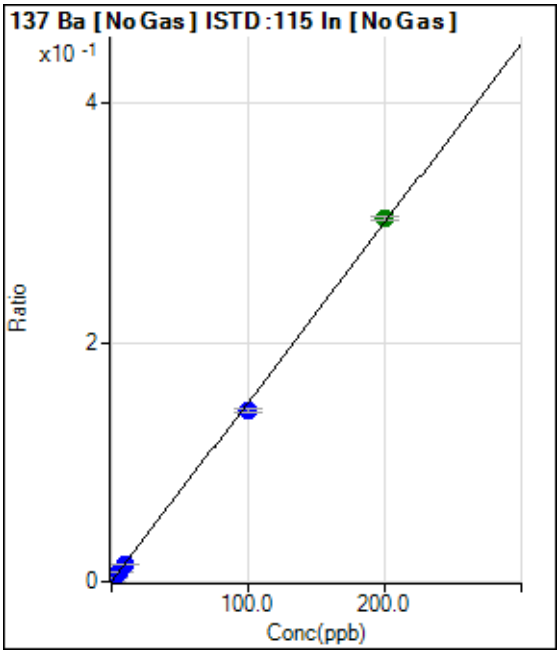
Calibration for 197_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	736.70	0.0004	P	9.7
2	☐	2.000	2.199	34609.23	0.0186	P	3.8
3	☐	5.000	5.407	83129.77	0.0452	P	0.8
4	☐	10.000	9.430	148117.42	0.0785	P	2.1
5	☐	100.000	99.171	1485351.96	0.8215	A	1.1
6	☐	200.000	200.431	2950681.62	1.6599	A	0.2

y = 0.0083 * x + 3.9005E-004
R = 1.0000
DL = 0.01373
BEC = 0.04711

Weight: <None>
Min Conc: <None>

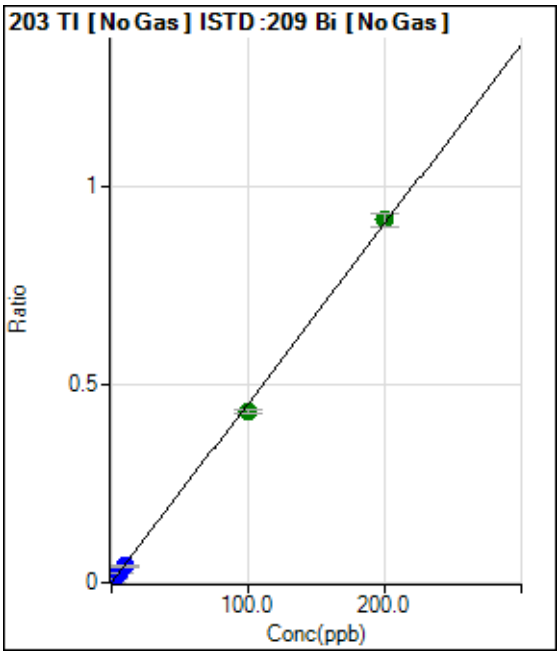


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	846.71	0.0001	P	14.8
2	☐	2.000	2.139	22760.32	0.0033	P	1.8
3	☐	5.000	5.378	55920.90	0.0082	P	3.3
4	☐	10.000	9.247	96357.98	0.0140	P	3.2
5	☐	100.000	95.504	959482.93	0.1432	P	2.4
6	☐	200.000	202.275	1979301.69	0.3032	A	1.0

y = 0.0015 * x + 1.2305E-004
R = 0.9996
DL = 0.03649
BEC = 0.08213

Weight: <None>
Min Conc: <None>

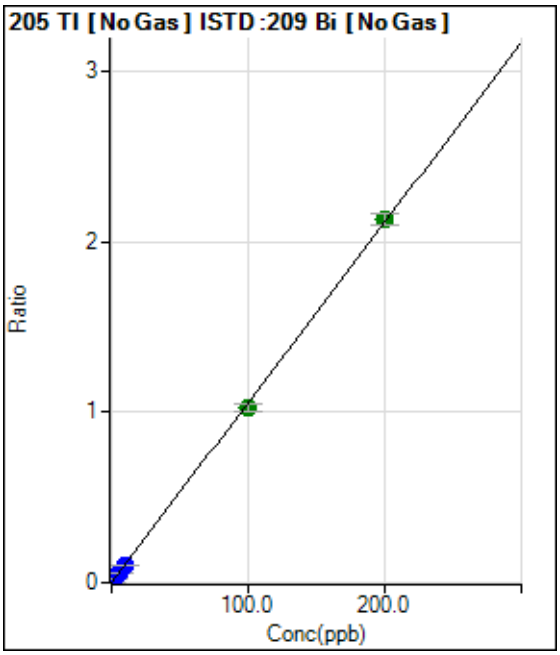
Calibration for 197_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	93.34	0.0000	P	65.2
2	☐	2.000	2.095	46611.48	0.0095	P	4.2
3	☐	5.000	5.148	114056.07	0.0234	P	3.0
4	☐	10.000	9.117	201047.51	0.0414	P	1.8
5	☐	100.000	95.533	2072410.34	0.4333	A	3.1
6	☐	200.000	202.273	4297209.41	0.9175	A	4.0

y = 0.0045 * x + 1.9076E-005
R = 0.9996
DL = 0.008224
BEC = 0.004206

Weight: <None>
Min Conc: <None>

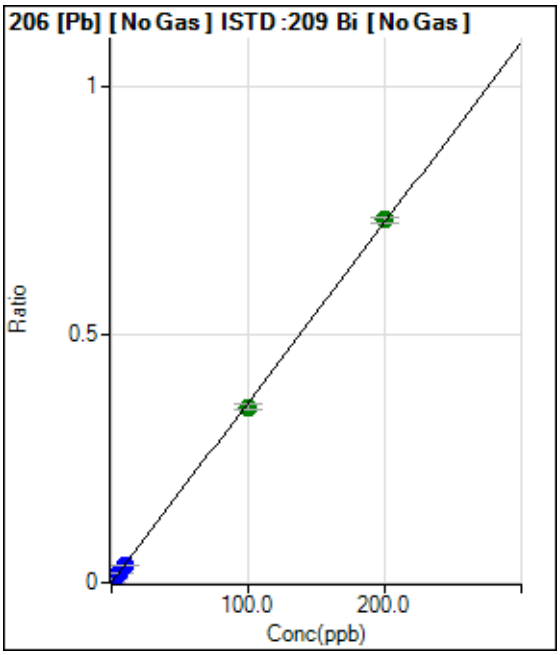


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	156.67	0.0000	P	24.9
2	☐	2.000	2.175	112687.31	0.0230	P	1.5
3	☐	5.000	5.317	274366.08	0.0562	P	1.4
4	☐	10.000	9.416	483447.28	0.0995	P	2.0
5	☐	100.000	97.106	4906709.51	1.0259	A	3.7
6	☐	200.000	201.467	9969985.89	2.1283	A	3.0

y = 0.0106 * x + 3.1880E-005
R = 0.9998
DL = 0.002255
BEC = 0.003018

Weight: <None>
Min Conc: <None>

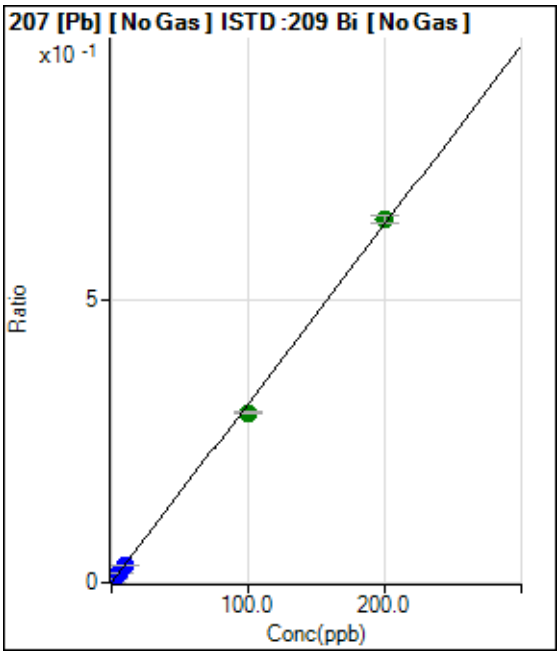
Calibration for 197_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	286.68	0.0001	P	22.1
2	☐	2.000	2.181	39095.50	0.0080	P	1.5
3	☐	5.000	5.282	93986.24	0.0193	P	1.8
4	☐	10.000	9.333	165021.79	0.0340	P	3.7
5	☐	100.000	97.215	1689914.61	0.3533	A	3.2
6	☐	200.000	201.417	3429198.28	0.7319	A	1.8

y = 0.0036 * x + 5.8221E-005
R = 0.9999
DL = 0.01062
BEC = 0.01602

Weight: <None>
Min Conc: <None>

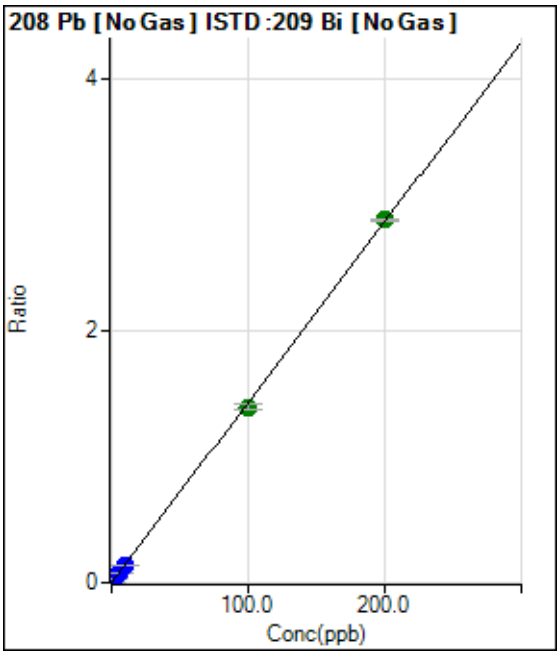


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	226.67	0.0000	P	26.8
2	☐	2.000	2.138	33308.85	0.0068	P	3.5
3	☐	5.000	5.224	80833.50	0.0166	P	1.2
4	☐	10.000	9.304	143113.16	0.0295	P	2.0
5	☐	100.000	94.968	1436176.59	0.3002	A	1.4
6	☐	200.000	202.544	2999801.10	0.6403	A	2.0

y = 0.0032 * x + 4.6283E-005
R = 0.9995
DL = 0.01177
BEC = 0.01464

Weight: <None>
Min Conc: <None>

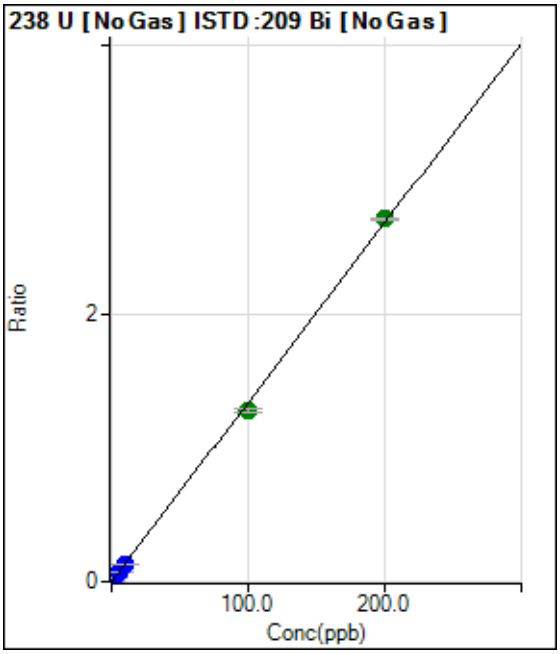
Calibration for 197_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1073.37	0.0002	P	4.6
2	☐	2.000	2.183	154190.96	0.0315	P	1.3
3	☐	5.000	5.283	370449.77	0.0759	P	1.2
4	☐	10.000	9.428	657272.19	0.1353	P	1.9
5	☐	100.000	97.390	6674396.87	1.3953	A	2.8
6	☐	200.000	201.325	13515392.40	2.8841	A	0.6

y = 0.0143 * x + 2.1880E-004
R = 0.9999
DL = 0.002102
BEC = 0.01527

Weight: <None>
Min Conc: <None>

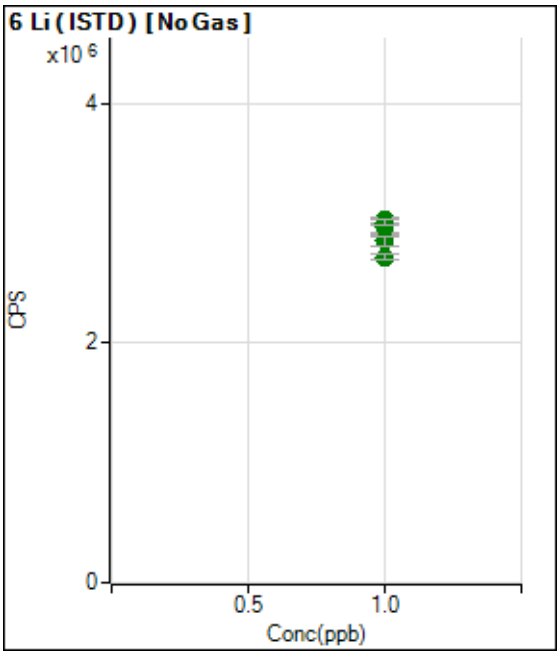


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	26.67	0.0000	P	76.2
2	☐	2.000	2.083	136394.93	0.0279	P	1.2
3	☐	5.000	5.112	333703.93	0.0684	P	3.0
4	☐	10.000	9.204	598036.33	0.1231	P	0.9
5	☐	100.000	95.411	6103066.16	1.2758	A	1.7
6	☐	200.000	202.331	12679614.81	2.7055	A	0.4

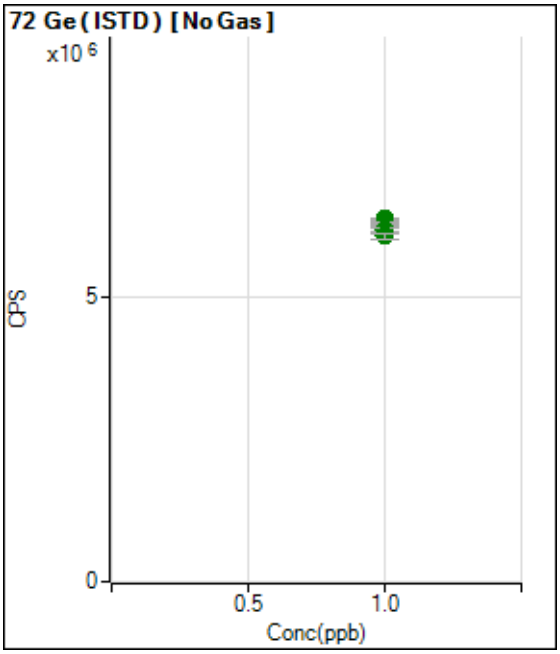
y = 0.0134 * x + 5.3717E-006
R = 0.9996
DL = 0.000918
BEC = 0.0004017

Weight: <None>
Min Conc: <None>

Calibration for 197_ICV.d

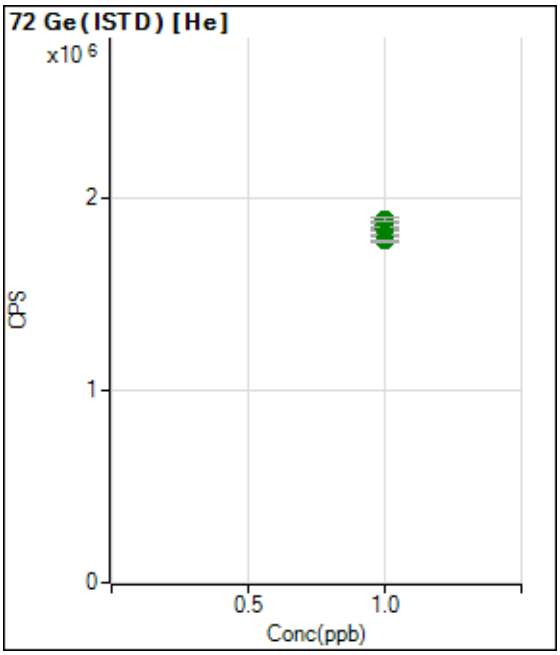


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		2966506.33		A	2.6
2	☐	1.000		2967777.38		A	4.2
3	☐	1.000		3030325.04		A	1.6
4	☐	1.000		3007190.79		A	1.6
5	☐	1.000		2852089.36		A	2.4
6	☐	1.000		2721105.89		A	1.5

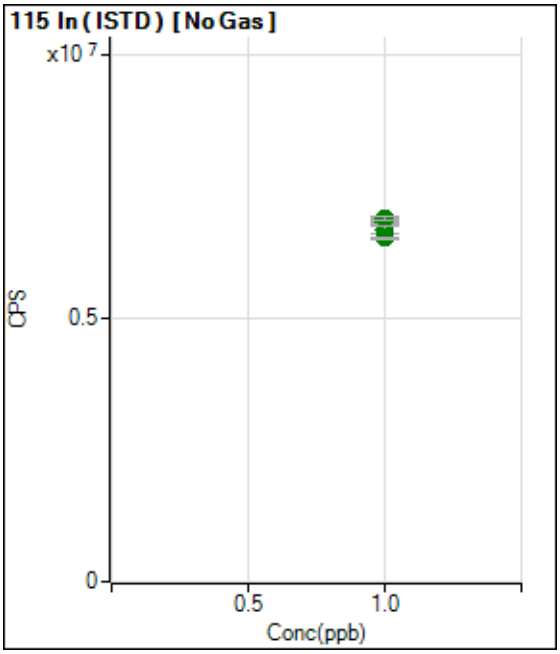


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		6196628.87		A	1.5
2	☐	1.000		6270208.45		A	0.5
3	☐	1.000		6380678.03		A	0.3
4	☐	1.000		6313482.62		A	0.7
5	☐	1.000		6198068.66		A	1.1
6	☐	1.000		6077878.04		A	1.9

Calibration for 197_ICV.d

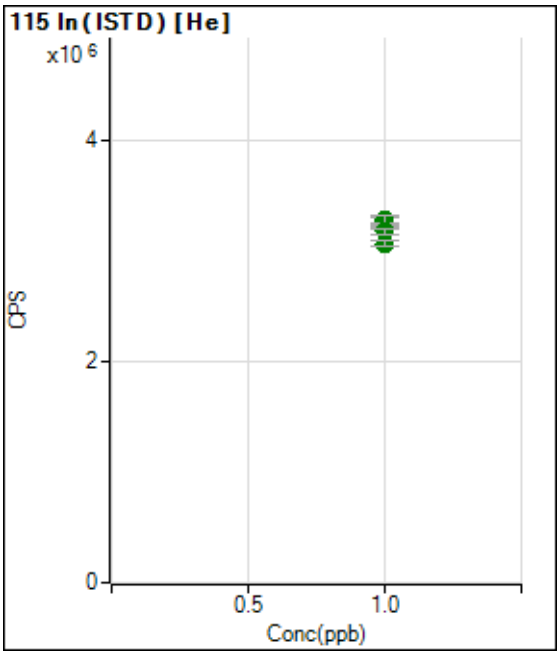


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1887289.56		A	1.2
2	☐	1.000		1861930.34		A	1.9
3	☐	1.000		1840947.16		A	1.0
4	☐	1.000		1887964.82		A	1.0
5	☐	1.000		1808049.66		A	0.6
6	☐	1.000		1777644.61		A	0.2

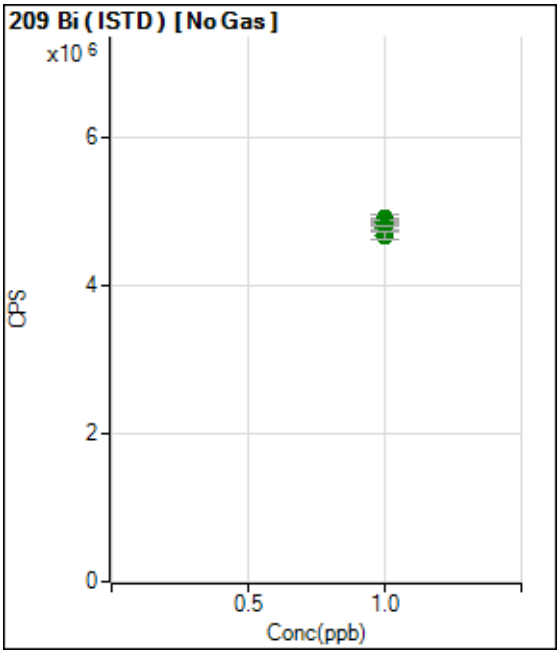


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		6876834.26		A	0.9
2	☐	1.000		6839608.83		A	1.2
3	☐	1.000		6837414.67		A	0.9
4	☐	1.000		6894866.84		A	0.9
5	☐	1.000		6701744.89		A	2.2
6	☐	1.000		6528727.38		A	1.0

Calibration for 197_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		3243089.31		A	0.3
2	☐	1.000		3218468.35		A	0.6
3	☐	1.000		3270428.62		A	2.4
4	☐	1.000		3285520.68		A	2.0
5	☐	1.000		3180523.60		A	1.6
6	☐	1.000		3070757.31		A	1.8



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		4906027.32		A	2.5
2	☐	1.000		4896895.55		A	1.1
3	☐	1.000		4881769.93		A	1.4
4	☐	1.000		4859392.74		A	1.4
5	☐	1.000		4783517.64		A	1.0
6	☐	1.000		4686428.99		A	2.1

Calibration Blank Report

Sample Table

Sample Name	CAL BLK
Data File Name	011CALB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\070220A.b
Acq Date Time	2020-07-02T11:19:56-05:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li	7	1	No Gas	193582	0.00
Be	9	1	No Gas	35	147.17
V	51	2	He	2430	0.06
Cr	52	2	He	2654	0.17
Fe	56	2	He	26174	0.18
Se	78	2	He	251	2.46
Sn	118	2	He	2207	0.52
As	75	2	He	472	3.15
Ca	44	2	He	2544	0.16
Na	23	2	He	325832	0.00
Mg	24	2	He	1797	0.29
K	39	2	He	109136	0.00
Mn	55	2	He	1207	0.44
Co	59	2	He	350	3.74
Ni	60	2	He	970	0.93
Cu	63	2	He	28443	0.01
Zn	66	2	He	690	1.47
Al	27	2	He	1647	0.08
B	11	1	No Gas	45704	0.00
Al	27	1	No Gas	73457	0.00
Si	28	1	No Gas	406074	0.00
P	31	1	No Gas	44849	0.01
Ag	107	1	No Gas	220	9.01
Cd	111	1	No Gas	17	749.40
Sr	88	1	No Gas	9744	0.05
Mo	95	1	No Gas	117	18.49
Sn	118	1	No Gas	6088	1.26
Sb	121	1	No Gas	1453	0.82
Ba	137	1	No Gas	1097	1.11
Tl	205	1	No Gas	160	15.63
Tl	203	1	No Gas	77	42.82
Pb	208	1	No Gas	1150	0.35
U	238	1	No Gas	20	0.00
Ca	43	2	He	67	12.99
Sb	121	2	He	710	2.73
Ti	47	2	He	13	649.52
Cu	63	1	No Gas	49493	0.00

Calibration Blank Report

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li	6	1	No Gas	3367912	2.03
Ge	72	2	He	2128792	2.35

Calibration Blank Report

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Ge	72	1	No Gas	6259187	2.10
In	115	1	No Gas	6832906	4.06
Bi	209	1	No Gas	4819187	0.55

Calibration Standard Report

Sample Table

Sample Name	2/10/200
Data File Name	012CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\070220A.b
Acq Date Time	2020-07-02T11:21:49-05:00
Sample Type	CalStd
Level	2
Dilution	1
Comment	
ISTD Ref File Name	011CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	No Gas	16860	0.00
V	51	2	He	26326	0.00
Cr	52	2	He	30985	0.00
Fe	56	2	He	2653096	0.00
Se	78	2	He	634	2.02
Sn	118	2	He	22520	0.01
As	75	2	He	4700	0.00
Ca	44	2	He	18319	0.00
Na	23	2	He	723318	0.00
Mg	24	2	He	248902	0.00
K	39	2	He	397457	0.00
Mn	55	2	He	21968	0.01
Co	59	2	He	42677	0.00
Ni	60	2	He	11235	0.03
Cu	63	2	He	56109	0.00
Zn	66	2	He	6382	0.05
Al	27	2	He	4821	0.22
B	11	1	No Gas	91896	0.00
Al	27	1	No Gas	216036	0.00
Si	28	1	No Gas	579390	0.00
P	31	1	No Gas	60442	0.00
Ag	107	1	No Gas	61912	0.00
Cd	111	1	No Gas	11949	0.04
Sr	88	1	No Gas	128779	0.00
Mo	95	1	No Gas	23114	0.01
Sn	118	1	No Gas	37240	0.01
Sb	121	1	No Gas	48748	0.00
Ba	137	1	No Gas	18744	0.02
Tl	205	1	No Gas	83961	0.00
Tl	203	1	No Gas	35665	0.01
Pb	208	1	No Gas	116954	0.00
U	238	1	No Gas	108859	0.00
Ca	43	2	He	1000	0.75
Sb	121	2	He	28849	0.00
Cu	63	1	No Gas	100349	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	3282944	1.78	3367912	97.48	70	120	

Calibration Standard Report

Ge	72	2	He	2109519	2.55	2128792	99.09	70	120	
Ge	72	1	No Gas	6285838	1.75	6259187	100.43	70	120	
In	115	1	No Gas	6578216	1.81	6832906	96.27	70	120	
Bi	209	1	No Gas	4784000	2.74	4819187	99.27	70	120	

Calibration Standard Report

Sample Table

Sample Name	5/25/500
Data File Name	013CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\070220A.b
Acq Date Time	2020-07-02T11:23:40-05:00
Sample Type	CalStd
Level	3
Dilution	1
Comment	
ISTD Ref File Name	011CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	No Gas	42454	0.00
V	51	2	He	62124	0.00
Cr	52	2	He	71962	0.00
Fe	56	2	He	6411675	0.00
Se	78	2	He	1165	0.33
Sn	118	2	He	54414	0.00
As	75	2	He	11309	0.01
Ca	44	2	He	40804	0.01
Na	23	2	He	1351531	0.00
Mg	24	2	He	621123	0.00
K	39	2	He	834995	0.00
Mn	55	2	He	52950	0.00
Co	59	2	He	107876	0.00
Ni	60	2	He	27856	0.01
Cu	63	2	He	101189	0.00
Zn	66	2	He	15182	0.03
Al	27	2	He	6458	0.03
B	11	1	No Gas	166432	0.00
Al	27	1	No Gas	290955	0.00
Si	28	1	No Gas	861068	0.00
P	31	1	No Gas	85452	0.00
Ag	107	1	No Gas	155723	0.00
Cd	111	1	No Gas	30375	0.01
Sr	88	1	No Gas	298416	0.00
Mo	95	1	No Gas	56748	0.01
Sn	118	1	No Gas	91301	0.00
Sb	121	1	No Gas	123634	0.00
Ba	137	1	No Gas	44771	0.00
Tl	205	1	No Gas	207106	0.00
Tl	203	1	No Gas	85762	0.00
Pb	208	1	No Gas	287946	0.00
U	238	1	No Gas	273039	0.00
Ca	43	2	He	2347	0.21
Sb	121	2	He	71271	0.00
Cu	63	1	No Gas	178603	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	3311164	1.42	3367912	98.32	70	120	

Calibration Standard Report

Ge	72	2	He	2067635	1.24	2128792	97.13	70	120	
Ge	72	1	No Gas	6246973	0.87	6259187	99.80	70	120	
In	115	1	No Gas	6686731	1.82	6832906	97.86	70	120	
Bi	209	1	No Gas	4855667	2.07	4819187	100.76	70	120	

Calibration Standard Report

Sample Table

Sample Name	10/50/100
Data File Name	014CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\070220A.b
Acq Date Time	2020-07-02T11:25:32-05:00
Sample Type	CalStd
Level	4
Dilution	1
Comment	
ISTD Ref File Name	011CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	No Gas	85301	0.00
V	51	2	He	122430	0.00
Cr	52	2	He	145498	0.00
Fe	56	2	He	12877665	0.00
Se	78	2	He	2098	0.09
Sn	118	2	He	107993	0.00
As	75	2	He	21738	0.00
Ca	44	2	He	78655	0.00
Na	23	2	He	2355171	0.00
Mg	24	2	He	1226117	0.00
K	39	2	He	1560277	0.00
Mn	55	2	He	105312	0.00
Co	59	2	He	216895	0.00
Ni	60	2	He	55500	0.00
Cu	63	2	He	173474	0.00
Zn	66	2	He	30017	0.00
Al	27	2	He	9277	0.07
B	11	1	No Gas	293842	0.00
Al	27	1	No Gas	397019	0.00
Si	28	1	No Gas	1249931	0.00
P	31	1	No Gas	126624	0.00
Ag	107	1	No Gas	310873	0.00
Cd	111	1	No Gas	61976	0.00
Sr	88	1	No Gas	582188	0.00
Mo	95	1	No Gas	114127	0.00
Sn	118	1	No Gas	183660	0.00
Sb	121	1	No Gas	246483	0.00
Ba	137	1	No Gas	86325	0.00
Tl	205	1	No Gas	415437	0.00
Tl	203	1	No Gas	174785	0.00
Pb	208	1	No Gas	580557	0.00
U	238	1	No Gas	551270	0.00
Ca	43	2	He	4541	0.21
Sb	121	2	He	141957	0.00
Cu	63	1	No Gas	308212	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	3331061	4.32	3367912	98.91	70	120	

Calibration Standard Report

Ge	72	2	He	2091168	1.23	2128792	98.23	70	120	
Ge	72	1	No Gas	6382108	0.31	6259187	101.96	70	120	
In	115	1	No Gas	6839439	3.30	6832906	100.10	70	120	
Bi	209	1	No Gas	4886189	2.83	4819187	101.39	70	120	

Calibration Standard Report

Sample Table

Sample Name	100/500/10K
Data File Name	015CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\070220A.b
Acq Date Time	2020-07-02T11:27:23-05:00
Sample Type	CalStd
Level	5
Dilution	1
Comment	
ISTD Ref File Name	011CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	No Gas	893557	0.00
V	51	2	He	1251486	0.00
Cr	52	2	He	1445189	0.00
Fe	56	2	He	131489571	0.00
Se	78	2	He	19624	0.00
Sn	118	2	He	1145545	0.00
As	75	2	He	219885	0.00
Ca	44	2	He	781917	0.00
Na	23	2	He	21342975	0.00
Mg	24	2	He	12273330	0.00
K	39	2	He	14716457	0.00
Mn	55	2	He	1057849	0.00
Co	59	2	He	2213459	0.00
Ni	60	2	He	556018	0.00
Cu	63	2	He	1496849	0.00
Zn	66	2	He	292354	0.00
Al	27	2	He	73005	0.00
B	11	1	No Gas	2578809	0.00
Al	27	1	No Gas	3250265	0.00
Si	28	1	No Gas	8705232	0.00
P	31	1	No Gas	862145	0.00
Ag	107	1	No Gas	3188540	0.00
Cd	111	1	No Gas	614855	0.00
Sr	88	1	No Gas	6057353	0.00
Mo	95	1	No Gas	1176764	0.00
Sn	118	1	No Gas	1915490	0.00
Sb	121	1	No Gas	2554254	0.00
Ba	137	1	No Gas	866193	0.00
Tl	205	1	No Gas	4370728	0.00
Tl	203	1	No Gas	1831351	0.00
Pb	208	1	No Gas	6054526	0.00
U	238	1	No Gas	5833204	0.00
Ca	43	2	He	45974	0.00
Sb	121	2	He	1510935	0.00
Cu	63	1	No Gas	2647580	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	3227890	1.45	3367912	95.84	70	120	

Calibration Standard Report

Ge	72	2	He	2083969	1.82	2128792	97.89	70	120	
Ge	72	1	No Gas	6239615	1.28	6259187	99.69	70	120	
In	115	1	No Gas	6632404	1.02	6832906	97.07	70	120	
Bi	209	1	No Gas	4718796	3.02	4819187	97.92	70	120	

Calibration Standard Report

Sample Table

Sample Name	200/1000/20K
Data File Name	016CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\070220A.b
Acq Date Time	2020-07-02T11:29:05-05:00
Sample Type	CalStd
Level	6
Dilution	1
Comment	
ISTD Ref File Name	011CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	No Gas	1745335	0.00
V	51	2	He	2456661	0.00
Cr	52	2	He	2803288	0.00
Fe	56	2	He	256913630	0.00
Se	78	2	He	38366	0.00
Sn	118	2	He	2258058	0.00
As	75	2	He	429800	0.00
Ca	44	2	He	1544859	0.00
Na	23	2	He	40275193	0.00
Mg	24	2	He	23635523	0.00
K	39	2	He	28573734	0.00
Mn	55	2	He	2074905	0.00
Co	59	2	He	4184088	0.00
Ni	60	2	He	1071852	0.00
Cu	63	2	He	2897753	0.00
Zn	66	2	He	567817	0.00
Al	27	2	He	138007	0.00
B	11	1	No Gas	5065548	0.00
Al	27	1	No Gas	6049706	0.00
Si	28	1	No Gas	16083944	0.00
P	31	1	No Gas	1683352	0.00
Ag	107	1	No Gas	6129250	0.00
Cd	111	1	No Gas	1228614	0.00
Sr	88	1	No Gas	11730387	0.00
Mo	95	1	No Gas	2387862	0.00
Sn	118	1	No Gas	3665244	0.00
Sb	121	1	No Gas	5034347	0.00
Ba	137	1	No Gas	1724607	0.00
Tl	205	1	No Gas	8643389	0.00
Tl	203	1	No Gas	3726763	0.00
Pb	208	1	No Gas	12085836	0.00
U	238	1	No Gas	11730614	0.00
Ca	43	2	He	89906	0.00
Sb	121	2	He	2996543	0.00
Cu	63	1	No Gas	5039471	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	3150845	0.64	3367912	93.55	70	120	

Calibration Standard Report

Ge	72	2	He	2024410	1.20	2128792	95.10	70	120	
Ge	72	1	No Gas	6059339	0.92	6259187	96.81	70	120	
In	115	1	No Gas	6452380	1.33	6832906	94.43	70	120	
Bi	209	1	No Gas	4704128	1.15	4819187	97.61	70	120	

Initial Calibration Verification (ICV) Report

Sample Table

Sample Name	ICV
Data File Name	018_ICV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\070220A.b
Acq Date Time	2020-07-02T11:34:22-05:00
Sample Type	ICV
Dilution	1
Comment	
ISTD Ref File Name	011CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	1	No Gas	104.286	2.355	3541370	0.33	100	104.3	90	110	
Be	9	1	No Gas	99.566	1.483	879714	1.61	100	99.6	90	110	
V	51	2	He	100.971	1.986	1280533	0.49	100	101.0	90	110	
Cr	52	2	He	101.981	2.348	1479476	0.85	100	102.0	90	110	
Fe	56	2	He	10205.240	1.776	135400871	0.77	10000	102.1	90	110	
Se	78	2	He	101.692	4.508	20234	2.96	100	101.7	90	110	
Sn	118	2	He	100.651	2.322	1140169	2.40	100	100.7	90	110	
As	75	2	He	101.253	1.095	224920	0.66	100	101.3	90	110	
Ca	44	2	He	10166.201	1.807	810140	0.18	10000	101.7	90	110	
Na	23	2	He	10151.475	0.499	21392845	2.15	10000	101.5	90	110	
Mg	24	2	He	10208.122	0.885	12499177	1.32	10000	102.1	90	110	
K	39	2	He	10230.110	1.536	15156854	0.77	10000	102.3	90	110	
Mn	55	2	He	103.519	3.391	1108585	1.82	100	103.5	90	110	
Co	59	2	He	101.818	2.474	2214698	1.32	100	101.8	90	110	
Ni	60	2	He	100.599	0.454	558816	1.23	100	100.6	90	110	
Cu	63	2	He	100.558	1.044	1518777	1.15	100	100.6	90	110	
Zn	66	2	He	102.195	1.029	300361	2.12	100	102.2	90	110	
Al	27	2	He	105.199	2.594	76114	1.96	100	105.2	90	110	
B	11	1	No Gas	498.514	1.772	2571024	1.62	500	99.7	90	110	
Al	27	1	No Gas	104.222	1.598	3285726	0.61	100	104.2	90	110	
Si	28	1	No Gas	508.767	1.723	8625782	0.53	500	101.8	90	110	
P	31	1	No Gas	509.558	1.339	894916	0.34	500	101.9	90	110	
Ag	107	1	No Gas	101.200	1.733	3223005	1.71	100	101.2	90	110	
Cd	111	1	No Gas	98.728	1.487	625459	2.59	100	98.7	90	110	
Sr	88	1	No Gas	101.263	4.271	6163727	1.37	100	101.3	90	110	
Mo	95	1	No Gas	97.889	3.207	1201246	1.06	100	97.9	90	110	
Sn	118	1	No Gas	101.995	1.782	1946210	1.85	100	102.0	90	110	
Sb	121	1	No Gas	99.615	1.164	2561323	1.39	100	99.6	90	110	
Ba	137	1	No Gas	97.423	4.182	866894	1.44	100	97.4	90	110	
Tl	205	1	No Gas	104.921	1.800	4509590	0.23	100	104.9	90	110	
Tl	203	1	No Gas	101.720	4.413	1873859	3.06	100	101.7	90	110	
Pb	208	1	No Gas	102.394	2.000	6141704	1.39	100	102.4	90	110	
U	238	1	No Gas	100.808	1.410	5860770	2.01	100	100.8	90	110	
Ca	43	2	He	10244.888	2.750	47576	1.22	10000	102.4	90	110	
Sb	121	2	He	100.786	0.791	1555034	1.01	100	100.8	90	110	
Ti	47	2	He	101.968	3.389	48389	1.86	100	102.0	90	110	
Cu	63	1	No Gas	102.314	0.784	2671055	1.82	100	102.3	90	110	

QC ISTD Table

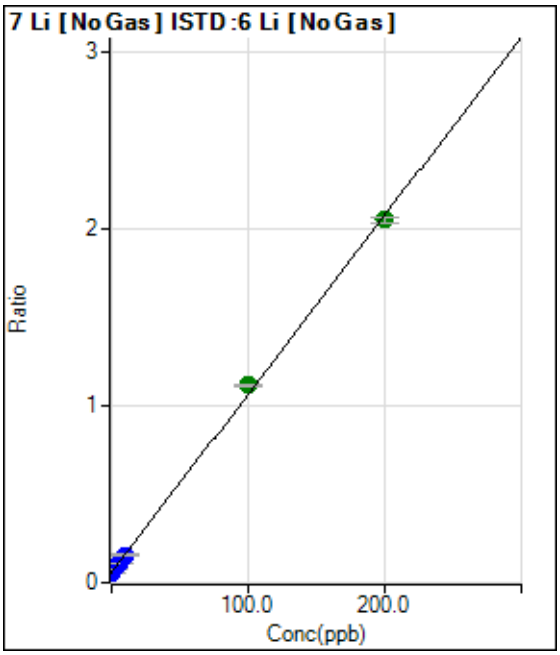
Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	3191044	2.11	3367912	94.75	70	120	
Ge	72	2	He	2093512	1.67	2128792	98.34	70	120	
Ge	72	1	No Gas	6207442	1.16	6259187	99.17	70	120	
In	115	1	No Gas	6691764	2.94	6832906	97.93	70	120	
Bi	209	1	No Gas	4671597	1.82	4819187	96.94	70	120	

Calibration for 018_ICV.d

Batch Folder: C:\Agilent\ICPMH\1\DATA\070220A.b\
Analysis File: 070220A.batch.bin
DA Date-Time: 7/2/2020 9:54:05 PM
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	011CALB.d	CAL BLK	7/2/2020 11:19:56 AM
2	012CALS.d	2/10/200	7/2/2020 11:21:49 AM
3	013CALS.d	5/25/500	7/2/2020 11:23:40 AM
4	014CALS.d	10/50/100	7/2/2020 11:25:32 AM
5	015CALS.d	100/500/10K	7/2/2020 11:27:23 AM
6	016CALS.d	200/1000/20K	7/2/2020 11:29:05 AM

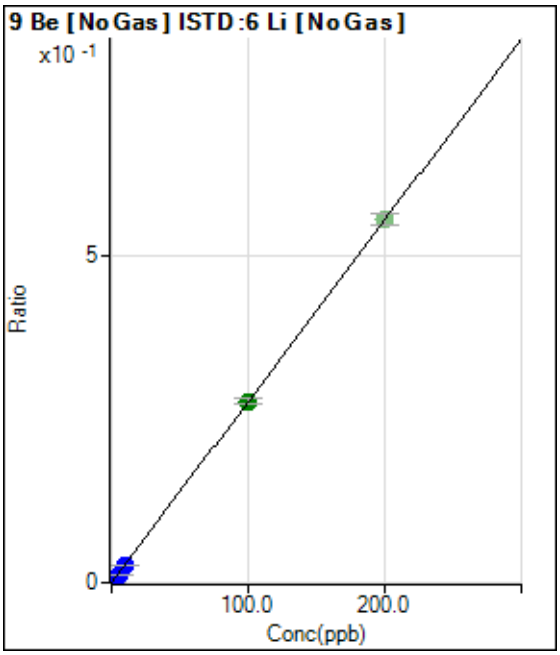
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	193582.19	0.0575	P	0.3
2	☐	2.000	1.971	253968.22	0.0774	P	1.0
3	☐	5.000	4.933	355153.27	0.1073	P	1.4
4	☐	10.000	9.781	519900.30	0.1562	P	3.0
5	☐	100.000	104.815	3600309.22	1.1155	A	1.1
6	☐	200.000	197.606	6465449.48	2.0521	A	1.6

y = 0.0101 * x + 0.0575
R = 0.9996
DL = 0.04621
BEC = 5.694

Weight: <None>
Min Conc: <None>

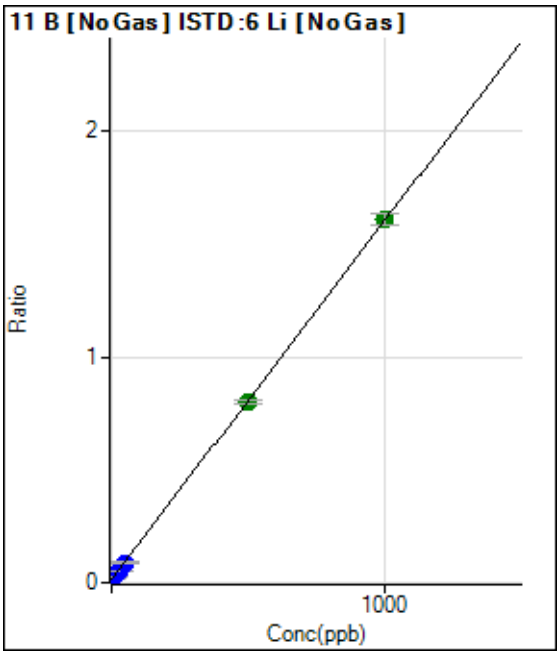


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	35.00	0.0000	P	52.9
2	☐	2.000	1.853	16860.18	0.0051	P	1.5
3	☐	5.000	4.632	42454.00	0.0128	P	1.2
4	☐	10.000	9.262	85300.79	0.0256	P	3.0
5	☐	100.000	100.095	893557.02	0.2769	A	3.1
6	☑	200.000		1745335.29	0.5540	A	3.0

y = 0.0028 * x + 1.0460E-005
R = 1.0000
DL = 0.005999
BEC = 0.003782

Weight: <None>
Min Conc: <None>

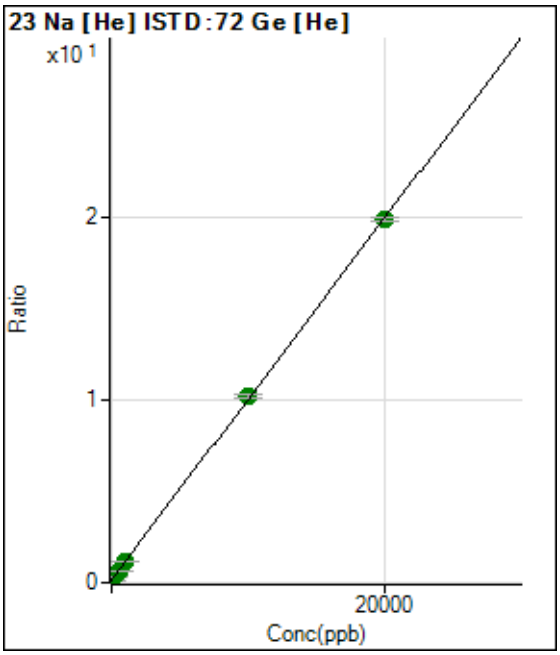
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	45704.31	0.0136	P	2.1
2	☐	10.000	9.074	91896.43	0.0280	P	2.1
3	☐	25.000	23.095	166431.73	0.0503	P	2.8
4	☐	50.000	47.022	293842.46	0.0883	P	3.6
5	☐	500.000	494.251	2578808.56	0.7991	A	2.5
6	☐	1000.000	1003.080	5065547.84	1.6077	A	3.1

y = 0.0016 * x + 0.0136
R = 1.0000
DL = 0.532
BEC = 8.541

Weight: <None>
Min Conc: <None>

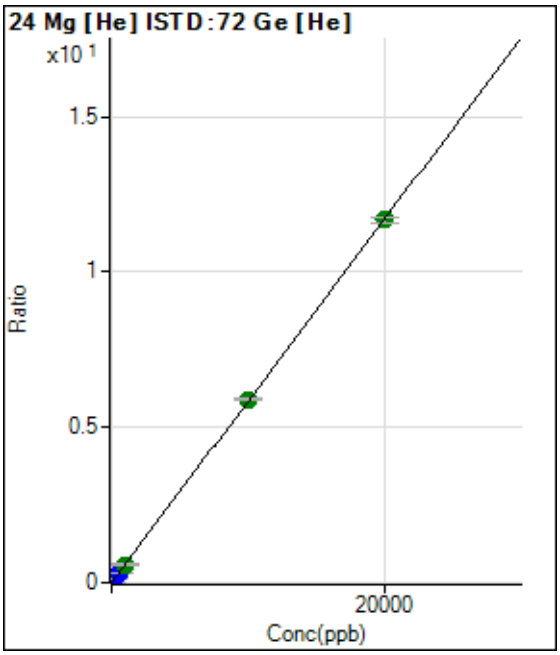


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	325832.34	0.1531	P	2.9
2	☐	200.000	191.530	723317.59	0.3430	A	3.9
3	☐	500.000	504.858	1351530.87	0.6537	A	0.6
4	☐	1000.000	981.632	2355171.27	1.1264	A	1.7
5	☐	10000.00	10176.32	21342974.68	10.2427	A	1.4
6	☐	20000.00	19912.72	40275192.73	19.8962	A	1.1

y = 9.9148E-004 * x + 0.1531
R = 0.9999
DL = 13.38
BEC = 154.4

Weight: <None>
Min Conc: <None>

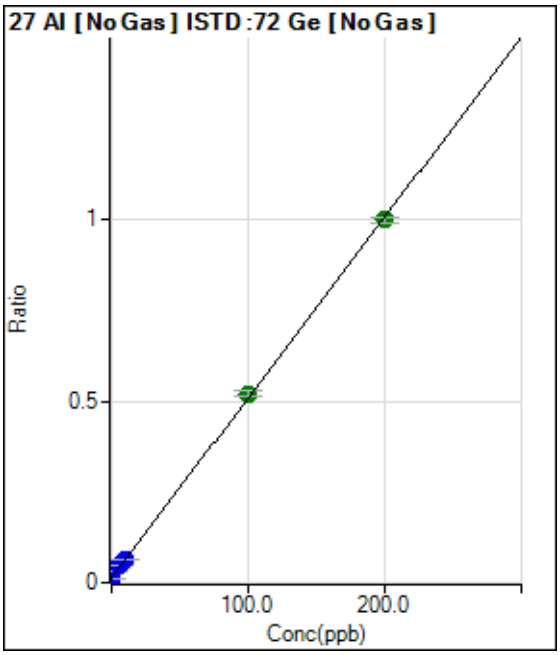
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1796.81	0.0008	P	7.3
2	☐	200.000	200.366	248901.78	0.1180	P	2.3
3	☐	500.000	512.242	621123.05	0.3004	P	1.4
4	☐	1000.000	1001.145	1226116.88	0.5863	A	2.6
5	☐	10000.00	10070.49	12273329.82	5.8903	A	1.3
6	☐	20000.00	19964.38	23635522.98	11.6765	A	1.3

y = 5.8482E-004 * x + 8.4497E-004
R = 1.0000
DL = 0.3144
BEC = 1.445

Weight: <None>
Min Conc: <None>

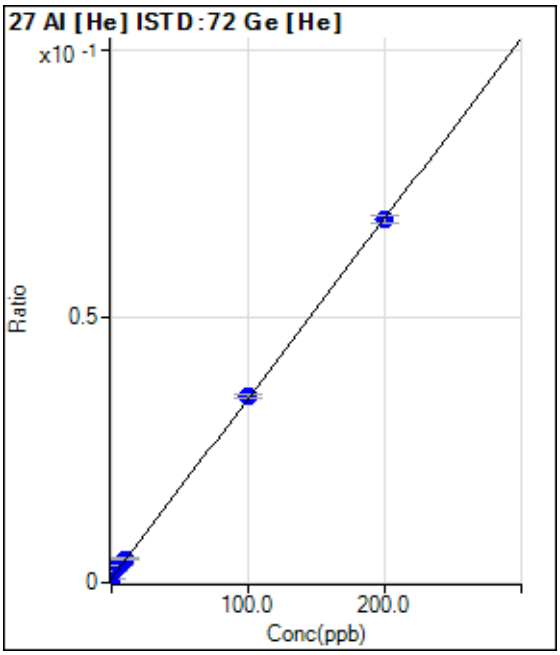


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	73457.45	0.0117	P	2.9
2	☐	2.000	4.564	216035.96	0.0344	P	10.3
3	☐	5.000	7.014	290954.61	0.0466	P	0.4
4	☐	10.000	10.161	397019.36	0.0622	P	1.5
5	☐	100.000	102.533	3250265.06	0.5210	A	2.9
6	☐	200.000	198.649	6049705.95	0.9984	A	1.8

y = 0.0050 * x + 0.0117
R = 0.9998
DL = 0.2041
BEC = 2.364

Weight: <None>
Min Conc: <None>

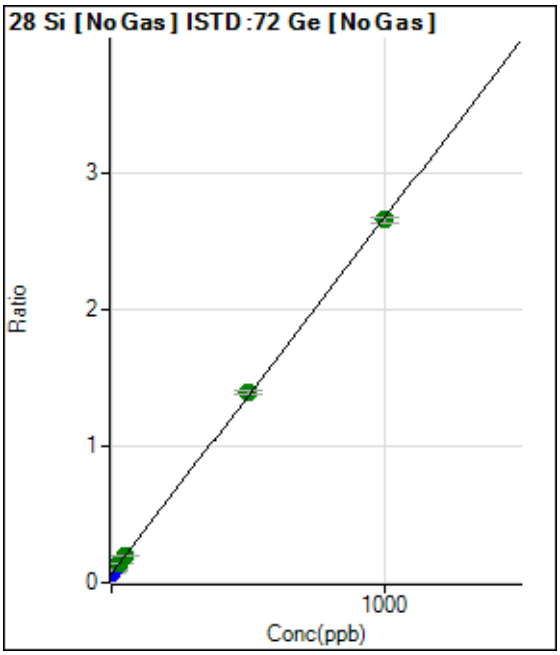
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1646.79	0.0008	P	2.6
2	☐	2.000	4.461	4820.95	0.0023	P	8.2
3	☐	5.000	6.948	6458.33	0.0031	P	3.3
4	☐	10.000	10.830	9277.09	0.0044	P	7.0
5	☐	100.000	101.275	73004.88	0.0350	P	1.9
6	☐	200.000	199.248	138007.11	0.0682	P	1.9

y = 3.3831E-004 * x + 7.7385E-004
R = 0.9999
DL = 0.1752
BEC = 2.287

Weight: <None>
Min Conc: <None>

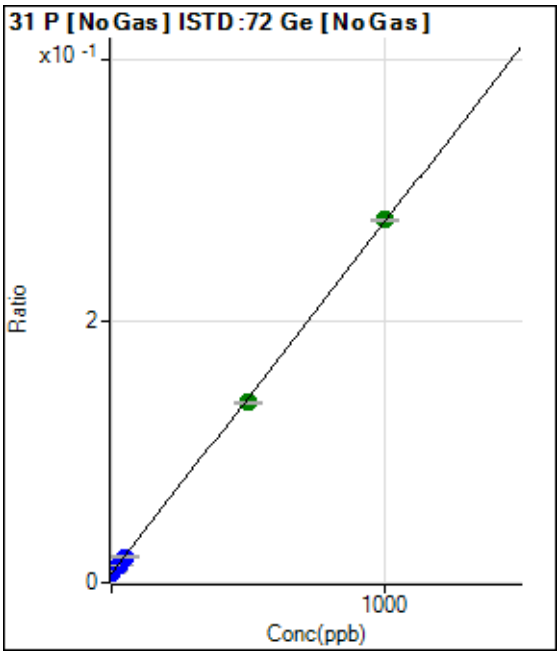


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	406074.31	0.0649	P	2.4
2	☐	10.000	10.482	579389.62	0.0922	P	2.1
3	☐	25.000	28.013	861068.37	0.1378	A	1.2
4	☐	50.000	50.289	1249930.71	0.1959	A	2.8
5	☐	500.000	510.910	8705232.16	1.3953	A	1.6
6	☐	1000.000	994.451	16083943.51	2.6545	A	1.3

y = 0.0026 * x + 0.0649
R = 0.9999
DL = 1.813
BEC = 24.92

Weight: <None>
Min Conc: <None>

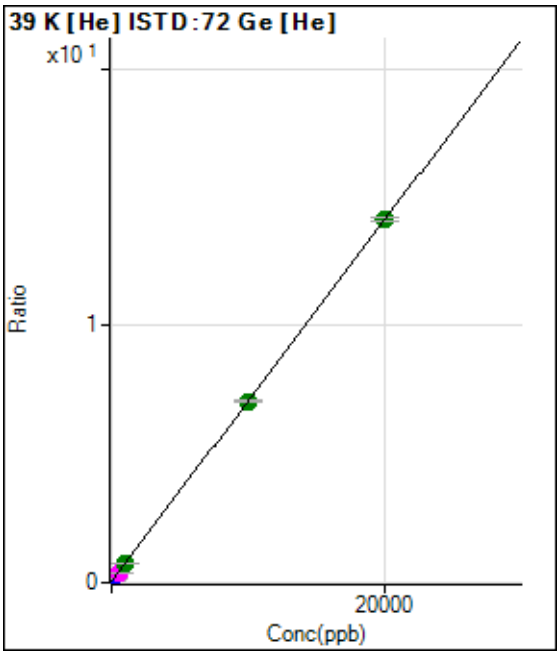
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	44849.37	0.0072	P	0.8
2	☐	10.000	9.124	60441.90	0.0096	P	2.6
3	☐	25.000	24.230	85452.02	0.0137	P	1.5
4	☐	50.000	47.140	126623.77	0.0198	P	0.5
5	☐	500.000	487.202	862145.17	0.1382	A	0.9
6	☐	1000.000	1006.570	1683351.90	0.2778	A	0.9

y = 2.6889E-004 * x + 0.0072
R = 0.9999
DL = 0.6243
BEC = 26.64

Weight: <None>
Min Conc: <None>

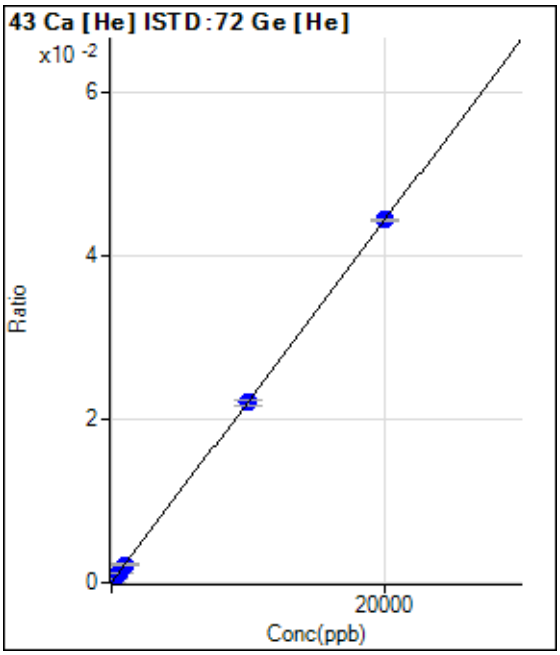


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	109136.12	0.0513	P	2.8
2	☐	200.000	195.217	397456.87	0.1885	P	2.4
3	☐	500.000	501.659	834994.75	0.4039	M	0.5
4	☐	1000.000	988.727	1560277.27	0.7462	A	1.9
5	☐	10000.00	9976.621	14716456.86	7.0629	A	1.3
6	☐	20000.00	20012.26	28573733.74	14.1159	A	1.2

y = 7.0280E-004 * x + 0.0513
R = 1.0000
DL = 6.207
BEC = 72.98

Weight: <None>
Min Conc: <None>

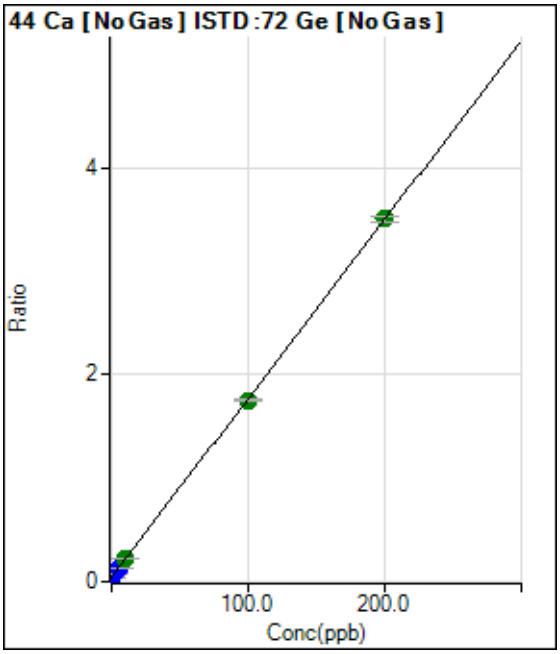
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	66.67	0.0000	P	8.6
2	☐	200.000	200.009	1000.05	0.0005	P	8.7
3	☐	500.000	497.996	2346.91	0.0011	P	3.9
4	☐	1000.000	965.224	4540.85	0.0022	P	8.4
5	☐	10000.00	9944.989	45973.93	0.0221	P	2.7
6	☐	20000.00	20029.29	89906.07	0.0444	P	0.7

y = 2.2158E-006 * x + 3.1321E-005
R = 1.0000
DL = 3.667
BEC = 14.14

Weight: <None>
Min Conc: <None>

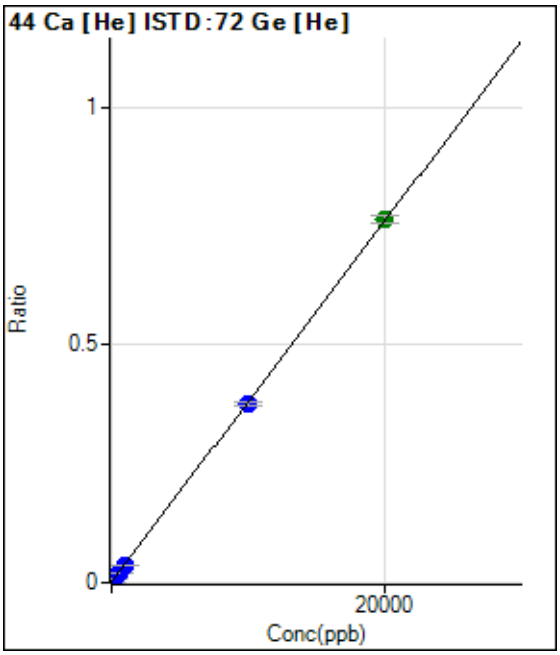


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	261358.00	0.0418	P	3.7
2	☐	2.000	1.951	474153.67	0.0755	P	2.8
3	☐	5.000	4.853	784394.44	0.1256	P	1.2
4	☐	10.000	10.362	1408377.38	0.2207	A	2.3
5	☐	100.000	99.025	10927582.76	1.7515	A	1.4
6	☐	200.000	200.473	21225239.69	3.5031	A	1.8

y = 0.0173 * x + 0.0418
R = 1.0000
DL = 0.2711
BEC = 2.42

Weight: <None>
Min Conc: <None>

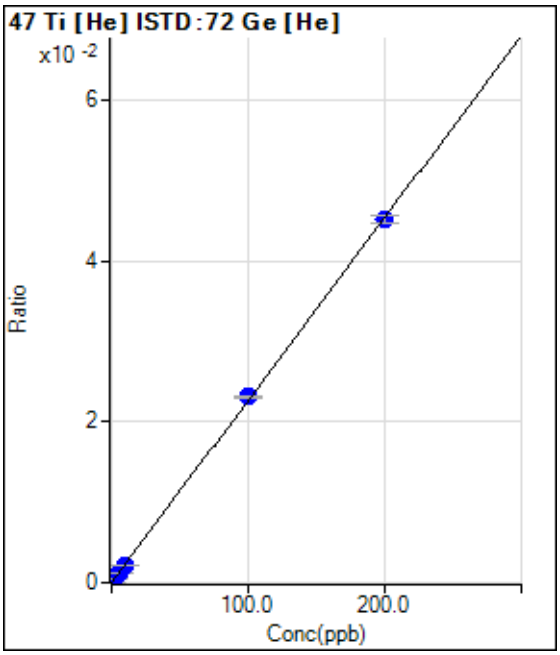
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2543.62	0.0012	P	5.8
2	☐	200.000	197.369	18319.17	0.0087	P	2.0
3	☐	500.000	488.379	40804.25	0.0197	P	1.6
4	☐	1000.000	959.461	78654.73	0.0376	P	0.4
5	☐	10000.00	9857.119	781917.02	0.3753	P	2.6
6	☐	20000.00	20073.78	1544859.20	0.7631	A	2.1

y = 3.7955E-005 * x + 0.0012
R = 1.0000
DL = 5.483
BEC = 31.5

Weight: <None>
Min Conc: <None>

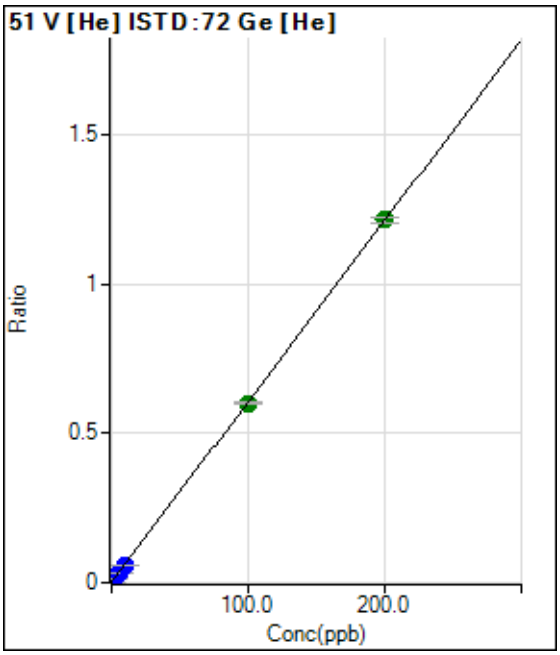


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	13.33	0.0000	P	86.6
2	☐	2.000	1.707	830.04	0.0004	P	5.1
3	☐	5.000	5.162	2433.60	0.0012	P	5.0
4	☐	10.000	9.366	4454.14	0.0021	P	7.4
5	☐	100.000	102.067	48225.43	0.0231	P	1.4
6	☐	200.000	198.997	91322.79	0.0451	P	2.1

y = 2.2670E-004 * x + 6.3445E-006
R = 0.9999
DL = 0.07272
BEC = 0.02799

Weight: <None>
Min Conc: <None>

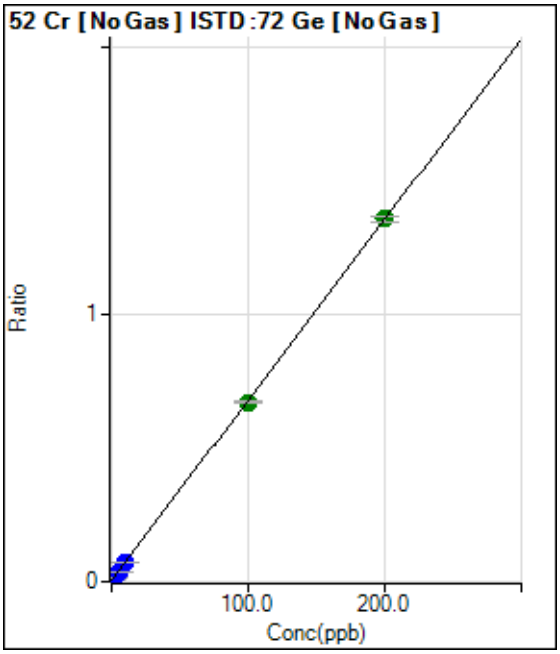
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2430.23	0.0011	P	1.9
2	☐	2.000	1.876	26326.39	0.0125	P	2.7
3	☐	5.000	4.780	62123.67	0.0301	P	1.9
4	☐	10.000	9.493	122430.15	0.0586	P	2.0
5	☐	100.000	99.121	1251485.92	0.6006	A	1.3
6	☐	200.000	200.471	2456660.88	1.2136	A	1.6

y = 0.0060 * x + 0.0011
R = 1.0000
DL = 0.0107
BEC = 0.1888

Weight: <None>
Min Conc: <None>

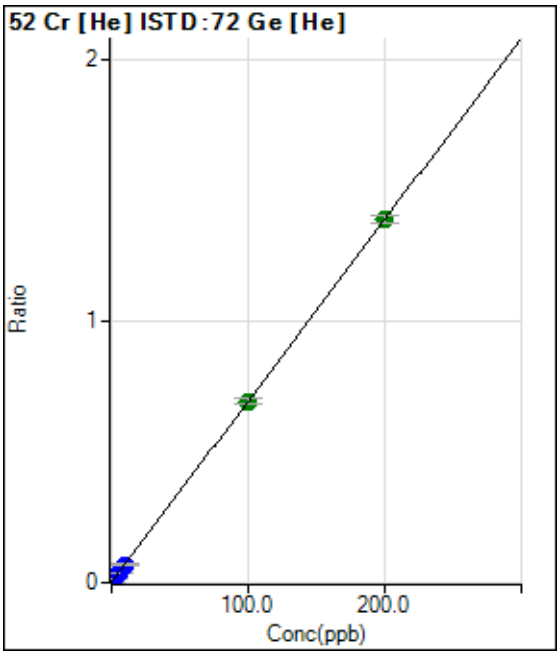


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	25083.23	0.0040	P	0.5
2	☐	2.000	1.956	108002.74	0.0172	P	1.6
3	☐	5.000	4.954	233455.23	0.0374	P	0.6
4	☐	10.000	9.658	440759.99	0.0691	P	1.1
5	☐	100.000	98.893	4180902.13	0.6701	A	1.3
6	☐	200.000	200.572	8209680.92	1.3550	A	1.9

y = 0.0067 * x + 0.0040
R = 1.0000
DL = 0.008085
BEC = 0.5949

Weight: <None>
Min Conc: <None>

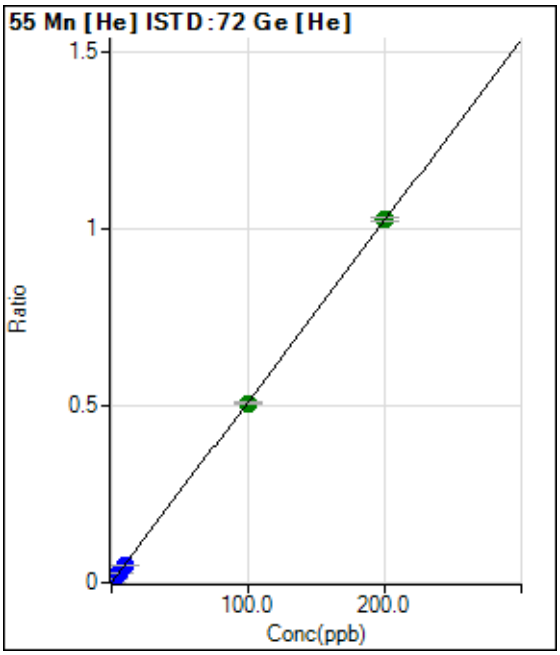
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2653.64	0.0012	P	3.3
2	☐	2.000	1.944	30985.47	0.0147	P	3.0
3	☐	5.000	4.850	71962.46	0.0348	P	2.0
4	☐	10.000	9.878	145498.43	0.0696	P	3.1
5	☐	100.000	100.062	1445189.25	0.6936	A	2.9
6	☐	200.000	199.979	2803288.09	1.3849	A	2.2

y = 0.0069 * x + 0.0012
R = 1.0000
DL = 0.01788
BEC = 0.1801

Weight: <None>
Min Conc: <None>

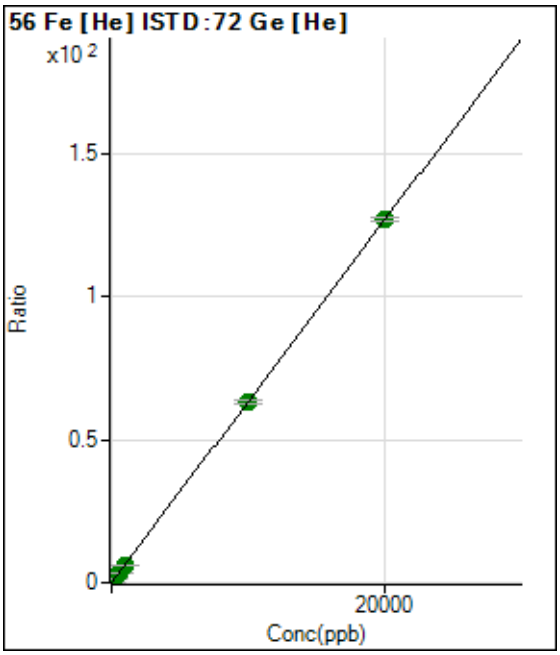


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1206.74	0.0006	P	6.1
2	☐	2.000	1.928	21967.99	0.0104	P	4.7
3	☐	5.000	4.899	52949.89	0.0256	P	1.3
4	☐	10.000	9.743	105311.84	0.0504	P	3.0
5	☐	100.000	99.212	1057849.41	0.5077	A	1.7
6	☐	200.000	200.410	2074905.28	1.0250	A	1.0

y = 0.0051 * x + 5.6715E-004
R = 1.0000
DL = 0.02022
BEC = 0.111

Weight: <None>
Min Conc: <None>

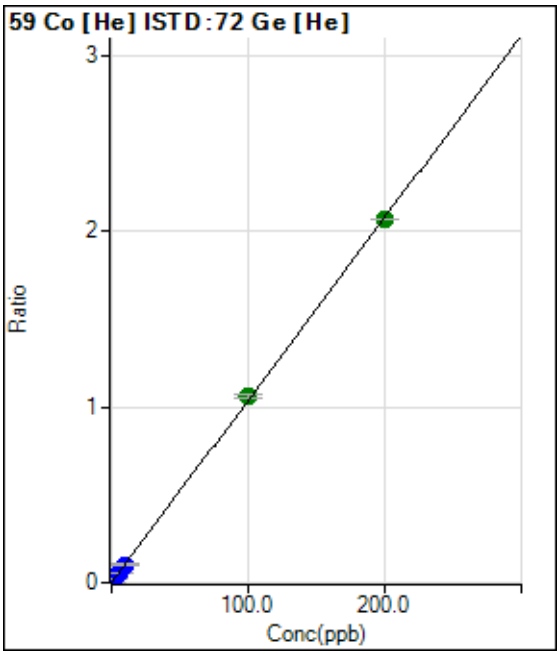
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	26173.96	0.0123	P	47.4
2	☐	200.000	196.550	2653096.47	1.2579	A	1.6
3	☐	500.000	487.388	6411675.32	3.1011	A	0.7
4	☐	1000.000	969.900	12877665.23	6.1590	A	1.8
5	☐	10000.00	9956.256	131489571.3	63.1100	A	1.9
6	☐	20000.00	20023.72	256913629.5	126.912	A	0.9

y = 0.0063 * x + 0.0123
R = 1.0000
DL = 2.764
BEC = 1.943

Weight: <None>
Min Conc: <None>

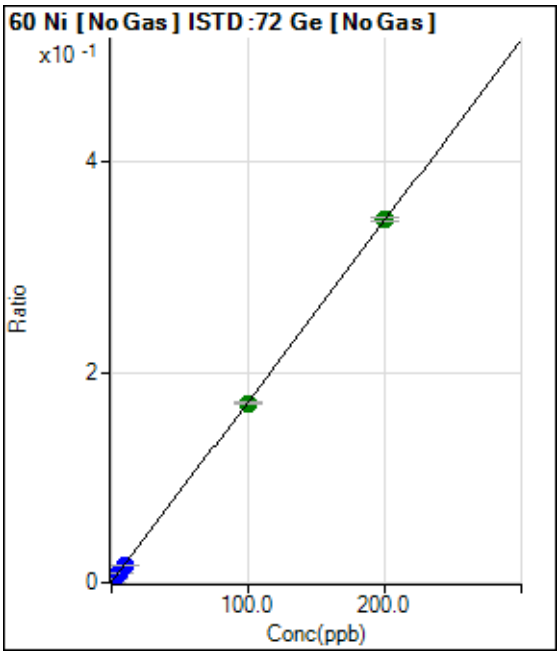


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	350.01	0.0002	P	13.8
2	☐	2.000	1.932	42677.07	0.0202	P	1.5
3	☐	5.000	5.006	107875.61	0.0522	P	2.1
4	☐	10.000	9.969	216894.91	0.1038	P	4.2
5	☐	100.000	102.221	2213459.34	1.0623	A	1.6
6	☐	200.000	198.892	4184088.48	2.0668	A	0.1

y = 0.0104 * x + 1.6453E-004
R = 0.9999
DL = 0.006568
BEC = 0.01583

Weight: <None>
Min Conc: <None>

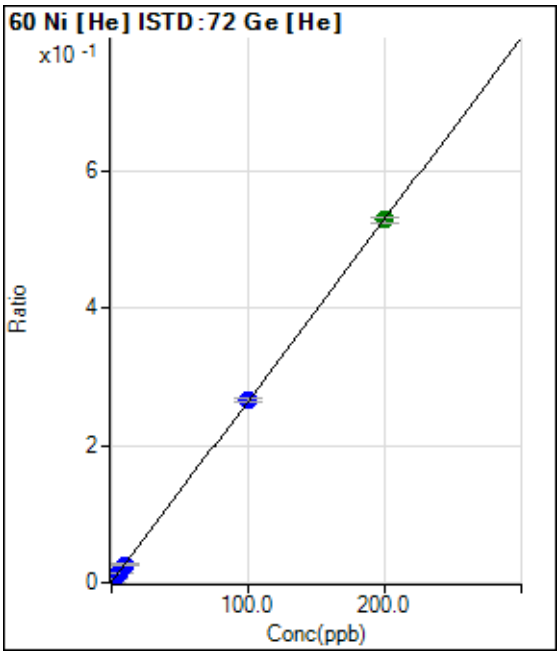
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2213.55	0.0004	P	4.8
2	☐	2.000	1.832	22041.45	0.0035	P	2.4
3	☐	5.000	4.877	54650.29	0.0087	P	1.3
4	☐	10.000	9.682	108625.57	0.0170	P	0.8
5	☐	100.000	99.203	1067767.85	0.1711	A	1.0
6	☐	200.000	200.419	2092542.37	0.3454	A	1.1

y = 0.0017 * x + 3.5343E-004
R = 1.0000
DL = 0.02927
BEC = 0.2053

Weight: <None>
Min Conc: <None>

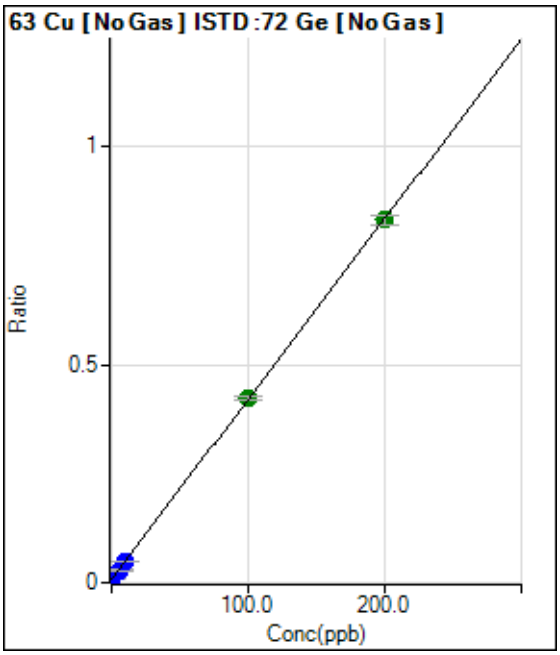


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	970.05	0.0005	P	11.2
2	☐	2.000	1.838	11234.88	0.0053	P	0.5
3	☐	5.000	4.913	27855.52	0.0135	P	2.3
4	☐	10.000	9.849	55500.19	0.0265	P	3.2
5	☐	100.000	100.574	556017.98	0.2669	P	2.6
6	☐	200.000	199.724	1071851.55	0.5295	A	1.4

y = 0.0026 * x + 4.5647E-004
R = 1.0000
DL = 0.05764
BEC = 0.1723

Weight: <None>
Min Conc: <None>

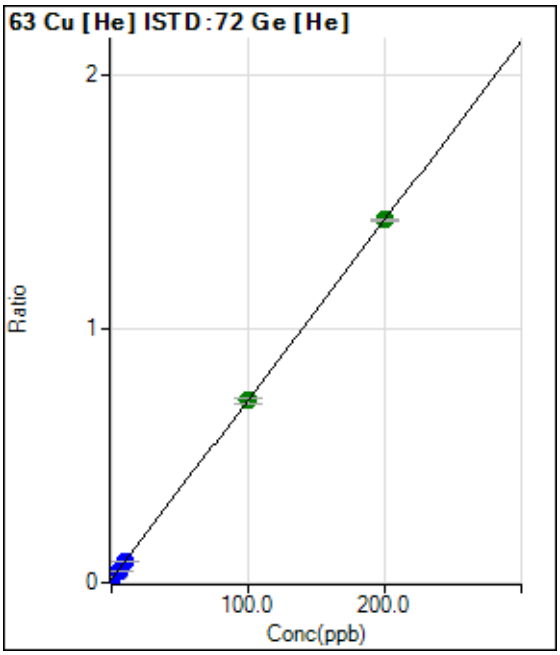
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	49493.41	0.0079	P	3.2
2	☐	2.000	1.951	100348.87	0.0160	P	0.5
3	☐	5.000	5.010	178602.70	0.0286	P	2.4
4	☐	10.000	9.782	308211.71	0.0483	P	2.1
5	☐	100.000	100.858	2647580.17	0.4243	A	1.8
6	☐	200.000	199.582	5039470.86	0.8318	A	2.6

y = 0.0041 * x + 0.0079
R = 1.0000
DL = 0.1821
BEC = 1.916

Weight: <None>
Min Conc: <None>

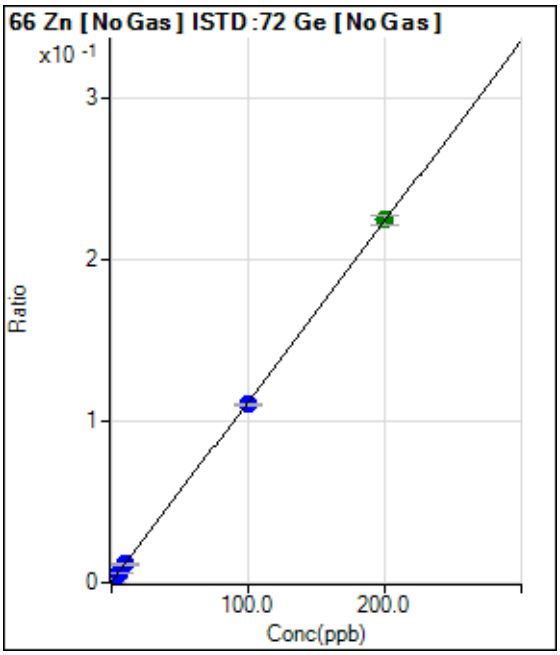


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	28443.48	0.0134	P	2.5
2	☐	2.000	1.870	56109.23	0.0266	P	3.1
3	☐	5.000	5.023	101188.67	0.0489	P	1.2
4	☐	10.000	9.829	173473.65	0.0830	P	3.0
5	☐	100.000	99.547	1496849.04	0.7184	A	3.5
6	☐	200.000	200.236	2897752.87	1.4315	A	0.8

y = 0.0071 * x + 0.0134
R = 1.0000
DL = 0.1426
BEC = 1.887

Weight: <None>
Min Conc: <None>

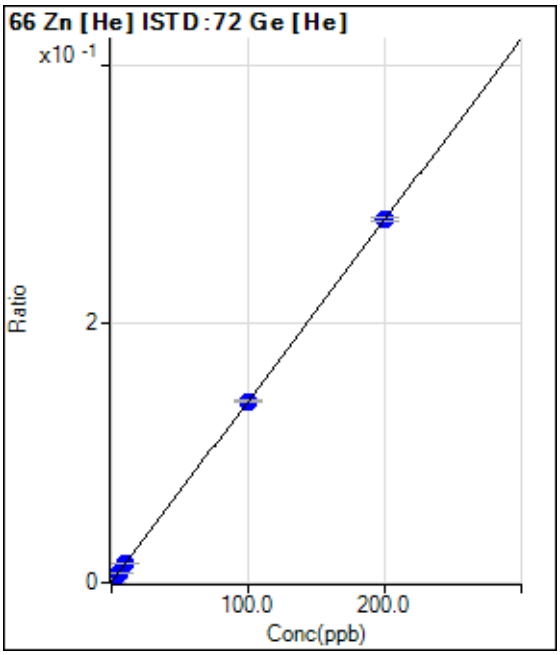
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1910.17	0.0003	P	10.7
2	☐	2.000	1.968	15749.36	0.0025	P	3.8
3	☐	5.000	5.039	37104.56	0.0059	P	2.0
4	☐	10.000	9.851	72235.78	0.0113	P	0.5
5	☐	100.000	98.542	689249.31	0.1105	P	1.0
6	☐	200.000	200.736	1361583.42	0.2247	A	2.5

y = 0.0011 * x + 3.0563E-004
R = 1.0000
DL = 0.08783
BEC = 0.2734

Weight: <None>
Min Conc: <None>

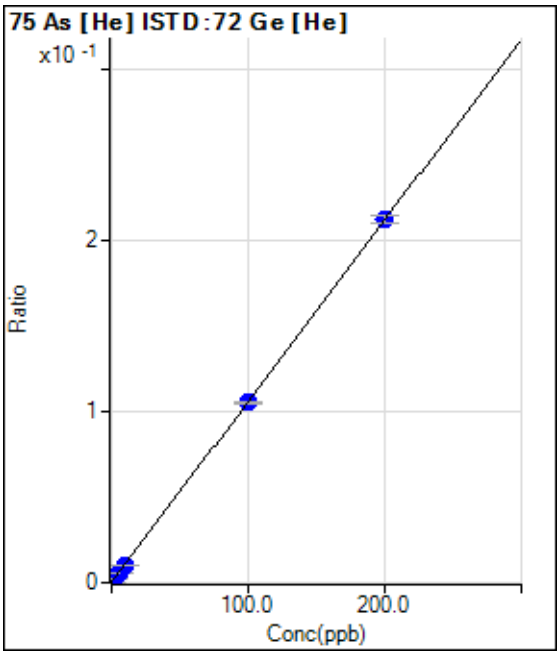


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	690.04	0.0003	P	8.9
2	☐	2.000	1.928	6381.58	0.0030	P	1.9
3	☐	5.000	5.010	15182.05	0.0073	P	3.0
4	☐	10.000	10.017	30016.84	0.0144	P	0.5
5	☐	100.000	99.935	292354.16	0.1403	P	0.9
6	☐	200.000	200.032	567817.41	0.2805	P	1.1

y = 0.0014 * x + 3.2392E-004
R = 1.0000
DL = 0.06164
BEC = 0.2313

Weight: <None>
Min Conc: <None>

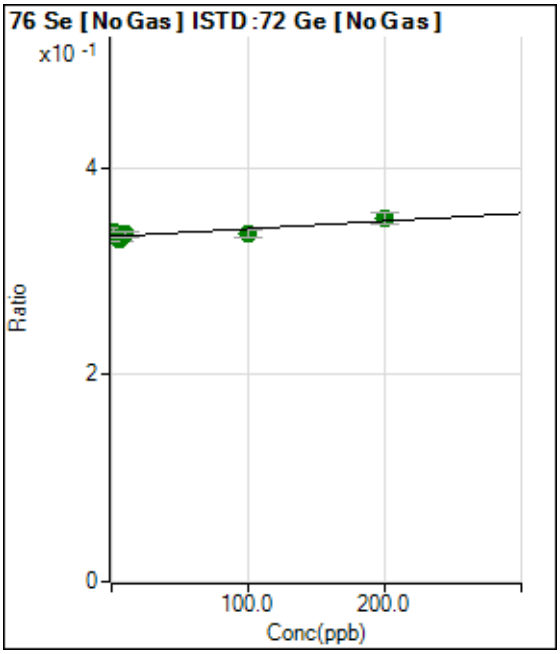
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	472.23	0.0002	P	12.5
2	☐	2.000	1.896	4699.73	0.0022	P	2.6
3	☐	5.000	4.956	11309.23	0.0055	P	0.5
4	☐	10.000	9.608	21737.54	0.0104	P	1.9
5	☐	100.000	99.439	219884.81	0.1055	P	1.3
6	☐	200.000	200.302	429800.32	0.2123	P	2.0

y = 0.0011 * x + 2.2140E-004
R = 1.0000
DL = 0.07818
BEC = 0.2091

Weight: <None>
Min Conc: <None>

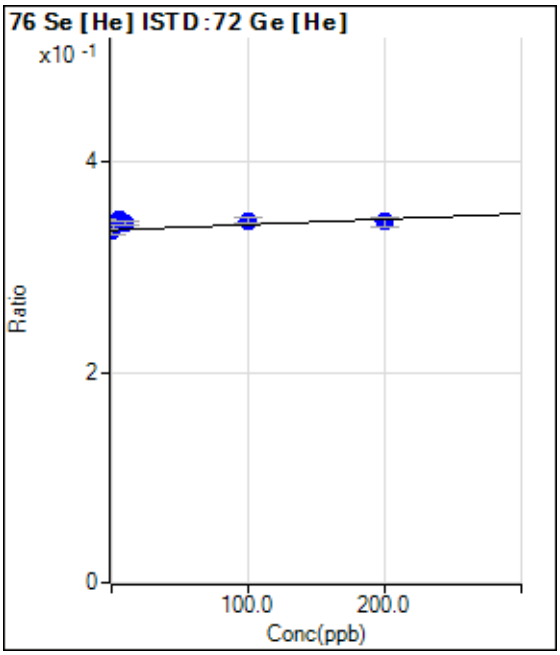


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2086182.16	0.3333	A	1.1
2	☐	2.000	68.416	2127032.73	0.3385	A	2.1
3	☐	5.000	-32.856	2067015.28	0.3309	A	1.1
4	☐	10.000	29.720	2141669.50	0.3356	A	1.9
5	☐	100.000	43.996	2100039.14	0.3366	A	2.4
6	☐	200.000	227.298	2122601.27	0.3503	A	3.1

y = 7.4663E-005 * x + 0.3333
R = 0.8705
DL = 150.5
BEC = 4465

Weight: <None>
Min Conc: <None>

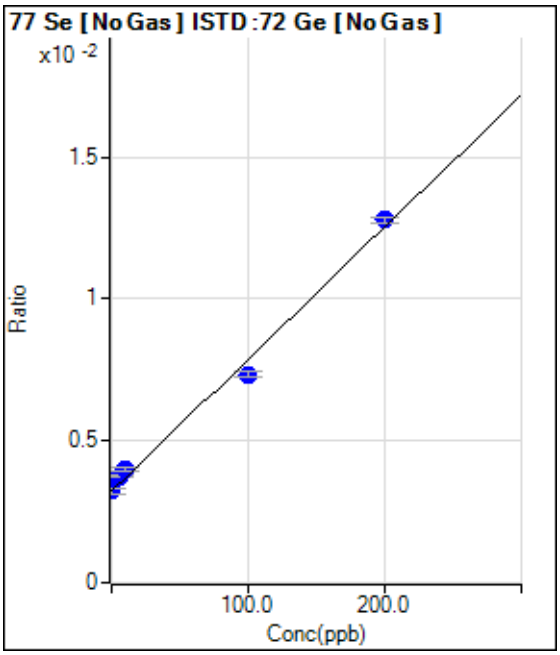
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	713776.08	0.3354	P	2.7
2	☐	2.000	126.825	721301.71	0.3421	P	2.8
3	☐	5.000	184.872	713613.61	0.3451	P	0.7
4	☐	10.000	114.716	713995.75	0.3415	P	0.9
5	☐	100.000	176.639	718235.59	0.3447	P	1.3
6	☐	200.000	150.700	694927.62	0.3433	P	2.4

y = 5.2442E-005 * x + 0.3354
R = 0.3749
DL = 520.7
BEC = 6396

Weight: <None>
Min Conc: <None>

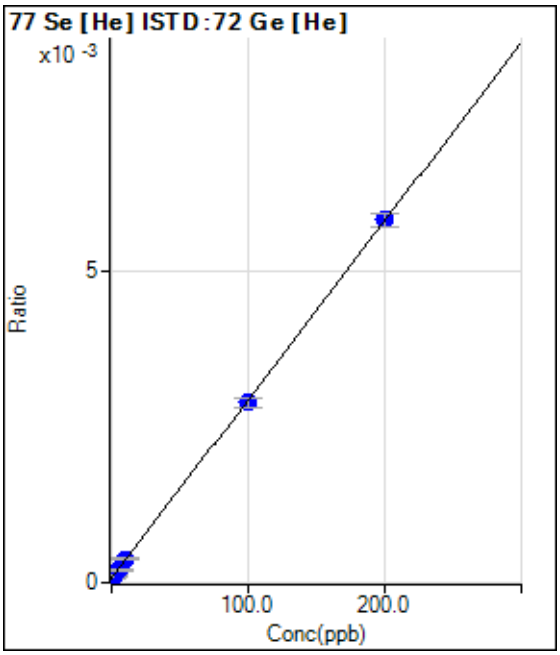


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	20182.14	0.0032	P	5.6
2	☐	2.000	9.616	23103.48	0.0037	P	1.8
3	☐	5.000	11.389	23474.13	0.0038	P	2.6
4	☐	10.000	16.691	25554.63	0.0040	P	2.2
5	☐	100.000	88.314	45784.66	0.0073	P	3.2
6	☐	200.000	205.273	77472.36	0.0128	P	1.4

y = 4.6571E-005 * x + 0.0032
R = 0.9960
DL = 11.67
BEC = 69.29

Weight: <None>
Min Conc: <None>

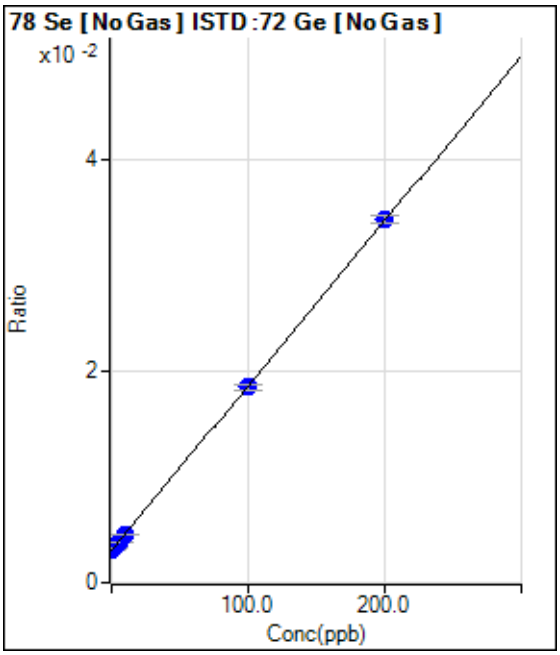
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	150.00	0.0001	P	45.9
2	☐	2.000	1.318	226.67	0.0001	P	23.1
3	☐	5.000	4.652	420.01	0.0002	P	15.1
4	☐	10.000	10.684	786.70	0.0004	P	10.4
5	☐	100.000	98.521	6024.80	0.0029	P	5.6
6	☐	200.000	200.721	11772.03	0.0058	P	3.7

y = 2.8628E-005 * x + 7.0068E-005
R = 0.9999
DL = 3.369
BEC = 2.448

Weight: <None>
Min Conc: <None>

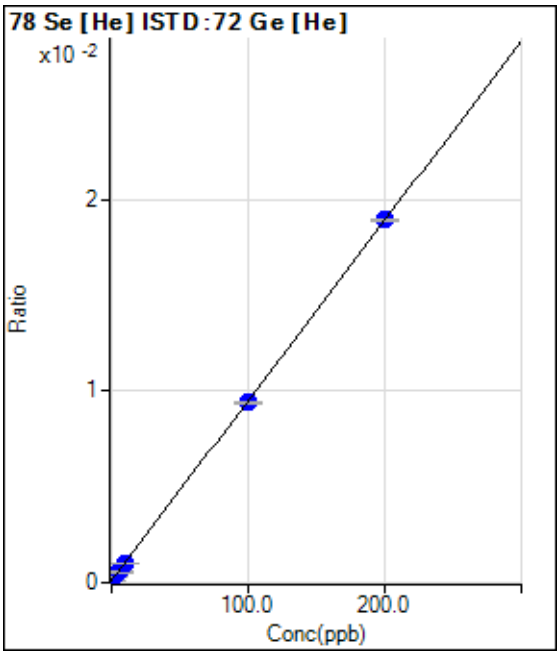


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	19100.41	0.0031	P	3.7
2	☐	2.000	1.679	20819.70	0.0033	P	5.5
3	☐	5.000	4.951	23881.49	0.0038	P	0.9
4	☐	10.000	9.356	28771.03	0.0045	P	2.6
5	☐	100.000	98.873	114978.71	0.0184	P	2.3
6	☐	200.000	200.600	207516.55	0.0342	P	2.0

y = 1.5552E-004 * x + 0.0031
R = 1.0000
DL = 2.201
BEC = 19.63

Weight: <None>
Min Conc: <None>

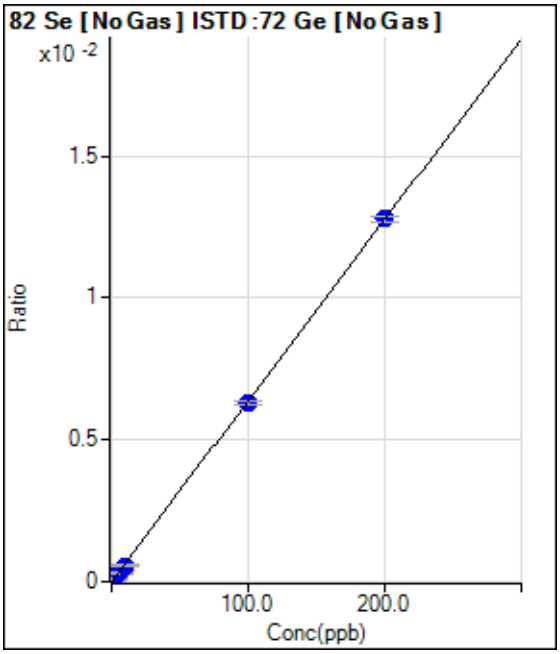
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	251.33	0.0001	P	6.9
2	☐	2.000	1.937	634.02	0.0003	P	10.3
3	☐	5.000	4.745	1165.39	0.0006	P	4.8
4	☐	10.000	9.424	2098.17	0.0010	P	1.0
5	☐	100.000	99.015	19624.27	0.0094	P	1.4
6	☐	200.000	200.528	38366.42	0.0190	P	0.7

y = 9.3926E-005 * x + 1.1812E-004
R = 1.0000
DL = 0.2598
BEC = 1.258

Weight: <None>
Min Conc: <None>

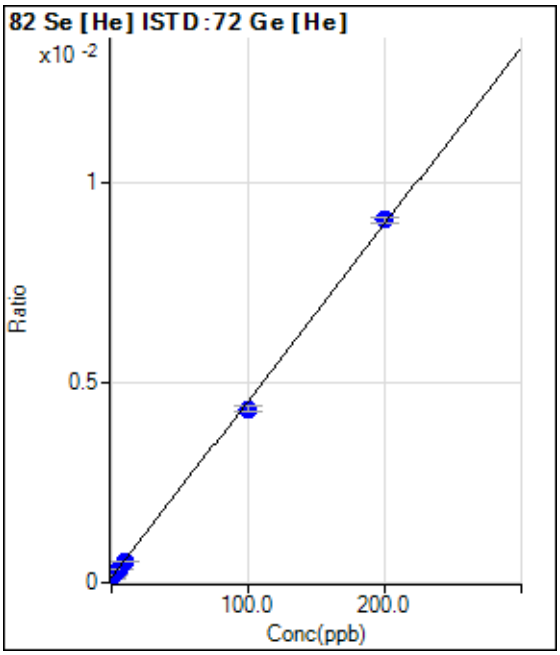


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	22.26	0.0000	P	577.3
2	☐	2.000	1.430	594.79	0.0001	P	51.3
3	☐	5.000	4.842	1949.44	0.0003	P	7.1
4	☐	10.000	8.727	3570.00	0.0006	P	9.3
5	☐	100.000	98.924	39333.07	0.0063	P	1.9
6	☐	200.000	200.611	77437.28	0.0128	P	1.5

y = 6.3692E-005 * x + 3.5704E-006
R = 1.0000
DL = 0.9708
BEC = 0.05606

Weight: <None>
Min Conc: <None>

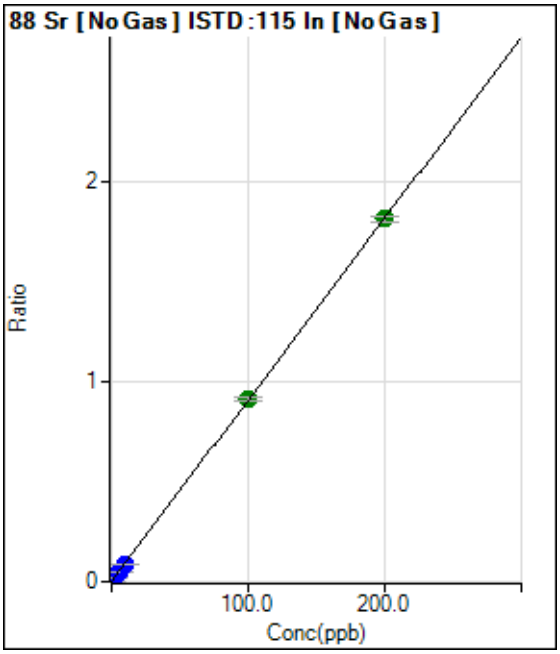
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	273.34	0.0001	P	30.9
2	☐	2.000	1.255	386.68	0.0002	P	8.2
3	☐	5.000	4.581	683.36	0.0003	P	9.2
4	☐	10.000	8.906	1090.06	0.0005	P	3.1
5	☐	100.000	95.401	9036.52	0.0043	P	3.3
6	☐	200.000	202.372	18339.50	0.0091	P	1.3

y = 4.4128E-005 * x + 1.2813E-004
R = 0.9997
DL = 2.694
BEC = 2.904

Weight: <None>
Min Conc: <None>

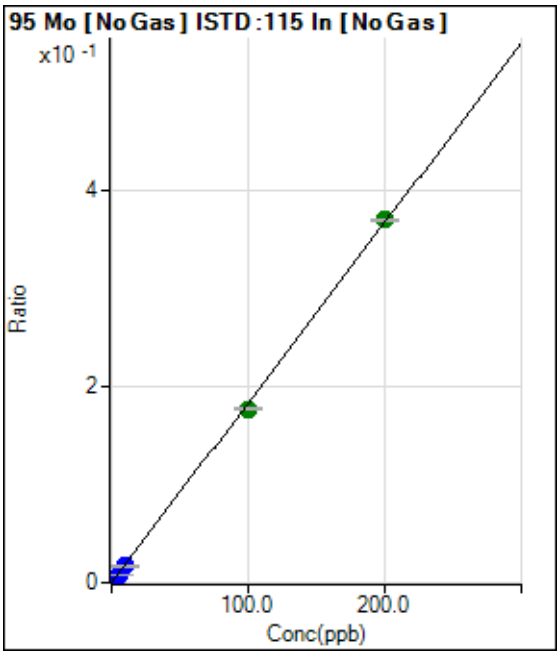


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	9743.72	0.0014	P	7.2
2	☐	2.000	1.998	128778.53	0.0196	P	3.6
3	☐	5.000	4.753	298416.08	0.0446	P	1.1
4	☐	10.000	9.215	582187.65	0.0852	P	4.3
5	☐	100.000	100.338	6057353.45	0.9134	A	2.4
6	☐	200.000	199.877	11730386.91	1.8182	A	1.6

y = 0.0091 * x + 0.0014
R = 1.0000
DL = 0.03402
BEC = 0.1571

Weight: <None>
Min Conc: <None>

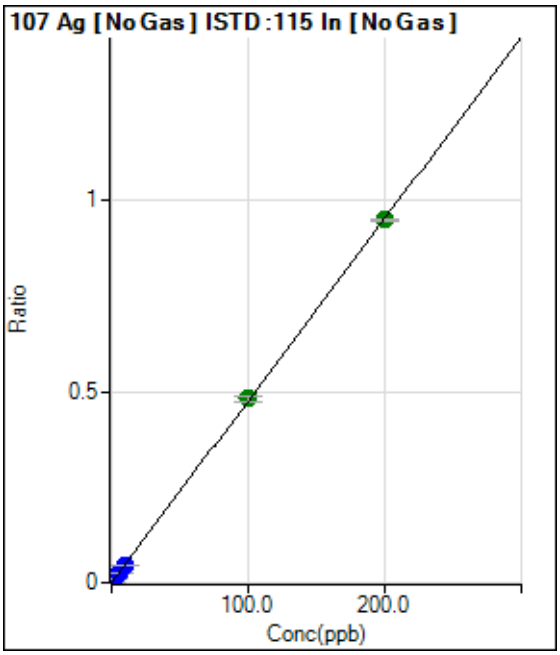
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	116.67	0.0000	P	22.4
2	☐	2.000	1.907	23113.89	0.0035	P	4.0
3	☐	5.000	4.618	56748.18	0.0085	P	4.6
4	☐	10.000	9.094	114127.09	0.0167	P	4.4
5	☐	100.000	96.699	1176764.46	0.1774	A	0.8
6	☐	200.000	201.707	2387861.89	0.3701	A	0.7

y = 0.0018 * x + 1.7092E-005
R = 0.9998
DL = 0.006257
BEC = 0.009316

Weight: <None>
Min Conc: <None>

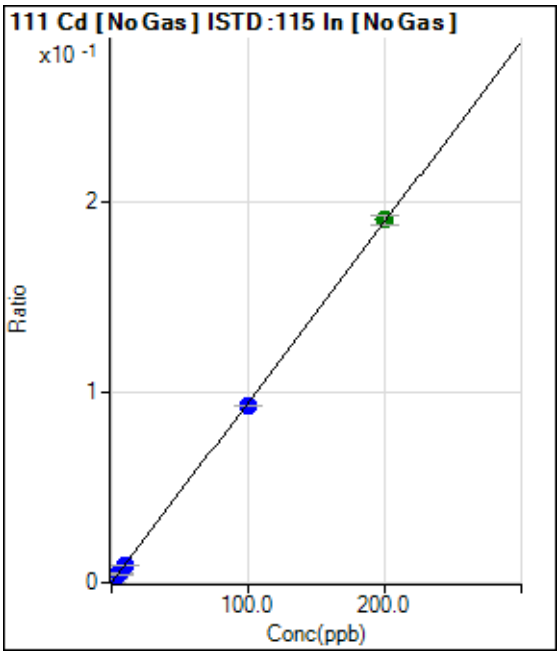


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	220.01	0.0000	P	18.3
2	☐	2.000	1.971	61912.23	0.0094	P	3.5
3	☐	5.000	4.886	155723.47	0.0233	P	0.8
4	☐	10.000	9.548	310872.54	0.0455	P	3.0
5	☐	100.000	100.999	3188539.75	0.4808	A	2.3
6	☐	200.000	199.526	6129250.12	0.9498	A	0.9

y = 0.0048 * x + 3.2147E-005
R = 1.0000
DL = 0.003716
BEC = 0.006753

Weight: <None>
Min Conc: <None>

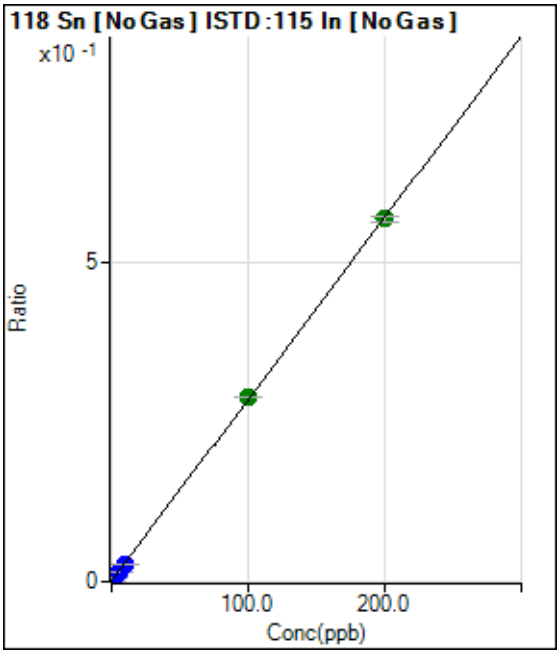
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	16.67	0.0000	P	127.1
2	☐	2.000	1.917	11948.96	0.0018	P	5.9
3	☐	5.000	4.796	30375.45	0.0045	P	3.8
4	☐	10.000	9.569	61975.73	0.0091	P	0.7
5	☐	100.000	97.914	614855.41	0.0927	P	0.8
6	☐	200.000	201.070	1228614.10	0.1904	A	2.9

y = 9.4682E-004 * x + 2.4559E-006
R = 0.9999
DL = 0.009893
BEC = 0.002594

Weight: <None>
Min Conc: <None>

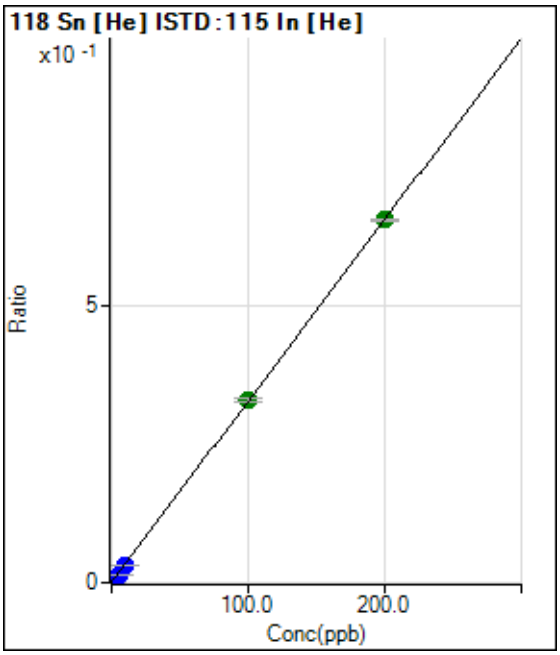


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	6088.15	0.0009	P	79.1
2	☐	2.000	1.674	37240.09	0.0057	P	2.6
3	☐	5.000	4.485	91301.39	0.0137	P	0.5
4	☐	10.000	9.134	183660.06	0.0269	P	3.5
5	☐	100.000	101.247	1915490.18	0.2888	A	0.8
6	☐	200.000	199.436	3665244.32	0.5680	A	1.9

y = 0.0028 * x + 9.0261E-004
R = 1.0000
DL = 0.7528
BEC = 0.3174

Weight: <None>
Min Conc: <None>

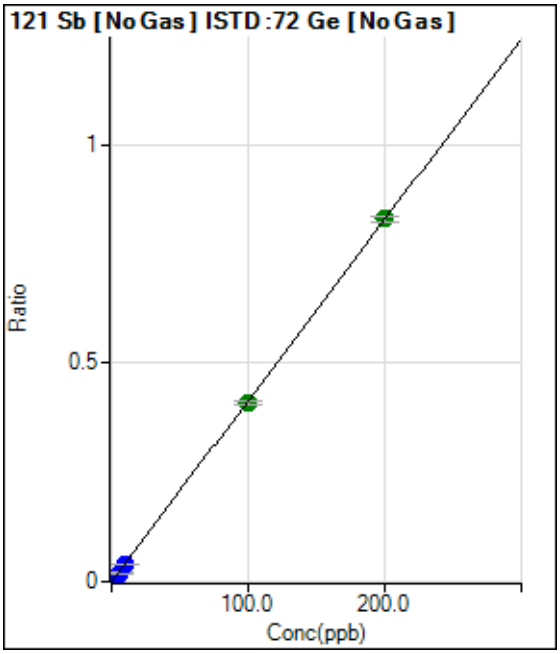
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2206.89	0.0006	P	10.3
2	☐	2.000	1.791	22519.72	0.0065	P	3.1
3	☐	5.000	4.426	54413.54	0.0151	P	3.2
4	☐	10.000	9.003	107993.10	0.0300	P	1.1
5	☐	100.000	100.177	1145544.80	0.3280	A	2.2
6	☐	200.000	199.978	2258057.99	0.6542	A	0.5

y = 0.0033 * x + 6.0136E-004
R = 1.0000
DL = 0.05706
BEC = 0.184

Weight: <None>
Min Conc: <None>

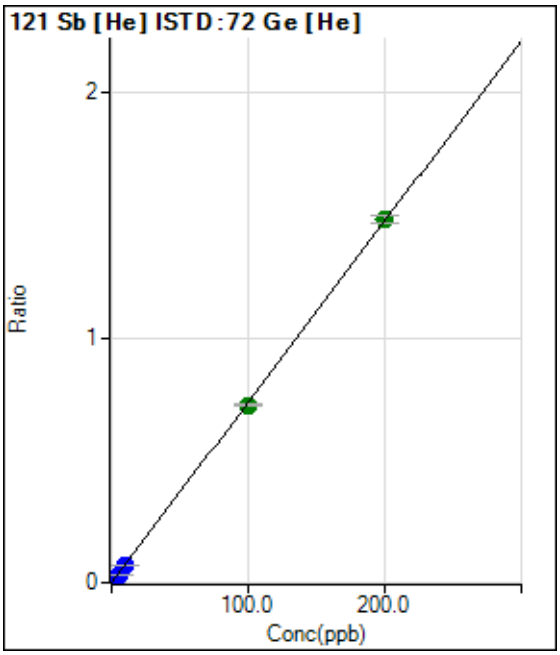


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1453.44	0.0002	P	10.7
2	☐	2.000	1.817	48747.69	0.0078	P	1.1
3	☐	5.000	4.725	123634.44	0.0198	P	1.7
4	☐	10.000	9.273	246483.40	0.0386	P	1.0
5	☐	100.000	98.839	2554253.71	0.4094	A	3.0
6	☐	200.000	200.625	5034347.43	0.8308	A	1.7

y = 0.0041 * x + 2.3205E-004
R = 1.0000
DL = 0.018
BEC = 0.05605

Weight: <None>
Min Conc: <None>

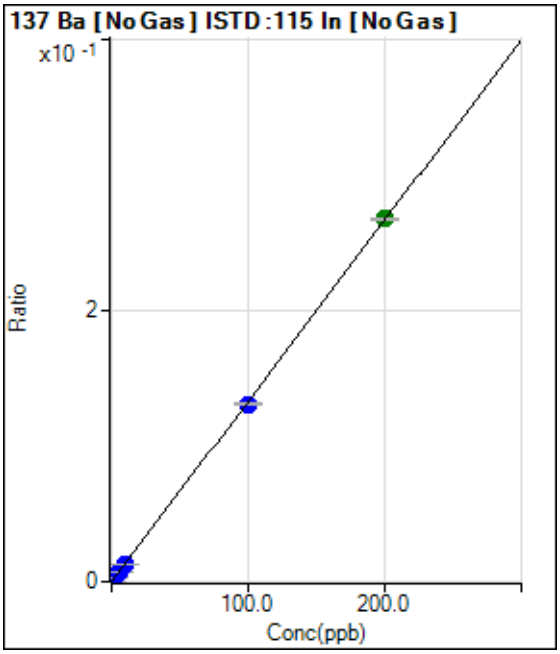
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	710.04	0.0003	P	18.5
2	☐	2.000	1.812	28848.74	0.0137	P	2.7
3	☐	5.000	4.634	71270.56	0.0345	P	1.6
4	☐	10.000	9.170	141956.76	0.0679	P	1.3
5	☐	100.000	98.367	1510935.40	0.7250	A	0.5
6	☐	200.000	200.869	2996542.77	1.4802	A	2.3

y = 0.0074 * x + 3.3314E-004
R = 1.0000
DL = 0.02515
BEC = 0.04522

Weight: <None>
Min Conc: <None>

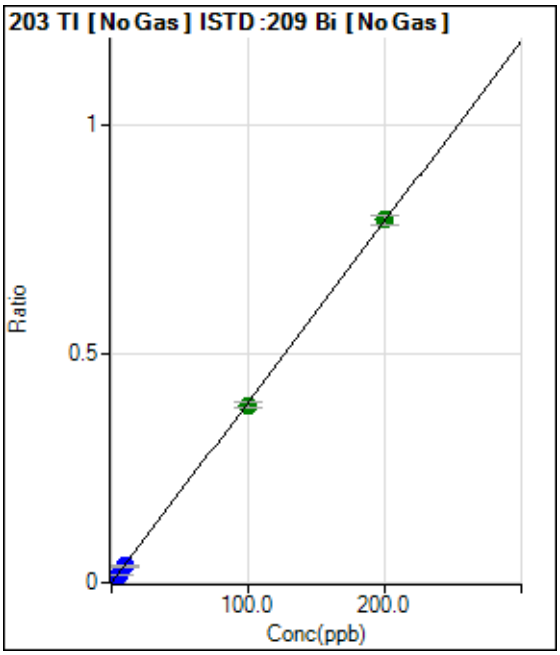


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1096.73	0.0002	P	11.8
2	☐	2.000	2.024	18743.93	0.0029	P	4.7
3	☐	5.000	4.917	44771.20	0.0067	P	0.9
4	☐	10.000	9.383	86324.78	0.0126	P	3.8
5	☐	100.000	98.134	866192.64	0.1306	P	1.3
6	☐	200.000	200.966	1724607.06	0.2673	A	0.4

y = 0.0013 * x + 1.6052E-004
R = 0.9999
DL = 0.04276
BEC = 0.1208

Weight: <None>
Min Conc: <None>

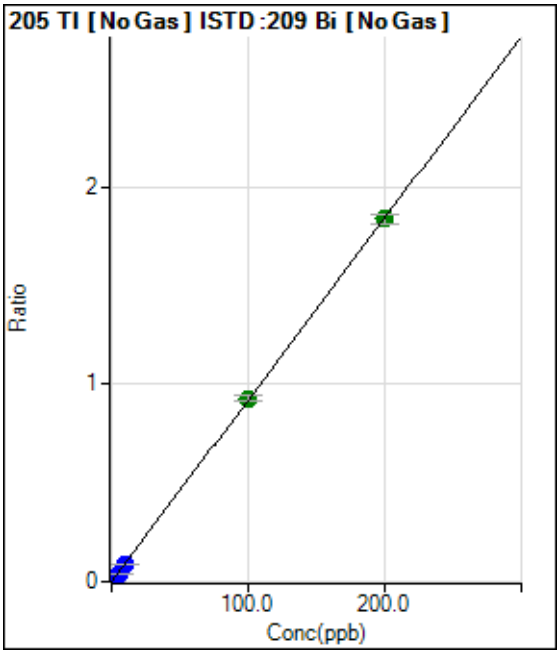
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	76.67	0.0000	P	32.6
2	☐	2.000	1.888	35664.93	0.0075	P	5.7
3	☐	5.000	4.474	85762.12	0.0177	P	2.1
4	☐	10.000	9.065	174784.91	0.0358	P	0.9
5	☐	100.000	98.458	1831350.96	0.3884	A	4.2
6	☐	200.000	200.832	3726763.38	0.7923	A	2.3

y = 0.0039 * x + 1.5905E-005
R = 1.0000
DL = 0.003949
BEC = 0.004032

Weight: <None>
Min Conc: <None>

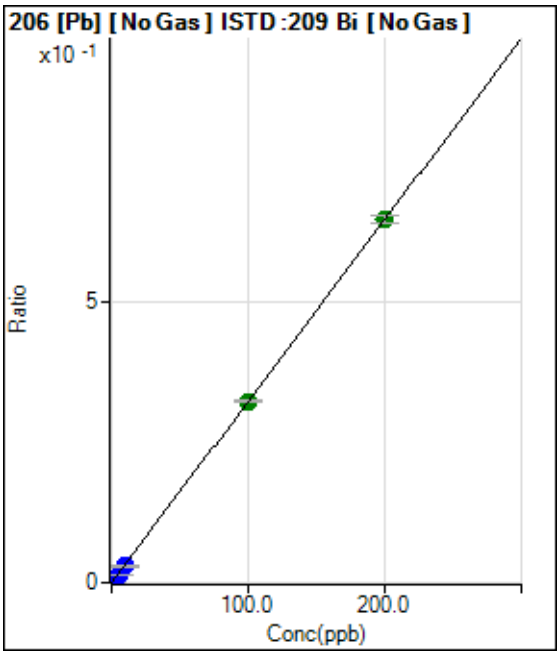


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	160.00	0.0000	P	25.1
2	☐	2.000	1.905	83960.96	0.0176	P	4.2
3	☐	5.000	4.633	207106.16	0.0427	P	2.6
4	☐	10.000	9.239	415436.74	0.0851	P	2.0
5	☐	100.000	100.716	4370727.64	0.9268	A	3.5
6	☐	200.000	199.690	8643389.25	1.8376	A	2.4

y = 0.0092 * x + 3.3211E-005
R = 1.0000
DL = 0.002716
BEC = 0.003609

Weight: <None>
Min Conc: <None>

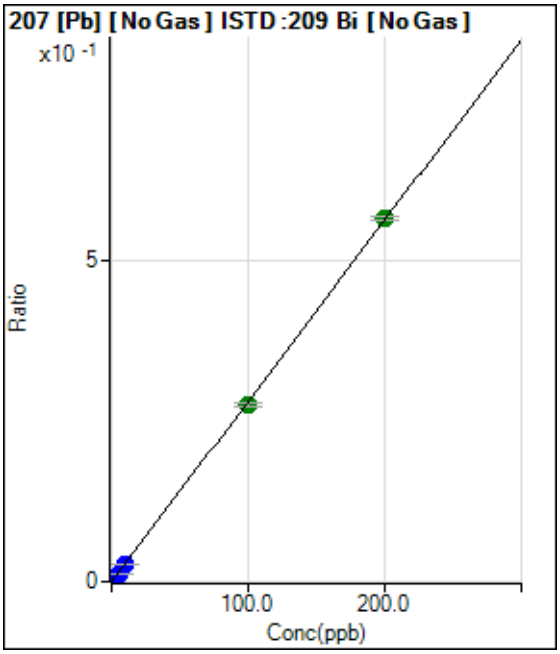
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	303.34	0.0001	P	13.5
2	☐	2.000	1.881	29421.94	0.0062	P	4.7
3	☐	5.000	4.520	71367.92	0.0147	P	3.6
4	☐	10.000	9.087	144067.70	0.0295	P	4.0
5	☐	100.000	100.048	1529653.62	0.3242	A	1.0
6	☐	200.000	200.035	3048607.14	0.6481	A	2.0

y = 0.0032 * x + 6.2959E-005
R = 1.0000
DL = 0.007885
BEC = 0.01943

Weight: <None>
Min Conc: <None>

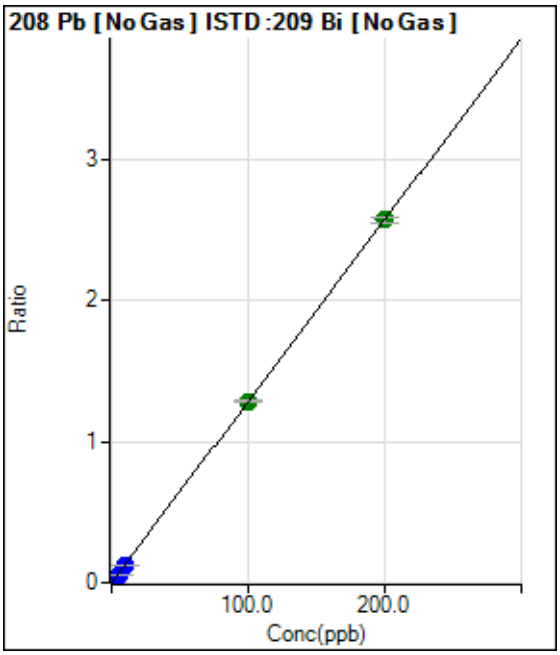


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	230.01	0.0000	P	26.0
2	☐	2.000	1.896	25643.64	0.0054	P	2.7
3	☐	5.000	4.635	63318.95	0.0130	P	0.8
4	☐	10.000	9.265	127054.22	0.0260	P	4.8
5	☐	100.000	98.147	1298122.95	0.2752	A	2.5
6	☐	200.000	200.974	2650809.13	0.5635	A	0.9

y = 0.0028 * x + 4.7686E-005
R = 0.9999
DL = 0.01329
BEC = 0.01701

Weight: <None>
Min Conc: <None>

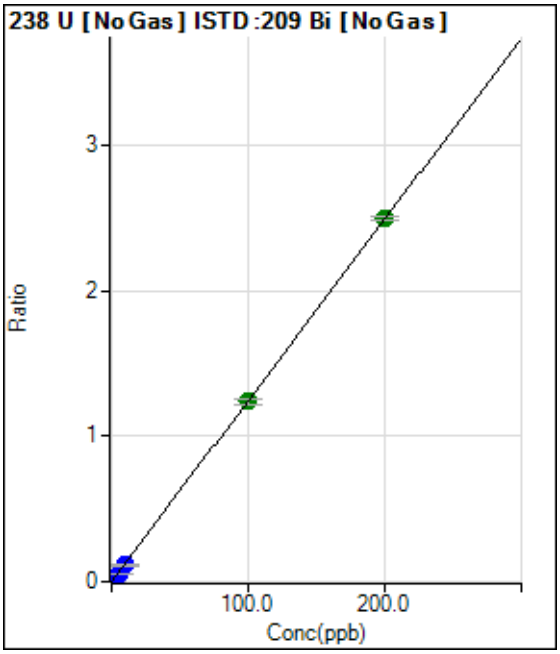
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1150.05	0.0002	P	3.7
2	☐	2.000	1.886	116953.70	0.0245	P	3.0
3	☐	5.000	4.600	287945.69	0.0593	P	0.9
4	☐	10.000	9.240	580557.46	0.1189	P	2.9
5	☐	100.000	99.932	6054525.90	1.2833	A	1.3
6	☐	200.000	200.083	12085835.55	2.5692	A	1.3

y = 0.0128 * x + 2.3863E-004
R = 1.0000
DL = 0.00208
BEC = 0.01859

Weight: <None>
Min Conc: <None>

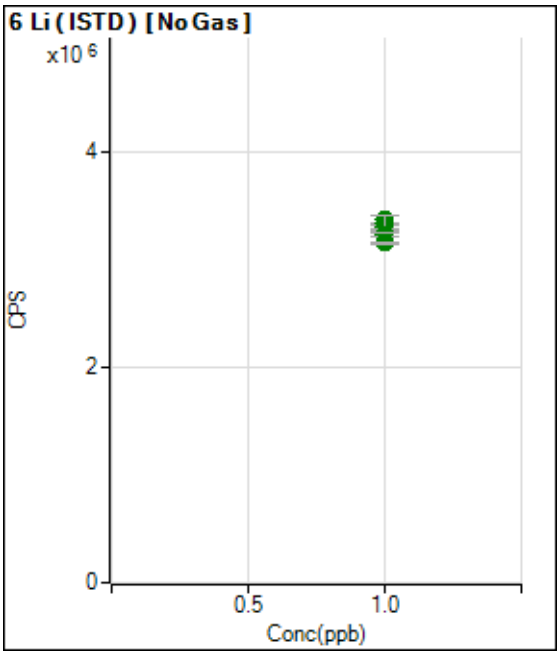


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	20.00	0.0000	P	0.5
2	☐	2.000	1.829	108859.24	0.0228	P	2.3
3	☐	5.000	4.518	273038.50	0.0562	P	0.2
4	☐	10.000	9.066	551270.46	0.1128	P	1.0
5	☐	100.000	99.365	5833204.29	1.2367	A	2.5
6	☐	200.000	200.378	11730613.57	2.4938	A	1.1

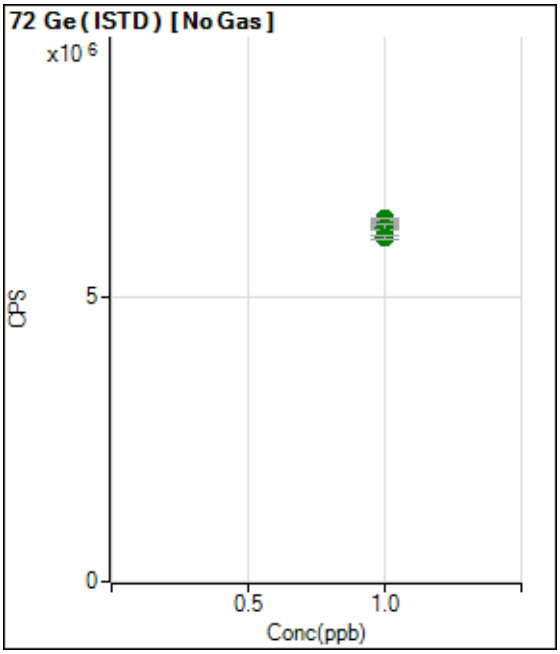
y = 0.0124 * x + 4.1502E-006
R = 1.0000
DL = 5.481E-06
BEC = 0.0003335

Weight: <None>
Min Conc: <None>

Calibration for 018_ICV.d

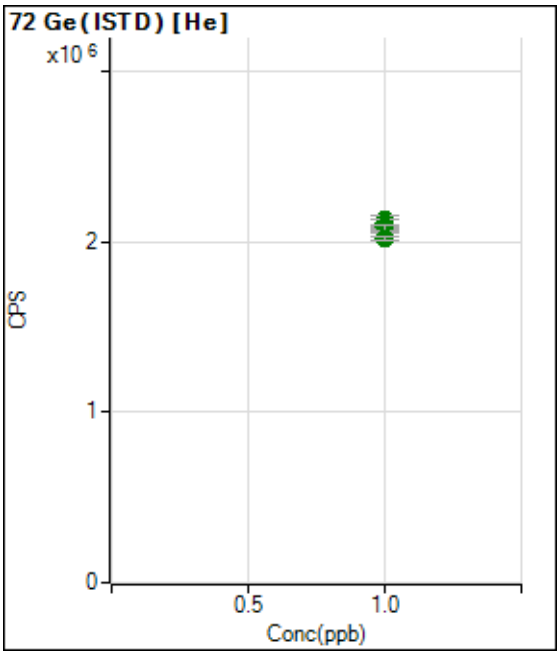


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		3367912.03		A	2.0
2	☐	1.000		3282944.31		A	1.8
3	☐	1.000		3311163.90		A	1.4
4	☐	1.000		3331060.60		A	4.3
5	☐	1.000		3227889.91		A	1.4
6	☐	1.000		3150844.63		A	0.6

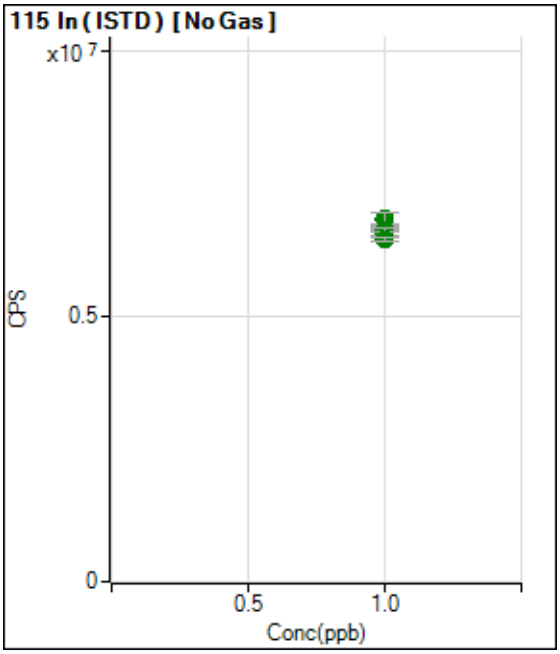


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		6259186.57		A	2.1
2	☐	1.000		6285838.24		A	1.8
3	☐	1.000		6246972.82		A	0.9
4	☐	1.000		6382107.61		A	0.3
5	☐	1.000		6239614.70		A	1.3
6	☐	1.000		6059339.28		A	0.9

Calibration for 018_ICV.d

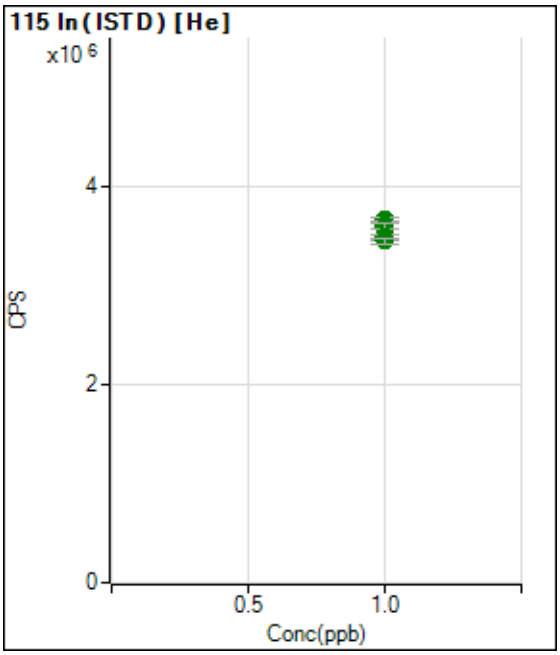


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		2128792.47		A	2.3
2	☐	1.000		2109518.72		A	2.5
3	☐	1.000		2067634.81		A	1.2
4	☐	1.000		2091168.41		A	1.2
5	☐	1.000		2083969.29		A	1.8
6	☐	1.000		2024410.34		A	1.2

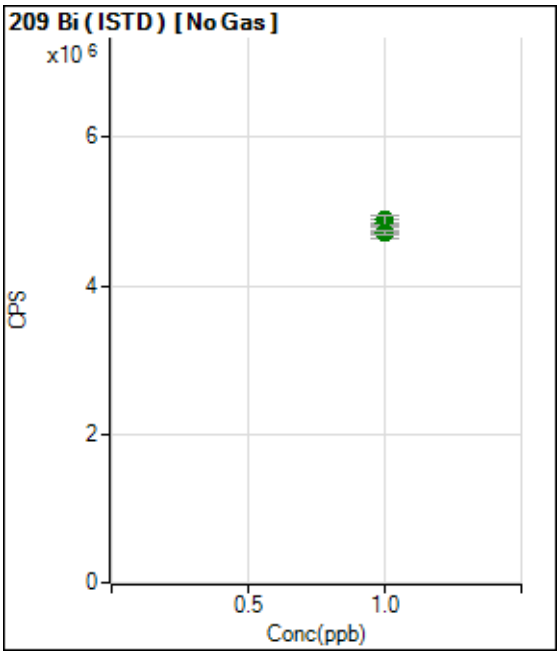


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		6832905.70		A	4.1
2	☐	1.000		6578216.25		A	1.8
3	☐	1.000		6686730.85		A	1.8
4	☐	1.000		6839438.66		A	3.3
5	☐	1.000		6632404.29		A	1.0
6	☐	1.000		6452380.02		A	1.3

Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		3666722.58		A	1.2
2	☐	1.000		3489822.74		A	1.4
3	☐	1.000		3613260.12		A	2.5
4	☐	1.000		3596745.54		A	1.6
5	☐	1.000		3492740.29		A	1.3
6	☐	1.000		3451331.86		A	1.8



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		4819187.01		A	0.5
2	☐	1.000		4783999.51		A	2.7
3	☐	1.000		4855667.11		A	2.1
4	☐	1.000		4886188.78		A	2.8
5	☐	1.000		4718795.87		A	3.0
6	☐	1.000		4704128.47		A	1.2

Sample Report

Sample Table

Sample Name	LLICV5
Data File Name	020LCV5.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\070220A.b
Acq Date Time	2020-07-02T11:37:56-05:00
Sample Type	LLCCV5
Dilution	1
Comment	
ISTD Ref FileName	011CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	1	No Gas	4.770	4.770	5.05	347762	0.00	5	
Be	9	1	No Gas	4.596	4.596	1.29	41944	0.01	5	
V	51	2	He	4.690	4.690	0.22	61950	0.01	5	
Cr	52	2	He	4.823	4.823	2.48	72687	0.01	5	
Fe	56	2	He	477.153	477.153	1.04	6374881	0.01	500	
Se	78	2	He	4.808	4.808	5.34	1196	0.40	5	
Sn	118	2	He	4.546	4.546	2.49	55481	0.01	5	
As	75	2	He	4.688	4.688	0.92	10889	0.04	5	
Ca	44	2	He	484.564	484.564	1.39	41125	1.18	500	
Na	23	2	He	465.421	465.421	2.60	1290383	0.04	500	
Mg	24	2	He	505.972	505.972	0.29	623050	0.08	500	
K	39	2	He	492.664	492.664	1.52	834653	0.06	500	
Mn	55	2	He	4.751	4.751	3.54	52177	0.01	5	
Co	59	2	He	4.927	4.927	0.87	107839	0.00	5	
Ni	60	2	He	4.858	4.858	1.13	27979	0.02	5	
Cu	63	2	He	4.619	4.619	3.01	96750	0.00	5	
Zn	66	2	He	5.126	5.126	5.51	15756	0.03	5	
Al	27	2	He	7.274	7.274	1.82	6792	0.11	5	NewName2 Main CR1 Failed
B	11	1	No Gas	31.328	31.328	4.59	208529	0.02	25	
Al	27	1	No Gas	7.255	7.255	7.34	296328	0.00	5	NewName2 Main CR1 Failed
Si	28	1	No Gas	34.952	34.952	30.31	967416	0.00	25	NewName2 Main CR1 Failed
P	31	1	No Gas	25.146	25.146	2.90	86408	0.03	25	
Ag	107	1	No Gas	4.790	4.790	1.45	153817	0.00	5	
Cd	111	1	No Gas	4.610	4.610	2.95	29423	0.02	5	
Sr	88	1	No Gas	4.723	4.723	3.59	298644	0.00	5	
Mo	95	1	No Gas	4.572	4.572	2.86	56594	0.01	5	
Sn	118	1	No Gas	4.458	4.458	1.58	91460	0.00	5	
Sb	121	1	No Gas	4.721	4.721	0.75	122713	0.00	5	
Ba	137	1	No Gas	4.761	4.761	1.37	43697	0.01	5	
Tl	205	1	No Gas	4.743	4.743	2.76	207627	0.00	5	
Tl	203	1	No Gas	4.673	4.673	2.40	87709	0.01	5	
Pb	208	1	No Gas	4.674	4.674	2.31	286450	0.00	5	
U	238	1	No Gas	4.514	4.514	1.93	267123	0.00	5	
Ca	43	2	He	506.109	506.109	11.44	2420	20.91	500	
Sb	121	2	He	4.651	4.651	0.67	72641	0.01	5	
Ti	47	2	He	4.917	4.917	3.19	2354	0.21	5	
Cu	63	1	No Gas	4.730	4.730	1.66	170241	0.00	5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	3293803	3.49	3367912	97.80	70	120	
Ge	72	2	He	2099579	0.10	2128792	98.63	70	120	
Ge	72	1	No Gas	6205377	1.38	6259187	99.14	70	120	
In	115	1	No Gas	6735887	2.54	6832906	98.58	70	120	
Bi	209	1	No Gas	4754853	1.40	4819187	98.67	70	120	

Initial Calibration Blank (ICB) Report

Sample Table

Sample Name	ICB
Data File Name	021_ICB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\070220A.b
Acq Date Time	2020-07-02T11:39:49-05:00
Sample Type	ICB
Dilution	1
Comment	
ISTD Ref File Name	011CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	1	No Gas	0.006	2409.7	193169	0.9	0.5	
Be	9	1	No Gas	0.007	41.4	102	28.8	0.5	
V	51	2	He	-0.033	-28.0	2008	6.1	2.5	
Cr	52	2	He	-0.025	-83.6	2287	13.8	2.5	
Fe	56	2	He	-0.784	-3.6	15626	1.9	100	
Se	78	2	He	-0.096	-164.4	232	13.5	1	
Sn	118	2	He	-0.012	-66.2	1997	5.3	2.5	
As	75	2	He	-0.025	-48.0	414	6.8	2.5	
Ca	44	2	He	7.720	16.4	3167	2.9	100	
Na	23	2	He	-25.449	-5.9	272090	0.9	100	
Mg	24	2	He	-0.338	-24.0	1377	7.3	100	
K	39	2	He	-0.651	-41.9	108142	0.6	100	
Mn	55	2	He	-0.013	-165.0	1063	22.1	2.5	
Co	59	2	He	0.001	278.3	367	12.3	2.5	
Ni	60	2	He	-0.100	-21.8	407	30.6	2.5	
Cu	63	2	He	-0.292	-12.0	24028	1.9	1	
Zn	66	2	He	-0.066	-51.1	493	20.5	2.5	
Al	27	2	He	3.637	4.2	4264	2.6	5	
B	11	1	No Gas	5.014	1.1	72342	1.7	0.5	ICB Main CR1 Failed
Al	27	1	No Gas	3.633	5.0	188387	1.3	5	
Si	28	1	No Gas	-2.764	-6.8	365055	1.2	10	
P	31	1	No Gas	0.602	73.9	46348	0.9	10	
Ag	107	1	No Gas	0.004	35.2	330	10.9	2.5	
Cd	111	1	No Gas	0.000	7735.9	17	124.9	1	
Sr	88	1	No Gas	0.071	1.8	13871	1.5	2.5	
Mo	95	1	No Gas	0.004	62.9	167	21.1	2.5	
Sn	118	1	No Gas	-0.130	-6.7	3567	3.3	5	
Sb	121	1	No Gas	0.049	5.5	2740	1.8	2.5	
Ba	137	1	No Gas	0.018	103.0	1233	13.0	2.5	
Tl	205	1	No Gas	0.024	35.9	1223	32.8	1	
Tl	203	1	No Gas	0.023	20.8	510	19.3	1	
Pb	208	1	No Gas	0.008	23.0	1590	7.7	2.5	
U	238	1	No Gas	0.001	17.7	70	14.3	2.5	
Ca	43	2	He	13.434	87.5	130	42.8	100	
Sb	121	2	He	0.045	15.1	1420	7.3	2.5	
Ti	47	2	He	-0.007	-289.7	10	100.0	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	3358079	1.65	3367912	99.71	70	120	
Ge	72	2	He	2127472	0.48	2128792	99.94	70	120	
Ge	72	1	No Gas	6327414	2.07	6259187	101.09	70	120	
In	115	1	No Gas	6697279	1.72	6832906	98.02	70	120	
Bi	209	1	No Gas	4720112	1.60	4819187	97.94	70	120	

Sample Report

Sample Table

Sample Name	LLICV2
Data File Name	022LCV2.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\070220A.b
Acq Date Time	2020-07-02T11:48:00-05:00
Sample Type	LLCCV2
Dilution	1
Comment	
ISTD Ref FileName	011CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	1	No Gas	2.023	2.023	6.55	258361	0.00	2	
Be	9	1	No Gas	1.827	1.827	2.50	16795	0.01	2	
V	51	2	He	1.863	1.863	1.49	26251	0.01	2	
Cr	52	2	He	1.894	1.894	1.82	30354	0.01	2	
Fe	56	2	He	189.963	189.963	1.94	2572588	0.01	200	
Se	78	2	He	1.669	1.669	6.61	581	0.29	2	
Sn	118	2	He	1.712	1.712	4.14	22329	0.01	2	
As	75	2	He	1.897	1.897	0.73	4718	0.04	2	
Ca	44	2	He	187.191	187.191	3.89	17558	1.07	200	
Na	23	2	He	147.881	147.881	3.71	634016	0.02	200	
Mg	24	2	He	201.431	201.431	0.60	250984	0.08	200	
K	39	2	He	196.229	196.229	0.19	400232	0.05	200	
Mn	55	2	He	1.950	1.950	2.02	22289	0.01	2	
Co	59	2	He	1.896	1.896	0.94	42015	0.00	2	
Ni	60	2	He	1.780	1.780	2.37	10941	0.02	2	
Cu	63	2	He	1.477	1.477	6.68	50401	0.00	2	
Zn	66	2	He	1.836	1.836	4.60	6125	0.03	2	
Al	27	2	He	2.246	2.246	7.76	3244	0.07	2	
B	11	1	No Gas	10.806	10.806	2.38	101978	0.01	10	
Al	27	1	No Gas	2.159	2.159	10.06	137258	0.00	2	
Si	28	1	No Gas	8.891	8.891	3.28	538294	0.00	10	
P	31	1	No Gas	11.858	11.858	7.68	63277	0.02	10	
Ag	107	1	No Gas	1.975	1.975	3.51	61142	0.00	2	
Cd	111	1	No Gas	1.934	1.934	1.27	11892	0.02	2	
Sr	88	1	No Gas	1.917	1.917	2.59	122203	0.00	2	
Mo	95	1	No Gas	1.856	1.856	3.76	22176	0.01	2	
Sn	118	1	No Gas	1.708	1.708	3.88	37344	0.00	2	
Sb	121	1	No Gas	1.891	1.891	2.22	49287	0.00	2	
Ba	137	1	No Gas	1.853	1.853	2.68	17011	0.01	2	
Tl	205	1	No Gas	1.892	1.892	5.74	83941	0.00	2	
Tl	203	1	No Gas	1.829	1.829	5.61	34809	0.01	2	
Pb	208	1	No Gas	1.855	1.855	3.77	115820	0.00	2	
U	238	1	No Gas	1.758	1.758	2.78	105369	0.00	2	
Ca	43	2	He	189.379	189.379	18.46	953	19.86	200	
Sb	121	2	He	1.823	1.823	2.45	29109	0.01	2	
Ti	47	2	He	2.017	2.017	13.63	980	0.21	200	
Cu	63	1	No Gas	1.630	1.630	3.03	89484	0.00	2	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	3316936	1.26	3367912	98.49	70	120	
Ge	72	2	He	2115407	1.01	2128792	99.37	70	120	

Sample Report

Ge	72	1	No Gas	6113556	1.84	6259187	97.67	70	120	
In	115	1	No Gas	6484563	2.43	6832906	94.90	70	120	
Bi	209	1	No Gas	4819046	3.52	4819187	100.00	70	120	

Interference Check Solution A (ICS-A) Report

Sample Table

Sample Name	ICSA
Data File Name	023ICSA.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\070220A.b
Acq Date Time	2020-07-02T11:50:05-05:00
Sample Type	ICSA
Dilution	1
Comment	
ISTD Ref File Name	011CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	1	No Gas	0.726	4.3	196356	1.5	0	ICSA Main CR1 Failed
Be	9	1	No Gas	0.002	138.1	45	40.1	0	ICSA Main CR1 Failed
V	51	2	He	-0.008	-187.1	2154	8.6	0	ICSA Main CR1 Failed
Cr	52	2	He	0.934	4.5	15135	2.8	0	ICSA Main CR1 Failed
Fe	56	2	He	100133.960	0.7	1246000808	0.5	0	
Se	78	2	He	0.183	155.4	265	18.9	0	ICSA Main CR1 Failed
Sn	118	2	He	0.052	21.6	2540	4.3	0	ICSA Main CR1 Failed
As	75	2	He	0.056	22.8	551	4.0	0	ICSA Main CR1 Failed
Ca	44	2	He	98302.955	1.9	7327554	1.2	0	
Na	23	2	He	101052.494	0.8	197021884	1.0	0	
Mg	24	2	He	100496.884	1.4	115394332	1.0	0	
K	39	2	He	101480.614	1.3	140127791	0.6	0	
Mn	55	2	He	0.146	5.0	2584	3.7	0	ICSA Main CR1 Failed
Co	59	2	He	0.206	4.3	4527	3.8	0	ICSA Main CR1 Failed
Ni	60	2	He	0.128	10.6	1560	4.0	0	ICSA Main CR1 Failed
Cu	63	2	He	-0.513	-5.3	19107	2.1	0	ICSA Main CR1 Failed
Zn	66	2	He	0.406	9.7	1753	6.3	0	ICSA Main CR1 Failed
Al	27	2	He	97971.347	1.6	65074547	0.9	0	
B	11	1	No Gas	3.488	7.9	57912	1.4	0	
Al	27	1	No Gas	98986.662	2.0	2881347477	1.4	0	
Si	28	1	No Gas	38.593	2.3	969475	2.1	0	
P	31	1	No Gas	96874.277	1.7	152709998	1.3	0	
Ag	107	1	No Gas	0.014	17.6	617	13.5	0	ICSA Main CR1 Failed
Cd	111	1	No Gas	1.531	4.3	8856	4.8	0	ICSA Main CR1 Failed
Sr	88	1	No Gas	1.039	1.1	66301	1.2	0	ICSA Main CR1 Failed
Mo	95	1	No Gas	1999.309	0.9	22374109	0.8	0	
Sn	118	1	No Gas	-0.079	-6.2	4134	0.5	0	ICSA Main CR1 Failed
Sb	121	1	No Gas	0.081	10.5	3314	5.5	0	ICSA Main CR1 Failed
Ba	137	1	No Gas	0.194	13.4	2554	6.9	0	ICSA Main CR1 Failed
Tl	205	1	No Gas	0.013	19.9	647	15.5	0	ICSA Main CR1 Failed
Tl	203	1	No Gas	0.014	21.1	307	16.4	0	ICSA Main CR1 Failed
Pb	208	1	No Gas	0.035	3.6	3014	2.0	0	ICSA Main CR1 Failed
U	238	1	No Gas	0.003	5.4	183	6.3	0	ICSA Main CR1 Failed
Ca	43	2	He	97624.368	1.1	424775	0.8	0	
Sb	121	2	He	0.076	11.0	1750	7.7	0	ICSA Main CR1 Failed
Ti	47	2	He	1996.161	0.7	888513	0.9	0	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	3029713	1.14	3367912	89.96	70	120	
Ge	72	2	He	1963481	0.89	2128792	92.23	70	120	
Ge	72	1	No Gas	5861190	0.94	6259187	93.64	70	120	
In	115	1	No Gas	6099971	1.61	6832906	89.27	70	120	
Bi	209	1	No Gas	4343017	1.45	4819187	90.12	70	120	

Interference Check Solution AB (ICS-AB) Report

Sample Table

Sample Name	ICSAB
Data File Name	024ICSB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\070220A.b
Acq Date Time	2020-07-02T11:52:07-05:00
Sample Type	ICSB
Dilution	1
Comment	
ISTD Ref File Name	011CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	1	No Gas	111.192	0.521	3577173	1.87	100	111.2	180	120	ICSB Main CR1 Failed
Be	9	1	No Gas	110.931	1.801	930059	0.16	100	110.9	80	120	
V	51	2	He	115.388	1.132	1363421	1.38	100	115.4	80	120	
Cr	52	2	He	115.712	1.098	1564087	1.25	100	115.7	80	120	
Fe	56	2	He	107468.031	0.914	1328480327	1.09	100	107468.0	80	120	ICSB Main CR1 Failed
Se	78	2	He	117.093	1.335	21683	1.89	100	117.1	80	120	
Sn	118	2	He	111.993	1.317	1188157	3.12	100	112.0	80	120	
As	75	2	He	114.957	1.176	237875	0.45	100	115.0	80	120	
Ca	44	2	He	105264.342	1.666	7795275	1.78	100	105264.3	80	120	ICSB Main CR1 Failed
Na	23	2	He	109744.335	0.187	212536357	0.91	100	109744.3	80	120	
Mg	24	2	He	106847.965	1.065	121879398	0.53	100	106848.0	80	120	ICSB Main CR1 Failed
K	39	2	He	108867.785	2.085	149325831	1.45	100	108867.8	80	120	ICSB Main CR1 Failed
Mn	55	2	He	114.522	0.617	1142929	0.42	100	114.5	80	120	
Co	59	2	He	113.654	1.871	2303642	1.20	100	113.7	80	120	
Ni	60	2	He	110.169	1.188	570098	0.55	100	110.2	80	120	
Cu	63	2	He	110.563	1.411	1553277	0.71	100	110.6	80	120	
Zn	66	2	He	112.307	0.695	307461	0.61	100	112.3	80	120	
Al	27	2	He	95110.223	1.380	62763226	1.59	100	95110.2	80	120	ICSB Main CR1 Failed
B	11	1	No Gas	555.843	2.507	2718818	1.54	100	555.8	80	120	
Al	27	1	No Gas	93680.705	2.301	2778547692	1.42	100	93680.7	80	120	ICSB Main CR1 Failed
Si	28	1	No Gas	559.797	0.833	9093514	0.58	100	559.8	80	120	
P	31	1	No Gas	90701.349	0.447	145707334	1.29	100	90701.3	80	120	ICSB Main CR1 Failed
Ag	107	1	No Gas	107.729	2.400	3238650	1.31	100	107.7	80	120	
Cd	111	1	No Gas	109.906	0.872	657237	0.91	100	109.9	80	120	
Sr	88	1	No Gas	112.143	2.460	6446039	1.67	100	112.1	80	120	
Mo	95	1	No Gas	2014.152	1.835	23337625	1.02	100	2014.2	80	120	ICSB Main CR1 Failed
Sn	118	1	No Gas	112.350	2.408	2023013	1.06	100	112.4	80	120	
Sb	121	1	No Gas	112.582	2.052	2784630	1.02	100	112.6	80	120	
Ba	137	1	No Gas	110.458	3.504	928011	2.18	100	110.5	80	120	
Tl	205	1	No Gas	114.546	1.999	4656008	1.50	100	114.5	80	120	
Tl	203	1	No Gas	114.101	2.537	1988437	2.73	100	114.1	80	120	
Pb	208	1	No Gas	113.098	1.011	6415320	0.45	100	113.1	80	120	
U	238	1	No Gas	114.218	1.430	6278811	0.52	100	114.2	80	120	
Ca	43	2	He	103448.767	1.329	447160	1.31	100	103448.8	80	120	ICSB Main CR1 Failed
Sb	121	2	He	113.437	1.145	1630812	1.74	100	113.4	80	120	
Ti	47	2	He	2092.244	0.834	925188	1.52	100	2092.2	80	120	
Cu	63	1	No Gas	110.339	2.247	2767196	0.90	100	110.3	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	3031867	1.64	3367912	90.02	70	120	
Ge	72	2	He	1950533	0.73	2128792	91.63	70	120	
Ge	72	1	No Gas	5972612	1.38	6259187	95.42	70	120	
In	115	1	No Gas	6316081	1.36	6832906	92.44	70	120	
Bi	209	1	No Gas	4417470	1.10	4819187	91.66	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	033_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\070220A.b
Acq Date Time	2020-07-02T12:20:55-05:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	011CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	No Gas	102.953	3.047	3466118	3.44	100	103.0	90	110	
Be	9	1	No Gas	98.622	0.653	862041	0.67	100	98.6	90	110	
V	51	2	He	100.250	3.202	1241906	1.13	100	100.2	90	110	
Cr	52	2	He	102.375	1.417	1451157	1.01	100	102.4	90	110	
Fe	56	2	He	9998.319	1.168	129609518	1.06	10000	100.0	90	110	
Se	78	2	He	99.549	2.720	19360	1.18	100	99.5	90	110	
Sn	118	2	He	99.610	2.036	1115968	1.50	100	99.6	90	110	
As	75	2	He	99.887	1.342	216780	1.15	100	99.9	90	110	
Ca	44	2	He	9955.089	1.094	775186	1.31	10000	99.6	90	110	
Na	23	2	He	10140.884	1.918	20874268	1.39	10000	101.4	90	110	
Mg	24	2	He	10168.193	2.448	12163818	2.83	10000	101.7	90	110	
K	39	2	He	10061.747	3.228	14562524	1.41	10000	100.6	90	110	
Mn	55	2	He	100.952	2.142	1056399	1.23	100	101.0	90	110	
Co	59	2	He	101.003	2.285	2146563	1.88	100	101.0	90	110	
Ni	60	2	He	100.162	2.999	543419	1.25	100	100.2	90	110	
Cu	63	2	He	100.050	2.390	1476207	1.21	100	100.0	90	110	
Zn	66	2	He	99.839	1.996	286628	1.02	100	99.8	90	110	
Al	27	2	He	102.073	1.798	72204	1.85	100	102.1	90	110	
B	11	1	No Gas	479.073	1.595	2448924	1.40	500	95.8	90	110	
Al	27	1	No Gas	101.609	0.669	3159594	1.14	100	101.6	90	110	
Si	28	1	No Gas	510.445	3.264	8528905	2.62	5000	10.2	90	110	CCV Main CR1-2 Failed
P	31	1	No Gas	491.969	2.549	853172	2.13	500	98.4	90	110	
Ag	107	1	No Gas	101.586	2.500	3172344	0.64	100	101.6	90	110	
Cd	111	1	No Gas	98.828	1.884	613869	0.74	100	98.8	90	110	
Sr	88	1	No Gas	102.049	3.911	6093336	2.68	100	102.0	90	110	
Mo	95	1	No Gas	97.496	3.449	1173364	1.68	100	97.5	90	110	
Sn	118	1	No Gas	102.276	1.237	1913888	0.85	100	102.3	90	110	
Sb	121	1	No Gas	98.289	2.352	2490957	2.21	100	98.3	90	110	
Ba	137	1	No Gas	96.469	2.492	842319	2.69	100	96.5	90	110	
Tl	205	1	No Gas	99.713	4.375	4352360	2.89	100	99.7	90	110	
Tl	203	1	No Gas	98.217	3.919	1837871	2.24	100	98.2	90	110	
Pb	208	1	No Gas	98.195	1.571	5982813	0.13	100	98.2	90	110	
U	238	1	No Gas	96.545	0.421	5701953	2.03	100	96.5	90	110	
Ca	43	2	He	10160.903	1.412	46108	1.15	10000	101.6	90	110	
Sb	121	2	He	98.276	2.297	1481176	1.15	100	98.3	90	110	
Ti	47	2	He	103.147	2.511	47824	0.59	100	103.1	90	110	
Cu	63	1	No Gas	101.160	1.510	2603497	1.71	100	101.2	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	3160408	1.31	3367912	93.84	70	120	
Ge	72	2	He	2045372	2.03	2128792	96.08	70	120	
Ge	72	1	No Gas	6118352	0.55	6259187	97.75	70	120	
In	115	1	No Gas	6561629	1.86	6832906	96.03	70	120	
Bi	209	1	No Gas	4745263	1.64	4819187	98.47	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	034_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\070220A.b
Acq Date Time	2020-07-02T12:22:39-05:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	011CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	1	No Gas	0.025	361.2	192154	0.4	0.5	
Be	9	1	No Gas	0.008	4.8	110	4.5	0.5	
V	51	2	He	-0.009	-110.2	2187	4.0	2.5	
Cr	52	2	He	-0.027	-14.8	2130	1.7	2.5	
Fe	56	2	He	0.199	25.6	27308	2.0	100	
Se	78	2	He	-0.019	-824.1	234	11.8	2	
As	75	2	He	-0.081	-14.7	272	8.6	2.5	
Ca	44	2	He	7.003	26.4	2940	4.7	100	
Na	23	2	He	-5.805	-60.3	296443	1.1	100	
Mg	24	2	He	0.344	38.4	2104	6.1	100	
K	39	2	He	0.708	51.8	104188	1.1	100	
Mn	55	2	He	0.157	14.3	2754	7.2	2.5	
Co	59	2	He	0.002	96.6	383	13.4	2.5	
Ni	60	2	He	-0.068	-21.0	557	12.6	2.5	
Cu	63	2	He	-0.831	-5.2	15042	3.5	2	
Zn	66	2	He	0.180	9.4	1160	4.8	2.5	
Al	27	2	He	2.022	12.1	2934	6.2	5	
B	11	1	No Gas	11.153	11.2	104151	5.6	0.5	CCB Main CR1 Failed
Al	27	1	No Gas	1.762	2.2	127907	1.3	5	
Si	28	1	No Gas	-0.219	-122.2	401538	0.5	10	
P	31	1	No Gas	-3.745	-5.2	38437	0.3	10	
Ag	107	1	No Gas	0.007	64.6	433	31.2	2.5	
Cd	111	1	No Gas	-0.001	-158.3	10	100.0	1	
Sr	88	1	No Gas	0.001	435.1	9630	2.1	2.5	
Mo	95	1	No Gas	0.049	17.5	720	13.4	2.5	
Sn	118	1	No Gas	-0.031	-55.3	5468	4.9	5	
Sb	121	1	No Gas	0.264	13.4	8276	11.3	2.5	
Ba	137	1	No Gas	-0.020	-125.8	903	23.9	2.5	
Tl	205	1	No Gas	0.230	66.8	10159	66.4	1	
Tl	203	1	No Gas	0.225	63.1	4258	62.7	1	
Pb	208	1	No Gas	0.022	14.7	2477	8.6	2.5	
U	238	1	No Gas	0.008	33.5	490	32.8	2.5	
Ca	43	2	He	3.779	97.6	80	21.7	100	
Sb	121	2	He	0.195	17.4	3564	15.2	2.5	
Ti	47	2	He	0.001	965.7	13	43.3	2.5	
Cu	63	1	No Gas	-0.869	-3.5	26980	1.9	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	3328685	1.31	3367912	98.84	70	120	
Ge	72	2	He	2011968	1.54	2128792	94.51	70	120	
Ge	72	1	No Gas	6242564	1.07	6259187	99.73	70	120	
In	115	1	No Gas	6718376	1.47	6832906	98.32	70	120	
Bi	209	1	No Gas	4706326	0.69	4819187	97.66	70	120	

Sample Report

Sample Table

Sample Name	MBLK-154955
Data File Name	035SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\070220A.b
Acq Date Time	2020-07-02T12:25:27-05:00
Sample Type	Sample
Dilution	1
Comment	DOD TW 154955
ISTD Ref FileName	011CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	1	No Gas	0.021	0.021	685.65	194786	0.00	2000	
Be	9	1	No Gas	0.003	0.003	16.82	65	0.00	2000	
V	51	2	He	-0.019	-0.019	-55.95	2135	0.00	2000	
Cr	52	2	He	0.007	0.007	116.56	2694	0.00	2000	
Fe	56	2	He	1.180	1.180	6.75	41236	0.00	200000	
Se	78	2	He	-0.174	-0.174	-21.28	212	-0.08	2000	
Sn	118	2	He	-0.020	-0.020	-119.29	1904	0.00	200	
As	75	2	He	-0.091	-0.091	-27.78	261	-0.03	2000	
Ca	44	2	He	7.199	7.199	17.45	3060	0.24	200000	
Na	23	2	He	-3.534	-3.534	-66.08	311671	0.00	200000	
Mg	24	2	He	13.862	13.862	4.17	18646	0.07	200000	
K	39	2	He	2.859	2.859	59.24	111018	0.00	200000	
Mn	55	2	He	0.259	0.259	6.93	3944	0.01	2000	
Co	59	2	He	0.000	0.000	-1757.52	337	0.00	2000	
Ni	60	2	He	-0.067	-0.067	-19.69	580	-0.01	2000	
Cu	63	2	He	-0.949	-0.949	-1.15	13834	-0.01	2000	
Zn	66	2	He	0.915	0.915	8.66	3344	0.03	2000	
Al	27	2	He	6.445	6.445	1.21	6155	0.10	2000	
B	11	1	No Gas	2.689	2.689	19.70	60310	0.00	2000	
Al	27	1	No Gas	6.281	6.281	2.70	269914	0.00	2000	
Si	28	1	No Gas	90.477	90.477	2.19	1889278	0.00	2000	
Ag	107	1	No Gas	0.009	0.009	11.25	510	0.00	2000	
Cd	111	1	No Gas	0.001	0.001	241.62	23	0.00	2000	
Sr	88	1	No Gas	-0.018	-0.018	-17.14	8740	0.00	2000	
Mo	95	1	No Gas	0.039	0.039	12.99	610	0.01	2000	
Sn	118	1	No Gas	-0.155	-0.155	-4.34	3194	0.00	2000	
Sb	121	1	No Gas	0.068	0.068	10.05	3240	0.00	2000	
Ba	137	1	No Gas	0.031	0.031	31.70	1393	0.00	2000	
Tl	205	1	No Gas	0.008	0.008	33.44	513	0.00	2000	
Tl	203	1	No Gas	0.008	0.008	34.45	233	0.00	2000	
Pb	208	1	No Gas	0.012	0.012	15.93	1877	0.00	2000	
U	238	1	No Gas	0.001	0.001	20.21	100	0.00	2000	
Ca	43	2	He	7.558	7.558	78.18	100	7.56	200000	
Sb	121	2	He	0.081	0.081	8.49	1937	0.00	2000	
Ti	47	2	He	0.064	0.064	39.06	43	0.15	2000	
Cu	63	1	No Gas	-0.953	-0.953	-1.91	24993	0.00	2000	
Zn	66	1	No Gas	0.880	0.880	6.40	8106	0.01	2000	
Se	82	1	No Gas	-0.134	-0.134	-167.91	-31	0.44	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	3377613	2.01	3367912	100.29	70	120	

Sample Report

Ge	72	2	He	2083185	0.76	2128792	97.86	70	120	
Ge	72	1	No Gas	6288023	1.74	6259187	100.46	70	120	
In	115	1	No Gas	6906840	1.63	6832906	101.08	70	120	
Bi	209	1	No Gas	4811430	1.43	4819187	99.84	70	120	

Sample Report

Sample Table

Sample Name	LCS-154955
Data File Name	036SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\070220A.b
Acq Date Time	2020-07-02T12:27:20-05:00
Sample Type	Sample
Dilution	1
Comment	DOD TW 154955
ISTD Ref FileName	011CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	1	No Gas	0.014	0.014	384.63	190208	0.00	2000	
Be	9	1	No Gas	46.744	46.744	1.63	426766	0.01	2000	
V	51	2	He	46.341	46.341	1.14	591457	0.01	2000	
Cr	52	2	He	47.059	47.059	1.26	686977	0.01	2000	
Fe	56	2	He	4724.813	4724.813	1.09	62961207	0.01	200000	
Se	78	2	He	49.705	49.705	1.45	10060	0.49	2000	
Sn	118	2	He	-0.004	-0.004	-295.03	2064	0.00	200	
As	75	2	He	48.155	48.155	1.47	107645	0.04	2000	
Ca	44	2	He	4595.573	4595.573	2.08	369112	1.25	200000	
Na	23	2	He	4738.951	4738.951	3.38	10195873	0.05	200000	
Mg	24	2	He	4768.090	4768.090	1.05	5863347	0.08	200000	
K	39	2	He	4747.793	4747.793	2.39	7120192	0.07	200000	
Mn	55	2	He	47.473	47.473	1.38	511227	0.01	2000	
Co	59	2	He	49.075	49.075	1.27	1072126	0.00	2000	
Ni	60	2	He	48.274	48.274	2.42	269704	0.02	2000	
Cu	63	2	He	47.619	47.619	2.68	736817	0.01	2000	
Zn	66	2	He	50.015	50.015	0.84	147928	0.03	2000	
Al	27	2	He	53.153	53.153	1.79	39420	0.13	2000	
B	11	1	No Gas	0.560	0.560	63.85	47729	0.00	2000	
Al	27	1	No Gas	54.348	54.348	2.49	1768070	0.00	2000	
Si	28	1	No Gas	101.012	101.012	1.45	2058744	0.00	2000	
Ag	107	1	No Gas	48.712	48.712	0.59	1538498	0.00	2000	
Cd	111	1	No Gas	48.218	48.218	1.83	302825	0.02	2000	
Sr	88	1	No Gas	0.024	0.024	12.74	10905	0.00	2000	
Mo	95	1	No Gas	45.690	45.690	0.63	556199	0.01	2000	
Sn	118	1	No Gas	-0.127	-0.127	-1.28	3587	0.00	2000	
Sb	121	1	No Gas	46.754	46.754	0.63	1216607	0.00	2000	
Ba	137	1	No Gas	46.112	46.112	1.49	407613	0.01	2000	
Tl	205	1	No Gas	47.814	47.814	1.94	2122931	0.00	2000	
Tl	203	1	No Gas	44.554	44.554	3.01	847828	0.01	2000	
Pb	208	1	No Gas	46.560	46.560	1.87	2885439	0.00	2000	
U	238	1	No Gas	0.001	0.001	87.19	57	0.00	2000	
Ca	43	2	He	4628.414	4628.414	1.63	21624	21.40	200000	
Sb	121	2	He	45.559	45.559	1.57	706134	0.01	2000	
Ti	47	2	He	46.465	46.465	2.60	22158	0.21	2000	
Cu	63	1	No Gas	49.450	49.450	2.81	1331008	0.00	2000	
Zn	66	1	No Gas	50.049	50.049	0.79	353197	0.01	2000	
Se	82	1	No Gas	48.539	48.539	3.18	19431	0.25	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	3301292	1.73	3367912	98.02	70	120	
Ge	72	2	He	2102012	1.34	2128792	98.74	70	120	
Ge	72	1	No Gas	6278182	1.08	6259187	100.30	70	120	

Sample Report

In	115	1	No Gas	6634070	1.68	6832906	97.09	70	120	
Bi	209	1	No Gas	4827108	4.00	4819187	100.16	70	120	

Sample Report

Sample Table

Sample Name	HS20061218-02SD
Data File Name	039SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\070220A.b
Acq Date Time	2020-07-02T12:35:28-05:00
Sample Type	Sample
Dilution	1
Comment	DOD TW 154955
ISTD Ref FileName	011CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	1	No Gas	29.183	29.183	3.20	1138044	0.00	2000	
Be	9	1	No Gas	0.046	0.046	16.33	445	0.01	2000	
V	51	2	He	0.289	0.289	3.32	5997	0.00	2000	
Cr	52	2	He	0.027	0.027	55.81	2977	0.00	2000	
Fe	56	2	He	1312.674	1312.674	2.82	17282894	0.01	200000	
Se	78	2	He	0.159	0.159	59.33	276	0.06	2000	
Sn	118	2	He	-0.044	-0.044	-42.27	1593	0.00	200	
As	75	2	He	0.168	0.168	8.14	828	0.02	2000	
Ca	44	2	He	59742.825	59742.825	3.35	4705996	1.27	200000	
Na	23	2	He	144232.067	144232.067	1.64	297007316	0.05	200000	
Mg	24	2	He	30186.269	30186.269	2.61	36623095	0.08	200000	
K	39	2	He	227.749	227.749	2.25	438487	0.05	200000	
Mn	55	2	He	532.986	532.986	1.76	5653851	0.01	2000	
Co	59	2	He	0.132	0.132	7.72	3187	0.00	2000	
Ni	60	2	He	0.097	0.097	12.77	1480	0.01	2000	
Cu	63	2	He	-0.614	-0.614	-8.24	18700	0.00	2000	
Zn	66	2	He	1.022	1.022	12.68	3637	0.03	2000	
Al	27	2	He	7.714	7.714	1.63	7022	0.11	2000	
B	11	1	No Gas	5.637	5.637	5.56	72819	0.01	2000	
Al	27	1	No Gas	7.626	7.626	3.20	305490	0.00	2000	
Si	28	1	No Gas	2865.638	2865.638	2.40	46344884	0.01	2000	>LDR
Ag	107	1	No Gas	0.004	0.004	19.45	327	0.00	2000	
Cd	111	1	No Gas	0.017	0.017	29.71	123	0.01	2000	
Sr	88	1	No Gas	1441.755	1441.755	1.91	85129645	0.00	2000	
Mo	95	1	No Gas	0.024	0.024	25.71	393	0.01	2000	
Sn	118	1	No Gas	-0.174	-0.174	-9.49	2644	-0.01	2000	
Sb	121	1	No Gas	0.078	0.078	22.31	3401	0.00	2000	
Ba	137	1	No Gas	8.425	8.425	2.98	73777	0.01	2000	
Tl	205	1	No Gas	0.000	0.000	600.60	160	0.00	2000	
Tl	203	1	No Gas	0.001	0.001	135.00	93	0.00	2000	
Pb	208	1	No Gas	0.050	0.050	8.00	3970	0.00	2000	
U	238	1	No Gas	3.940	3.940	0.82	220339	0.00	2000	
Ca	43	2	He	62129.336	62129.336	1.45	285693	21.75	200000	
Sb	121	2	He	0.082	0.082	10.29	1950	0.00	2000	
Ti	47	2	He	0.319	0.319	24.68	163	0.20	2000	
Cu	63	1	No Gas	-0.043	-0.043	-119.05	47624	0.00	2000	
Zn	66	1	No Gas	1.427	1.427	2.92	11705	0.01	2000	
Se	82	1	No Gas	0.874	0.874	16.28	365	0.24	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	3232488	1.61	3367912	95.98	70	120	
Ge	72	2	He	2075172	2.04	2128792	97.48	70	120	
Ge	72	1	No Gas	6159322	2.40	6259187	98.40	70	120	
In	115	1	No Gas	6495863	0.63	6832906	95.07	70	120	
Bi	209	1	No Gas	4493192	1.77	4819187	93.24	70	120	

Sample Report

Sample Table

Sample Name	HS20061218-02MS
Data File Name	040SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\070220A.b
Acq Date Time	2020-07-02T12:37:21-05:00
Sample Type	Sample
Dilution	1
Comment	DOD TW 154955
ISTD Ref FileName	011CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	1	No Gas	144.843	144.843	3.07	4539754	0.00	2000	
Be	9	1	No Gas	46.176	46.176	3.88	381516	0.01	2000	
V	51	2	He	48.186	48.186	0.68	580785	0.01	2000	
Cr	52	2	He	46.008	46.008	0.60	634403	0.01	2000	
Fe	56	2	He	11019.483	11019.483	0.56	138655668	0.01	200000	
Se	78	2	He	49.423	49.423	2.06	9449	0.52	2000	
Sn	118	2	He	-0.009	-0.009	-195.09	1894	0.00	200	
As	75	2	He	49.662	49.662	0.78	104844	0.05	2000	
Ca	44	2	He	311683.074	311683.074	1.01	23485760	1.33	200000	>LDR
Na	23	2	He	742314.767	742314.767	0.84	1461323872	0.05	200000	>LDR
Mg	24	2	He	155170.408	155170.408	1.24	180140944	0.09	200000	
K	39	2	He	5890.532	5890.532	1.92	8319855	0.07	200000	
Mn	55	2	He	2755.395	2755.395	1.20	27959842	0.01	2000	>LDR
Co	59	2	He	45.926	45.926	1.05	947656	0.00	2000	
Ni	60	2	He	44.992	44.992	0.58	237497	0.02	2000	
Cu	63	2	He	42.694	42.694	1.04	626738	0.01	2000	
Zn	66	2	He	47.288	47.288	1.84	132119	0.04	2000	
Al	27	2	He	82.714	82.714	3.57	57078	0.14	2000	
B	11	1	No Gas	29.335	29.335	4.19	179831	0.02	2000	
Al	27	1	No Gas	86.600	86.600	5.40	2587618	0.00	2000	
Si	28	1	No Gas	14632.520	14632.520	1.98	223494517	0.01	2000	>LDR
Ag	107	1	No Gas	43.555	43.555	2.14	1253285	0.00	2000	
Cd	111	1	No Gas	43.469	43.469	0.64	248782	0.02	2000	
Sr	88	1	No Gas	7377.501	7377.501	3.21	405227474	0.00	2000	>LDR
Mo	95	1	No Gas	46.178	46.178	2.06	512130	0.01	2000	
Sn	118	1	No Gas	-0.137	-0.137	-9.36	3104	0.00	2000	
Sb	121	1	No Gas	43.486	43.486	1.75	1055468	0.00	2000	
Ba	137	1	No Gas	86.741	86.741	3.05	697692	0.01	2000	
Tl	205	1	No Gas	48.935	48.935	1.55	1791121	0.00	2000	
Tl	203	1	No Gas	45.114	45.114	1.47	707827	0.01	2000	
Pb	208	1	No Gas	46.594	46.594	1.50	2380352	0.00	2000	
U	238	1	No Gas	20.612	20.612	1.24	1020031	0.00	2000	
Ca	43	2	He	329975.804	329975.804	0.93	1451467	22.73	200000	>LDR
Sb	121	2	He	43.839	43.839	1.68	641755	0.01	2000	
Ti	47	2	He	48.498	48.498	1.67	21838	0.22	2000	
Cu	63	1	No Gas	46.891	46.891	2.22	1179689	0.00	2000	
Zn	66	1	No Gas	47.935	47.935	1.12	315575	0.02	2000	
Se	82	1	No Gas	53.201	53.201	3.55	19858	0.27	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2989256	2.84	3367912	88.76	70	120	
Ge	72	2	He	1985128	0.66	2128792	93.25	70	120	
Ge	72	1	No Gas	5855828	1.13	6259187	93.56	70	120	
In	115	1	No Gas	6044323	1.15	6832906	88.46	70	120	
Bi	209	1	No Gas	3976710	1.56	4819187	82.52	70	120	

Sample Report

Sample Table

Sample Name	HS20061218-02MSD
Data File Name	041SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\070220A.b
Acq Date Time	2020-07-02T12:39:21-05:00
Sample Type	Sample
Dilution	1
Comment	DOD TW 154955
ISTD Ref FileName	011CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	1	No Gas	146.044	146.044	1.52	4472922	0.00	2000	
Be	9	1	No Gas	45.783	45.783	0.93	369838	0.01	2000	
V	51	2	He	47.385	47.385	1.96	547466	0.01	2000	
Cr	52	2	He	45.616	45.616	1.16	602992	0.01	2000	
Fe	56	2	He	10812.885	10812.885	1.66	130418505	0.01	200000	
Se	78	2	He	46.909	46.909	1.54	8609	0.54	2000	
Sn	118	2	He	-0.014	-0.014	-116.31	1757	0.00	200	
As	75	2	He	48.751	48.751	1.92	98655	0.05	2000	
Ca	44	2	He	305915.359	305915.359	1.37	22096654	1.38	200000	>LDR
Na	23	2	He	745754.742	745754.742	0.63	1407414112	0.05	200000	>LDR
Mg	24	2	He	152986.098	152986.098	1.82	170252064	0.09	200000	
K	39	2	He	5813.278	5813.278	1.51	7872760	0.07	200000	
Mn	55	2	He	2751.514	2751.514	1.94	26763762	0.01	2000	>LDR
Co	59	2	He	44.907	44.907	1.33	888262	0.01	2000	
Ni	60	2	He	44.093	44.093	2.14	223112	0.02	2000	
Cu	63	2	He	42.760	42.760	1.76	601662	0.01	2000	
Zn	66	2	He	46.272	46.272	2.26	123943	0.04	2000	
Al	27	2	He	81.605	81.605	2.15	54022	0.15	2000	
B	11	1	No Gas	28.947	28.947	3.13	173983	0.02	2000	
Al	27	1	No Gas	83.586	83.586	1.64	2463657	0.00	2000	
Si	28	1	No Gas	14551.923	14551.923	2.13	219041897	0.01	2000	>LDR
Ag	107	1	No Gas	43.120	43.120	1.58	1221486	0.00	2000	
Cd	111	1	No Gas	43.123	43.123	1.16	242950	0.02	2000	
Sr	88	1	No Gas	7282.836	7282.836	1.68	393862114	0.00	2000	>LDR
Mo	95	1	No Gas	45.508	45.508	3.26	496808	0.01	2000	
Sn	118	1	No Gas	-0.149	-0.149	-11.17	2850	-0.01	2000	
Sb	121	1	No Gas	42.688	42.688	1.50	1021230	0.00	2000	
Ba	137	1	No Gas	87.000	87.000	2.24	688956	0.01	2000	
Tl	205	1	No Gas	48.222	48.222	1.52	1743891	0.00	2000	
Tl	203	1	No Gas	44.997	44.997	0.85	697607	0.01	2000	
Pb	208	1	No Gas	45.821	45.821	0.24	2312862	0.00	2000	
U	238	1	No Gas	20.269	20.269	0.67	991299	0.00	2000	
Ca	43	2	He	326266.275	326266.275	1.79	1375873	23.71	200000	>LDR
Sb	121	2	He	43.539	43.539	1.81	610993	0.01	2000	
Ti	47	2	He	46.963	46.963	2.24	20269	0.23	2000	
Cu	63	1	No Gas	47.654	47.654	2.82	1180901	0.00	2000	
Zn	66	1	No Gas	47.484	47.484	0.27	308148	0.02	2000	
Se	82	1	No Gas	52.032	52.032	0.97	19147	0.27	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2920659	0.98	3367912	86.72	70	120	
Ge	72	2	He	1903197	1.82	2128792	89.40	70	120	
Ge	72	1	No Gas	5771613	1.40	6259187	92.21	70	120	
In	115	1	No Gas	5950557	1.29	6832906	87.09	70	120	
Bi	209	1	No Gas	3929687	0.26	4819187	81.54	70	120	

Sample Report

Sample Table

Sample Name	HS20061218-02PDS
Data File Name	042SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\070220A.b
Acq Date Time	2020-07-02T12:41:19-05:00
Sample Type	Sample
Dilution	1
Comment	DOD TW 154955
ISTD Ref FileName	011CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	1	No Gas	154.030	154.030	0.89	4617789	0.00	2000	
Be	9	1	No Gas	104.596	104.596	2.76	828594	0.01	2000	
V	51	2	He	111.314	111.314	0.74	1279226	0.01	2000	
Cr	52	2	He	106.941	106.941	3.10	1405554	0.01	2000	
Fe	56	2	He	17149.498	17149.498	3.12	206124324	0.01	200000	
Se	78	2	He	111.338	111.338	2.56	20057	0.56	2000	
Sn	118	2	He	0.010	0.010	43.66	1970	0.00	200	
As	75	2	He	112.187	112.187	2.64	225731	0.05	2000	
Ca	44	2	He	328361.178	328361.178	0.88	23643600	1.39	200000	>LDR
Na	23	2	He	783193.335	783193.335	2.80	1472849311	0.05	200000	>LDR
Mg	24	2	He	168400.865	168400.865	1.44	186802591	0.09	200000	
K	39	2	He	11999.635	11999.635	2.70	16090352	0.07	200000	
Mn	55	2	He	2907.109	2907.109	2.07	28184731	0.01	2000	>LDR
Co	59	2	He	105.000	105.000	2.91	2069296	0.01	2000	
Ni	60	2	He	102.982	102.982	2.57	518208	0.02	2000	
Cu	63	2	He	102.605	102.605	4.16	1403096	0.01	2000	
Zn	66	2	He	105.545	105.545	2.83	280995	0.04	2000	
Al	27	2	He	147.620	147.620	3.89	96170	0.15	2000	
B	11	1	No Gas	31.062	31.062	3.24	180235	0.02	2000	
Al	27	1	No Gas	147.987	147.987	2.16	4222766	0.00	2000	
Si	28	1	No Gas	14970.678	14970.678	0.53	220819623	0.01	2000	>LDR
Ag	107	1	No Gas	102.399	102.399	2.50	2816650	0.00	2000	
Cd	111	1	No Gas	101.164	101.164	2.31	553467	0.02	2000	
Sr	88	1	No Gas	7821.381	7821.381	2.08	410795207	0.00	2000	>LDR
Mo	95	1	No Gas	105.917	105.917	2.89	1122856	0.01	2000	
Sn	118	1	No Gas	-0.117	-0.117	-13.83	3290	0.00	2000	
Sb	121	1	No Gas	96.939	96.939	0.90	2270703	0.00	2000	
Ba	137	1	No Gas	151.524	151.524	3.85	1164652	0.01	2000	
Tl	205	1	No Gas	113.435	113.435	1.11	4009171	0.00	2000	
Tl	203	1	No Gas	111.127	111.127	1.72	1683793	0.01	2000	
Pb	208	1	No Gas	108.044	108.044	0.44	5329075	0.00	2000	
U	238	1	No Gas	21.306	21.306	1.28	1018347	0.00	2000	
Ca	43	2	He	344489.046	344489.046	0.69	1448156	23.79	200000	>LDR
Sb	121	2	He	99.641	99.641	3.31	1392617	0.01	2000	
Ti	47	2	He	109.913	109.913	1.34	47282	0.23	2000	
Cu	63	1	No Gas	103.913	103.913	0.41	2470492	0.00	2000	
Zn	66	1	No Gas	105.787	105.787	0.42	670501	0.02	2000	
Se	82	1	No Gas	113.857	113.857	1.09	41028	0.28	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2864445	1.65	3367912	85.05	70	120	
Ge	72	2	He	1897160	2.27	2128792	89.12	70	120	
Ge	72	1	No Gas	5654858	0.11	6259187	90.34	70	120	
In	115	1	No Gas	5779973	2.18	6832906	84.59	70	120	
Bi	209	1	No Gas	3840873	1.45	4819187	79.70	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	044_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\070220A.b
Acq Date Time	2020-07-02T12:45:08-05:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	011CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	No Gas	99.090	3.316	3450076	1.98	100	99.1	90	110	
Be	9	1	No Gas	95.296	3.681	860047	4.18	100	95.3	90	110	
V	51	2	He	100.722	1.737	1266502	0.76	100	100.7	90	110	
Cr	52	2	He	100.287	2.121	1442562	1.08	100	100.3	90	110	
Fe	56	2	He	10136.004	1.346	133336061	0.55	10000	101.4	90	110	
Se	78	2	He	98.342	2.326	19413	1.05	100	98.3	90	110	
Sn	118	2	He	100.984	1.767	1174854	1.85	100	101.0	90	110	
As	75	2	He	99.002	1.626	218034	0.40	100	99.0	90	110	
Ca	44	2	He	9803.122	1.846	774621	0.80	10000	98.0	90	110	
Na	23	2	He	10091.315	2.227	21080955	1.43	10000	100.9	90	110	
Mg	24	2	He	9893.979	2.677	12008670	1.58	10000	98.9	90	110	
K	39	2	He	9835.024	0.689	14451788	0.77	10000	98.4	90	110	
Mn	55	2	He	99.375	1.308	1055377	0.09	100	99.4	90	110	
Co	59	2	He	103.188	1.616	2225446	0.59	100	103.2	90	110	
Ni	60	2	He	100.553	2.386	553680	1.14	100	100.6	90	110	
Cu	63	2	He	101.170	2.912	1514487	1.67	100	101.2	90	110	
Zn	66	2	He	100.093	1.323	291628	0.12	100	100.1	90	110	
Al	27	2	He	97.689	1.146	70205	2.29	100	97.7	90	110	
B	11	1	No Gas	477.031	3.742	2516681	1.19	500	95.4	90	110	
Al	27	1	No Gas	97.834	1.590	3259757	0.91	100	97.8	90	110	
Si	28	1	No Gas	495.133	1.832	8870494	0.64	5000	9.9	90	110	CCV Main CR1-2 Failed
P	31	1	No Gas	475.859	0.845	885232	2.04	500	95.2	90	110	
Ag	107	1	No Gas	99.699	1.239	3272802	2.99	100	99.7	90	110	
Cd	111	1	No Gas	96.823	1.374	632043	2.14	100	96.8	90	110	
Sr	88	1	No Gas	99.762	4.251	6257296	0.75	100	99.8	90	110	
Mo	95	1	No Gas	96.107	5.206	1214785	2.08	100	96.1	90	110	
Sn	118	1	No Gas	101.848	2.560	2002389	1.67	100	101.8	90	110	
Sb	121	1	No Gas	99.220	3.164	2691498	1.16	100	99.2	90	110	
Ba	137	1	No Gas	98.326	3.561	901667	0.68	100	98.3	90	110	
Tl	205	1	No Gas	102.582	1.691	4607941	2.92	100	102.6	90	110	
Tl	203	1	No Gas	100.559	1.206	1936154	1.57	100	100.6	90	110	
Pb	208	1	No Gas	101.833	0.275	6382989	2.03	100	101.8	90	110	
U	238	1	No Gas	96.552	1.277	5864438	1.38	100	96.6	90	110	
Ca	43	2	He	9925.624	0.776	45709	0.48	10000	99.3	90	110	
Sb	121	2	He	99.533	2.917	1522270	1.77	100	99.5	90	110	
Ti	47	2	He	100.796	2.627	47429	1.45	100	100.8	90	110	
Cu	63	1	No Gas	98.246	2.636	2708071	0.87	100	98.2	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	3263276	2.53	3367912	96.89	70	120	
Ge	72	2	He	2075509	1.24	2128792	97.50	70	120	
Ge	72	1	No Gas	6551649	2.14	6259187	104.67	70	120	
In	115	1	No Gas	6896503	3.49	6832906	100.93	70	120	
Bi	209	1	No Gas	4880830	1.78	4819187	101.28	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	045_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\070220A.b
Acq Date Time	2020-07-02T12:46:50-05:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	011CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	1	No Gas	0.063	272.6	197002	0.6	0.5	
Be	9	1	No Gas	0.008	13.5	115	7.5	0.5	
V	51	2	He	-0.038	-31.9	1918	5.7	2.5	
Cr	52	2	He	-0.042	-22.7	2010	5.2	2.5	
Fe	56	2	He	0.415	12.6	31554	1.5	100	
Se	78	2	He	-0.070	-147.0	235	6.4	2	
As	75	2	He	-0.083	-7.1	282	5.9	2.5	
Ca	44	2	He	3.241	44.2	2787	6.6	100	
Na	23	2	He	87.910	3.9	507347	1.1	100	
Mg	24	2	He	1.053	7.9	3084	0.9	100	
K	39	2	He	-0.327	-595.3	107783	0.3	100	
Mn	55	2	He	0.236	7.1	3741	2.6	2.5	
Co	59	2	He	0.004	81.3	427	15.1	2.5	
Ni	60	2	He	-0.062	-22.7	617	12.0	2.5	
Cu	63	2	He	-0.828	-1.7	15836	2.9	2	
Zn	66	2	He	0.143	30.0	1107	12.2	2.5	
Al	27	2	He	1.513	13.9	2714	3.9	5	
B	11	1	No Gas	8.912	16.0	93946	5.5	0.5	CCB Main CR1 Failed
Al	27	1	No Gas	1.714	3.5	133130	2.1	5	
Si	28	1	No Gas	-0.376	-71.3	420080	1.1	10	
P	31	1	No Gas	-3.725	-20.0	40499	2.8	10	
Ag	107	1	No Gas	0.010	48.1	563	28.9	2.5	
Cd	111	1	No Gas	0.005	85.4	47	53.9	1	
Sr	88	1	No Gas	0.060	6.6	13721	2.6	2.5	
Mo	95	1	No Gas	0.042	39.2	660	32.1	2.5	
Sn	118	1	No Gas	-0.004	-731.0	6205	7.9	5	
Sb	121	1	No Gas	0.444	8.5	13601	7.3	2.5	
Ba	137	1	No Gas	-0.030	-29.0	843	8.9	2.5	
Tl	205	1	No Gas	0.212	67.2	9929	67.2	1	
Tl	203	1	No Gas	0.197	65.9	3958	65.7	1	
Pb	208	1	No Gas	0.024	12.2	2757	8.7	2.5	
U	238	1	No Gas	0.006	15.2	417	15.4	2.5	
Ca	43	2	He	2.991	192.2	80	33.1	100	
Sb	121	2	He	0.363	3.8	6355	1.8	2.5	
Ti	47	2	He	-0.001	-4755.5	13	114.6	2.5	
Cu	63	1	No Gas	-0.807	-5.0	30097	3.1	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	3391747	2.59	3367912	100.71	70	120	
Ge	72	2	He	2111902	2.50	2128792	99.21	70	120	
Ge	72	1	No Gas	6572273	1.07	6259187	105.00	70	120	
In	115	1	No Gas	6959375	0.80	6832906	101.85	70	120	
Bi	209	1	No Gas	4983454	1.85	4819187	103.41	70	120	

Sample Report

Sample Table

Sample Name	HS20061178-01
Data File Name	049SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\070220A.b
Acq Date Time	2020-07-02T12:54:54-05:00
Sample Type	Sample
Dilution	1
Comment	DOD TW 154955
ISTD Ref FileName	011CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	1	No Gas	138.416	138.416	0.90	4345394	0.00	2000	
Be	9	1	No Gas	0.020	0.020	10.19	200	0.01	2000	
V	51	2	He	0.705	0.705	5.61	10352	0.01	2000	
Cr	52	2	He	0.295	0.295	20.21	6295	0.00	2000	
Fe	56	2	He	147.123	147.123	3.34	1809594	0.01	200000	
Se	78	2	He	0.647	0.647	11.32	343	0.19	2000	
Sn	118	2	He	-0.032	-0.032	-18.83	1587	0.00	200	
As	75	2	He	0.251	0.251	17.87	932	0.03	2000	
Ca	44	2	He	325680.513	325680.513	1.80	23683071	1.38	200000	>LDR
Na	23	2	He	536600.658	536600.658	1.58	1019521318	0.05	200000	>LDR
Mg	24	2	He	223953.697	223953.697	2.55	250887090	0.09	200000	>LDR
K	39	2	He	1057.728	1057.728	2.40	1522338	0.07	200000	
Mn	55	2	He	125.817	125.817	3.03	1233161	0.01	2000	
Co	59	2	He	0.650	0.650	3.97	13247	0.00	2000	
Ni	60	2	He	15.994	15.994	1.16	82050	0.02	2000	
Cu	63	2	He	-0.424	-0.424	-1.29	19855	0.00	2000	
Zn	66	2	He	15.560	15.560	1.68	42380	0.04	2000	
Al	27	2	He	120.690	120.690	29.36	79505	0.15	2000	
B	11	1	No Gas	7.195	7.195	2.43	74708	0.01	2000	
Al	27	1	No Gas	116.495	116.495	35.37	3526750	0.00	2000	
Si	28	1	No Gas	17795.896	17795.896	1.50	277736429	0.01	2000	>LDR
Ag	107	1	No Gas	0.027	0.027	10.45	1000	0.00	2000	
Cd	111	1	No Gas	0.720	0.720	6.57	4211	0.02	2000	
Sr	88	1	No Gas	7037.713	7037.713	1.57	394131687	0.00	2000	>LDR
Mo	95	1	No Gas	0.086	0.086	16.42	1073	0.01	2000	
Sn	118	1	No Gas	-0.155	-0.155	-14.38	2847	-0.01	2000	
Sb	121	1	No Gas	0.118	0.118	10.40	4304	0.00	2000	
Ba	137	1	No Gas	17.970	17.970	0.99	148191	0.01	2000	
Tl	205	1	No Gas	0.008	0.008	17.83	433	0.00	2000	
Tl	203	1	No Gas	0.007	0.007	34.78	177	0.00	2000	
Pb	208	1	No Gas	0.164	0.164	5.08	9308	0.00	2000	
U	238	1	No Gas	6.190	6.190	0.64	306710	0.00	2000	
Ca	43	2	He	349550.345	349550.345	0.70	1484032	23.55	200000	>LDR
Sb	121	2	He	0.123	0.123	5.63	2377	0.01	2000	
Ti	47	2	He	3.402	3.402	22.80	1487	0.23	2000	
Cu	63	1	No Gas	1.494	1.494	3.25	84277	0.00	2000	
Zn	66	1	No Gas	16.092	16.092	1.54	109500	0.01	2000	
Se	82	1	No Gas	6.869	6.869	8.18	2639	0.26	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2987299	0.41	3367912	88.70	70	120	
Ge	72	2	He	1915987	1.40	2128792	90.00	70	120	
Ge	72	1	No Gas	5985352	0.84	6259187	95.63	70	120	
In	115	1	No Gas	6162004	2.70	6832906	90.18	70	120	
Bi	209	1	No Gas	3981035	1.49	4819187	82.61	70	120	

Sample Report

Sample Table

Sample Name	HS20061178-02
Data File Name	050SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\070220A.b
Acq Date Time	2020-07-02T12:56:54-05:00
Sample Type	Sample
Dilution	1
Comment	DOD TW 154955
ISTD Ref FileName	011CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	1	No Gas	24.590	24.590	1.71	887564	0.00	2000	
Be	9	1	No Gas	0.052	0.052	25.27	448	0.01	2000	
V	51	2	He	8.816	8.816	1.90	106385	0.01	2000	
Cr	52	2	He	2.615	2.615	2.31	37779	0.01	2000	
Fe	56	2	He	43403.879	43403.879	1.01	537444459	0.01	200000	
Se	78	2	He	0.736	0.736	26.10	366	0.20	2000	
Sn	118	2	He	-0.036	-0.036	-27.28	1540	0.00	200	
As	75	2	He	9.364	9.364	0.36	19807	0.05	2000	
Ca	44	2	He	191768.570	191768.570	1.11	14222366	1.35	200000	>LDR
Na	23	2	He	687164.634	687164.634	1.13	1331344380	0.05	200000	>LDR
Mg	24	2	He	130708.321	130708.321	1.84	149330671	0.09	200000	
K	39	2	He	1116.299	1116.299	1.65	1632811	0.07	200000	
Mn	55	2	He	4537.424	4537.424	2.94	45304471	0.01	2000	>LDR
Co	59	2	He	5.671	5.671	1.25	115437	0.00	2000	
Ni	60	2	He	6.258	6.258	1.16	33278	0.02	2000	
Cu	63	2	He	-0.534	-0.534	-7.76	18713	0.00	2000	
Zn	66	2	He	1.686	1.686	3.58	5244	0.03	2000	
Al	27	2	He	21.126	21.126	1.64	15476	0.14	2000	
B	11	1	No Gas	83.817	83.817	2.43	426123	0.02	2000	
Al	27	1	No Gas	22.143	22.143	0.47	704460	0.00	2000	
Si	28	1	No Gas	17755.633	17755.633	1.09	267976296	0.01	2000	>LDR
Ag	107	1	No Gas	0.007	0.007	34.86	400	0.00	2000	
Cd	111	1	No Gas	0.014	0.014	27.16	97	0.01	2000	
Sr	88	1	No Gas	4006.628	4006.628	3.58	218303423	0.00	2000	>LDR
Mo	95	1	No Gas	0.216	0.216	8.54	2474	0.01	2000	
Sn	118	1	No Gas	-0.157	-0.157	-4.67	2740	-0.01	2000	
Sb	121	1	No Gas	0.189	0.189	3.36	5865	0.00	2000	
Ba	137	1	No Gas	340.250	340.250	3.98	2711602	0.01	2000	
Tl	205	1	No Gas	0.000	0.000	-2624.44	130	0.00	2000	
Tl	203	1	No Gas	-0.001	-0.001	-93.30	47	0.00	2000	
Pb	208	1	No Gas	0.111	0.111	9.49	6634	0.00	2000	
U	238	1	No Gas	0.376	0.376	2.23	18635	0.00	2000	
Ca	43	2	He	200956.332	200956.332	1.97	869900	23.10	200000	>LDR
Sb	121	2	He	0.180	0.180	10.18	3240	0.01	2000	
Ti	47	2	He	6.363	6.363	6.35	2830	0.22	2000	
Cu	63	1	No Gas	2.105	2.105	7.62	96025	0.00	2000	
Zn	66	1	No Gas	2.043	2.043	4.51	14982	0.01	2000	
Se	82	1	No Gas	4.699	4.699	12.97	1752	0.27	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2903382	0.53	3367912	86.21	70	120	
Ge	72	2	He	1953879	1.70	2128792	91.78	70	120	
Ge	72	1	No Gas	5787928	2.12	6259187	92.47	70	120	
In	115	1	No Gas	5997567	2.40	6832906	87.77	70	120	
Bi	209	1	No Gas	3974359	0.90	4819187	82.47	70	120	

Sample Report

Sample Table

Sample Name	HS20061178-03
Data File Name	051SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\070220A.b
Acq Date Time	2020-07-02T12:58:55-05:00
Sample Type	Sample
Dilution	2
Comment	DOD TW 154955
ISTD Ref FileName	011CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	1	No Gas	33.743	67.485	1.00	1216872	0.00	2000	
Be	9	1	No Gas	0.045	0.089	10.03	408	0.01	2000	
V	51	2	He	20.974	41.947	2.66	249528	0.01	2000	
Cr	52	2	He	9.278	18.557	2.49	127591	0.01	2000	
Fe	56	2	He	15465.124	30930.248	1.55	191115237	0.01	200000	
Se	78	2	He	1.086	2.172	17.37	429	0.25	2000	
Sn	118	2	He	0.038	0.075	12.63	2347	0.00	200	
As	75	2	He	10.484	20.968	1.37	22079	0.05	2000	
Ca	44	2	He	164217.556	328435.112	1.75	12154890	1.35	200000	
Na	23	2	He	829950.251	1659900.503	2.85	1604608936	0.05	200000	>LDR
Mg	24	2	He	129336.773	258673.547	1.96	147476441	0.09	200000	
K	39	2	He	382.015	764.031	2.22	623444	0.06	200000	
Mn	55	2	He	5520.177	11040.354	1.00	55020303	0.01	2000	>LDR
Co	59	2	He	4.573	9.147	1.08	92977	0.00	2000	
Ni	60	2	He	18.620	37.240	1.93	97055	0.02	2000	
Cu	63	2	He	3.207	6.414	2.53	70338	0.00	2000	
Zn	66	2	He	2.821	5.642	3.10	8336	0.03	2000	
Al	27	2	He	39.169	78.337	2.98	27346	0.14	2000	
B	11	1	No Gas	53.222	106.445	1.38	300046	0.02	2000	
Al	27	1	No Gas	38.836	77.672	6.67	1227699	0.00	2000	
Si	28	1	No Gas	8731.883	17463.767	1.12	136782998	0.01	2000	>LDR
Ag	107	1	No Gas	0.013	0.027	9.34	587	0.00	2000	
Cd	111	1	No Gas	0.071	0.142	7.05	423	0.02	2000	
Sr	88	1	No Gas	4040.852	8081.704	1.55	223685130	0.00	2000	>LDR
Mo	95	1	No Gas	0.376	0.752	6.88	4304	0.01	2000	
Sn	118	1	No Gas	-0.099	-0.198	-8.15	3787	0.00	2000	
Sb	121	1	No Gas	0.326	0.652	6.92	9487	0.00	2000	
Ba	137	1	No Gas	595.619	1191.239	0.75	4822263	0.01	2000	
Tl	205	1	No Gas	0.000	0.001	327.91	147	0.00	2000	
Tl	203	1	No Gas	0.000	0.000	1281.90	63	0.00	2000	
Pb	208	1	No Gas	1.625	3.250	3.62	82491	0.00	2000	
U	238	1	No Gas	0.207	0.415	1.25	10104	0.00	2000	
Ca	43	2	He	169240.486	338480.971	1.06	731235	23.14	200000	
Sb	121	2	He	0.322	0.644	6.57	5271	0.01	2000	
Ti	47	2	He	25.108	50.216	5.51	11108	0.23	2000	
Cu	63	1	No Gas	6.444	12.887	1.26	206987	0.00	2000	
Zn	66	1	No Gas	2.774	5.549	1.68	20432	0.01	2000	
Se	82	1	No Gas	5.522	11.044	12.59	2134	0.26	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	3056994	0.92	3367912	90.77	70	120	
Ge	72	2	He	1949907	1.02	2128792	91.60	70	120	
Ge	72	1	No Gas	5998072	2.16	6259187	95.83	70	120	
In	115	1	No Gas	6090097	0.77	6832906	89.13	70	120	
Bi	209	1	No Gas	3910860	1.99	4819187	81.15	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	054_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\070220A.b
Acq Date Time	2020-07-02T13:08:28-05:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	011CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	No Gas	103.513	1.061	3469437	2.06	100	103.5	90	110	
Be	9	1	No Gas	95.994	0.819	835665	1.99	100	96.0	90	110	
V	51	2	He	99.818	0.630	1198656	1.39	100	99.8	90	110	
Cr	52	2	He	102.295	0.994	1405106	0.62	100	102.3	90	110	
Fe	56	2	He	9952.047	0.851	125011735	0.66	10000	99.5	90	110	
Se	78	2	He	95.980	1.803	18099	1.91	100	96.0	90	110	
Sn	118	2	He	98.042	2.717	1076425	1.47	100	98.0	90	110	
As	75	2	He	98.371	1.384	206872	0.48	100	98.4	90	110	
Ca	44	2	He	9816.338	0.962	740704	0.73	10000	98.2	90	110	
Na	23	2	He	10223.067	1.690	20388283	0.53	10000	102.2	90	110	
Mg	24	2	He	10172.821	1.981	11790243	0.88	10000	101.7	90	110	
K	39	2	He	9953.586	1.046	13964061	0.47	10000	99.5	90	110	
Mn	55	2	He	99.796	1.570	1012203	2.65	100	99.8	90	110	
Co	59	2	He	103.038	2.168	2121807	1.02	100	103.0	90	110	
Ni	60	2	He	100.489	1.323	528400	0.58	100	100.5	90	110	
Cu	63	2	He	102.265	2.934	1461641	2.48	100	102.3	90	110	
Zn	66	2	He	101.244	1.387	281656	0.24	100	101.2	90	110	
Al	27	2	He	99.427	3.437	68184	2.73	100	99.4	90	110	
B	11	1	No Gas	482.683	1.016	2456753	0.53	500	96.5	90	110	
Al	27	1	No Gas	100.238	4.326	3175791	2.16	100	100.2	90	110	
Si	28	1	No Gas	499.178	3.900	8506211	1.79	5000	10.0	90	110	CCV Main CR1-2 Failed
P	31	1	No Gas	480.798	3.300	850494	1.20	500	96.2	90	110	
Ag	107	1	No Gas	103.419	1.611	3289127	2.01	100	103.4	90	110	
Cd	111	1	No Gas	99.080	0.728	626688	0.62	100	99.1	90	110	
Sr	88	1	No Gas	101.790	1.388	6189855	0.67	100	101.8	90	110	
Mo	95	1	No Gas	99.877	0.864	1224257	0.88	100	99.9	90	110	
Sn	118	1	No Gas	103.232	3.548	1966397	2.21	100	103.2	90	110	
Sb	121	1	No Gas	98.701	2.542	2548562	0.68	100	98.7	90	110	
Ba	137	1	No Gas	96.039	2.998	853659	2.04	100	96.0	90	110	
Tl	205	1	No Gas	100.731	1.420	4328060	1.76	100	100.7	90	110	
Tl	203	1	No Gas	100.330	3.454	1847334	1.22	100	100.3	90	110	
Pb	208	1	No Gas	100.870	0.977	6049120	2.73	100	100.9	90	110	
U	238	1	No Gas	98.941	0.523	5750001	2.22	100	98.9	90	110	
Ca	43	2	He	10017.367	1.672	44051	1.92	10000	100.2	90	110	
Sb	121	2	He	101.131	1.308	1477071	0.32	100	101.1	90	110	
Ti	47	2	He	99.978	0.729	44927	0.57	100	100.0	90	110	
Cu	63	1	No Gas	99.392	0.942	2607545	1.21	100	99.4	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	3147258	1.38	3367912	93.45	70	120	
Ge	72	2	He	1981802	1.17	2128792	93.10	70	120	
Ge	72	1	No Gas	6235683	2.07	6259187	99.62	70	120	
In	115	1	No Gas	6680603	1.33	6832906	97.77	70	120	
Bi	209	1	No Gas	4669999	2.73	4819187	96.90	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	055_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\070220A.b
Acq Date Time	2020-07-02T13:10:12-05:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	011CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	1	No Gas	0.016	394.4	190385	0.7	0.5	
Be	9	1	No Gas	0.008	34.3	108	23.7	0.5	
V	51	2	He	-0.050	-9.8	1699	2.2	2.5	
Cr	52	2	He	-0.045	-28.4	1887	9.9	2.5	
Fe	56	2	He	0.320	32.4	29001	4.3	100	
Se	78	2	He	0.027	128.5	244	3.8	2	
As	75	2	He	-0.075	-39.2	286	20.9	2.5	
Ca	44	2	He	3.737	53.7	2704	4.3	100	
Na	23	2	He	32.107	15.0	373972	1.3	100	
Mg	24	2	He	0.721	19.0	2564	7.7	100	
K	39	2	He	-1.719	-97.8	101259	1.0	100	
Mn	55	2	He	0.214	16.1	3360	10.1	2.5	
Co	59	2	He	0.007	51.5	487	15.1	2.5	
Ni	60	2	He	-0.051	-31.9	650	12.6	2.5	
Cu	63	2	He	-0.795	-5.2	15633	2.5	2	
Zn	66	2	He	0.169	12.9	1133	6.9	2.5	
Al	27	2	He	2.129	22.2	3024	11.8	5	
B	11	1	No Gas	8.427	16.0	88996	6.2	0.5	CCB Main CR1 Failed
Al	27	1	No Gas	1.783	6.4	130244	2.8	5	
Si	28	1	No Gas	-0.168	-719.0	407473	3.8	10	
P	31	1	No Gas	-3.010	-17.7	40182	1.5	10	
Ag	107	1	No Gas	0.008	36.5	497	20.2	2.5	
Cd	111	1	No Gas	0.005	25.4	50	20.0	1	
Sr	88	1	No Gas	0.112	121.7	16794	45.8	2.5	
Mo	95	1	No Gas	0.041	22.7	640	16.2	2.5	
Sn	118	1	No Gas	-0.027	-81.2	5745	3.3	5	
Sb	121	1	No Gas	0.268	13.9	8476	11.1	2.5	
Ba	137	1	No Gas	-0.015	-96.5	977	13.4	2.5	
Tl	205	1	No Gas	0.216	70.5	9725	69.5	1	
Tl	203	1	No Gas	0.200	63.2	3878	62.0	1	
Pb	208	1	No Gas	0.021	20.0	2447	11.1	2.5	
U	238	1	No Gas	0.006	30.7	387	28.8	2.5	
Ca	43	2	He	5.259	174.0	87	46.6	100	
Sb	121	2	He	0.188	10.3	3481	7.7	2.5	
Ti	47	2	He	-0.021	-61.2	3	173.2	2.5	
Cu	63	1	No Gas	-0.842	-2.2	28059	2.9	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	3303283	1.77	3367912	98.08	70	120	
Ge	72	2	He	2022355	1.40	2128792	95.00	70	120	
Ge	72	1	No Gas	6323502	1.24	6259187	101.03	70	120	
In	115	1	No Gas	6974334	4.14	6832906	102.07	70	120	
Bi	209	1	No Gas	4811689	0.68	4819187	99.84	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	066_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\070220A.b
Acq Date Time	2020-07-02T13:33:58-05:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	011CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	No Gas	101.012	2.339	3535108	1.11	100	101.0	90	110	
Be	9	1	No Gas	94.701	3.359	859688	2.71	100	94.7	90	110	
V	51	2	He	101.499	0.178	1261673	0.90	100	101.5	90	110	
Cr	52	2	He	103.563	1.200	1472570	1.02	100	103.6	90	110	
Fe	56	2	He	10186.048	1.478	132448911	0.88	10000	101.9	90	110	
Se	78	2	He	99.898	1.468	19491	1.53	100	99.9	90	110	
Sn	118	2	He	102.791	1.636	1168410	0.64	100	102.8	90	110	
As	75	2	He	100.547	1.457	218880	0.40	100	100.5	90	110	
Ca	44	2	He	10026.947	0.478	783190	0.70	10000	100.3	90	110	
Na	23	2	He	10220.277	2.124	21099658	1.04	10000	102.2	90	110	
Mg	24	2	He	10122.167	0.893	12146169	1.37	10000	101.2	90	110	
K	39	2	He	10097.527	1.422	14664458	2.00	10000	101.0	90	110	
Mn	55	2	He	101.370	3.512	1064192	3.56	100	101.4	90	110	
Co	59	2	He	104.561	1.284	2229093	0.24	100	104.6	90	110	
Ni	60	2	He	102.671	0.801	558930	1.84	100	102.7	90	110	
Cu	63	2	He	103.812	2.937	1535987	3.82	100	103.8	90	110	
Zn	66	2	He	104.091	1.072	299794	1.95	100	104.1	90	110	
Al	27	2	He	100.664	1.053	71454	1.51	100	100.7	90	110	
B	11	1	No Gas	478.655	2.240	2541285	1.32	500	95.7	90	110	
Al	27	1	No Gas	101.795	6.596	3345377	3.47	100	101.8	90	110	
Si	28	1	No Gas	497.035	3.801	8794576	0.64	5000	9.9	90	110	CCV Main CR1-2 Failed
P	31	1	No Gas	484.424	3.405	889273	0.88	500	96.9	90	110	
Ag	107	1	No Gas	103.584	0.757	3345003	1.23	100	103.6	90	110	
Cd	111	1	No Gas	101.126	1.198	649503	1.67	100	101.1	90	110	
Sr	88	1	No Gas	104.242	0.931	6436453	0.61	100	104.2	90	110	
Mo	95	1	No Gas	101.785	0.978	1266818	0.81	100	101.8	90	110	
Sn	118	1	No Gas	103.659	1.233	2005423	1.37	100	103.7	90	110	
Sb	121	1	No Gas	99.442	2.631	2665796	0.66	100	99.4	90	110	
Ba	137	1	No Gas	100.160	0.934	904080	0.86	100	100.2	90	110	
Tl	205	1	No Gas	103.722	2.625	4661835	1.86	100	103.7	90	110	
Tl	203	1	No Gas	100.566	2.511	1937546	0.63	100	100.6	90	110	
Pb	208	1	No Gas	102.878	1.749	6453423	1.94	100	102.9	90	110	
U	238	1	No Gas	99.706	2.276	6061654	2.62	100	99.7	90	110	
Ca	43	2	He	10100.976	1.245	45981	1.42	10000	101.0	90	110	
Sb	121	2	He	101.194	0.886	1530214	1.83	100	101.2	90	110	
Ti	47	2	He	100.623	2.800	46810	2.97	100	100.6	90	110	
Cu	63	1	No Gas	102.416	1.284	2788162	1.90	100	102.4	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	3282844	1.75	3367912	97.47	70	120	
Ge	72	2	He	2051539	1.06	2128792	96.37	70	120	
Ge	72	1	No Gas	6475071	3.03	6259187	103.45	70	120	
In	115	1	No Gas	6783039	0.47	6832906	99.27	70	120	
Bi	209	1	No Gas	4886236	3.17	4819187	101.39	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	067_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\070220A.b
Acq Date Time	2020-07-02T13:35:41-05:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	011CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	1	No Gas	-0.060	-180.2	190933	1.4	0.5	
Be	9	1	No Gas	0.013	16.6	152	12.5	0.5	
V	51	2	He	-0.049	-6.4	1743	3.1	2.5	
Cr	52	2	He	-0.038	-9.5	2030	3.4	2.5	
Fe	56	2	He	0.206	55.3	28096	5.2	100	
Se	78	2	He	-0.067	-119.5	231	5.8	2	
As	75	2	He	-0.098	-5.8	242	4.2	2.5	
Ca	44	2	He	1.011	188.5	2547	6.6	100	
Na	23	2	He	-12.520	-20.9	290291	0.8	100	
Mg	24	2	He	0.703	29.2	2590	8.6	100	
K	39	2	He	-1.070	-127.7	104256	1.0	100	
Mn	55	2	He	0.160	8.1	2860	5.2	2.5	
Co	59	2	He	0.006	75.6	477	22.2	2.5	
Ni	60	2	He	-0.044	-54.4	700	17.8	2.5	
Cu	63	2	He	-0.868	-2.1	14895	2.6	2	
Zn	66	2	He	0.159	17.8	1127	7.7	2.5	
Al	27	2	He	1.571	10.6	2694	5.3	5	
B	11	1	No Gas	7.825	10.2	87335	5.0	0.5	CCB Main CR1 Failed
Al	27	1	No Gas	3.247	84.0	182715	47.8	5	
Si	28	1	No Gas	-2.052	-22.5	391392	0.9	10	
P	31	1	No Gas	-1.425	-17.5	44578	2.2	10	
Ag	107	1	No Gas	0.011	35.0	573	20.2	2.5	
Cd	111	1	No Gas	0.007	77.5	63	55.5	1	
Sr	88	1	No Gas	0.025	14.3	11498	3.6	2.5	
Mo	95	1	No Gas	0.040	10.5	630	6.9	2.5	
Sn	118	1	No Gas	-0.036	-88.3	5558	9.5	5	
Sb	121	1	No Gas	0.335	16.4	10635	14.1	2.5	
Ba	137	1	No Gas	-0.021	-40.0	923	10.2	2.5	
Tl	205	1	No Gas	0.225	65.2	10513	64.8	1	
Tl	203	1	No Gas	0.219	70.1	4401	69.4	1	
Pb	208	1	No Gas	0.027	6.4	2884	3.5	2.5	
U	238	1	No Gas	0.007	17.5	483	17.8	2.5	
Ca	43	2	He	9.893	116.0	110	48.1	100	
Sb	121	2	He	0.270	9.0	4798	7.3	2.5	
Ti	47	2	He	0.029	212.8	27	108.3	2.5	
Cu	63	1	No Gas	-0.914	-1.6	27194	2.1	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	3357652	0.52	3367912	99.70	70	120	
Ge	72	2	He	2063226	1.03	2128792	96.92	70	120	
Ge	72	1	No Gas	6573058	1.19	6259187	105.01	70	120	
In	115	1	No Gas	6949258	1.82	6832906	101.70	70	120	
Bi	209	1	No Gas	4973241	1.43	4819187	103.20	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	075_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\070220A.b
Acq Date Time	2020-07-02T13:50:54-05:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	011CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	No Gas	104.428	3.749	3579273	1.45	100	104.4	90	110	
Be	9	1	No Gas	96.407	3.622	858629	1.60	100	96.4	90	110	
V	51	2	He	97.996	2.118	1184980	2.51	100	98.0	90	110	
Cr	52	2	He	98.904	1.909	1368166	2.49	100	98.9	90	110	
Fe	56	2	He	9956.505	1.081	125938578	1.38	10000	99.6	90	110	
Se	78	2	He	96.577	1.245	18336	1.14	100	96.6	90	110	
Sn	118	2	He	102.101	2.314	1124960	1.90	100	102.1	90	110	
As	75	2	He	98.837	1.153	209294	0.57	100	98.8	90	110	
Ca	44	2	He	9850.941	1.874	748421	1.29	10000	98.5	90	110	
Na	23	2	He	10213.898	1.207	20512434	0.64	10000	102.1	90	110	
Mg	24	2	He	9972.224	2.215	11638238	1.64	10000	99.7	90	110	
K	39	2	He	9935.084	1.397	14034723	0.88	10000	99.4	90	110	
Mn	55	2	He	98.224	1.322	1003004	0.89	100	98.2	90	110	
Co	59	2	He	103.681	2.386	2149920	1.81	100	103.7	90	110	
Ni	60	2	He	102.256	1.464	541404	1.04	100	102.3	90	110	
Cu	63	2	He	104.488	0.905	1503279	0.80	100	104.5	90	110	
Zn	66	2	He	102.600	0.706	287409	0.18	100	102.6	90	110	
Al	27	2	He	98.436	1.875	67996	1.84	100	98.4	90	110	
B	11	1	No Gas	510.160	3.043	2654661	1.15	500	102.0	90	110	
Al	27	1	No Gas	103.197	3.645	3314693	1.14	100	103.2	90	110	
Si	28	1	No Gas	511.018	3.398	8824842	1.91	5000	10.2	90	110	CCV Main CR1-2 Failed
P	31	1	No Gas	493.748	1.789	885056	2.03	500	98.7	90	110	
Ag	107	1	No Gas	102.347	2.132	3391377	1.17	100	102.3	90	110	
Cd	111	1	No Gas	99.836	0.734	658093	1.82	100	99.8	90	110	
Sr	88	1	No Gas	102.169	3.024	6472595	0.69	100	102.2	90	110	
Mo	95	1	No Gas	98.862	2.622	1262497	0.62	100	98.9	90	110	
Sn	118	1	No Gas	103.460	3.351	2053466	1.11	100	103.5	90	110	
Sb	121	1	No Gas	104.120	2.196	2727301	0.41	100	104.1	90	110	
Ba	137	1	No Gas	98.599	1.991	913284	0.59	100	98.6	90	110	
Tl	205	1	No Gas	105.589	2.222	4713372	1.84	100	105.6	90	110	
Tl	203	1	No Gas	102.337	1.936	1958370	1.47	100	102.3	90	110	
Pb	208	1	No Gas	103.518	0.623	6448954	1.16	100	103.5	90	110	
U	238	1	No Gas	100.213	1.258	6050211	1.28	100	100.2	90	110	
Ca	43	2	He	9859.808	3.532	43653	3.04	10000	98.6	90	110	
Sb	121	2	He	102.602	2.152	1508984	2.04	100	102.6	90	110	
Ti	47	2	He	99.357	1.453	44957	1.47	100	99.4	90	110	
Cu	63	1	No Gas	99.759	1.070	2654820	1.63	100	99.8	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	3221634	2.08	3367912	95.66	70	120	
Ge	72	2	He	1995465	0.59	2128792	93.74	70	120	
Ge	72	1	No Gas	6326024	2.52	6259187	101.07	70	120	
In	115	1	No Gas	6962651	2.54	6832906	101.90	70	120	
Bi	209	1	No Gas	4851060	0.60	4819187	100.66	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	076_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\070220A.b
Acq Date Time	2020-07-02T13:52:39-05:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	011CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	1	No Gas	0.069	220.7	189437	1.0	0.5	
Be	9	1	No Gas	0.011	32.1	133	22.9	0.5	
V	51	2	He	-0.050	-19.6	1709	7.1	2.5	
Cr	52	2	He	-0.034	-33.2	2057	7.3	2.5	
Fe	56	2	He	0.013	553.6	25227	2.4	100	
Se	78	2	He	-0.103	-52.3	221	5.0	2	
As	75	2	He	-0.096	-16.1	243	14.8	2.5	
Ca	44	2	He	-0.864	-86.9	2367	2.4	100	
Na	23	2	He	34.069	11.0	380360	0.8	100	
Mg	24	2	He	0.131	122.5	1877	11.2	100	
K	39	2	He	-3.272	-62.0	99689	1.9	100	
Mn	55	2	He	0.139	3.6	2597	1.1	2.5	
Co	59	2	He	0.008	6.1	497	3.1	2.5	
Ni	60	2	He	-0.049	-8.9	663	2.3	2.5	
Cu	63	2	He	-0.862	-3.2	14778	2.5	2	
Zn	66	2	He	0.184	14.7	1183	5.8	2.5	
Al	27	2	He	1.979	7.5	2937	2.5	5	
B	11	1	No Gas	23.343	5.1	165047	4.0	0.5	CCB Main CR1 Failed
Al	27	1	No Gas	1.685	11.3	131781	2.2	5	
Si	28	1	No Gas	-0.727	-300.8	413839	11.8	10	
P	31	1	No Gas	-2.602	-33.6	42368	0.9	10	
Ag	107	1	No Gas	0.015	10.9	713	7.7	2.5	
Cd	111	1	No Gas	0.004	93.4	43	58.1	1	
Sr	88	1	No Gas	0.026	12.4	11672	1.4	2.5	
Mo	95	1	No Gas	0.050	35.4	757	28.0	2.5	
Sn	118	1	No Gas	-0.010	-90.3	6132	4.6	5	
Sb	121	1	No Gas	0.427	8.7	13130	9.2	2.5	
Ba	137	1	No Gas	-0.010	-106.2	1027	8.4	2.5	
Tl	205	1	No Gas	0.221	68.2	10473	65.2	1	
Tl	203	1	No Gas	0.214	69.4	4354	66.2	1	
Pb	208	1	No Gas	0.024	25.0	2760	12.5	2.5	
U	238	1	No Gas	0.007	38.1	463	34.9	2.5	
Ca	43	2	He	2.901	166.2	77	27.2	100	
Sb	121	2	He	0.359	3.0	6055	2.8	2.5	
Ti	47	2	He	0.023	242.6	23	107.9	2.5	
Cu	63	1	No Gas	-0.938	-7.0	26463	4.5	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	3257472	2.00	3367912	96.72	70	120	
Ge	72	2	He	2035373	1.36	2128792	95.61	70	120	
Ge	72	1	No Gas	6557994	2.79	6259187	104.77	70	120	
In	115	1	No Gas	7000967	2.18	6832906	102.46	70	120	
Bi	209	1	No Gas	5105576	1.80	4819187	105.94	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	084_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\070220A.b
Acq Date Time	2020-07-02T14:38:16-05:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	011CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	No Gas	103.053	0.999	3451139	1.60	100	103.1	90	110	
Be	9	1	No Gas	97.955	3.403	851619	2.47	100	98.0	90	110	
V	51	2	He	101.443	2.484	1227921	0.80	100	101.4	90	110	
Cr	52	2	He	100.970	0.776	1398468	1.10	100	101.0	90	110	
Fe	56	2	He	10102.749	1.845	127943825	0.83	10000	101.0	90	110	
Se	78	2	He	98.719	0.419	18764	1.57	100	98.7	90	110	
Sn	118	2	He	106.006	2.651	1159464	2.18	100	106.0	90	110	
As	75	2	He	98.837	1.653	209564	0.33	100	98.8	90	110	
Ca	44	2	He	9903.457	0.898	753447	0.87	10000	99.0	90	110	
Na	23	2	He	10155.672	1.911	20423739	1.22	10000	101.6	90	110	
Mg	24	2	He	9967.938	1.465	11649462	1.33	10000	99.7	90	110	
K	39	2	He	10053.011	1.992	14217824	0.38	10000	100.5	90	110	
Mn	55	2	He	101.025	2.763	1032789	1.46	100	101.0	90	110	
Co	59	2	He	102.443	1.881	2127040	0.73	100	102.4	90	110	
Ni	60	2	He	100.529	2.012	532957	1.07	100	100.5	90	110	
Cu	63	2	He	102.585	3.115	1478002	1.36	100	102.6	90	110	
Zn	66	2	He	102.080	1.920	286308	0.25	100	102.1	90	110	
Al	27	2	He	99.007	1.217	68475	1.56	100	99.0	90	110	
B	11	1	No Gas	496.353	0.596	2522767	1.47	500	99.3	90	110	
Al	27	1	No Gas	102.211	2.039	3252732	1.20	100	102.2	90	110	
Si	28	1	No Gas	525.005	4.716	8970872	5.13	5000	10.5	90	110	CCV Main CR1-2 Failed
P	31	1	No Gas	501.357	1.024	889195	0.46	500	100.3	90	110	
Ag	107	1	No Gas	102.181	0.902	3316714	1.27	100	102.2	90	110	
Cd	111	1	No Gas	99.178	0.791	640258	0.91	100	99.2	90	110	
Sr	88	1	No Gas	101.071	1.982	6273569	2.30	100	101.1	90	110	
Mo	95	1	No Gas	97.155	0.321	1215485	0.83	100	97.2	90	110	
Sn	118	1	No Gas	104.835	0.720	2038519	0.37	100	104.8	90	110	
Sb	121	1	No Gas	103.631	1.627	2688371	1.24	100	103.6	90	110	
Ba	137	1	No Gas	97.926	1.391	888484	1.01	100	97.9	90	110	
Tl	205	1	No Gas	102.831	2.268	4598040	1.35	100	102.8	90	110	
Tl	203	1	No Gas	100.858	2.450	1933253	1.17	100	100.9	90	110	
Pb	208	1	No Gas	103.907	2.569	6483356	1.49	100	103.9	90	110	
U	238	1	No Gas	99.921	2.541	6044381	3.58	100	99.9	90	110	
Ca	43	2	He	10143.090	0.895	44971	0.96	10000	101.4	90	110	
Sb	121	2	He	100.688	0.788	1482851	0.90	100	100.7	90	110	
Ti	47	2	He	100.122	3.460	45352	1.89	100	100.1	90	110	
Cu	63	1	No Gas	100.976	0.640	2660398	1.23	100	101.0	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	3144071	1.41	3367912	93.35	70	120	
Ge	72	2	He	1998295	1.68	2128792	93.87	70	120	
Ge	72	1	No Gas	6263248	0.81	6259187	100.06	70	120	
In	115	1	No Gas	6818072	0.53	6832906	99.78	70	120	
Bi	209	1	No Gas	4860286	2.20	4819187	100.85	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	085_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\070220A.b
Acq Date Time	2020-07-02T14:39:58-05:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	011CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	1	No Gas	-0.017	-290.2	190425	1.2	0.5	
Be	9	1	No Gas	0.011	17.1	140	14.3	0.5	
V	51	2	He	-0.018	-65.5	2089	5.5	2.5	
Cr	52	2	He	-0.017	-89.0	2284	7.9	2.5	
Fe	56	2	He	-0.081	-109.0	23918	3.1	100	
Se	78	2	He	0.014	573.6	242	4.3	2	
As	75	2	He	-0.051	-18.1	340	7.4	2.5	
Ca	44	2	He	2.888	128.8	2650	12.3	100	
Na	23	2	He	-16.331	-30.4	277620	1.8	100	
Mg	24	2	He	0.322	38.1	2097	8.2	100	
K	39	2	He	-2.458	-84.9	100486	1.0	100	
Mn	55	2	He	0.136	8.6	2557	3.0	2.5	
Co	59	2	He	0.004	61.5	410	10.6	2.5	
Ni	60	2	He	-0.064	-23.2	580	12.4	2.5	
Cu	63	2	He	-0.930	-6.1	13737	4.4	2	
Zn	66	2	He	0.192	24.6	1203	10.8	2.5	
Al	27	2	He	1.857	10.4	2844	5.1	5	
B	11	1	No Gas	10.619	13.3	101105	6.0	0.5	CCB Main CR1 Failed
Al	27	1	No Gas	1.732	2.6	131341	0.7	5	
Si	28	1	No Gas	-3.364	-7.2	362489	1.5	10	
P	31	1	No Gas	0.570	37.1	47251	0.3	10	
Ag	107	1	No Gas	0.009	45.8	510	24.5	2.5	
Cd	111	1	No Gas	0.004	95.8	43	58.1	1	
Sr	88	1	No Gas	0.031	33.2	11669	3.6	2.5	
Mo	95	1	No Gas	0.033	17.5	537	15.1	2.5	
Sn	118	1	No Gas	0.003	1575.6	6226	14.5	5	
Sb	121	1	No Gas	0.392	10.7	11976	8.8	2.5	
Ba	137	1	No Gas	-0.024	-57.5	873	12.8	2.5	
Tl	205	1	No Gas	0.229	66.0	10399	66.6	1	
Tl	203	1	No Gas	0.220	61.0	4288	61.4	1	
Pb	208	1	No Gas	0.030	10.4	3004	8.0	2.5	
U	238	1	No Gas	0.007	13.9	417	14.7	2.5	
Ca	43	2	He	4.443	82.3	83	18.3	100	
Sb	121	2	He	0.312	7.1	5335	4.8	2.5	
Ti	47	2	He	0.023	50.5	23	24.7	2.5	
Cu	63	1	No Gas	-0.978	-2.7	25013	2.1	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	3323037	2.03	3367912	98.67	70	120	
Ge	72	2	He	2028293	1.99	2128792	95.28	70	120	
Ge	72	1	No Gas	6457127	0.90	6259187	103.16	70	120	
In	115	1	No Gas	6836666	2.28	6832906	100.06	70	120	
Bi	209	1	No Gas	4825275	1.61	4819187	100.13	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	096_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\070220A.b
Acq Date Time	2020-07-02T15:08:39-05:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	011CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	No Gas	101.940	0.689	3496148	1.17	100	101.9	90	110	
Be	9	1	No Gas	94.624	1.796	842196	1.92	100	94.6	90	110	
V	51	2	He	99.382	1.907	1192613	1.62	100	99.4	90	110	
Cr	52	2	He	102.766	3.993	1410487	3.23	100	102.8	90	110	
Fe	56	2	He	10123.092	0.301	127090951	1.24	10000	101.2	90	110	
Se	78	2	He	96.692	1.717	18220	0.91	100	96.7	90	110	
Sn	118	2	He	102.772	0.367	1123051	1.34	100	102.8	90	110	
As	75	2	He	99.407	0.704	208934	0.74	100	99.4	90	110	
Ca	44	2	He	9813.140	1.924	739983	1.35	10000	98.1	90	110	
Na	23	2	He	10256.324	1.265	20442674	1.00	10000	102.6	90	110	
Mg	24	2	He	10060.601	2.188	11652859	0.86	10000	100.6	90	110	
K	39	2	He	9943.424	1.675	13940729	0.39	10000	99.4	90	110	
Mn	55	2	He	100.542	0.840	1019097	1.87	100	100.5	90	110	
Co	59	2	He	103.978	1.536	2140013	0.89	100	104.0	90	110	
Ni	60	2	He	101.016	0.828	530911	1.71	100	101.0	90	110	
Cu	63	2	He	101.728	1.397	1453458	2.10	100	101.7	90	110	
Zn	66	2	He	100.503	0.962	279442	0.50	100	100.5	90	110	
Al	27	2	He	100.077	2.543	68576	1.06	100	100.1	90	110	
B	11	1	No Gas	477.768	1.473	2487323	2.56	500	95.6	90	110	
Al	27	1	No Gas	100.344	1.862	3222563	1.34	100	100.3	90	110	
Si	28	1	No Gas	493.214	2.328	8523098	1.15	5000	9.9	90	110	CCV Main CR1-2 Failed
P	31	1	No Gas	486.979	2.951	872430	2.09	500	97.4	90	110	
Ag	107	1	No Gas	101.667	3.944	3226622	3.13	100	101.7	90	110	
Cd	111	1	No Gas	98.548	2.460	622089	1.44	100	98.5	90	110	
Sr	88	1	No Gas	104.787	3.209	6359326	2.39	100	104.8	90	110	
Mo	95	1	No Gas	99.636	3.225	1218787	2.14	100	99.6	90	110	
Sn	118	1	No Gas	102.726	0.760	1953742	1.29	100	102.7	90	110	
Sb	121	1	No Gas	98.526	0.934	2578324	0.73	100	98.5	90	110	
Ba	137	1	No Gas	99.330	2.655	881352	2.45	100	99.3	90	110	
Tl	205	1	No Gas	102.044	3.960	4370147	3.14	100	102.0	90	110	
Tl	203	1	No Gas	100.658	4.759	1847503	2.90	100	100.7	90	110	
Pb	208	1	No Gas	101.466	1.318	6065199	1.41	100	101.5	90	110	
U	238	1	No Gas	99.103	1.755	5740766	1.26	100	99.1	90	110	
Ca	43	2	He	9935.994	1.423	43663	0.03	10000	99.4	90	110	
Sb	121	2	He	101.468	2.000	1481028	0.88	100	101.5	90	110	
Ti	47	2	He	100.367	2.178	45071	1.50	100	100.4	90	110	
Cu	63	1	No Gas	99.006	0.463	2632101	0.82	100	99.0	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	3218040	1.26	3367912	95.55	70	120	
Ge	72	2	He	1980660	1.44	2128792	93.04	70	120	
Ge	72	1	No Gas	6317852	1.06	6259187	100.94	70	120	
In	115	1	No Gas	6668439	1.67	6832906	97.59	70	120	
Bi	209	1	No Gas	4655614	2.42	4819187	96.61	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	097_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\070220A.b
Acq Date Time	2020-07-02T15:10:23-05:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	011CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	1	No Gas	0.002	8461.8	189674	0.7	0.5	
Be	9	1	No Gas	0.009	25.2	117	17.3	0.5	
V	51	2	He	-0.029	-16.4	1976	1.5	2.5	
Cr	52	2	He	-0.029	-36.8	2130	4.2	2.5	
Fe	56	2	He	-0.088	-73.3	23988	0.4	100	
Se	78	2	He	-0.047	-391.0	233	17.5	2	
As	75	2	He	-0.011	-111.1	428	3.7	2.5	
Ca	44	2	He	-1.781	-99.3	2300	2.3	100	
Na	23	2	He	5.928	112.7	324341	0.7	100	
Mg	24	2	He	0.273	21.2	2050	3.9	100	
K	39	2	He	-0.153	-1132.4	104448	1.7	100	
Mn	55	2	He	0.387	3.3	5198	2.7	2.5	
Co	59	2	He	0.006	33.9	457	12.1	2.5	
Ni	60	2	He	-0.061	-24.4	600	10.9	2.5	
Cu	63	2	He	-0.688	-10.7	17311	3.2	2	
Zn	66	2	He	0.139	51.1	1053	15.6	2.5	
Al	27	2	He	1.767	1.3	2800	3.5	5	
B	11	1	No Gas	14.120	4.5	118862	3.9	0.5	CCB Main CR1 Failed
Al	27	1	No Gas	1.821	7.1	133213	2.4	5	
Si	28	1	No Gas	-2.354	-1.7	376738	1.2	10	
P	31	1	No Gas	0.228	277.7	46314	1.2	10	
Ag	107	1	No Gas	0.005	48.6	390	20.4	2.5	
Cd	111	1	No Gas	0.002	154.1	27	57.3	1	
Sr	88	1	No Gas	0.070	12.9	14034	2.8	2.5	
Mo	95	1	No Gas	0.038	15.0	593	11.2	2.5	
Sn	118	1	No Gas	0.007	444.7	6272	8.7	5	
Sb	121	1	No Gas	0.347	8.2	10695	6.4	2.5	
Ba	137	1	No Gas	-0.029	-34.3	833	10.8	2.5	
Tl	205	1	No Gas	0.222	63.0	9869	63.5	1	
Tl	203	1	No Gas	0.213	63.8	4071	64.1	1	
Pb	208	1	No Gas	0.024	11.0	2570	6.5	2.5	
U	238	1	No Gas	0.006	43.0	370	42.0	2.5	
Ca	43	2	He	8.000	50.5	100	17.3	100	
Sb	121	2	He	0.284	2.7	4958	5.6	2.5	
Ti	47	2	He	-0.006	-12.8	10	0.0	2.5	
Cu	63	1	No Gas	-0.741	-2.3	31109	2.6	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	3299914	1.82	3367912	97.98	70	120	
Ge	72	2	He	2041907	3.73	2128792	95.92	70	120	
Ge	72	1	No Gas	6410666	1.18	6259187	102.42	70	120	
In	115	1	No Gas	6806308	1.30	6832906	99.61	70	120	
Bi	209	1	No Gas	4737424	1.62	4819187	98.30	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	108_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\070220A.b
Acq Date Time	2020-07-02T15:34:25-05:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	011CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	No Gas	104.824	2.425	3847958	1.90	100	104.8	90	110	
Be	9	1	No Gas	100.802	3.782	961428	1.90	100	100.8	90	110	
V	51	2	He	104.166	2.168	1374839	1.44	100	104.2	90	110	
Cr	52	2	He	103.639	1.105	1564919	0.14	100	103.6	90	110	
Fe	56	2	He	10491.880	2.702	144874285	2.22	10000	104.9	90	110	
Se	78	2	He	102.363	1.077	21203	0.43	100	102.4	90	110	
Sn	118	2	He	107.474	2.773	1262853	2.08	100	107.5	90	110	
As	75	2	He	103.145	0.982	238443	0.17	100	103.1	90	110	
Ca	44	2	He	10155.183	2.567	842254	2.07	10000	101.6	90	110	
Na	23	2	He	10760.351	1.760	23578365	2.42	10000	107.6	90	110	
Mg	24	2	He	10417.876	1.606	13274592	1.18	10000	104.2	90	110	
K	39	2	He	10450.467	2.073	16111876	1.74	10000	104.5	90	110	
Mn	55	2	He	103.397	0.496	1152702	0.69	100	103.4	90	110	
Co	59	2	He	108.083	3.708	2446577	2.75	100	108.1	90	110	
Ni	60	2	He	105.380	2.279	609105	1.77	100	105.4	90	110	
Cu	63	2	He	107.991	1.036	1695328	1.14	100	108.0	90	110	
Zn	66	2	He	104.742	0.361	320334	0.65	100	104.7	90	110	
Al	27	2	He	103.938	1.828	78293	1.94	100	103.9	90	110	
B	11	1	No Gas	555.218	2.604	3090176	1.53	500	111.0	90	110	CCV Main CR1-2 Failed
Al	27	1	No Gas	109.022	0.186	3721688	1.13	100	109.0	90	110	
Si	28	1	No Gas	568.401	1.547	10393003	0.49	5000	11.4	90	110	CCV Main CR1-2 Failed
P	31	1	No Gas	536.768	1.339	1019252	2.21	500	107.4	90	110	
Ag	107	1	No Gas	110.805	0.917	3739168	1.30	100	110.8	90	110	CCV Main CR1-2 Failed
Cd	111	1	No Gas	106.416	0.083	714217	0.79	100	106.4	90	110	
Sr	88	1	No Gas	113.244	2.633	7305598	2.11	100	113.2	90	110	CCV Main CR1-2 Failed
Mo	95	1	No Gas	108.562	2.195	1411883	1.65	100	108.6	90	110	
Sn	118	1	No Gas	108.941	0.750	2202059	0.19	100	108.9	90	110	
Sb	121	1	No Gas	102.132	1.170	2845764	0.25	100	102.1	90	110	
Ba	137	1	No Gas	104.478	1.081	985424	0.44	100	104.5	90	110	
Tl	205	1	No Gas	108.171	2.514	4944498	1.86	100	108.2	90	110	
Tl	203	1	No Gas	106.452	0.824	2086214	0.77	100	106.5	90	110	
Pb	208	1	No Gas	107.005	1.075	6825958	0.45	100	107.0	90	110	
U	238	1	No Gas	102.304	2.270	6324386	1.55	100	102.3	90	110	
Ca	43	2	He	10457.039	3.096	50553	3.55	10000	104.6	90	110	
Sb	121	2	He	104.268	2.907	1674300	3.06	100	104.3	90	110	
Ti	47	2	He	104.113	2.430	51426	1.50	100	104.1	90	110	
Cu	63	1	No Gas	105.777	2.491	2990243	1.23	100	105.8	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	3450385	2.67	3367912	102.45	70	120	
Ge	72	2	He	2178650	0.97	2128792	102.34	70	120	
Ge	72	1	No Gas	6727407	1.22	6259187	107.48	70	120	
In	115	1	No Gas	7088353	0.70	6832906	103.74	70	120	
Bi	209	1	No Gas	4967729	0.72	4819187	103.08	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	109_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\070220A.b
Acq Date Time	2020-07-02T15:36:08-05:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	011CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	1	No Gas	0.233	23.1	215236	0.1	0.5	
Be	9	1	No Gas	0.011	29.4	145	22.6	0.5	
V	51	2	He	0.014	51.4	2644	3.2	2.5	
Cr	52	2	He	-0.030	-32.8	2227	6.8	2.5	
Fe	56	2	He	0.105	91.7	27919	4.2	100	
Se	78	2	He	-0.063	-146.6	241	8.3	2	
As	75	2	He	-0.042	-35.2	380	8.5	2.5	
Ca	44	2	He	-0.265	-692.7	2550	6.2	100	
Na	23	2	He	194.785	1.7	744684	1.5	100	CCB Main CR1 Failed
Mg	24	2	He	1.097	10.2	3197	4.0	100	
K	39	2	He	6.942	11.9	120792	0.6	100	
Mn	55	2	He	0.353	5.1	5104	4.3	2.5	
Co	59	2	He	0.007	20.3	513	6.8	2.5	
Ni	60	2	He	-0.065	-27.9	613	16.3	2.5	
Cu	63	2	He	0.220	22.1	32092	2.4	2	
Zn	66	2	He	0.164	18.1	1190	7.2	2.5	
Al	27	2	He	1.933	14.2	3070	6.3	5	
B	11	1	No Gas	45.837	4.3	310889	3.7	0.5	CCB Main CR1 Failed
Al	27	1	No Gas	1.954	1.3	149782	0.6	5	
Si	28	1	No Gas	3.565	11.6	518125	0.7	10	
P	31	1	No Gas	0.213	113.0	50445	0.8	10	
Ag	107	1	No Gas	0.011	17.7	650	10.1	2.5	
Cd	111	1	No Gas	0.004	55.3	50	34.6	1	
Sr	88	1	No Gas	0.063	5.9	15155	0.9	2.5	
Mo	95	1	No Gas	0.043	6.1	730	4.7	2.5	
Sn	118	1	No Gas	-0.023	-71.0	6325	4.5	5	
Sb	121	1	No Gas	0.267	16.6	9347	13.7	2.5	
Ba	137	1	No Gas	-0.016	-41.0	1053	6.3	2.5	
Tl	205	1	No Gas	0.217	65.5	10356	64.8	1	
Tl	203	1	No Gas	0.212	66.5	4338	65.6	1	
Pb	208	1	No Gas	0.021	3.1	2594	3.1	2.5	
U	238	1	No Gas	0.007	27.4	460	25.6	2.5	
Ca	43	2	He	8.269	82.5	107	30.1	100	
Sb	121	2	He	0.209	7.7	4024	5.8	2.5	
Ti	47	2	He	0.041	128.2	33	75.5	2.5	
Cu	63	1	No Gas	0.214	10.7	61432	0.3	2.5	

QC ISTD Table

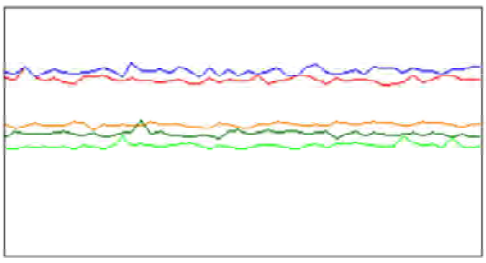
Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	3597481	1.03	3367912	106.82	70	120	
Ge	72	2	He	2150618	0.55	2128792	101.03	70	120	
Ge	72	1	No Gas	6985165	1.05	6259187	111.60	70	120	
In	115	1	No Gas	7559608	1.01	6832906	110.64	70	120	
Bi	209	1	No Gas	5101838	1.58	4819187	105.87	70	120	

Tune Check Report

Operator Name	ALSHS NoUser
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\070220A.b
Acq. Date-Time	7/2/2020 9:59:49 AM
Report Comment	---
Instrument Name	G8421A SG18523544

[No Gas]

Sensitivity



Sampling Period [sec]	0.514
Integration Time [sec]	0.1

Mass	Range	Count	Resp [cps/ug/l]	Resp (Required) [cps/ug/l]	Resp (Flag)
9	10000	7115	71153.18		
24	50000	22256	222562.94		
59	50000	37300	373002.08		
115	100000	53020	530202.46		
208	50000	24676	246763.03		

Mass	Resp Ratio	Resp Ratio (Required)	Resp Ratio (Flag)
9		-	
24		-	
59		-	
115		-	
208		-	

Mass	RSD%	RSD% (Required)	RSD% (Flag)
9	1.816	5.000	
24	2.693	5.000	
59	1.730	5.000	
115	1.603	5.000	
208	2.297	5.000	

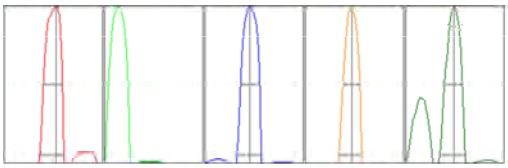
Mass	Background	Background (Required)	Background (Flag)
9	0.200		
24	0.600		
59	0.300		
115	1.000		
208	2.400		

Oxide/Doubly Charged Ratio

Oxide	156 / 140 0.793 %
Doubly Charged	70 / 140 1.475 %

Tune Check Report

Resolution/Axis



Integration Time [sec]	0.1
Acquisition Time [sec]	37.4
Y Axis	Linear

Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
9	7181.70	9.10	8.90 - 9.10	
24	22426.16	23.95	23.90 - 24.10	
59	37828.53	58.90	58.90 - 59.10	
115	53977.37	114.95	114.90 - 115.10	
208	24812.77	208.00	207.90 - 208.10	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (Flag)
9	0.60	0.734		
24	0.62	0.736		
59	0.57	0.732		
115	0.51	0.684		
208	0.56	0.769		

Tune Parameters

Plasma Parameters

Plasma Mode	---	Nebulizer Gas	0.45 L/min	Dilution Gas	0.55 L/min
RF Power	1600 W	Option Gas	---	Auxiliary Gas	0.90 L/min
RF Matching	1.80 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min
Sample Depth	8.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	9.1 V	Deflect	12.6 V
Extract 2	-195.0 V	Cell Entrance	-30 V	Plate Bias	-35 V
Omega Bias	-90 V	Cell Exit	-50 V		

Cell Parameters

Use Gas	No	3rd Gas Flow	---	Energy Discrimination	5.0 V
He Flow	0.0 mL/min	OctP Bias	-8.0 V		
H2 Flow	---	OctP RF	190 V		

QP Parameters

Mass Gain	132	Axis Gain	1.0003	QP Bias	-3.0 V
Mass Offset	126	Axis Offset	0.05		

Hardware Settings

Torch

Torch H	-0.3 mm	Torch V	0.2 mm

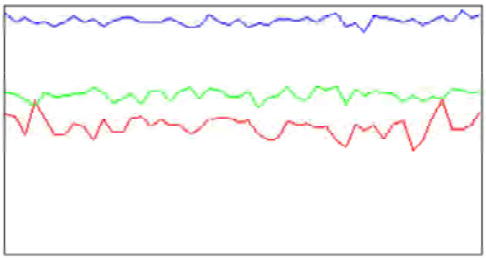
EM

Discriminator	3.1 mV	Analog HV	2384 V	Pulse HV	1167 V

[He]

Tune Check Report

Sensitivity



Sampling Period [sec]	0.306
Integration Time [sec]	0.1

Mass	Range	Count	Resp [cps/ug/l]	Resp (Required) [cps/ug/l]	Resp (Flag)
9	500	258	2577.04		
24	2000	1283	12831.86		
59	20000	18861	188606.93		

Mass	Resp Ratio	Resp Ratio (Required)	Resp Ratio (Flag)
9		-	
24		-	
59		-	

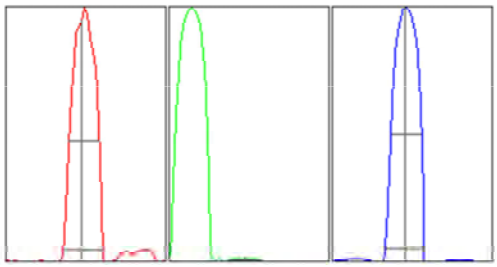
Mass	RSD%	RSD% (Required)	RSD% (Flag)
9	8.046	5.000	Fail
24	3.252	5.000	
59	1.783	5.000	

Mass	Background	Background (Required)	Background (Flag)
9	0.000		
24	0.300		
59	0.000		

Oxide/Doubly Charged Ratio

Oxide	156 / 140 0.435 %
Doubly Charged	70 / 140 1.130 %

Resolution/Axis



Integration Time [sec]	0.1
Acquisition Time [sec]	22.24
Y Axis	Linear

Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
9	250.03	8.95	8.90 - 9.10	
24	1252.61	23.95	23.90 - 24.10	
59	19507.06	58.90	58.90 - 59.10	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (Flag)
9	0.58	0.737		
24	0.62	0.735		

Tune Check Report

Mass	W-50%	W-5%	W-5% (Required)	W-5% (Flag)
59	0.56	0.728		

Tune Parameters

Plasma Parameters

Plasma Mode	---	Nebulizer Gas	0.45 L/min	Dilution Gas	0.55 L/min
RF Power	1600 W	Option Gas	---	Auxiliary Gas	0.90 L/min
RF Matching	1.80 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min
Sample Depth	8.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	10.0 V	Deflect	0.0 V
Extract 2	-195.0 V	Cell Entrance	-40 V	Plate Bias	-60 V
Omega Bias	-80 V	Cell Exit	-60 V		

Cell Parameters

Use Gas	Yes	3rd Gas Flow	---	Energy Discrimination	3.0 V
He Flow	4.0 mL/min	OctP Bias	-18.0 V		
H2 Flow	---	OctP RF	200 V		

QP Parameters

Mass Gain	132	Axis Gain	1.0003	QP Bias	-15.0 V
Mass Offset	126	Axis Offset	0.05		

Hardware Settings

Torch

Torch H	-0.3 mm	Torch V	0.2 mm

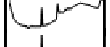
EM

Discriminator	3.1 mV	Analog HV	2384 V	Pulse HV	1167 V

HS20061178 Wet Chem Raw Data (IC)

ALS WO# HS20061178

Sequence: 062420
Last Update Operator: alshs.nouser

CD	Name	Comment	Type	Position	Dilution	Level	Instrument Method	Processing Method	Volume	Status
	STD1		Calibration	GB1	1.0000	1	Anions Program 06022020.1	Anions Processing Method	5.0	Finished
	STD2		Calibration	GB2	1.0000	2	Anions Program 06022020.1	Anions Processing Method	5.0	Finished
	STD3		Calibration	GB3	1.0000	3	Anions Program 06022020.1	Anions Processing Method	5.0	Finished
	STD4		Calibration	GB4	1.0000	4	Anions Program 06022020.1	Anions Processing Method	5.0	Finished
	STD5		Calibration	GB5	1.0000	5	Anions Program 06022020.1	Anions Processing Method	5.0	Finished
	STD6		Calibration	GB6	1.0000	6	Anions Program 06022020.1	Anions Processing Method	5.0	Finished
	ICV		Unknown	GB7	1.0000		Anions Program 06022020.1	Anions Processing Method	5.0	Finished
	ICB		Unknown	BA3	1.0000		Anions Program 06022020.1	Anions Processing Method	5.0	Finished
	CCB		Unknown	BA1	1.0000		Anions Program 06022020.1	Anions Processing Method	5.0	Finished
	CCV		Unknown	BA2	1.0000		Anions Program 06022020.1	Anions Processing Method	5.0	Finished
	WBLKW1-062420		Unknown	BB1	1.0000		Anions Program 06022020.1	Anions Processing Method	5.0	Finished
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	CCV1		Unknown	BA4	1.0000		Anions Program 06022020.1	Anions Processing Method	5.0	Finished
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	CCV		Unknown	BA2	1.0000		Anions Program 06022020.1	Anions Processing Method	5.0	Finished
	CCB		Unknown	BA3	1.0000		Anions Program 06022020.1	Anions Processing Method	5.0	Finished
	HS20061149-01		Unknown	GE3	1.0000		Anions Program 06022020.1	Anions Processing Method	5.0	Finished
	HS20061149-01MS		Unknown	GE4	1.0000		Anions Program 06022020.1	Anions Processing Method	5.0	Finished
	HS20061149-01MSD		Unknown	GE5	1.0000		Anions Program 06022020.1	Anions Processing Method	5.0	Finished
	CCV1		Unknown	BA4	1.0000		Anions Program 06022020.1	Anions Processing Method	5.0	Finished
	CCB		Unknown	BA5	1.0000		Anions Program 06022020.1	Anions Processing Method	5.0	Finished
	HS20061178-01		Unknown	RE1	1.0000		Anions Program 06022020.1	Anions Processing Method	5.0	Finished
	HS20061178-02DF2		Unknown	RE2	2.0000		Anions Program 06022020.1	Anions Processing Method	5.0	Finished
	HS20061178-03DF2		Unknown	RE3	2.0000		Anions Program 06022020.1	Anions Processing Method	5.0	Finished
	HS20061178-04		Unknown	RE4	1.0000		Anions Program 06022020.1	Anions Processing Method	5.0	Finished
	CCV		Unknown	BA2	1.0000		Anions Program 06022020.1	Anions Processing Method	5.0	Finished
	CCB		Unknown	BA3	1.0000		Anions Program 06022020.1	Anions Processing Method	5.0	Finished

Sequence: 062420
Last Update Operator: alshs.nouser

Inject Time
6/2/2020 11:02:48 AM -05:00
6/2/2020 11:20:59 AM -05:00
6/2/2020 11:39:04 AM -05:00
6/2/2020 11:57:10 AM -05:00
6/2/2020 12:15:18 PM -05:00
6/2/2020 12:33:22 PM -05:00
6/2/2020 12:51:27 PM -05:00
6/2/2020 1:45:50 PM -05:00
6/24/2020 10:24:42 AM -05:00
6/24/2020 10:42:49 AM -05:00
6/24/2020 11:19:01 AM -05:00
6/24/2020 11:37:08 AM -05:00
6/24/2020 1:20:42 PM -05:00
6/24/2020 1:38:48 PM -05:00
6/25/2020 12:08:40 AM -05:00
6/25/2020 12:26:47 AM -05:00
6/25/2020 2:15:22 AM -05:00
6/25/2020 2:33:29 AM -05:00
6/25/2020 2:51:34 AM -05:00
6/25/2020 3:45:53 AM -05:00
6/25/2020 4:03:58 AM -05:00
6/25/2020 4:40:17 AM -05:00
6/25/2020 4:58:22 AM -05:00
6/25/2020 5:16:28 AM -05:00
6/25/2020 5:34:35 AM -05:00
6/25/2020 6:28:55 AM -05:00
6/25/2020 6:47:02 AM -05:00

Sequence: 062420
Injection #6: STD6

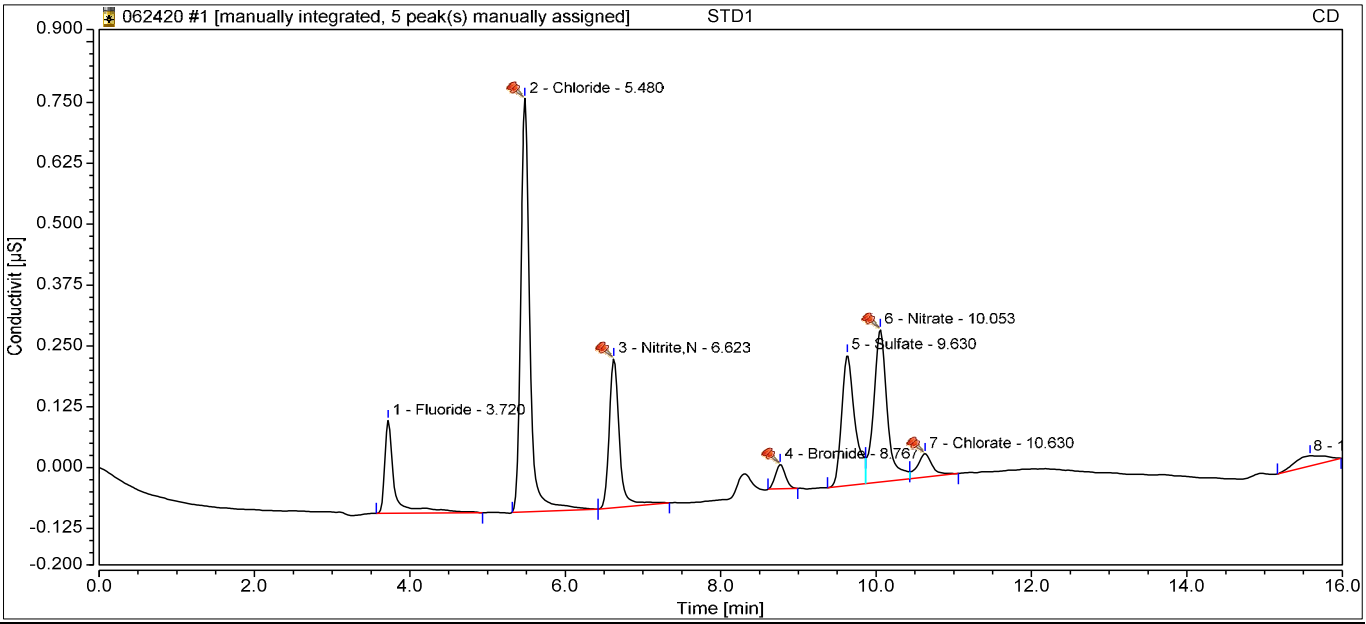
Calibration

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*	*10.8139*	*0.99942*	*-0.0046*	*0.3376*	*0.0000*
2	Chloride	Lin, WithOffset, 1/	Area	6	3.4292	0.99994	0.0066	0.2216	0.0000
3	Nitrite,N	Lin, WithOffset, 1/	Area	6	25.3231	0.99619	0.0124	0.4569	0.0000
4	Bromide	Lin, WithOffset, 1/	Area	6	11.6783	0.99936	-0.0023	0.0890	0.0000
5	Sulfate	Lin, WithOffset, 1/	Area	6	4.6337	0.99991	-0.0317	0.1582	0.0000
6	Nitrate	Lin, WithOffset, 1/	Area	6	5.8899	0.99981	0.0058	0.5970	0.0000
7	Chlorate	Lin, WithOffset, 1/	Area	6	15.6369	0.99851	0.0032	0.0971	0.0000
8	Phosphate	Lin, WithOffset, 1/	Area	5	24.1443	0.99440	-0.0555	0.1862	0.0000
Maximum					**25.3231**	0.99994			
Minimum					3.4292	**0.99440**			

1 STD1

Sample Name:	**STD1**	*Injection Volume:*	**5.00**
Vial Number:	**GB1**	*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:	**06/02/2020 11:02**	*Sample Weight:*	**1.0000**

Run Time:



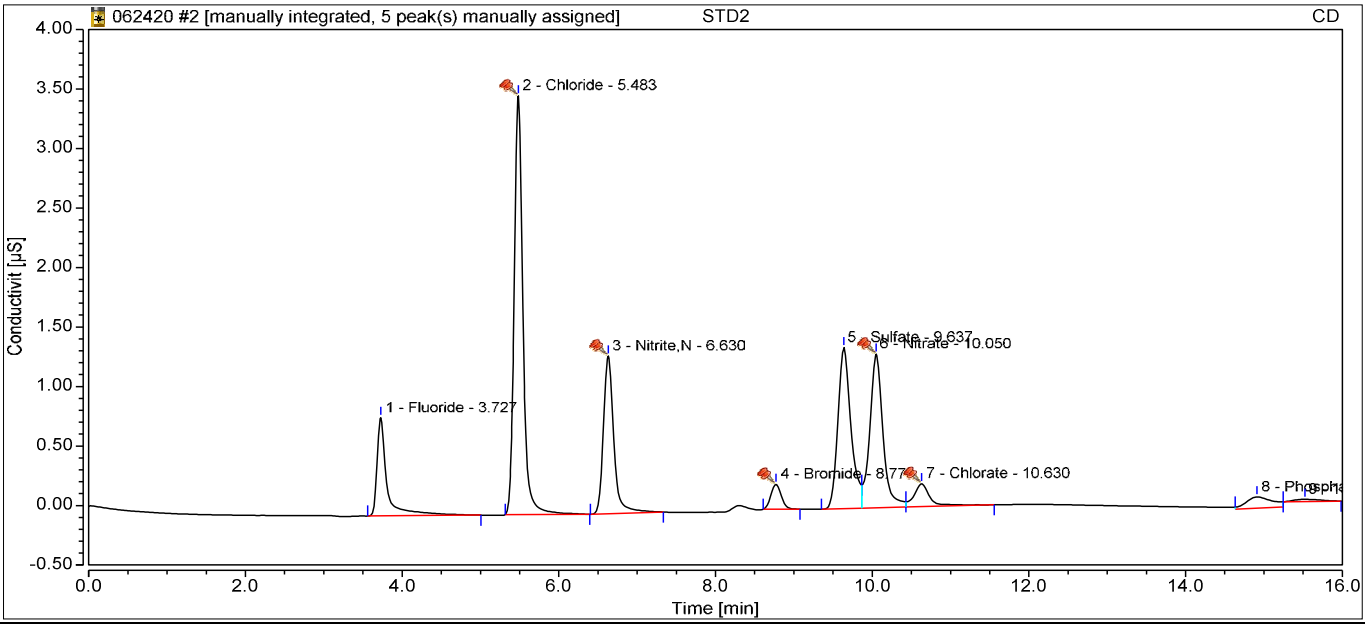
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.72	Fluoride	BMB	0.029	0.0982	0.0982	1.0000
2	5.48	Chloride	BMB^	0.115	0.4904	0.4904	1.0000
3	6.62	Nitrite,N	BMB*^	0.046	0.0745	0.0745	1.0000
4	8.77	Bromide	BMB^	0.007	0.1093	0.1093	1.0000
5	9.63	Sulfate	BM	0.053	0.5374	0.5374	1.0000
6	10.05	Nitrate	M ^	0.064	0.0969	0.0969	1.0000
7	10.63	Chlorate	MB^	0.011	0.0775	0.0775	1.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	1.0000
Total:			**0.000**	**0.325**		**1.48**	

2 STD2

Sample Name:	**STD2**	*Injection Volume:*	**5.00**
Vial Number:	**GB2**	*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:	**06/02/2020 11:20**	*Sample Weight:*	**1.0000**

Run Time:



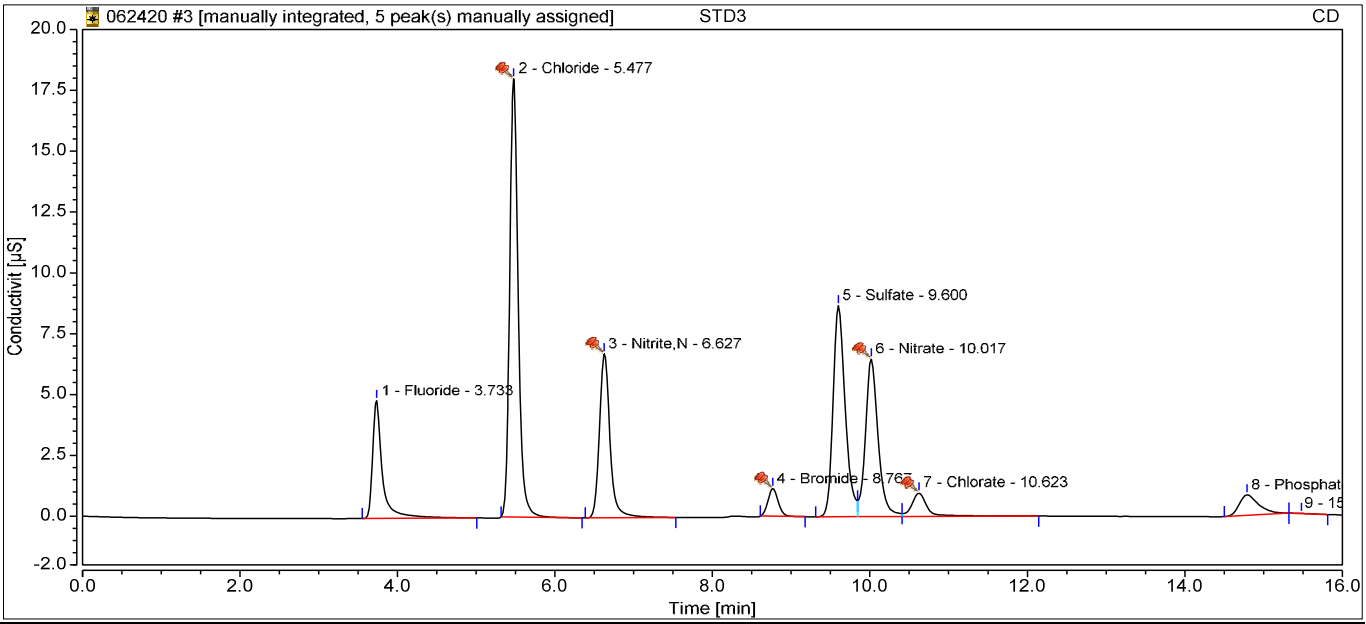
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.73	Fluoride	BMB	0.122	0.3761	0.3761	1.0000
2	5.48	Chloride	BMB^	0.452	2.0081	2.0081	1.0000
3	6.63	Nitrite,N	BMB*^	0.202	0.4159	0.4159	1.0000
4	8.77	Bromide	BMB^	0.032	0.3810	0.3810	1.0000
5	9.64	Sulfate	BM	0.263	1.8631	1.8631	1.0000
6	10.05	Nitrate	M ^	0.253	0.4135	0.4135	1.0000
7	10.63	Chlorate	MB^	0.046	0.4359	0.4359	1.0000
8	14.91	Phosphate	M *	0.037	0.4982	0.4982	1.0000
Total:			**0.000**	**1.407**		**6.39**	

3 STD3

Sample Name:	**STD3**	*Injection Volume:*	**5.00**
Vial Number:	**GB3**	*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:	**06/02/2020 11:39**	*Sample Weight:*	**1.0000**

Run Time:



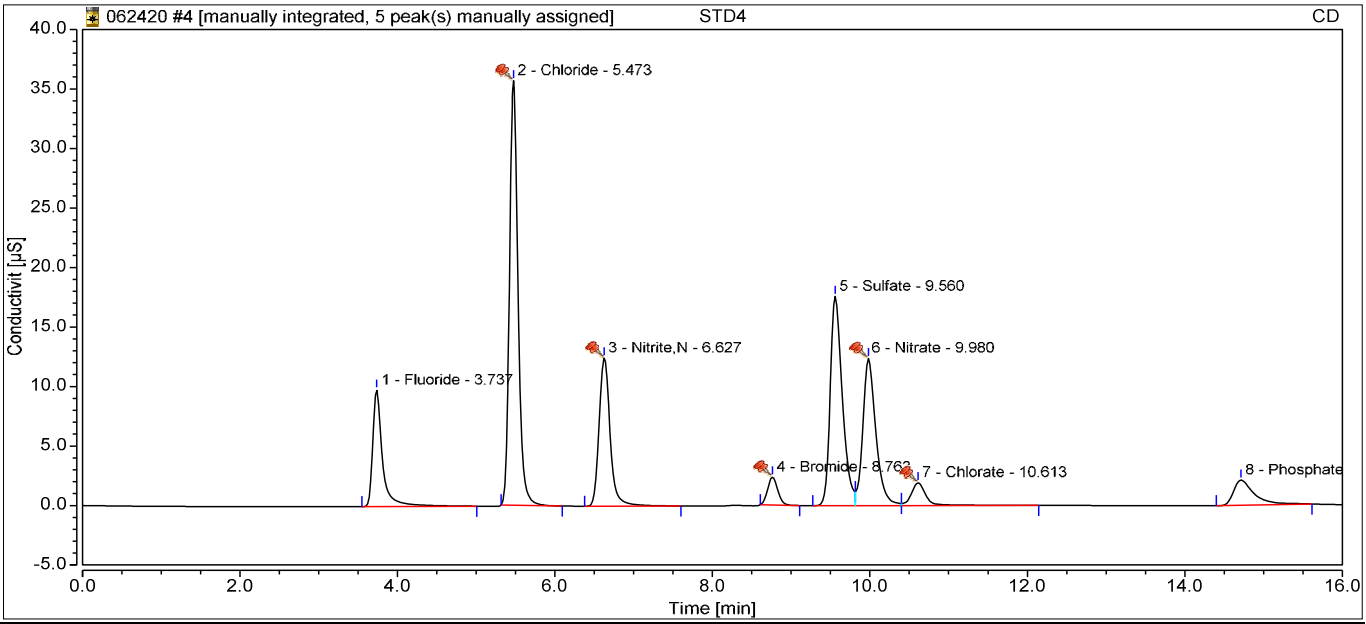
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.73	Fluoride	BMB	0.697	2.0782	2.0782	1.0000
2	5.48	Chloride	BMB^	2.257	10.1575	10.1575	1.0000
3	6.63	Nitrite,N	BMB*^	1.049	2.2692	2.2692	1.0000
4	8.77	Bromide	BMB^	0.172	1.9524	1.9524	1.0000
5	9.60	Sulfate	BM	1.543	9.9532	9.9532	1.0000
6	10.02	Nitrate	M ^	1.213	2.0220	2.0220	1.0000
7	10.62	Chlorate	MB^	0.220	2.2332	2.2332	1.0000
8	14.79	Phosphate	BMB	0.243	1.6042	1.6042	1.0000
Total:			**0.000**	**7.394**		**32.27**	

4 STD4

Sample Name:	**STD4**	*Injection Volume:*	**5.00**
Vial Number:	**GB4**	*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:	**06/02/2020 11:57**	*Sample Weight:*	**1.0000**

Run Time:



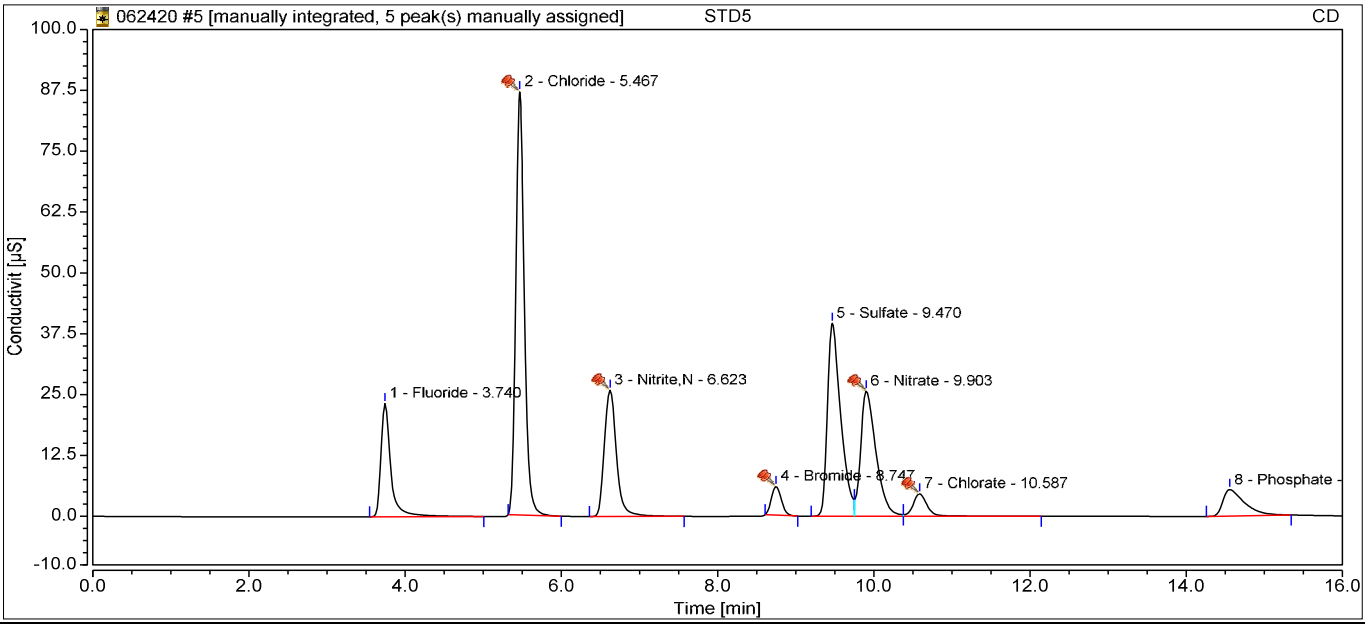
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.74	Fluoride	BMB	1.406	4.1793	4.1793	1.0000
2	5.47	Chloride	BMB^	4.475	20.1656	20.1656	1.0000
3	6.63	Nitrite,N	BMB*^	2.031	4.4170	4.4170	1.0000
4	8.76	Bromide	BMB^	0.350	3.9560	3.9560	1.0000
5	9.56	Sulfate	BM	3.131	19.9943	19.9943	1.0000
6	9.98	Nitrate	M ^	2.388	3.9909	3.9909	1.0000
7	10.61	Chlorate	MB^	0.410	4.1864	4.1864	1.0000
8	14.71	Phosphate	BMB*	0.647	3.7708	3.7708	1.0000
Total:			**0.000**	**14.837**		**64.66**	

5 STD5

Sample Name:	**STD5**	*Injection Volume:*	**5.00**
Vial Number:	**GB5**	*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:	**06/02/2020 12:15**	*Sample Weight:*	**1.0000**

Run Time:



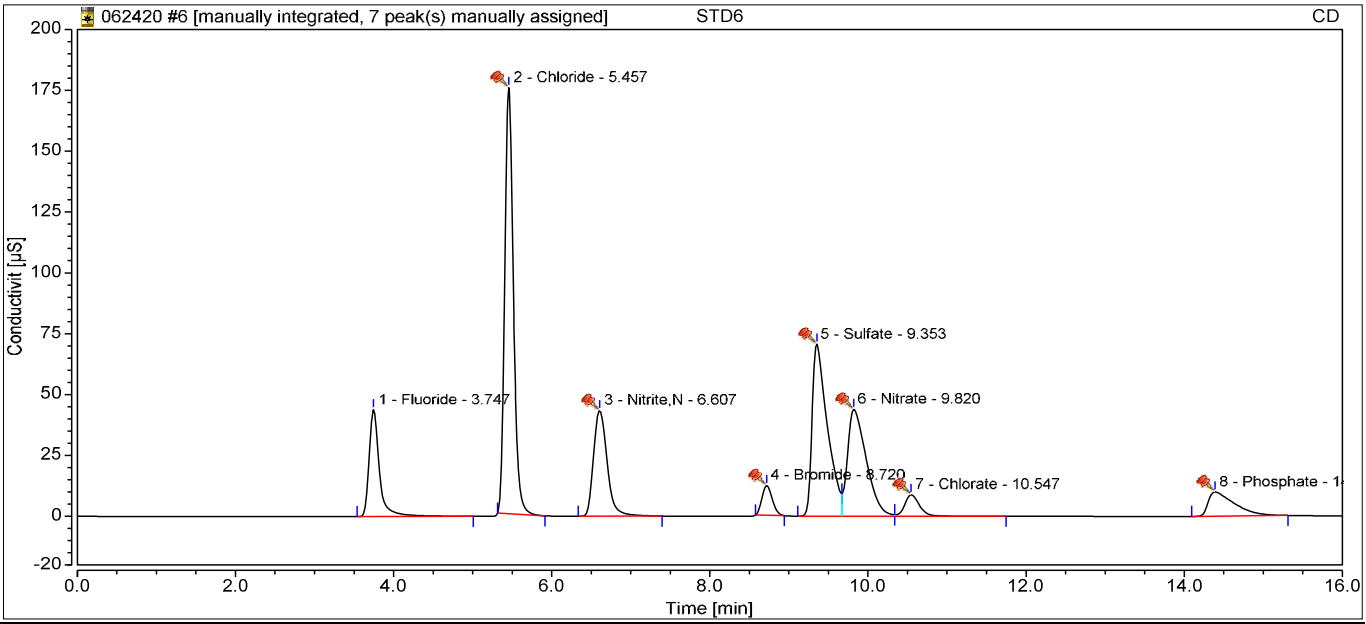
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.74	Fluoride	BMB	3.409	10.1112	10.1112	1.0000
2	5.47	Chloride	BMB^	10.962	49.4436	49.4436	1.0000
3	6.62	Nitrite,N	BMB*^	4.673	10.1996	10.1996	1.0000
4	8.75	Bromide	BMB^	0.860	9.6874	9.6874	1.0000
5	9.47	Sulfate	BM	7.832	49.7141	49.7141	1.0000
6	9.90	Nitrate	M ^	5.855	9.7981	9.7981	1.0000
7	10.59	Chlorate	MB^	0.963	9.8794	9.8794	1.0000
8	14.56	Phosphate	BMB*	1.744	9.6675	9.6675	1.0000
Total:			**0.000**	**36.299**		**158.50**	

6 STD6

Sample Name:	**STD6**	*Injection Volume:*	**5.00**
Vial Number:	**GB6**	*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:	**06/02/2020 12:33**	*Sample Weight:*	**1.0000**

Run Time:



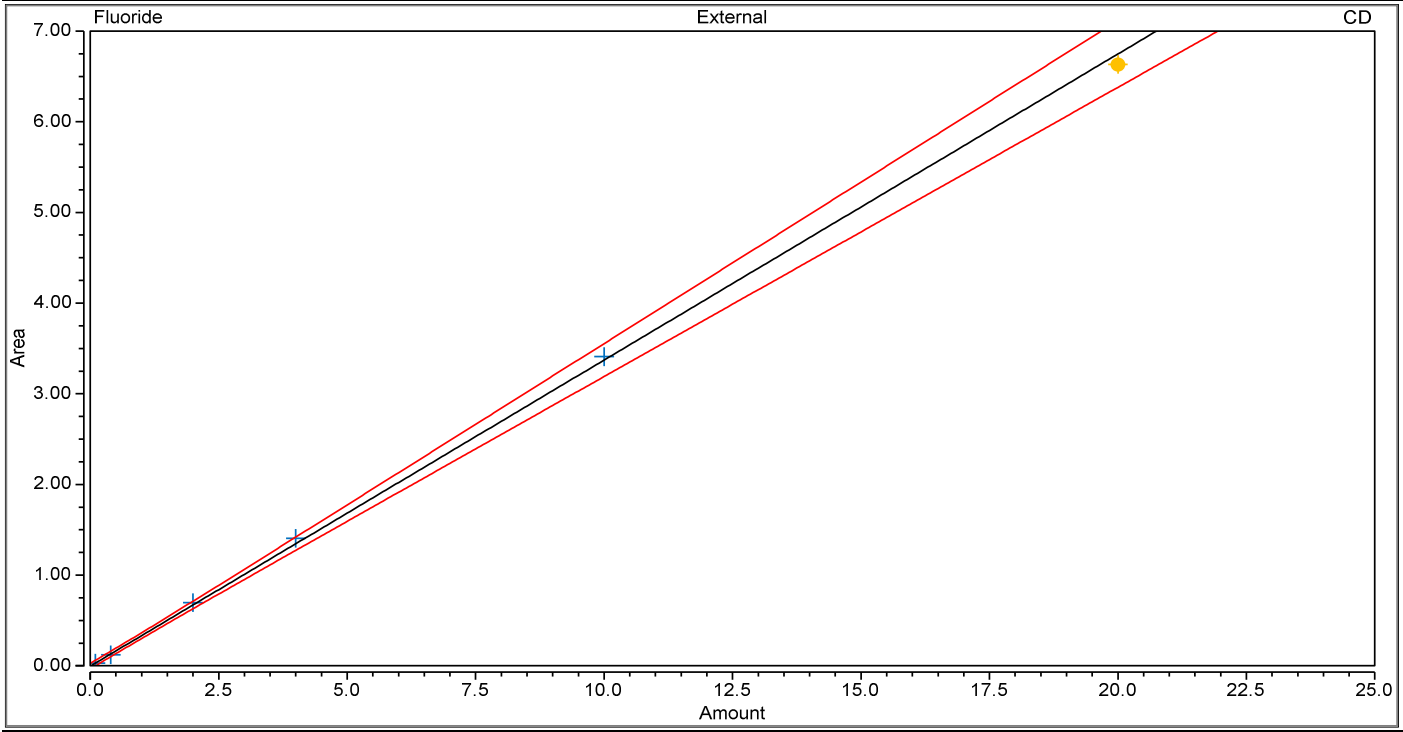
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.75	Fluoride	BMB	6.632	19.6569	19.6569	1.0000
2	5.46	Chloride	BMB^	22.217	100.2349	100.2349	1.0000
3	6.61	Nitrite,N	BMB*^	8.750	19.1238	19.1238	1.0000
4	8.72	Bromide	BMB*^	1.815	20.4140	20.4140	1.0000
5	9.35	Sulfate	BM ^	15.855	100.4380	100.4380	1.0000
6	9.82	Nitrate	M ^	12.052	20.1786	20.1786	1.0000
7	10.55	Chlorate	MB^	1.916	19.6877	19.6877	1.0000
8	14.39	Phosphate	BMB*^	3.828	20.8593	20.8593	1.0000
Total:			**0.000**	**73.065**		**320.59**	

Calibration

Calibration Details	Fluoride		
Calibration Type	Lin, WithOffset, 1/A	*Offset (C0)*	-0.0046
Evaluation Type	Area	*Slope (C1)*	0.3376
Number of Calibration Points	6	*Curve (C2)*	0.0000
Number of disabled Calibration Points	0	*R-Square*	0.9994

Calibration Plot **Fluoride**



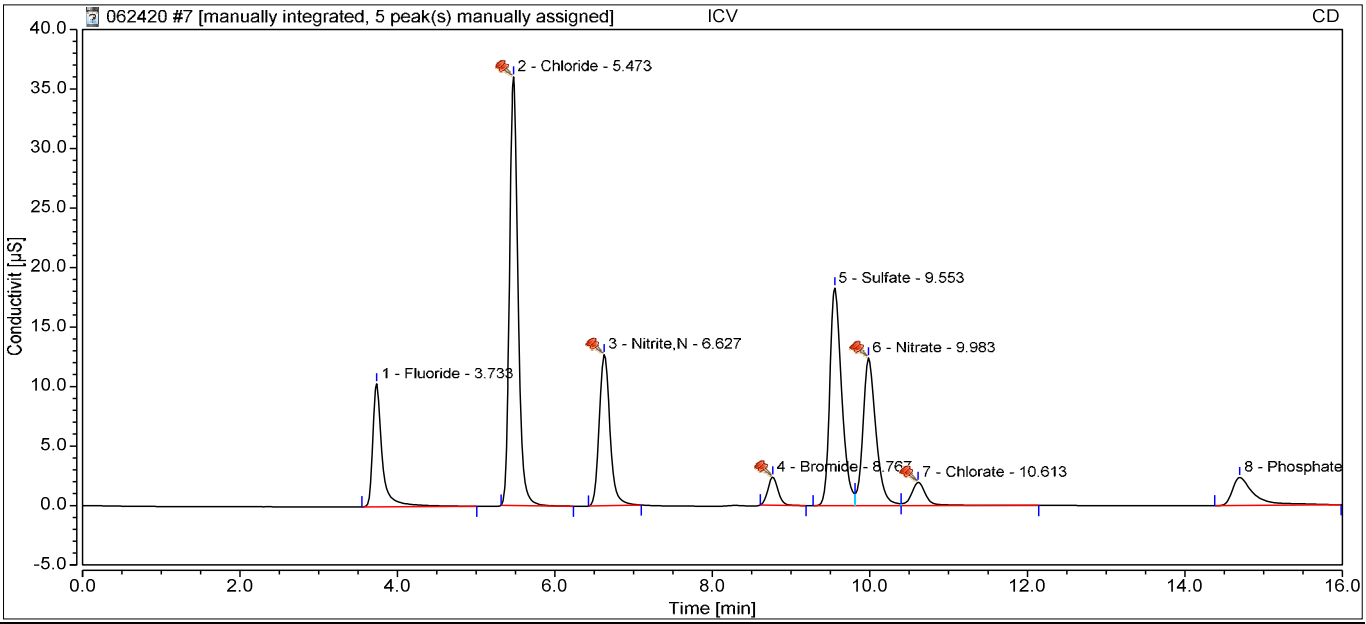
Calibration Results **Fluoride**

No.	Injection Name	Calibration Level	X Value CD Fluoride	Y Value CD Fluoride	Y Value CD Fluoride	Area µS*min CD Fluoride	Height µS CD Fluoride
1	STD1	1	0.1000	0.0285	0.0285	0.029	0.191
2	STD2	2	0.4000	0.1224	0.1224	0.122	0.826
3	STD3	3	2.0000	0.6970	0.6970	0.697	4.841
4	STD4	4	4.0000	1.4064	1.4064	1.406	9.790
5	STD5	5	10.0000	3.4092	3.4092	3.409	23.253
6	STD6	6	20.0000	6.6320	6.6320	6.632	43.889

7 ICV

Sample Name:	**ICV**	*Injection Volume:*	**5.00**
Vial Number:	**GB7**	*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:	**06/02/2020 12:51**	*Sample Weight:*	**1.0000**

Run Time:



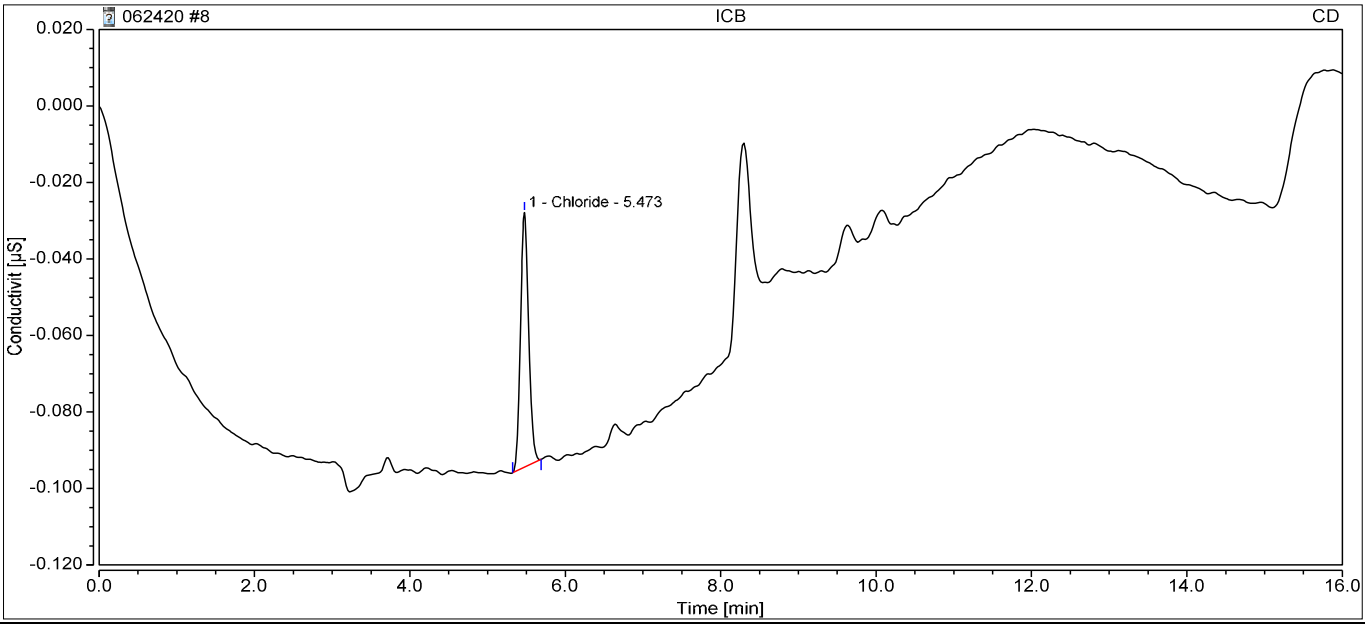
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.73	Fluoride	BMB	1.442	4.2839	4.2839	1.0000
2	5.47	Chloride	BMB^	4.508	20.3168	20.3168	1.0000
3	6.63	Nitrite,N	BMB*^	2.013	4.3785	4.3785	1.0000
4	8.77	Bromide	BMB^	0.352	3.9794	3.9794	1.0000
5	9.55	Sulfate	BM	3.208	20.4827	20.4827	1.0000
6	9.98	Nitrate	M ^	2.387	3.9894	3.9894	1.0000
7	10.61	Chlorate	MB^	0.412	4.2081	4.2081	1.0000
8	14.70	Phosphate	BMB	0.762	4.3926	4.3926	1.0000
Total:			**0.000**	**15.085**		**66.03**	

8 ICB

Sample Name:	**ICB**	*Injection Volume:*	**5.00**
Vial Number:	**BA3**	*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:	**06/02/2020 13:45**	*Sample Weight:*	**1.0000**

Run Time:



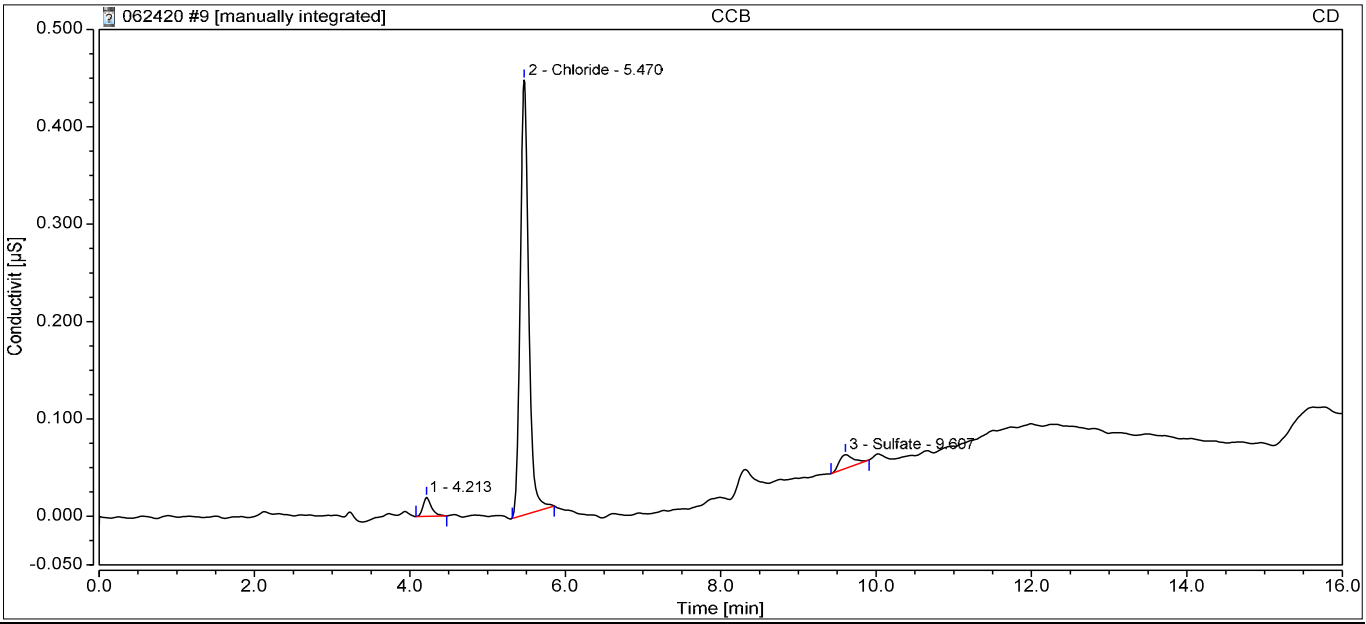
Integration Results

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	5.47	Chloride	BMB	0.008	0.0067	0.0067	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**	**0.008**		**0.01**	

9 CCB

Sample Name:	**CCB**	*Injection Volume:*	**5.00**
Vial Number:	**BA1**	*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:	**06/24/2020 10:24**	*Sample Weight:*	**1.0000**

Run Time:



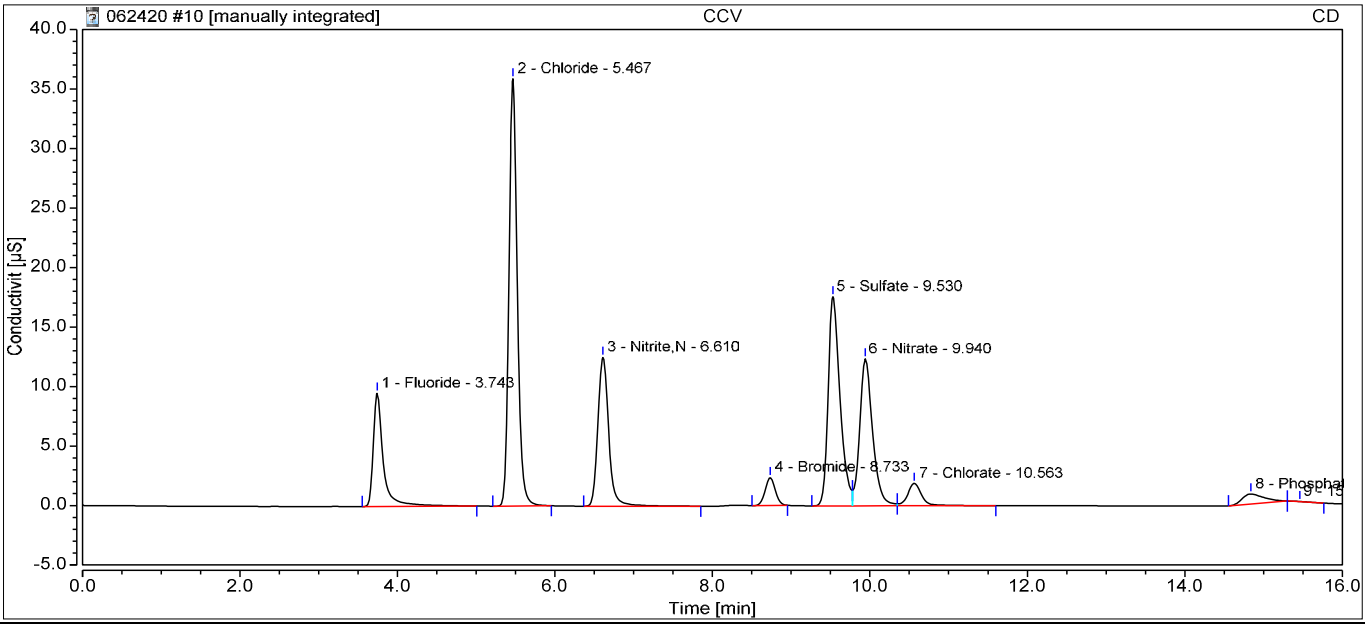
Integration Results

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.	1.0000
2	5.47	Chloride	BMB*	0.056	0.2236	0.2236	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	9.61	Sulfate	BMB	0.003	0.2190	0.2190	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**	**0.059**		**0.44**	

10 CCV

Sample Name:	**CCV**	*Injection Volume:*	**5.00**
Vial Number:	**BA2**	*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:	**06/24/2020 10:42**	*Sample Weight:*	**1.0000**

Run Time:



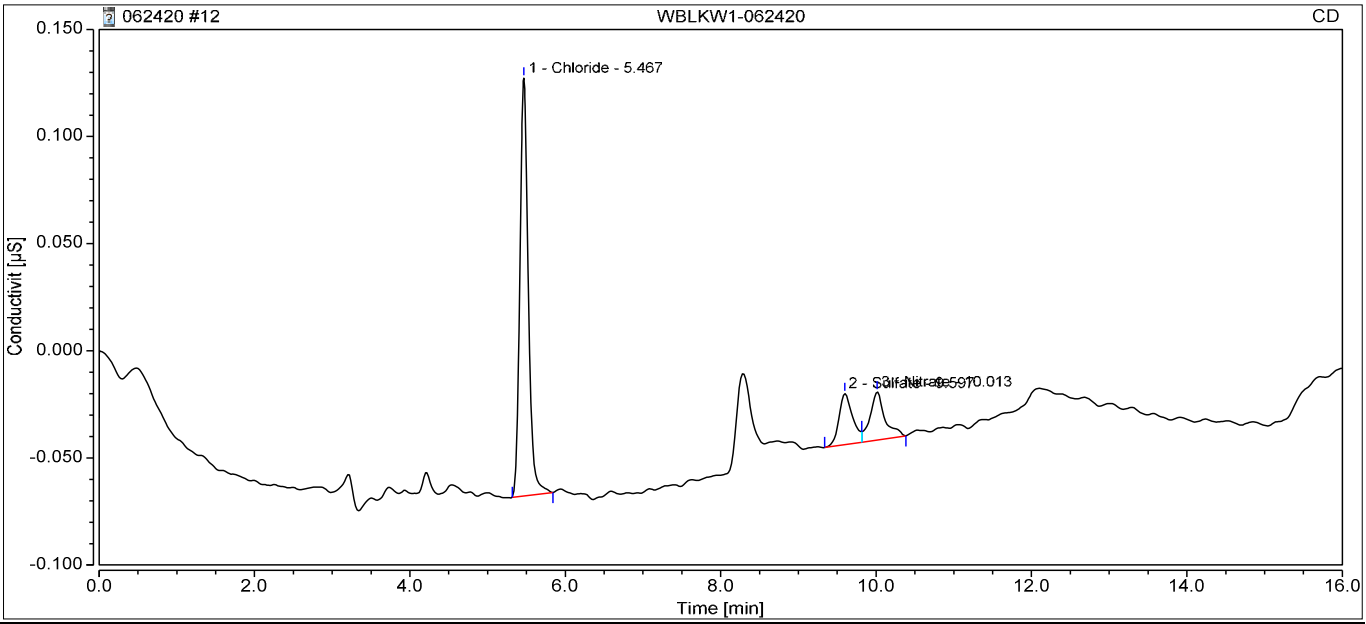
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.74	Fluoride	BMB	1.392	4.1352	4.1352	1.0000
2	5.47	Chloride	BMB*	4.449	20.0504	20.0504	1.0000
3	6.61	Nitrite,N	BMB	1.997	4.3434	4.3434	1.0000
4	8.73	Bromide	BMB*	0.352	3.9742	3.9742	1.0000
5	9.53	Sulfate	BM	3.083	19.6900	19.6900	1.0000
6	9.94	Nitrate	M	2.345	3.9185	3.9185	1.0000
7	10.56	Chlorate	MB	0.392	4.0008	4.0008	1.0000
8	14.84	Phosphate	BMB	0.271	1.7538	1.7538	1.0000
Total:			**0.000**	**14.280**		**61.87**	

12 WBLKW1-062420

Sample Name:	**WBLKW1-062420**	*Injection Volume:*	**5.00**
Vial Number:	**BB1**	*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:	**06/24/2020 11:19**	*Sample Weight:*	**1.0000**

Run Time:



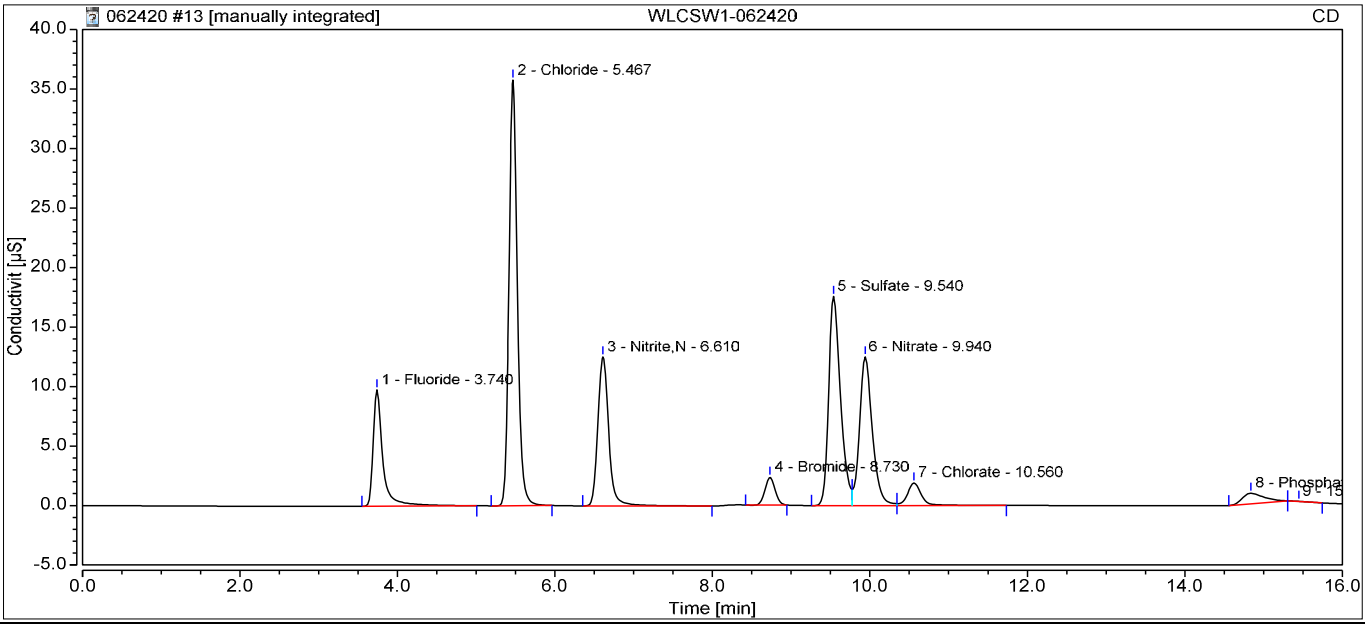
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	1.0000
1	5.47	Chloride	BMB	0.024	0.0806	0.0806	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
2	9.60	Sulfate	BM	0.005	0.2308	0.2308	1.0000
3	10.01	Nitrate	MB	0.005	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**		**0.31**	

13 WLCSW1-062420

Sample Name:	**WLCSW1-062420**	*Injection Volume:*	**5.00**
Vial Number:	**BB2**	*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:	**06/24/2020 11:37**	*Sample Weight:*	**1.0000**

Run Time:



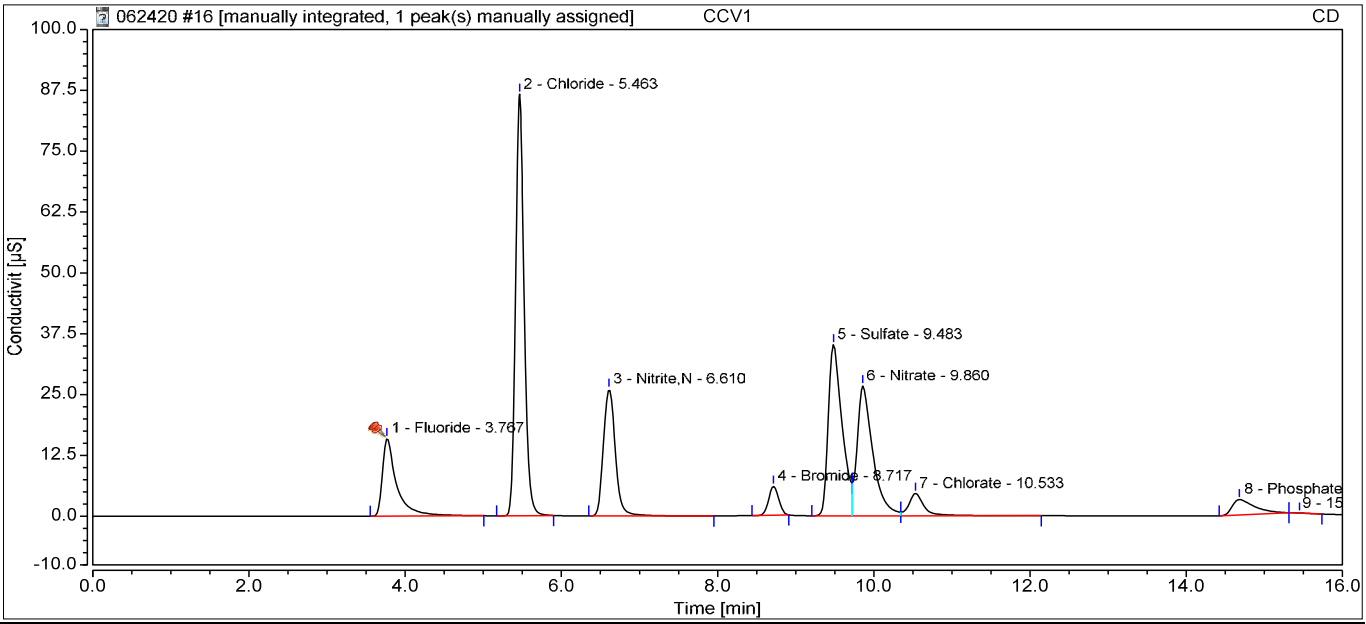
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.74	Fluoride	BMB	1.387	4.1218	4.1218	1.0000
2	5.47	Chloride	BMB*	4.428	19.9526	19.9526	1.0000
3	6.61	Nitrite,N	BMB	2.000	4.3495	4.3495	1.0000
4	8.73	Bromide	BMB*	0.346	3.9104	3.9104	1.0000
5	9.54	Sulfate	BM	3.068	19.5953	19.5953	1.0000
6	9.94	Nitrate	M	2.362	3.9469	3.9469	1.0000
7	10.56	Chlorate	MB	0.390	3.9851	3.9851	1.0000
8	14.84	Phosphate	BMB	0.285	1.8307	1.8307	1.0000
Total:			**0.000**	**14.266**		**61.69**	

16 CCV1

Sample Name:	**CCV1**	*Injection Volume:*	**5.00**
Vial Number:	**BA4**	*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:	**06/24/2020 13:20**	*Sample Weight:*	**1.0000**

Run Time:



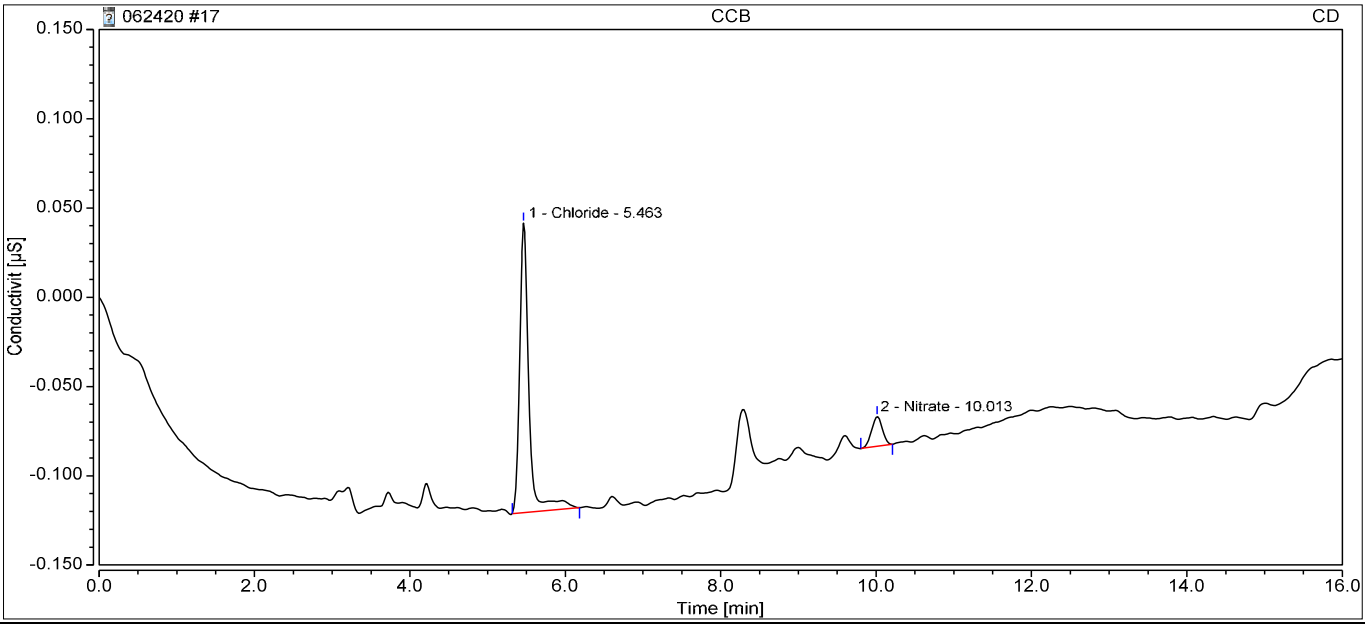
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.77	Fluoride	BMB^	3.381	10.0293	10.0293	1.0000
2	5.46	Chloride	BMB*	10.949	49.3841	49.3841	1.0000
3	6.61	Nitrite,N	BMB	4.623	10.0915	10.0915	1.0000
4	8.72	Bromide	BMB*	0.885	9.9656	9.9656	1.0000
5	9.48	Sulfate	BM	7.205	45.7540	45.7540	1.0000
6	9.86	Nitrate	M	6.221	10.4111	10.4111	1.0000
7	10.53	Chlorate	MB	1.057	10.8471	10.8471	1.0000
8	14.68	Phosphate	BMB	1.052	5.9509	5.9509	1.0000
Total:			**0.000**	**35.375**		**152.43**	

17 CCB

Sample Name:	**CCB**	*Injection Volume:*	**5.00**
Vial Number:	**BA5**	*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:	**06/24/2020 13:38**	*Sample Weight:*	**1.0000**

Run Time:



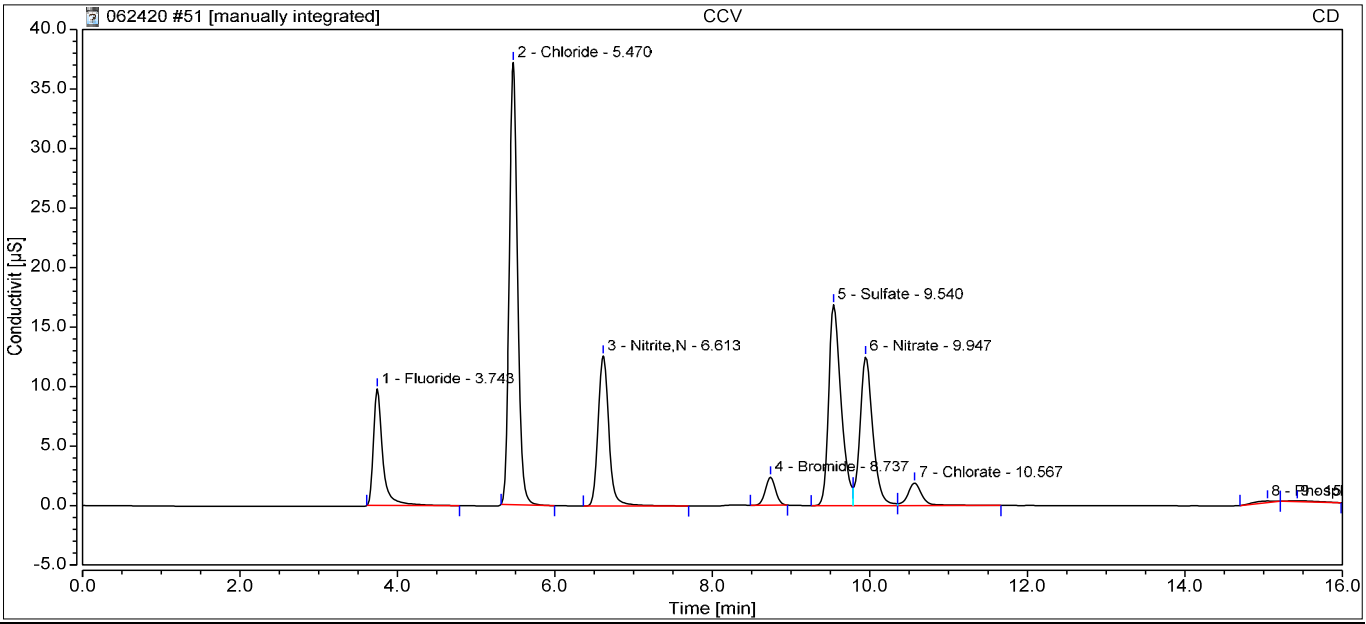
Integration Results

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	5.46	Chloride	BMB	0.022	0.0707	0.0707	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
2	10.01	Nitrate	BMB	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**	**0.025**		**0.07**	

51 CCV

Sample Name:	**CCV**	*Injection Volume:*	**5.00**
Vial Number:	**BA2**	*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:	**06/25/2020 00:08**	*Sample Weight:*	**1.0000**

Run Time:



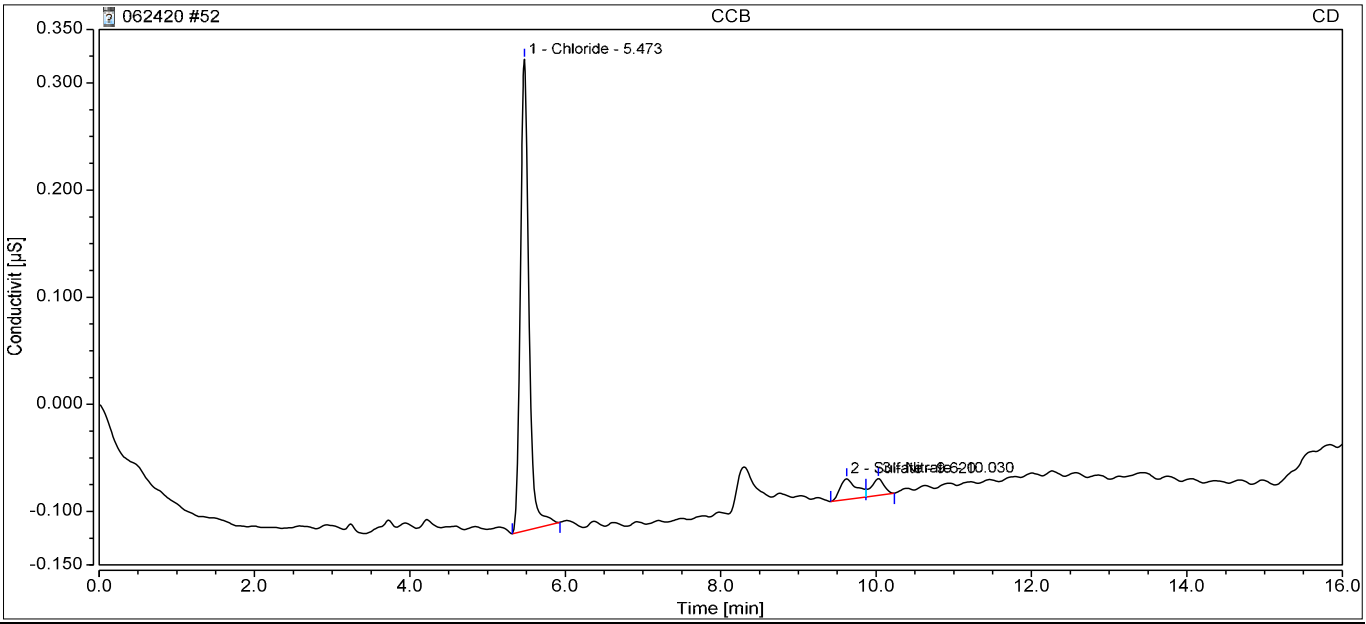
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.74	Fluoride	BMB	1.333	3.9618	3.9618	1.0000
2	5.47	Chloride	BMB	4.548	20.4960	20.4960	1.0000
3	6.61	Nitrite,N	BMB	1.998	4.3454	4.3454	1.0000
4	8.74	Bromide	BMB*	0.354	3.9963	3.9963	1.0000
5	9.54	Sulfate	BM	3.091	19.7427	19.7427	1.0000
6	9.95	Nitrate	M	2.358	3.9404	3.9404	1.0000
7	10.57	Chlorate	MB	0.396	4.0447	4.0447	1.0000
8	15.05	Phosphate	BMB	0.045	0.5414	0.5414	1.0000
Total:			**0.000**	**14.123**		**61.07**	

52 CCB

Sample Name:	**CCB**	*Injection Volume:*	**5.00**
Vial Number:	**BA3**	*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:	**06/25/2020 00:26**	*Sample Weight:*	**1.0000**

Run Time:



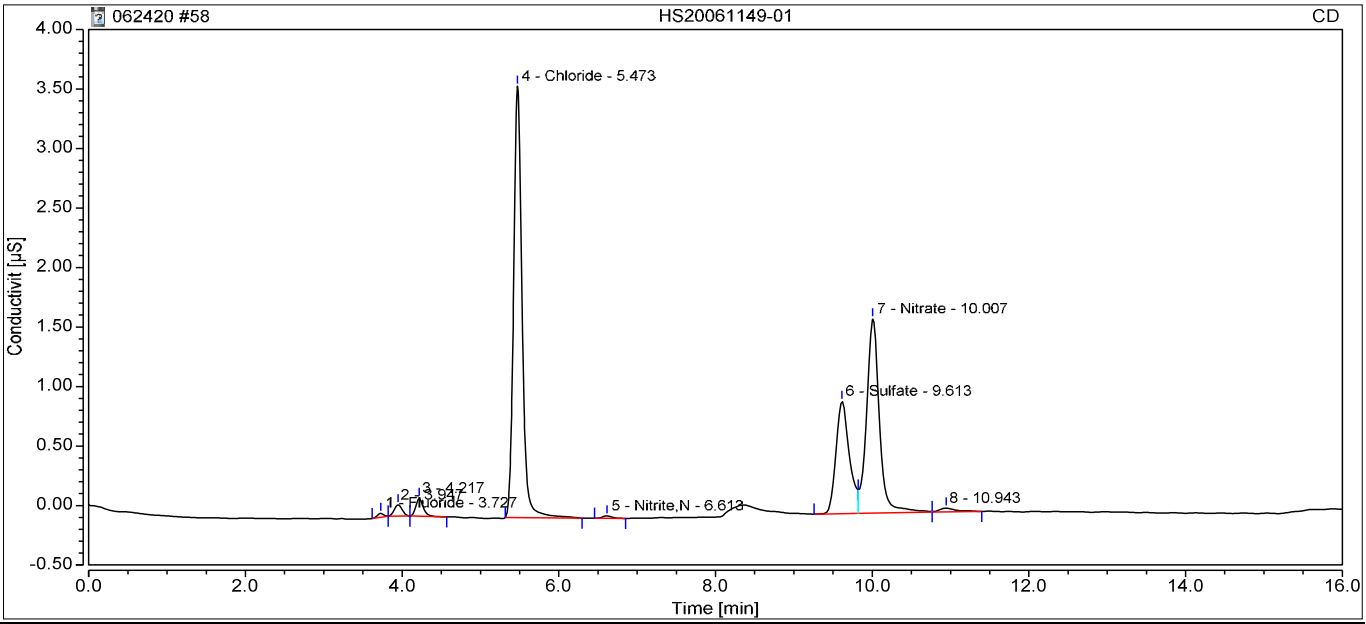
Integration Results

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	5.47	Chloride	BMB	0.056	0.2223	0.2223	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
2	9.62	Sulfate	BM	0.005	0.2302	0.2302	1.0000
3	10.03	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**	**0.064**		**0.45**	

58 HS20061149-01

Sample Name:	**HS20061149-01**	*Injection Volume:*	**5.00**
Vial Number:	**GE3**	*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:	**06/25/2020 02:15**	*Sample Weight:*	**1.0000**

Run Time:



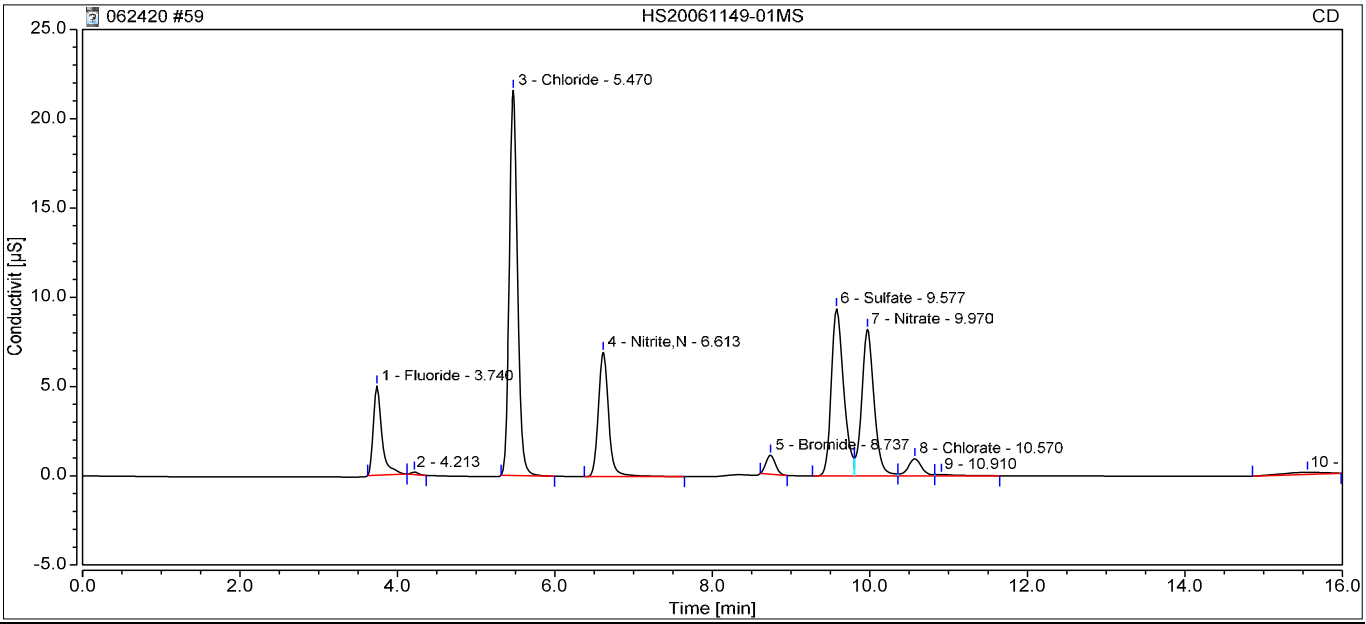
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.73	Fluoride	BMB	0.003	0.0222	0.0222	1.0000
4	5.47	Chloride	BMB	0.451	2.0050	2.0050	1.0000
5	6.61	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
6	9.61	Sulfate	BM	0.188	1.3880	1.3880	1.0000
7	10.01	Nitrate	M	0.311	0.5108	0.5108	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**	**0.955**		**3.93**	

59 HS20061149-01MS

Sample Name:	**HS20061149-01MS**	*Injection Volume:*	**5.00**
Vial Number:	**GE4**	*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:	**06/25/2020 02:33**	*Sample Weight:*	**1.0000**

Run Time:



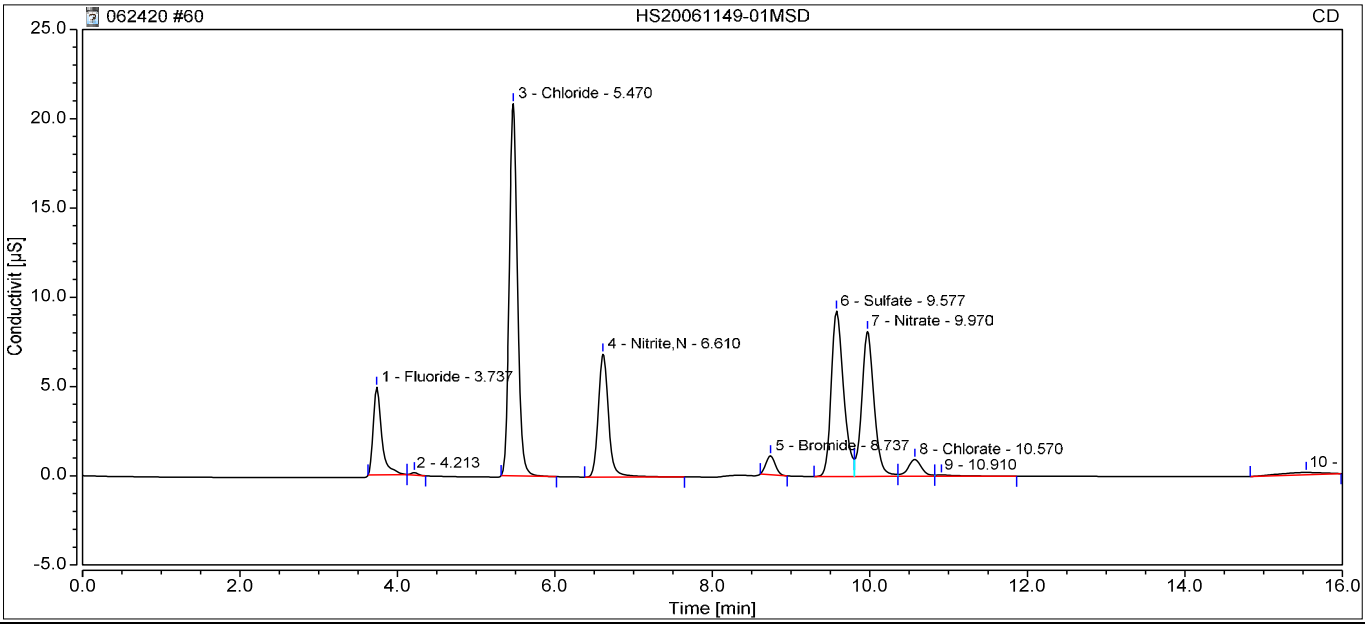
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.74	Fluoride	BMB	0.627	1.8721	1.8721	1.0000
3	5.47	Chloride	BMB	2.623	11.8087	11.8087	1.0000
4	6.61	Nitrite,N	BMB	1.050	2.2709	2.2709	1.0000
5	8.74	Bromide	BMB	0.149	1.6992	1.6992	1.0000
6	9.58	Sulfate	BM	1.712	11.0234	11.0234	1.0000
7	9.97	Nitrate	M	1.503	2.5074	2.5074	1.0000
8	10.57	Chlorate	M	0.191	1.9299	1.9299	1.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	1.0000
Total:			**0.000**	**7.855**		**33.11**	

60 HS20061149-01MSD

Sample Name:	**HS20061149-01MSD**	*Injection Volume:*	**5.00**
Vial Number:	**GE5**	*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:	**06/25/2020 02:51**	*Sample Weight:*	**1.0000**

Run Time:



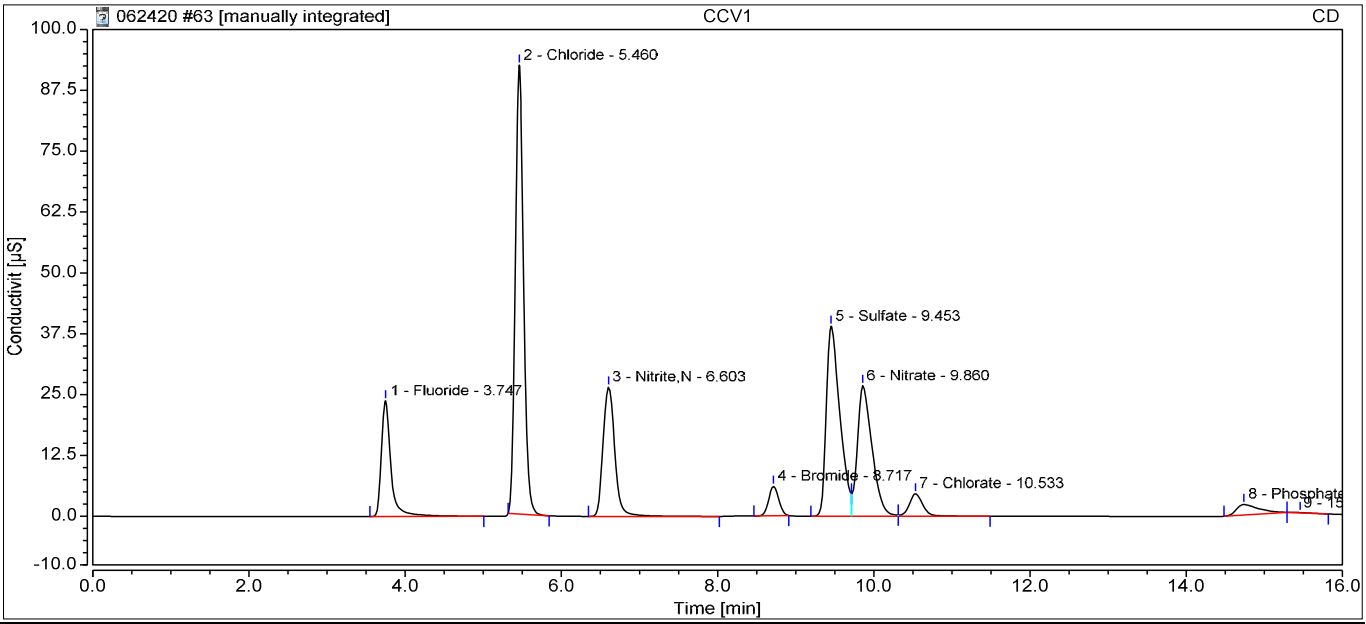
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.74	Fluoride	BMB	0.607	1.8108	1.8108	1.0000
3	5.47	Chloride	BMB	2.535	11.4117	11.4117	1.0000
4	6.61	Nitrite,N	BMB	1.038	2.2449	2.2449	1.0000
5	8.74	Bromide	BMB	0.146	1.6702	1.6702	1.0000
6	9.58	Sulfate	BM	1.684	10.8484	10.8484	1.0000
7	9.97	Nitrate	M	1.480	2.4701	2.4701	1.0000
8	10.57	Chlorate	M	0.188	1.9049	1.9049	1.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	1.0000
Total:			**0.000**	**7.679**		**32.36**	

63 CCV1

Sample Name:	**CCV1**	*Injection Volume:*	**5.00**
Vial Number:	**BA4**	*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:	**06/25/2020 03:45**	*Sample Weight:*	**1.0000**

Run Time:



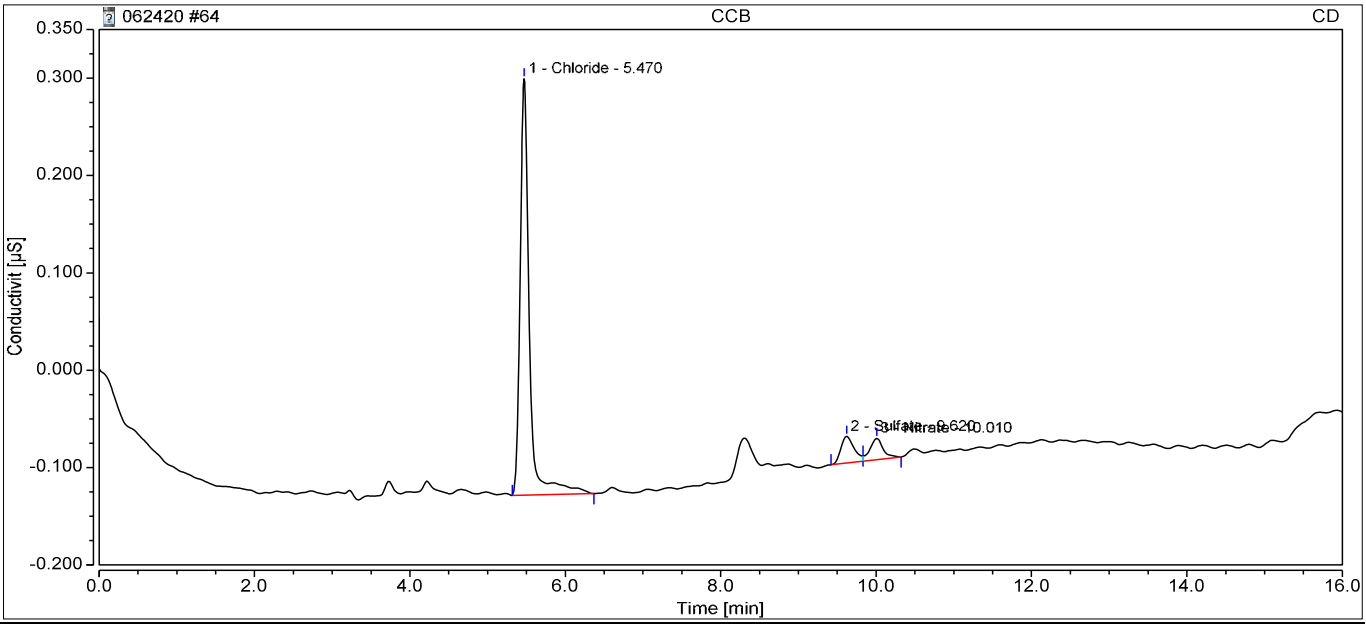
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.75	Fluoride	BMB	3.374	10.0057	10.0057	1.0000
2	5.46	Chloride	BMB	11.295	50.9439	50.9439	1.0000
3	6.60	Nitrite,N	BMB	4.637	10.1205	10.1205	1.0000
4	8.72	Bromide	BMB*	0.898	10.1121	10.1121	1.0000
5	9.45	Sulfate	BM	7.887	50.0647	50.0647	1.0000
6	9.86	Nitrate	M	5.841	9.7748	9.7748	1.0000
7	10.53	Chlorate	MB	0.933	9.5714	9.5714	1.0000
8	14.74	Phosphate	BMB	0.726	4.1961	4.1961	1.0000
Total:			**0.000**	**35.590**		**154.79**	

64 CCB

Sample Name:	**CCB**	*Injection Volume:*	**5.00**
Vial Number:	**BA5**	*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:	**06/25/2020 04:03**	*Sample Weight:*	**1.0000**

Run Time:



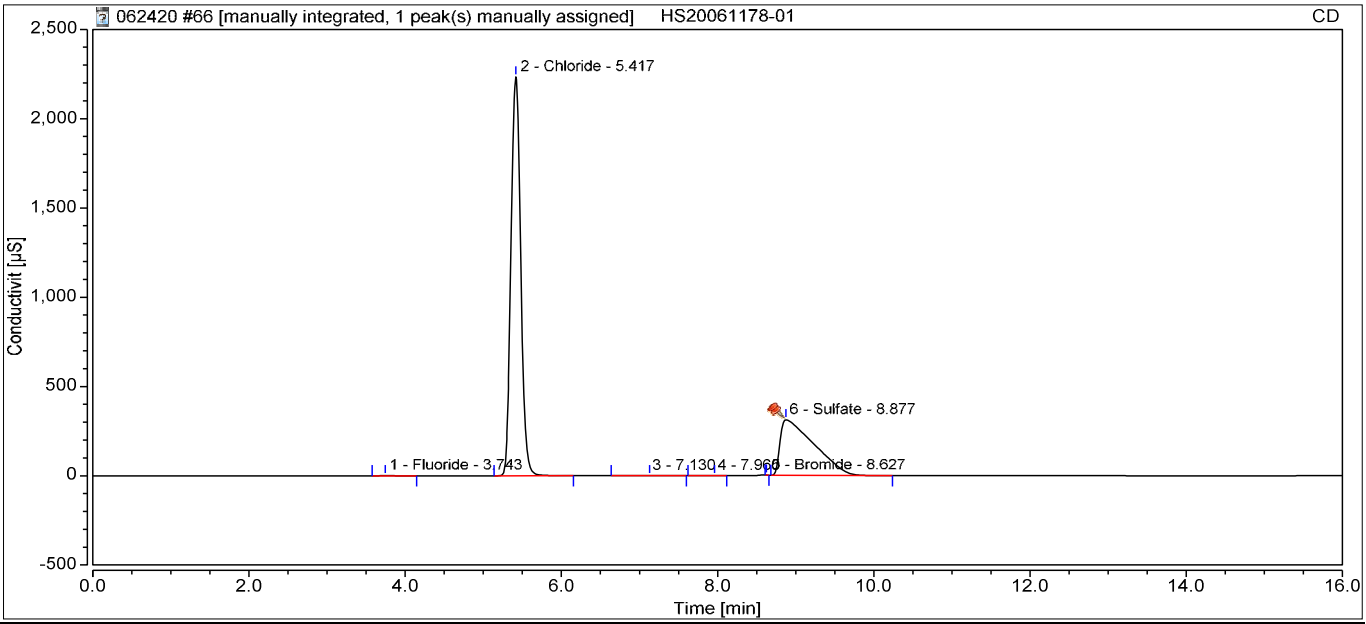
Integration Results

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	5.47	Chloride	BMB	0.059	0.2346	0.2346	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
2	9.62	Sulfate	BM	0.005	0.2345	0.2345	1.0000
3	10.01	Nitrate	MB	0.004	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**	**0.068**		**0.47**	

66 HS20061178-01

Sample Name:	**HS20061178-01**	*Injection Volume:*	**5.00**
Vial Number:	**RE1**	*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:	**06/25/2020 04:40**	*Sample Weight:*	**1.0000**

Run Time:



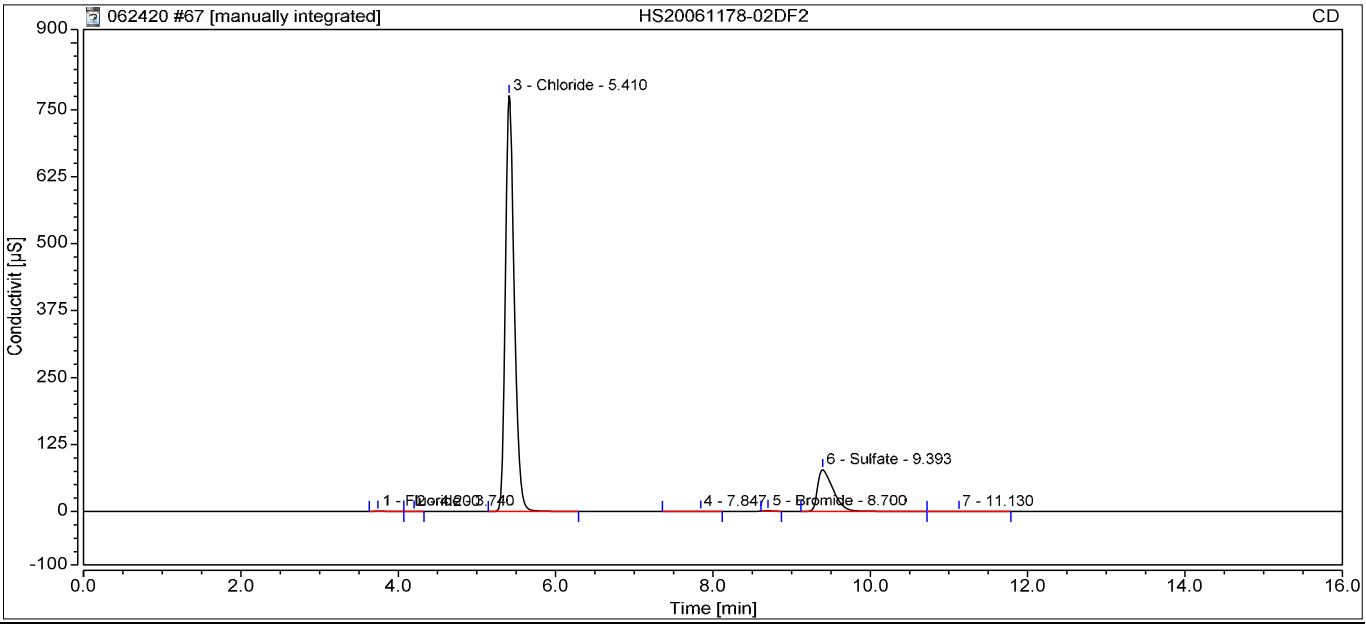
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.74	Fluoride	BMB	0.046	0.1487	0.1487	1.0000
2	5.42	Chloride	BMB*	321.371	1450.3378	1450.3378	1.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	1.0000
5	8.63	Bromide	BMB	0.002	0.0484	0.0484	1.0000
6	8.88	Sulfate	BMB^	156.364	988.7761	988.7761	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**	**477.783**		**2439.31**	

67 HS20061178-02DF2

Sample Name:	**HS20061178-02DF2**	*Injection Volume:*	**5.00**
Vial Number:	**RE2**	*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:	**06/25/2020 04:58**	*Sample Weight:*	**1.0000**

Run Time:



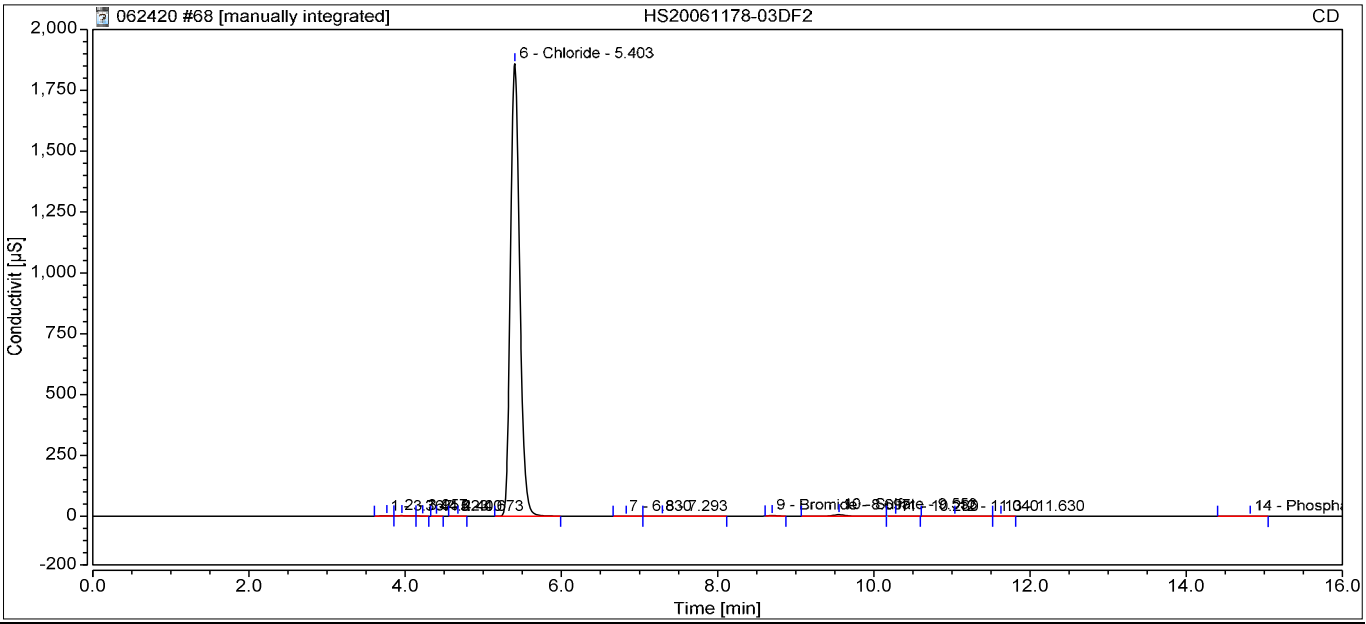
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.74	Fluoride	BMB	0.095	0.2964	0.5928	2.0000
3	5.41	Chloride	BMB*	102.428	462.2351	924.4702	2.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	2.0000
5	8.70	Bromide	BMB	0.115	1.3122	2.6245	2.0000
6	9.39	Sulfate	BM	17.712	112.1779	224.3559	2.0000
n.a.	n.a.	Nitrate	n.a.	n.a.	n.a.	n.a.	2.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	2.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	2.0000
Total:			**0.000**	**120.350**		**1152.04**	

68 HS20061178-03DF2

Sample Name:	**HS20061178-03DF2**	*Injection Volume:*	**5.00**
Vial Number:	**RE3**	*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:	**06/25/2020 05:16**	*Sample Weight:*	**1.0000**

Run Time:



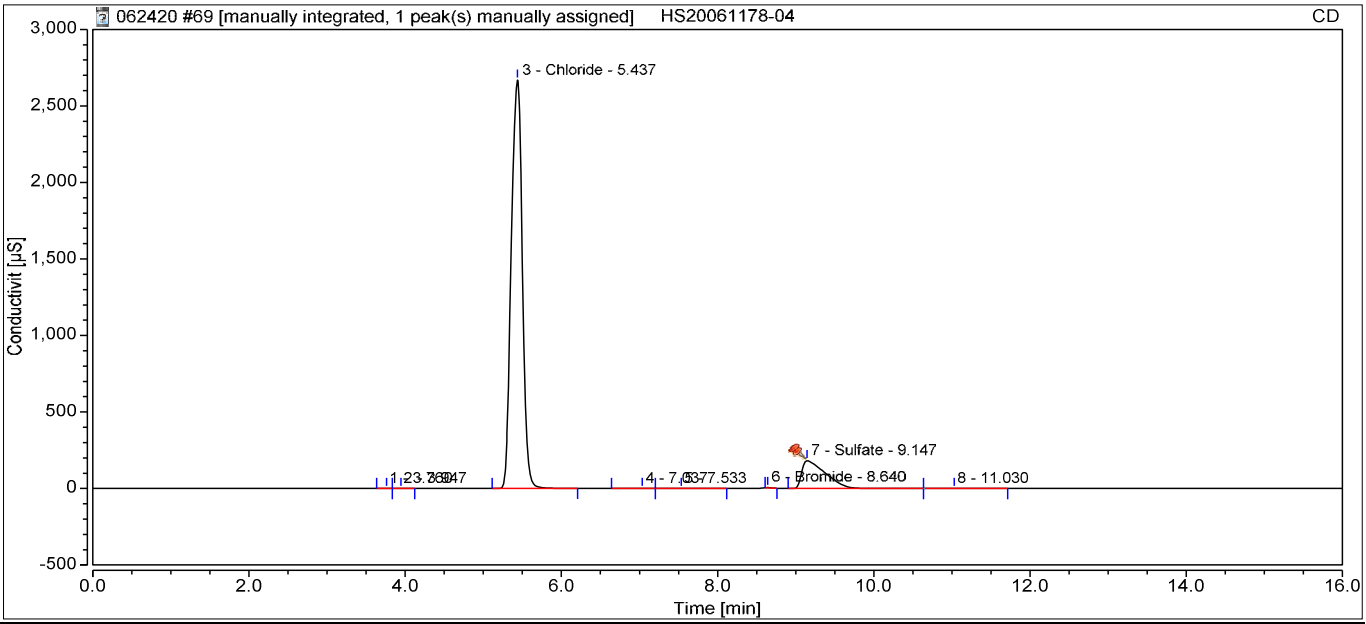
Integration Results

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.	2.0000
6	5.40	Chloride	BMB*	254.034	1146.4392	2292.8783	2.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	2.0000
9	8.70	Bromide	BMB	0.259	2.9286	5.8573	2.0000
10	9.55	Sulfate	BM	1.193	7.7396	15.4792	2.0000
n.a.	n.a.	Nitrate	n.a.	n.a.	n.a.	n.a.	2.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	2.0000
14	14.82	Phosphate	BMB	0.005	0.3273	0.6546	2.0000
Total:			**0.000**	**255.490**		**2314.87**	

69 HS20061178-04

Sample Name:	**HS20061178-04**	*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:	**06/25/2020 05:34**	*Sample Weight:*	**1.0000**

Run Time:



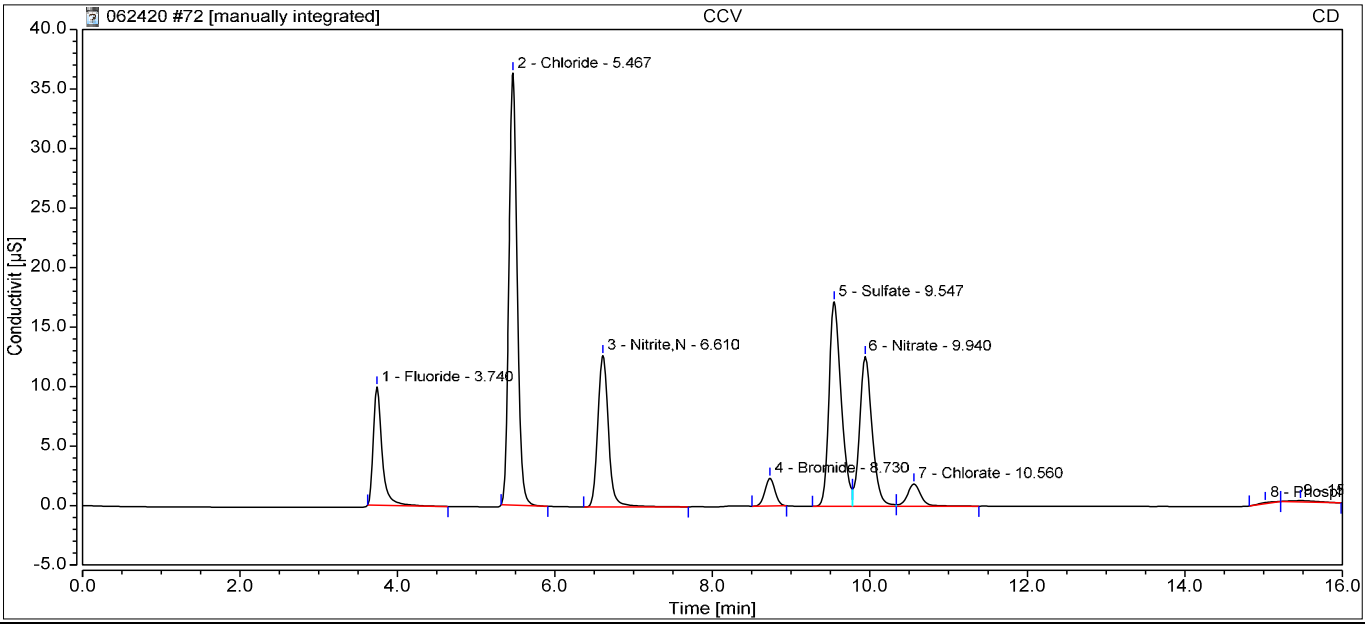
Integration Results

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
3	5.44	Chloride	BMB*	436.792	1971.2382	1971.2382	1.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	1.0000
6	8.64	Bromide	BMB	0.135	1.5385	1.5385	1.0000
7	9.15	Sulfate	BM ^	63.239	400.0128	400.0128	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**	**500.166**		**2372.79**	

72 CCV

Sample Name:	**CCV**	*Injection Volume:*	**5.00**
Vial Number:	**BA2**	*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:	**06/25/2020 06:28**	*Sample Weight:*	**1.0000**

Run Time:



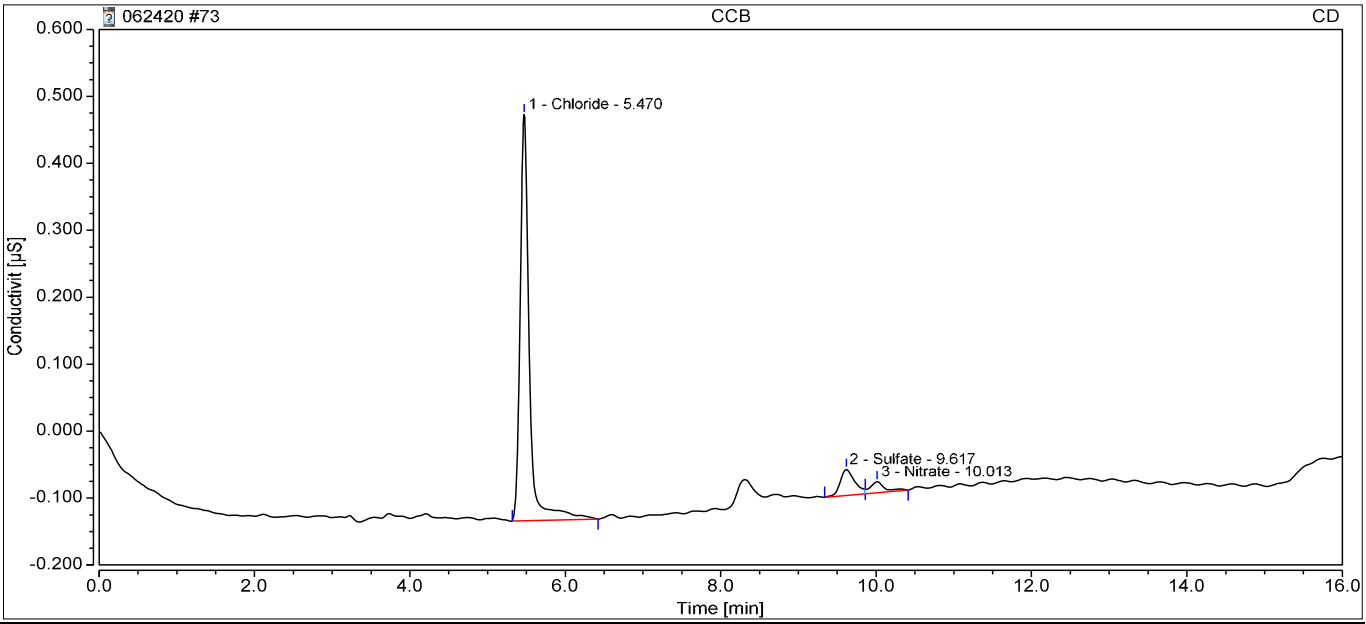
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.74	Fluoride	BMB	1.279	3.8011	3.8011	1.0000
2	5.47	Chloride	BMB	4.420	19.9177	19.9177	1.0000
3	6.61	Nitrite,N	BMB	1.990	4.3281	4.3281	1.0000
4	8.73	Bromide	BMB*	0.347	3.9253	3.9253	1.0000
5	9.55	Sulfate	BM	3.094	19.7610	19.7610	1.0000
6	9.94	Nitrate	M	2.329	3.8919	3.8919	1.0000
7	10.56	Chlorate	MB	0.374	3.8213	3.8213	1.0000
8	15.02	Phosphate	BMB	0.021	0.4107	0.4107	1.0000
Total:			**0.000**	**13.854**		**59.86**	

73 CCB

Sample Name:	**CCB**	*Injection Volume:*	**5.00**
Vial Number:	**BA3**	*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:	**06/25/2020 06:47**	*Sample Weight:*	**1.0000**

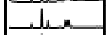
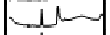
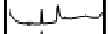
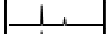
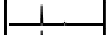
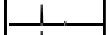
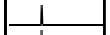
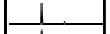
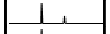
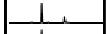
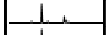
Run Time:



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	5.47	Chloride	BMB	0.083	0.3448	0.3448	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
2	9.62	Sulfate	BM	0.008	0.2526	0.2526	1.0000
3	10.01	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**	**0.095**		**0.60**	

Sequence: 070620
Last Update Operator: alshs.nouser

CD	Name	Comment	Type	Position	Dilution	Level	Instrument Method	Processing Method	me	Status
	STD1		Calibration	GB1	1.00	1	Anions Program 06022020.1	Anions Processing Method	5.0	Finished
	STD2		Calibration	GB2	1.00	2	Anions Program 06022020.1	Anions Processing Method	5.0	Finished
	STD3		Calibration	GB3	1.00	3	Anions Program 06022020.1	Anions Processing Method	5.0	Finished
	STD4		Calibration	GB4	1.00	4	Anions Program 06022020.1	Anions Processing Method	5.0	Finished
	STD5		Calibration	GB5	1.00	5	Anions Program 06022020.1	Anions Processing Method	5.0	Finished
	STD6		Calibration	GB6	1.00	6	Anions Program 06022020.1	Anions Processing Method	5.0	Finished
	ICV		Unknown	GB7	1.00		Anions Program 06022020.1	Anions Processing Method	5.0	Finished
	ICB		Unknown	BA3	1.00		Anions Program 06022020.1	Anions Processing Method	5.0	Finished
	CCV1		Unknown	BA4	1.00		Anions Program 06022020.1	Anions Processing Method	5.0	Finished
	CCB		Unknown	BA7	1.00		Anions Program 06022020.1	Anions Processing Method	5.0	Finished
	MBLK-070820		Unknown	BB3	1.00		Anions Program 06022020.1	Anions Processing Method	5.0	Finished
	CCV		Unknown	BB2	1.00		Anions Program 06022020.1	Anions Processing Method	5.0	Finished
	CCB		Unknown	BB3	1.00		Anions Program 06022020.1	Anions Processing Method	5.0	Finished
	LCS-070820		Unknown	BB2	1.00		Anions Program 06022020.1	Anions Processing Method	5.0	Finished
	CCV		Unknown	BA2	1.00		Anions Program 06022020.1	Anions Processing Method	5.0	Finished
	CCB		Unknown	BA3	1.00		Anions Program 06022020.1	Anions Processing Method	5.0	Finished
	HS20061178-01DF50		Unknown	RC5	50.00		Anions Program 06022020.1	Anions Processing Method	5.0	Finished
	HS20061178-02DF10		Unknown	RC6	10.00		Anions Program 06022020.1	Anions Processing Method	5.0	Finished
	HS20061178-02DF50		Unknown	RC7	50.00		Anions Program 06022020.1	Anions Processing Method	5.0	Finished
	HS20061178-03DF100		Unknown	RC8	100.00		Anions Program 06022020.1	Anions Processing Method	5.0	Finished
	HS20061178-04DF10		Unknown	RD1	10.00		Anions Program 06022020.1	Anions Processing Method	5.0	Finished
	HS20061178-04DF100		Unknown	RD2	100.00		Anions Program 06022020.1	Anions Processing Method	5.0	Finished
	CCV1		Unknown	BA4	1.00		Anions Program 06022020.1	Anions Processing Method	5.0	Finished
	CCB		Unknown	BA5	1.00		Anions Program 06022020.1	Anions Processing Method	5.0	Finished
	HS20061283-02		Unknown	RD6	1.00		Anions Program 06022020.1	Anions Processing Method	5.0	Finished
	HS20061283-02MS		Unknown	RD7	1.00		Anions Program 06022020.1	Anions Processing Method	5.0	Finished
	HS20061283-02MSD		Unknown	RD8	1.00		Anions Program 06022020.1	Anions Processing Method	5.0	Finished
	CCV		Unknown	BA2	1.00		Anions Program 06022020.1	Anions Processing Method	5.0	Finished
	CCB		Unknown	BA3	1.00		Anions Program 06022020.1	Anions Processing Method	5.0	Finished

Sequence: 070620
Last Update Operator: alshs.nouser

Inject Time
6/2/2020 11:02:48 AM -05:00
6/2/2020 11:20:59 AM -05:00
6/2/2020 11:39:04 AM -05:00
6/2/2020 11:57:10 AM -05:00
6/2/2020 12:15:18 PM -05:00
6/2/2020 12:33:22 PM -05:00
6/2/2020 12:51:27 PM -05:00
6/2/2020 1:45:50 PM -05:00
7/7/2020 11:16:34 PM -05:00
7/7/2020 11:34:41 PM -05:00
7/8/2020 12:29:01 AM -05:00
7/8/2020 12:47:06 AM -05:00
7/8/2020 1:05:14 AM -05:00
7/8/2020 1:23:19 AM -05:00
7/8/2020 3:12:05 AM -05:00
7/8/2020 3:30:13 AM -05:00
7/8/2020 3:48:19 AM -05:00
7/8/2020 4:06:24 AM -05:00
7/8/2020 4:24:31 AM -05:00
7/8/2020 4:42:39 AM -05:00
7/8/2020 5:00:45 AM -05:00
7/8/2020 5:18:49 AM -05:00
7/8/2020 6:31:15 AM -05:00
7/8/2020 6:49:20 AM -05:00
7/8/2020 7:07:28 AM -05:00
7/8/2020 7:25:35 AM -05:00
7/8/2020 7:43:39 AM -05:00
7/8/2020 10:08:31 AM -05:00
7/8/2020 10:26:37 AM -05:00

Sequence: 070620
Injection #6: STD6

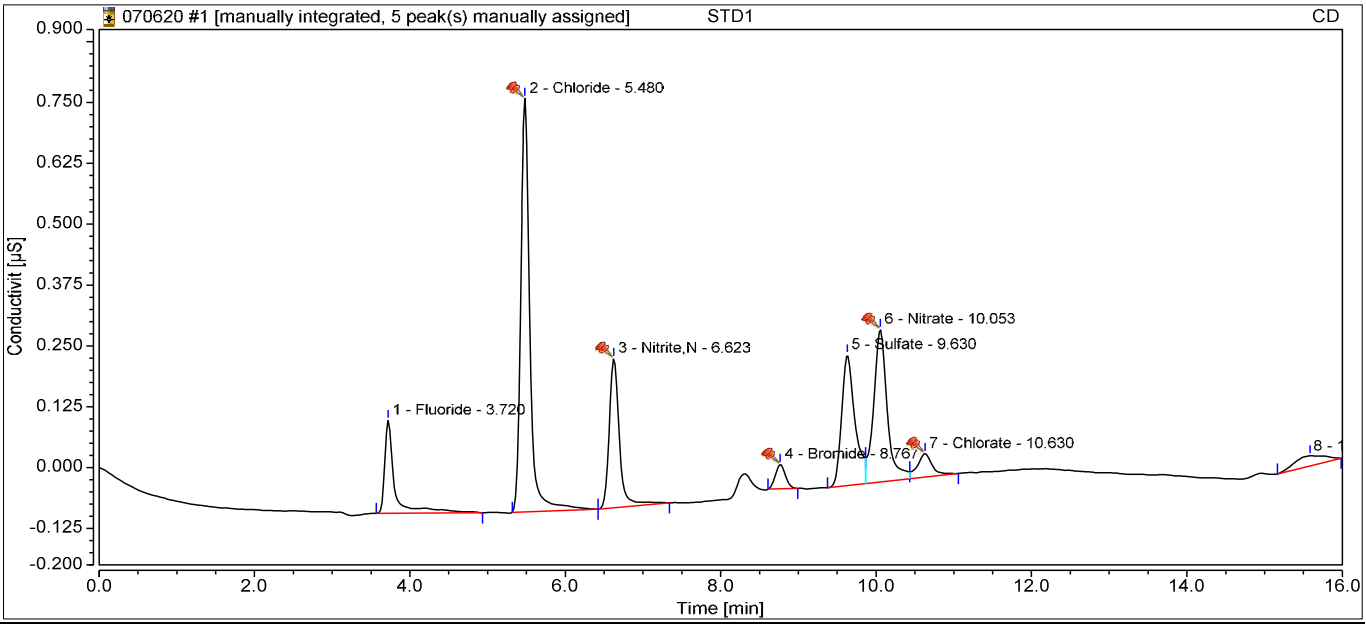
Calibration

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*	*10.8139*	*0.99942*	*-0.0046*	*0.3376*	*0.0000*
2	Chloride	Lin, WithOffset, 1/	Area	6	3.4292	0.99994	0.0066	0.2216	0.0000
3	Nitrite,N	Lin, WithOffset, 1/	Area	6	25.3231	0.99619	0.0124	0.4569	0.0000
4	Bromide	Lin, WithOffset, 1/	Area	6	11.6783	0.99936	-0.0023	0.0890	0.0000
5	Sulfate	Lin, WithOffset, 1/	Area	6	4.6337	0.99991	-0.0317	0.1582	0.0000
6	Nitrate	Lin, WithOffset, 1/	Area	6	5.8899	0.99981	0.0058	0.5970	0.0000
7	Chlorate	Lin, WithOffset, 1/	Area	6	15.6369	0.99851	0.0032	0.0971	0.0000
8	Phosphate	Lin, WithOffset, 1/	Area	5	24.1443	0.99440	-0.0555	0.1862	0.0000
Maximum					**25.3231**	0.99994			
Minimum					3.4292	**0.99440**			

1 STD1

Sample Name:	**STD1**	*Injection Volume:*	**5.00**
Vial Number:	**GB1**	*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:	**06/02/2020 11:02**	*Sample Weight:*	**1.0000**

Run Time:



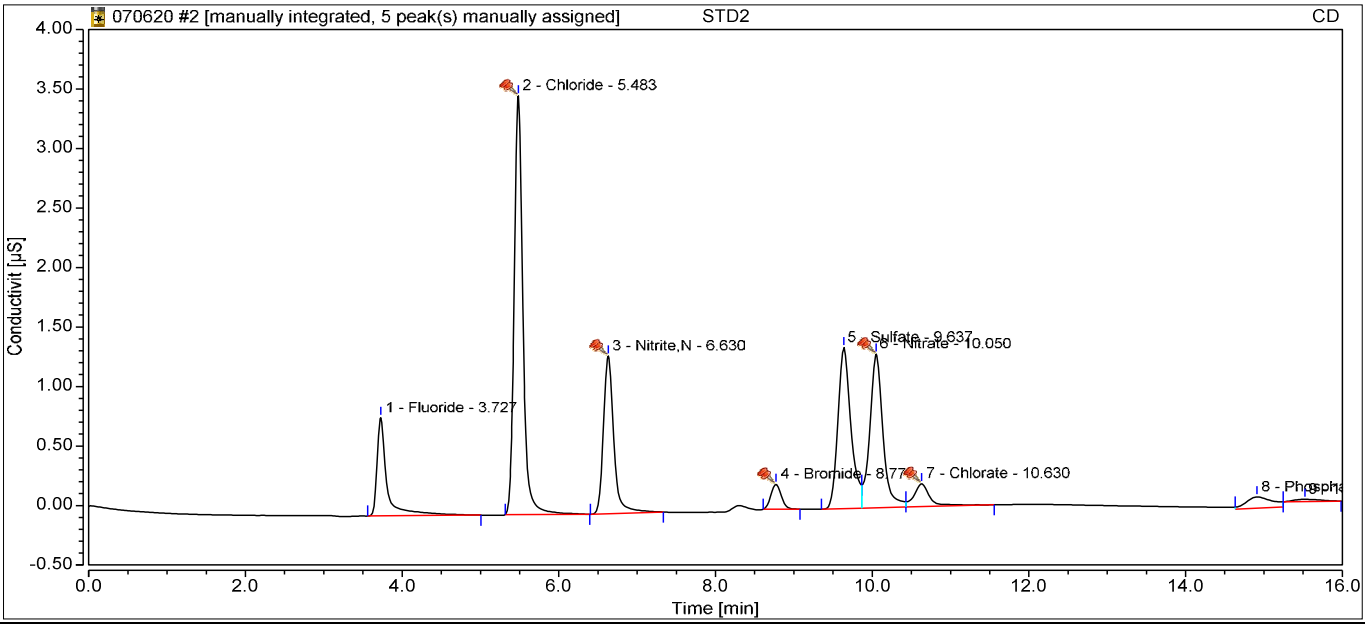
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.72	Fluoride	BMB	0.029	0.0982	0.0982	1.0000
2	5.48	Chloride	BMB^	0.115	0.4904	0.4904	1.0000
3	6.62	Nitrite,N	BMB*^	0.046	0.0745	0.0745	1.0000
4	8.77	Bromide	BMB^	0.007	0.1093	0.1093	1.0000
5	9.63	Sulfate	BM	0.053	0.5374	0.5374	1.0000
6	10.05	Nitrate	M ^	0.064	0.0969	0.0969	1.0000
7	10.63	Chlorate	MB^	0.011	0.0775	0.0775	1.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	1.0000
Total:			**0.000**	**0.325**		**1.48**	

2 STD2

Sample Name:	**STD2**	*Injection Volume:*	**5.00**
Vial Number:	**GB2**	*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:	**06/02/2020 11:20**	*Sample Weight:*	**1.0000**

Run Time:



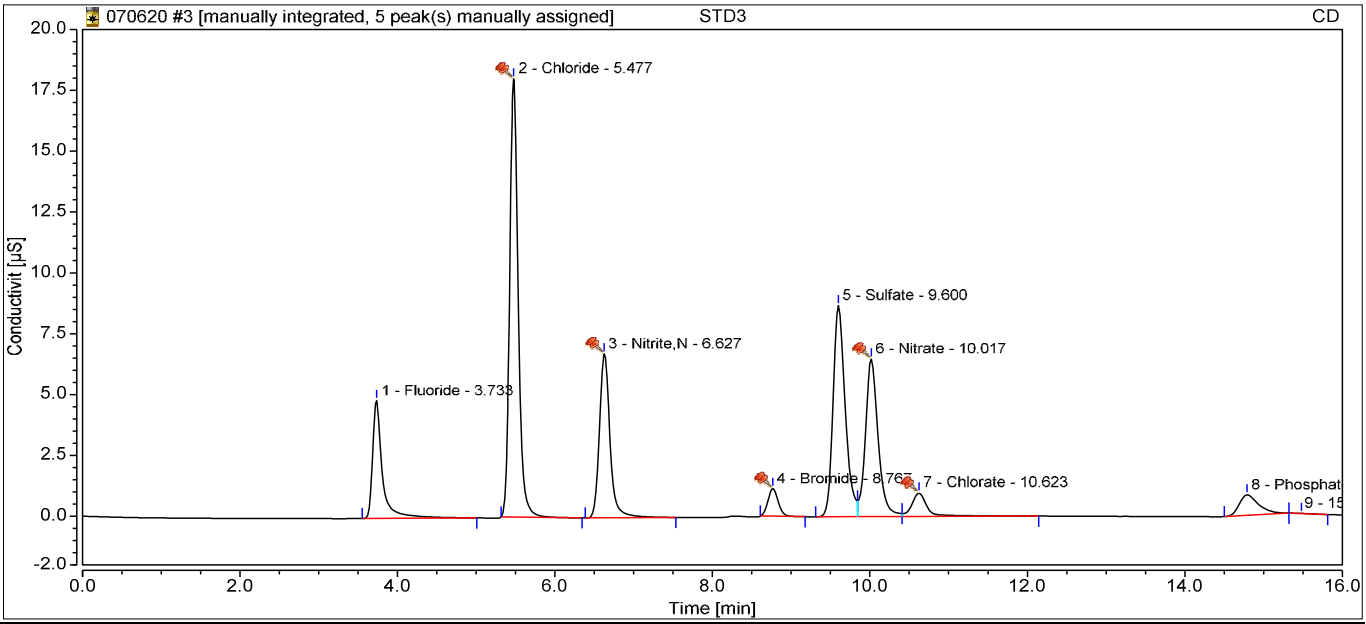
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.73	Fluoride	BMB	0.122	0.3761	0.3761	1.0000
2	5.48	Chloride	BMB^	0.452	2.0081	2.0081	1.0000
3	6.63	Nitrite,N	BMB*^	0.202	0.4159	0.4159	1.0000
4	8.77	Bromide	BMB^	0.032	0.3810	0.3810	1.0000
5	9.64	Sulfate	BM	0.263	1.8631	1.8631	1.0000
6	10.05	Nitrate	M ^	0.253	0.4135	0.4135	1.0000
7	10.63	Chlorate	MB^	0.046	0.4359	0.4359	1.0000
8	14.91	Phosphate	M *	0.037	0.4982	0.4982	1.0000
Total:			**0.000**	**1.407**		**6.39**	

3 STD3

Sample Name:	**STD3**	*Injection Volume:*	**5.00**
Vial Number:	**GB3**	*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:	**06/02/2020 11:39**	*Sample Weight:*	**1.0000**

Run Time:



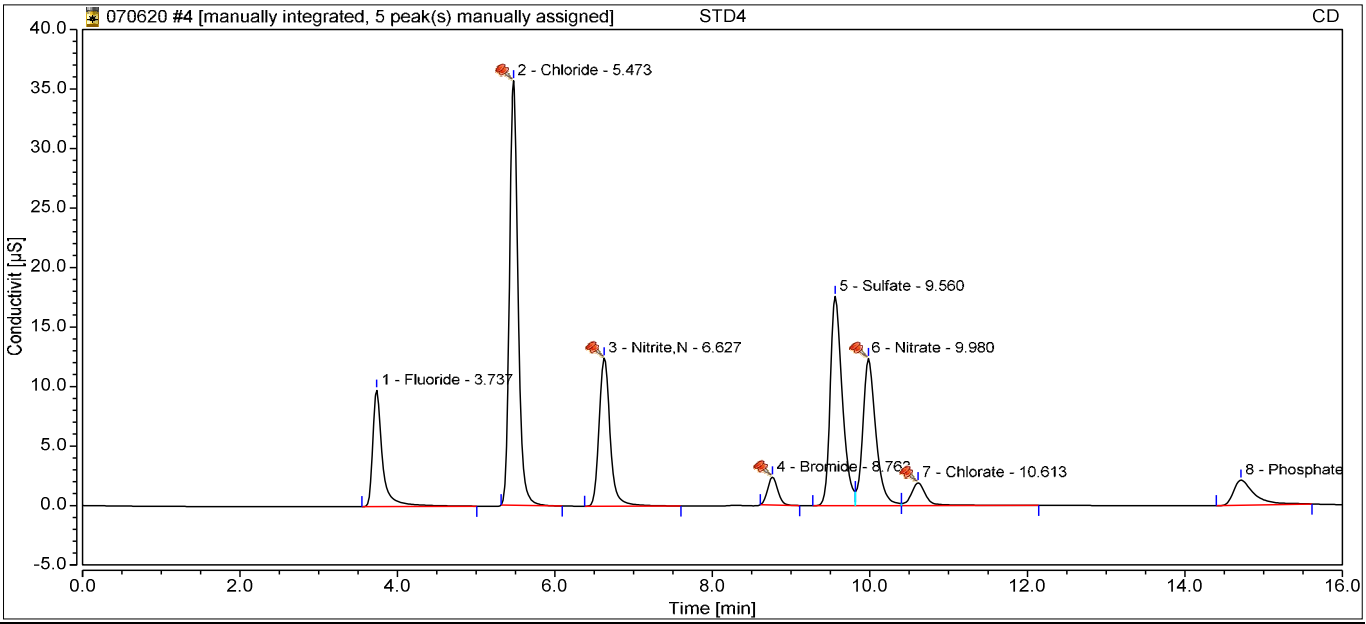
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.73	Fluoride	BMB	0.697	2.0782	2.0782	1.0000
2	5.48	Chloride	BMB^	2.257	10.1575	10.1575	1.0000
3	6.63	Nitrite,N	BMB*^	1.049	2.2692	2.2692	1.0000
4	8.77	Bromide	BMB^	0.172	1.9524	1.9524	1.0000
5	9.60	Sulfate	BM	1.543	9.9532	9.9532	1.0000
6	10.02	Nitrate	M ^	1.213	2.0220	2.0220	1.0000
7	10.62	Chlorate	MB^	0.220	2.2332	2.2332	1.0000
8	14.79	Phosphate	BMB	0.243	1.6042	1.6042	1.0000
Total:			**0.000**	**7.394**		**32.27**	

4 STD4

Sample Name:	**STD4**	*Injection Volume:*	**5.00**
Vial Number:	**GB4**	*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:	**06/02/2020 11:57**	*Sample Weight:*	**1.0000**

Run Time:



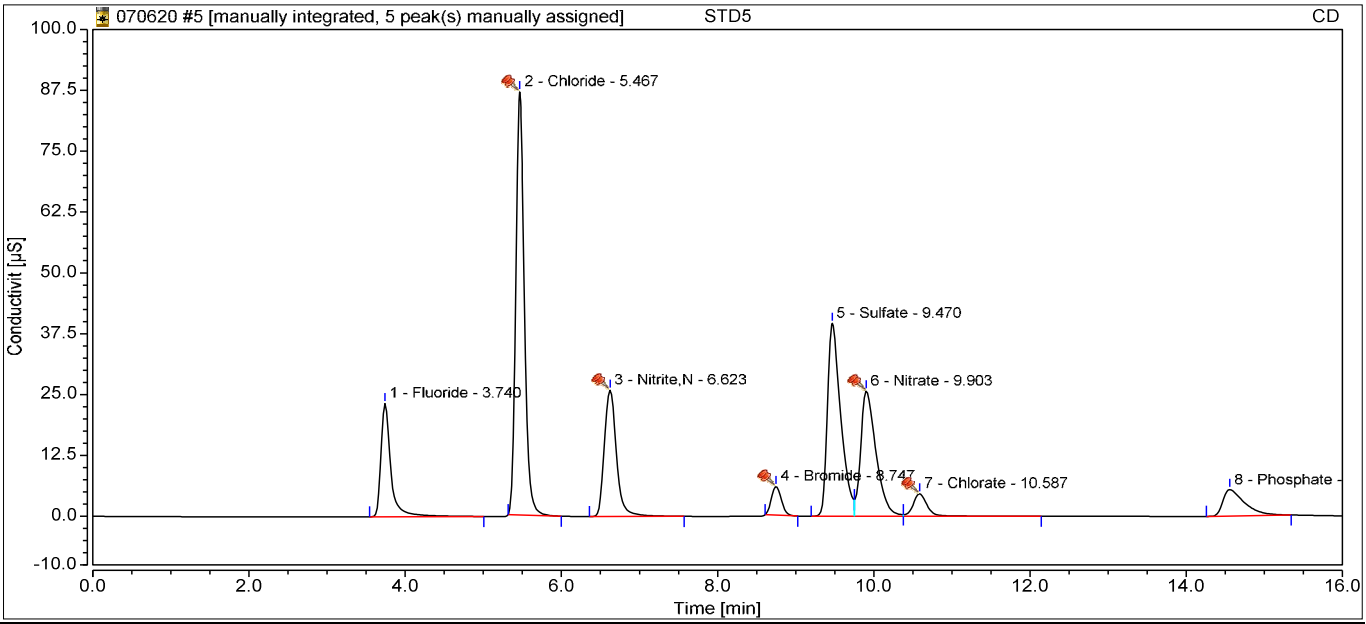
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.74	Fluoride	BMB	1.406	4.1793	4.1793	1.0000
2	5.47	Chloride	BMB^	4.475	20.1656	20.1656	1.0000
3	6.63	Nitrite,N	BMB*^	2.031	4.4170	4.4170	1.0000
4	8.76	Bromide	BMB^	0.350	3.9560	3.9560	1.0000
5	9.56	Sulfate	BM	3.131	19.9943	19.9943	1.0000
6	9.98	Nitrate	M ^	2.388	3.9909	3.9909	1.0000
7	10.61	Chlorate	MB^	0.410	4.1864	4.1864	1.0000
8	14.71	Phosphate	BMB*	0.647	3.7708	3.7708	1.0000
Total:			**0.000**	**14.837**		**64.66**	

5 STD5

Sample Name:	**STD5**	*Injection Volume:*	**5.00**
Vial Number:	**GB5**	*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:	**06/02/2020 12:15**	*Sample Weight:*	**1.0000**

Run Time:



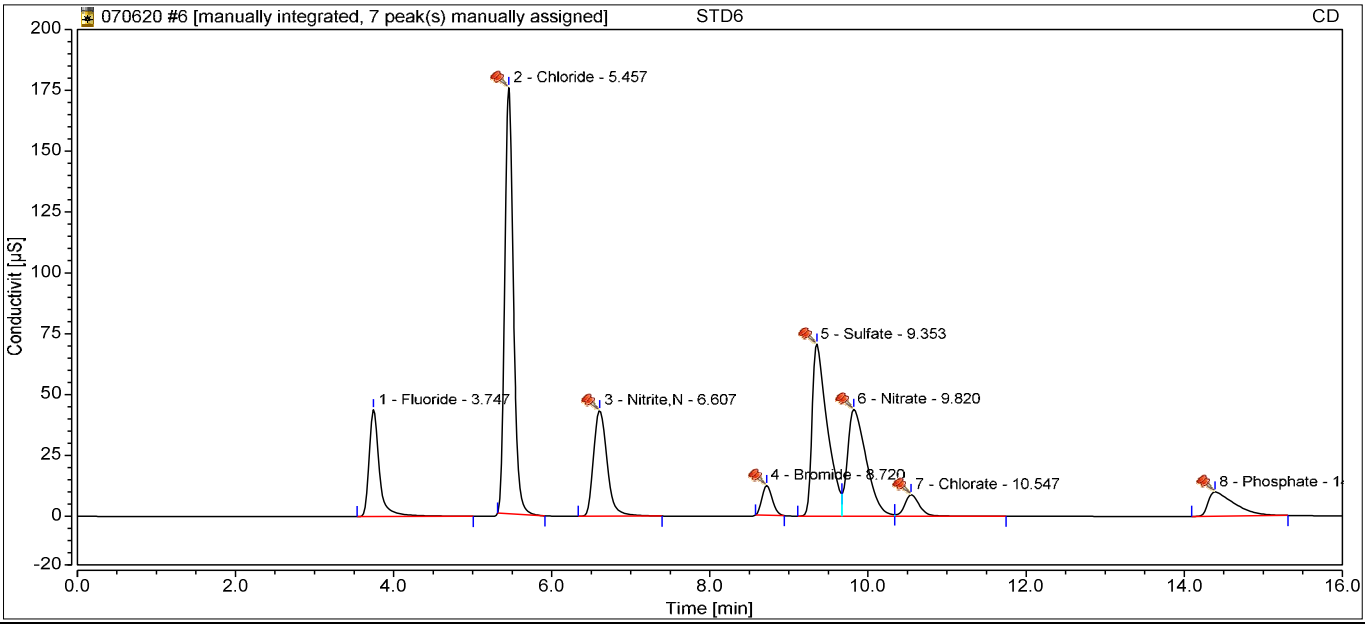
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.74	Fluoride	BMB	3.409	10.1112	10.1112	1.0000
2	5.47	Chloride	BMB^	10.962	49.4436	49.4436	1.0000
3	6.62	Nitrite,N	BMB*^	4.673	10.1996	10.1996	1.0000
4	8.75	Bromide	BMB^	0.860	9.6874	9.6874	1.0000
5	9.47	Sulfate	BM	7.832	49.7141	49.7141	1.0000
6	9.90	Nitrate	M ^	5.855	9.7981	9.7981	1.0000
7	10.59	Chlorate	MB^	0.963	9.8794	9.8794	1.0000
8	14.56	Phosphate	BMB*	1.744	9.6675	9.6675	1.0000
Total:			**0.000**	**36.299**		**158.50**	

6 STD6

Sample Name:	**STD6**	*Injection Volume:*	**5.00**
Vial Number:	**GB6**	*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:	**06/02/2020 12:33**	*Sample Weight:*	**1.0000**

Run Time:



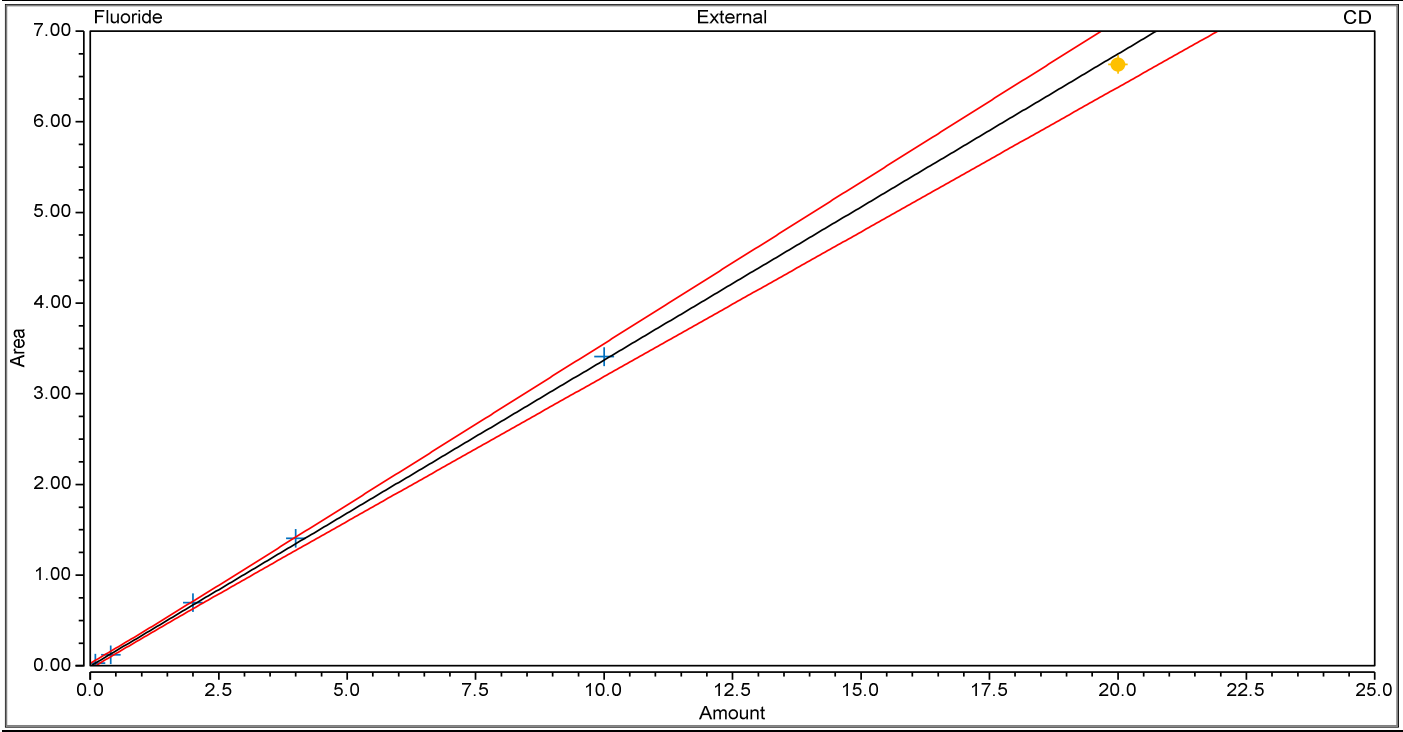
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.75	Fluoride	BMB	6.632	19.6569	19.6569	1.0000
2	5.46	Chloride	BMB^	22.217	100.2349	100.2349	1.0000
3	6.61	Nitrite,N	BMB*^	8.750	19.1238	19.1238	1.0000
4	8.72	Bromide	BMB*^	1.815	20.4140	20.4140	1.0000
5	9.35	Sulfate	BM ^	15.855	100.4380	100.4380	1.0000
6	9.82	Nitrate	M ^	12.052	20.1786	20.1786	1.0000
7	10.55	Chlorate	MB^	1.916	19.6877	19.6877	1.0000
8	14.39	Phosphate	BMB*^	3.828	20.8593	20.8593	1.0000
Total:			**0.000**	**73.065**		**320.59**	

Calibration

Calibration Details	Fluoride		
Calibration Type	Lin, WithOffset, 1/A	*Offset (C0)*	-0.0046
Evaluation Type	Area	*Slope (C1)*	0.3376
Number of Calibration Points	6	*Curve (C2)*	0.0000
Number of disabled Calibration Points	0	*R-Square*	0.9994

Calibration Plot **Fluoride**



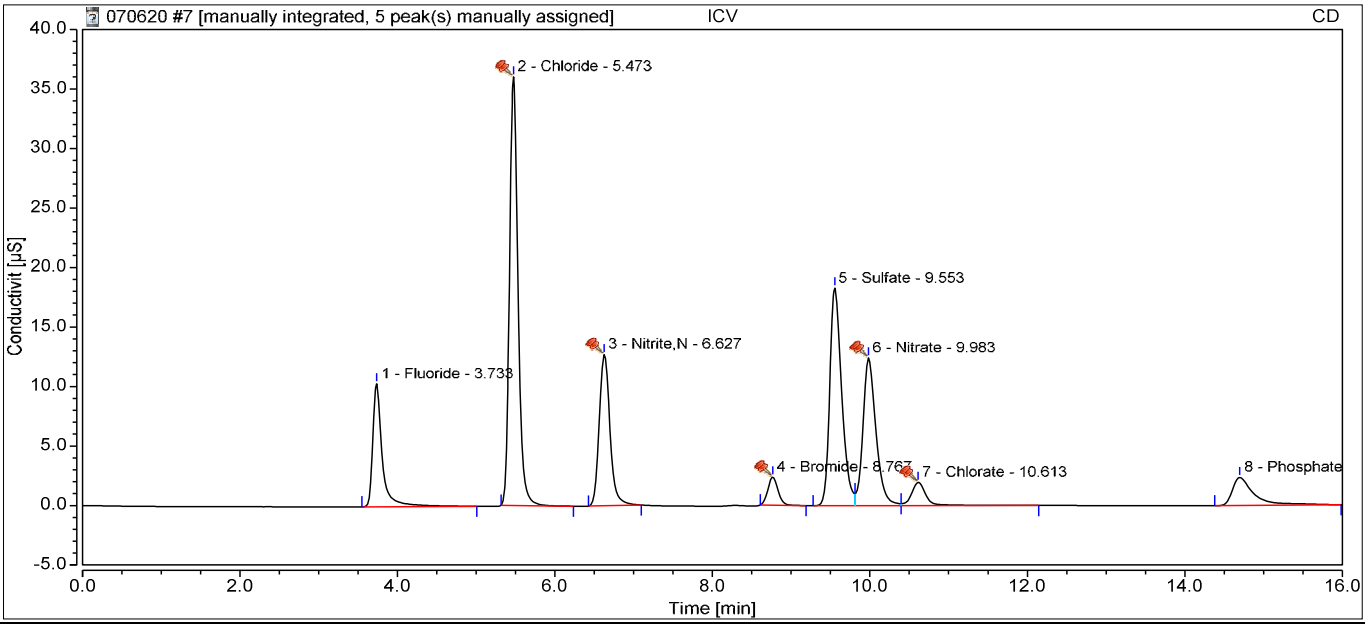
Calibration Results **Fluoride**

No.	Injection Name	Calibration Level	X Value CD Fluoride	Y Value CD Fluoride	Y Value CD Fluoride	Area µS*min CD Fluoride	Height µS CD Fluoride
1	STD1	1	0.1000	0.0285	0.0285	0.029	0.191
2	STD2	2	0.4000	0.1224	0.1224	0.122	0.826
3	STD3	3	2.0000	0.6970	0.6970	0.697	4.841
4	STD4	4	4.0000	1.4064	1.4064	1.406	9.790
5	STD5	5	10.0000	3.4092	3.4092	3.409	23.253
6	STD6	6	20.0000	6.6320	6.6320	6.632	43.889

7 ICV

Sample Name:	**ICV**	*Injection Volume:*	**5.00**
Vial Number:	**GB7**	*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:	**06/02/2020 12:51**	*Sample Weight:*	**1.0000**

Run Time:



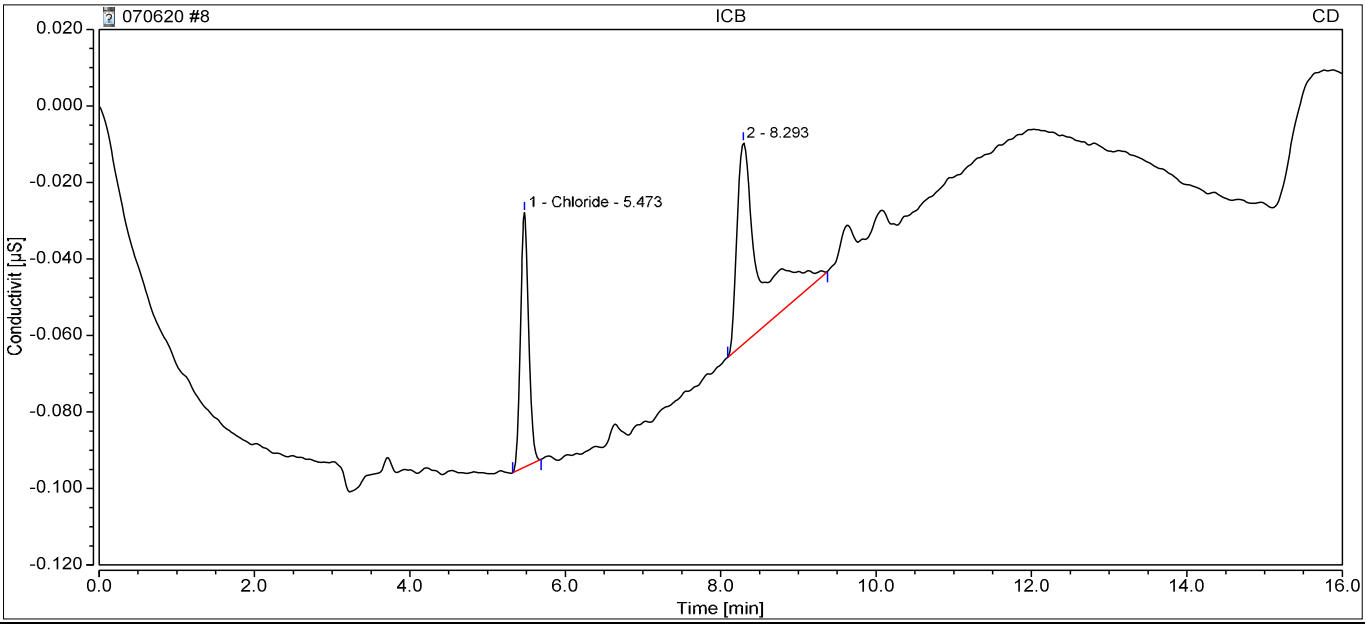
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.73	Fluoride	BMB	1.442	4.2839	4.2839	1.0000
2	5.47	Chloride	BMB^	4.508	20.3168	20.3168	1.0000
3	6.63	Nitrite,N	BMB*^	2.013	4.3785	4.3785	1.0000
4	8.77	Bromide	BMB^	0.352	3.9794	3.9794	1.0000
5	9.55	Sulfate	BM	3.208	20.4827	20.4827	1.0000
6	9.98	Nitrate	M ^	2.387	3.9894	3.9894	1.0000
7	10.61	Chlorate	MB^	0.412	4.2081	4.2081	1.0000
8	14.70	Phosphate	BMB	0.762	4.3926	4.3926	1.0000
Total:			**0.000**	**15.085**		**66.03**	

8 ICB

Sample Name:	**ICB**	*Injection Volume:*	**5.00**
Vial Number:	**BA3**	*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:	**06/02/2020 13:45**	*Sample Weight:*	**1.0000**

Run Time:



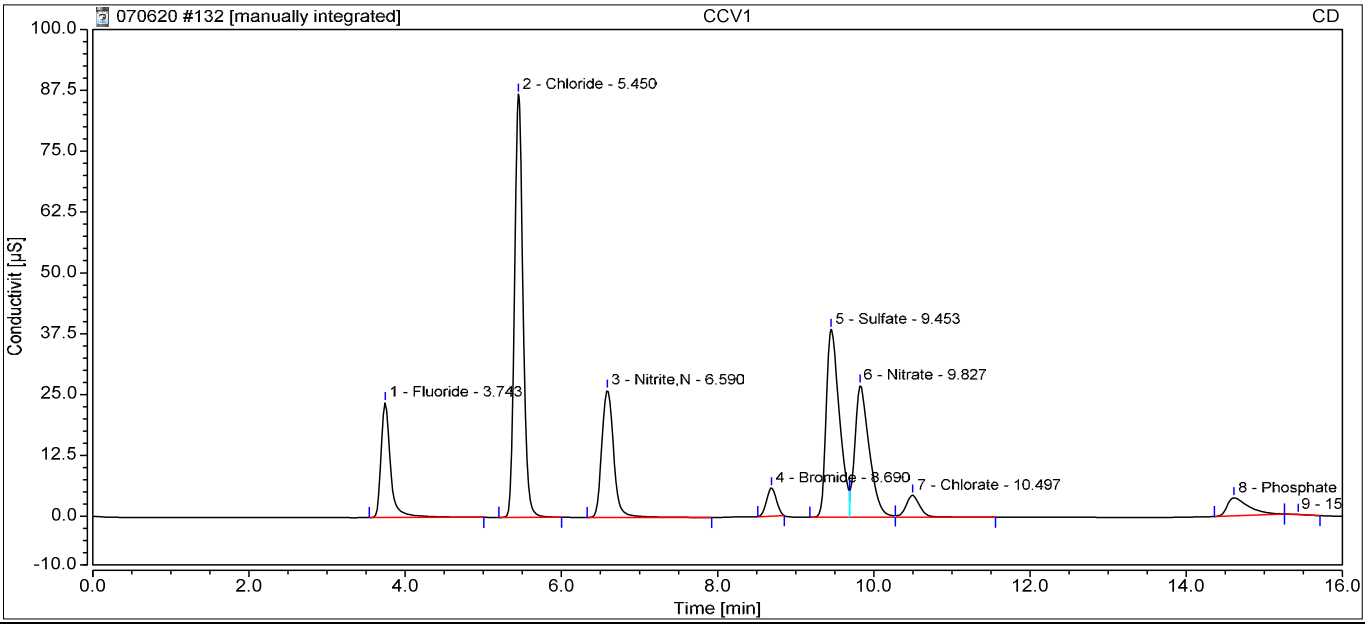
Integration Results

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	5.47	Chloride	BMB	0.008	0.0067	0.0067	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**	**0.008**		**0.01**	

132 CCV1

Sample Name:	**CCV1**	*Injection Volume:*	**5.00**
Vial Number:	**BA4**	*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:	**07/07/2020 23:16**	*Sample Weight:*	**1.0000**

Run Time:



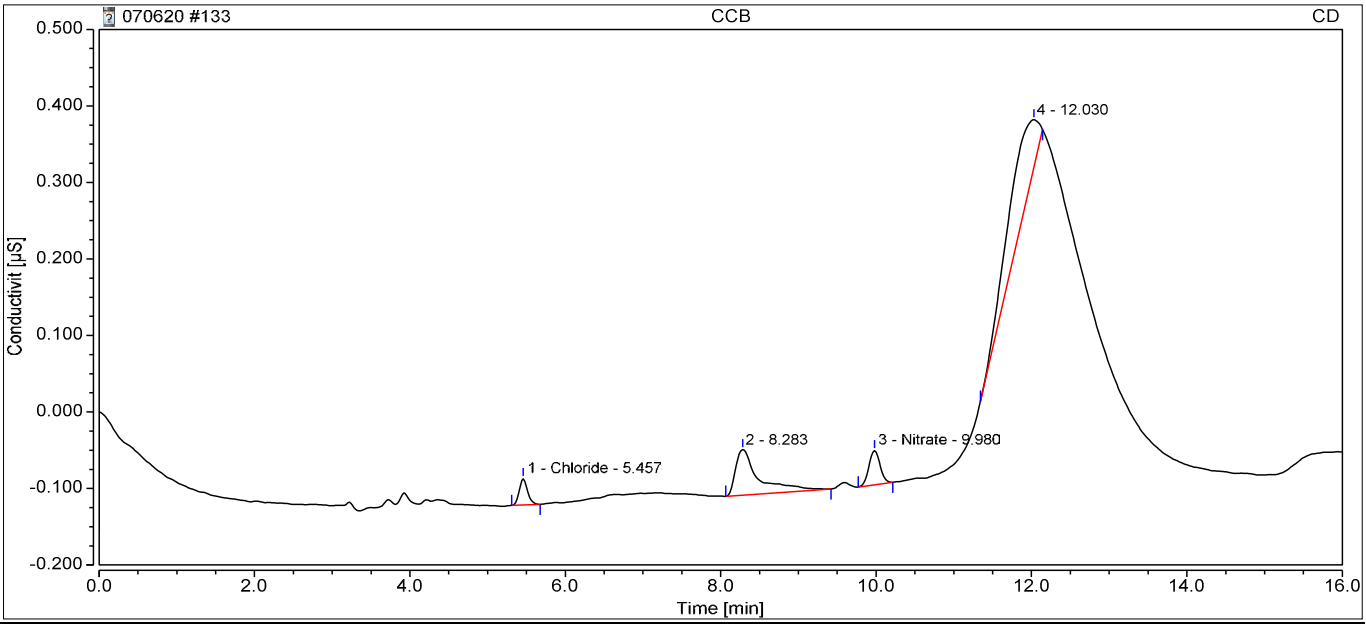
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.74	Fluoride	BMB	3.343	9.9144	9.9144	1.0000
2	5.45	Chloride	BMB*	10.909	49.2022	49.2022	1.0000
3	6.59	Nitrite,N	BMB	4.590	10.0189	10.0189	1.0000
4	8.69	Bromide	BMB*	0.849	9.5554	9.5554	1.0000
5	9.45	Sulfate	BM	7.577	48.1036	48.1036	1.0000
6	9.83	Nitrate	M	5.820	9.7391	9.7391	1.0000
7	10.50	Chlorate	MB	0.923	9.4667	9.4667	1.0000
8	14.61	Phosphate	BMB	1.180	6.6352	6.6352	1.0000
Total:			**0.000**	**35.190**		**152.64**	

133 CCB

Sample Name:	**CCB**	*Injection Volume:*	**5.00**
Vial Number:	**BA7**	*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:	**07/07/2020 23:34**	*Sample Weight:*	**1.0000**

Run Time:



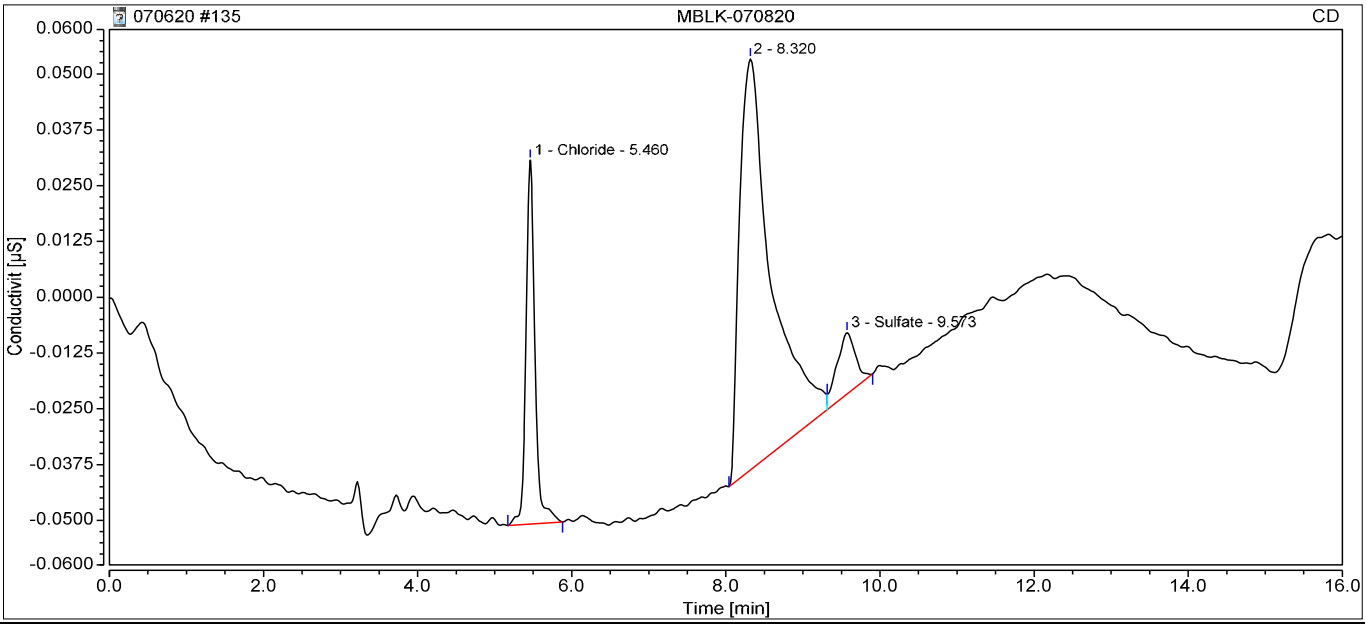
Integration Results

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
1	5.46	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
3	9.98	Nitrate	BMB	0.007	0.0027	0.0027	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**	**0.012**		**0.00**	

135 MBLK-070820

Sample Name:	**MBLK-070820**	*Injection Volume:*	**5.00**
Vial Number:	**BB3**	*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:	**07/08/2020 00:29**	*Sample Weight:*	**1.0000**

Run Time:



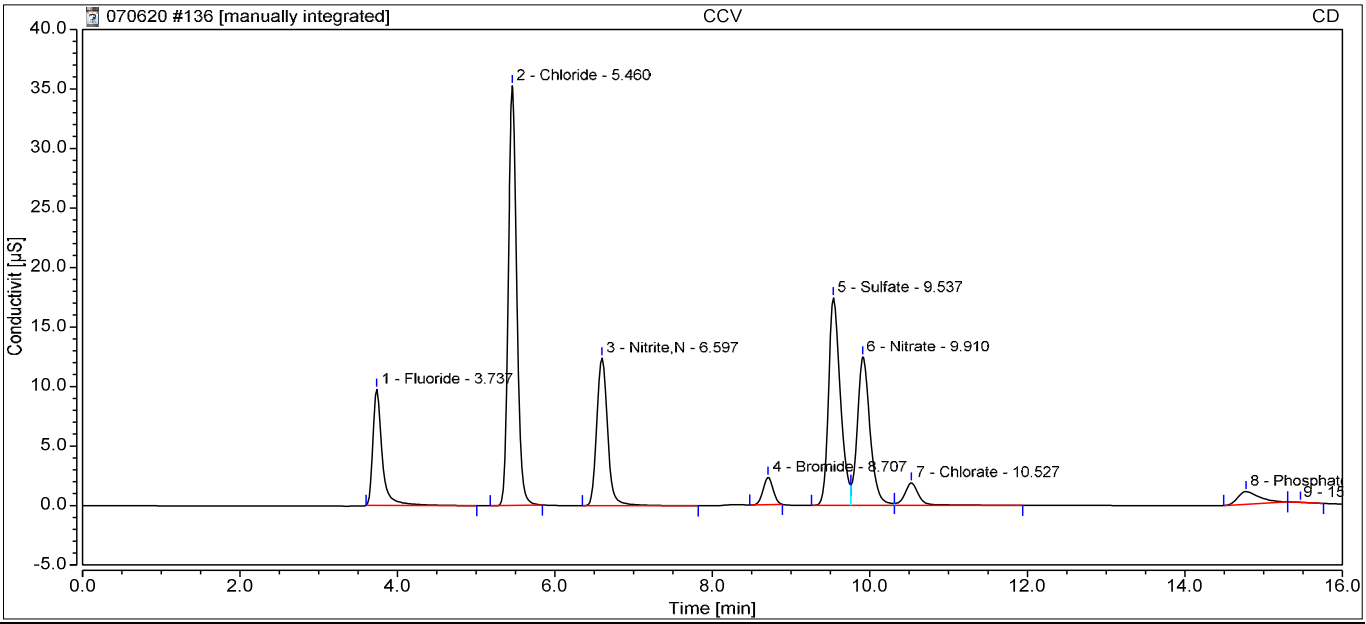
Integration Results

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	5.46	Chloride	BMB	0.011	0.0199	0.0199	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	9.57	Sulfate	MB	0.004	0.2250	0.2250	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**	**0.015**		**0.24**	

136 CCV

Sample Name:	**CCV**	*Injection Volume:*	**5.00**
Vial Number:	**BB2**	*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:	**07/08/2020 00:47**	*Sample Weight:*	**1.0000**

Run Time:



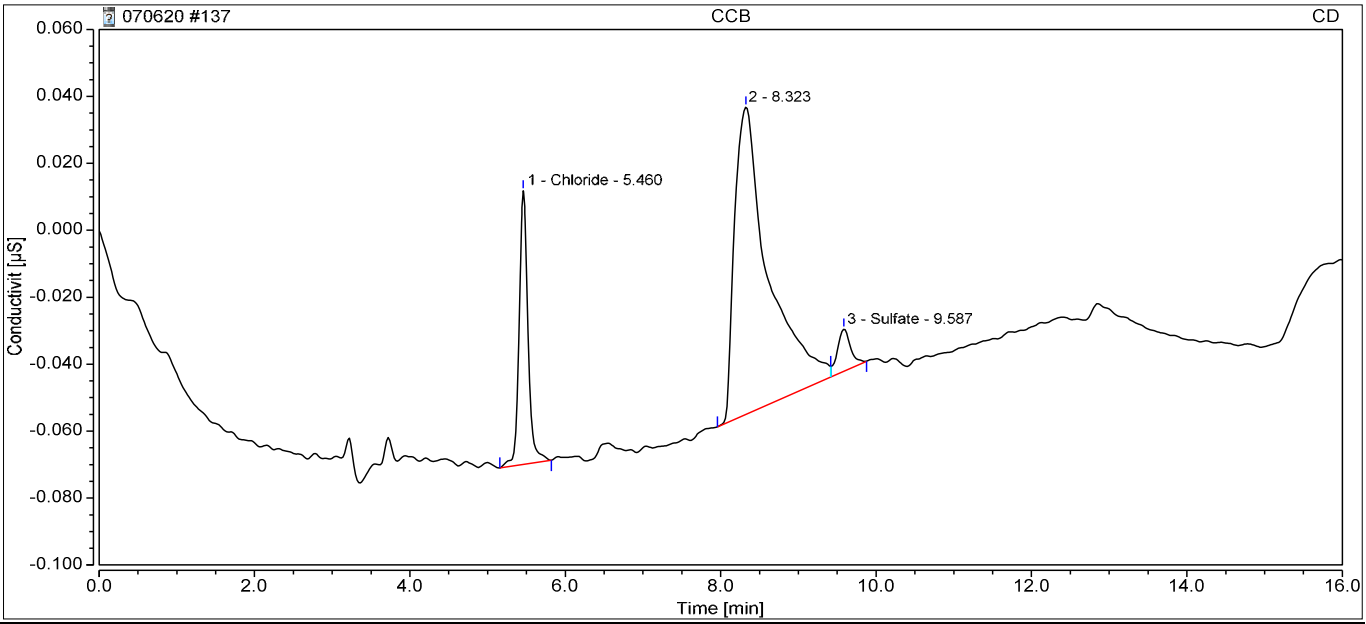
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.74	Fluoride	BMB	1.333	3.9626	3.9626	1.0000
2	5.46	Chloride	BMB*	4.404	19.8466	19.8466	1.0000
3	6.60	Nitrite,N	BMB	1.987	4.3221	4.3221	1.0000
4	8.71	Bromide	BMB*	0.340	3.8426	3.8426	1.0000
5	9.54	Sulfate	BM	3.059	19.5422	19.5422	1.0000
6	9.91	Nitrate	M	2.340	3.9101	3.9101	1.0000
7	10.53	Chlorate	MB	0.398	4.0635	4.0635	1.0000
8	14.78	Phosphate	BMB	0.338	2.1152	2.1152	1.0000
Total:			**0.000**	**14.200**		**61.60**	

137 CCB

Sample Name:	**CCB**	*Injection Volume:*	**5.00**
Vial Number:	**BB3**	*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:	**07/08/2020 01:05**	*Sample Weight:*	**1.0000**

Run Time:



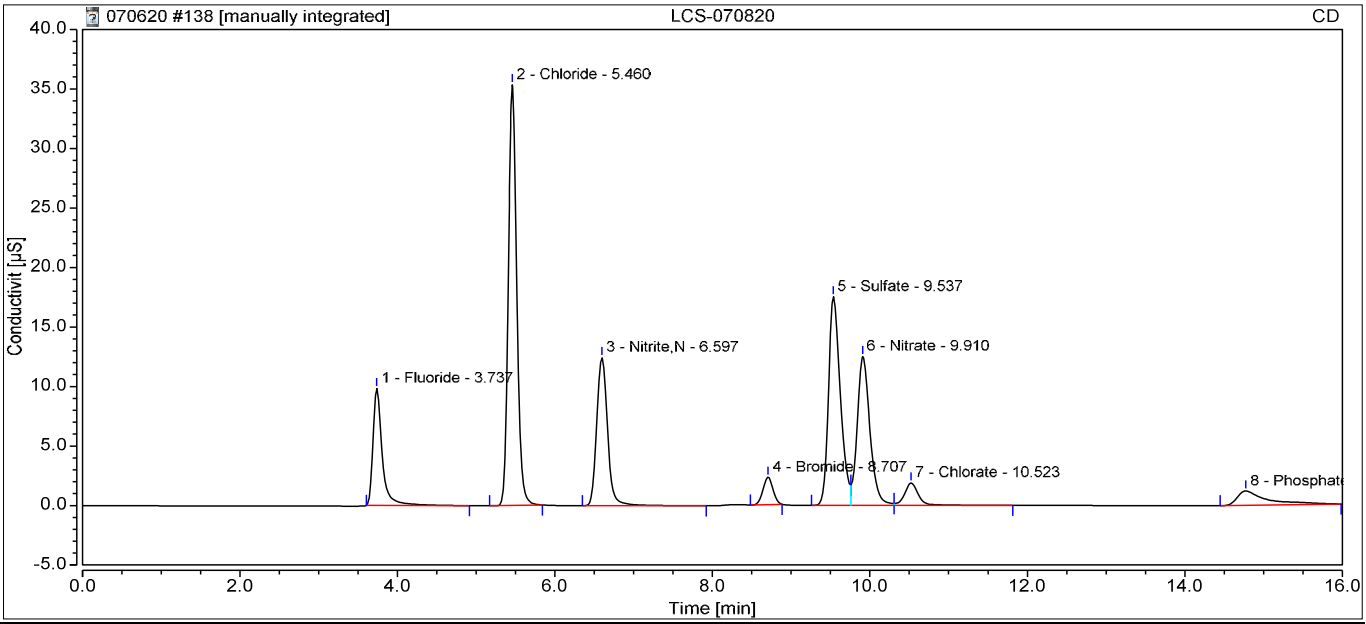
Integration Results

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	5.46	Chloride	BMB	0.011	0.0188	0.0188	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	9.59	Sulfate	MB	0.003	0.2161	0.2161	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**		**0.23**	

138 LCS-070820

Sample Name:	**LCS-070820**	*Injection Volume:*	**5.00**
Vial Number:	**BB2**	*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:	**07/08/2020 01:23**	*Sample Weight:*	**1.0000**

Run Time:



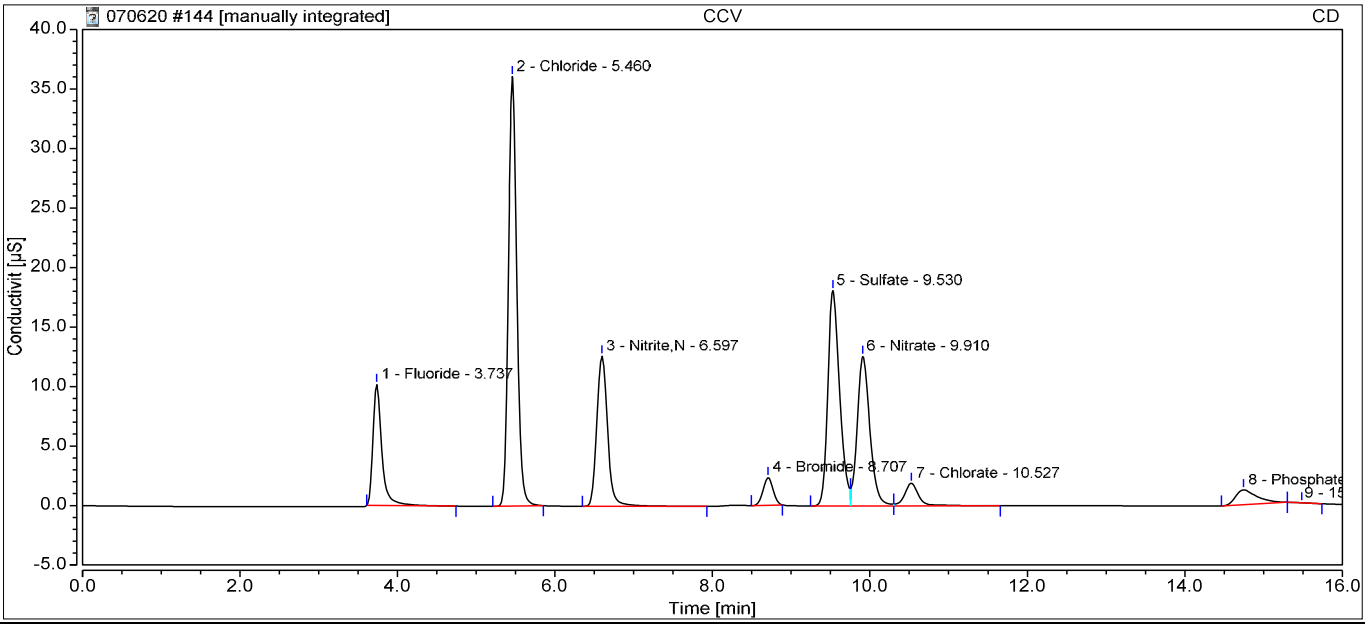
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.74	Fluoride	BMB	1.331	3.9559	3.9559	1.0000
2	5.46	Chloride	BMB*	4.401	19.8325	19.8325	1.0000
3	6.60	Nitrite,N	BMB	1.994	4.3371	4.3371	1.0000
4	8.71	Bromide	BMB*	0.340	3.8452	3.8452	1.0000
5	9.54	Sulfate	BM	3.070	19.6086	19.6086	1.0000
6	9.91	Nitrate	M	2.347	3.9216	3.9216	1.0000
7	10.52	Chlorate	MB	0.392	4.0067	4.0067	1.0000
8	14.77	Phosphate	BMB	0.527	3.1286	3.1286	1.0000
Total:			**0.000**	**14.403**		**62.64**	

144 CCV

Sample Name:	**CCV**	*Injection Volume:*	**5.00**
Vial Number:	**BA2**	*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:	**07/08/2020 03:12**	*Sample Weight:*	**1.0000**

Run Time:



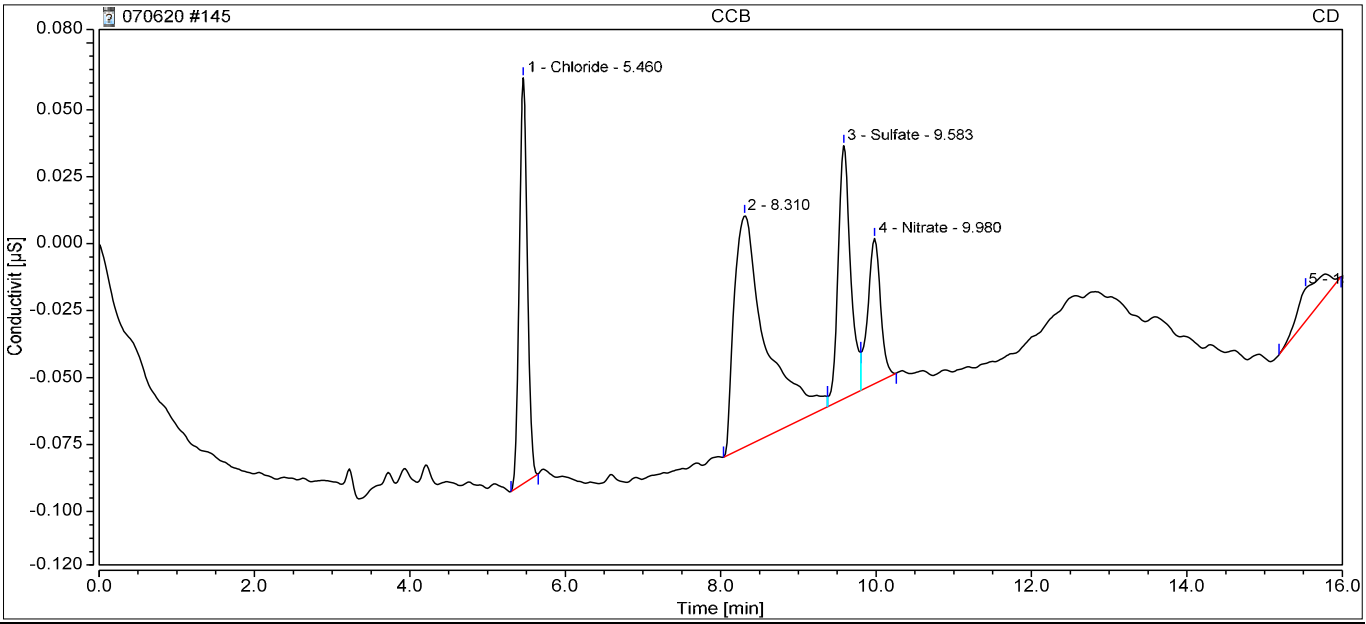
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.74	Fluoride	BMB	1.323	3.9328	3.9328	1.0000
2	5.46	Chloride	BMB*	4.494	20.2506	20.2506	1.0000
3	6.60	Nitrite,N	BMB	2.010	4.3721	4.3721	1.0000
4	8.71	Bromide	BMB*	0.345	3.8981	3.8981	1.0000
5	9.53	Sulfate	BM	3.159	20.1741	20.1741	1.0000
6	9.91	Nitrate	M	2.341	3.9115	3.9115	1.0000
7	10.53	Chlorate	MB	0.401	4.0935	4.0935	1.0000
8	14.75	Phosphate	BMB	0.396	2.4247	2.4247	1.0000
Total:			**0.000**	**14.469**		**63.06**	

145 CCB

Sample Name:	**CCB**	*Injection Volume:*	**5.00**
Vial Number:	**BA3**	*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:	**07/08/2020 03:30**	*Sample Weight:*	**1.0000**

Run Time:



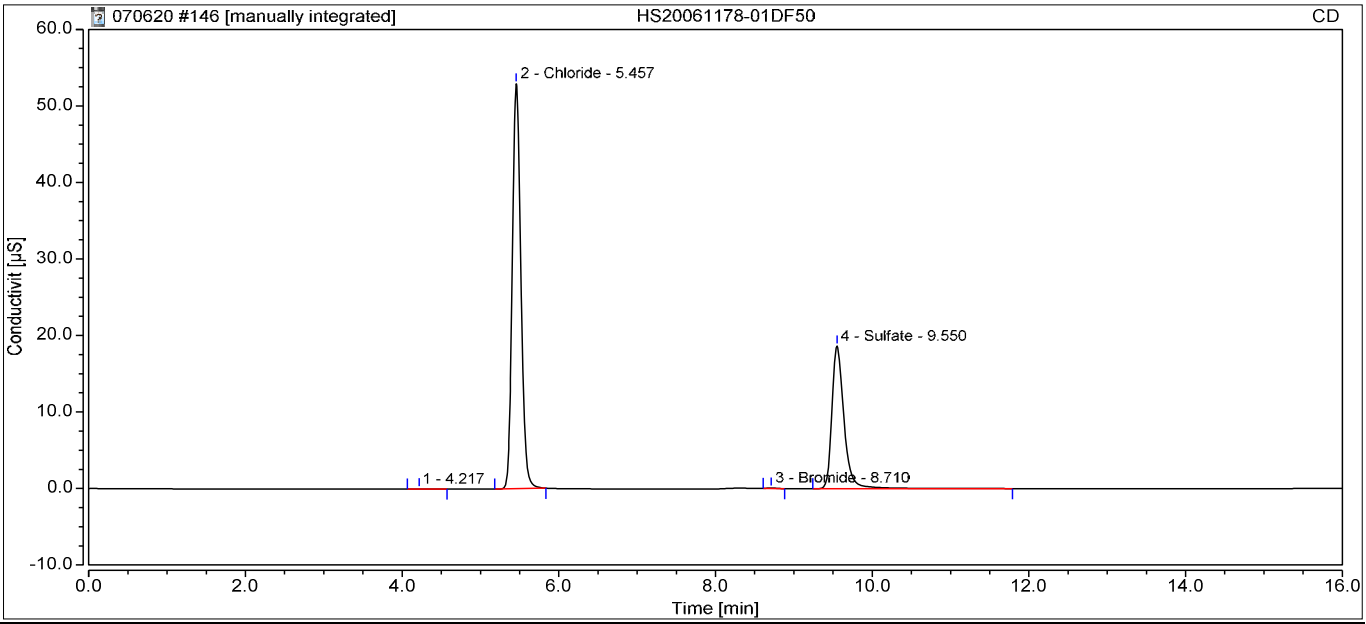
Integration Results

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	5.46	Chloride	BMB	0.018	0.0522	0.0522	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	9.58	Sulfate	M	0.018	0.3113	0.3113	1.0000
4	9.98	Nitrate	MB	0.010	0.0077	0.0077	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**	**0.046**		**0.37**	

146 HS20061178-01DF50

Sample Name:	**HS20061178-01DF50**	*Injection Volume:*	**5.00**
Vial Number:	**RC5**	*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:	**07/08/2020 03:48**	*Sample Weight:*	**1.0000**

Run Time:



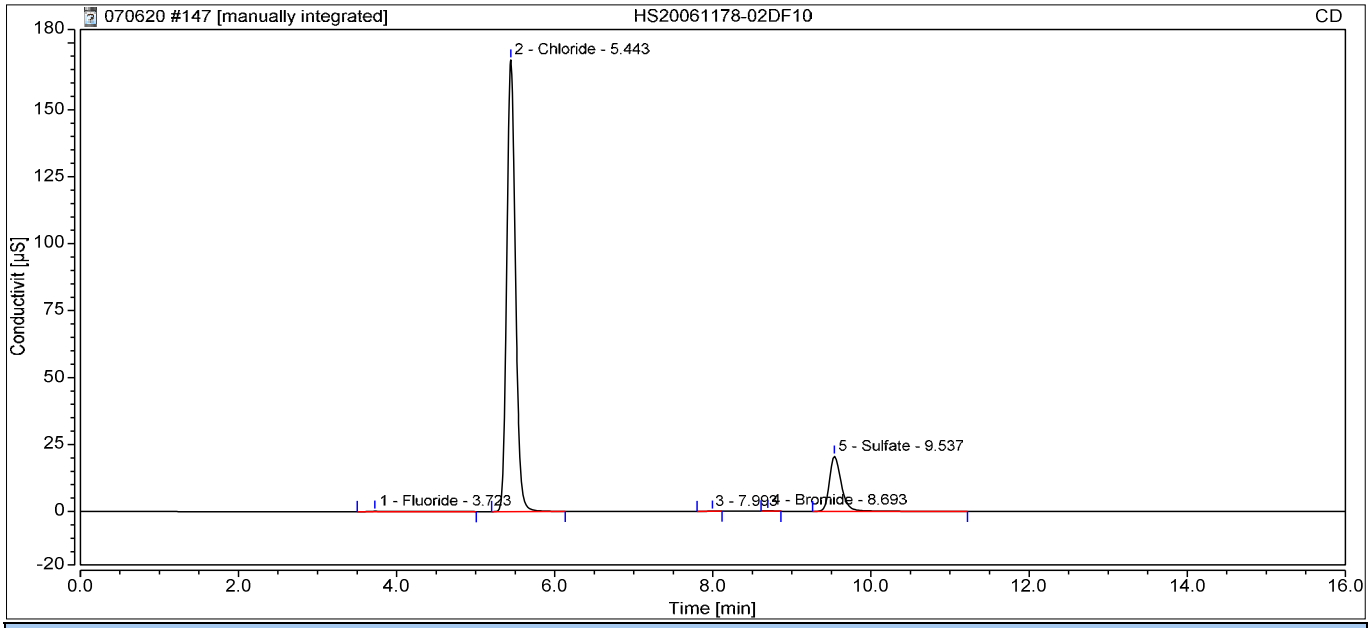
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	50.0000
2	5.46	Chloride	BMB*	6.631	29.8983	1494.9168	50.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	50.0000
3	8.71	Bromide	BMB	0.008	0.1111	5.5539	50.0000
4	9.55	Sulfate	BMB	3.330	21.2563	1062.8156	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**	**9.970**		**2563.29**	

147 HS20061178-02DF10

Sample Name:	**HS20061178-02DF10**	*Injection Volume:*	**5.00**
Vial Number:	**RC6**	*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:	**07/08/2020 04:06**	*Sample Weight:*	**1.0000**

Run Time:



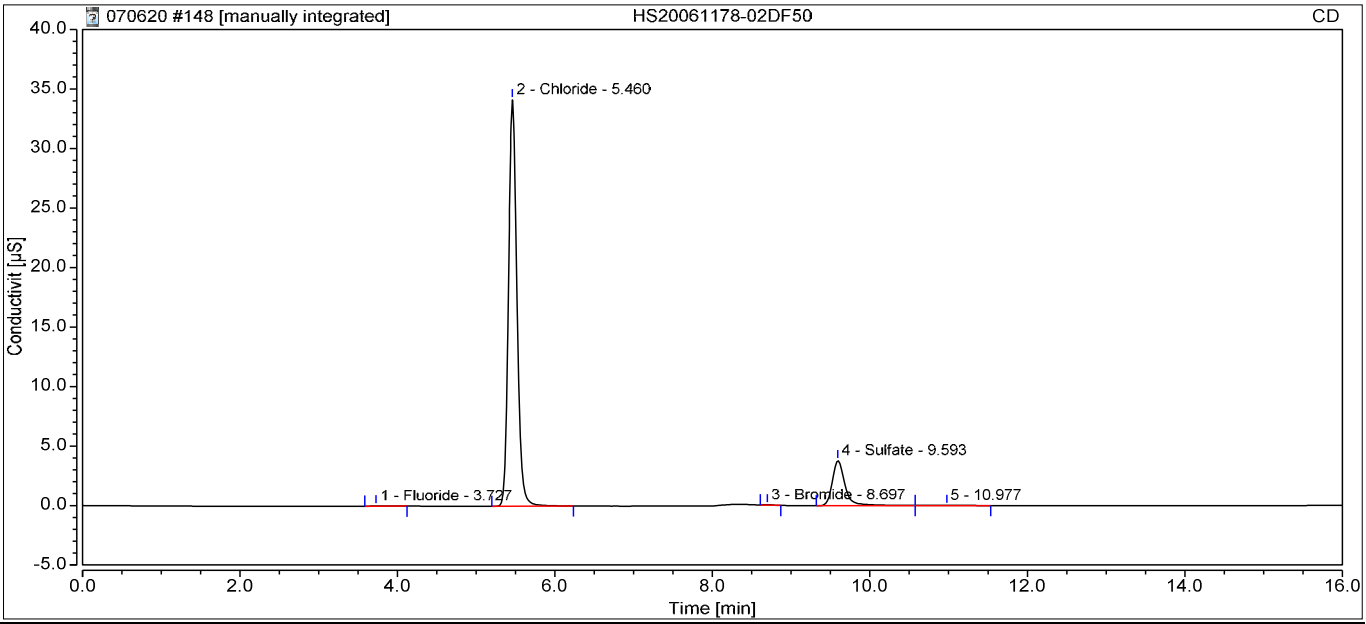
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.72	Fluoride	BMB	0.052	0.1663	1.6629	10.0000
2	5.44	Chloride	BMB*	21.390	96.5062	965.0625	10.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	10.0000
4	8.69	Bromide	BMB	0.019	0.2406	2.4056	10.0000
5	9.54	Sulfate	BMB	3.625	23.1183	231.1834	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**	**25.086**		**1200.31**	

148 HS20061178-02DF50

Sample Name:	**HS20061178-02DF50**	*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:*	**50.0000**
Recording Time:	**07/08/2020 04:24**	*Sample Weight:*	**1.0000**

Run Time:



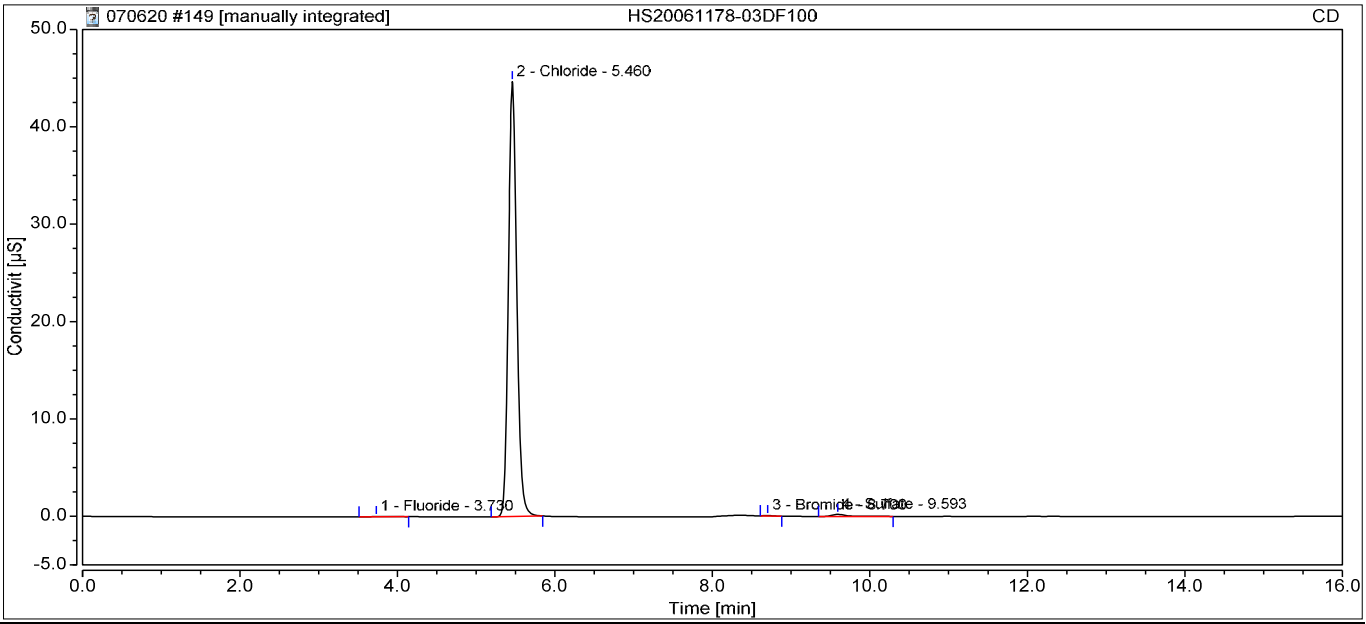
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.73	Fluoride	BMB	0.005	0.0276	1.3813	50.0000
2	5.46	Chloride	BMB*	4.275	19.2643	963.2173	50.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	50.0000
3	8.70	Bromide	BMB	0.004	0.0691	3.4533	50.0000
4	9.59	Sulfate	BM	0.703	4.6463	232.3127	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**	**4.987**		**1200.36**	

149 HS20061178-03DF100

Sample Name:	**HS20061178-03DF100**	*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:	**07/08/2020 04:42**	*Sample Weight:*	**1.0000**

Run Time:



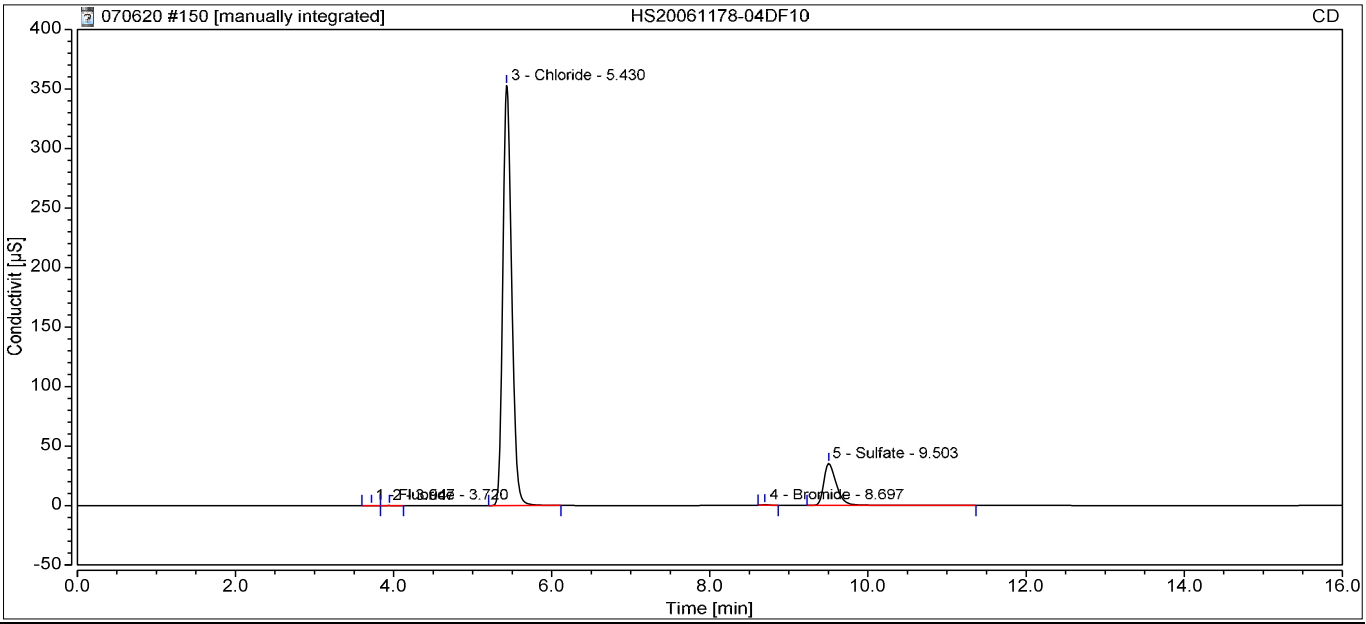
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.73	Fluoride	BMB	0.009	0.0392	3.9218	100.0000
2	5.46	Chloride	BMB*	5.577	25.1377	2513.7688	100.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	100.0000
3	8.70	Bromide	BMB	0.005	0.0798	7.9765	100.0000
4	9.59	Sulfate	BMB	0.045	0.4833	48.3347	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**	**5.635**		**2574.00**	

150 HS20061178-04DF10

Sample Name:	**HS20061178-04DF10**	*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:	**07/08/2020 05:00**	*Sample Weight:*	**1.0000**

Run Time:



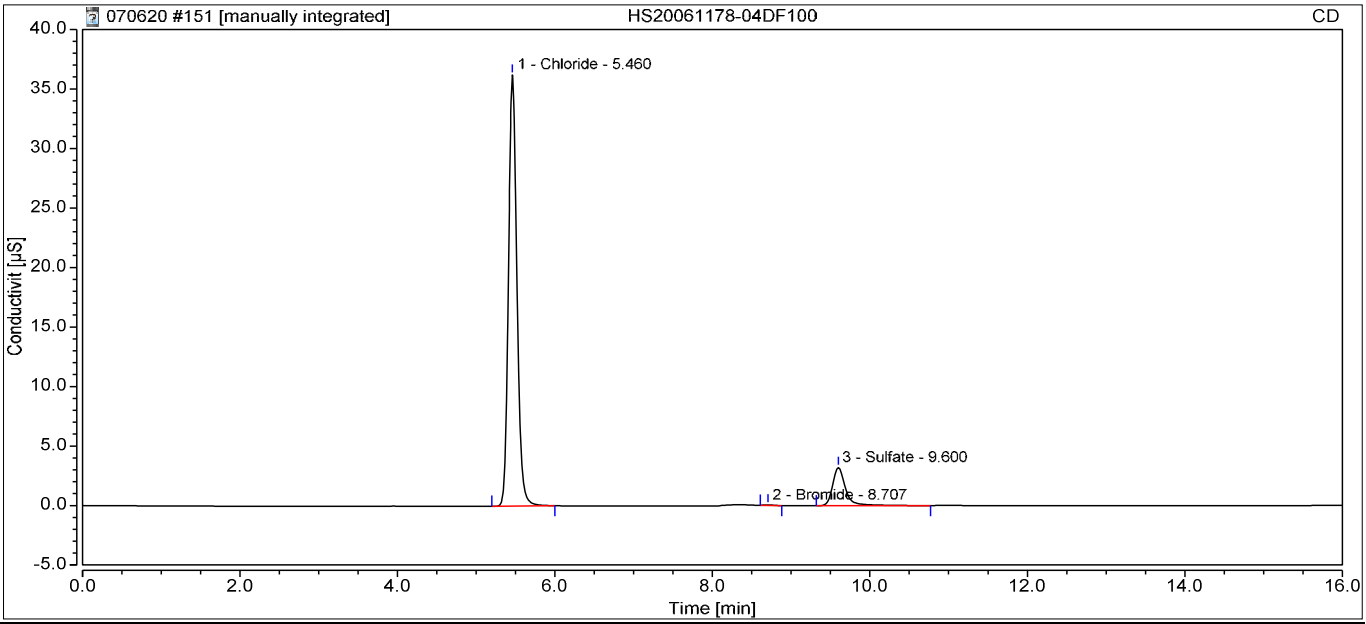
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.72	Fluoride	BMB	0.005	0.0273	0.2728	10.0000
3	5.43	Chloride	BMB*	45.459	205.1298	2051.2982	10.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	10.0000
4	8.70	Bromide	BMB	0.045	0.5305	5.3046	10.0000
5	9.50	Sulfate	BMB	6.546	41.5885	415.8851	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**	**52.055**		**2472.76**	

151 HS20061178-04DF100

Sample Name:	**HS20061178-04DF100**	*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:	**07/08/2020 05:18**	*Sample Weight:*	**1.0000**

Run Time:



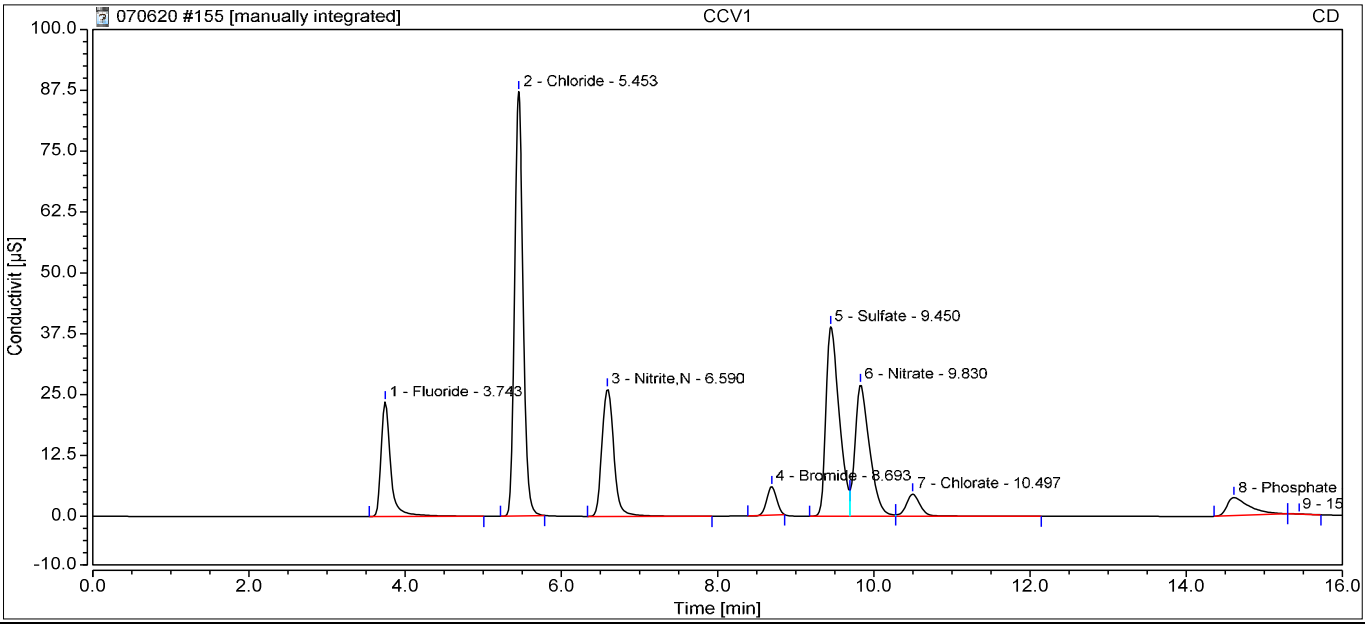
Integration Results

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.	100.0000
1	5.46	Chloride	BMB*	4.533	20.4295	2042.9479	100.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	100.0000
2	8.71	Bromide	BMB	0.005	0.0787	7.8691	100.0000
3	9.60	Sulfate	BMB	0.608	4.0422	404.2151	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**	**5.146**		**2455.03**	

155 CCV1

Sample Name:	**CCV1**	*Injection Volume:*	**5.00**
Vial Number:	**BA4**	*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:	**07/08/2020 06:31**	*Sample Weight:*	**1.0000**

Run Time:



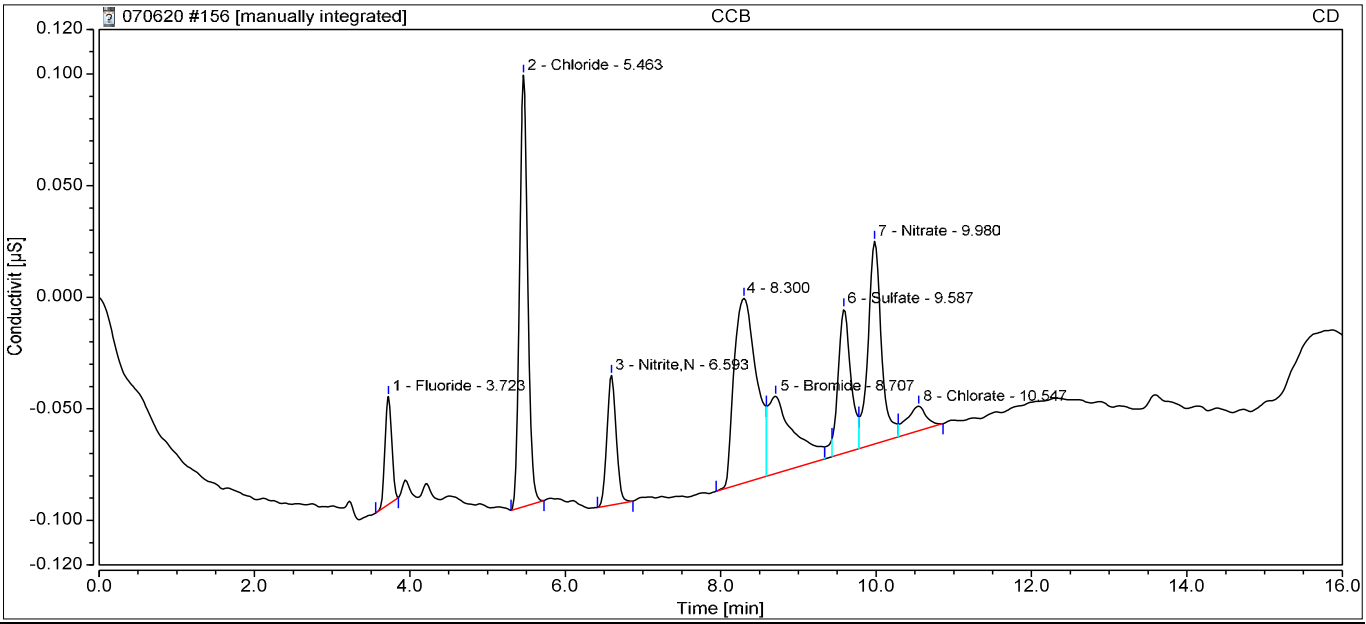
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.74	Fluoride	BMB	3.369	9.9916	9.9916	1.0000
2	5.45	Chloride	BMB*	10.921	49.2560	49.2560	1.0000
3	6.59	Nitrite,N	BMB	4.621	10.0859	10.0859	1.0000
4	8.69	Bromide	BMB*	0.852	9.5950	9.5950	1.0000
5	9.45	Sulfate	BM	7.682	48.7693	48.7693	1.0000
6	9.83	Nitrate	M	5.846	9.7834	9.7834	1.0000
7	10.50	Chlorate	MB	0.951	9.7552	9.7552	1.0000
8	14.61	Phosphate	BMB	1.225	6.8781	6.8781	1.0000
Total:			**0.000**	**35.467**		**154.11**	

156 CCB

Sample Name:	**CCB**	*Injection Volume:*	**5.00**
Vial Number:	**BA5**	*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:	**07/08/2020 06:49**	*Sample Weight:*	**1.0000**

Run Time:



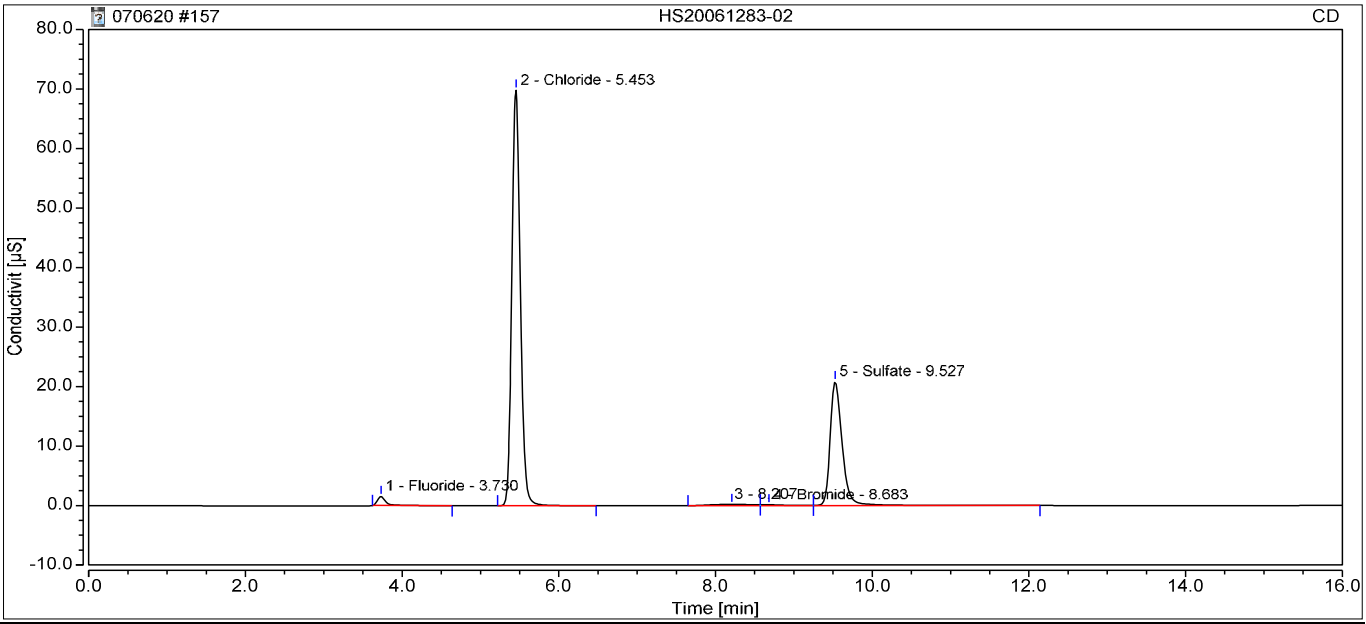
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.72	Fluoride	BMB	0.005	0.0280	0.0280	1.0000
2	5.46	Chloride	BMB	0.024	0.0767	0.0767	1.0000
3	6.59	Nitrite,N	BMB	0.008	n.a.	n.a.	1.0000
5	8.71	Bromide	M	0.013	0.1759	0.1759	1.0000
6	9.59	Sulfate	M *	0.012	0.2774	0.2774	1.0000
7	9.98	Nitrate	M	0.018	0.0208	0.0208	1.0000
8	10.55	Chlorate	MB	0.003	0.0017	0.0017	1.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	1.0000
Total:			**0.000**	**0.084**		**0.58**	

157 HS20061283-02

Sample Name:	**HS20061283-02**	*Injection Volume:*	**5.00**
Vial Number:	**RD6**	*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:	**07/08/2020 07:07**	*Sample Weight:*	**1.0000**

Run Time:



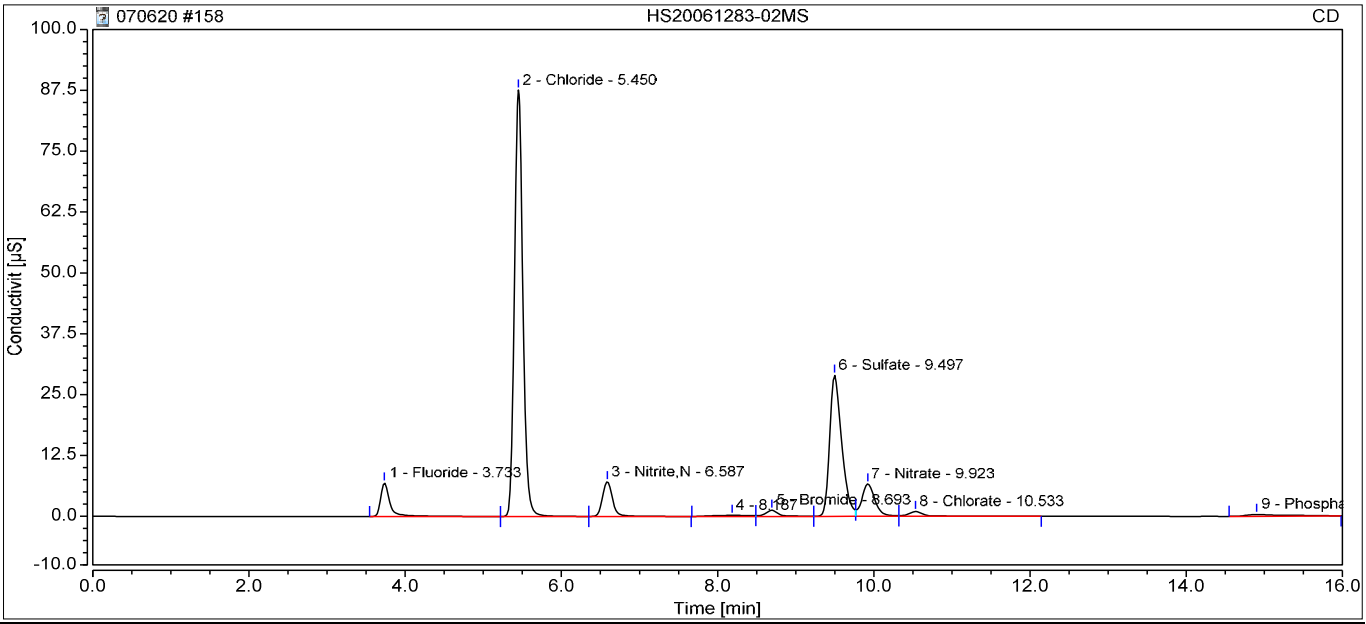
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.73	Fluoride	BMB	0.191	0.5791	0.5791	1.0000
2	5.45	Chloride	BMB	8.684	39.1599	39.1599	1.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	1.0000
4	8.68	Bromide	M	0.065	0.7607	0.7607	1.0000
5	9.53	Sulfate	MB	3.728	23.7689	23.7689	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**	**12.668**		**64.27**	

158 HS20061283-02MS

Sample Name:	**HS20061283-02MS**	*Injection Volume:*	**5.00**
Vial Number:	**RD7**	*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:	**07/08/2020 07:25**	*Sample Weight:*	**1.0000**

Run Time:



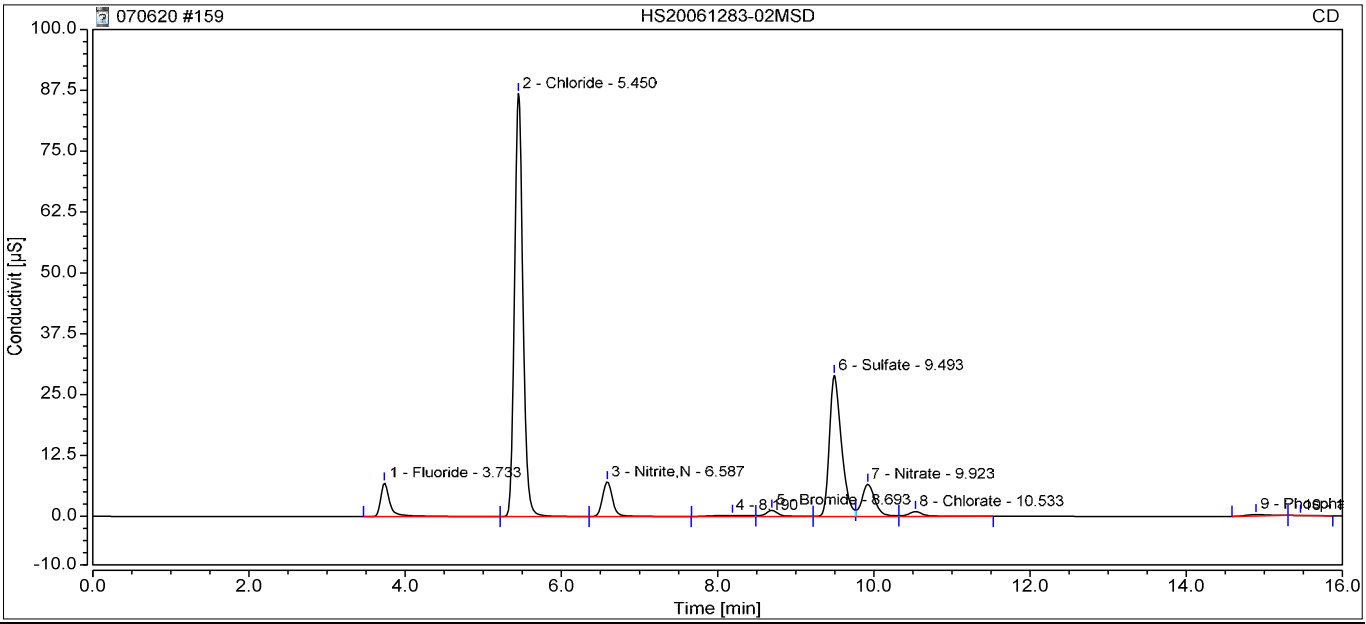
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.73	Fluoride	BMB	0.970	2.8857	2.8857	1.0000
2	5.45	Chloride	BMB	10.930	49.2997	49.2997	1.0000
3	6.59	Nitrite,N	BMB	1.066	2.3053	2.3053	1.0000
5	8.69	Bromide	M	0.251	2.8461	2.8461	1.0000
6	9.50	Sulfate	M	5.199	33.0708	33.0708	1.0000
7	9.92	Nitrate	M	1.295	2.1603	2.1603	1.0000
8	10.53	Chlorate	MB	0.234	2.3781	2.3781	1.0000
9	14.90	Phosphate	BMB	0.206	1.4069	1.4069	1.0000
Total:			**0.000**	**20.152**		**96.35**	

159 HS20061283-02MSD

Sample Name:	**HS20061283-02MSD**	*Injection Volume:*	**5.00**
Vial Number:	**RD8**	*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:	**07/08/2020 07:43**	*Sample Weight:*	**1.0000**

Run Time:



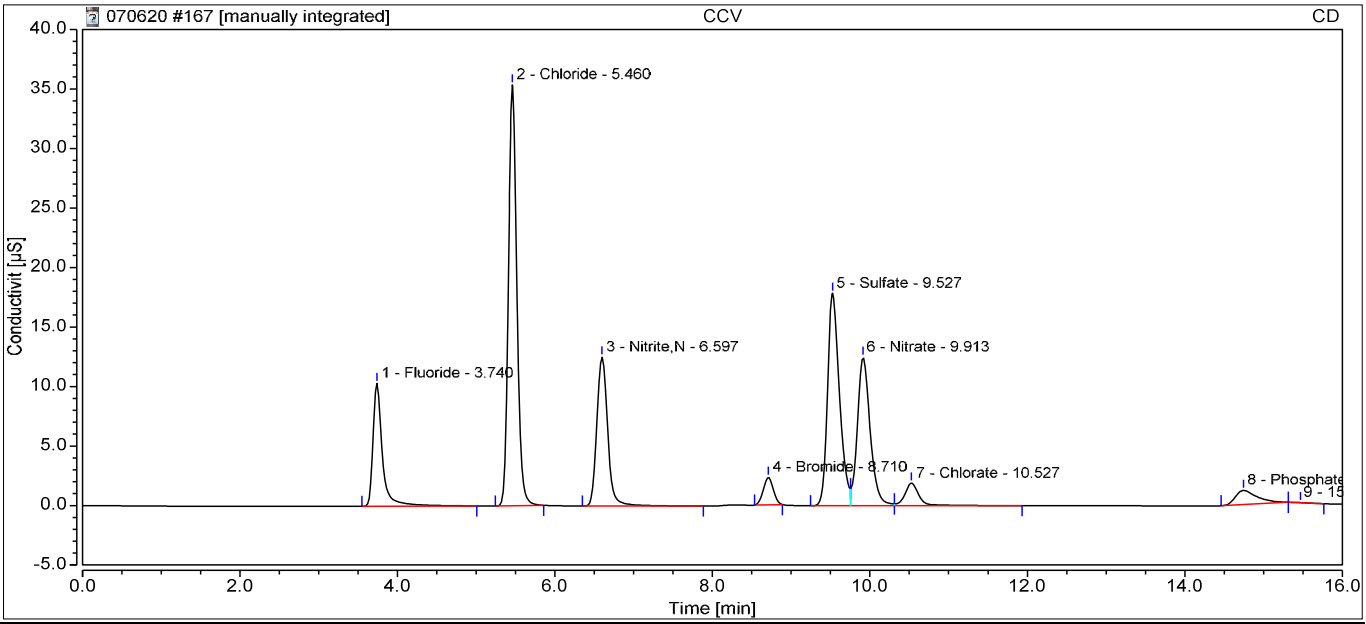
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.73	Fluoride	BMB	0.968	2.8804	2.8804	1.0000
2	5.45	Chloride	BMB	10.848	48.9298	48.9298	1.0000
3	6.59	Nitrite,N	BMB	1.065	2.3027	2.3027	1.0000
5	8.69	Bromide	M	0.247	2.7990	2.7990	1.0000
6	9.49	Sulfate	M	5.174	32.9142	32.9142	1.0000
7	9.92	Nitrate	M	1.280	2.1350	2.1350	1.0000
8	10.53	Chlorate	MB	0.217	2.1982	2.1982	1.0000
9	14.89	Phosphate	BMB	0.095	0.8108	0.8108	1.0000
Total:			**0.000**	**19.895**		**94.97**	

167 CCV

Sample Name:	**CCV**	*Injection Volume:*	**5.00**
Vial Number:	**BA2**	*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:	**07/08/2020 10:08**	*Sample Weight:*	**1.0000**

Run Time:



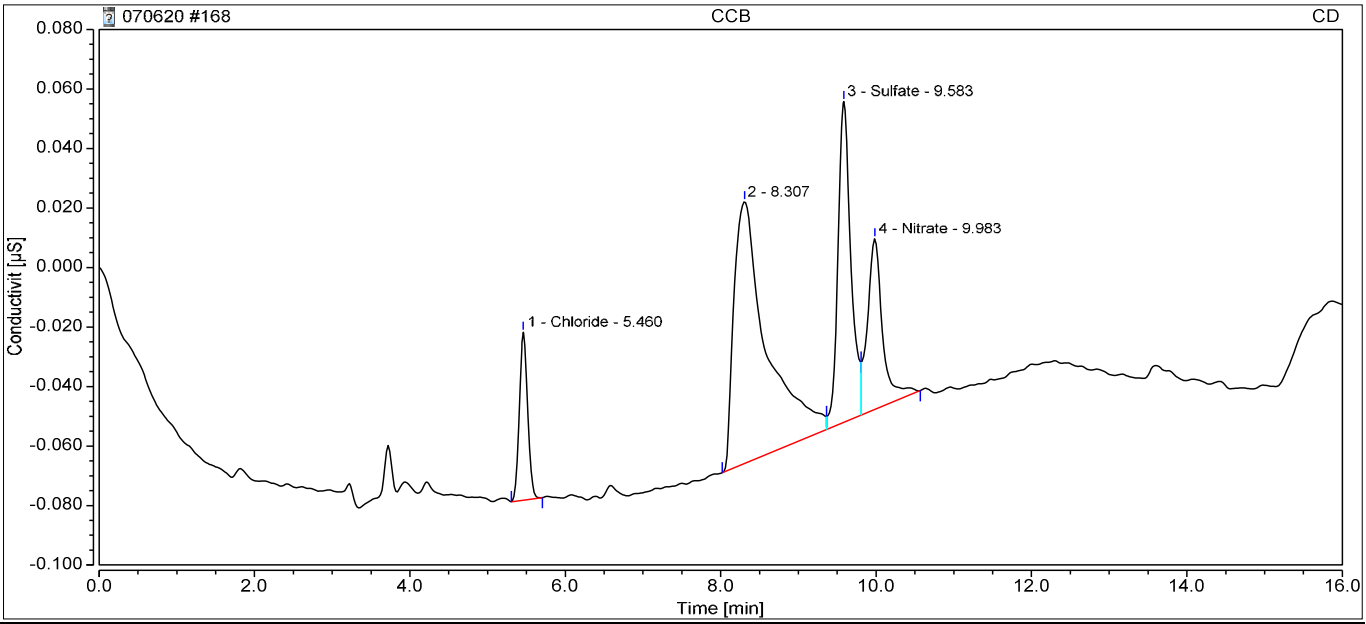
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.74	Fluoride	BMB	1.427	4.2390	4.2390	1.0000
2	5.46	Chloride	BMB*	4.409	19.8661	19.8661	1.0000
3	6.60	Nitrite,N	BMB	2.003	4.3576	4.3576	1.0000
4	8.71	Bromide	BMB*	0.340	3.8445	3.8445	1.0000
5	9.53	Sulfate	BM	3.134	20.0133	20.0133	1.0000
6	9.91	Nitrate	M	2.340	3.9101	3.9101	1.0000
7	10.53	Chlorate	MB	0.395	4.0337	4.0337	1.0000
8	14.74	Phosphate	BMB	0.383	2.3547	2.3547	1.0000
Total:			**0.000**	**14.431**		**62.62**	

168 CCB

Sample Name:	**CCB**	*Injection Volume:*	**5.00**
Vial Number:	**BA3**	*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:	**07/08/2020 10:26**	*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	5.46	Chloride	BMB	0.007	0.0016	0.0016	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	9.58	Sulfate	M	0.021	0.3314	0.3314	1.0000
4	9.98	Nitrate	MB	0.013	0.0122	0.0122	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**	**0.041**		**0.35**	

10450 Stancliff Rd. Suite 210
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T: +1 281 530 5656
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July 17, 2020

Marcia Olive
Bhate Environmental Associates, Inc.
445 Union Blvd Ste 129
Lakewood, CO 80228

Work Order: **HS20061218**

Laboratory Results for: **LHAAP-58**

Dear Marcia Olive,

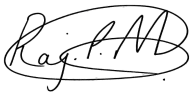
ALS Environmental received 7 sample(s) on Jun 25, 2020 for the analysis presented in the following report.

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: 17-Jul-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
Work Order: HS20061218

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS20061218-01	35AWW19_062420	Groundwater		24-Jun-2020 08:30	25-Jun-2020 09:00	☐
HS20061218-02	35AWW20_062420	Groundwater		24-Jun-2020 09:25	25-Jun-2020 09:00	☐
HS20061218-03	LHSMW07_062420	Groundwater		24-Jun-2020 10:15	25-Jun-2020 09:00	☐
HS20061218-04	35AWW06_062420	Groundwater		24-Jun-2020 11:05	25-Jun-2020 09:00	☐
HS20061218-05	35AWW23_062420	Groundwater		24-Jun-2020 12:00	25-Jun-2020 09:00	☐
HS20061218-06	35AWW22_062420	Groundwater		24-Jun-2020 13:05	25-Jun-2020 09:00	☐
HS20061218-07	Trip Blank	Water	CG 032420 -140	24-Jun-2020 00:00	25-Jun-2020 09:00	☐

ALS Houston, US Date: 17-Jul-20

Client: Bhate Environmental Associates, Inc. **CASE NARRATIVE**
Project: LHAAP-58
Work Order: HS20061218

Work Order Comments

- The analyses for Volatile Fatty Acids were subcontracted to ALS Environmental in Rochester, NY. Final Report attached.

  The analysis for TOC was subcontracted to ALS Environmental in Kelso, WA. Final Report attached.

  The analyses for RSK-175 Dissolved Gases and CO2 were subcontracted to ALS Environmental in Simi Valley, CA. Final Report attached

  The analyses for DHC/DHB were subcontracted to Microbial Insights in Knoxville, TN. Final Report attached

GCMS Volatiles by Method SW8260

Batch ID: R364717

Sample ID: 35AWW19_062420(HS20061218-01MS/MSD)

- The recovery of the Matrix Spike (MS) and 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 MS/MSD may be due to sample matrix interference. Acetone

Metals by Method SW6020

Batch ID: 154955

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

WetChemistry by Method SW9056

Batch ID: R364863

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

ALS Houston, US Date: 17-Jul-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
Sample ID: 35AWW19_062420
Collection Date: 24-Jun-2020 08:30

ANALYTICAL REPORT
WorkOrder:HS20061218
Lab ID:HS20061218-01
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	07-Jul-2020 21:31
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	07-Jul-2020 21:31
1,1,2,2-Tetrachloroethane	1.0	U	0.50	1.0	1.0	UG/L	1	07-Jul-2020 21:31
1,1,2-Trichloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	07-Jul-2020 21:31
1,1-Dichloroethane	**0.85**	J	**0.20**	**0.50**	**1.0**	**UG/L**	1	07-Jul-2020 21:31
1,1-Dichloroethene	**4.6**		**0.20**	**0.50**	**1.0**	**UG/L**	1	07-Jul-2020 21:31
1,1-Dichloropropene	1.0	U	0.30	1.0	1.0	UG/L	1	07-Jul-2020 21:31
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	07-Jul-2020 21:31
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	07-Jul-2020 21:31
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	07-Jul-2020 21:31
1,2,4-Trimethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	07-Jul-2020 21:31
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	07-Jul-2020 21:31
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	UG/L	1	07-Jul-2020 21:31
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	07-Jul-2020 21:31
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	07-Jul-2020 21:31
1,2-Dichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	07-Jul-2020 21:31
1,3,5-Trimethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	07-Jul-2020 21:31
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	07-Jul-2020 21:31
1,3-Dichloropropane	1.0	U	0.30	1.0	1.0	UG/L	1	07-Jul-2020 21:31
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	07-Jul-2020 21:31
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	07-Jul-2020 21:31
2-Butanone	1.0	U	0.50	1.0	2.0	UG/L	1	07-Jul-2020 21:31
2-Chlorotoluene	1.0	U	0.30	1.0	1.0	UG/L	1	07-Jul-2020 21:31
2-Hexanone	2.0	U	1.0	2.0	2.0	UG/L	1	07-Jul-2020 21:31
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	UG/L	1	07-Jul-2020 21:31
4-Isopropyltoluene	1.0	U	0.30	1.0	1.0	UG/L	1	07-Jul-2020 21:31
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	UG/L	1	07-Jul-2020 21:31
Acetone	1.0	U	0.40	1.0	2.0	UG/L	1	07-Jul-2020 21:31
Benzene	0.50	U	0.20	0.50	1.0	UG/L	1	07-Jul-2020 21:31
Bromobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	07-Jul-2020 21:31
Bromochloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	07-Jul-2020 21:31
Bromodichloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	07-Jul-2020 21:31
Bromoform	1.0	U	0.40	1.0	1.0	UG/L	1	07-Jul-2020 21:31
Bromomethane	1.0	U	0.40	1.0	1.0	UG/L	1	07-Jul-2020 21:31
Carbon disulfide	1.0	U	0.60	1.0	2.0	UG/L	1	07-Jul-2020 21:31
Carbon tetrachloride	1.0	U	0.50	1.0	1.0	UG/L	1	07-Jul-2020 21:31
Chlorobenzene	1.0	U	0.30	1.0	1.0	UG/L	1	07-Jul-2020 21:31
Chloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	07-Jul-2020 21:31
Chloroform	0.50	U	0.20	0.50	1.0	UG/L	1	07-Jul-2020 21:31

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

ALS Houston, US Date: 17-Jul-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
Sample ID: 35AWW19_062420
Collection Date: 24-Jun-2020 08:30

ANALYTICAL REPORT
WorkOrder:HS20061218
Lab ID:HS20061218-01
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
Chloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	07-Jul-2020 21:31
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	07-Jul-2020 21:31
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	UG/L	1	07-Jul-2020 21:31
Dibromochloromethane	1.0	U	0.30	1.0	1.0	UG/L	1	07-Jul-2020 21:31
Dibromomethane	0.50	U	0.20	0.50	1.0	UG/L	1	07-Jul-2020 21:31
Dichlorodifluoromethane	1.0	U	0.30	1.0	1.0	UG/L	1	07-Jul-2020 21:31
Ethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	07-Jul-2020 21:31
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	UG/L	1	07-Jul-2020 21:31
Isopropylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	07-Jul-2020 21:31
m,p-Xylene	1.0	U	0.50	1.0	2.0	UG/L	1	07-Jul-2020 21:31
Methylene chloride	1.0	U	0.40	1.0	2.0	UG/L	1	07-Jul-2020 21:31
n-Butylbenzene	1.0	U	0.40	1.0	1.0	UG/L	1	07-Jul-2020 21:31
n-Propylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	07-Jul-2020 21:31
Naphthalene	1.0	U	0.30	1.0	1.0	UG/L	1	07-Jul-2020 21:31
o-Xylene	1.0	U	0.30	1.0	1.0	UG/L	1	07-Jul-2020 21:31
sec-Butylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	07-Jul-2020 21:31
Styrene	1.0	U	0.30	1.0	1.0	UG/L	1	07-Jul-2020 21:31
tert-Butylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	07-Jul-2020 21:31
Tetrachloroethene	1.0	U	0.30	1.0	1.0	UG/L	1	07-Jul-2020 21:31
Toluene	0.50	U	0.20	0.50	1.0	UG/L	1	07-Jul-2020 21:31
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	07-Jul-2020 21:31
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	UG/L	1	07-Jul-2020 21:31
Trichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	07-Jul-2020 21:31
Trichlorofluoromethane	1.0	U	0.30	1.0	1.0	UG/L	1	07-Jul-2020 21:31
Vinyl chloride	0.50	U	0.20	0.50	1.0	UG/L	1	07-Jul-2020 21:31
Surr: 1,2-Dichloroethane-d4	*87.4*			**0**	*81-118*	*%REC*	*1*	*07-Jul-2020 21:31*
Surr: 4-Bromofluorobenzene	*100.0*			**0**	*85-114*	*%REC*	*1*	*07-Jul-2020 21:31*
Surr: Dibromofluoromethane	*92.2*			**0**	*80-119*	*%REC*	*1*	*07-Jul-2020 21:31*
Surr: Toluene-d8	*102*			**0**	*89-112*	*%REC*	*1*	*07-Jul-2020 21:31*
ANIONS BY SW9056A		**Method:SW9056**						Analyst: YP
Chloride	**934**		**10.0**	**25.0**	**25.0**	**mg/L**	50	25-Jun-2020 22:21
Nitrogen, Nitrate (As N)	0.100	U	0.0300	0.100	0.100	mg/L	1	25-Jun-2020 19:56
Nitrogen, Nitrite (As N)	0.100	U	0.0300	0.100	0.100	mg/L	1	25-Jun-2020 19:56
Sulfate	**1,020**		**10.0**	**25.0**	**25.0**	**mg/L**	50	25-Jun-2020 22:21
SUBCONTRACT ANALYSIS - DHC/DHB		**Method:NA**						Analyst: SUB
Subcontract Analysis	See Attached		0	0		NA	1	01-Jul-2020 12:17
SUBCONTRACT ANALYSIS - RSK		**Method:NA**						Analyst: SUBCA
Subcontract Analysis	See Attached		0	0		NA	1	06-Jul-2020 17:50

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

ALS Houston, US Date: 17-Jul-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
Sample ID: 35AWW19_062420
Collection Date: 24-Jun-2020 08:30

ANALYTICAL REPORT
WorkOrder:HS20061218
Lab ID:HS20061218-01
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
SUBCONTRACT ANALYSIS - TOC ANALYSIS		**Method:NA**						Analyst: SUBK
Subcontract Analysis	See Attached		0	0		NA	1	17-Jul-2020 16:35
SUBCONTRACT ANALYSIS - VOLATILE FATTY ACIDS		**Method:NA**						Analyst: SUB
Subcontract Analysis	See Attached		0	0		NA	1	13-Jul-2020 09:49

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

ALS Houston, US Date: 17-Jul-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
Sample ID: 35AWW20_062420
Collection Date: 24-Jun-2020 09:25

ANALYTICAL REPORT
WorkOrder:HS20061218
Lab ID:HS20061218-02
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	07-Jul-2020 21:55
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	07-Jul-2020 21:55
1,1,2,2-Tetrachloroethane	1.0	U	0.50	1.0	1.0	UG/L	1	07-Jul-2020 21:55
1,1,2-Trichloroethane	**73**		**0.30**	**1.0**	**1.0**	**UG/L**	1	07-Jul-2020 21:55
1,1-Dichloroethane	**510**		**5.0**	**12**	**25**	**UG/L**	25	07-Jul-2020 23:07
1,1-Dichloroethene	**1,100**		**5.0**	**12**	**25**	**UG/L**	25	07-Jul-2020 23:07
1,1-Dichloropropene	1.0	U	0.30	1.0	1.0	UG/L	1	07-Jul-2020 21:55
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	07-Jul-2020 21:55
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	07-Jul-2020 21:55
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	07-Jul-2020 21:55
1,2,4-Trimethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	07-Jul-2020 21:55
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	07-Jul-2020 21:55
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	UG/L	1	07-Jul-2020 21:55
1,2-Dichlorobenzene	**21**		**0.50**	**1.0**	**1.0**	**UG/L**	1	07-Jul-2020 21:55
1,2-Dichloroethane	**18**		**0.20**	**0.50**	**1.0**	**UG/L**	1	07-Jul-2020 21:55
1,2-Dichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	07-Jul-2020 21:55
1,3,5-Trimethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	07-Jul-2020 21:55
1,3-Dichlorobenzene	**0.97**	J	**0.40**	**1.0**	**1.0**	**UG/L**	1	07-Jul-2020 21:55
1,3-Dichloropropane	1.0	U	0.30	1.0	1.0	UG/L	1	07-Jul-2020 21:55
1,4-Dichlorobenzene	**3.6**		**0.40**	**1.0**	**1.0**	**UG/L**	1	07-Jul-2020 21:55
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	07-Jul-2020 21:55
2-Butanone	1.0	U	0.50	1.0	2.0	UG/L	1	07-Jul-2020 21:55
2-Chlorotoluene	1.0	U	0.30	1.0	1.0	UG/L	1	07-Jul-2020 21:55
2-Hexanone	2.0	U	1.0	2.0	2.0	UG/L	1	07-Jul-2020 21:55
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	UG/L	1	07-Jul-2020 21:55
4-Isopropyltoluene	1.0	U	0.30	1.0	1.0	UG/L	1	07-Jul-2020 21:55
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	UG/L	1	07-Jul-2020 21:55
Acetone	1.0	U	0.40	1.0	2.0	UG/L	1	07-Jul-2020 21:55
Benzene	**8.5**		**0.20**	**0.50**	**1.0**	**UG/L**	1	07-Jul-2020 21:55
Bromobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	07-Jul-2020 21:55
Bromochloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	07-Jul-2020 21:55
Bromodichloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	07-Jul-2020 21:55
Bromoform	1.0	U	0.40	1.0	1.0	UG/L	1	07-Jul-2020 21:55
Bromomethane	1.0	U	0.40	1.0	1.0	UG/L	1	07-Jul-2020 21:55
Carbon disulfide	**3.7**		**0.60**	**1.0**	**2.0**	**UG/L**	1	07-Jul-2020 21:55
Carbon tetrachloride	1.0	U	0.50	1.0	1.0	UG/L	1	07-Jul-2020 21:55
Chlorobenzene	1.0	U	0.30	1.0	1.0	UG/L	1	07-Jul-2020 21:55
Chloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	07-Jul-2020 21:55
Chloroform	0.50	U	0.20	0.50	1.0	UG/L	1	07-Jul-2020 21:55

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

ALS Houston, US Date: 17-Jul-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
Sample ID: 35AWW20_062420
Collection Date: 24-Jun-2020 09:25

ANALYTICAL REPORT
WorkOrder:HS20061218
Lab ID:HS20061218-02
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
Chloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	07-Jul-2020 21:55
cis-1,2-Dichloroethene	**63**		**0.20**	**0.50**	**1.0**	**UG/L**	1	07-Jul-2020 21:55
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	UG/L	1	07-Jul-2020 21:55
Dibromochloromethane	1.0	U	0.30	1.0	1.0	UG/L	1	07-Jul-2020 21:55
Dibromomethane	0.50	U	0.20	0.50	1.0	UG/L	1	07-Jul-2020 21:55
Dichlorodifluoromethane	1.0	U	0.30	1.0	1.0	UG/L	1	07-Jul-2020 21:55
Ethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	07-Jul-2020 21:55
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	UG/L	1	07-Jul-2020 21:55
Isopropylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	07-Jul-2020 21:55
m,p-Xylene	1.0	U	0.50	1.0	2.0	UG/L	1	07-Jul-2020 21:55
Methylene chloride	1.0	U	0.40	1.0	2.0	UG/L	1	07-Jul-2020 21:55
n-Butylbenzene	1.0	U	0.40	1.0	1.0	UG/L	1	07-Jul-2020 21:55
n-Propylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	07-Jul-2020 21:55
Naphthalene	1.0	U	0.30	1.0	1.0	UG/L	1	07-Jul-2020 21:55
o-Xylene	1.0	U	0.30	1.0	1.0	UG/L	1	07-Jul-2020 21:55
sec-Butylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	07-Jul-2020 21:55
Styrene	1.0	U	0.30	1.0	1.0	UG/L	1	07-Jul-2020 21:55
tert-Butylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	07-Jul-2020 21:55
Tetrachloroethene	**0.61**	J	**0.30**	**1.0**	**1.0**	**UG/L**	1	07-Jul-2020 21:55
Toluene	0.50	U	0.20	0.50	1.0	UG/L	1	07-Jul-2020 21:55
trans-1,2-Dichloroethene	**7.2**		**0.20**	**0.50**	**1.0**	**UG/L**	1	07-Jul-2020 21:55
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	UG/L	1	07-Jul-2020 21:55
Trichloroethene	**94**		**0.20**	**0.50**	**1.0**	**UG/L**	1	07-Jul-2020 21:55
Trichlorofluoromethane	1.0	U	0.30	1.0	1.0	UG/L	1	07-Jul-2020 21:55
Vinyl chloride	**2,000**		**5.0**	**12**	**25**	**UG/L**	25	07-Jul-2020 23:07
Surr: 1,2-Dichloroethane-d4	*87.9*			**0**	*81-118*	*%REC*	*25*	*07-Jul-2020 23:07*
Surr: 1,2-Dichloroethane-d4	*90.6*			**0**	*81-118*	*%REC*	*1*	*07-Jul-2020 21:55*
Surr: 4-Bromofluorobenzene	*101*			**0**	*85-114*	*%REC*	*1*	*07-Jul-2020 21:55*
Surr: 4-Bromofluorobenzene	*103*			**0**	*85-114*	*%REC*	*25*	*07-Jul-2020 23:07*
Surr: Dibromofluoromethane	*94.2*			**0**	*80-119*	*%REC*	*1*	*07-Jul-2020 21:55*
Surr: Dibromofluoromethane	*92.3*			**0**	*80-119*	*%REC*	*25*	*07-Jul-2020 23:07*
Surr: Toluene-d8	*102*			**0**	*89-112*	*%REC*	*1*	*07-Jul-2020 21:55*
Surr: Toluene-d8	*98.6*			**0**	*89-112*	*%REC*	*25*	*07-Jul-2020 23:07*
METALS BY ICPMS BY SW6020A		**Method:SW6020**				Prep:SW3010A / 29-Jun-2020		Analyst: JHD
Arsenic	**0.00119**	J	**0.000400**	**0.000500**	**0.00500**	**mg/L**	1	02-Jul-2020 12:33

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

ALS Houston, US Date: 17-Jul-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
Sample ID: 35AWW20_062420
Collection Date: 24-Jun-2020 09:25

ANALYTICAL REPORT
WorkOrder:HS20061218
Lab ID:HS20061218-02
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
ANIONS BY SW9056A		**Method:SW9056**						Analyst: YP
Chloride	**911**		**10.0**	**25.0**	**25.0**	**mg/L**	50	25-Jun-2020 22:39
Nitrogen, Nitrate (As N)	**0.747**		**0.0300**	**0.100**	**0.100**	**mg/L**	1	25-Jun-2020 20:14
Nitrogen, Nitrite (As N)	0.100	U	0.0300	0.100	0.100	mg/L	1	25-Jun-2020 20:14
Sulfate	**1,270**		**10.0**	**25.0**	**25.0**	**mg/L**	50	25-Jun-2020 22:39
SUBCONTRACT ANALYSIS - DHC/DHB		**Method:NA**						Analyst: SUB
Subcontract Analysis	See Attached		0	0		NA	1	01-Jul-2020 12:17
SUBCONTRACT ANALYSIS - RSK		**Method:NA**						Analyst: SUBCA
Subcontract Analysis	See Attached		0	0		NA	1	06-Jul-2020 17:50
SUBCONTRACT ANALYSIS - TOC ANALYSIS		**Method:NA**						Analyst: SUBK
Subcontract Analysis	See Attached		0	0		NA	1	17-Jul-2020 16:35
SUBCONTRACT ANALYSIS - VOLATILE FATTY ACIDS		**Method:NA**						Analyst: SUB
Subcontract Analysis	See Attached		0	0		NA	1	13-Jul-2020 09:49

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

ALS Houston, US Date: 17-Jul-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
Sample ID: LHSMW07_062420
Collection Date: 24-Jun-2020 10:15

ANALYTICAL REPORT
WorkOrder:HS20061218
Lab ID:HS20061218-03
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	07-Jul-2020 23:31
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	07-Jul-2020 23:31
1,1,2,2-Tetrachloroethane	1.0	U	0.50	1.0	1.0	UG/L	1	07-Jul-2020 23:31
1,1,2-Trichloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	07-Jul-2020 23:31
1,1-Dichloroethane	**9.0**		**0.20**	**0.50**	**1.0**	**UG/L**	1	07-Jul-2020 23:31
1,1-Dichloroethene	**130**		**0.20**	**0.50**	**1.0**	**UG/L**	1	07-Jul-2020 23:31
1,1-Dichloropropene	1.0	U	0.30	1.0	1.0	UG/L	1	07-Jul-2020 23:31
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	07-Jul-2020 23:31
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	07-Jul-2020 23:31
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	07-Jul-2020 23:31
1,2,4-Trimethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	07-Jul-2020 23:31
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	07-Jul-2020 23:31
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	UG/L	1	07-Jul-2020 23:31
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	07-Jul-2020 23:31
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	07-Jul-2020 23:31
1,2-Dichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	07-Jul-2020 23:31
1,3,5-Trimethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	07-Jul-2020 23:31
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	07-Jul-2020 23:31
1,3-Dichloropropane	1.0	U	0.30	1.0	1.0	UG/L	1	07-Jul-2020 23:31
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	07-Jul-2020 23:31
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	07-Jul-2020 23:31
2-Butanone	1.0	U	0.50	1.0	2.0	UG/L	1	07-Jul-2020 23:31
2-Chlorotoluene	1.0	U	0.30	1.0	1.0	UG/L	1	07-Jul-2020 23:31
2-Hexanone	2.0	U	1.0	2.0	2.0	UG/L	1	07-Jul-2020 23:31
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	UG/L	1	07-Jul-2020 23:31
4-Isopropyltoluene	1.0	U	0.30	1.0	1.0	UG/L	1	07-Jul-2020 23:31
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	UG/L	1	07-Jul-2020 23:31
Acetone	1.0	U	0.40	1.0	2.0	UG/L	1	07-Jul-2020 23:31
Benzene	0.50	U	0.20	0.50	1.0	UG/L	1	07-Jul-2020 23:31
Bromobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	07-Jul-2020 23:31
Bromochloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	07-Jul-2020 23:31
Bromodichloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	07-Jul-2020 23:31
Bromoform	1.0	U	0.40	1.0	1.0	UG/L	1	07-Jul-2020 23:31
Bromomethane	1.0	U	0.40	1.0	1.0	UG/L	1	07-Jul-2020 23:31
Carbon disulfide	1.0	U	0.60	1.0	2.0	UG/L	1	07-Jul-2020 23:31
Carbon tetrachloride	1.0	U	0.50	1.0	1.0	UG/L	1	07-Jul-2020 23:31
Chlorobenzene	1.0	U	0.30	1.0	1.0	UG/L	1	07-Jul-2020 23:31
Chloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	07-Jul-2020 23:31
Chloroform	0.50	U	0.20	0.50	1.0	UG/L	1	07-Jul-2020 23:31

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

ALS Houston, US Date: 17-Jul-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
Sample ID: LHSMW07_062420
Collection Date: 24-Jun-2020 10:15

ANALYTICAL REPORT
WorkOrder:HS20061218
Lab ID:HS20061218-03
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
Chloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	07-Jul-2020 23:31
cis-1,2-Dichloroethene	**1.0**		**0.20**	**0.50**	**1.0**	**UG/L**	1	07-Jul-2020 23:31
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	UG/L	1	07-Jul-2020 23:31
Dibromochloromethane	1.0	U	0.30	1.0	1.0	UG/L	1	07-Jul-2020 23:31
Dibromomethane	0.50	U	0.20	0.50	1.0	UG/L	1	07-Jul-2020 23:31
Dichlorodifluoromethane	1.0	U	0.30	1.0	1.0	UG/L	1	07-Jul-2020 23:31
Ethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	07-Jul-2020 23:31
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	UG/L	1	07-Jul-2020 23:31
Isopropylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	07-Jul-2020 23:31
m,p-Xylene	1.0	U	0.50	1.0	2.0	UG/L	1	07-Jul-2020 23:31
Methylene chloride	1.0	U	0.40	1.0	2.0	UG/L	1	07-Jul-2020 23:31
n-Butylbenzene	1.0	U	0.40	1.0	1.0	UG/L	1	07-Jul-2020 23:31
n-Propylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	07-Jul-2020 23:31
Naphthalene	1.0	U	0.30	1.0	1.0	UG/L	1	07-Jul-2020 23:31
o-Xylene	1.0	U	0.30	1.0	1.0	UG/L	1	07-Jul-2020 23:31
sec-Butylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	07-Jul-2020 23:31
Styrene	1.0	U	0.30	1.0	1.0	UG/L	1	07-Jul-2020 23:31
tert-Butylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	07-Jul-2020 23:31
Tetrachloroethene	1.0	U	0.30	1.0	1.0	UG/L	1	07-Jul-2020 23:31
Toluene	0.50	U	0.20	0.50	1.0	UG/L	1	07-Jul-2020 23:31
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	07-Jul-2020 23:31
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	UG/L	1	07-Jul-2020 23:31
Trichloroethene	**2.5**		**0.20**	**0.50**	**1.0**	**UG/L**	1	07-Jul-2020 23:31
Trichlorofluoromethane	1.0	U	0.30	1.0	1.0	UG/L	1	07-Jul-2020 23:31
Vinyl chloride	**44**		**0.20**	**0.50**	**1.0**	**UG/L**	1	07-Jul-2020 23:31
Surr: 1,2-Dichloroethane-d4	*89.8*			**0**	*81-118*	*%REC*	*1*	*07-Jul-2020 23:31*
Surr: 4-Bromofluorobenzene	*103*			**0**	*85-114*	*%REC*	*1*	*07-Jul-2020 23:31*
Surr: Dibromofluoromethane	*93.5*			**0**	*80-119*	*%REC*	*1*	*07-Jul-2020 23:31*
Surr: Toluene-d8	*101*			**0**	*89-112*	*%REC*	*1*	*07-Jul-2020 23:31*
ANIONS BY SW9056A		**Method:SW9056**						Analyst: YP
Chloride	**2,010**		**10.0**	**25.0**	**25.0**	**mg/L**	50	25-Jun-2020 22:57
Nitrogen, Nitrate (As N)	0.100	U	0.0300	0.100	0.100	mg/L	1	25-Jun-2020 21:27
Nitrogen, Nitrite (As N)	0.100	U	0.0300	0.100	0.100	mg/L	1	25-Jun-2020 21:27
Sulfate	**3,000**		**10.0**	**25.0**	**25.0**	**mg/L**	50	25-Jun-2020 22:57
SUBCONTRACT ANALYSIS - DHC/DHB		**Method:NA**						Analyst: SUB
Subcontract Analysis	See Attached		0	0		NA	1	01-Jul-2020 12:17
SUBCONTRACT ANALYSIS - RSK		**Method:NA**						Analyst: SUBCA
Subcontract Analysis	See Attached		0	0		NA	1	06-Jul-2020 17:50

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

ALS Houston, US Date: 17-Jul-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
Sample ID: LHSMW07_062420
Collection Date: 24-Jun-2020 10:15

ANALYTICAL REPORT
WorkOrder:HS20061218
Lab ID:HS20061218-03
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
SUBCONTRACT ANALYSIS - TOC ANALYSIS		**Method:NA**						Analyst: SUBK
Subcontract Analysis	See Attached		0	0		NA	1	17-Jul-2020 16:35
SUBCONTRACT ANALYSIS - VOLATILE FATTY ACIDS		**Method:NA**						Analyst: SUB
Subcontract Analysis	See Attached		0	0		NA	1	13-Jul-2020 09:49

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

ALS Houston, US Date: 17-Jul-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
Sample ID: 35AWW06_062420
Collection Date: 24-Jun-2020 11:05

ANALYTICAL REPORT
WorkOrder:HS20061218
Lab ID:HS20061218-04
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	07-Jul-2020 23:55
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	07-Jul-2020 23:55
1,1,2,2-Tetrachloroethane	1.0	U	0.50	1.0	1.0	UG/L	1	07-Jul-2020 23:55
1,1,2-Trichloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	07-Jul-2020 23:55
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	07-Jul-2020 23:55
1,1-Dichloroethene	**0.99**	J	**0.20**	**0.50**	**1.0**	**UG/L**	1	07-Jul-2020 23:55
1,1-Dichloropropene	1.0	U	0.30	1.0	1.0	UG/L	1	07-Jul-2020 23:55
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	07-Jul-2020 23:55
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	07-Jul-2020 23:55
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	07-Jul-2020 23:55
1,2,4-Trimethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	07-Jul-2020 23:55
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	07-Jul-2020 23:55
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	UG/L	1	07-Jul-2020 23:55
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	07-Jul-2020 23:55
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	07-Jul-2020 23:55
1,2-Dichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	07-Jul-2020 23:55
1,3,5-Trimethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	07-Jul-2020 23:55
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	07-Jul-2020 23:55
1,3-Dichloropropane	1.0	U	0.30	1.0	1.0	UG/L	1	07-Jul-2020 23:55
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	07-Jul-2020 23:55
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	07-Jul-2020 23:55
2-Butanone	1.0	U	0.50	1.0	2.0	UG/L	1	07-Jul-2020 23:55
2-Chlorotoluene	1.0	U	0.30	1.0	1.0	UG/L	1	07-Jul-2020 23:55
2-Hexanone	2.0	U	1.0	2.0	2.0	UG/L	1	07-Jul-2020 23:55
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	UG/L	1	07-Jul-2020 23:55
4-Isopropyltoluene	1.0	U	0.30	1.0	1.0	UG/L	1	07-Jul-2020 23:55
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	UG/L	1	07-Jul-2020 23:55
Acetone	1.0	U	0.40	1.0	2.0	UG/L	1	07-Jul-2020 23:55
Benzene	0.50	U	0.20	0.50	1.0	UG/L	1	07-Jul-2020 23:55
Bromobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	07-Jul-2020 23:55
Bromochloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	07-Jul-2020 23:55
Bromodichloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	07-Jul-2020 23:55
Bromoform	1.0	U	0.40	1.0	1.0	UG/L	1	07-Jul-2020 23:55
Bromomethane	1.0	U	0.40	1.0	1.0	UG/L	1	07-Jul-2020 23:55
Carbon disulfide	1.0	U	0.60	1.0	2.0	UG/L	1	07-Jul-2020 23:55
Carbon tetrachloride	1.0	U	0.50	1.0	1.0	UG/L	1	07-Jul-2020 23:55
Chlorobenzene	1.0	U	0.30	1.0	1.0	UG/L	1	07-Jul-2020 23:55
Chloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	07-Jul-2020 23:55
Chloroform	0.50	U	0.20	0.50	1.0	UG/L	1	07-Jul-2020 23:55

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

ALS Houston, US Date: 17-Jul-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
Sample ID: 35AWW06_062420
Collection Date: 24-Jun-2020 11:05

ANALYTICAL REPORT
WorkOrder:HS20061218
Lab ID:HS20061218-04
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
Chloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	07-Jul-2020 23:55
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	07-Jul-2020 23:55
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	UG/L	1	07-Jul-2020 23:55
Dibromochloromethane	1.0	U	0.30	1.0	1.0	UG/L	1	07-Jul-2020 23:55
Dibromomethane	0.50	U	0.20	0.50	1.0	UG/L	1	07-Jul-2020 23:55
Dichlorodifluoromethane	1.0	U	0.30	1.0	1.0	UG/L	1	07-Jul-2020 23:55
Ethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	07-Jul-2020 23:55
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	UG/L	1	07-Jul-2020 23:55
Isopropylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	07-Jul-2020 23:55
m,p-Xylene	1.0	U	0.50	1.0	2.0	UG/L	1	07-Jul-2020 23:55
Methylene chloride	1.0	U	0.40	1.0	2.0	UG/L	1	07-Jul-2020 23:55
n-Butylbenzene	1.0	U	0.40	1.0	1.0	UG/L	1	07-Jul-2020 23:55
n-Propylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	07-Jul-2020 23:55
Naphthalene	1.0	U	0.30	1.0	1.0	UG/L	1	07-Jul-2020 23:55
o-Xylene	1.0	U	0.30	1.0	1.0	UG/L	1	07-Jul-2020 23:55
sec-Butylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	07-Jul-2020 23:55
Styrene	1.0	U	0.30	1.0	1.0	UG/L	1	07-Jul-2020 23:55
tert-Butylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	07-Jul-2020 23:55
Tetrachloroethene	1.0	U	0.30	1.0	1.0	UG/L	1	07-Jul-2020 23:55
Toluene	0.50	U	0.20	0.50	1.0	UG/L	1	07-Jul-2020 23:55
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	07-Jul-2020 23:55
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	UG/L	1	07-Jul-2020 23:55
Trichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	07-Jul-2020 23:55
Trichlorofluoromethane	1.0	U	0.30	1.0	1.0	UG/L	1	07-Jul-2020 23:55
Vinyl chloride	**0.51**	J	**0.20**	**0.50**	**1.0**	**UG/L**	1	07-Jul-2020 23:55
Surr: 1,2-Dichloroethane-d4	*90.4*			**0**	*81-118*	*%REC*	*1*	*07-Jul-2020 23:55*
Surr: 4-Bromofluorobenzene	*101*			**0**	*85-114*	*%REC*	*1*	*07-Jul-2020 23:55*
Surr: Dibromofluoromethane	*93.5*			**0**	*80-119*	*%REC*	*1*	*07-Jul-2020 23:55*
Surr: Toluene-d8	*103*			**0**	*89-112*	*%REC*	*1*	*07-Jul-2020 23:55*
ANIONS BY SW9056A		**Method:SW9056**						Analyst: YP
Chloride	**1,080**		**10.0**	**25.0**	**25.0**	**mg/L**	50	25-Jun-2020 23:15
Nitrogen, Nitrate (As N)	0.100	U	0.0300	0.100	0.100	mg/L	1	25-Jun-2020 21:45
Nitrogen, Nitrite (As N)	0.100	U	0.0300	0.100	0.100	mg/L	1	25-Jun-2020 21:45
Sulfate	**35.1**		**0.200**	**0.500**	**0.500**	**mg/L**	1	25-Jun-2020 21:45
SUBCONTRACT ANALYSIS - DHC/DHB		**Method:NA**						Analyst: SUB
Subcontract Analysis	See Attached		0	0		NA	1	01-Jul-2020 12:17
SUBCONTRACT ANALYSIS - RSK		**Method:NA**						Analyst: SUBCA
Subcontract Analysis	See Attached		0	0		NA	1	06-Jul-2020 17:50

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

ALS Houston, US Date: 17-Jul-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
Sample ID: 35AWW06_062420
Collection Date: 24-Jun-2020 11:05

ANALYTICAL REPORT
WorkOrder:HS20061218
Lab ID:HS20061218-04
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
SUBCONTRACT ANALYSIS - TOC ANALYSIS		**Method:NA**						Analyst: SUBK
Subcontract Analysis	See Attached		0	0		NA	1	17-Jul-2020 16:35
SUBCONTRACT ANALYSIS - VOLATILE FATTY ACIDS		**Method:NA**						Analyst: SUB
Subcontract Analysis	See Attached		0	0		NA	1	13-Jul-2020 09:49

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

ALS Houston, US Date: 17-Jul-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
Sample ID: 35AWW23_062420
Collection Date: 24-Jun-2020 12:00

ANALYTICAL REPORT
WorkOrder:HS20061218
Lab ID:HS20061218-05
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 00:20
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 00:20
1,1,2,2-Tetrachloroethane	1.0	U	0.50	1.0	1.0	UG/L	1	08-Jul-2020 00:20
1,1,2-Trichloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 00:20
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 00:20
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 00:20
1,1-Dichloropropene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 00:20
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	08-Jul-2020 00:20
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	08-Jul-2020 00:20
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	08-Jul-2020 00:20
1,2,4-Trimethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 00:20
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 00:20
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 00:20
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	08-Jul-2020 00:20
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 00:20
1,2-Dichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	08-Jul-2020 00:20
1,3,5-Trimethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 00:20
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	08-Jul-2020 00:20
1,3-Dichloropropane	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 00:20
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	08-Jul-2020 00:20
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 00:20
2-Butanone	**160**		**0.50**	**1.0**	**2.0**	**UG/L**	1	08-Jul-2020 00:20
2-Chlorotoluene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 00:20
2-Hexanone	2.0	U	1.0	2.0	2.0	UG/L	1	08-Jul-2020 00:20
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	UG/L	1	08-Jul-2020 00:20
4-Isopropyltoluene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 00:20
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	UG/L	1	08-Jul-2020 00:20
Acetone	**190**		**0.40**	**1.0**	**2.0**	**UG/L**	1	08-Jul-2020 00:20
Benzene	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 00:20
Bromobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	08-Jul-2020 00:20
Bromochloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 00:20
Bromodichloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 00:20
Bromoform	1.0	U	0.40	1.0	1.0	UG/L	1	08-Jul-2020 00:20
Bromomethane	1.0	U	0.40	1.0	1.0	UG/L	1	08-Jul-2020 00:20
Carbon disulfide	1.0	U	0.60	1.0	2.0	UG/L	1	08-Jul-2020 00:20
Carbon tetrachloride	1.0	U	0.50	1.0	1.0	UG/L	1	08-Jul-2020 00:20
Chlorobenzene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 00:20
Chloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 00:20
Chloroform	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 00:20

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

ALS Houston, US Date: 17-Jul-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
Sample ID: 35AWW23_062420
Collection Date: 24-Jun-2020 12:00

ANALYTICAL REPORT
WorkOrder:HS20061218
Lab ID:HS20061218-05
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
Chloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 00:20
cis-1,2-Dichloroethene	**5.0**		**0.20**	**0.50**	**1.0**	**UG/L**	1	08-Jul-2020 00:20
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	UG/L	1	08-Jul-2020 00:20
Dibromochloromethane	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 00:20
Dibromomethane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 00:20
Dichlorodifluoromethane	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 00:20
Ethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 00:20
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	UG/L	1	08-Jul-2020 00:20
Isopropylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 00:20
m,p-Xylene	1.0	U	0.50	1.0	2.0	UG/L	1	08-Jul-2020 00:20
Methylene chloride	1.0	U	0.40	1.0	2.0	UG/L	1	08-Jul-2020 00:20
n-Butylbenzene	1.0	U	0.40	1.0	1.0	UG/L	1	08-Jul-2020 00:20
n-Propylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 00:20
Naphthalene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 00:20
o-Xylene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 00:20
sec-Butylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 00:20
Styrene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 00:20
tert-Butylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 00:20
Tetrachloroethene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 00:20
Toluene	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 00:20
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 00:20
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 00:20
Trichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 00:20
Trichlorofluoromethane	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 00:20
Vinyl chloride	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 00:20
Surr: 1,2-Dichloroethane-d4	*90.3*			**0**	*81-118*	*%REC*	*1*	*08-Jul-2020 00:20*
Surr: 4-Bromofluorobenzene	*97.6*			**0**	*85-114*	*%REC*	*1*	*08-Jul-2020 00:20*
Surr: Dibromofluoromethane	*92.6*			**0**	*80-119*	*%REC*	*1*	*08-Jul-2020 00:20*
Surr: Toluene-d8	*109*			**0**	*89-112*	*%REC*	*1*	*08-Jul-2020 00:20*
ANIONS BY SW9056A		**Method:SW9056**						Analyst: YP
Chloride	**1,160**		**10.0**	**25.0**	**25.0**	**mg/L**	50	25-Jun-2020 23:33
Nitrogen, Nitrate (As N)	0.100	U	0.0300	0.100	0.100	mg/L	1	25-Jun-2020 22:03
Nitrogen, Nitrite (As N)	0.100	U	0.0300	0.100	0.100	mg/L	1	25-Jun-2020 22:03
Sulfate	**1.26**		**0.200**	**0.500**	**0.500**	**mg/L**	1	25-Jun-2020 22:03
SUBCONTRACT ANALYSIS - DHC/DHB		**Method:NA**						Analyst: SUB
Subcontract Analysis	See Attached		0	0		NA	1	01-Jul-2020 12:17
SUBCONTRACT ANALYSIS - RSK		**Method:NA**						Analyst: SUBCA
Subcontract Analysis	See Attached		0	0		NA	1	06-Jul-2020 17:50

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

ALS Houston, US Date: 17-Jul-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
Sample ID: 35AWW23_062420
Collection Date: 24-Jun-2020 12:00

ANALYTICAL REPORT
WorkOrder:HS20061218
Lab ID:HS20061218-05
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
SUBCONTRACT ANALYSIS - TOC ANALYSIS		**Method:NA**						Analyst: SUBK
Subcontract Analysis	See Attached		0	0		NA	1	17-Jul-2020 16:35
SUBCONTRACT ANALYSIS - VOLATILE FATTY ACIDS		**Method:NA**						Analyst: SUB
Subcontract Analysis	See Attached		0	0		NA	1	13-Jul-2020 09:49

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

ALS Houston, US Date: 17-Jul-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
Sample ID: 35AWW22_062420
Collection Date: 24-Jun-2020 13:05

ANALYTICAL REPORT
WorkOrder:HS20061218
Lab ID:HS20061218-06
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 00:44
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 00:44
1,1,2,2-Tetrachloroethane	1.0	U	0.50	1.0	1.0	UG/L	1	08-Jul-2020 00:44
1,1,2-Trichloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 00:44
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 00:44
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 00:44
1,1-Dichloropropene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 00:44
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	08-Jul-2020 00:44
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	08-Jul-2020 00:44
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	08-Jul-2020 00:44
1,2,4-Trimethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 00:44
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 00:44
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 00:44
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	08-Jul-2020 00:44
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 00:44
1,2-Dichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	08-Jul-2020 00:44
1,3,5-Trimethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 00:44
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	08-Jul-2020 00:44
1,3-Dichloropropane	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 00:44
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	08-Jul-2020 00:44
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 00:44
2-Butanone	1.0	U	0.50	1.0	2.0	UG/L	1	08-Jul-2020 00:44
2-Chlorotoluene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 00:44
2-Hexanone	2.0	U	1.0	2.0	2.0	UG/L	1	08-Jul-2020 00:44
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	UG/L	1	08-Jul-2020 00:44
4-Isopropyltoluene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 00:44
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	UG/L	1	08-Jul-2020 00:44
Acetone	1.0	U	0.40	1.0	2.0	UG/L	1	08-Jul-2020 00:44
Benzene	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 00:44
Bromobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	08-Jul-2020 00:44
Bromochloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 00:44
Bromodichloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 00:44
Bromoform	1.0	U	0.40	1.0	1.0	UG/L	1	08-Jul-2020 00:44
Bromomethane	1.0	U	0.40	1.0	1.0	UG/L	1	08-Jul-2020 00:44
Carbon disulfide	1.0	U	0.60	1.0	2.0	UG/L	1	08-Jul-2020 00:44
Carbon tetrachloride	1.0	U	0.50	1.0	1.0	UG/L	1	08-Jul-2020 00:44
Chlorobenzene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 00:44
Chloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 00:44
Chloroform	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 00:44

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

ALS Houston, US Date: 17-Jul-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
Sample ID: 35AWW22_062420
Collection Date: 24-Jun-2020 13:05

ANALYTICAL REPORT
WorkOrder:HS20061218
Lab ID:HS20061218-06
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
Chloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 00:44
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 00:44
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	UG/L	1	08-Jul-2020 00:44
Dibromochloromethane	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 00:44
Dibromomethane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 00:44
Dichlorodifluoromethane	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 00:44
Ethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 00:44
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	UG/L	1	08-Jul-2020 00:44
Isopropylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 00:44
m,p-Xylene	1.0	U	0.50	1.0	2.0	UG/L	1	08-Jul-2020 00:44
Methylene chloride	1.0	U	0.40	1.0	2.0	UG/L	1	08-Jul-2020 00:44
n-Butylbenzene	1.0	U	0.40	1.0	1.0	UG/L	1	08-Jul-2020 00:44
n-Propylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 00:44
Naphthalene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 00:44
o-Xylene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 00:44
sec-Butylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 00:44
Styrene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 00:44
tert-Butylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 00:44
Tetrachloroethene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 00:44
Toluene	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 00:44
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 00:44
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 00:44
Trichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 00:44
Trichlorofluoromethane	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 00:44
Vinyl chloride	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 00:44
Surr: 1,2-Dichloroethane-d4	*88.3*			**0**	*81-118*	*%REC*	*1*	*08-Jul-2020 00:44*
Surr: 4-Bromofluorobenzene	*102*			**0**	*85-114*	*%REC*	*1*	*08-Jul-2020 00:44*
Surr: Dibromofluoromethane	*93.0*			**0**	*80-119*	*%REC*	*1*	*08-Jul-2020 00:44*
Surr: Toluene-d8	*103*			**0**	*89-112*	*%REC*	*1*	*08-Jul-2020 00:44*

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

ALS Houston, US Date: 17-Jul-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
Sample ID: Trip Blank
Collection Date: 24-Jun-2020 00:00

ANALYTICAL REPORT
WorkOrder:HS20061218
Lab ID:HS20061218-07
Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	07-Jul-2020 20:43
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	07-Jul-2020 20:43
1,1,2,2-Tetrachloroethane	1.0	U	0.50	1.0	1.0	UG/L	1	07-Jul-2020 20:43
1,1,2-Trichloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	07-Jul-2020 20:43
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	07-Jul-2020 20:43
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	07-Jul-2020 20:43
1,1-Dichloropropene	1.0	U	0.30	1.0	1.0	UG/L	1	07-Jul-2020 20:43
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	07-Jul-2020 20:43
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	07-Jul-2020 20:43
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	07-Jul-2020 20:43
1,2,4-Trimethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	07-Jul-2020 20:43
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	07-Jul-2020 20:43
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	UG/L	1	07-Jul-2020 20:43
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	07-Jul-2020 20:43
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	07-Jul-2020 20:43
1,2-Dichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	07-Jul-2020 20:43
1,3,5-Trimethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	07-Jul-2020 20:43
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	07-Jul-2020 20:43
1,3-Dichloropropane	1.0	U	0.30	1.0	1.0	UG/L	1	07-Jul-2020 20:43
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	07-Jul-2020 20:43
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	07-Jul-2020 20:43
2-Butanone	1.0	U	0.50	1.0	2.0	UG/L	1	07-Jul-2020 20:43
2-Chlorotoluene	1.0	U	0.30	1.0	1.0	UG/L	1	07-Jul-2020 20:43
2-Hexanone	2.0	U	1.0	2.0	2.0	UG/L	1	07-Jul-2020 20:43
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	UG/L	1	07-Jul-2020 20:43
4-Isopropyltoluene	1.0	U	0.30	1.0	1.0	UG/L	1	07-Jul-2020 20:43
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	UG/L	1	07-Jul-2020 20:43
Acetone	1.0	U	0.40	1.0	2.0	UG/L	1	07-Jul-2020 20:43
Benzene	0.50	U	0.20	0.50	1.0	UG/L	1	07-Jul-2020 20:43
Bromobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	07-Jul-2020 20:43
Bromochloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	07-Jul-2020 20:43
Bromodichloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	07-Jul-2020 20:43
Bromoform	1.0	U	0.40	1.0	1.0	UG/L	1	07-Jul-2020 20:43
Bromomethane	1.0	U	0.40	1.0	1.0	UG/L	1	07-Jul-2020 20:43
Carbon disulfide	1.0	U	0.60	1.0	2.0	UG/L	1	07-Jul-2020 20:43
Carbon tetrachloride	1.0	U	0.50	1.0	1.0	UG/L	1	07-Jul-2020 20:43
Chlorobenzene	1.0	U	0.30	1.0	1.0	UG/L	1	07-Jul-2020 20:43
Chloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	07-Jul-2020 20:43
Chloroform	0.50	U	0.20	0.50	1.0	UG/L	1	07-Jul-2020 20:43

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

ALS Houston, US Date: 17-Jul-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
Sample ID: Trip Blank
Collection Date: 24-Jun-2020 00:00

ANALYTICAL REPORT
WorkOrder:HS20061218
Lab ID:HS20061218-07
Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
Chloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	07-Jul-2020 20:43
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	07-Jul-2020 20:43
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	UG/L	1	07-Jul-2020 20:43
Dibromochloromethane	1.0	U	0.30	1.0	1.0	UG/L	1	07-Jul-2020 20:43
Dibromomethane	0.50	U	0.20	0.50	1.0	UG/L	1	07-Jul-2020 20:43
Dichlorodifluoromethane	1.0	U	0.30	1.0	1.0	UG/L	1	07-Jul-2020 20:43
Ethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	07-Jul-2020 20:43
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	UG/L	1	07-Jul-2020 20:43
Isopropylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	07-Jul-2020 20:43
m,p-Xylene	1.0	U	0.50	1.0	2.0	UG/L	1	07-Jul-2020 20:43
Methylene chloride	1.0	U	0.40	1.0	2.0	UG/L	1	07-Jul-2020 20:43
n-Butylbenzene	1.0	U	0.40	1.0	1.0	UG/L	1	07-Jul-2020 20:43
n-Propylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	07-Jul-2020 20:43
Naphthalene	1.0	U	0.30	1.0	1.0	UG/L	1	07-Jul-2020 20:43
o-Xylene	1.0	U	0.30	1.0	1.0	UG/L	1	07-Jul-2020 20:43
sec-Butylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	07-Jul-2020 20:43
Styrene	1.0	U	0.30	1.0	1.0	UG/L	1	07-Jul-2020 20:43
tert-Butylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	07-Jul-2020 20:43
Tetrachloroethene	1.0	U	0.30	1.0	1.0	UG/L	1	07-Jul-2020 20:43
Toluene	0.50	U	0.20	0.50	1.0	UG/L	1	07-Jul-2020 20:43
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	07-Jul-2020 20:43
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	UG/L	1	07-Jul-2020 20:43
Trichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	07-Jul-2020 20:43
Trichlorofluoromethane	1.0	U	0.30	1.0	1.0	UG/L	1	07-Jul-2020 20:43
Vinyl chloride	0.50	U	0.20	0.50	1.0	UG/L	1	07-Jul-2020 20:43
Surr: 1,2-Dichloroethane-d4	*88.0*			**0**	*81-118*	*%REC*	*1*	*07-Jul-2020 20:43*
Surr: 4-Bromofluorobenzene	*101*			**0**	*85-114*	*%REC*	*1*	*07-Jul-2020 20:43*
Surr: Dibromofluoromethane	*92.5*			**0**	*80-119*	*%REC*	*1*	*07-Jul-2020 20:43*
Surr: Toluene-d8	*103*			**0**	*89-112*	*%REC*	*1*	*07-Jul-2020 20:43*

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

Weight / Prep Log

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
WorkOrder: HS20061218

Batch ID: 154955 **Start Date:** 29 Jun 2020 10:30 **End Date:** 29 Jun 2020 14:30
Method: WATER - SW3010A **Prep Code:** 3010A

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS20061218-02		10 (mL)	10 (mL)	1

ALS Houston, US Date: 17-Jul-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
WorkOrder: HS20061218

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: 154955 (0)	**Test Name :** METALS BY ICPMS BY SW6020A				**Matrix:** Groundwater	
HS20061218-02	35AWW20_062420	24 Jun 2020 09:25		29 Jun 2020 14:30	02 Jul 2020 12:33	1
Batch ID: R364318 (0)	**Test Name :** SUBCONTRACT ANALYSIS - DHC/DHB				**Matrix:** Groundwater	
HS20061218-01	35AWW19_062420	24 Jun 2020 08:30			01 Jul 2020 12:17	1
HS20061218-02	35AWW20_062420	24 Jun 2020 09:25			01 Jul 2020 12:17	1
HS20061218-03	LHSMW07_062420	24 Jun 2020 10:15			01 Jul 2020 12:17	1
HS20061218-04	35AWW06_062420	24 Jun 2020 11:05			01 Jul 2020 12:17	1
HS20061218-05	35AWW23_062420	24 Jun 2020 12:00			01 Jul 2020 12:17	1
Batch ID: R364574 (0)	**Test Name :** SUBCONTRACT ANALYSIS - RSK				**Matrix:** Groundwater	
HS20061218-01	35AWW19_062420	24 Jun 2020 08:30			06 Jul 2020 17:50	1
HS20061218-02	35AWW20_062420	24 Jun 2020 09:25			06 Jul 2020 17:50	1
HS20061218-03	LHSMW07_062420	24 Jun 2020 10:15			06 Jul 2020 17:50	1
HS20061218-04	35AWW06_062420	24 Jun 2020 11:05			06 Jul 2020 17:50	1
HS20061218-05	35AWW23_062420	24 Jun 2020 12:00			06 Jul 2020 17:50	1
Batch ID: R364717 (0)	**Test Name :** VOLATILES ORGANICS BY METHOD 8260C				**Matrix:** Water	
HS20061218-07	Trip Blank	24 Jun 2020 00:00			07 Jul 2020 20:43	1
Batch ID: R364717 (0)	**Test Name :** VOLATILES ORGANICS BY METHOD 8260C				**Matrix:** Groundwater	
HS20061218-01	35AWW19_062420	24 Jun 2020 08:30			07 Jul 2020 21:31	1
HS20061218-02	35AWW20_062420	24 Jun 2020 09:25			07 Jul 2020 23:07	25
HS20061218-02	35AWW20_062420	24 Jun 2020 09:25			07 Jul 2020 21:55	1
HS20061218-03	LHSMW07_062420	24 Jun 2020 10:15			07 Jul 2020 23:31	1
HS20061218-04	35AWW06_062420	24 Jun 2020 11:05			07 Jul 2020 23:55	1
HS20061218-05	35AWW23_062420	24 Jun 2020 12:00			08 Jul 2020 00:20	1
HS20061218-06	35AWW22_062420	24 Jun 2020 13:05			08 Jul 2020 00:44	1
Batch ID: R364863 (0)	**Test Name :** ANIONS BY SW9056A				**Matrix:** Groundwater	
HS20061218-01	35AWW19_062420	24 Jun 2020 08:30			25 Jun 2020 22:21	50
HS20061218-01	35AWW19_062420	24 Jun 2020 08:30			25 Jun 2020 19:56	1
HS20061218-02	35AWW20_062420	24 Jun 2020 09:25			25 Jun 2020 22:39	50
HS20061218-02	35AWW20_062420	24 Jun 2020 09:25			25 Jun 2020 20:14	1
HS20061218-03	LHSMW07_062420	24 Jun 2020 10:15			25 Jun 2020 22:57	50
HS20061218-03	LHSMW07_062420	24 Jun 2020 10:15			25 Jun 2020 21:27	1
HS20061218-04	35AWW06_062420	24 Jun 2020 11:05			25 Jun 2020 23:15	50
HS20061218-04	35AWW06_062420	24 Jun 2020 11:05			25 Jun 2020 21:45	1
HS20061218-05	35AWW23_062420	24 Jun 2020 12:00			25 Jun 2020 23:33	50
HS20061218-05	35AWW23_062420	24 Jun 2020 12:00			25 Jun 2020 22:03	1

ALS Houston, US Date: 17-Jul-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
WorkOrder: HS20061218

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: R364908 (0)	**Test Name :** SUBCONTRACT ANALYSIS - VOLATILE FATTY ACIDS				**Matrix:** Groundwater	
HS20061218-01	35AWW19_062420	24 Jun 2020 08:30			13 Jul 2020 09:49	1
HS20061218-02	35AWW20_062420	24 Jun 2020 09:25			13 Jul 2020 09:49	1
HS20061218-03	LHSMW07_062420	24 Jun 2020 10:15			13 Jul 2020 09:49	1
HS20061218-04	35AWW06_062420	24 Jun 2020 11:05			13 Jul 2020 09:49	1
HS20061218-05	35AWW23_062420	24 Jun 2020 12:00			13 Jul 2020 09:49	1
Batch ID: R365263 (0)	**Test Name :** SUBCONTRACT ANALYSIS - TOC ANALYSIS				**Matrix:** Groundwater	
HS20061218-01	35AWW19_062420	24 Jun 2020 08:30			17 Jul 2020 16:35	1
HS20061218-02	35AWW20_062420	24 Jun 2020 09:25			17 Jul 2020 16:35	1
HS20061218-03	LHSMW07_062420	24 Jun 2020 10:15			17 Jul 2020 16:35	1
HS20061218-04	35AWW06_062420	24 Jun 2020 11:05			17 Jul 2020 16:35	1
HS20061218-05	35AWW23_062420	24 Jun 2020 12:00			17 Jul 2020 16:35	1

ALS Houston, US Date: 17-Jul-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
WorkOrder: HS20061218

QC BATCH REPORT

Batch ID: 154955 (0) **Instrument: ICPMS06** **Method: METALS BY ICPMS BY SW6020A**

MBLK Sample ID: **MBLK-154955** Units: **mg/L** Analysis Date: **02-Jul-2020 12:25**
Client ID: Run ID: **ICPMS06_364391** SeqNo: **5648603** PrepDate: **29-Jun-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.000500	0.00500								U

LCS Sample ID: **LCS-154955** Units: **mg/L** Analysis Date: **02-Jul-2020 12:27**
Client ID: Run ID: **ICPMS06_364391** SeqNo: **5648604** PrepDate: **29-Jun-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.04816	0.00500	0.05	0	96.3	84 - 116				

MS Sample ID: **HS20061218-02MS** Units: **mg/L** Analysis Date: **02-Jul-2020 12:37**
Client ID: **35AWW20_062420** Run ID: **ICPMS06_364391** SeqNo: **5648607** PrepDate: **29-Jun-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.04966	0.00500	0.05	0.001189	96.9	84 - 116				

MSD Sample ID: **HS20061218-02MSD** Units: **mg/L** Analysis Date: **02-Jul-2020 12:39**
Client ID: **35AWW20_062420** Run ID: **ICPMS06_364391** SeqNo: **5648608** PrepDate: **29-Jun-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.04875	0.00500	0.05	0.001189	95.1	84 - 116	0.04966	1.85	20	

PDS Sample ID: **HS20061218-02PDS** Units: **mg/L** Analysis Date: **02-Jul-2020 12:41**
Client ID: **35AWW20_062420** Run ID: **ICPMS06_364391** SeqNo: **5648609** PrepDate: **29-Jun-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.1122	0.00500	0.1	0.001189	111	80 - 120				

SD Sample ID: **HS20061218-02SD** Units: **mg/L** Analysis Date: **02-Jul-2020 12:35**
Client ID: **35AWW20_062420** Run ID: **ICPMS06_364391** SeqNo: **5648606** PrepDate: **29-Jun-2020** DF: **5**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	%D Limit	Qual
Arsenic	0.00250	0.0250					0.001189	0	10	U

The following samples were analyzed in this batch: HS20061218-02

ALS Houston, US Date: 17-Jul-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
WorkOrder: HS20061218

QC BATCH REPORT

Batch ID: R364717 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MBLK Sample ID: **VBLKW-200707** Units: **UG/L** Analysis Date: **07-Jul-2020 20:19**
Client ID: Run ID: **VOA6_364717** SeqNo: **5654689** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	1.0	1.0								U
1,1,1-Trichloroethane	0.50	1.0								U
1,1,2,2-Tetrachloroethane	1.0	1.0								U
1,1,2-Trichloroethane	1.0	1.0								U
1,1-Dichloroethane	0.50	1.0								U
1,1-Dichloroethene	0.50	1.0								U
1,1-Dichloropropene	1.0	1.0								U
1,2,3-Trichlorobenzene	1.0	1.0								U
1,2,3-Trichloropropane	1.0	1.0								U
1,2,4-Trichlorobenzene	1.0	1.0								U
1,2,4-Trimethylbenzene	1.0	1.0								U
1,2-Dibromo-3-chloropropane	0.50	1.0								U
1,2-Dibromoethane	0.50	1.0								U
1,2-Dichlorobenzene	1.0	1.0								U
1,2-Dichloroethane	0.50	1.0								U
1,2-Dichloropropane	1.0	1.0								U
1,3,5-Trimethylbenzene	1.0	1.0								U
1,3-Dichlorobenzene	1.0	1.0								U
1,3-Dichloropropane	1.0	1.0								U
1,4-Dichlorobenzene	1.0	1.0								U
2,2-Dichloropropane	0.50	1.0								U
2-Butanone	1.0	2.0								U
2-Chlorotoluene	1.0	1.0								U
2-Hexanone	2.0	2.0								U
4-Chlorotoluene	1.0	1.0								U
4-Isopropyltoluene	1.0	1.0								U
4-Methyl-2-pentanone	2.0	2.0								U
Acetone	1.0	2.0								U
Benzene	0.50	1.0								U
Bromobenzene	1.0	1.0								U
Bromochloromethane	0.50	1.0								U
Bromodichloromethane	0.50	1.0								U
Bromoform	1.0	1.0								U
Bromomethane	1.0	1.0								U

ALS Houston, US Date: 17-Jul-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
WorkOrder: HS20061218

QC BATCH REPORT

Batch ID: R364717 (0) **Instrument: VOA6** **Method: VOLATILES ORGANICS BY METHOD 8260C**

MBLK Sample ID: **VBLKW-200707** Units: **UG/L** Analysis Date: **07-Jul-2020 20:19**
Client ID: Run ID: **VOA6_364717** SeqNo: **5654689** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Carbon disulfide	1.0	2.0								U
Carbon tetrachloride	1.0	1.0								U
Chlorobenzene	1.0	1.0								U
Chloroethane	1.0	1.0								U
Chloroform	0.50	1.0								U
Chloromethane	0.50	1.0								U
cis-1,2-Dichloroethene	0.50	1.0								U
cis-1,3-Dichloropropene	0.50	1.0								U
Dibromochloromethane	1.0	1.0								U
Dibromomethane	0.50	1.0								U
Dichlorodifluoromethane	1.0	1.0								U
Ethylbenzene	1.0	1.0								U
Hexachlorobutadiene	1.0	1.0								U
Isopropylbenzene	1.0	1.0								U
m,p-Xylene	1.0	2.0								U
Methylene chloride	1.0	2.0								U
Naphthalene	1.0	1.0								U
n-Butylbenzene	1.0	1.0								U
n-Propylbenzene	1.0	1.0								U
o-Xylene	1.0	1.0								U
sec-Butylbenzene	1.0	1.0								U
Styrene	1.0	1.0								U
tert-Butylbenzene	1.0	1.0								U
Tetrachloroethene	1.0	1.0								U
Toluene	0.50	1.0								U
trans-1,2-Dichloroethene	0.50	1.0								U
trans-1,3-Dichloropropene	0.50	1.0								U
Trichloroethene	0.50	1.0								U
Trichlorofluoromethane	1.0	1.0								U
Vinyl chloride	0.50	1.0								U
Surr: 1,2-Dichloroethane-d4	*45.09*	*1.0*	*50*	*0*	*90.2*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*49.93*	*1.0*	*50*	*0*	*99.9*	*85 - 114*				
Surr: Dibromofluoromethane	*47.53*	*1.0*	*50*	*0*	*95.1*	*80 - 119*				
Surr: Toluene-d8	*52.44*	*1.0*	*50*	*0*	*105*	*89 - 112*				

ALS Houston, US Date: 17-Jul-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
WorkOrder: HS20061218

QC BATCH REPORT

Batch ID: R364717 (0) **Instrument: VOA6** **Method: VOLATILES ORGANICS BY METHOD 8260C**

LCS Sample ID: **VLCSW-200707** Units: **UG/L** Analysis Date: **07-Jul-2020 19:07**
Client ID: Run ID: **VOA6_364717** SeqNo: **5654688** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	19.11	1.0	20	0	95.6	78 - 124				
1,1,1-Trichloroethane	19.23	1.0	20	0	96.2	74 - 131				
1,1,2,2-Tetrachloroethane	17.51	1.0	20	0	87.5	71 - 121				
1,1,2-Trichloroethane	19.46	1.0	20	0	97.3	80 - 119				
1,1-Dichloroethane	18.92	1.0	20	0	94.6	77 - 125				
1,1-Dichloroethene	18.58	1.0	20	0	92.9	71 - 131				
1,1-Dichloropropene	18.5	1.0	20	0	92.5	78 - 125				
1,2,3-Trichlorobenzene	21.89	1.0	20	0	109	69 - 129				
1,2,3-Trichloropropane	17.75	1.0	20	0	88.8	73 - 122				
1,2,4-Trichlorobenzene	21.7	1.0	20	0	109	69 - 130				
1,2,4-Trimethylbenzene	19.22	1.0	20	0	96.1	76 - 124				
1,2-Dibromo-3-chloropropane	17	1.0	20	0	85.0	62 - 128				
1,2-Dibromoethane	18.84	1.0	20	0	94.2	77 - 121				
1,2-Dichlorobenzene	18.58	1.0	20	0	92.9	80 - 119				
1,2-Dichloroethane	19.27	1.0	20	0	96.4	73 - 128				
1,2-Dichloropropane	19.62	1.0	20	0	98.1	78 - 122				
1,3,5-Trimethylbenzene	19.61	1.0	20	0	98.0	75 - 124				
1,3-Dichlorobenzene	19.23	1.0	20	0	96.2	80 - 119				
1,3-Dichloropropane	18.7	1.0	20	0	93.5	80 - 119				
1,4-Dichlorobenzene	19.46	1.0	20	0	97.3	79 - 118				
2,2-Dichloropropane	19.54	1.0	20	0	97.7	60 - 139				
2-Butanone	33.92	2.0	40	0	84.8	56 - 143				
2-Chlorotoluene	19.36	1.0	20	0	96.8	79 - 122				
2-Hexanone	33.58	2.0	40	0	83.9	57 - 139				
4-Chlorotoluene	19.74	1.0	20	0	98.7	78 - 122				
4-Isopropyltoluene	19.67	1.0	20	0	98.3	77 - 127				
4-Methyl-2-pentanone	35.65	2.0	40	0	89.1	67 - 130				
Acetone	29.57	2.0	40	0	73.9	39 - 160				
Benzene	19.33	1.0	20	0	96.7	79 - 120				
Bromobenzene	19.57	1.0	20	0	97.8	80 - 120				
Bromochloromethane	18.46	1.0	20	0	92.3	78 - 123				
Bromodichloromethane	19.55	1.0	20	0	97.7	79 - 125				
Bromoform	18.49	1.0	20	0	92.5	66 - 130				
Bromomethane	22.4	1.0	20	0	112	53 - 141				

ALS Houston, US Date: 17-Jul-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
WorkOrder: HS20061218

QC BATCH REPORT

Batch ID: R364717 (0) **Instrument: VOA6** **Method: VOLATILES ORGANICS BY METHOD 8260C**

LCS Sample ID: **VLCSW-200707** Units: **UG/L** Analysis Date: **07-Jul-2020 19:07**
Client ID: Run ID: **VOA6_364717** SeqNo: **5654688** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Carbon disulfide	39.21	2.0	40	0	98.0	64 - 133				
Carbon tetrachloride	19.04	1.0	20	0	95.2	72 - 136				
Chlorobenzene	19.09	1.0	20	0	95.5	82 - 118				
Chloroethane	20.35	1.0	20	0	102	60 - 138				
Chloroform	18.97	1.0	20	0	94.9	79 - 124				
Chloromethane	20.38	1.0	20	0	102	50 - 139				
cis-1,2-Dichloroethene	19.5	1.0	20	0	97.5	78 - 123				
cis-1,3-Dichloropropene	19.34	1.0	20	0	96.7	75 - 124				
Dibromochloromethane	18.78	1.0	20	0	93.9	74 - 126				
Dibromomethane	19.11	1.0	20	0	95.6	79 - 123				
Dichlorodifluoromethane	18.5	1.0	20	0	92.5	32 - 152				
Ethylbenzene	19.2	1.0	20	0	96.0	79 - 121				
Hexachlorobutadiene	24.19	1.0	20	0	121	66 - 134				
Isopropylbenzene	19.4	1.0	20	0	97.0	72 - 131				
m,p-Xylene	38.14	2.0	40	0	95.3	80 - 121				
Methylene chloride	23.44	2.0	20	0	117	74 - 124				
Naphthalene	19.05	1.0	20	0	95.2	61 - 128				
n-Butylbenzene	19.47	1.0	20	0	97.3	75 - 128				
n-Propylbenzene	19.55	1.0	20	0	97.8	76 - 126				
o-Xylene	19.04	1.0	20	0	95.2	78 - 122				
sec-Butylbenzene	19.73	1.0	20	0	98.6	77 - 126				
Styrene	19.49	1.0	20	0	97.5	78 - 123				
tert-Butylbenzene	20	1.0	20	0	100.0	78 - 124				
Tetrachloroethene	19.63	1.0	20	0	98.2	74 - 129				
Toluene	19.44	1.0	20	0	97.2	80 - 121				
trans-1,2-Dichloroethene	19.93	1.0	20	0	99.7	75 - 124				
trans-1,3-Dichloropropene	19.75	1.0	20	0	98.7	73 - 127				
Trichloroethene	19.25	1.0	20	0	96.2	79 - 123				
Trichlorofluoromethane	19.16	1.0	20	0	95.8	65 - 141				
Vinyl chloride	18.79	1.0	20	0	93.9	58 - 137				
Surr: 1,2-Dichloroethane-d4	*50.46*	*1.0*	*50*	*0*	*101*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*51.76*	*1.0*	*50*	*0*	*104*	*85 - 114*				
Surr: Dibromofluoromethane	*51.48*	*1.0*	*50*	*0*	*103*	*80 - 119*				
Surr: Toluene-d8	*48.46*	*1.0*	*50*	*0*	*96.9*	*89 - 112*				

ALS Houston, US Date: 17-Jul-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
WorkOrder: HS20061218

QC BATCH REPORT

Batch ID: R364717 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MS Sample ID: **HS20061218-01MS** Units: **UG/L** Analysis Date: **07-Jul-2020 22:19**
Client ID: **35AWW19_062420** Run ID: **VOA6_364717** SeqNo: **5654694** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	19.74	1.0	20	0	98.7	78 - 124				
1,1,1-Trichloroethane	19.26	1.0	20	0	96.3	74 - 131				
1,1,2,2-Tetrachloroethane	19	1.0	20	0	95.0	71 - 121				
1,1,2-Trichloroethane	19.78	1.0	20	0	98.9	80 - 119				
1,1-Dichloroethane	19.12	1.0	20	0.8538	91.3	77 - 125				
1,1-Dichloroethene	23.4	1.0	20	4.618	93.9	71 - 131				
1,1-Dichloropropene	19.53	1.0	20	0	97.7	78 - 125				
1,2,3-Trichlorobenzene	14.27	1.0	20	0	71.3	69 - 129				
1,2,3-Trichloropropane	18.12	1.0	20	0	90.6	73 - 122				
1,2,4-Trichlorobenzene	17.18	1.0	20	0	85.9	69 - 130				
1,2,4-Trimethylbenzene	20.96	1.0	20	0	105	76 - 124				
1,2-Dibromo-3-chloropropane	13.77	1.0	20	0	68.9	62 - 128				
1,2-Dibromoethane	18.98	1.0	20	0	94.9	77 - 121				
1,2-Dichlorobenzene	19.82	1.0	20	0	99.1	80 - 119				
1,2-Dichloroethane	19.74	1.0	20	0	98.7	73 - 128				
1,2-Dichloropropane	19.73	1.0	20	0	98.6	78 - 122				
1,3,5-Trimethylbenzene	21.64	1.0	20	0	108	75 - 124				
1,3-Dichlorobenzene	20.47	1.0	20	0	102	80 - 119				
1,3-Dichloropropane	19.06	1.0	20	0	95.3	80 - 119				
1,4-Dichlorobenzene	21.19	1.0	20	0	106	79 - 118				
2,2-Dichloropropane	18.11	1.0	20	0	90.6	60 - 139				
2-Butanone	25.18	2.0	40	0	63.0	56 - 143				
2-Chlorotoluene	21.04	1.0	20	0	105	79 - 122				
2-Hexanone	32.79	2.0	40	0	82.0	57 - 139				
4-Chlorotoluene	21.22	1.0	20	0	106	78 - 122				
4-Isopropyltoluene	21.9	1.0	20	0	110	77 - 127				
4-Methyl-2-pentanone	35.96	2.0	40	0	89.9	67 - 130				
Acetone	4.724	2.0	40	0	11.8	39 - 160				S
Benzene	19.73	1.0	20	0	98.6	79 - 120				
Bromobenzene	21.18	1.0	20	0	106	80 - 120				
Bromochloromethane	17.28	1.0	20	0	86.4	78 - 123				
Bromodichloromethane	19.33	1.0	20	0	96.7	79 - 125				
Bromoform	18.25	1.0	20	0	91.2	66 - 130				
Bromomethane	19.87	1.0	20	0	99.4	53 - 141				

ALS Houston, US Date: 17-Jul-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
WorkOrder: HS20061218

QC BATCH REPORT

Batch ID: R364717 (0) **Instrument: VOA6** **Method: VOLATILES ORGANICS BY METHOD 8260C**

MS Sample ID: **HS20061218-01MS** Units: **UG/L** Analysis Date: **07-Jul-2020 22:19**
Client ID: **35AWW19_062420** Run ID: **VOA6_364717** SeqNo: **5654694** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Carbon disulfide	37.91	2.0	40	0	94.8	64 - 133				
Carbon tetrachloride	20.34	1.0	20	0	102	72 - 136				
Chlorobenzene	20.12	1.0	20	0	101	82 - 118				
Chloroethane	18.33	1.0	20	0	91.6	60 - 138				
Chloroform	18.63	1.0	20	0	93.2	79 - 124				
Chloromethane	19.59	1.0	20	0	98.0	50 - 139				
cis-1,2-Dichloroethene	18.4	1.0	20	0	92.0	78 - 123				
cis-1,3-Dichloropropene	18.6	1.0	20	0	93.0	75 - 124				
Dibromochloromethane	18.92	1.0	20	0	94.6	74 - 126				
Dibromomethane	18.45	1.0	20	0	92.2	79 - 123				
Dichlorodifluoromethane	16.58	1.0	20	0	82.9	32 - 152				
Ethylbenzene	20.88	1.0	20	0	104	79 - 121				
Hexachlorobutadiene	21.93	1.0	20	0	110	66 - 134				
Isopropylbenzene	20.56	1.0	20	0	103	72 - 131				
m,p-Xylene	40.6	2.0	40	0	101	80 - 121				
Methylene chloride	18.18	2.0	20	0	90.9	74 - 124				
Naphthalene	13.74	1.0	20	0	68.7	61 - 128				
n-Butylbenzene	21.53	1.0	20	0	108	75 - 128				
n-Propylbenzene	22.04	1.0	20	0	110	76 - 126				
o-Xylene	20.12	1.0	20	0	101	78 - 122				
sec-Butylbenzene	21.75	1.0	20	0	109	77 - 126				
Styrene	20.26	1.0	20	0	101	78 - 123				
tert-Butylbenzene	22.26	1.0	20	0	111	78 - 124				
Tetrachloroethene	21.31	1.0	20	0	107	74 - 129				
Toluene	20.62	1.0	20	0	103	80 - 121				
trans-1,2-Dichloroethene	19.34	1.0	20	0	96.7	75 - 124				
trans-1,3-Dichloropropene	18.68	1.0	20	0	93.4	73 - 127				
Trichloroethene	19.87	1.0	20	0	99.4	79 - 123				
Trichlorofluoromethane	20.56	1.0	20	0	103	65 - 141				
Vinyl chloride	19.44	1.0	20	0	97.2	58 - 137				
Surr: 1,2-Dichloroethane-d4	*44.28*	*1.0*	*50*	*0*	*88.6*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*49.92*	*1.0*	*50*	*0*	*99.8*	*85 - 114*				
Surr: Dibromofluoromethane	*46.44*	*1.0*	*50*	*0*	*92.9*	*80 - 119*				
Surr: Toluene-d8	*50.61*	*1.0*	*50*	*0*	*101*	*89 - 112*				

ALS Houston, US Date: 17-Jul-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
WorkOrder: HS20061218

QC BATCH REPORT

Batch ID: R364717 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MSD Sample ID: **HS20061218-01MSD** Units: **UG/L** Analysis Date: **07-Jul-2020 22:43**
Client ID: **35AWW19_062420** Run ID: **VOA6_364717** SeqNo: **5654695** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	19.81	1.0	20	0	99.0	78 - 124	19.74	0.33	20	
1,1,1-Trichloroethane	19.13	1.0	20	0	95.7	74 - 131	19.26	0.678	20	
1,1,2,2-Tetrachloroethane	19.21	1.0	20	0	96.0	71 - 121	19	1.08	20	
1,1,2-Trichloroethane	19.26	1.0	20	0	96.3	80 - 119	19.78	2.66	20	
1,1-Dichloroethane	19	1.0	20	0.8538	90.7	77 - 125	19.12	0.632	20	
1,1-Dichloroethene	23.33	1.0	20	4.618	93.6	71 - 131	23.4	0.284	20	
1,1-Dichloropropene	19.18	1.0	20	0	95.9	78 - 125	19.53	1.79	20	
1,2,3-Trichlorobenzene	16.66	1.0	20	0	83.3	69 - 129	14.27	15.5	20	
1,2,3-Trichloropropane	18.75	1.0	20	0	93.7	73 - 122	18.12	3.42	20	
1,2,4-Trichlorobenzene	17.41	1.0	20	0	87.1	69 - 130	17.18	1.36	20	
1,2,4-Trimethylbenzene	21.14	1.0	20	0	106	76 - 124	20.96	0.864	20	
1,2-Dibromo-3-chloropropane	12.98	1.0	20	0	64.9	62 - 128	13.77	5.95	20	
1,2-Dibromoethane	18.53	1.0	20	0	92.6	77 - 121	18.98	2.41	20	
1,2-Dichlorobenzene	17.03	1.0	20	0	85.1	80 - 119	19.82	15.2	20	
1,2-Dichloroethane	19.29	1.0	20	0	96.5	73 - 128	19.74	2.3	20	
1,2-Dichloropropane	19.33	1.0	20	0	96.6	78 - 122	19.73	2.04	20	
1,3,5-Trimethylbenzene	20.19	1.0	20	0	101	75 - 124	21.64	6.96	20	
1,3-Dichlorobenzene	20.4	1.0	20	0	102	80 - 119	20.47	0.379	20	
1,3-Dichloropropane	19.05	1.0	20	0	95.3	80 - 119	19.06	0.0465	20	
1,4-Dichlorobenzene	21.15	1.0	20	0	106	79 - 118	21.19	0.222	20	
2,2-Dichloropropane	17.43	1.0	20	0	87.2	60 - 139	18.11	3.84	20	
2-Butanone	25.18	2.0	40	0	62.9	56 - 143	25.18	0.0162	20	
2-Chlorotoluene	21.54	1.0	20	0	108	79 - 122	21.04	2.35	20	
2-Hexanone	32.8	2.0	40	0	82.0	57 - 139	32.79	0.0413	20	
4-Chlorotoluene	19.82	1.0	20	0	99.1	78 - 122	21.22	6.8	20	
4-Isopropyltoluene	21.98	1.0	20	0	110	77 - 127	21.9	0.369	20	
4-Methyl-2-pentanone	35.68	2.0	40	0	89.2	67 - 130	35.96	0.792	20	
Acetone	4.338	2.0	40	0	10.8	39 - 160	4.724	8.52	20	S
Benzene	19.18	1.0	20	0	95.9	79 - 120	19.73	2.83	20	
Bromobenzene	21.41	1.0	20	0	107	80 - 120	21.18	1.06	20	
Bromochloromethane	16.95	1.0	20	0	84.8	78 - 123	17.28	1.93	20	
Bromodichloromethane	19.02	1.0	20	0	95.1	79 - 125	19.33	1.61	20	
Bromoform	18.09	1.0	20	0	90.5	66 - 130	18.25	0.867	20	
Bromomethane	20.33	1.0	20	0	102	53 - 141	19.87	2.28	20	

ALS Houston, US Date: 17-Jul-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
WorkOrder: HS20061218

QC BATCH REPORT

Batch ID: R364717 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MSD Sample ID: **HS20061218-01MSD** Units: **UG/L** Analysis Date: **07-Jul-2020 22:43**
Client ID: **35AWW19_062420** Run ID: **VOA6_364717** SeqNo: **5654695** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
Carbon disulfide	38.28	2.0	40	0	95.7	64 - 133	37.91	0.97	20	
Carbon tetrachloride	20.03	1.0	20	0	100	72 - 136	20.34	1.54	20	
Chlorobenzene	20.1	1.0	20	0	100	82 - 118	20.12	0.128	20	
Chloroethane	17.97	1.0	20	0	89.9	60 - 138	18.33	1.96	20	
Chloroform	18.26	1.0	20	0	91.3	79 - 124	18.63	2.04	20	
Chloromethane	18.81	1.0	20	0	94.1	50 - 139	19.59	4.08	20	
cis-1,2-Dichloroethene	18.16	1.0	20	0	90.8	78 - 123	18.4	1.31	20	
cis-1,3-Dichloropropene	18.46	1.0	20	0	92.3	75 - 124	18.6	0.752	20	
Dibromochloromethane	19.04	1.0	20	0	95.2	74 - 126	18.92	0.645	20	
Dibromomethane	18.1	1.0	20	0	90.5	79 - 123	18.45	1.89	20	
Dichlorodifluoromethane	15.8	1.0	20	0	79.0	32 - 152	16.58	4.82	20	
Ethylbenzene	20.14	1.0	20	0	101	79 - 121	20.88	3.62	20	
Hexachlorobutadiene	19.58	1.0	20	0	97.9	66 - 134	21.93	11.3	20	
Isopropylbenzene	20.51	1.0	20	0	103	72 - 131	20.56	0.239	20	
m,p-Xylene	39.81	2.0	40	0	99.5	80 - 121	40.6	1.96	20	
Methylene chloride	17.98	2.0	20	0	89.9	74 - 124	18.18	1.1	20	
Naphthalene	14.78	1.0	20	0	73.9	61 - 128	13.74	7.29	20	
n-Butylbenzene	18.05	1.0	20	0	90.2	75 - 128	21.53	17.6	20	
n-Propylbenzene	22.38	1.0	20	0	112	76 - 126	22.04	1.51	20	
o-Xylene	20.34	1.0	20	0	102	78 - 122	20.12	1.1	20	
sec-Butylbenzene	21.2	1.0	20	0	106	77 - 126	21.75	2.58	20	
Styrene	19.92	1.0	20	0	99.6	78 - 123	20.26	1.71	20	
tert-Butylbenzene	22.88	1.0	20	0	114	78 - 124	22.26	2.74	20	
Tetrachloroethene	20.5	1.0	20	0	103	74 - 129	21.31	3.87	20	
Toluene	20.49	1.0	20	0	102	80 - 121	20.62	0.595	20	
trans-1,2-Dichloroethene	18.89	1.0	20	0	94.4	75 - 124	19.34	2.4	20	
trans-1,3-Dichloropropene	18.37	1.0	20	0	91.8	73 - 127	18.68	1.67	20	
Trichloroethene	19.07	1.0	20	0	95.4	79 - 123	19.87	4.11	20	
Trichlorofluoromethane	19.22	1.0	20	0	96.1	65 - 141	20.56	6.73	20	
Vinyl chloride	19.27	1.0	20	0	96.3	58 - 137	19.44	0.887	20	
Surr: 1,2-Dichloroethane-d4	*44.88*	*1.0*	*50*	*0*	*89.8*	*81 - 118*	*44.28*	*1.35*	*20*	
Surr: 4-Bromofluorobenzene	*48.86*	*1.0*	*50*	*0*	*97.7*	*85 - 114*	*49.92*	*2.15*	*20*	
Surr: Dibromofluoromethane	*46.47*	*1.0*	*50*	*0*	*92.9*	*80 - 119*	*46.44*	*0.0659*	*20*	
Surr: Toluene-d8	*50.21*	*1.0*	*50*	*0*	*100*	*89 - 112*	*50.61*	*0.785*	*20*	

ALS Houston, US Date: 17-Jul-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
WorkOrder: HS20061218

QC BATCH REPORT

Batch ID: R364717 (0)	Instrument: VOA6	Method: VOLATILES ORGANICS BY METHOD 8260C

The following samples were analyzed in this batch:

HS20061218-01	HS20061218-02	HS20061218-03	HS20061218-04
HS20061218-05	HS20061218-06	HS20061218-07	

ALS Houston, US Date: 17-Jul-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
WorkOrder: HS20061218

QC BATCH REPORT

Batch ID: R364863 (0) **Instrument: ICS-Integrion** **Method: ANIONS BY SW9056A**

MBLK Sample ID: **WBLKW1-062520** Units: **mg/L** Analysis Date: **25-Jun-2020 11:13**
Client ID: Run ID: **ICS-Integrion_364863** SeqNo: **5658151** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	0.22	0.500								J
Nitrogen, Nitrate (As N)	0.100	0.100								U
Nitrogen, Nitrite (As N)	0.100	0.100								U
Sulfate	0.2131	0.500								J

LCS Sample ID: **WLCSW1-062520** Units: **mg/L** Analysis Date: **25-Jun-2020 10:55**
Client ID: Run ID: **ICS-Integrion_364863** SeqNo: **5658150** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	20.11	0.500	20	0	101	80 - 120				
Nitrogen, Nitrate (As N)	3.959	0.100	4	0	99.0	80 - 120				
Nitrogen, Nitrite (As N)	4.351	0.100	4	0	109	80 - 120				
Sulfate	19.54	0.500	20	0	97.7	80 - 120				

The following samples were analyzed in this batch: HS20061218-01 HS20061218-02 HS20061218-03 HS20061218-04 HS20061218-05

ALS Houston, US Date: 17-Jul-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
WorkOrder: **HS20061218**

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	20-030-0	26-Mar-2021
Dept of Defense	ANAB L2231 V009	22-Dec-2021
Illinois	2000322020-4	09-May-2021
Kansas	E-10352 2019-2020	31-Jul-2020
North Carolina	624-2020	31-Dec-2020
Oklahoma	2019-141	31-Aug-2020
Texas	T104704231-20-26	30-Apr-2021

ALS Houston, US Date: 17-Jul-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
Work Order: HS20061218

SAMPLE TRACKING

Lab Samp ID	Client Sample ID	Action	Date	Person	New Location
HS20061218-01	35AWW19_062420	Login	6/25/2020 11:55:20 AM	JRM	MET102
HS20061218-01	35AWW19_062420	Login	6/25/2020 11:55:20 AM	JRM	WET281
HS20061218-01	35AWW19_062420	Login	6/25/2020 11:55:20 AM	JRM	VOA044
HS20061218-01	35AWW19_062420	Login	6/25/2020 11:55:20 AM	JRM	Sub
HS20061218-01	35AWW19_062420	Login	6/25/2020 11:55:20 AM	JRM	Sub
HS20061218-02	35AWW20_062420	Login	6/25/2020 11:55:20 AM	JRM	MET102
HS20061218-02	35AWW20_062420	Login	6/25/2020 11:55:20 AM	JRM	Sub
HS20061218-02	35AWW20_062420	Login	6/25/2020 11:55:20 AM	JRM	WET281
HS20061218-02	35AWW20_062420	Login	6/25/2020 11:55:20 AM	JRM	VOA044
HS20061218-02	35AWW20_062420	Login	6/25/2020 11:55:20 AM	JRM	Sub
HS20061218-02	35AWW20_062420	Login	6/25/2020 11:55:20 AM	JRM	Sub
HS20061218-03	LHSMW07_062420	Login	6/25/2020 11:55:20 AM	JRM	MET102
HS20061218-03	LHSMW07_062420	Login	6/25/2020 11:55:20 AM	JRM	Sub
HS20061218-03	LHSMW07_062420	Login	6/25/2020 11:55:20 AM	JRM	WET281
HS20061218-03	LHSMW07_062420	Login	6/25/2020 11:55:20 AM	JRM	VOA044
HS20061218-03	LHSMW07_062420	Login	6/25/2020 11:55:20 AM	JRM	Sub
HS20061218-03	LHSMW07_062420	Login	6/25/2020 11:55:20 AM	JRM	Sub
HS20061218-04	35AWW06_062420	Login	6/25/2020 11:55:20 AM	JRM	Sub
HS20061218-04	35AWW06_062420	Login	6/25/2020 11:55:20 AM	JRM	WET281
HS20061218-04	35AWW06_062420	Login	6/25/2020 11:55:20 AM	JRM	VOA044
HS20061218-04	35AWW06_062420	Login	6/25/2020 11:55:20 AM	JRM	Sub
HS20061218-04	35AWW06_062420	Login	6/25/2020 11:55:20 AM	JRM	Sub
HS20061218-06	35AWW22_062420	Login	6/25/2020 11:55:20 AM	JRM	VOA044
HS20061218-05	35AWW23_062420	Login	6/25/2020 11:56:27 AM	JML	Sub
HS20061218-05	35AWW23_062420	Login	6/25/2020 11:56:27 AM	JML	Sub
HS20061218-05	35AWW23_062420	Login	6/25/2020 11:56:27 AM	JML	WET301
HS20061218-05	35AWW23_062420	Login	6/25/2020 11:56:27 AM	JML	VOA224
HS20061218-05	35AWW23_062420	Login	6/25/2020 11:56:27 AM	JML	Sub
HS20061218-05	35AWW23_062420	Login	6/25/2020 11:56:27 AM	JML	Sub
HS20061218-07	Trip Blank	Login	6/25/2020 11:56:40 AM	JML	VOA224

ALS Houston, US Date: 17-Jul-20

Sample Receipt Checklist

Work Order ID: HS20061218 **Date/Time Received:** **25-Jun-2020 09:00**

Client Name: Bhate Environmental **Received by:** **Jared R. Makan**

Completed By:	/S/ Paresh M. Giga	25-Jun-2020 12:05	**Reviewed by:**	/S/ RJ Modashia	25-Jun-2020 14:56
	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):	1.8°C/1.8°C UC/C	IR25
Cooler(s)/Kit(s):	43244	
Date/Time sample(s) sent to storage:	6/25/2020 12:05	

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:

01003319

bhate

1608 13th Avenue South, Suite 300
Birmingham Alabama 35205
Tel: 205-918-4000
Fax: 205-918-4050

Chain of Custody and Analytical Request

Page: ____ of ____

Project/Phase No: NWO1312.0150

COC Number(1): ____

LIMS Number: ____

Facility/Base I.D.: LHAAP

Project/Site Name: LHAAP / Site 58

Client Name:

Collected by: Scott Beesinger

Sample Analysis Requested (5) / Quality Assurance Samples (6)

Field Sample ID (30 Characters Max)	Date Collected (dd-mmm-yyyy)	Time Collected (Military) (hhmm)	Sample Depth (beginning - ending)	SA Code (2)	Sample Number (3)	Sample Matrix (4)	Number of containers	VOC	MEE	TOC	Carbon Dioxide	Anions	ARSENIC					Ambient Blank Lot Control Number	Equipment Blank Lot Control Number	Trip Blank Lot Control Number	Cooler ID
35AWW19_062420	24 Jun 2020	0830	-	N		WG	11	X	X	X	X	X									
35AWW20-062420	24 Jun 2020	0925	-	N		WG	12	X	X	X	X	X	X								
LHSMW07_062420	24 Jun 2020	1015	-	N		WG	11	X	X	X	X	X									
35AWW06_062420	24 Jun 2020	1105		N		WG	11	X	X	X	X	X									
35AWW23_062420	24 Jun 2020	1200		N		WG	11	X	X	X	X	X									
35AWW22_062420	24 Jun 2020	1305	-	N		WG	3	X													
TRIP BLANK	24 Jun 2020		-	TB		W	2	X													
			-																		
			-																		
			-																		
			-																		

HS20061218

Bhate Environmental Associates, Inc.

LHAAP-58

COMMENTS: ____

Custody Transfers Prior to Receipt by Laboratory

Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
1. Scott Beesinger	6/24/20	1430	1. NR	6-25-20	09:00
2.			2.		
3.			3.		

Sample Delivery Details / Laboratory Receipt

Delivered Directly to Lab: ____ Shipped ____ No.:

Method of Shipment: ____

Fed ____ Ex ____ Airbill ____ Number:

Analytical Lab: ALS 10450 Stancliff Rd. Suite 210 Houston, TX 77099 (281) 530-5656

ATTN: SONIA WEST Lab Recipient: Delivery Date/Time:

1.) Chain of Custody Number = date collected + custody number (e.g. 09-02-1999-01)

2.) Sample Type (SA) Codes: N = Normal Sample, TB = Trip Blank (-c) Sample, FD = Field Duplicate (-a) Samples, FR = Field Replicate (-b) Samples, EB = Equipment Blank (-d) Samples, MS = Matrix Spike, SD = Matrix Spike Duplicate, AB = Ambient Blank (-e)

3.) Sample Number: Unique sample number collected from a particular location per day. (e.g. Groundwater sample collected from MW-1 on 10/10/99 = 01, if sampled again on 10/10/99 = 02, etc.)

4.) Matrix Codes: GS = Soil Gas, WG = Groundwater, WS = Surface Water, SO = Soil, SE = Sediment, SL = Sludge, SS = Surface Soil Samples, WQ = Aqueous Blank Samples (trip, equipment, ambient, etc), SQ = Soil Blanks

5.) Sample Analysis Requested: Analytical method requested and number of containers provided for each.

6.) Quality assurance samples are assigned by date (ddmmyy) and the sample number associated with the sample (01, 02, etc) (e.g. Equipment blank collected in association with MW-1 on 10/10/99 will be designated 10109901 in the Equipment Blank Lot Control

Trip UK

4 [illegible] 1.8

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

43244

CUSTODY SEAL

Date: 6/24/20 Time: 1430
Name: Scott Beesinger
Company: Bhate

Seal Broken By: SM
Date: 06/25/20

43244

Must Deliver Next Business Day
Time and Tempature Sensitive!

43244

ORIGIN ID:SGRA (903) 930-8183
SCOTT BEESINER
BHATE ENVIRONMENTAL ASSOCIATES
1203-B EAST GRAND AVE. PMB202
MARSHALL, TX 75670
UNITED STATES US

SHIP DATE: 27NOV19
ACTWGT: 1.00 LB MAN
CAD: 300130/CAFE3211
DIMS: 26x14x14 IN

TO CLIENT SERVICES
ALS LABORATORY GROUP
10450 STANCLIFF ROAD
SUITE 210
HOUSTON TX 77099
(281) 530-5868
REF: LHAAP-58 - BD 68898 - RJ
RMA:

FedEx Express

FedEx TRK# 0221 1251 0292 3762

THU - 25 JUN 10:30A
PRIORITY OVERNIGHT

AB SGRA

77099
TX-US
IAH

ALS Environmental
ALS Group USA, Corp
1317 South 13th Avenue
Kelso, WA 98626
T : +1 360 577 7222
F : +1 360 636 1068
www.alsglobal.com

July 14, 2020

Analytical Report for Service Request No: K2005353

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

RE: HS20061218

Dear RJ,

Enclosed are the results of the sample(s) submitted to our laboratory June 26, 2020
For your reference, these analyses have been assigned our service request number **K2005353.**

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. All results are intended to be considered in their entirety, and ALS Group USA Corp. dba ALS Environmental (ALS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please contact me if you have any questions. My extension is 3350. You may also contact me via email at Kelley.Lovejoy@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

for Kelley Lovejoy
Project Manager

RIGHT SOLUTIONS | RIGHT PARTNER

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1317 South 13th Avenue
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Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LOD	Limit of Detection
LOQ	Limit of Quantitation
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Inorganic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
E	The result is an estimate amount because the value exceeded the instrument calibration range.
J	The result is an estimated value.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.
H	The holding time for this test is immediately following sample collection. The samples were analyzed as soon as possible after receipt by the laboratory.

Metals Data Qualifiers

#	The control limit criteria is not applicable. See case narrative.
J	The result is an estimated value.
E	The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
M	The duplicate injection precision was not met.
N	The Matrix Spike sample recovery is not within control limits. See case narrative.
S	The reported value was determined by the Method of Standard Additions (MSA).
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
W	The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
+	The correlation coefficient for the MSA is less than 0.995.
Q	See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
A	A tentatively identified compound, a suspected aldol-condensation product.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
C	The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
D	The reported result is from a dilution.
E	The result is an estimated value.
J	The result is an estimated value.
N	The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
P	The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

F	The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
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.
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.
O	The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
Y	The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
Z	The chromatographic fingerprint does not resemble a petroleum product.

ALS Group USA Corp. dba ALS Environmental (ALS) - Kelso
State Certifications, Accreditations, and Licenses

Agency	Web Site	Number
Alaska DEH	http://dec.alaska.gov/eh/lab/cs/csapproval.htm	UST-040
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0339
Arkansas - DEQ	http://www.adeq.state.ar.us/techsvs/labcert.htm	88-0637
California DHS (ELAP)	http://www.cdph.ca.gov/certlic/labs/Pages/ELAP.aspx	2795
DOD ELAP	http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm	L16-58-R4
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Hawaii DOH	http://health.hawaii.gov/	-
ISO 17025	http://www.pjlabs.com/	L16-57
Louisiana DEQ	http://www.deq.louisiana.gov/page/la-lab-accreditation	03016
Maine DHS	http://www.maine.gov/dhhs/	WA01276
Minnesota DOH	http://www.health.state.mn.us/accreditation	053-999-457
Nevada DEP	http://ndep.nv.gov/bsdw/labservice.htm	WA01276
New Jersey DEP	http://www.nj.gov/dep/enforcement/oqa.html	WA005
New York - DOH	https://www.wadsworth.org/regulatory/elap	12060
North Carolina DEQ	https://deq.nc.gov/about/divisions/water-resources/water-resources-data/water-sciences-home-page/laboratory-certification-branch/non-field-lab-certification	605
Oklahoma DEQ	http://www.deq.state.ok.us/CSDnew/labcert.htm	9801
Oregon – DEQ (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	WA100010
South Carolina DHEC	http://www.scdhec.gov/environment/EnvironmentalLabCertification/	61002
Texas CEQ	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704427
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C544
Wyoming (EPA Region 8)	https://www.epa.gov/region8-waterops/epa-region-8-certified-drinking-water-	-
Kelso Laboratory Website	www.alsglobal.com	NA

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. A complete listing of specific NELAP-certified analytes, can be found in the certification section at www.ALSGlobal.com or at the accreditation bodies web site.
Please refer to the certification and/or accreditation body's web site if samples are submitted for compliance purposes. The states highlighted above, require the analysis be listed on the state certification if used for compliance purposes and if the method/anlayte is offered by that state.

Case Narrative

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

1317 South 13th Ave, Kelso, WA 98626 | 1-360-577-7222 | www.alsglobal.com

Client: ALS Environmental - US
Project: HS20061218
Sample Matrix: Ground Water

Service Request: K2005353
Date Received: 06/26/2020

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples for the Tier level IV requested by the client.

Sample Receipt:

Five ground water samples were received for analysis at ALS Environmental on 06/26/2020. Any discrepancies upon initial sample inspection are annotated on the sample receipt and preservation form included within this report. The samples were stored at minimum in accordance with the analytical method requirements.

General Chemistry:

No significant anomalies were noted with this analysis.

Approved by Noe D. Dan Date 07/14/2020

Chain of Custody

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

K2005353

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: **Texas** **COC ID:** **14190**

SUBCONTRACT TO:

ALS Environmental Kelso
1317 S. 13th Avenue
Kelso, WA 98626

Phone: +1 360 501 3312

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:	HS20061218
TSR:	Danielle Winnings

	LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
	ANALYSIS REQUESTED			DUE DATE
1.	**HS20061218-01**	**35AWW19_062420**	**Groundwater**	**24 Jun 2020 08:30**
	TOC Analysis for DOD Level IV/Excel EDD			06 Jul 2020
2.	**HS20061218-02**	**35AWW20_062420**	**Groundwater**	**24 Jun 2020 09:25**
	TOC Analysis for DOD Level IV/Excel EDD			06 Jul 2020
3.	**HS20061218-03**	**LHSMW07_062420**	**Groundwater**	**24 Jun 2020 10:15**
	TOC Analysis for DOD Level IV/Excel EDD			06 Jul 2020
4.	**HS20061218-04**	**35AWW06_062420**	**Groundwater**	**24 Jun 2020 11:05**
	TOC Analysis for DOD Level IV/Excel EDD			06 Jul 2020
5.	**HS20061218-05**	**35AWW23_062420**	**Groundwater**	**24 Jun 2020 12:00**
	TOC Analysis for DOD Level IV/Excel EDD			06 Jul 2020

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

QC Level: DOD IV (DoD Data Package)

Subcontract Chain of Custody

SAMPLING STATE: **Texas** **COC ID:** **14190**

Relinquished By: _____ Date/Time: 6/25/2020 1800

Received By: _____ Date/Time: 6/26/20 0930

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

01003331

PC KL

Cooler Receipt and Preservation Form

Client AIY HOUSTON Service Request *K20* 05353

Received: 6/12/20 Opened: 6/12/20 By: BR Unloaded: 6/12/20 By: BR

1. Samples were received via? *USPS* (*Fed Ex*) *UPS* *DHL* *PDX* *Courier* *Hand Delivered*
2. Samples were received in: (circle) (*Cooler*) *Box* *Envelope* *Other* _____ *NA*
3. Were custody seals on coolers? NA (Y) N If yes, how many and where? 2 front
   If present, were custody seals intact? (Y) N If present, were they signed and dated? (Y) N

Temp Blank	Sample 1	Sample 2	Sample 3	Sample 4	IR GUN	Cooler / COC ID (NA)	Tracking Number NA	Filed
2.1	—	—	—	—	IR02		1891 8877 9056	

4. Packing material: *Inserts* (*Baggies*) *Bubble Wrap* *Gel Packs* (*Wet Ice*) *Dry Ice* *Sleeves* _____
5. Were custody papers properly filled out (ink, signed, etc.)? NA (Y) N
6. Were samples received in good condition (temperature, unbroken)? *Indicate in the table below.* NA (Y) N
   If applicable, tissue samples were received: *Frozen* *Partially Thawed* *Thawed*
7. Were all sample labels complete (i.e analysis, preservation, etc.)? NA (Y) N
8. Did all sample labels and tags agree with custody papers? *Indicate major discrepancies in the table on page 2.* NA (Y) N
9. Were appropriate bottles/containers and volumes received for the tests indicated? NA (Y) N
10. Were the pH-preserved bottles (*see SMO GEN SOP*) received at the appropriate pH? *Indicate in the table below* NA (Y) N
11. Were VOA vials received without headspace? *Indicate in the table below.* (NA) Y N
12. Was C12/Res negative? (NA) Y N

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count Bottle Type	Out of Temp	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

Notes, Discrepancies, & Resolutions: _____

General Chemistry

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	K2005353
Project:	HS20061218	**Date Collected:**	06/24/20
Sample Matrix:	Ground Water	**Date Received:**	06/26/20
Analysis Method:	SM 5310 C	**Units:**	mg/L
Prep Method:	None	**Basis:**	NA

Carbon, Total Organic

Sample Name	Lab Code	Result	LOQ	LOD	MDL	Dil.	Date Analyzed	Q
35AWW19_062420	K2005353-001	**1.75**	0.50	0.20	0.07	1	07/02/20 10:33	
35AWW20_062420	K2005353-002	**13.9**	0.50	0.20	0.07	1	07/02/20 10:33	
LHSMW07_062420	K2005353-003	**3.00**	0.50	0.20	0.07	1	07/02/20 10:33	
35AWW06_062420	K2005353-004	**10.2**	0.50	0.20	0.07	1	07/02/20 10:33	
35AWW23_062420	K2005353-005	**849**	5.0	2.0	0.7	10	07/02/20 10:33	
Method Blank	K2005353-MB	ND U	0.50	0.20	0.07	1	07/02/20 10:33	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	K2005353
Project:	HS20061218	**Date Analyzed:**	07/02/20
Sample Matrix:	Ground Water	**Date Extracted:**	NA

Lab Control Sample Summary
Carbon, Total Organic

Analysis Method:	SM 5310 C	**Units:**	mg/L
Prep Method:	None	**Basis:**	NA
		Analysis Lot:	685526

Sample Name	Lab Code	Result	Spike Amount	% Rec	% Rec Limits
Lab Control Sample	K2005353-LCS	82.8	87.5	95	83-117

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US **Service Request:** K2005353
Project: HS20061218

Continuing Calibration Verification (CCV) Summary

Carbon, Total Organic

Analysis Method: SM 5310 C **Units:** mg/L

	Analysis Lot	Lab Code	Date Analyzed	True Value	Measured Value	Percent Recovery	Acceptance Limits
CCV1	685526	KQ2009226-06	07/02/20 10:33	25.0	26.1	105	90-110
CCV2	685526	KQ2009226-07	07/02/20 10:33	25.0	25.1	101	90-110
CCV3	685526	KQ2009226-08	07/02/20 10:33	25.0	25.3	101	90-110
CCV4	685526	KQ2009226-09	07/02/20 10:33	25.0	24.9	100	90-110

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US **Service Request:**K2005353
Project: HS20061218

Continuing Calibration Blank (CCB) Summary
Carbon, Total Organic

Analysis Method: SM 5310 C **Units:**mg/L

	Analysis Lot	Lab Code	Date Analyzed	LOQ	LOD	MDL	Result	Q
CCB1	685526	KQ2009226-10	07/02/20 10:33	0.50	0.20	0.07	0.45	J
CCB2	685526	KQ2009226-11	07/02/20 10:33	0.50	0.20	0.07	ND	U
CCB3	685526	KQ2009226-12	07/02/20 10:33	0.50	0.20	0.07	ND	U
CCB4	685526	KQ2009226-13	07/02/20 10:33	0.50	0.20	0.07	ND	U

Raw Data

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
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General Chemistry

ALS Environmental—Kelso Laboratory
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www.alsglobal.com

Work Request # Original (5353) 5357 5466 5295 5204 | 5480 5020 5459

Tier: IV II I IV I II II II

5174 5453 5455
II II II

Date Analyzed: 7/2/20

Analyst: MK

Run # 685526 / 686066

Analysis: TOC / DOC

DATA QUALITY REPORT
INORGANICS

Explain any "no" responses to questions below, and any corrective actions in the comments section below.

1.	Is the method name and number correct and appropriate?	yes/no/NA
2.	Holding times met for all analyses and for all samples?	yes/no/NA
3.	Are calculations correct?	yes/no/NA
4.	Is the reporting basis correct? (Dry Weight)	yes/no/NA
5.	All quality control criteria met?	yes/no
6.	Is the calibration curve correlation coefficient ≥ 0.995?	yes/no/NA
7.	MBs, CCVs, CCBs, LCSs, Dups, and Spikes, analyzed at proper frequency?	yes/no/NA
8.	Are ICVs, CCVs, and CCBs all within acceptance limits?	yes/no/NA
9.	Are results for methods blanks all ND?	yes/no/NA
10.	Are all QC samples within acceptance criteria? (LCS % rec, MS/DMS % rec, DUP or MS/DMS RPDs, etc.)	yes/no/NA
11.	Are all exceptions explained?	yes/no/NA
12.	Have all applicable service requests been reviewed?	yes/no/NA
13.	Are all samples labeled correctly?	yes/no/NA
14.	Have all instructions on the service request been followed? (e.g. Special MRLs, QC on a specific sample, Form V)	yes/no/NA
15.	Are detection limits and units reported correctly?	yes/no/NA
16.	Is the unused space on the benchsheet crossed out?	yes/no/NA
17.	Was analysis turned in by the due date? (n-2) (If not record SR#)	yes/no/NA

COMMENTS:
686066 - LCS is low 82%
5480-1 Dup 11% < 5x MRL

Final Approved by: _____ Date: 7/10/20

DQREPORT

Analytical Results Summary

Instrument Name: K-TOC-03 **Analyst:** MKANALY **Analysis Lot:** 685526 **Method/Testcode:** SM 5310 C/TOC T

Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	MDL	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier
K2005204-002	Carbon, Total Organic	N/A		Water	2.01 mg/L	10 mL	2.01 mg/L	1	0.07	0.50			7/2/20 10:33:00	N	I
K2005295-002	Carbon, Total Organic	N/A		Ground Water	69.82 mg/L	10 mL	69.8 mg/L	1	0.07	0.50			7/2/20 10:33:00	N	IV
K2005295-003	Carbon, Total Organic	N/A		Ground Water	207.90 mg/L	10 mL	208 mg/L	1	0.07	0.50			7/2/20 10:33:00	N	IV
K2005353-001	Carbon, Total Organic	N/A		Ground Water	1.75 mg/L	10 mL	1.75 mg/L	1	0.07	0.50			7/2/20 10:33:00	N	IV
K2005353-002	Carbon, Total Organic	N/A		Ground Water	13.87 mg/L	10 mL	13.9 mg/L	1	0.07	0.50			7/2/20 10:33:00	N	IV
K2005353-003	Carbon, Total Organic	N/A		Ground Water	3.00 mg/L	10 mL	3.00 mg/L	1	0.07	0.50			7/2/20 10:33:00	N	IV
K2005353-004	Carbon, Total Organic	N/A		Ground Water	10.18 mg/L	10 mL	10.2 mg/L	1	0.07	0.50			7/2/20 10:33:00	N	IV
K2005353-005	Carbon, Total Organic	N/A		Ground Water	84.93 mg/L	10 mL	849 mg/L	10	0.7	5.0			7/2/20 10:33:00	N	IV
K2005357-001	Carbon, Total Organic	N/A		Water	2.03 mg/L	10 mL	2.03 mg/L	1	0.07	0.50			7/2/20 10:33:00	N	II
K2005466-001	Carbon, Total Organic	N/A		Water	3.82 mg/L	10 mL	3.82 mg/L	1	0.07	0.50			7/2/20 10:33:00	N	I
K2005466-002	Carbon, Total Organic	N/A		Water	2.78 mg/L	10 mL	2.78 mg/L	1	0.07	0.50			7/2/20 10:33:00	N	I
K2005466-003	Carbon, Total Organic	N/A		Water	2.75 mg/L	10 mL	2.75 mg/L	1	0.07	0.50			7/2/20 10:33:00	N	I
K2005466-004	Carbon, Total Organic	N/A		Water	2.80 mg/L	10 mL	2.80 mg/L	1	0.07	0.50			7/2/20 10:33:00	N	I
K2005466-005	Carbon, Total Organic	N/A		Water	2.62 mg/L	10 mL	2.62 mg/L	1	0.07	0.50			7/2/20 10:33:00	N	I
KQ2009226-02	Carbon, Total Organic	MS	K2005357-001	Water	29.02 mg/L	10 mL	29.0 mg/L	1	0.07	0.50	108		7/2/20 10:33:00	N	II
KQ2009226-03	Carbon, Total Organic	DUP	K2005357-001	Water	1.95 mg/L	10 mL	1.95 mg/L	1	0.07	0.50		4	7/2/20 10:33:00	N	II
KQ2009226-04	Carbon, Total Organic	MB		Ground Water	0.02 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			7/2/20 10:33:00	N	IV
KQ2009226-05	Carbon, Total Organic	LCS		Ground Water	20.70 mg/L	10 mL	82.8 mg/L	4	0.3	2.0	95		7/2/20 10:33:00	N	IV
KQ2009226-06	Carbon, Total Organic	CCV		Water	26.14 mg/L	10 mL	26.1 mg/L	1					7/2/20 10:33:00	N	I
KQ2009226-07	Carbon, Total Organic	CCV		Water	25.14 mg/L	10 mL	25.1 mg/L	1					7/2/20 10:33:00	N	I
KQ2009226-08	Carbon, Total Organic	CCV		Water	25.28 mg/L	10 mL	25.3 mg/L	1					7/2/20 10:33:00	N	I
KQ2009226-09	Carbon, Total Organic	CCV		Water	24.90 mg/L	10 mL	24.9 mg/L	1					7/2/20 10:33:00	N	I
KQ2009226-10	Carbon, Total Organic	CCB		Water	0.45 mg/L	10 mL	0.45 mg/L J	1	0.07	0.50			7/2/20 10:33:00	N	I
KQ2009226-11	Carbon, Total Organic	CCB		Water	-0.02 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			7/2/20 10:33:00	N	I
KQ2009226-12	Carbon, Total Organic	CCB		Water	-0.13 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			7/2/20 10:33:00	N	I
KQ2009226-13	Carbon, Total Organic	CCB		Water	-0.34 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			7/2/20 10:33:00	N	I

# indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

Analytical Results Summary

Instrument Name: K-TOC-03 **Analyst:** MKANALY **Analysis Lot:** 686666 **Method/Testcode:** SM 5310 C/TOC D

Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	MDL	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier
K2005020-002	Carbon, Dissolved Organic (DOC)	N/A		Water	5.25 mg/L	10 mL	5.25 mg/L	1	0.07	0.50			7/2/20 10:30:00	N	II
K2005020-004	Carbon, Dissolved Organic (DOC)	N/A		Water	2.56 mg/L	10 mL	2.56 mg/L	1	0.07	0.50			7/2/20 10:30:00	N	II
K2005174-001	Carbon, Dissolved Organic (DOC)	N/A		Water	8.90 mg/L	10 mL	890 mg/L	100	7	50			7/2/20 10:30:00	N	II
K2005453-001	Carbon, Dissolved Organic (DOC)	N/A		Water	4901.30 mg/L	10 mL	490000 mg/L	100	7	50			7/2/20 10:30:00	N	II
K2005455-001	Carbon, Dissolved Organic (DOC)	N/A		Water	705.71 mg/L	10 mL	70600 mg/L	100	7	50			7/2/20 10:30:00	N	II
K2005459-001	Carbon, Dissolved Organic (DOC)	N/A		Effluent	0.98 mg/L	10 mL	0.98 mg/L	1	0.07	0.50			7/2/20 10:30:00	N	II
K2005459-002	Carbon, Dissolved Organic (DOC)	N/A		Water	0.98 mg/L	10 mL	0.98 mg/L	1	0.07	0.50			7/2/20 10:30:00	N	II
K2005480-001	Carbon, Total Organic	N/A		Water	0.48 mg/L	10 mL	0.48 mg/L J	1	0.07	0.50			7/2/20 10:30:00	N	II
K2005480-002	Carbon, Total Organic	N/A		Water	0.03 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			7/2/20 10:30:00	N	II
K2005480-003	Carbon, Total Organic	N/A		Water	0.08 mg/L	10 mL	0.08 mg/L J	1	0.07	0.50			7/2/20 10:30:00	N	II
K2005480-004	Carbon, Total Organic	N/A		Water	0.04 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			7/2/20 10:30:00	N	II
K2005480-005	Carbon, Total Organic	N/A		Water	-0.06 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			7/2/20 10:30:00	N	II
K2005480-006	Carbon, Total Organic	N/A		Water	-0.34 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			7/2/20 10:30:00	N	II
K2005480-007	Carbon, Total Organic	N/A		Water	0.37 mg/L	10 mL	0.37 mg/L J	1	0.07	0.50			7/2/20 10:30:00	N	II
K2005480-008	Carbon, Total Organic	N/A		Water	-0.28 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			7/2/20 10:30:00	N	II
KQ2009240-01	Carbon, Dissolved Organic (DOC)	DUP	K2005020-002	Water	5.39 mg/L	10 mL	5.39 mg/L	1	0.07	0.50		3	7/2/20 10:30:00	N	II
KQ2009240-02	Carbon, Dissolved Organic (DOC)	MS	K2005020-002	Water	31.99 mg/L	10 mL	32.0 mg/L	1	0.07	0.50	107		7/2/20 10:30:00	N	II
KQ2009240-03	Carbon, Total Organic	DUP	K2005480-001	Water	0.54 mg/L	10 mL	0.54 mg/L	1	0.07	0.50		11*	7/2/20 10:30:00	N	II
KQ2009240-04	Carbon, Total Organic	MS	K2005480-001	Water	28.68 mg/L	10 mL	28.7 mg/L	1	0.07	0.50	113		7/2/20 10:30:00	N	II
KQ2009240-05	Carbon, Dissolved Organic (DOC)	CCV		Water	25.28 mg/L	10 mL	25.3 mg/L	1					7/2/20 10:30:00	N	II
KQ2009240-05	Carbon, Total Organic	CCV		Water	25.28 mg/L	10 mL	25.3 mg/L	1					7/2/20 10:30:00	N	II
KQ2009240-06	Carbon, Dissolved Organic (DOC)	CCV		Water	24.90 mg/L	10 mL	24.9 mg/L	1					7/2/20 10:30:00	N	II
KQ2009240-06	Carbon, Total Organic	CCV		Water	24.90 mg/L	10 mL	24.9 mg/L	1					7/2/20 10:30:00	N	II
KQ2009240-07	Carbon, Dissolved Organic (DOC)	CCV		Water	24.90 mg/L	10 mL	24.9 mg/L	1					7/2/20 10:30:00	N	II
KQ2009240-07	Carbon, Total Organic	CCV		Water	24.90 mg/L	10 mL	24.9 mg/L	1					7/2/20 10:30:00	N	II
KQ2009240-08	Carbon, Dissolved Organic (DOC)	CCV		Water	24.53 mg/L	10 mL	24.5 mg/L	1					7/2/20 10:30:00	N	II
KQ2009240-08	Carbon, Total Organic	CCV		Water	24.53 mg/L	10 mL	24.5 mg/L	1					7/2/20 10:30:00	N	II
KQ2009240-09	Carbon, Dissolved Organic (DOC)	CCB		Water	-0.13 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			7/2/20 10:30:00	N	II
KQ2009240-09	Carbon, Total Organic	CCB		Water	-0.13 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			7/2/20 10:30:00	N	II

# indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

Analytical Results Summary

Instrument Name: K-TOC-03 **Analyst:** MKANALY **Analysis Lot:** 686666 **Method/Testcode:** SM 5310 C/TOC D

Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	MDL	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier
KQ2009240-10	Carbon, Dissolved Organic (DOC)	CCB		Water	-0.34 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			7/2/20 10:30:00	N	II
KQ2009240-10	Carbon, Total Organic	CCB		Water	-0.34 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			7/2/20 10:30:00	N	II
KQ2009240-11	Carbon, Dissolved Organic (DOC)	CCB		Water	-0.34 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			7/2/20 10:30:00	N	II
KQ2009240-11	Carbon, Total Organic	CCB		Water	-0.34 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			7/2/20 10:30:00	N	II
KQ2009240-12	Carbon, Dissolved Organic (DOC)	CCB		Water	-0.34 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			7/2/20 10:30:00	N	II
KQ2009240-12	Carbon, Total Organic	CCB		Water	-0.34 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			7/2/20 10:30:00	N	II
KQ2009240-13	Carbon, Dissolved Organic (DOC)	MB		Water	-0.34 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			7/2/20 10:30:00	N	II
KQ2009240-13	Carbon, Total Organic	MB		Water	-0.34 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			7/2/20 10:30:00	N	II
KQ2009240-14	Carbon, Dissolved Organic (DOC)	LCS		Water	17.97 mg/L	10 mL	18.0 mg/L	1	0.07	0.50	82*		7/2/20 10:30:00	N	II
KQ2009240-14	Carbon, Total Organic	LCS		Water	17.97 mg/L	10 mL	18.0 mg/L	1	0.07	0.50	82*		7/2/20 10:30:00	N	II

# indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

ALS ENVIRONMENTAL

Matrix: WATER

Analysis: Total Organic Carbon (WATER) Method:Oxidation EPA 415.1/9060/5310C

Printout	Sample #	Dil. Factor	Solution Conc.,mg/L	Blank Correction, mg/L	Net mg/L	TOC mg/L	Reported TOC mg/L	
CBA	RB	1			0.0000	0	<0.5	
2	CCV	1	26.484	0.3393	26.1444	26.14435	26.1	7/2/2020
3	CCB	1	0.786	0.3393	0.4470	0.44695	<0.5	7/2/2020
4	MB1	1	0.354	0.3393	0.0150	0.01495	<0.5	7/2/2020
5	LCS	1	21.061	0.3393	20.7215	20.72145	20.7	7/2/2020
6	5353-1	1	2.091	0.3393	1.7522	1.75215	1.75	7/2/2020
7	5353-2	1	14.207	0.3393	13.8678	13.86775	13.9	7/2/2020
8	5353-3	1	3.339	0.3393	3.0001	3.00005	3	7/2/2020
9	5353-4	1	10.524	0.3393	10.1847	10.18465	10.18	7/2/2020
10	5353-5	10	8.832	0.3393	8.4932	84.9315	84.93	7/2/2020
11	5357-1	1	2.367	0.3393	2.0278	2.02775	2.0	7/2/2020
12	5357-1D	1	2.291	0.3393	1.9514	1.95135	1.95	7/2/2020
13	ccv	1	25.475	0.3393	25.1361	25.13605	25.14	7/2/2020
14	ccb	1	0.324	0.3393	-0.0150	-0.01495	<0.5	7/2/2020
15	5357-1MS	1	29.360	0.3393	29.0208	29.02075	29.0	7/2/2020
16	5466-1	1	4.155	0.3393	3.8160	3.81595	3.8	7/2/2020
17	5466-2	1	3.121	0.3393	2.7822	2.78215	2.78	7/2/2020
18	5466-3	1	3.092	0.3393	2.7527	2.75265	2.8	7/2/2020
19	5466-4	1	3.141	0.3393	2.8021	2.80205	2.8	7/2/2020
20	5466-5	1	2.963	0.3393	2.6233	2.62325	2.62	7/2/2020
21	5527-1	1	2.354	0.3393	2.0148	2.01475	2.01	7/2/2020
22	LCS2	1	18.306	0.3393	17.9672	17.96715	18.0	7/2/2020
23	RB	1	0.000	0.3393	-0.3393	-0.33925	<0.5	7/2/2020
24	IB	1	0.000	0.3393	-0.3393	-0.33925	<0.5	7/2/2020
25	CCV	1	25.621	0.3393	25.2818	25.28175	25.28	7/2/2020

ICAL Date 06/13/20 ICAL ID#:11-GEN-05-51A

LCS =21.9 ppm Lot (REF# 19-GEN-08-24F)

CCV = 25.0 ppm (Ref.#13-GEN-8-23F)

Spike: 0.05 ml of 5000 ppm stock ----> 10.0 ml =25.0 ppm x Dilution Factor (Ref.# 13-GEN-08-15B)

date time

Analyzed By:	Date Analyzed
Reviewed By:	Date Reviewed 7/10/20

Revision 1, 2010 R:\WET\ANALYSES\TOC\TEMPLATE\TOCwaterLIMS

ALS ENVIRONMENTAL

Matrix: WATER

Analysis: Total Organic Carbon (WATER) Method:Oxidation EPA 415.1/9060/5310C

Printout	Sample #	Dil. Factor	Solution Conc.,mg/L	Blank Correction, mg/L	Net mg/L	TOC mg/L	Reported TOC mg/L	
26	CCB	1	0.2114	0.3393	-0.1279	-0.12785	<0.5	7/2/2020
27	MB	1	0.0000	0.3393	-0.3393	-0.33925	<0.5	7/2/2020
28	LCS	1	17.4088	0.3393	17.0696	17.06955	17.1	7/2/2020
29	ib	1	0.0000	0.3393	-0.3393	-0.33925	<0.5	7/2/2020
30	ib	1	0.0000	0.3393	-0.3393	-0.33925	<0.5	7/2/2020
31	5295-2	10	7.3216	0.3393	6.9824	69.8235	69.8	7/2/2020
32	5295-3	20	10.7357	0.3393	10.3965	207.929	207.9	7/2/2020
33	5204-2	1	2.3509	0.3393	2.0117	2.01165	2.0	7/2/2020
34	5480-1	1	0.8224	0.3393	0.4832	0.48315	<0.5	7/2/2020
35	5480-1D	1	0.8790	0.3393	0.5398	0.53975	0.5	7/2/2020
36	5480-1MS	1	29.0198	0.3393	28.6806	28.68055	28.7	7/2/2020
37	CCV	1	25.2427	0.3393	24.9035	24.90345	24.9	7/2/2020
38	CCB	1	0.0000	0.3393	-0.3393	-0.33925	<0.5	7/2/2020
39	5480-2	1	0.3701	0.3393	0.0309	0.03085	<0.5	7/2/2020
40	5480-3	1	0.4217	0.3393	0.0825	0.08245	<0.5	7/2/2020
41	5480-4	1	0.3797	0.3393	0.0405	0.04045	<0.5	7/2/2020
42	5480-5	1	0.2763	0.3393	-0.0630	-0.063	<0.5	7/2/2020
43	5480-6	1	0.0000	0.3393	-0.3393	-0.33925	<0.5	7/2/2020
44	5480-7	1	0.7055	0.3393	0.3663	0.36625	<0.5	7/2/2020
45	5480-8	1	0.0620	0.3393	-0.2773	-0.27725	<0.5	7/2/2020
46	5020-2	1	5.5916	0.3393	5.2524	5.25235	5.3	7/2/2020
47	5020-2D	1	5.7299	0.3393	5.3907	5.39065	5.4	7/2/2020
48	5020-2MS	1	32.3279	0.3393	31.9887	31.98865	32.0	7/2/2020
49	CCV	1	25.2354	0.3393	24.8962	24.89615	24.9	7/2/2020
50	CCB	1	0.0000	0.3393	-0.3393	-0.33925	<0.5	7/2/2020

Analyzed By:	Date Analyzed
Reviewed By:	Date Reviewed 7/10/20

ALS ENVIRONMENTAL

Matrix: WATER

Analysis: Total Organic Carbon (WATER) Method:Oxidation EPA 415.1/9060/5310C

Printout	Sample #	Dil. Factor	Solution Conc.,mg/L	Blank Correction, mg/L	Net mg/L	TOC mg/L	Reported TOC mg/L	
51	MB	1	0.0000	0.3393	-0.3393	-0.33925	<0.5	7/2/2020
52	LCS	1	13.9973	0.3393	13.6581	13.65805	13.7	7/2/2020
53	5020-4	1	2.9015	0.3393	2.5623	2.56225	2.6	7/2/2020
54	5459-1	1	1.3180	0.3393	0.9788	0.97875	1.0	7/2/2020
55	5459-2	1	1.3232	0.3393	0.9840	0.98395	1.0	7/2/2020
56	5174-1	100	8.9021	0.3393	8.5629	856.285	856.3	7/2/2020
57	5453-1	100	49.3522	0.3393	49.0130	4901.295	4901.3	7/2/2020
58	5455-1	100	7.3963	0.3393	7.0571	705.705	705.7	7/2/2020
59	RB	1	0.0000	0.3393	-0.3393	-0.33925	<0.5	7/2/2020
60	RB	1	0.0000	0.3393	-0.3393	-0.33925	<0.5	7/2/2020
61	CCV	1	24.8697	0.3393	24.5305	24.53045	24.5	7/2/2020
62	CCB	1	0.0000	0.3393	-0.3393	-0.33925	<0.5	7/2/2020
63		1		0.3393	-0.3393	-0.33925	<0.5	7/2/2020
64		1		0.3393	-0.3393	-0.33925	<0.5	7/2/2020
65		1		0.0000	0.0000	0	<0.5	7/2/2020
66		1		0.0000	0.0000	0	<0.5	7/2/2020
67		1		0.0000	0.0000	0	<0.5	7/2/2020
68		1		0.0000	0.0000	0	<0.5	7/2/2020
69		1		0.0000	0.0000	0	<0.5	7/2/2020
70		1		0.0000	0.0000	0	<0.5	7/2/2020
71		1		0.0000	0.0000	0	<0.5	7/2/2020
72		1		0.0000	0.0000	0	<0.5	7/2/2020
73		1		0.0000	0.0000	0	<0.5	7/2/2020
74		1		0.0000	0.0000	0	<0.5	7/2/2020
75		1		0.0000	0.0000	0	<0.5	7/2/2020

Analyzed By:	Date Analyzed
Reviewed By:	Date Reviewed 7/10/20

ALS ENVIRONMENTAL

0 Carbon
0 Carbon

0.736	0.736			OBSERVATIONS	5	0.7356
0.786				STD Deviation	0.26042	ABOVE
0.354	0.354	0.354	0.354	AVERAGE	0.48234	0.3542
0.324	0.324	0.324	0.324	UCL	0.74276	0.3243
0.211				LCL	0.22192	BELOW
						BELOW
						BELOW
				OBSERVATIONS	3	BELOW
				STD Deviation	0.22932	BELOW
				AVERAGE	0.47137	BELOW
				UCL	0.70069	BELOW
				LCL	0.24205	BELOW
						BELOW
						BELOW
				OBSERVATIONS	2	BELOW
				STD Deviation	0.02114	BELOW
				AVERAGE	0.33925	BELOW
				UCL	0.36039	BELOW
				LCL	0.31811	BELOW
						BELOW
						BELOW
				OBSERVATIONS	2	BELOW
				STD Deviation	0.02990	BELOW
				AVERAGE	0.33925	BELOW
						BELOW
						BELOW
						BELOW
						BELOW
						BELOW
						BELOW

685526

Schedule: 070220

Version: 7
Instrument: Fusion1
Last Saved by: Fusion1 (Fusion1)
Last Saved on: 2020/07/02 17:58 - Thursday

Position	Sample Type	Sample ID	Method ID (Calibration ID)	Reps	Use	State
(Clean)	Clean	Clean		1	True	Ready
(Clean)	Clean	Clean		1	True	Ready
(Clean)	Clean	Clean		1	True	Ready
(Blank)	Blank	Reagent/Acid Blank		1	True	Ready
D	Sample	RB	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
B	Check Standard	[TOC] CCV 25 ppm [25 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
D	Check Standard	[TOC] CCB [0 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
1	Sample	MB1	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
C	Check Standard	[TOC] LCS [24.0 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
2	Sample	ICS	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
3	Sample	K2005353-001	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
4	Sample	K2005353-002	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
5	Sample	K2005353-003	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
6	Sample	K2005353-004	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
7	Sample	K2005353-005 10X	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
8	Sample	K2005357-001	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
9	Sample	K2005357-001D	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
B	Check Standard	[TOC] CCV 25 ppm [25 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
D	Check Standard	[TOC] CCB [0 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
10	Sample	K2005357-001MS	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
11	Sample	K2005466-001	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
12	Sample	K2005466-002	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
13	Sample	K2005466-003	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
14	Sample	K2005466-004	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
15	Sample	K2005466-005	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
16	Sample	K2005527-001	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
C	Check Standard	[TOC] LCS [25.0 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
18	Sample	IB	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
19	Sample	RB	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
B	Check Standard	[TOC] CCV 25 ppm [25 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
D	Check Standard	[TOC] CCB [0 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
20	Sample	MB2	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
C	Check Standard	[TOC] LCS [24.0 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
21	Sample	~~K2005375-009~~ IB	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
22	Sample	~~K2005375-010~~ IB	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
23	Sample	K2005295-002 10X	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
24	Sample	K2005295-003 20X	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
25	Sample	K2005204-002	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
26	Sample	K2005480-001	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
27	Sample	K2005480-001DUP	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
28	Sample	K2005480-001MS	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
B	Check Standard	[TOC] CCV 25 ppm [25 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
D	Check Standard	[TOC] CCB [0 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
29	Sample	K2005480-002	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
30	Sample	K2005480-003	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
31	Sample	K2005480-004	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
32	Sample	K2005480-005	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
33	Sample	K2005480-006	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
34	Sample	K2005480-007	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
35	Sample	K2005480-008	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
36	Sample	K2005020-002 DOC	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
37	Sample	K2005020-002 DUP	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
38	Sample	K2005020-002 MS	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
B	Check Standard	[TOC] CCV 25 ppm [25 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready

Schedule: 070220

Position	Sample Type	Sample ID	Method ID (Calibration ID)	Reps	Use	State
D	Check Standard	[TOC] CCB [0 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
39	Sample	MB3	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
C	Check Standard	[TOC] LCS [25.0 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
40	Sample	K2005020-004 DOC	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
41	Sample	K2005459-001 DOC	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
42	Sample	K2005459-002 DOC	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
43	Sample	K2005174-001 100X	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
44	Sample	K2005453-001 100X	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
45	Sample	K2005453-001 100X	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
46	Sample	RB	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
47	Sample	RB	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
B	Check Standard	[TOC] CCV 25 ppm [25 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
D	Check Standard	[TOC] CCB [0 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
48	Sample		CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
49	Sample		CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
50	Sample		CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
51	Sample		CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
52	Sample		CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
53	Sample		CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
54	Sample		CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
55	Sample		CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
56	Sample		CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
57	Sample		CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
B	Check Standard	[TOC] CCV 25 ppm [25 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
D	Check Standard	[TOC] CCB [0 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
58	Sample	MB4	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
C	Check Standard	[TOC] LCS [25.0 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
59	Sample		CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
60	Sample		CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
61	Sample		CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
62	Sample		CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
63	Sample		CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
64	Sample		CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
65	Sample		CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
66	Sample		CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
B	Check Standard	[TOC] CCV 25 ppm [25 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
D	Check Standard	[TOC] CCB [0 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
67	Sample		CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
68	Sample		CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
69	Sample		CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
70	Sample		CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
71	Sample		CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
72	Sample		CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
73	Sample		CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
74	Sample		CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
75	Sample		CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
B	Check Standard	[TOC] CCV 25 ppm [25 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
D	Check Standard	[TOC] CCB [0 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
					False	

Fusion Report - 070220
Thursday, July 02, 2020 10:33 AM

(View - Reps, Unused Reps, Meta-Data, Signature, History)
Printed on 2020/07/06 08:18 - Monday

Report Summary Information

Company Location:	Gen Chem Lab		
Schedule Name:	070220	Engine Version:	1.1.5.1
Instrument Name:	Fusion1	Firmware Version:	1.2.0696
Report Version:	1 of 1	Connection:	RS232 COM1
Report Creation by Operators (schedule version):	Fusion1 (Fusion1) (v4) Fusion1 (Fusion1) (v5) Fusion1 (Fusion1) (v6) Fusion1 (Fusion1) (v7)		
Comment:			

Report Results

Sample Type: Clean — From Schedule Version 4

	Pos	Analysis Type	Sample ID	Start Time
◈	(clean)		Clean	2020/07/02 10:33

Rep #	Base Analysis Type	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	IC Clean	16.57	20.54	3.97	49.66	05:25
2	TC Clean	16.80	20.49	3.70	49.79	07:19
3	TC Clean	2.80	6.54	3.74	49.81	07:01
4	TC Clean	1.41	5.23	3.81	49.80	07:01

Sample Type: Clean — From Schedule Version 5

	Pos	Analysis Type	Sample ID	Start Time
◈	(clean)		Clean	2020/07/02 11:05

Rep #	Base Analysis Type	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	IC Clean	4.14	7.83	3.69	49.68	05:24
2	TC Clean	9.03	12.60	3.57	49.79	07:18
3	TC Clean	2.16	5.86	3.70	49.77	07:00

4	TC Clean	1.88	5.63	3.75	49.78	07:02

Sample Type: Clean — From Schedule Version 5

	Pos	Analysis Type	Sample ID	Start Time
◆	(clean)		Clean	2020/07/02 11:36

Rep #	Base Analysis Type	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	IC Clean	2.49	6.22	3.73	49.65	05:25
2	TC Clean	7.09	10.67	3.58	49.76	07:16
3	TC Clean	2.36	5.90	3.55	49.74	07:04
4	TC Clean	2.07	5.65	3.58	49.75	07:03

Sample Type: Blank (Creating v1404) — From Schedule Version 5

	Pos	Analysis Type	Sample ID	Start Time
◆	(blank)		Reagent/Acid Blank	2020/07/02 12:08

Rep #	Base Analysis Type	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	IC Clean	1.90	5.50	3.59	49.76	05:19
2	TC Clean	7.90	11.59	3.69	49.75	07:16
3	TC Clean	2.67	6.30	3.62	49.73	07:00
4	TC Clean	2.59	6.12	3.53	49.74	07:01
5	Reagent Blank	18.31	22.13	3.82	49.72	08:11
6	Acid Blank	2.84	6.38	3.54	49.87	08:03

Sample Type: Sample — From Schedule Version 5

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	D	TOC	RB	0.7356 ppm	0.0000 ppm	0.0000%	2020/07/02 12:57

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.7356	7.3563	17.37	20.98	3.61	49.82	10:32

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 12.2067 (IC) (v1404)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

Sample Type: Check Standard --> CCV 25 ppm

From Schedule Version 5

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	B	TOC	25.0000	1:2	[TOC] CCV 25 ppm [25 ppm]	0 / infinity (NA / NA)	26.4836 ppm (PASS)	0.0000 ppm	0%	2020/07/02 13:12

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
B	TOC	25 ppm	1	26.4836	264.8361	195.67	199.41	3.74	49.80	10:33

Completion State	Success Action	Method	Calibration	STD Conc - Pos B
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	50 ppmC

Sample Type: Check Standard --> CCB

From Schedule Version 5

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	D	TOC	0.0000	1:1	[TOC] CCB [0 ppm]	0 / infinity (NA / NA)	0.7862 ppm (PASS)	0.0000 ppm	0%	2020/07/02 13:26

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
D	TOC	0 ppm	1	0.7862	7.8618	15.41	19.00	3.60	49.86	10:34

Completion State	Success Action	Method	Calibration	STD Conc - Pos D
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	0 ppmC

Sample Type: Sample

From Schedule Version 5

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	1	TOC	MB1	0.3542 ppm	0.0000 ppm	0.0000%	2020/07/02 13:41

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.3542	3.5415	14.69	18.43	3.74	49.84	10:29

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 12.2067 (IC) (v1404)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

Sample Type: Check Standard --> LCS

From Schedule Version 5

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	C	TOC	25.0000	1:1	[TOC] LCS [24.0 ppm]	0 / infinity (NA / NA)	21.0607 ppm (PASS)	0.0000 ppm	0%	2020/07/02 13:56

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
C	TOC	25.0 ppm	1	21.0607	210.6067	157.63	161.14	3.51	49.82	10:33

Completion State	Success Action	Method	Calibration	STD Conc - Pos C
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	25 ppmC

Sample Type: Sample From Schedule Version 5

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	2	TOC	ICS	0.7298 ppm	0.0000 ppm	0.0000%	2020/07/02 14:11

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.7298	7.2979	17.33	21.04	3.71	49.81	10:30

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 12.2067 (IC) (v1404)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	3	TOC	K2005353-001	2.0914 ppm	0.1019 ppm	4.8700%	2020/07/02 14:25

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	2.1635	21.6347	27.38	30.98	3.60	49.81	10:25
2	TOC	2.0193	20.1934	26.37	30.19	3.81	49.79	10:28

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 12.2067 (IC) (v1404)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	4	TOC	K2005353-002	14.2070 ppm	0.0275 ppm	0.1900%	2020/07/02 14:53

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	14.2265	142.2649	112.00	115.76	3.76	49.89	10:27
2	TOC	14.1876	141.8757	111.73	115.39	3.66	50.03	10:28

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 12.2067 (IC) (v1404)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	5	TOC	K2005353-003	3.3393 ppm	0.2545 ppm	7.6200%	2020/07/02 15:21

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	3.5193	35.1931	36.89	40.69	3.80	50.06	10:28
2	TOC	3.1594	31.5936	34.37	38.20	3.83	50.22	10:25

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 12.2067 (IC) (v1404)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	6	TOC	K2005353-004	10.5239 ppm	0.0292 ppm	0.2800%	2020/07/02 15:49

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	10.5032	105.0323	85.88	89.65	3.76	50.32	10:29
2	TOC	10.5446	105.4457	86.18	89.88	3.71	50.42	10:28

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 12.2067 (IC) (v1404)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	7	TOC	K2005353-005 10X	8.8324 ppm	0.3003 ppm	3.4000%	2020/07/02 16:18

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	9.0447	90.4475	75.65	79.17	3.51	50.50	10:30
2	TOC	8.6201	86.2008	72.68	76.38	3.70	50.57	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 12.2067 (IC) (v1404)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	8	TOC	K2005357-001	2.3670 ppm	0.0746 ppm	3.1500%	2020/07/02 16:46

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	2.4198	24.1978	29.18	32.71	3.53	50.63	10:29
2	TOC	2.3143	23.1429	28.44	32.20	3.76	50.65	10:25

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 12.2067 (IC) (v1404)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	9	TOC	K2005357-001D	2.2906 ppm	0.0053 ppm	0.2300%	2020/07/02 17:14

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	2.2943	22.9433	28.30	31.95	3.65	50.69	10:29
2	TOC	2.2868	22.8678	28.25	32.05	3.80	50.61	10:30

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 12.2067 (IC) (v1404)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

Sample Type: Check Standard --> CCV 25 ppm From Schedule Version 5

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	B	TOC	25.0000	1:2	[TOC] CCV 25 ppm [25 ppm]	0 / infinity (NA / NA)	25.4753 ppm (PASS)	0.0000 ppm	0%	2020/07/02 17:42

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
B	TOC	25 ppm	1	25.4753	254.7532	188.60	192.34	3.74	50.59	10:32

Completion State	Success Action	Method	Calibration	STD Conc - Pos B
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	50 ppmC

Sample Type: Check Standard --> CCB From Schedule Version 6

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	D	TOC	0.0000	1:1	[TOC] CCB [0 ppm]	0 / infinity (NA / NA)	0.3243 ppm (PASS)	0.0000 ppm	0%	2020/07/02 17:57

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
D	TOC	0 ppm	1	0.3243	3.2431	12.17	16.00	3.83	50.52	10:29

Completion State	Success Action	Method	Calibration	STD Conc - Pos D
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	0 ppmC

Sample Type: Sample From Schedule Version 7

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	10	TOC	K2005357-001MS	29.3600 ppm	0.3828 ppm	1.3000%	2020/07/02 18:11

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	29.0893	290.8929	216.26	219.80	3.54	50.44	10:32
2	TOC	29.6307	296.3072	220.06	223.87	3.81	50.35	10:28

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 12.2067 (IC) (v1404)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	11	TOC	K2005466-001	4.1552 ppm	0.0957 ppm	2.3000%	2020/07/02 18:40

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	4.2228	42.2282	41.83	45.64	3.81	50.25	10:29
2	TOC	4.0875	40.8753	40.88	44.62	3.74	50.19	10:28

Dilution	Blank Contribution	Method	Calibration

1:10	(TC) 12.2067 (IC) (v1404)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	12	TOC	K2005466-002	3.1214 ppm	0.0203 ppm	0.6500%	2020/07/02 19:08

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	3.1357	31.3569	34.20	37.88	3.68	50.08	10:26
2	TOC	3.1070	31.0704	34.00	37.63	3.63	50.02	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 12.2067 (IC) (v1404)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	13	TOC	K2005466-003	3.0919 ppm	0.0094 ppm	0.3000%	2020/07/02 19:36

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	3.0852	30.8523	33.85	37.57	3.72	49.98	10:26
2	TOC	3.0985	30.9848	33.94	37.65	3.71	49.94	10:25

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 12.2067 (IC) (v1404)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	14	TOC	K2005466-004	3.1413 ppm	0.0101 ppm	0.3200%	2020/07/02 20:04

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	3.1484	31.4838	34.29	38.04	3.75	49.92	10:29
2	TOC	3.1341	31.3412	34.19	37.95	3.76	49.92	10:28

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 12.2067 (IC) (v1404)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	15	TOC	K2005466-005	2.9625 ppm	0.0554 ppm	1.8700%	2020/07/02 20:32

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	3.0017	30.0169	33.26	37.04	3.78	49.96	10:28
2	TOC	2.9233	29.2328	32.71	36.58	3.86	49.96	10:25

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 12.2067 (IC) (v1404)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	16	TOC	K2005527-001	2.3540 ppm	0.0146 ppm	0.6200%	2020/07/02 21:00

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	2.3643	23.6433	28.79	32.53	3.74	49.97	10:30
2	TOC	2.3437	23.4366	28.65	32.46	3.81	49.99	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 12.2067 (IC) (v1404)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

Sample Type: Check Standard --> LCS From Schedule Version 7

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◈	C	TOC	25.0000	1:1	[TOC] LCS [25.0 ppm]	0 / infinity (NA / NA)	18.3064 ppm (PASS)	0.0000 ppm	0%	2020/07/02 21:28

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
C	TOC	25.0 ppm	1	18.3064	183.0636	138.31	142.18	3.88	49.99	10:30

Completion State	Success Action	Method	Calibration	STD Conc - Pos C
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	25 ppmC

Sample Type: Sample From Schedule Version 7

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	18	TOC	IB	0.0000 ppm	0.0000 ppm	0.0000%	2020/07/02 21:42

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0000	0.0000	11.68	15.63	3.95	50.01	10:29
2	TOC	0.0000	0.0000	11.56	15.56	4.00	50.02	10:28

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 12.2067 (IC) (v1404)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	19	TOC	RB	0.0000 ppm	0.0000 ppm	0.0000%	2020/07/02 22:10

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0000	0.0000	11.36	15.34	3.98	50.04	10:27
2	TOC	0.0000	0.0000	11.30	15.20	3.89	50.07	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 12.2067 (IC) (v1404)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

Sample Type: Check Standard --> CCV 25 ppm From Schedule Version 7

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	B	TOC	25.0000	1:2	[TOC] CCV 25 ppm [25 ppm]	0 / infinity (NA / NA)	25.6210 ppm (PASS)	0.0000 ppm	0%	2020/07/02 22:39

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
B	TOC	25 ppm	1	25.6210	256.2101	189.62	193.44	3.82	50.08	10:31

Completion State	Success Action	Method	Calibration	STD Conc - Pos B
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	50 ppmC

Sample Type: Check Standard --> CCB From Schedule Version 7

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	D	TOC	0.0000	1:1	[TOC] CCB [0 ppm]	0 / infinity (NA / NA)	0.2114 ppm (PASS)	0.0000 ppm	0%	2020/07/02 22:53

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
D	TOC	0 ppm	1	0.2114	2.1140	11.38	15.30	3.92	50.09	10:34

Completion State	Success Action	Method	Calibration	STD Conc - Pos D
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	0 ppmC

Sample Type: Sample From Schedule Version 7

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	20	TOC	MB2	0.0000 ppm	0.0000 ppm	0.0000%	2020/07/02 23:08

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0000	0.0000	10.75	14.56	3.81	50.10	10:30

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 12.2067 (IC) (v1404)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

Sample Type: Check Standard --> LCS From Schedule Version 7

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	C	TOC	25.0000	1:1	[TOC] LCS [24.0 ppm]	0 / infinity (NA / NA)	17.4088 ppm (PASS)	0.0000 ppm	0%	2020/07/02 23:23

Pos	Base Analysis	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time

	Type									
C	TOC	25.0 ppm	1	17.4088	174.0883	132.01	135.94	3.92	50.11	10:32

Completion State	Success Action	Method	Calibration	STD Conc - Pos C
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	25 ppmC

Sample Type: Sample From Schedule Version 7

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	21	TOC	K2005375-009	0.0000 ppm	0.0000 ppm	0.0000%	2020/07/02 23:37

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0000	0.0000	10.77	14.54	3.78	50.15	10:29
2	TOC	0.0000	0.0000	10.03	13.80	3.77	50.15	10:25

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 12.2067 (IC) (v1404)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	22	TOC	K2005375-010	0.0000 ppm	0.0000 ppm	0.0000%	2020/07/03 00:05

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0000	0.0000	10.17	13.91	3.74	50.17	10:27
2	TOC	0.0000	0.0000	9.80	13.74	3.95	50.18	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 12.2067 (IC) (v1404)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	23	TOC	K2005295-002 10X	7.3216 ppm	0.0162 ppm	0.2200%	2020/07/03 00:33

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	7.3331	73.3309	63.65	67.59	3.94	50.18	10:31
2	TOC	7.3101	73.1014	63.49	67.64	4.16	50.21	10:28

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 12.2067 (IC) (v1404)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	24	TOC	K2005295-003 20X	10.7357 ppm	0.1529 ppm	1.4200%	2020/07/03 01:01

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	10.6275	106.2754	86.76	90.72	3.96	50.20	10:30
2	TOC	10.8438	108.4379	88.27	92.20	3.92	50.22	10:28

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 12.2067 (IC) (v1404)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	25	TOC	K2005204-002	2.3509 ppm	0.0088 ppm	0.3700%	2020/07/03 01:30

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	2.3571	23.5706	28.74	32.75	4.01	50.21	10:30
2	TOC	2.3447	23.4465	28.65	32.47	3.82	50.22	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 12.2067 (IC) (v1404)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	26	TOC	K2005480-001	0.8224 ppm	0.0062 ppm	0.7600%	2020/07/03 01:58

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.8269	8.2687	18.01	22.03	4.02	50.23	10:27
2	TOC	0.8180	8.1803	17.94	21.78	3.83	50.22	10:28

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 12.2067 (IC) (v1404)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	27	TOC	K2005480-001DUP	0.8790 ppm	0.0249 ppm	2.8300%	2020/07/03 02:26

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.8614	8.6137	18.25	22.22	3.97	50.22	10:26
2	TOC	0.8966	8.9658	18.50	22.45	3.96	50.25	10:28

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 12.2067 (IC) (v1404)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	28	TOC	K2005480-001MS	29.0198 ppm	0.0027 ppm	0.0100%	2020/07/03 02:54

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	29.0179	290.1787	215.76	219.59	3.83	50.24	10:25
2	TOC	29.0217	290.2172	215.79	219.74	3.95	50.23	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 12.2067 (IC) (v1404)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

Sample Type: Check Standard --> CCV 25 ppm From Schedule Version 7

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	B	TOC	25.0000	1:2	[TOC] CCV 25 ppm [25 ppm]	0 / infinity (NA / NA)	25.2427 ppm (PASS)	0.0000 ppm	0%	2020/07/03 03:22

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
B	TOC	25 ppm	1	25.2427	252.4267	186.96	190.97	4.00	50.23	10:32

Completion State	Success Action	Method	Calibration	STD Conc - Pos B
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	50 ppmC

Sample Type: Check Standard --> CCB From Schedule Version 7

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	D	TOC	0.0000	1:1	[TOC] CCB [0 ppm]	0 / infinity (NA / NA)	0.0000 ppm (PASS)	0.0000 ppm	0%	2020/07/03 03:37

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
D	TOC	0 ppm	1	0.0000	0.0000	9.86	13.92	4.06	50.23	10:30

Completion State	Success Action	Method	Calibration	STD Conc - Pos D
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	0 ppmC

Sample Type: Sample From Schedule Version 7

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	29	TOC	K2005480-002	0.3701 ppm	0.0192 ppm	5.1700%	2020/07/03 03:52

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.3837	3.8366	14.90	18.90	4.00	50.25	10:28
2	TOC	0.3566	3.5658	14.71	18.62	3.92	50.24	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 12.2067 (IC) (v1404)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	30	TOC	K2005480-003	0.4217 ppm	0.0010 ppm	0.2400%	2020/07/03 04:20

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.4224	4.2244	15.17	19.10	3.93	50.23	10:29
2	TOC	0.4210	4.2101	15.16	19.28	4.12	50.23	10:32

Dilution	Blank Contribution	Method	Calibration

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 12.2067 (IC) (v1404)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	31	TOC	K2005480-004	0.3797 ppm	0.0185 ppm	4.8900%	2020/07/03 04:48

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.3928	3.9279	14.96	18.88	3.92	50.25	10:27
2	TOC	0.3666	3.6656	14.78	18.73	3.95	50.24	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 12.2067 (IC) (v1404)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	32	TOC	K2005480-005	0.2762 ppm	0.0380 ppm	13.7600%	2020/07/03 05:16

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.2494	2.4938	13.96	17.95	4.00	50.24	10:27
2	TOC	0.3031	3.0312	14.33	17.93	3.60	50.24	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 12.2067 (IC) (v1404)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	33	TOC	K2005480-006	0.0000 ppm	0.0000 ppm	0.0000%	2020/07/03 05:44

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0000	0.0000	12.17	15.98	3.82	50.24	10:32
2	TOC	0.0000	0.0000	11.90	15.65	3.75	50.25	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 12.2067 (IC) (v1404)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	34	TOC	K2005480-007	0.7055 ppm	0.0326 ppm	4.6200%	2020/07/03 06:12

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.7285	7.2850	17.32	21.01	3.69	50.24	10:29
2	TOC	0.6825	6.8246	16.99	20.90	3.90	50.23	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 12.2067 (IC) (v1404)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	35	TOC	K2005480-008	0.0620 ppm	0.0489 ppm	78.8700%	2020/07/03 06:40

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0966	0.9656	12.88	16.61	3.72	50.24	10:30
2	TOC	0.0274	0.2742	12.40	16.02	3.62	50.23	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 12.2067 (IC) (v1404)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	36	TOC	K2005020-002 DOC	5.5916 ppm	0.0571 ppm	1.0200%	2020/07/03 07:08

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	5.5513	55.5129	51.15	54.95	3.80	50.22	10:30
2	TOC	5.6320	56.3198	51.71	55.35	3.64	50.22	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 12.2067 (IC) (v1404)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	37	TOC	K2005020-002 DUP	5.7299 ppm	0.0306 ppm	0.5300%	2020/07/03 07:37

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	5.7516	57.5158	52.55	56.13	3.58	50.19	10:30
2	TOC	5.7082	57.0824	52.25	55.99	3.74	50.19	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 12.2067 (IC) (v1404)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	38	TOC	K2005020-002 MS	32.3279 ppm	0.2808 ppm	0.8700%	2020/07/03 08:05

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	32.5264	325.2644	240.37	244.27	3.90	50.18	10:26
2	TOC	32.1293	321.2928	237.59	241.48	3.90	50.17	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 12.2067 (IC) (v1404)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

Sample Type: Check Standard --> CCV 25 ppm From Schedule Version 7

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	B	TOC	25.0000	1:2	[TOC] CCV 25 ppm [25 ppm]	0 / infinity (NA / NA)	25.2354 ppm (PASS)	0.0000 ppm	0%	2020/07/03 08:33

Pos	Base Analysis	ID	Rep	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run

	Type		#							Time
B	TOC	25 ppm	1	25.2354	252.3540	186.91	190.63	3.72	50.14	10:32

Completion State	Success Action	Method	Calibration	STD Conc - Pos B
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	50 ppmC

Sample Type: Check Standard --> CCB From Schedule Version 7

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	D	TOC	0.0000	1:1	[TOC] CCB [0 ppm]	0 / infinity (NA / NA)	0.0000 ppm (PASS)	0.0000 ppm	0%	2020/07/03 08:47

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
D	TOC	0 ppm	1	0.0000	0.0000	9.64	13.17	3.54	50.12	10:34

Completion State	Success Action	Method	Calibration	STD Conc - Pos D
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	0 ppmC

Sample Type: Sample From Schedule Version 7

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	39	TOC	MB3	0.0000 ppm	0.0000 ppm	0.0000%	2020/07/03 09:02

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0000	0.0000	9.19	12.81	3.62	50.12	10:32

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 12.2067 (IC) (v1404)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

Sample Type: Check Standard --> LCS From Schedule Version 7

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	C	TOC	25.0000	1:1	[TOC] LCS [25.0 ppm]	0 / infinity (NA / NA)	13.9973 ppm (PASS)	0.0000 ppm	0%	2020/07/03 09:17

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
C	TOC	25.0 ppm	1	13.9973	139.9734	108.08	111.62	3.54	50.12	10:32

Completion State	Success Action	Method	Calibration	STD Conc - Pos C
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	25 ppmC

Sample Type: Sample From Schedule Version 7

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	40	TOC	K2005020-004 DOC	2.9015 ppm	0.0669 ppm	2.3100%	2020/07/03 09:31

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	2.9488	29.4880	32.89	36.47	3.58	50.09	10:34
2	TOC	2.8541	28.5415	32.23	35.81	3.58	50.09	10:24

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 12.2067 (IC) (v1404)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	41	TOC	K2005459-001 DOC	1.3180 ppm	0.0121 ppm	0.9200%	2020/07/03 09:59

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	1.3094	13.0942	21.39	24.97	3.58	50.08	10:30
2	TOC	1.3265	13.2652	21.51	25.23	3.72	50.07	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 12.2067 (IC) (v1404)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	42	TOC	K2005459-002 DOC	1.3232 ppm	0.0044 ppm	0.3400%	2020/07/03 10:28

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	1.3264	13.2638	21.51	25.23	3.72	50.05	10:28
2	TOC	1.3201	13.2011	21.47	25.18	3.71	50.04	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 12.2067 (IC) (v1404)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	43	TOC	K2005174-001 100X	8.9021 ppm	0.0563 ppm	0.6300%	2020/07/03 10:56

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	8.9420	89.4197	74.93	78.66	3.73	50.03	10:26
2	TOC	8.8623	88.6228	74.37	77.98	3.60	50.03	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 12.2067 (IC) (v1404)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	44	TOC	K2005453-001 100X	49.3522 ppm	0.1170 ppm	0.2400%	2020/07/03 11:24

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time

1	TOC	49.4349	494.3491	358.98	362.57	3.58	50.02	10:27
2	TOC	49.2694	492.6941	357.82	361.69	3.86	50.01	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 12.2067 (IC) (v1404)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	45	TOC	K2005453-001 100X	7.3963 ppm	0.1878 ppm	2.5400%	2020/07/03 11:52

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	7.5291	75.2910	65.02	68.53	3.51	50.01	10:28
2	TOC	7.2635	72.6352	63.16	66.81	3.66	50.00	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 12.2067 (IC) (v1404)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	46	TOC	RB	0.0000 ppm	0.0000 ppm	0.0000%	2020/07/03 12:20

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0000	0.0000	9.01	12.53	3.52	49.99	10:28
2	TOC	0.0000	0.0000	9.06	12.47	3.41	49.99	10:28

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 12.2067 (IC) (v1404)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	47	TOC	RB	0.0000 ppm	0.0000 ppm	0.0000%	2020/07/03 12:48

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0000	0.0000	8.51	11.96	3.45	49.98	10:27
2	TOC	0.0000	0.0000	8.30	11.88	3.58	49.97	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 12.2067 (IC) (v1404)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

Sample Type: Check Standard --> CCV 25 ppm — From Schedule Version 7

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◈	B	TOC	25.0000	1:2	[TOC] CCV 25 ppm [25 ppm]	0 / infinity (NA / NA)	24.8697 ppm (PASS)	0.0000 ppm	0%	2020/07/03 13:16

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
B	TOC	25 ppm	1	24.8697	248.6975	184.35	187.98	3.63	49.96	10:32

Completion State	Success Action	Method	Calibration	STD Conc - Pos B
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	50 ppmC

Sample Type: Check Standard --> CCB From Schedule Version 7

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	D	TOC	0.0000	1:1	[TOC] CCB [0 ppm]	0 / infinity (NA / NA)	0.0000 ppm (PASS)	0.0000 ppm	0%	2020/07/03 13:31

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
D	TOC	0 ppm	1	0.0000	0.0000	8.84	12.35	3.51	49.96	10:32

Completion State	Success Action	Method	Calibration	STD Conc - Pos D
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	0 ppmC

Sample Type: Sample From Schedule Version 7

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	48	TOC		0.0000 ppm	0.0000 ppm	0.0000%	2020/07/03 13:45

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0000	0.0000	8.36	11.89	3.53	49.93	10:26
2	TOC	0.0000	0.0000	8.20	11.72	3.52	49.92	10:25

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 12.2067 (IC) (v1404)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	49	TOC		0.0000 ppm	0.0000 ppm	0.0000%	2020/07/03 14:14

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0000	0.0000	8.06	11.60	3.53	49.92	10:30
2	TOC	0.0000	0.0000	8.01	11.61	3.60	49.92	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 12.2067 (IC) (v1404)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	50	TOC		0.0000 ppm	0.0000 ppm	0.0000%	2020/07/03 14:42

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0000	0.0000	8.03	11.73	3.70	49.90	10:28

July 10, 2020 Service Request No:R2005464

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

Laboratory Results for: LHAAP / Site 58

Dear RJ,

Enclosed are the results of the sample(s) submitted to our laboratory June 25, 2020
For your reference, these analyses have been assigned our service request number **R2005464.**

All testing was performed according to our laboratory's quality assurance program and met the requirements of the TNI standards except as noted in the case narrative report. Any testing not included in the lab's accreditation is identified on a Non-Certified Analytes report. All results are intended to be considered in their entirety. ALS Environmental is not responsible for use of less than the complete report. Results apply only to the individual samples submitted to the lab for analysis, as listed in the report. The measurement uncertainty of the results included in this report is within that expected when using the prescribed method(s), and represented by Laboratory Control Sample control limits. Any events, such as QC failures or Holding Time exceedances, which may add to the uncertainty are explained in the report narrative or are flagged with qualifiers. The flags are explained in the Report Qualifiers and Definitions page of this report.

Please contact me if you have any questions. My extension is 7471. You may also contact me via email at Brady.Kalkman@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental



Brady Kalkman
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35AWW06_062420 - Semivoa GC 36

35AWW23_062420 - Semivoa GC 37

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RQ2007136-01 - CCV Semivoa GC 209

RQ2007136-05 - CCV Semivoa GC 210

RQ2007136-06 - CCV Semivoa GC 211

RQ2007136-09 - CCV Semivoa GC 212

RQ2007136-10 - CCV Semivoa GC 213

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Narrative Documents

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Client: ALS Environmental - US
Project: LHAAP / Site 58
Sample Matrix: Water

Service Request: R2005464
Date Received: 06/25/2020

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples for the Tier level IV requested by the client.

Sample Receipt:

Five water samples were received for analysis at ALS Environmental on 06/25/2020. Any discrepancies upon initial sample inspection are annotated on the sample receipt and preservation form included within this report. The samples were stored at minimum in accordance with the analytical method requirements.

Semivoa GC:

Method Organic Acids, 07/02/2020: The control limits for matrix spike recovery of pyruvic acid exceeds the lower limit. Other run QC was within acceptable limits and Matrix spike was not required for the sample. No other action was taken. Sample R2005464-001.

Approved by _____ Date 07/10/2020

ALS Environmental

SAMPLE DETECTION SUMMARY

CLIENT ID: 35AWW23_062420			Lab ID: R2005464-005			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Acetic Acid	76		0.56	4.0	mg/L	Organic Acids
Propionic Acid	44		0.19	2.0	mg/L	Organic Acids

Sample Receipt Information

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Client: ALS Environmental - US
Project: LHAAP / Site 58/NW01312.0150

Service Request:R2005464

SAMPLE CROSS-REFERENCE

SAMPLE #	CLIENT SAMPLE ID	DATE	TIME
R2005464-001	35AWW19_062420	6/24/2020	0830
R2005464-002	35AWW20_062420	6/24/2020	0925
R2005464-003	LHSMW07_062420	6/24/2020	1015
R2005464-004	35AWW06_062420	6/24/2020	1105
R2005464-005	35AWW23_062420	6/24/2020	1200

bhate ENVIRONMENTAL CONSTRUCTION CALIBRE

1608 13th Avenue South, Suite 300
Birmingham Alabama 35205
Tel: 205-918-4000
Fax: 205-918-4050

Chain of Custody and Analytical Request

Page: _____ of _____

Project/Phase No: NWO1312.0150

COC Number(1): _____

UMS Number: _____

Facility/Base I.D.: LHAAP

Project/Site Name: LHAAP / Site 58

Client Name:

Collected by: Scott Beesinger

Field Sample ID (50 Characters Max)	Date Collected (dd-mmm-yyyy)	Time Collected (Military) (hhmm)	Sample Depth (beginning - ending)	SA Code (2)	Sample Number (3)	Sample Matrix (4)	Sample Analysis Requested (5): Number of containers	Volatile Fatty Acids										Quality Assurance Samples (6): Ambient Blank Lot Control Number	Equipment Blank Lot Control Number	Trip Blank Lot Control Number	Cooler ID
35AWW19_062420	24-Jun-2020	0830	-	N		WG	1	X													
35AWW20_062420	24-Jun-2020	0925	-	N		WG	1	X													
LHSMW07_062420	24-Jun-2020	1015	-	N		WG	1	X													
35AWW06_062420	24-Jun-2020	1105	-	N		WG	1	X													
35AWW23_062420	24-Jun-2020	1200	-	N		WG	1	X													
			-																		
			-																		
			-																		
			-																		
			-																		
			-																		

COMMENTS: _____

Custody Transfers Prior to Receipt by Laboratory

Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
1. Scott Beesinger	6/24/20	1430	1.	6/25/2020	1015
2.			2.		
3.			3.		

Sample Delivery Details / Laboratory Receipt

Delivered Directly to Lab: _____ Shipped No.:

_____ Method of Shipment: _____

_____ Fed Ex _____ Airbill Number:

_____ Analytical Lab: ALS 10450 Stancliff Rd. Suite 210 Houston, TX 77099 (281) 530-5656

ATTN: SONIA WEST Lab Recipient: Delivery Date/Time:

1.) Chain of Custody Number = date collected + custody number (e.g. 09-02-1999-01)

2.) Sample Type (SA) Codes: N = Normal Sample, TB = Trip Blank (-c) Sample, FD = Field Duplicate (-a) Samples, FR = Field Replicate (-b) Samples, EB = Equipment Blank (-d) Samples, MS = Matrix Spike, SD = Matrix Spike Duplicate, AB = Ambient Blank /

3.) Sample Number: Unique sample number collected from a particular location per day. (e.g. Groundwater sample collected from MW-1 on 10/10/99 = 01, if sampled again on 10/10/99 = 02, etc.)

4.) Matrix Codes: GS = Soil Gas, WG = Groundwater, WS = Surface Water, SO = Soil, SE = Sediment, SL = Sludge, SS = Surface Soil Samples, WQ = Aqueous Blank Samples (trip, equipment, ambient, etc), SQ = Soil Blanks

5.) Sample Analysis Requested: Analytical method requested and number of containers provided for each.

6.) Quality assurance samples are assigned by date (ddmmyy) and the sample number associated with the sample (01, 02, etc) (e.g. Equipment blank collected in association with MW-1 on 10/10/99 will be designated 10109901 in the Equipment Blank

R2005464 5
ALS Laboratory Group
LHAAP / Site 58

Cooler Receipt and Preservation Check Form

R2005464 5
ALS Laboratory Group
LHAAP / Site 68

Project/Client Bhate Folder Number

Cooler received on 6/25/2020 by: @

COURIER: ALS UPS (FEDEX) VELOCITY CLIENT

1	Were **Custody seals** on outside of cooler?	(Y) N	5a	**Perchlorate** samples have required headspace?	Y N (NA)
2	**Custody papers** properly completed (ink, signed)?	(Y) N	5b	Did VOA vials, Alk,or Sulfide have sig* **bubbles**?	Y N (NA)
3	Did all bottles arrive in good **condition** (unbroken)?	(Y) N	6	Where did the bottles originate?	(ALS/ROC) CLIENT
4	Circle: (**Wet Ice**) **Dry Ice** **Gel packs** present?	(Y) N	7	Soil VOA received as: Bulk Encore 5035set	(NA)

3. Temperature Readings Date: 6/25/2020 Time: 1045 ID: IR#7 (IR#10) From: (Temp Blank) Sample Bottle

Observed Temp (°C)	1.5						
Within 0-6°C?	(Y) N	Y N	Y N	Y N	Y N	Y N	Y N
If <0°C, were samples frozen?	Y N	Y N	Y N	Y N	Y N	Y N	Y N

If out of Temperature, note packing/ice condition: _____ Ice melted Poorly Packed (described below) Same Day Rule

&Client Approval to Run Samples: _____ Standing Approval Client aware at drop-off Client notified by: _____

All samples held in storage location: R-002 by @ on 6/25/20 at 1050
5035 samples placed in storage location: _____ by _____ on _____ at _____ within 48 hours of sampling? Y N

Cooler Breakdown/Preservation Check**: Date: 6/25/2020 Time: 1530 by: AW

9. Were all bottle labels complete (*i.e.* analysis, preservation, etc.)? (YES) NO
10. Did all bottle labels and tags agree with custody papers? (YES) NO
11. Were correct containers used for the tests indicated? (YES) NO
12. Were 5035 vials acceptable (no extra labels, not leaking)? YES NO (N/A)
13. Air Samples: Cassettes / Tubes Intact with MS? Canisters Pressurized Tedlar® Bags Inflated (N/A)

pH	Lot of test paper	Reagent	Preserved? Yes	Preserved? No	Lot Received	Exp	Sample ID Adjusted	Vol. Added	Lot Added	Final pH
≥12		NaOH								
≤2		HNO_3								
≤2		H_2SO_4								
<4		$NaHSO_4$								
5-9		For 608pest			No=Notify for 3day					
Residual Chlorine (-)		For CN, Phenol, 625, 608pest, 522			If +, contact PM to add $Na_2S_2O_3$ (625, 608, CN), ascorbic (phenol).					
		$Na_2S_2O_3$								
		ZnAcetate	-	--			**VOAs and 1664 Not to be tested before analysis. Otherwise, all bottles of all samples with chemical preservatives are checked (not just representatives).			
		HCl	**	**						

Bottle lot numbers: 413720 - IBMC
Explain all Discrepancies/ Other Comments:

HPROD	BULK
HTR	FLDT
SUB	HGFB
ALS	LL3541

Labels secondary reviewed by: _____
PC Secondary Review: _____

*significant air bubbles: VOA > 5-6 mm : WC >1 in. diameter

ALS Group USA, Corp.
dba ALS Environmental

Internal Chain of Custody Report

Client: ALS Laboratory Group **Service Request:** R2005464
Project: LHAAP / Site 58/NW01312.0150

Bottle ID	Methods	Date	Time	Sample Location / User	Disposed On
R2005464-001.01					
	Organic Acids				
		6/25/2020	1534	SMO / GLAFORCE	
		6/25/2020	1542	R-002 / GLAFORCE	
		6/30/2020	1550	In Lab / AFELSER	
		6/30/2020	1648	R-002 / AFELSER	
R2005464-002.01					
	Organic Acids				
		6/25/2020	1534	SMO / GLAFORCE	
		6/25/2020	1542	R-002 / GLAFORCE	
		6/30/2020	1550	In Lab / AFELSER	
		6/30/2020	1648	R-002 / AFELSER	
R2005464-003.01					
	Organic Acids				
		6/25/2020	1534	SMO / GLAFORCE	
		6/25/2020	1542	R-002 / GLAFORCE	
		6/30/2020	1550	In Lab / AFELSER	
		6/30/2020	1648	R-002 / AFELSER	
R2005464-004.01					
	Organic Acids				
		6/25/2020	1534	SMO / GLAFORCE	
		6/25/2020	1542	R-002 / GLAFORCE	
		6/30/2020	1550	In Lab / AFELSER	
		6/30/2020	1648	R-002 / AFELSER	
R2005464-005.01					
	Organic Acids				
		6/25/2020	1534	SMO / GLAFORCE	
		6/25/2020	1542	R-002 / GLAFORCE	
		6/30/2020	1550	In Lab / AFELSER	
		6/30/2020	1648	R-002 / AFELSER	

Miscellaneous Forms

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REPORT QUALIFIERS AND DEFINITIONS

U Analyte was analyzed for but not detected. The sample quantitation limit has been corrected for dilution and for percent moisture, unless otherwise noted in the case narrative.

J Estimated value due to either being a Tentatively Identified Compound (TIC) or that the concentration is between the MRL and the MDL. Concentrations are not verified within the linear range of the calibration. For DoD: concentration >40% difference between two GC columns (pesticides/Arclors).

B Analyte was also detected in the associated method blank at a concentration that may have contributed to the sample result.

E Inorganics- Concentration is estimated due to the serial dilution was outside control limits.

E Organics- Concentration has exceeded the calibration range for that specific analysis.

D Concentration is a result of a dilution, typically a secondary analysis of the sample due to exceeding the calibration range or that a surrogate has been diluted out of the sample and cannot be assessed.

* Indicates that a quality control parameter has exceeded laboratory limits. Under the ñNotesò column of the Form I, this qualifier denotes analysis was performed out of Holding Time.

H Analysis was performed out of hold time for tests that have an ñimmediateò hold time criteria.

Spike was diluted out.

\+ Correlation coefficient for MSA is <0.995.

N Inorganics- Matrix spike recovery was outside laboratory limits.

N Organics- Presumptive evidence of a compound (reported as a TIC) based on the MS library search.

S Concentration has been determined using Method of Standard Additions (MSA).

W Post-Digestion Spike recovery is outside control limits and the sample absorbance is <50% of the spike absorbance.

P Concentration >40% difference between the two GC columns.

C Confirmed by GC/MS

Q DoD reports: indicates a pesticide/Aroclor is not confirmed (Ó100% Difference between two GC columns).

X See Case Narrative for discussion.

MRL Method Reporting Limit. Also known as:
LOQ Limit of Quantitation (LOQ)
The lowest concentration at which the method analyte may be reliably quantified under the method conditions.

MDL Method Detection Limit. A statistical value derived from a study designed to provide the lowest concentration that will be detected 99% of the time. Values between the MDL and MRL are estimated (see J qualifier).

LOD Limit of Detection. A value at or above the MDL which has been verified to be detectable.

ND Non-Detect. Analyte was not detected at the concentration listed. Same as U qualifier.

Rochester Lab ID # for State Certifications[1]

Connecticut ID # PH0556	Maine ID #NY0032	Pennsylvania ID# 68-786
Delaware Approved	New Hampshire ID # 2941	Rhode Island ID # 158
DoD ELAP #65817	New York ID # 10145	Virginia #460167
Florida ID # E87674	North Carolina #676	

[1] Analyses were performed according to our laboratoryôs NELAP-approved quality assurance program and any applicable state or agency requirements. The test results meet requirements of the current NELAP/TNI standards or state or agency requirements, where applicable, except as noted in the case narrative. Since not all analyte/method/matrix combinations are offered for state/NELAC accreditation, this report may contain results which are not accredited. For a specific list of accredited analytes, contact the laboratory or go to https://www.alsglobal.com/locations/americas/north-america/usa/new-york/rochester-environmental

ALS Laboratory Group

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

ALS Group USA, Corp.
dba ALS Environmental

Analyst Summary report

Client: ALS Environmental - US
Project: LHAAP / Site 58/NW01312.0150
Service Request: R2005464

Sample Name: 35AWW19_062420
Lab Code: R2005464-001
Sample Matrix: Water
Date Collected: 06/24/20
Date Received: 06/25/20

Analysis Method	Extracted/Digested By	Analyzed By
Organic Acids		AFELSER

Sample Name: 35AWW20_062420
Lab Code: R2005464-002
Sample Matrix: Water
Date Collected: 06/24/20
Date Received: 06/25/20

Analysis Method	Extracted/Digested By	Analyzed By
Organic Acids		AFELSER

Sample Name: LHSMW07_062420
Lab Code: R2005464-003
Sample Matrix: Water
Date Collected: 06/24/20
Date Received: 06/25/20

Analysis Method	Extracted/Digested By	Analyzed By
Organic Acids		AFELSER

Sample Name: 35AWW06_062420
Lab Code: R2005464-004
Sample Matrix: Water
Date Collected: 06/24/20
Date Received: 06/25/20

Analysis Method	Extracted/Digested By	Analyzed By
Organic Acids		AFELSER

Sample Name: 35AWW23_062420
Lab Code: R2005464-005
Sample Matrix: Water
Date Collected: 06/24/20
Date Received: 06/25/20

Analysis Method	Extracted/Digested By	Analyzed By
Organic Acids		AFELSER

INORGANIC PREPARATION METHODS

The preparation methods associated with this report are found in these tables unless discussed in the case narrative.

Water/Liquid Matrix

Analytical Method	Preparation Method
200.7	200.2
200.8	200.2
6010C	3005A/3010A
6020A	ILM05.3
9034 Sulfide Acid Soluble	9030B
SM 4500-CN-E Residual Cyanide	SM 4500-CN-G
SM 4500-CN-E WAD Cyanide	SM 4500-CN-I

Solid/Soil/Non-Aqueous Matrix

Analytical Method	Preparation Method
6010C	3050B
6020A	3050B
6010C TCLP (1311) extract	3005A/3010A
6010 SPLP (1312) extract	3005A/3010A
7199	3060A
300.0 Anions/ 350.1/ 353.2/ SM 2320B/ SM 5210B/ 9056A Anions	DI extraction
For analytical methods not listed, the preparation method is the same as the analytical method reference.	

Sample Results

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Semivolatile Organic Compounds by GC

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ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	R2005464
Project:	LHAAP / Site 58/NW01312.0150	**Date Collected:**	06/24/20 08:30
Sample Matrix:	Water	**Date Received:**	06/25/20 10:15
Sample Name:	35AWW19_062420	**Units:**	mg/L
Lab Code:	R2005464-001	**Basis:**	NA

Organic Acids in Aqueous Matrices by High Performance Liquid Chromatography (HPLC) 28 Day Hold Time

Analysis Method: Organic Acids

Analyte Name	Result	LOQ	LOD	MDL	Dil.	Date Analyzed	Q
Pyruvic Acid	ND U	0.20	0.10	0.016	1	07/02/20 06:44	
Acetic Acid	ND U	4.0	2.0	0.56	1	07/02/20 06:44	
Butanoic Acid (Butyric Acid)	ND U	2.0	1.0	0.32	1	07/02/20 06:44	
Lactic Acid	ND U	2.0	1.0	0.14	1	07/02/20 06:44	
Propionic Acid	ND U	2.0	1.0	0.19	1	07/02/20 06:44	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	R2005464
Project:	LHAAP / Site 58/NW01312.0150	**Date Collected:**	06/24/20 09:25
Sample Matrix:	Water	**Date Received:**	06/25/20 10:15
Sample Name:	35AWW20_062420	**Units:**	mg/L
Lab Code:	R2005464-002	**Basis:**	NA

Organic Acids in Aqueous Matrices by High Performance Liquid Chromatography (HPLC) 28 Day Hold Time

Analysis Method: Organic Acids

Analyte Name	Result	LOQ	LOD	MDL	Dil.	Date Analyzed	Q
Pyruvic Acid	ND U	0.20	0.10	0.016	1	07/02/20 10:56	
Acetic Acid	ND U	4.0	2.0	0.56	1	07/02/20 10:56	
Butanoic Acid (Butyric Acid)	ND U	2.0	1.0	0.32	1	07/02/20 10:56	
Lactic Acid	ND U	2.0	1.0	0.14	1	07/02/20 10:56	
Propionic Acid	ND U	2.0	1.0	0.19	1	07/02/20 10:56	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	R2005464
Project:	LHAAP / Site 58/NW01312.0150	**Date Collected:**	06/24/20 10:15
Sample Matrix:	Water	**Date Received:**	06/25/20 10:15
Sample Name:	LHSMW07_062420	**Units:**	mg/L
Lab Code:	R2005464-003	**Basis:**	NA

Organic Acids in Aqueous Matrices by High Performance Liquid Chromatography (HPLC) 28 Day Hold Time

Analysis Method: Organic Acids

Analyte Name	Result	LOQ	LOD	MDL	Dil.	Date Analyzed	Q
Pyruvic Acid	ND U	0.20	0.10	0.016	1	07/02/20 11:56	
Acetic Acid	ND U	4.0	2.0	0.56	1	07/02/20 11:56	
Butanoic Acid (Butyric Acid)	ND U	2.0	1.0	0.32	1	07/02/20 11:56	
Lactic Acid	ND U	2.0	1.0	0.14	1	07/02/20 11:56	
Propionic Acid	ND U	2.0	1.0	0.19	1	07/02/20 11:56	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	R2005464
Project:	LHAAP / Site 58/NW01312.0150	**Date Collected:**	06/24/20 11:05
Sample Matrix:	Water	**Date Received:**	06/25/20 10:15
Sample Name:	35AWW06_062420	**Units:**	mg/L
Lab Code:	R2005464-004	**Basis:**	NA

Organic Acids in Aqueous Matrices by High Performance Liquid Chromatography (HPLC) 28 Day Hold Time

Analysis Method: Organic Acids

Analyte Name	Result	LOQ	LOD	MDL	Dil.	Date Analyzed	Q
Pyruvic Acid	ND U	0.20	0.10	0.016	1	07/02/20 13:02	
Acetic Acid	ND U	4.0	2.0	0.56	1	07/02/20 13:02	
Butanoic Acid (Butyric Acid)	ND U	2.0	1.0	0.32	1	07/02/20 13:02	
Lactic Acid	ND U	2.0	1.0	0.14	1	07/02/20 13:02	
Propionic Acid	ND U	2.0	1.0	0.19	1	07/02/20 13:02	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	R2005464
Project:	LHAAP / Site 58/NW01312.0150	**Date Collected:**	06/24/20 12:00
Sample Matrix:	Water	**Date Received:**	06/25/20 10:15
Sample Name:	35AWW23_062420	**Units:**	mg/L
Lab Code:	R2005464-005	**Basis:**	NA

Organic Acids in Aqueous Matrices by High Performance Liquid Chromatography (HPLC) 28 Day Hold Time

Analysis Method: Organic Acids

Analyte Name	Result		LOQ	LOD	MDL	Dil.	Date Analyzed	Q
Pyruvic Acid	ND	U	0.20	0.10	0.016	1	07/02/20 14:02	
Acetic Acid	**76**		4.0	2.0	0.56	1	07/02/20 14:02	
Butanoic Acid (Butyric Acid)	ND	U	2.0	1.0	0.32	1	07/02/20 14:02	
Lactic Acid	ND	U	2.0	1.0	0.14	1	07/02/20 14:02	
Propionic Acid	**44**		2.0	1.0	0.19	1	07/02/20 14:02	

QC Summary Forms

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Semivolatile Organic Compounds by GC

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ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	R2005464
Project:	LHAAP / Site 58/NW01312.0150	**Date Collected:**	06/24/20
Sample Matrix:	Water	**Date Received:**	06/25/20
		Date Analyzed:	07/2/20

Duplicate Matrix Spike Summary
Organic Acids in Aqueous Matrices by High Performance Liquid Chromatography (HPLC) 28 Day Hold Time

Sample Name:	35AWW19_062420	**Units:**	mg/L
Lab Code:	R2005464-001	**Basis:**	NA
Analysis Method:	Organic Acids		

		Matrix Spike RQ2007136-07			Duplicate Matrix Spike RQ2007136-08					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Pyruvic Acid	ND U	1.52	2.00	76	1.43	2.00	72 *	73-122	6	30
Acetic Acid	ND U	19.8	20.1	99	18.4	20.1	92	80-130	8	30
Butanoic Acid (Butyric Acid)	ND U	20.1	20.1	100	17.8	20.1	89	86-128	12	30
Lactic Acid	ND U	19.0	20.0	95	17.7	20.0	89	81-114	7	30
Propionic Acid	ND U	20.5	20.0	102	18.6	20.0	93	63-153	10	30

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.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: LHAAP / Site 58/NW01312.0150
Sample Matrix: Water

Service Request: R2005464
Date Analyzed: 07/01/20 14:56

Method Blank Summary

Organic Acids in Aqueous Matrices by High Performance Liquid Chromatography (HPLC) 28 Day Hold Time

Sample Name: Method Blank
Lab Code: RQ2007136-02

Instrument ID:R-HPLC-05
File ID:I:\ACQUDATA\hplc05\data\070120\A0005449.D\

Analysis Method: Organic Acids
Analysis Lot:686010

This Method Blank applies to the following analyses.

Sample Name	Lab Code	File ID	Date Analyzed
Lab Control Sample	RQ2007136-03	I:\ACQUDATA\hplc05\data\070120\A0005450.D\	07/01/20 16:02
Duplicate Lab Control Sample	RQ2007136-04	I:\ACQUDATA\hplc05\data\070120\A0005451.D\	07/01/20 17:05
35AWW19_062420	R2005464-001	I:\ACQUDATA\hplc05\data\070120\A0005464.D\	07/02/20 06:44
35AWW19_062420MS	RQ2007136-07	I:\ACQUDATA\hplc05\data\070120\A0005465.D\	07/02/20 07:44
35AWW19_062420DMS	RQ2007136-08	I:\ACQUDATA\hplc05\data\070120\A0005467.D\	07/02/20 09:50
35AWW20_062420	R2005464-002	I:\ACQUDATA\hplc05\data\070120\A0005468.D\	07/02/20 10:56
LHSMW07_062420	R2005464-003	I:\ACQUDATA\hplc05\data\070120\A0005469.D\	07/02/20 11:56
35AWW06_062420	R2005464-004	I:\ACQUDATA\hplc05\data\070120\A0005470.D\	07/02/20 13:02
35AWW23_062420	R2005464-005	I:\ACQUDATA\hplc05\data\070120\A0005471.D\	07/02/20 14:02

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	R2005464
Project:	LHAAP / Site 58/NW01312.0150	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	mg/L
Lab Code:	RQ2007136-02	**Basis:**	NA

Organic Acids in Aqueous Matrices by High Performance Liquid Chromatography (HPLC) 28 Day Hold Time

Analysis Method: Organic Acids

Analyte Name	Result		LOQ	LOD	MDL	Dil.	Date Analyzed	Q
Pyruvic Acid	ND	U	0.20	0.10	0.016	1	07/01/20 14:56	
Acetic Acid	ND	U	4.0	2.0	0.56	1	07/01/20 14:56	
Butanoic Acid (Butyric Acid)	ND	U	2.0	1.0	0.32	1	07/01/20 14:56	
Lactic Acid	ND	U	2.0	1.0	0.14	1	07/01/20 14:56	
Propionic Acid	ND	U	2.0	1.0	0.19	1	07/01/20 14:56	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: LHAAP / Site 58/NW01312.0150
Sample Matrix: Water

Service Request: R2005464
Date Analyzed: 07/01/20 16:02

Lab Control Sample Summary
Organic Acids in Aqueous Matrices by High Performance Liquid Chromatography (HPLC) 28 Day Hold Time

Sample Name: Lab Control Sample
Lab Code: RQ2007136-03

Instrument ID:R-HPLC-05
File ID:I:\ACQUDATA\hplc05\data\070120\A0005450.D\

Analysis Method: Organic Acids
Analysis Lot:686010

This Lab Control Sample applies to the following analyses.

Sample Name	Lab Code	File ID	Date Analyzed
Method Blank	RQ2007136-02	I:\ACQUDATA\hplc05\data\070120\A0005449.D\	07/01/20 14:56
Duplicate Lab Control Sample	RQ2007136-04	I:\ACQUDATA\hplc05\data\070120\A0005451.D\	07/01/20 17:05
35AWW19_062420	R2005464-001	I:\ACQUDATA\hplc05\data\070120\A0005464.D\	07/02/20 06:44
35AWW19_062420MS	RQ2007136-07	I:\ACQUDATA\hplc05\data\070120\A0005465.D\	07/02/20 07:44
35AWW19_062420DMS	RQ2007136-08	I:\ACQUDATA\hplc05\data\070120\A0005467.D\	07/02/20 09:50
35AWW20_062420	R2005464-002	I:\ACQUDATA\hplc05\data\070120\A0005468.D\	07/02/20 10:56
LHSMW07_062420	R2005464-003	I:\ACQUDATA\hplc05\data\070120\A0005469.D\	07/02/20 11:56
35AWW06_062420	R2005464-004	I:\ACQUDATA\hplc05\data\070120\A0005470.D\	07/02/20 13:02
35AWW23_062420	R2005464-005	I:\ACQUDATA\hplc05\data\070120\A0005471.D\	07/02/20 14:02

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: LHAAP / Site 58/NW01312.0150
Sample Matrix: Water

Service Request: R2005464
Date Analyzed: 07/01/20

Duplicate Lab Control Sample Summary
Organic Acids in Aqueous Matrices by High Performance Liquid Chromatography (HPLC) 28 Day Hold Time

Units:mg/L
Basis:NA

		Lab Control Sample			Duplicate Lab Control Sample					
		RQ2007136-03			RQ2007136-04					
Analyte Name	**Analytical Method**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Pyruvic Acid	Organic Acids	1.95	2.00	98	1.74	2.00	87	73-122	11	30
Acetic Acid	Organic Acids	24.8	20.1	123	22.1	20.1	110	80-130	11	30
Butanoic Acid (Butyric Acid)	Organic Acids	23.5	20.1	117	21.2	20.1	106	86-128	10	30
Lactic Acid	Organic Acids	22.9	20.0	114	21.0	20.0	105	81-114	9	30
Propionic Acid	Organic Acids	25.3	20.0	126	22.7	20.0	113	63-153	11	30

Raw Data

ALS Environmental—Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com

Semivolatile Organic Compounds by GC

ALS Environmental—Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	R2005464
Project:	LHAAP / Site 58/NW01312.0150	**Date Collected:**	06/24/20 08:30
Sample Matrix:	Water	**Date Received:**	06/25/20 10:15
Sample Name:	35AWW19_062420	**Units:**	mg/L
Lab Code:	R2005464-001	**Basis:**	NA

Organic Acids in Aqueous Matrices by High Performance Liquid Chromatography (HPLC) 28 Day Hold Time

Analysis Method: Organic Acids

Analyte Name	Result	LOQ	LOD	MDL	Dil.	Date Analyzed	Q
Pyruvic Acid	ND U	0.20	0.10	0.016	1	07/02/20 06:44	
Acetic Acid	ND U	4.0	2.0	0.56	1	07/02/20 06:44	
Butanoic Acid (Butyric Acid)	ND U	2.0	1.0	0.32	1	07/02/20 06:44	
Lactic Acid	ND U	2.0	1.0	0.14	1	07/02/20 06:44	
Propionic Acid	ND U	2.0	1.0	0.19	1	07/02/20 06:44	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	R2005464
Project:	LHAAP / Site 58/NW01312.0150	**Date Collected:**	06/24/20 09:25
Sample Matrix:	Water	**Date Received:**	06/25/20 10:15
Sample Name:	35AWW20_062420	**Units:**	mg/L
Lab Code:	R2005464-002	**Basis:**	NA

Organic Acids in Aqueous Matrices by High Performance Liquid Chromatography (HPLC) 28 Day Hold Time

Analysis Method: Organic Acids

Analyte Name	Result		LOQ	LOD	MDL	Dil.	Date Analyzed	Q
Pyruvic Acid	ND	U	0.20	0.10	0.016	1	07/02/20 10:56	
Acetic Acid	ND	U	4.0	2.0	0.56	1	07/02/20 10:56	
Butanoic Acid (Butyric Acid)	ND	U	2.0	1.0	0.32	1	07/02/20 10:56	
Lactic Acid	ND	U	2.0	1.0	0.14	1	07/02/20 10:56	
Propionic Acid	ND	U	2.0	1.0	0.19	1	07/02/20 10:56	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	R2005464
Project:	LHAAP / Site 58/NW01312.0150	**Date Collected:**	06/24/20 10:15
Sample Matrix:	Water	**Date Received:**	06/25/20 10:15
Sample Name:	LHSMW07_062420	**Units:**	mg/L
Lab Code:	R2005464-003	**Basis:**	NA

Organic Acids in Aqueous Matrices by High Performance Liquid Chromatography (HPLC) 28 Day Hold Time

Analysis Method: Organic Acids

Analyte Name	Result		LOQ	LOD	MDL	Dil.	Date Analyzed	Q
Pyruvic Acid	ND	U	0.20	0.10	0.016	1	07/02/20 11:56	
Acetic Acid	ND	U	4.0	2.0	0.56	1	07/02/20 11:56	
Butanoic Acid (Butyric Acid)	ND	U	2.0	1.0	0.32	1	07/02/20 11:56	
Lactic Acid	ND	U	2.0	1.0	0.14	1	07/02/20 11:56	
Propionic Acid	ND	U	2.0	1.0	0.19	1	07/02/20 11:56	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	R2005464
Project:	LHAAP / Site 58/NW01312.0150	**Date Collected:**	06/24/20 11:05
Sample Matrix:	Water	**Date Received:**	06/25/20 10:15
Sample Name:	35AWW06_062420	**Units:**	mg/L
Lab Code:	R2005464-004	**Basis:**	NA

Organic Acids in Aqueous Matrices by High Performance Liquid Chromatography (HPLC) 28 Day Hold Time

Analysis Method: Organic Acids

Analyte Name	Result		LOQ	LOD	MDL	Dil.	Date Analyzed	Q
Pyruvic Acid	ND	U	0.20	0.10	0.016	1	07/02/20 13:02	
Acetic Acid	ND	U	4.0	2.0	0.56	1	07/02/20 13:02	
Butanoic Acid (Butyric Acid)	ND	U	2.0	1.0	0.32	1	07/02/20 13:02	
Lactic Acid	ND	U	2.0	1.0	0.14	1	07/02/20 13:02	
Propionic Acid	ND	U	2.0	1.0	0.19	1	07/02/20 13:02	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	R2005464
Project:	LHAAP / Site 58/NW01312.0150	**Date Collected:**	06/24/20 12:00
Sample Matrix:	Water	**Date Received:**	06/25/20 10:15
Sample Name:	35AWW23_062420	**Units:**	mg/L
Lab Code:	R2005464-005	**Basis:**	NA

Organic Acids in Aqueous Matrices by High Performance Liquid Chromatography (HPLC) 28 Day Hold Time

Analysis Method: Organic Acids

Analyte Name	Result		LOQ	LOD	MDL	Dil.	Date Analyzed	Q
Pyruvic Acid	ND	U	0.20	0.10	0.016	1	07/02/20 14:02	
Acetic Acid	**76**		4.0	2.0	0.56	1	07/02/20 14:02	
Butanoic Acid (Butyric Acid)	ND	U	2.0	1.0	0.32	1	07/02/20 14:02	
Lactic Acid	ND	U	2.0	1.0	0.14	1	07/02/20 14:02	
Propionic Acid	**44**		2.0	1.0	0.19	1	07/02/20 14:02	

1st AF 07/06/20
2nd BA 07/06/20

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\hplc05\data\070120\
Data File : A0005464.D
Signal(s) : dad1C.ch
Acq On : 02-Jul-2020, 06:44:40
Operator : A.Felser
Sample : R2005464-001
Misc :
ALS Vial : 15 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Jul 02 11:06:16 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Jul 02 11:05:58 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210

	Compound	R.T.	Response	Conc	Units
Target Compounds					
1) t	Formic acid	0.000	0	N.D.	ppm
2) T	Pyruvic acid	0.000	0	N.D.	ppm
3) T	Lactic Acid	0.000	0	N.D.	ppm
4) T	Acetic Acid	0.000	0	N.D.	ppm
5) T	Propionic Acid	0.000	0	N.D.	ppm
6) T	Butyric Acid	0.000	0	N.D.	ppm

(f)=RT Delta > 1/2 Window (m)=manual int.

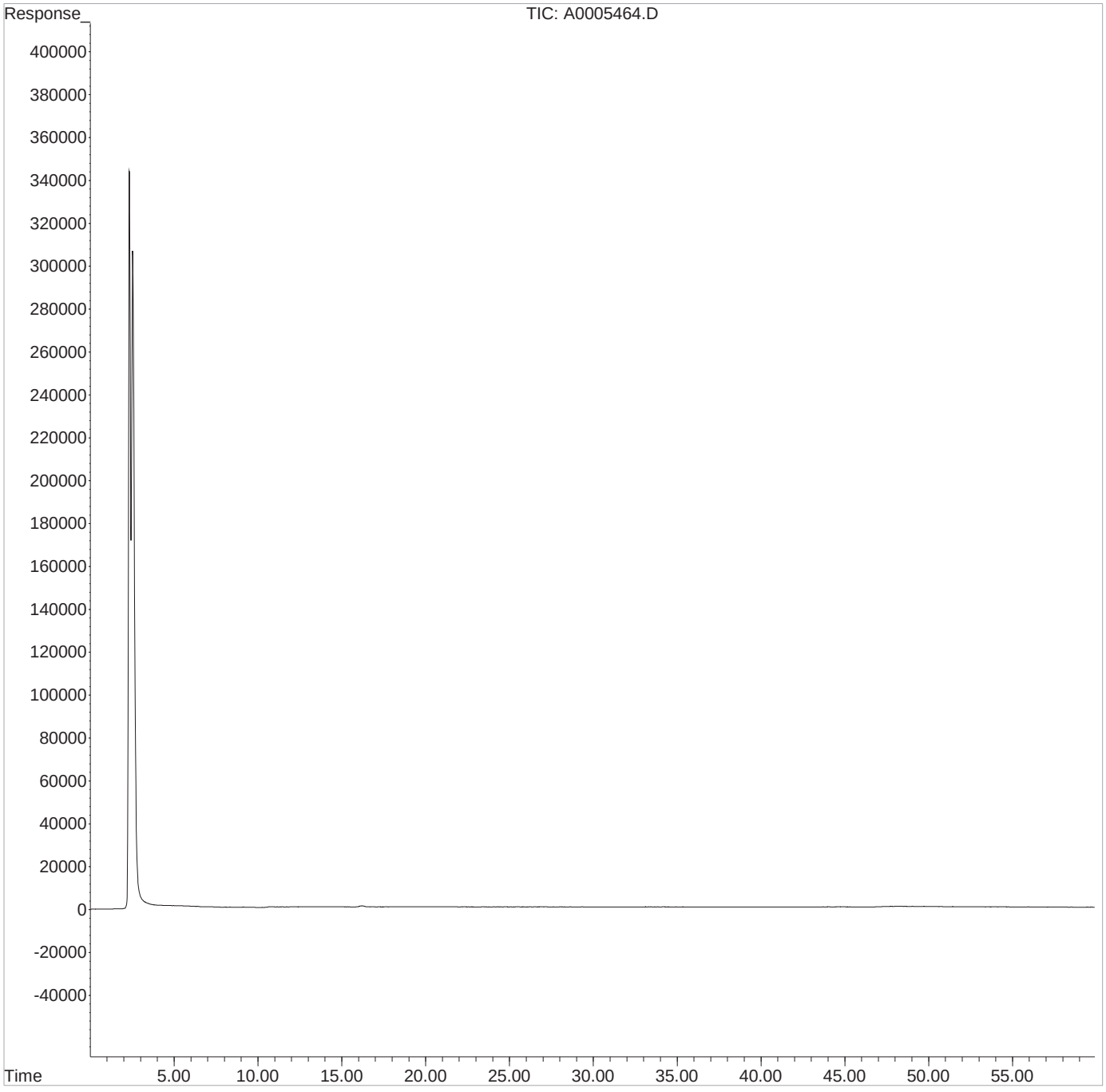
1st AF 07/06/20
2nd BA 07/06/20

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\hplc05\data\070120\
Data File : A0005464.D
Signal(s) : dad1C.ch
Acq On : 02-Jul-2020, 06:44:40
Operator : A.Felser
Sample : R2005464-001
Misc :
ALS Vial : 15 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Jul 02 11:06:16 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Jul 02 11:05:58 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



1st AF 07/06/20
2nd BA 07/06/20

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\hplc05\data\070120\
Data File : A0005468.D
Signal(s) : dad1C.ch
Acq On : 02-Jul-2020, 10:56:30
Operator : A.Felser
Sample : R2005464-002
Misc :
ALS Vial : 18 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Jul 02 16:39:01 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Jul 02 16:38:47 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210

	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1) t	Formic acid	0.000	0	N.D.	ppm	
2) T	Pyruvic acid	0.000	0	N.D.	ppm	
3) T	Lactic Acid	0.000	0	N.D.	ppm	d
4) T	Acetic Acid	0.000	0	N.D.	ppm	
5) T	Propionic Acid	0.000	0	N.D.	ppm	
6) T	Butyric Acid	0.000	0	N.D.	ppm	

(f)=RT Delta > 1/2 Window (m)=manual int.

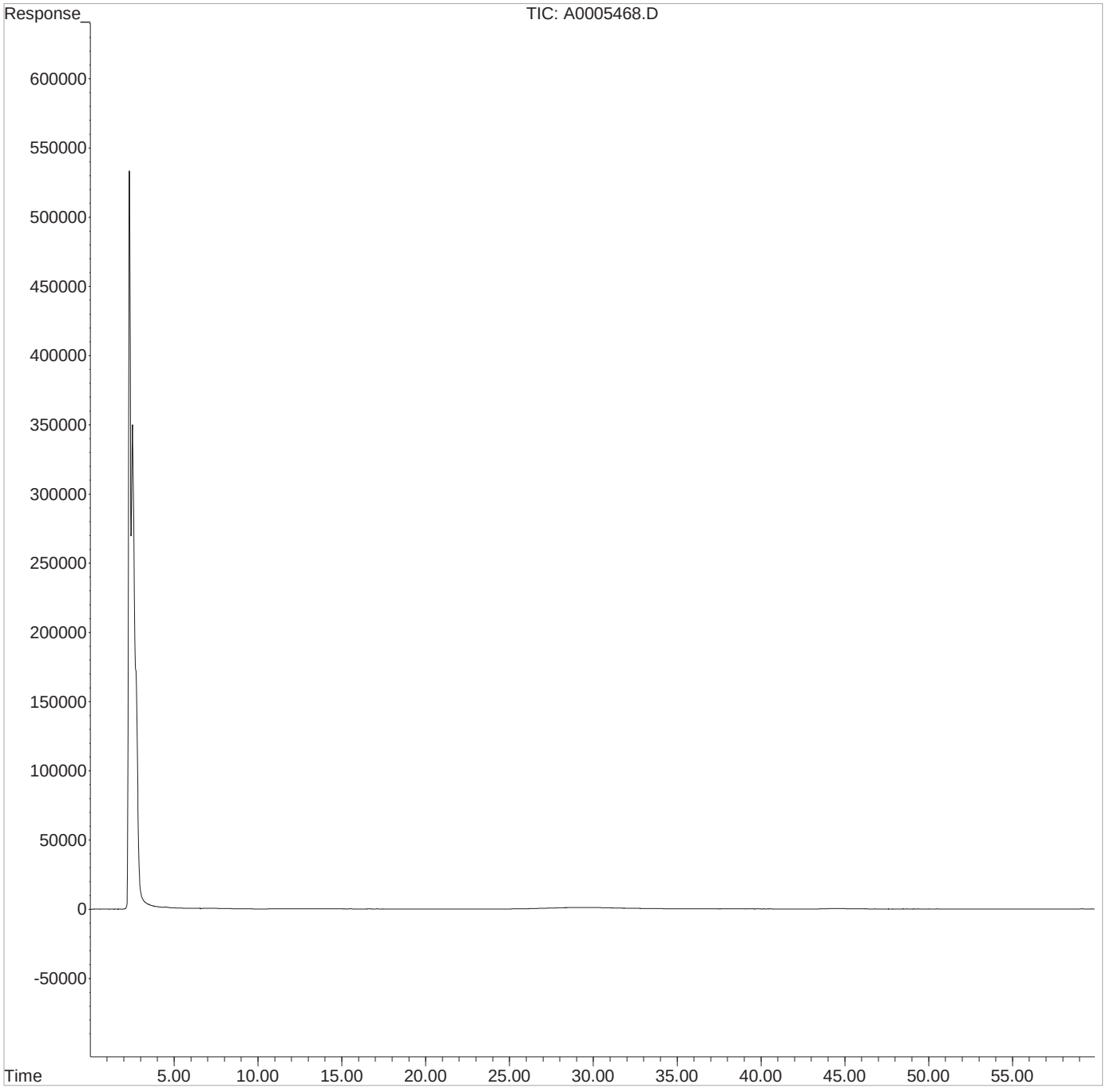
1st AF 07/06/20
2nd BA 07/06/20

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\hplc05\data\070120\
Data File : A0005468.D
Signal(s) : dad1C.ch
Acq On : 02-Jul-2020, 10:56:30
Operator : A.Felser
Sample : R2005464-002
Misc :
ALS Vial : 18 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Jul 02 16:39:01 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Jul 02 16:38:47 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



1st AF 07/06/20
2nd BA 07/06/20

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\hplc05\data\070120\
Data File : A0005469.D
Signal(s) : dad1C.ch
Acq On : ~~31-Dec-2000, 02:48:33~~ 02-Jul-2020, 11:56
Operator : A.Felser
Sample : R2005464-003
Misc :
ALS Vial : 19 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Jul 02 16:39:03 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Jul 02 16:38:47 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210

	Compound	R.T.	Response	Conc	Units
Target Compounds					
1) t	Formic acid	0.000	0	N.D.	ppm
2) T	Pyruvic acid	0.000	0	N.D.	ppm
3) T	Lactic Acid	0.000	0	N.D.	ppm
4) T	Acetic Acid	0.000	0	N.D.	ppm
5) T	Propionic Acid	0.000	0	N.D.	ppm
6) T	Butyric Acid	0.000	0	N.D.	ppm

(f)=RT Delta > 1/2 Window (m)=manual int.

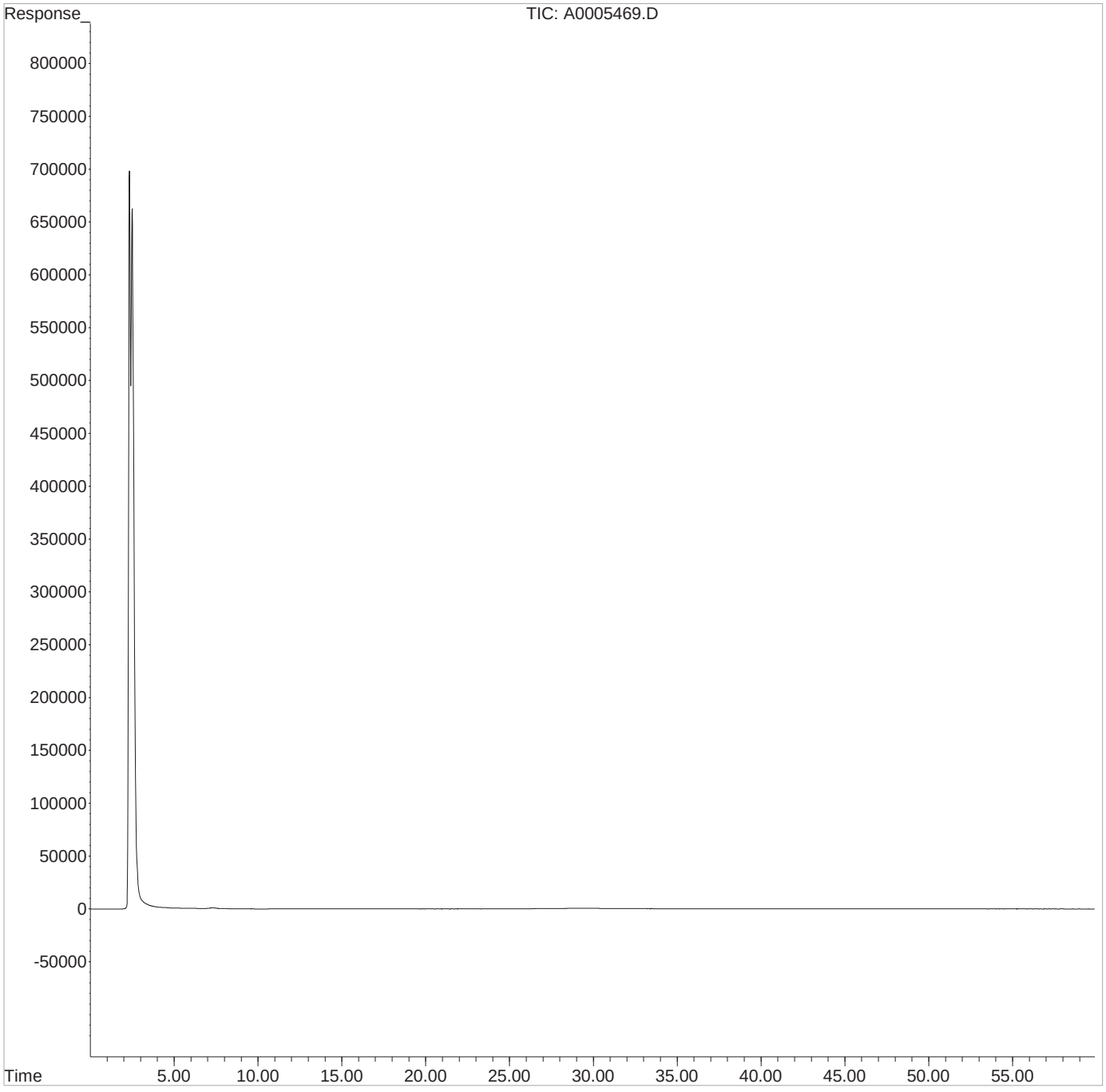
1st AF 07/06/20
2nd BA 07/06/20

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\hplc05\data\070120\
Data File : A0005469.D
Signal(s) : dad1C.ch
Acq On : 31-Dec-2000, 02:48:33
Operator : A.Felser
Sample : R2005464-003
Misc :
ALS Vial : 19 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Jul 02 16:39:03 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Jul 02 16:38:47 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



1st AF 07/06/20
2nd BA 07/06/20

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\hplc05\data\070120\
Data File : A0005470.D
Signal(s) : dad1C.ch
Acq On : 02-Jul-2020, 13:02:27
Operator : A.Felser
Sample : R2005464-004
Misc :
ALS Vial : 20 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Jul 02 16:39:05 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Jul 02 16:38:47 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210

	Compound	R.T.	Response	Conc	Units
Target Compounds					
1) t	Formic acid	0.000	0	N.D.	ppm
2) T	Pyruvic acid	0.000	0	N.D.	ppm
3) T	Lactic Acid	0.000	0	N.D.	ppm
4) T	Acetic Acid	0.000	0	N.D.	ppm
5) T	Propionic Acid	0.000	0	N.D.	ppm
6) T	Butyric Acid	0.000	0	N.D.	ppm

(f)=RT Delta > 1/2 Window (m)=manual int.

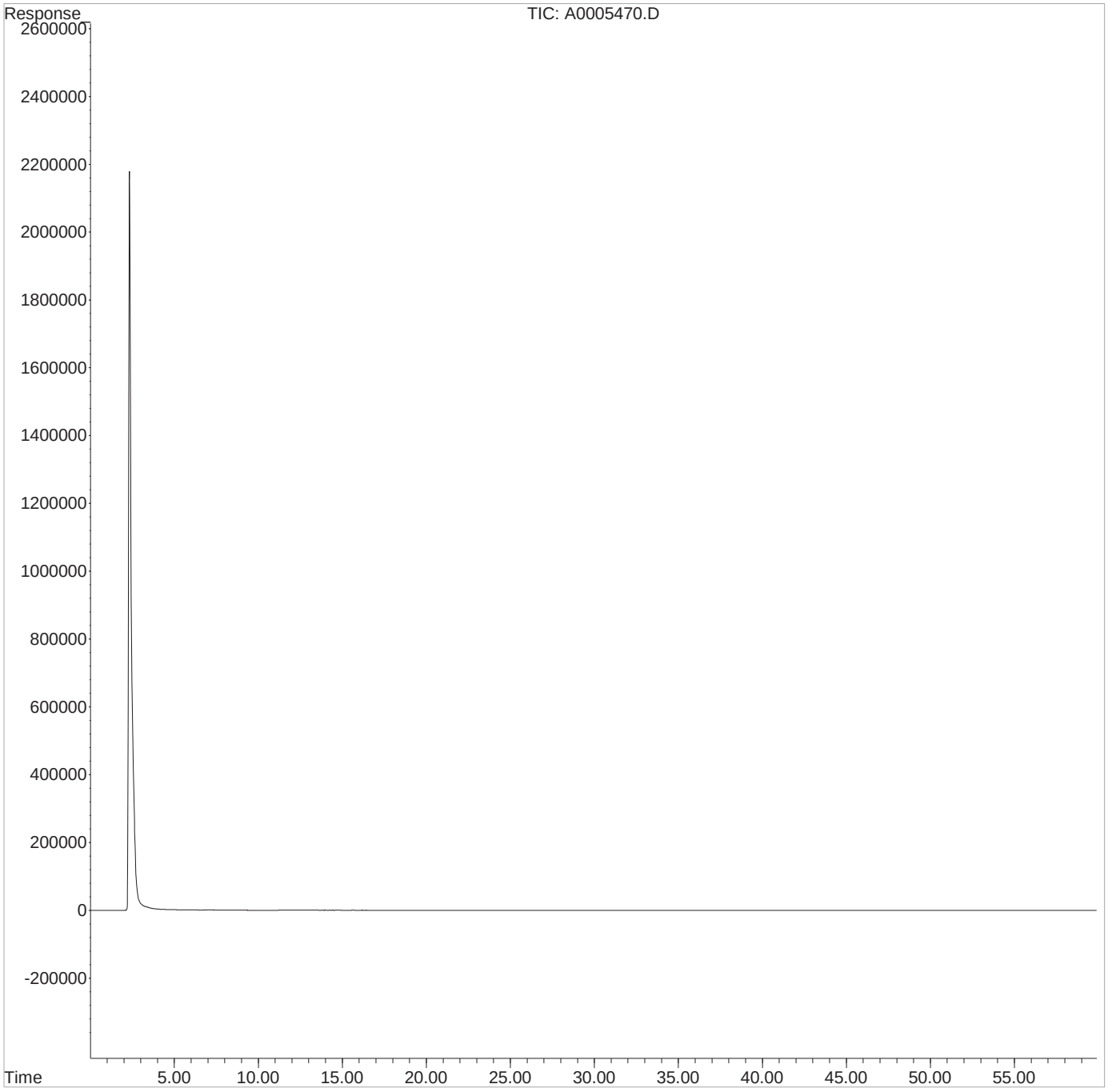
1st AF 07/06/20
2nd BA 07/06/20

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\hplc05\data\070120\
Data File : A0005470.D
Signal(s) : dad1C.ch
Acq On : 02-Jul-2020, 13:02:27
Operator : A.Felser
Sample : R2005464-004
Misc :
ALS Vial : 20 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Jul 02 16:39:05 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Jul 02 16:38:47 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



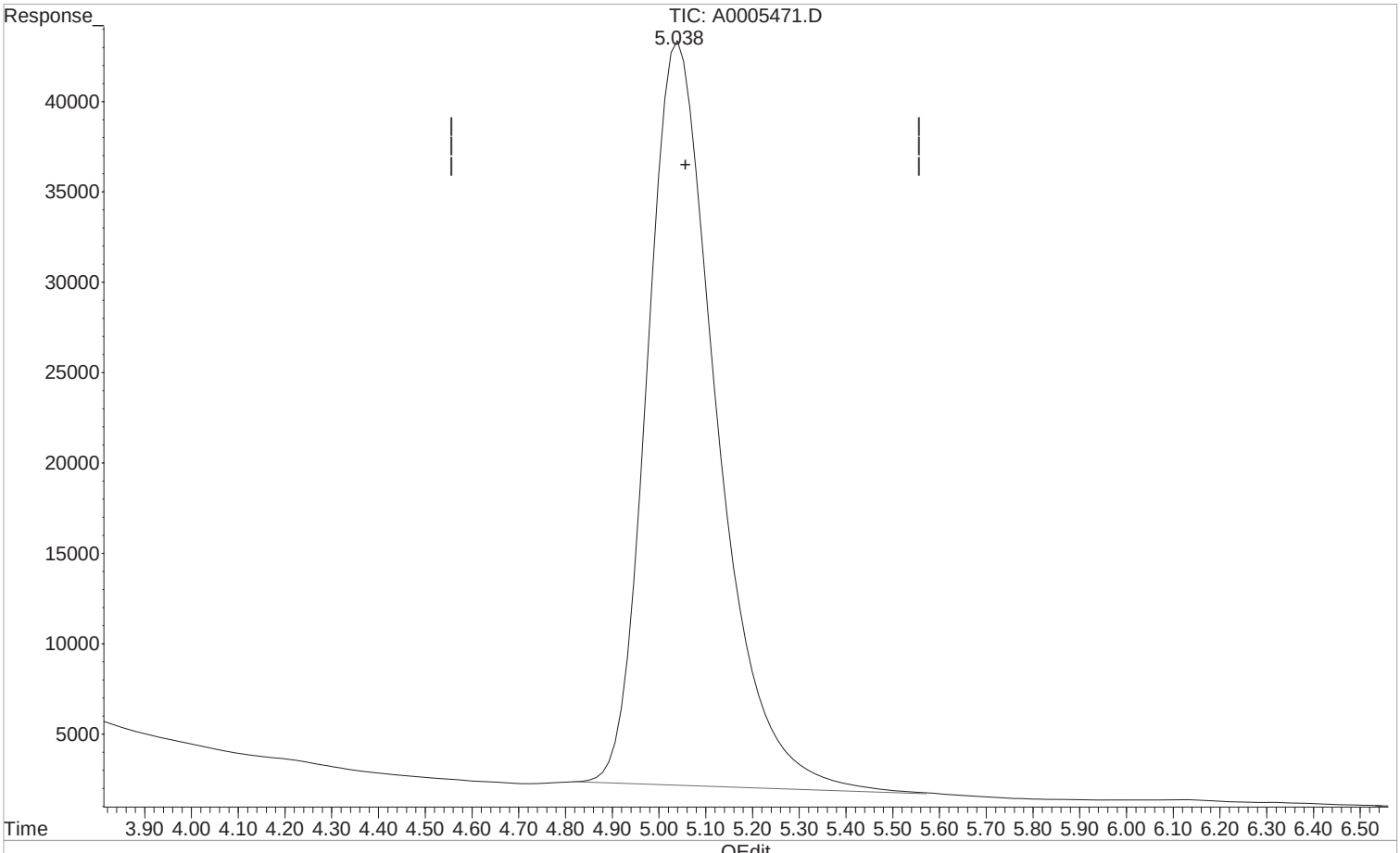
1st

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\070120\
Data File : A0005471.D
Signal(s) : dad1C.ch
Acq On : 31-Dec-2000, 02:48:34
Operator : A.Felser
Sample : R2005464-005
Misc :
ALS Vial : 21 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Jul 02 16:39:07 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Jul 02 16:38:47 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(4) Acetic Acid (T)

5.038min 76.311 ppm m

response 4277103

Manual Integration:

After

Poor integration.

07/02/20

(+) = Expected Retention Time

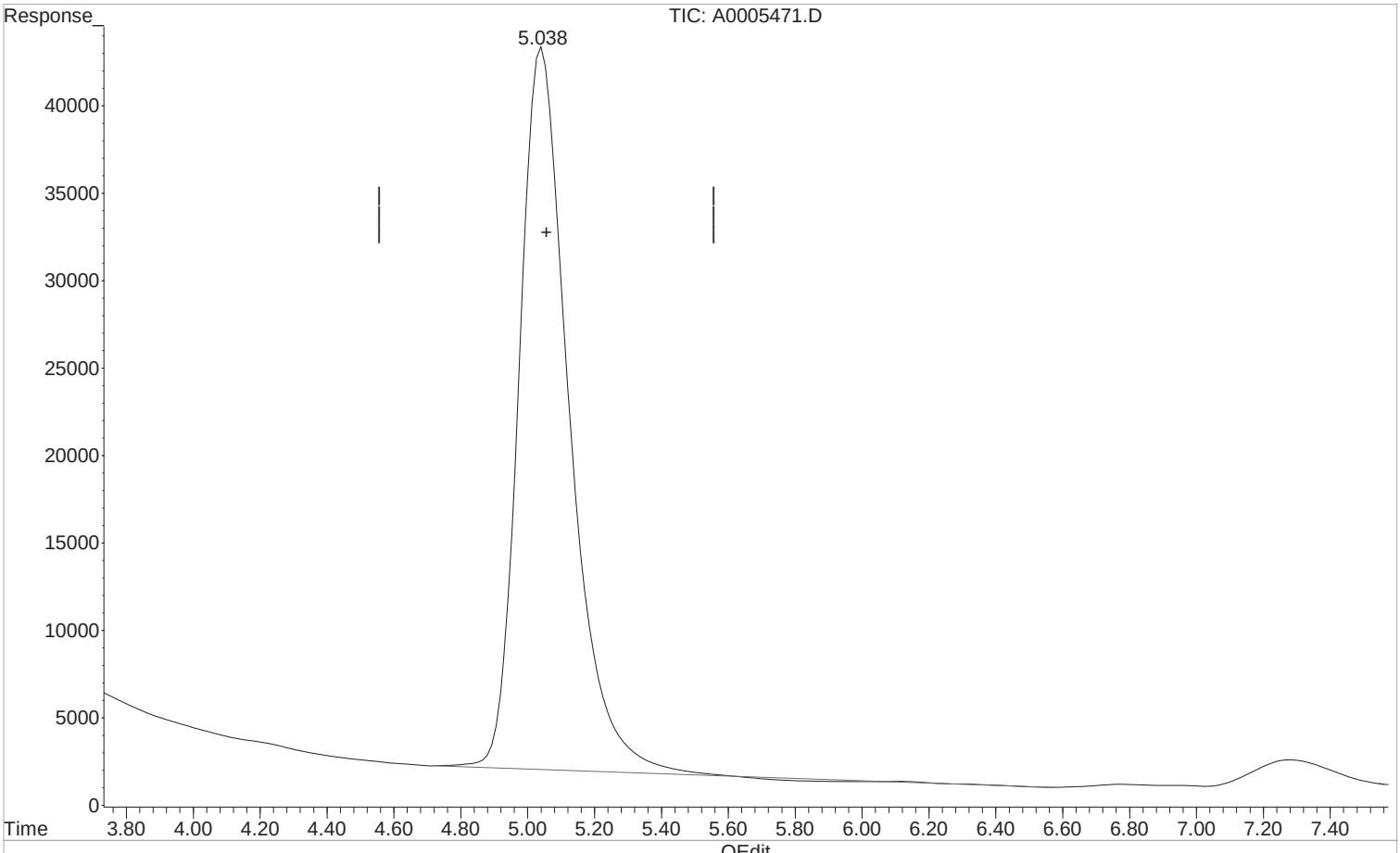
1st

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\070120\
Data File : A0005471.D
Signal(s) : dad1C.ch
Acq On : 31-Dec-2000, 02:48:34
Operator : A.Felser
Sample : R2005464-005
Misc :
ALS Vial : 21 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Jul 02 16:39:07 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Jul 02 16:38:47 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(4) Acetic Acid (T)

5.045min 76.748 ppm

response 4301608

Manual Integration:

Before

07/02/20

(+) = Expected Retention Time

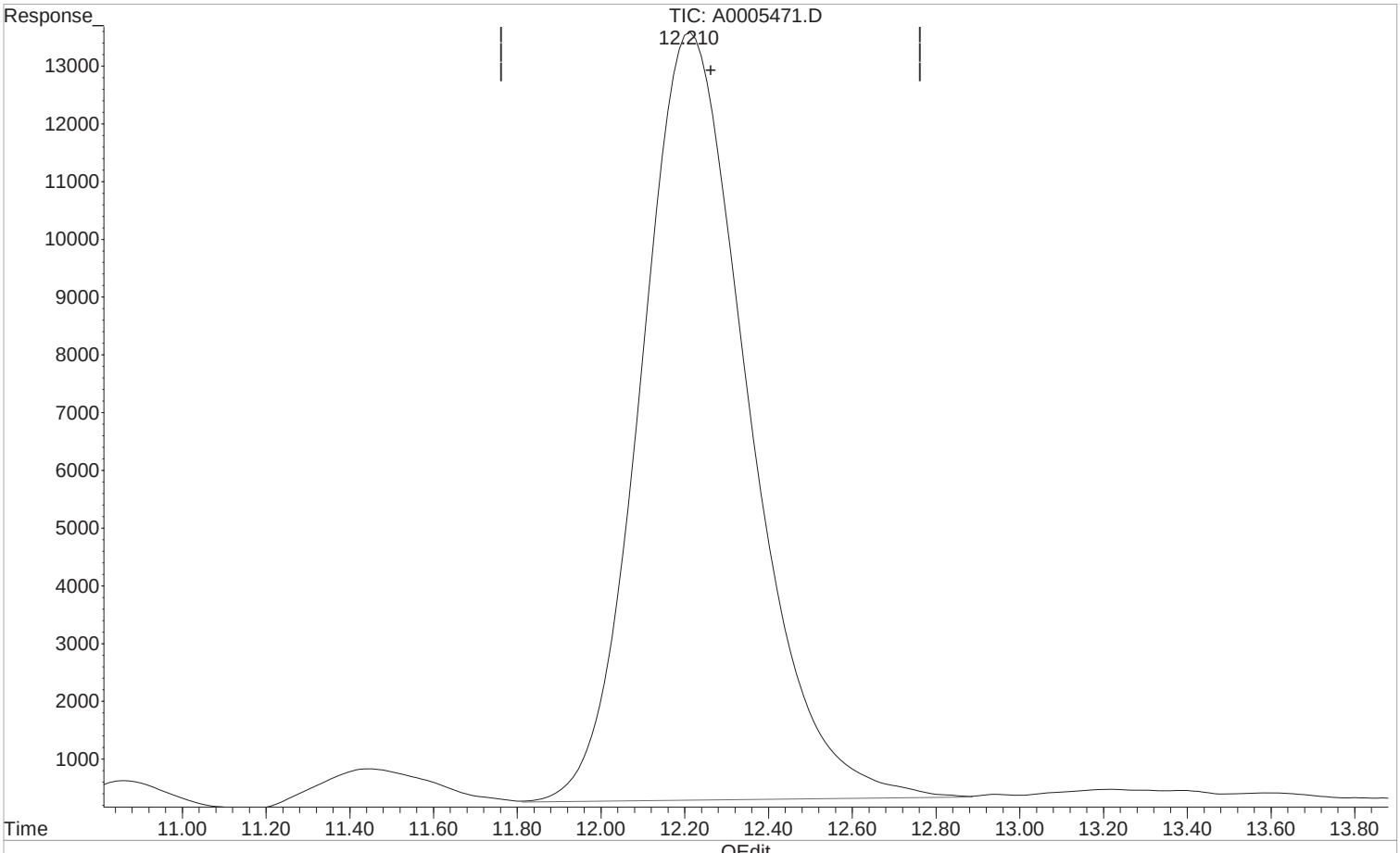
1st

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\070120\
Data File : A0005471.D
Signal(s) : dad1C.ch
Acq On : 31-Dec-2000, 02:48:34
Operator : A.Felser
Sample : R2005464-005
Misc :
ALS Vial : 21 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Jul 02 16:39:07 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Jul 02 16:38:47 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(5) Propionic Acid (T)

12.210min 43.781 ppm m

response 2379811

Manual Integration:

After

Poor integration.

07/02/20

(+) = Expected Retention Time

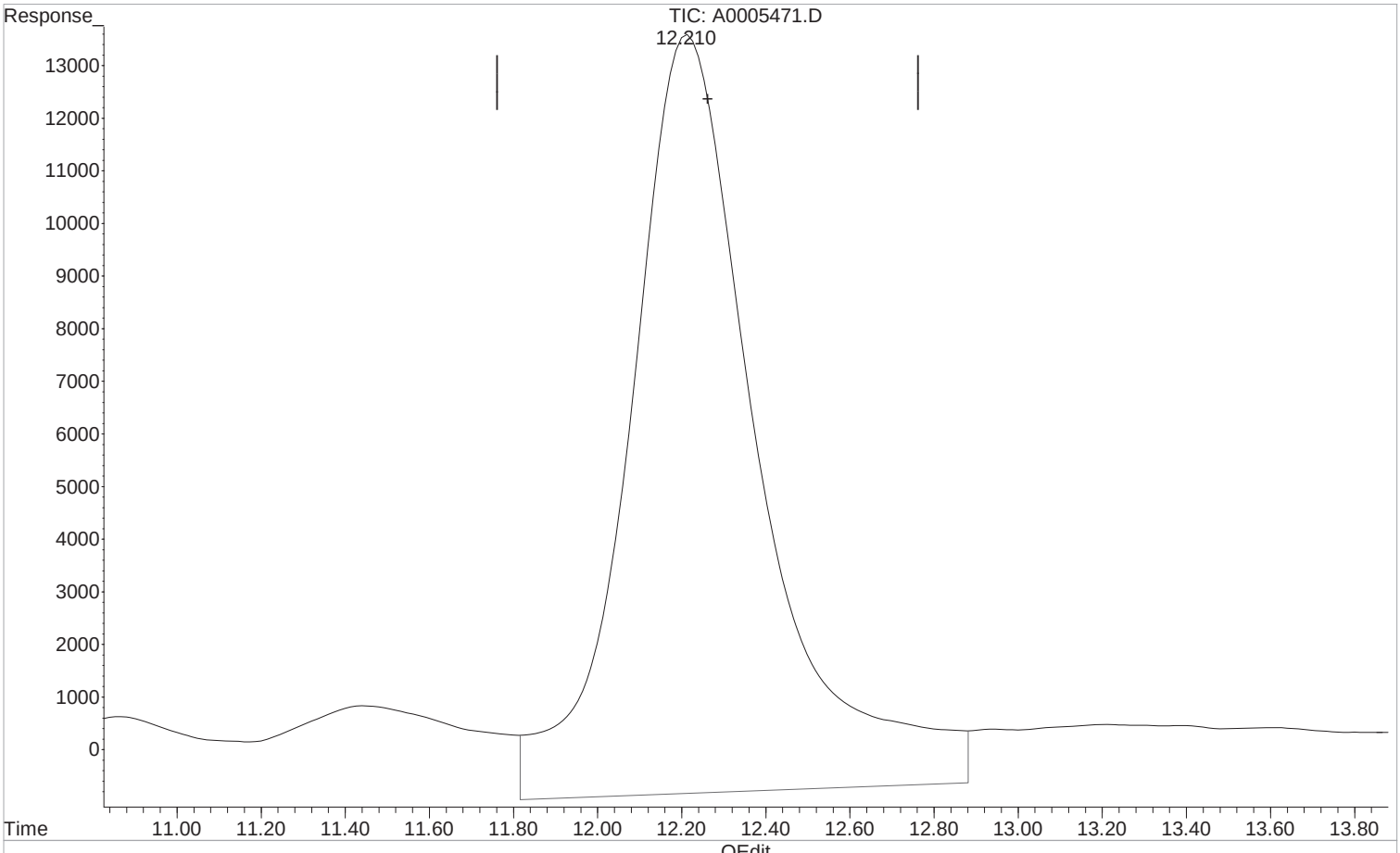
1st

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\070120\
Data File : A0005471.D
Signal(s) : dad1C.ch
Acq On : 31-Dec-2000, 02:48:34
Operator : A.Felser
Sample : R2005464-005
Misc :
ALS Vial : 21 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Jul 02 16:39:07 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Jul 02 16:38:47 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(5) Propionic Acid (T)

12.217min 56.603 ppm

response 3076793

Manual Integration:

Before

07/02/20

(+) = Expected Retention Time

1st AF 07/06/20
2nd BA 07/06/20

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\hplc05\data\070120\
Data File : A0005471.D
Signal(s) : dad1C.ch
Acq On : ~~31-Dec-2000, 02:48:34~~ 02-Jul-2020, 14:02
Operator : A.Felser
Sample : R2005464-005
Misc :
ALS Vial : 21 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Jul 02 16:39:07 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Jul 02 16:38:47 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210

	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1) t	Formic acid	0.000	0	N.D.	ppm	
2) T	Pyruvic acid	0.000	0	N.D.	ppm	
3) T	Lactic Acid	0.000	0	N.D.	ppm	
4) T	Acetic Acid	5.038	4277103	76.311	ppm	m
5) T	Propionic Acid	12.210	2379811	43.781	ppm	m
6) T	Butyric Acid	0.000	0	N.D.	ppm	d

(f)=RT Delta > 1/2 Window (m)=manual int.

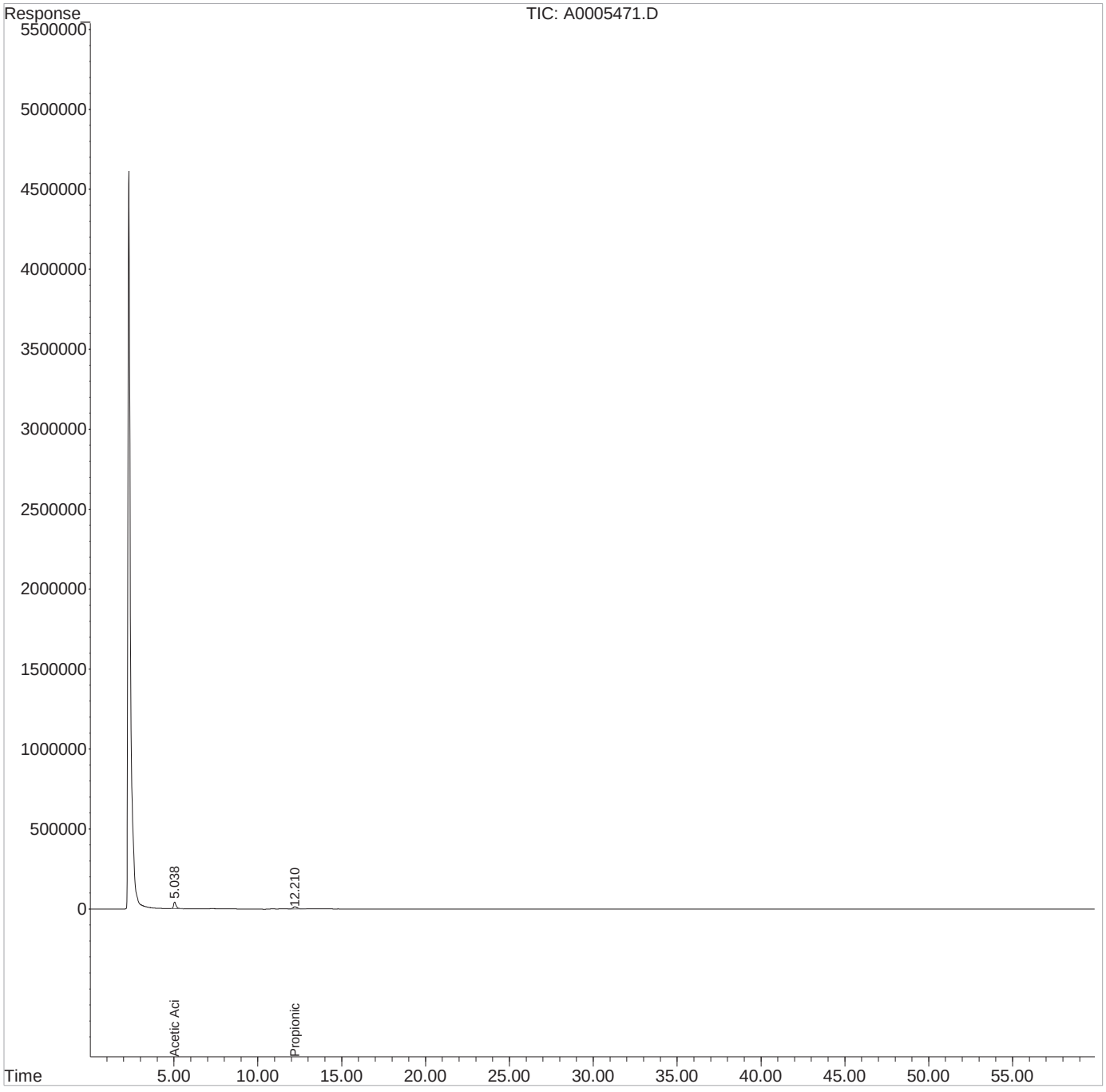
1st AF 07/06/20
2nd BA 07/06/20

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\hplc05\data\070120\
Data File : A0005471.D
Signal(s) : dad1C.ch
Acq On : 31-Dec-2000, 02:48:34
Operator : A.Felser
Sample : R2005464-005
Misc :
ALS Vial : 21 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Jul 02 16:39:07 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Jul 02 16:38:47 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



1st AF 07/06/20
2nd BA 07/06/20

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\hplc05\data\070120\
Data File : A0005449.D
Signal(s) : dad1C.ch
Acq On : ~~31-Dec-2000, 02:48:24~~ 01-Jul-2020, 14:56
Operator : A.Felser
Sample : MB
Misc :
ALS Vial : 2 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Jul 02 11:04:28 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Jul 02 11:03:09 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210

	Compound	R.T.	Response	Conc	Units
Target Compounds					
1) t	Formic acid	0.000	0	N.D.	ppm
2) T	Pyruvic acid	0.000	0	N.D.	ppm
3) T	Lactic Acid	0.000	0	N.D.	ppm
4) T	Acetic Acid	0.000	0	N.D.	ppm
5) T	Propionic Acid	0.000	0	N.D.	ppm
6) T	Butyric Acid	0.000	0	N.D.	ppm

(f)=RT Delta > 1/2 Window (m)=manual int.

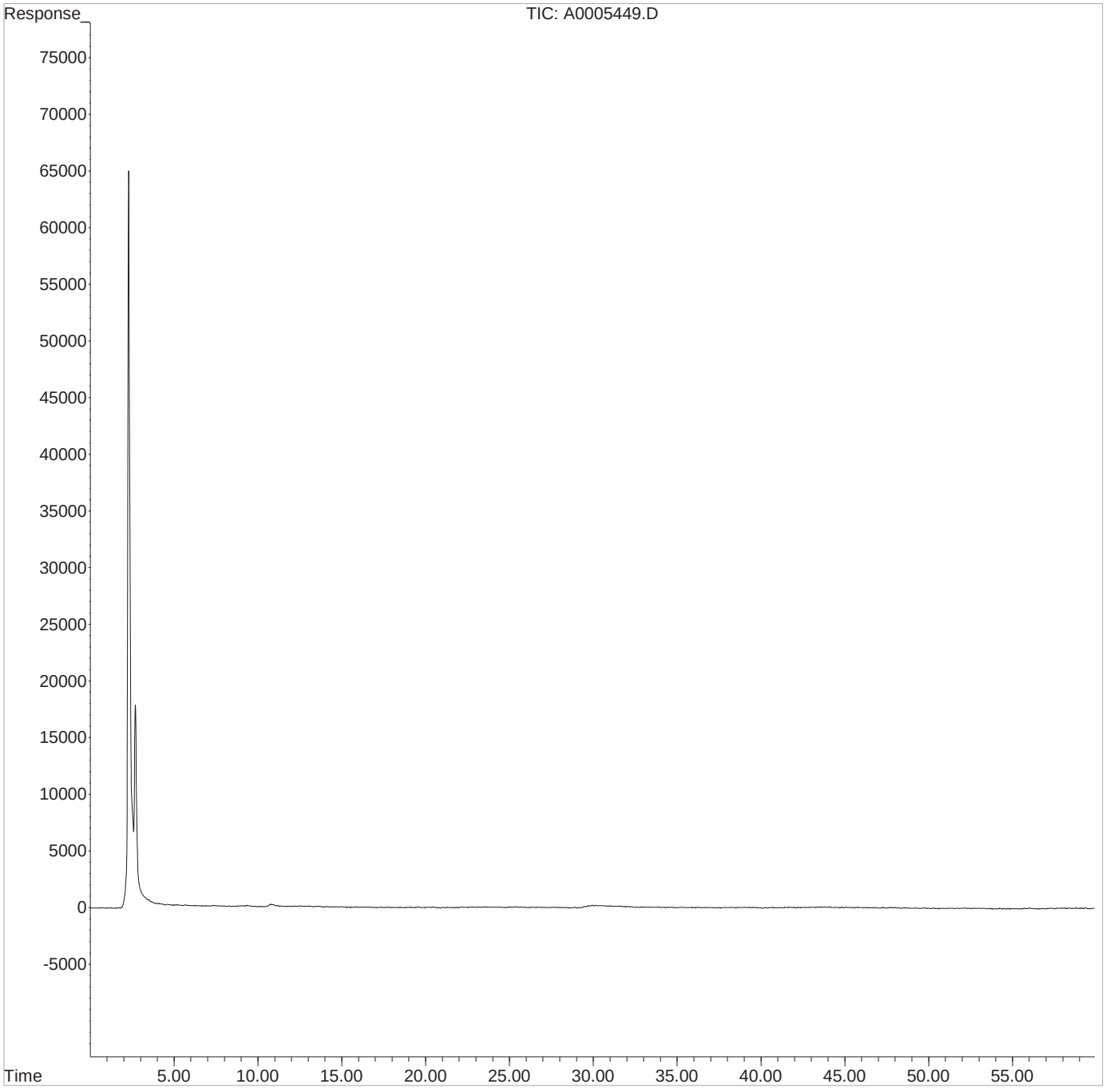
1st AF 07/06/20
2nd BA 07/06/20

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\hplc05\data\070120\
Data File : A0005449.D
Signal(s) : dad1C.ch
Acq On : 31-Dec-2000, 02:48:24
Operator : A.Felser
Sample : MB
Misc :
ALS Vial : 2 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Jul 02 11:04:28 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Jul 02 11:03:09 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



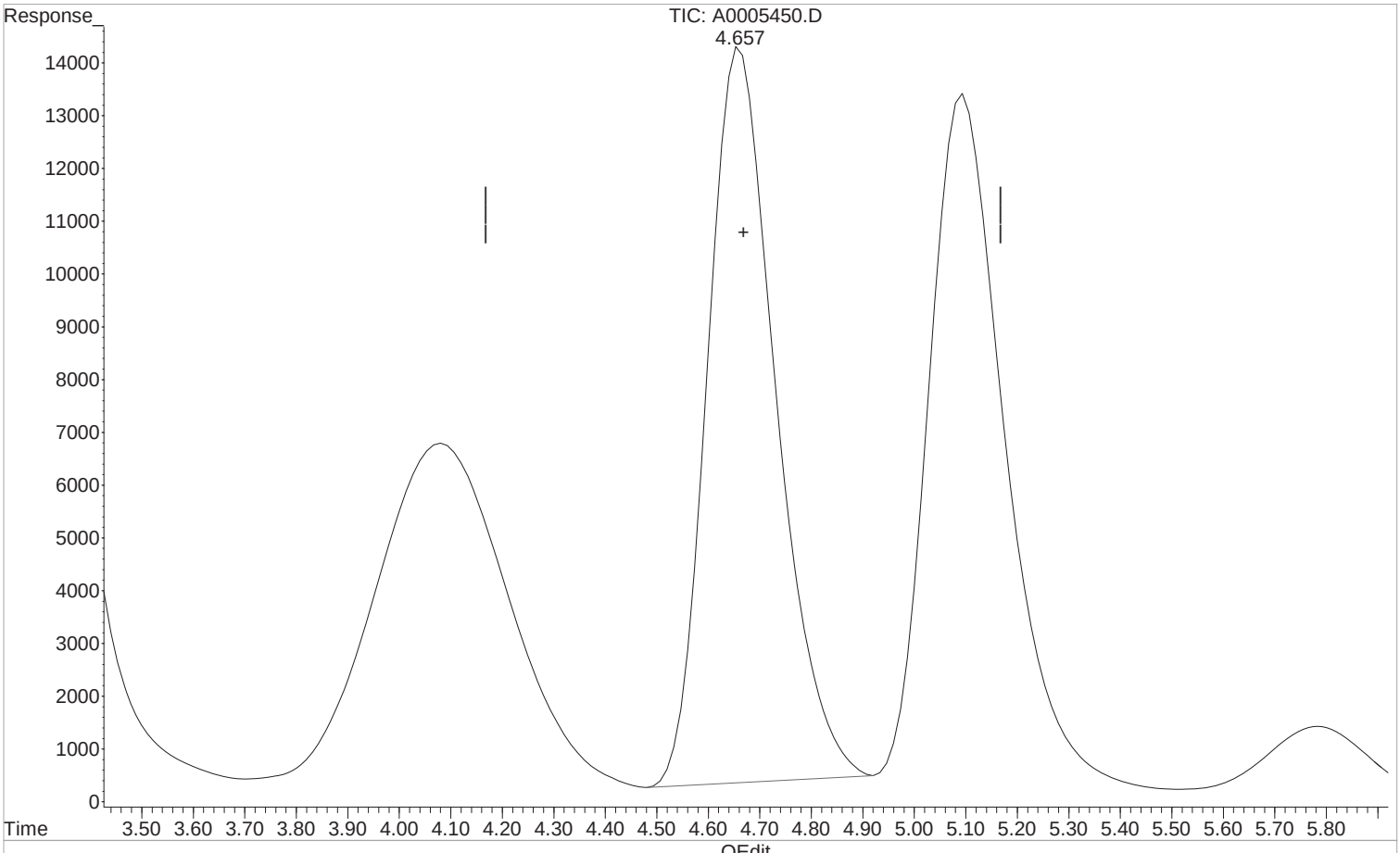
1st

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\070120\
Data File : A0005450.D
Signal(s) : dad1C.ch
Acq On : 01-Jul-2020, 16:02:18
Operator : A.Felser
Sample : LCS
Misc :
ALS Vial : 3 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Jul 02 11:04:31 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Jul 02 11:03:09 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(3) Lactic Acid (T)

4.657min 22.937 ppm m

response 1294019

Manual Integration:

After

Poor integration.

07/06/20

(+) = Expected Retention Time

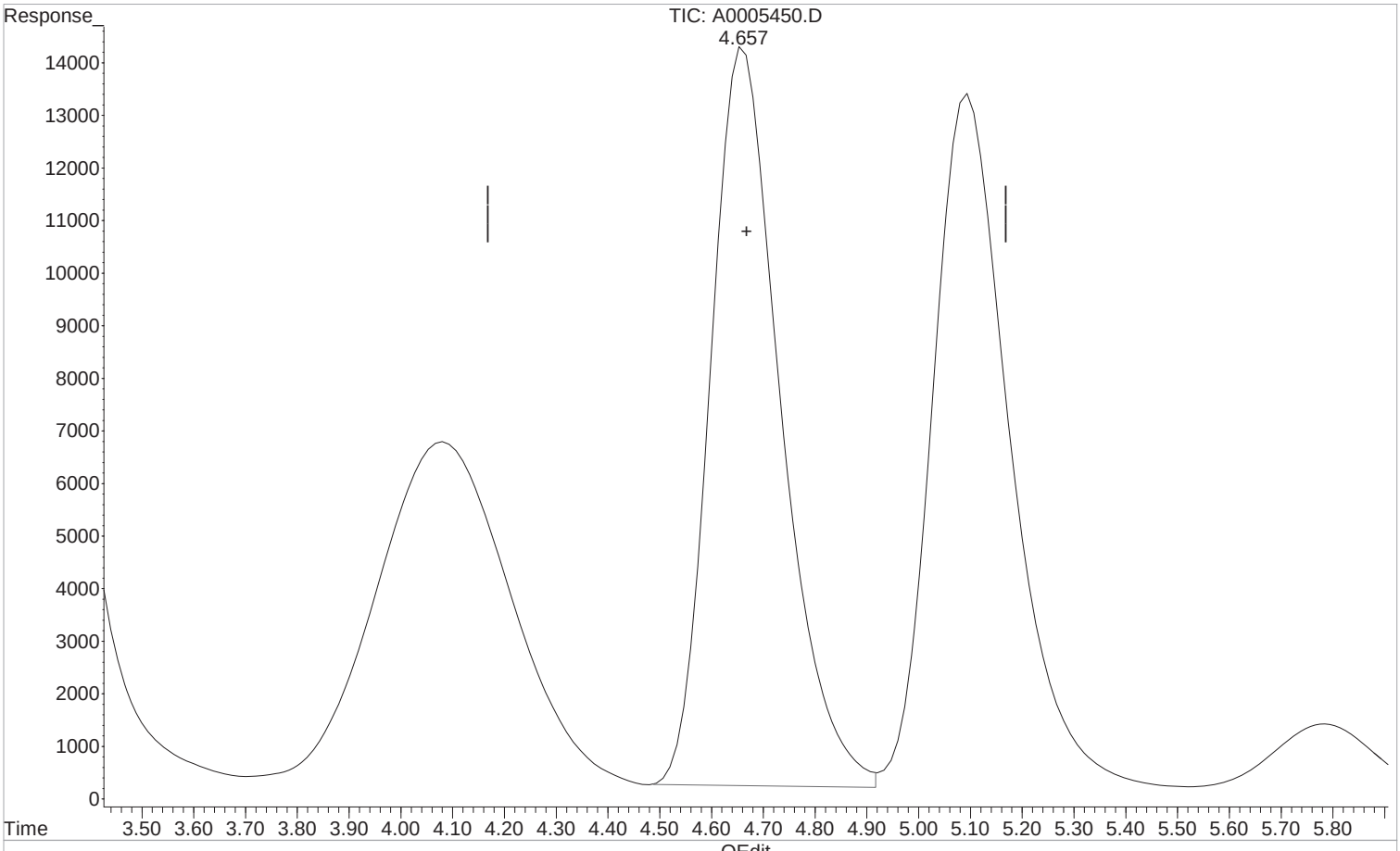
1st

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\070120\
Data File : A0005450.D
Signal(s) : dad1C.ch
Acq On : 01-Jul-2020, 16:02:18
Operator : A.Felser
Sample : LCS
Misc :
ALS Vial : 3 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Jul 02 11:04:31 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Jul 02 11:03:09 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(3) Lactic Acid (T)

4.664min 23.528 ppm

response 1327346

Manual Integration:

Before

07/06/20

(+) = Expected Retention Time

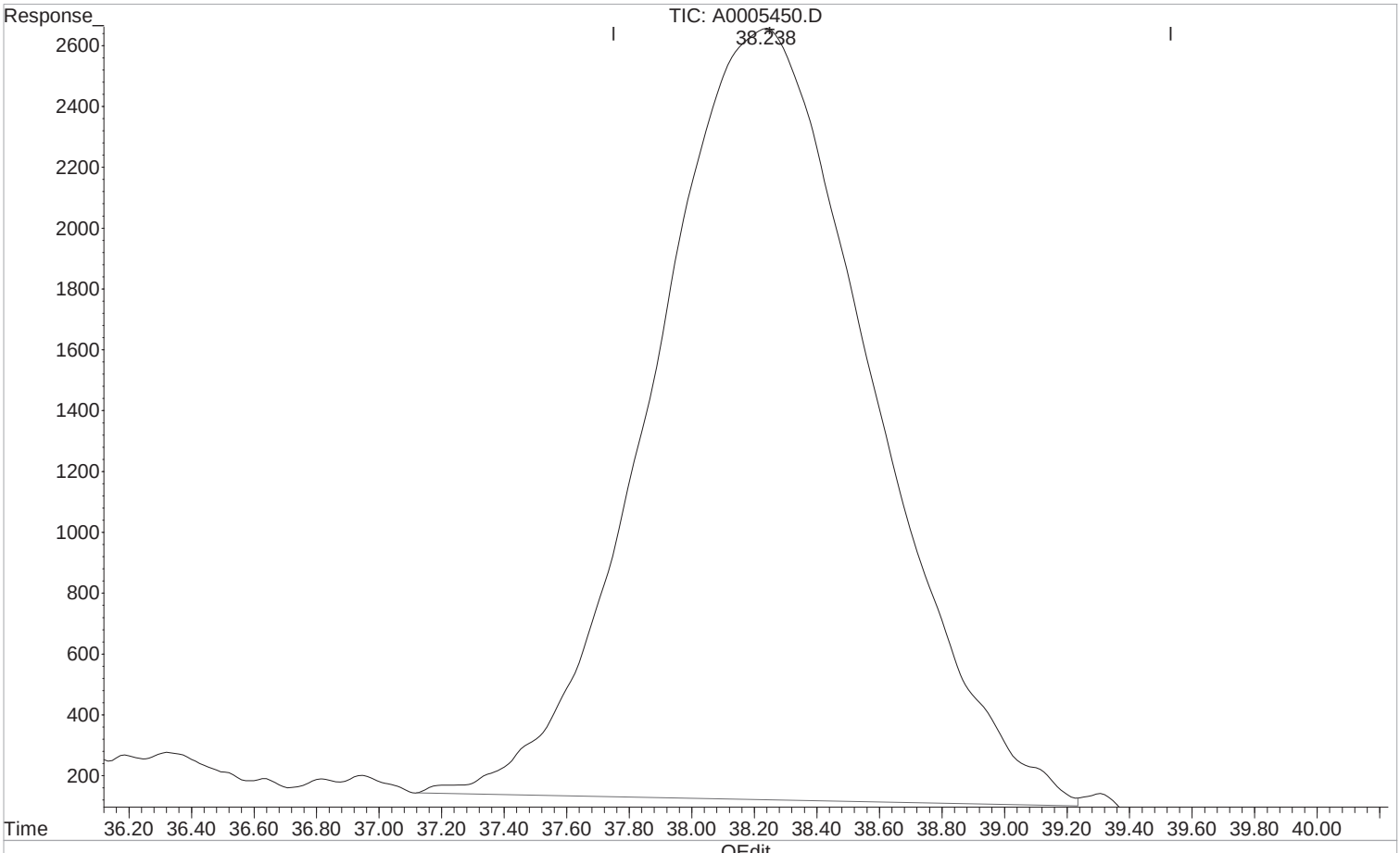
1st

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\070120\
Data File : A0005450.D
Signal(s) : dad1C.ch
Acq On : 01-Jul-2020, 16:02:18
Operator : A.Felser
Sample : LCS
Misc :
ALS Vial : 3 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Jul 02 11:04:31 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Jul 02 11:03:09 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(6) Butyric Acid (T)

38.238min 23.480 ppm m

response 1234140

Manual Integration:

After

Poor integration.

07/02/20

(+) = Expected Retention Time

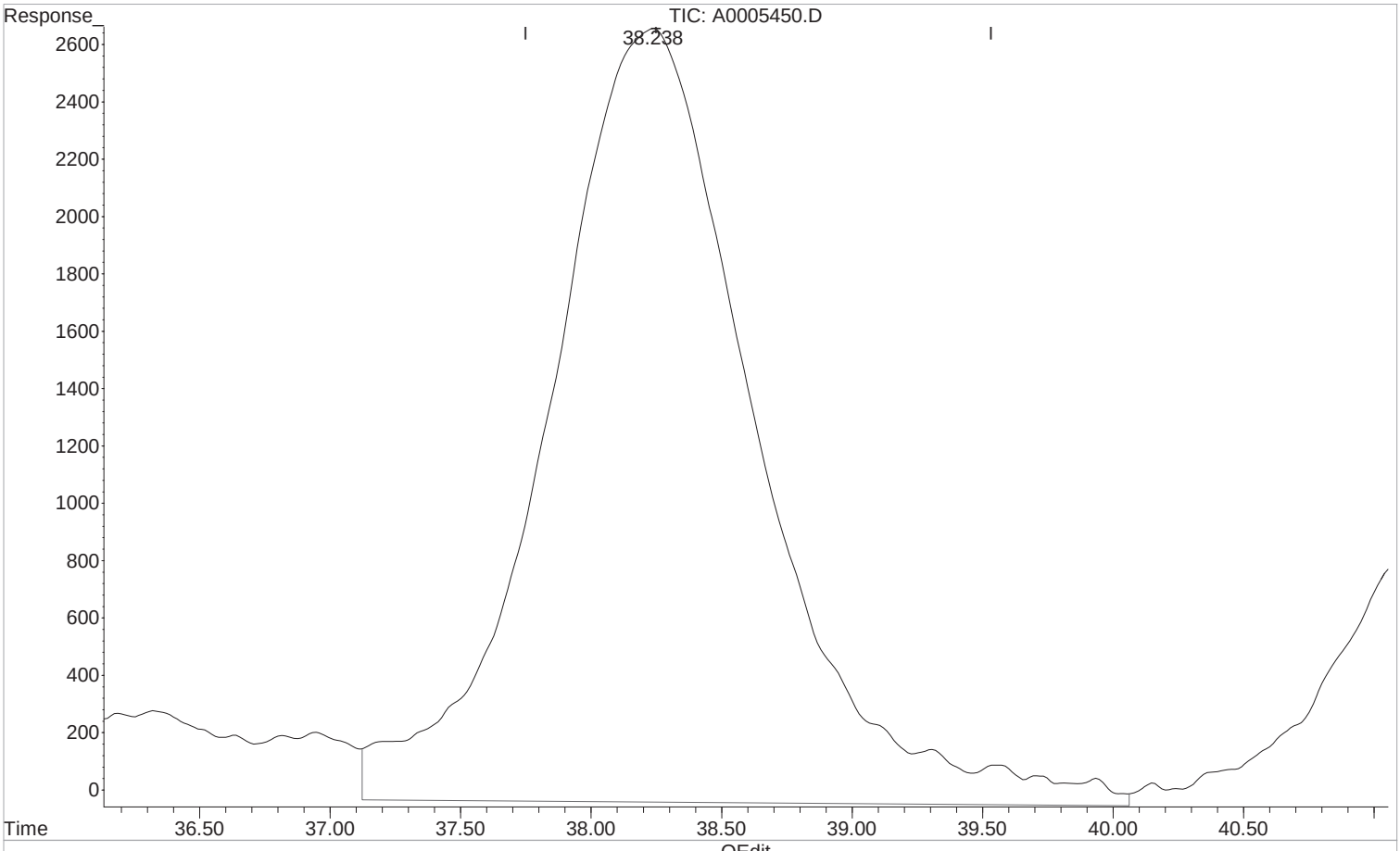
1st

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\070120\
Data File : A0005450.D
Signal(s) : dad1C.ch
Acq On : 01-Jul-2020, 16:02:18
Operator : A.Felser
Sample : LCS
Misc :
ALS Vial : 3 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Jul 02 11:04:31 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Jul 02 11:03:09 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(6) Butyric Acid (T)

38.230min 28.477 ppm

response 1496779

Manual Integration:

Before

07/02/20

(+) = Expected Retention Time

1st AF 07/06/20
2nd BA 07/06/20

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\hplc05\data\070120\
Data File : A0005450.D
Signal(s) : dad1C.ch
Acq On : 01-Jul-2020, 16:02:18
Operator : A.Felser
Sample : LCS
Misc :
ALS Vial : 3 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Jul 02 11:04:31 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Jul 02 11:03:09 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210

	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1) t	Formic acid	3.289	2115098	22.686	ppm	
2) T	Pyruvic acid	4.084	1152581	1.948	ppm	
3) T	Lactic Acid	4.657	1294019	22.937	ppm	m
4) T	Acetic Acid	5.097	1387411	24.754	ppm	
5) T	Propionic Acid	12.474	1373396	25.266	ppm	
6) T	Butyric Acid	38.238	1234140	23.480	ppm	m

(f)=RT Delta > 1/2 Window (m)=manual int.

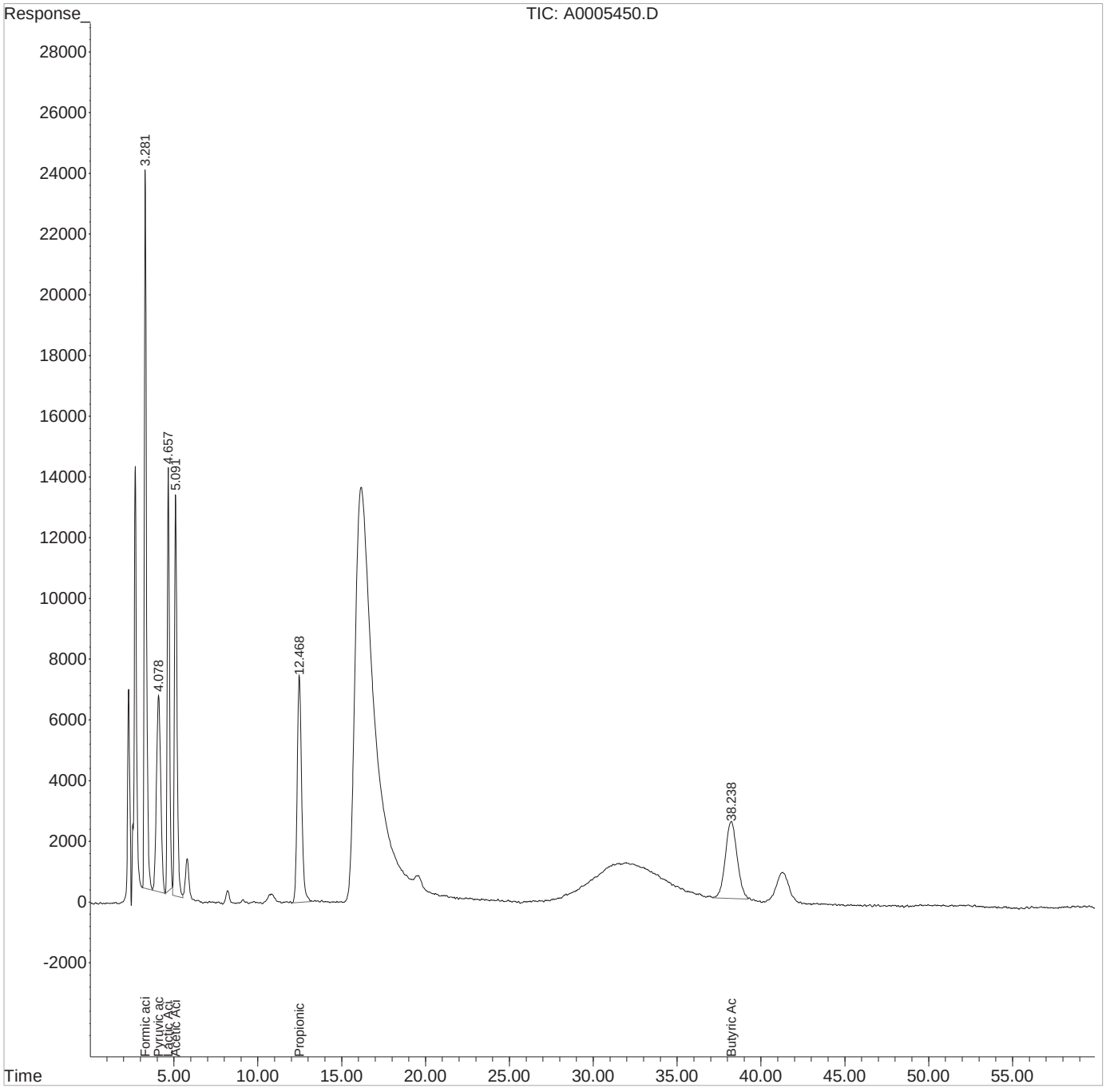
1st AF 07/06/20
2nd BA 07/06/20

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\hplc05\data\070120\
Data File : A0005450.D
Signal(s) : dad1C.ch
Acq On : 01-Jul-2020, 16:02:18
Operator : A.Felser
Sample : LCS
Misc :
ALS Vial : 3 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Jul 02 11:04:31 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Jul 02 11:03:09 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



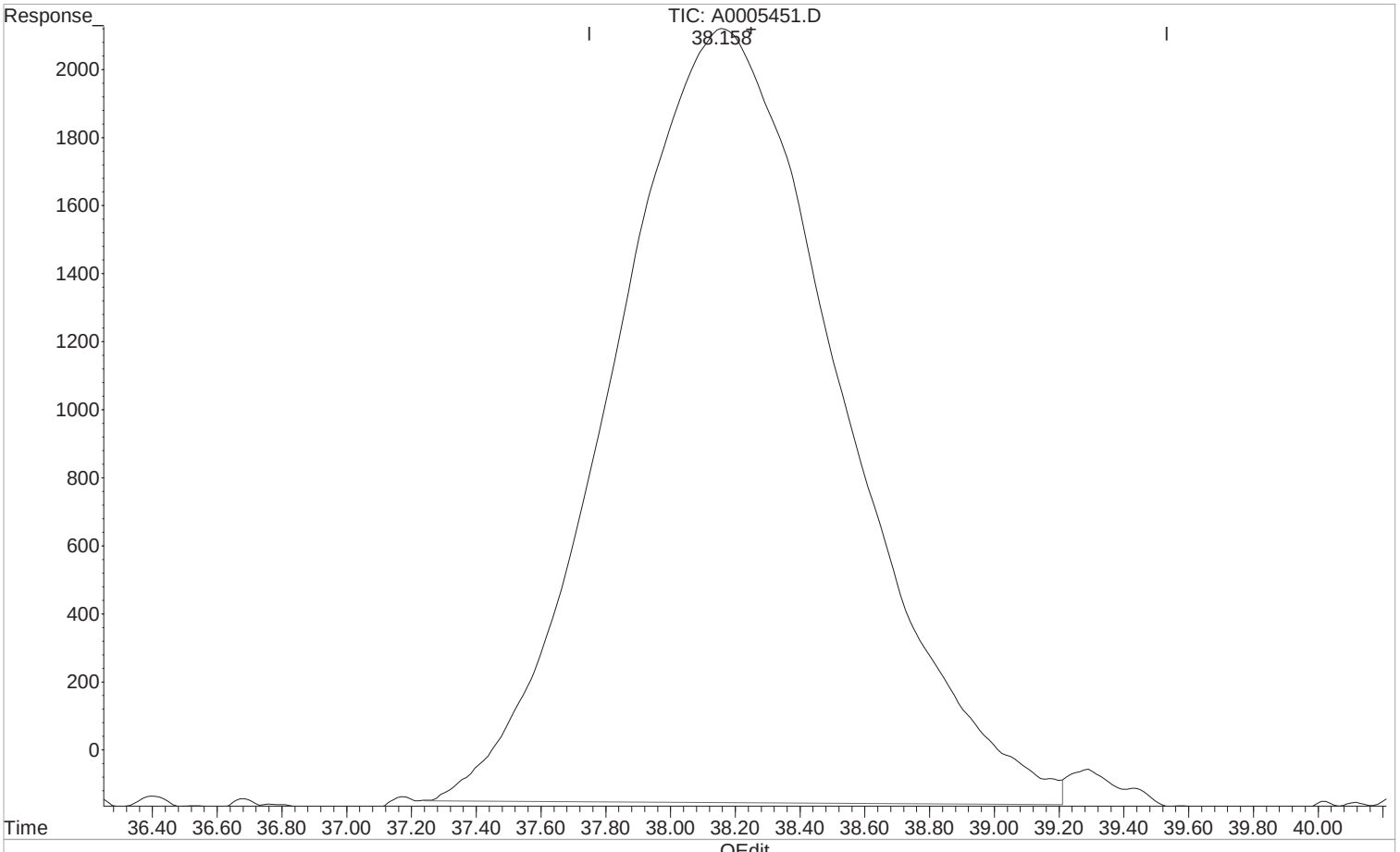
1st

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\070120\
Data File : A0005451.D
Signal(s) : dad1C.ch
Acq On : 01-Jul-2020, 17:05:25
Operator : A.Felser
Sample : DLCS
Misc :
ALS Vial : 4 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Jul 02 11:04:33 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Jul 02 11:03:09 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(6) Butyric Acid (T)

38.158min 21.205 ppm m

response 1114586

Manual Integration:

After

Poor integration.

07/02/20

(+) = Expected Retention Time

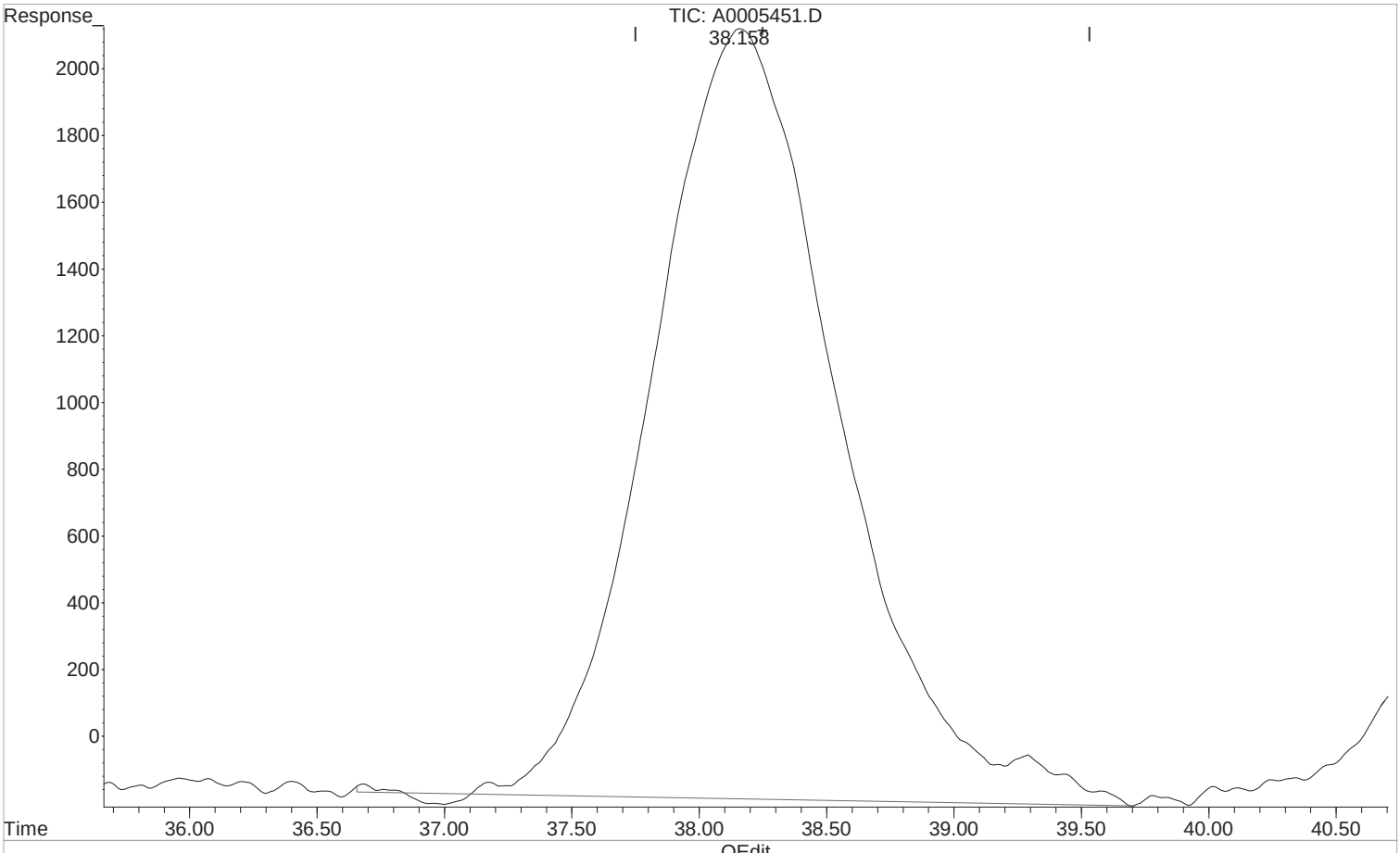
1st

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\070120\
Data File : A0005451.D
Signal(s) : dad1C.ch
Acq On : 01-Jul-2020, 17:05:25
Operator : A.Felser
Sample : DLCS
Misc :
ALS Vial : 4 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Jul 02 11:04:33 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Jul 02 11:03:09 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



QEdit

(6) Butyric Acid (T)

38.165min 22.339 ppm

response 1174190

Manual Integration:

Before

07/02/20

(+) = Expected Retention Time

1st AF 07/06/20
2nd BA 07/06/20

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\hplc05\data\070120\
Data File : A0005451.D
Signal(s) : dad1C.ch
Acq On : 01-Jul-2020, 17:05:25
Operator : A.Felser
Sample : DLCS
Misc :
ALS Vial : 4 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Jul 02 11:04:33 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Jul 02 11:03:09 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210

	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1) t	Formic acid	3.289	1896917	20.346	ppm	
2) T	Pyruvic acid	4.085	1031900	1.744	ppm	
3) T	Lactic Acid	4.663	1185702	21.017	ppm	
4) T	Acetic Acid	5.097	1237397	22.077	ppm	
5) T	Propionic Acid	12.463	1235919	22.737	ppm	
6) T	Butyric Acid	38.158	1114586	21.205	ppm	m

(f)=RT Delta > 1/2 Window (m)=manual int.

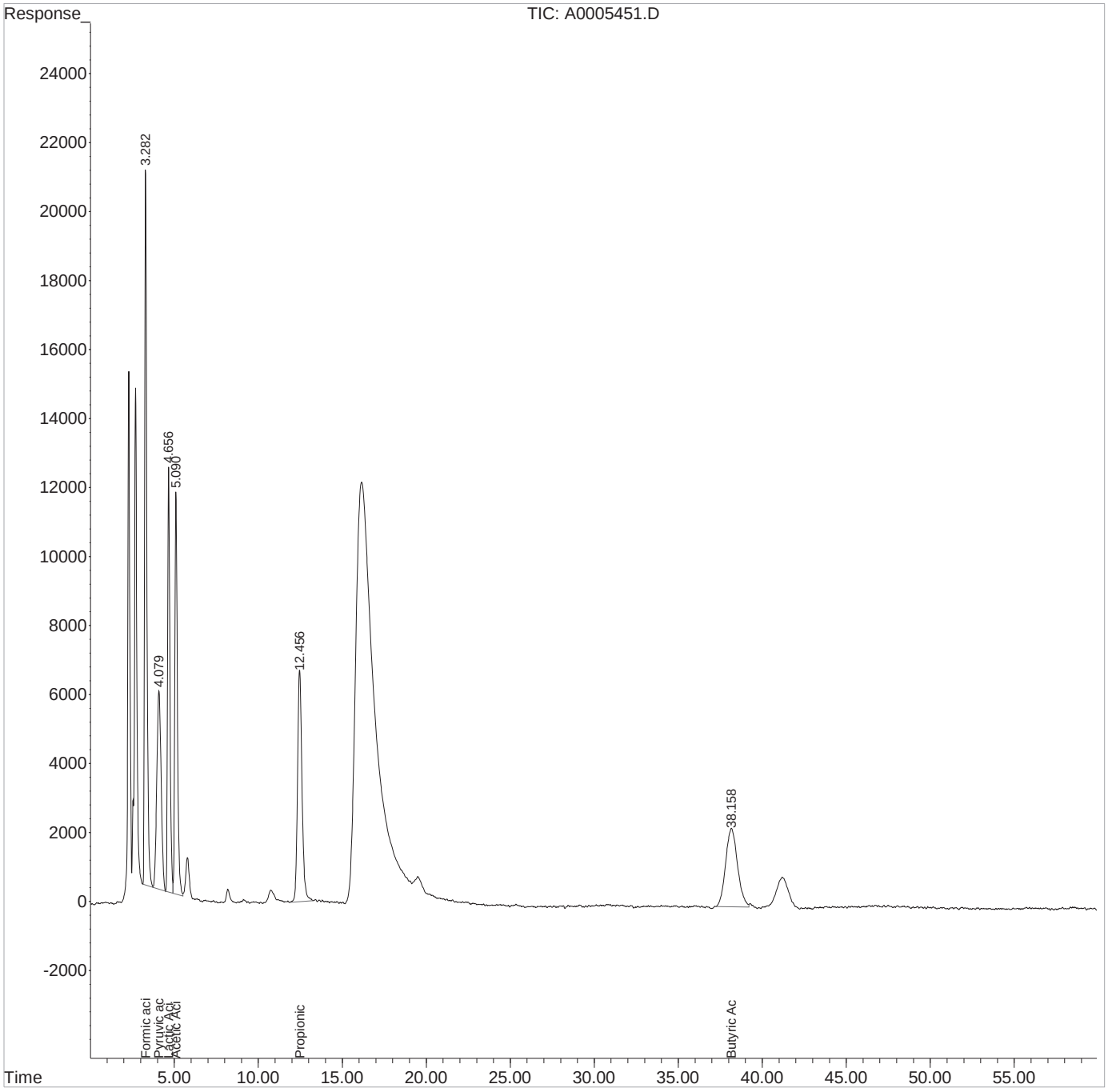
1st AF 07/06/20
2nd BA 07/06/20

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\hplc05\data\070120\
Data File : A0005451.D
Signal(s) : dad1C.ch
Acq On : 01-Jul-2020, 17:05:25
Operator : A.Felser
Sample : DLCS
Misc :
ALS Vial : 4 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Jul 02 11:04:33 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Jul 02 11:03:09 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



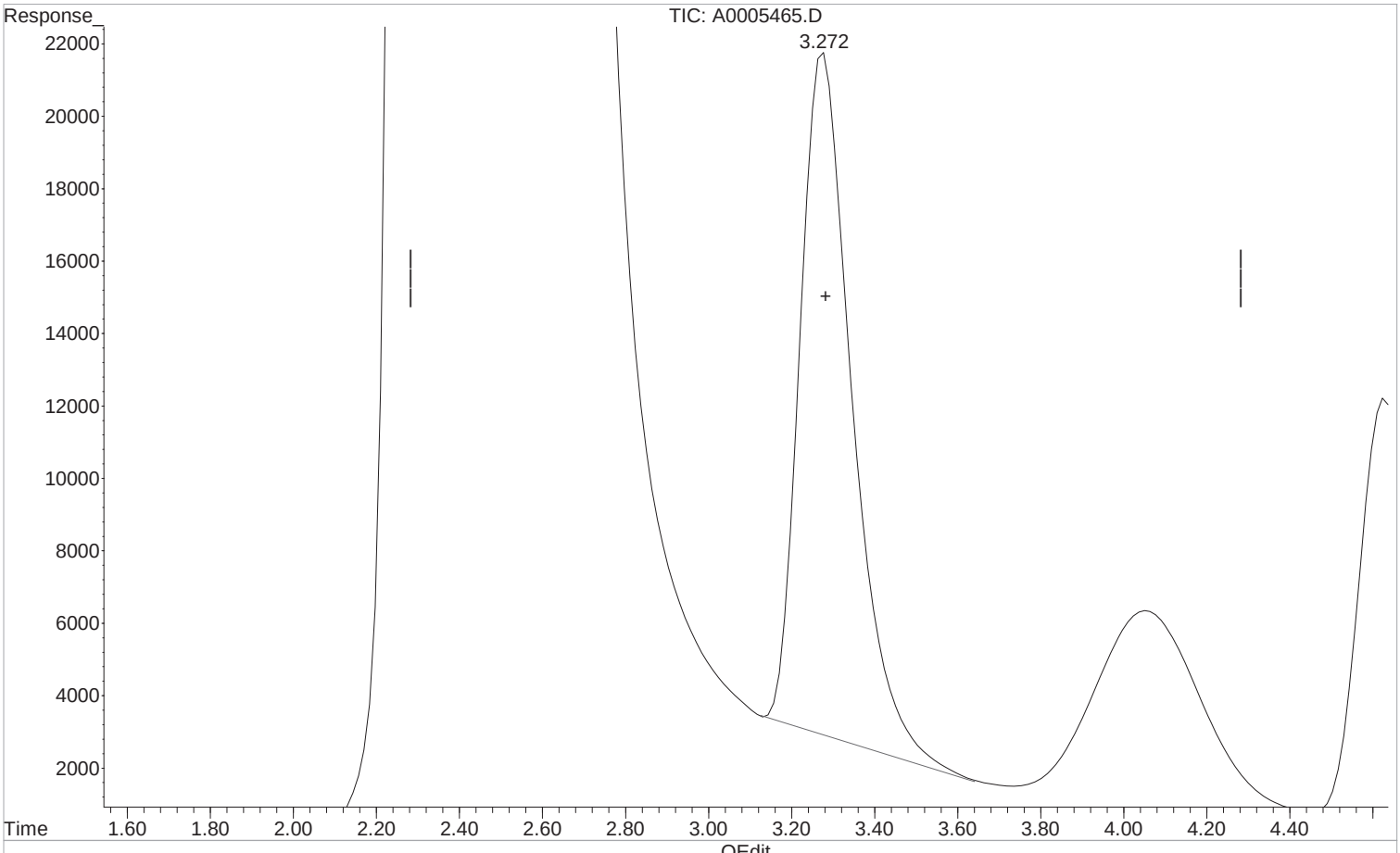
1st

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\070120\
Data File : A0005465.D
Signal(s) : dad1C.ch
Acq On : 29-Dec-2000, 23:47:48
Operator : A.Felser
Sample : R2005464-001MS
Misc :
ALS Vial : 16 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Jul 02 11:06:18 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Jul 02 11:05:58 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(1) Formic acid (t)

3.272min 17.714 ppm m

response 1651539

Manual Integration:

After

Poor integration.

07/02/20

(+) = Expected Retention Time

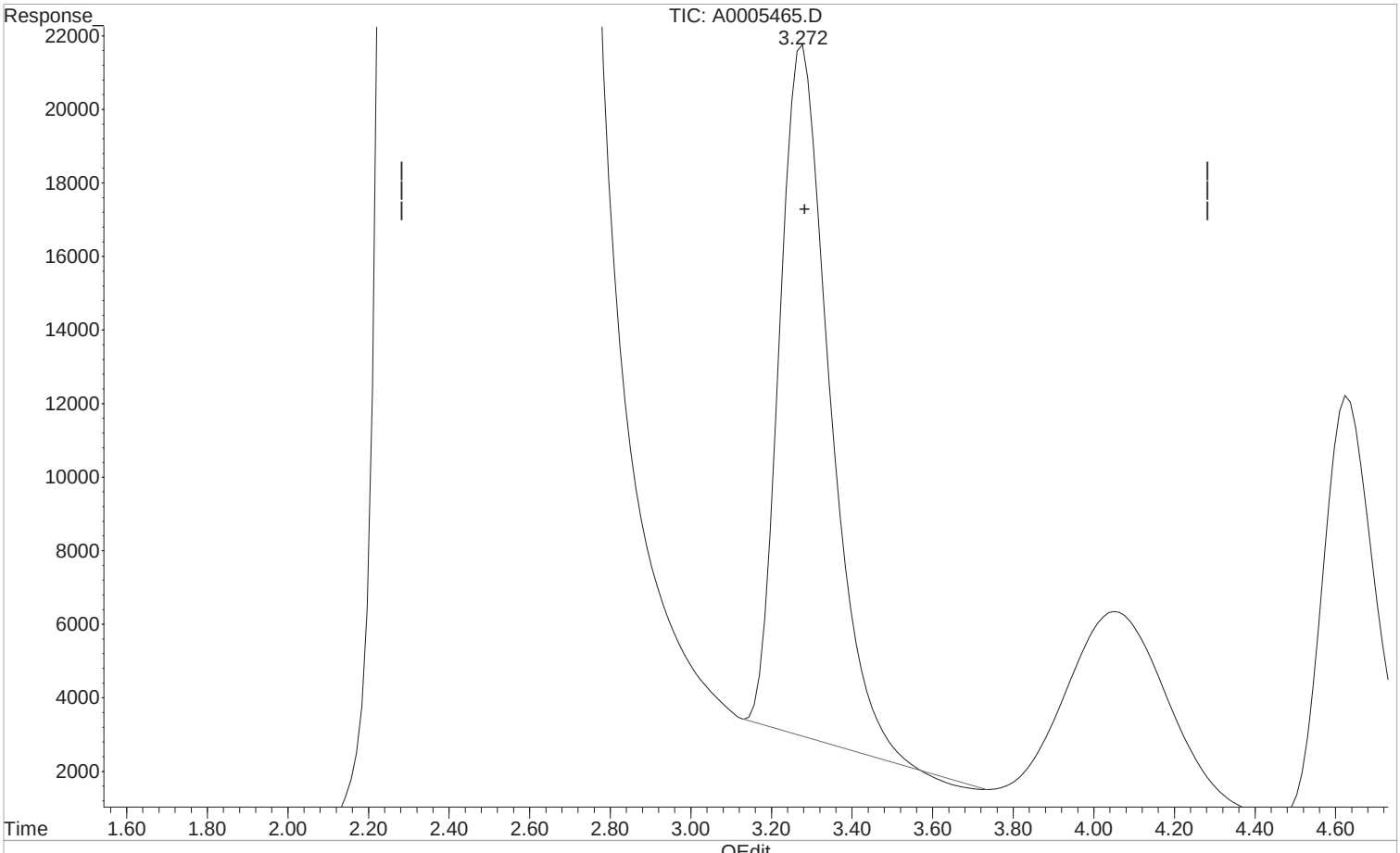
1st

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\070120\
Data File : A0005465.D
Signal(s) : dad1C.ch
Acq On : 29-Dec-2000, 23:47:48
Operator : A.Felser
Sample : R2005464-001MS
Misc :
ALS Vial : 16 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Jul 02 11:06:18 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Jul 02 11:05:58 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(1) Formic acid (t)

3.280min 17.465 ppm

response 1628331

Manual Integration:

Before

07/02/20

(+) = Expected Retention Time

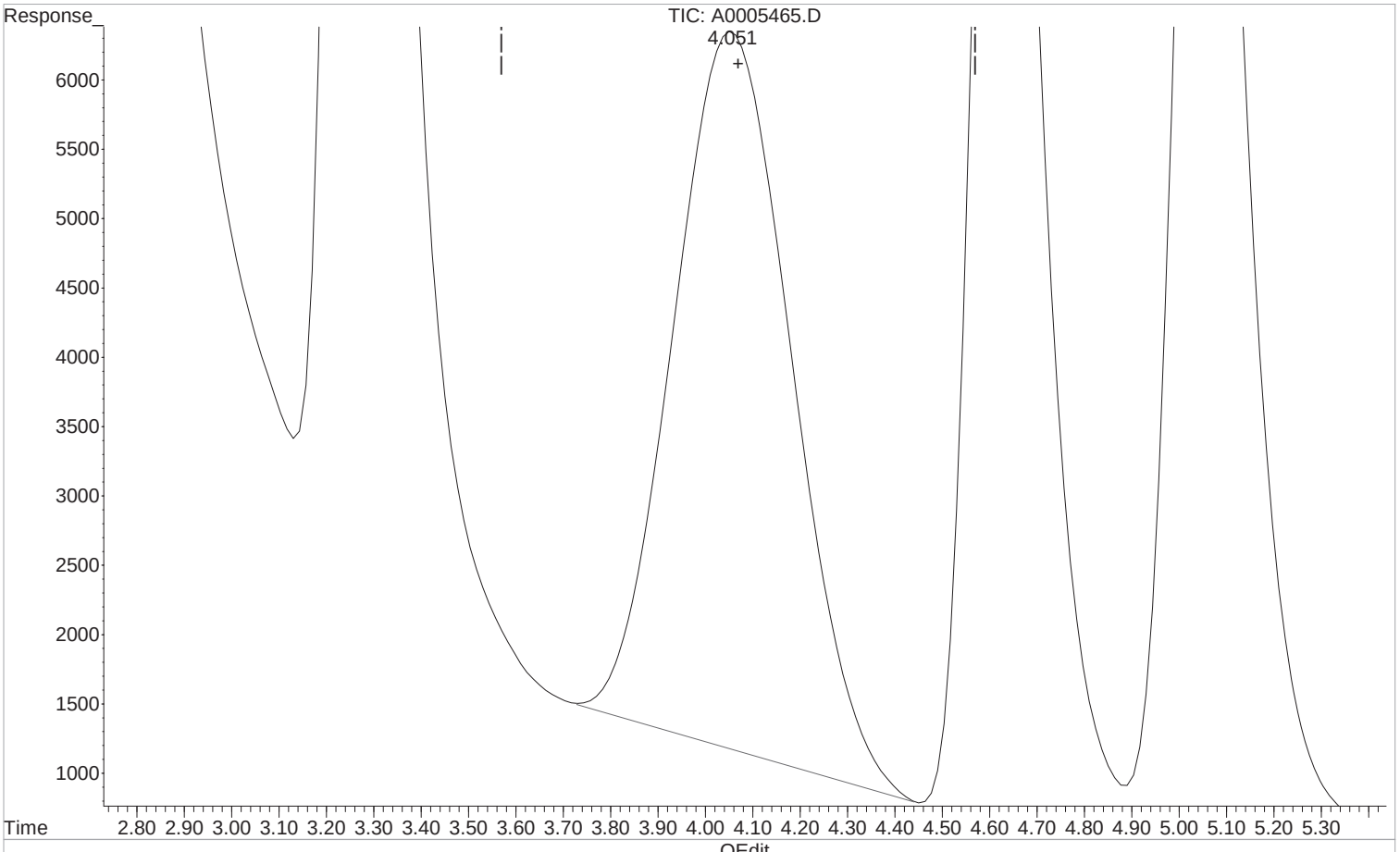
1st

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\070120\
Data File : A0005465.D
Signal(s) : dad1C.ch
Acq On : 29-Dec-2000, 23:47:48
Operator : A.Felser
Sample : R2005464-001MS
Misc :
ALS Vial : 16 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Jul 02 11:06:18 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Jul 02 11:05:58 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(2) Pyruvic acid (T)

4.051min 1.519 ppm m

response 898843

Manual Integration:

After

Poor integration.

07/02/20

(+) = Expected Retention Time

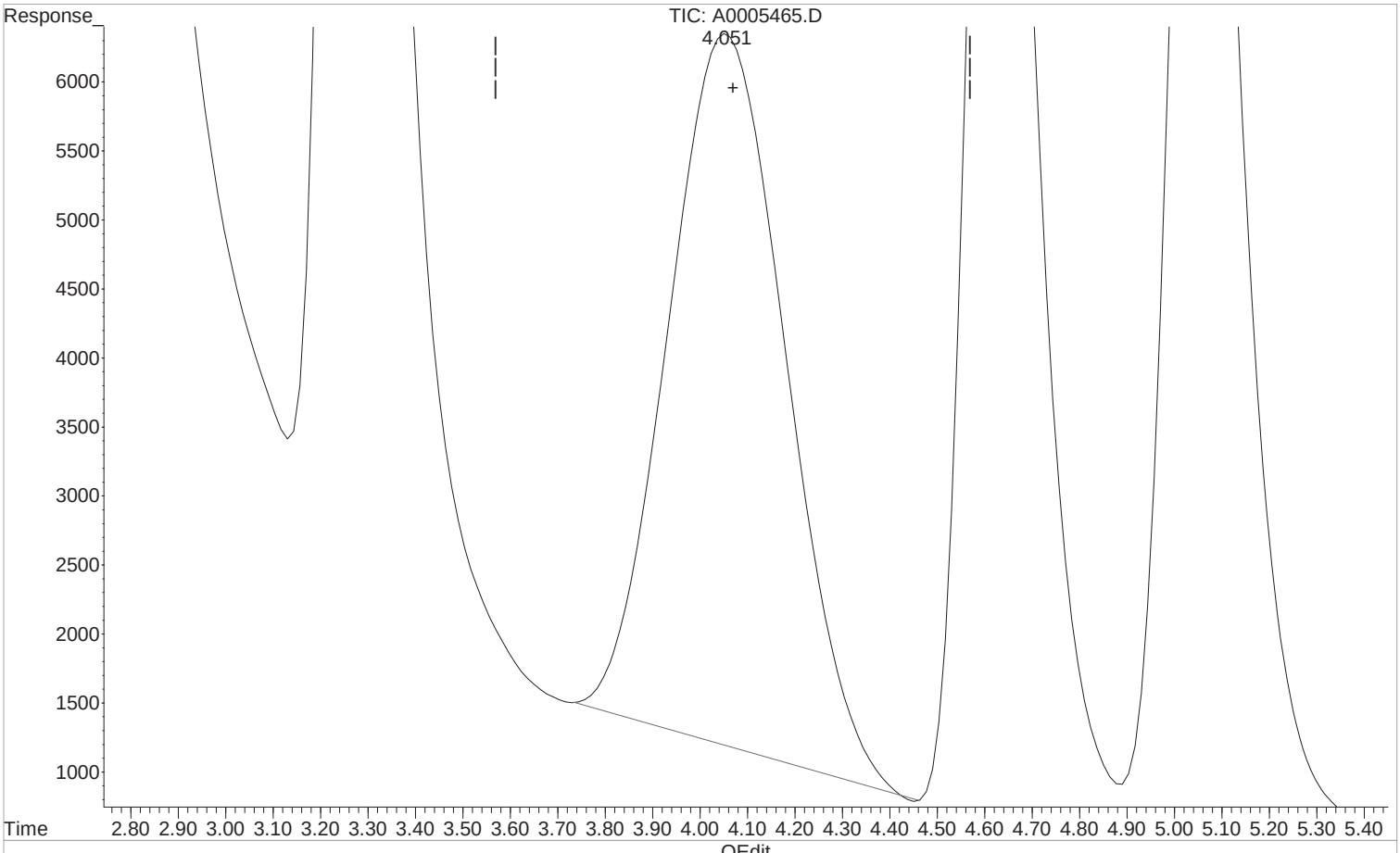
1st AF 07/06/20
2nd BA 07/06/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\070120\
Data File : A0005465.D
Signal(s) : dad1C.ch
Acq On : 29-Dec-2000, 23:47:48
Operator : A.Felser
Sample : R2005464-001MS
Misc :
ALS Vial : 16 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Jul 02 11:06:18 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Jul 02 11:05:58 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(2) Pyruvic acid (T)

4.057min 1.510 ppm

response 893225

Manual Integration:

Before

07/02/20

(+) = Expected Retention Time

1st AF 07/06/20
2nd BA 07/06/20

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\hplc05\data\070120\
Data File : A0005465.D
Signal(s) : dad1C.ch
Acq On : ~~29-Dec-2000, 23:47:48~~ 02-Jul-2020, 07:44
Operator : A.Felser
Sample : R2005464-001MS
Misc :
ALS Vial : 16 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Jul 02 11:06:18 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Jul 02 11:05:58 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210

	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1) t	Formic acid	3.272	1651539	17.714	ppm	m
2) T	Pyruvic acid	4.051	898843	1.519	ppm	m
3) T	Lactic Acid	4.633	1073735	19.032	ppm	
4) T	Acetic Acid	5.062	1111098	19.824	ppm	
5) T	Propionic Acid	12.298	1116418	20.538	ppm	
6) T	Butyric Acid	37.433	1058060	20.130	ppm	

(f)=RT Delta > 1/2 Window (m)=manual int.

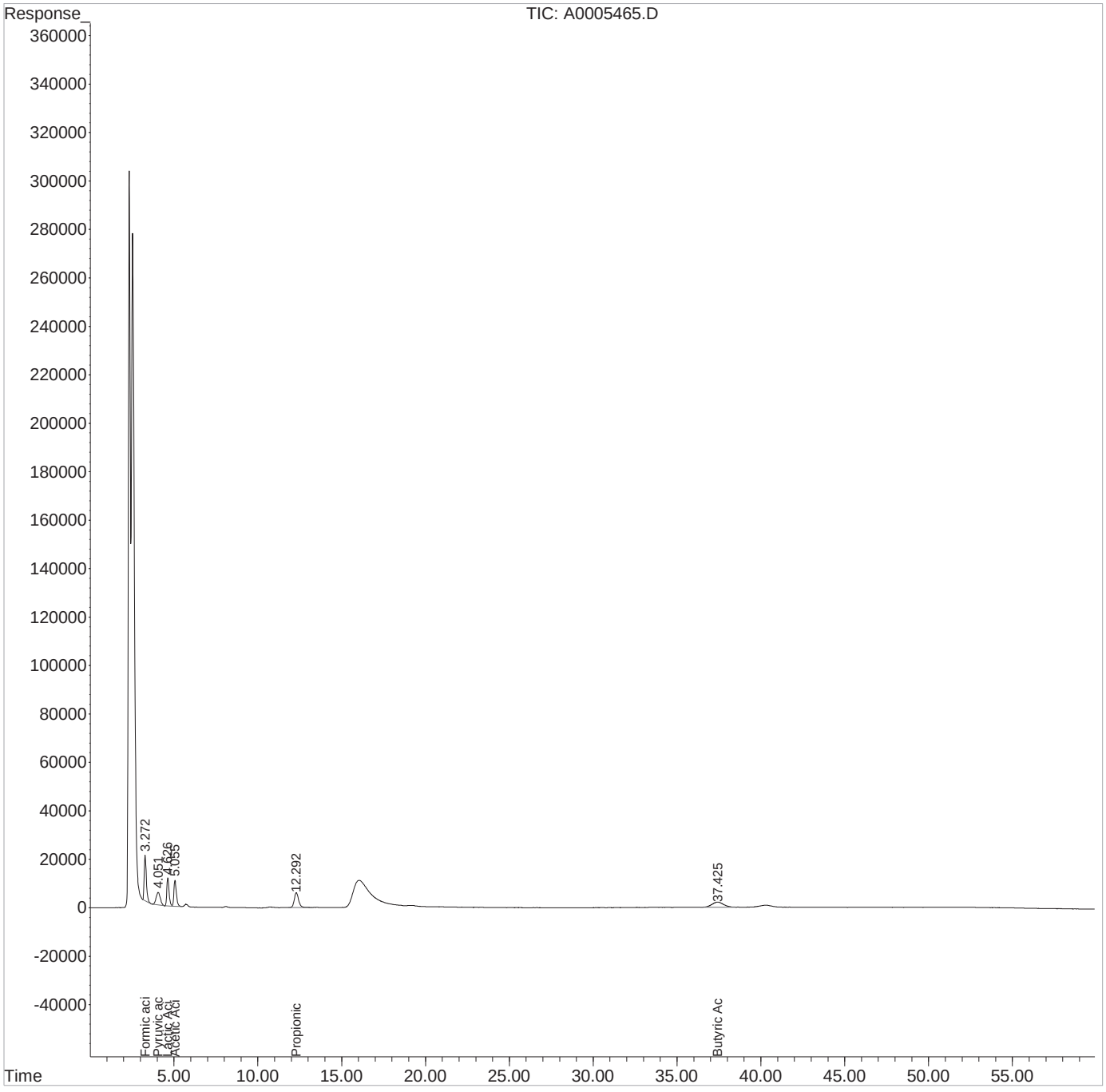
1st AF 07/06/20
2nd BA 07/06/20

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\hplc05\data\070120\
Data File : A0005465.D
Signal(s) : dad1C.ch
Acq On : 29-Dec-2000, 23:47:48
Operator : A.Felser
Sample : R2005464-001MS
Misc :
ALS Vial : 16 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Jul 02 11:06:18 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Jul 02 11:05:58 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



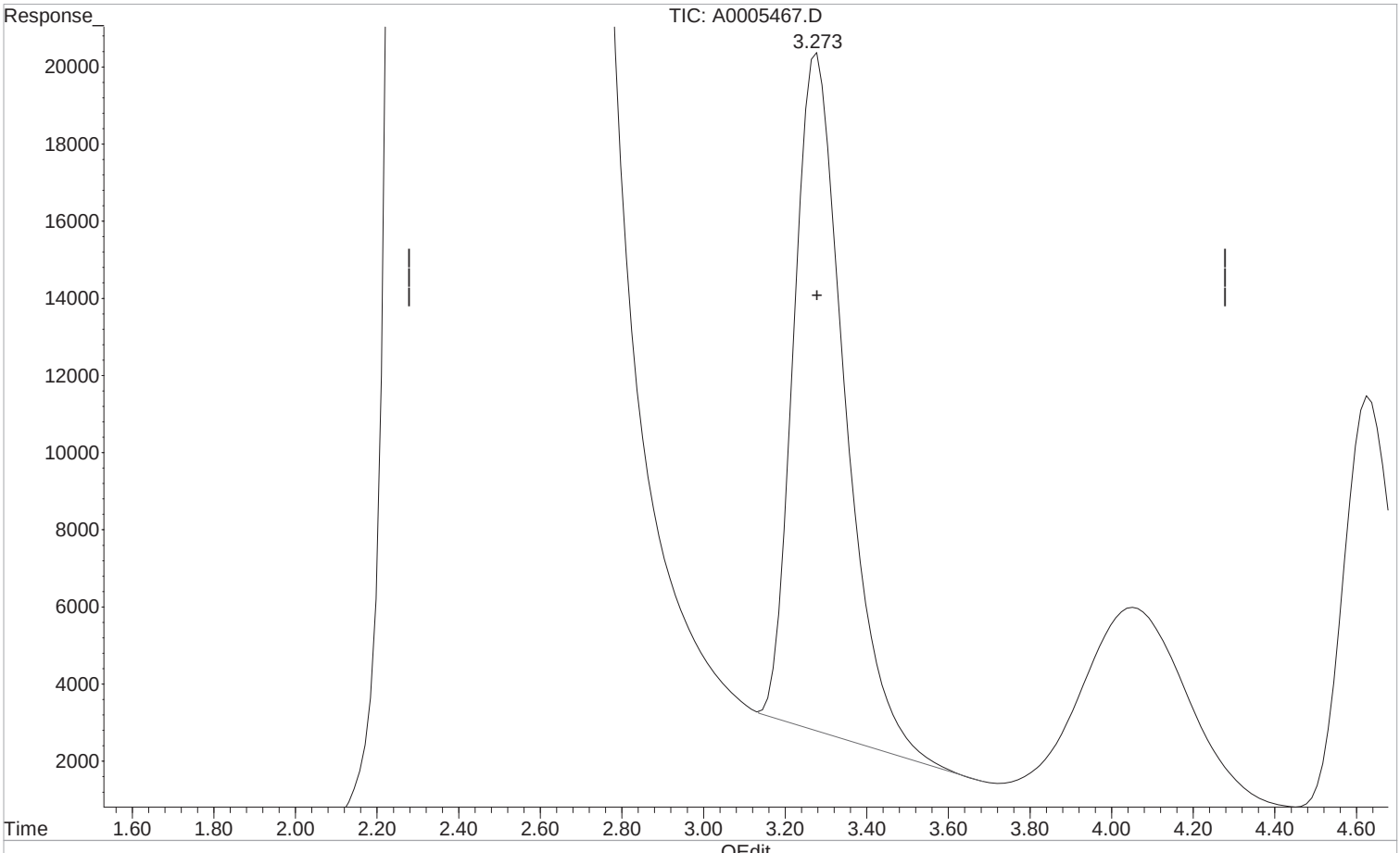
1st

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\070120\
Data File : A0005467.D
Signal(s) : dad1C.ch
Acq On : 30-Dec-2000, 16:48:42
Operator : A.Felser
Sample : R2005464-001DMS
Misc :
ALS Vial : 17 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Jul 02 16:38:59 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Jul 02 16:38:47 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(1) Formic acid (t)

3.273min 16.526 ppm m

response 1540796

Manual Integration:

After

Poor integration.

07/02/20

(+) = Expected Retention Time

1st

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\070120\
Data File : A0005467.D
Signal(s) : dad1C.ch
Acq On : 30-Dec-2000, 16:48:42
Operator : A.Felser
Sample : R2005464-001DMS
Misc :
ALS Vial : 17 Sample Multiplier: 1

Integration File: MA1.E
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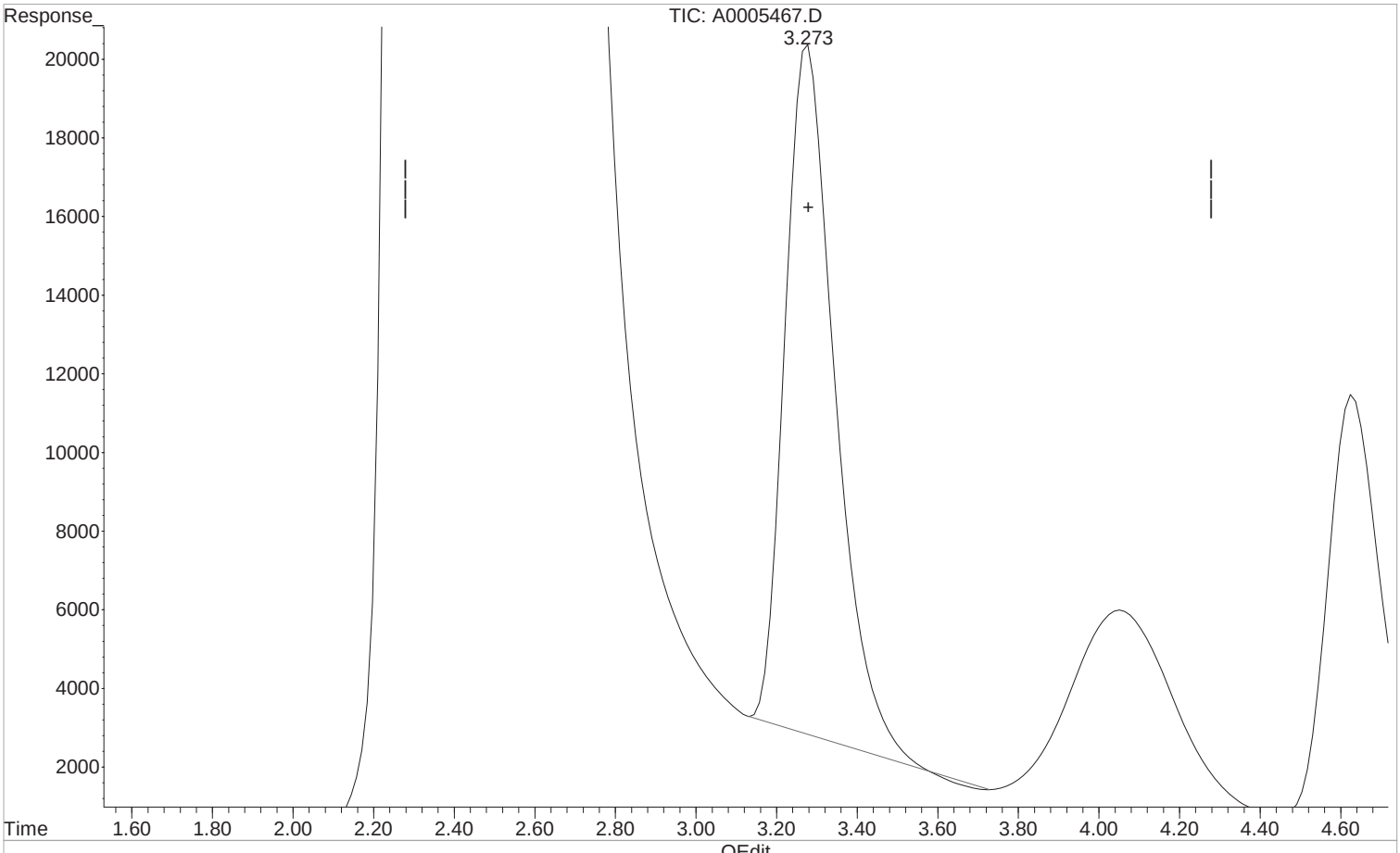
Quant Title : organic acids
QLast Update : Thu Jul 02 16:38:47 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(1) Formic acid (t)

3.280min 16.370 ppm

response 1526176

Manual Integration:

Before

07/02/20

(+) = Expected Retention Time

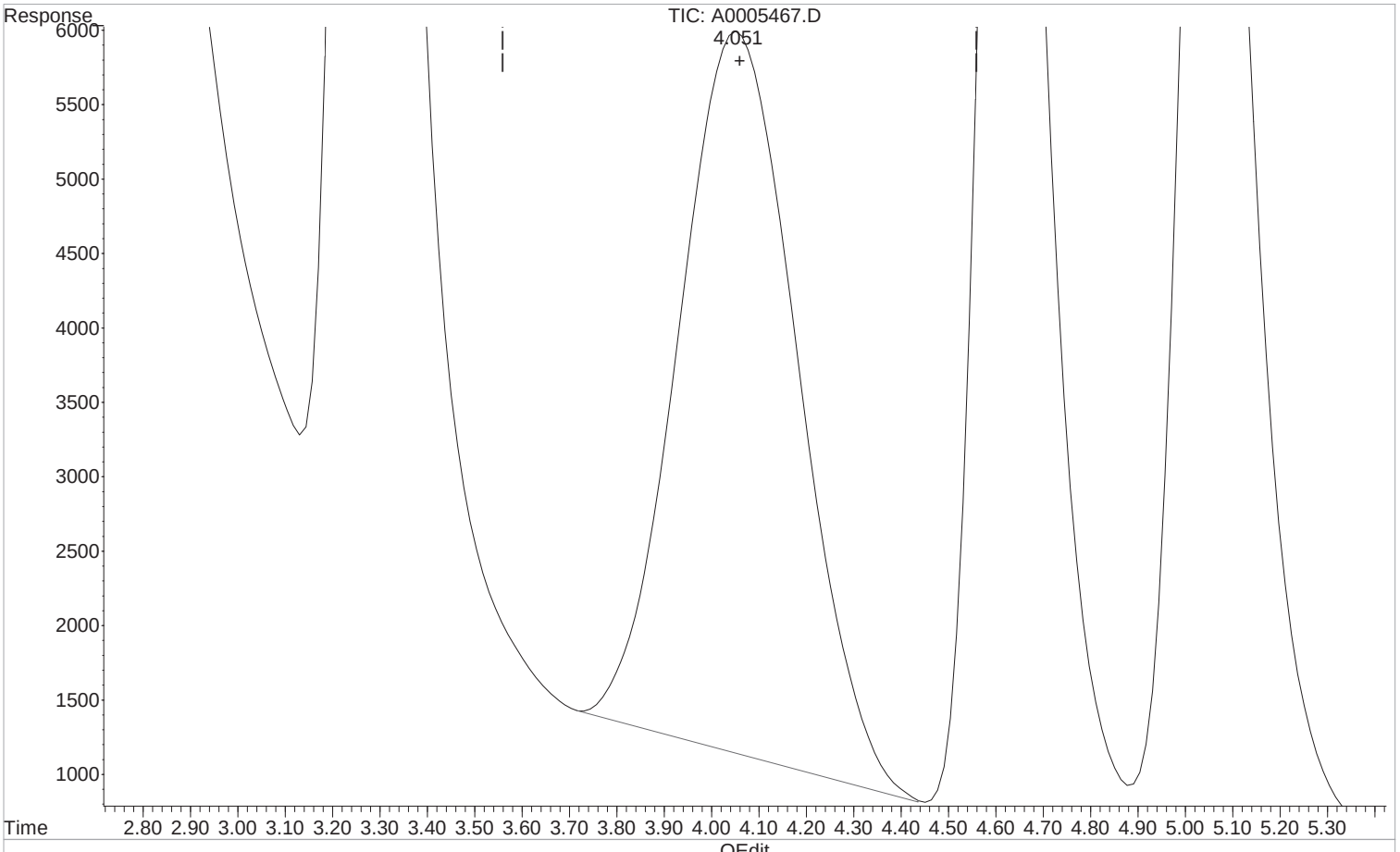
1st

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\070120\
Data File : A0005467.D
Signal(s) : dad1C.ch
Acq On : 30-Dec-2000, 16:48:42
Operator : A.Felser
Sample : R2005464-001DMS
Misc :
ALS Vial : 17 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Jul 02 16:38:59 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Jul 02 16:38:47 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(2) Pyruvic acid (T)

4.051min 1.433 ppm m

response 847838

Manual Integration:

After

Poor integration.

07/02/20

(+) = Expected Retention Time

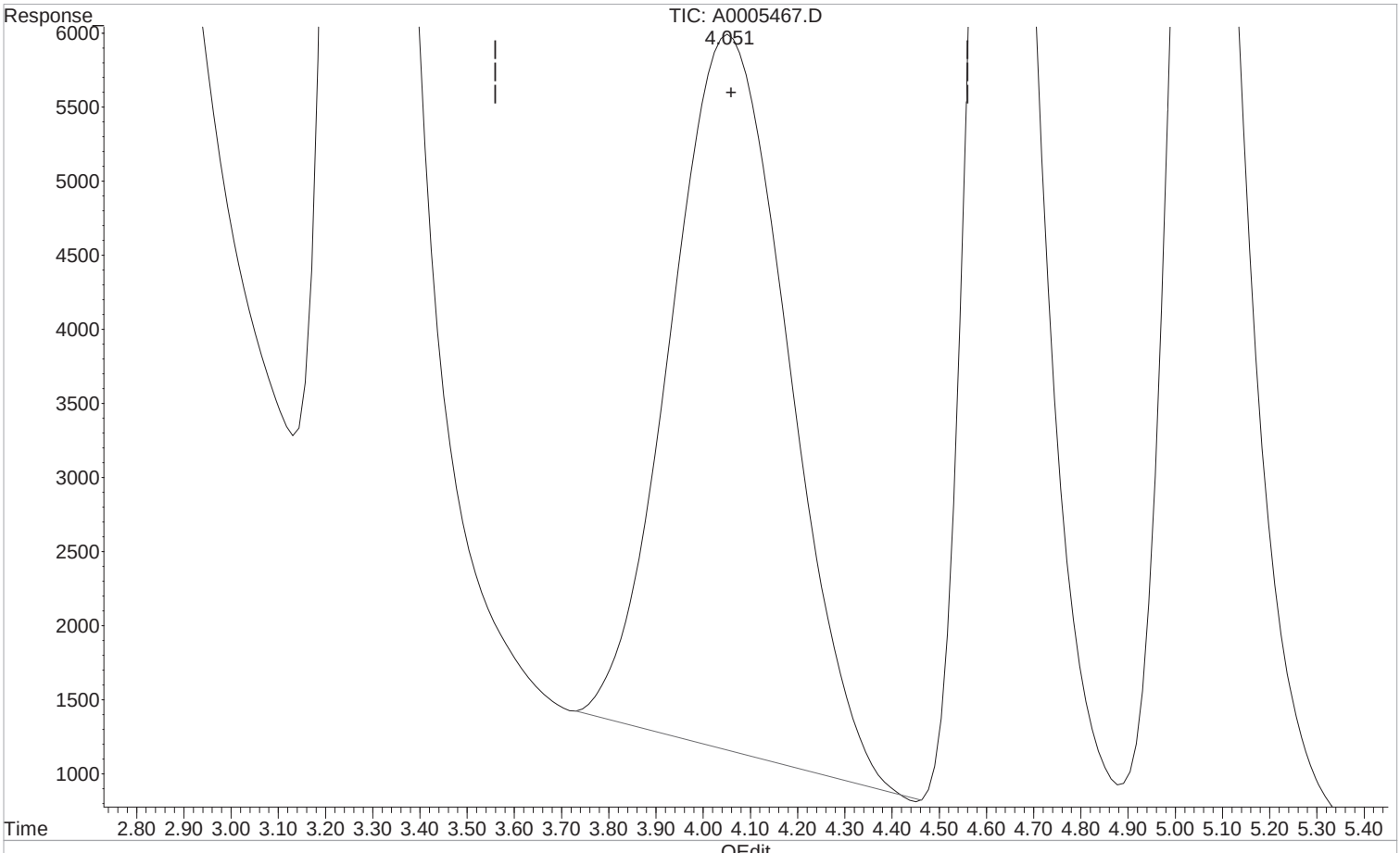
1st

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\070120\
Data File : A0005467.D
Signal(s) : dad1C.ch
Acq On : 30-Dec-2000, 16:48:42
Operator : A.Felser
Sample : R2005464-001DMS
Misc :
ALS Vial : 17 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Jul 02 16:38:59 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Jul 02 16:38:47 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(2) Pyruvic acid (T)

4.056min 1.422 ppm

response 840986

Manual Integration:

Before

07/02/20

(+) = Expected Retention Time

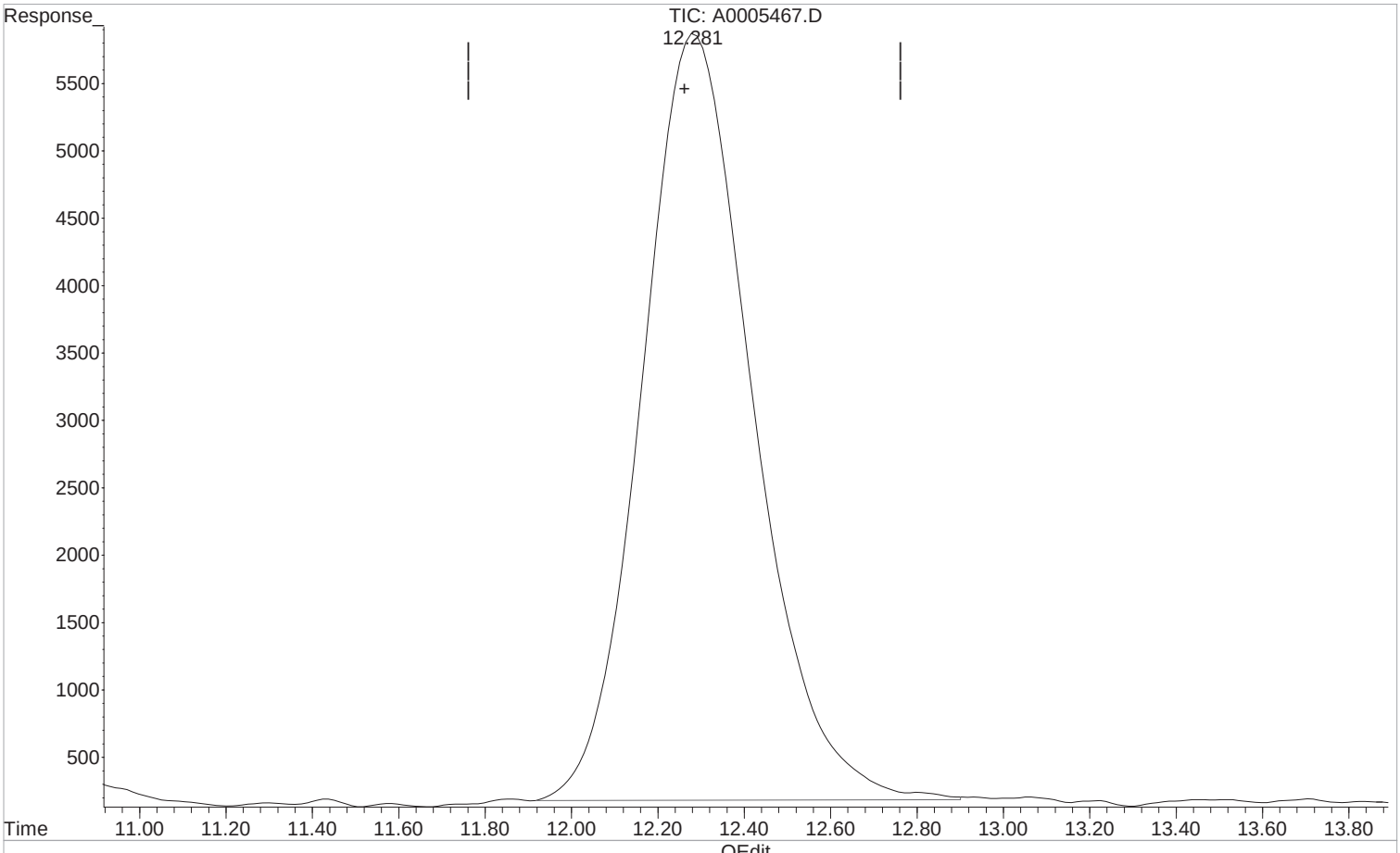
1st

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\070120\
Data File : A0005467.D
Signal(s) : dad1C.ch
Acq On : 30-Dec-2000, 16:48:42
Operator : A.Felser
Sample : R2005464-001DMS
Misc :
ALS Vial : 17 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Jul 02 16:38:59 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Jul 02 16:38:47 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(5) Propionic Acid (T)

12.281min 18.610 ppm m

response 1011590

Manual Integration:

After

Poor integration.

07/02/20

(+) = Expected Retention Time

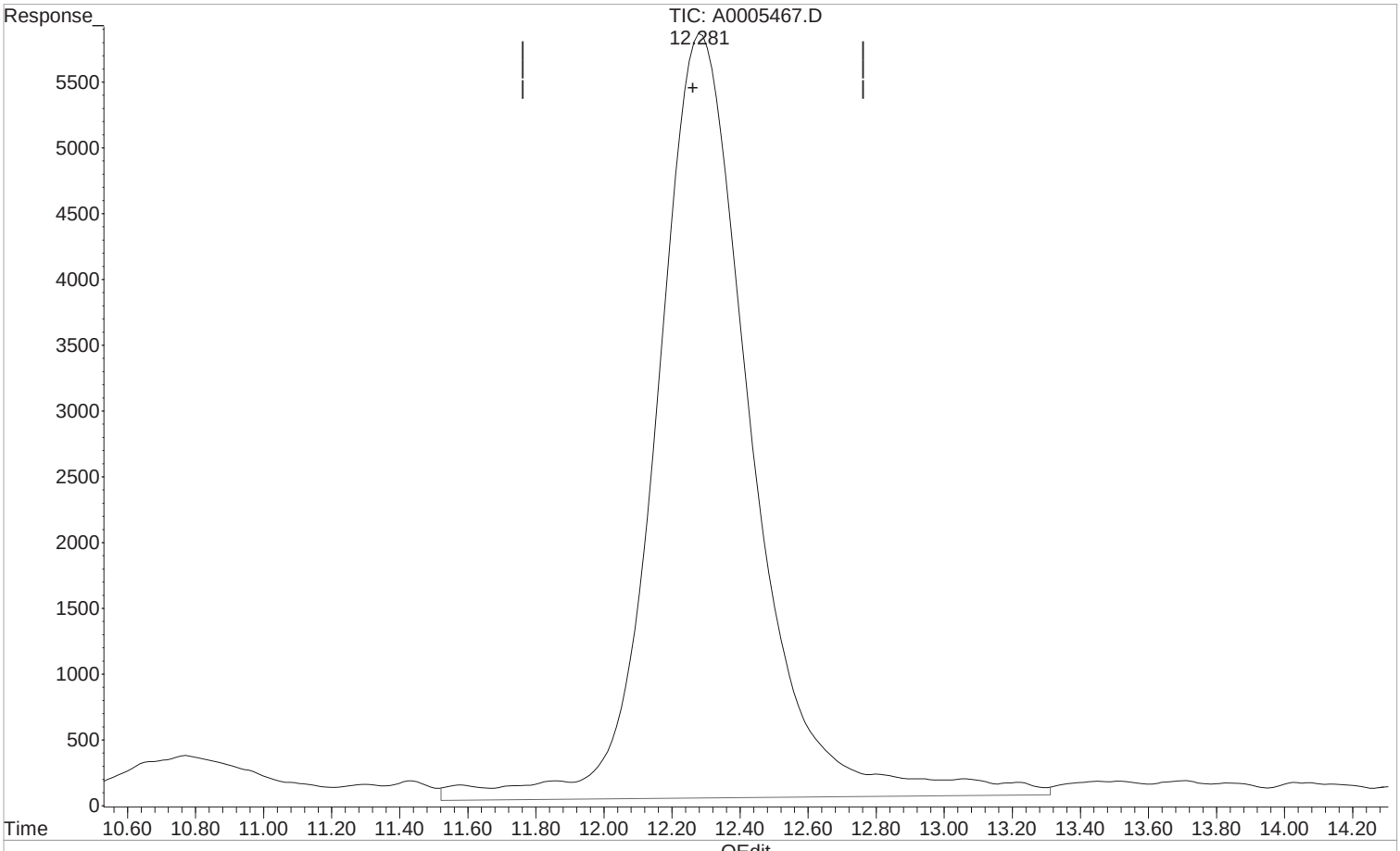
1st

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\070120\
Data File : A0005467.D
Signal(s) : dad1C.ch
Acq On : 30-Dec-2000, 16:48:42
Operator : A.Felser
Sample : R2005464-001DMS
Misc :
ALS Vial : 17 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Jul 02 16:38:59 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Jul 02 16:38:47 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(5) Propionic Acid (T)

12.287min 20.889 ppm

response 1135459

Manual Integration:

Before

07/02/20

(+) = Expected Retention Time

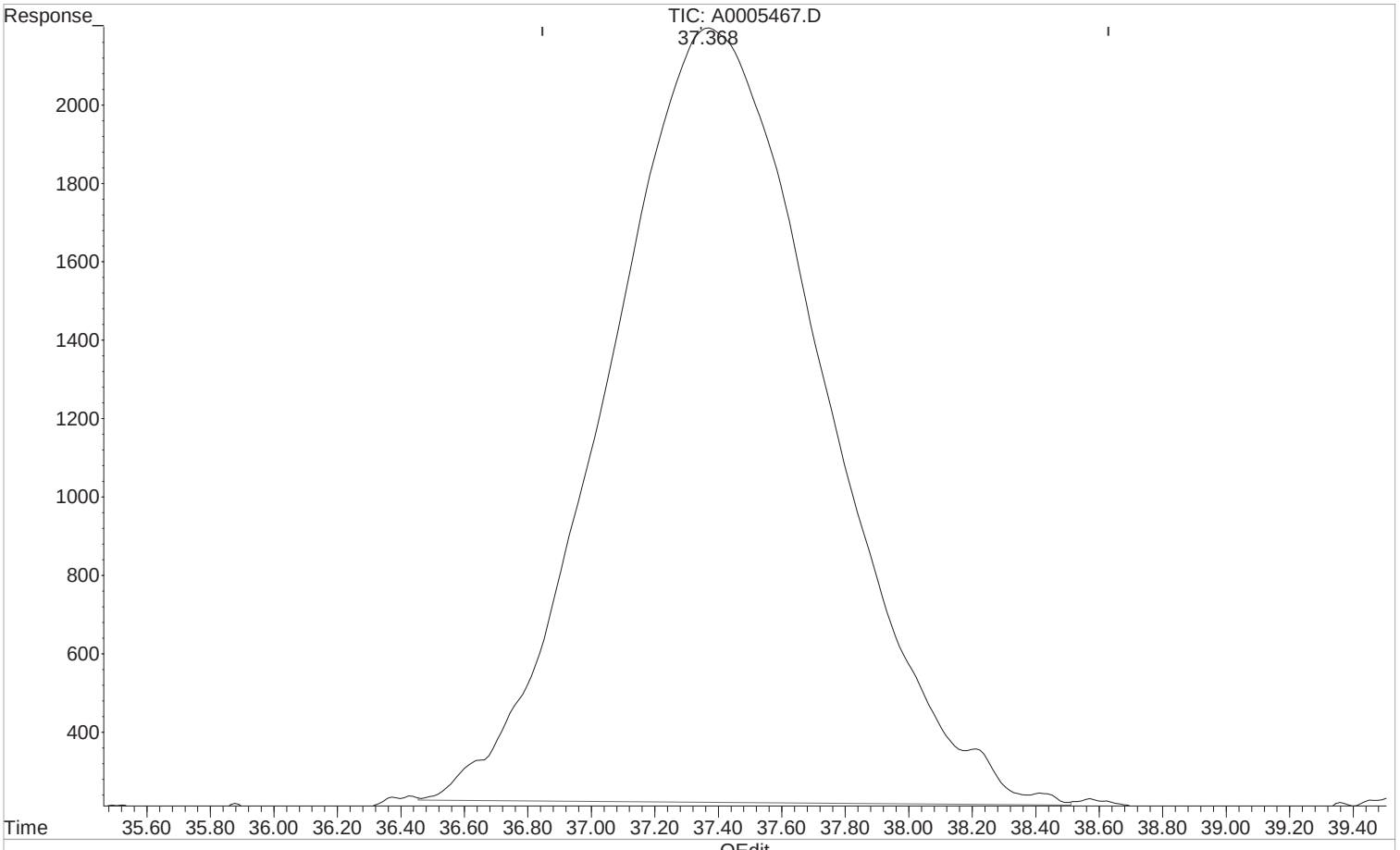
1st

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\070120\
Data File : A0005467.D
Signal(s) : dad1C.ch
Acq On : 30-Dec-2000, 16:48:42
Operator : A.Felser
Sample : R2005464-001DMS
Misc :
ALS Vial : 17 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Jul 02 16:38:59 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Jul 02 16:38:47 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(6) Butyric Acid (T)

37.368min 17.788 ppm m

response 934955

Manual Integration:

After

Poor integration.

07/02/20

(+) = Expected Retention Time

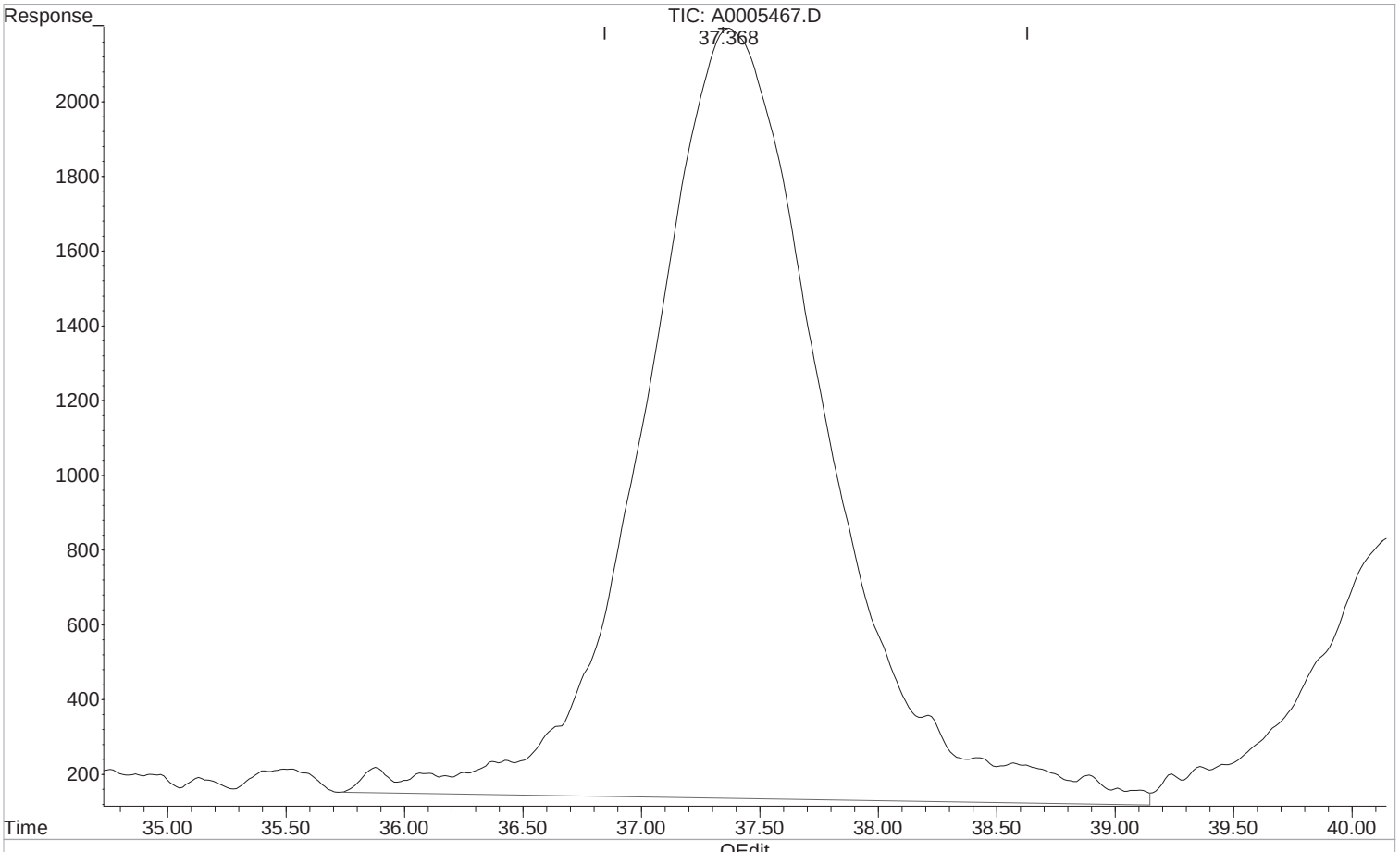
1st

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\070120\
Data File : A0005467.D
Signal(s) : dad1C.ch
Acq On : 30-Dec-2000, 16:48:42
Operator : A.Felser
Sample : R2005464-001DMS
Misc :
ALS Vial : 17 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Jul 02 16:38:59 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Jul 02 16:38:47 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(6) Butyric Acid (T)

37.380min 20.725 ppm

response 1089360

Manual Integration:

Before

07/02/20

(+) = Expected Retention Time

1st AF 07/06/20
2nd BA 07/06/20

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\hplc05\data\070120\
Data File : A0005467.D
Signal(s) : dad1C.ch
Acq On : ~~30-Dec-2000, 16:48:42~~ 02-Jul-2020, 09:50
Operator : A.Felser
Sample : R2005464-001DMS
Misc :
ALS Vial : 17 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Jul 02 16:38:59 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Jul 02 16:38:47 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210

	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1) t	Formic acid	3.273	1540796	16.526	ppm	m
2) T	Pyruvic acid	4.051	847838	1.433	ppm	m
3) T	Lactic Acid	4.633	1001154	17.746	ppm	
4) T	Acetic Acid	5.062	1029809	18.374	ppm	
5) T	Propionic Acid	12.281	1011590	18.610	ppm	m
6) T	Butyric Acid	37.368	934955	17.788	ppm	m

(f)=RT Delta > 1/2 Window (m)=manual int.

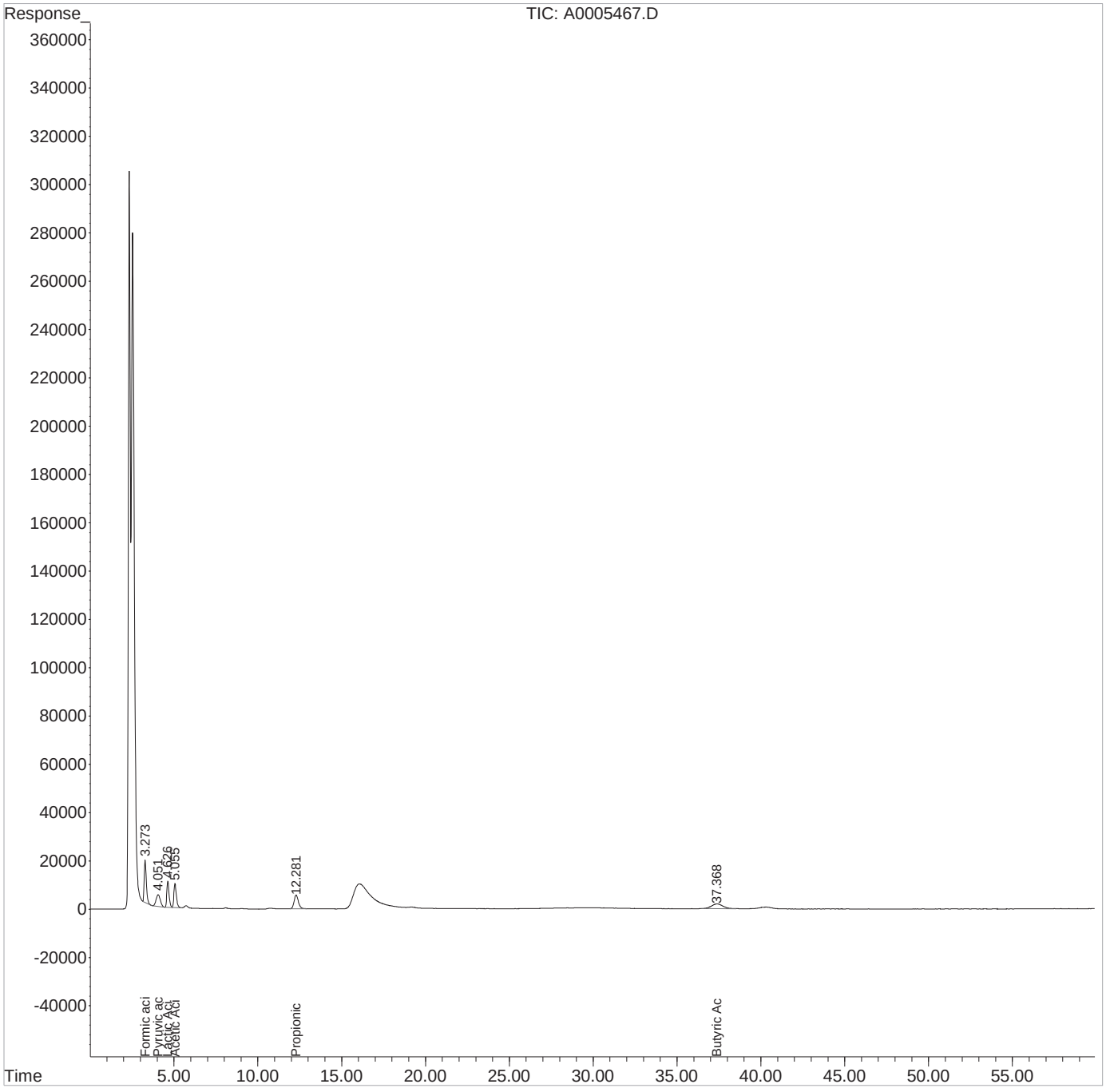
1st AF 07/06/20
2nd BA 07/06/20

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\hplc05\data\070120\
Data File : A0005467.D
Signal(s) : dad1C.ch
Acq On : 30-Dec-2000, 16:48:42
Operator : A.Felser
Sample : R2005464-001DMS
Misc :
ALS Vial : 17 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Jul 02 16:38:59 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Jul 02 16:38:47 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



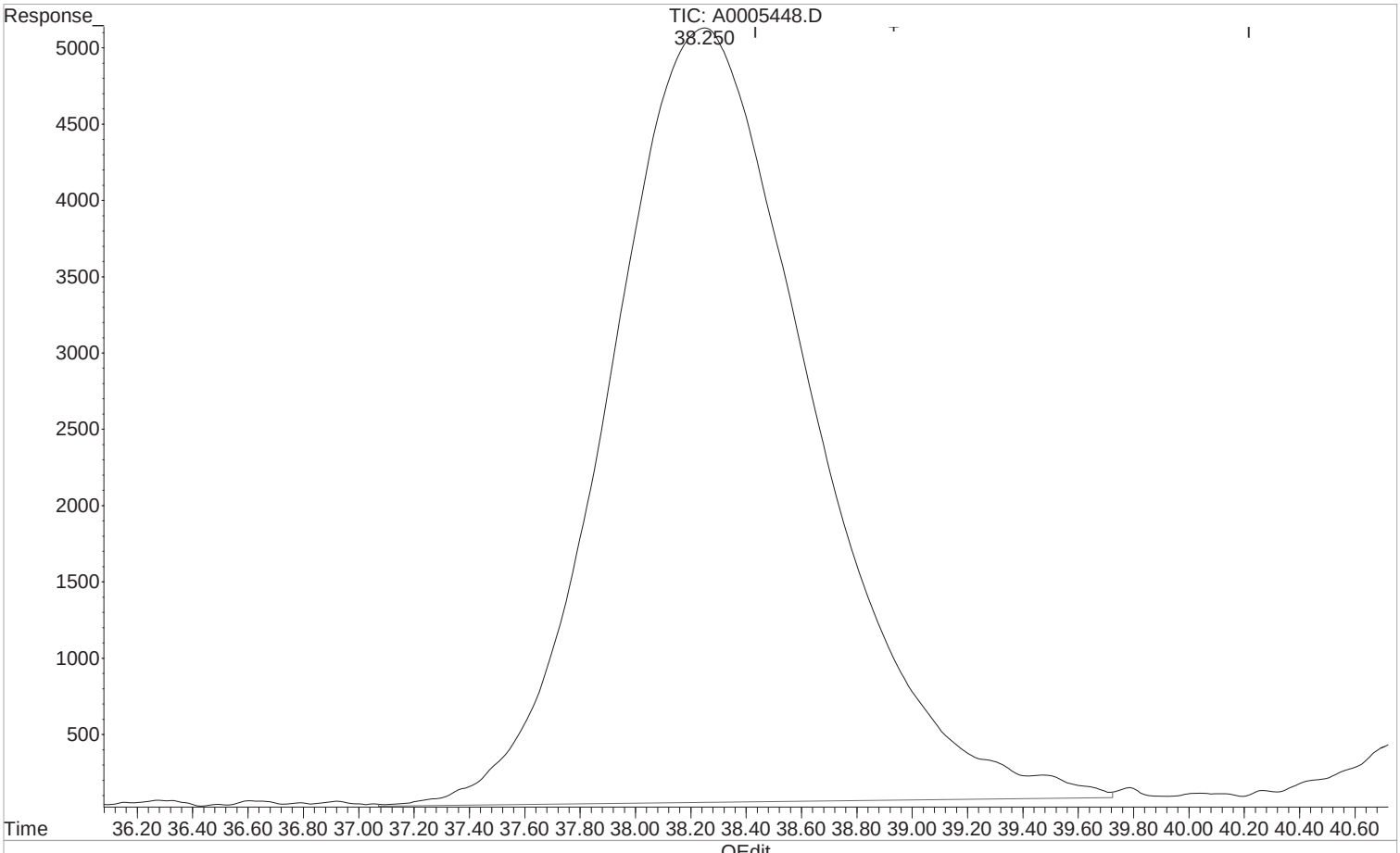
1st AF 07/06/20
2nd BA 07/06/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\070120\
Data File : A0005448.D
Signal(s) : dad1C.ch
Acq On : 01-Jul-2020, 13:56:19
Operator : A.Felser
Sample : CCV
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Jul 02 11:02:43 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Wed Jul 01 11:45:58 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(6) Butyric Acid (T)

38.250min 48.980 ppm m

response 2574498

Manual Integration:

After

Peak not found.

07/02/20

(+) = Expected Retention Time

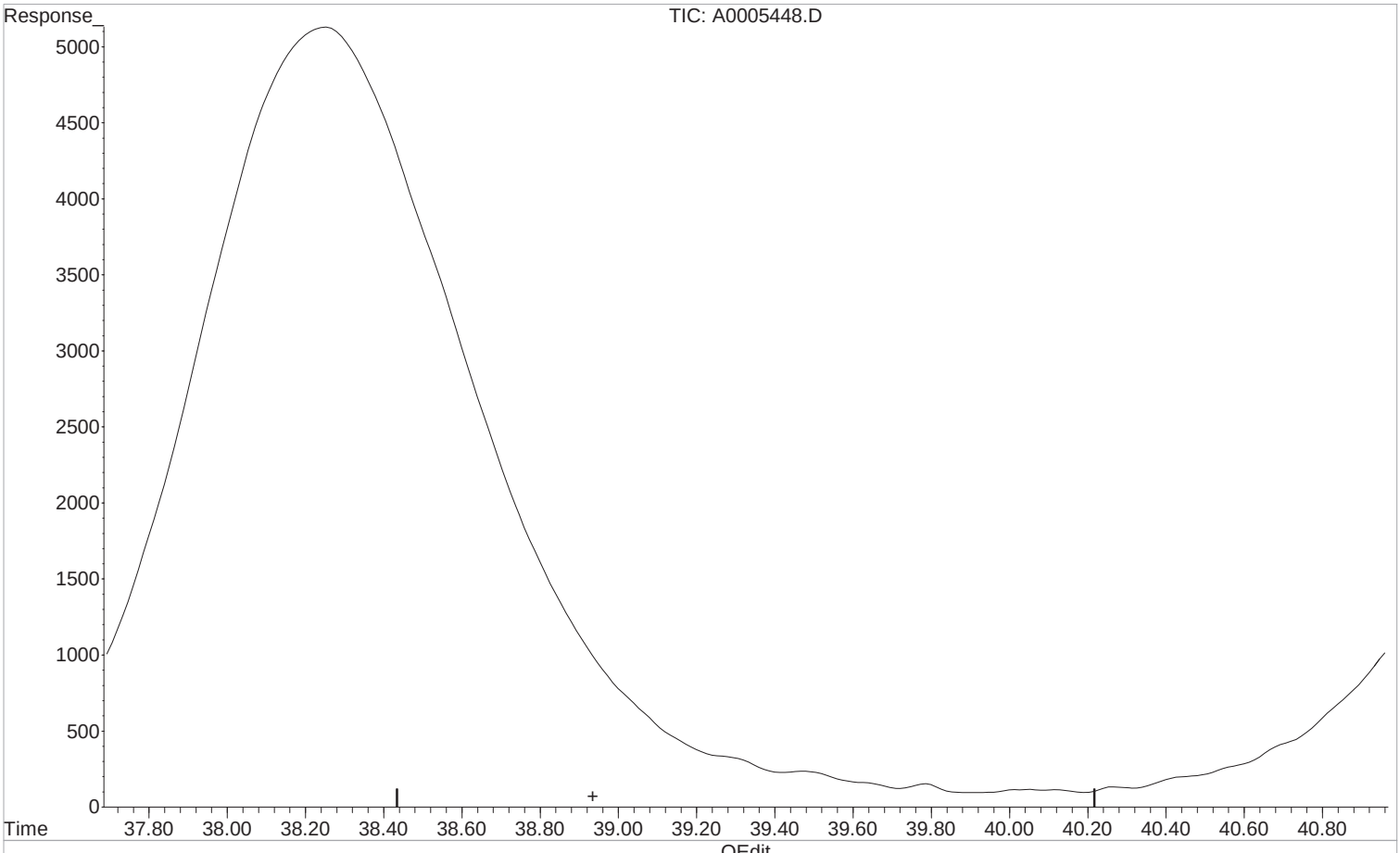
1st

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\070120\
Data File : A0005448.D
Signal(s) : dad1C.ch
Acq On : 01-Jul-2020, 13:56:19
Operator : A.Felser
Sample : CCV
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Jul 02 11:02:43 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Wed Jul 01 11:45:58 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(6) Butyric Acid (T)

38.935min 0.000 ppm

response 0

Manual Integration:

Before

07/02/20

(+) = Expected Retention Time

1st AF 07/06/20
2nd BA 07/06/20

Evaluate Continuing Calibration Report

Data Path : I:\ACQUDATA\hplc05\data\070120\
Data File : A0005448.D
Signal(s) : dad1C.ch
Acq On : 01-Jul-2020, 13:56:19
Operator : A.Felser
Sample : CCV
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Jul 02 11:02:43 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Wed Jul 01 11:45:58 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 150%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(Min)
1 t	Formic acid	93.232	87.923 E3	5.7	93	0.00
2 T	Pyruvic acid	591.568	618.910 E3	-4.6	105	0.00
3 T	Lactic Acid	56.417	53.048 E3	6.0	94	0.00
4 T	Acetic Acid	56.048	55.724 E3	0.6	99	0.00
5 T	Propionic Acid	54.357	53.918 E3	0.8	96	0.00
6 T	Butyric Acid	52.562	51.490 E3	2.0	97	0.00

Evaluate Continuing Calibration Report - Not Founds

(#) = Out of Range SPCC's out = 0 CCC's out = 0

1st AF 07/06/20
2nd BA 07/06/20

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\hplc05\data\070120\
Data File : A0005448.D
Signal(s) : dad1C.ch
Acq On : 01-Jul-2020, 13:56:19
Operator : A.Felser
Sample : CCV
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Jul 02 11:02:43 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Wed Jul 01 11:45:58 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210

	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1) t	Formic acid	3.289	4396140	47.153	ppm	
2) T	Pyruvic acid	4.087	3094550	5.231	ppm	
3) T	Lactic Acid	4.668	2652410	47.015	ppm	
4) T	Acetic Acid	5.103	2786198	49.711	ppm	
5) T	Propionic Acid	12.491	2695880	49.595	ppm	
6) T	Butyric Acid	38.250f	2574498	48.980	ppm	m

(f)=RT Delta > 1/2 Window (m)=manual int.

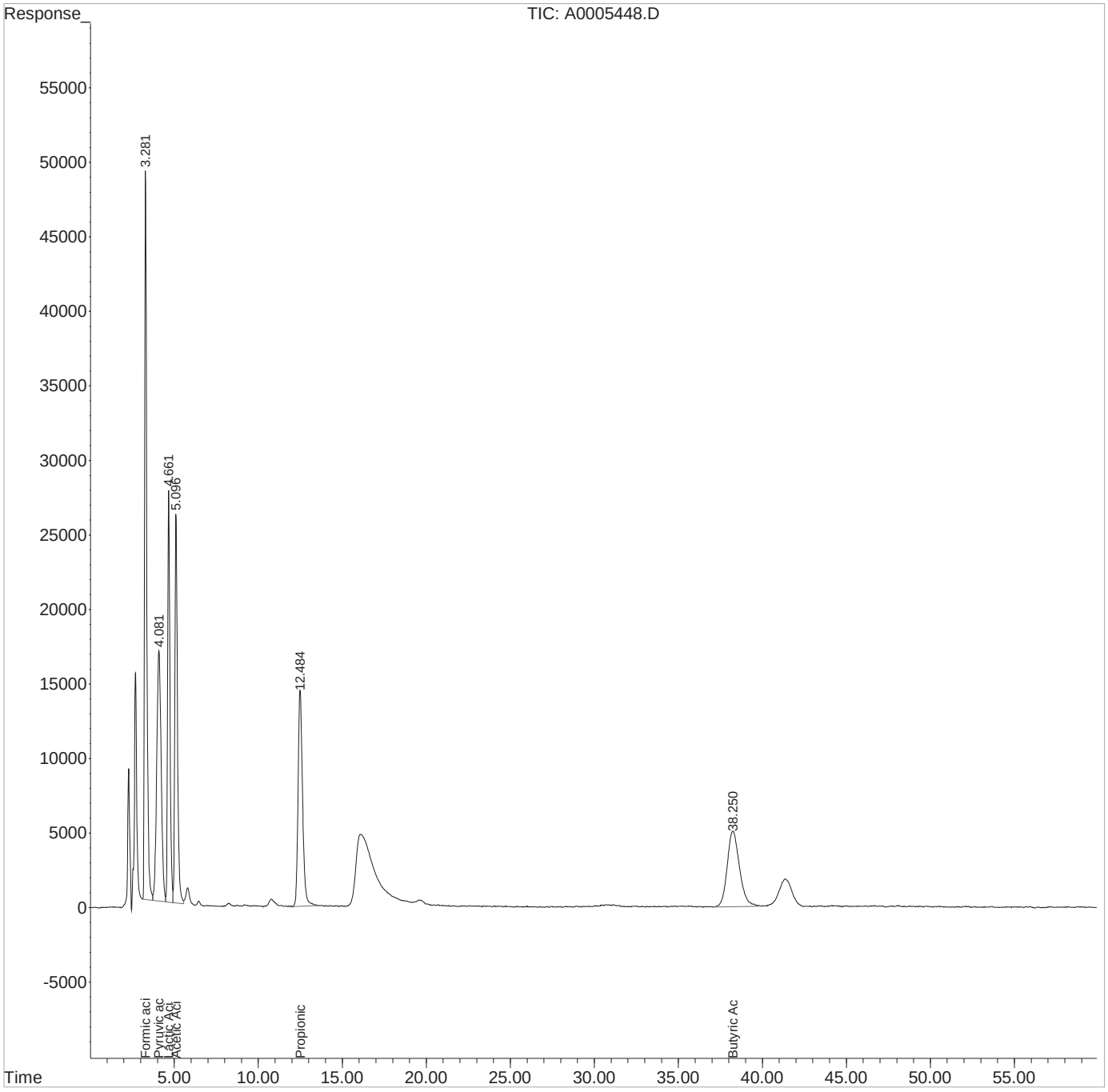
1st AF 07/06/20
2nd BA 07/06/20

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\hplc05\data\070120\
Data File : A0005448.D
Signal(s) : dad1C.ch
Acq On : 01-Jul-2020, 13:56:19
Operator : A.Felser
Sample : CCV
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Jul 02 11:02:43 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Wed Jul 01 11:45:58 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



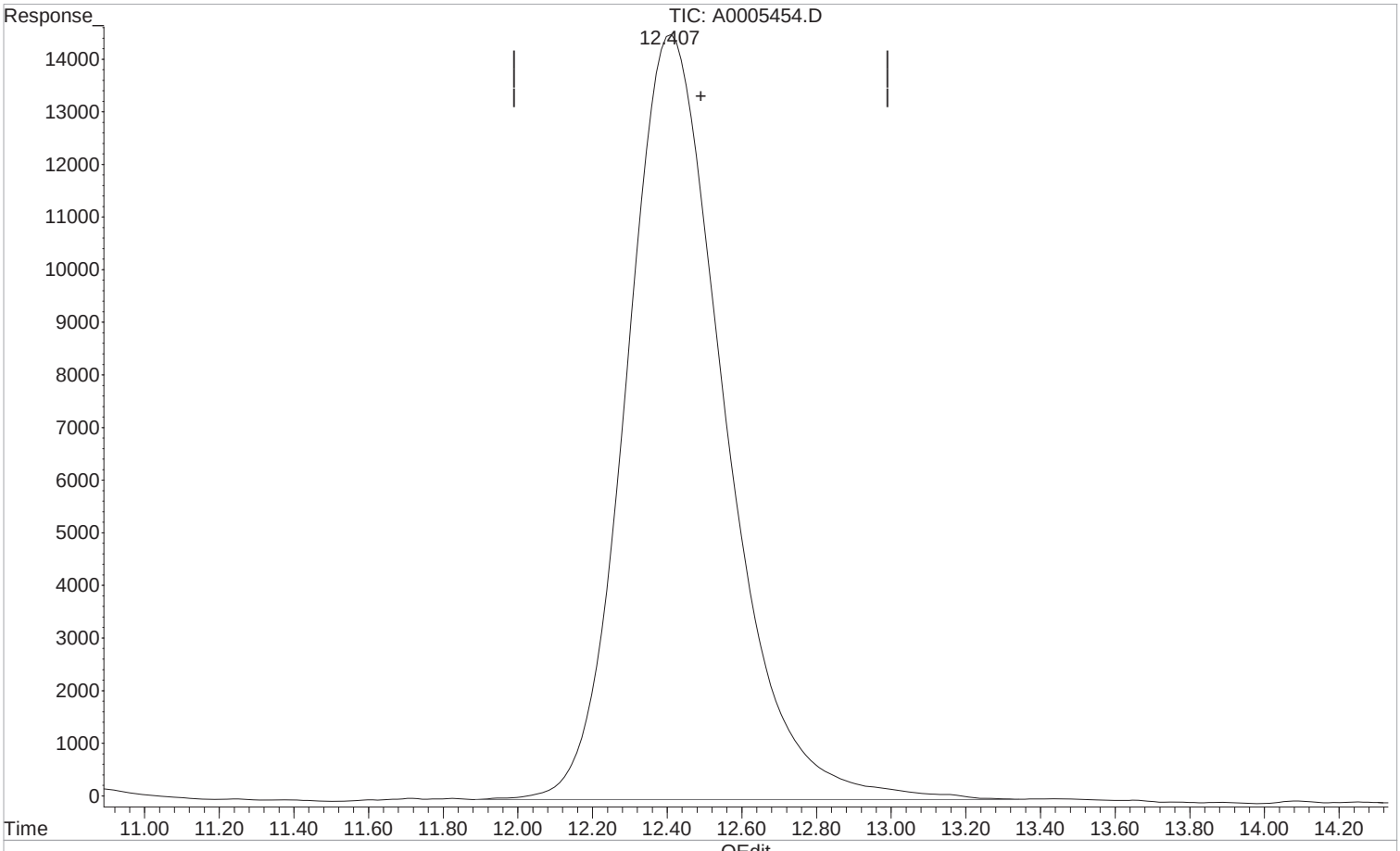
1st

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\070120\
Data File : A0005454.D
Signal(s) : dad1C.ch
Acq On : 31-Dec-2000, 02:48:28
Operator : A.Felser
Sample : CCV
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Jul 02 11:04:39 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Jul 02 11:03:09 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(5) Propionic Acid (T)

12.407min 49.189 ppm m

response 2673803

Manual Integration:

After

Poor integration.

07/02/20

(+) = Expected Retention Time

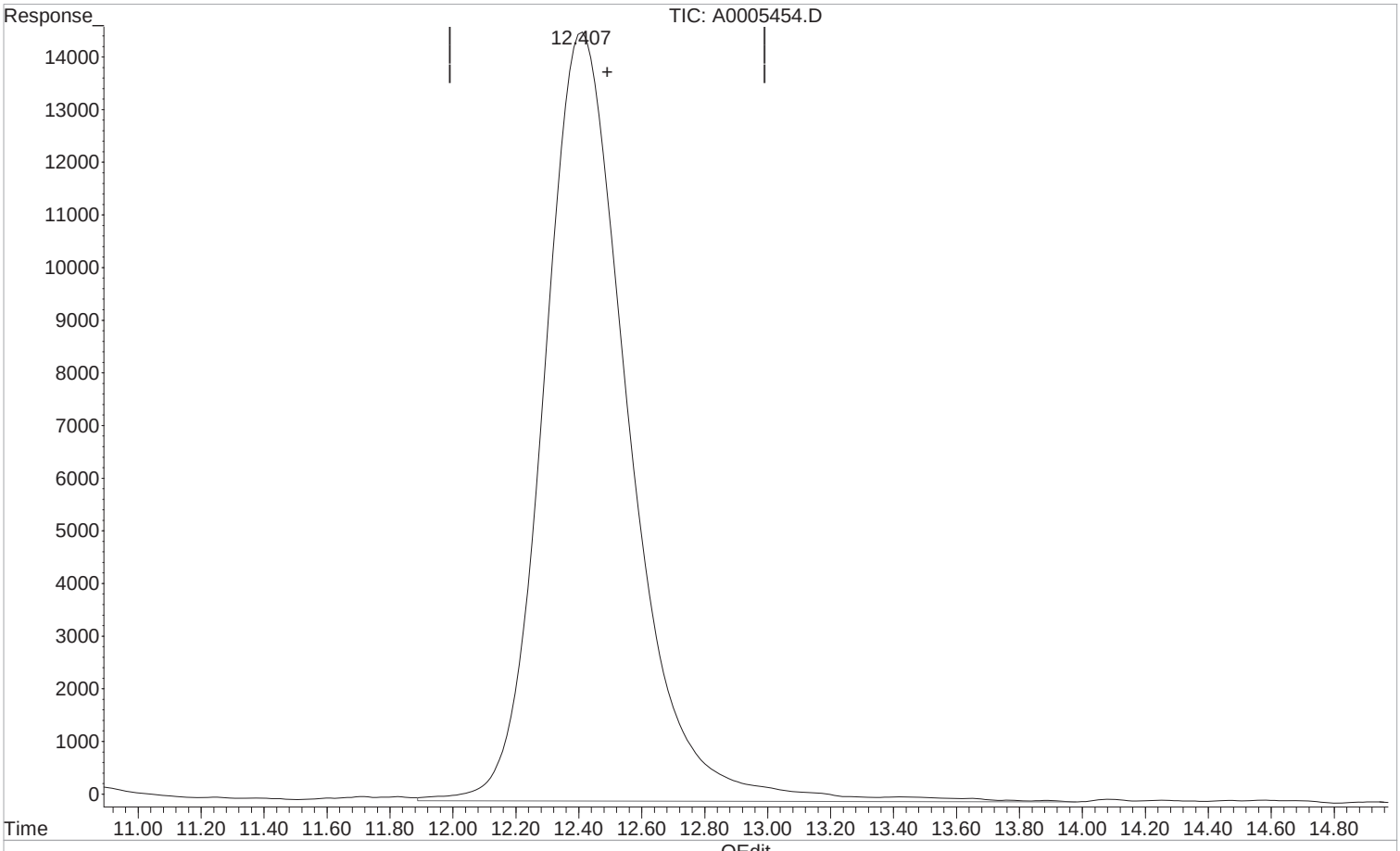
1st

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\070120\
Data File : A0005454.D
Signal(s) : dad1C.ch
Acq On : 31-Dec-2000, 02:48:28
Operator : A.Felser
Sample : CCV
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Jul 02 11:04:39 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Jul 02 11:03:09 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(5) Propionic Acid (T)

12.413min 50.550 ppm

response 2747773

Manual Integration:

Before

07/02/20

(+) = Expected Retention Time

1st AF 07/06/20
2nd BA 07/06/20

Evaluate Continuing Calibration Report

Data Path : I:\ACQUDATA\hplc05\data\070120\
Data File : A0005454.D
Signal(s) : dad1C.ch
Acq On : ~~31-Dec-2000, 02:48:28~~ 01-Jul-2020, 20:11
Operator : A.Felser
Sample : CCV
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Jul 02 11:04:39 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Jul 02 11:03:09 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 150%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(Min)
1 t	Formic acid	93.232	87.036 E3	6.6	92	0.00
2 T	Pyruvic acid	591.568	615.694 E3	-4.1	104	0.00
3 T	Lactic Acid	56.417	53.445 E3	5.3	95	-0.01
4 T	Acetic Acid	56.048	55.634 E3	0.7	98	-0.01
5 T	Propionic Acid	54.357	53.476 E3	1.6	96	-0.08
6 T	Butyric Acid	52.562	49.573 E3	5.7	93	-0.31

Evaluate Continuing Calibration Report - Not Founds

(#) = Out of Range SPCC's out = 0 CCC's out = 0

1st AF 07/06/20
2nd BA 07/06/20

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\hplc05\data\070120\
Data File : A0005454.D
Signal(s) : dad1C.ch
Acq On : ~~31-Dec-2000, 02:48:28~~ 01-Jul-2020, 20:11
Operator : A.Felser
Sample : CCV
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Jul 02 11:04:39 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Jul 02 11:03:09 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210

	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1) t	Formic acid	3.286	4351784	46.677	ppm	
2) T	Pyruvic acid	4.078	3078468	5.204	ppm	
3) T	Lactic Acid	4.656	2672249	47.366	ppm	
4) T	Acetic Acid	5.088	2781679	49.630	ppm	
5) T	Propionic Acid	12.407	2673803	49.189	ppm	m
6) T	Butyric Acid	37.941	2478649	47.157	ppm	

(f)=RT Delta > 1/2 Window (m)=manual int.

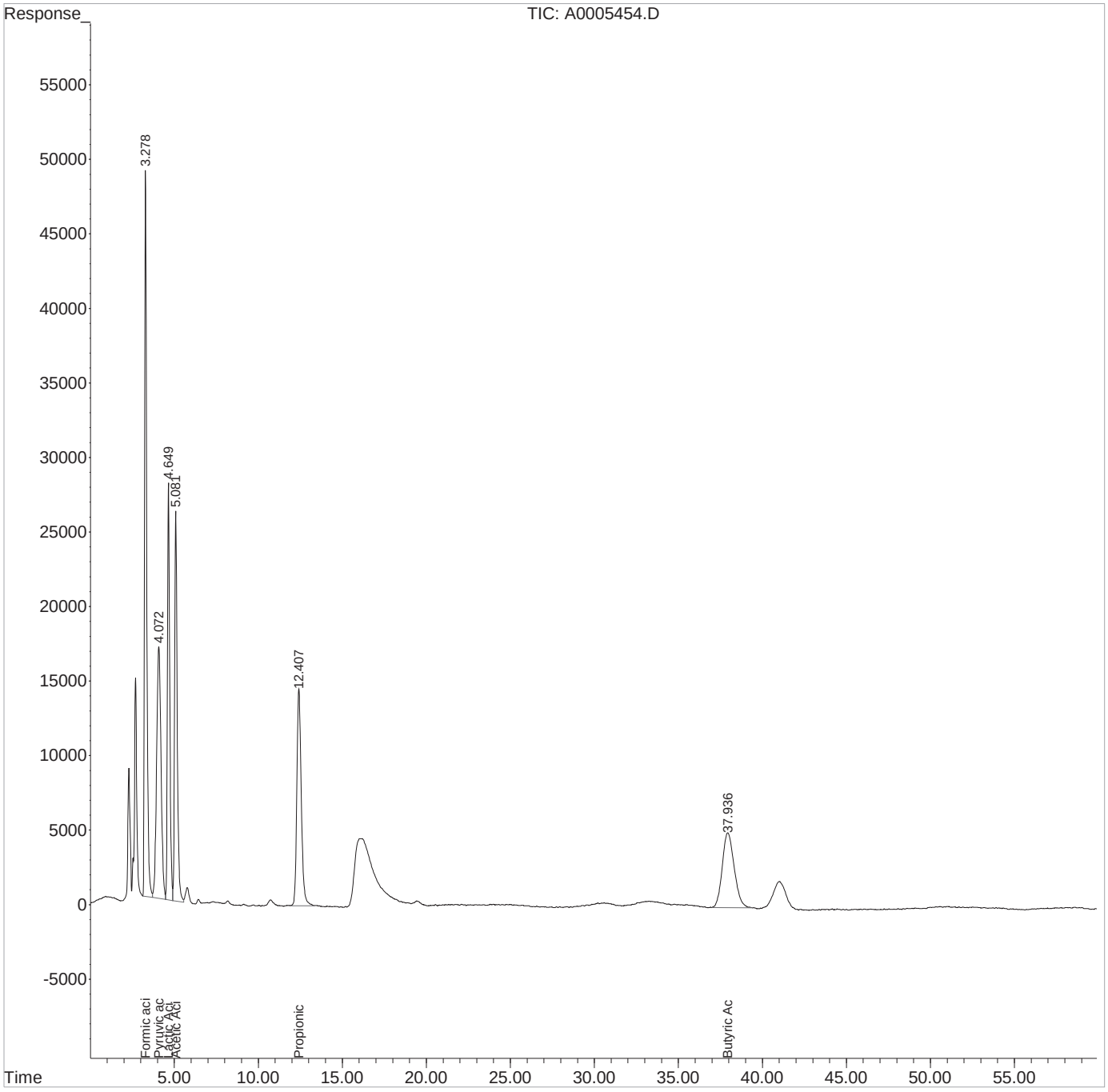
1st AF 07/06/20
2nd BA 07/06/20

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\hplc05\data\070120\
Data File : A0005454.D
Signal(s) : dad1C.ch
Acq On : 31-Dec-2000, 02:48:28
Operator : A.Felser
Sample : CCV
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Jul 02 11:04:39 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Jul 02 11:03:09 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



1st AF 07/06/20
2nd BA 07/06/20

Evaluate Continuing Calibration Report

Data Path : I:\ACQUDATA\hplc05\data\070120\
Data File : A0005460.D
Signal(s) : dad1C.ch
Acq On : 02-Jul-2020, 02:32:48
Operator : A.Felser
Sample : CCV
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Jul 02 11:05:35 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Jul 02 11:05:13 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 150%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(Min)
1 t	Formic acid	93.232	86.967 E3	6.7	92	0.00
2 T	Pyruvic acid	591.568	618.225 E3	-4.5	105	0.00
3 T	Lactic Acid	56.417	53.615 E3	5.0	95	-0.01
4 T	Acetic Acid	56.048	55.562 E3	0.9	98	-0.01
5 T	Propionic Acid	54.357	53.174 E3	2.2	95	-0.07
6 T	Butyric Acid	52.562	50.719 E3	3.5	95	-0.34

Evaluate Continuing Calibration Report - Not Founds

(#) = Out of Range SPCC's out = 0 CCC's out = 0

1st AF 07/06/20
2nd BA 07/06/20

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\hplc05\data\070120\
Data File : A0005460.D
Signal(s) : dad1C.ch
Acq On : 02-Jul-2020, 02:32:48
Operator : A.Felser
Sample : CCV
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Jul 02 11:05:35 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Jul 02 11:05:13 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210

	Compound	R.T.	Response	Conc Units
Target Compounds				
1) t	Formic acid	3.283	4348362	46.640 ppm
2) T	Pyruvic acid	4.070	3091124	5.225 ppm
3) T	Lactic Acid	4.644	2680731	47.517 ppm
4) T	Acetic Acid	5.074	2778090	49.566 ppm
5) T	Propionic Acid	12.337	2658692	48.911 ppm
6) T	Butyric Acid	37.600	2535956	48.247 ppm

(f)=RT Delta > 1/2 Window (m)=manual int.

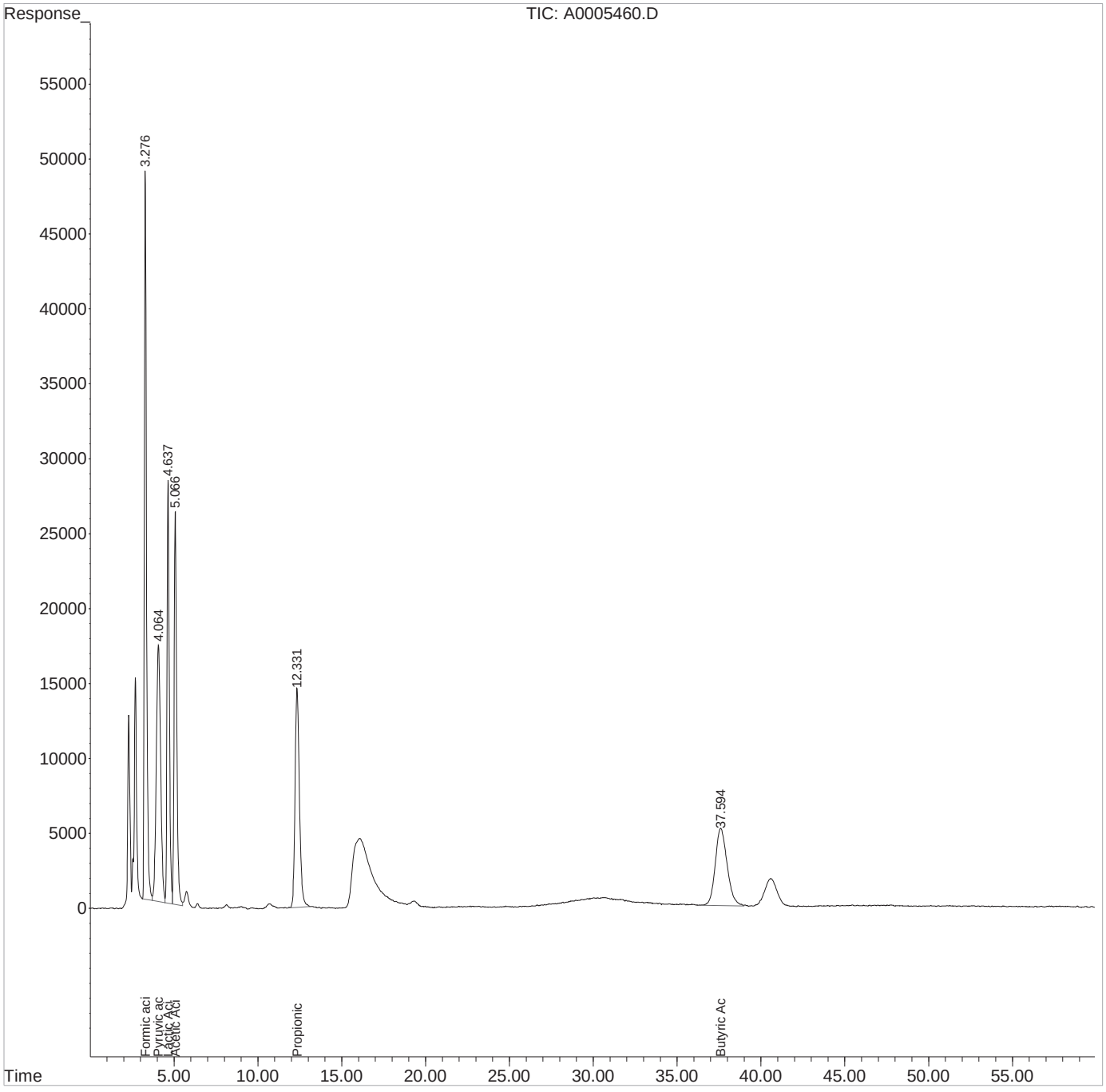
1st AF 07/06/20
2nd BA 07/06/20

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\hplc05\data\070120\
Data File : A0005460.D
Signal(s) : dad1C.ch
Acq On : 02-Jul-2020, 02:32:48
Operator : A.Felser
Sample : CCV
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Jul 02 11:05:35 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Jul 02 11:05:13 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



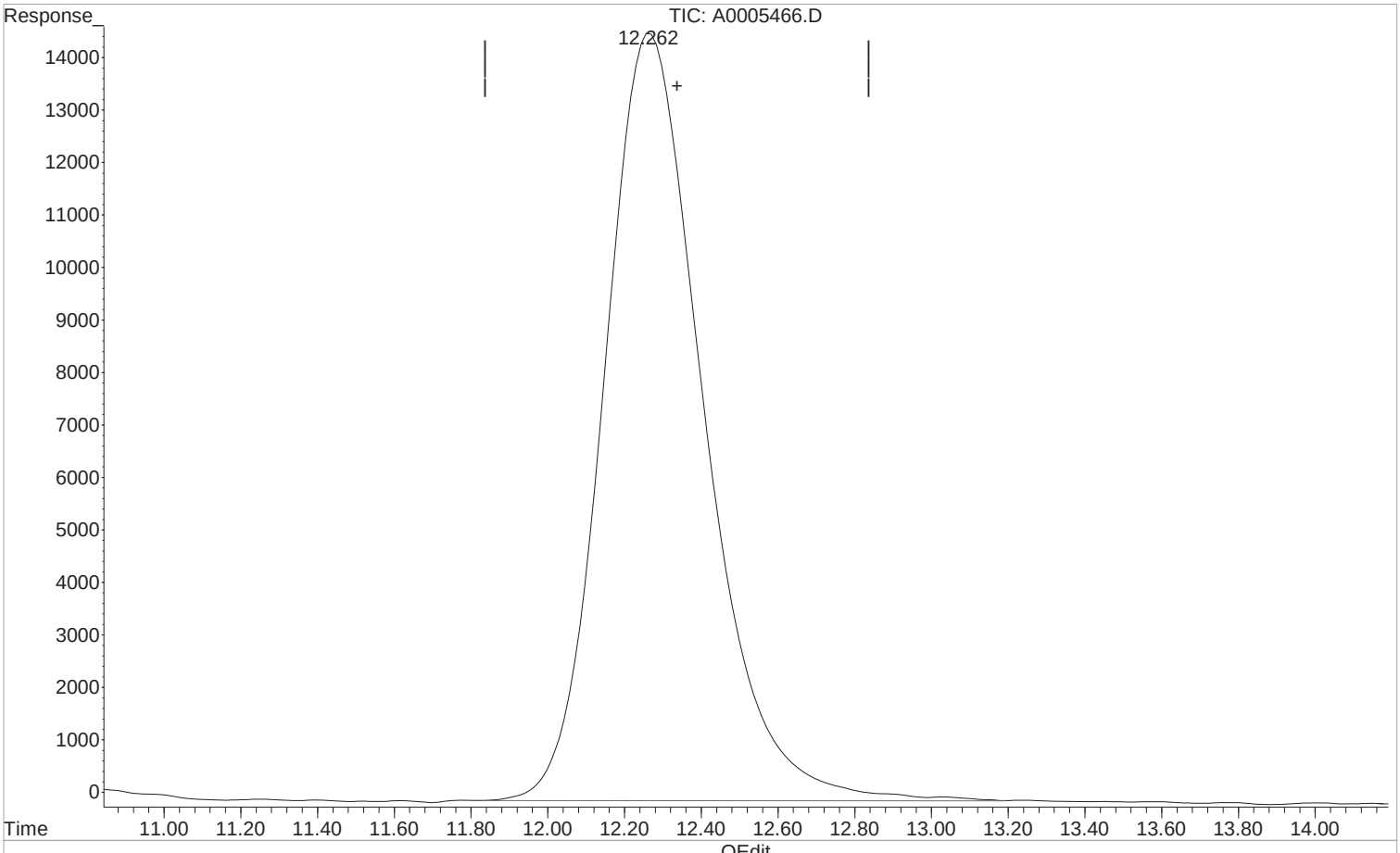
1st

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\070120\
Data File : A0005466.D
Signal(s) : dad1C.ch
Acq On : 02-Jul-2020, 08:50:41
Operator : A.Felser
Sample : CCV
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Jul 02 11:06:20 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Jul 02 11:05:58 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(5) Propionic Acid (T)

12.262min 48.691 ppm m

response 2646708

Manual Integration:

After

Poor integration.

07/02/20

(+) = Expected Retention Time

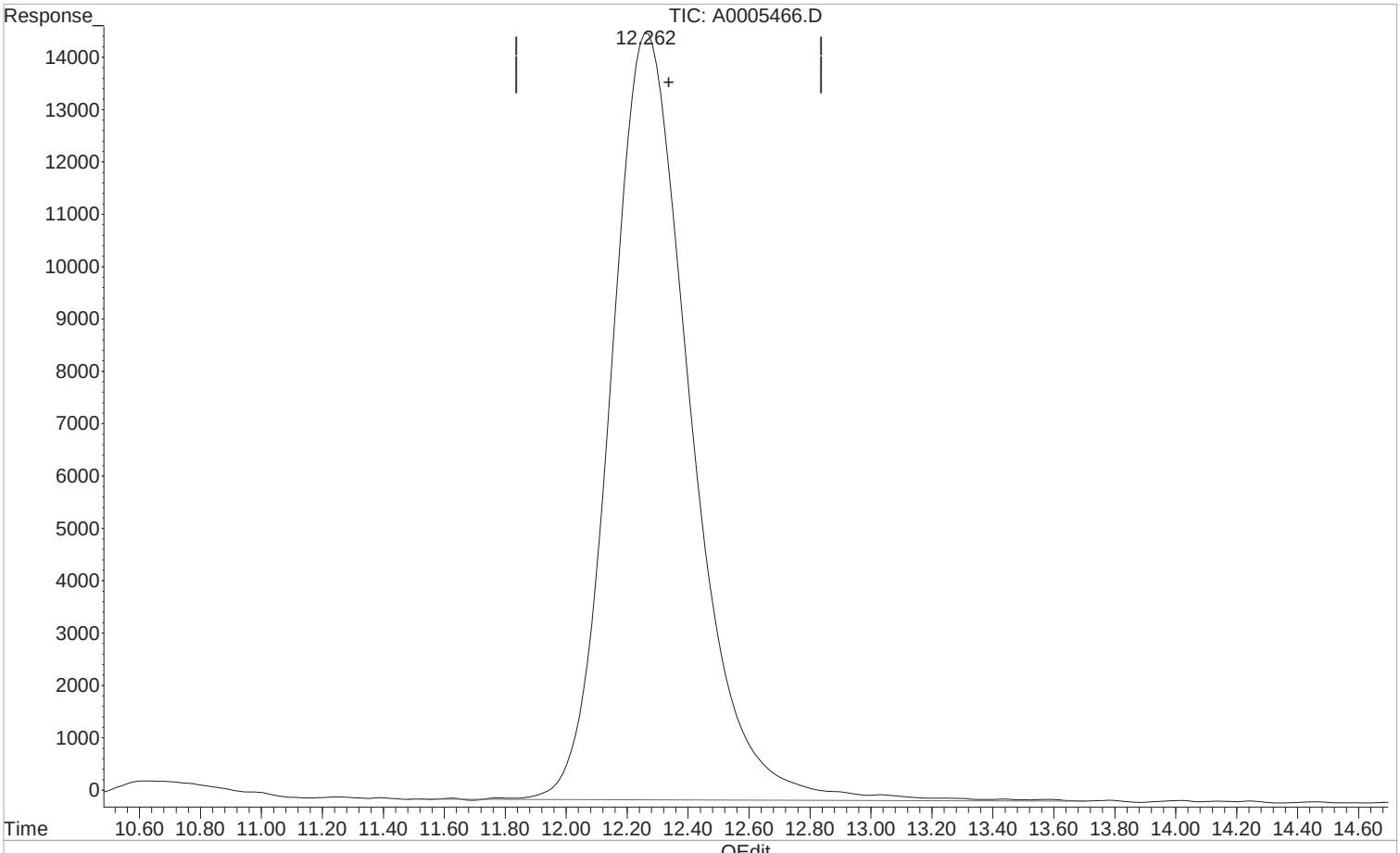
1st

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\070120\
Data File : A0005466.D
Signal(s) : dad1C.ch
Acq On : 02-Jul-2020, 08:50:41
Operator : A.Felser
Sample : CCV
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Jul 02 11:06:20 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Jul 02 11:05:58 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(5) Propionic Acid (T)

12.268min 49.322 ppm

response 2681012

Manual Integration:

Before

07/02/20

(+) = Expected Retention Time

1st AF 07/06/20
2nd BA 07/06/20

Evaluate Continuing Calibration Report

Data Path : I:\ACQUDATA\hplc05\data\070120\
Data File : A0005466.D
Signal(s) : dad1C.ch
Acq On : 02-Jul-2020, 08:50:41
Operator : A.Felser
Sample : CCV
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Jul 02 11:06:20 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Jul 02 11:05:58 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 150%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(Min)
1 t	Formic acid	93.232	85.866 E3	7.9	91	0.00
2 T	Pyruvic acid	591.568	594.210 E3	-0.4	101	0.00
3 T	Lactic Acid	56.417	52.771 E3	6.5	94	-0.01
4 T	Acetic Acid	56.048	54.437 E3	2.9	96	-0.02
5 T	Propionic Acid	54.357	52.934 E3	2.6	95	-0.07
6 T	Butyric Acid	52.562	52.270 E3	0.6	98	-0.25

Evaluate Continuing Calibration Report - Not Founds

(#) = Out of Range SPCC's out = 0 CCC's out = 0

1st AF 07/06/20
2nd BA 07/06/20

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\hplc05\data\070120\
Data File : A0005466.D
Signal(s) : dad1C.ch
Acq On : 02-Jul-2020, 08:50:41
Operator : A.Felser
Sample : CCV
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Jul 02 11:06:20 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Jul 02 11:05:58 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210

	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1) t	Formic acid	3.279	4293319	46.050	ppm	
2) T	Pyruvic acid	4.060	2971052	5.022	ppm	
3) T	Lactic Acid	4.630	2638527	46.769	ppm	
4) T	Acetic Acid	5.057	2721854	48.563	ppm	
5) T	Propionic Acid	12.262	2646708	48.691	ppm	m
6) T	Butyric Acid	37.347	2613511	49.723	ppm	

(f)=RT Delta > 1/2 Window (m)=manual int.

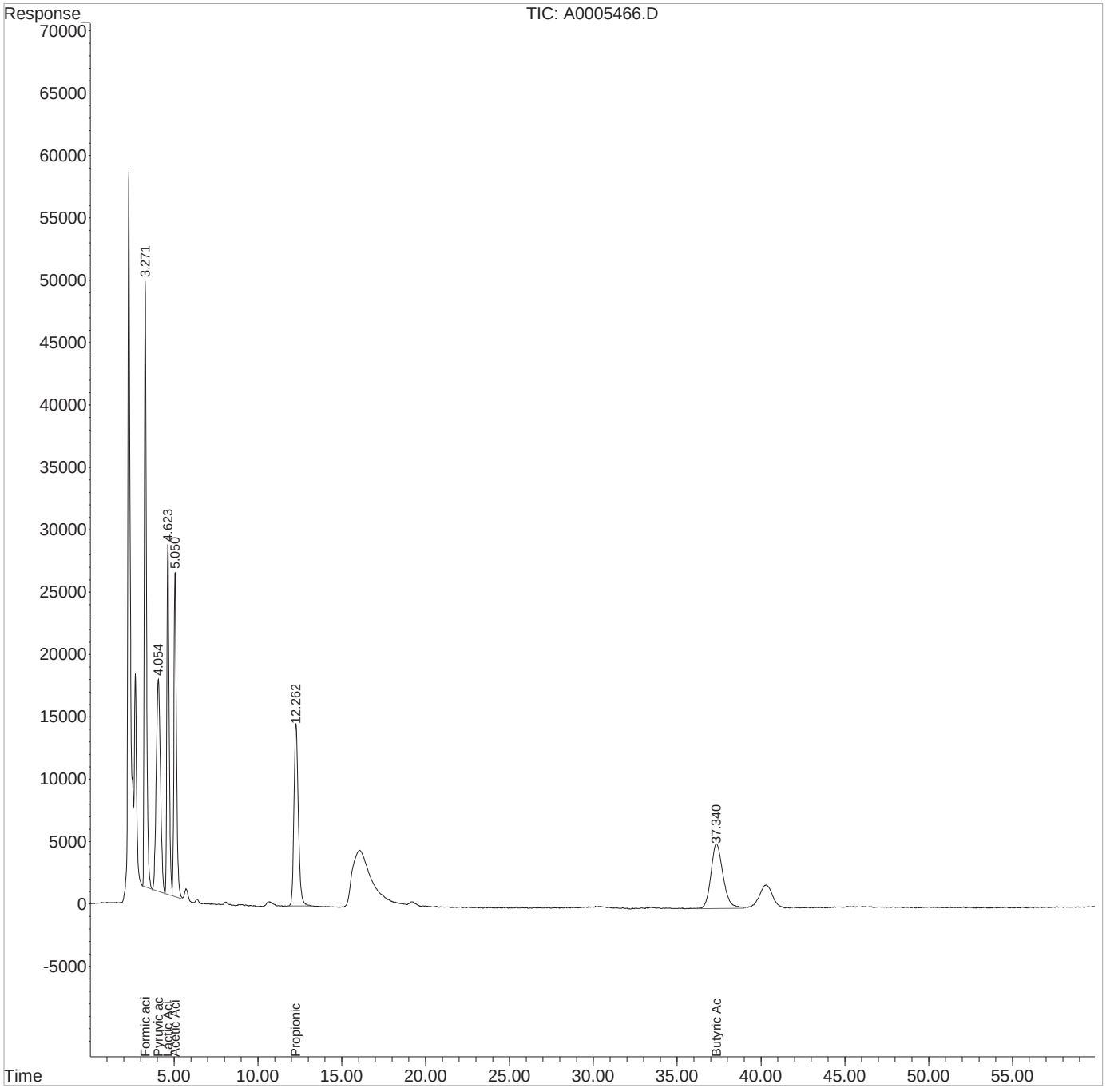
1st AF 07/06/20
2nd BA 07/06/20

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\hplc05\data\070120\
Data File : A0005466.D
Signal(s) : dad1C.ch
Acq On : 02-Jul-2020, 08:50:41
Operator : A.Felser
Sample : CCV
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Jul 02 11:06:20 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Jul 02 11:05:58 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



1st AF 07/06/20
2nd BA 07/06/20

Evaluate Continuing Calibration Report

Data Path : I:\ACQUDATA\hplc05\data\070120\
Data File : A0005472.D
Signal(s) : dad1C.ch
Acq On : 02-Jul-2020, 15:08:24
Operator : A.Felser
Sample : CCV
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Jul 02 16:39:09 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Jul 02 16:38:47 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 150%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(Min)
1 t	Formic acid	93.232	85.492 E3	8.3	91	0.00
2 T	Pyruvic acid	591.568	593.597 E3	-0.3	101	0.00
3 T	Lactic Acid	56.417	53.078 E3	5.9	94	0.00
4 T	Acetic Acid	56.048	54.351 E3	3.0	96	0.00
5 T	Propionic Acid	54.357	53.792 E3	1.0	96	-0.02
6 T	Butyric Acid	52.562	52.259 E3	0.6	98	-0.19

Evaluate Continuing Calibration Report - Not Founds

(#) = Out of Range SPCC's out = 0 CCC's out = 0

1st AF 07/06/20
2nd BA 07/06/20

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\hplc05\data\070120\
Data File : A0005472.D
Signal(s) : dad1C.ch
Acq On : 02-Jul-2020, 15:08:24
Operator : A.Felser
Sample : CCV
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Jul 02 16:39:09 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Jul 02 16:38:47 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210

	Compound	R.T.	Response	Conc Units
Target Compounds				
1) t	Formic acid	3.279	4274586	45.849 ppm
2) T	Pyruvic acid	4.054	2967984	5.017 ppm
3) T	Lactic Acid	4.627	2653881	47.041 ppm
4) T	Acetic Acid	5.055	2717571	48.486 ppm
5) T	Propionic Acid	12.242	2689612	49.480 ppm
6) T	Butyric Acid	37.161	2612962	49.712 ppm

(f)=RT Delta > 1/2 Window (m)=manual int.

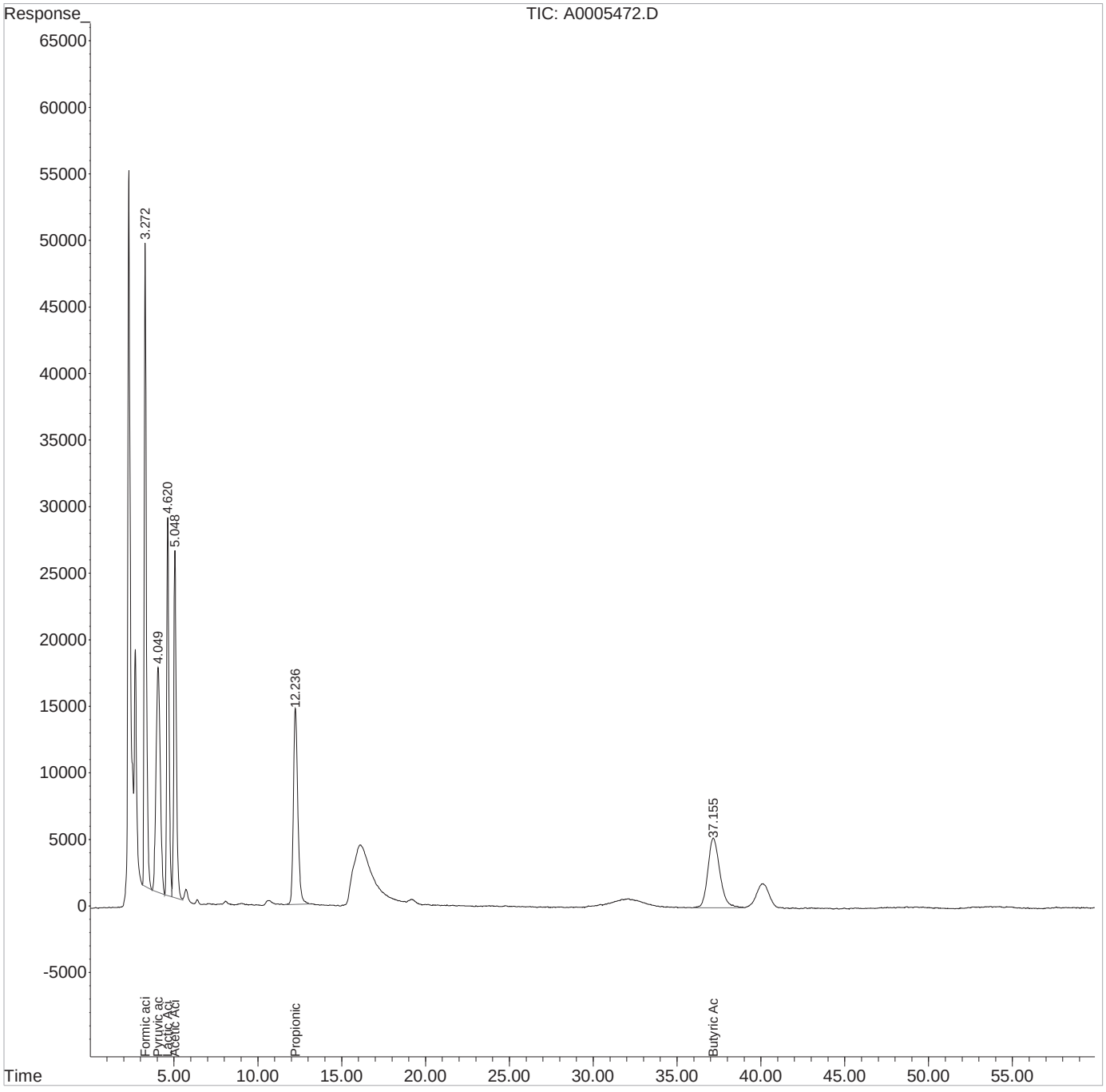
1st AF 07/06/20
2nd BA 07/06/20

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\hplc05\data\070120\
Data File : A0005472.D
Signal(s) : dad1C.ch
Acq On : 02-Jul-2020, 15:08:24
Operator : A.Felser
Sample : CCV
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Jul 02 16:39:09 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Jul 02 16:38:47 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



Analysis: Met Acids Analyst: Archer Run Method: NEWMETA.M
Date: 03/12/2020 Instr. HPLC05 Quant Method: MA03/220.M
LIMS Run#:
Setup: Column: Synergi Hydro-RP 150x4.6 Col. Temp: 35°C Flow: 0.6 mL/min
Mobile Phase: 0.02M KH2PO4 prep 0.1M PO4 ul Inj.: 50
Mobile Phase ID: O-760-76 03/12/2020

Pos.	Sample	Diln.	Stds. ID	File#	OK?	Comments
1	Blk			A0004461	—	
1	Blk			62	—	
1	Blk			63	—	
1	last Blk			64	Y	
2	STD 1	2µL/1mL	205268	65	Y	
3	2	4µL/1mL		66	Y	
4	3	10µL/1mL		67	Y	
5	4	20µL/1mL		68	Y	
6	5	40µL/1mL		69	Y	
7	6	0.1mL/1mL		70	Y	
8	7	0.2mL/1mL		71	Y	
9	8	0.4mL/1mL		72	Y	
10	ICV	100µL/1mL	203153	73	N	Interference w/ Butyric

Archer 03/17/2020

Primary: 205268 exp: 03/21/20 Secondary: 203153 exp: 03/21/20
pH Paper: 205508 Acid: 203550

Runlog HPLCr2
3/23/18

Analysis: Met Acids Analyst: AFelter Run Method: NEWMETA.M
Date: 03/16/2020 Instr. HPLC05 Quant Method: MA031220.M
LIMS Run#: 673626
Setup: Column: Synergi Hydro RP 150 x 4.6 Col.Temp: 35°C Flow: 0.6mL/min
Mobile Phase: 0.02m KH2 pump 0.1m PO4 ul Inj.: 50
Mobile Phase ID: 0-760-76 03/12/2020

Pos.	Sample	Diln.	Stds. ID	File#	OK?	Comments
1	BLK			A0004774	—	
1	BLK			75	—	
2	CCV	100µL/1mL	205268	76	Y	
3	ICV	↓	203153	77	Y	
4	CCV	100µL/1mL	205268	78	Y	Butyric ↑
5	MB			79	Y	
6	LCS	100µL/1mL	203153	80	Y	
7	DLCS	↓	↓	81	Y	
8	K2001991-001			82	N	Acetic >LR, dilute 1/2
9	↓ -001 MS		203153	83	N	↓
4	CCV	100µL/1mL	205268	84	Y	
10	K2001991-001 DMS		203153	85	N	Acetic >LR
11	K2001990-001	2		86	Y	
12	R2001765-012			87	Y	
13	↓ -022			88	Y	
14	↓ -023			89	Y	
4	CCV	100µL/1mL	205268	90	Y	
15	LOQ/MDL	10µL/1mL	203153	91	Y	
16	LODV	5µL/1mL	↓	92	Y	
17	R2002223-001			93	Y	
18	↓ -003			94	Y	
19	↓ -005			95	Y	
4	CCV	100µL/1mL	205268	96	Y	
20	K2001991-001	2		97		
4	CCV	100µL/1mL	205268	98	Y	

AFelter 03/17/2020

Primary: 205268 exp: 03/21/20 Secondary: 203153 exp: 03/25/20
pH Paper: 205502 Acid: 203990

Runlog HPLCr2
3/23/18

1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004472.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 20:00:49
Operator : A.Felser
Sample : STD 8
Misc :
ALS Vial : 9 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:28 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210

	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1) t	Formic acid	2.949	18444040	201.560	ppm	
2) T	Pyruvic acid	3.625	11605902	19.912	ppm	m
3) T	Lactic Acid	4.103	11063811	199.720	ppm	m
4) T	Acetic Acid	4.584	11047591	197.987	ppm	m
5) T	Propionic Acid	11.450	10994386	200.127	ppm	
6) T	Butyric Acid	36.001f	10326182	196.253	ppm	m

(f)=RT Delta > 1/2 Window (m)=manual int.

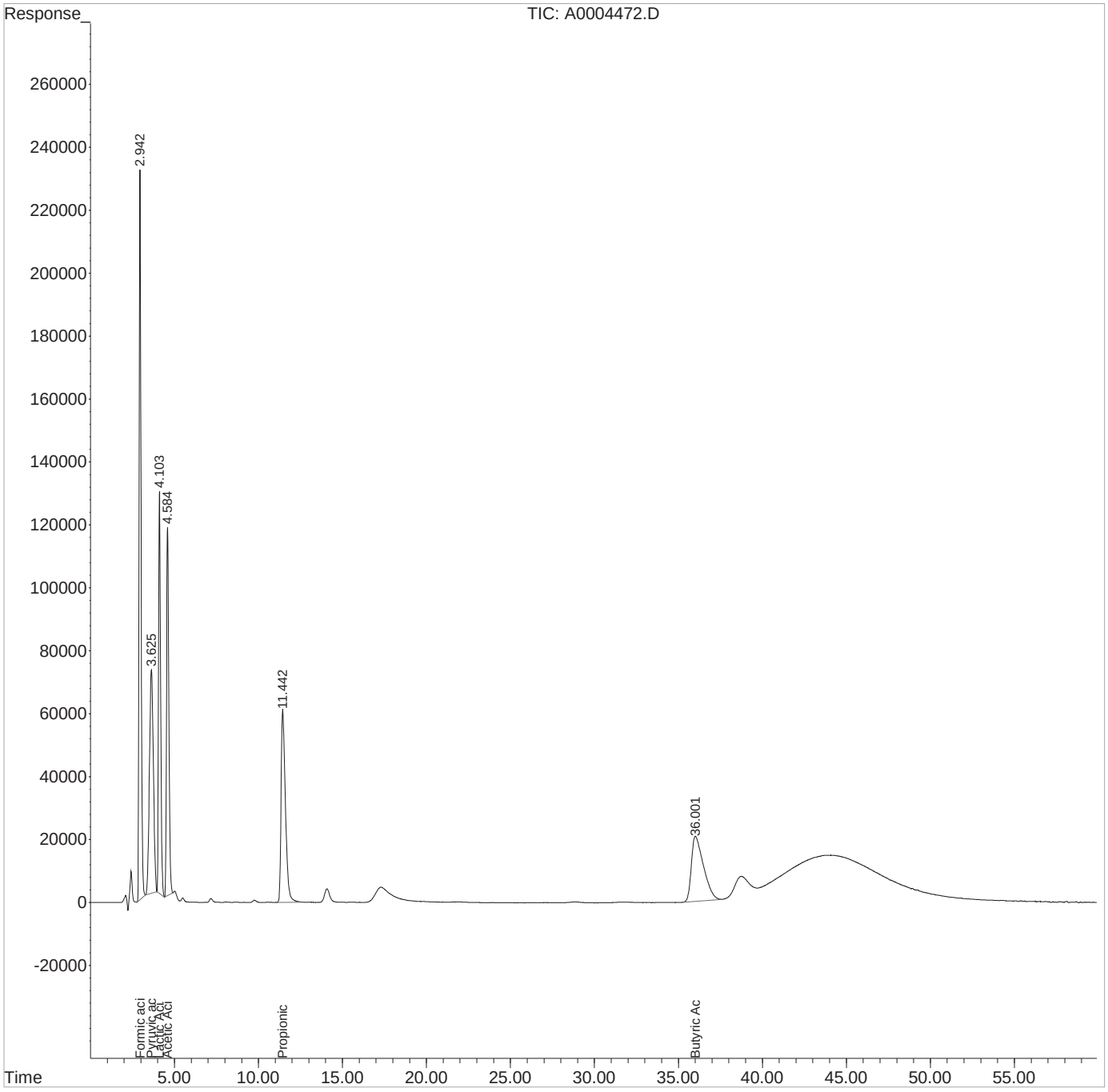
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004472.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 20:00:49
Operator : A.Felser
Sample : STD 8
Misc :
ALS Vial : 9 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:28 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004464.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 11:36:51
Operator : A.Felser
Sample : INST BLK
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:30:23 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:29:26 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210

	Compound	R.T.	Response	Conc	Units
Target Compounds					
1) t	Formic acid	0.000	0	N.D.	ppm
2) T	Pyruvic acid	0.000	0	N.D.	ppm
3) T	Lactic Acid	0.000	0	N.D.	ppm
4) T	Acetic Acid	0.000	0	N.D.	ppm
5) T	Propionic Acid	0.000	0	N.D.	ppm
6) T	Butyric Acid	0.000	0	N.D.	ppm

(f)=RT Delta > 1/2 Window (m)=manual int.

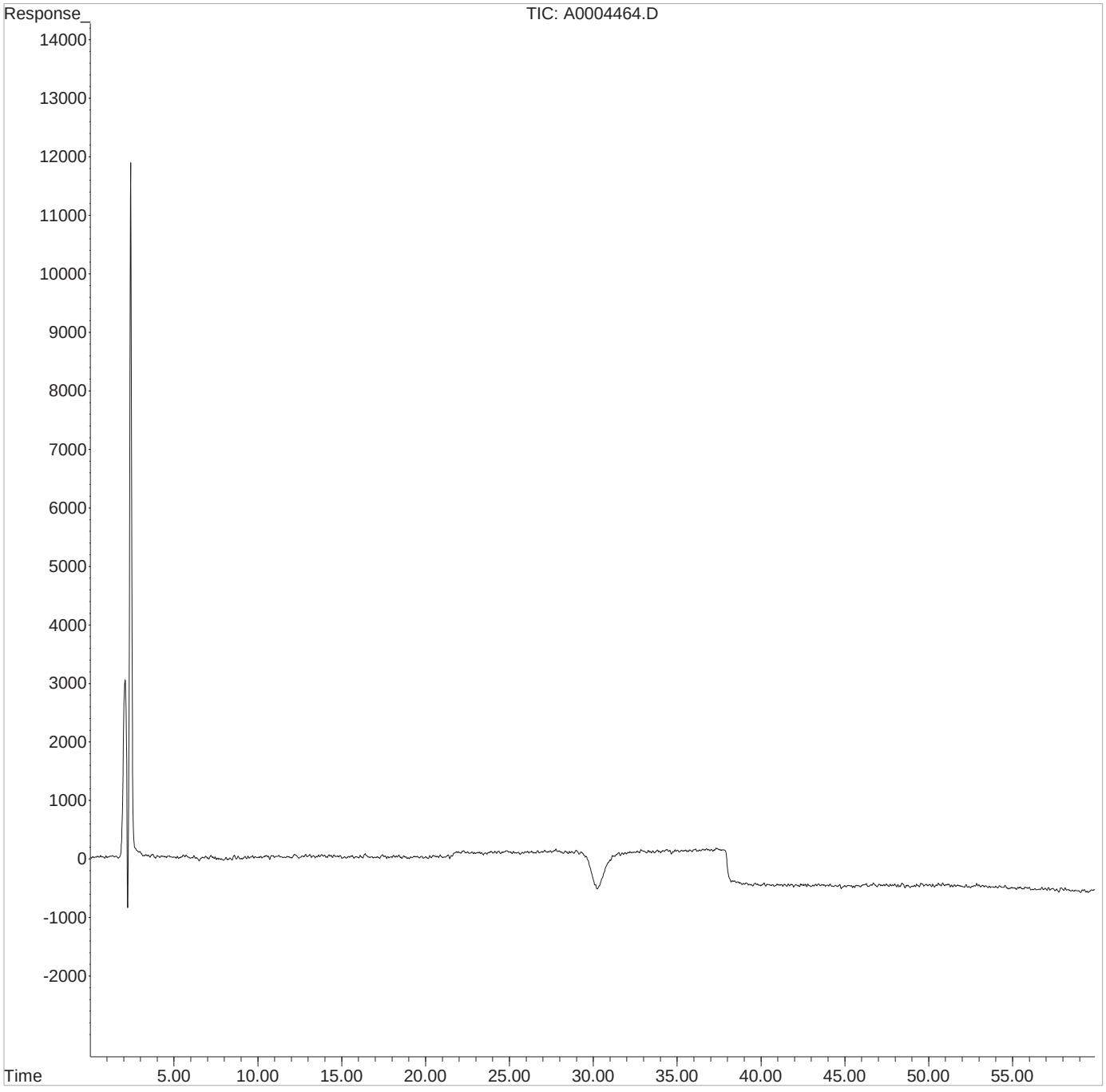
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004464.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 11:36:51
Operator : A.Felser
Sample : INST BLK
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:30:23 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:29:26 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



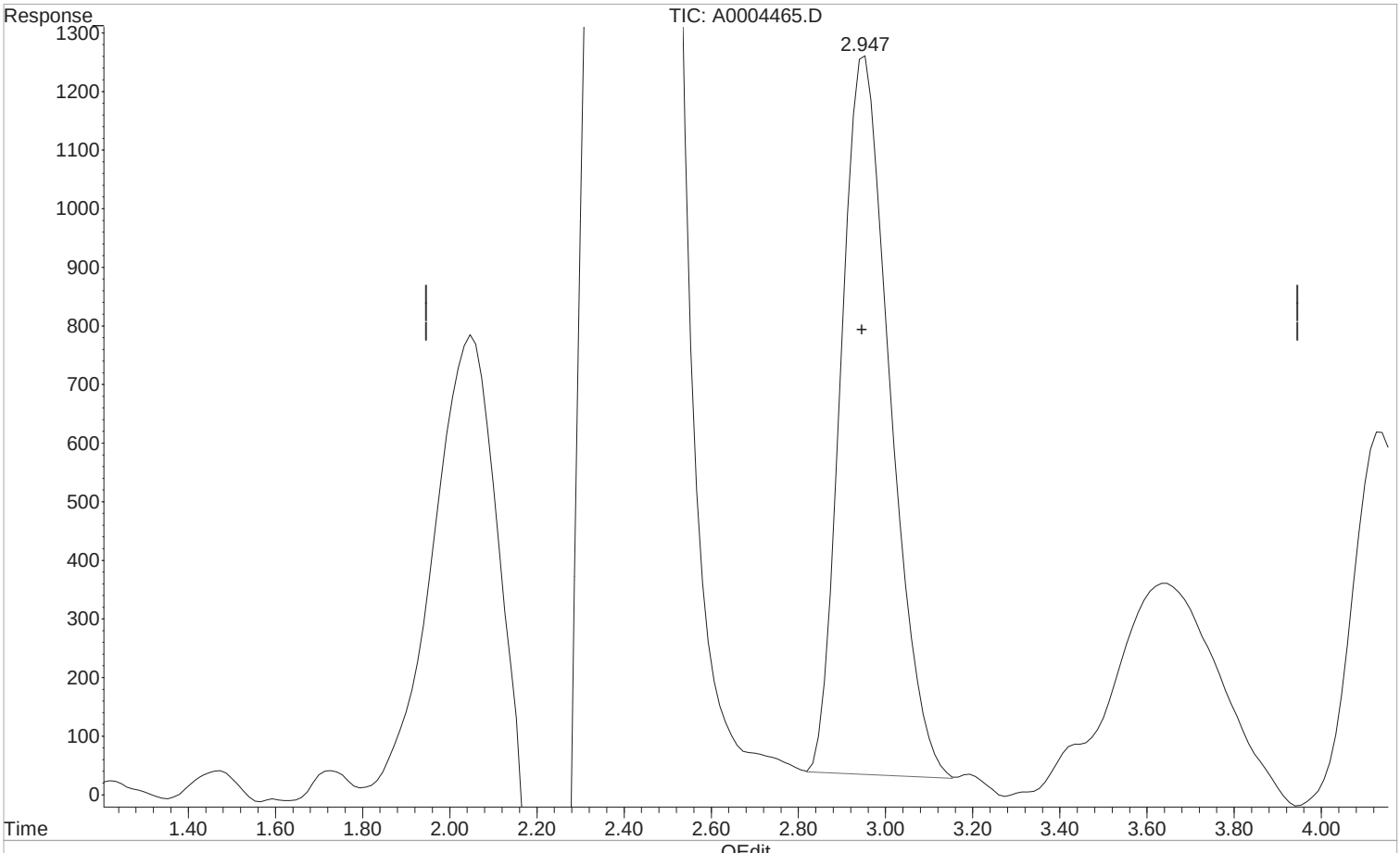
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004465.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 12:39:51
Operator : A.Felser
Sample : STD 1
Misc :
ALS Vial : 2 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:16 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(1) Formic acid (t)

2.947min 1.051 ppm m

response 96141

Manual Integration:

After

Peak not found.

03/16/20

(+) = Expected Retention Time

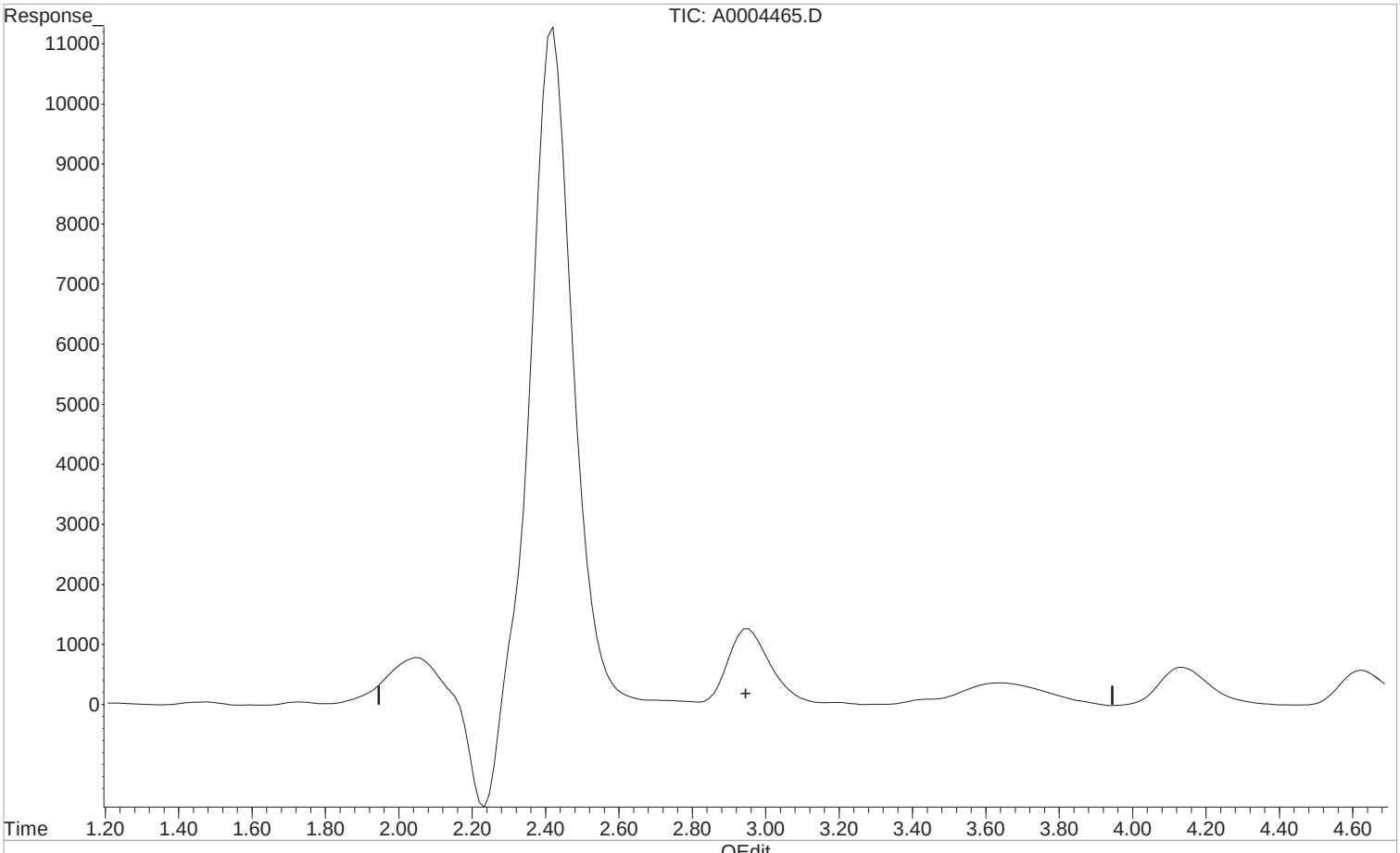
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004465.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 12:39:51
Operator : A.Felser
Sample : STD 1
Misc :
ALS Vial : 2 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:16 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(1) Formic acid (t)

2.946min 0.000 ppm

response 0

Manual Integration:

Before

03/16/20

(+) = Expected Retention Time

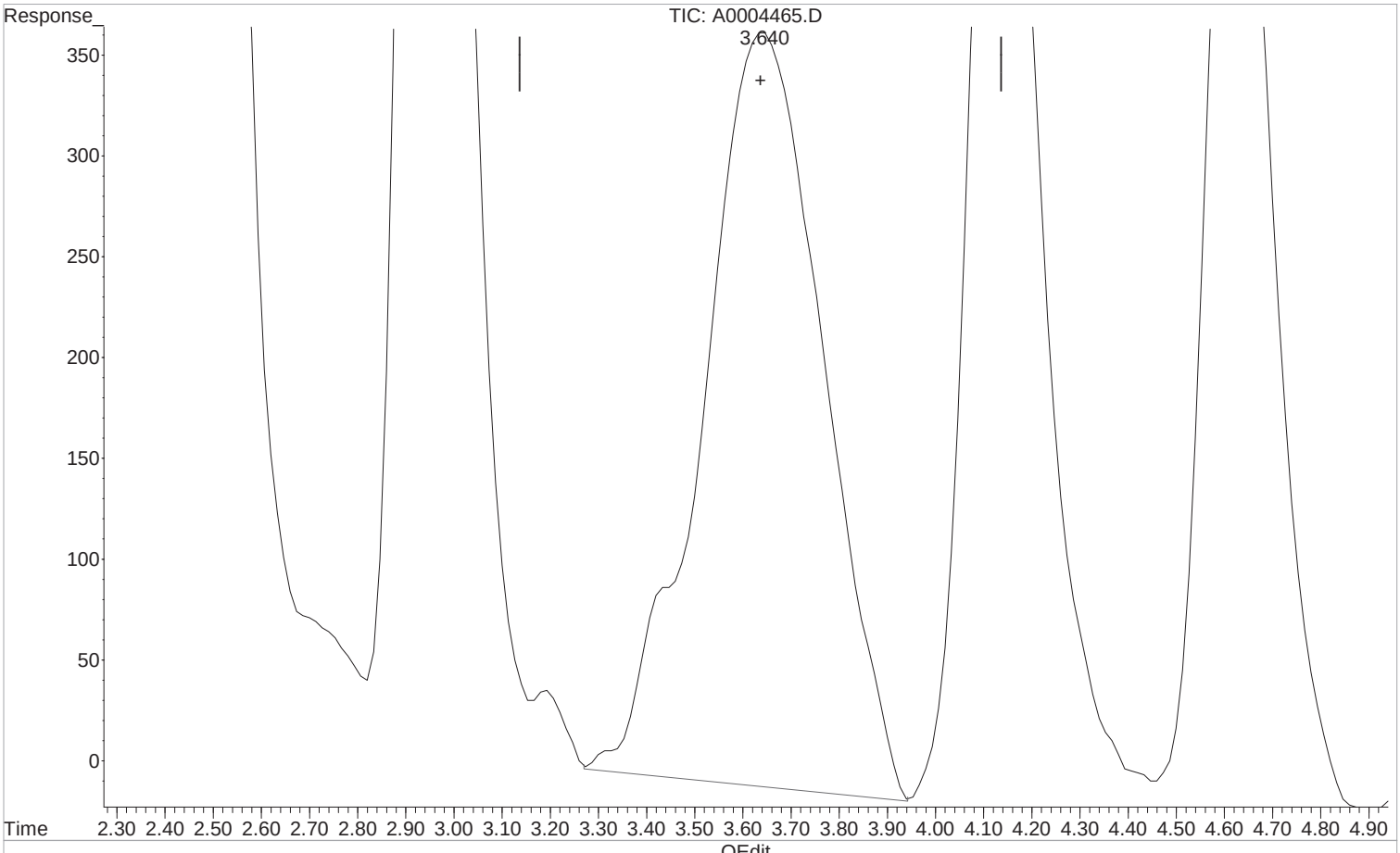
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004465.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 12:39:51
Operator : A.Felser
Sample : STD 1
Misc :
ALS Vial : 2 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:16 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(2) Pyruvic acid (T)

3.640min 0.112 ppm m

response 65073

Manual Integration:

After

Peak not found.

03/16/20

(+) = Expected Retention Time

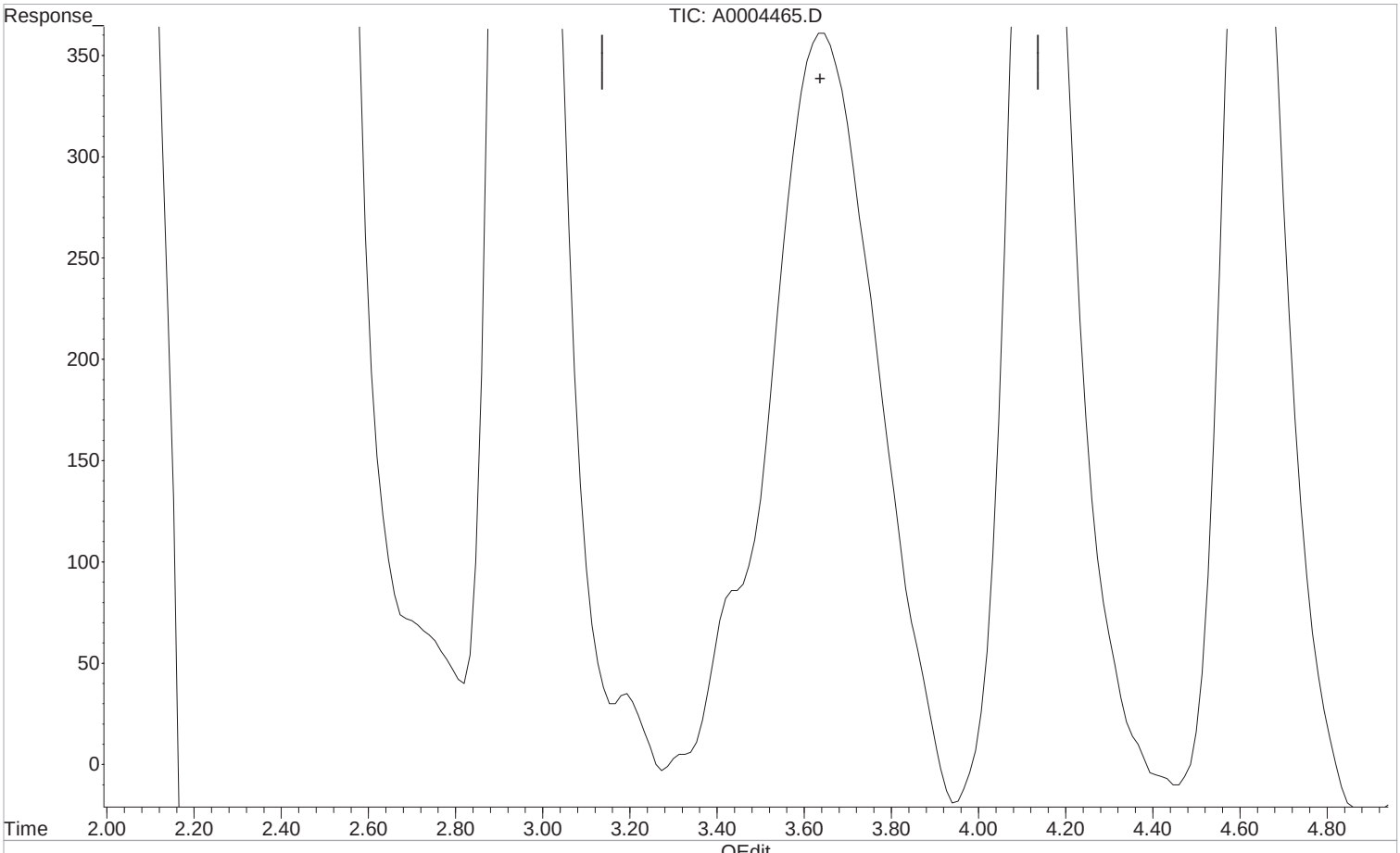
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004465.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 12:39:51
Operator : A.Felser
Sample : STD 1
Misc :
ALS Vial : 2 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:16 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(2) Pyruvic acid (T)

3.645min -0.100 ppm

response -58358

Manual Integration:

Before

03/16/20

(+) = Expected Retention Time

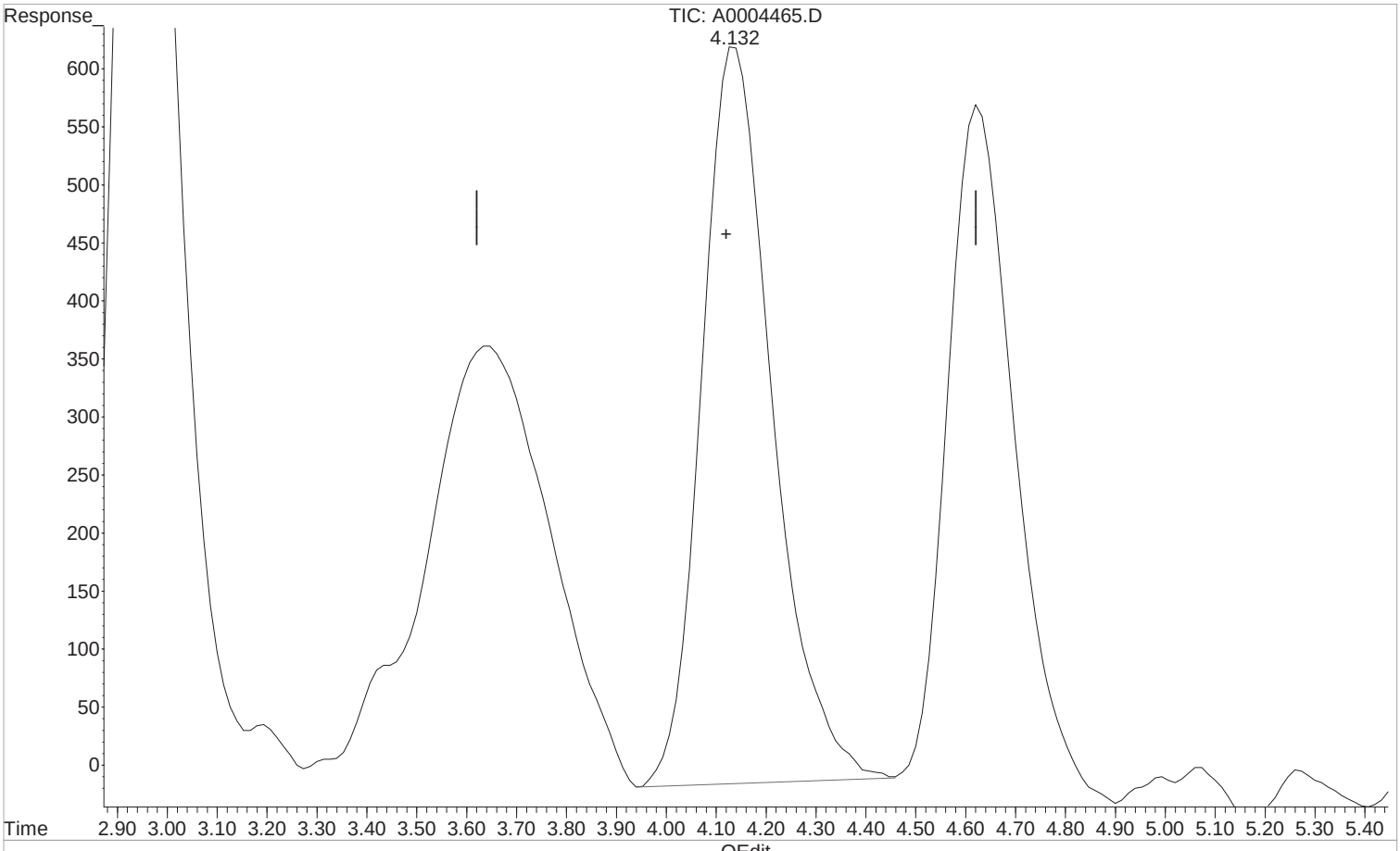
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004465.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 12:39:51
Operator : A.Felser
Sample : STD 1
Misc :
ALS Vial : 2 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:16 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(3) Lactic Acid (T)

4.132min 1.131 ppm m

response 62664

Manual Integration:

After

Poor integration.

03/16/20

(+) = Expected Retention Time

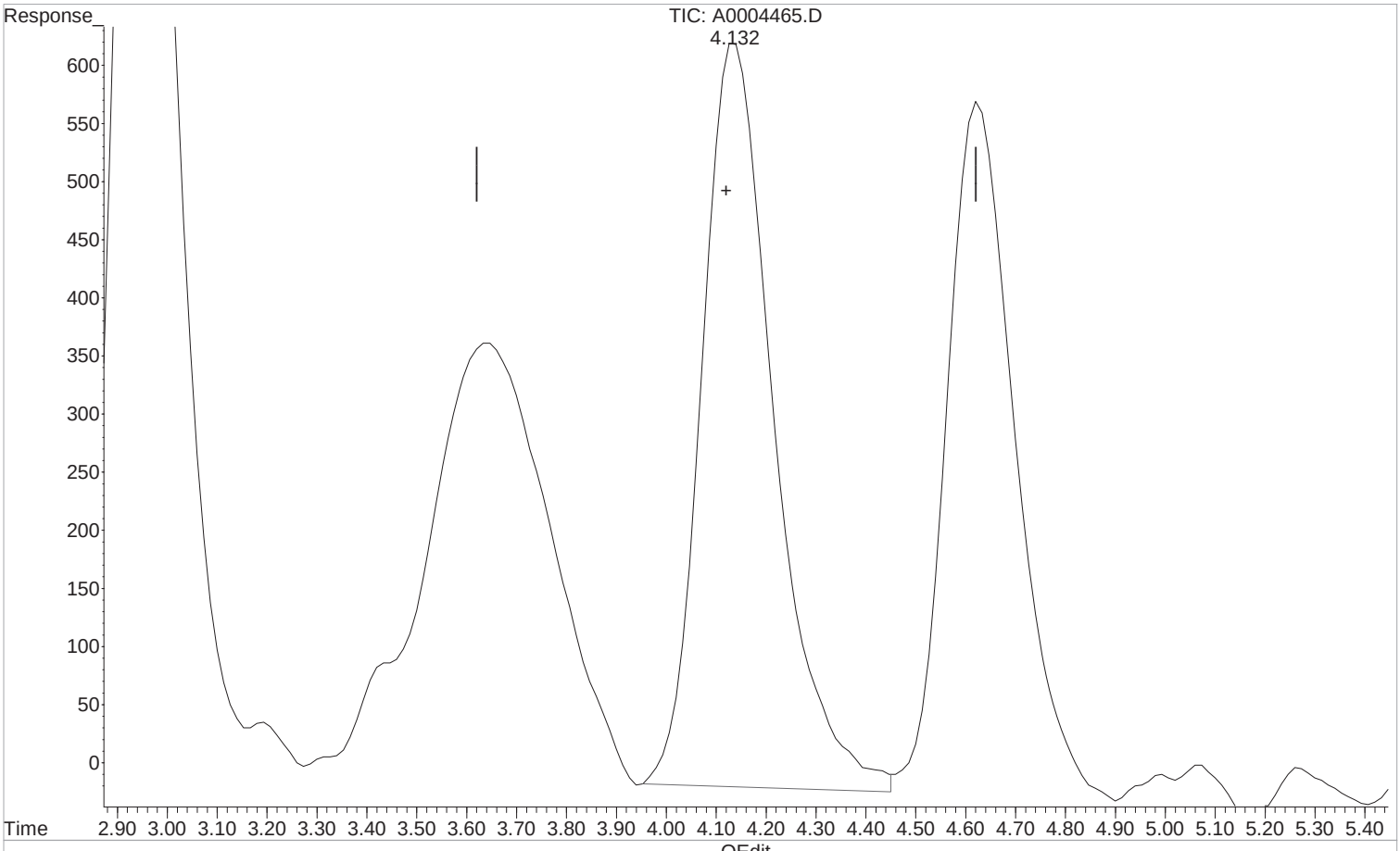
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004465.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 12:39:51
Operator : A.Felser
Sample : STD 1
Misc :
ALS Vial : 2 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:16 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(3) Lactic Acid (T)

4.140min 1.165 ppm

response 64524

Manual Integration:

Before

03/16/20

(+) = Expected Retention Time

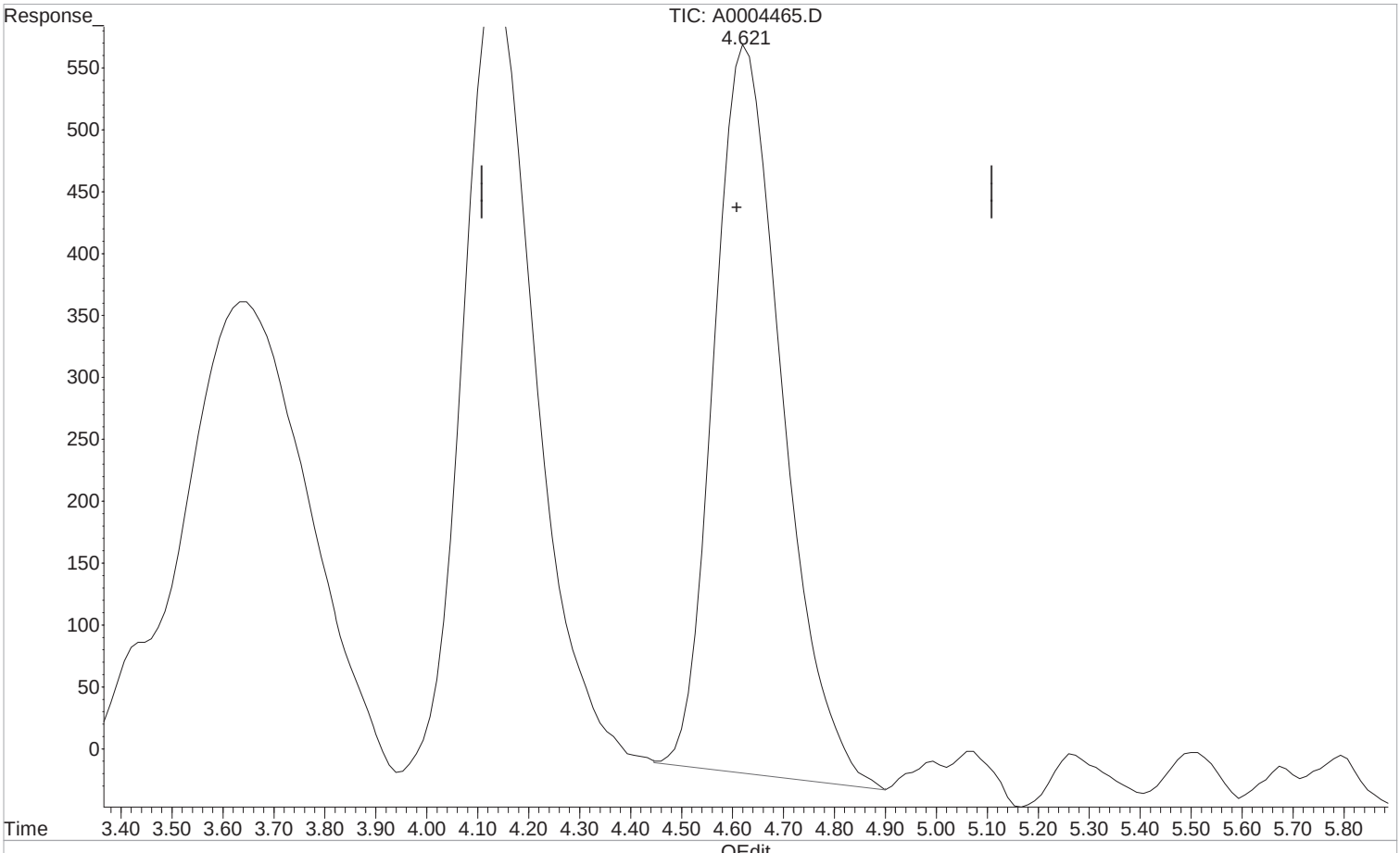
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004465.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 12:39:51
Operator : A.Felser
Sample : STD 1
Misc :
ALS Vial : 2 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:16 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(4) Acetic Acid (T)

4.621min 0.989 ppm m

response 55208

Manual Integration:

After

Poor integration.

03/16/20

(+) = Expected Retention Time

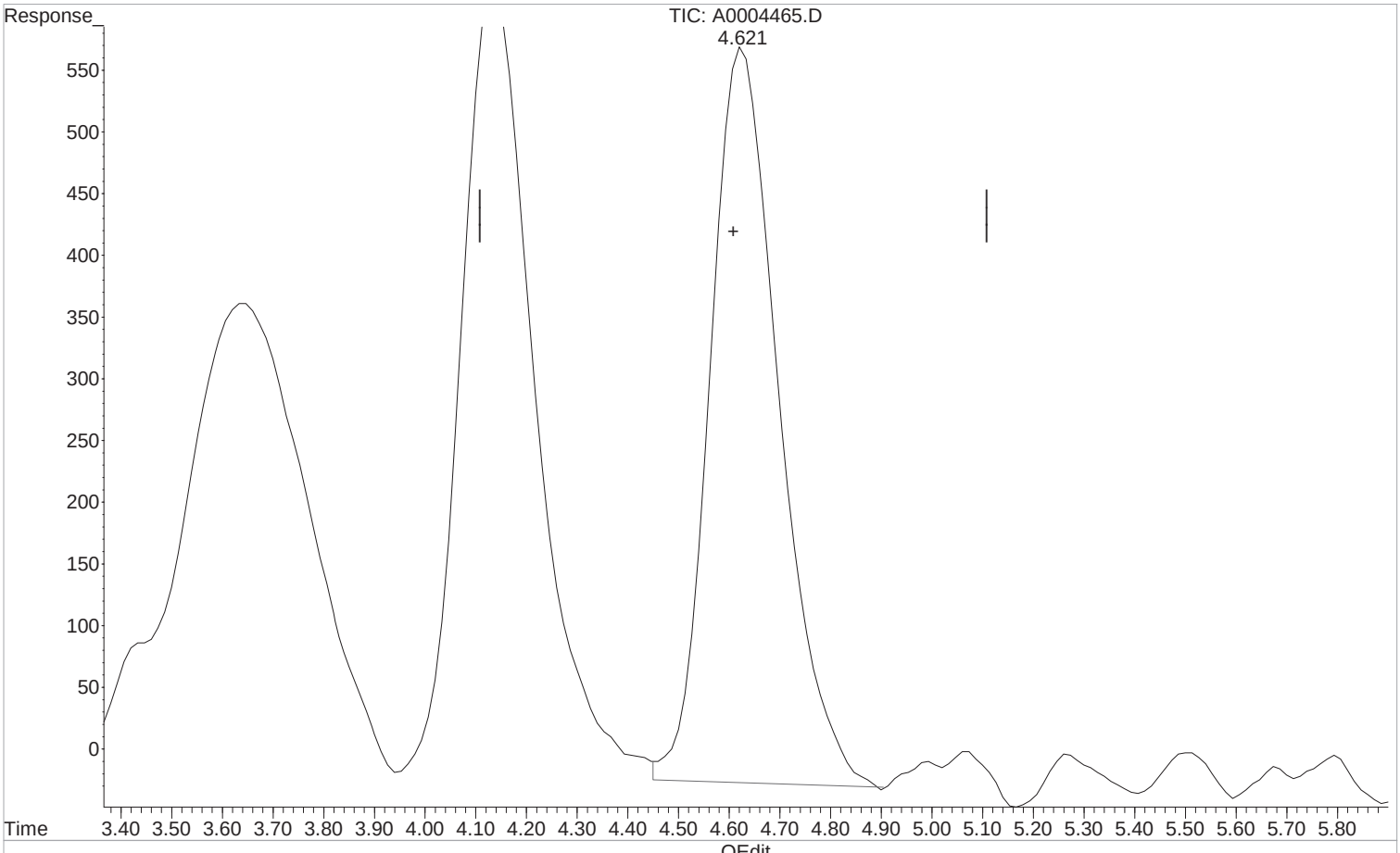
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004465.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 12:39:51
Operator : A.Felser
Sample : STD 1
Misc :
ALS Vial : 2 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:16 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(4) Acetic Acid (T)

4.629min 1.019 ppm

response 56862

Manual Integration:

Before

03/16/20

(+) = Expected Retention Time

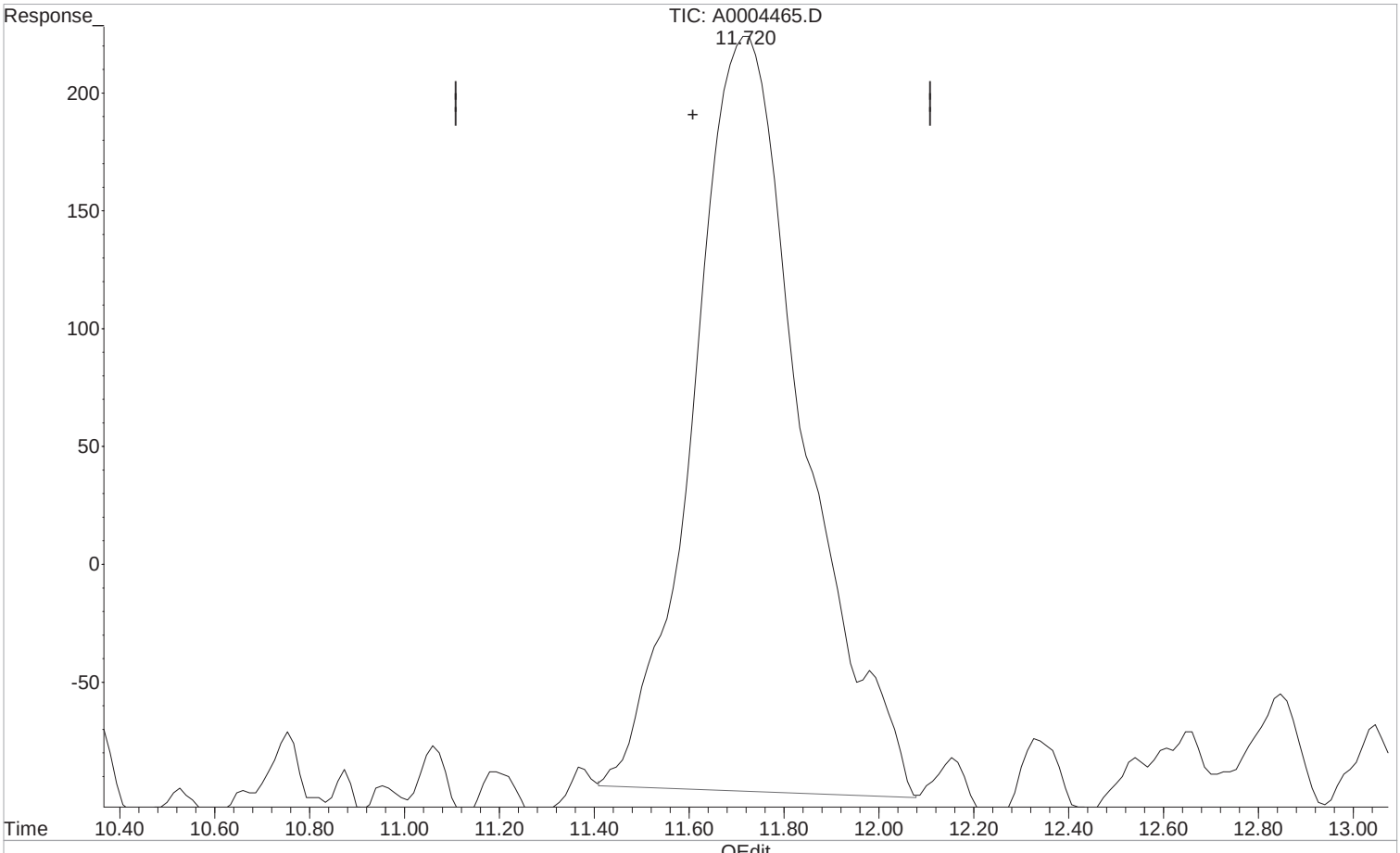
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004465.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 12:39:51
Operator : A.Felser
Sample : STD 1
Misc :
ALS Vial : 2 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:16 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(5) Propionic Acid (T)

11.720min 0.938 ppm m

response 51534

Manual Integration:

After

Poor integration.

03/16/20

(+) = Expected Retention Time

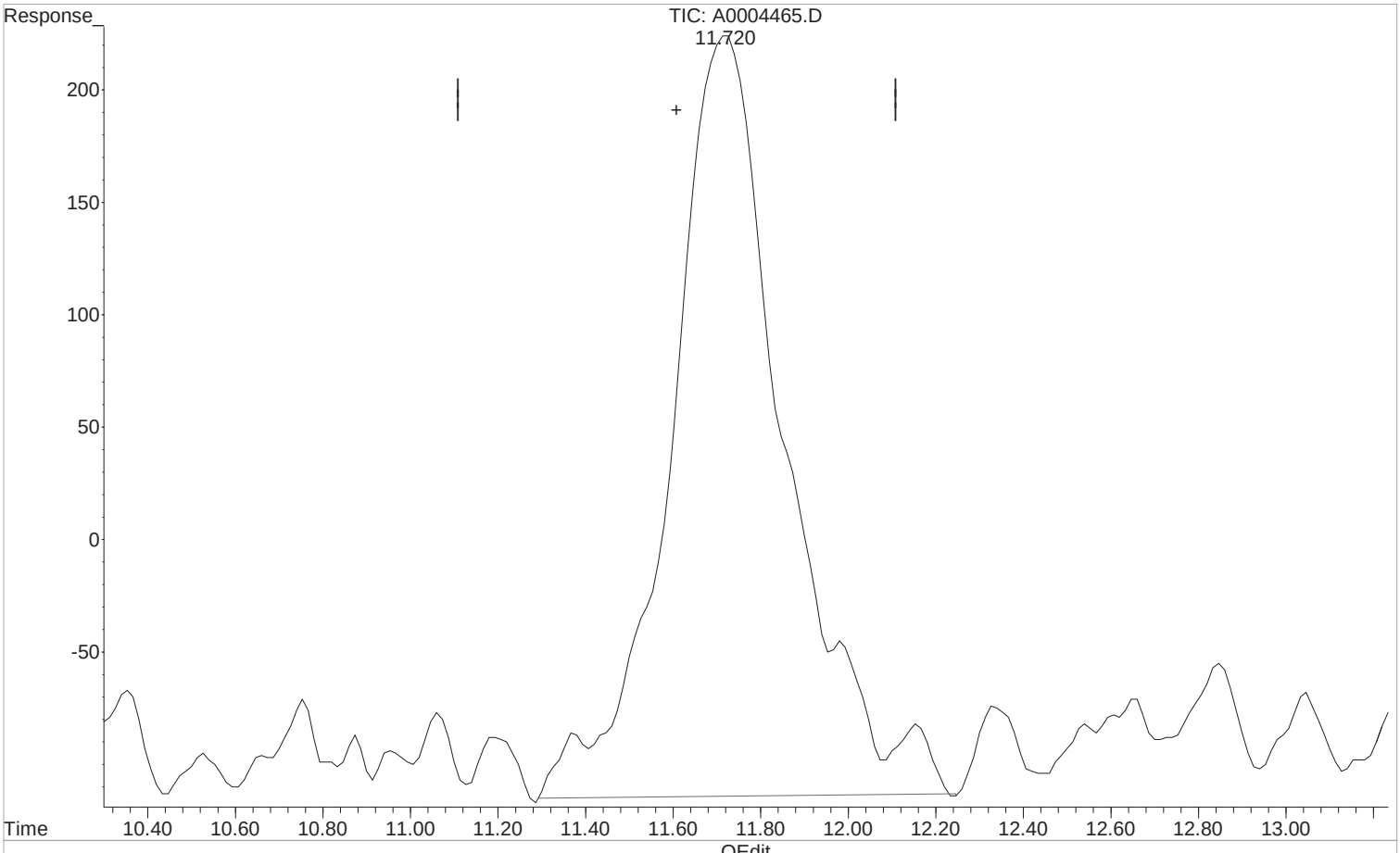
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004465.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 12:39:51
Operator : A.Felser
Sample : STD 1
Misc :
ALS Vial : 2 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:16 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(5) Propionic Acid (T)

11.721min 1.124 ppm

response 61737

Manual Integration:

Before

03/16/20

(+) = Expected Retention Time

MA031220.M Mon Mar 16 09:19:59 2020

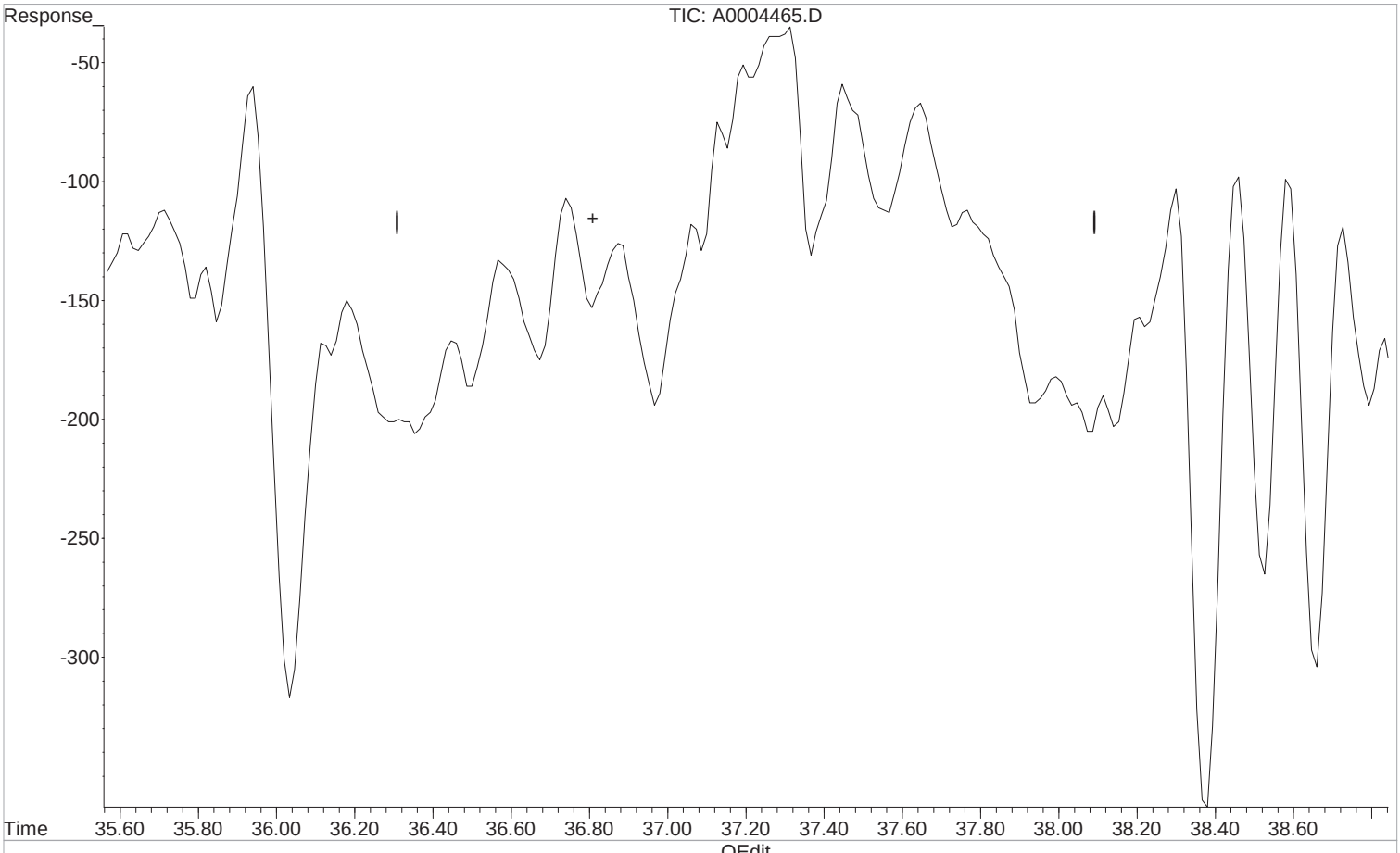
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004465.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 12:39:51
Operator : A.Felser
Sample : STD 1
Misc :
ALS Vial : 2 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:16 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(6) Butyric Acid (T)

37.309min 1.012 ppm m

response 53231

Manual Integration:

After

Peak not found.

03/16/20

(+) = Expected Retention Time

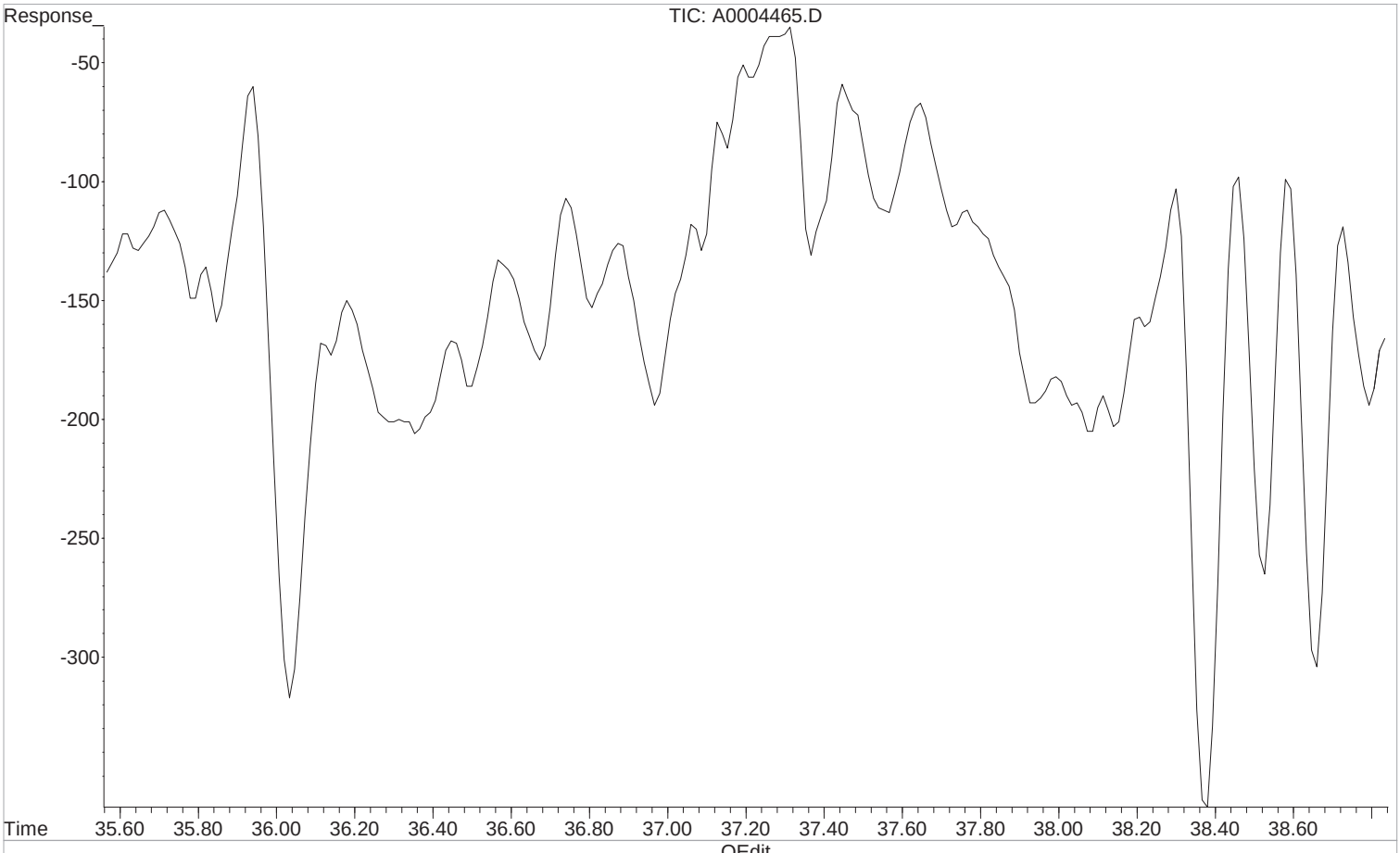
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004465.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 12:39:51
Operator : A.Felser
Sample : STD 1
Misc :
ALS Vial : 2 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:16 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(6) Butyric Acid (T)

0.000min 0.000 ppm d

response 0

Manual Integration:

Before

03/16/20

(+) = Expected Retention Time

1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004465.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 12:39:51
Operator : A.Felser
Sample : STD 1
Misc :
ALS Vial : 2 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:16 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210

	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1) t	Formic acid	2.947	96141	1.051	ppm	m
2) T	Pyruvic acid	3.640	65073	0.112	ppm	m
3) T	Lactic Acid	4.132	62664	1.131	ppm	m
4) T	Acetic Acid	4.621	55208	0.989	ppm	m
5) T	Propionic Acid	11.720	51534	0.938	ppm	m
6) T	Butyric Acid	37.309f	53231	1.012	ppm	m

(f)=RT Delta > 1/2 Window (m)=manual int.

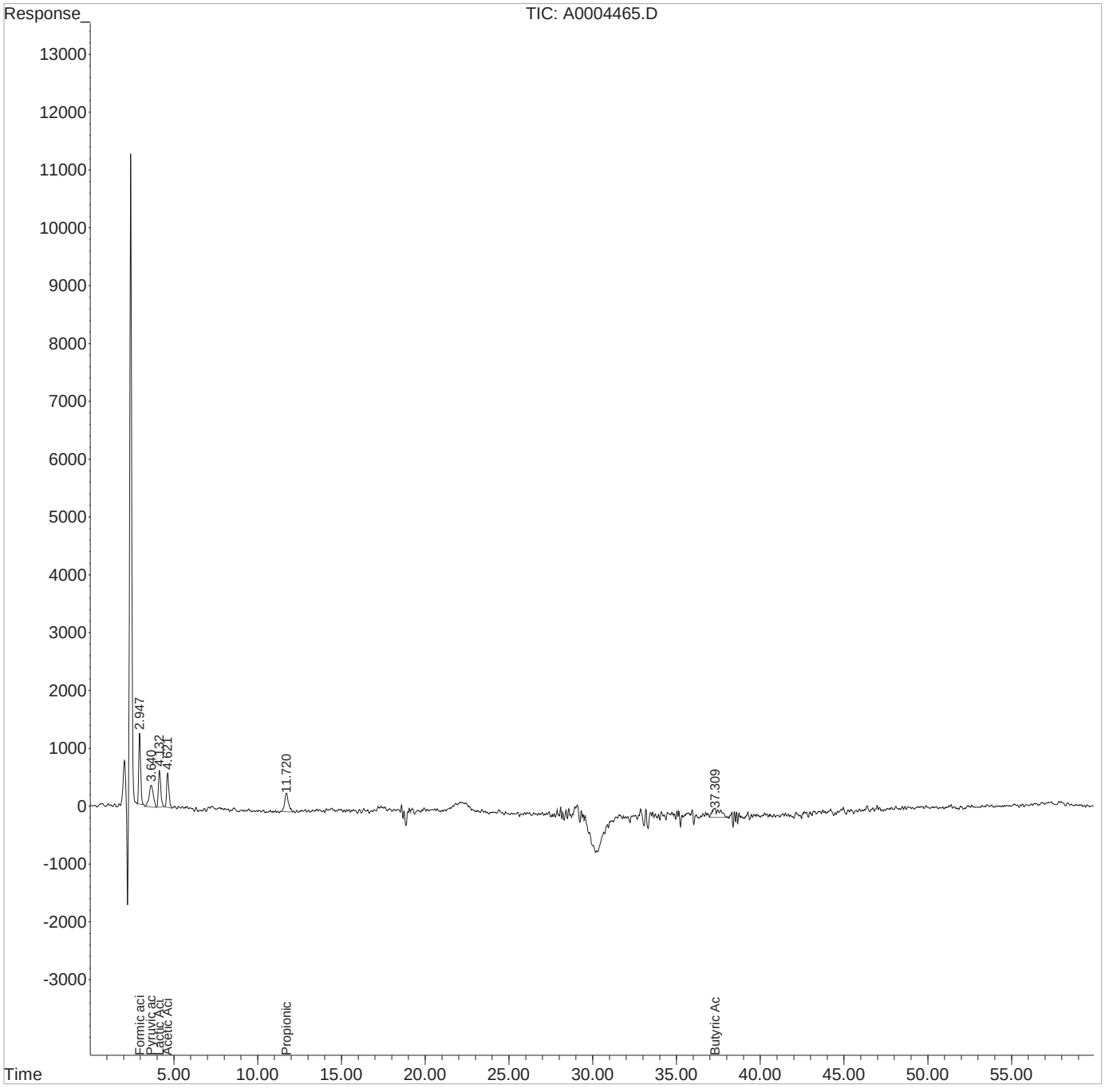
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004465.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 12:39:51
Operator : A.Felser
Sample : STD 1
Misc :
ALS Vial : 2 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:16 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



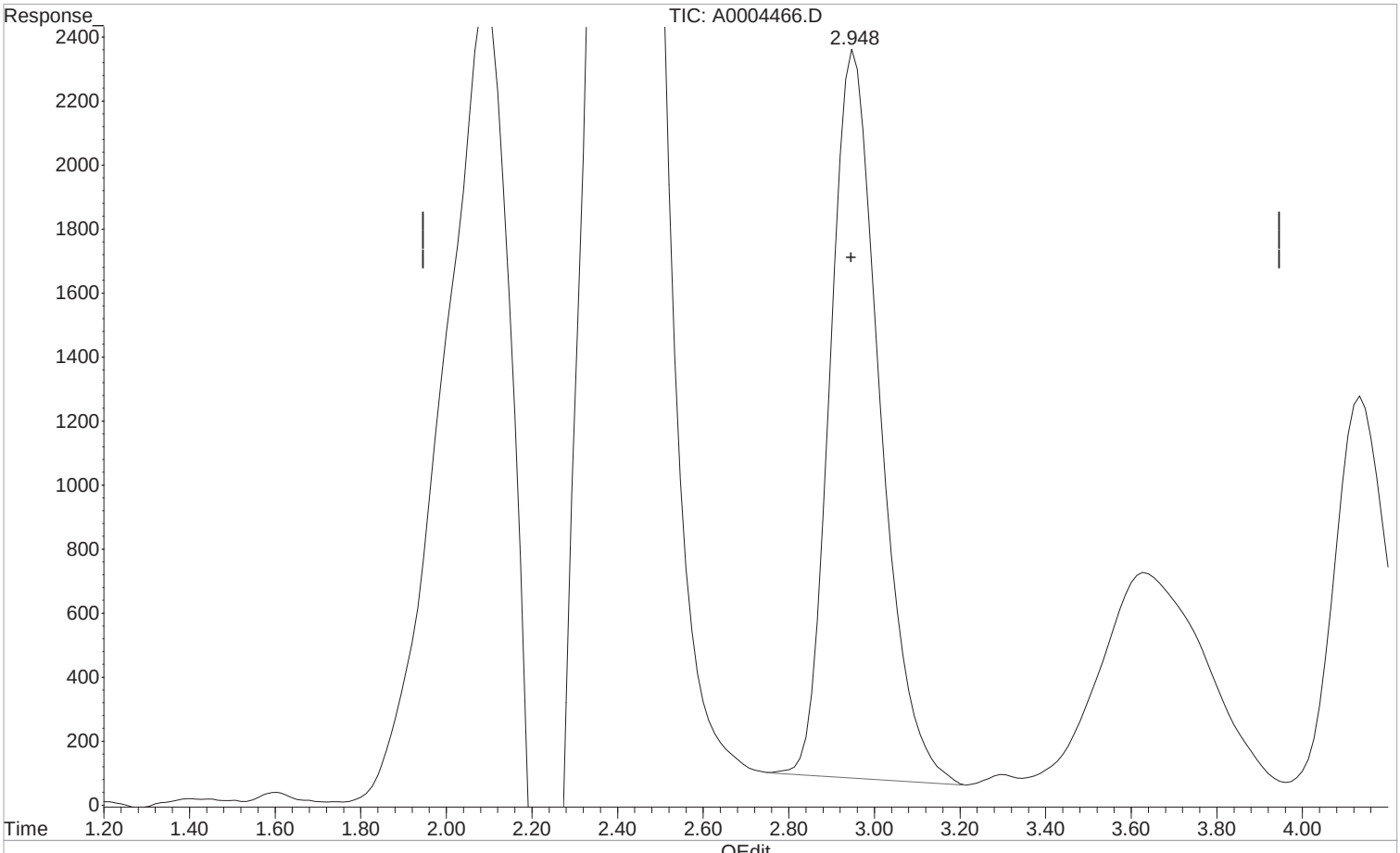
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004466.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 13:42:51
Operator : A.Felser
Sample : STD 2
Misc :
ALS Vial : 3 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:18 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(1) Formic acid (t)

2.948min 2.019 ppm m

response 184745

Manual Integration:

After

Poor integration.

03/16/20

(+) = Expected Retention Time

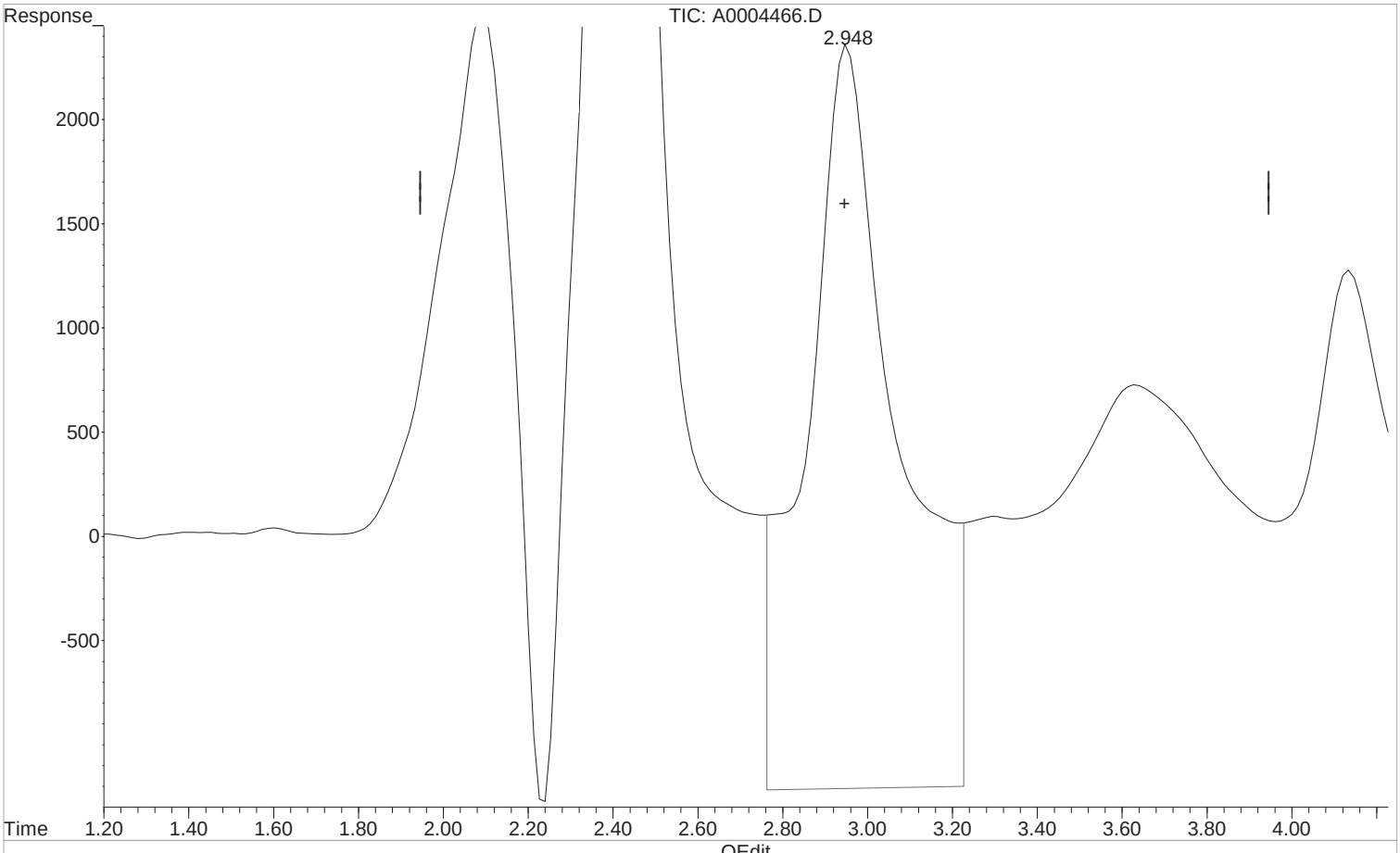
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004466.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 13:42:51
Operator : A.Felser
Sample : STD 2
Misc :
ALS Vial : 3 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:18 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(1) Formic acid (t)

2.955min 5.943 ppm

response 543858

Manual Integration:

Before

03/16/20

(+) = Expected Retention Time

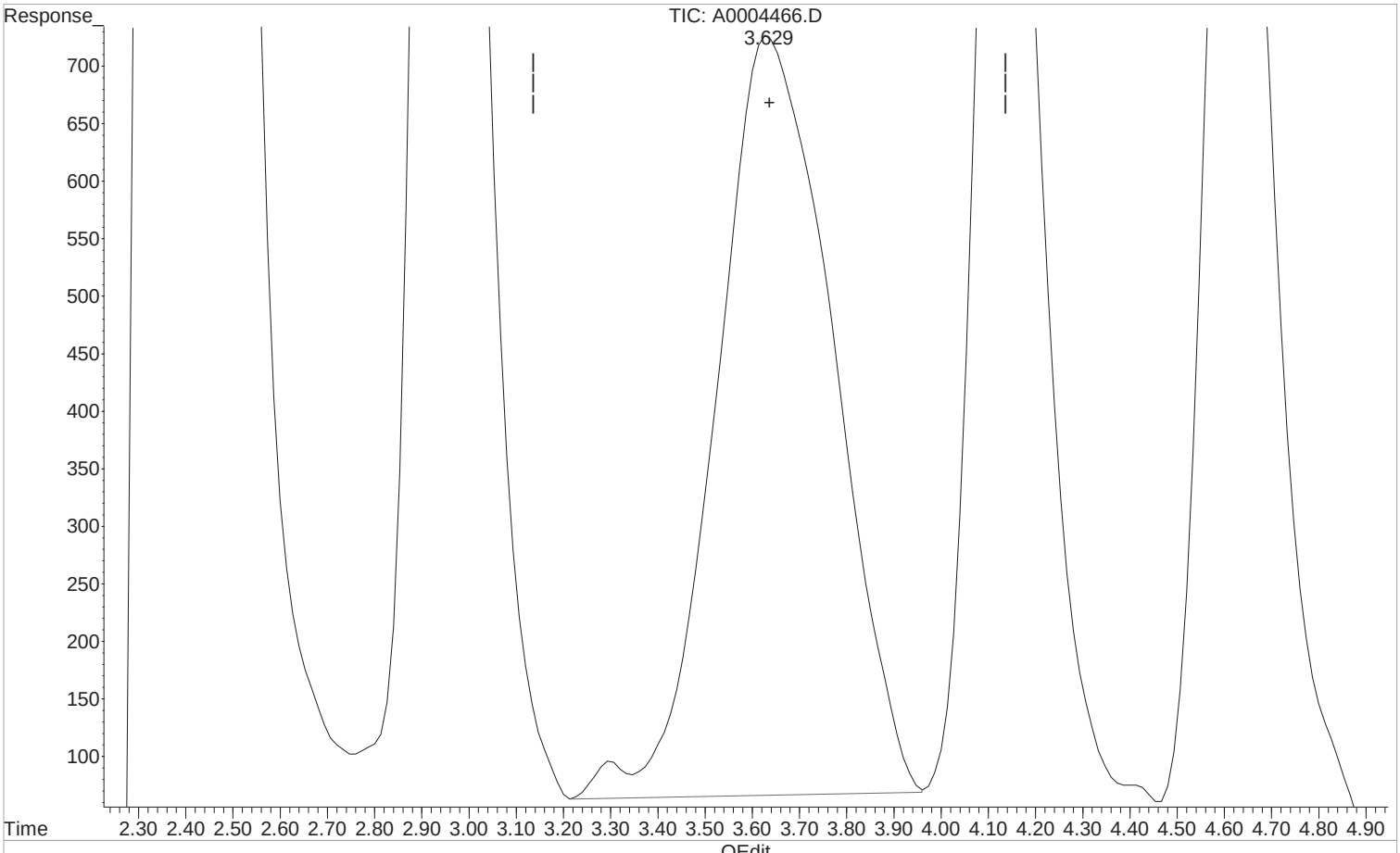
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004466.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 13:42:51
Operator : A.Felser
Sample : STD 2
Misc :
ALS Vial : 3 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:18 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(2) Pyruvic acid (T)

3.629min 0.194 ppm m

response 113308

Manual Integration:

After

Poor integration.

03/16/20

(+) = Expected Retention Time

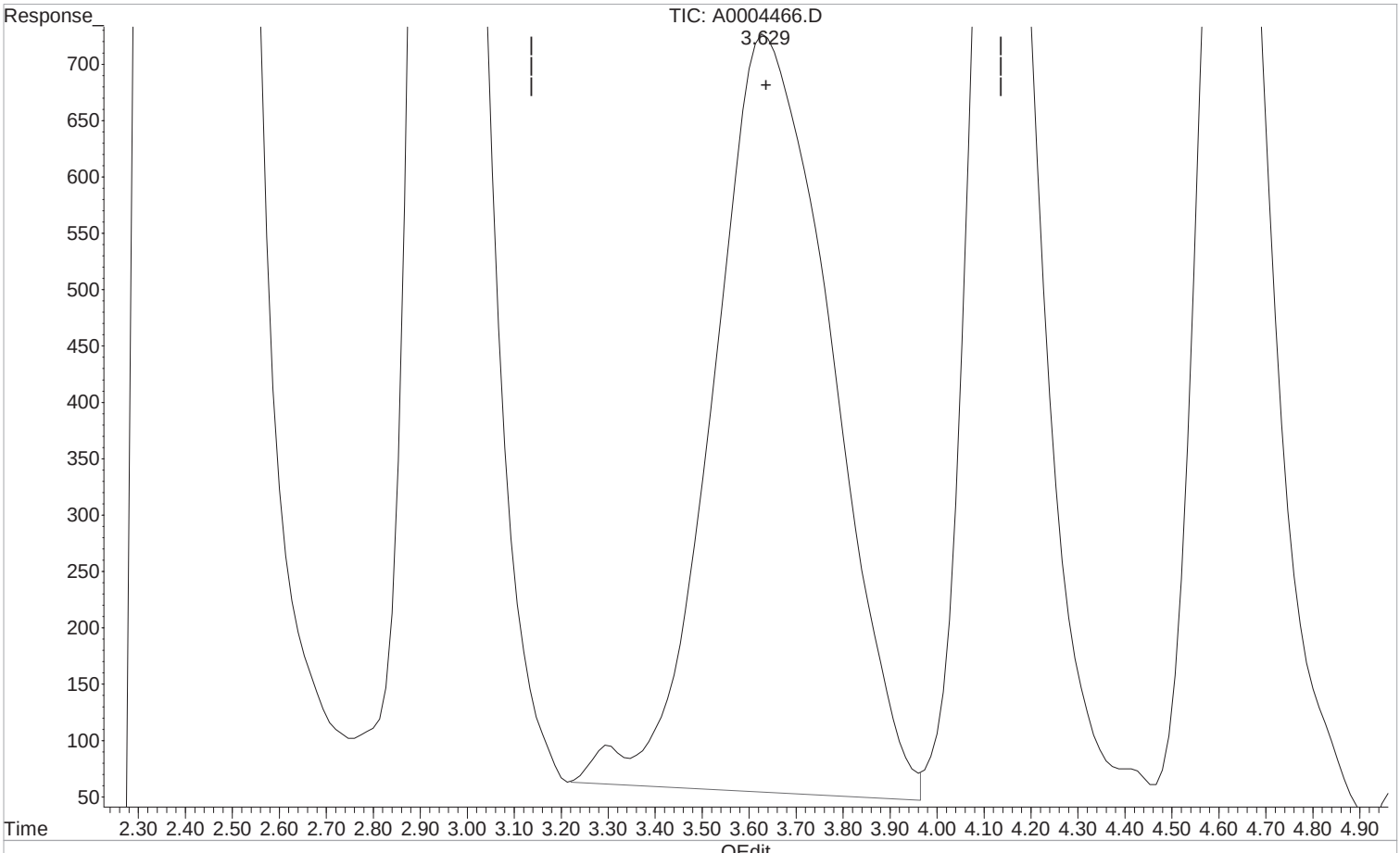
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004466.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 13:42:51
Operator : A.Felser
Sample : STD 2
Misc :
ALS Vial : 3 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:18 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(2) Pyruvic acid (T)

3.639min 0.203 ppm

response 118180

Manual Integration:

Before

03/16/20

(+) = Expected Retention Time

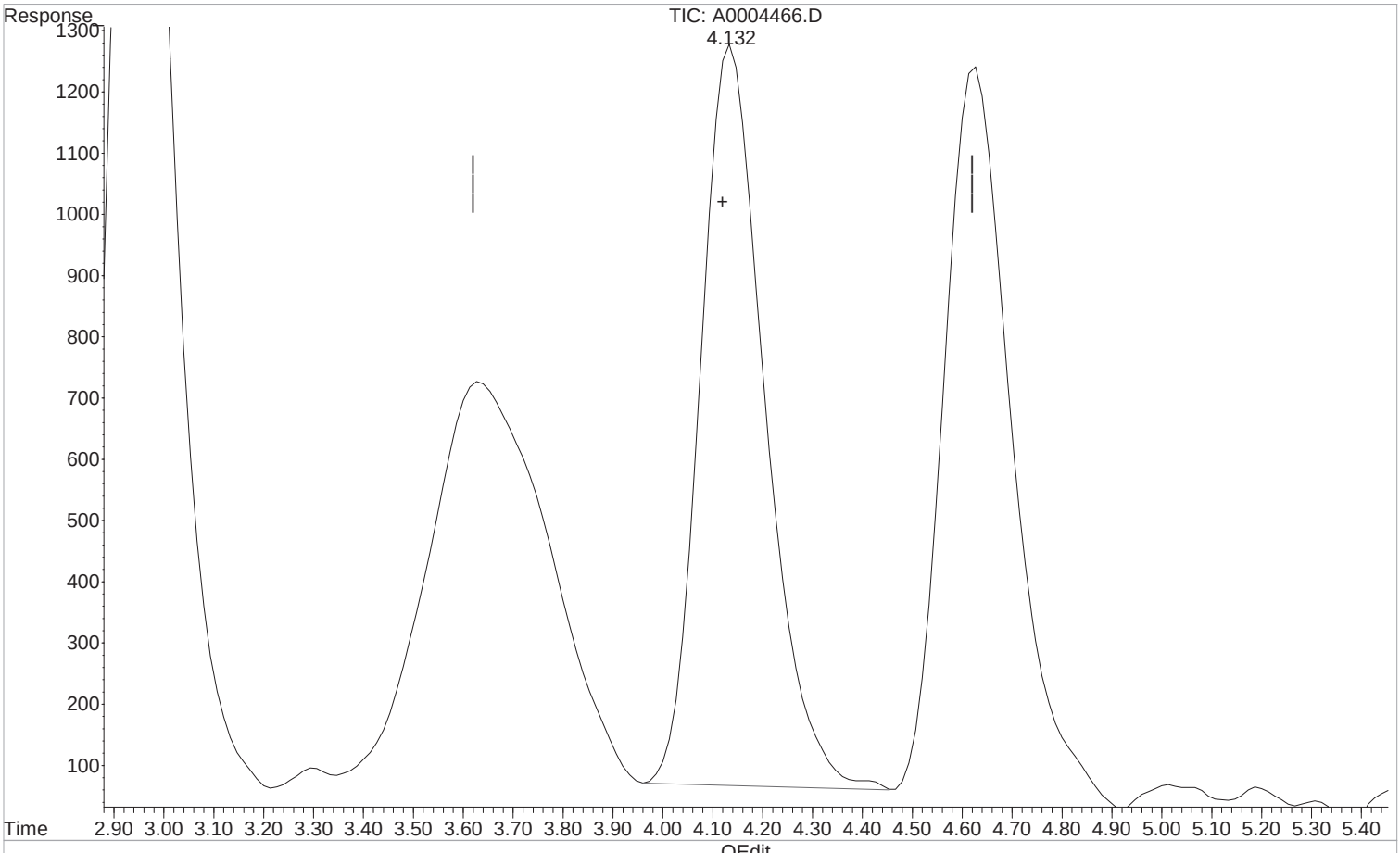
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004466.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 13:42:51
Operator : A.Felser
Sample : STD 2
Misc :
ALS Vial : 3 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:18 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(3) Lactic Acid (T)

4.132min 1.974 ppm m

response 109344

Manual Integration:

After

Poor integration.

03/16/20

(+) = Expected Retention Time

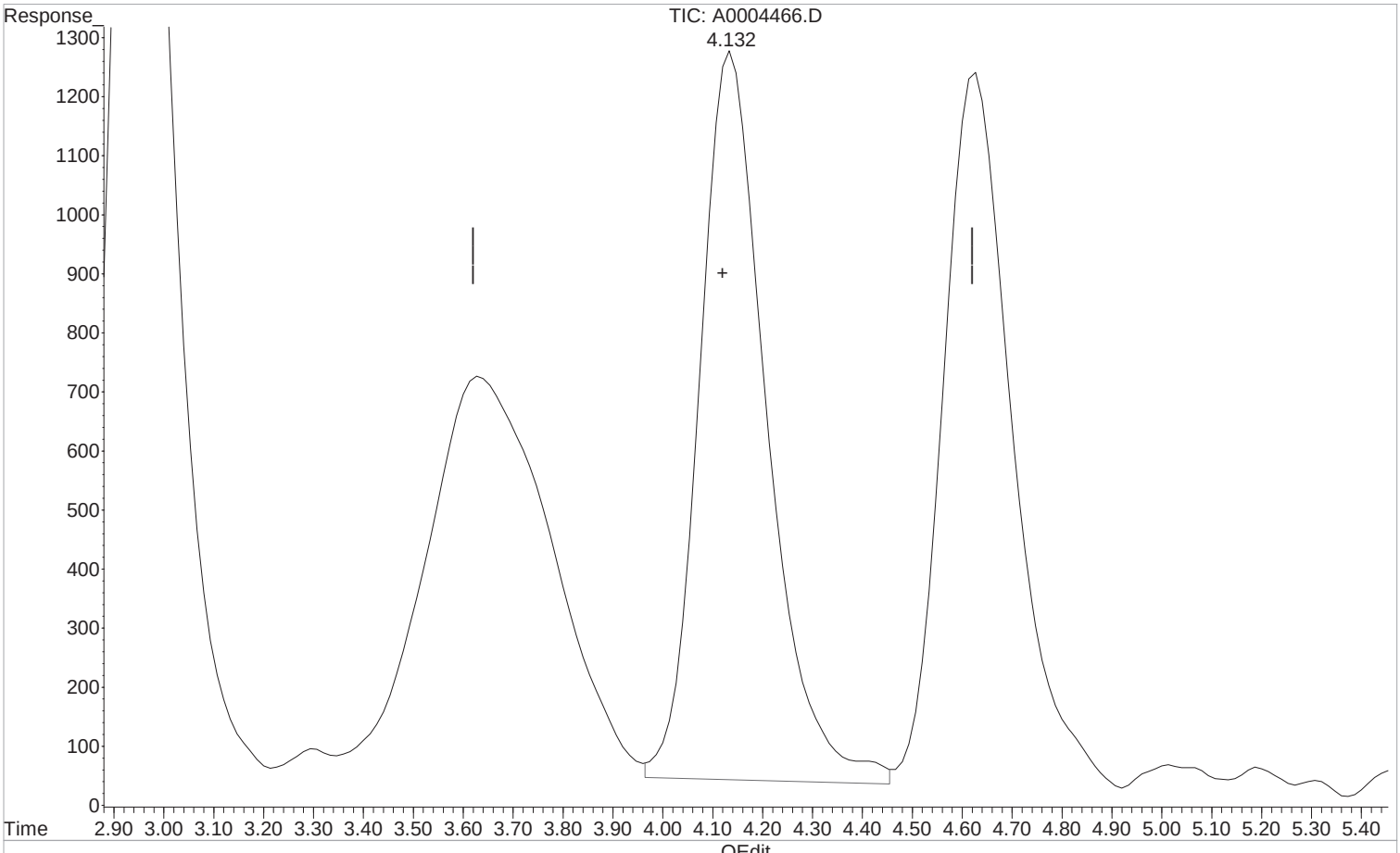
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004466.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 13:42:51
Operator : A.Felser
Sample : STD 2
Misc :
ALS Vial : 3 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:18 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(3) Lactic Acid (T)

4.139min 2.102 ppm

response 116418

Manual Integration:

Before

03/16/20

(+) = Expected Retention Time

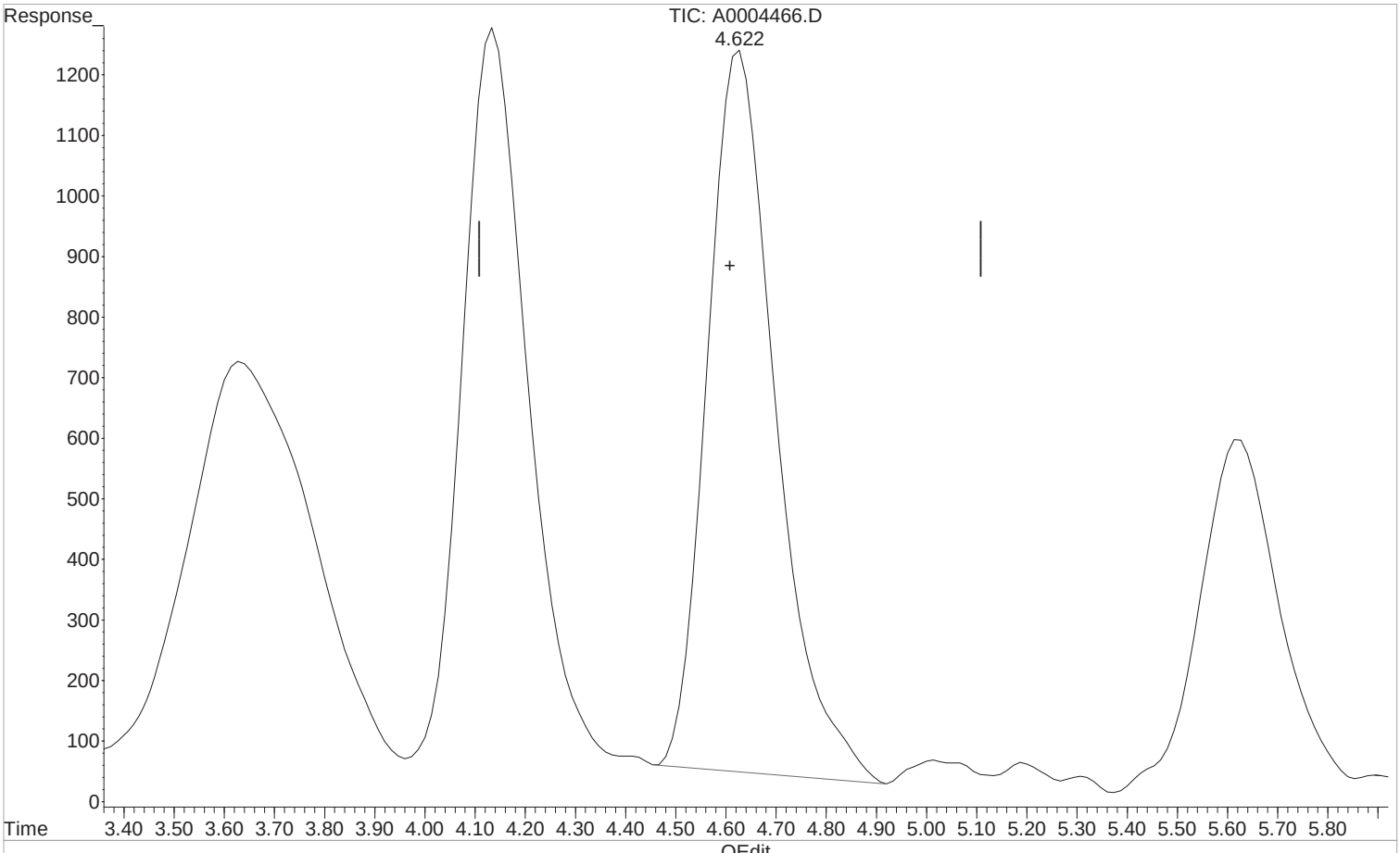
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004466.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 13:42:51
Operator : A.Felser
Sample : STD 2
Misc :
ALS Vial : 3 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:18 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(4) Acetic Acid (T)

4.622min 2.028 ppm m

response 113173

Manual Integration:

After

Poor integration.

03/16/20

(+) = Expected Retention Time

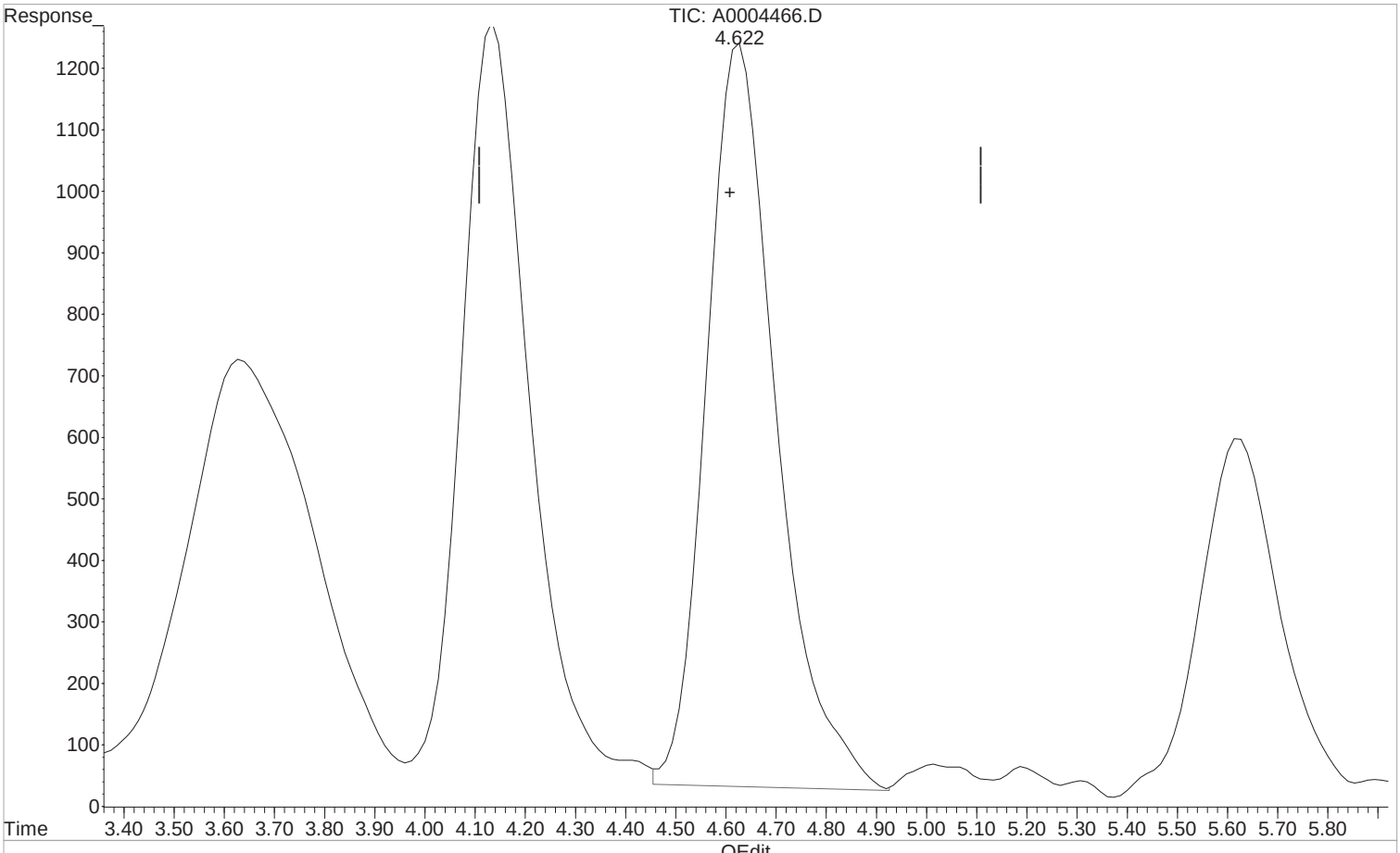
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004466.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 13:42:51
Operator : A.Felser
Sample : STD 2
Misc :
ALS Vial : 3 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:18 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(4) Acetic Acid (T)

4.629min 2.100 ppm

response 117200

Manual Integration:

Before

03/16/20

(+) = Expected Retention Time

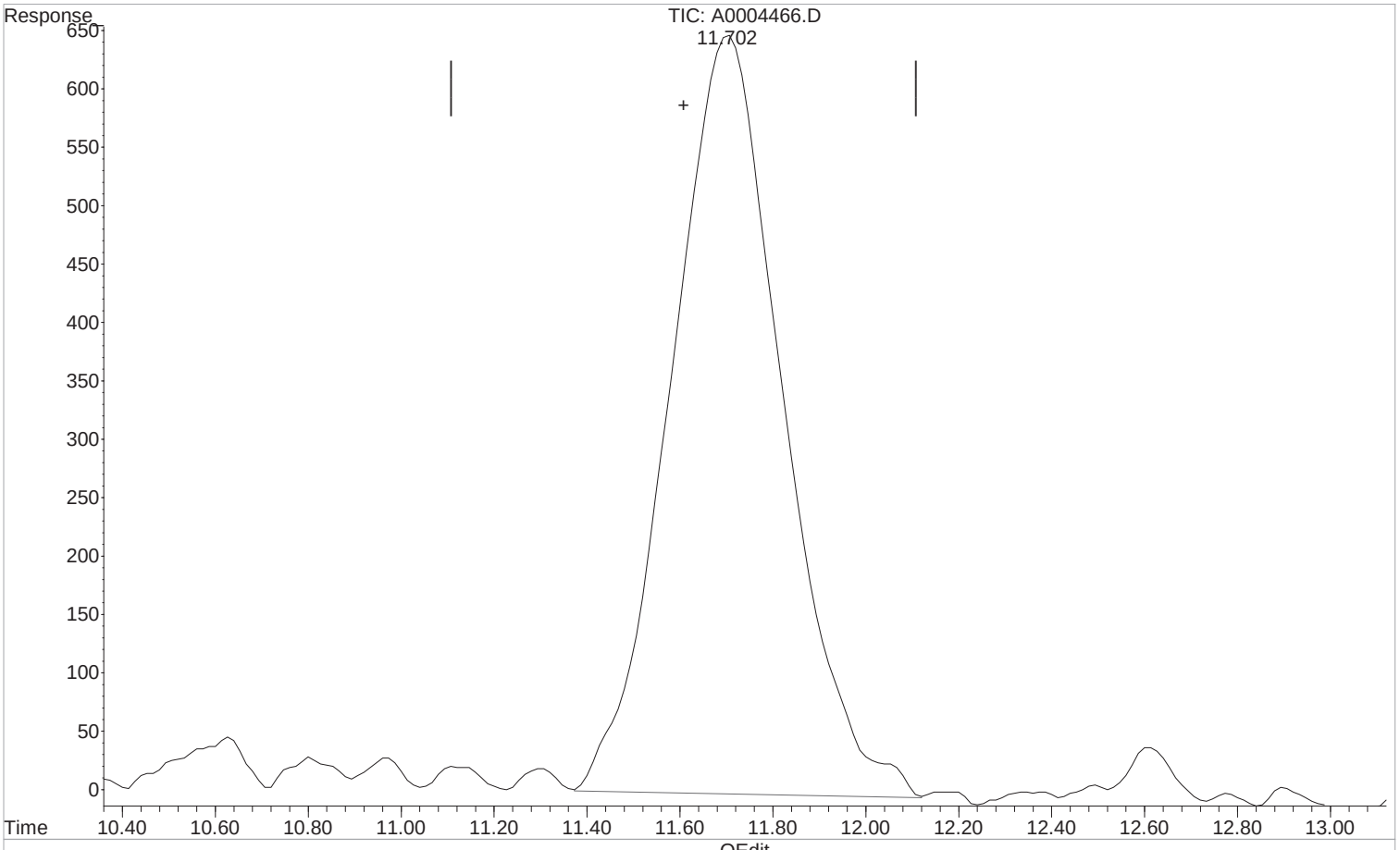
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004466.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 13:42:51
Operator : A.Felser
Sample : STD 2
Misc :
ALS Vial : 3 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:18 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(5) Propionic Acid (T)

11.702min 1.979 ppm m

response 108705

Manual Integration:

After

Poor integration.

03/16/20

(+) = Expected Retention Time

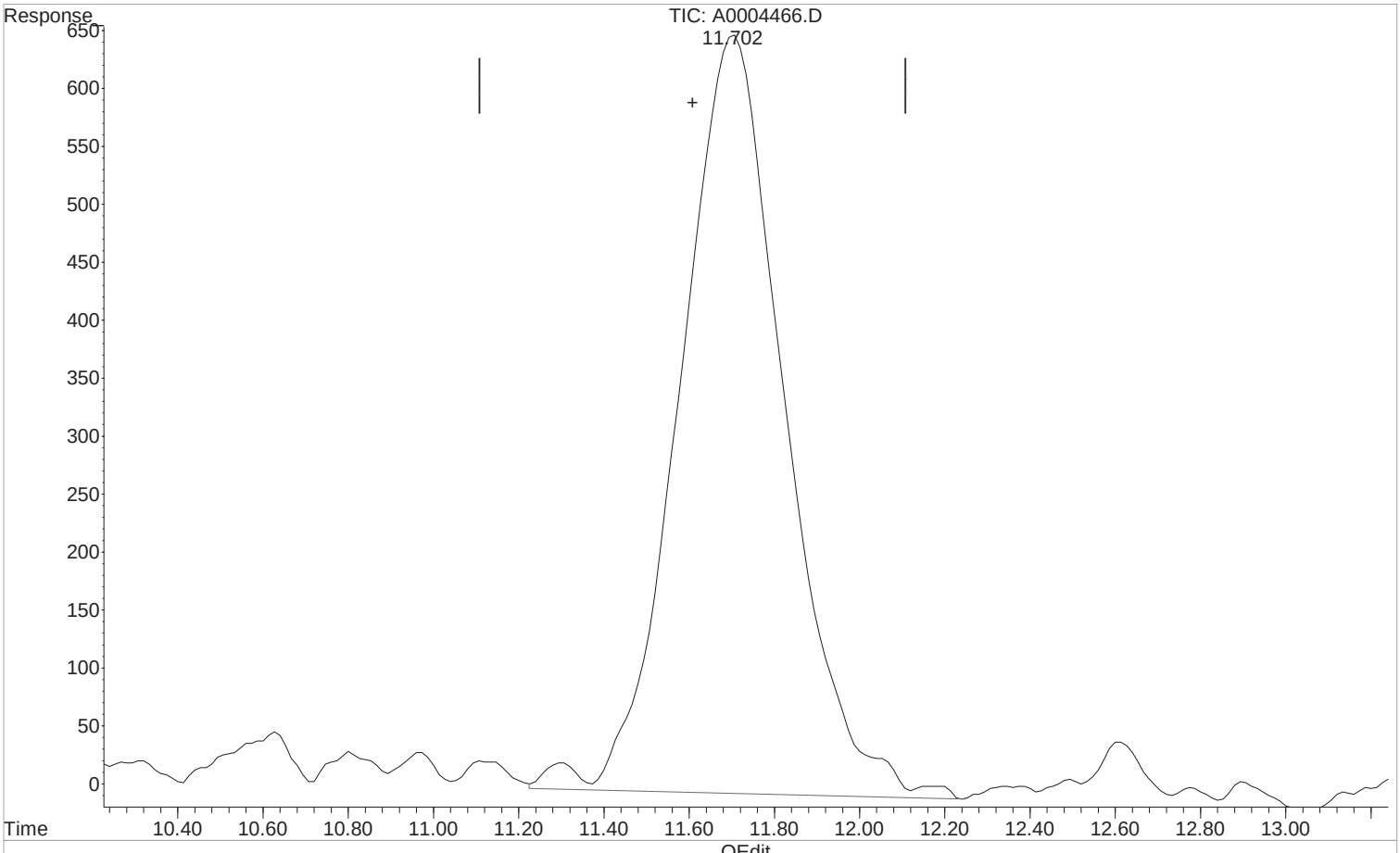
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004466.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 13:42:51
Operator : A.Felser
Sample : STD 2
Misc :
ALS Vial : 3 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:18 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(5) Propionic Acid (T)

11.707min 2.047 ppm

response 112454

Manual Integration:

Before

03/16/20

(+) = Expected Retention Time

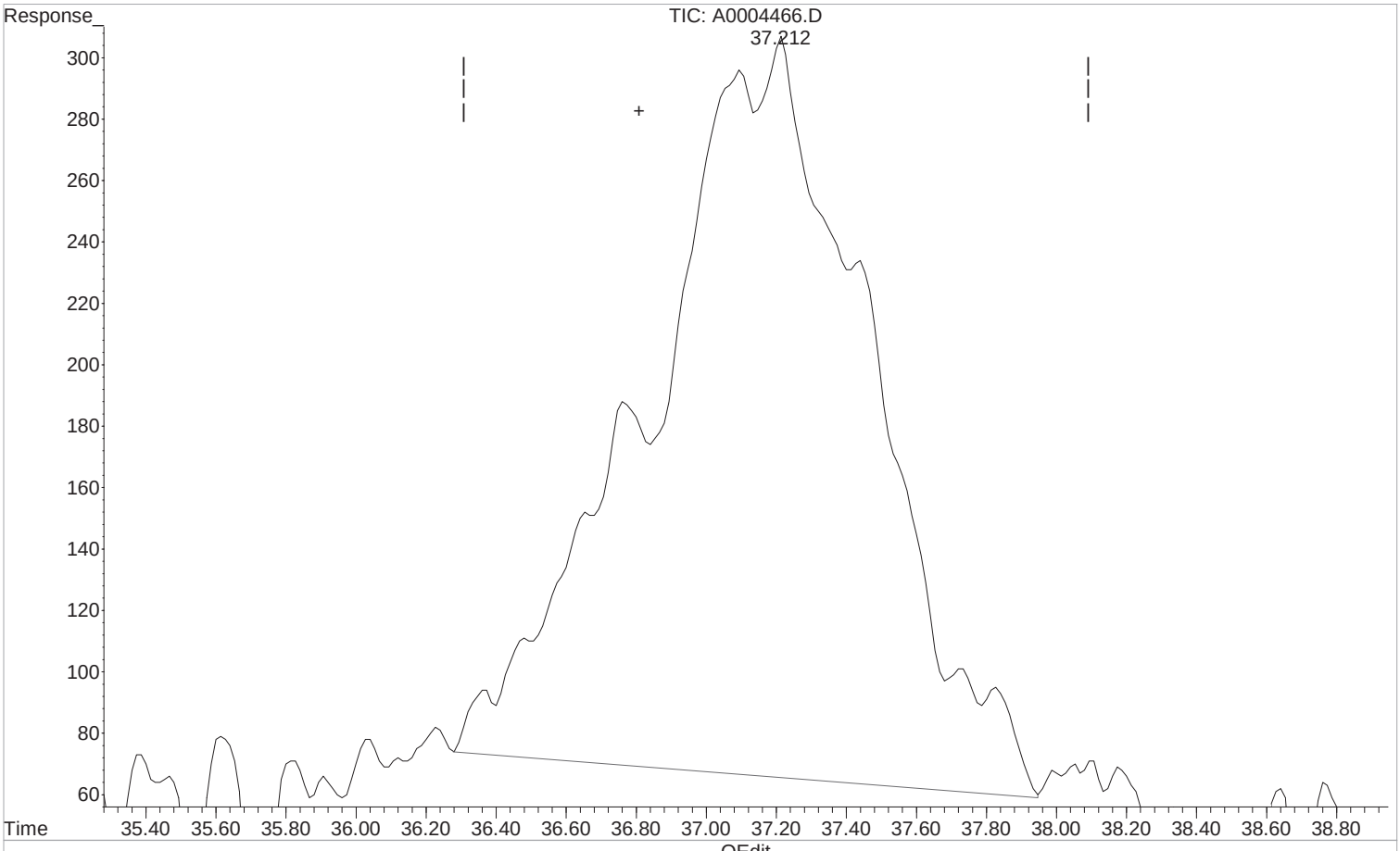
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004466.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 13:42:51
Operator : A.Felser
Sample : STD 2
Misc :
ALS Vial : 3 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:18 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(6) Butyric Acid (T)

37.212min 2.029 ppm m

response 106761

Manual Integration:

After

Poor integration.

03/16/20

(+) = Expected Retention Time

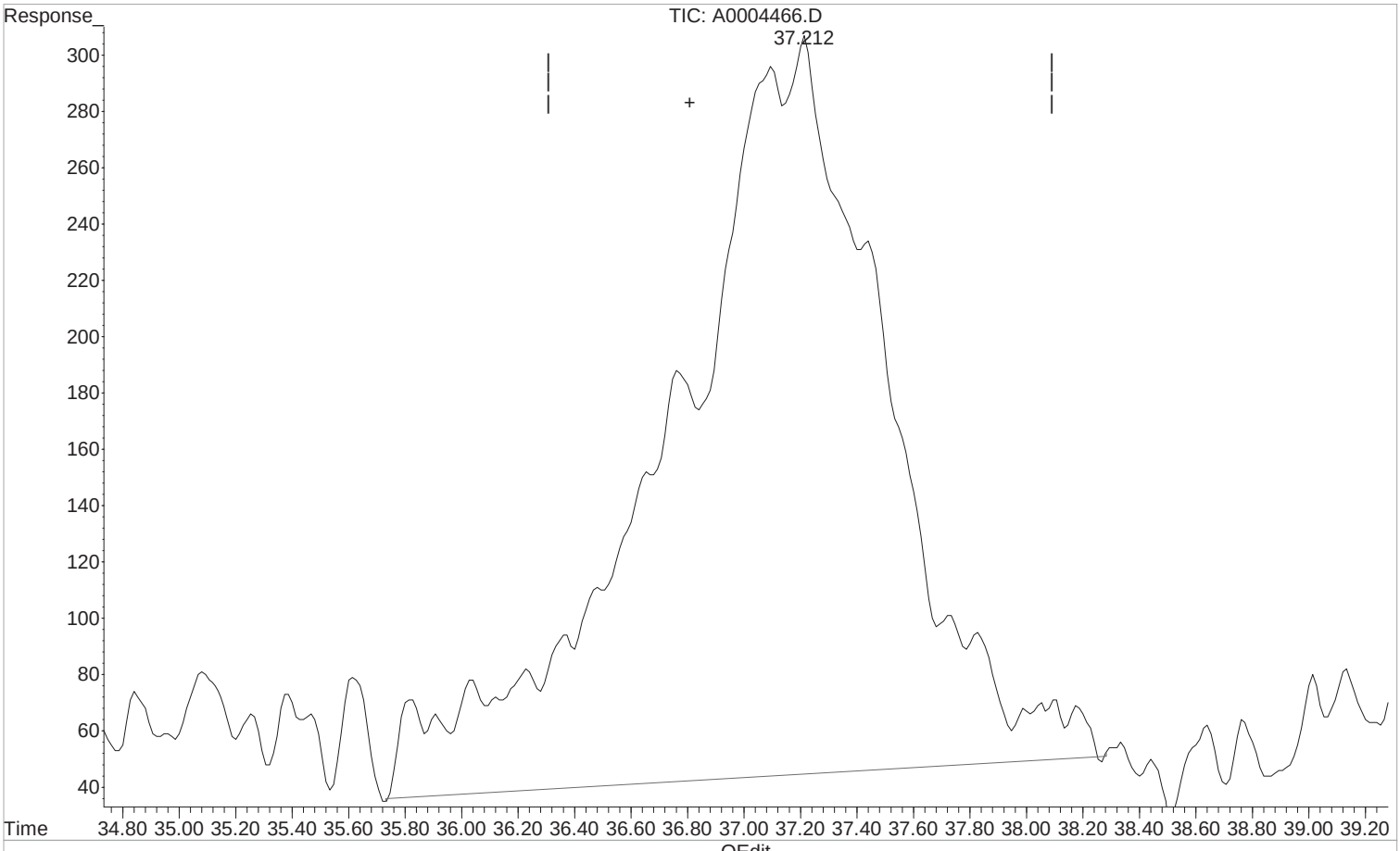
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004466.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 13:42:51
Operator : A.Felser
Sample : STD 2
Misc :
ALS Vial : 3 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:18 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(6) Butyric Acid (T)

37.213min 2.698 ppm

response 141960

Manual Integration:

Before

03/16/20

(+) = Expected Retention Time

1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004466.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 13:42:51
Operator : A.Felser
Sample : STD 2
Misc :
ALS Vial : 3 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:18 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210

	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1) t	Formic acid	2.948	184745	2.019	ppm	m
2) T	Pyruvic acid	3.629	113308	0.194	ppm	m
3) T	Lactic Acid	4.132	109344	1.974	ppm	m
4) T	Acetic Acid	4.622	113173	2.028	ppm	m
5) T	Propionic Acid	11.702	108705	1.979	ppm	m
6) T	Butyric Acid	37.212	106761	2.029	ppm	m

(f)=RT Delta > 1/2 Window (m)=manual int.

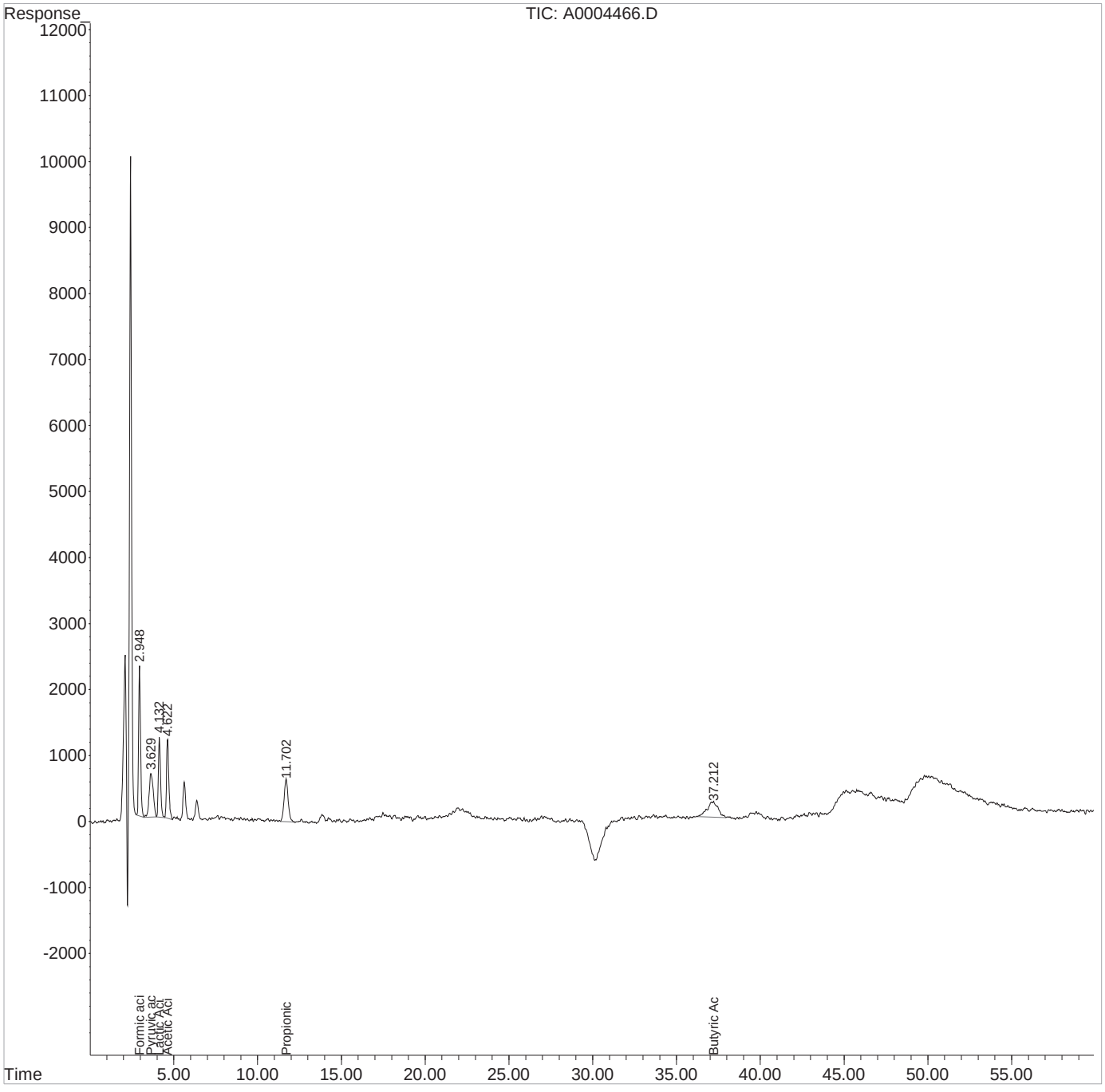
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004466.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 13:42:51
Operator : A.Felser
Sample : STD 2
Misc :
ALS Vial : 3 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:18 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



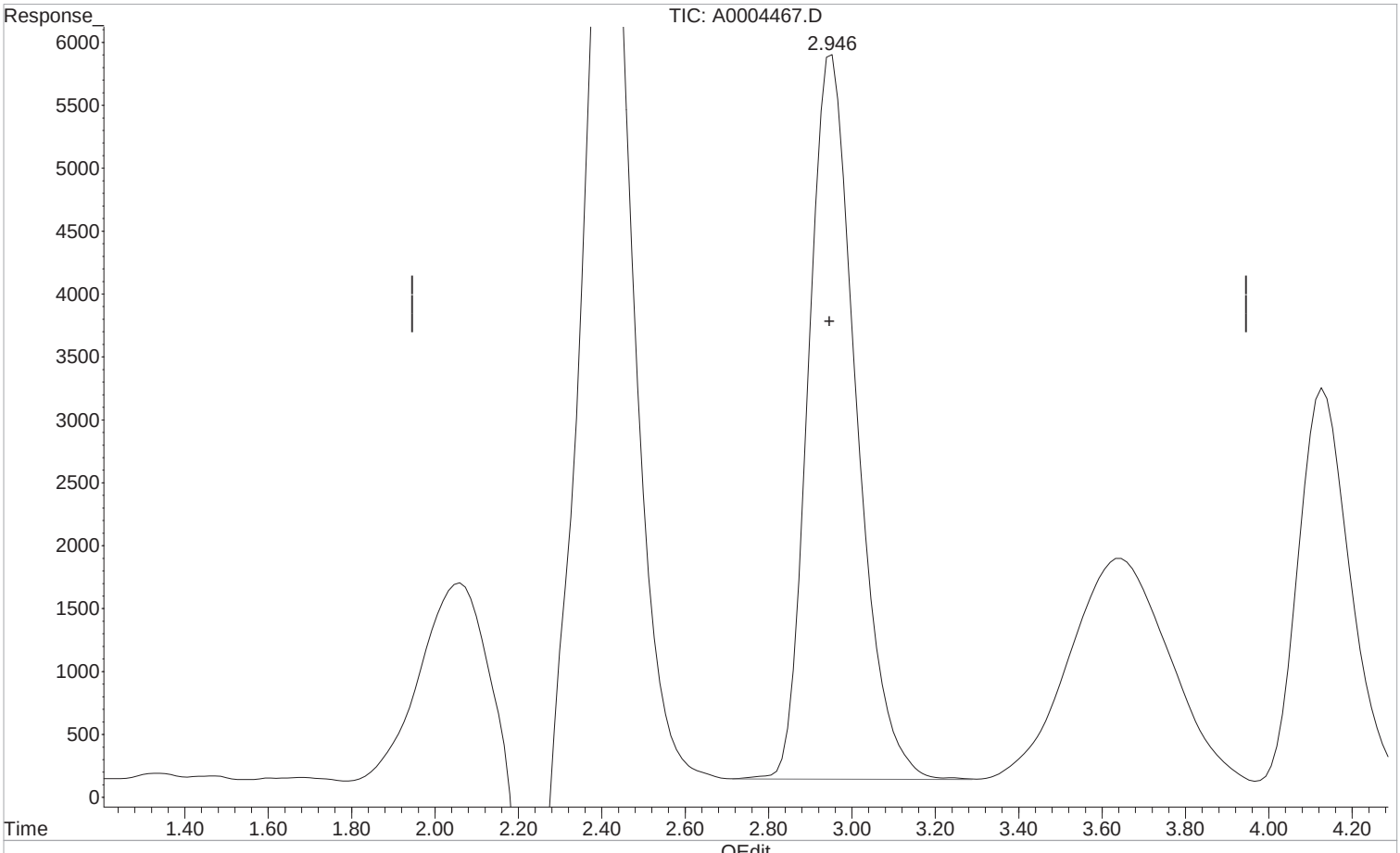
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004467.D
Signal(s) : dad1C.ch
Acq On : 30-Dec-2000, 02:48:14
Operator : A.Felser
Sample : STD 3
Misc :
ALS Vial : 4 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:20 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(1) Formic acid (t)

2.946min 5.032 ppm m

response 460497

Manual Integration:

After

Poor integration.

03/16/20

(+) = Expected Retention Time

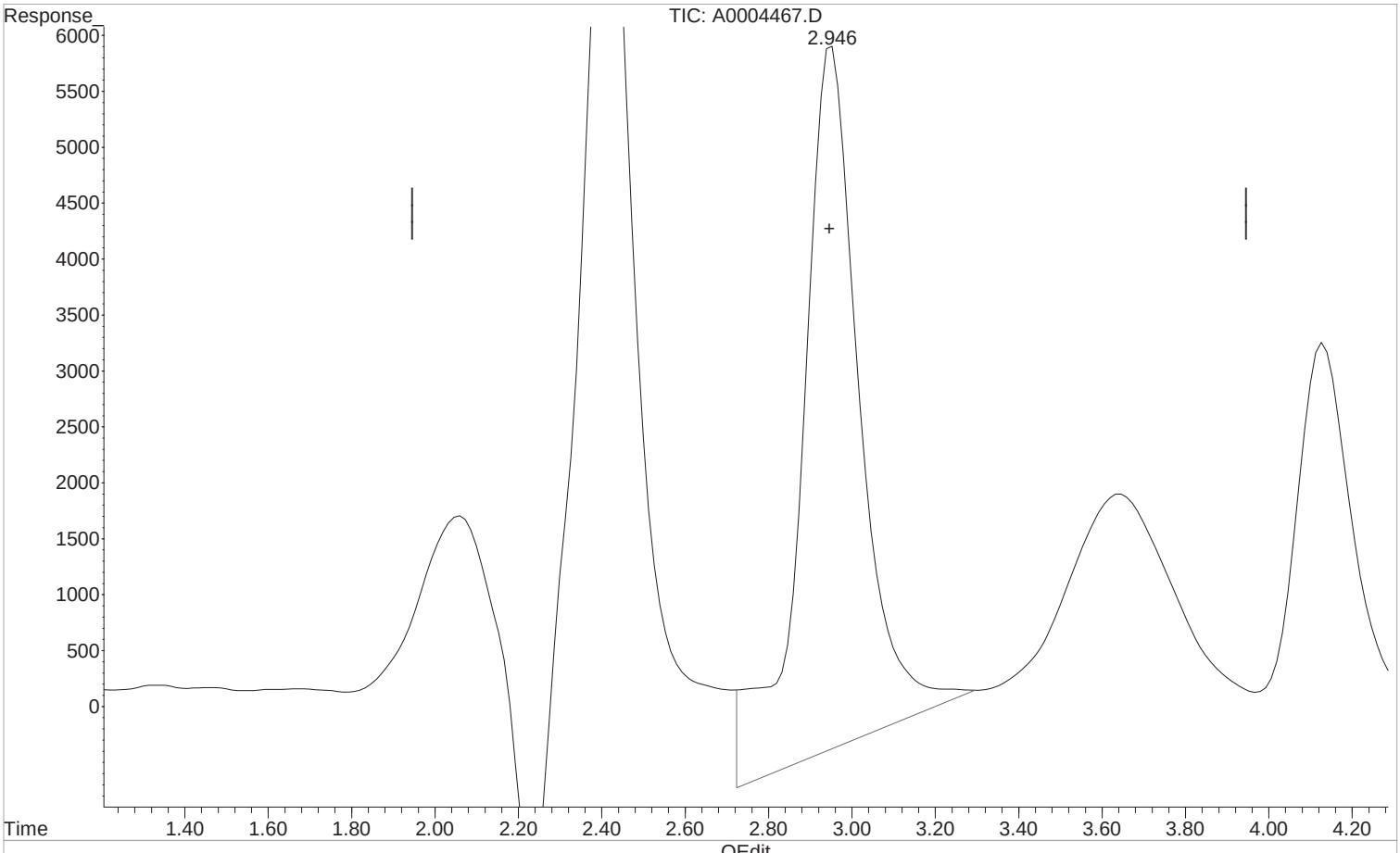
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004467.D
Signal(s) : dad1C.ch
Acq On : 30-Dec-2000, 02:48:14
Operator : A.Felser
Sample : STD 3
Misc :
ALS Vial : 4 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:20 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(1) Formic acid (t)

2.953min 6.666 ppm

response 609950

Manual Integration:

Before

03/16/20

(+) = Expected Retention Time

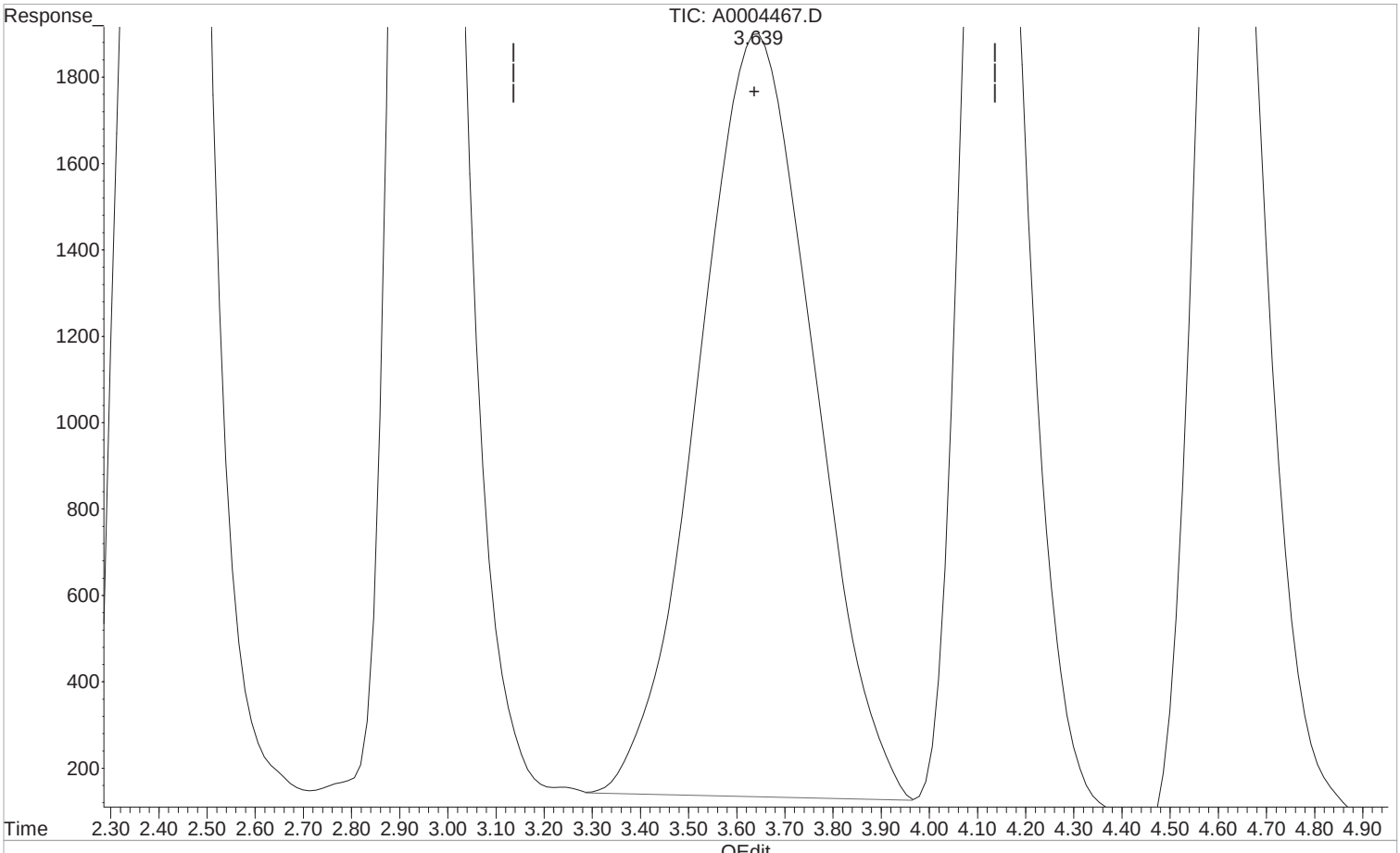
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004467.D
Signal(s) : dad1C.ch
Acq On : 30-Dec-2000, 02:48:14
Operator : A.Felser
Sample : STD 3
Misc :
ALS Vial : 4 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:20 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(2) Pyruvic acid (T)

3.639min 0.503 ppm m

response 293242

Manual Integration:

After

Poor integration.

03/16/20

(+) = Expected Retention Time

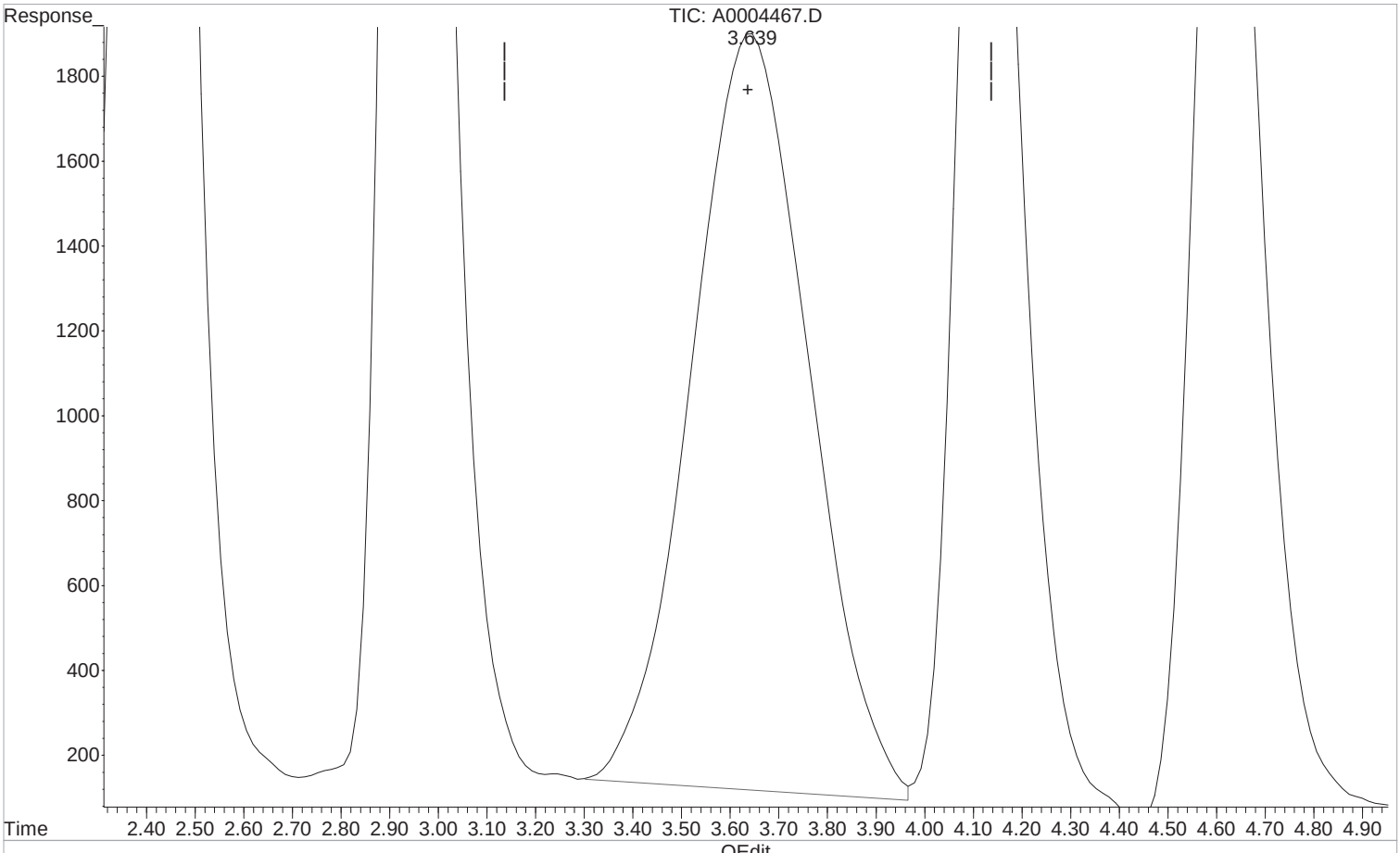
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004467.D
Signal(s) : dad1C.ch
Acq On : 30-Dec-2000, 02:48:14
Operator : A.Felser
Sample : STD 3
Misc :
ALS Vial : 4 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:20 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(2) Pyruvic acid (T)

3.645min 0.513 ppm

response 299276

Manual Integration:

Before

03/16/20

(+) = Expected Retention Time

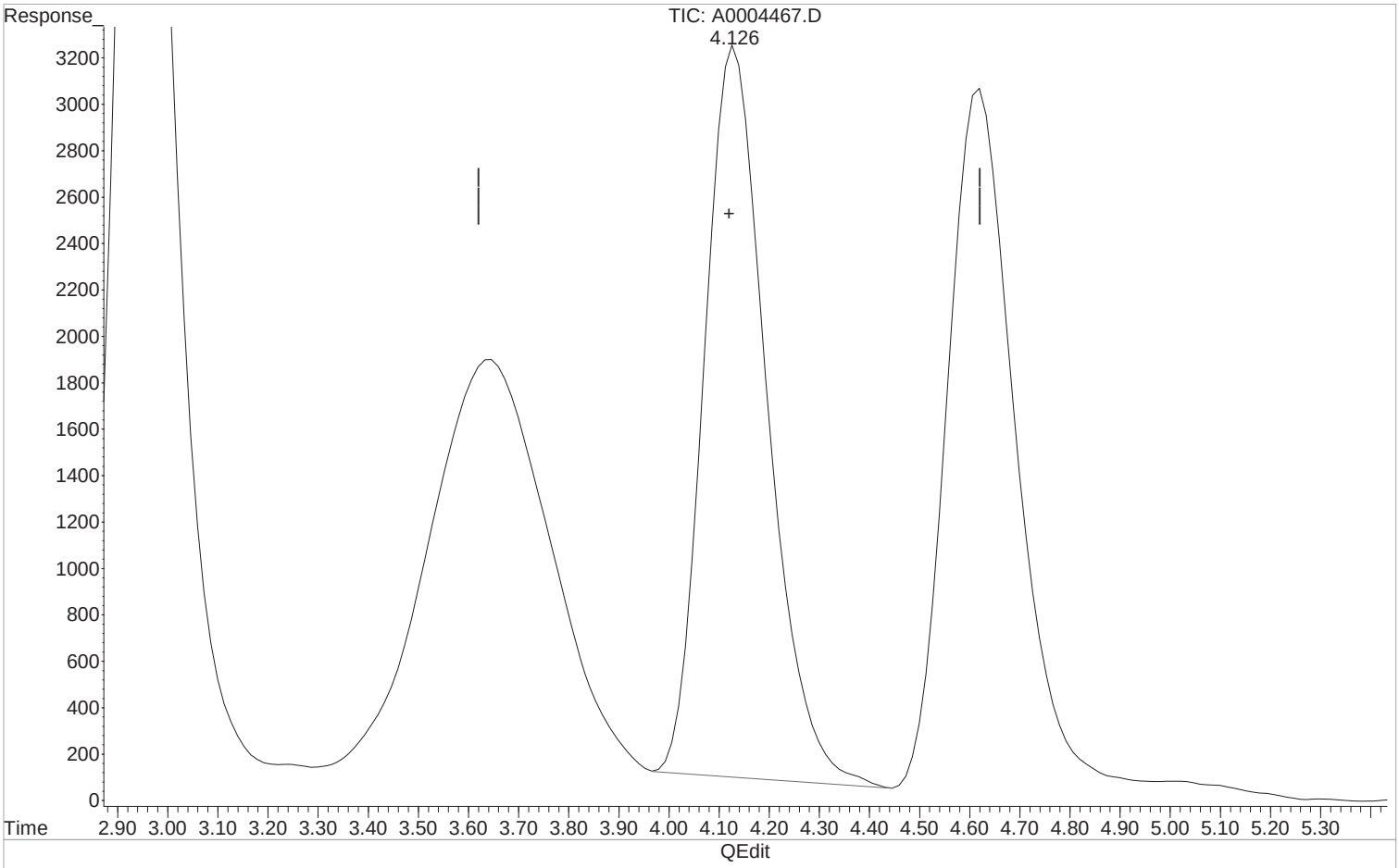
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004467.D
Signal(s) : dad1C.ch
Acq On : 30-Dec-2000, 02:48:14
Operator : A.Felser
Sample : STD 3
Misc :
ALS Vial : 4 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:20 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(3) Lactic Acid (T)

4.126min 4.978 ppm m

response 275770

Manual Integration:

After

Poor integration.

03/16/20

(+) = Expected Retention Time

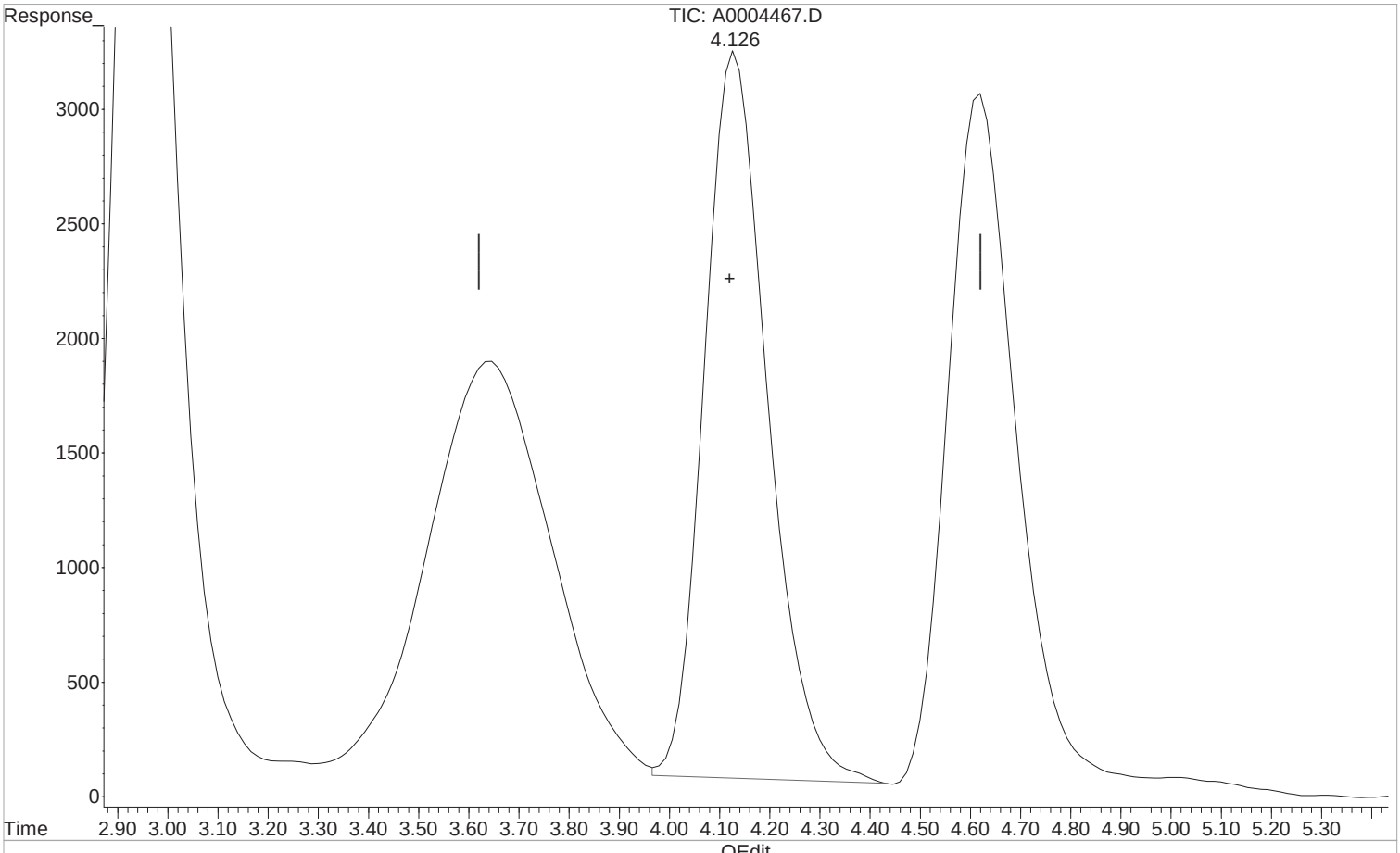
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004467.D
Signal(s) : dad1C.ch
Acq On : 30-Dec-2000, 02:48:14
Operator : A.Felser
Sample : STD 3
Misc :
ALS Vial : 4 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:20 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(3) Lactic Acid (T)

4.132min 5.051 ppm

response 279806

Manual Integration:

Before

03/16/20

(+) = Expected Retention Time

1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004467.D
Signal(s) : dad1C.ch
Acq On : 30-Dec-2000, 02:48:14
Operator : A.Felser
Sample : STD 3
Misc :
ALS Vial : 4 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:20 2020
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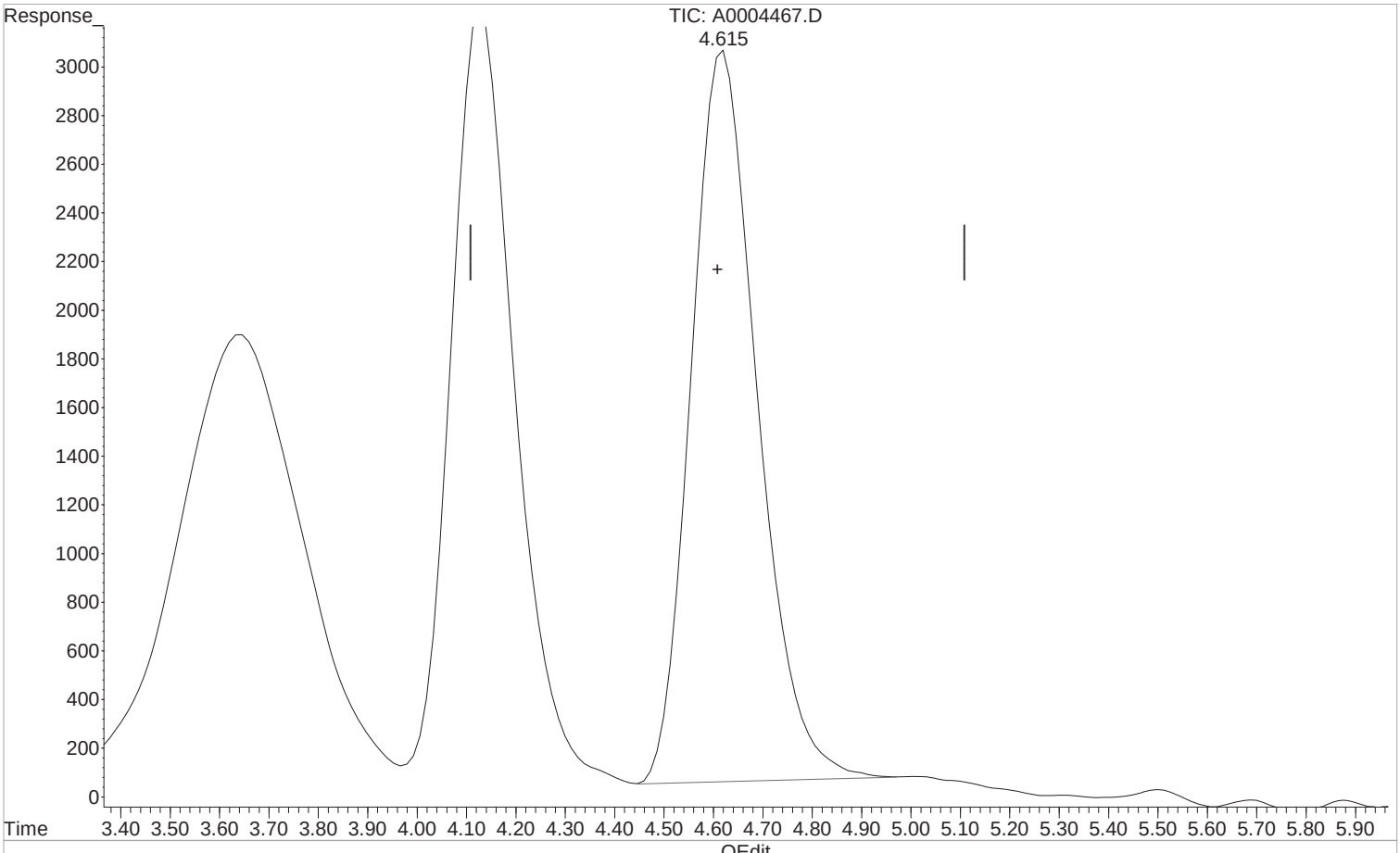
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(4) Acetic Acid (T)

4.615min 5.028 ppm m

response 280536

Manual Integration:

After

Poor integration.

03/16/20

(+) = Expected Retention Time

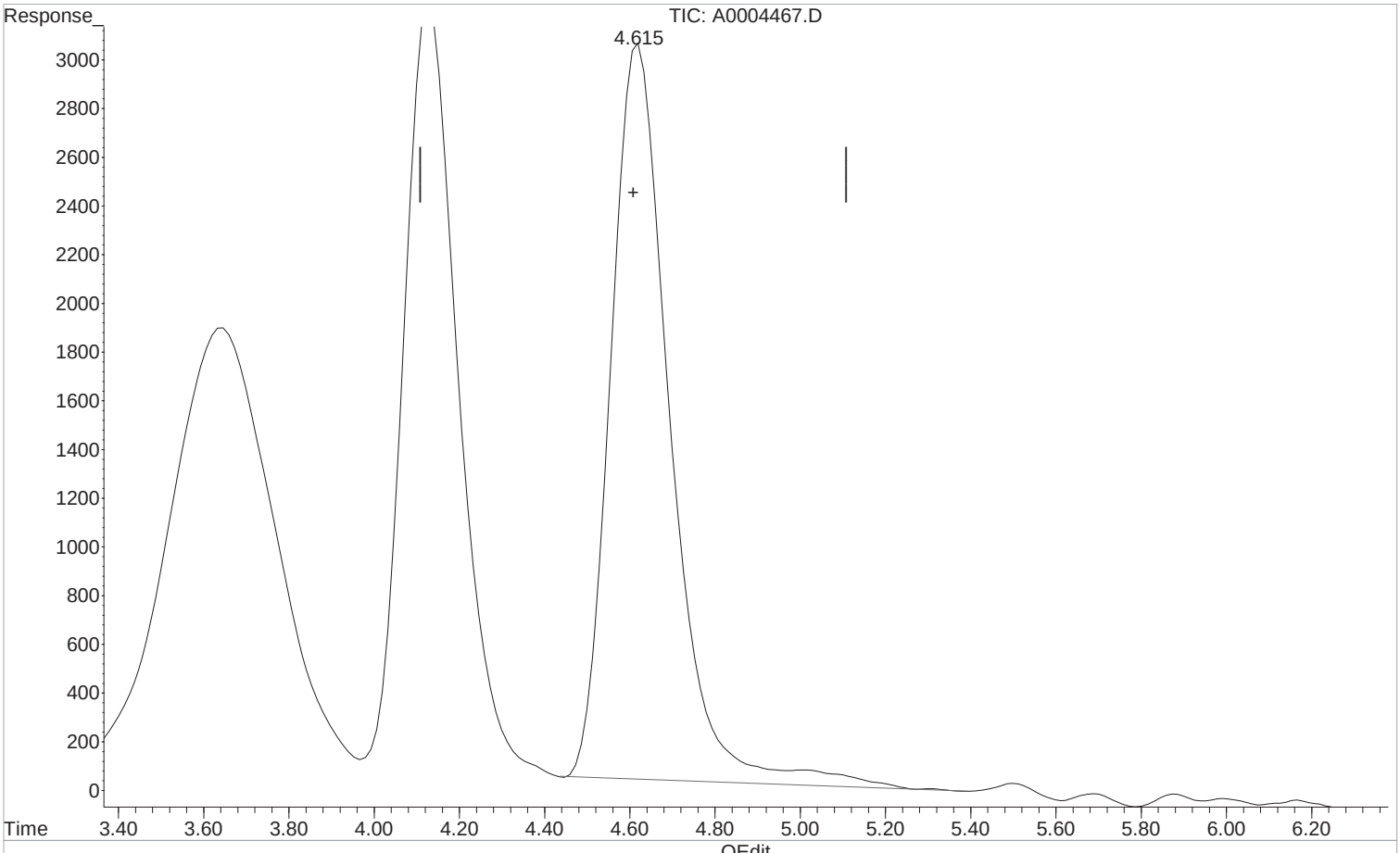
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004467.D
Signal(s) : dad1C.ch
Acq On : 30-Dec-2000, 02:48:14
Operator : A.Felser
Sample : STD 3
Misc :
ALS Vial : 4 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:20 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(4) Acetic Acid (T)

4.622min 5.292 ppm

response 295308

Manual Integration:

Before

03/16/20

(+) = Expected Retention Time

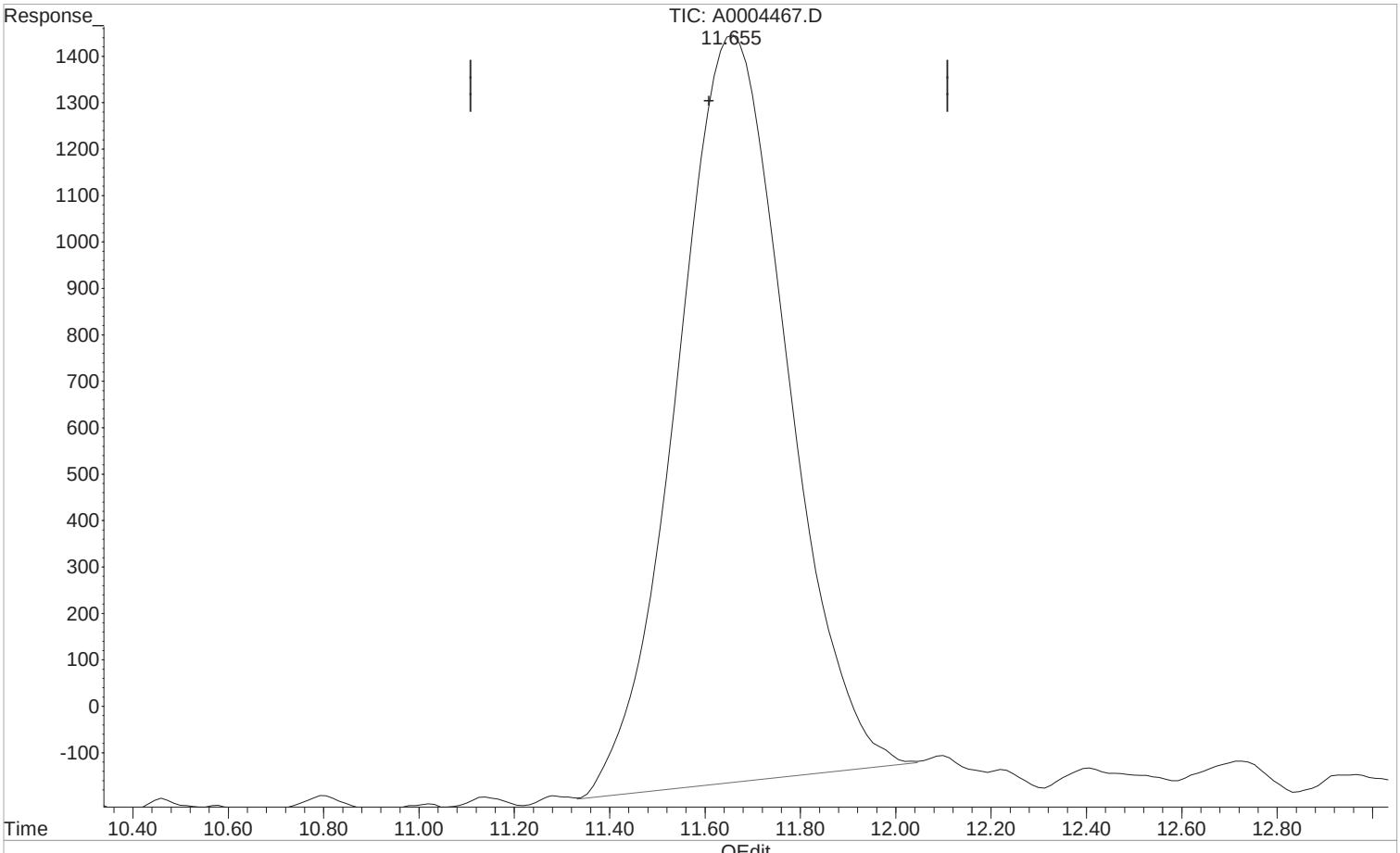
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004467.D
Signal(s) : dad1C.ch
Acq On : 30-Dec-2000, 02:48:14
Operator : A.Felser
Sample : STD 3
Misc :
ALS Vial : 4 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:20 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(5) Propionic Acid (T)

11.655min 4.717 ppm m

response 259122

Manual Integration:

After

Poor integration.

03/16/20

(+) = Expected Retention Time

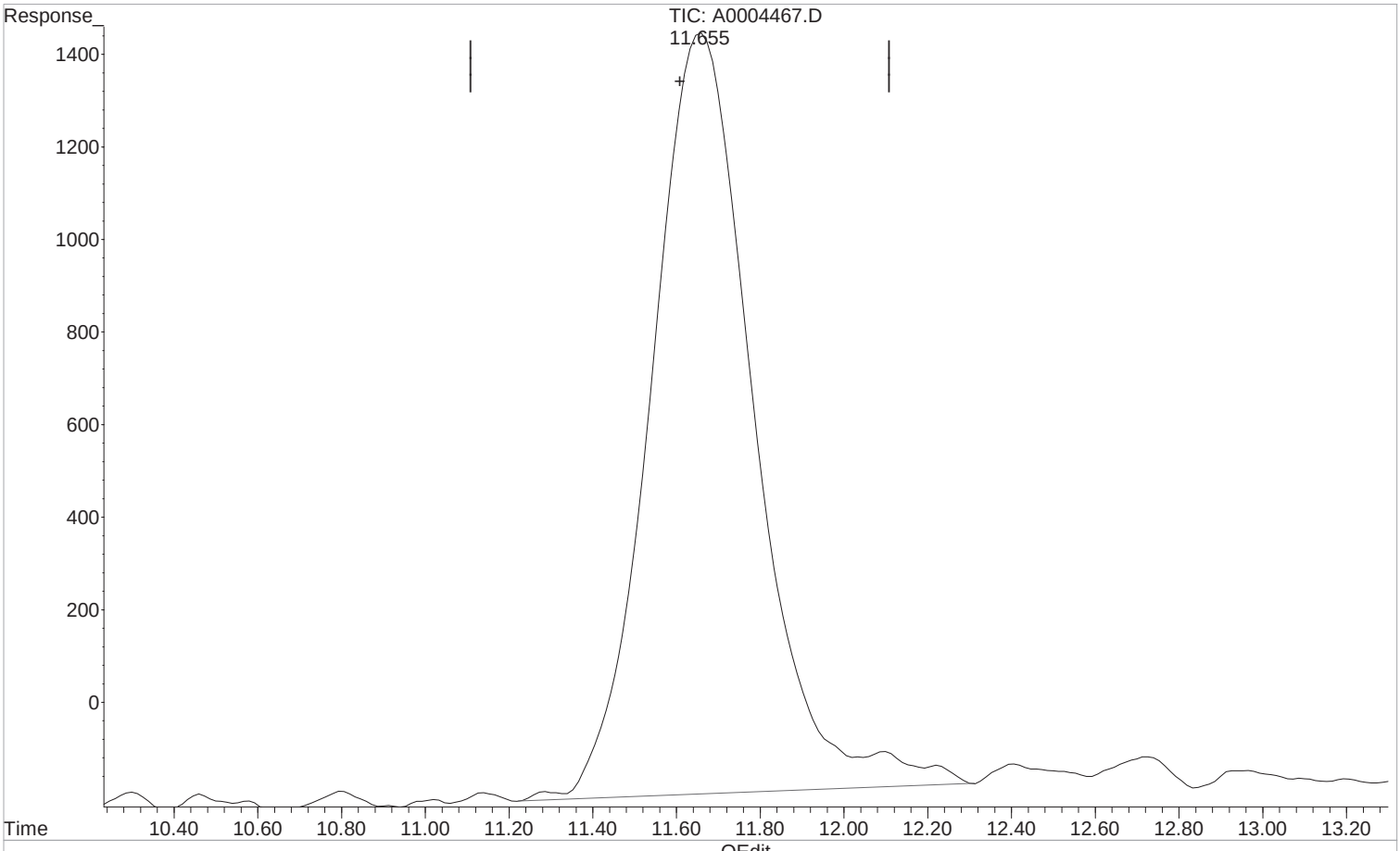
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004467.D
Signal(s) : dad1C.ch
Acq On : 30-Dec-2000, 02:48:14
Operator : A.Felser
Sample : STD 3
Misc :
ALS Vial : 4 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:20 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(5) Propionic Acid (T)

11.661min 5.138 ppm

response 282253

Manual Integration:

Before

03/16/20

(+) = Expected Retention Time

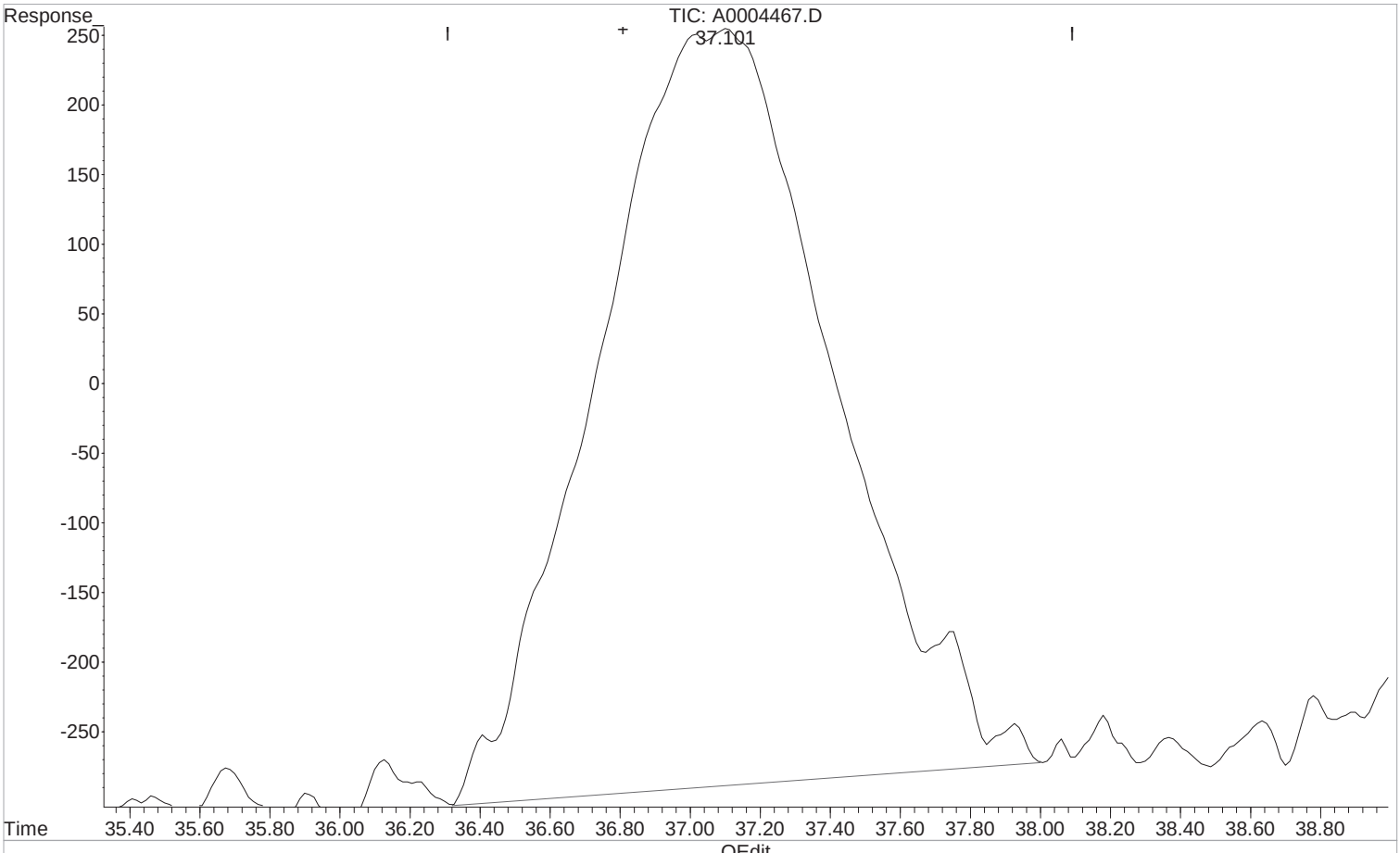
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004467.D
Signal(s) : dad1C.ch
Acq On : 30-Dec-2000, 02:48:14
Operator : A.Felser
Sample : STD 3
Misc :
ALS Vial : 4 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:20 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(6) Butyric Acid (T)

37.101min 4.834 ppm m

response 254345

Manual Integration:

After

Poor integration.

03/16/20

(+) = Expected Retention Time

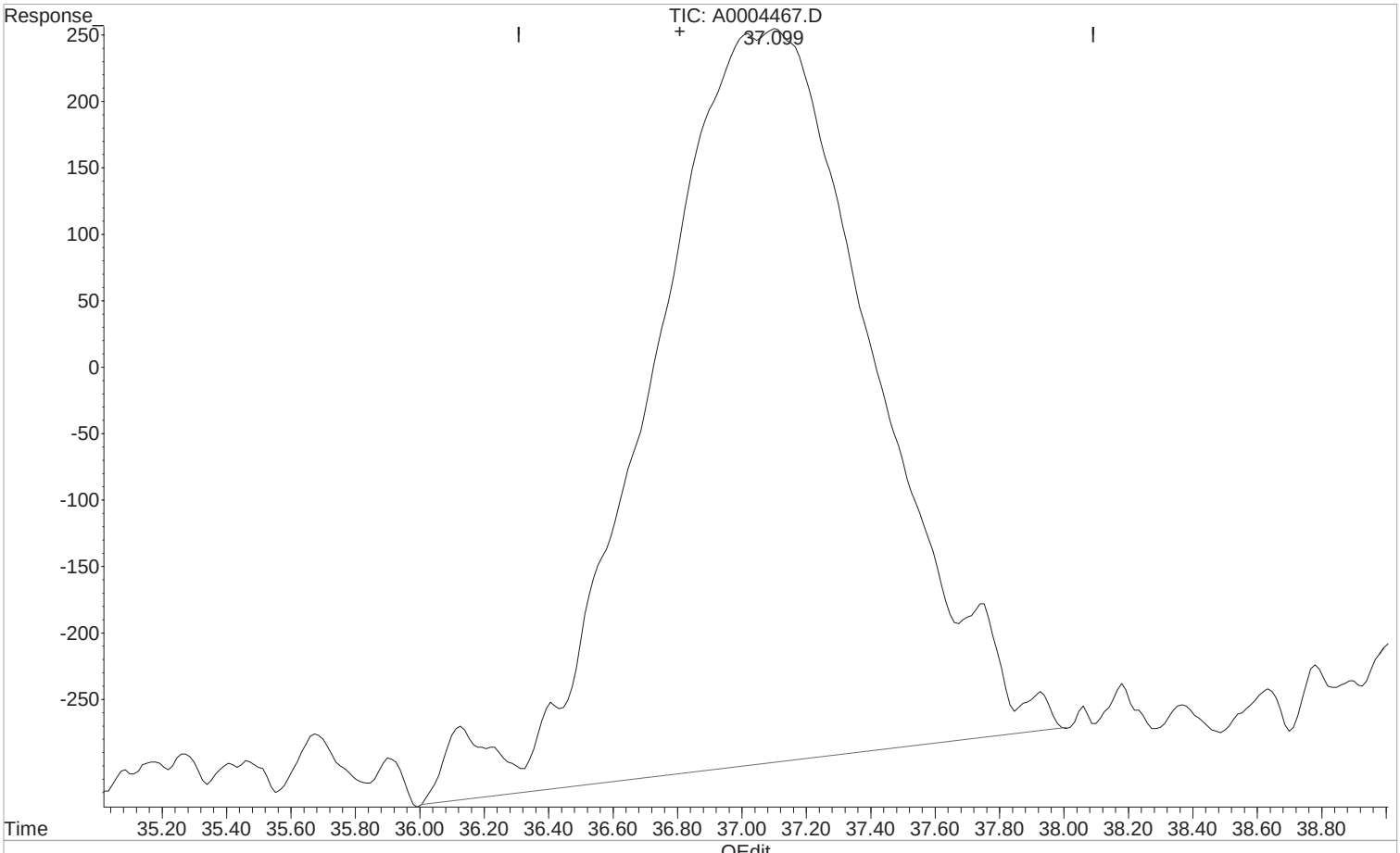
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004467.D
Signal(s) : dad1C.ch
Acq On : 30-Dec-2000, 02:48:14
Operator : A.Felser
Sample : STD 3
Misc :
ALS Vial : 4 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:20 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(6) Butyric Acid (T)

37.103min 5.106 ppm

response 268658

Manual Integration:

Before

03/16/20

(+) = Expected Retention Time

1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004467.D
Signal(s) : dad1C.ch
Acq On : ~~30-Dec-2000, 02:48:14~~ 12-Mar-2020, 14:42
Operator : A.Felser
Sample : STD 3
Misc :
ALS Vial : 4 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:20 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210

	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1) t	Formic acid	2.946	460497	5.032	ppm	m
2) T	Pyruvic acid	3.639	293242	0.503	ppm	m
3) T	Lactic Acid	4.126	275770	4.978	ppm	m
4) T	Acetic Acid	4.615	280536	5.028	ppm	m
5) T	Propionic Acid	11.655	259122	4.717	ppm	m
6) T	Butyric Acid	37.101	254345	4.834	ppm	m

(f)=RT Delta > 1/2 Window (m)=manual int.

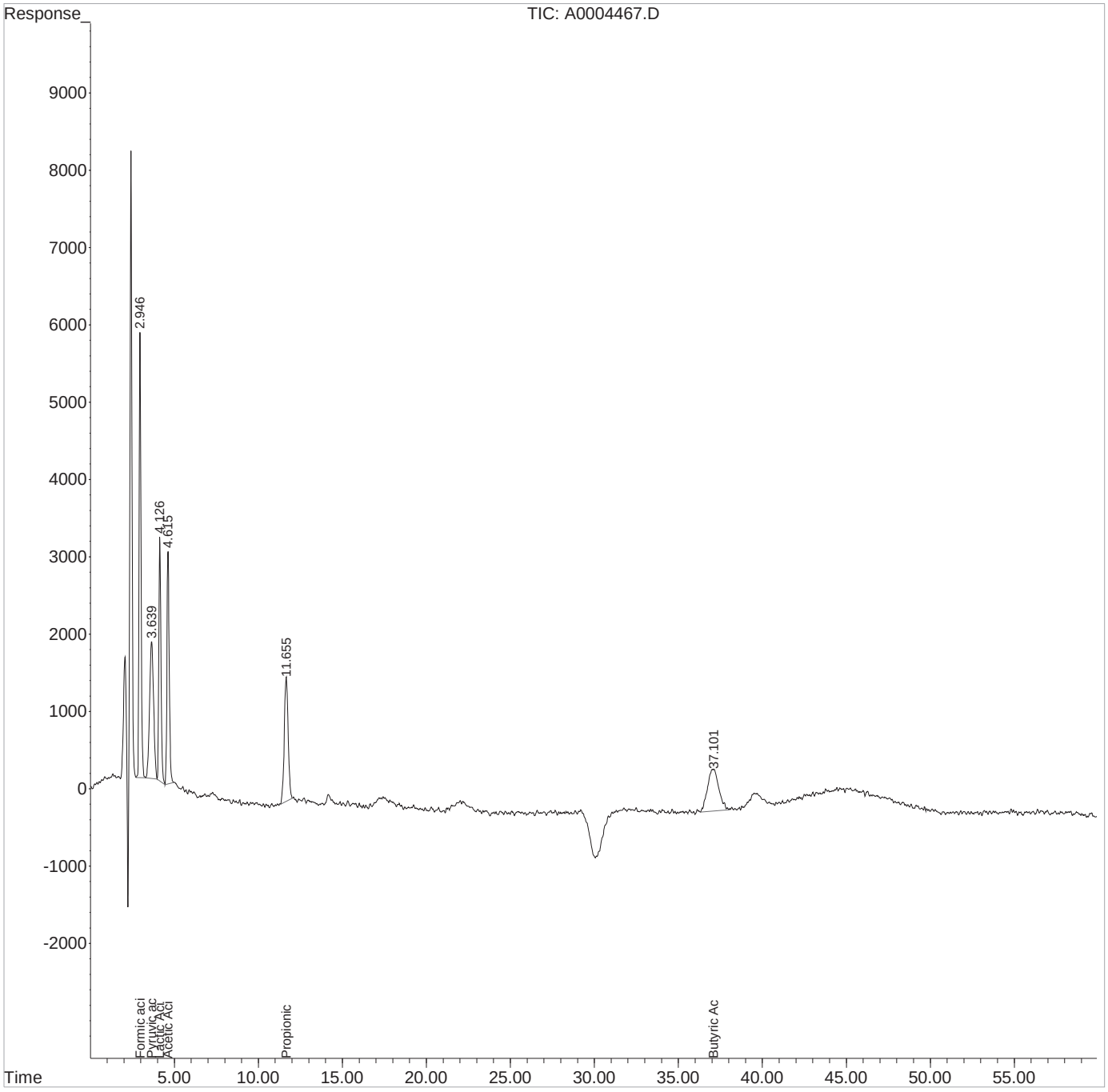
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004467.D
Signal(s) : dad1C.ch
Acq On : 30-Dec-2000, 02:48:14
Operator : A.Felser
Sample : STD 3
Misc :
ALS Vial : 4 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:20 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



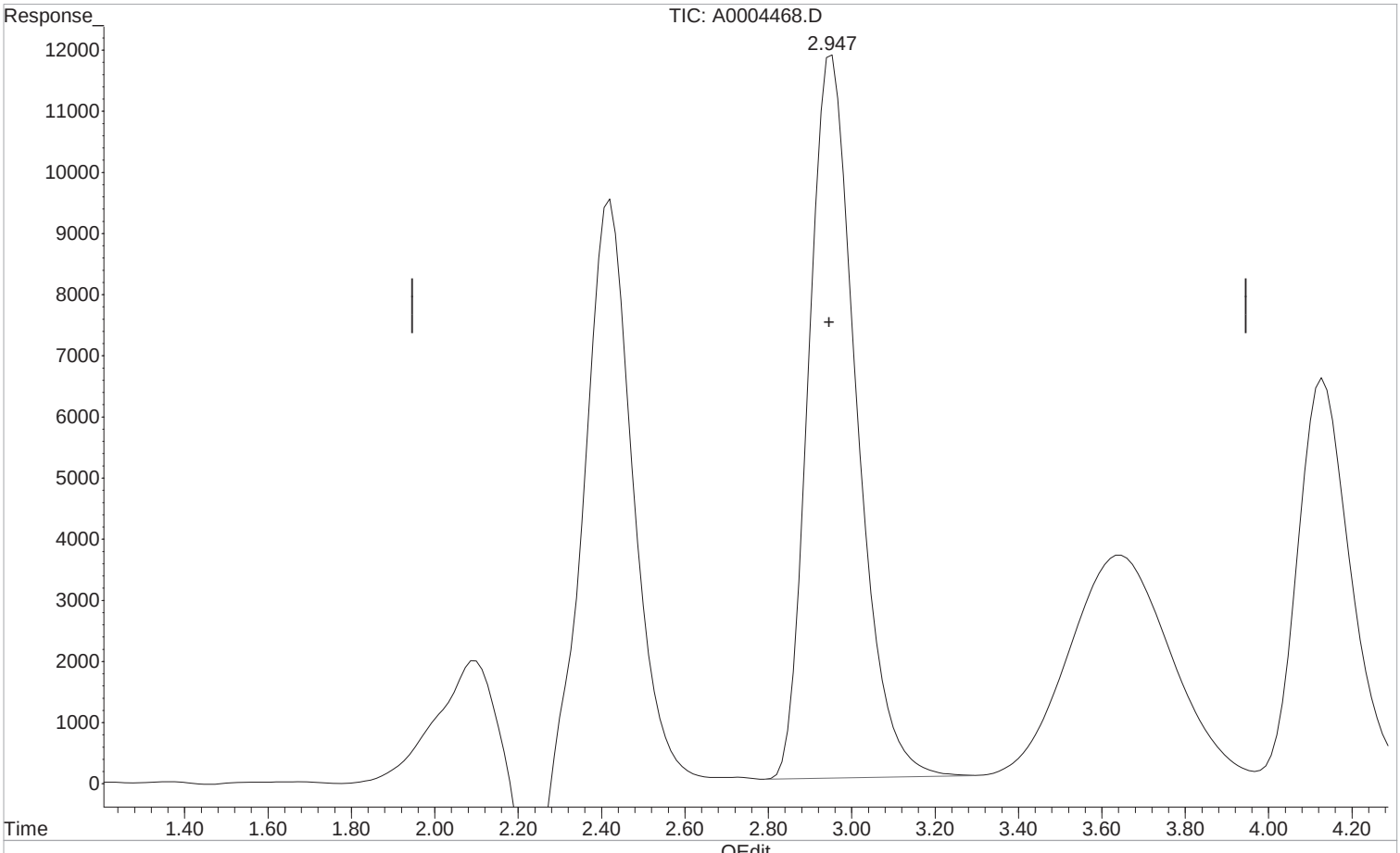
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004468.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 15:48:46
Operator : A.Felser
Sample : STD 4
Misc :
ALS Vial : 5 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:22 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(1) Formic acid (t)

2.947min 10.368 ppm m

response 948710

Manual Integration:

After

Poor integration.

03/16/20

(+) = Expected Retention Time

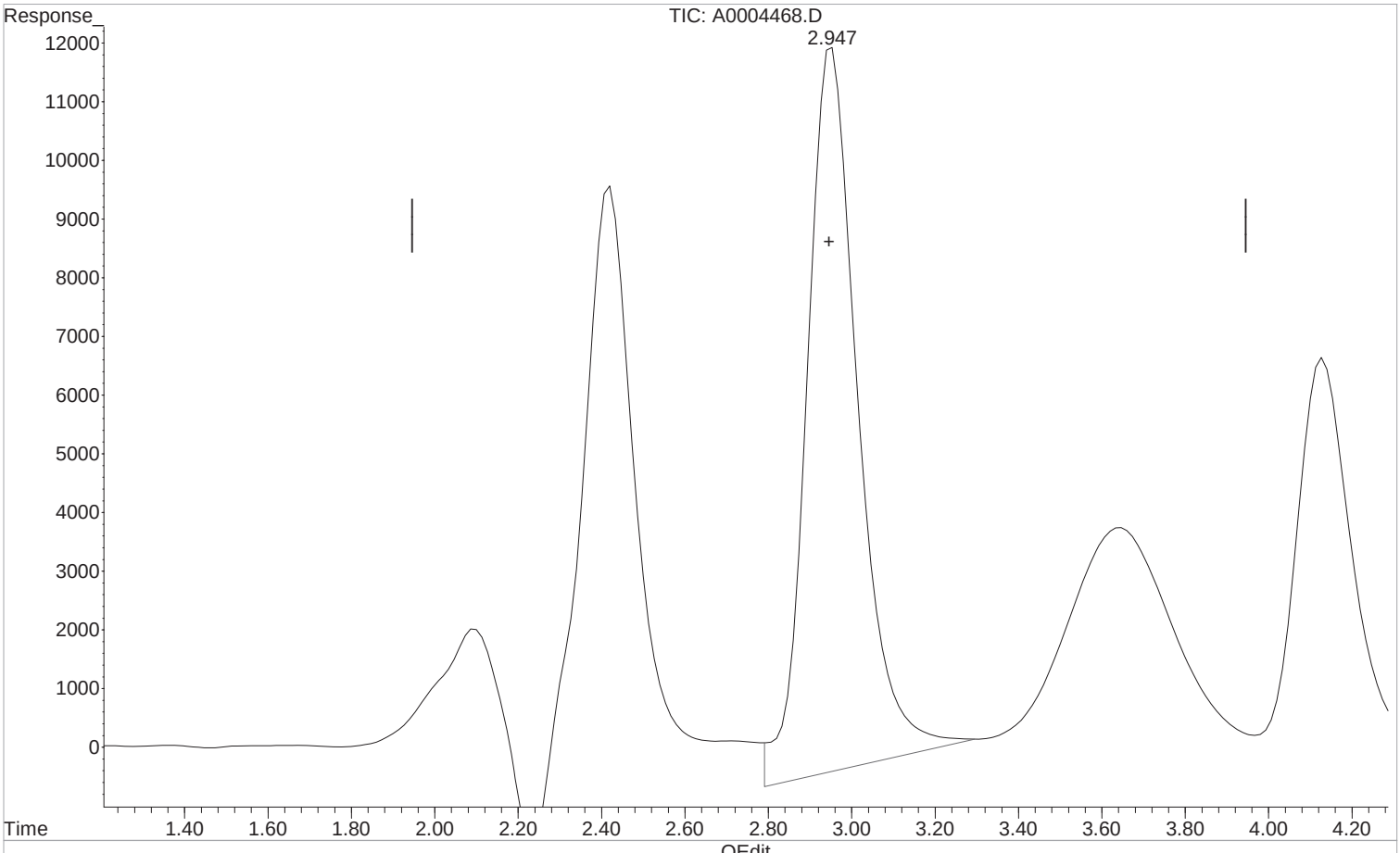
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004468.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 15:48:46
Operator : A.Felser
Sample : STD 4
Misc :
ALS Vial : 5 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:22 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(1) Formic acid (t)

2.954min 11.593 ppm

response 1060848

Manual Integration:

Before

03/16/20

(+) = Expected Retention Time

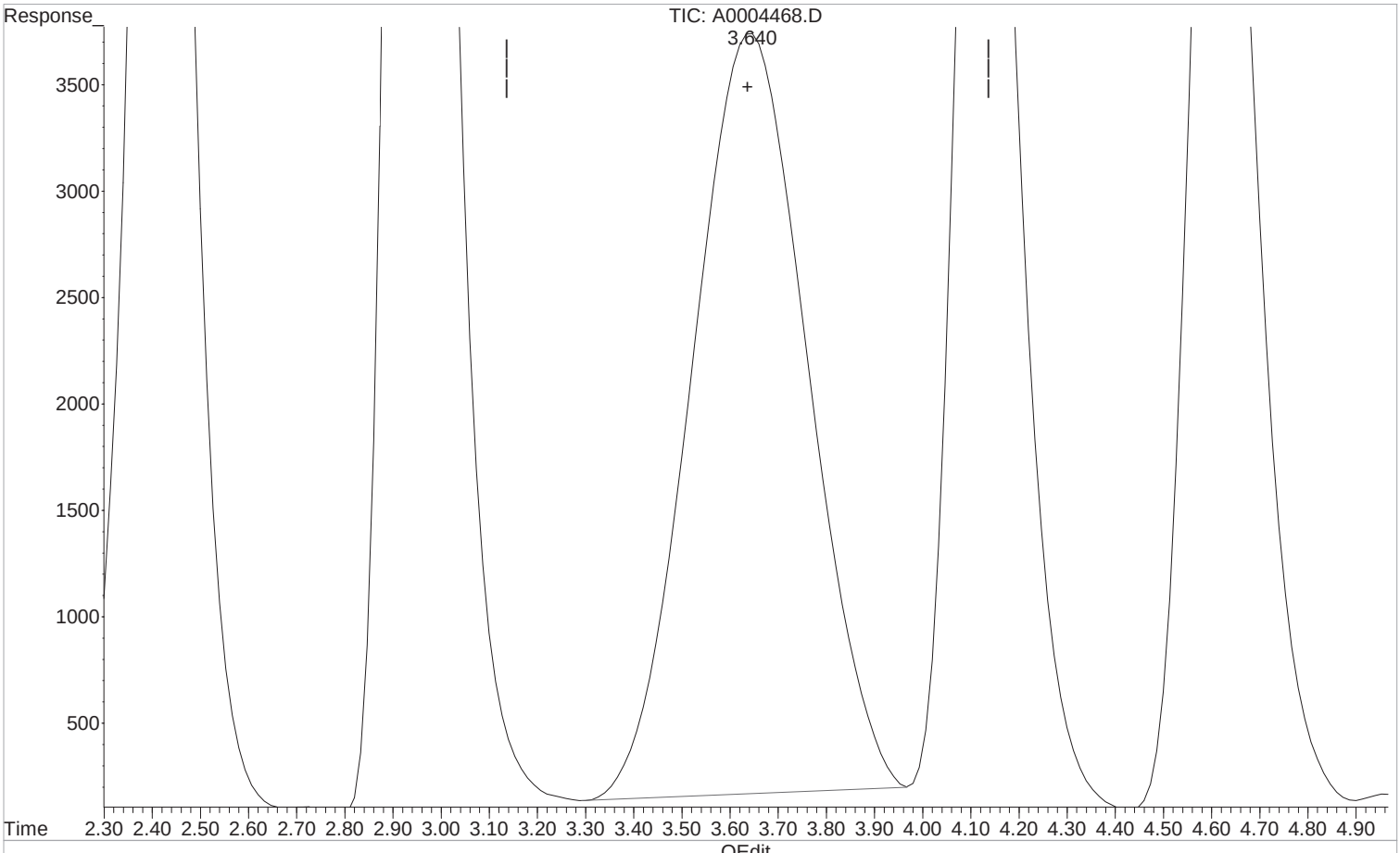
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004468.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 15:48:46
Operator : A.Felser
Sample : STD 4
Misc :
ALS Vial : 5 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:22 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(2) Pyruvic acid (T)

3.640min 1.020 ppm m

response 594304

Manual Integration:

After

Poor integration.

03/16/20

(+) = Expected Retention Time

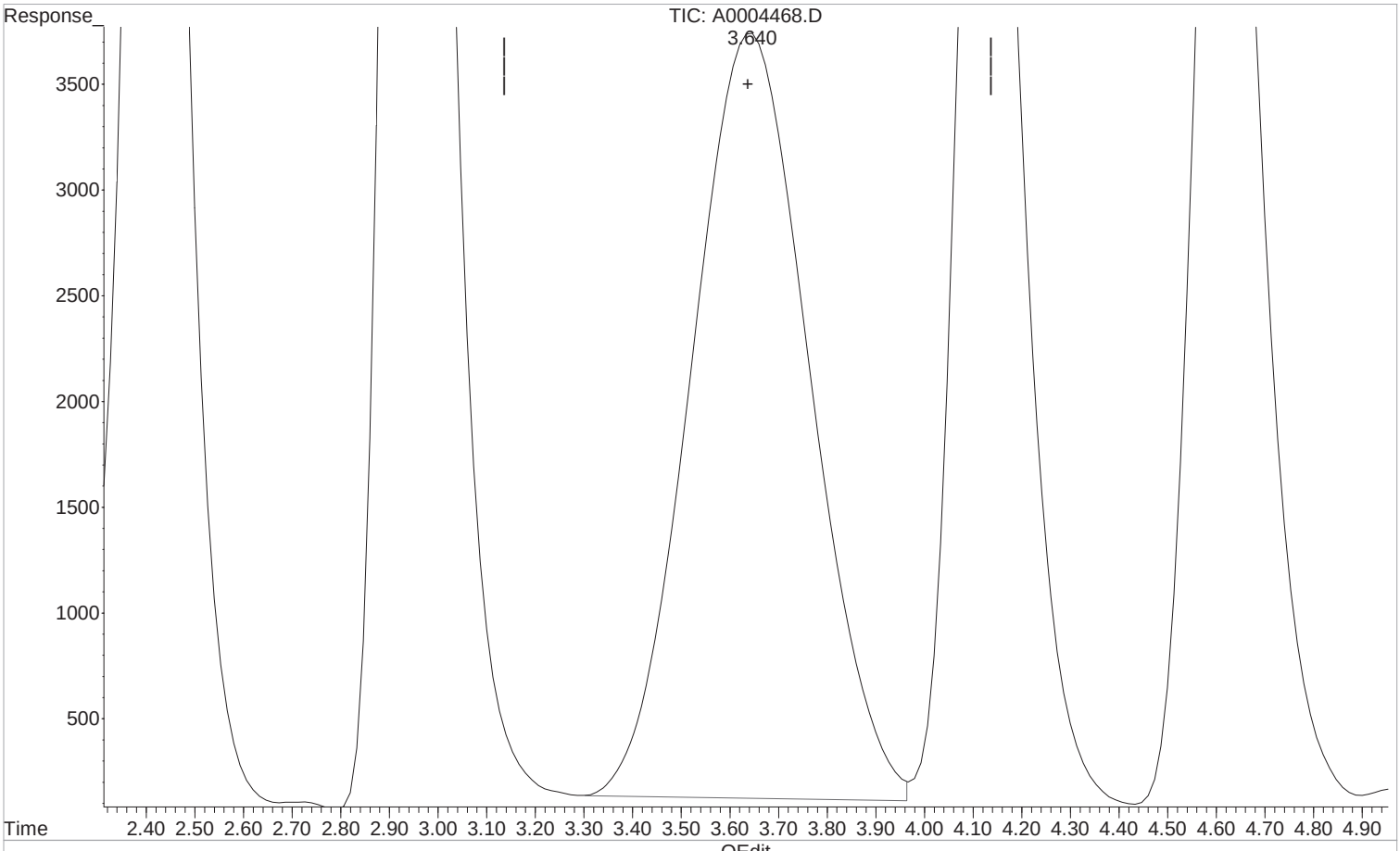
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004468.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 15:48:46
Operator : A.Felser
Sample : STD 4
Misc :
ALS Vial : 5 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:22 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(2) Pyruvic acid (T)

3.646min 1.048 ppm

response 611122

Manual Integration:

Before

03/16/20

(+) = Expected Retention Time

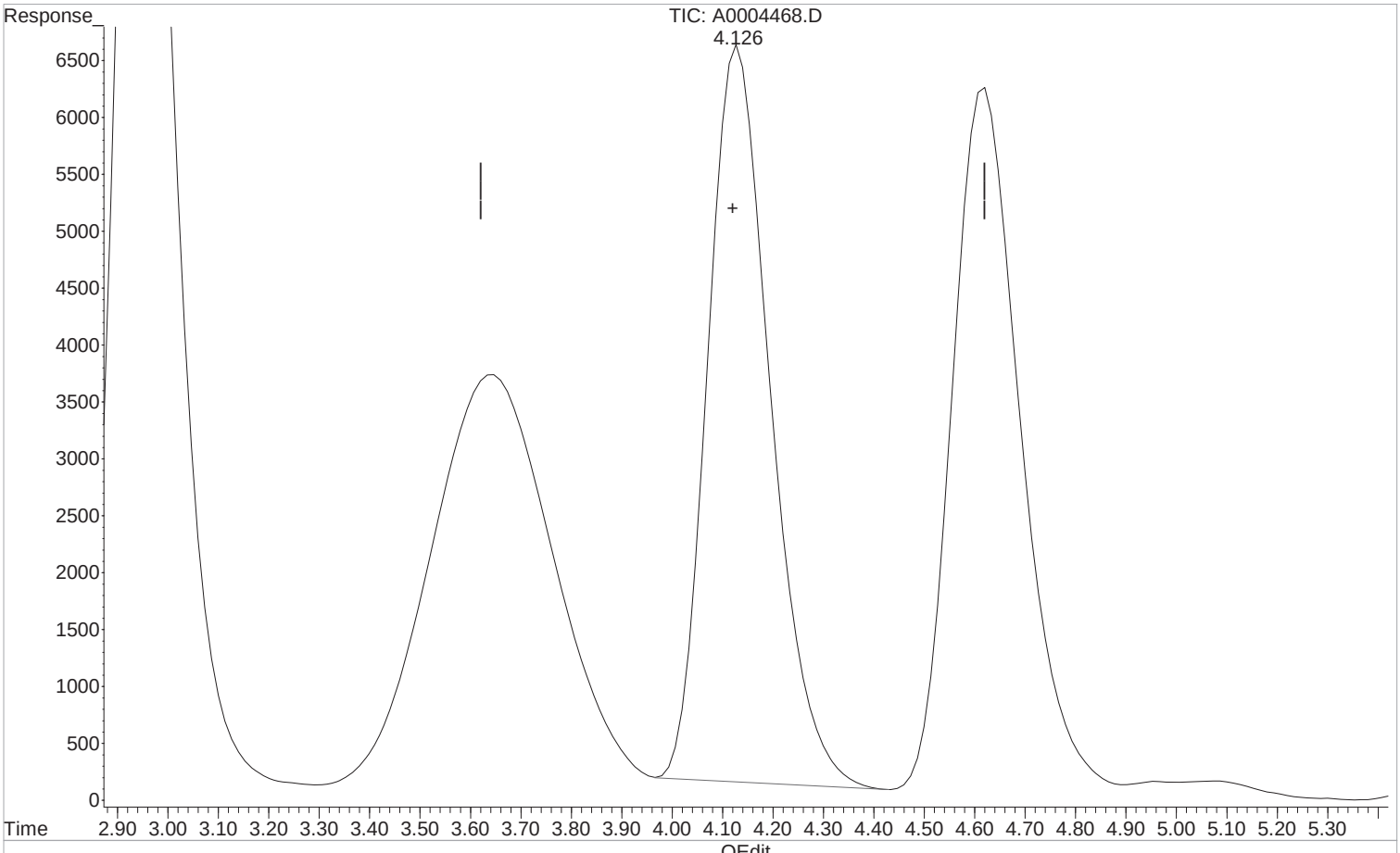
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004468.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 15:48:46
Operator : A.Felser
Sample : STD 4
Misc :
ALS Vial : 5 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:22 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(3) Lactic Acid (T)

4.126min 10.183 ppm m

response 564128

Manual Integration:

After

Poor integration.

03/16/20

(+) = Expected Retention Time

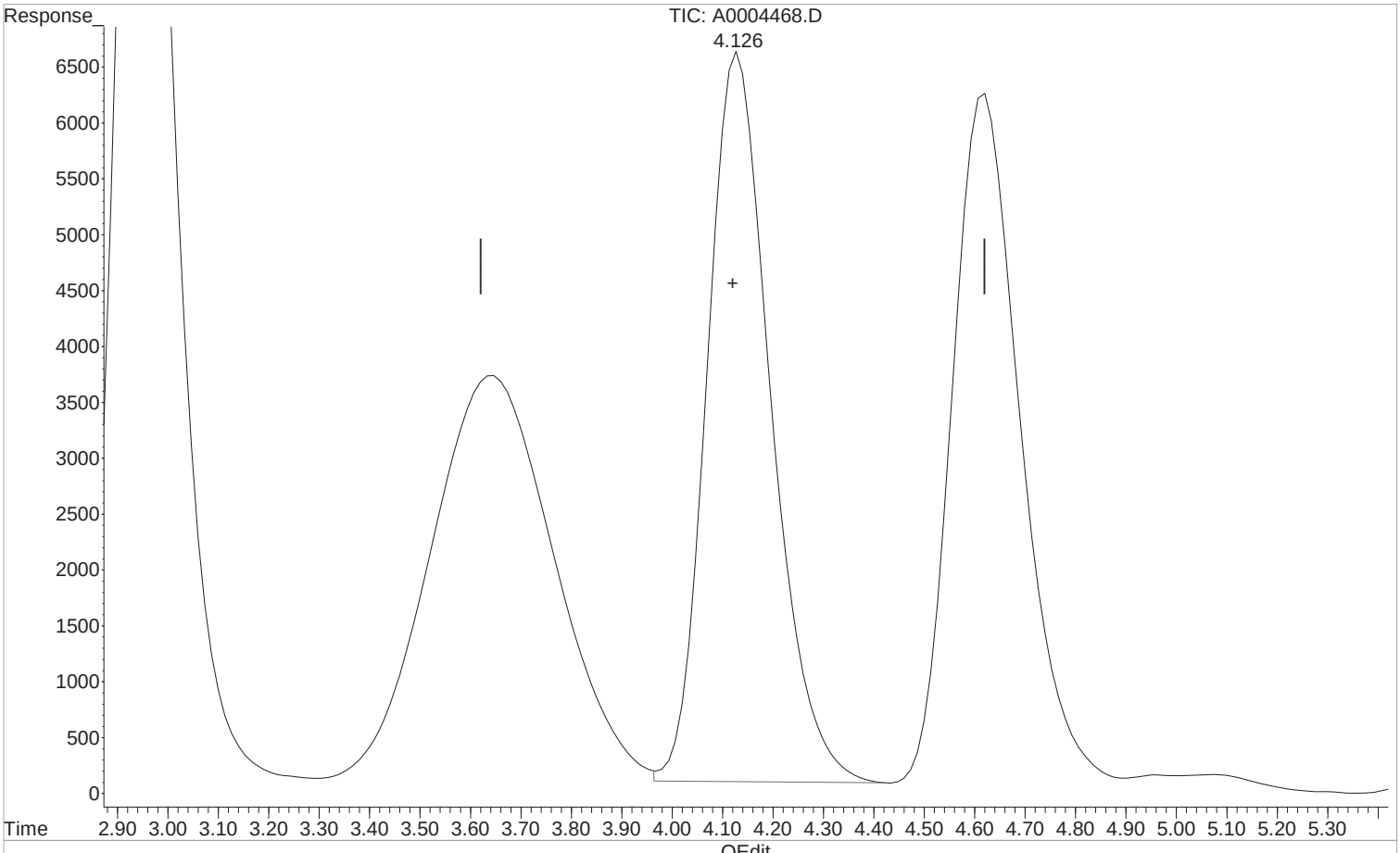
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004468.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 15:48:46
Operator : A.Felser
Sample : STD 4
Misc :
ALS Vial : 5 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:22 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(3) Lactic Acid (T)

4.132min 10.406 ppm

response 576451

Manual Integration:

Before

03/16/20

(+) = Expected Retention Time

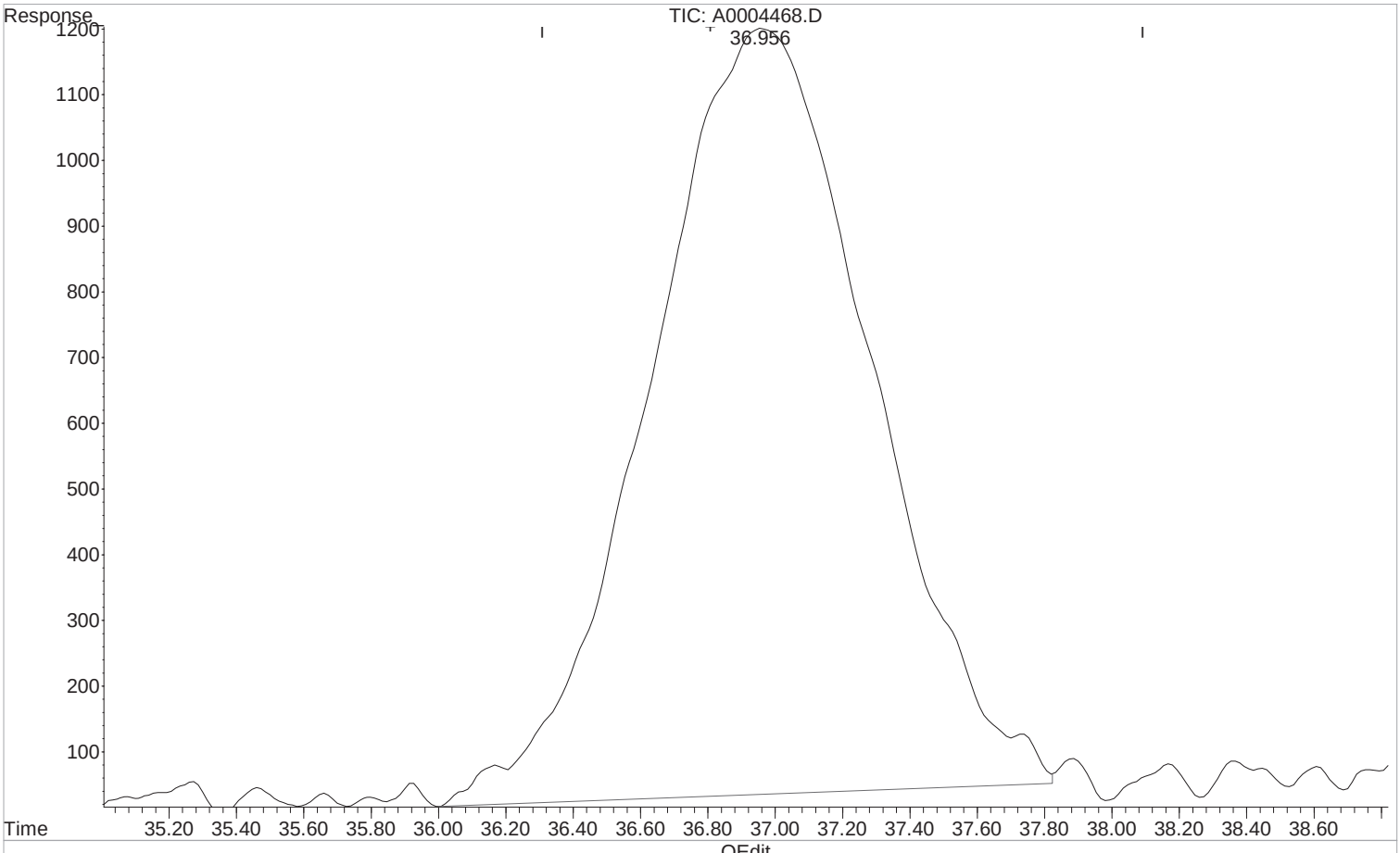
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004468.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 15:48:46
Operator : A.Felser
Sample : STD 4
Misc :
ALS Vial : 5 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:22 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(6) Butyric Acid (T)

36.956min 10.111 ppm m

response 532016

Manual Integration:

After

Poor integration.

03/16/20

(+) = Expected Retention Time

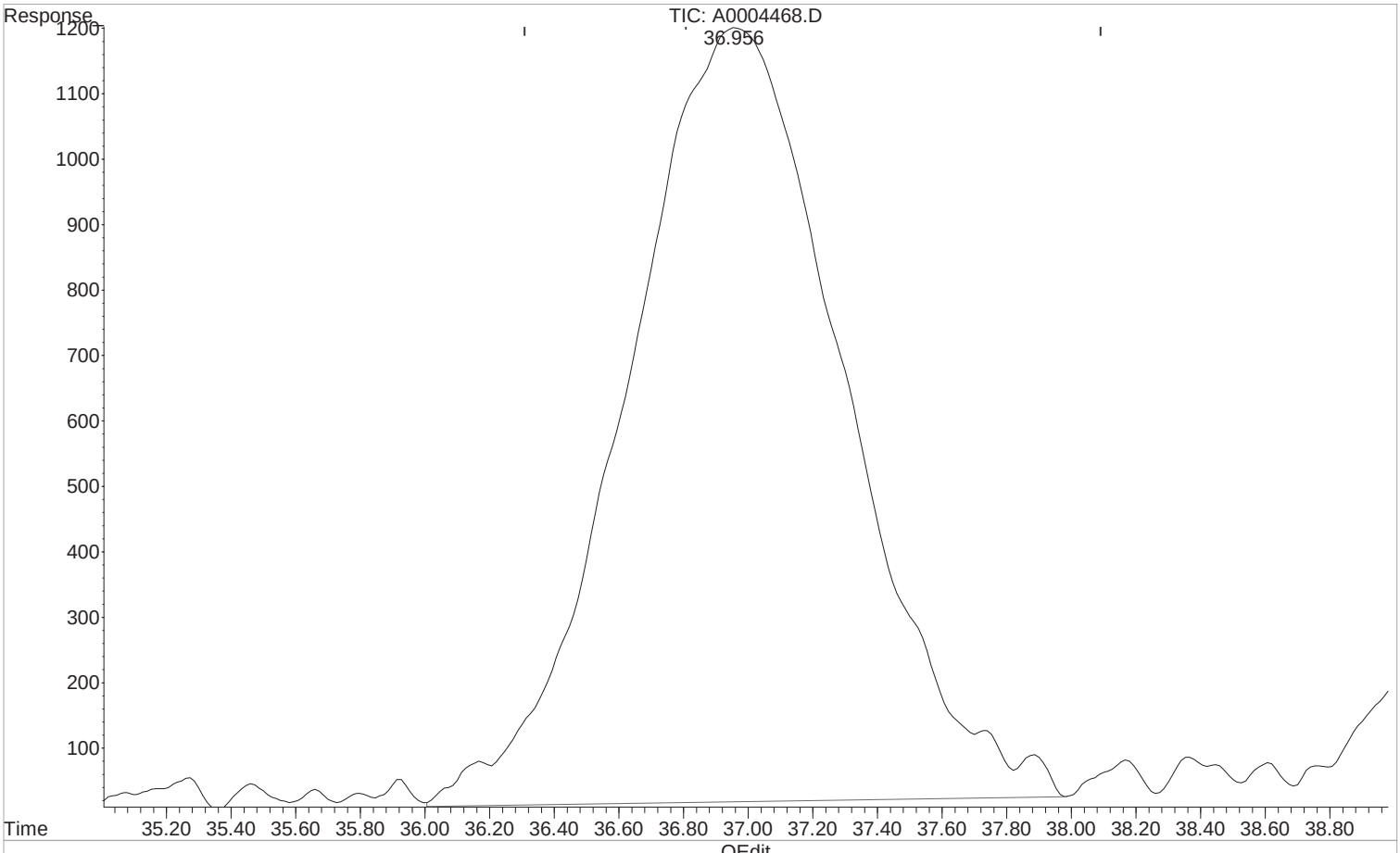
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004468.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 15:48:46
Operator : A.Felser
Sample : STD 4
Misc :
ALS Vial : 5 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:22 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(6) Butyric Acid (T)

36.967min 10.515 ppm

response 553241

Manual Integration:

Before

03/16/20

(+) = Expected Retention Time

1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004468.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 15:48:46
Operator : A.Felser
Sample : STD 4
Misc :
ALS Vial : 5 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:22 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210

	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1) t	Formic acid	2.947	948710	10.368	ppm	m
2) T	Pyruvic acid	3.640	594304	1.020	ppm	m
3) T	Lactic Acid	4.126	564128	10.183	ppm	m
4) T	Acetic Acid	4.622	573121	10.271	ppm	
5) T	Propionic Acid	11.654	559828	10.190	ppm	
6) T	Butyric Acid	36.956	532016	10.111	ppm	m

(f)=RT Delta > 1/2 Window (m)=manual int.

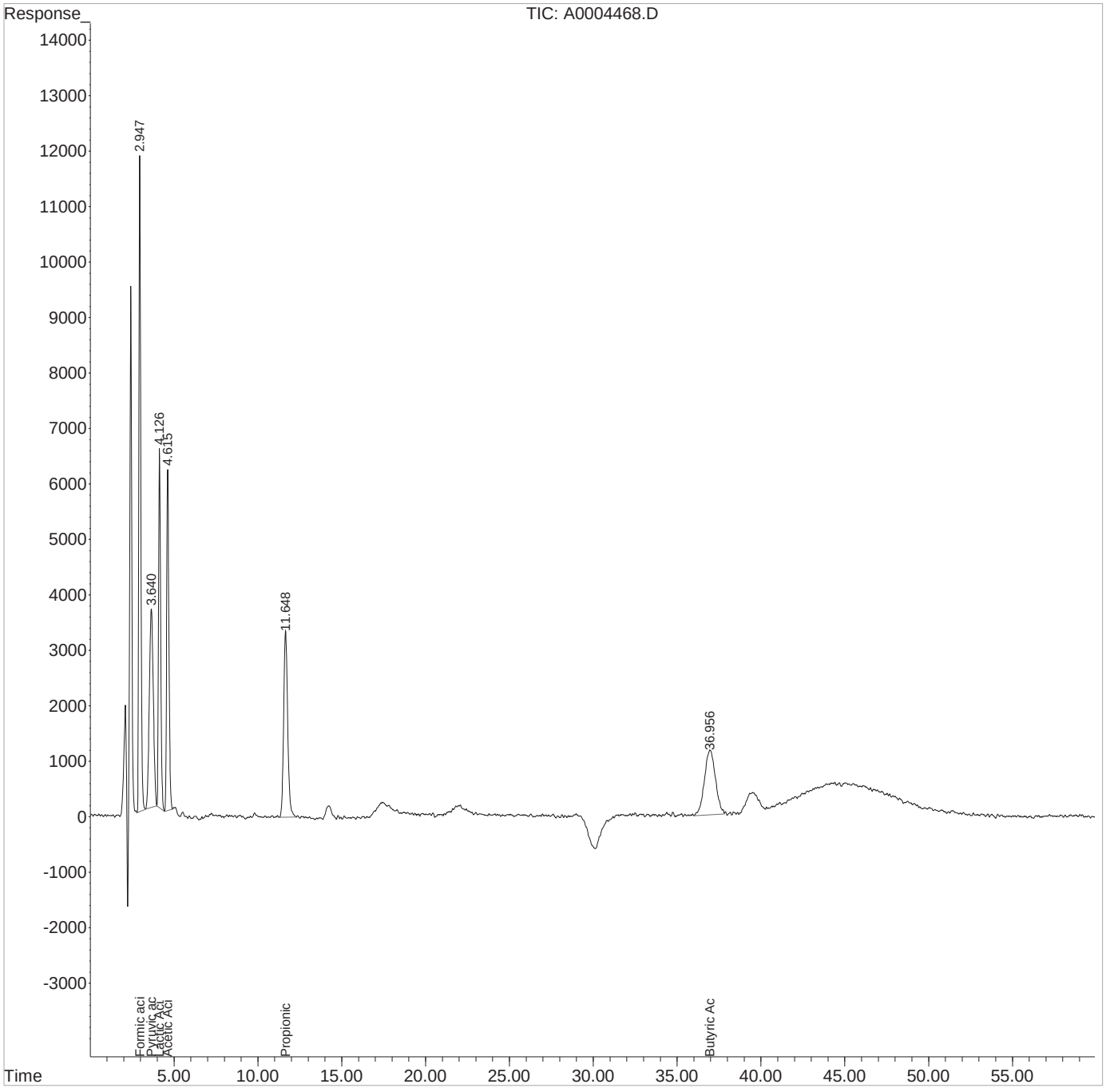
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004468.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 15:48:46
Operator : A.Felser
Sample : STD 4
Misc :
ALS Vial : 5 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:22 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



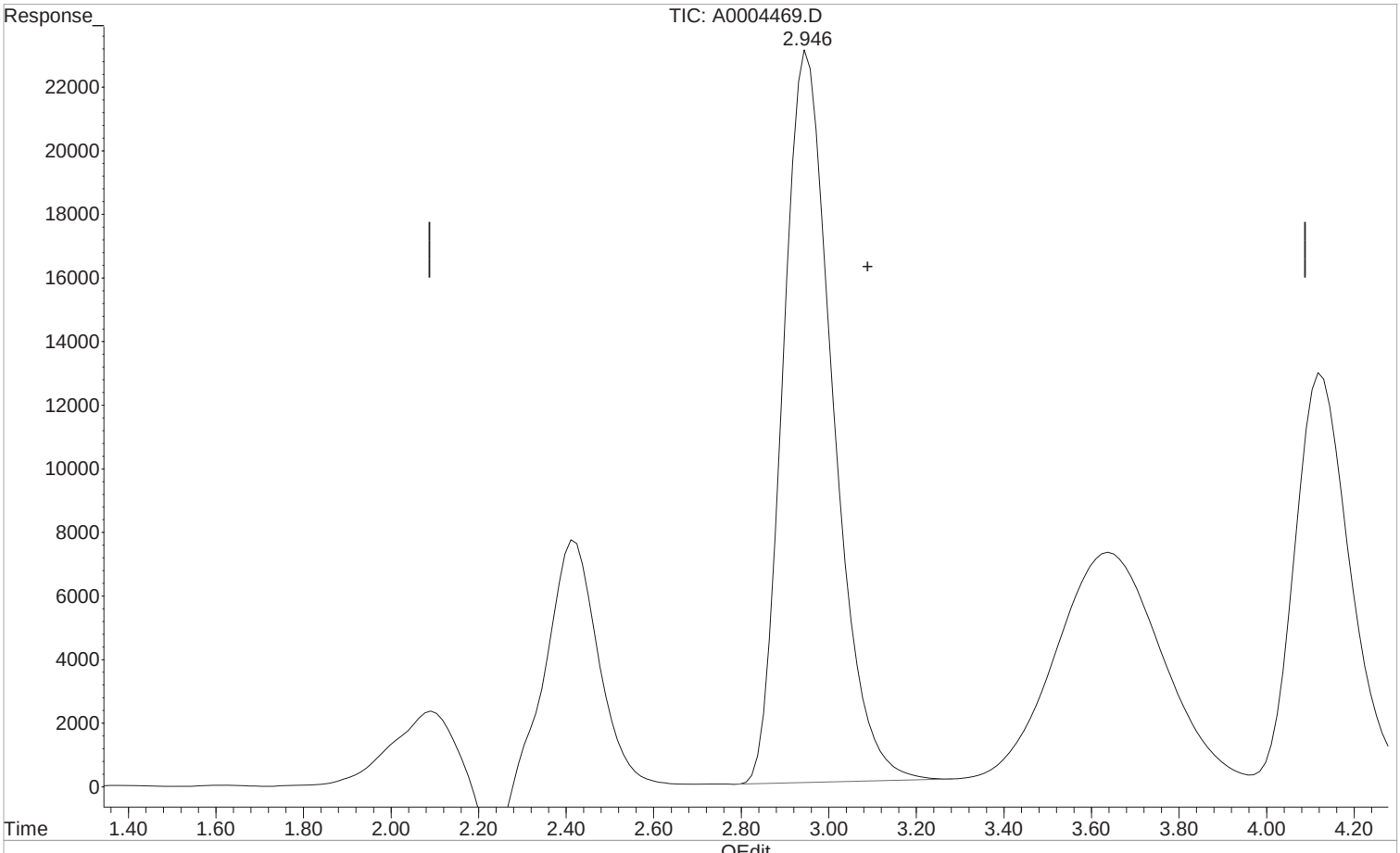
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004469.D
Signal(s) : dad1C.ch
Acq On : 30-Dec-2000, 17:48:02
Operator : A.Felser
Sample : STD 5
Misc :
ALS Vial : 6 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:15:50 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Mar 12 07:11:04 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(1) Formic acid (t)

2.946min 19.154 ppm m

response 1830133

Manual Integration:

After

Poor integration.

03/16/20

(+) = Expected Retention Time

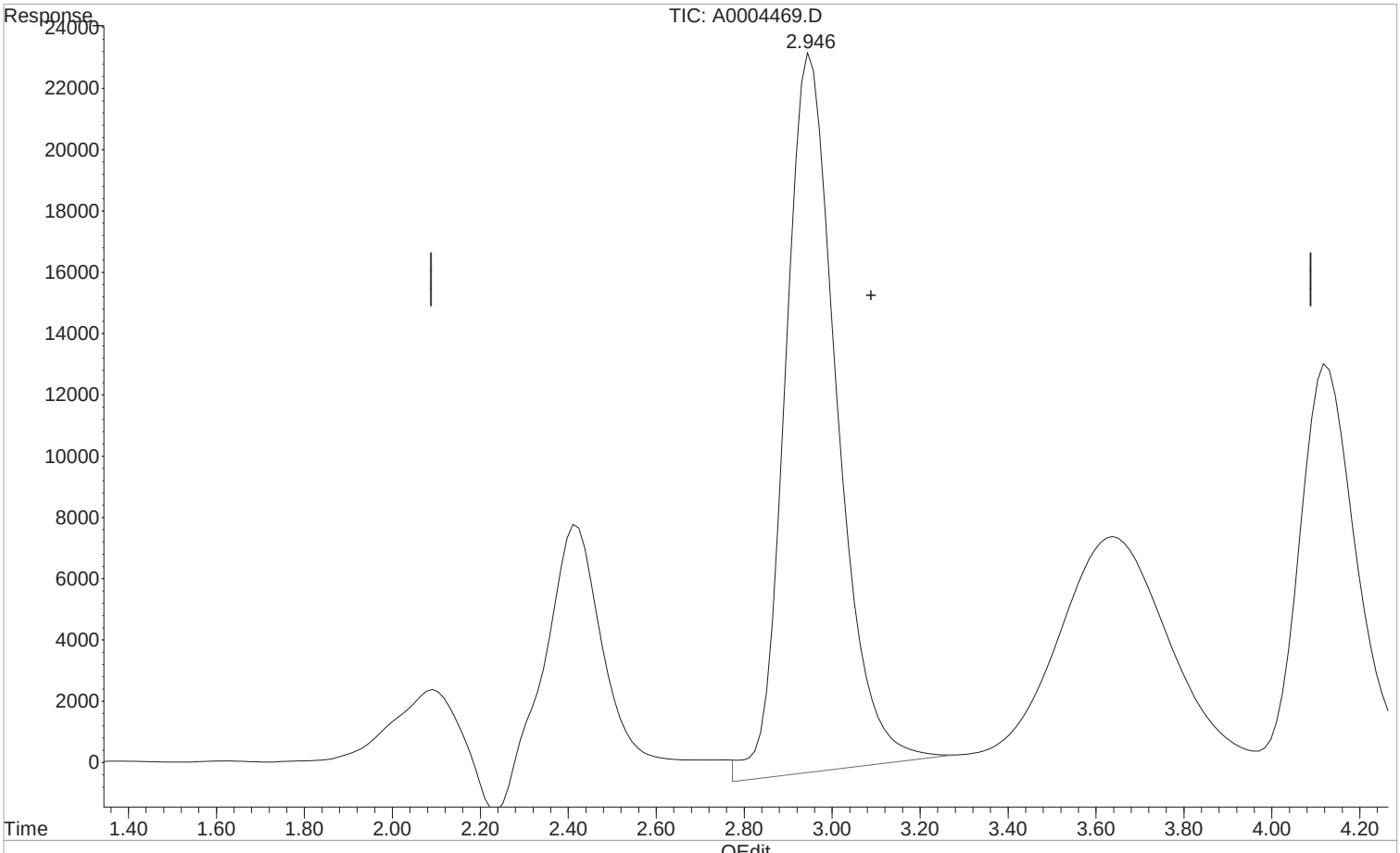
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004469.D
Signal(s) : dad1C.ch
Acq On : 30-Dec-2000, 17:48:02
Operator : A.Felser
Sample : STD 5
Misc :
ALS Vial : 6 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:15:50 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Mar 12 07:11:04 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(1) Formic acid (t)

2.953min 20.256 ppm

response 1935353

Manual Integration:

Before

03/16/20

(+) = Expected Retention Time

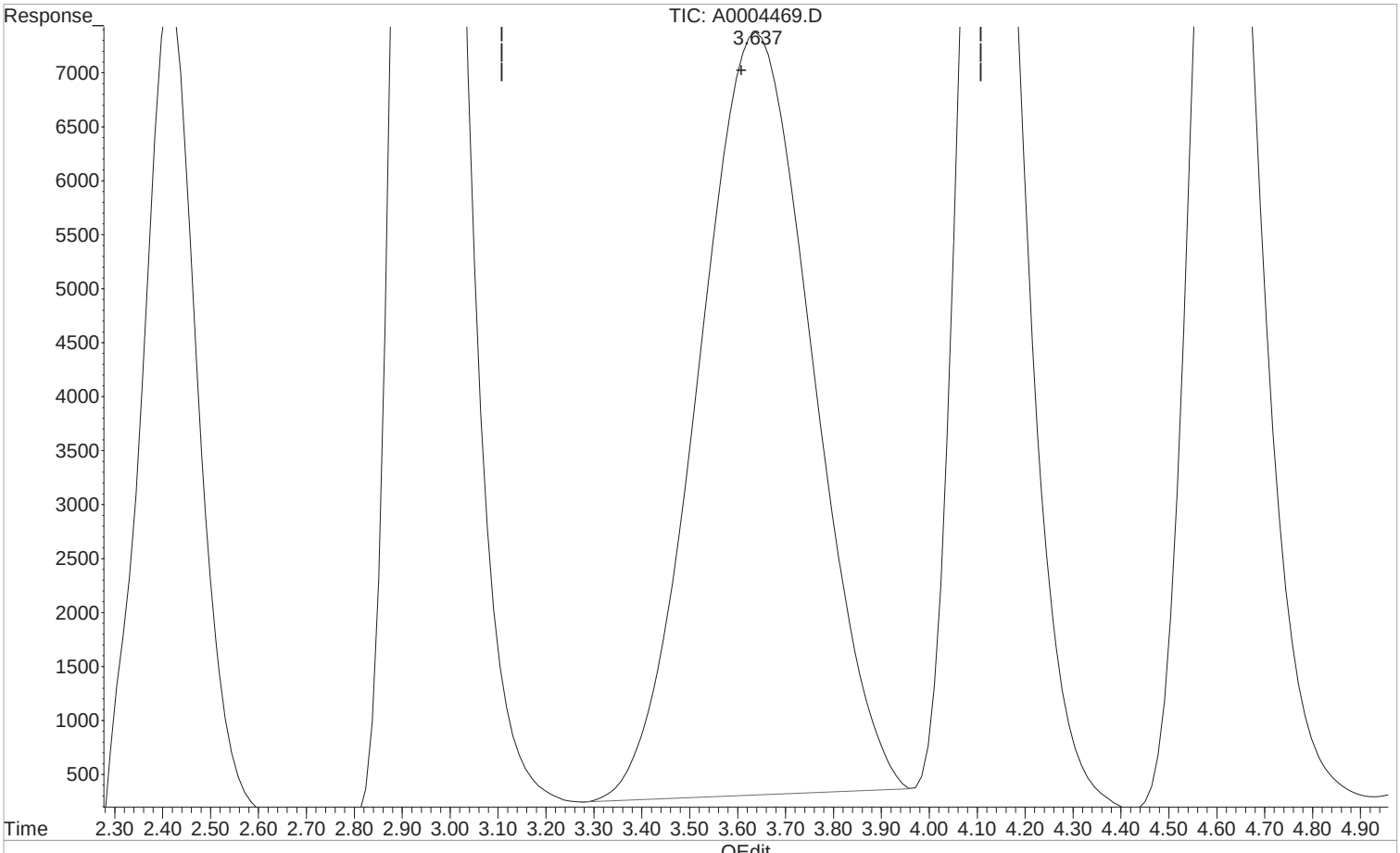
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004469.D
Signal(s) : dad1C.ch
Acq On : 30-Dec-2000, 17:48:02
Operator : A.Felser
Sample : STD 5
Misc :
ALS Vial : 6 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:15:50 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Mar 12 07:11:04 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(2) Pyruvic acid (T)

3.637min 2.190 ppm m

response 1165741

Manual Integration:

After

Poor integration.

03/16/20

(+) = Expected Retention Time

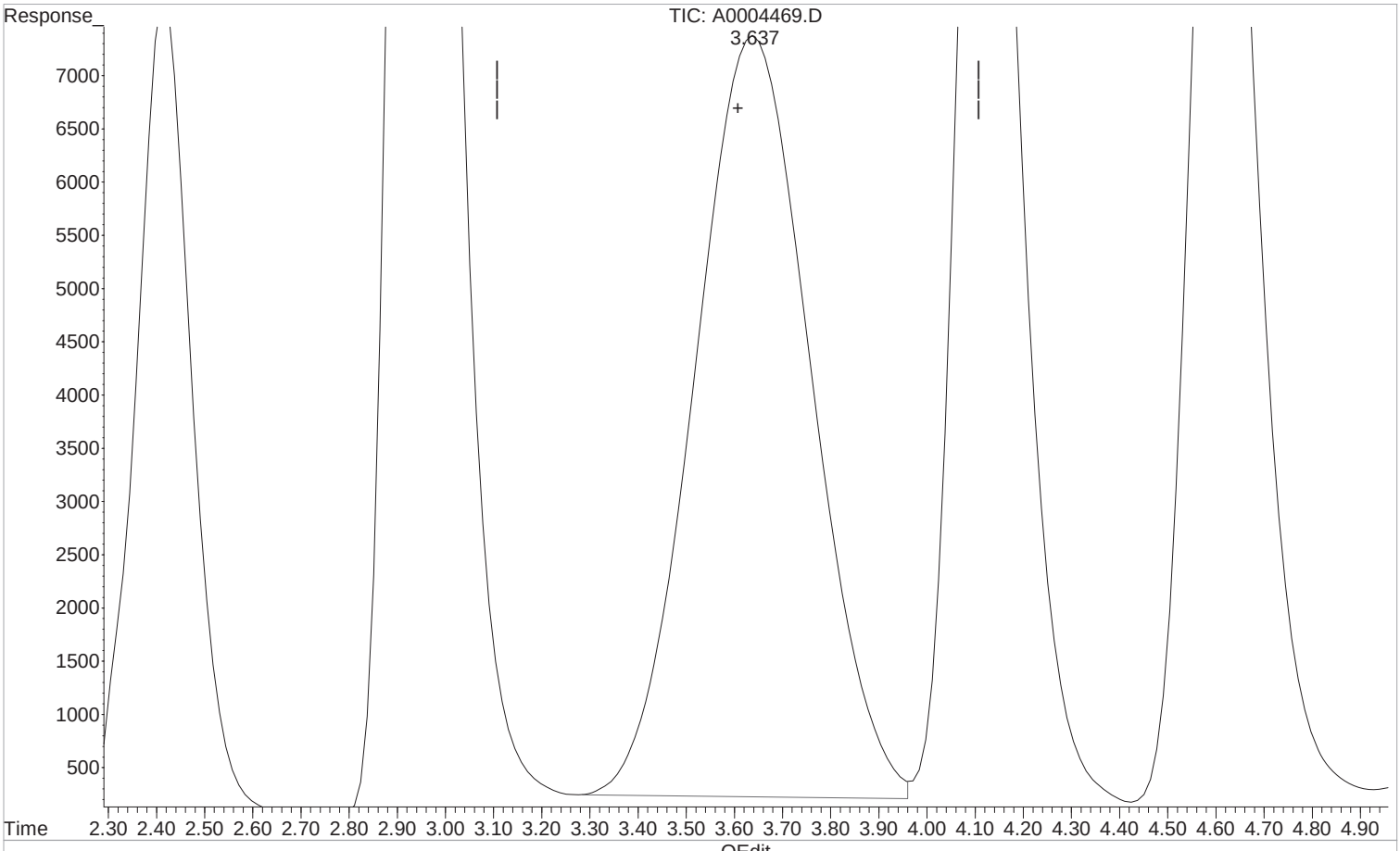
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004469.D
Signal(s) : dad1C.ch
Acq On : 30-Dec-2000, 17:48:02
Operator : A.Felser
Sample : STD 5
Misc :
ALS Vial : 6 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:15:50 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Mar 12 07:11:04 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(2) Pyruvic acid (T)

3.642min 2.250 ppm

response 1197650

Manual Integration:

Before

03/16/20

(+) = Expected Retention Time

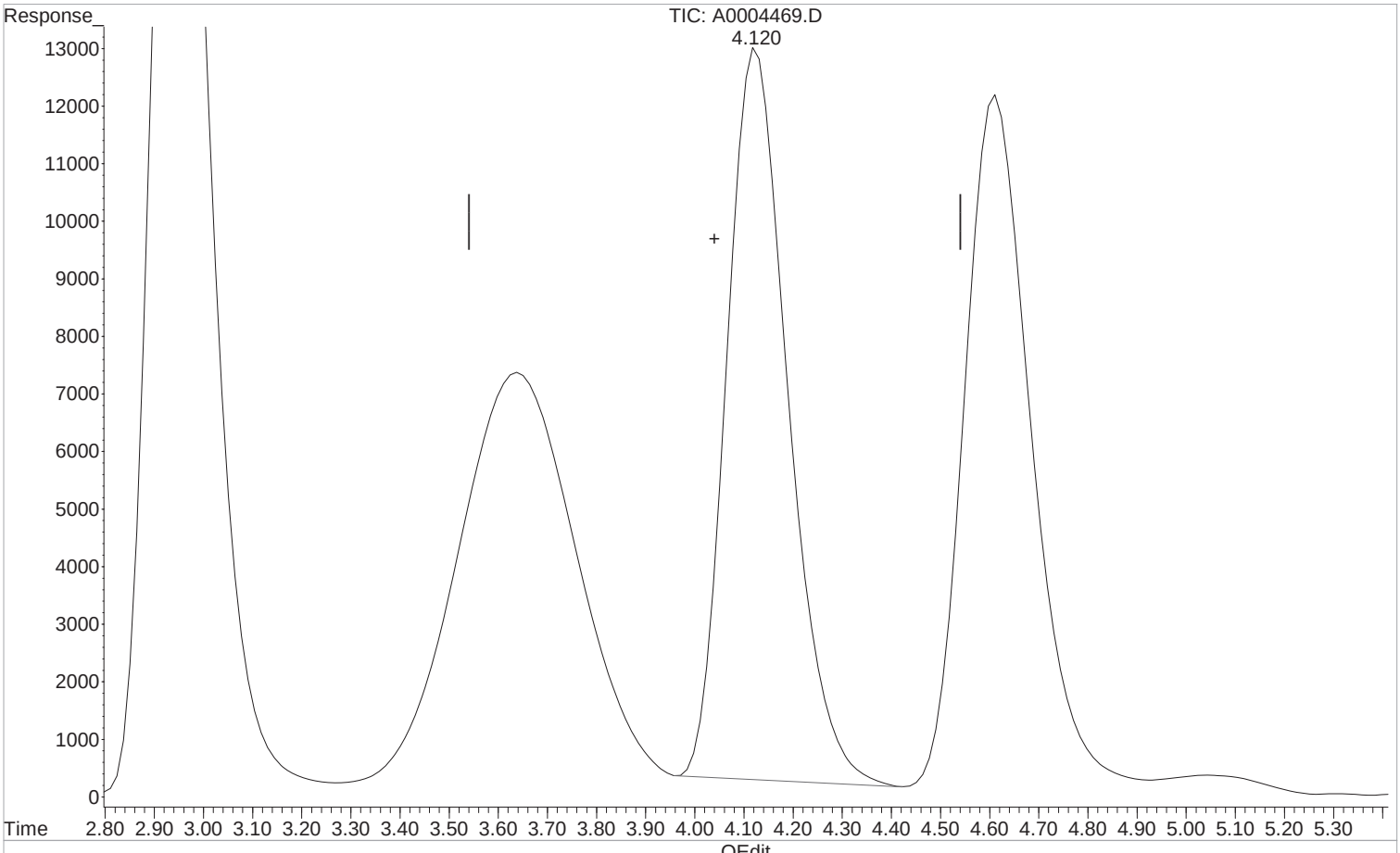
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004469.D
Signal(s) : dad1C.ch
Acq On : 30-Dec-2000, 17:48:02
Operator : A.Felser
Sample : STD 5
Misc :
ALS Vial : 6 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:15:50 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Mar 12 07:11:04 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(3) Lactic Acid (T)

4.120min 21.482 ppm m

response 1107931

Manual Integration:

After

Poor integration.

03/16/20

(+) = Expected Retention Time

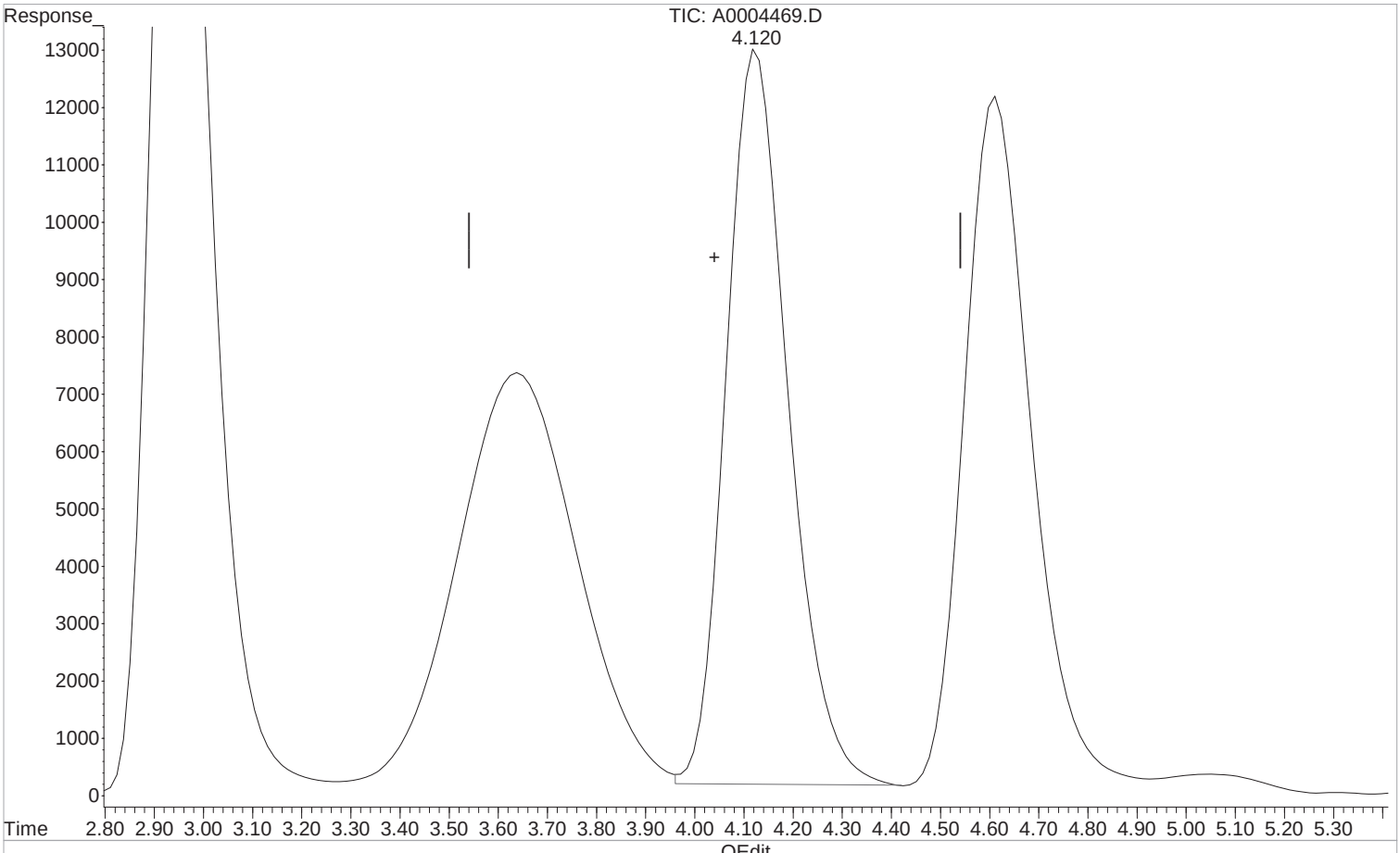
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004469.D
Signal(s) : dad1C.ch
Acq On : 30-Dec-2000, 17:48:02
Operator : A.Felser
Sample : STD 5
Misc :
ALS Vial : 6 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:15:50 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Mar 12 07:11:04 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(3) Lactic Acid (T)

4.127min 21.898 ppm

response 1129421

Manual Integration:

Before

03/16/20

(+) = Expected Retention Time

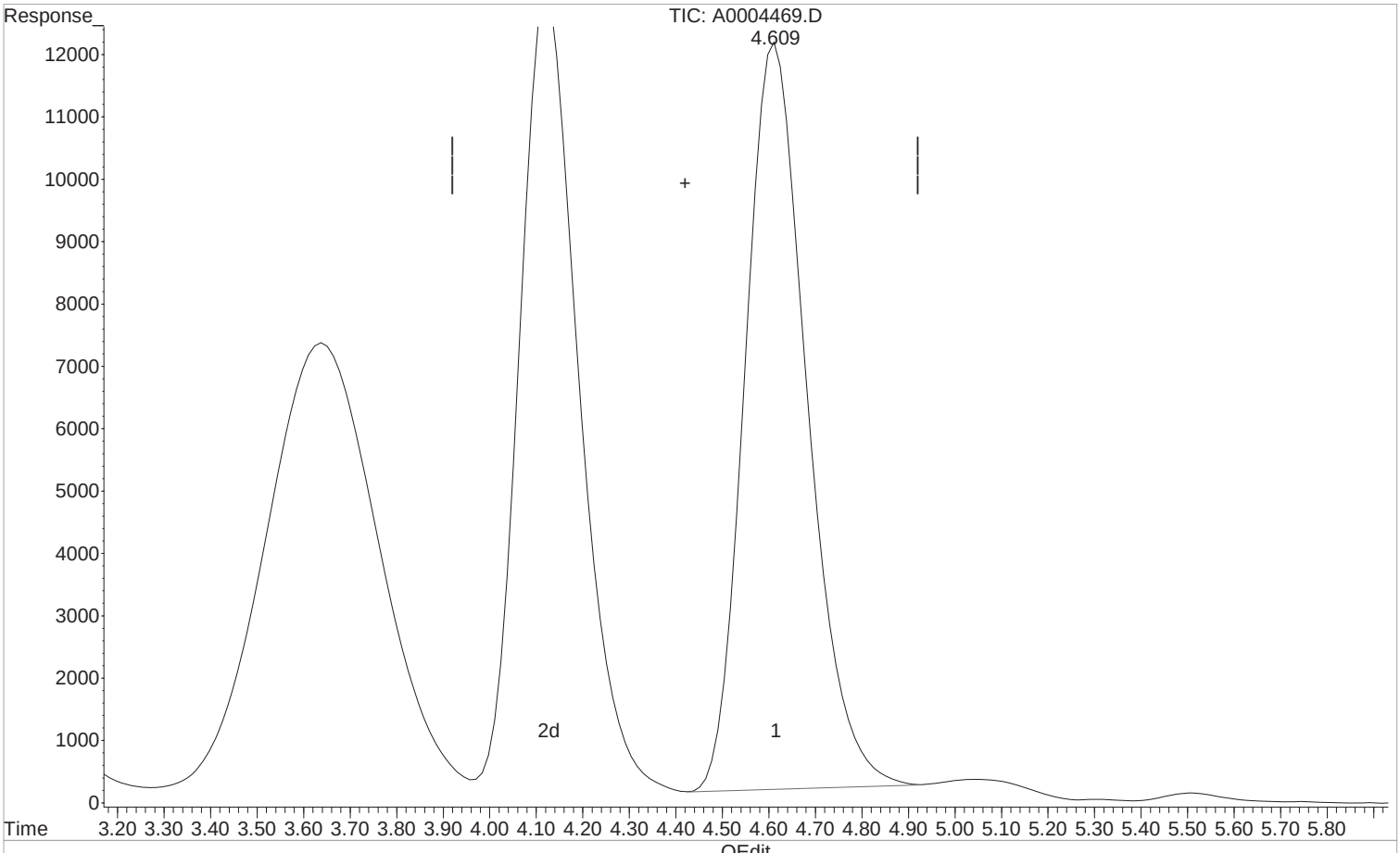
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004469.D
Signal(s) : dad1C.ch
Acq On : 30-Dec-2000, 17:48:02
Operator : A.Felser
Sample : STD 5
Misc :
ALS Vial : 6 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:15:50 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Mar 12 07:11:04 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(4) Acetic Acid (T)

4.609min 19.276 ppm m

response 1115994

Manual Integration:

After

Poor integration.

03/16/20

(+) = Expected Retention Time

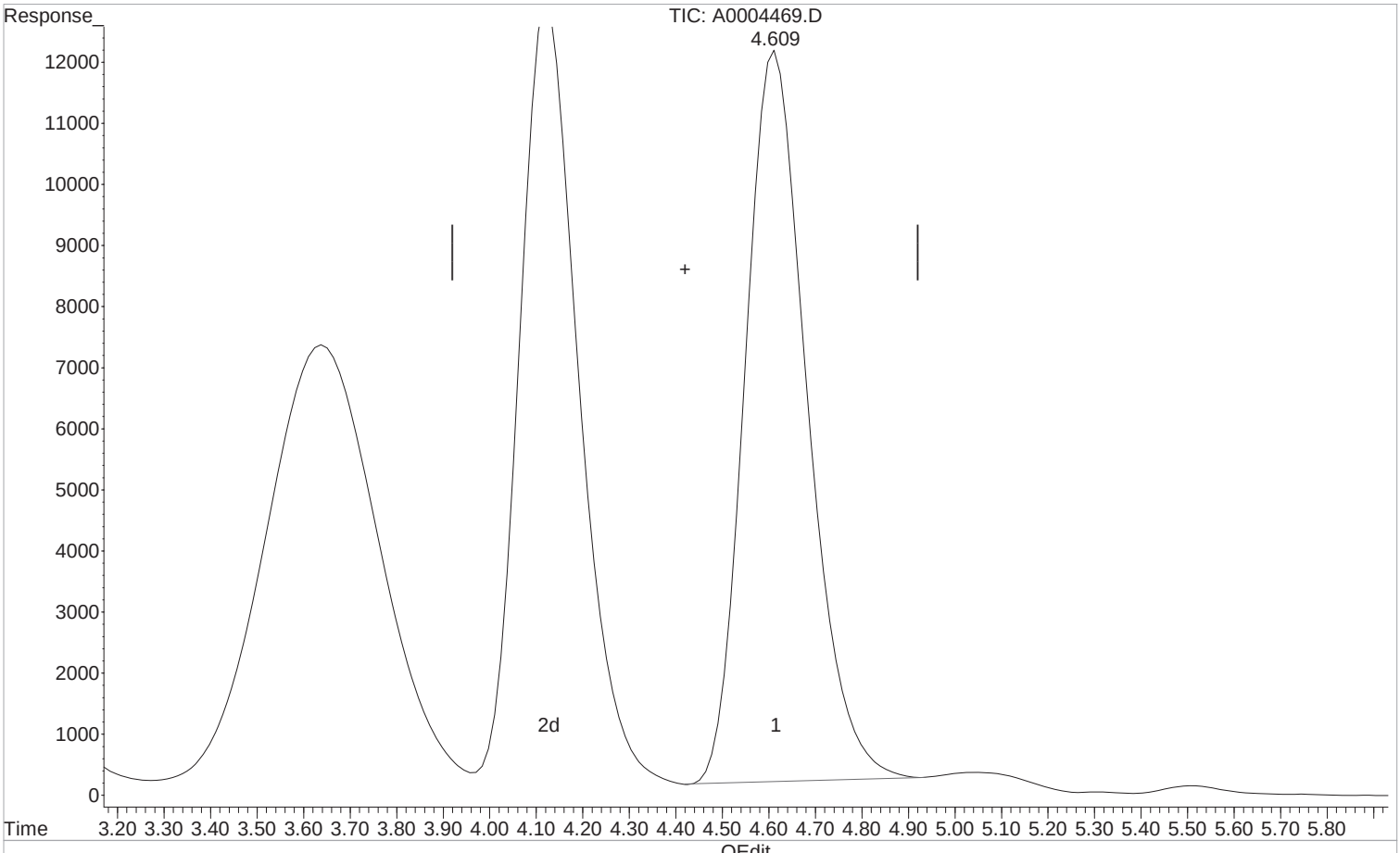
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004469.D
Signal(s) : dad1C.ch
Acq On : 30-Dec-2000, 17:48:02
Operator : A.Felser
Sample : STD 5
Misc :
ALS Vial : 6 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:15:50 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Mar 12 07:11:04 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(4) Acetic Acid (T)

4.615min 19.234 ppm

response 1113595

Manual Integration:

Before

03/16/20

(+) = Expected Retention Time

MA031220.M Mon Mar 16 09:16:43 2020

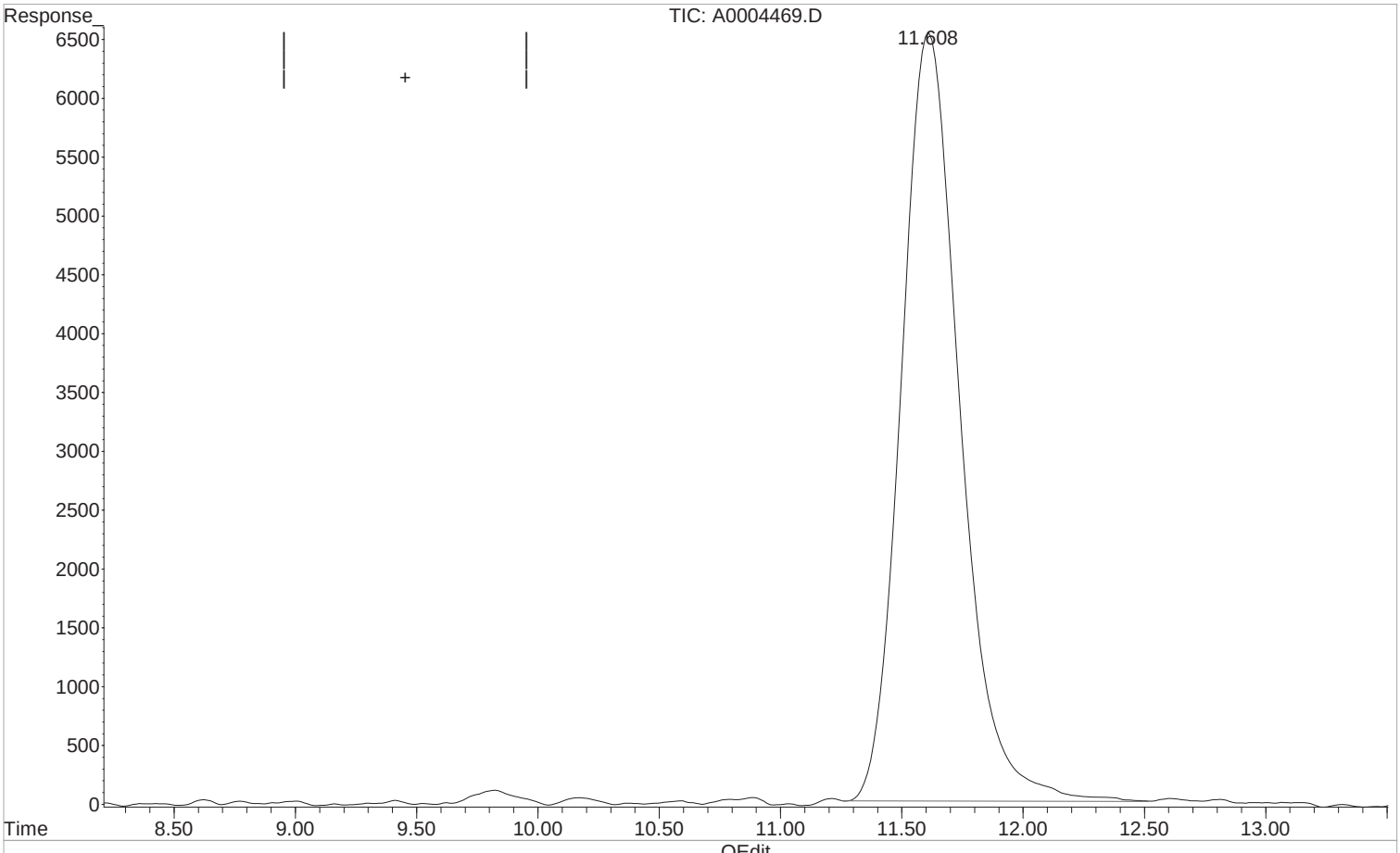
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004469.D
Signal(s) : dad1C.ch
Acq On : 30-Dec-2000, 17:48:02
Operator : A.Felser
Sample : STD 5
Misc :
ALS Vial : 6 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:15:50 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Mar 12 07:11:04 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(5) Propionic Acid (T)

11.608min 19.595 ppm m

response 1098741

Manual Integration:

After

Peak not found.

03/16/20

(+) = Expected Retention Time

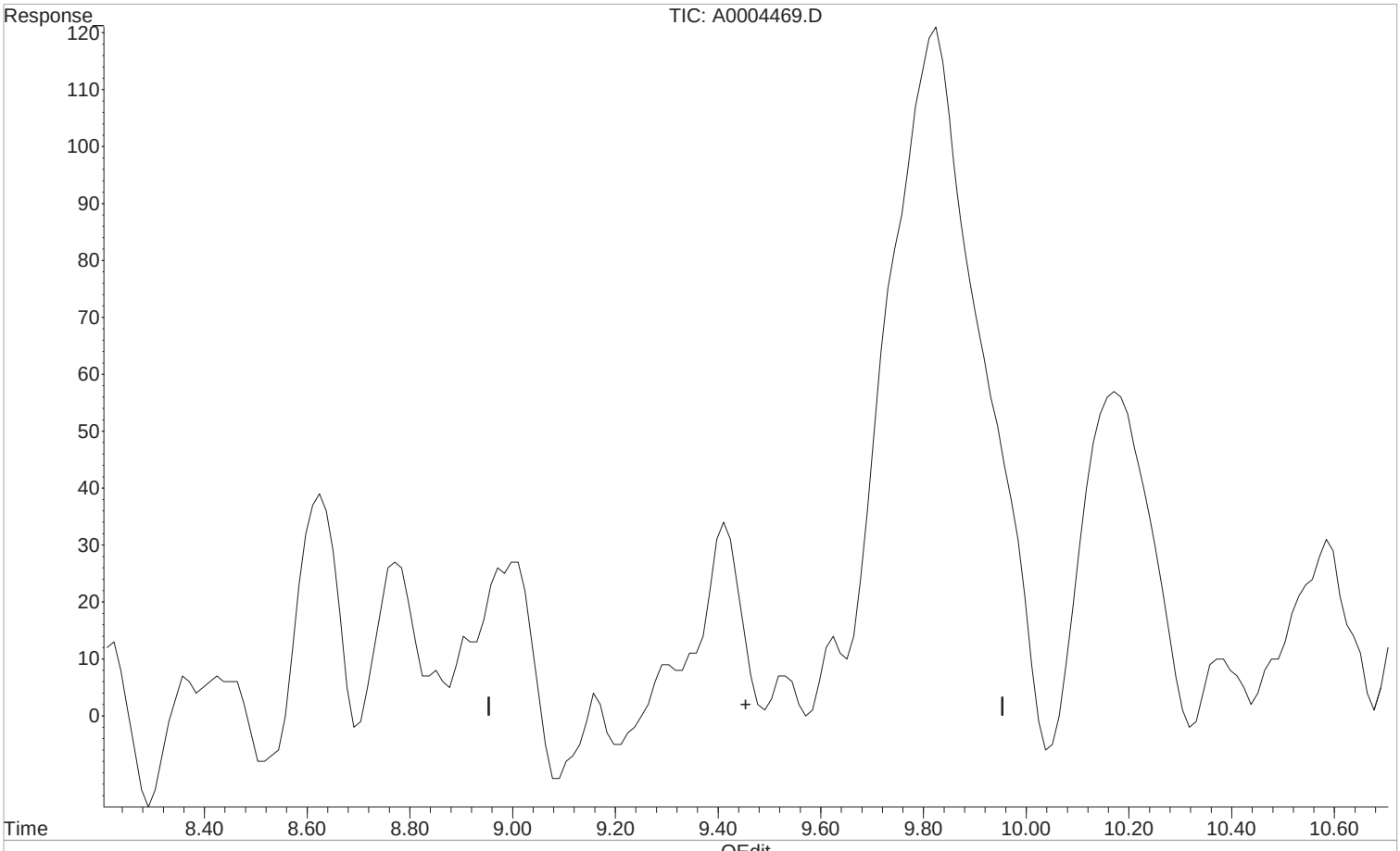
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004469.D
Signal(s) : dad1C.ch
Acq On : 30-Dec-2000, 17:48:02
Operator : A.Felser
Sample : STD 5
Misc :
ALS Vial : 6 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:15:50 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Mar 12 07:11:04 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(5) Propionic Acid (T)

9.454min 0.000 ppm

response 0

Manual Integration:

Before

03/16/20

(+) = Expected Retention Time

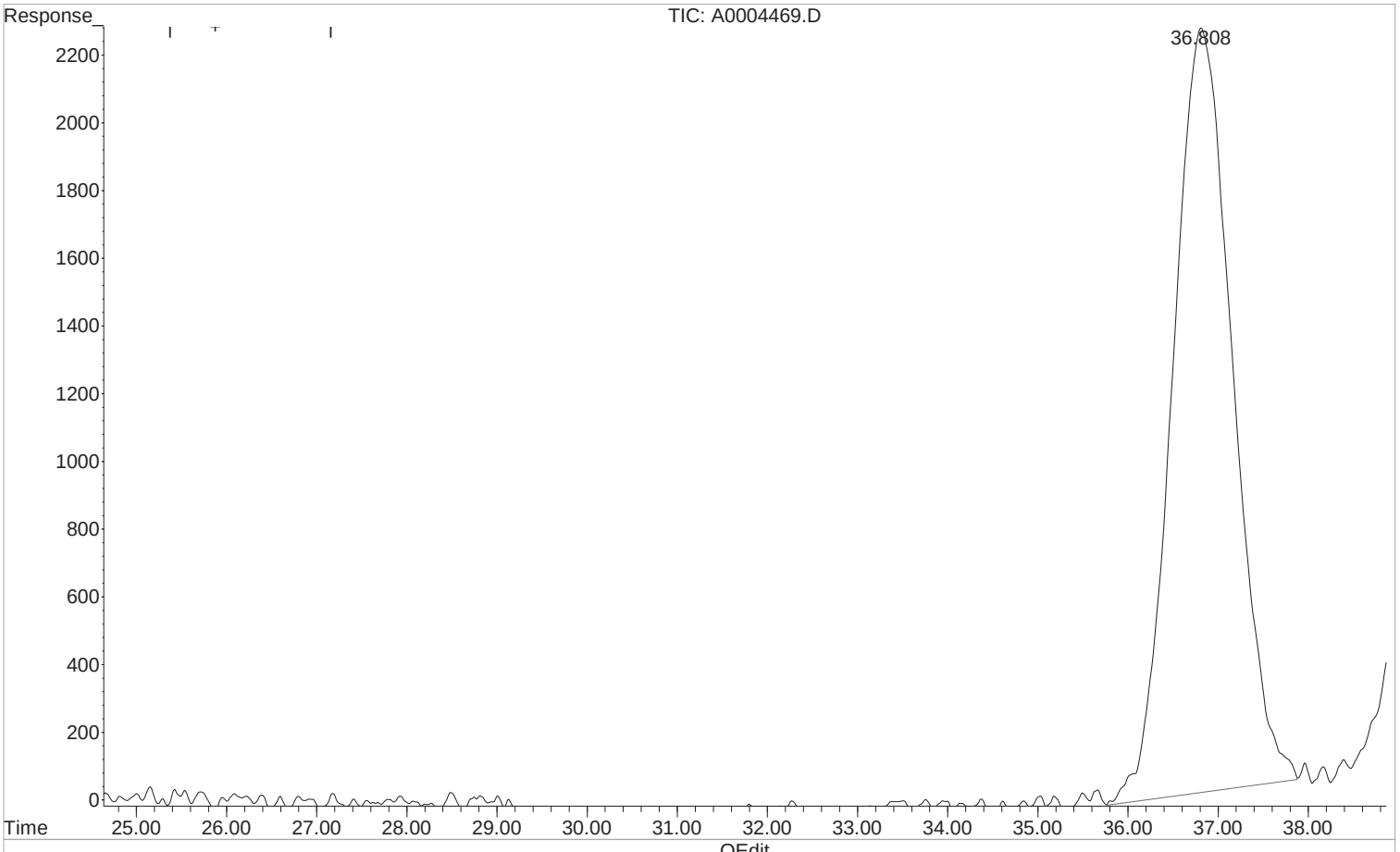
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004469.D
Signal(s) : dad1C.ch
Acq On : 30-Dec-2000, 17:48:02
Operator : A.Felser
Sample : STD 5
Misc :
ALS Vial : 6 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:15:50 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Mar 12 07:11:04 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(6) Butyric Acid (T)

36.808min 19.370 ppm m

response 1052332

Manual Integration:

After

Peak not found.

03/16/20

(+) = Expected Retention Time

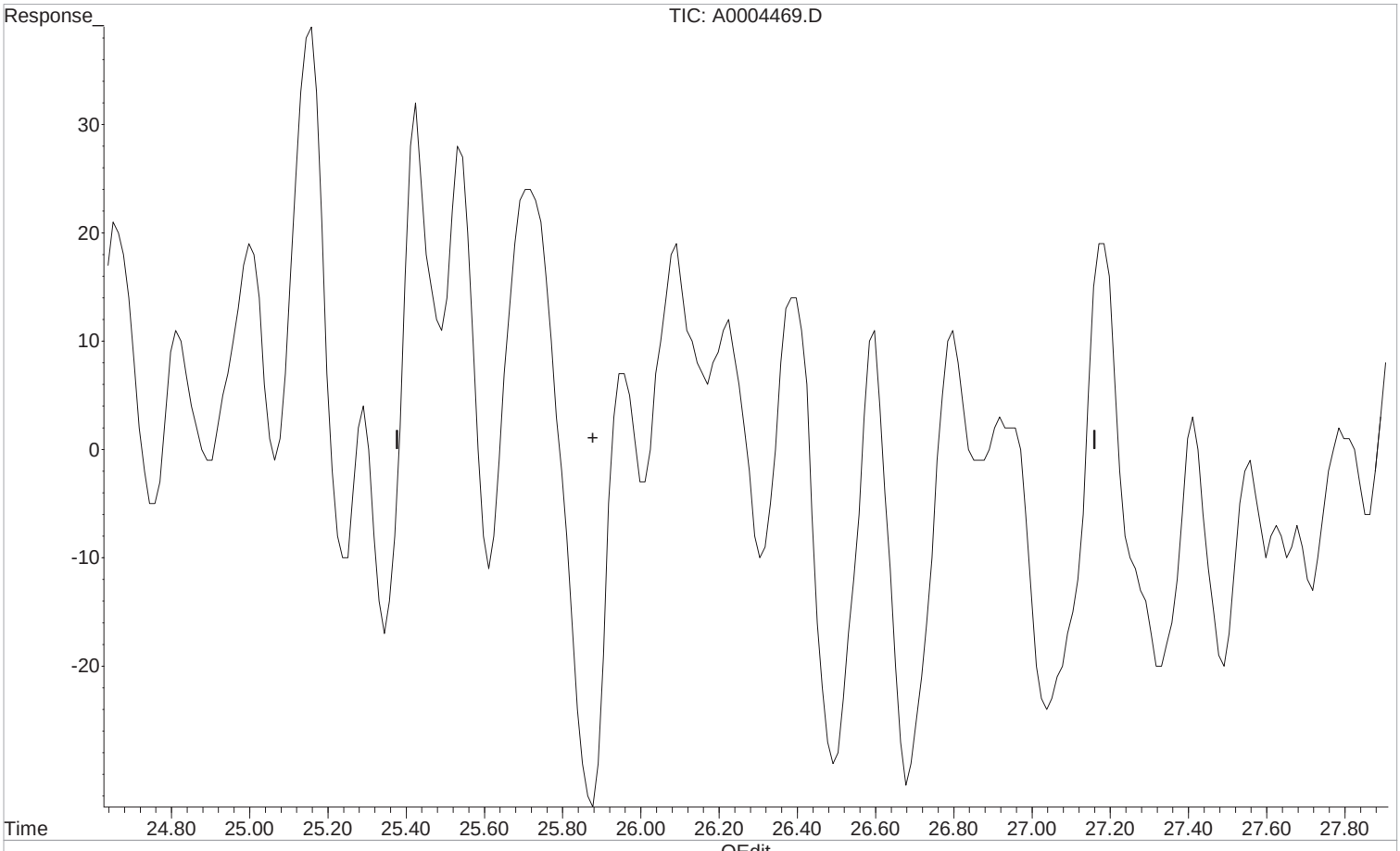
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004469.D
Signal(s) : dad1C.ch
Acq On : 30-Dec-2000, 17:48:02
Operator : A.Felser
Sample : STD 5
Misc :
ALS Vial : 6 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:15:50 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Mar 12 07:11:04 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(6) Butyric Acid (T)

25.877min 0.000 ppm

response 0

Manual Integration:

Before

03/16/20

(+) = Expected Retention Time

1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004469.D
Signal(s) : dad1C.ch
Acq On : ~~30-Dec-2000, 17:48:02~~ 12-Mar-2020, 16:48
Operator : A.Felser
Sample : STD 5
Misc :
ALS Vial : 6 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:15:50 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Thu Mar 12 07:11:04 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210

	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1) t	Formic acid	2.946	1830133	19.154	ppm	m
2) T	Pyruvic acid	3.637	1165741	2.190	ppm	m
3) T	Lactic Acid	4.120	1107931	21.482	ppm	m
4) T	Acetic Acid	4.609	1115994	19.276	ppm	m
5) T	Propionic Acid	11.608f	1098741	19.595	ppm	m
6) T	Butyric Acid	36.808f	1052332	19.370	ppm	m

(f)=RT Delta > 1/2 Window (m)=manual int.

1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004469.D
Signal(s) : dad1C.ch
Acq On : 30-Dec-2000, 17:48:02
Operator : A.Felser
Sample : STD 5
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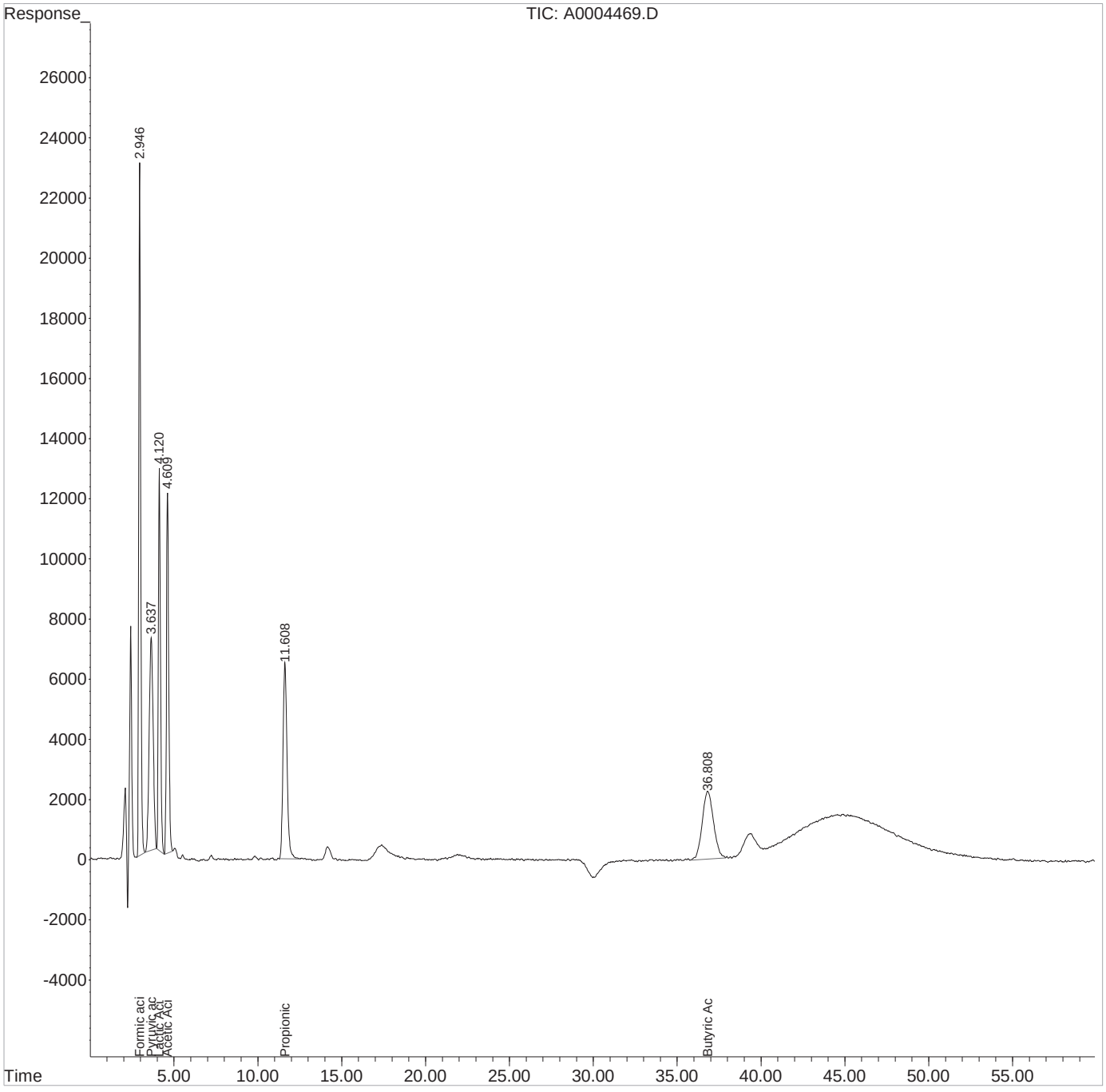
Quant Title : organic acids
QLast Update : Thu Mar 12 07:11:04 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



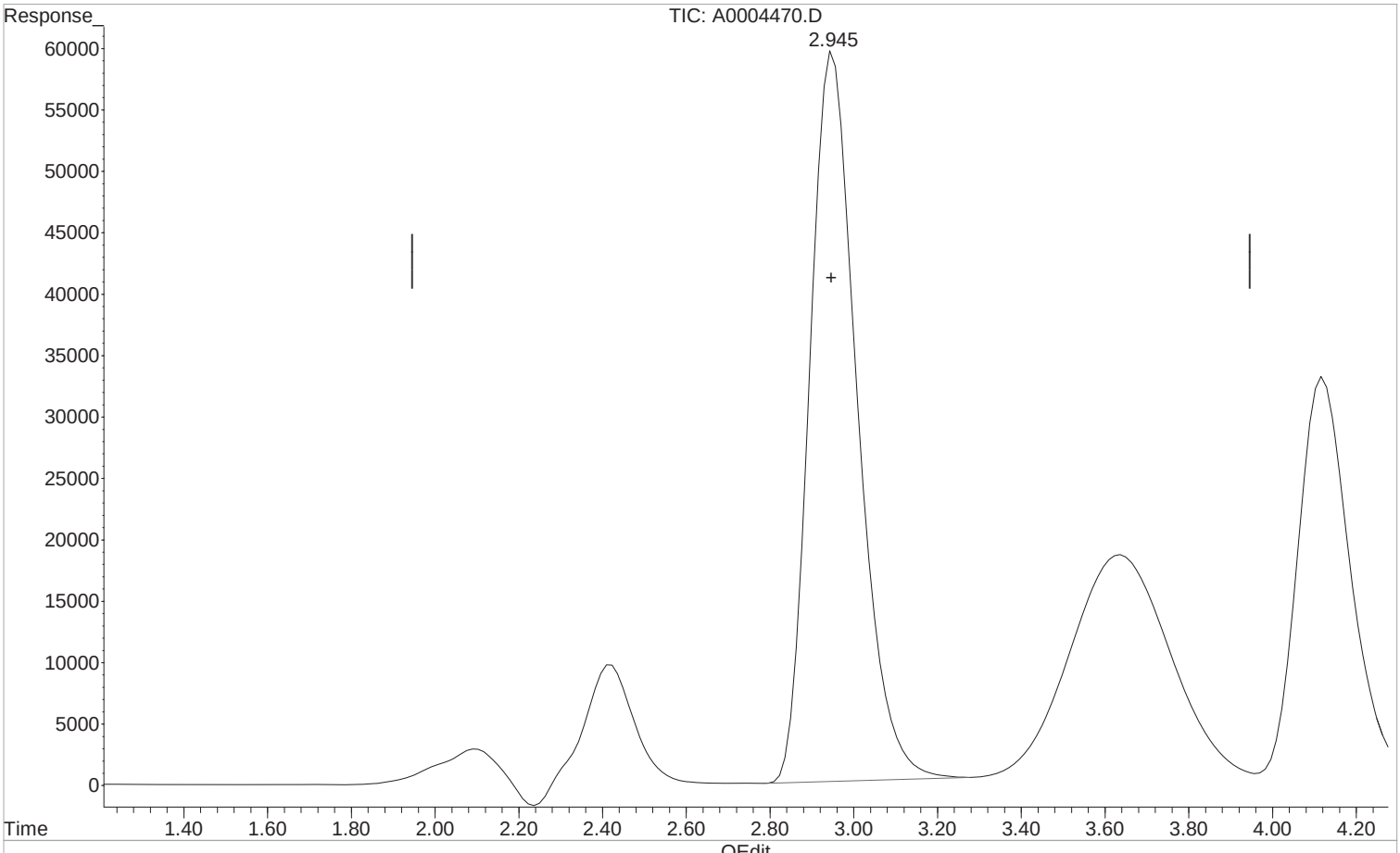
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004470.D
Signal(s) : dad1C.ch
Acq On : 30-Dec-2000, 17:47:58
Operator : A.Felser
Sample : STD 6
Misc :
ALS Vial : 7 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:24 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(1) Formic acid (t)

2.945min 51.436 ppm m

response 4706776

Manual Integration:

After

Poor integration.

03/16/20

(+) = Expected Retention Time

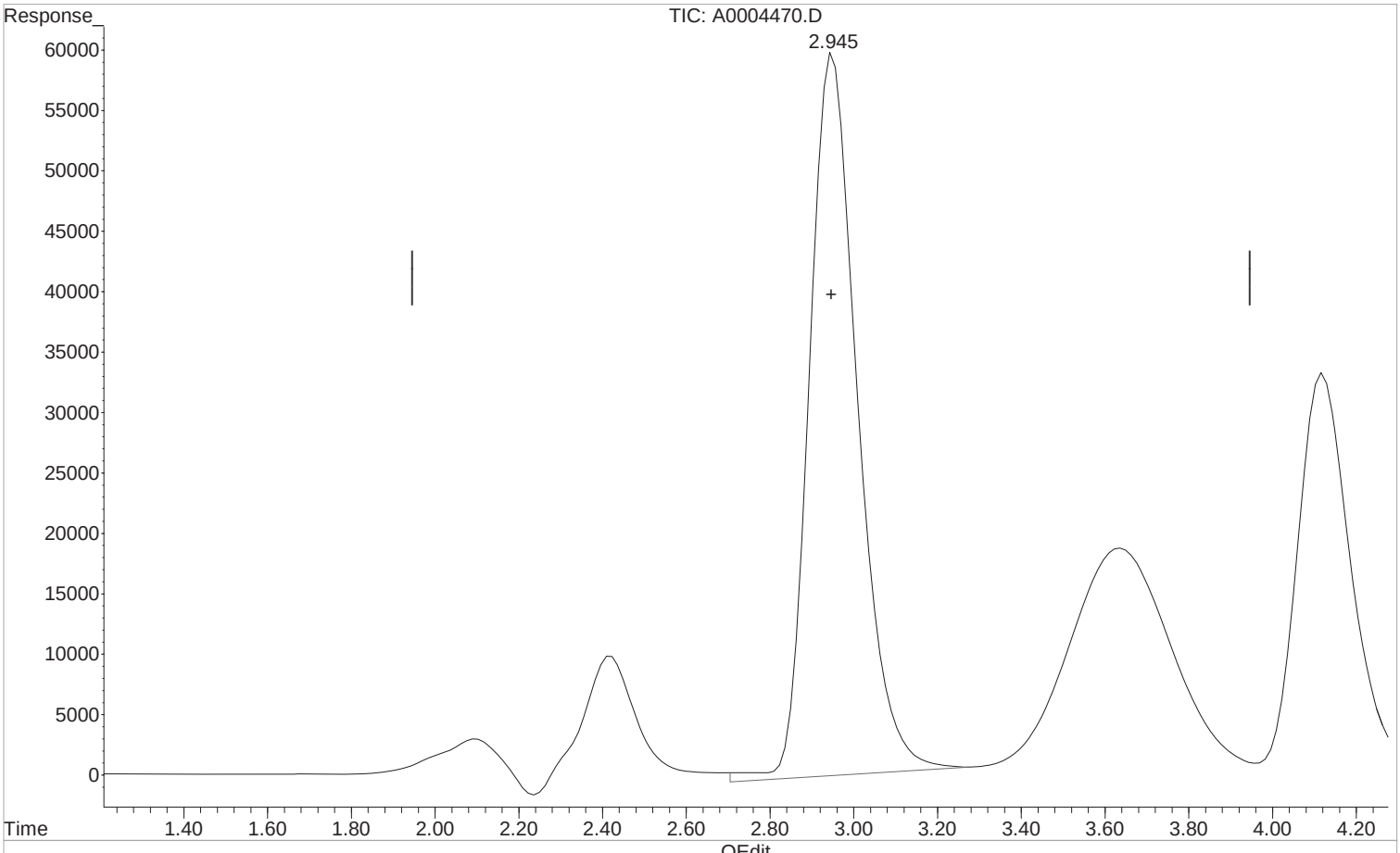
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004470.D
Signal(s) : dad1C.ch
Acq On : 30-Dec-2000, 17:47:58
Operator : A.Felser
Sample : STD 6
Misc :
ALS Vial : 7 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:24 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(1) Formic acid (t)

2.952min 52.682 ppm

response 4820746

Manual Integration:

Before

03/16/20

(+) = Expected Retention Time

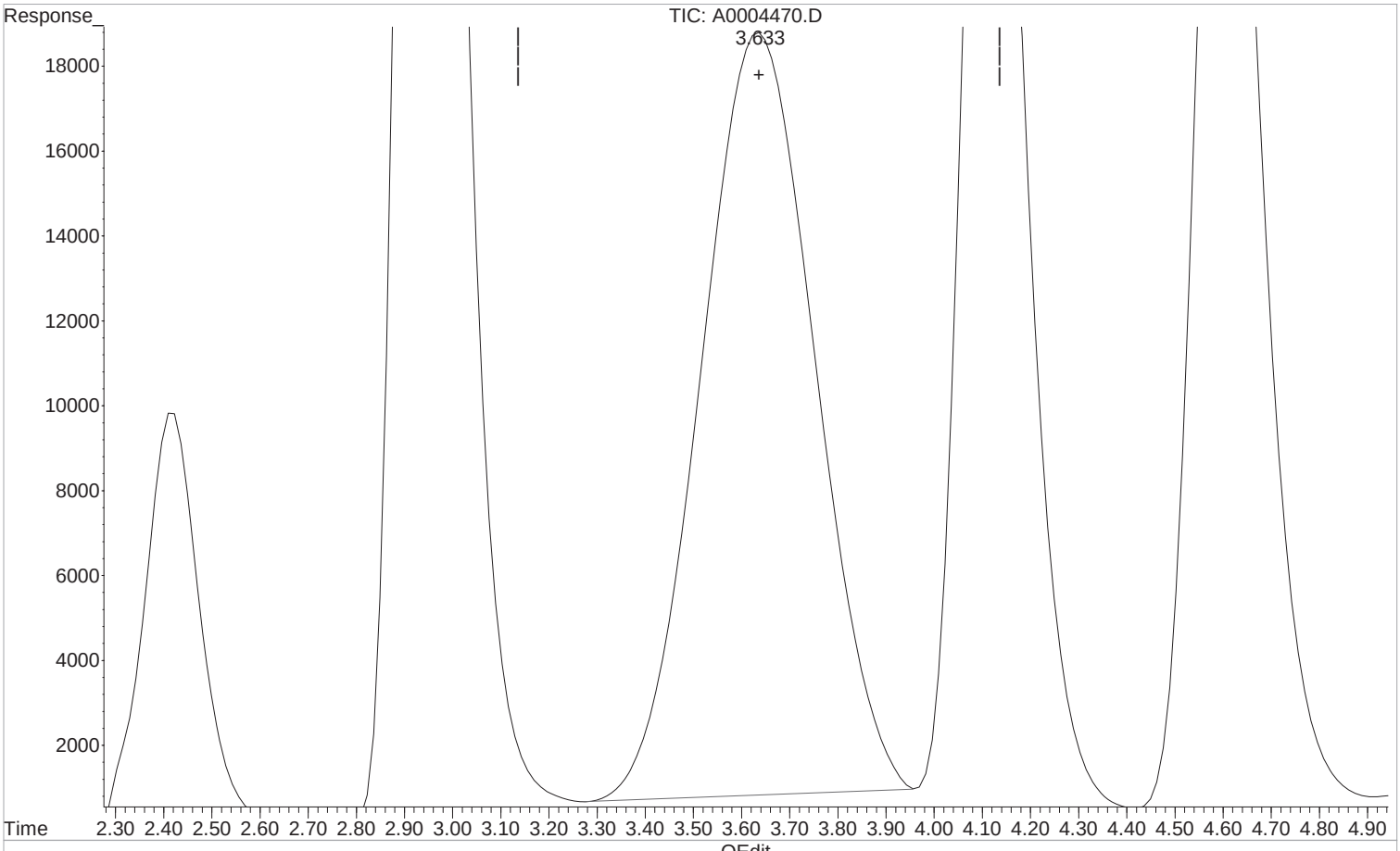
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004470.D
Signal(s) : dad1C.ch
Acq On : 30-Dec-2000, 17:47:58
Operator : A.Felser
Sample : STD 6
Misc :
ALS Vial : 7 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:24 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(2) Pyruvic acid (T)

3.633min 5.066 ppm m

response 2952886

Manual Integration:

After

Poor integration.

03/16/20

(+) = Expected Retention Time

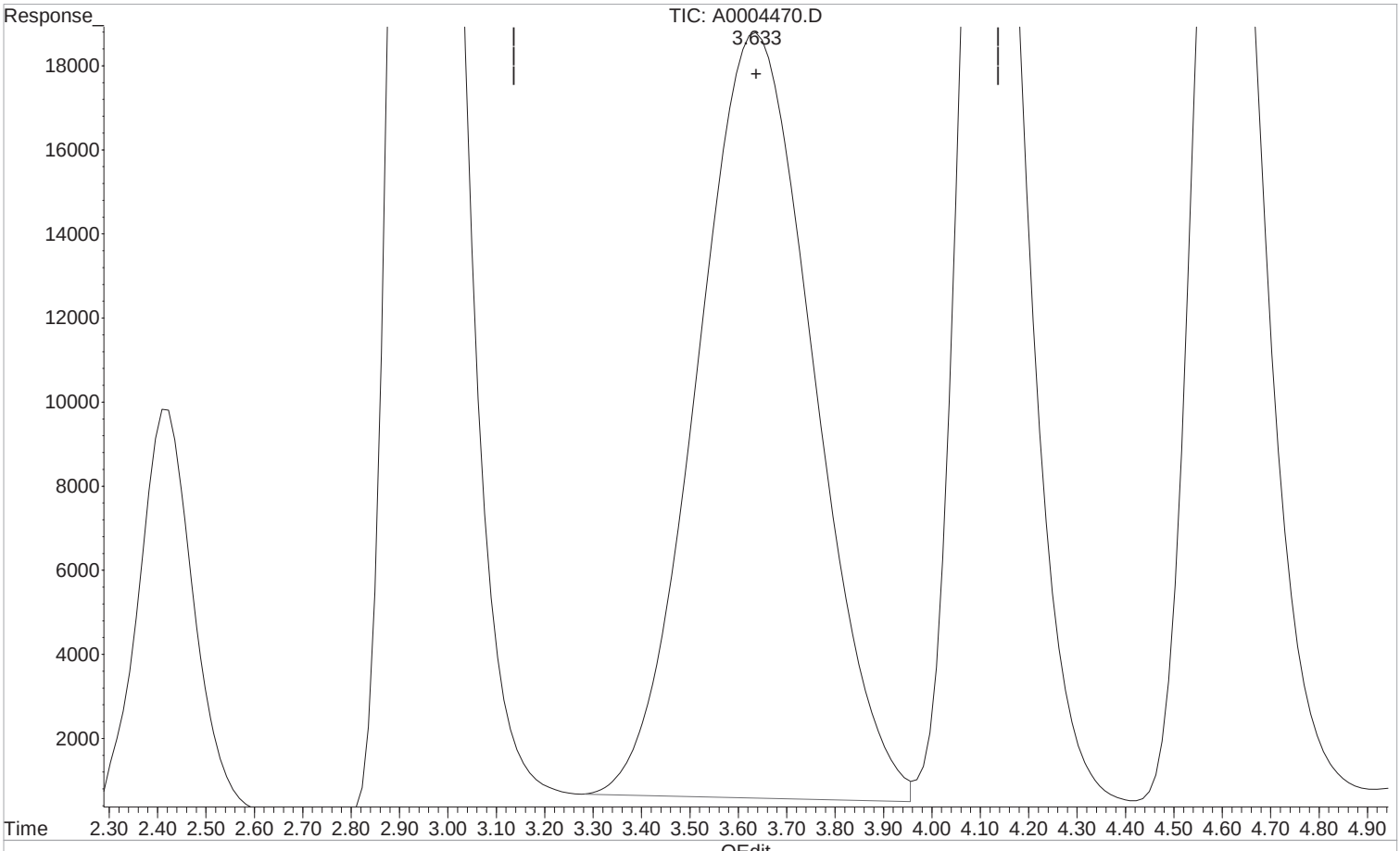
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004470.D
Signal(s) : dad1C.ch
Acq On : 30-Dec-2000, 17:47:58
Operator : A.Felser
Sample : STD 6
Misc :
ALS Vial : 7 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:24 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(2) Pyruvic acid (T)

3.639min 5.230 ppm

response 3048306

Manual Integration:

Before

03/16/20

(+) = Expected Retention Time

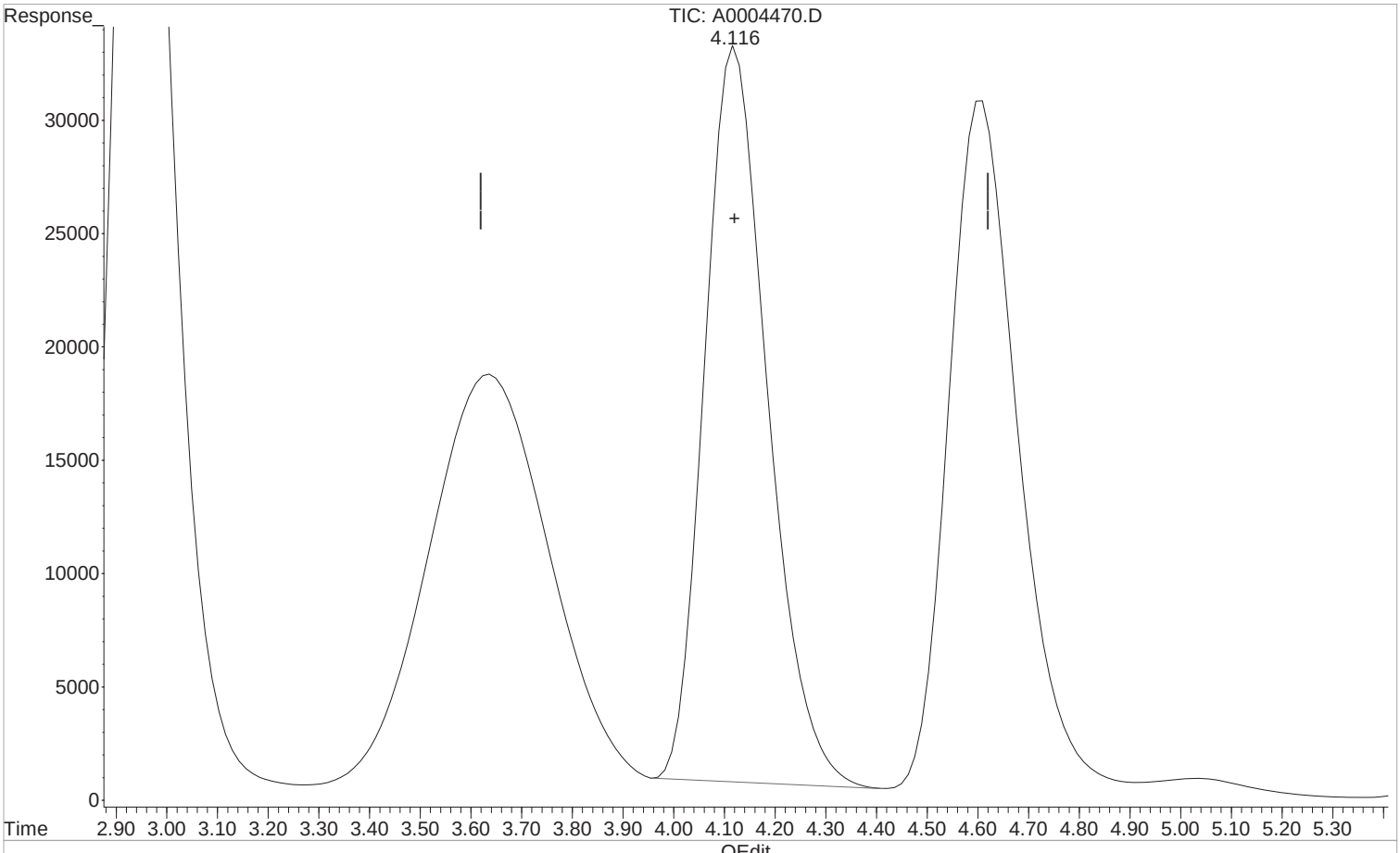
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004470.D
Signal(s) : dad1C.ch
Acq On : 30-Dec-2000, 17:47:58
Operator : A.Felser
Sample : STD 6
Misc :
ALS Vial : 7 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:24 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(3) Lactic Acid (T)

4.116min 50.780 ppm m

response 2813056

Manual Integration:

After

Poor integration.

03/16/20

(+) = Expected Retention Time

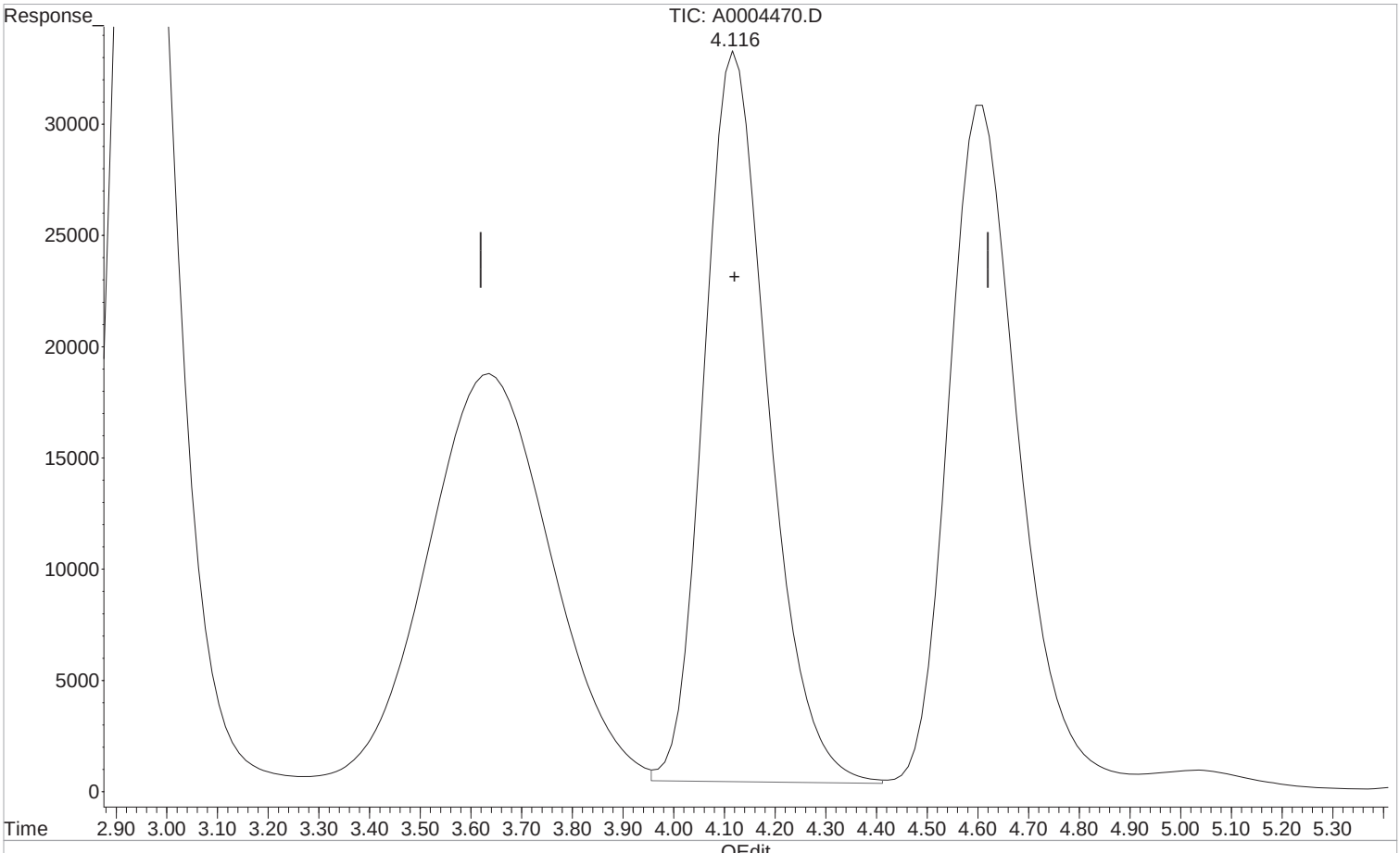
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004470.D
Signal(s) : dad1C.ch
Acq On : 30-Dec-2000, 17:47:58
Operator : A.Felser
Sample : STD 6
Misc :
ALS Vial : 7 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:24 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(3) Lactic Acid (T)

4.123min 52.344 ppm

response 2899673

Manual Integration:

Before

03/16/20

(+) = Expected Retention Time

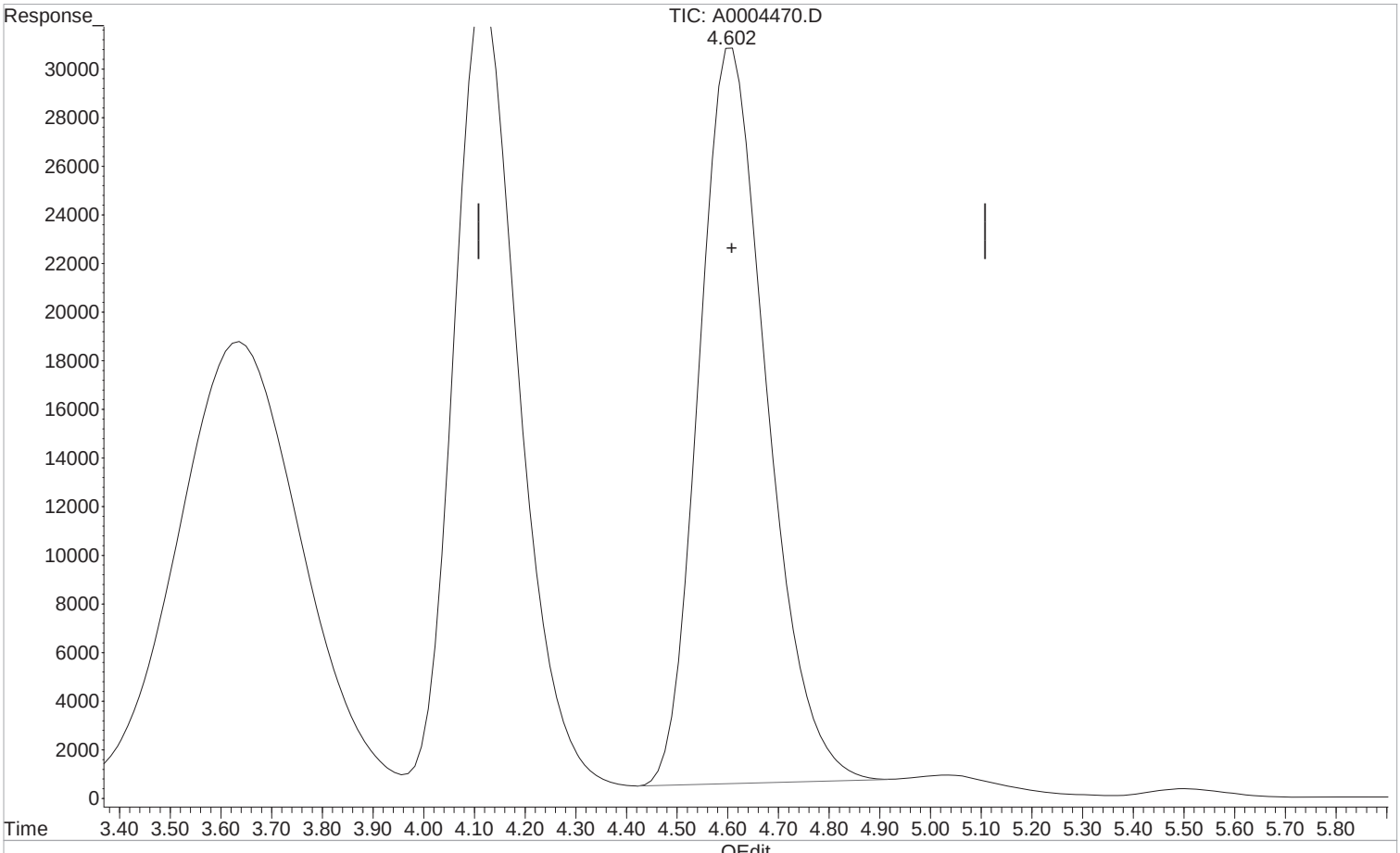
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004470.D
Signal(s) : dad1C.ch
Acq On : 30-Dec-2000, 17:47:58
Operator : A.Felser
Sample : STD 6
Misc :
ALS Vial : 7 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:24 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(4) Acetic Acid (T)

4.602min 50.675 ppm m

response 2827626

Manual Integration:

After

Poor integration.

03/16/20

(+) = Expected Retention Time

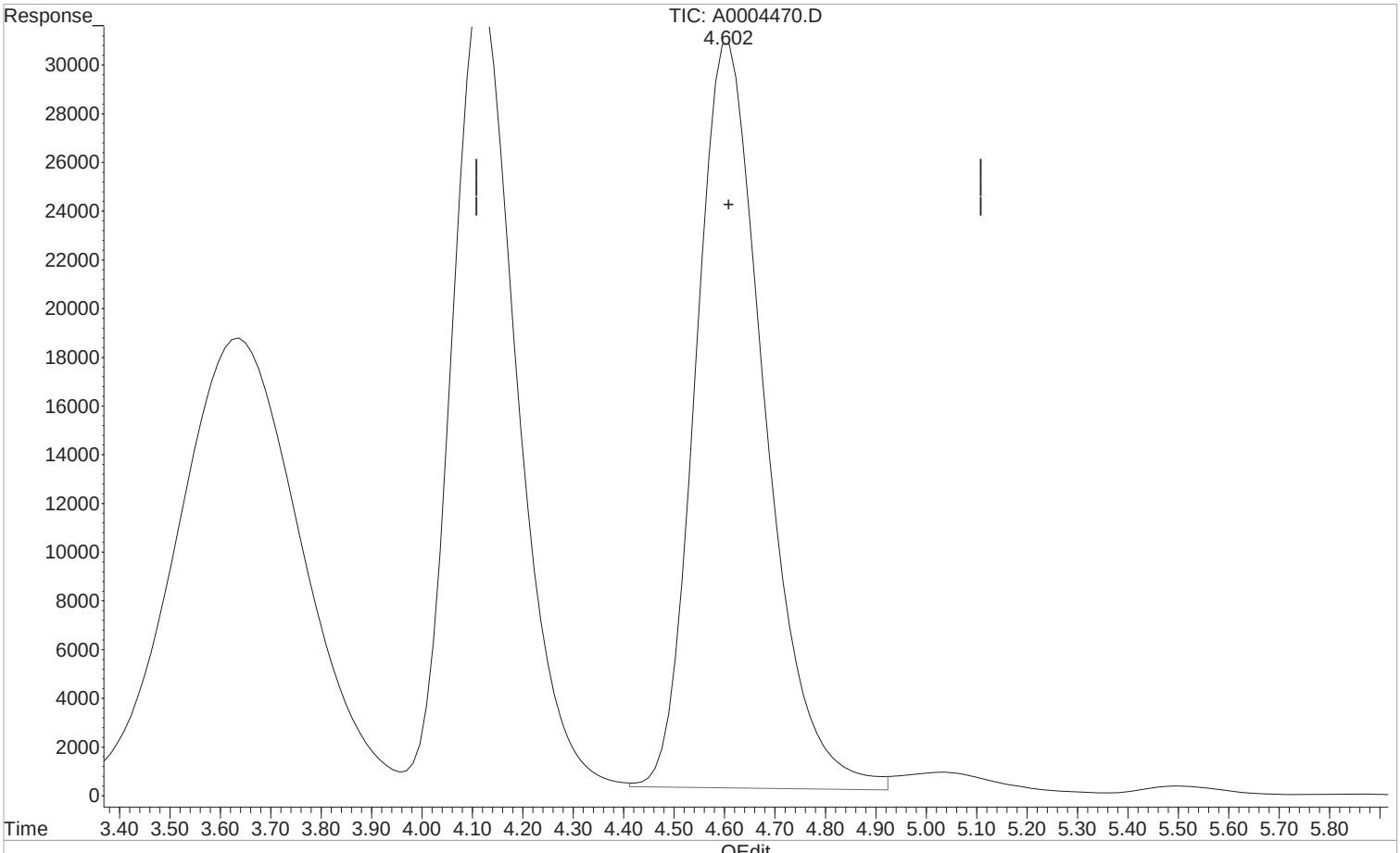
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004470.D
Signal(s) : dad1C.ch
Acq On : 30-Dec-2000, 17:47:58
Operator : A.Felser
Sample : STD 6
Misc :
ALS Vial : 7 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:24 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(4) Acetic Acid (T)

4.610min 52.537 ppm

response 2931536

Manual Integration:

Before

03/16/20

(+) = Expected Retention Time

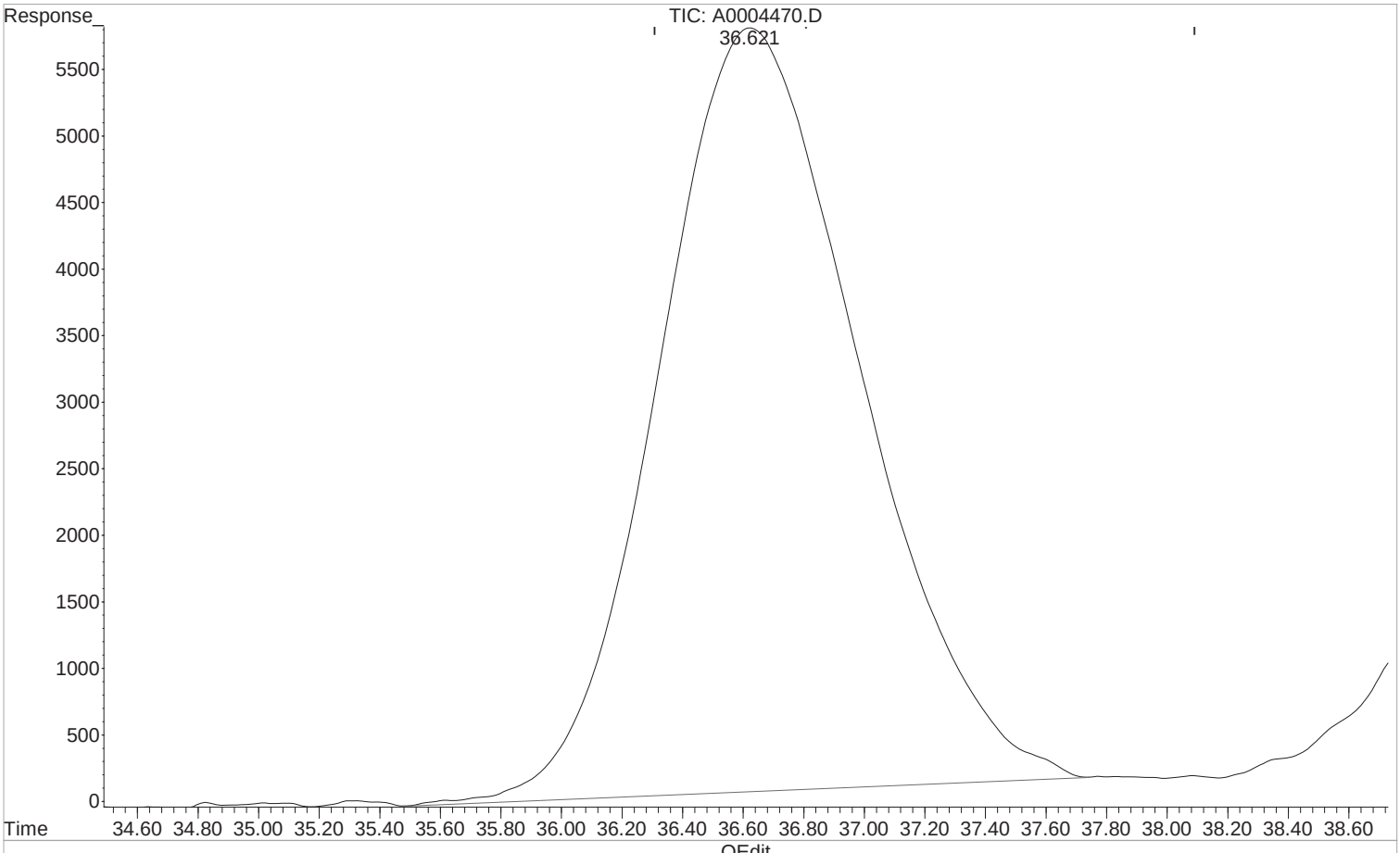
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004470.D
Signal(s) : dad1C.ch
Acq On : 30-Dec-2000, 17:47:58
Operator : A.Felser
Sample : STD 6
Misc :
ALS Vial : 7 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:24 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(6) Butyric Acid (T)

36.621min 50.484 ppm m

response 2656312

Manual Integration:

After

Poor integration.

03/16/20

(+) = Expected Retention Time

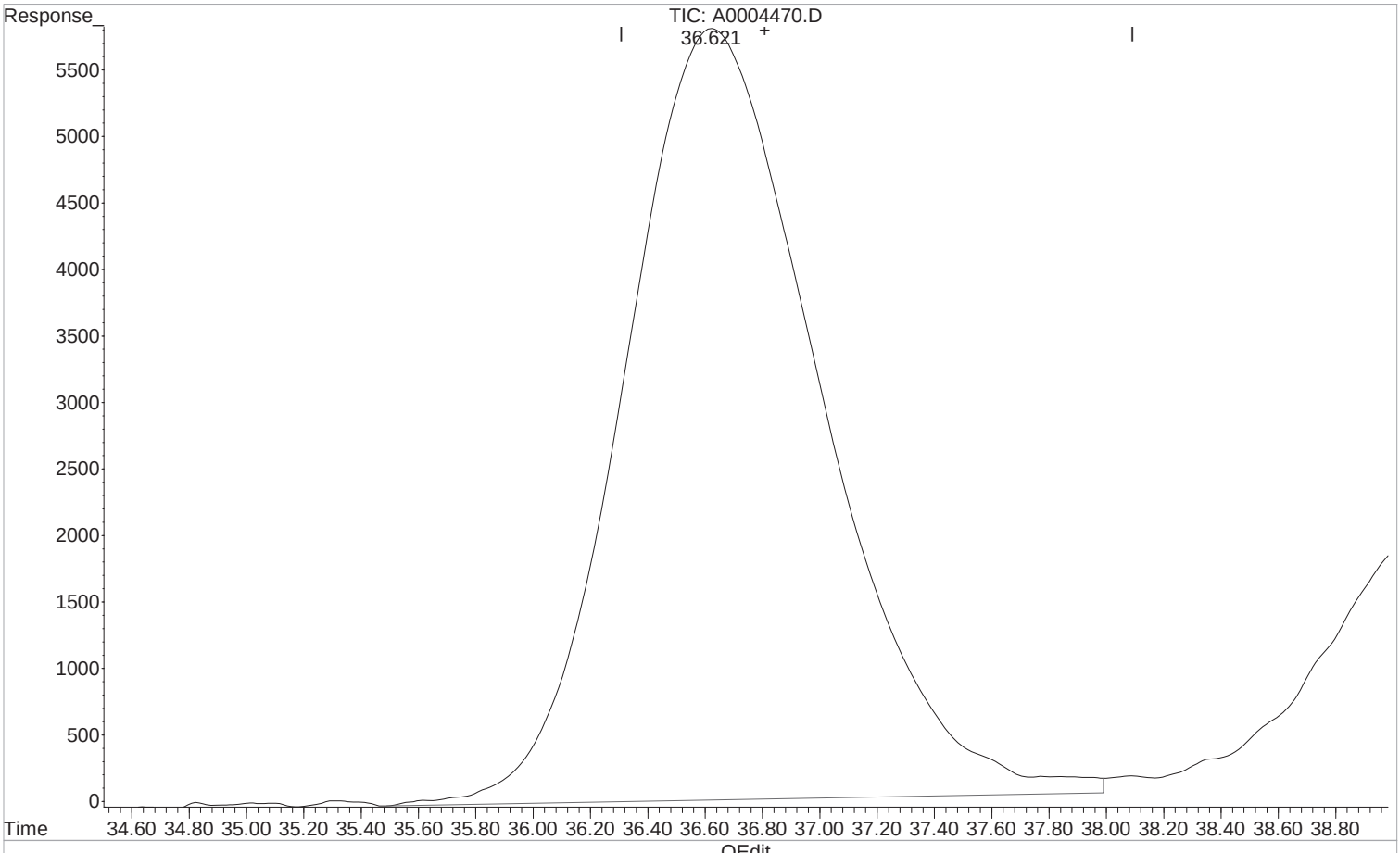
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004470.D
Signal(s) : dad1C.ch
Acq On : 30-Dec-2000, 17:47:58
Operator : A.Felser
Sample : STD 6
Misc :
ALS Vial : 7 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:24 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(6) Butyric Acid (T)

36.628min 52.351 ppm

response 2754505

Manual Integration:

Before

03/16/20

(+) = Expected Retention Time

1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004470.D
Signal(s) : dad1C.ch
Acq On : ~~30-Dec-2000, 17:47:58~~ 12-Mar-2020, 17:51
Operator : A.Felser
Sample : STD 6
Misc :
ALS Vial : 7 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:24 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210

	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1) t	Formic acid	2.945	4706776	51.436	ppm	m
2) T	Pyruvic acid	3.633	2952886	5.066	ppm	m
3) T	Lactic Acid	4.116	2813056	50.780	ppm	m
4) T	Acetic Acid	4.602	2827626	50.675	ppm	m
5) T	Propionic Acid	11.574	2794775	50.872	ppm	
6) T	Butyric Acid	36.621	2656312	50.484	ppm	m

(f)=RT Delta > 1/2 Window (m)=manual int.

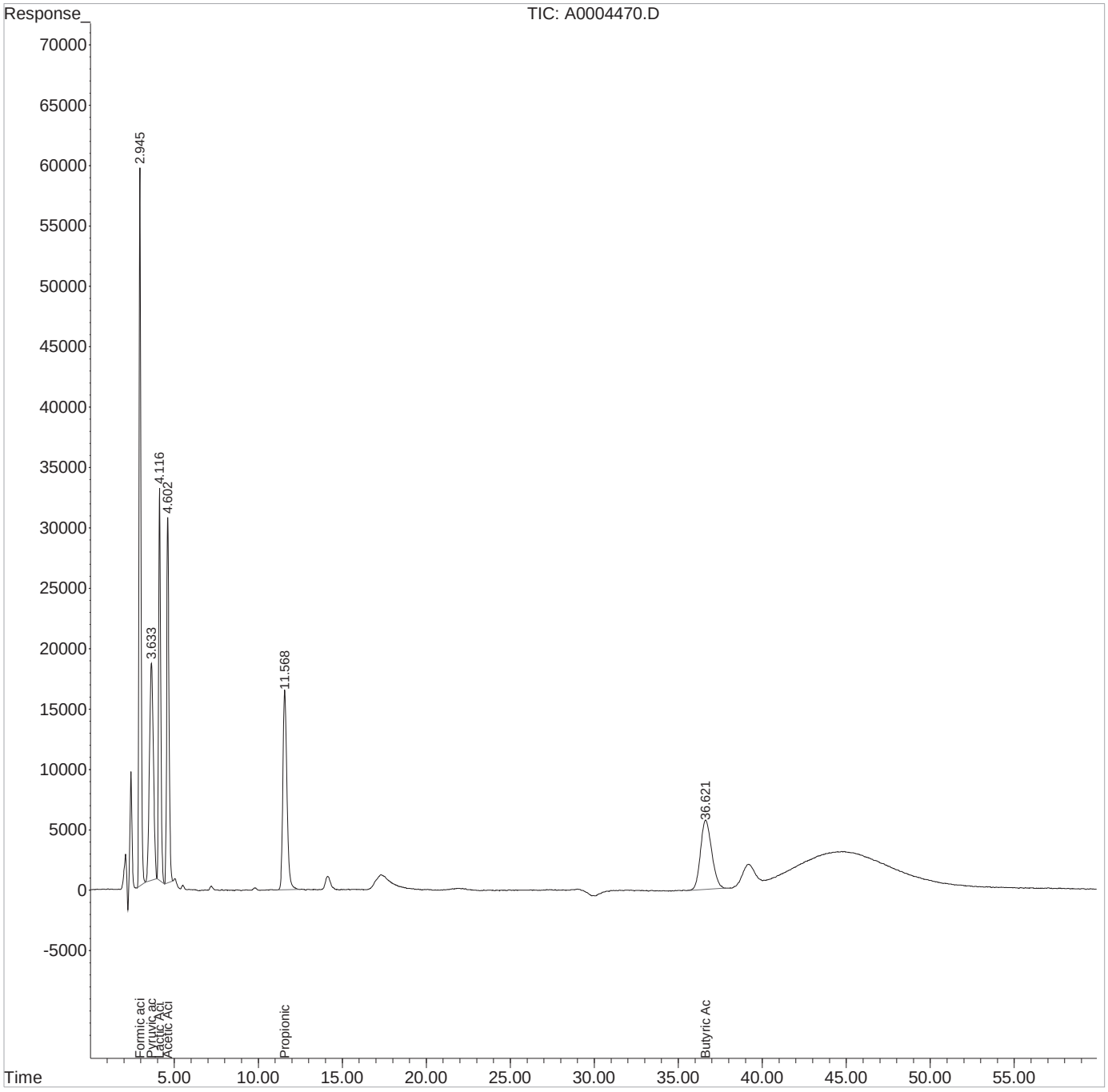
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004470.D
Signal(s) : dad1C.ch
Acq On : 30-Dec-2000, 17:47:58
Operator : A.Felser
Sample : STD 6
Misc :
ALS Vial : 7 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:24 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



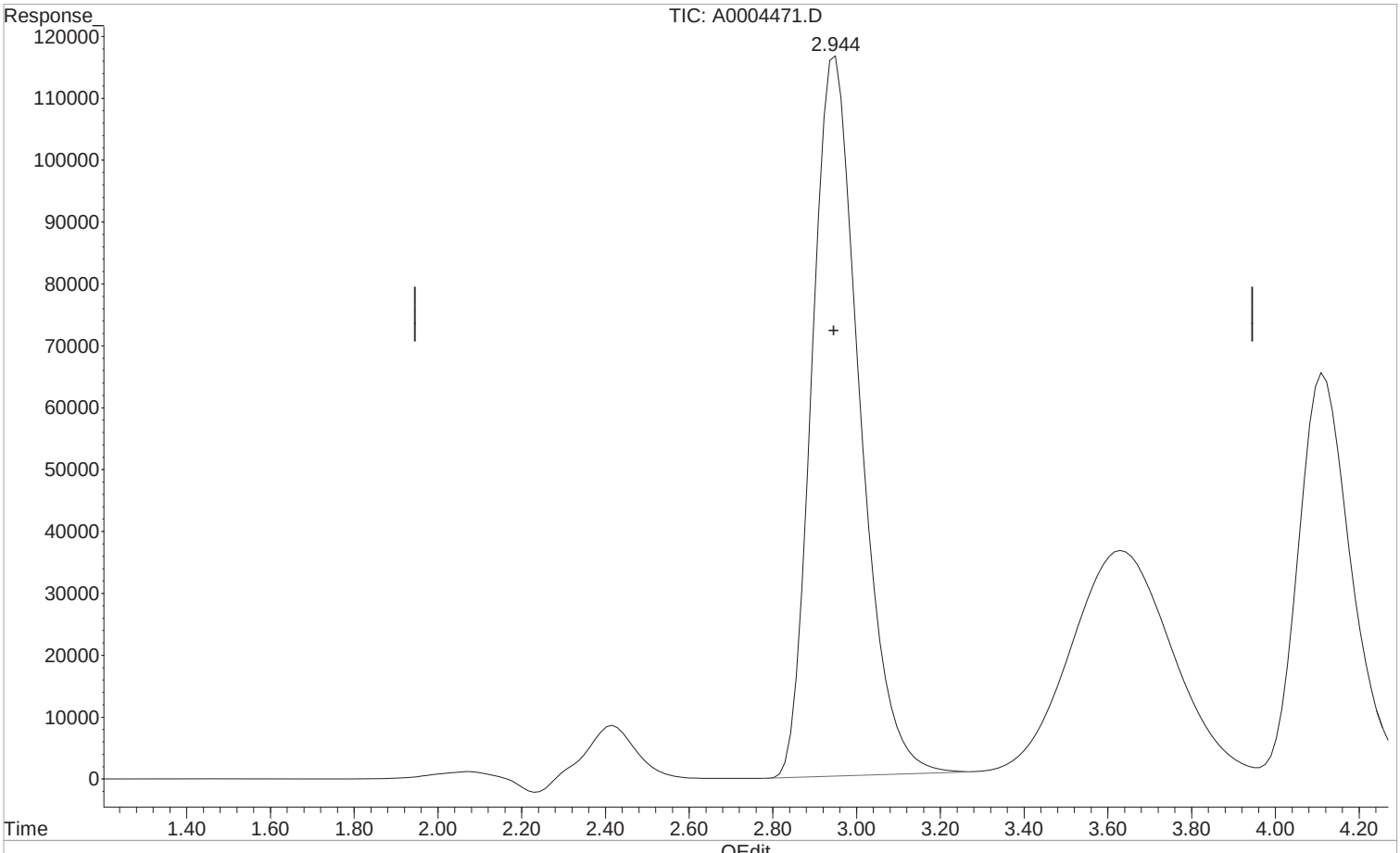
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004471.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 18:57:42
Operator : A.Felser
Sample : STD 7
Misc :
ALS Vial : 8 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:26 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(1) Formic acid (t)

2.944min 101.099 ppm m

response 9251260

Manual Integration:

After

Poor integration.

03/16/20

(+) = Expected Retention Time

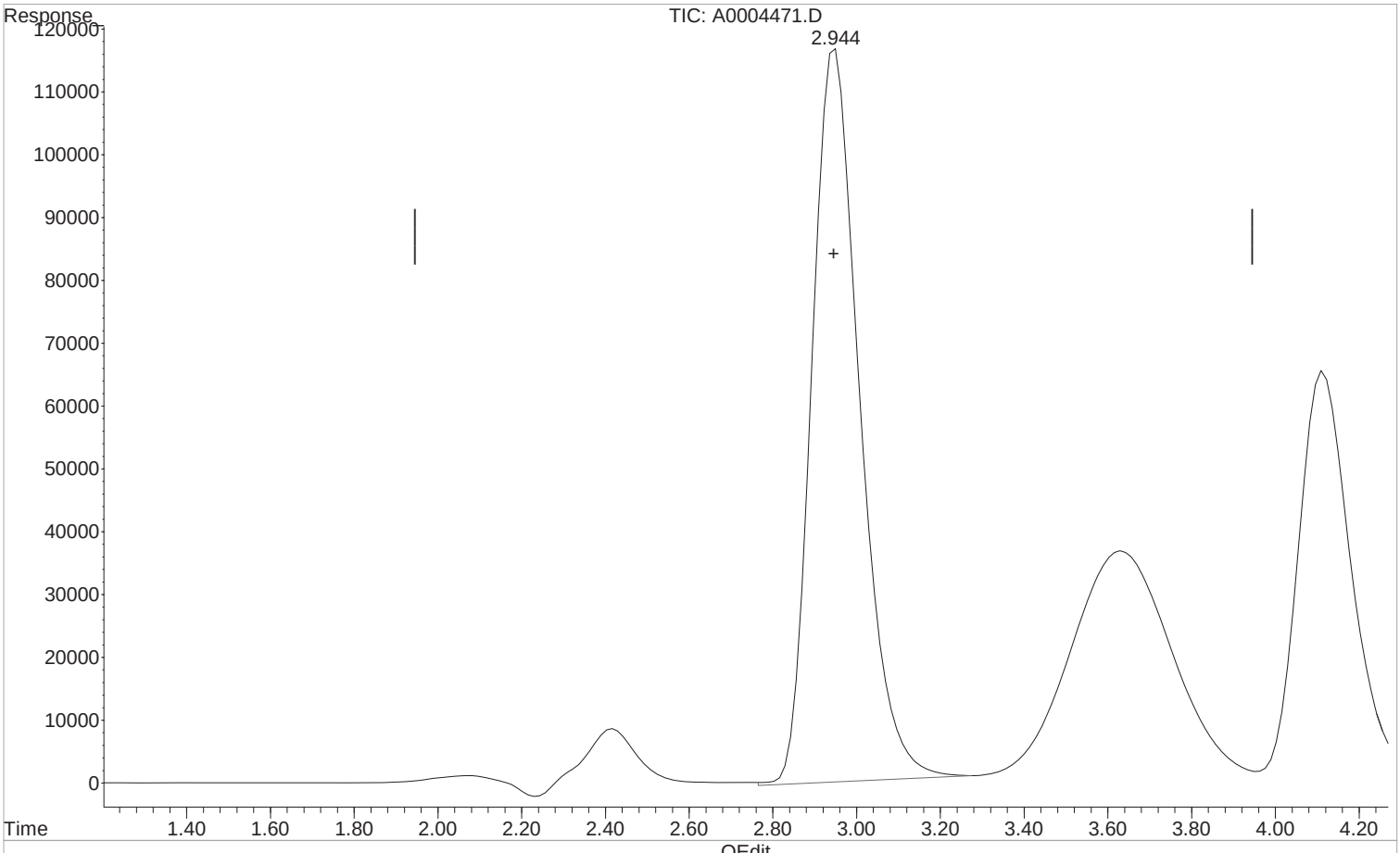
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004471.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 18:57:42
Operator : A.Felser
Sample : STD 7
Misc :
ALS Vial : 8 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:26 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(1) Formic acid (t)

2.950min 101.826 ppm

response 9317801

Manual Integration:

Before

03/16/20

(+) = Expected Retention Time

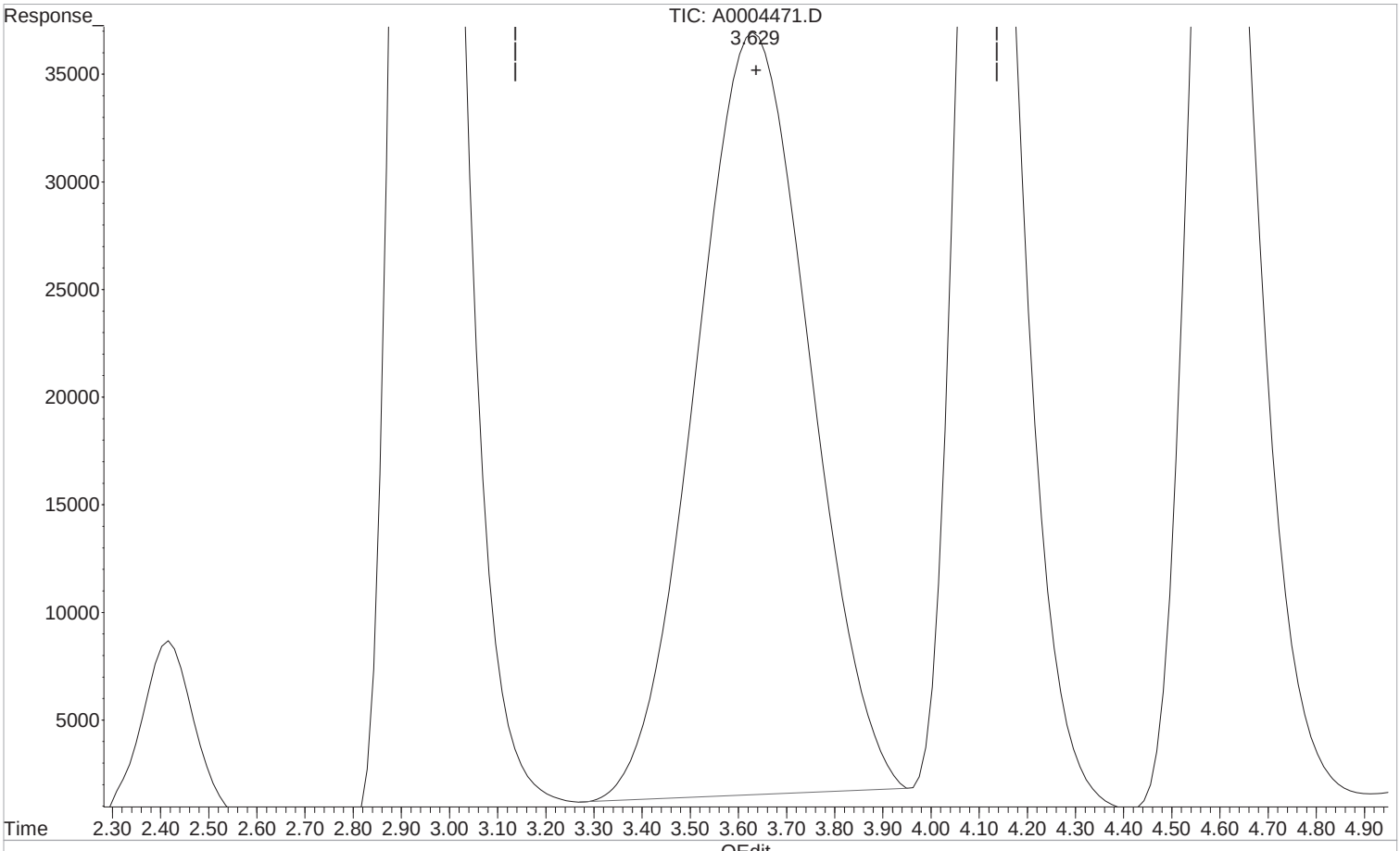
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004471.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 18:57:42
Operator : A.Felser
Sample : STD 7
Misc :
ALS Vial : 8 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:26 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(2) Pyruvic acid (T)

3.629min 9.964 ppm m

response 5807459

Manual Integration:

After

Poor integration.

03/16/20

(+) = Expected Retention Time

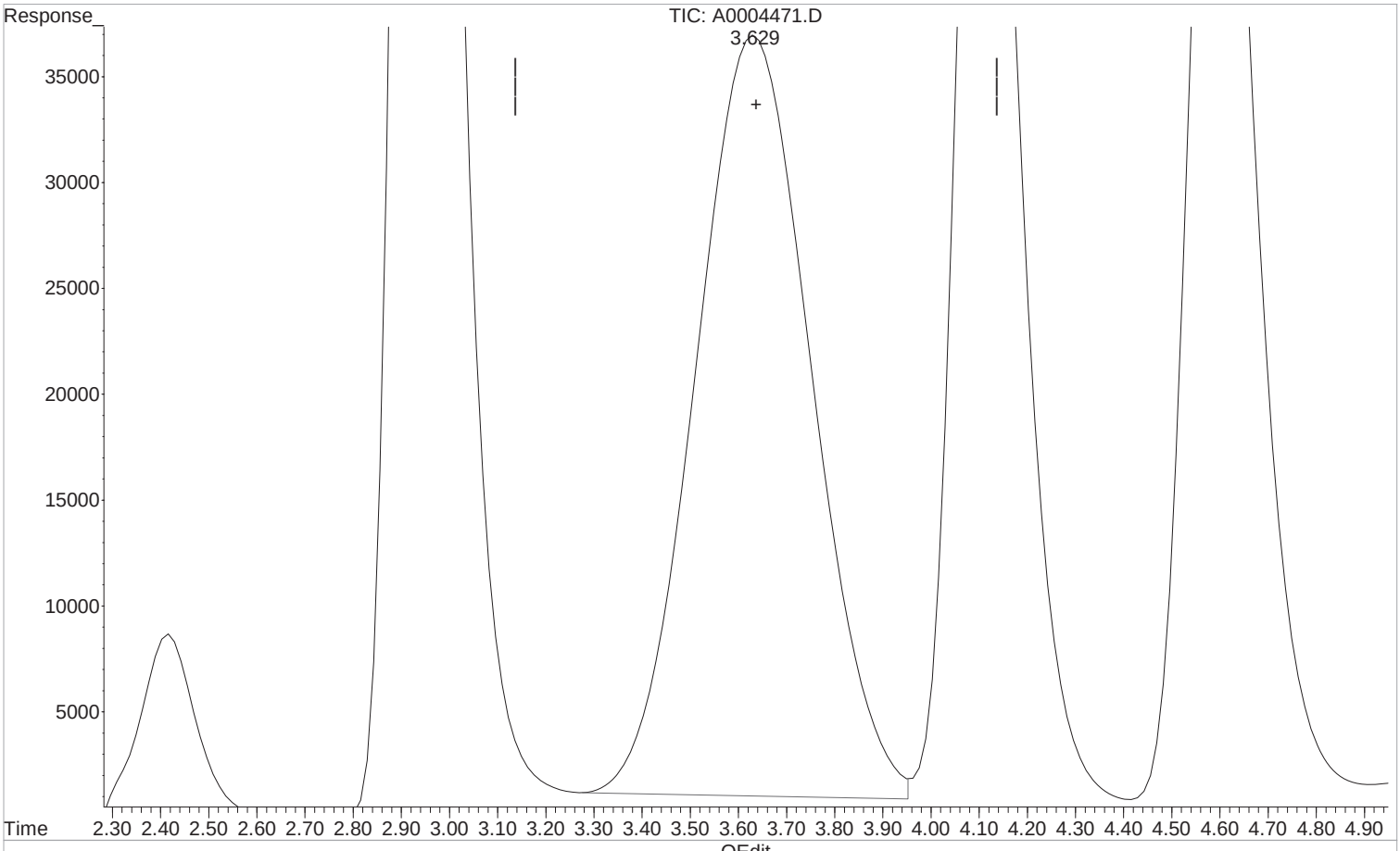
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004471.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 18:57:42
Operator : A.Felser
Sample : STD 7
Misc :
ALS Vial : 8 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:26 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(2) Pyruvic acid (T)

3.635min 10.292 ppm

response 5999073

Manual Integration:

Before

03/16/20

(+) = Expected Retention Time

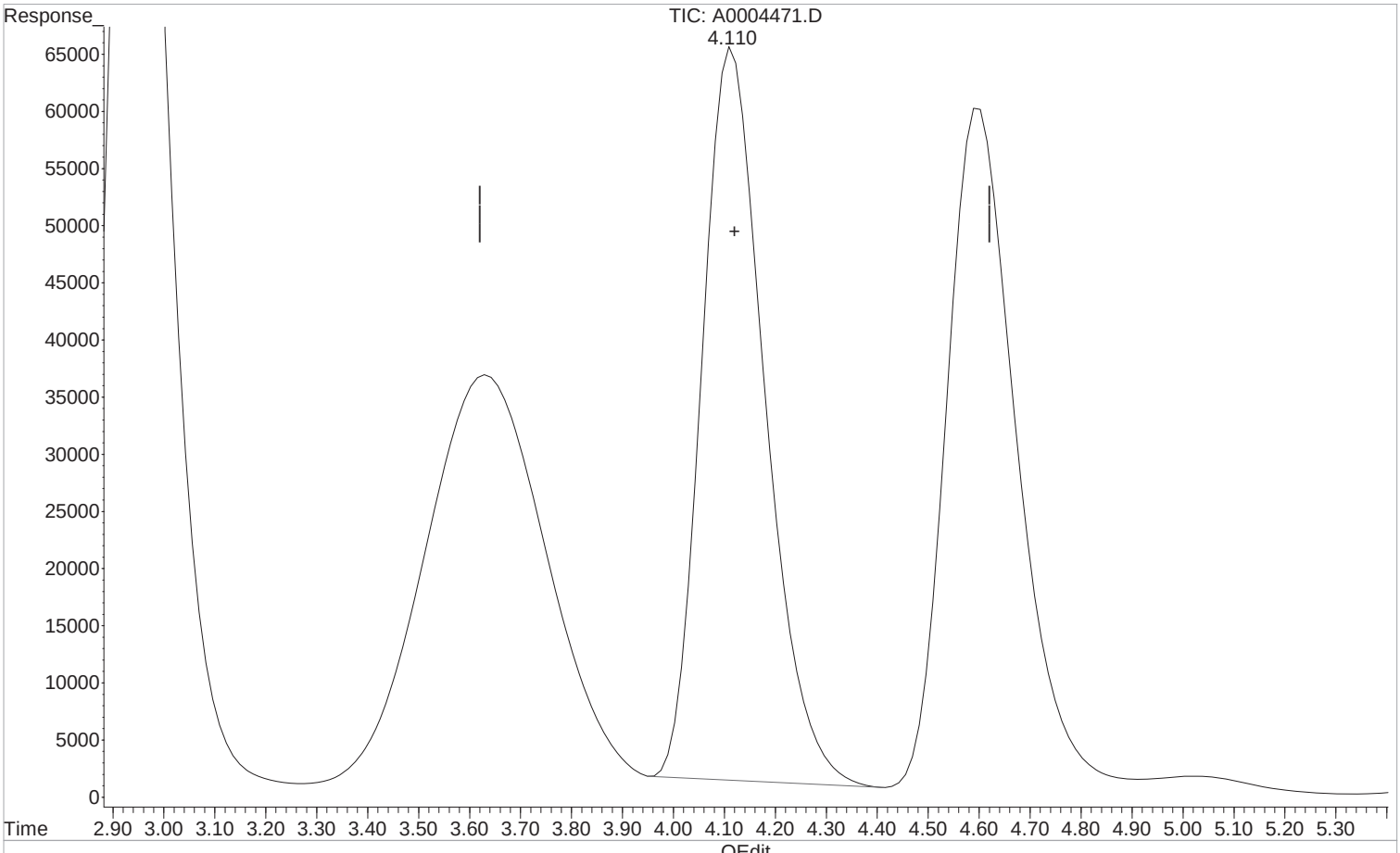
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004471.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 18:57:42
Operator : A.Felser
Sample : STD 7
Misc :
ALS Vial : 8 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:26 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(3) Lactic Acid (T)

4.110min 100.101 ppm m

response 5545238

Manual Integration:

After

Poor integration.

03/16/20

(+) = Expected Retention Time

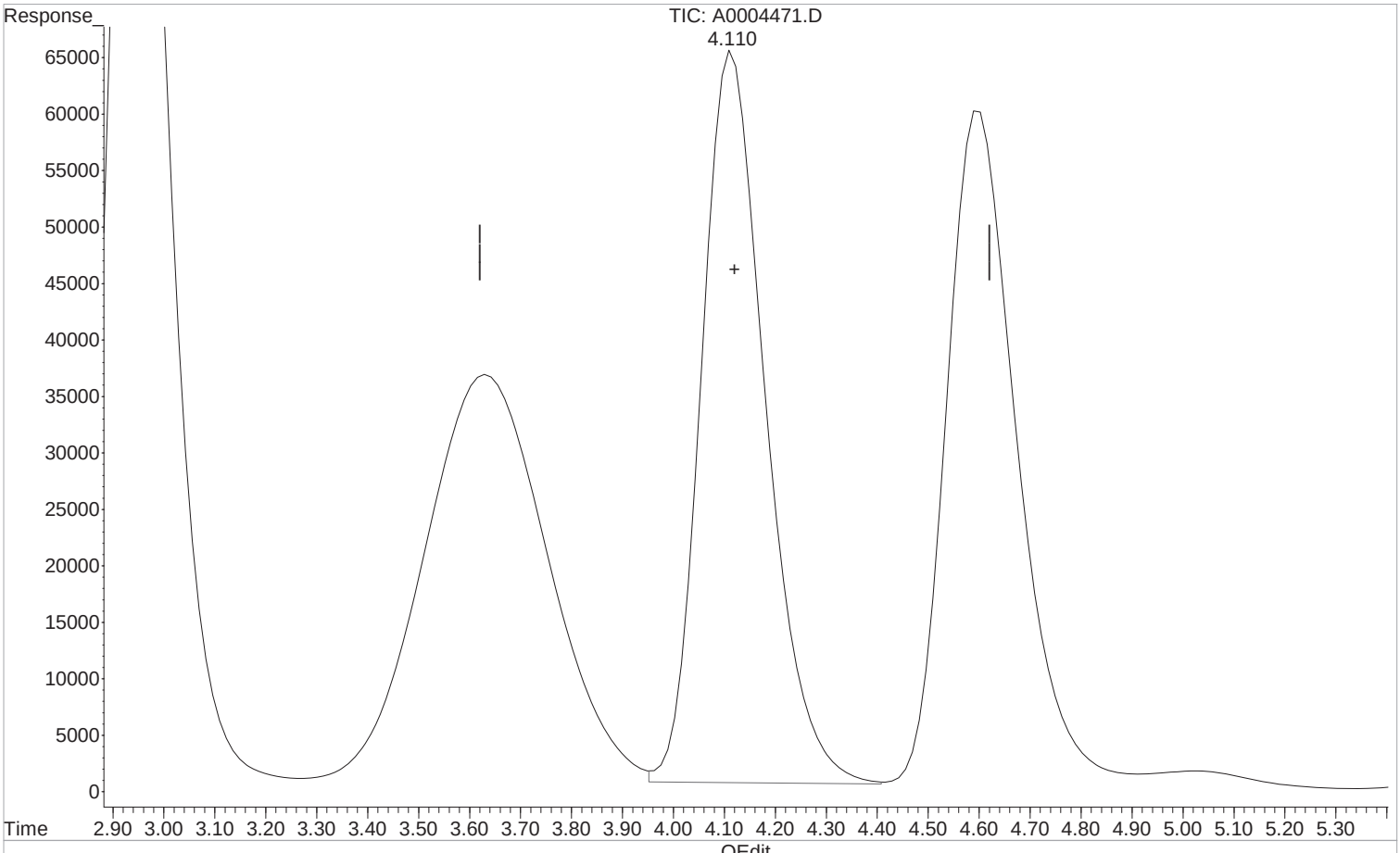
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004471.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 18:57:42
Operator : A.Felser
Sample : STD 7
Misc :
ALS Vial : 8 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:26 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(3) Lactic Acid (T)

4.117min 102.879 ppm

response 5699157

Manual Integration:

Before

03/16/20

(+) = Expected Retention Time

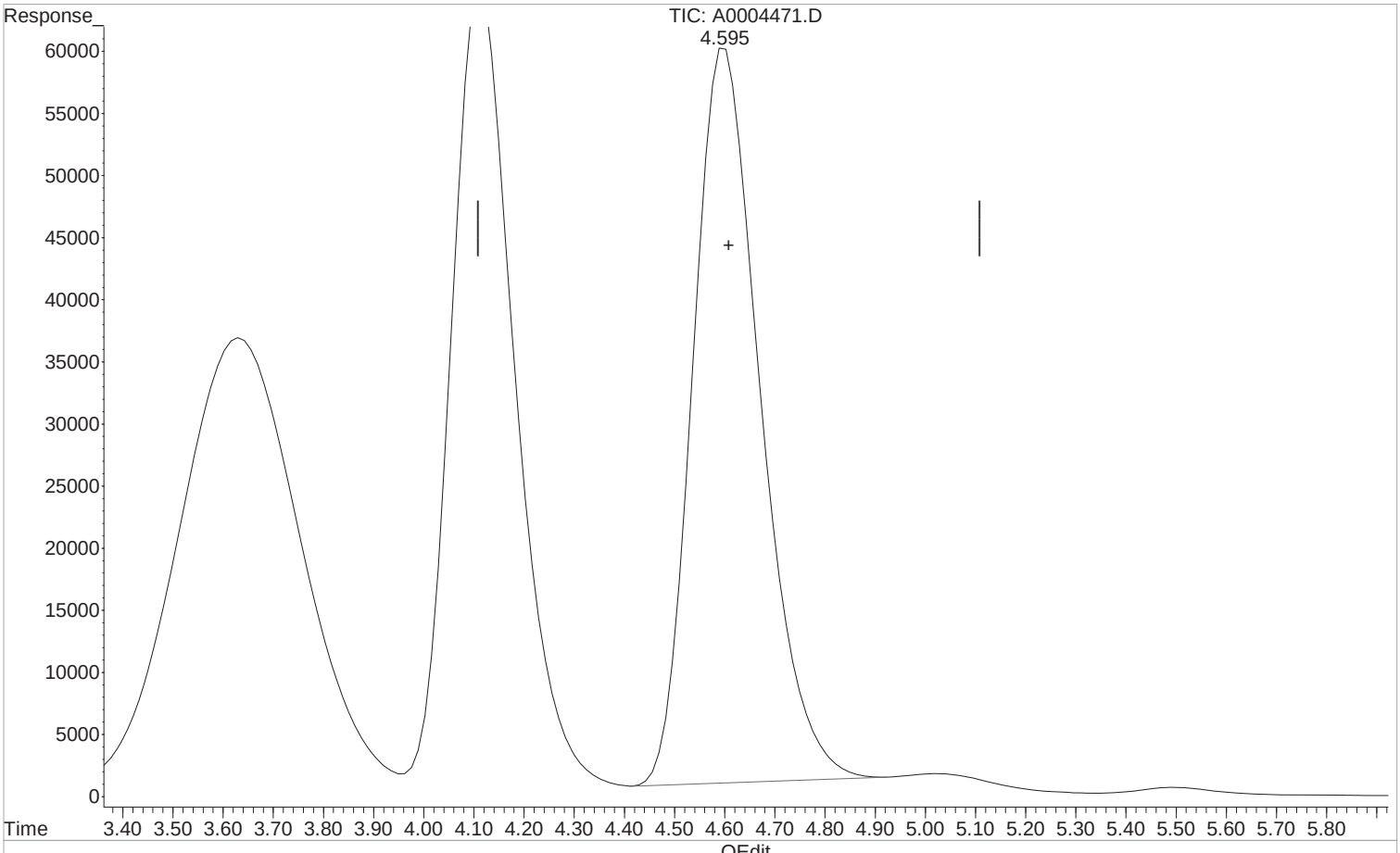
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004471.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 18:57:42
Operator : A.Felser
Sample : STD 7
Misc :
ALS Vial : 8 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:26 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(4) Acetic Acid (T)

4.595min 99.609 ppm m

response 5558142

Manual Integration:

After

Poor integration.

03/16/20

(+) = Expected Retention Time

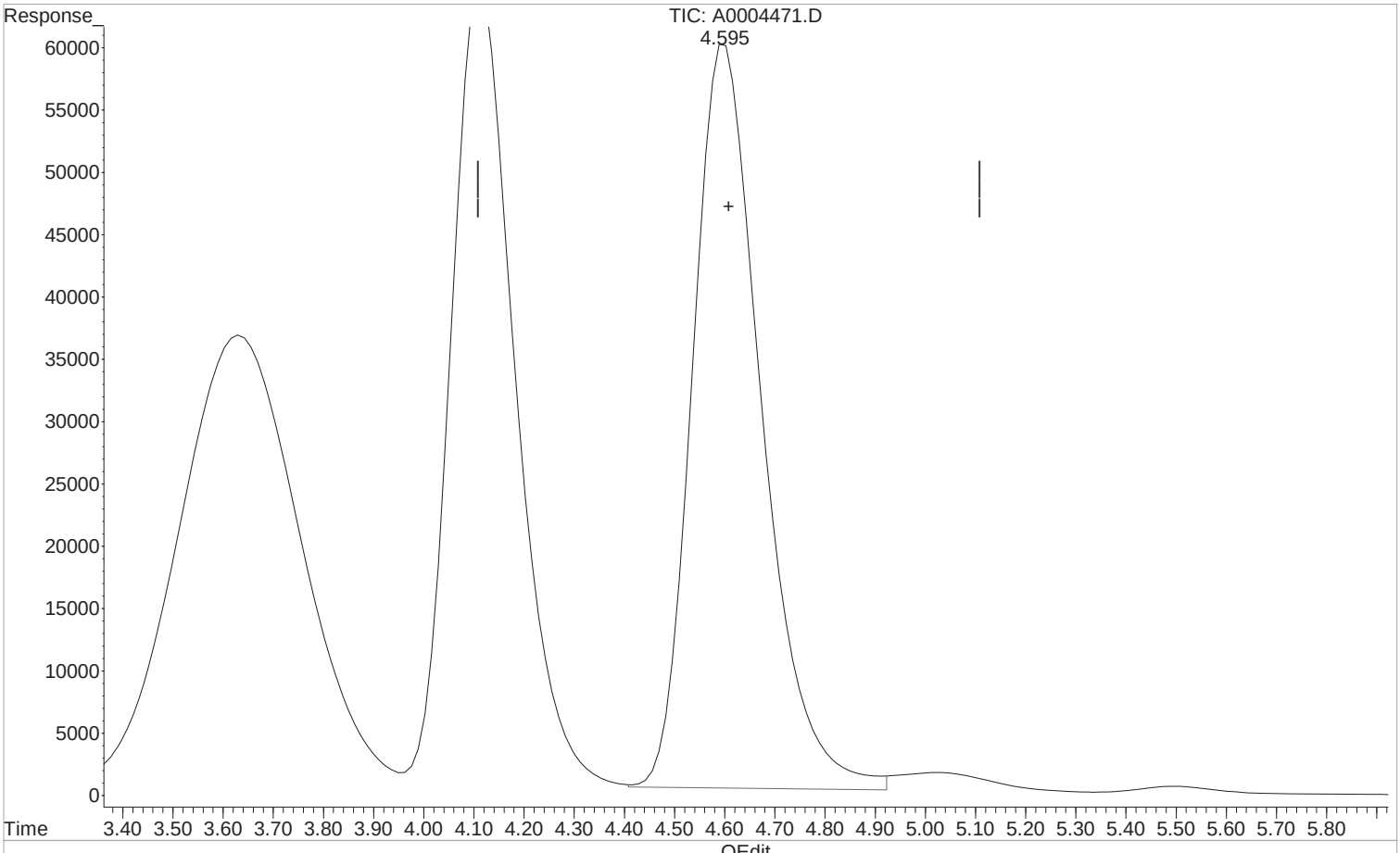
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004471.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 18:57:42
Operator : A.Felser
Sample : STD 7
Misc :
ALS Vial : 8 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:26 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(4) Acetic Acid (T)

4.602min 103.031 ppm

response 5749108

Manual Integration:

Before

03/16/20

(+) = Expected Retention Time

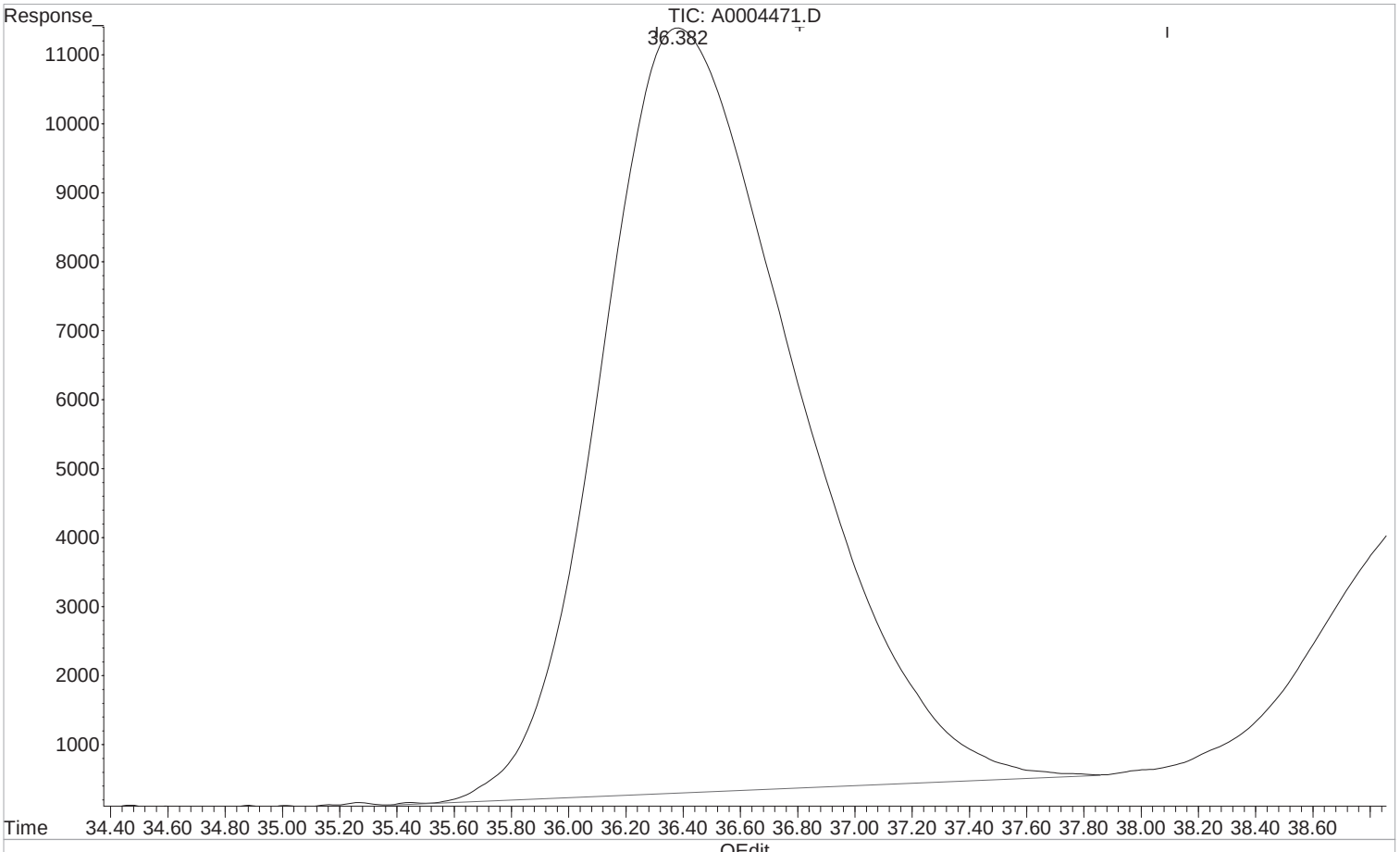
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004471.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 18:57:42
Operator : A.Felser
Sample : STD 7
Misc :
ALS Vial : 8 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:26 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(6) Butyric Acid (T)

36.382min 99.663 ppm m

response 5243902

Manual Integration:

After

Poor integration.

03/16/20

(+) = Expected Retention Time

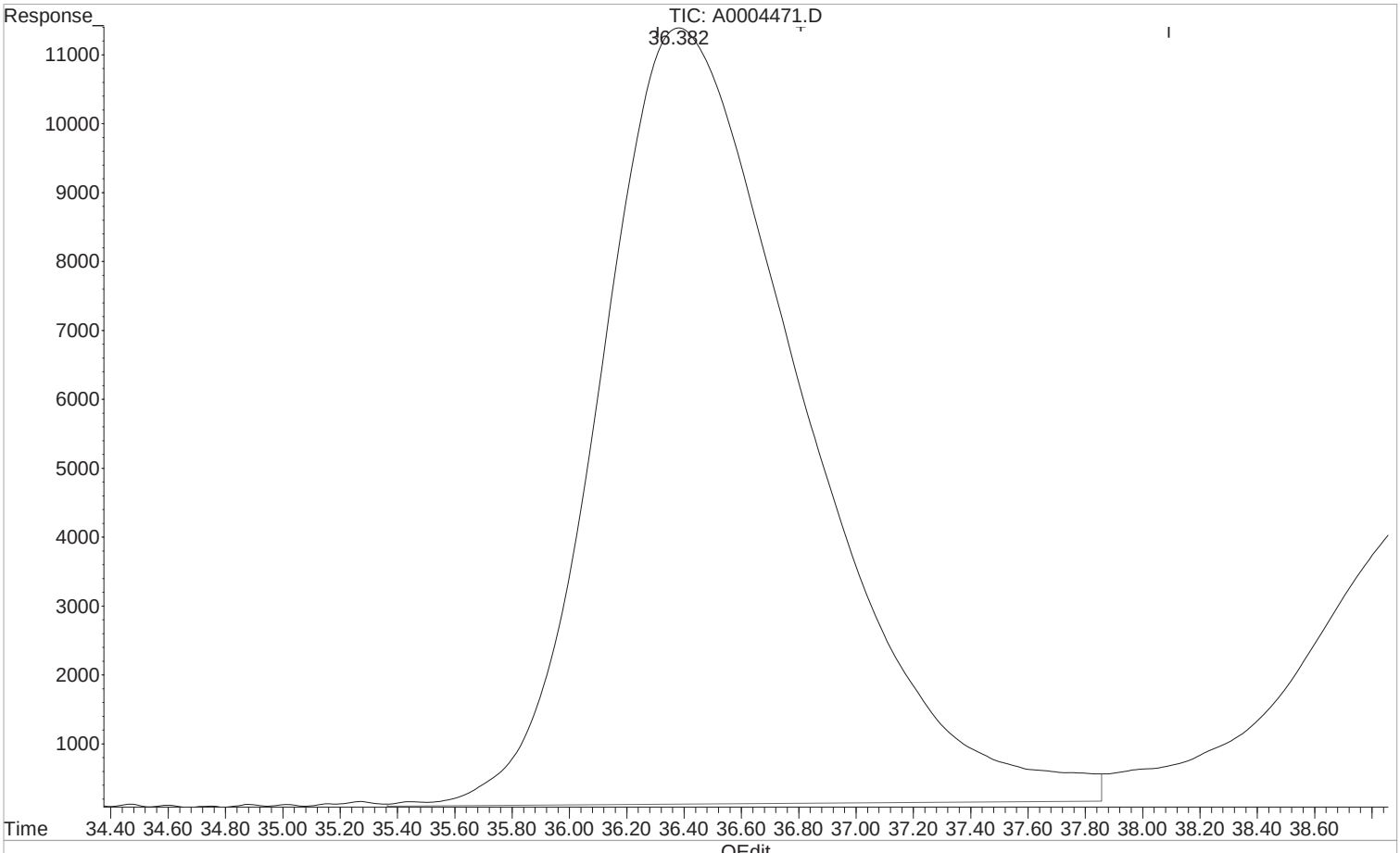
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004471.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 18:57:42
Operator : A.Felser
Sample : STD 7
Misc :
ALS Vial : 8 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:26 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(6) Butyric Acid (T)

36.387min 105.508 ppm

response 5551464

Manual Integration:

Before

03/16/20

(+) = Expected Retention Time

1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004471.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 18:57:42
Operator : A.Felser
Sample : STD 7
Misc :
ALS Vial : 8 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:26 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210

	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1) t	Formic acid	2.944	9251260	101.099	ppm	m
2) T	Pyruvic acid	3.629	5807459	9.964	ppm	m
3) T	Lactic Acid	4.110	5545238	100.101	ppm	m
4) T	Acetic Acid	4.595	5558142	99.609	ppm	m
5) T	Propionic Acid	11.528	5536155	100.773	ppm	
6) T	Butyric Acid	36.382	5243902	99.663	ppm	m

(f)=RT Delta > 1/2 Window (m)=manual int.

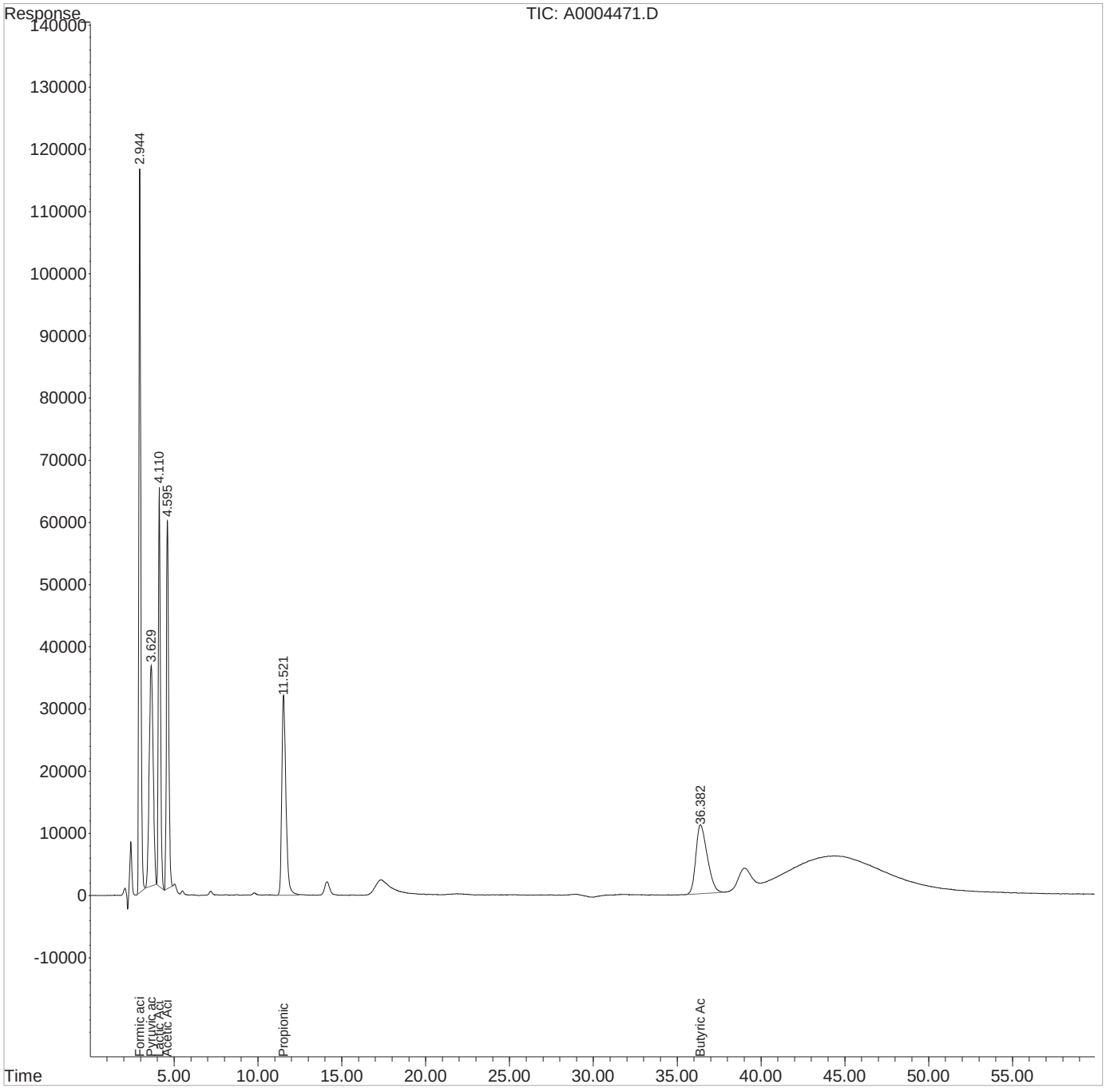
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004471.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 18:57:42
Operator : A.Felser
Sample : STD 7
Misc :
ALS Vial : 8 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:26 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



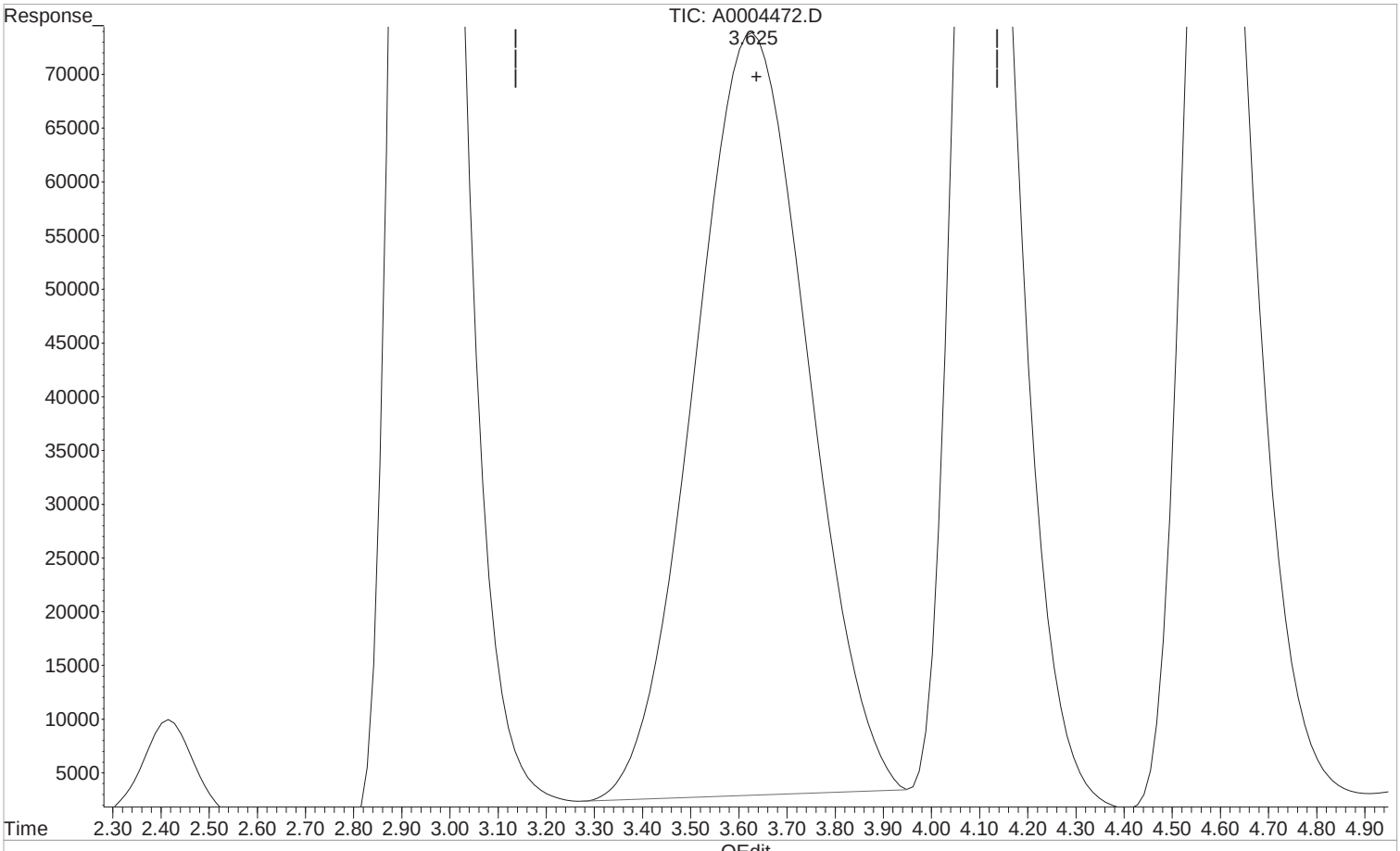
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004472.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 20:00:49
Operator : A.Felser
Sample : STD 8
Misc :
ALS Vial : 9 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:28 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(2) Pyruvic acid (T)

3.625min 19.912 ppm m

response 11605902

Manual Integration:

After

Poor integration.

03/16/20

(+) = Expected Retention Time

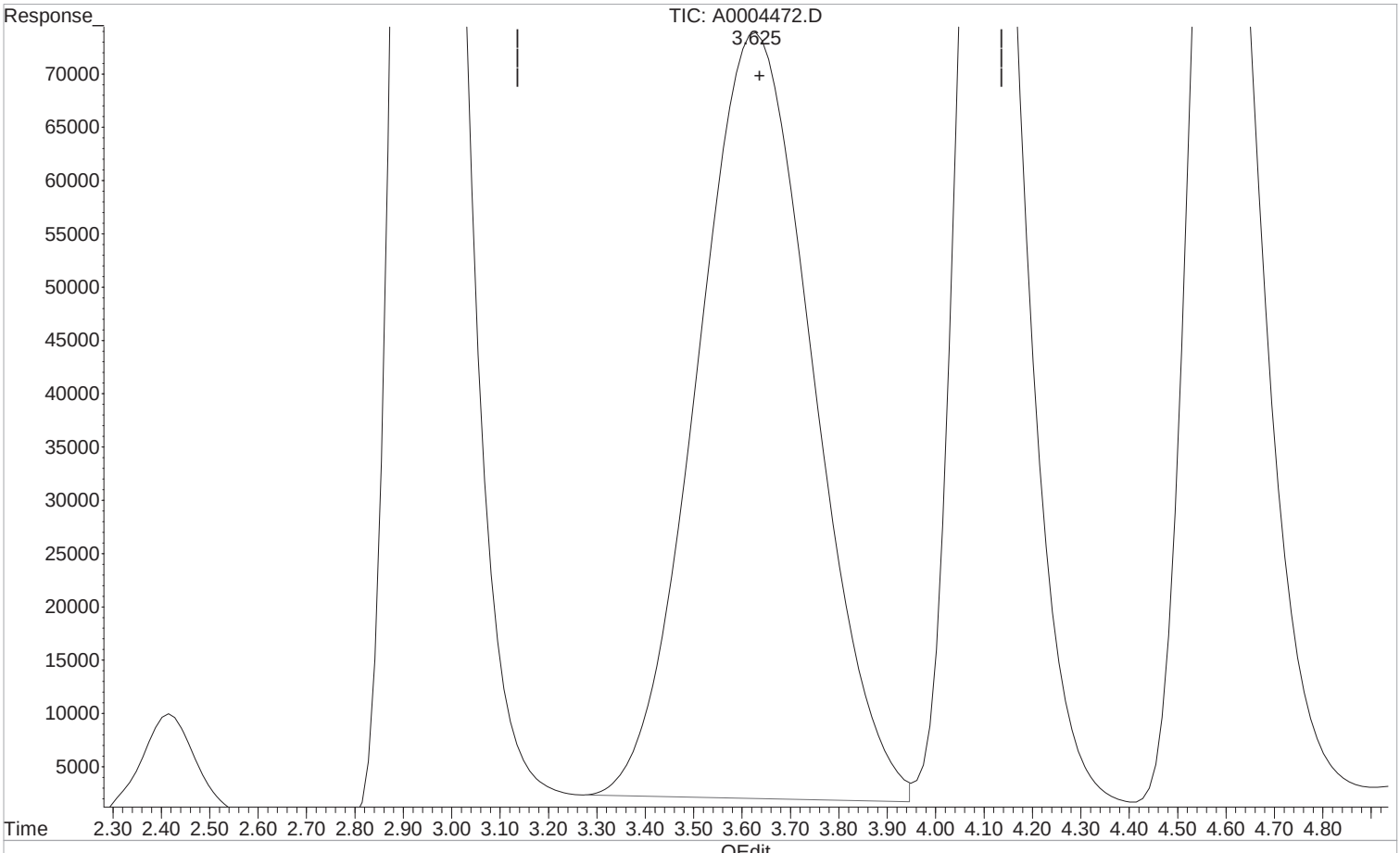
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004472.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 20:00:49
Operator : A.Felser
Sample : STD 8
Misc :
ALS Vial : 9 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:28 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(2) Pyruvic acid (T)

3.630min 20.492 ppm

response 11944441

Manual Integration:

Before

03/16/20

(+) = Expected Retention Time

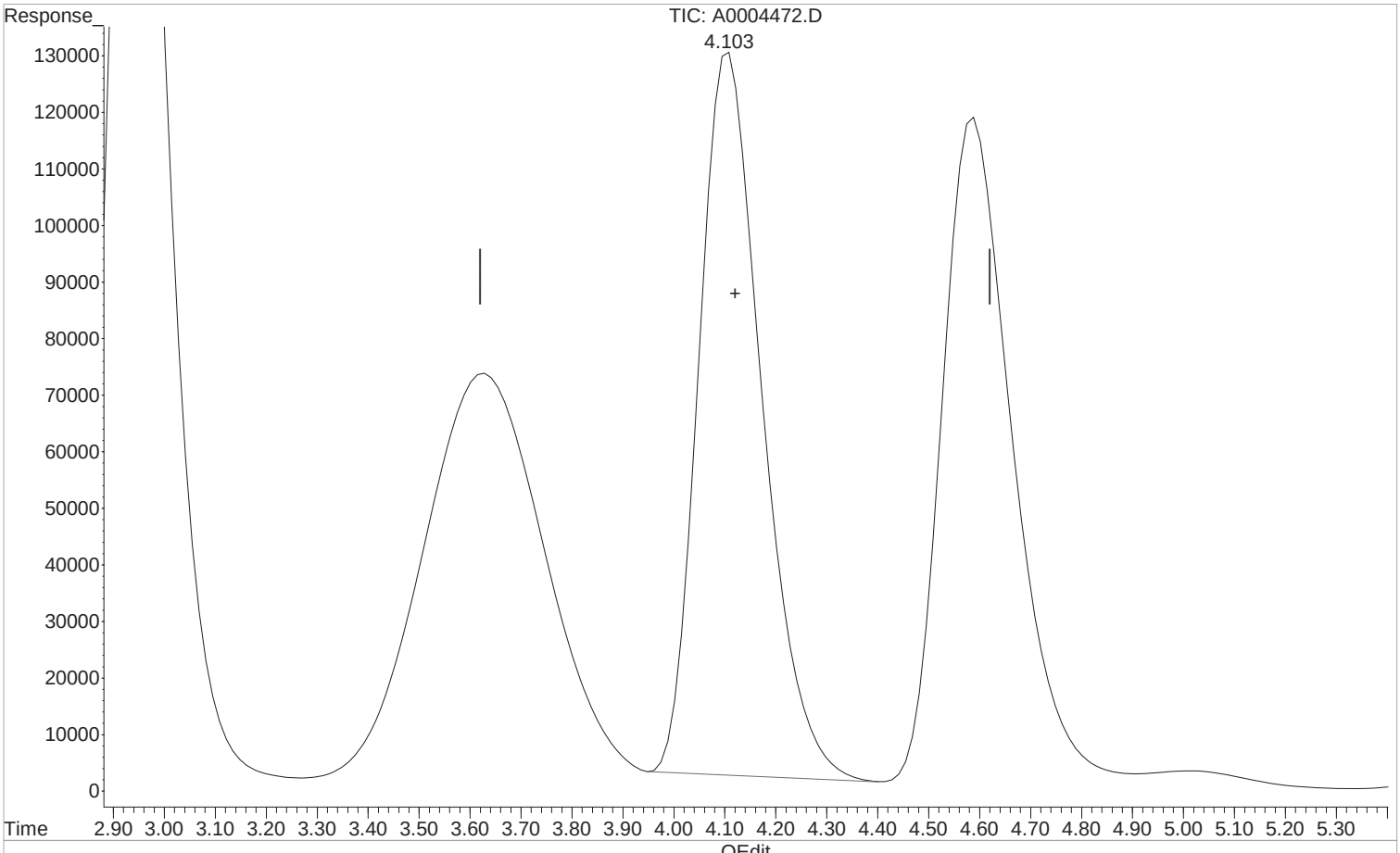
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004472.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 20:00:49
Operator : A.Felser
Sample : STD 8
Misc :
ALS Vial : 9 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:28 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(3) Lactic Acid (T)

4.103min 199.720 ppm m

response 11063811

Manual Integration:

After

Poor integration.

03/16/20

(+) = Expected Retention Time

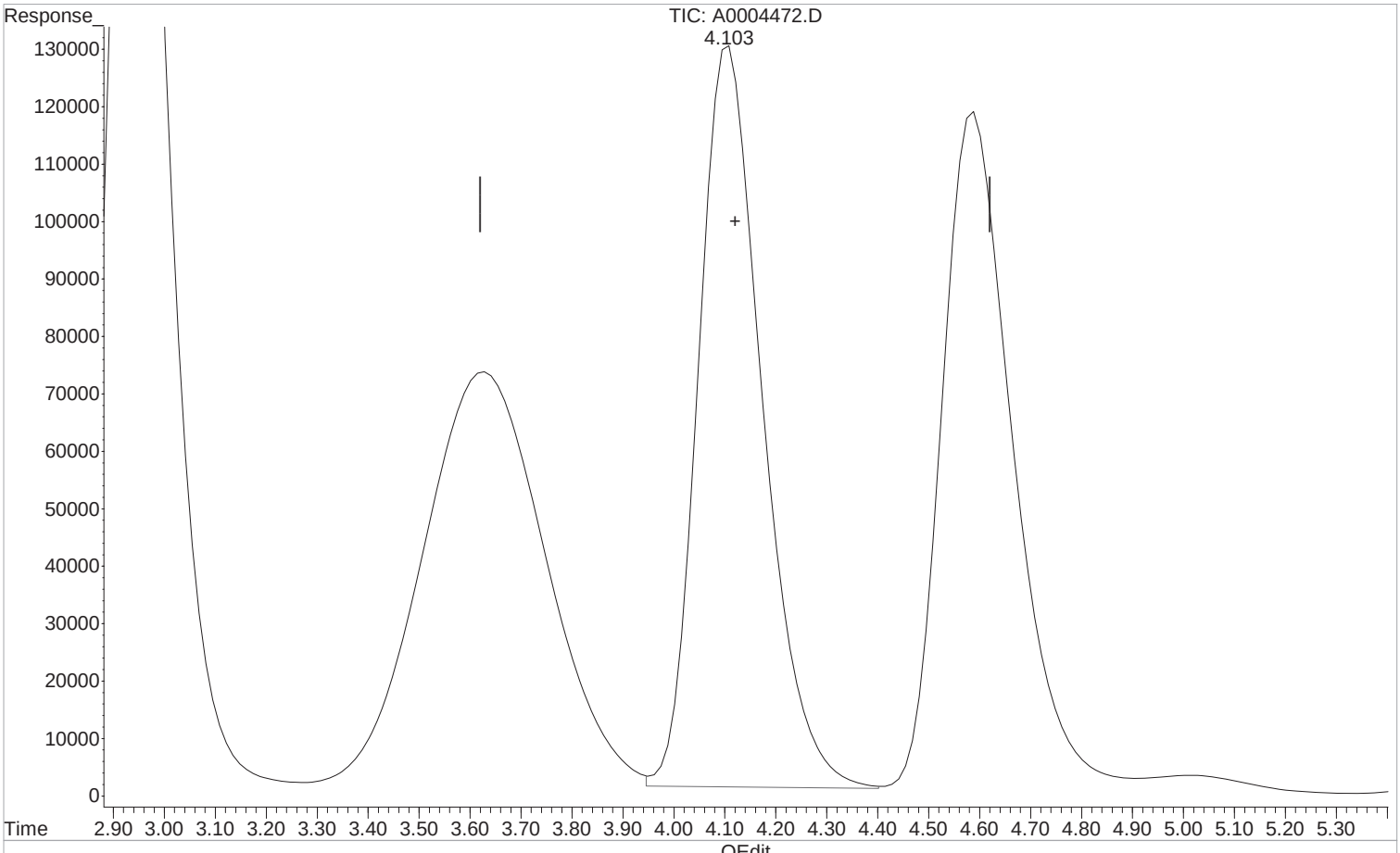
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004472.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 20:00:49
Operator : A.Felser
Sample : STD 8
Misc :
ALS Vial : 9 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:28 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(3) Lactic Acid (T)

4.110min 205.006 ppm

response 11356650

Manual Integration:

Before

03/16/20

(+) = Expected Retention Time

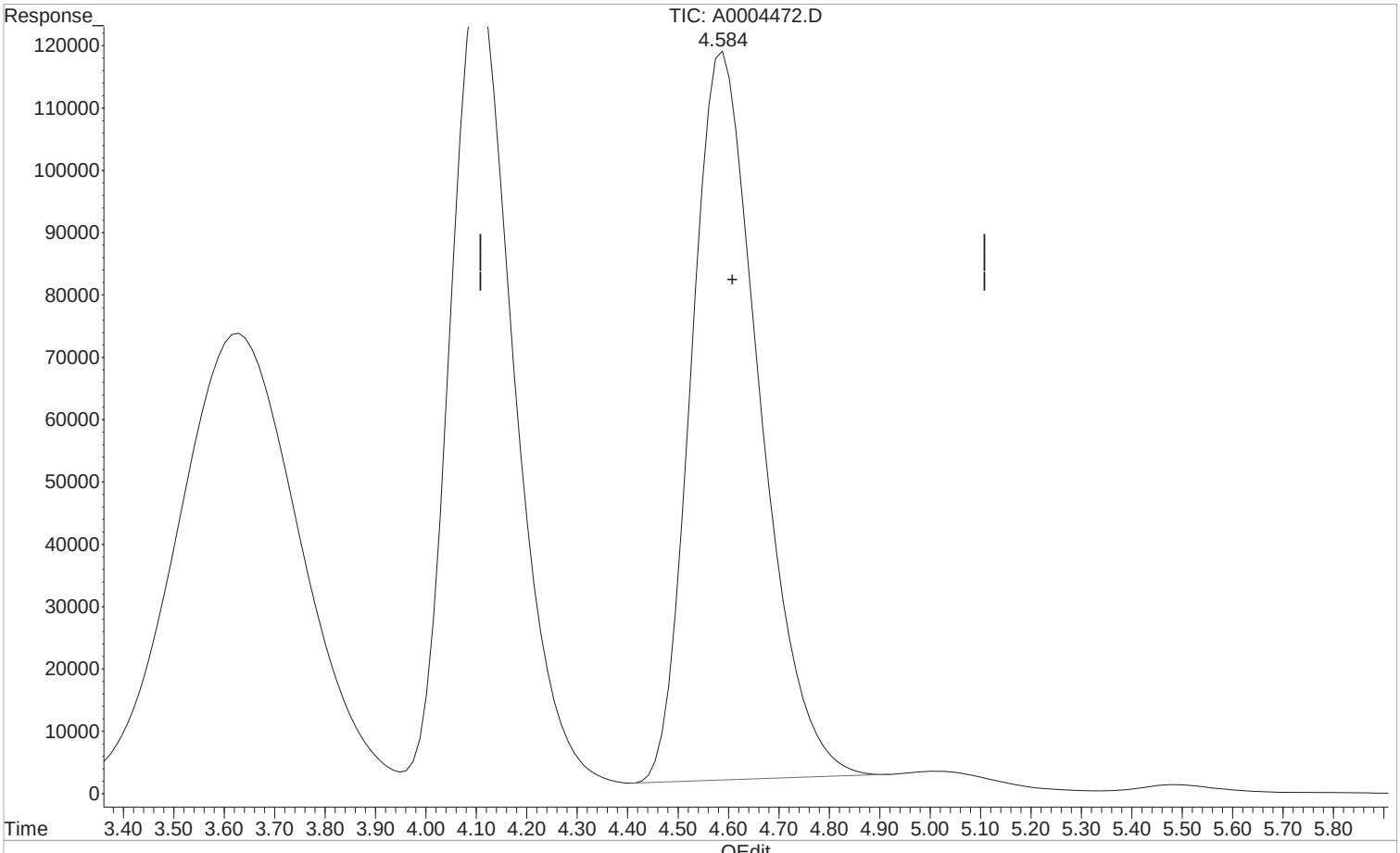
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004472.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 20:00:49
Operator : A.Felser
Sample : STD 8
Misc :
ALS Vial : 9 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:28 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(4) Acetic Acid (T)

4.584min 197.987 ppm m

response 11047591

Manual Integration:

After

Poor integration.

03/16/20

(+) = Expected Retention Time

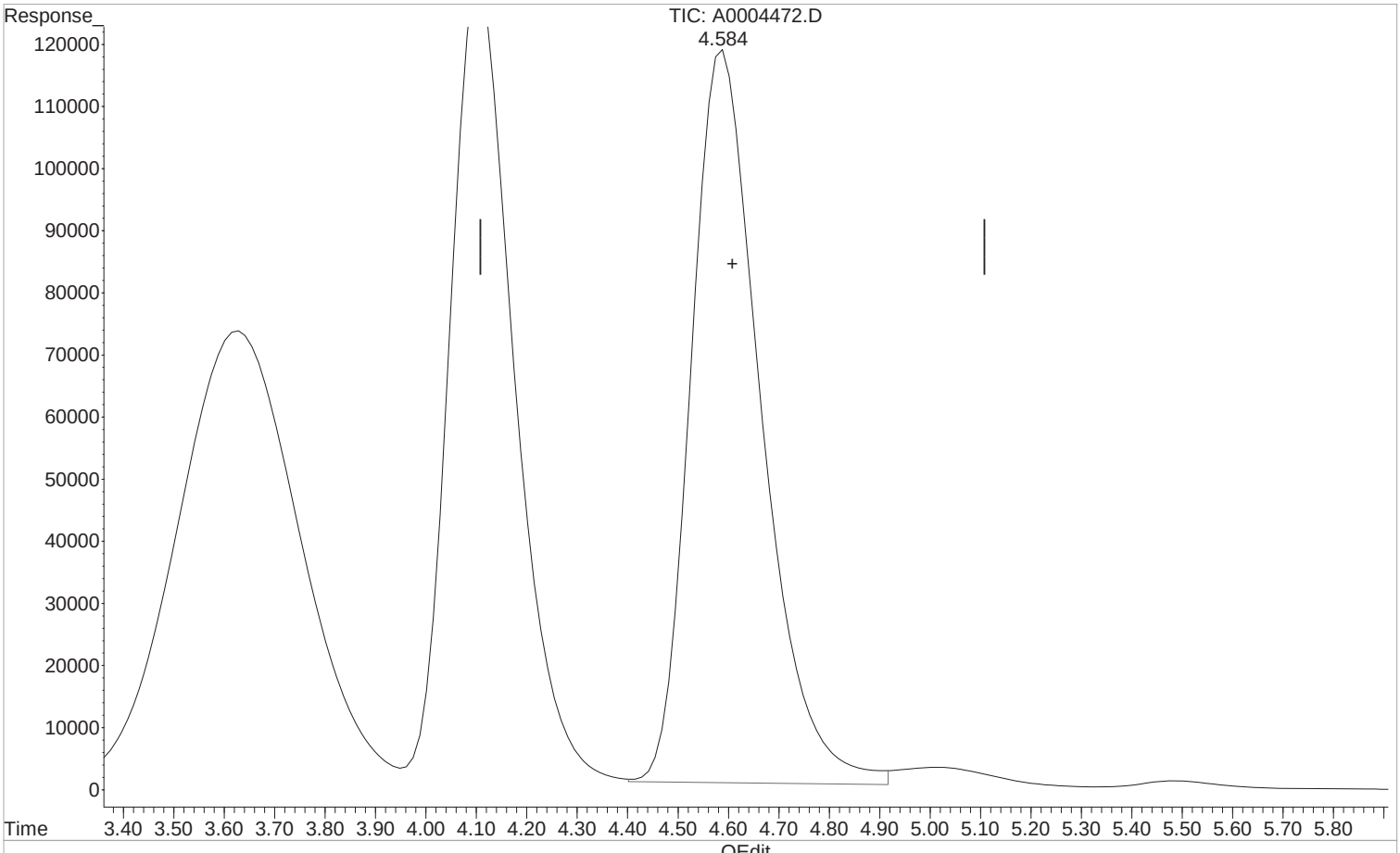
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004472.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 20:00:49
Operator : A.Felser
Sample : STD 8
Misc :
ALS Vial : 9 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:28 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(4) Acetic Acid (T)

4.592min 205.148 ppm

response 11447174

Manual Integration:

Before

03/16/20

(+) = Expected Retention Time

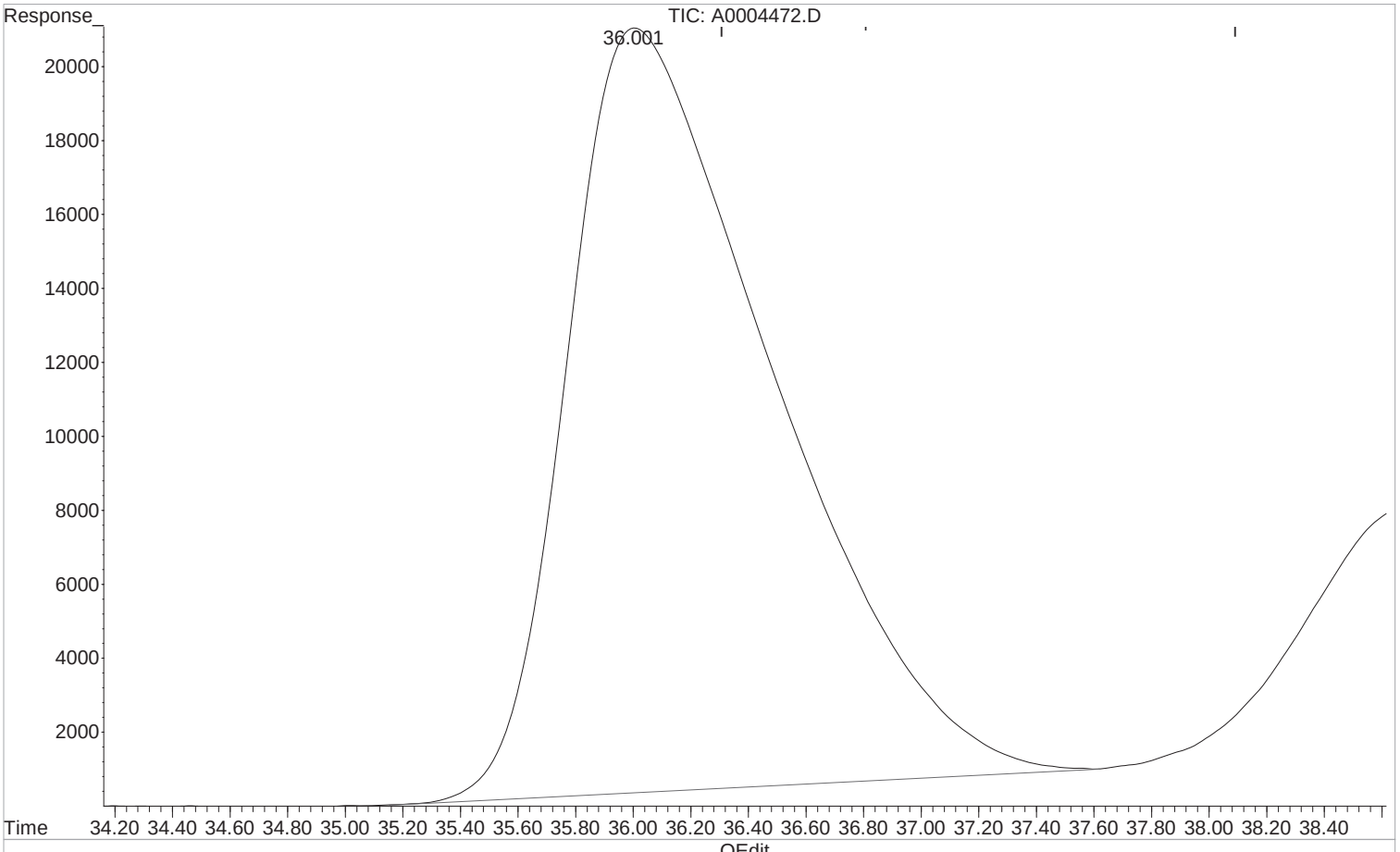
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004472.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 20:00:49
Operator : A.Felser
Sample : STD 8
Misc :
ALS Vial : 9 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:28 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(6) Butyric Acid (T)

36.001min 196.253 ppm m

response 10326182

Manual Integration:

After

Poor integration.

03/16/20

(+) = Expected Retention Time

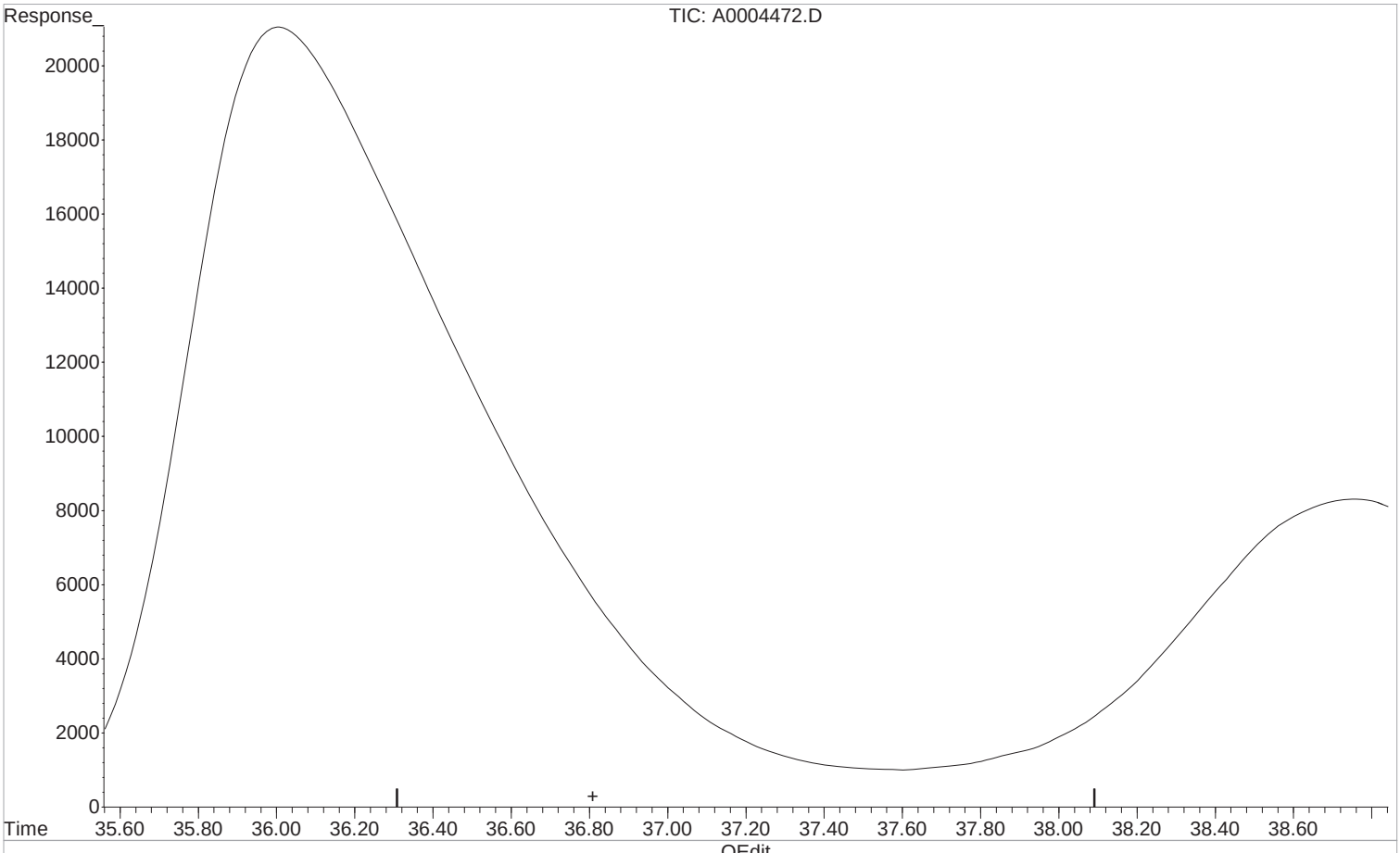
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004472.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 20:00:49
Operator : A.Felser
Sample : STD 8
Misc :
ALS Vial : 9 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:28 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(6) Butyric Acid (T)

36.808min 0.000 ppm

response 0

Manual Integration:

Before

03/16/20

(+) = Expected Retention Time

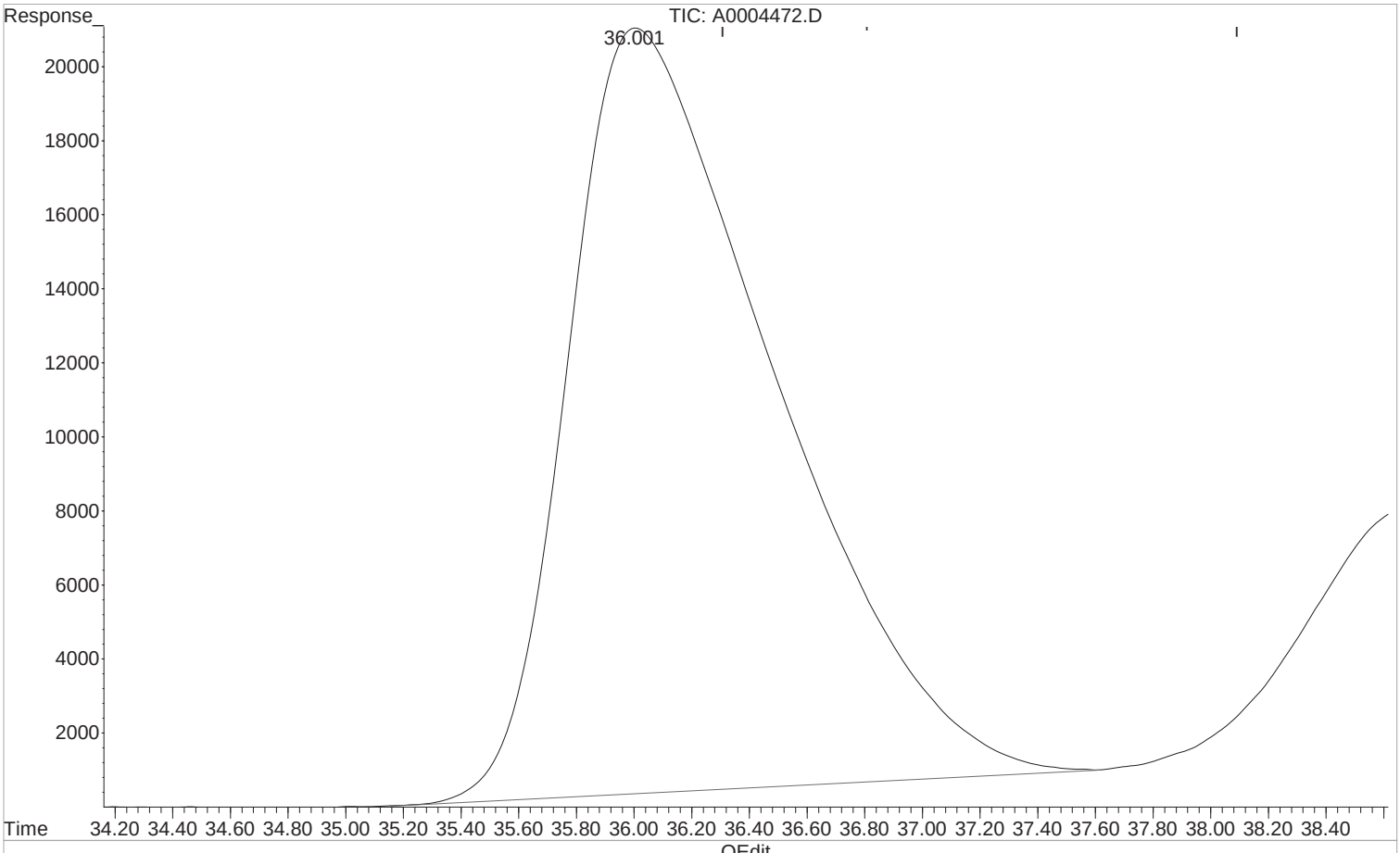
1st AF 03/17/20
2nd DM 03/19/20

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\hplc05\data\031220\
Data File : A0004472.D
Signal(s) : dad1C.ch
Acq On : 12-Mar-2020, 20:00:49
Operator : A.Felser
Sample : STD 8
Misc :
ALS Vial : 9 Sample Multiplier: 1

Integration File: MA1.E
Quant Time: Mar 16 09:18:28 2020
Quant Method : I:\ACQUDATA\hplc05\Methods\MA031220.M
Quant Title : organic acids
QLast Update : Mon Mar 16 09:18:01 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 50.0ul
Signal Phase : synergi hydro rp
Signal Info : UV wave 210



(6) Butyric Acid (T)

36.001min 196.253 ppm m

response 10326182

Manual Integration:

After

Peak not found.

03/16/20

(+) = Expected Retention Time

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: LHAAP / Site 58

Service Request: R2005464
Calibration Date: 12/30/2000

Initial Calibration Summary
Organic Acids in Aqueous Matrices by High Performance Liquid Chromatography (HPLC) 28 Day Hold Time

Calibration ID: RC2000053
Instrument ID: R-HPLC-05

Signal ID: 1

#	Lab Code	Sample Name	File Location	Acquisition Date
01	RC2000053-01	STD 1	I:\ACQUDATA\hplc05\data\031220\A0004465.D	03/12/2020 12:39
02	RC2000053-02	STD 2	I:\ACQUDATA\hplc05\data\031220\A0004466.D	03/12/2020 13:42
04	RC2000053-04	STD 4	I:\ACQUDATA\hplc05\data\031220\A0004468.D	03/12/2020 15:48
07	RC2000053-07	STD 7	I:\ACQUDATA\hplc05\data\031220\A0004471.D	03/12/2020 18:57
08	RC2000053-08	STD 8	I:\ACQUDATA\hplc05\data\031220\A0004472.D	03/12/2020 20:00
03	RC2000053-03	STD 3	I:\ACQUDATA\hplc05\data\031220\A0004467.D	12/30/2000 02:48
06	RC2000053-06	STD 6	I:\ACQUDATA\hplc05\data\031220\A0004470.D	12/30/2000 17:47
05	RC2000053-05	STD 5	I:\ACQUDATA\hplc05\data\031220\A0004469.D	12/30/2000 17:48

Analyte

Acetic Acid

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	1	5.521E4	02	2	5.659E4	03	5	5.611E4	04	10	5.731E4
05	20	5.58E4	06	50	5.655E4	07	100	5.558E4	08	200	5.524E4

Butanoic Acid (Butyric Acid)

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	1	5.323E4	02	2	5.338E4	03	5	5.087E4	04	10	5.32E4
05	20	5.262E4	06	50	5.313E4	07	100	5.244E4	08	200	5.163E4

Lactic Acid

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	1	6.266E4	02	2	5.467E4	03	5	5.515E4	04	10	5.641E4
05	20	5.54E4	06	50	5.626E4	07	100	5.545E4	08	200	5.532E4

Propionic Acid

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	1	5.153E4	02	2	5.435E4	03	5	5.182E4	04	10	5.598E4
05	20	5.494E4	06	50	5.59E4	07	100	5.536E4	08	200	5.497E4

Pyruvic Acid

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	.1	6.507E5	02	.2	5.665E5	03	.5	5.865E5	04	1	5.943E5
05	2	5.829E5	06	5	5.906E5	07	10	5.807E5	08	20	5.803E5

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: LHAAP / Site 58

Service Request: R2005464
Calibration Date: 12/30/2000

Initial Calibration Summary
Organic Acids in Aqueous Matrices by High Performance Liquid Chromatography (HPLC) 28 Day Hold Time

Calibration ID: RC2000053
Instrument ID: R-HPLC-05

Signal ID: 1

		Calibration Evaluation				Calibration Evaluation	
Analyte Name	Compound Type	Fit Type	Eval	Eval Result	Control Criteria	Average RRF	Minimum RRF
Acetic Acid	TRG	Average RF	% RSD	1.3	≤	5.605E4	
Butanoic Acid (Butyric Acid)	TRG	Average RF	% RSD	1.7	≤	5.256E4	
Lactic Acid	TRG	Average RF	% RSD	4.6	≤	5.642E4	
Propionic Acid	TRG	Average RF	% RSD	3.2	≤	5.436E4	
Pyruvic Acid	TRG	Average RF	% RSD	4.3	≤	5.916E5	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US **Service Request:** R2005464
Project: LHAAP / Site 58 **Calibration Date:** 12/30/2000

Initial Calibration Verification Summary
Organic Acids in Aqueous Matrices by High Performance Liquid Chromatography (HPLC) 28 Day Hold Time

Calibration ID: RC2000053 **Signal ID:** 1
Instrument ID: R-HPLC-05

#	Lab Code	Sample Name	File Location	Acquisition Date
09	RC2000053-09	ICV	I:\ACQUDATA\hplc05\data\031620\A0004777.D	12/30/2000 00:01

Analyte Name	Expected	Result	Average RF	SSV RF	Rec.	Criteria	Curve Fit
Pyruvic Acid	2.00	1.80	5.916E5	5.334E5	90.0	85-115	Average RF
Acetic Acid	20.0	18.9	5.605E4	5.295E4	94.5	85-115	Average RF
Butanoic Acid (Butyric Acid)	20.0	19.4	5.256E4	5.089E4	97.0	85-115	Average RF
Lactic Acid	20.0	18.8	5.642E4	5.298E4	94.0	85-115	Average RF
Propionic Acid	20.0	20.4	5.436E4	5.533E4	102	85-115	Average RF

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: LHAAP / Site 58/NW01312.0150

Service Request: R2005464
Date Analyzed: 07/01/20 13:56

Continuing Calibration Verification (CCV) Summary
Organic Acids in Aqueous Matrices by High Performance Liquid Chromatography (HPLC) 28 Day Hold Time

Analysis Method: Organic Acids
File ID: I:\ACQUDATA\hplc05\data\070120\A0005448.D\
Signal ID: 1

Calibration Date: 12/30/2000
Calibration ID: RC2000053
Analysis Lot: 686010
Units: mg/L

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
Pyruvic Acid	5.00	5.23	5.916E5	6.194E5	4.7	NA	±15	Average RF
Acetic Acid	50.0	49.7	5.605E4	5.568E4	-0.7	NA	±15	Average RF
Butanoic Acid (Butyric Acid)	50.0	49.0	5.256E4	5.154E4	-1.9	NA	±15	Average RF
Lactic Acid	50.0	47.0	5.642E4	5.305E4	-6.0	NA	±15	Average RF
Propionic Acid	50.0	49.6	5.436E4	5.387E4	-0.9	NA	±15	Average RF

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: LHAAP / Site 58/NW01312.0150

Service Request: R2005464
Date Analyzed: 07/01/20 20:11

Continuing Calibration Verification (CCV) Summary
Organic Acids in Aqueous Matrices by High Performance Liquid Chromatography (HPLC) 28 Day Hold Time

Analysis Method: Organic Acids
File ID: I:\ACQUDATA\hplc05\data\070120\A0005454.D\
Signal ID: 1

Calibration Date: 12/30/2000
Calibration ID: RC2000053
Analysis Lot: 686010
Units: mg/L

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
Pyruvic Acid	5.00	5.20	5.916E5	6.161E5	4.2	NA	±15	Average RF
Acetic Acid	50.0	49.6	5.605E4	5.559E4	-0.8	NA	±15	Average RF
Butanoic Acid (Butyric Acid)	50.0	47.2	5.256E4	4.962E4	-5.6	NA	±15	Average RF
Lactic Acid	50.0	47.4	5.642E4	5.345E4	-5.3	NA	±15	Average RF
Propionic Acid	50.0	49.2	5.436E4	5.343E4	-1.7	NA	±15	Average RF

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: LHAAP / Site 58/NW01312.0150

Service Request: R2005464
Date Analyzed: 07/02/20 02:32

Continuing Calibration Verification (CCV) Summary
Organic Acids in Aqueous Matrices by High Performance Liquid Chromatography (HPLC) 28 Day Hold Time

Analysis Method: Organic Acids
File ID: I:\ACQUDATA\hplc05\data\070120\A0005460.D\
Signal ID: 1

Calibration Date: 12/30/2000
Calibration ID: RC2000053
Analysis Lot: 686010
Units: mg/L

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
Pyruvic Acid	5.00	5.23	5.916E5	6.187E5	4.6	NA	±15	Average RF
Acetic Acid	50.0	49.6	5.605E4	5.552E4	-0.9	NA	±15	Average RF
Butanoic Acid (Butyric Acid)	50.0	48.2	5.256E4	5.077E4	-3.4	NA	±15	Average RF
Lactic Acid	50.0	47.5	5.642E4	5.362E4	-5.0	NA	±15	Average RF
Propionic Acid	50.0	48.9	5.436E4	5.313E4	-2.3	NA	±15	Average RF

ALS Group USA, Corp.
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QA/QC Report

Client: ALS Environmental - US
Project: LHAAP / Site 58/NW01312.0150

Service Request: R2005464
Date Analyzed: 07/02/20 08:50

Continuing Calibration Verification (CCV) Summary
Organic Acids in Aqueous Matrices by High Performance Liquid Chromatography (HPLC) 28 Day Hold Time

Analysis Method: Organic Acids
File ID: I:\ACQUDATA\hplc05\data\070120\A0005466.D\
Signal ID: 1

Calibration Date: 12/30/2000
Calibration ID: RC2000053
Analysis Lot: 686010
Units: mg/L

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
Pyruvic Acid	5.00	5.02	5.916E5	5.947E5	0.5	NA	±15	Average RF
Acetic Acid	50.0	48.6	5.605E4	5.439E4	-3.0	NA	±15	Average RF
Butanoic Acid (Butyric Acid)	50.0	49.7	5.256E4	5.232E4	-0.5	NA	±15	Average RF
Lactic Acid	50.0	46.8	5.642E4	5.278E4	-6.5	NA	±15	Average RF
Propionic Acid	50.0	48.7	5.436E4	5.289E4	-2.7	NA	±15	Average RF

ALS Group USA, Corp.
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QA/QC Report

Client: ALS Environmental - US
Project: LHAAP / Site 58/NW01312.0150

Service Request: R2005464
Date Analyzed: 07/02/20 15:08

Continuing Calibration Verification (CCV) Summary
Organic Acids in Aqueous Matrices by High Performance Liquid Chromatography (HPLC) 28 Day Hold Time

Analysis Method: Organic Acids
File ID: I:\ACQUDATA\hplc05\data\070120\A0005472.D\
Signal ID: 1

Calibration Date: 12/30/2000
Calibration ID: RC2000053
Analysis Lot: 686010
Units: mg/L

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
Pyruvic Acid	5.00	5.02	5.916E5	5.94E5	0.4	NA	±15	Average RF
Acetic Acid	50.0	48.5	5.605E4	5.431E4	-3.1	NA	±15	Average RF
Butanoic Acid (Butyric Acid)	50.0	49.7	5.256E4	5.231E4	-0.5	NA	±15	Average RF
Lactic Acid	50.0	47.0	5.642E4	5.308E4	-5.9	NA	±15	Average RF
Propionic Acid	50.0	49.5	5.436E4	5.375E4	-1.1	NA	±15	Average RF

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US **Service Request:**R2005464
Project: LHAAP / Site 58/NW01312.0150

Analysis Run Log
Organic Acids in Aqueous Matrices by High Performance Liquid Chromatography (HPLC) 28 Day Hold Time

Analysis Method: Organic Acids **Analysis Lot:**686010
Instrument ID:R-HPLC-05

Raw Data File	Sample Name	Lab Code	Date Analyzed	Time Analyzed	Q
I:\ACQUDATA\hplc05\data\070120\A0005465.D\	35AWW19_062420 MS	RQ2007136-07	12/29/2000	23:47:48	
I:\ACQUDATA\hplc05\data\070120\A0005455.D\	ZZZZZZZ	ZZZZZZZ	12/29/2000	23:48:29	
I:\ACQUDATA\hplc05\data\070120\A0005461.D\	ZZZZZZZ	ZZZZZZZ	12/30/2000	02:47:58	
I:\ACQUDATA\hplc05\data\070120\A0005456.D\	ZZZZZZZ	ZZZZZZZ	12/30/2000	16:48:33	
I:\ACQUDATA\hplc05\data\070120\A0005467.D\	35AWW19_062420 DMS	RQ2007136-08	12/30/2000	16:48:42	
I:\ACQUDATA\hplc05\data\070120\A0005449.D\	Method Blank	RQ2007136-02	12/31/2000	02:48:24	
I:\ACQUDATA\hplc05\data\070120\A0005454.D\	Continuing Calibration Verification	RQ2007136-05	12/31/2000	02:48:28	
I:\ACQUDATA\hplc05\data\070120\A0005469.D\	LHSMW07_062420	R2005464-003	12/31/2000	02:48:33	
I:\ACQUDATA\hplc05\data\070120\A0005471.D\	35AWW23_062420	R2005464-005	12/31/2000	02:48:34	
I:\ACQUDATA\hplc05\data\070120\A0005448.D\	Continuing Calibration Verification	RQ2007136-01	7/1/2020	13:56:19	
I:\ACQUDATA\hplc05\data\070120\A0005449.D\	Method Blank	RQ2007136-02	7/1/2020	14:56:00	
I:\ACQUDATA\hplc05\data\070120\A0005450.D\	Lab Control Sample	RQ2007136-03	7/1/2020	16:02:18	
I:\ACQUDATA\hplc05\data\070120\A0005451.D\	Duplicate Lab Control Sample	RQ2007136-04	7/1/2020	17:05:25	
I:\ACQUDATA\hplc05\data\070120\A0005452.D\	ZZZZZZZ	ZZZZZZZ	7/1/2020	18:08:24	
I:\ACQUDATA\hplc05\data\070120\A0005453.D\	ZZZZZZZ	ZZZZZZZ	7/1/2020	19:11:21	
I:\ACQUDATA\hplc05\data\070120\A0005454.D\	Continuing Calibration Verification	RQ2007136-05	7/1/2020	20:11:00	
I:\ACQUDATA\hplc05\data\070120\A0005455.D\	ZZZZZZZ	ZZZZZZZ	7/1/2020	21:14:00	
I:\ACQUDATA\hplc05\data\070120\A0005456.D\	ZZZZZZZ	ZZZZZZZ	7/1/2020	22:17:00	
I:\ACQUDATA\hplc05\data\070120\A0005460.D\	Continuing Calibration Verification	RQ2007136-06	7/2/2020	02:32:48	
I:\ACQUDATA\hplc05\data\070120\A0005461.D\	ZZZZZZZ	ZZZZZZZ	7/2/2020	03:32:00	
I:\ACQUDATA\hplc05\data\070120\A0005462.D\	ZZZZZZZ	ZZZZZZZ	7/2/2020	04:38:45	
I:\ACQUDATA\hplc05\data\070120\A0005463.D\	ZZZZZZZ	ZZZZZZZ	7/2/2020	05:41:40	
I:\ACQUDATA\hplc05\data\070120\A0005464.D\	35AWW19_062420	R2005464-001	7/2/2020	06:44:40	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US **Service Request:**R2005464
Project: LHAAP / Site 58/NW01312.0150

Analysis Run Log

Organic Acids in Aqueous Matrices by High Performance Liquid Chromatography (HPLC) 28 Day Hold Time

Analysis Method: Organic Acids **Analysis Lot:**686010
Instrument ID:R-HPLC-05

Raw Data File	Sample Name	Lab Code	Date Analyzed	Time Analyzed	Q
I:\ACQUDATA\hplc05\data\070120\A0005465.D\	35AWW19_062420 MS	RQ2007136-07	7/2/2020	07:44:00	
I:\ACQUDATA\hplc05\data\070120\A0005466.D\	Continuing Calibration Verification	RQ2007136-09	7/2/2020	08:50:41	
I:\ACQUDATA\hplc05\data\070120\A0005467.D\	35AWW19_062420 DMS	RQ2007136-08	7/2/2020	09:50:00	
I:\ACQUDATA\hplc05\data\070120\A0005468.D\	35AWW20_062420	R2005464-002	7/2/2020	10:56:30	
I:\ACQUDATA\hplc05\data\070120\A0005469.D\	LHSMW07_062420	R2005464-003	7/2/2020	11:56:00	
I:\ACQUDATA\hplc05\data\070120\A0005470.D\	35AWW06_062420	R2005464-004	7/2/2020	13:02:27	
I:\ACQUDATA\hplc05\data\070120\A0005471.D\	35AWW23_062420	R2005464-005	7/2/2020	14:02:00	
I:\ACQUDATA\hplc05\data\070120\A0005472.D\	Continuing Calibration Verification	RQ2007136-10	7/2/2020	15:08:24	

Analysis: Organic Acids Analyst: AFelix Run Method: NEUMETA.M
Date: 07/01/2020 Instr. HPLC05 Quant Method: MAD31220.M
LIMS Run#: 686010
Setup: Column: Synergi Hydro RP 150x4.6 Col.Temp: 35 Flow: 0.6 mL/min
Mobile Phase: Organic Acids preparation Buffer ul Inj.: 50
Mobile Phase ID: O-766-77G

Pos.	Sample	Diln.	Stds. ID	File#	OK?	Comments
2	BLK			A0005446	—	
2	BLK			47	—	
1	CCV	100µL/1mL	209218	48	Y	
2	MB			49	Y	
3	LCS	100µL/1mL	208621	50	Y	
4	DLCS	〃	〃	51	Y	
5	R2005448-001			52	Y	
6	〃 -002			53	Y	
1	CCV	100µL/1mL	209218	54	Y	
7	R2005448-003			55	Y	
8	R2005449-001			56	Y	
9	〃 -002			57	N	>LR, repeat @ 1/2
10	〃 -002 MS		208621	58	N	
11	〃 -002 DMS		〃	59	N	
1	CCV	100µL/1mL	209218	60	Y	
12	R2005353-001			61	Y	
13	〃 -002			62	Y	
14	〃 -003			63	Y	
15	R2005464-001			64	Y	
16	〃 -001 MS		208621	65	Y	
1	CCV	100µL/1mL	209218	66	Y	
17	R2005464-001 DMS		208621	67	Y	Pyruvic 〃
18	〃 -002			68	Y	
19	〃 -003			69	Y	
20	〃 -004			70	Y	
21	〃 -005			71	Y	
1	CCV	100µL/1mL	209218	72	Y	

Primary: 209218 exp: 09/19/2020 Secondary: 208621 exp: 09/19/2020
pH Paper: 208628 Acid: 209896

Runlog HPLCr2
3/23/18

LABORATORY REPORT

July 6, 2020

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

RE: HS20061218

Dear RJ:

Enclosed are the results of the samples submitted to our laboratory on June 26, 2020. For your reference, these analyses have been assigned our service request number P2003597.

All analyses were performed according to our laboratory's NELAP and DoD-ELAP-approved quality assurance program. The test results meet requirements of the current NELAP and DoD-ELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP and DoD-ELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. Results are intended to be considered in their entirety and apply only to the samples analyzed and reported herein.

If you have any questions, please call me at (805) 526-7161.

Respectfully submitted,

ALS | Environmental

By Sue Anderson at 1:28 pm, Jul 06, 2020

For Hayden Akers
Project Manager

Client: ALS Laboratory Group Service Request No: P2003597
Project: HS20061218

CASE NARRATIVE

The samples were received intact under chain of custody on June 26, 2020 and were stored in accordance with the analytical method requirements. Please refer to the sample acceptance check form for additional information. The results reported herein are applicable only to the condition of the samples at the time of sample receipt.

Carbon Dioxide Analysis

The samples were analyzed for carbon dioxide using a gas chromatograph equipped with a thermal conductivity detector (TCD). A known amount of liquid was displaced by injecting 8.0 milliliters of helium creating a headspace in the sample vial. Each sample vial was agitated using a sonic disrupter for fifteen minutes and then allowed to equilibrate for at least four hours. A volume of the headspace was withdrawn using a gas-tight syringe and analyzed using a manual injection technique. The amount of dissolved gases (carbon dioxide) in the original sample was calculated using Henry's Law. This method was performed with guidance from RSK 175 as described in laboratory SOP VOA-DISGAS. This analyte is included on the laboratory's NELAP and DoD-ELAP scope of accreditation.

Methane, Ethene and Ethane Analysis

The samples were also analyzed for methane, ethene, and ethane using a gas chromatograph equipped with a flame ionization detector (FID). A known amount of liquid was displaced by injecting 8.0 milliliters of helium creating a headspace in the sample vial. Each sample vial was agitated using a sonic disrupter for fifteen minutes and then allowed to equilibrate for at least two hours. A volume of the headspace was withdrawn using a gas-tight syringe and analyzed using a manual injection technique. The amount of dissolved gases (methane, ethene and ethane) in the original sample was calculated using Henry's Law. This method was performed with guidance from RSK 175. This method is included on the laboratory's NELAP and DoD-ELAP scope of accreditation. Any analytes flagged with an X are not included on the laboratory's NELAP or DoD-ELAP accreditation.

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 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.

ALS Environmental – Simi Valley

CERTIFICATIONS, ACCREDITATIONS, AND REGISTRATIONS

Agency	Web Site	Number
Alaska DEC	http://dec.alaska.gov/eh/lab.aspx	17-019
Arizona DHS	http://www.azdhs.gov/preparedness/state-laboratory/lab-licensure-certification/index.php#laboratory-licensure-home	AZ0694
Florida DOH (NELAP)	http://www.floridahealth.gov/licensing-and-regulation/environmental-laboratories/index.html	E871020
Louisiana DEQ (NELAP)	http://www.deq.louisiana.gov/page/la-lab-accreditation	05071
Maine DHHS	http://www.maine.gov/dhhs/mecdc/environmental-health/dwp/professionals/labCert.shtml	2018027
Minnesota DOH (NELAP)	http://www.health.state.mn.us/accreditation	1776326
New Jersey DEP (NELAP)	http://www.nj.gov/dep/enforcement/oqa.html	CA009
New York DOH (NELAP)	http://www.wadsworth.org/labcert/elap/elap.html	11221
Oregon PHD (NELAP)	http://www.oregon.gov/oha/ph/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	4068-007
Pennsylvania DEP	http://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx	68-03307 (Registration)
PJLA (DoD ELAP)	http://www.pjlabs.com/search-accredited-labs	65818 (Testing)
Texas CEQ (NELAP)	http://www.tceq.texas.gov/agency/qa/env_lab_accreditation.html	T104704413-19-10
Utah DOH (NELAP)	http://health.utah.gov/lab/lab_cert_env	CA016272019-10
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C946

Analyses were performed according to our laboratory's NELAP and DoD-ELAP approved quality assurance program. A complete listing of specific NELAP and DoD-ELAP certified analytes can be found in the certifications section at www.alsglobal.com, or at the accreditation body's website.

Each of the certifications listed above have an explicit Scope of Accreditation that applies to specific matrices/methods/analytes; therefore, please contact the laboratory for information corresponding to a particular certification.

ALS ENVIRONMENTAL

DETAIL SUMMARY REPORT

Client: ALS Laboratory Group
Service Request: P2003597
Project ID: HS20061218

Date Received: 6/26/2020
Time Received: 09:15

Client Sample ID	Lab Code	Matrix	Date Collected	Time Collected	RSK 175 - CO2	RSK 175 - Gases
35AWW19_062420	P2003597-001	Water	6/24/2020	08:30	X	X
35AWW20_062420	P2003597-002	Water	6/24/2020	09:25	X	X
LHSMW07_062420	P2003597-003	Water	6/24/2020	10:15	X	X
35AWW06_062420	P2003597-004	Water	6/24/2020	11:05	X	X
35AWW23_062420	P2003597-005	Water	6/24/2020	12:00	X	X

RJ603597

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: **Texas** **COC ID:** **14191**

SUBCONTRACT TO:

ALS Environmental
2655 Park Center Drive, Suite A
Simi Valley, CA 93065

Phone: +1 805 526 7161

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:	HS20061218
TSR:	Danielle Winnings

	LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
	ANALYSIS REQUESTED			DUE DATE
1.	**HS20061218-01**	**35AWW19_062420**	**Groundwater**	**24 Jun 2020 08:30**
	MEE plus CO2 Sub to ALS SimiValley			06 Jul 2020
2.	**HS20061218-02**	**35AWW20_062420**	**Groundwater**	**24 Jun 2020 09:25**
	MEE plus CO2 Sub to ALS SimiValley			06 Jul 2020
3.	**HS20061218-03**	**LHSMW07_062420**	**Groundwater**	**24 Jun 2020 10:15**
	MEE plus CO2 Sub to ALS SimiValley			06 Jul 2020
4.	**HS20061218-04**	**35AWW06_062420**	**Groundwater**	**24 Jun 2020 11:05**
	MEE plus CO2 Sub to ALS SimiValley			06 Jul 2020
5.	**HS20061218-05**	**35AWW23_062420**	**Groundwater**	**24 Jun 2020 12:00**
	MEE plus CO2 Sub to ALS SimiValley			06 Jul 2020

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

QC Level: DOD IV (DoD Data Package)

PJ003597

Subcontract Chain of Custody

SAMPLING STATE: **Texas**

COC ID: **14191**

Relinquished By: _____ Date/Time: 6/25/2020 1800

Received By: _____ Date/Time: 6-26-20 0915 3° wet

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

ALS Environmental
Sample Acceptance Check Form

Client: ALS Laboratory Group Work order: P2003597

Project: HS20061218

Sample(s) received on: 06/26/20 Date opened: 06/26/20 by: ADAVID

Note: This form is used for all samples received by ALS. The use of this form for custody seals is strictly meant to indicate presence/absence and not as an indication of compliance or nonconformity. Thermal preservation and pH will only be evaluated either at the request of the client and/or as required by the method/SOP.

		Yes	No	N/A
1	Were **sample containers** properly marked with client sample ID?	☒	☐	☐
2	Did **sample containers** arrive in good condition?	☒	☐	☐
3	Were **chain-of-custody** papers used and filled out?	☒	☐	☐
4	Did **sample container labels** and/or tags agree with custody papers?	☒	☐	☐
5	Was **sample volume** received adequate for analysis?	☒	☐	☐
6	Are samples within specified holding times?	☒	☐	☐
7	Was proper **temperature** (thermal preservation) of cooler at receipt adhered to?	☒	☐	☐
	Cooler Temperature: ° C Blank Temperature: 3° C			
8	Were **custody seals** on outside of cooler/Box/Container?	☒	☐	☐
	Location of seal(s)? _____ Sealing Lid?	☒	☐	☐
	Were signature and date included?	☒	☐	☐
	Were seals intact?	☒	☐	☐
9	Do containers have appropriate **preservation**, according to method/SOP or Client specified information?	☒	☐	☐
	Is there a client indication that the submitted samples are **pH** preserved?	☒	☐	☐
	Were **VOA vials** checked for presence/absence of air bubbles?	☒	☐	☐
	Does the client/method/SOP require that the analyst check the sample pH and if necessary alter it?	☐	☒	☐
10	**Tubes:** Are the tubes capped and intact?	☒	☐	☐
11	**Badges:** Are the badges properly capped and intact?	☒	☐	☐
	Are dual bed badges separated and individually capped and intact?	☒	☐	☐

Lab Sample ID	Container Description	Required pH *	Received pH	Adjusted pH	VOA Headspace (Presence/Absence)	Receipt / Preservation Comments
P2003597-001.01	40mL VOA NP		7		A	LD 06/30/2020
P2003597-001.02	40mL VOA NP				A	
P2003597-001.04	40ml VOA HCL		1		A	LD 07/01/2020
P2003597-001.05	40ml VOA HCL				A	
P2003597-001.06	40ml VOA HCL				A	
P2003597-002.01	40mL VOA NP		7		A	LD 06/30/2020
P2003597-002.02	40mL VOA NP				A	
P2003597-002.04	40ml VOA HCL		1		A	LD 07/01/2020
P2003597-002.05	40ml VOA HCL				A	
P2003597-002.06	40ml VOA HCL				A	
P2003597-003.01	40mL VOA NP		7		A	LD 06/30/2020
P2003597-003.02	40mL VOA NP				A	
P2003597-003.04	40ml VOA HCL		1		A	LD 07/01/2020
P2003597-003.05	40ml VOA HCL				A	
P2003597-003.06	40ml VOA HCL				A	

Explain any discrepancies: (include lab sample ID numbers):

RSK - MEEPP, HCL (pH<2); RSK - CO2, (pH 5-8); Sulfur (pH>4)

ALS Environmental
Sample Acceptance Check Form

Client: ALS Laboratory Group Work order: P2003597

Project: HS20061218

Sample(s) received on: 06/26/20 Date opened: 06/26/20 by: ADAVID

Lab Sample ID	Container Description	Required pH *	Received pH	Adjusted pH	VOA Headspace (Presence/Absence)	Receipt / Preservation Comments
P2003597-004.01	40mL VOA NP		7		A	LD 06/30/2020
P2003597-004.02	40mL VOA NP				A	
P2003597-004.04	40ml VOA HCL		1		A	LD 07/01/2020
P2003597-004.05	40ml VOA HCL				A	
P2003597-004.06	40ml VOA HCL				A	
P2003597-005.01	40mL VOA NP		7		A	LD 06/30/2020
P2003597-005.02	40mL VOA NP				A	
P2003597-005.04	40ml VOA HCL		1		A	LD 07/01/2020
P2003597-005.05	40ml VOA HCL				A	
P2003597-005.06	40ml VOA HCL				A	

Explain any discrepancies: (include lab sample ID numbers):

RSK - MEEPP, HCL (pH<2); RSK - CO2, (pH 5-8); Sulfur (pH>4)

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **ALS Laboratory Group**
Client Project ID: **HS20061218** ALS Project ID: P2003597

Carbon Dioxide

Test Code: RSK 175
Instrument ID: HP5890A/GC10/TCD Date(s) Collected: 6/24/20
Analyst: Li Donghao Date Received: 6/26/20
Matrix: Liquid Date Analyzed: 6/30/20
Test Notes:

Client Sample ID	ALS Sample ID	Injection Volume ml(s)	Result µg/L	LOQ µg/L	LOD µg/L	MDL µg/L	Data Qualifier
35AWW19_062420	P2003597-001	0.10	**160,000**	1,000	860	370	
35AWW20_062420	P2003597-002	0.10	**250,000**	1,000	860	370	
LHSMW07_062420	P2003597-003	0.10	**250,000**	1,000	860	370	
35AWW06_062420	P2003597-004	0.10	**270,000**	1,000	860	370	
35AWW23_062420	P2003597-005	0.10	**310,000**	1,000	860	370	
Method Control Sample	P200630-MB	0.10	860	1,000	860	370	**U**

The Method Control Sample is laboratory water carried through the entire analytical process.
U = Compound was analyzed for, but not detected above the laboratory detection limit.
LOQ = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

LABORATORY CONTROL SAMPLE / DUPLICATE LABORATORY CONTROL SAMPLE SUMMARY

Client: **ALS Laboratory Group**
Client Sample ID: **Duplicate Lab Control Sample** ALS Project ID: P2003597
Client Project ID: **HS20061218** ALS Sample ID: P200630-DLCS

Test Code: RSK 175 Date Collected: NA
Instrument ID: HP5890A/GC10/TCD Date Received: NA
Analyst: Li Donghao Date Analyzed: 6/30/20
Matrix: Liquid Volume(s) Analyzed: NA ml(s)
Test Notes:

CAS #	Compound	Spike Amount LCS / DLCS ug/L	Result$_1$ LCS ug/L	Result$_1$ DLCS ug/L	% Recovery LCS	% Recovery DLCS	DOD Acceptance Limits	RPD	RPD Limit	Data Qualifier
124-38-9	Carbon Dioxide	22,900	19,500	19,200	**85**	**84**	80-122	1	12	

$_1$ = The concentration shown includes a subtraction of the Method Control Sample value, even if the result is less than the MRL.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **ALS Laboratory Group**
Client Sample ID: **35AWW19_062420**
Client Project ID: **HS20061218**

ALS Project ID: P2003597
ALS Sample ID: P2003597-001

Test Code: RSK 175
Instrument ID: HP5890A/GC10/FID
Analyst: Li Donghao
Matrix: Water
Test Notes:

Date Collected: 06/24/20
Date Received: 06/26/20
Date Analyzed: 07/01/20
Volume(s) Analyzed: 0.10 ml(s)

CAS #	Compound	Result µg/L	LOQ µg/L	LOD µg/L	MDL µg/L	Data Qualifier
74-82-8	Methane	**3.0**	1.3	1.0	0.51	
74-85-1	Ethene	0.55	1.0	0.55	0.24	**U**
74-84-0	Ethane	0.47	0.60	0.47	0.16	**U**

U = Compound was analyzed for, but not detected above the laboratory detection limit.
LOQ = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **ALS Laboratory Group**
Client Sample ID: **35AWW20_062420**
Client Project ID: **HS20061218**

ALS Project ID: P2003597
ALS Sample ID: P2003597-002

Test Code: RSK 175
Instrument ID: HP5890A/GC10/FID
Analyst: Li Donghao
Matrix: Water
Test Notes:

Date Collected: 06/24/20
Date Received: 06/26/20
Date Analyzed: 07/01/20
Volume(s) Analyzed: 0.10 ml(s)

CAS #	Compound	Result µg/L	LOQ µg/L	LOD µg/L	MDL µg/L	Data Qualifier
74-82-8	Methane	**260**	1.3	1.0	0.51	
74-85-1	Ethene	**5.5**	1.0	0.55	0.24	
74-84-0	Ethane	0.47	0.60	0.47	0.16	**U**

U = Compound was analyzed for, but not detected above the laboratory detection limit.
LOQ = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **ALS Laboratory Group**
Client Sample ID: **LHSMW07_062420**
Client Project ID: **HS20061218**

ALS Project ID: P2003597
ALS Sample ID: P2003597-003

Test Code: RSK 175
Instrument ID: HP5890A/GC10/FID
Analyst: Li Donghao
Matrix: Water
Test Notes:

Date Collected: 06/24/20
Date Received: 06/26/20
Date Analyzed: 07/01/20
Volume(s) Analyzed: 0.10 ml(s)

CAS #	Compound	Result µg/L	LOQ µg/L	LOD µg/L	MDL µg/L	Data Qualifier
74-82-8	Methane	**140**	1.3	1.0	0.51	
74-85-1	Ethene	**2.2**	1.0	0.55	0.24	
74-84-0	Ethane	0.47	0.60	0.47	0.16	**U**

U = Compound was analyzed for, but not detected above the laboratory detection limit.
LOQ = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **ALS Laboratory Group**
Client Sample ID: **35AWW06_062420**
Client Project ID: **HS20061218**

ALS Project ID: P2003597
ALS Sample ID: P2003597-004

Test Code: RSK 175
Instrument ID: HP5890A/GC10/FID
Analyst: Li Donghao
Matrix: Water
Test Notes:

Date Collected: 06/24/20
Date Received: 06/26/20
Date Analyzed: 07/01/20
Volume(s) Analyzed: 0.10 ml(s)

CAS #	Compound	Result µg/L	LOQ µg/L	LOD µg/L	MDL µg/L	Data Qualifier
74-82-8	Methane	**1,400**	1.3	1.0	0.51	
74-85-1	Ethene	0.55	1.0	0.55	0.24	**U**
74-84-0	Ethane	0.47	0.60	0.47	0.16	**U**

U = Compound was analyzed for, but not detected above the laboratory detection limit.
LOQ = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **ALS Laboratory Group**
Client Sample ID: **35AWW23_062420**
Client Project ID: **HS20061218**

ALS Project ID: P2003597
ALS Sample ID: P2003597-005

Test Code: RSK 175
Instrument ID: HP5890A/GC10/FID
Analyst: Li Donghao
Matrix: Water
Test Notes:

Date Collected: 06/24/20
Date Received: 06/26/20
Date Analyzed: 07/01/20
Volume(s) Analyzed: 0.10 ml(s)

CAS #	Compound	Result µg/L	LOQ µg/L	LOD µg/L	MDL µg/L	Data Qualifier
74-82-8	Methane	**1,300**	1.3	1.0	0.51	
74-85-1	Ethene	0.55	1.0	0.55	0.24	**U**
74-84-0	Ethane	0.47	0.60	0.47	0.16	**U**

U = Compound was analyzed for, but not detected above the laboratory detection limit.
LOQ = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **ALS Laboratory Group**
Client Sample ID: **Method Control Sample** ALS Project ID: P2003597
Client Project ID: **HS20061218** ALS Sample ID: P200701-MB

Test Code: RSK 175 Date Collected: NA
Instrument ID: HP5890A/GC10/FID Date Received: NA
Analyst: Li Donghao Date Analyzed: 7/01/20
Matrix: Water Volume(s) Analyzed: 0.10 ml(s)
Test Notes:

CAS #	Compound	Result µg/L	LOQ µg/L	LOD µg/L	MDL µg/L	Data Qualifier
74-82-8	Methane	1.0	1.3	1.0	0.51	**U**
74-85-1	Ethene	0.55	1.0	0.55	0.24	**U**
74-84-0	Ethane	0.47	0.60	0.47	0.16	**U**

The Method Control Sample is laboratory water carried through the entire analytical process.
U = Compound was analyzed for, but not detected above the laboratory detection limit.
LOQ = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

LABORATORY CONTROL SAMPLE / DUPLICATE LABORATORY CONTROL SAMPLE SUMMARY

Client: **ALS Laboratory Group**
Client Sample ID: **Duplicate Lab Control Sample**
Client Project ID: **HS20061218**

ALS Project ID: P2003597
ALS Sample ID: P200701-LCS
P200701-DLCS

Test Code: RSK 175
Instrument ID: HP5890A/GC10/FID
Analyst: Li Donghao
Matrix: Water
Test Notes:

Date Collected: NA
Date Received: NA
Date Analyzed: 7/01/20
Volume(s) Analyzed: 0.10 ml(s)

CAS #	Compound	Spike Amount LCS / DLCS µg/L	Result$_1$ LCS µg/L	Result$_1$ DLCS µg/L	% Recovery LCS	% Recovery DLCS	DOD Acceptance Limits	RPD	RPD Limit	Data Qualifier
74-82-8	Methane	2.52	2.72	2.70	**108**	**107**	73-125	0.9	26	
74-85-1	Ethene	4.40	4.68	4.60	**106**	**105**	72-133	0.9	11	
74-84-0	Ethane	4.72	4.52	4.38	**96**	**93**	74-131	3	10	

$_1$ = The concentration shown includes a subtraction of the Method Control Sample value, even if the result is less than the MRL.

Data Path : I:\GC10\DATA\RSK_FID\2020_06\30CO2\
Data File : 06302011.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 30-Jun-2020, 18:11:05
Operator : LD
Sample : P2003597-001 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Jun 30 18:55:08 2020
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

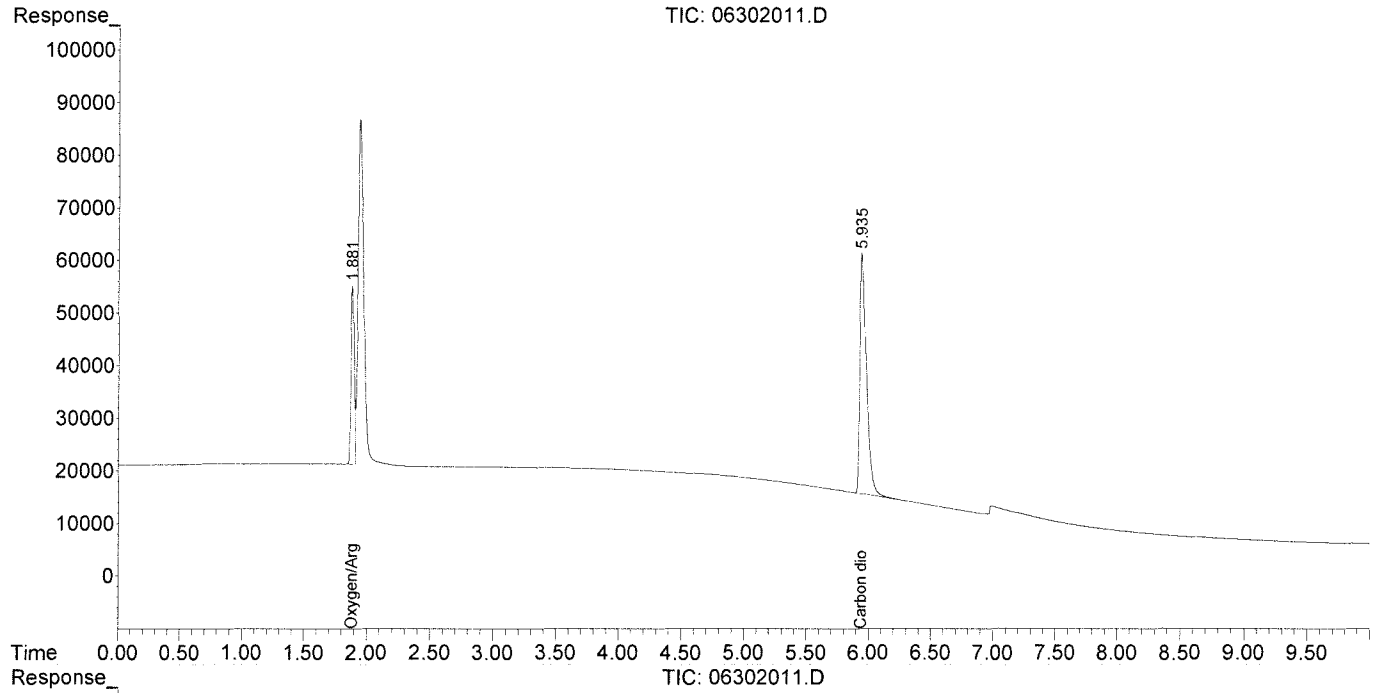
	Compound	R.T.	Response	Conc	Units
Target Compounds					
1)	Oxygen/Argon	1.881	579437	0.122	ppm
2)	Carbon monoxide	1.881	579437	N.D.	ppm
3)	Methane (TCD)	0.000	0	N.D.	ppm
4)	Carbon dioxide	5.936	1692930	7212.270	ppm
6)	Methane (FID)	0.000	0	N.D.	ppm
7)	Ethylene	0.000	0	N.D.	ppm
8)	Ethane	0.000	0	N.D.	ppm
9)	Propylene	0.000	0	N.D.	ppm
10)	Propane	0.000	0	N.D.	ppm
11)	Isobutylene	0.000	0	N.D.	ppm
12)	Isobutane	0.000	0	N.D.	ppm
13)	n-Butane	0.000	0	N.D.	ppm

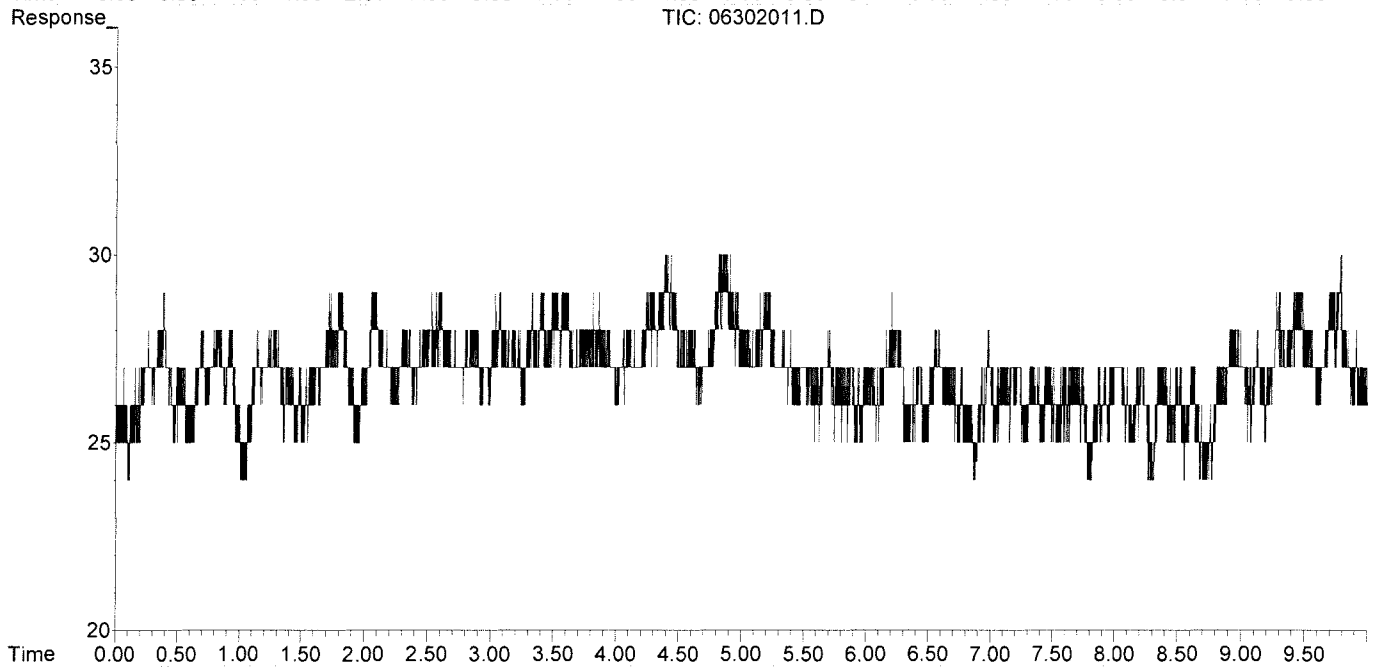
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : I:\GC10\DATA\RSK_FID\2020_06\30CO2\
Data File : 06302011.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 30-Jun-2020, 18:11:05
Operator : LD
Sample : P2003597-001 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Jun 30 18:55:08 2020
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Data Path : I:\GC10\DATA\RSK_FID\2020_06\30CO2\
Data File : 06302012.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 30-Jun-2020, 18:24:23
Operator : LD
Sample : P2003597-002 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Jun 30 18:55:19 2020
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

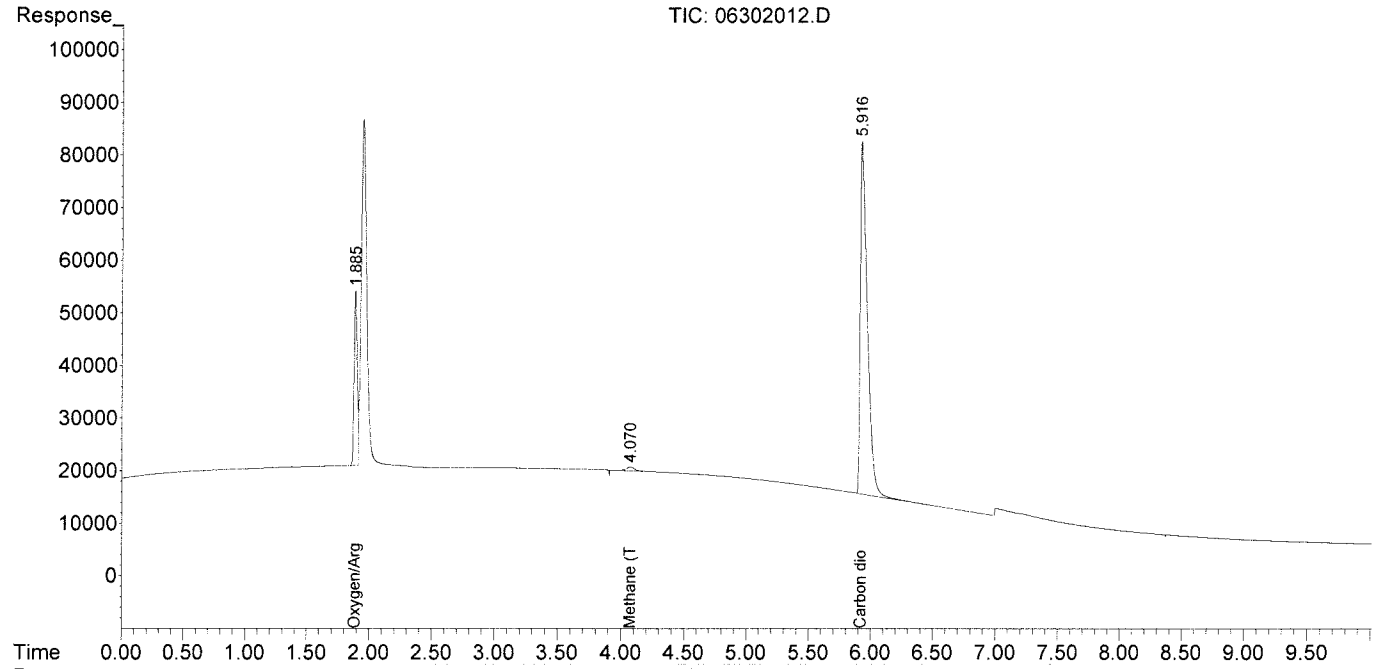
	Compound	R.T.	Response	Conc	Units
Target Compounds					
1)	Oxygen/Argon	1.886	562008	0.118	ppm
2)	Carbon monoxide	1.886	562008	N.D.	ppm
3)	Methane (TCD)	4.070f	30428	3217.401	ppm
4)	Carbon dioxide	5.917	2660994	11336.443	ppm
6)	Methane (FID)	0.000	0	N.D.	ppm
7)	Ethylene	0.000	0	N.D.	ppm
8)	Ethane	0.000	0	N.D.	ppm
9)	Propylene	0.000	0	N.D.	ppm
10)	Propane	0.000	0	N.D.	ppm
11)	Isobutylene	0.000	0	N.D.	ppm
12)	Isobutane	0.000	0	N.D.	ppm
13)	n-Butane	0.000	0	N.D.	ppm

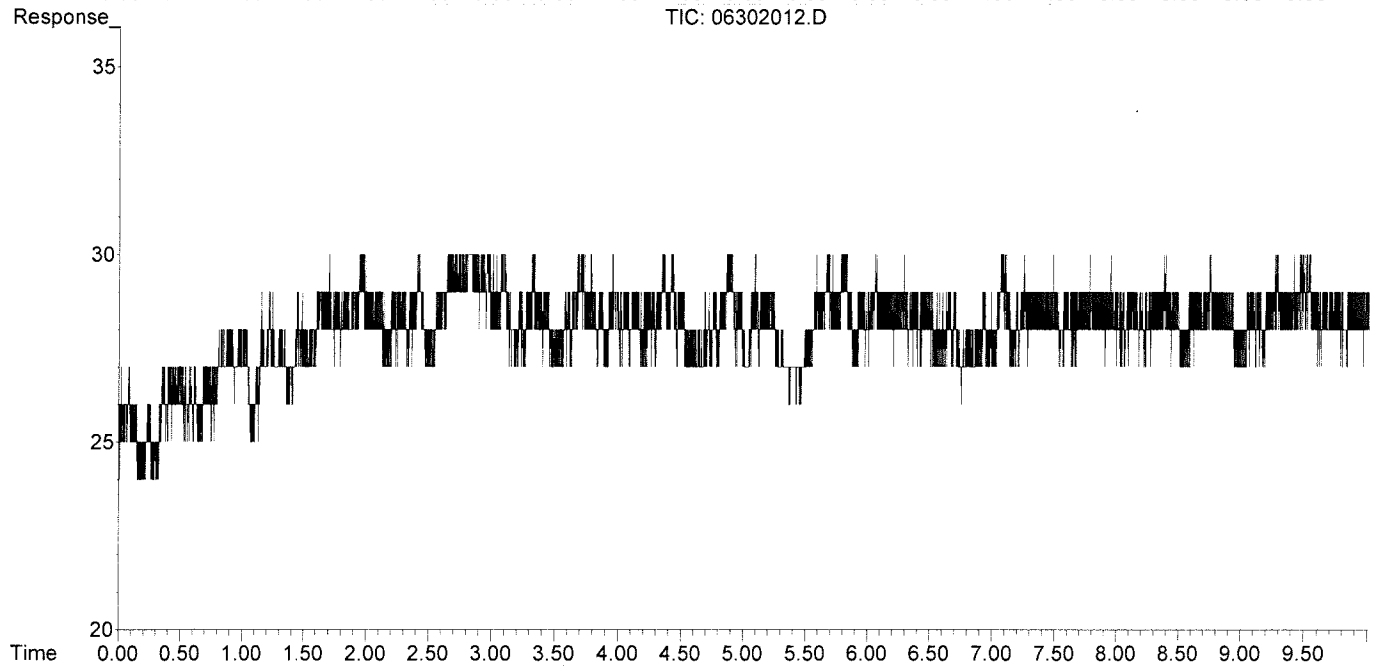
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : I:\GC10\DATA\RSK_FID\2020_06\30CO2\
Data File : 06302012.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 30-Jun-2020, 18:24:23
Operator : LD
Sample : P2003597-002 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Jun 30 18:55:19 2020
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Data Path : I:\GC10\DATA\RSK_FID\2020_06\30CO2\
Data File : 06302013.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 30-Jun-2020, 18:51:47
Operator : LD
Sample : P2003597-003 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Jun 30 19:13:04 2020
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

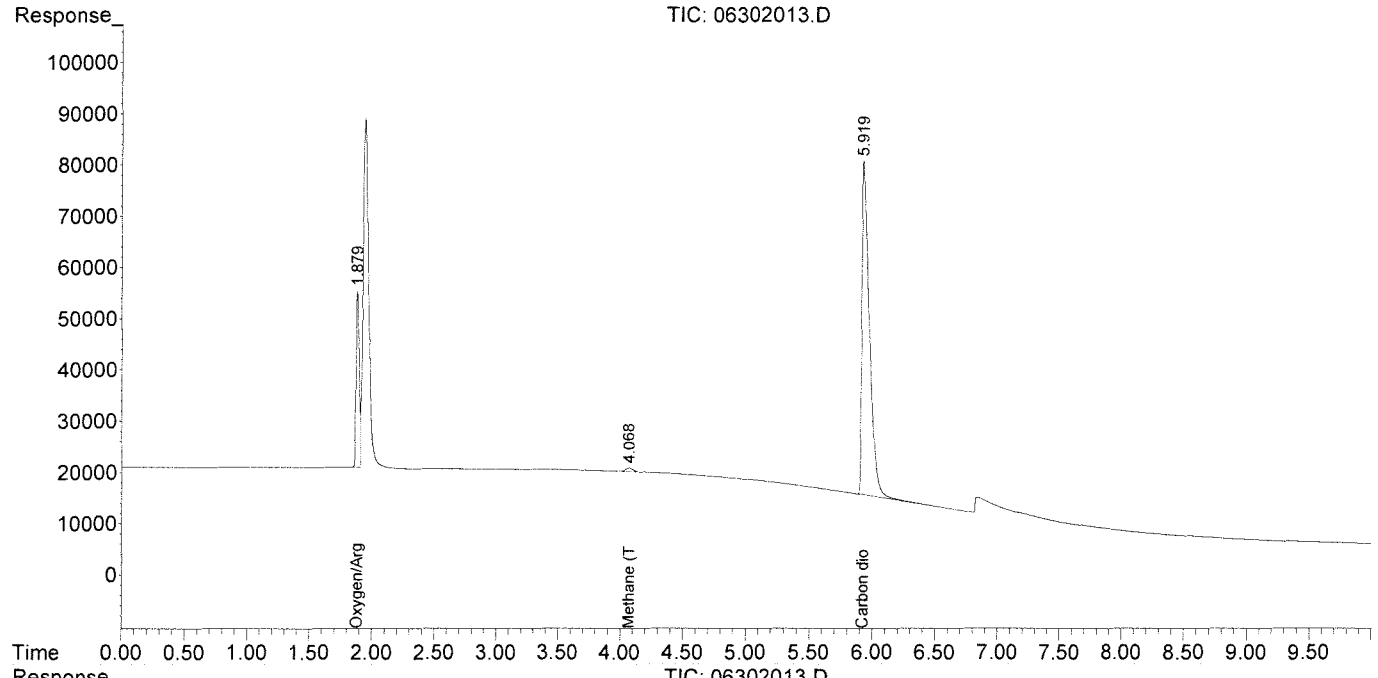
	Compound	R.T.	Response	Conc	Units
Target Compounds					
1)	Oxygen/Argon	1.880	583209	0.123	ppm
2)	Carbon monoxide	1.880	583209	N.D.	ppm
3)	Methane (TCD)	4.068f	32458	3432.037	ppm
4)	Carbon dioxide	5.921	2659264	11329.071	ppm
6)	Methane (FID)	0.000	0	N.D.	ppm
7)	Ethylene	0.000	0	N.D.	ppm
8)	Ethane	0.000	0	N.D.	ppm
9)	Propylene	0.000	0	N.D.	ppm
10)	Propane	0.000	0	N.D.	ppm
11)	Isobutylene	0.000	0	N.D.	ppm
12)	Isobutane	0.000	0	N.D.	ppm
13)	n-Butane	0.000	0	N.D.	ppm

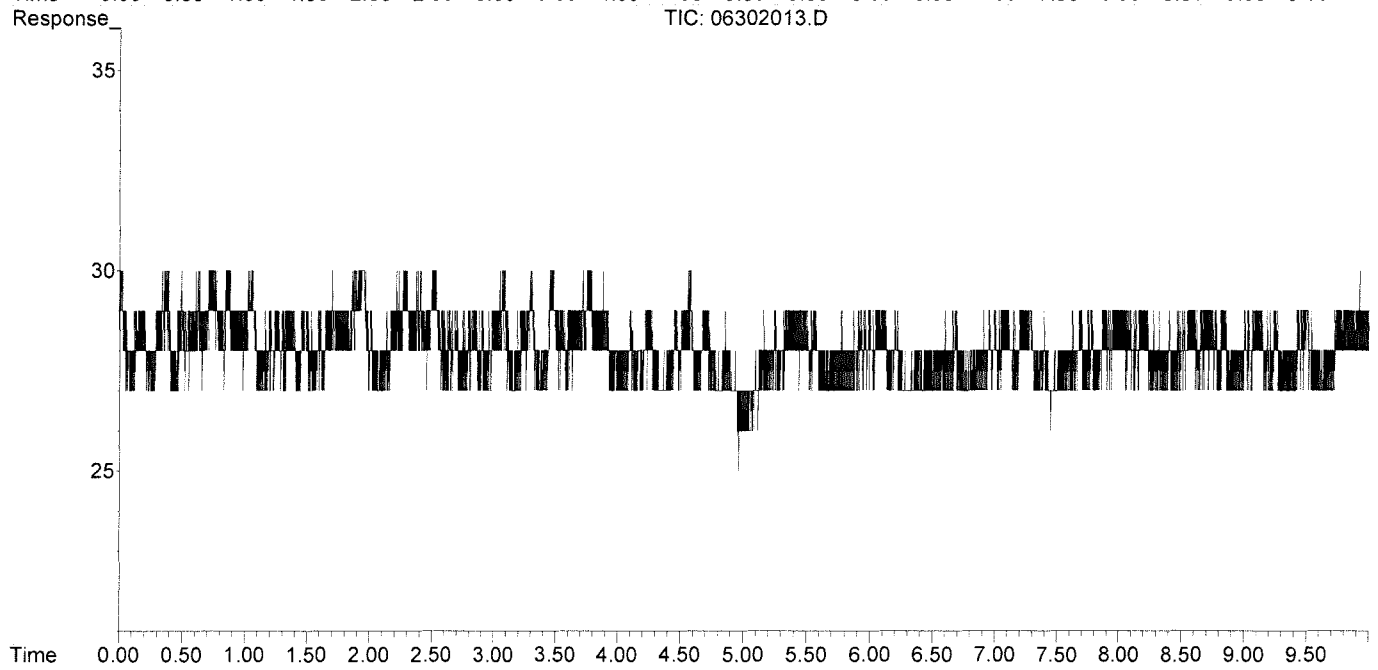
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : I:\GC10\DATA\RSK_FID\2020_06\30CO2\
Data File : 06302013.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 30-Jun-2020, 18:51:47
Operator : LD
Sample : P2003597-003 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Jun 30 19:13:04 2020
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Data Path : I:\GC10\DATA\RSK_FID\2020_06\30CO2\
Data File : 06302014.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 30-Jun-2020, 19:04:54
Operator : LD
Sample : P2003597-004 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Jun 30 19:22:07 2020
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

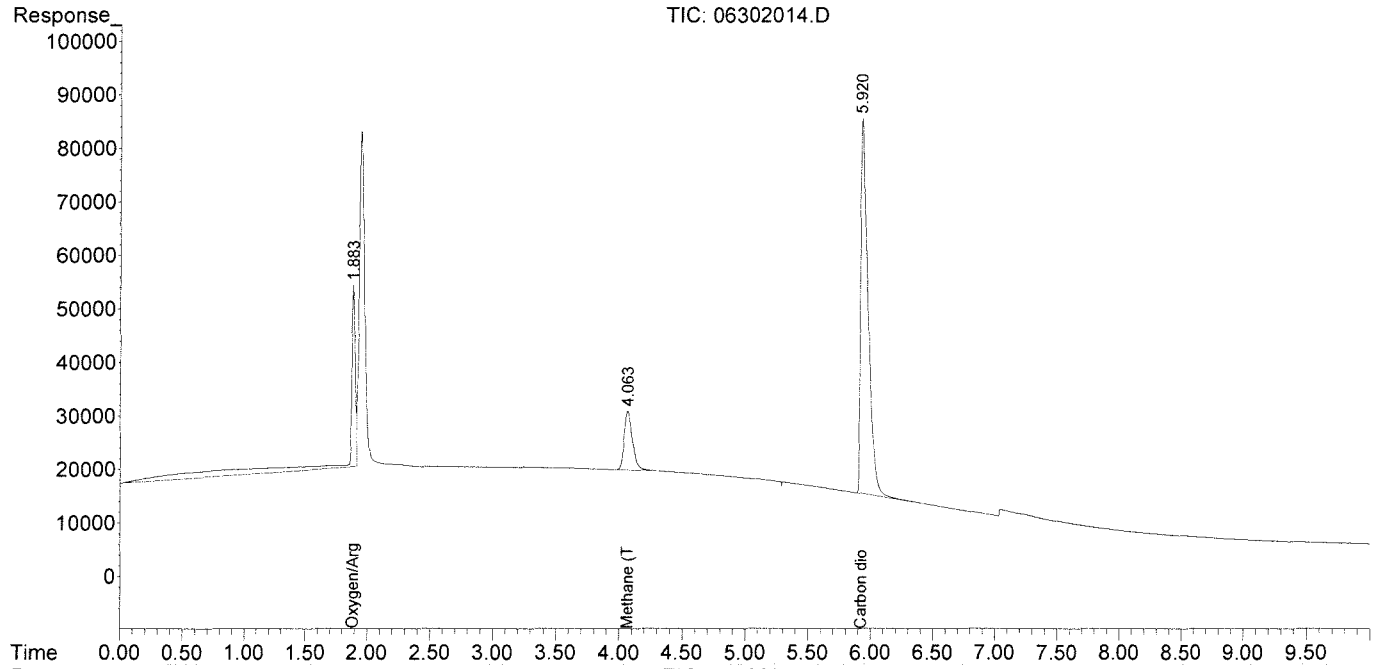
	Compound	R.T.	Response	Conc	Units
Target Compounds					
1)	Oxygen/Argon	1.884	1463966	0.308	ppm
2)	Carbon monoxide	1.884	1463966	N.D.	ppm
3)	Methane (TCD)	4.064f	501100	52985.194	ppm
4)	Carbon dioxide	5.922	2859104	12180.436	ppm
6)	Methane (FID)	0.000	0	N.D.	ppm
7)	Ethylene	0.000	0	N.D.	ppm
8)	Ethane	0.000	0	N.D.	ppm
9)	Propylene	0.000	0	N.D.	ppm
10)	Propane	0.000	0	N.D.	ppm
11)	Isobutylene	0.000	0	N.D.	ppm
12)	Isobutane	0.000	0	N.D.	ppm
13)	n-Butane	0.000	0	N.D.	ppm

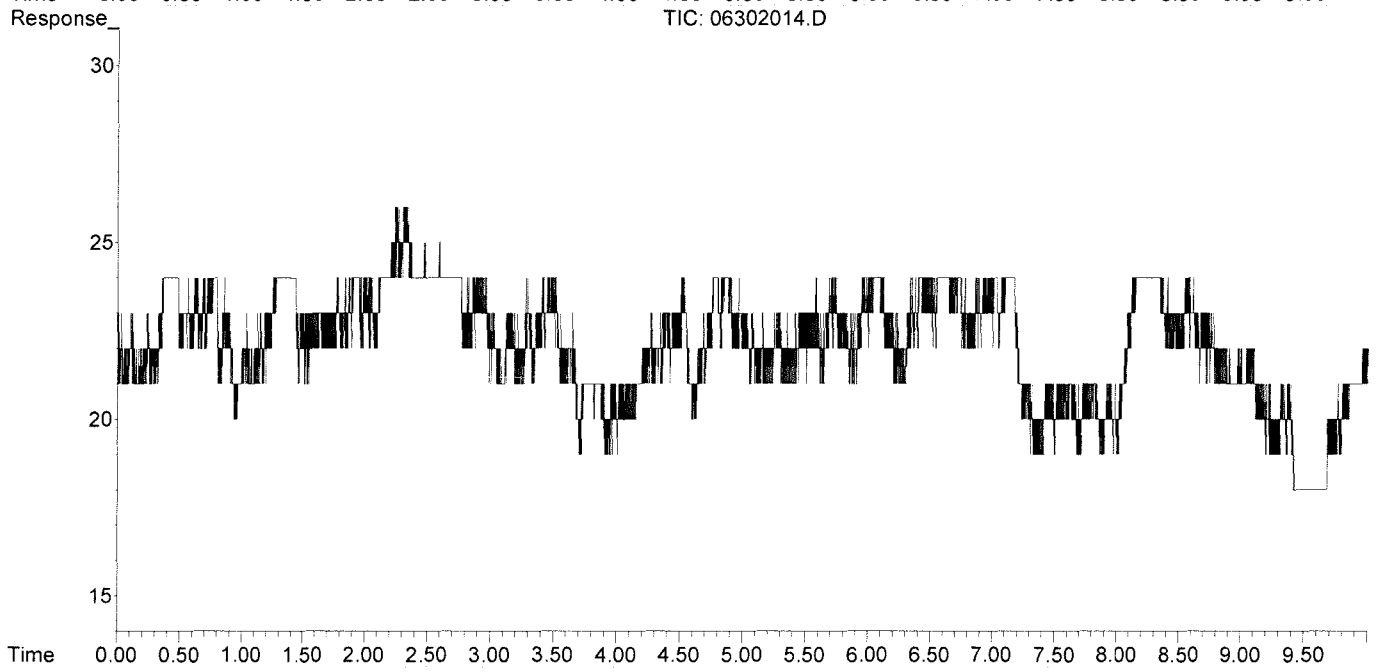
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : I:\GC10\DATA\RSK_FID\2020_06\30CO2\
Data File : 06302014.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 30-Jun-2020, 19:04:54
Operator : LD
Sample : P2003597-004 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Jun 30 19:22:07 2020
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Data Path : I:\GC10\DATA\RSK_FID\2020_06\30CO2\
Data File : 06302015.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 30-Jun-2020, 19:23:20
Operator : LD
Sample : P2003597-005 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Jun 30 19:38:56 2020
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

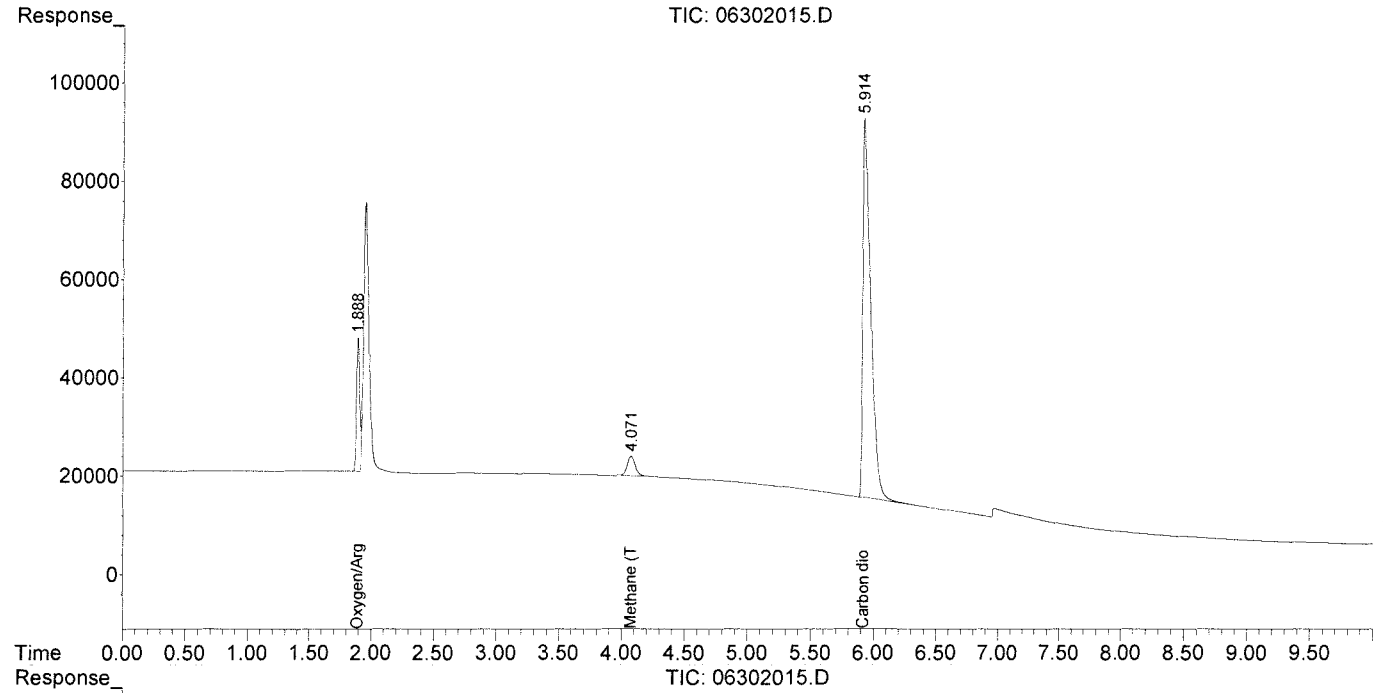
	Compound	R.T.	Response	Conc	Units
Target Compounds					
1)	Oxygen/Argon	1.889	467981	0.098	ppm
2)	Carbon monoxide	1.889	467981	N.D.	ppm
3)	Methane (TCD)	4.072f	176956	18710.902	ppm
4)	Carbon dioxide	5.916	3343077	14242.272	ppm
6)	Methane (FID)	0.000	0	N.D.	ppm
7)	Ethylene	0.000	0	N.D.	ppm
8)	Ethane	0.000	0	N.D.	ppm
9)	Propylene	0.000	0	N.D.	ppm
10)	Propane	0.000	0	N.D.	ppm
11)	Isobutylene	0.000	0	N.D.	ppm
12)	Isobutane	0.000	0	N.D.	ppm
13)	n-Butane	0.000	0	N.D.	ppm

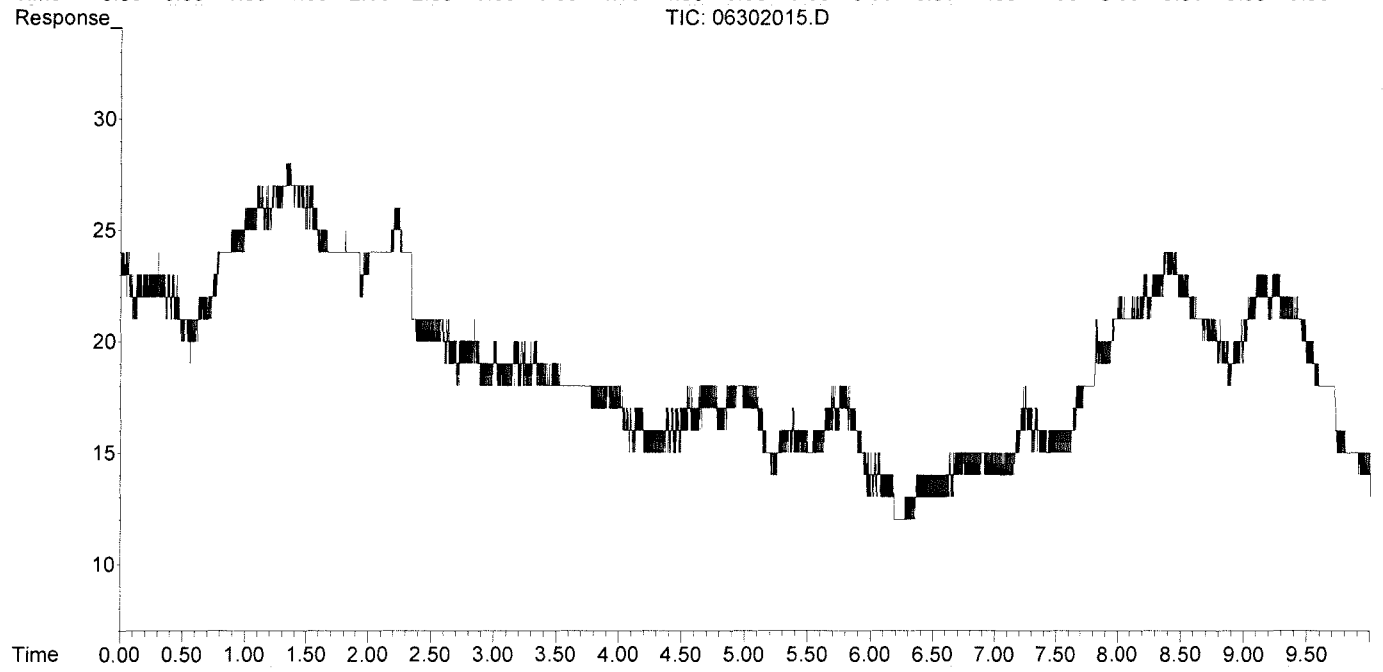
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : I:\GC10\DATA\RSK_FID\2020_06\30CO2\
Data File : 06302015.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 30-Jun-2020, 19:23:20
Operator : LD
Sample : P2003597-005 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Jun 30 19:38:56 2020
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Data Path : I:\GC10\DATA\RSK_FID\2020_06\30CO2\
Data File : 06302003.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 30-Jun-2020, 15:53:39
Operator : LD
Sample : MCS 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Jun 30 16:06:51 2020
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

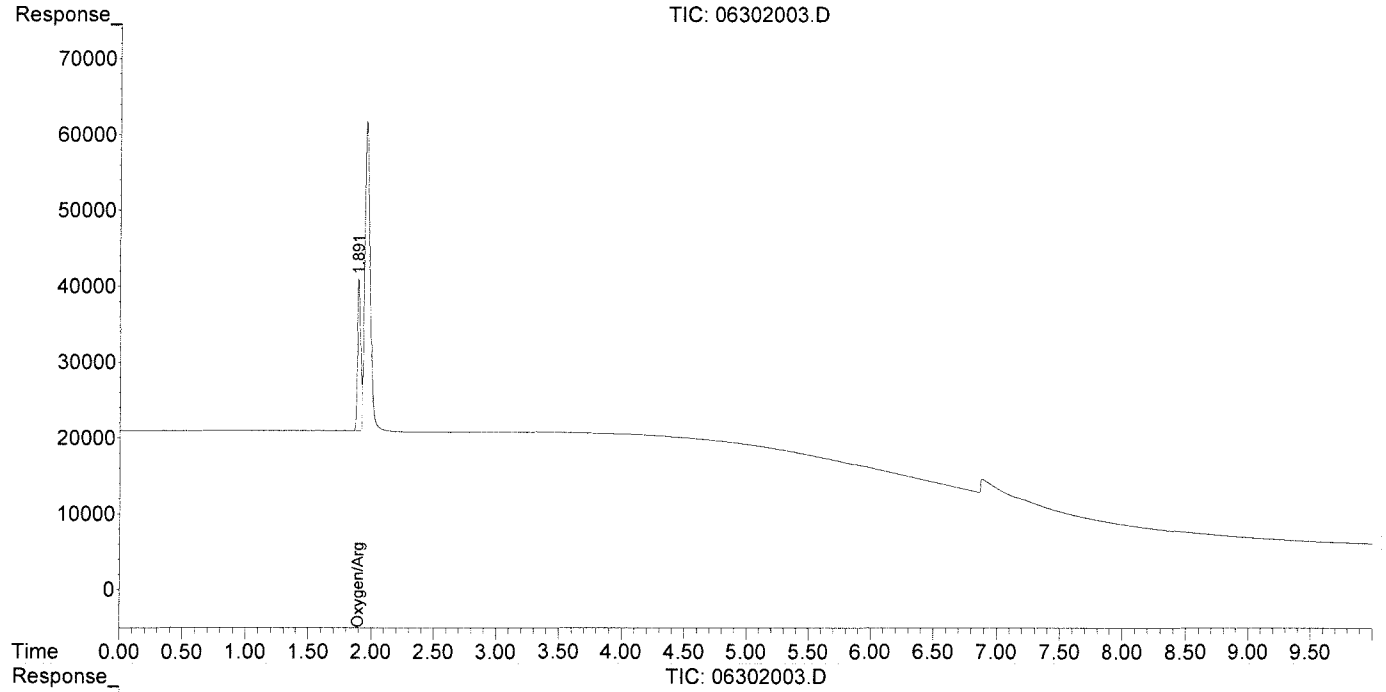
	Compound	R.T.	Response	Conc	Units
Target Compounds					
1)	Oxygen/Argon	1.892	355521	0.075	ppm
2)	Carbon monoxide	1.892	355521	N.D.	ppm
3)	Methane (TCD)	0.000	0	N.D.	ppm
4)	Carbon dioxide	0.000	0	N.D.	ppm
6)	Methane (FID)	0.000	0	N.D.	ppm
7)	Ethylene	0.000	0	N.D.	ppm
8)	Ethane	0.000	0	N.D.	ppm
9)	Propylene	0.000	0	N.D.	ppm
10)	Propane	0.000	0	N.D.	ppm
11)	Isobutylene	0.000	0	N.D.	ppm
12)	Isobutane	0.000	0	N.D.	ppm
13)	n-Butane	0.000	0	N.D.	ppm

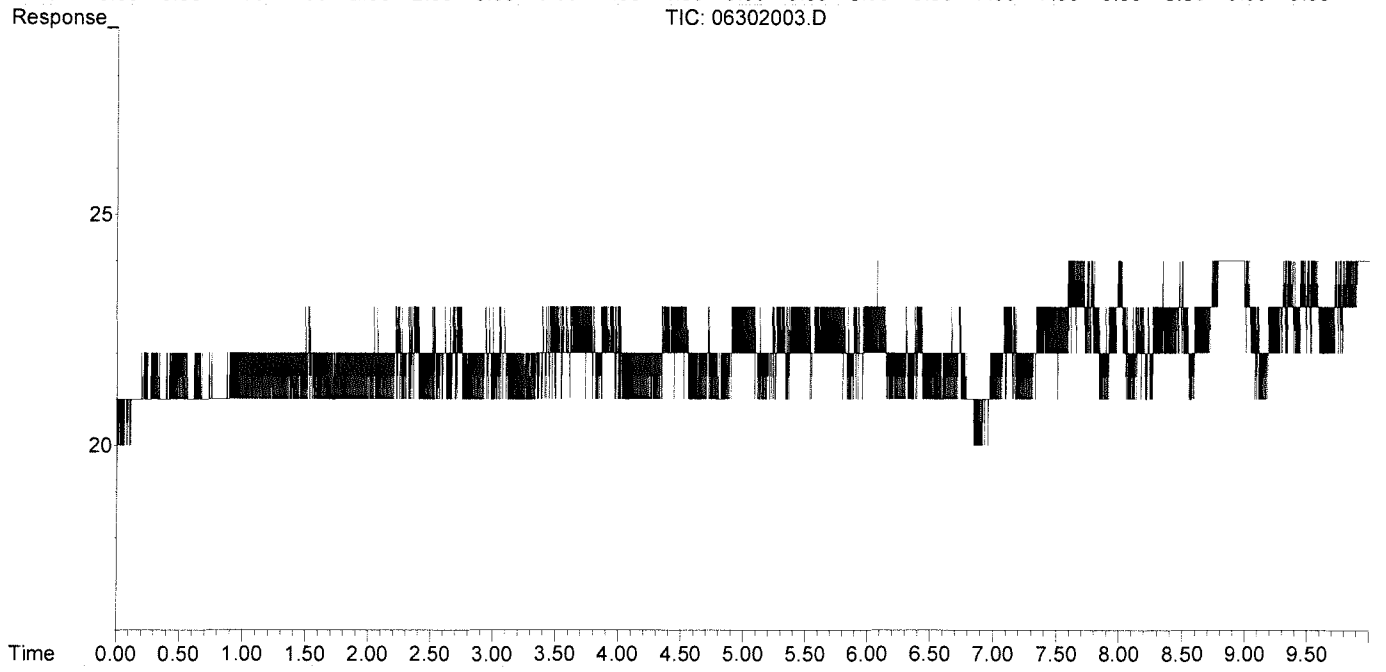
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : I:\GC10\DATA\RSK_FID\2020_06\30CO2\
Data File : 06302003.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 30-Jun-2020, 15:53:39
Operator : LD
Sample : MCS 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Jun 30 16:06:51 2020
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Data Path : I:\GC10\DATA\RSK_FID\2020_06\30CO2\
Data File : 06302005.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 30-Jun-2020, 16:21:46
Operator : LD
Sample : LCS S32-01212003
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Jun 30 16:34:35 2020
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

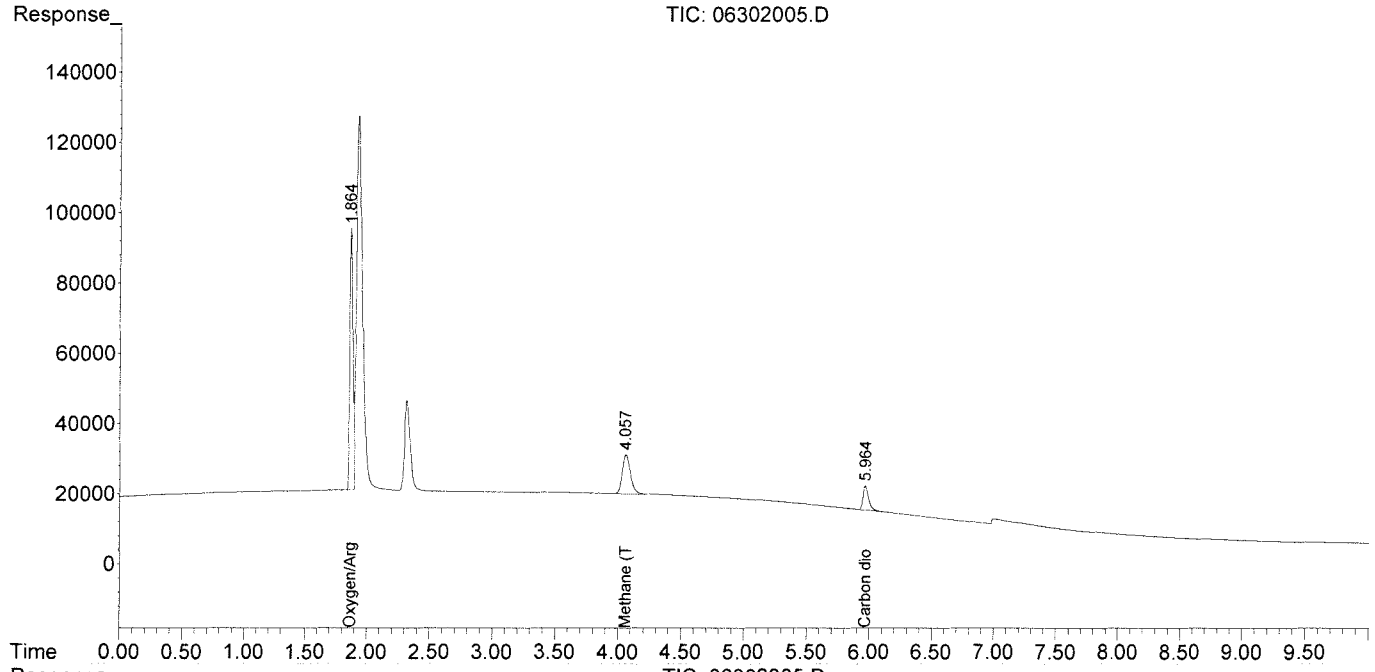
	Compound	R.T.	Response	Conc	Units
Target Compounds					
1)	Oxygen/Argon	1.864	1294617	0.272	ppm
2)	Carbon monoxide	1.864	1294617	N.D.	ppm
3)	Methane (TCD)	4.058f	508271	53743.498	ppm
4)	Carbon dioxide	5.965	209388	892.043	ppm
6)	Methane (FID)	0.000	0	N.D.	ppm
7)	Ethylene	0.000	0	N.D.	ppm
8)	Ethane	0.000	0	N.D.	ppm
9)	Propylene	0.000	0	N.D.	ppm
10)	Propane	0.000	0	N.D.	ppm
11)	Isobutylene	0.000	0	N.D.	ppm
12)	Isobutane	0.000	0	N.D.	ppm
13)	n-Butane	0.000	0	N.D.	ppm

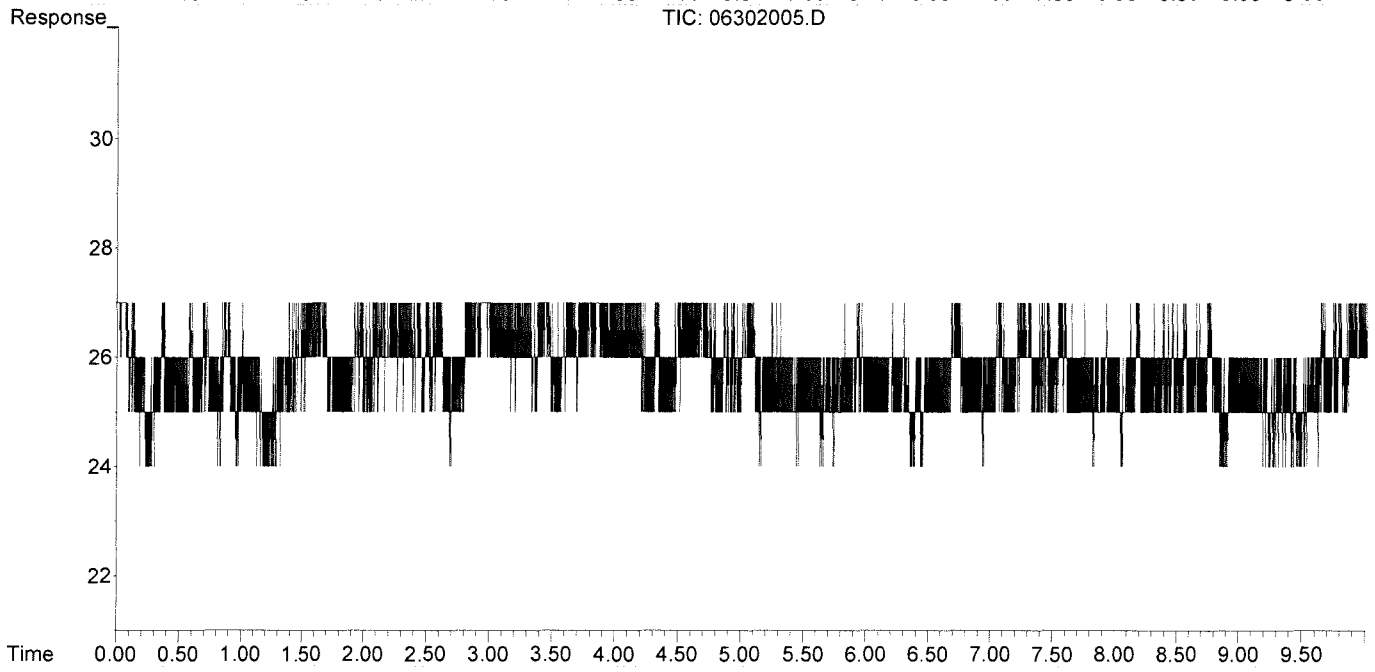
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : I:\GC10\DATA\RSK_FID\2020_06\30CO2\
Data File : 06302005.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 30-Jun-2020, 16:21:46
Operator : LD
Sample : LCS S32-01212003
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Jun 30 16:34:35 2020
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Data Path : I:\GC10\DATA\RSK_FID\2020_06\30CO2\
Data File : 06302006.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 30-Jun-2020, 16:35:59
Operator : LD
Sample : LCSD S32-01212003
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Jun 30 17:12:43 2020
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

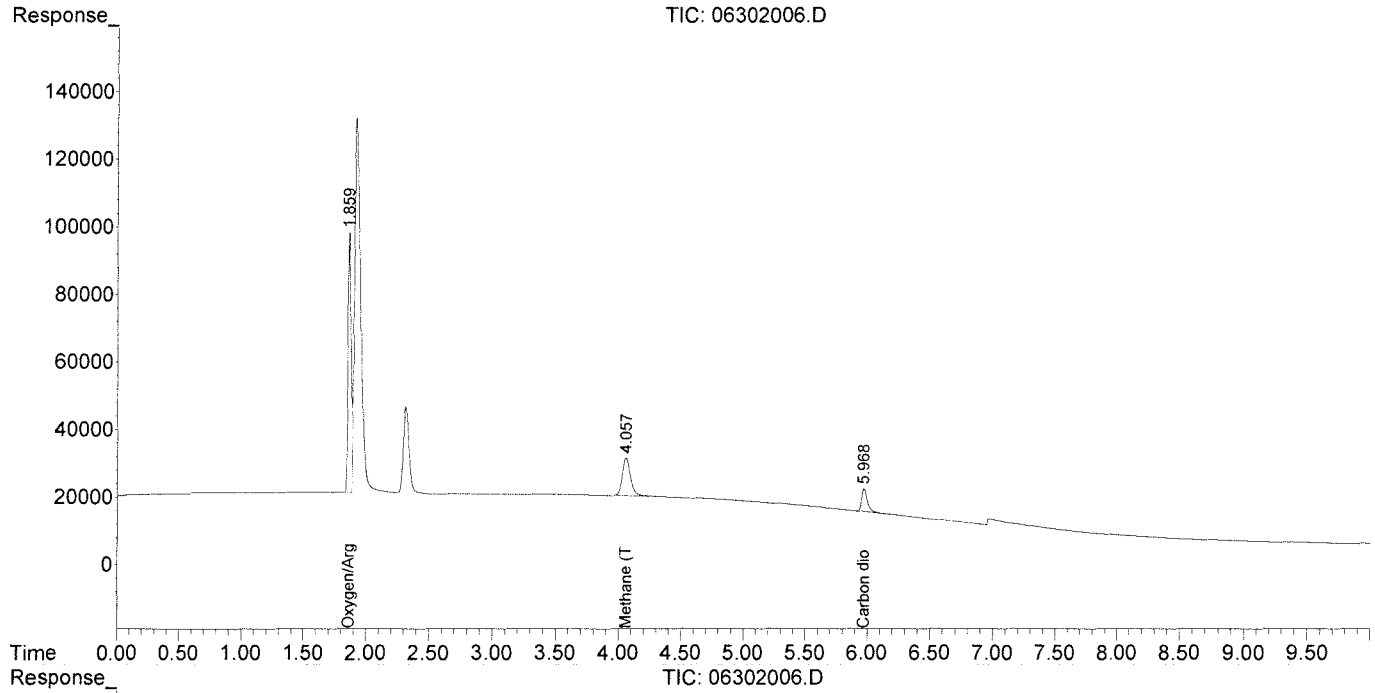
	Compound	R.T.	Response	Conc	Units
Target Compounds					
1)	Oxygen/Argon	1.860	1335935	0.281	ppm
2)	Carbon monoxide	1.860	1335935	N.D.	ppm
3)	Methane (TCD)	4.058f	508224	53738.492	ppm
4)	Carbon dioxide	5.969	206148	878.239	ppm
6)	Methane (FID)	0.000	0	N.D.	ppm
7)	Ethylene	0.000	0	N.D.	ppm
8)	Ethane	0.000	0	N.D.	ppm
9)	Propylene	0.000	0	N.D.	ppm
10)	Propane	0.000	0	N.D.	ppm
11)	Isobutylene	0.000	0	N.D.	ppm
12)	Isobutane	0.000	0	N.D.	ppm
13)	n-Butane	0.000	0	N.D.	ppm

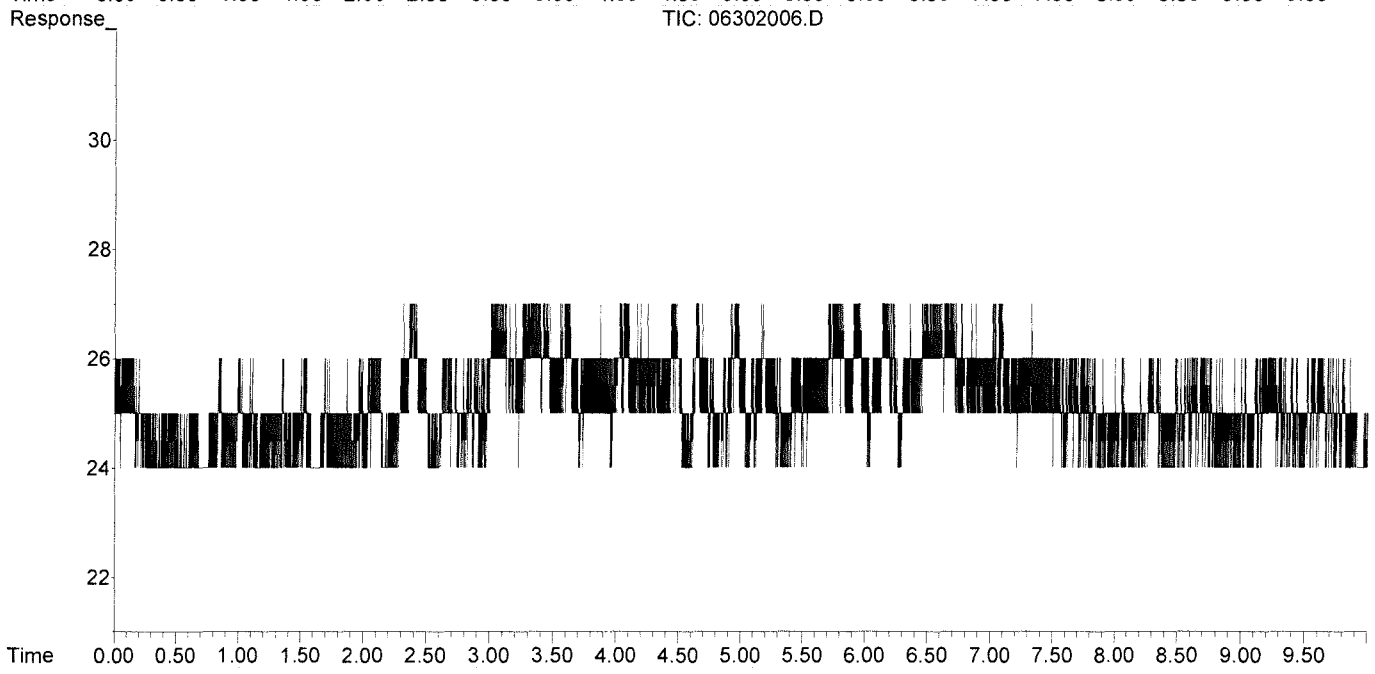
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : I:\GC10\DATA\RSK_FID\2020_06\30CO2\
Data File : 06302006.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 30-Jun-2020, 16:35:59
Operator : LD
Sample : LCSD S32-01212003
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Jun 30 17:12:43 2020
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Response Factor Report HP5890

Method Path : I:\GC10\METHODS\
Method File : RS082817_CO2.M
Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
Last Update : Tue Aug 29 16:13:13 2017
Response Via : Initial Calibration

Calibration Files
1 =08291715.D 2 =08291716.D 3 =08291717.D
4 =08291719.D 5 =08291720.D 6 =08291721.D

	Compound	1	2	3	4	5	6	Avg		%RSD
1)	Oxygen/Argon	4.760						4.760	E6	0.00
2)	Carbon monoxide	2.775		1.066	0.043	0.033	0.027	0.657	E6	170.12
3)	Methane (TCD)							9.457		0.00
4)	Carbon dioxide	2.717	2.193	2.338	2.272	2.265	2.298	2.347	E2	7.99

Signal #2 Calibration Files
1 =08291715.D 2 =08291716.D 3 =08291717.D
4 =08291719.D 5 =08291720.D 6 =08291721.D

	Compound	1	2	3	4	5	6	Avg		%RSD
6)	Methane (FID)	1.253	1.160	1.005	0.927	0.848	0.848	0.945	E4	15.85
7)	Ethylene	1.677	1.605	1.900	1.749	1.597	1.579	1.684	E4	7.30
8)	Ethane	1.769	1.631	1.866	1.767	1.639	1.667	1.723	E4	5.40
9)	Propylene	2.402	2.309	2.767	2.551	2.331	2.333	2.449	E4	7.32
10)	Propane	2.906	2.737	2.817	2.639	2.410	2.420	2.655	E4	7.75
11)	Isobutylene							0.000		-1.00
12)	Isobutane							0.000		-1.00
13)	n-Butane							0.000		-1.00

(#) = Out of Range ### Number of calibration levels exceeded format ###

RS082817_CO2.M Wed Aug 30 13:24:19 2017

dit Compounds -- Compound #4 -- Carbon dioxide

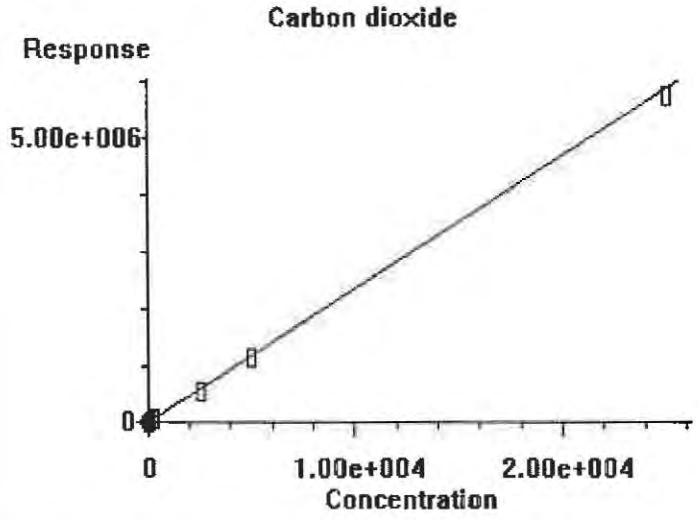
Search by: Ret Time | Name | Index | Find Compound

- Compound Database
- External Standard Compoun
  - Oxygen/Argon
  - Carbon monoxide
  - Methane (TCD)
  - Carbon dioxide
  - Signal #2
  - Methane (FID)
  - Ethylene
  - Ethane
  - Propylene
  - Propane
  - Isobutylene
  - Isobutane
  - n-Butane

Identification | Calibration | User-Defined | Advanced | Reporting

Lvl ID	Concentration	Response
1	25.000000	6793.665186
2	100.000000	21932.418000
3	250.000000	58460.642510
4	2500.000000	568043.388750
5	5000.000000	1132363.215937
6	25000.000000	5744294.891563
7	25000.000000	
8	25000.000000	
9	2000.000000	
10	30000.000000	

Lvl ID	Concentration	Response



0.000e+000	Quadratic term
2.347e+002	Linear term
0.000e+000	Constant term
7.987%	RF Rel Std Dev

OK | Cancel | Help | Print Calibration Curve | Copy Calibration Curve

Calibration Status Report HP5890

Method Path : I:\GC10\METHODS\
Method File : RS082817_CO2.M
Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
Last Update : Tue Aug 29 16:13:13 2017
Response Via : Initial Calibration

#	ID	Conc	ISTD Conc	Path\File
1	1	0	0	J:\GC10\DATA\RSK_FID\2017_08\29\08291715.D
2	2	0	0	J:\GC10\DATA\RSK_FID\2017_08\29\08291716.D
3	3	3	0	J:\GC10\DATA\RSK_FID\2017_08\29\08291717.D
4	4	10	0	J:\GC10\DATA\RSK_FID\2017_08\29\08291719.D
5	5	25	0	J:\GC10\DATA\RSK_FID\2017_08\29\08291720.D
6	6	125	0	J:\GC10\DATA\RSK_FID\2017_08\29\08291721.D
7	7	5000	0	J:\GC10\DATA\RSK_FID\2017_08\24\08241708.D
8	8	25000	0	J:\GC10\DATA\RSK_FID\2017_08\24\08241709.D
9	9	2000	0	J:\GC10\DATA\RSK_FID\2017_08\24\08241710.D
10	10	30000	0	J:\GC10\DATA\RSK_FID\2017_08\24\08241711.D

#	ID	Update Time	Quant Time	Acquisition Time
1	1	Aug 29 14:21 2017	Aug 29 14:20 2017	29-Aug-2017, 14:07
2	2	Aug 29 14:52 2017	Aug 29 14:51 2017	29-Aug-2017, 14:22
3	3	Aug 29 15:04 2017	Aug 29 15:04 2017	29-Aug-2017, 14:53
4	4	Aug 29 15:36 2017	Aug 29 15:36 2017	29-Aug-2017, 15:23
5	5	Aug 29 15:57 2017	Aug 29 15:57 2017	29-Aug-2017, 15:44
6	6	Aug 29 16:13 2017	Aug 29 16:13 2017	29-Aug-2017, 16:00
7	7	Aug 25 09:05 2017	Aug 24 16:00 2017	24-Aug-2017, 15:44
8	8	Aug 25 09:06 2017	Aug 24 16:13 2017	24-Aug-2017, 16:02
9	9	Aug 25 09:06 2017	Aug 24 16:31 2017	24-Aug-2017, 16:16
10	10	Aug 25 09:07 2017	Aug 24 16:42 2017	24-Aug-2017, 16:33

RS082817_CO2.M Wed Aug 30 13:24:30 2017

Data Path : J:\GC10\DATA\RSK_FID\2017_08\29\
Data File : 08291715.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 29-Aug-2017, 14:07
Operator : MC
Sample : 25ppm s32-08291701 0.25ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 29 14:20:06 2017
Quant Method : I:\GC10\METHODS\RS082417.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Fri Aug 25 09:19:14 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

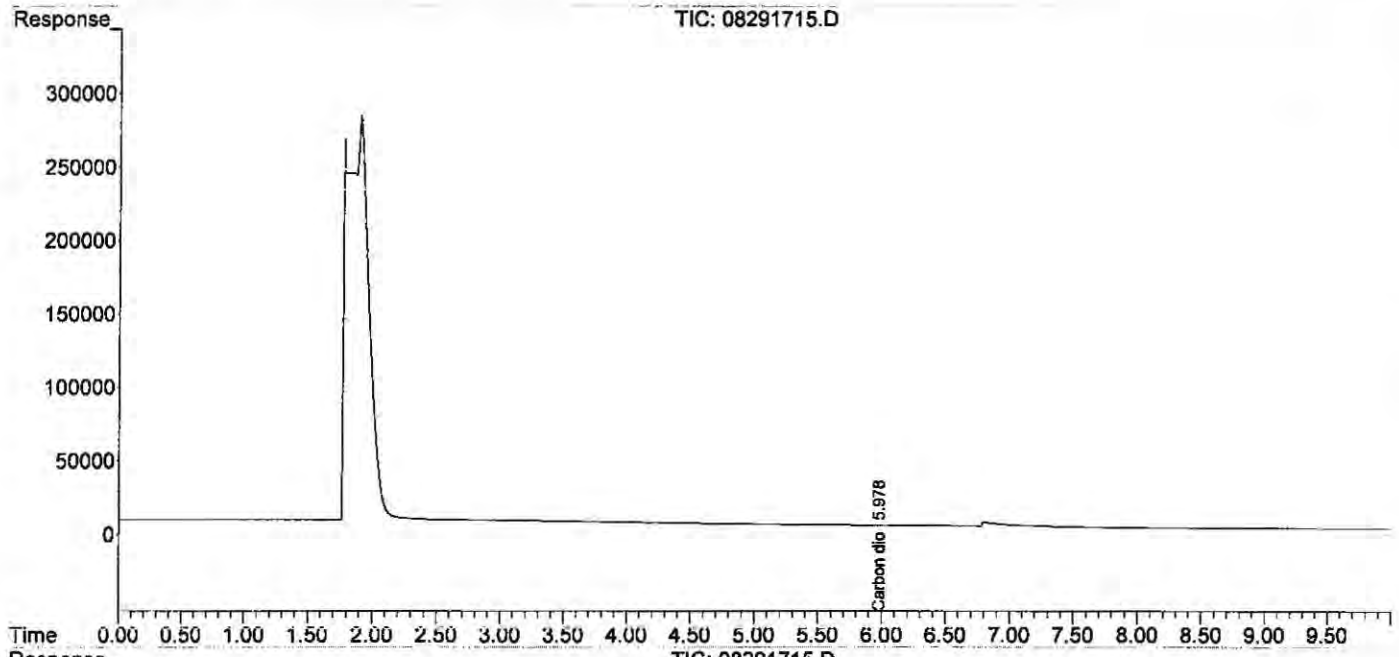
	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1)	Oxygen/Argon	0.000	0	N.D.	ppm	d
2)	Carbon monoxide	1.776	277465	N.D.	ppm	
3)	Methane (TCD)	0.000	0	N.D.	ppm	
4)	Carbon dioxide	5.978	6794	27.870	ppm	m
6)	Methane (FID)	0.000	0	N.D.	ppm	d
7)	Ethylene	0.000	0	N.D.	ppm	
8)	Ethane	0.000	0	N.D.	ppm	
9)	Propylene	0.000	0	N.D.	ppm	
10)	Propane	0.000	0	N.D.	ppm	
11)	Isobutylene	0.000	0	N.D.	ppm	
12)	Isobutane	0.000	0	N.D.	ppm	
13)	n-Butane	0.000	0	N.D.	ppm	

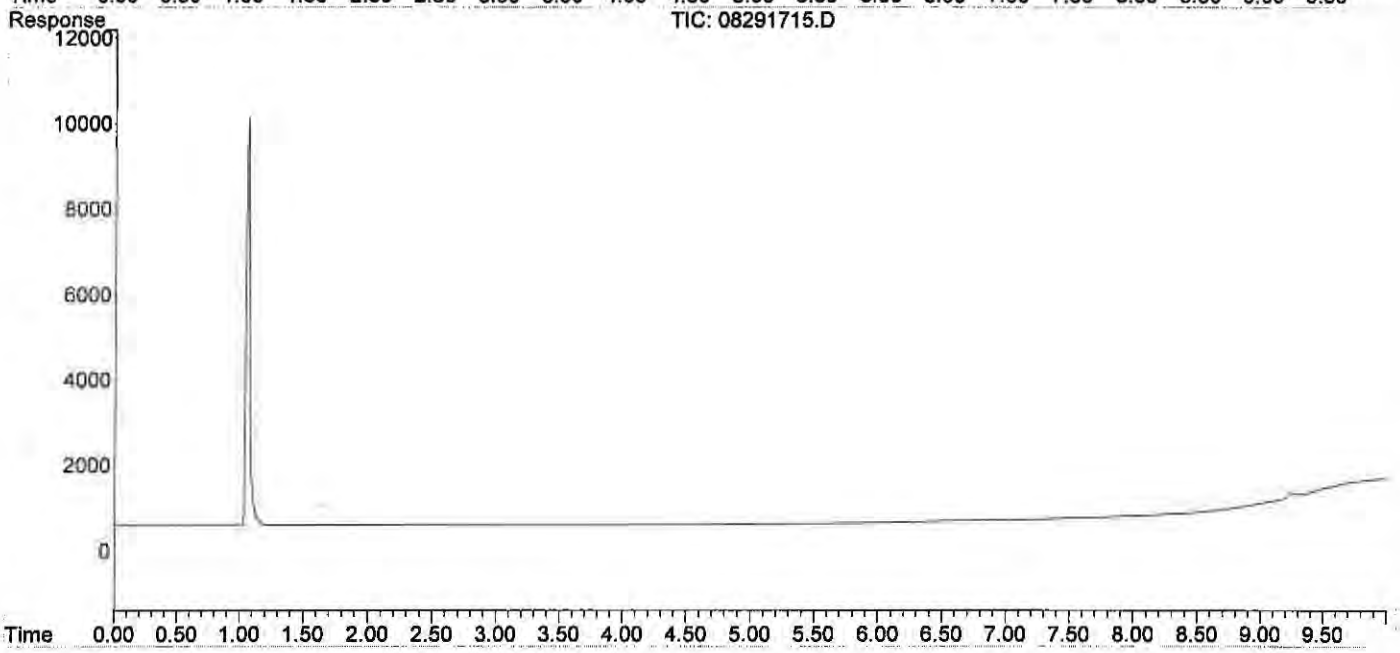
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : J:\GC10\DATA\RSK_FID\2017_08\29\
Data File : 08291715.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 29-Aug-2017, 14:07
Operator : MC
Sample : 25ppm s32-08291701 0.25ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 29 14:20:06 2017
Quant Method : I:\GC10\METHODS\RS082417.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Fri Aug 25 09:19:14 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



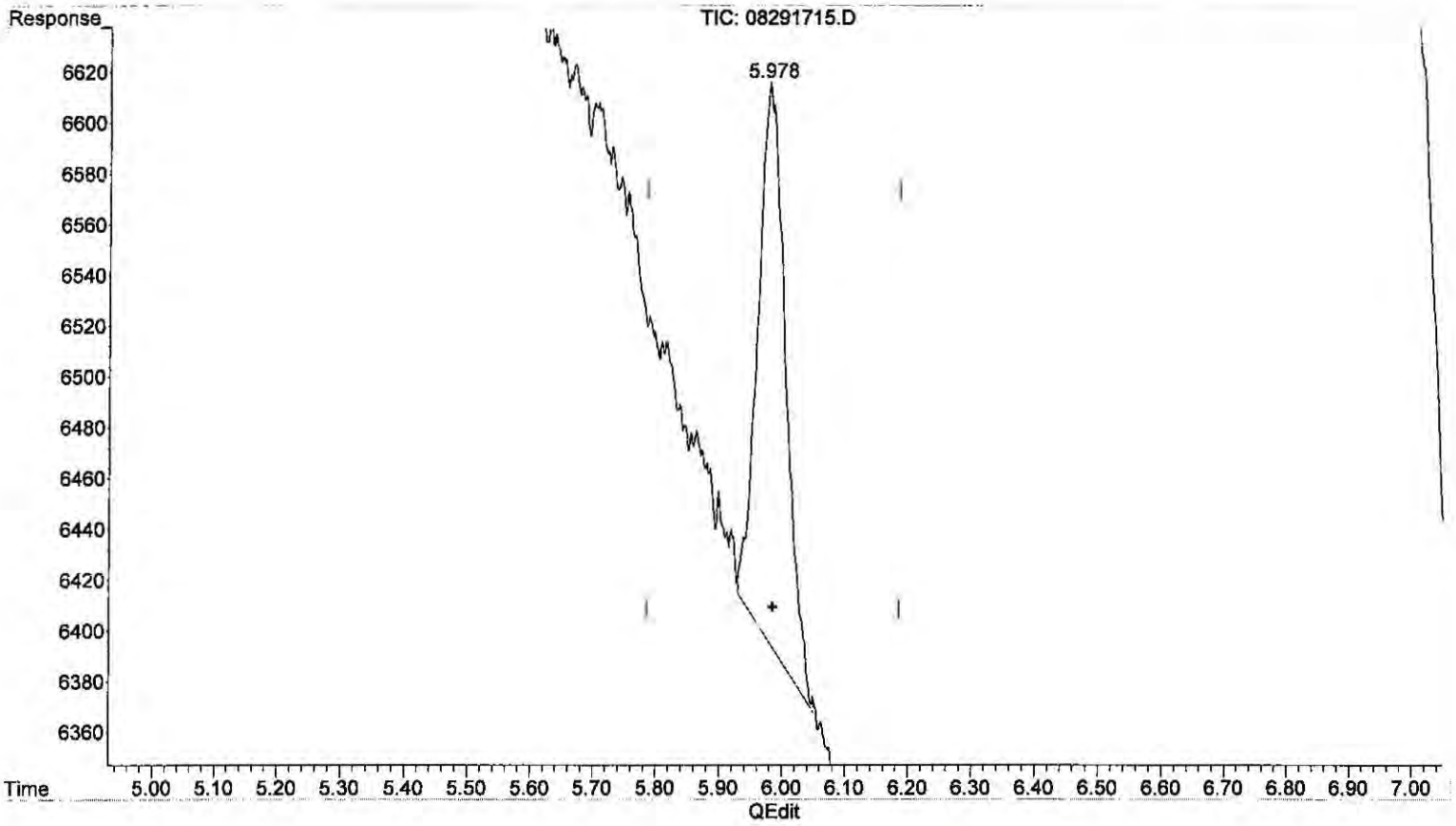


Quantitation Report (Qedit)

Data Path : J:\GC10\DATA\RSK_FID\2017_08\29\
Data File : 08291715.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 29-Aug-2017, 14:07
Operator : MC
Sample : 25ppm s32-08291701 0.25ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 29 14:20:06 2017
Quant Method : I:\GC10\METHODS\RS082417.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Fri Aug 25 09:19:14 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



(4) Carbon dioxide
5.978min 27.870 ppm m
response 6794

(+) = Expected Retention Time

RS082817_CO2.M Wed Aug 30 13:17:47 2017

Page: 1

Data Path : J:\GC10\DATA\RSK_FID\2017_08\29\
Data File : 08291716.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 29-Aug-2017, 14:22
Operator : MC
Sample : 100ppm s32-08291702 0.2ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 29 14:51:38 2017
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 14:21:08 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

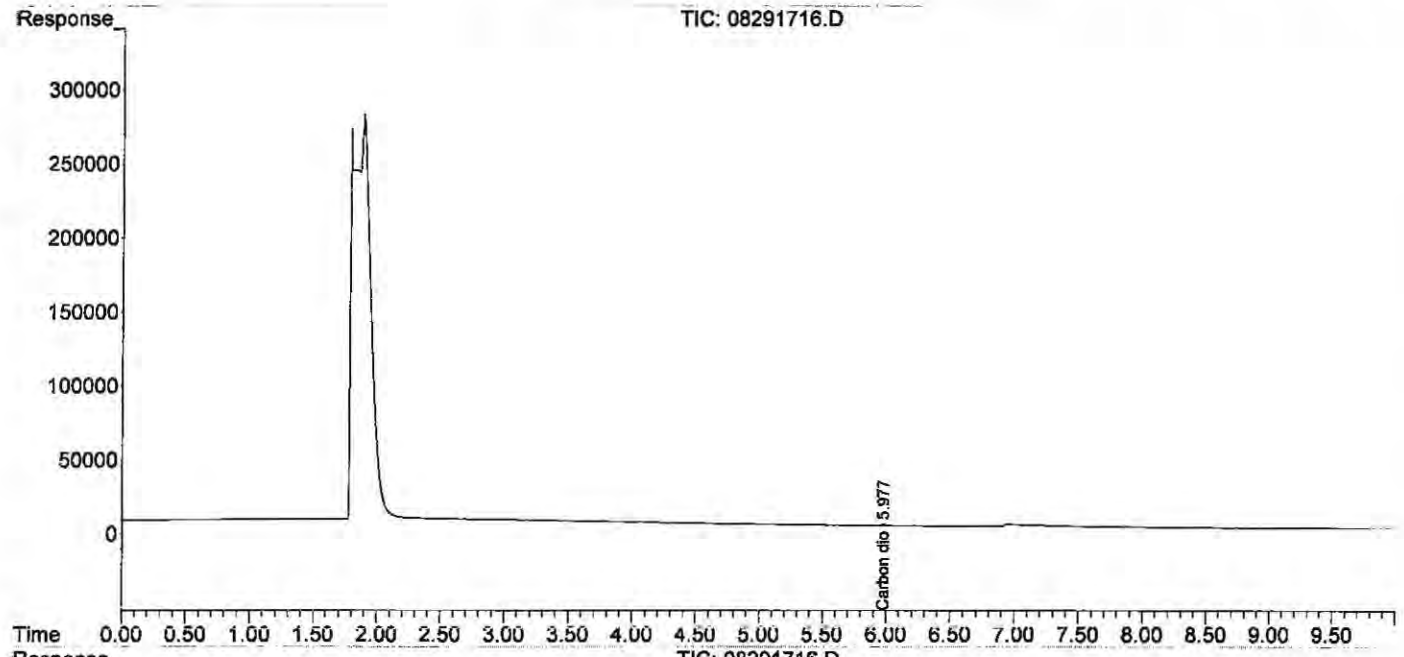
	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1)	Oxygen/Argon	1.790	-598962	N.D.	ppm	
2)	Carbon monoxide	0.000	0	N.D.	ppm	d
3)	Methane (TCD)	0.000	0	N.D.	ppm	
4)	Carbon dioxide	5.978	21932	87.858	ppm	
6)	Methane (FID)	0.000	0	N.D.	ppm	d
7)	Ethylene	0.000	0	N.D.	ppm	
8)	Ethane	0.000	0	N.D.	ppm	
9)	Propylene	0.000	0	N.D.	ppm	
10)	Propane	0.000	0	N.D.	ppm	
11)	Isobutylene	0.000	0	N.D.	ppm	
12)	Isobutane	0.000	0	N.D.	ppm	
13)	n-Butane	0.000	0	N.D.	ppm	

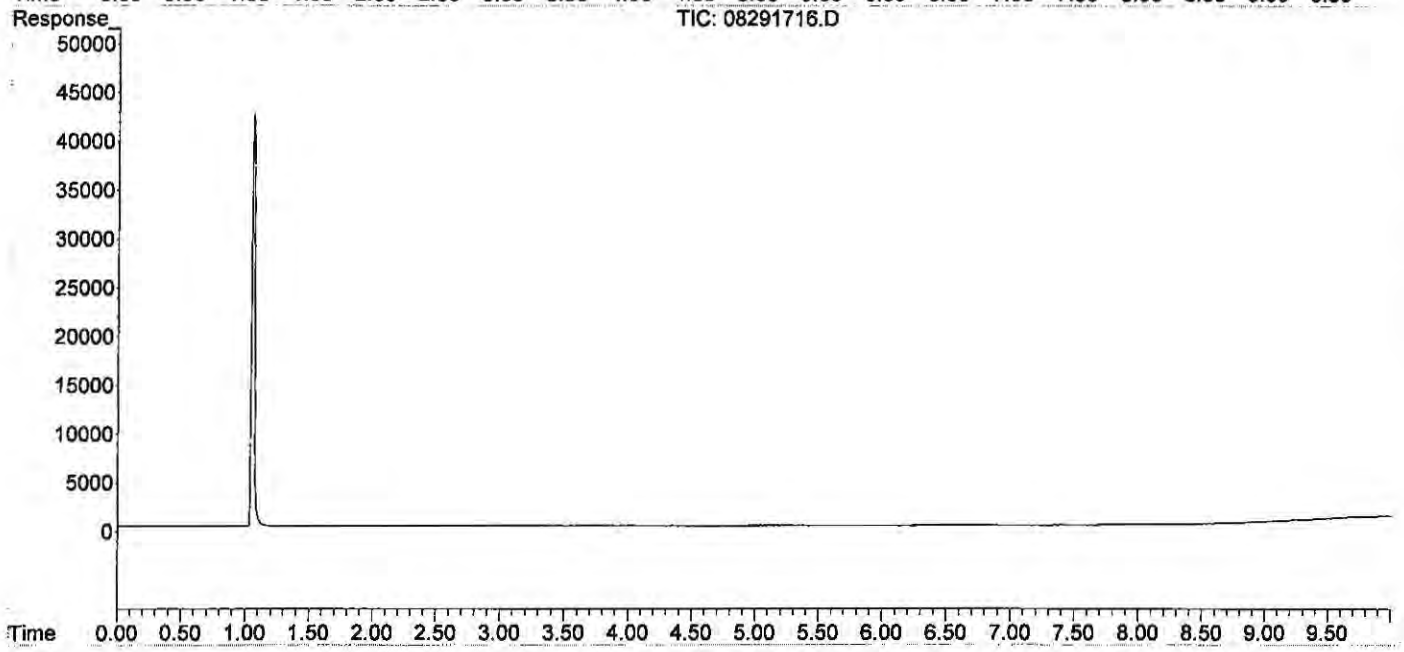
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : J:\GC10\DATA\RSK_FID\2017_08\29\
Data File : 08291716.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 29-Aug-2017, 14:22
Operator : MC
Sample : 100ppm s32-08291702 0.2ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 29 14:51:38 2017
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 14:21:08 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Quantitation Report (QT Reviewed)

Data Path : J:\GC10\DATA\RSK_FID\2017_08\29\
Data File : 08291717.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 29-Aug-2017, 14:53
Operator : MC
Sample : 250ppm s32-08291702 0.5ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 29 15:03:42 2017
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 14:52:06 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

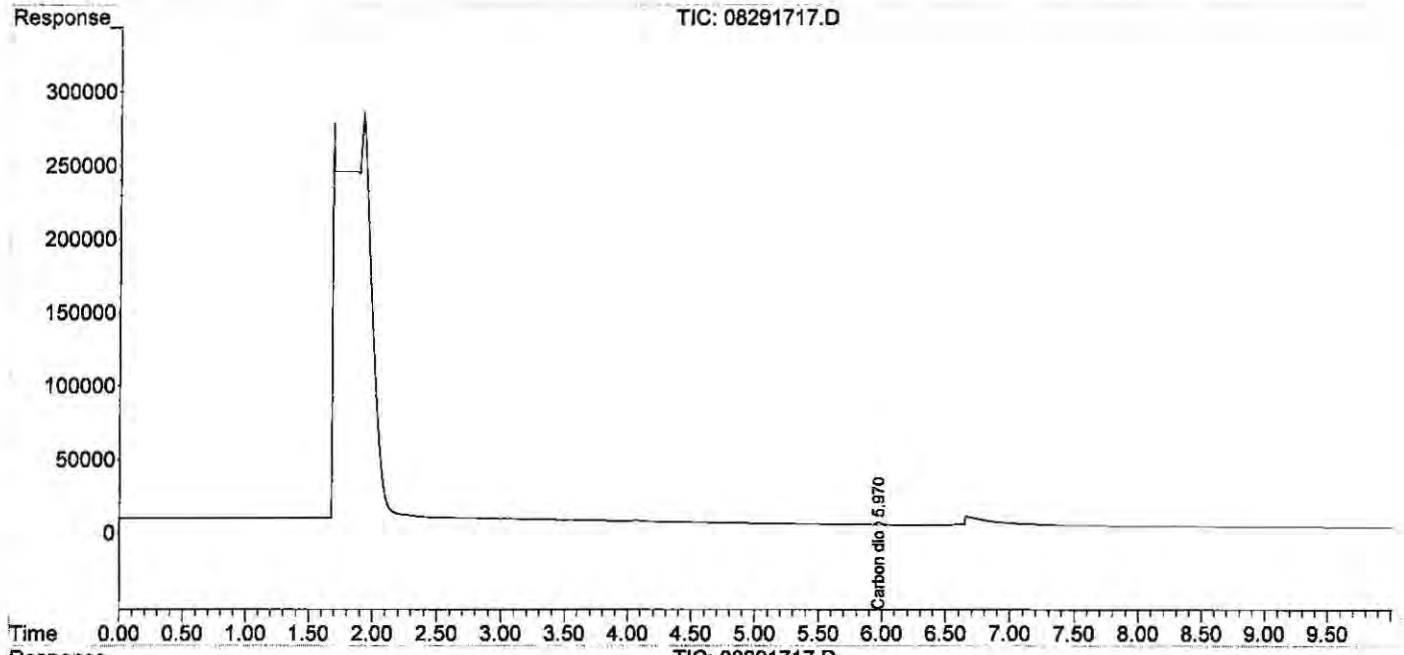
	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1)	Oxygen/Argon	1.920f	-30716454	N.D.	ppm	
2)	Carbon monoxide	0.000	0	N.D.	ppm	d
3)	Methane (TCD)	0.000	0	N.D.	ppm	d
4)	Carbon dioxide	5.970	58461	240.204	ppm	m
6)	Methane (FID)	0.000	0	N.D.	ppm	d
7)	Ethylene	0.000	0	N.D.	ppm	
8)	Ethane	0.000	0	N.D.	ppm	
9)	Propylene	0.000	0	N.D.	ppm	
10)	Propane	0.000	0	N.D.	ppm	
11)	Isobutylene	0.000	0	N.D.	ppm	
12)	Isobutane	0.000	0	N.D.	ppm	
13)	n-Butane	0.000	0	N.D.	ppm	

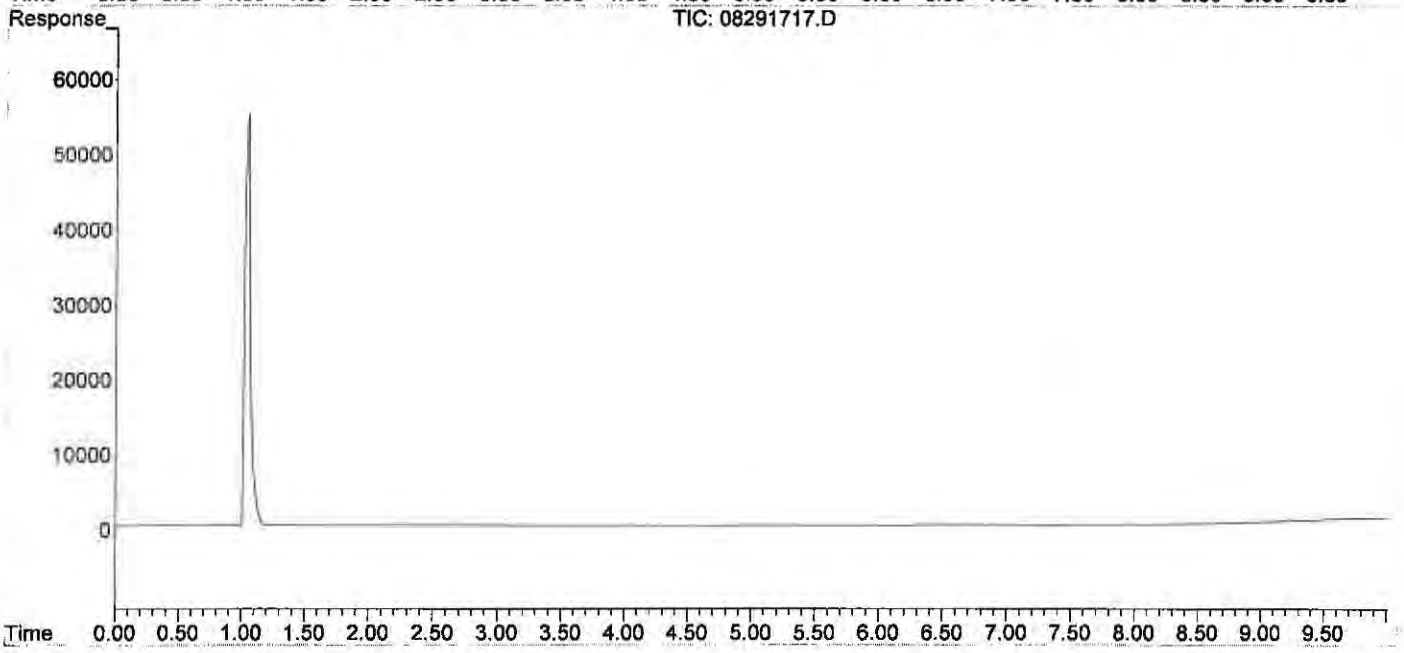
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : J:\GC10\DATA\RSK_FID\2017_08\29\
Data File : 08291717.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 29-Aug-2017, 14:53
Operator : MC
Sample : 250ppm s32-08291702 0.5ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 29 15:03:42 2017
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 14:52:06 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



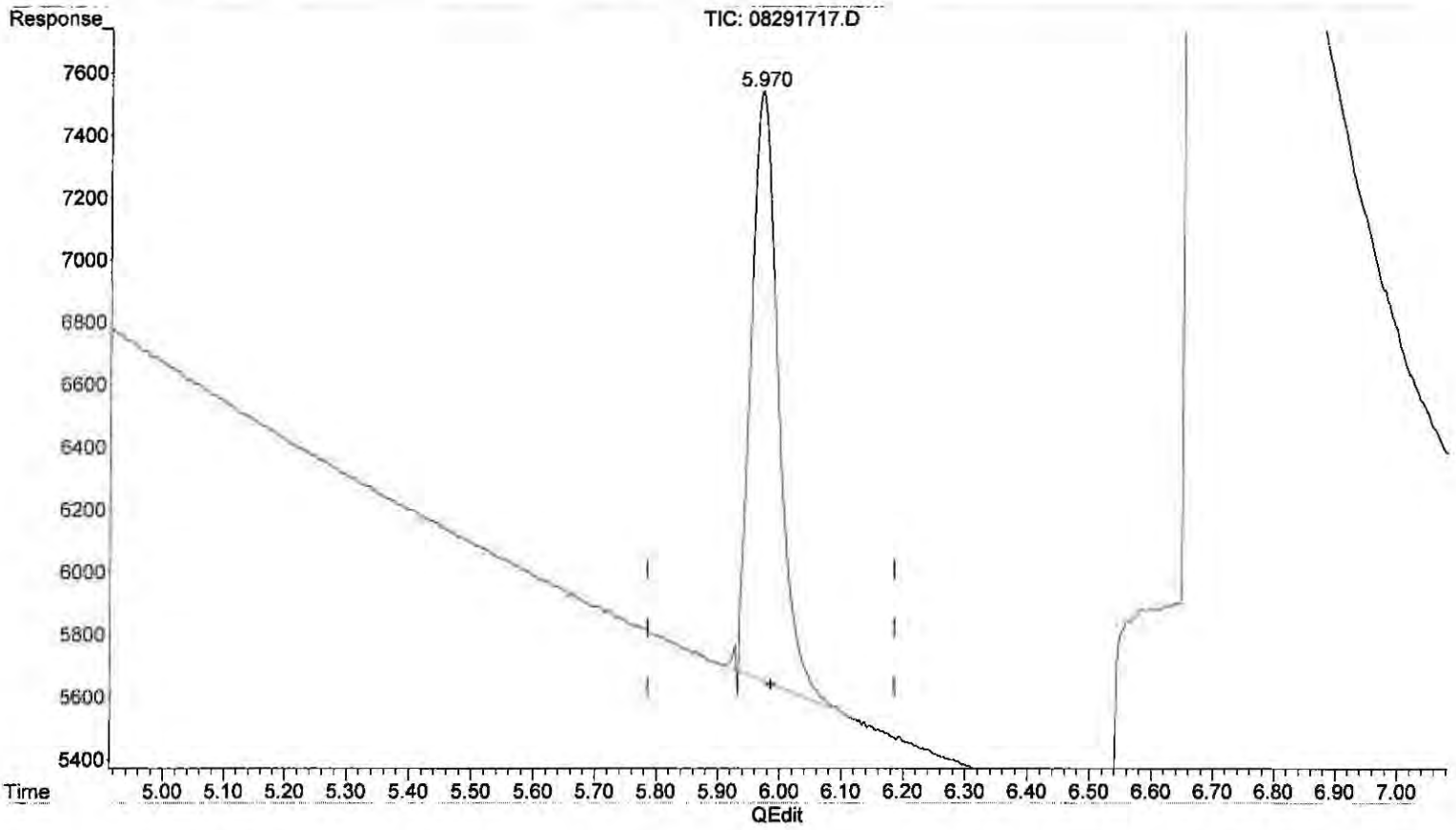


Quantitation Report (Qedit)

Data Path : J:\GC10\DATA\RSK_FID\2017_08\29\
Data File : 08291717.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 29-Aug-2017, 14:53
Operator : MC
Sample : 250ppm s32-08291702 0.5ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 29 15:03:42 2017
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 14:52:06 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase :
Signal #1 Info :
Signal #2 Phase:
Signal #2 Info :



(4) Carbon dioxide

5.970min 240.204 ppm m

response 58461

(+) = Expected Retention Time

Quantitation Report (QT Reviewed)

Data Path : J:\GC10\DATA\RSK_FID\2017_08\29\
Data File : 08291719.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 29-Aug-2017, 15:23
Operator : MC
Sample : 2500ppm s32-08231701 50ul
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 29 15:35:50 2017
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 15:04:14 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

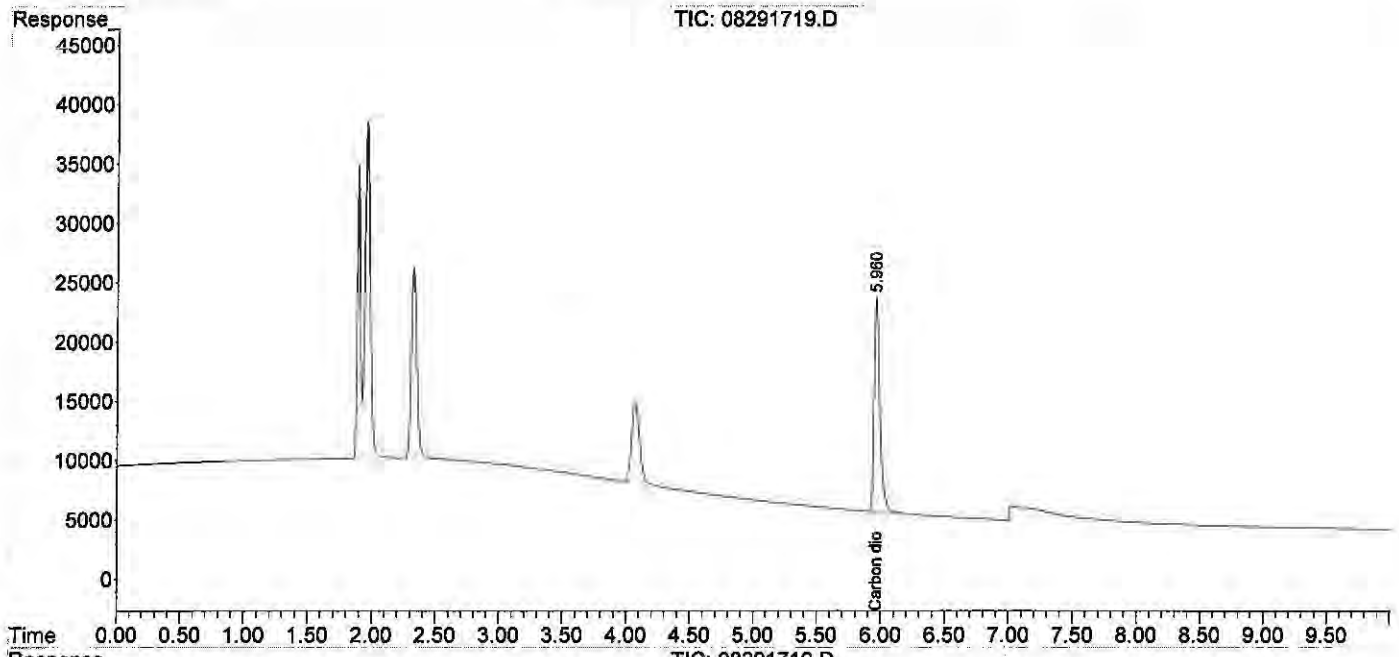
	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1)	Oxygen/Argon	0.000	0	N.D.	ppm	d
2)	Carbon monoxide	1.891	425113	N.D.	ppm	
3)	Methane (TCD)	0.000	0	N.D.	ppm	d
4)	Carbon dioxide	5.962	568043	2369.673	ppm	
6)	Methane (FID)	0.000	0	N.D.	ppm	d
7)	Ethylene	0.000	0	N.D.	ppm	
8)	Ethane	0.000	0	N.D.	ppm	
9)	Propylene	0.000	0	N.D.	ppm	
10)	Propane	0.000	0	N.D.	ppm	
11)	Isobutylene	0.000	0	N.D.	ppm	
12)	Isobutane	0.000	0	N.D.	ppm	
13)	n-Butane	0.000	0	N.D.	ppm	

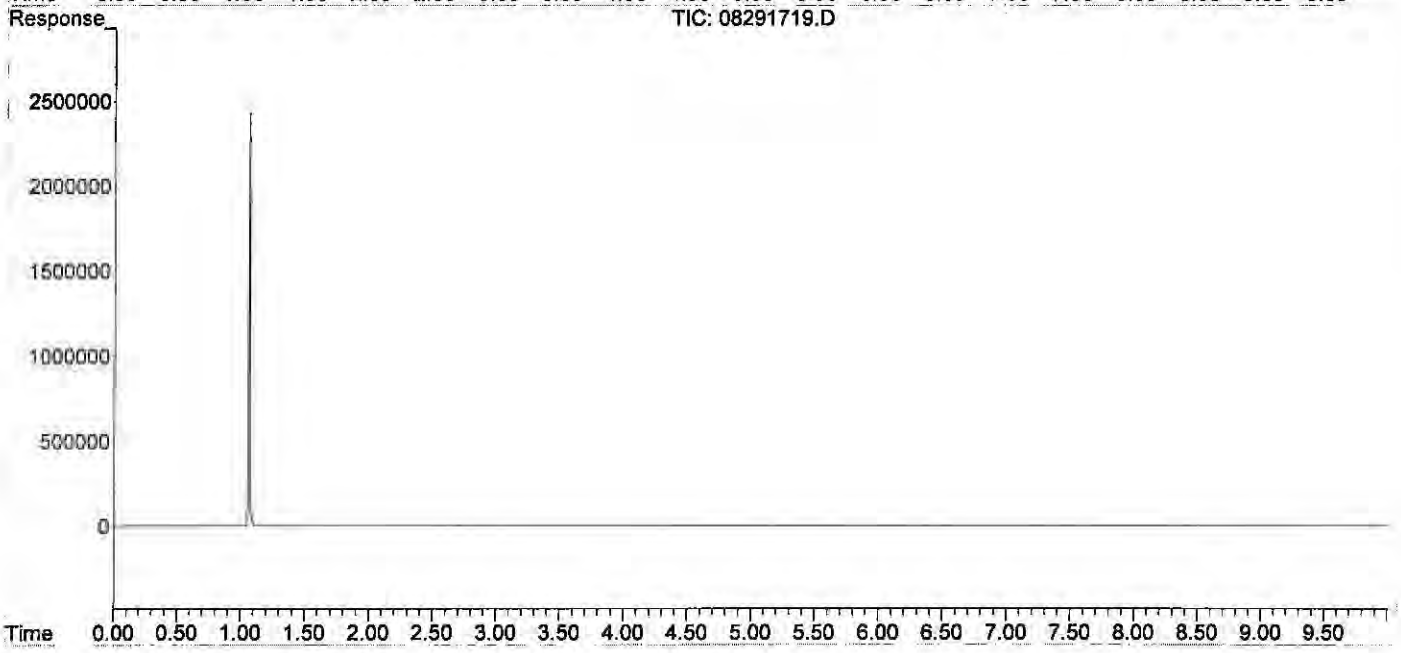
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : J:\GC10\DATA\RSK_FID\2017_08\29\
Data File : 08291719.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 29-Aug-2017, 15:23
Operator : MC
Sample : 2500ppm s32-08231701 50ul
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 29 15:35:50 2017
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 15:04:14 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Quantitation Report (QT Reviewed)

Data Path : J:\GC10\DATA\RSK_FID\2017_08\29\
Data File : 08291720.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 29-Aug-2017, 15:44
Operator : MC
Sample : 5000ppm s32-08231701 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 29 15:57:17 2017
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 15:36:14 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

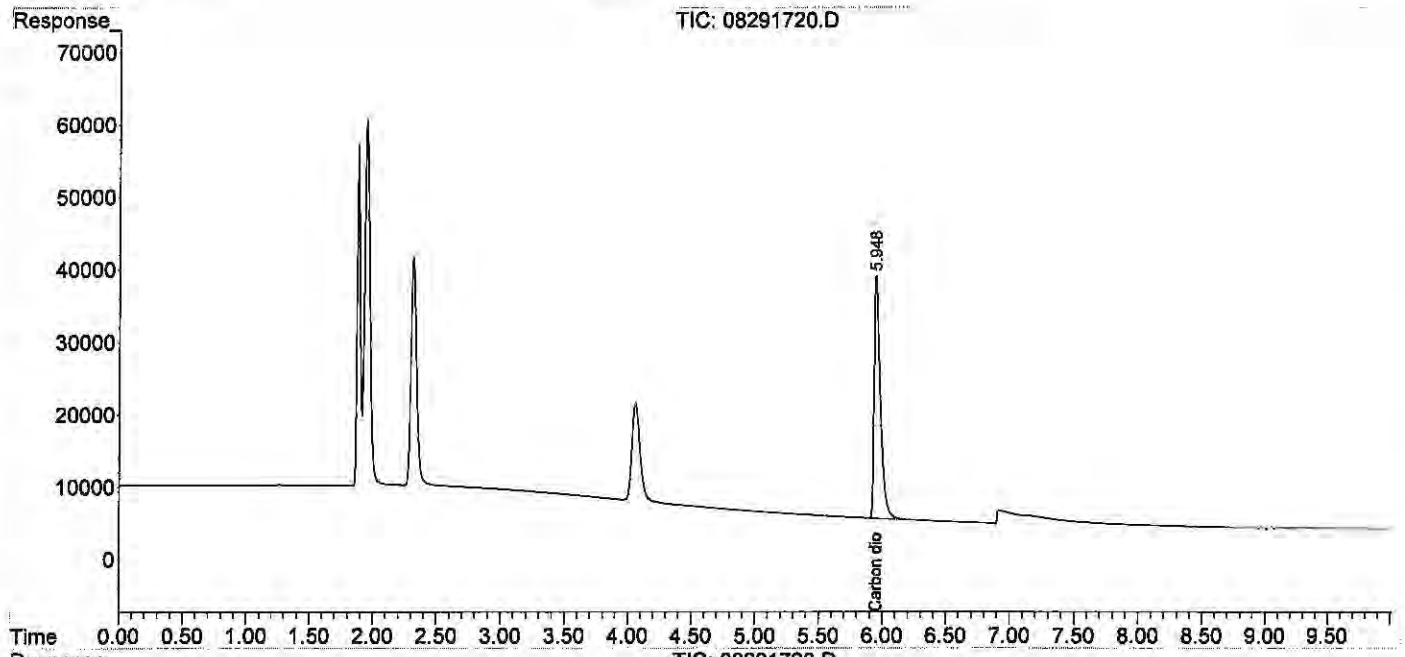
	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1)	Oxygen/Argon	0.000	0	N.D.	ppm	d
2)	Carbon monoxide	1.880	819221	N.D.	ppm	
3)	Methane (TCD)	0.000	0	N.D.	ppm	d
4)	Carbon dioxide	5.948	1132363	4753.126	ppm	
6)	Methane (FID)	0.000	0	N.D.	ppm	d
7)	Ethylene	0.000	0	N.D.	ppm	
8)	Ethane	0.000	0	N.D.	ppm	
9)	Propylene	0.000	0	N.D.	ppm	
10)	Propane	0.000	0	N.D.	ppm	
11)	Isobutylene	0.000	0	N.D.	ppm	
12)	Isobutane	0.000	0	N.D.	ppm	
13)	n-Butane	0.000	0	N.D.	ppm	

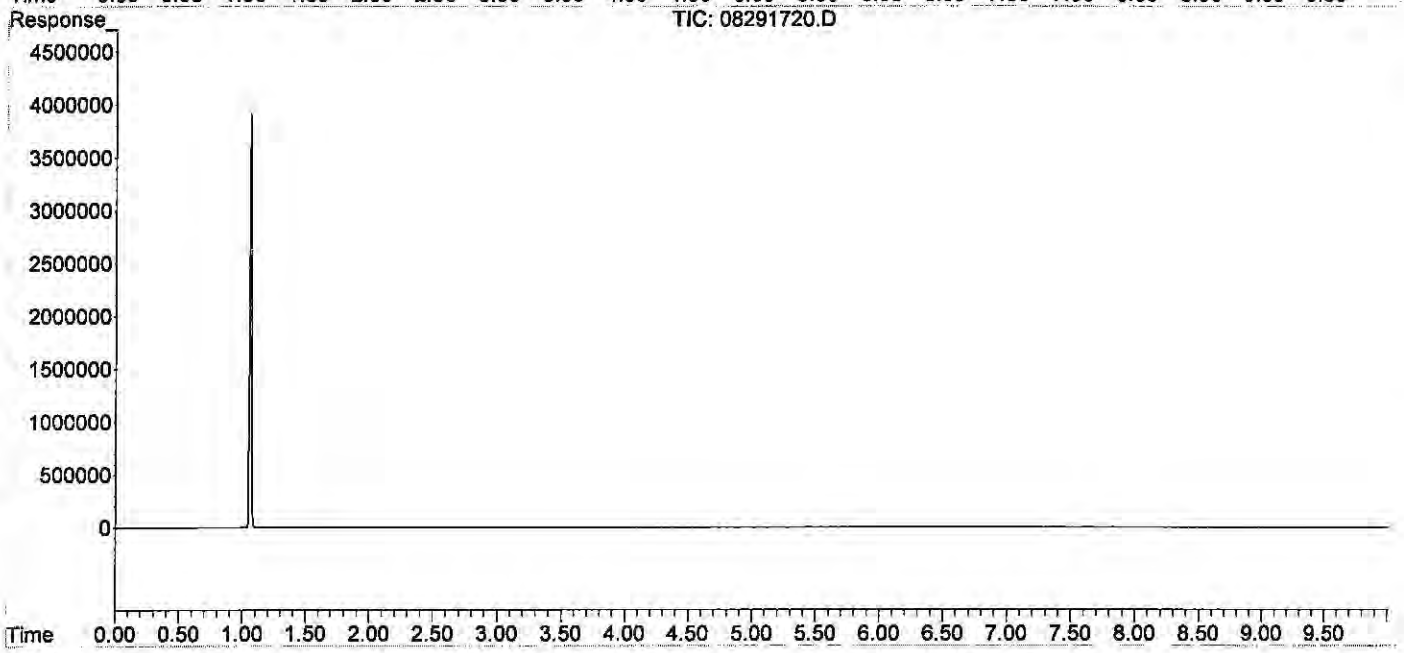
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : J:\GC10\DATA\RSK_FID\2017_08\29\
Data File : 08291720.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 29-Aug-2017, 15:44
Operator : MC
Sample : 5000ppm s32-08231701 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 29 15:57:17 2017
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 15:36:14 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Quantitation Report (QT Reviewed)

Data Path : J:\GC10\DATA\RSK_FID\2017_08\29\
Data File : 08291721.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 29-Aug-2017, 16:00
Operator : MC
Sample : 25000ppm s32-08231701 0.5ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 29 16:12:53 2017
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 15:57:37 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

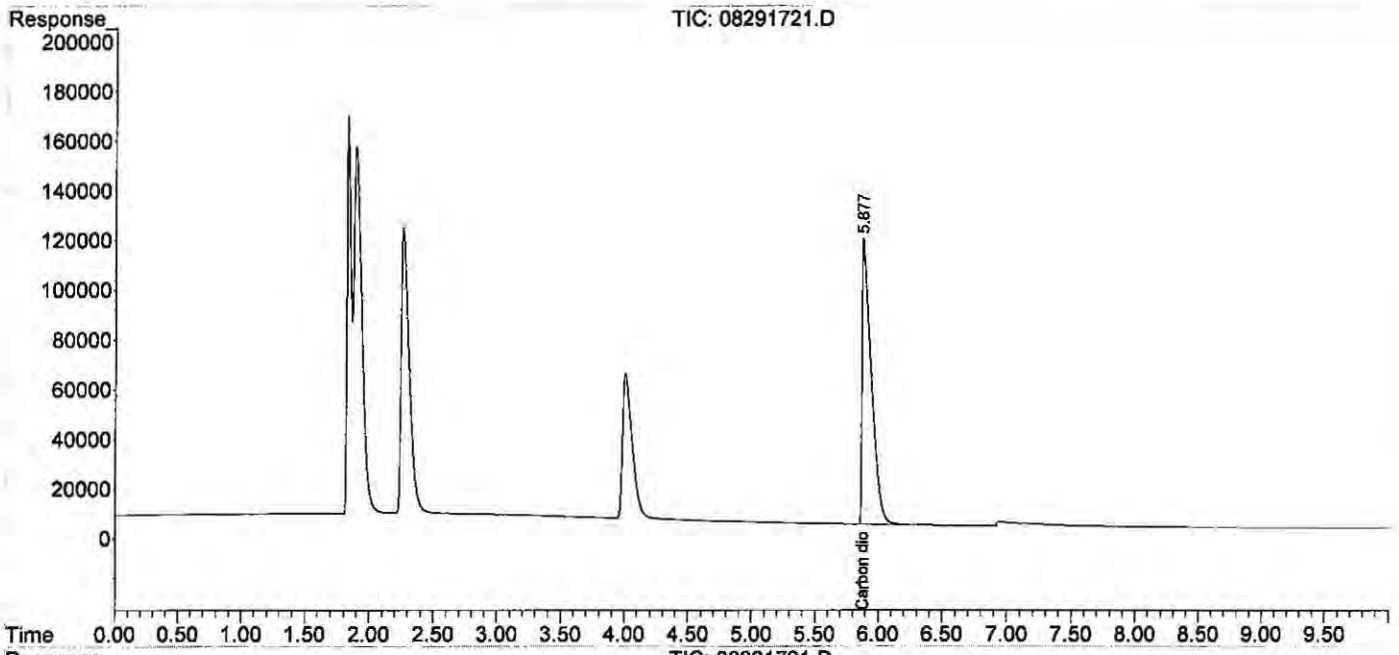
	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1)	Oxygen/Argon	0.000	0	N.D.	ppm	d
2)	Carbon monoxide	1.827	3325463	N.D.	ppm	
3)	Methane (TCD)	0.000	0	N.D.	ppm	d
4)	Carbon dioxide	5.879f	5744295	24443.288	ppm	
6)	Methane (FID)	0.000	0	N.D.	ppm	d
7)	Ethylene	0.000	0	N.D.	ppm	
8)	Ethane	0.000	0	N.D.	ppm	
9)	Propylene	0.000	0	N.D.	ppm	
10)	Propane	0.000	0	N.D.	ppm	
11)	Isobutylene	0.000	0	N.D.	ppm	
12)	Isobutane	0.000	0	N.D.	ppm	
13)	n-Butane	0.000	0	N.D.	ppm	

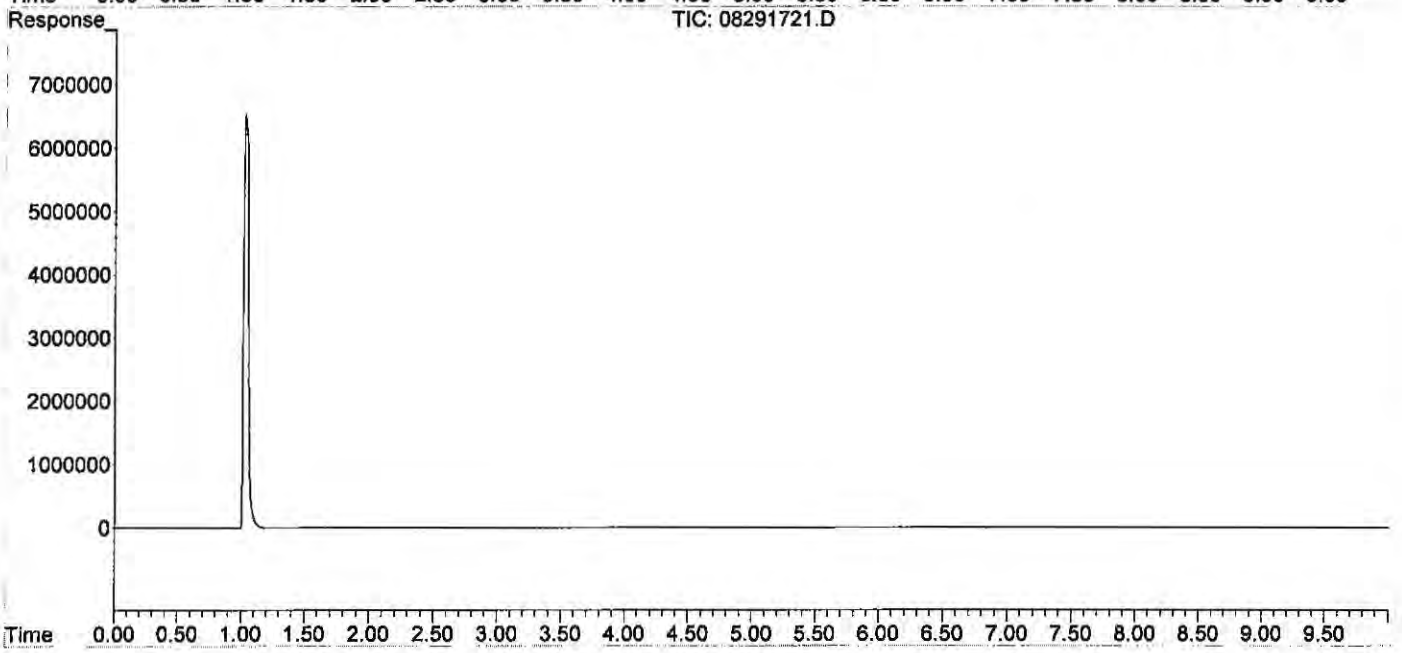
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : J:\GC10\DATA\RSK_FID\2017_08\29\
Data File : 08291721.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 29-Aug-2017, 16:00
Operator : MC
Sample : 25000ppm s32-08231701 0.5ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 29 16:12:53 2017
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 15:57:37 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Quantitation Report (QT Reviewed)

Data Path : J:\GC10\DATA\RSK_FID\2017_08\29\
Data File : 08291723.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 29-Aug-2017, 16:35
Operator : MC
Sample : icv s30-07071701
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 29 16:54:07 2017
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	R.T.	Response	Conc	Units
Target Compounds					
1)	Oxygen/Argon	1.886	536422	0.113	ppm
2)	Carbon monoxide	1.886	536422	N.D.	ppm
3)	Methane (TCD)	4.059f	626500	66244.710	ppm
4)	Carbon dioxide	5.947	1163775	4957.948	ppm
6)	Methane (FID)	1.062	37290742	3947.023	ppm
7)	Ethylene	0.000	0	N.D.	ppm
8)	Ethane	0.000	0	N.D.	ppm
9)	Propylene	0.000	0	N.D.	ppm
10)	Propane	0.000	0	N.D.	ppm
11)	Isobutylene	0.000	0	N.D.	ppm
12)	Isobutane	0.000	0	N.D.	ppm
13)	n-Butane	0.000	0	N.D.	ppm

Actual %D
5000 99.16

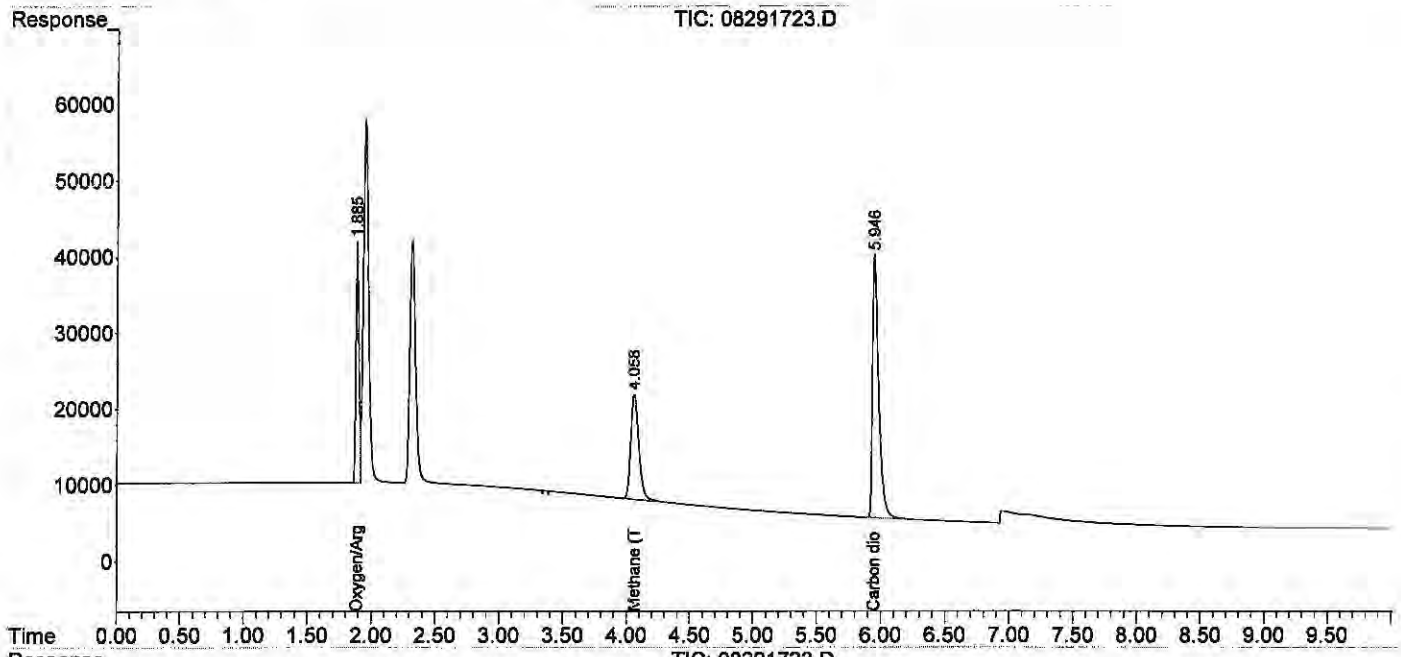
(f)=RT Delta > 1/2 Window (m)=manual int.

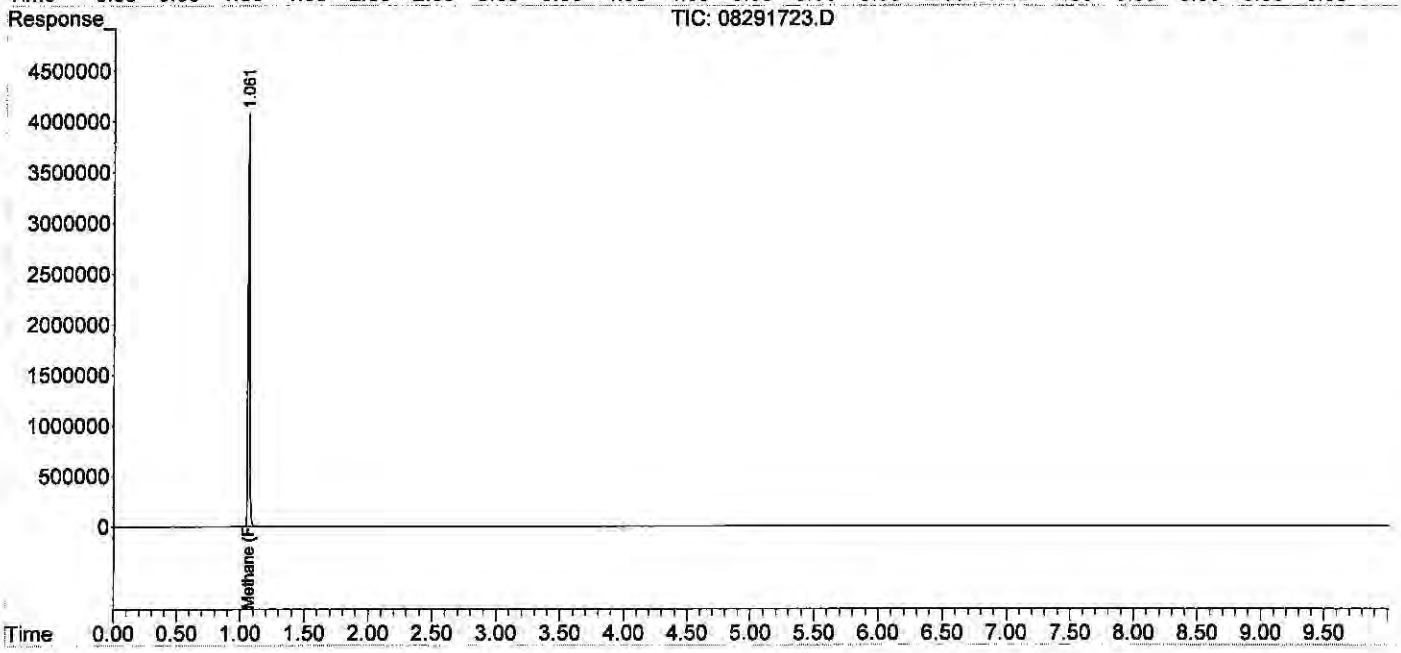
9/4/17

Data Path : J:\GC10\DATA\RSK_FID\2017_08\29\
Data File : 08291723.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 29-Aug-2017, 16:35
Operator : MC
Sample : icv s30-07071701
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 29 16:54:07 2017
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Dissolved Gases by RSK175

ALS Environmental

Method : RSK175 Headspace Method for Dissolved Hydrocarbon in Water by FID/TCD
Client : ALS Laboratory Group | Analyst : LD | Instrument : GC#10
Service Request: P2003597 | Date Analysis : 06/30/20 | Detector : FID#10, TCD#10
Sample Vol. (ml) : 32.00 ml | Head Space Vol.(ml) : 8.00 ml | Gas Constant : 24.05684 (20°C)

HEAD SPACE RESULT (ppm)

Sample ID	Inj. Vol.	Carbon Dioxide
STD S32-06222001	0.100	4877.612
ACTUAL		5000.00
%Difference		2.4%
MCS 0.1ml	0.100	0.000
RB 0.1ml	0.100	0.000
LCS S32-01212003	0.100	892.043
LCSD S32-01212003	0.100	878.239
P2003597-001 0.1ml	0.100	7212.270
P2003597-002 0.1ml	0.100	11336.44
P2003597-003 0.1ml	0.100	11329.07
P2003597-004 0.1ml	0.100	12180.44
P2003597-005 0.1ml	0.100	14242.27

FINAL HEAD SPACE RESULT (ppm)

	Carbon Dioxide
WWt.	44.10
HENRY'S CONSTANT	1.42E+03
RL	100.00
MCS 0.1ml	0.000
LCS S32-01212003	8920.430
LCSD S32-01212003	8782.390
P2003597-001 0.1ml	72122.700
P2003597-002 0.1ml	113364.43
P2003597-003 0.1ml	113290.71
P2003597-004 0.1ml	121804.36
P2003597-005 0.1ml	142422.72

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LP 06/30

STD S32-06222001	4778.670
ACTUAL	5000.00
%Difference	4.4%

Data Path : I:\GC10\DATA\RSK_FID\2020_06\30CO2\
Data File : 06302001.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 30-Jun-2020, 12:47:00
Operator : LD
Sample : STD S32-06222001
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Jun 30 13:05:55 2020
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

LP 06/30

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

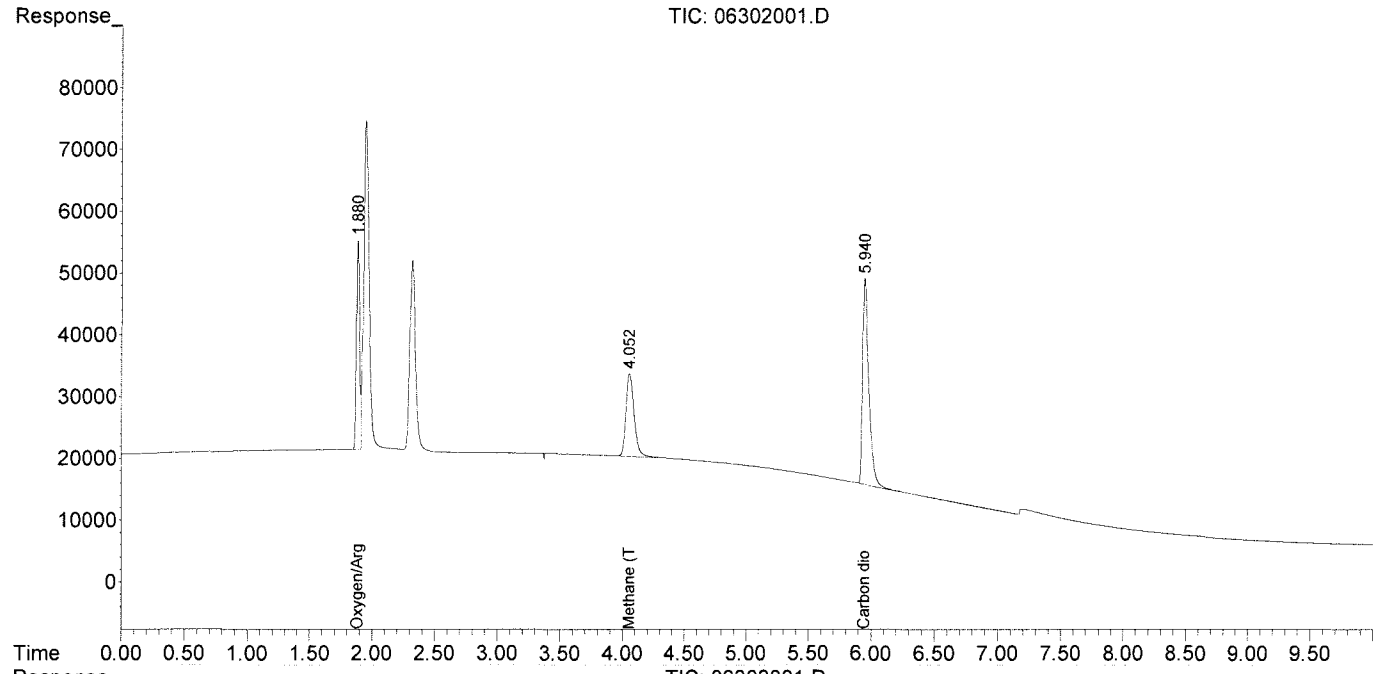
	Compound	R.T.	Response	Conc	Units
Target Compounds					
1)	Oxygen/Argon	1.881	581272	0.122	ppm
2)	Carbon monoxide	1.881	581272	N.D.	ppm
3)	Methane (TCD)	4.053f	611602	64669.487	ppm
4)	Carbon dioxide	5.941	1144918	4877.612	ppm
6)	Methane (FID)	0.000	0	N.D.	ppm
7)	Ethylene	0.000	0	N.D.	ppm
8)	Ethane	0.000	0	N.D.	ppm
9)	Propylene	0.000	0	N.D.	ppm
10)	Propane	0.000	0	N.D.	ppm
11)	Isobutylene	0.000	0	N.D.	ppm
12)	Isobutane	0.000	0	N.D.	ppm
13)	n-Butane	0.000	0	N.D.	ppm

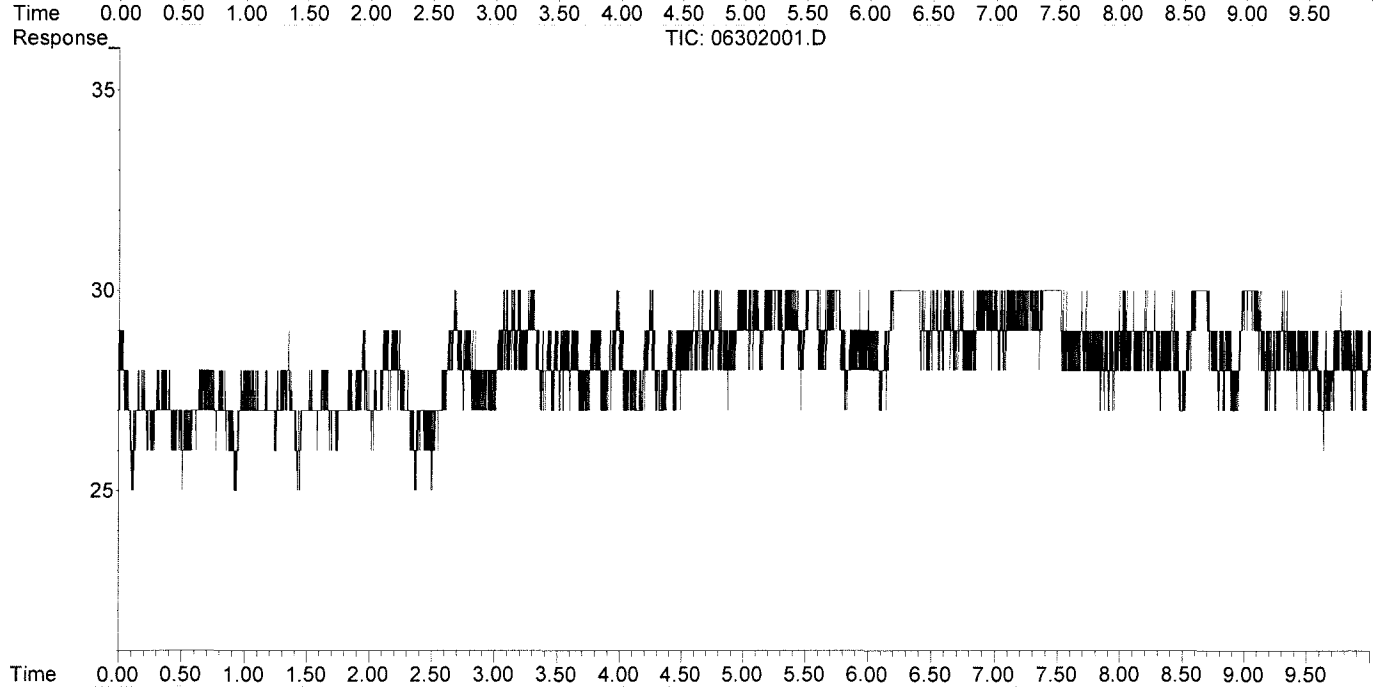
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : I:\GC10\DATA\RSK_FID\2020_06\30CO2\
Data File : 06302001.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 30-Jun-2020, 12:47:00
Operator : LD
Sample : STD S32-06222001
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Jun 30 13:05:55 2020
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





01003639

Data Path : I:\GC10\DATA\RSK_FID\2020_06\30CO2\
Data File : 06302016.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 30-Jun-2020, 19:40:55
Operator : LD
Sample : STD S32-06222001
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Jun 30 19:52:35 2020
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

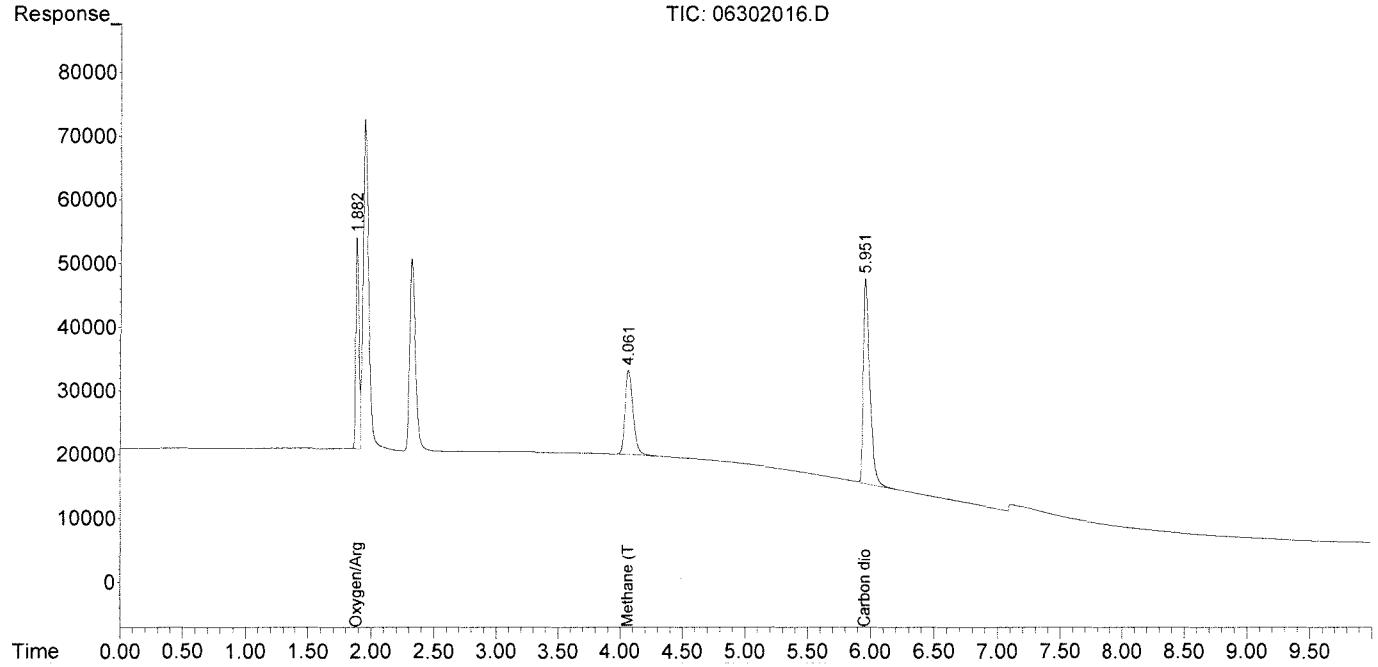
	Compound	R.T.	Response	Conc	Units
Target Compounds					
1)	Oxygen/Argon	1.883	577214	0.121	ppm
2)	Carbon monoxide	1.883	577214	N.D.	ppm
3)	Methane (TCD)	4.061f	607023	64185.278	ppm
4)	Carbon dioxide	5.952	1121693	4778.670	ppm
6)	Methane (FID)	0.000	0	N.D.	ppm
7)	Ethylene	0.000	0	N.D.	ppm
8)	Ethane	0.000	0	N.D.	ppm
9)	Propylene	0.000	0	N.D.	ppm
10)	Propane	0.000	0	N.D.	ppm
11)	Isobutylene	0.000	0	N.D.	ppm
12)	Isobutane	0.000	0	N.D.	ppm
13)	n-Butane	0.000	0	N.D.	ppm

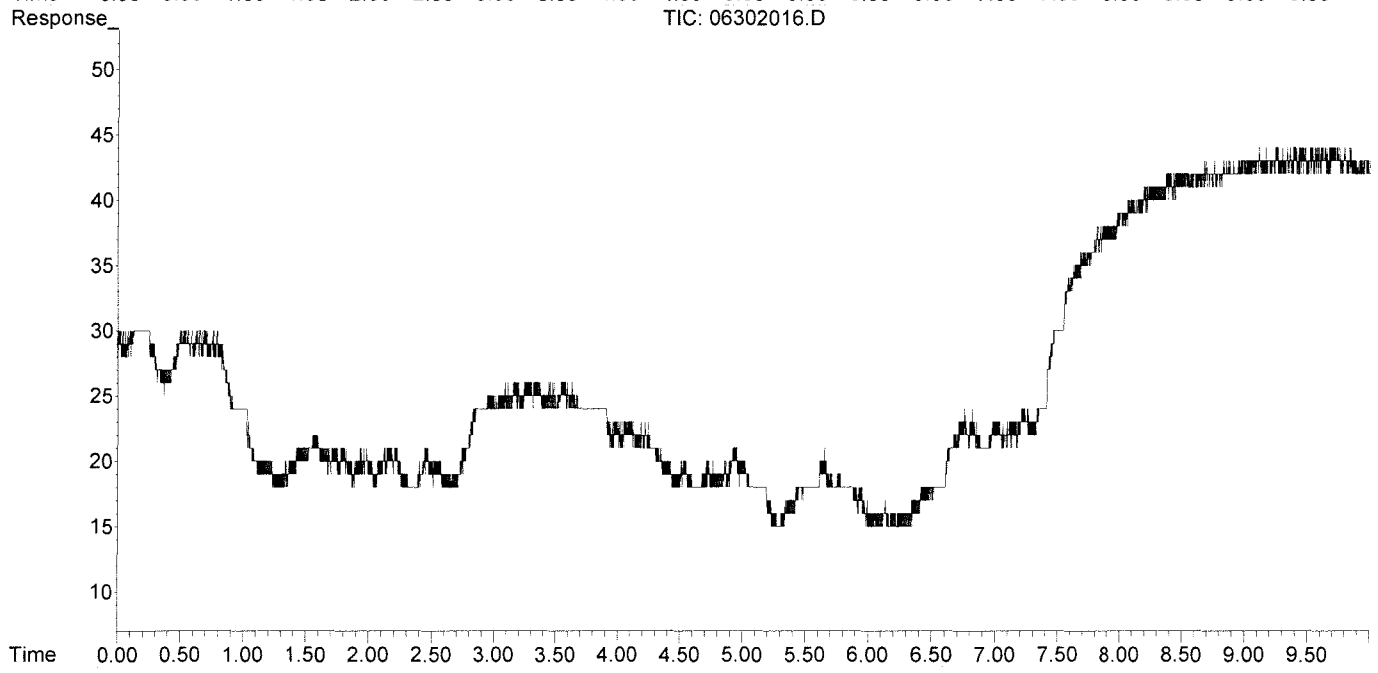
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : I:\GC10\DATA\RSK_FID\2020_06\30CO2\
Data File : 06302016.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 30-Jun-2020, 19:40:55
Operator : LD
Sample : STD S32-06222001
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Jun 30 19:52:35 2020
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Injection Log

Directory: I:\GC10\DATA\RSK_FID\2017_08\29\

	Date/Time	File Name	Sample ID	Misc Info	Operator	Acquisition Method	Comments
1	29-Aug-17, 07:58:00	08291701.D	std s30-06161601		MC	RSKBOTH.M	Pass
2	29-Aug-17, 08:11:02	08291702.D	mb 0.5ml		MC	RSKBOTH.M	Pass
3	29-Aug-17, 08:24:13	08291703.D	4089-001 0.5ml		MC	RSKBOTH.M	
4	29-Aug-17, 08:39:29	08291704.D	4089-002 0.5ml		MC	RSKBOTH.M	
5	29-Aug-17, 08:53:38	08291705.D	4089-003 0.5ml		MC	RSKBOTH.M	
6	29-Aug-17, 09:33:52	08291706.D	4089-004 0.5ml		MC	RSKBOTH.M	
7	29-Aug-17, 09:50:51	08291707.D	4089-005 0.5ml		MC	RSKBOTH.M	
8	29-Aug-17, 10:07:54	08291708.D	4089-006 0.5ml		MC	RSKBOTH.M	
9	29-Aug-17, 10:42:34	08291709.D	4089-007 0.5ml		MC	RSKBOTH.M	
10	29-Aug-17, 11:06:01	08291710.D	4089-008 0.5ml		MC	RSKBOTH.M	
11	29-Aug-17, 11:23:53	08291711.D	4089-009 0.5ml		MC	RSKBOTH.M	
12	29-Aug-17, 11:37:17	08291712.D	lcs s30-05241604		MC	RSKBOTH.M	Pass
13	29-Aug-17, 11:50:31	08291713.D	lcs s30-05241604		MC	RSKBOTH.M	Pass
14	29-Aug-17, 12:29:45	08291714.D	std s30-06161601		MC	RSKBOTH.M	Pass
15	29-Aug-17, 14:07:01	08291715.D	25ppm s32-08291701 0.25ml		MC	RSKBOTH.M	Curve
16	29-Aug-17, 14:22:12	08291716.D	100ppm s32-08291702 0.2ml		MC	RSKBOTH.M	Curve
17	29-Aug-17, 14:53:00	08291717.D	250ppm s32-08291702 0.5ml		MC	RSKBOTH.M	Curve
18	29-Aug-17, 15:07:43	08291718.D	mls inject		MC	RSKBOTH.M	
19	29-Aug-17, 15:23:21	08291719.D	2500ppm s32-08231701 50ul		MC	RSKBOTH.M	Curve
20	29-Aug-17, 15:44:54	08291720.D	5000ppm s32-08231701 0.1ml		MC	RSKBOTH.M	Curve
21	29-Aug-17, 16:00:09	08291721.D	25000ppm s32-08231701 0.5ml		MC	RSKBOTH.M	Curve
22	29-Aug-17, 16:15:43	08291722.D	mb 0.1ml		MC	RSKBOTH.M	Pass
23	29-Aug-17, 16:35:37	08291723.D	lcv s30-07071701		MC	RSKBOTH.M	Pass

Injection Log

Directory: I:\GC10\DATA\RSK_TCD\2020_06\30\

	Date/Time	File Name	Sample ID	Misc Info	Operator	Acquisition Method	Comments
1	30-Jun-20, 12:47:00	06302001.D	STD S32-06222001		LD	RSKBOTH.M	pass
2	30-Jun-20, 13:20:23	06302002.D	RB 0.1ml		LD	RSKBOTH.M	pass
3	30-Jun-20, 15:53:39	06302003.D	MCS 0.1ml		LD	RSKBOTH.M	pass
4	30-Jun-20, 16:08:23	06302004.D	xxxxLCS S32-01212003		LD	RSKBOTH.M	pass
5	30-Jun-20, 16:21:46	06302005.D	LCS S32-01212003		LD	RSKBOTH.M	pass
6	30-Jun-20, 16:35:59	06302006.D	LCSD S32-01212003		LD	RSKBOTH.M	pass
7	30-Jun-20, 17:15:13	06302007.D	P2003560-001 0.1ml		LD	RSKBOTH.M	
8	30-Jun-20, 17:29:19	06302008.D	P2003560-002 0.1ml		LD	RSKBOTH.M	
9	30-Jun-20, 17:42:46	06302009.D	P2003560-003 0.1ml		LD	RSKBOTH.M	
10	30-Jun-20, 17:55:45	06302010.D	P2003560-004 0.1ml		LD	RSKBOTH.M	
11	30-Jun-20, 18:11:05	06302011.D	P2003597-001 0.1ml		LD	RSKBOTH.M	
12	30-Jun-20, 18:24:23	06302012.D	P2003597-002 0.1ml		LD	RSKBOTH.M	
13	30-Jun-20, 18:51:47	06302013.D	P2003597-003 0.1ml		LD	RSKBOTH.M	
14	30-Jun-20, 19:04:54	06302014.D	P2003597-004 0.1ml		LD	RSKBOTH.M	
15	30-Jun-20, 19:23:20	06302015.D	P2003597-005 0.1ml		LD	RSKBOTH.M	
16	30-Jun-20, 19:40:55	06302016.D	STD S32-06222001		LD	RSKBOTH.M	pass

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Data Path : I:\GC10\DATA\RSK_FID\2020_07\01\
Data File : 07012010.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 01-Jul-2020, 15:43:08
Operator : LD
Sample : P2003597-001 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Jul 01 16:07:01 2020
Quant Method : I:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:14:47 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	R.T.	Response	Conc	Units
Target Compounds					
1)	Oxygen/Argon	0.000	0	N.D.	ppm
2)	Carbon monoxide	0.000	0	N.D.	ppm
3)	Methane (TCD)	0.000	0	N.D.	ppm
4)	Carbon dioxide	0.000	0	N.D.	ppm
6)	Methane (FID)	1.099	14388	1.586	ppm
7)	Ethylene	0.000	0	N.D.	ppm
8)	Ethane	0.000	0	N.D.	ppm
9)	Propylene	0.000	0	N.D.	ppm
10)	Propane	0.000	0	N.D.	ppm
11)	Isobutylene	0.000	0	N.D.	ppm
12)	Isobutane	0.000	0	N.D.	ppm
13)	n-Butane	0.000	0	N.D.	ppm

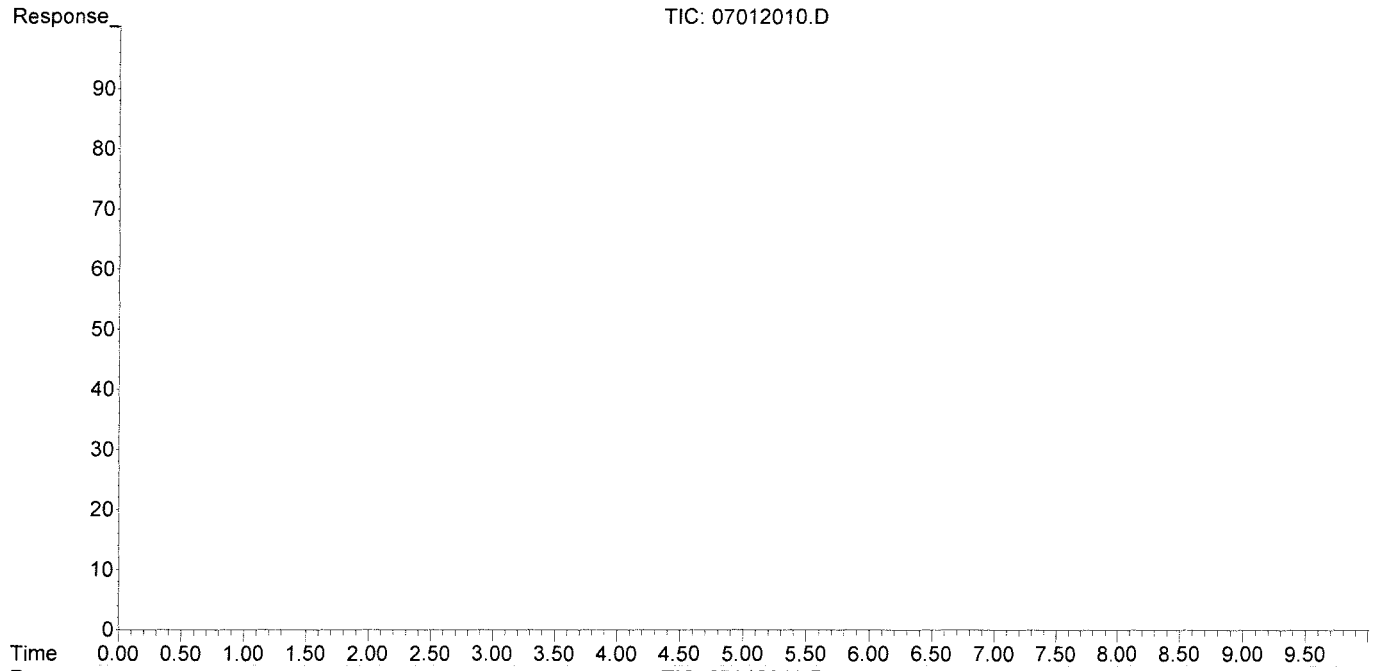
(f)=RT Delta > 1/2 Window (m)=manual int.

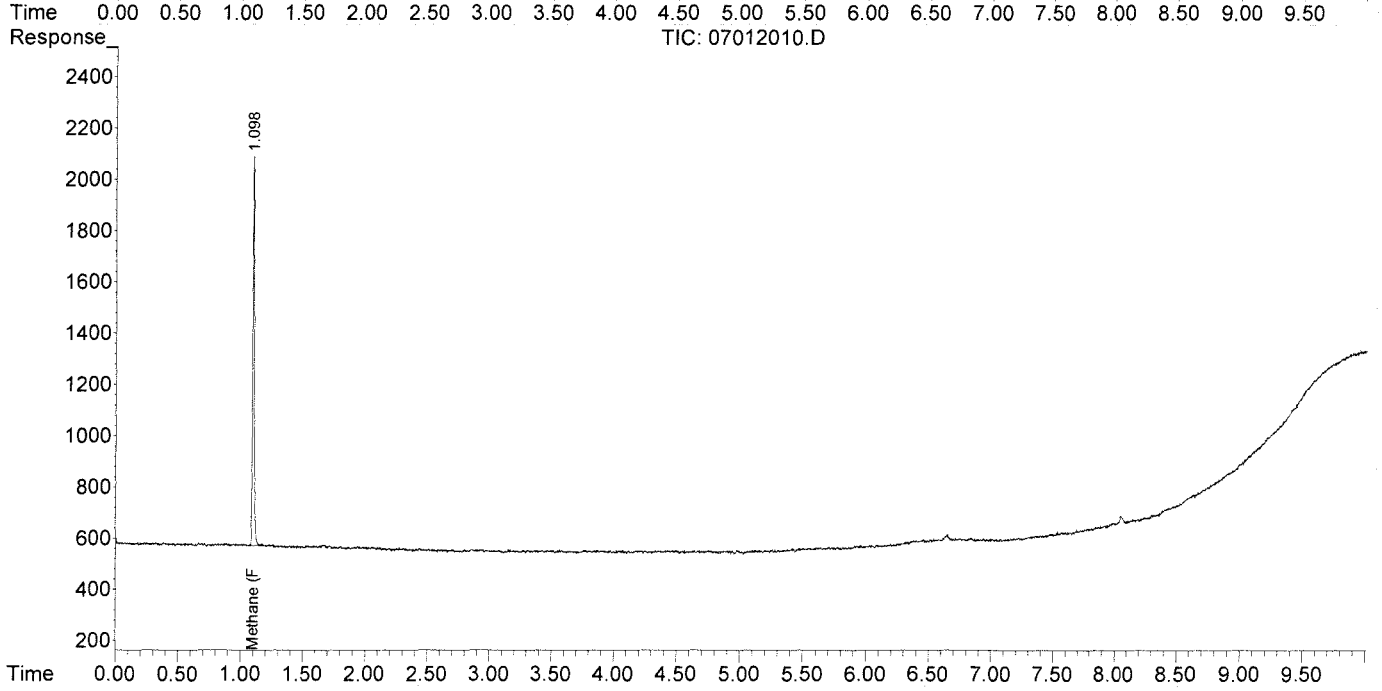
01003644

Data Path : I:\GC10\DATA\RSK_FID\2020_07\01\
Data File : 07012010.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 01-Jul-2020, 15:43:08
Operator : LD
Sample : P2003597-001 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Jul 01 16:07:01 2020
Quant Method : I:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:14:47 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Data Path : I:\GC10\DATA\RSK_FID\2020_07\01\
Data File : 07012011.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 01-Jul-2020, 15:56:30
Operator : LD
Sample : P2003597-002 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Jul 01 16:27:22 2020
Quant Method : I:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:14:47 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

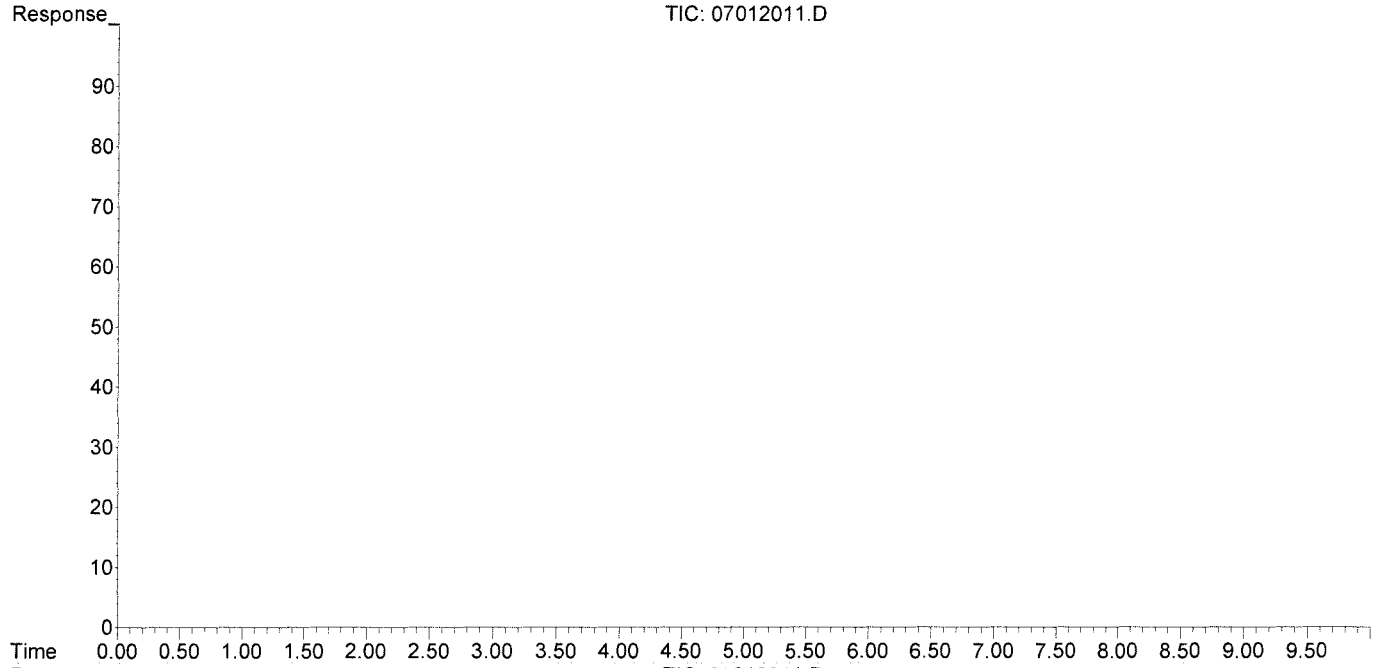
	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1)	Oxygen/Argon	0.000	0	N.D.	ppm	
2)	Carbon monoxide	0.000	0	N.D.	ppm	
3)	Methane (TCD)	0.000	0	N.D.	ppm	
4)	Carbon dioxide	0.000	0	N.D.	ppm	
6)	Methane (FID)	1.101	1221099	134.621	ppm	
7)	Ethylene	1.665	20894	1.249	ppm	
8)	Ethane	0.000	0	N.D.	ppm	
9)	Propylene	0.000	0	N.D.	ppm	
10)	Propane	0.000	0	N.D.	ppm	
11)	Isobutylene	0.000	0	N.D.	ppm	
12)	Isobutane	0.000	0	N.D.	ppm	d
13)	n-Butane	0.000	0	N.D.	ppm	d

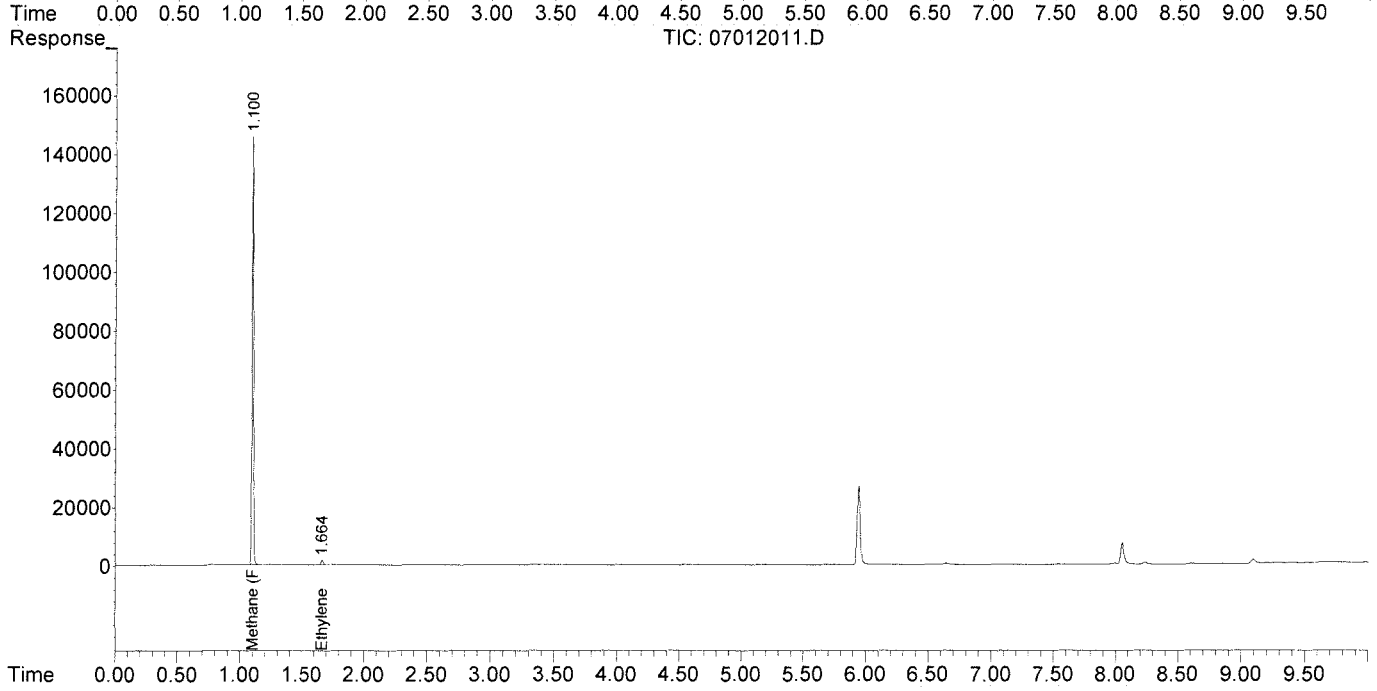
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : I:\GC10\DATA\RSK_FID\2020_07\01\
Data File : 07012011.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 01-Jul-2020, 15:56:30
Operator : LD
Sample : P2003597-002 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Jul 01 16:27:22 2020
Quant Method : I:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:14:47 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Data Path : I:\GC10\DATA\RSK_FID\2020_07\01\
Data File : 07012012.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 01-Jul-2020, 16:09:40
Operator : LD
Sample : P2003597-003 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Jul 01 16:27:48 2020
Quant Method : I:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:14:47 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

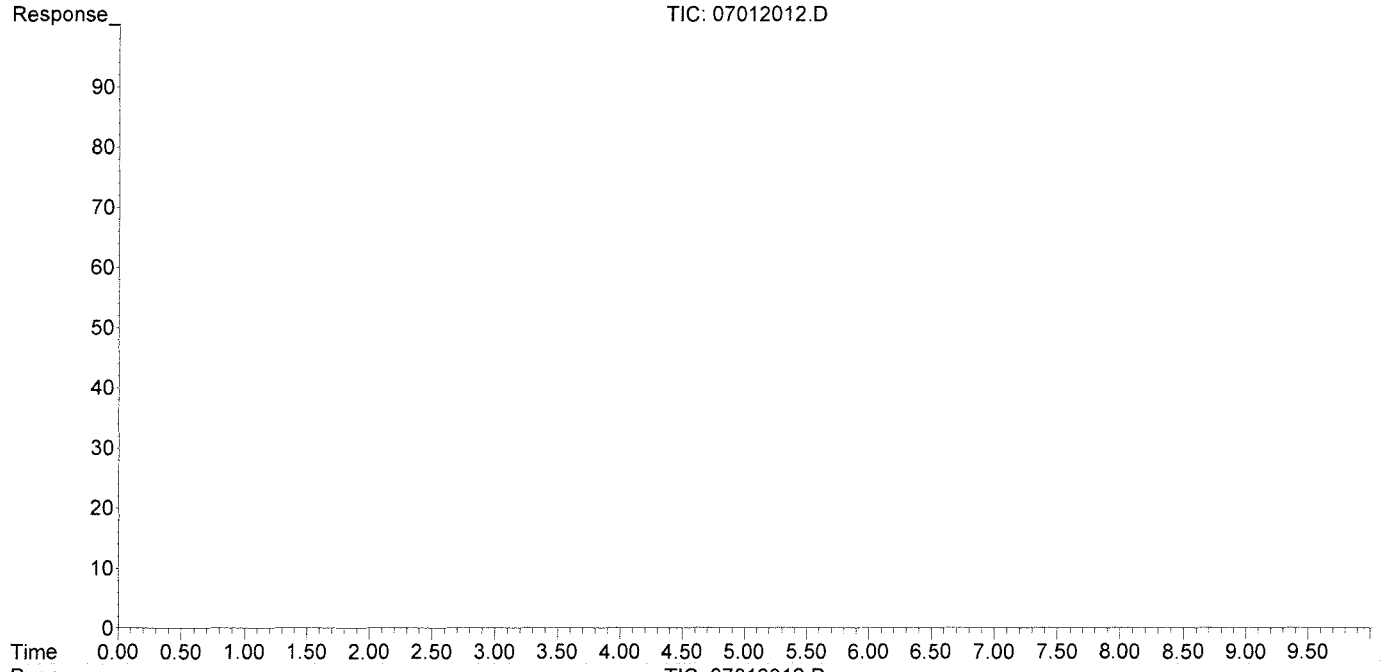
	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1)	Oxygen/Argon	0.000	0	N.D.	ppm	
2)	Carbon monoxide	0.000	0	N.D.	ppm	
3)	Methane (TCD)	0.000	0	N.D.	ppm	
4)	Carbon dioxide	0.000	0	N.D.	ppm	
6)	Methane (FID)	1.100	660866	72.858	ppm	
7)	Ethylene	1.665	8423	0.503	ppm	
8)	Ethane	0.000	0	N.D.	ppm	
9)	Propylene	0.000	0	N.D.	ppm	
10)	Propane	0.000	0	N.D.	ppm	
11)	Isobutylene	0.000	0	N.D.	ppm	
12)	Isobutane	0.000	0	N.D.	ppm	d
13)	n-Butane	0.000	0	N.D.	ppm	d

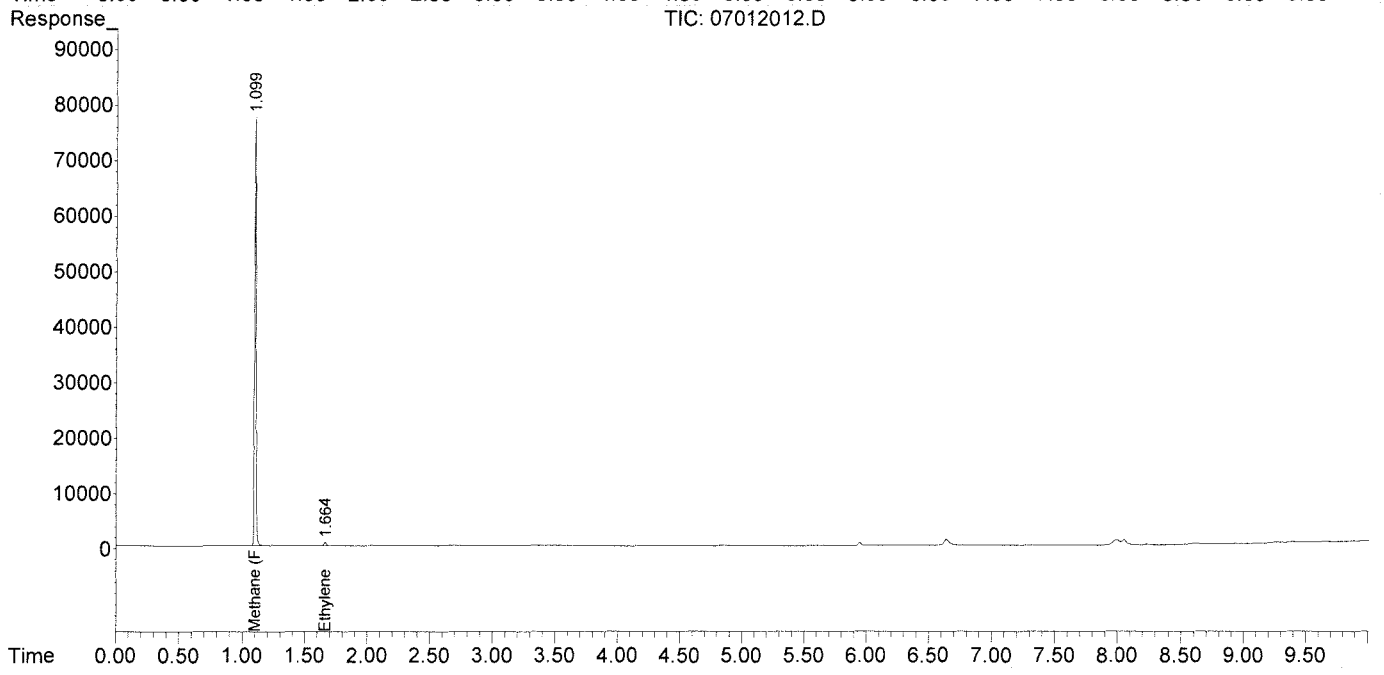
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : I:\GC10\DATA\RSK_FID\2020_07\01\
Data File : 07012012.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 01-Jul-2020, 16:09:40
Operator : LD
Sample : P2003597-003 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Jul 01 16:27:48 2020
Quant Method : I:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:14:47 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





01003649

Data Path : I:\GC10\DATA\RSK_FID\2020_07\01\
Data File : 07012013.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 01-Jul-2020, 16:22:41
Operator : LD
Sample : P2003597-004 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Jul 01 17:16:54 2020
Quant Method : I:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:14:47 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

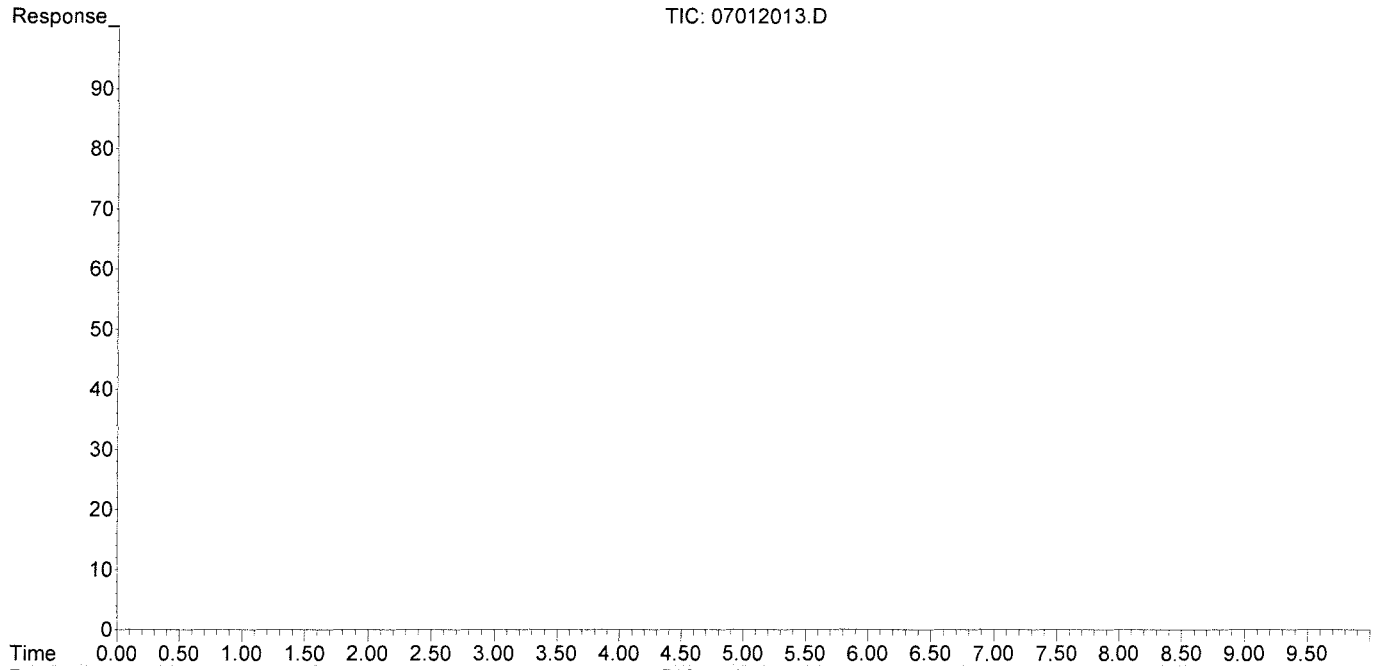
	Compound	R.T.	Response	Conc	Units
Target Compounds					
1)	Oxygen/Argon	0.000	0	N.D.	ppm
2)	Carbon monoxide	0.000	0	N.D.	ppm
3)	Methane (TCD)	0.000	0	N.D.	ppm
4)	Carbon dioxide	0.000	0	N.D.	ppm
6)	Methane (FID)	1.094	6516405	718.406	ppm
7)	Ethylene	0.000	0	N.D.	ppm
8)	Ethane	0.000	0	N.D.	ppm
9)	Propylene	0.000	0	N.D.	ppm
10)	Propane	0.000	0	N.D.	ppm
11)	Isobutylene	0.000	0	N.D.	ppm
12)	Isobutane	0.000	0	N.D.	ppm
13)	n-Butane	0.000	0	N.D.	ppm

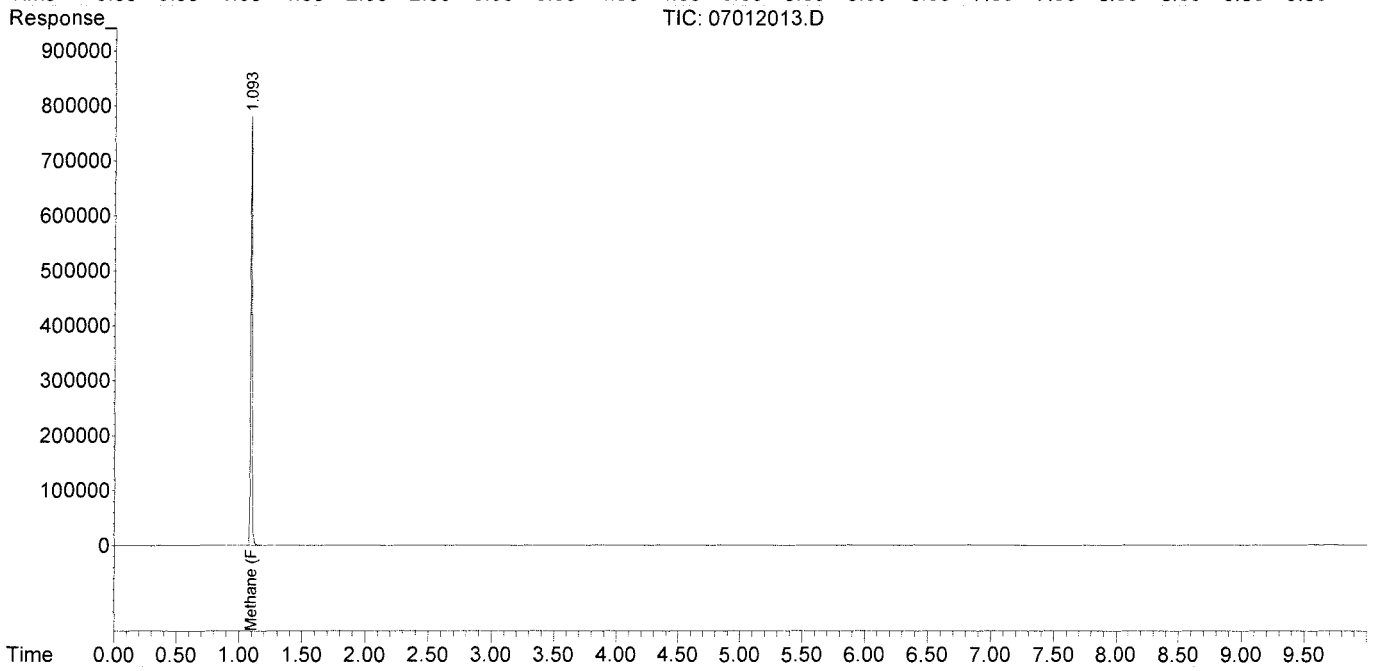
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : I:\GC10\DATA\RSK_FID\2020_07\01\
Data File : 07012013.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 01-Jul-2020, 16:22:41
Operator : LD
Sample : P2003597-004 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Jul 01 17:16:54 2020
Quant Method : I:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:14:47 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Data Path : I:\GC10\DATA\RSK_FID\2020_07\01\
Data File : 07012014.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 01-Jul-2020, 16:38:47
Operator : LD
Sample : P2003597-005 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Jul 01 17:17:08 2020
Quant Method : I:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:14:47 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

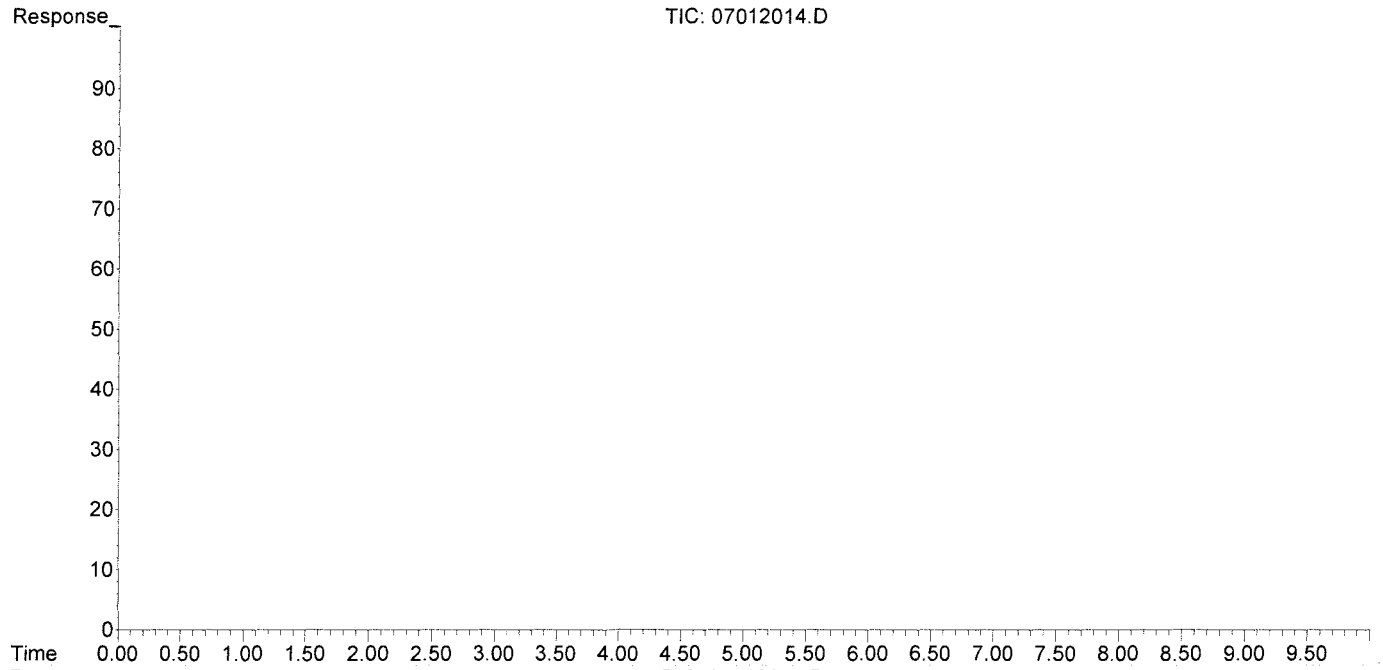
	Compound	R.T.	Response	Conc	Units
Target Compounds					
1)	Oxygen/Argon	0.000	0	N.D.	ppm
2)	Carbon monoxide	0.000	0	N.D.	ppm
3)	Methane (TCD)	0.000	0	N.D.	ppm
4)	Carbon dioxide	0.000	0	N.D.	ppm
6)	Methane (FID)	1.104	6073426	669.570	ppm
7)	Ethylene	0.000	0	N.D.	ppm
8)	Ethane	0.000	0	N.D.	ppm
9)	Propylene	0.000	0	N.D.	ppm
10)	Propane	0.000	0	N.D.	ppm
11)	Isobutylene	0.000	0	N.D.	ppm
12)	Isobutane	0.000	0	N.D.	ppm
13)	n-Butane	0.000	0	N.D.	ppm

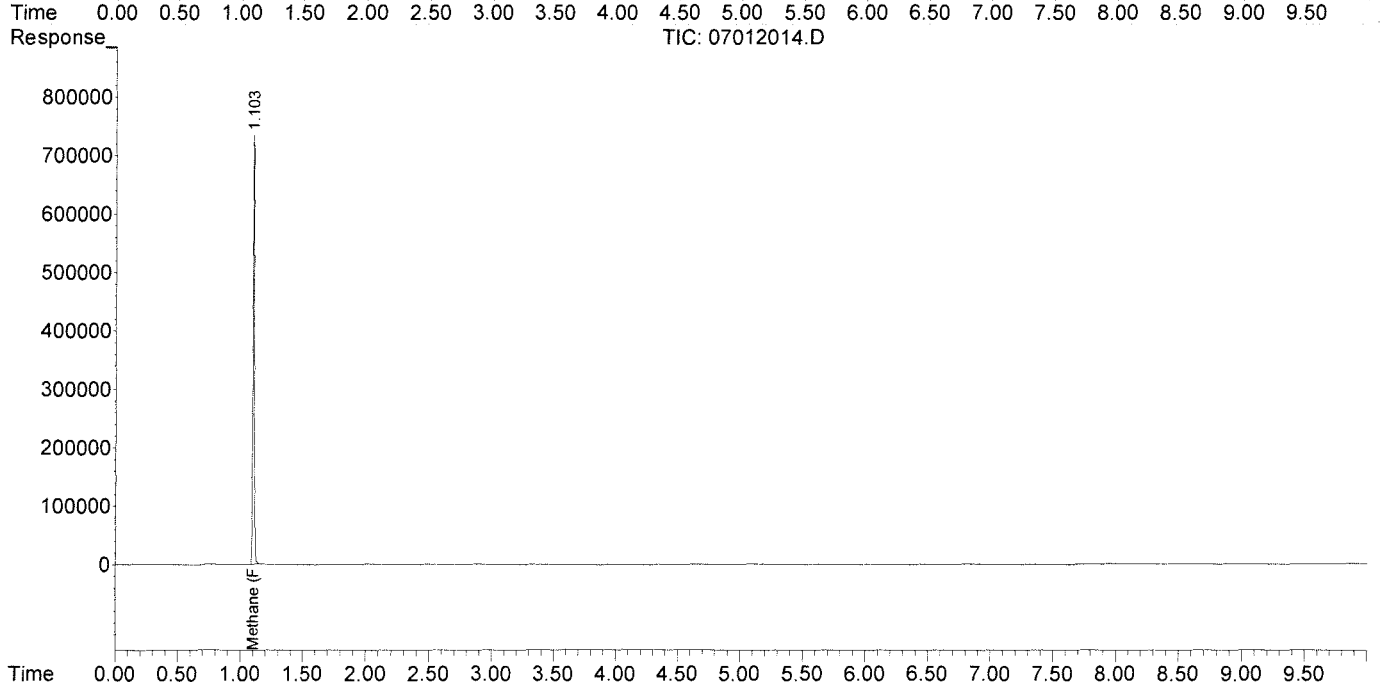
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : I:\GC10\DATA\RSK_FID\2020_07\01\
Data File : 07012014.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 01-Jul-2020, 16:38:47
Operator : LD
Sample : P2003597-005 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Jul 01 17:17:08 2020
Quant Method : I:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:14:47 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Data Path : I:\GC10\DATA\RSK_FID\2020_07\01\
Data File : 07012003.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 01-Jul-2020, 13:48:06
Operator : LD
Sample : MCS 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Jul 01 14:08:21 2020
Quant Method : I:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:14:47 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

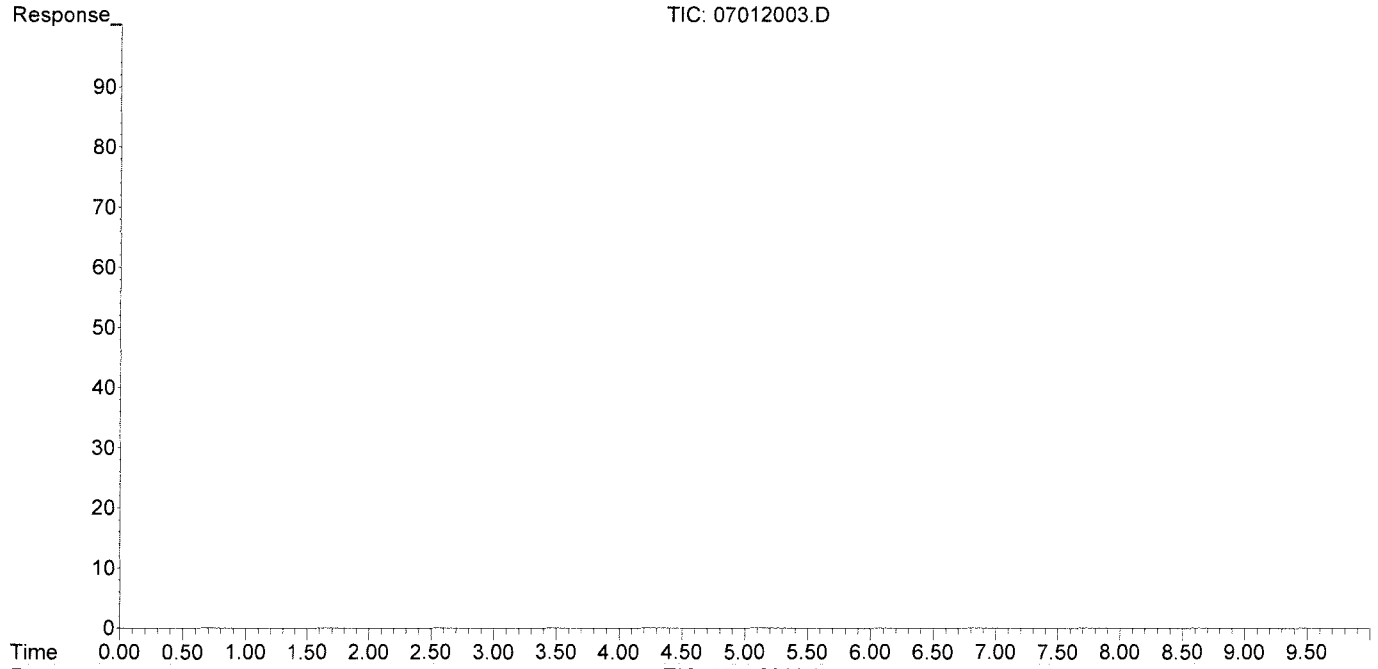
	Compound	R.T.	Response	Conc	Units
Target Compounds					
1)	Oxygen/Argon	0.000	0	N.D.	ppm
2)	Carbon monoxide	0.000	0	N.D.	ppm
3)	Methane (TCD)	0.000	0	N.D.	ppm
4)	Carbon dioxide	0.000	0	N.D.	ppm
6)	Methane (FID)	0.000	0	N.D.	ppm
7)	Ethylene	0.000	0	N.D.	ppm
8)	Ethane	0.000	0	N.D.	ppm
9)	Propylene	0.000	0	N.D.	ppm
10)	Propane	0.000	0	N.D.	ppm
11)	Isobutylene	0.000	0	N.D.	ppm
12)	Isobutane	0.000	0	N.D.	ppm
13)	n-Butane	0.000	0	N.D.	ppm

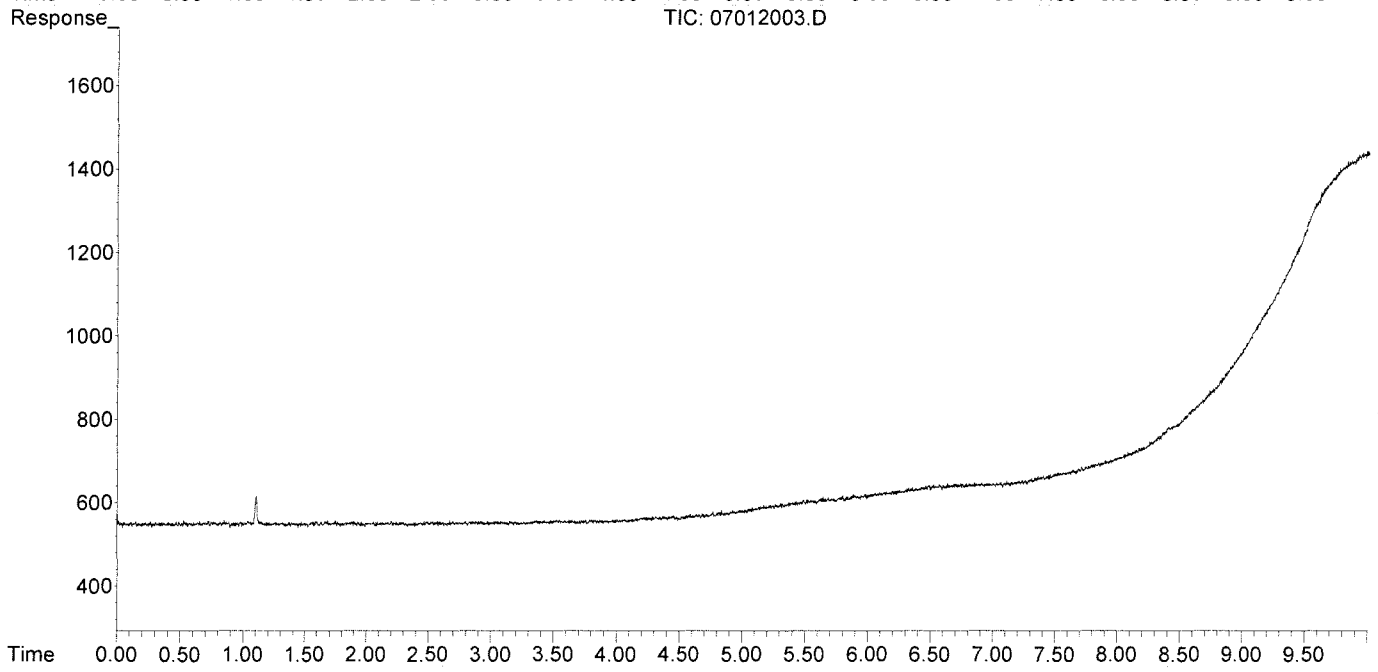
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : I:\GC10\DATA\RSK_FID\2020_07\01\
Data File : 07012003.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 01-Jul-2020, 13:48:06
Operator : LD
Sample : MCS 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Jul 01 14:08:21 2020
Quant Method : I:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:14:47 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Data Path : I:\GC10\DATA\RSK_FID\2020_07\01\
Data File : 07012004.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 01-Jul-2020, 14:01:52
Operator : LD
Sample : LCS FID 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Jul 01 14:18:37 2020
Quant Method : I:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:14:47 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

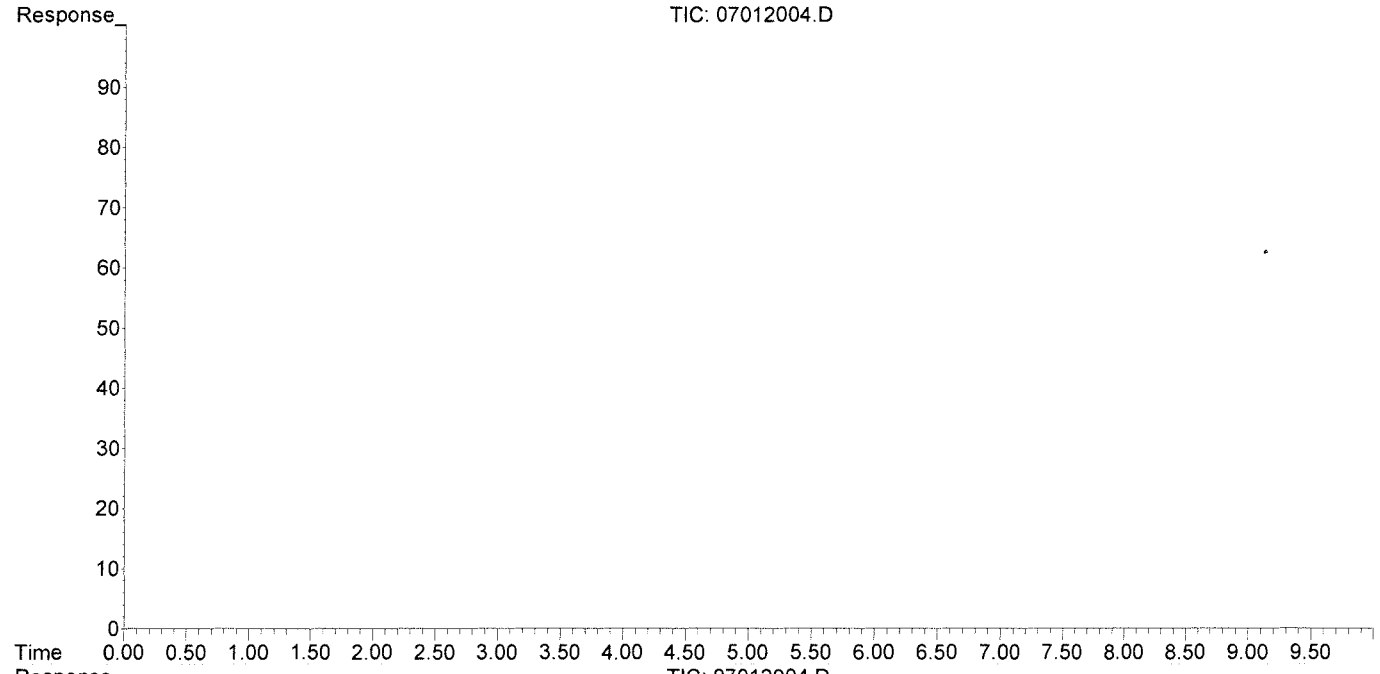
	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1)	Oxygen/Argon	0.000	0	N.D.	ppm	
2)	Carbon monoxide	0.000	0	N.D.	ppm	
3)	Methane (TCD)	0.000	0	N.D.	ppm	
4)	Carbon dioxide	0.000	0	N.D.	ppm	
6)	Methane (FID)	1.097	12970	1.430	ppm	
7)	Ethylene	1.664	17638	1.054	ppm	
8)	Ethane	1.928	20361	1.201	ppm	
9)	Propylene	4.313	23705	1.012	ppm	
10)	Propane	4.435	30311	1.218	ppm	
11)	Isobutylene	0.000	0	N.D.	ppm	
12)	Isobutane	0.000	0	N.D.	ppm	d
13)	n-Butane	0.000	0	N.D.	ppm	d

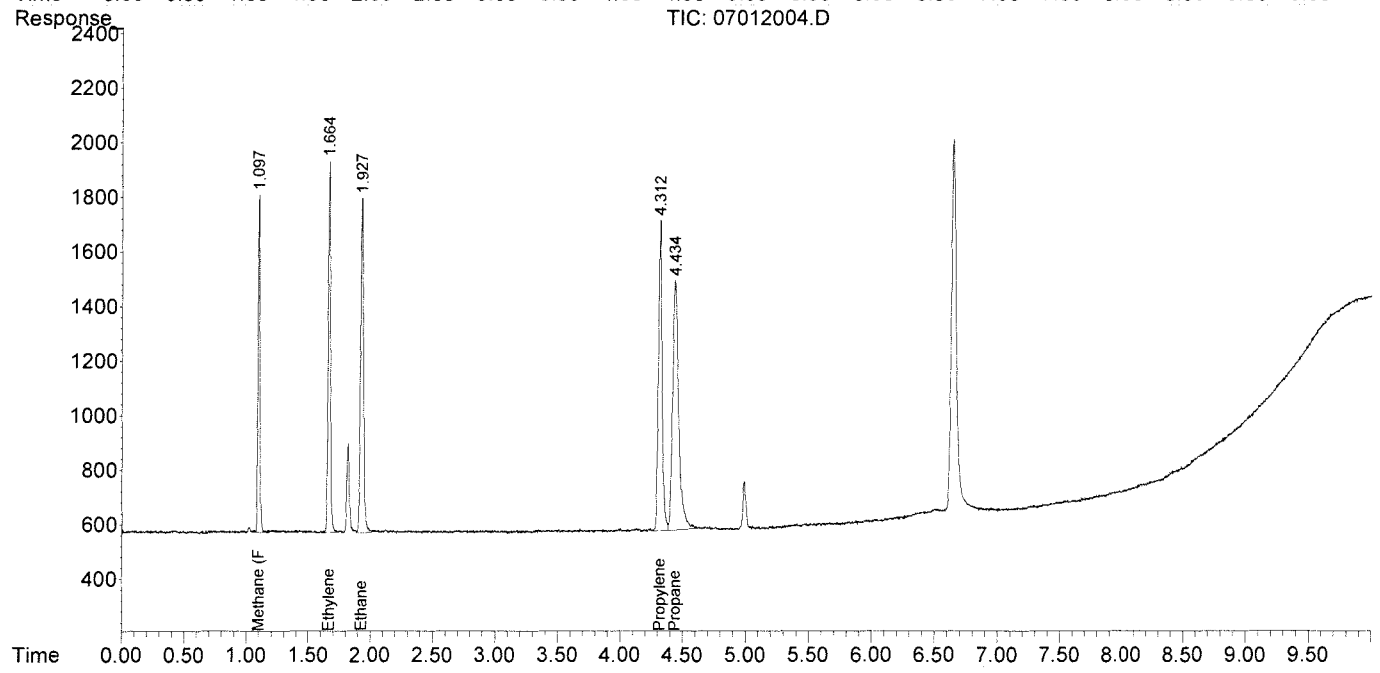
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : I:\GC10\DATA\RSK_FID\2020_07\01\
Data File : 07012004.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 01-Jul-2020, 14:01:52
Operator : LD
Sample : LCS FID 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Jul 01 14:18:37 2020
Quant Method : I:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:14:47 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Data Path : I:\GC10\DATA\RSK_FID\2020_07\01\
Data File : 07012005.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 01-Jul-2020, 14:21:34
Operator : LD
Sample : LCSD FID 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Jul 01 14:39:02 2020
Quant Method : I:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:14:47 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

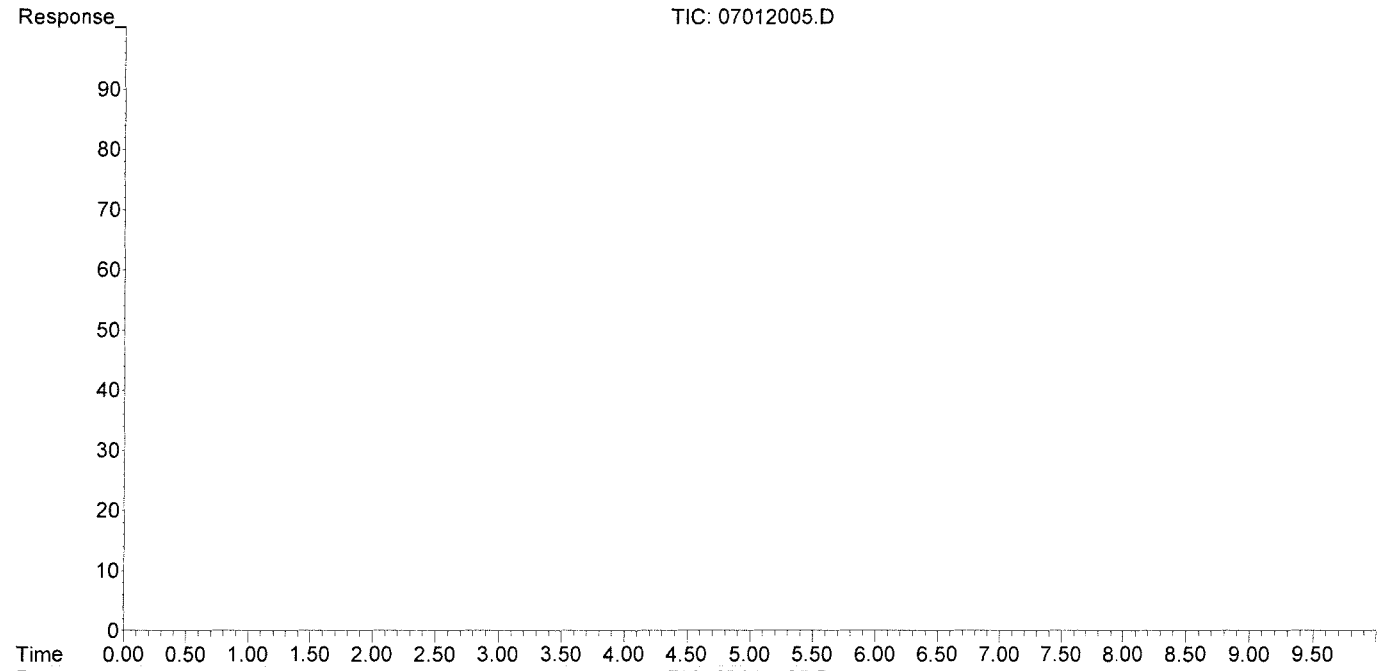
	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1)	Oxygen/Argon	0.000	0	N.D.	ppm	
2)	Carbon monoxide	0.000	0	N.D.	ppm	
3)	Methane (TCD)	0.000	0	N.D.	ppm	
4)	Carbon dioxide	0.000	0	N.D.	ppm	
6)	Methane (FID)	1.098	12856	1.417	ppm	
7)	Ethylene	1.665	17341	1.036	ppm	
8)	Ethane	1.928	19739	1.165	ppm	
9)	Propylene	4.311	23012	0.982	ppm	
10)	Propane	4.433	29429	1.183	ppm	
11)	Isobutylene	0.000	0	N.D.	ppm	
12)	Isobutane	0.000	0	N.D.	ppm	d
13)	n-Butane	0.000	0	N.D.	ppm	d

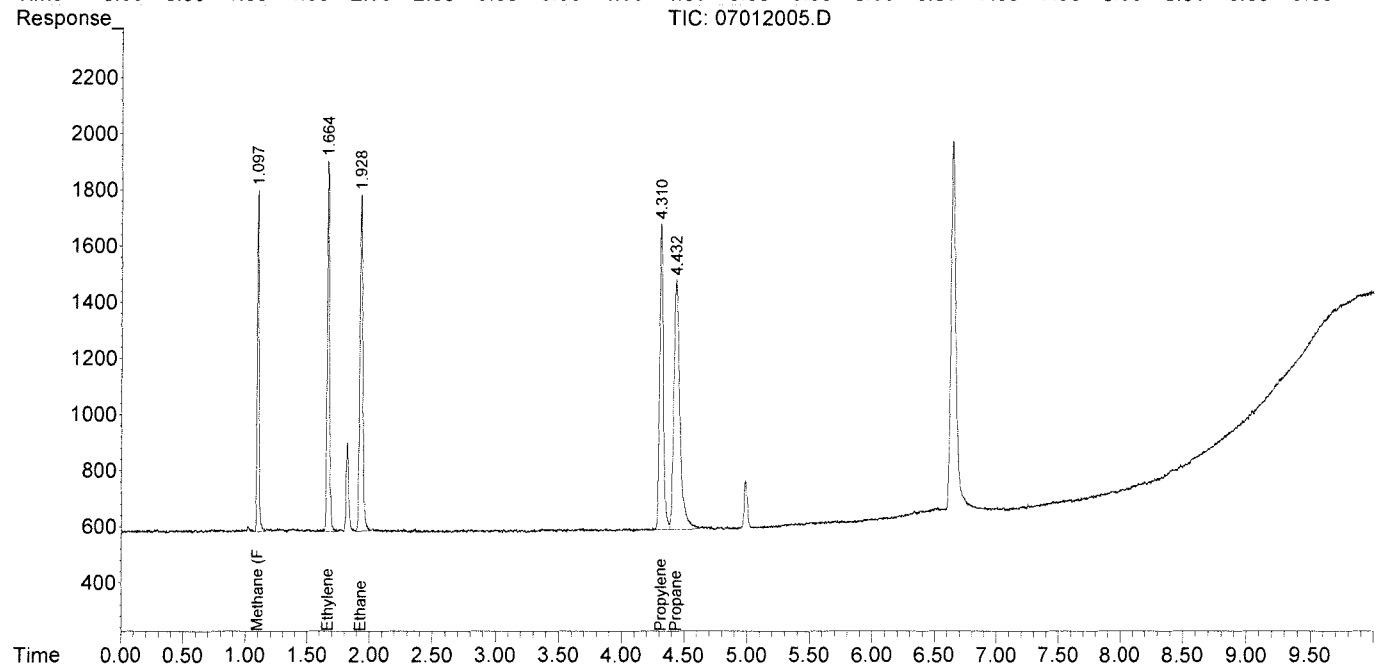
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : I:\GC10\DATA\RSK_FID\2020_07\01\
Data File : 07012005.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 01-Jul-2020, 14:21:34
Operator : LD
Sample : LCSD FID 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Jul 01 14:39:02 2020
Quant Method : I:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:14:47 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Response Factor Report HP5890

Method Path : J:\GC10\METHODS\
Method File : RS091217_R.M
Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
Last Update : Wed Sep 13 11:14:47 2017
Response Via : Initial Calibration

Calibration Files
1 =09121702.D 2 =09121703.D 3 =09121704.D
4 =09121705.D 5 =09121706.D 6 =09121707.D

	Compound	1	2	3	4	5	6	Avg		%RSD
1)	Oxygen/Argon	3.739		1.014			0.001	0.793	E6	189.17
2)	Carbon monoxide	3.739		1.014			0.001	0.594	E6	221.92
3)	Methane (TCD)						2.161	0.951	E2	106.37
4)	Carbon dioxide	2.365	2.569	2.558	2.361	2.459	2.314	2.438	E2	4.44

Signal #2 Calibration Files
1 =09121702.D 2 =09121703.D 3 =09121704.D
4 =09121705.D 5 =09121706.D 6 =09121707.D

	Compound	1	2	3	4	5	6	Avg		%RSD
6)	Methane (FID)		1.180	0.975	0.908	0.870	0.868	0.907	E4	11.66
7)	Ethylene	1.736	1.638	1.780	1.720	1.628	1.670	1.673	E4	3.90
8)	Ethane	1.781	1.676	1.784	1.730	1.692	1.675	1.695	E4	3.83
9)	Propylene	2.505	2.296	2.592	2.480	2.346	2.252	2.343	E4	6.56
10)	Propane	2.439	2.283	2.645	2.555	2.433	2.522	2.488	E4	4.20
11)	Isobutylene							0.652	E1	138.46
12)	Isobutane	6.058	4.793	2.214	1.553	1.353		2.662	E4	86.17
13)	n-Butane	6.058	4.793	2.214	1.553	1.353		2.662	E4	86.17

(#) = Out of Range ### Number of calibration levels exceeded format ###

RS091217_R.M Wed Sep 13 15:11:48 2017

Edit Compounds -- Compound #6 -- Methane (FID)

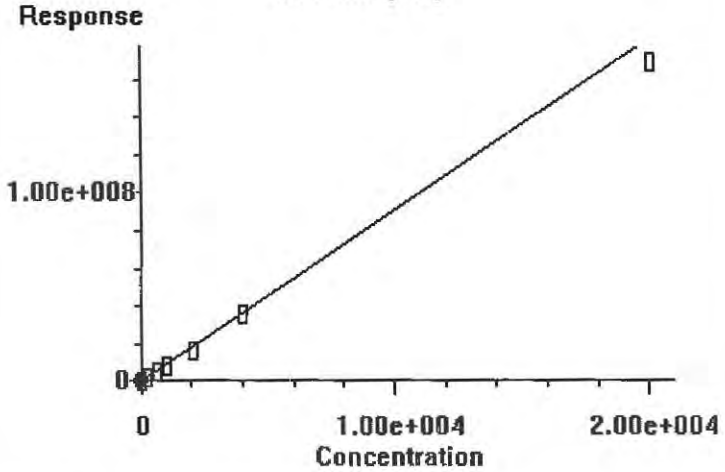
Search by: Ret Time | Name | Index | Find Compound

- Compound Database
- External Standard Compoun
  - Oxygen/Argon
  - Carbon monoxide
  - Methane (TCD)
  - Carbon dioxide
  - Signal #2
  - Methane (FID)
  - Ethylene
  - Ethane
  - Propylene
  - Propane
  - Isobutylene
  - Isobutane
  - n-Butane

Identification | Calibration | User-Defined | Advanced | Reporting

Lvl ID	Concentration	Response
1	0.151000	
2	0.302000	3564.400000
3	1.510000	14725.268625
4	4.530000	41128.575000
5	10.570000	91966.784531
6	200.000000	1735997.497500
7	600.000000	5189848.900000
8	1000.000000	8598533.570000
9	2000.000000	16098209.390000
10	4000.000000	35776839.311362
11	20000.000000	169009160.49199

Methane (FID)



0.000e+000	Quadratic term
9.071e+003	Linear term
0.000e+000	Constant term
11.657%	RF Rel Std Dev

OK | Cancel | Help | Print Calibration Curve | Copy Calibration Curve

Edit Compounds -- Compound #7 -- Ethylene

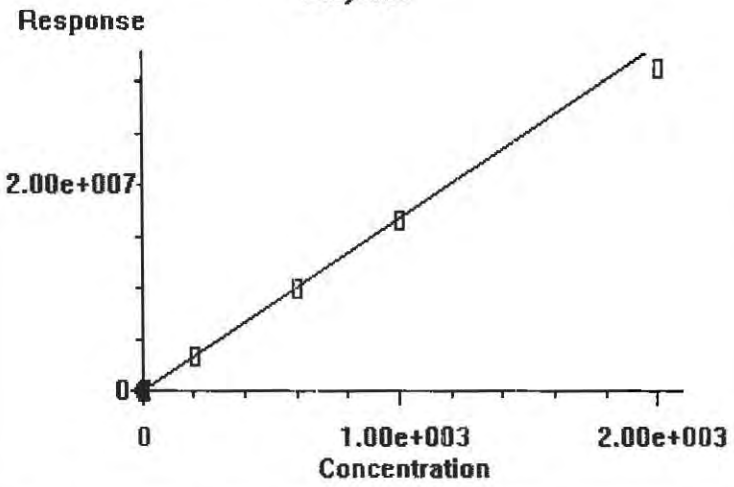
Search by: Ret Time | Name | Index | Find Compound

- Compound Database
- External Standard Compoun
  - Oxygen/Argon
  - Carbon monoxide
  - Methane (TCD)
  - Carbon dioxide
  - Signal #2
  - Methane (FID)
  - Ethylene
  - Ethane
  - Propylene
  - Propane
  - Isobutylene
  - Isobutane
  - n-Butane

Identification | Calibration | User-Defined | Advanced | Reporting

Lvl ID	Concentration	Response
1	0.151000	2621.970000
2	0.302000	4946.731301
3	1.510000	26884.746847
4	4.530000	77902.721497
5	10.570000	172085.529560
6	200.000000	3339702.313219
7	600.000000	10007758.776971
8	1000.000000	16608503.805988
9	2000.000000	31192443.898600
10	4000.000000	
11	20000.000000	

Ethylene



0.000e+000	Quadratic term
1.673e+004	Linear term
0.000e+000	Constant term
3.897%	RF Rel Std Dev

OK | Cancel | Help | Print Calibration Curve | Copy Calibration Curve

Edit Compounds -- Compound #8 -- Ethane

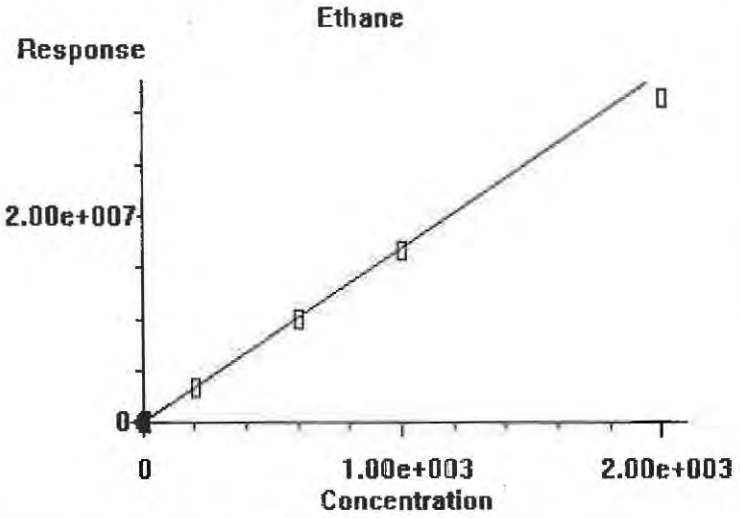
Search by: Ret Time | Name | Index — Find Compound

- Compound Database
- External Standard Compoun
  - Oxygen/Argon
  - Carbon monoxide
  - Methane (TCD)
  - Carbon dioxide
  - Signal #2
  - Methane (FID)
  - Ethylene
  - Ethane
  - Propylene
  - Propane
  - Isobutylene
  - Isobutane
  - n-Butane

Identification | Calibration | User-Defined | Advanced | Reporting

Lvl ID	Concentration	Response
1	0.151000	2689.928008
2	0.302000	5060.331943
3	1.510000	26943.667500
4	4.530000	78353.525045
5	10.570000	178840.731148
6	200.000000	3350442.319129
7	600.000000	10048964.218029
8	1000.000000	16703164.879012
9	2000.000000	31424217.938900
10	4000.000000	

Lvl ID	Concentration	Response
11	20000.000000	



0.000e+000	Quadratic term
1.695e+004	Linear term
0.000e+000	Constant term
3.831%	RF Rel Std Dev

OK | Cancel | Help | Print Calibration Curve | Copy Calibration Curve

Edit Compounds -- Compound #9 -- Propylene

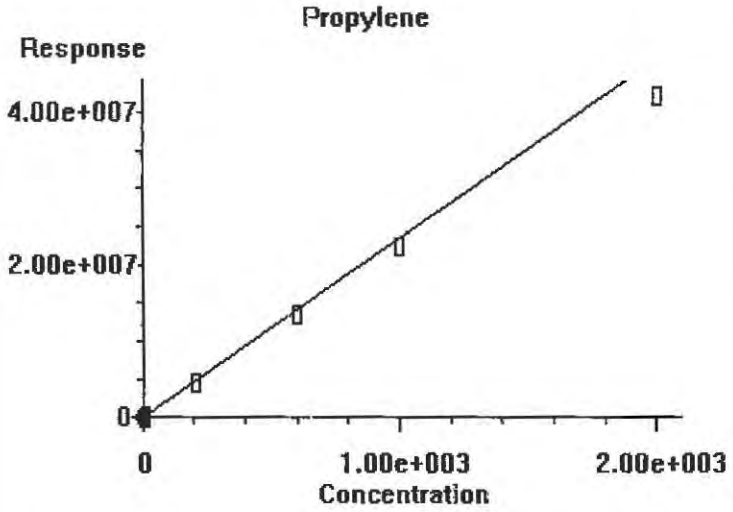
Search by: Ret Time | Name | Index | Find Compound

- Compound Database
- External Standard Compoun
  - Oxygen/Argon
  - Carbon monoxide
  - Methane (TCD)
  - Carbon dioxide
  - Signal #2
  - Methane (FID)
  - Ethylene
  - Ethane
  - Propylene
  - Propane
  - Isobutylene
  - Isobutane
  - n-Butane

Identification | Calibration | User-Defined | Advanced | Reporting

Lvl ID	Concentration	Response
1	0.151000	3782.537646
2	0.302000	6933.285530
3	1.510000	39139.518208
4	4.530000	112341.896872
5	10.570000	248003.903623
6	200.000000	4504060.086084
7	600.000000	13569342.761419
8	1000.000000	22494887.720990
9	2000.000000	42124689.656800
10	4000.000000	

Lvl ID	Concentration	Response
11	20000.000000	



0.000e+000	Quadratic term
2.343e+004	Linear term
0.000e+000	Constant term
6.559%	RF Rel Std Dev

OK | Cancel | Help | Print Calibration Curve | Copy Calibration Curve

Edit Compounds -- Compound #10 -- Propane

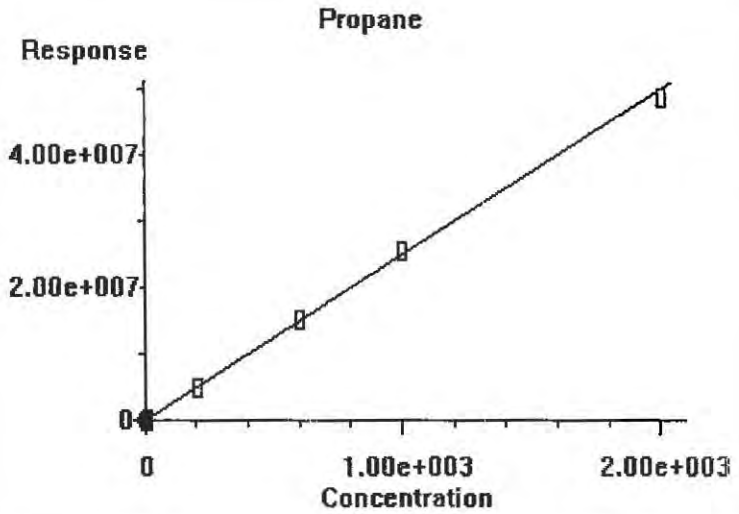
Search by: Ret Time | Name | Index — Find Compound

- Compound Database
- External Standard Compoun
  - Oxygen/Argon
  - Carbon monoxide
  - Methane (TCD)
  - Carbon dioxide
  - Signal #2
  - Methane (FID)
  - Ethylene
  - Ethane
  - Propylene
  - Propane
  - Isobutylene
  - Isobutane
  - n-Butane

Identification | Calibration | User-Defined | Advanced | Reporting

Lvl ID	Concentration	Response
1	0.151000	3682.897354
2	0.302000	6894.237803
3	1.510000	39934.166792
4	4.530000	115723.428128
5	10.570000	257124.432806
6	200.000000	5043035.663316
7	600.000000	15251325.797404
8	1000.000000	25459410.657938
9	2000.000000	48583085.287451
10	4000.000000	

Lvl ID	Concentration	Response
11	20000.000000	



0.000e+000	Quadratic term
2.488e+004	Linear term
0.000e+000	Constant term
4.200%	RF Rel Std Dev

OK | Cancel | Help | Print Calibration Curve | Copy Calibration Curve

Calibration Status Report HP5890

Method Path : J:\GC10\METHODS\
Method File : RS091217_R.M
Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
Last Update : Wed Sep 13 11:14:47 2017
Response Via : Initial Calibration

#	ID	Conc	ISTD Conc	Path\File
1	1	0	0	J:\GC10\DATA\RSK_FID\2017_09\12\09121702.D
2	2	0	0	J:\GC10\DATA\RSK_FID\2017_09\12\09121703.D
3	3	3	0	J:\GC10\DATA\RSK_FID\2017_09\12\09121704.D
4	4	10	0	J:\GC10\DATA\RSK_FID\2017_09\12\09121705.D
5	5	25	0	J:\GC10\DATA\RSK_FID\2017_09\12\09121706.D
6	6	125	0	J:\GC10\DATA\RSK_FID\2017_09\12\09121707.D
7	7	5000	0	J:\GC10\DATA\RSK_FID\2017_09\12\09121708.D
8	8	25000	0	J:\GC10\DATA\RSK_FID\2017_09\12\09121709.D
9	9	2000	0	J:\GC10\DATA\RSK_FID\2017_09\12\09121710.D
10	10	30000	0	J:\GC10\DATA\RSK_FID\2017_09\12\09121711.D
11	11	20000	0	J:\GC10\DATA\RSK_FID\2017_09\12\09121712.D

#	ID	Update Time	Quant Time	Acquisition Time
1	1	Sep 13 11:04 2017	Sep 12 15:03 2017	12-Sep-2017, 10:52
2	2	Sep 13 11:05 2017	Sep 13 11:05 2017	12-Sep-2017, 11:05
3	3	Sep 13 11:06 2017	Sep 13 11:05 2017	12-Sep-2017, 11:45
4	4	Sep 13 11:09 2017	Sep 13 11:06 2017	12-Sep-2017, 12:09
5	5	Sep 13 11:09 2017	Sep 13 11:09 2017	12-Sep-2017, 12:30
6	6	Sep 13 11:10 2017	Sep 13 11:10 2017	12-Sep-2017, 12:47
7	7	Sep 13 11:11 2017	Sep 13 11:10 2017	12-Sep-2017, 13:00
8	8	Sep 13 11:12 2017	Sep 13 11:11 2017	12-Sep-2017, 13:47
9	9	Sep 13 11:12 2017	Sep 13 11:12 2017	12-Sep-2017, 14:07
10	10	Sep 13 11:14 2017	Sep 13 11:13 2017	12-Sep-2017, 14:48
11	11	Sep 13 11:14 2017	Sep 13 11:14 2017	12-Sep-2017, 15:21

RS091217_R.M Wed Sep 13 15:11:22 2017

Quantitation Report (QT Reviewed)

Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121702.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 10:52
Operator : MC
Sample : 0.151ppm 0.250ml s32-09121702
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 12 11:03:15 2017
Quant Method : I:\GC10\METHODS\RS082417.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Fri Aug 25 09:19:14 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1)	Oxygen/Argon	1.767	373920	0.128	ppm	
2)	Carbon monoxide	1.767	373920	N.D.	ppm	
3)	Methane (TCD)	0.000	0	N.D.	ppm	
4)	Carbon dioxide	0.000	0	N.D.	ppm	
6)	Methane (FID)	0.000	0	N.D.	ppm	d
7)	Ethylene	1.595	2622	0.156	ppm	
8)	Ethane	1.848	2690	0.156	ppm	
9)	Propylene	4.222	3783	0.154	ppm	
10)	Propane	4.348	3683	0.139	ppm	
11)	Isobutylene	0.000	0	N.D.	ppm	
12)	Isobutane	6.582f	6058	NoCal	ppm	
13)	n-Butane	6.582f	6058	NoCal	ppm	

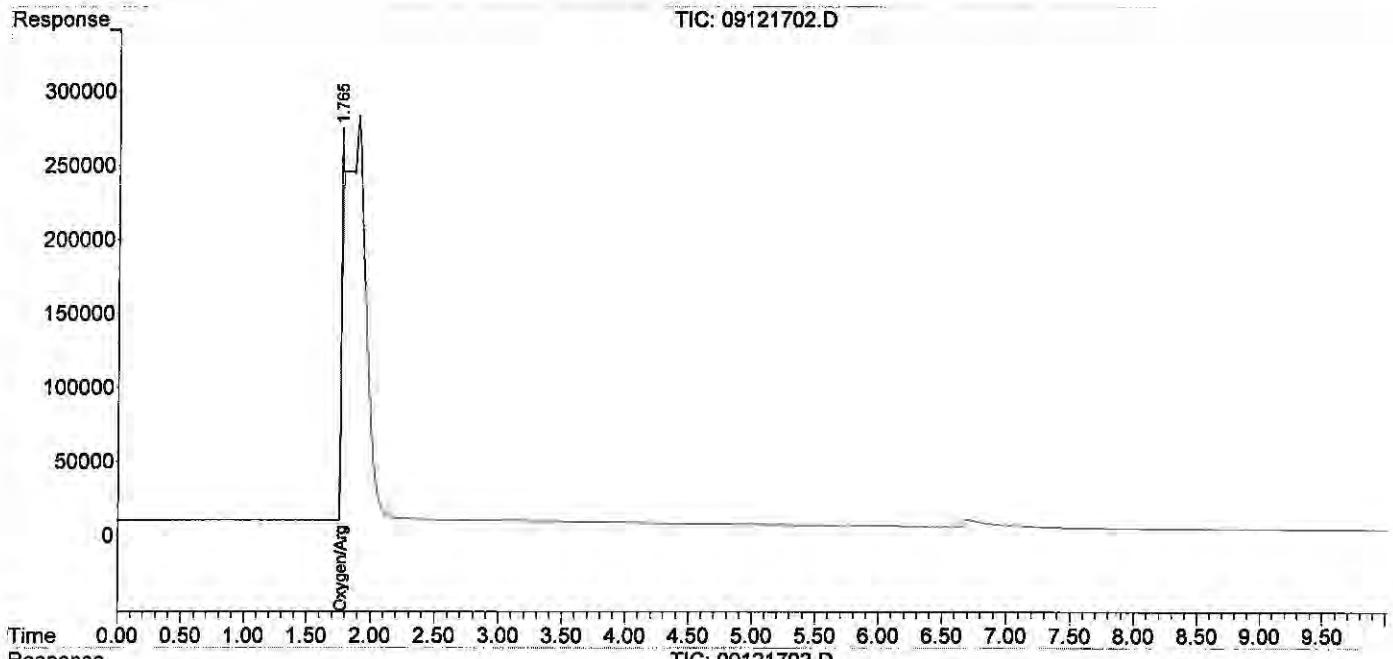
(f)=RT Delta > 1/2 Window (m)=manual int.

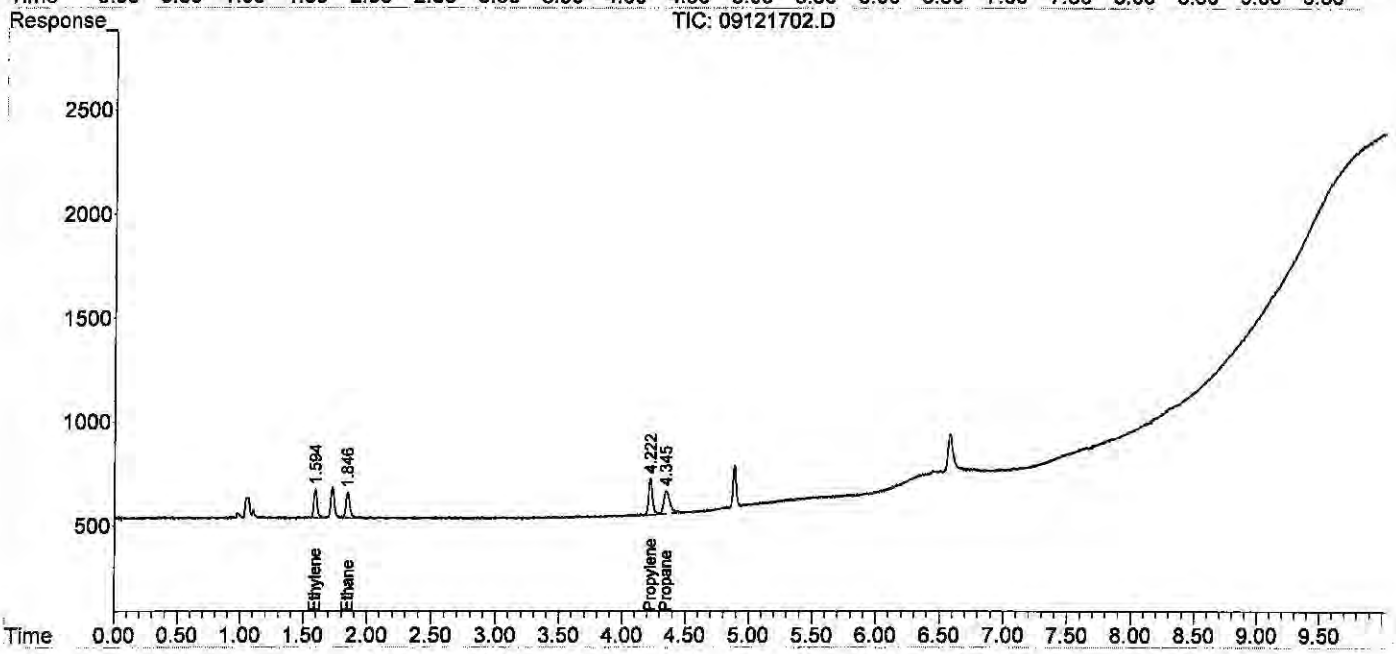
9/13/17

Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121702.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 10:52
Operator : MC
Sample : 0.151ppm 0.250ml s32-09121702
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 12 11:03:15 2017
Quant Method : I:\GC10\METHODS\RS082417.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Fri Aug 25 09:19:14 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Quantitation Report (QT Reviewed)

Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121703.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 11:05
Operator : MC
Sample : 0.302ppm 0.5ml s32-09121702
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 11:05:03 2017
Quant Method : J:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:04:50 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1)	Oxygen/Argon	1.913f	-25181981	N.D.	ppm	
2)	Carbon monoxide	1.913f	-25181981	1.089	ppm	
3)	Methane (TCD)	0.000	0	N.D.	ppm	
4)	Carbon dioxide	0.000	0	N.D.	ppm	
6)	Methane (FID)	1.049	3564	0.391	ppm	m
7)	Ethylene	1.577	4947	0.292	ppm	
8)	Ethane	1.828	5060	0.293	ppm	
9)	Propylene	4.207	6933	0.281	ppm	
10)	Propane	4.337	6894	0.268	ppm	
11)	Isobutylene	0.000	0	N.D.	ppm	
12)	Isobutane	6.579f	9587	0.158	ppm	
13)	n-Butane	6.579f	9587	0.158	ppm	

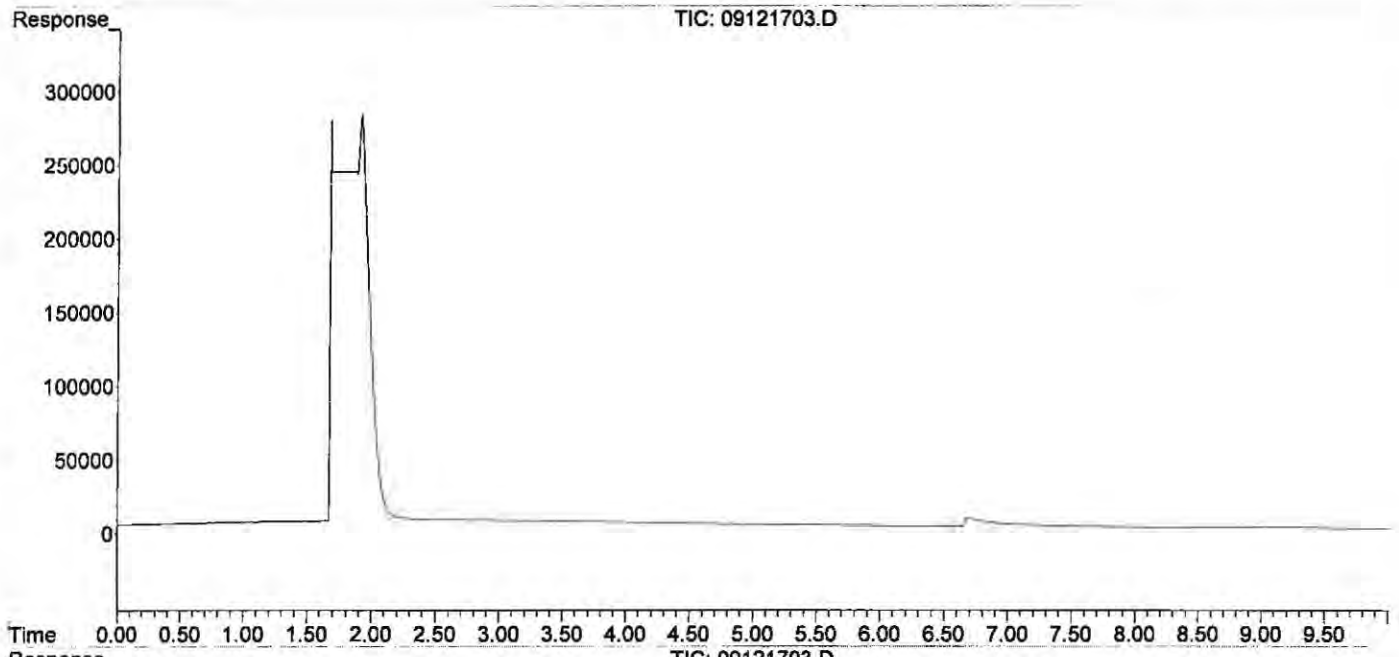
(f)=RT Delta > 1/2 Window (m)=manual int.

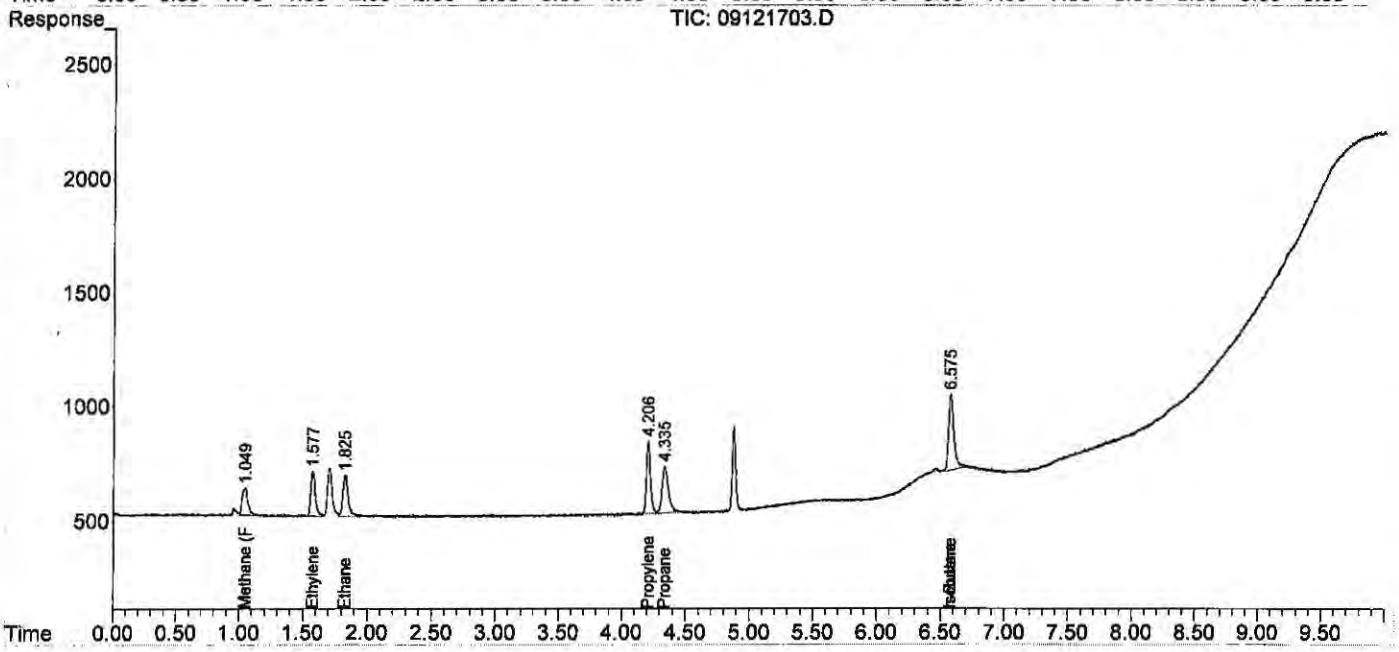
Quantitation Report (QT Reviewed)

Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121703.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 11:05
Operator : MC
Sample : 0.302ppm 0.5ml s32-09121702
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 11:05:03 2017
Quant Method : J:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:04:50 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



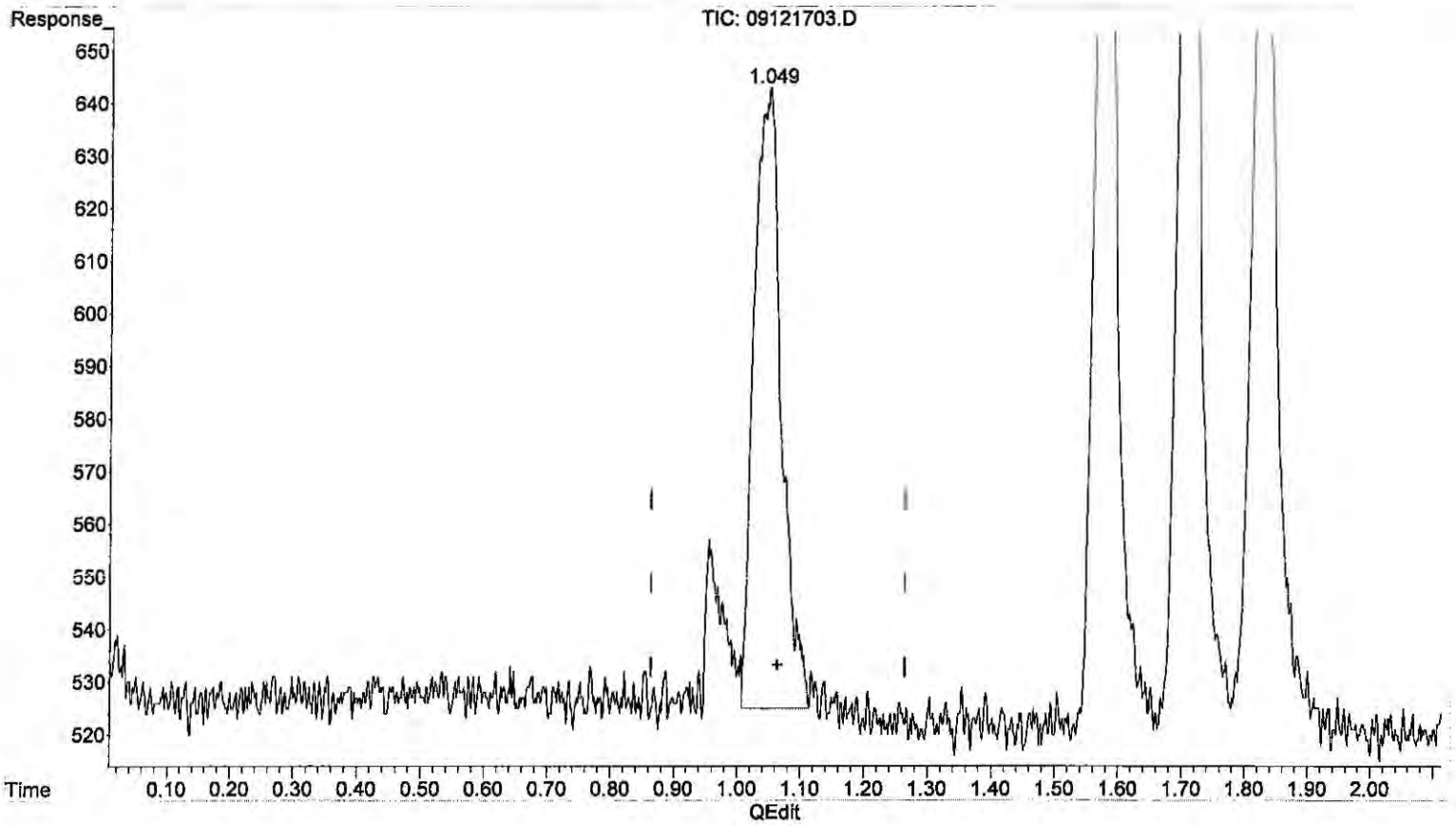


Quantitation Report (Qedit)

Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121703.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 11:05
Operator : MC
Sample : 0.302ppm 0.5ml s32-09121702
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 11:05:03 2017
Quant Method : J:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:04:50 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



(6) Methane (FID)
1.049min 0.391 ppm m
response 3564

(+) = Expected Retention Time
RS091217_R.M Wed Sep 13 15:00:03 2017

Quantitation Report (QT Reviewed)

Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121704.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 11:45
Operator : MC
Sample : 1.51ppm 0.1ml s32-09051701
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 11:05:55 2017
Quant Method : J:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:04:50 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

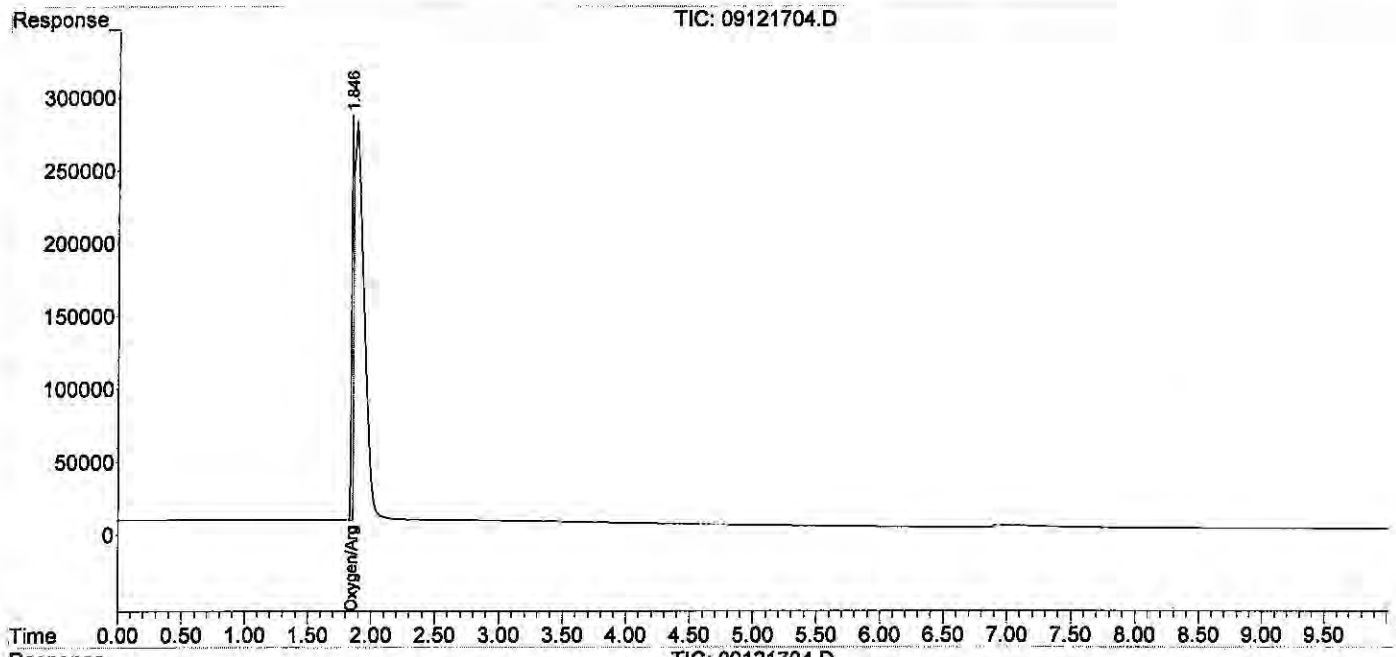
	Compound	R.T.	Response	Conc	Units
Target Compounds					
1)	Oxygen/Argon	1.847	2536230	1.056	ppm
2)	Carbon monoxide	1.847	2536230	N.D.	ppm
3)	Methane (TCD)	0.000	0	N.D.	ppm
4)	Carbon dioxide	0.000	0	N.D.	ppm
6)	Methane (FID)	1.064	14725	1.613	ppm
7)	Ethylene	1.598	26885	1.582	ppm
8)	Ethane	1.851	26944	1.555	ppm
9)	Propylene	4.220	39140	1.589	ppm
10)	Propane	4.349	39934	1.596	ppm
11)	Isobutylene	0.000	0	N.D.	ppm
12)	Isobutane	6.578f	55348	1.020	ppm
13)	n-Butane	6.578f	55348	1.020	ppm

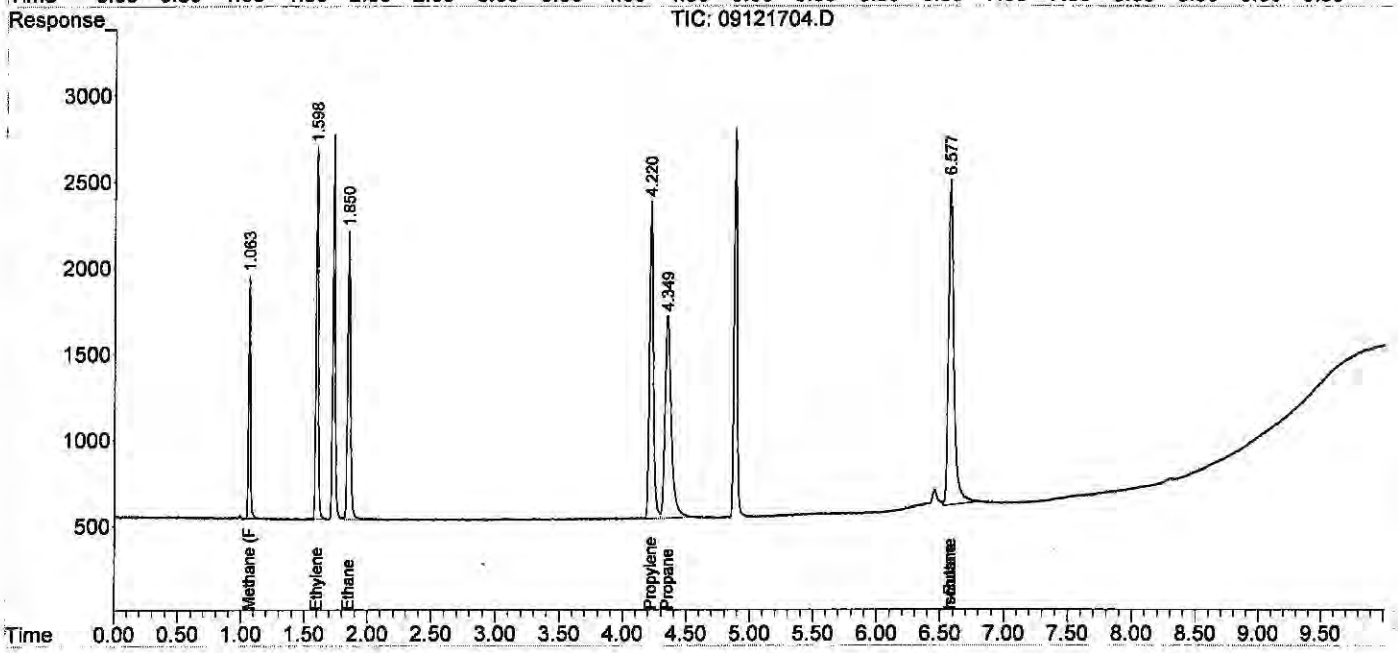
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121704.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 11:45
Operator : MC
Sample : 1.51ppm 0.1ml s32-09051701
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 11:05:55 2017
Quant Method : J:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:04:50 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Quantitation Report (QT Reviewed)

Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121705.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 12:09
Operator : MC
Sample : 4.53ppm 0.3ml s32-09051701
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 11:06:32 2017
Quant Method : J:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:04:50 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

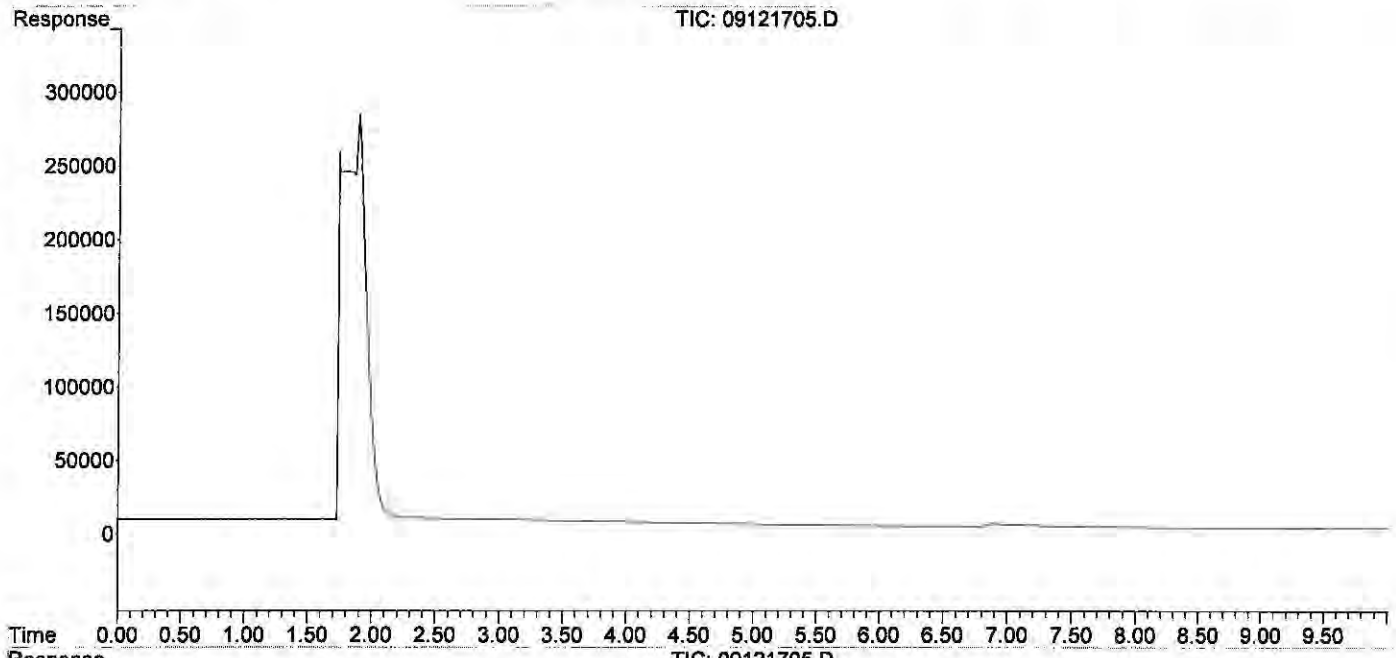
	Compound	R.T.	Response	Conc	Units
Target Compounds					
1)	Oxygen/Argon	1.738	-331216	N.D.	ppm
2)	Carbon monoxide	1.738	-331216	0.019	ppm
3)	Methane (TCD)	0.000	0	N.D.	ppm
4)	Carbon dioxide	0.000	0	N.D.	ppm
6)	Methane (FID)	1.052	41129	4.522	ppm
7)	Ethylene	1.586	77903	4.637	ppm
8)	Ethane	1.838	78354	4.558	ppm
9)	Propylene	4.218	112342	4.614	ppm
10)	Propane	4.347	115723	4.680	ppm
11)	Isobutylene	0.000	0	N.D.	ppm
12)	Isobutane	6.580f	155256	3.565	ppm
13)	n-Butane	6.580f	155256	3.565	ppm

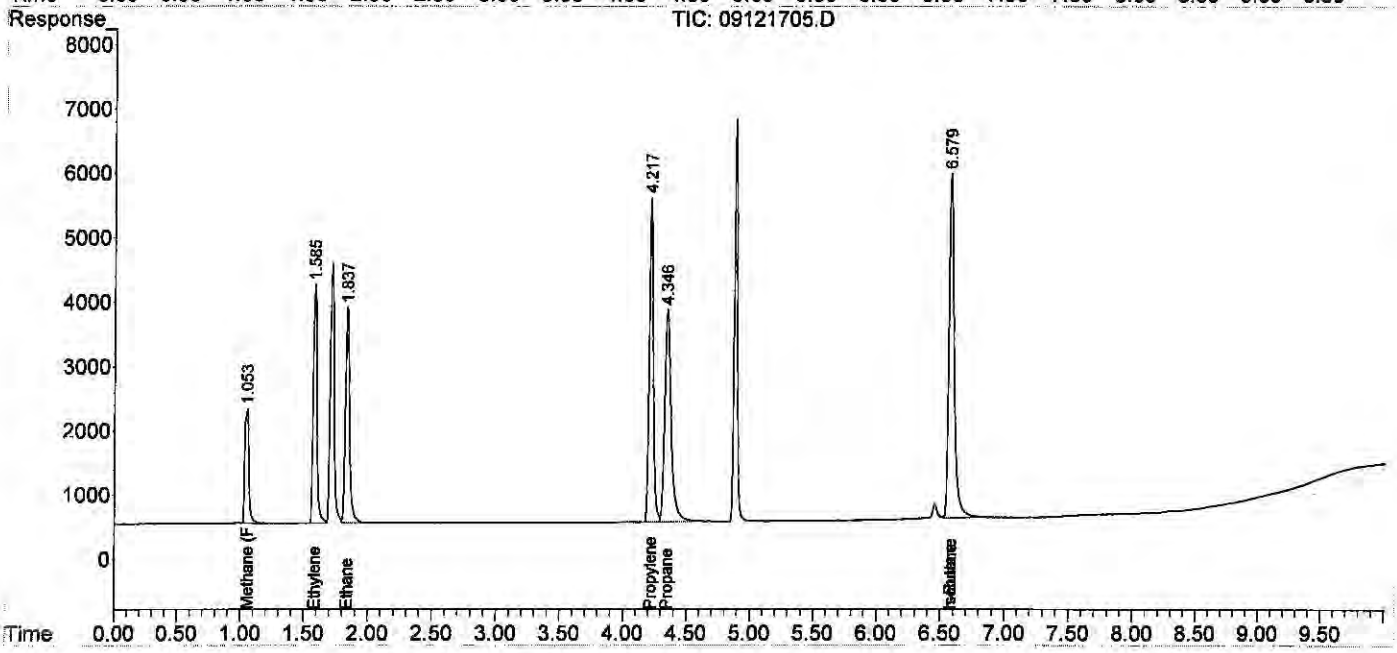
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121705.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 12:09
Operator : MC
Sample : 4.53ppm 0.3ml s32-09051701
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 11:06:32 2017
Quant Method : J:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:04:50 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Quantitation Report (QT Reviewed)

Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121706.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 12:30
Operator : MC
Sample : 10.57ppm 0.7ml s32-09051701
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 11:09:24 2017
Quant Method : J:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:04:50 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	R.T.	Response	Conc	Units
Target Compounds					
1)	Oxygen/Argon	1.929f	-31871242	N.D.	ppm
2)	Carbon monoxide	1.929f	-31871242	1.818	ppm
3)	Methane (TCD)	0.000	0	N.D.	ppm
4)	Carbon dioxide	0.000	0	N.D.	ppm
6)	Methane (FID)	1.025	91967	10.135	ppm
7)	Ethylene	1.568	172086	10.273	ppm
8)	Ethane	1.822	178841	10.441	ppm
9)	Propylene	4.214	248004	10.236	ppm
10)	Propane	4.344	257124	10.458	ppm
11)	Isobutylene	0.000	0	N.D.	ppm
12)	Isobutane	6.578f	338181	9.254	ppm
13)	n-Butane	6.578f	338181	9.254	ppm

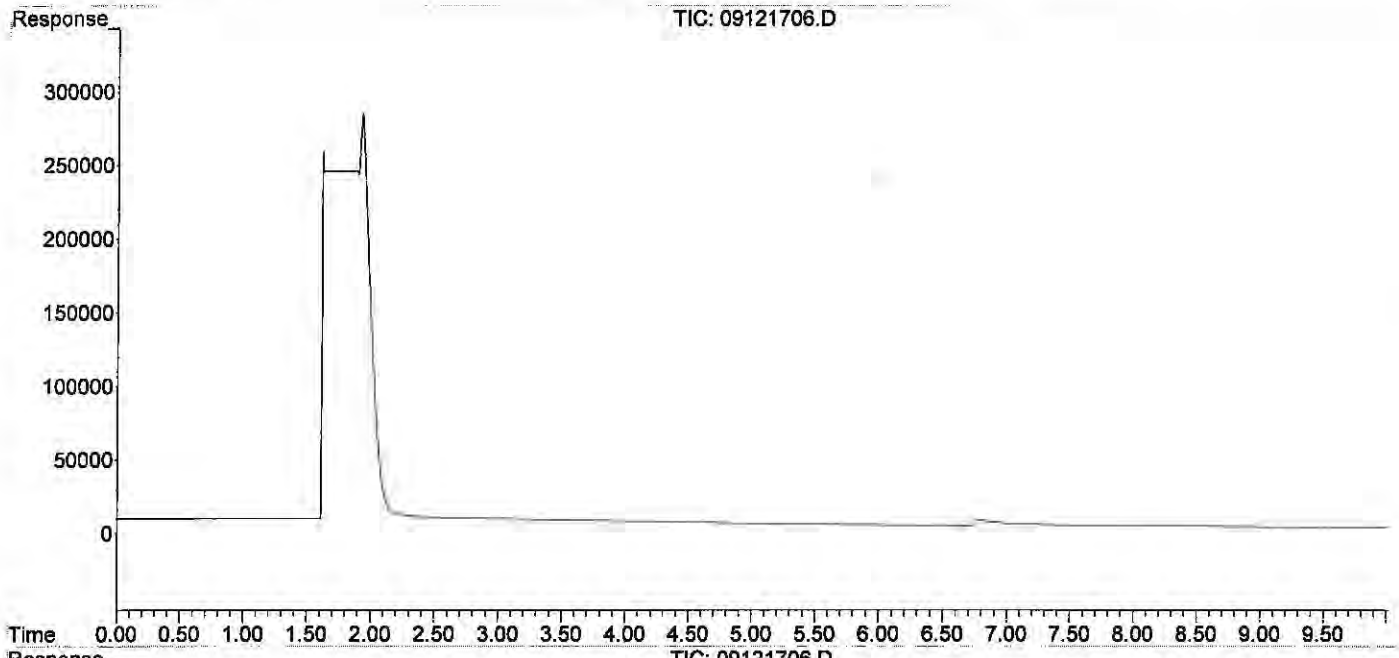
(f)=RT Delta > 1/2 Window (m)=manual int.

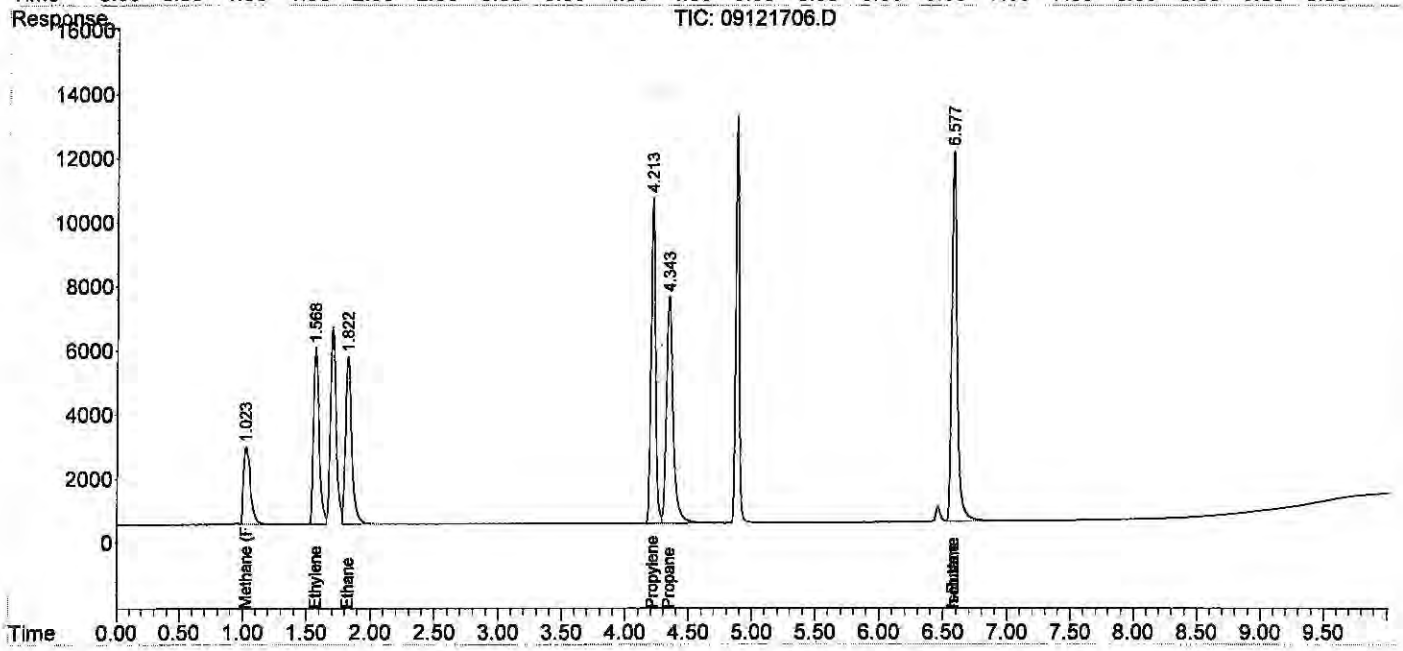
Quantitation Report (QT Reviewed)

Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121706.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 12:30
Operator : MC
Sample : 10.57ppm 0.7ml s32-09051701
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 11:09:24 2017
Quant Method : J:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:04:50 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Quantitation Report (QT Reviewed)

Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121707.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 12:47
Operator : MC
Sample : 200ppm 0.1ml s32-09121701
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 11:09:59 2017
Quant Method : J:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:04:50 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	R.T.	Response	Conc	Units
Target Compounds					
1)	Oxygen/Argon	1.897	155286	0.065	ppm
2)	Carbon monoxide	1.897	155286	N.D.	ppm
3)	Methane (TCD)	4.079f	27015	2856.472	ppm
4)	Carbon dioxide	0.000	0	N.D.	ppm
6)	Methane (FID)	1.063	1735997	190.792	ppm
7)	Ethylene	1.597	3339702	198.758	ppm
8)	Ethane	1.849	3350442	194.597	ppm
9)	Propylene	4.201	4504060	185.706	ppm
10)	Propane	4.333	5043036	204.809	ppm
11)	Isobutylene	0.000	0	N.D.	ppm
12)	Isobutane	0.000	0	N.D.	ppm
13)	n-Butane	0.000	0	N.D.	ppm

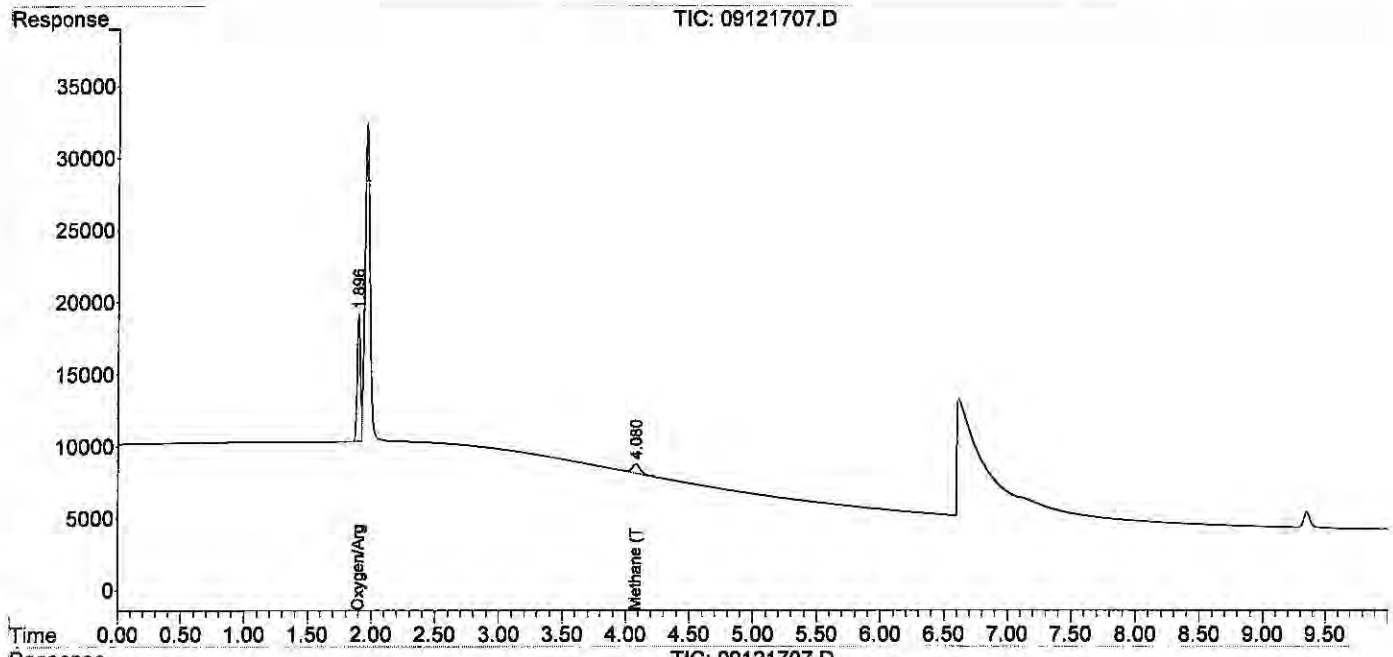
(f)=RT Delta > 1/2 Window (m)=manual int.

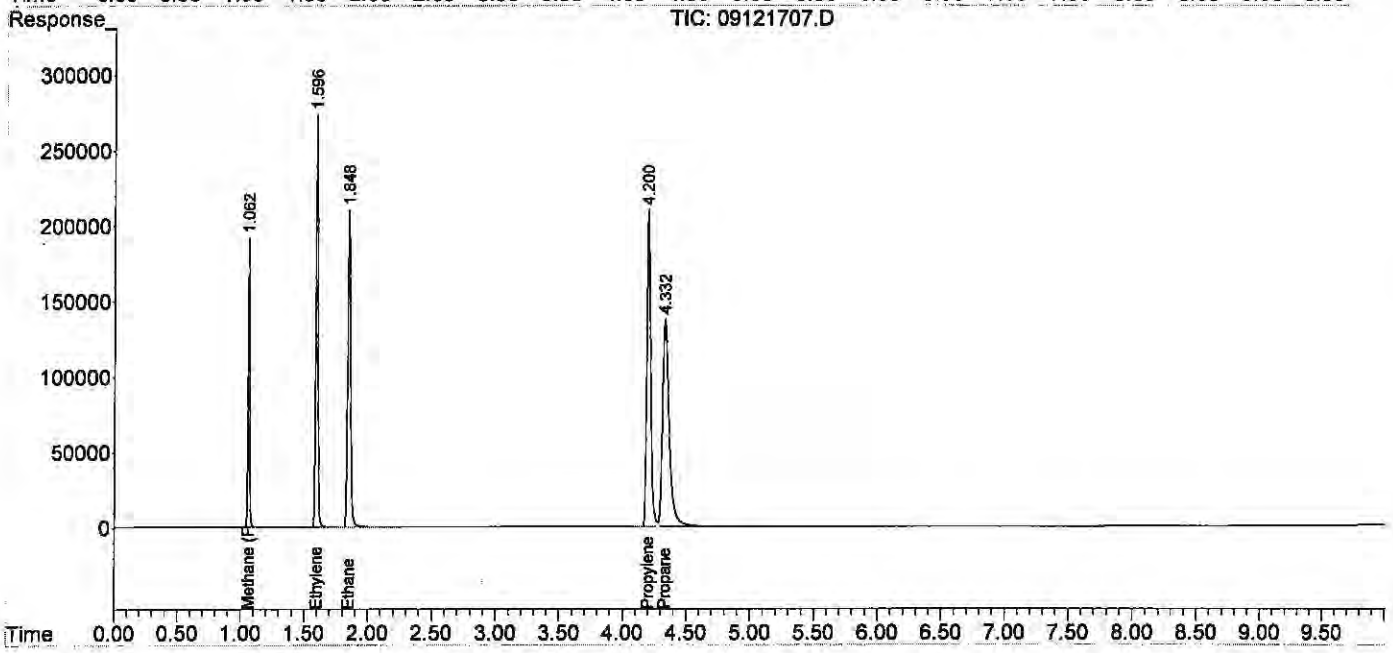
Quantitation Report (QT Reviewed)

Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121707.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 12:47
Operator : MC
Sample : 200ppm 0.1ml s32-09121701
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 11:09:59 2017
Quant Method : J:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:04:50 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Quantitation Report (QT Reviewed)

Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121708.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 13:00
Operator : MC
Sample : 600ppm 0.3ml s32-09121701
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 11:10:57 2017
Quant Method : J:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:10:50 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	R.T.	Response	Conc	Units
Target Compounds					
1)	Oxygen/Argon	1.884	196022	0.124	ppm
2)	Carbon monoxide	1.884	196022	N.D.	ppm
3)	Methane (TCD)	4.070f	88282	782.730	ppm
4)	Carbon dioxide	0.000	0	N.D.	ppm
6)	Methane (FID)	1.044	5189849	539.759	ppm
7)	Ethylene	1.573	10007759	590.286	ppm
8)	Ethane	1.822	10048964	583.213	ppm
9)	Propylene	4.160	13569343	562.612	ppm
10)	Propane	4.300	15251326	615.171	ppm
11)	Isobutylene	6.143	9815	NoCal	ppm
12)	Isobutane	0.000	0	N.D.	ppm
13)	n-Butane	0.000	0	N.D.	ppm

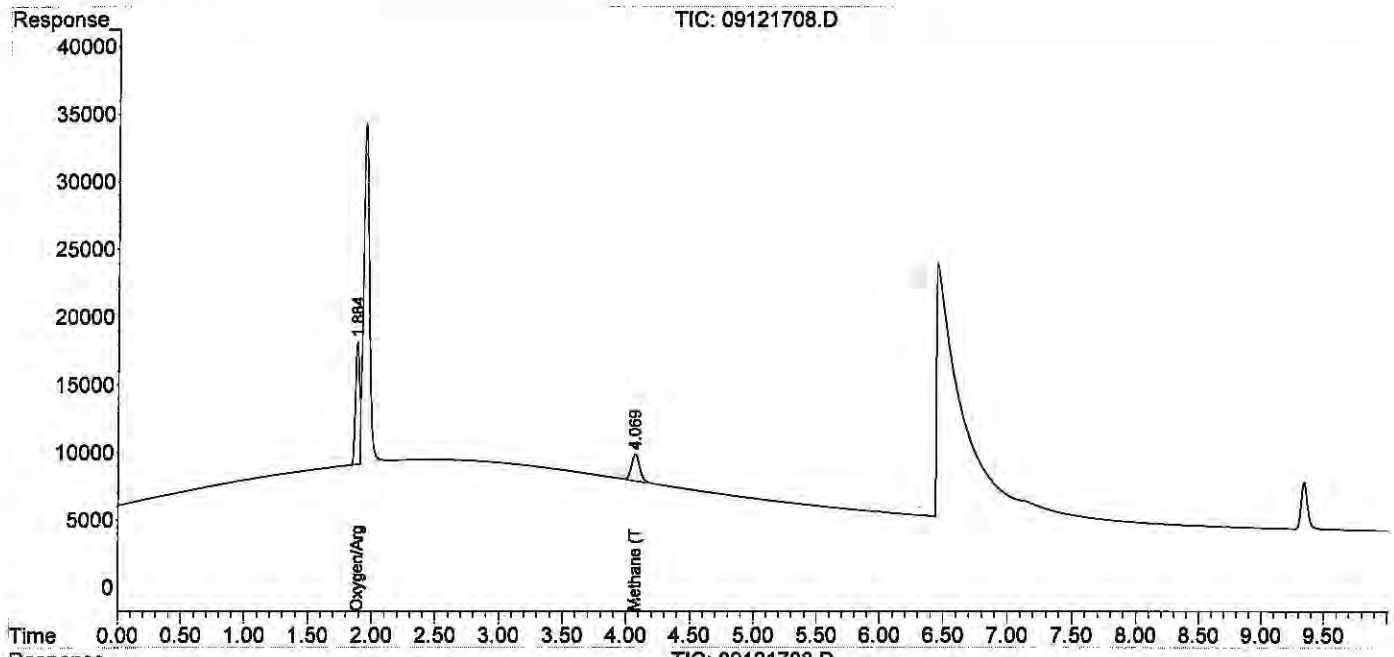
(f)=RT Delta > 1/2 Window (m)=manual int.

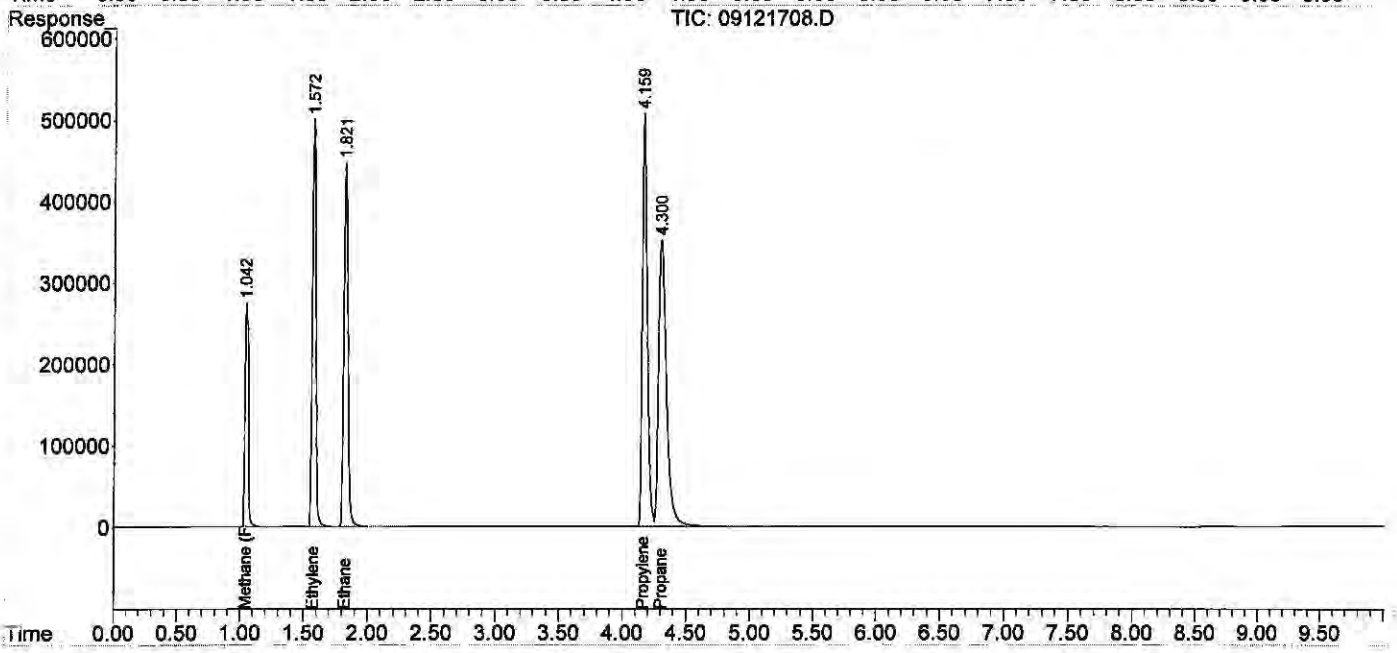
Quantitation Report (QT Reviewed)

Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121708.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 13:00
Operator : MC
Sample : 600ppm 0.3ml s32-09121701
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 11:10:57 2017
Quant Method : J:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:10:50 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Quantitation Report (QT Reviewed)

Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121709.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 13:47
Operator : MC
Sample : 1000ppm 0.5ml s32-09121701
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 11:11:46 2017
Quant Method : J:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:11:38 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

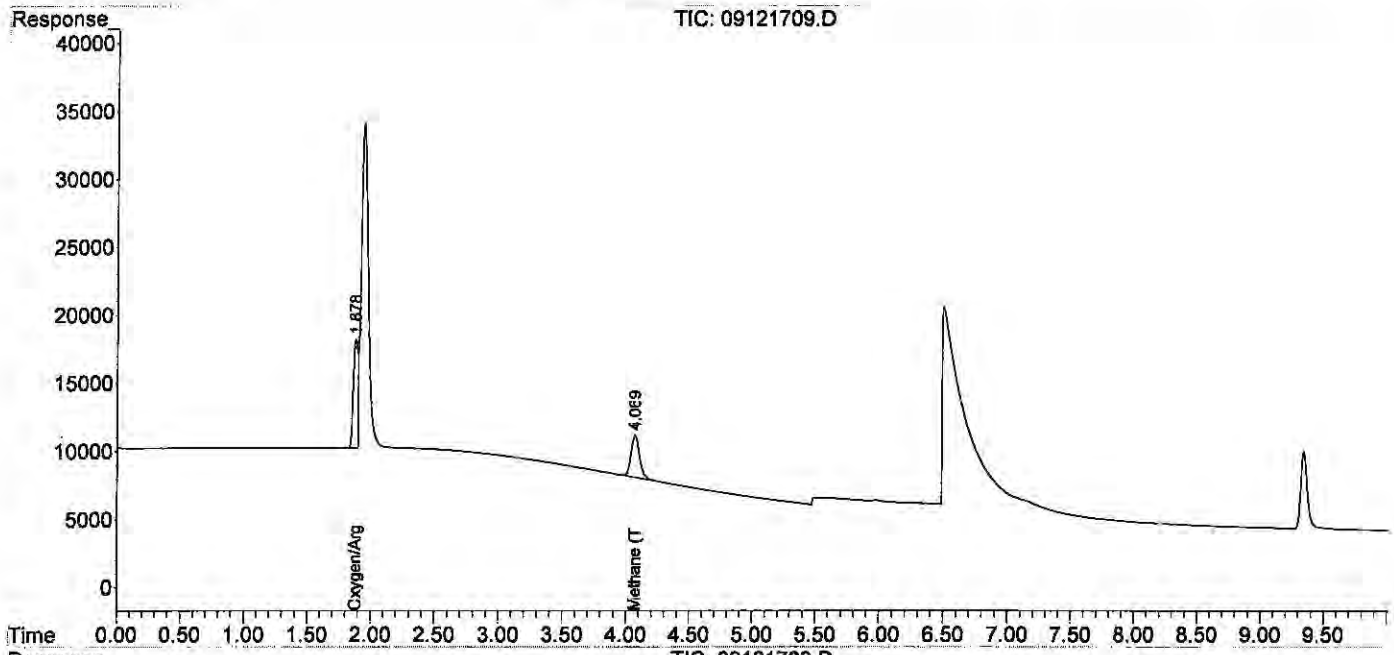
	Compound	R.T.	Response	Conc	Units
Target Compounds					
1)	Oxygen/Argon	1.879	192611	0.162	ppm
2)	Carbon monoxide	1.879	192611	N.D.	ppm
3)	Methane (TCD)	4.070f	145492	1244.729	ppm
4)	Carbon dioxide	0.000	0	N.D.	ppm
6)	Methane (FID)	1.039	8598534	945.644	ppm
7)	Ethylene	1.576	16608504	981.887	ppm
8)	Ethane	1.827	16709165	973.644	ppm
9)	Propylene	4.161	22494888	941.060	ppm
10)	Propane	4.298	25459411	1023.223	ppm
11)	Isobutylene	6.138	16970	8645.243	ppm
12)	Isobutane	0.000	0	N.D.	ppm
13)	n-Butane	0.000	0	N.D.	ppm

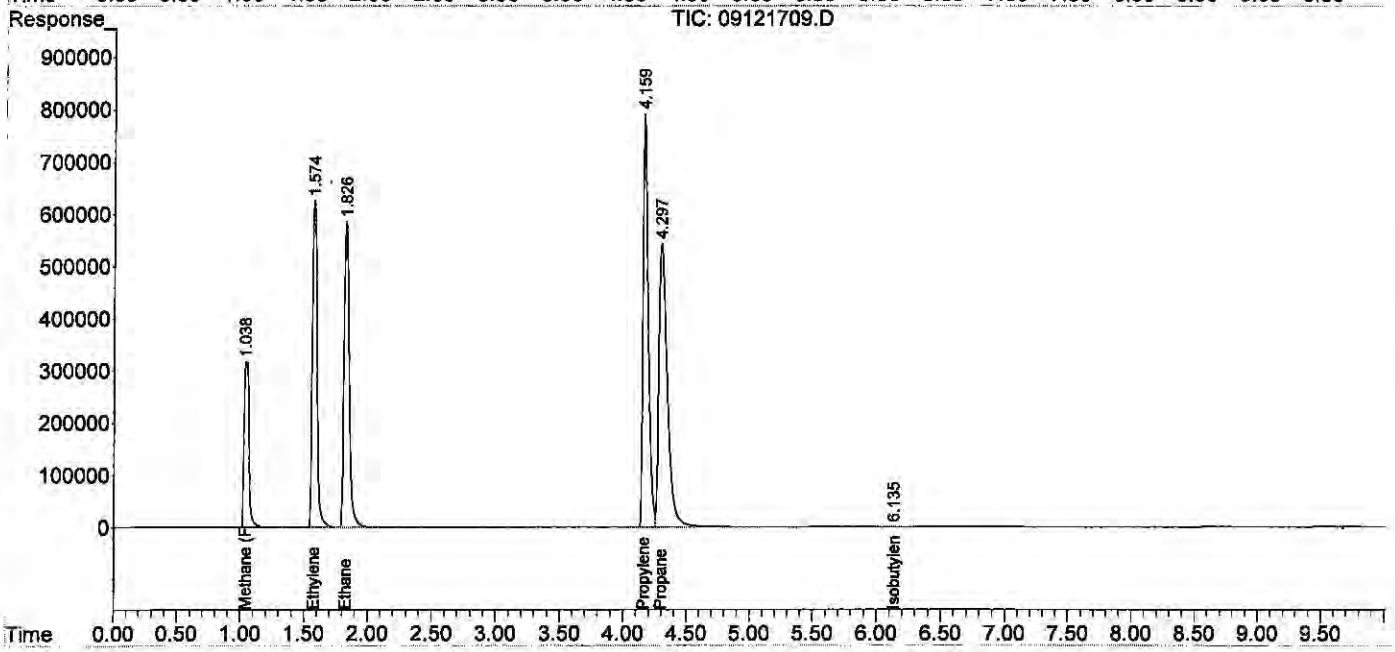
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121709.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 13:47
Operator : MC
Sample : 1000ppm 0.5ml s32-09121701
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 11:11:46 2017
Quant Method : J:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:11:38 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Quantitation Report (QT Reviewed)

Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121710.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 14:07
Operator : MC
Sample : 2000ppm 1ml s32-09121701
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 11:12:33 2017
Quant Method : J:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:12:25 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

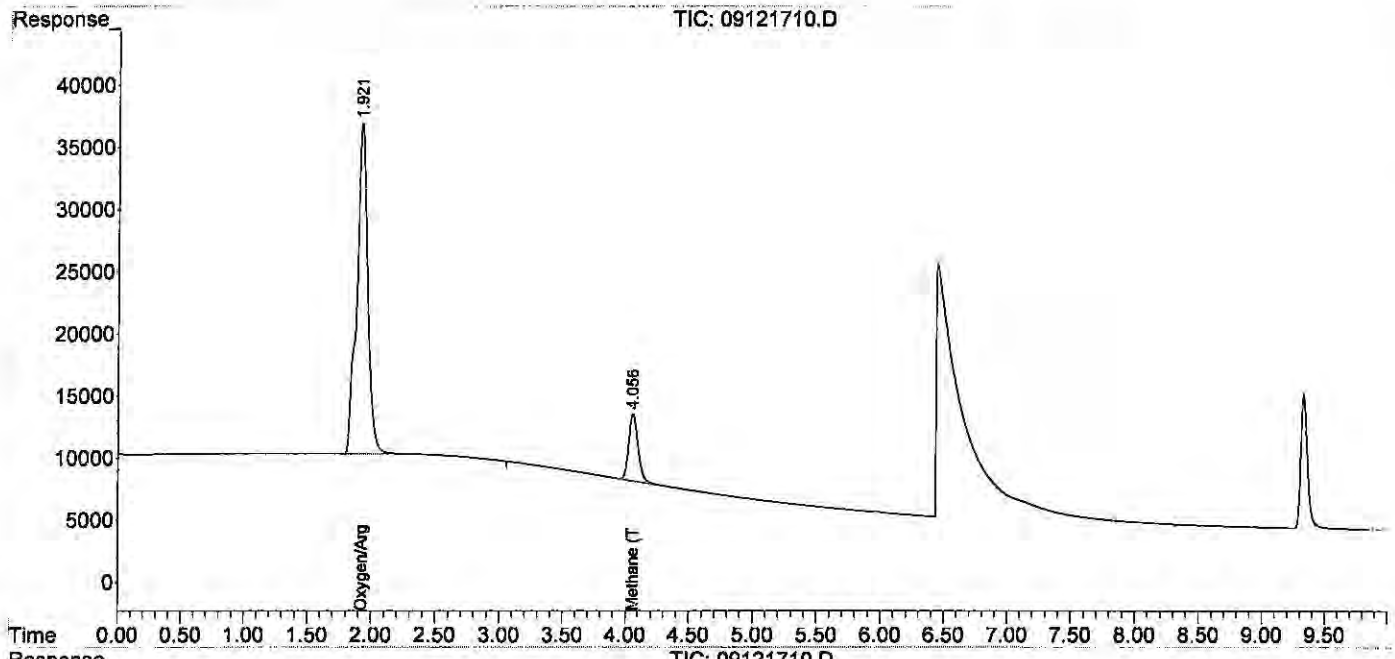
	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1)	Oxygen/Argon	1.922f	1578147	1.659	ppm	
2)	Carbon monoxide	1.922f	1578147	N.D.	ppm	
3)	Methane (TCD)	4.057f	281651	3526.607	ppm	
4)	Carbon dioxide	0.000	0	N.D.	ppm	
6)	Methane (FID)	1.016	16098209	1763.622	ppm	
7)	Ethylene	1.552	31192444	1848.268	ppm	
8)	Ethane	1.801	31424218	1837.143	ppm	
9)	Propylene	4.129	42124690	1775.341	ppm	m
10)	Propane	4.269	48583085	1946.921	ppm	
11)	Isobutylene	6.136	33832	25613.603	ppm	
12)	Isobutane	6.576f	3845	0.120	ppm	
13)	n-Butane	6.576f	3845	0.120	ppm	

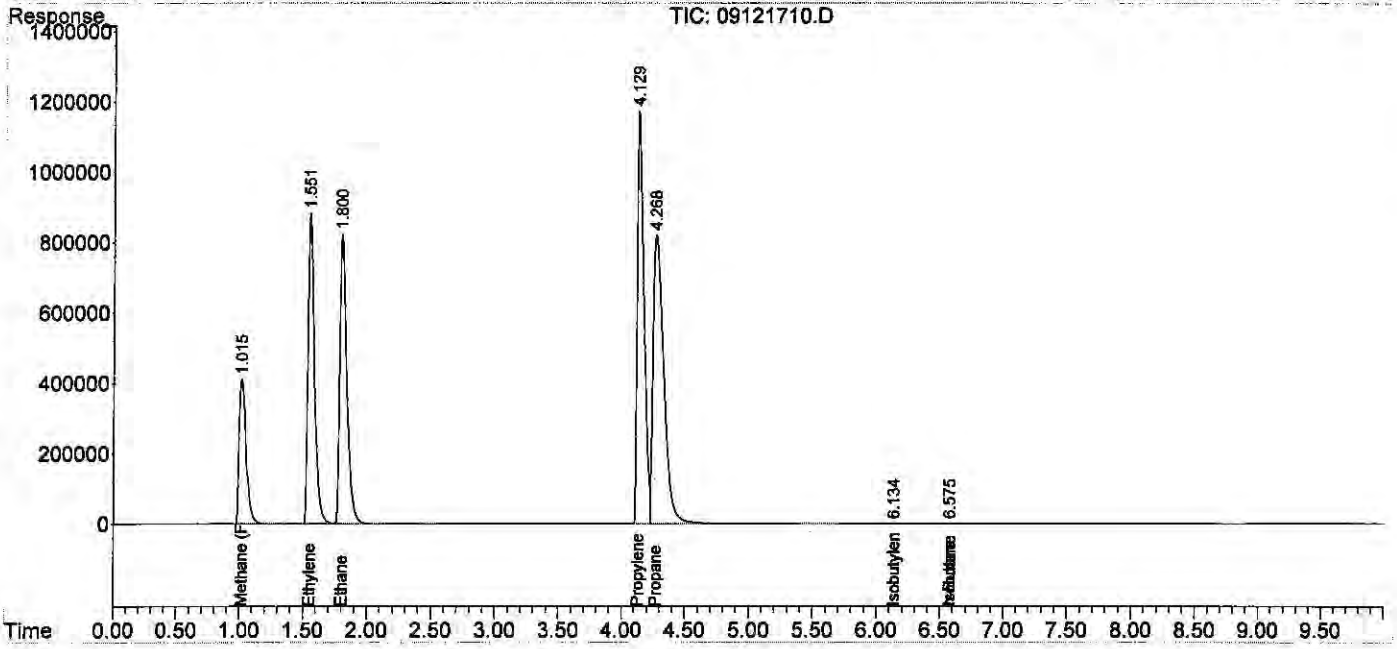
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121710.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 14:07
Operator : MC
Sample : 2000ppm 1ml s32-09121701
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 11:12:33 2017
Quant Method : J:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:12:25 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



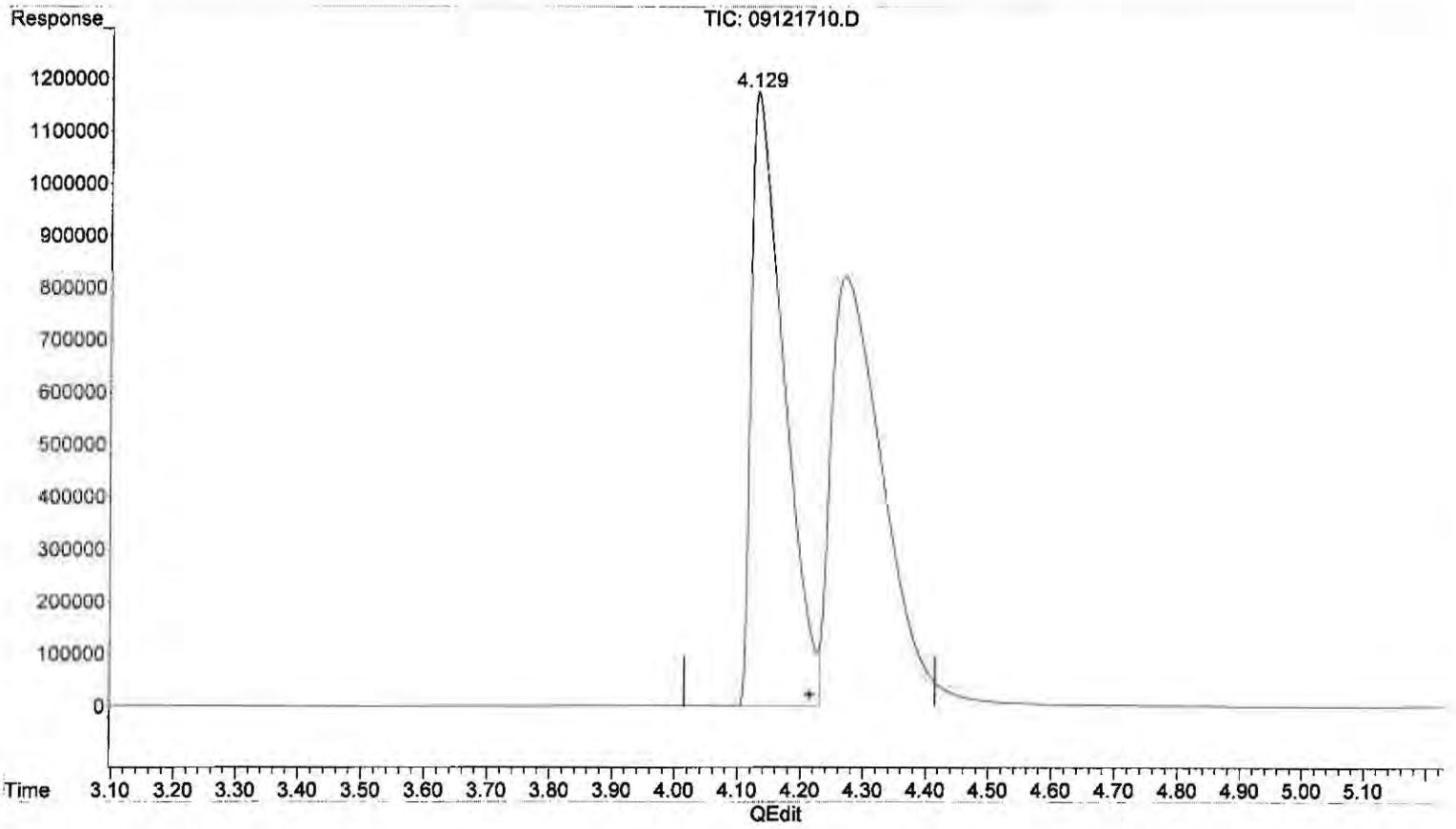


Quantitation Report (Qedit)

Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121710.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 14:07
Operator : MC
Sample : 2000ppm 1ml s32-09121701
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 11:12:33 2017
Quant Method : J:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:12:25 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



(9) Propylene
4.129min 1775.341 ppm m
response 42124690

(+) = Expected Retention Time

Quantitation Report (QT Reviewed)

Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121711.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 14:48
Operator : MC
Sample : 4000ppm 0.1ml s32-08231701
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 11:13:37 2017
Quant Method : J:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:13:29 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

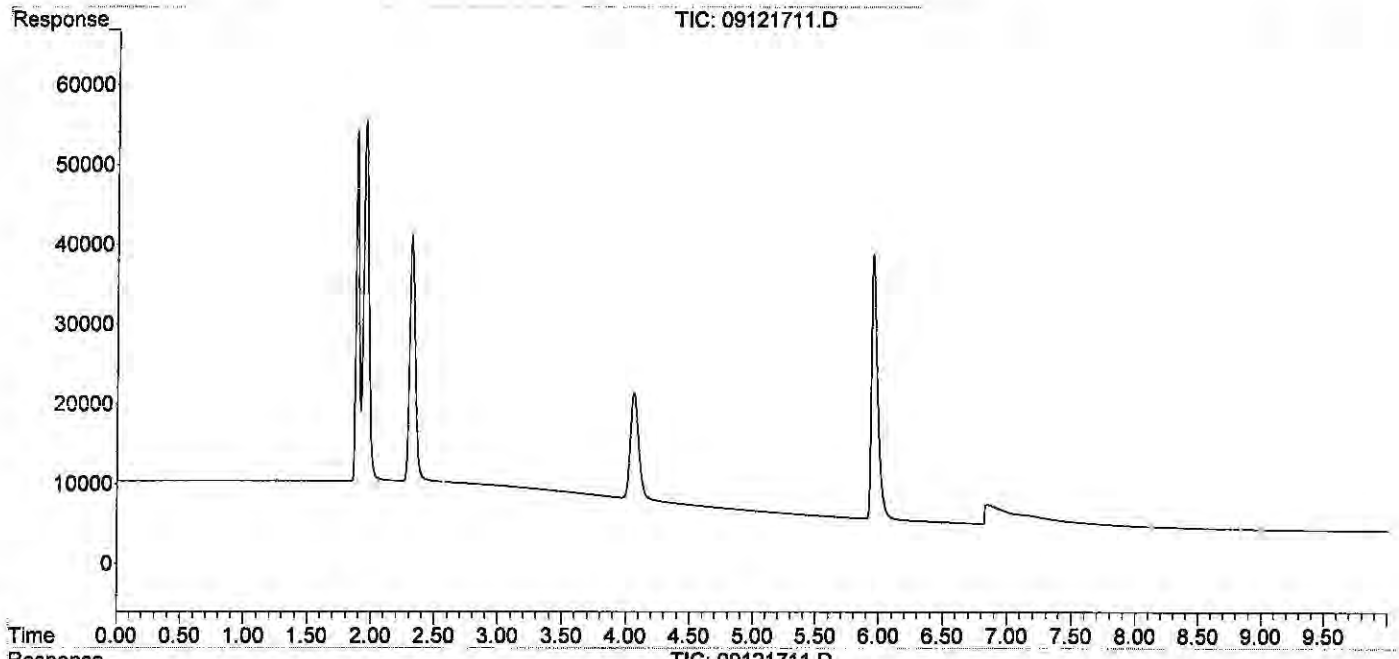
	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1)	Oxygen/Argon	0.000	0	N.D.	ppm	d
2)	Carbon monoxide	0.000	0	N.D.	ppm	d
3)	Methane (TCD)	0.000	0	N.D.	ppm	d
4)	Carbon dioxide	0.000	0	N.D.	ppm	d
6)	Methane (FID)	1.059	35776839	3925.122	ppm	
7)	Ethylene	0.000	0	N.D.	ppm	
8)	Ethane	0.000	0	N.D.	ppm	
9)	Propylene	0.000	0	N.D.	ppm	
10)	Propane	0.000	0	N.D.	ppm	
11)	Isobutylene	0.000	0	N.D.	ppm	
12)	Isobutane	0.000	0	N.D.	ppm	
13)	n-Butane	0.000	0	N.D.	ppm	

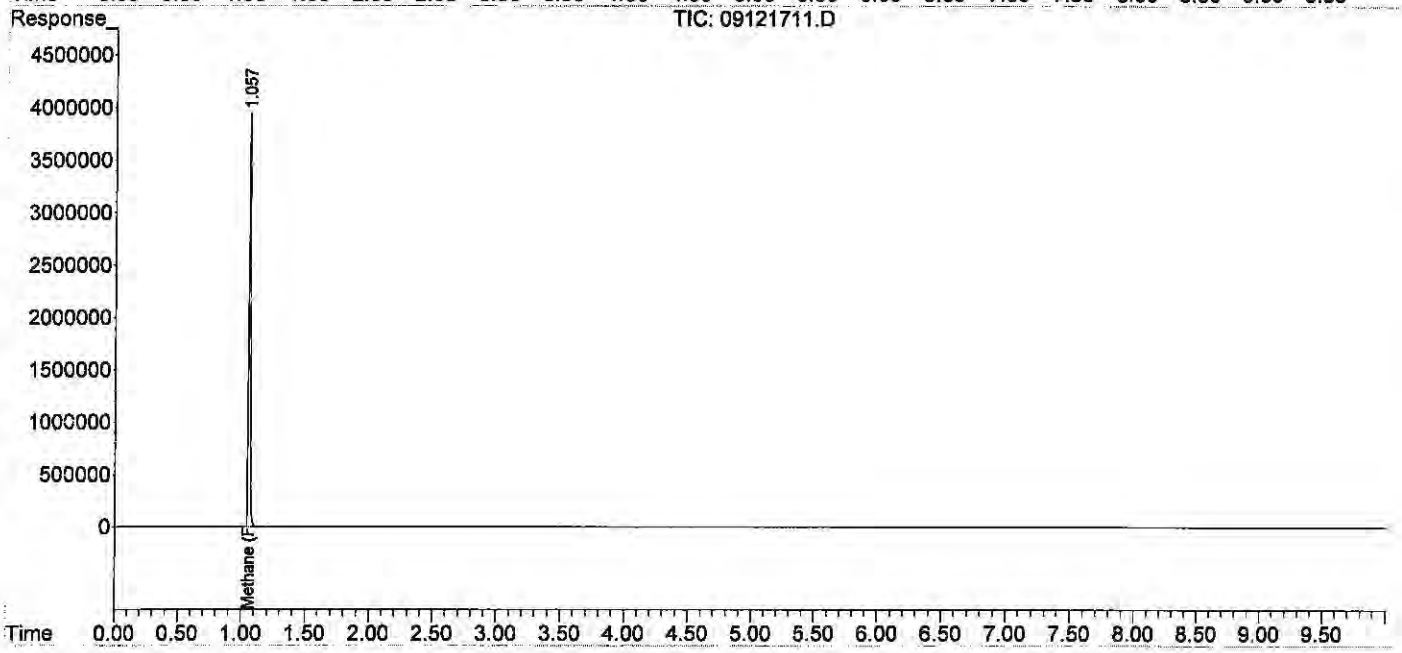
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121711.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 14:48
Operator : MC
Sample : 4000ppm 0.1ml s32-08231701
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 11:13:37 2017
Quant Method : J:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:13:29 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase :
Signal #1 Info :
Signal #2 Phase:
Signal #2 Info :





Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121712.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 15:21
Operator : MC
Sample : 20000ppm 0.5ml s32-08231701
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 11:14:17 2017
Quant Method : J:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:13:29 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

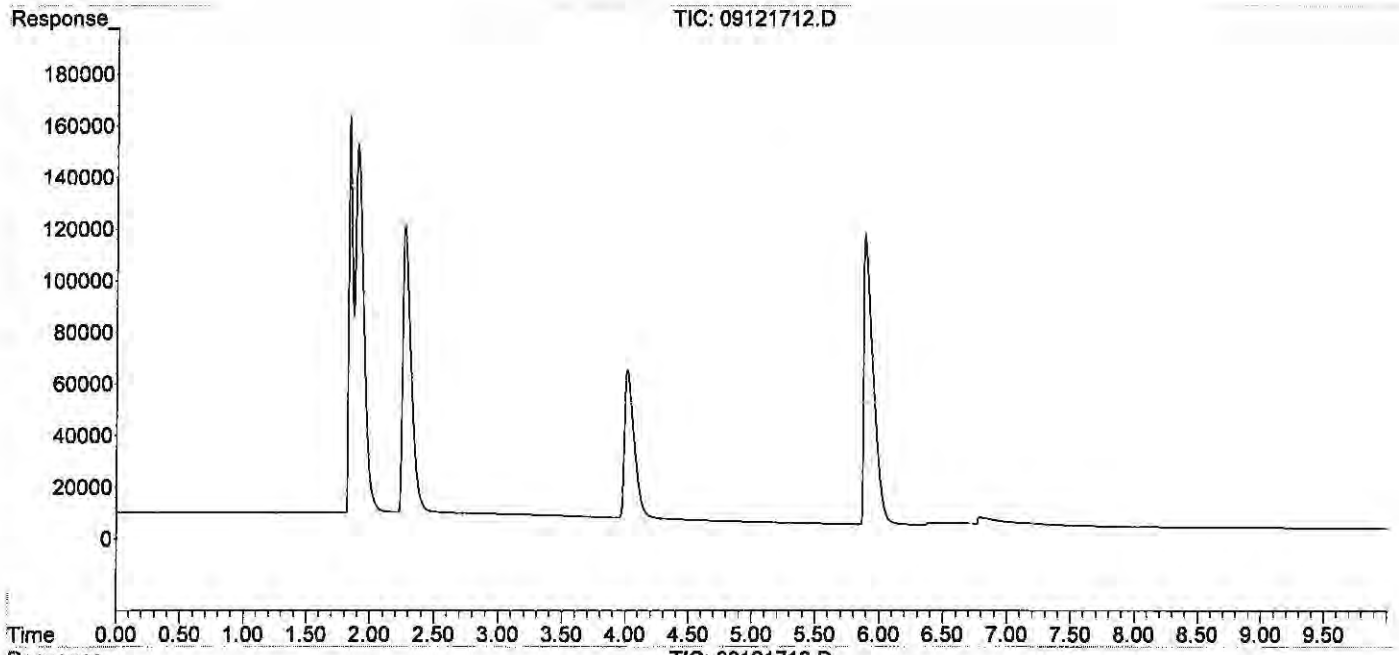
	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1)	Oxygen/Argon	0.000	0	N.D.	ppm	d
2)	Carbon monoxide	1.836	3190788	N.D.	ppm	
3)	Methane (TCD)	0.000	0	N.D.	ppm	d
4)	Carbon dioxide	0.000	0	N.D.	ppm	d
6)	Methane (FID)	1.034	169009160	18492.064	ppm	
7)	Ethylene	0.000	0	N.D.	ppm	
8)	Ethane	0.000	0	N.D.	ppm	
9)	Propylene	0.000	0	N.D.	ppm	
10)	Propane	0.000	0	N.D.	ppm	
11)	Isobutylene	0.000	0	N.D.	ppm	
12)	Isobutane	0.000	0	N.D.	ppm	
13)	n-Butane	0.000	0	N.D.	ppm	

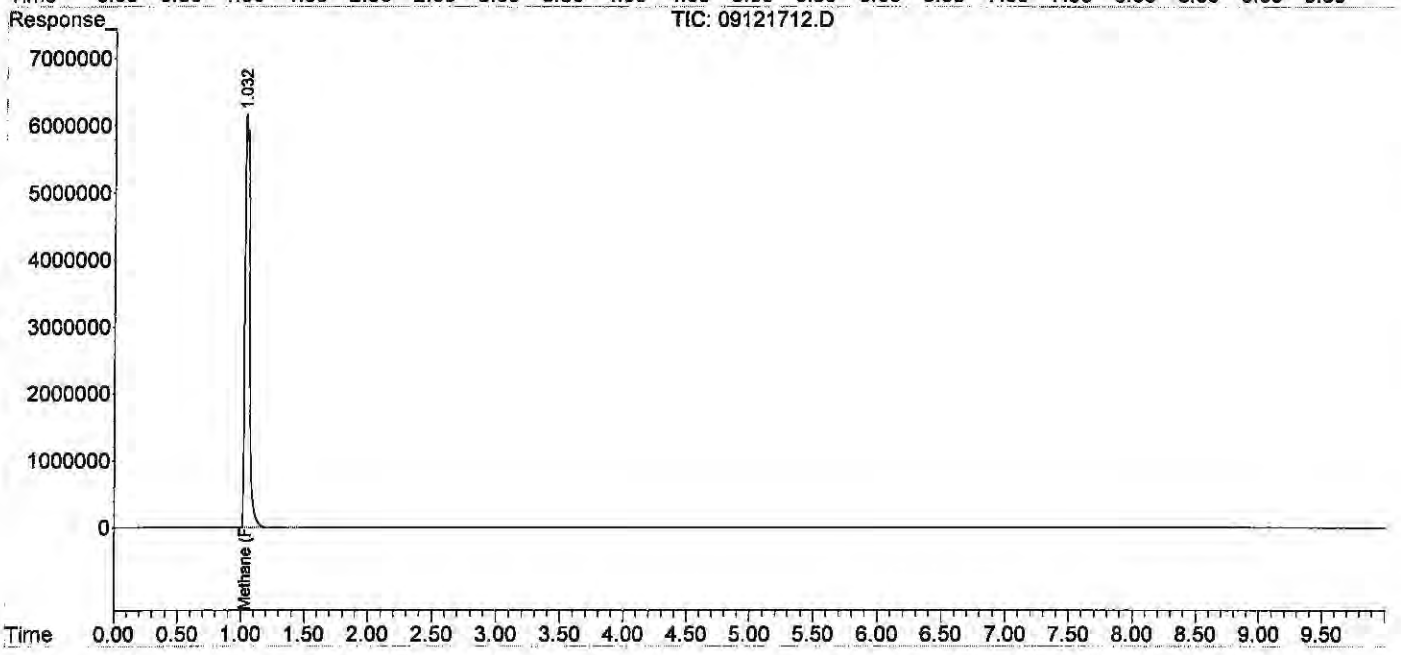
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121712.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 15:21
Operator : MC
Sample : 20000ppm 0.5ml s32-08231701
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 11:14:17 2017
Quant Method : J:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:13:29 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Quantitation Report (QT Reviewed)

Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121715.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 16:15
Operator : MC
Sample : icv s30-05241604
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 11:15:11 2017
Quant Method : J:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:13:29 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1)	Oxygen/Argon	1.843	2922459	3.687	ppm	
2)	Carbon monoxide	1.843	2922459	N.D.	ppm	
3)	Methane (TCD)	0.000	0	N.D.	ppm	actual %D
4)	Carbon dioxide	0.000	0	N.D.	ppm	
6)	Methane (FID)	1.063	13748	1.516	ppm	1.50 101.1
7)	Ethylene	1.598	24153	1.443	ppm	1.50 96.2
8)	Ethane	1.850	24488	1.445	ppm	1.50 96.3
9)	Propylene	4.221	36004	1.537	ppm	1.50 102.5
10)	Propane	4.350	37738	1.517	ppm	1.51 100.5
11)	Isobutylene	0.000	0	N.D.	ppm	
12)	Isobutane	6.579f	48019	1.804	ppm	9/14/2
13)	n-Butane	6.579f	48019	1.804	ppm	

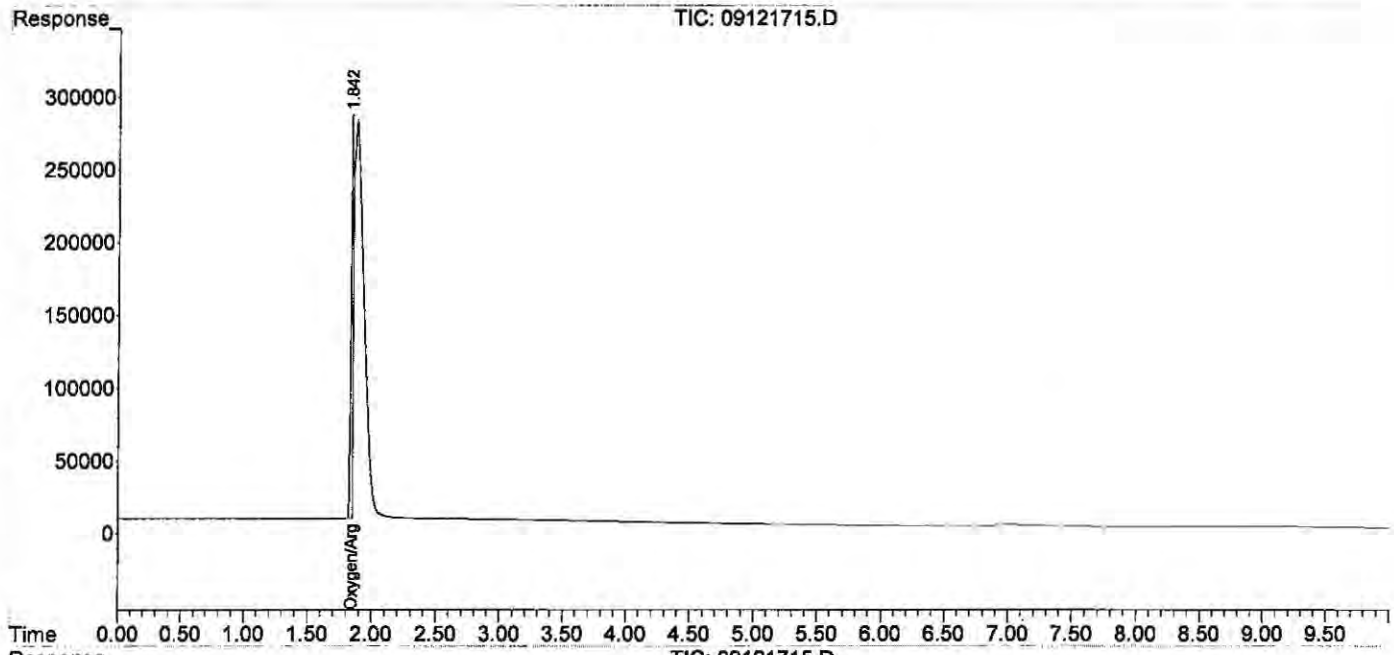
(f)=RT Delta > 1/2 Window (m)=manual int.

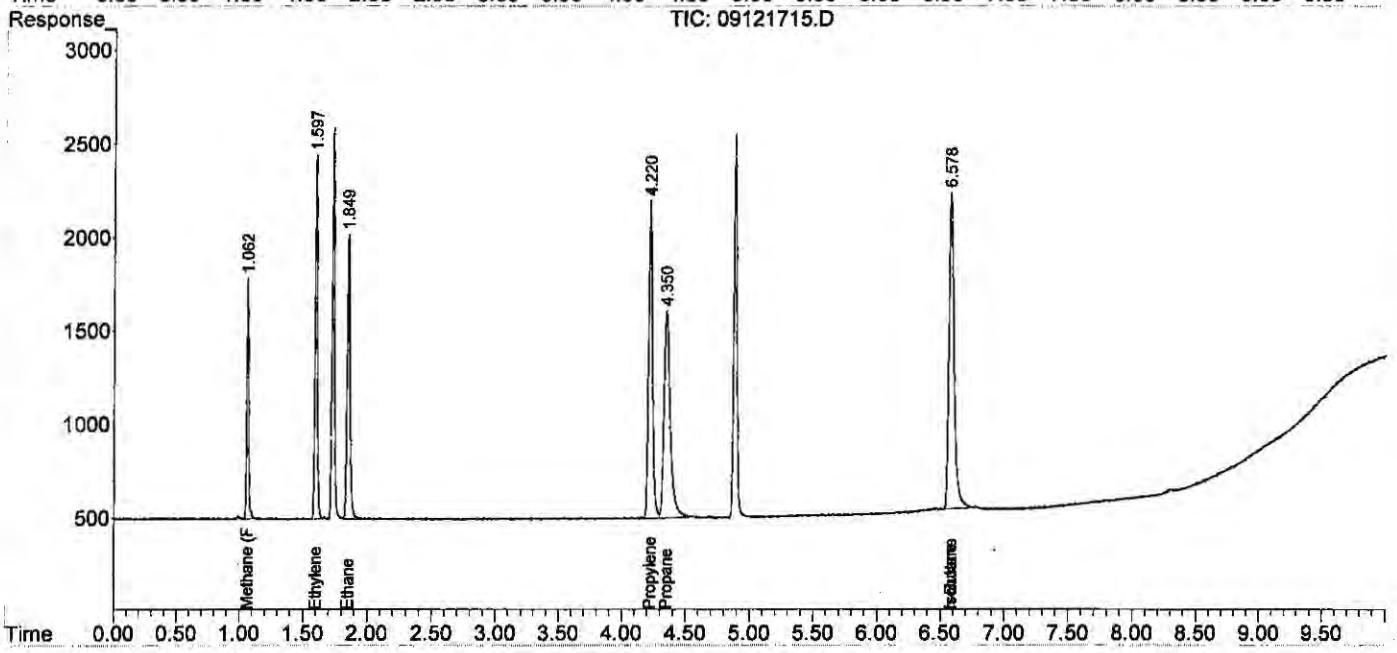
9/14/2017

Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121715.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 16:15
Operator : MC
Sample : icv s30-05241604
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 11:15:11 2017
Quant Method : J:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:13:29 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Dissolved Gases by RSK175

ALS Environmental

Method : RSK175 Headspace Method for Dissolved Hydrocarbon in Water by FID/TCD
Client : ALS Laboratory Group
Service Request: P2003597
Sample Vol. (ml) : 32.00 ml
Analyst : LD
Date Analysis : 07/01/20
Head Space Vol.(ml) : 8.00 ml
Instrument : GC#10
Detector : FID#10, TCD#10
Gas Constant : 24.05684 (20°C)

HEAD SPACE RESULT (ppm)

Sample ID	Inj. Vol.	Methane	Ethylene	Ethane
STD S32-05221901	0.100	95.229	101.520	101.160
ACTUAL		101.50	100.90	101.40
%Difference		6.2%	0.6%	0.2%
MCS 0.1ml	0.100	0.000	0.000	0.000
RB 0.1ml	0.100	0.131	0.000	0.000
LCS FID 0.1ml	0.100	1.430	1.054	1.201
LCSD FID 0.1ml	0.100	1.417	1.036	1.165
P2003597-001 0.1ml	0.100	1.586	0.000	0.000
P2003597-002 0.1ml	0.100	134.621	1.249	0.000
P2003597-003 0.1ml	0.100	72.858	0.503	0.000
P2003597-004 0.1ml	0.100	718.406	0.000	0.000
P2003597-005 0.1ml	0.100	669.570	0.000	0.000

FINAL HEAD SPACE RESULT (ppm)

	Methane	Ethylene	Ethane
WWt.	16.04	28.05	30.07
HENRY'S CONSTANT	3.76E+04	1.02E+04	2.63E+04
RL	1.30	1.00	0.60
MCS 0.1ml	0.000	0.000	0.000
LCS FID 0.1ml	14.300	10.540	12.010
LCSD FID 0.1ml	14.170	10.360	11.650
P2003597-001 0.1ml	15.860	0.000	0.000
P2003597-002 0.1ml	1346.210	12.490	0.000
P2003597-003 0.1ml	728.580	5.030	0.000
P2003597-004 0.1ml	7184.060	0.000	0.000
P2003597-005 0.1ml	6695.700	0.000	0.000

414 of 435

STD S32-05221901	88.197	93.300	92.540
ACTUAL	101.50	100.90	101.40
%Difference	13.1%	7.5%	8.7%

LP 07/01

01003693

Data Path : I:\GC10\DATA\RSK_FID\2020_07\01\
Data File : 07012001.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 01-Jul-2020, 12:25:59
Operator : LD
Sample : STD S32-05221901
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Jul 01 12:50:08 2020
Quant Method : I:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:14:47 2017
Response via : Initial Calibration
Integrator: ChemStation

LD 7/01

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

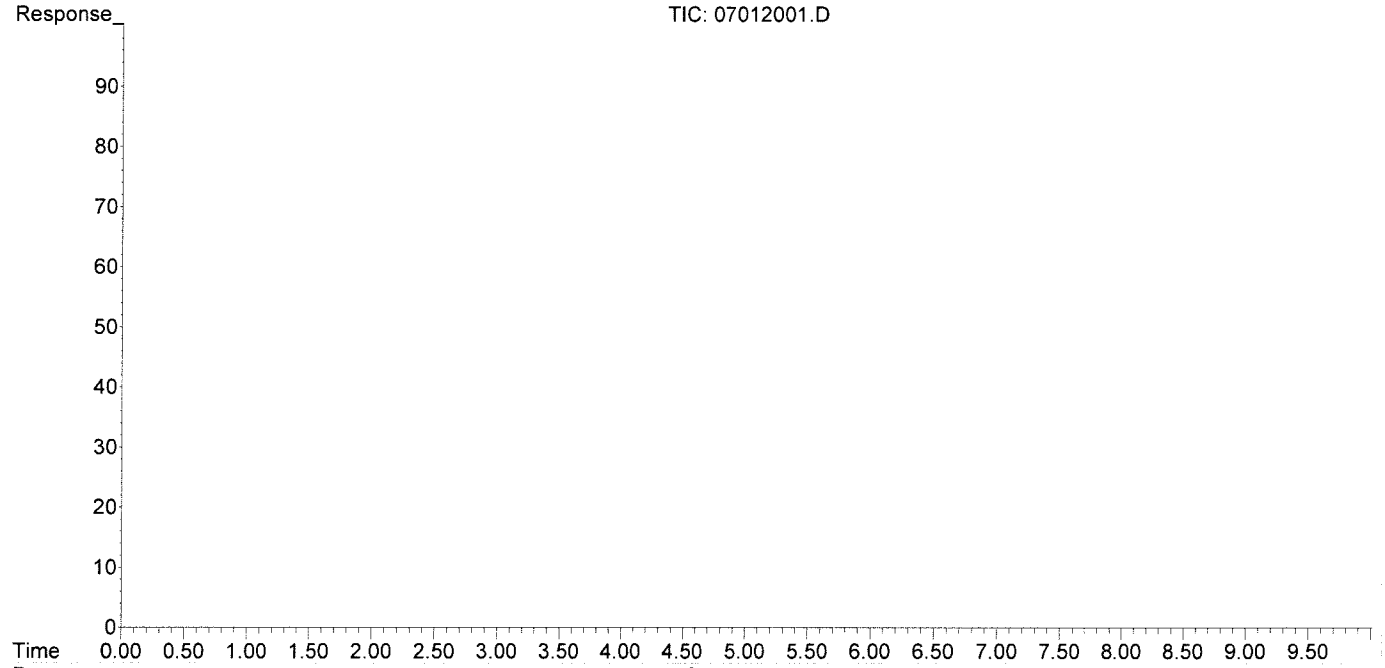
	Compound	R.T.	Response	Conc	Units
Target Compounds					
1)	Oxygen/Argon	0.000	0	N.D.	ppm
2)	Carbon monoxide	0.000	0	N.D.	ppm
3)	Methane (TCD)	0.000	0	N.D.	ppm
4)	Carbon dioxide	0.000	0	N.D.	ppm
6)	Methane (FID)	1.094	863792	95.229	ppm
7)	Ethylene	1.657	1698867	101.520	ppm
8)	Ethane	1.920	1714674	101.160	ppm
9)	Propylene	4.305	2500360	106.709	ppm
10)	Propane	4.427	2577356	103.591	ppm
11)	Isobutylene	0.000	0	N.D.	ppm
12)	Isobutane	0.000	0	N.D.	ppm
13)	n-Butane	0.000	0	N.D.	ppm

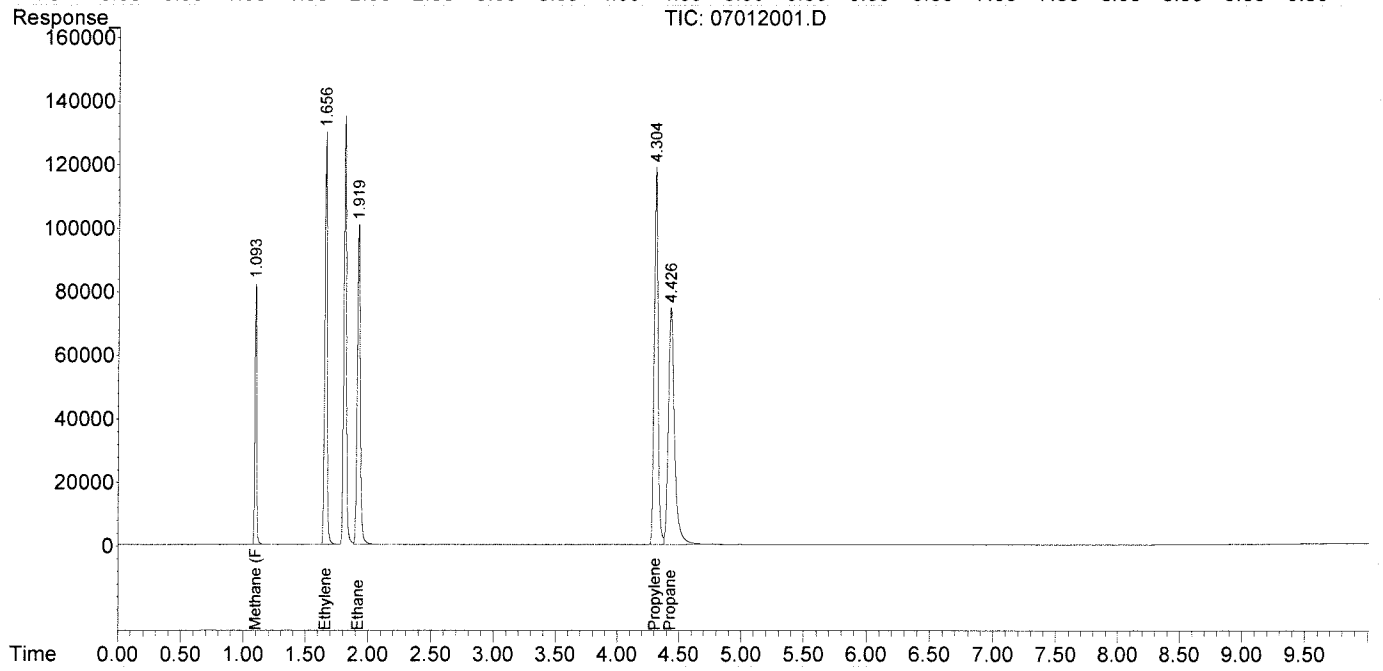
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : I:\GC10\DATA\RSK_FID\2020_07\01\
Data File : 07012001.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 01-Jul-2020, 12:25:59
Operator : LD
Sample : STD S32-05221901
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Jul 01 12:50:08 2020
Quant Method : I:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:14:47 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Data Path : I:\GC10\DATA\RSK_FID\2020_07\01\
Data File : 07012015.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 01-Jul-2020, 16:56:52
Operator : LD
Sample : STD S32-05221901
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Jul 01 17:17:22 2020
Quant Method : I:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:14:47 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

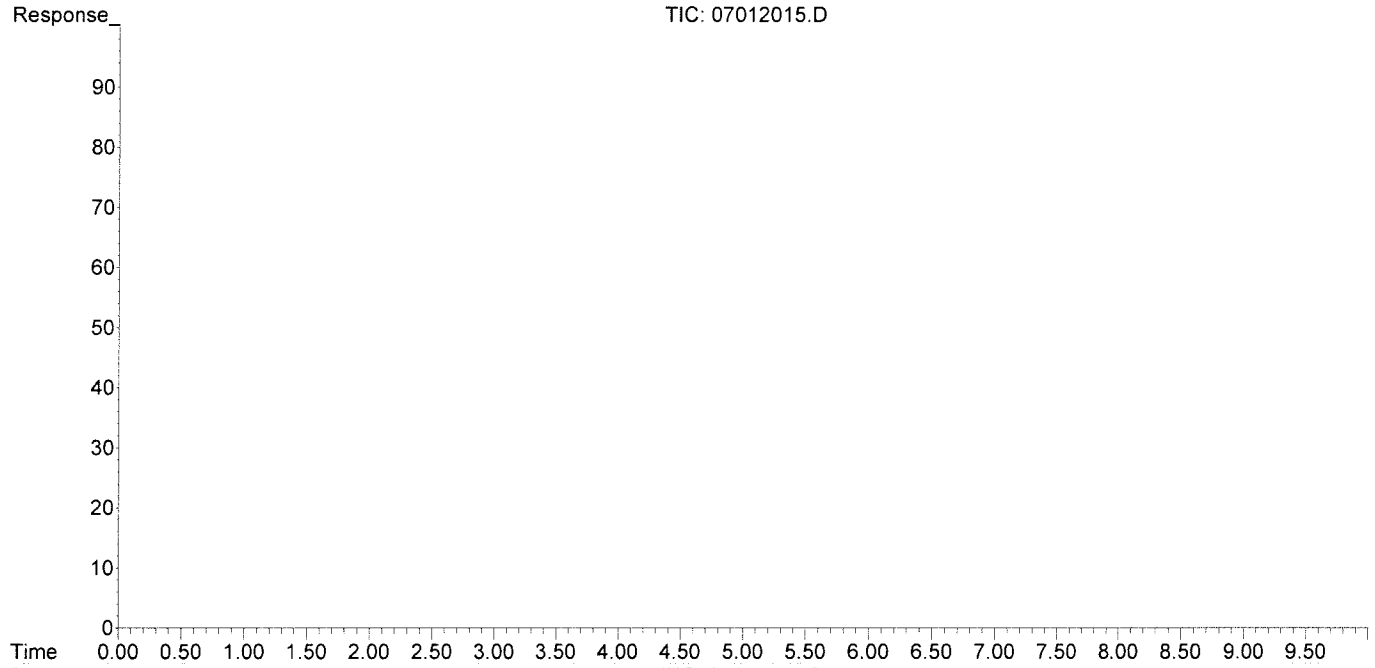
	Compound	R.T.	Response	Conc	Units
Target Compounds					
1)	Oxygen/Argon	0.000	0	N.D.	ppm
2)	Carbon monoxide	0.000	0	N.D.	ppm
3)	Methane (TCD)	0.000	0	N.D.	ppm
4)	Carbon dioxide	0.000	0	N.D.	ppm
6)	Methane (FID)	1.100	800006	88.197	ppm
7)	Ethylene	1.666	1561310	93.300	ppm
8)	Ethane	1.929	1568578	92.540	ppm
9)	Propylene	4.305	2269738	96.867	ppm
10)	Propane	4.427	2334081	93.813	ppm
11)	Isobutylene	0.000	0	N.D.	ppm
12)	Isobutane	0.000	0	N.D.	ppm
13)	n-Butane	0.000	0	N.D.	ppm

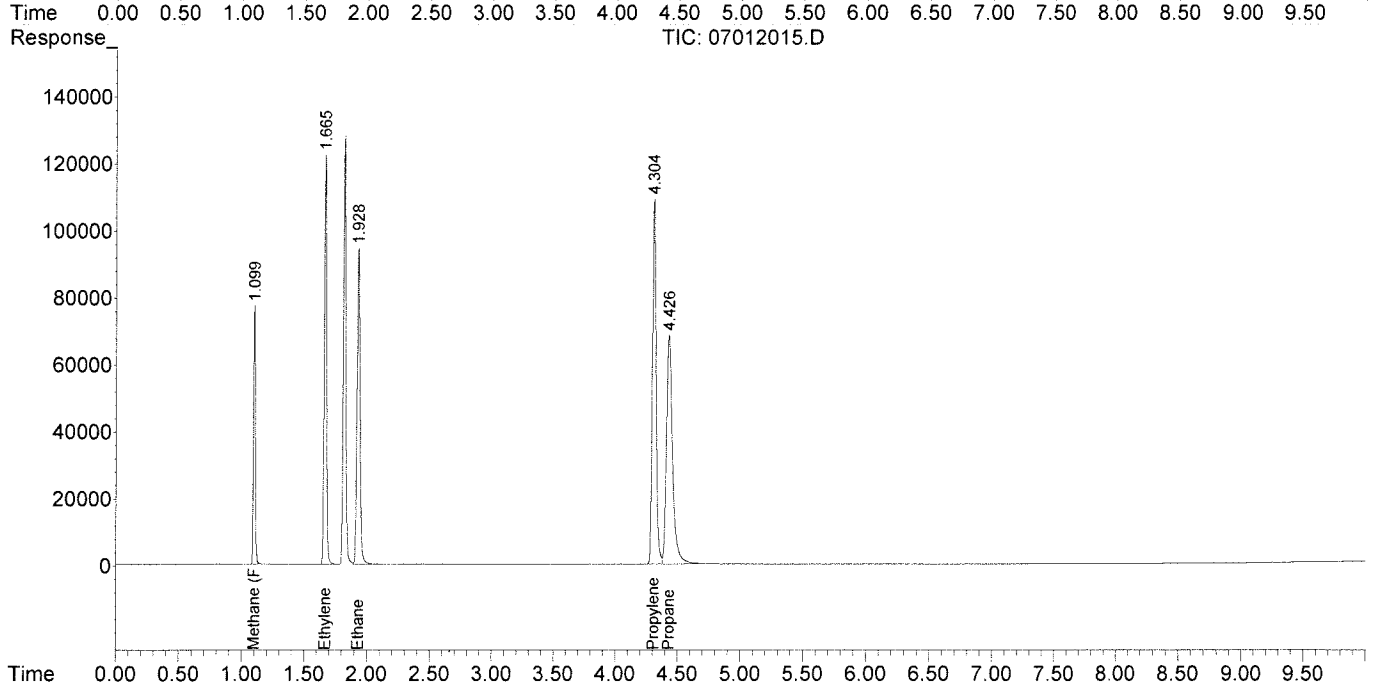
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : I:\GC10\DATA\RSK_FID\2020_07\01\
Data File : 07012015.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 01-Jul-2020, 16:56:52
Operator : LD
Sample : STD S32-05221901
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Jul 01 17:17:22 2020
Quant Method : I:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:14:47 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Injection Log

Directory: I:\GC10\DATA\RSK_FID\2017_09\12\

	Date/Time	File Name	Sample ID	Misc Info	Operator	Acquisition Method	Comments
1	12-Sep-17, 08:38:08	09121701.D	test		MC	RSKBOTH.M	
2	12-Sep-17, 10:52:40	09121702.D	0.151ppm 0.250ml s32-09121702		MC	RSKBOTH.M	Curve
3	12-Sep-17, 11:05:49	09121703.D	0.302ppm 0.5ml s32-09121702		MC	RSKBOTH.M	Curve
4	12-Sep-17, 11:45:34	09121704.D	1.51ppm 0.1ml s32-09051701		MC	RSKBOTH.M	Curve
5	12-Sep-17, 12:09:33	09121705.D	4.53ppm 0.3ml s32-09051701		MC	RSKBOTH.M	Curve
6	12-Sep-17, 12:30:23	09121706.D	10.57ppm 0.7ml s32-09051701		MC	RSKBOTH.M	Curve
7	12-Sep-17, 12:47:18	09121707.D	200ppm 0.1ml s32-09121701		MC	RSKBOTH.M	Curve
8	12-Sep-17, 13:00:22	09121708.D	600ppm 0.3ml s32-09121701		MC	RSKBOTH.M	Curve
9	12-Sep-17, 13:47:48	09121709.D	1000ppm 0.5ml s32-09121701		MC	RSKBOTH.M	Curve
10	12-Sep-17, 14:07:58	09121710.D	2000ppm 1ml s32-09121701		MC	RSKBOTH.M	Curve
11	12-Sep-17, 14:48:48	09121711.D	4000ppm 0.1ml s32-08231701		MC	RSKBOTH.M	Curve
12	12-Sep-17, 15:21:51	09121712.D	20000ppm 0.5ml s32-08231701		MC	RSKBOTH.M	Curve
13	12-Sep-17, 15:38:59	09121713.D	mb 0.5ml		MC	RSKBOTH.M	Pass
14	12-Sep-17, 15:55:35	09121714.D	mb 0.1ml		MC	RSKBOTH.M	Pass
15	12-Sep-17, 16:15:26	09121715.D	icv s30-05241604		MC	RSKBOTH.M	Pass

Injection Log

Directory: I:\GC10\DATA\RSK_FID\2020_07\01\

	Date/Time	File Name	Sample ID	Misc Info	Operator	Acquisition Method	Comments
1	01-Jul-20, 12:25:59	07012001.D	STD S32-05221901		LD	RSKBOTH.M	pass
2	01-Jul-20, 12:54:01	07012002.D	RB 0.1ml		LD	RSKBOTH.M	pass
3	01-Jul-20, 13:48:06	07012003.D	MCS 0.1ml		LD	RSKBOTH.M	pass
4	01-Jul-20, 14:01:52	07012004.D	LCS FID 0.1ml		LD	RSKBOTH.M	pass
5	01-Jul-20, 14:21:34	07012005.D	LCSD FID 0.1ml		LD	RSKBOTH.M	pass
6	01-Jul-20, 14:41:02	07012006.D	P2003560-001 0.1ml		LD	RSKBOTH.M	
7	01-Jul-20, 14:54:52	07012007.D	P2003560-002 0.1ml		LD	RSKBOTH.M	
8	01-Jul-20, 15:07:49	07012008.D	P2003560-003 0.1ml		LD	RSKBOTH.M	
9	01-Jul-20, 15:27:11	07012009.D	P2003560-004 0.1ml		LD	RSKBOTH.M	
10	01-Jul-20, 15:43:08	07012010.D	P2003597-001 0.1ml		LD	RSKBOTH.M	
11	01-Jul-20, 15:56:30	07012011.D	P2003597-002 0.1ml		LD	RSKBOTH.M	
12	01-Jul-20, 16:09:40	07012012.D	P2003597-003 0.1ml		LD	RSKBOTH.M	
13	01-Jul-20, 16:22:41	07012013.D	P2003597-004 0.1ml		LD	RSKBOTH.M	
14	01-Jul-20, 16:38:47	07012014.D	P2003597-005 0.1ml		LD	RSKBOTH.M	
15	01-Jul-20, 16:56:52	07012015.D	STD S32-05221901		LD	RSKBOTH.M	pass
16	01-Jul-20, 17:18:36	07012016.D	J2003335-054 0.1ml		LD	RSKBOTH.M	
17	01-Jul-20, 17:34:03	07012017.D	J2003335-055 0.1ml		LD	RSKBOTH.M	
18	01-Jul-20, 17:47:00	07012018.D	J2003335-056 0.1ml		LD	RSKBOTH.M	
19	01-Jul-20, 18:04:34	07012019.D	J2003335-057 0.1ml		LD	RSKBOTH.M	
20	01-Jul-20, 18:17:48	07012020.D	STD S32-05221901		LD	RSKBOTH.M	pass

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ALS Laboratory Group
10450 Stancliff Rd
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Houston, TX 77040

Phone: 281-575-2279

Fax:

Identifier: 095RF **Date Rec:** 06/25/2020 **Report Date:** 07/01/2020

Client Project #: NW01312.0150 **Client Project Name:** LHAAP-58

Purchase Order #:

Analysis Requested: CENSUS

Reviewed By:



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MICROBIAL INSIGHTS, INC.

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CENSUS

Client: **ALS Laboratory Group**
Project: LHAAP-58

MI Project Number: **095RF**
Date Received: 06/25/2020

Sample Information

Client Sample ID:		**35AWW19_062420**	**35AWW20_062420**	**LHSMW07_062420**	**35AWW06_062420**	**35AWW23_062420**
Sample Date:		06/24/2020	06/24/2020	06/24/2020	06/24/2020	06/24/2020
Units:		cells/mL	cells/mL	cells/mL	cells/mL	cells/mL
Analyst/Reviewer:		HT	HT	HT	HT	HT
Dechlorinating Bacteria						
Dehalococcoides	*DHC*	**2.00E+00**	**1.15E+05**	**1.09E+03**	**3.50E+00**	**7.65E+02**
tceA Reductase	TCE	<5.00E-01	<5.00E-01	<5.00E-01	**3.00E-01 (J)**	**4.86E+01**
BAV1 Vinyl Chloride Reductase	BVC	<5.00E-01	**1.84E+04**	**9.00E-01**	<6.00E-01	**1.26E+01**
Vinyl Chloride Reductase	VCR	**1.00E-01 (J)**	<5.00E-01	**3.78E+02**	**5.00E-01 (J)**	**1.06E+02**
Dehalobacter spp.	*DHBt*	**1.97E+04**	**3.83E+03**	**4.21E+04**	**1.99E+03**	<5.60E+00

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

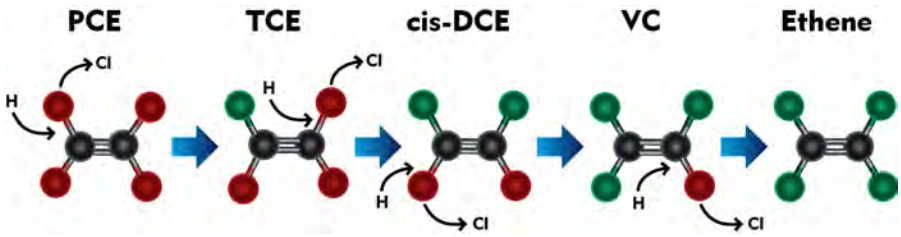
Samples Received **6/25/2020**

Component	Date Prepared	Date Analyzed	Arrival Temperature	Positive Control	Extraction Blank	Negative Control
DHC	06/25/2020	07/01/2020	0 °C	100%	non-detect	non-detect
BVC	06/25/2020	07/01/2020	0 °C	96%	non-detect	non-detect
TCE	06/25/2020	07/01/2020	0 °C	93%	non-detect	non-detect
VCR	06/25/2020	07/01/2020	0 °C	96%	non-detect	non-detect
DHBt	06/25/2020	07/01/2020	0 °C	101%	non-detect	non-detect

DHC Interpretation

Dehalococcoides 16S rRNA gene (qDHC)

Under anaerobic conditions, tetrachloroethene (PCE) and trichloroethene (TCE) can undergo sequential reductive dechlorination through the daughter products *cis*-dichloroethene (*cis*-DCE) and vinyl chloride to nontoxic ethene (1,2).



While a number of bacterial cultures capable of utilizing PCE and TCE as growth supporting electron acceptors have been isolated (3-7), *Dehalococcoides* spp. may be the most important because they are the only bacterial group that has been isolated to date which is capable of complete reductive dechlorination of PCE to ethene (8). In fact, the presence of *Dehalococcoides* spp. has been associated with complete dechlorination to ethene at sites across North America and Europe (9).

Status	*Dehalococcoides spp.*	Observation
	**≥ 10^4** (cells/mL)	Lu et al. proposed that a concentration of 1 x 10^4 DHC cells/mL could be used as a screening criterion to identify sites where reductive dechlorination will yield a generally useful biodegradation rate (10). Similarly, in an internal study conducted with nearly 1000 groundwater samples obtained from sites across the US, ethene production was observed in approximately 80% of samples in which CENSUS® qDHC results were greater than or equal to 10^4 DHC cells/mL.
	**10^1 to < 10^4** (cells/mL)	When vinyl chloride reductase genes (See DHC functional genes discussion below) are also detected, complete reductive dechlorination of PCE and TCE to ethene may still occur even with moderate DHC concentrations. When the DHC population is below the 10^4 cells/mL criterion proposed by Lu et al. (10), project managers should carefully consider other site-specific data to determine whether subsurface conditions may be limiting reductive dechlorination. For example, the addition of an electron donor may be able to stimulate DHC growth and enhance anaerobic bioremediation.
	**< 10^1** (cells/mL)	DHC concentrations are low suggesting that complete reductive dechlorination of PCE and TCE to ethene is unlikely to occur under existing conditions. Enhanced anaerobic bioremediation options (biostimulation or bioaugmentation) may need to be considered.

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DHC Interpretation

DHC Functional Genes (*tce*A, *bvc*A, *vcr*A)

A "stall" where daughter products *cis*-DCE and vinyl chloride accumulate can occur at PCE- and TCE-impacted sites especially under MNA conditions. The accumulation of vinyl chloride, generally considered more carcinogenic than the parent compounds, is particularly problematic. Although elevated *Dehalococcoides* concentrations correspond to ethene production in numerous studies, the range of chlorinated ethenes metabolized and cometabolized varies among species and strains within the *Dehalococcoides* genus. For example, *Dehalococcoides ethenogenes* str. 195 metabolizes PCE, TCE, and *cis*-DCE and cometabolizes vinyl chloride (8) to produce ethene. Conversely, *Dehalococcoides* sp. CBDB1 utilizes PCE and TCE but does not cometabolize additional chloroethenes (11). Other *Dehalococcoides* strains, such as BAV1, GT and VS, are known to fully dechlorinate cis-DCE and VC to ethene (14,16,19). Quantification of reductive dehalogenase genes is used to more definitively confirm the potential for reductive dechlorination of TCE, cis-DCE, and vinyl chloride (12-15).

Functional Gene	Observation
TCE Reductase	
***tce*A gene**	The *tce*A gene encodes the enzyme responsible for reductive dechlorination of TCE to *cis*-DCE in some strains of *Dehalococcoides*. Absence of *tce*A does not preclude the potential for reductive dechlorination of TCE in the field since the *tce*A gene is not universally distributed among all DHC and is not present in other microorganisms capable of reductive dechlorination of TCE (e.g. *Dehalobacter*). Detection of the *tce*A gene provides an additional line of evidence indicating the potential for dechlorination of TCE.
Vinyl Chloride Reductase	
***bvc*A gene**	The *bvc*A gene encodes the vinyl chloride reductase enzyme responsible for reductive dechlorination of vinyl chloride to ethene by *Dehalococcoides* sp. str. BAV1 (16). Presence of *bvc*A gene indicates the potential for reductive dechlorination of VC to ethene. Absence of both *bvc*A and *vcr*A genes suggests VC may accumulate. An internal study with ~1,000 samples showed ethene production was observed in 80% of the samples that the DHC population was greater than or equal to 10^4 cells/mL. The *bvc*A gene was detected in over 50% of these samples. Van Der Zaan et al (17) noted that the bvcA gene was the only VC reductase gene detected at three of their sites. Alfred Spormann's laboratory at Stanford University (18) reported that the *bvc*A gene was the most abundant and active at the outflow of a PCE fed column study. This section of the column was in the DCE to VC stages of reductive dechlorination thus confirming the importance of the *bvc*A gene for complete reductive dechlorination.
***vcr*A gene**	The *vcr*A gene encodes the vinyl chloride reductase enzyme responsible for reductive dechlorination of *cis*-DCE and vinyl chloride by *Dehalococcoides* sp. strain VS (14). Presence of *vcr*A gene indicates the potential for reductive dechlorination of DCE and/or VC to ethene. Absence of both *bvc*A and *vcr*A genes suggest VC may accumulate. As with the *bvc*A gene, detection of the *vcr*A gene is associated with ethene production in internal studies (67%) and vinyl chloride reduction in independent studies (14, 17).

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DHC Interpretation

Reporting

Microbial Insights can provide a variety of data packages and reporting levels to suit the needs of any project. Data packages range from simple analytical reports with results only to more complex data packages that include a report narrative, analytical results, QC data, and supporting materials including all raw data and chain-of-custody documentation. The figure below shows our standard report and explains the way values are reported.

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CENSUS

Client: Company Name
Project: Your Project Name

MI Project Number: Unique Laboratory Identifier
Date Received: Date Samples Arrived

Sample Information

Client Sample ID:		Sample A	Sample B	Sample C
Sample Date:		00/00/0000	00/00/0000	00/00/0000
Units:		cells/mL	cells/mL	cells/mL
Analyst:		Intials	Intials	Intials
Dechlorinating Bacteria				
Dehalococcoides spp.	DHC	**1.84E+05**	**2.76E+02**	**2.28E+01 (J)**
Functional Genes				
tceA Reductase	TCE	**6.00E+01**	**3.23E+01**	<4.00E-01
bvcA Reductase	BVC	**1.17E+04**	**1.81E+01**	<4.00E-01
vcrA Reducatase	VCR	**8.42E+04**	**1.74E+02**	<4.00E-01

"J" value
Result is an estimated value. This data qualifier (flag) is used when the target gene is detected but at a concentration or abundance below the practical quantification limit (PQL).

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

< value
The target gene was not detected at the limit of quantitation (LOQ) reported for that sample.

"I" value
QA Procedure indicated that the sample may have exhibited PCR inhibition. Although relatively rare, PCR inhibition can occur due to the presence of metals or humic acids at high concentrations in the sample.

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Quality Assurance

Microbial Insights' comprehensive Quality Assurance (QA) Program is the foundation of all laboratory analyses, ensuring that our clients receive high-quality analytical services that are timely, reliable, and meet their intended purpose in a cost effective manner. MI is committed to providing quality data that surpasses regulatory and industry standards, thus enabling the client to make well-informed decisions. MI maintains strict standard operating procedures and QA/QC measures throughout all of the analyses offered. The following Table details specific QA/QC procedures that are used for CENSUS.

QA/QC	Description
Date of Extraction	DNA and RNA extractions are performed the day the samples are received by MI to minimize the possibility of any changes to the microbial community prior to analysis.
Laboratory Method Blanks	An extraction blank (no sample added) is processed alongside each set of field samples from DNA extraction through CENSUS® analysis to ensure that cross contamination has not occurred. Although MI has never experienced this issue, the detection of the CENSUS® target (e.g. *Dehalococcoides*) in an extraction blank is direct evidence of cross contamination with a sample or contamination of a reagent and would invalidate the results. If this were to occur, MI would re-extract the sample. If not possible to re-extract, MI would contact the client immediately and notate it on the laboratory report.
Laboratory Control Samples (LCS)	A laboratory control sample (LCS) or positive control (target DNA) is included with each CENSUS® plate to confirm amplification and as a continuing calibration check.
Negative Controls	A negative control (no DNA) is included with each CENSUS plate to ensure that cross contamination has not occurred during amplification. As with the extraction blank, detection of CENSUS target (e.g. DHC) in a negative control is direct evidence of contamination and would invalidate the results. If this were to occur, MI would rerun the analysis.

References

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How to Retrieve and Use Estimated Percentile Ranks from the Microbial Insights Database

The MI Database

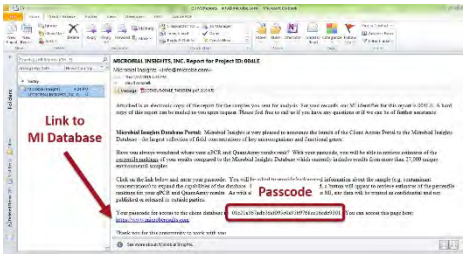
The Microbial Insights Database is the largest collection of field concentrations of key microorganisms and functional genes currently containing qPCR and QuantArray results for more than 40,000 unique groundwater, soil, and sediment samples from all 50 states and 33 countries worldwide.

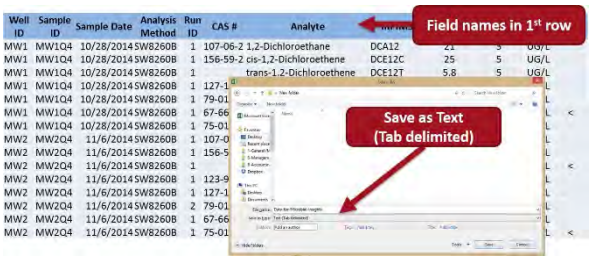
Is that low, medium or high?

In practice, biodegradation depends not just on the presence but the actual concentrations of the contaminant degrading microorganisms. The estimated percentile ranks retrieved from the MI Database answer the question "Is that low, medium or high?" by comparing your results to those of the literally thousands of other environmental samples submitted to MI for analysis over the last 20+ years.

Retrieving Estimated Percentile Ranks

With your report, you were emailed a passcode and link enabling you to login to the Client Portal. Just enter basic information about the sample (e.g. contaminant concentrations) to aid in understanding the links between environmental conditions and microbial populations and you can retrieve estimates of the percentile ranks of your results based on those compiled in the MI database at no additional charge.





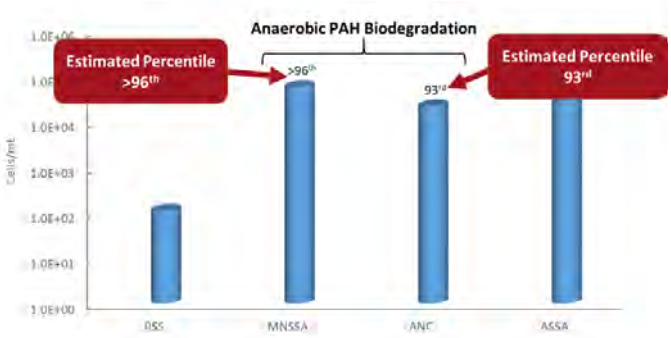
All site specific data will be treated as confidential and uploading is easy.

You can even upload chemical and geochemical data from EDDs. Just save as a Tab Delimited text file.

Example - Using Estimated Percentile for MNA Assessment at an MGP Site

CENSUS® qPCR was performed to quantify anaerobic naphthalene carboxylase (ANC) and naphthyl-2-methylsuccinate synthase (MNSSA) to assess anaerobic biodegradation of naphthalene and methyl-naphthalene under existing site conditions.

- Not only were ANC and MNSSA genes detected, but these functional genes responsible for anaerobic biodegradation of PAHs were present at concentrations "far better than average" based on the estimated percentile ranks.
- Demonstrating high concentrations of ANC and MNSSA gave an additional line of evidence indicating growth substantial populations of anaerobic PAH degraders and suggested a greater probability that monitored natural attenuation (MNA) will be successful.



How to Use Estimated Percentile Ranks from the Microbial Insights Database

The MI Database and Client Portal

The Microbial Insights Database is the largest collection of field concentrations of key microorganisms and functional genes currently containing qPCR and QuantArray results for more than 32,000 unique groundwater, soil, and sediment samples from all 50 states and 33 countries worldwide. Driven by field samples, the database reflects the impacts of common contaminants, geochemical conditions, and site management practices on critical microbial populations.

With your report, you received a passcode enabling you to retrieve estimates of the percentile ranks of your results based on those compiled in the MI database at no additional charge. When accessing the database, you will be asked to provide background information about the sample (e.g. contaminant concentrations) to aid in understanding the links between environmental conditions and microbial populations. As with all client information provided to MI, site specific data will be treated as confidential.

Is that low, medium or high?

In practice, biodegradation depends not just on the presence but the actual concentrations of the contaminant degrading microorganisms. Simply put, qPCR and QuantArray results demonstrating high concentrations of target microorganisms or functional genes suggest in situ selection, enrichment and growth of those specific contaminant degraders and therefore a greater probability that monitored natural attenuation (MNA) or bioremediation will be successful.

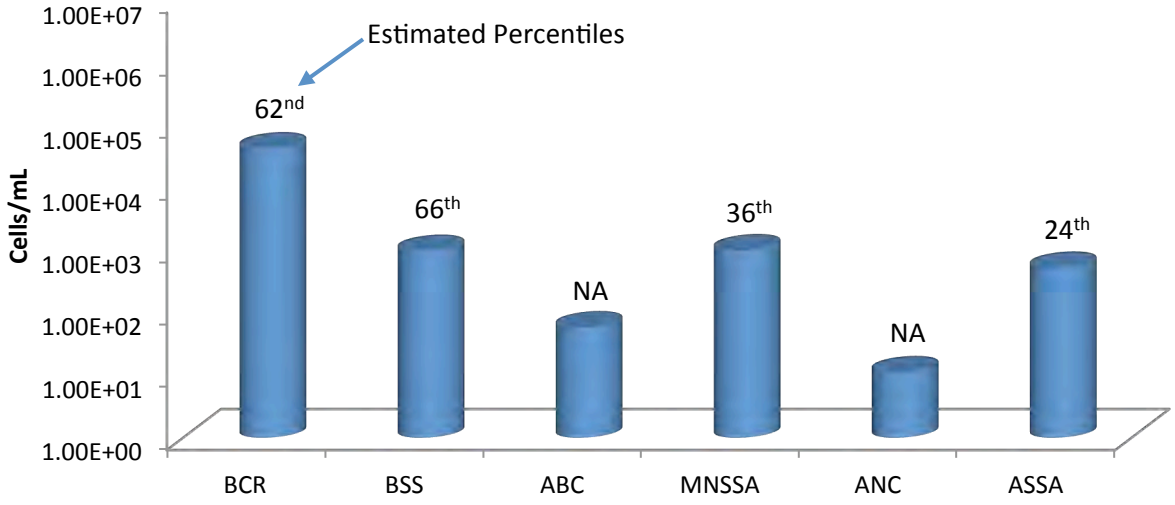
Is that a low, medium, or high concentration? The estimated percentile ranks retrieved from the MI Database answer that question by comparing your qPCR and QuantArray results to those of the literally thousands of other environmental samples submitted to MI for analysis over the last 20+ years.

Using the Estimated Percentile - Interpretation Examples

MNA Assessment – Petroleum Hydrocarbon Site:

Whenever possible, interpretation of qPCR and QuantArray results should include comparisons between samples obtained from background and impacted wells. The estimated percentile ranks however provide an additional avenue for comparison and evaluation of treatment options as shown below.

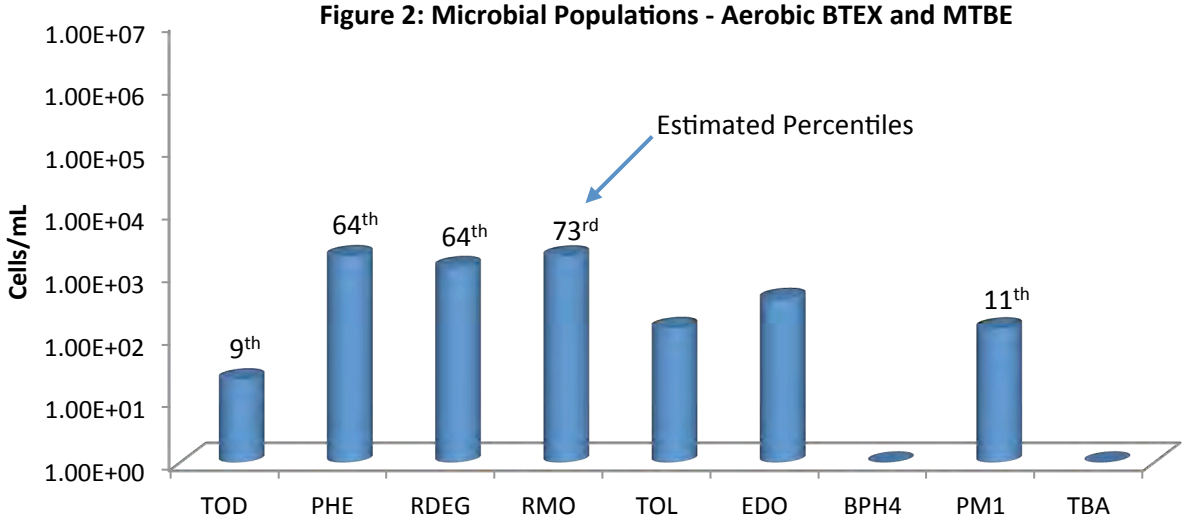
Figure 1: Microbial Populations - Anaerobic BTEX and PAHs



Anaerobic BTEX and PAH Biodegradation (Figure 1):

- With moderate concentrations of functional genes involved in anaerobic BTEX metabolism detected, the QuantArray-Petro® results were encouraging in terms of evaluating biodegradation potential under existing site conditions.
- More specifically, benzylsuccinate synthase (BSS) was detected on the order of nearly 10^3 cells/mL indicating the presence of a substantial population (66th percentile) capable of anaerobic biodegradation of toluene and other alkyl substituted benzenes.
- Naphthyl-2-methylsuccinate synthase (MNSSA) and alkylsuccinate synthase (ASSA) genes were also detected indicating the potential for anaerobic biodegradation of 2-methylnaphthalene and normal alkanes.
- The concentration of MNSSA genes would be considered modest with an estimated percentile of 36th.
- While the percentile rank for MNSSA would be "below average", a number of additional factors should be considered.
    - First, anaerobic hydrocarbon degraders are less prevalent than aerobic BTEX degraders and overall detection frequencies for many genes involved in anaerobic hydrocarbon biodegradation are less than 50%.
    - Therefore, the detection of genes like BSS, MNSSA, ASSA, anaerobic benzene carboxylase (ABC), and anaerobic naphthalene carboxylase (ANC) even at low concentrations is certainly noteworthy and inherently "better than average".
    - The estimated percentiles for all assays are based only on samples where the concentration of the target gene was greater than the practical quantitation limit (PQL).
    - For less commonly detected targets like many of the genes involved in anaerobic hydrocarbon biodegradation this is an especially important consideration.
    - Excluding samples where a gene target is below the PQL ensured that the median concentrations of less commonly detected targets would not be unduly biased low by the fact that the gene is not detected in most samples.
- Anaerobic benzene carboxylase (ABC) and naphthalene carboxylase (ANC) genes were also detected indicating the presence of bacterial populations capable of anaerobic biodegradation of benzene and naphthalene.
- For newly identified genes like ABC and ANC, estimated percentile ranks are not yet available due to the limited number of field samples that have been analyzed to date.
- However, like MNSSA and other genes involved in anaerobic hydrocarbon biodegradation, ABC and ANC detection frequencies are relatively low so the detection of these genes even at low concentrations should be considered when evaluating biodegradation potential under existing site conditions.

Figure 2: Microbial Populations - Aerobic BTEX and MTBE



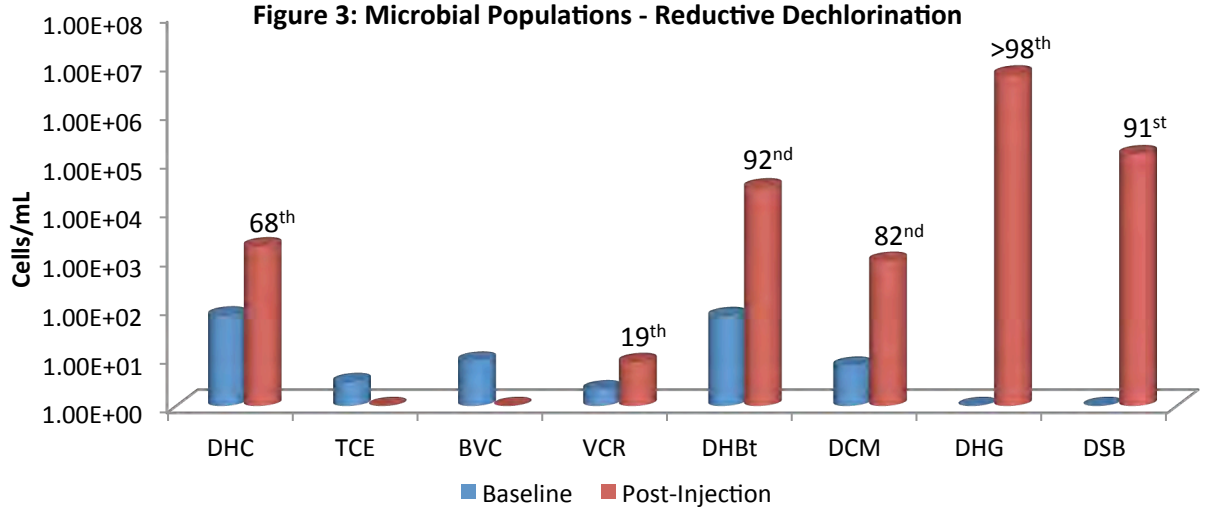
Aerobic BTEX and MTBE Biodegradation (Figure 2):

- With growing evidence that aromatic oxygenases function at low dissolved oxygen concentrations, aerobic BTEX biodegradation pathways should also be evaluated when considering MNA.
- Again, the QuantArray-Petro results were encouraging – genes encoding the first step in multiple pathways for aerobic BTEX biodegradation were detected indicating the presence of a diverse population of aerobic BTEX degraders.
- However, aerobic BTEX degraders are often considered ubiquitous. Therefore answering the question "Is that low, medium or high?" becomes especially important when evaluating aerobic BTEX biodegradation at petroleum hydrocarbon sites.
- In this case, the estimated percentile ranks of the concentrations of toluene/benzene monooxygenase (RMO and RDEG) and phenol hydroxylase (PHE) genes ranged from the 64th to 73rd percentile.
- In other words, the concentrations of RMO, RDEG, and PHE detected in this groundwater sample were greater than the concentrations detected in 64% to 73% of all other groundwater samples where these genes were analyzed and detected above the PQL.
- Aerobic BTEX degraders are common in the environment, but in this sample concentrations of toluene/benzene monooxygenase genes could be viewed as "better than average" when compared to the MI Database.

Biostimulation – Chlorinated Solvent Site:

Whenever possible, interpretation of qPCR and QuantArray results should include comparisons between baseline and post-injection monitoring events as shown below (Figure 3). The estimated percentile ranks however provide an additional avenue for comparison and evaluation of remedy performance.

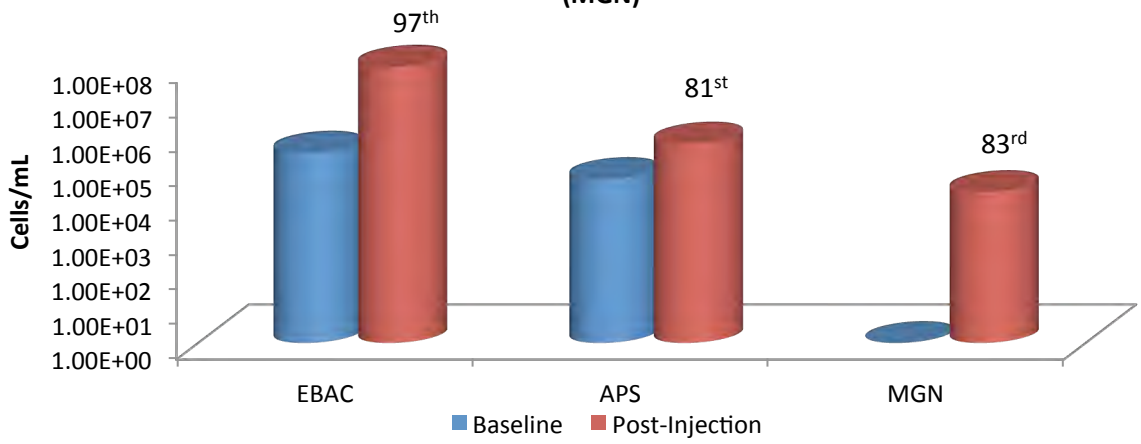
Figure 3: Microbial Populations - Reductive Dechlorination



- During the baseline groundwater sampling event, *Dehalococcoides* and vinyl chloride reductase genes were detected indicating the potential for complete reductive dechlorination of PCE and TCE to ethene.
- However, the *Dehalococcoides* concentration was well below the 10^4 cells/mL recommended by Lu et al. (2006) for generally effective rates of reductive dechlorination.
- Based on qPCR results as well as traditional groundwater monitoring, biostimulation with electron donor addition was selected as the site management plan.
- By the first monitoring event after injection, populations of halorespiring bacteria had increased substantially in response to electron donor addition.
    - *Dehalobacter* populations increased by more than two orders of magnitude to post-injection concentrations greater than 10^4 cells/mL (92nd percentile).
    - *Dehalogenimonas* (10^6 cells/mL) and *Desulfitobacterium* (10^5 cells/mL) which had not been detected prior electron donor addition were present at concentrations greater than observed in over 90% of other groundwater samples where these halorespiring bacteria were detected.
- After injection, *Dehalococcoides* populations increased by more than an order of magnitude to a concentration of over 10^3 cells/mL (68th percentile) demonstrating growth of this key group of halorespiring bacteria.
- Despite a substantial increase and a "better than average" concentration, the *Dehalococcoides* population was still below the 10^4 cells/mL threshold and vinyl chloride reductase gene copies were low (19th percentile).
    - In terms of electron donors and acceptors, the metabolic capabilities of *Dehalococcoides* are rather specialized (hydrogen utilizing obligate halorespiring bacteria) so the median concentration is low. With a low median concentration across the database, a "better than average" *Dehalococcoides* concentration in a given sample may not exceed the 10^4 cells/mL threshold established for effective reductive dechlorination (Lu et al. 2006) and ethene production (Microbial Insights, unpublished data).

- In this case, the initial growth of *Dehalococcoides* was substantial but may have been somewhat hindered by competition with sulfate reducing bacteria (Figure 4 below).
    - The baseline population of sulfate reducing bacteria was moderate (10^4 cells/mL; 63rd percentile). Consistent with an observed decreased in dissolved sulfate concentrations, populations of sulfate reducing bacteria increased and were detected at a relatively high concentration (81st percentile) after electron donor addition.
    - After injection, methanogen populations also increased to a relatively high concentration (83rd percentile) suggesting generation of methanogenic conditions.
- With sulfate depletion and generation of highly anaerobic conditions more conducive to reductive dechlorination, *Dehalococcoides* populations may continue to increase and exceed the 10^4 *Dehalococcoides* cells/mL threshold in subsequent monitoring events.
- Overall, QuantArray analysis conclusively demonstrated that electron donor addition stimulated growth of halorespiring bacteria with the estimated percentiles retrieved from the MI Database providing the "low, medium or high" perspective to the observed changes in microbial populations.

Figure 4: Total Bacteria (EBAC), Sulfate Reducering Bacteria (APS) and Methanogens (MGN)



References

Lu, X., J.T. Wilson, and D.H. Kampbell. 2006. Relationship between *Dehalococcoides* DNA in ground water and rates of reductive dechlorination at field scale. *Water Research* 40 no. 16: 3131-3140.

REPORT TO:
Name: MARCIA OLIVA
Company: BHATT & ENVIRONMENTAL
Address:
email: molive@bhate.com
Phone: 303-725-7631
Fax:

INVOICE TO: (For Invoices paid by a third party it is imperative that all information be provided)
Name:
Company:
Address:
email:
Phone:
Fax:

microbialinsights
10515 Research Dr
Knoxville, TN 37932
865-573-8188
www.microbe.com

Project Manager: Kim Nemmers
Project Name: LHAAP
Project No.: NW01312.0150

Purchase Order No.
Subcontract No.
MI Quote No.

Please Check One:
☐ More samples to follow
☒ No Additional Samples

Report Type: ☒ Standard (default) ☐ Microbial Insights Level III raw data(15% surcharge) ☐ Microbial Insights Level IV (25% surcharge) ☐ Comprehensive Interpretive(15%) ☐ Historical Interpretive (30%)
EDD type: ☐ Microbial Insights Standard (default) ☐ All other available EDDs (5% surcharge) Specify EDD Type:

Please contact us with any questions about the analyses or filling out the COC at (865) 573-8188 (9:00 am to 5:00 pm EST, M-F). After hours email: customerservice@microbe.com

Sample Information					Analyses					CENSUS: Please select the target organism/gene																								
MI ID (Laboratory Use Only)	Sample Name	Date Sampled	Time Sampled	Matrix	PLFA	DGGE+3ID	DGGE+5ID	QuantArray Chlor	QuantArray Petro	DHC (Dehalococcoides)	DHC Functional genes (vc, tca, vcr)	DHBt (Dehalobacter)	DSM (Desulfuromonas)	DSB (Desulfitobacterium)	EBAC (Total)	SRB (Sulfate Reducing Bacteria-APS)	MGN (Methanogens)	MOB (Methanotrophs)	SMMO	DNF (Denitrifiers-nirS and nirK)	AOB (ammonia oxidizing bacteria)	PM1 (MTBE aerobic)	RMO (Toluene Monooxygenase)	RDEG (Toluene Monooxygenase)	PHE (Phenol Hydroxylase)	NAH (Naphthalene-aerobic)	BSSA (Toluene/Xylene-Anaerobic)	add. qPCR:	add. qPCR:	RNA (Expression Option)*	Other:	Other:	Other:
095RF1	35AWW19_062420	6/24/20	0830	WG							X	X																					
2	35AWW20_062420	6/24/20	0925	WG							X	X																					
3	LHSMW07_062420	6/24/20	1015	WG							X	X																					
4	35AWW06_062420	6/24/20	1105	WG							X	X																					
5	35AWW23_062420	6/24/20	1200	WG							X	X																					

Relinquished by: Sean Bessinger 6/24/20 1430
Received by: Date 6/25/2020 930

It is vital that chain of custody is filled out correctly & that all relative information is provided.
Failure to provide sufficient and/or correct information regarding reporting, invoicing & analyses requested information may result in delays for which MI will not be liable.

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WorkOrder: HS20061390

LHAAP-58

Bhate Environmental Associates, Inc.

Marcia Olive
445 Union Blvd Ste 129
Lakewood CO 80228

13-Aug-2020

ALS Environmental
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HS20061390 LHAAP58 Final

ALS WO# HS20061390

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July 09, 2020

Marcia Olive
Bhate Environmental Associates, Inc.
445 Union Blvd Ste 129
Lakewood, CO 80228

Work Order: **HS20061390**

Laboratory Results for: **LHAAP-58**

Dear Marcia Olive,

ALS Environmental received 11 sample(s) on Jun 26, 2020 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: 09-Jul-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
Work Order: HS20061390

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS20061390-01	35AWW01_062520	Groundwater		25-Jun-2020 07:50	26-Jun-2020 09:30	☐
HS20061390-02	35AWW01_062520_a	Groundwater		25-Jun-2020 07:50	26-Jun-2020 09:30	☐
HS20061390-03	35AWW15_062520	Groundwater		25-Jun-2020 08:35	26-Jun-2020 09:30	☐
HS20061390-04	35AWW12_062520	Groundwater		25-Jun-2020 09:30	26-Jun-2020 09:30	☐
HS20061390-05	35AWW16_062520	Groundwater		25-Jun-2020 10:15	26-Jun-2020 09:30	☐
HS20061390-06	35AWW24_062520	Groundwater		25-Jun-2020 11:00	26-Jun-2020 09:30	☐
HS20061390-07	35AWW24_062520_a	Groundwater		25-Jun-2020 11:00	26-Jun-2020 09:30	☐
HS20061390-08	LHSMW06_062520	Groundwater		25-Jun-2020 11:50	26-Jun-2020 09:30	☐
HS20061390-09	35AWW18_062520	Groundwater		25-Jun-2020 12:40	26-Jun-2020 09:30	☐
HS20061390-10	35AWW14_062520	Groundwater		25-Jun-2020 12:55	26-Jun-2020 09:30	☐
HS20061390-11	Trip Blank	Water		25-Jun-2020 00:00	26-Jun-2020 09:30	☐

ALS Houston, US Date: 09-Jul-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
Work Order: HS20061390

CASE NARRATIVE

GCMS Volatiles by Method SW8260

Batch ID: R364717

Sample ID: HS20061218-01MS

- MS and MSD are for an unrelated sample

Batch ID: R364746

Sample ID: HS20070055-04MS, HS20070055-03MS

- MS and MSD are for an unrelated sample

Metals by Method SW6020

Batch ID: 154955

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

ALS Houston, US Date: 09-Jul-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
Sample ID: 35AWW01_062520
Collection Date: 25-Jun-2020 07:50

ANALYTICAL REPORT
WorkOrder:HS20061390
Lab ID:HS20061390-01
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 01:08
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 01:08
1,1,2,2-Tetrachloroethane	1.0	U	0.50	1.0	1.0	UG/L	1	08-Jul-2020 01:08
1,1,2-Trichloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 01:08
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 01:08
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 01:08
1,1-Dichloropropene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 01:08
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	08-Jul-2020 01:08
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	08-Jul-2020 01:08
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	08-Jul-2020 01:08
1,2,4-Trimethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 01:08
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 01:08
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 01:08
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	08-Jul-2020 01:08
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 01:08
1,2-Dichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	08-Jul-2020 01:08
1,3,5-Trimethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 01:08
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	08-Jul-2020 01:08
1,3-Dichloropropane	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 01:08
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	08-Jul-2020 01:08
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 01:08
2-Butanone	1.0	U	0.50	1.0	2.0	UG/L	1	08-Jul-2020 01:08
2-Chlorotoluene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 01:08
2-Hexanone	2.0	U	1.0	2.0	2.0	UG/L	1	08-Jul-2020 01:08
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	UG/L	1	08-Jul-2020 01:08
4-Isopropyltoluene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 01:08
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	UG/L	1	08-Jul-2020 01:08
Acetone	1.0	U	0.40	1.0	2.0	UG/L	1	08-Jul-2020 01:08
Benzene	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 01:08
Bromobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	08-Jul-2020 01:08
Bromochloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 01:08
Bromodichloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 01:08
Bromoform	1.0	U	0.40	1.0	1.0	UG/L	1	08-Jul-2020 01:08
Bromomethane	1.0	U	0.40	1.0	1.0	UG/L	1	08-Jul-2020 01:08
Carbon disulfide	1.0	U	0.60	1.0	2.0	UG/L	1	08-Jul-2020 01:08
Carbon tetrachloride	1.0	U	0.50	1.0	1.0	UG/L	1	08-Jul-2020 01:08
Chlorobenzene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 01:08
Chloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 01:08
Chloroform	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 01:08

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

ALS Houston, US Date: 09-Jul-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
Sample ID: 35AWW01_062520
Collection Date: 25-Jun-2020 07:50

ANALYTICAL REPORT
WorkOrder:HS20061390
Lab ID:HS20061390-01
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
Chloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 01:08
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 01:08
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	UG/L	1	08-Jul-2020 01:08
Dibromochloromethane	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 01:08
Dibromomethane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 01:08
Dichlorodifluoromethane	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 01:08
Ethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 01:08
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	UG/L	1	08-Jul-2020 01:08
Isopropylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 01:08
m,p-Xylene	1.0	U	0.50	1.0	2.0	UG/L	1	08-Jul-2020 01:08
Methylene chloride	1.0	U	0.40	1.0	2.0	UG/L	1	08-Jul-2020 01:08
n-Butylbenzene	1.0	U	0.40	1.0	1.0	UG/L	1	08-Jul-2020 01:08
n-Propylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 01:08
Naphthalene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 01:08
o-Xylene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 01:08
sec-Butylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 01:08
Styrene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 01:08
tert-Butylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 01:08
Tetrachloroethene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 01:08
Toluene	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 01:08
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 01:08
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 01:08
Trichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 01:08
Trichlorofluoromethane	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 01:08
Vinyl chloride	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 01:08
Surr: 1,2-Dichloroethane-d4	*88.1*			**0**	*81-118*	*%REC*	*1*	*08-Jul-2020 01:08*
Surr: 4-Bromofluorobenzene	*99.8*			**0**	*85-114*	*%REC*	*1*	*08-Jul-2020 01:08*
Surr: Dibromofluoromethane	*92.8*			**0**	*80-119*	*%REC*	*1*	*08-Jul-2020 01:08*
Surr: Toluene-d8	*100*			**0**	*89-112*	*%REC*	*1*	*08-Jul-2020 01:08*

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

ALS Houston, US Date: 09-Jul-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
Sample ID: 35AWW01_062520_a
Collection Date: 25-Jun-2020 07:50

ANALYTICAL REPORT
WorkOrder:HS20061390
Lab ID:HS20061390-02
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 01:32
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 01:32
1,1,2,2-Tetrachloroethane	1.0	U	0.50	1.0	1.0	UG/L	1	08-Jul-2020 01:32
1,1,2-Trichloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 01:32
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 01:32
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 01:32
1,1-Dichloropropene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 01:32
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	08-Jul-2020 01:32
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	08-Jul-2020 01:32
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	08-Jul-2020 01:32
1,2,4-Trimethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 01:32
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 01:32
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 01:32
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	08-Jul-2020 01:32
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 01:32
1,2-Dichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	08-Jul-2020 01:32
1,3,5-Trimethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 01:32
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	08-Jul-2020 01:32
1,3-Dichloropropane	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 01:32
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	08-Jul-2020 01:32
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 01:32
2-Butanone	1.0	U	0.50	1.0	2.0	UG/L	1	08-Jul-2020 01:32
2-Chlorotoluene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 01:32
2-Hexanone	2.0	U	1.0	2.0	2.0	UG/L	1	08-Jul-2020 01:32
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	UG/L	1	08-Jul-2020 01:32
4-Isopropyltoluene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 01:32
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	UG/L	1	08-Jul-2020 01:32
Acetone	1.0	U	0.40	1.0	2.0	UG/L	1	08-Jul-2020 01:32
Benzene	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 01:32
Bromobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	08-Jul-2020 01:32
Bromochloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 01:32
Bromodichloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 01:32
Bromoform	1.0	U	0.40	1.0	1.0	UG/L	1	08-Jul-2020 01:32
Bromomethane	1.0	U	0.40	1.0	1.0	UG/L	1	08-Jul-2020 01:32
Carbon disulfide	1.0	U	0.60	1.0	2.0	UG/L	1	08-Jul-2020 01:32
Carbon tetrachloride	1.0	U	0.50	1.0	1.0	UG/L	1	08-Jul-2020 01:32
Chlorobenzene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 01:32
Chloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 01:32
Chloroform	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 01:32

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

ALS Houston, US Date: 09-Jul-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
Sample ID: 35AWW01_062520_a
Collection Date: 25-Jun-2020 07:50

ANALYTICAL REPORT
WorkOrder:HS20061390
Lab ID:HS20061390-02
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
Chloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 01:32
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 01:32
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	UG/L	1	08-Jul-2020 01:32
Dibromochloromethane	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 01:32
Dibromomethane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 01:32
Dichlorodifluoromethane	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 01:32
Ethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 01:32
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	UG/L	1	08-Jul-2020 01:32
Isopropylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 01:32
m,p-Xylene	1.0	U	0.50	1.0	2.0	UG/L	1	08-Jul-2020 01:32
Methylene chloride	1.0	U	0.40	1.0	2.0	UG/L	1	08-Jul-2020 01:32
n-Butylbenzene	1.0	U	0.40	1.0	1.0	UG/L	1	08-Jul-2020 01:32
n-Propylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 01:32
Naphthalene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 01:32
o-Xylene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 01:32
sec-Butylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 01:32
Styrene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 01:32
tert-Butylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 01:32
Tetrachloroethene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 01:32
Toluene	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 01:32
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 01:32
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 01:32
Trichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 01:32
Trichlorofluoromethane	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 01:32
Vinyl chloride	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 01:32
Surr: 1,2-Dichloroethane-d4	*87.1*			**0**	*81-118*	*%REC*	*1*	*08-Jul-2020 01:32*
Surr: 4-Bromofluorobenzene	*101*			**0**	*85-114*	*%REC*	*1*	*08-Jul-2020 01:32*
Surr: Dibromofluoromethane	*93.5*			**0**	*80-119*	*%REC*	*1*	*08-Jul-2020 01:32*
Surr: Toluene-d8	*102*			**0**	*89-112*	*%REC*	*1*	*08-Jul-2020 01:32*

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

ALS Houston, US Date: 09-Jul-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
Sample ID: 35AWW15_062520
Collection Date: 25-Jun-2020 08:35

ANALYTICAL REPORT
WorkOrder:HS20061390
Lab ID:HS20061390-03
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 01:56
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 01:56
1,1,2,2-Tetrachloroethane	1.0	U	0.50	1.0	1.0	UG/L	1	08-Jul-2020 01:56
1,1,2-Trichloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 01:56
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 01:56
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 01:56
1,1-Dichloropropene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 01:56
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	08-Jul-2020 01:56
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	08-Jul-2020 01:56
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	08-Jul-2020 01:56
1,2,4-Trimethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 01:56
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 01:56
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 01:56
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	08-Jul-2020 01:56
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 01:56
1,2-Dichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	08-Jul-2020 01:56
1,3,5-Trimethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 01:56
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	08-Jul-2020 01:56
1,3-Dichloropropane	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 01:56
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	08-Jul-2020 01:56
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 01:56
2-Butanone	1.0	U	0.50	1.0	2.0	UG/L	1	08-Jul-2020 01:56
2-Chlorotoluene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 01:56
2-Hexanone	2.0	U	1.0	2.0	2.0	UG/L	1	08-Jul-2020 01:56
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	UG/L	1	08-Jul-2020 01:56
4-Isopropyltoluene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 01:56
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	UG/L	1	08-Jul-2020 01:56
Acetone	1.0	U	0.40	1.0	2.0	UG/L	1	08-Jul-2020 01:56
Benzene	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 01:56
Bromobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	08-Jul-2020 01:56
Bromochloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 01:56
Bromodichloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 01:56
Bromoform	1.0	U	0.40	1.0	1.0	UG/L	1	08-Jul-2020 01:56
Bromomethane	1.0	U	0.40	1.0	1.0	UG/L	1	08-Jul-2020 01:56
Carbon disulfide	1.0	U	0.60	1.0	2.0	UG/L	1	08-Jul-2020 01:56
Carbon tetrachloride	1.0	U	0.50	1.0	1.0	UG/L	1	08-Jul-2020 01:56
Chlorobenzene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 01:56
Chloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 01:56
Chloroform	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 01:56

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

ALS Houston, US Date: 09-Jul-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
Sample ID: 35AWW15_062520
Collection Date: 25-Jun-2020 08:35

ANALYTICAL REPORT
WorkOrder:HS20061390
Lab ID:HS20061390-03
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
Chloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 01:56
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 01:56
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	UG/L	1	08-Jul-2020 01:56
Dibromochloromethane	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 01:56
Dibromomethane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 01:56
Dichlorodifluoromethane	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 01:56
Ethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 01:56
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	UG/L	1	08-Jul-2020 01:56
Isopropylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 01:56
m,p-Xylene	1.0	U	0.50	1.0	2.0	UG/L	1	08-Jul-2020 01:56
Methylene chloride	1.0	U	0.40	1.0	2.0	UG/L	1	08-Jul-2020 01:56
n-Butylbenzene	1.0	U	0.40	1.0	1.0	UG/L	1	08-Jul-2020 01:56
n-Propylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 01:56
Naphthalene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 01:56
o-Xylene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 01:56
sec-Butylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 01:56
Styrene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 01:56
tert-Butylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 01:56
Tetrachloroethene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 01:56
Toluene	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 01:56
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 01:56
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 01:56
Trichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 01:56
Trichlorofluoromethane	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 01:56
Vinyl chloride	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 01:56
Surr: 1,2-Dichloroethane-d4	*89.1*			**0**	*81-118*	*%REC*	*1*	*08-Jul-2020 01:56*
Surr: 4-Bromofluorobenzene	*103*			**0**	*85-114*	*%REC*	*1*	*08-Jul-2020 01:56*
Surr: Dibromofluoromethane	*93.2*			**0**	*80-119*	*%REC*	*1*	*08-Jul-2020 01:56*
Surr: Toluene-d8	*102*			**0**	*89-112*	*%REC*	*1*	*08-Jul-2020 01:56*

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

ALS Houston, US Date: 09-Jul-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
Sample ID: 35AWW12_062520
Collection Date: 25-Jun-2020 09:30

ANALYTICAL REPORT
WorkOrder:HS20061390
Lab ID:HS20061390-04
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 02:20
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 02:20
1,1,2,2-Tetrachloroethane	1.0	U	0.50	1.0	1.0	UG/L	1	08-Jul-2020 02:20
1,1,2-Trichloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 02:20
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 02:20
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 02:20
1,1-Dichloropropene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 02:20
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	08-Jul-2020 02:20
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	08-Jul-2020 02:20
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	08-Jul-2020 02:20
1,2,4-Trimethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 02:20
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 02:20
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 02:20
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	08-Jul-2020 02:20
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 02:20
1,2-Dichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	08-Jul-2020 02:20
1,3,5-Trimethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 02:20
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	08-Jul-2020 02:20
1,3-Dichloropropane	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 02:20
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	08-Jul-2020 02:20
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 02:20
2-Butanone	1.0	U	0.50	1.0	2.0	UG/L	1	08-Jul-2020 02:20
2-Chlorotoluene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 02:20
2-Hexanone	2.0	U	1.0	2.0	2.0	UG/L	1	08-Jul-2020 02:20
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	UG/L	1	08-Jul-2020 02:20
4-Isopropyltoluene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 02:20
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	UG/L	1	08-Jul-2020 02:20
Acetone	1.0	U	0.40	1.0	2.0	UG/L	1	08-Jul-2020 02:20
Benzene	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 02:20
Bromobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	08-Jul-2020 02:20
Bromochloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 02:20
Bromodichloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 02:20
Bromoform	1.0	U	0.40	1.0	1.0	UG/L	1	08-Jul-2020 02:20
Bromomethane	1.0	U	0.40	1.0	1.0	UG/L	1	08-Jul-2020 02:20
Carbon disulfide	1.0	U	0.60	1.0	2.0	UG/L	1	08-Jul-2020 02:20
Carbon tetrachloride	1.0	U	0.50	1.0	1.0	UG/L	1	08-Jul-2020 02:20
Chlorobenzene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 02:20
Chloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 02:20
Chloroform	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 02:20

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

ALS Houston, US Date: 09-Jul-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
Sample ID: 35AWW12_062520
Collection Date: 25-Jun-2020 09:30

ANALYTICAL REPORT
WorkOrder:HS20061390
Lab ID:HS20061390-04
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
Chloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 02:20
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 02:20
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	UG/L	1	08-Jul-2020 02:20
Dibromochloromethane	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 02:20
Dibromomethane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 02:20
Dichlorodifluoromethane	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 02:20
Ethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 02:20
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	UG/L	1	08-Jul-2020 02:20
Isopropylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 02:20
m,p-Xylene	1.0	U	0.50	1.0	2.0	UG/L	1	08-Jul-2020 02:20
Methylene chloride	1.0	U	0.40	1.0	2.0	UG/L	1	08-Jul-2020 02:20
n-Butylbenzene	1.0	U	0.40	1.0	1.0	UG/L	1	08-Jul-2020 02:20
n-Propylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 02:20
Naphthalene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 02:20
o-Xylene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 02:20
sec-Butylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 02:20
Styrene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 02:20
tert-Butylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 02:20
Tetrachloroethene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 02:20
Toluene	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 02:20
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 02:20
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 02:20
Trichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 02:20
Trichlorofluoromethane	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 02:20
Vinyl chloride	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 02:20
Surr: 1,2-Dichloroethane-d4	*88.8*			**0**	*81-118*	*%REC*	*1*	*08-Jul-2020 02:20*
Surr: 4-Bromofluorobenzene	*102*			**0**	*85-114*	*%REC*	*1*	*08-Jul-2020 02:20*
Surr: Dibromofluoromethane	*93.0*			**0**	*80-119*	*%REC*	*1*	*08-Jul-2020 02:20*
Surr: Toluene-d8	*103*			**0**	*89-112*	*%REC*	*1*	*08-Jul-2020 02:20*

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

ALS Houston, US Date: 09-Jul-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
Sample ID: 35AWW16_062520
Collection Date: 25-Jun-2020 10:15

ANALYTICAL REPORT
WorkOrder:HS20061390
Lab ID:HS20061390-05
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 02:44
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 02:44
1,1,2,2-Tetrachloroethane	1.0	U	0.50	1.0	1.0	UG/L	1	08-Jul-2020 02:44
1,1,2-Trichloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 02:44
1,1-Dichloroethane	**0.43**	J	**0.20**	**0.50**	**1.0**	**UG/L**	1	08-Jul-2020 02:44
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 02:44
1,1-Dichloropropene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 02:44
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	08-Jul-2020 02:44
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	08-Jul-2020 02:44
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	08-Jul-2020 02:44
1,2,4-Trimethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 02:44
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 02:44
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 02:44
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	08-Jul-2020 02:44
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 02:44
1,2-Dichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	08-Jul-2020 02:44
1,3,5-Trimethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 02:44
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	08-Jul-2020 02:44
1,3-Dichloropropane	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 02:44
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	08-Jul-2020 02:44
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 02:44
2-Butanone	1.0	U	0.50	1.0	2.0	UG/L	1	08-Jul-2020 02:44
2-Chlorotoluene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 02:44
2-Hexanone	2.0	U	1.0	2.0	2.0	UG/L	1	08-Jul-2020 02:44
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	UG/L	1	08-Jul-2020 02:44
4-Isopropyltoluene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 02:44
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	UG/L	1	08-Jul-2020 02:44
Acetone	1.0	U	0.40	1.0	2.0	UG/L	1	08-Jul-2020 02:44
Benzene	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 02:44
Bromobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	08-Jul-2020 02:44
Bromochloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 02:44
Bromodichloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 02:44
Bromoform	1.0	U	0.40	1.0	1.0	UG/L	1	08-Jul-2020 02:44
Bromomethane	1.0	U	0.40	1.0	1.0	UG/L	1	08-Jul-2020 02:44
Carbon disulfide	1.0	U	0.60	1.0	2.0	UG/L	1	08-Jul-2020 02:44
Carbon tetrachloride	1.0	U	0.50	1.0	1.0	UG/L	1	08-Jul-2020 02:44
Chlorobenzene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 02:44
Chloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 02:44
Chloroform	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 02:44

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

ALS Houston, US Date: 09-Jul-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
Sample ID: 35AWW16_062520
Collection Date: 25-Jun-2020 10:15

ANALYTICAL REPORT
WorkOrder:HS20061390
Lab ID:HS20061390-05
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
Chloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 02:44
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 02:44
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	UG/L	1	08-Jul-2020 02:44
Dibromochloromethane	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 02:44
Dibromomethane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 02:44
Dichlorodifluoromethane	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 02:44
Ethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 02:44
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	UG/L	1	08-Jul-2020 02:44
Isopropylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 02:44
m,p-Xylene	1.0	U	0.50	1.0	2.0	UG/L	1	08-Jul-2020 02:44
Methylene chloride	1.0	U	0.40	1.0	2.0	UG/L	1	08-Jul-2020 02:44
n-Butylbenzene	1.0	U	0.40	1.0	1.0	UG/L	1	08-Jul-2020 02:44
n-Propylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 02:44
Naphthalene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 02:44
o-Xylene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 02:44
sec-Butylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 02:44
Styrene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 02:44
tert-Butylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 02:44
Tetrachloroethene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 02:44
Toluene	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 02:44
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 02:44
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 02:44
Trichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 02:44
Trichlorofluoromethane	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 02:44
Vinyl chloride	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 02:44
Surr: 1,2-Dichloroethane-d4	*89.7*			**0**	*81-118*	*%REC*	*1*	*08-Jul-2020 02:44*
Surr: 4-Bromofluorobenzene	*100*			**0**	*85-114*	*%REC*	*1*	*08-Jul-2020 02:44*
Surr: Dibromofluoromethane	*93.1*			**0**	*80-119*	*%REC*	*1*	*08-Jul-2020 02:44*
Surr: Toluene-d8	*104*			**0**	*89-112*	*%REC*	*1*	*08-Jul-2020 02:44*

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

ALS Houston, US Date: 09-Jul-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
Sample ID: 35AWW24_062520
Collection Date: 25-Jun-2020 11:00

ANALYTICAL REPORT
WorkOrder:HS20061390
Lab ID:HS20061390-06
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 03:08
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 03:08
1,1,2,2-Tetrachloroethane	1.0	U	0.50	1.0	1.0	UG/L	1	08-Jul-2020 03:08
1,1,2-Trichloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 03:08
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 03:08
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 03:08
1,1-Dichloropropene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 03:08
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	08-Jul-2020 03:08
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	08-Jul-2020 03:08
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	08-Jul-2020 03:08
1,2,4-Trimethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 03:08
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 03:08
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 03:08
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	08-Jul-2020 03:08
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 03:08
1,2-Dichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	08-Jul-2020 03:08
1,3,5-Trimethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 03:08
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	08-Jul-2020 03:08
1,3-Dichloropropane	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 03:08
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	08-Jul-2020 03:08
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 03:08
2-Butanone	1.0	U	0.50	1.0	2.0	UG/L	1	08-Jul-2020 03:08
2-Chlorotoluene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 03:08
2-Hexanone	2.0	U	1.0	2.0	2.0	UG/L	1	08-Jul-2020 03:08
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	UG/L	1	08-Jul-2020 03:08
4-Isopropyltoluene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 03:08
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	UG/L	1	08-Jul-2020 03:08
Acetone	1.0	U	0.40	1.0	2.0	UG/L	1	08-Jul-2020 03:08
Benzene	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 03:08
Bromobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	08-Jul-2020 03:08
Bromochloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 03:08
Bromodichloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 03:08
Bromoform	1.0	U	0.40	1.0	1.0	UG/L	1	08-Jul-2020 03:08
Bromomethane	1.0	U	0.40	1.0	1.0	UG/L	1	08-Jul-2020 03:08
Carbon disulfide	1.0	U	0.60	1.0	2.0	UG/L	1	08-Jul-2020 03:08
Carbon tetrachloride	1.0	U	0.50	1.0	1.0	UG/L	1	08-Jul-2020 03:08
Chlorobenzene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 03:08
Chloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 03:08
Chloroform	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 03:08

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

ALS Houston, US Date: 09-Jul-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
Sample ID: 35AWW24_062520
Collection Date: 25-Jun-2020 11:00

ANALYTICAL REPORT
WorkOrder:HS20061390
Lab ID:HS20061390-06
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
Chloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 03:08
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 03:08
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	UG/L	1	08-Jul-2020 03:08
Dibromochloromethane	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 03:08
Dibromomethane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 03:08
Dichlorodifluoromethane	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 03:08
Ethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 03:08
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	UG/L	1	08-Jul-2020 03:08
Isopropylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 03:08
m,p-Xylene	1.0	U	0.50	1.0	2.0	UG/L	1	08-Jul-2020 03:08
Methylene chloride	1.0	U	0.40	1.0	2.0	UG/L	1	08-Jul-2020 03:08
n-Butylbenzene	1.0	U	0.40	1.0	1.0	UG/L	1	08-Jul-2020 03:08
n-Propylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 03:08
Naphthalene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 03:08
o-Xylene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 03:08
sec-Butylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 03:08
Styrene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 03:08
tert-Butylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 03:08
Tetrachloroethene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 03:08
Toluene	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 03:08
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 03:08
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 03:08
Trichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 03:08
Trichlorofluoromethane	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 03:08
Vinyl chloride	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 03:08
Surr: 1,2-Dichloroethane-d4	*87.6*			**0**	*81-118*	*%REC*	*1*	*08-Jul-2020 03:08*
Surr: 4-Bromofluorobenzene	*97.4*			**0**	*85-114*	*%REC*	*1*	*08-Jul-2020 03:08*
Surr: Dibromofluoromethane	*94.0*			**0**	*80-119*	*%REC*	*1*	*08-Jul-2020 03:08*
Surr: Toluene-d8	*111*			**0**	*89-112*	*%REC*	*1*	*08-Jul-2020 03:08*

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

ALS Houston, US Date: 09-Jul-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
Sample ID: 35AWW24_062520_a
Collection Date: 25-Jun-2020 11:00

ANALYTICAL REPORT
WorkOrder:HS20061390
Lab ID:HS20061390-07
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 03:32
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 03:32
1,1,2,2-Tetrachloroethane	1.0	U	0.50	1.0	1.0	UG/L	1	08-Jul-2020 03:32
1,1,2-Trichloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 03:32
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 03:32
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 03:32
1,1-Dichloropropene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 03:32
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	08-Jul-2020 03:32
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	08-Jul-2020 03:32
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	08-Jul-2020 03:32
1,2,4-Trimethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 03:32
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 03:32
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 03:32
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	08-Jul-2020 03:32
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 03:32
1,2-Dichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	08-Jul-2020 03:32
1,3,5-Trimethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 03:32
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	08-Jul-2020 03:32
1,3-Dichloropropane	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 03:32
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	08-Jul-2020 03:32
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 03:32
2-Butanone	1.0	U	0.50	1.0	2.0	UG/L	1	08-Jul-2020 03:32
2-Chlorotoluene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 03:32
2-Hexanone	2.0	U	1.0	2.0	2.0	UG/L	1	08-Jul-2020 03:32
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	UG/L	1	08-Jul-2020 03:32
4-Isopropyltoluene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 03:32
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	UG/L	1	08-Jul-2020 03:32
Acetone	1.0	U	0.40	1.0	2.0	UG/L	1	08-Jul-2020 03:32
Benzene	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 03:32
Bromobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	08-Jul-2020 03:32
Bromochloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 03:32
Bromodichloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 03:32
Bromoform	1.0	U	0.40	1.0	1.0	UG/L	1	08-Jul-2020 03:32
Bromomethane	1.0	U	0.40	1.0	1.0	UG/L	1	08-Jul-2020 03:32
Carbon disulfide	1.0	U	0.60	1.0	2.0	UG/L	1	08-Jul-2020 03:32
Carbon tetrachloride	1.0	U	0.50	1.0	1.0	UG/L	1	08-Jul-2020 03:32
Chlorobenzene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 03:32
Chloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 03:32
Chloroform	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 03:32

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

ALS Houston, US Date: 09-Jul-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
Sample ID: 35AWW24_062520_a
Collection Date: 25-Jun-2020 11:00

ANALYTICAL REPORT
WorkOrder:HS20061390
Lab ID:HS20061390-07
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
Chloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 03:32
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 03:32
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	UG/L	1	08-Jul-2020 03:32
Dibromochloromethane	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 03:32
Dibromomethane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 03:32
Dichlorodifluoromethane	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 03:32
Ethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 03:32
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	UG/L	1	08-Jul-2020 03:32
Isopropylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 03:32
m,p-Xylene	1.0	U	0.50	1.0	2.0	UG/L	1	08-Jul-2020 03:32
Methylene chloride	1.0	U	0.40	1.0	2.0	UG/L	1	08-Jul-2020 03:32
n-Butylbenzene	1.0	U	0.40	1.0	1.0	UG/L	1	08-Jul-2020 03:32
n-Propylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 03:32
Naphthalene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 03:32
o-Xylene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 03:32
sec-Butylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 03:32
Styrene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 03:32
tert-Butylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 03:32
Tetrachloroethene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 03:32
Toluene	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 03:32
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 03:32
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 03:32
Trichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 03:32
Trichlorofluoromethane	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 03:32
Vinyl chloride	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 03:32
Surr: 1,2-Dichloroethane-d4	*88.3*			**0**	*81-118*	*%REC*	*1*	*08-Jul-2020 03:32*
Surr: 4-Bromofluorobenzene	*98.6*			**0**	*85-114*	*%REC*	*1*	*08-Jul-2020 03:32*
Surr: Dibromofluoromethane	*93.3*			**0**	*80-119*	*%REC*	*1*	*08-Jul-2020 03:32*
Surr: Toluene-d8	*104*			**0**	*89-112*	*%REC*	*1*	*08-Jul-2020 03:32*

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

ALS Houston, US Date: 09-Jul-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
Sample ID: LHSMW06_062520
Collection Date: 25-Jun-2020 11:50

ANALYTICAL REPORT
WorkOrder:HS20061390
Lab ID:HS20061390-08
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 03:56
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 03:56
1,1,2,2-Tetrachloroethane	1.0	U	0.50	1.0	1.0	UG/L	1	08-Jul-2020 03:56
1,1,2-Trichloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 03:56
1,1-Dichloroethane	**7.0**		**0.20**	**0.50**	**1.0**	**UG/L**	1	08-Jul-2020 03:56
1,1-Dichloroethene	**22**		**0.20**	**0.50**	**1.0**	**UG/L**	1	08-Jul-2020 03:56
1,1-Dichloropropene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 03:56
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	08-Jul-2020 03:56
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	08-Jul-2020 03:56
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	08-Jul-2020 03:56
1,2,4-Trimethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 03:56
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 03:56
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 03:56
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	08-Jul-2020 03:56
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 03:56
1,2-Dichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	08-Jul-2020 03:56
1,3,5-Trimethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 03:56
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	08-Jul-2020 03:56
1,3-Dichloropropane	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 03:56
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	08-Jul-2020 03:56
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 03:56
2-Butanone	1.0	U	0.50	1.0	2.0	UG/L	1	08-Jul-2020 03:56
2-Chlorotoluene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 03:56
2-Hexanone	2.0	U	1.0	2.0	2.0	UG/L	1	08-Jul-2020 03:56
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	UG/L	1	08-Jul-2020 03:56
4-Isopropyltoluene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 03:56
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	UG/L	1	08-Jul-2020 03:56
Acetone	1.0	U	0.40	1.0	2.0	UG/L	1	08-Jul-2020 03:56
Benzene	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 03:56
Bromobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	08-Jul-2020 03:56
Bromochloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 03:56
Bromodichloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 03:56
Bromoform	1.0	U	0.40	1.0	1.0	UG/L	1	08-Jul-2020 03:56
Bromomethane	1.0	U	0.40	1.0	1.0	UG/L	1	08-Jul-2020 03:56
Carbon disulfide	1.0	U	0.60	1.0	2.0	UG/L	1	08-Jul-2020 03:56
Carbon tetrachloride	1.0	U	0.50	1.0	1.0	UG/L	1	08-Jul-2020 03:56
Chlorobenzene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 03:56
Chloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 03:56
Chloroform	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 03:56

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

ALS Houston, US Date: 09-Jul-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
Sample ID: LHSMW06_062520
Collection Date: 25-Jun-2020 11:50

ANALYTICAL REPORT
WorkOrder:HS20061390
Lab ID:HS20061390-08
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
Chloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 03:56
cis-1,2-Dichloroethene	**65**		**0.20**	**0.50**	**1.0**	**UG/L**	1	08-Jul-2020 03:56
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	UG/L	1	08-Jul-2020 03:56
Dibromochloromethane	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 03:56
Dibromomethane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 03:56
Dichlorodifluoromethane	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 03:56
Ethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 03:56
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	UG/L	1	08-Jul-2020 03:56
Isopropylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 03:56
m,p-Xylene	1.0	U	0.50	1.0	2.0	UG/L	1	08-Jul-2020 03:56
Methylene chloride	1.0	U	0.40	1.0	2.0	UG/L	1	08-Jul-2020 03:56
n-Butylbenzene	1.0	U	0.40	1.0	1.0	UG/L	1	08-Jul-2020 03:56
n-Propylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 03:56
Naphthalene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 03:56
o-Xylene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 03:56
sec-Butylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 03:56
Styrene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 03:56
tert-Butylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 03:56
Tetrachloroethene	**2.1**		**0.30**	**1.0**	**1.0**	**UG/L**	1	08-Jul-2020 03:56
Toluene	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 03:56
trans-1,2-Dichloroethene	**1.4**		**0.20**	**0.50**	**1.0**	**UG/L**	1	08-Jul-2020 03:56
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 03:56
Trichloroethene	**16**		**0.20**	**0.50**	**1.0**	**UG/L**	1	08-Jul-2020 03:56
Trichlorofluoromethane	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 03:56
Vinyl chloride	**5.5**		**0.20**	**0.50**	**1.0**	**UG/L**	1	08-Jul-2020 03:56
Surr: 1,2-Dichloroethane-d4	*88.8*			**0**	*81-118*	*%REC*	*1*	*08-Jul-2020 03:56*
Surr: 4-Bromofluorobenzene	*99.2*			**0**	*85-114*	*%REC*	*1*	*08-Jul-2020 03:56*
Surr: Dibromofluoromethane	*93.3*			**0**	*80-119*	*%REC*	*1*	*08-Jul-2020 03:56*
Surr: Toluene-d8	*104*			**0**	*89-112*	*%REC*	*1*	*08-Jul-2020 03:56*
METALS BY ICPMS BY SW6020A		**Method:SW6020**				Prep:SW3010A / 29-Jun-2020		Analyst: JHD
Arsenic	0.000500	U	0.000400	0.000500	0.00500	mg/L	1	02-Jul-2020 13:00

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

ALS Houston, US Date: 09-Jul-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
Sample ID: 35AWW18_062520
Collection Date: 25-Jun-2020 12:40

ANALYTICAL REPORT
WorkOrder:HS20061390
Lab ID:HS20061390-09
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 04:20
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 04:20
1,1,2,2-Tetrachloroethane	1.0	U	0.50	1.0	1.0	UG/L	1	08-Jul-2020 04:20
1,1,2-Trichloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 04:20
1,1-Dichloroethane	**2.8**		**0.20**	**0.50**	**1.0**	**UG/L**	1	08-Jul-2020 04:20
1,1-Dichloroethene	**18**		**0.20**	**0.50**	**1.0**	**UG/L**	1	08-Jul-2020 04:20
1,1-Dichloropropene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 04:20
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	08-Jul-2020 04:20
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	08-Jul-2020 04:20
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	08-Jul-2020 04:20
1,2,4-Trimethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 04:20
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 04:20
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 04:20
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	08-Jul-2020 04:20
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 04:20
1,2-Dichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	08-Jul-2020 04:20
1,3,5-Trimethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 04:20
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	08-Jul-2020 04:20
1,3-Dichloropropane	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 04:20
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	08-Jul-2020 04:20
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 04:20
2-Butanone	1.0	U	0.50	1.0	2.0	UG/L	1	08-Jul-2020 04:20
2-Chlorotoluene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 04:20
2-Hexanone	2.0	U	1.0	2.0	2.0	UG/L	1	08-Jul-2020 04:20
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	UG/L	1	08-Jul-2020 04:20
4-Isopropyltoluene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 04:20
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	UG/L	1	08-Jul-2020 04:20
Acetone	1.0	U	0.40	1.0	2.0	UG/L	1	08-Jul-2020 04:20
Benzene	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 04:20
Bromobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	08-Jul-2020 04:20
Bromochloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 04:20
Bromodichloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 04:20
Bromoform	1.0	U	0.40	1.0	1.0	UG/L	1	08-Jul-2020 04:20
Bromomethane	1.0	U	0.40	1.0	1.0	UG/L	1	08-Jul-2020 04:20
Carbon disulfide	1.0	U	0.60	1.0	2.0	UG/L	1	08-Jul-2020 04:20
Carbon tetrachloride	1.0	U	0.50	1.0	1.0	UG/L	1	08-Jul-2020 04:20
Chlorobenzene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 04:20
Chloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 04:20
Chloroform	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 04:20

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

ALS Houston, US Date: 09-Jul-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
Sample ID: 35AWW18_062520
Collection Date: 25-Jun-2020 12:40

ANALYTICAL REPORT
WorkOrder:HS20061390
Lab ID:HS20061390-09
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
Chloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 04:20
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 04:20
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	UG/L	1	08-Jul-2020 04:20
Dibromochloromethane	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 04:20
Dibromomethane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 04:20
Dichlorodifluoromethane	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 04:20
Ethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 04:20
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	UG/L	1	08-Jul-2020 04:20
Isopropylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 04:20
m,p-Xylene	1.0	U	0.50	1.0	2.0	UG/L	1	08-Jul-2020 04:20
Methylene chloride	1.0	U	0.40	1.0	2.0	UG/L	1	08-Jul-2020 04:20
n-Butylbenzene	1.0	U	0.40	1.0	1.0	UG/L	1	08-Jul-2020 04:20
n-Propylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 04:20
Naphthalene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 04:20
o-Xylene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 04:20
sec-Butylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 04:20
Styrene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 04:20
tert-Butylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 04:20
Tetrachloroethene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 04:20
Toluene	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 04:20
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 04:20
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 04:20
Trichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 04:20
Trichlorofluoromethane	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 04:20
Vinyl chloride	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 04:20
Surr: 1,2-Dichloroethane-d4	*87.2*			**0**	*81-118*	*%REC*	*1*	*08-Jul-2020 04:20*
Surr: 4-Bromofluorobenzene	*102*			**0**	*85-114*	*%REC*	*1*	*08-Jul-2020 04:20*
Surr: Dibromofluoromethane	*93.2*			**0**	*80-119*	*%REC*	*1*	*08-Jul-2020 04:20*
Surr: Toluene-d8	*102*			**0**	*89-112*	*%REC*	*1*	*08-Jul-2020 04:20*

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

ALS Houston, US Date: 09-Jul-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
Sample ID: 35AWW14_062520
Collection Date: 25-Jun-2020 12:55

ANALYTICAL REPORT
WorkOrder:HS20061390
Lab ID:HS20061390-10
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 14:37
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 14:37
1,1,2,2-Tetrachloroethane	1.0	U	0.50	1.0	1.0	UG/L	1	08-Jul-2020 14:37
1,1,2-Trichloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 14:37
1,1-Dichloroethane	**12**		**0.20**	**0.50**	**1.0**	**UG/L**	1	08-Jul-2020 14:37
1,1-Dichloroethene	**9.3**		**0.20**	**0.50**	**1.0**	**UG/L**	1	08-Jul-2020 14:37
1,1-Dichloropropene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 14:37
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	08-Jul-2020 14:37
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	08-Jul-2020 14:37
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	08-Jul-2020 14:37
1,2,4-Trimethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 14:37
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 14:37
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 14:37
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	08-Jul-2020 14:37
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 14:37
1,2-Dichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	08-Jul-2020 14:37
1,3,5-Trimethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 14:37
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	08-Jul-2020 14:37
1,3-Dichloropropane	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 14:37
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	08-Jul-2020 14:37
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 14:37
2-Butanone	1.0	U	0.50	1.0	2.0	UG/L	1	08-Jul-2020 14:37
2-Chlorotoluene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 14:37
2-Hexanone	2.0	U	1.0	2.0	2.0	UG/L	1	08-Jul-2020 14:37
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	UG/L	1	08-Jul-2020 14:37
4-Isopropyltoluene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 14:37
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	UG/L	1	08-Jul-2020 14:37
Acetone	1.0	U	0.40	1.0	2.0	UG/L	1	08-Jul-2020 14:37
Benzene	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 14:37
Bromobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	08-Jul-2020 14:37
Bromochloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 14:37
Bromodichloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 14:37
Bromoform	1.0	U	0.40	1.0	1.0	UG/L	1	08-Jul-2020 14:37
Bromomethane	1.0	U	0.40	1.0	1.0	UG/L	1	08-Jul-2020 14:37
Carbon disulfide	1.0	U	0.60	1.0	2.0	UG/L	1	08-Jul-2020 14:37
Carbon tetrachloride	1.0	U	0.50	1.0	1.0	UG/L	1	08-Jul-2020 14:37
Chlorobenzene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 14:37
Chloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 14:37
Chloroform	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 14:37

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

ALS Houston, US Date: 09-Jul-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
Sample ID: 35AWW14_062520
Collection Date: 25-Jun-2020 12:55

ANALYTICAL REPORT
WorkOrder:HS20061390
Lab ID:HS20061390-10
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
Chloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 14:37
cis-1,2-Dichloroethene	**4.6**		**0.20**	**0.50**	**1.0**	**UG/L**	1	08-Jul-2020 14:37
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	UG/L	1	08-Jul-2020 14:37
Dibromochloromethane	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 14:37
Dibromomethane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 14:37
Dichlorodifluoromethane	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 14:37
Ethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 14:37
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	UG/L	1	08-Jul-2020 14:37
Isopropylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 14:37
m,p-Xylene	1.0	U	0.50	1.0	2.0	UG/L	1	08-Jul-2020 14:37
Methylene chloride	1.0	U	0.40	1.0	2.0	UG/L	1	08-Jul-2020 14:37
n-Butylbenzene	1.0	U	0.40	1.0	1.0	UG/L	1	08-Jul-2020 14:37
n-Propylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 14:37
Naphthalene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 14:37
o-Xylene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 14:37
sec-Butylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 14:37
Styrene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 14:37
tert-Butylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 14:37
Tetrachloroethene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 14:37
Toluene	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 14:37
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 14:37
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 14:37
Trichloroethene	**11**		**0.20**	**0.50**	**1.0**	**UG/L**	1	08-Jul-2020 14:37
Trichlorofluoromethane	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 14:37
Vinyl chloride	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 14:37
Surr: 1,2-Dichloroethane-d4	*88.2*			**0**	*81-118*	*%REC*	*1*	*08-Jul-2020 14:37*
Surr: 4-Bromofluorobenzene	*100.0*			**0**	*85-114*	*%REC*	*1*	*08-Jul-2020 14:37*
Surr: Dibromofluoromethane	*92.6*			**0**	*80-119*	*%REC*	*1*	*08-Jul-2020 14:37*
Surr: Toluene-d8	*103*			**0**	*89-112*	*%REC*	*1*	*08-Jul-2020 14:37*

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

ALS Houston, US Date: 09-Jul-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
Sample ID: Trip Blank
Collection Date: 25-Jun-2020 00:00

ANALYTICAL REPORT
WorkOrder:HS20061390
Lab ID:HS20061390-11
Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	07-Jul-2020 21:07
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	07-Jul-2020 21:07
1,1,2,2-Tetrachloroethane	1.0	U	0.50	1.0	1.0	UG/L	1	07-Jul-2020 21:07
1,1,2-Trichloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	07-Jul-2020 21:07
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	07-Jul-2020 21:07
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	07-Jul-2020 21:07
1,1-Dichloropropene	1.0	U	0.30	1.0	1.0	UG/L	1	07-Jul-2020 21:07
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	07-Jul-2020 21:07
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	07-Jul-2020 21:07
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	07-Jul-2020 21:07
1,2,4-Trimethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	07-Jul-2020 21:07
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	07-Jul-2020 21:07
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	UG/L	1	07-Jul-2020 21:07
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	07-Jul-2020 21:07
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	07-Jul-2020 21:07
1,2-Dichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	07-Jul-2020 21:07
1,3,5-Trimethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	07-Jul-2020 21:07
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	07-Jul-2020 21:07
1,3-Dichloropropane	1.0	U	0.30	1.0	1.0	UG/L	1	07-Jul-2020 21:07
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	07-Jul-2020 21:07
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	07-Jul-2020 21:07
2-Butanone	1.0	U	0.50	1.0	2.0	UG/L	1	07-Jul-2020 21:07
2-Chlorotoluene	1.0	U	0.30	1.0	1.0	UG/L	1	07-Jul-2020 21:07
2-Hexanone	2.0	U	1.0	2.0	2.0	UG/L	1	07-Jul-2020 21:07
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	UG/L	1	07-Jul-2020 21:07
4-Isopropyltoluene	1.0	U	0.30	1.0	1.0	UG/L	1	07-Jul-2020 21:07
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	UG/L	1	07-Jul-2020 21:07
Acetone	1.0	U	0.40	1.0	2.0	UG/L	1	07-Jul-2020 21:07
Benzene	0.50	U	0.20	0.50	1.0	UG/L	1	07-Jul-2020 21:07
Bromobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	07-Jul-2020 21:07
Bromochloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	07-Jul-2020 21:07
Bromodichloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	07-Jul-2020 21:07
Bromoform	1.0	U	0.40	1.0	1.0	UG/L	1	07-Jul-2020 21:07
Bromomethane	1.0	U	0.40	1.0	1.0	UG/L	1	07-Jul-2020 21:07
Carbon disulfide	1.0	U	0.60	1.0	2.0	UG/L	1	07-Jul-2020 21:07
Carbon tetrachloride	1.0	U	0.50	1.0	1.0	UG/L	1	07-Jul-2020 21:07
Chlorobenzene	1.0	U	0.30	1.0	1.0	UG/L	1	07-Jul-2020 21:07
Chloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	07-Jul-2020 21:07
Chloroform	0.50	U	0.20	0.50	1.0	UG/L	1	07-Jul-2020 21:07

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

ALS Houston, US Date: 09-Jul-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
Sample ID: Trip Blank
Collection Date: 25-Jun-2020 00:00

ANALYTICAL REPORT
WorkOrder:HS20061390
Lab ID:HS20061390-11
Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
Chloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	07-Jul-2020 21:07
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	07-Jul-2020 21:07
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	UG/L	1	07-Jul-2020 21:07
Dibromochloromethane	1.0	U	0.30	1.0	1.0	UG/L	1	07-Jul-2020 21:07
Dibromomethane	0.50	U	0.20	0.50	1.0	UG/L	1	07-Jul-2020 21:07
Dichlorodifluoromethane	1.0	U	0.30	1.0	1.0	UG/L	1	07-Jul-2020 21:07
Ethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	07-Jul-2020 21:07
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	UG/L	1	07-Jul-2020 21:07
Isopropylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	07-Jul-2020 21:07
m,p-Xylene	1.0	U	0.50	1.0	2.0	UG/L	1	07-Jul-2020 21:07
Methylene chloride	1.0	U	0.40	1.0	2.0	UG/L	1	07-Jul-2020 21:07
n-Butylbenzene	1.0	U	0.40	1.0	1.0	UG/L	1	07-Jul-2020 21:07
n-Propylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	07-Jul-2020 21:07
Naphthalene	1.0	U	0.30	1.0	1.0	UG/L	1	07-Jul-2020 21:07
o-Xylene	1.0	U	0.30	1.0	1.0	UG/L	1	07-Jul-2020 21:07
sec-Butylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	07-Jul-2020 21:07
Styrene	1.0	U	0.30	1.0	1.0	UG/L	1	07-Jul-2020 21:07
tert-Butylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	07-Jul-2020 21:07
Tetrachloroethene	1.0	U	0.30	1.0	1.0	UG/L	1	07-Jul-2020 21:07
Toluene	0.50	U	0.20	0.50	1.0	UG/L	1	07-Jul-2020 21:07
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	07-Jul-2020 21:07
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	UG/L	1	07-Jul-2020 21:07
Trichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	07-Jul-2020 21:07
Trichlorofluoromethane	1.0	U	0.30	1.0	1.0	UG/L	1	07-Jul-2020 21:07
Vinyl chloride	0.50	U	0.20	0.50	1.0	UG/L	1	07-Jul-2020 21:07
Surr: 1,2-Dichloroethane-d4	*88.3*			**0**	*81-118*	*%REC*	*1*	*07-Jul-2020 21:07*
Surr: 4-Bromofluorobenzene	*100*			**0**	*85-114*	*%REC*	*1*	*07-Jul-2020 21:07*
Surr: Dibromofluoromethane	*93.5*			**0**	*80-119*	*%REC*	*1*	*07-Jul-2020 21:07*
Surr: Toluene-d8	*102*			**0**	*89-112*	*%REC*	*1*	*07-Jul-2020 21:07*

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

Weight / Prep Log

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
WorkOrder: HS20061390

Batch ID: 154955 **Start Date:** 29 Jun 2020 10:30 **End Date:** 29 Jun 2020 14:30
Method: WATER - SW3010A **Prep Code:** 3010A

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS20061390-08		10 (mL)	10 (mL)	1

ALS Houston, US Date: 09-Jul-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
WorkOrder: HS20061390

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: 154955 (0)	**Test Name :** METALS BY ICPMS BY SW6020A				**Matrix:** Groundwater	
HS20061390-08	LHSMW06_062520	25 Jun 2020 11:50		29 Jun 2020 14:30	02 Jul 2020 13:00	1
Batch ID: R364717 (0)	**Test Name :** VOLATILES ORGANICS BY METHOD 8260C				**Matrix:** Water	
HS20061390-11	Trip Blank	25 Jun 2020 00:00			07 Jul 2020 21:07	1
Batch ID: R364717 (0)	**Test Name :** VOLATILES ORGANICS BY METHOD 8260C				**Matrix:** Groundwater	
HS20061390-01	35AWW01_062520	25 Jun 2020 07:50			08 Jul 2020 01:08	1
HS20061390-02	35AWW01_062520_a	25 Jun 2020 07:50			08 Jul 2020 01:32	1
HS20061390-03	35AWW15_062520	25 Jun 2020 08:35			08 Jul 2020 01:56	1
HS20061390-04	35AWW12_062520	25 Jun 2020 09:30			08 Jul 2020 02:20	1
HS20061390-05	35AWW16_062520	25 Jun 2020 10:15			08 Jul 2020 02:44	1
HS20061390-06	35AWW24_062520	25 Jun 2020 11:00			08 Jul 2020 03:08	1
HS20061390-07	35AWW24_062520_a	25 Jun 2020 11:00			08 Jul 2020 03:32	1
HS20061390-08	LHSMW06_062520	25 Jun 2020 11:50			08 Jul 2020 03:56	1
HS20061390-09	35AWW18_062520	25 Jun 2020 12:40			08 Jul 2020 04:20	1
Batch ID: R364746 (0)	**Test Name :** VOLATILES ORGANICS BY METHOD 8260C				**Matrix:** Groundwater	
HS20061390-10	35AWW14_062520	25 Jun 2020 12:55			08 Jul 2020 14:37	1

ALS Houston, US Date: 09-Jul-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
WorkOrder: HS20061390

QC BATCH REPORT

Batch ID: 154955 (0) **Instrument: ICPMS06** **Method: METALS BY ICPMS BY SW6020A**

MBLK Sample ID: **MBLK-154955** Units: **mg/L** Analysis Date: **02-Jul-2020 12:25**
Client ID: Run ID: **ICPMS06_364391** SeqNo: **5648603** PrepDate: **29-Jun-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.000500	0.00500								U

LCS Sample ID: **LCS-154955** Units: **mg/L** Analysis Date: **02-Jul-2020 12:27**
Client ID: Run ID: **ICPMS06_364391** SeqNo: **5648604** PrepDate: **29-Jun-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.04816	0.00500	0.05	0	96.3	84 - 116				

MS Sample ID: **HS20061218-02MS** Units: **mg/L** Analysis Date: **02-Jul-2020 12:37**
Client ID: Run ID: **ICPMS06_364391** SeqNo: **5648607** PrepDate: **29-Jun-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.04966	0.00500	0.05	0.001189	96.9	84 - 116				

MSD Sample ID: **HS20061218-02MSD** Units: **mg/L** Analysis Date: **02-Jul-2020 12:39**
Client ID: Run ID: **ICPMS06_364391** SeqNo: **5648608** PrepDate: **29-Jun-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.04875	0.00500	0.05	0.001189	95.1	84 - 116	0.04966	1.85	20	

PDS Sample ID: **HS20061218-02PDS** Units: **mg/L** Analysis Date: **02-Jul-2020 12:41**
Client ID: Run ID: **ICPMS06_364391** SeqNo: **5648609** PrepDate: **29-Jun-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.1122	0.00500	0.1	0.001189	111	80 - 120				

SD Sample ID: **HS20061218-02SD** Units: **mg/L** Analysis Date: **02-Jul-2020 12:35**
Client ID: Run ID: **ICPMS06_364391** SeqNo: **5648606** PrepDate: **29-Jun-2020** DF: **5**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	%D Limit	Qual
Arsenic	0.00250	0.0250					0.001189	0	10	U

The following samples were analyzed in this batch: HS20061390-08

ALS Houston, US Date: 09-Jul-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
WorkOrder: HS20061390

QC BATCH REPORT

Batch ID: R364717 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MBLK Sample ID: **VBLKW-200707** Units: **UG/L** Analysis Date: **07-Jul-2020 20:19**
Client ID: Run ID: **VOA6_364717** SeqNo: **5654689** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	1.0	1.0								U
1,1,1-Trichloroethane	0.50	1.0								U
1,1,2,2-Tetrachloroethane	1.0	1.0								U
1,1,2-Trichloroethane	1.0	1.0								U
1,1-Dichloroethane	0.50	1.0								U
1,1-Dichloroethene	0.50	1.0								U
1,1-Dichloropropene	1.0	1.0								U
1,2,3-Trichlorobenzene	1.0	1.0								U
1,2,3-Trichloropropane	1.0	1.0								U
1,2,4-Trichlorobenzene	1.0	1.0								U
1,2,4-Trimethylbenzene	1.0	1.0								U
1,2-Dibromo-3-chloropropane	0.50	1.0								U
1,2-Dibromoethane	0.50	1.0								U
1,2-Dichlorobenzene	1.0	1.0								U
1,2-Dichloroethane	0.50	1.0								U
1,2-Dichloropropane	1.0	1.0								U
1,3,5-Trimethylbenzene	1.0	1.0								U
1,3-Dichlorobenzene	1.0	1.0								U
1,3-Dichloropropane	1.0	1.0								U
1,4-Dichlorobenzene	1.0	1.0								U
2,2-Dichloropropane	0.50	1.0								U
2-Butanone	1.0	2.0								U
2-Chlorotoluene	1.0	1.0								U
2-Hexanone	2.0	2.0								U
4-Chlorotoluene	1.0	1.0								U
4-Isopropyltoluene	1.0	1.0								U
4-Methyl-2-pentanone	2.0	2.0								U
Acetone	1.0	2.0								U
Benzene	0.50	1.0								U
Bromobenzene	1.0	1.0								U
Bromochloromethane	0.50	1.0								U
Bromodichloromethane	0.50	1.0								U
Bromoform	1.0	1.0								U
Bromomethane	1.0	1.0								U

ALS Houston, US Date: 09-Jul-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
WorkOrder: HS20061390

QC BATCH REPORT

Batch ID: R364717 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MBLK Sample ID: **VBLKW-200707** Units: **UG/L** Analysis Date: **07-Jul-2020 20:19**
Client ID: Run ID: **VOA6_364717** SeqNo: **5654689** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Carbon disulfide	1.0	2.0								U
Carbon tetrachloride	1.0	1.0								U
Chlorobenzene	1.0	1.0								U
Chloroethane	1.0	1.0								U
Chloroform	0.50	1.0								U
Chloromethane	0.50	1.0								U
cis-1,2-Dichloroethene	0.50	1.0								U
cis-1,3-Dichloropropene	0.50	1.0								U
Dibromochloromethane	1.0	1.0								U
Dibromomethane	0.50	1.0								U
Dichlorodifluoromethane	1.0	1.0								U
Ethylbenzene	1.0	1.0								U
Hexachlorobutadiene	1.0	1.0								U
Isopropylbenzene	1.0	1.0								U
m,p-Xylene	1.0	2.0								U
Methylene chloride	1.0	2.0								U
Naphthalene	1.0	1.0								U
n-Butylbenzene	1.0	1.0								U
n-Propylbenzene	1.0	1.0								U
o-Xylene	1.0	1.0								U
sec-Butylbenzene	1.0	1.0								U
Styrene	1.0	1.0								U
tert-Butylbenzene	1.0	1.0								U
Tetrachloroethene	1.0	1.0								U
Toluene	0.50	1.0								U
trans-1,2-Dichloroethene	0.50	1.0								U
trans-1,3-Dichloropropene	0.50	1.0								U
Trichloroethene	0.50	1.0								U
Trichlorofluoromethane	1.0	1.0								U
Vinyl chloride	0.50	1.0								U
Surr: 1,2-Dichloroethane-d4	*45.09*	*1.0*	*50*	*0*	*90.2*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*49.93*	*1.0*	*50*	*0*	*99.9*	*85 - 114*				
Surr: Dibromofluoromethane	*47.53*	*1.0*	*50*	*0*	*95.1*	*80 - 119*				
Surr: Toluene-d8	*52.44*	*1.0*	*50*	*0*	*105*	*89 - 112*				

ALS Houston, US Date: 09-Jul-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
WorkOrder: HS20061390

QC BATCH REPORT

Batch ID: R364717 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

LCS Sample ID: **VLCSW-200707** Units: **UG/L** Analysis Date: **07-Jul-2020 19:07**
Client ID: Run ID: **VOA6_364717** SeqNo: **5654688** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	19.11	1.0	20	0	95.6	78 - 124				
1,1,1-Trichloroethane	19.23	1.0	20	0	96.2	74 - 131				
1,1,2,2-Tetrachloroethane	17.51	1.0	20	0	87.5	71 - 121				
1,1,2-Trichloroethane	19.46	1.0	20	0	97.3	80 - 119				
1,1-Dichloroethane	18.92	1.0	20	0	94.6	77 - 125				
1,1-Dichloroethene	18.58	1.0	20	0	92.9	71 - 131				
1,1-Dichloropropene	18.5	1.0	20	0	92.5	78 - 125				
1,2,3-Trichlorobenzene	21.89	1.0	20	0	109	69 - 129				
1,2,3-Trichloropropane	17.75	1.0	20	0	88.8	73 - 122				
1,2,4-Trichlorobenzene	21.7	1.0	20	0	109	69 - 130				
1,2,4-Trimethylbenzene	19.22	1.0	20	0	96.1	76 - 124				
1,2-Dibromo-3-chloropropane	17	1.0	20	0	85.0	62 - 128				
1,2-Dibromoethane	18.84	1.0	20	0	94.2	77 - 121				
1,2-Dichlorobenzene	18.58	1.0	20	0	92.9	80 - 119				
1,2-Dichloroethane	19.27	1.0	20	0	96.4	73 - 128				
1,2-Dichloropropane	19.62	1.0	20	0	98.1	78 - 122				
1,3,5-Trimethylbenzene	19.61	1.0	20	0	98.0	75 - 124				
1,3-Dichlorobenzene	19.23	1.0	20	0	96.2	80 - 119				
1,3-Dichloropropane	18.7	1.0	20	0	93.5	80 - 119				
1,4-Dichlorobenzene	19.46	1.0	20	0	97.3	79 - 118				
2,2-Dichloropropane	19.54	1.0	20	0	97.7	60 - 139				
2-Butanone	33.92	2.0	40	0	84.8	56 - 143				
2-Chlorotoluene	19.36	1.0	20	0	96.8	79 - 122				
2-Hexanone	33.58	2.0	40	0	83.9	57 - 139				
4-Chlorotoluene	19.74	1.0	20	0	98.7	78 - 122				
4-Isopropyltoluene	19.67	1.0	20	0	98.3	77 - 127				
4-Methyl-2-pentanone	35.65	2.0	40	0	89.1	67 - 130				
Acetone	29.57	2.0	40	0	73.9	39 - 160				
Benzene	19.33	1.0	20	0	96.7	79 - 120				
Bromobenzene	19.57	1.0	20	0	97.8	80 - 120				
Bromochloromethane	18.46	1.0	20	0	92.3	78 - 123				
Bromodichloromethane	19.55	1.0	20	0	97.7	79 - 125				
Bromoform	18.49	1.0	20	0	92.5	66 - 130				
Bromomethane	22.4	1.0	20	0	112	53 - 141				

ALS Houston, US Date: 09-Jul-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
WorkOrder: HS20061390

QC BATCH REPORT

Batch ID: R364717 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

LCS Sample ID: **VLCSW-200707** Units: **UG/L** Analysis Date: **07-Jul-2020 19:07**
Client ID: Run ID: **VOA6_364717** SeqNo: **5654688** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Carbon disulfide	39.21	2.0	40	0	98.0	64 - 133				
Carbon tetrachloride	19.04	1.0	20	0	95.2	72 - 136				
Chlorobenzene	19.09	1.0	20	0	95.5	82 - 118				
Chloroethane	20.35	1.0	20	0	102	60 - 138				
Chloroform	18.97	1.0	20	0	94.9	79 - 124				
Chloromethane	20.38	1.0	20	0	102	50 - 139				
cis-1,2-Dichloroethene	19.5	1.0	20	0	97.5	78 - 123				
cis-1,3-Dichloropropene	19.34	1.0	20	0	96.7	75 - 124				
Dibromochloromethane	18.78	1.0	20	0	93.9	74 - 126				
Dibromomethane	19.11	1.0	20	0	95.6	79 - 123				
Dichlorodifluoromethane	18.5	1.0	20	0	92.5	32 - 152				
Ethylbenzene	19.2	1.0	20	0	96.0	79 - 121				
Hexachlorobutadiene	24.19	1.0	20	0	121	66 - 134				
Isopropylbenzene	19.4	1.0	20	0	97.0	72 - 131				
m,p-Xylene	38.14	2.0	40	0	95.3	80 - 121				
Methylene chloride	23.44	2.0	20	0	117	74 - 124				
Naphthalene	19.05	1.0	20	0	95.2	61 - 128				
n-Butylbenzene	19.47	1.0	20	0	97.3	75 - 128				
n-Propylbenzene	19.55	1.0	20	0	97.8	76 - 126				
o-Xylene	19.04	1.0	20	0	95.2	78 - 122				
sec-Butylbenzene	19.73	1.0	20	0	98.6	77 - 126				
Styrene	19.49	1.0	20	0	97.5	78 - 123				
tert-Butylbenzene	20	1.0	20	0	100.0	78 - 124				
Tetrachloroethene	19.63	1.0	20	0	98.2	74 - 129				
Toluene	19.44	1.0	20	0	97.2	80 - 121				
trans-1,2-Dichloroethene	19.93	1.0	20	0	99.7	75 - 124				
trans-1,3-Dichloropropene	19.75	1.0	20	0	98.7	73 - 127				
Trichloroethene	19.25	1.0	20	0	96.2	79 - 123				
Trichlorofluoromethane	19.16	1.0	20	0	95.8	65 - 141				
Vinyl chloride	18.79	1.0	20	0	93.9	58 - 137				
Surr: 1,2-Dichloroethane-d4	*50.46*	*1.0*	*50*	*0*	*101*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*51.76*	*1.0*	*50*	*0*	*104*	*85 - 114*				
Surr: Dibromofluoromethane	*51.48*	*1.0*	*50*	*0*	*103*	*80 - 119*				
Surr: Toluene-d8	*48.46*	*1.0*	*50*	*0*	*96.9*	*89 - 112*				

ALS Houston, US Date: 09-Jul-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
WorkOrder: HS20061390

QC BATCH REPORT

Batch ID: R364717 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MS Sample ID: **HS20061218-01MS** Units: **UG/L** Analysis Date: **07-Jul-2020 22:19**
Client ID: Run ID: **VOA6_364717** SeqNo: **5654694** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	19.74	1.0	20	0	98.7	78 - 124				
1,1,1-Trichloroethane	19.26	1.0	20	0	96.3	74 - 131				
1,1,2,2-Tetrachloroethane	19	1.0	20	0	95.0	71 - 121				
1,1,2-Trichloroethane	19.78	1.0	20	0	98.9	80 - 119				
1,1-Dichloroethane	19.12	1.0	20	0.8538	91.3	77 - 125				
1,1-Dichloroethene	23.4	1.0	20	4.618	93.9	71 - 131				
1,1-Dichloropropene	19.53	1.0	20	0	97.7	78 - 125				
1,2,3-Trichlorobenzene	14.27	1.0	20	0	71.3	69 - 129				
1,2,3-Trichloropropane	18.12	1.0	20	0	90.6	73 - 122				
1,2,4-Trichlorobenzene	17.18	1.0	20	0	85.9	69 - 130				
1,2,4-Trimethylbenzene	20.96	1.0	20	0	105	76 - 124				
1,2-Dibromo-3-chloropropane	13.77	1.0	20	0	68.9	62 - 128				
1,2-Dibromoethane	18.98	1.0	20	0	94.9	77 - 121				
1,2-Dichlorobenzene	19.82	1.0	20	0	99.1	80 - 119				
1,2-Dichloroethane	19.74	1.0	20	0	98.7	73 - 128				
1,2-Dichloropropane	19.73	1.0	20	0	98.6	78 - 122				
1,3,5-Trimethylbenzene	21.64	1.0	20	0	108	75 - 124				
1,3-Dichlorobenzene	20.47	1.0	20	0	102	80 - 119				
1,3-Dichloropropane	19.06	1.0	20	0	95.3	80 - 119				
1,4-Dichlorobenzene	21.19	1.0	20	0	106	79 - 118				
2,2-Dichloropropane	18.11	1.0	20	0	90.6	60 - 139				
2-Butanone	25.18	2.0	40	0	63.0	56 - 143				
2-Chlorotoluene	21.04	1.0	20	0	105	79 - 122				
2-Hexanone	32.79	2.0	40	0	82.0	57 - 139				
4-Chlorotoluene	21.22	1.0	20	0	106	78 - 122				
4-Isopropyltoluene	21.9	1.0	20	0	110	77 - 127				
4-Methyl-2-pentanone	35.96	2.0	40	0	89.9	67 - 130				
Acetone	4.724	2.0	40	0	11.8	39 - 160				S
Benzene	19.73	1.0	20	0	98.6	79 - 120				
Bromobenzene	21.18	1.0	20	0	106	80 - 120				
Bromochloromethane	17.28	1.0	20	0	86.4	78 - 123				
Bromodichloromethane	19.33	1.0	20	0	96.7	79 - 125				
Bromoform	18.25	1.0	20	0	91.2	66 - 130				
Bromomethane	19.87	1.0	20	0	99.4	53 - 141				

ALS Houston, US Date: 09-Jul-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
WorkOrder: HS20061390

QC BATCH REPORT

Batch ID: R364717 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MS Sample ID: **HS20061218-01MS** Units: **UG/L** Analysis Date: **07-Jul-2020 22:19**
Client ID: Run ID: **VOA6_364717** SeqNo: **5654694** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Carbon disulfide	37.91	2.0	40	0	94.8	64 - 133				
Carbon tetrachloride	20.34	1.0	20	0	102	72 - 136				
Chlorobenzene	20.12	1.0	20	0	101	82 - 118				
Chloroethane	18.33	1.0	20	0	91.6	60 - 138				
Chloroform	18.63	1.0	20	0	93.2	79 - 124				
Chloromethane	19.59	1.0	20	0	98.0	50 - 139				
cis-1,2-Dichloroethene	18.4	1.0	20	0	92.0	78 - 123				
cis-1,3-Dichloropropene	18.6	1.0	20	0	93.0	75 - 124				
Dibromochloromethane	18.92	1.0	20	0	94.6	74 - 126				
Dibromomethane	18.45	1.0	20	0	92.2	79 - 123				
Dichlorodifluoromethane	16.58	1.0	20	0	82.9	32 - 152				
Ethylbenzene	20.88	1.0	20	0	104	79 - 121				
Hexachlorobutadiene	21.93	1.0	20	0	110	66 - 134				
Isopropylbenzene	20.56	1.0	20	0	103	72 - 131				
m,p-Xylene	40.6	2.0	40	0	101	80 - 121				
Methylene chloride	18.18	2.0	20	0	90.9	74 - 124				
Naphthalene	13.74	1.0	20	0	68.7	61 - 128				
n-Butylbenzene	21.53	1.0	20	0	108	75 - 128				
n-Propylbenzene	22.04	1.0	20	0	110	76 - 126				
o-Xylene	20.12	1.0	20	0	101	78 - 122				
sec-Butylbenzene	21.75	1.0	20	0	109	77 - 126				
Styrene	20.26	1.0	20	0	101	78 - 123				
tert-Butylbenzene	22.26	1.0	20	0	111	78 - 124				
Tetrachloroethene	21.31	1.0	20	0	107	74 - 129				
Toluene	20.62	1.0	20	0	103	80 - 121				
trans-1,2-Dichloroethene	19.34	1.0	20	0	96.7	75 - 124				
trans-1,3-Dichloropropene	18.68	1.0	20	0	93.4	73 - 127				
Trichloroethene	19.87	1.0	20	0	99.4	79 - 123				
Trichlorofluoromethane	20.56	1.0	20	0	103	65 - 141				
Vinyl chloride	19.44	1.0	20	0	97.2	58 - 137				
Surr: 1,2-Dichloroethane-d4	*44.28*	*1.0*	*50*	*0*	*88.6*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*49.92*	*1.0*	*50*	*0*	*99.8*	*85 - 114*				
Surr: Dibromofluoromethane	*46.44*	*1.0*	*50*	*0*	*92.9*	*80 - 119*				
Surr: Toluene-d8	*50.61*	*1.0*	*50*	*0*	*101*	*89 - 112*				

ALS Houston, US Date: 09-Jul-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
WorkOrder: HS20061390

QC BATCH REPORT

Batch ID: R364717 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MSD Sample ID: **HS20061218-01MSD** Units: **UG/L** Analysis Date: **07-Jul-2020 22:43**
Client ID: Run ID: **VOA6_364717** SeqNo: **5654695** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	19.81	1.0	20	0	99.0	78 - 124	19.74	0.33	20	
1,1,1-Trichloroethane	19.13	1.0	20	0	95.7	74 - 131	19.26	0.678	20	
1,1,2,2-Tetrachloroethane	19.21	1.0	20	0	96.0	71 - 121	19	1.08	20	
1,1,2-Trichloroethane	19.26	1.0	20	0	96.3	80 - 119	19.78	2.66	20	
1,1-Dichloroethane	19	1.0	20	0.8538	90.7	77 - 125	19.12	0.632	20	
1,1-Dichloroethene	23.33	1.0	20	4.618	93.6	71 - 131	23.4	0.284	20	
1,1-Dichloropropene	19.18	1.0	20	0	95.9	78 - 125	19.53	1.79	20	
1,2,3-Trichlorobenzene	16.66	1.0	20	0	83.3	69 - 129	14.27	15.5	20	
1,2,3-Trichloropropane	18.75	1.0	20	0	93.7	73 - 122	18.12	3.42	20	
1,2,4-Trichlorobenzene	17.41	1.0	20	0	87.1	69 - 130	17.18	1.36	20	
1,2,4-Trimethylbenzene	21.14	1.0	20	0	106	76 - 124	20.96	0.864	20	
1,2-Dibromo-3-chloropropane	12.98	1.0	20	0	64.9	62 - 128	13.77	5.95	20	
1,2-Dibromoethane	18.53	1.0	20	0	92.6	77 - 121	18.98	2.41	20	
1,2-Dichlorobenzene	17.03	1.0	20	0	85.1	80 - 119	19.82	15.2	20	
1,2-Dichloroethane	19.29	1.0	20	0	96.5	73 - 128	19.74	2.3	20	
1,2-Dichloropropane	19.33	1.0	20	0	96.6	78 - 122	19.73	2.04	20	
1,3,5-Trimethylbenzene	20.19	1.0	20	0	101	75 - 124	21.64	6.96	20	
1,3-Dichlorobenzene	20.4	1.0	20	0	102	80 - 119	20.47	0.379	20	
1,3-Dichloropropane	19.05	1.0	20	0	95.3	80 - 119	19.06	0.0465	20	
1,4-Dichlorobenzene	21.15	1.0	20	0	106	79 - 118	21.19	0.222	20	
2,2-Dichloropropane	17.43	1.0	20	0	87.2	60 - 139	18.11	3.84	20	
2-Butanone	25.18	2.0	40	0	62.9	56 - 143	25.18	0.0162	20	
2-Chlorotoluene	21.54	1.0	20	0	108	79 - 122	21.04	2.35	20	
2-Hexanone	32.8	2.0	40	0	82.0	57 - 139	32.79	0.0413	20	
4-Chlorotoluene	19.82	1.0	20	0	99.1	78 - 122	21.22	6.8	20	
4-Isopropyltoluene	21.98	1.0	20	0	110	77 - 127	21.9	0.369	20	
4-Methyl-2-pentanone	35.68	2.0	40	0	89.2	67 - 130	35.96	0.792	20	
Acetone	4.338	2.0	40	0	10.8	39 - 160	4.724	8.52	20	S
Benzene	19.18	1.0	20	0	95.9	79 - 120	19.73	2.83	20	
Bromobenzene	21.41	1.0	20	0	107	80 - 120	21.18	1.06	20	
Bromochloromethane	16.95	1.0	20	0	84.8	78 - 123	17.28	1.93	20	
Bromodichloromethane	19.02	1.0	20	0	95.1	79 - 125	19.33	1.61	20	
Bromoform	18.09	1.0	20	0	90.5	66 - 130	18.25	0.867	20	
Bromomethane	20.33	1.0	20	0	102	53 - 141	19.87	2.28	20	

ALS Houston, US Date: 09-Jul-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
WorkOrder: HS20061390

QC BATCH REPORT

Batch ID: R364717 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MSD Sample ID: **HS20061218-01MSD** Units: **UG/L** Analysis Date: **07-Jul-2020 22:43**
Client ID: Run ID: **VOA6_364717** SeqNo: **5654695** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
Carbon disulfide	38.28	2.0	40	0	95.7	64 - 133	37.91	0.97	20	
Carbon tetrachloride	20.03	1.0	20	0	100	72 - 136	20.34	1.54	20	
Chlorobenzene	20.1	1.0	20	0	100	82 - 118	20.12	0.128	20	
Chloroethane	17.97	1.0	20	0	89.9	60 - 138	18.33	1.96	20	
Chloroform	18.26	1.0	20	0	91.3	79 - 124	18.63	2.04	20	
Chloromethane	18.81	1.0	20	0	94.1	50 - 139	19.59	4.08	20	
cis-1,2-Dichloroethene	18.16	1.0	20	0	90.8	78 - 123	18.4	1.31	20	
cis-1,3-Dichloropropene	18.46	1.0	20	0	92.3	75 - 124	18.6	0.752	20	
Dibromochloromethane	19.04	1.0	20	0	95.2	74 - 126	18.92	0.645	20	
Dibromomethane	18.1	1.0	20	0	90.5	79 - 123	18.45	1.89	20	
Dichlorodifluoromethane	15.8	1.0	20	0	79.0	32 - 152	16.58	4.82	20	
Ethylbenzene	20.14	1.0	20	0	101	79 - 121	20.88	3.62	20	
Hexachlorobutadiene	19.58	1.0	20	0	97.9	66 - 134	21.93	11.3	20	
Isopropylbenzene	20.51	1.0	20	0	103	72 - 131	20.56	0.239	20	
m,p-Xylene	39.81	2.0	40	0	99.5	80 - 121	40.6	1.96	20	
Methylene chloride	17.98	2.0	20	0	89.9	74 - 124	18.18	1.1	20	
Naphthalene	14.78	1.0	20	0	73.9	61 - 128	13.74	7.29	20	
n-Butylbenzene	18.05	1.0	20	0	90.2	75 - 128	21.53	17.6	20	
n-Propylbenzene	22.38	1.0	20	0	112	76 - 126	22.04	1.51	20	
o-Xylene	20.34	1.0	20	0	102	78 - 122	20.12	1.1	20	
sec-Butylbenzene	21.2	1.0	20	0	106	77 - 126	21.75	2.58	20	
Styrene	19.92	1.0	20	0	99.6	78 - 123	20.26	1.71	20	
tert-Butylbenzene	22.88	1.0	20	0	114	78 - 124	22.26	2.74	20	
Tetrachloroethene	20.5	1.0	20	0	103	74 - 129	21.31	3.87	20	
Toluene	20.49	1.0	20	0	102	80 - 121	20.62	0.595	20	
trans-1,2-Dichloroethene	18.89	1.0	20	0	94.4	75 - 124	19.34	2.4	20	
trans-1,3-Dichloropropene	18.37	1.0	20	0	91.8	73 - 127	18.68	1.67	20	
Trichloroethene	19.07	1.0	20	0	95.4	79 - 123	19.87	4.11	20	
Trichlorofluoromethane	19.22	1.0	20	0	96.1	65 - 141	20.56	6.73	20	
Vinyl chloride	19.27	1.0	20	0	96.3	58 - 137	19.44	0.887	20	
Surr: 1,2-Dichloroethane-d4	*44.88*	*1.0*	*50*	*0*	*89.8*	*81 - 118*	*44.28*	*1.35*	*20*	
Surr: 4-Bromofluorobenzene	*48.86*	*1.0*	*50*	*0*	*97.7*	*85 - 114*	*49.92*	*2.15*	*20*	
Surr: Dibromofluoromethane	*46.47*	*1.0*	*50*	*0*	*92.9*	*80 - 119*	*46.44*	*0.0659*	*20*	
Surr: Toluene-d8	*50.21*	*1.0*	*50*	*0*	*100*	*89 - 112*	*50.61*	*0.785*	*20*	

ALS Houston, US Date: 09-Jul-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
WorkOrder: HS20061390

QC BATCH REPORT

Batch ID: R364717 (0)	Instrument: VOA6	Method: VOLATILES ORGANICS BY METHOD 8260C

The following samples were analyzed in this batch:

HS20061390-01	HS20061390-02	HS20061390-03	HS20061390-04
HS20061390-05	HS20061390-06	HS20061390-07	HS20061390-08
HS20061390-09	HS20061390-11		

ALS Houston, US Date: 09-Jul-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
WorkOrder: HS20061390

QC BATCH REPORT

Batch ID: R364746 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MBLK Sample ID: **VBLKW-200708** Units: **UG/L** Analysis Date: **08-Jul-2020 13:49**
Client ID: Run ID: **VOA6_364746** SeqNo: **5655577** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	1.0	1.0								U
1,1,1-Trichloroethane	0.50	1.0								U
1,1,2,2-Tetrachloroethane	1.0	1.0								U
1,1,2-Trichloroethane	1.0	1.0								U
1,1-Dichloroethane	0.50	1.0								U
1,1-Dichloroethene	0.50	1.0								U
1,1-Dichloropropene	1.0	1.0								U
1,2,3-Trichlorobenzene	1.0	1.0								U
1,2,3-Trichloropropane	1.0	1.0								U
1,2,4-Trichlorobenzene	1.0	1.0								U
1,2,4-Trimethylbenzene	1.0	1.0								U
1,2-Dibromo-3-chloropropane	0.50	1.0								U
1,2-Dibromoethane	0.50	1.0								U
1,2-Dichlorobenzene	1.0	1.0								U
1,2-Dichloroethane	0.50	1.0								U
1,2-Dichloropropane	1.0	1.0								U
1,3,5-Trimethylbenzene	1.0	1.0								U
1,3-Dichlorobenzene	1.0	1.0								U
1,3-Dichloropropane	1.0	1.0								U
1,4-Dichlorobenzene	1.0	1.0								U
2,2-Dichloropropane	0.50	1.0								U
2-Butanone	1.0	2.0								U
2-Chlorotoluene	1.0	1.0								U
2-Hexanone	2.0	2.0								U
4-Chlorotoluene	1.0	1.0								U
4-Isopropyltoluene	1.0	1.0								U
4-Methyl-2-pentanone	2.0	2.0								U
Acetone	1.0	2.0								U
Benzene	0.50	1.0								U
Bromobenzene	1.0	1.0								U
Bromochloromethane	0.50	1.0								U
Bromodichloromethane	0.50	1.0								U
Bromoform	1.0	1.0								U
Bromomethane	1.0	1.0								U

ALS Houston, US Date: 09-Jul-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
WorkOrder: HS20061390

QC BATCH REPORT

Batch ID: R364746 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MBLK Sample ID: **VBLKW-200708** Units: **UG/L** Analysis Date: **08-Jul-2020 13:49**
Client ID: Run ID: **VOA6_364746** SeqNo: **5655577** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Carbon disulfide	1.0	2.0								U
Carbon tetrachloride	1.0	1.0								U
Chlorobenzene	1.0	1.0								U
Chloroethane	1.0	1.0								U
Chloroform	0.50	1.0								U
Chloromethane	0.50	1.0								U
cis-1,2-Dichloroethene	0.50	1.0								U
cis-1,3-Dichloropropene	0.50	1.0								U
Dibromochloromethane	1.0	1.0								U
Dibromomethane	0.50	1.0								U
Dichlorodifluoromethane	1.0	1.0								U
Ethylbenzene	1.0	1.0								U
Hexachlorobutadiene	1.0	1.0								U
Isopropylbenzene	1.0	1.0								U
m,p-Xylene	1.0	2.0								U
Methylene chloride	1.0	2.0								U
Naphthalene	1.0	1.0								U
n-Butylbenzene	1.0	1.0								U
n-Propylbenzene	1.0	1.0								U
o-Xylene	1.0	1.0								U
sec-Butylbenzene	1.0	1.0								U
Styrene	1.0	1.0								U
tert-Butylbenzene	1.0	1.0								U
Tetrachloroethene	1.0	1.0								U
Toluene	0.50	1.0								U
trans-1,2-Dichloroethene	0.50	1.0								U
trans-1,3-Dichloropropene	0.50	1.0								U
Trichloroethene	0.50	1.0								U
Trichlorofluoromethane	1.0	1.0								U
Vinyl chloride	0.50	1.0								U
Surr: 1,2-Dichloroethane-d4	*44.73*	*1.0*	*50*	*0*	*89.5*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*50.31*	*1.0*	*50*	*0*	*101*	*85 - 114*				
Surr: Dibromofluoromethane	*47.03*	*1.0*	*50*	*0*	*94.1*	*80 - 119*				
Surr: Toluene-d8	*52.05*	*1.0*	*50*	*0*	*104*	*89 - 112*				

ALS Houston, US Date: 09-Jul-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
WorkOrder: HS20061390

QC BATCH REPORT

Batch ID: R364746 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

LCS Sample ID: **VLCSW-200708** Units: **UG/L** Analysis Date: **08-Jul-2020 12:36**
Client ID: Run ID: **VOA6_364746** SeqNo: **5655576** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	19.38	1.0	20	0	96.9	78 - 124				
1,1,1-Trichloroethane	19.17	1.0	20	0	95.9	74 - 131				
1,1,2,2-Tetrachloroethane	17.67	1.0	20	0	88.4	71 - 121				
1,1,2-Trichloroethane	18.86	1.0	20	0	94.3	80 - 119				
1,1-Dichloroethane	18.55	1.0	20	0	92.8	77 - 125				
1,1-Dichloroethene	19.51	1.0	20	0	97.5	71 - 131				
1,1-Dichloropropene	18.73	1.0	20	0	93.7	78 - 125				
1,2,3-Trichlorobenzene	21.47	1.0	20	0	107	69 - 129				
1,2,3-Trichloropropane	17.83	1.0	20	0	89.2	73 - 122				
1,2,4-Trichlorobenzene	21.55	1.0	20	0	108	69 - 130				
1,2,4-Trimethylbenzene	19.14	1.0	20	0	95.7	76 - 124				
1,2-Dibromo-3-chloropropane	14.77	1.0	20	0	73.8	62 - 128				
1,2-Dibromoethane	18.65	1.0	20	0	93.2	77 - 121				
1,2-Dichlorobenzene	18.07	1.0	20	0	90.3	80 - 119				
1,2-Dichloroethane	19.73	1.0	20	0	98.6	73 - 128				
1,2-Dichloropropane	19.8	1.0	20	0	99.0	78 - 122				
1,3,5-Trimethylbenzene	19.58	1.0	20	0	97.9	75 - 124				
1,3-Dichlorobenzene	19.11	1.0	20	0	95.5	80 - 119				
1,3-Dichloropropane	18.9	1.0	20	0	94.5	80 - 119				
1,4-Dichlorobenzene	19.88	1.0	20	0	99.4	79 - 118				
2,2-Dichloropropane	20.66	1.0	20	0	103	60 - 139				
2-Butanone	33.67	2.0	40	0	84.2	56 - 143				
2-Chlorotoluene	18.84	1.0	20	0	94.2	79 - 122				
2-Hexanone	34.66	2.0	40	0	86.6	57 - 139				
4-Chlorotoluene	19.51	1.0	20	0	97.6	78 - 122				
4-Isopropyltoluene	19.47	1.0	20	0	97.4	77 - 127				
4-Methyl-2-pentanone	35.68	2.0	40	0	89.2	67 - 130				
Acetone	18.47	2.0	40	0	46.2	39 - 160				
Benzene	19.21	1.0	20	0	96.1	79 - 120				
Bromobenzene	19.39	1.0	20	0	97.0	80 - 120				
Bromochloromethane	17.34	1.0	20	0	86.7	78 - 123				
Bromodichloromethane	19.84	1.0	20	0	99.2	79 - 125				
Bromoform	17.78	1.0	20	0	88.9	66 - 130				
Bromomethane	20.32	1.0	20	0	102	53 - 141				

ALS Houston, US Date: 09-Jul-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
WorkOrder: HS20061390

QC BATCH REPORT

Batch ID: R364746 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

LCS Sample ID: **VLCSW-200708** Units: **UG/L** Analysis Date: **08-Jul-2020 12:36**
Client ID: Run ID: **VOA6_364746** SeqNo: **5655576** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Carbon disulfide	38.58	2.0	40	0	96.5	64 - 133				
Carbon tetrachloride	19.08	1.0	20	0	95.4	72 - 136				
Chlorobenzene	19.12	1.0	20	0	95.6	82 - 118				
Chloroethane	16.68	1.0	20	0	83.4	60 - 138				
Chloroform	19.06	1.0	20	0	95.3	79 - 124				
Chloromethane	18.29	1.0	20	0	91.5	50 - 139				
cis-1,2-Dichloroethene	19.13	1.0	20	0	95.6	78 - 123				
cis-1,3-Dichloropropene	19.51	1.0	20	0	97.6	75 - 124				
Dibromochloromethane	19.13	1.0	20	0	95.6	74 - 126				
Dibromomethane	19.46	1.0	20	0	97.3	79 - 123				
Dichlorodifluoromethane	18.49	1.0	20	0	92.4	32 - 152				
Ethylbenzene	19.12	1.0	20	0	95.6	79 - 121				
Hexachlorobutadiene	24.39	1.0	20	0	122	66 - 134				
Isopropylbenzene	18.99	1.0	20	0	94.9	72 - 131				
m,p-Xylene	38.39	2.0	40	0	96.0	80 - 121				
Methylene chloride	20.43	2.0	20	0	102	74 - 124				
Naphthalene	18.3	1.0	20	0	91.5	61 - 128				
n-Butylbenzene	19.63	1.0	20	0	98.1	75 - 128				
n-Propylbenzene	19.36	1.0	20	0	96.8	76 - 126				
o-Xylene	19.01	1.0	20	0	95.1	78 - 122				
sec-Butylbenzene	19.09	1.0	20	0	95.4	77 - 126				
Styrene	18.62	1.0	20	0	93.1	78 - 123				
tert-Butylbenzene	19.8	1.0	20	0	99.0	78 - 124				
Tetrachloroethene	19.31	1.0	20	0	96.5	74 - 129				
Toluene	19.54	1.0	20	0	97.7	80 - 121				
trans-1,2-Dichloroethene	19.43	1.0	20	0	97.1	75 - 124				
trans-1,3-Dichloropropene	19.05	1.0	20	0	95.2	73 - 127				
Trichloroethene	19.06	1.0	20	0	95.3	79 - 123				
Trichlorofluoromethane	18.38	1.0	20	0	91.9	65 - 141				
Vinyl chloride	16.8	1.0	20	0	84.0	58 - 137				
Surr: 1,2-Dichloroethane-d4	*49.73*	*1.0*	*50*	*0*	*99.5*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*49.44*	*1.0*	*50*	*0*	*98.9*	*85 - 114*				
Surr: Dibromofluoromethane	*49.6*	*1.0*	*50*	*0*	*99.2*	*80 - 119*				
Surr: Toluene-d8	*48.05*	*1.0*	*50*	*0*	*96.1*	*89 - 112*				

ALS Houston, US Date: 09-Jul-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
WorkOrder: HS20061390

QC BATCH REPORT

Batch ID: R364746 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MS Sample ID: **HS20070055-04MS** Units: **UG/L** Analysis Date: **08-Jul-2020 18:13**
Client ID: Run ID: **VOA6_364746** SeqNo: **5655587** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	20.39	1.0	20	0	102	78 - 124				
1,1,1-Trichloroethane	19.24	1.0	20	0	96.2	74 - 131				
1,1,2,2-Tetrachloroethane	18.97	1.0	20	0	94.9	71 - 121				
1,1,2-Trichloroethane	19.72	1.0	20	0	98.6	80 - 119				
1,1-Dichloroethane	17.81	1.0	20	0	89.0	77 - 125				
1,1-Dichloroethene	16.61	1.0	20	0	83.1	71 - 131				
1,1-Dichloropropene	19.86	1.0	20	0	99.3	78 - 125				
1,2,3-Trichlorobenzene	20.66	1.0	20	0	103	69 - 129				
1,2,3-Trichloropropane	18.53	1.0	20	0	92.7	73 - 122				
1,2,4-Trichlorobenzene	20.9	1.0	20	0	104	69 - 130				
1,2,4-Trimethylbenzene	21.6	1.0	20	0	108	76 - 124				
1,2-Dibromo-3-chloropropane	16.53	1.0	20	0	82.7	62 - 128				
1,2-Dibromoethane	19	1.0	20	0	95.0	77 - 121				
1,2-Dichlorobenzene	20.15	1.0	20	0	101	80 - 119				
1,2-Dichloroethane	18.61	1.0	20	0	93.0	73 - 128				
1,2-Dichloropropane	19.65	1.0	20	0	98.3	78 - 122				
1,3,5-Trimethylbenzene	22.19	1.0	20	0	111	75 - 124				
1,3-Dichlorobenzene	20.99	1.0	20	0	105	80 - 119				
1,3-Dichloropropane	19.2	1.0	20	0	96.0	80 - 119				
1,4-Dichlorobenzene	22.37	1.0	20	0	112	79 - 118				
2,2-Dichloropropane	19.88	1.0	20	0	99.4	60 - 139				
2-Butanone	25.56	2.0	40	0	63.9	56 - 143				
2-Chlorotoluene	21.63	1.0	20	0	108	79 - 122				
2-Hexanone	32.93	2.0	40	0	82.3	57 - 139				
4-Chlorotoluene	21.42	1.0	20	0	107	78 - 122				
4-Isopropyltoluene	22.42	1.0	20	0	112	77 - 127				
4-Methyl-2-pentanone	35.92	2.0	40	0	89.8	67 - 130				
Acetone	61.84	2.0	40	0	155	39 - 160				
Benzene	19.74	1.0	20	0	98.7	79 - 120				
Bromobenzene	21.34	1.0	20	0	107	80 - 120				
Bromochloromethane	17.11	1.0	20	0	85.5	78 - 123				
Bromodichloromethane	19.2	1.0	20	0	96.0	79 - 125				
Bromoform	18.28	1.0	20	0	91.4	66 - 130				
Bromomethane	17.71	1.0	20	0	88.5	53 - 141				

ALS Houston, US Date: 09-Jul-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
WorkOrder: HS20061390

QC BATCH REPORT

Batch ID: R364746 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MS Sample ID: **HS20070055-04MS** Units: **UG/L** Analysis Date: **08-Jul-2020 18:13**
Client ID: Run ID: **VOA6_364746** SeqNo: **5655587** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Carbon disulfide	31.17	2.0	40	0	77.9	64 - 133				
Carbon tetrachloride	20.26	1.0	20	0	101	72 - 136				
Chlorobenzene	20.11	1.0	20	0	101	82 - 118				
Chloroethane	15.56	1.0	20	0	77.8	60 - 138				
Chloroform	18.58	1.0	20	0	92.9	79 - 124				
Chloromethane	19.21	1.0	20	0	96.0	50 - 139				
cis-1,2-Dichloroethene	18.36	1.0	20	0	91.8	78 - 123				
cis-1,3-Dichloropropene	19.11	1.0	20	0	95.6	75 - 124				
Dibromochloromethane	19.23	1.0	20	0	96.1	74 - 126				
Dibromomethane	18.44	1.0	20	0	92.2	79 - 123				
Dichlorodifluoromethane	17.05	1.0	20	0	85.2	32 - 152				
Ethylbenzene	20.9	1.0	20	0	105	79 - 121				
Hexachlorobutadiene	23.26	1.0	20	0	116	66 - 134				
Isopropylbenzene	20.93	1.0	20	0	105	72 - 131				
m,p-Xylene	41.34	2.0	40	0	103	80 - 121				
Methylene chloride	14.79	2.0	20	0	74.0	74 - 124				S
Naphthalene	19.27	1.0	20	0	96.3	61 - 128				
n-Butylbenzene	22.36	1.0	20	0	112	75 - 128				
n-Propylbenzene	22.58	1.0	20	0	113	76 - 126				
o-Xylene	20.39	1.0	20	0	102	78 - 122				
sec-Butylbenzene	22.15	1.0	20	0	111	77 - 126				
Styrene	20.27	1.0	20	0	101	78 - 123				
tert-Butylbenzene	22.48	1.0	20	0	112	78 - 124				
Tetrachloroethene	21.65	1.0	20	0	108	74 - 129				
Toluene	20.99	1.0	20	0	105	80 - 121				
trans-1,2-Dichloroethene	19.07	1.0	20	0	95.3	75 - 124				
trans-1,3-Dichloropropene	18.58	1.0	20	0	92.9	73 - 127				
Trichloroethene	20	1.0	20	0	100	79 - 123				
Trichlorofluoromethane	17.5	1.0	20	0	87.5	65 - 141				
Vinyl chloride	18.59	1.0	20	0	92.9	58 - 137				
Surr: 1,2-Dichloroethane-d4	*44.82*	*1.0*	*50*	*0*	*89.6*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*49.52*	*1.0*	*50*	*0*	*99.0*	*85 - 114*				
Surr: Dibromofluoromethane	*46.72*	*1.0*	*50*	*0*	*93.4*	*80 - 119*				
Surr: Toluene-d8	*50.75*	*1.0*	*50*	*0*	*102*	*89 - 112*				

ALS Houston, US Date: 09-Jul-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
WorkOrder: HS20061390

QC BATCH REPORT

Batch ID: R364746 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MS Sample ID: **HS20070055-03MS** Units: **UG/L** Analysis Date: **08-Jul-2020 17:25**
Client ID: Run ID: **VOA6_364746** SeqNo: **5655585** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	19.89	1.0	20	0	99.5	78 - 124				
1,1,1-Trichloroethane	19.34	1.0	20	0	96.7	74 - 131				
1,1,2,2-Tetrachloroethane	20.58	1.0	20	0	103	71 - 121				
1,1,2-Trichloroethane	19.52	1.0	20	0	97.6	80 - 119				
1,1-Dichloroethane	18.25	1.0	20	0	91.3	77 - 125				
1,1-Dichloroethene	19.32	1.0	20	0	96.6	71 - 131				
1,1-Dichloropropene	19.67	1.0	20	0	98.3	78 - 125				
1,2,3-Trichlorobenzene	18.24	1.0	20	0	91.2	69 - 129				
1,2,3-Trichloropropane	20	1.0	20	0	100	73 - 122				
1,2,4-Trichlorobenzene	20.41	1.0	20	0	102	69 - 130				
1,2,4-Trimethylbenzene	19.41	1.0	20	0	97.0	76 - 124				
1,2-Dibromo-3-chloropropane	17.64	1.0	20	0	88.2	62 - 128				
1,2-Dibromoethane	18.48	1.0	20	0	92.4	77 - 121				
1,2-Dichlorobenzene	21.38	1.0	20	0	107	80 - 119				
1,2-Dichloroethane	18.47	1.0	20	0	92.3	73 - 128				
1,2-Dichloropropane	19.73	1.0	20	0	98.7	78 - 122				
1,3,5-Trimethylbenzene	23.36	1.0	20	0	117	75 - 124				
1,3-Dichlorobenzene	19.68	1.0	20	0	98.4	80 - 119				
1,3-Dichloropropane	19.32	1.0	20	0	96.6	80 - 119				
1,4-Dichlorobenzene	20.53	1.0	20	0	103	79 - 118				
2,2-Dichloropropane	20.49	1.0	20	0	102	60 - 139				
2-Butanone	26.69	2.0	40	0	66.7	56 - 143				
2-Chlorotoluene	23	1.0	20	0	115	79 - 122				
2-Hexanone	33.24	2.0	40	0	83.1	57 - 139				
4-Chlorotoluene	22.7	1.0	20	0	113	78 - 122				
4-Isopropyltoluene	21.13	1.0	20	0	106	77 - 127				
4-Methyl-2-pentanone	36.52	2.0	40	0	91.3	67 - 130				
Acetone	8.695	2.0	40	0	21.7	39 - 160				S
Benzene	19.46	1.0	20	0	97.3	79 - 120				
Bromobenzene	23.16	1.0	20	0	116	80 - 120				
Bromochloromethane	16.99	1.0	20	0	84.9	78 - 123				
Bromodichloromethane	19.4	1.0	20	0	97.0	79 - 125				
Bromoform	17.83	1.0	20	0	89.2	66 - 130				
Bromomethane	20.16	1.0	20	0	101	53 - 141				

ALS Houston, US Date: 09-Jul-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
WorkOrder: HS20061390

QC BATCH REPORT

Batch ID: R364746 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MS Sample ID: **HS20070055-03MS** Units: **UG/L** Analysis Date: **08-Jul-2020 17:25**
Client ID: Run ID: **VOA6_364746** SeqNo: **5655585** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Carbon disulfide	39.68	2.0	40	0	99.2	64 - 133				
Carbon tetrachloride	20.19	1.0	20	0	101	72 - 136				
Chlorobenzene	19.7	1.0	20	0	98.5	82 - 118				
Chloroethane	17.03	1.0	20	0	85.1	60 - 138				
Chloroform	18.42	1.0	20	0	92.1	79 - 124				
Chloromethane	19.23	1.0	20	0	96.1	50 - 139				
cis-1,2-Dichloroethene	18.92	1.0	20	0	94.6	78 - 123				
cis-1,3-Dichloropropene	19.2	1.0	20	0	96.0	75 - 124				
Dibromochloromethane	19.07	1.0	20	0	95.3	74 - 126				
Dibromomethane	18.38	1.0	20	0	91.9	79 - 123				
Dichlorodifluoromethane	17.83	1.0	20	0	89.2	32 - 152				
Ethylbenzene	20.27	1.0	20	0	101	79 - 121				
Hexachlorobutadiene	25.4	1.0	20	0	127	66 - 134				
Isopropylbenzene	20.53	1.0	20	0	103	72 - 131				
m,p-Xylene	40.28	2.0	40	0	101	80 - 121				
Methylene chloride	17.8	2.0	20	0	89.0	74 - 124				
Naphthalene	16.18	1.0	20	0	80.9	61 - 128				
n-Butylbenzene	23.91	1.0	20	0	120	75 - 128				
n-Propylbenzene	23.83	1.0	20	0	119	76 - 126				
o-Xylene	19.93	1.0	20	0	99.7	78 - 122				
sec-Butylbenzene	20.02	1.0	20	0	100	77 - 126				
Styrene	19.56	1.0	20	0	97.8	78 - 123				
tert-Butylbenzene	20.41	1.0	20	0	102	78 - 124				
Tetrachloroethene	21.77	1.0	20	0	109	74 - 129				
Toluene	21	1.0	20	0	105	80 - 121				
trans-1,2-Dichloroethene	19.64	1.0	20	0	98.2	75 - 124				
trans-1,3-Dichloropropene	18.8	1.0	20	0	94.0	73 - 127				
Trichloroethene	19.78	1.0	20	0	98.9	79 - 123				
Trichlorofluoromethane	19.08	1.0	20	0	95.4	65 - 141				
Vinyl chloride	19.63	1.0	20	0	98.1	58 - 137				
Surr: 1,2-Dichloroethane-d4	*44.6*	*1.0*	*50*	*0*	*89.2*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*48.69*	*1.0*	*50*	*0*	*97.4*	*85 - 114*				
Surr: Dibromofluoromethane	*46.96*	*1.0*	*50*	*0*	*93.9*	*80 - 119*				
Surr: Toluene-d8	*50.94*	*1.0*	*50*	*0*	*102*	*89 - 112*				

ALS Houston, US Date: 09-Jul-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
WorkOrder: HS20061390

QC BATCH REPORT

Batch ID: R364746 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MSD Sample ID: **HS20070055-04MSD** Units: **UG/L** Analysis Date: **08-Jul-2020 18:37**
Client ID: Run ID: **VOA6_364746** SeqNo: **5655588** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	19.59	1.0	20	0	97.9	78 - 124	20.39	4	20	
1,1,1-Trichloroethane	18.74	1.0	20	0	93.7	74 - 131	19.24	2.63	20	
1,1,2,2-Tetrachloroethane	17.66	1.0	20	0	88.3	71 - 121	18.97	7.15	20	
1,1,2-Trichloroethane	19.12	1.0	20	0	95.6	80 - 119	19.72	3.06	20	
1,1-Dichloroethane	17.88	1.0	20	0	89.4	77 - 125	17.81	0.388	20	
1,1-Dichloroethene	16.87	1.0	20	0	84.4	71 - 131	16.61	1.55	20	
1,1-Dichloropropene	18.73	1.0	20	0	93.6	78 - 125	19.86	5.87	20	
1,2,3-Trichlorobenzene	19.4	1.0	20	0	97.0	69 - 129	20.66	6.29	20	
1,2,3-Trichloropropane	17.75	1.0	20	0	88.8	73 - 122	18.53	4.31	20	
1,2,4-Trichlorobenzene	19.72	1.0	20	0	98.6	69 - 130	20.9	5.78	20	
1,2,4-Trimethylbenzene	20.13	1.0	20	0	101	76 - 124	21.6	7.09	20	
1,2-Dibromo-3-chloropropane	15.47	1.0	20	0	77.3	62 - 128	16.53	6.65	20	
1,2-Dibromoethane	18.69	1.0	20	0	93.4	77 - 121	19	1.68	20	
1,2-Dichlorobenzene	18.81	1.0	20	0	94.0	80 - 119	20.15	6.91	20	
1,2-Dichloroethane	18.44	1.0	20	0	92.2	73 - 128	18.61	0.869	20	
1,2-Dichloropropane	19	1.0	20	0	95.0	78 - 122	19.65	3.36	20	
1,3,5-Trimethylbenzene	20.15	1.0	20	0	101	75 - 124	22.19	9.64	20	
1,3-Dichlorobenzene	19.35	1.0	20	0	96.8	80 - 119	20.99	8.13	20	
1,3-Dichloropropane	18.87	1.0	20	0	94.4	80 - 119	19.2	1.74	20	
1,4-Dichlorobenzene	20.24	1.0	20	0	101	79 - 118	22.37	10	20	
2,2-Dichloropropane	19	1.0	20	0	95.0	60 - 139	19.88	4.52	20	
2-Butanone	25.76	2.0	40	0	64.4	56 - 143	25.56	0.774	20	
2-Chlorotoluene	19.4	1.0	20	0	97.0	79 - 122	21.63	10.9	20	
2-Hexanone	33.01	2.0	40	0	82.5	57 - 139	32.93	0.236	20	
4-Chlorotoluene	19.8	1.0	20	0	99.0	78 - 122	21.42	7.86	20	
4-Isopropyltoluene	20.31	1.0	20	0	102	77 - 127	22.42	9.87	20	
4-Methyl-2-pentanone	35.57	2.0	40	0	88.9	67 - 130	35.92	0.978	20	
Acetone	6.938	2.0	40	0	17.3	39 - 160	61.84	160	20	SR
Benzene	18.81	1.0	20	0	94.1	79 - 120	19.74	4.79	20	
Bromobenzene	19.38	1.0	20	0	96.9	80 - 120	21.34	9.63	20	
Bromochloromethane	16.72	1.0	20	0	83.6	78 - 123	17.11	2.26	20	
Bromodichloromethane	18.96	1.0	20	0	94.8	79 - 125	19.2	1.27	20	
Bromoform	17.81	1.0	20	0	89.1	66 - 130	18.28	2.58	20	
Bromomethane	18.55	1.0	20	0	92.7	53 - 141	17.71	4.64	20	

ALS Houston, US Date: 09-Jul-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
WorkOrder: HS20061390

QC BATCH REPORT

Batch ID: R364746 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MSD Sample ID: **HS20070055-04MSD** Units: **UG/L** Analysis Date: **08-Jul-2020 18:37**
Client ID: Run ID: **VOA6_364746** SeqNo: **5655588** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
Carbon disulfide	33.88	2.0	40	0	84.7	64 - 133	31.17	8.32	20	
Carbon tetrachloride	19.39	1.0	20	0	96.9	72 - 136	20.26	4.39	20	
Chlorobenzene	19.36	1.0	20	0	96.8	82 - 118	20.11	3.8	20	
Chloroethane	15.9	1.0	20	0	79.5	60 - 138	15.56	2.16	20	
Chloroform	17.92	1.0	20	0	89.6	79 - 124	18.58	3.59	20	
Chloromethane	17.42	1.0	20	0	87.1	50 - 139	19.21	9.78	20	
cis-1,2-Dichloroethene	17.88	1.0	20	0	89.4	78 - 123	18.36	2.65	20	
cis-1,3-Dichloropropene	18.47	1.0	20	0	92.3	75 - 124	19.11	3.43	20	
Dibromochloromethane	19	1.0	20	0	95.0	74 - 126	19.23	1.21	20	
Dibromomethane	17.85	1.0	20	0	89.3	79 - 123	18.44	3.21	20	
Dichlorodifluoromethane	15.94	1.0	20	0	79.7	32 - 152	17.05	6.71	20	
Ethylbenzene	19.78	1.0	20	0	98.9	79 - 121	20.9	5.51	20	
Hexachlorobutadiene	21.15	1.0	20	0	106	66 - 134	23.26	9.52	20	
Isopropylbenzene	19.96	1.0	20	0	99.8	72 - 131	20.93	4.75	20	
m,p-Xylene	39.24	2.0	40	0	98.1	80 - 121	41.34	5.2	20	
Methylene chloride	17.7	2.0	20	0	88.5	74 - 124	14.79	17.9	20	
Naphthalene	16.74	1.0	20	0	83.7	61 - 128	19.27	14	20	
n-Butylbenzene	20.51	1.0	20	0	103	75 - 128	22.36	8.66	20	
n-Propylbenzene	20.31	1.0	20	0	102	76 - 126	22.58	10.5	20	
o-Xylene	19.52	1.0	20	0	97.6	78 - 122	20.39	4.35	20	
sec-Butylbenzene	20.14	1.0	20	0	101	77 - 126	22.15	9.52	20	
Styrene	19.3	1.0	20	0	96.5	78 - 123	20.27	4.89	20	
tert-Butylbenzene	20.63	1.0	20	0	103	78 - 124	22.48	8.57	20	
Tetrachloroethene	20.55	1.0	20	0	103	74 - 129	21.65	5.23	20	
Toluene	20.05	1.0	20	0	100	80 - 121	20.99	4.58	20	
trans-1,2-Dichloroethene	18.69	1.0	20	0	93.4	75 - 124	19.07	2.01	20	
trans-1,3-Dichloropropene	18.48	1.0	20	0	92.4	73 - 127	18.58	0.558	20	
Trichloroethene	19.23	1.0	20	0	96.1	79 - 123	20	3.97	20	
Trichlorofluoromethane	17.6	1.0	20	0	88.0	65 - 141	17.5	0.55	20	
Vinyl chloride	16.49	1.0	20	0	82.5	58 - 137	18.59	11.9	20	
Surr: 1,2-Dichloroethane-d4	*43.77*	*1.0*	*50*	*0*	*87.5*	*81 - 118*	*44.82*	*2.38*	*20*	
Surr: 4-Bromofluorobenzene	*50.68*	*1.0*	*50*	*0*	*101*	*85 - 114*	*49.52*	*2.33*	*20*	
Surr: Dibromofluoromethane	*46.38*	*1.0*	*50*	*0*	*92.8*	*80 - 119*	*46.72*	*0.724*	*20*	
Surr: Toluene-d8	*50.16*	*1.0*	*50*	*0*	*100*	*89 - 112*	*50.75*	*1.17*	*20*	

ALS Houston, US Date: 09-Jul-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
WorkOrder: HS20061390

QC BATCH REPORT

Batch ID: R364746 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MSD Sample ID: **HS20070055-03MSD** Units: **UG/L** Analysis Date: **08-Jul-2020 17:49**
Client ID: Run ID: **VOA6_364746** SeqNo: **5655586** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	19.6	1.0	20	0	98.0	78 - 124	19.89	1.46	20	
1,1,1-Trichloroethane	18.76	1.0	20	0	93.8	74 - 131	19.34	3.02	20	
1,1,2,2-Tetrachloroethane	18.25	1.0	20	0	91.2	71 - 121	20.58	12	20	
1,1,2-Trichloroethane	19.51	1.0	20	0	97.6	80 - 119	19.52	0.00862	20	
1,1-Dichloroethane	17.54	1.0	20	0	87.7	77 - 125	18.25	3.97	20	
1,1-Dichloroethene	17.88	1.0	20	0	89.4	71 - 131	19.32	7.73	20	
1,1-Dichloropropene	18.94	1.0	20	0	94.7	78 - 125	19.67	3.79	20	
1,2,3-Trichlorobenzene	17.91	1.0	20	0	89.5	69 - 129	18.24	1.84	20	
1,2,3-Trichloropropane	18.07	1.0	20	0	90.4	73 - 122	20	10.1	20	
1,2,4-Trichlorobenzene	19.69	1.0	20	0	98.5	69 - 130	20.41	3.56	20	
1,2,4-Trimethylbenzene	19.46	1.0	20	0	97.3	76 - 124	19.41	0.268	20	
1,2-Dibromo-3-chloropropane	16.41	1.0	20	0	82.0	62 - 128	17.64	7.23	20	
1,2-Dibromoethane	18.37	1.0	20	0	91.9	77 - 121	18.48	0.57	20	
1,2-Dichlorobenzene	16.68	1.0	20	0	83.4	80 - 119	21.38	24.7	20	R
1,2-Dichloroethane	18.64	1.0	20	0	93.2	73 - 128	18.47	0.943	20	
1,2-Dichloropropane	19.58	1.0	20	0	97.9	78 - 122	19.73	0.762	20	
1,3,5-Trimethylbenzene	21.44	1.0	20	0	107	75 - 124	23.36	8.57	20	
1,3-Dichlorobenzene	19.62	1.0	20	0	98.1	80 - 119	19.68	0.305	20	
1,3-Dichloropropane	18.91	1.0	20	0	94.5	80 - 119	19.32	2.19	20	
1,4-Dichlorobenzene	20.9	1.0	20	0	105	79 - 118	20.53	1.79	20	
2,2-Dichloropropane	19.88	1.0	20	0	99.4	60 - 139	20.49	3.05	20	
2-Butanone	25.42	2.0	40	0	63.6	56 - 143	26.69	4.88	20	
2-Chlorotoluene	20.54	1.0	20	0	103	79 - 122	23	11.3	20	
2-Hexanone	33.25	2.0	40	0	83.1	57 - 139	33.24	0.0178	20	
4-Chlorotoluene	20.91	1.0	20	0	105	78 - 122	22.7	8.18	20	
4-Isopropyltoluene	21.42	1.0	20	0	107	77 - 127	21.13	1.4	20	
4-Methyl-2-pentanone	34.27	2.0	40	0	85.7	67 - 130	36.52	6.38	20	
Acetone	8.021	2.0	40	0	20.1	39 - 160	8.695	8.06	20	S
Benzene	19.02	1.0	20	0	95.1	79 - 120	19.46	2.28	20	
Bromobenzene	20.39	1.0	20	0	102	80 - 120	23.16	12.7	20	
Bromochloromethane	16.66	1.0	20	0	83.3	78 - 123	16.99	1.95	20	
Bromodichloromethane	18.46	1.0	20	0	92.3	79 - 125	19.4	4.97	20	
Bromoform	17.88	1.0	20	0	89.4	66 - 130	17.83	0.301	20	
Bromomethane	19.39	1.0	20	0	96.9	53 - 141	20.16	3.93	20	

ALS Houston, US Date: 09-Jul-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
WorkOrder: HS20061390

QC BATCH REPORT

Batch ID: R364746 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MSD Sample ID: **HS20070055-03MSD** Units: **UG/L** Analysis Date: **08-Jul-2020 17:49**
Client ID: Run ID: **VOA6_364746** SeqNo: **5655586** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
Carbon disulfide	37.63	2.0	40	0	94.1	64 - 133	39.68	5.3	20	
Carbon tetrachloride	19.56	1.0	20	0	97.8	72 - 136	20.19	3.2	20	
Chlorobenzene	19.67	1.0	20	0	98.3	82 - 118	19.7	0.139	20	
Chloroethane	15.53	1.0	20	0	77.7	60 - 138	17.03	9.19	20	
Chloroform	18.08	1.0	20	0	90.4	79 - 124	18.42	1.89	20	
Chloromethane	18.32	1.0	20	0	91.6	50 - 139	19.23	4.85	20	
cis-1,2-Dichloroethene	17.95	1.0	20	0	89.8	78 - 123	18.92	5.27	20	
cis-1,3-Dichloropropene	18.52	1.0	20	0	92.6	75 - 124	19.2	3.57	20	
Dibromochloromethane	18.51	1.0	20	0	92.6	74 - 126	19.07	2.96	20	
Dibromomethane	18.21	1.0	20	0	91.1	79 - 123	18.38	0.935	20	
Dichlorodifluoromethane	16.99	1.0	20	0	85.0	32 - 152	17.83	4.83	20	
Ethylbenzene	20.15	1.0	20	0	101	79 - 121	20.27	0.631	20	
Hexachlorobutadiene	21.74	1.0	20	0	109	66 - 134	25.4	15.5	20	
Isopropylbenzene	20.25	1.0	20	0	101	72 - 131	20.53	1.36	20	
m,p-Xylene	40.02	2.0	40	0	100	80 - 121	40.28	0.642	20	
Methylene chloride	17.33	2.0	20	0	86.6	74 - 124	17.8	2.72	20	
Naphthalene	16.57	1.0	20	0	82.9	61 - 128	16.18	2.43	20	
n-Butylbenzene	18.32	1.0	20	0	91.6	75 - 128	23.91	26.5	20	R
n-Propylbenzene	21.49	1.0	20	0	107	76 - 126	23.83	10.3	20	
o-Xylene	19.8	1.0	20	0	99.0	78 - 122	19.93	0.653	20	
sec-Butylbenzene	21.13	1.0	20	0	106	77 - 126	20.02	5.41	20	
Styrene	19.46	1.0	20	0	97.3	78 - 123	19.56	0.534	20	
tert-Butylbenzene	21.59	1.0	20	0	108	78 - 124	20.41	5.62	20	
Tetrachloroethene	20.67	1.0	20	0	103	74 - 129	21.77	5.18	20	
Toluene	20.28	1.0	20	0	101	80 - 121	21	3.51	20	
trans-1,2-Dichloroethene	18.76	1.0	20	0	93.8	75 - 124	19.64	4.57	20	
trans-1,3-Dichloropropene	18.68	1.0	20	0	93.4	73 - 127	18.8	0.645	20	
Trichloroethene	18.9	1.0	20	0	94.5	79 - 123	19.78	4.55	20	
Trichlorofluoromethane	18.28	1.0	20	0	91.4	65 - 141	19.08	4.29	20	
Vinyl chloride	17.94	1.0	20	0	89.7	58 - 137	19.63	8.97	20	
Surr: 1,2-Dichloroethane-d4	*44.66*	*1.0*	*50*	*0*	*89.3*	*81 - 118*	*44.6*	*0.142*	*20*	
Surr: 4-Bromofluorobenzene	*48.96*	*1.0*	*50*	*0*	*97.9*	*85 - 114*	*48.69*	*0.546*	*20*	
Surr: Dibromofluoromethane	*46.85*	*1.0*	*50*	*0*	*93.7*	*80 - 119*	*46.96*	*0.242*	*20*	
Surr: Toluene-d8	*50.65*	*1.0*	*50*	*0*	*101*	*89 - 112*	*50.94*	*0.588*	*20*	

ALS Houston, US Date: 09-Jul-20

Client:	Bhate Environmental Associates, Inc.
Project:	LHAAP-58
WorkOrder:	HS20061390

QC BATCH REPORT

Batch ID:	**R364746 (0)**	**Instrument:**	**VOA6**	**Method:**	**VOLATILES ORGANICS BY METHOD 8260C**

The following samples were analyzed in this batch: HS20061390-10

ALS Houston, US Date: 09-Jul-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
WorkOrder: **HS20061390**

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

CERTIFICATIONS,ACCREDITATIONS & LICENSES

Agency	Number	Expire Date
Arkansas	20-030-0	26-Mar-2021
Dept of Defense	ANAB L2231 V009	22-Dec-2021
Illinois	2000322020-4	09-May-2021
Kansas	E-10352 2019-2020	31-Jul-2020
North Carolina	624-2020	31-Dec-2020
Oklahoma	2019-141	31-Aug-2020
Texas	T104704231-20-26	30-Apr-2021

ALS Houston, US Date: 09-Jul-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
Work Order: HS20061390

SAMPLE TRACKING

Lab Samp ID	Client Sample ID	Action	Date	Person	New Location
HS20061390-01	35AWW01_062520	Login	6/28/2020 9:12:33 AM	NDR	Sub
HS20061390-01	35AWW01_062520	Login	6/28/2020 9:12:33 AM	NDR	Sub
HS20061390-01	35AWW01_062520	Login	6/28/2020 9:12:33 AM	NDR	WET301
HS20061390-01	35AWW01_062520	Login	6/28/2020 9:12:33 AM	NDR	VOA224
HS20061390-01	35AWW01_062520	Login	6/28/2020 9:12:33 AM	NDR	Sub
HS20061390-01	35AWW01_062520	Login	6/28/2020 9:12:33 AM	NDR	Sub

ALS Houston, US Date: 09-Jul-20

Sample Receipt Checklist

Work Order ID: HS20061390 **Date/Time Received:** **26-Jun-2020 09:30**

Client Name: Bhate Environmental **Received by:** **Jared R. Makan**

Completed By:	/S/ Nilesh D. Ranchod	28-Jun-2020 09:19	**Reviewed by:**	/S/ RJ Modashia	29-Jun-2020 14:11
	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 ☐	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):	0.7c UC/C	IR25
Cooler(s)/Kit(s):	44980	
Date/Time sample(s) sent to storage:	06/26/2020 18:00	

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:

bhate

1608 13th Avenue South, Suite 300
Birmingham Alabama 35205
Tel: 205-918-4000
Fax: 205-918-4050

Chain of Custody and Analytical Request

Page: ____ of ____

Project/Phase No: NWO1312.0150

COC Number(1): ____

LIMS Number: ____

Facility/Base I.D.: LHAAP

Project/Site Name: LHAAP / Site 58

Client Name:

Collected by: Scott Beesinger

Field Sample ID (30 Characters Max)	Date Collected (dd-mmm-yyyy)	Time Collected (Military) (hhmm)	Sample Depth (beginning - ending)	SA Code (2)	Sample Number (3)	Sample Matrix (4)	Number of containers	VOC	MEE	TOC	Carbon Dioxide	Anions	AOS4nic					Ambient Blank Lot Control Number	Equipment Control
35AWW01_062520	25 Jun 2020	0750	-	N		WG	3	X											
35AWW01_062520_a	25 Jun 2020	0750	-	FD		WG	3	X											
35AWW15_062520	25 Jun 2020	0835	-	N		WG	3	X											
35AWW12_062520	25 Jun 2020	0930		N		WG	3	X											
35AWW16_062520	25 Jun 2020	1015		N		WG	3	X											
35AWW24_062520	25 Jun 2020	1100	-	N		WG	3	X											
35AWW24_062520_a	25 Jun 2020	1100	-	FD		WG	3	X											
LHSMW06_062520	25 Jun 2020	1150	-	N		WG	4	X					X						
35AWW18_06250	25 Jun 2020	1240	-	N		WG	3	X											
35AWW14_062520	25 Jun 2020	1255	-	N		WG	3	X											
TRIP BLANK	25 Jun 2020		-	TB		W	2	X											

Sample Analysis Requested (5) | Quality Assurance Samples (6)

HS20061390

Bhate Environmental Associates, Inc.
LHAAP-58

COMMENTS: Cooler 44980 1225
Temp 0-7°C CF 0.0

Custody Transfers Prior to Receipt by Laboratory

Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
1. Scott Beesinger	6/25/20	1430	1. J. WALTON	6/26/20	09:30
2.			2.		
3.			3.		

Sample Delivery Details / Laboratory Receipt

Delivered Directly to Lab: ____ Shipped ____ No.:

Method of Shipment: ____

____ Fed Ex ____ Airbill Number:

____ Analytical Lab: ALS 10450 Stanciff Rd. Suite 210 Houston, TX 77099 (281) 530-5656

ATTN: SONIA WEST Lab Recipient: Delivery Date/Time:

1.) Chain of Custody Number = date collected + custody number (e.g. 09-02-1999-01)

2.) Sample Type (SA) Codes: N = Normal Sample, TB = Trip Blank (-c) Sample, FD = Field Duplicate (-a) Samples, FR = Field Replicate (-b) Samples, EB = Equipment Blank (-d) Samples, MS = Matrix Spike, SD = Matrix Spike Duplicate, AB = Ambient Blank (-e)

3.) Sample Number: Unique sample number collected from a particular location per day. (e.g. Groundwater sample collected from MW-1 on 10/10/99 = 01, if sampled again on 10/10/99 = 02, etc.)

4.) Matrix Codes: GS = Soil Gas, WG = Groundwater, WS = Surface Water, SO = Soil, SE = Sediment, SL = Sludge, SS = Surface Soil Samples, WQ = Aqueous Blank Samples (trip, equipment, ambient, etc), SQ = Soil Blanks

5.) Sample Analysis Requested: Analytical method requested and number of containers provided for each.

6.) Quality assurance samples are assigned by date (ddmmyy) and the sample number associated with the sample (01, 02, etc) (e.g. Equipment blank collected in association with MW-1 on 10/10/99 will be designated 10109901 in the Equipment Blank Lot Control

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

44980

CUSTODY SEAL
Date: 6/25/20 Time: 1430
Name: Scott Beesinger
Company: BHATE

Seal Broken By: SM
Date: 06/26/20

44980

Must Deliver Next Business Day
Time and Tempature Sensitive!

ALS

ORIGIN ID:SGRA (903) 930-6193
SCOTT BEESINER
BHATE ENVIRONMENTAL ASSOCIATES
1203-B EAST GRAND AVE. PM8202

MARSHALL, TX 75670
UNITED STATES US

TOP DATE: 27NOV19
WGT: 1.00 LB MAN
AD: 300130/CAFE3211
IMS: 26x14x14 IN

TO CLIENT SERVICES
ALS LABORATORY GROUP
10450 STANCLIFF ROAD
SUITE 210
HOUSTON TX 77099
(281) 530-5656
REF: LHAAP-58 - BO 68898 - RJ
RMA:

FedEx Express

FedEx
TRK# 0221 1251 0292 3751

FRI - 26 JUN 10:30A
PRIORITY OVERNIGHT

77099
TX-US
IAH

AB SGRA

FID 162785 25JUN20 GGGA 559C1/C700/05A2

HS20061390 8260 Raw Data

ALS WO# HS20061390

MSVOA06 -Logbook

Batch: 41076 **Analyst:** Presenta Cabascango

Date: 07-07-2020 **Reviewer:**

Method: 8260 **Laboratory:** Houston

Comments:

#	Samp ID	Type	Analyzed	DF	Init Wt/Vol	Final Vol	File ID	Matrix	Status	pH
1	BFB	TUNE	07-07-2020 10:42 am	1.00	50 mL	50 mL	X070701.D	Liquid	Y	NA
	Auto find/ purged									
2	VSTD000.25	ICAL1	07-07-2020 11:06 am	1.00	50 mL	50 mL	X070702.D	Liquid	Y	NA
	0.1 uL cal std/100 mL DI									
3	VSTD000.5	ICAL2	07-07-2020 11:30 am	1.00	50 mL	50 mL	X070703.D	Liquid	Y	NA
	0.10 uL cal std/50 mL DI									
4	VSTD001	ICAL3	07-07-2020 12:18 pm	1.00	50 mL	50 mL	X070704.D	Liquid	Y	NA
	0.20 uL cal std/50 mL DI									
5	VSTD002	ICAL4	07-07-2020 12:42 pm	1.00	50 mL	50 mL	X070705.D	Liquid	Y	NA
	0.40 uL cal std/50 mL DI									
6	VSTD005	ICAL5	07-07-2020 01:06 pm	1.00	50 mL	50 mL	X070706.D	Liquid	Y	NA
	1.0 uL cal std/50 mL DI									
7	VSTD020	ICAL6	07-07-2020 01:29 pm	1.00	50 mL	50 mL	X070707.D	Liquid	Y	NA
	4.0 uL cal std/50 mL DI									
8	VSTD050	ICAL7	07-07-2020 01:53 pm	1.00	50 mL	50 mL	X070708.D	Liquid	Y	NA
	10 uL cal std/50 mL DI									
9	VSTD100	ICAL8	07-07-2020 02:17 pm	1.00	50 mL	50 mL	X070709.D	Liquid	Y	NA
	20 uL cal std/50 mL DI									
10	VSTD150	ICAL9	07-07-2020 02:41 pm	1.00	50 mL	50 mL	X070710.D	Liquid	Y	NA
	30 uL cal std/50 mL DI									
11	VSTD200	ICAL	07-07-2020 03:05 pm	1.00	50 mL	50 mL	X070711.D	Liquid	Y	NA
	40 uL cal std/50 mL DI									
12	BLANK	SAMP	07-07-2020 03:29 pm	1.00	50 mL	50 mL	X070712.D	Liquid	Y	NA
13	BLANK	SAMP	07-07-2020 04:17 pm	1.00	50 mL	50 mL	X070713.D	Liquid	Y	NA
14	BFB	TUNE	07-07-2020 05:31 pm	1.00	50 mL	50 mL	Y070701.D	Liquid	Y	NA
	Auto find/ purged									
15	CCV	ICV	07-07-2020 05:55 pm	1.00	50 mL	50 mL	Y070702.D	Liquid	Y	NA
	10 uL ical std/50 mL DI									
16	CCV	CCV	07-07-2020 06:19 pm	1.00	50 mL	50 mL	Y070703.D	Liquid	Y	NA
	10 uL cal std/50 mL DI									
17	CCB	SAMP	07-07-2020 06:43 pm	1.00	50 mL	50 mL	Y070704.D	Liquid	Y	NA
18	VLCSW-200707	LCS	07-07-2020 07:07 pm	1.00	50 mL	50 mL	Y070705.D	Liquid	Y	NA
	4.0 uL cal std/50 mL DI									
19	BLANK	SAMP	07-07-2020 07:31 pm	1.00	50 mL	50 mL	Y070706.D	Liquid	Y	NA
20	BLANK	SAMP	07-07-2020 07:55 pm	1.00	50 mL	50 mL	Y070707.D	Liquid	Y	NA
21	VBLKW-200707	MBLK	07-07-2020 08:19 pm	1.00	50 mL	50 mL	Y070708.D	Liquid	Y	NA
22	HS20061218-07	SAMP	07-07-2020 08:43 pm	1.00	50 mL	50 mL	Y070709.D	Liquid	Y	<2
23	HS20061390-11	SAMP	07-07-2020 09:07 pm	1.00	50 mL	50 mL	Y070710.D	Liquid	Y	<2
24	HS20061218-01	SAMP	07-07-2020 09:31 pm	1.00	50 mL	50 mL	Y070711.D	Liquid	Y	<2
25	HS20061218-02	SAMP	07-07-2020 09:55 pm	1.00	50 mL	50 mL	Y070712.D	Liquid	Y	<2
26	HS20061218-01MS	MS	07-07-2020 10:19 pm	1.00	50 mL	50 mL	Y070713.D	Liquid	Y	<2
	3.5 uL cal std/40 mL samp									
27	HS20061218-01MSD	MSD	07-07-2020 10:43 pm	1.00	50 mL	50 mL	Y070714.D	Liquid	Y	<2
	3.5 uL cal std/40 mL samp									
28	HS20061218-02	SAMP	07-07-2020 11:07 pm	25.00	2 mL	50 mL	Y070715.D	Liquid	Y	<2
29	HS20061218-03	SAMP	07-07-2020 11:31 pm	1.00	50 mL	50 mL	Y070716.D	Liquid	Y	<2
30	HS20061218-04	SAMP	07-07-2020 11:55 pm	1.00	50 mL	50 mL	Y070717.D	Liquid	Y	<2
31	HS20061218-05	SAMP	07-08-2020 12:20 am	1.00	50 mL	50 mL	Y070718.D	Liquid	Y	<2
32	HS20061218-06	SAMP	07-08-2020 12:44 am	1.00	50 mL	50 mL	Y070719.D	Liquid	Y	<2

MSVOA06 -Logbook

#	Samp ID	Type	Analyzed	DF	Init Wt/Vol	Final Vol	File ID	Matrix	Status	pH
33	HS20061390-01	SAMP	07-08-2020 01:08 am	1.00	50 mL	50 mL	Y070720.D	Liquid	Y	<2
34	HS20061390-02	SAMP	07-08-2020 01:32 am	1.00	50 mL	50 mL	Y070721.D	Liquid	Y	<2
35	HS20061390-03	SAMP	07-08-2020 01:56 am	1.00	50 mL	50 mL	Y070722.D	Liquid	Y	<2
36	HS20061390-04	SAMP	07-08-2020 02:20 am	1.00	50 mL	50 mL	Y070723.D	Liquid	Y	<2
37	HS20061390-05	SAMP	07-08-2020 02:44 am	1.00	50 mL	50 mL	Y070724.D	Liquid	Y	<2
38	HS20061390-06	SAMP	07-08-2020 03:08 am	1.00	50 mL	50 mL	Y070725.D	Liquid	Y	<2
39	HS20061390-07	SAMP	07-08-2020 03:32 am	1.00	50 mL	50 mL	Y070726.D	Liquid	Y	<2
40	HS20061390-08	SAMP	07-08-2020 03:56 am	1.00	50 mL	50 mL	Y070727.D	Liquid	Y	<2
41	HS20061390-09	SAMP	07-08-2020 04:20 am	1.00	50 mL	50 mL	Y070728.D	Liquid	Y	<2
42	HS20061390-10n/r	SAMP	07-08-2020 04:44 am	1.00	50 mL	50 mL	Y070729.D	Liquid	Y	<2
43	CCV-END	CCV	07-08-2020 05:08 am	1.00	50 mL	50 mL	Y070730.D	Liquid	Y	NA
	10 uL cal std/50 mL DI									
44	BLANK	SAMP	07-08-2020 05:32 am	1.00	50 mL	50 mL	Y070731.D	Liquid	Y	NA

Chemical	Value
SURR SPK ID	31106-34-06
IS ID	31106-34-06
CAL STD ID	31106-37-01/02
BFB ID	31106-34-06

FORM 3
WATER VOLATILE METHOD SPIKE RECOVERY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20061390

Matrix Spike - Sample No.: ICV

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE AMOUNT ()	% REC #	QC. LIMITS REC.
cis-1,3-Dichloropropene	50.00	45.96	92	80-120
trans-1,3-Dichloroprope	50.00	46.20	92	80-120
1,3-Dichlorobenzene	50.00	45.07	90	80-120
2,2-Dichloropropane	50.00	49.60	99	80-120
1,1-Dichloropropene	50.00	44.63	89	80-120
Dibromomethane	50.00	44.89	90	80-120
1,2-Dibromoethane	50.00	43.94	88	80-120
trans-1,2-Dichloroethen	50.00	48.12	96	80-120
1,1,1,2-Tetrachloroetha	50.00	46.91	94	80-120
1,1,1-Trichloroethane	50.00	47.71	95	80-120
1,1,2,2-Tetrachloroetha	50.00	40.20	80	80-120
1,1,2-Trichloroethane	50.00	45.35	91	80-120
1,1-Dichloroethane	50.00	45.41	91	80-120
1,1-Dichloroethene	50.00	49.14	98	80-120
Trichloroethene	50.00	45.66	91	80-120
1,2,3-Trichlorobenzene	50.00	46.89	94	80-120
Trichlorofluoromethane	50.00	50.21	100	80-120
1,2,4-Trichlorobenzene	50.00	49.10	98	80-120
1,2,4-Trimethylbenzene	50.00	45.96	92	80-120
Tetrachloroethene	50.00	47.39	95	80-120
1,2-Dichlorobenzene	50.00	43.86	88	80-120
1,2-Dichloroethane	50.00	44.66	89	80-120
1,2-Dichloropropane	50.00	46.90	94	80-120
1,3,5-Trimethylbenzene	50.00	46.49	93	80-120
1,3-Dichloropropane	50.00	44.45	89	80-120
1,4-Dichlorobenzene	50.00	46.98	94	80-120
Toluene	50.00	46.83	94	80-120
2-Butanone	100.00	89.03	89	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 3
WATER VOLATILE METHOD SPIKE RECOVERY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20061390

Matrix Spike - Sample No.: ICV

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE AMOUNT ()	% REC #	QC. LIMITS REC.
2-Chlorotoluene	50.00	45.41	91	80-120
2-Hexanone	100.00	87.00	87	80-120
4-Chlorotoluene	50.00	45.86	92	80-120
tert-Butylbenzene	50.00	46.48	93	80-120
4-Methyl-2-Pentanone	100.00	88.11	88	80-120
Acetone	100.00	86.84	87	80-120
Benzene	50.00	46.07	92	80-120
Bromobenzene	50.00	45.84	92	80-120
Bromochloromethane	50.00	42.61	85	80-120
Bromodichloromethane	50.00	47.17	94	80-120
Bromoform	50.00	44.49	89	80-120
Bromomethane	50.00	50.59	101	80-120
Carbon Disulfide	100.00	97.31	97	80-120
Carbon Tetrachloride	50.00	46.20	92	80-120
Chlorobenzene	50.00	46.08	92	80-120
Chloroethane	50.00	48.34	97	80-120
Chloroform	50.00	46.29	92	80-120
Chloromethane	50.00	47.14	94	80-120
cis-1,2-Dichloroethene	50.00	46.63	93	80-120
Dibromochloromethane	50.00	45.83	92	80-120
Dichlorodifluoromethane	50.00	49.83	100	80-120
Ethylbenzene	50.00	46.27	92	80-120
Hexachlorobutadiene	50.00	55.77	112	80-120
Isopropylbenzene	50.00	46.24	92	80-120
m,p-Xylenes	100.00	93.34	93	80-120
Methylene Chloride	50.00	57.72	115	80-120
n-Butylbenzene	50.00	48.53	97	80-120
n-Propylbenzene	50.00	46.87	94	80-120

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

* Values outside of QC limits

COMMENTS: _____

_____

FORM 3
WATER VOLATILE METHOD SPIKE RECOVERY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20061390

Matrix Spike - Sample No.: ICV

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE AMOUNT ()	% REC #	QC. LIMITS REC.
Naphthalene	50.00	40.99	82	80-120
o-Xylene	50.00	45.70	91	80-120
sec-Butylbenzene	50.00	46.89	94	80-120
Styrene	50.00	45.40	91	80-120
Vinyl Chloride	50.00	47.99	96	80-120
1,2,3-Trichloropropane	50.00	42.21	84	80-120
p-Isopropyltoluene	50.00	47.33	95	80-120
1,2-Dibromo-3-Chloropro	50.00	40.45	81	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: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20061390

Lab File ID: X070701 BFB Injection Date: 07/07/20

Instrument ID: VOA6 BFB Injection Time: 1042

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	31.5
75	30.0 - 60.0% of mass 95	53.4
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.9
173	Less than 2.0% of mass 174	0.5 (0.9)1
174	Greater than 50.0% of mass 95	53.1
175	5.0 - 9.0% of mass 174	4.4 (8.3)1
176	95.0 - 101.0% of mass 174	51.5 (96.8)1
177	5.0 - 9.0% of mass 176	3.4 (6.7)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	X070702	07/07/20	1106
02	VSTD000.5	VSTD000.5	X070703	07/07/20	1130
03	VSTD001	VSTD001	X070704	07/07/20	1218
04	VSTD002	VSTD002	X070705	07/07/20	1242
05	VSTD005	VSTD005	X070706	07/07/20	1306
06	VSTD020	VSTD020	X070707	07/07/20	1329
07	VSTD050	VSTD050	X070708	07/07/20	1353
08	VSTD100	VSTD100	X070709	07/07/20	1417
09	VSTD150	VSTD150	X070710	07/07/20	1441
10	VSTD200	VSTD200	X070711	07/07/20	1505
11	ICV	ICV	Y070702	07/07/20	1755
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20061390

Instrument ID: VOA6 Calibration Date(s): 07/07/20 07/07/20

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1106 1505

LAB FILE ID: RF0.25: X070702 RF0.5: X070703 RF1: X070704
RF2: X070705 RF5: X070706 RF20: X070707

COMPOUND	RF0.25	RF0.5	RF1	RF2	RF5	RF20
cis-1,3-Dichloropropene		0.733	0.565	0.566	0.629	0.572
trans-1,3-Dichloropropene		0.603	0.531	0.504	0.573	0.523
1,3-Dichlorobenzene		2.022	1.498	1.521	1.640	1.550
2,2-Dichloropropane		1.076	0.894	0.742	0.909	0.862
1,1-Dichloropropene		0.558	0.557	0.481	0.503	0.458
Dibromomethane		0.311	0.228	0.242	0.267	0.244
1,2-Dibromoethane		0.510	0.403	0.395	0.425	0.397
trans-1,2-Dichloroethene		0.613	0.525	0.506	0.591	0.551
1,1,1,2-Tetrachloroethane		0.452	0.369	0.373	0.397	0.373
1,1,1-Trichloroethane		0.990	0.873	0.859	0.978	0.902
1,1,2,2-Tetrachloroethane		1.257	1.018	0.980	1.158	0.960
1,1,2-Trichloroethane		0.390	0.286	0.312	0.353	0.322
1,1-Dichloroethane		1.887	1.456	1.272	1.483	1.338
1,1-Dichloroethene		0.564	0.426	0.433	0.475	0.446
Trichloroethene		0.463	0.332	0.323	0.396	0.360
1,2,3-Trichlorobenzene			716	1800	4185	12636
Trichlorofluoromethane		0.907	0.852	0.750	0.855	0.860
1,2,4-Trichlorobenzene		839	1386	3441	7921	24701
1,2,4-Trimethylbenzene		3.733	2.863	2.686	2.985	2.842
Tetrachloroethene		0.376	0.260	0.292	0.326	0.311
1,2-Dichlorobenzene		1.923	1.415	1.396	1.565	1.388
1,2-Dichloroethane		0.742	0.620	0.574	0.657	0.617
1,2-Dichloropropane		0.491	0.450	0.458	0.504	0.456
1,3,5-Trimethylbenzene		3.508	2.695	2.573	2.925	2.768
1,3-Dichloropropane		0.819	0.685	0.677	0.709	0.650
1,4-Dichlorobenzene		4670	6719	12018	32551	120181
Toluene		1.901	1.647	1.520	1.708	1.543
2-Butanone		4038	8248	14432	38898	122100
2-Chlorotoluene		3.314	2.441	2.366	2.609	2.334
2-Hexanone		5501	8043	19454	54537	183102
4-Chlorotoluene		3.566	2.542	2.584	3.050	2.739
tert-Butylbenzene		2.883	2.150	2.099	2.360	2.214
4-Methyl-2-Pentanone		9002	14318	26164	73042	248616
Acetone		47904	48306	56307	78299	132631
Benzene		1.706	1.451	1.281	1.493	1.386
Bromobenzene		1.099	0.926	0.902	0.998	0.931
Bromochloromethane		0.435	0.371	0.393	0.365	0.325
Bromodichloromethane		0.543	0.498	0.463	0.520	0.484
Bromoform		0.312	0.280	0.257	0.302	0.276
Bromomethane		1573	2882	4741	10361	35913
Carbon Disulfide		1.728	1.475	1.420	1.573	1.471
Carbon Tetrachloride		0.520	0.491	0.436	0.500	0.450
Chlorobenzene		1.310	1.022	0.948	1.060	0.968
Chloroethane		1996	2977	6029	14118	55533

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS2006139

Instrument ID: VOA6 Calibration Date(s): 07/07/20 07/07/20

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1106 1505

LAB FILE ID: RF0.25: X070702 RF0.5: X070703 RF1: X070704
RF2: X070705 RF5: X070706 RF20: X070707

COMPOUND	RF0.25	RF0.5	RF1	RF2	RF5	RF20
Chloroform		1.290	1.086	1.045	1.163	1.078
Chloromethane		1.271	1.007	0.963	1.022	0.923
cis-1,2-Dichloroethene		0.792	0.657	0.594	0.694	0.650
Dibromochloromethane		0.492	0.378	0.410	0.440	0.392
Dichlorodifluoromethane		0.713	0.523	0.538	0.617	0.585
Ethylbenzene		0.630	0.580	0.493	0.571	0.522
Hexachlorobutadiene		964	1140	2378	4900	17457
Isopropylbenzene		2.017	1.496	1.463	1.682	1.565
m,p-Xylenes		0.828	0.634	0.609	0.689	0.625
Methylene Chloride		0.473	0.634	0.449	0.590	0.588
n-Butylbenzene		3.206	2.342	2.242	2.472	2.439
n-Propylbenzene		4.977	3.764	3.623	4.224	3.936
Naphthalene		1869	3173	5731	13133	40238
o-Xylene		0.773	0.654	0.581	0.677	0.624
sec-Butylbenzene		4.190	3.166	3.017	3.441	3.203
Styrene		1.380	1.027	1.067	1.150	1.088
Vinyl Chloride		0.997	0.837	0.828	0.895	0.830
1,2,3-Trichloropropane		0.981	0.835	0.937	0.990	0.873
p-Isopropyltoluene		3.468	2.635	2.544	2.903	2.767
1,2-Dibromo-3-Chloropropane		171	296	800	2373	6863
1,2-Dichloroethane-d4		3020	5456	8551	23738	81727
Dibromofluoromethane		2185	3277	6445	17474	60811
Toluene-d8		1.637	1.340	1.266	1.346	1.250
4-Bromofluorobenzene		3626	5370	8990	23624	79496

FORM VI VOA

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS2006139

Instrument ID: VOA6 Calibration Date(s): 07/07/20 07/07/20

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1106 1505

LAB FILE ID: RF50: X070708 RF100: X070709 RF150: X070710
RF200: X070711

COMPOUND	RF50	RF100	RF150	RF200
cis-1,3-Dichloropropene	0.597	0.585	0.596	0.589
trans-1,3-Dichloropropene	0.540	0.532	0.539	0.535
1,3-Dichlorobenzene	1.568	1.528	1.543	1.536
2,2-Dichloropropane	0.867	0.820	0.836	0.783
1,1-Dichloropropene	0.470	0.464	0.477	0.465
Dibromomethane	0.246	0.240	0.242	0.237
1,2-Dibromoethane	0.385	0.371	0.369	0.363
trans-1,2-Dichloroethene	0.559	0.525	0.530	0.517
1,1,1,2-Tetrachloroethane	0.375	0.373	0.374	0.366
1,1,1-Trichloroethane	0.924	0.894	0.921	0.901
1,1,2,2-Tetrachloroethane	0.907	0.884	0.862	0.869
1,1,2-Trichloroethane	0.308	0.295	0.294	0.287
1,1-Dichloroethane	1.378	1.312	1.334	1.293
1,1-Dichloroethene	0.474	0.453	0.457	0.440
Trichloroethene	0.377	0.360	0.368	0.360
1,2,3-Trichlorobenzene	25695	55251	79399	113093
Trichlorofluoromethane	0.905	0.872	0.894	0.866
1,2,4-Trichlorobenzene	51947	107787	155239	223355
1,2,4-Trimethylbenzene	2.897	2.793	2.850	2.814
Tetrachloroethene	0.300	0.295	0.298	0.289
1,2-Dichlorobenzene	1.419	1.356	1.348	1.340
1,2-Dichloroethane	0.610	0.590	0.593	0.580
1,2-Dichloropropane	0.468	0.453	0.457	0.448
1,3,5-Trimethylbenzene	2.851	2.738	2.812	2.769
1,3-Dichloropropane	0.629	0.616	0.609	0.598
1,4-Dichlorobenzene	284407	530827	790661	1025151
Toluene	1.548	1.514	1.506	1.469
2-Butanone	258420	455606	643926	836660
2-Chlorotoluene	2.430	2.339	2.400	2.353
2-Hexanone	391819	730128	1049289	1371530
4-Chlorotoluene	2.832	2.777	2.782	2.741
tert-Butylbenzene	2.273	2.194	2.258	2.212
4-Methyl-2-Pentanone	554737	1037472	1488543	1953538
Acetone	227994	370679	497386	616921
Benzene	1.414	1.366	1.388	1.353
Bromobenzene	0.941	0.917	0.939	0.932
Bromochloromethane	0.320	0.306	0.313	0.296
Bromodichloromethane	0.504	0.497	0.502	0.495
Bromoform	0.275	0.269	0.266	0.261
Bromomethane	85523	181570	258225	336728
Carbon Disulfide	1.565	1.480	1.517	1.454
Carbon Tetrachloride	0.466	0.469	0.484	0.478
Chlorobenzene	0.980	0.963	0.966	0.951
Chloroethane	119616	231987	327112	412328

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS2006139

Instrument ID: VOA6 Calibration Date(s): 07/07/20 07/07/20

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1106 1505

LAB FILE ID: RF50: X070708 RF100: X070709 RF150: X070710
RF200: X070711

COMPOUND	RF50	RF100	RF150	RF200
Chloroform	1.089	1.030	1.056	1.021
Chloromethane	0.989	0.983	1.041	1.048
cis-1,2-Dichloroethene	0.650	0.617	0.626	0.602
Dibromochloromethane	0.402	0.398	0.394	0.392
Dichlorodifluoromethane	0.610	0.600	0.633	0.629
Ethylbenzene	0.518	0.513	0.519	0.506
Hexachlorobutadiene	37898	87052	125138	167946
Isopropylbenzene	1.575	1.527	1.555	1.512
m,p-Xylenes	0.626	0.611	0.616	0.596
Methylene Chloride	0.548	0.546	0.544	0.549
n-Butylbenzene	2.606	2.480	2.558	2.481
n-Propylbenzene	4.069	3.970	4.086	4.052
Naphthalene	83775	165996	242788	339317
o-Xylene	0.617	0.600	0.599	0.590
sec-Butylbenzene	3.356	3.238	3.324	3.233
Styrene	1.080	1.068	1.042	1.033
Vinyl Chloride	0.897	0.859	0.890	0.871
1,2,3-Trichloropropane	0.856	0.810	0.785	0.777
p-Isopropyltoluene	2.866	2.752	2.858	2.796
1,2-Dibromo-3-Chloropropane	14963	27599	38494	51251
1,2-Dichloroethane-d4	193703	380559	544077	711398
Dibromofluoromethane	141276	276479	399110	511371
Toluene-d8	1.261	1.269	1.244	1.217
4-Bromofluorobenzene	190894	370763	536443	687661

FORM VI VOA

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS2006139

Instrument ID: VOA6 Calibration Date(s): 07/07/20 07/07/20

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1106 1505

COMPOUND	CURVE	COEFFICENTS A0	COEFFICENTS A1	%RSD OR R^2	MAX %RSD OR R^2
cis-1,3-Dichloropropene	AVRG		0.60349437	8.689	15.000
trans-1,3-Dichloropropene	AVRG		0.54221185	5.402	15.000
1,3-Dichlorobenzene	AVRG		1.60078114	10.189	15.000
2,2-Dichloropropane	AVRG		0.86565624	10.942	15.000
1,1-Dichloropropene	AVRG		0.49236911	7.916	15.000
Dibromomethane	AVRG		0.25069074	9.872	15.000
1,2-Dibromoethane	AVRG		0.40189663	11.150	15.000
trans-1,2-Dichloroethene	AVRG		0.54648752	6.588	15.000
1,1,1,2-Tetrachloroethane	AVRG		0.38390374	7.066	15.000
1,1,1-Trichloroethane	AVRG		0.91595738	4.779	15.000
1,1,2,2-Tetrachloroethane	AVRG		0.98850834	13.883	15.000
1,1,2-Trichloroethane	AVRG		0.31629508	10.963	15.000
1,1-Dichloroethane	AVRG		1.41703507	13.404	15.000
1,1-Dichloroethene	AVRG		0.46298543	8.956	15.000
Trichloroethene	AVRG		0.37097303	11.008	15.000
1,2,3-Trichlorobenzene	LINR	3.126e-002	6.14275671	0.9961507	0.9900000
Trichlorofluoromethane	AVRG		0.86224441	5.455	15.000
1,2,4-Trichlorobenzene	LINR	2.611e-002	3.12702574	0.9960302	0.9900000
1,2,4-Trimethylbenzene	AVRG		2.94035470	10.468	15.000
Tetrachloroethene	AVRG		0.30540368	10.371	15.000
1,2-Dichlorobenzene	AVRG		1.46136524	12.709	15.000
1,2-Dichloroethane	AVRG		0.62033824	8.424	15.000
1,2-Dichloropropane	AVRG		0.46513819	4.200	15.000
1,3,5-Trimethylbenzene	AVRG		2.84880498	9.336	15.000
1,3-Dichloropropane	AVRG		0.66576337	10.331	15.000
1,4-Dichlorobenzene	LINR	-4.e-003	0.65956419	0.9998495	0.9900000
Toluene	AVRG		1.59521768	8.594	15.000
2-Butanone	LINR	-0.1254893	2.31712051	0.9982783	0.9900000
2-Chlorotoluene	AVRG		2.50949721	12.481	15.000
2-Hexanone	LINR	-7.51e-002	2.17591025	0.9993852	0.9900000
4-Chlorotoluene	AVRG		2.84581625	10.777	15.000
tert-Butylbenzene	AVRG		2.29378715	10.162	15.000
4-Methyl-2-Pentanone	LINR	-6.47e-002	1.52822376	0.9995597	0.9900000
Acetone	LINR	-0.6888002	3.30836801	0.9960733	0.9900000
Benzene	AVRG		1.42657559	8.452	15.000
Bromobenzene	AVRG		0.95387490	6.334	15.000
Bromochloromethane	AVRG		0.34727619	13.461	15.000
Bromodichloromethane	AVRG		0.50081614	4.398	15.000
Bromoform	AVRG		0.27755733	6.584	15.000
Bromomethane	LINR	-1.53e-003	2.85253789	0.9996352	0.9900000
Carbon Disulfide	AVRG		1.52035898	6.092	15.000
Carbon Tetrachloride	AVRG		0.47716841	5.356	15.000
Chlorobenzene	AVRG		1.01866323	11.313	15.000
Chloroethane	LINR	-3.83e-002	2.30643152	0.9982402	0.9900000

FORM VI VOA

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS2006139

Instrument ID: VOA6 Calibration Date(s): 07/07/20 07/07/20

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1106 1505

COMPOUND	CURVE	COEFFICENTS A0	COEFFICENTS A1	%RSD OR R^2	MAX %RSD OR R^2
Chloroform	AVRG		1.09563060	7.690	15.000
Chloromethane	AVRG		1.02749779	9.668	15.000
cis-1,2-Dichloroethene	AVRG		0.65356543	9.210	15.000
Dibromochloromethane	AVRG		0.41072157	8.499	15.000
Dichlorodifluoromethane	AVRG		0.60529225	9.218	15.000
Ethylbenzene	AVRG		0.53913118	8.264	15.000
Hexachlorobutadiene	LINR	2.678e-002	4.04851806	0.9985599	0.9900000
Isopropylbenzene	AVRG		1.59916105	10.541	15.000
m,p-Xylenes	AVRG		0.64833333	11.163	15.000
Methylene Chloride	AVRG		0.54676003	10.430	15.000
n-Butylbenzene	AVRG		2.53614962	10.780	15.000
n-Propylbenzene	AVRG		4.07790031	9.371	15.000
Naphthalene	LINR	5.962e-003	2.04981196	0.9977387	0.9900000
o-Xylene	AVRG		0.63514686	9.482	15.000
sec-Butylbenzene	AVRG		3.35206887	10.048	15.000
Styrene	AVRG		1.10382680	9.966	15.000
Vinyl Chloride	AVRG		0.87835920	5.932	15.000
1,2,3-Trichloropropane	AVRG		0.87160873	9.265	15.000
p-Isopropyltoluene	AVRG		2.84324348	9.165	15.000
1,2-Dibromo-3-Chloropropane	LINR	-3.51e-002	13.3313497	0.9993120	0.9900000
1,2-Dichloroethane-d4	LINR	-1.38e-002	1.35500319	0.9998000	0.9900000
Dibromofluoromethane	LINR	-1.8e-002	1.87178805	0.9993538	0.9900000
Toluene-d8	AVRG		1.31449843	9.760	15.000
4-Bromofluorobenzene	LINR	-2.17e-002	2.14592362	0.9994374	0.9900000

FORM VI VOA

Data File: \\nahstws005\Target\chem\voa6.i\X200707.b\X070701.D

Date : 07-JUL-2020 10:42

Client ID: BFB

Instrument: voa6.i

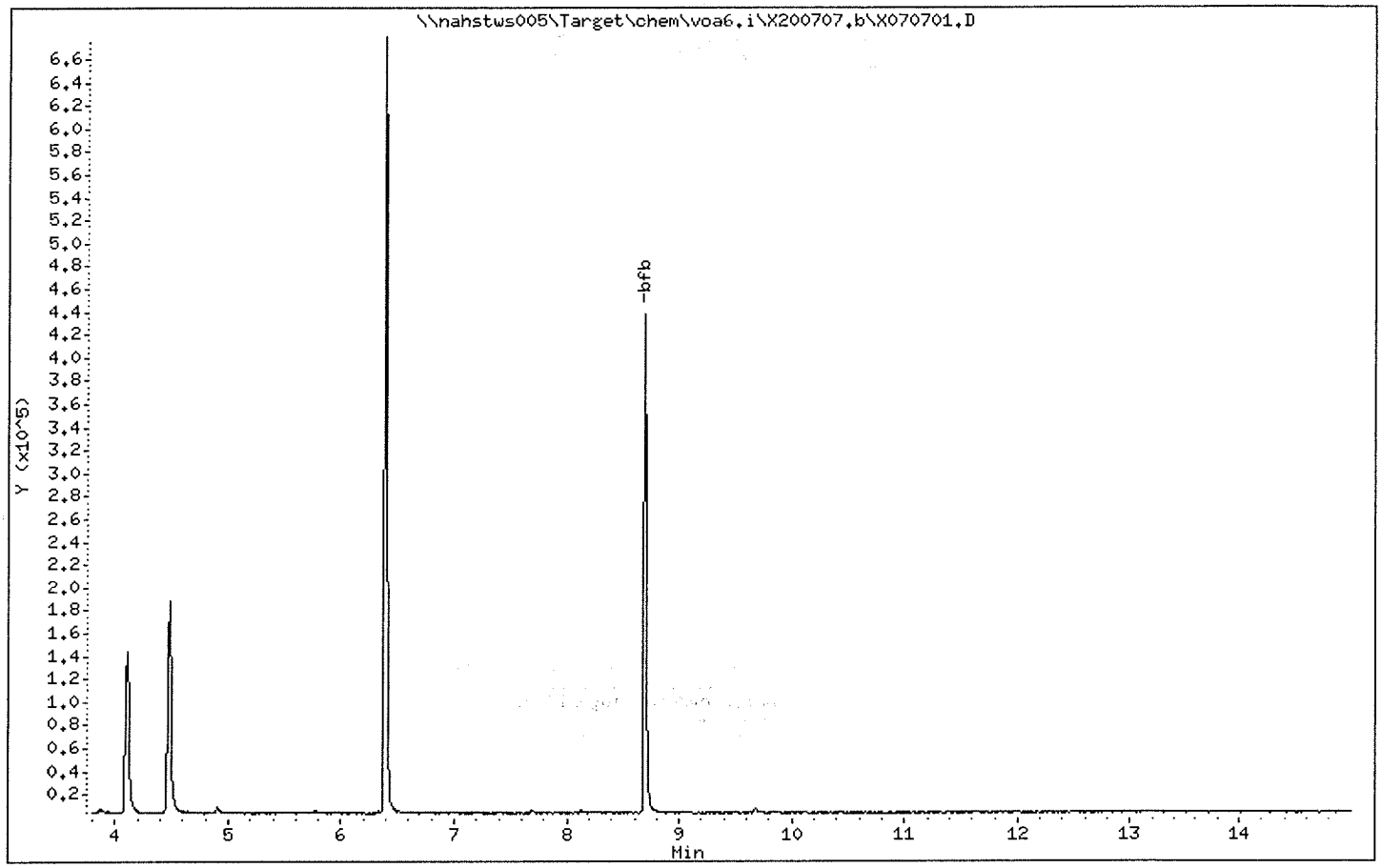
Sample Info: BFB;BFB;3;;BFB

Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

Column diameter: 0.25



Data File: \\nahstws005\Target\chem\voa6.i\X200707.b\X070701.D

Date : 07-JUL-2020 10:42

Client ID: BFB

Instrument: voa6.i

Sample Info: BFB;BFB;3;;BFB

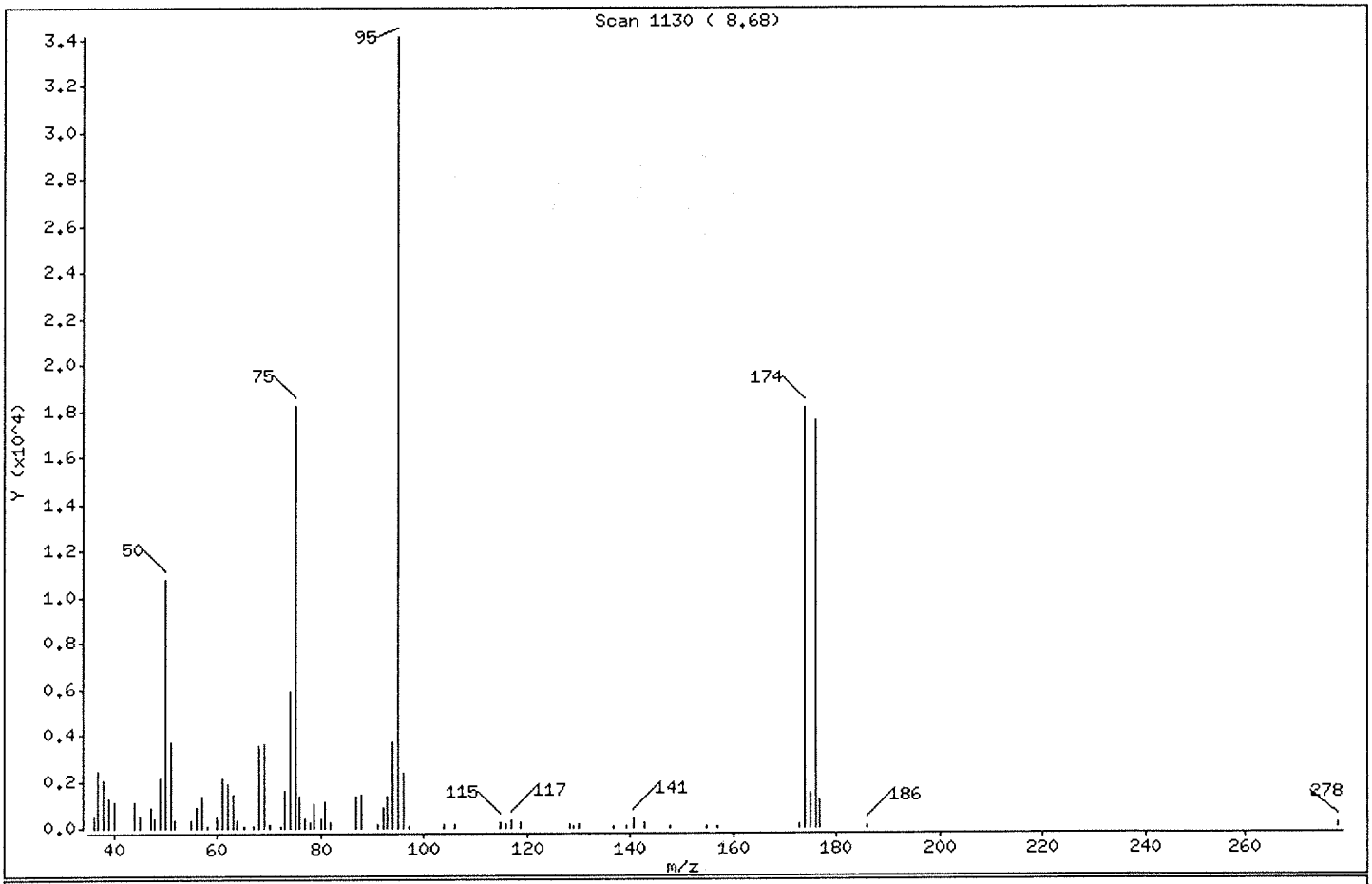
Volume Injected (uL): 2.0

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	31.54
75	30.00 - 60.00% of mass 95	53.42
96	5.00 - 9.00% of mass 95	6.89
173	Less than 2.00% of mass 174	0.47 (0.88)
174	Greater than 50.00% of mass 95	53.14
175	5.00 - 9.00% of mass 174	4.39 (8.26)
176	95.00 - 101.00% of mass 174	51.45 (96.83)
177	5.00 - 9.00% of mass 176	3.44 (6.68)

Data File: \\nahstws005\Target\chem\voa6.i\X200707.b\X070701.D

Date : 07-JUL-2020 10:42

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: X070701.D
Spectrum: Scan 1130 (8.68)
Location of Maximum: 95.00
Number of points: 70

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.10	509	60.90	2085	80.90	1096	129.00	83
37.00	2471	62.00	1904	81.90	254	130.00	180
38.00	2023	63.00	1446	86.90	1296	136.90	66
39.00	1258	63.90	336	88.00	1448	139.10	78
39.90	1064	65.20	110	91.00	138	140.80	397
44.00	1079	66.80	108	92.00	832	142.90	263
44.90	454	67.90	3534	92.90	1360	147.70	87
47.00	875	69.00	3625	94.00	3702	154.90	86
48.00	411	70.00	157	95.00	34144	157.00	68
49.00	2120	72.20	77	96.00	2353	173.00	159
50.00	10768	73.00	1607	97.10	80	173.90	18144
51.00	3726	74.00	5851	103.80	133	174.90	1498
51.80	310	75.00	18240	106.00	137	175.90	17568
55.00	307	76.00	1359	114.80	239	176.90	1173
55.90	830	76.90	411	115.90	120	186.10	55
57.00	1296	78.00	205	116.90	323	278.10	164
58.00	82	78.80	990	118.80	218		
60.00	496	79.90	431	128.10	183		

Data File: \\nahstws005\Target\chem\voa6.i\X200707.b\X070702.D Page 1
Report Date: 12-Aug-2020 15:35

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200707.b\X070702.D
Lab Smp Id: VSTD000.25 Client Smp ID: VSTD000.25
Inj Date : 07-JUL-2020 11:06
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\X200707.b\8260W.m
Meth Date : 12-Aug-2020 15:35 voa6.i Quant Type: ISTD
Cal Date : 07-JUL-2020 13:53 Cal File: X070708.D
Als bottle: 2 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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

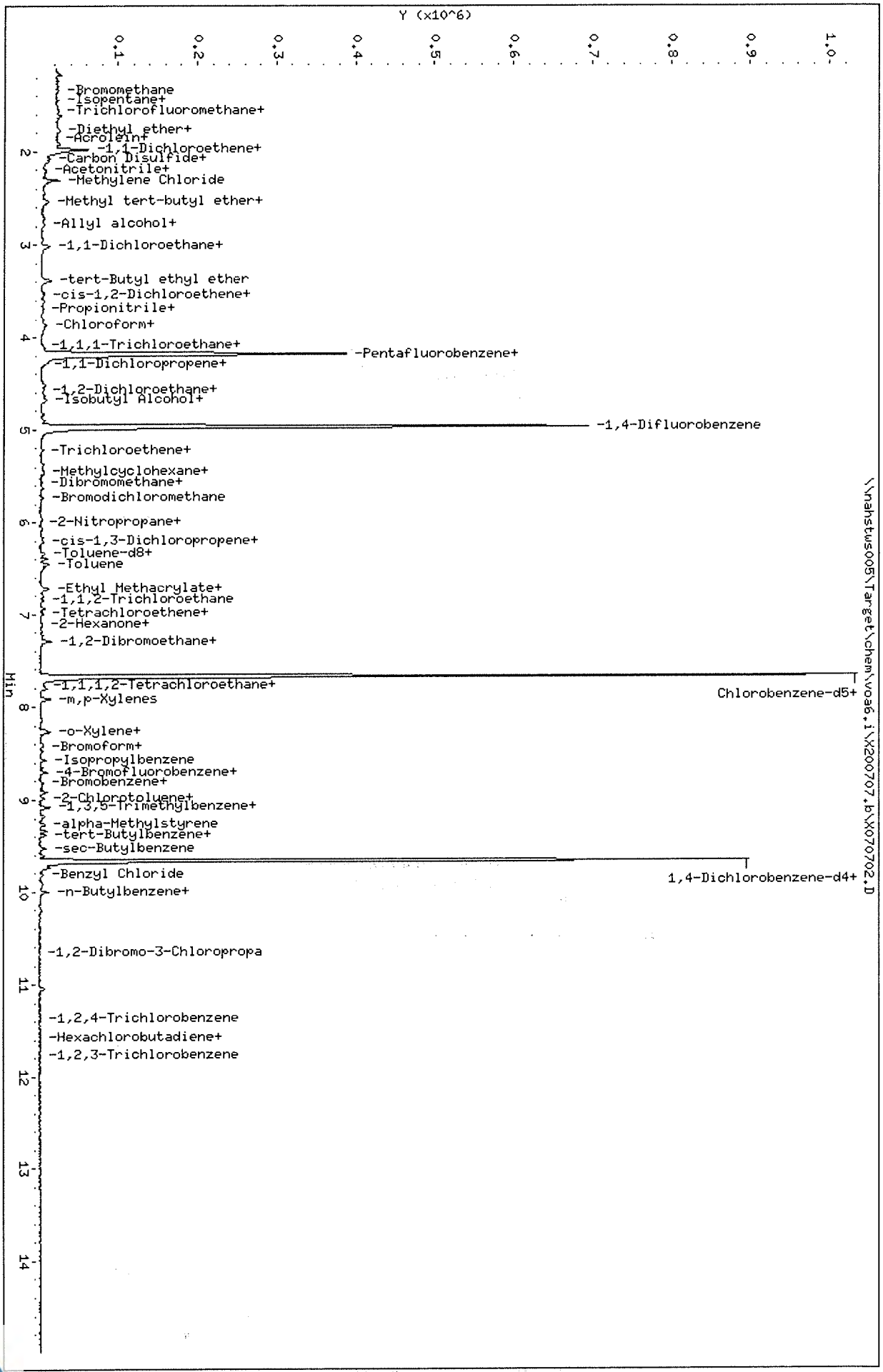
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.189	4.189	(1.000)	306082	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	510067	50.0000	
* 47 Chlorobenzene-d5	117	7.670	7.670	(1.000)	446154	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	206242	50.0000	
$ 30 Dibromofluoromethane	113	4.118	4.118	(0.983)	1254	0.25000	(a)
$ 35 1,2-Dichloroethane-d4	65	4.483	4.483	(1.070)	1712	0.25000	(Ta)
$ 48 Toluene-d8	98	6.395	6.395	(0.834)	4352	0.25000	0.37(Ta)
$ 69 4-Bromofluorobenzene	95	8.702	8.702	(1.134)	2767	0.25000	(a)
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	1134	0.25000	0.33(a)
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.976)	1562	0.25000	0.27(a)
68 1,1,2,2-Tetrachloroethane	83	8.845	8.845	(0.915)	1426	0.25000	0.34(aM)
53 1,1,2-Trichloroethane	83	6.847	6.847	(0.893)	944	0.25000	0.33(a)
22 1,1-Dichloroethane	63	2.929	2.929	(0.699)	2542	0.25000	0.29(Ta)
11 1,1-Dichloroethene	96	1.911	1.911	(0.456)	978	0.25000	0.34(a)
32 1,1-Dichloropropene	75	4.290	4.290	(0.863)	1650	0.25000	0.32(a)
93 1,2,3-Trichlorobenzene	180	11.761	11.761	(1.216)	185	0.25000	1.83(aM)
71 1,2,3-Trichloropropane	75	8.874	8.874	(0.918)	1081	0.25000	0.30(aM)
90 1,2,4-Trichlorobenzene	180	11.359	11.359	(1.175)	487	0.25000	1.67(aM)
79 1,2,4-Trimethylbenzene	105	9.390	9.390	(0.971)	3863	0.25000	0.31(a)
89 1,2-Dibromo-3-Chloropropane	155	10.650	10.650	(1.101)	28	0.25000	(aM)
57 1,2-Dibromoethane	107	7.269	7.269	(0.948)	1264	0.25000	0.35(a)
88 1,2-Dichlorobenzene	146	9.998	9.998	(1.034)	1980	0.25000	0.32(a)

Data File: \\nahstws005\Target\chem\voa6.i\X200707.b\X070702.D Page 2
Report Date: 12-Aug-2020 15:35

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
33	1,2-Dichloroethane	62	4.569	4.569	(0.919)	2308	0.25000	0.36 (a)
42	1,2-Dichloropropane	63	5.443	5.443	(1.095)	522	0.25000	0.11 (aM)
75	1,3,5-Trimethylbenzene	105	9.074	9.074	(0.939)	3560	0.25000	0.30 (a)
83	1,3-Dichlorobenzene	146	9.612	9.612	(0.994)	2025	0.25000	0.30 (a)
54	1,3-Dichloropropane	76	6.990	6.990	(0.911)	1661	0.25000	0.27 (aM)
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	2179	0.25000	0.14 (a)
26	2,2-Dichloropropane	77	3.523	3.523	(0.841)	1629	0.25000	0.30 (aM)
24	2-Butanone	43	3.602	3.602	(0.860)	2182	0.50000	(aM)
76	2-Chlorotoluene	91	8.981	8.981	(0.929)	3634	0.25000	0.35 (a)
52	2-Hexanone	43	7.105	7.105	(0.926)	2527	0.50000	(a)
77	4-Chlorotoluene	91	9.082	9.082	(0.939)	3661	0.25000	0.31 (a)
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	3422	0.25000	0.29 (a)
45	4-Methyl-2-Pentanone	43	6.338	6.338	(0.826)	4865	0.50000	(aM)
10	Acetone	43	1.969	1.969	(0.470)	10435	0.50000	(aM)
37	Benzene	78	4.526	4.526	(0.911)	4885	0.25000	0.33 (a)
74	Bromobenzene	156	8.817	8.817	(0.912)	1187	0.25000	0.30 (a)
29	Bromochloromethane	128	3.795	3.795	(0.906)	885	0.25000	0.41 (aM)
39	Bromodichloromethane	83	5.729	5.729	(1.153)	1667	0.25000	0.32 (aM)
66	Bromoform	173	8.415	8.415	(1.097)	719	0.25000	0.29 (aM)
6	Bromomethane	94	1.338	1.338	(0.320)	935	0.25000	0.35 (aM)
19	Carbon Disulfide	76	2.076	2.076	(0.496)	6334	0.50000	0.68 (a)
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	1350	0.25000	0.27 (aM)
59	Chlorobenzene	112	7.699	7.699	(1.004)	2558	0.25000	0.28 (a)
7	Chloroethane	64	1.410	1.410	(0.337)	1384	0.25000	(aM)
28	Chloroform	83	3.917	3.917	(0.935)	1841	0.25000	0.27 (a)
3	Chloromethane	50	1.080	1.080	(0.258)	2307	0.25000	0.36 (a)
27	cis-1,2-Dichloroethene	96	3.537	3.537	(0.844)	1365	0.25000	0.34 (a)
46	cis-1,3-Dichloropropene	75	6.166	6.166	(1.241)	1727	0.25000	0.28 (a)
55	Dibromochloromethane	129	7.183	7.183	(0.937)	1262	0.25000	0.34 (a)
44	Dibromomethane	93	5.565	5.565	(1.120)	851	0.25000	0.33 (a)
2	Dichlorodifluoromethane	85	0.973	0.973	(0.232)	1068	0.25000	0.28 (aM)
61	Ethylbenzene	106	7.807	7.807	(1.018)	1421	0.25000	0.29 (a)
91	Hexachlorobutadiene	225	11.488	11.488	(1.188)	183	0.25000	1.51 (aM)
67	Isopropylbenzene	105	8.566	8.566	(1.117)	4418	0.25000	0.30 (a)
62	m,p-Xylenes	106	7.907	7.907	(1.031)	3360	0.50000	0.58 (a)
17	Methylene Chloride	84	2.298	2.298	(0.549)	1154	0.25000	0.34 (aM)
87	n-Butylbenzene	91	10.006	10.006	(1.035)	3163	0.25000	0.30 (a)
73	n-Propylbenzene	91	8.917	8.917	(0.922)	4653	0.25000	0.27 (aM)
92	Naphthalene	128	11.574	11.574	(1.197)	939	0.25000	0.76 (aM)
63	o-Xylene	106	8.251	8.251	(1.076)	1821	0.25000	0.32 (a)
81	sec-Butylbenzene	105	9.526	9.526	(0.985)	4276	0.25000	0.30 (a)
64	Styrene	104	8.265	8.265	(1.078)	2911	0.25000	0.29 (a)
78	tert-Butylbenzene	119	9.339	9.339	(0.966)	3094	0.25000	0.32 (a)
56	Tetrachloroethene	164	6.933	6.933	(0.904)	944	0.25000	0.34 (a)
50	Toluene	91	6.460	6.460	(0.842)	4228	0.25000	0.29 (a)
20	trans-1,2-Dichloroethene	96	2.542	2.542	(0.607)	1236	0.25000	0.36 (a)
51	trans-1,3-Dichloropropene	75	6.696	6.696	(1.347)	1670	0.25000	0.30 (a)
38	Trichloroethene	130	5.221	5.221	(1.050)	1045	0.25000	0.27 (a)
8	Trichlorofluoromethane	101	1.560	1.560	(0.373)	1760	0.25000	0.33 (a)
5	Vinyl Chloride	62	1.145	1.145	(0.273)	1976	0.25000	0.36 (a)

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\X200707.b\X070702.D
Date : 07-JUL-2020 11:06
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\X200707.b\X070703.D Page 1
Report Date: 12-Aug-2020 15:35

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200707.b\X070703.D
Lab Smp Id: VSTD000.5 Client Smp ID: VSTD000.5
Inj Date : 07-JUL-2020 11:30
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\X200707.b\8260W.m
Meth Date : 12-Aug-2020 15:35 voa6.i Quant Type: ISTD
Cal Date : 07-JUL-2020 11:06 Cal File: X070702.D
Als bottle: 3 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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

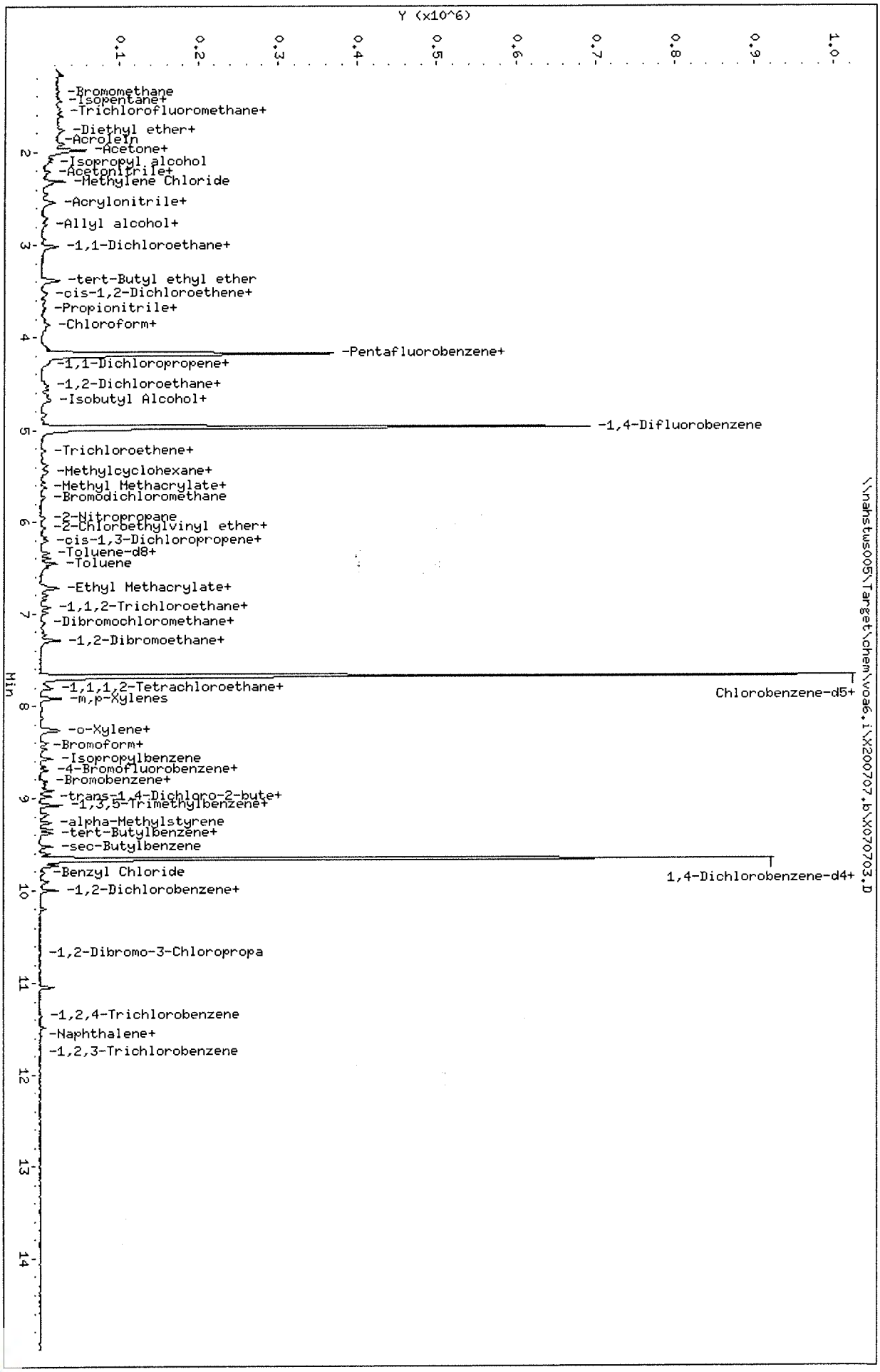
Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
*	1 Pentafluorobenzene	168	4.189	4.189	(1.000)	289846	50.0000	
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	489976	50.0000	
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	439026	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	207323	50.0000	
$	30 Dibromofluoromethane	113	4.103	4.103	(0.979)	2185	0.50000	(a)
$	35 1,2-Dichloroethane-d4	65	4.483	4.483	(1.070)	3020	0.50000	0.01(Ta)
$	48 Toluene-d8	98	6.396	6.396	(0.834)	7187	0.50000	0.62(a)
$	69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	3626	0.50000	(a)
	60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	1986	0.50000	0.58(a)
	31 1,1,1-Trichloroethane	97	4.096	4.096	(0.978)	2870	0.50000	0.54(a)
	68 1,1,2,2-Tetrachloroethane	83	8.845	8.845	(0.915)	2607	0.50000	0.63(aM)
	53 1,1,2-Trichloroethane	83	6.847	6.847	(0.893)	1712	0.50000	0.61(a)
	22 1,1-Dichloroethane	63	2.929	2.929	(0.699)	5469	0.50000	0.66(Ta)
	11 1,1-Dichloroethene	96	1.919	1.919	(0.458)	1635	0.50000	0.60(a)
	32 1,1-Dichloropropene	75	4.290	4.290	(0.863)	2732	0.50000	0.56(aM)
	93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.215)	450	0.50000	2.22(aM)
	71 1,2,3-Trichloropropane	75	8.874	8.874	(0.918)	2034	0.50000	0.56(aM)
	90 1,2,4-Trichlorobenzene	180	11.352	11.352	(1.174)	839	0.50000	1.93(aM)
	79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.970)	7739	0.50000	0.63(a)
	89 1,2-Dibromo-3-Chloropropane	155	10.665	10.665	(1.103)	171	0.50000	(aM)
	57 1,2-Dibromoethane	107	7.270	7.270	(0.948)	2238	0.50000	0.63(a)
	88 1,2-Dichlorobenzene	146	9.999	9.999	(1.034)	3987	0.50000	0.65(a)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
33	1,2-Dichloroethane	62	4.569	4.569	(0.919)	3638	0.50000	0.59(a)
42	1,2-Dichloropropane	63	5.443	5.443	(1.095)	2406	0.50000	0.52(aM)
75	1,3,5-Trimethylbenzene	105	9.075	9.075	(0.939)	7272	0.50000	0.61(a)
83	1,3-Dichlorobenzene	146	9.612	9.612	(0.994)	4193	0.50000	0.63(aM)
54	1,3-Dichloropropane	76	6.990	6.990	(0.911)	3596	0.50000	0.61(a)
84	1,4-Dichlorobenzene	146	9.691	9.691	(1.002)	4670	0.50000	0.54(a)
26	2,2-Dichloropropane	77	3.516	3.516	(0.839)	3118	0.50000	0.62(aM)
24	2-Butanone	43	3.602	3.602	(0.860)	4038	1.00000	(aM)
76	2-Chlorotoluene	91	8.982	8.982	(0.929)	6870	0.50000	0.66(aM)
52	2-Hexanone	43	7.105	7.105	(0.926)	5501	1.00000	(aM)
77	4-Chlorotoluene	91	9.075	9.075	(0.939)	7393	0.50000	0.62(aM)
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	7189	0.50000	0.60(a)
45	4-Methyl-2-Pentanone	43	6.338	6.338	(0.826)	9002	1.00000	(aM)
10	Acetone	43	1.976	1.976	(0.472)	47904	1.00000	(a)
37	Benzene	78	4.519	4.519	(0.909)	8358	0.50000	0.59(a)
74	Bromobenzene	156	8.817	8.817	(0.912)	2278	0.50000	0.57(a)
29	Bromochloromethane	128	3.803	3.803	(0.908)	1262	0.50000	0.62(aM)
39	Bromodichloromethane	83	5.737	5.737	(1.154)	2660	0.50000	0.54(aM)
66	Bromoform	173	8.416	8.416	(1.097)	1370	0.50000	0.56(Ta)
6	Bromomethane	94	1.346	1.346	(0.321)	1573	0.50000	0.69(aM)
19	Carbon Disulfide	76	2.069	2.069	(0.494)	10020	1.00000	1.13(a)
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	2549	0.50000	0.54(aM)
59	Chlorobenzene	112	7.699	7.699	(1.004)	5752	0.50000	0.64(a)
7	Chloroethane	64	1.403	1.403	(0.335)	1996	0.50000	(aM)
28	Chloroform	83	3.910	3.910	(0.933)	3740	0.50000	0.58(a)
3	Chloromethane	50	1.081	1.081	(0.258)	3684	0.50000	0.61(a)
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.843)	2295	0.50000	0.60(a)
46	cis-1,3-Dichloropropene	75	6.166	6.166	(1.241)	3591	0.50000	0.60(a)
55	Dibromochloromethane	129	7.184	7.184	(0.937)	2159	0.50000	0.59(a)
44	Dibromomethane	93	5.565	5.565	(1.120)	1522	0.50000	0.61(a)
2	Dichlorodifluoromethane	85	0.973	0.973	(0.232)	2066	0.50000	0.58(a)
61	Ethylbenzene	106	7.814	7.814	(1.019)	2765	0.50000	0.58(a)
91	Hexachlorobutadiene	225	11.481	11.481	(1.187)	964	0.50000	2.28(aM)
67	Isopropylbenzene	105	8.566	8.566	(1.117)	8856	0.50000	0.63(a)
62	m,p-Xylenes	106	7.914	7.914	(1.032)	7272	1.00000	1.27(a)
17	Methylene Chloride	84	2.298	2.298	(0.549)	1372	0.50000	0.43(aM)
87	n-Butylbenzene	91	9.999	9.999	(1.034)	6647	0.50000	0.63(aM)
73	n-Propylbenzene	91	8.917	8.917	(0.922)	10319	0.50000	0.61(aM)
92	Naphthalene	128	11.560	11.560	(1.196)	1869	0.50000	1.22(a)
63	o-Xylene	106	8.251	8.251	(1.076)	3394	0.50000	0.60(a)
81	sec-Butylbenzene	105	9.526	9.526	(0.985)	8687	0.50000	0.62(a)
64	Styrene	104	8.265	8.265	(1.077)	6060	0.50000	0.62(a)
78	tert-Butylbenzene	119	9.340	9.340	(0.966)	5977	0.50000	0.62(a)
56	Tetrachloroethene	164	6.940	6.940	(0.905)	1650	0.50000	0.61(a)
50	Toluene	91	6.453	6.453	(0.841)	8347	0.50000	0.59(a)
20	trans-1,2-Dichloroethene	96	2.542	2.542	(0.607)	1778	0.50000	0.56(a)
51	trans-1,3-Dichloropropene	75	6.697	6.697	(1.347)	2956	0.50000	0.55(a)
38	Trichloroethene	130	5.221	5.221	(1.050)	2267	0.50000	0.62(a)
8	Trichlorofluoromethane	101	1.561	1.561	(0.373)	2630	0.50000	0.52(aM)
5	Vinyl Chloride	62	1.145	1.145	(0.273)	2889	0.50000	0.56(aM)

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.

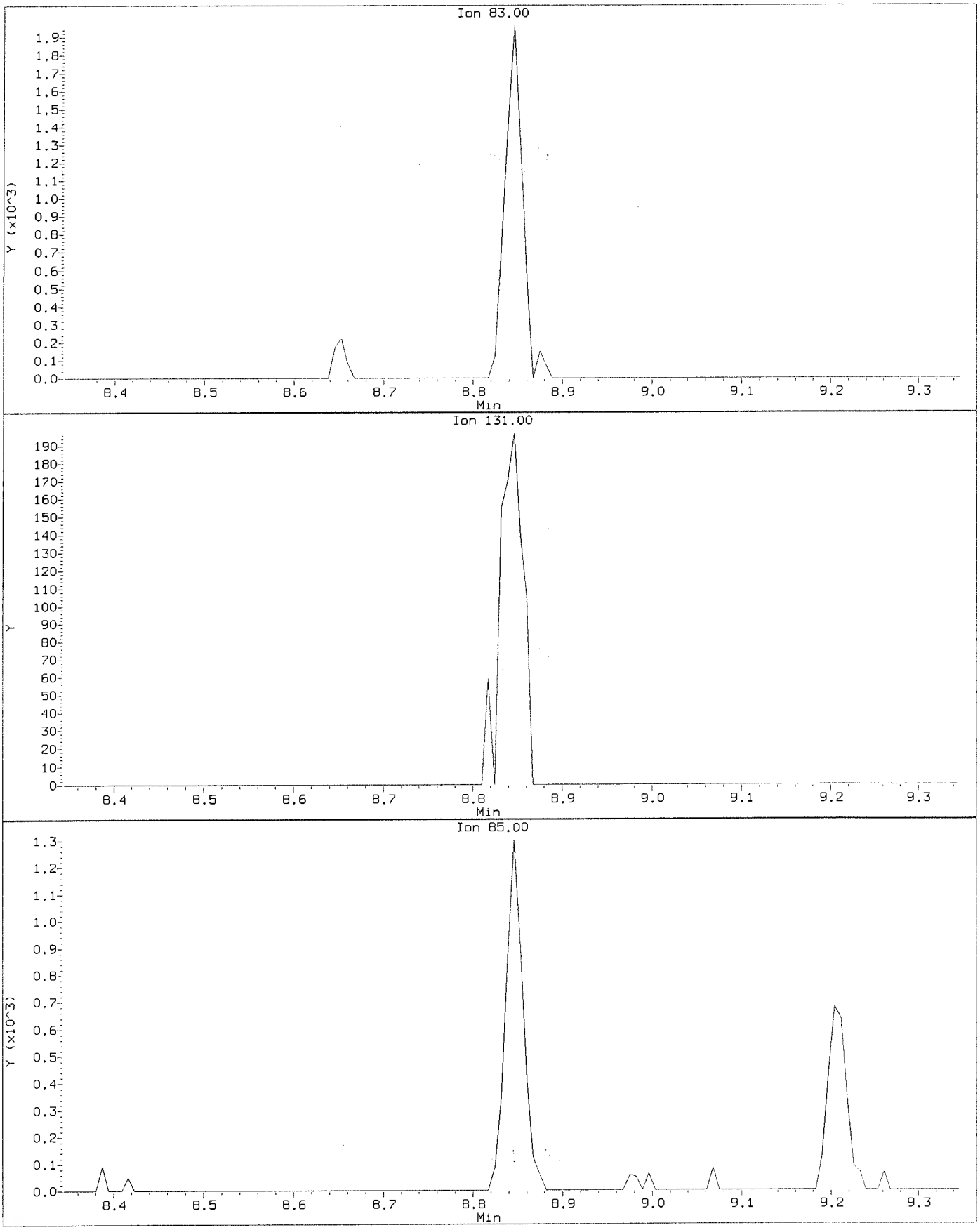


Data File: \\nahstws005\Target\chem\voa6.i\X200707.b\X070703.D
Date : 07-JUL-2020 11:30
Client ID: VSTD000.5
Sample Info: VSTD000.5;VSTD000.5;1;2;
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\nahstws005\Target\chem\voa6.i\X200707.b\Before\X070703.D
Injection Date: 07-JUL-2020 11:30
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: 1,1,2,2-Tetrachloroethane
CAS Number: 79-34-5



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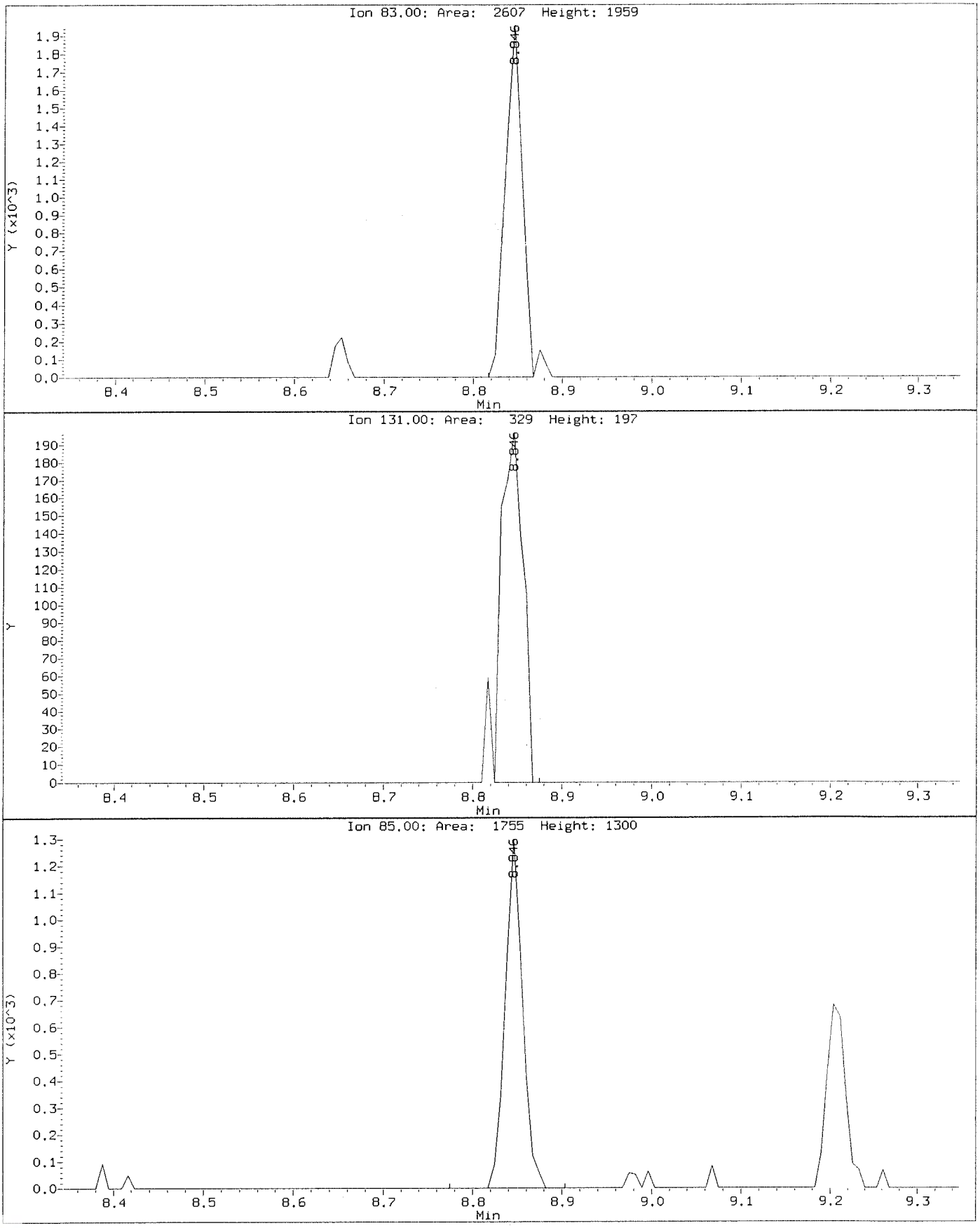
Injection Date: 07-JUL-2020 11:30
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: 1,1,2,2-Tetrachloroethane
CAS Number: 79-34-5



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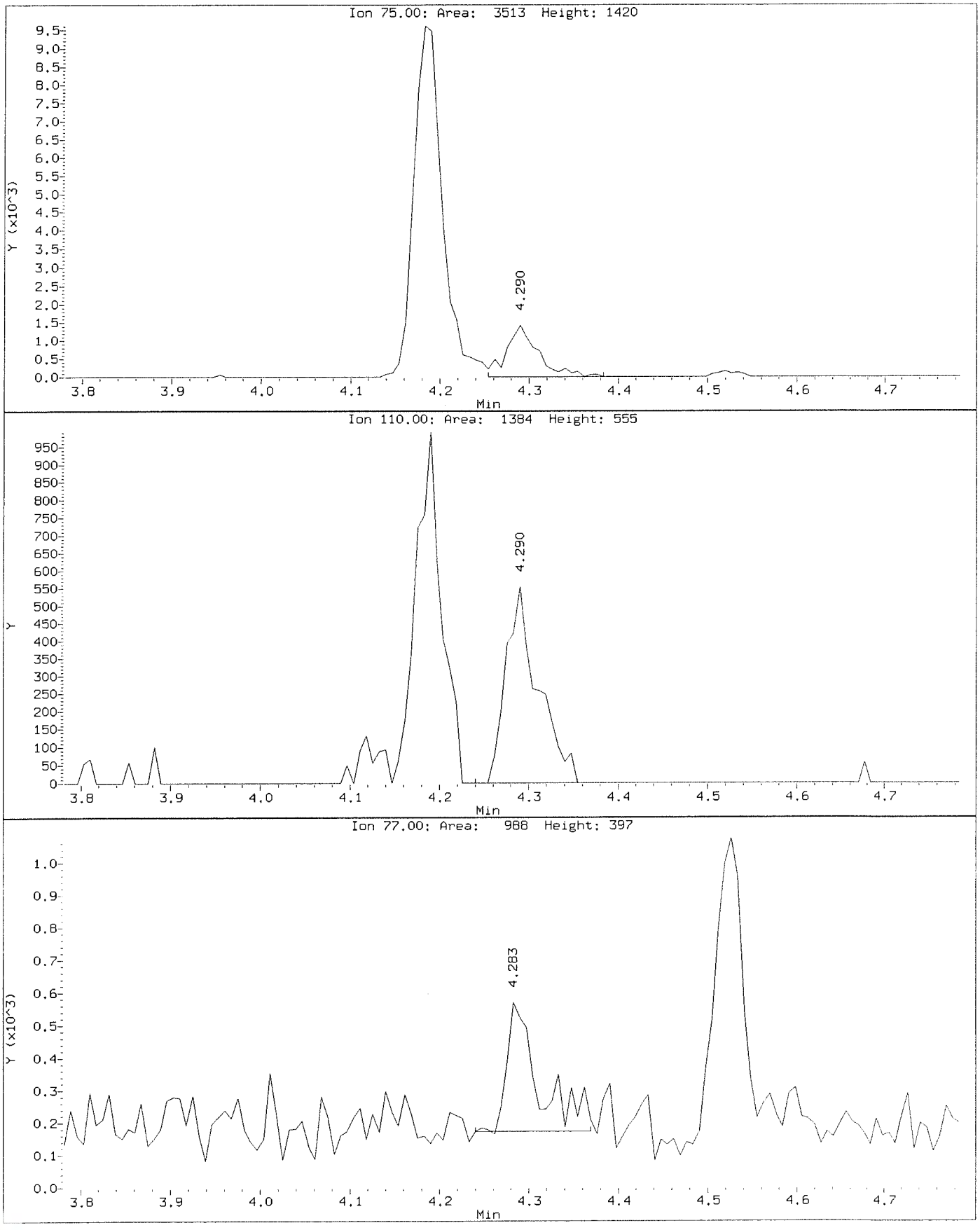
Injection Date: 07-JUL-2020 11:30
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: 1,1-Dichloropropene
CAS Number: 563-58-6



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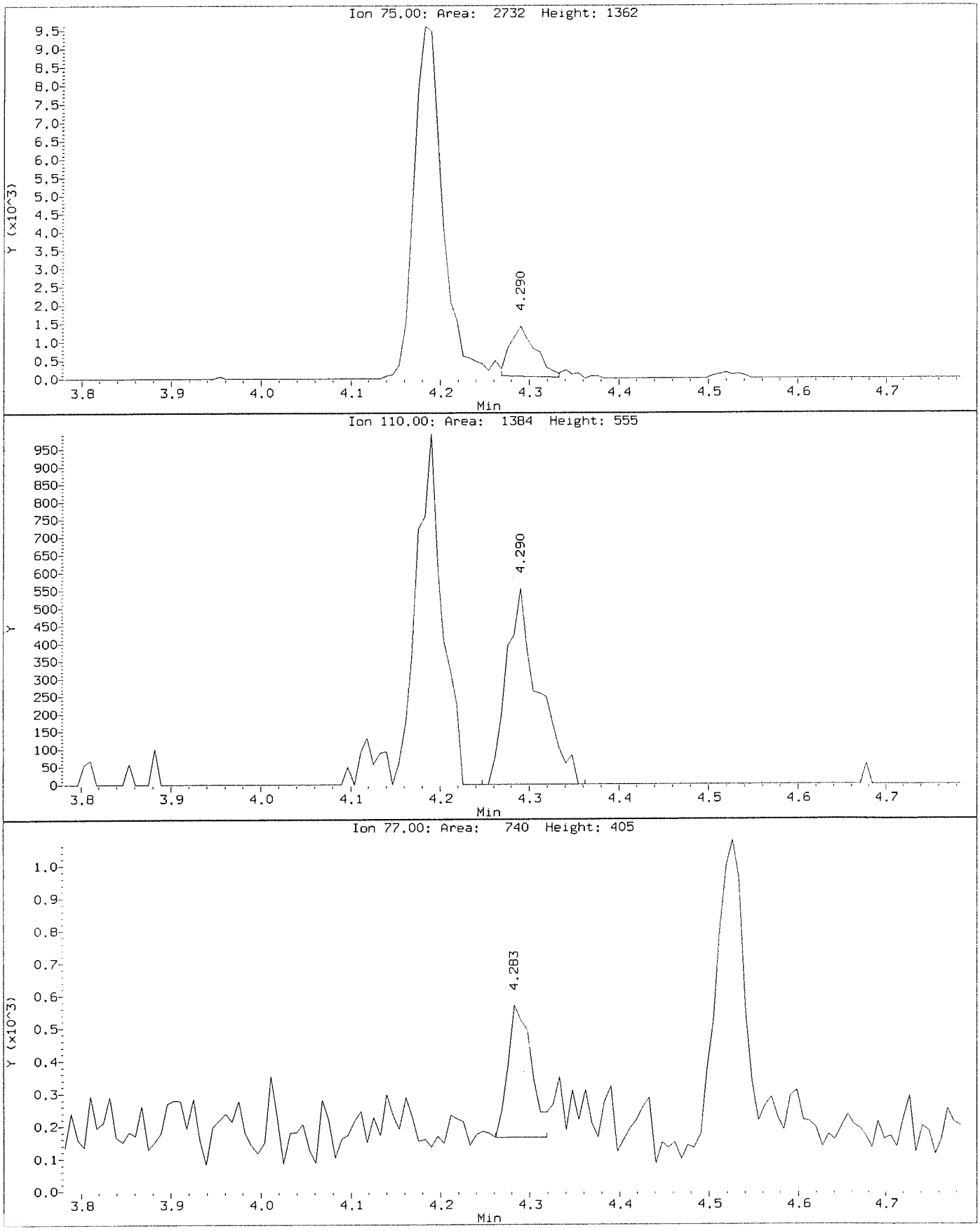
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: 1,1-Dichloropropene
CAS Number: 563-58-6



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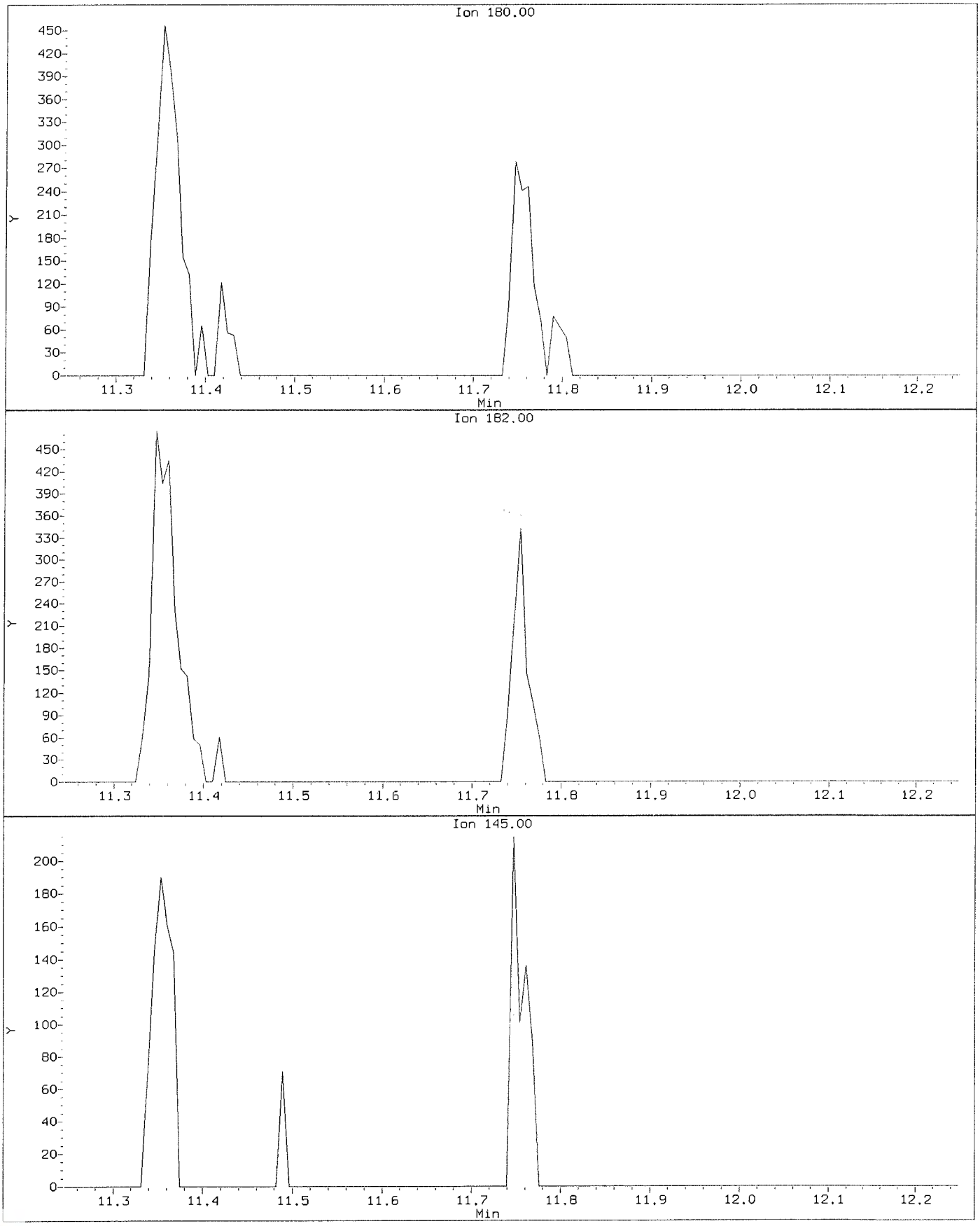
Injection Date: 07-JUL-2020 11:30
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: 1,2,3-Trichlorobenzene
CAS Number: 87-61-6



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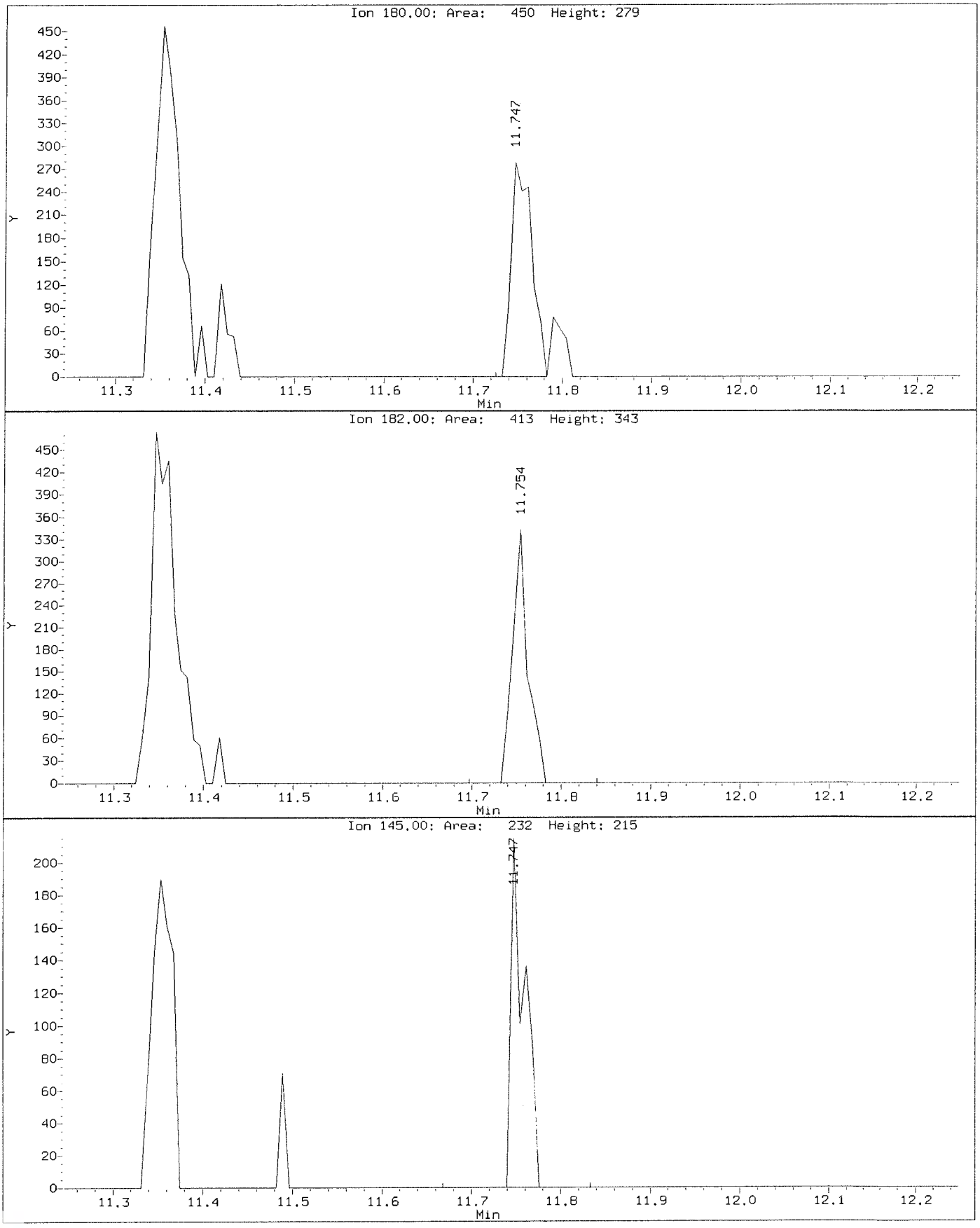
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: 1,2,3-Trichlorobenzene
CAS Number: 87-61-6



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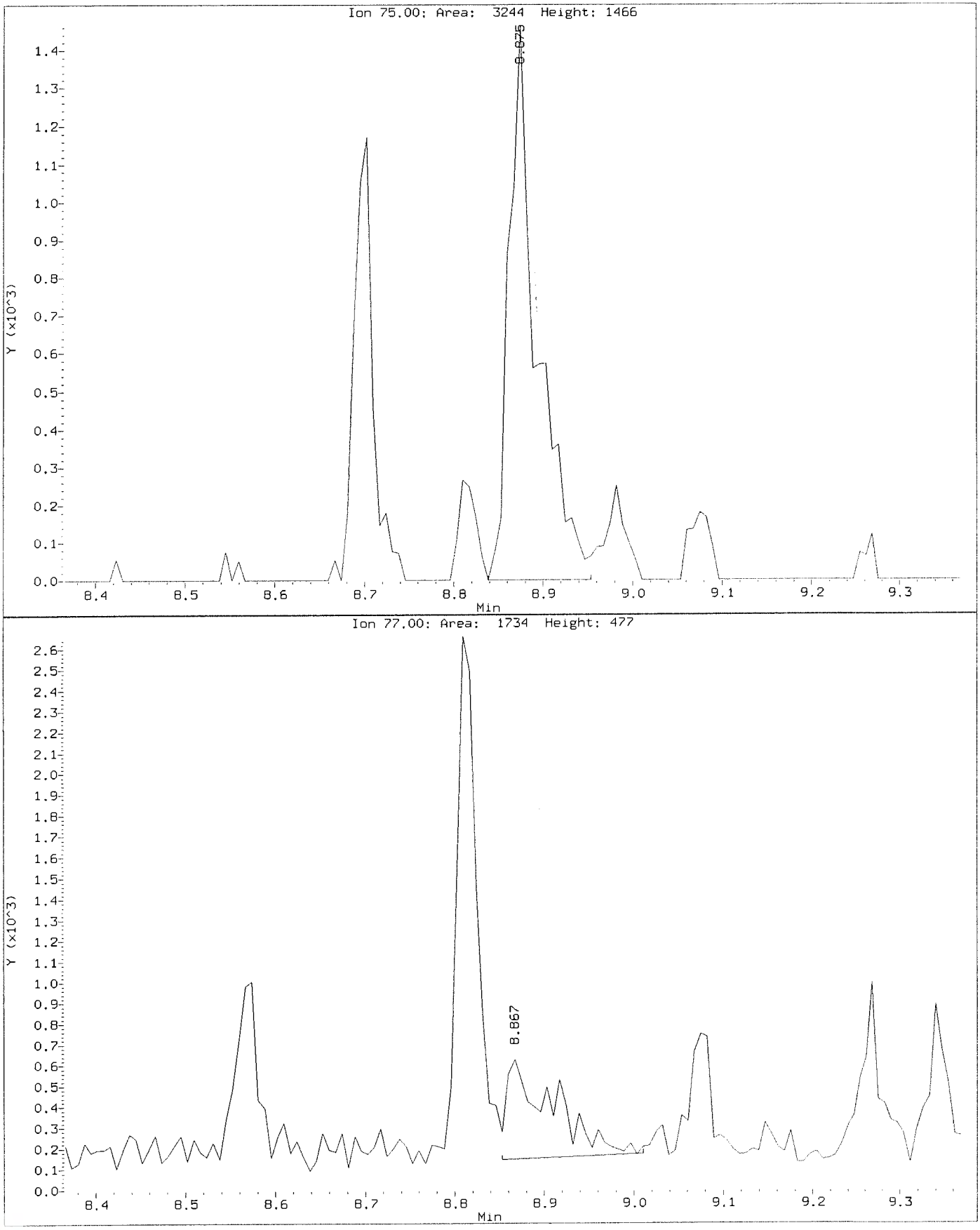
Injection Date: 07-JUL-2020 11:30
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4



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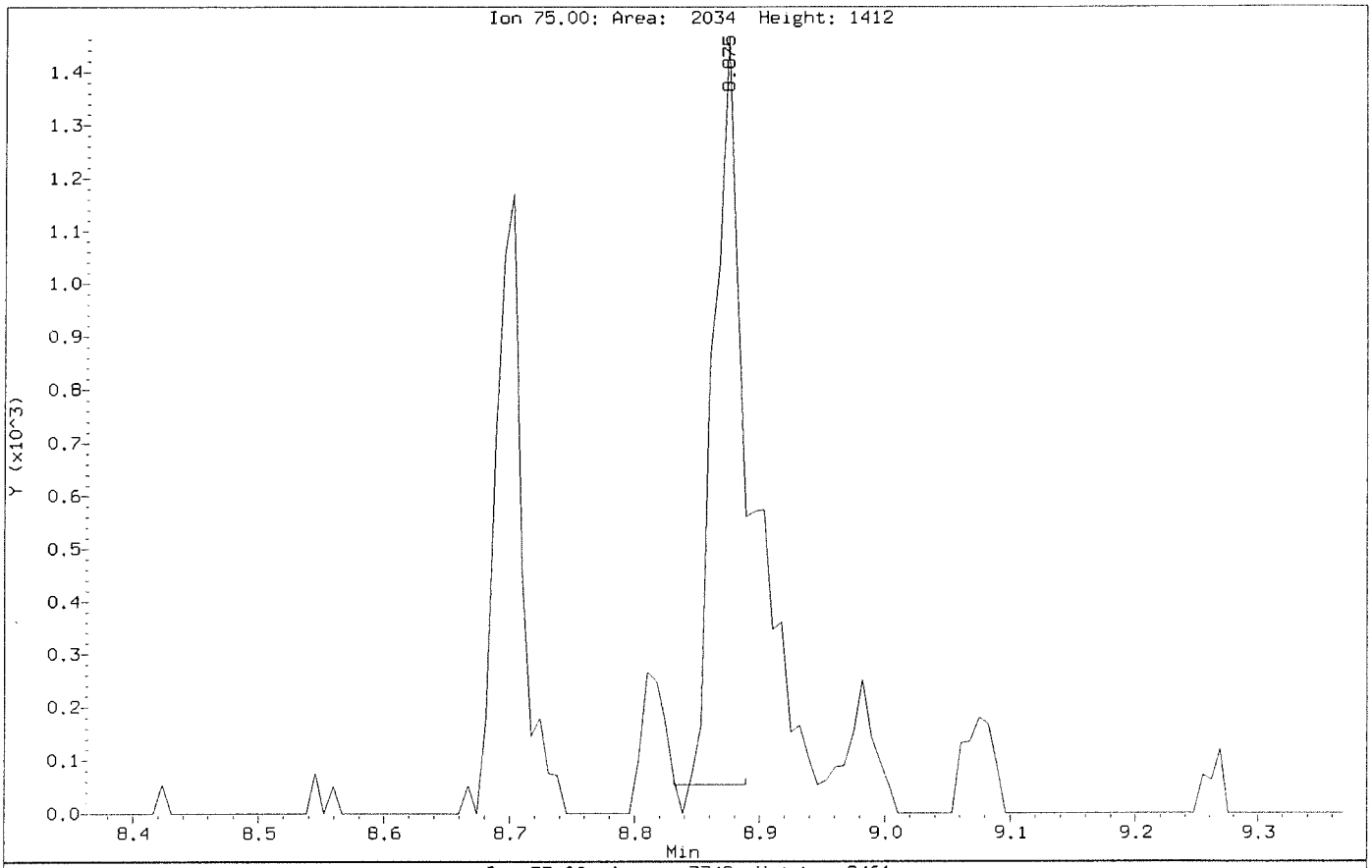
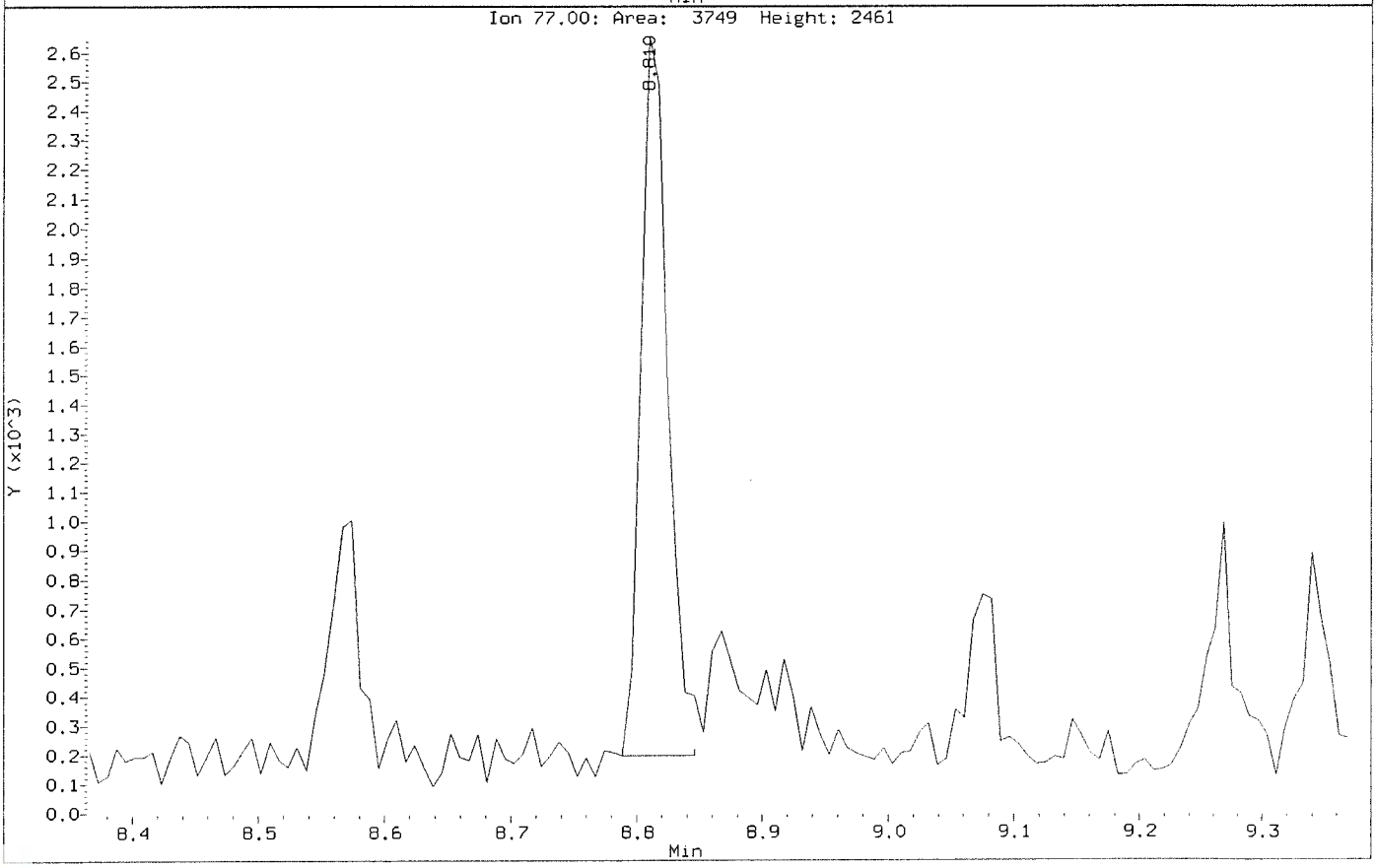
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





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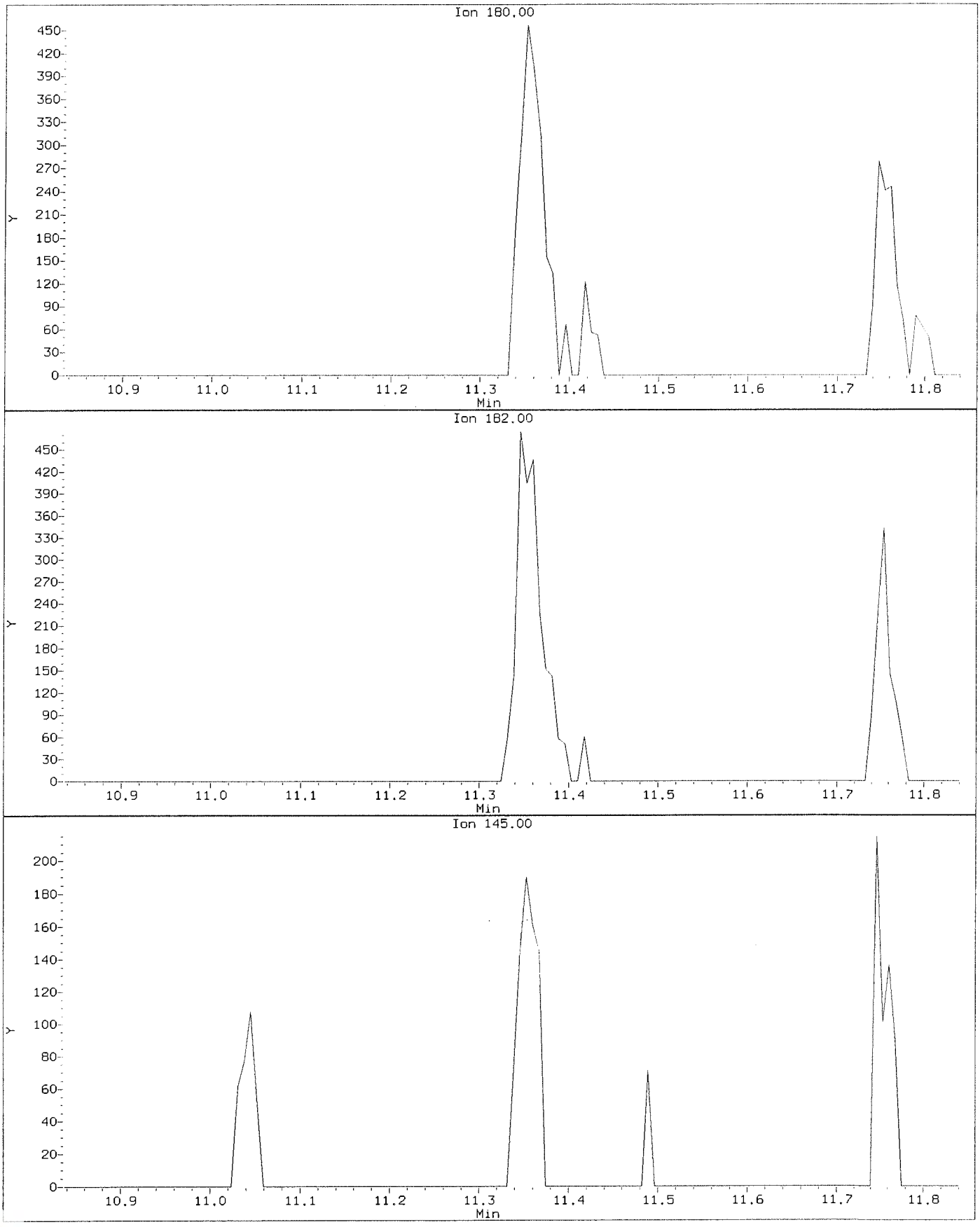
Injection Date: 07-JUL-2020 11:30
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: 1,2,4-Trichlorobenzene
CAS Number: 120-82-1



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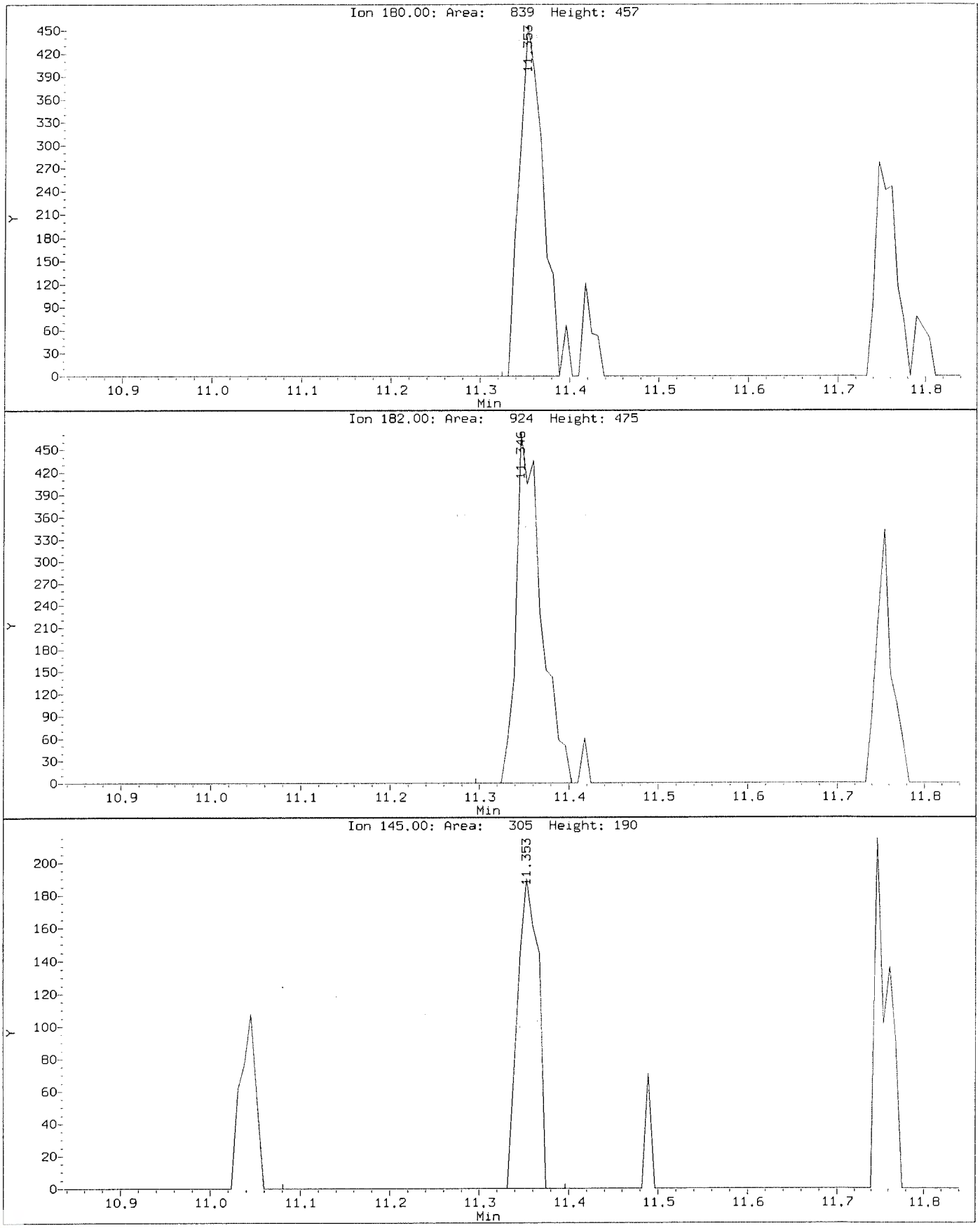
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: 1,2,4-Trichlorobenzene
CAS Number: 120-82-1



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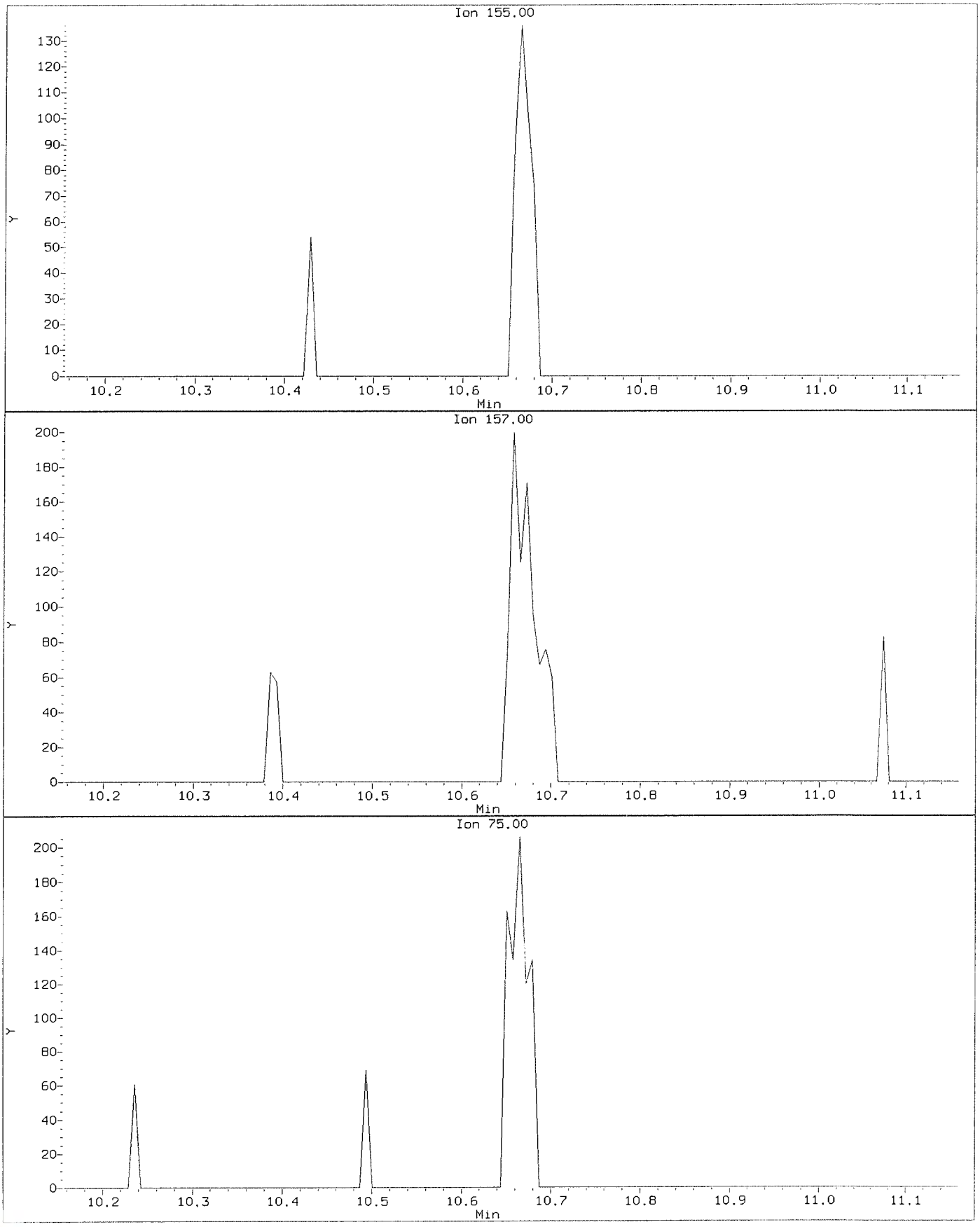
Injection Date: 07-JUL-2020 11:30
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: 1,2-Dibromo-3-Chloropropane
CAS Number: 96-12-8



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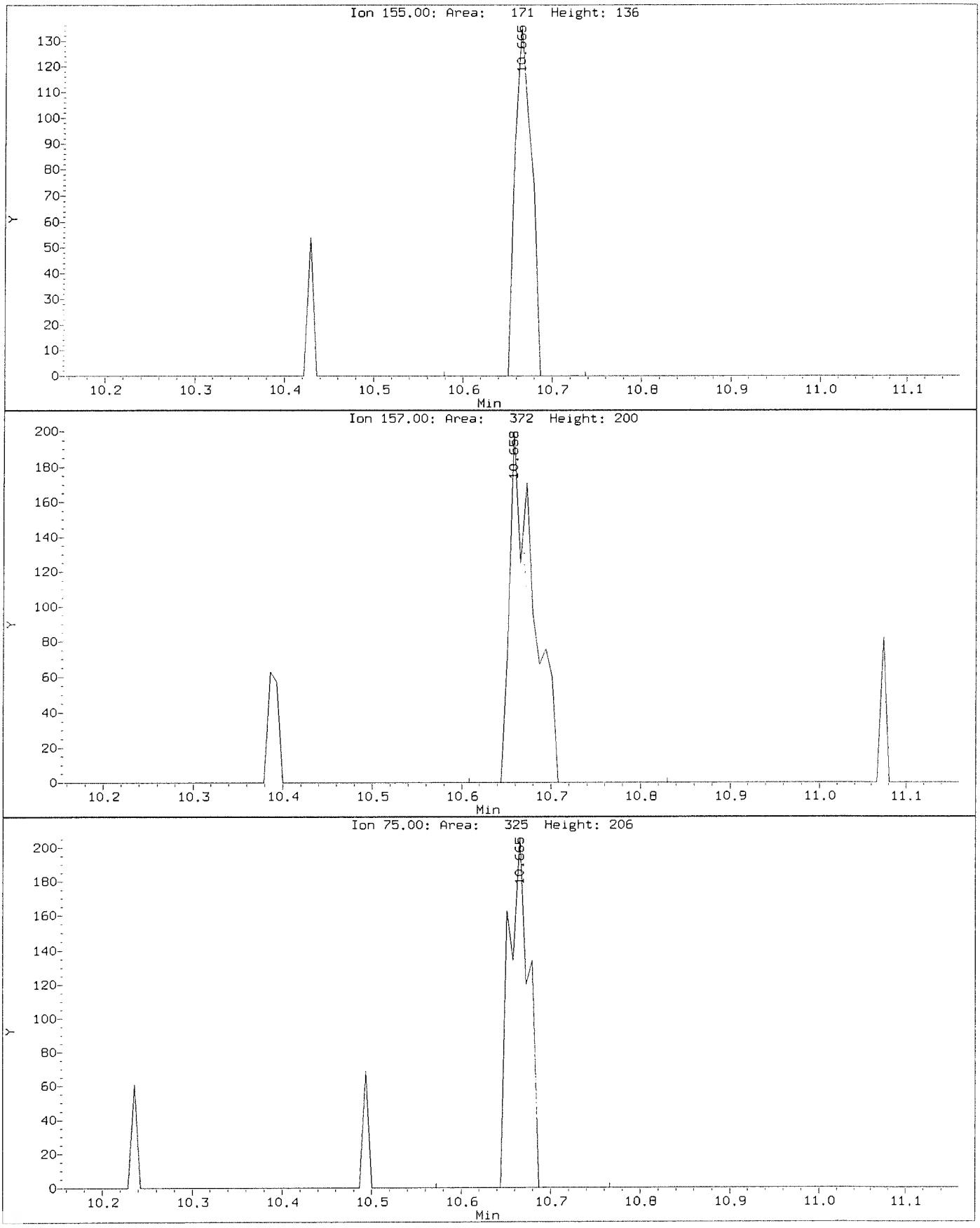
Client Sample ID: VSTD000.5

Compound: 1,2-Dibromo-3-Chloropropane
CAS Number: 96-12-8



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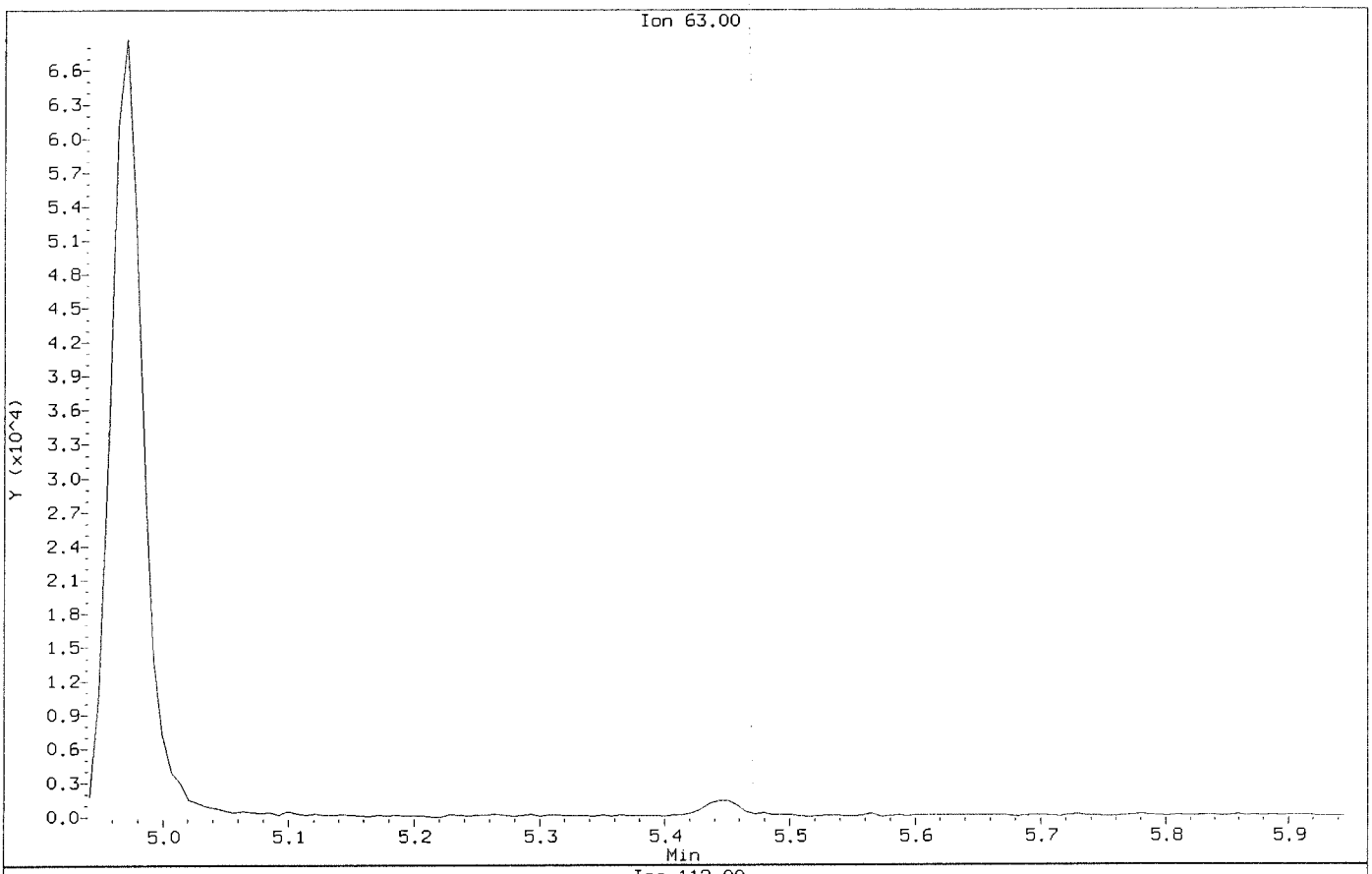
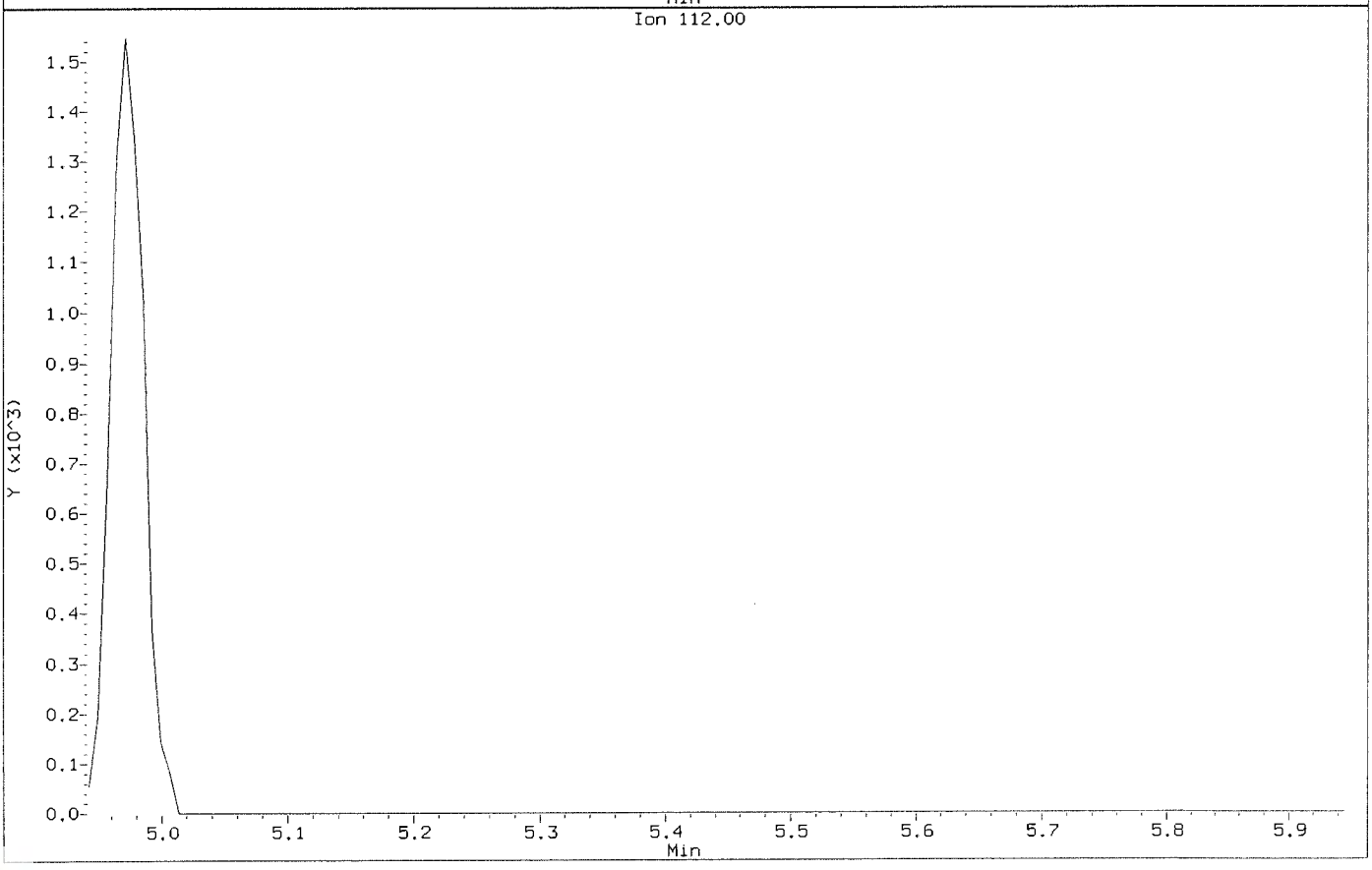
Injection Date: 07-JUL-2020 11:30
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: 1,2-Dichloropropane
CAS Number: 78-87-5





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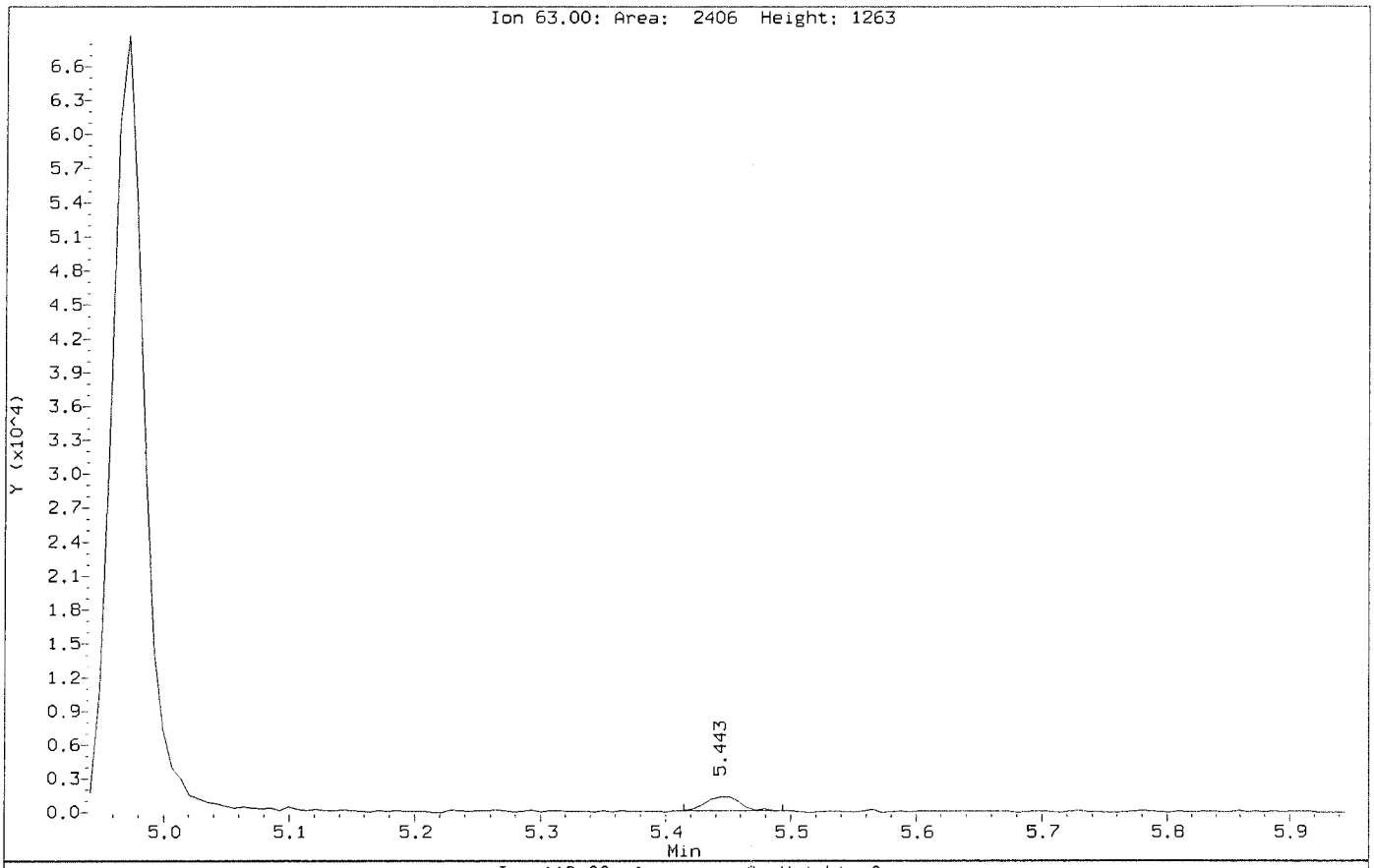
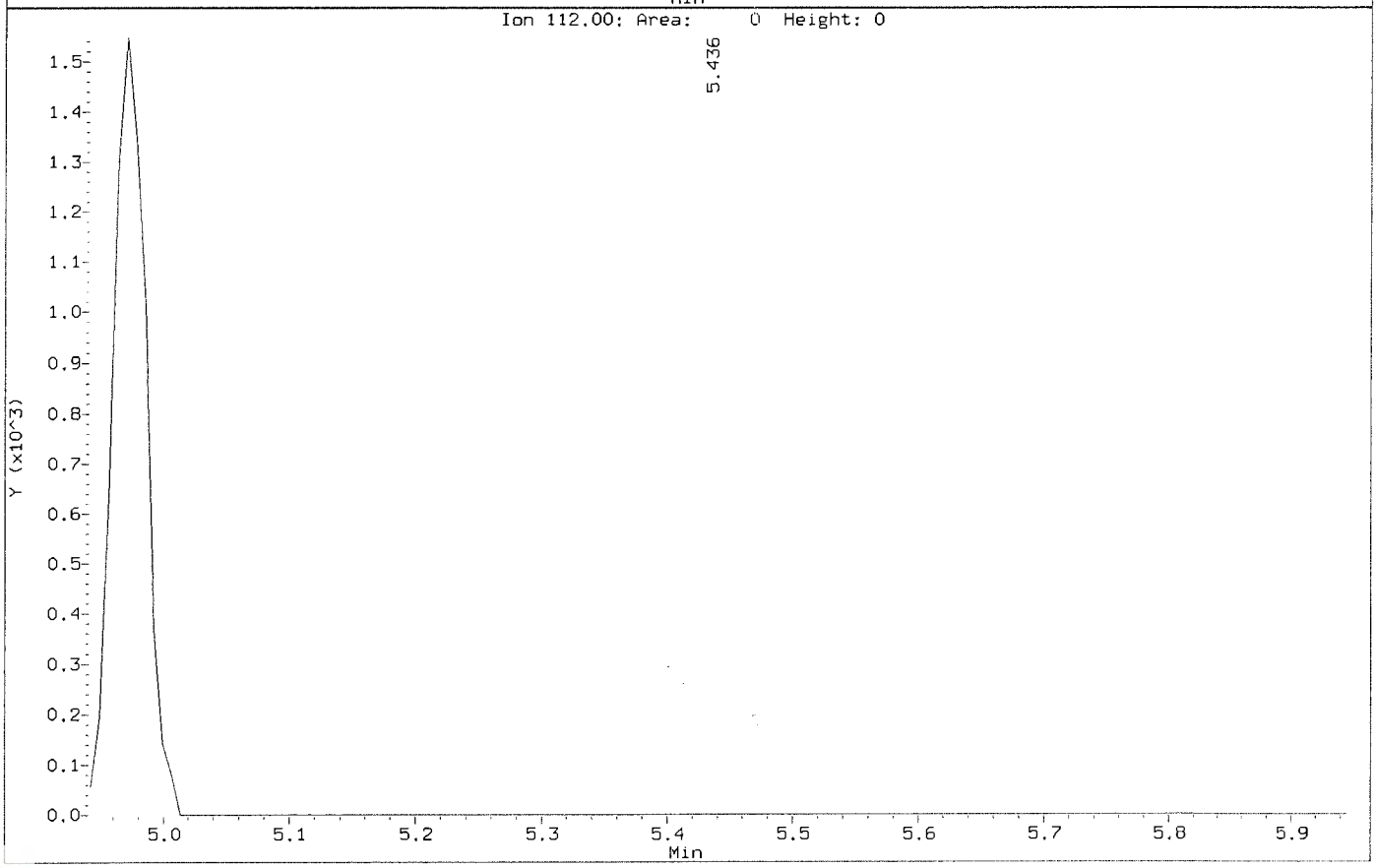
Client Sample ID: VSTD000.5

Compound: 1,2-Dichloropropane
CAS Number: 78-87-5





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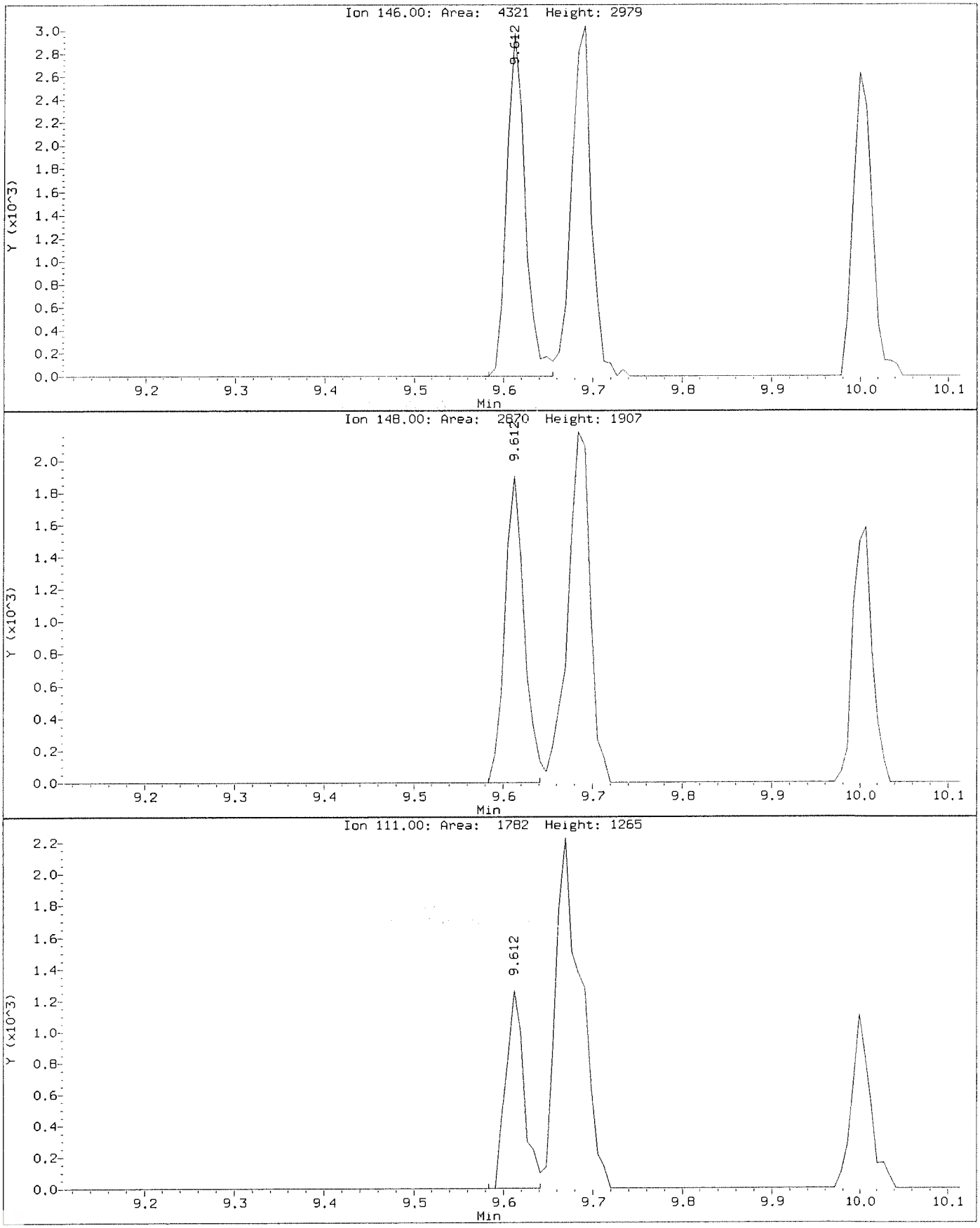
Injection Date: 07-JUL-2020 11:30
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: 1,3-Dichlorobenzene
CAS Number: 541-73-1



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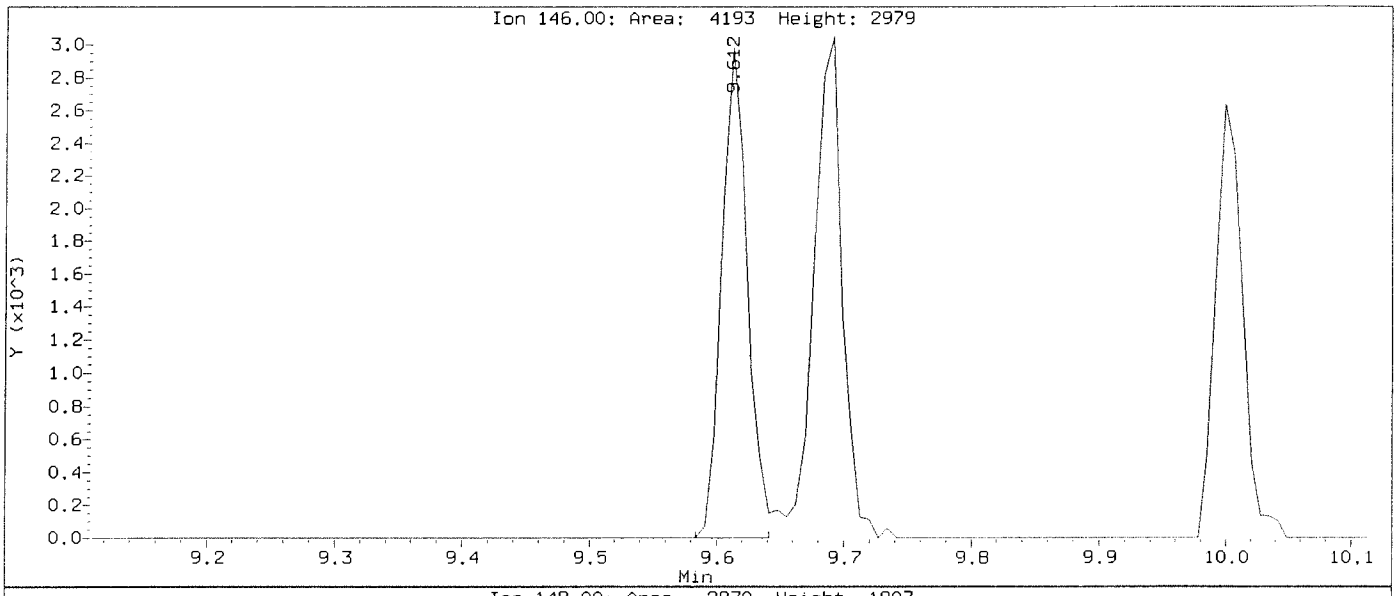
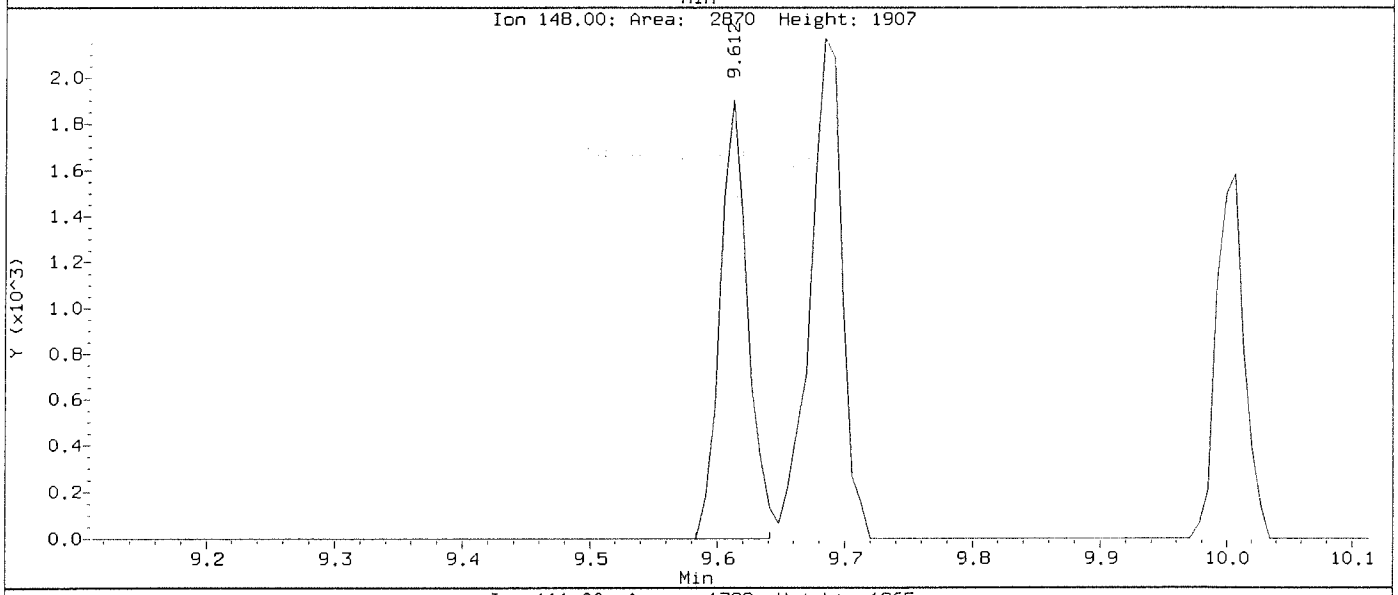
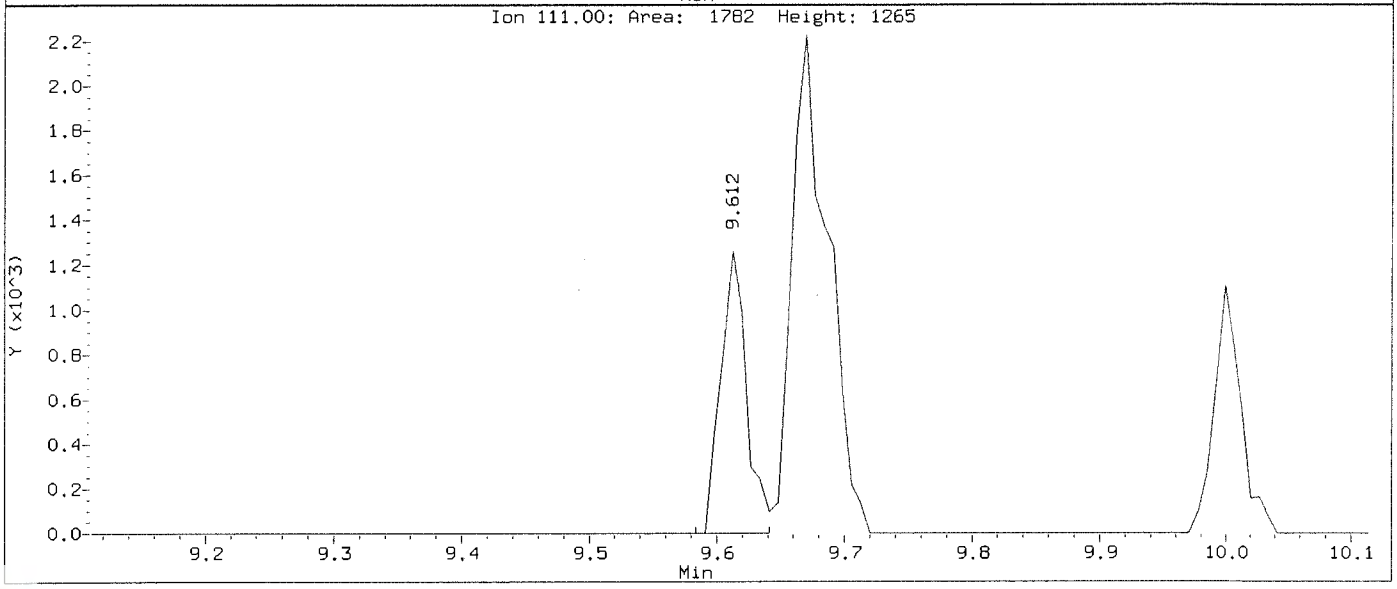
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: 1,3-Dichlorobenzene
CAS Number: 541-73-1







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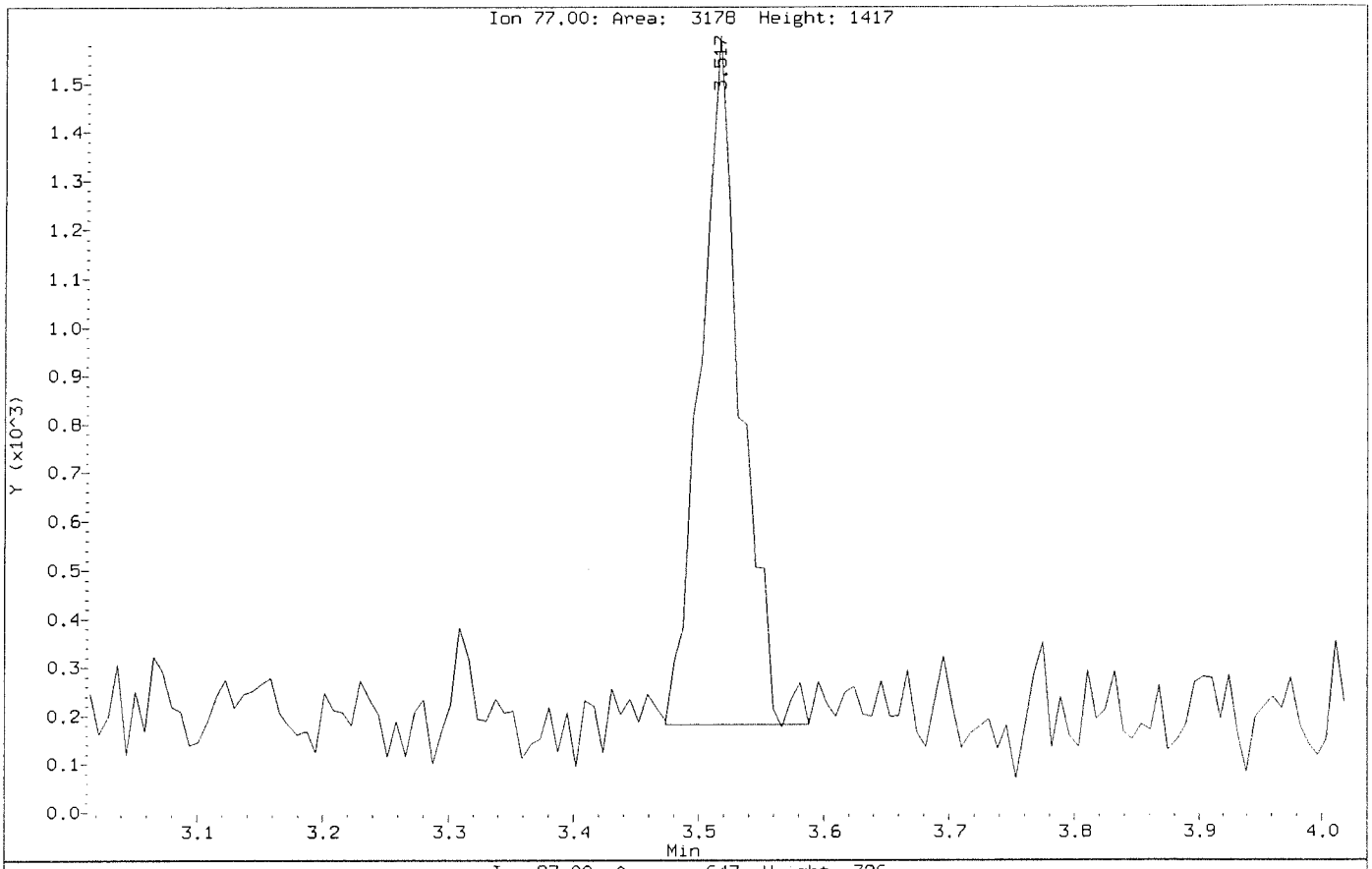
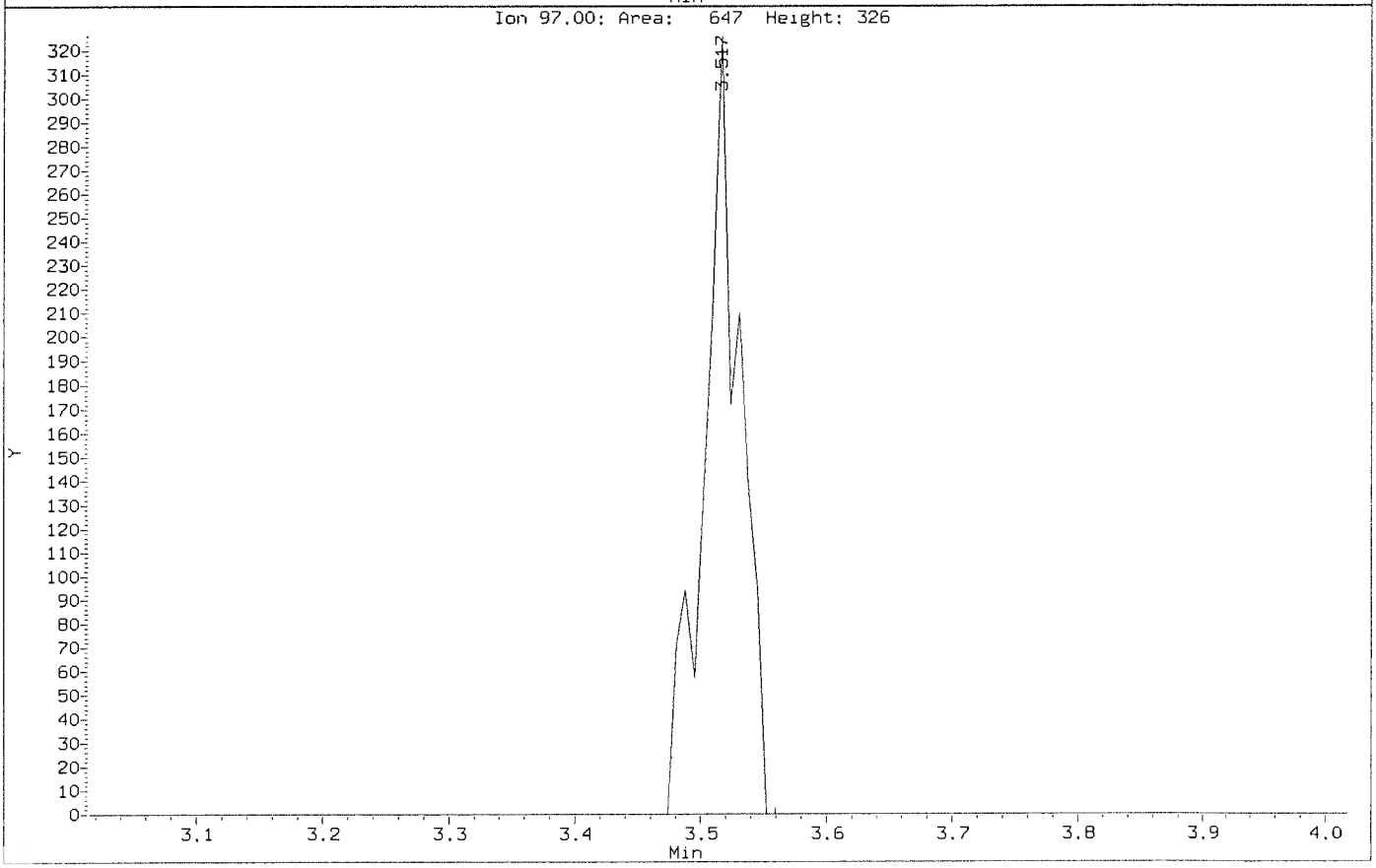
Injection Date: 07-JUL-2020 11:30
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: 2,2-Dichloropropane
CAS Number: 594-20-7





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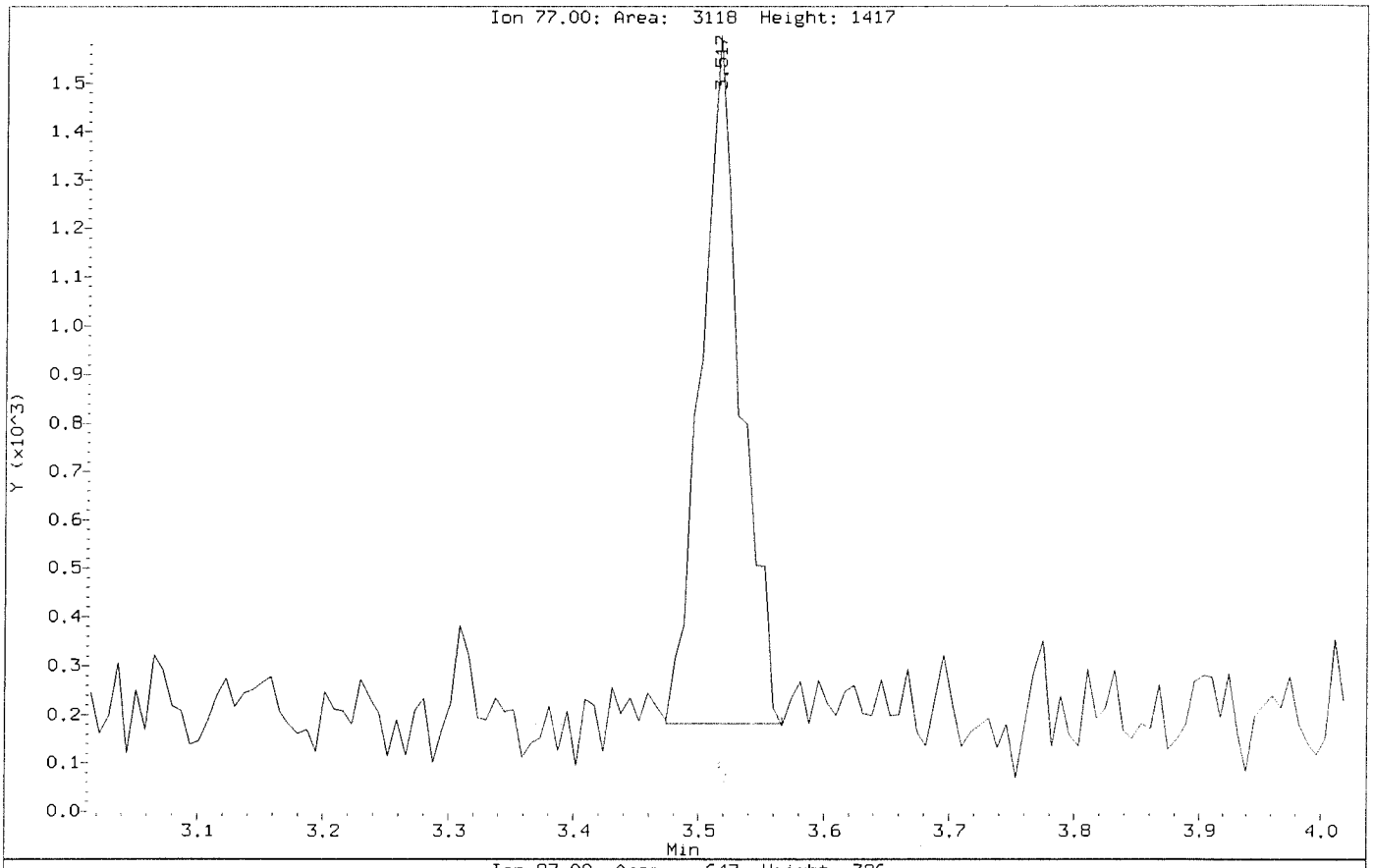
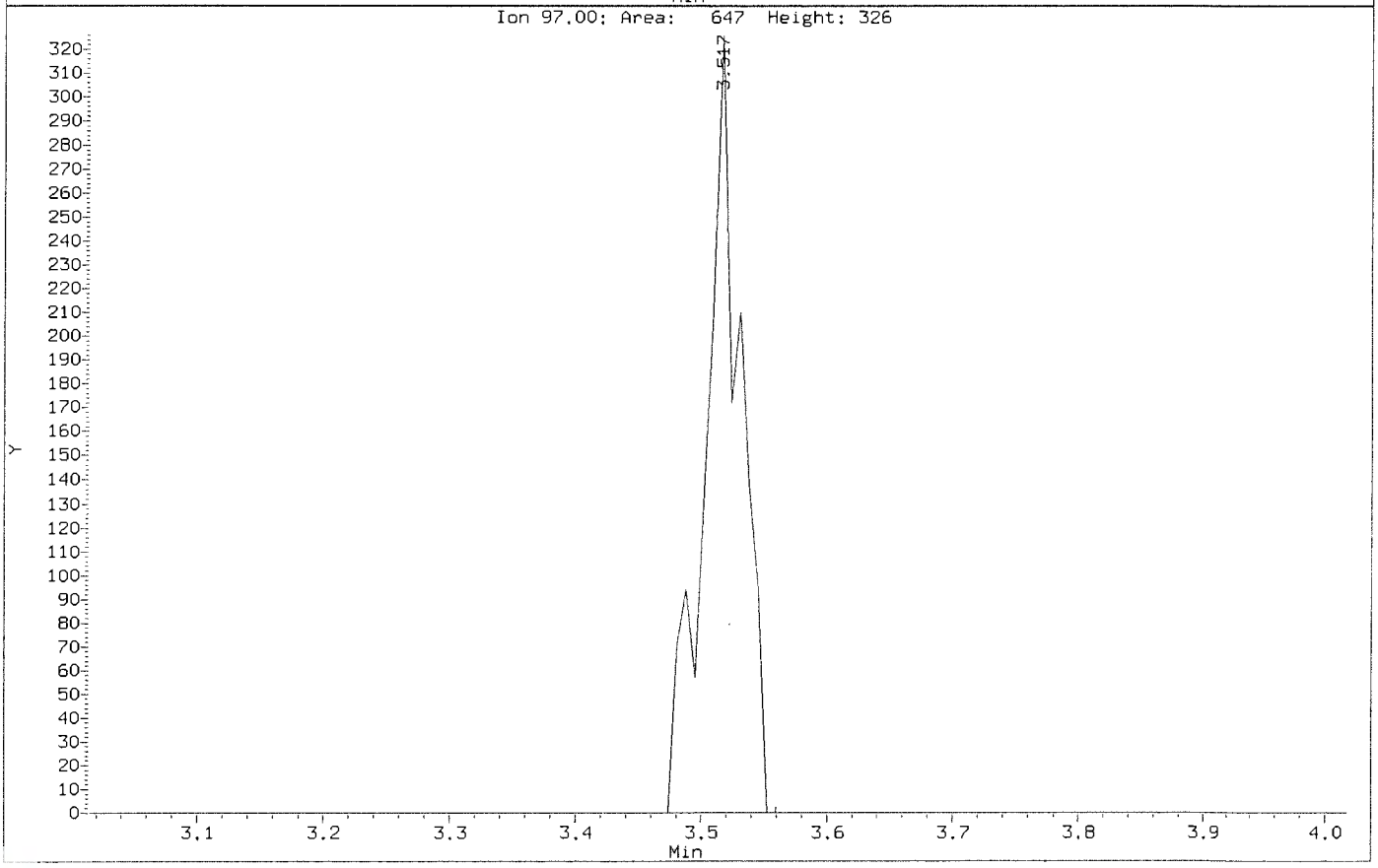
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: 2,2-Dichloropropane
CAS Number: 594-20-7





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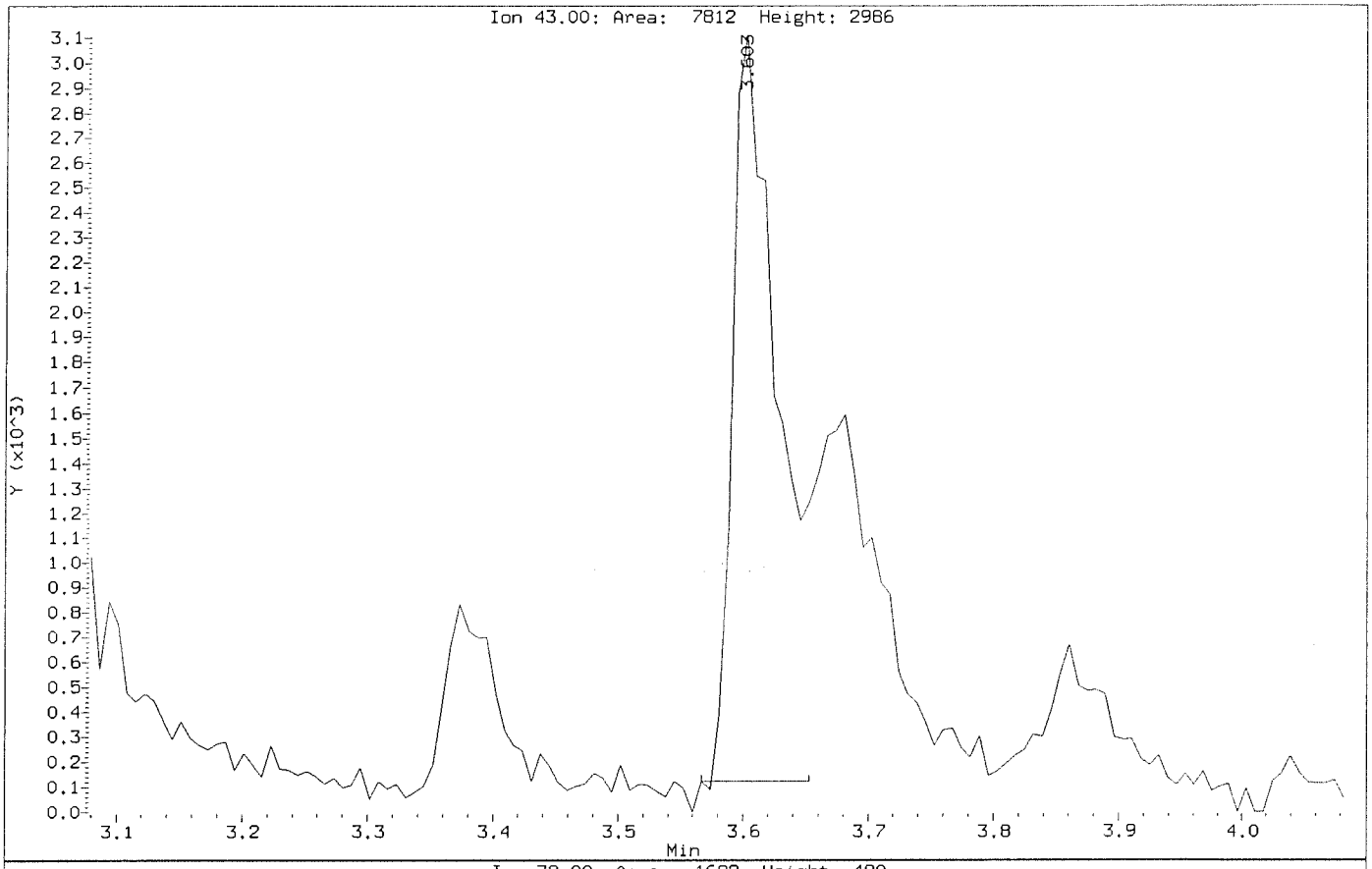
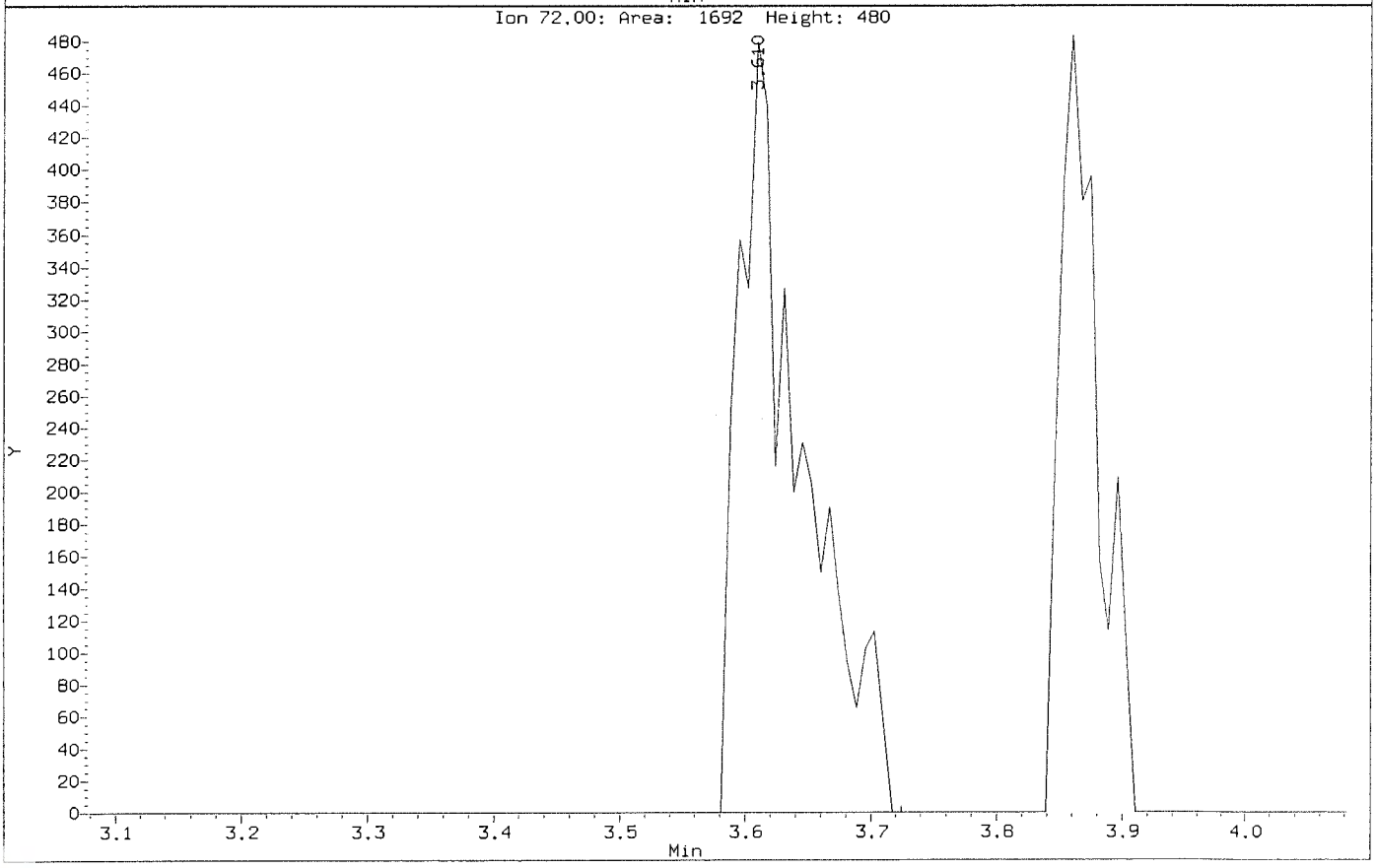
Injection Date: 07-JUL-2020 11:30
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: 2-Butanone
CAS Number: 78-93-3





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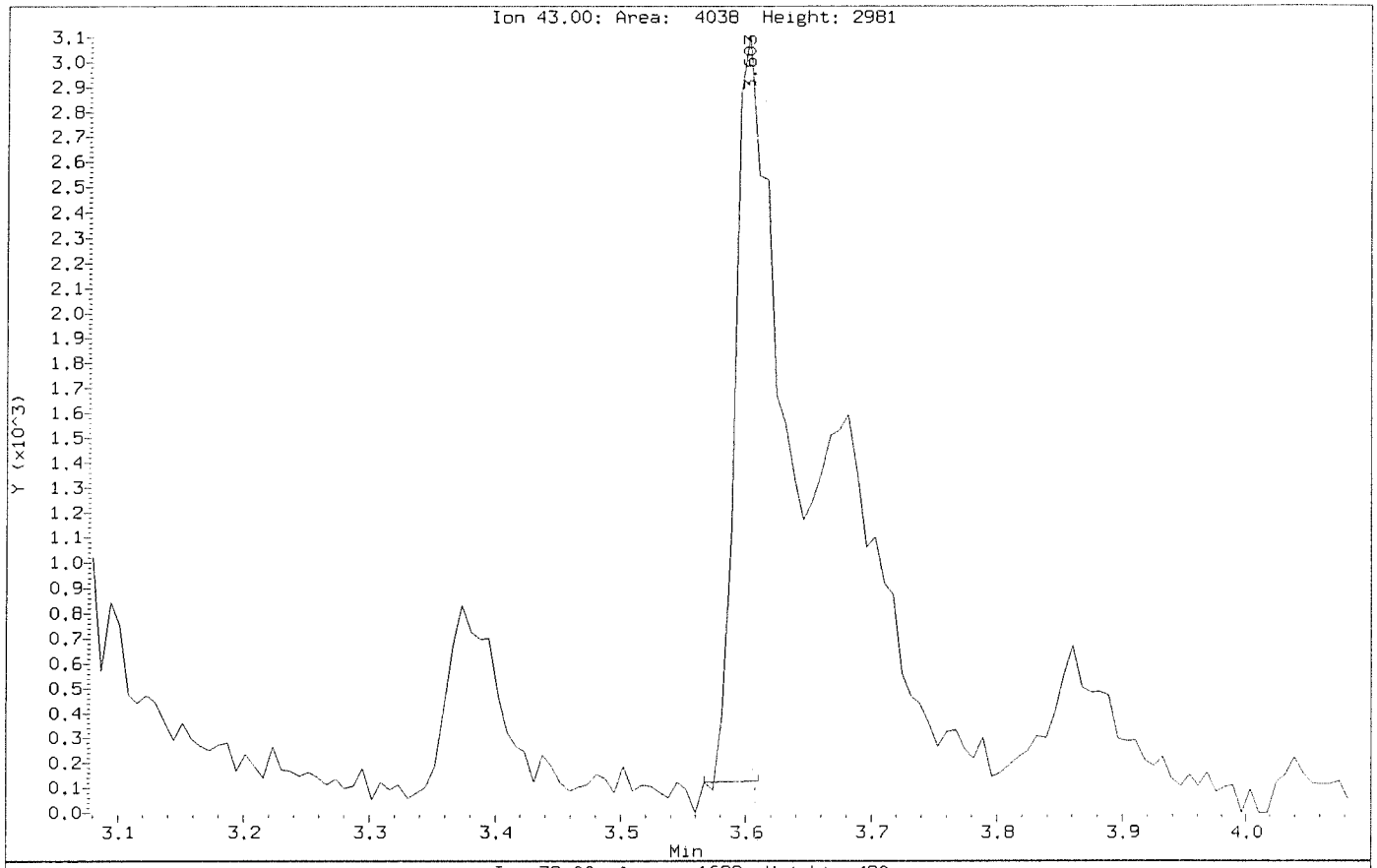
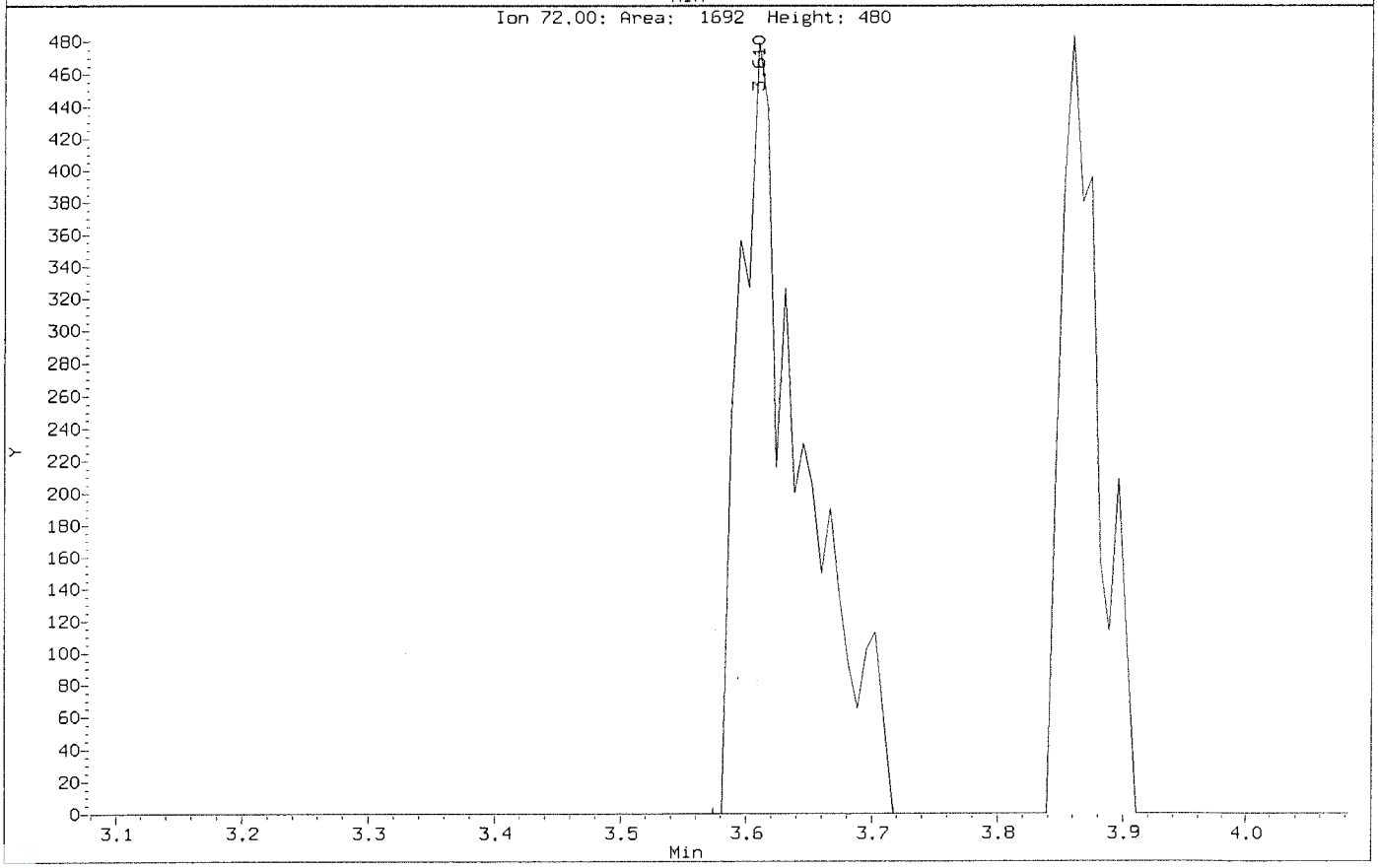
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: 2-Butanone
CAS Number: 78-93-3





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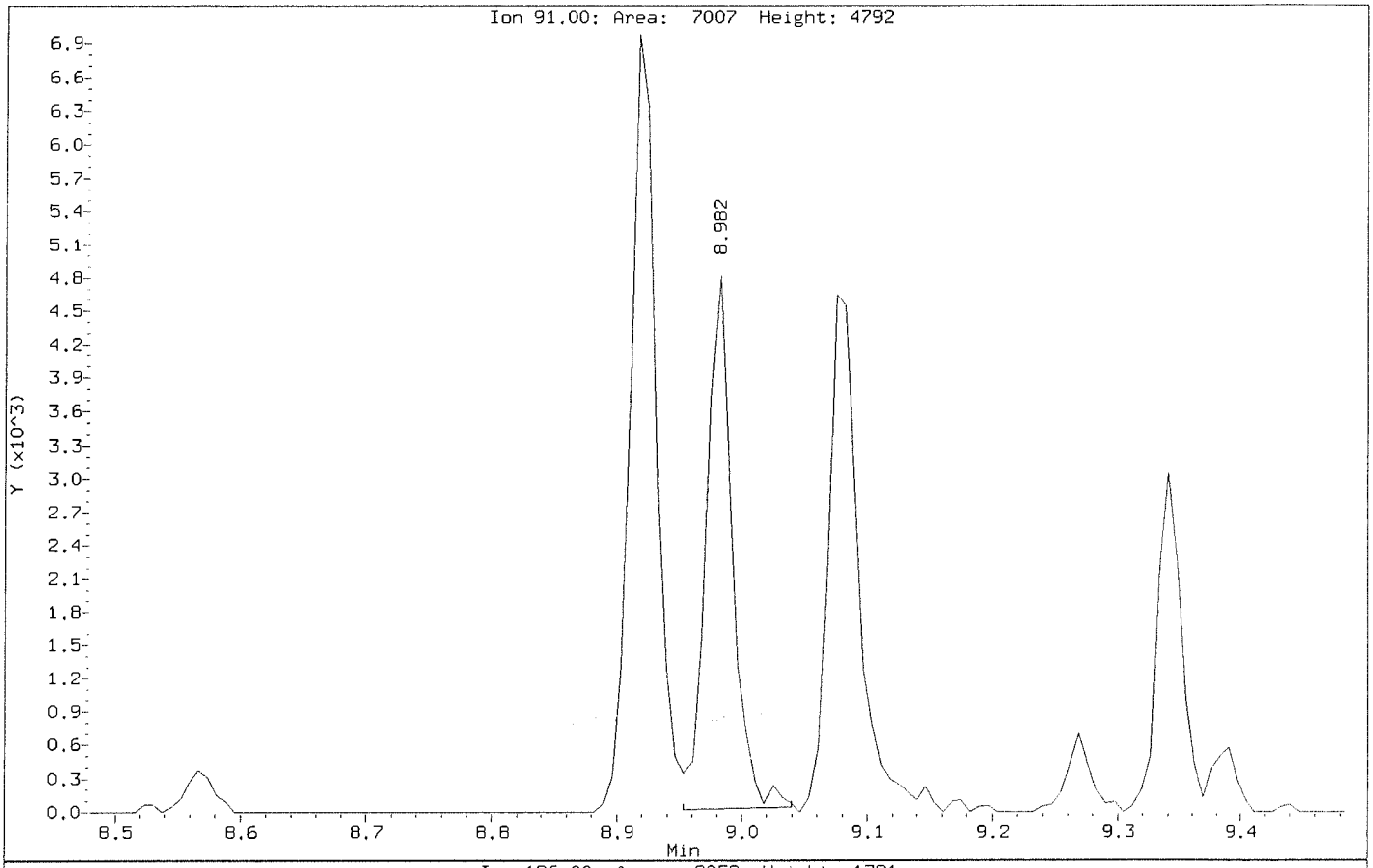
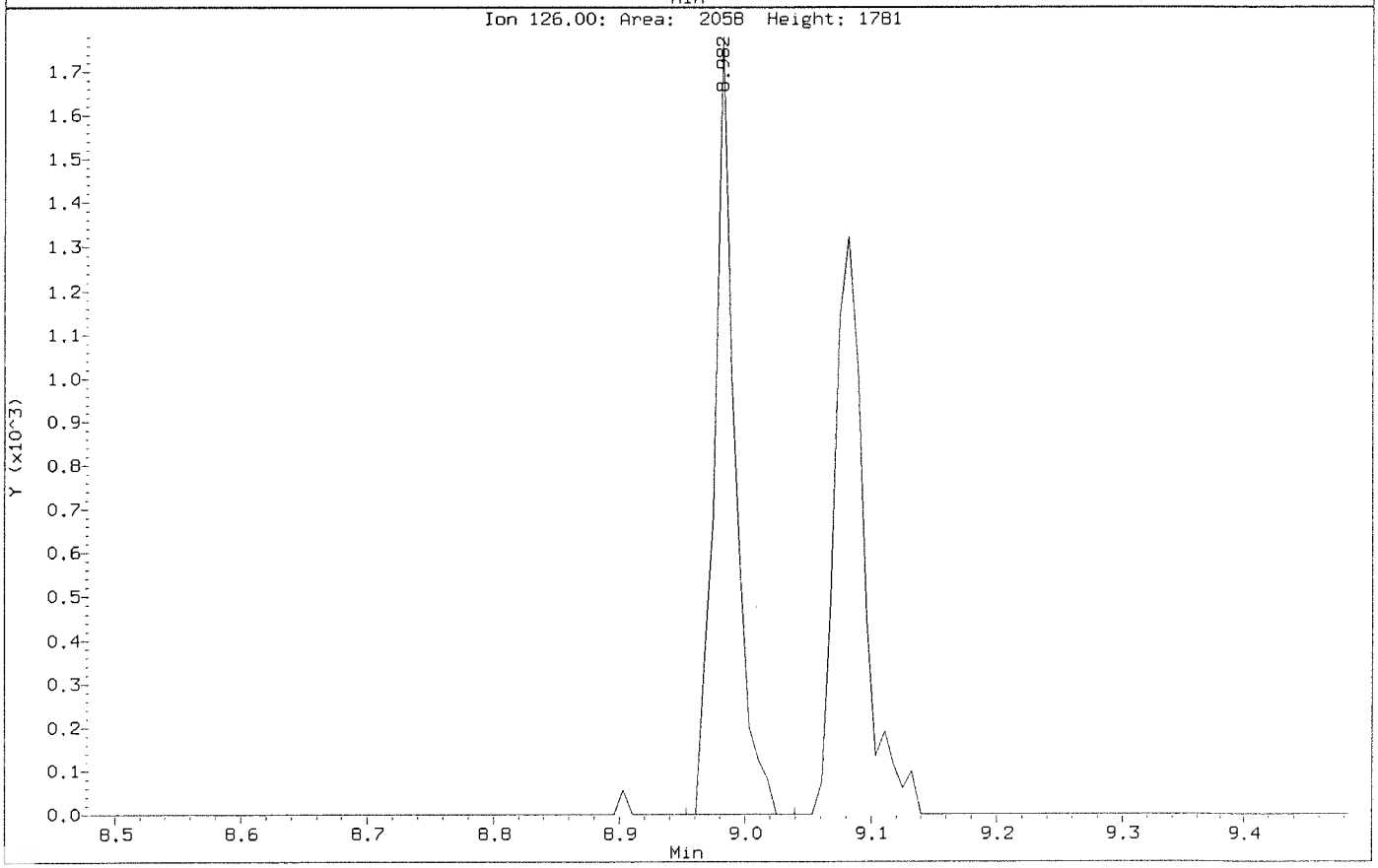
Injection Date: 07-JUL-2020 11:30
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: 2-Chlorotoluene
CAS Number: 95-49-8





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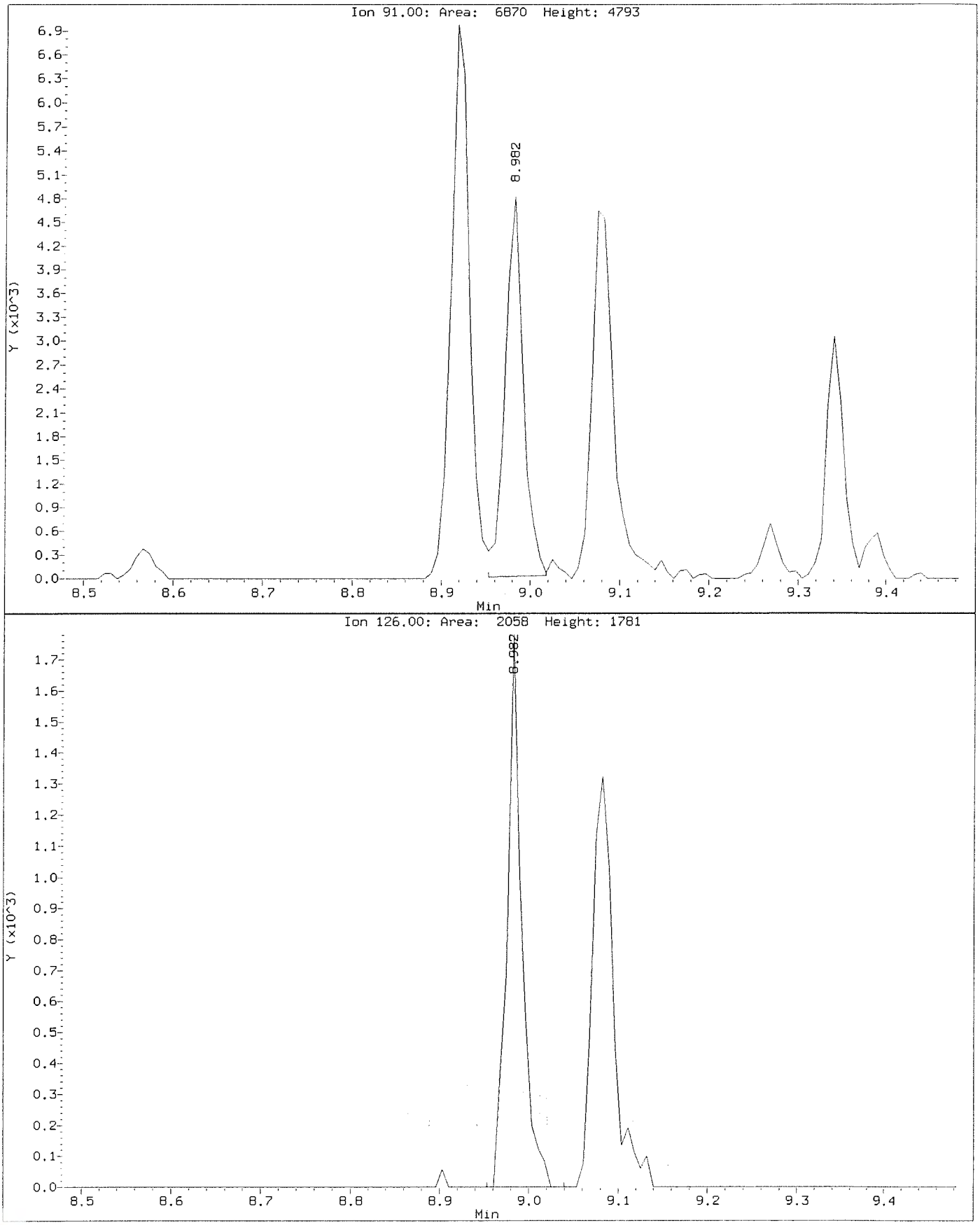
Injection Date: 07-JUL-2020 11:30
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: 2-Chlorotoluene
CAS Number: 95-49-8



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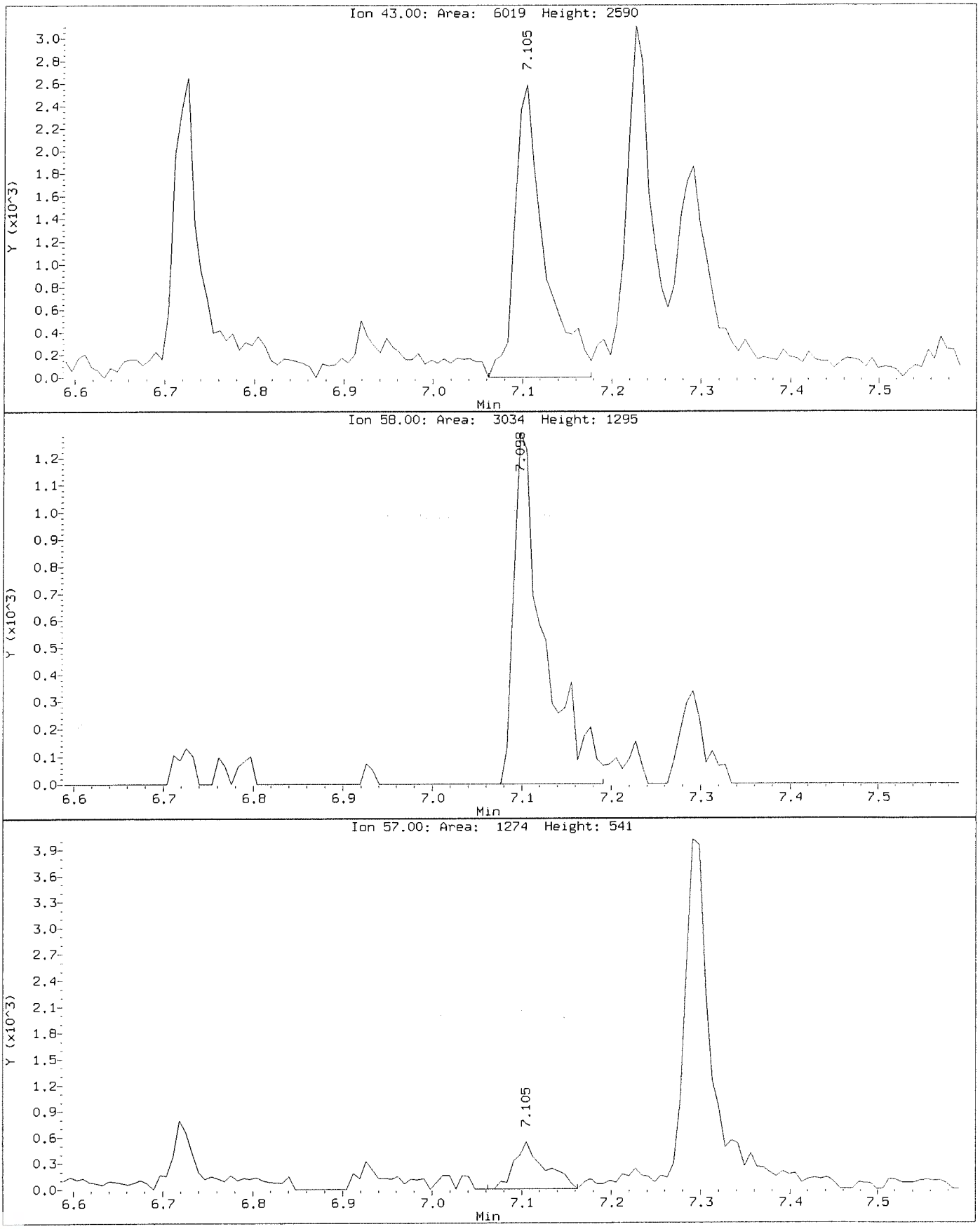
Injection Date: 07-JUL-2020 11:30
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: 2-Hexanone
CAS Number: 591-78-6



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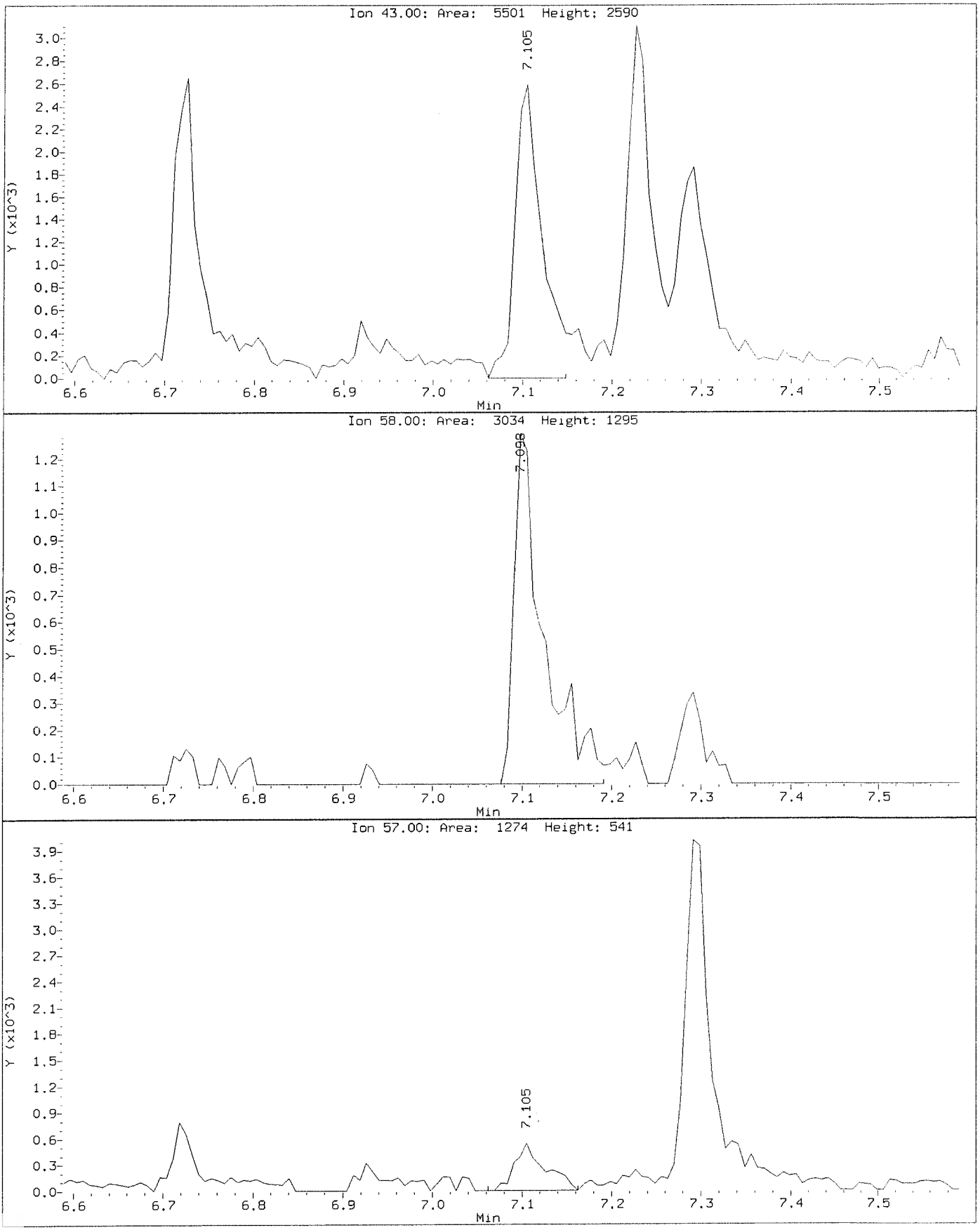
Client Sample ID: VSTD000.5

Compound: 2-Hexanone
CAS Number: 591-78-6



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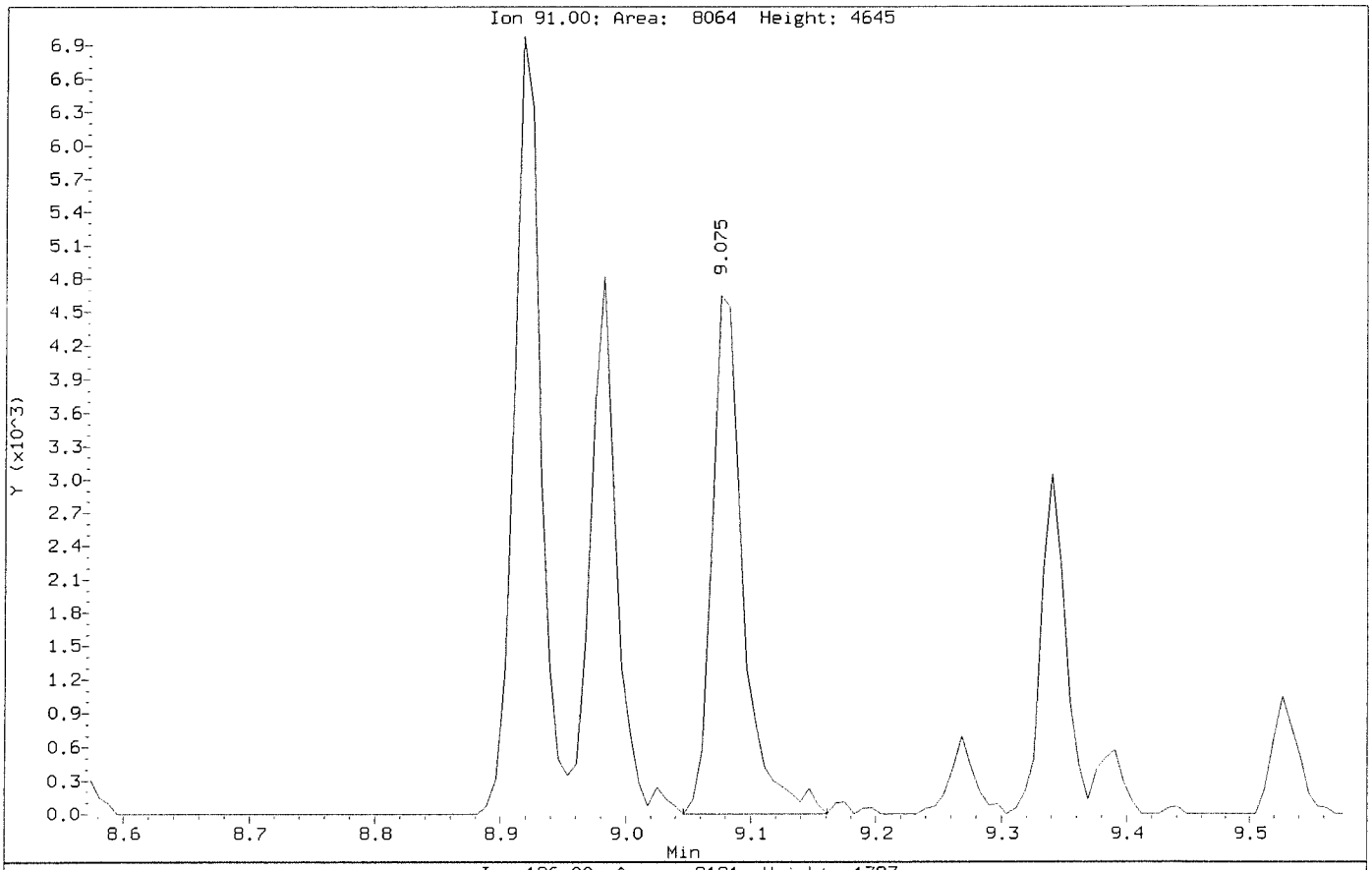
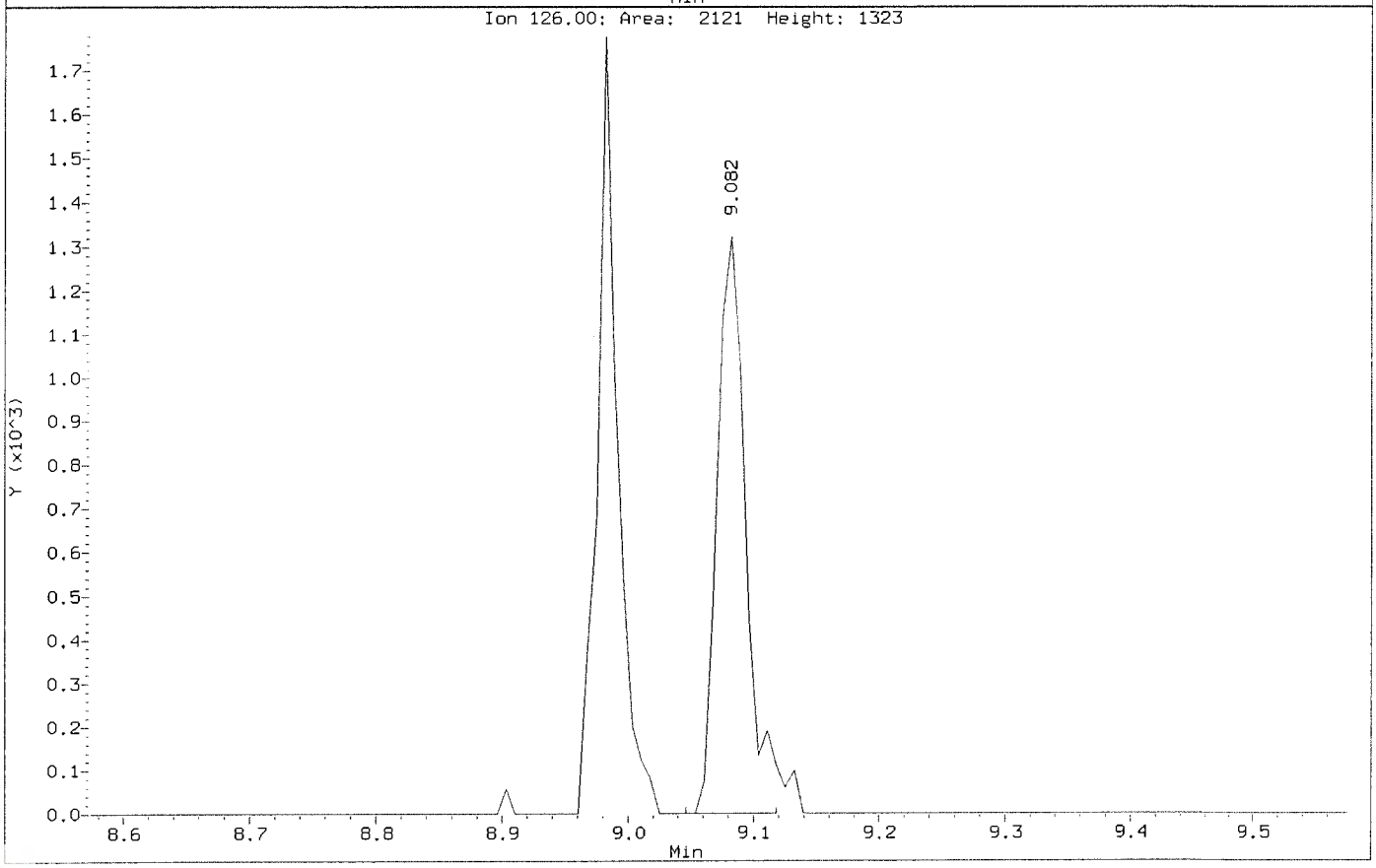
Injection Date: 07-JUL-2020 11:30
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: 4-Chlorotoluene
CAS Number: 106-43-4





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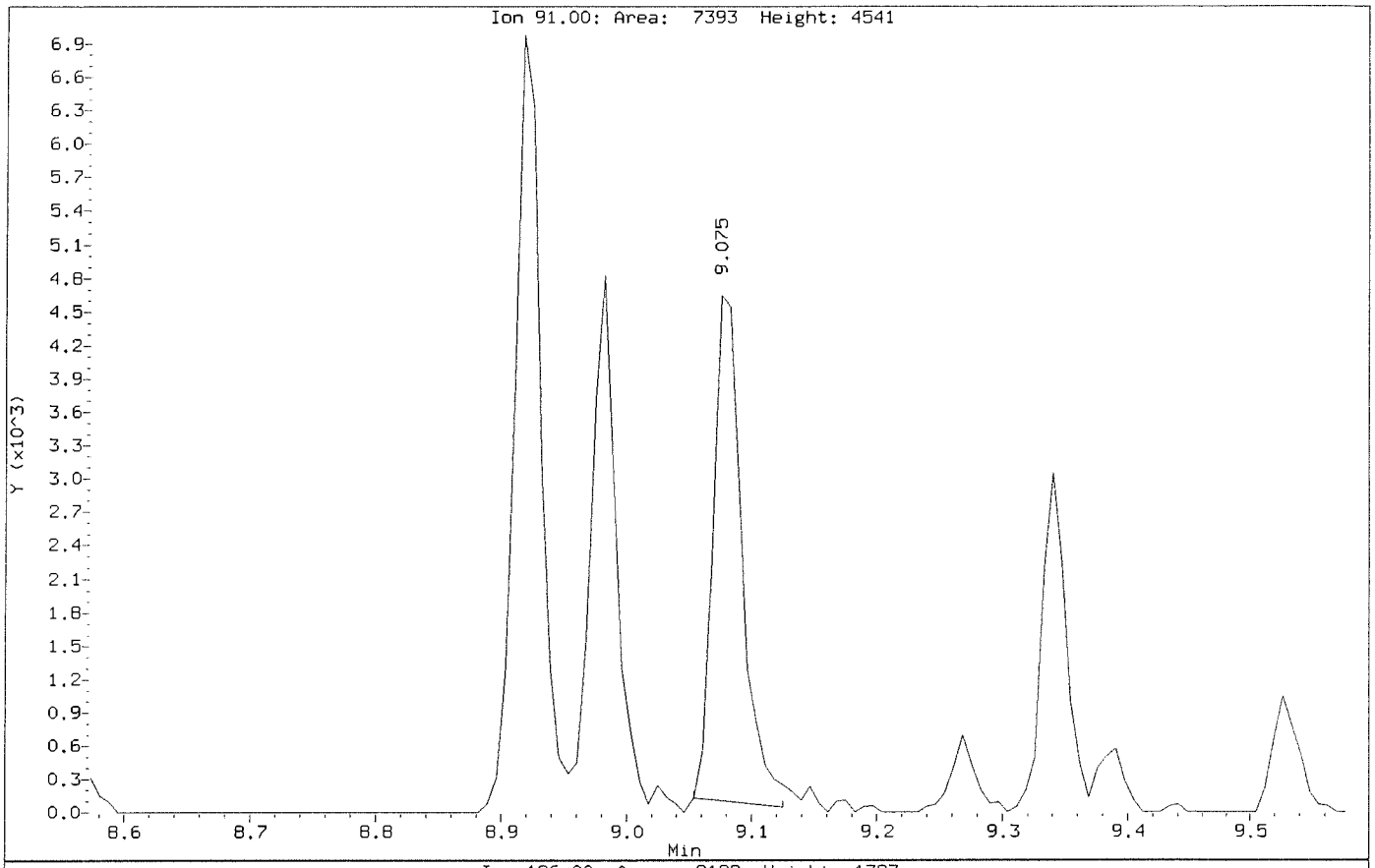
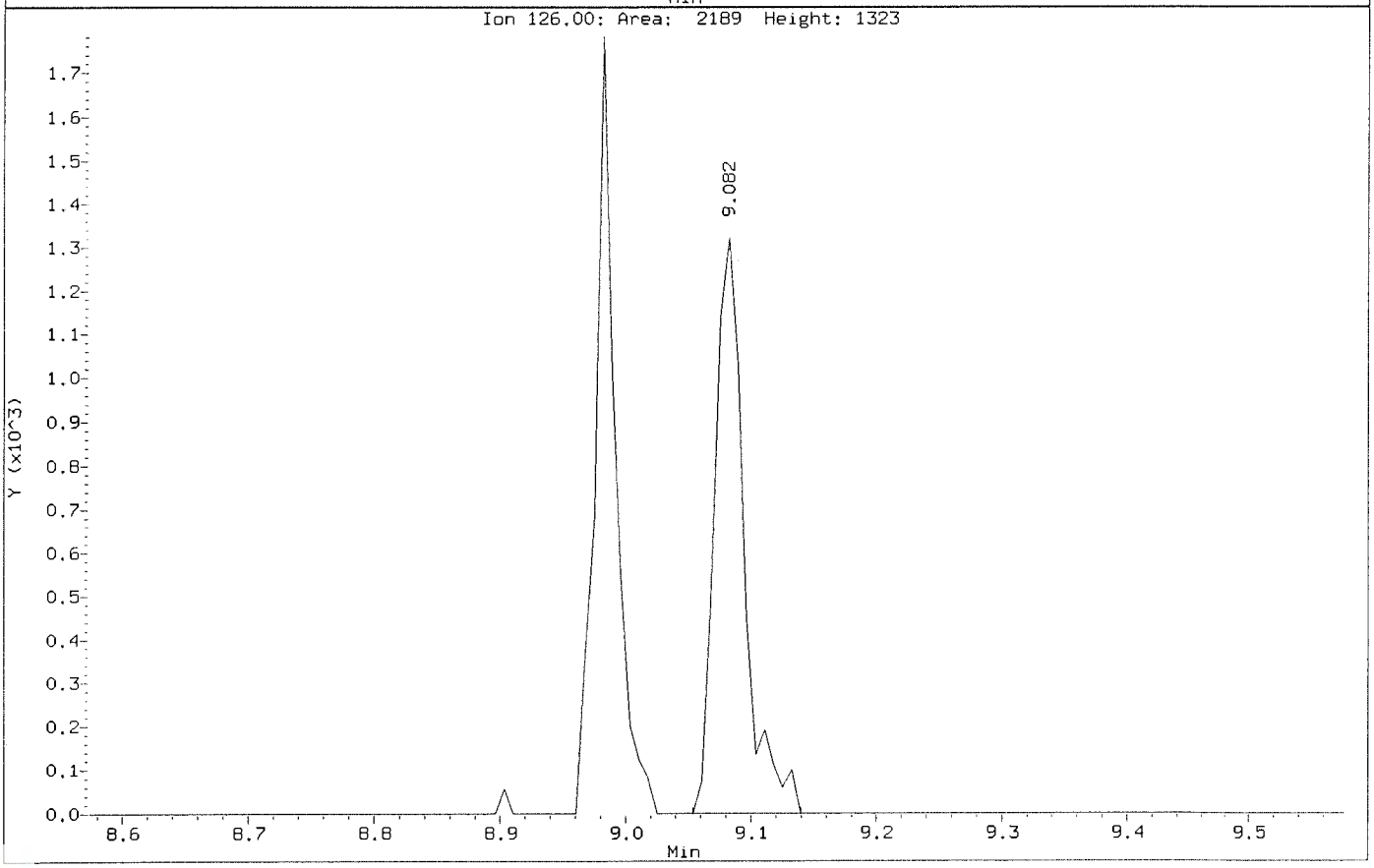
Injection Date: 07-JUL-2020 11:30
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: 4-Chlorotoluene
CAS Number: 106-43-4





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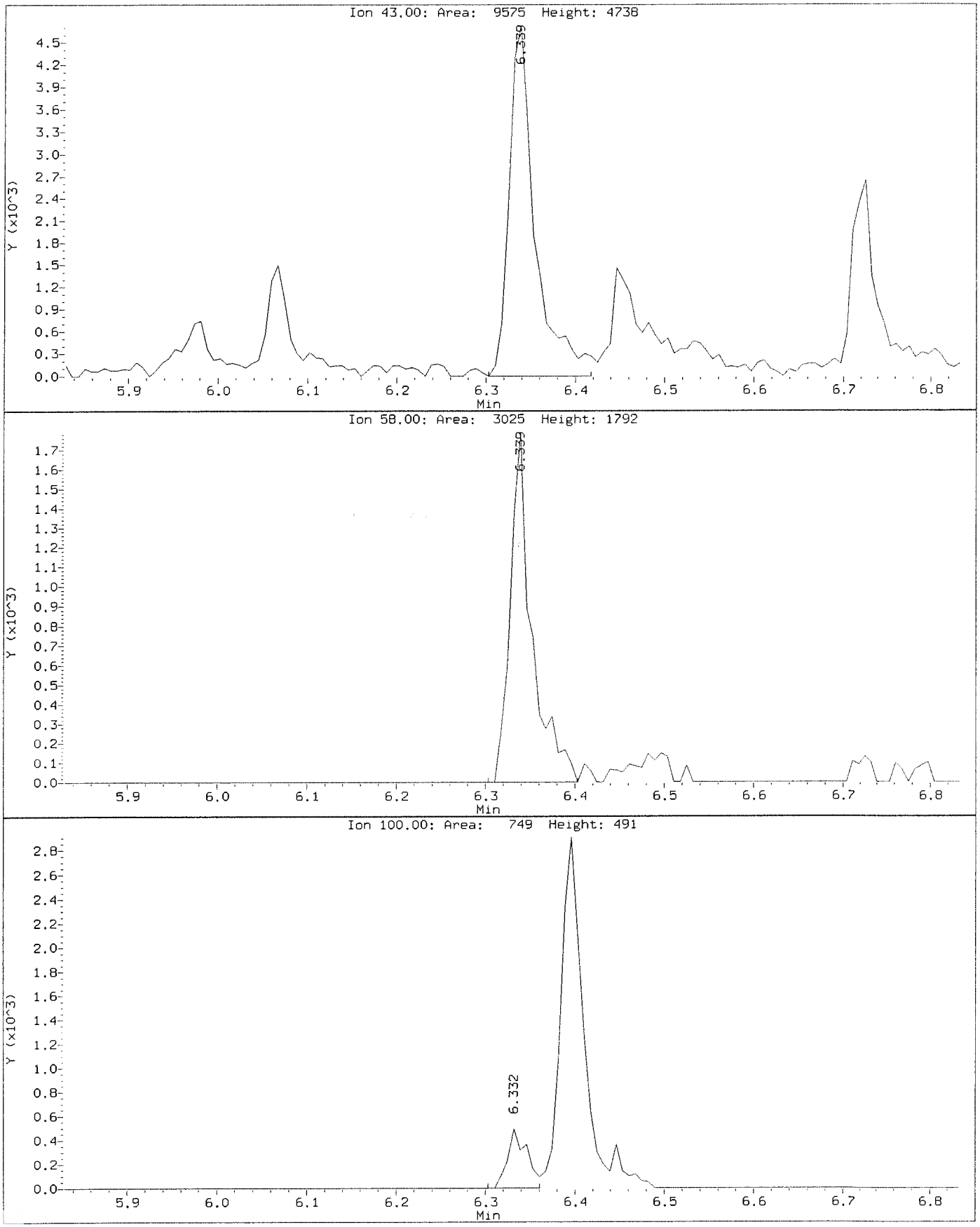
Injection Date: 07-JUL-2020 11:30
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: 4-Methyl-2-Pentanone
CAS Number: 108-10-1



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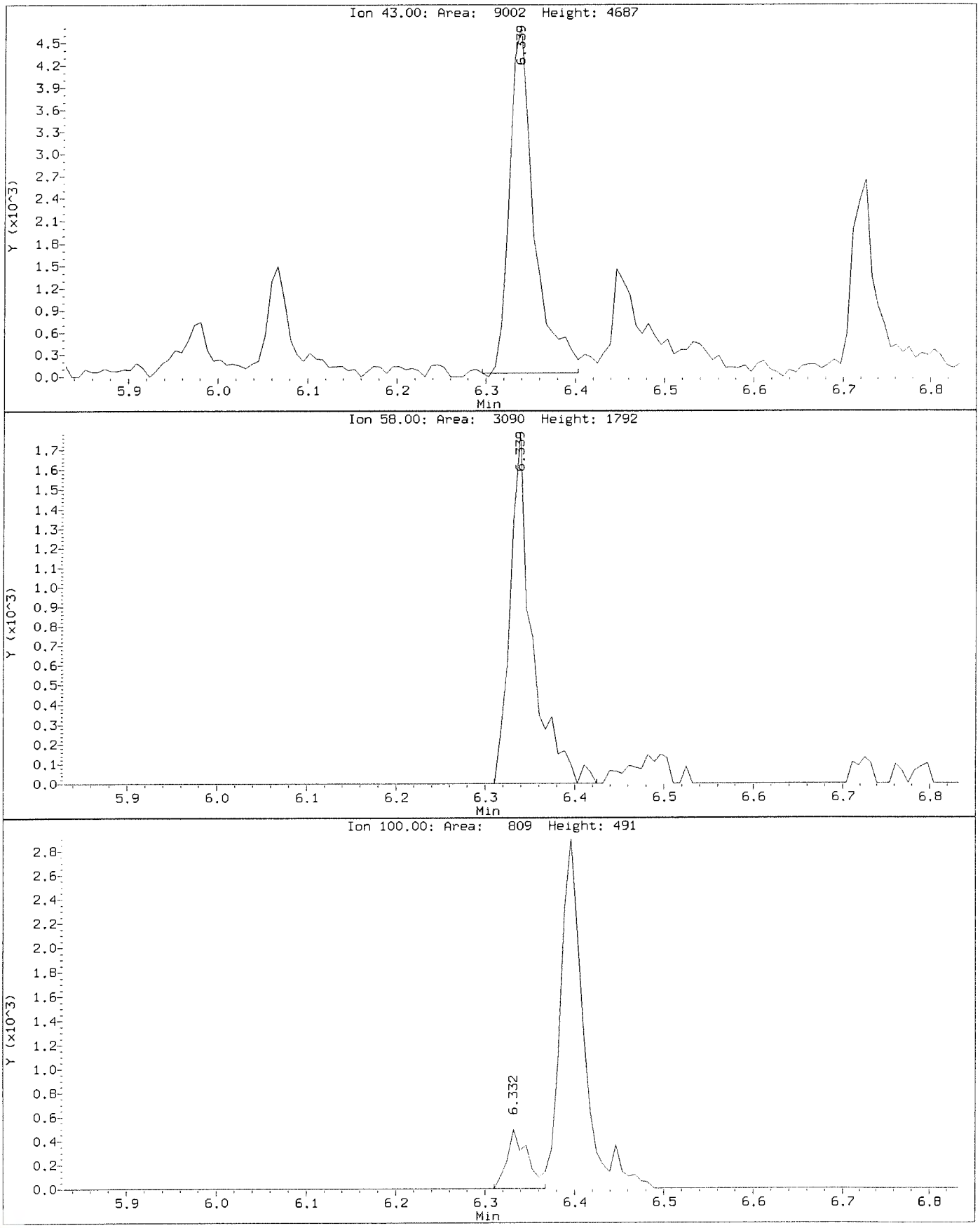
Injection Date: 07-JUL-2020 11:30
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: 4-Methyl-2-Pentanone
CAS Number: 108-10-1



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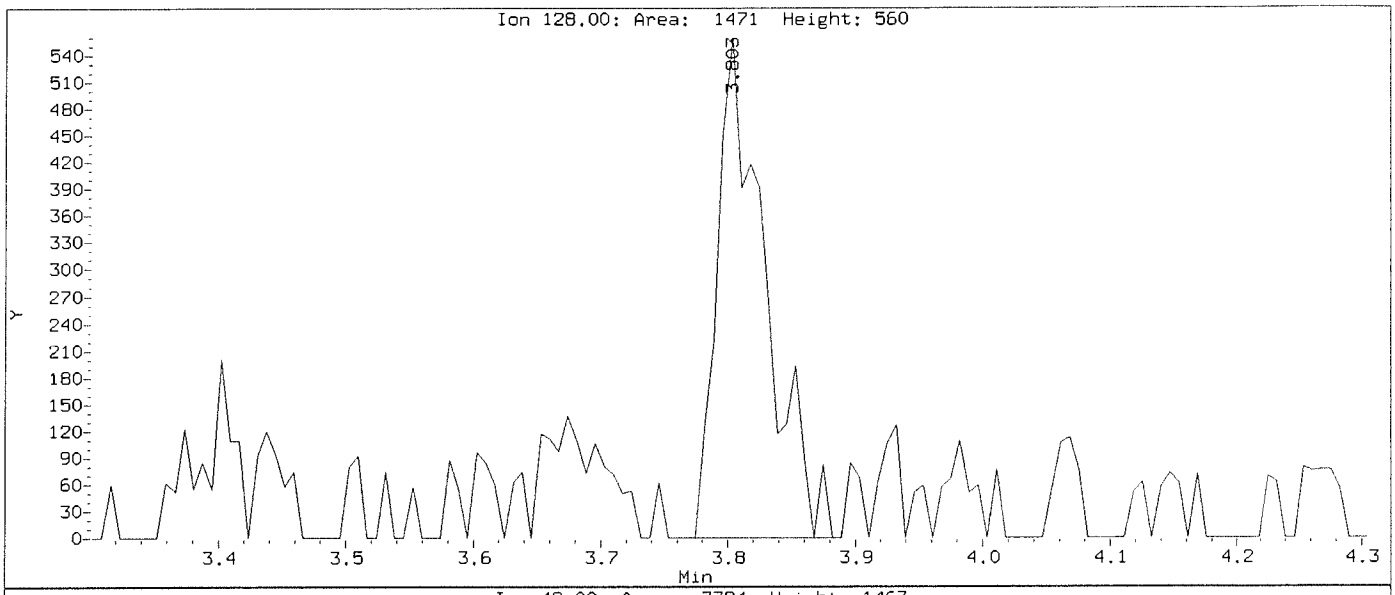
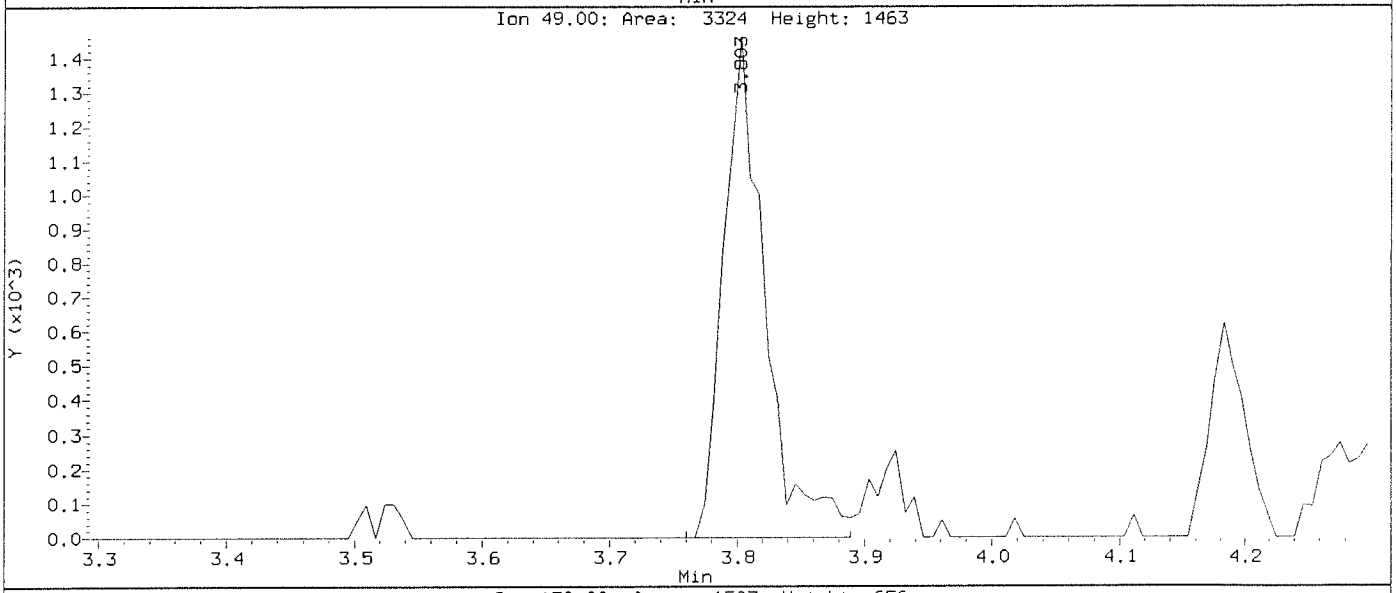
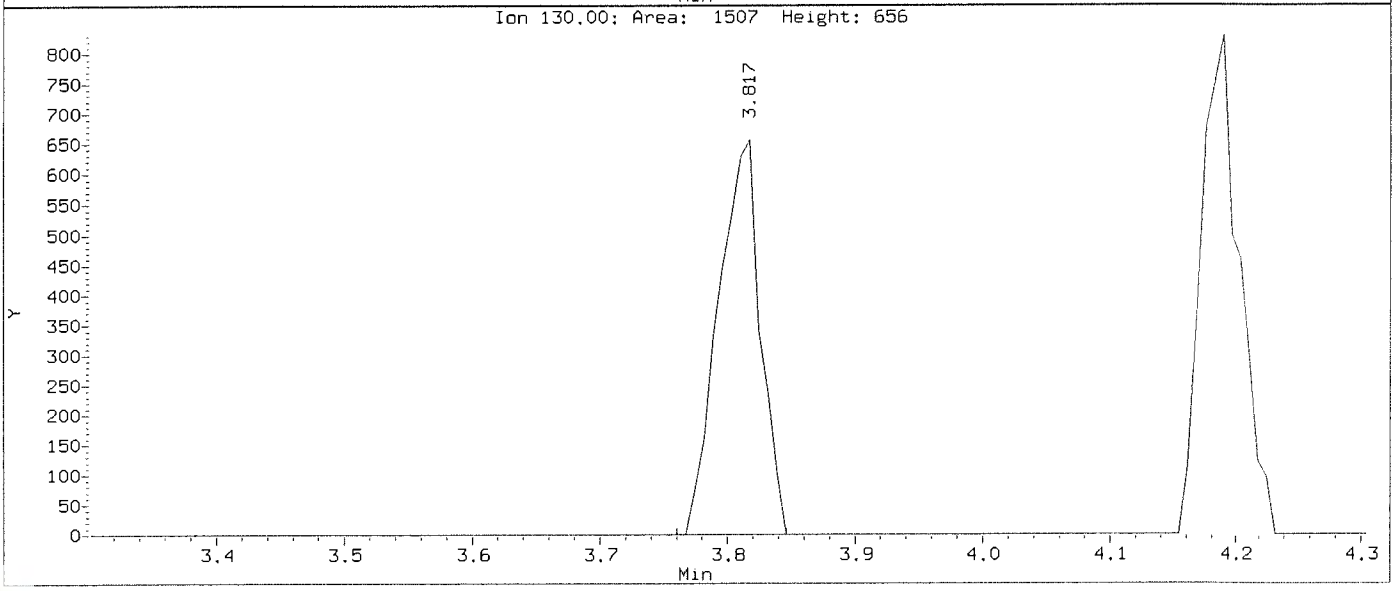
Injection Date: 07-JUL-2020 11:30
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Bromochloromethane
CAS Number: 74-97-5







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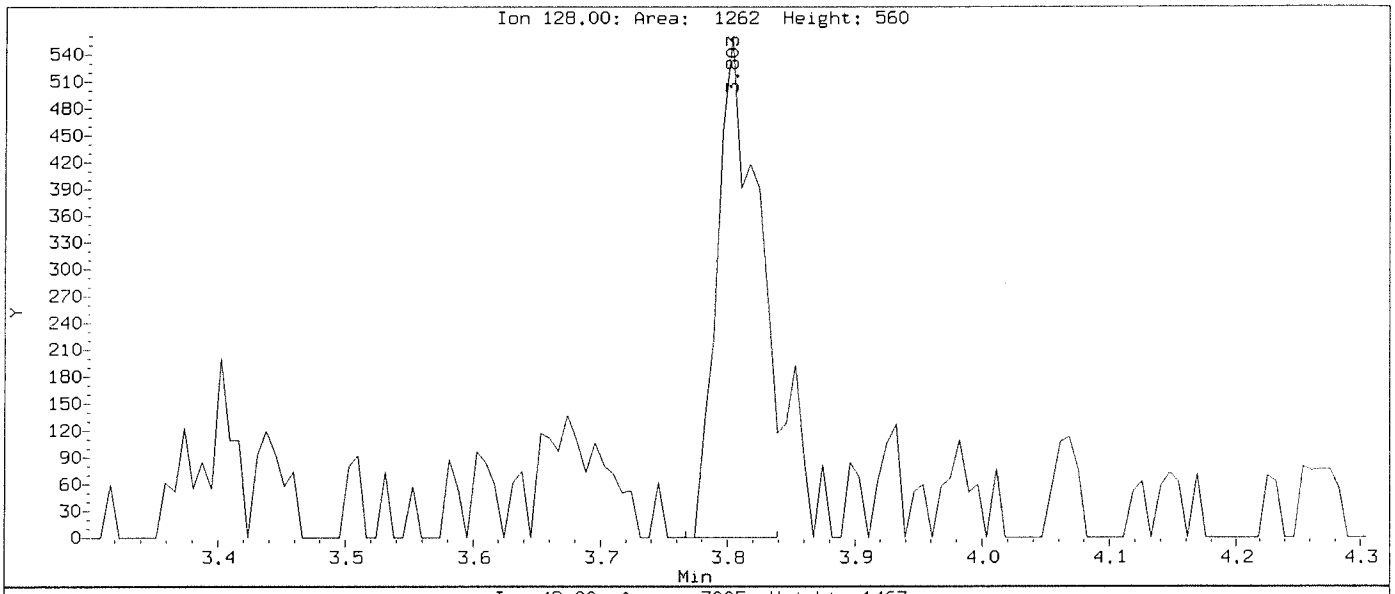
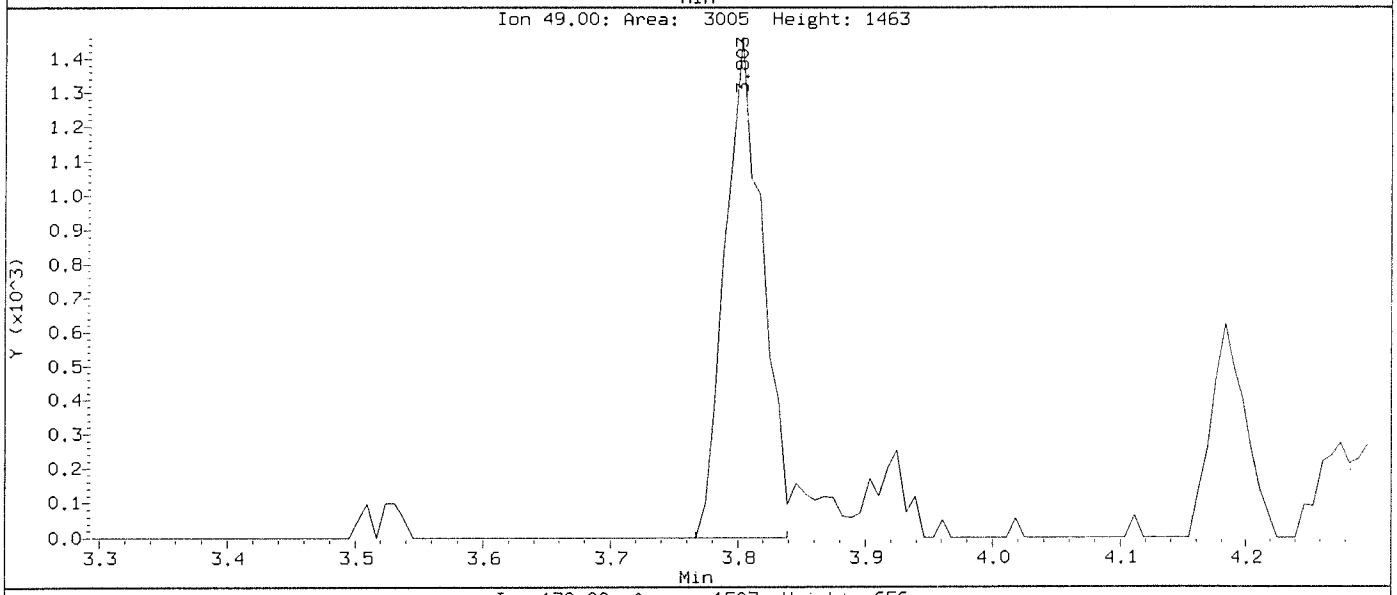
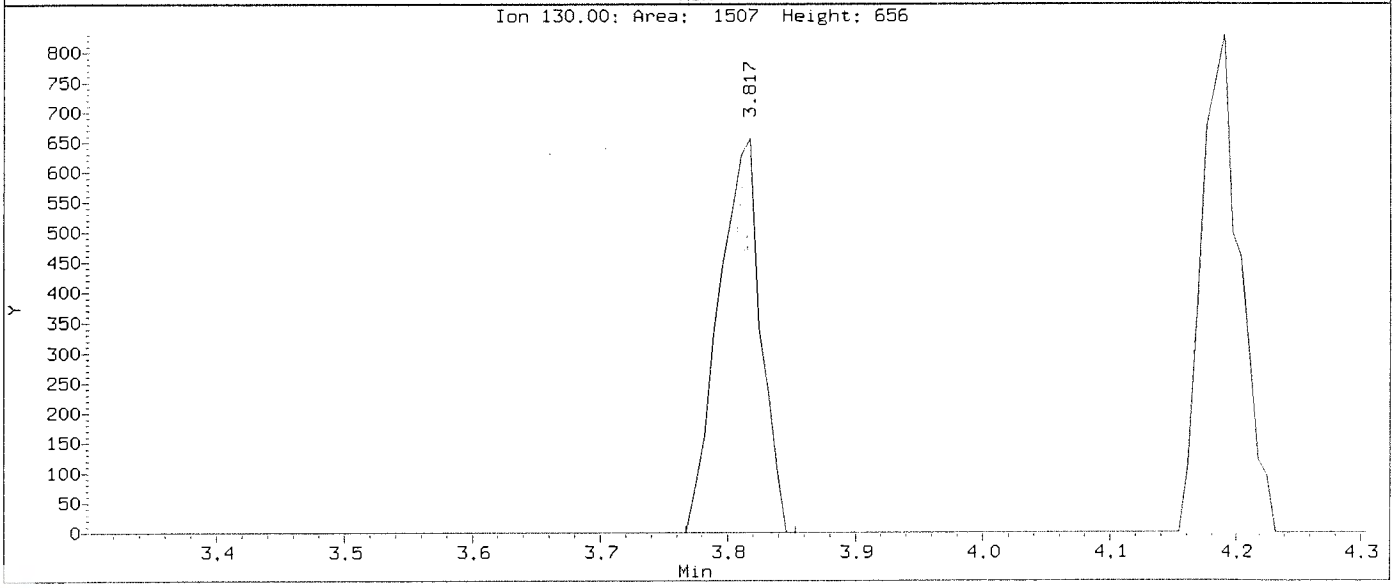
Injection Date: 07-JUL-2020 11:30
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Bromochloromethane
CAS Number: 74-97-5







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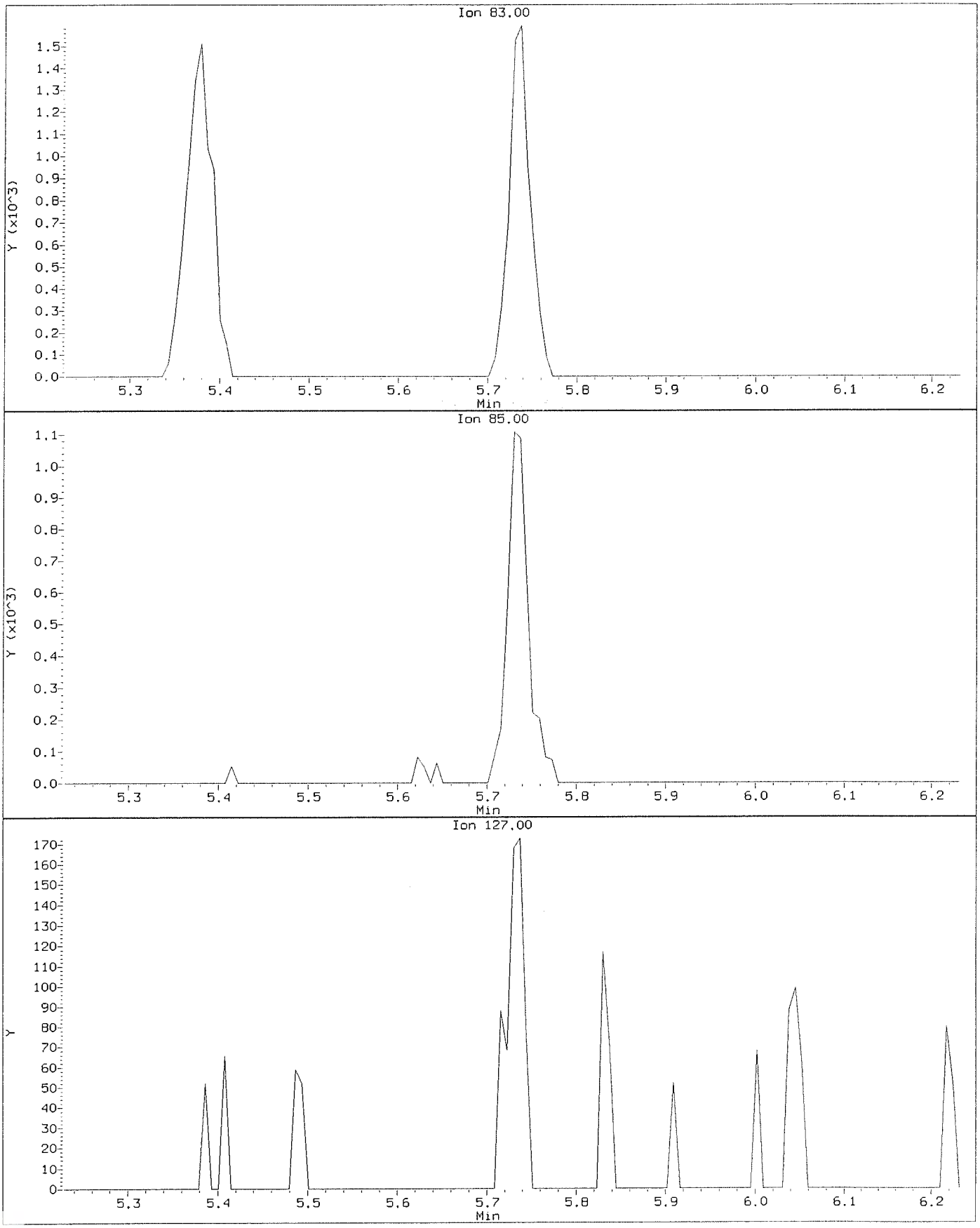
Injection Date: 07-JUL-2020 11:30
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Bromodichloromethane
CAS Number: 75-27-4



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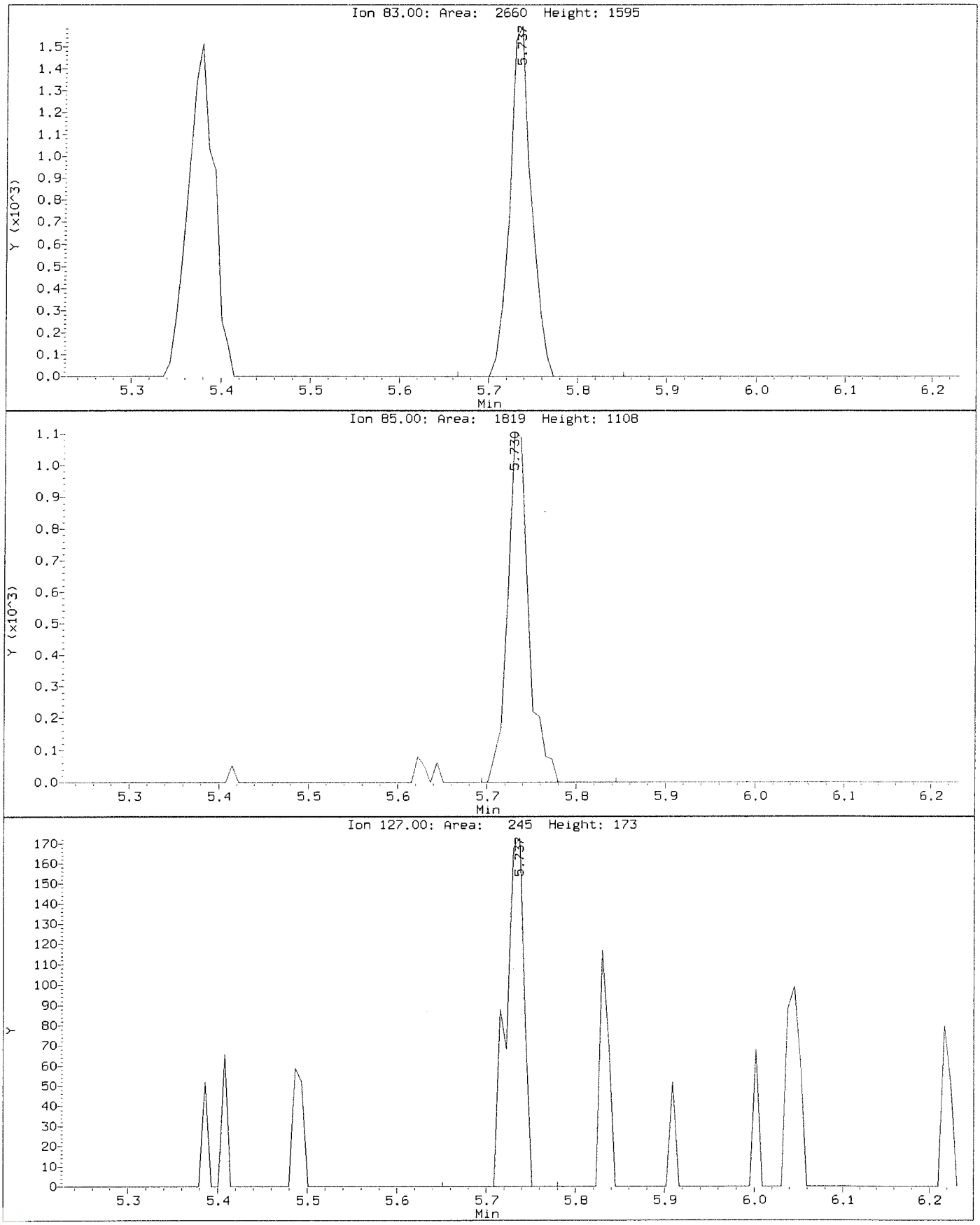
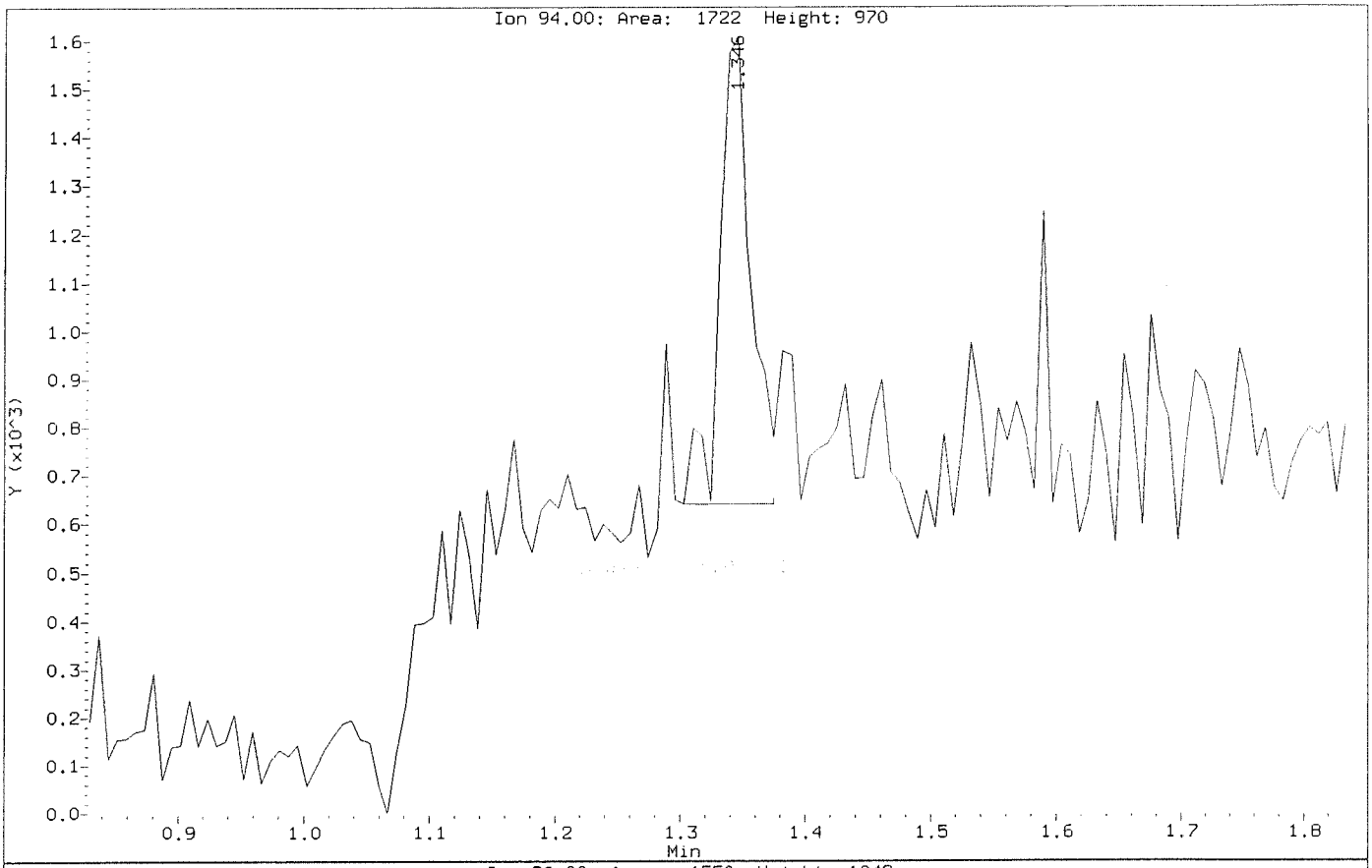
Injection Date: 07-JUL-2020 11:30
Instrument: voa6.i
Client Sample ID: VSTD000.5

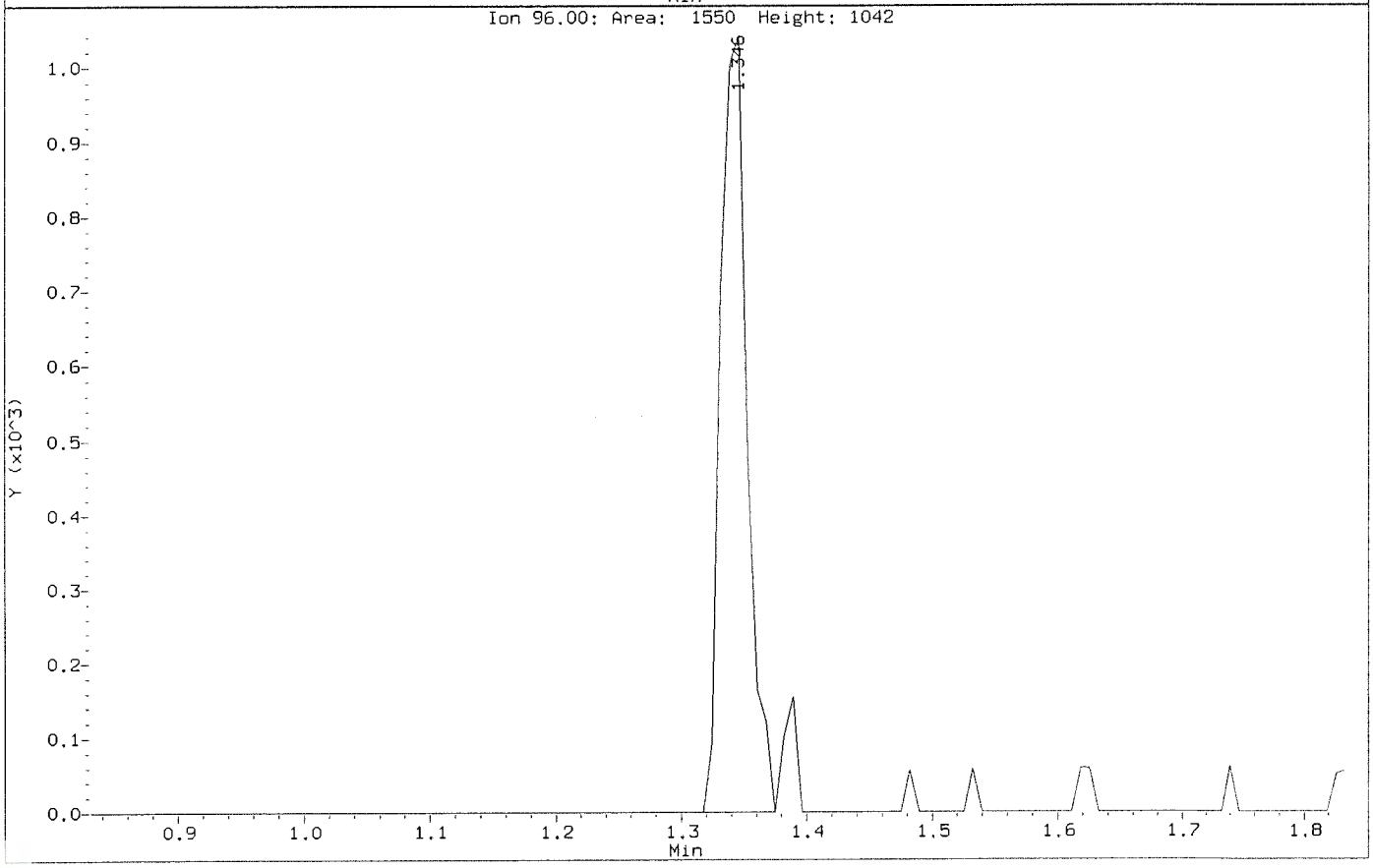
Compound: Bromodichloromethane
CAS Number: 75-27-4



Data File: \\nahstws005\Target\chem\voa6.i\X200707.b\Before\X070703.D
Injection Date: 07-JUL-2020 11:30
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Bromomethane
CAS Number: 74-83-9





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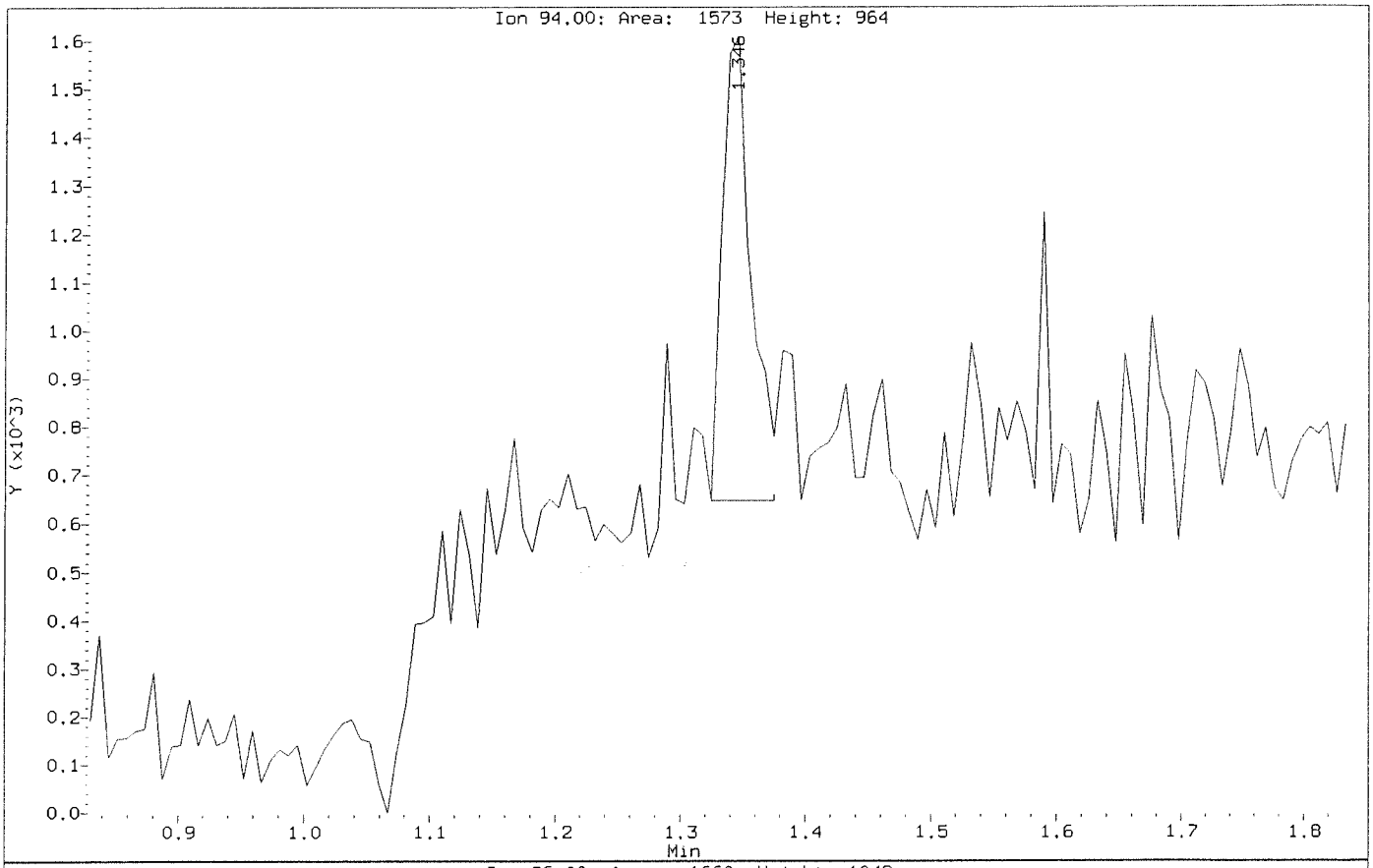
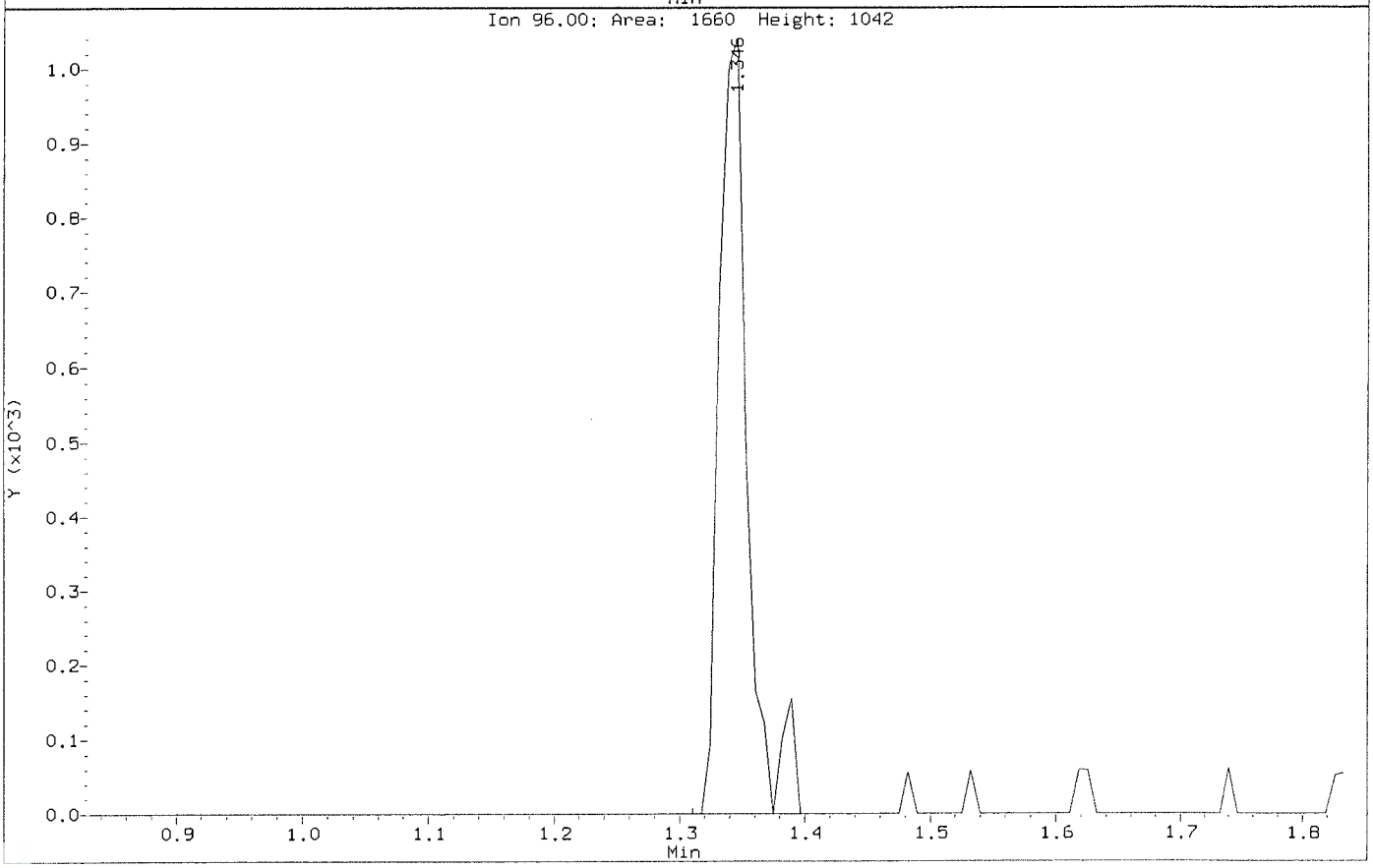
Compound: Bromomethane
CAS Number: 74-83-9





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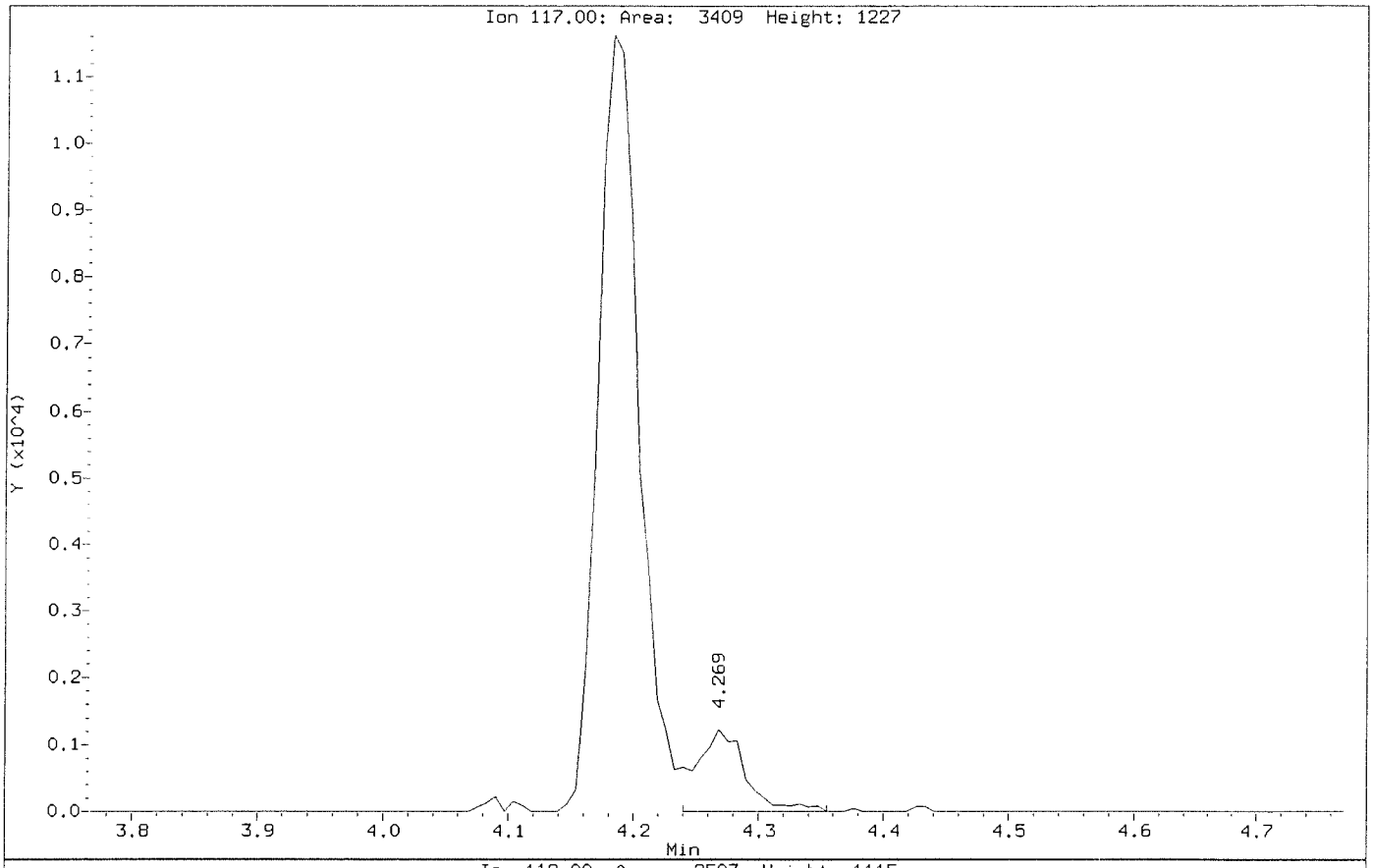
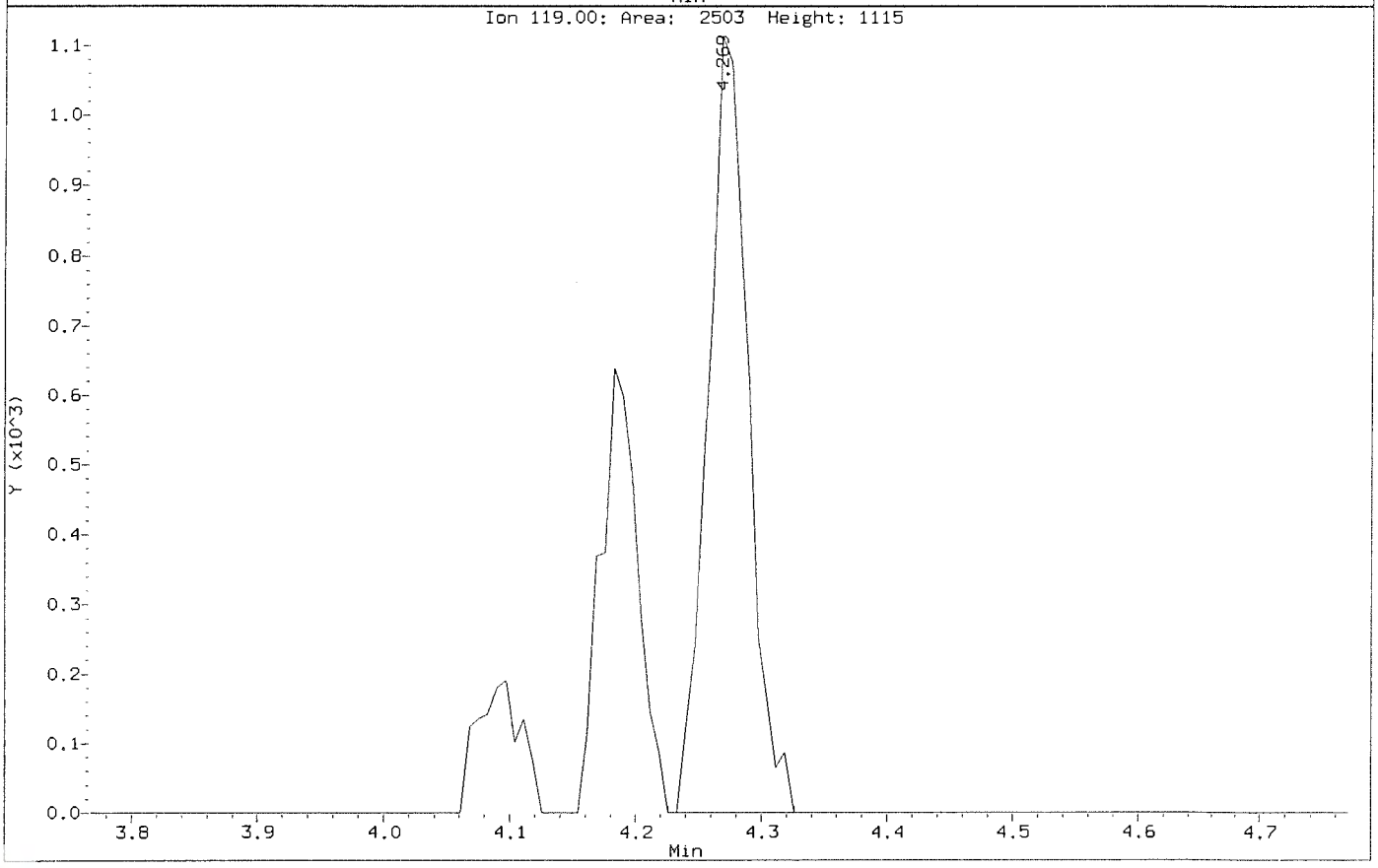
Injection Date: 07-JUL-2020 11:30
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Carbon Tetrachloride
CAS Number: 56-23-5





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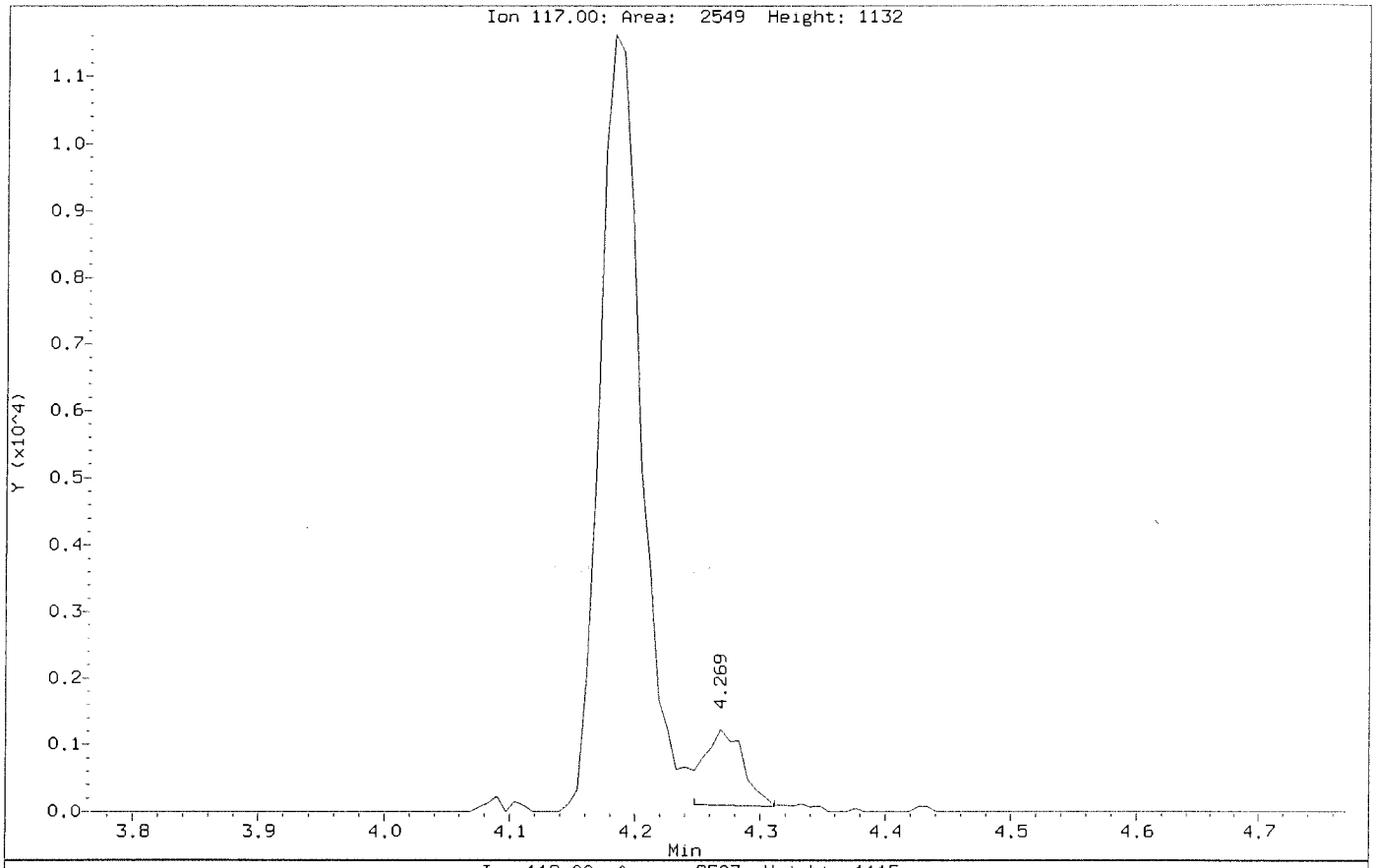
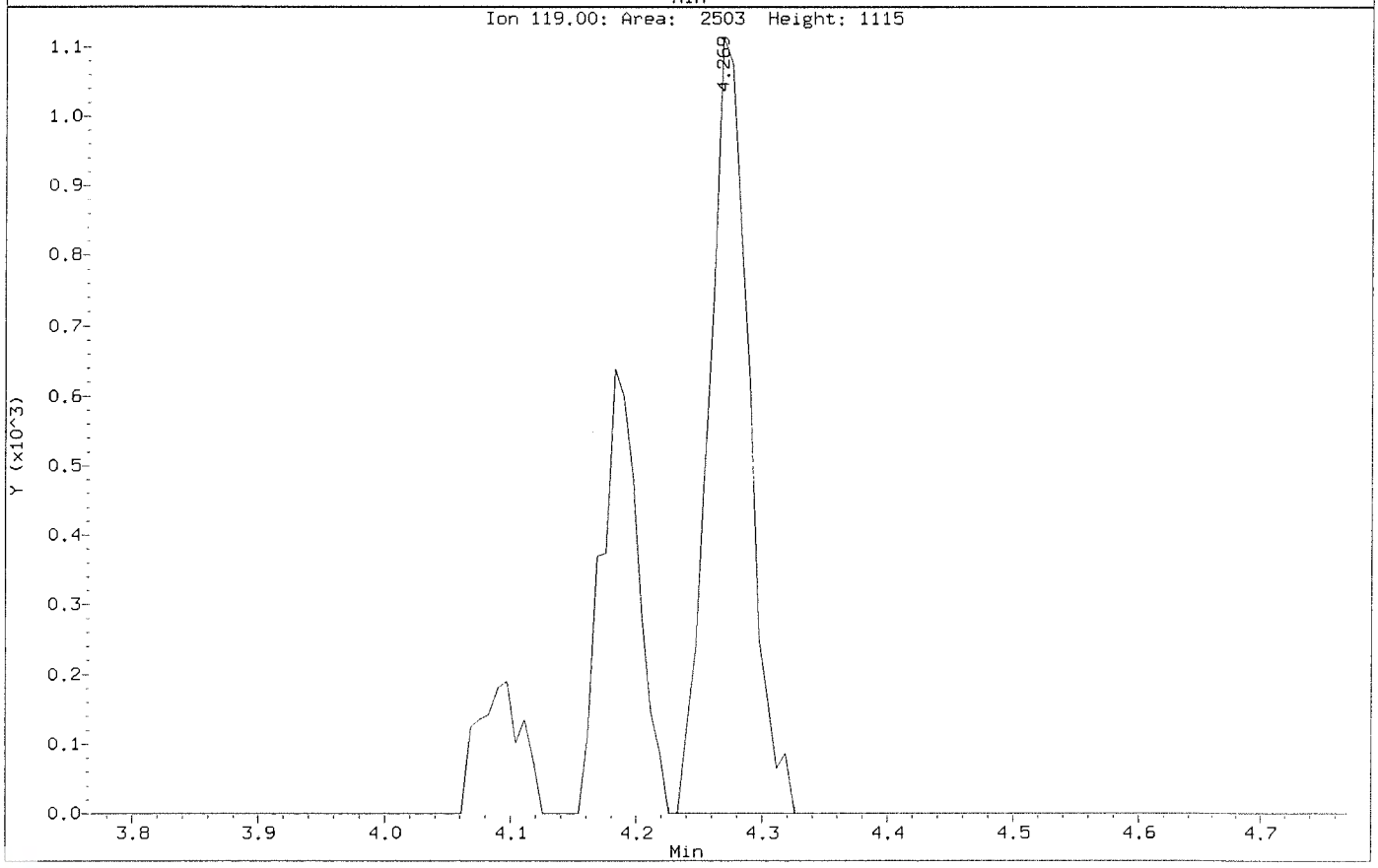
Injection Date: 07-JUL-2020 11:30
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Carbon Tetrachloride
CAS Number: 56-23-5





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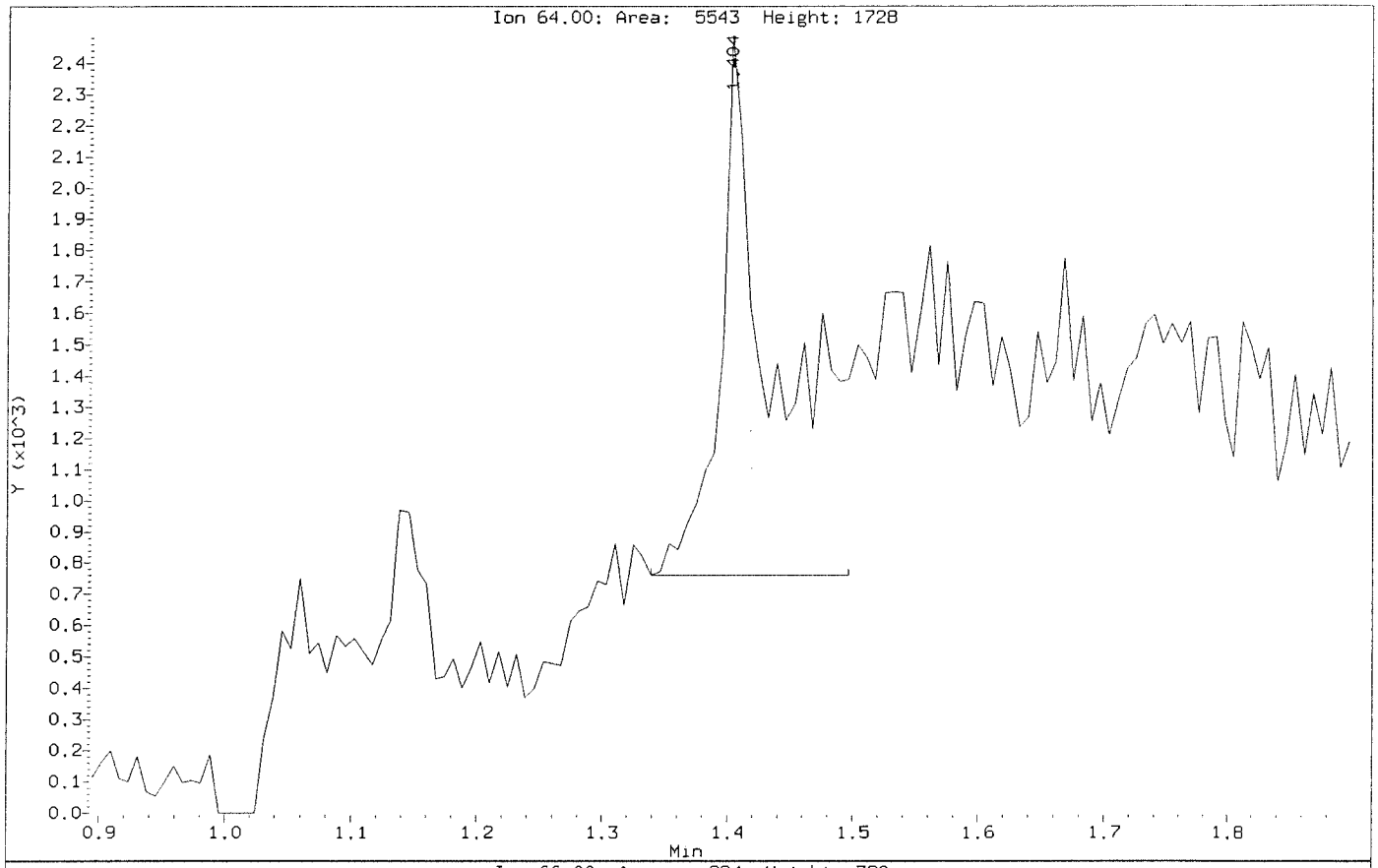
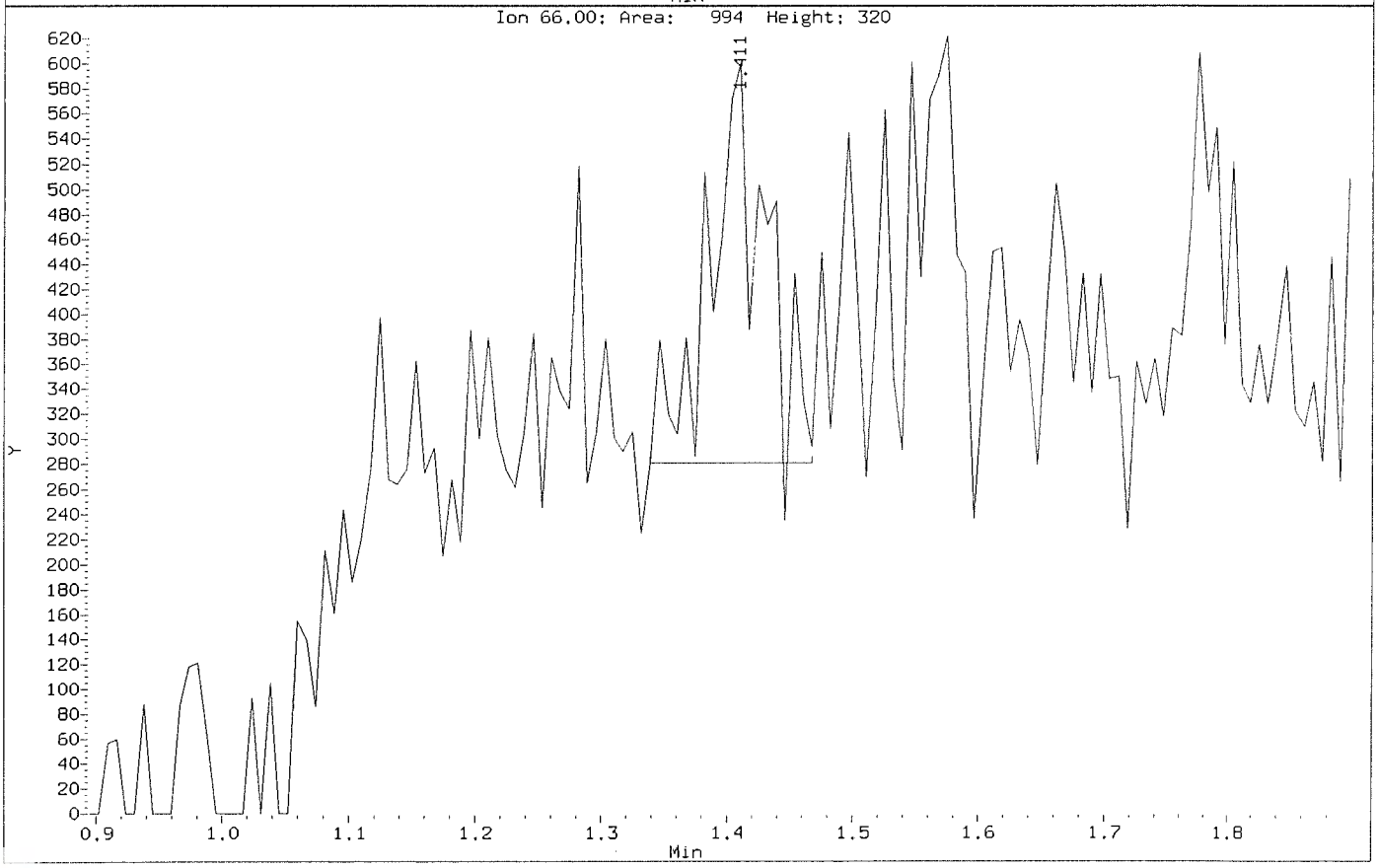
Injection Date: 07-JUL-2020 11:30
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Chloroethane
CAS Number: 75-00-3





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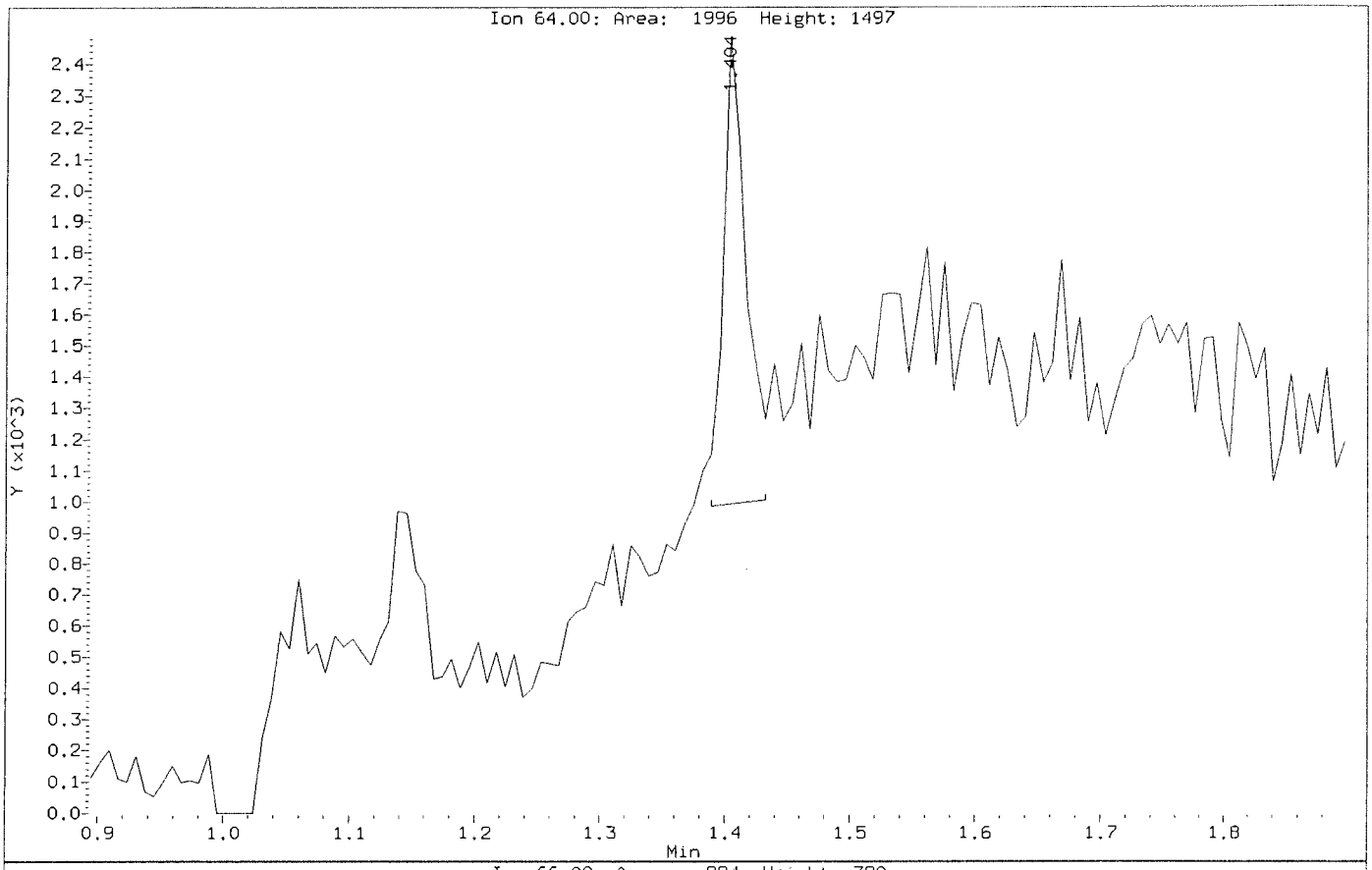
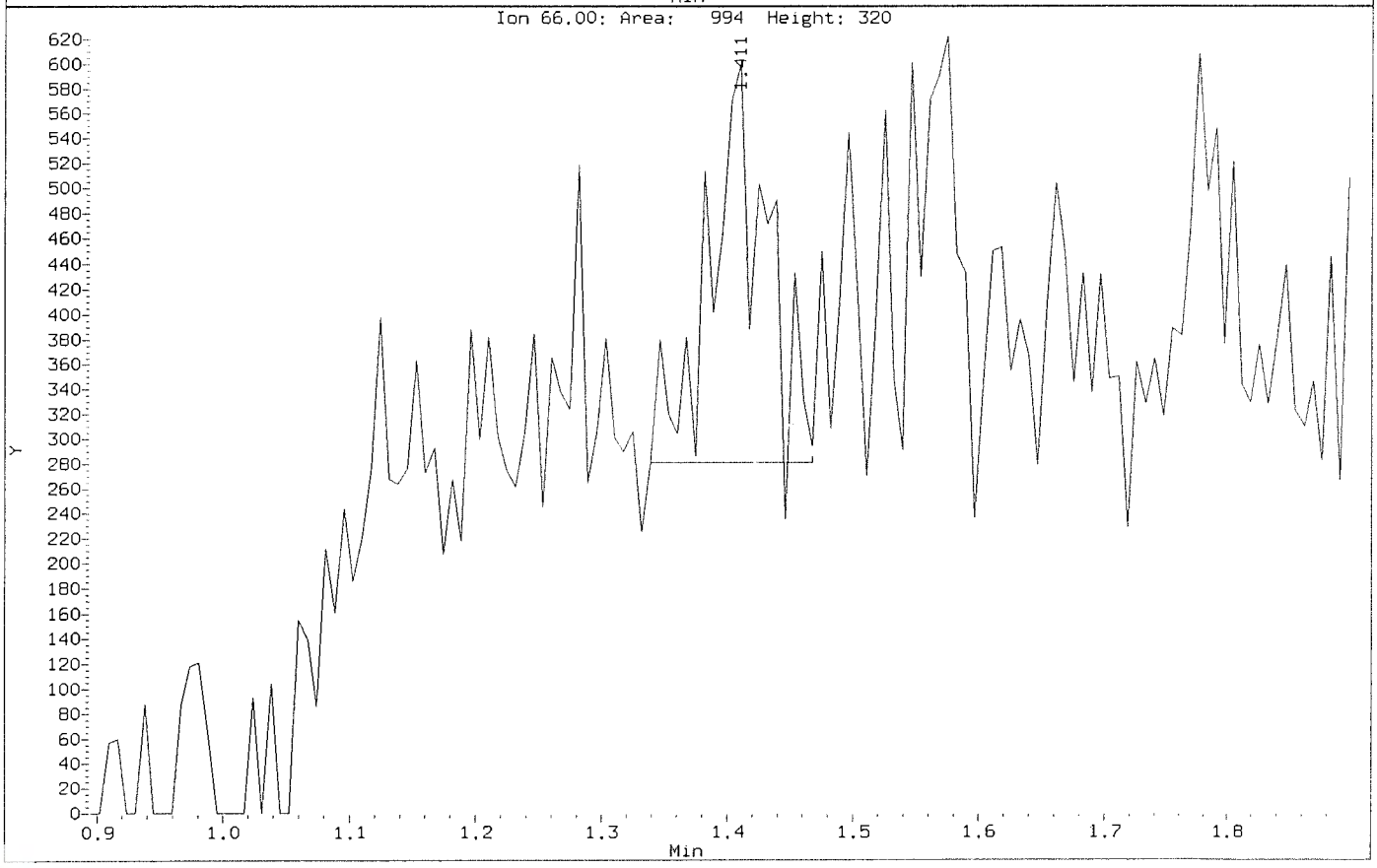
Injection Date: 07-JUL-2020 11:30
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Chloroethane
CAS Number: 75-00-3





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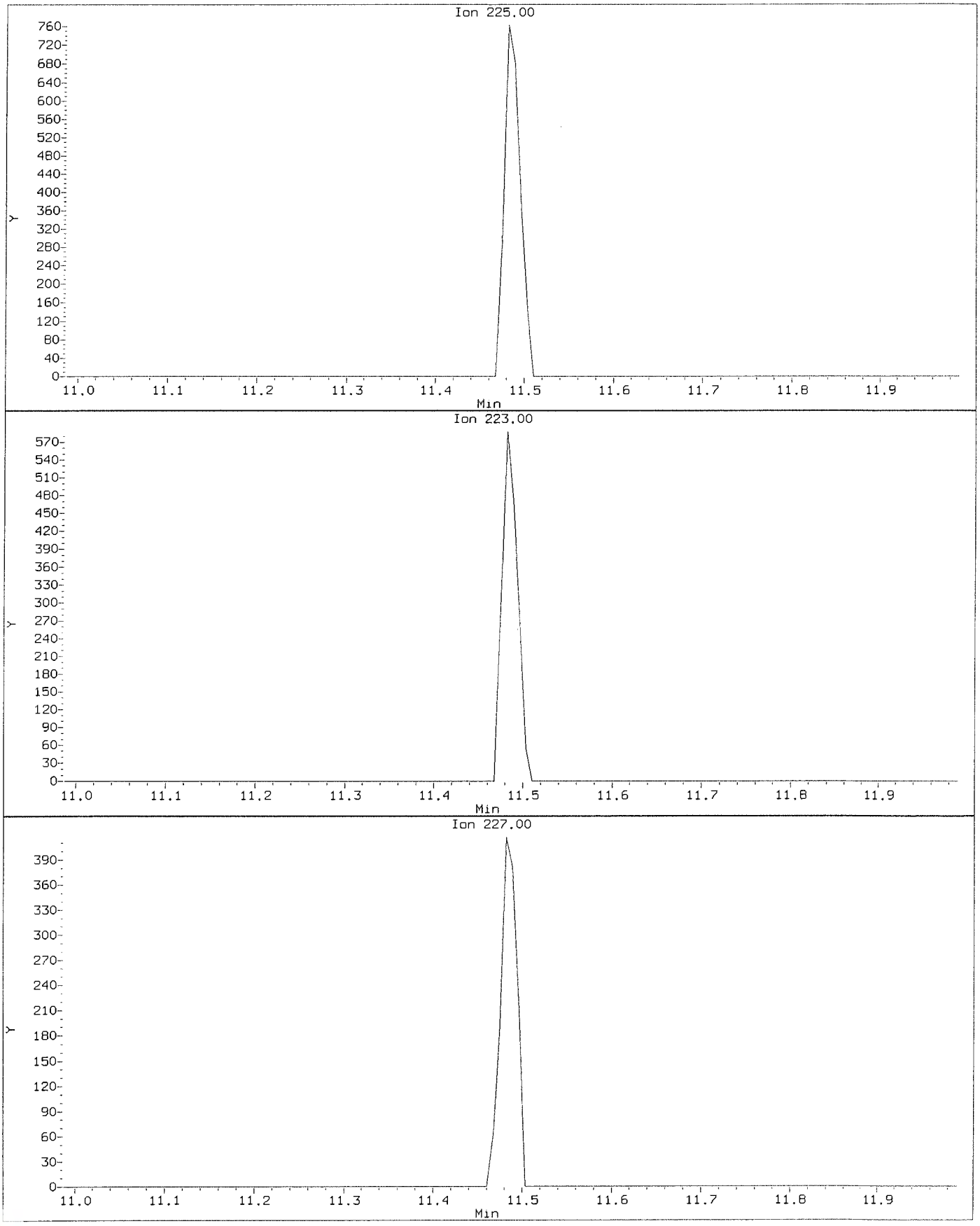
Injection Date: 07-JUL-2020 11:30
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Hexachlorobutadiene
CAS Number: 87-68-3



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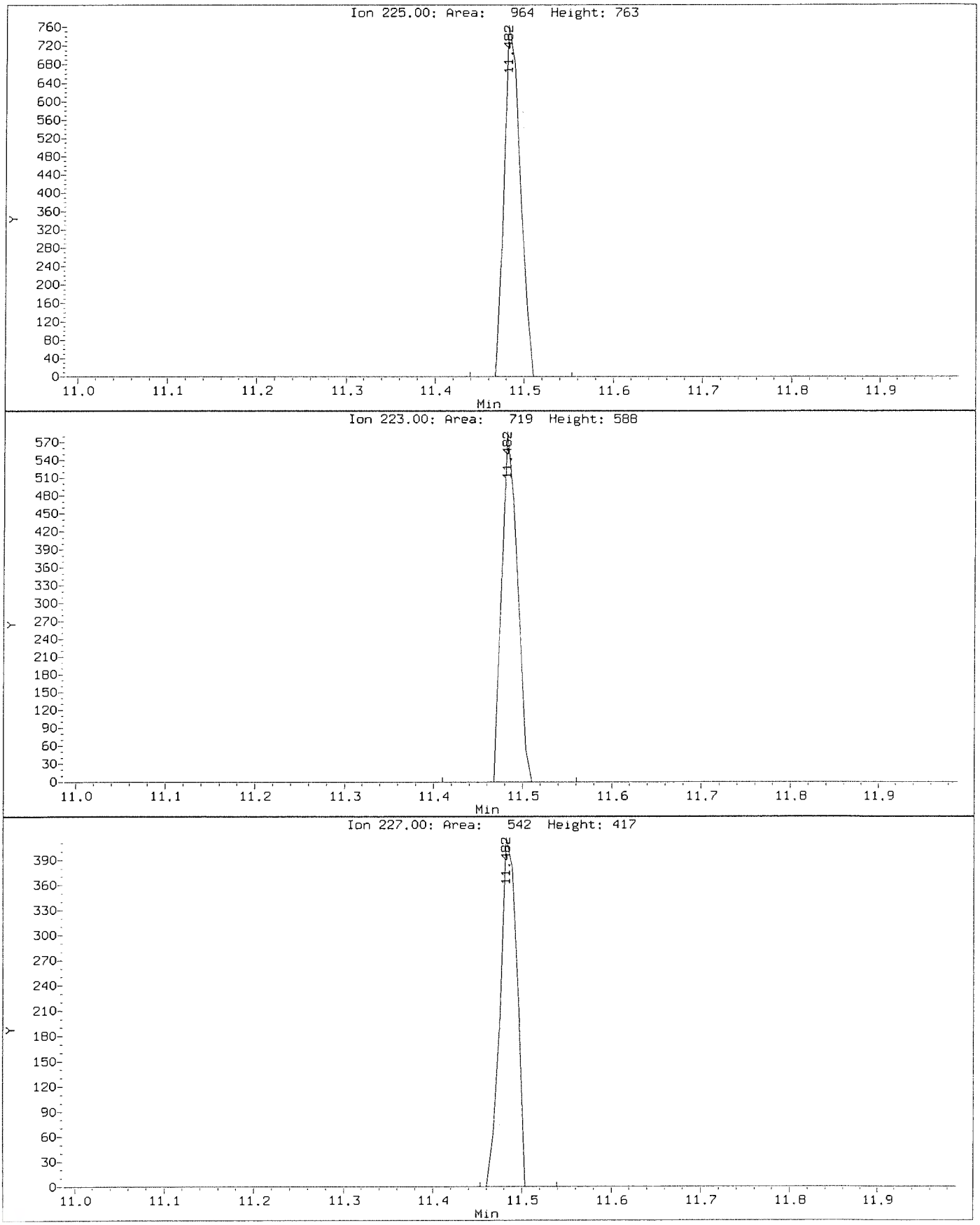
Injection Date: 07-JUL-2020 11:30
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Hexachlorobutadiene
CAS Number: 87-68-3



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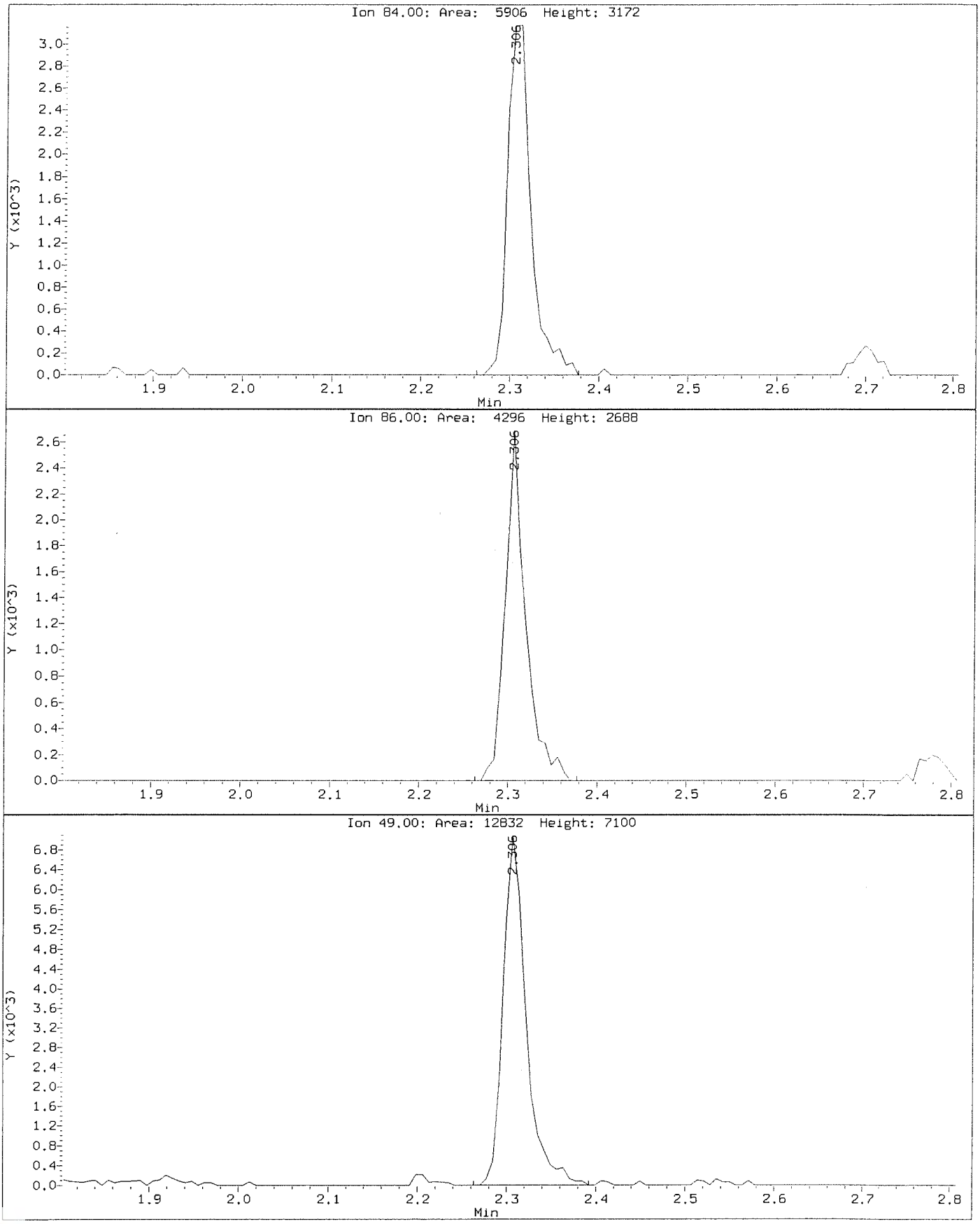
Injection Date: 07-JUL-2020 11:30
Instrument: voa6.i
Client Sample ID: VSTD000.5

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



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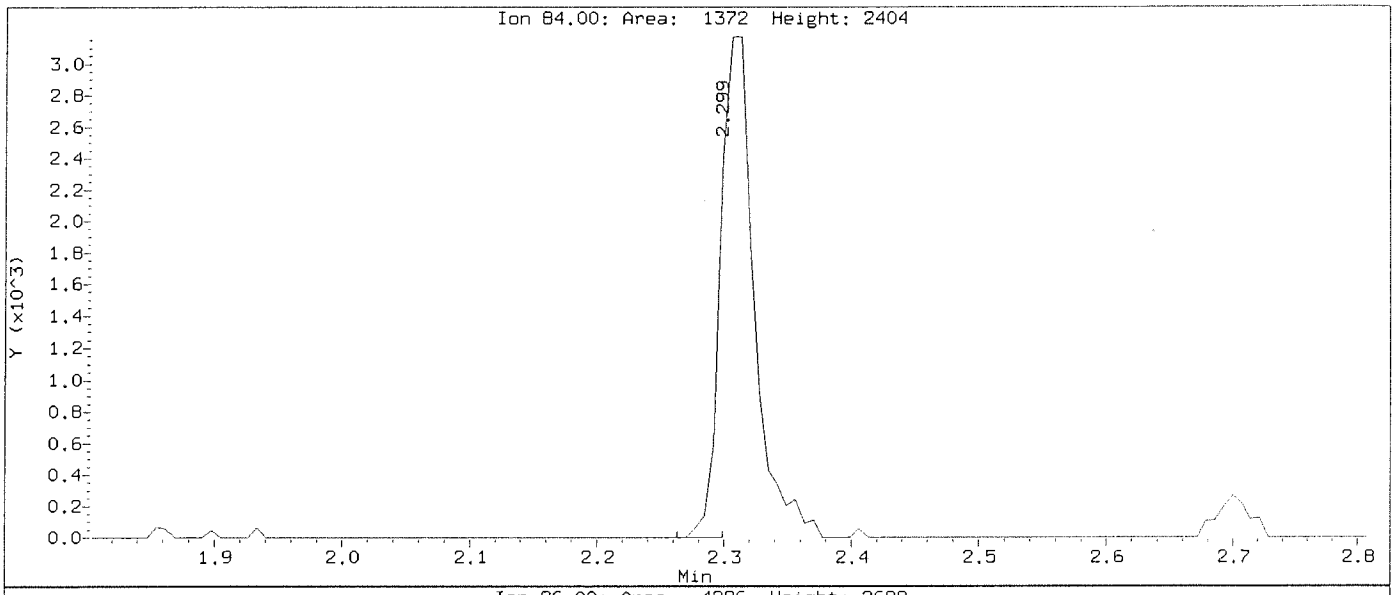
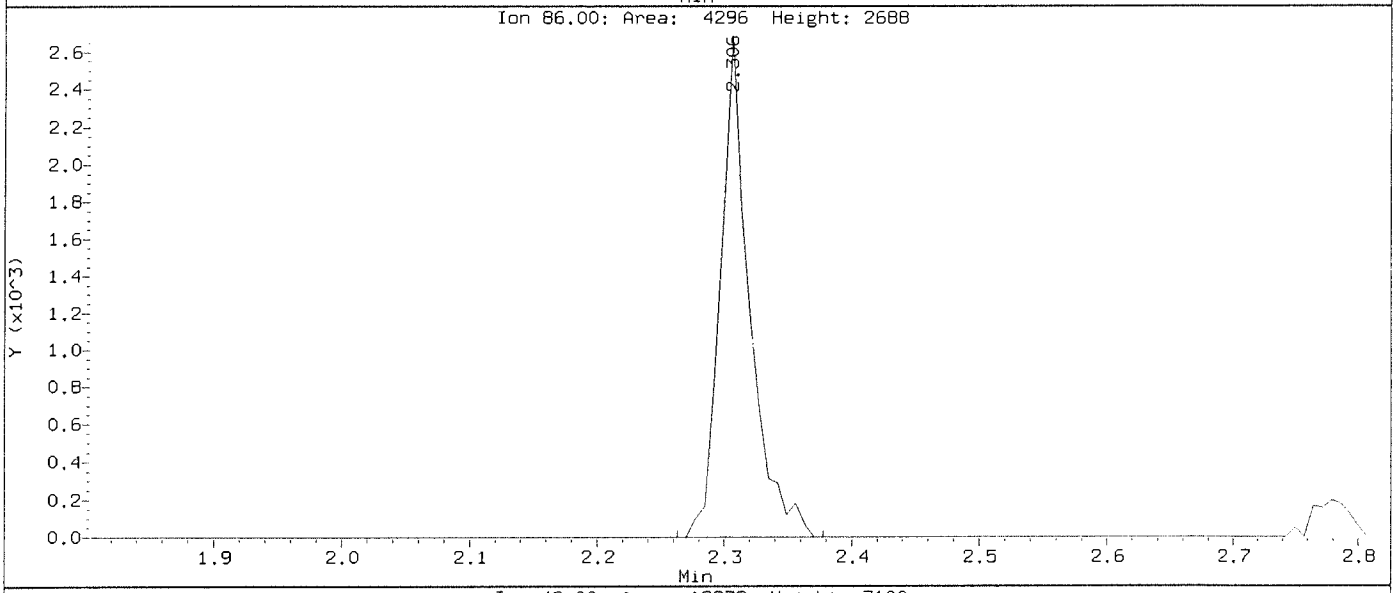
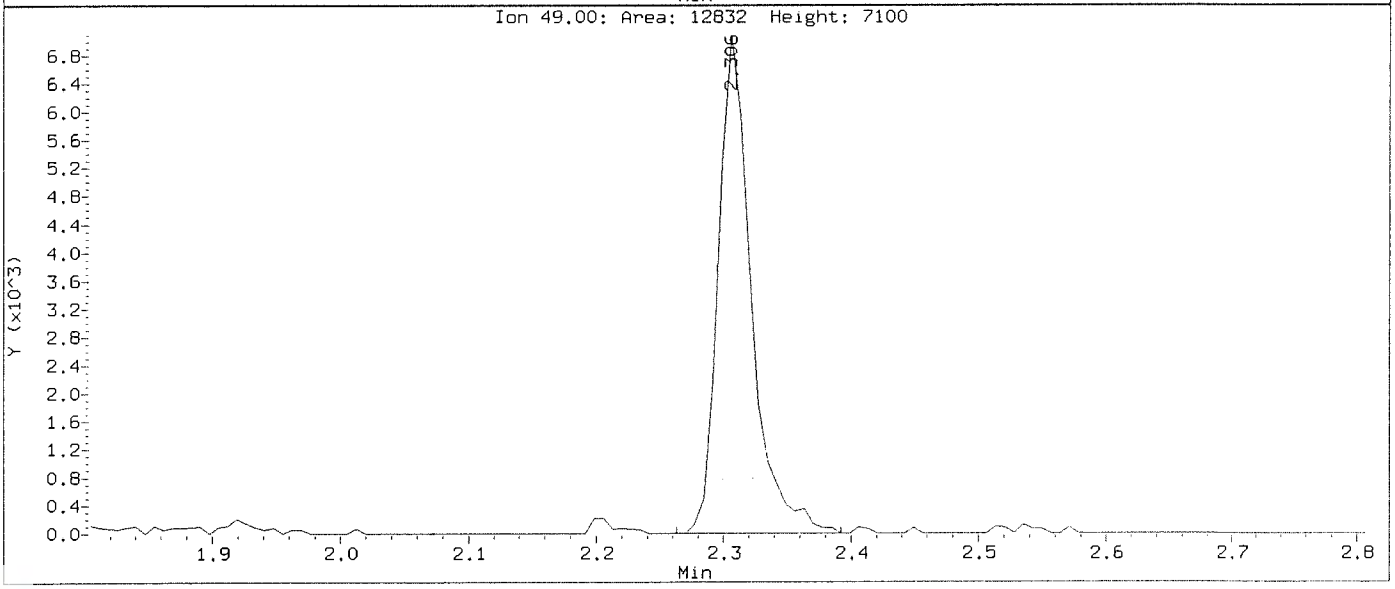
Injection Date: 07-JUL-2020 11:30
Instrument: voa6.i
Client Sample ID: VSTD000.5

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

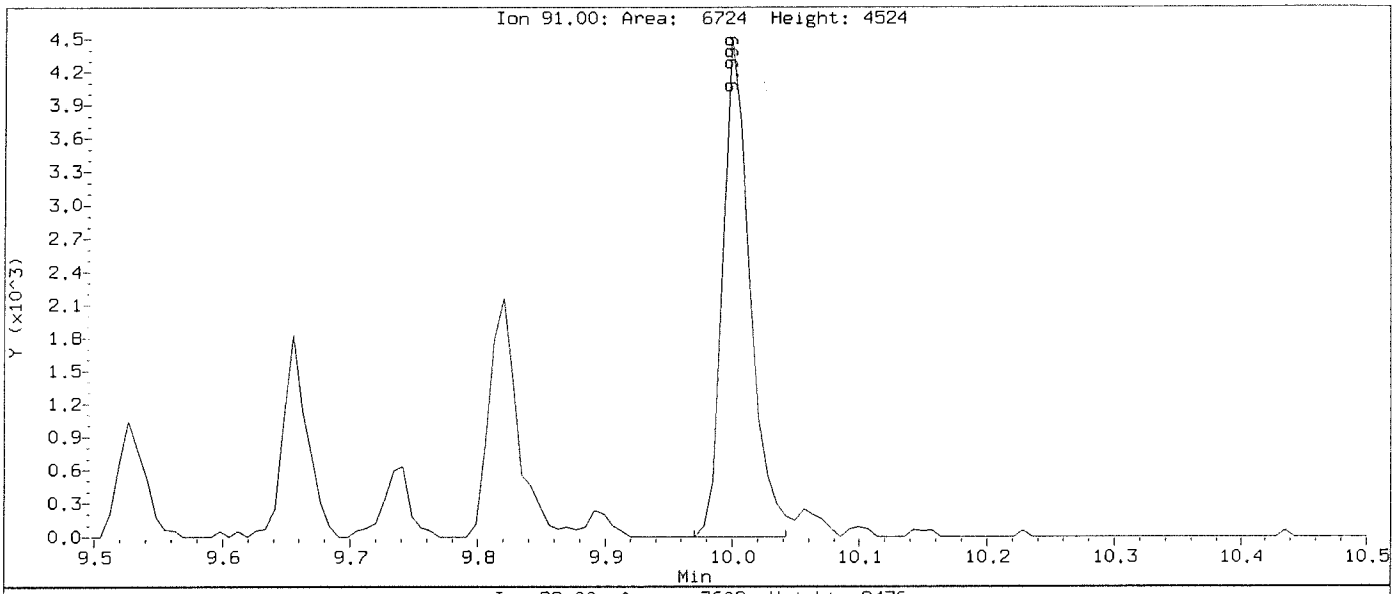


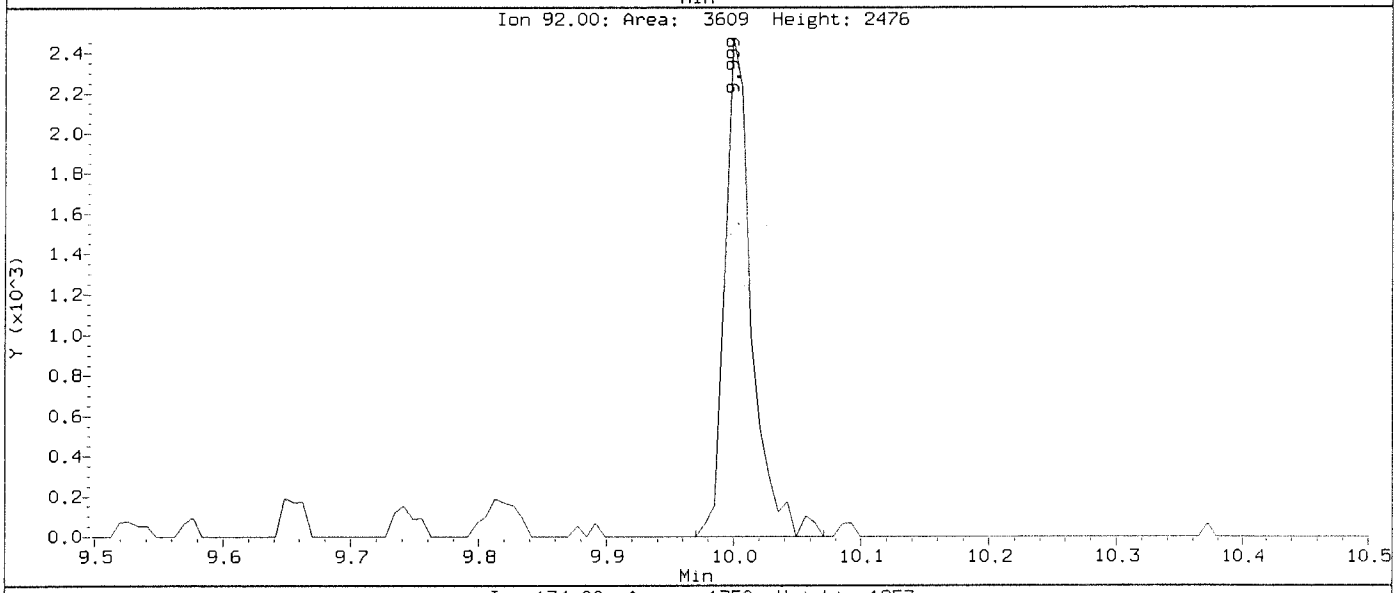


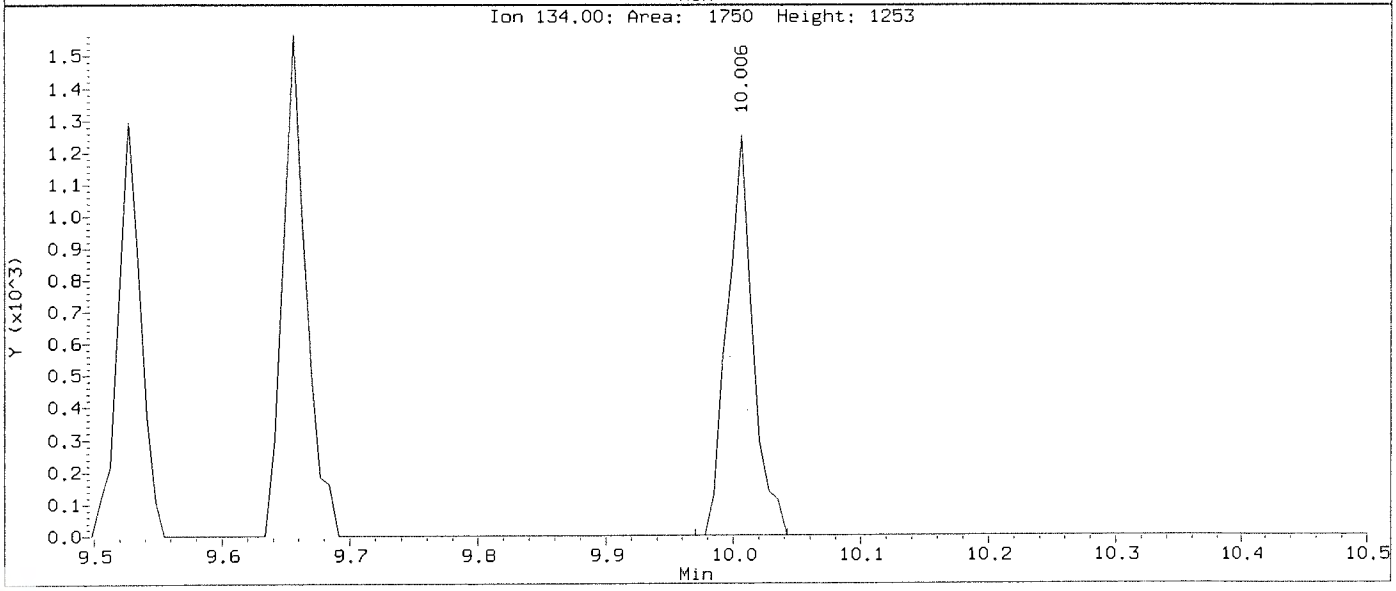


Data File: \\nahstws005\Target\chem\voa6.i\X200707.b\Before\X070703.D
Injection Date: 07-JUL-2020 11:30
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: n-Butylbenzene
CAS Number: 104-51-8







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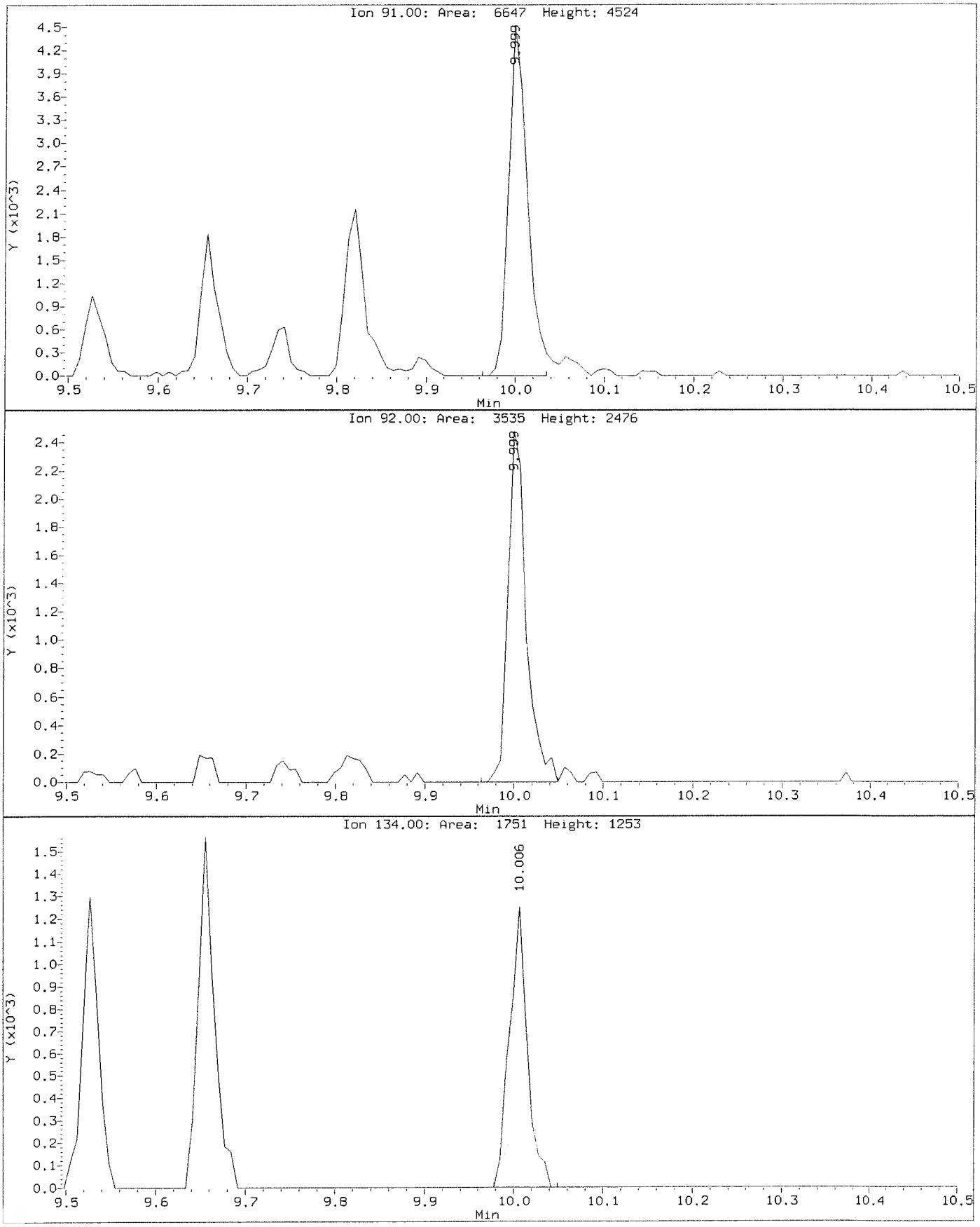
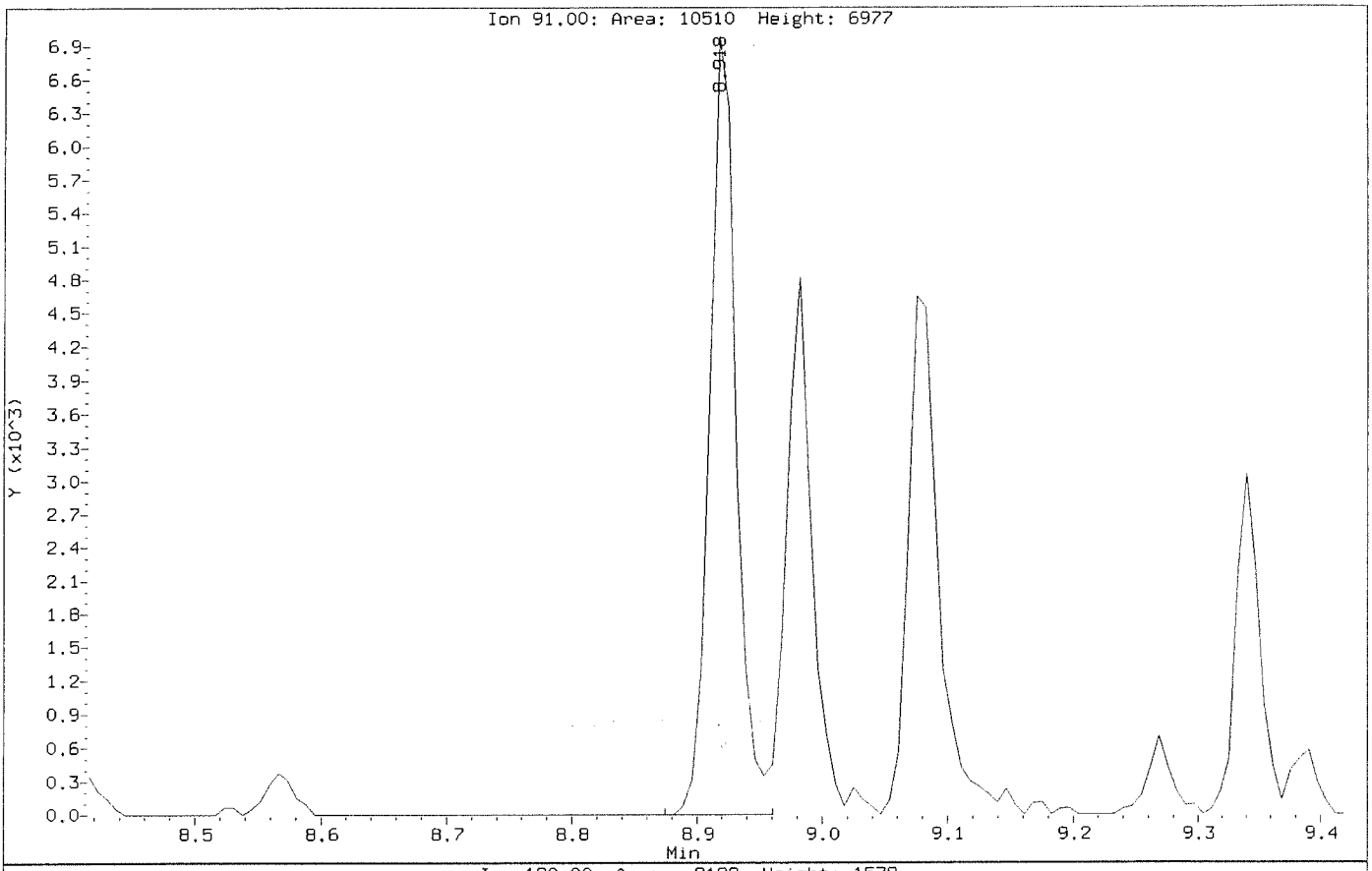
Injection Date: 07-JUL-2020 11:30
Instrument: voa6.i
Client Sample ID: VSTD000.5

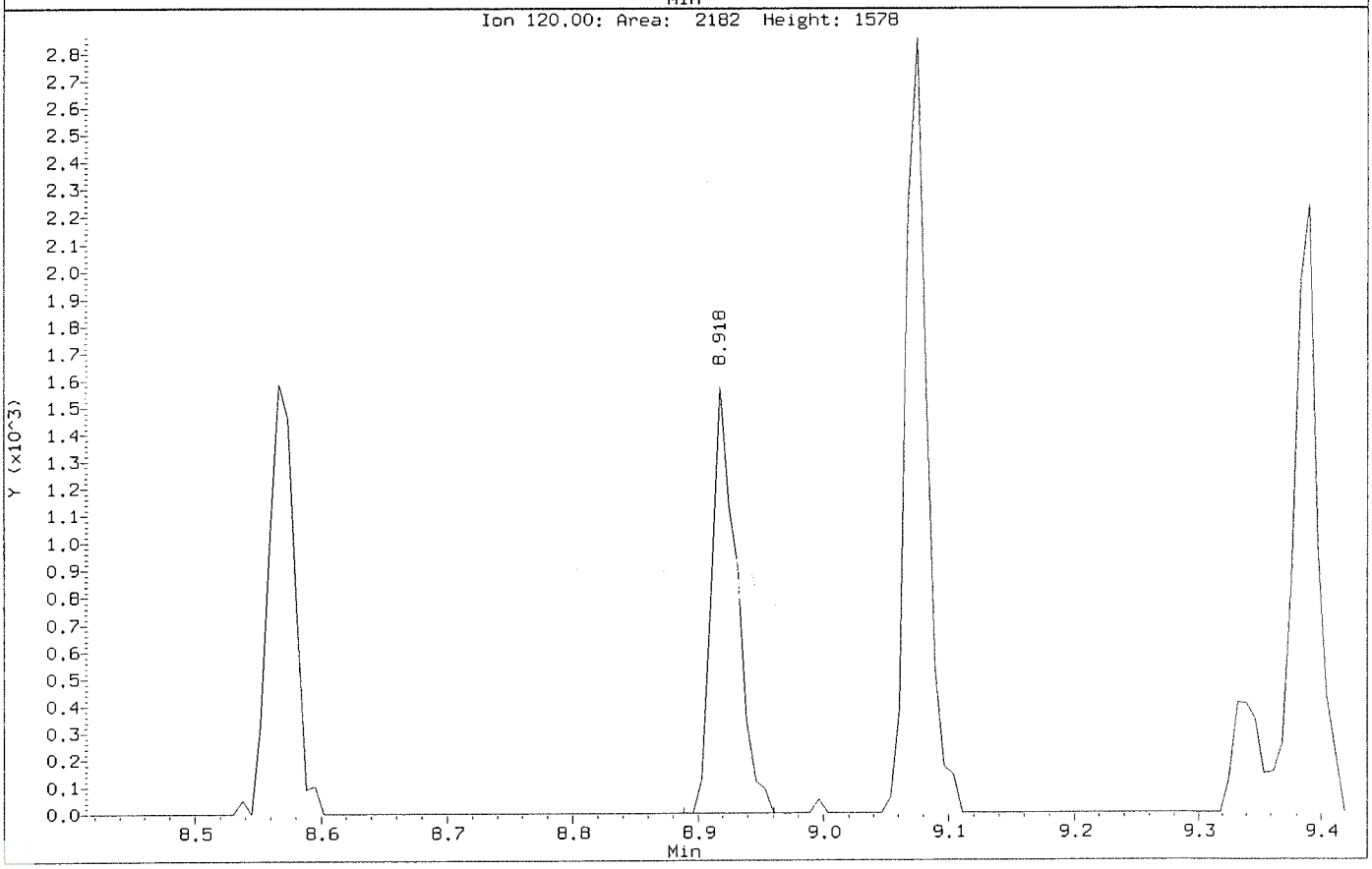
Compound: n-Butylbenzene
CAS Number: 104-51-8



Data File: \\nahstws005\Target\chem\voa6.i\X200707.b\Before\X070703.D
Injection Date: 07-JUL-2020 11:30
Instrument: voa6.i
Client Sample ID: VSTD000.5

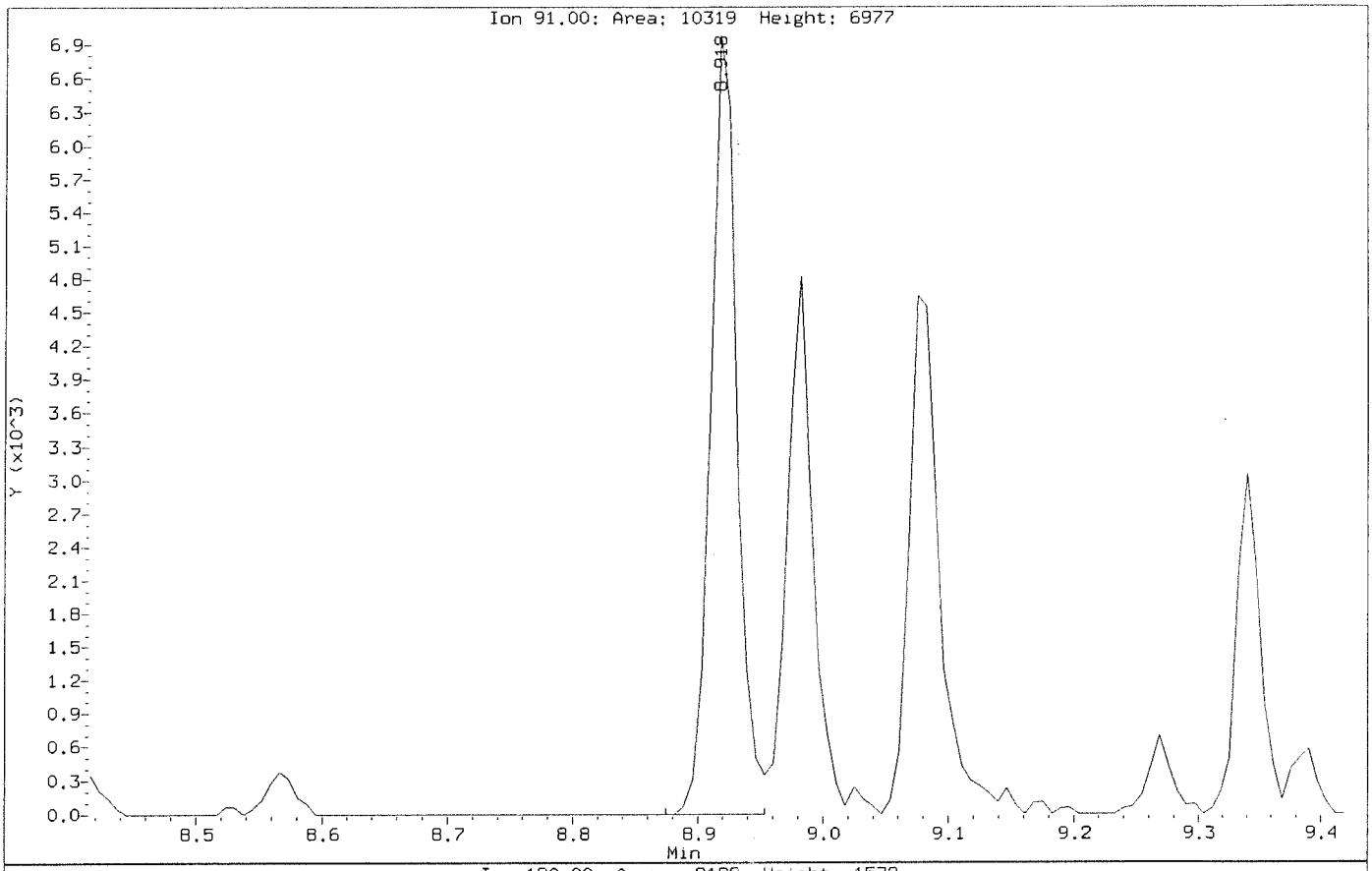
Compound: n-Propylbenzene
CAS Number: 106-65-1

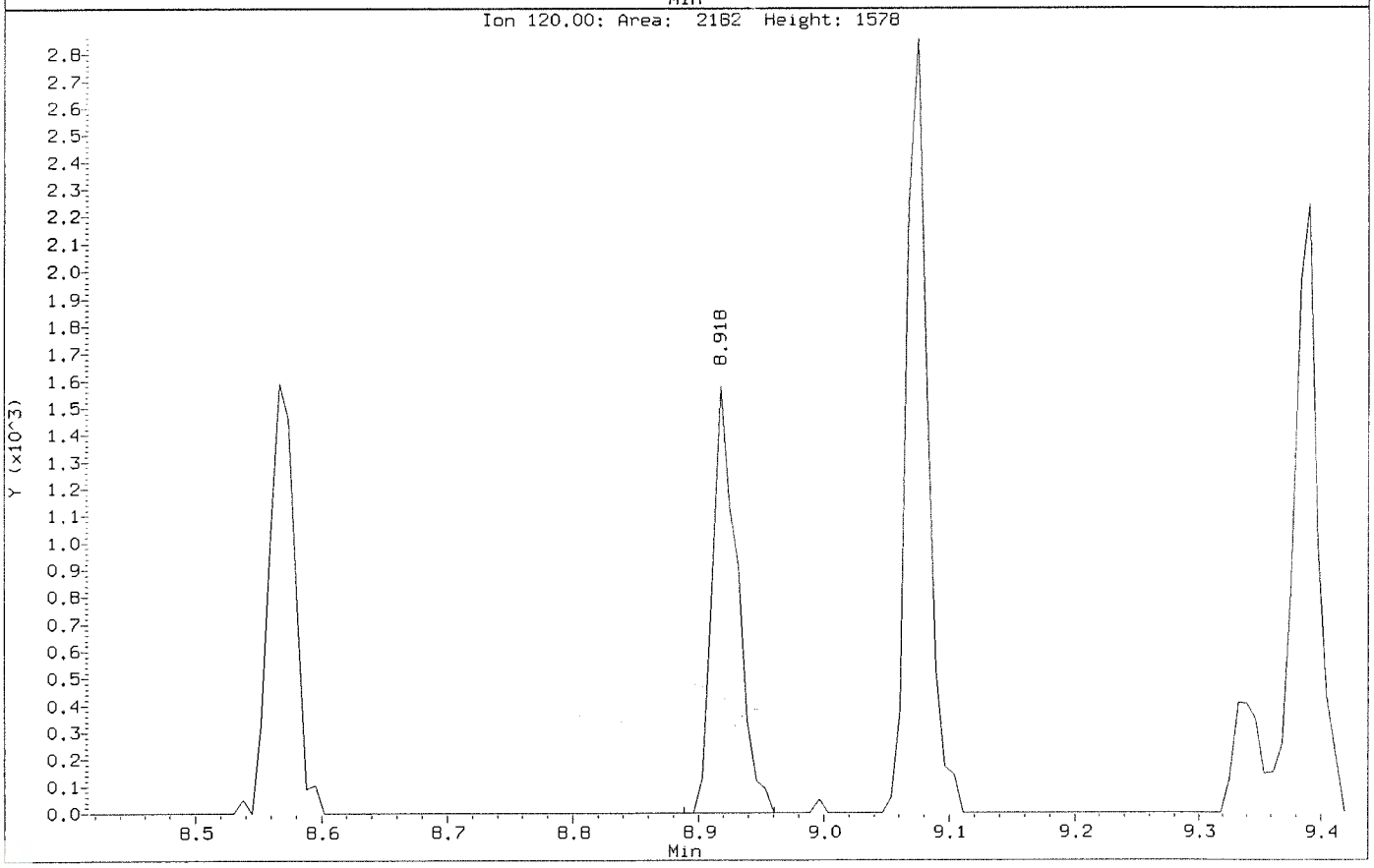




Data File: \\nahstws005\Target\chem\voa6.i\X200707.b\X070703.D
Injection Date: 07-JUL-2020 11:30
Instrument: voa6.i
Client Sample ID: VSTD000.5

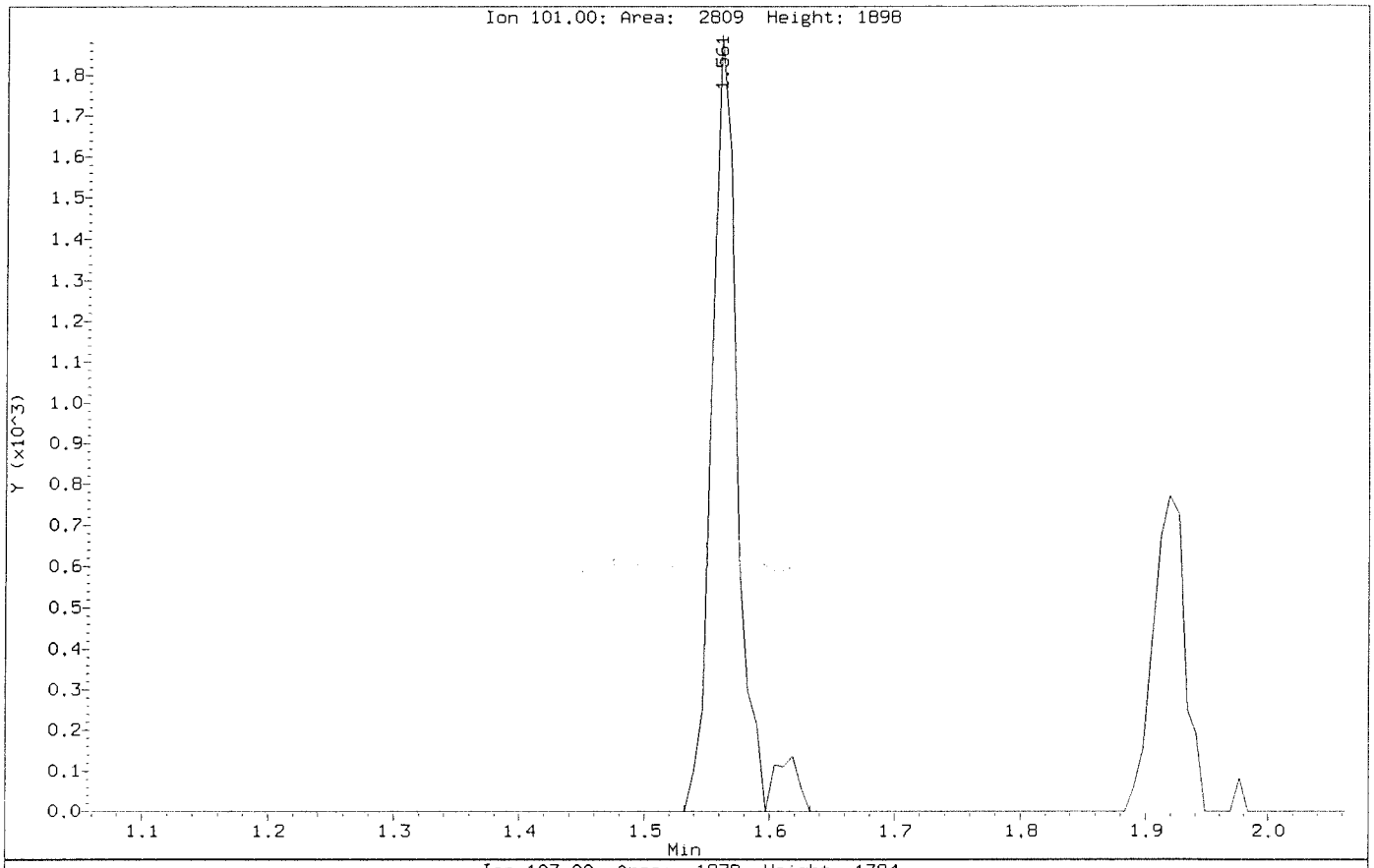
Compound: n-Propylbenzene
CAS Number: 106-65-1

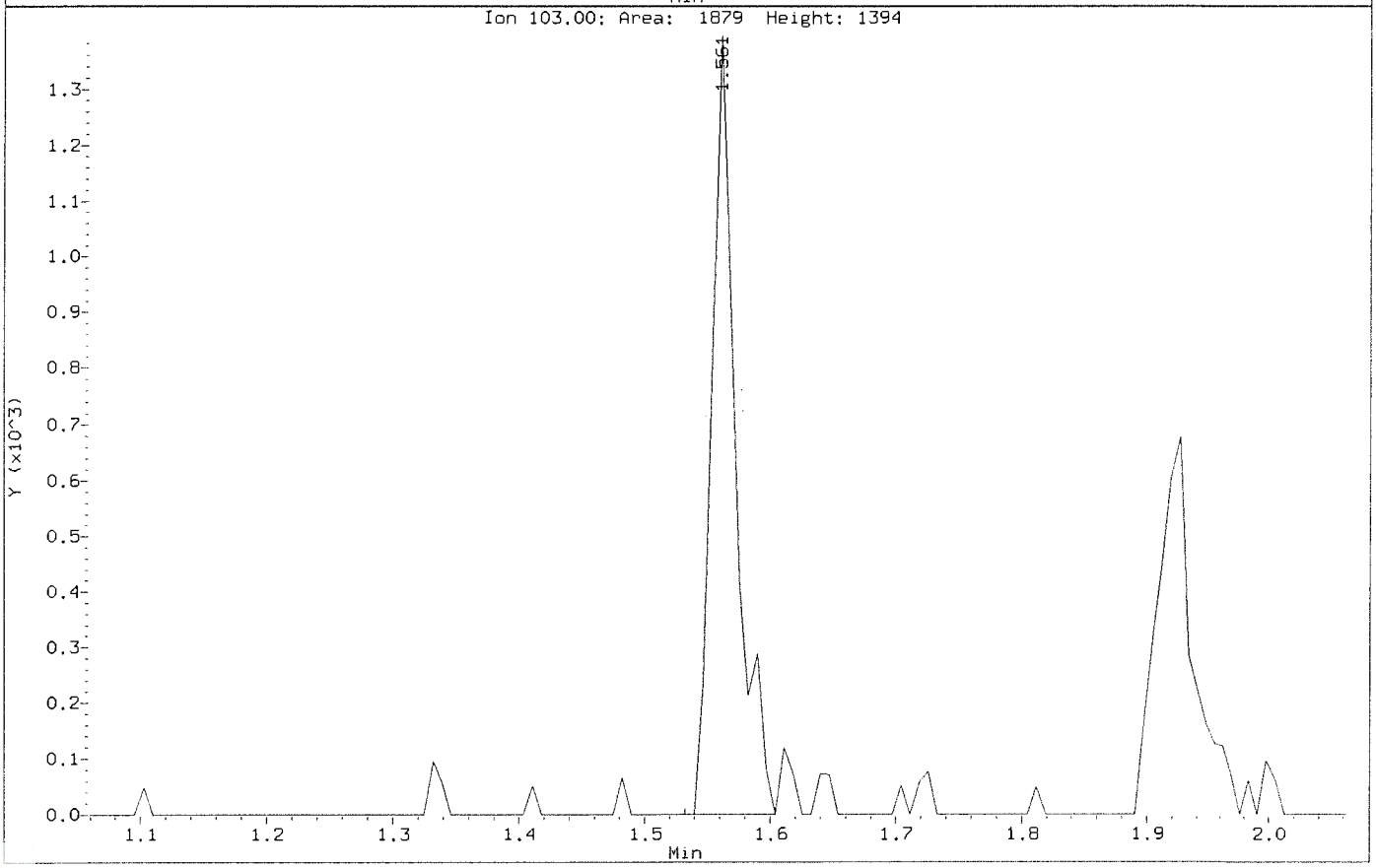




Data File: \\nahstws005\Target\chem\voa6.i\X200707.b\Before\X070703.D
Injection Date: 07-JUL-2020 11:30
Instrument: voa6.i
Client Sample ID: VSTD000.5

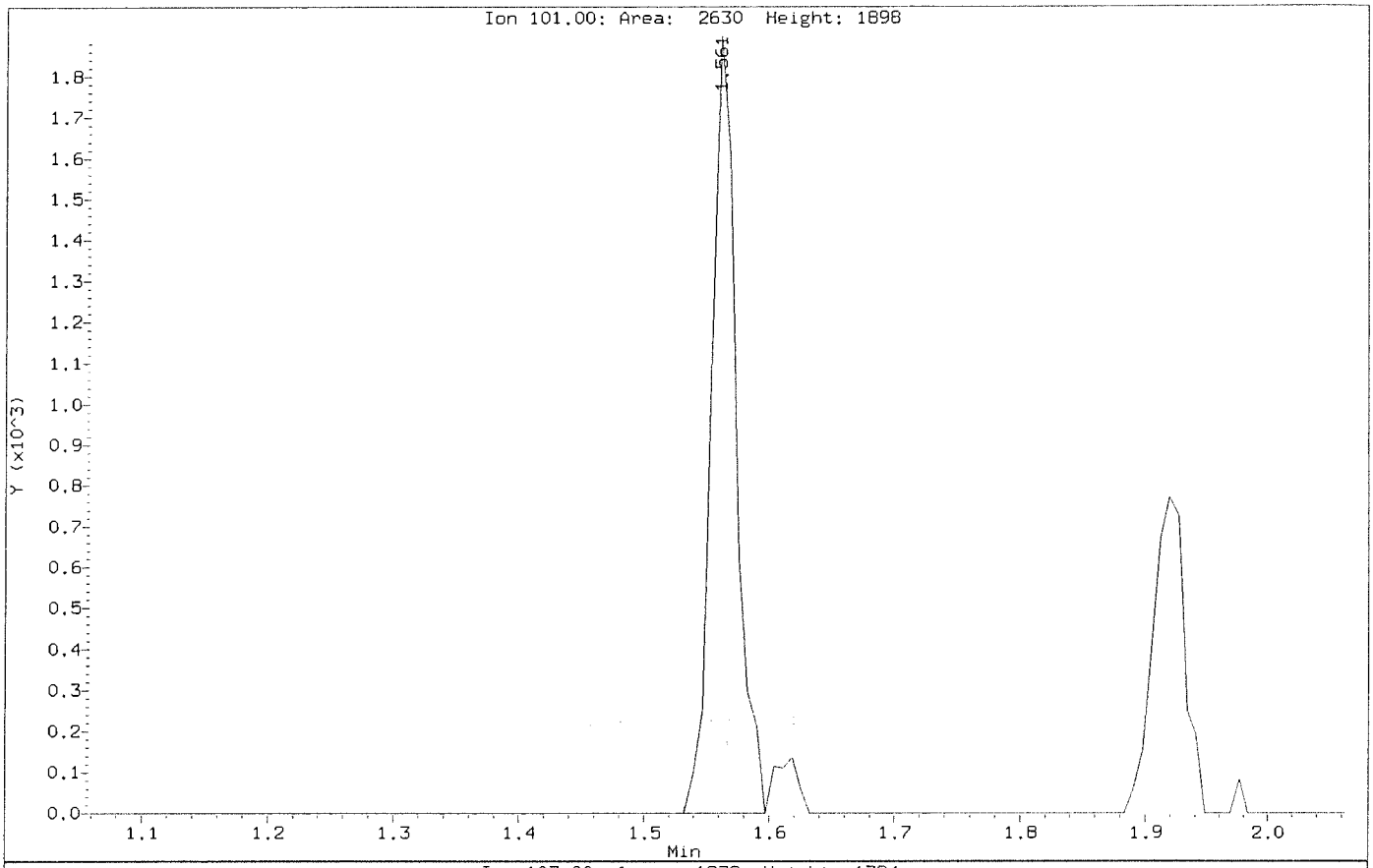
Compound: Trichlorofluoromethane
CAS Number: 75-69-4

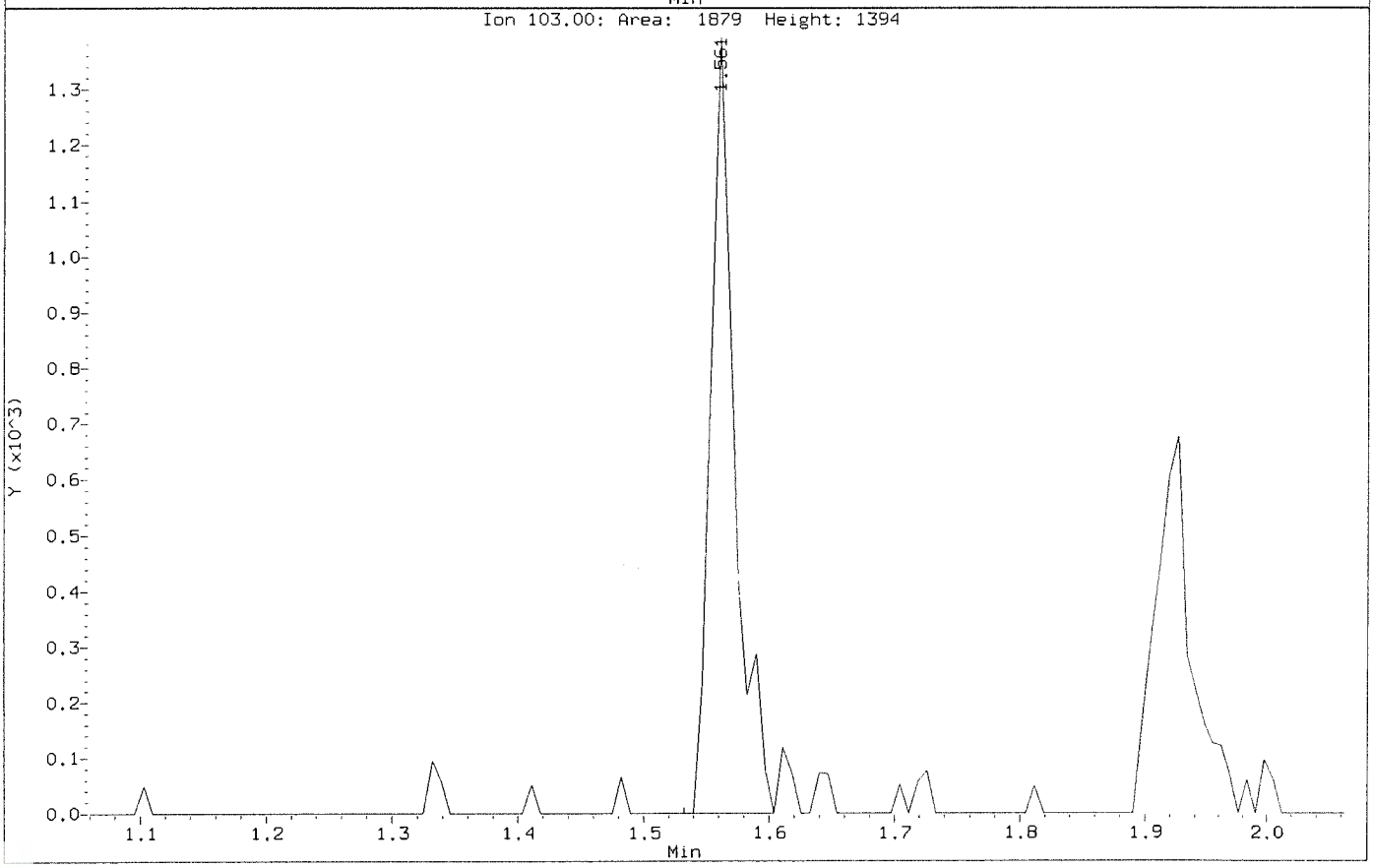




Data File: \\nahstws005\Target\chem\voa6.i\X200707.b\X070703.D
Injection Date: 07-JUL-2020 11:30
Instrument: voa6.i
Client Sample ID: VSTD000.5

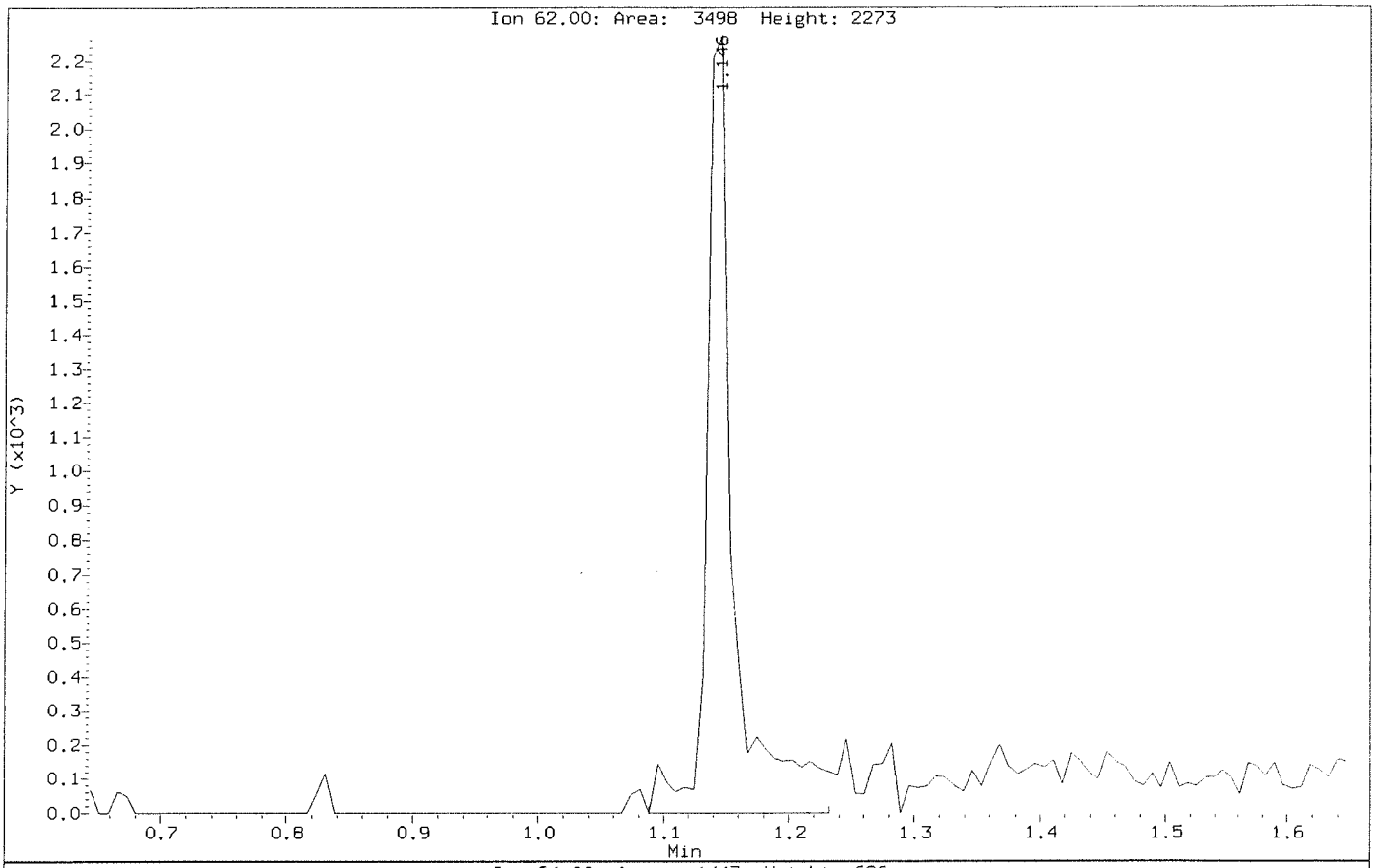
Compound: Trichlorofluoromethane
CAS Number: 75-69-4

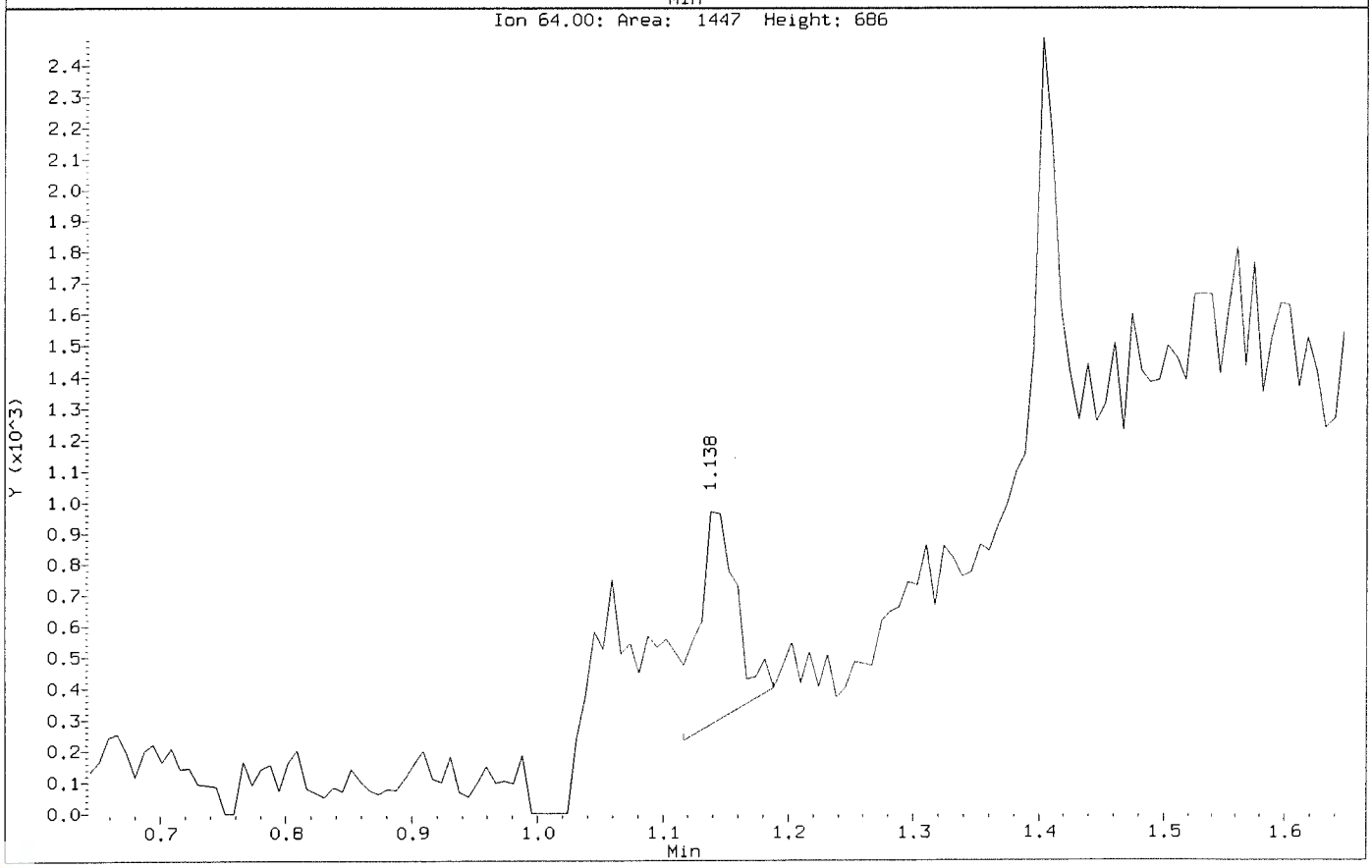




Data File: \\nahstws005\Target\chem\voa6.i\X200707.b\Before\X070703.D
Injection Date: 07-JUL-2020 11:30
Instrument: voa6.i
Client Sample ID: VSTD000.5

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





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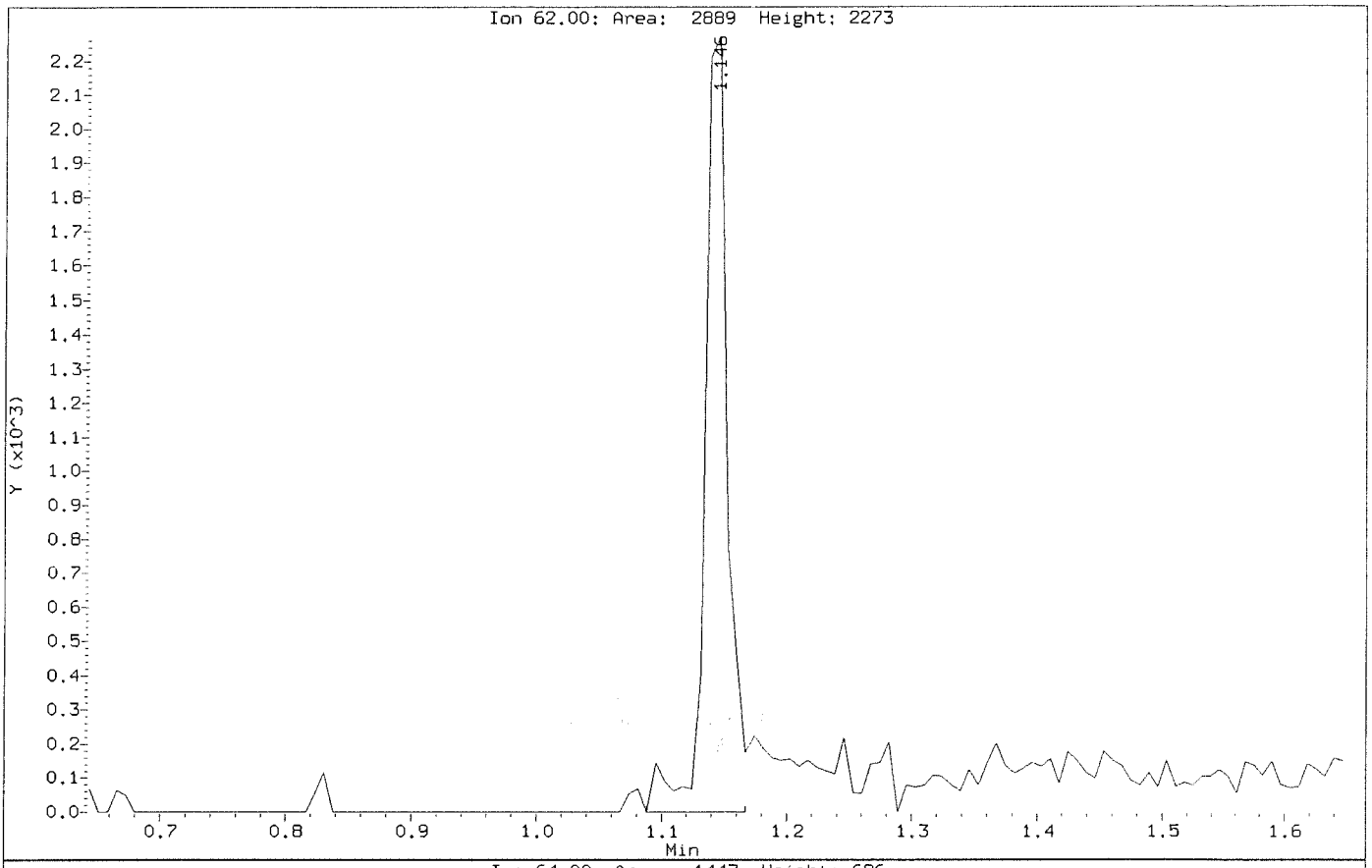
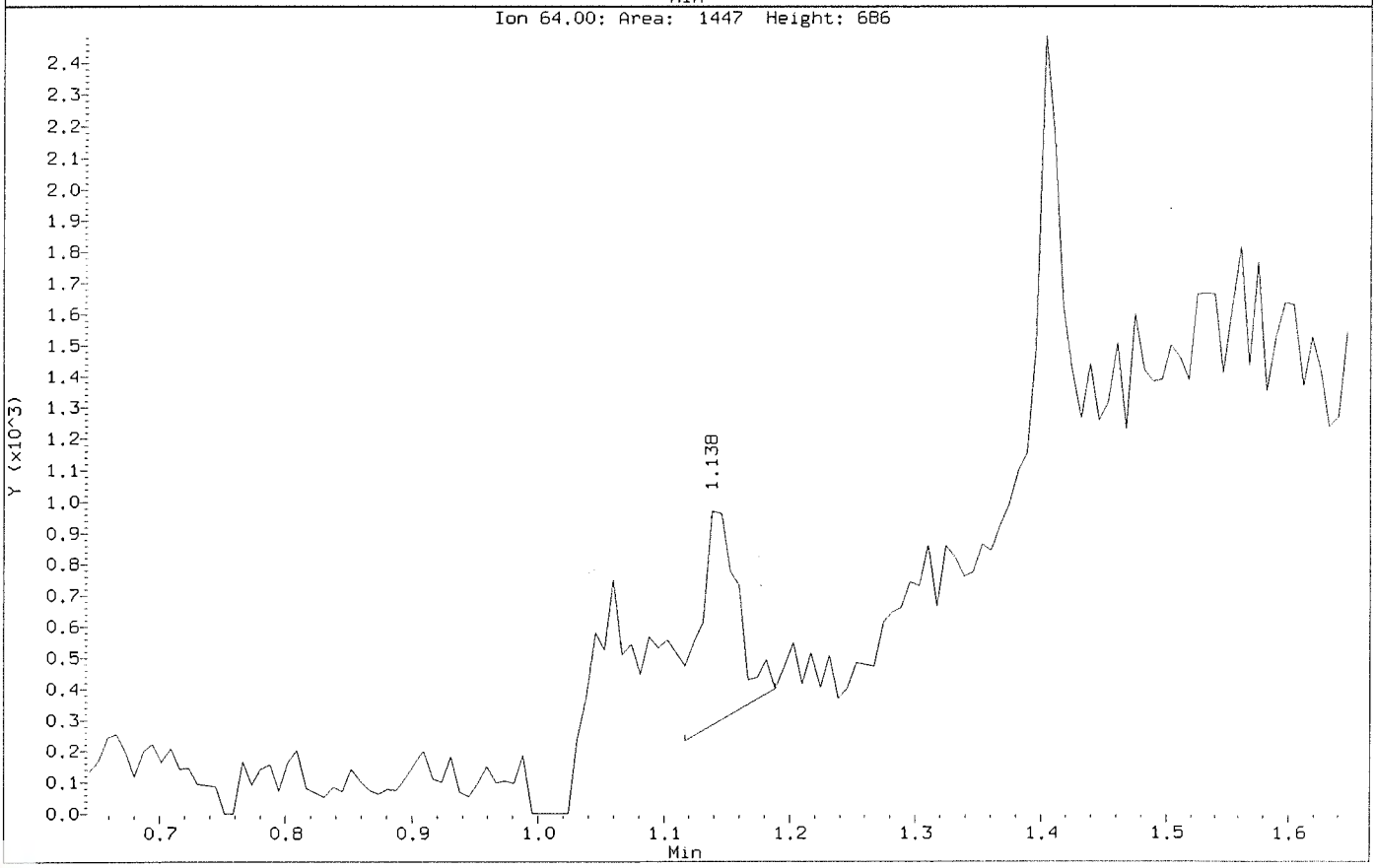
Injection Date: 07-JUL-2020 11:30
Instrument: voa6.i
Client Sample ID: VSTD000.5

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





Data File: \\nahstws005\Target\chem\voa6.i\X200707.b\X070704.D Page 1
Report Date: 12-Aug-2020 15:35

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200707.b\X070704.D
Lab Smp Id: VSTD001 Client Smp ID: VSTD001
Inj Date : 07-JUL-2020 12:18
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\X200707.b\8260W.m
Meth Date : 12-Aug-2020 15:35 voa6.i Quant Type: ISTD
Cal Date : 07-JUL-2020 11:30 Cal File: X070703.D
Als bottle: 5 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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

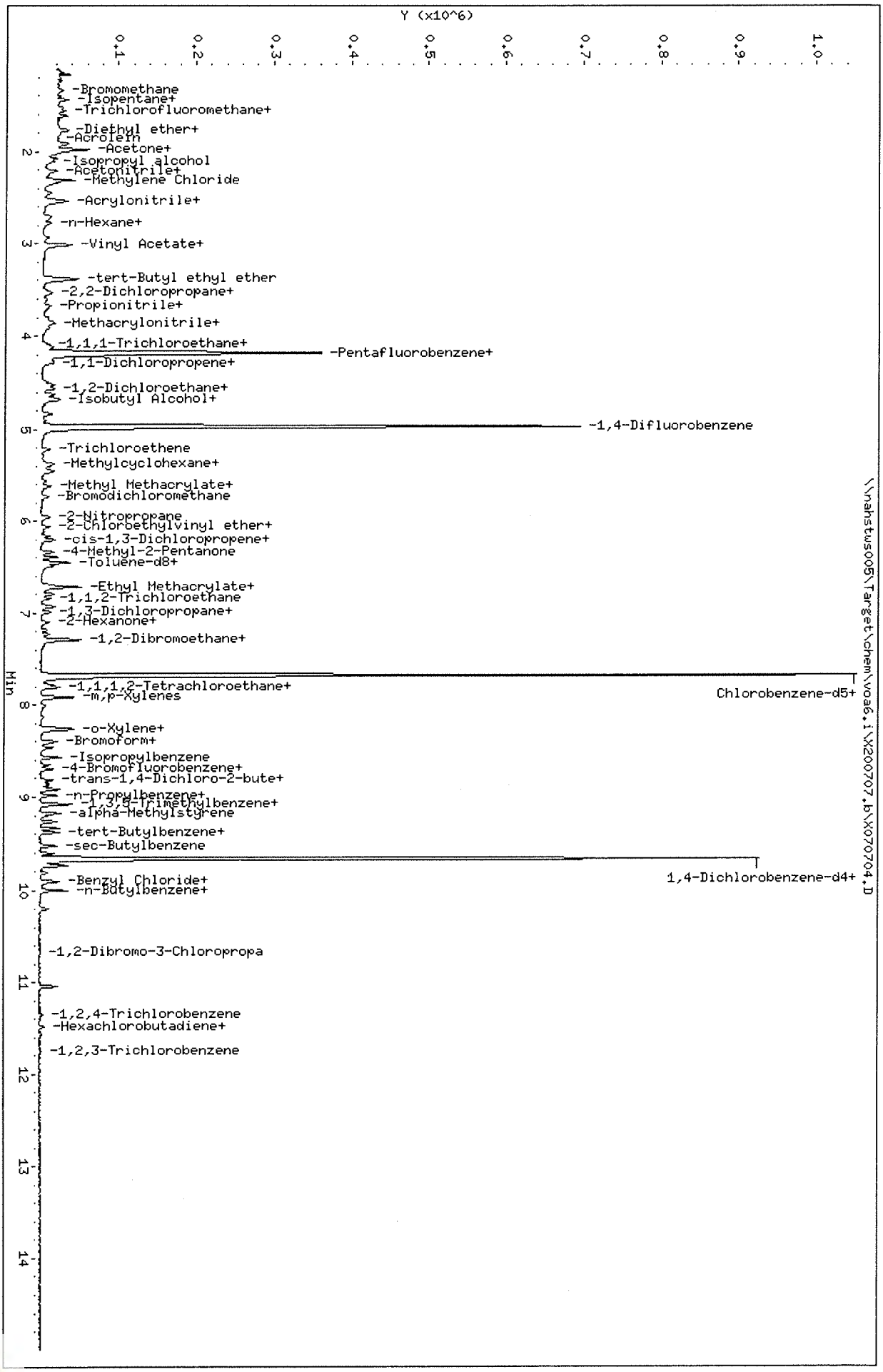
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.189	4.189	(1.000)	287665	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	489068	50.0000	
* 47 Chlorobenzene-d5	117	7.670	7.670	(1.000)	442544	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	206795	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.979)	3277	1.00000	0.16(a)
$ 35 1,2-Dichloroethane-d4	65	4.483	4.483	(1.070)	5456	1.00000	0.59(a)
$ 48 Toluene-d8	98	6.395	6.395	(0.834)	11865	1.00000	1.01(a)
$ 69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	5370	1.00000	0.21(a)
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	3270	1.00000	0.96(a)
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.976)	5025	1.00000	0.95(a)
68 1,1,2,2-Tetrachloroethane	83	8.845	8.845	(0.915)	4211	1.00000	1.02(aM)
53 1,1,2-Trichloroethane	83	6.847	6.847	(0.893)	2530	1.00000	0.90(a)
22 1,1-Dichloroethane	63	2.929	2.929	(0.699)	8376	1.00000	1.02(a)
11 1,1-Dichloroethene	96	1.911	1.911	(0.456)	2451	1.00000	0.92(a)
32 1,1-Dichloropropene	75	4.289	4.289	(0.863)	5445	1.00000	1.13(a)
93 1,2,3-Trichlorobenzene	180	11.753	11.753	(1.216)	716	1.00000	2.62(aM)
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	3452	1.00000	0.95(aM)
90 1,2,4-Trichlorobenzene	180	11.345	11.345	(1.173)	1386	1.00000	2.35(aM)
79 1,2,4-Trimethylbenzene	105	9.382	9.382	(0.970)	11840	1.00000	0.97(a)
89 1,2-Dibromo-3-Chloropropane	155	10.665	10.665	(1.103)	296	1.00000	(aM)
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	3564	1.00000	1.00(a)
88 1,2-Dichlorobenzene	146	9.998	9.998	(1.034)	5853	1.00000	0.96(a)

Data File: \\nahstws005\Target\chem\voa6.i\X200707.b\X070704.D Page 2
Report Date: 12-Aug-2020 15:35

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
33	1,2-Dichloroethane	62	4.569	4.569	(0.919)	6061	1.00000	0.99(a)
42	1,2-Dichloropropane	63	5.443	5.443	(1.095)	4404	1.00000	0.96(aM)
75	1,3,5-Trimethylbenzene	105	9.074	9.074	(0.939)	11148	1.00000	0.94(a)
83	1,3-Dichlorobenzene	146	9.612	9.612	(0.994)	6195	1.00000	0.93(a)
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	6067	1.00000	1.02(a)
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	6719	1.00000	0.87(a)
26	2,2-Dichloropropane	77	3.523	3.523	(0.841)	5145	1.00000	1.03(a)
24	2-Butanone	43	3.602	3.602	(0.860)	8248	2.00000	(aM)
76	2-Chlorotoluene	91	8.981	8.981	(0.929)	10095	1.00000	0.97(a)
52	2-Hexanone	43	7.097	7.097	(0.925)	8043	2.00000	(a)
77	4-Chlorotoluene	91	9.074	9.074	(0.939)	10512	1.00000	0.89(a)
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	10898	1.00000	0.92(a)
45	4-Methyl-2-Pentanone	43	6.331	6.331	(0.825)	14318	2.00000	(a)
10	Acetone	43	1.976	1.976	(0.472)	48306	2.00000	(a)
37	Benzene	78	4.519	4.519	(0.909)	14195	1.00000	1.01(a)
74	Bromobenzene	156	8.817	8.817	(0.912)	3830	1.00000	0.97(a)
29	Bromochloromethane	128	3.802	3.802	(0.908)	2137	1.00000	1.06(a)
39	Bromodichloromethane	83	5.736	5.736	(1.154)	4874	1.00000	0.99(aM)
66	Bromoform	173	8.423	8.423	(1.098)	2480	1.00000	1.00(Ta)
6	Bromomethane	94	1.338	1.338	(0.320)	2882	1.00000	1.35(aM)
19	Carbon Disulfide	76	2.069	2.069	(0.494)	16970	2.00000	1.94(a)
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	4805	1.00000	1.02(a)
59	Chlorobenzene	112	7.699	7.699	(1.004)	9050	1.00000	1.00(a)
7	Chloroethane	64	1.403	1.403	(0.335)	2977	1.00000	(aM)
28	Chloroform	83	3.910	3.910	(0.933)	6251	1.00000	0.99(a)
3	Chloromethane	50	1.080	1.080	(0.258)	5793	1.00000	0.97(a)
27	cis-1,2-Dichloroethene	96	3.537	3.537	(0.844)	3779	1.00000	1.00(a)
46	cis-1,3-Dichloropropene	75	6.166	6.166	(1.241)	5523	1.00000	0.93(a)
55	Dibromochloromethane	129	7.183	7.183	(0.937)	3342	1.00000	0.91(a)
44	Dibromomethane	93	5.565	5.565	(1.120)	2234	1.00000	0.91(a)
2	Dichlorodifluoromethane	85	0.973	0.973	(0.232)	3008	1.00000	0.86(a)
61	Ethylbenzene	106	7.799	7.799	(1.017)	5130	1.00000	1.07(a)
91	Hexachlorobutadiene	225	11.488	11.488	(1.188)	1140	1.00000	2.45(a)
67	Isopropylbenzene	105	8.566	8.566	(1.117)	13237	1.00000	0.93(a)
62	m,p-Xylenes	106	7.914	7.914	(1.032)	11232	2.00000	1.95(a)
17	Methylene Chloride	84	2.305	2.305	(0.550)	3648	1.00000	1.15(aM)
87	n-Butylbenzene	91	9.998	9.998	(1.034)	9685	1.00000	0.92(a)
73	n-Propylbenzene	91	8.917	8.917	(0.922)	15566	1.00000	0.92(a)
92	Naphthalene	128	11.560	11.560	(1.196)	3173	1.00000	1.87(a)
63	o-Xylene	106	8.251	8.251	(1.076)	5792	1.00000	1.03(a)
81	sec-Butylbenzene	105	9.526	9.526	(0.985)	13093	1.00000	0.94(a)
64	Styrene	104	8.265	8.265	(1.078)	9093	1.00000	0.93(a)
78	tert-Butylbenzene	119	9.339	9.339	(0.966)	8891	1.00000	0.93(a)
56	Tetrachloroethene	164	6.933	6.933	(0.904)	2306	1.00000	0.85(aM)
50	Toluene	91	6.453	6.453	(0.841)	14579	1.00000	1.03(a)
20	trans-1,2-Dichloroethene	96	2.542	2.542	(0.607)	3019	1.00000	0.96(a)
51	trans-1,3-Dichloropropene	75	6.689	6.689	(1.346)	5191	1.00000	0.97(a)
38	Trichloroethene	130	5.214	5.214	(1.049)	3243	1.00000	0.89(a)
8	Trichlorofluoromethane	101	1.560	1.560	(0.373)	4899	1.00000	0.98(a)
5	Vinyl Chloride	62	1.138	1.138	(0.272)	4817	1.00000	0.95(a)

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.



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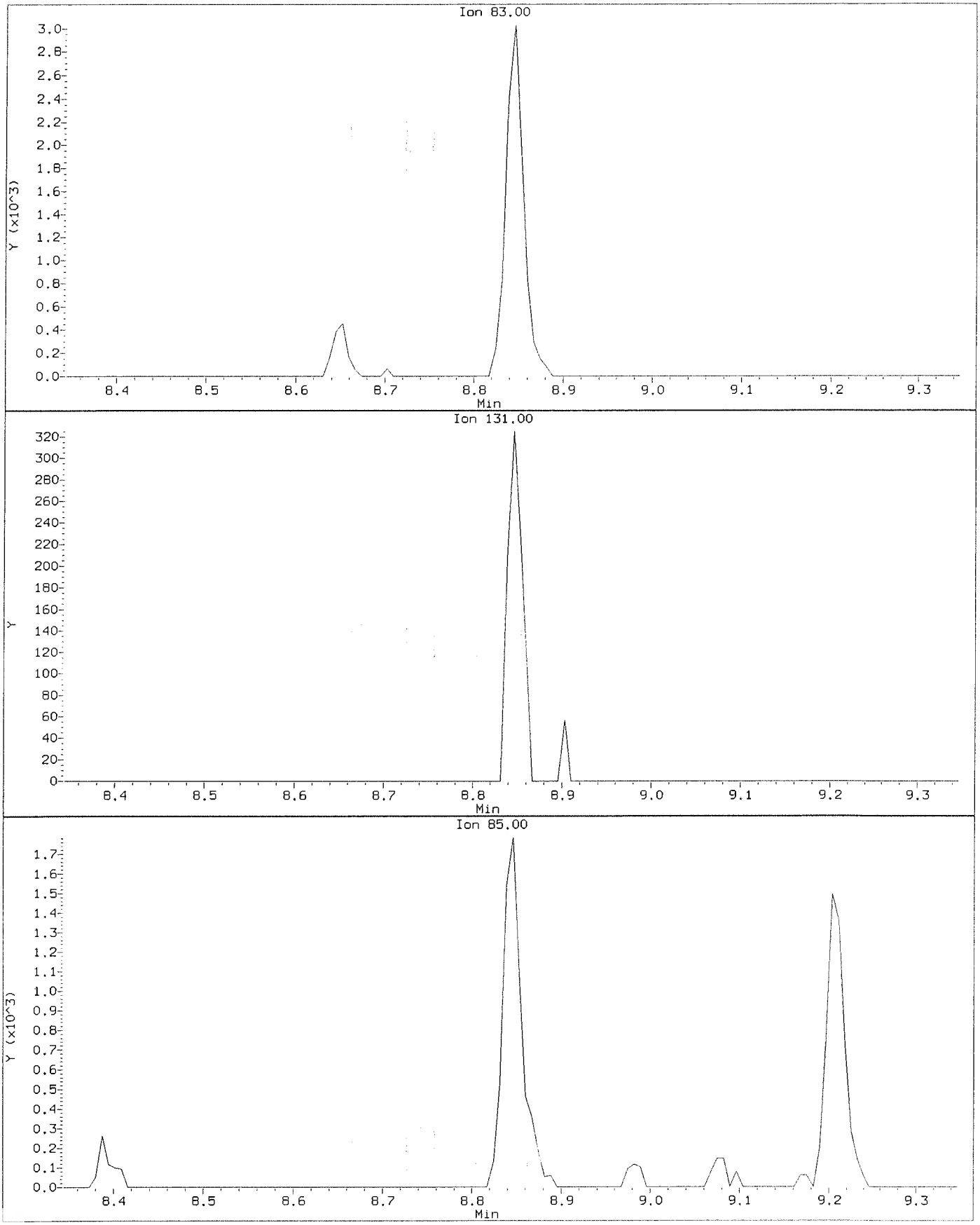
Client ID: VSTD001
Sample Info: VSTD001;VSTD001;1;3;
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\nahstws005\Target\chem\voa6.i\X200707.b\Before\X070704.D
Injection Date: 07-JUL-2020 12:18
Instrument: voa6.i
Client Sample ID: VSTD001

Compound: 1,1,2,2-Tetrachloroethane
CAS Number: 79-34-5



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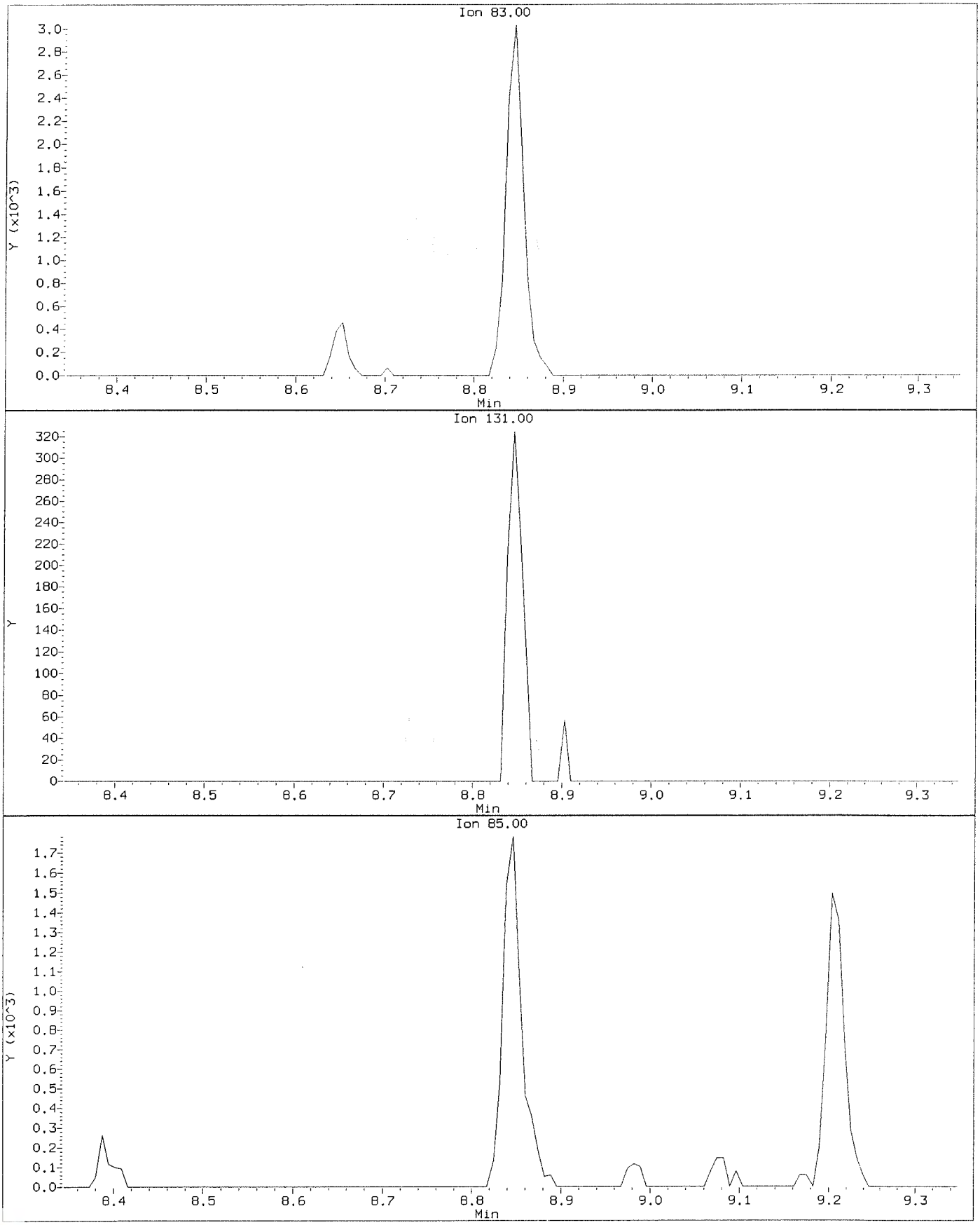
Instrument: voa6.i
Client Sample ID: VSTD001

Compound: 1,1,2,2-Tetrachloroethane
CAS Number: 79-34-5



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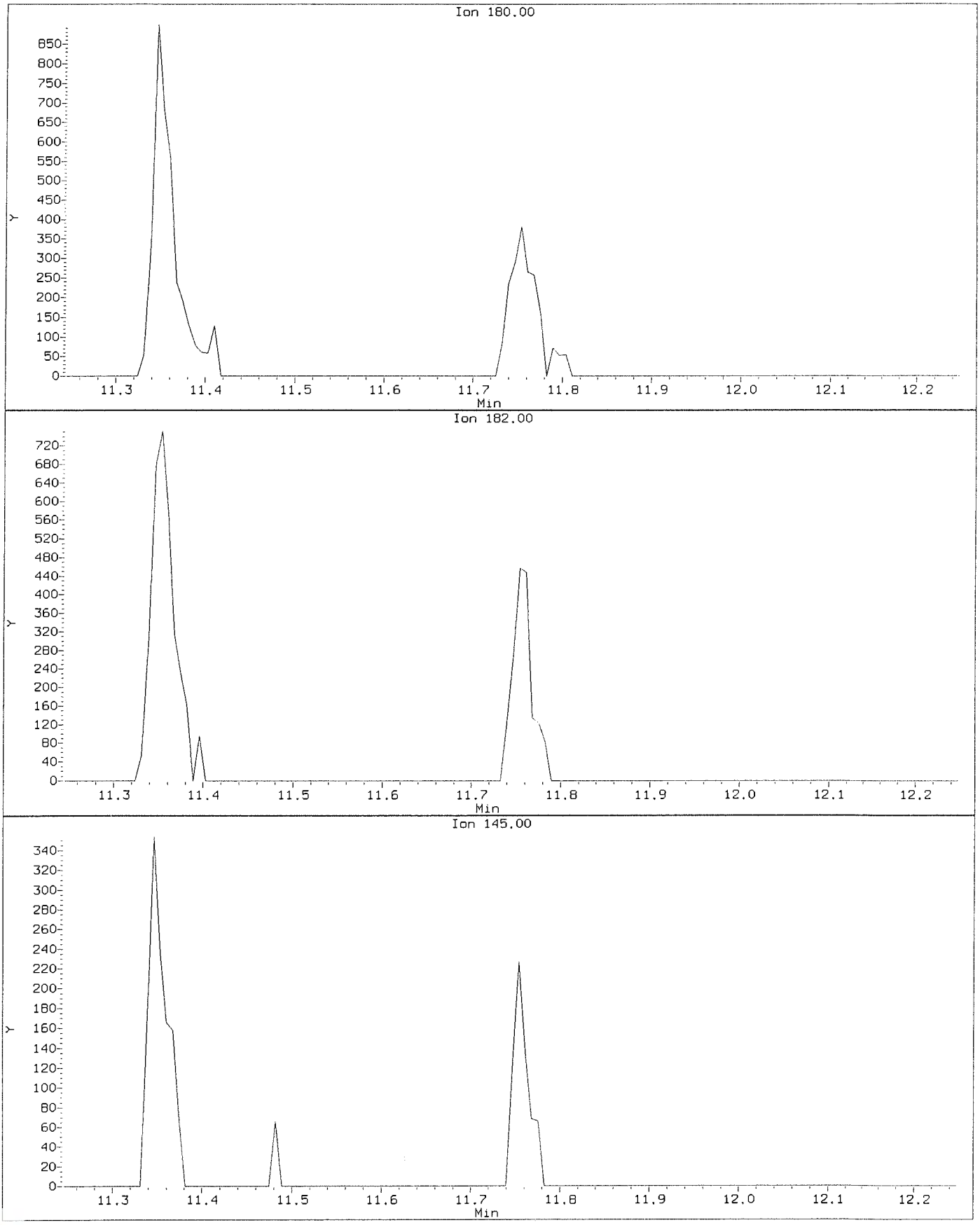
Injection Date: 07-JUL-2020 12:18
Instrument: voa6.i
Client Sample ID: VSTD001

Compound: 1,2,3-Trichlorobenzene
CAS Number: 87-61-6



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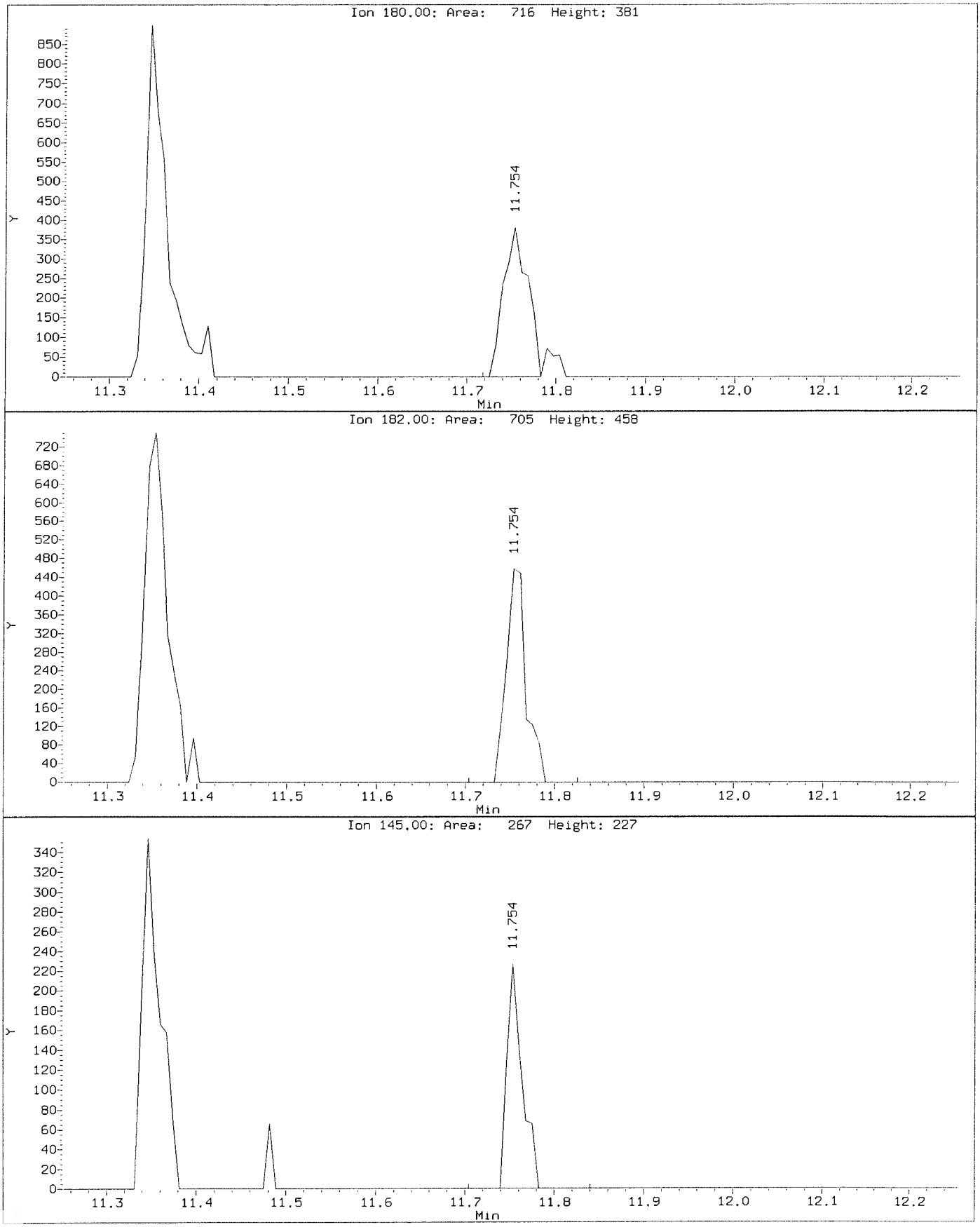
Instrument: voa6.i
Client Sample ID: VSTD001

Compound: 1,2,3-Trichlorobenzene
CAS Number: 87-61-6



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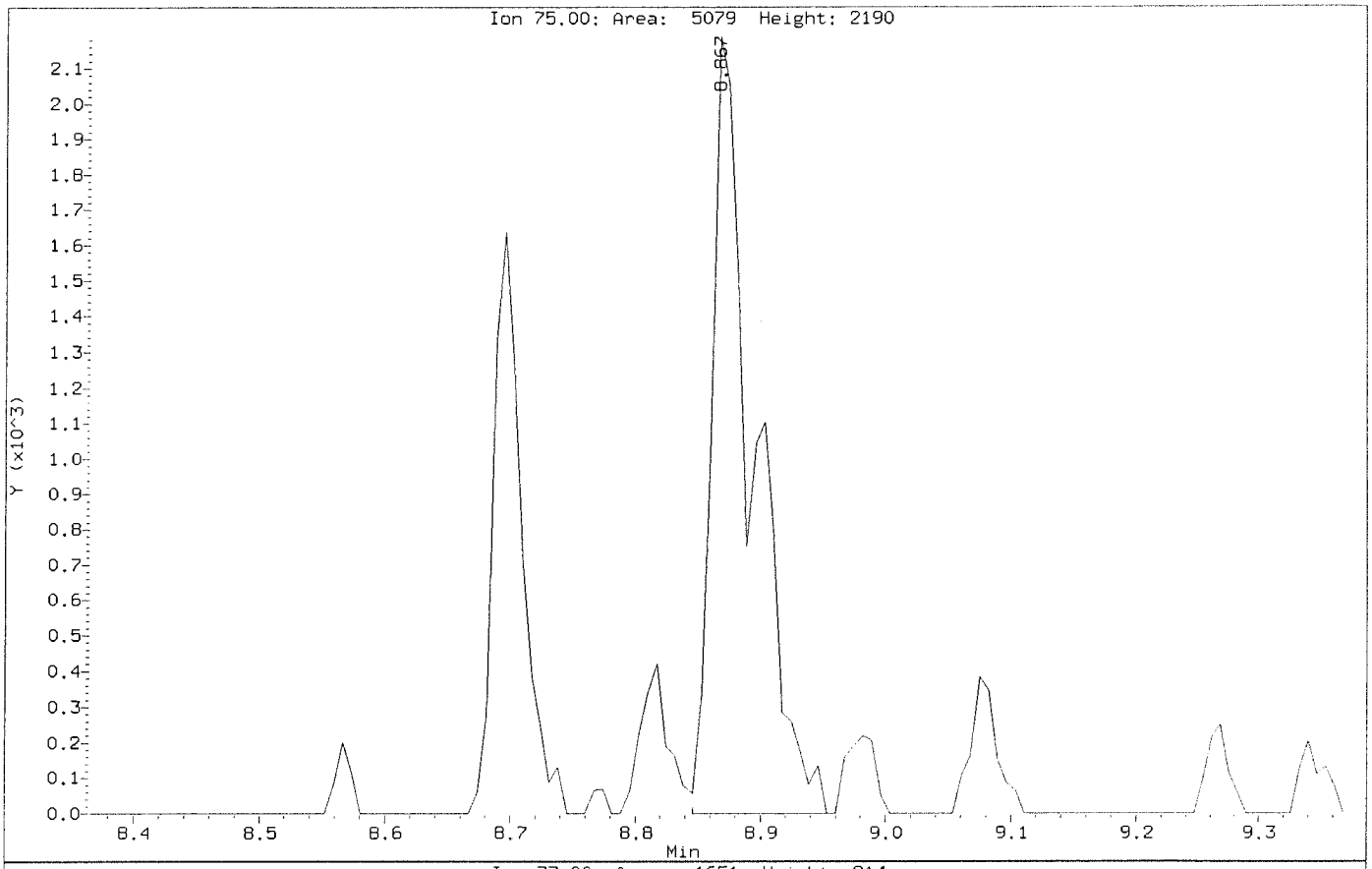
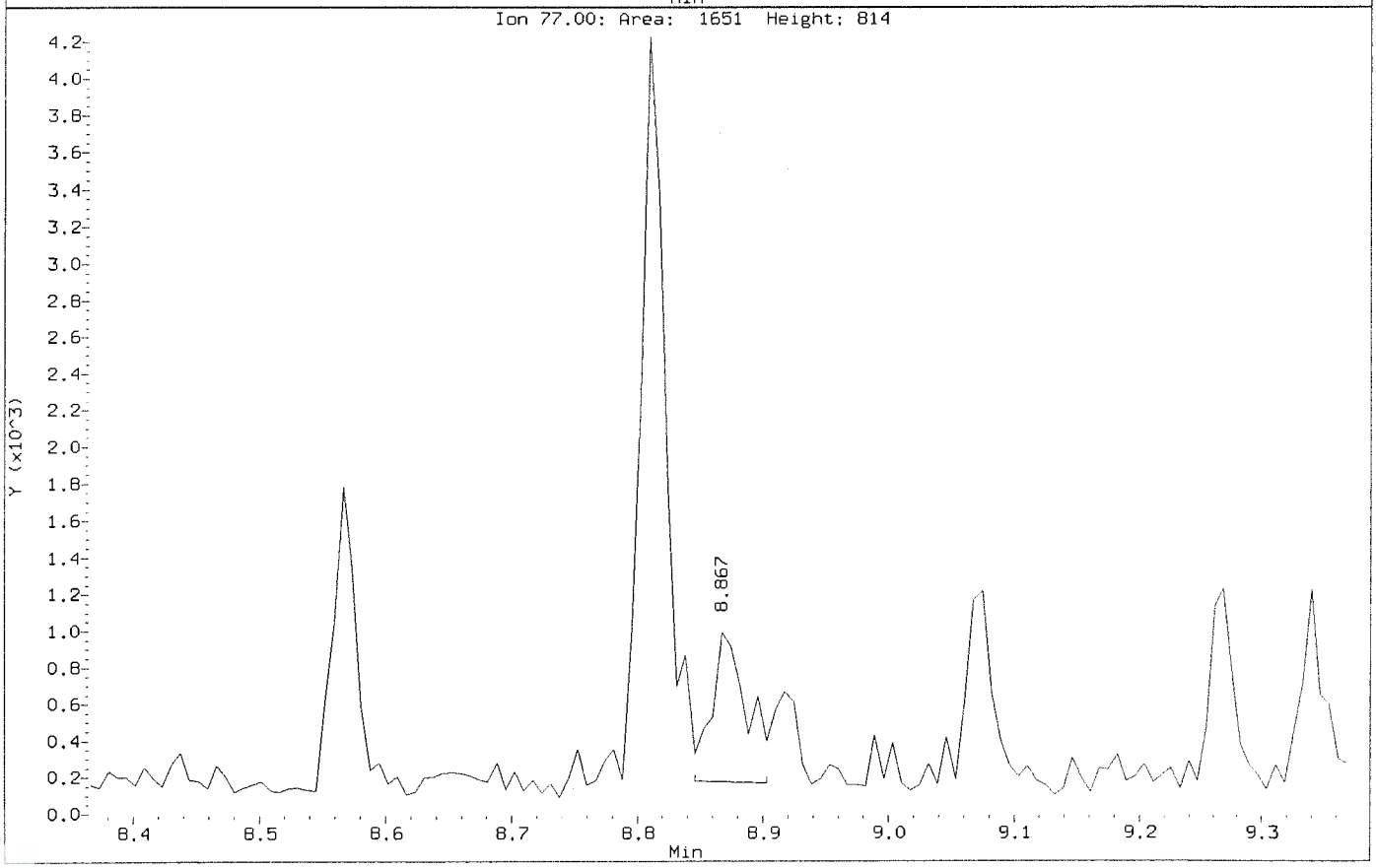
Injection Date: 07-JUL-2020 12:18
Instrument: voa6.i
Client Sample ID: VSTD001

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





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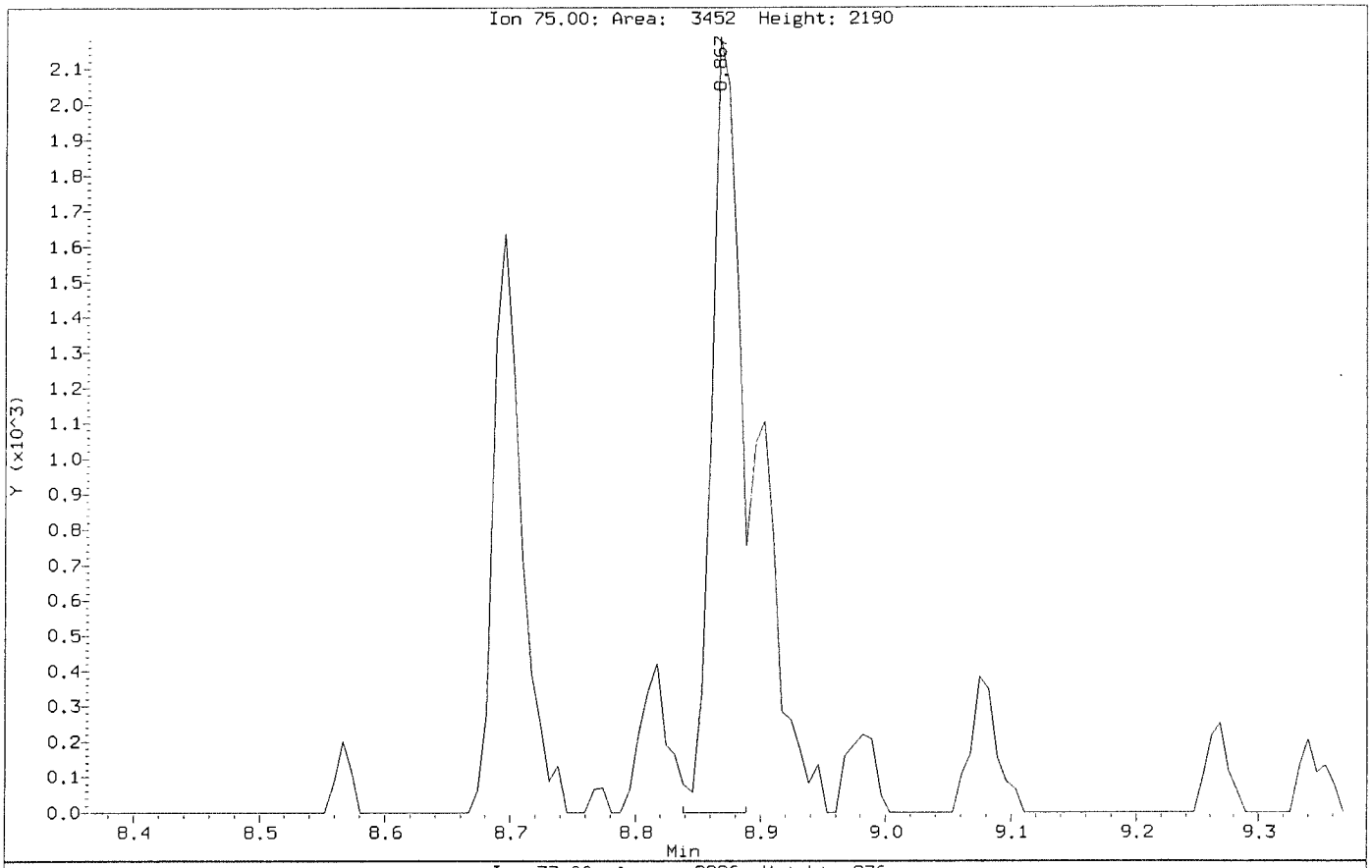
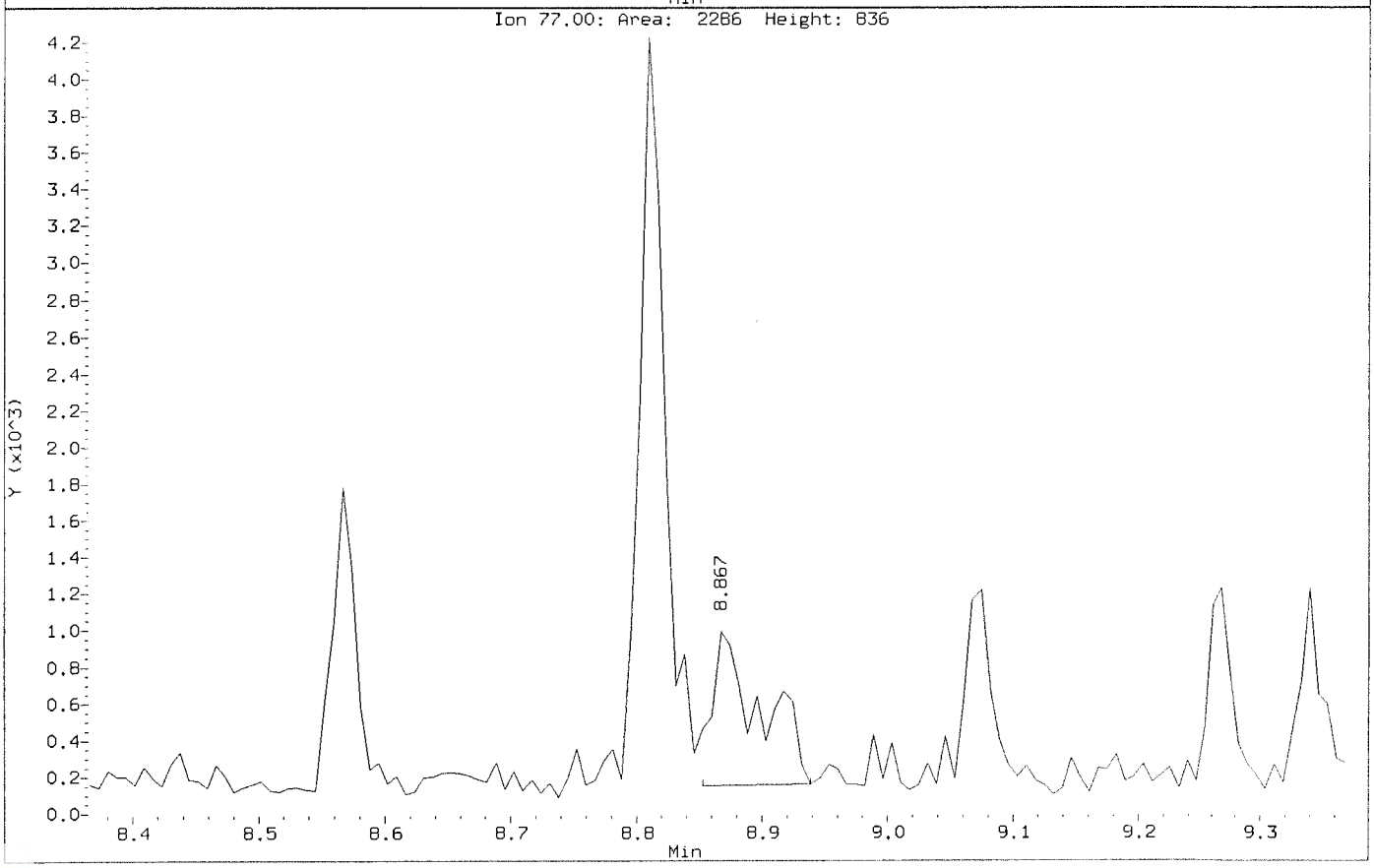
Injection Date: 07-JUL-2020 12:18
Instrument: voa6.i
Client Sample ID: VSTD001

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





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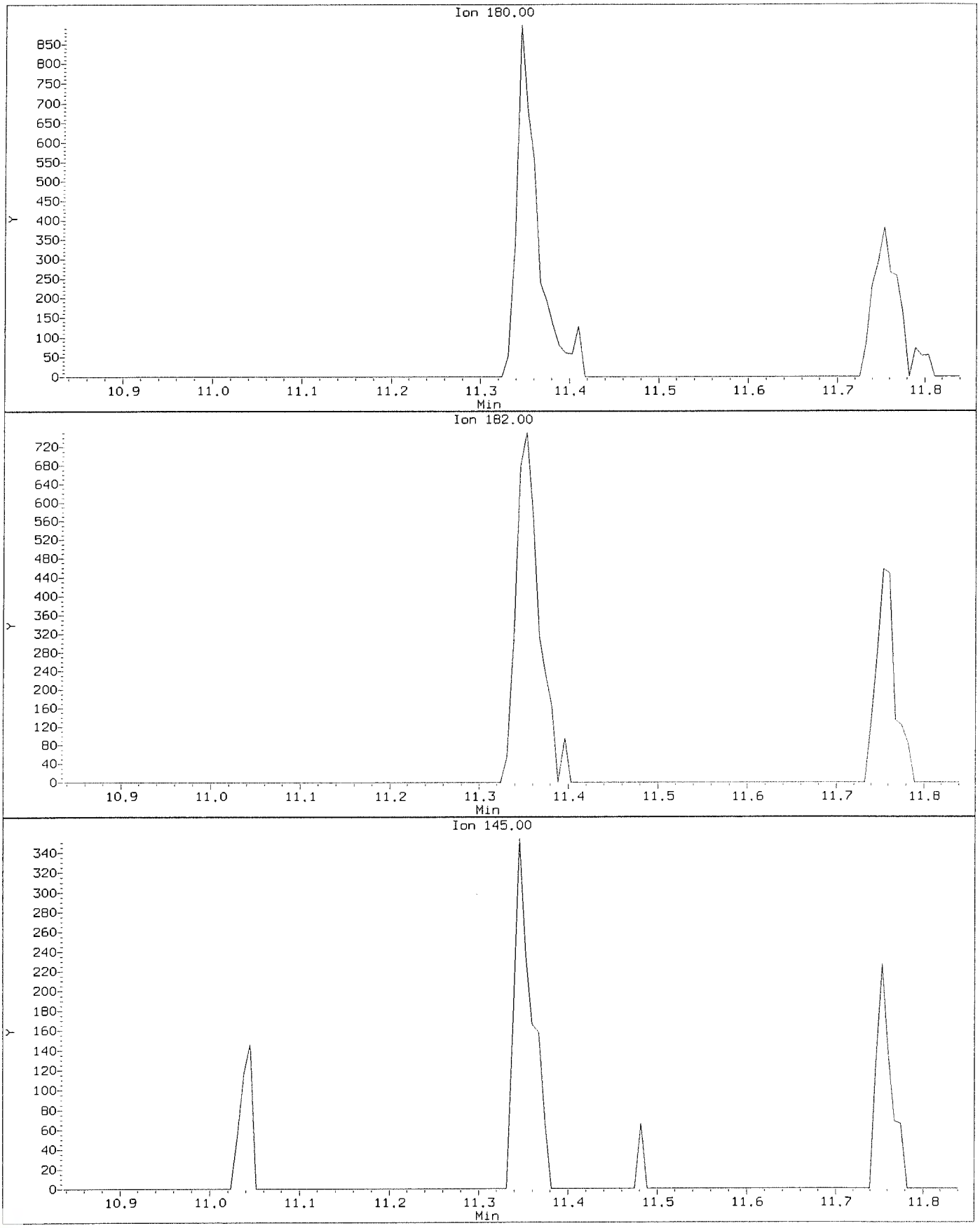
Injection Date: 07-JUL-2020 12:18
Instrument: voa6.i
Client Sample ID: VSTD001

Compound: 1,2,4-Trichlorobenzene
CAS Number: 120-82-1



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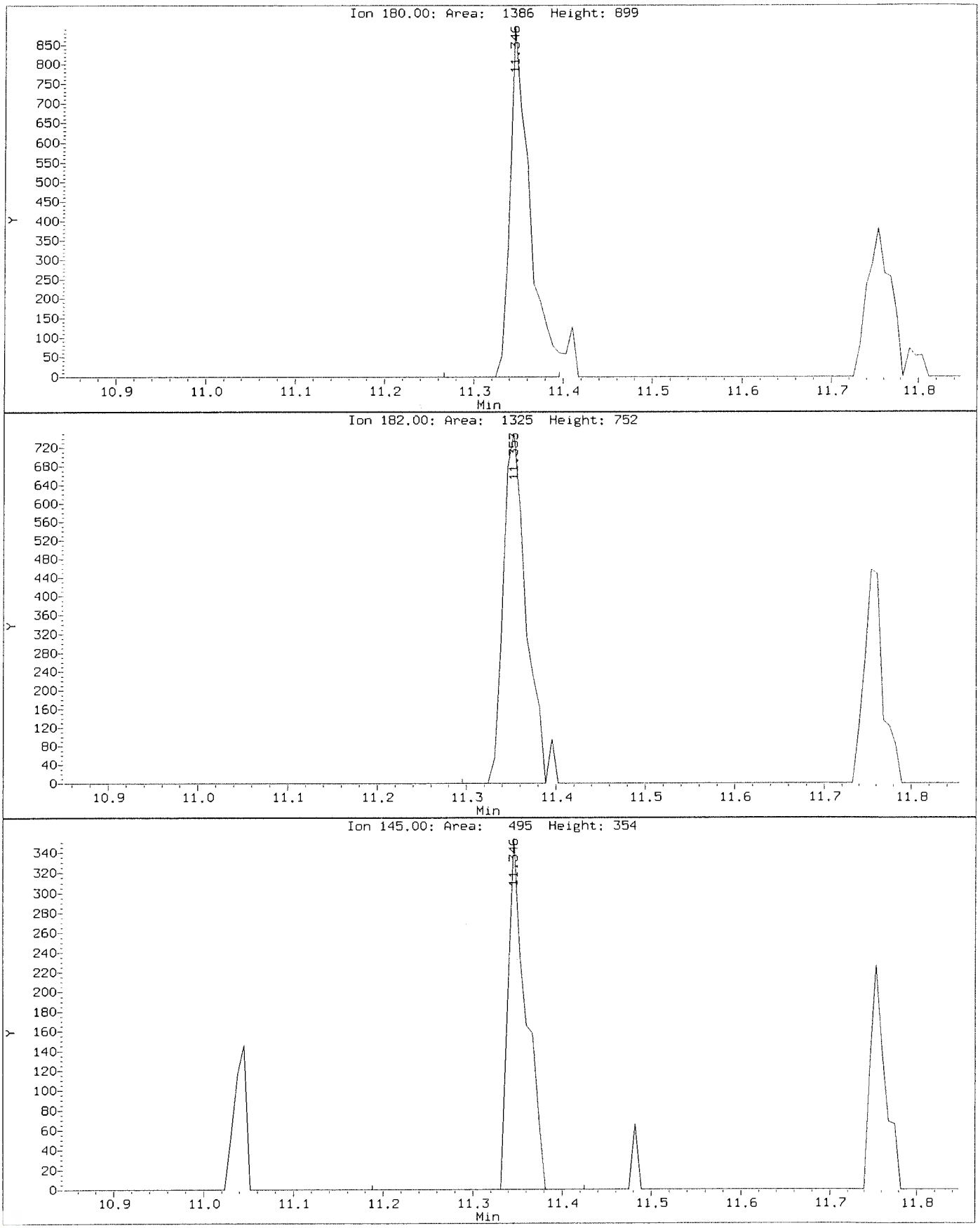
Instrument: voa6.i
Client Sample ID: VSTD001

Compound: 1,2,4-Trichlorobenzene
CAS Number: 120-82-1



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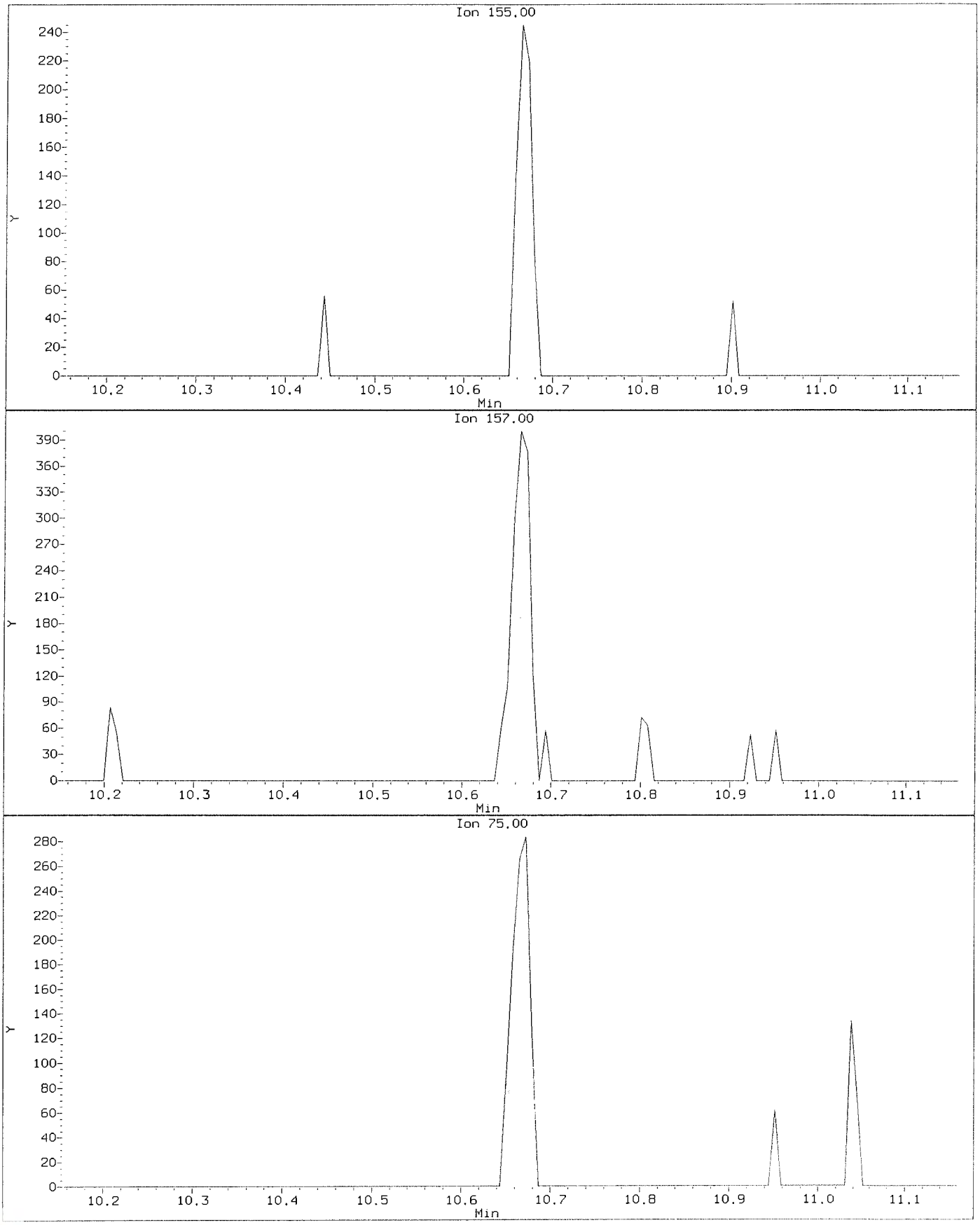
Injection Date: 07-JUL-2020 12:18
Instrument: voa6.i
Client Sample ID: VSTD001

Compound: 1,2-Dibromo-3-Chloropropane
CAS Number: 96-12-8



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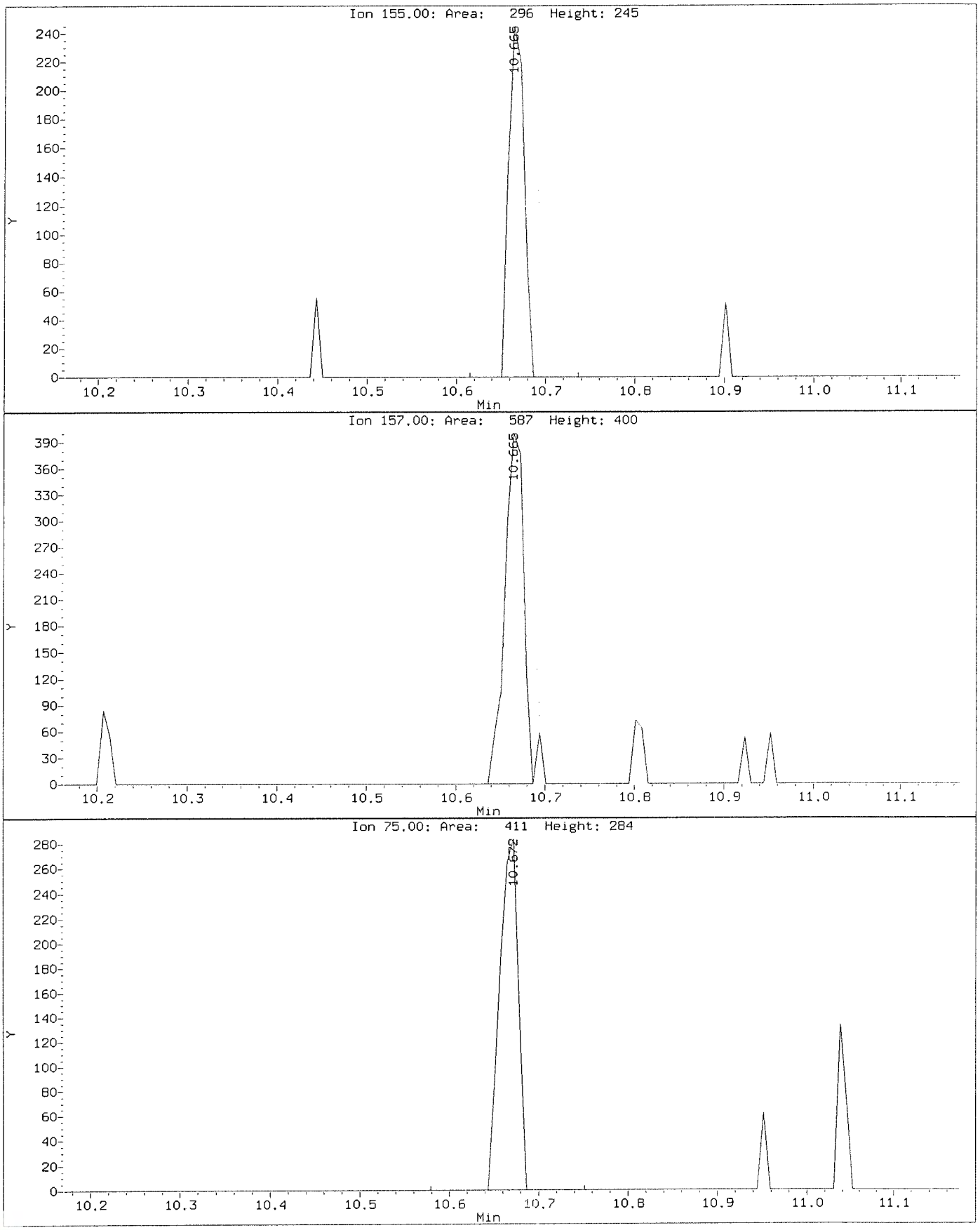
Injection Date: 07-JUL-2020 12:18
Instrument: voa6.i
Client Sample ID: VSTD001

Compound: 1,2-Dibromo-3-Chloropropane
CAS Number: 96-12-8



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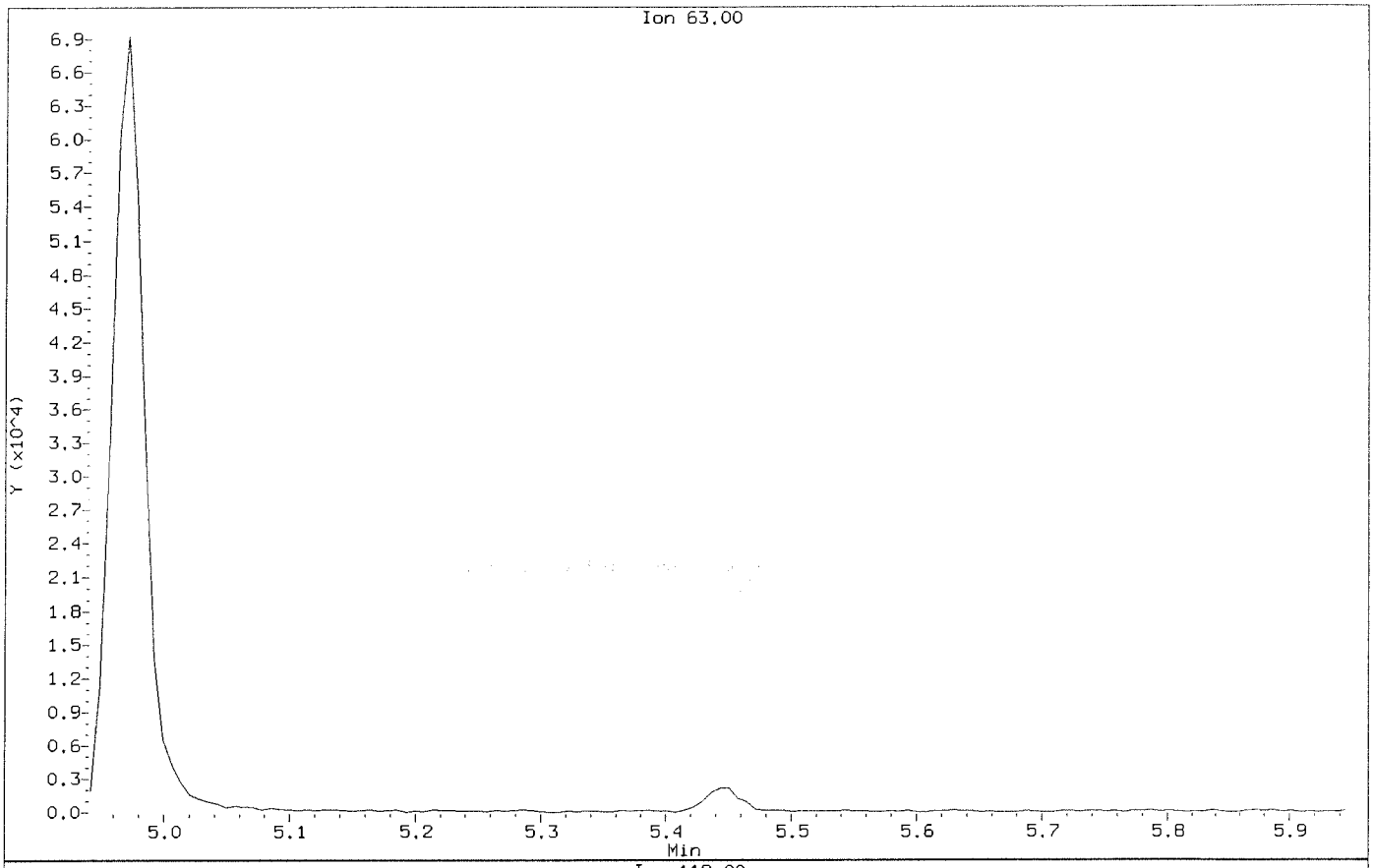
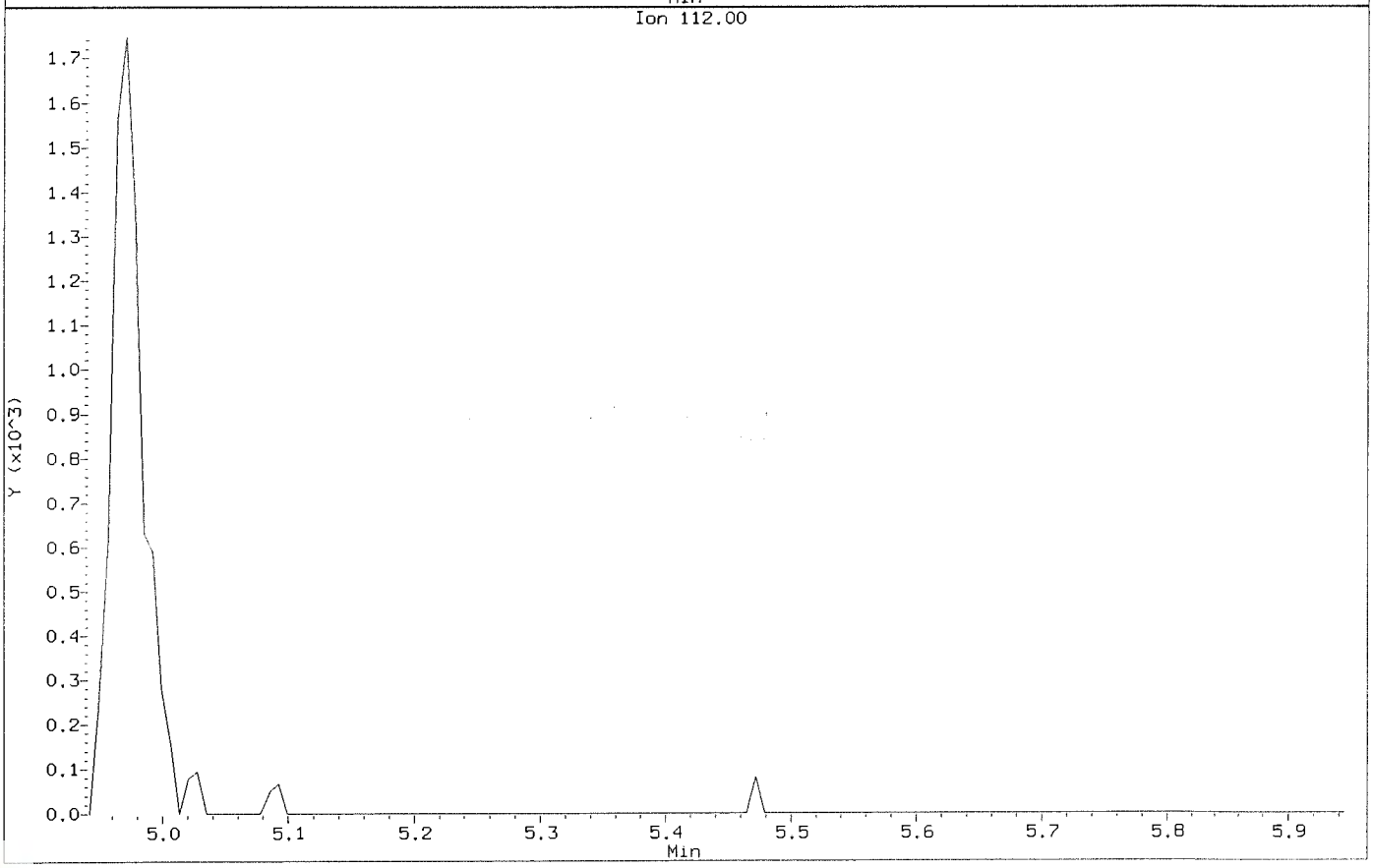
Injection Date: 07-JUL-2020 12:18
Instrument: voa6.i
Client Sample ID: VSTD001

Compound: 1,2-Dichloropropane
CAS Number: 78-87-5





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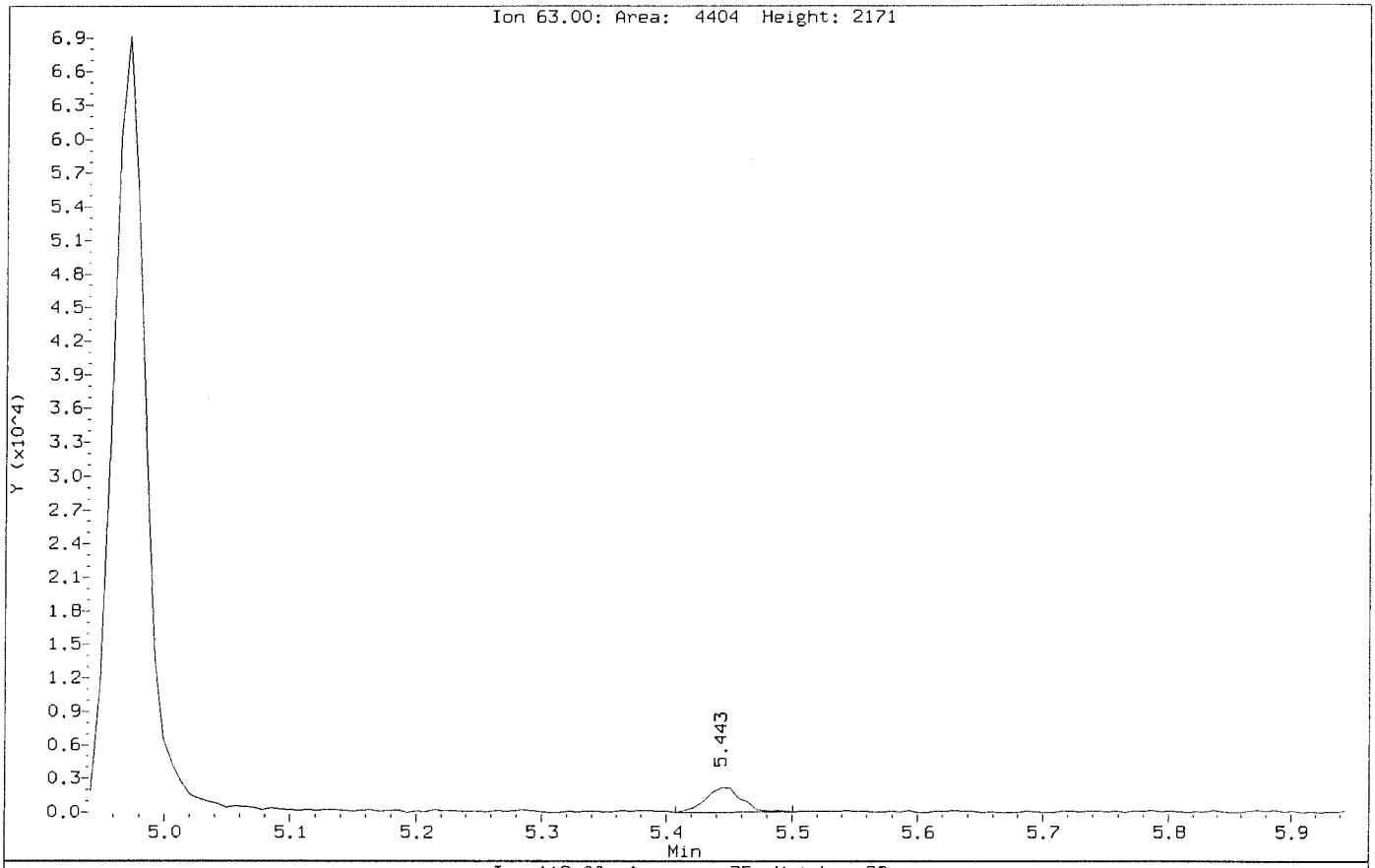
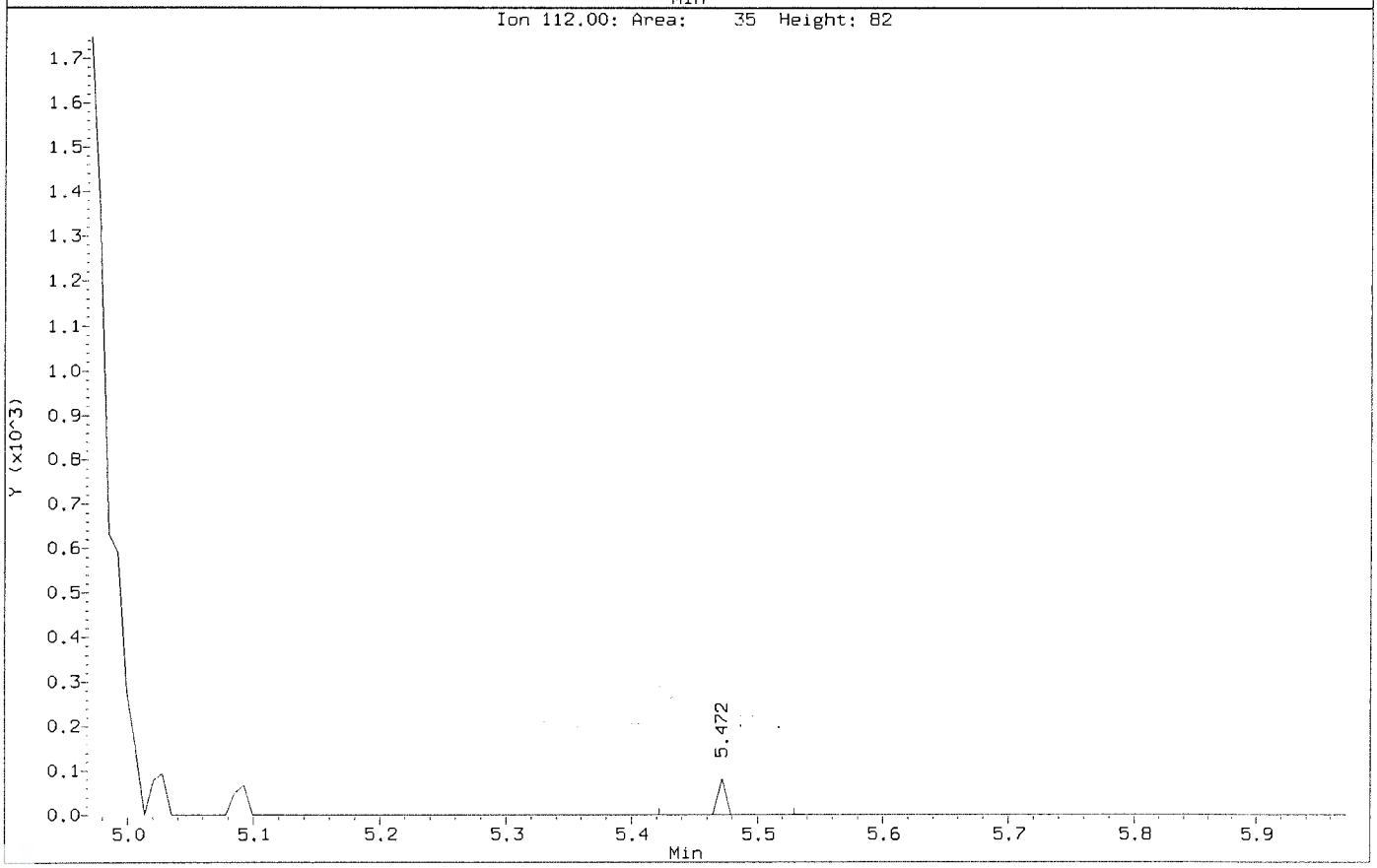
Injection Date: 07-JUL-2020 12:18
Instrument: voa6.i
Client Sample ID: VSTD001

Compound: 1,2-Dichloropropane
CAS Number: 78-87-5





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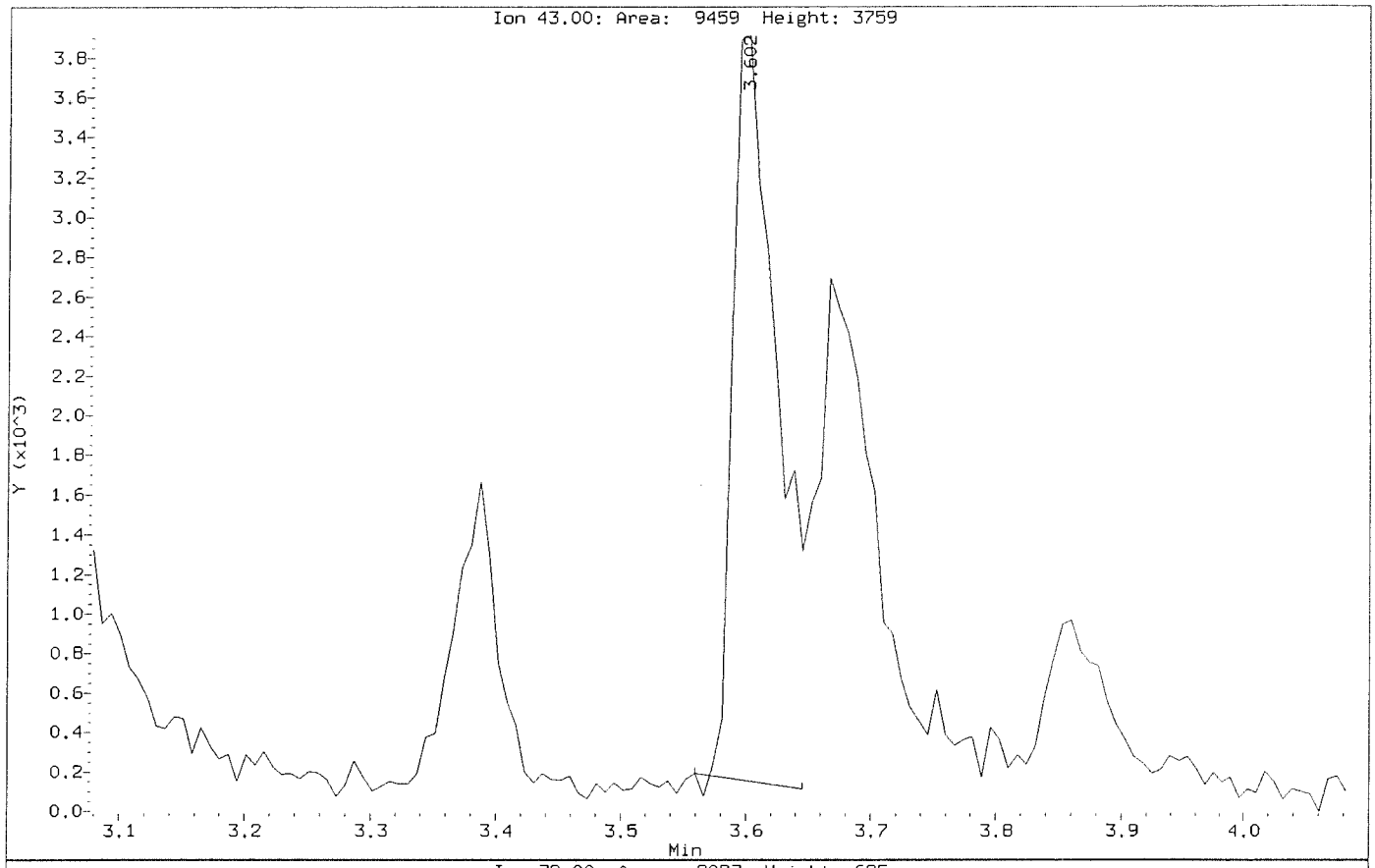
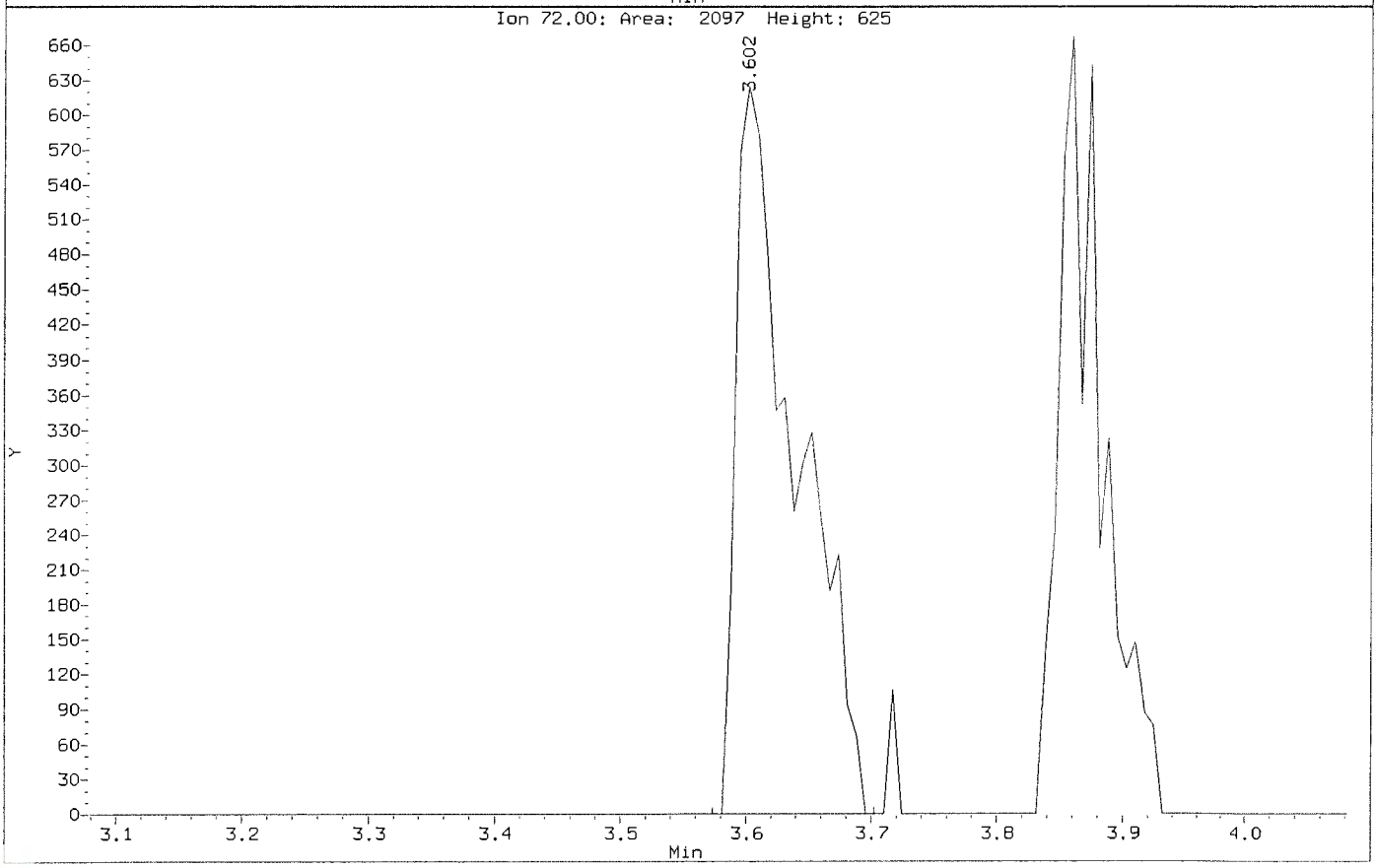
Injection Date: 07-JUL-2020 12:18
Instrument: voa6.i
Client Sample ID: VSTD001

Compound: 2-Butanone
CAS Number: 78-93-3





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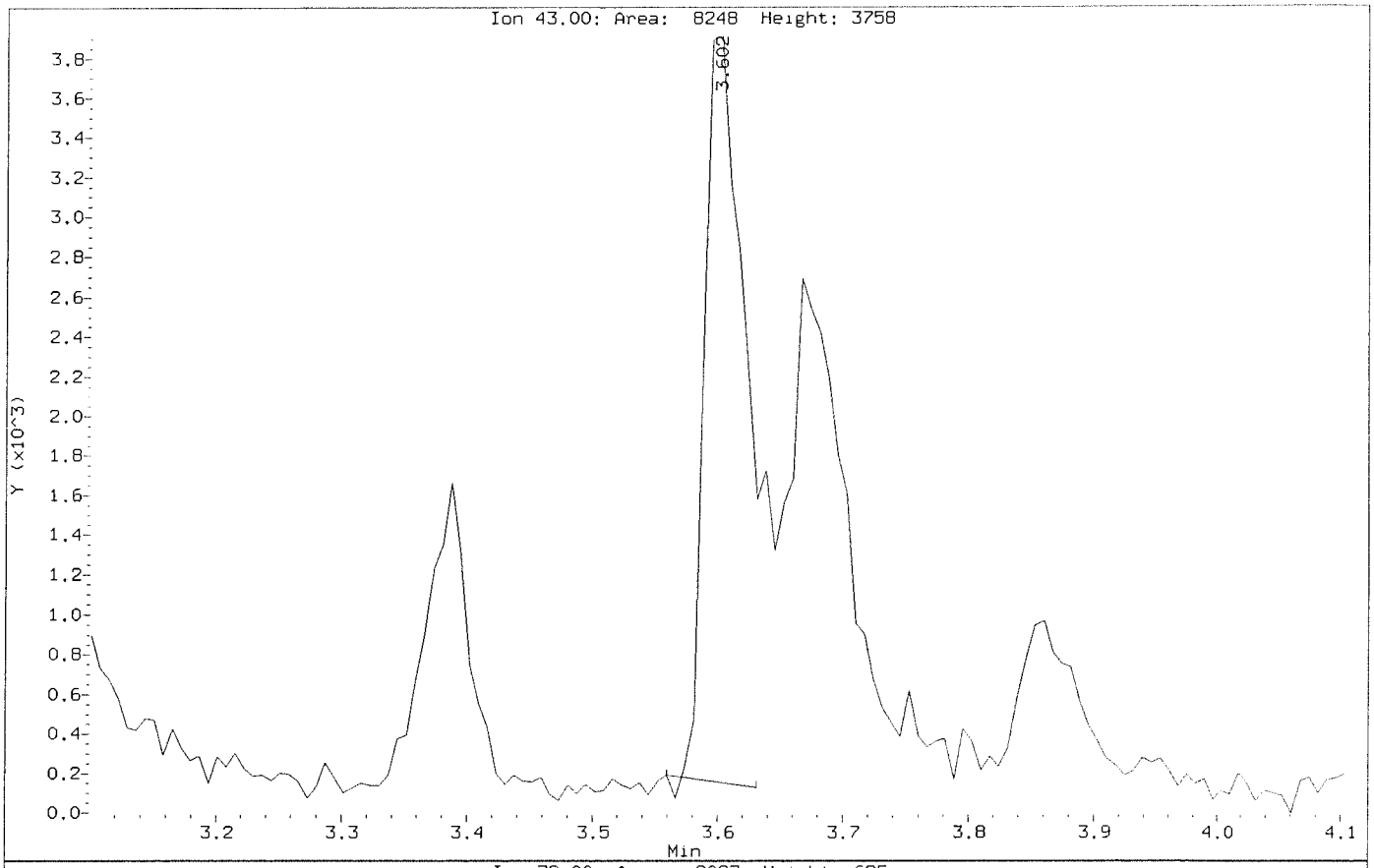
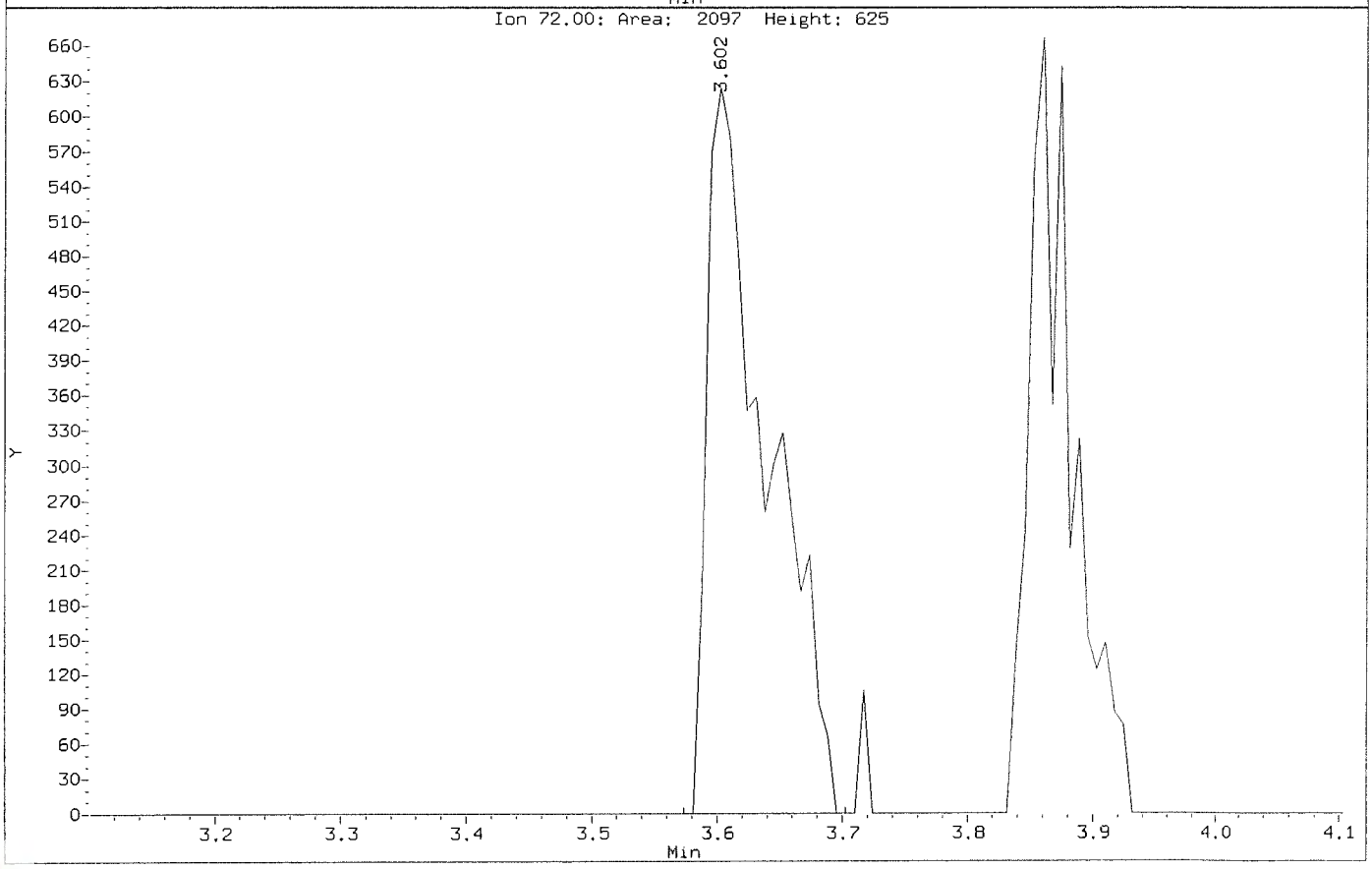
Injection Date: 07-JUL-2020 12:18
Instrument: voa6.i
Client Sample ID: VSTD001

Compound: 2-Butanone
CAS Number: 78-93-3





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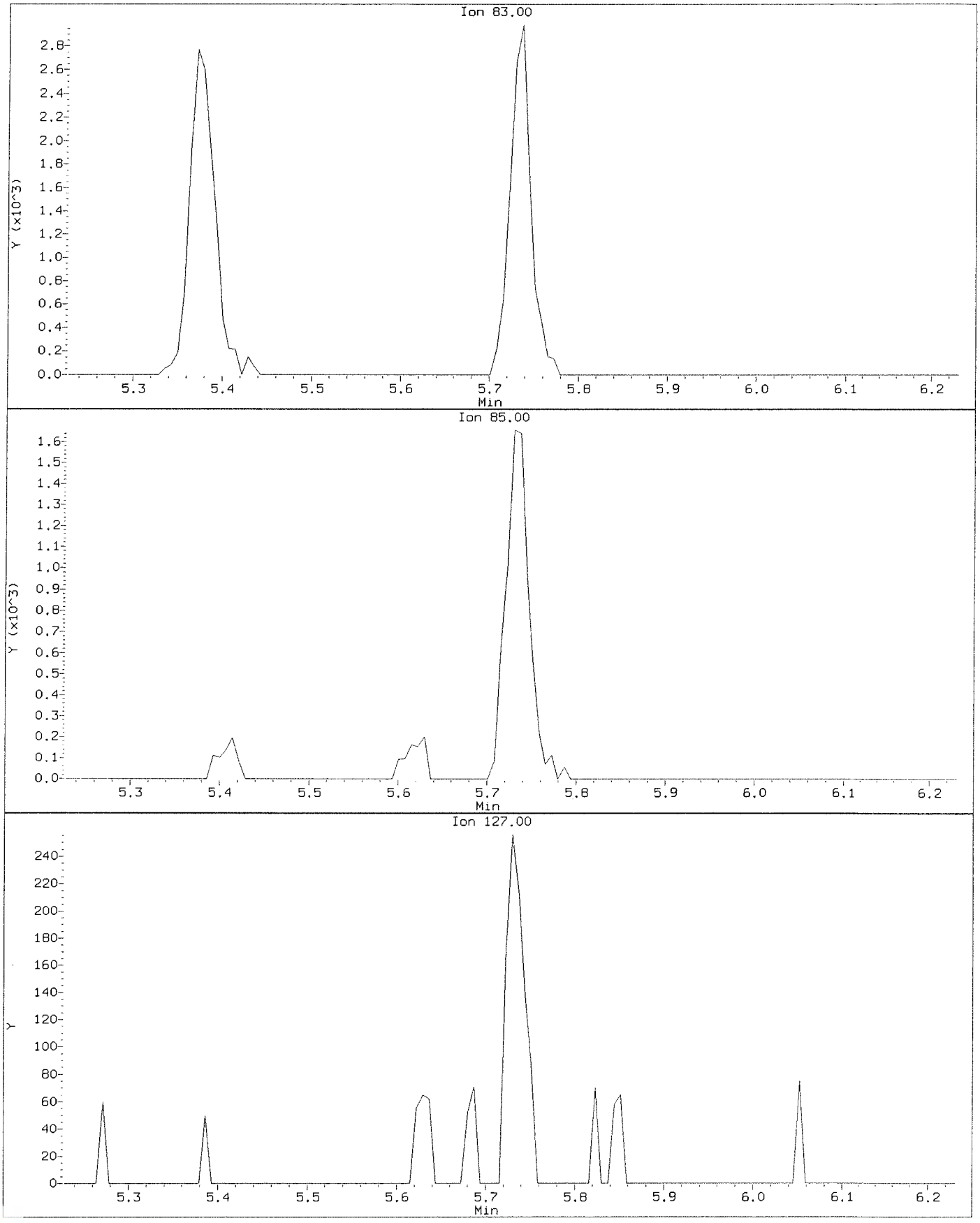
Instrument: voa6.i
Client Sample ID: VSTD001

Compound: Bromodichloromethane
CAS Number: 75-27-4



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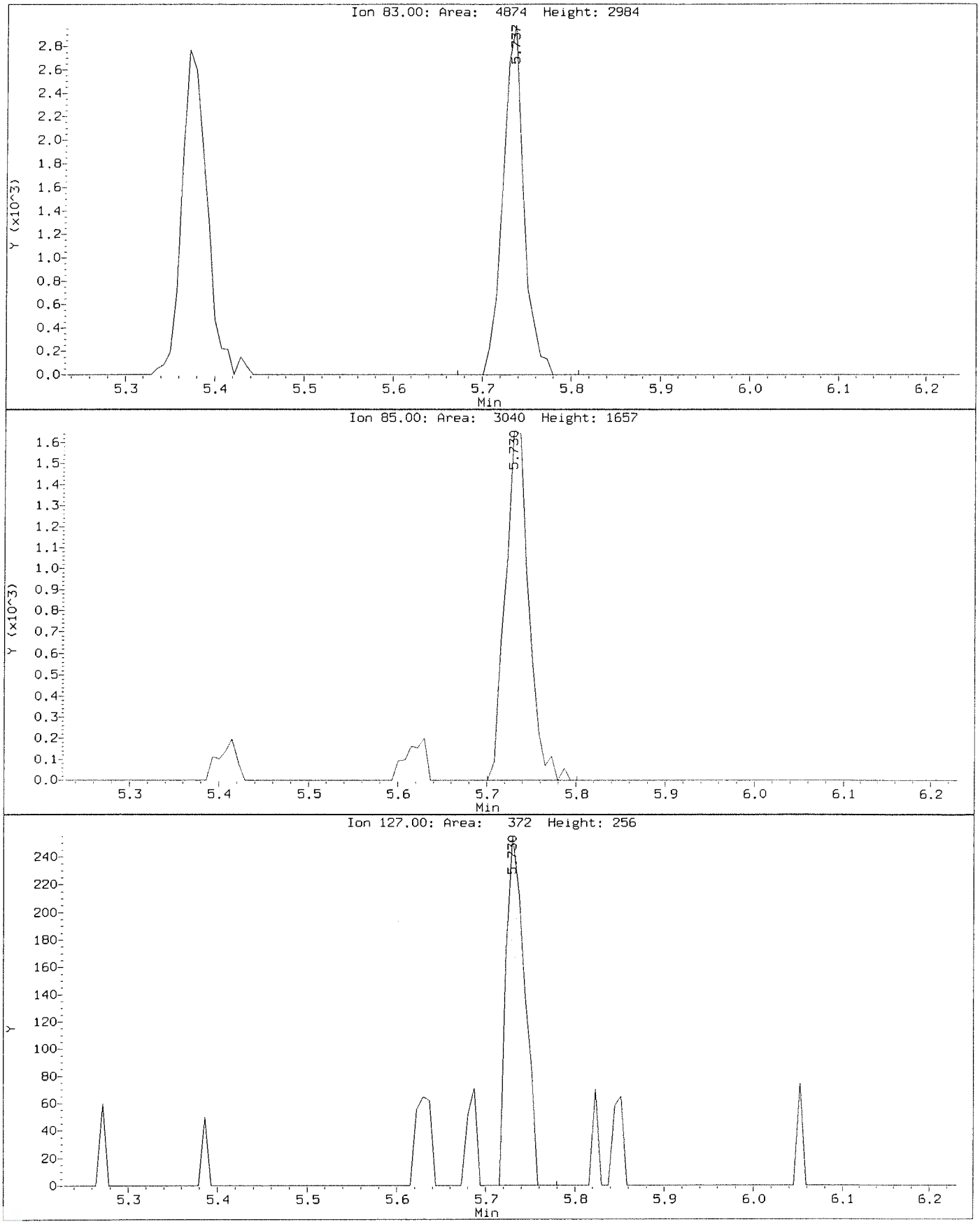
Instrument: voa6.i
Client Sample ID: VSTD001

Compound: Bromodichloromethane
CAS Number: 75-27-4



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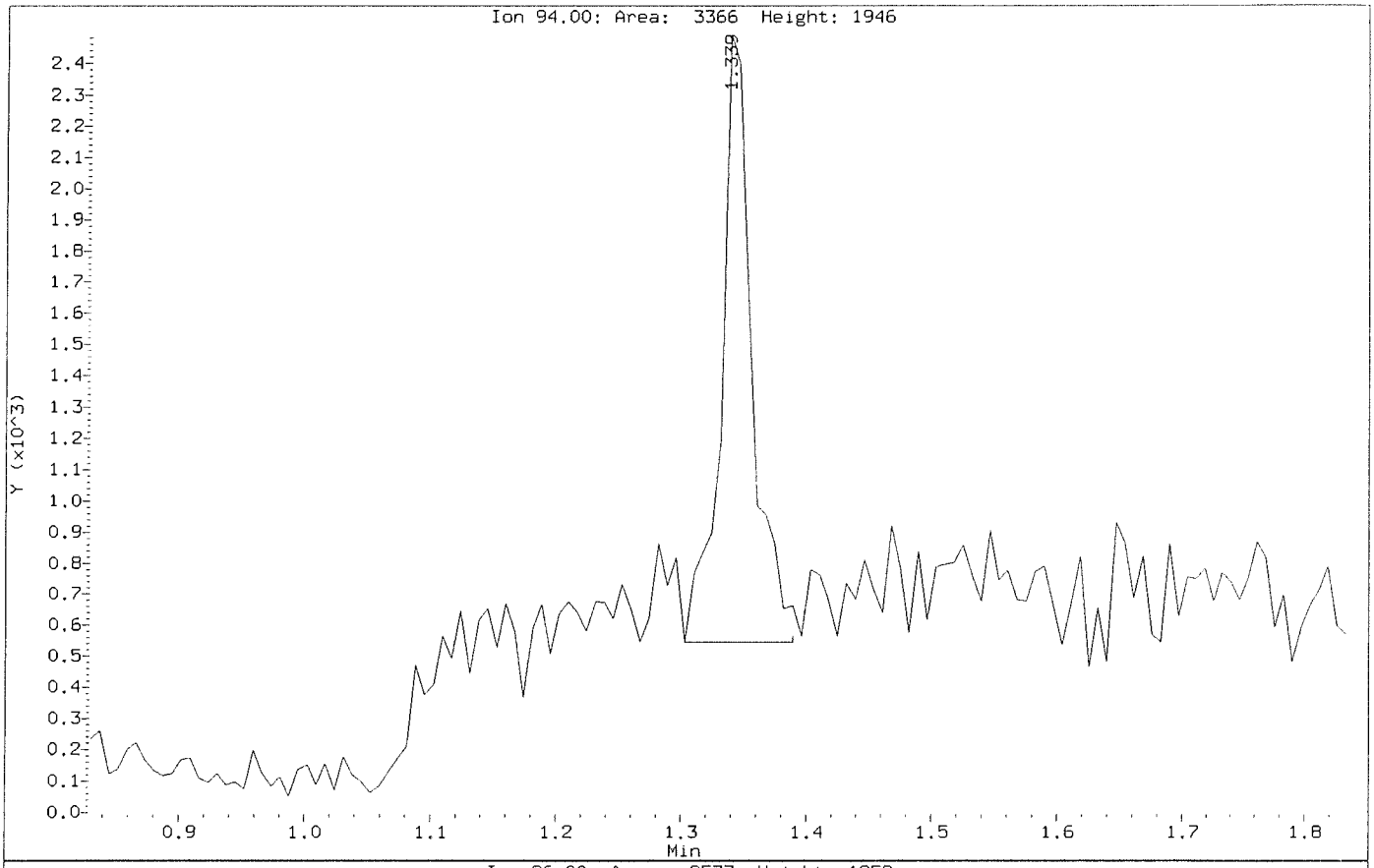
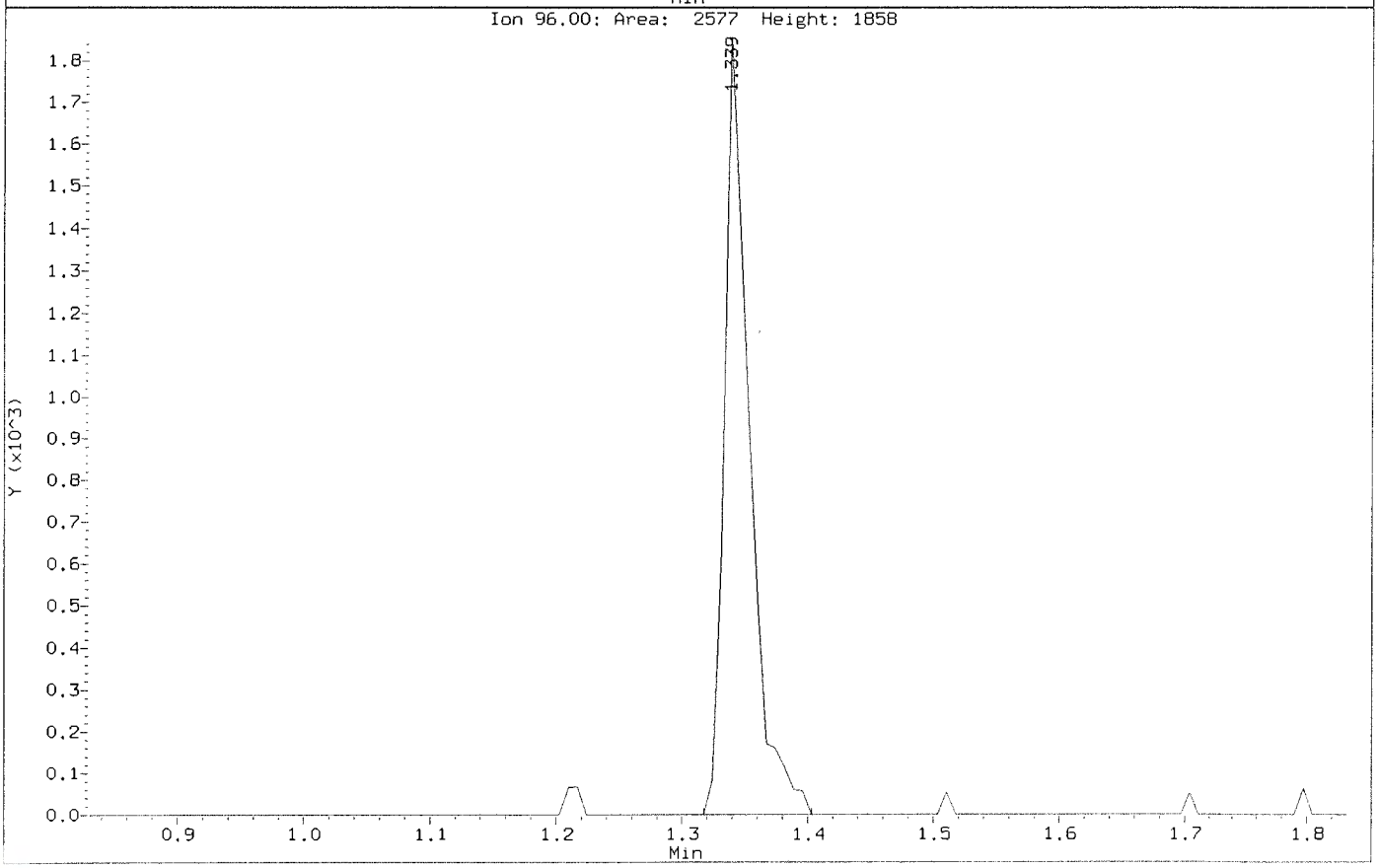
Injection Date: 07-JUL-2020 12:18
Instrument: voa6.i
Client Sample ID: VSTD001

Compound: Bromomethane
CAS Number: 74-83-9





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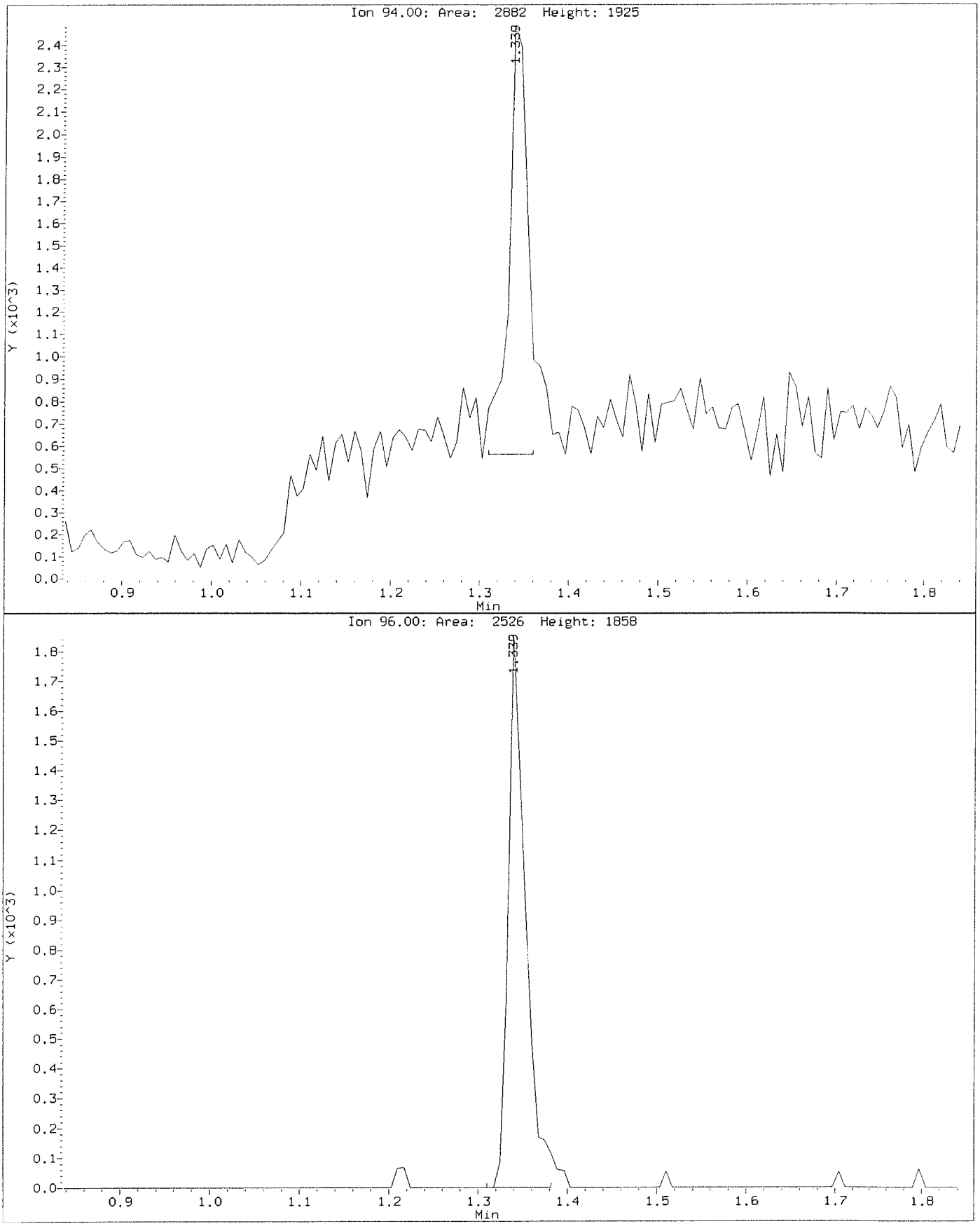
Instrument: voa6.i
Client Sample ID: VSTD001

Compound: Bromomethane
CAS Number: 74-83-9



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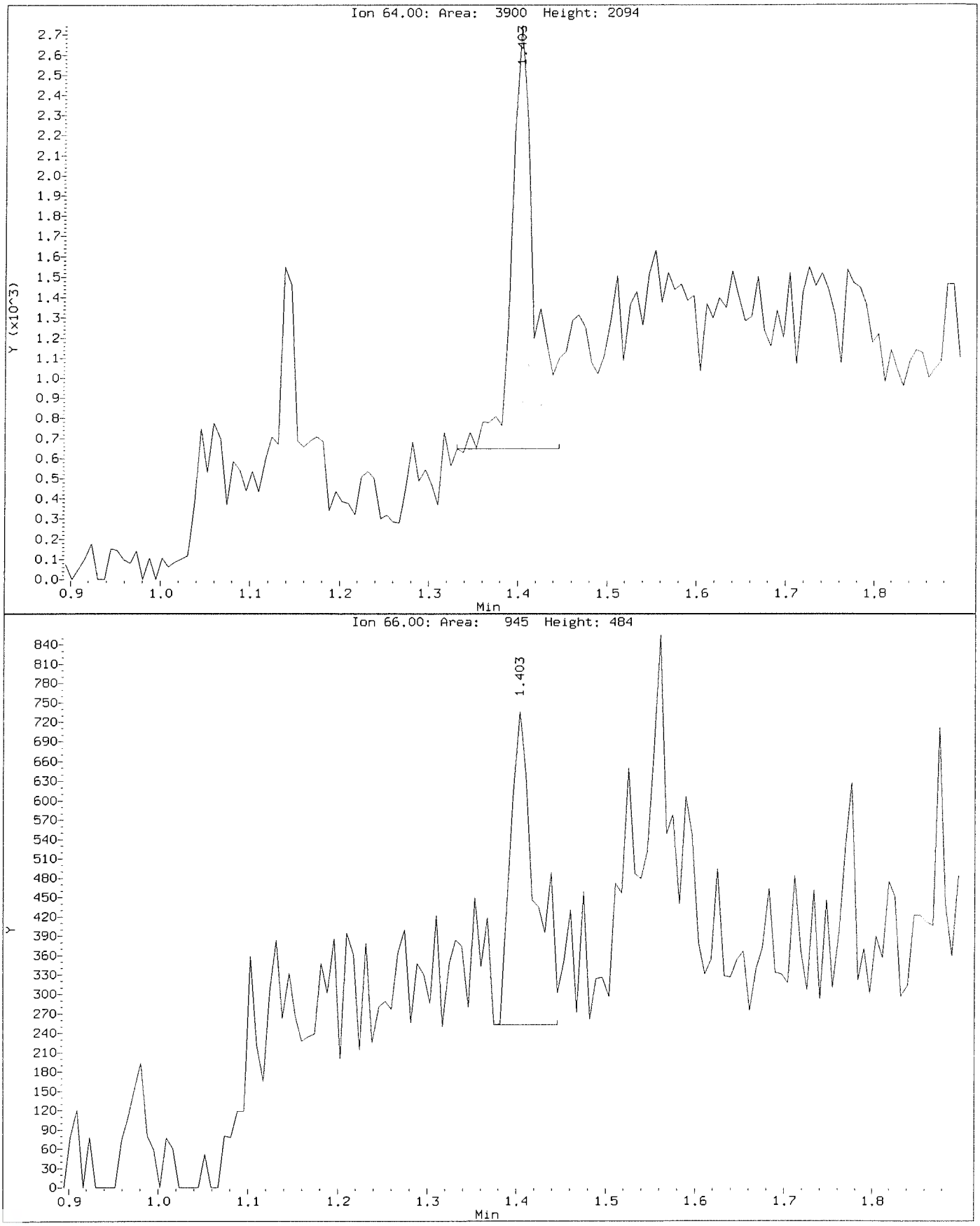
Instrument: voa6.i
Client Sample ID: VSTD001

Compound: Chloroethane
CAS Number: 75-00-3



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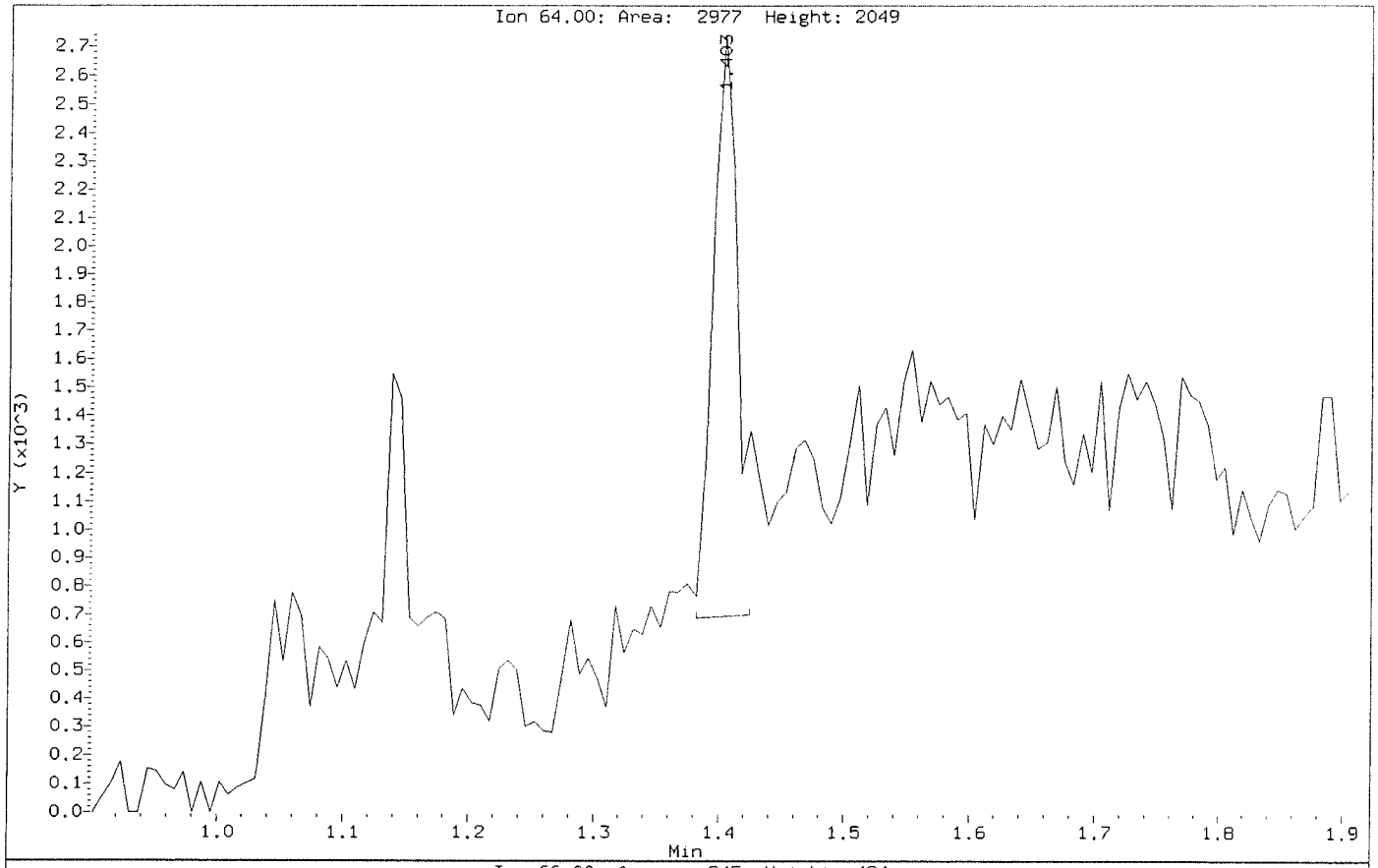
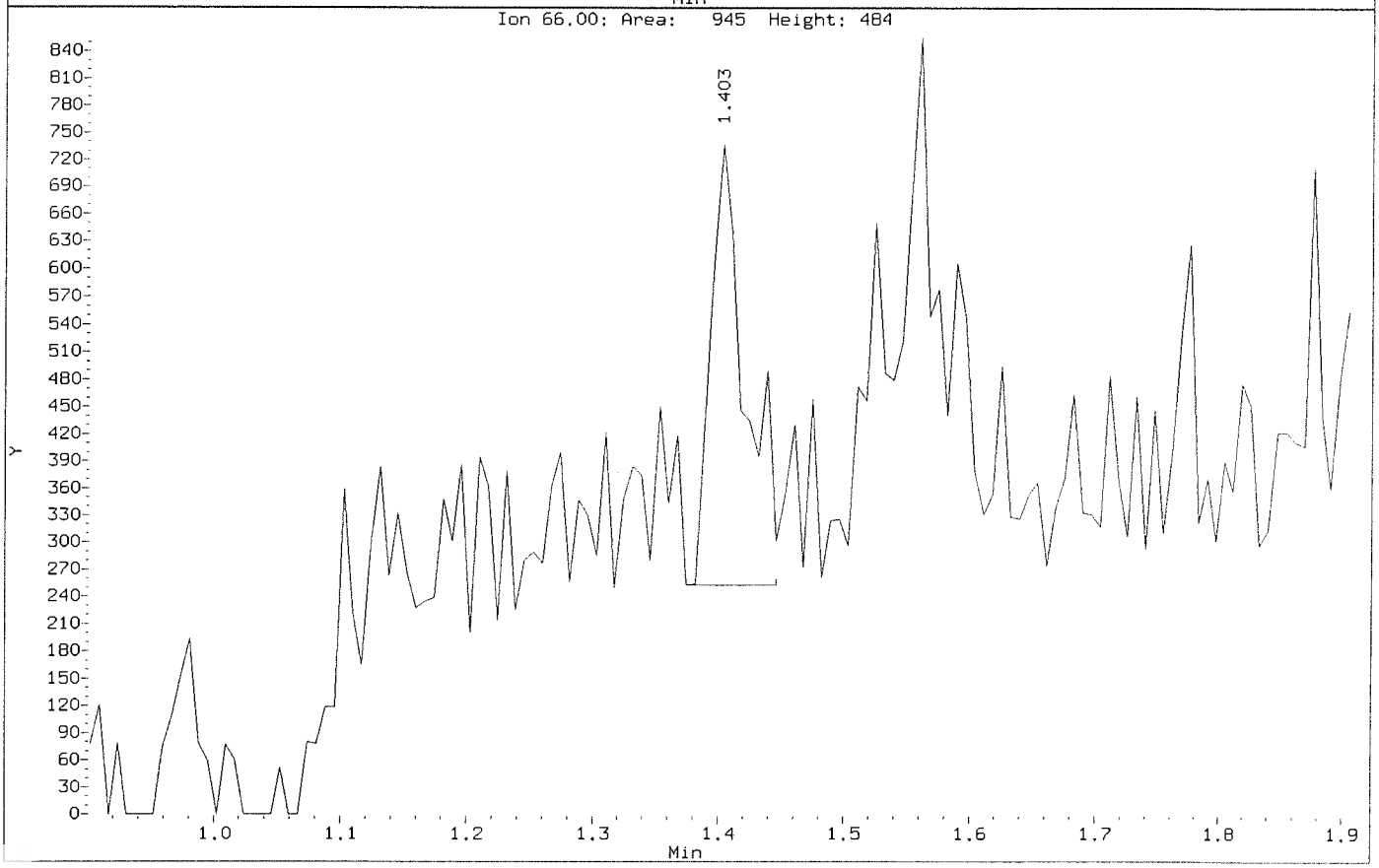
Client Sample ID: VSTD001

Compound: Chloroethane
CAS Number: 75-00-3





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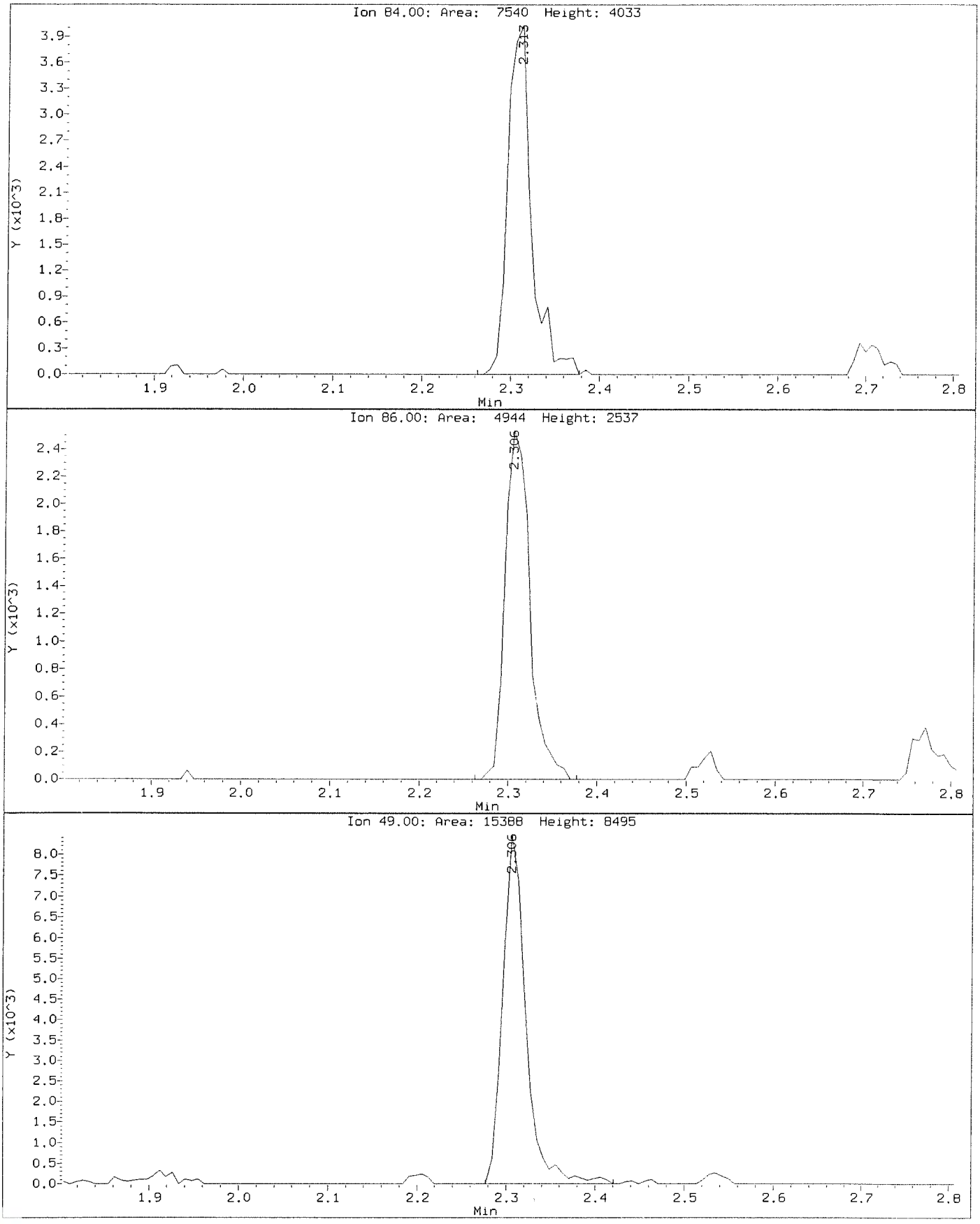
Instrument: voa6.i
Client Sample ID: VSTD001

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



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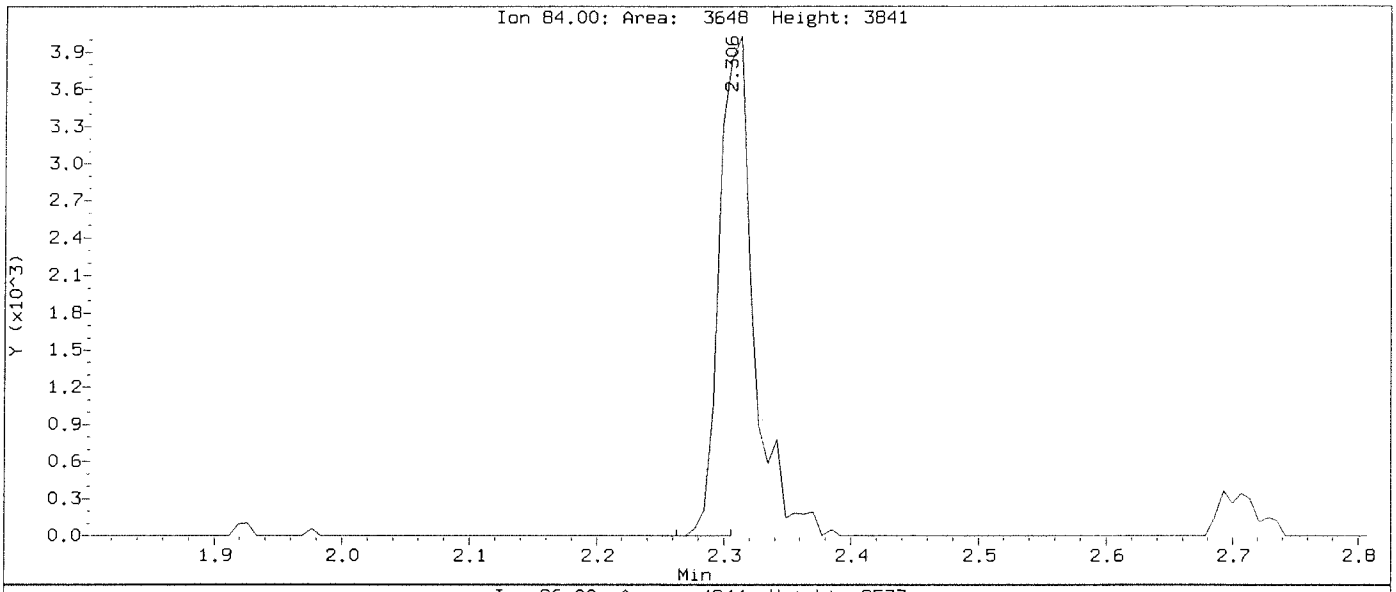
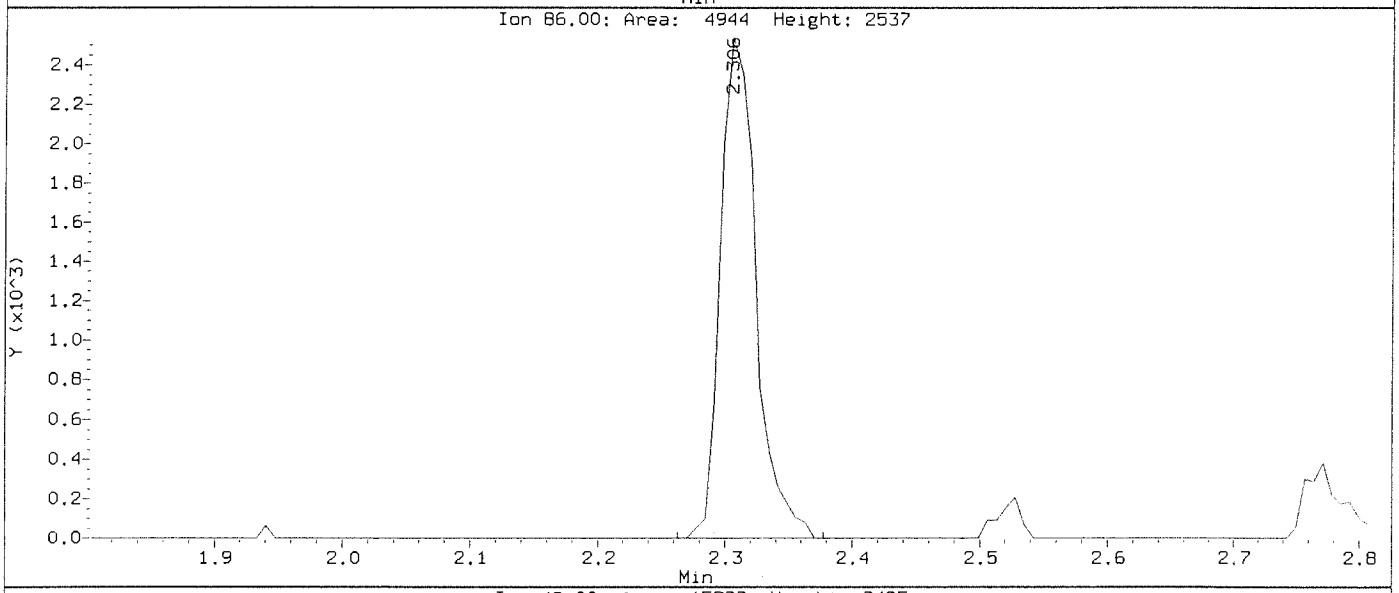
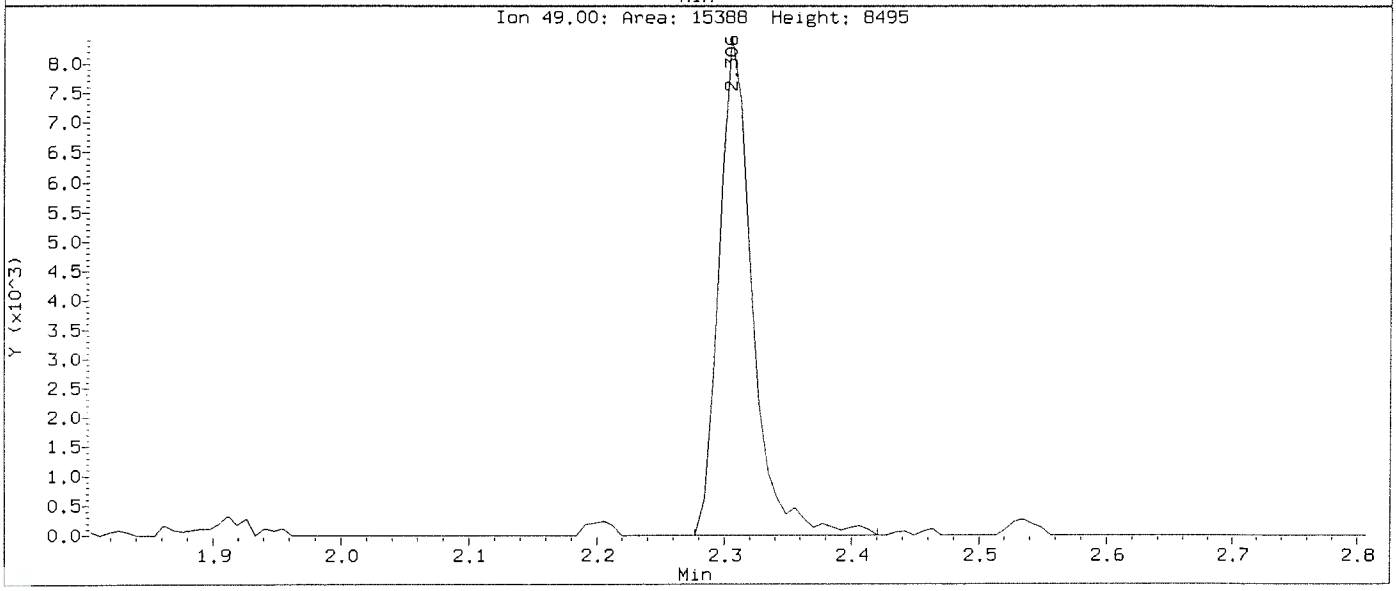
Client Sample ID: VSTD001

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







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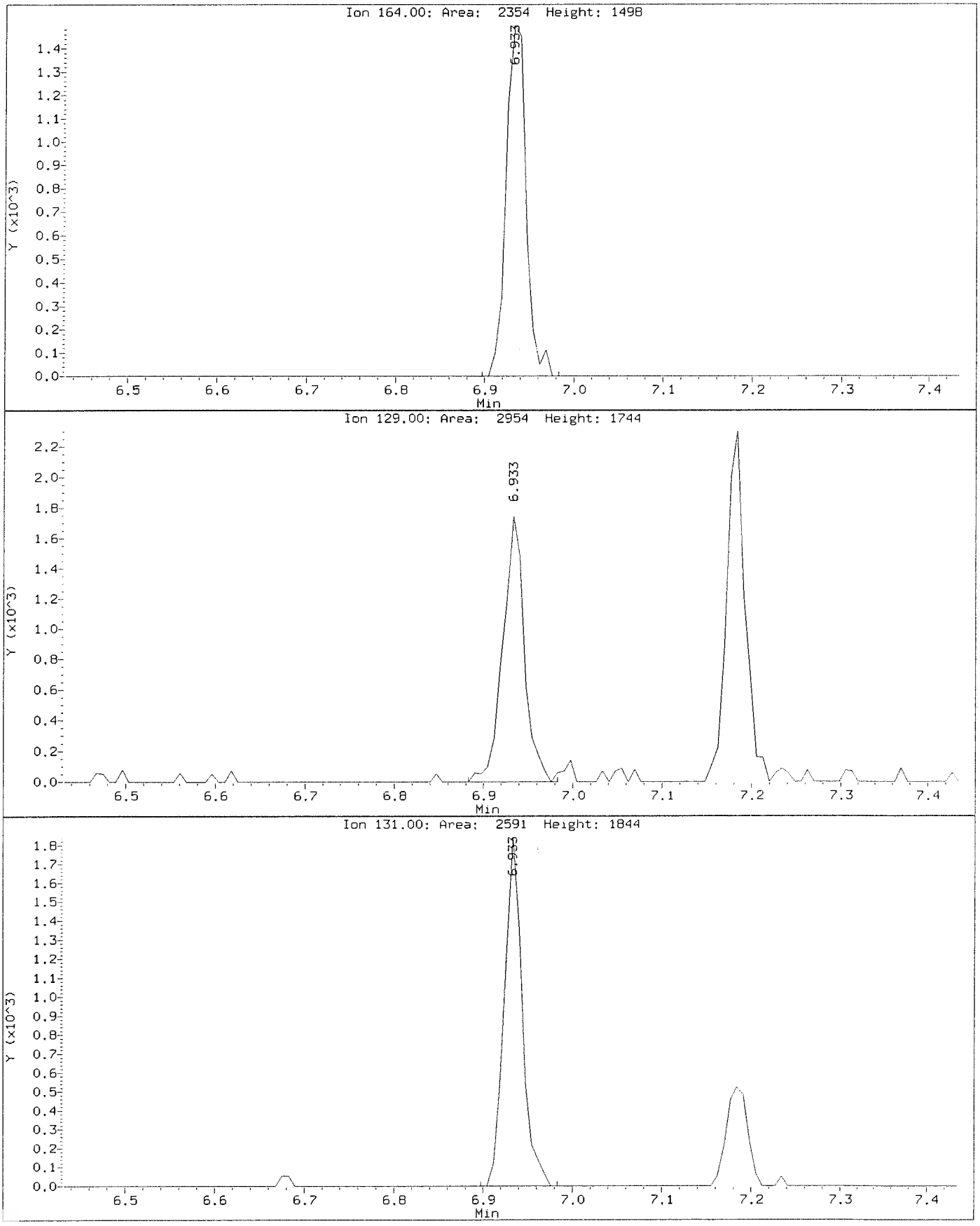
Instrument: voa6.i
Client Sample ID: VSTD001

Compound: Tetrachloroethene
CAS Number: 127-18-4



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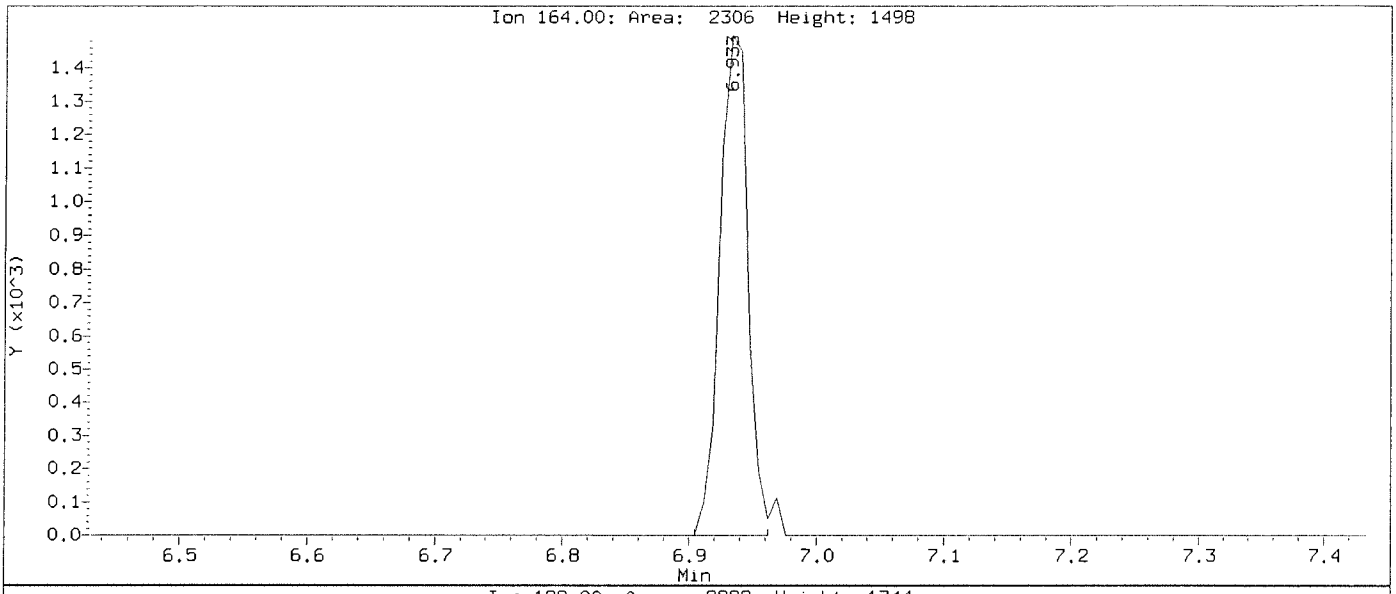
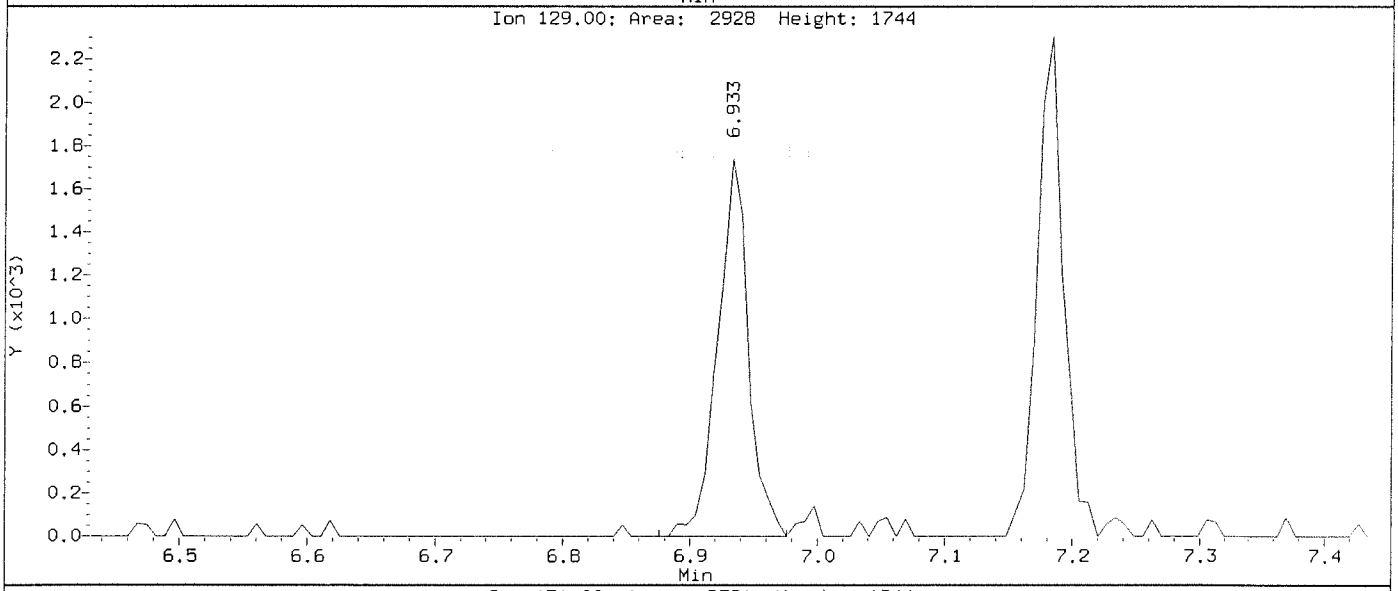
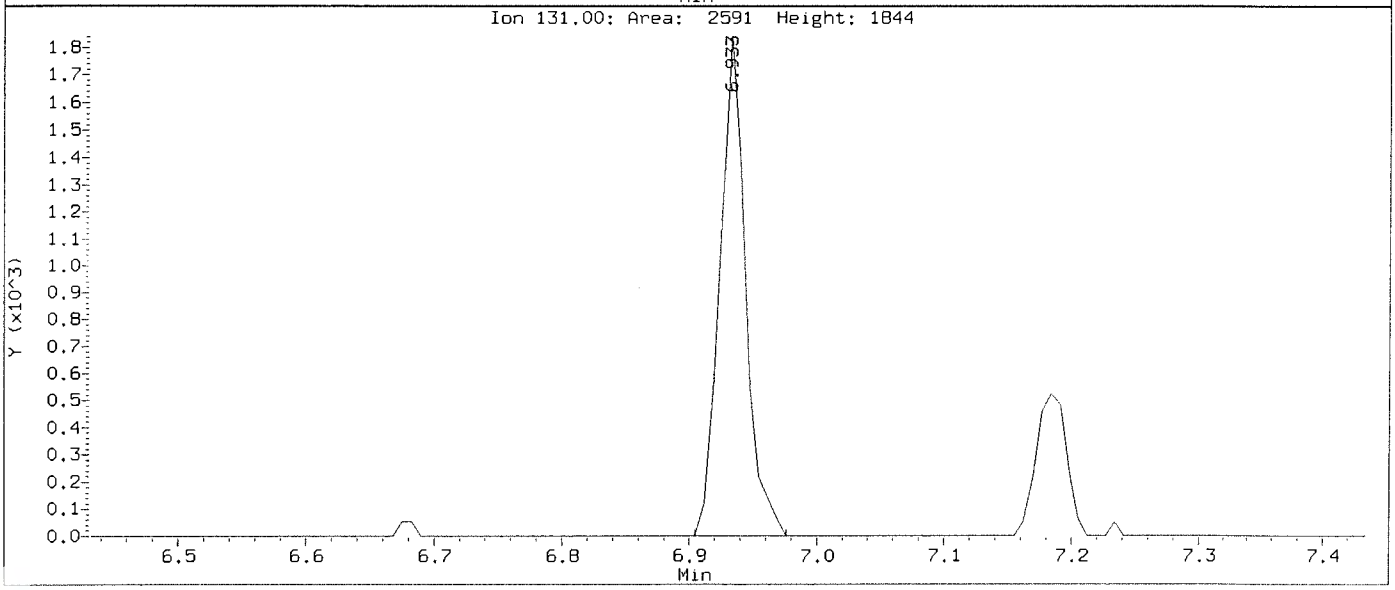
Instrument: voa6.i
Client Sample ID: VSTD001

Compound: Tetrachloroethene
CAS Number: 127-18-4







Data File: \\nahstws005\Target\chem\voa6.i\X200707.b\X070705.D Page 1
Report Date: 12-Aug-2020 15:35

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200707.b\X070705.D
Lab Smp Id: VSTD002 Client Smp ID: VSTD002
Inj Date : 07-JUL-2020 12:42
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\X200707.b\8260W.m
Meth Date : 12-Aug-2020 15:35 voa6.i Quant Type: ISTD
Cal Date : 07-JUL-2020 12:18 Cal File: X070704.D
Als bottle: 6 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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

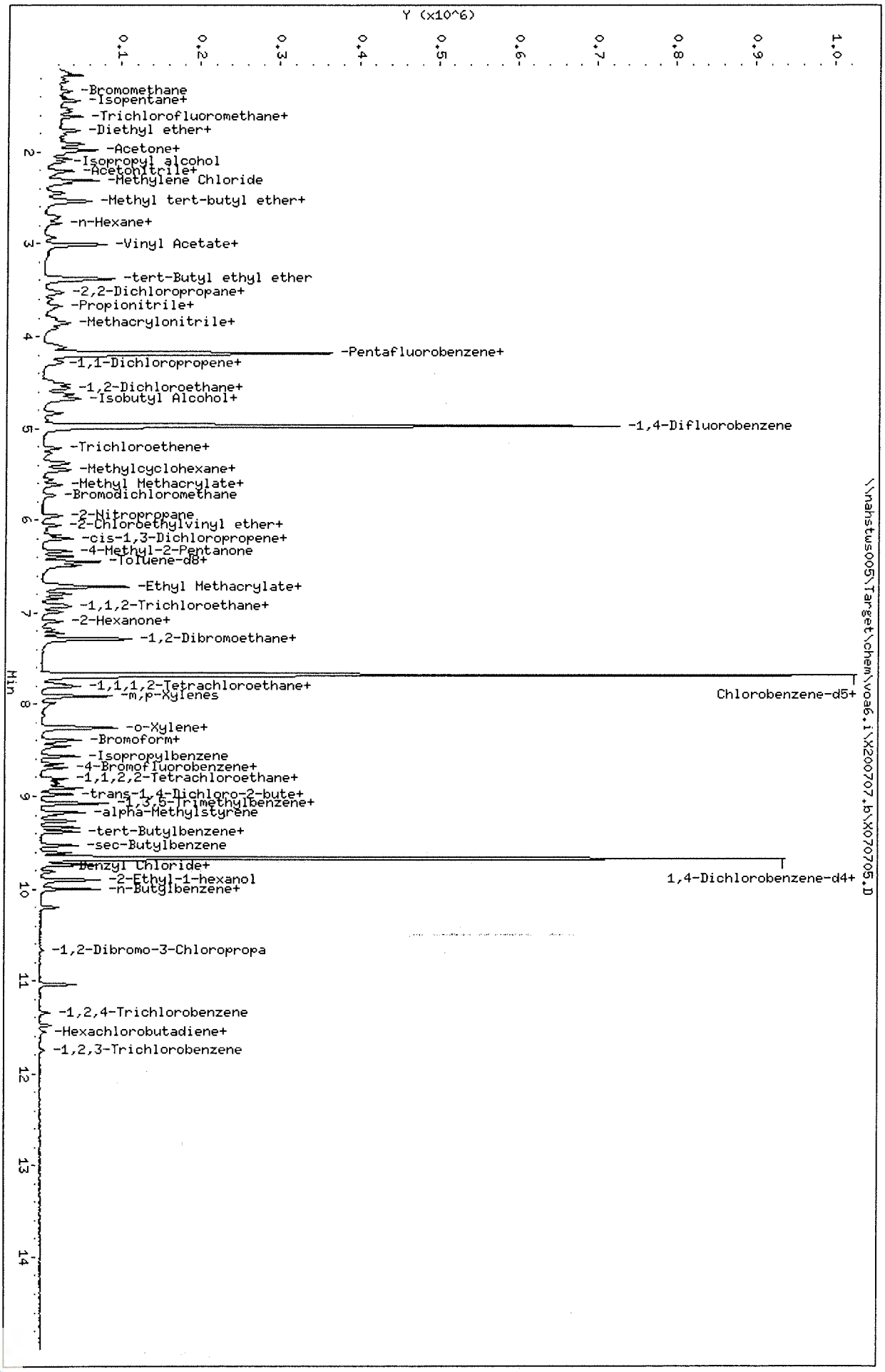
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
*	1 Pentafluorobenzene	168	4.189	4.189	(1.000)	287329	50.0000	
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	487637	50.0000	
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	437656	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	208366	50.0000	
$	30 Dibromofluoromethane	113	4.110	4.110	(0.981)	6445	2.00000	1.19(a)
$	35 1,2-Dichloroethane-d4	65	4.483	4.483	(1.070)	8551	2.00000	1.32(a)
$	48 Toluene-d8	98	6.395	6.395	(0.834)	22164	2.00000	1.92(a)
$	69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	8990	2.00000	1.11(a)
	60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	6538	2.00000	1.94(a)
	31 1,1,1-Trichloroethane	97	4.096	4.096	(0.978)	9877	2.00000	1.87(a)
	68 1,1,2,2-Tetrachloroethane	83	8.845	8.845	(0.915)	8164	2.00000	1.98(a)
	53 1,1,2-Trichloroethane	83	6.847	6.847	(0.893)	5459	2.00000	1.97(a)
	22 1,1-Dichloroethane	63	2.929	2.929	(0.699)	14621	2.00000	1.79(a)
	11 1,1-Dichloroethene	96	1.919	1.919	(0.458)	4974	2.00000	1.86(a)
	32 1,1-Dichloropropene	75	4.290	4.290	(0.863)	9379	2.00000	1.95(a)
	93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.215)	1800	2.00000	4.21(a)
	71 1,2,3-Trichloropropane	75	8.874	8.874	(0.918)	7810	2.00000	2.15(aM)
	90 1,2,4-Trichlorobenzene	180	11.345	11.345	(1.173)	3441	2.00000	3.88(a)
	79 1,2,4-Trimethylbenzene	105	9.382	9.382	(0.970)	22388	2.00000	1.82(a)
	89 1,2-Dibromo-3-Chloropropane	155	10.665	10.665	(1.103)	800	2.00000	0.80(a)
	57 1,2-Dibromoethane	107	7.269	7.269	(0.948)	6908	2.00000	1.96(a)
	88 1,2-Dichlorobenzene	146	9.999	9.999	(1.034)	11639	2.00000	1.91(a)

Data File: \\nahstws005\Target\chem\voa6.i\X200707.b\X070705.D Page 2
Report Date: 12-Aug-2020 15:35

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)
33	1,2-Dichloroethane	62	4.562	4.562	(0.918)	11198	2.00000	1.85(a)
42	1,2-Dichloropropane	63	5.443	5.443	(1.095)	8933	2.00000	1.96(aM)
75	1,3,5-Trimethylbenzene	105	9.074	9.074	(0.939)	21445	2.00000	1.80(a)
83	1,3-Dichlorobenzene	146	9.612	9.612	(0.994)	12676	2.00000	1.90(a)
54	1,3-Dichloropropane	76	6.990	6.990	(0.911)	11847	2.00000	2.03(a)
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	12018	2.00000	1.70(a)
26	2,2-Dichloropropane	77	3.516	3.516	(0.839)	8530	2.00000	1.71(a)
24	2-Butanone	43	3.595	3.595	(0.858)	14432	4.00000	(aM)
76	2-Chlorotoluene	91	8.981	8.981	(0.929)	19717	2.00000	1.88(a)
52	2-Hexanone	43	7.097	7.097	(0.925)	19454	4.00000	1.08(a)
77	4-Chlorotoluene	91	9.074	9.074	(0.939)	21540	2.00000	1.81(a)
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	21205	2.00000	1.78(a)
45	4-Methyl-2-Pentanone	43	6.331	6.331	(0.825)	26164	4.00000	1.33(a)
10	Acetone	43	1.976	1.976	(0.472)	56307	4.00000	(a)
37	Benzene	78	4.519	4.519	(0.909)	24995	2.00000	1.79(a)
74	Bromobenzene	156	8.809	8.809	(0.911)	7514	2.00000	1.89(a)
29	Bromochloromethane	128	3.802	3.802	(0.908)	4515	2.00000	2.26(a)
39	Bromodichloromethane	83	5.729	5.729	(1.153)	9039	2.00000	1.85(a)
66	Bromoform	173	8.415	8.415	(1.097)	4505	2.00000	1.85(Ta)
6	Bromomethane	94	1.338	1.338	(0.320)	4741	2.00000	2.27(a)
19	Carbon Disulfide	76	2.069	2.069	(0.494)	32636	4.00000	3.73(a)
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	8498	2.00000	1.82(a)
59	Chlorobenzene	112	7.699	7.699	(1.004)	16593	2.00000	1.86(a)
7	Chloroethane	64	1.403	1.403	(0.335)	6029	2.00000	0.50(aM)
28	Chloroform	83	3.910	3.910	(0.933)	12010	2.00000	1.90(a)
3	Chloromethane	50	1.081	1.081	(0.258)	11069	2.00000	1.87(a)
27	cis-1,2-Dichloroethene	96	3.537	3.537	(0.844)	6832	2.00000	1.81(a)
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	11034	2.00000	1.87(a)
55	Dibromochloromethane	129	7.183	7.183	(0.937)	7177	2.00000	1.99(a)
44	Dibromomethane	93	5.565	5.565	(1.120)	4711	2.00000	1.92(a)
2	Dichlorodifluoromethane	85	0.973	0.973	(0.232)	6179	2.00000	1.77(a)
61	Ethylbenzene	106	7.807	7.807	(1.018)	8638	2.00000	1.83(a)
91	Hexachlorobutadiene	225	11.481	11.481	(1.187)	2378	2.00000	3.64(a)
67	Isopropylbenzene	105	8.566	8.566	(1.117)	25615	2.00000	1.82(a)
62	m,p-Xylenes	106	7.907	7.907	(1.031)	21309	4.00000	3.75(a)
17	Methylene Chloride	84	2.305	2.305	(0.550)	5166	2.00000	1.64(aM)
87	n-Butylbenzene	91	9.999	9.999	(1.034)	18691	2.00000	1.76(a)
73	n-Propylbenzene	91	8.917	8.917	(0.922)	30197	2.00000	1.77(a)
92	Naphthalene	128	11.553	11.553	(1.195)	5731	2.00000	3.11(a)
63	o-Xylene	106	8.244	8.244	(1.075)	10176	2.00000	1.83(a)
81	sec-Butylbenzene	105	9.526	9.526	(0.985)	25143	2.00000	1.79(a)
64	Styrene	104	8.265	8.265	(1.078)	18673	2.00000	1.93(a)
78	tert-Butylbenzene	119	9.340	9.340	(0.966)	17498	2.00000	1.83(a)
56	Tetrachloroethene	164	6.933	6.933	(0.904)	5118	2.00000	1.91(aM)
50	Toluene	91	6.453	6.453	(0.841)	26607	2.00000	1.90(a)
20	trans-1,2-Dichloroethene	96	2.535	2.535	(0.605)	5817	2.00000	1.85(a)
51	trans-1,3-Dichloropropene	75	6.689	6.689	(1.346)	9828	2.00000	1.85(a)
38	Trichloroethene	130	5.214	5.214	(1.049)	6294	2.00000	1.73(a)
8	Trichlorofluoromethane	101	1.560	1.560	(0.373)	8621	2.00000	1.73(a)
5	Vinyl Chloride	62	1.138	1.138	(0.272)	9523	2.00000	1.88(a)

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.



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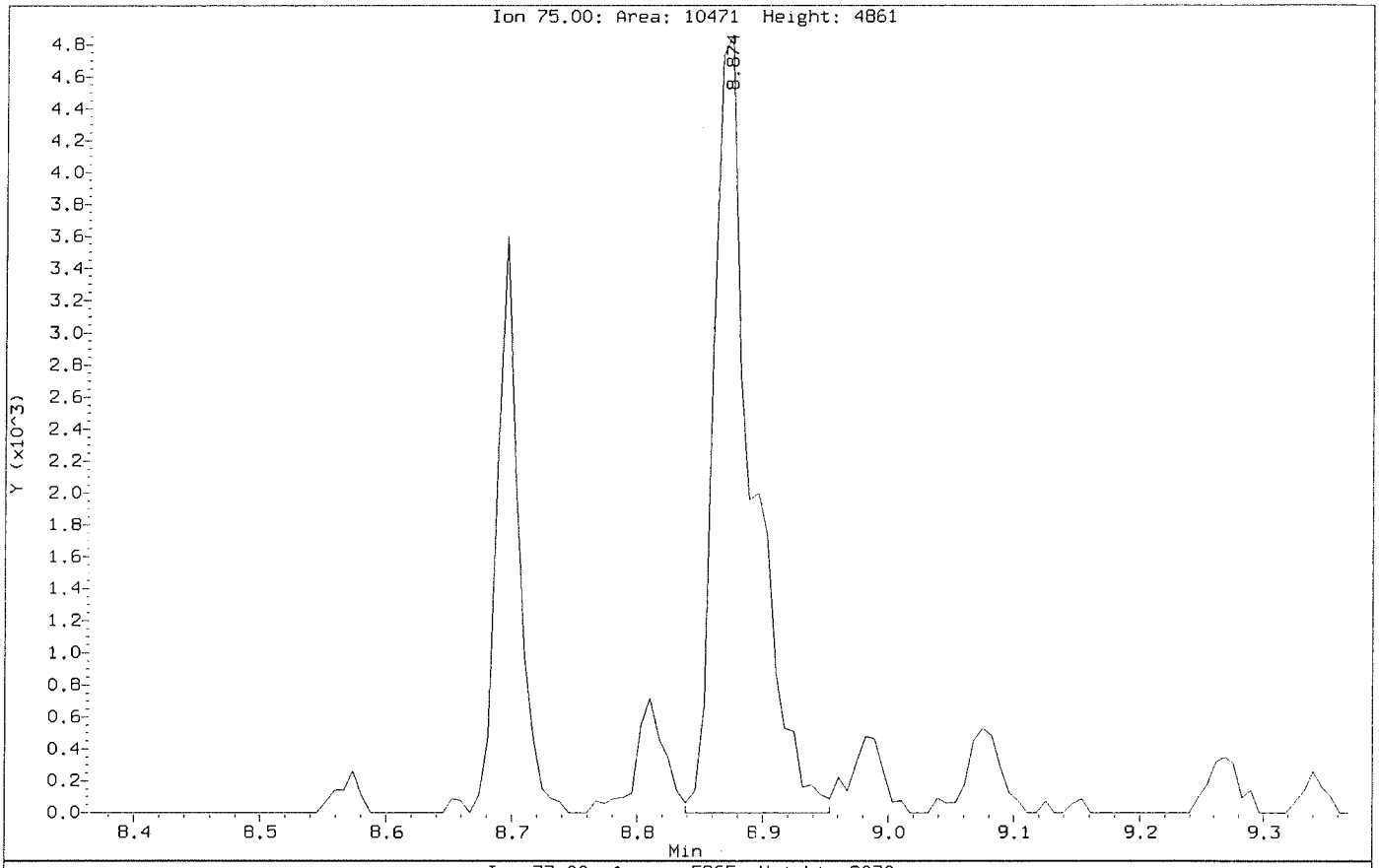
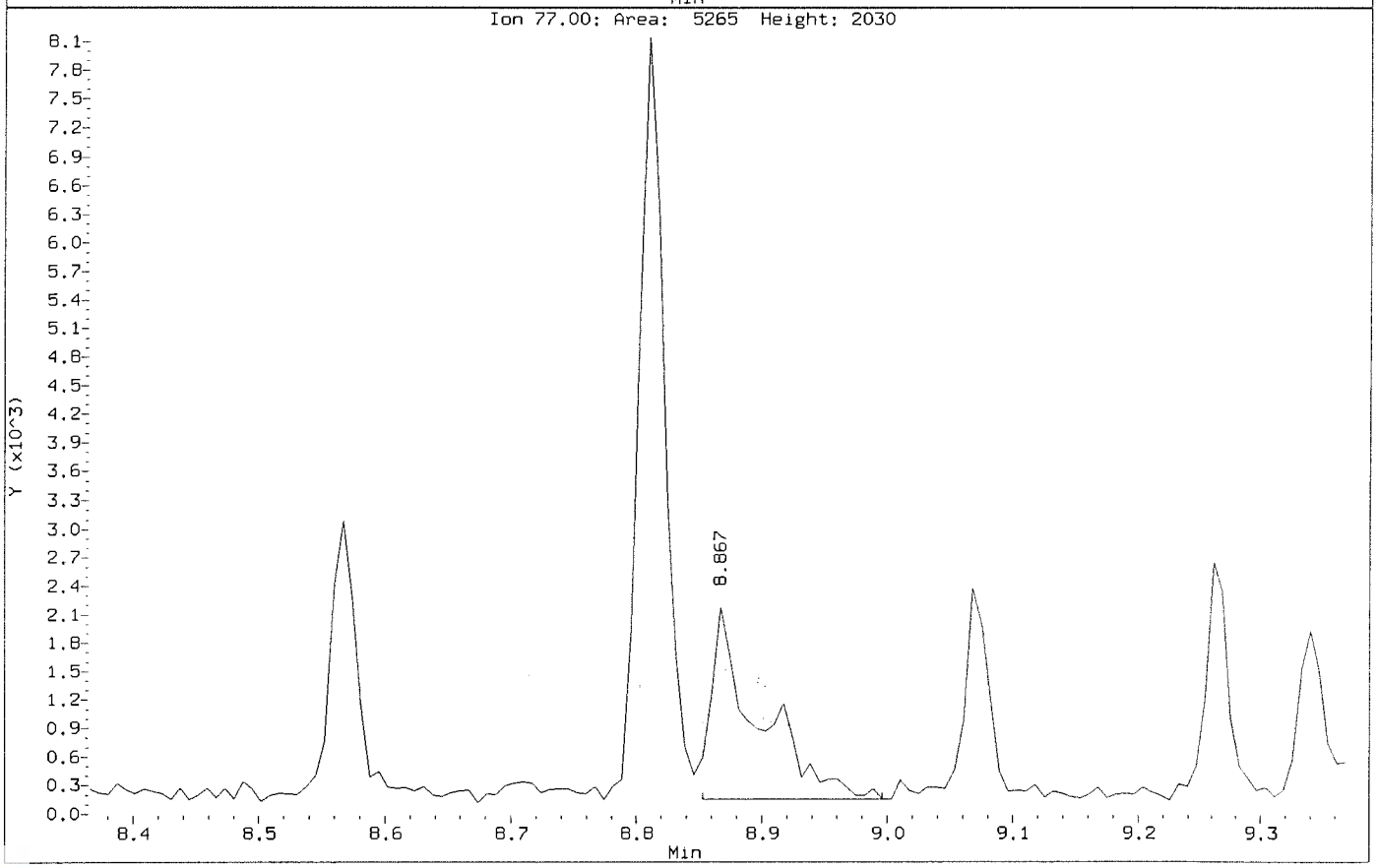
Client ID: VSTD002
Sample Info: VSTD002;VSTD002;1;4;
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\nahstws005\Target\chem\voa6.i\X200707.b\Before\X070705.D
Injection Date: 07-JUL-2020 12:42
Instrument: voa6.i
Client Sample ID: VSTD002

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





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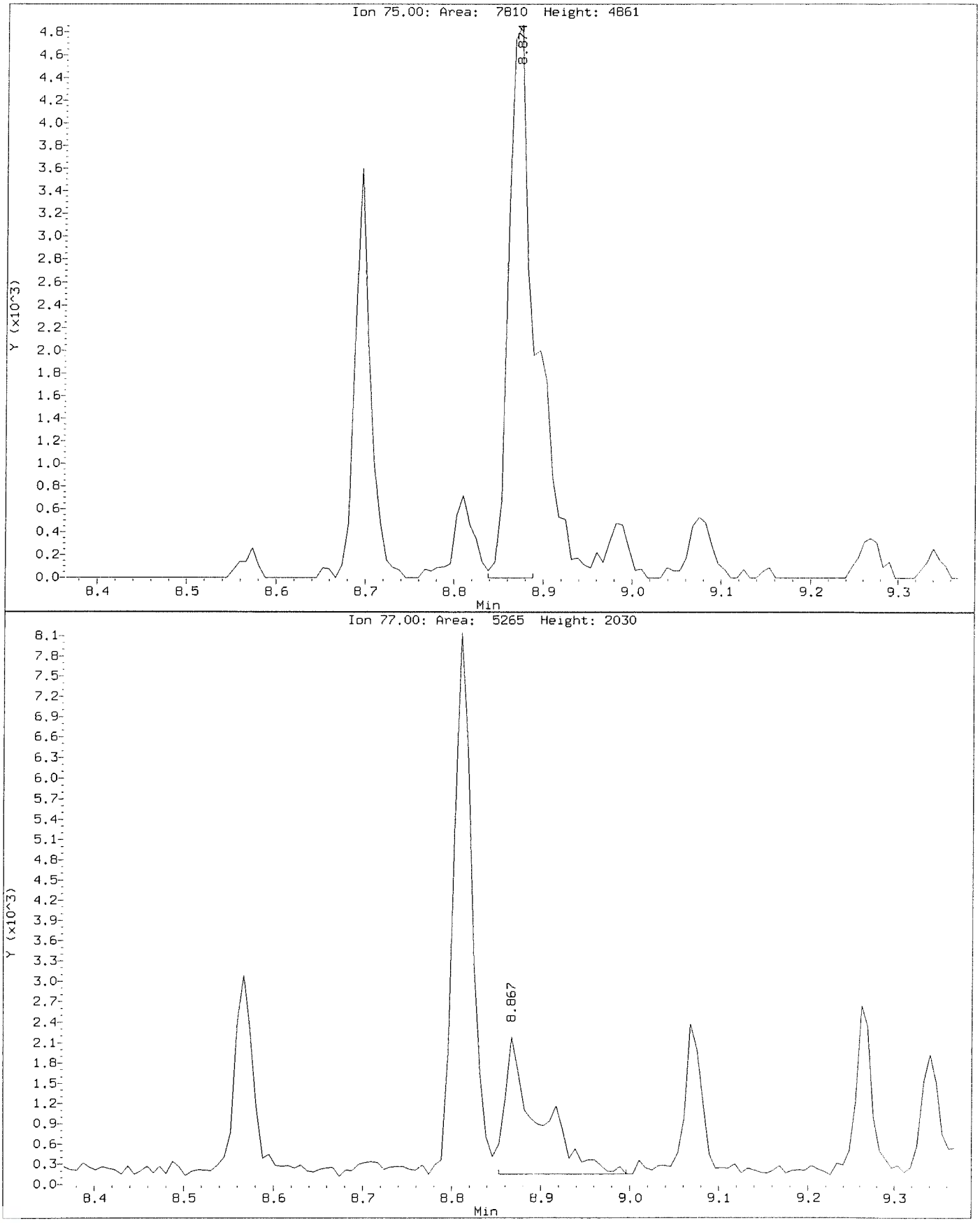
Injection Date: 07-JUL-2020 12:42
Instrument: voa6.i
Client Sample ID: VSTD002

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4



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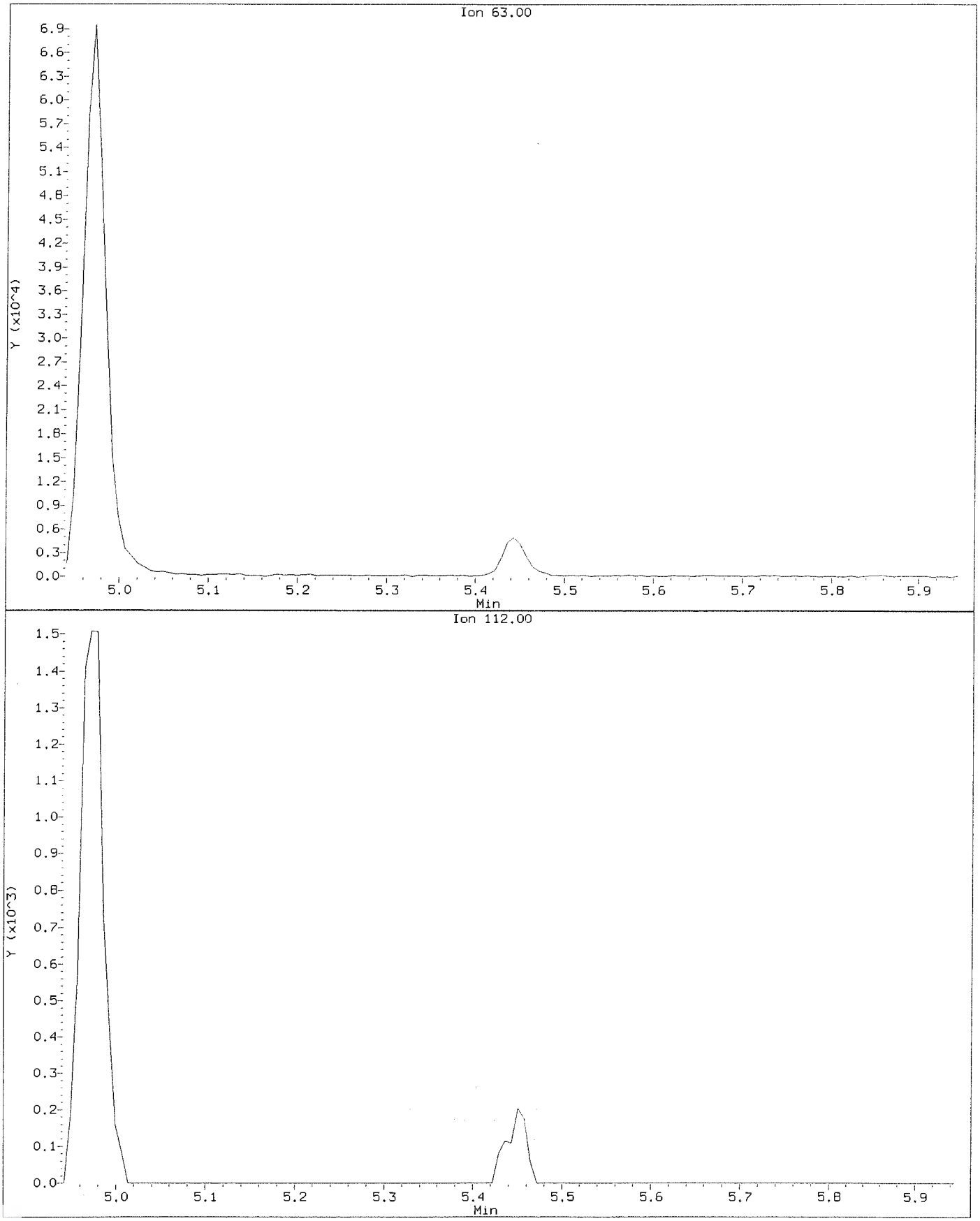
Instrument: voa6.i
Client Sample ID: VSTD002

Compound: 1,2-Dichloropropane
CAS Number: 78-87-5



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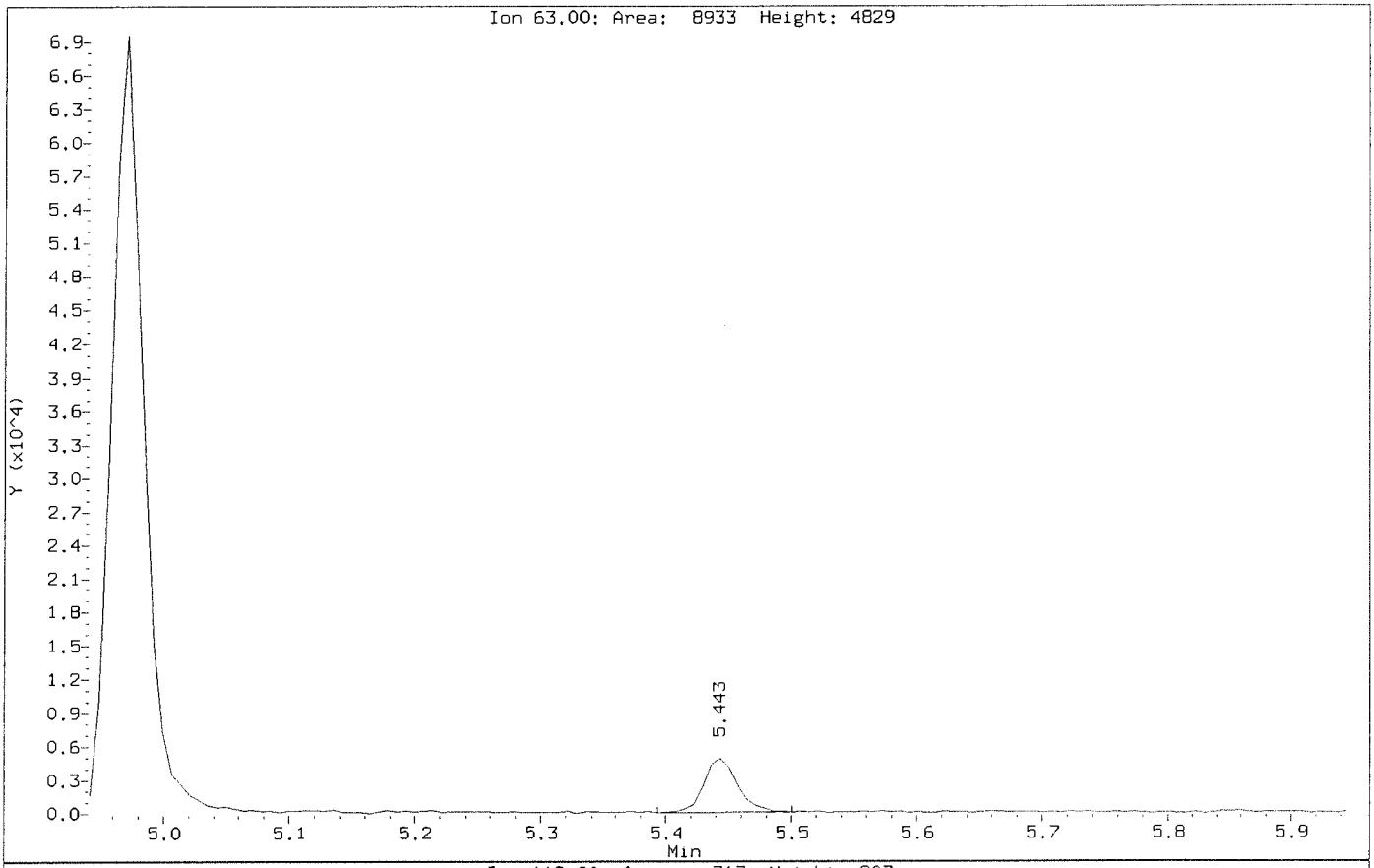
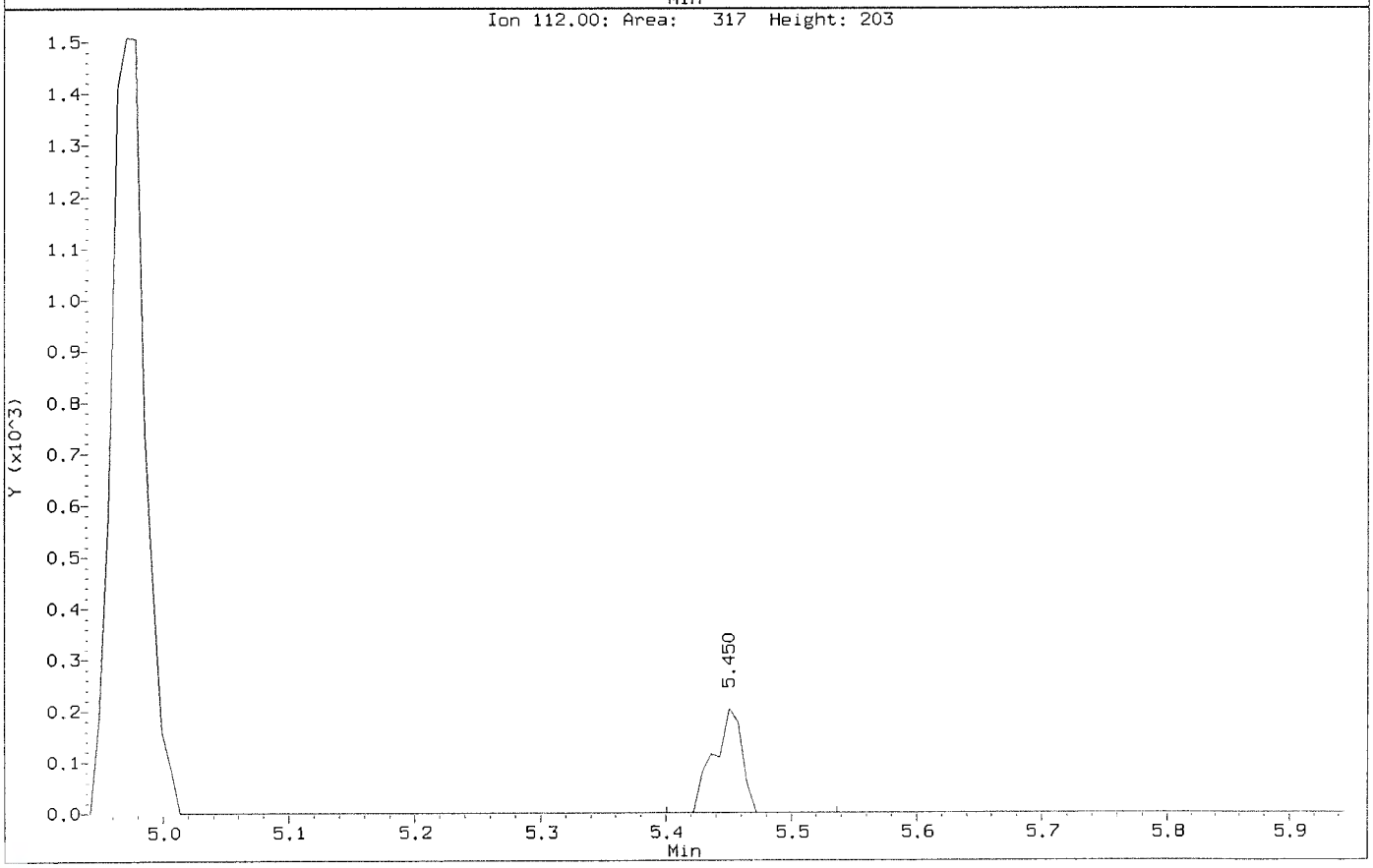
Instrument: voa6.i
Client Sample ID: VSTD002

Compound: 1,2-Dichloropropane
CAS Number: 78-87-5





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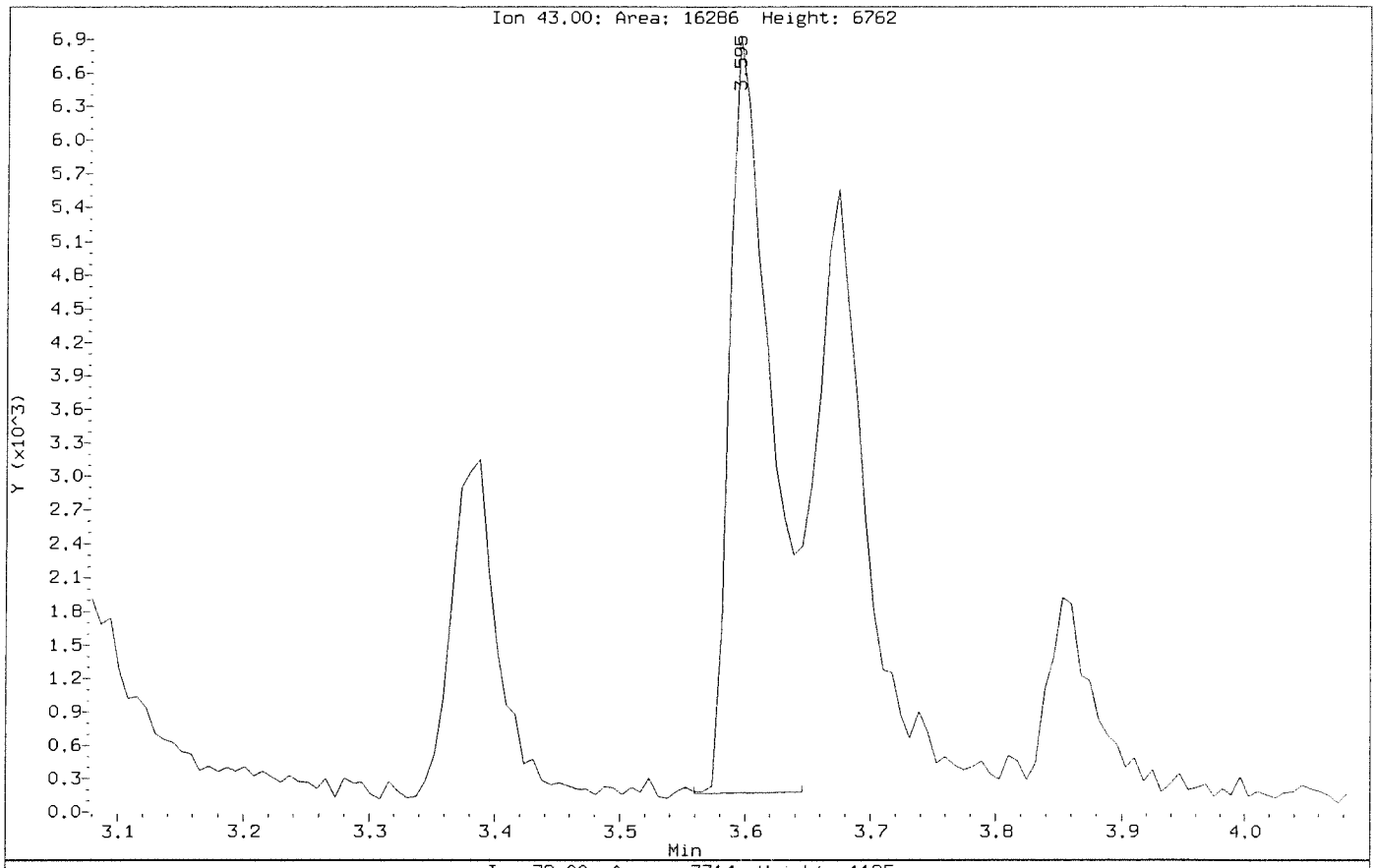
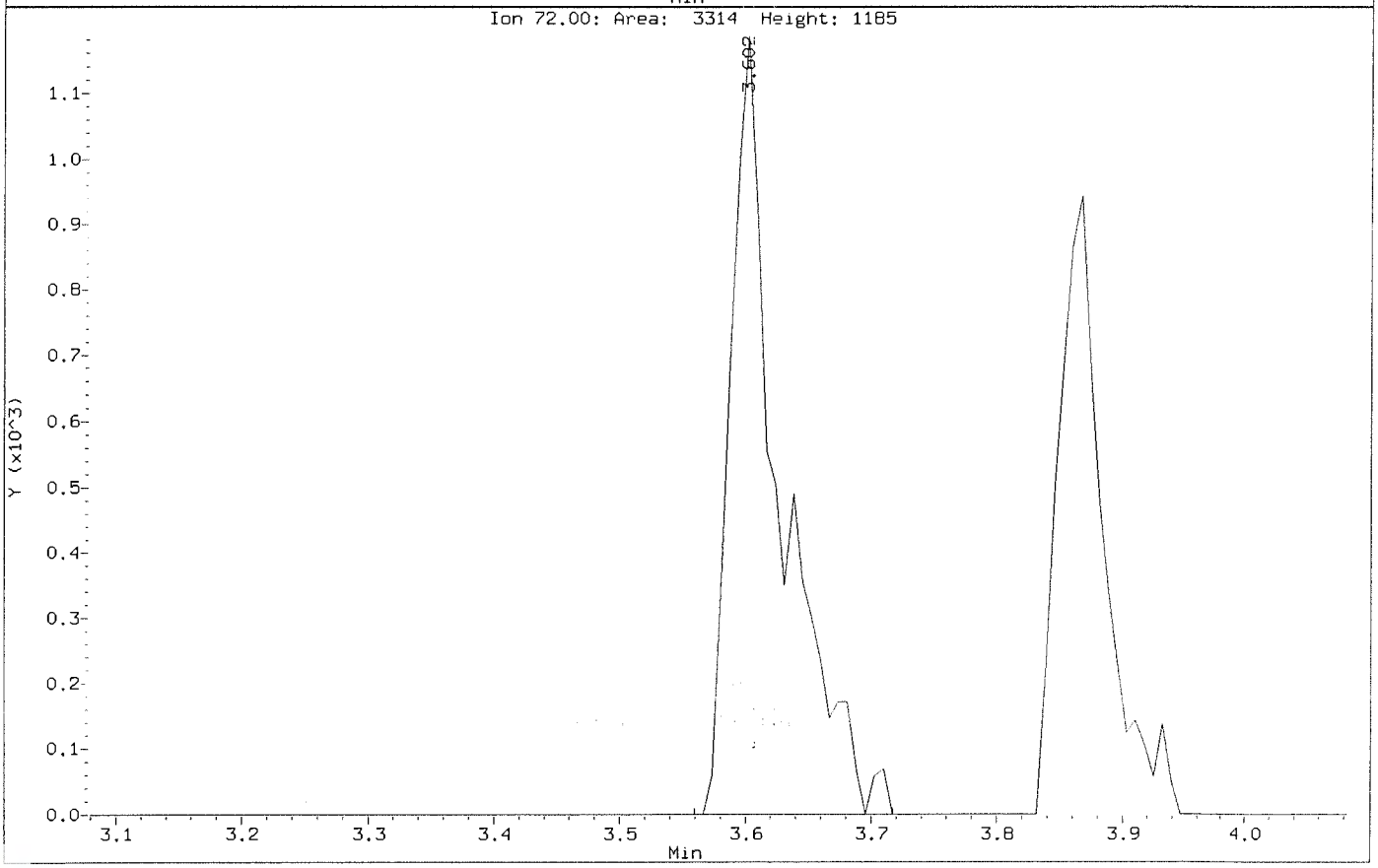
Instrument: voa6.i
Client Sample ID: VSTD002

Compound: 2-Butanone
CAS Number: 78-93-3





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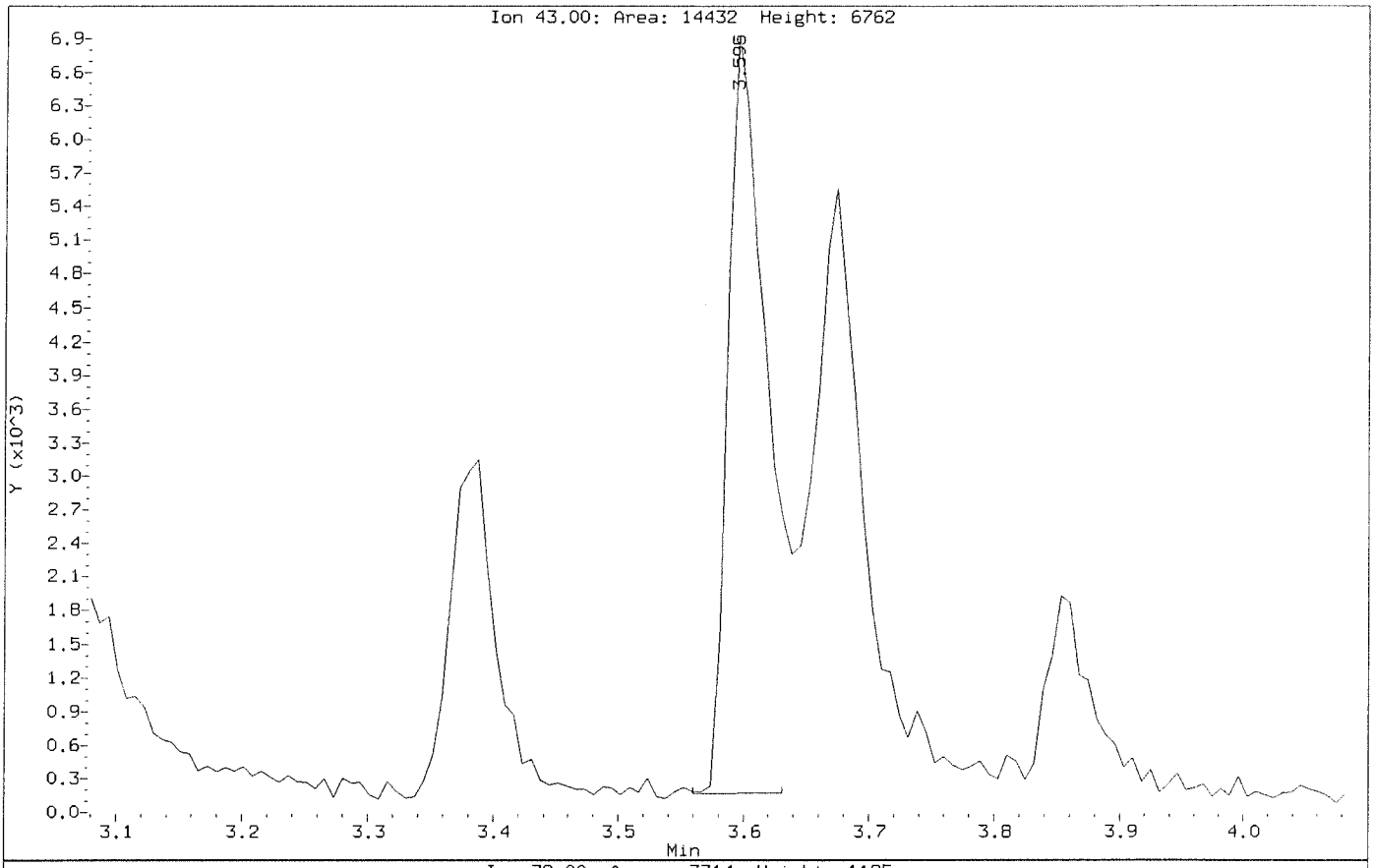
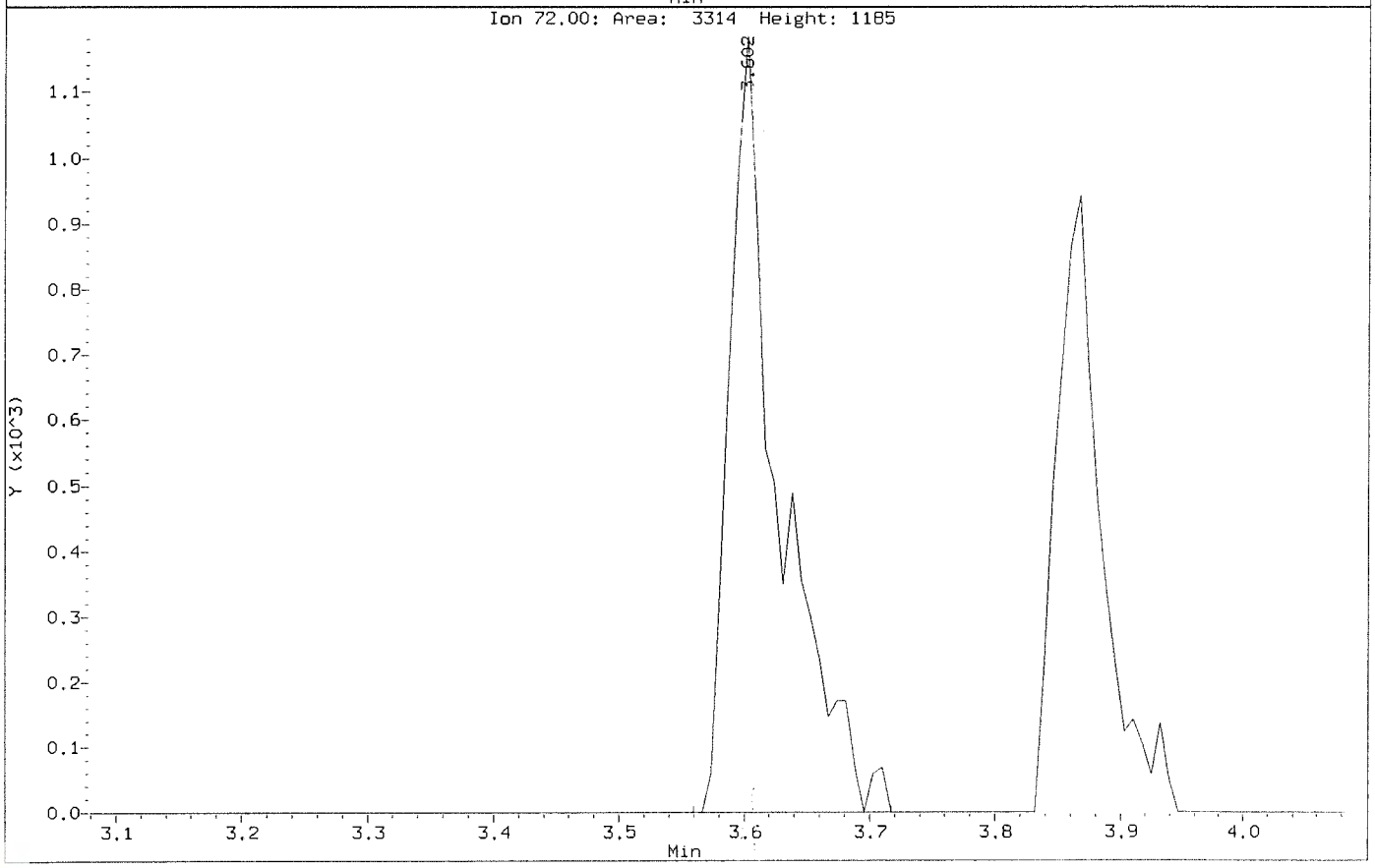
Instrument: voa6.i
Client Sample ID: VSTD002

Compound: 2-Butanone
CAS Number: 78-93-3





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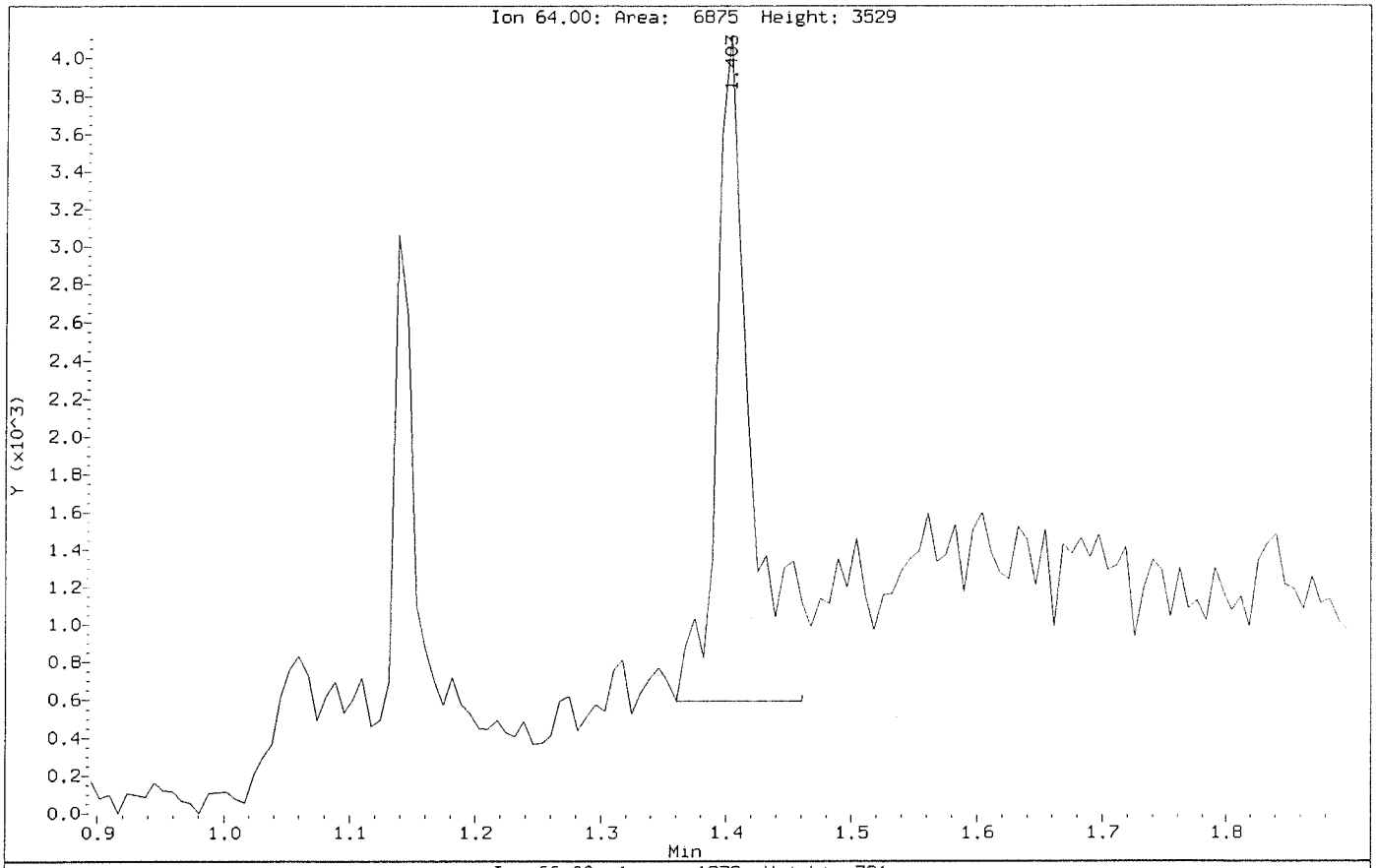
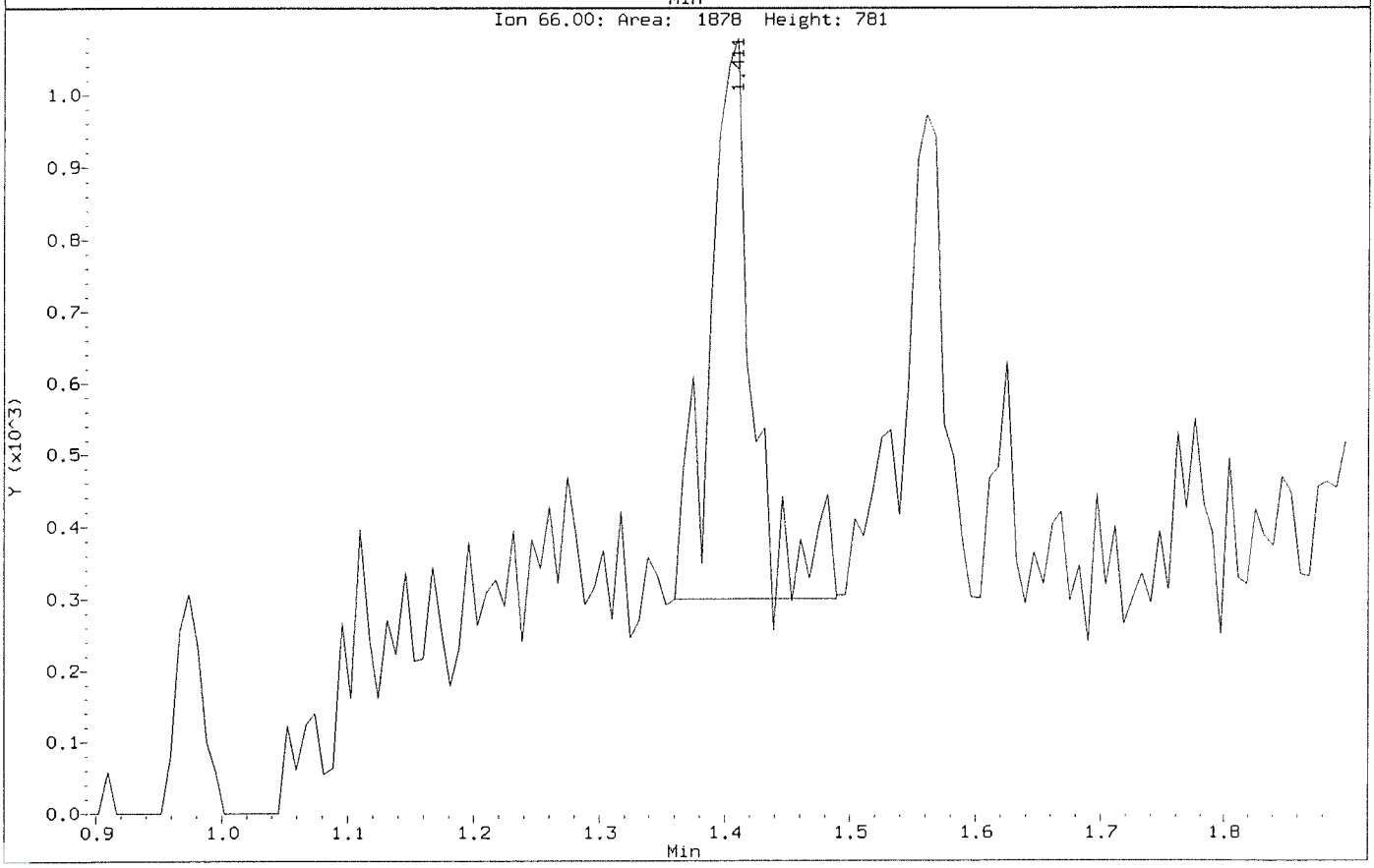
Instrument: voa6.i
Client Sample ID: VSTD002

Compound: Chloroethane
CAS Number: 75-00-3





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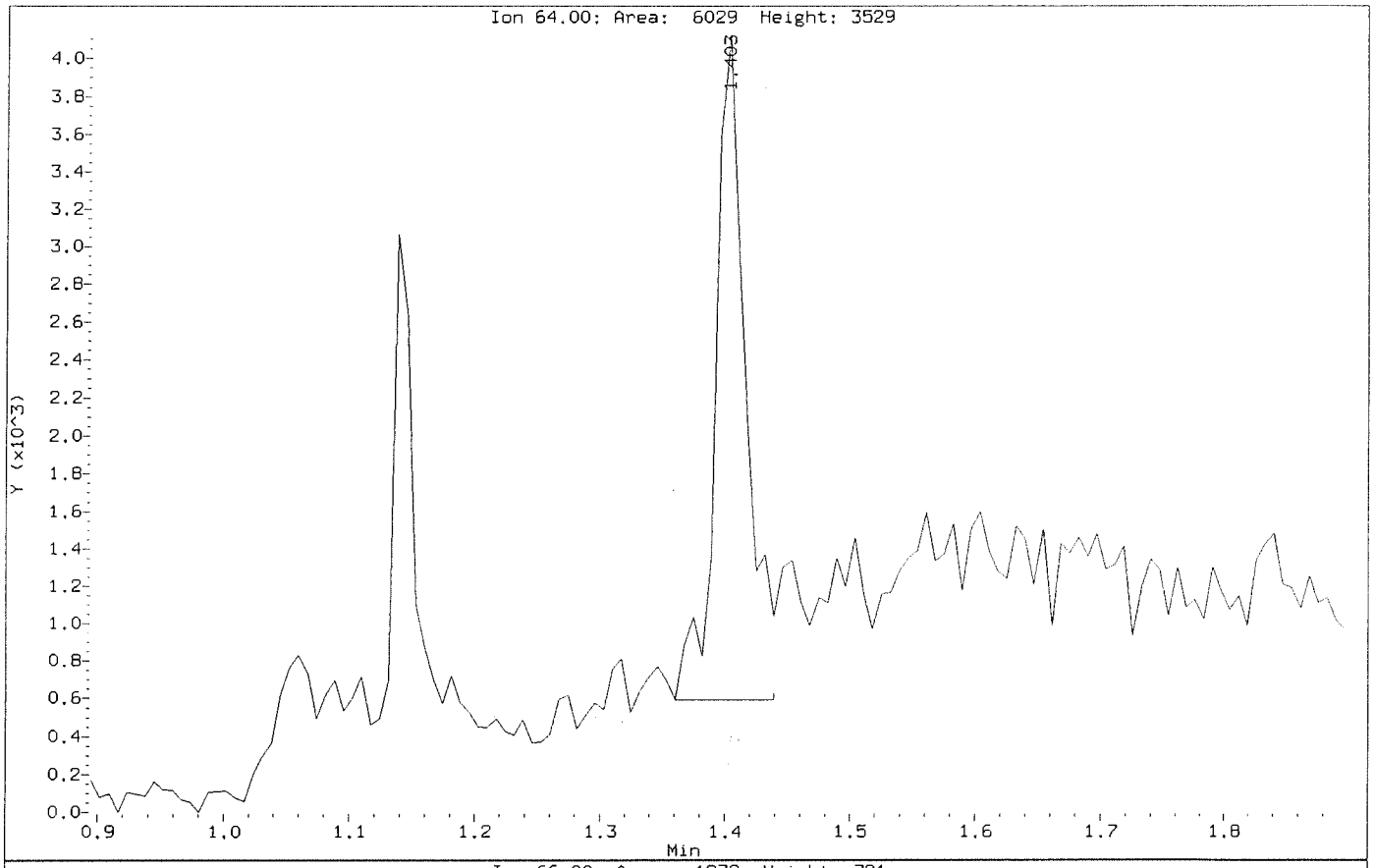
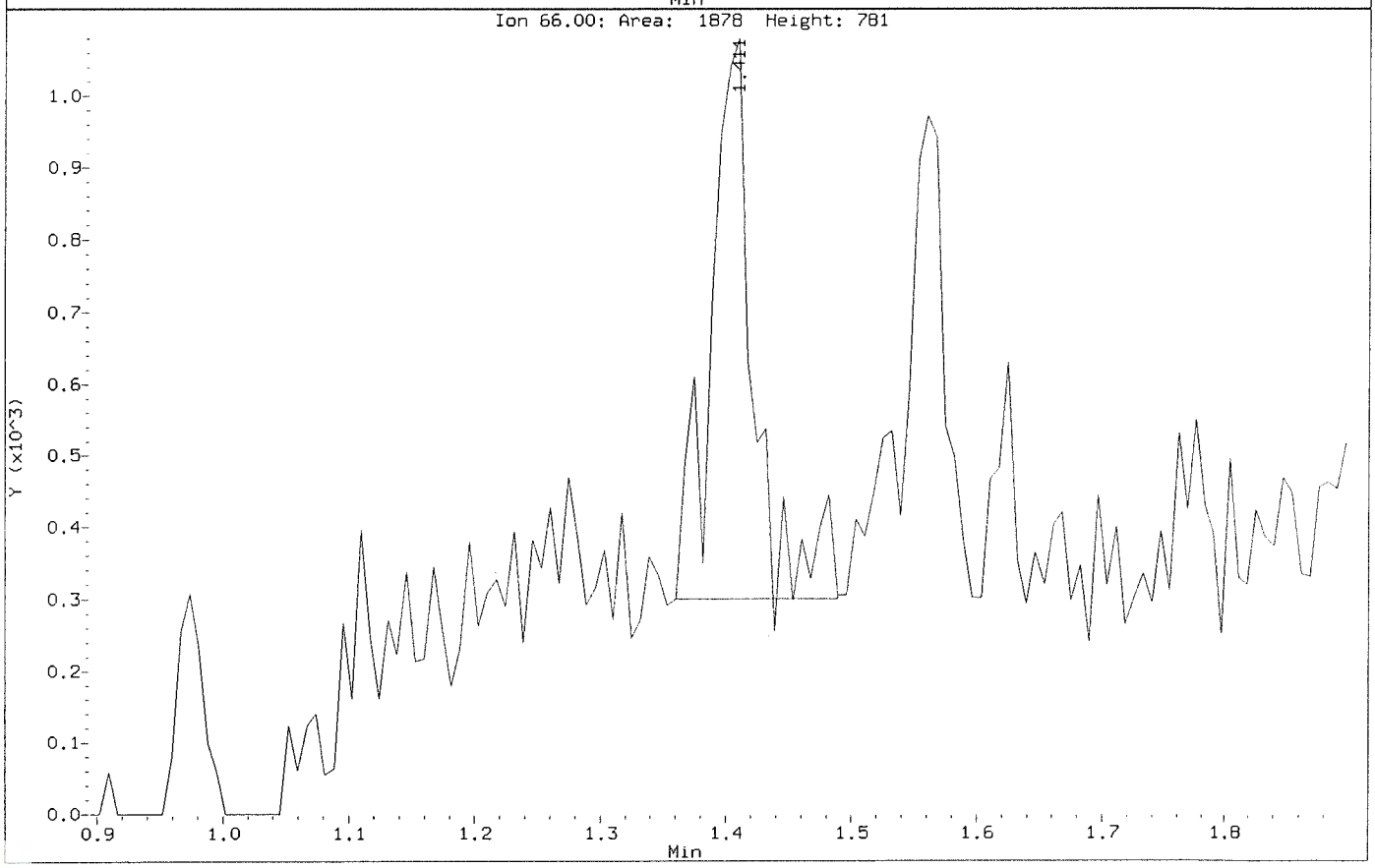
Client Sample ID: VSTD002

Compound: Chloroethane
CAS Number: 75-00-3





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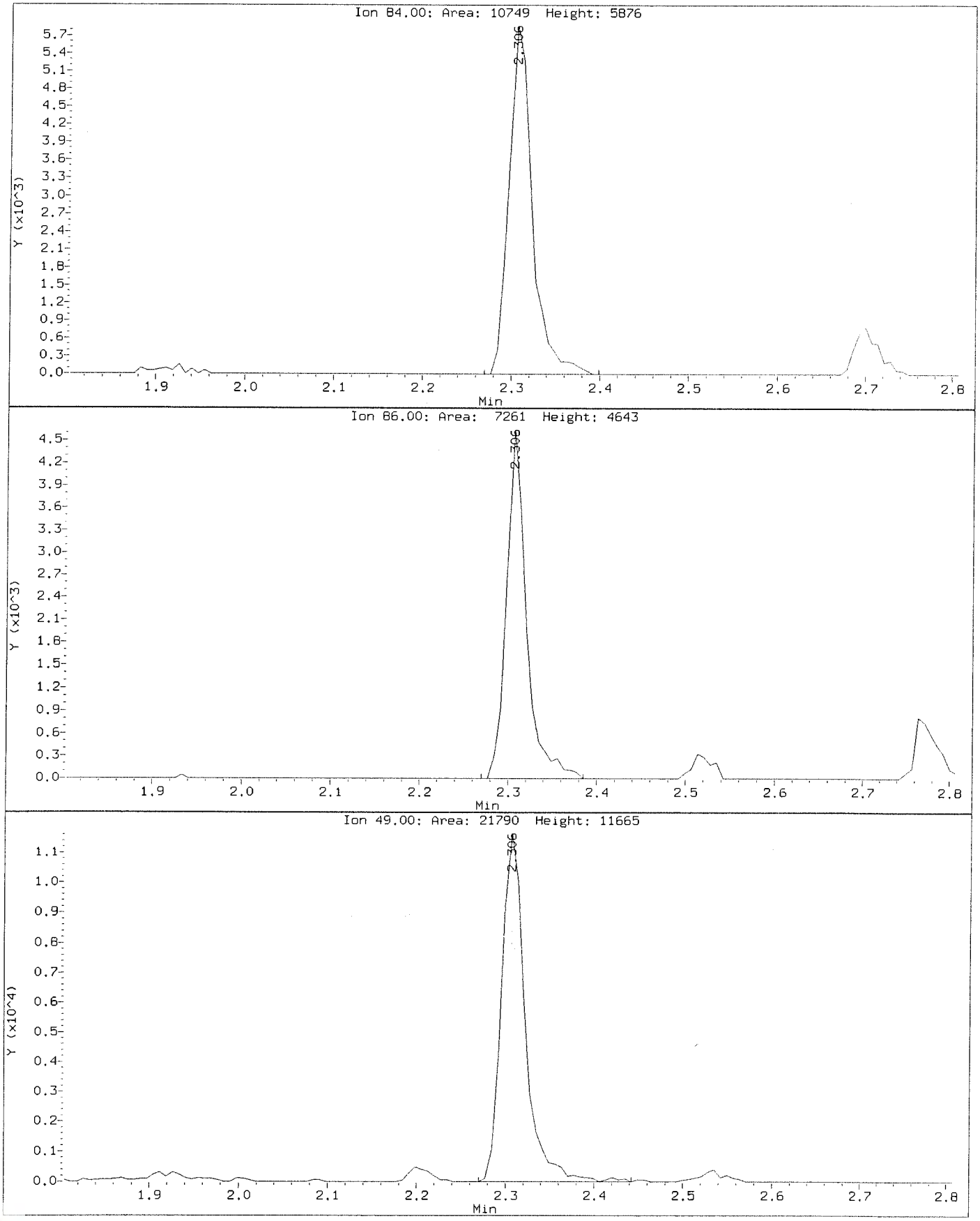
Instrument: voa6.i
Client Sample ID: VSTD002

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



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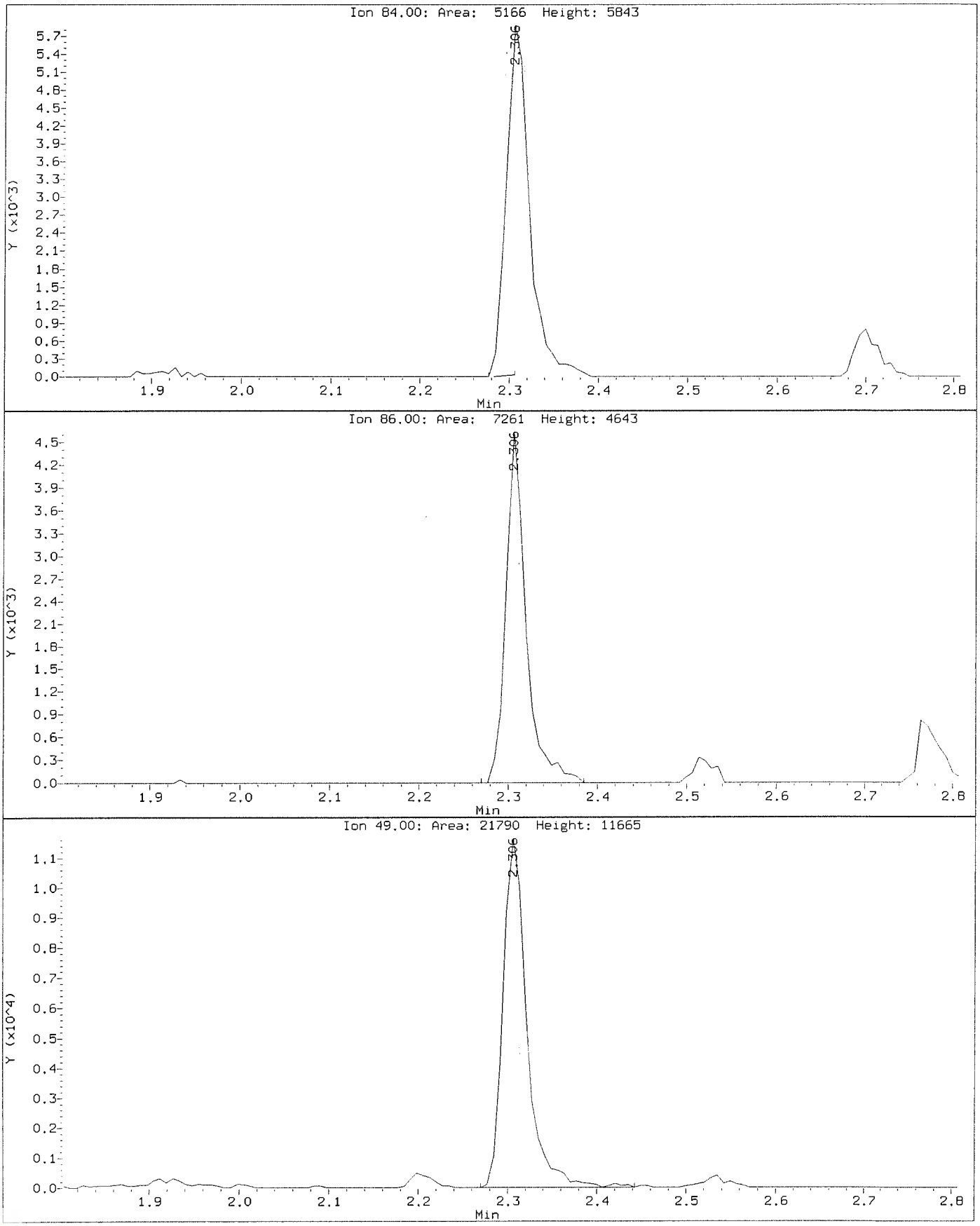
Instrument: voa6.i
Client Sample ID: VSTD002

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



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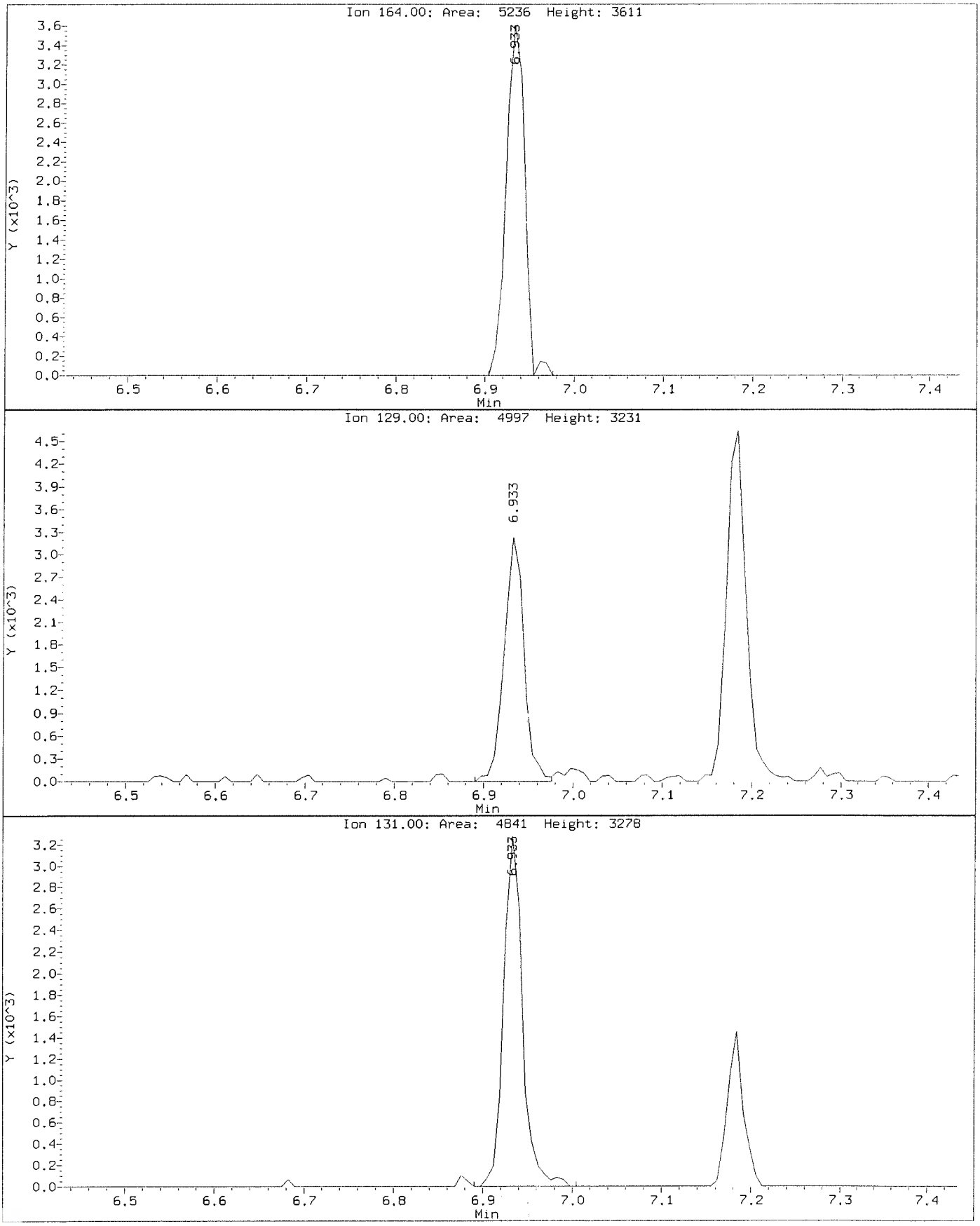
Instrument: voa6.i
Client Sample ID: VSTD002

Compound: Tetrachloroethene
CAS Number: 127-18-4



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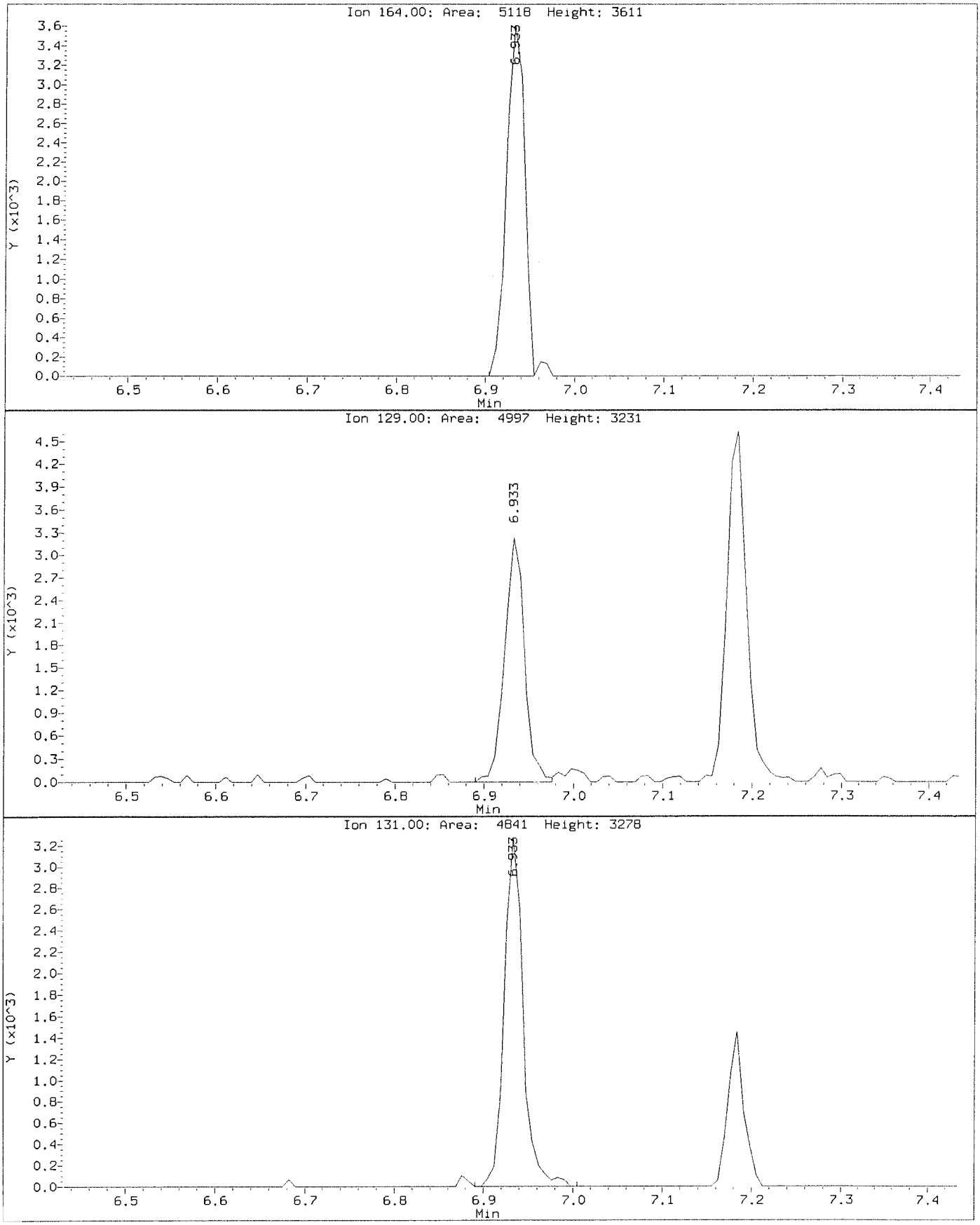
Client Sample ID: VSTD002

Compound: Tetrachloroethene
CAS Number: 127-18-4



ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200707.b\X070706.D
Lab Smp Id: VSTD005 Client Smp ID: VSTD005
Inj Date : 07-JUL-2020 13:06
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\X200707.b\8260W.m
Meth Date : 12-Aug-2020 15:35 voa6.i Quant Type: ISTD
Cal Date : 07-JUL-2020 12:42 Cal File: X070705.D
Als bottle: 7 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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

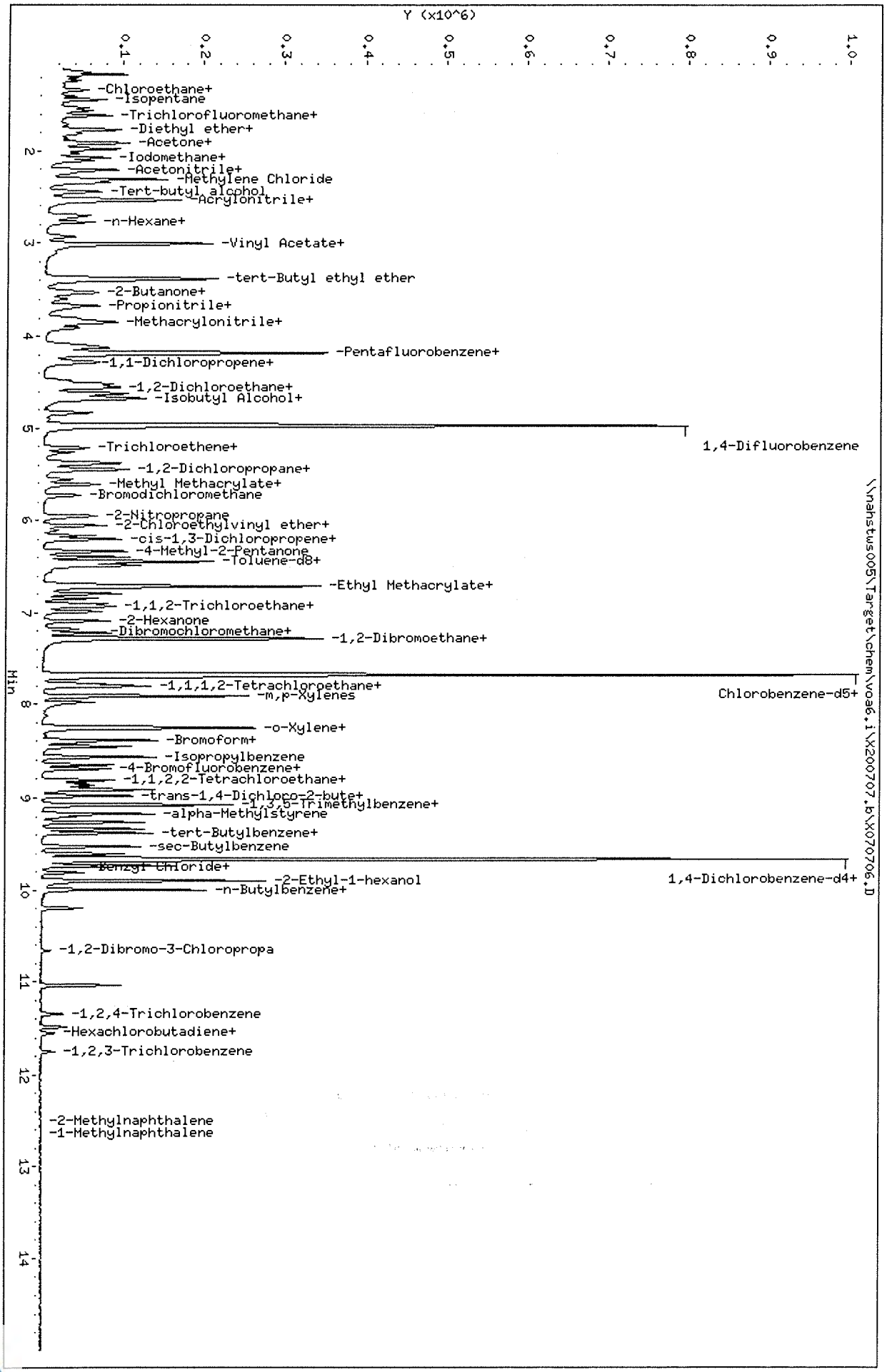
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)
*	1 Pentafluorobenzene	168	4.189	4.189	(1.000)	275112	50.0000	
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	464824	50.0000	
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	419648	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	198648	50.0000	
$	30 Dibromofluoromethane	113	4.111	4.111	(0.981)	17474	5.00000	5.04
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	23738	5.00000	5.15
$	48 Toluene-d8	98	6.388	6.388	(0.833)	56496	5.00000	5.12
$	69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	23624	5.00000	4.95(a)
	60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	16678	5.00000	5.17
	31 1,1,1-Trichloroethane	97	4.089	4.089	(0.976)	26900	5.00000	5.33
	68 1,1,2,2-Tetrachloroethane	83	8.845	8.845	(0.915)	23012	5.00000	5.85
	53 1,1,2-Trichloroethane	83	6.847	6.847	(0.893)	14806	5.00000	5.57
	22 1,1-Dichloroethane	63	2.929	2.929	(0.699)	40807	5.00000	5.23
	11 1,1-Dichloroethene	96	1.912	1.912	(0.456)	13079	5.00000	5.13
	32 1,1-Dichloropropene	75	4.290	4.290	(0.863)	23386	5.00000	5.10
	93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.215)	4185	5.00000	8.03(M)
	71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	19668	5.00000	5.67(M)
	90 1,2,4-Trichlorobenzene	180	11.345	11.345	(1.173)	7921	5.00000	7.54
	79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.970)	59290	5.00000	5.07
	89 1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.102)	2373	5.00000	6.20
	57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	17825	5.00000	5.28
	88 1,2-Dichlorobenzene	146	9.999	9.999	(1.034)	31094	5.00000	5.35

Data File: \\nahstws005\Target\chem\voa6.i\X200707.b\X070706.D Page 2
Report Date: 12-Aug-2020 15:35

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
33	1,2-Dichloroethane	62	4.562	4.562	(0.918)	30545	5.00000	5.29
42	1,2-Dichloropropane	63	5.443	5.443	(1.095)	23437	5.00000	5.42
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	58108	5.00000	5.13
83	1,3-Dichlorobenzene	146	9.612	9.612	(0.994)	32589	5.00000	5.12
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	29768	5.00000	5.32
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	32551	5.00000	5.20
26	2,2-Dichloropropane	77	3.516	3.516	(0.839)	25011	5.00000	5.25
24	2-Butanone	43	3.588	3.588	(0.856)	38898	10.0000	10.10
76	2-Chlorotoluene	91	8.981	8.981	(0.929)	51836	5.00000	5.19
52	2-Hexanone	43	7.090	7.090	(0.924)	54537	10.0000	10.38
77	4-Chlorotoluene	91	9.075	9.075	(0.939)	60584	5.00000	5.35
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	57677	5.00000	5.10
45	4-Methyl-2-Pentanone	43	6.331	6.331	(0.825)	73042	10.0000	10.06
10	Acetone	43	1.976	1.976	(0.472)	78299	10.0000	12.63
37	Benzene	78	4.519	4.519	(0.909)	69383	5.00000	5.23
74	Bromobenzene	156	8.810	8.810	(0.911)	19827	5.00000	5.23
29	Bromochloromethane	128	3.803	3.803	(0.908)	10051	5.00000	5.26
39	Bromodichloromethane	83	5.729	5.729	(1.153)	24184	5.00000	5.19
66	Bromoform	173	8.416	8.416	(1.097)	12661	5.00000	5.43
6	Bromomethane	94	1.339	1.339	(0.320)	10361	5.00000	5.29(M)
19	Carbon Disulfide	76	2.069	2.069	(0.494)	86529	10.0000	10.34
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	23230	5.00000	5.23
59	Chlorobenzene	112	7.699	7.699	(1.004)	44474	5.00000	5.20
7	Chloroethane	64	1.403	1.403	(0.335)	14118	5.00000	4.00(a)
28	Chloroform	83	3.910	3.910	(0.933)	32005	5.00000	5.30
3	Chloromethane	50	1.081	1.081	(0.258)	28111	5.00000	4.97(a)
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.843)	19083	5.00000	5.30
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	29252	5.00000	5.21
55	Dibromochloromethane	129	7.184	7.184	(0.937)	18452	5.00000	5.35
44	Dibromomethane	93	5.558	5.558	(1.118)	12413	5.00000	5.32
2	Dichlorodifluoromethane	85	0.973	0.973	(0.232)	16987	5.00000	5.10
61	Ethylbenzene	106	7.807	7.807	(1.018)	23972	5.00000	5.29
91	Hexachlorobutadiene	225	11.489	11.489	(1.188)	4900	5.00000	6.33
67	Isopropylbenzene	105	8.566	8.566	(1.117)	70593	5.00000	5.25
62	m,p-Xylenes	106	7.907	7.907	(1.031)	57805	10.0000	10.62
17	Methylene Chloride	84	2.306	2.306	(0.550)	16219	5.00000	5.39(M)
87	n-Butylbenzene	91	9.999	9.999	(1.034)	49103	5.00000	4.87(a)
73	n-Propylbenzene	91	8.917	8.917	(0.922)	83901	5.00000	5.17
92	Naphthalene	128	11.546	11.546	(1.194)	13133	5.00000	7.07
63	o-Xylene	106	8.244	8.244	(1.075)	28405	5.00000	5.32
81	sec-Butylbenzene	105	9.526	9.526	(0.985)	68360	5.00000	5.13
64	Styrene	104	8.265	8.265	(1.078)	48257	5.00000	5.20
78	tert-Butylbenzene	119	9.340	9.340	(0.966)	46887	5.00000	5.14
56	Tetrachloroethene	164	6.933	6.933	(0.904)	13669	5.00000	5.33
50	Toluene	91	6.453	6.453	(0.841)	71698	5.00000	5.35
20	trans-1,2-Dichloroethene	96	2.535	2.535	(0.605)	16269	5.00000	5.41
51	trans-1,3-Dichloropropene	75	6.689	6.689	(1.346)	26654	5.00000	5.28
38	Trichloroethene	130	5.214	5.214	(1.049)	18430	5.00000	5.34
8	Trichlorofluoromethane	101	1.561	1.561	(0.373)	23519	5.00000	4.95(a)
5	Vinyl Chloride	62	1.138	1.138	(0.272)	24629	5.00000	5.09

QC Flag Legend

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



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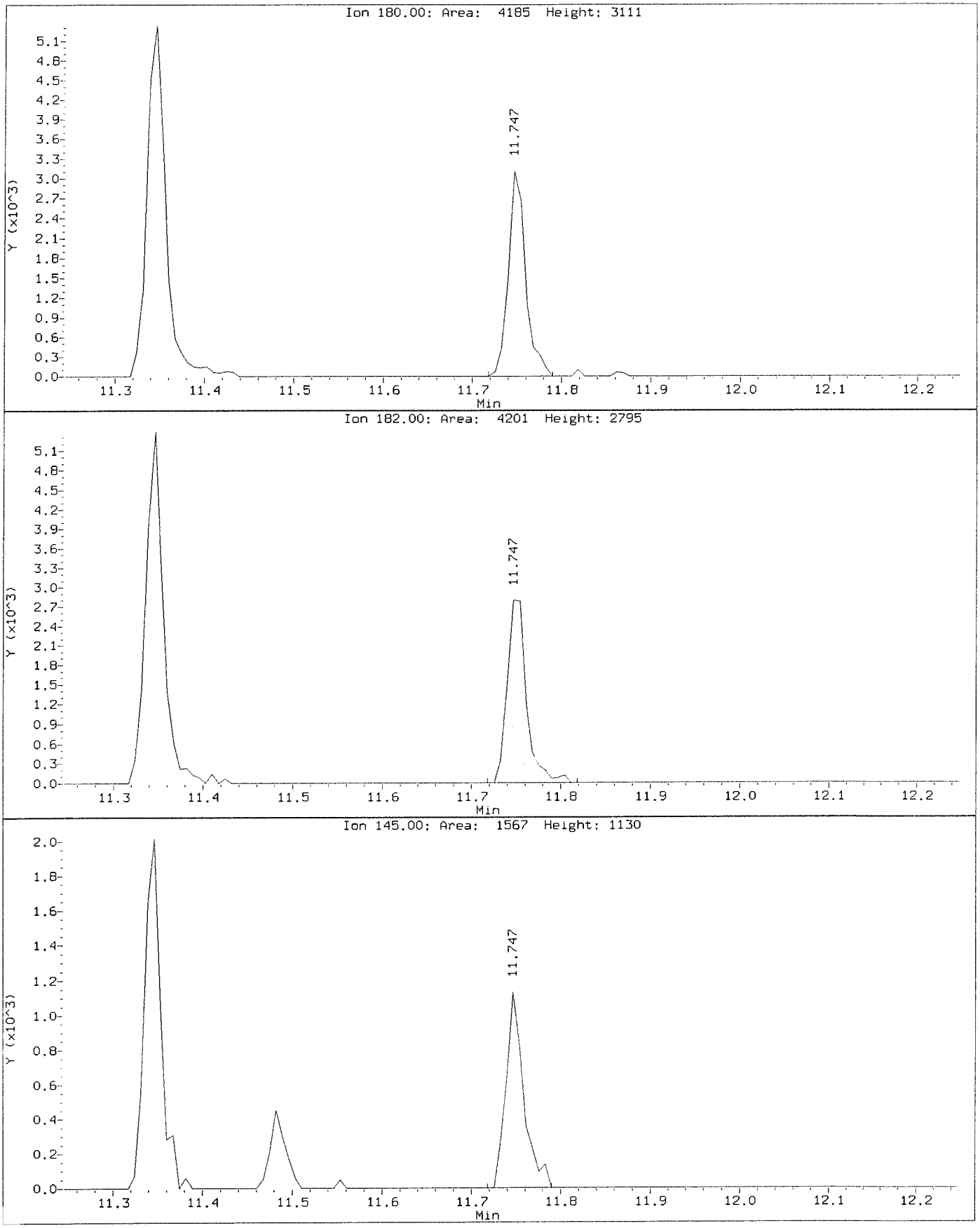
Date : 07-JUL-2020 13:06
Client ID: VSTD005
Sample Info: VSTD005;VSTD005;1;5;
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\nahstws005\Target\chem\voa6.i\X200707.b\Before\X070706.D
Injection Date: 07-JUL-2020 13:06
Instrument: voa6.i
Client Sample ID: VSTD005

Compound: 1,2,3-Trichlorobenzene
CAS Number: 87-61-6



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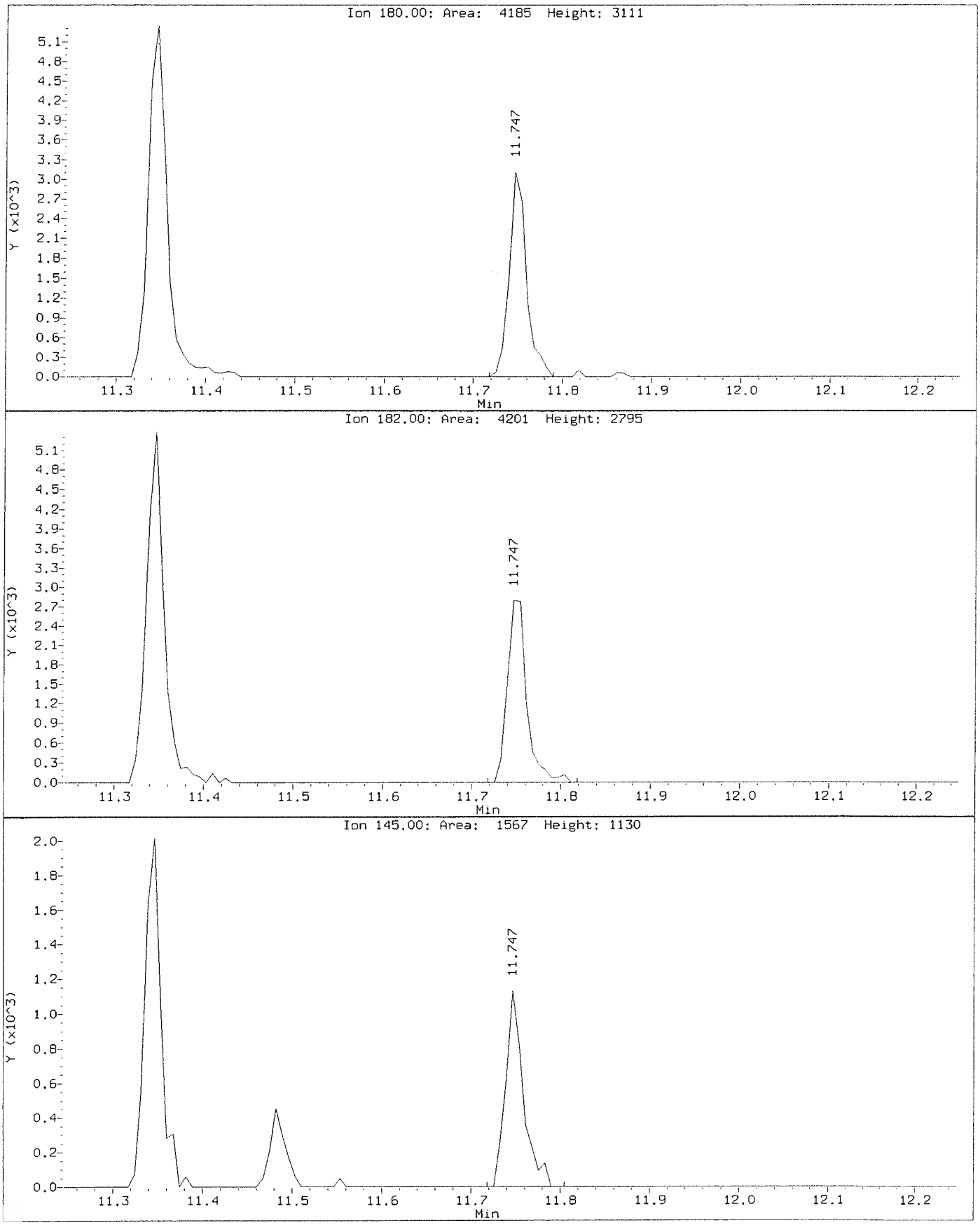
Instrument: voa6.i
Client Sample ID: VSTD005

Compound: 1,2,3-Trichlorobenzene
CAS Number: 87-61-6



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Instrument: voa6.i
Client Sample ID: VSTD005

Compound: 1,2,3-Trichloropropane
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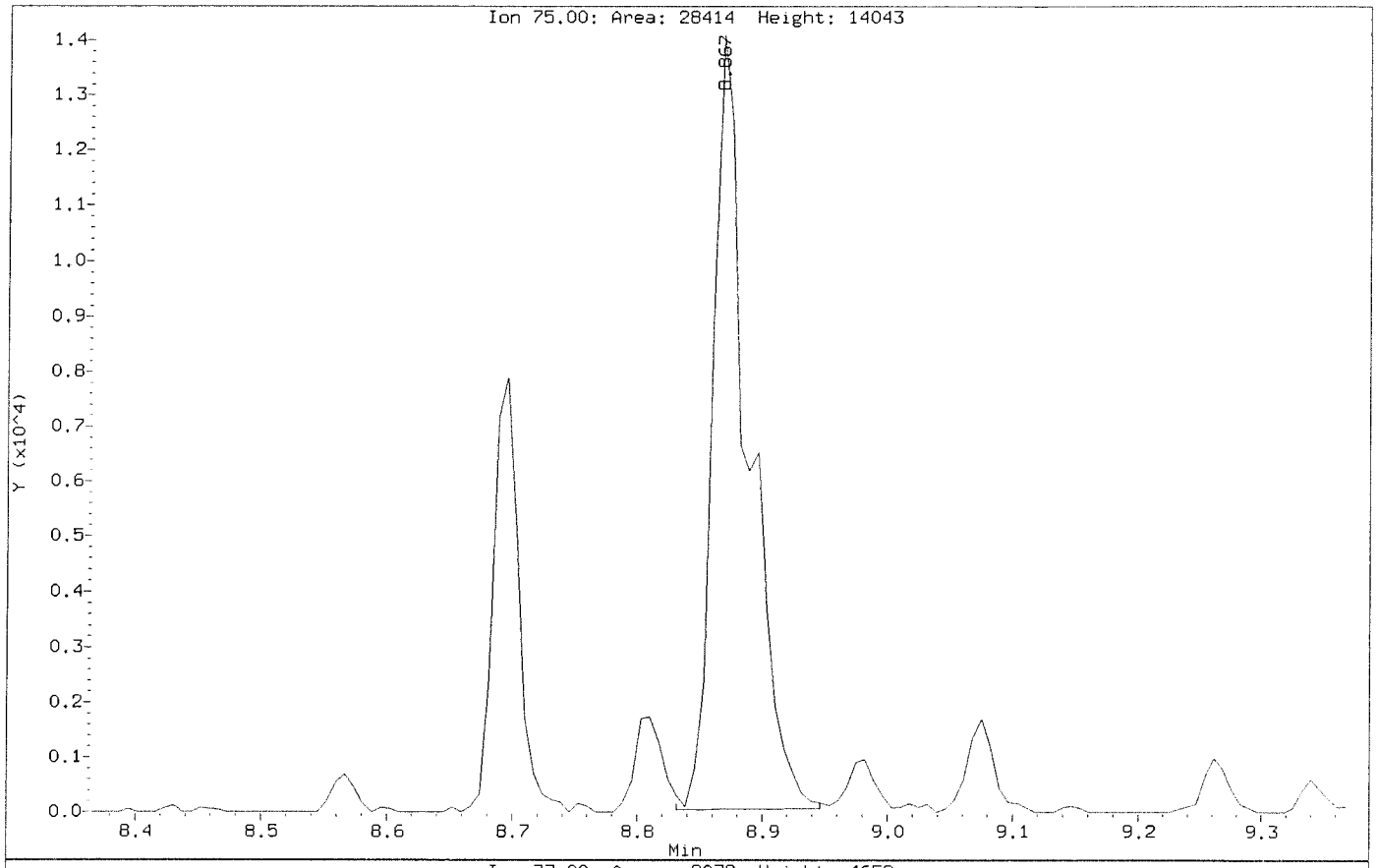

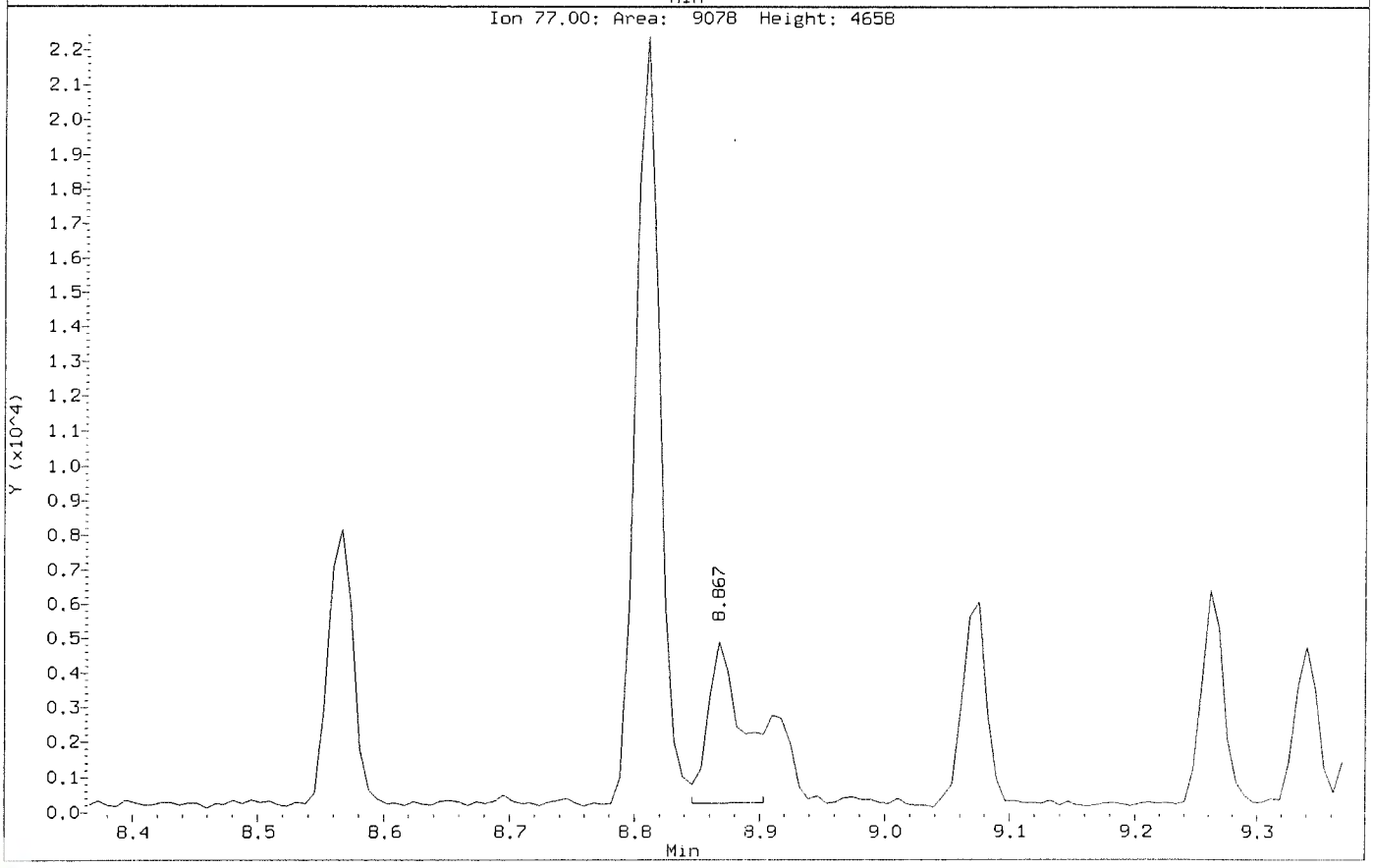

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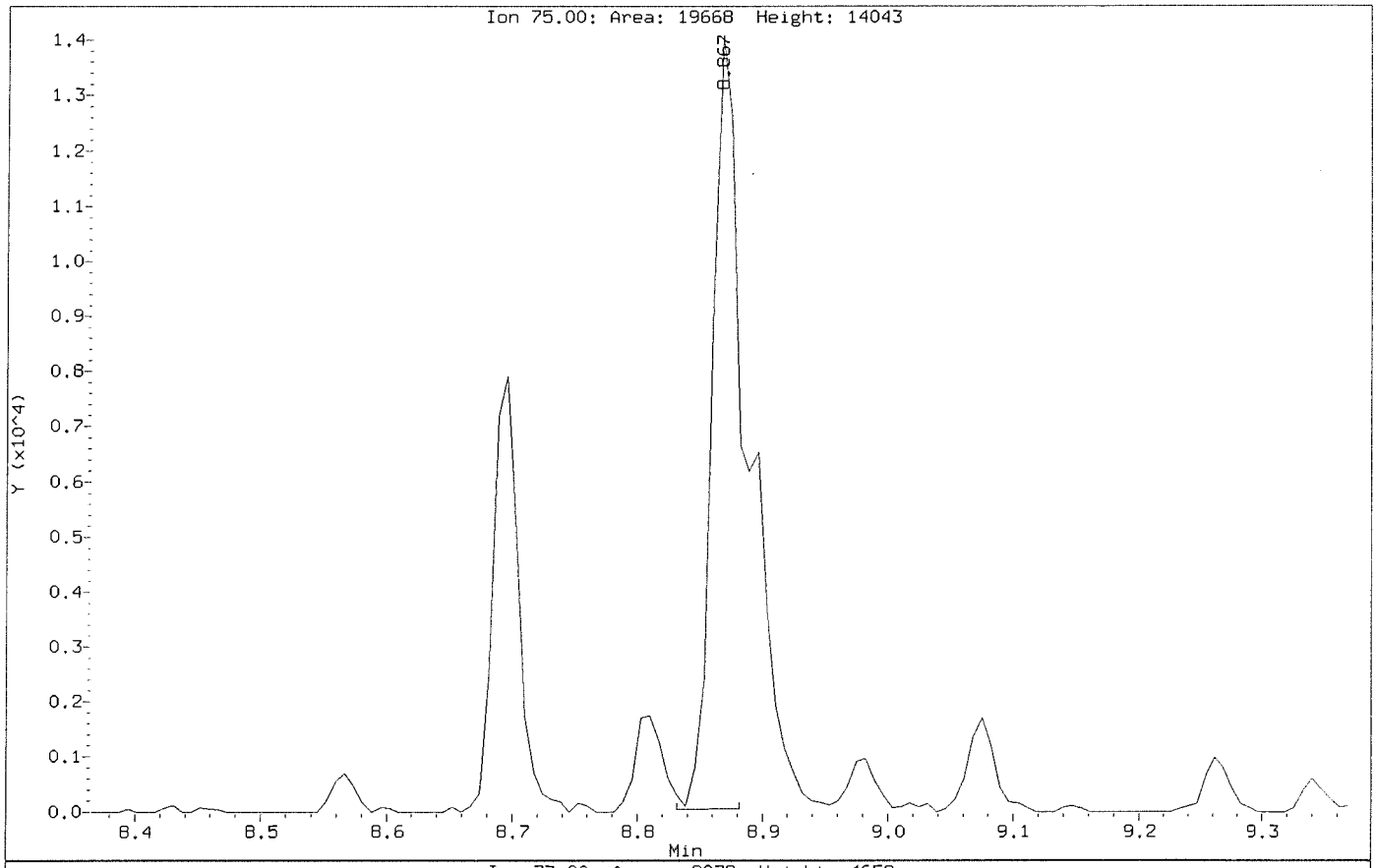
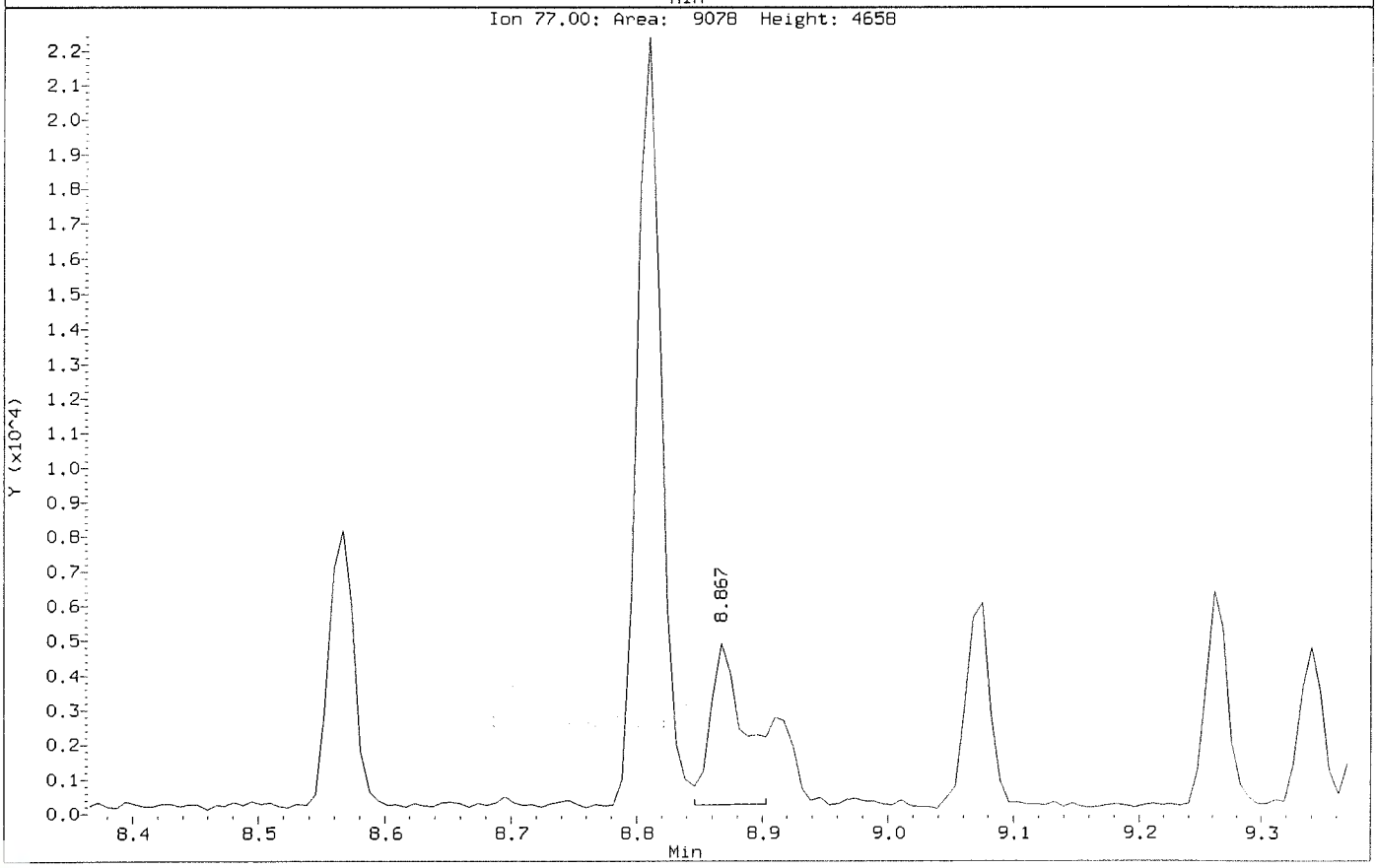
Instrument: voa6.i
Client Sample ID: VSTD005

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





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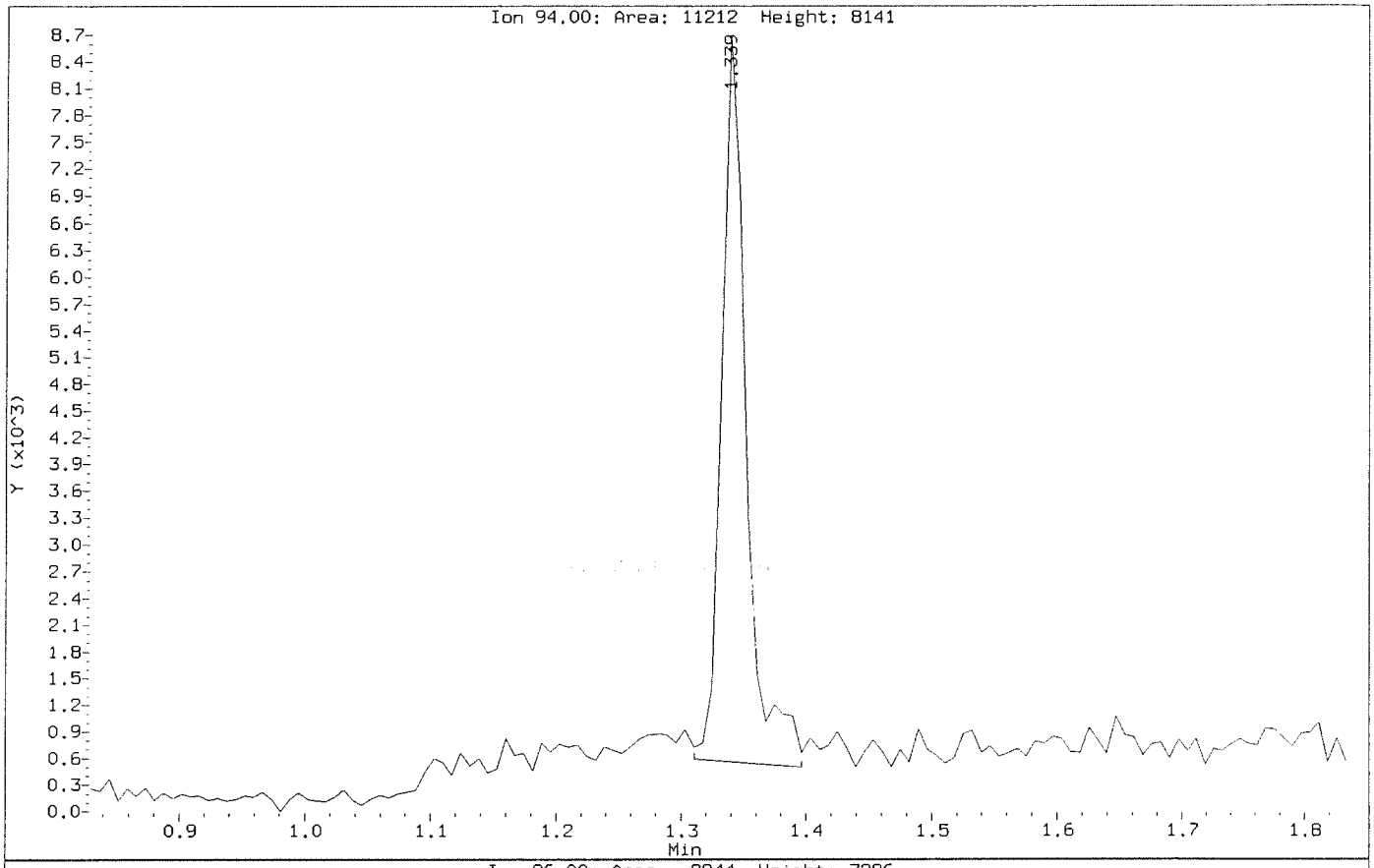
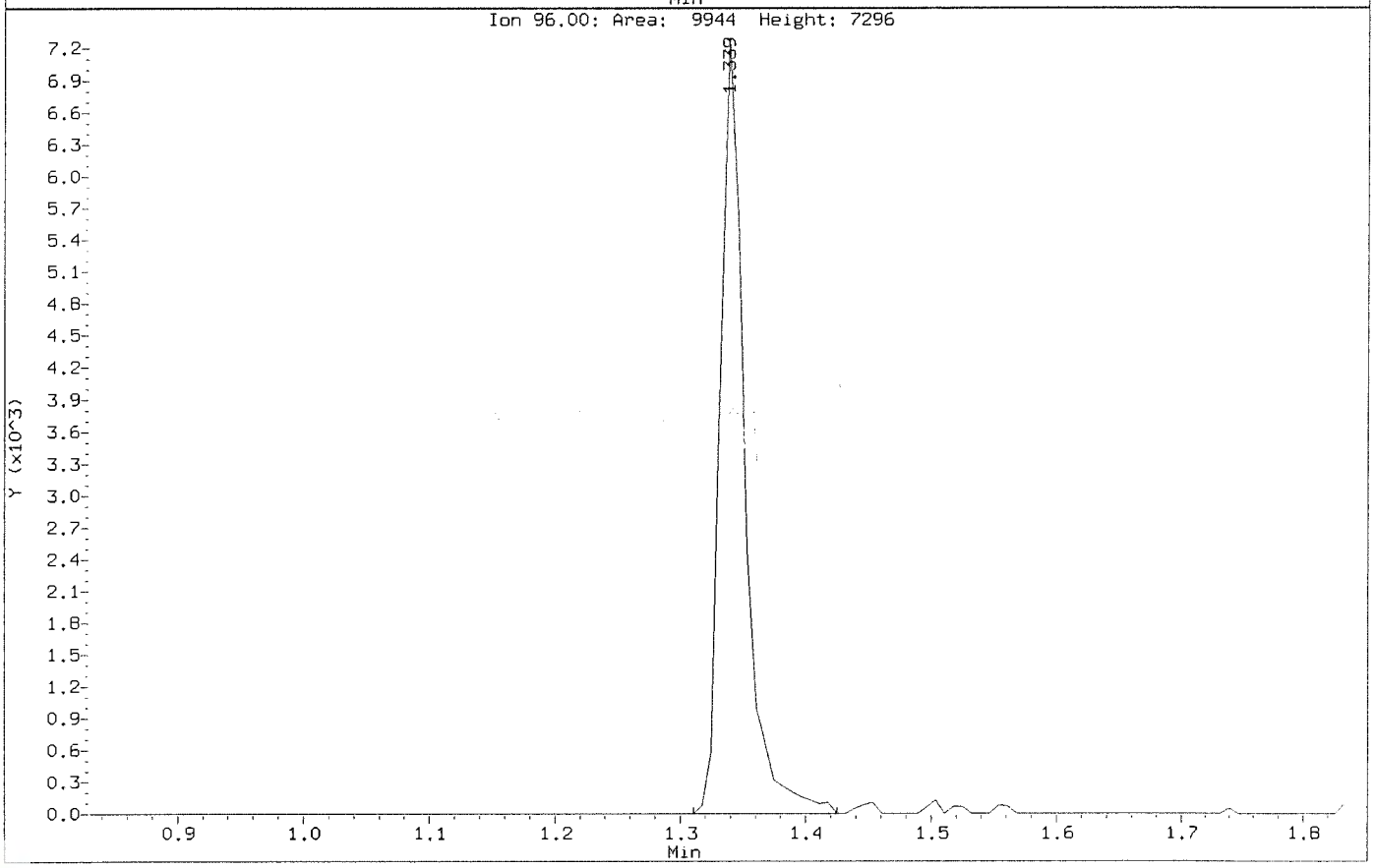
Injection Date: 07-JUL-2020 13:06
Instrument: voa6.i
Client Sample ID: VSTD005

Compound: Bromomethane
CAS Number: 74-83-9





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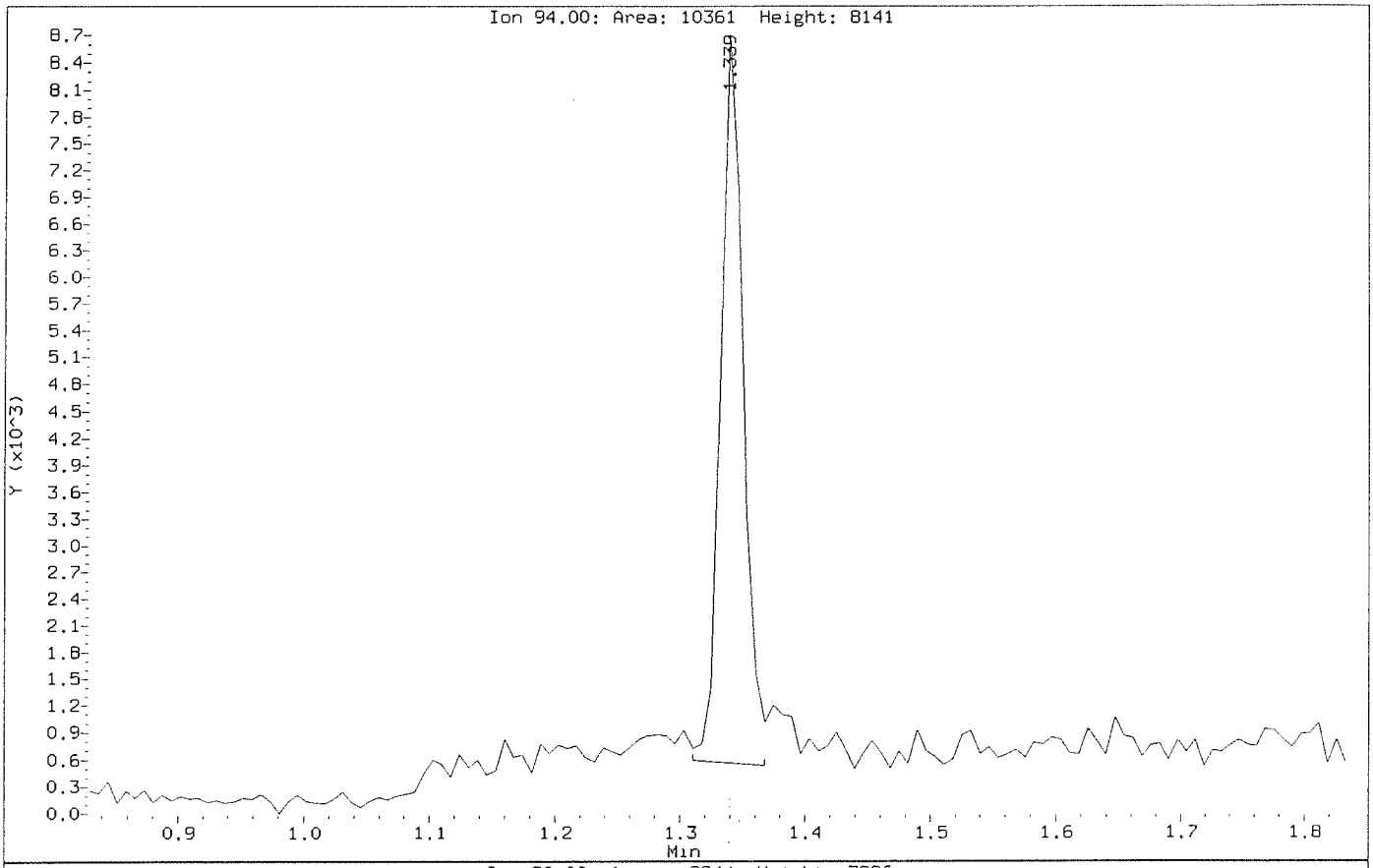
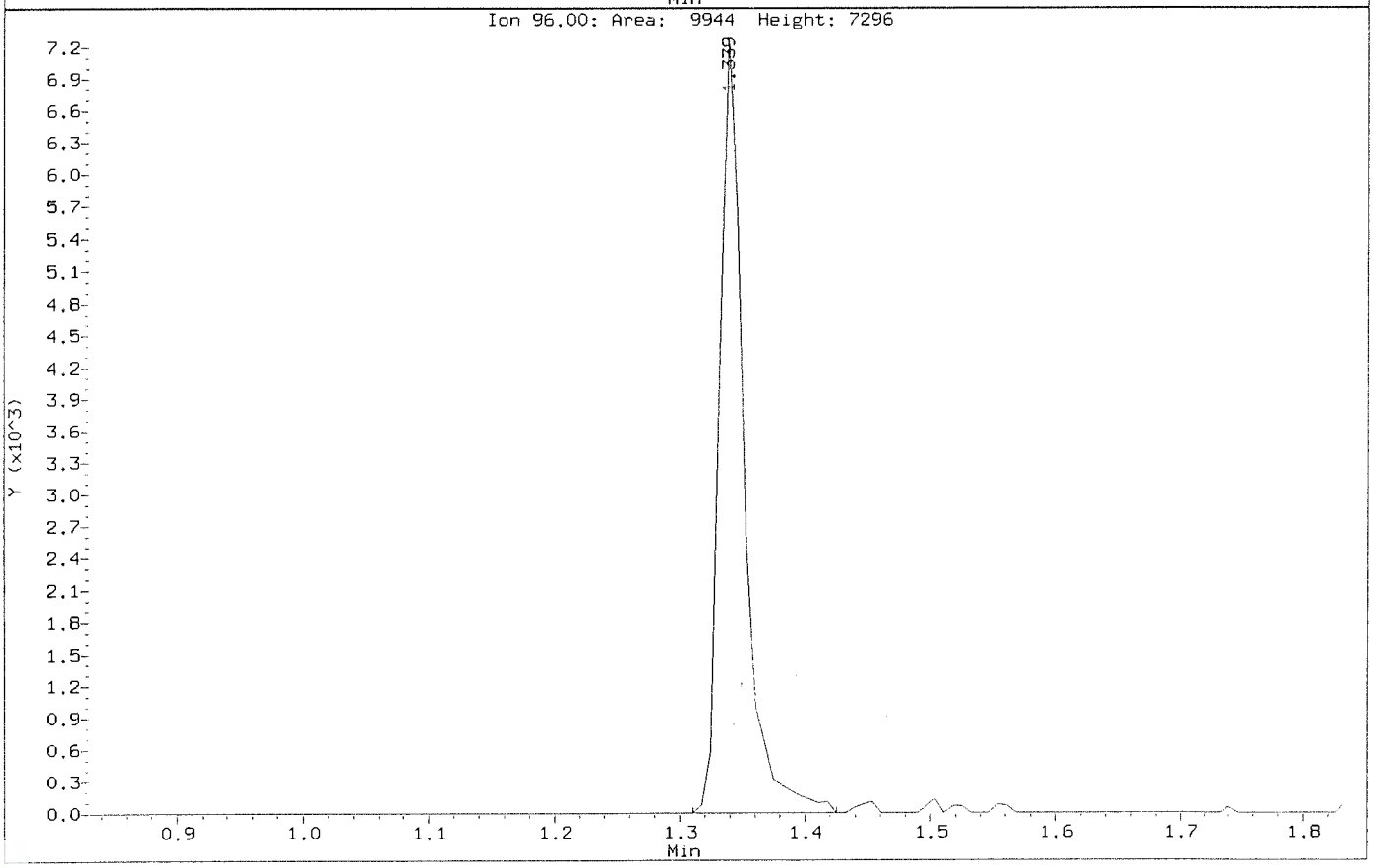
Injection Date: 07-JUL-2020 13:06
Instrument: voa6.i
Client Sample ID: VSTD005

Compound: Bromomethane
CAS Number: 74-83-9





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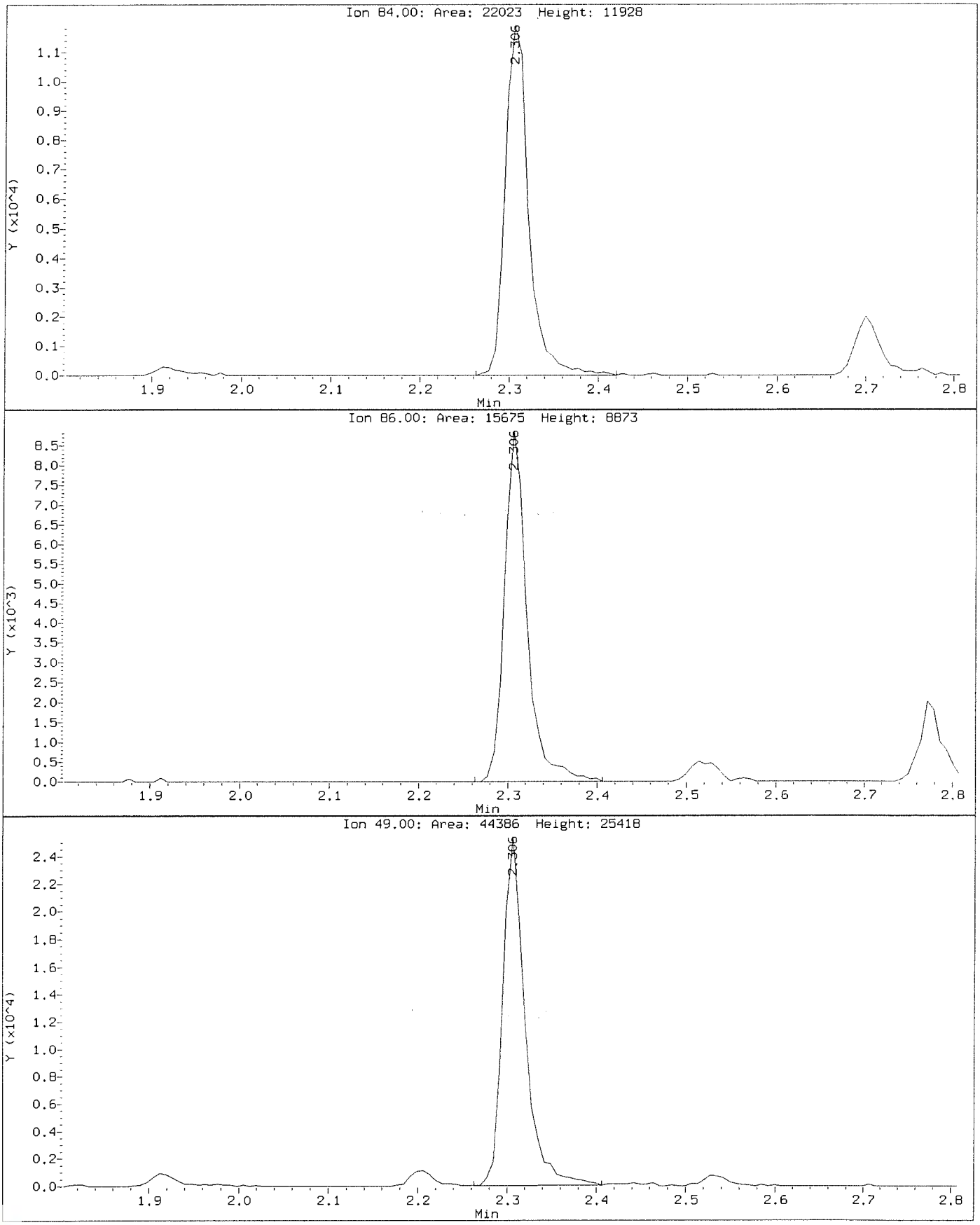
Instrument: voa6.i
Client Sample ID: VSTD005

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



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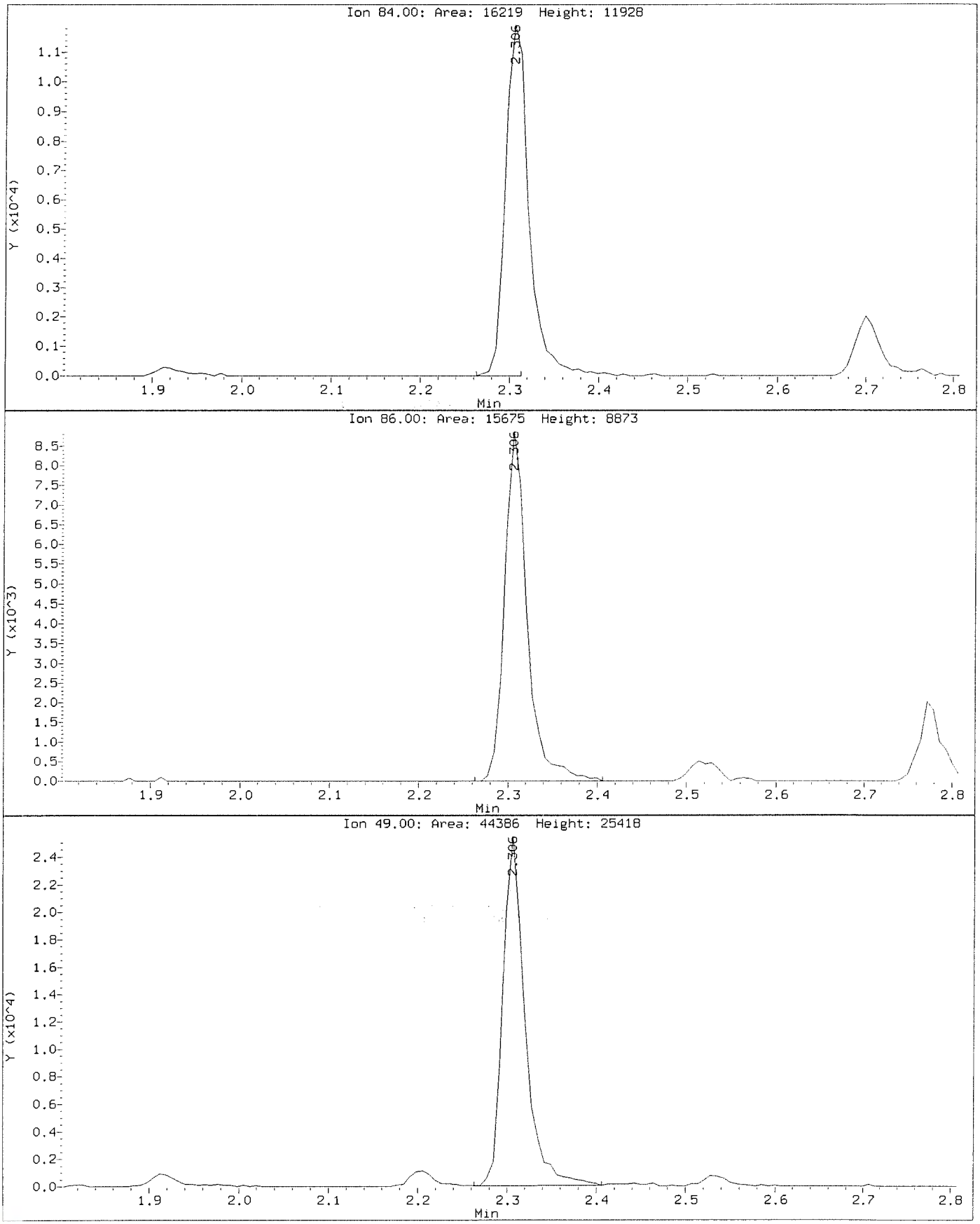
Injection Date: 07-JUL-2020 13:06
Instrument: voa6.i
Client Sample ID: VSTD005

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



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Data file : \\nahstws005\Target\chem\voa6.i\X200707.b\X070707.D
Lab Smp Id: VSTD020 Client Smp ID: VSTD020
Inj Date : 07-JUL-2020 13:29
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\X200707.b\8260W.m
Meth Date : 12-Aug-2020 15:35 voa6.i Quant Type: ISTD
Cal Date : 07-JUL-2020 13:06 Cal File: X070706.D
Als bottle: 8 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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

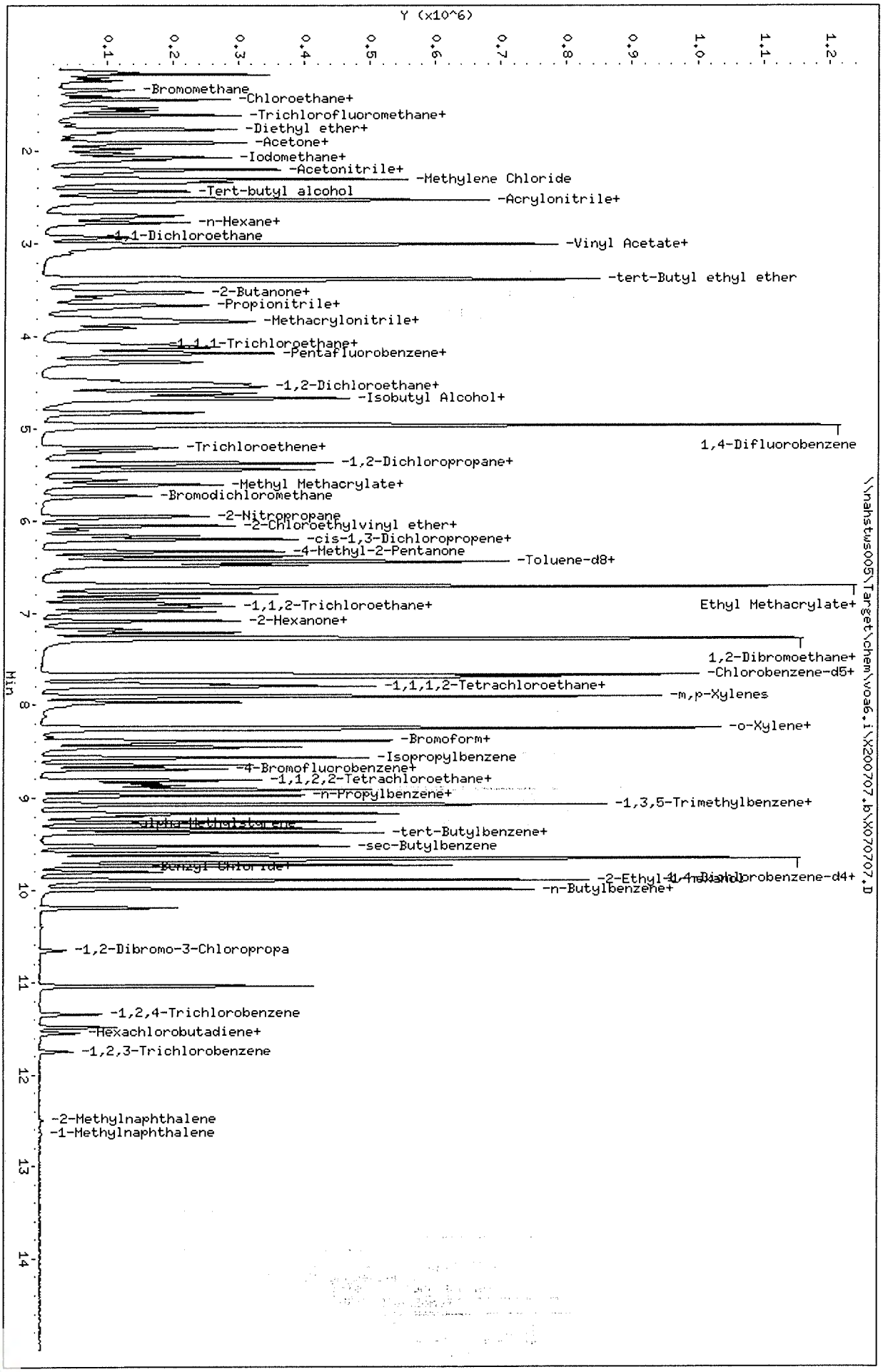
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
*	1 Pentafluorobenzene	168	4.189	4.189	(1.000)	268905	50.0000	
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	451202	50.0000	
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	408645	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	195089	50.0000	
$	30 Dibromofluoromethane	113	4.103	4.103	(0.979)	60811	20.0000	20.26
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	81727	20.0000	19.90
$	48 Toluene-d8	98	6.388	6.388	(0.833)	204328	20.0000	19.01
$	69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	79496	20.0000	19.78
	60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	60983	20.0000	19.43
	31 1,1,1-Trichloroethane	97	4.089	4.089	(0.976)	97061	20.0000	19.70
	68 1,1,2,2-Tetrachloroethane	83	8.845	8.845	(0.915)	74946	20.0000	19.43
	53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	52625	20.0000	20.35
	22 1,1-Dichloroethane	63	2.929	2.929	(0.699)	143968	20.0000	18.89
	11 1,1-Dichloroethene	96	1.919	1.919	(0.458)	47920	20.0000	19.24
	32 1,1-Dichloropropene	75	4.282	4.282	(0.862)	82612	20.0000	18.59
	93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.215)	12636	20.0000	21.45
	71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	68148	20.0000	20.03(M)
	90 1,2,4-Trichlorobenzene	180	11.345	11.345	(1.173)	24701	20.0000	21.10
	79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.970)	221763	20.0000	19.32
	89 1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.102)	6863	20.0000	21.69
	57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	64899	20.0000	19.75
	88 1,2-Dichlorobenzene	146	9.999	9.999	(1.034)	108348	20.0000	19.00

Data File: \\nahstws005\Target\chem\voa6.i\X200707.b\X070707.D Page 2
Report Date: 12-Aug-2020 15:35

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)
33	1,2-Dichloroethane	62	4.562	4.562	(0.918)	111420	20.0000	19.90
42	1,2-Dichloropropane	63	5.443	5.443	(1.095)	82315	20.0000	19.61
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	215977	20.0000	19.43
83	1,3-Dichlorobenzene	146	9.612	9.612	(0.994)	121002	20.0000	19.37
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	106168	20.0000	19.51
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	120181	20.0000	20.11
26	2,2-Dichloropropane	77	3.516	3.516	(0.839)	92762	20.0000	19.92
24	2-Butanone	43	3.580	3.580	(0.855)	122100	40.0000	46.33
76	2-Chlorotoluene	91	8.974	8.974	(0.928)	182135	20.0000	18.60
52	2-Hexanone	43	7.090	7.090	(0.924)	183102	40.0000	44.99
77	4-Chlorotoluene	91	9.075	9.075	(0.939)	213720	20.0000	19.24
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	215948	20.0000	19.46
45	4-Methyl-2-Pentanone	43	6.331	6.331	(0.825)	248616	40.0000	43.25
10	Acetone	43	1.976	1.976	(0.472)	132631	40.0000	47.14
37	Benzene	78	4.519	4.519	(0.909)	250058	20.0000	19.42
74	Bromobenzene	156	8.809	8.809	(0.911)	72659	20.0000	19.52
29	Bromochloromethane	128	3.803	3.803	(0.908)	34947	20.0000	18.71
39	Bromodichloromethane	83	5.729	5.729	(1.153)	87426	20.0000	19.34
66	Bromoform	173	8.416	8.416	(1.097)	45041	20.0000	19.85
6	Bromomethane	94	1.338	1.338	(0.320)	35913	20.0000	18.97
19	Carbon Disulfide	76	2.069	2.069	(0.494)	316447	40.0000	38.70
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	81313	20.0000	18.88
59	Chlorobenzene	112	7.699	7.699	(1.004)	158162	20.0000	18.99
7	Chloroethane	64	1.403	1.403	(0.335)	55533	20.0000	21.89
28	Chloroform	83	3.910	3.910	(0.933)	115938	20.0000	19.67
3	Chloromethane	50	1.081	1.081	(0.258)	99257	20.0000	17.96
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.843)	69871	20.0000	19.87
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	103237	20.0000	18.95
55	Dibromochloromethane	129	7.176	7.176	(0.936)	64031	20.0000	19.07
44	Dibromomethane	93	5.557	5.557	(1.118)	44054	20.0000	19.47
2	Dichlorodifluoromethane	85	0.973	0.973	(0.232)	62910	20.0000	19.32
61	Ethylbenzene	106	7.800	7.800	(1.017)	85244	20.0000	19.34
91	Hexachlorobutadiene	225	11.488	11.488	(1.188)	17457	20.0000	19.45
67	Isopropylbenzene	105	8.566	8.566	(1.117)	255805	20.0000	19.57
62	m,p-Xylenes	106	7.907	7.907	(1.031)	204410	40.0000	38.57
17	Methylene Chloride	84	2.305	2.305	(0.550)	63246	20.0000	21.50(M)
87	n-Butylbenzene	91	9.999	9.999	(1.034)	190321	20.0000	19.23
73	n-Propylbenzene	91	8.917	8.917	(0.922)	307136	20.0000	19.30
92	Naphthalene	128	11.546	11.546	(1.194)	40238	20.0000	21.43
63	o-Xylene	106	8.244	8.244	(1.075)	102056	20.0000	19.66
81	sec-Butylbenzene	105	9.526	9.526	(0.985)	249960	20.0000	19.11
64	Styrene	104	8.265	8.265	(1.078)	177823	20.0000	19.71
78	tert-Butylbenzene	119	9.340	9.340	(0.966)	172814	20.0000	19.30
56	Tetrachloroethene	164	6.933	6.933	(0.904)	50813	20.0000	20.35
50	Toluene	91	6.453	6.453	(0.841)	252164	20.0000	19.34
20	trans-1,2-Dichloroethene	96	2.535	2.535	(0.605)	59242	20.0000	20.15
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	94321	20.0000	19.27
38	Trichloroethene	130	5.214	5.214	(1.049)	65008	20.0000	19.41
8	Trichlorofluoromethane	101	1.560	1.560	(0.373)	92485	20.0000	19.94
5	Vinyl Chloride	62	1.145	1.145	(0.273)	89279	20.0000	18.89

QC Flag Legend

M - Compound response manually integrated.



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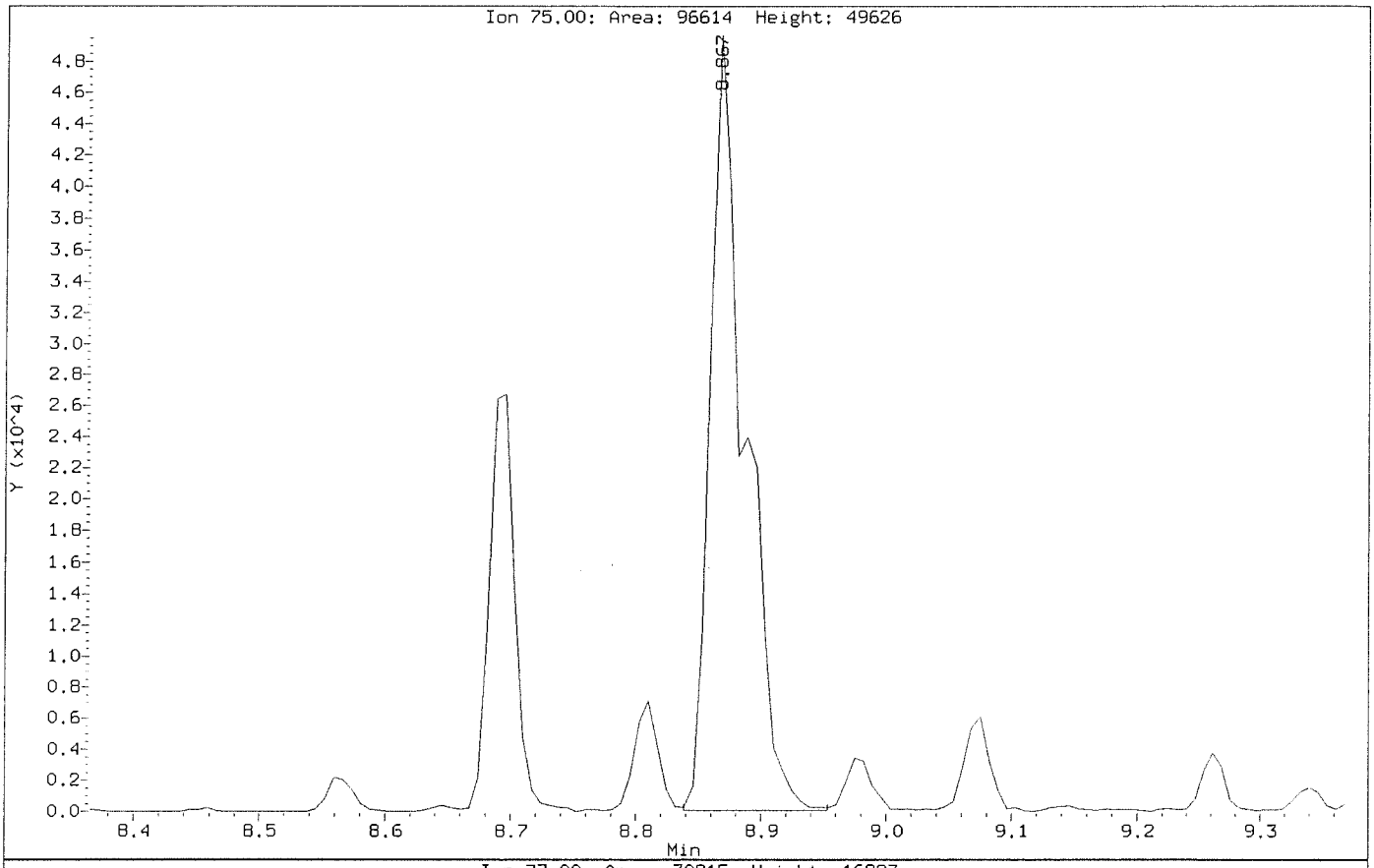
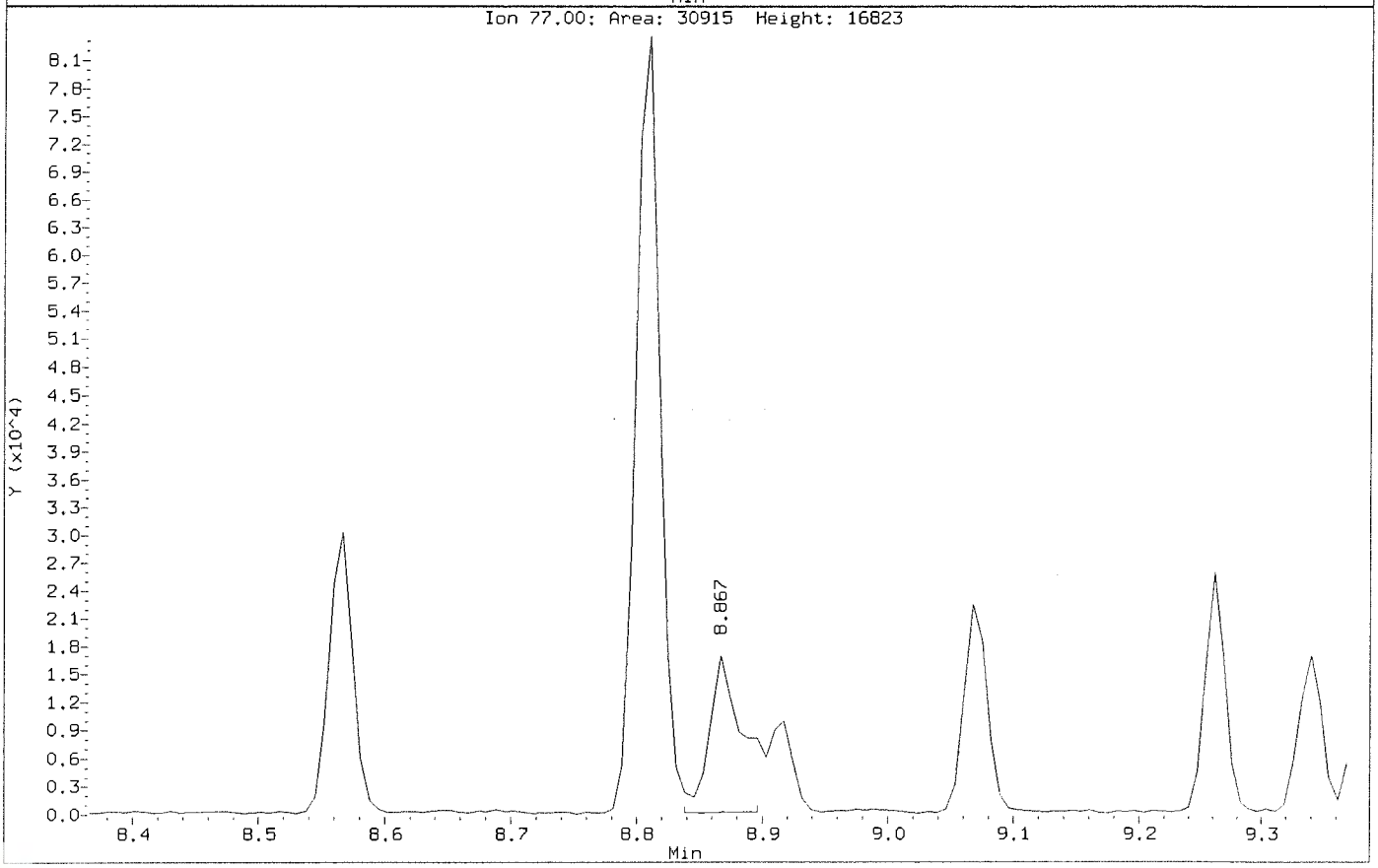
Date : 07-JUL-2020 13:29
Client ID: VSTD020
Sample Info: VSTD020;VSTD020;1;6;
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\nahstws005\Target\chem\voa6.i\X200707.b\Before\X070707.D
Injection Date: 07-JUL-2020 13:29
Instrument: voa6.i
Client Sample ID: VSTD020

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





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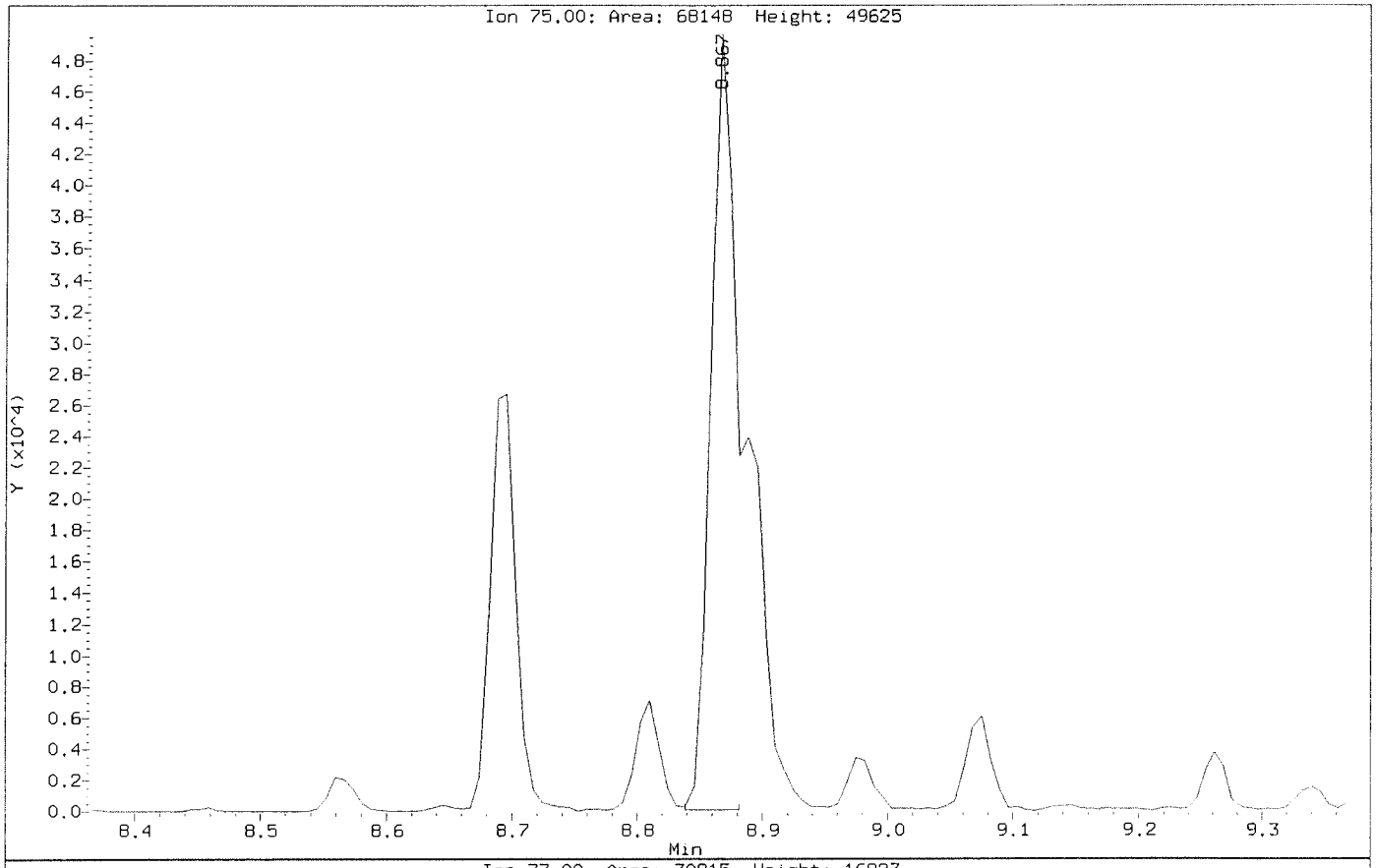
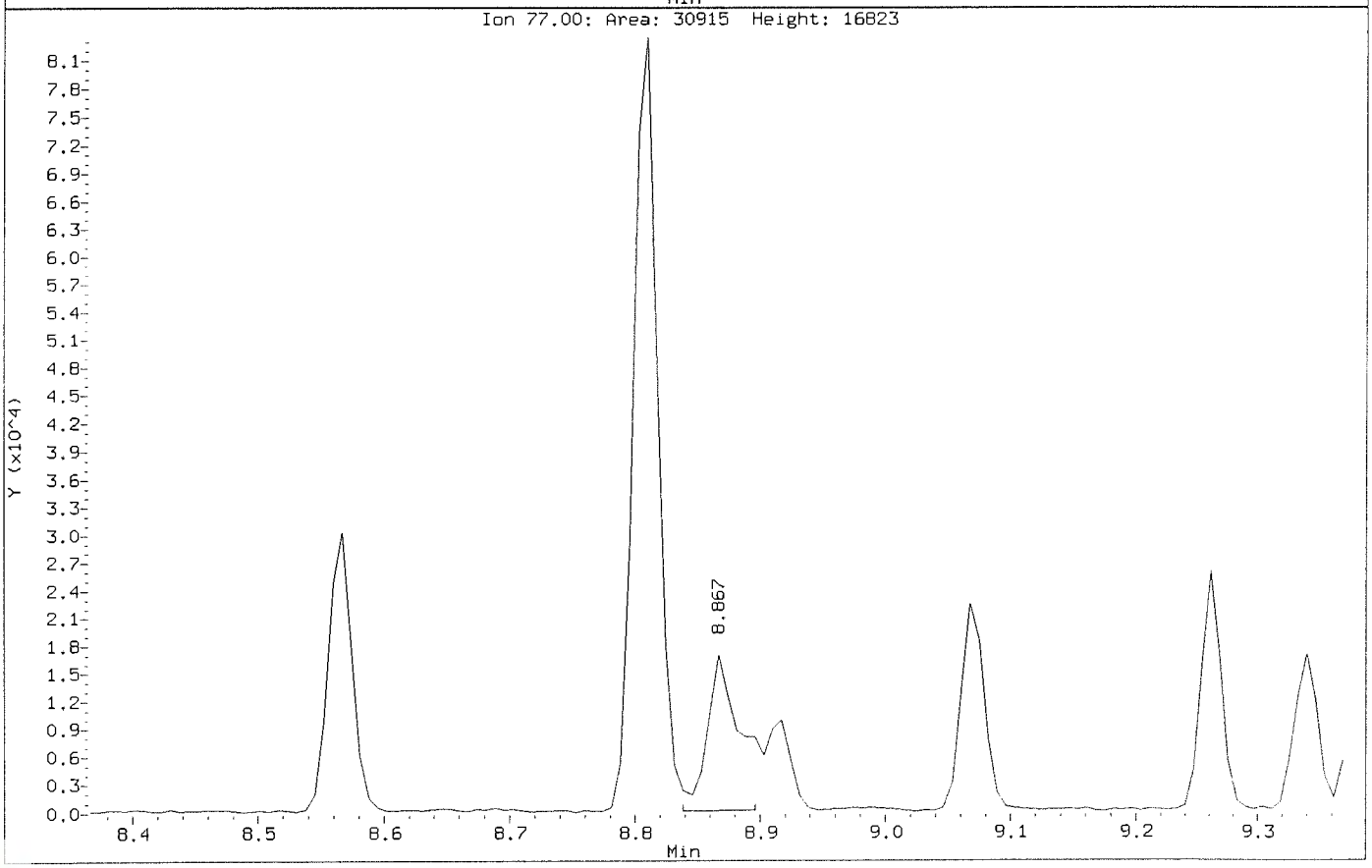
Instrument: voa6.i
Client Sample ID: VSTD020

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





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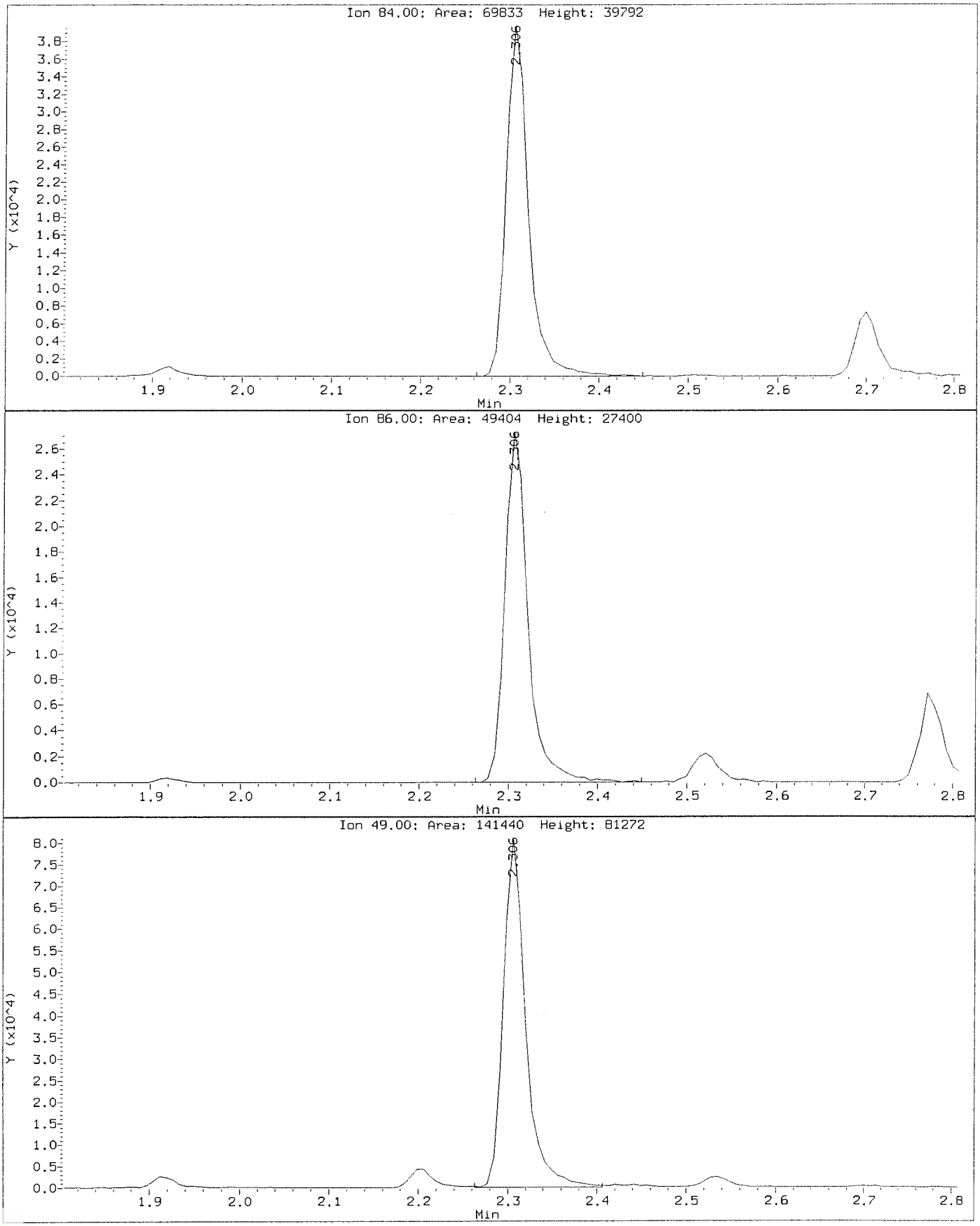
Injection Date: 07-JUL-2020 13:29
Instrument: voa6.i
Client Sample ID: VSTD020

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



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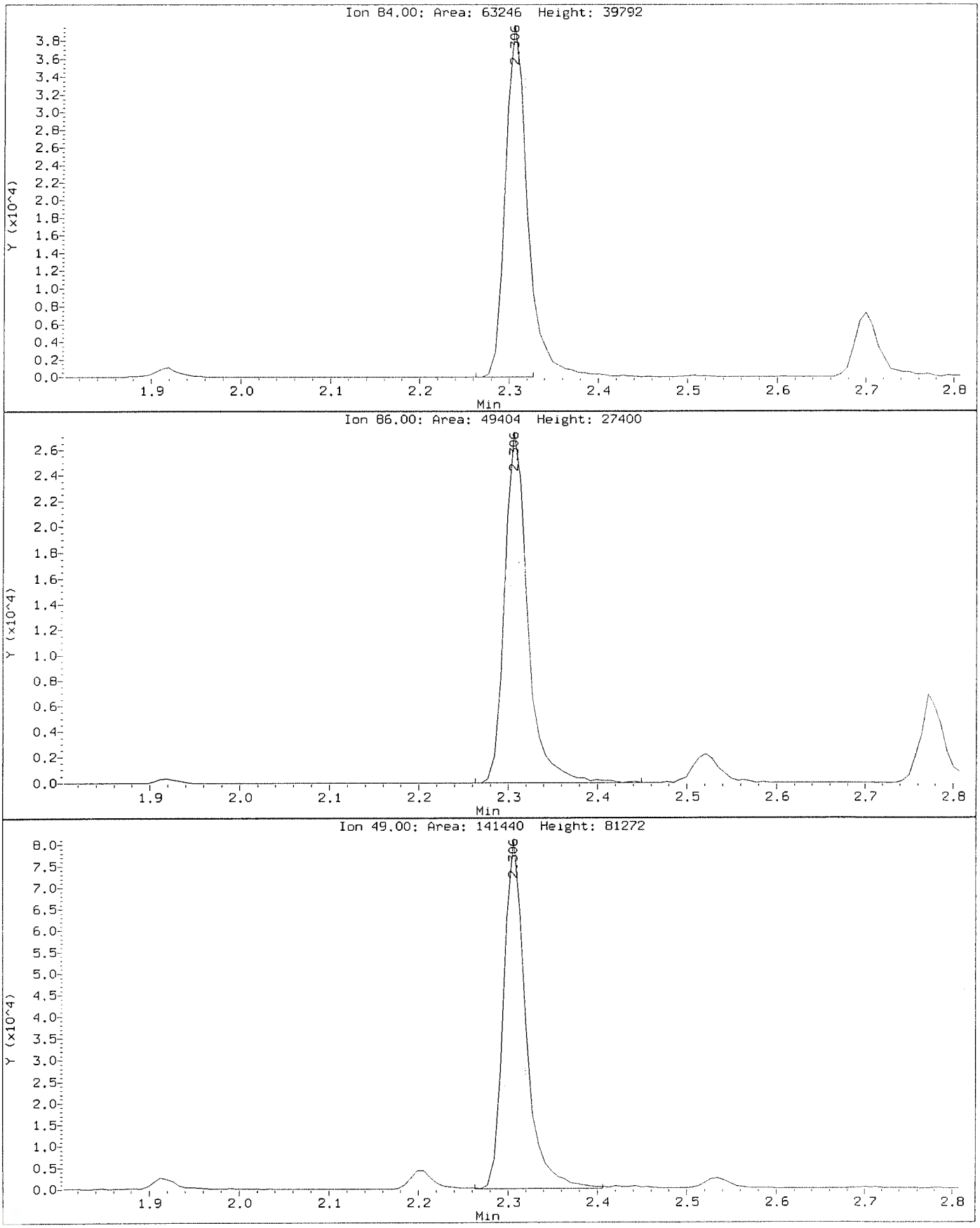
Injection Date: 07-JUL-2020 13:29
Instrument: voa6.i
Client Sample ID: VSTD020

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



Data File: \\nahstws005\Target\chem\voa6.i\X200707.b\X070708.D Page 1
Report Date: 12-Aug-2020 15:35

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200707.b\X070708.D
Lab Smp Id: VSTD050 Client Smp ID: VSTD050
Inj Date : 07-JUL-2020 13:53
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\X200707.b\8260W.m
Meth Date : 12-Aug-2020 15:35 voa6.i Quant Type: ISTD
Cal Date : 07-JUL-2020 13:29 Cal File: X070707.D
Als bottle: 9 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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

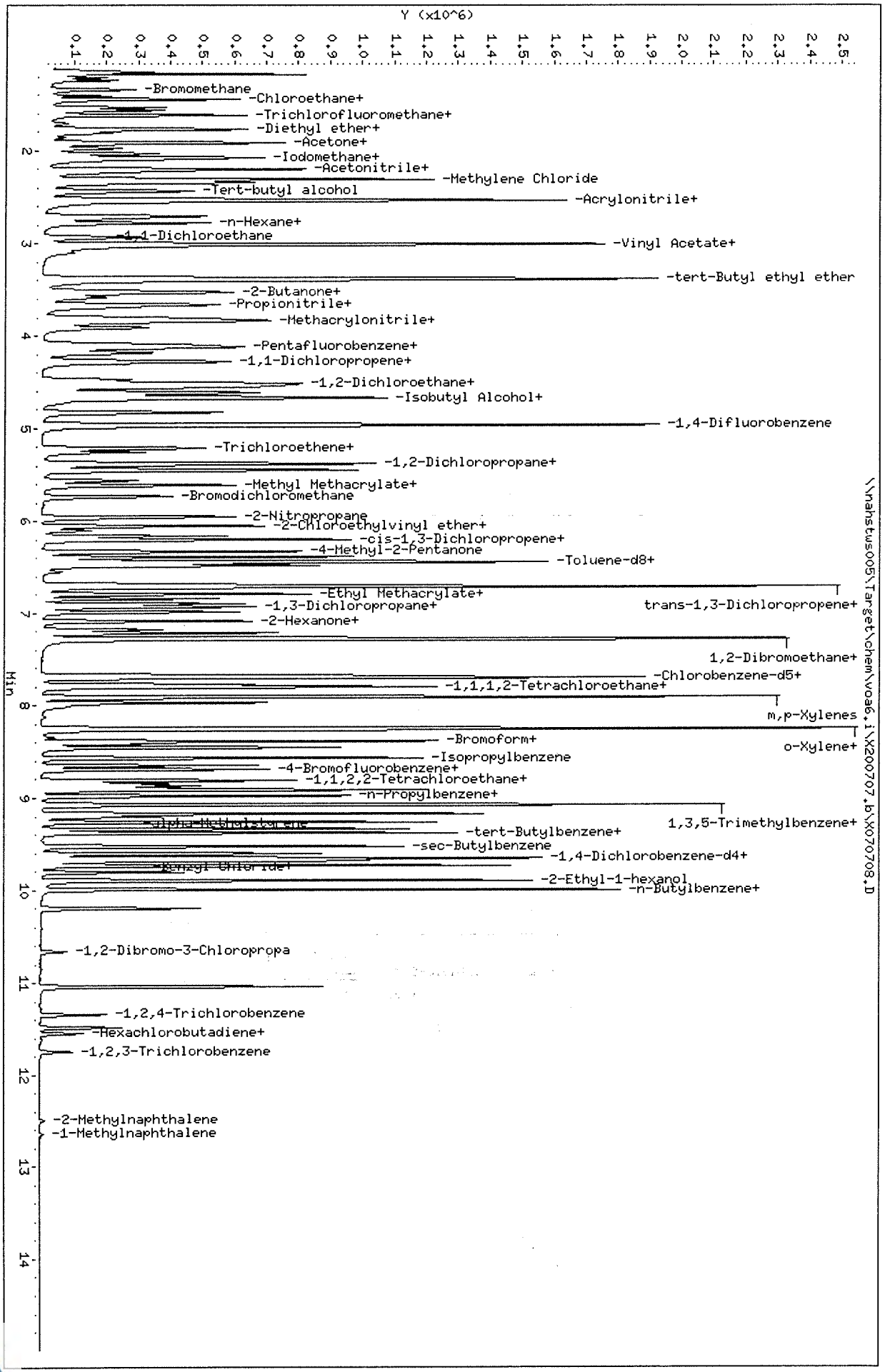
Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)
*	1 Pentafluorobenzene	168	4.189	4.189	(1.000)	253263	50.0000	
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	423192	50.0000	
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	392139	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	182702	50.0000	
$	30 Dibromofluoromethane	113	4.103	4.103	(0.979)	141276	50.0000	51.30
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	193703	50.0000	51.12
$	48 Toluene-d8	98	6.388	6.388	(0.833)	494527	50.0000	47.96
$	69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	190894	50.0000	51.14
	60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	147156	50.0000	48.87
	31 1,1,1-Trichloroethane	97	4.089	4.089	(0.976)	234096	50.0000	50.45
	68 1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.914)	165711	50.0000	45.87
	53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	120890	50.0000	48.73
	22 1,1-Dichloroethane	63	2.929	2.929	(0.699)	348914	50.0000	48.61
	11 1,1-Dichloroethene	96	1.919	1.919	(0.458)	119960	50.0000	51.15
	32 1,1-Dichloropropene	75	4.282	4.282	(0.862)	198929	50.0000	47.73
	93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.215)	25695	50.0000	44.75
	71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	156477	50.0000	49.13(M)
	90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	51947	50.0000	45.76
	79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.970)	529356	50.0000	49.26
	89 1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.102)	14963	50.0000	52.83
	57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	151070	50.0000	47.92
	88 1,2-Dichlorobenzene	146	9.999	9.999	(1.034)	259270	50.0000	48.55

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
33	1,2-Dichloroethane	62	4.562	4.562	(0.918)	257992	50.0000	49.13
42	1,2-Dichloropropane	63	5.443	5.443	(1.095)	198135	50.0000	50.32
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	520906	50.0000	50.04
83	1,3-Dichlorobenzene	146	9.605	9.605	(0.993)	286433	50.0000	48.96
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	246499	50.0000	47.20
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	284407	50.0000	51.13
26	2,2-Dichloropropane	77	3.516	3.516	(0.839)	219591	50.0000	50.08
24	2-Butanone	43	3.580	3.580	(0.855)	258420	100.000	111.94
76	2-Chlorotoluene	91	8.974	8.974	(0.928)	443961	50.0000	48.41
52	2-Hexanone	43	7.090	7.090	(0.924)	391819	100.000	104.95
77	4-Chlorotoluene	91	9.075	9.075	(0.939)	517343	50.0000	49.75
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	523543	50.0000	50.39
45	4-Methyl-2-Pentanone	43	6.324	6.324	(0.824)	554737	100.000	104.85
10	Acetone	43	1.976	1.976	(0.472)	227994	100.000	114.47
37	Benzene	78	4.519	4.519	(0.909)	598607	50.0000	49.57
74	Bromobenzene	156	8.810	8.810	(0.911)	171970	50.0000	49.33
29	Bromochloromethane	128	3.803	3.803	(0.908)	81152	50.0000	46.13
39	Bromodichloromethane	83	5.729	5.729	(1.153)	213349	50.0000	50.33
66	Bromoform	173	8.416	8.416	(1.097)	107797	50.0000	49.52
6	Bromomethane	94	1.338	1.338	(0.320)	85523	50.0000	48.08
19	Carbon Disulfide	76	2.069	2.069	(0.494)	792573	100.000	102.91
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	197241	50.0000	48.83
59	Chlorobenzene	112	7.699	7.699	(1.004)	384127	50.0000	48.08
7	Chloroethane	64	1.403	1.403	(0.335)	119616	50.0000	52.55
28	Chloroform	83	3.910	3.910	(0.933)	275874	50.0000	49.71
3	Chloromethane	50	1.081	1.081	(0.258)	250438	50.0000	48.11
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.843)	164749	50.0000	49.76
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	252596	50.0000	49.45
55	Dibromochloromethane	129	7.176	7.176	(0.936)	157619	50.0000	48.93
44	Dibromomethane	93	5.557	5.557	(1.118)	104290	50.0000	49.15
2	Dichlorodifluoromethane	85	0.973	0.973	(0.232)	154544	50.0000	50.40
61	Ethylbenzene	106	7.800	7.800	(1.017)	203192	50.0000	48.05
91	Hexachlorobutadiene	225	11.481	11.481	(1.187)	37898	50.0000	43.32
67	Isopropylbenzene	105	8.566	8.566	(1.117)	617562	50.0000	49.24
62	m,p-Xylenes	106	7.907	7.907	(1.031)	491233	100.000	96.60
17	Methylene Chloride	84	2.305	2.305	(0.550)	138674	50.0000	50.07(M)
87	n-Butylbenzene	91	9.999	9.999	(1.034)	476099	50.0000	51.37
73	n-Propylbenzene	91	8.917	8.917	(0.922)	743464	50.0000	49.89
92	Naphthalene	128	11.546	11.546	(1.194)	83775	50.0000	47.29
63	o-Xylene	106	8.244	8.244	(1.075)	241800	50.0000	48.54
81	sec-Butylbenzene	105	9.526	9.526	(0.985)	613245	50.0000	50.06
64	Styrene	104	8.265	8.265	(1.078)	423323	50.0000	48.89
78	tert-Butylbenzene	119	9.340	9.340	(0.966)	415216	50.0000	49.53
56	Tetrachloroethene	164	6.933	6.933	(0.904)	117871	50.0000	49.21
50	Toluene	91	6.453	6.453	(0.841)	607209	50.0000	48.53
20	trans-1,2-Dichloroethene	96	2.535	2.535	(0.605)	141687	50.0000	51.18
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	228653	50.0000	49.82
38	Trichloroethene	130	5.214	5.214	(1.049)	159413	50.0000	50.77
8	Trichlorofluoromethane	101	1.561	1.561	(0.373)	229104	50.0000	52.45
5	Vinyl Chloride	62	1.145	1.145	(0.273)	227208	50.0000	51.06

QC Flag Legend

M - Compound response manually integrated.



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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

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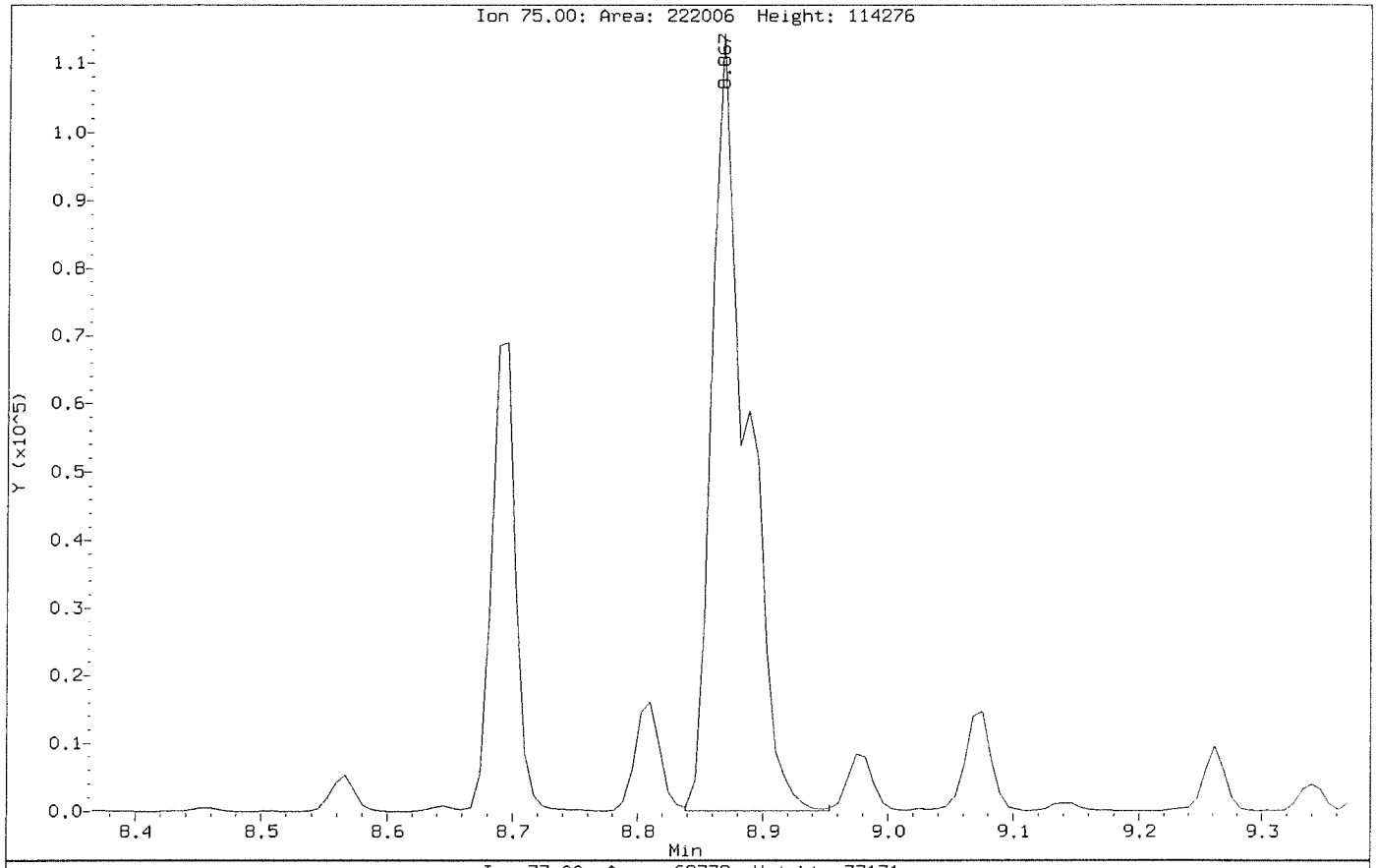
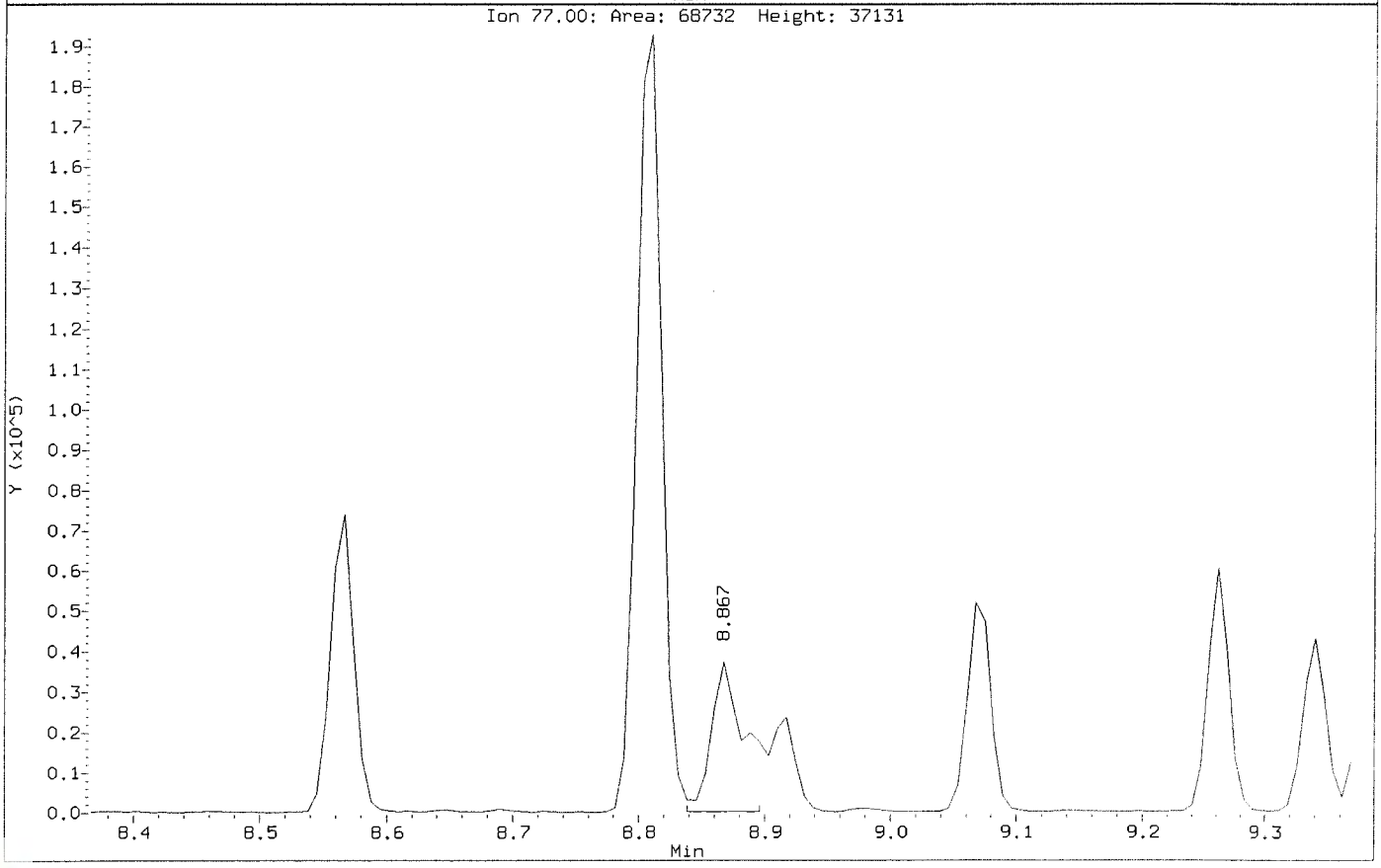
Instrument: voa6.i
Client Sample ID: VSTD050

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





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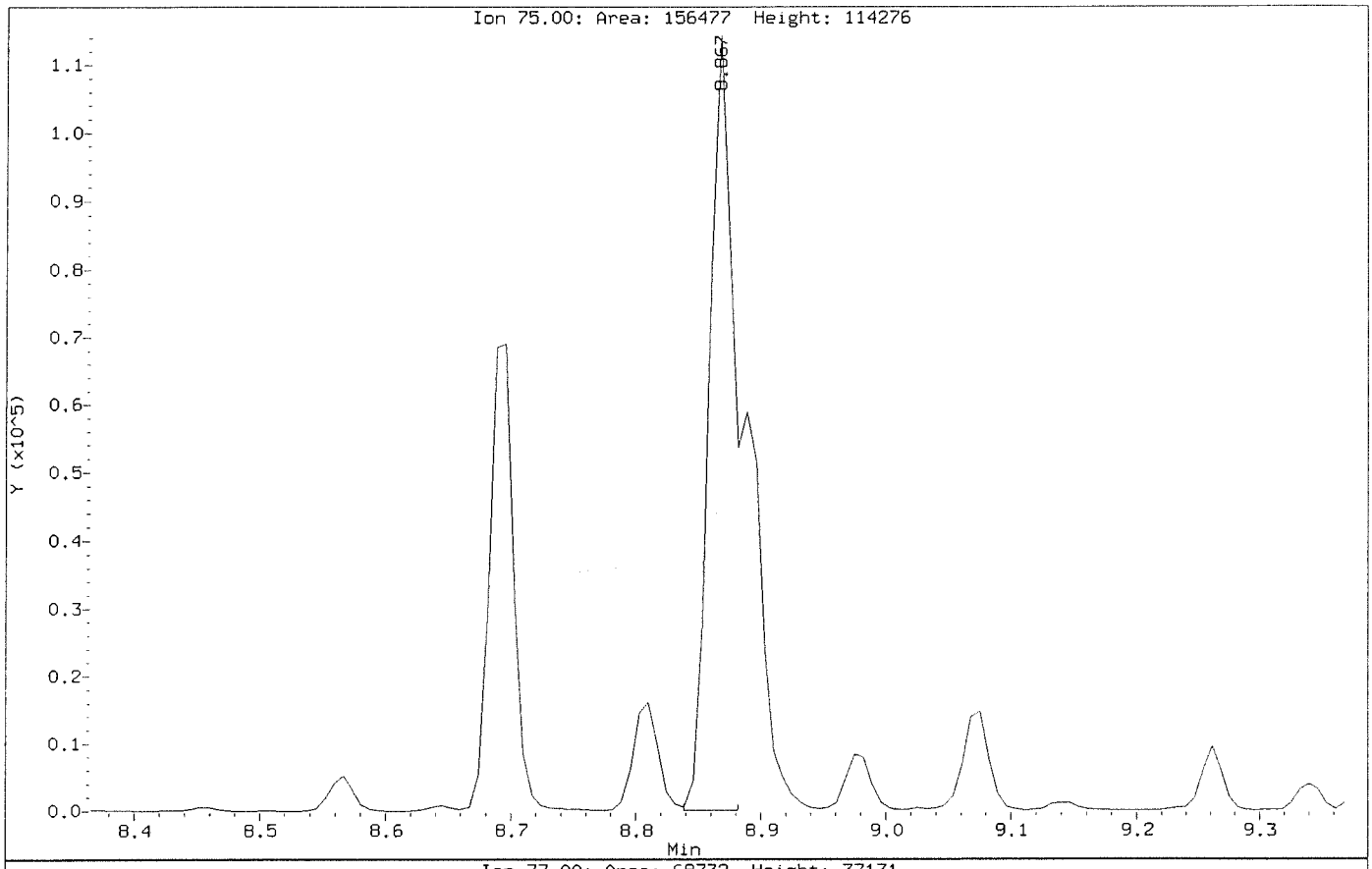
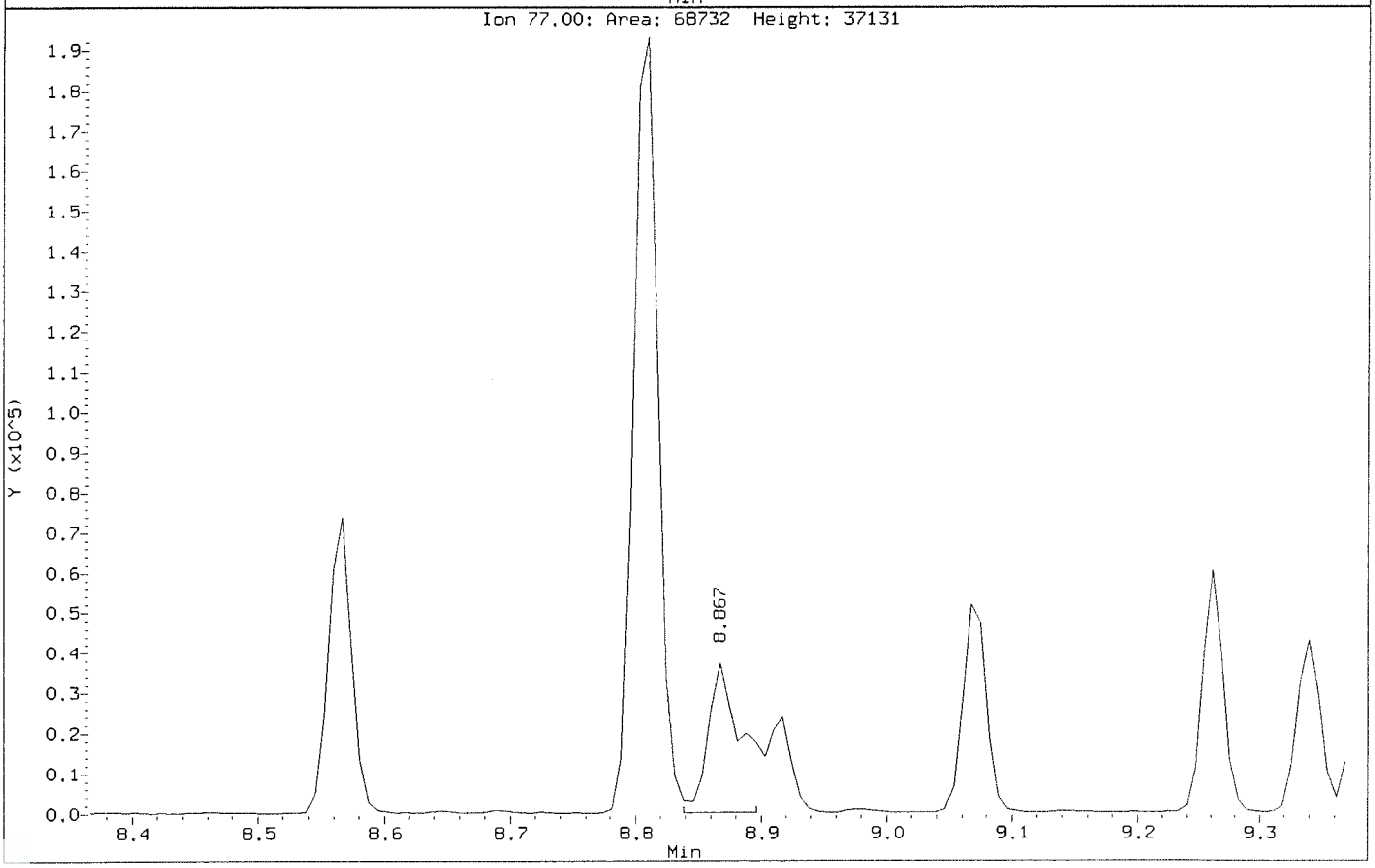
Instrument: voa6.i
Client Sample ID: VSTD050

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





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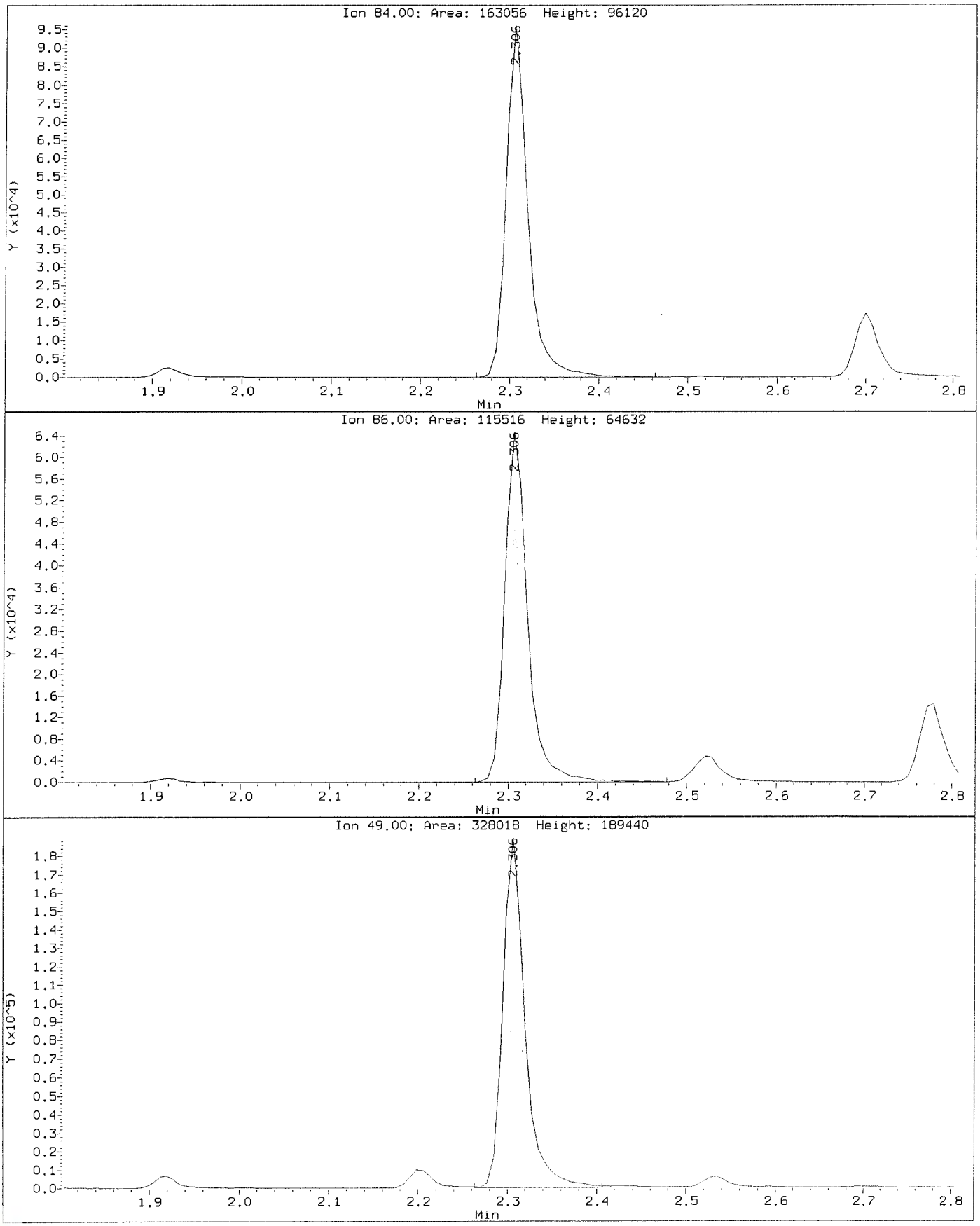
Instrument: voa6.i
Client Sample ID: VSTD050

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



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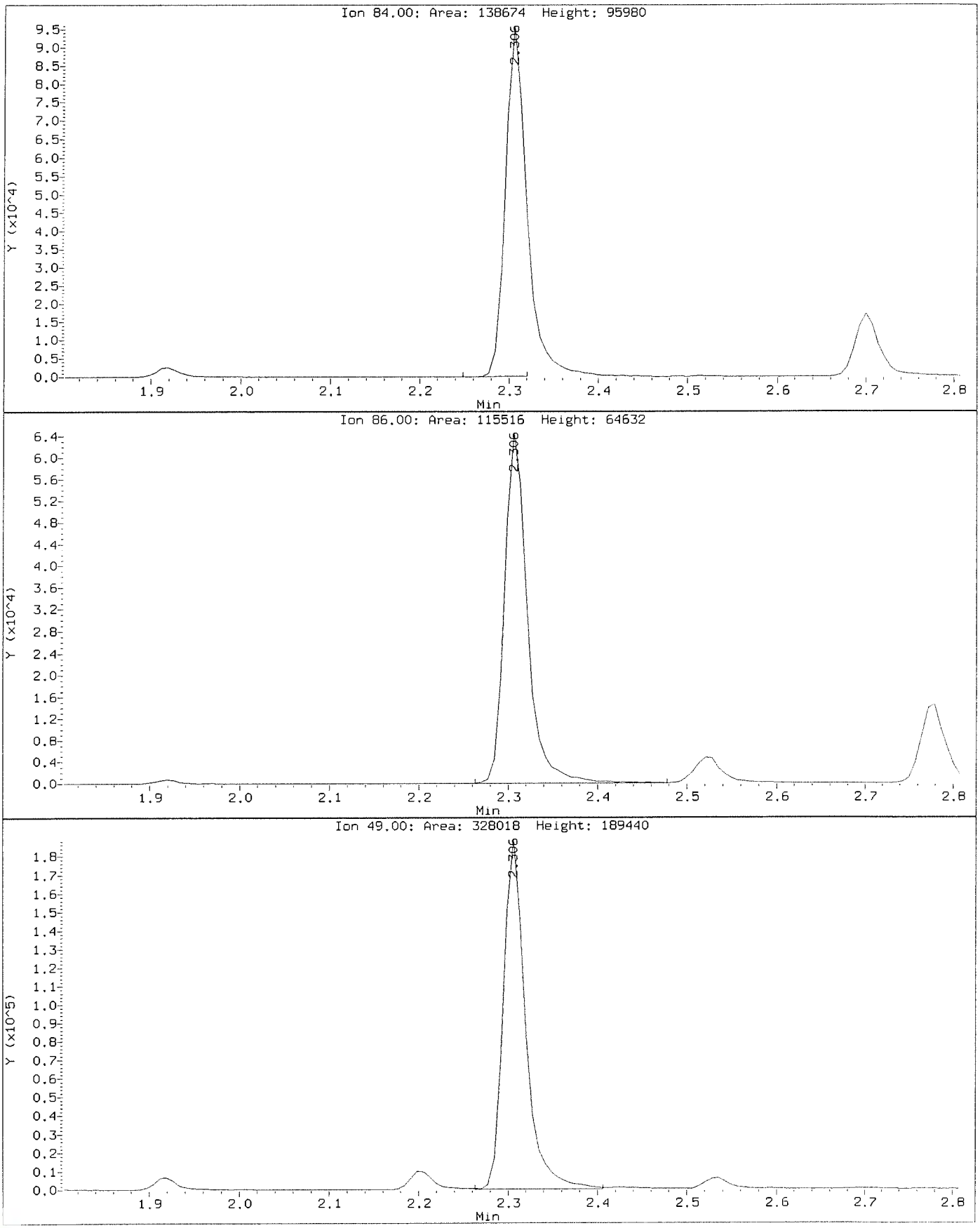
Instrument: voa6.i
Client Sample ID: VSTD050

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



Data File: \\nahstws005\Target\chem\voa6.i\X200707.b\X070709.D Page 1
Report Date: 12-Aug-2020 15:35

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200707.b\X070709.D
Lab Smp Id: VSTD100 Client Smp ID: VSTD100
Inj Date : 07-JUL-2020 14:17
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\X200707.b\8260W.m
Meth Date : 12-Aug-2020 15:35 voa6.i Quant Type: ISTD
Cal Date : 07-JUL-2020 13:53 Cal File: X070708.D
Als bottle: 10 Calibration Sample, Level: 8
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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

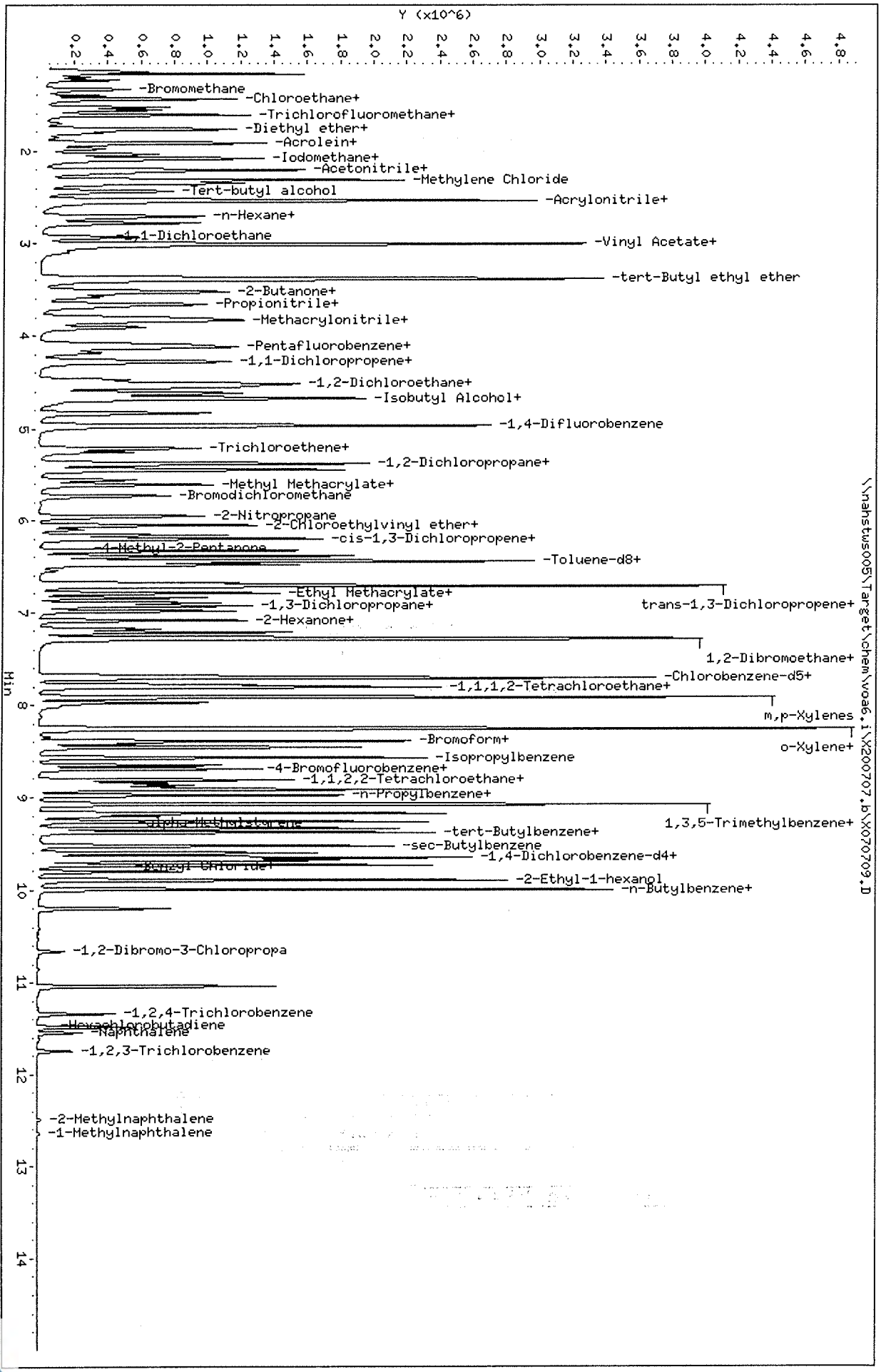
Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)
*	1 Pentafluorobenzene	168	4.189	4.189	(1.000)	254814	50.0000	
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	415120	50.0000	
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	383282	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	178296	50.0000	
$	30 Dibromofluoromethane	113	4.103	4.103	(0.979)	276479	100.000	100.64
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	380559	100.000	100.49
$	48 Toluene-d8	98	6.388	6.388	(0.833)	972650	100.000	96.52
$	69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	370763	100.000	102.70
	60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	286216	100.000	97.25
	31 1,1,1-Trichloroethane	97	4.089	4.089	(0.976)	455521	100.000	97.58
	68 1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.914)	315324	100.000	89.45
	53 1,1,2-Trichloroethane	83	6.847	6.847	(0.893)	226369	100.000	93.36
	22 1,1-Dichloroethane	63	2.929	2.929	(0.699)	668553	100.000	92.57
	11 1,1-Dichloroethene	96	1.919	1.919	(0.458)	230722	100.000	97.78
	32 1,1-Dichloropropene	75	4.282	4.282	(0.862)	384840	100.000	94.14
	93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.215)	55251	100.000	96.74
	71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	288791	100.000	92.91(M)
	90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	107787	100.000	95.82
	79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.970)	996015	100.000	94.99
	89 1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.102)	27599	100.000	101.42
	57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	284355	100.000	92.29
	88 1,2-Dichlorobenzene	146	9.999	9.999	(1.034)	483479	100.000	92.77

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
33	1,2-Dichloroethane	62	4.562	4.562	(0.918)	489510	100.000	95.04
42	1,2-Dichloropropane	63	5.443	5.443	(1.095)	376197	100.000	97.41
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	976493	100.000	96.12
83	1,3-Dichlorobenzene	146	9.605	9.605	(0.993)	544919	100.000	95.46
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	472401	100.000	92.56
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	530827	100.000	97.98
26	2,2-Dichloropropane	77	3.516	3.516	(0.839)	418119	100.000	94.77
24	2-Butanone	43	3.573	3.573	(0.853)	455606	200.000	200.87(A)
76	2-Chlorotoluene	91	8.974	8.974	(0.928)	834090	100.000	93.20
52	2-Hexanone	43	7.090	7.090	(0.924)	730128	200.000	203.49(A)
77	4-Chlorotoluene	91	9.075	9.075	(0.939)	990222	100.000	97.57
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	981195	100.000	96.77
45	4-Methyl-2-Pentanone	43	6.324	6.324	(0.824)	1037472	200.000	203.59(A)
10	Acetone	43	1.976	1.976	(0.472)	370679	200.000	206.19(A)
37	Benzene	78	4.519	4.519	(0.909)	1134413	100.000	95.77
74	Bromobenzene	156	8.810	8.810	(0.911)	326997	100.000	96.13
29	Bromochloromethane	128	3.803	3.803	(0.908)	156028	100.000	88.16
39	Bromodichloromethane	83	5.729	5.729	(1.153)	412599	100.000	99.23
66	Bromoform	173	8.416	8.416	(1.097)	206121	100.000	96.87
6	Bromomethane	94	1.338	1.338	(0.320)	181570	100.000	101.55
19	Carbon Disulfide	76	2.069	2.069	(0.494)	1508992	200.000	194.75
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	389564	100.000	98.33
59	Chlorobenzene	112	7.699	7.699	(1.004)	738580	100.000	94.58
7	Chloroethane	64	1.403	1.403	(0.335)	231987	100.000	103.07
28	Chloroform	83	3.910	3.910	(0.933)	525140	100.000	94.04
3	Chloromethane	50	1.081	1.081	(0.258)	501139	100.000	95.70
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.843)	314306	100.000	94.36
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	485585	100.000	96.91
55	Dibromochloromethane	129	7.176	7.176	(0.936)	305403	100.000	97.00
44	Dibromomethane	93	5.557	5.557	(1.118)	198845	100.000	95.53
2	Dichlorodifluoromethane	85	0.973	0.973	(0.232)	305540	100.000	99.04
61	Ethylbenzene	106	7.800	7.800	(1.017)	393381	100.000	95.18
91	Hexachlorobutadiene	225	11.481	11.481	(1.187)	87052	100.000	100.17
67	Isopropylbenzene	105	8.566	8.566	(1.117)	1170779	100.000	95.50
62	m,p-Xylenes	106	7.907	7.907	(1.031)	936717	200.000	188.47
17	Methylene Chloride	84	2.305	2.305	(0.550)	278105	100.000	99.80(M)
87	n-Butylbenzene	91	9.999	9.999	(1.034)	884170	100.000	97.76
73	n-Propylbenzene	91	8.917	8.917	(0.922)	1415674	100.000	97.35
92	Naphthalene	128	11.546	11.546	(1.194)	165996	100.000	95.71
63	o-Xylene	106	8.244	8.244	(1.075)	459774	100.000	94.43
81	sec-Butylbenzene	105	9.526	9.526	(0.985)	1154751	100.000	96.60
64	Styrene	104	8.258	8.258	(1.077)	818753	100.000	96.76
78	tert-Butylbenzene	119	9.340	9.340	(0.966)	782359	100.000	95.64
56	Tetrachloroethene	164	6.933	6.933	(0.904)	226468	100.000	96.73
50	Toluene	91	6.453	6.453	(0.841)	1160893	100.000	94.93
20	trans-1,2-Dichloroethene	96	2.535	2.535	(0.605)	267523	100.000	96.05
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	441875	100.000	98.15
38	Trichloroethene	130	5.207	5.207	(1.048)	299347	100.000	97.19
8	Trichlorofluoromethane	101	1.561	1.561	(0.373)	444501	100.000	101.15
5	Vinyl Chloride	62	1.145	1.145	(0.273)	437640	100.000	97.76

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.
M - Compound response manually integrated.



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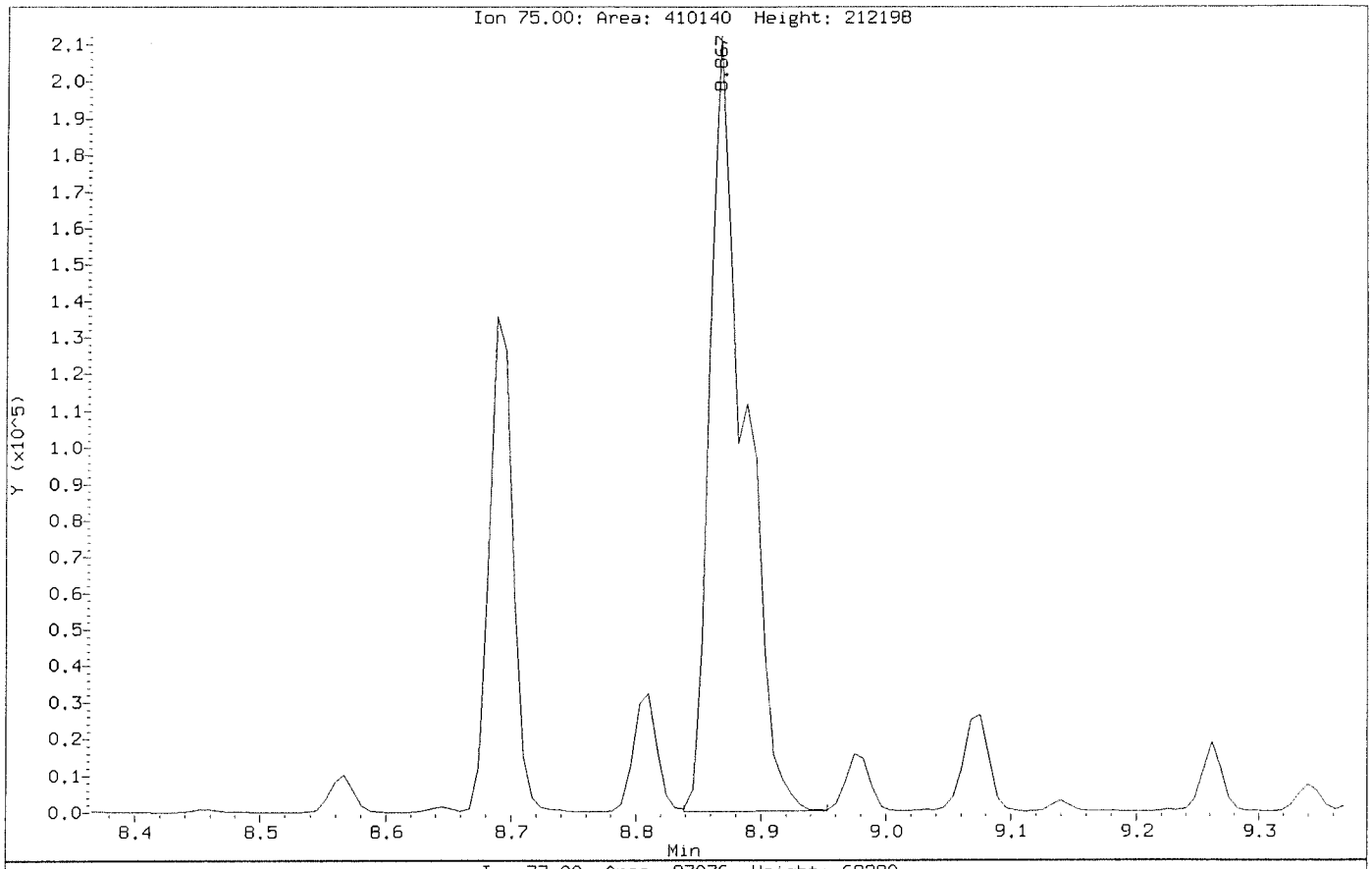
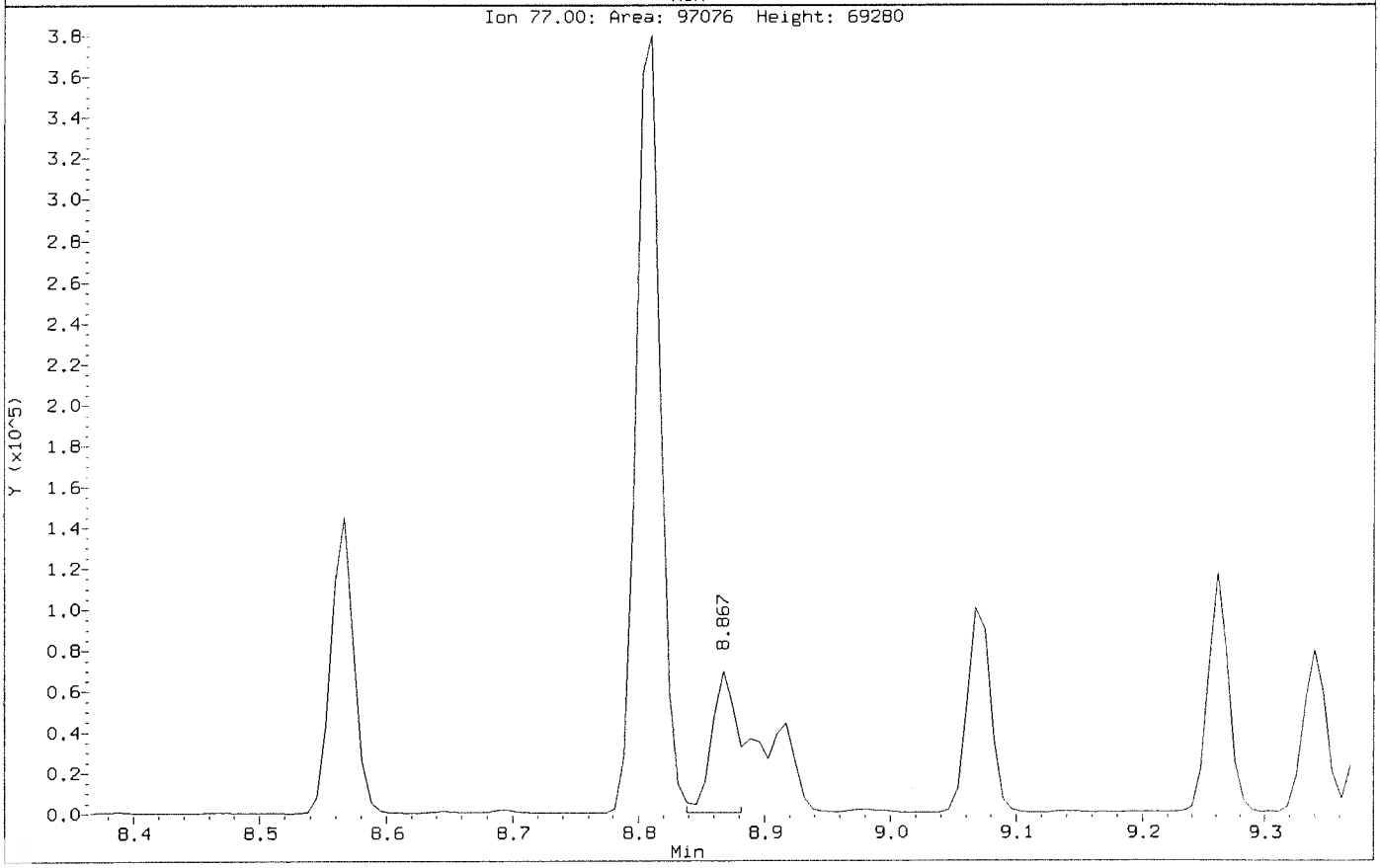
Sample Info: VSTD100;VSTD100;1;8;
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\nahstws005\Target\chem\voa6.i\X200707.b\Before\X070709.D
Injection Date: 07-JUL-2020 14:17
Instrument: voa6.i
Client Sample ID: VSTD100

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





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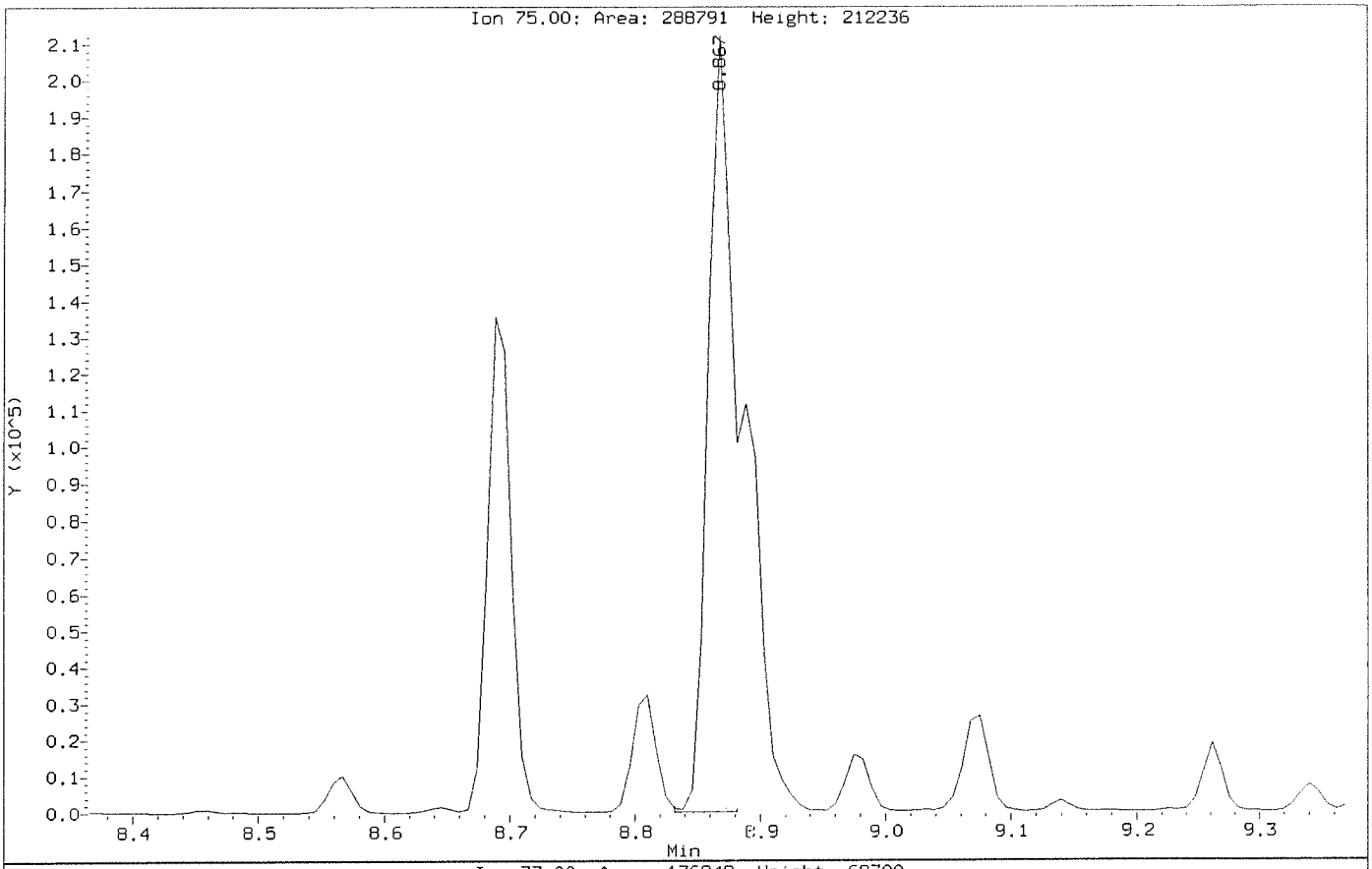
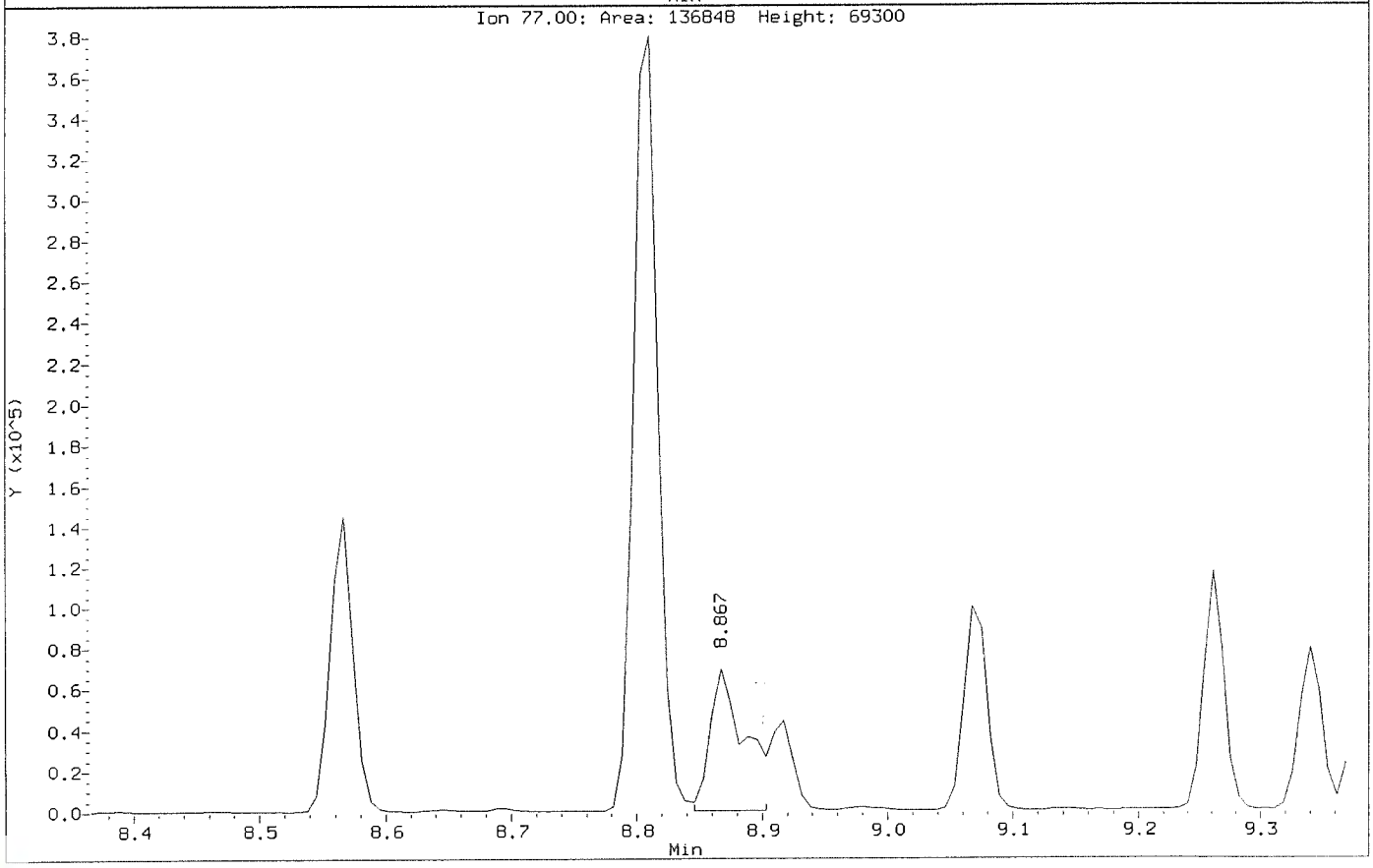
Instrument: voa6.i
Client Sample ID: VSTD100

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





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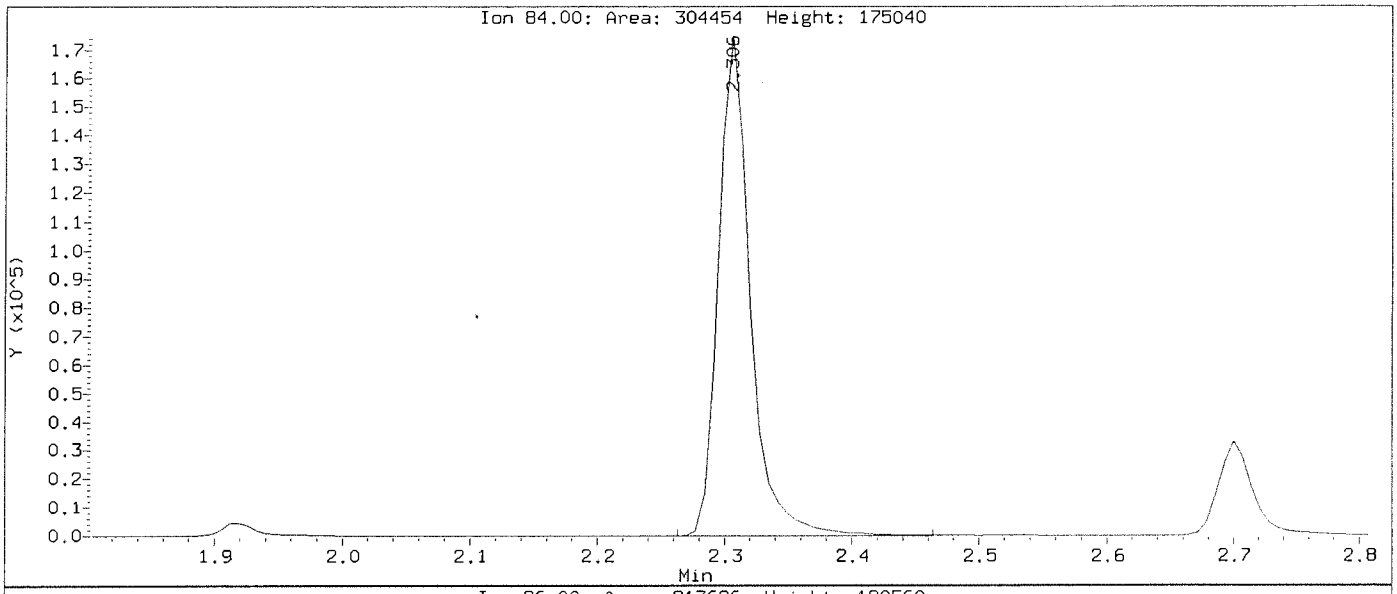
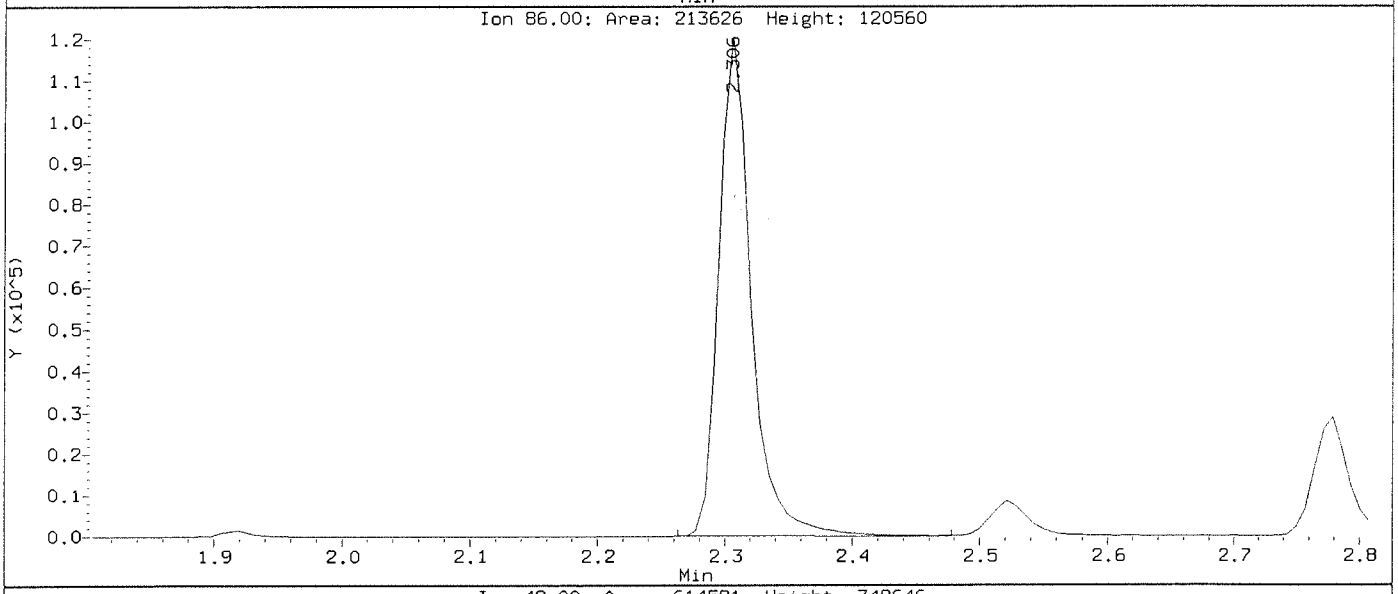
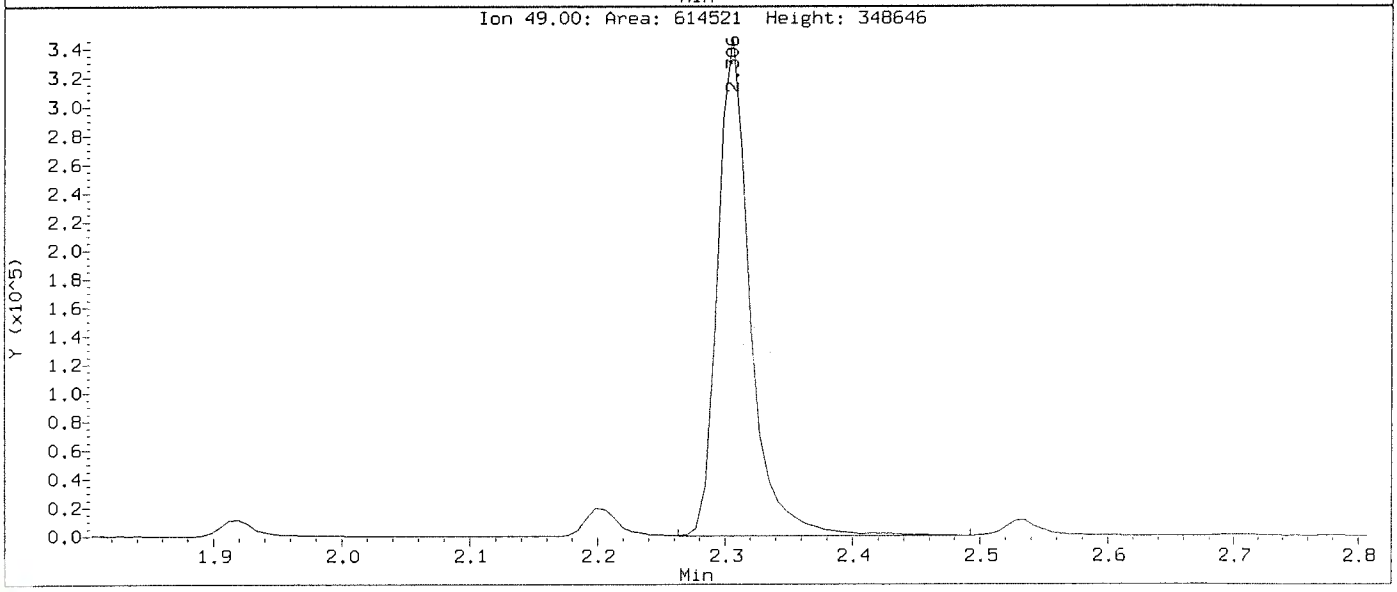
Injection Date: 07-JUL-2020 14:17
Instrument: voa6.i
Client Sample ID: VSTD100

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







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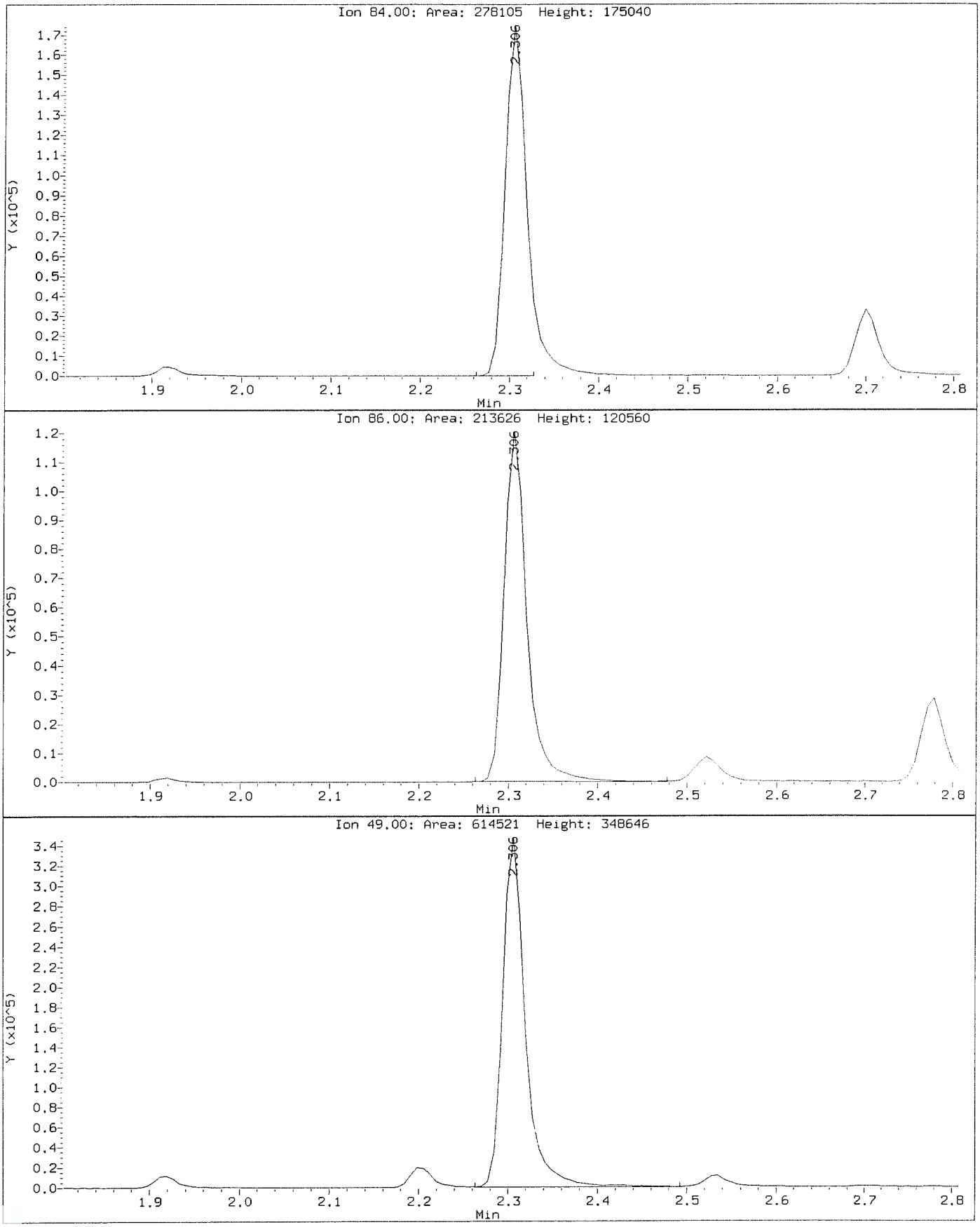
Injection Date: 07-JUL-2020 14:17
Instrument: voa6.i
Client Sample ID: VSTD100

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



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Report Date: 12-Aug-2020 15:35

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200707.b\X070710.D
Lab Smp Id: VSTD150 Client Smp ID: VSTD150
Inj Date : 07-JUL-2020 14:41
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\X200707.b\8260W.m
Meth Date : 12-Aug-2020 15:35 voa6.i Quant Type: ISTD
Cal Date : 07-JUL-2020 14:17 Cal File: X070709.D
Als bottle: 11 Calibration Sample, Level: 9
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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

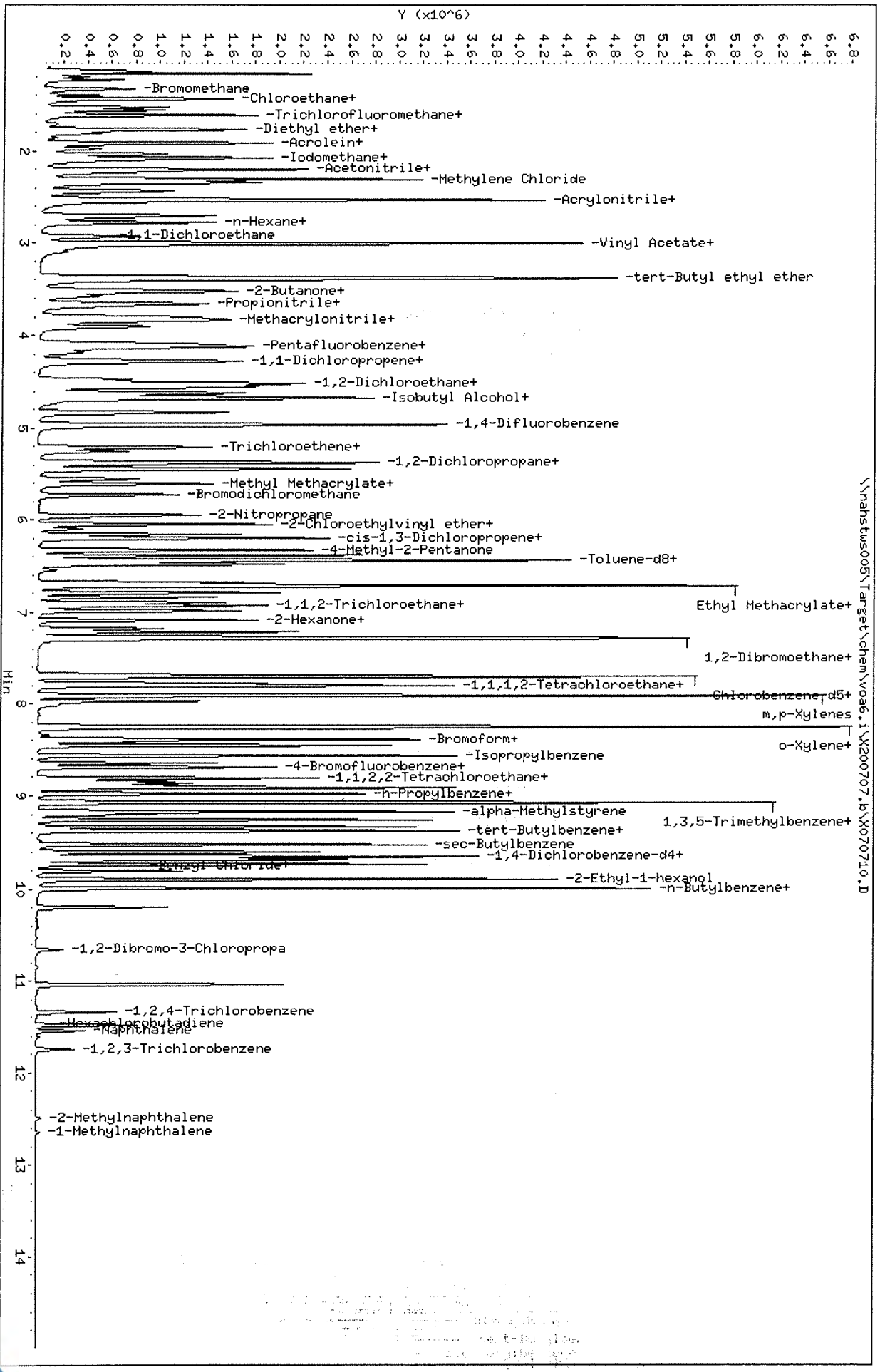
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.189	4.189	(1.000)	241832	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	401050	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	375988	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	172370	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.979)	399110	150.000	153.55
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	544077	150.000	151.73
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	1402858	150.000	141.92
$ 69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	536443	150.000	151.99
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	422034	150.000	146.19
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.976)	668277	150.000	150.84
68 1,1,2,2-Tetrachloroethane	83	8.845	8.845	(0.915)	445719	150.000	130.79
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	331664	150.000	139.44
22 1,1-Dichloroethane	63	2.929	2.929	(0.699)	967625	150.000	141.18
11 1,1-Dichloroethene	96	1.919	1.919	(0.458)	331437	150.000	148.00
32 1,1-Dichloropropene	75	4.282	4.282	(0.862)	573482	150.000	145.21
93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.215)	79399	150.000	143.04
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	405923	150.000	135.09(M)
90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	155239	150.000	142.11
79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.970)	1473699	150.000	145.38
89 1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.102)	38494	150.000	147.10
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	416493	150.000	137.81
88 1,2-Dichlorobenzene	146	9.999	9.999	(1.034)	697359	150.000	138.42

Data File: \\nahstws005\Target\chem\voa6.i\X200707.b\X070710.D Page 2
Report Date: 12-Aug-2020 15:35

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
33	1,2-Dichloroethane	62	4.562	4.562	(0.918)	713434	150.000	143.38
42	1,2-Dichloropropane	63	5.443	5.443	(1.095)	549790	150.000	147.36
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	1454141	150.000	148.06
83	1,3-Dichlorobenzene	146	9.612	9.612	(0.994)	797938	150.000	144.59
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	686799	150.000	137.18
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	790661	150.000	151.07
26	2,2-Dichloropropane	77	3.516	3.516	(0.839)	606750	150.000	144.91
24	2-Butanone	43	3.581	3.581	(0.855)	643926	300.000	302.21(A)
76	2-Chlorotoluene	91	8.981	8.981	(0.929)	1241143	150.000	143.46
52	2-Hexanone	43	7.090	7.090	(0.924)	1049289	300.000	299.86(A)
77	4-Chlorotoluene	91	9.075	9.075	(0.939)	1438640	150.000	146.64
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	1477945	150.000	150.78
45	4-Methyl-2-Pentanone	43	6.331	6.331	(0.825)	1488543	300.000	299.27(A)
10	Acetone	43	1.976	1.976	(0.472)	497386	300.000	305.78(A)
37	Benzene	78	4.519	4.519	(0.909)	1670646	150.000	146.00
74	Bromobenzene	156	8.810	8.810	(0.911)	485620	150.000	147.67
29	Bromochloromethane	128	3.795	3.795	(0.906)	227289	150.000	135.31
39	Bromodichloromethane	83	5.729	5.729	(1.153)	603643	150.000	150.27
66	Bromoform	173	8.416	8.416	(1.097)	300170	150.000	143.81
6	Bromomethane	94	1.338	1.338	(0.320)	258225	150.000	152.21
19	Carbon Disulfide	76	2.069	2.069	(0.494)	2201316	300.000	299.35(A)
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	582078	150.000	152.08
59	Chlorobenzene	112	7.699	7.699	(1.004)	1089859	150.000	142.27
7	Chloroethane	64	1.403	1.403	(0.335)	327112	150.000	154.07
28	Chloroform	83	3.910	3.910	(0.933)	766487	150.000	144.64
3	Chloromethane	50	1.081	1.081	(0.258)	755577	150.000	152.03
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.843)	454490	150.000	143.77
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	717591	150.000	148.24
55	Dibromochloromethane	129	7.176	7.176	(0.936)	444050	150.000	143.77
44	Dibromomethane	93	5.557	5.557	(1.118)	290829	150.000	144.63
2	Dichlorodifluoromethane	85	0.973	0.973	(0.232)	459425	150.000	156.92
61	Ethylbenzene	106	7.807	7.807	(1.018)	585123	150.000	144.32
91	Hexachlorobutadiene	225	11.481	11.481	(1.187)	125138	150.000	148.29
67	Isopropylbenzene	105	8.566	8.566	(1.117)	1754156	150.000	145.87
62	m,p-Xylenes	106	7.907	7.907	(1.031)	1389163	300.000	284.93(A)
17	Methylene Chloride	84	2.305	2.305	(0.550)	394864	150.000	149.31(M)
87	n-Butylbenzene	91	9.999	9.999	(1.034)	1322550	150.000	151.26
73	n-Propylbenzene	91	8.917	8.917	(0.922)	2112864	150.000	150.29
92	Naphthalene	128	11.546	11.546	(1.194)	242788	150.000	144.65
63	o-Xylene	106	8.244	8.244	(1.075)	676073	150.000	141.55
81	sec-Butylbenzene	105	9.526	9.526	(0.985)	1718736	150.000	148.73
64	Styrene	104	8.265	8.265	(1.078)	1174868	150.000	141.54
78	tert-Butylbenzene	119	9.340	9.340	(0.966)	1167709	150.000	147.66
56	Tetrachloroethene	164	6.933	6.933	(0.904)	336320	150.000	146.44
50	Toluene	91	6.453	6.453	(0.841)	1698619	150.000	141.60
20	trans-1,2-Dichloroethene	96	2.535	2.535	(0.605)	384909	150.000	145.62
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	648104	150.000	149.02
38	Trichloroethene	130	5.207	5.207	(1.048)	443143	150.000	148.92
8	Trichlorofluoromethane	101	1.561	1.561	(0.373)	648549	150.000	155.51
5	Vinyl Chloride	62	1.145	1.145	(0.273)	645732	150.000	151.99

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.
M - Compound response manually integrated.



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Column phase: DB624

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

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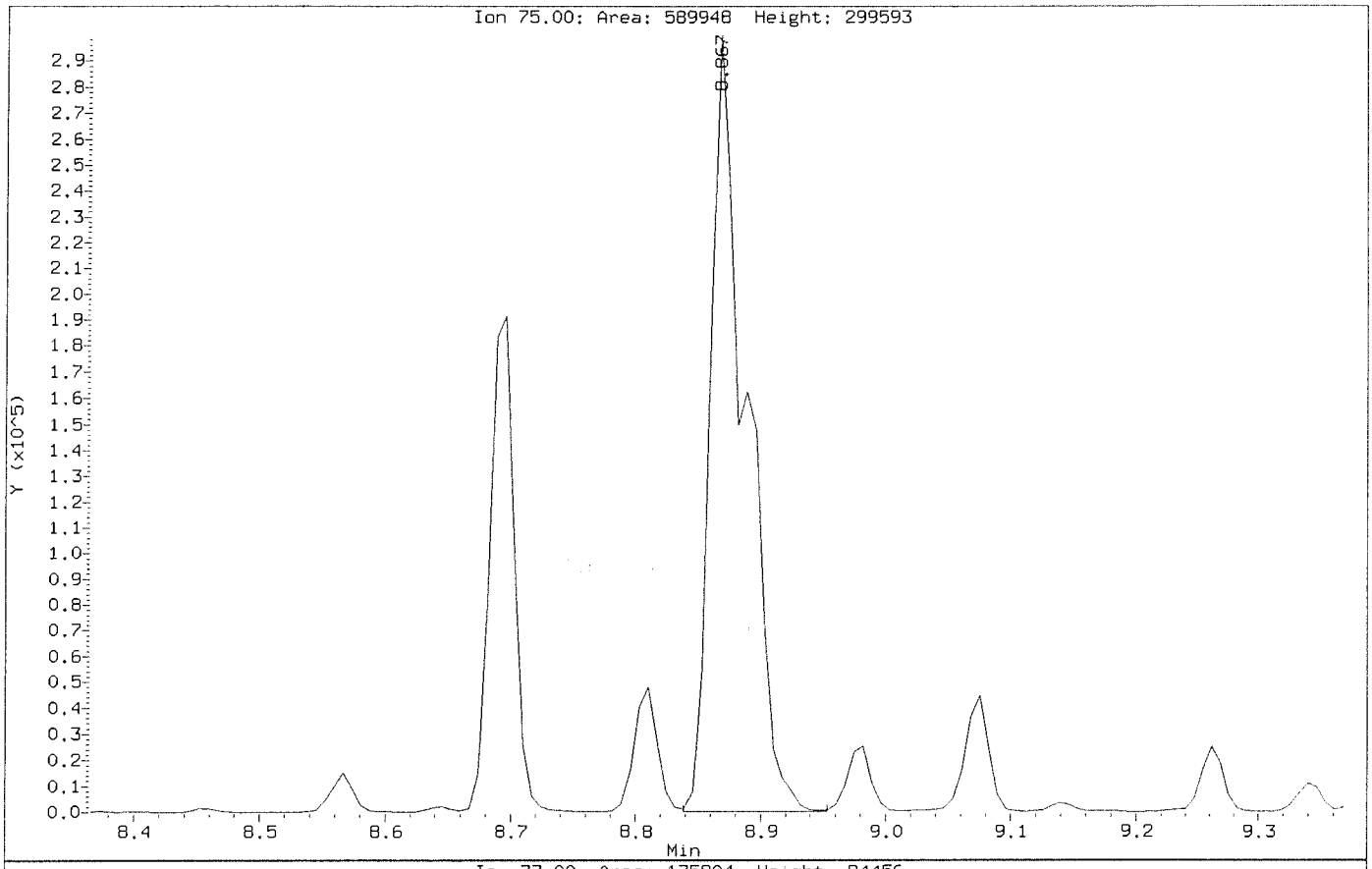
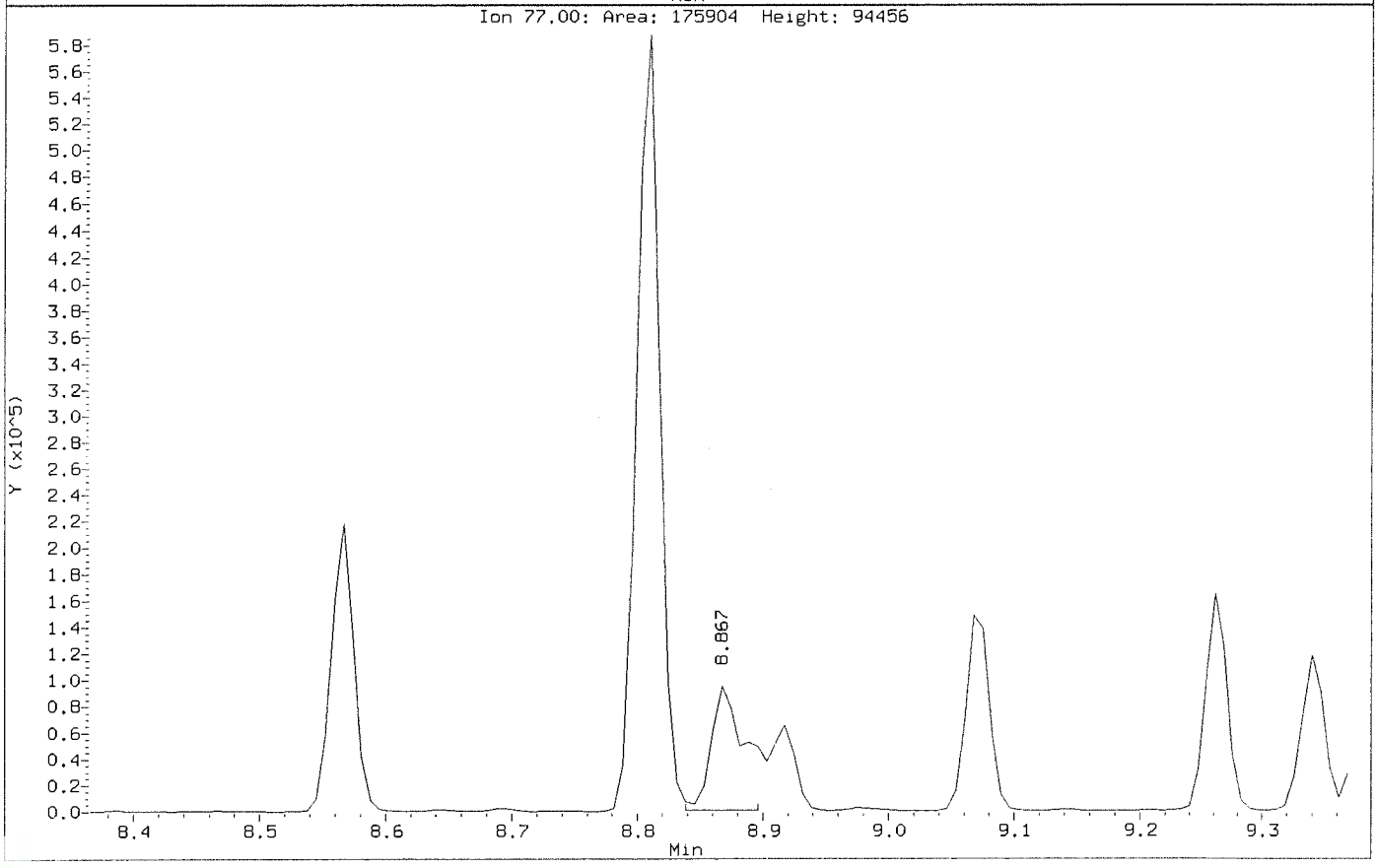
Instrument: voa6.i
Client Sample ID: VSTD150

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





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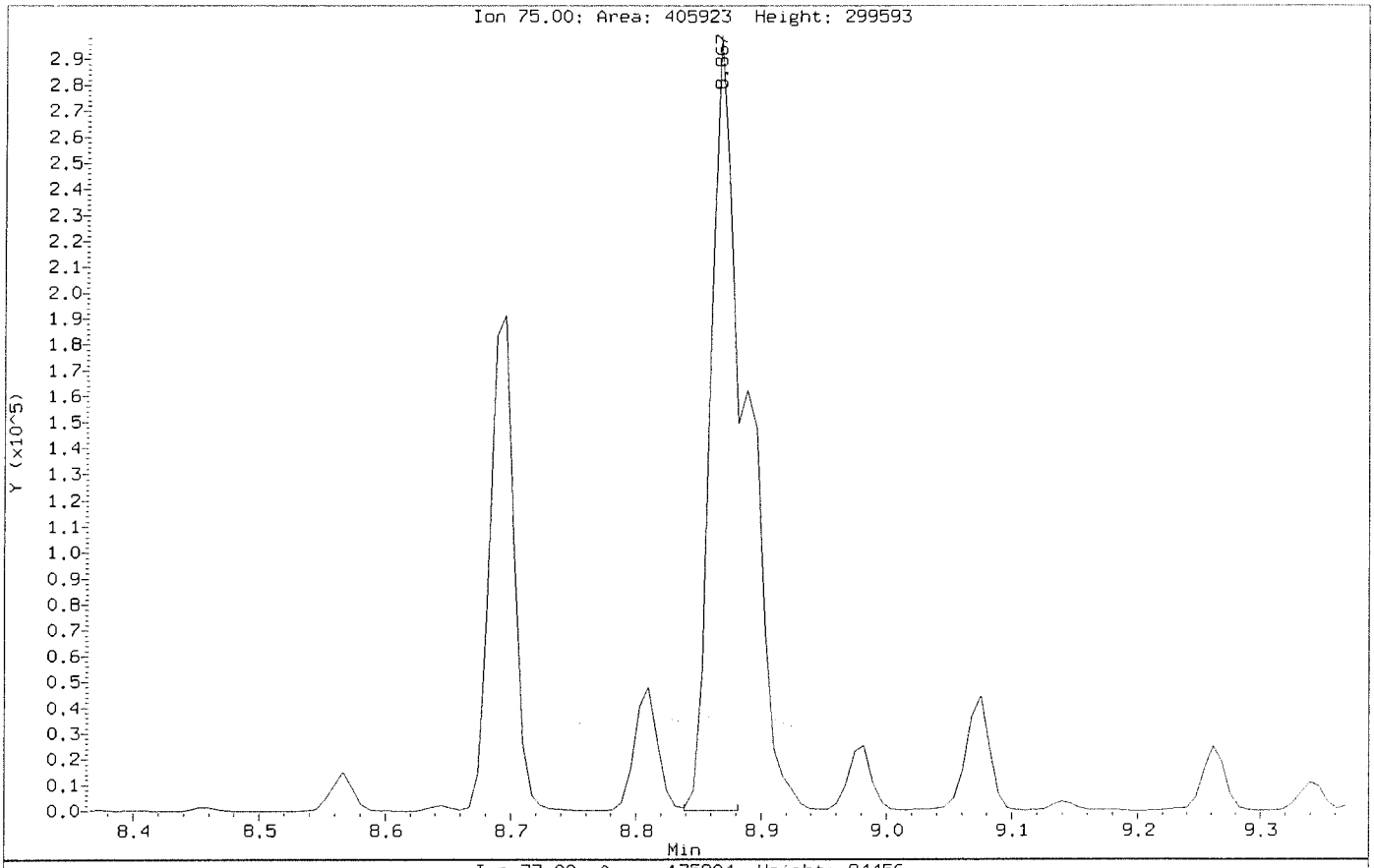
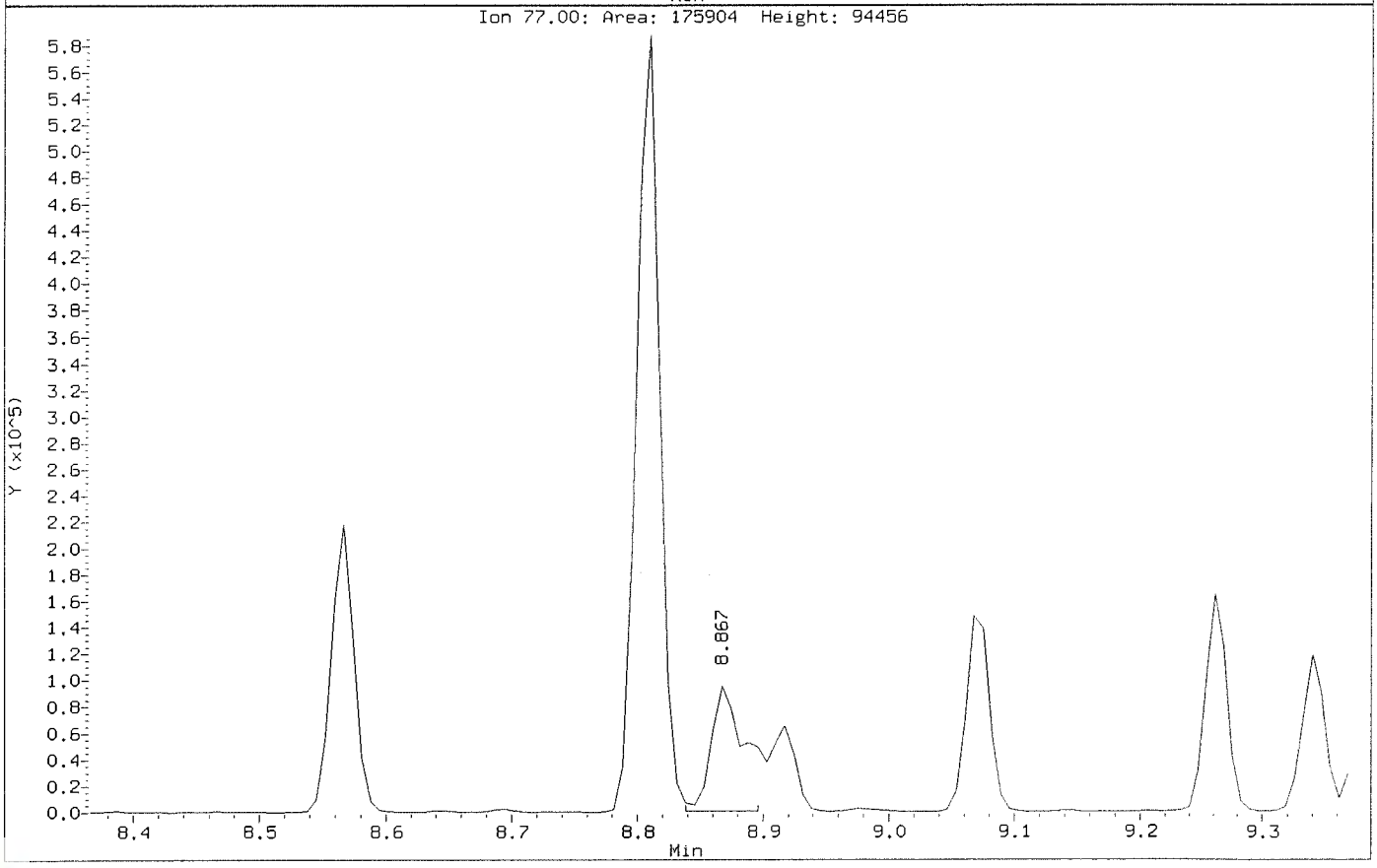
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





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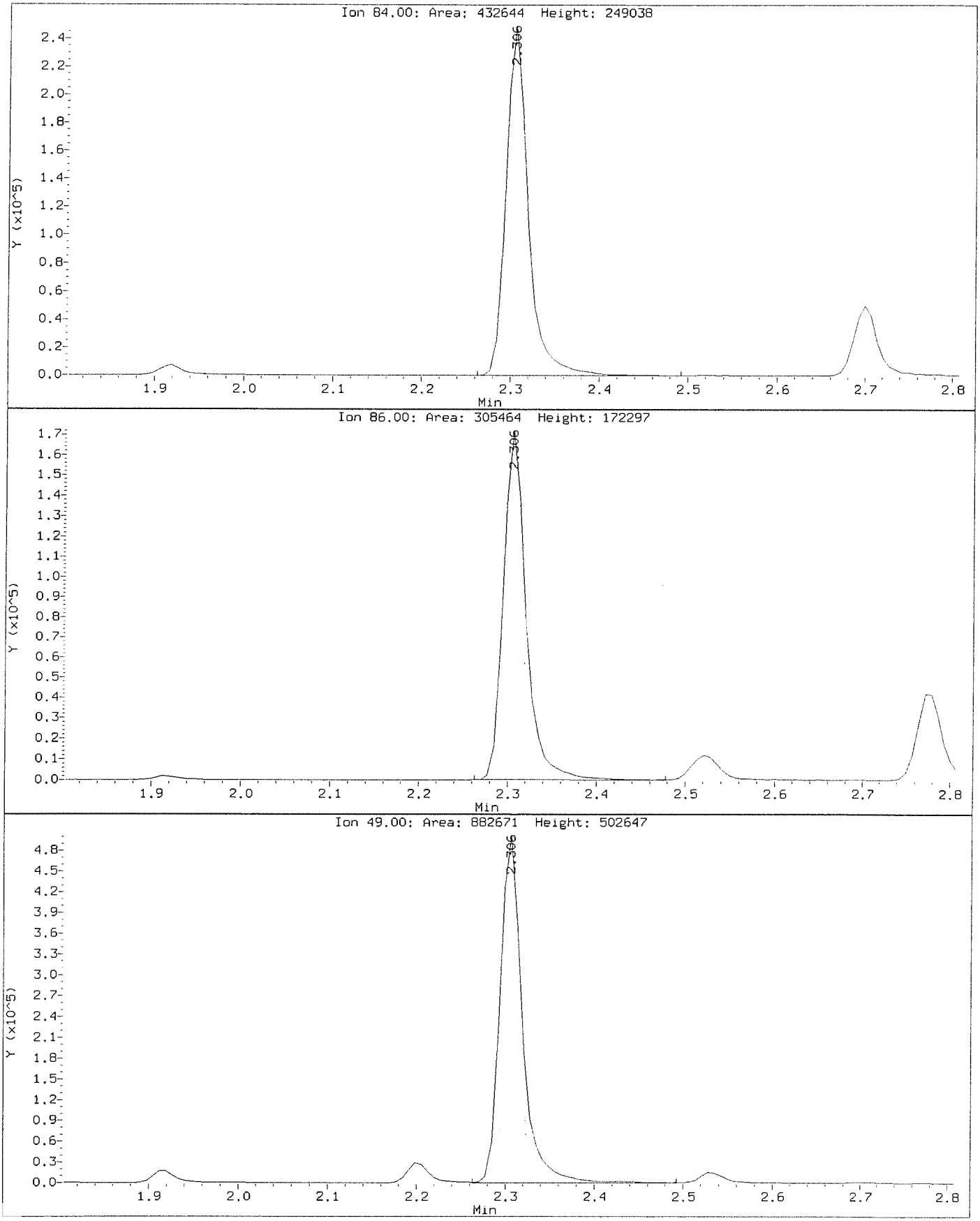
Instrument: voa6.i
Client Sample ID: VSTD150

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



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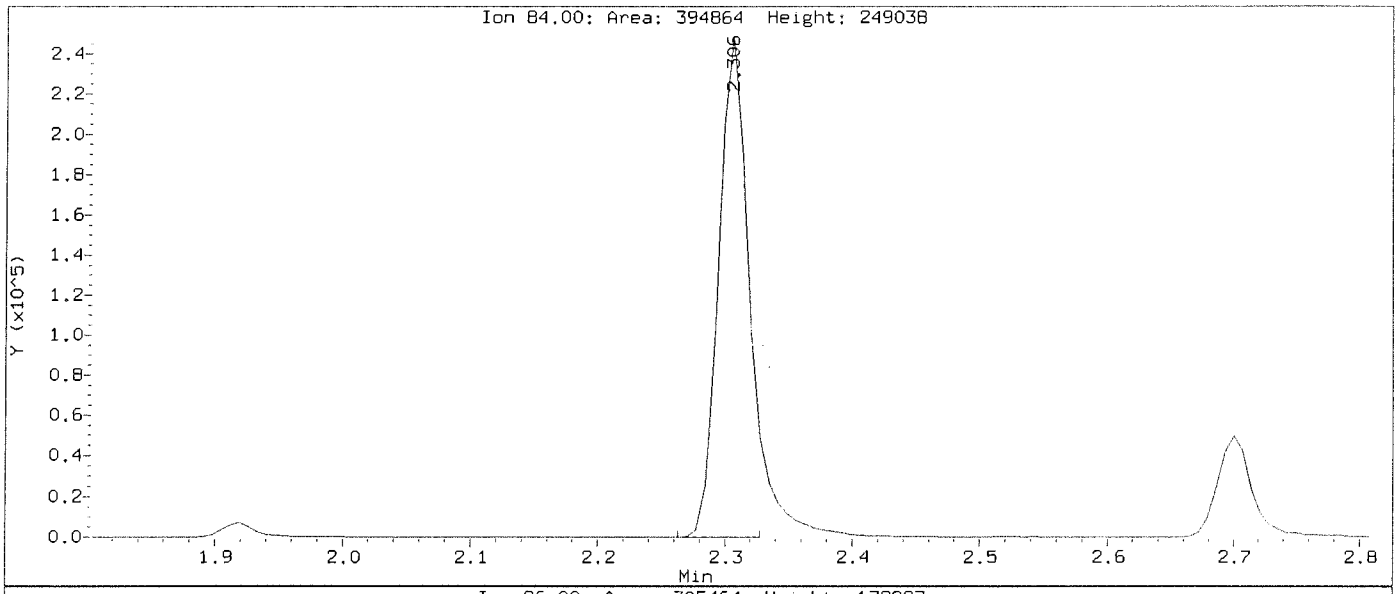
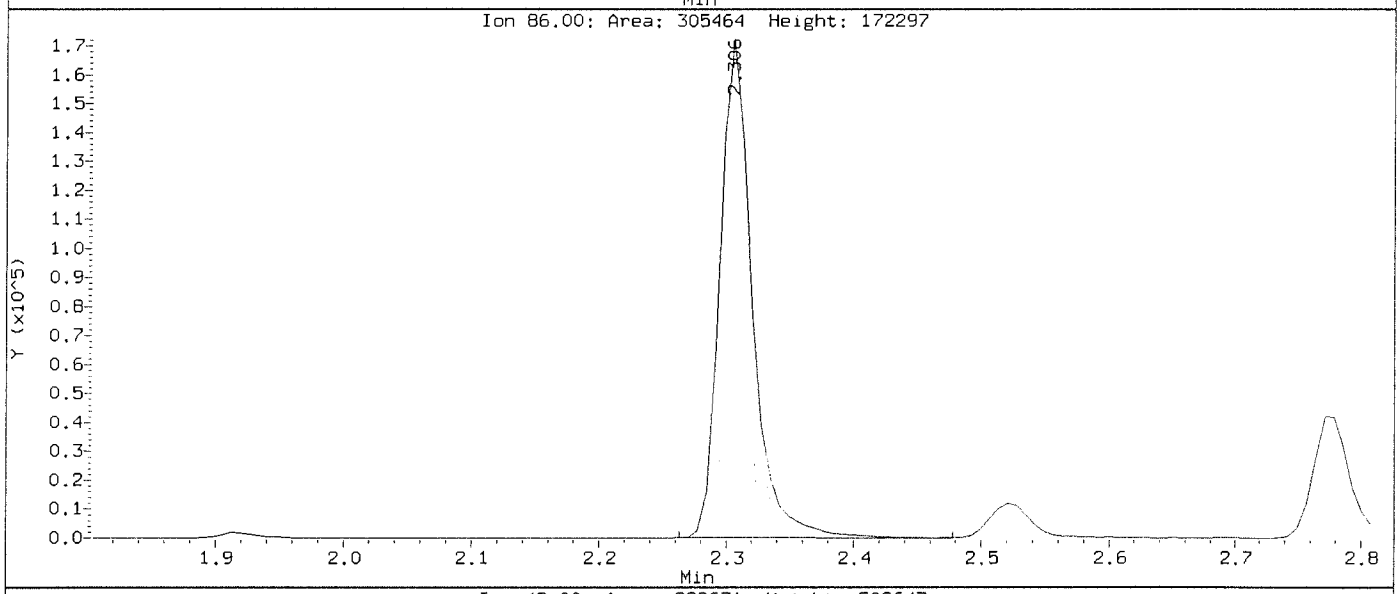
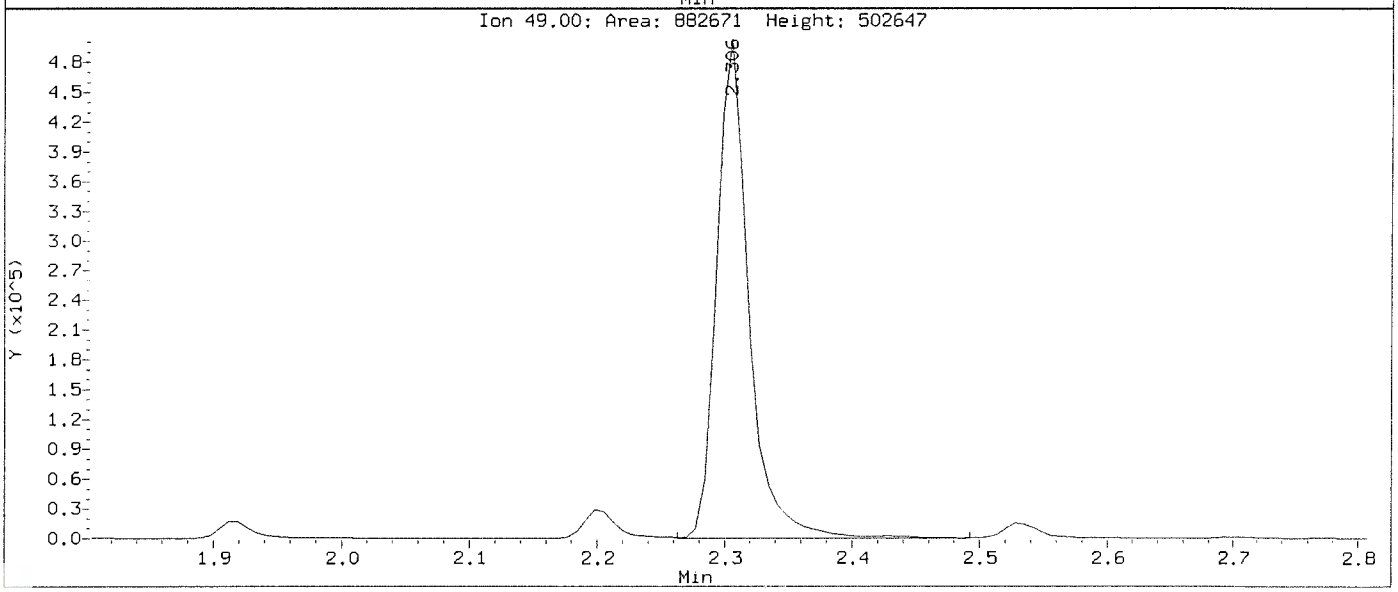
Instrument: voa6.i
Client Sample ID: VSTD150

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







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Report Date: 12-Aug-2020 15:35

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200707.b\X070711.D
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Inj Date : 07-JUL-2020 15:05
Operator : PC Inst ID: voa6.i
Smp Info : VSTD200;VSTD200;1;10;
Misc Info : HS18090001;WATER;0;1;
Comment :
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Meth Date : 12-Aug-2020 15:35 voa6.i Quant Type: ISTD
Cal Date : 07-JUL-2020 14:41 Cal File: X070710.D
Als bottle: 12 Calibration Sample, Level: 10
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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

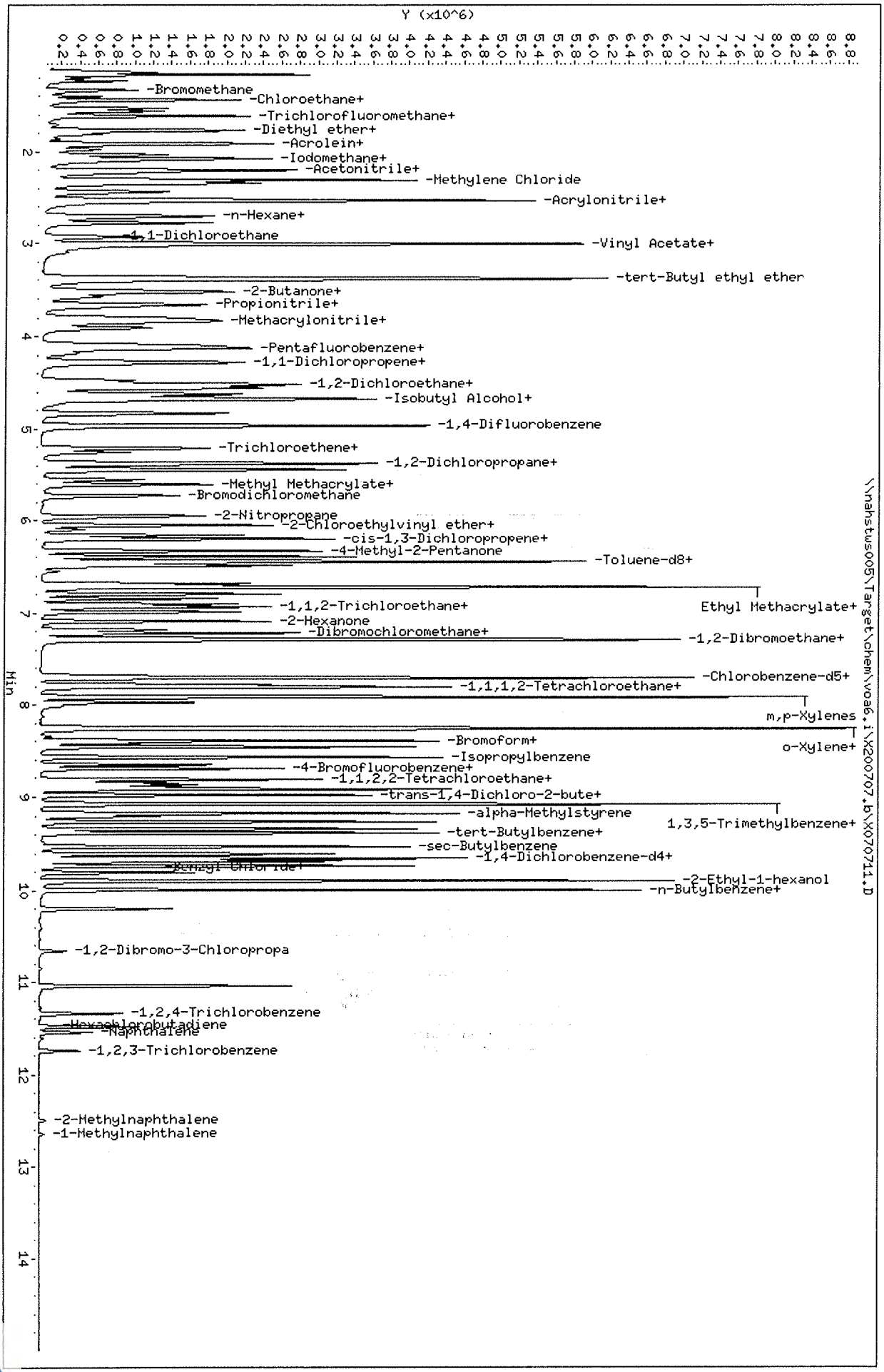
Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)
*	1 Pentafluorobenzene	168	4.189	4.189	(1.000)	242407	50.0000	
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	398460	50.0000	
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	372909	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	168975	50.0000	
$	30 Dibromofluoromethane	113	4.103	4.103	(0.979)	511371	200.000	196.52
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	711398	200.000	198.13
$	48 Toluene-d8	98	6.388	6.388	(0.833)	1815153	200.000	185.14
$	69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	687661	200.000	196.77
	60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	546748	200.000	190.95
	31 1,1,1-Trichloroethane	97	4.089	4.089	(0.976)	873834	200.000	196.77
	68 1,1,2,2-Tetrachloroethane	83	8.845	8.845	(0.915)	587613	200.000	175.89
	53 1,1,2-Trichloroethane	83	6.847	6.847	(0.893)	427548	200.000	181.24
	22 1,1-Dichloroethane	63	2.922	2.922	(0.697)	1254145	200.000	182.55
	11 1,1-Dichloroethene	96	1.912	1.912	(0.456)	426479	200.000	190.00
	32 1,1-Dichloropropene	75	4.283	4.283	(0.862)	741356	200.000	188.93
	93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.215)	113093	200.000	207.12(A)
	71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	525181	200.000	178.29(M)
	90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	223355	200.000	207.97(A)
	79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.970)	1902387	200.000	191.44
	89 1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.102)	51251	200.000	200.42(A)
	57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	541159	200.000	180.54
	88 1,2-Dichlorobenzene	146	9.999	9.999	(1.034)	905947	200.000	183.43

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)
33	1,2-Dichloroethane	62	4.562	4.562	(0.918)	924632	200.000	187.03
42	1,2-Dichloropropane	63	5.443	5.443	(1.095)	714698	200.000	192.80
75	1,3,5-Trimethylbenzene	105	9.075	9.075	(0.939)	1871450	200.000	194.38
83	1,3-Dichlorobenzene	146	9.612	9.612	(0.994)	1038005	200.000	191.87
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	891960	200.000	179.63
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	1025151	200.000	199.87
26	2,2-Dichloropropane	77	3.516	3.516	(0.839)	759583	200.000	180.99
24	2-Butanone	43	3.581	3.581	(0.855)	836660	400.000	393.59(A)
76	2-Chlorotoluene	91	8.981	8.981	(0.929)	1590182	200.000	187.50
52	2-Hexanone	43	7.090	7.090	(0.924)	1371530	400.000	396.38(A)
77	4-Chlorotoluene	91	9.075	9.075	(0.939)	1852777	200.000	192.64
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	1890131	200.000	196.70
45	4-Methyl-2-Pentanone	43	6.331	6.331	(0.825)	1953538	400.000	397.05(A)
10	Acetone	43	1.976	1.976	(0.472)	616921	400.000	386.54(A)
37	Benzene	78	4.519	4.519	(0.909)	2156630	200.000	189.69
74	Bromobenzene	156	8.810	8.810	(0.911)	629913	200.000	195.40
29	Bromochloromethane	128	3.803	3.803	(0.908)	286703	200.000	170.28
39	Bromodichloromethane	83	5.729	5.729	(1.153)	789341	200.000	197.77
66	Bromoform	173	8.416	8.416	(1.097)	389719	200.000	188.26
6	Bromomethane	94	1.331	1.331	(0.318)	336728	200.000	198.04
19	Carbon Disulfide	76	2.069	2.069	(0.494)	2820046	400.000	382.59(A)
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	761833	200.000	200.34(A)
59	Chlorobenzene	112	7.699	7.699	(1.004)	1418235	200.000	186.67
7	Chloroethane	64	1.396	1.396	(0.333)	412328	200.000	194.24
28	Chloroform	83	3.910	3.910	(0.933)	990403	200.000	186.45
3	Chloromethane	50	1.081	1.081	(0.258)	1016387	200.000	204.03(A)
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.843)	583793	200.000	184.24
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	938320	200.000	195.10
55	Dibromochloromethane	129	7.184	7.184	(0.937)	584290	200.000	190.74
44	Dibromomethane	93	5.558	5.558	(1.118)	377535	200.000	188.97
2	Dichlorodifluoromethane	85	0.973	0.973	(0.232)	609945	200.000	207.85(A)
61	Ethylbenzene	106	7.807	7.807	(1.018)	755551	200.000	187.90
91	Hexachlorobutadiene	225	11.489	11.489	(1.188)	167946	200.000	202.53(A)
67	Isopropylbenzene	105	8.566	8.566	(1.117)	2255410	200.000	189.10
62	m,p-Xylenes	106	7.907	7.907	(1.031)	1779702	400.000	368.05(A)
17	Methylene Chloride	84	2.306	2.306	(0.550)	532203	200.000	200.77(AM)
87	n-Butylbenzene	91	9.999	9.999	(1.034)	1677085	200.000	195.67
73	n-Propylbenzene	91	8.917	8.917	(0.922)	2739089	200.000	198.75
92	Naphthalene	128	11.546	11.546	(1.194)	339317	200.000	206.10(A)
63	o-Xylene	106	8.244	8.244	(1.075)	880899	200.000	185.95
81	sec-Butylbenzene	105	9.526	9.526	(0.985)	2185305	200.000	192.90
64	Styrene	104	8.265	8.265	(1.078)	1541009	200.000	187.18
78	tert-Butylbenzene	119	9.340	9.340	(0.966)	1495338	200.000	192.90
56	Tetrachloroethene	164	6.933	6.933	(0.904)	431289	200.000	189.34
50	Toluene	91	6.453	6.453	(0.841)	2190728	200.000	184.13
20	trans-1,2-Dichloroethene	96	2.535	2.535	(0.605)	501326	200.000	189.21
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	852410	200.000	197.27
38	Trichloroethene	130	5.214	5.214	(1.049)	573146	200.000	193.86
8	Trichlorofluoromethane	101	1.561	1.561	(0.373)	839445	200.000	200.81(A)
5	Vinyl Chloride	62	1.145	1.145	(0.273)	845008	200.000	198.43

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.
M - Compound response manually integrated.



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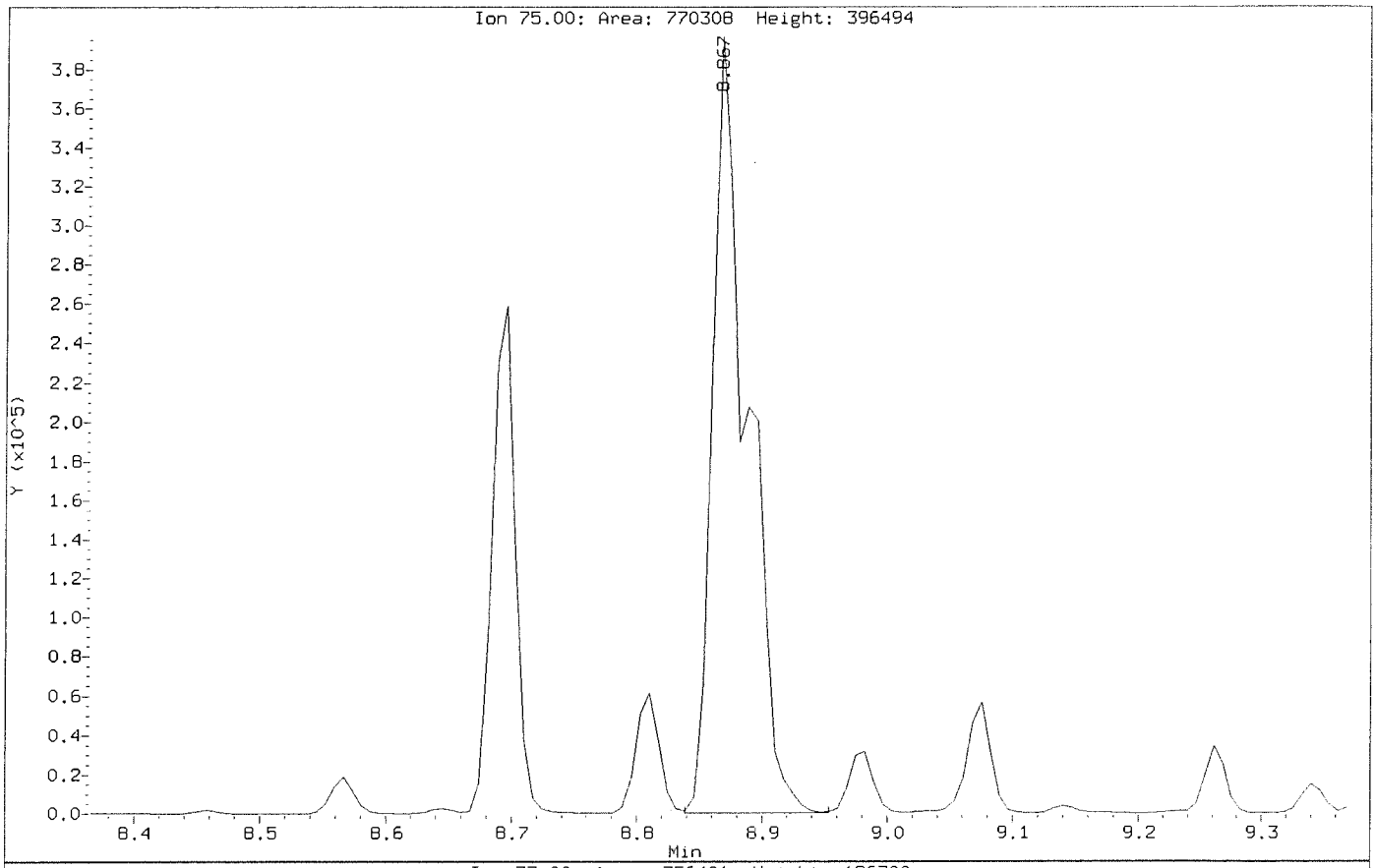
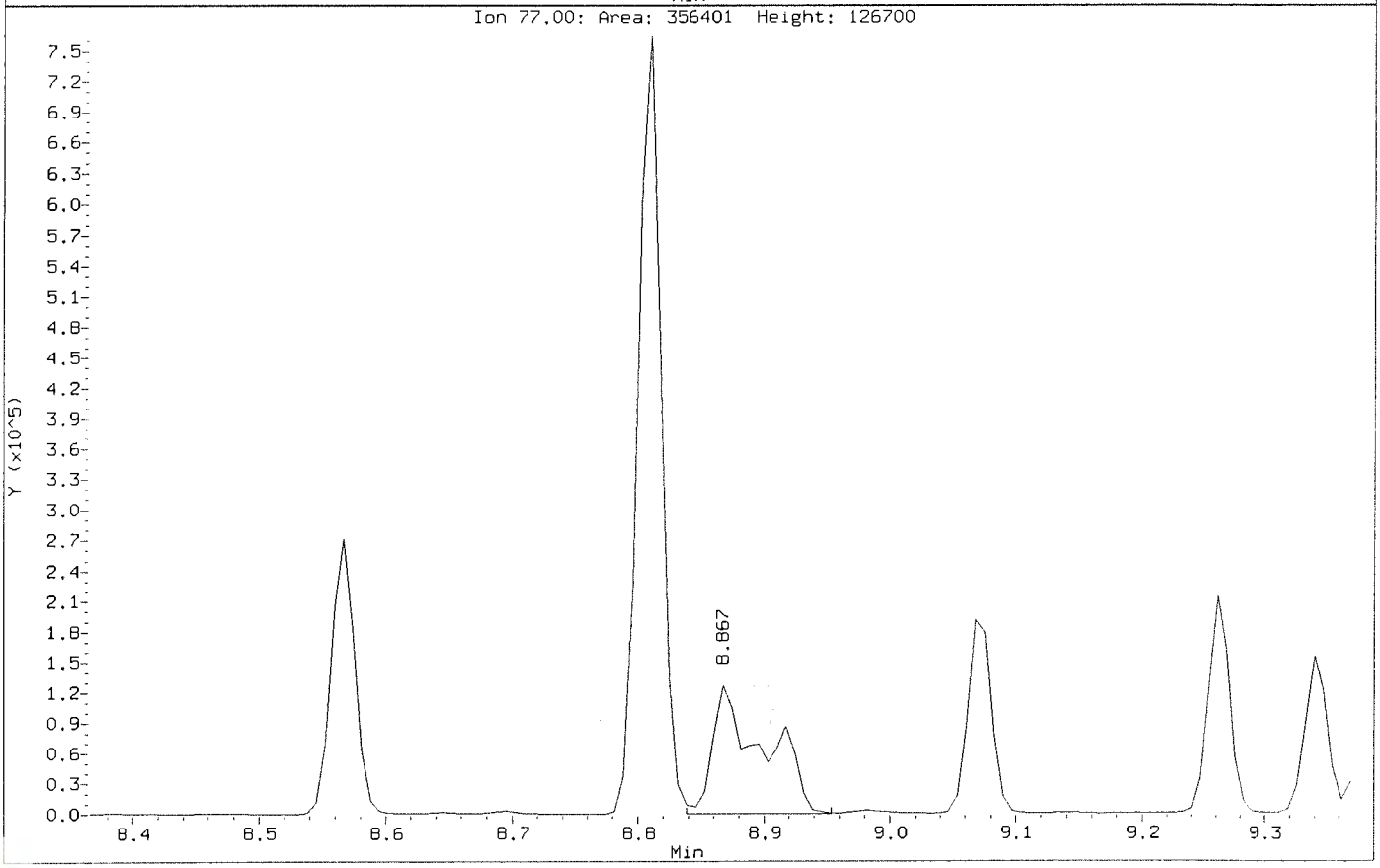
Date : 07-JUL-2020 15:05
Client ID: VSTD200
Sample Info: VSTD200;VSTD200;1;10;
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\nahstws005\Target\chem\voa6.i\X200707.b\Before\X070711.D
Injection Date: 07-JUL-2020 15:05
Instrument: voa6.i
Client Sample ID: VSTD200

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





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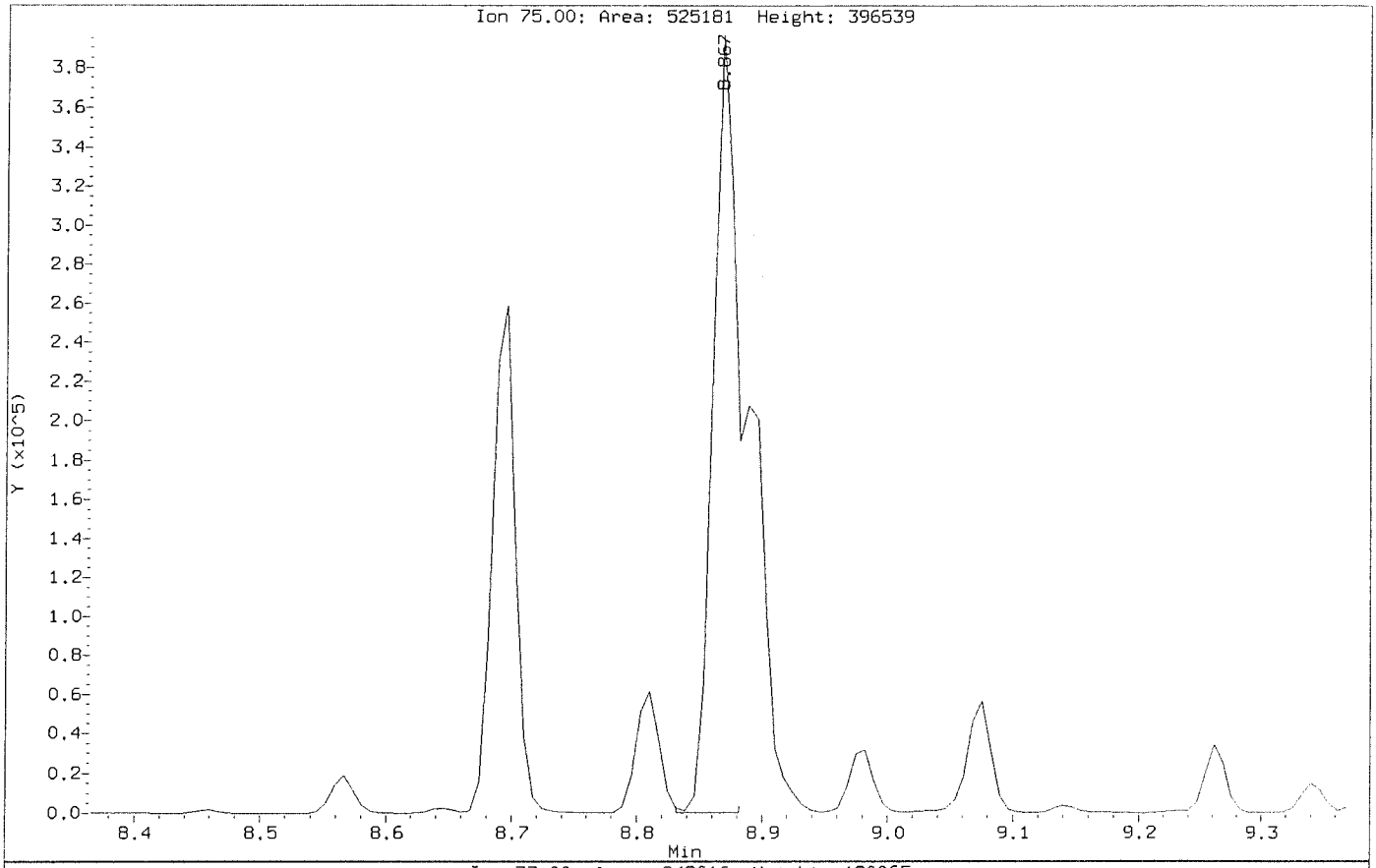
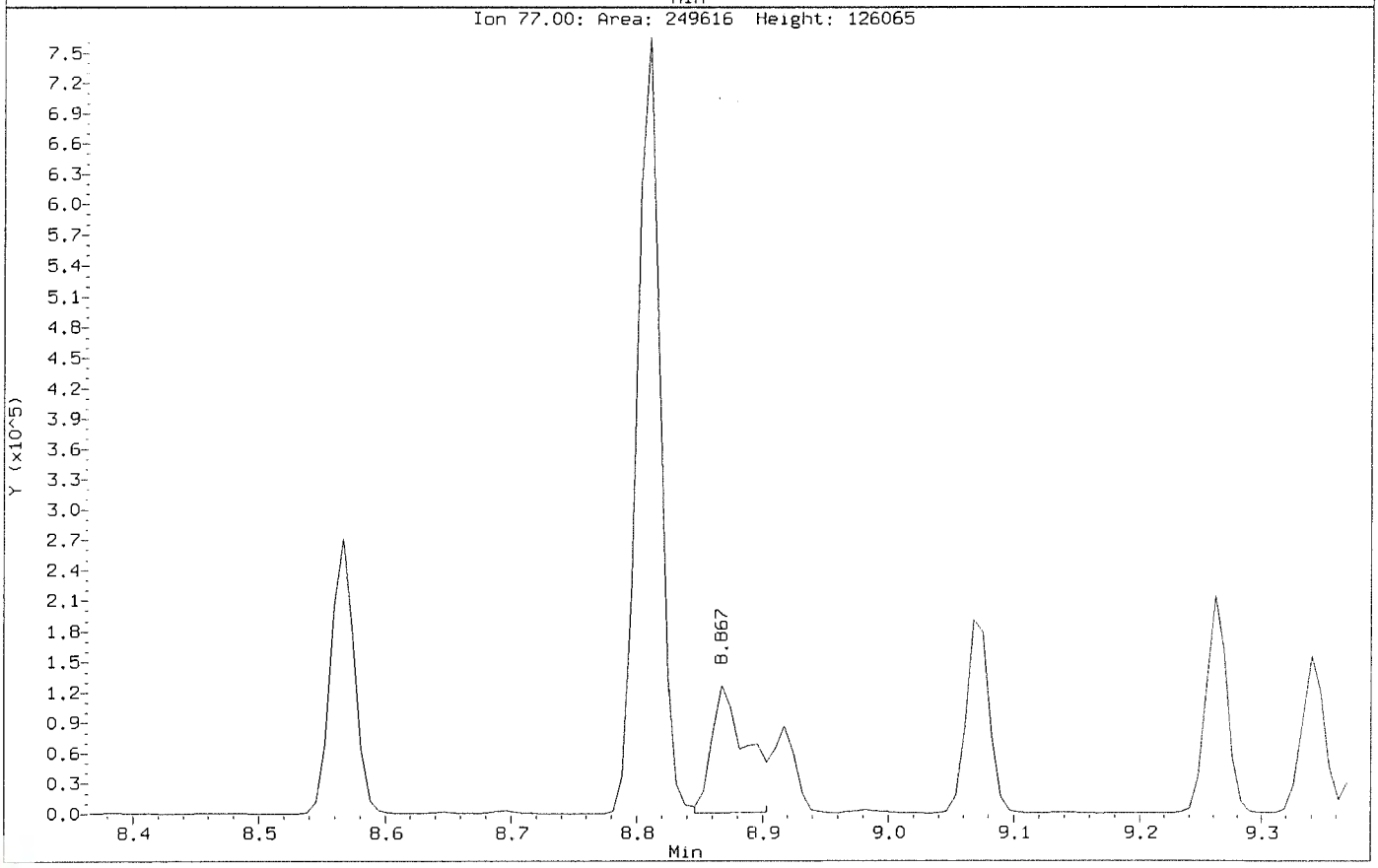
Injection Date: 07-JUL-2020 15:05
Instrument: voa6.i
Client Sample ID: VSTD200

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





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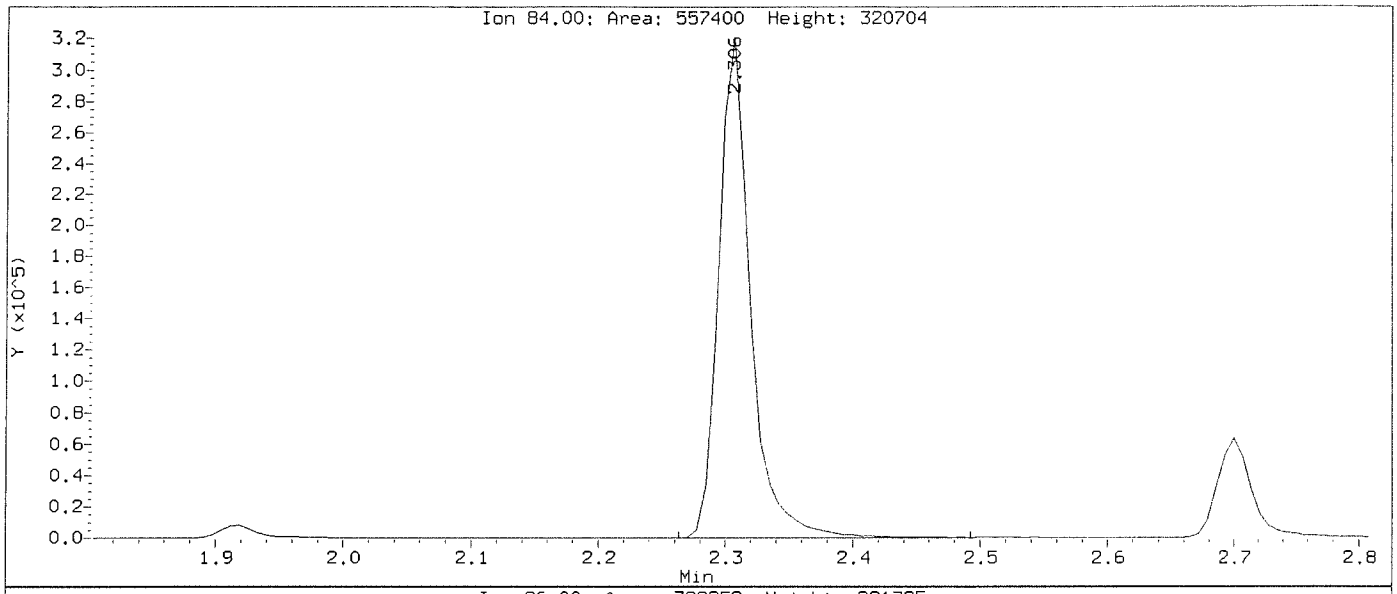
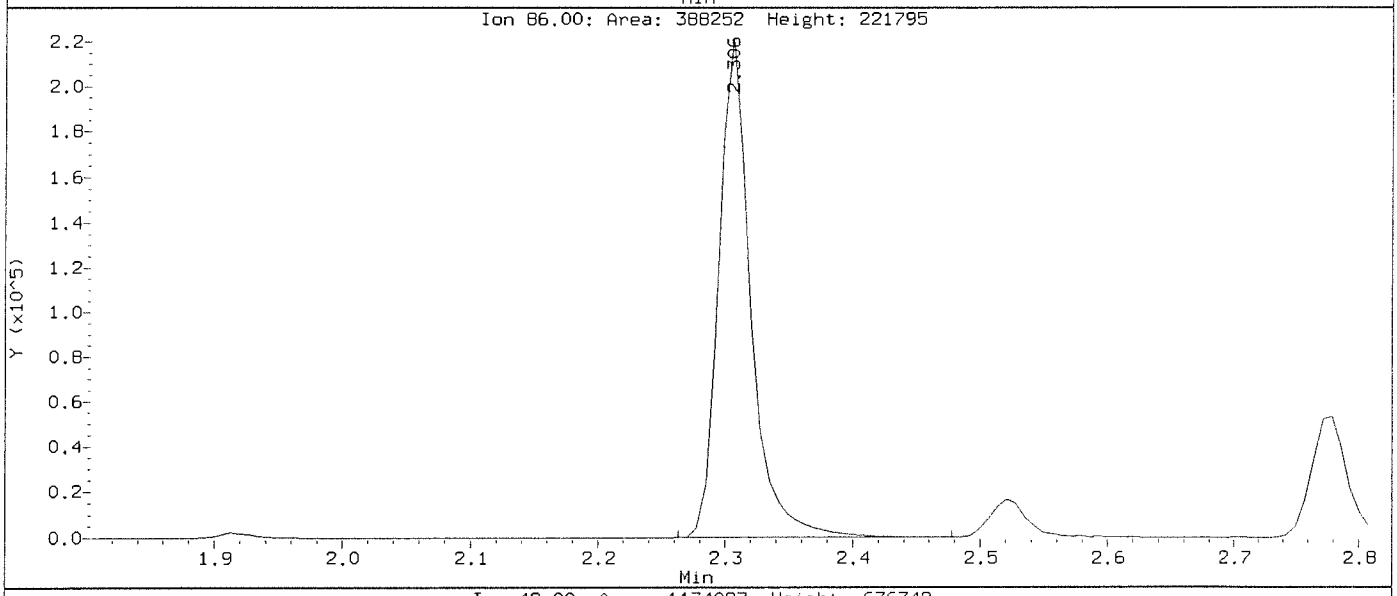
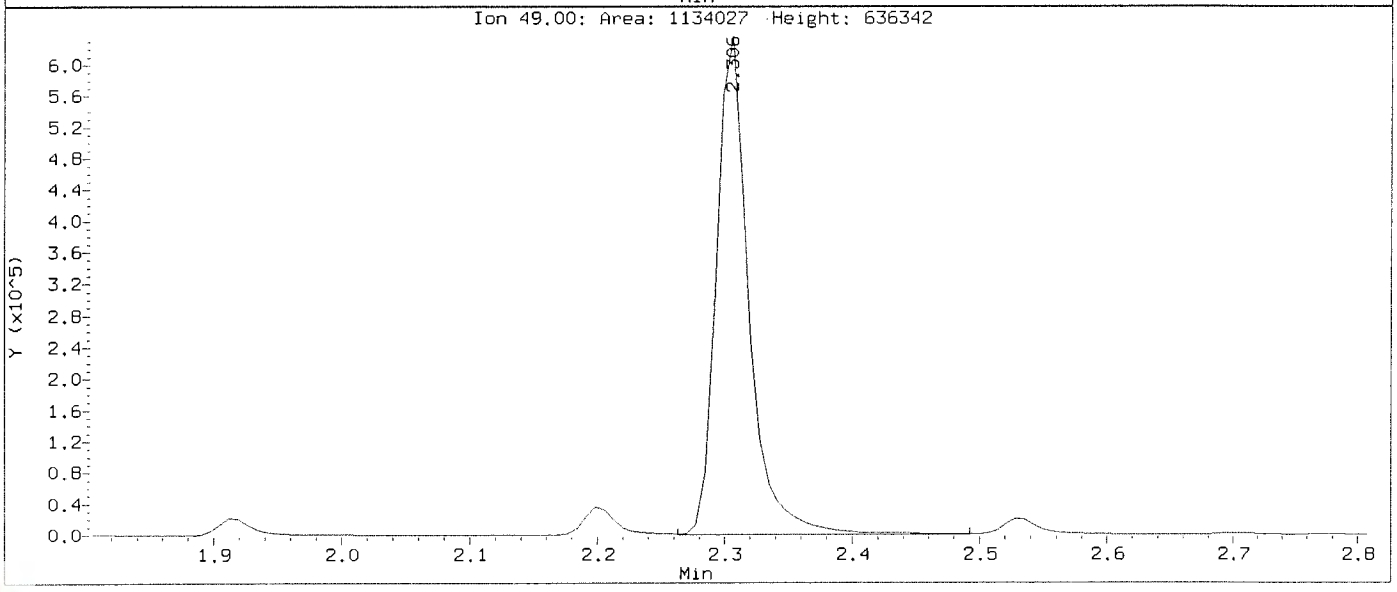
Injection Date: 07-JUL-2020 15:05
Instrument: voa6.i
Client Sample ID: VSTD200

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







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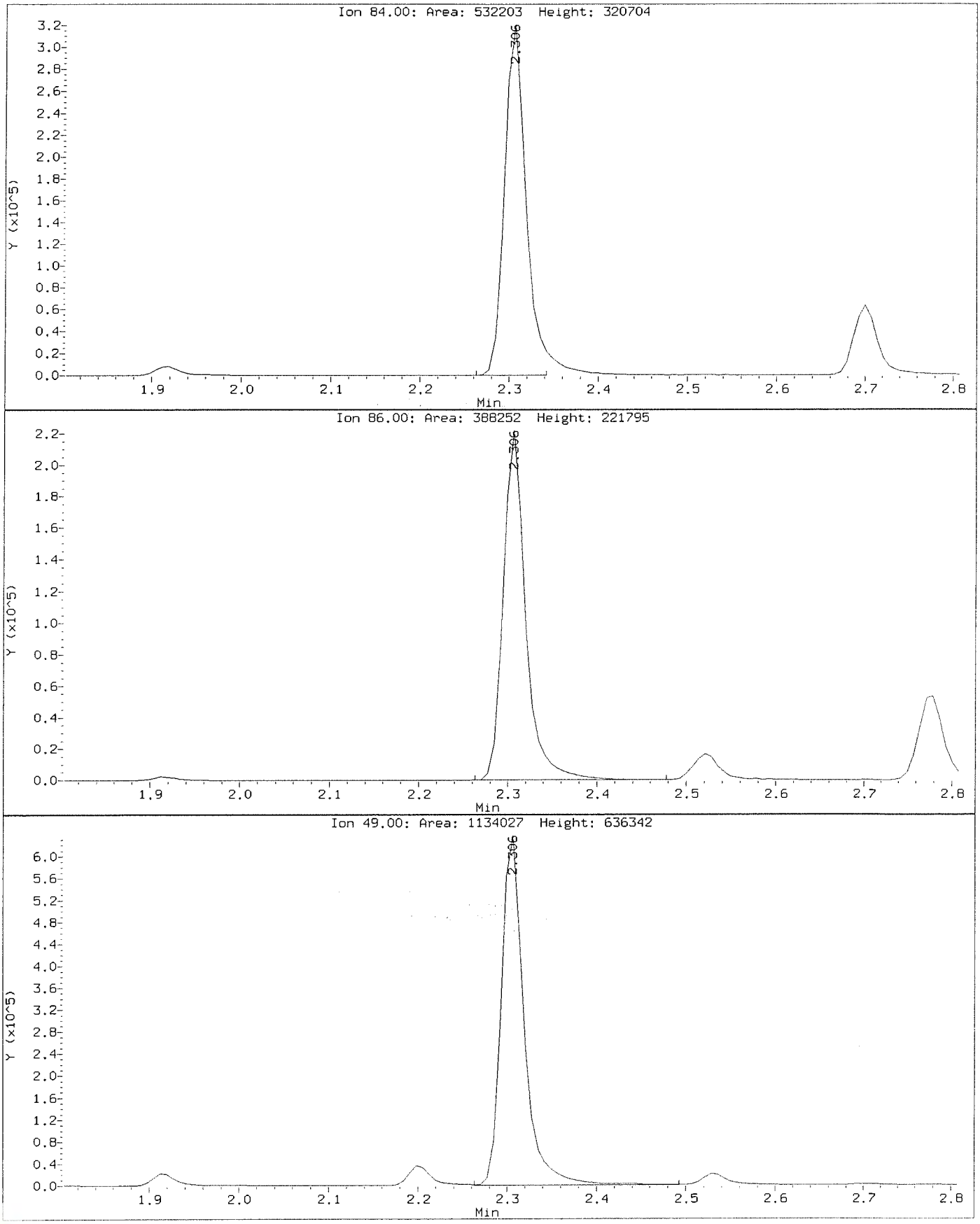
Injection Date: 07-JUL-2020 15:05
Instrument: voa6.i
Client Sample ID: VSTD200

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



ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200707.b\Y070702.D
Lab Smp Id: ICV Client Smp ID: ICV
Inj Date : 07-JUL-2020 17:55
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\X200707.b\8260W.m
Meth Date : 12-Aug-2020 15:35 voa6.i Quant Type: ISTD
Cal Date : 07-JUL-2020 15:05 Cal File: X070711.D
Als bottle: 17 QC Sample: METHSPIKE
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

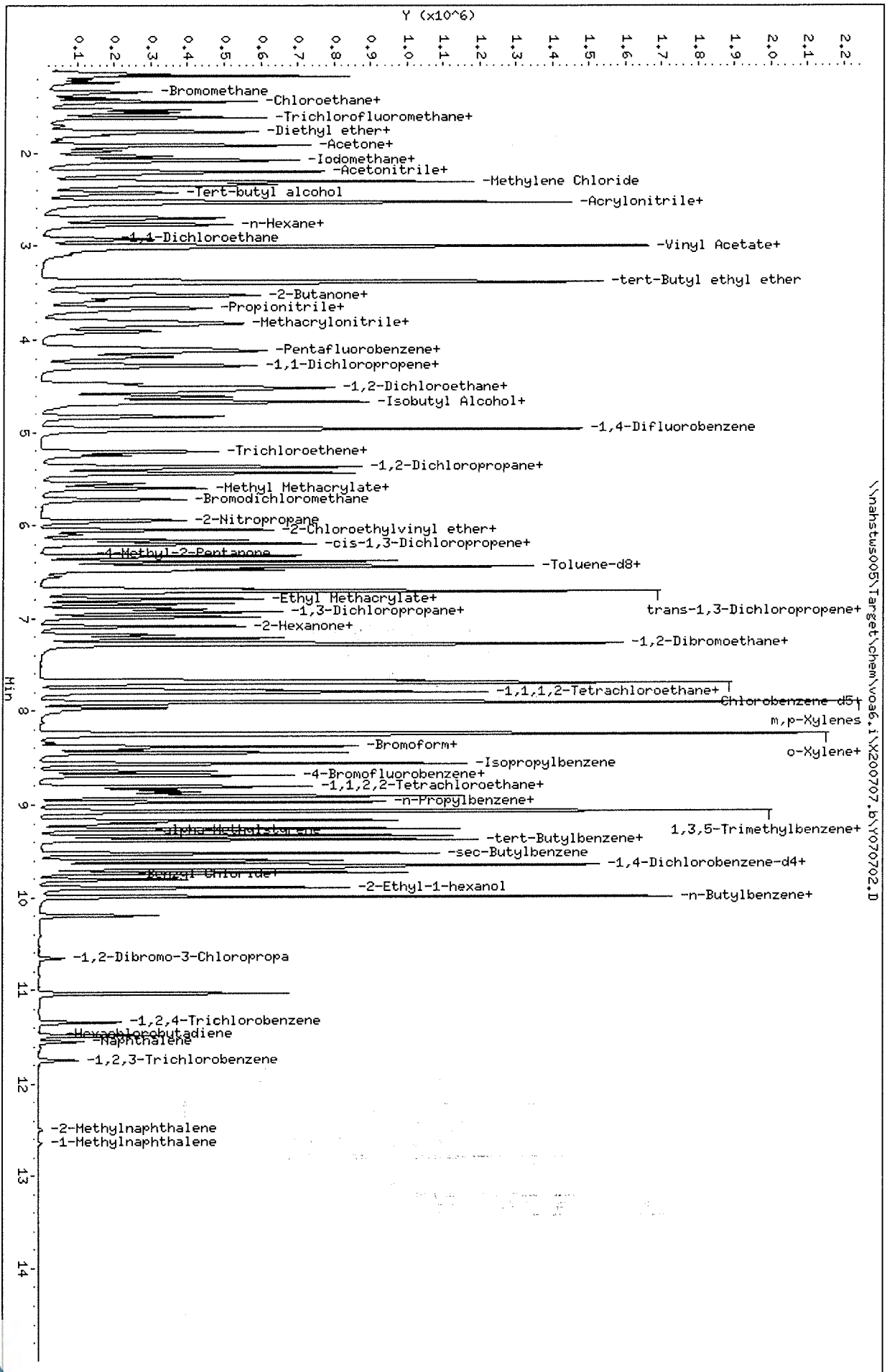
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

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	4.189	4.189	(1.000)	268686	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	446022	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	401301	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	188931	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.979)	145034	49.6163	49.61
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	194428	48.3371	48.33
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	501404	47.5256	47.52
$ 69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	189870	49.6798	49.67
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	144552	46.9139	46.91
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.976)	234841	47.7116	47.71
68 1,1,2,2-Tetrachloroethane	83	8.838	8.845	(0.914)	150169	40.2038	40.20
53 1,1,2-Trichloroethane	83	6.840	6.847	(0.892)	115138	45.3551	45.35
22 1,1-Dichloroethane	63	2.929	2.922	(0.699)	345838	45.4169	45.41
11 1,1-Dichloroethene	96	1.919	1.912	(0.458)	122268	49.1440	49.14
32 1,1-Dichloropropene	75	4.282	4.283	(0.862)	196057	44.6381	44.63
93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.215)	27885	46.8948	46.89
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	139034	42.2149	42.21(M)
90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	57765	49.1095	49.10
79 1,2,4-Trimethylbenzene	105	9.382	9.383	(0.970)	510732	45.9685	45.96
89 1,2-Dibromo-3-Chloropropane	155	10.657	10.658	(1.102)	11963	40.4535	40.45
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	141760	43.9480	43.94
88 1,2-Dichlorobenzene	146	9.998	9.999	(1.034)	242201	43.8615	43.86

Data File: \\nahstws005\Target\chem\voa6.i\X200707.b\Y070702.D Page 2
Report Date: 12-Aug-2020 15:35

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
33	1,2-Dichloroethane	62	4.562	4.562	(0.918)	247188	44.6697	44.66
42	1,2-Dichloropropane	63	5.443	5.443	(1.095)	194629	46.9072	46.90
75	1,3,5-Trimethylbenzene	105	9.067	9.075	(0.938)	500515	46.4966	46.49
83	1,3-Dichlorobenzene	146	9.612	9.612	(0.994)	272664	45.0778	45.07
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	237525	44.4518	44.45
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	270313	46.9834	46.98
26	2,2-Dichloropropane	77	3.516	3.516	(0.839)	230748	49.6041	49.60
24	2-Butanone	43	3.580	3.581	(0.855)	221040	89.0368	89.03
76	2-Chlorotoluene	91	8.974	8.981	(0.928)	430644	45.4149	45.41
52	2-Hexanone	43	7.090	7.090	(0.924)	334778	87.0072	87.00
77	4-Chlorotoluene	91	9.074	9.075	(0.939)	493208	45.8659	45.86
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	508577	47.3379	47.33
45	4-Methyl-2-Pentanone	43	6.324	6.331	(0.824)	479743	88.1112	88.11
10	Acetone	43	1.976	1.976	(0.472)	196997	86.8426	86.84
37	Benzene	78	4.519	4.519	(0.909)	586290	46.0714	46.07
74	Bromobenzene	156	8.809	8.810	(0.911)	165250	45.8476	45.84
29	Bromochloromethane	128	3.802	3.803	(0.908)	79535	42.6195	42.61
39	Bromodichloromethane	83	5.729	5.729	(1.153)	210732	47.1700	47.17
66	Bromoform	173	8.415	8.416	(1.097)	99110	44.4902	44.49
6	Bromomethane	94	1.338	1.331	(0.320)	95465	50.5994	50.59
19	Carbon Disulfide	76	2.076	2.069	(0.496)	795057	97.3144	97.31
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	196676	46.2055	46.20
59	Chlorobenzene	112	7.699	7.699	(1.004)	376773	46.0839	46.08
7	Chloroethane	64	1.403	1.396	(0.335)	117110	48.3481	48.34
28	Chloroform	83	3.910	3.910	(0.933)	272572	46.2958	46.29
3	Chloromethane	50	1.081	1.081	(0.258)	260290	47.1413	47.14
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.843)	163788	46.6356	46.63
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	247464	45.9677	45.96
55	Dibromochloromethane	129	7.176	7.184	(0.936)	151100	45.8371	45.83
44	Dibromomethane	93	5.557	5.558	(1.118)	100387	44.8903	44.89
2	Dichlorodifluoromethane	85	0.973	0.973	(0.232)	162096	49.8347	49.83
61	Ethylbenzene	106	7.799	7.807	(1.017)	200248	46.2779	46.27
91	Hexachlorobutadiene	225	11.488	11.489	(1.188)	50803	55.7708	55.77
67	Isopropylbenzene	105	8.566	8.566	(1.117)	593517	46.2424	46.24
62	m,p-Xylenes	106	7.907	7.907	(1.031)	485701	93.3406	93.34
17	Methylene Chloride	84	2.305	2.306	(0.550)	169597	57.7227	57.72(M)
87	n-Butylbenzene	91	9.998	9.999	(1.034)	465106	48.5338	48.53
73	n-Propylbenzene	91	8.917	8.917	(0.922)	722217	46.8703	46.87
92	Naphthalene	128	11.546	11.546	(1.194)	75028	40.9990	40.99
63	o-Xylene	106	8.244	8.244	(1.075)	232988	45.7045	45.70
81	sec-Butylbenzene	105	9.526	9.526	(0.985)	593924	46.8905	46.89
64	Styrene	104	8.265	8.265	(1.078)	402300	45.4097	45.40
78	tert-Butylbenzene	119	9.339	9.340	(0.966)	402938	46.4892	46.48
56	Tetrachloroethene	164	6.933	6.933	(0.904)	116167	47.3924	47.39
50	Toluene	91	6.446	6.453	(0.840)	599697	46.8394	46.83
20	trans-1,2-Dichloroethene	96	2.535	2.535	(0.605)	141337	48.1283	48.12
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	223471	46.2025	46.20
38	Trichloroethene	130	5.214	5.214	(1.049)	151130	45.6691	45.66
8	Trichlorofluoromethane	101	1.560	1.561	(0.373)	232659	50.2128	50.21
5	Vinyl Chloride	62	1.145	1.145	(0.273)	226532	47.9935	47.99



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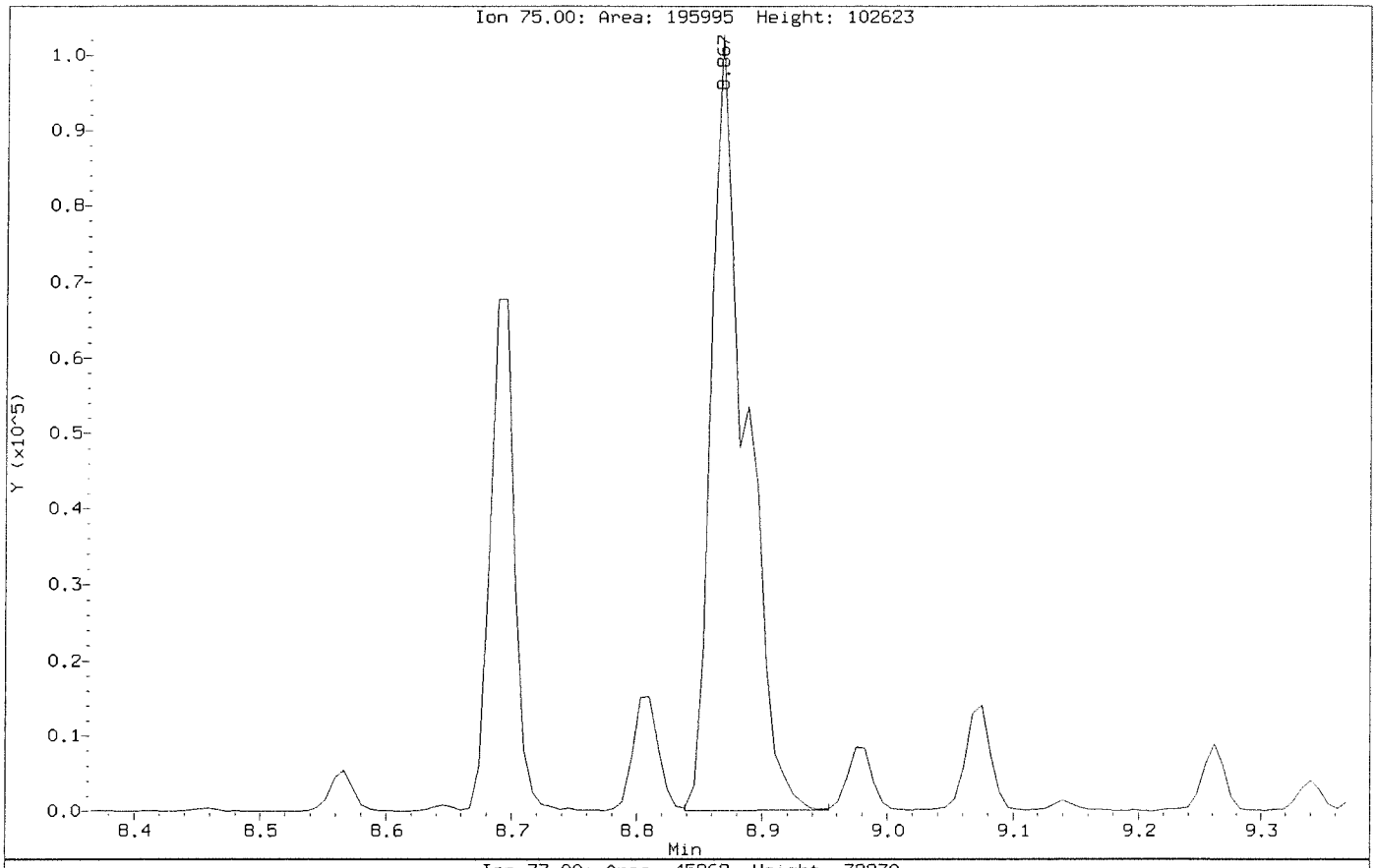
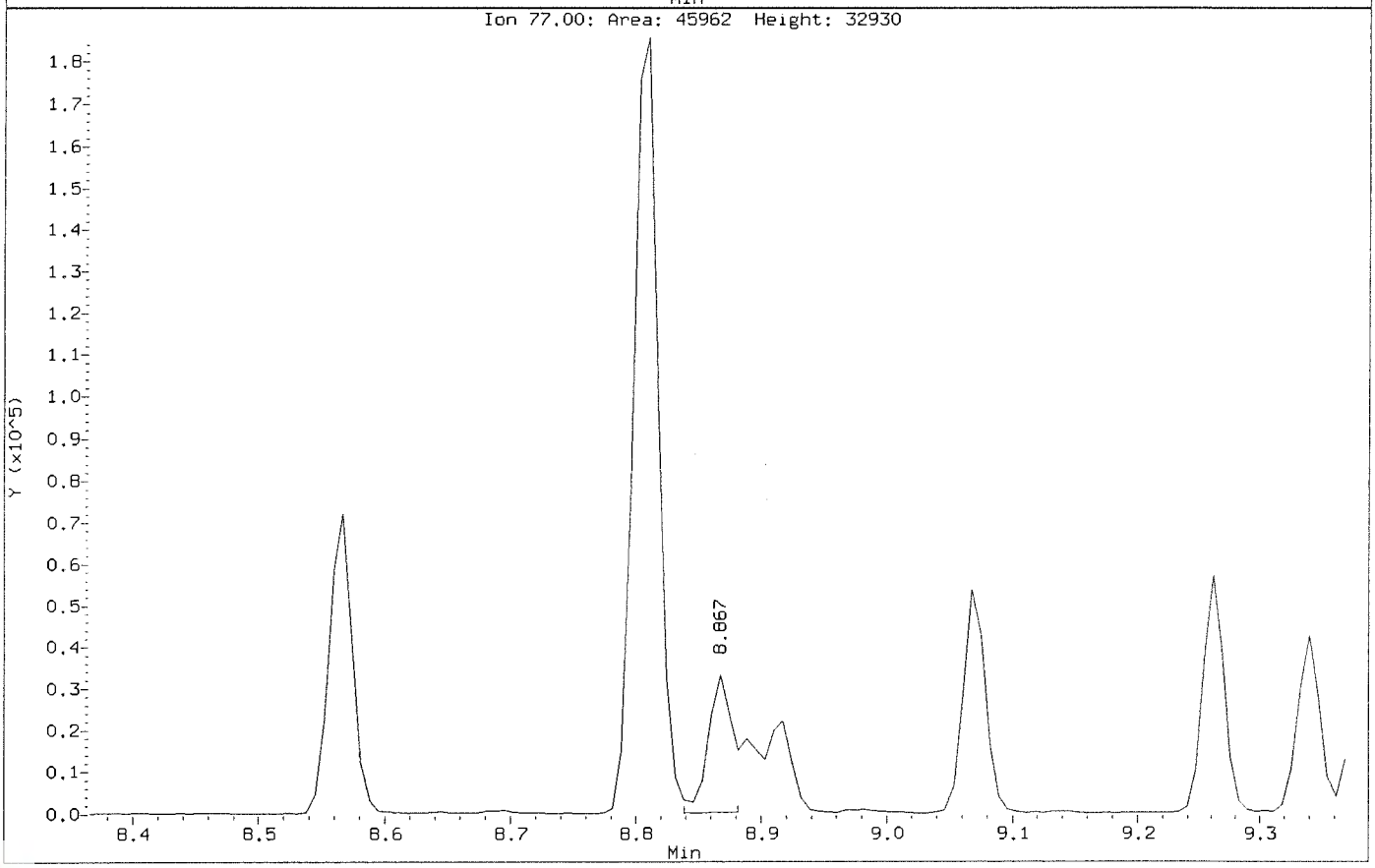
Client ID: ICV
Sample Info: CCV;CCV;2;;;;ICV
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\nahstws005\Target\chem\voa6.i\X200707.b\Before\Y070702.D
Injection Date: 07-JUL-2020 17:55
Instrument: voa6.i
Client Sample ID: ICV

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





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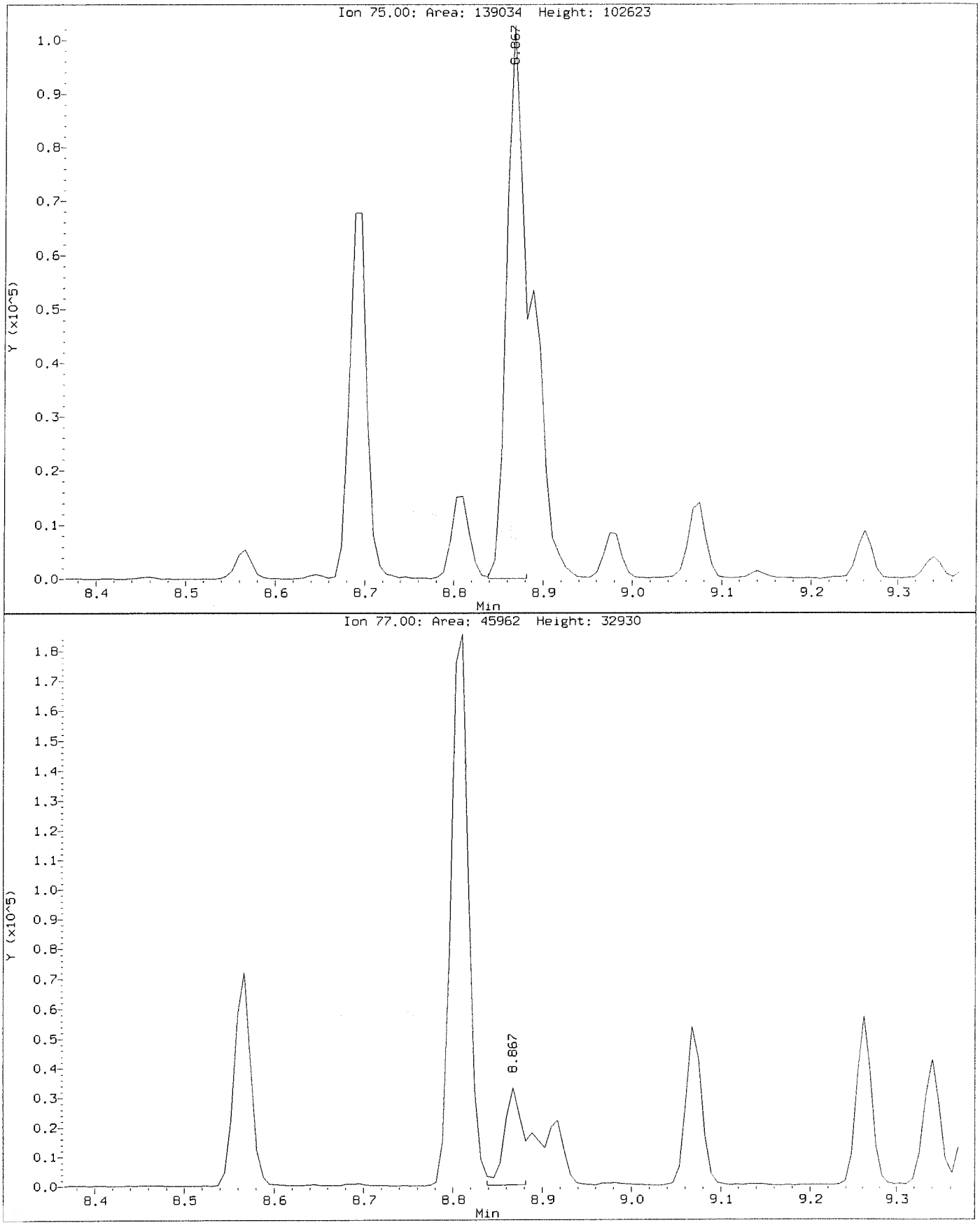
Client Sample ID: ICV

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4



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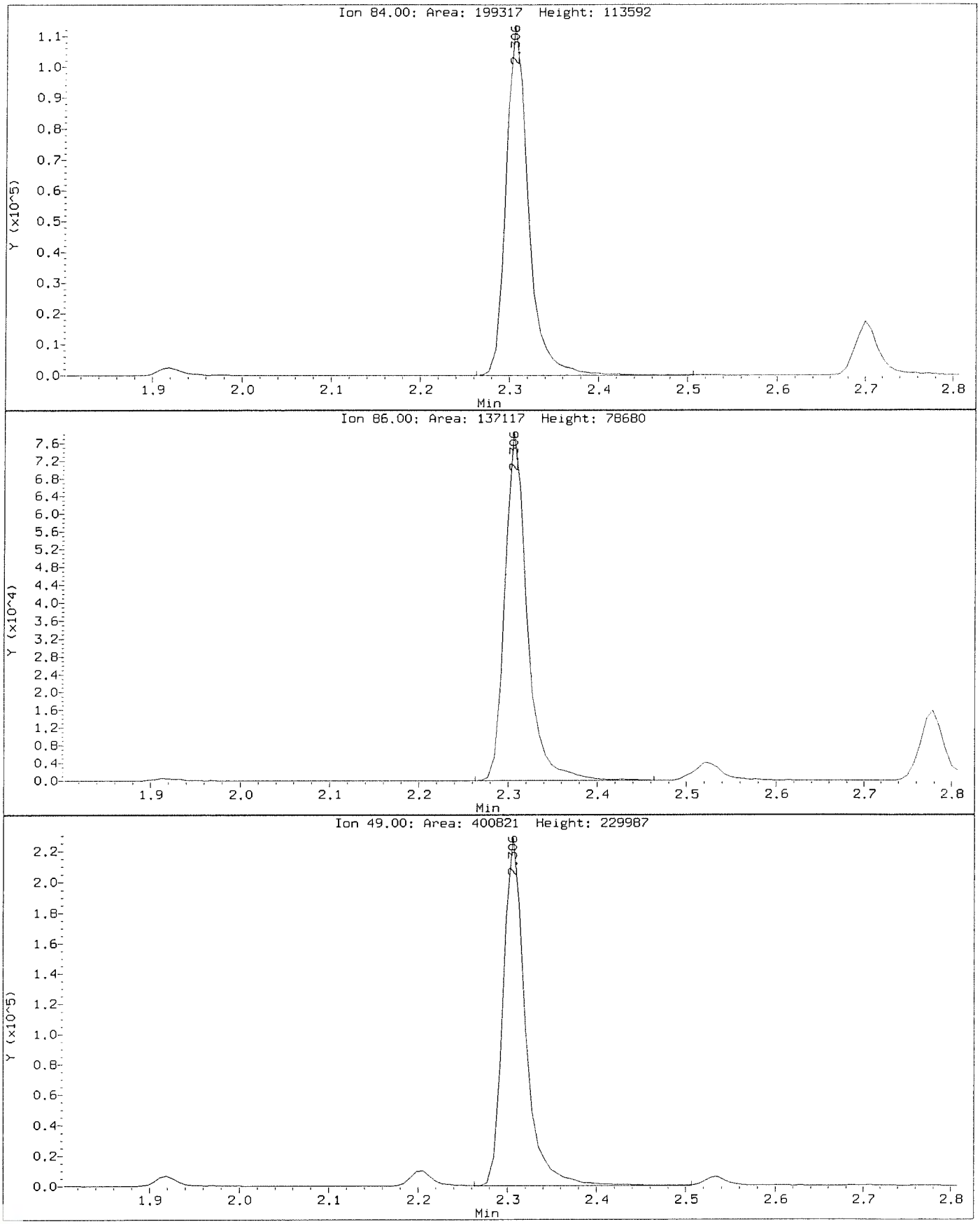
Injection Date: 07-JUL-2020 17:55
Instrument: voa6.i
Client Sample ID: ICV

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



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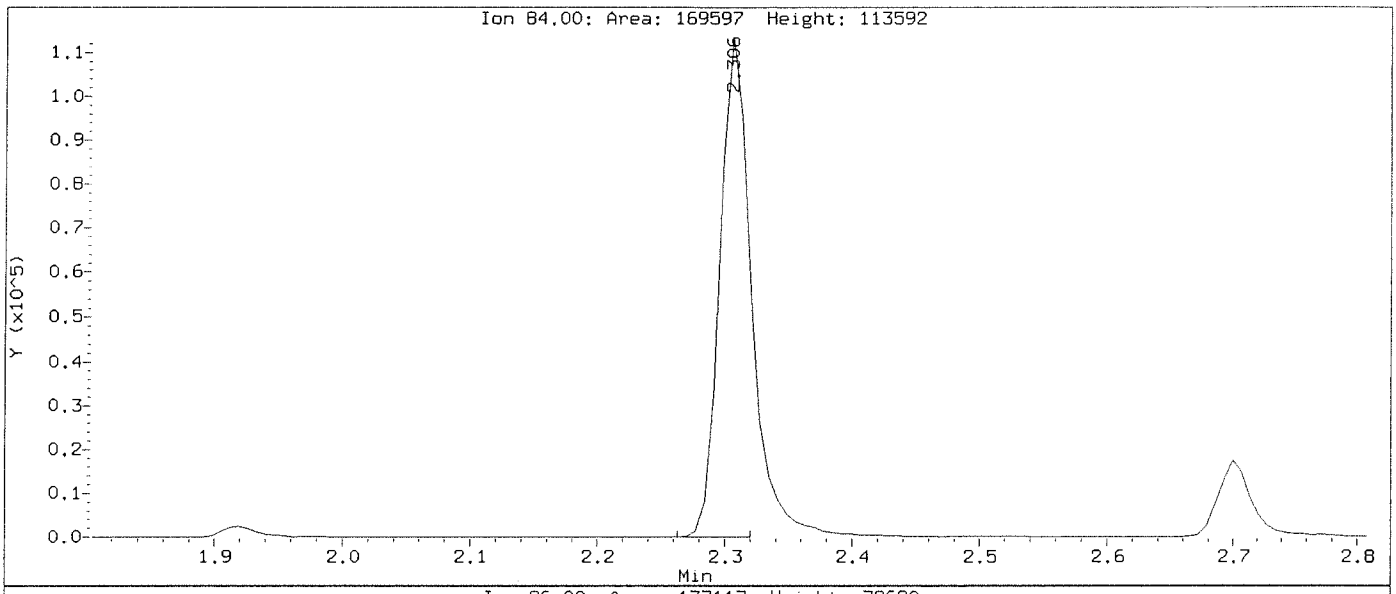
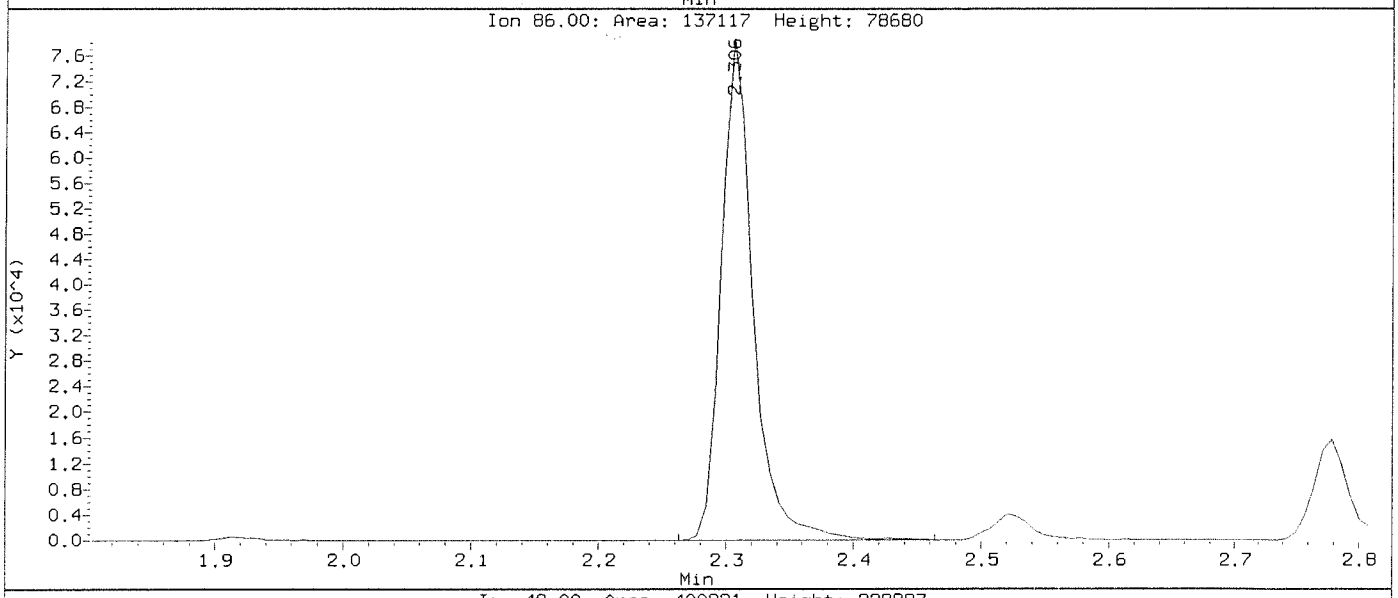
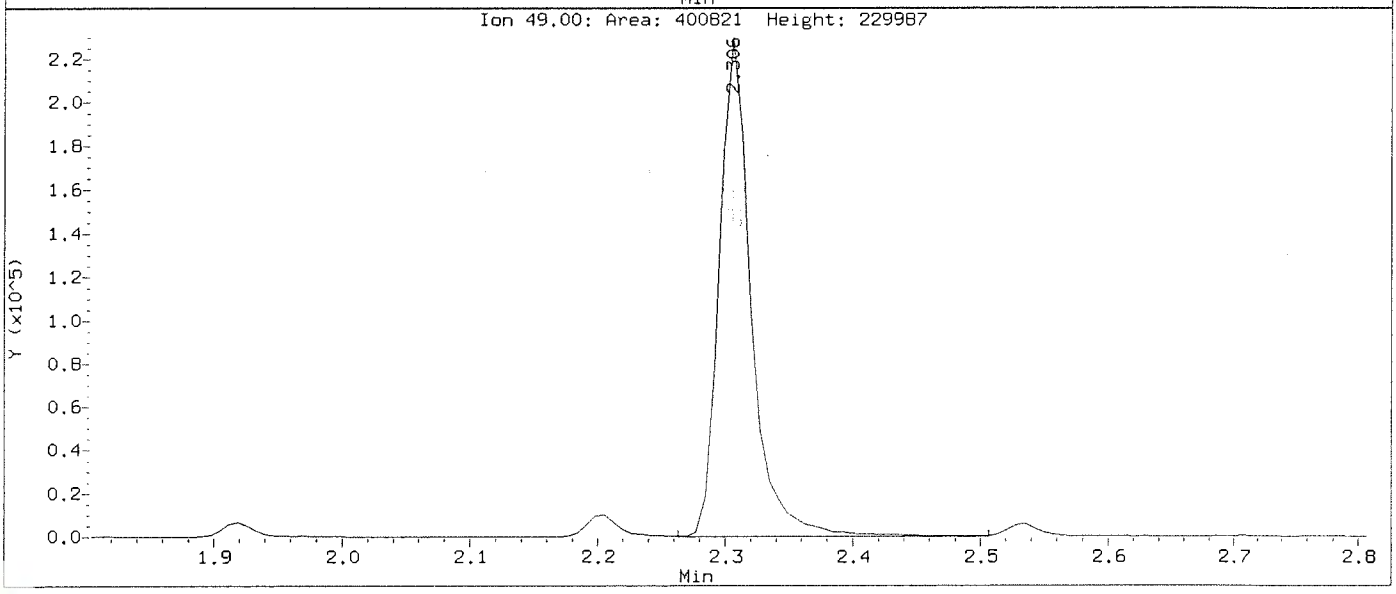
Injection Date: 07-JUL-2020 17:55
Instrument: voa6.i
Client Sample ID: ICV

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







MSVOA06 -Logbook

Batch: 41076 **Analyst:** Presenta Cabascango

Date: 07-07-2020 **Reviewer:**

Method: 8260 **Laboratory:** Houston

Comments:

#	Samp ID	Type	Analyzed	DF	Init Wt/Vol	Final Vol	File ID	Matrix	Status	pH
1	BFB	TUNE	07-07-2020 10:42 am	1.00	50 mL	50 mL	X070701.D	Liquid	Y	NA
	Auto find/ purged									
2	VSTD000.25	ICAL1	07-07-2020 11:06 am	1.00	50 mL	50 mL	X070702.D	Liquid	Y	NA
	0.1 uL cal std/100 mL DI									
3	VSTD000.5	ICAL2	07-07-2020 11:30 am	1.00	50 mL	50 mL	X070703.D	Liquid	Y	NA
	0.10 uL cal std/50 mL DI									
4	VSTD001	ICAL3	07-07-2020 12:18 pm	1.00	50 mL	50 mL	X070704.D	Liquid	Y	NA
	0.20 uL cal std/50 mL DI									
5	VSTD002	ICAL4	07-07-2020 12:42 pm	1.00	50 mL	50 mL	X070705.D	Liquid	Y	NA
	0.40 uL cal std/50 mL DI									
6	VSTD005	ICAL5	07-07-2020 01:06 pm	1.00	50 mL	50 mL	X070706.D	Liquid	Y	NA
	1.0 uL cal std/50 mL DI									
7	VSTD020	ICAL6	07-07-2020 01:29 pm	1.00	50 mL	50 mL	X070707.D	Liquid	Y	NA
	4.0 uL cal std/50 mL DI									
8	VSTD050	ICAL7	07-07-2020 01:53 pm	1.00	50 mL	50 mL	X070708.D	Liquid	Y	NA
	10 uL cal std/50 mL DI									
9	VSTD100	ICAL8	07-07-2020 02:17 pm	1.00	50 mL	50 mL	X070709.D	Liquid	Y	NA
	20 uL cal std/50 mL DI									
10	VSTD150	ICAL9	07-07-2020 02:41 pm	1.00	50 mL	50 mL	X070710.D	Liquid	Y	NA
	30 uL cal std/50 mL DI									
11	VSTD200	ICAL	07-07-2020 03:05 pm	1.00	50 mL	50 mL	X070711.D	Liquid	Y	NA
	40 uL cal std/50 mL DI									
12	BLANK	SAMP	07-07-2020 03:29 pm	1.00	50 mL	50 mL	X070712.D	Liquid	Y	NA
13	BLANK	SAMP	07-07-2020 04:17 pm	1.00	50 mL	50 mL	X070713.D	Liquid	Y	NA
14	BFB	TUNE	07-07-2020 05:31 pm	1.00	50 mL	50 mL	Y070701.D	Liquid	Y	NA
	Auto find/ purged									
15	CCV	ICV	07-07-2020 05:55 pm	1.00	50 mL	50 mL	Y070702.D	Liquid	Y	NA
	10 uL ical std/50 mL DI									
16	CCV	CCV	07-07-2020 06:19 pm	1.00	50 mL	50 mL	Y070703.D	Liquid	Y	NA
	10 uL cal std/50 mL DI									
17	CCB	SAMP	07-07-2020 06:43 pm	1.00	50 mL	50 mL	Y070704.D	Liquid	Y	NA
18	VLCSW-200707	LCS	07-07-2020 07:07 pm	1.00	50 mL	50 mL	Y070705.D	Liquid	Y	NA
	4.0 uL cal std/50 mL DI									
19	BLANK	SAMP	07-07-2020 07:31 pm	1.00	50 mL	50 mL	Y070706.D	Liquid	Y	NA
20	BLANK	SAMP	07-07-2020 07:55 pm	1.00	50 mL	50 mL	Y070707.D	Liquid	Y	NA
21	VBLKW-200707	MBLK	07-07-2020 08:19 pm	1.00	50 mL	50 mL	Y070708.D	Liquid	Y	NA
22	HS20061218-07	SAMP	07-07-2020 08:43 pm	1.00	50 mL	50 mL	Y070709.D	Liquid	Y	<2
23	HS20061390-11	SAMP	07-07-2020 09:07 pm	1.00	50 mL	50 mL	Y070710.D	Liquid	Y	<2
24	HS20061218-01	SAMP	07-07-2020 09:31 pm	1.00	50 mL	50 mL	Y070711.D	Liquid	Y	<2
25	HS20061218-02	SAMP	07-07-2020 09:55 pm	1.00	50 mL	50 mL	Y070712.D	Liquid	Y	<2
26	HS20061218-01MS	MS	07-07-2020 10:19 pm	1.00	50 mL	50 mL	Y070713.D	Liquid	Y	<2
	3.5 uL cal std/40 mL samp									
27	HS20061218-01MSD	MSD	07-07-2020 10:43 pm	1.00	50 mL	50 mL	Y070714.D	Liquid	Y	<2
	3.5 uL cal std/40 mL samp									
28	HS20061218-02	SAMP	07-07-2020 11:07 pm	25.00	2 mL	50 mL	Y070715.D	Liquid	Y	<2
29	HS20061218-03	SAMP	07-07-2020 11:31 pm	1.00	50 mL	50 mL	Y070716.D	Liquid	Y	<2
30	HS20061218-04	SAMP	07-07-2020 11:55 pm	1.00	50 mL	50 mL	Y070717.D	Liquid	Y	<2
31	HS20061218-05	SAMP	07-08-2020 12:20 am	1.00	50 mL	50 mL	Y070718.D	Liquid	Y	<2
32	HS20061218-06	SAMP	07-08-2020 12:44 am	1.00	50 mL	50 mL	Y070719.D	Liquid	Y	<2

MSVOA06 -Logbook

#	Samp ID	Type	Analyzed	DF	Init Wt/Vol	Final Vol	File ID	Matrix	Status	pH
33	HS20061390-01	SAMP	07-08-2020 01:08 am	1.00	50 mL	50 mL	Y070720.D	Liquid	Y	<2
34	HS20061390-02	SAMP	07-08-2020 01:32 am	1.00	50 mL	50 mL	Y070721.D	Liquid	Y	<2
35	HS20061390-03	SAMP	07-08-2020 01:56 am	1.00	50 mL	50 mL	Y070722.D	Liquid	Y	<2
36	HS20061390-04	SAMP	07-08-2020 02:20 am	1.00	50 mL	50 mL	Y070723.D	Liquid	Y	<2
37	HS20061390-05	SAMP	07-08-2020 02:44 am	1.00	50 mL	50 mL	Y070724.D	Liquid	Y	<2
38	HS20061390-06	SAMP	07-08-2020 03:08 am	1.00	50 mL	50 mL	Y070725.D	Liquid	Y	<2
39	HS20061390-07	SAMP	07-08-2020 03:32 am	1.00	50 mL	50 mL	Y070726.D	Liquid	Y	<2
40	HS20061390-08	SAMP	07-08-2020 03:56 am	1.00	50 mL	50 mL	Y070727.D	Liquid	Y	<2
41	HS20061390-09	SAMP	07-08-2020 04:20 am	1.00	50 mL	50 mL	Y070728.D	Liquid	Y	<2
42	HS20061390-10n/r	SAMP	07-08-2020 04:44 am	1.00	50 mL	50 mL	Y070729.D	Liquid	Y	<2
43	CCV-END	CCV	07-08-2020 05:08 am	1.00	50 mL	50 mL	Y070730.D	Liquid	Y	NA
	10 uL cal std/50 mL DI									
44	BLANK	SAMP	07-08-2020 05:32 am	1.00	50 mL	50 mL	Y070731.D	Liquid	Y	NA

Chemical	Value
SURR SPK ID	31106-34-06
IS ID	31106-34-06
CAL STD ID	31106-37-01/02
BFB ID	31106-34-06

FORM 2
WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20061390

	CLIENT SAMPLE NO.	SMC1 (DCE) #	SMC2 #	SMC3 (TOL) #	OTHER #	TOT OUT
01	VLCSW-200707	101	103	97	104	0
02	VBLKW-200707	90	95	105	100	0
03	HS20061390-11	88	94	102	100	0
04	HS20061390-01	88	93	100	100	0
05	HS20061390-02	87	93	102	101	0
06	HS20061390-03	89	93	102	103	0
07	HS20061390-04	89	93	103	102	0
08	HS20061390-05	90	93	104	100	0
09	HS20061390-06	88	94	111	97	0
10	HS20061390-07	88	93	104	99	0
11	HS20061390-08	89	93	104	99	0
12	HS20061390-09	87	93	102	102	0
13						
14						
15						
16						
17						
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25						
26						
27						
28						

		QC LIMITS
SMC1 (DCE)	= 1,2-Dichloroethane-d4	(0-130)
SMC2	= Dibromofluoromethane	(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

VBLKW-200707

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20061390

Lab File ID: Y070708 Lab Sample ID: VBLKW-200707

Date Analyzed: 07/07/20 Time Analyzed: 2019

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-200707	VLCSW-200707	Y070705	1907
02	HS20061390-1	HS20061390-11	Y070710	2107
03	HS20061218-0	HS20061218-01M	Y070713	2219
04	HS20061218-0	HS20061218-01M	Y070714	2243
05	HS20061390-0	HS20061390-01	Y070720	0108
06	HS20061390-0	HS20061390-02	Y070721	0132
07	HS20061390-0	HS20061390-03	Y070722	0156
08	HS20061390-0	HS20061390-04	Y070723	0220
09	HS20061390-0	HS20061390-05	Y070724	0244
10	HS20061390-0	HS20061390-06	Y070725	0308
11	HS20061390-0	HS20061390-07	Y070726	0332
12	HS20061390-0	HS20061390-08	Y070727	0356
13	HS20061390-0	HS20061390-09	Y070728	0420
14				
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27				
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COMMENTS:

FORM 5
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20061390

Lab File ID: Y070701 BFB Injection Date: 07/07/20

Instrument ID: VOA6 BFB Injection Time: 1731

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	25.0
75	30.0 - 60.0% of mass 95	47.9
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.4
173	Less than 2.0% of mass 174	0.6 (0.7)1
174	Greater than 50.0% of mass 95	88.0
175	5.0 - 9.0% of mass 174	6.6 (7.5)1
176	95.0 - 101.0% of mass 174	85.9 (97.6)1
177	5.0 - 9.0% of mass 176	5.6 (6.5)2

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

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	CCV	CCV	Y070703	07/07/20	1819
02	VLCSW-200707	VLCSW-200707	Y070705	07/07/20	1907
03	VBLKW-200707	VBLKW-200707	Y070708	07/07/20	2019
04	HS20061390-1	HS20061390-11	Y070710	07/07/20	2107
05	HS20061218-0	HS20061218-01M	Y070713	07/07/20	2219
06	HS20061218-0	HS20061218-01M	Y070714	07/07/20	2243
07	HS20061390-0	HS20061390-01	Y070720	07/08/20	0108
08	HS20061390-0	HS20061390-02	Y070721	07/08/20	0132
09	HS20061390-0	HS20061390-03	Y070722	07/08/20	0156
10	HS20061390-0	HS20061390-04	Y070723	07/08/20	0220
11	HS20061390-0	HS20061390-05	Y070724	07/08/20	0244
12	HS20061390-0	HS20061390-06	Y070725	07/08/20	0308
13	HS20061390-0	HS20061390-07	Y070726	07/08/20	0332
14	HS20061390-0	HS20061390-08	Y070727	07/08/20	0356
15	HS20061390-0	HS20061390-09	Y070728	07/08/20	0420
16	CCV-END	CCV-END	Y070730	07/08/20	0508
17					
18					
19					
20					
21					
22					

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20061390

Instrument ID: VOA6 Calibration Date: 07/07/20 Time: 1819

Lab File ID: Y070703 Init. Calib. Date(s): 07/07/20 07/07/20

Init. Calib. Times: 1106 1505

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
cis-1,3-Dichloropropene	0.6040000	0.5771952	0.5771952	0.2	4.44	20.00	AVRG
trans-1,3-Dichloropropene	0.5420000	0.5171524	0.5171524	0.1	4.58	20.00	AVRG
1,3-Dichlorobenzene	1.6010000	1.5279285	1.5279285	0.6	4.56	20.00	AVRG
2,2-Dichloropropane	0.8650000	0.8612261	0.8612261	0.1	0.44	20.00	AVRG
1,1-Dichloropropene	0.4920000	0.4578773	0.4578773	0.1	6.94	20.00	AVRG
Dibromomethane	0.2510000	0.2373354	0.2373354	0.1	5.44	20.00	AVRG
1,2-Dibromoethane	0.4020000	0.3618263	0.3618263	0.1	9.99	20.00	AVRG
trans-1,2-Dichloroethene	0.5460000	0.5352365	0.5352365	0.1	1.97	20.00	AVRG
1,1,1,2-Tetrachloroethane	0.3840000	0.3670741	0.3670741	0.1	4.41	20.00	AVRG
1,1,1-Trichloroethane	0.9160000	0.8817438	0.8817438	0.1	3.74	20.00	AVRG
1,1,2,2-Tetrachloroethane	0.9880000	0.8611314	0.8611314	0.3	12.84	20.00	AVRG
1,1,2-Trichloroethane	0.3160000	0.2935145	0.2935145	0.1	7.12	20.00	AVRG
1,1-Dichloroethane	1.4170000	1.3159131	1.3159131	0.2	7.13	20.00	AVRG
1,1-Dichloroethene	0.4630000	0.4449515	0.4449515	0.1	3.90	20.00	AVRG
Trichloroethene	0.3710000	0.3557761	0.3557761	0.2	4.10	20.00	AVRG
1,2,3-Trichlorobenzene	47.611837	50.000000	0.1499282	0.01	4.78	20.00	LINR
Trichlorofluoromethane	0.8620000	0.7986575	0.7986575	0.1	7.35	20.00	AVRG
1,2,4-Trichlorobenzene	50.413134	50.000000	0.3140847	0.1	-0.83	20.00	LINR
1,2,4-Trimethylbenzene	2.9400000	2.8244038	2.8244038	0.1	3.93	20.00	AVRG
Tetrachloroethene	0.3050000	0.2962767	0.2962767	0.2	2.86	20.00	AVRG
1,2-Dichlorobenzene	1.4610000	1.3430275	1.3430275	0.4	8.07	20.00	AVRG
1,2-Dichloroethane	0.6200000	0.5834443	0.5834443	0.1	5.90	20.00	AVRG
1,2-Dichloropropane	0.4650000	0.4546589	0.4546589	0.1	2.22	20.00	AVRG
1,3,5-Trimethylbenzene	2.8490000	2.8062356	2.8062356	0.1	1.50	20.00	AVRG
1,3-Dichloropropane	0.6660000	0.6022970	0.6022970	0.1	9.56	20.00	AVRG
1,4-Dichlorobenzene	50.060642	50.000000	1.5240613	0.4	-0.12	20.00	LINR
Toluene	1.5950000	1.5198853	1.5198853	0.4	4.71	20.00	AVRG
2-Butanone	92.548477	100.00000	0.4264903	0.1	7.45	20.00	LINR
2-Chlorotoluene	2.5100000	2.3804425	2.3804425	0.1	5.16	20.00	AVRG
2-Hexanone	90.983946	100.00000	0.4353922	0.1	9.02	20.00	LINR
4-Chlorotoluene	2.8460000	2.7683792	2.7683792	0.1	2.73	20.00	AVRG
tert-Butylbenzene	2.2940000	2.2488055	2.2488055	0.1	1.97	20.00	AVRG
4-Methyl-2-Pentanone	91.404307	100.00000	0.6192832	0.1	8.60	20.00	LINR
Acetone	89.713944	100.00000	0.3752725	0.1	10.29	20.00	LINR
Benzene	1.4260000	1.3643333	1.3643333	0.5	4.32	20.00	AVRG
Bromobenzene	0.9540000	0.9230185	0.9230185	0.1	3.25	20.00	AVRG
Bromochloromethane	0.3470000	0.3119334	0.3119334	0.1	10.10	20.00	AVRG
Bromodichloromethane	0.5010000	0.4897195	0.4897195	0.2	2.25	20.00	AVRG
Bromoform	0.2780000	0.2603793	0.2603793	0.1	6.34	20.00	AVRG
romomethane	51.392737	50.000000	0.3608654	0.1	-2.78	20.00	LINR
arbon Disulfide	1.5200000	1.4851930	1.4851930	0.1	2.29	20.00	AVRG
rbon Tetrachloride	0.4770000	0.4552864	0.4552864	0.1	4.55	20.00	AVRG

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS2006139

Instrument ID: VOA6 Calibration Date: 07/07/20 Time: 1819

Lab File ID: Y070703 Init. Calib. Date(s): 07/07/20 07/07/20

Init. Calib. Times: 1106 1505

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
Chlorobenzene	1.0190000	0.9631182	0.9631182	0.5	5.48	20.00	AVRG
Chloroethane	45.076406	50.000000	0.4074919	0.1	9.85	20.00	LINR
Chloroform	1.0950000	1.0391064	1.0391064	0.2	5.10	20.00	AVRG
Chloromethane	1.0270000	0.9794392	0.9794392	0.1	4.63	20.00	AVRG
cis-1,2-Dichloroethene	0.6540000	0.6208478	0.6208478	0.1	5.07	20.00	AVRG
Dibromochloromethane	0.4110000	0.3876389	0.3876389	0.1	5.68	20.00	AVRG
Dichlorodifluoromethane	0.6050000	0.5823139	0.5823139	0.1	3.75	20.00	AVRG
Ethylbenzene	0.5390000	0.5118779	0.5118779	0.1	5.03	20.00	AVRG
Hexachlorobutadiene	55.520638	50.000000	0.2676610	0.1	-11.04	20.00	LINR
Isopropylbenzene	1.5990000	1.5214433	1.5214433	0.1	4.85	20.00	AVRG
m,p-Xylenes	0.6480000	0.6158106	0.6158106	0.1	4.97	20.00	AVRG
Methylene Chloride	0.5470000	0.6365233	0.6365233	0.1	-16.37	20.00	AVRG
n-Butylbenzene	2.5360000	2.5772582	2.5772582	0.5	-1.63	20.00	AVRG
n-Propylbenzene	4.0780000	4.0228905	4.0228905	0.1	1.35	20.00	AVRG
Naphthalene	46.017601	50.000000	0.4460850	0.2	7.96	20.00	LINR
o-Xylene	0.6350000	0.6039662	0.6039662	0.3	4.89	20.00	AVRG
sec-Butylbenzene	3.3520000	3.2963636	3.2963636	0.1	1.66	20.00	AVRG
Styrene	1.1040000	1.0660586	1.0660586	0.3	3.44	20.00	AVRG
Vinyl Chloride	0.8780000	0.8300712	0.8300712	0.1	5.46	20.00	AVRG
1,2,3-Trichloropropane	0.8720000	0.7728611	0.7728611	0.1	11.37	20.00	AVRG
p-Isopropyltoluene	2.8430000	2.8619138	2.8619138	0.1	-0.66	20.00	AVRG
1,2-Dibromo-3-Chloropropane	44.382352	50.000000	6.92e-002	0.05	11.24	20.00	LINR
1,2-Dichloroethane-d4	50.881285	50.000000	0.7611783	0.1	-1.76	20.00	LINR
Dibromofluoromethane	51.583708	50.000000	0.5608121	0.1	-3.17	20.00	LINR
Toluene-d8	1.3140000	1.2879748	1.2879748	0.1	1.98	20.00	AVRG
4-Bromofluorobenzene	51.941712	50.000000	0.4942174	0.1	-3.88	20.00	LINR

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20061390

Instrument ID: VOA6 Calibration Date: 07/08/20 Time: 0508

Lab File ID: Y070730 Init. Calib. Date(s): 07/07/20 07/07/20

Init. Calib. Times: 1106 1505

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
cis-1,3-Dichloropropene	0.6040000	0.5598856	0.5598856	0.2	7.30	50.00	AVRG
trans-1,3-Dichloropropene	0.5420000	0.4959654	0.4959654	0.1	8.49	50.00	AVRG
1,3-Dichlorobenzene	1.6010000	1.5117508	1.5117508	0.6	5.57	50.00	AVRG
2,2-Dichloropropane	0.8650000	0.7076452	0.7076452	0.1	18.19	50.00	AVRG
1,1-Dichloropropene	0.4920000	0.4639821	0.4639821	0.1	5.69	50.00	AVRG
Dibromomethane	0.2510000	0.2337215	0.2337215	0.1	6.88	50.00	AVRG
1,2-Dibromoethane	0.4020000	0.3568125	0.3568125	0.1	11.24	50.00	AVRG
trans-1,2-Dichloroethene	0.5460000	0.5522329	0.5522329	0.1	-1.14	50.00	AVRG
1,1,1,2-Tetrachloroethane	0.3840000	0.3648615	0.3648615	0.1	4.98	50.00	AVRG
1,1,1-Trichloroethane	0.9160000	0.9381547	0.9381547	0.1	-2.42	50.00	AVRG
1,1,2,2-Tetrachloroethane	0.9880000	0.7674124	0.7674124	0.3	22.33	50.00	AVRG
1,1,2-Trichloroethane	0.3160000	0.2944745	0.2944745	0.1	6.81	50.00	AVRG
1,1-Dichloroethane	1.4170000	1.4102125	1.4102125	0.2	0.48	50.00	AVRG
1,1-Dichloroethene	0.4630000	0.4921774	0.4921774	0.1	-6.30	50.00	AVRG
Trichloroethene	0.3710000	0.3795853	0.3795853	0.2	-2.31	50.00	AVRG
1,2,3-Trichlorobenzene	33.274037	50.000000	0.1032462	0.01	33.45	50.00	LINR
Trichlorofluoromethane	0.8620000	0.8759259	0.8759259	0.1	-1.62	50.00	AVRG
1,2,4-Trichlorobenzene	38.913316	50.000000	0.2405335	0.1	22.17	50.00	LINR
1,2,4-Trimethylbenzene	2.9400000	2.8327700	2.8327700	0.1	3.65	50.00	AVRG
Tetrachloroethene	0.3050000	0.2893271	0.2893271	0.2	5.14	50.00	AVRG
1,2-Dichlorobenzene	1.4610000	1.3200616	1.3200616	0.4	9.65	50.00	AVRG
1,2-Dichloroethane	0.6200000	0.5796430	0.5796430	0.1	6.51	50.00	AVRG
1,2-Dichloropropane	0.4650000	0.4606073	0.4606073	0.1	0.94	50.00	AVRG
1,3,5-Trimethylbenzene	2.8490000	2.7865534	2.7865534	0.1	2.19	50.00	AVRG
1,3-Dichloropropane	0.6660000	0.6028391	0.6028391	0.1	9.48	50.00	AVRG
1,4-Dichlorobenzene	48.720218	50.000000	1.4834155	0.4	2.56	50.00	LINR
Toluene	1.5950000	1.5140807	1.5140807	0.4	5.07	50.00	AVRG
2-Butanone	90.166225	100.00000	0.4162092	0.1	9.83	50.00	LINR
2-Chlorotoluene	2.5100000	2.4342235	2.4342235	0.1	3.02	50.00	AVRG
2-Hexanone	82.412601	100.00000	0.3960002	0.1	17.59	50.00	LINR
4-Chlorotoluene	2.8460000	2.7666201	2.7666201	0.1	2.79	50.00	AVRG
tert-Butylbenzene	2.2940000	2.2918973	2.2918973	0.1	0.09	50.00	AVRG
4-Methyl-2-Pentanone	87.285248	100.00000	0.5923300	0.1	12.71	50.00	LINR
Acetone	79.007161	100.00000	0.3429098	0.1	20.99	50.00	LINR
Benzene	1.4260000	1.3881455	1.3881455	0.5	2.65	50.00	AVRG
Bromobenzene	0.9540000	0.9459686	0.9459686	0.1	0.84	50.00	AVRG
Bromochloromethane	0.3470000	0.3220110	0.3220110	0.1	7.20	50.00	AVRG
Bromodichloromethane	0.5010000	0.4890577	0.4890577	0.2	2.38	50.00	AVRG
Bromoform	0.2780000	0.2389617	0.2389617	0.1	14.04	50.00	AVRG
Bromomethane	52.652417	50.000000	0.3696974	0.1	-5.30	50.00	LINR
Carbon Disulfide	1.5200000	1.5661241	1.5661241	0.1	-3.03	50.00	AVRG
Carbon Tetrachloride	0.4770000	0.4604979	0.4604979	0.1	3.46	50.00	AVRG

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS2006139

Instrument ID: VOA6 Calibration Date: 07/08/20 Time: 0508

Lab File ID: Y070730 Init. Calib. Date(s): 07/07/20 07/07/20

Init. Calib. Times: 1106 1505

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
Chlorobenzene	1.0190000	0.9549938	0.9549938	0.5	6.28	50.00	AVRG
Chloroethane	54.917573	50.000000	0.4928287	0.1	-9.84	50.00	LINR
Chloroform	1.0950000	1.0966832	1.0966832	0.2	-0.15	50.00	AVRG
Chloromethane	1.0270000	1.0479341	1.0479341	0.1	-2.04	50.00	AVRG
cis-1,2-Dichloroethene	0.6540000	0.6550767	0.6550767	0.1	-0.16	50.00	AVRG
Dibromochloromethane	0.4110000	0.3749139	0.3749139	0.1	8.78	50.00	AVRG
Dichlorodifluoromethane	0.6050000	0.6212655	0.6212655	0.1	-2.69	50.00	AVRG
Ethylbenzene	0.5390000	0.5086331	0.5086331	0.1	5.63	50.00	AVRG
Hexachlorobutadiene	46.506618	50.000000	0.2231311	0.1	6.99	50.00	LINR
Isopropylbenzene	1.5990000	1.4998448	1.4998448	0.1	6.20	50.00	AVRG
m,p-Xylenes	0.6480000	0.6064473	0.6064473	0.1	6.41	50.00	AVRG
Methylene Chloride	0.5470000	0.6465709	0.6465709	0.1	-18.20	50.00	AVRG
n-Butylbenzene	2.5360000	2.4443355	2.4443355	0.5	3.61	50.00	AVRG
n-Propylbenzene	4.0780000	4.0314418	4.0314418	0.1	1.14	50.00	AVRG
Naphthalene	32.230915	50.000000	0.3115684	0.2	35.54	50.00	LINR
o-Xylene	0.6350000	0.5931551	0.5931551	0.3	6.59	50.00	AVRG
sec-Butylbenzene	3.3520000	3.2616924	3.2616924	0.1	2.69	50.00	AVRG
Styrene	1.1040000	1.0422862	1.0422862	0.3	5.59	50.00	AVRG
Vinyl Chloride	0.8780000	0.9178752	0.9178752	0.1	-4.54	50.00	AVRG
1,2,3-Trichloropropane	0.8720000	0.7516516	0.7516516	0.1	13.80	50.00	AVRG
p-Isopropyltoluene	2.8430000	2.7578305	2.7578305	0.1	3.00	50.00	AVRG
1,2-Dibromo-3-Chloropropane	35.630267	50.000000	5.61e-002	0.05	28.74	50.00	LINR
1,2-Dichloroethane-d4	52.023136	50.000000	0.7780321	0.1	-4.05	50.00	LINR
Dibromofluoromethane	52.247995	50.000000	0.5679100	0.1	-4.50	50.00	LINR
Toluene-d8	1.3140000	1.2504195	1.2504195	0.1	4.84	50.00	AVRG
4-Bromofluorobenzene	49.620831	50.000000	0.4725868	0.1	0.76	50.00	LINR

FORM 8
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20061390

Lab File ID (Standard): Y070703 Date Analyzed: 07/07/20

Instrument ID: VOA6 Time Analyzed: 1819

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

		IS1(CBZ)		IS2(DFB)		IS3(DCB)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	387020	7.67	420700	4.97	178939	9.67
	UPPER LIMIT	774040	8.17	841400	5.47	357878	10.17
	LOWER LIMIT	193510	7.17	210350	4.47	89470	9.17
	CLIENT SAMPLE NO.						
01	VLCSW-200707	399883	7.67	441135	4.97	184588	9.66
02	VBLKW-200707	439327	7.67	523783	4.97	184345	9.67
03	HS20061390-11	464042	7.67	539226	4.97	198627	9.67
04	HS20061218-01	428830	7.67	492809	4.97	188125	9.67
05	HS20061218-01	425793	7.67	494233	4.97	179870	9.67
06	HS20061390-01	462027	7.67	532944	4.97	191957	9.67
07	HS20061390-02	459617	7.67	536289	4.97	204046	9.67
08	HS20061390-03	454135	7.67	530558	4.97	200744	9.67
09	HS20061390-04	456581	7.67	535588	4.97	203046	9.67
10	HS20061390-05	453163	7.67	537110	4.97	196759	9.67
11	HS20061390-06	417932	7.67	538245	4.97	175408	9.67
12	HS20061390-07	451560	7.67	537630	4.97	197307	9.67
13	HS20061390-08	450343	7.67	531739	4.97	184995	9.67
14	HS20061390-09	446935	7.67	529727	4.97	197015	9.67
15							
16							
17							
18							
19							
20							

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

Lab Code: Case No.: SAS No.: SDG No.: HS20061390

Lab File ID (Standard): Y070703 Date Analyzed: 07/07/20

Instrument ID: VOA6 Time Analyzed: 1819

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

		IS4 AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	255048	4.19				
	UPPER LIMIT	510096	4.69				
	LOWER LIMIT	127524	3.69				
	CLIENT SAMPLE NO.						
01	VLCSW-200707	266919	4.19				
02	VBLKW-200707	329975	4.19				
03	HS20061390-11	341287	4.19				
04	HS20061218-01	314806	4.19				
05	HS20061218-01	310574	4.19				
06	HS20061390-01	340647	4.19				
07	HS20061390-02	340407	4.19				
08	HS20061390-03	335476	4.19				
09	HS20061390-04	337231	4.19				
10	HS20061390-05	337726	4.19				
11	HS20061390-06	338497	4.19				
12	HS20061390-07	338039	4.19				
13	HS20061390-08	334267	4.19				
14	HS20061390-09	333855	4.19				
15							
16							
17							
18							
19							
20							

IS4 = Pentafluorobenzene

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\X200707.b\Y070701.D

Date : 07-JUL-2020 17:31

Client ID: BFB

Instrument: voa6.i

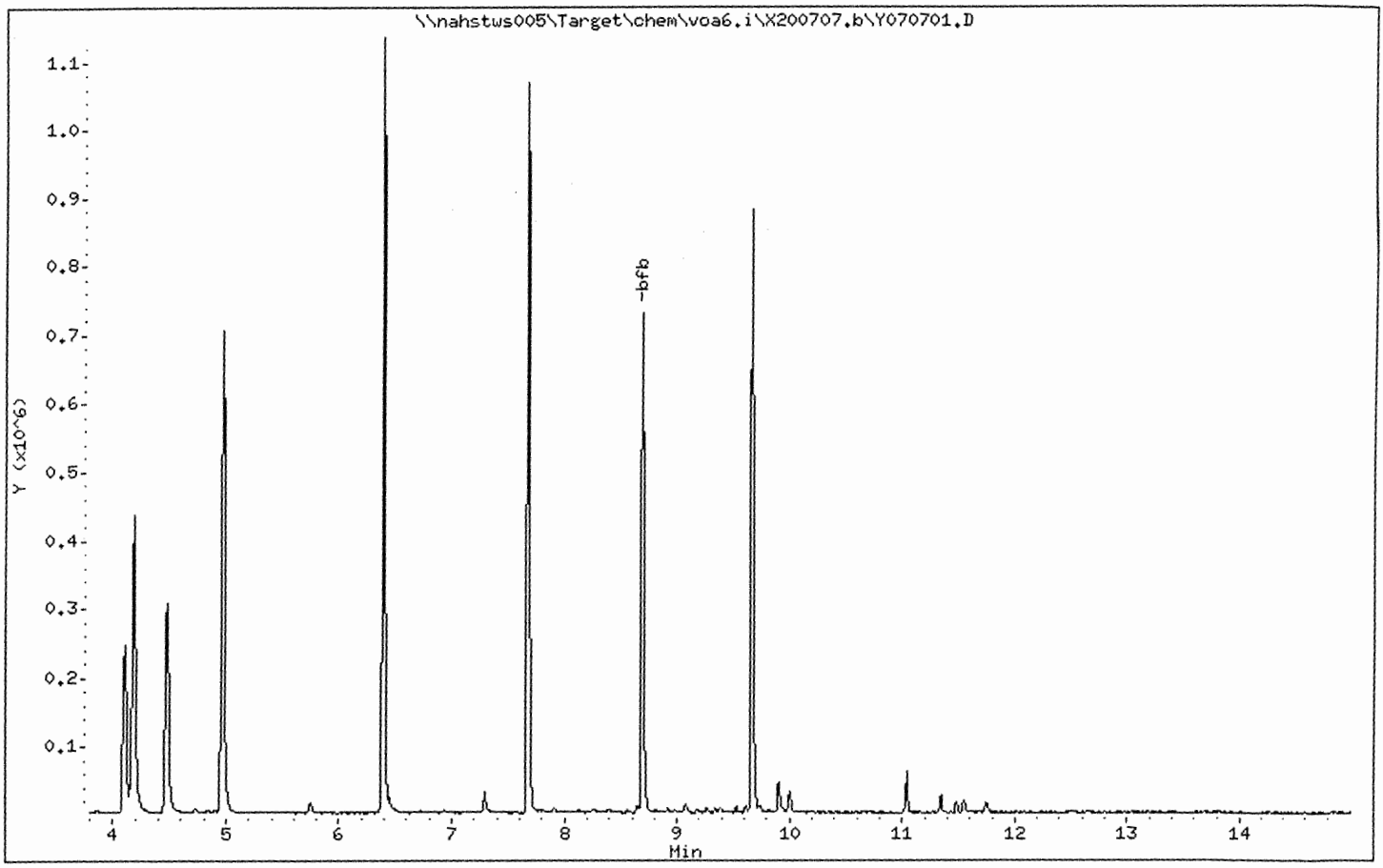
Sample Info: BFB;BFB;3;;BFB

Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

Column diameter: 0.25



Data File: \\nahstws005\Target\chem\voa6.i\X200707.b\Y070701.D

Date : 07-JUL-2020 17:31

Client ID: BFB

Instrument: voa6.i

Sample Info: BFB;BFB;3;;BFB

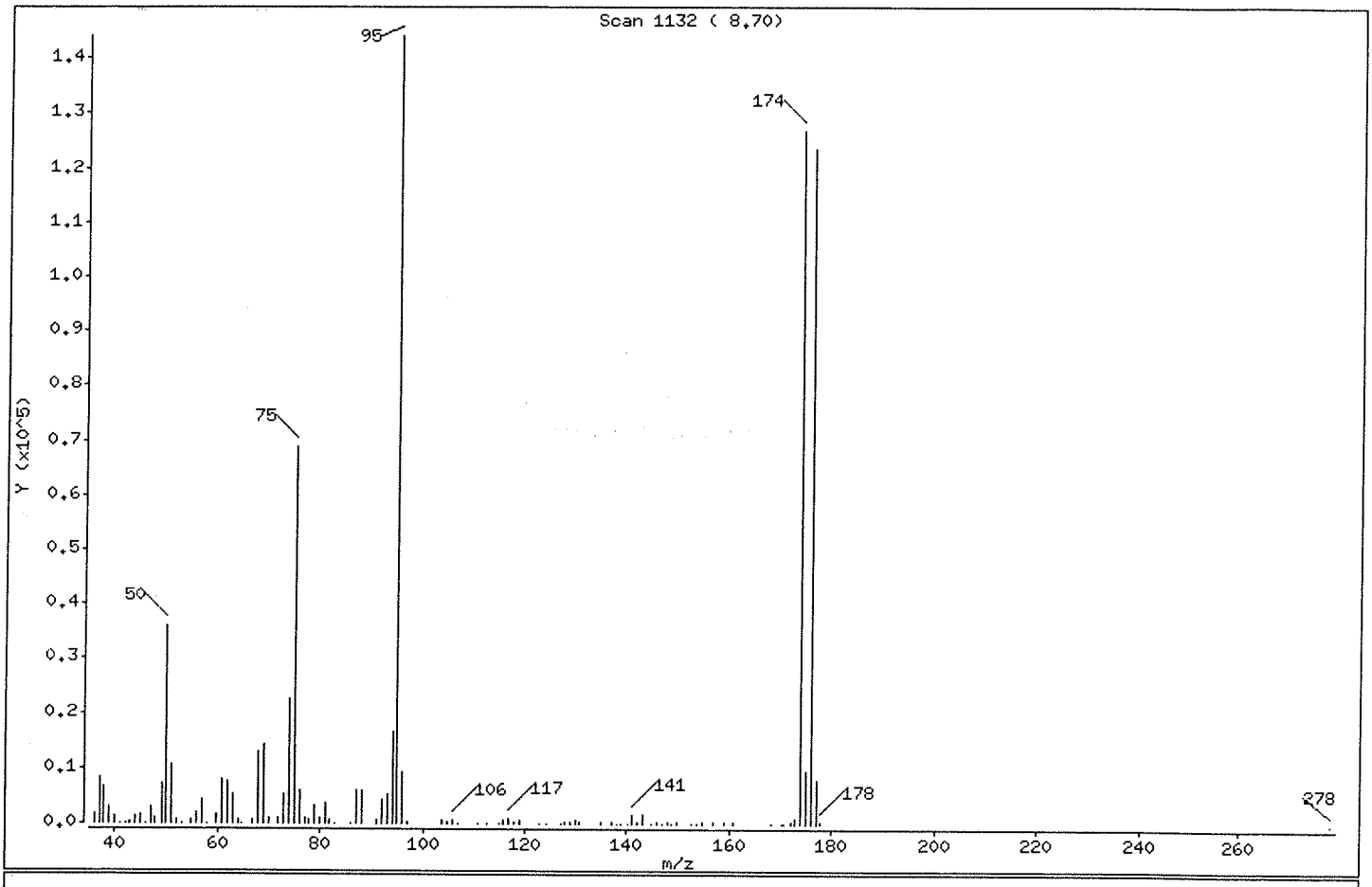
Volume Injected (uL): 2.0

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	24.98
75	30.00 - 60.00% of mass 95	47.87
96	5.00 - 9.00% of mass 95	6.39
173	Less than 2.00% of mass 174	0.62 (0.70)
174	Greater than 50.00% of mass 95	87.96
175	5.00 - 9.00% of mass 174	6.58 (7.49)
176	95.00 - 101.00% of mass 174	85.85 (97.61)
177	5.00 - 9.00% of mass 176	5.56 (6.47)

Data File: \\nahstws005\Target\chem\voa6.i\X200707.b\Y070701.D

Date : 07-JUL-2020 17:31

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: Y070701.D
Spectrum: Scan 1132 (8.70)
Location of Maximum: 95.00
Number of points: 103

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	1647	64.00	673	96.00	9202	141.90	218
37.00	8191	64.90	143	96.90	197	142.90	1507
38.00	6629	66.90	524	103.80	504	144.90	119
39.00	3045	68.00	12788	104.90	255	145.70	227
39.90	1206	69.00	14117	105.80	724	146.90	96
40.90	151	69.90	1048	106.90	111	147.90	363
42.10	60	72.00	982	110.70	100	148.80	51
42.90	225	73.00	5451	112.70	86	149.80	178
44.00	1418	74.00	22448	114.90	159	152.70	143
45.00	1677	75.00	68968	115.90	557	153.80	79
46.00	67	76.00	5897	116.90	1121	154.80	325
47.00	2817	77.00	891	117.80	477	156.80	284
47.90	872	78.00	509	118.90	641	158.90	176
49.00	7194	78.90	3172	122.90	69	160.80	174
50.00	35984	79.90	1079	124.10	55	168.30	119
51.00	10584	80.90	3664	126.90	69	170.20	54
52.00	627	81.90	767	127.80	492	170.70	60
53.00	134	82.90	107	129.00	313	172.20	263
54.90	679	85.90	130	129.80	629	172.90	890
56.00	2141	87.00	6066	130.70	188	173.90	126712
57.00	4403	88.00	5887	134.90	323	174.90	9485
58.10	163	90.80	517	137.00	320	175.90	123680
59.90	1680	91.90	4200	137.90	86	176.90	8006
61.00	7803	93.00	5460	138.90	134	177.80	276
62.00	7591	94.00	16488	140.10	92	278.00	155
63.00	5249	95.00	144064	140.90	1510		

Data File: \\nahstws005\Target\chem\voa6.i\X200707.b\Y070703.D Page 1
Report Date: 13-Aug-2020 12:16

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200707.b\Y070703.D
Lab Smp Id: CCV Client Smp ID: CCV
Inj Date : 07-JUL-2020 18:19
Operator : PC Inst ID: voa6.i
Smp Info : CCV;CCV;2;;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200707.b\8260W.m
Meth Date : 13-Aug-2020 12:16 voa6.i Quant Type: ISTD
Cal Date : 07-JUL-2020 15:05 Cal File: X070711.D
Als bottle: 18 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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

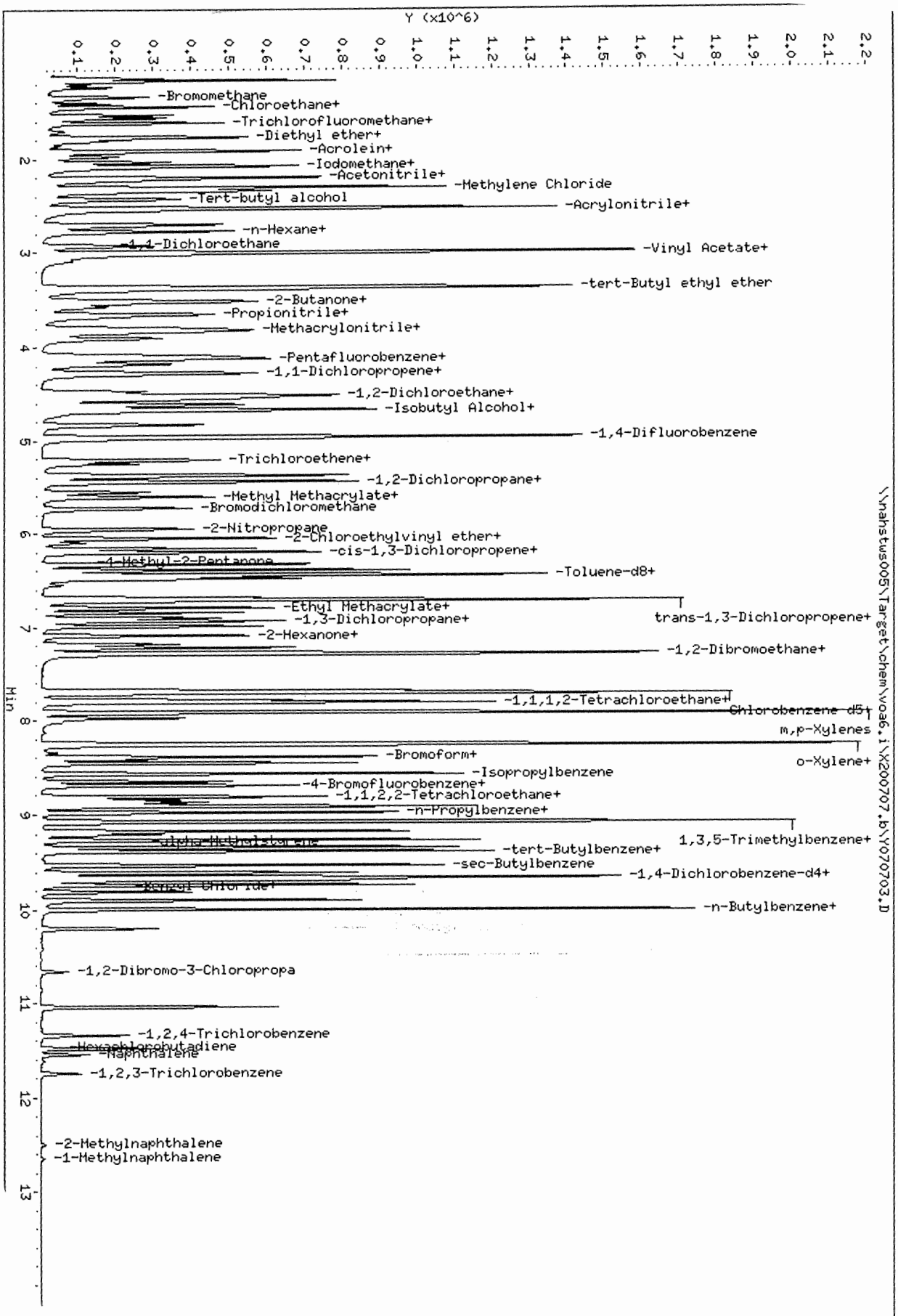
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.189	4.189	(1.000)	255048	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	420700	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	387020	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	178939	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.979)	143034	50.0000	51.58
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	194137	50.0000	50.88
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	498472	50.0000	48.99
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	191272	50.0000	51.94
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	142065	50.0000	47.80
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.976)	224887	50.0000	48.13
68 1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.914)	154090	50.0000	43.55
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	113596	50.0000	46.39
22 1,1-Dichloroethane	63	2.929	2.929	(0.699)	335621	50.0000	46.43
11 1,1-Dichloroethene	96	1.919	1.919	(0.458)	113484	50.0000	48.05
32 1,1-Dichloropropene	75	4.283	4.283	(0.862)	192629	50.0000	46.49
93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.215)	26828	50.0000	47.61
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	138295	50.0000	44.33(M)
90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	56202	50.0000	50.41
79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.970)	505396	50.0000	48.02
39 1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.102)	12385	50.0000	44.38
7 1,2-Dibromoethane	107	7.262	7.262	(0.947)	140034	50.0000	45.01
1,2-Dichlorobenzene	146	9.999	9.999	(1.034)	240320	50.0000	45.95

Data File: \\nahstws005\Target\chem\voa6.i\X200707.b\Y070703.D Page 2
Report Date: 13-Aug-2020 12:16

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
33	1,2-Dichloroethane	62	4.562	4.562	(0.918)	245455	50.0000	47.02
42	1,2-Dichloropropane	63	5.443	5.443	(1.095)	191275	50.0000	48.87
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	502145	50.0000	49.25
83	1,3-Dichlorobenzene	146	9.605	9.605	(0.993)	273406	50.0000	47.72
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	233101	50.0000	45.23
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	272714	50.0000	50.06
26	2,2-Dichloropropane	77	3.516	3.516	(0.839)	219654	50.0000	49.74
24	2-Butanone	43	3.581	3.581	(0.855)	217551	100.000	92.54
76	2-Chlorotoluene	91	8.974	8.974	(0.928)	425954	50.0000	47.42
52	2-Hexanone	43	7.090	7.090	(0.924)	337011	100.000	90.98
77	4-Chlorotoluene	91	9.075	9.075	(0.939)	495371	50.0000	48.63
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	512108	50.0000	50.32
45	4-Methyl-2-Pentanone	43	6.324	6.324	(0.824)	479350	100.000	91.40
10	Acetone	43	1.976	1.976	(0.472)	191425	100.000	89.71
37	Benzene	78	4.519	4.519	(0.909)	573975	50.0000	47.81
74	Bromobenzene	156	8.810	8.810	(0.911)	165164	50.0000	48.38
29	Bromochloromethane	128	3.803	3.803	(0.908)	79558	50.0000	44.91
39	Bromodichloromethane	83	5.729	5.729	(1.153)	206025	50.0000	48.89
66	Bromoform	173	8.416	8.416	(1.097)	100772	50.0000	46.90
6	Bromomethane	94	1.339	1.339	(0.320)	92038	50.0000	51.39
19	Carbon Disulfide	76	2.076	2.076	(0.496)	757591	100.000	97.68
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	191539	50.0000	47.70
59	Chlorobenzene	112	7.699	7.699	(1.004)	372746	50.0000	47.27
7	Chloroethane	64	1.403	1.403	(0.335)	103930	50.0000	45.07
28	Chloroform	83	3.910	3.910	(0.933)	265022	50.0000	47.42
3	Chloromethane	50	1.081	1.081	(0.258)	249804	50.0000	47.66
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.843)	158346	50.0000	47.49
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	242826	50.0000	47.82
55	Dibromochloromethane	129	7.176	7.176	(0.936)	150024	50.0000	47.18
44	Dibromomethane	93	5.558	5.558	(1.118)	99847	50.0000	47.33
2	Dichlorodifluoromethane	85	0.973	0.973	(0.232)	148518	50.0000	48.10
61	Ethylbenzene	106	7.800	7.800	(1.017)	198107	50.0000	47.47
91	Hexachlorobutadiene	225	11.481	11.481	(1.187)	47895	50.0000	55.52
67	Isopropylbenzene	105	8.566	8.566	(1.117)	588829	50.0000	47.57
62	m,p-Xylenes	106	7.907	7.907	(1.031)	476662	100.000	94.98
17	Methylene Chloride	84	2.306	2.306	(0.550)	162344	50.0000	58.20(M)
87	n-Butylbenzene	91	9.999	9.999	(1.034)	461172	50.0000	50.81
73	n-Propylbenzene	91	8.917	8.917	(0.922)	719852	50.0000	49.32
92	Naphthalene	128	11.546	11.546	(1.194)	79822	50.0000	46.01
63	o-Xylene	106	8.244	8.244	(1.075)	233747	50.0000	47.54
81	sec-Butylbenzene	105	9.526	9.526	(0.985)	589848	50.0000	49.16
64	Styrene	104	8.265	8.265	(1.078)	412586	50.0000	48.28
78	tert-Butylbenzene	119	9.340	9.340	(0.966)	402399	50.0000	49.01
56	Tetrachloroethene	164	6.933	6.933	(0.904)	114665	50.0000	48.50
50	Toluene	91	6.446	6.446	(0.840)	588226	50.0000	47.63
20	trans-1,2-Dichloroethene	96	2.535	2.535	(0.605)	136511	50.0000	48.97
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	217566	50.0000	47.68
38	Trichloroethene	130	5.214	5.214	(1.049)	149675	50.0000	47.95
8	Trichlorofluoromethane	101	1.561	1.561	(0.373)	203696	50.0000	46.31
5	Vinyl Chloride	62	1.145	1.145	(0.273)	211708	50.0000	47.25

QC Flag Legend

M - Compound response manually integrated.



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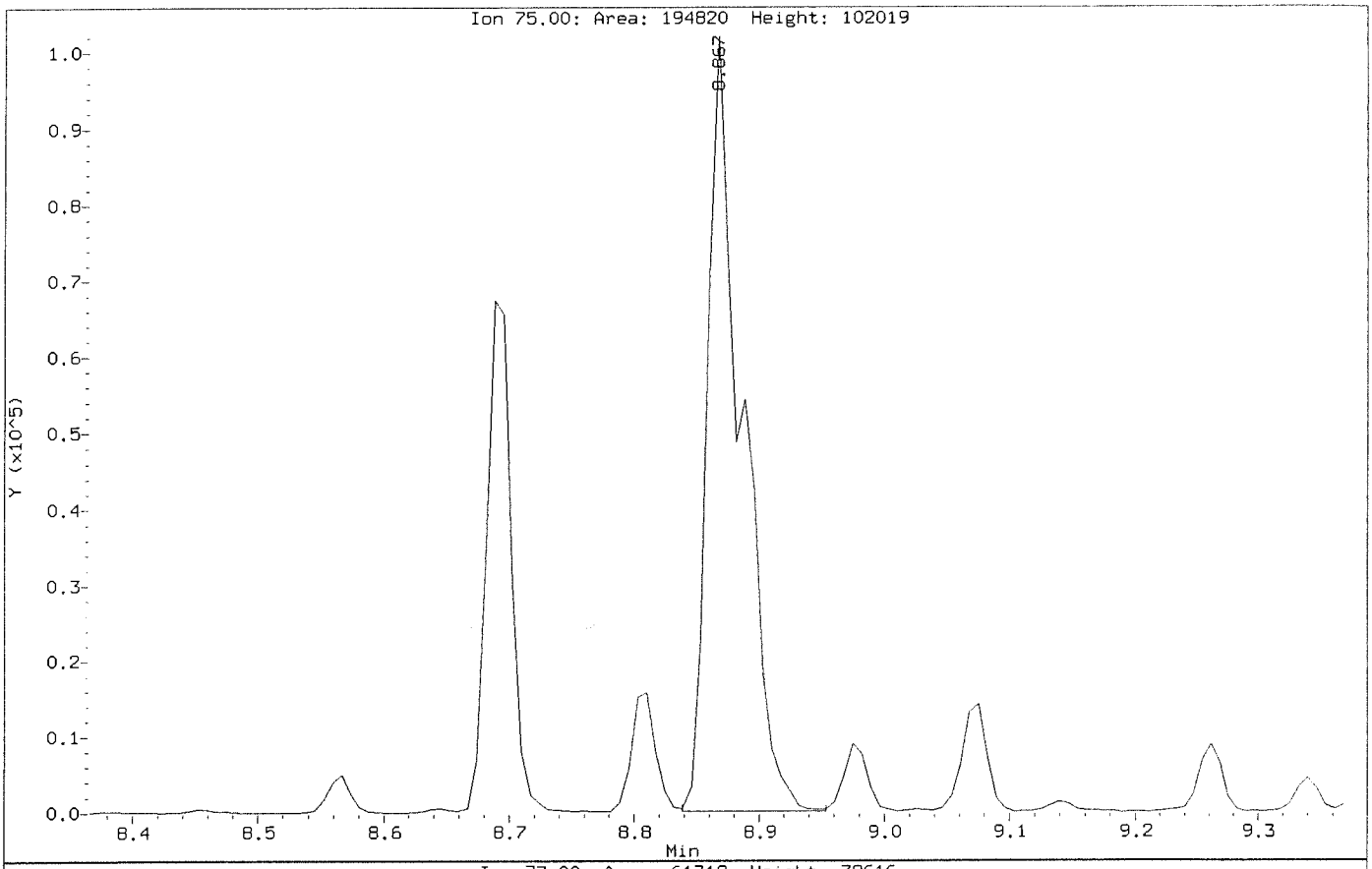
Date : 07-JUL-2020 18:19
Client ID: CCV
Sample Info: CCV;CCV;2;;;
Purge Volume: 5.0
Column phase: DB624

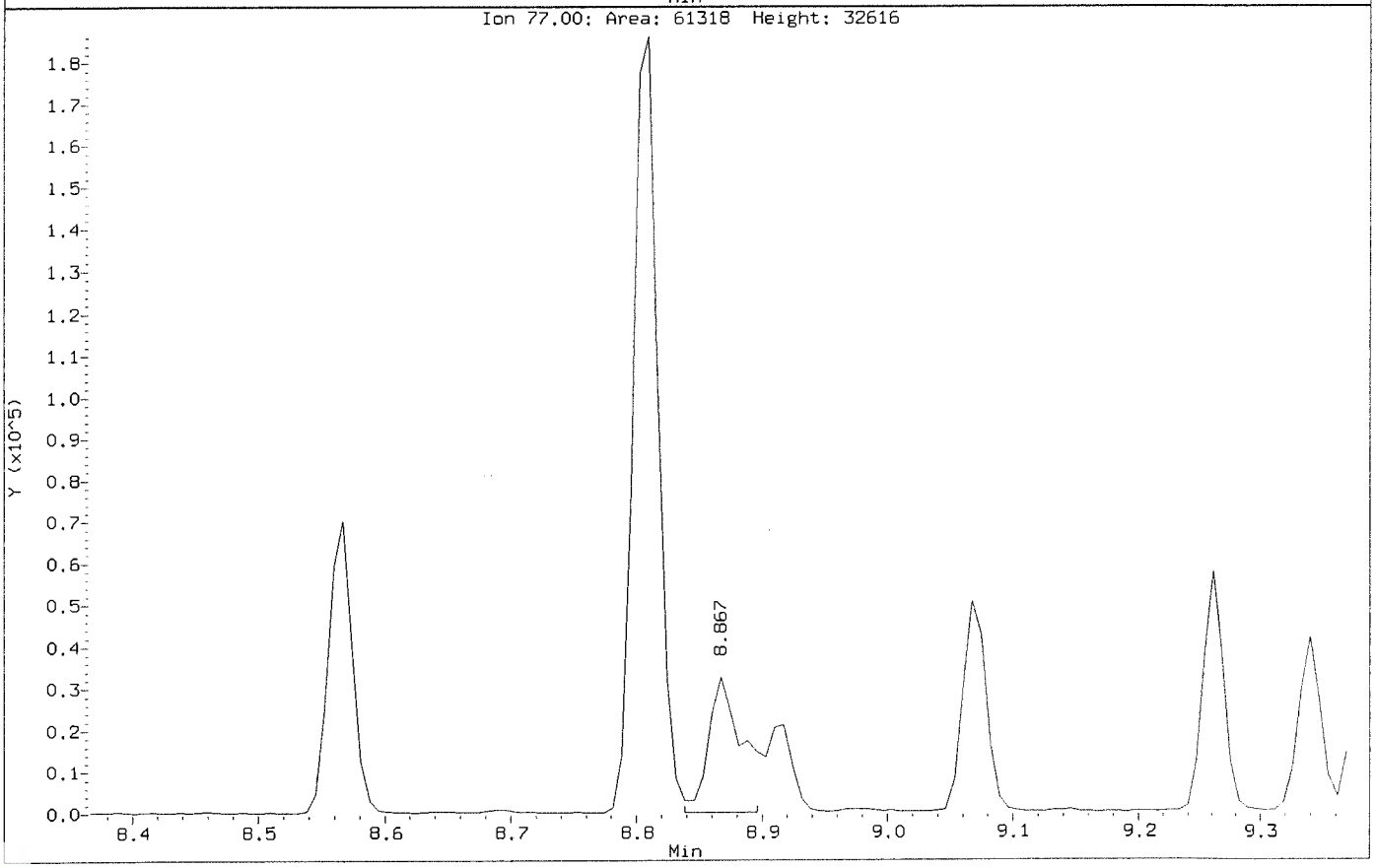
\\nahstws005\Target\chem\voa6.i\X200707.b\Y070703.D

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

Data File: \\nahstws005\Target\chem\voa6.i\X200707.b\Before\Y070703.D
Injection Date: 07-JUL-2020 18:19
Instrument: voa6.i
Client Sample ID: CCV

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





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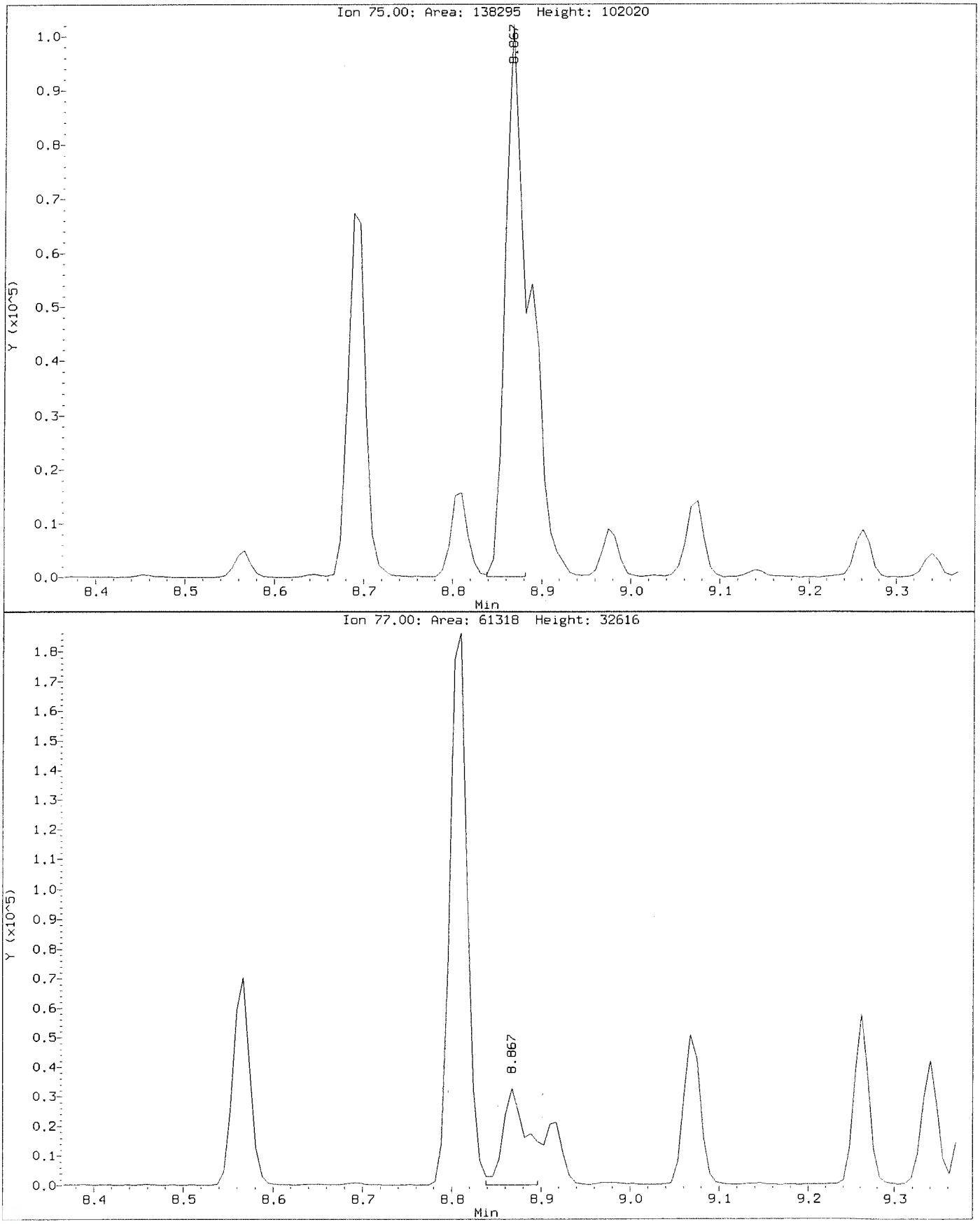
Injection Date: 07-JUL-2020 18:19
Instrument: voa6.i
Client Sample ID: CCV

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4



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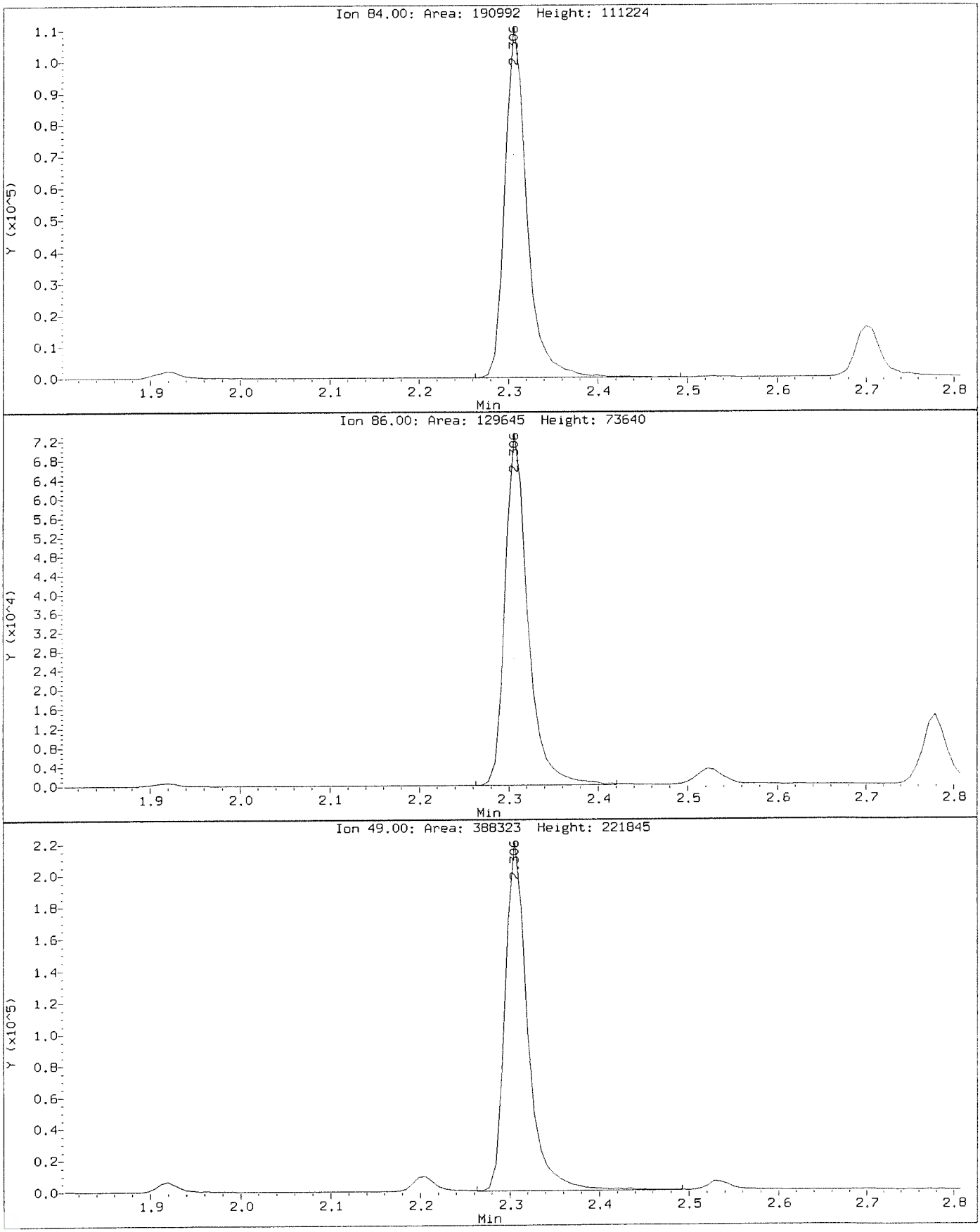
Injection Date: 07-JUL-2020 18:19
Instrument: voa6.i
Client Sample ID: CCV

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



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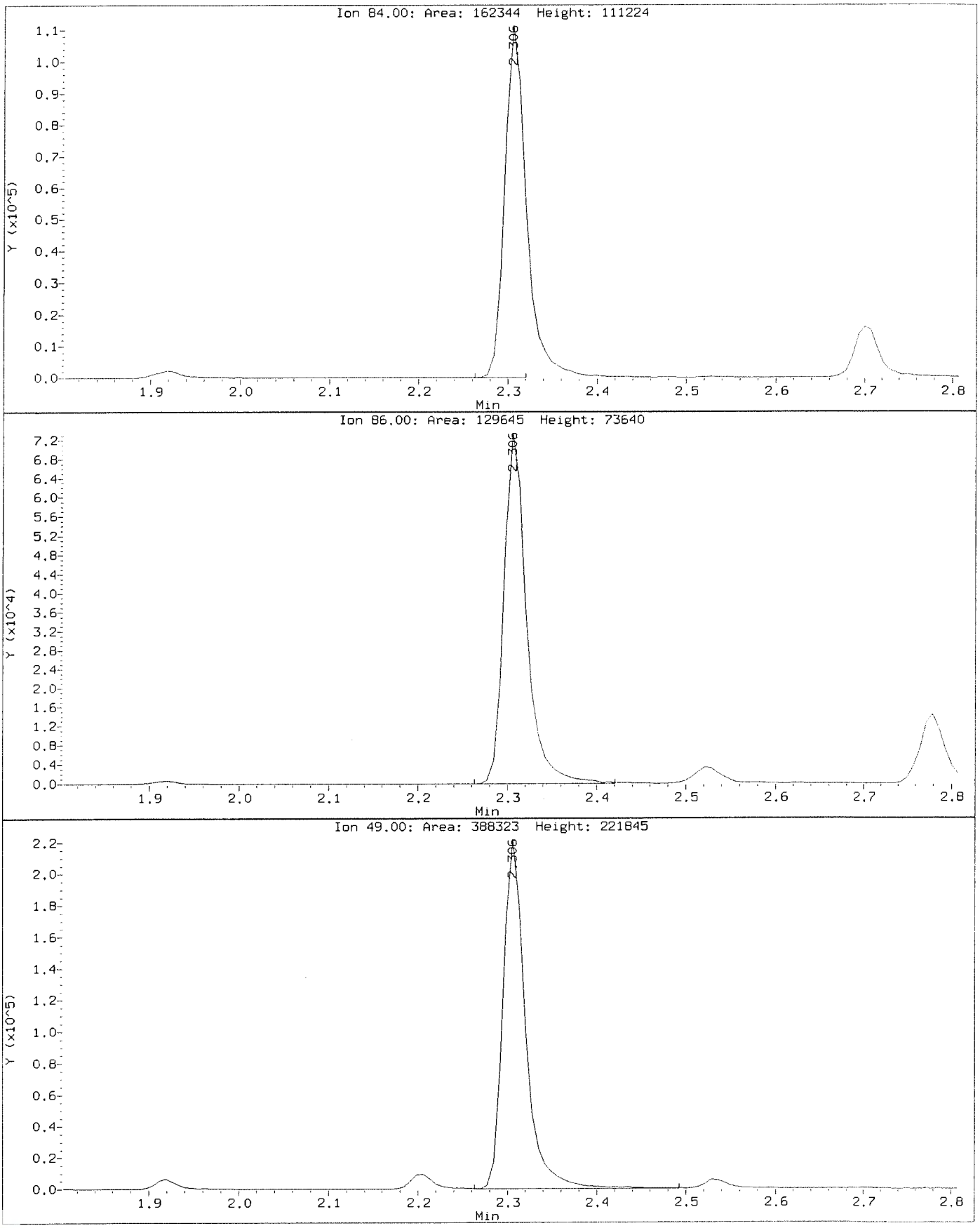
Injection Date: 07-JUL-2020 18:19
Instrument: voa6.i
Client Sample ID: CCV

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



Data File: \\nahstws005\Target\chem\voa6.i\X200707.b\Y070705.D Page 1
Report Date: 13-Aug-2020 12:16

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200707.b\Y070705.D
Lab Smp Id: VLCSW-200707 Client Smp ID: VLCSW-200707
Inj Date : 07-JUL-2020 19:07
Operator : PC Inst ID: voa6.i
Smp Info : VLCSW-200707;VLCSW-200707;3;;LCS
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200707.b\8260W.m
Meth Date : 13-Aug-2020 12:16 voa6.i Quant Type: ISTD
Cal Date : 07-JUL-2020 15:05 Cal File: X070711.D
Als bottle: 20 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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

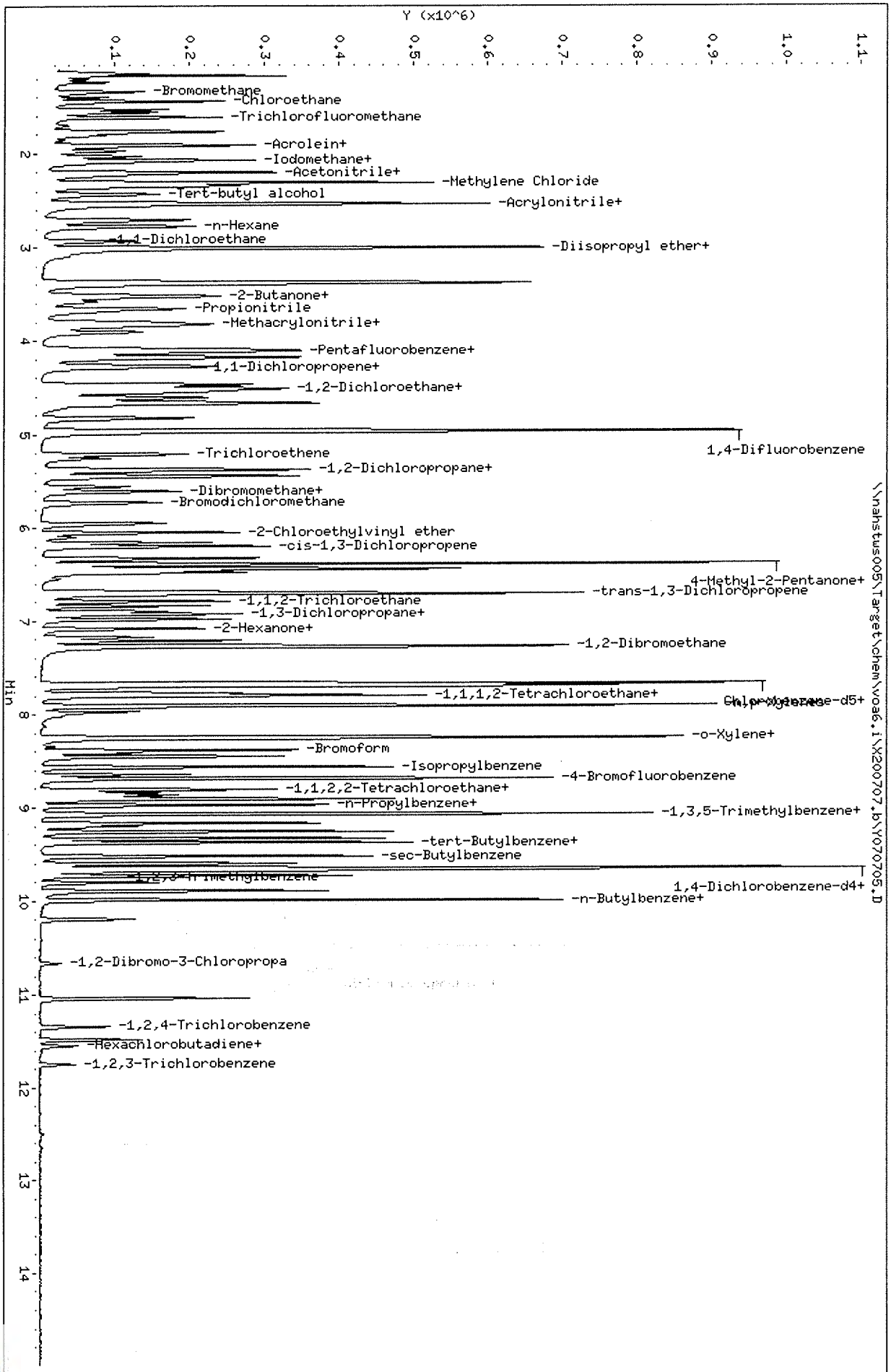
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.189	4.189	(1.000)	266919	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	441135	50.0000	
* 47 Chlorobenzene-d5	117	7.670	7.671	(1.000)	399883	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.669	(1.000)	184588	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.979)	149406	51.4836	51.48
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	201497	50.4559	50.45
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	509491	48.4634	48.46
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	196962	51.7627	51.76
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	58675	19.1103	19.11
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.976)	94037	19.2315	19.23
68 1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.915)	63887	17.5065	17.50
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	49233	19.4626	19.46
22 1,1-Dichloroethane	63	2.929	2.929	(0.699)	143088	18.9153	18.91
11 1,1-Dichloroethene	96	1.919	1.919	(0.458)	45928	18.5824	18.58
32 1,1-Dichloropropene	75	4.289	4.283	(0.863)	80386	18.5050	18.50
93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.216)	12217	21.8912	21.89
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.918)	57124	17.7527	17.75(M)
90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	24083	21.7046	21.70
79 1,2,4-Trimethylbenzene	105	9.382	9.383	(0.971)	208611	19.2178	19.21
9 1,2-Dibromo-3-Chloropropane	155	10.657	10.658	(1.103)	5192	16.9957	16.99
1,2-Dibromoethane	107	7.262	7.262	(0.947)	60565	18.8428	18.84
1,2-Dichlorobenzene	146	9.998	9.999	(1.035)	100253	18.5825	18.58

Data File: \\nahstws005\Target\chem\voa6.i\X200707.b\Y070705.D Page 2
Report Date: 13-Aug-2020 12:16

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
33	1,2-Dichloroethane	62	4.562	4.562	(0.918)	105471	19.2709	19.27
42	1,2-Dichloropropane	63	5.443	5.443	(1.095)	80501	19.6163	19.61
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	206213	19.6074	19.60
83	1,3-Dichlorobenzene	146	9.604	9.605	(0.994)	113652	19.2314	19.23
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	99553	18.6970	18.69
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.002)	110065	19.4639	19.46
26	2,2-Dichloropropane	77	3.516	3.516	(0.839)	90311	19.5428	19.54
24	2-Butanone	43	3.580	3.581	(0.855)	92608	33.9220	33.92
76	2-Chlorotoluene	91	8.974	8.974	(0.929)	179314	19.3550	19.35
52	2-Hexanone	43	7.090	7.090	(0.924)	137214	33.5781	33.57
77	4-Chlorotoluene	91	9.074	9.075	(0.939)	207346	19.7358	19.73
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	206428	19.6662	19.66
45	4-Methyl-2-Pentanone	43	6.324	6.324	(0.824)	203512	35.6518	35.65
10	Acetone	43	1.976	1.976	(0.472)	103287	29.5703	29.57
37	Benzene	78	4.519	4.519	(0.909)	243296	19.3303	19.33
74	Bromobenzene	156	8.809	8.810	(0.912)	68913	19.5693	19.56
29	Bromochloromethane	128	3.802	3.803	(0.908)	34217	18.4568	18.45
39	Bromodichloromethane	83	5.729	5.729	(1.153)	86361	19.5451	19.54
66	Bromoform	173	8.415	8.416	(1.097)	41054	18.4944	18.49
6	Bromomethane	94	1.338	1.339	(0.320)	42060	22.3982	22.39
19	Carbon Disulfide	76	2.076	2.076	(0.496)	318219	39.2076	39.20
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	80161	19.0410	19.04
59	Chlorobenzene	112	7.699	7.699	(1.004)	155557	19.0940	19.09
7	Chloroethane	64	1.403	1.403	(0.335)	51539	20.3511	20.35
28	Chloroform	83	3.910	3.910	(0.933)	110976	18.9738	18.97
3	Chloromethane	50	1.080	1.081	(0.258)	111764	20.3757	20.37
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.843)	68047	19.5034	19.50
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	102967	19.3385	19.33
55	Dibromochloromethane	129	7.176	7.176	(0.936)	61689	18.7801	18.78
44	Dibromomethane	93	5.557	5.558	(1.118)	42277	19.1146	19.11
2	Dichlorodifluoromethane	85	0.973	0.973	(0.232)	59766	18.4961	18.49
61	Ethylbenzene	106	7.799	7.800	(1.017)	82800	19.2032	19.20
91	Hexachlorobutadiene	225	11.481	11.481	(1.188)	20841	24.1941	24.19
67	Isopropylbenzene	105	8.566	8.566	(1.117)	248110	19.3994	19.39
62	m,p-Xylenes	106	7.907	7.907	(1.031)	197739	38.1356	38.13
17	Methylene Chloride	84	2.305	2.306	(0.550)	68419	23.4407	23.44 (M)
87	n-Butylbenzene	91	9.998	9.999	(1.035)	182250	19.4652	19.46
73	n-Propylbenzene	91	8.917	8.917	(0.923)	294345	19.5518	19.55
92	Naphthalene	128	11.546	11.546	(1.195)	33768	19.0474	19.04
63	o-Xylene	106	8.243	8.244	(1.075)	96729	19.0423	19.04
81	sec-Butylbenzene	105	9.526	9.526	(0.986)	244104	19.7255	19.72
64	Styrene	104	8.258	8.265	(1.077)	172094	19.4940	19.49
78	tert-Butylbenzene	119	9.339	9.340	(0.967)	169333	19.9965	19.99
56	Tetrachloroethene	164	6.933	6.933	(0.904)	47956	19.6339	19.63
50	Toluene	91	6.446	6.446	(0.840)	248000	19.4388	19.43
20	trans-1,2-Dichloroethene	96	2.535	2.535	(0.605)	58149	19.9321	19.93
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	94470	19.7480	19.74
38	Trichloroethene	130	5.214	5.214	(1.049)	62996	19.2473	19.24
8	Trichlorofluoromethane	101	1.560	1.561	(0.373)	88182	19.1576	19.15
5	Vinyl Chloride	62	1.145	1.145	(0.273)	88095	18.7875	18.78

QC Flag Legend

M - Compound response manually integrated.



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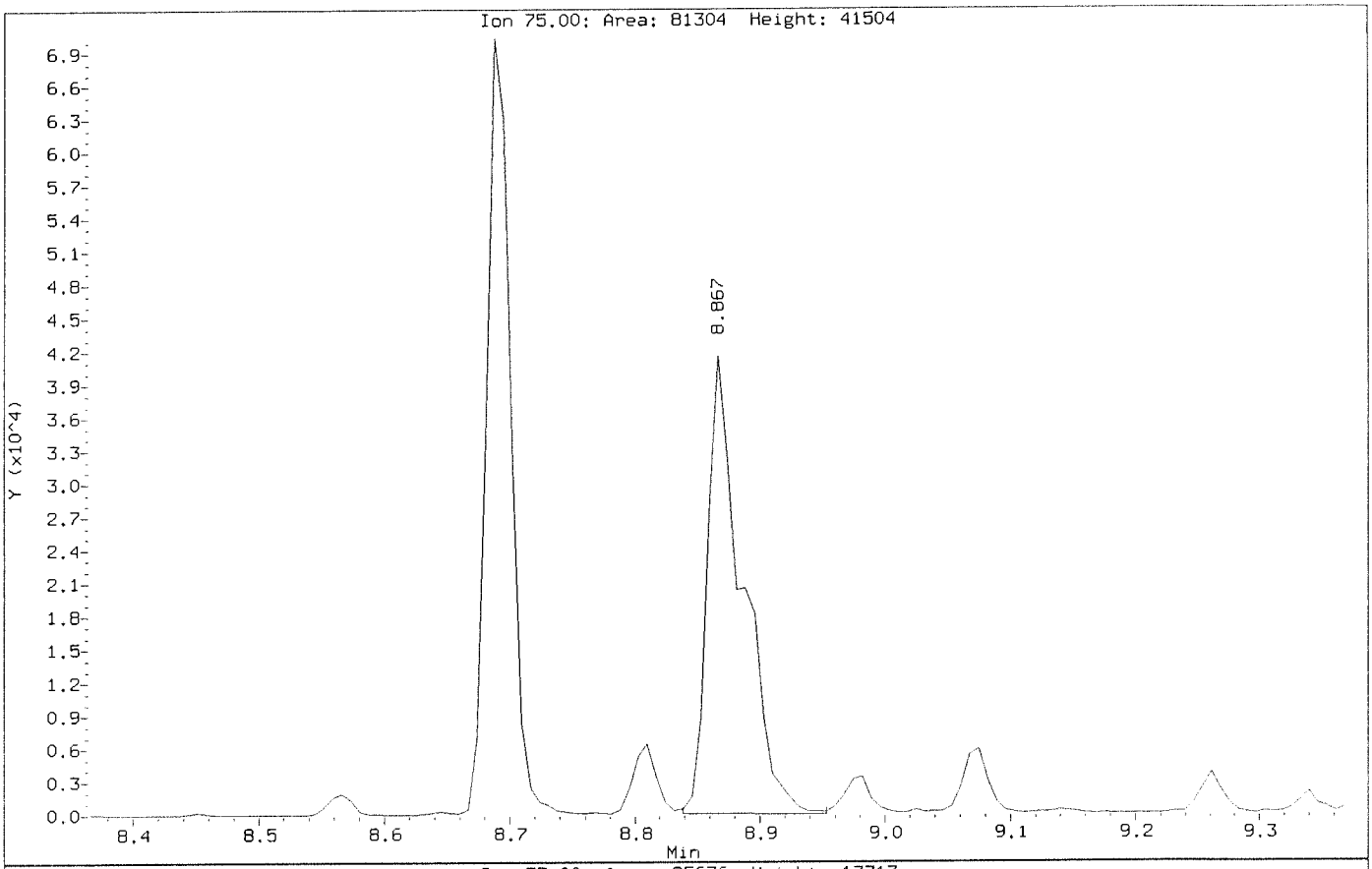
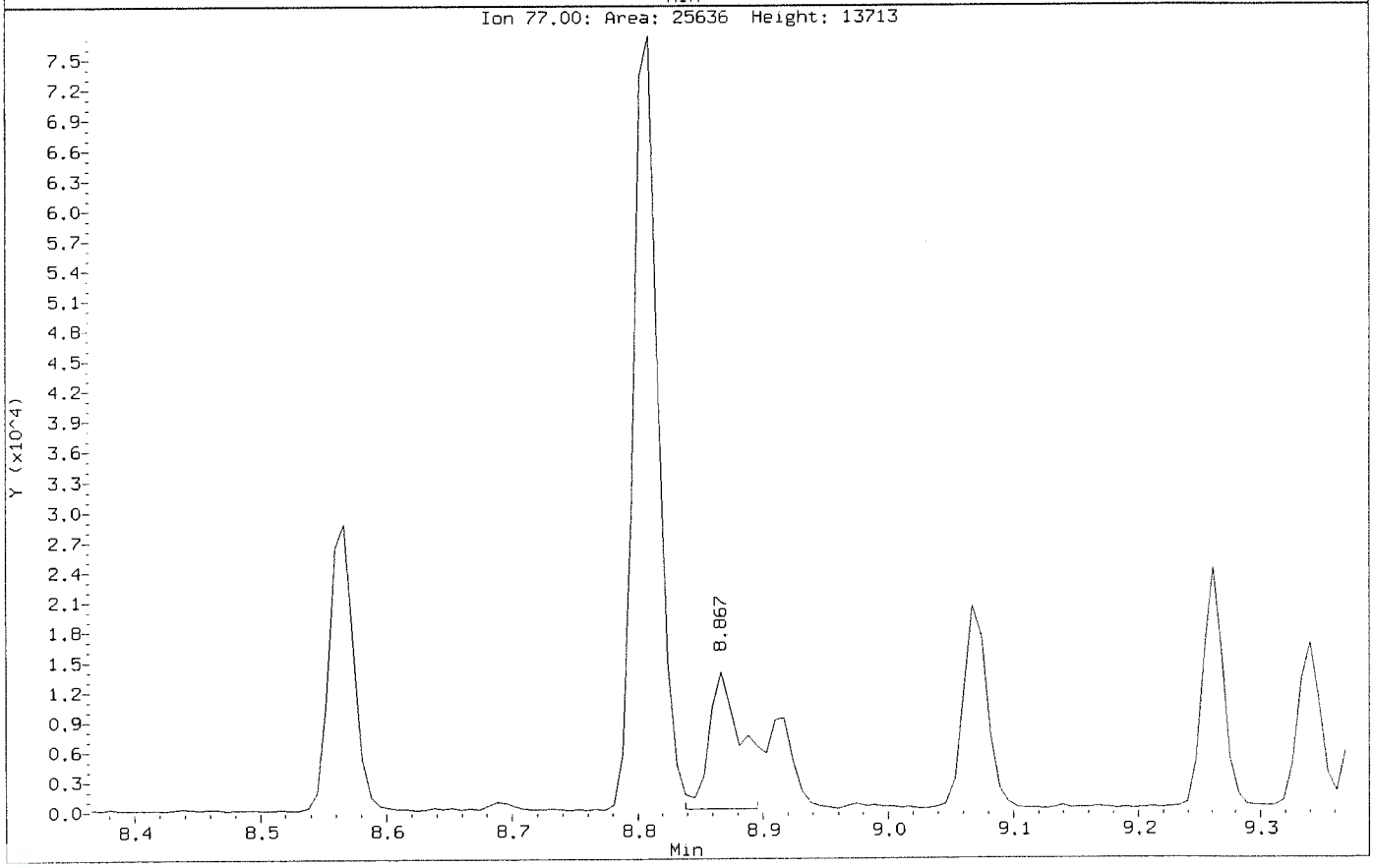
Sample Info: VLCSW-200707;VLCSW-200707;3;;LCS
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\nahstws005\Target\chem\voa6.i\X200707.b\Before\Y070705.D
Injection Date: 07-JUL-2020 19:07
Instrument: voa6.i
Client Sample ID: VLCSW-200707

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





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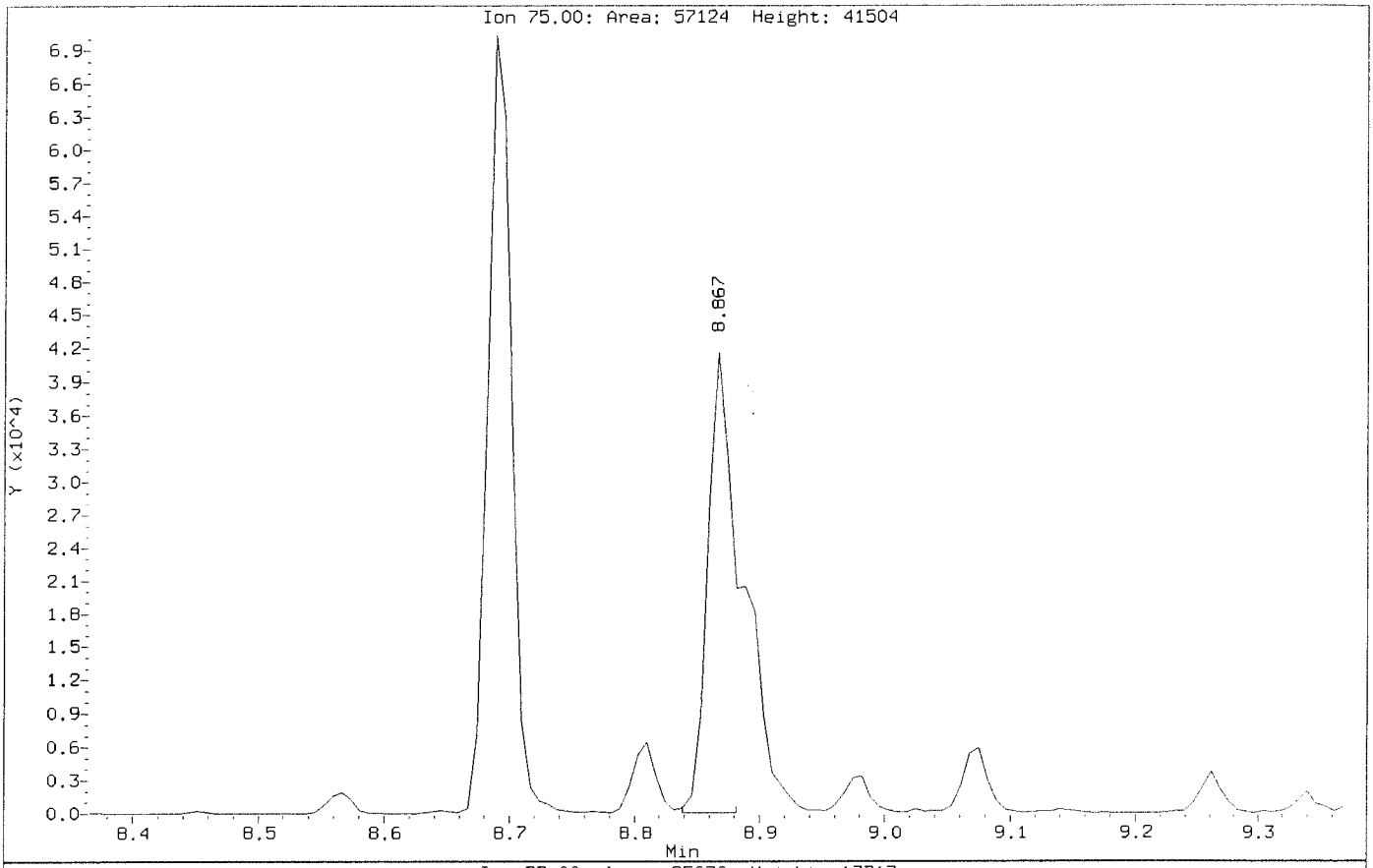
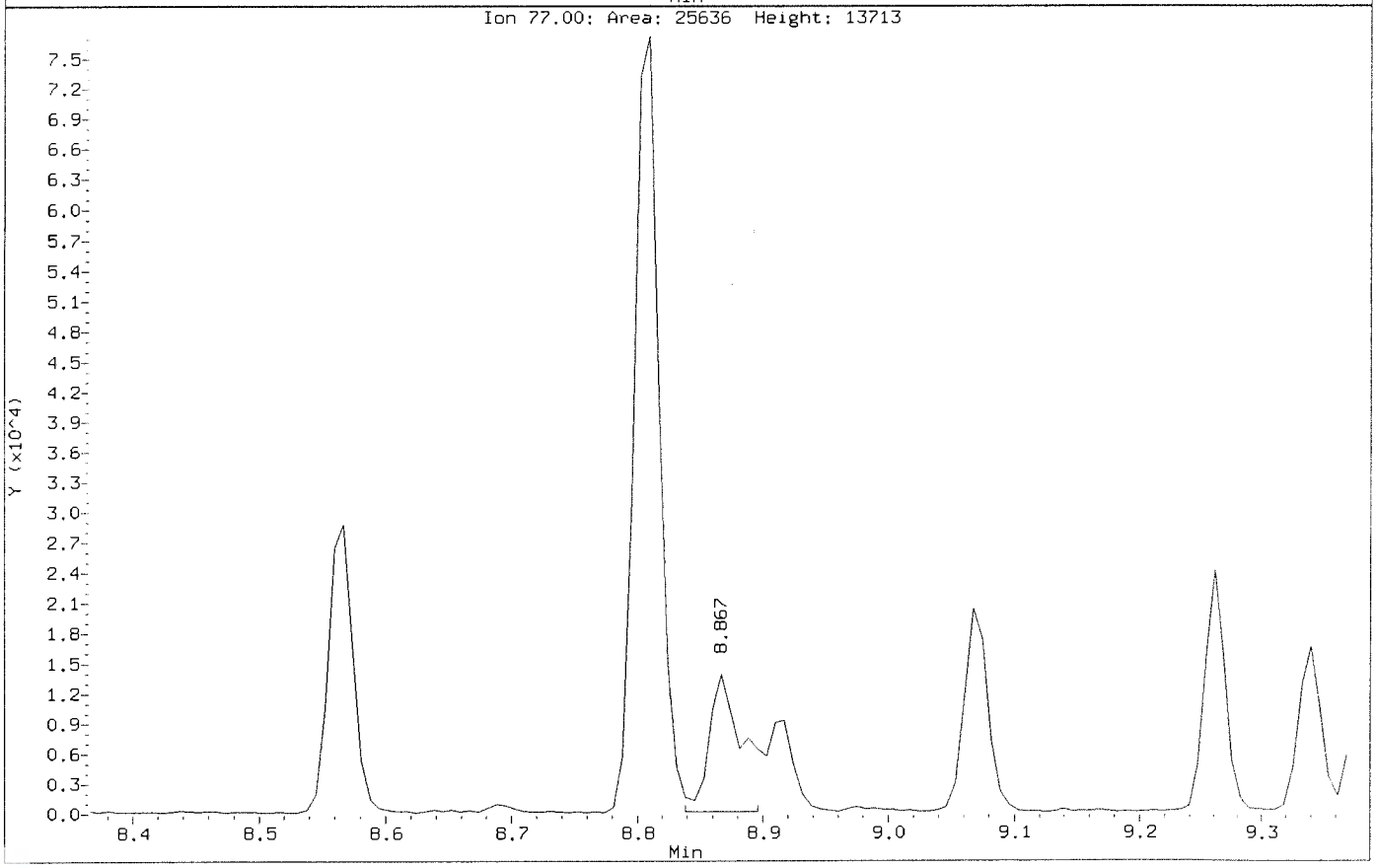
Instrument: voa6.i
Client Sample ID: VLCSW-200707

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





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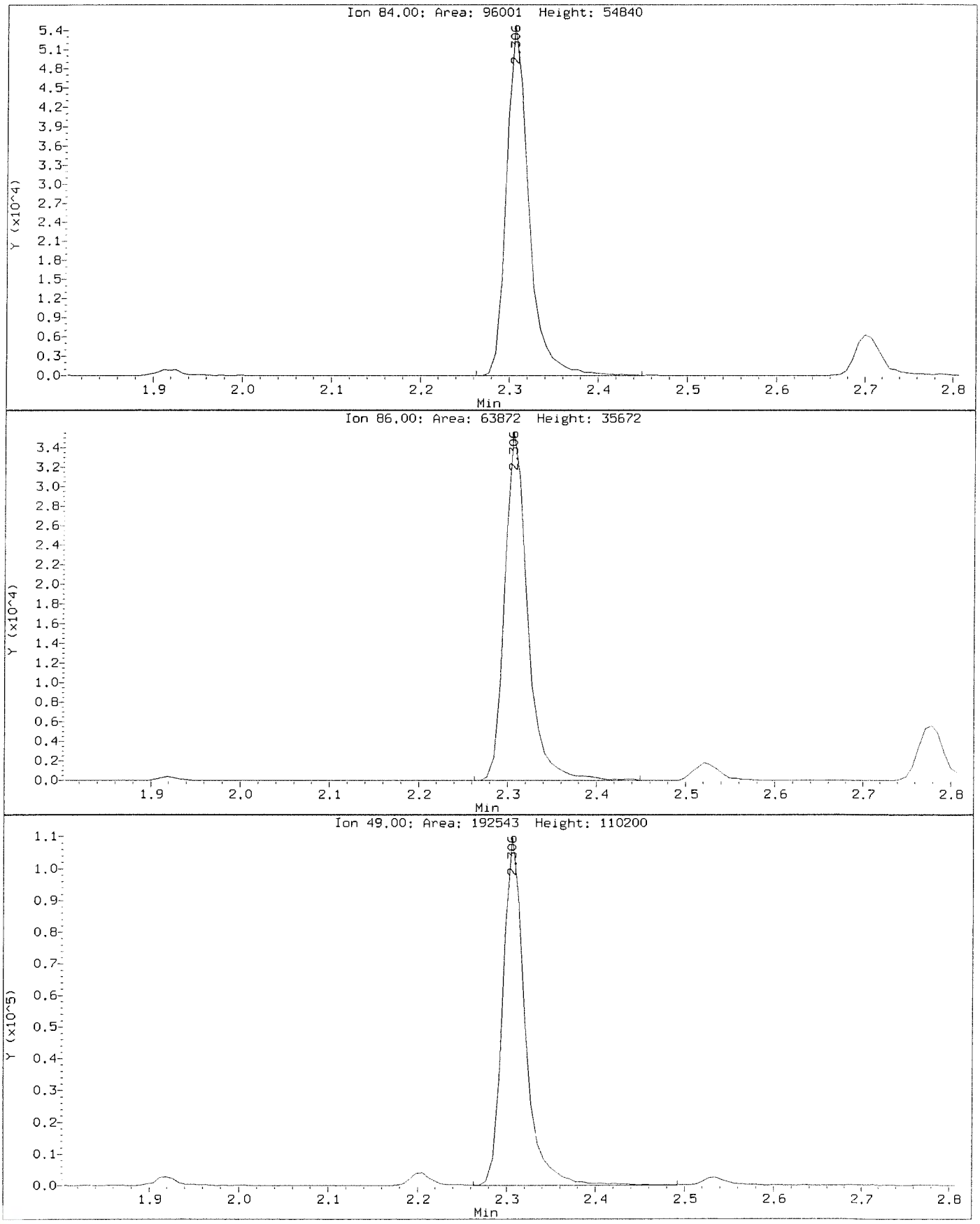
Injection Date: 07-JUL-2020 19:07
Instrument: voa6.i
Client Sample ID: VLCSW-200707

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



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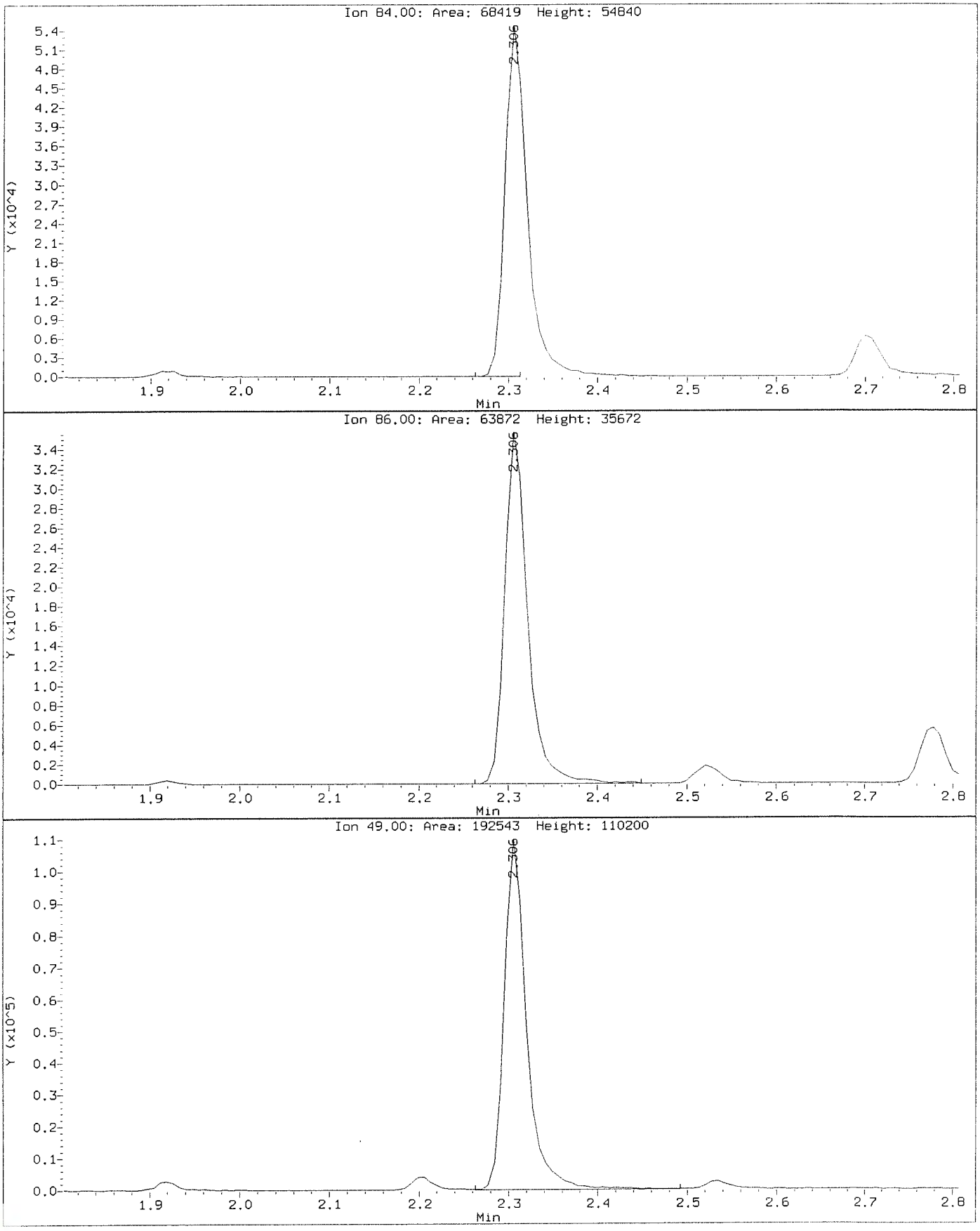
Injection Date: 07-JUL-2020 19:07
Instrument: voa6.i
Client Sample ID: VLCSW-200707

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



Data File: \\nahstws005\Target\chem\voa6.i\X200707.b\Y070708.D Page 1
Report Date: 13-Aug-2020 12:16

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Data file : \\nahstws005\Target\chem\voa6.i\X200707.b\Y070708.D
Lab Smp Id: VBLKW-200707 Client Smp ID: VBLKW-200707
Inj Date : 07-JUL-2020 20:19
Operator : PC Inst ID: voa6.i
Smp Info : VBLKW-200707;VBLKW-200707;3;;BLANK
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200707.b\8260W.m
Meth Date : 13-Aug-2020 12:16 voa6.i Quant Type: ISTD
Cal Date : 07-JUL-2020 15:05 Cal File: X070711.D
Als bottle: 23 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

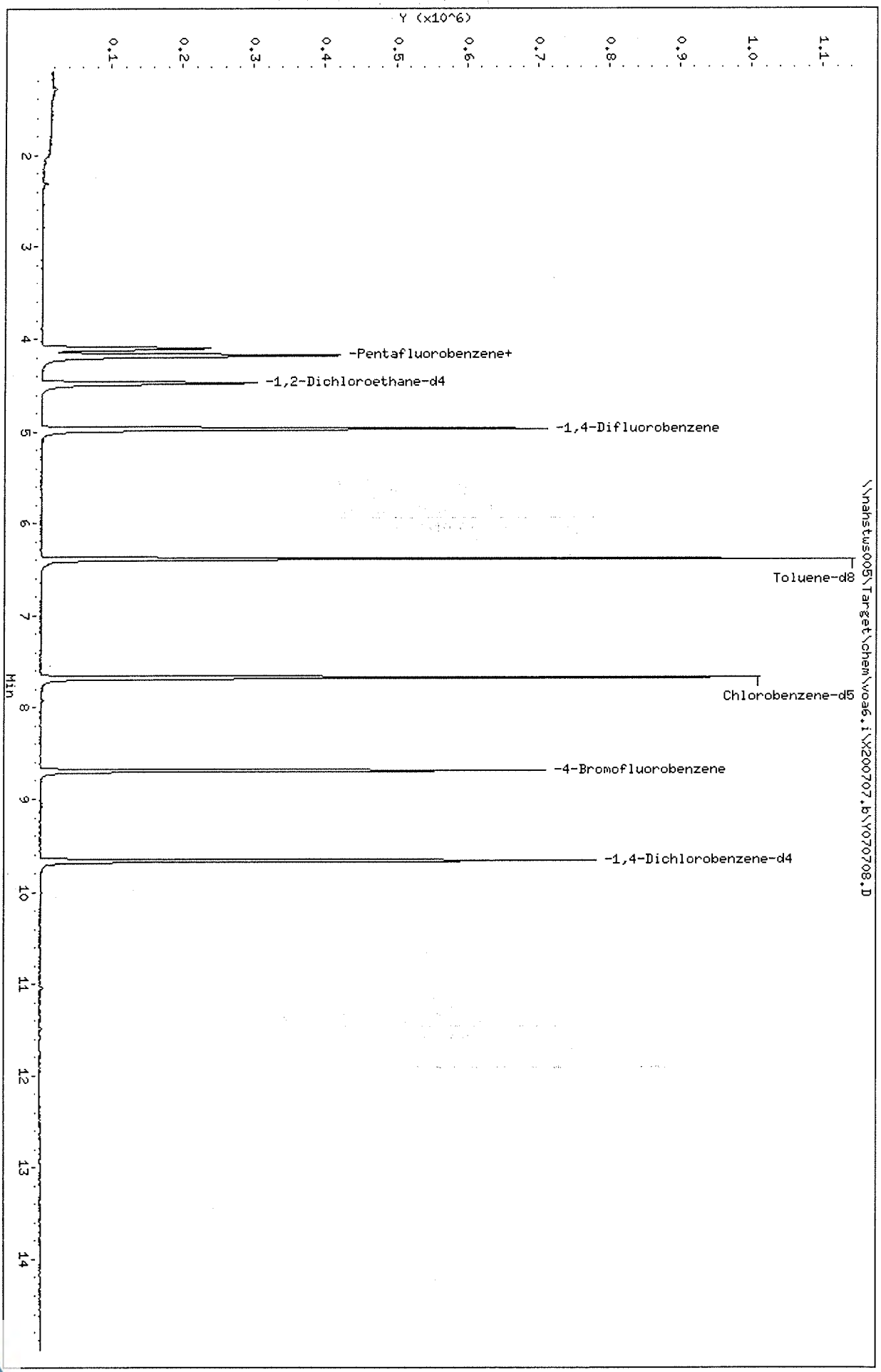
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

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	4.189	4.189	(1.000)	329975	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	523783	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	439327	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	184345	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.979)	170764	47.5307	47.53
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	222974	45.0921	45.09
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	605712	52.4431	52.44
$ 69 4-Bromofluorobenzene	95	8.695	8.688	(1.134)	208879	49.9283	49.92

Data File: \\nahstws005\Target\chem\voa6.i\X200707.b\Y070708.D
Date : 07-JUL-2020 20:19
Client ID: VBLKW-200707
Sample Info: VBLKW-200707;VBLKW-200707;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\X200707.b\Y070710.D Page 1
Report Date: 13-Aug-2020 12:41

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200707.b\Y070710.D
Lab Smp Id: HS20061390-11 Client Smp ID: HS20061390-11
Inj Date : 07-JUL-2020 21:07
Operator : PC Inst ID: voa6.i
Smp Info : HS20061390-11;HS20061390-11;;;
Misc Info : HS18090001;WATER;0;1;
Comment   :
Method   : \\nahstws005\Target\chem\voa6.i\X200707.b\8260W.m
Meth Date : 13-Aug-2020 12:38 voa6.i Quant Type: ISTD
Cal Date : 07-JUL-2020 15:05 Cal File: X070711.D
Als bottle: 25
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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

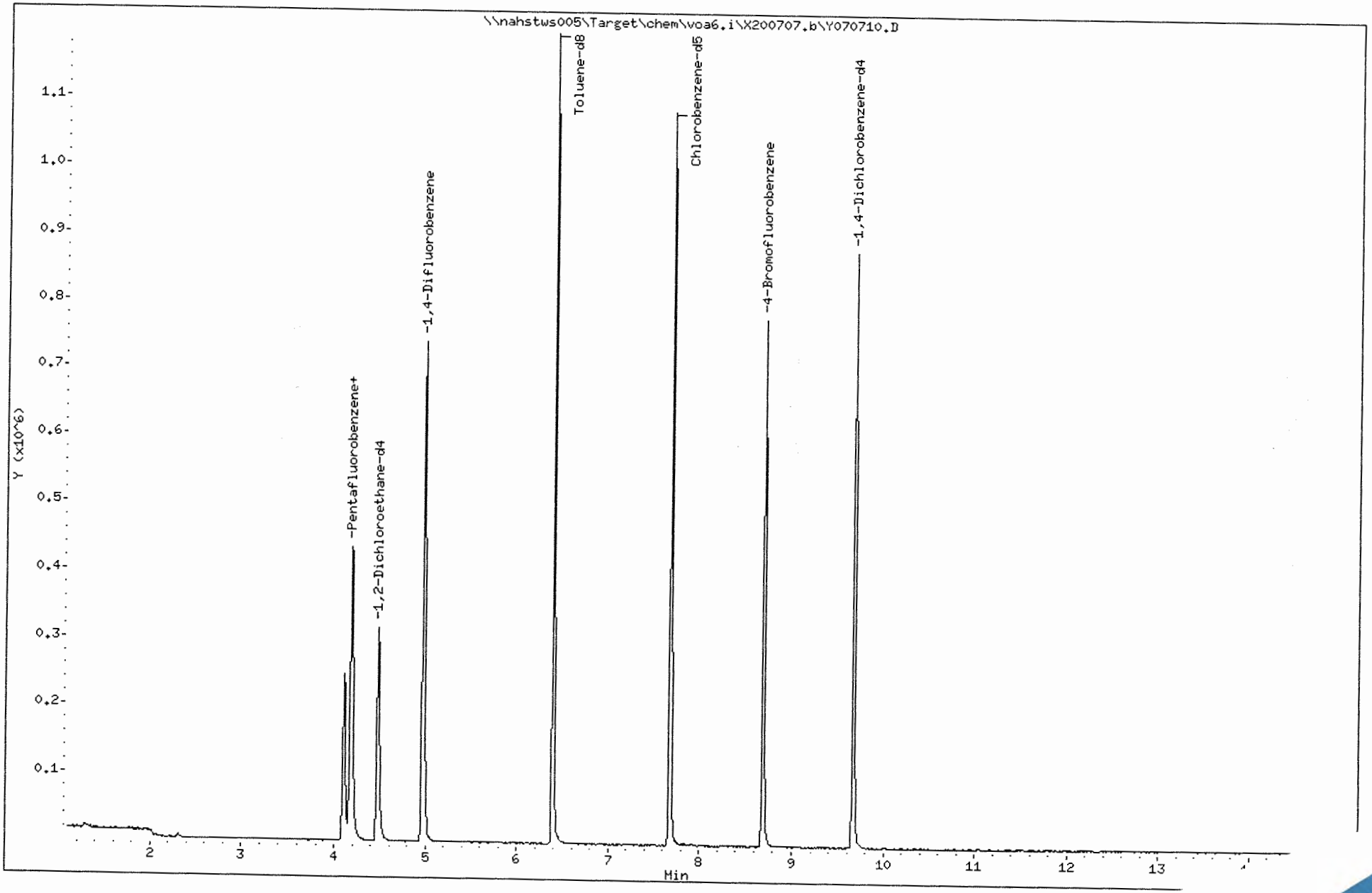
Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.189	4.189	(1.000)	341287	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	539226	50.0000	
* 47 Chlorobenzene-d5	117	7.670	7.671	(1.000)	464042	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	198627	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.979)	173853	46.7725	46.77
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	225851	44.1459	44.14
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	624188	51.1644	51.16
$ 69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	221931	50.2291	50.22

Data File: \\nahstws005\Target\chem\voa6.i\X200707.b\Y070710.D
Date : 07-JUL-2020 21:07
Client ID: HS20061390-11
Sample Info: HS20061390-11;HS20061390-11;;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i

Operator: PC
Column diameter: 0.18



Data File: \\nahstws005\Target\chem\voa6.i\X200707.b\Y070713.D Page 1
Report Date: 13-Aug-2020 12:16

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200707.b\Y070713.D
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Inj Date : 07-JUL-2020 22:19
Operator : PC Inst ID: voa6.i
Smp Info : HS20061218-01MS;HS20061218-01MS;3;;MS
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200707.b\8260W.m
Meth Date : 13-Aug-2020 12:16 voa6.i Quant Type: ISTD
Cal Date : 07-JUL-2020 15:05 Cal File: X070711.D
Als bottle: 28 QC Sample: MS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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

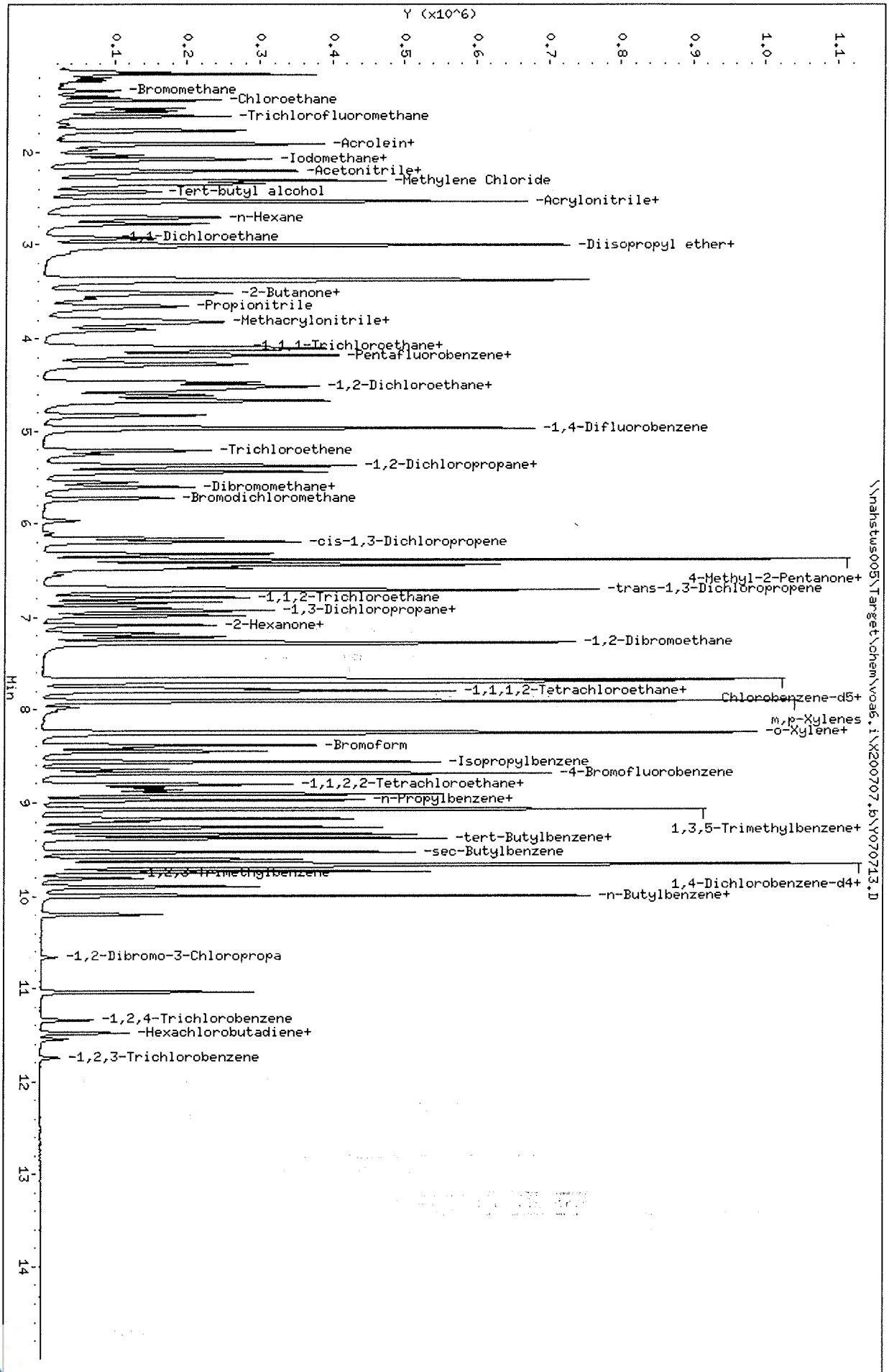
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
* 1	Pentafluorobenzene	168	4.189	4.189	(1.000)	314806	50.0000	
* 36	1,4-Difluorobenzene	114	4.970	4.970	(1.000)	492809	50.0000	
* 47	Chlorobenzene-d5	117	7.671	7.671	(1.000)	428830	50.0000	
* 70	1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	188125	50.0000	
$ 30	Dibromofluoromethane	113	4.103	4.103	(0.979)	159232	46.4361	46.43
$ 35	1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	208965	44.2832	44.28
$ 48	Toluene-d8	98	6.388	6.388	(0.833)	570550	50.6079	50.60
$ 69	4-Bromofluorobenzene	95	8.688	8.688	(1.133)	203849	49.9185	49.91
60	1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	64997	19.7404	19.74
31	1,1,1-Trichloroethane	97	4.089	4.089	(0.976)	111084	19.2621	19.26
68	1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.914)	70666	19.0000	19.00
53	1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	53659	19.7804	19.78
22	1,1-Dichloroethane	63	2.929	2.929	(0.699)	170599	19.1215	19.12
11	1,1-Dichloroethene	96	1.919	1.919	(0.458)	68210	23.3996	23.39
32	1,1-Dichloropropene	75	4.282	4.283	(0.862)	94785	19.5317	19.53
93	1,2,3-Trichlorobenzene	180	11.746	11.746	(1.215)	7781	14.2667	14.26
71	1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	59422	18.1196	18.11(M)
90	1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	19100	17.1797	17.17
79	1,2,4-Trimethylbenzene	105	9.383	9.383	(0.970)	231893	20.9610	20.96
89	1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.102)	4382	13.7732	13.77
57	1,2-Dibromoethane	107	7.262	7.262	(0.947)	65414	18.9776	18.97
88	1,2-Dichlorobenzene	146	9.999	9.999	(1.034)	108990	19.8222	19.82

Data File: \\nahstws005\Target\chem\voa6.i\X200707.b\Y070713.D Page 2
Report Date: 13-Aug-2020 12:16

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
33	1,2-Dichloroethane	62	4.562	4.562	(0.918)	120712	19.7430	19.74
42	1,2-Dichloropropane	63	5.443	5.443	(1.095)	90432	19.7257	19.72
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	231955	21.6404	21.64
83	1,3-Dichlorobenzene	146	9.612	9.605	(0.994)	123311	20.4736	20.47
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	108839	19.0612	19.06
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	122033	21.1921	21.19
26	2,2-Dichloropropane	77	3.516	3.516	(0.839)	98731	18.1149	18.11
24	2-Butanone	43	3.580	3.581	(0.855)	85476	25.1827	25.18
76	2-Chlorotoluene	91	8.974	8.974	(0.928)	198704	21.0447	21.04
52	2-Hexanone	43	7.090	7.090	(0.924)	144021	32.7851	32.78
77	4-Chlorotoluene	91	9.075	9.075	(0.939)	227202	21.2192	21.21
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	234308	21.9026	21.90
45	4-Methyl-2-Pentanone	43	6.324	6.324	(0.824)	219974	35.9601	35.96
10	Acetone	43	2.234	1.976	(0.533)	74532	4.72368	4.72(a)
37	Benzene	78	4.519	4.519	(0.909)	277380	19.7275	19.72
74	Bromobenzene	156	8.809	8.810	(0.911)	76027	21.1836	21.18
29	Bromochloromethane	128	3.803	3.803	(0.908)	37787	17.2820	17.28
39	Bromodichloromethane	83	5.729	5.729	(1.153)	95419	19.3307	19.33
66	Bromoform	173	8.416	8.416	(1.097)	43444	18.2500	18.24
6	Bromomethane	94	1.338	1.339	(0.320)	44029	19.8715	19.87
19	Carbon Disulfide	76	2.076	2.076	(0.496)	362852	37.9062	37.90
34	Carbon Tetrachloride	117	4.275	4.268	(0.860)	95648	20.3374	20.33
59	Chlorobenzene	112	7.699	7.699	(1.004)	175811	20.1233	20.12
7	Chloroethane	64	1.403	1.403	(0.335)	55262	18.3277	18.32
28	Chloroform	83	3.910	3.910	(0.933)	128529	18.6322	18.63
3	Chloromethane	50	1.081	1.081	(0.258)	126761	19.5944	19.59
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.843)	75712	18.3994	18.39
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	110606	18.5950	18.59
55	Dibromochloromethane	129	7.176	7.176	(0.936)	66647	18.9199	18.91
44	Dibromomethane	93	5.557	5.558	(1.118)	45575	18.4450	18.44
2	Dichlorodifluoromethane	85	0.973	0.973	(0.232)	63177	16.5776	16.57
61	Ethylbenzene	106	7.800	7.800	(1.017)	96539	20.8782	20.87
91	Hexachlorobutadiene	225	11.481	11.481	(1.187)	19132	21.9255	21.92
67	Isopropylbenzene	105	8.566	8.566	(1.117)	281929	20.5557	20.55
62	m,p-Xylenes	106	7.907	7.907	(1.031)	225751	40.5991	40.59
17	Methylene Chloride	84	2.305	2.306	(0.550)	62593	18.1826	18.18(M)
87	n-Butylbenzene	91	9.999	9.999	(1.034)	205398	21.5251	21.52
73	n-Propylbenzene	91	8.917	8.917	(0.922)	338230	22.0444	22.04
92	Naphthalene	128	11.546	11.546	(1.194)	24673	13.7399	13.73
63	o-Xylene	106	8.244	8.244	(1.075)	109578	20.1156	20.11
81	sec-Butylbenzene	105	9.526	9.526	(0.985)	274352	21.7530	21.75
64	Styrene	104	8.258	8.265	(1.077)	191796	20.2593	20.25
78	tert-Butylbenzene	119	9.340	9.340	(0.966)	192119	22.2608	22.26
56	Tetrachloroethene	164	6.933	6.933	(0.904)	55819	21.3105	21.31
50	Toluene	91	6.453	6.446	(0.841)	282073	20.6170	20.61
20	trans-1,2-Dichloroethene	96	2.535	2.535	(0.605)	66559	19.3443	19.34
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	99802	18.6750	18.67
38	Trichloroethene	130	5.214	5.214	(1.049)	72658	19.8716	19.87
8	Trichlorofluoromethane	101	1.560	1.561	(0.373)	111597	20.5565	20.55
5	Vinyl Chloride	62	1.145	1.145	(0.273)	107512	19.4407	19.44

QC Flag Legend

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



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Purge Volume: 5.0
Column phase: DB624

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

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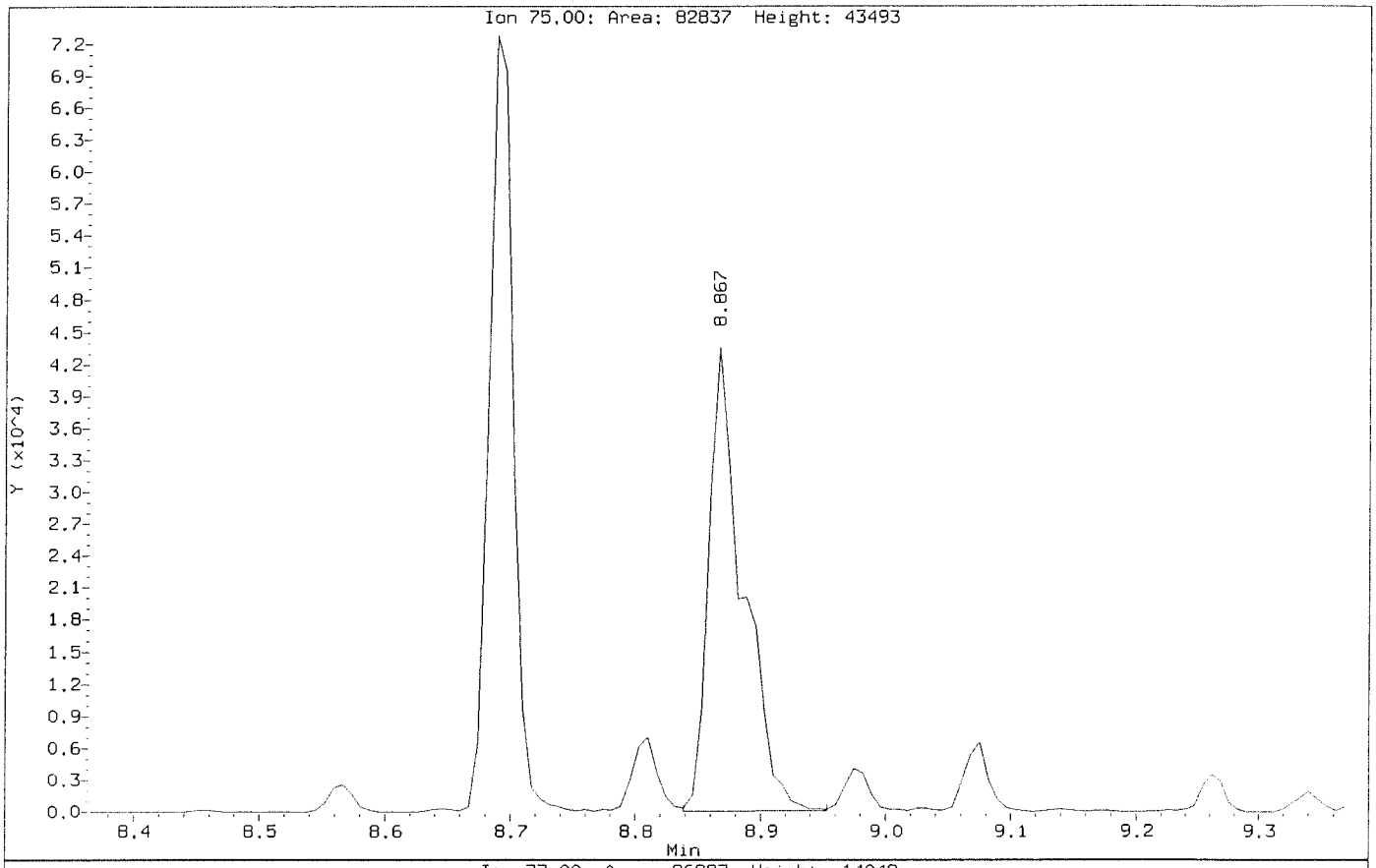
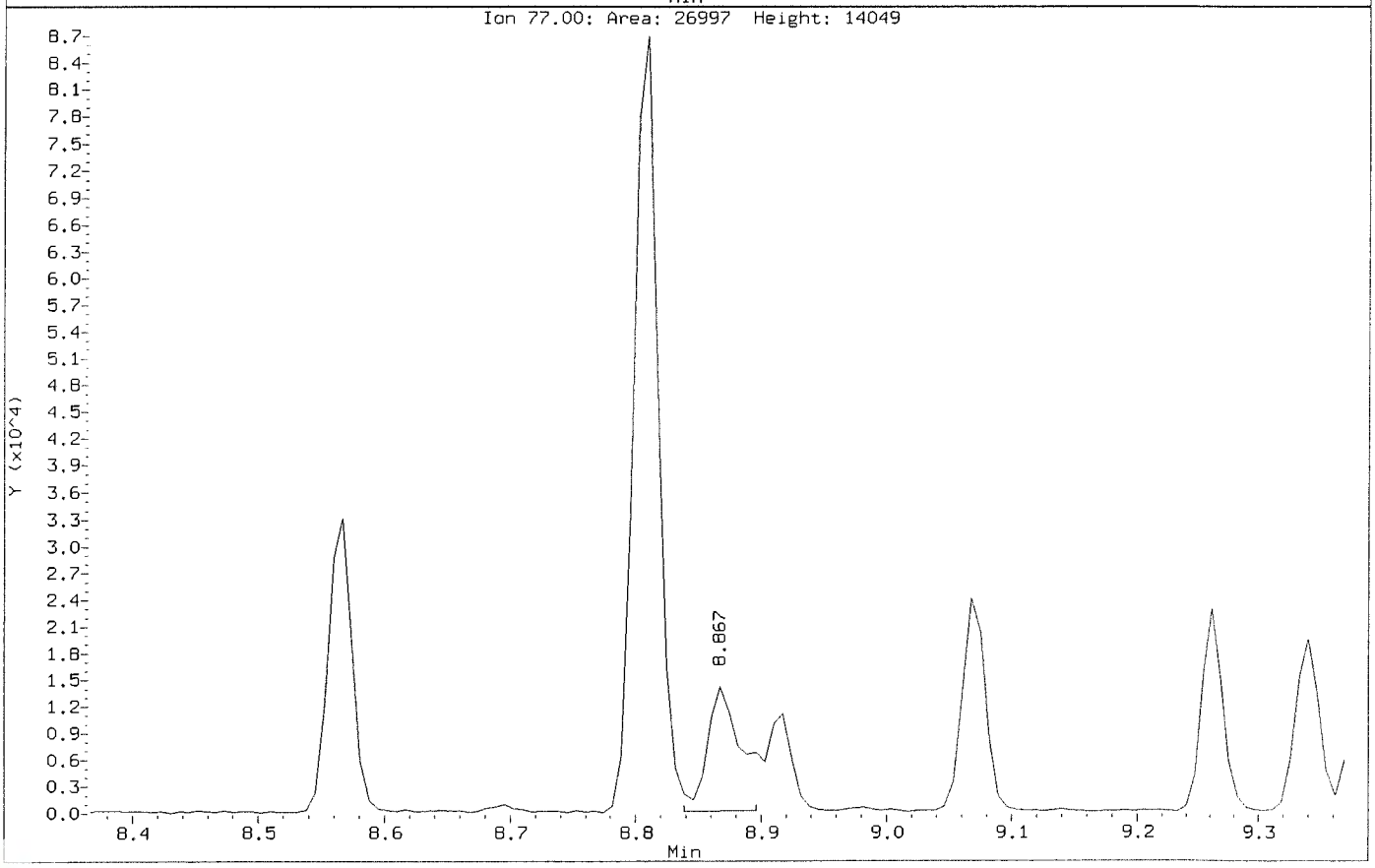
Instrument: voa6.i
Client Sample ID: HS20061218-01MS

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





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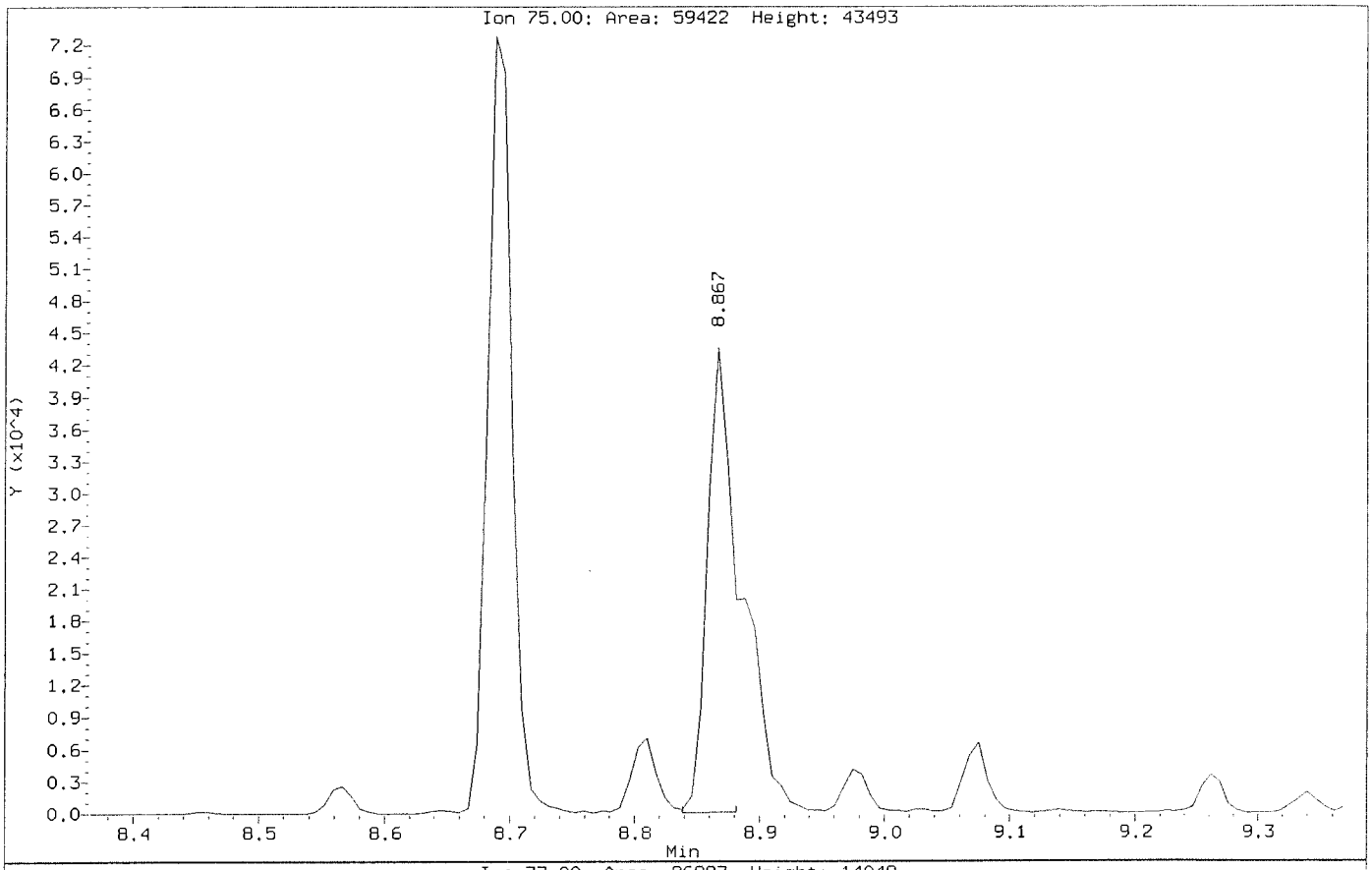
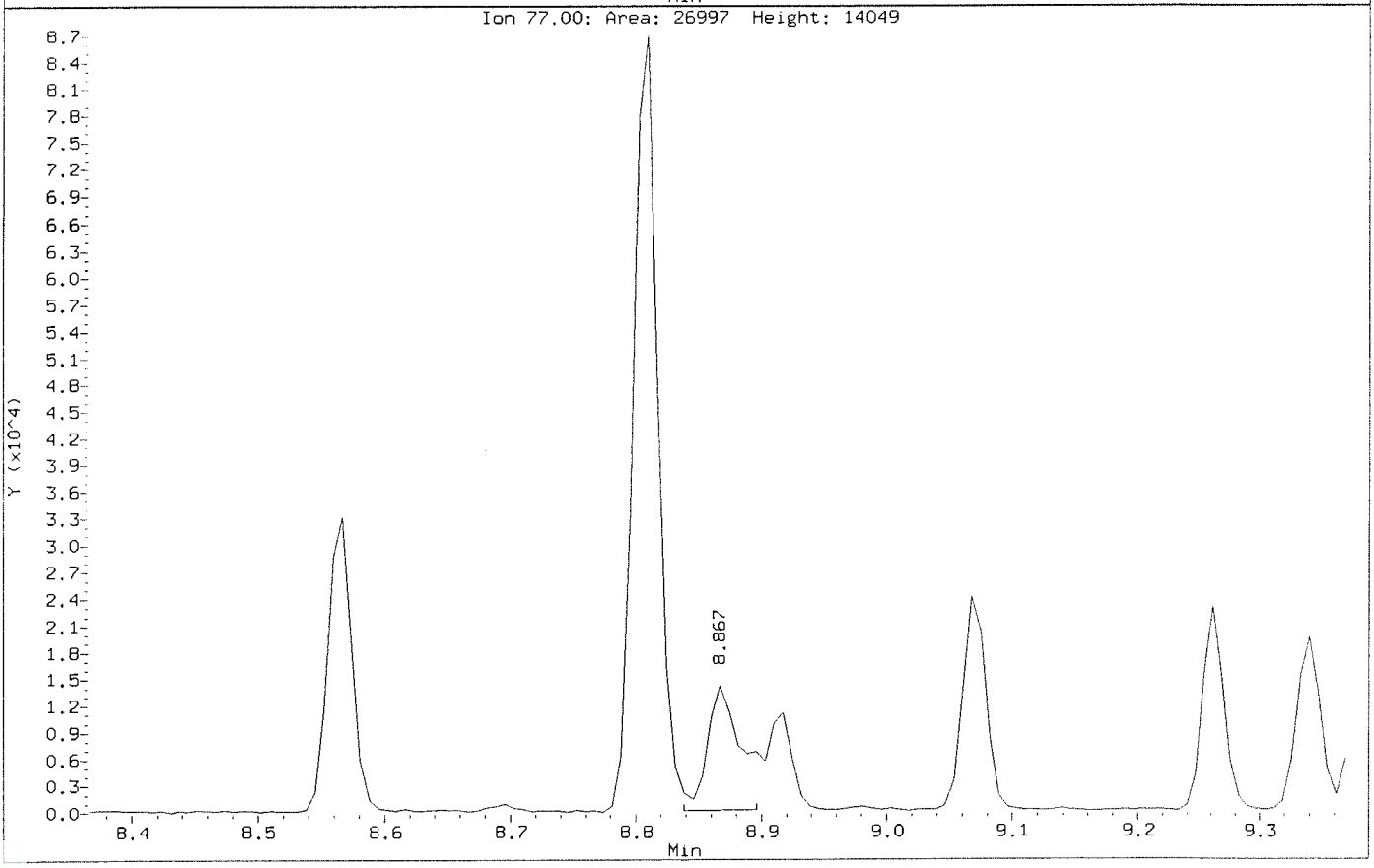
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





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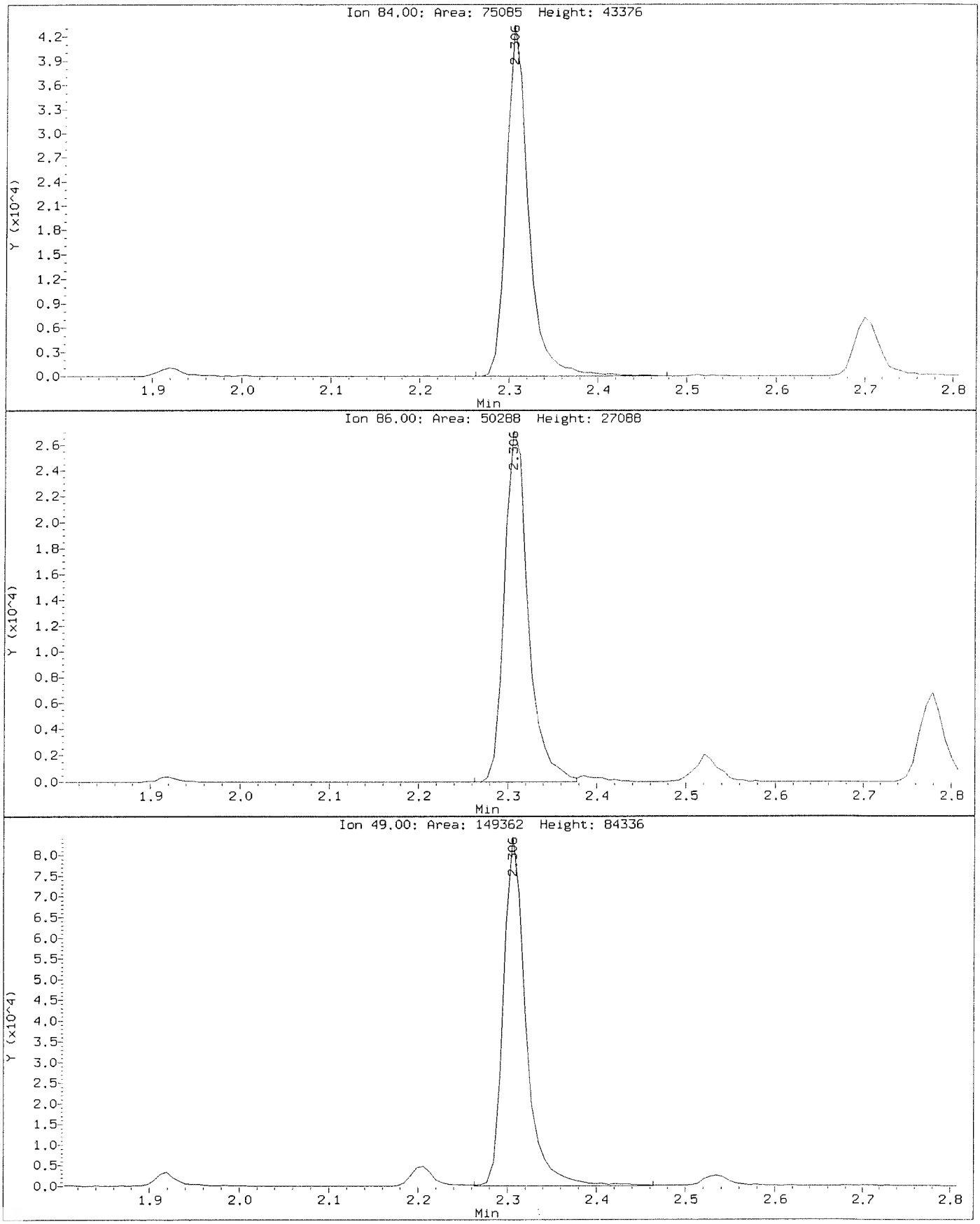
Injection Date: 07-JUL-2020 22:19
Instrument: voa6.i
Client Sample ID: HS20061218-01MS

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



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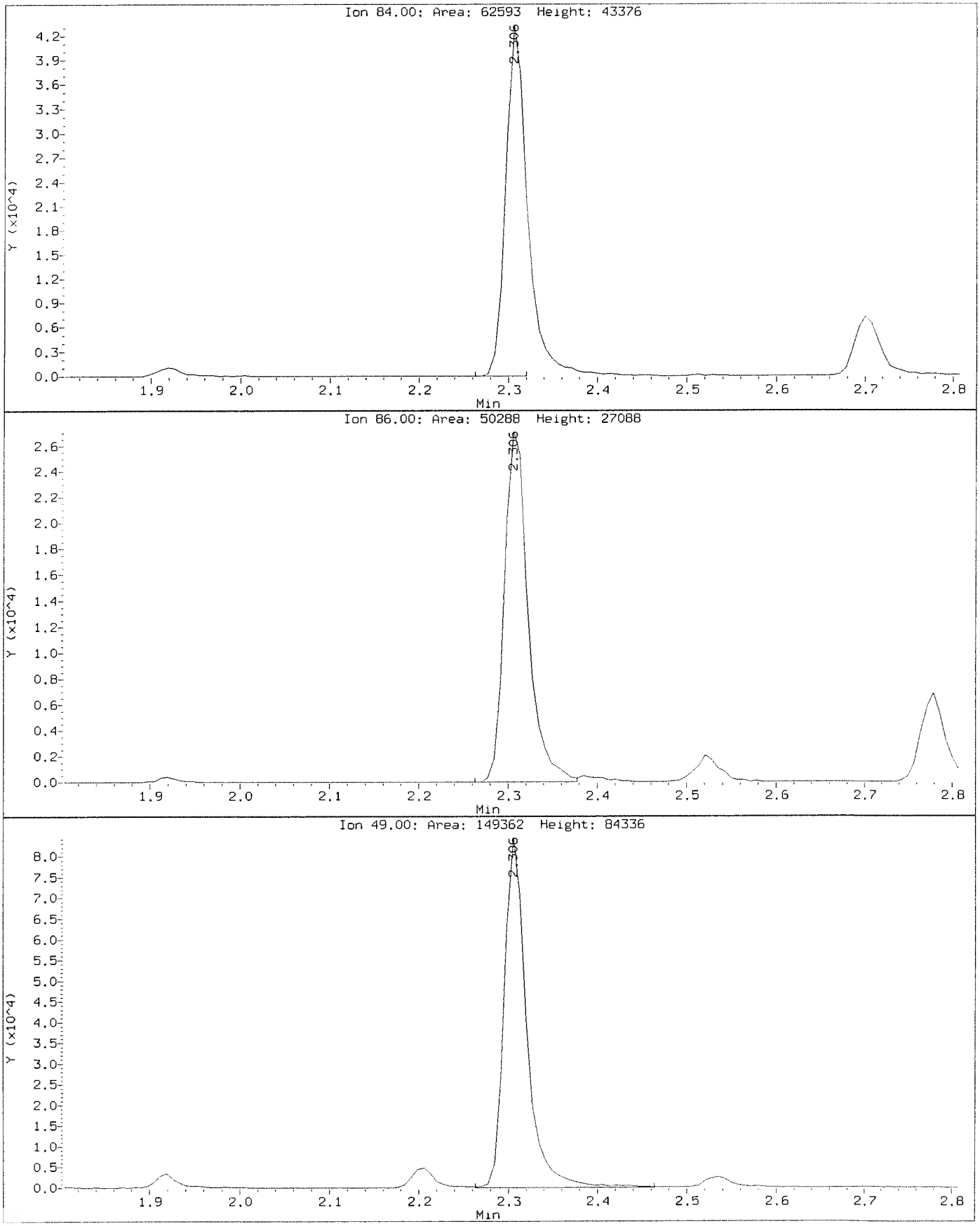
Instrument: voa6.i
Client Sample ID: HS20061218-01MS

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



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Report Date: 13-Aug-2020 12:16

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200707.b\Y070714.D
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Inj Date : 07-JUL-2020 22:43
Operator : PC Inst ID: voa6.i
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Misc Info : HS18090001;WATER;0;1;
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Cal Date : 07-JUL-2020 15:05 Cal File: X070711.D
Als bottle: 28 QC Sample: MSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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	4.189	4.189	(1.000)	310574	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	494233	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	425793	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	179870	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.979)	157193	46.4667	46.46
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	208913	44.8847	44.88
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	562080	50.2122	50.21
$ 69 4-Bromofluorobenzene	95	8.695	8.688	(1.134)	198196	48.8578	48.85
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	64750	19.8056	19.80
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.976)	108850	19.1319	19.13
68 1,1,2,2-Tetrachloroethane	83	8.845	8.838	(0.915)	68300	19.2067	19.20
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	51882	19.2618	19.26
22 1,1-Dichloroethane	63	2.929	2.929	(0.699)	167246	19.0012	19.00
11 1,1-Dichloroethene	96	1.919	1.919	(0.458)	67102	23.3331	23.33
32 1,1-Dichloropropene	75	4.283	4.283	(0.862)	93369	19.1845	19.18
93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.215)	8842	16.6614	16.66
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	58790	18.7496	18.74(M)
90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	18532	17.4145	17.41
79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.970)	223642	21.1429	21.14
89 1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.102)	3975	12.9775	12.97
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	63404	18.5257	18.52
88 1,2-Dichlorobenzene	146	9.999	9.999	(1.034)	89512	17.0268	17.02

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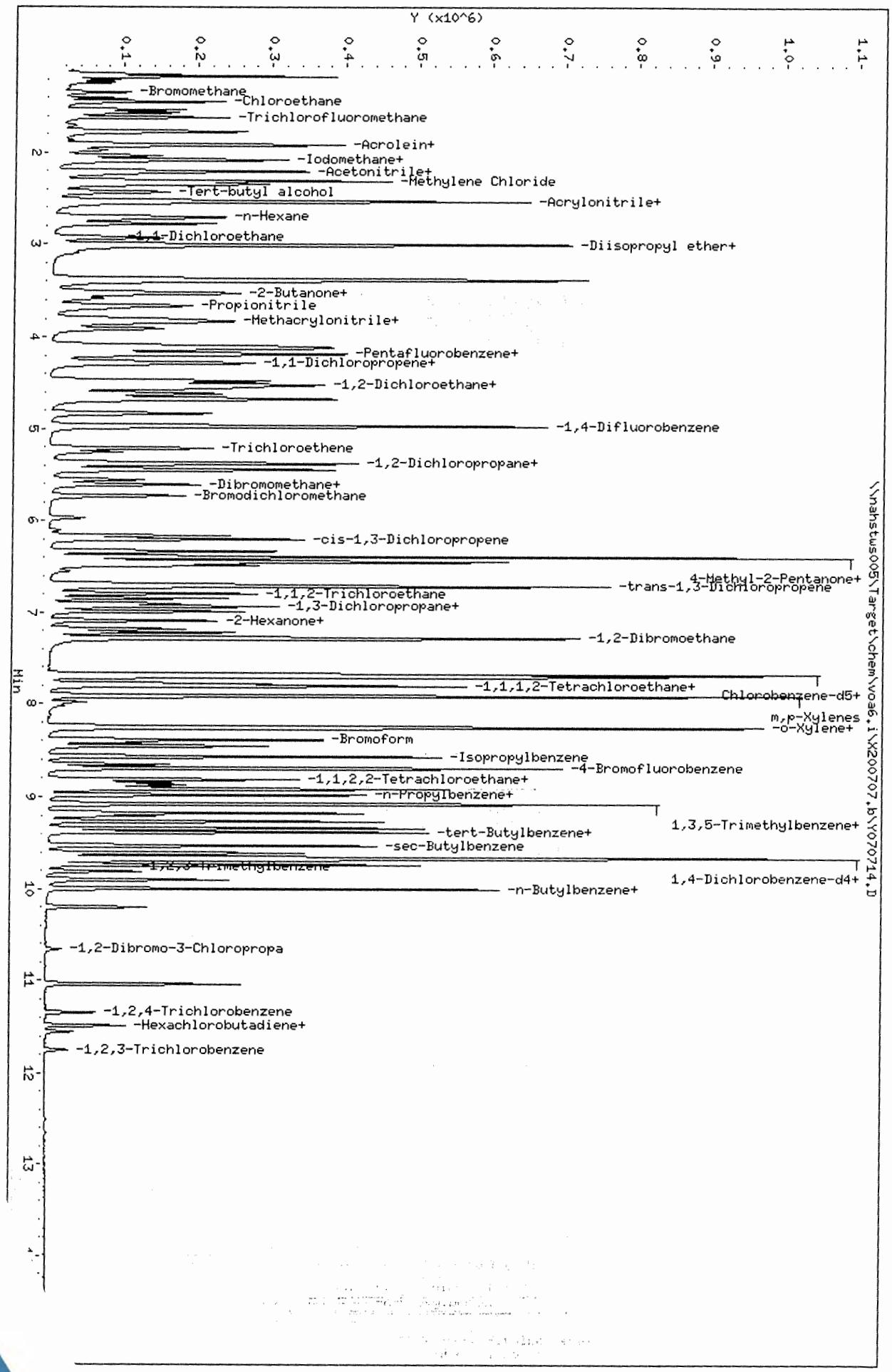
Report Date: 13-Aug-2020 12:16

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
33	1,2-Dichloroethane	62	4.562	4.562	(0.918)	118303	19.2933	19.29
42	1,2-Dichloropropane	63	5.443	5.443	(1.095)	88866	19.3282	19.32
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	206870	20.1858	20.18
83	1,3-Dichlorobenzene	146	9.605	9.605	(0.993)	117454	20.3961	20.39
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	108018	19.0523	19.05
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	116422	21.1452	21.14
26	2,2-Dichloropropane	77	3.516	3.516	(0.839)	93737	17.4329	17.43
24	2-Butanone	43	3.581	3.581	(0.855)	84316	25.1786	25.17
76	2-Chlorotoluene	91	8.974	8.974	(0.928)	194494	21.5442	21.54
52	2-Hexanone	43	7.090	7.090	(0.924)	143054	32.7986	32.79
77	4-Chlorotoluene	91	9.075	9.075	(0.939)	202940	19.8231	19.82
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	224854	21.9836	21.98
45	4-Methyl-2-Pentanone	43	6.324	6.324	(0.824)	216835	35.6764	35.67
10	Acetone	43	2.234	1.976	(0.533)	72805	4.33750	4.33(a)
37	Benzene	78	4.519	4.519	(0.909)	270408	19.1762	19.17
74	Bromobenzene	156	8.810	8.810	(0.911)	73469	21.4104	21.41
29	Bromochloromethane	128	3.803	3.803	(0.908)	36565	16.9510	16.95
39	Bromodichloromethane	83	5.729	5.729	(1.153)	94162	19.0211	19.02
66	Bromoform	173	8.416	8.416	(1.097)	42764	18.0924	18.09
6	Bromomethane	94	1.339	1.339	(0.320)	44434	20.3293	20.32
19	Carbon Disulfide	76	2.076	2.076	(0.496)	361465	38.2759	38.27
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	94456	20.0261	20.02
59	Chlorobenzene	112	7.699	7.699	(1.004)	174342	20.0975	20.09
7	Chloroethane	64	1.403	1.403	(0.335)	53560	17.9716	17.97
28	Chloroform	83	3.910	3.910	(0.933)	124241	18.2560	18.25
3	Chloromethane	50	1.081	1.081	(0.258)	120059	18.8113	18.81
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.843)	73724	18.1604	18.16
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	110095	18.4558	18.45
55	Dibromochloromethane	129	7.176	7.176	(0.936)	66603	19.0422	19.04
44	Dibromomethane	93	5.558	5.558	(1.118)	44852	18.1001	18.10
2	Dichlorodifluoromethane	85	0.973	0.973	(0.232)	59392	15.7968	15.79
61	Ethylbenzene	106	7.800	7.800	(1.017)	92451	20.1367	20.13
91	Hexachlorobutadiene	225	11.481	11.481	(1.187)	16212	19.5841	19.58
67	Isopropylbenzene	105	8.566	8.566	(1.117)	279263	20.5066	20.50
62	m,p-Xylenes	106	7.907	7.907	(1.031)	219808	39.8122	39.81
17	Methylene Chloride	84	2.306	2.306	(0.550)	61076	17.9837	17.98(M)
87	n-Butylbenzene	91	9.999	9.999	(1.034)	164645	18.0462	18.04
73	n-Propylbenzene	91	8.917	8.917	(0.922)	328320	22.3806	22.38
92	Naphthalene	128	11.546	11.546	(1.194)	25414	14.7791	14.77
63	o-Xylene	106	8.244	8.244	(1.075)	110009	20.3388	20.33
81	sec-Butylbenzene	105	9.526	9.526	(0.985)	255621	21.1980	21.19
64	Styrene	104	8.265	8.265	(1.078)	187205	19.9154	19.91
78	tert-Butylbenzene	119	9.340	9.340	(0.966)	188792	22.8792	22.87
56	Tetrachloroethene	164	6.933	6.933	(0.904)	53318	20.5008	20.50
50	Toluene	91	6.446	6.446	(0.840)	278415	20.4948	20.49
20	trans-1,2-Dichloroethene	96	2.535	2.535	(0.605)	64106	18.8853	18.88
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	98432	18.3656	18.36
38	Trichloroethene	130	5.207	5.214	(1.048)	69934	19.0715	19.07
8	Trichlorofluoromethane	101	1.561	1.561	(0.373)	102931	19.2186	19.21
5	Vinyl Chloride	62	1.145	1.145	(0.273)	105130	19.2690	19.26

Flag Legend

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



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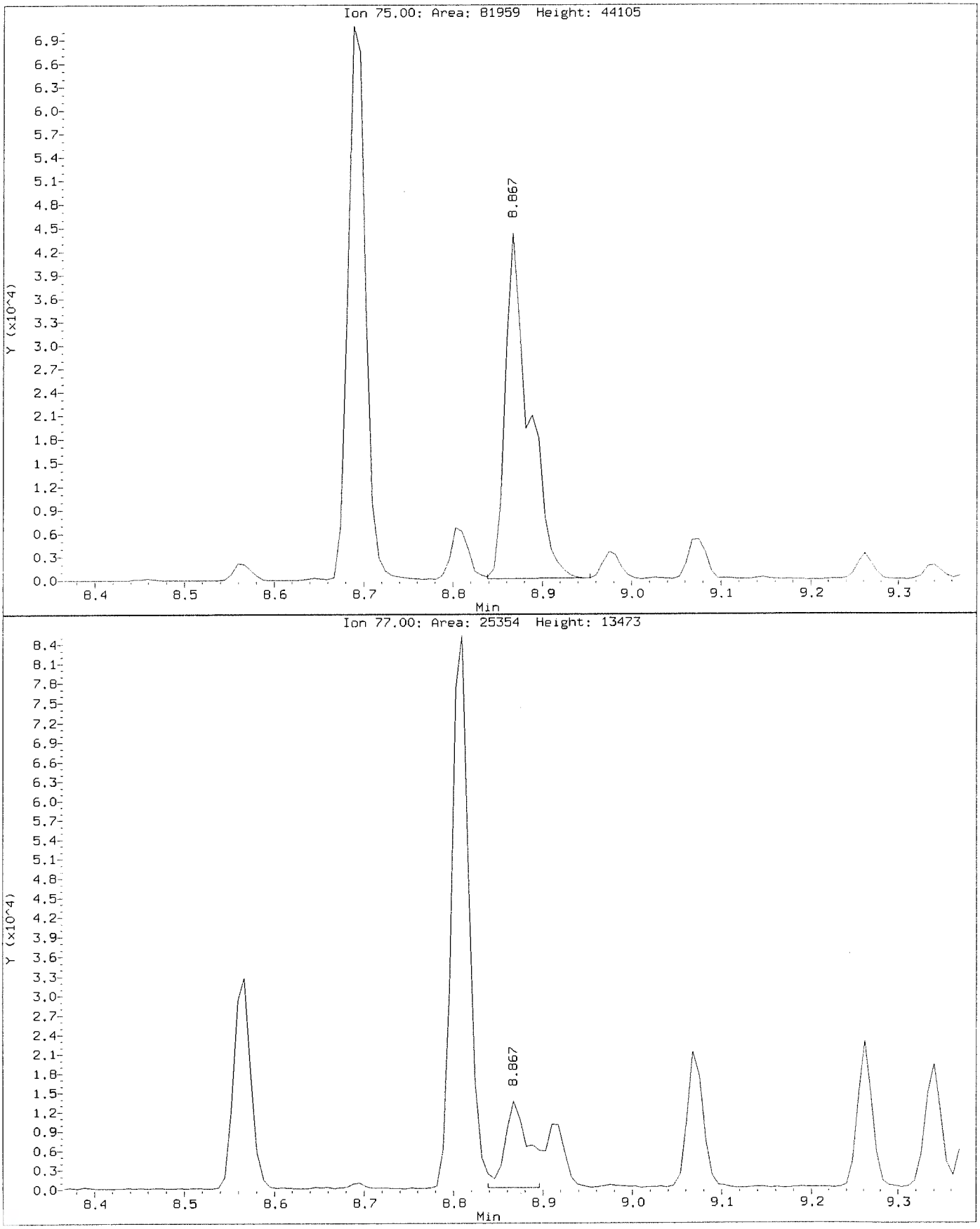
Date : 07-JUL-2020 22:43
Client ID: HS20061218-01MSD
Sample Info: HS20061218-01MSD;HS20061218-01MSD;3;;MSD
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\nahstws005\Target\chem\voa6.i\X200707.b\Before\Y070714.D
Injection Date: 07-JUL-2020 22:43
Instrument: voa6.i
Client Sample ID: HS20061218-01MSD

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4



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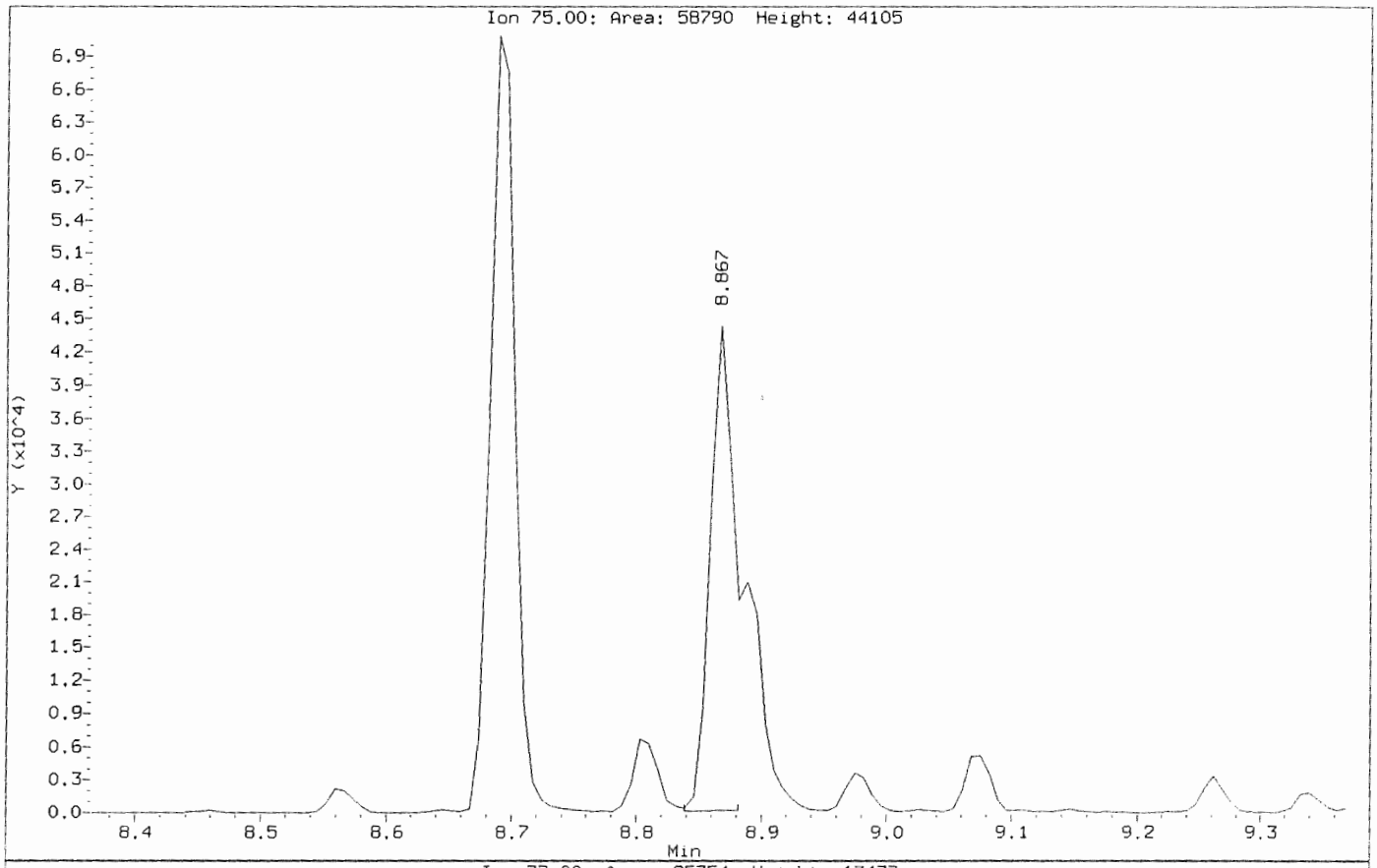
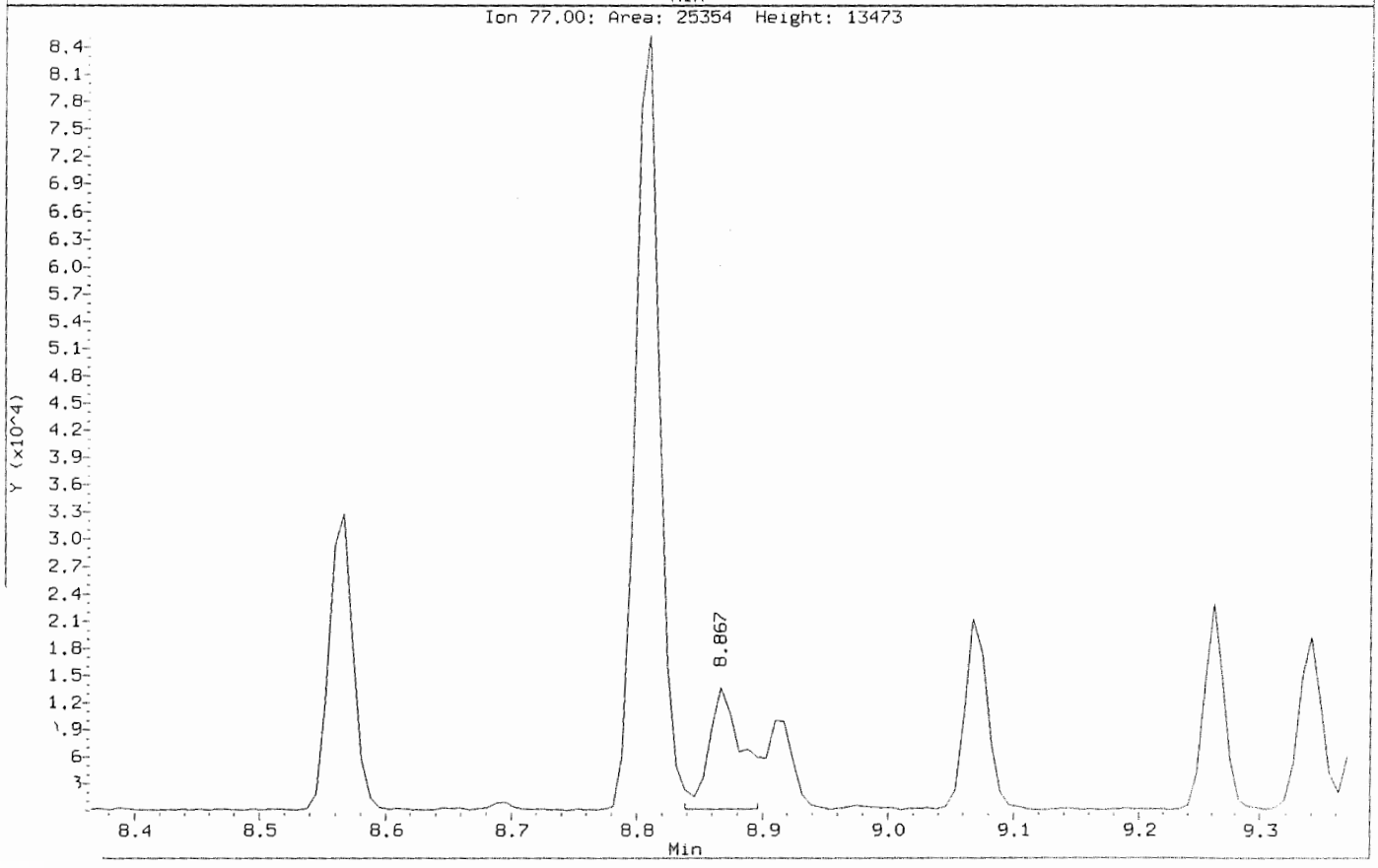
Injection Date: 07-JUL-2020 22:43
Instrument: voa6.i
Client Sample ID: HS20061218-01MSD

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





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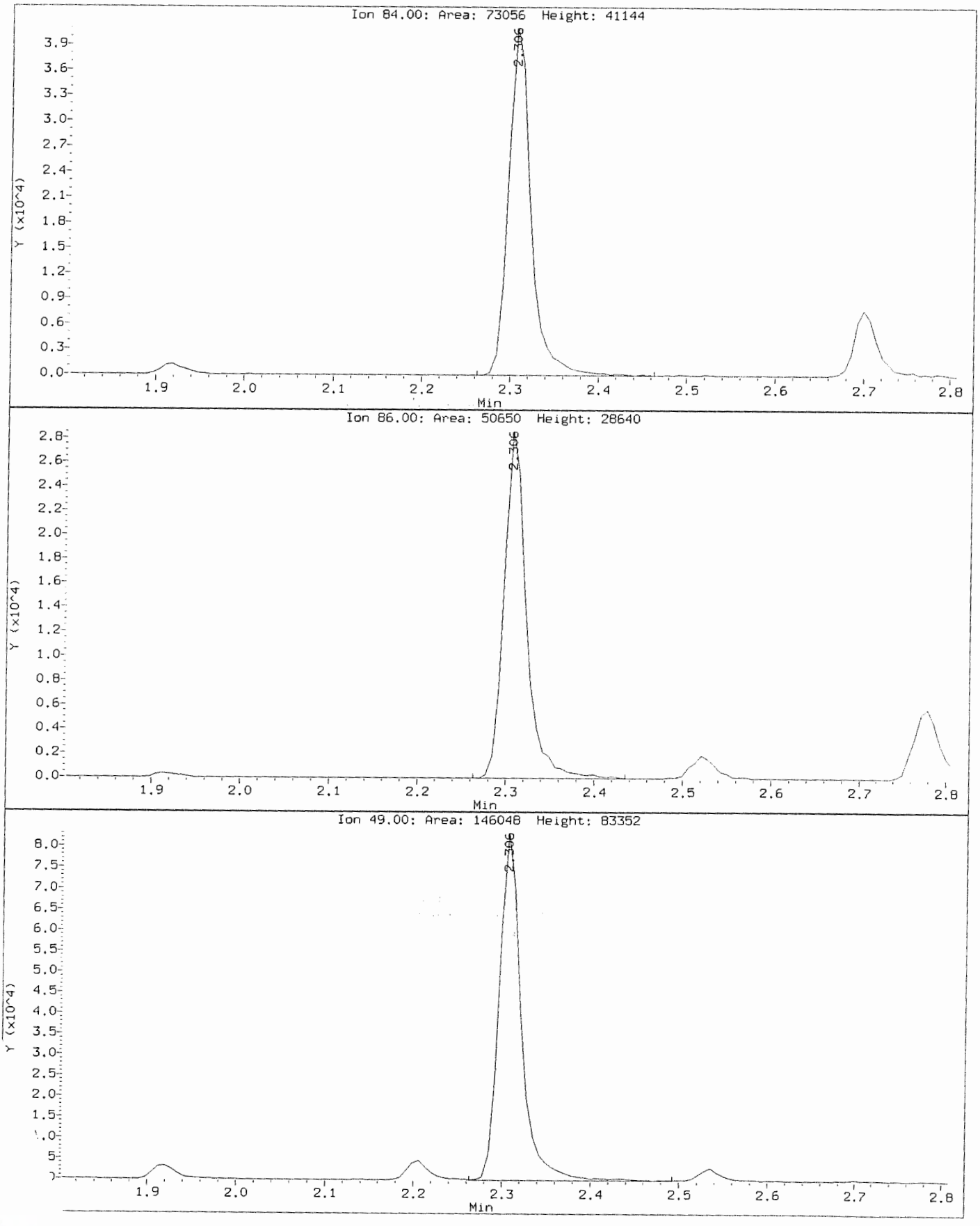
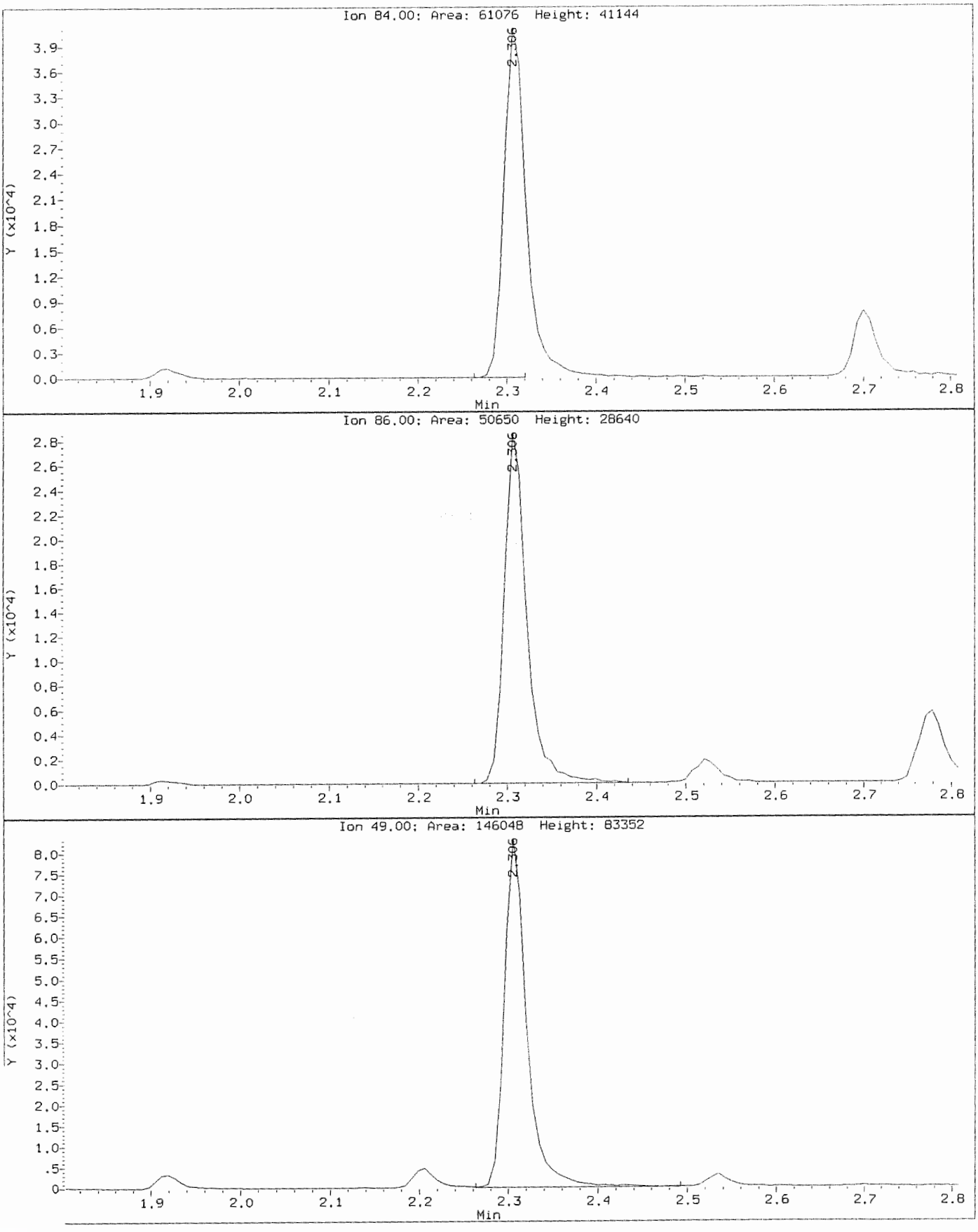
Injection Date: 07-JUL-2020 22:43
Instrument: voa6.i
Client Sample ID: HS20061218-01MSD

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



Data File: \\nahstws005\Target\chem\voa6.i\X200707.b\Y070714.D
Injection Date: 07-JUL-2020 22:43
Instrument: voa6.i
Client Sample ID: HS20061218-01MSD

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



Data File: \\nahstws005\Target\chem\voa6.i\X200707.b\Y070720.D Page 1
Report Date: 13-Aug-2020 12:41

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200707.b\Y070720.D
Lab Smp Id: HS20061390-01 Client Smp ID: HS20061390-01
Inj Date : 08-JUL-2020 01:08
Operator : PC Inst ID: voa6.i
Smp Info : HS20061390-01;HS20061390-01;;;
Misc Info : HS18090001;WATER;0;1;
Comment   :
Method   : \\nahstws005\Target\chem\voa6.i\X200707.b\8260W.m
Meth Date : 13-Aug-2020 12:38 voa6.i Quant Type: ISTD
Cal Date : 07-JUL-2020 15:05 Cal File: X070711.D
Als bottle: 34
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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	4.189	4.189	(1.000)	340647	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	532944	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	462027	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	191957	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.979)	172106	46.3821	46.38
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	225053	44.0714	44.07
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	609706	50.1953	50.19
$ 69 4-Bromofluorobenzene	95	8.688	8.695	(1.133)	219558	49.9019	49.90

Data File: \\nahstws005\Target\chem\voa6.i\X200707.b\Y070720.D

Date : 08-JUL-2020 01:08

Client ID: HS20061390-01

Instrument: voa6.i

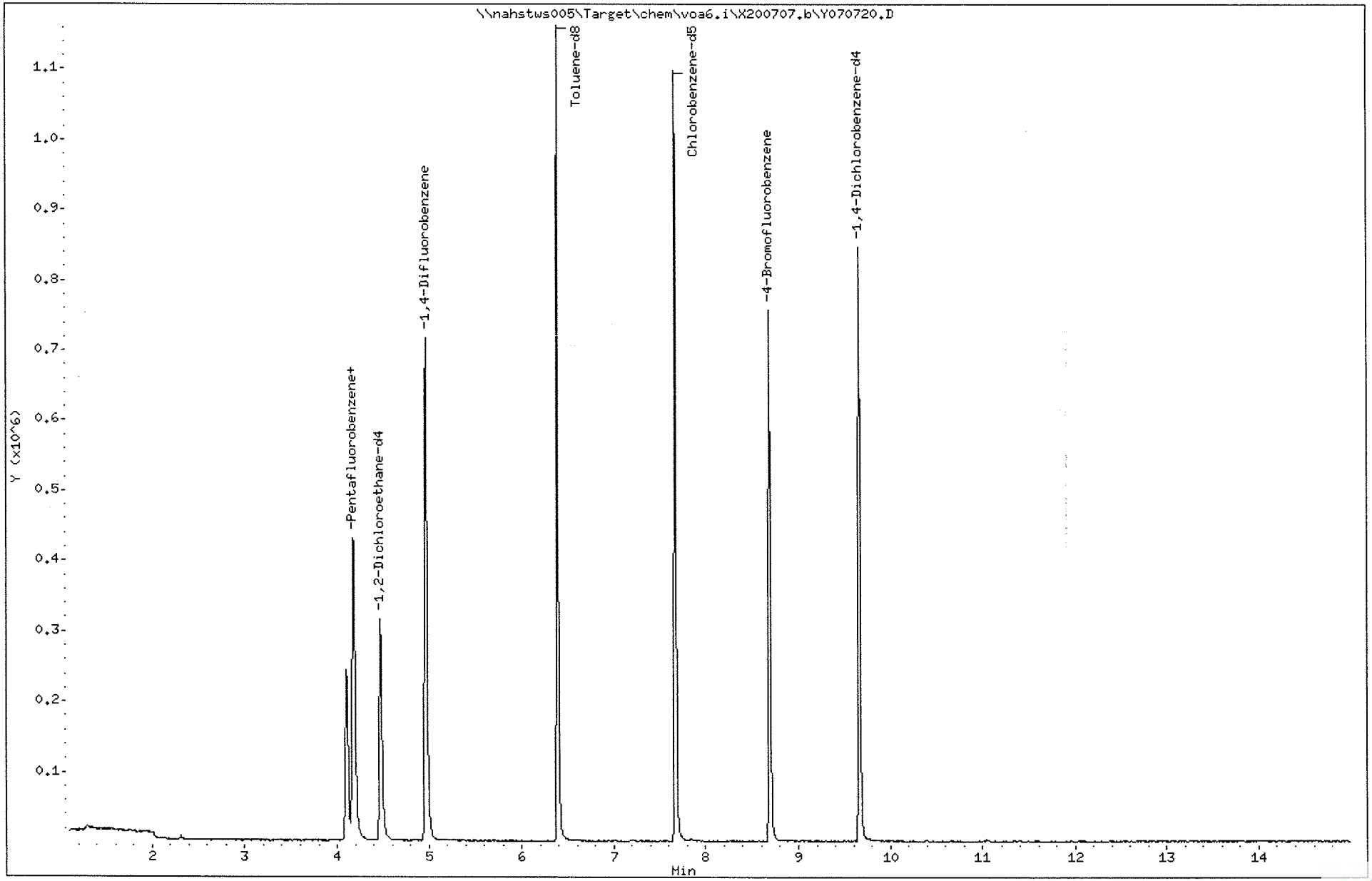
Sample Info: HS20061390-01;HS20061390-01;;;

Purge Volume: 5.0

Operator: PC

Column phase: DB624

Column diameter: 0.18



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Data file : \\nahstws005\Target\chem\voa6.i\X200707.b\Y070721.D
Lab Smp Id: HS20061390-02 Client Smp ID: HS20061390-02
Inj Date : 08-JUL-2020 01:32
Operator : PC Inst ID: voa6.i
Smp Info : HS20061390-02;HS20061390-02;;;
Misc Info : HS18090001;WATER;0;1;
Comment   :
Method   : \\nahstws005\Target\chem\voa6.i\X200707.b\8260W.m
Meth Date : 13-Aug-2020 12:38 voa6.i Quant Type: ISTD
Cal Date : 07-JUL-2020 15:05 Cal File: X070711.D
Als bottle: 35
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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	4.189	4.189	(1.000)	340407	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	536289	50.0000	
* 47 Chlorobenzene-d5	117	7.670	7.671	(1.000)	459617	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	204046	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.979)	173318	46.7486	46.74
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	222229	43.5409	43.54
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	615964	50.9764	50.97
$ 69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	220862	50.4736	50.47

Data File: \\nahstws005\Target\chem\voa6.i\X200707.b\Y070721.D

Date : 08-JUL-2020 01:32

Client ID: HS20061390-02

Instrument: voa6.i

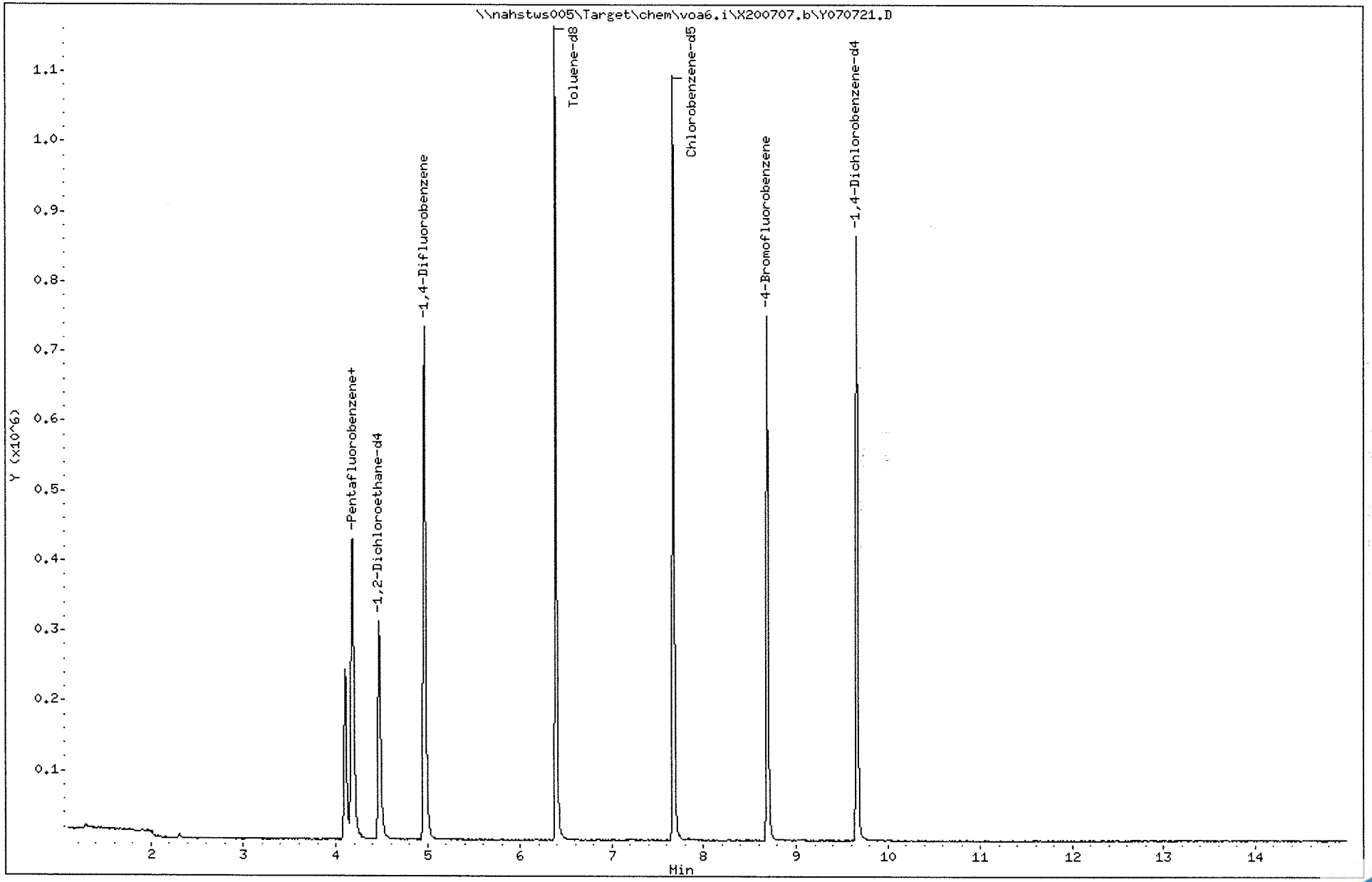
Sample Info: HS20061390-02;HS20061390-02;;;

Purge Volume: 5.0

Operator: PC

Column phase: DB624

Column diameter: 0.18



Data File: \\nahstws005\Target\chem\voa6.i\X200707.b\Y070722.D Page 1
Report Date: 13-Aug-2020 12:41

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Data file : \\nahstws005\Target\chem\voa6.i\X200707.b\Y070722.D
Lab Smp Id: HS20061390-03 Client Smp ID: HS20061390-03
Inj Date : 08-JUL-2020 01:56
Operator : PC Inst ID: voa6.i
Smp Info : HS20061390-03;HS20061390-03;;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200707.b\8260W.m
Meth Date : 13-Aug-2020 12:38 voa6.i Quant Type: ISTD
Cal Date : 07-JUL-2020 15:05 Cal File: X070711.D
Als bottle: 36
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

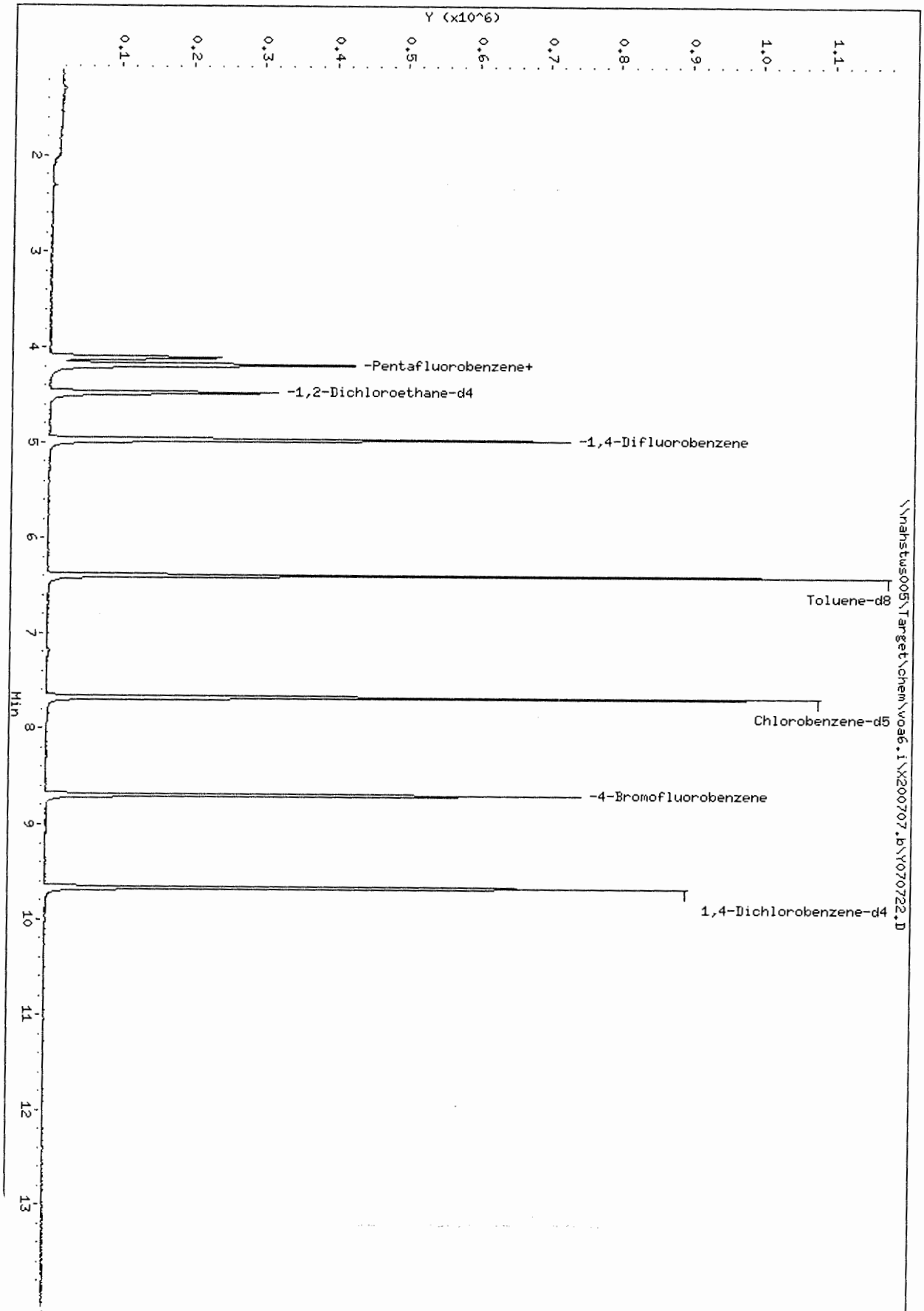
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

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	4.189	4.189	(1.000)	335476	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	530558	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	454135	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	200744	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.979)	170232	46.5881	46.58
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	224005	44.5497	44.54
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	610775	51.1571	51.15
$ 69 4-Bromofluorobenzene	95	8.688	8.695	(1.133)	222620	51.5114	51.51

Data File: \\nahstws005\Target\chem\voa6.i\X200707.b\Y070722.D
Date : 08-JUL-2020 01:56
Client ID: HS20061390-03
Sample Info: HS20061390-03;HS20061390-03;;;
Purge Volume: 5.0
Column phase: DB624

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



Data File: \\nahstws005\Target\chem\voa6.i\X200707.b\Y070723.D Page 1
Report Date: 13-Aug-2020 12:41

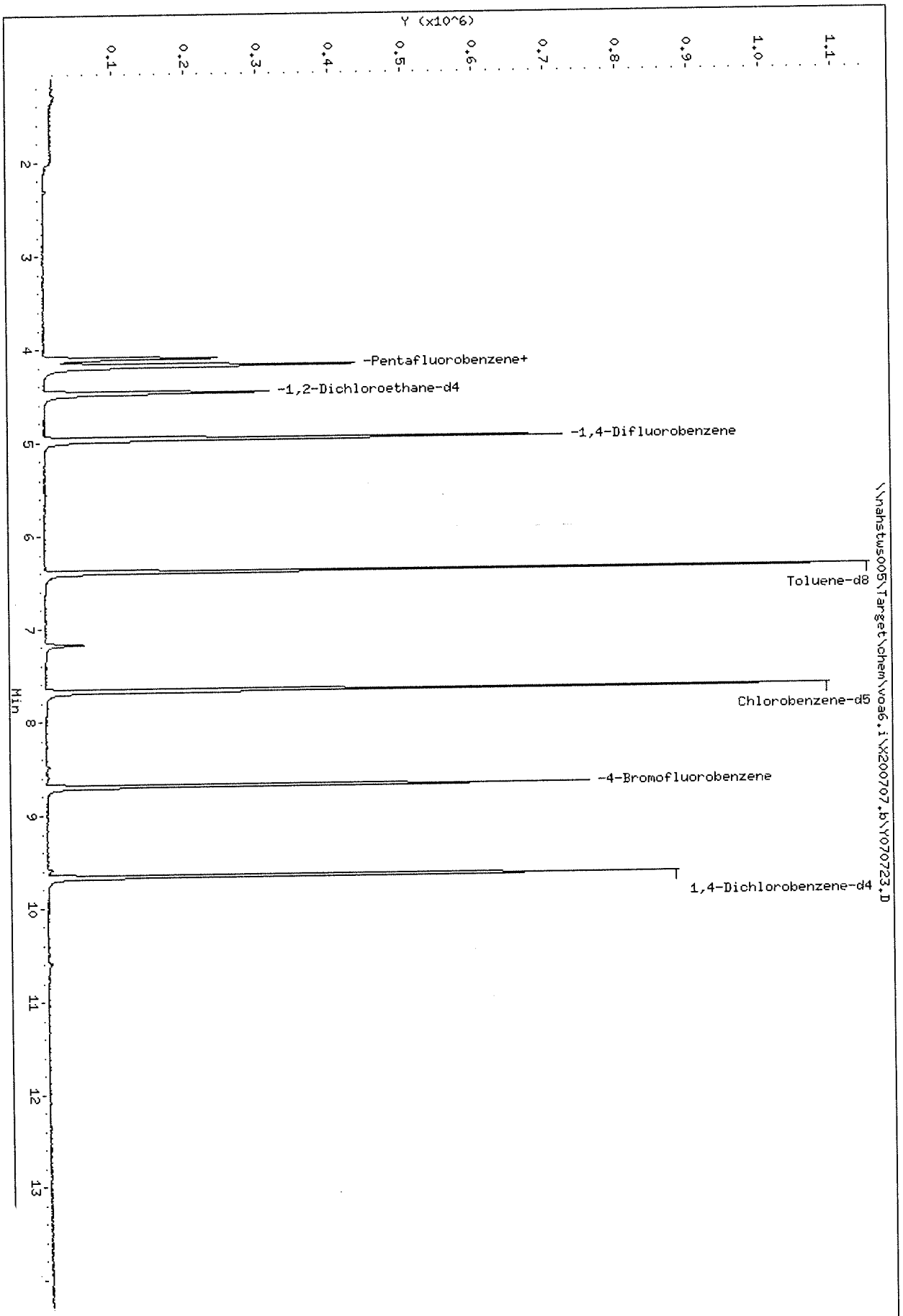
ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200707.b\Y070723.D
Lab Smp Id: HS20061390-04 Client Smp ID: HS20061390-04
Inj Date : 08-JUL-2020 02:20
Operator : PC Inst ID: voa6.i
Smp Info : HS20061390-04;HS20061390-04;;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200707.b\8260W.m
Meth Date : 13-Aug-2020 12:38 voa6.i Quant Type: ISTD
Cal Date : 07-JUL-2020 15:05 Cal File: X070711.D
Als bottle: 37
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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	4.189	4.189	(1.000)	337231	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	535588	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	456581	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	203046	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.979)	170811	46.5016	46.50
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	224460	44.4056	44.40
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	616442	51.3552	51.35
$ 69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	220804	50.8028	50.80



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Date : 08-JUL-2020 02:20
Client ID: HS20061390-04
Sample Info: HS20061390-04;HS20061390-04;;;
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\nahstws005\Target\chem\voa6.i\X200707.b\Y070724.D Page 1
Report Date: 13-Aug-2020 12:41

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200707.b\Y070724.D
Lab Smp Id: HS20061390-05 Client Smp ID: HS20061390-05
Inj Date : 08-JUL-2020 02:44
Operator : PC Inst ID: voa6.i
Smp Info : HS20061390-05;HS20061390-05;;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200707.b\8260W.m
Meth Date : 13-Aug-2020 12:38 voa6.i Quant Type: ISTD
Cal Date : 07-JUL-2020 15:05 Cal File: X070711.D
Als bottle: 38
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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	4.189	4.189	(1.000)	337726	50.0000	
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	537110	50.0000	
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	453163	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	196759	50.0000	
$	30 Dibromofluoromethane	113	4.103	4.103	(0.979)	171286	46.5638	46.56
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	227078	44.8647	44.86
$	48 Toluene-d8	98	6.388	6.388	(0.833)	617244	51.8099	51.80
$	69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	216630	50.2059	50.20
	22 1,1-Dichloroethane	63	2.929	2.929	(0.699)	4088	0.42711	0.42(a)

QC Flag Legend

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

Data File: \\nahstws005\Target\chem\voa6.i\X200707.b\Y070724.D

Date : 08-JUL-2020 02:44

Client ID: HS20061390-05

Instrument: voa6.i

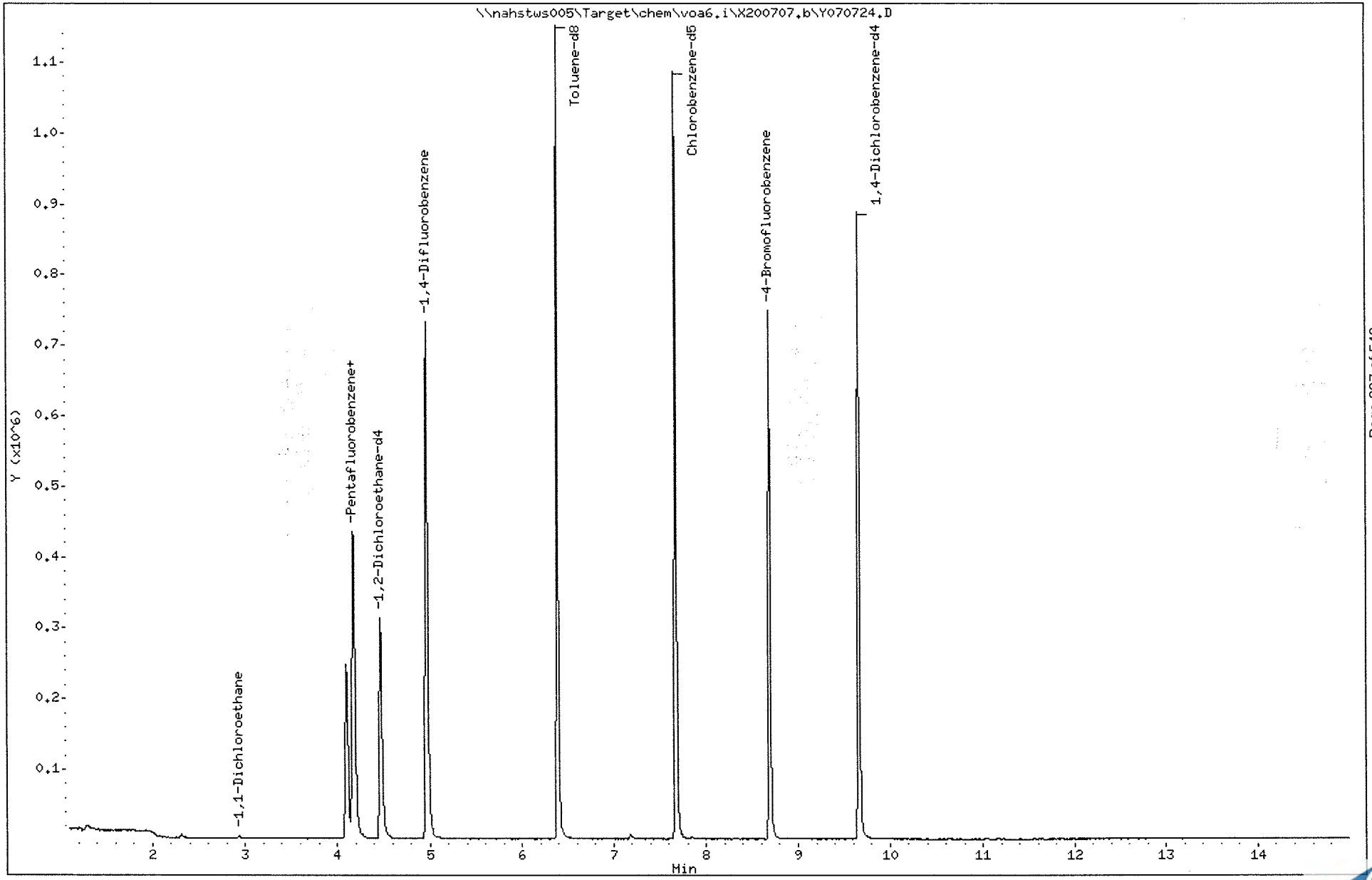
Sample Info: HS20061390-05;HS20061390-05;;;

Purge Volume: 5.0

Operator: PC

Column phase: DB624

Column diameter: 0.18



Data File: \\nahstws005\Target\chem\voa6.i\X200707.b\Y070724.D

Date : 08-JUL-2020 02:44

Client ID: HS20061390-05

Instrument: voa6.i

Sample Info: HS20061390-05;HS20061390-05;;;

Purge Volume: 5.0

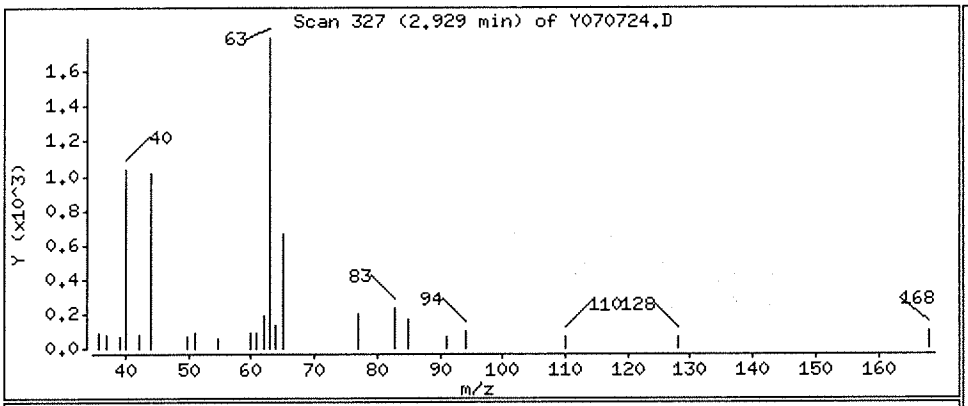
Operator: PC

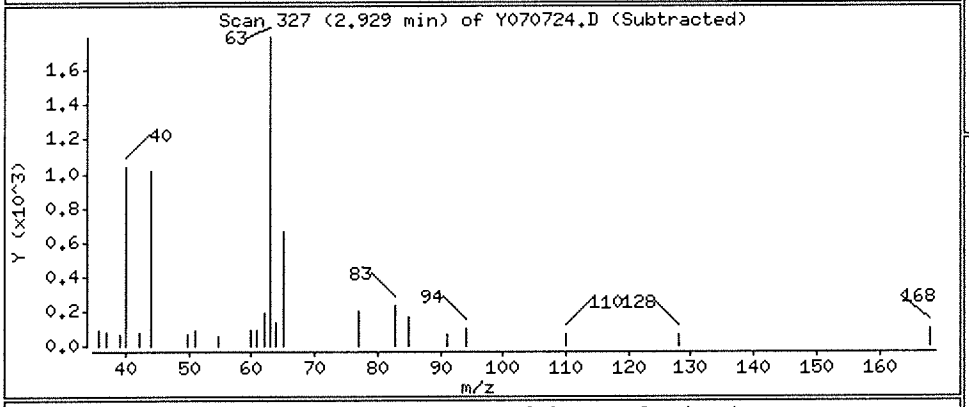
Column phase: DB624

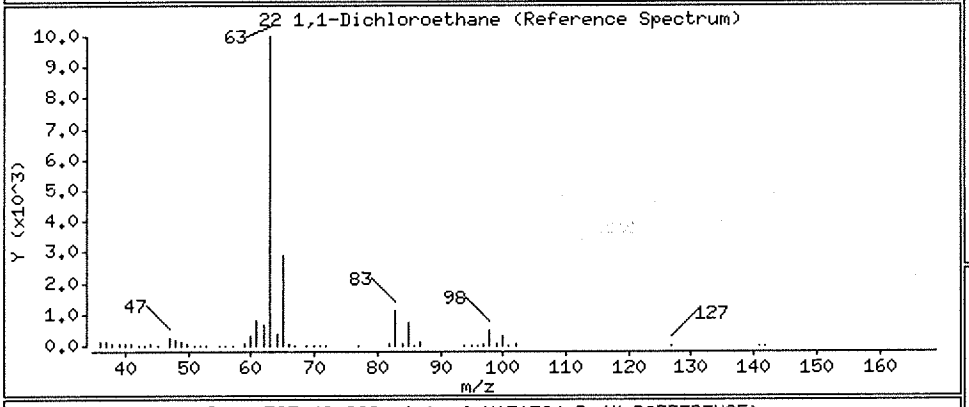
Column diameter: 0.18

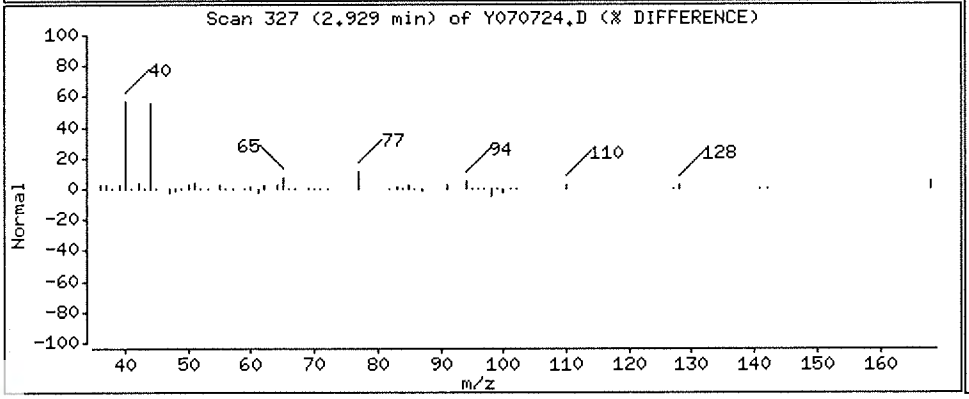
22 1,1-Dichloroethane

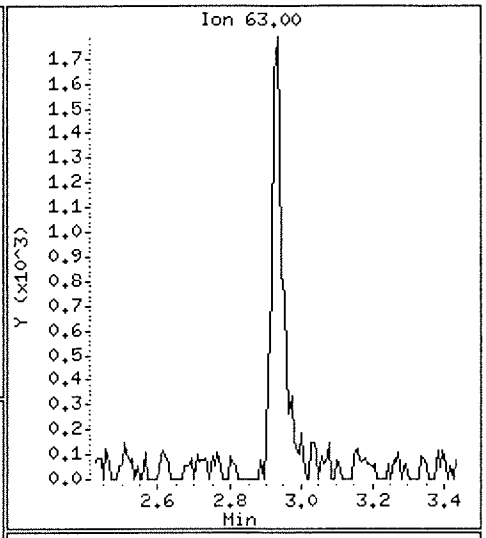
Concentration: 0.42 ug/l

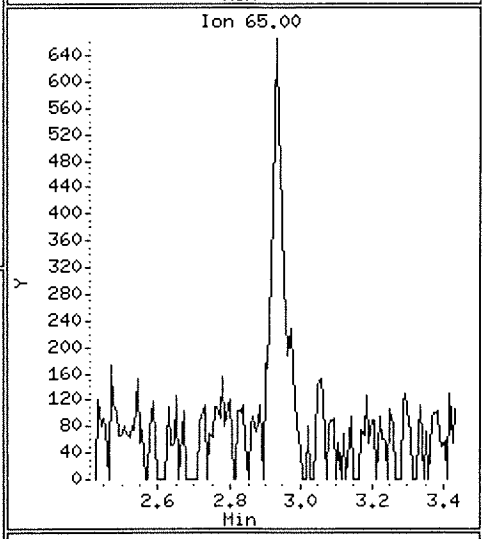


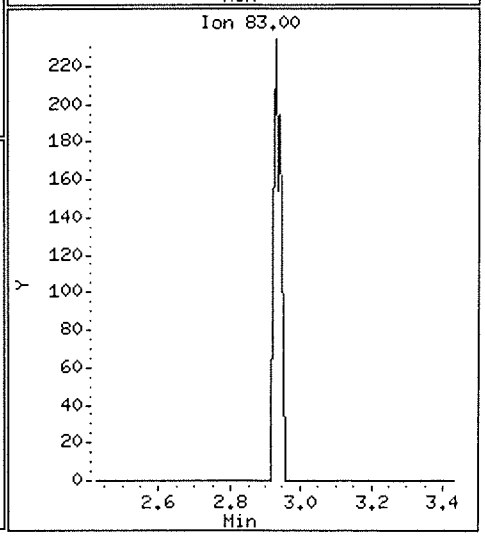












Data File: \\nahstws005\Target\chem\voa6.i\X200707.b\Y070725.D Page 1
Report Date: 13-Aug-2020 12:41

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Data file : \\nahstws005\Target\chem\voa6.i\X200707.b\Y070725.D
Lab Smp Id: HS20061390-06 Client Smp ID: HS20061390-06
Inj Date : 08-JUL-2020 03:08
Operator : PC Inst ID: voa6.i
Smp Info : HS20061390-06;HS20061390-06;;;
Misc Info : HS18090001;WATER;0;1;
Comment   :
Method   : \\nahstws005\Target\chem\voa6.i\X200707.b\8260W.m
Meth Date : 13-Aug-2020 12:38 voa6.i Quant Type: ISTD
Cal Date : 07-JUL-2020 15:05 Cal File: X070711.D
Als bottle: 39
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

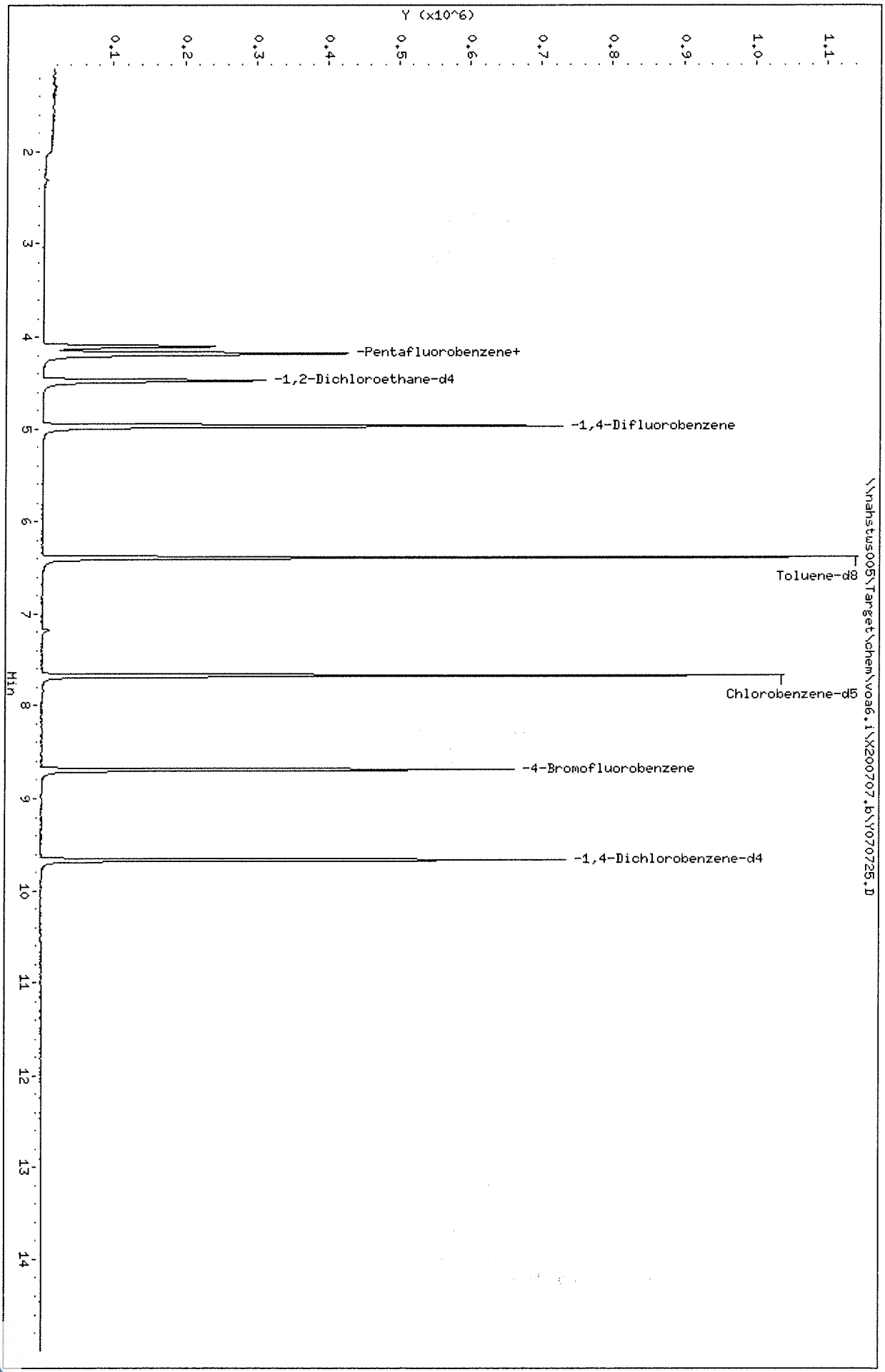
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

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	4.189	4.189	(1.000)	338497	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	538245	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	417932	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	175408	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.979)	173218	46.9898	46.98
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	222269	43.7985	43.79
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	611143	55.6221	55.62
$ 69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	193889	48.6914	48.69

Data File: \\nahstws005\Target\chem\voa6.i\X200707.b\Y070725.D
Date : 08-JUL-2020 03:08
Client ID: HS20061390-06
Sample Info: HS20061390-06;HS20061390-06;;;
Purge Volume: 5.0
Column phase: DB624

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



Data File: \\nahstws005\Target\chem\voa6.i\X200707.b\Y070726.D Page 1
Report Date: 13-Aug-2020 12:41

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200707.b\Y070726.D
Lab Smp Id: HS20061390-07 Client Smp ID: HS20061390-07
Inj Date : 08-JUL-2020 03:32
Operator : PC Inst ID: voa6.i
Smp Info : HS20061390-07;HS20061390-07;;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200707.b\8260W.m
Meth Date : 13-Aug-2020 12:38 voa6.i Quant Type: ISTD
Cal Date : 07-JUL-2020 15:05 Cal File: X070711.D
Als bottle: 40
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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	4.189	4.189	(1.000)	338039	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	537630	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	451560	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	197307	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.979)	171692	46.6322	46.63
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	223767	44.1590	44.15
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	617064	51.9786	51.97
$ 69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	212068	49.3040	49.30

Data File: \\nahstws005\Target\chem\voa6.i\X200707.b\Y070726.D

Date : 08-JUL-2020 03:32

Client ID: HS20061390-07

Instrument: voa6.i

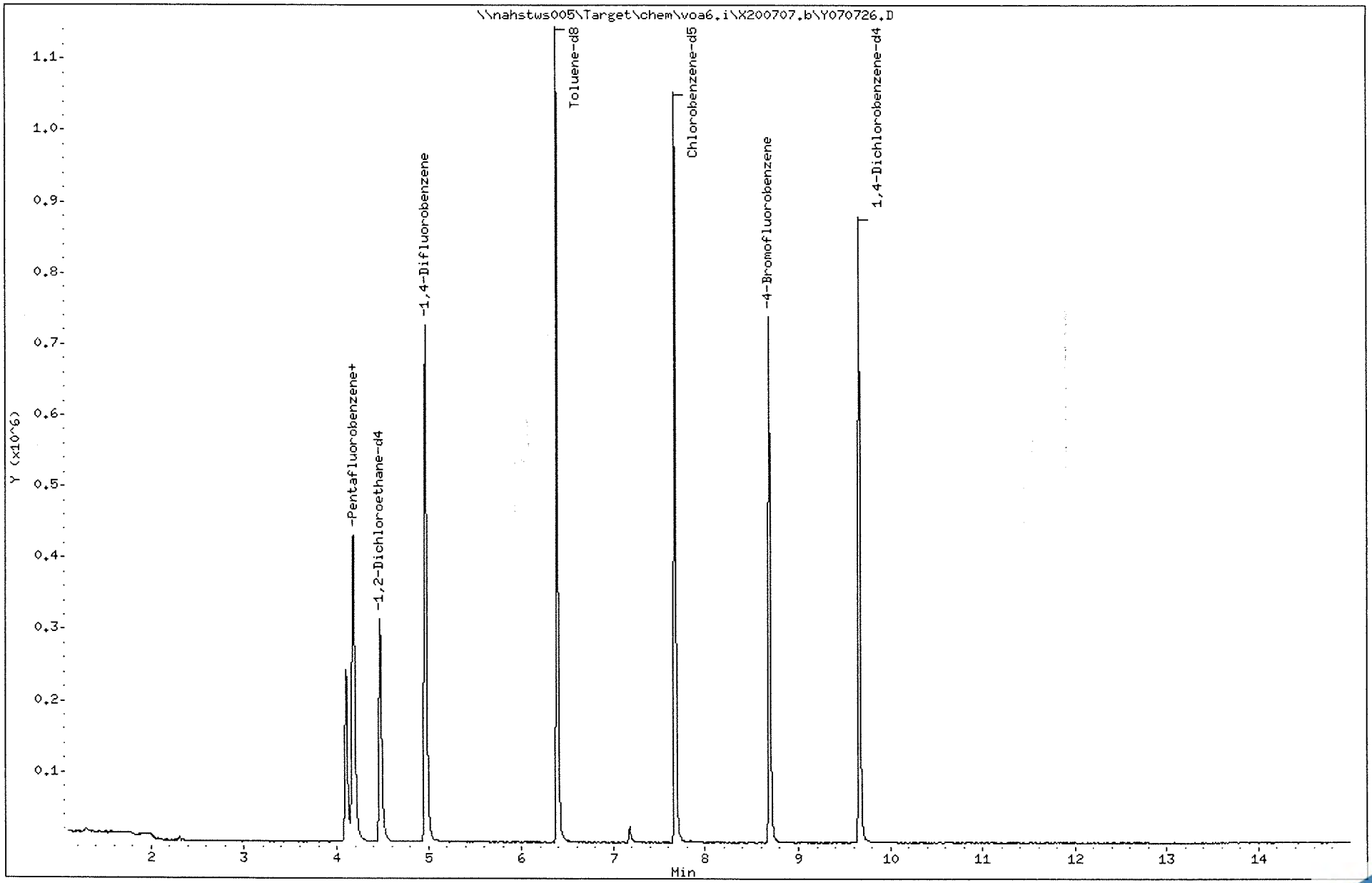
Sample Info: HS20061390-07;HS20061390-07;;;

Purge Volume: 5.0

Operator: PC

Column phase: DB624

Column diameter: 0.18



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Report Date: 13-Aug-2020 12:41

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200707.b\Y070727.D
Lab Smp Id: HS20061390-08 Client Smp ID: HS20061390-08
Inj Date : 08-JUL-2020 03:56
Operator : PC Inst ID: voa6.i
Smp Info : HS20061390-08;HS20061390-08;;;
Misc Info : HS18090001;WATER;0;1;
Comment   :
Method   : \\nahstws005\Target\chem\voa6.i\X200707.b\8260W.m
Meth Date : 13-Aug-2020 12:38 voa6.i Quant Type: ISTD
Cal Date : 07-JUL-2020 15:05 Cal File: X070711.D
Als bottle: 41
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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

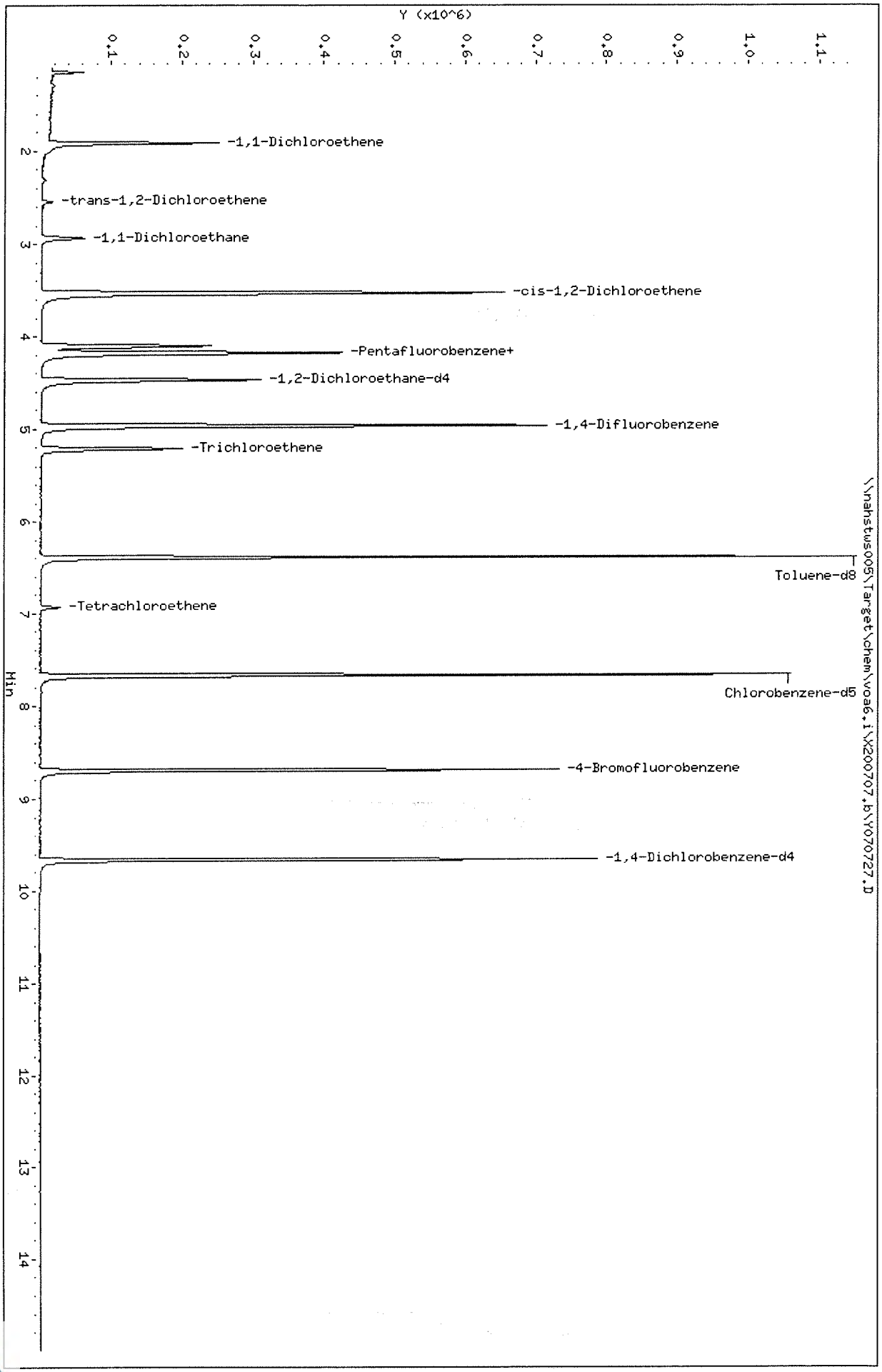
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.189	4.189	(1.000)	334267	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	531739	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	450343	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	184995	50.0000	
$ 30 Dibromofluoromethane	113	4.104	4.103	(0.979)	169796	46.6378	46.63
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	222383	44.3845	44.38
$ 48 Toluene-d8	98	6.389	6.388	(0.833)	614066	51.8659	51.86
$ 69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	212698	49.5903	49.59
22 1,1-Dichloroethane	63	2.929	2.929	(0.699)	66605	7.03077	7.03
11 1,1-Dichloroethene	96	1.919	1.919	(0.458)	69329	22.3988	22.39
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.843)	285032	65.2351	65.23
56 Tetrachloroethene	164	6.933	6.933	(0.904)	5652	2.05473	2.05(a)
20 trans-1,2-Dichloroethene	96	2.542	2.535	(0.607)	5006	1.37021	1.37(a)
38 Trichloroethene	130	5.214	5.214	(1.049)	62825	15.9243	15.92
5 Vinyl Chloride	62	1.145	1.145	(0.273)	32071	5.46156	5.46

QC Flag Legend

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

Data File: \\nahstws005\Target\chem\voa6.i\X200707.b\Y070727.D
Date : 08-JUL-2020 03:56
Client ID: HS20061390-08
Sample Info: HS20061390-08;HS20061390-08;;;
Purge Volume: 5.0
Column phase: DB624

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



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Date : 08-JUL-2020 03:56

Client ID: HS20061390-08

Instrument: voa6.i

Sample Info: HS20061390-08;HS20061390-08;;;

Purge Volume: 5.0

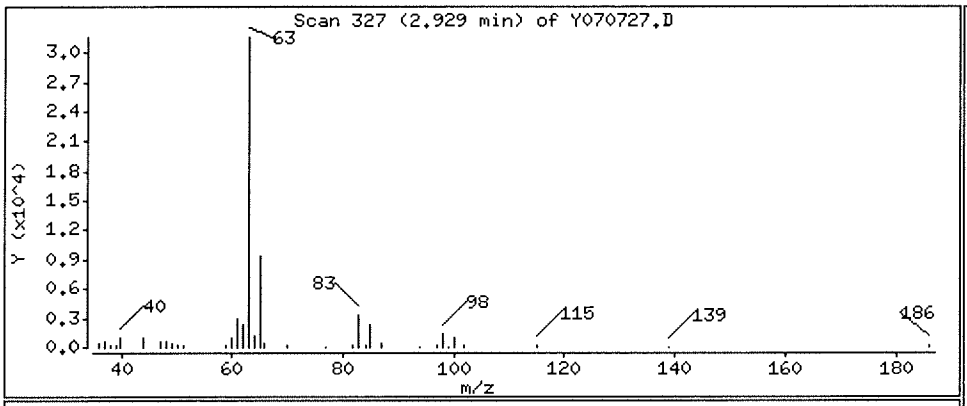
Operator: PC

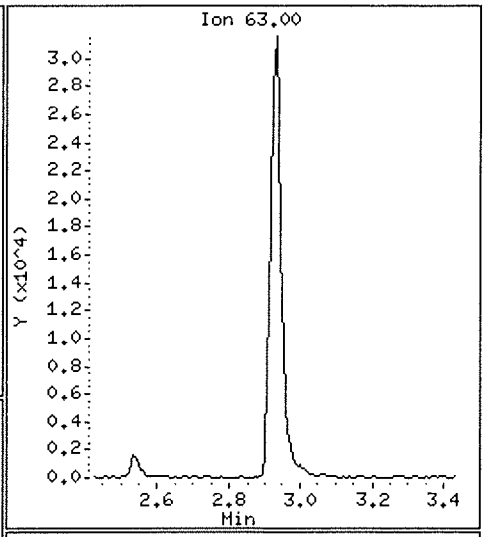
Column phase: DB624

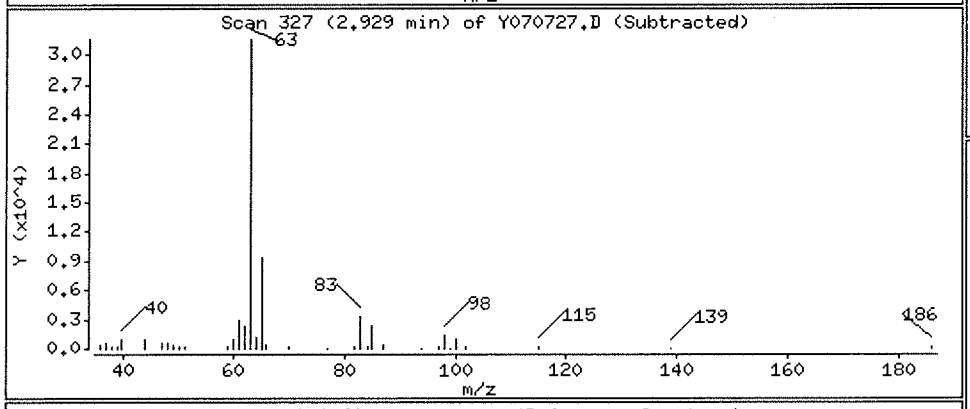
Column diameter: 0.18

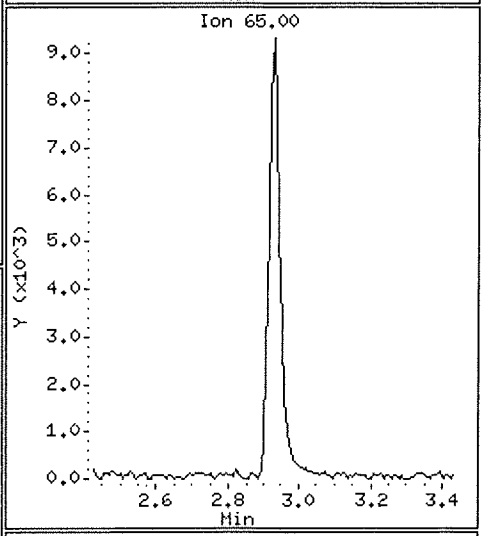
22 1,1-Dichloroethane

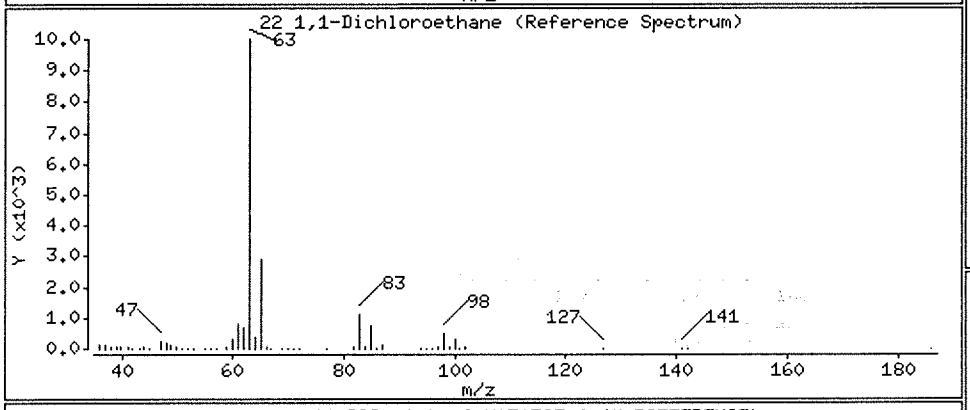
Concentration: 7.03 ug/l

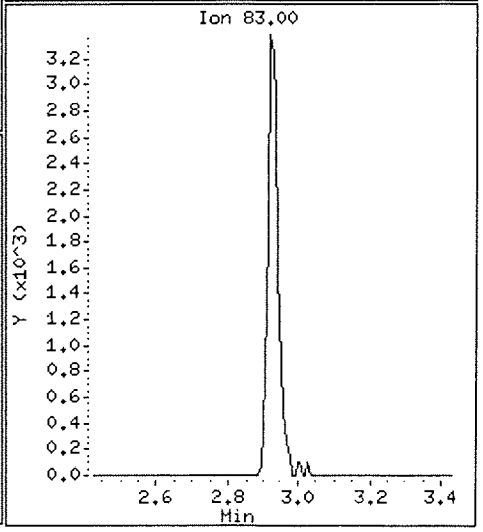


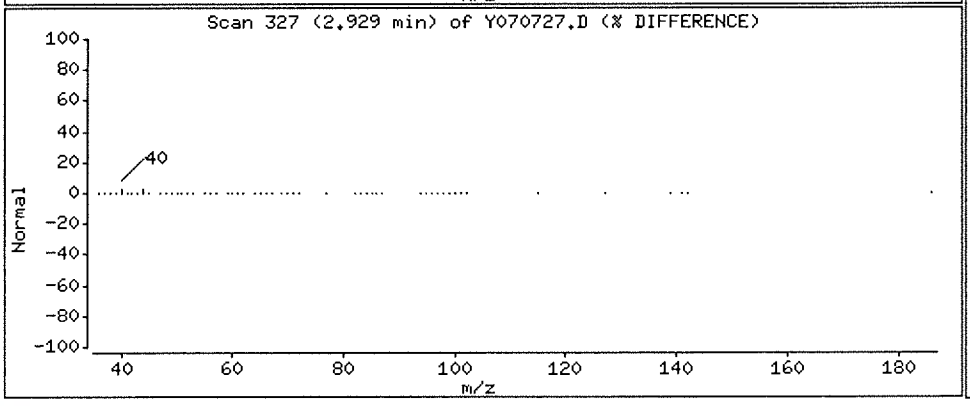












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Date : 08-JUL-2020 03:56

Client ID: HS20061390-08

Instrument: voa6.i

Sample Info: HS20061390-08;HS20061390-08;;;

Purge Volume: 5.0

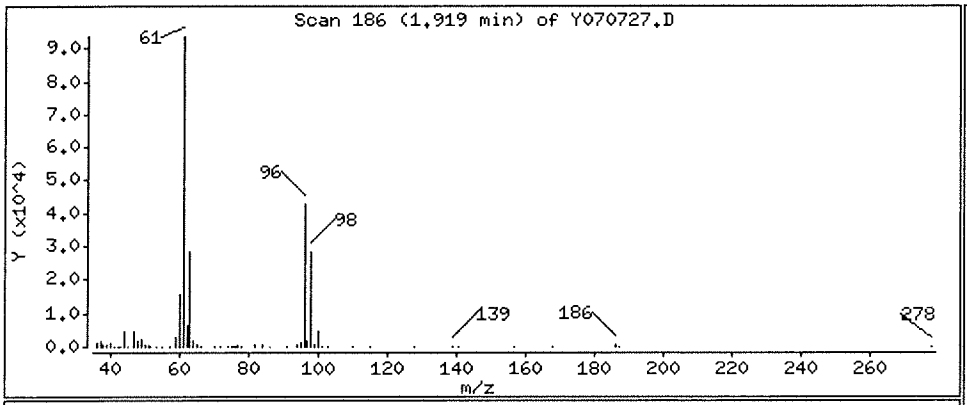
Operator: PC

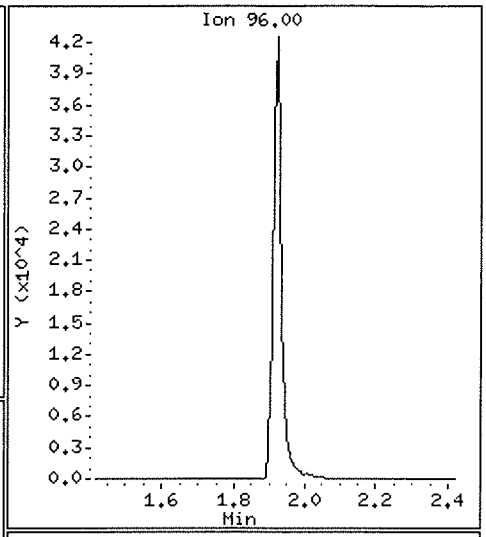
Column phase: DB624

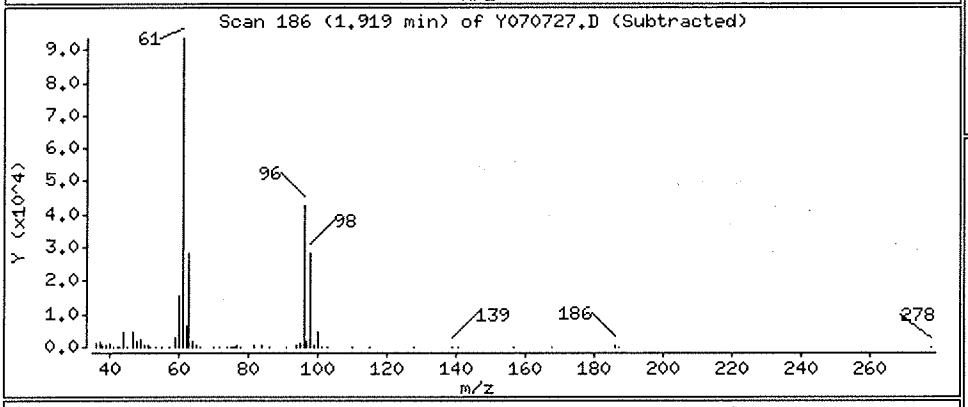
Column diameter: 0.18

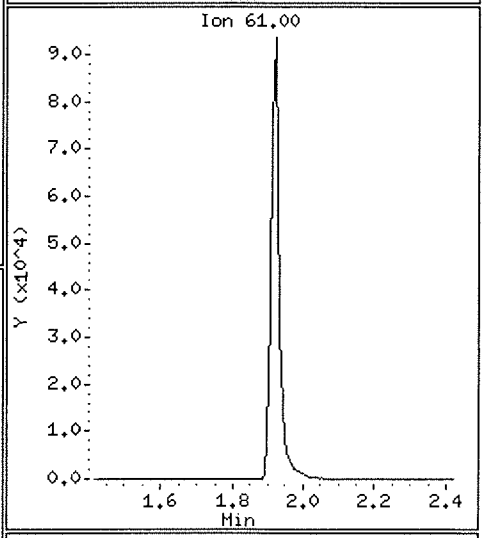
11 1,1-Dichloroethene

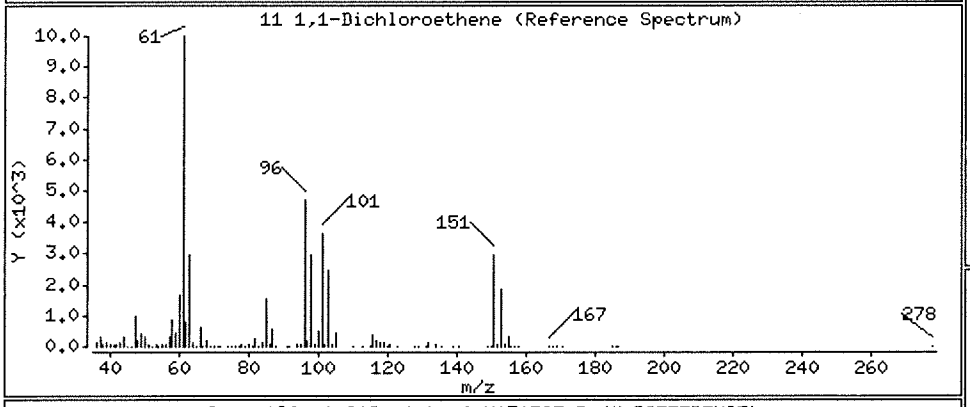
Concentration: 22.39 ug/l

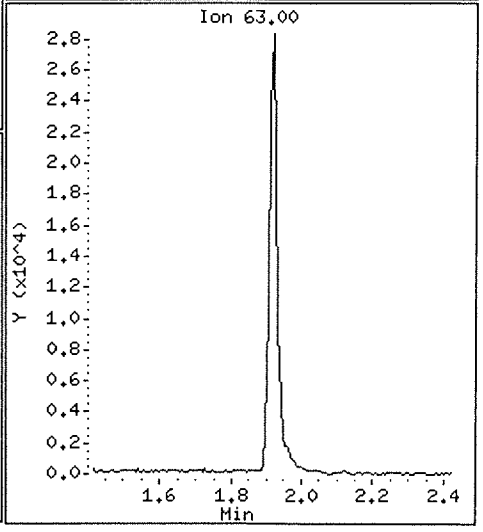


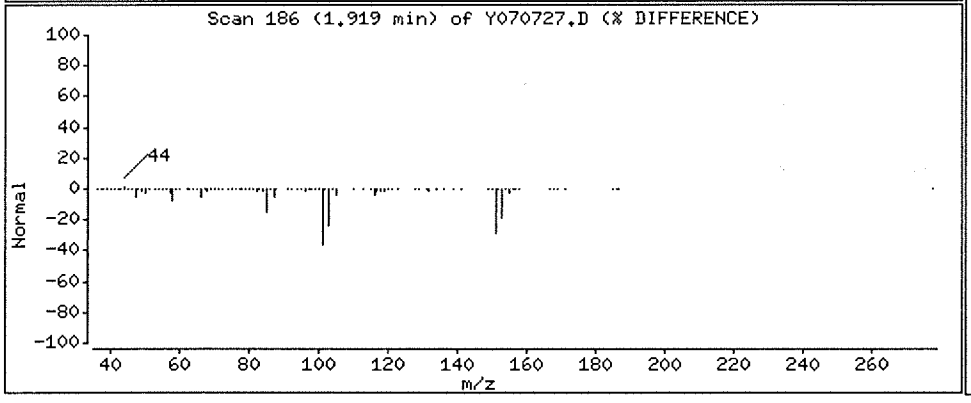












Data File: \\nahstws005\Target\chem\voa6.i\X200707.b\Y070727.D Page 5

Date : 08-JUL-2020 03:56

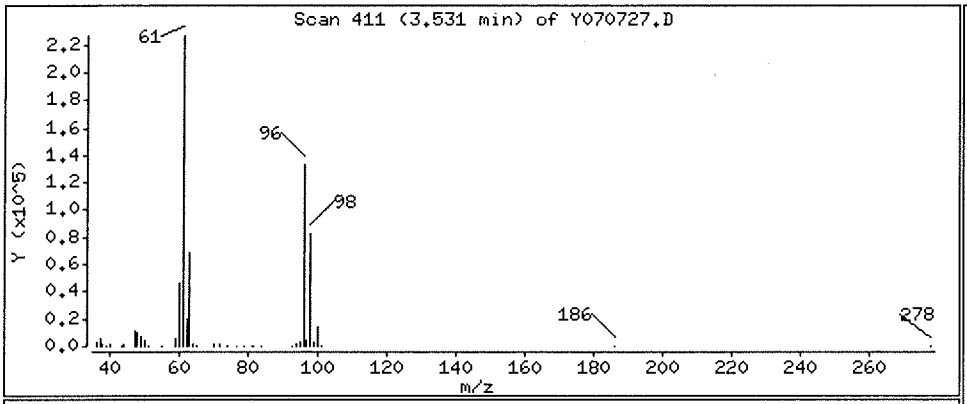
Client ID: HS20061390-08 Instrument: voa6.i

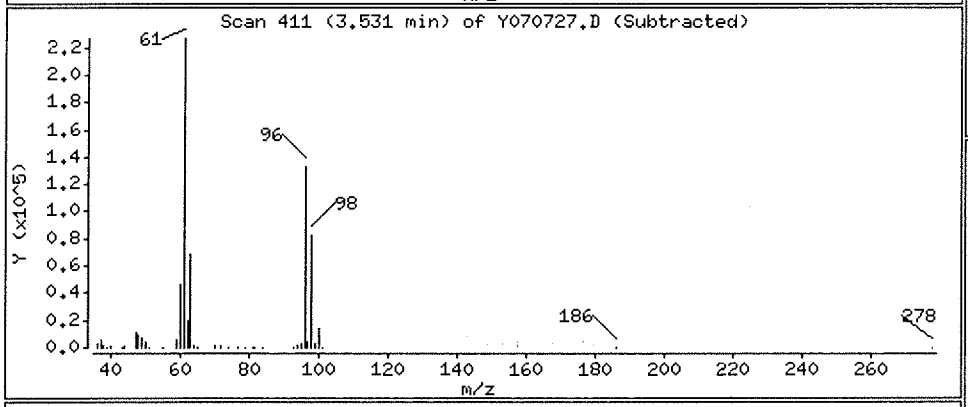
Sample Info: HS20061390-08;HS20061390-08;;;

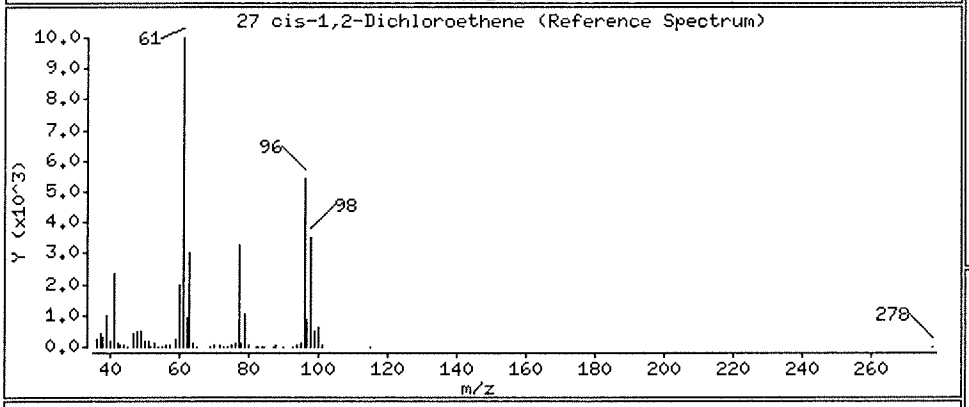
Purge Volume: 5.0 Operator: PC

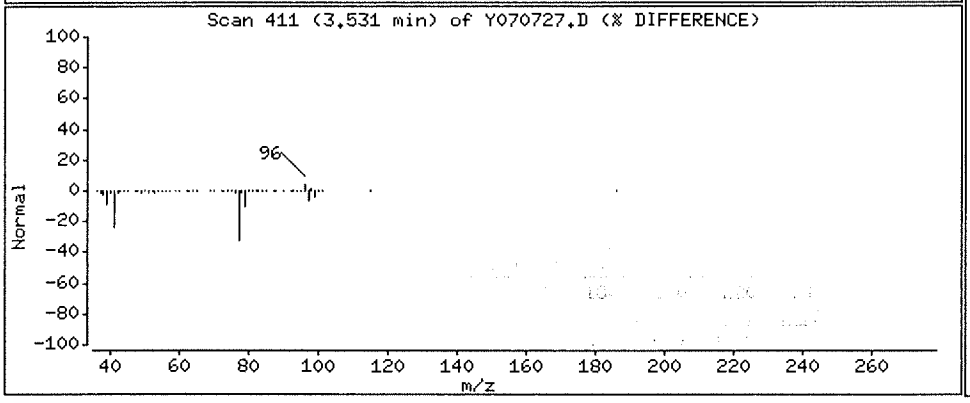
Column phase: DB624 Column diameter: 0.18

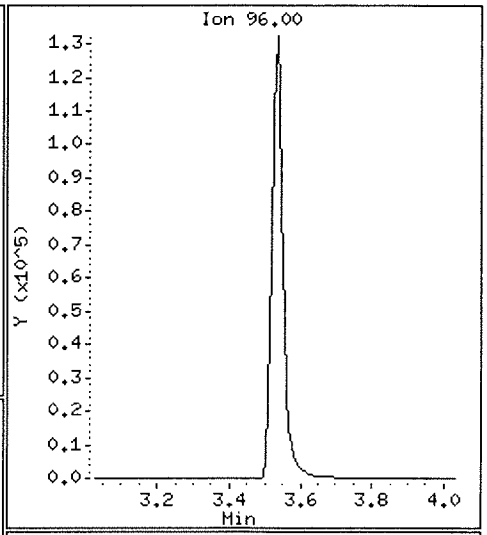
27 cis-1,2-Dichloroethene Concentration: 65.23 ug/l

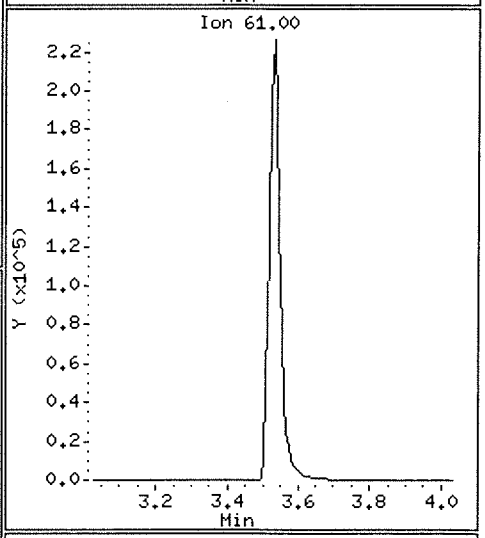


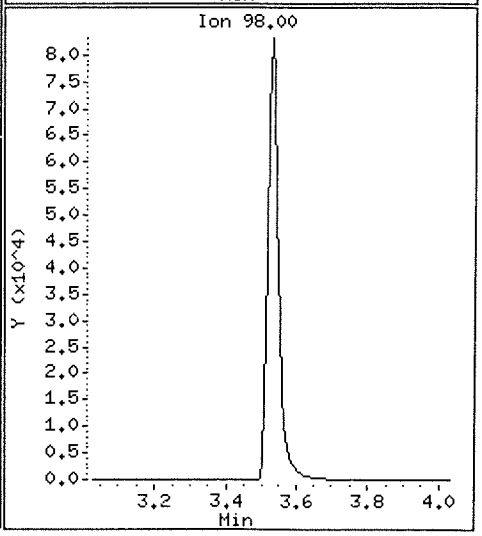












Data File: \\nahstws005\Target\chem\voa6.i\X200707.b\Y070727.D

Date : 08-JUL-2020 03:56

Client ID: HS20061390-08

Instrument: voa6.i

Sample Info: HS20061390-08;HS20061390-08;;;

Purge Volume: 5.0

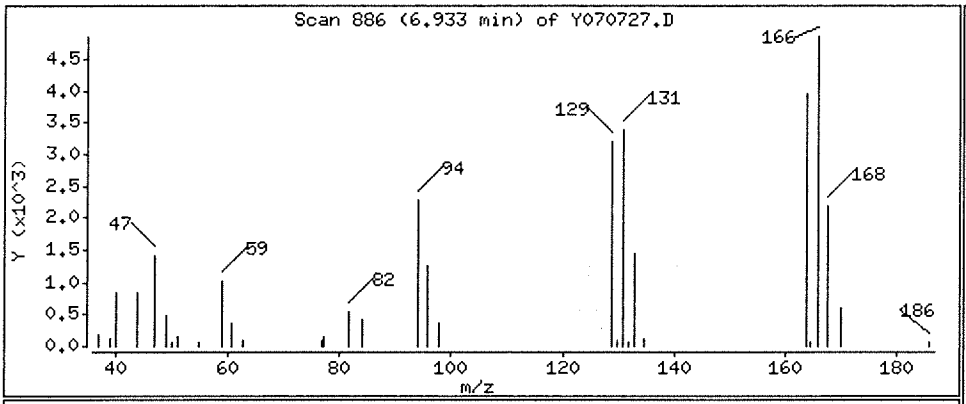
Operator: PC

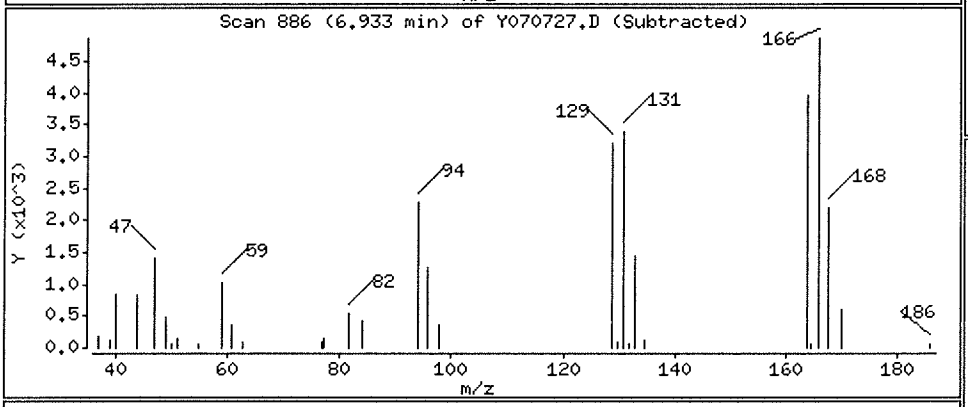
Column phase: DB624

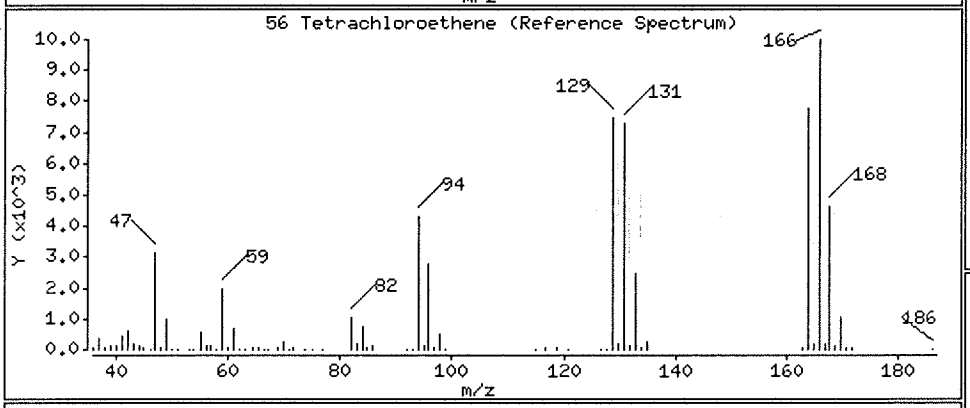
Column diameter: 0.18

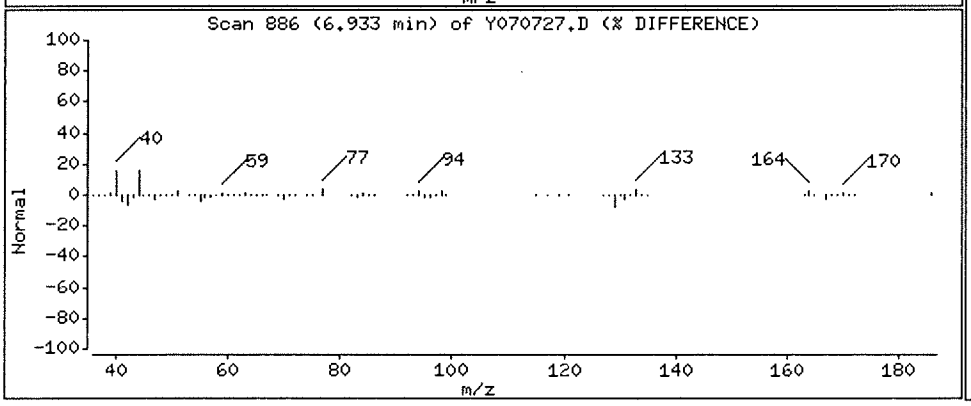
56 Tetrachloroethene

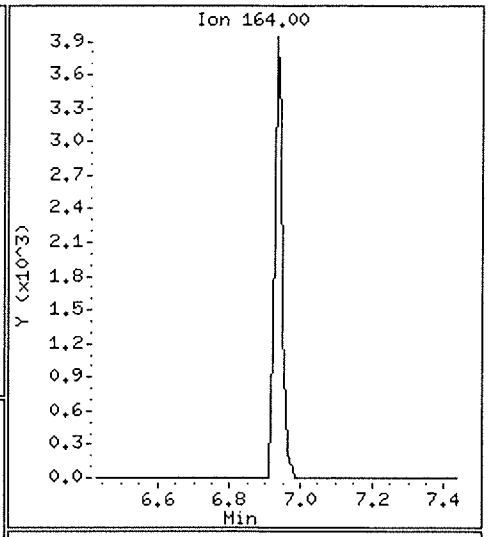
Concentration: 2.05 ug/l

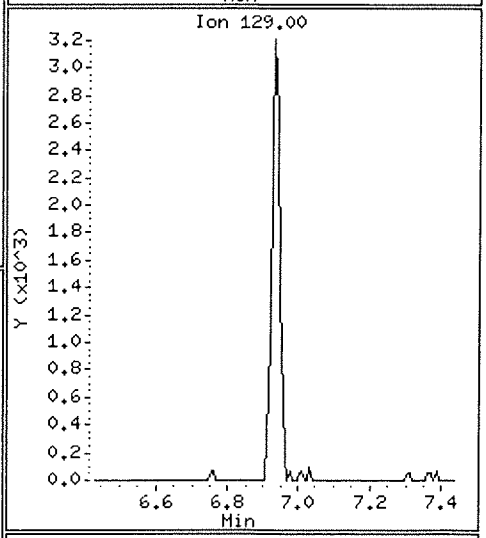


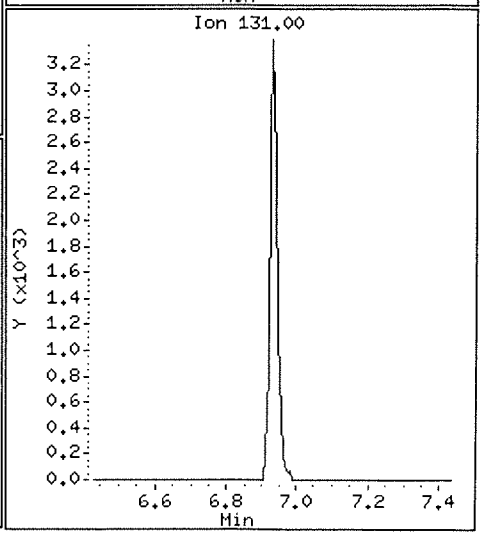












Data File: \\nahstws005\Target\chem\voa6.i\X200707.b\Y070727.D Page 7

Date : 08-JUL-2020 03:56

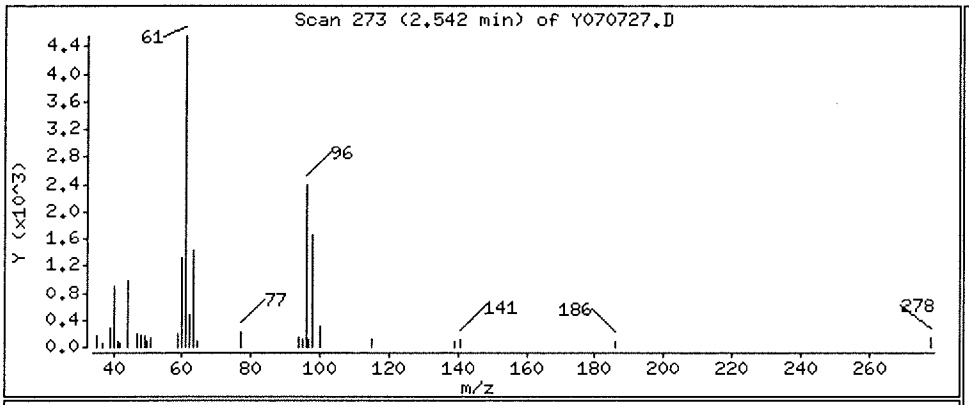
Client ID: HS20061390-08 Instrument: voa6.i

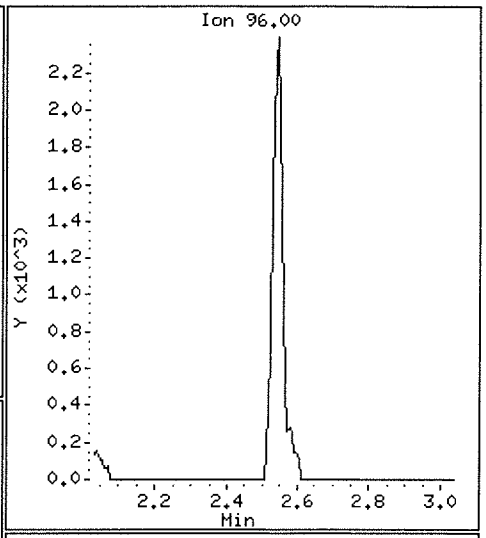
Sample Info: HS20061390-08;HS20061390-08;;;

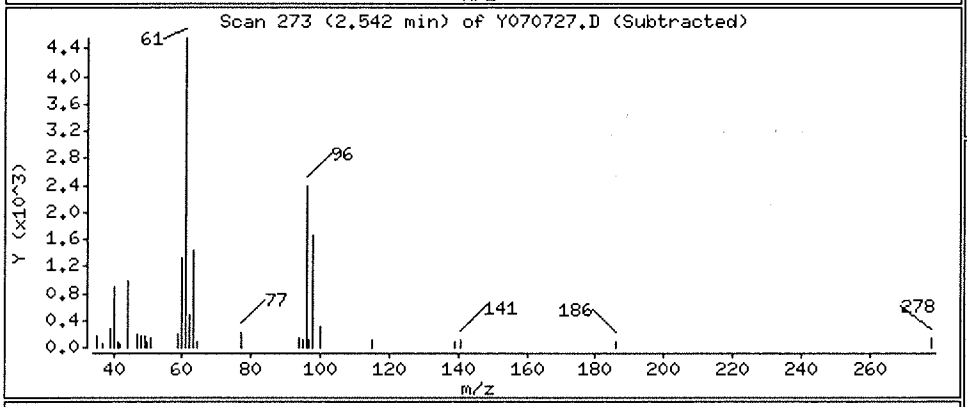
Purge Volume: 5.0 Operator: PC

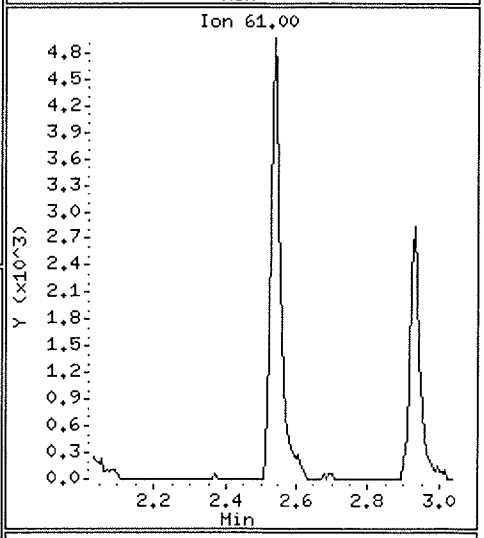
Column phase: DB624 Column diameter: 0.18

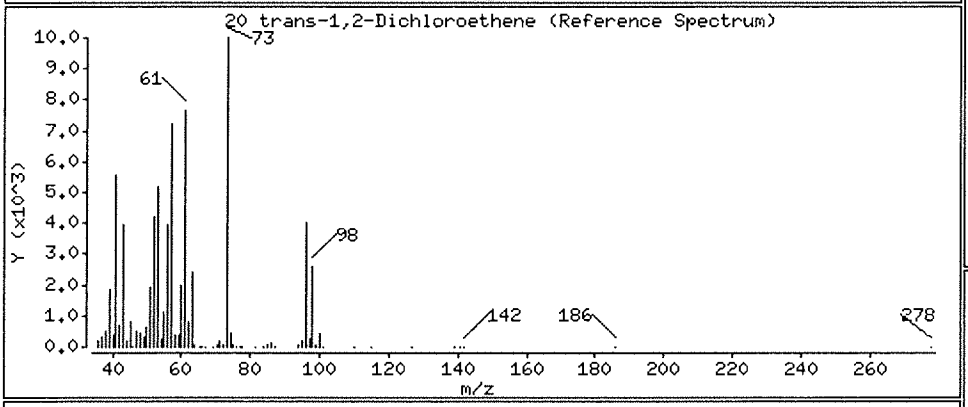
20 trans-1,2-Dichloroethene Concentration: 1.37 ug/l

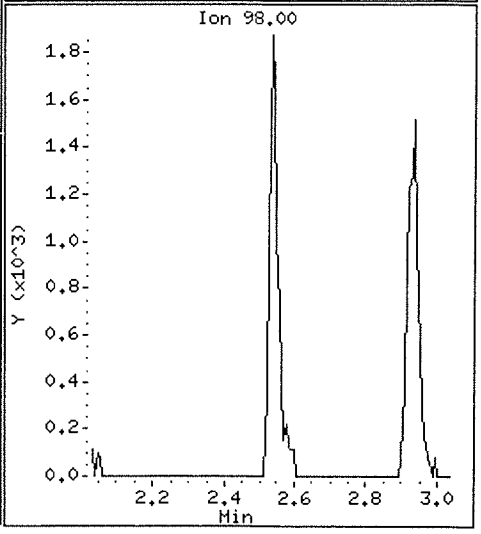


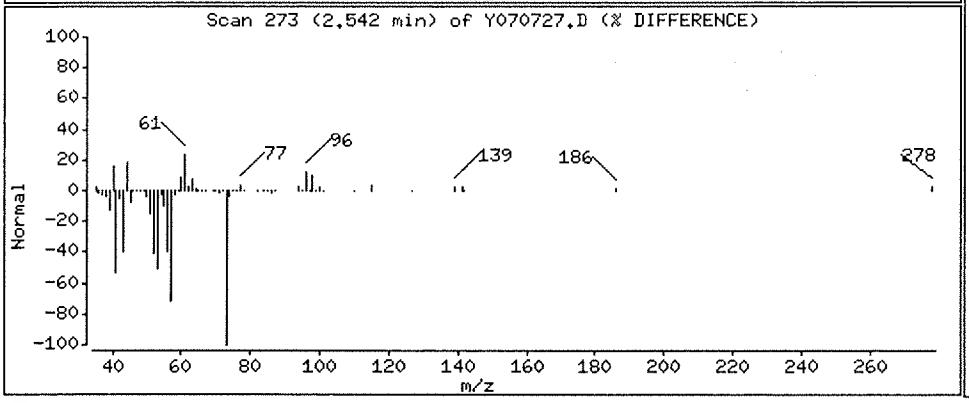












Data File: \\nahstws005\Target\chem\voa6.i\X200707.b\Y070727.D

Date : 08-JUL-2020 03:56

Client ID: HS20061390-08

Instrument: voa6.i

Sample Info: HS20061390-08;HS20061390-08;;;

Purge Volume: 5.0

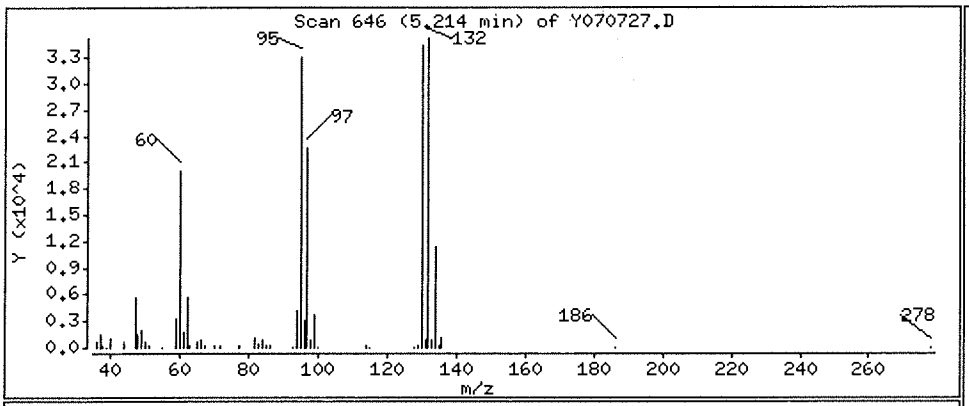
Operator: PC

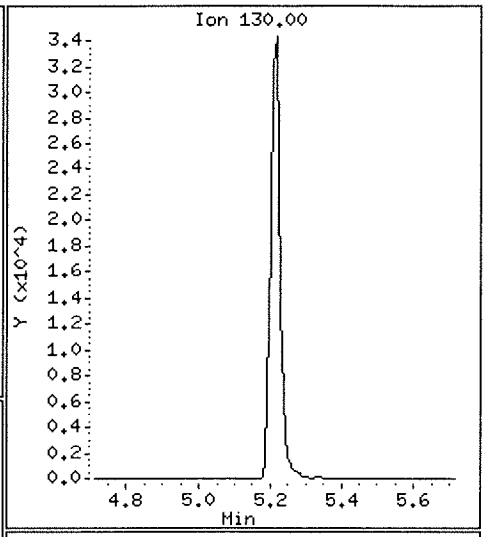
Column phase: DB624

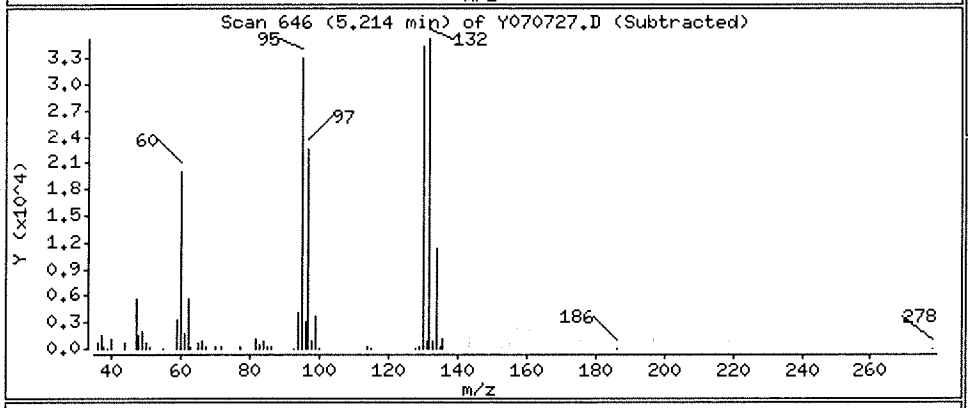
Column diameter: 0.18

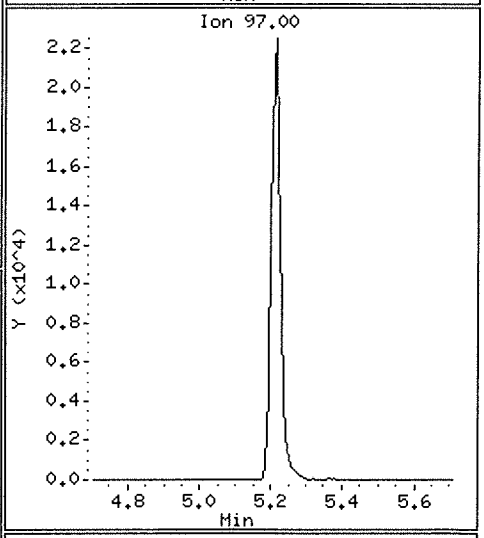
38 Trichloroethene

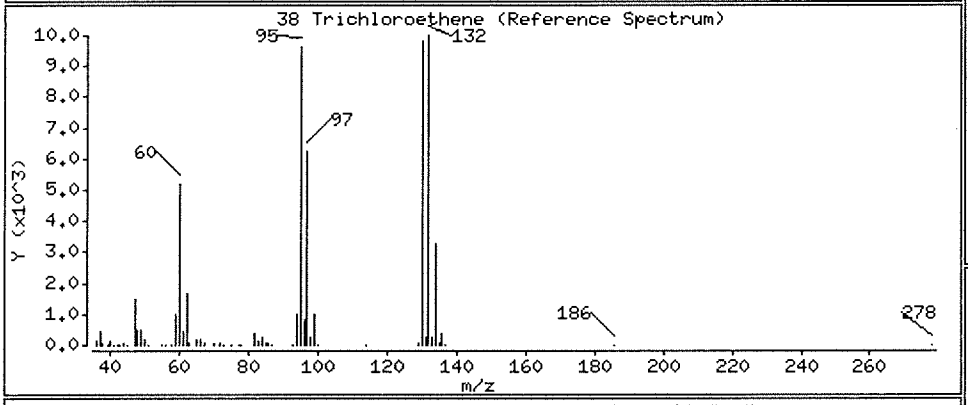
Concentration: 15.92 ug/l

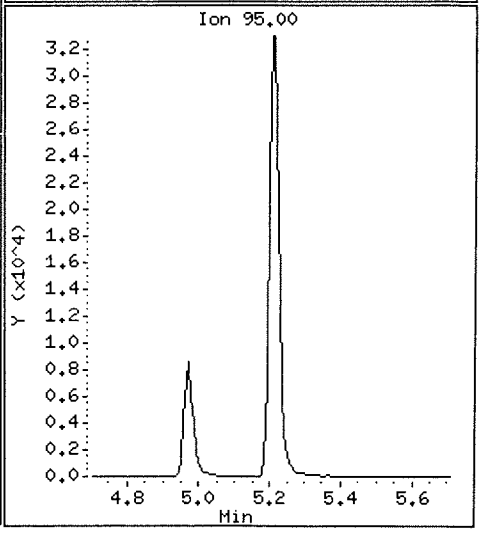


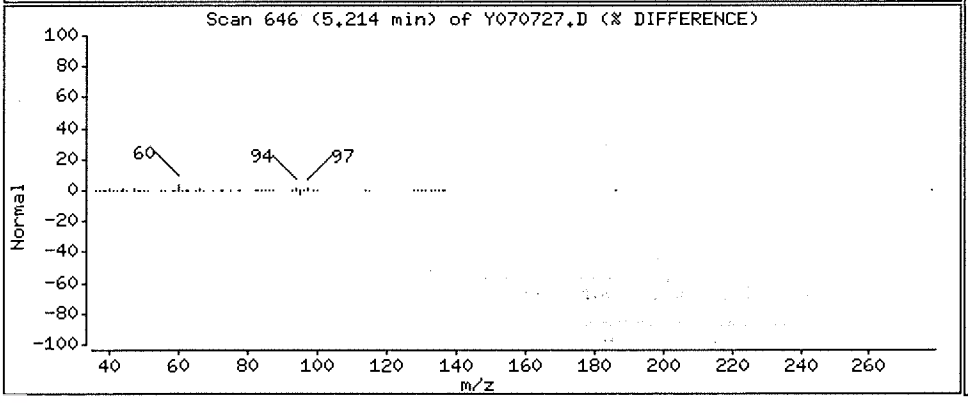












Data File: \\nahstws005\Target\chem\voa6.i\X200707.b\Y070727.D

Date : 08-JUL-2020 03:56

Client ID: HS20061390-08

Instrument: voa6.i

Sample Info: HS20061390-08;HS20061390-08;;;

Purge Volume: 5.0

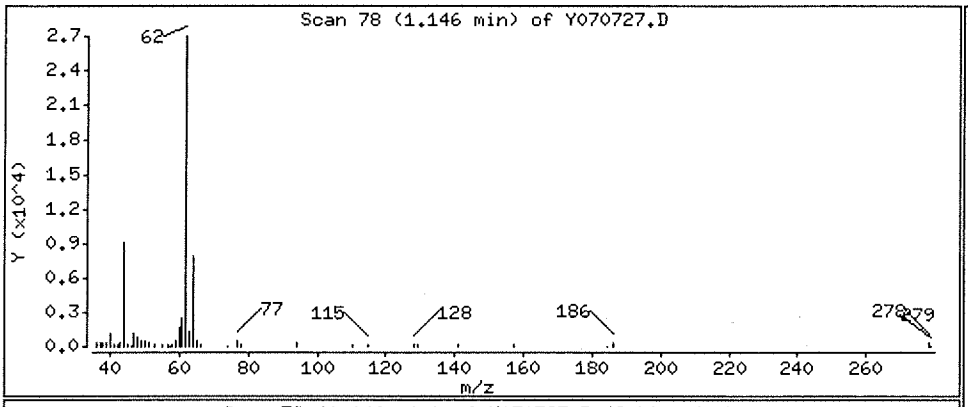
Operator: PC

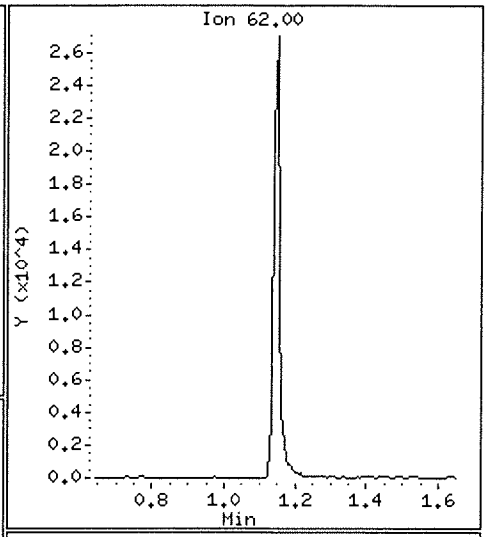
Column phase: DB624

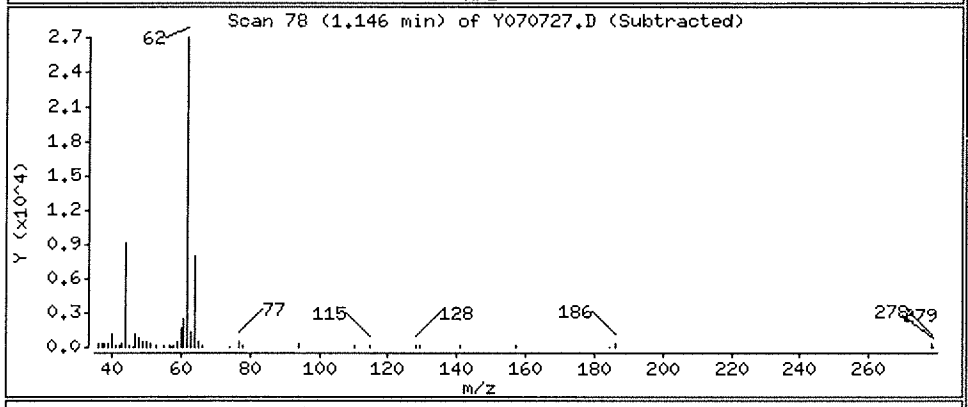
Column diameter: 0.18

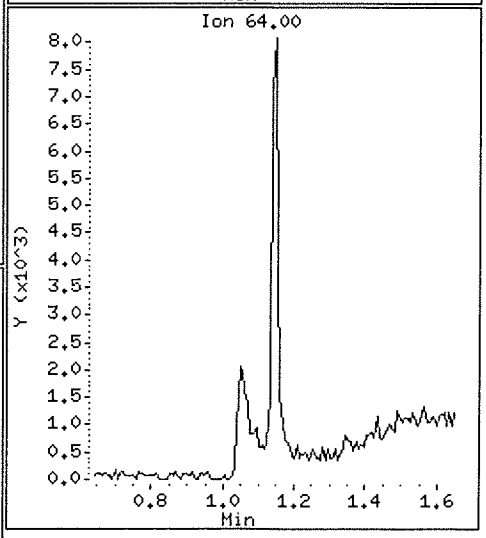
5 Vinyl Chloride

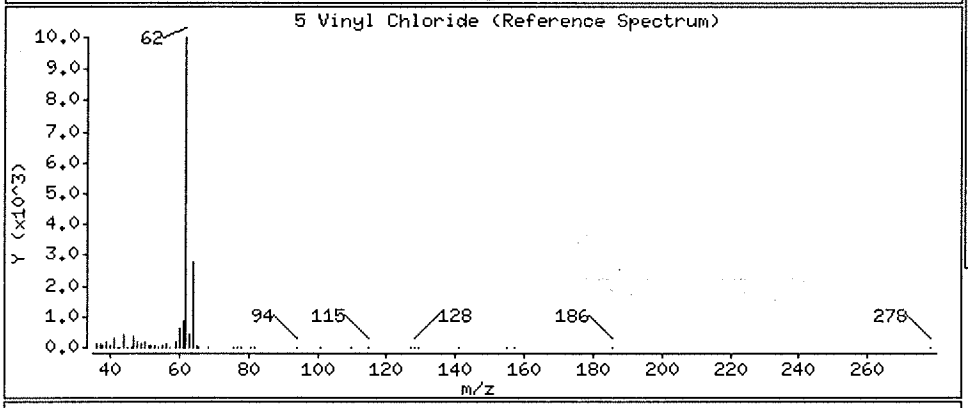
Concentration: 5.46 ug/l

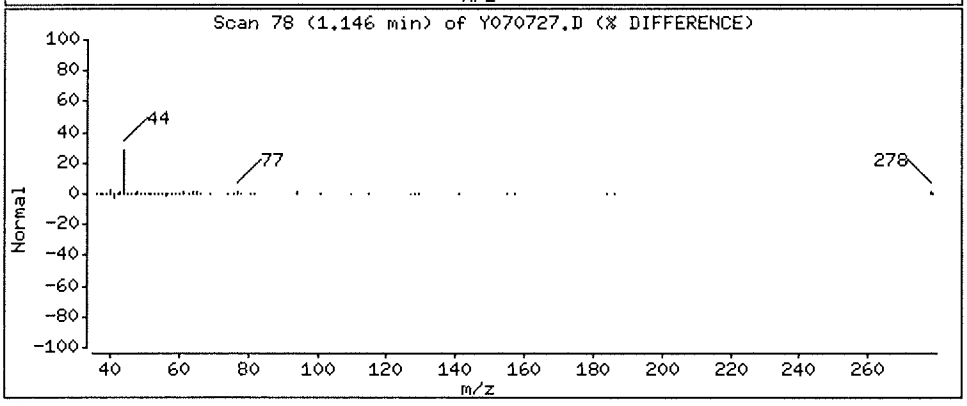












Data File: \\nahstws005\Target\chem\voa6.i\X200707.b\Y070728.D Page 1
Report Date: 13-Aug-2020 12:41

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200707.b\Y070728.D
Lab Smp Id: HS20061390-09 Client Smp ID: HS20061390-09
Inj Date : 08-JUL-2020 04:20
Operator : PC Inst ID: voa6.i
Smp Info : HS20061390-09;HS20061390-09;;;
Misc Info : HS18090001;WATER;0;1;
Comment   :
Method   : \\nahstws005\Target\chem\voa6.i\X200707.b\8260W.m
Meth Date : 13-Aug-2020 12:38 voa6.i Quant Type: ISTD
Cal Date : 07-JUL-2020 15:05 Cal File: X070711.D
Als bottle: 42
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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

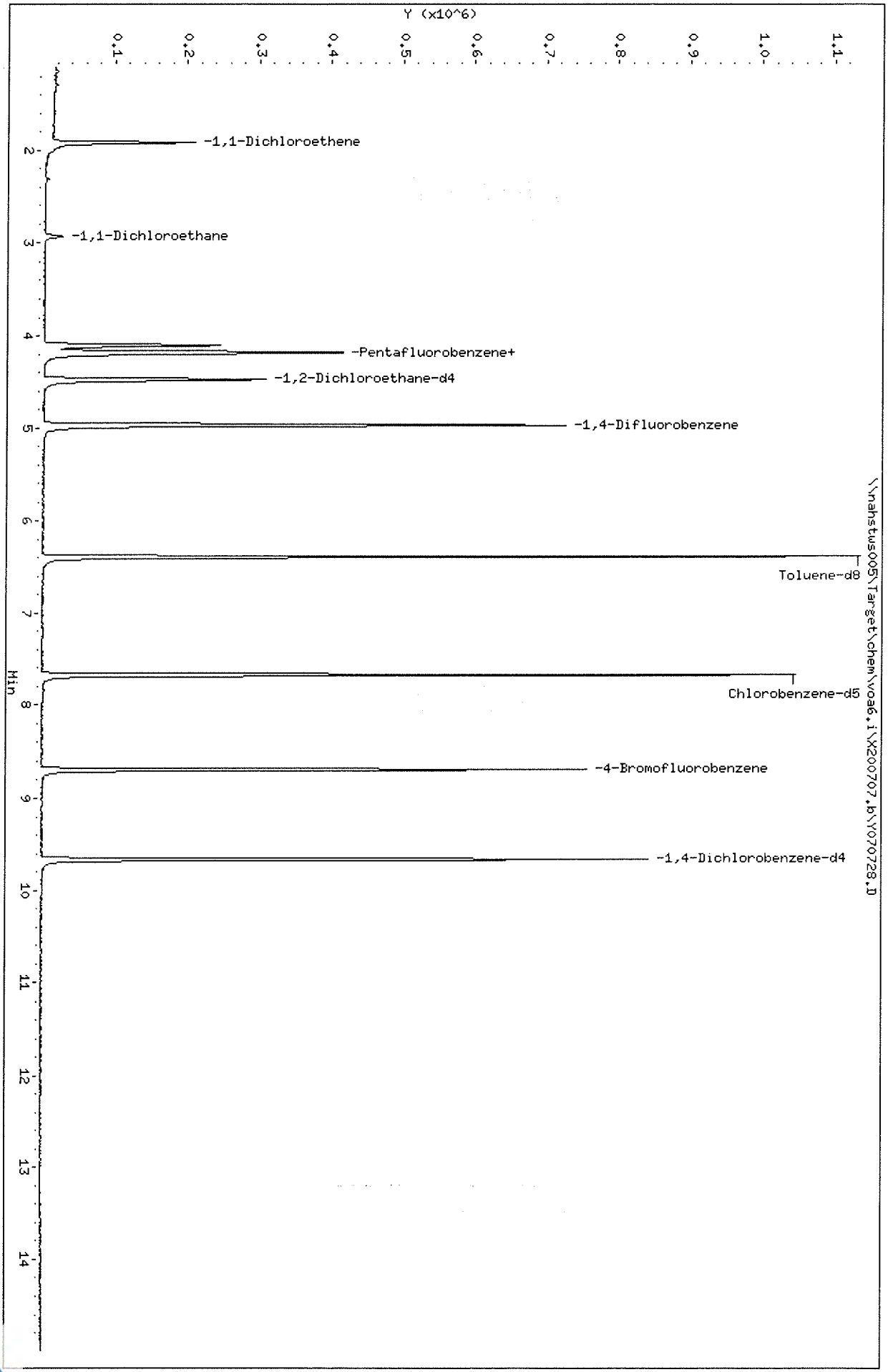
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.189	4.189	(1.000)	333855	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	529727	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	446935	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	197015	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.979)	169403	46.5863	46.58
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	218184	43.5880	43.58
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	601587	51.1993	51.19
$ 69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	216239	50.8268	50.82
22 1,1-Dichloroethane	63	2.929	2.929	(0.699)	26877	2.84061	2.84(a)
11 1,1-Dichloroethene	96	1.919	1.919	(0.458)	57147	18.4858	18.48

QC Flag Legend

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

Data File: \\nahstws005\Target\chem\voa6.i\X200707.b\Y070728.D
Date : 08-JUL-2020 04:20
Client ID: HS20061390-09
Sample Info: HS20061390-09;HS20061390-09;;;
Purge Volume: 5.0
Column phase: DB624

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



Data File: \\nahstws005\Target\chem\voa6.i\X200707.b\Y070728.D

Date : 08-JUL-2020 04:20

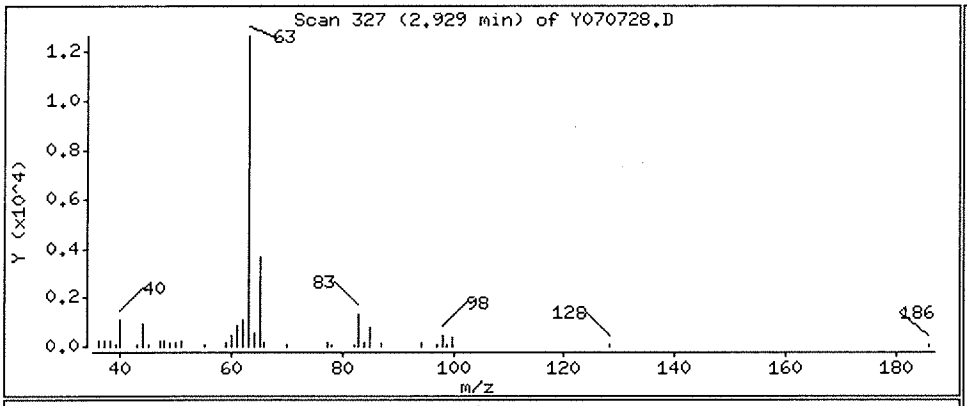
Client ID: HS20061390-09 Instrument: voa6.i

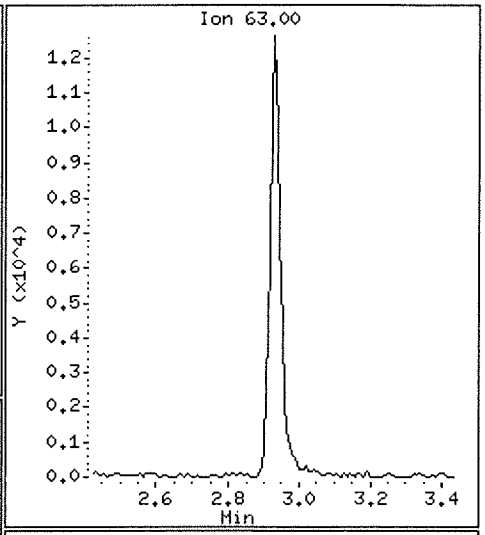
Sample Info: HS20061390-09;HS20061390-09;;;

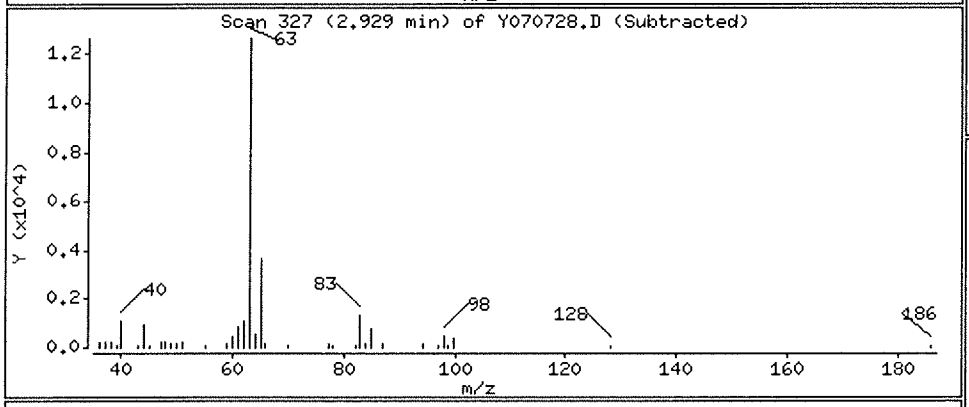
Purge Volume: 5.0 Operator: PC

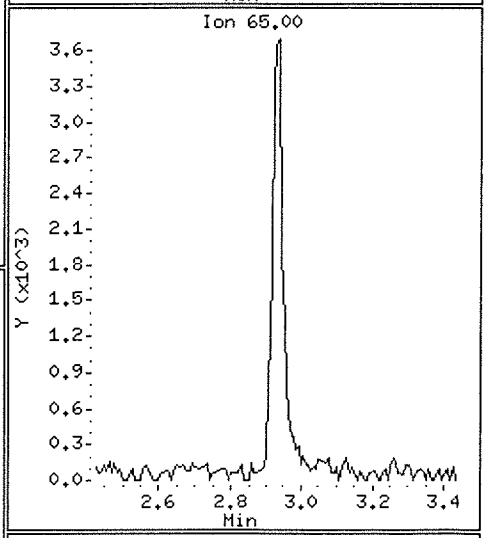
Column phase: DB624 Column diameter: 0.18

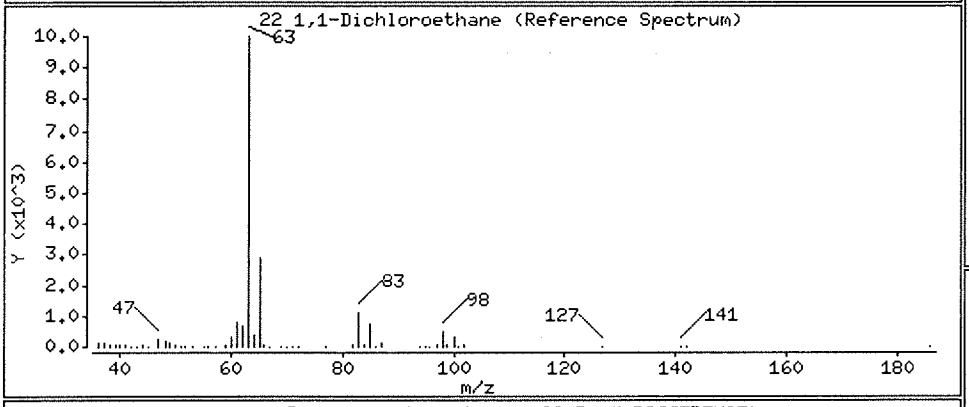
22 1,1-Dichloroethane Concentration: 2.84 ug/l

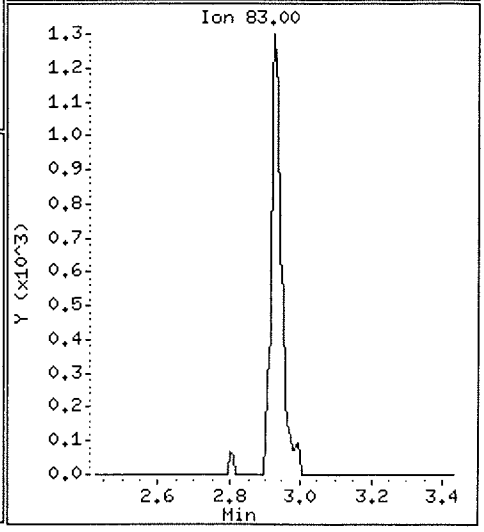


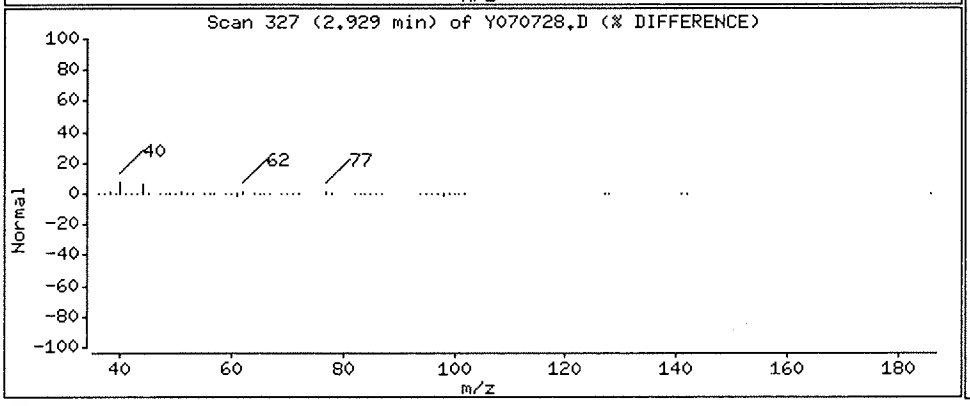












Data File: \\nahstws005\Target\chem\voa6.i\X200707.b\Y070728.D

Date : 08-JUL-2020 04:20

Client ID: HS20061390-09

Instrument: voa6.i

Sample Info: HS20061390-09;HS20061390-09;;;

Purge Volume: 5.0

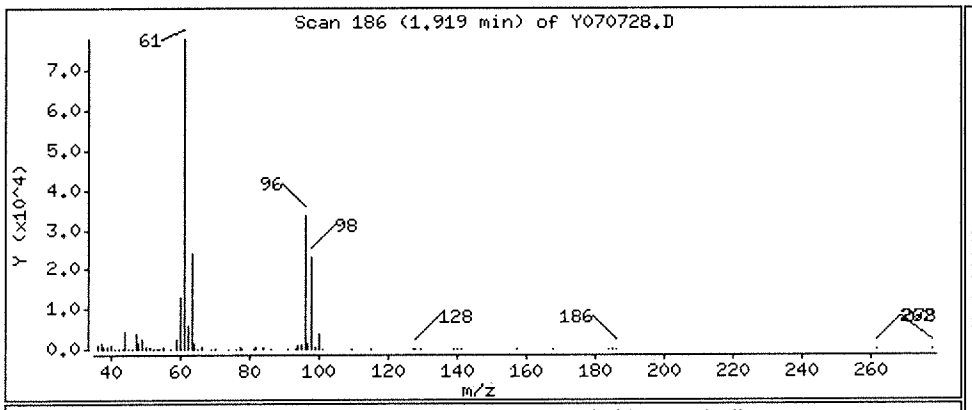
Operator: PC

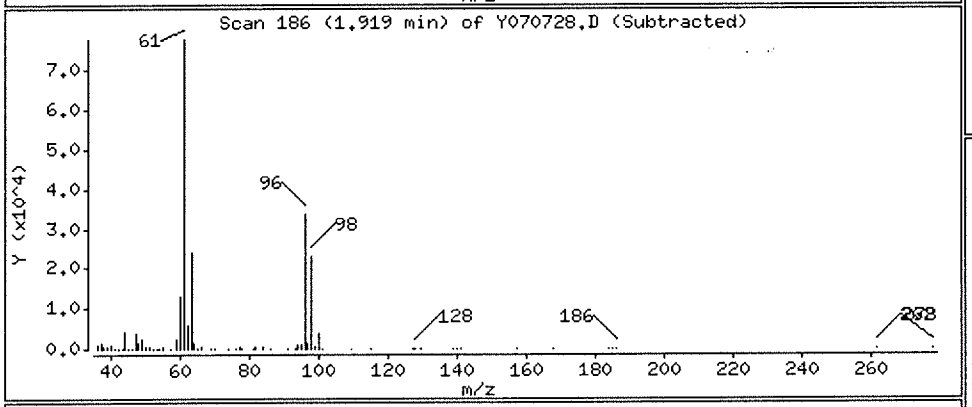
Column phase: DB624

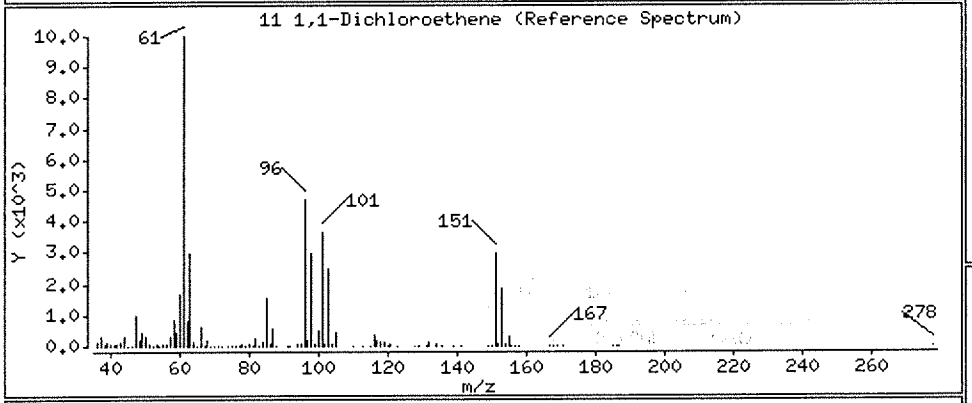
Column diameter: 0.18

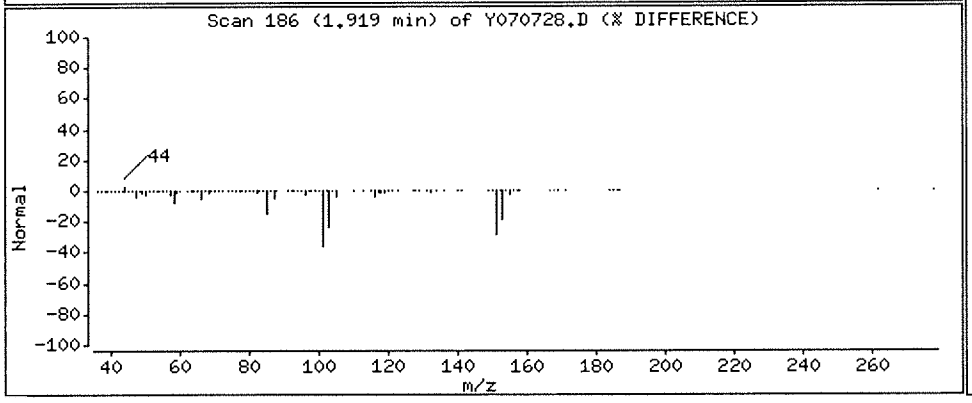
11 1,1-Dichloroethene

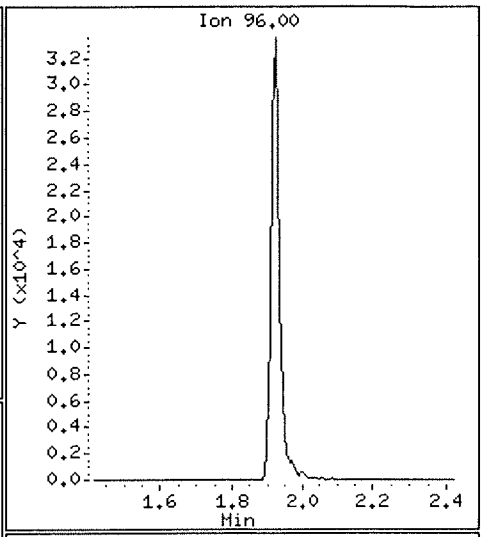
Concentration: 18.48 ug/l

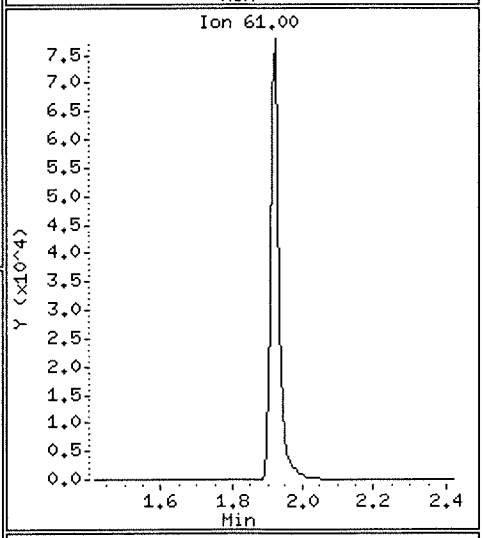


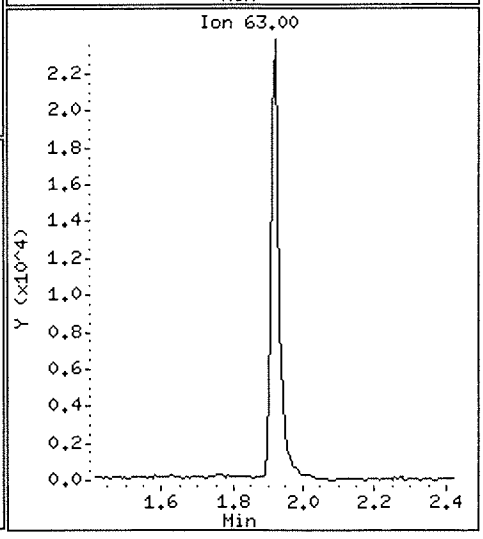












Data File: \\nahstws005\Target\chem\voa6.i\X200707.b\Y070730.D Page 1
Report Date: 13-Aug-2020 12:16

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200707.b\Y070730.D
Lab Smp Id: CCV-END Client Smp ID: CCV-END
Inj Date : 08-JUL-2020 05:08
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\X200707.b\8260W.m
Meth Date : 13-Aug-2020 12:16 voa6.i Quant Type: ISTD
Cal Date : 07-JUL-2020 15:05 Cal File: X070711.D
Als bottle: 44 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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

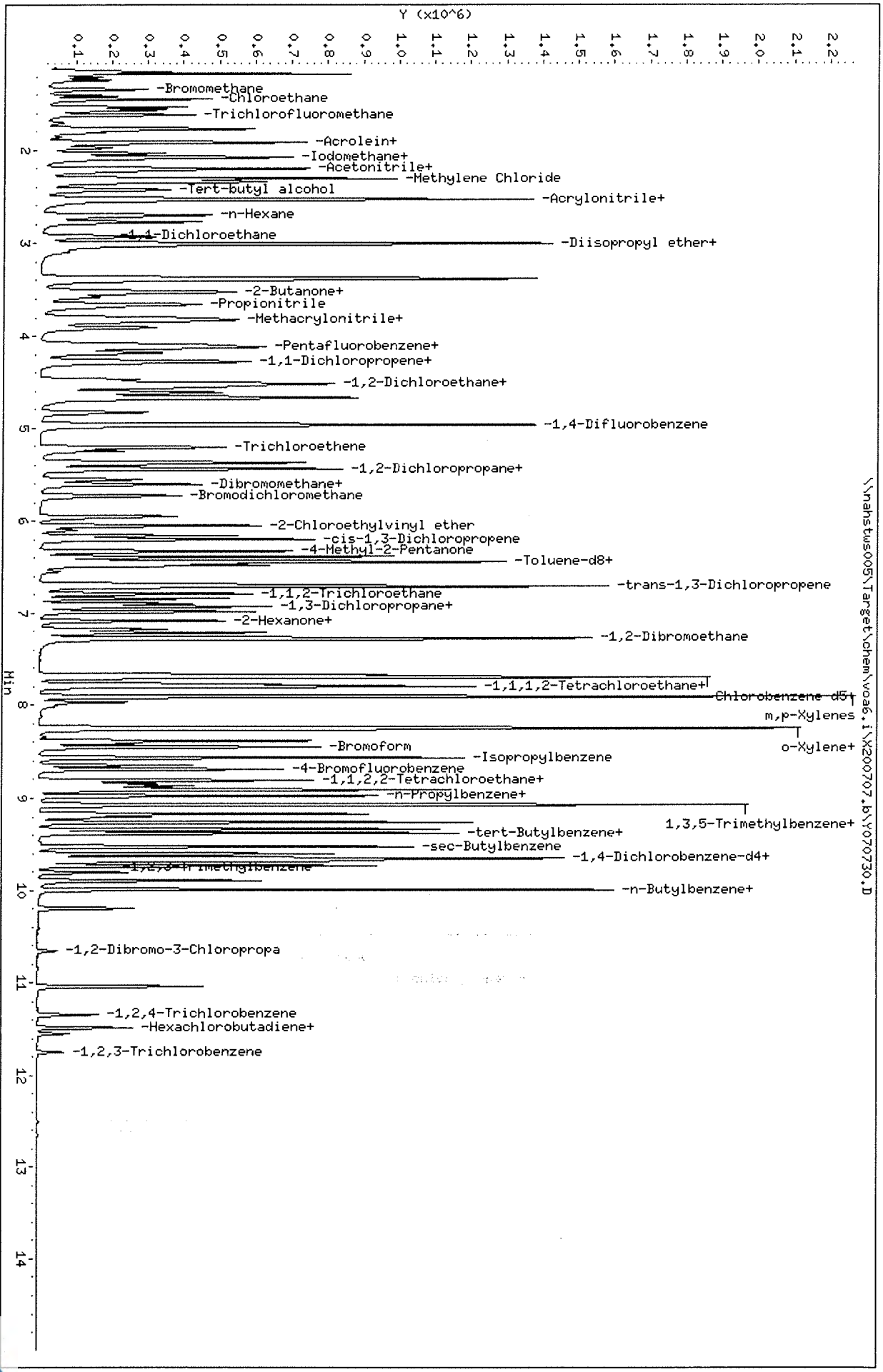
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.189	4.189	(1.000)	250302	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	429661	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	396323	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	175435	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.979)	142149	50.0000	52.24
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	194743	50.0000	52.02
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	495570	50.0000	47.56
$ 69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	187297	50.0000	49.62
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	144603	50.0000	47.51
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.976)	234822	50.0000	51.21
68 1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.914)	134631	50.0000	38.81
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	116707	50.0000	46.55
22 1,1-Dichloroethane	63	2.929	2.929	(0.699)	352979	50.0000	49.75
11 1,1-Dichloroethene	96	1.919	1.919	(0.458)	123193	50.0000	53.15
32 1,1-Dichloropropene	75	4.282	4.282	(0.862)	199355	50.0000	47.11
93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.215)	18113	50.0000	33.27
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	131866	50.0000	43.11(M)
90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	42198	50.0000	38.91
79 1,2,4-Trimethylbenzene	105	9.382	9.382	(0.970)	496967	50.0000	48.17
89 1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.102)	9839	50.0000	35.63
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	141413	50.0000	44.39
88 1,2-Dichlorobenzene	146	9.999	9.999	(1.034)	231585	50.0000	45.16

Data File: \\nahstws005\Target\chem\voa6.i\X200707.b\Y070730.D Page 2
Report Date: 13-Aug-2020 12:16

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
33	1,2-Dichloroethane	62	4.562	4.562	(0.918)	249050	50.0000	46.71
42	1,2-Dichloropropane	63	5.443	5.443	(1.095)	197905	50.0000	49.51
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	488859	50.0000	48.90
83	1,3-Dichlorobenzene	146	9.605	9.605	(0.993)	265214	50.0000	47.21
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	238919	50.0000	45.27
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	260243	50.0000	48.72
26	2,2-Dichloropropane	77	3.516	3.516	(0.839)	177125	50.0000	40.87
24	2-Butanone	43	3.580	3.580	(0.855)	208356	100.000	90.16
76	2-Chlorotoluene	91	8.974	8.974	(0.928)	427048	50.0000	48.50
52	2-Hexanone	43	7.090	7.090	(0.924)	313888	100.000	82.41
77	4-Chlorotoluene	91	9.074	9.074	(0.939)	485362	50.0000	48.60
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	483820	50.0000	48.49
45	4-Methyl-2-Pentanone	43	6.324	6.324	(0.824)	469508	100.000	87.28
10	Acetone	43	1.976	1.976	(0.472)	171662	100.000	79.00
37	Benzene	78	4.519	4.519	(0.909)	596432	50.0000	48.65
74	Bromobenzene	156	8.809	8.809	(0.911)	165956	50.0000	49.58
29	Bromochloromethane	128	3.802	3.802	(0.908)	80600	50.0000	46.36
39	Bromodichloromethane	83	5.729	5.729	(1.153)	210129	50.0000	48.82
66	Bromoform	173	8.415	8.415	(1.097)	94706	50.0000	43.04
6	Bromomethane	94	1.338	1.338	(0.320)	92536	50.0000	52.65
19	Carbon Disulfide	76	2.076	2.076	(0.496)	784008	100.000	103.01
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	197858	50.0000	48.25
59	Chlorobenzene	112	7.699	7.699	(1.004)	378486	50.0000	46.87
7	Chloroethane	64	1.403	1.403	(0.335)	123356	50.0000	54.91
28	Chloroform	83	3.910	3.910	(0.933)	274502	50.0000	50.04
3	Chloromethane	50	1.081	1.081	(0.258)	262300	50.0000	50.99
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.843)	163967	50.0000	50.11
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	240561	50.0000	46.38
55	Dibromochloromethane	129	7.176	7.176	(0.936)	148587	50.0000	45.64
44	Dibromomethane	93	5.557	5.557	(1.118)	100421	50.0000	46.61
2	Dichlorodifluoromethane	85	0.973	0.973	(0.232)	155504	50.0000	51.31
61	Ethylbenzene	106	7.799	7.799	(1.017)	201583	50.0000	47.17
91	Hexachlorobutadiene	225	11.481	11.481	(1.187)	39145	50.0000	46.50
67	Isopropylbenzene	105	8.566	8.566	(1.117)	594423	50.0000	46.89
62	m,p-Xylenes	106	7.907	7.907	(1.031)	480698	100.000	93.53
17	Methylene Chloride	84	2.305	2.305	(0.550)	161838	50.0000	59.12(M)
87	n-Butylbenzene	91	9.999	9.999	(1.034)	428822	50.0000	48.18
73	n-Propylbenzene	91	8.917	8.917	(0.922)	707256	50.0000	49.43
92	Naphthalene	128	11.546	11.546	(1.194)	54660	50.0000	32.23
63	o-Xylene	106	8.244	8.244	(1.075)	235081	50.0000	46.69
81	sec-Butylbenzene	105	9.526	9.526	(0.985)	572215	50.0000	48.65
64	Styrene	104	8.265	8.265	(1.078)	413082	50.0000	47.21
78	tert-Butylbenzene	119	9.340	9.340	(0.966)	402079	50.0000	49.95
56	Tetrachloroethene	164	6.933	6.933	(0.904)	114667	50.0000	47.36
50	Toluene	91	6.453	6.453	(0.841)	600065	50.0000	47.45
20	trans-1,2-Dichloroethene	96	2.535	2.535	(0.605)	138225	50.0000	50.52
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	213097	50.0000	45.73
38	Trichloroethene	130	5.214	5.214	(1.049)	163093	50.0000	51.16
8	Trichlorofluoromethane	101	1.560	1.560	(0.373)	219246	50.0000	50.79
5	Vinyl Chloride	62	1.145	1.145	(0.273)	229746	50.0000	52.24

QC Flag Legend

M - Compound response manually integrated.

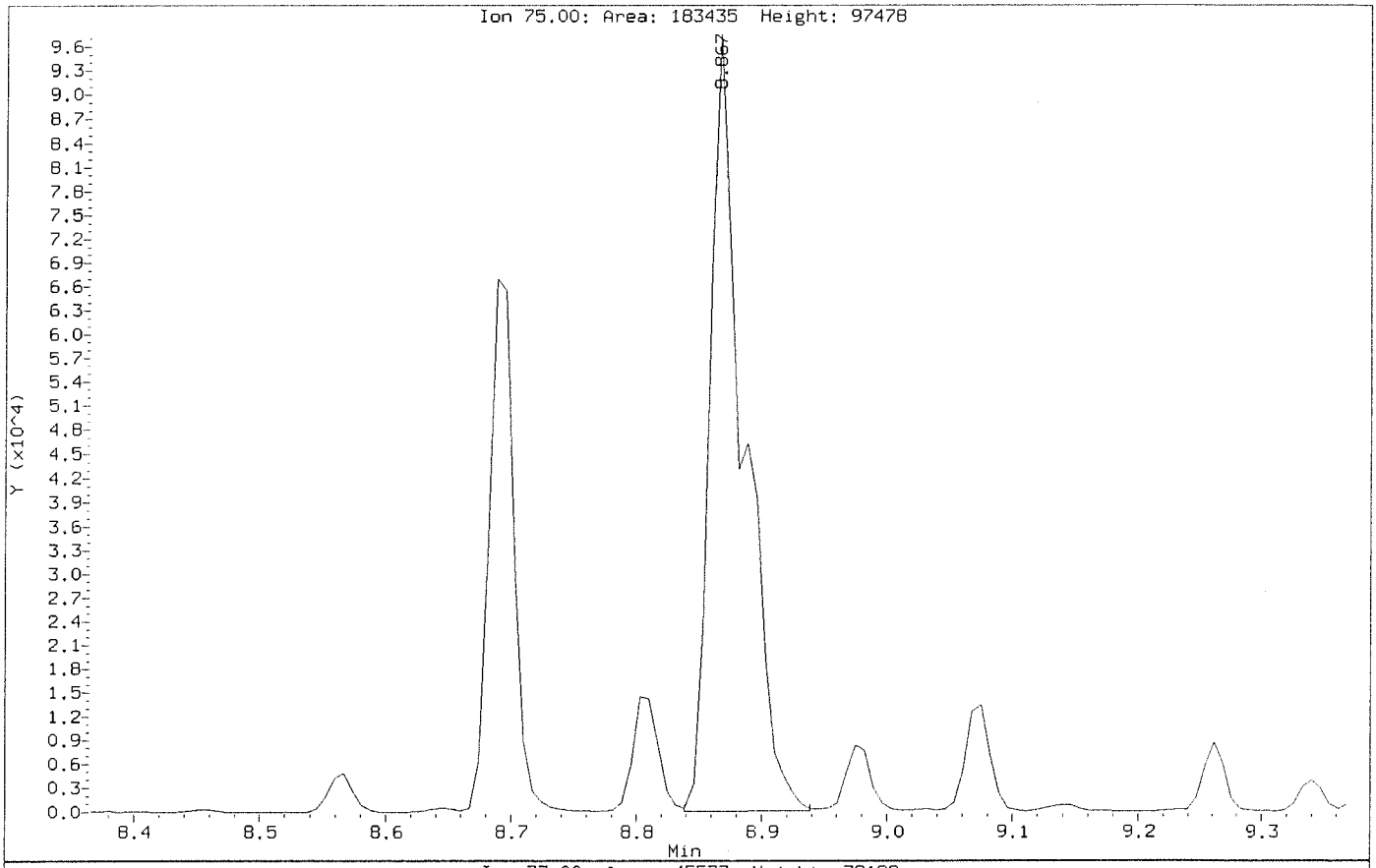


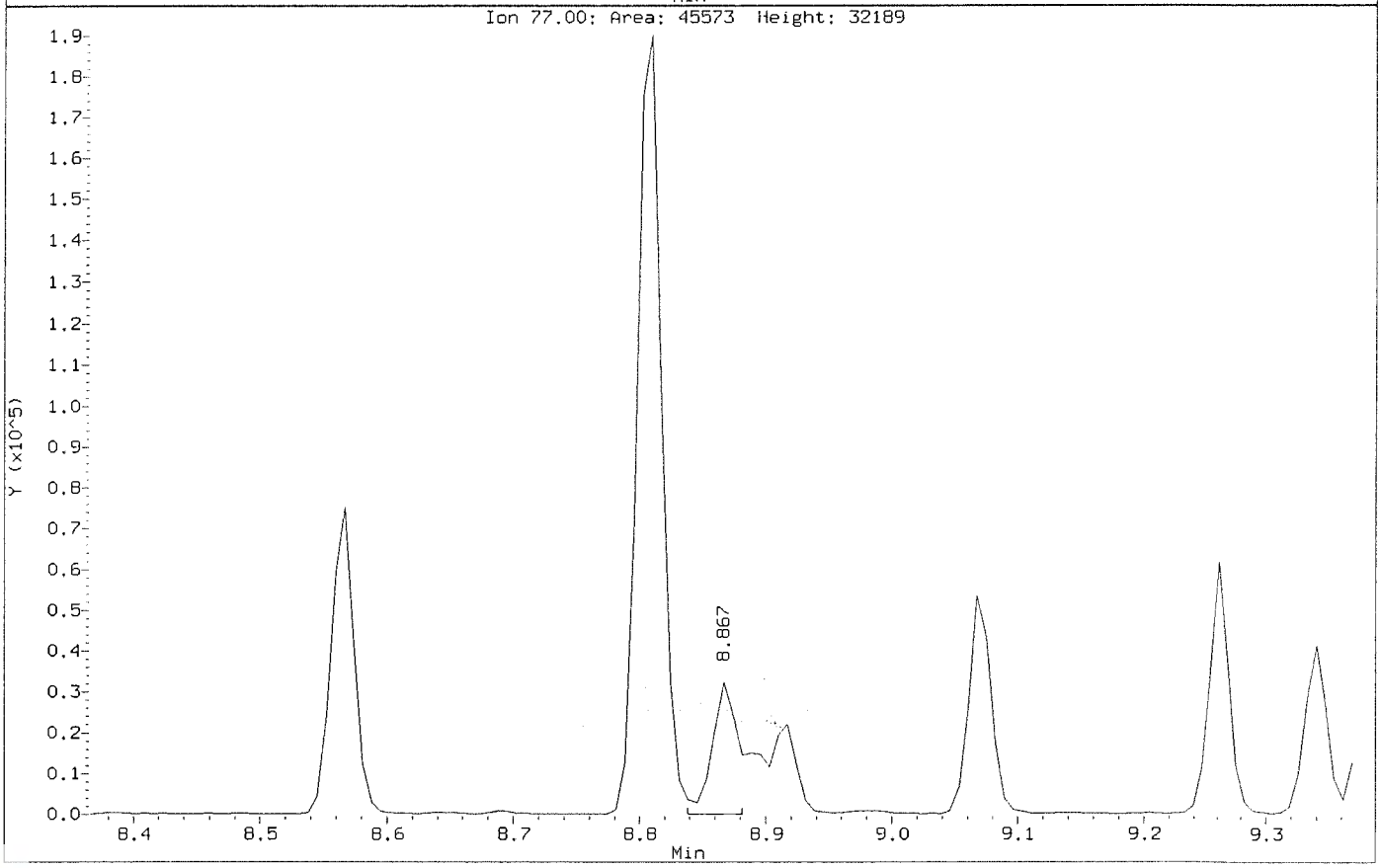
Data File: \\nahstws005\Target\chem\voa6.i\X200707.b\Y070730.D
Date : 08-JUL-2020 05:08
Client ID: CCV-END
Sample Info: CCV-END;CCV-END;2;;;
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\nahstws005\Target\chem\voa6.i\X200707.b\Before\Y070730.D
Injection Date: 08-JUL-2020 05:08
Instrument: voa6.i
Client Sample ID: CCV-END

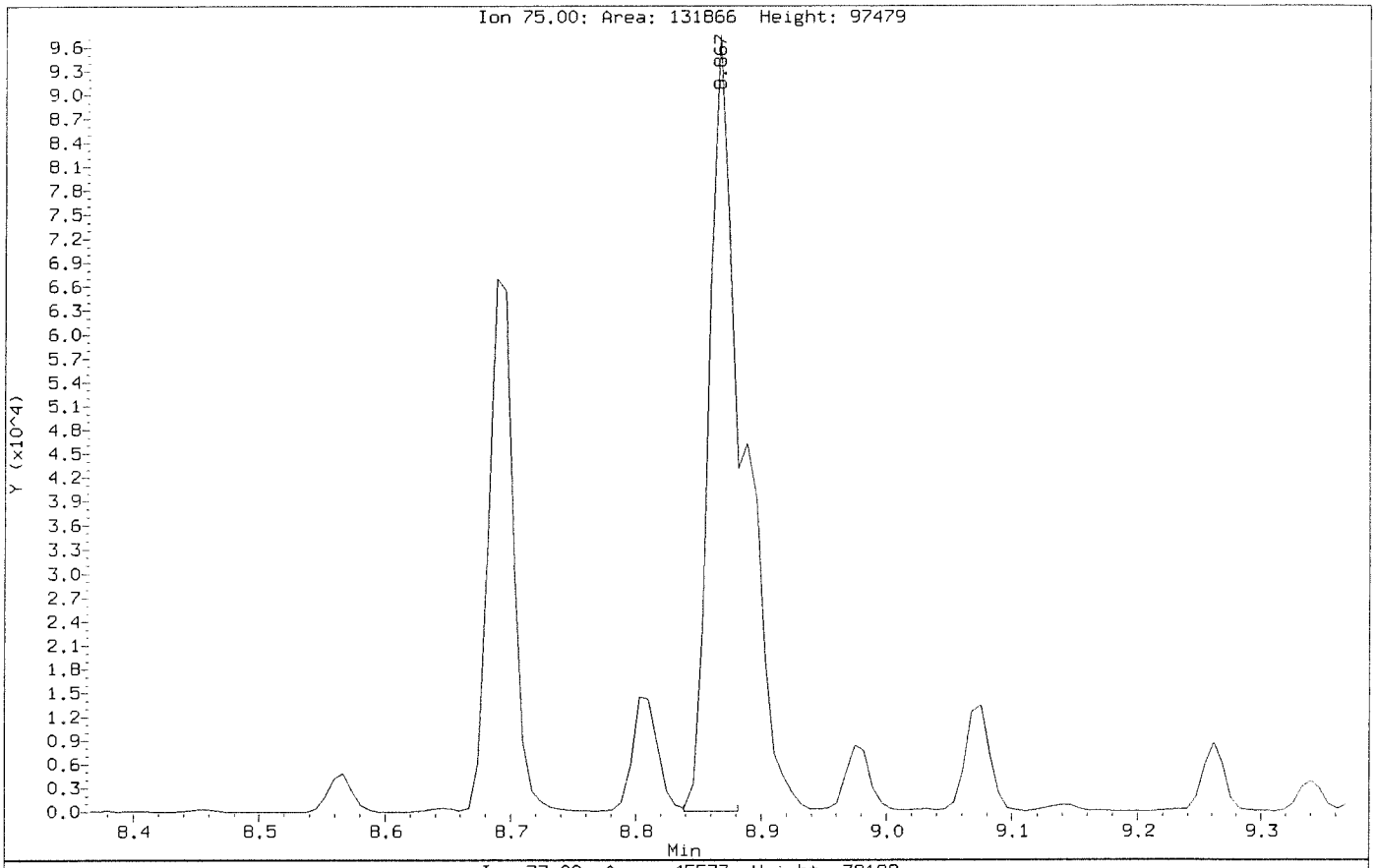
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

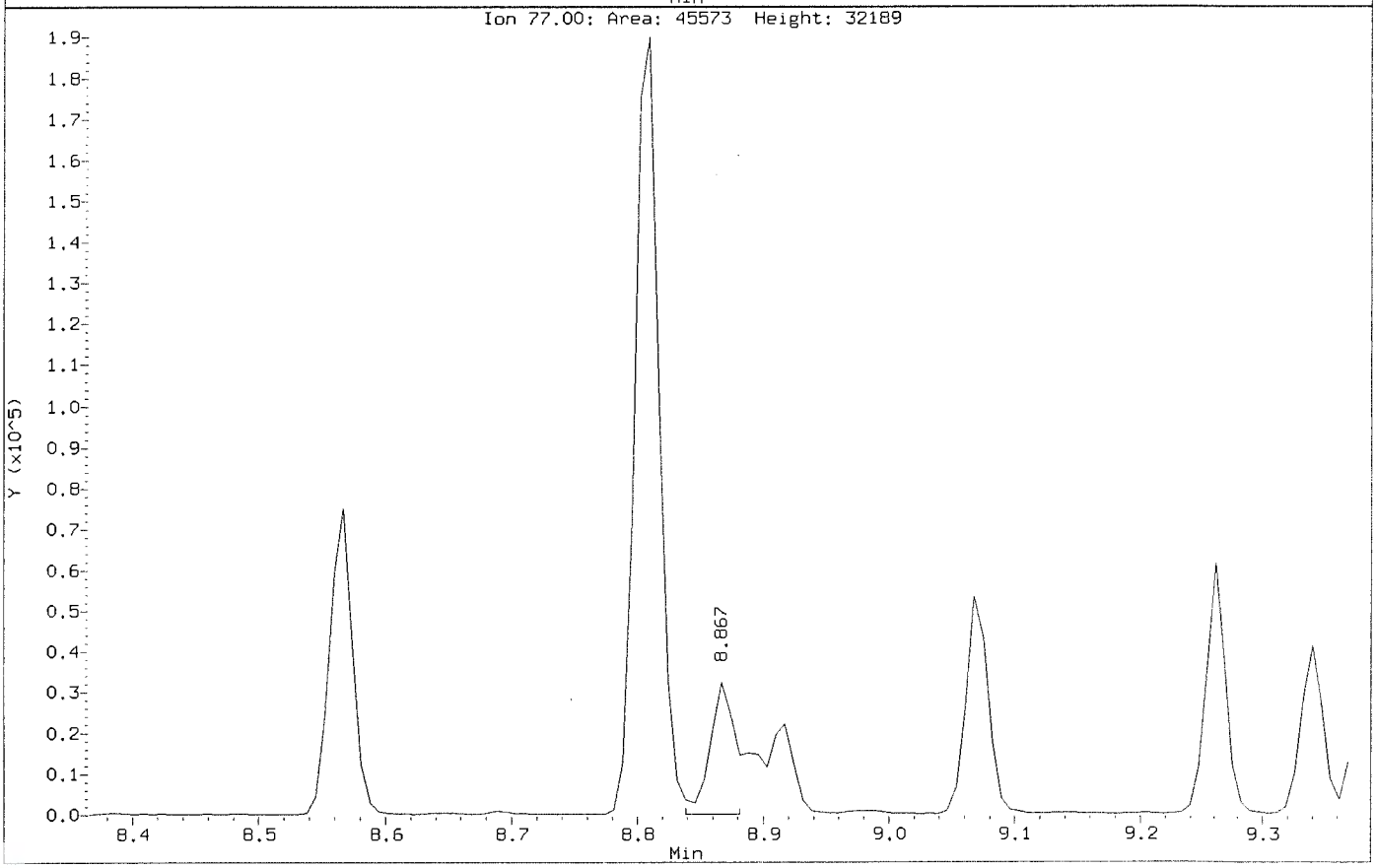




Data File: \\nahstws005\Target\chem\voa6.i\X200707.b\Y070730.D
Injection Date: 08-JUL-2020 05:08
Instrument: voa6.i
Client Sample ID: CCV-END

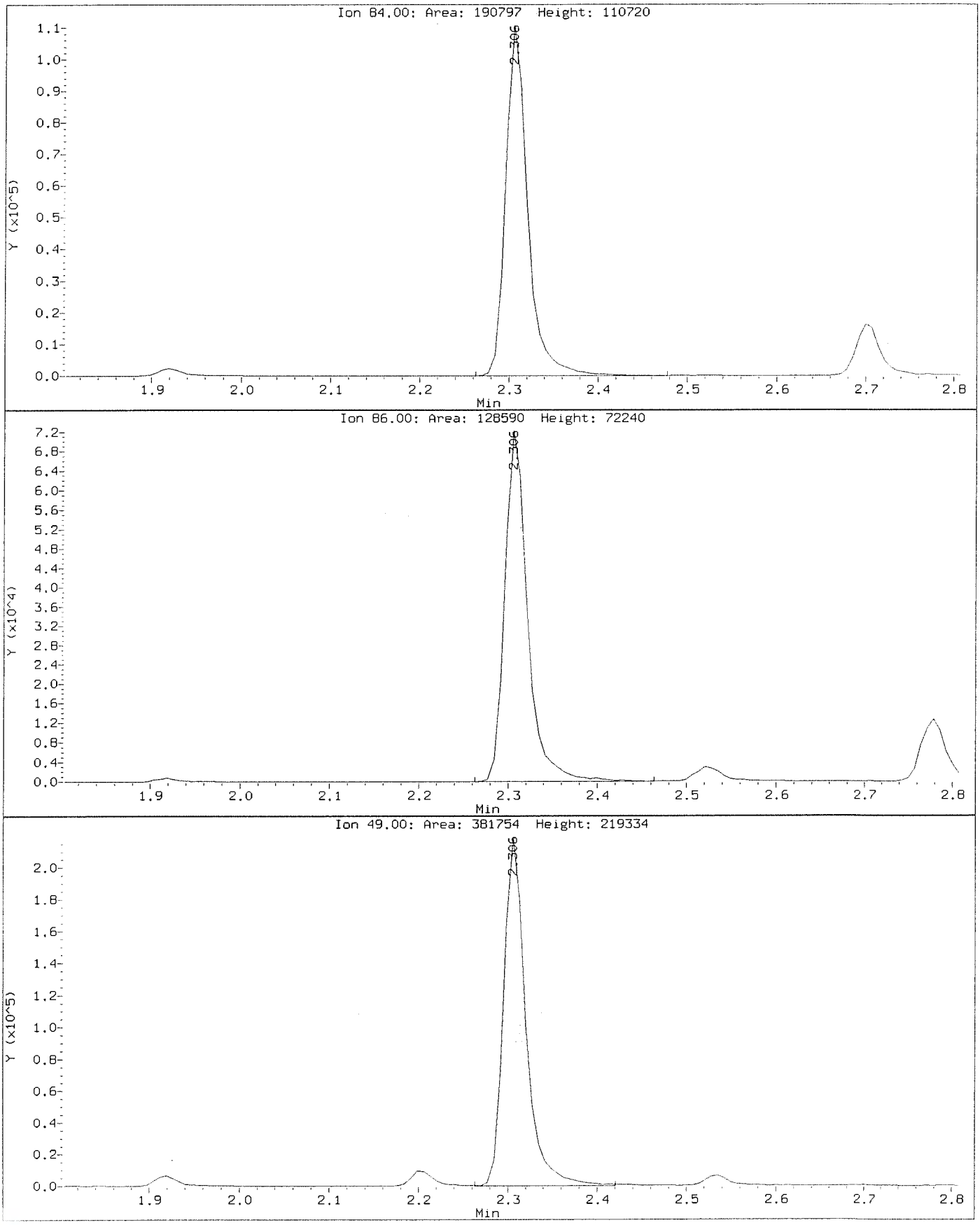
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





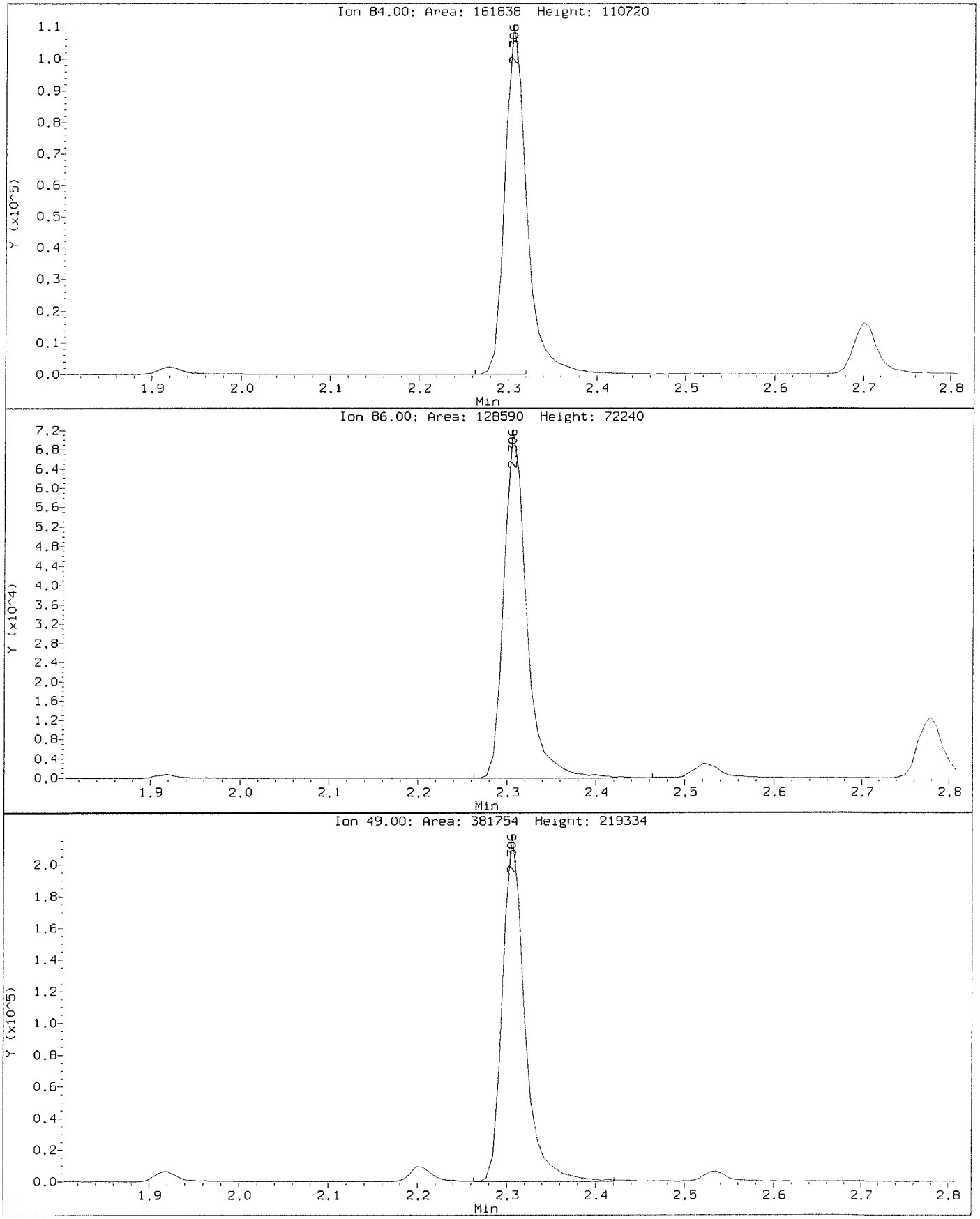
Data File: \\nahstws005\Target\chem\voa6.i\X200707.b\Before\Y070730.D
Injection Date: 08-JUL-2020 05:08
Instrument: voa6.i
Client Sample ID: CCV-END

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



Data File: \\nahstws005\Target\chem\voa6.i\X200707.b\Y070730.D
Injection Date: 08-JUL-2020 05:08
Instrument: voa6.i
Client Sample ID: CCV-END

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



MSVOA06 -Logbook

Batch: 41080 **Analyst:** Presenta Cabascango

Date: 07-08-2020 **Reviewer:**

Method: 8260 **Laboratory:** Houston

Comments:

#	Samp ID	Type	Analyzed	DF	Init Wt/Vol	Final Vol	File ID	Matrix	Status	pH
1	BFB	TUNE	07-08-2020 11:01 am	1.00	50 mL	50 mL	X070801.D	Liquid	Y	NA
	auto find/ purged									
2	CCV	CCV	07-08-2020 11:25 am	1.00	50 mL	50 mL	X070802a.D	Liquid	Y	NA
	10 uL cal std/50 mL DI									
3	CCV	CCV	07-08-2020 11:49 am	1.00	50 mL	50 mL	X070803.D	Liquid	Y	NA
	10 uL cal std/50 mL DI									
4	CCB	SAMP	07-08-2020 12:13 pm	1.00	50 mL	50 mL	X070804.D	Liquid	Y	NA
5	VLCSW-200708	LCS	07-08-2020 12:36 pm	1.00	50 mL	50 mL	X070805.D	Liquid	Y	NA
	4.0 uL cal std/50 mL DI									
6	BLANK	SAMP	07-08-2020 01:01 pm	1.00	50 mL	50 mL	X070806.D	Liquid	Y	NA
7	BLANK	SAMP	07-08-2020 01:25 pm	1.00	50 mL	50 mL	X070807.D	Liquid	Y	NA
8	VBLKW-200708	MBLK	07-08-2020 01:49 pm	1.00	50 mL	50 mL	X070808.D	Liquid	Y	<2
9	HS20070055-01n/r	SAMP	07-08-2020 02:13 pm	1.00	50 mL	50 mL	X070809.D	Liquid	Y	<2
10	HS20061390-10	SAMP	07-08-2020 02:37 pm	1.00	50 mL	50 mL	X070810.D	Liquid	Y	<2
11	HS20070055-02	SAMP	07-08-2020 03:01 pm	1.00	50 mL	50 mL	X070811.D	Liquid	Y	<2
12	HS20070055-06	SAMP	07-08-2020 03:25 pm	1.00	50 mL	50 mL	X070812.D	Liquid	Y	<2
13	HS20070055-03	SAMP	07-08-2020 03:49 pm	1.00	50 mL	50 mL	X070813.D	Liquid	Y	<2
14	HS20070055-04	SAMP	07-08-2020 04:13 pm	1.00	50 mL	50 mL	X070814.D	Liquid	Y	<2
15	HS20070055-05	SAMP	07-08-2020 04:36 pm	1.00	50 mL	50 mL	X070815.D	Liquid	Y	<2
16	HS20070043-01	SAMP	07-08-2020 05:01 pm	1.00	50 mL	50 mL	X070816.D	Liquid	Y	<2
17	HS20070055-03MS	MS	07-08-2020 05:25 pm	1.00	50 mL	50 mL	X070817.D	Liquid	Y	<2
	3.5 uL cal std/40 mL samp									
18	HS20070055-03MSD	MSD	07-08-2020 05:49 pm	1.00	50 mL	50 mL	X070818.D	Liquid	Y	<2
	3.5 uL cal std/40 mL samp									
19	HS20070055-04MS	MS	07-08-2020 06:13 pm	1.00	50 mL	50 mL	X070819.D	Liquid	Y	<2
	3.5 uL cal std/40 mL samp									
20	HS20070055-04MSD	MSD	07-08-2020 06:37 pm	1.00	50 mL	50 mL	X070820.D	Liquid	Y	<2
	3.5 uL cal std/40 mL samp									
21	HS20070043-01	SAMP	07-08-2020 07:01 pm	25.00	2 mL	50 mL	X070821.D	Liquid	Y	<2
22	HS20070043-15	SAMP	07-08-2020 07:25 pm	1.00	50 mL	50 mL	X070822.D	Liquid	Y	<2
23	HS20070043-20	SAMP	07-08-2020 07:49 pm	1.00	50 mL	50 mL	X070823.D	Liquid	Y	<2
24	HS20070043-04	SAMP	07-08-2020 08:12 pm	1.00	50 mL	50 mL	X070824.D	Liquid	Y	<2
25	HS20070043-16	SAMP	07-08-2020 08:36 pm	1.00	50 mL	50 mL	X070825.D	Liquid	Y	<2
26	HS20070043-14	SAMP	07-08-2020 09:00 pm	1.00	50 mL	50 mL	X070826.D	Liquid	Y	<2
27	HS20070043-02	SAMP	07-08-2020 09:24 pm	10.00	5 mL	50 mL	X070827.D	Liquid	Y	<2
28	HS20070043-02	SAMP	07-08-2020 09:48 pm	100.0(	500 µL	50 mL	X070828.D	Liquid	Y	<2
29	HS20070043-03	SAMP	07-08-2020 10:12 pm	10.00	5 mL	50 mL	X070829.D	Liquid	Y	<2
30	HS20070043-03	SAMP	07-08-2020 10:36 pm	100.0(	500 µL	50 mL	X070830.D	Liquid	Y	<2
31	CCV-END	CCV	07-08-2020 11:00 pm	1.00	50 mL	50 mL	X070831.D	Liquid	Y	na
	10 uL cal std/50 mL DI									

MSVOA06 -Logbook

Chemical	Value
SURR SPK ID	31106-34-06
IS ID	31106-34-06
CAL STD ID	31106-37-01/02
BFB ID	31106-34-06

FORM 2
WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20061390

	CLIENT SAMPLE NO.	SMC1 (DCE)#	SMC2 #	SMC3 (TOL)#	OTHER #	TOT OUT
01	VLCSW-200708	99	99	96	99	0
02	VBLKW-200708	89	94	104	101	0
03	HS20061390-10	88	93	103	100	0
04						
05						
06						
07						
08						
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28						

		QC LIMITS
SMC1 (DCE)	= 1,2-Dichloroethane-d4	(0-130)
SMC2	= Dibromofluoromethane	(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-200708

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20061390

Lab File ID: X070808 Lab Sample ID: VBLKW-200708

Date Analyzed: 07/08/20 Time Analyzed: 1349

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-200708	VLCSW-200708	X070805	1236
02	HS20061390-1	HS20061390-10	X070810	1437
03	HS20070055-0	HS20070055-03M	X070817	1725
04	HS20070055-0	HS20070055-03M	X070818	1749
05	HS20070055-0	HS20070055-04M	X070819	1813
06	HS20070055-0	HS20070055-04M	X070820	1837
07				
08				
09				
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30				

COMMENTS:

FORM 5
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20061390

Lab File ID: X070801 BFB Injection Date: 07/08/20

Instrument ID: VOA6 BFB Injection Time: 1101

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	29.3
75	30.0 - 60.0% of mass 95	51.2
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	1.0 (1.6)1
174	Greater than 50.0% of mass 95	61.3
175	5.0 - 9.0% of mass 174	4.9 (8.0)1
176	95.0 - 101.0% of mass 174	59.4 (96.9)1
177	5.0 - 9.0% of mass 176	5.0 (8.4)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	X070803	07/08/20	1149
02	VLCSW-200708	VLCSW-200708	X070805	07/08/20	1236
03	VBLKW-200708	VBLKW-200708	X070808	07/08/20	1349
04	HS20061390-1	HS20061390-10	X070810	07/08/20	1437
05	HS20070055-0	HS20070055-03M	X070817	07/08/20	1725
06	HS20070055-0	HS20070055-03M	X070818	07/08/20	1749
07	HS20070055-0	HS20070055-04M	X070819	07/08/20	1813
08	HS20070055-0	HS20070055-04M	X070820	07/08/20	1837
09	CCV-END	CCV-END	X070831	07/08/20	2300
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20061390

Instrument ID: VOA6 Calibration Date: 07/08/20 Time: 1149

Lab File ID: X070803 Init. Calib. Date(s): 07/07/20 07/07/20

Init. Calib. Times: 1106 1505

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
cis-1,3-Dichloropropene	0.6040000	0.5633118	0.5633118	0.2	6.74	20.00	AVRG
trans-1,3-Dichloropropene	0.5420000	0.5027638	0.5027638	0.1	7.24	20.00	AVRG
1,3-Dichlorobenzene	1.6010000	1.4473017	1.4473017	0.6	9.60	20.00	AVRG
2,2-Dichloropropane	0.8650000	0.8582356	0.8582356	0.1	0.78	20.00	AVRG
1,1-Dichloropropene	0.4920000	0.4274527	0.4274527	0.1	13.12	20.00	AVRG
Dibromomethane	0.2510000	0.2286322	0.2286322	0.1	8.91	20.00	AVRG
1,2-Dibromoethane	0.4020000	0.3597863	0.3597863	0.1	10.50	20.00	AVRG
trans-1,2-Dichloroethene	0.5460000	0.5137722	0.5137722	0.1	5.90	20.00	AVRG
1,1,1,2-Tetrachloroethane	0.3840000	0.3599124	0.3599124	0.1	6.27	20.00	AVRG
1,1,1-Trichloroethane	0.9160000	0.8386042	0.8386042	0.1	8.45	20.00	AVRG
1,1,2,2-Tetrachloroethane	0.9880000	0.8309345	0.8309345	0.3	15.90	20.00	AVRG
1,1,2-Trichloroethane	0.3160000	0.2889578	0.2889578	0.1	8.56	20.00	AVRG
1,1-Dichloroethane	1.4170000	1.2636490	1.2636490	0.2	10.82	20.00	AVRG
1,1-Dichloroethene	0.4630000	0.4107052	0.4107052	0.1	11.29	20.00	AVRG
Trichloroethene	0.3710000	0.3385976	0.3385976	0.2	8.73	20.00	AVRG
1,2,3-Trichlorobenzene	44.976767	50.000000	0.1413487	0.01	10.05	20.00	LINR
Trichlorofluoromethane	0.8620000	0.7913366	0.7913366	0.1	8.20	20.00	AVRG
1,2,4-Trichlorobenzene	45.749586	50.000000	0.2842573	0.1	8.50	20.00	LINR
1,2,4-Trimethylbenzene	2.9400000	2.6740640	2.6740640	0.1	9.04	20.00	AVRG
Tetrachloroethene	0.3050000	0.2782148	0.2782148	0.2	8.78	20.00	AVRG
1,2-Dichlorobenzene	1.4610000	1.2866352	1.2866352	0.4	11.93	20.00	AVRG
1,2-Dichloroethane	0.6200000	0.5624100	0.5624100	0.1	9.29	20.00	AVRG
1,2-Dichloropropane	0.4650000	0.4319186	0.4319186	0.1	7.11	20.00	AVRG
1,3,5-Trimethylbenzene	2.8490000	2.5953478	2.5953478	0.1	8.90	20.00	AVRG
1,3-Dichloropropane	0.6660000	0.6009431	0.6009431	0.1	9.77	20.00	AVRG
1,4-Dichlorobenzene	47.371331	50.000000	1.4425132	0.4	5.26	20.00	LINR
Toluene	1.5950000	1.4686894	1.4686894	0.4	7.92	20.00	AVRG
2-Butanone	95.442788	100.00000	0.4389813	0.1	4.56	20.00	LINR
2-Chlorotoluene	2.5100000	2.2479180	2.2479180	0.1	10.44	20.00	AVRG
2-Hexanone	93.044514	100.00000	0.4448621	0.1	6.96	20.00	LINR
4-Chlorotoluene	2.8460000	2.6271550	2.6271550	0.1	7.69	20.00	AVRG
tert-Butylbenzene	2.2940000	2.0742549	2.0742549	0.1	9.58	20.00	AVRG
4-Methyl-2-Pentanone	91.047980	100.00000	0.6169516	0.1	8.95	20.00	LINR
Acetone	85.979313	100.00000	0.3639841	0.1	14.02	20.00	LINR
Benzene	1.4260000	1.3067037	1.3067037	0.5	8.36	20.00	AVRG
Bromobenzene	0.9540000	0.8912110	0.8912110	0.1	6.58	20.00	AVRG
Bromochloromethane	0.3470000	0.3046351	0.3046351	0.1	12.21	20.00	AVRG
Bromodichloromethane	0.5010000	0.4648491	0.4648491	0.2	7.22	20.00	AVRG
Bromoform	0.2780000	0.2554371	0.2554371	0.1	8.12	20.00	AVRG
Bromomethane	50.033744	50.000000	0.3513371	0.1	-0.07	20.00	LINR
Carbon Disulfide	1.5200000	1.4078148	1.4078148	0.1	7.38	20.00	AVRG
Carbon Tetrachloride	0.4770000	0.4200734	0.4200734	0.1	11.93	20.00	AVRG

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS2006139

Instrument ID: VOA6 Calibration Date: 07/08/20 Time: 1149

Lab File ID: X070803 Init. Calib. Date(s): 07/07/20 07/07/20

Init. Calib. Times: 1106 1505

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
Chlorobenzene	1.0190000	0.9327719	0.9327719	0.5	8.46	20.00	AVRG
Chloroethane	47.779193	50.000000	0.4309289	0.1	4.44	20.00	LINR
Chloroform	1.0950000	1.0130864	1.0130864	0.2	7.48	20.00	AVRG
Chloromethane	1.0270000	0.9441318	0.9441318	0.1	8.07	20.00	AVRG
cis-1,2-Dichloroethene	0.6540000	0.5968295	0.5968295	0.1	8.74	20.00	AVRG
Dibromochloromethane	0.4110000	0.3844361	0.3844361	0.1	6.46	20.00	AVRG
Dichlorodifluoromethane	0.6050000	0.5357305	0.5357305	0.1	11.45	20.00	AVRG
Ethylbenzene	0.5390000	0.4903495	0.4903495	0.1	9.03	20.00	AVRG
Hexachlorobutadiene	47.841148	50.000000	0.2297238	0.1	4.32	20.00	LINR
Isopropylbenzene	1.5990000	1.4263407	1.4263407	0.1	10.80	20.00	AVRG
m,p-Xylenes	0.6480000	0.5844237	0.5844237	0.1	9.81	20.00	AVRG
Methylene Chloride	0.5470000	0.5169511	0.5169511	0.1	5.49	20.00	AVRG
n-Butylbenzene	2.5360000	2.3192168	2.3192168	0.5	8.55	20.00	AVRG
n-Propylbenzene	4.0780000	3.7066565	3.7066565	0.1	9.11	20.00	AVRG
Naphthalene	41.896338	50.000000	0.4058739	0.2	16.21	20.00	LINR
o-Xylene	0.6350000	0.5800021	0.5800021	0.3	8.66	20.00	AVRG
sec-Butylbenzene	3.3520000	2.9871724	2.9871724	0.1	10.88	20.00	AVRG
Styrene	1.1040000	1.0024978	1.0024978	0.3	9.19	20.00	AVRG
Vinyl Chloride	0.8780000	0.7961967	0.7961967	0.1	9.32	20.00	AVRG
1,2,3-Trichloropropane	0.8720000	0.7601156	0.7601156	0.1	12.83	20.00	AVRG
p-Isopropyltoluene	2.8430000	2.5346895	2.5346895	0.1	10.84	20.00	AVRG
1,2-Dibromo-3-Chloropropane	40.079330	50.000000	6.28e-002	0.05	19.84	20.00	LINR
1,2-Dichloroethane-d4	50.228470	50.000000	0.7515427	0.1	-0.46	20.00	LINR
Dibromofluoromethane	51.458044	50.000000	0.5594694	0.1	-2.92	20.00	LINR
Toluene-d8	1.3140000	1.2730351	1.2730351	0.1	3.12	20.00	AVRG
4-Bromofluorobenzene	50.517498	50.000000	0.4809437	0.1	-1.03	20.00	LINR

FORM VII VOA

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20061390

Instrument ID: VOA6 Calibration Date: 07/08/20 Time: 2300

Lab File ID: X070831 Init. Calib. Date(s): 07/07/20 07/07/20

Init. Calib. Times: 1106 1505

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
cis-1,3-Dichloropropene	0.6040000	0.5533848	0.5533848	0.2	8.38	50.00	AVRG
trans-1,3-Dichloropropene	0.5420000	0.4861347	0.4861347	0.1	10.31	50.00	AVRG
1,3-Dichlorobenzene	1.6010000	1.3950607	1.3950607	0.6	12.86	50.00	AVRG
2,2-Dichloropropane	0.8650000	0.7476760	0.7476760	0.1	13.56	50.00	AVRG
1,1-Dichloropropene	0.4920000	0.4116250	0.4116250	0.1	16.34	50.00	AVRG
Dibromomethane	0.2510000	0.2282865	0.2282865	0.1	9.05	50.00	AVRG
1,2-Dibromoethane	0.4020000	0.3644355	0.3644355	0.1	9.34	50.00	AVRG
trans-1,2-Dichloroethene	0.5460000	0.5186155	0.5186155	0.1	5.02	50.00	AVRG
1,1,1,2-Tetrachloroethane	0.3840000	0.3636527	0.3636527	0.1	5.30	50.00	AVRG
1,1,1-Trichloroethane	0.9160000	0.8251429	0.8251429	0.1	9.92	50.00	AVRG
1,1,2,2-Tetrachloroethane	0.9880000	0.8114075	0.8114075	0.3	17.87	50.00	AVRG
1,1,2-Trichloroethane	0.3160000	0.3058191	0.3058191	0.1	3.22	50.00	AVRG
1,1-Dichloroethane	1.4170000	1.3176327	1.3176327	0.2	7.01	50.00	AVRG
1,1-Dichloroethene	0.4630000	0.4058616	0.4058616	0.1	12.34	50.00	AVRG
Trichloroethene	0.3710000	0.3517705	0.3517705	0.2	5.18	50.00	AVRG
1,2,3-Trichlorobenzene	39.782968	50.000000	0.1244384	0.01	20.43	50.00	LINR
Trichlorofluoromethane	0.8620000	0.7381483	0.7381483	0.1	14.37	50.00	AVRG
1,2,4-Trichlorobenzene	45.113069	50.000000	0.2801862	0.1	9.77	50.00	LINR
1,2,4-Trimethylbenzene	2.9400000	2.8542503	2.8542503	0.1	2.92	50.00	AVRG
Tetrachloroethene	0.3050000	0.2683785	0.2683785	0.2	12.01	50.00	AVRG
1,2-Dichlorobenzene	1.4610000	1.3875417	1.3875417	0.4	5.03	50.00	AVRG
1,2-Dichloroethane	0.6200000	0.5843947	0.5843947	0.1	5.74	50.00	AVRG
1,2-Dichloropropane	0.4650000	0.4423121	0.4423121	0.1	4.88	50.00	AVRG
1,3,5-Trimethylbenzene	2.8490000	2.6637325	2.6637325	0.1	6.50	50.00	AVRG
1,3-Dichloropropane	0.6660000	0.6216852	0.6216852	0.1	6.65	50.00	AVRG
1,4-Dichlorobenzene	46.783352	50.000000	1.4246838	0.4	6.43	50.00	LINR
Toluene	1.5950000	1.5080649	1.5080649	0.4	5.45	50.00	AVRG
2-Butanone	85.563128	100.00000	0.3963436	0.1	14.44	50.00	LINR
2-Chlorotoluene	2.5100000	2.3882464	2.3882464	0.1	4.85	50.00	AVRG
2-Hexanone	85.447724	100.00000	0.4099490	0.1	14.55	50.00	LINR
4-Chlorotoluene	2.8460000	2.7745108	2.7745108	0.1	2.51	50.00	AVRG
tert-Butylbenzene	2.2940000	2.1211980	2.1211980	0.1	7.53	50.00	AVRG
4-Methyl-2-Pentanone	90.023171	100.00000	0.6102457	0.1	9.98	50.00	LINR
Acetone	65.347270	100.00000	0.3016209	0.1	34.65	50.00	LINR
Benzene	1.4260000	1.3337507	1.3337507	0.5	6.47	50.00	AVRG
Bromobenzene	0.9540000	0.9679482	0.9679482	0.1	-1.46	50.00	AVRG
Bromochloromethane	0.3470000	0.3072487	0.3072487	0.1	11.46	50.00	AVRG
Bromodichloromethane	0.5010000	0.4802380	0.4802380	0.2	4.14	50.00	AVRG
Bromoform	0.2780000	0.2408342	0.2408342	0.1	13.37	50.00	AVRG
Bromomethane	49.335185	50.000000	0.3464393	0.1	1.33	50.00	LINR
Carbon Disulfide	1.5200000	1.2539711	1.2539711	0.1	17.50	50.00	AVRG
Carbon Tetrachloride	0.4770000	0.3993128	0.3993128	0.1	16.29	50.00	AVRG

FORM VII VOA

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS2006139

Instrument ID: VOA6 Calibration Date: 07/08/20 Time: 2300

Lab File ID: X070831 Init. Calib. Date(s): 07/07/20 07/07/20

Init. Calib. Times: 1106 1505

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
Chlorobenzene	1.0190000	0.9347666	0.9347666	0.5	8.27	50.00	AVRG
Chloroethane	45.542303	50.000000	0.4115319	0.1	8.92	50.00	LINR
Chloroform	1.0950000	1.0454935	1.0454935	0.2	4.52	50.00	AVRG
Chloromethane	1.0270000	0.9504332	0.9504332	0.1	7.46	50.00	AVRG
cis-1,2-Dichloroethene	0.6540000	0.6285266	0.6285266	0.1	3.90	50.00	AVRG
Dibromochloromethane	0.4110000	0.3850534	0.3850534	0.1	6.31	50.00	AVRG
Dichlorodifluoromethane	0.6050000	0.5052576	0.5052576	0.1	16.49	50.00	AVRG
Ethylbenzene	0.5390000	0.4770377	0.4770377	0.1	11.50	50.00	AVRG
Hexachlorobutadiene	45.654244	50.000000	0.2189203	0.1	8.69	50.00	LINR
Isopropylbenzene	1.5990000	1.3230200	1.3230200	0.1	17.26	50.00	AVRG
m,p-Xylenes	0.6480000	0.5417104	0.5417104	0.1	16.40	50.00	AVRG
Methylene Chloride	0.5470000	0.4937241	0.4937241	0.1	9.74	50.00	AVRG
n-Butylbenzene	2.5360000	2.2301391	2.2301391	0.5	12.06	50.00	AVRG
n-Propylbenzene	4.0780000	3.7388599	3.7388599	0.1	8.32	50.00	AVRG
Naphthalene	39.144942	50.000000	0.3790285	0.2	21.71	50.00	LINR
o-Xylene	0.6350000	0.5660943	0.5660943	0.3	10.85	50.00	AVRG
sec-Butylbenzene	3.3520000	2.8275656	2.8275656	0.1	15.64	50.00	AVRG
Styrene	1.1040000	0.9975193	0.9975193	0.3	9.64	50.00	AVRG
Vinyl Chloride	0.8780000	0.7654081	0.7654081	0.1	12.82	50.00	AVRG
1,2,3-Trichloropropane	0.8720000	0.7609514	0.7609514	0.1	12.73	50.00	AVRG
p-Isopropyltoluene	2.8430000	2.3457371	2.3457371	0.1	17.49	50.00	AVRG
1,2-Dibromo-3-Chloropropane	38.489203	50.000000	6.04e-002	0.05	23.02	50.00	LINR
1,2-Dichloroethane-d4	50.397442	50.000000	0.7540367	0.1	-0.79	50.00	LINR
Dibromofluoromethane	51.018990	50.000000	0.5547781	0.1	-2.04	50.00	LINR
Toluene-d8	1.3140000	1.3444180	1.3444180	0.1	-2.31	50.00	AVRG
4-Bromofluorobenzene	50.368819	50.000000	0.4795580	0.1	-0.74	50.00	LINR

FORM 8
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20061390

Lab File ID (Standard): X070803 Date Analyzed: 07/08/20

Instrument ID: VOA6 Time Analyzed: 1149

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

		IS1(CBZ) AREA #	RT #	IS2(DFB) AREA #	RT #	IS3(DCB) AREA #	RT #
	12 HOUR STD	396352	7.67	437983	4.97	183355	9.67
	UPPER LIMIT	792704	8.17	875966	5.47	366710	10.17
	LOWER LIMIT	198176	7.17	218992	4.47	91678	9.17
	CLIENT SAMPLE NO.						
01	VLCSW-200708	407148	7.67	447593	4.97	185535	9.67
02	VBLKW-200708	449679	7.67	531625	4.97	192440	9.67
03	HS20061390-10	447766	7.67	529191	4.97	197554	9.67
04	HS20070055-03	423204	7.67	495334	4.97	166192	9.67
05	HS20070055-03	421669	7.67	494544	4.97	185130	9.66
06	HS20070055-04	426175	7.67	494232	4.97	186067	9.67
07	HS20070055-04	428230	7.67	492723	4.97	197403	9.66
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							

IS1 (CBZ) = Chlorobenzene-d5
IS2 (DFB) = 1,4-Difluorobenzene
IS3 (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 8
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20061390

Lab File ID (Standard): X070803 Date Analyzed: 07/08/20

Instrument ID: VOA6 Time Analyzed: 1149

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

		IS4 AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	261723	4.19				
	UPPER LIMIT	523446	4.69				
	LOWER LIMIT	130862	3.69				
	CLIENT SAMPLE NO.						
01	VLCSW-200708	274577	4.19				
02	VBLKW-200708	336025	4.19				
03	HS20061390-10	336444	4.19				
04	HS20070055-03	314779	4.19				
05	HS20070055-03	314292	4.19				
06	HS20070055-04	316702	4.19				
07	HS20070055-04	313191	4.19				
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							

IS4 = Pentafluorobenzene

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\X200708.b\X070801.D

Date : 08-JUL-2020 11:01

Client ID: BFB

Instrument: voa6.i

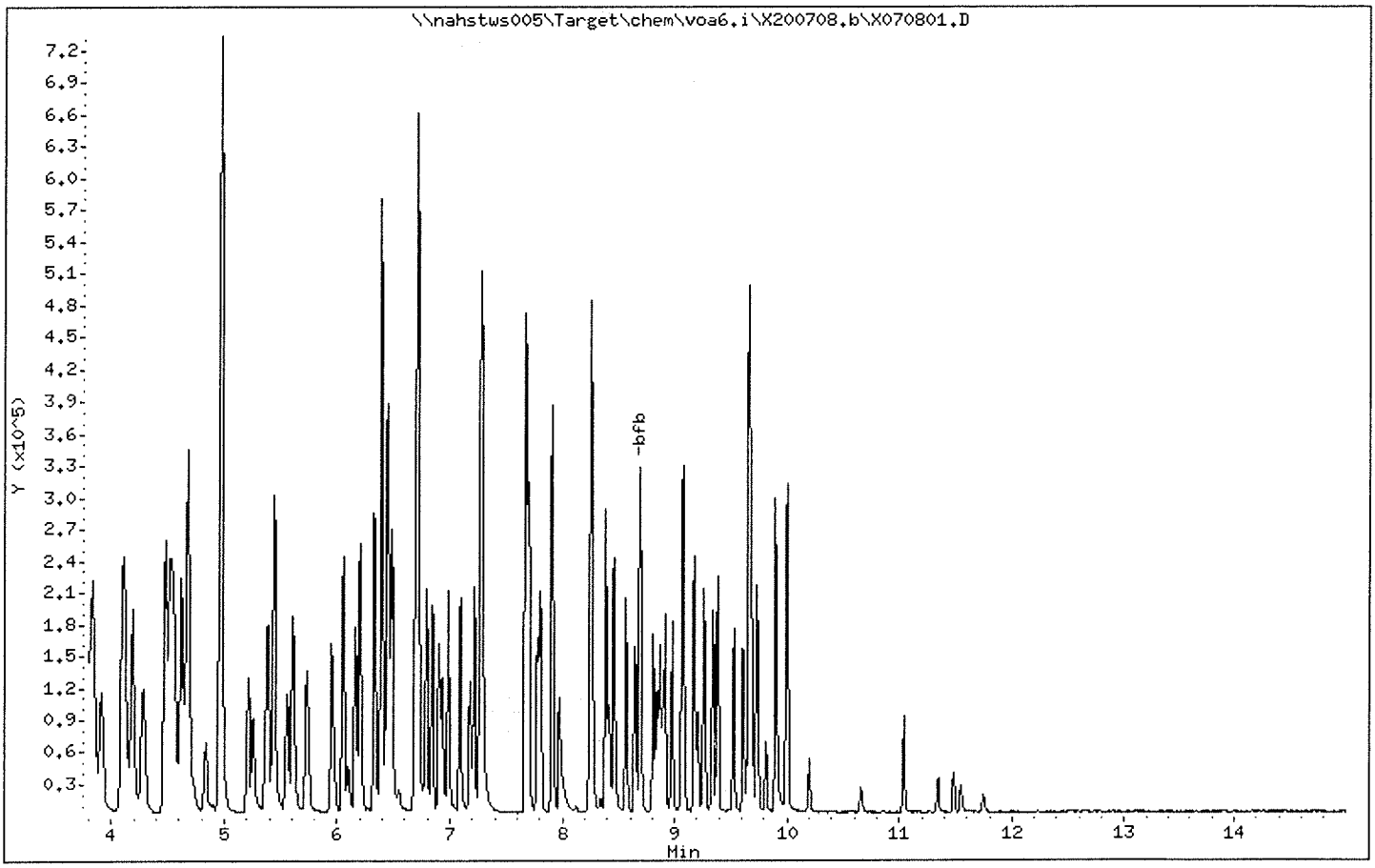
Sample Info: BFB;BFB;3;;BFB

Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

Column diameter: 0.25



Data File: \\nahstws005\Target\chem\voa6.i\X200708.b\X070801.D

Date : 08-JUL-2020 11:01

Client ID: BFB

Instrument: voa6.i

Sample Info: BFB;BFB;3;;BFB

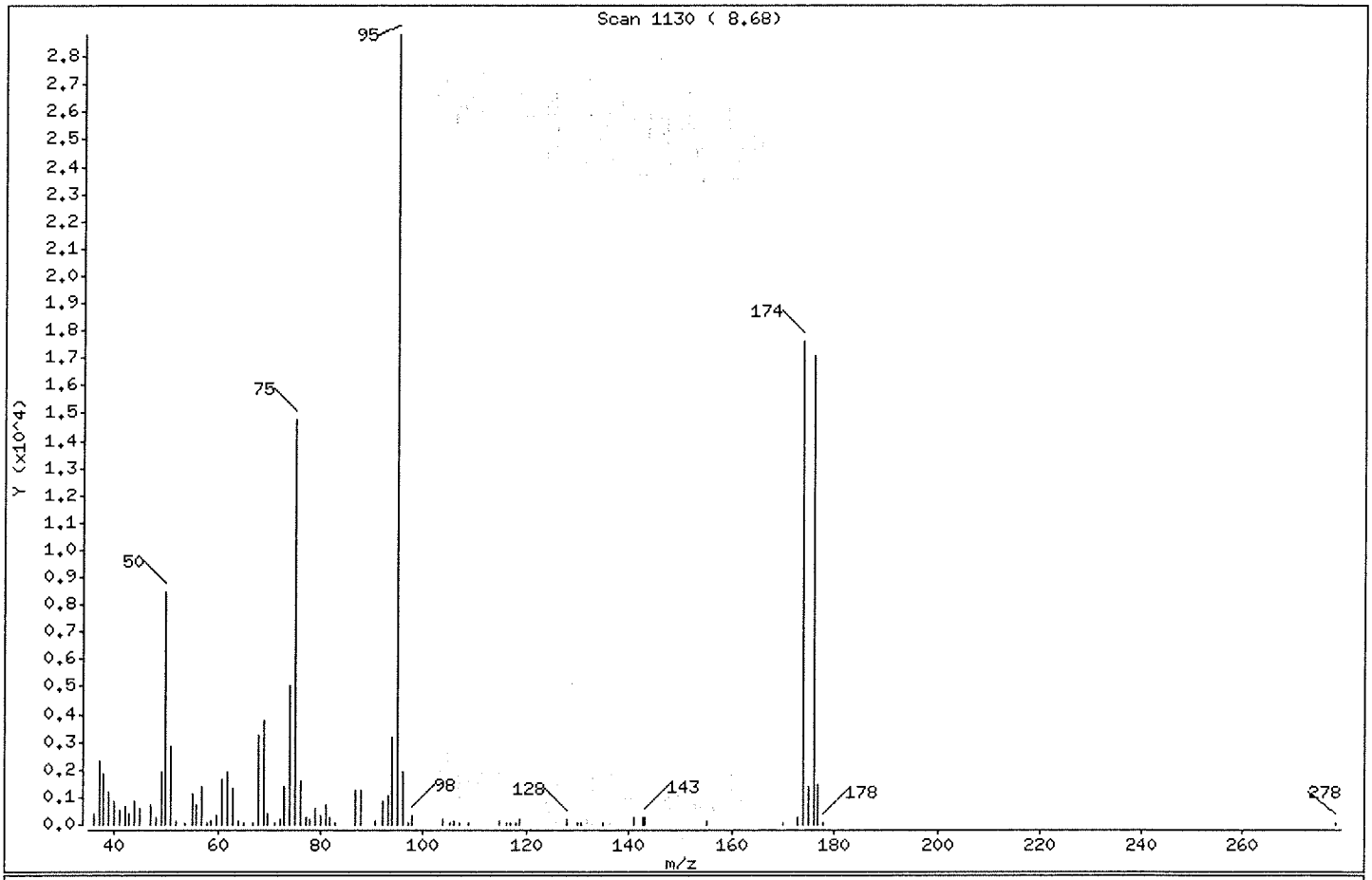
Volume Injected (uL): 2.0

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	29.34
75	30.00 - 60.00% of mass 95	51.17
96	5.00 - 9.00% of mass 95	6.60
173	Less than 2.00% of mass 174	0.97 (1.58)
174	Greater than 50.00% of mass 95	61.25
175	5.00 - 9.00% of mass 174	4.90 (7.99)
176	95.00 - 101.00% of mass 174	59.36 (96.92)
177	5.00 - 9.00% of mass 176	5.01 (8.45)

Data File: \\nahstws005\Target\chem\voa6.i\X200708.b\X070801.D

Date : 08-JUL-2020 11:01

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: X070801.D
Spectrum: Scan 1130 (8.68)
Location of Maximum: 95.00
Number of points: 81

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	425	58.90	108	80.90	759	118.00	62
37.00	2288	59.80	351	81.80	239	118.80	188
37.90	1845	60.90	1655	83.00	58	127.80	190
39.00	1205	62.00	1928	86.90	1244	130.00	79
40.00	845	63.00	1310	87.90	1249	130.80	61
41.10	506	64.10	121	90.80	150	134.80	54
42.00	632	65.10	64	91.90	859	140.90	249
42.90	374	67.00	98	93.00	1044	142.70	241
44.00	839	68.00	3224	93.90	3152	143.00	250
44.90	564	69.00	3760	95.00	28800	155.00	125
47.10	705	69.90	429	96.00	1901	169.90	82
48.00	265	71.10	87	97.00	95	172.80	279
49.00	1952	72.10	169	97.90	328	174.00	17640
50.00	8451	73.00	1411	103.90	180	174.90	1410
51.00	2880	74.00	5046	105.10	50	175.90	17096
52.00	151	75.00	14736	106.00	106	176.90	1444
53.80	72	76.00	1577	106.90	69	177.80	85
55.10	1148	77.00	280	108.60	75	278.20	70
56.00	735	77.90	208	114.80	134		
57.00	1393	78.80	619	116.00	60		
58.20	96	80.00	305	116.80	99		

ata File: \\nahstws005\Target\chem\voa6.i\X200708.b\X0
:eport Date: 13-Aug-2020 12:56

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200708.b\X070803.D
Lab Smp Id: CCV Client Smp ID: CCV
Inj Date : 08-JUL-2020 11:49
Operator : PC Inst ID: voa6.i
Smp Info : CCV;CCV;2;;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200708.b\8260W.m
Meth Date : 13-Aug-2020 12:56 voa6.i Quant Type: ISTD
Cal Date : 07-JUL-2020 13:53 Cal File: X070708.D
Als bottle: 3 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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

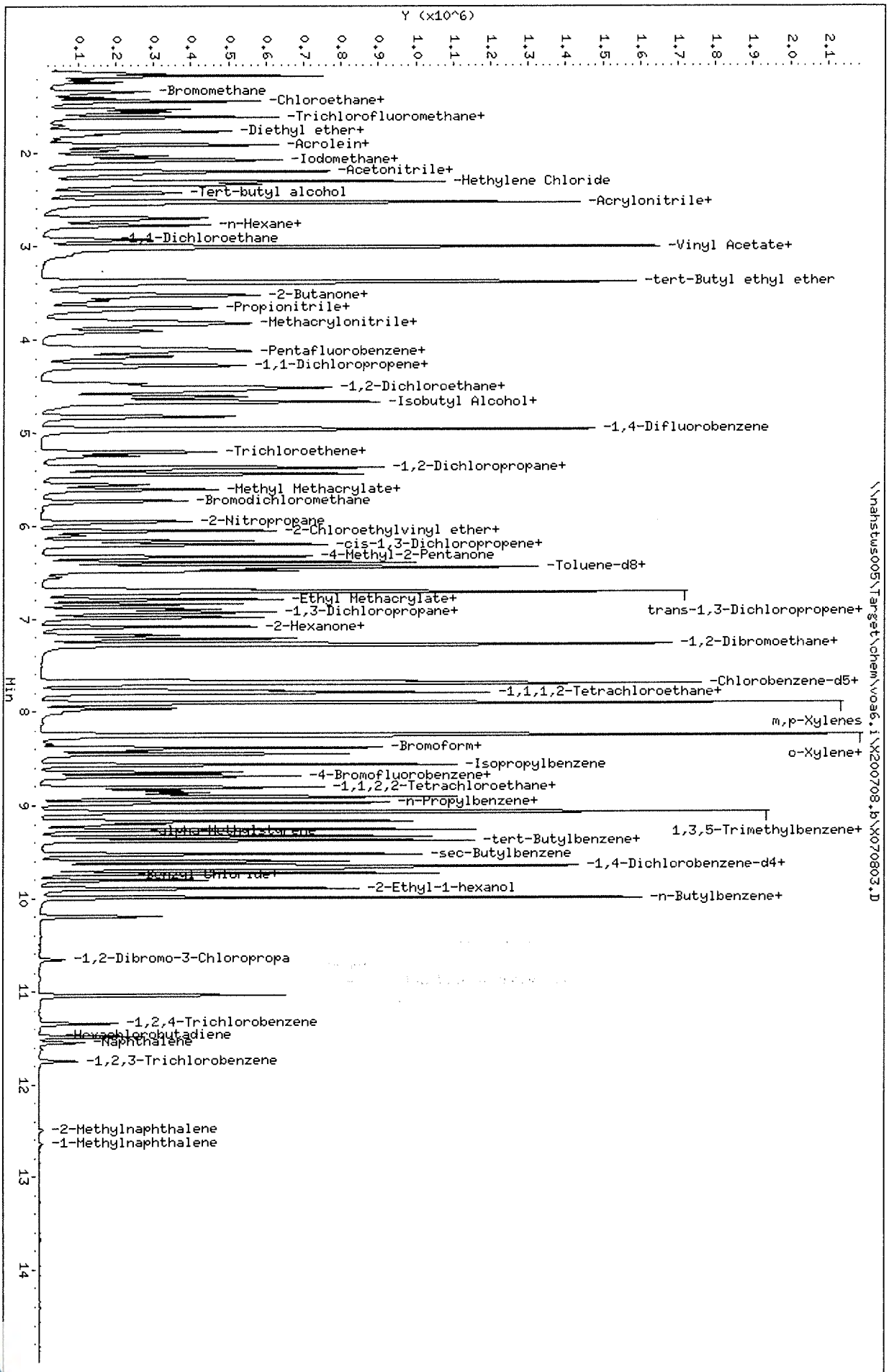
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)
* 1	Pentafluorobenzene	168	4.189	4.189	(1.000)	261723	50.0000	
* 36	1,4-Difluorobenzene	114	4.970	4.970	(1.000)	437983	50.0000	
* 47	Chlorobenzene-d5	117	7.671	7.671	(1.000)	396352	50.0000	
* 70	1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	183355	50.0000	
$ 30	Dibromofluoromethane	113	4.103	4.103	(0.979)	146426	50.0000	51.45
$ 35	1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	196696	50.0000	50.22
$ 48	Toluene-d8	98	6.388	6.388	(0.833)	504570	50.0000	48.42
$ 69	4-Bromofluorobenzene	95	8.695	8.695	(1.134)	190623	50.0000	50.51
60	1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	142652	50.0000	46.87
31	1,1,1-Trichloroethane	97	4.089	4.089	(0.976)	219482	50.0000	45.77
68	1,1,2,2-Tetrachloroethane	83	8.845	8.845	(0.915)	152356	50.0000	42.02
53	1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	114529	50.0000	45.67
22	1,1-Dichloroethane	63	2.929	2.929	(0.699)	330726	50.0000	44.58
11	1,1-Dichloroethene	96	1.919	1.919	(0.458)	107491	50.0000	44.35
32	1,1-Dichloropropene	75	4.283	4.283	(0.862)	187217	50.0000	43.40
93	1,2,3-Trichlorobenzene	180	11.746	11.746	(1.215)	25917	50.0000	44.97
71	1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	139371	50.0000	43.60(M)
90	1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	52120	50.0000	45.74
79	1,2,4-Trimethylbenzene	105	9.383	9.383	(0.970)	490303	50.0000	45.47
9	1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.102)	11507	50.0000	40.07(M)
	1,2-Dibromoethane	107	7.262	7.262	(0.947)	142602	50.0000	44.76
	1,2-Dichlorobenzene	146	9.991	9.991	(1.033)	235911	50.0000	44.02

Data File: \\nahstws005\Target\chem\voa6.i\X200708.b\X070803.D Page 2
Report Date: 13-Aug-2020 12:56

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
33	1,2-Dichloroethane	62	4.562	4.562	(0.918)	246326	50.0000	45.33
42	1,2-Dichloropropane	63	5.443	5.443	(1.095)	189173	50.0000	46.42
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	475870	50.0000	45.55
83	1,3-Dichlorobenzene	146	9.605	9.605	(0.993)	265370	50.0000	45.20
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	238185	50.0000	45.13
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	264492	50.0000	47.37
26	2,2-Dichloropropane	77	3.516	3.516	(0.839)	224620	50.0000	49.57
24	2-Butanone	43	3.581	3.581	(0.855)	229783	100.000	95.44
76	2-Chlorotoluene	91	8.974	8.974	(0.928)	412167	50.0000	44.78
52	2-Hexanone	43	7.090	7.090	(0.924)	352644	100.000	93.04
77	4-Chlorotoluene	91	9.075	9.075	(0.939)	481702	50.0000	46.15
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	464748	50.0000	44.57
45	4-Methyl-2-Pentanone	43	6.324	6.324	(0.824)	489060	100.000	91.04
10	Acetone	43	1.976	1.976	(0.472)	190526	100.000	85.97
37	Benzene	78	4.519	4.519	(0.909)	572314	50.0000	45.79
74	Bromobenzene	156	8.810	8.810	(0.911)	163408	50.0000	46.71
29	Bromochloromethane	128	3.795	3.795	(0.906)	79730	50.0000	43.86
39	Bromodichloromethane	83	5.729	5.729	(1.153)	203596	50.0000	46.40
66	Bromoform	173	8.416	8.416	(1.097)	101243	50.0000	46.01
6	Bromomethane	94	1.339	1.339	(0.320)	91953	50.0000	50.03
19	Carbon Disulfide	76	2.069	2.069	(0.494)	736915	100.000	92.59
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	183985	50.0000	44.01
59	Chlorobenzene	112	7.699	7.699	(1.004)	369706	50.0000	45.78
7	Chloroethane	64	1.403	1.403	(0.335)	112784	50.0000	47.77
28	Chloroform	83	3.910	3.910	(0.933)	265148	50.0000	46.23
3	Chloromethane	50	1.081	1.081	(0.258)	247101	50.0000	45.94
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.843)	156204	50.0000	45.65
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	246721	50.0000	46.67
55	Dibromochloromethane	129	7.176	7.176	(0.936)	152372	50.0000	46.80
44	Dibromomethane	93	5.558	5.558	(1.118)	100137	50.0000	45.60
2	Dichlorodifluoromethane	85	0.973	0.973	(0.232)	140213	50.0000	44.25
61	Ethylbenzene	106	7.800	7.800	(1.017)	194351	50.0000	45.47
91	Hexachlorobutadiene	225	11.481	11.481	(1.187)	42121	50.0000	47.84
67	Isopropylbenzene	105	8.566	8.566	(1.117)	565333	50.0000	44.59
62	m,p-Xylenes	106	7.907	7.907	(1.031)	463275	100.000	90.14
17	Methylene Chloride	84	2.306	2.306	(0.550)	135298	50.0000	47.27(M)
87	n-Butylbenzene	91	9.999	9.999	(1.034)	425240	50.0000	45.72
73	n-Propylbenzene	91	8.917	8.917	(0.922)	679634	50.0000	45.44
92	Naphthalene	128	11.546	11.546	(1.194)	74419	50.0000	41.89
63	o-Xylene	106	8.244	8.244	(1.075)	229885	50.0000	45.65
81	sec-Butylbenzene	105	9.526	9.526	(0.985)	547713	50.0000	44.55
64	Styrene	104	8.258	8.258	(1.077)	397342	50.0000	45.41
78	tert-Butylbenzene	119	9.340	9.340	(0.966)	380325	50.0000	45.21
56	Tetrachloroethene	164	6.933	6.933	(0.904)	110271	50.0000	45.54
50	Toluene	91	6.453	6.453	(0.841)	582118	50.0000	46.03
20	trans-1,2-Dichloroethene	96	2.535	2.535	(0.605)	134466	50.0000	47.00
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	220202	50.0000	46.36
38	Trichloroethene	130	5.214	5.214	(1.049)	148300	50.0000	45.63
8	Trichlorofluoromethane	101	1.561	1.561	(0.373)	207111	50.0000	45.88
5	Vinyl Chloride	62	1.145	1.145	(0.273)	208383	50.0000	45.32

QC Flag Legend

M - Compound response manually integrated.



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Purge Volume: 5.0
Column phase: DB624

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

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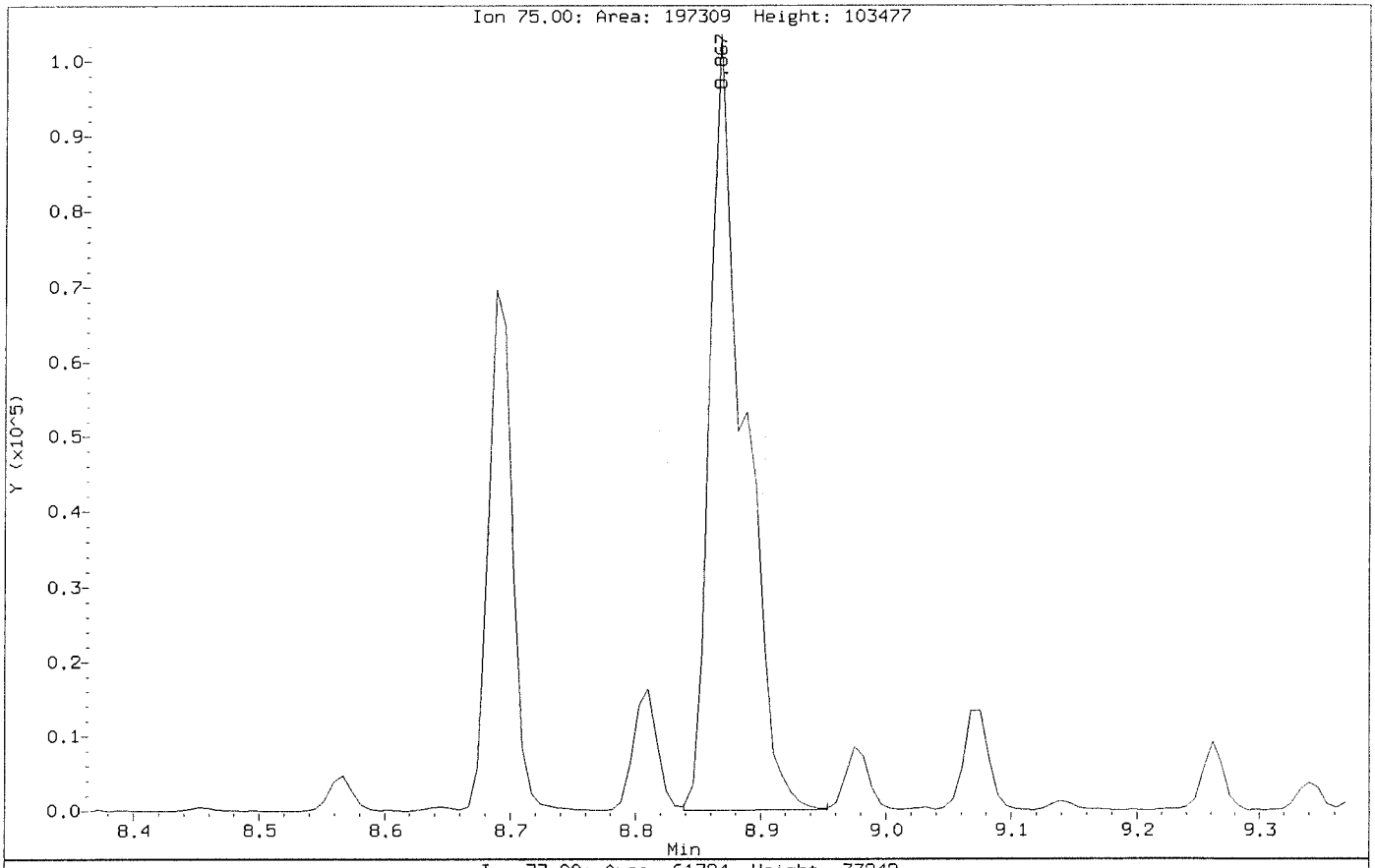
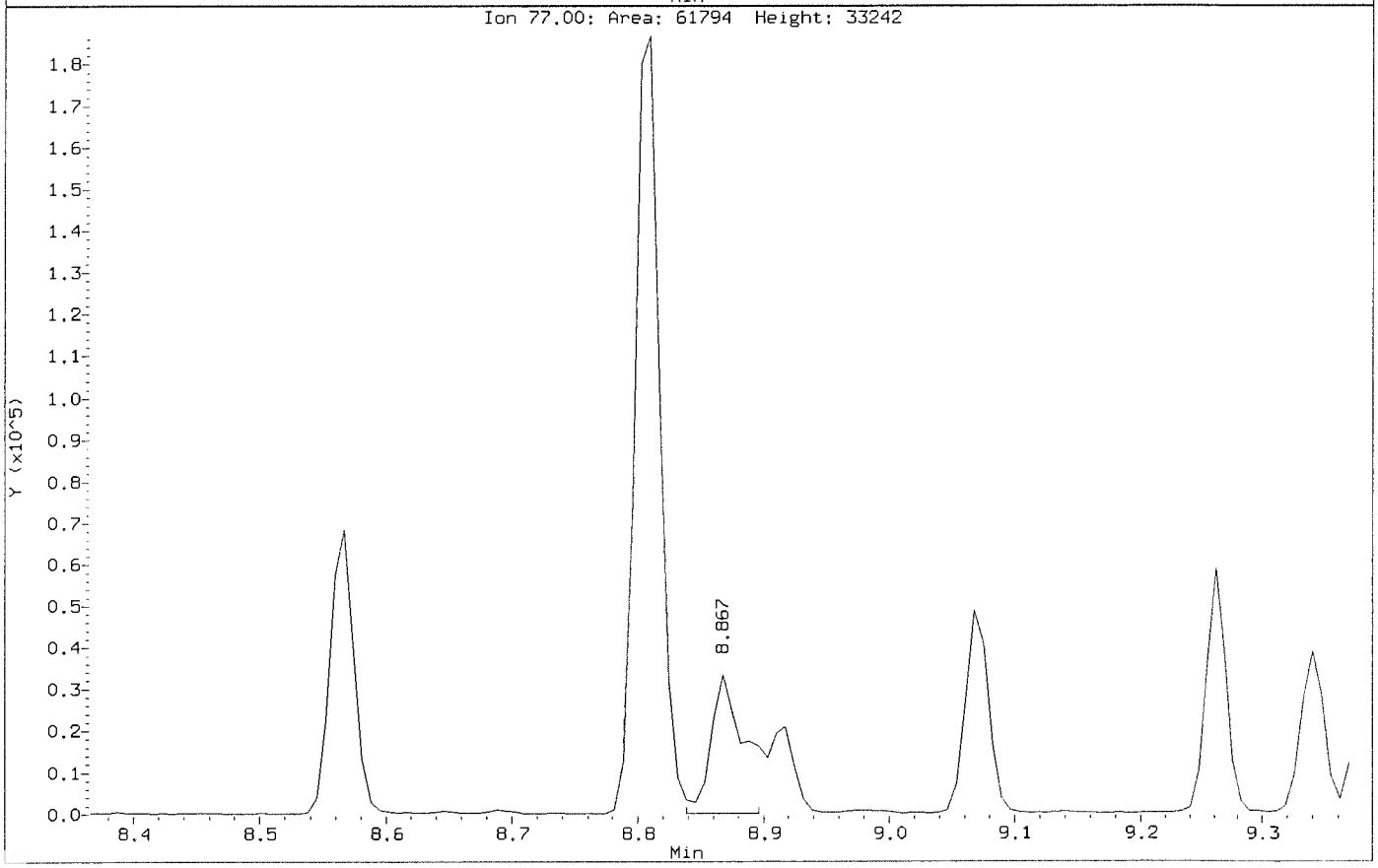
Instrument: voa6.i
Client Sample ID: CCV

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





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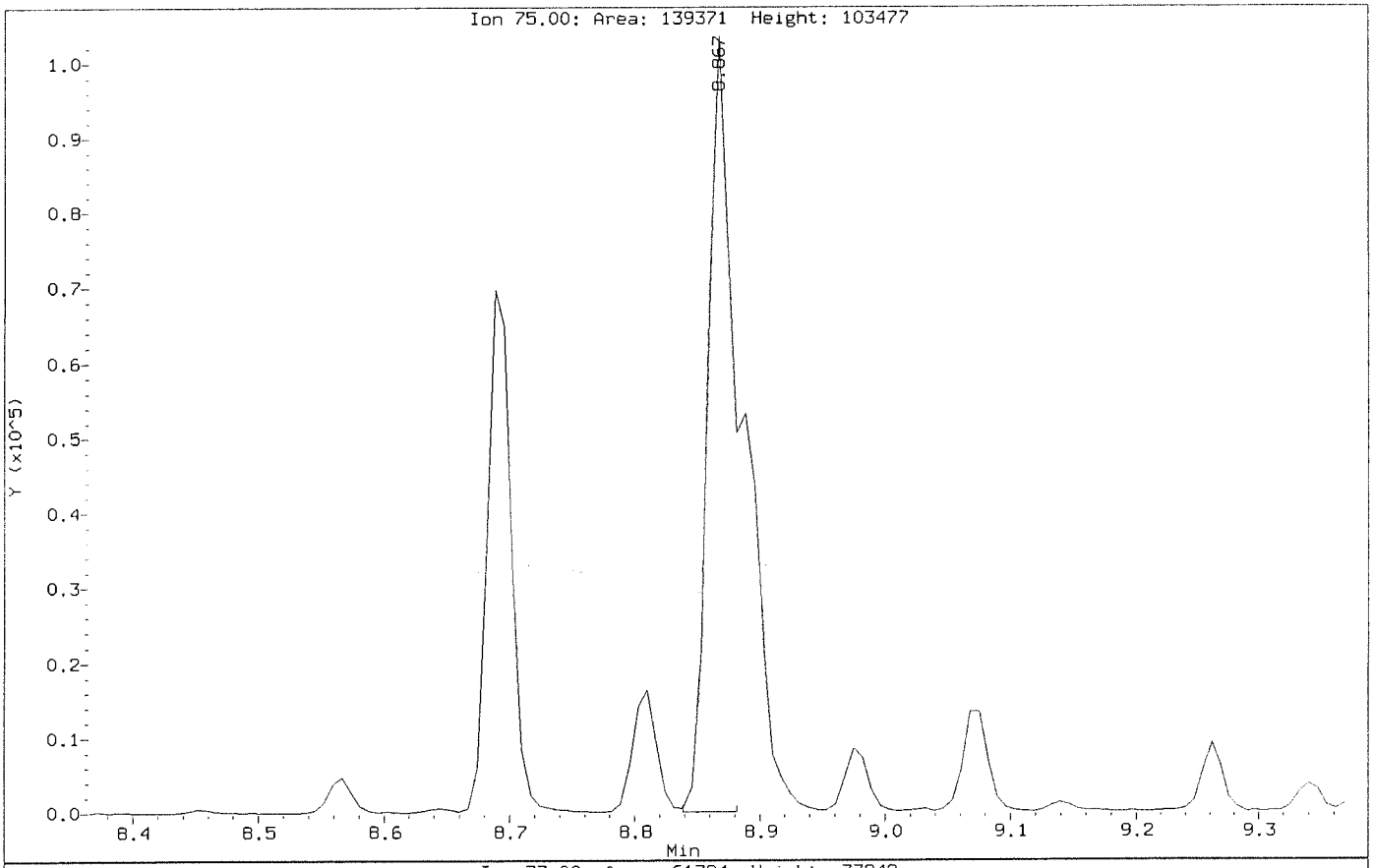
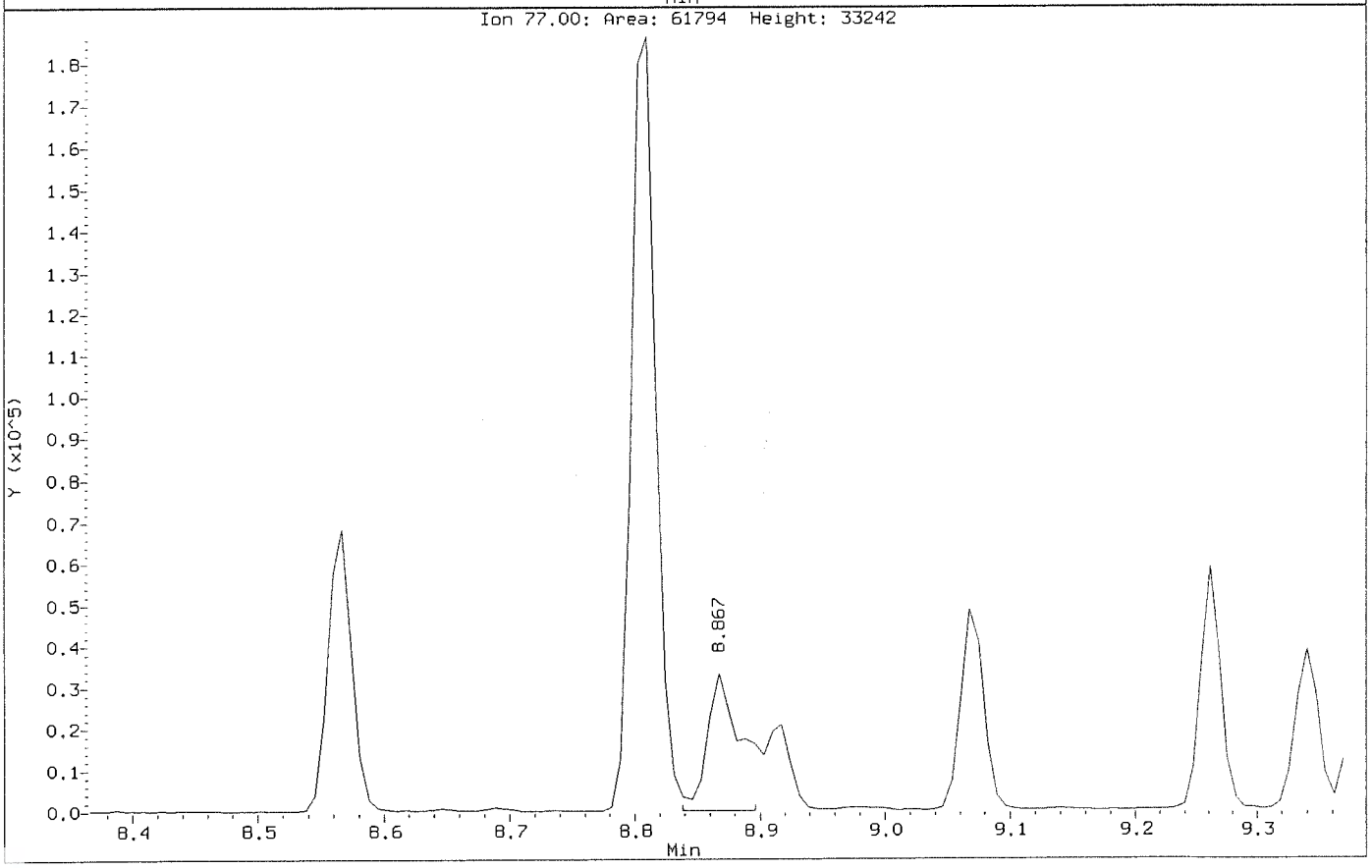
Client Sample ID: CCV

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





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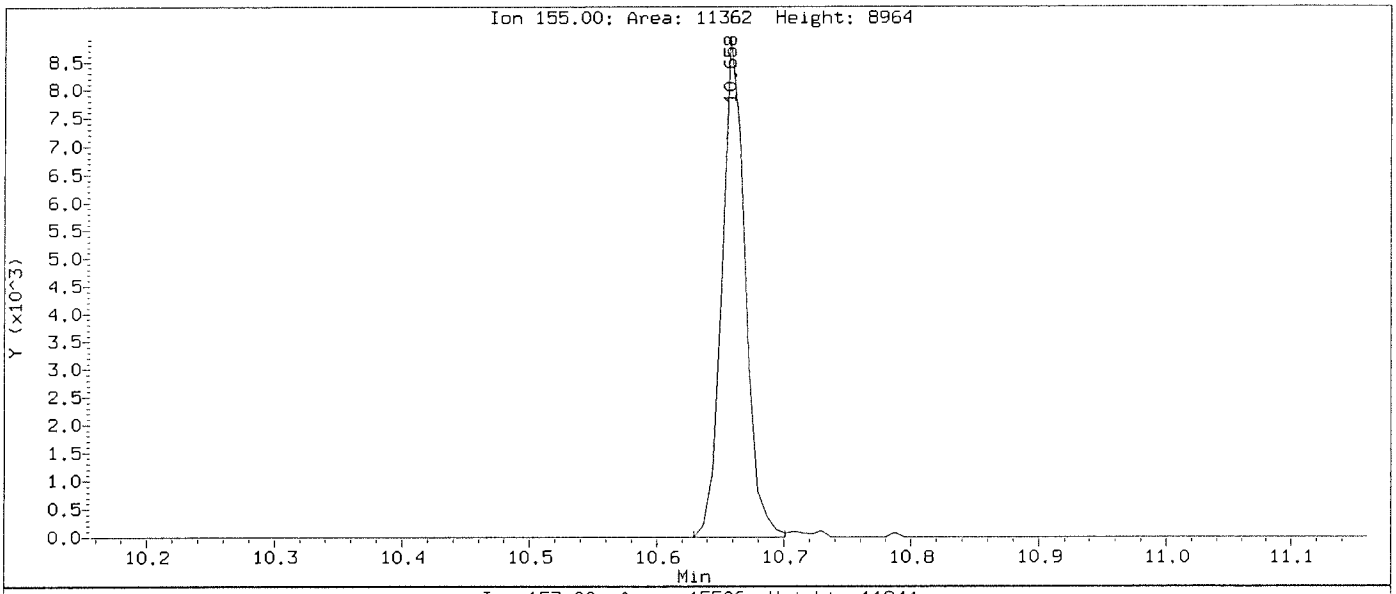
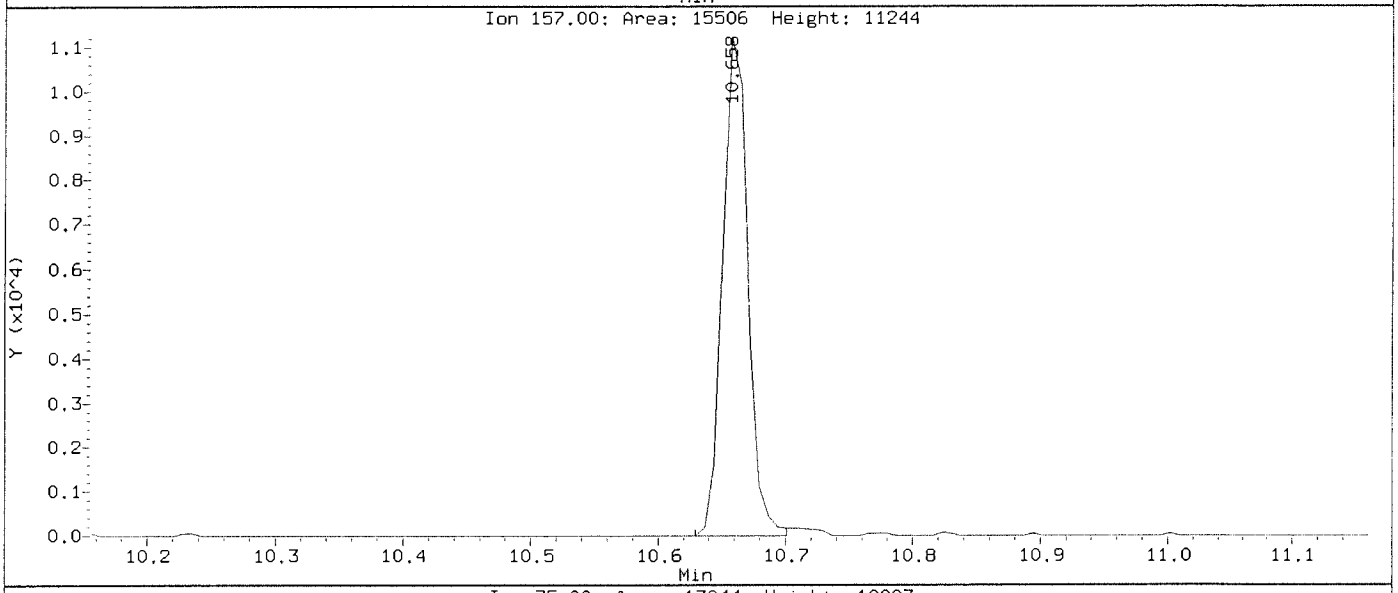
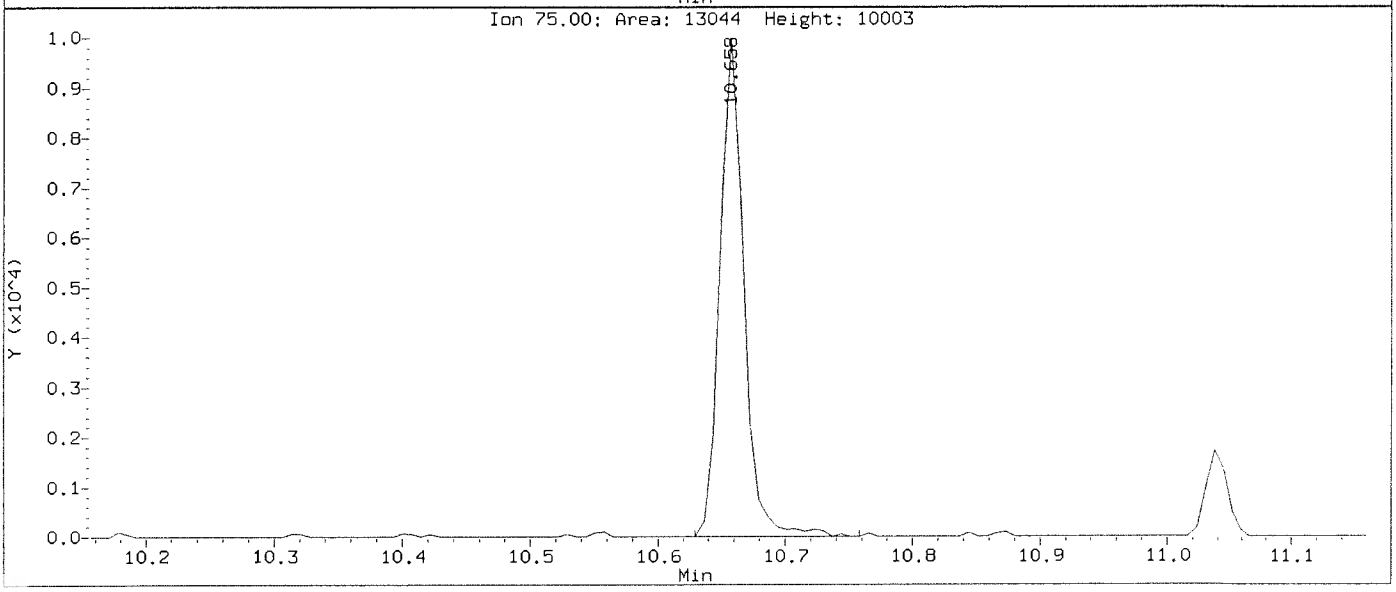
Instrument: voa6.i
Client Sample ID: CCV

Compound: 1,2-Dibromo-3-Chloropropane
CAS Number: 96-12-8







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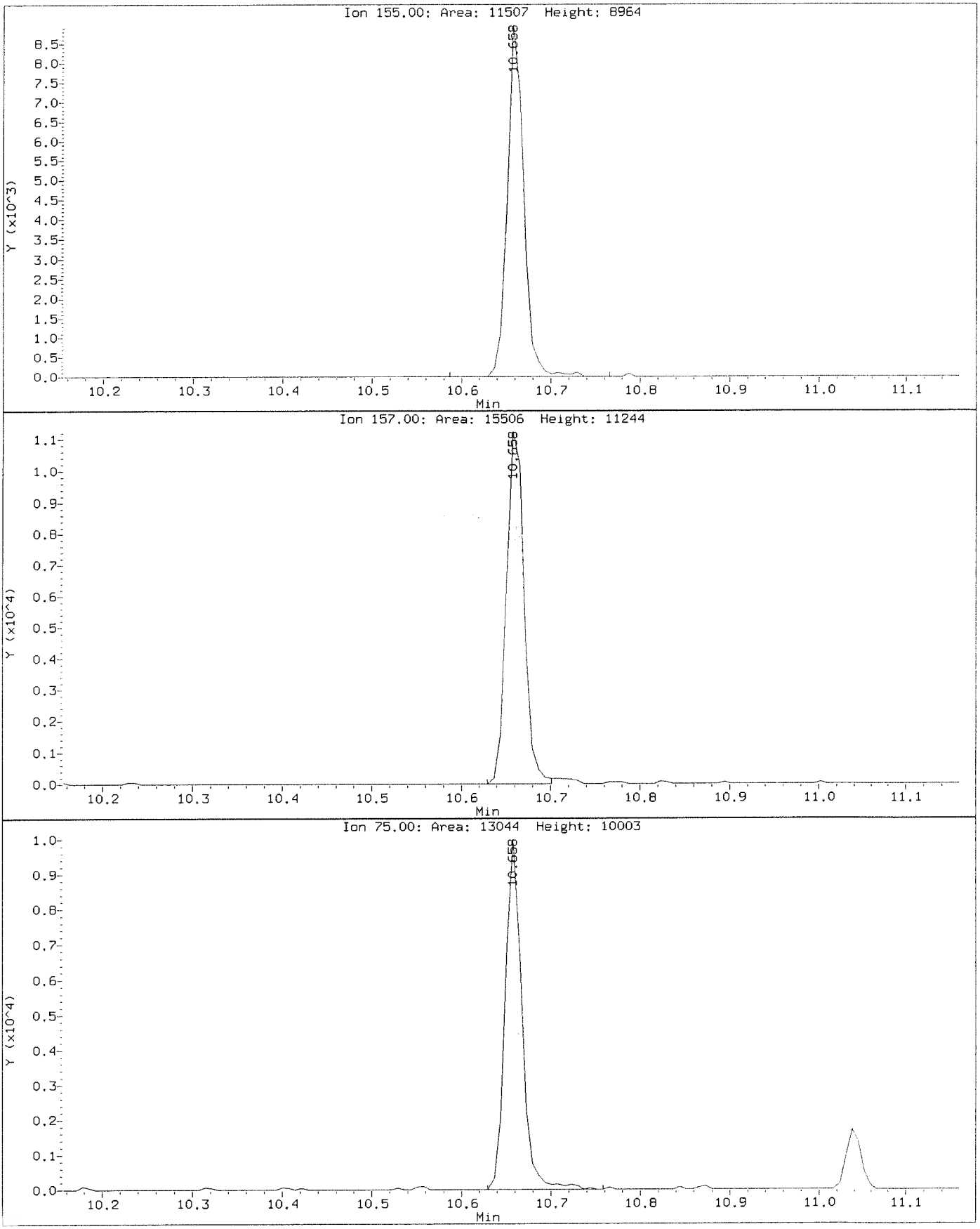
Client Sample ID: CCV

Compound: 1,2-Dibromo-3-Chloropropane
CAS Number: 96-12-8



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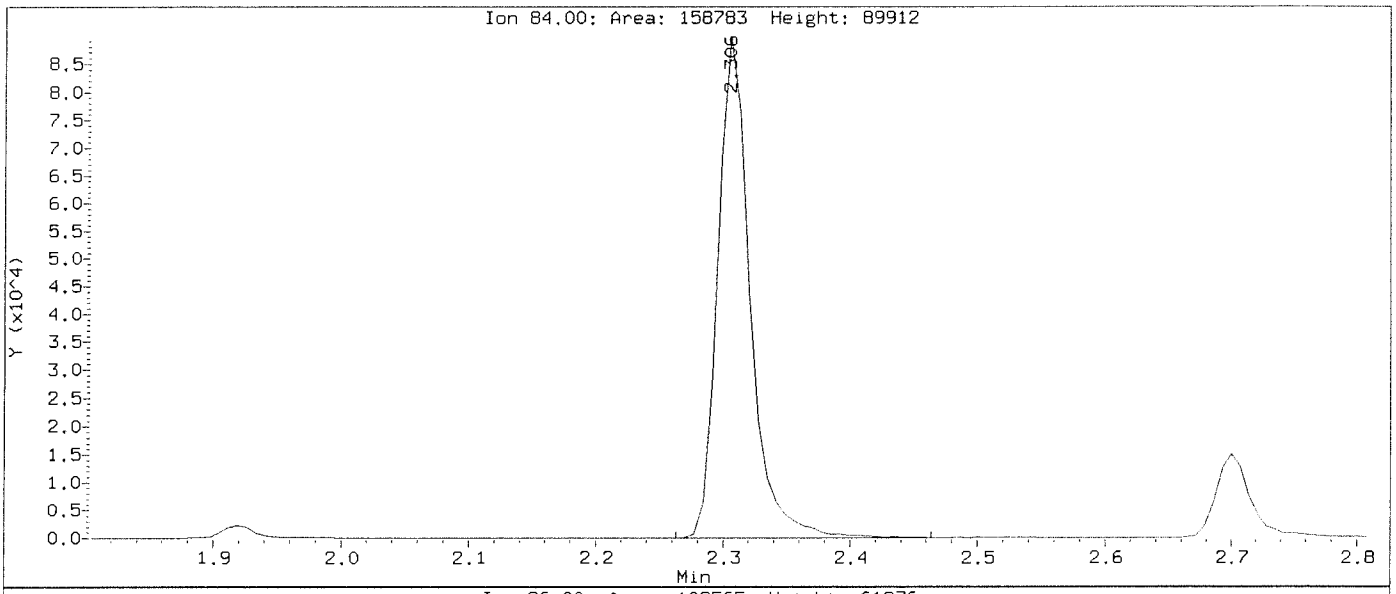
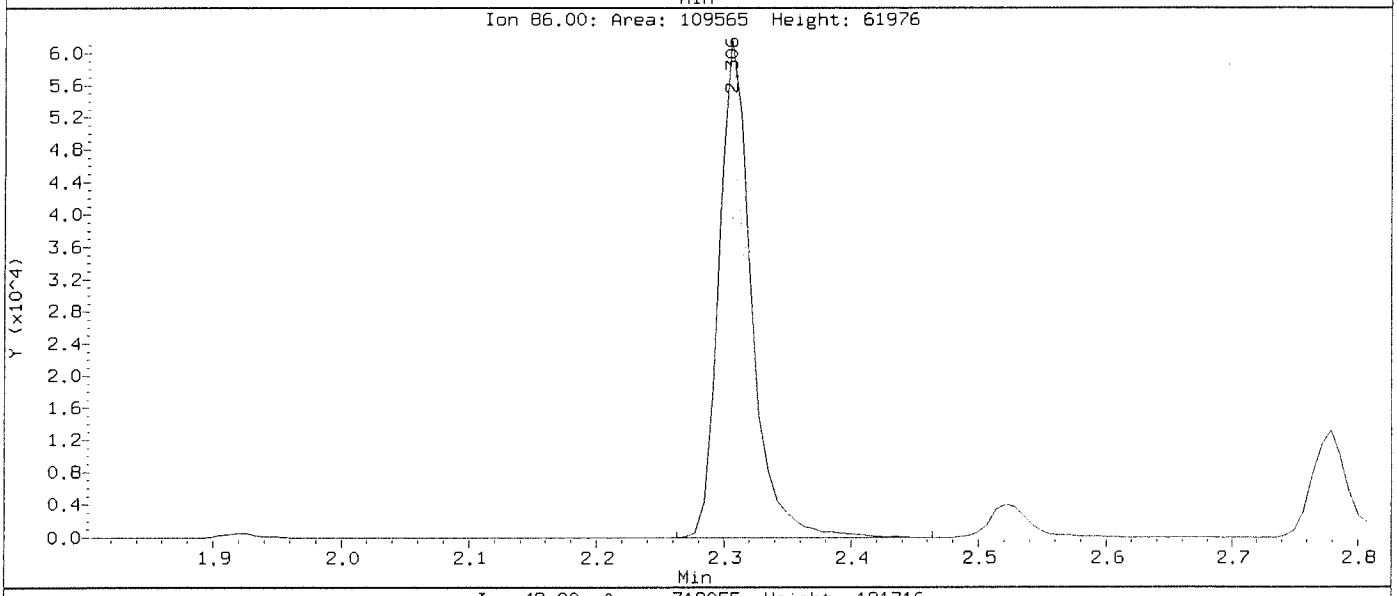
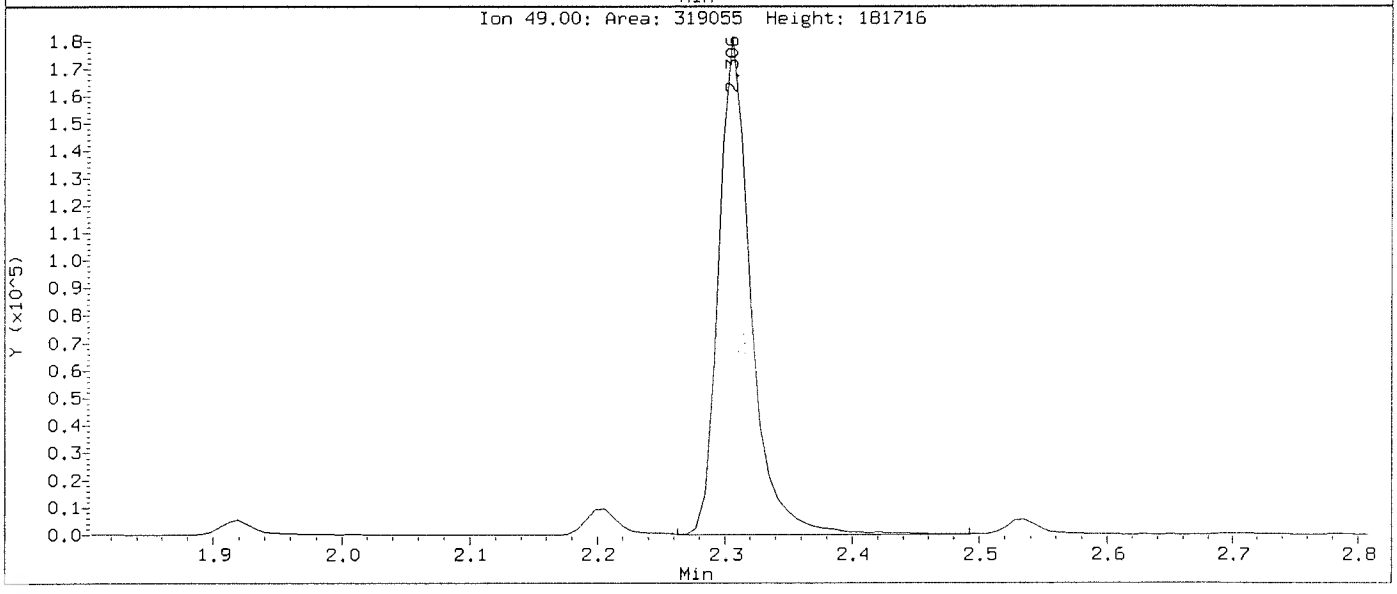
Instrument: voa6.i
Client Sample ID: CCV

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







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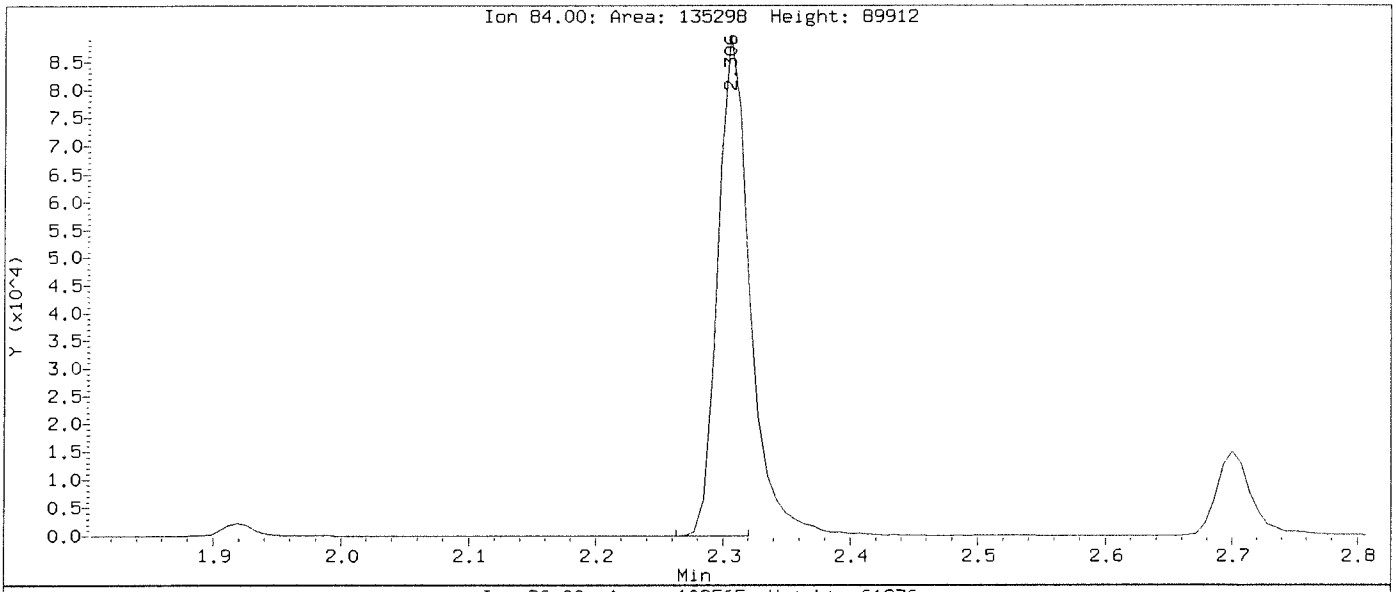
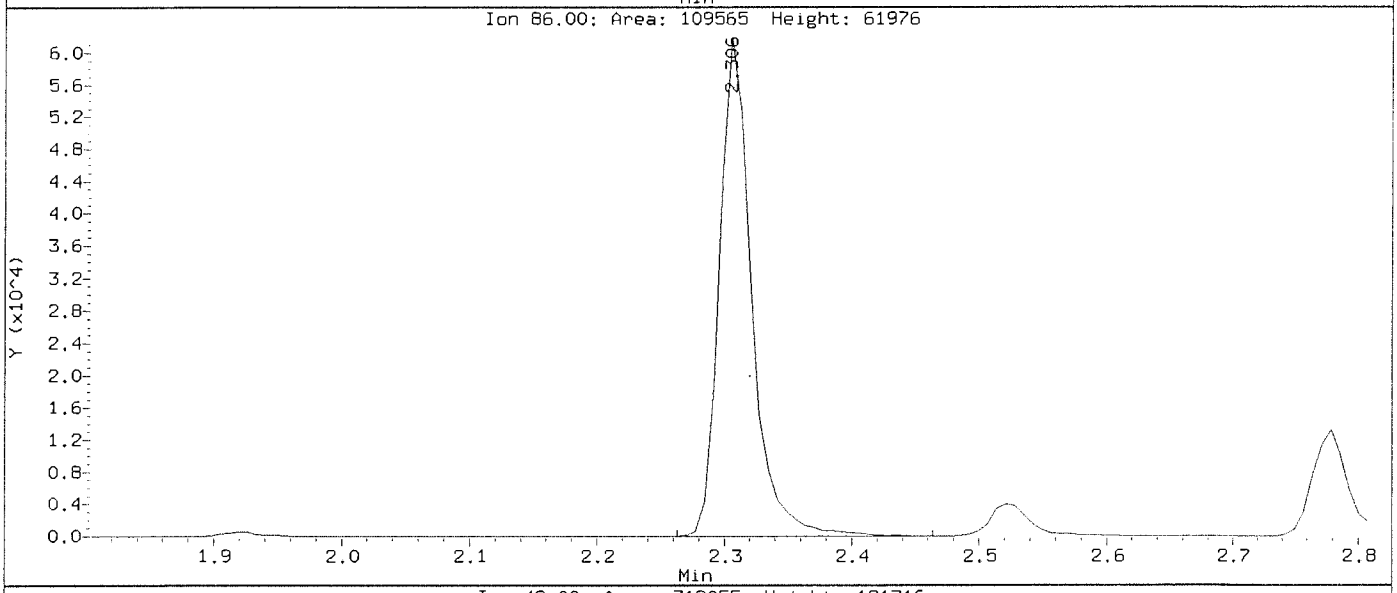
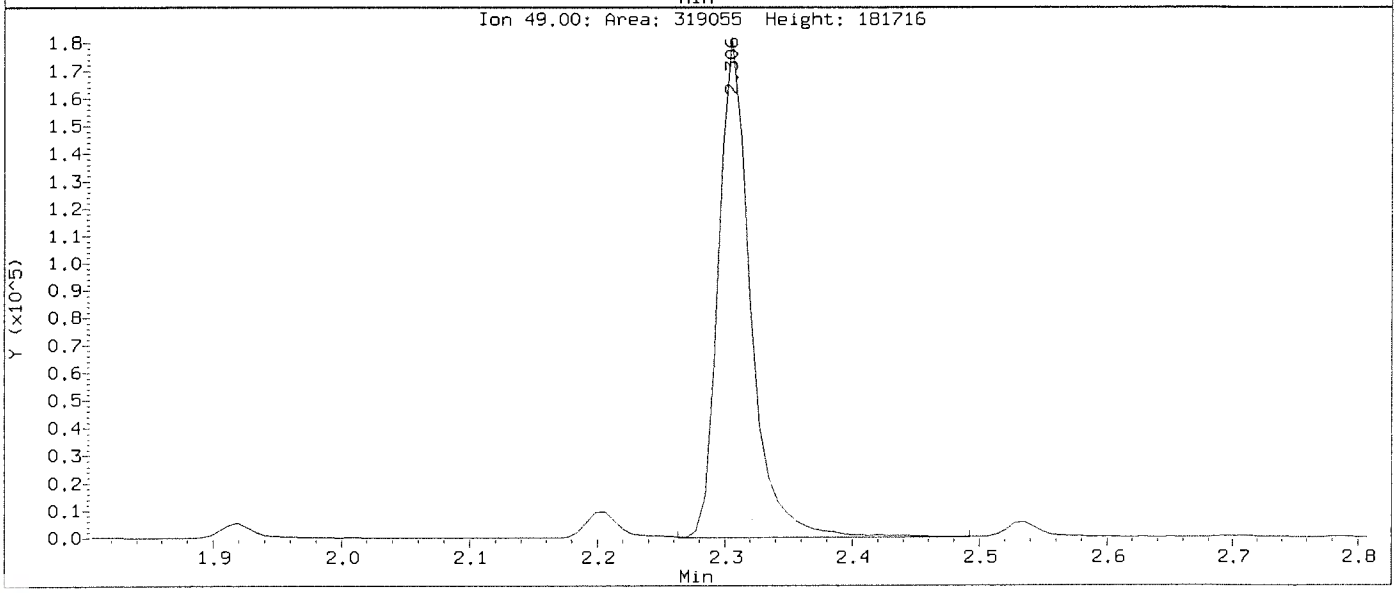
Instrument: voa6.i
Client Sample ID: CCV

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







Data File: \\nahstws005\Target\chem\voa6.i\X200708.b\X070805.D Page 1
Report Date: 13-Aug-2020 12:56

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200708.b\X070805.D
Lab Smp Id: VLCSW-200708 Client Smp ID: VLCSW-200708
Inj Date : 08-JUL-2020 12:36
Operator : PC Inst ID: voa6.i
Smp Info : VLCSW-200708;VLCSW-200708;3;;LCS
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200708.b\8260W.m
Meth Date : 13-Aug-2020 12:56 voa6.i Quant Type: ISTD
Cal Date : 07-JUL-2020 13:53 Cal File: X070708.D
Als bottle: 5 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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

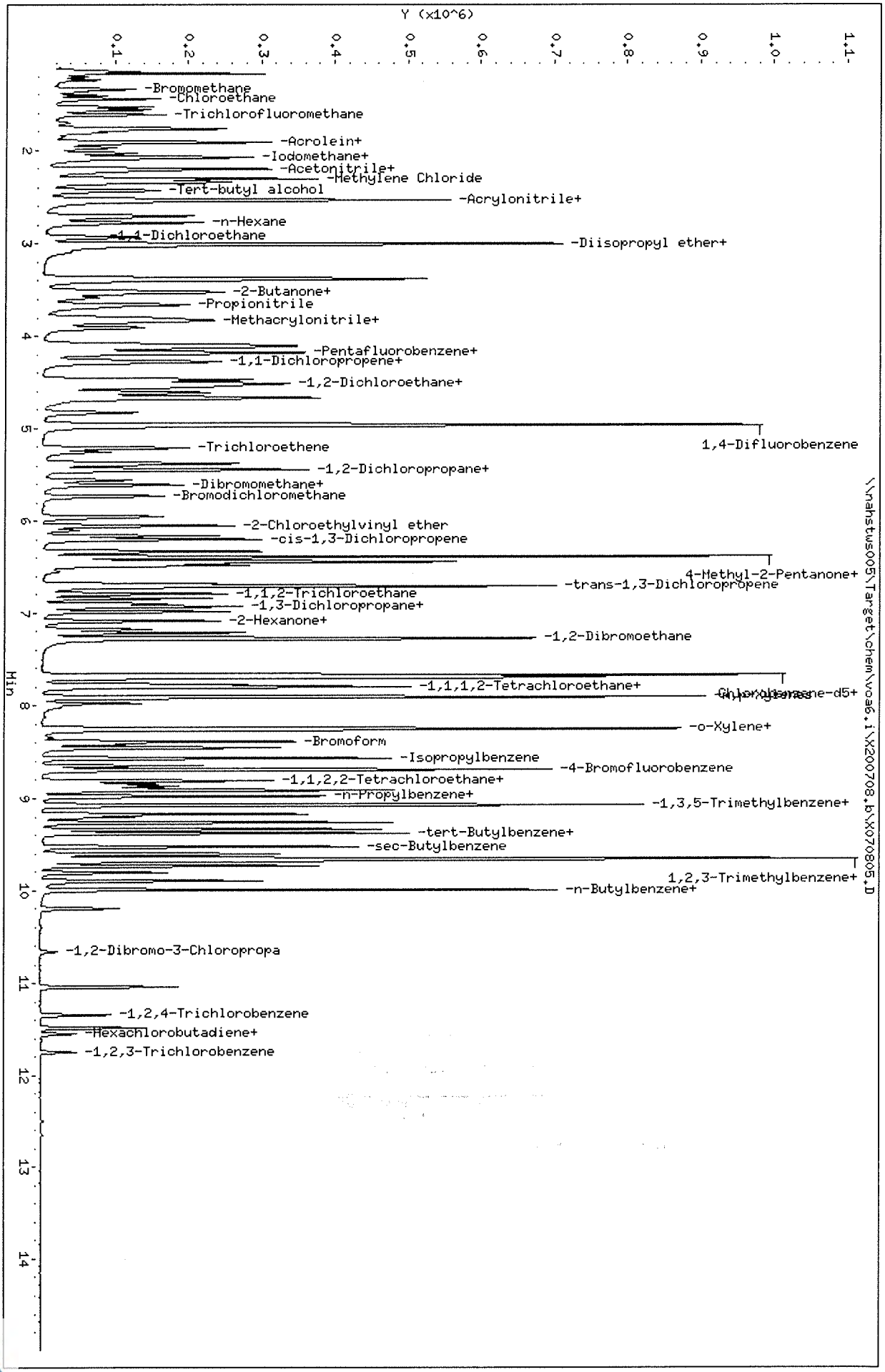
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
*	1 Pentafluorobenzene	168	4.189	4.189	(1.000)	274577	50.0000	
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	447593	50.0000	
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	407148	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	185535	50.0000	
$	30 Dibromofluoromethane	113	4.103	4.103	(0.979)	148178	49.6040	49.60
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	204331	49.7287	49.72
$	48 Toluene-d8	98	6.388	6.388	(0.833)	514305	48.0483	48.04
$	69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	191726	49.4398	49.43
	60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	60595	19.3835	19.38
	31 1,1,1-Trichloroethane	97	4.089	4.089	(0.976)	96432	19.1713	19.17
	68 1,1,2,2-Tetrachloroethane	83	8.845	8.845	(0.915)	64824	17.6726	17.67
	53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	48587	18.8645	18.86
	22 1,1-Dichloroethane	63	2.929	2.929	(0.699)	144362	18.5515	18.55
	11 1,1-Dichloroethene	96	1.919	1.919	(0.458)	49601	19.5087	19.50
	32 1,1-Dichloropropene	75	4.282	4.283	(0.862)	82556	18.7303	18.73
	93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.215)	12027	21.4729	21.47
	71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	57681	17.8343	17.83(M)
	90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	24021	21.5482	21.54
	79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.970)	208808	19.1378	19.13
	89 1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.102)	4599	14.7696	14.76
	57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	61024	18.6468	18.64
	88 1,2-Dichlorobenzene	146	9.999	9.991	(1.034)	97981	18.0687	18.06

Data File: \\nahstws005\Target\chem\voa6.i\X200708.b\X070805.D Page 2
Report Date: 13-Aug-2020 12:56

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
33 1,2-Dichloroethane	62	4.562	4.562	(0.918)	109553	19.7280	19.72
42 1,2-Dichloropropane	63	5.443	5.443	(1.095)	82459	19.8035	19.80
75 1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	206982	19.5801	19.58
83 1,3-Dichlorobenzene	146	9.612	9.605	(0.994)	113492	19.1063	19.10
54 1,3-Dichloropropane	76	6.983	6.983	(0.910)	102438	18.8955	18.89
84 1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	112977	19.8811	19.88
26 2,2-Dichloropropane	77	3.516	3.516	(0.839)	98211	20.6595	20.65
24 2-Butanone	43	3.580	3.581	(0.855)	94674	33.6726	33.67
76 2-Chlorotoluene	91	8.974	8.974	(0.928)	175474	18.8439	18.84
52 2-Hexanone	43	7.090	7.090	(0.924)	143748	34.6579	34.65
77 4-Chlorotoluene	91	9.075	9.075	(0.939)	206070	19.5143	19.51
82 p-Isopropyltoluene	119	9.655	9.655	(0.999)	205454	19.4735	19.47
45 4-Methyl-2-Pentanone	43	6.331	6.324	(0.825)	207342	35.6767	35.67
10 Acetone	43	1.976	1.976	(0.472)	87833	18.4748	18.47
37 Benzene	78	4.519	4.519	(0.909)	245380	19.2146	19.21
74 Bromobenzene	156	8.809	8.810	(0.911)	68633	19.3904	19.39
29 Bromochloromethane	128	3.803	3.795	(0.908)	33071	17.3412	17.34
39 Bromodichloromethane	83	5.729	5.729	(1.153)	88941	19.8386	19.83
66 Bromoform	173	8.416	8.416	(1.097)	40183	17.7790	17.77
6 Bromomethane	94	1.338	1.339	(0.320)	39257	20.3154	20.31
19 Carbon Disulfide	76	2.076	2.069	(0.496)	322130	38.5825	38.58
34 Carbon Tetrachloride	117	4.268	4.268	(0.859)	81511	19.0823	19.08
59 Chlorobenzene	112	7.699	7.699	(1.004)	158596	19.1196	19.11
7 Chloroethane	64	1.403	1.403	(0.335)	44274	16.6788	16.67
28 Chloroform	83	3.917	3.910	(0.935)	114658	19.0566	19.05
3 Chloromethane	50	1.081	1.081	(0.258)	103210	18.2914	18.29
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.843)	68642	19.1252	19.12
46 cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	105425	19.5145	19.51
55 Dibromochloromethane	129	7.176	7.176	(0.936)	63969	19.1267	19.12
44 Dibromomethane	93	5.557	5.558	(1.118)	43672	19.4604	19.46
2 Dichlorodifluoromethane	85	0.973	0.973	(0.232)	61452	18.4874	18.48
61 Ethylbenzene	106	7.799	7.800	(1.017)	83937	19.1195	19.11
91 Hexachlorobutadiene	225	11.481	11.481	(1.187)	21128	24.3906	24.39
67 Isopropylbenzene	105	8.566	8.566	(1.117)	247251	18.9873	18.98
62 m,p-Xylenes	106	7.907	7.907	(1.031)	202659	38.3871	38.38
17 Methylene Chloride	84	2.305	2.306	(0.550)	61332	20.4266	20.42(M)
87 n-Butylbenzene	91	9.999	9.999	(1.034)	184722	19.6285	19.62
73 n-Propylbenzene	91	8.917	8.917	(0.922)	292932	19.3586	19.35
92 Naphthalene	128	11.546	11.546	(1.194)	32587	18.2993	18.29
63 o-Xylene	106	8.244	8.244	(1.075)	98339	19.0138	19.01
81 sec-Butylbenzene	105	9.526	9.526	(0.985)	237416	19.0872	19.08
64 Styrene	104	8.265	8.258	(1.078)	167392	18.6231	18.62
78 tert-Butylbenzene	119	9.340	9.340	(0.966)	168544	19.8018	19.80
56 Tetrachloroethene	164	6.933	6.933	(0.904)	48017	19.3081	19.30
50 Toluene	91	6.453	6.453	(0.841)	253853	19.5425	19.54
20 trans-1,2-Dichloroethene	96	2.535	2.535	(0.605)	58300	19.4265	19.42
51 trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	92443	19.0455	19.04
38 Trichloroethene	130	5.214	5.214	(1.049)	63287	19.0572	19.05
8 Trichlorofluoromethane	101	1.560	1.561	(0.373)	87049	18.3840	18.38
5 Vinyl Chloride	62	1.145	1.145	(0.273)	81047	16.8024	16.80

QC Flag Legend

M - Compound response manually integrated.



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Column phase: DB624

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

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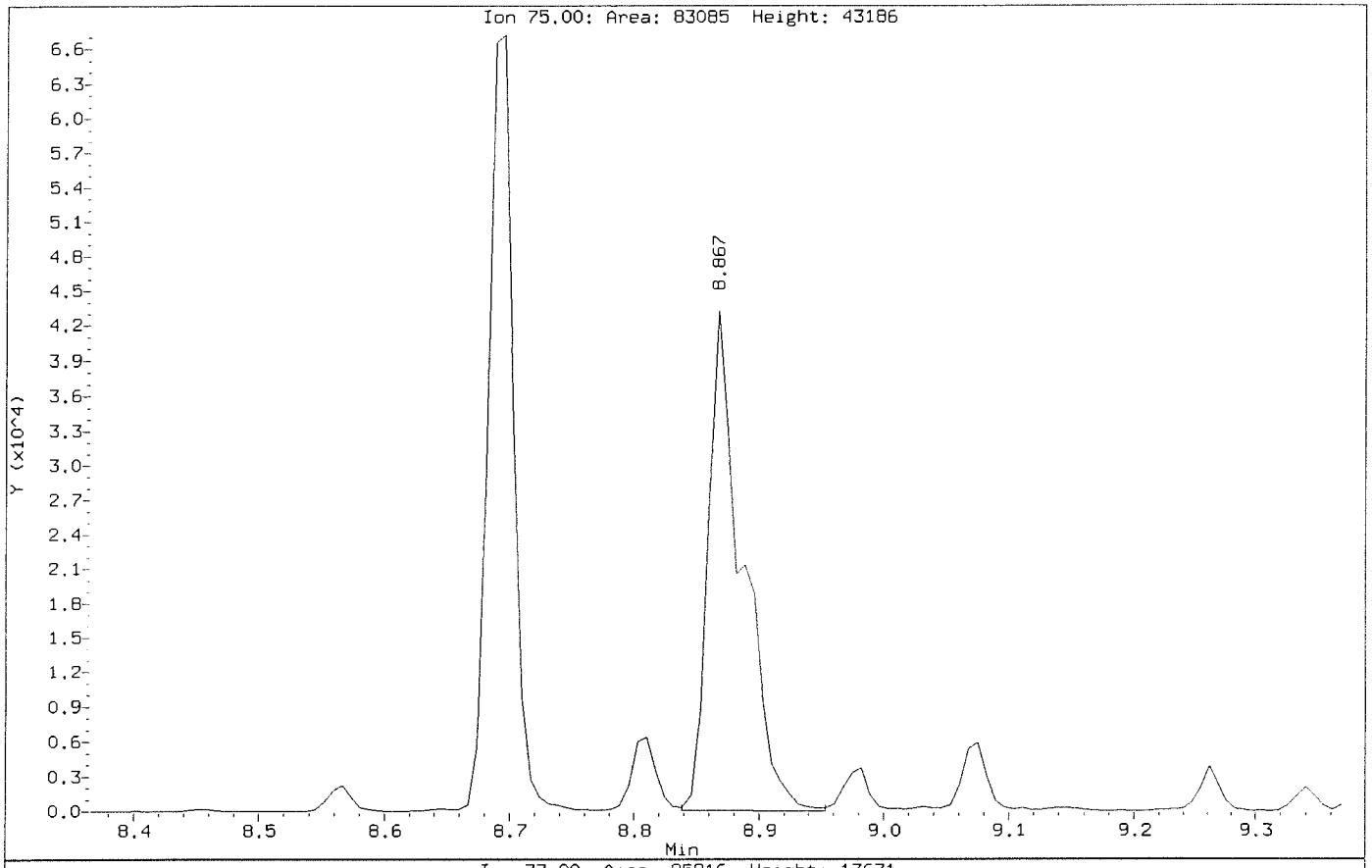
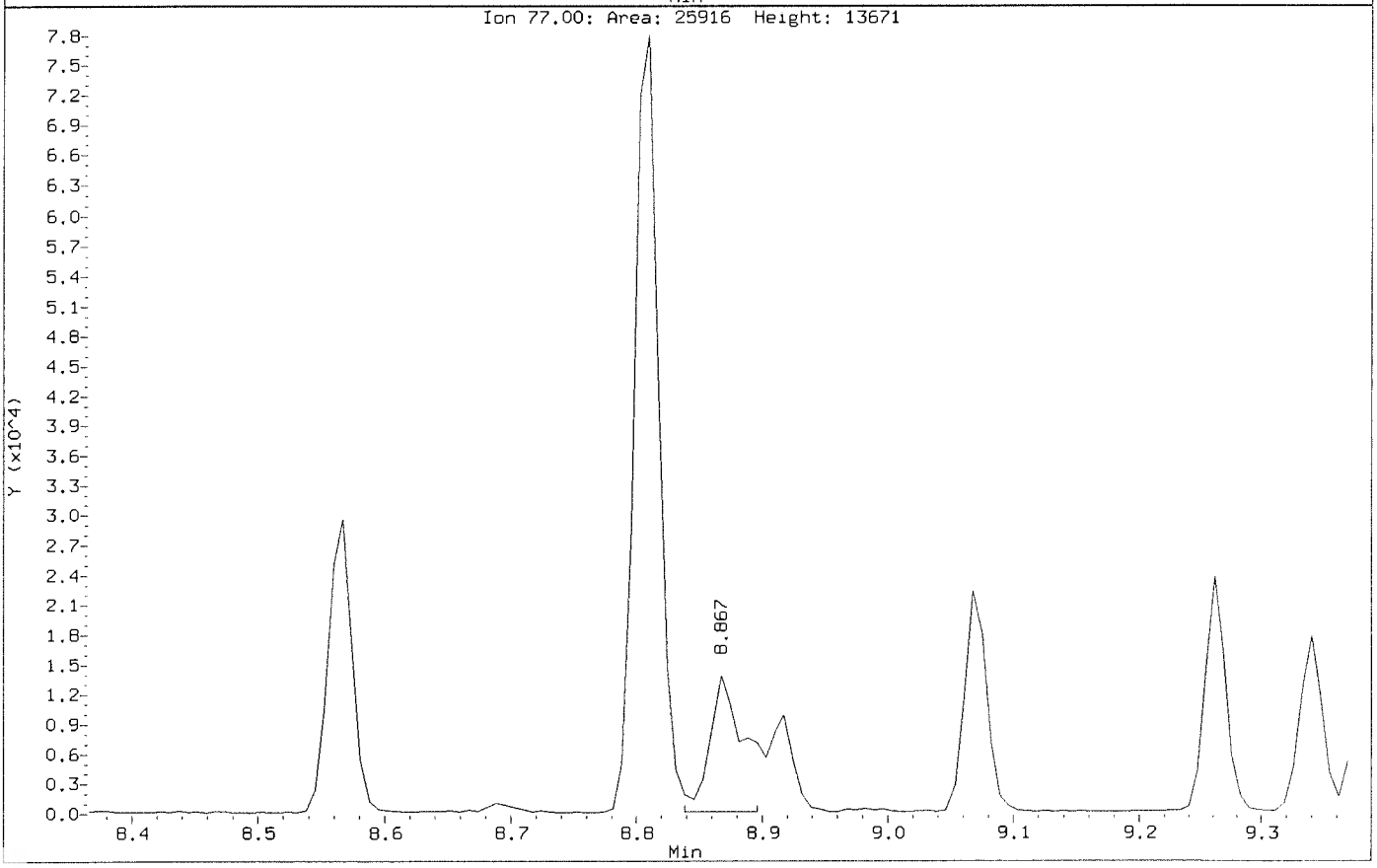
Instrument: voa6.i
Client Sample ID: VLCSW-200708

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





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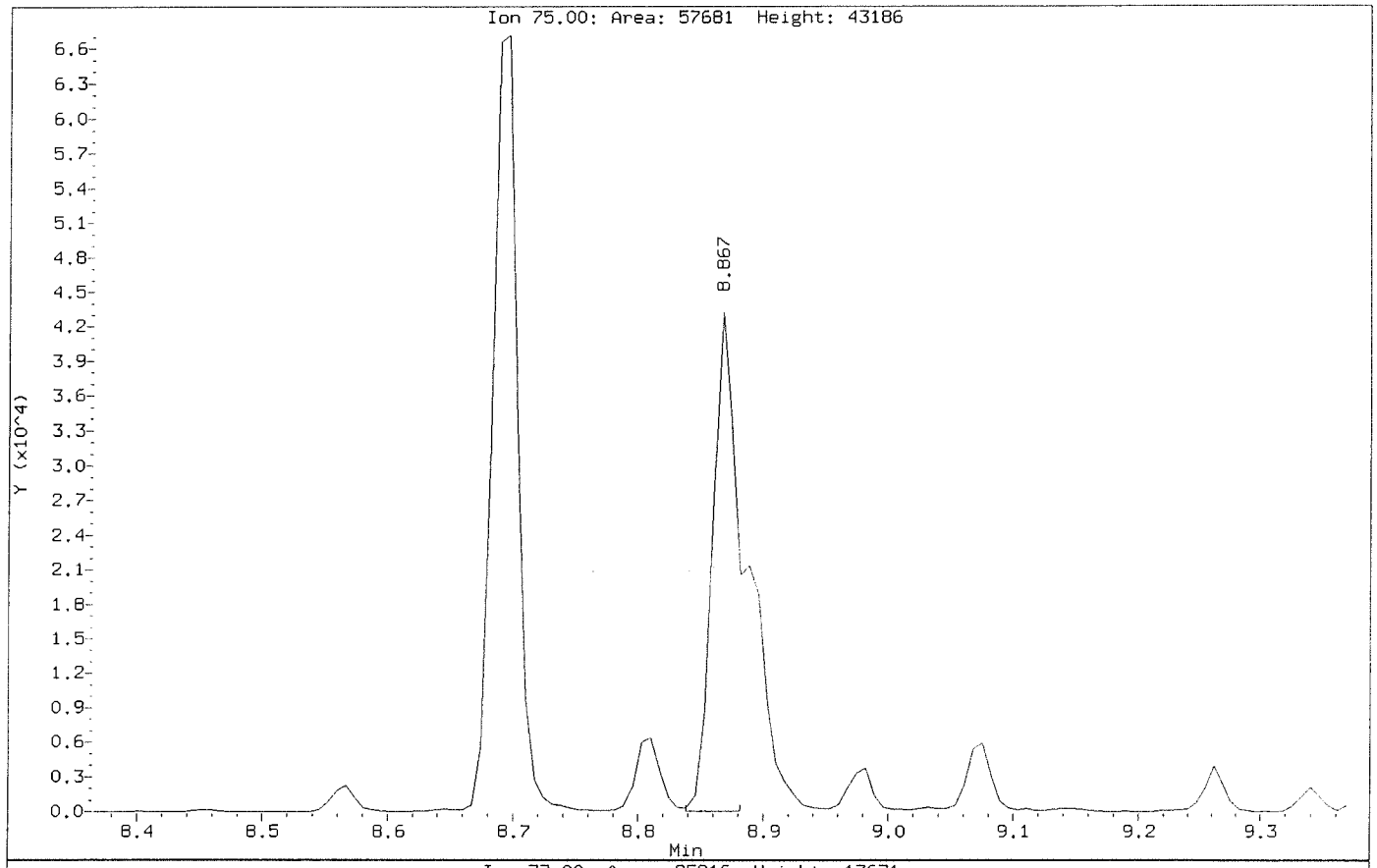
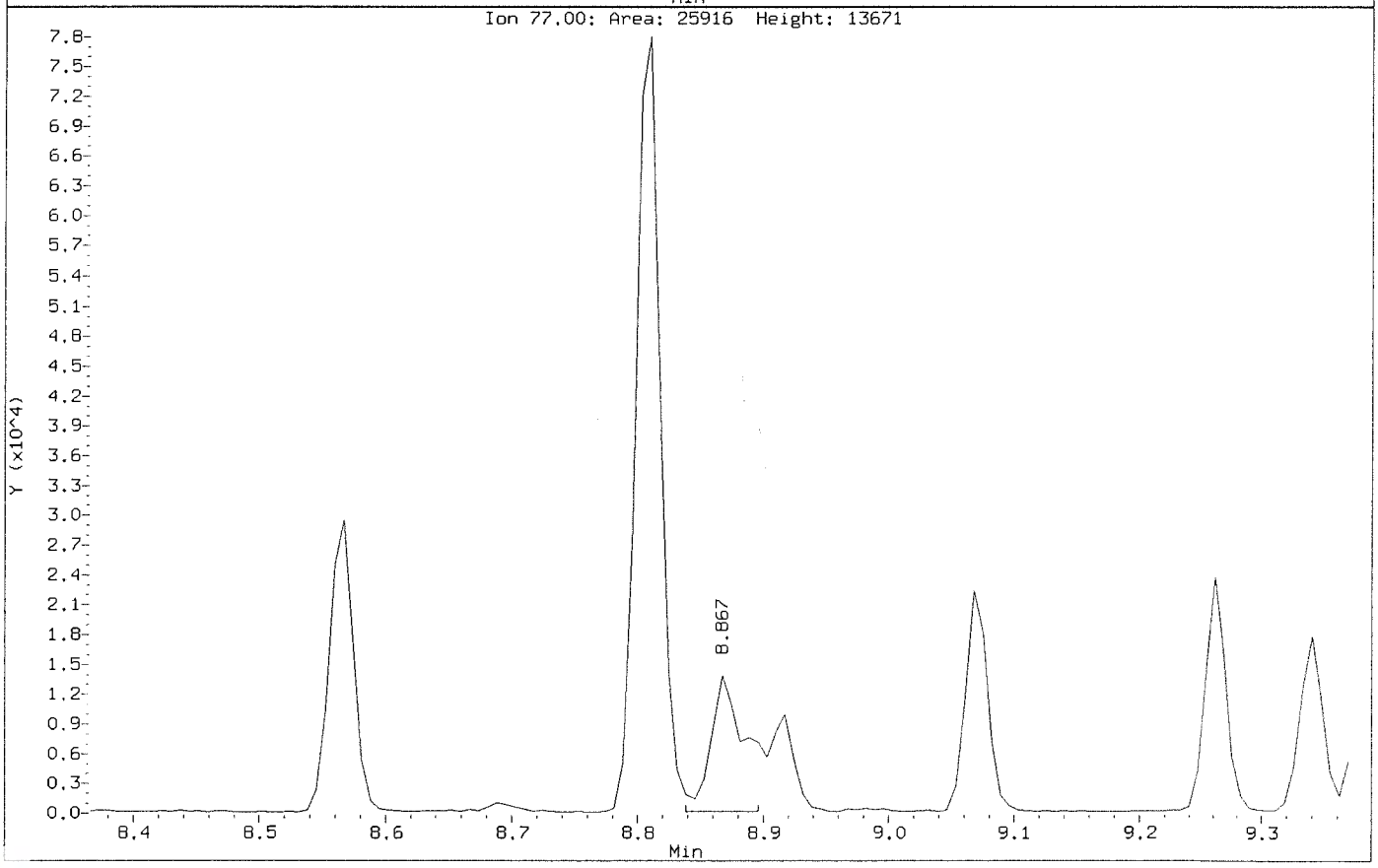
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





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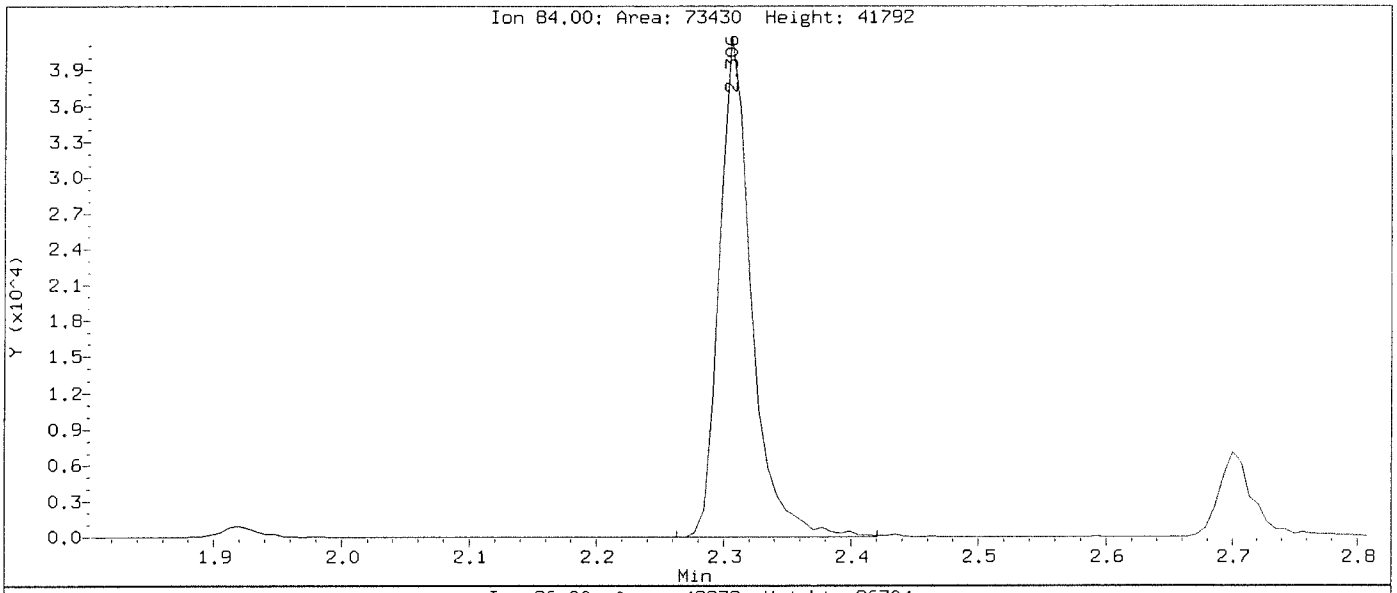
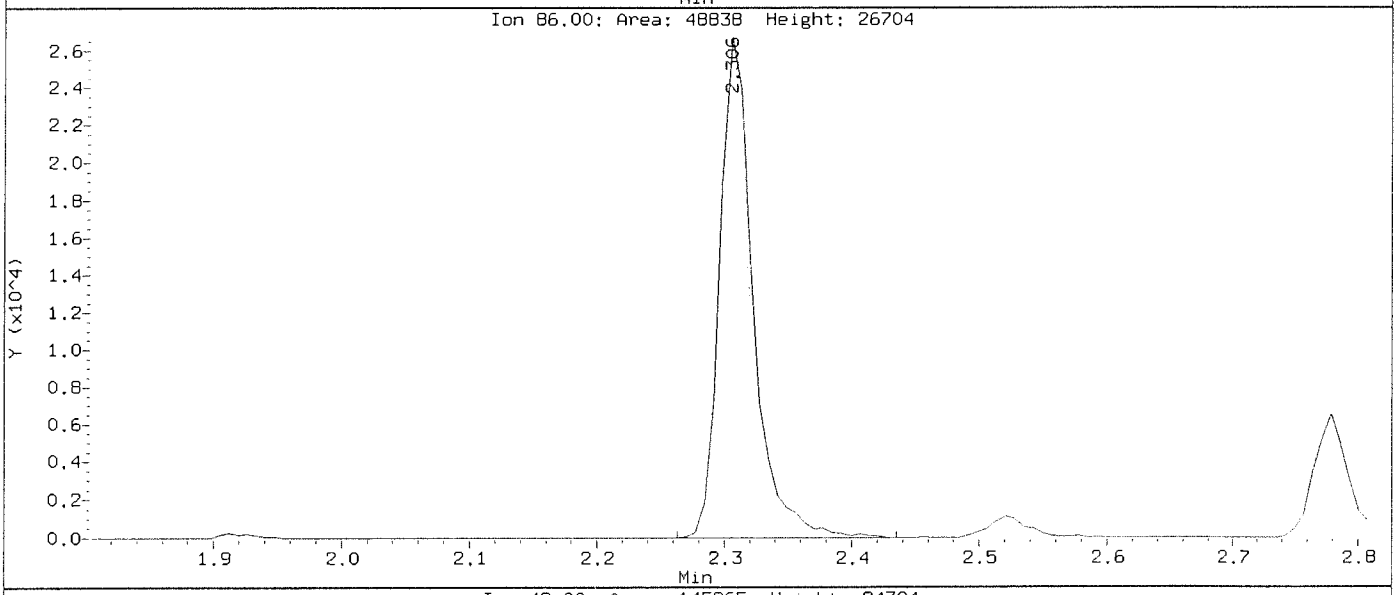
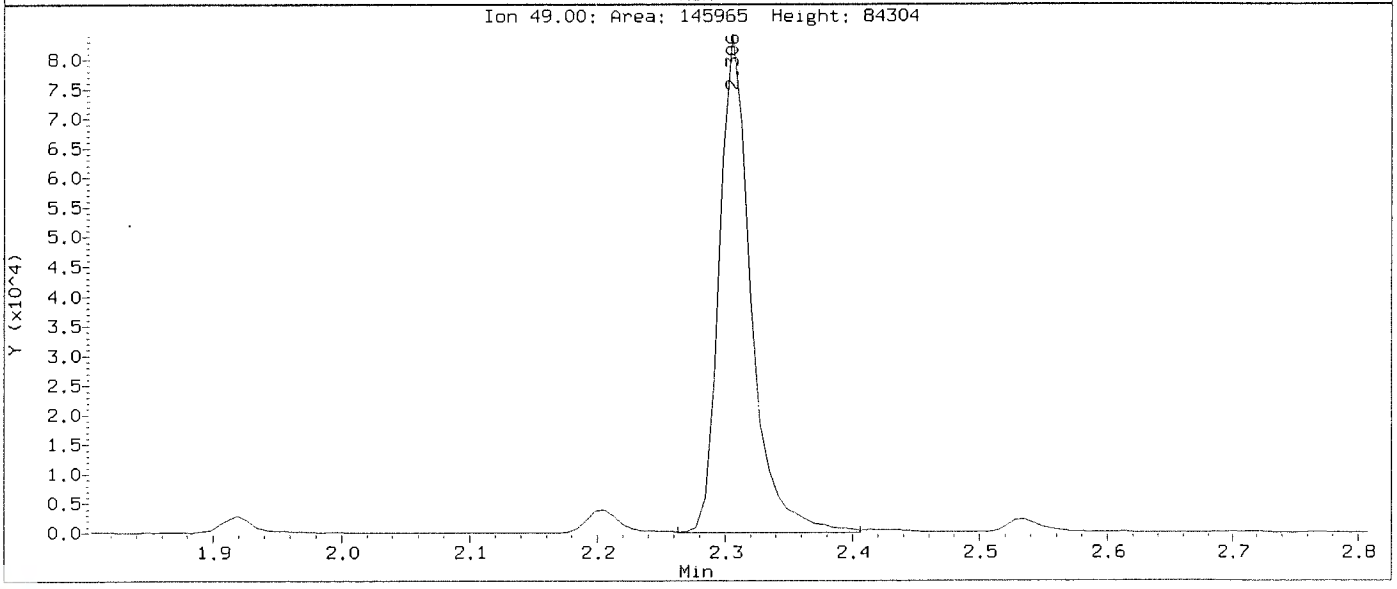
Injection Date: 08-JUL-2020 12:36
Instrument: voa6.i
Client Sample ID: VLCSW-200708

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







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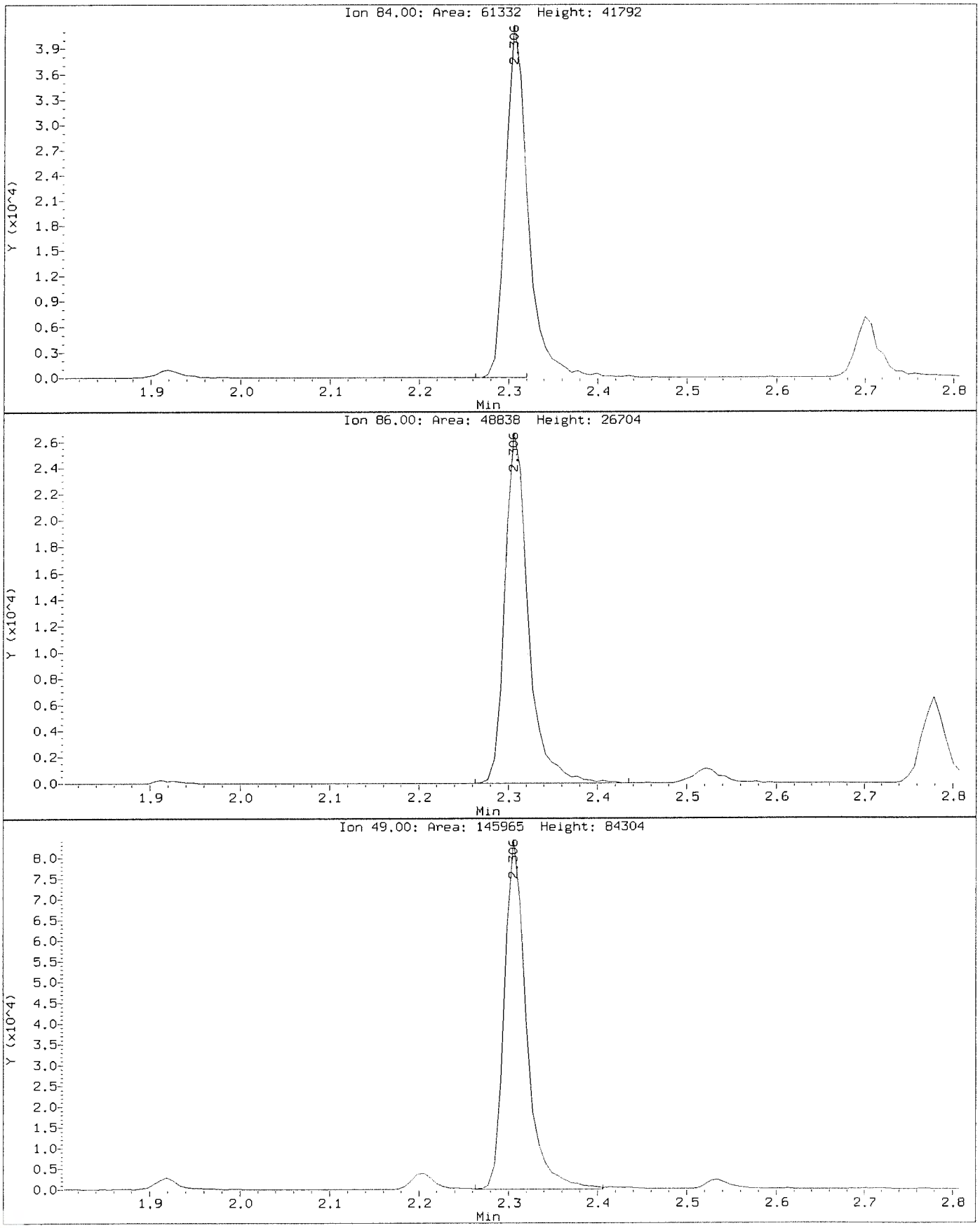
Injection Date: 08-JUL-2020 12:36
Instrument: voa6.i
Client Sample ID: VLCSW-200708

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



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Report Date: 13-Aug-2020 12:56

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Data file : \\nahstws005\Target\chem\voa6.i\X200708.b\X070808.D
Lab Smp Id: VBLKW-200708 Client Smp ID: VBLKW-200708
Inj Date : 08-JUL-2020 13:49
Operator : PC Inst ID: voa6.i
Smp Info : VBLKW-200708;VBLKW-200708;3;;BLANK
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200708.b\8260W.m
Meth Date : 13-Aug-2020 12:56 voa6.i Quant Type: ISTD
Cal Date : 07-JUL-2020 13:53 Cal File: X070708.D
Als bottle: 8 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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	4.189	4.189	(1.000)	336025	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	531625	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	449679	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	192440	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.979)	172105	47.0322	47.03
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	225281	44.7330	44.73
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	615367	52.0525	52.05
$ 69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	215388	50.3070	50.30

Data File: \\nahstws005\Target\chem\voa6.i\X200708.b\X070808.D

Date : 08-JUL-2020 13:49

Client ID: VBLKW-200708

Instrument: voa6.i

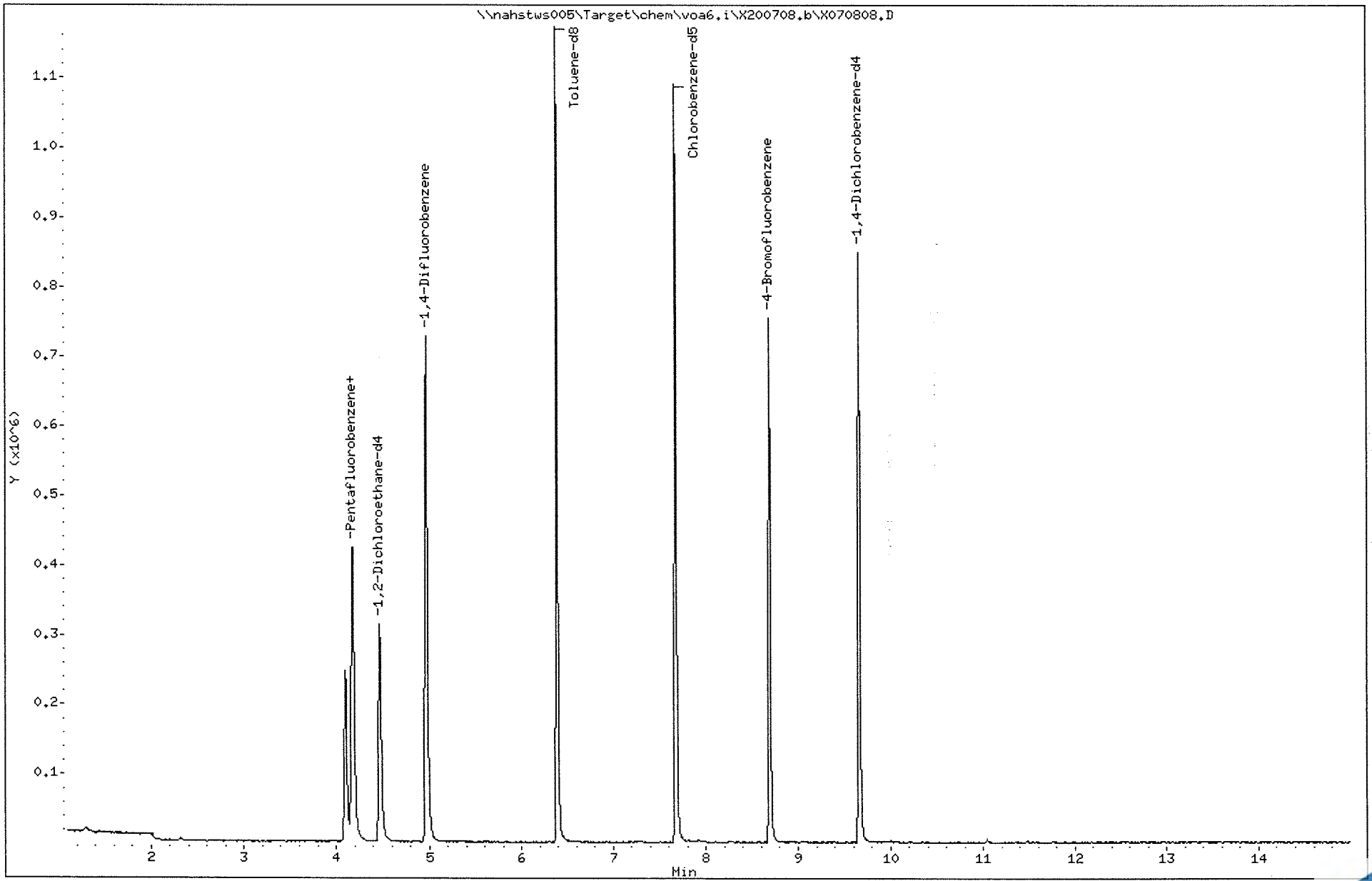
Sample Info: VBLKW-200708;VBLKW-200708;3;;BLANK

Purge Volume: 5.0

Operator: PC

Column phase: DB624

Column diameter: 0.18



ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200708.b\X070810.D
Lab Smp Id: HS20061390-10 Client Smp ID: HS20061390-10
Inj Date : 08-JUL-2020 14:37
Operator : PC Inst ID: voa6.i
Smp Info : HS20061390-10;HS20061390-10;;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200708.b\8260W.m
Meth Date : 13-Aug-2020 12:57 voa6.i Quant Type: ISTD
Cal Date : 07-JUL-2020 13:53 Cal File: X070708.D
Als bottle: 10
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

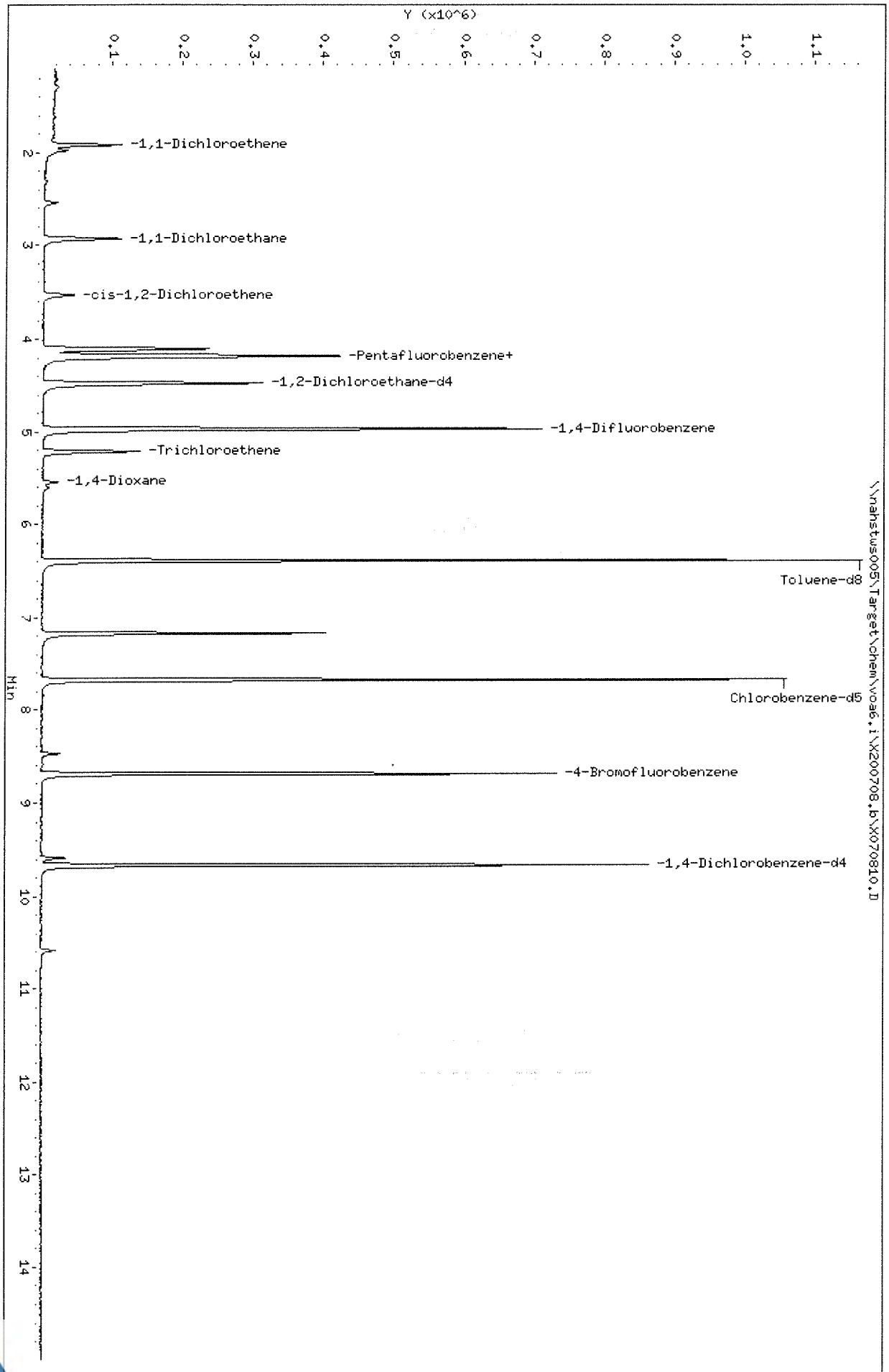
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

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	4.189	4.189	(1.000)	336444	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	529191	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.670	(1.000)	447766	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	197554	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.979)	169715	46.3077	46.30
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	222463	44.1090	44.10
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	608600	51.7000	51.70
$ 69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	213092	49.9764	49.97
22 1,1-Dichloroethane	63	2.929	2.929	(0.699)	118673	12.4460	12.44
11 1,1-Dichloroethene	96	1.919	1.919	(0.458)	28901	9.27690	9.27
27 cis-1,2-Dichloroethene	96	3.538	3.530	(0.844)	20337	4.62440	4.62(a)
38 Trichloroethene	130	5.214	5.214	(1.049)	41762	10.6364	10.63

QC Flag Legend

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



Data File: \\nahstws005\Target\chem\voa6.i\X200708.b\X070810.D
Date : 08-JUL-2020 14:37
Client ID: HS20061390-10
Sample Info: HS20061390-10;HS20061390-10;;;
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\nahstws005\Target\chem\voa6.i\X200708.b\X070810.D

Date : 08-JUL-2020 14:37

Client ID: HS20061390-10

Instrument: voa6.i

Sample Info: HS20061390-10;HS20061390-10;;;

Purge Volume: 5.0

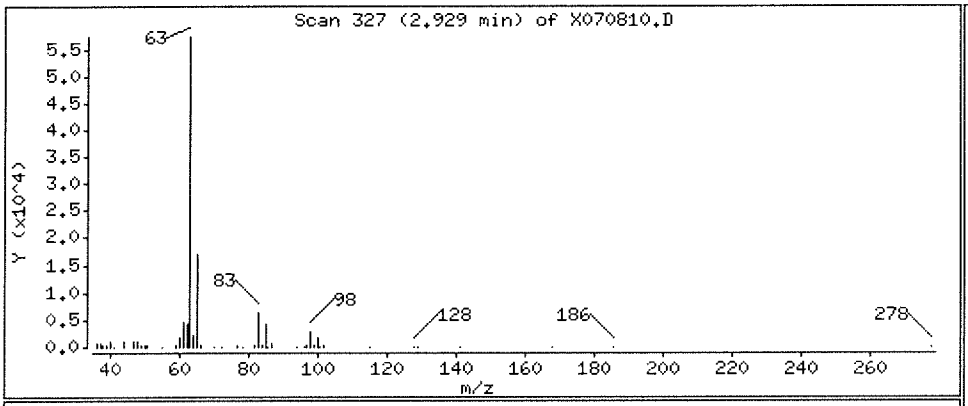
Operator: PC

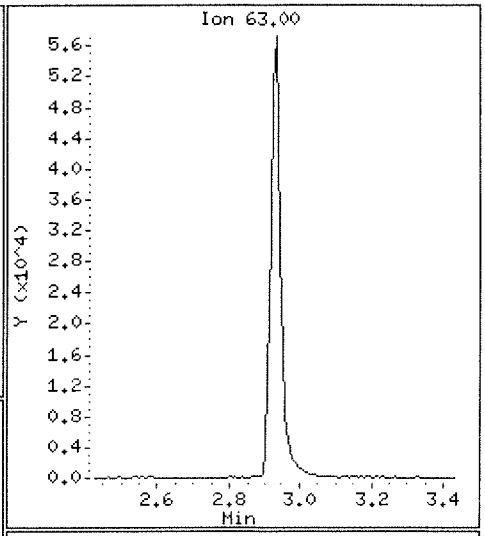
Column phase: DB624

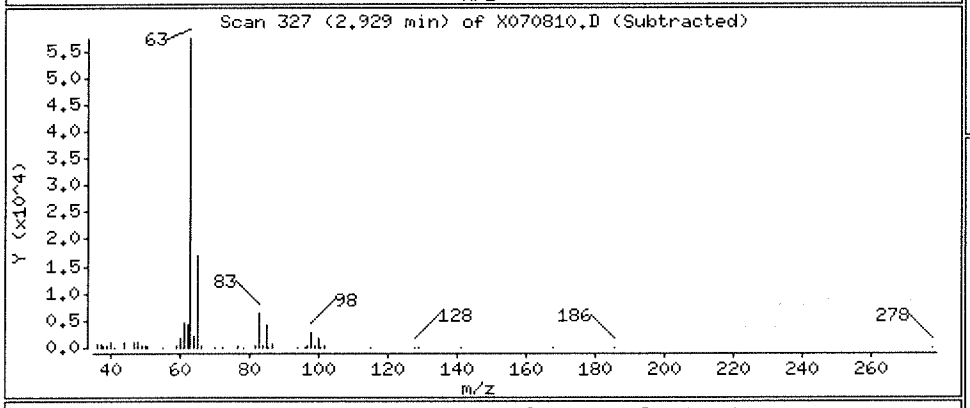
Column diameter: 0.18

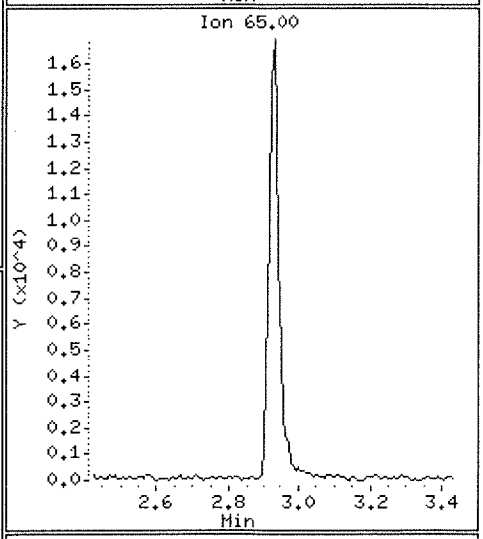
22 1,1-Dichloroethane

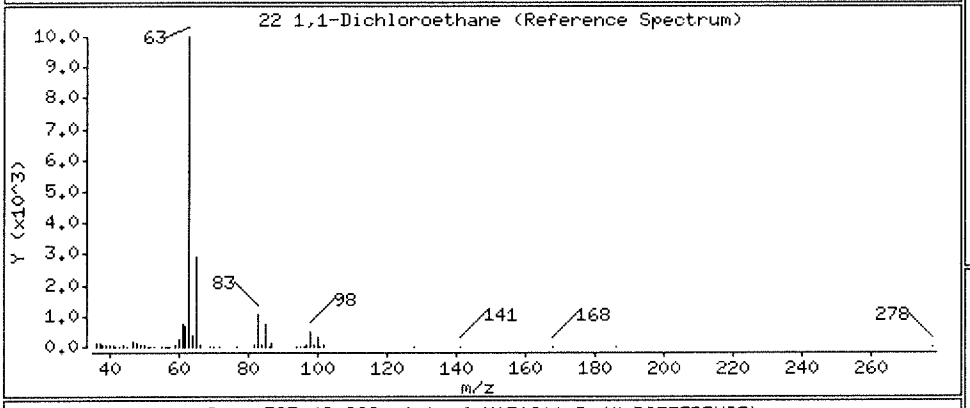
Concentration: 12.44 ug/l

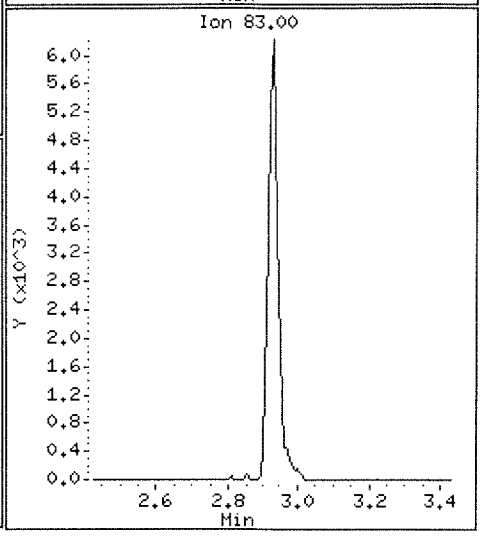


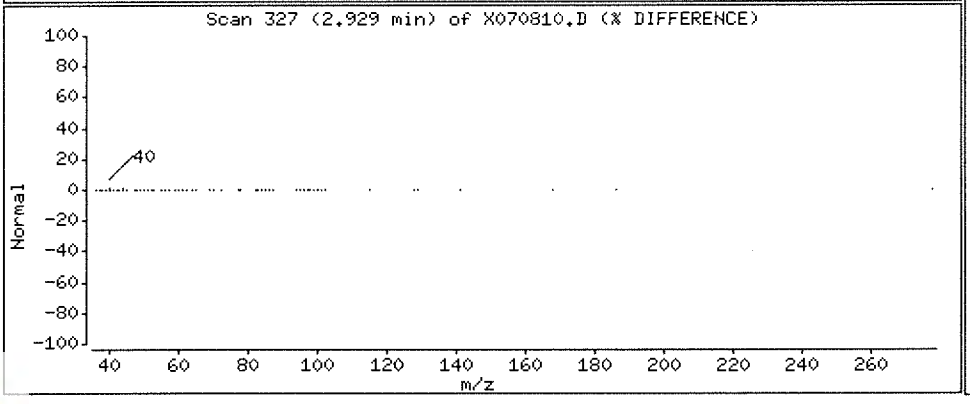












Data File: \\nahstws005\Target\chem\voa6.i\X200708.b\X070810.D

Date : 08-JUL-2020 14:37

Client ID: HS20061390-10

Instrument: voa6.i

Sample Info: HS20061390-10;HS20061390-10;;;

Purge Volume: 5.0

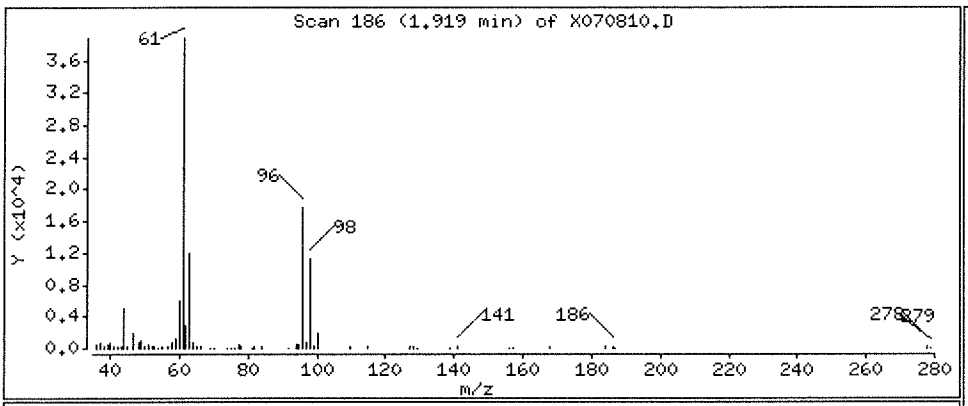
Operator: PC

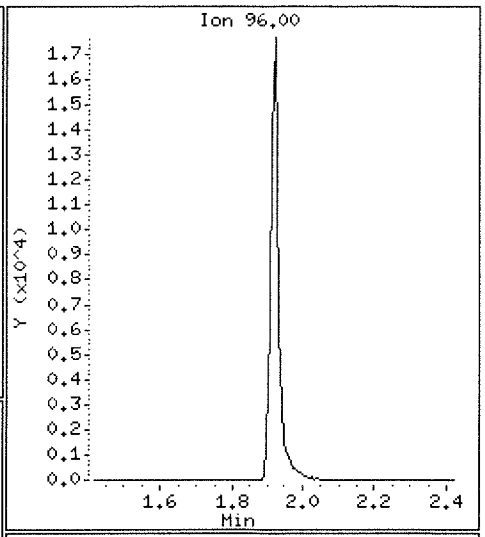
Column phase: DB624

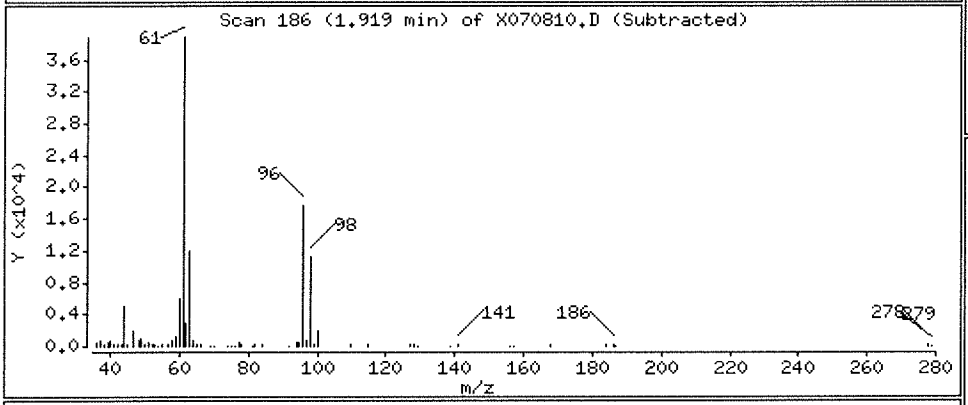
Column diameter: 0.18

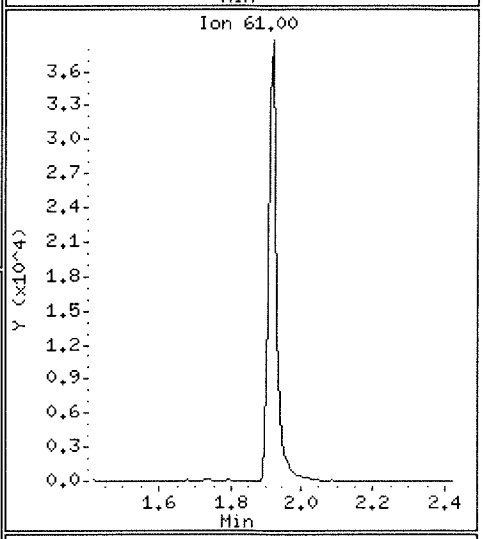
11 1,1-Dichloroethene

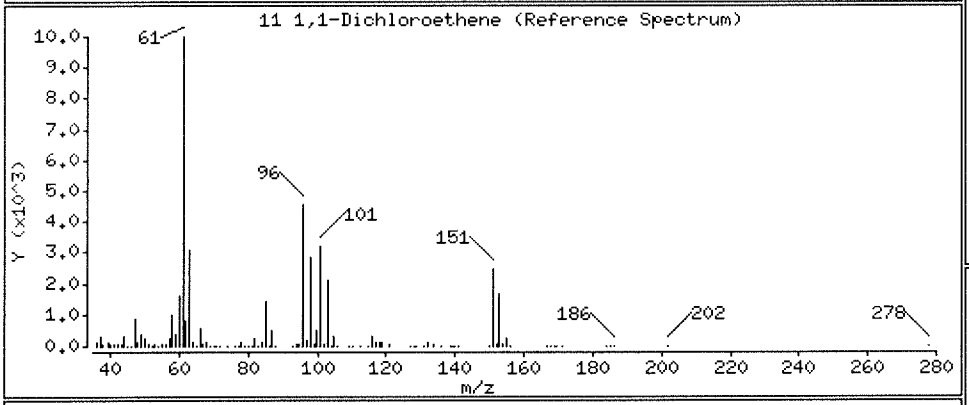
Concentration: 9.27 ug/l

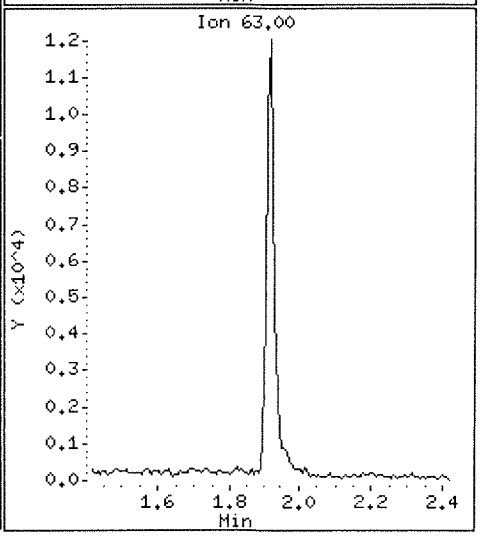


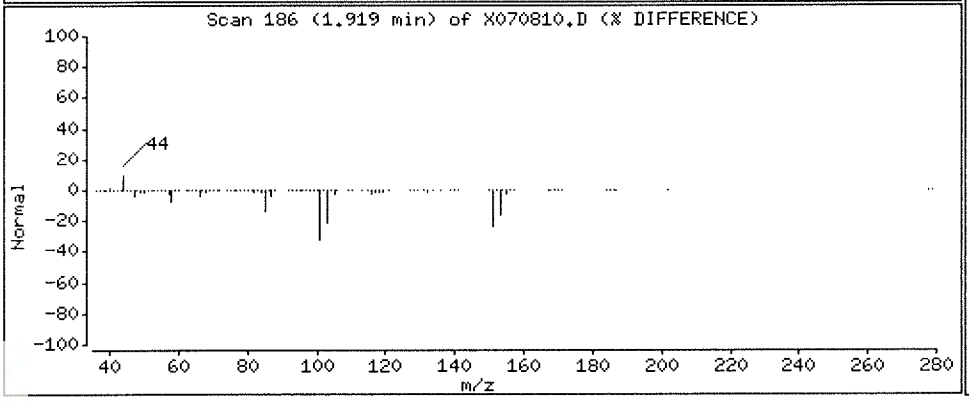












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Date : 08-JUL-2020 14:37

Client ID: HS20061390-10

Instrument: voa6.i

Sample Info: HS20061390-10;HS20061390-10;;;

Purge Volume: 5.0

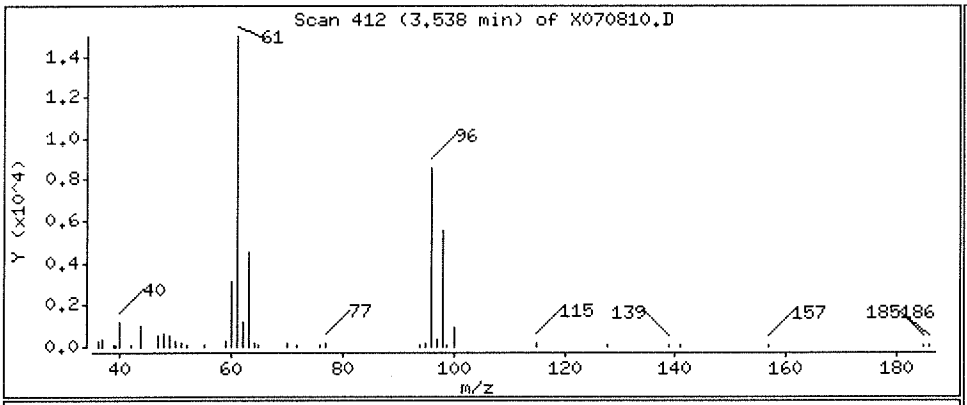
Operator: PC

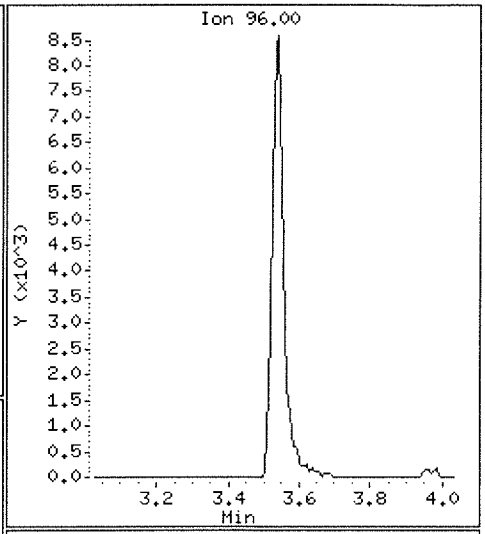
Column phase: DB624

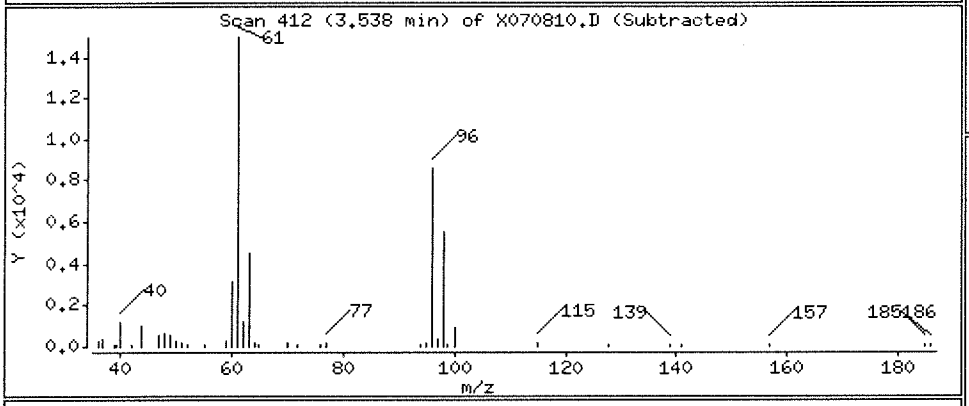
Column diameter: 0.18

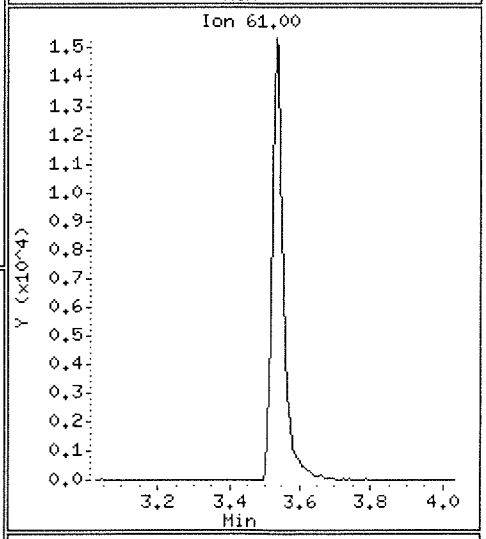
27 cis-1,2-Dichloroethene

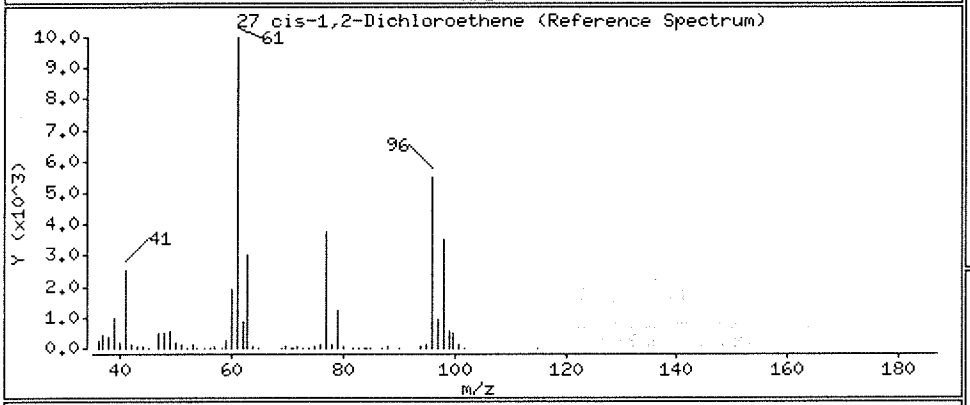
Concentration: 4.62 ug/l

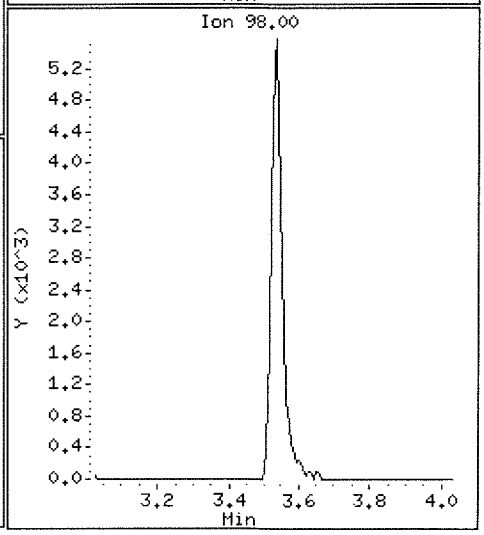


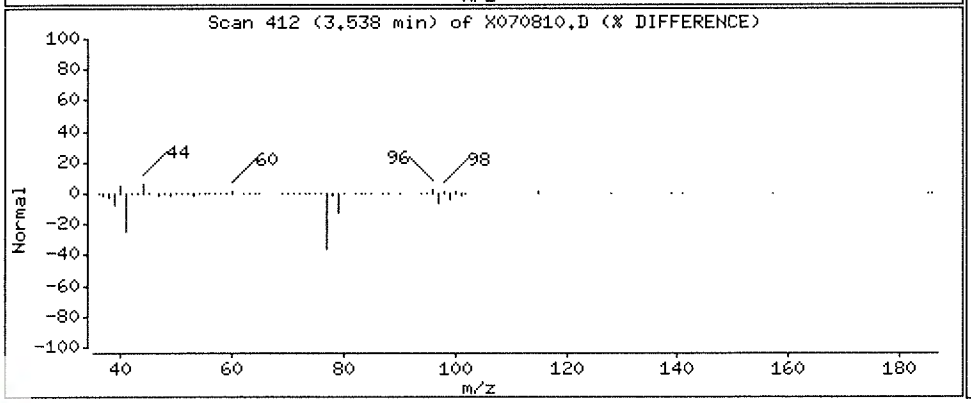












Data File: \\nahstws005\Target\chem\voa6.i\X200708.b\X070810.D

Date : 08-JUL-2020 14:37

Client ID: HS20061390-10

Instrument: voa6.i

Sample Info: HS20061390-10;HS20061390-10;;;

Purge Volume: 5.0

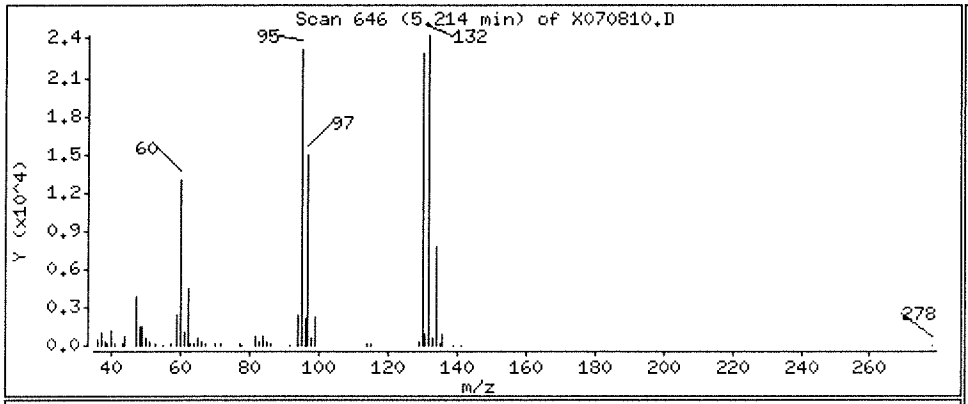
Operator: PC

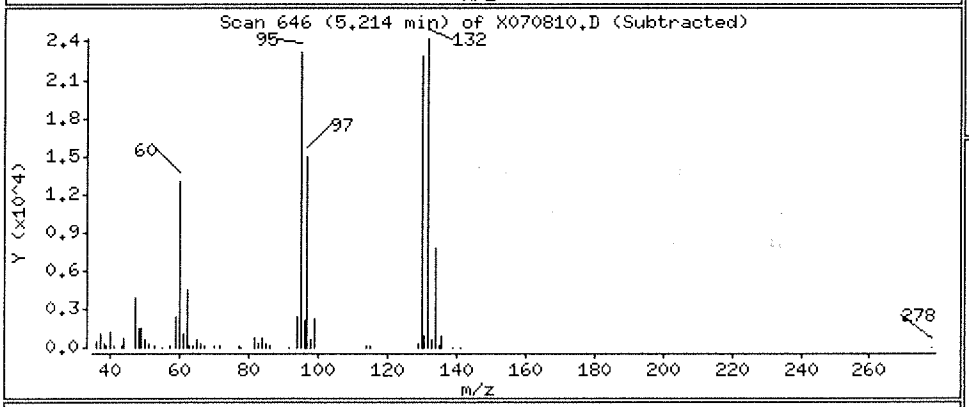
Column phase: DB624

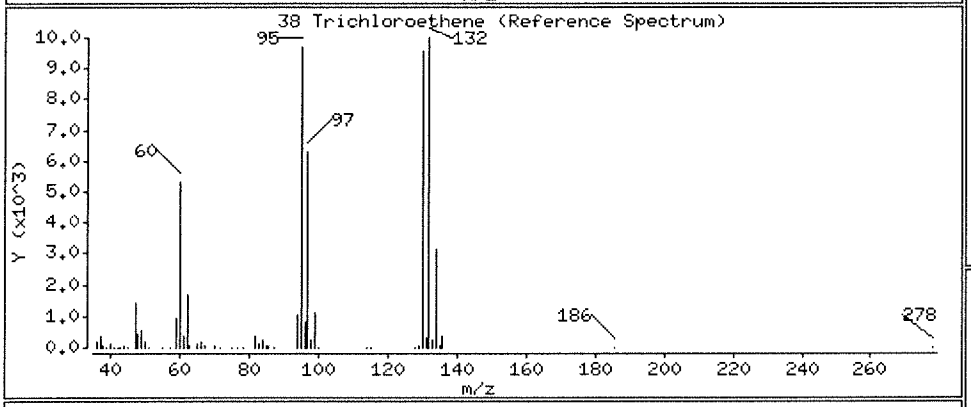
Column diameter: 0.18

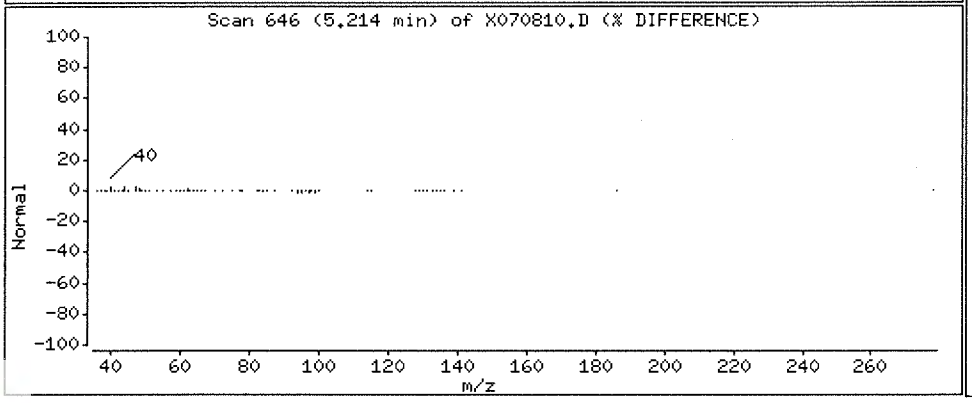
38 Trichloroethene

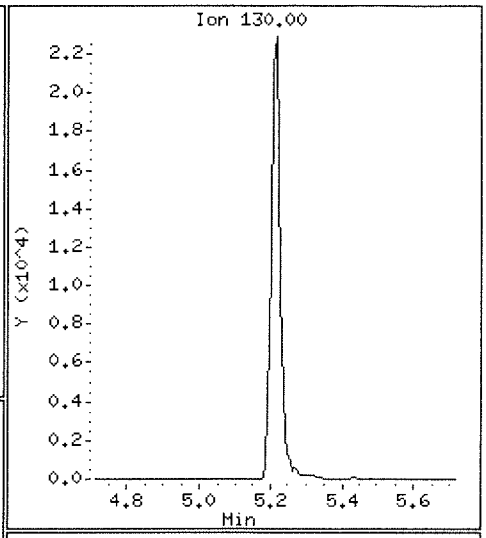
Concentration: 10.63 ug/l

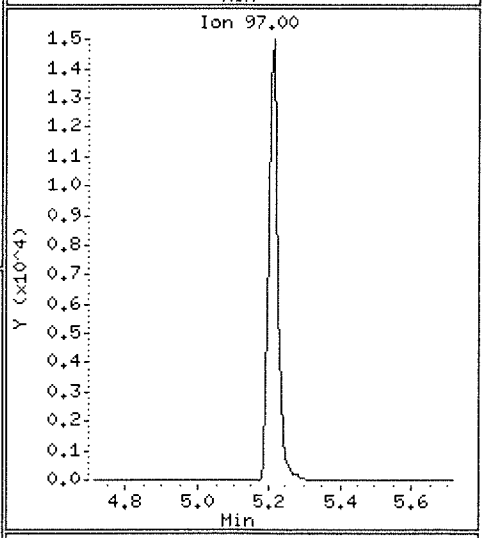


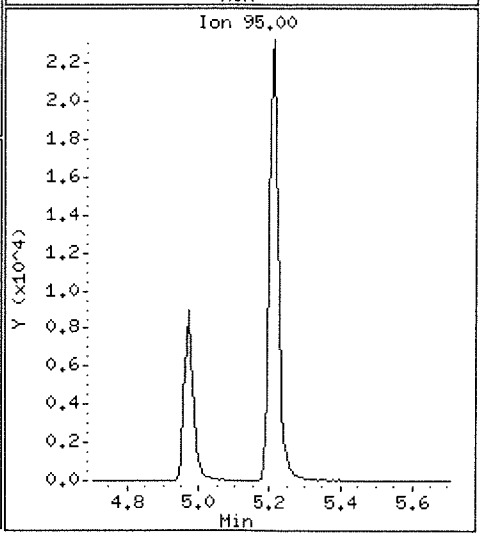












Data File: \\nahstws005\Target\chem\voa6.i\X200708.b\X070817.D Page 1
Report Date: 13-Aug-2020 12:56

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200708.b\X070817.D
Lab Smp Id: HS20070055-03MS Client Smp ID: HS20070055-03MS
Inj Date : 08-JUL-2020 17:25
Operator : PC Inst ID: voa6.i
Smp Info : HS20070055-03MS;HS20070055-03MS;3;;MS
Misc Info : HS18090001;WATER;0;1;
Comment   :
Method   : \\nahstws005\Target\chem\voa6.i\X200708.b\8260W.m
Meth Date : 13-Aug-2020 12:56 voa6.i Quant Type: ISTD
Cal Date : 07-JUL-2020 13:53 Cal File: X070708.D
Als bottle: 17 QC Sample: MS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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

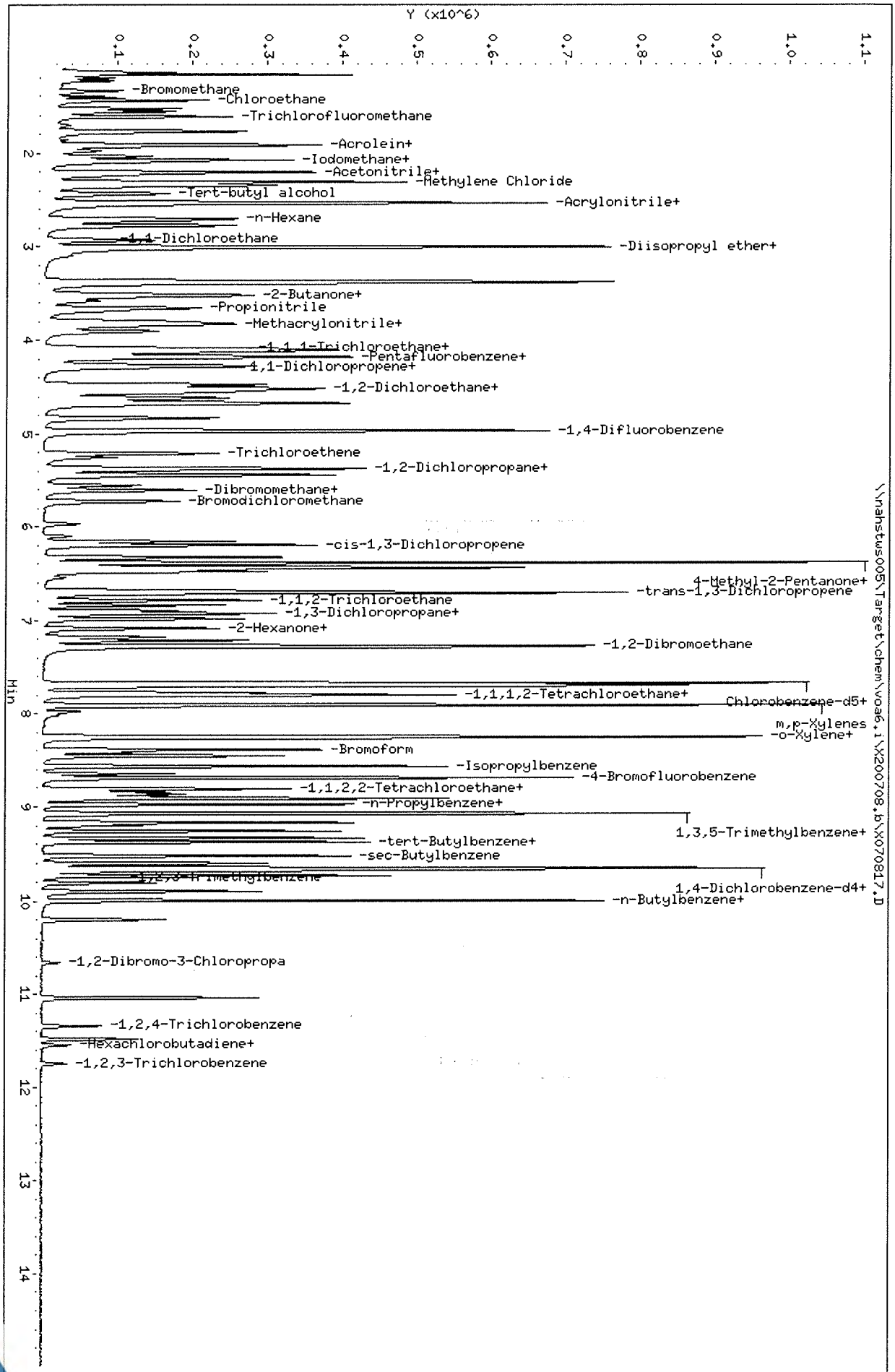
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.189	4.189	(1.000)	314779	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	495334	50.0000	
* 47 Chlorobenzene-d5	117	7.670	7.671	(1.000)	423204	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	166192	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.979)	160983	46.9608	46.96
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	210415	44.5991	44.59
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	566813	50.9448	50.94
$ 69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	196346	48.6943	48.69
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	64635	19.8914	19.89
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.976)	111503	19.3364	19.33
68 1,1,2,2-Tetrachloroethane	83	8.845	8.845	(0.915)	67612	20.5780	20.57
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	52249	19.5167	19.51
22 1,1-Dichloroethane	63	2.929	2.929	(0.699)	162843	18.2538	18.25
11 1,1-Dichloroethene	96	1.919	1.919	(0.458)	56318	19.3216	19.32
32 1,1-Dichloropropene	75	4.290	4.283	(0.863)	95942	19.6693	19.66
93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.215)	9023	18.2385	18.23
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	57947	20.0018	20.00(M)
90 1,2,4-Trichlorobenzene	180	11.345	11.338	(1.173)	20303	20.4064	20.40
79 1,2,4-Trimethylbenzene	105	9.382	9.383	(0.970)	189671	19.4071	19.40
89 1,2-Dibromo-3-Chloropropane	155	10.657	10.658	(1.102)	4835	17.6392	17.63
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	62860	18.4791	18.47
88 1,2-Dichlorobenzene	146	9.998	9.991	(1.034)	103873	21.3847	21.38

Data File: \\nahstws005\Target\chem\voa6.i\X200708.b\X070817.D Page 2
Report Date: 13-Aug-2020 12:56

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
33 1,2-Dichloroethane	62	4.562	4.562	(0.918)	113491	18.4674	18.46
42 1,2-Dichloropropane	63	5.443	5.443	(1.095)	90920	19.7310	19.73
75 1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	221197	23.3602	23.36
83 1,3-Dichlorobenzene	146	9.612	9.605	(0.994)	104702	19.6781	19.67
54 1,3-Dichloropropane	76	6.983	6.983	(0.910)	108895	19.3245	19.32
84 1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	104474	20.5311	20.53
26 2,2-Dichloropropane	77	3.516	3.516	(0.839)	111672	20.4910	20.49
24 2-Butanone	43	3.580	3.581	(0.855)	89570	26.6922	26.69
76 2-Chlorotoluene	91	8.974	8.974	(0.928)	191858	23.0013	23.00
52 2-Hexanone	43	7.090	7.090	(0.924)	143903	33.2405	33.24
77 4-Chlorotoluene	91	9.074	9.075	(0.939)	214673	22.6950	22.69
82 p-Isopropyltoluene	119	9.655	9.655	(0.999)	199662	21.1272	21.12
45 4-Methyl-2-Pentanone	43	6.324	6.324	(0.824)	220216	36.5249	36.52
10 Acetone	43	2.234	1.976	(0.533)	82083	8.69514	8.69
37 Benzene	78	4.519	4.519	(0.909)	274993	19.4580	19.45
74 Bromobenzene	156	8.809	8.810	(0.911)	73425	23.1586	23.15
29 Bromochloromethane	128	3.802	3.795	(0.908)	37145	16.9899	16.98
39 Bromodichloromethane	83	5.729	5.729	(1.153)	96242	19.3981	19.39
66 Bromoform	173	8.415	8.416	(1.097)	41889	17.8307	17.83
6 Bromomethane	94	1.338	1.339	(0.320)	44666	20.1619	20.16
19 Carbon Disulfide	76	2.076	2.069	(0.496)	379818	39.6820	39.68
34 Carbon Tetrachloride	117	4.268	4.268	(0.859)	95448	20.1914	20.19
59 Chlorobenzene	112	7.699	7.699	(1.004)	169813	19.6952	19.69
7 Chloroethane	64	1.403	1.403	(0.335)	51709	17.0278	17.02
28 Chloroform	83	3.910	3.910	(0.933)	127088	18.4249	18.42
3 Chloromethane	50	1.080	1.081	(0.258)	124379	19.2278	19.22
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.843)	77864	18.9240	18.92
46 cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	114774	19.1974	19.19
55 Dibromochloromethane	129	7.176	7.176	(0.936)	66286	19.0675	19.06
44 Dibromomethane	93	5.557	5.558	(1.118)	45656	18.3836	18.38
2 Dichlorodifluoromethane	85	0.973	0.973	(0.232)	67961	17.8344	17.83
61 Ethylbenzene	106	7.799	7.800	(1.017)	92516	20.2741	20.27
91 Hexachlorobutadiene	225	11.481	11.481	(1.187)	19754	25.4000	25.39
67 Isopropylbenzene	105	8.566	8.566	(1.117)	277854	20.5279	20.52
62 m,p-Xylenes	106	7.907	7.907	(1.031)	221015	40.2758	40.27
17 Methylene Chloride	84	2.305	2.306	(0.550)	61278	17.8021	17.80(M)
87 n-Butylbenzene	91	9.998	9.999	(1.034)	201523	23.9061	23.90
73 n-Propylbenzene	91	8.917	8.917	(0.922)	322937	23.8254	23.82
92 Naphthalene	128	11.546	11.546	(1.194)	25747	16.1763	16.17
63 o-Xylene	106	8.244	8.244	(1.075)	107154	19.9322	19.93
81 sec-Butylbenzene	105	9.526	9.526	(0.985)	223084	20.0224	20.02
64 Styrene	104	8.265	8.258	(1.078)	182758	19.5612	19.56
78 tert-Butylbenzene	119	9.339	9.340	(0.966)	155583	20.4065	20.40
56 Tetrachloroethene	164	6.933	6.933	(0.904)	56276	21.7705	21.77
50 Toluene	91	6.453	6.453	(0.841)	283560	21.0013	21.00
20 trans-1,2-Dichloroethene	96	2.535	2.535	(0.605)	67567	19.6390	19.63
51 trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	100970	18.7973	18.79
38 Trichloroethene	130	5.214	5.214	(1.049)	72686	19.7779	19.77
8 Trichlorofluoromethane	101	1.560	1.561	(0.373)	103569	19.0794	19.07
5 Vinyl Chloride	62	1.145	1.145	(0.273)	108538	19.6279	19.62

QC Flag Legend

M - Compound response manually integrated.



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

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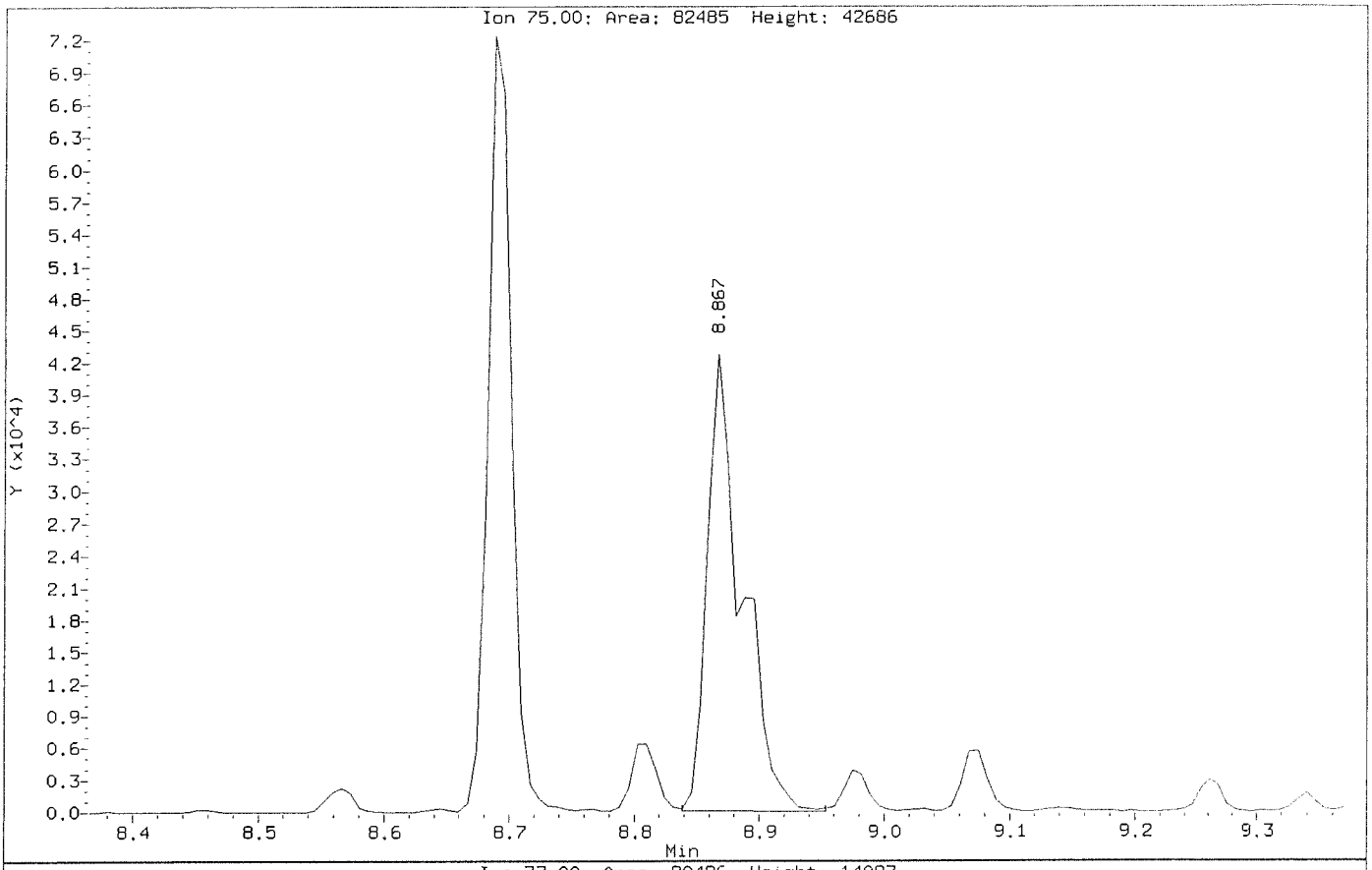
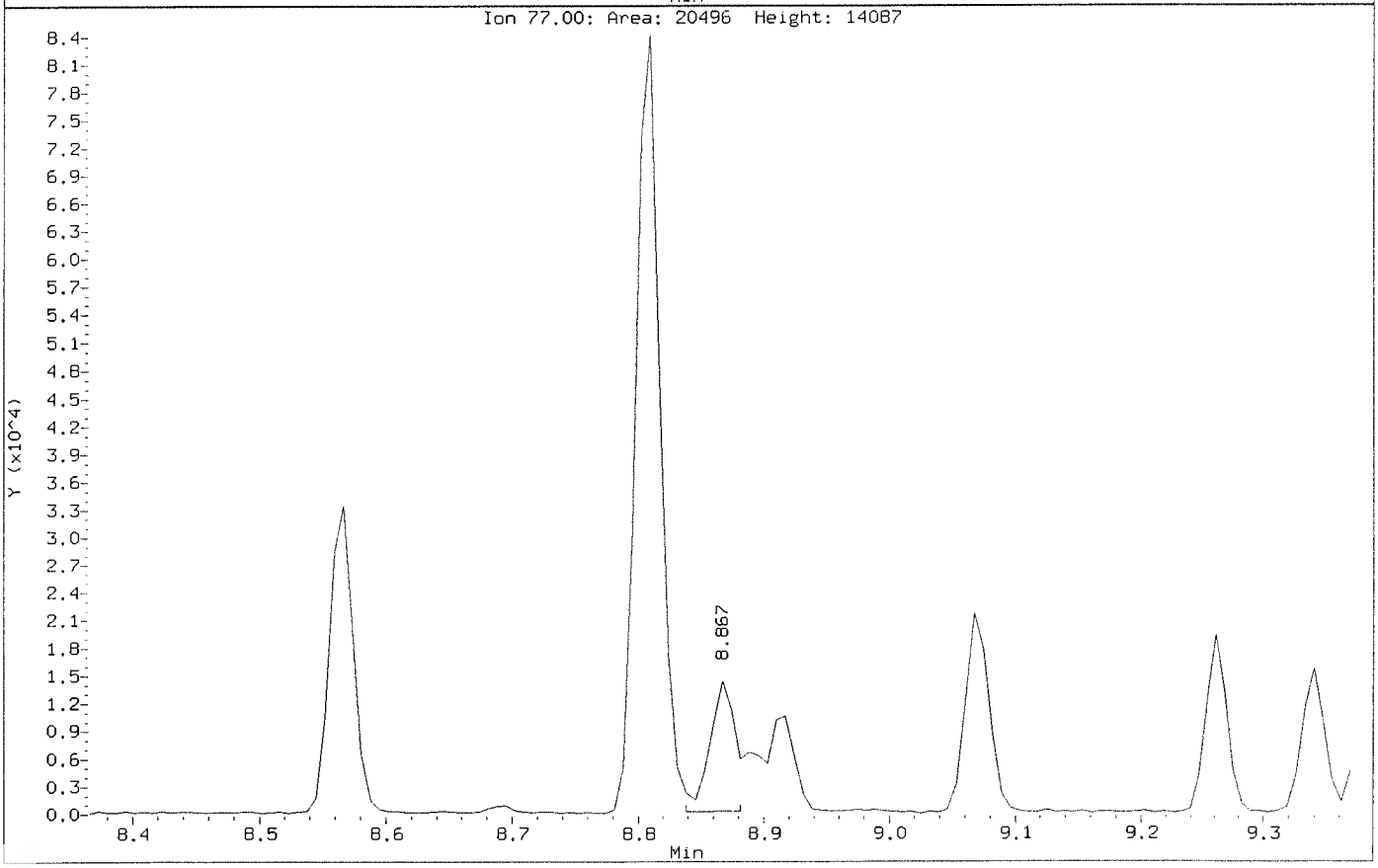
Instrument: voa6.i
Client Sample ID: HS20070055-03MS

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





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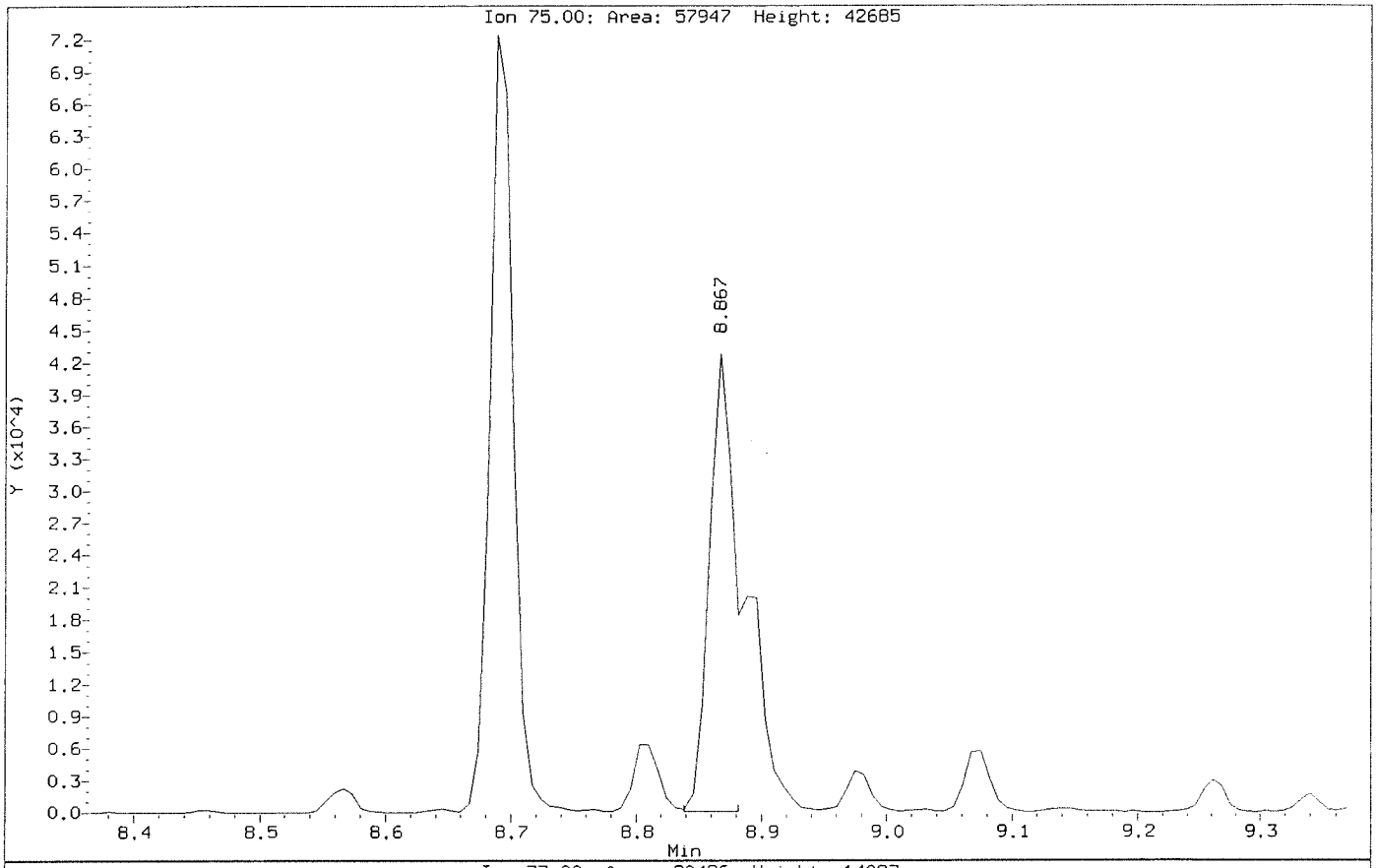

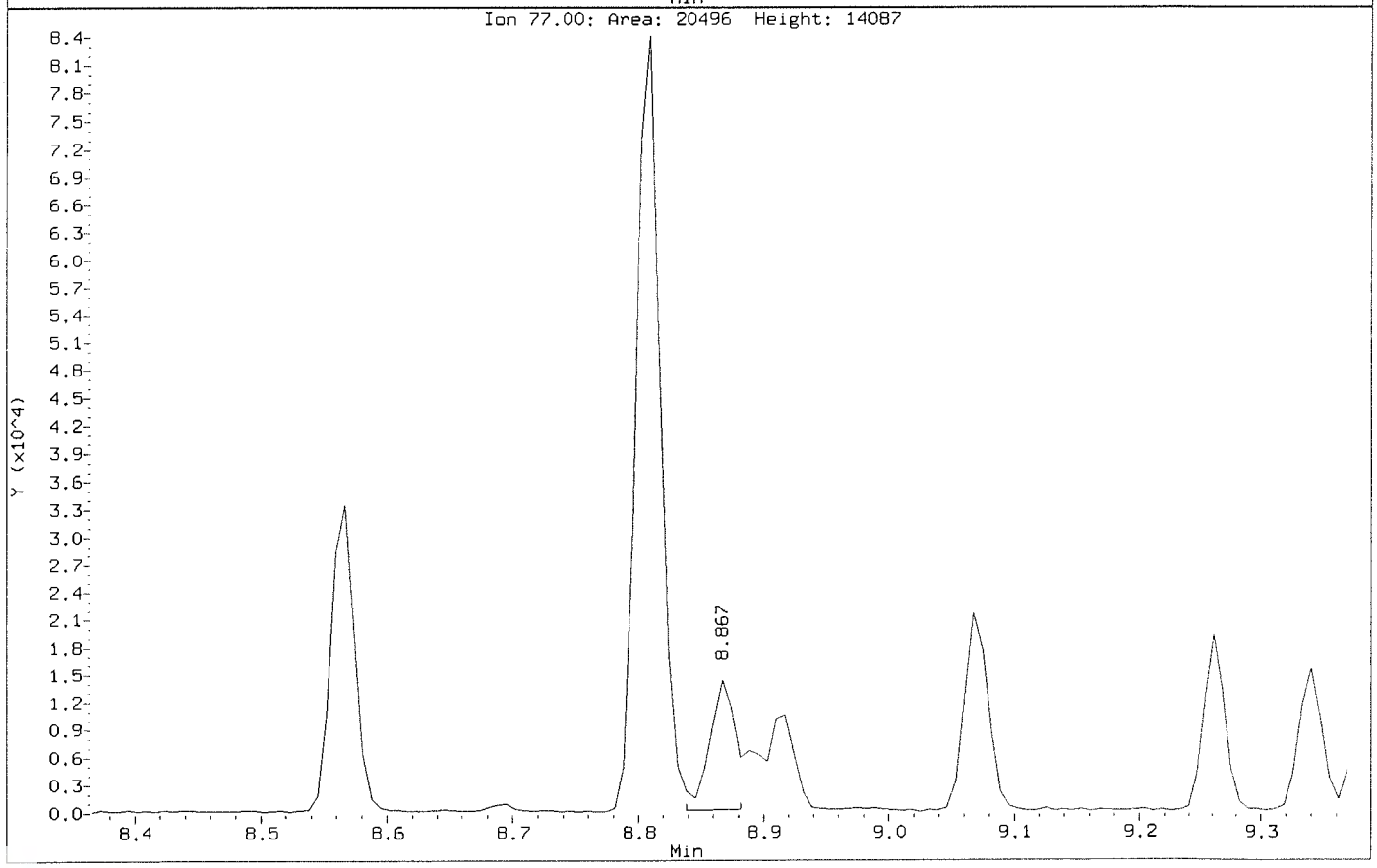

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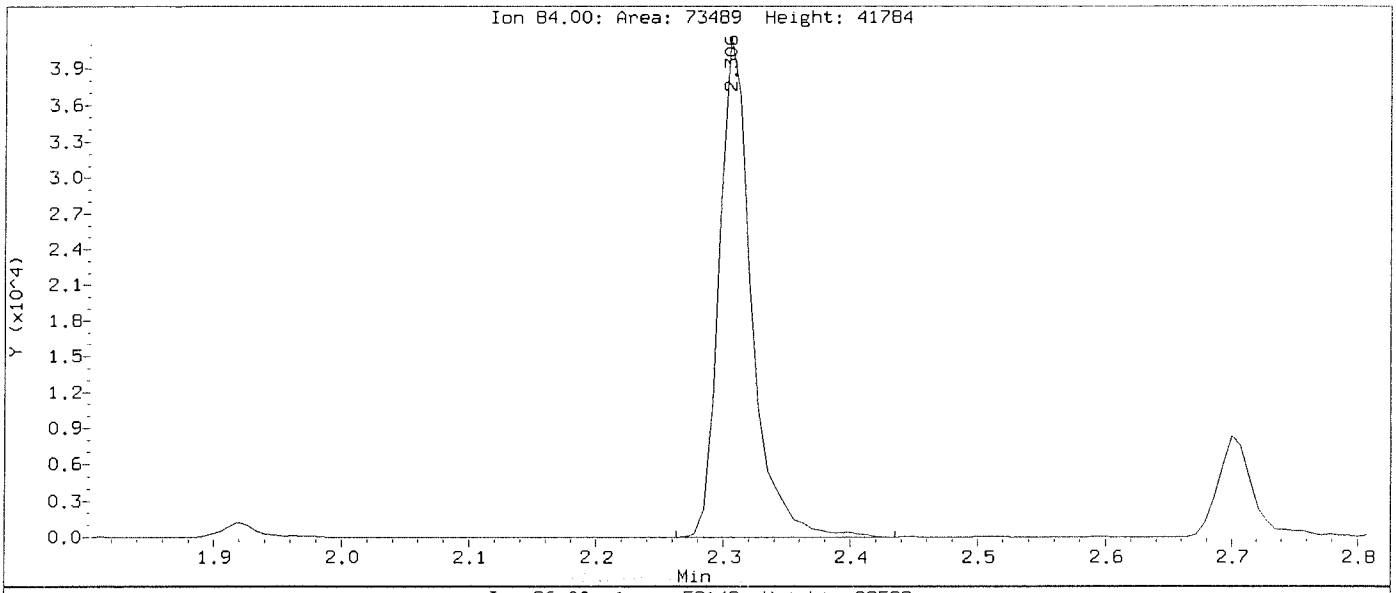
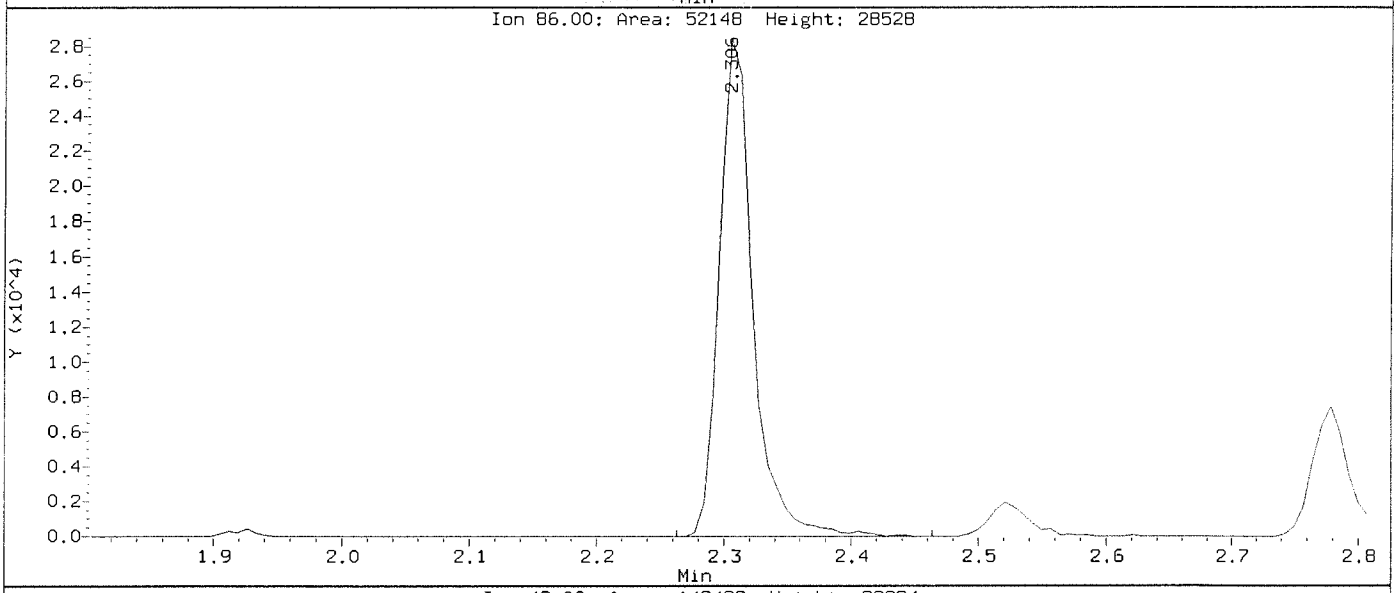
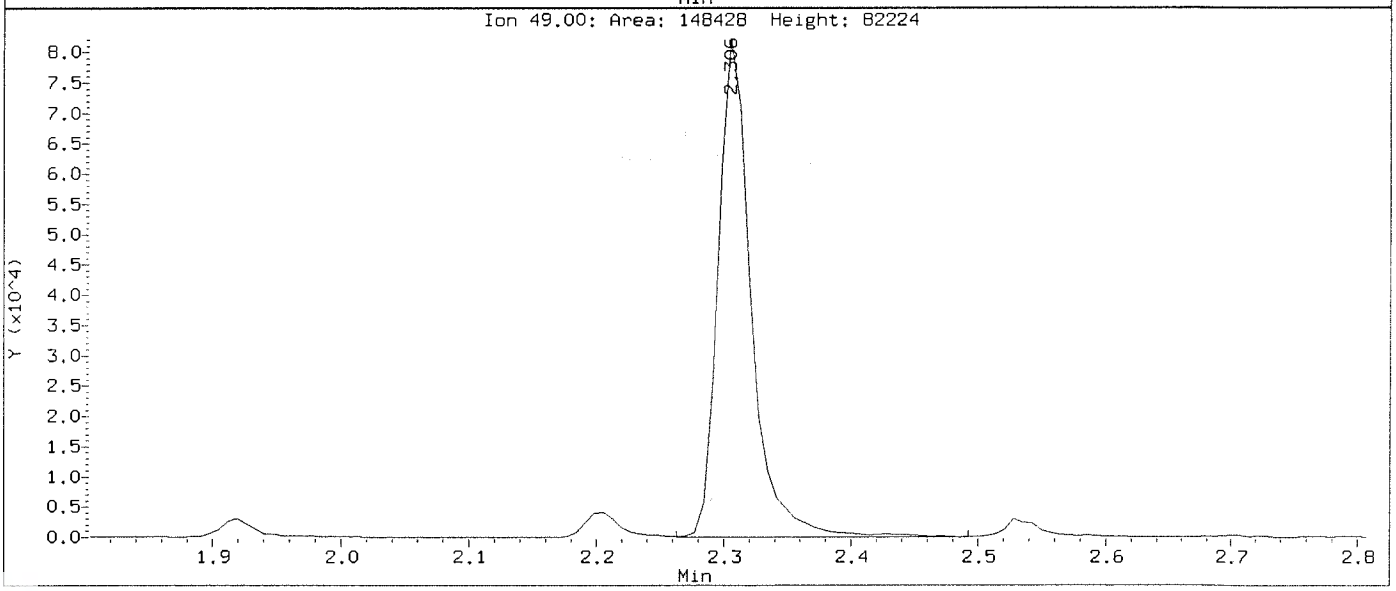
Instrument: voa6.i
Client Sample ID: HS20070055-03MS

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







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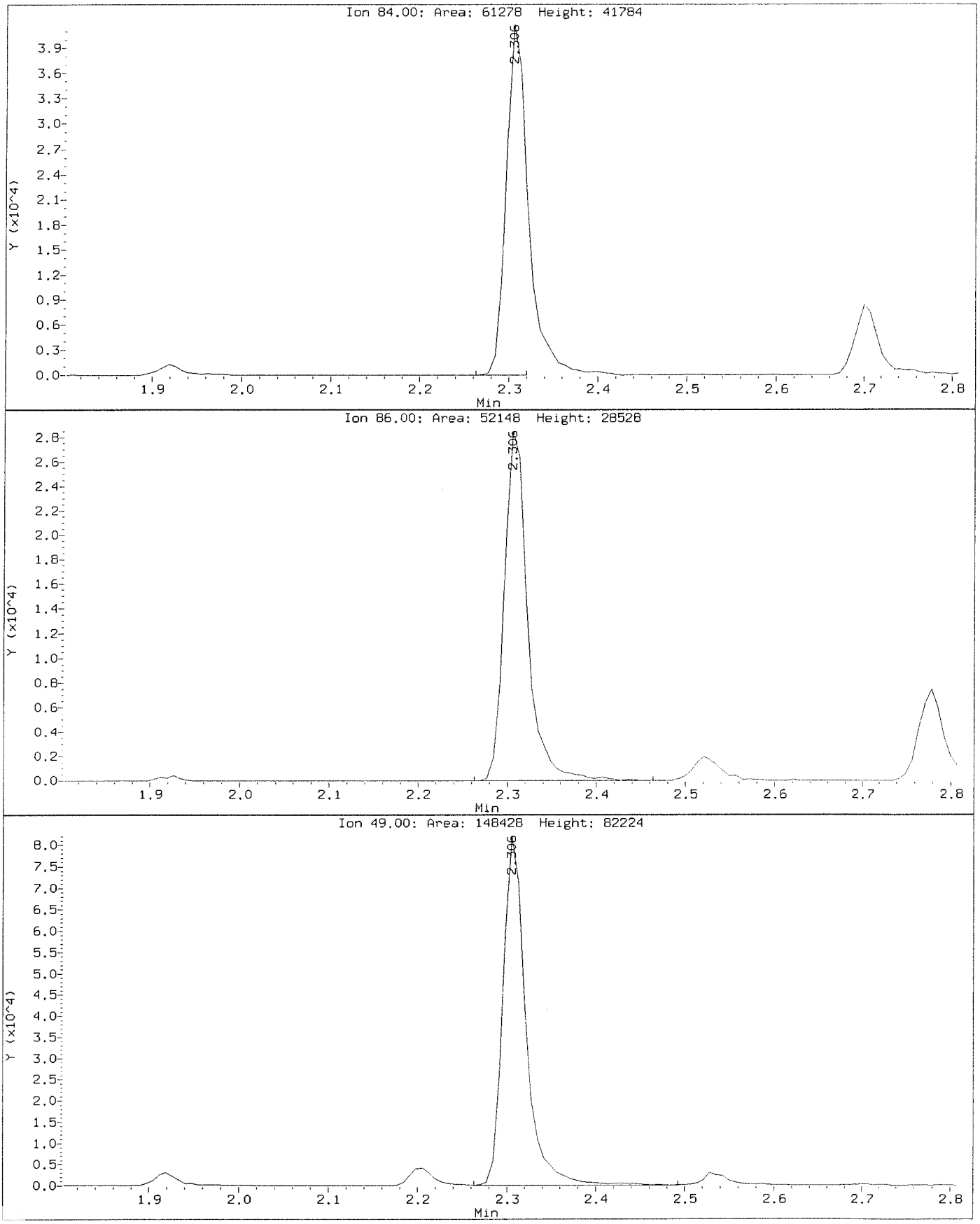
Client Sample ID: HS20070055-03MS

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



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Report Date: 13-Aug-2020 12:56

ALS Laboratory Group

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Inj Date : 08-JUL-2020 17:49
Operator : PC Inst ID: voa6.i
Smp Info : HS20070055-03MSD;HS20070055-03MSD;3;;MSD
Misc Info : HS18090001;WATER;0;1;
Comment :
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Cal Date : 07-JUL-2020 13:53 Cal File: X070708.D
Als bottle: 17 QC Sample: MSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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	4.189	4.189	(1.000)	314292	50.0000	
* 36	1,4-Difluorobenzene	114	4.970	4.970	(1.000)	494544	50.0000	
* 47	Chlorobenzene-d5	117	7.670	7.671	(1.000)	421669	50.0000	
* 70	1,4-Dichlorobenzene-d4	152	9.662	9.669	(1.000)	185130	50.0000	
$ 30	Dibromofluoromethane	113	4.103	4.103	(0.979)	160352	46.8470	46.84
$ 35	1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	210383	44.6624	44.66
$ 48	Toluene-d8	98	6.388	6.388	(0.833)	561445	50.6460	50.64
$ 69	4-Bromofluorobenzene	95	8.695	8.695	(1.134)	196682	48.9610	48.96
60	1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	63469	19.6037	19.60
31	1,1,1-Trichloroethane	97	4.089	4.089	(0.976)	108016	18.7607	18.76
68	1,1,2,2-Tetrachloroethane	83	8.838	8.845	(0.915)	66780	18.2456	18.24
53	1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	52055	19.5150	19.51
22	1,1-Dichloroethane	63	2.929	2.929	(0.699)	156259	17.5429	17.54
11	1,1-Dichloroethene	96	1.919	1.919	(0.458)	52045	17.8833	17.88
32	1,1-Dichloropropene	75	4.282	4.283	(0.862)	92224	18.9373	18.93
93	1,2,3-Trichlorobenzene	180	11.746	11.746	(1.216)	9851	17.9064	17.90
71	1,2,3-Trichloropropane	75	8.867	8.867	(0.918)	58324	18.0725	18.07(M)
90	1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	21771	19.6923	19.69
9	1,2,4-Trimethylbenzene	105	9.382	9.383	(0.971)	211852	19.4592	19.45
	1,2-Dibromo-3-Chloropropane	155	10.657	10.658	(1.103)	5044	16.4080	16.40
	1,2-Dibromoethane	107	7.262	7.262	(0.947)	62276	18.3740	18.37
	.2-Dichlorobenzene	146	9.998	9.991	(1.035)	90236	16.6769	16.67

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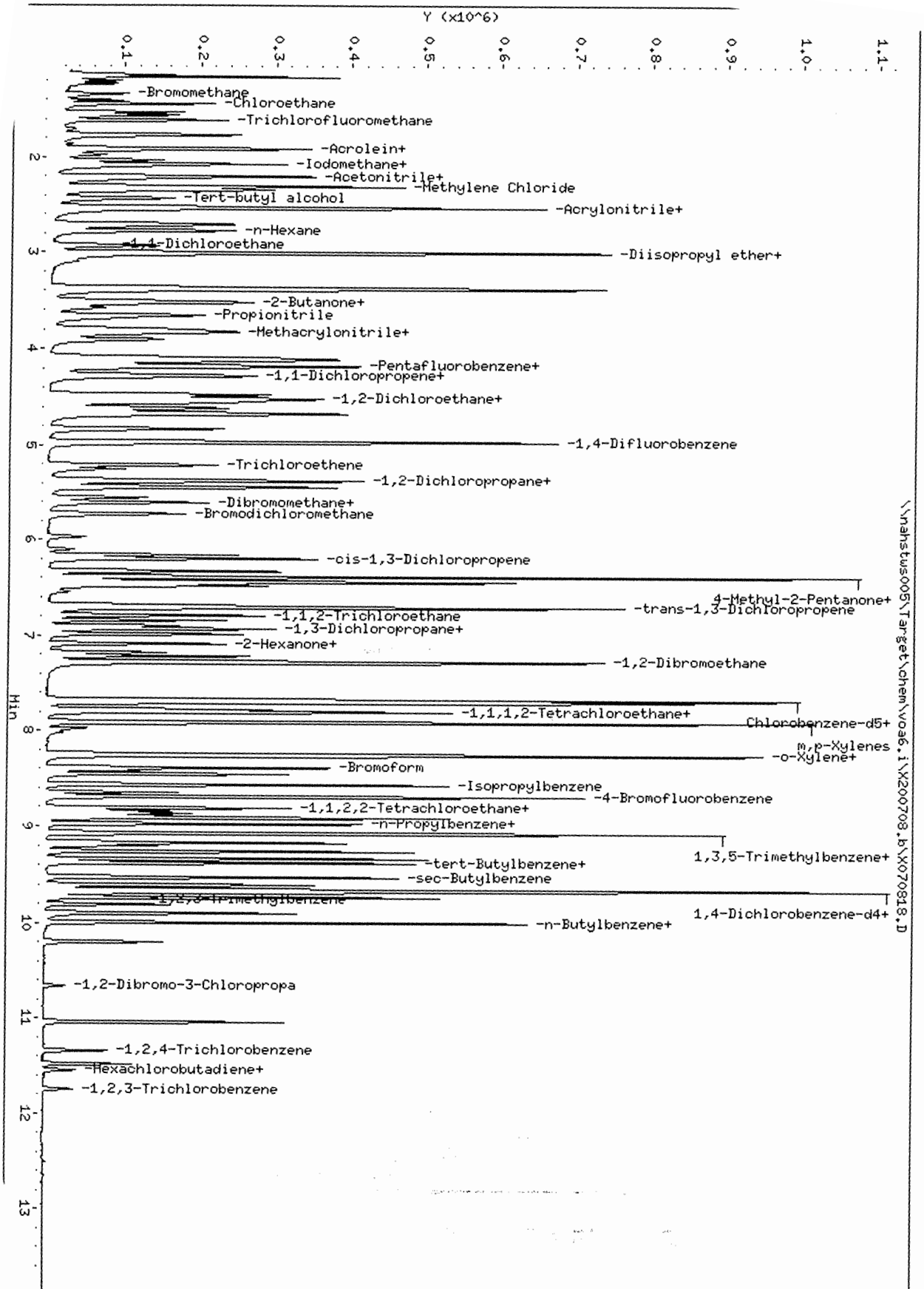
Report Date: 13-Aug-2020 12:56

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
33	1,2-Dichloroethane	62	4.562	4.562	(0.918)	114384	18.6424	18.64
42	1,2-Dichloropropane	63	5.443	5.443	(1.095)	90086	19.5812	19.58
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	226164	21.4414	21.44
83	1,3-Dichlorobenzene	146	9.612	9.605	(0.995)	116278	19.6182	19.61
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	106151	18.9061	18.90
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.002)	118464	20.9025	20.90
26	2,2-Dichloropropane	77	3.516	3.516	(0.839)	108151	19.8757	19.87
24	2-Butanone	43	3.580	3.581	(0.855)	85983	25.4211	25.42
76	2-Chlorotoluene	91	8.974	8.974	(0.929)	190830	20.5378	20.53
52	2-Hexanone	43	7.090	7.090	(0.924)	143404	33.2464	33.24
77	4-Chlorotoluene	91	9.074	9.075	(0.939)	220348	20.9120	20.91
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	225541	21.4242	21.42
45	4-Methyl-2-Pentanone	43	6.331	6.324	(0.825)	206964	34.2682	34.26
10	Acetone	43	2.234	1.976	(0.533)	80676	8.02144	8.02
37	Benzene	78	4.519	4.519	(0.909)	268373	19.0199	19.01
74	Bromobenzene	156	8.809	8.810	(0.912)	72015	20.3904	20.39
29	Bromochloromethane	128	3.802	3.795	(0.908)	36373	16.6625	16.66
39	Bromodichloromethane	83	5.729	5.729	(1.153)	91429	18.4574	18.45
66	Bromoform	173	8.415	8.416	(1.097)	41863	17.8845	17.88
6	Bromomethane	94	1.338	1.339	(0.320)	42886	19.3855	19.38
19	Carbon Disulfide	76	2.076	2.069	(0.496)	359636	37.6317	37.63
34	Carbon Tetrachloride	117	4.275	4.268	(0.860)	92296	19.5558	19.55
59	Chlorobenzene	112	7.699	7.699	(1.004)	168962	19.6678	19.66
7	Chloroethane	64	1.403	1.403	(0.335)	47550	15.5311	15.53
28	Chloroform	83	3.910	3.910	(0.933)	124510	18.0791	18.07
3	Chloromethane	50	1.080	1.081	(0.258)	118312	18.3183	18.31
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.843)	73750	17.9519	17.95
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	110576	18.5248	18.52
55	Dibromochloromethane	129	7.176	7.176	(0.936)	64119	18.5113	18.51
44	Dibromomethane	93	5.557	5.558	(1.118)	45159	18.2126	18.21
2	Dichlorodifluoromethane	85	0.973	0.973	(0.232)	64657	16.9937	16.99
61	Ethylbenzene	106	7.799	7.800	(1.017)	91601	20.1467	20.14
91	Hexachlorobutadiene	225	11.488	11.481	(1.189)	18656	21.7381	21.73
67	Isopropylbenzene	105	8.566	8.566	(1.117)	273101	20.2502	20.25
62	m,p-Xylenes	106	7.907	7.907	(1.031)	218804	40.0180	40.01
17	Methylene Chloride	84	2.305	2.306	(0.550)	59544	17.3252	17.32(M)
87	n-Butylbenzene	91	9.998	9.999	(1.035)	172040	18.3209	18.32
73	n-Propylbenzene	91	8.917	8.917	(0.923)	324428	21.4870	21.48
92	Naphthalene	128	11.546	11.546	(1.195)	29401	16.5749	16.57
63	o-Xylene	106	8.244	8.244	(1.075)	106070	19.8024	19.80
81	sec-Butylbenzene	105	9.526	9.526	(0.986)	262312	21.1348	21.13
64	Styrene	104	8.265	8.258	(1.078)	181126	19.4571	19.45
78	tert-Butylbenzene	119	9.339	9.340	(0.967)	183329	21.5860	21.58
56	Tetrachloroethene	164	6.933	6.933	(0.904)	53243	20.6722	20.67
50	Toluene	91	6.453	6.453	(0.841)	272783	20.2766	20.27
20	trans-1,2-Dichloroethene	96	2.535	2.535	(0.605)	64447	18.7611	18.76
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	100161	18.6765	18.67
38	Trichloroethene	130	5.214	5.214	(1.049)	69341	18.8979	18.89
8	Trichlorofluoromethane	101	1.560	1.561	(0.373)	99064	18.2777	18.27
5	Vinyl Chloride	62	1.145	1.145	(0.273)	99066	17.9428	17.94

QC Flag Legend

M - Compound response manually integrated.



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Sample Info: HS200700S5-03MSD;HS200700S5-03MSD;3;;MSD
Purge Volume: 5.0
Column phase: DB624

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

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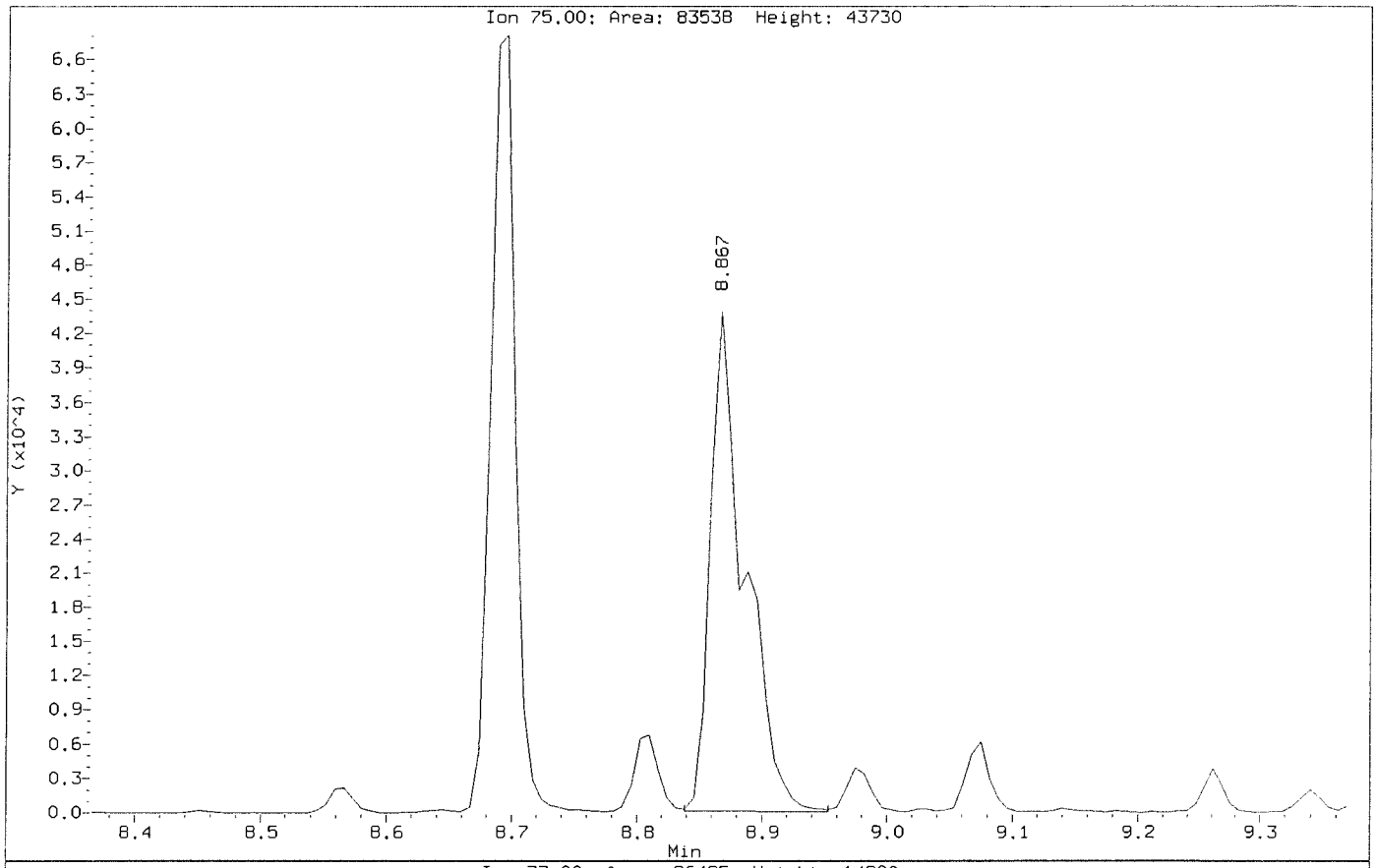
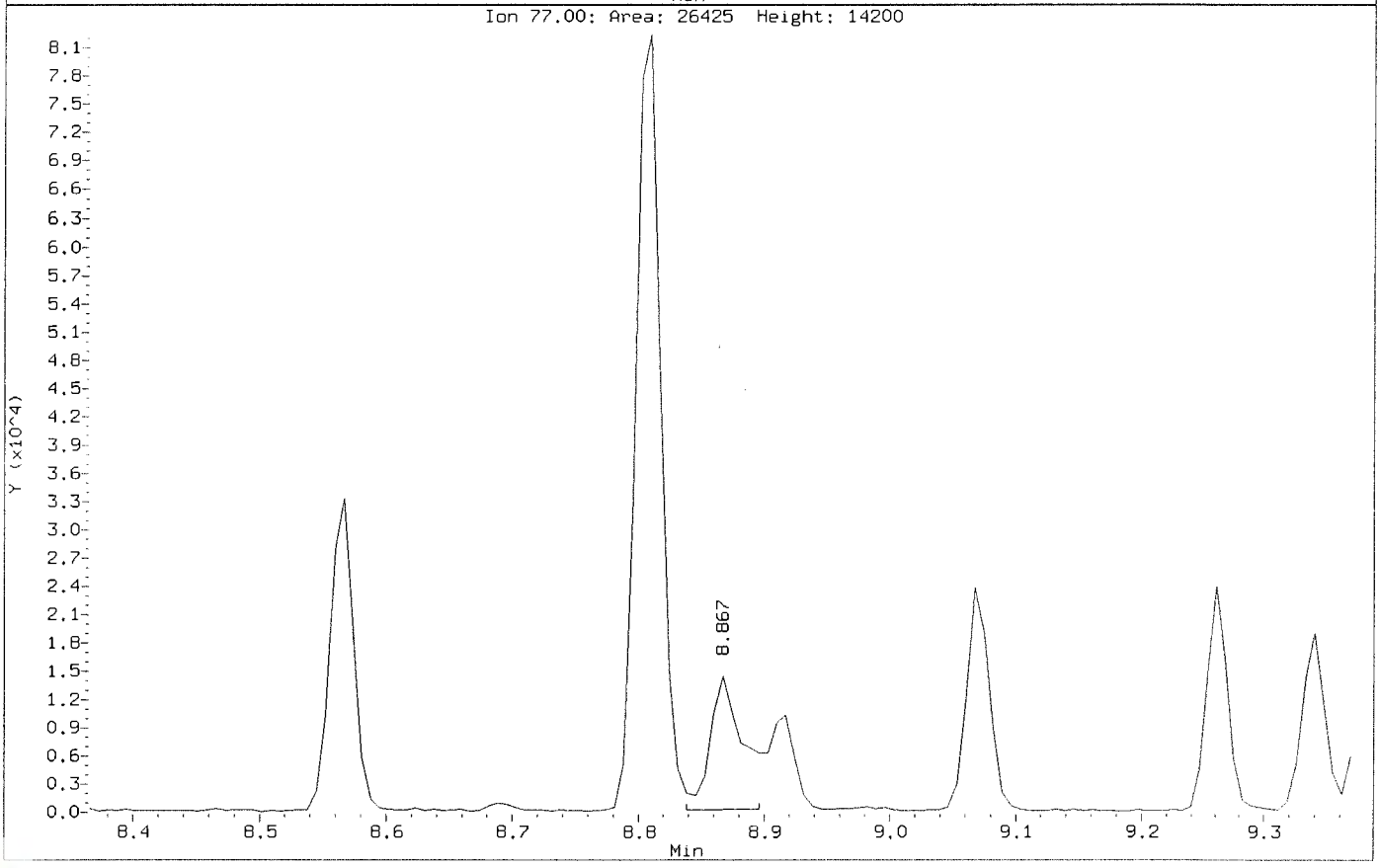
Instrument: voa6.i
Client Sample ID: HS20070055-03MSD

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





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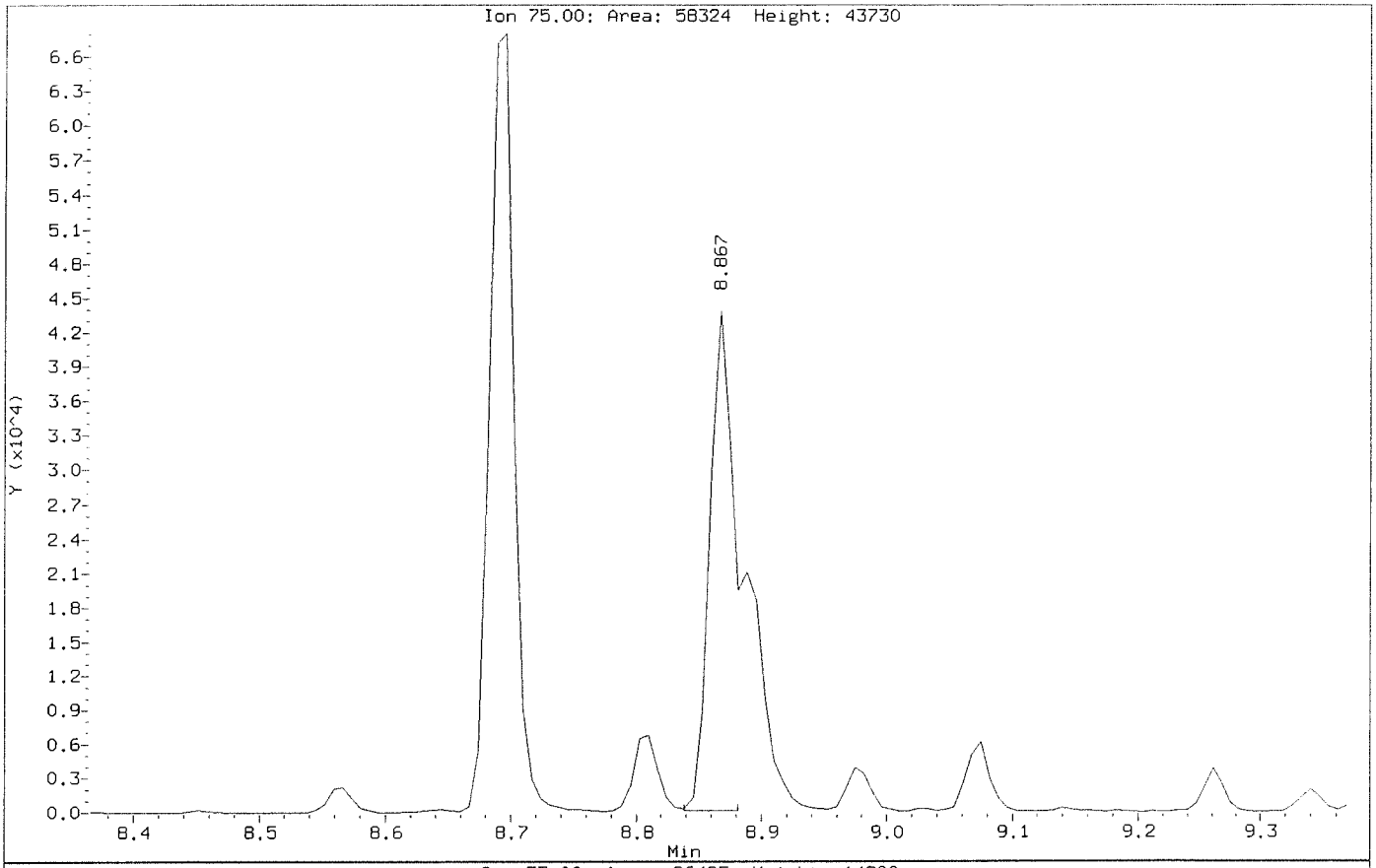
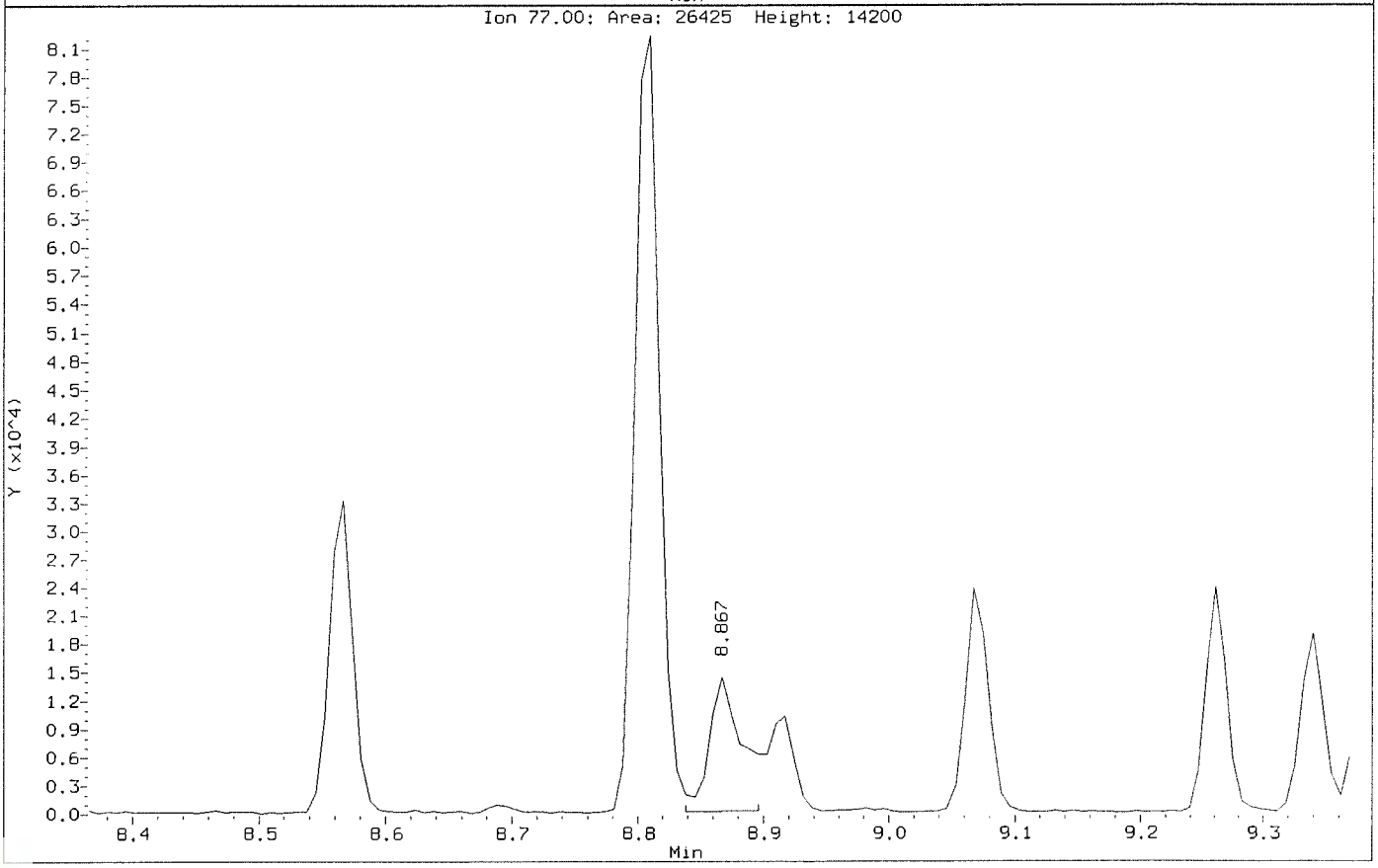
Instrument: voa6.i
Client Sample ID: HS20070055-03MSD

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





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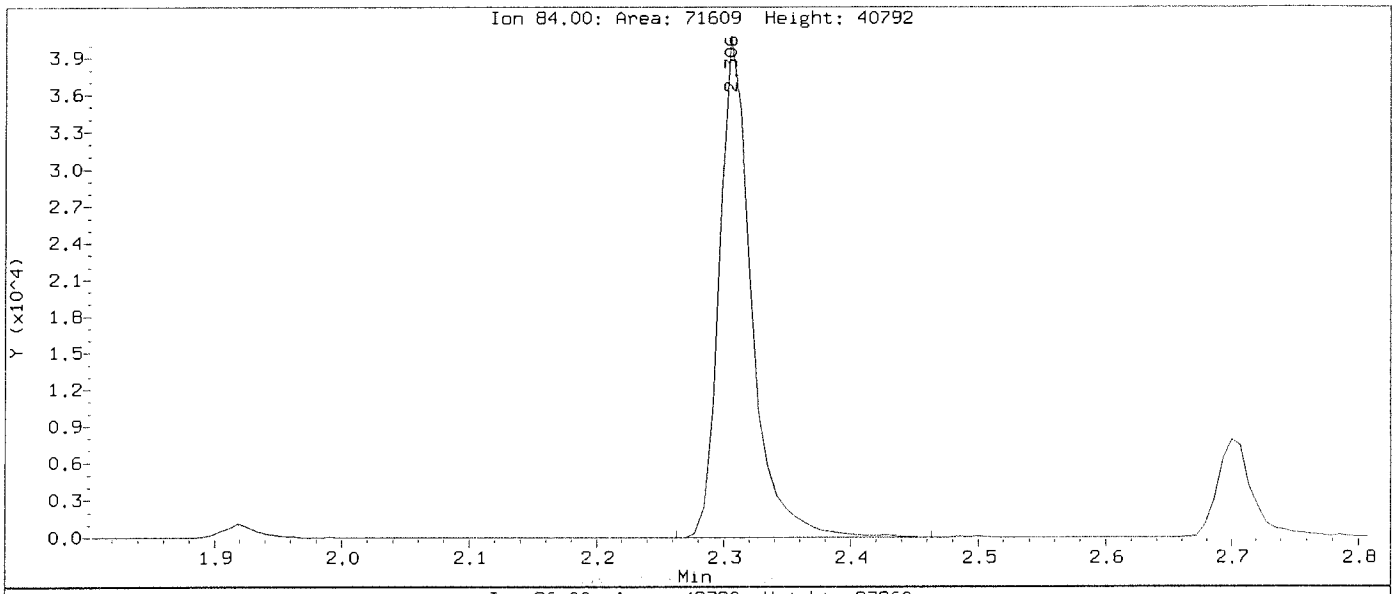
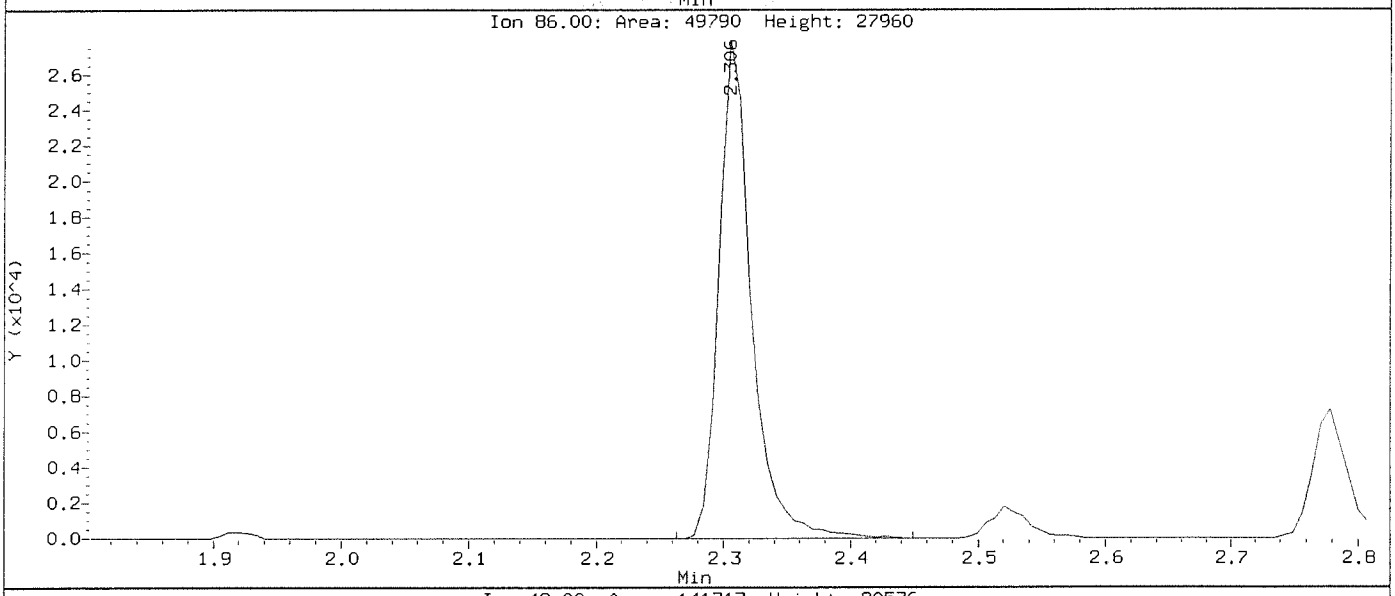
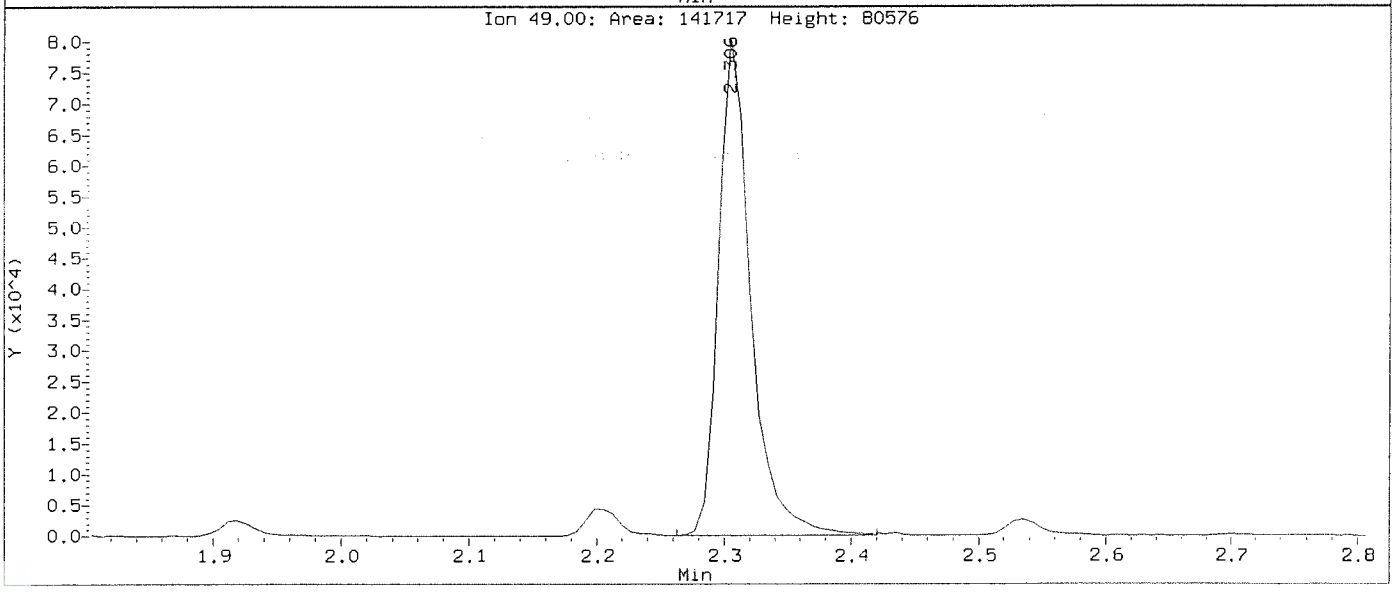
Injection Date: 08-JUL-2020 17:49
Instrument: voa6.i
Client Sample ID: HS20070055-03MSD

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







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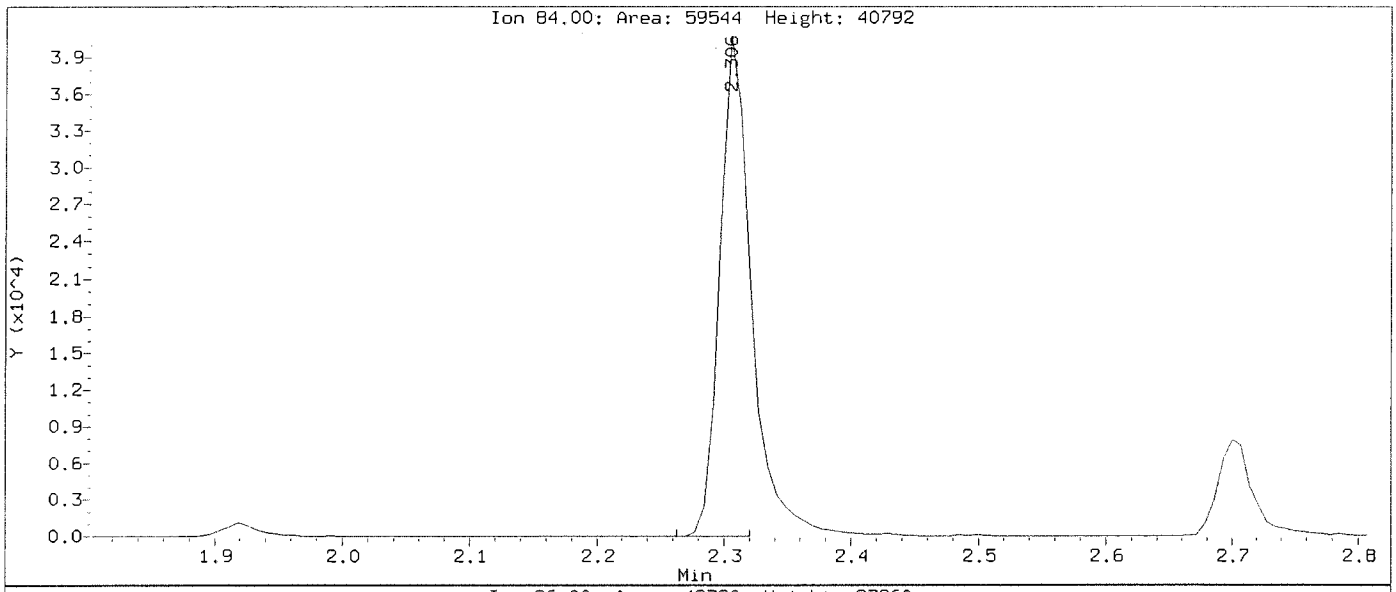
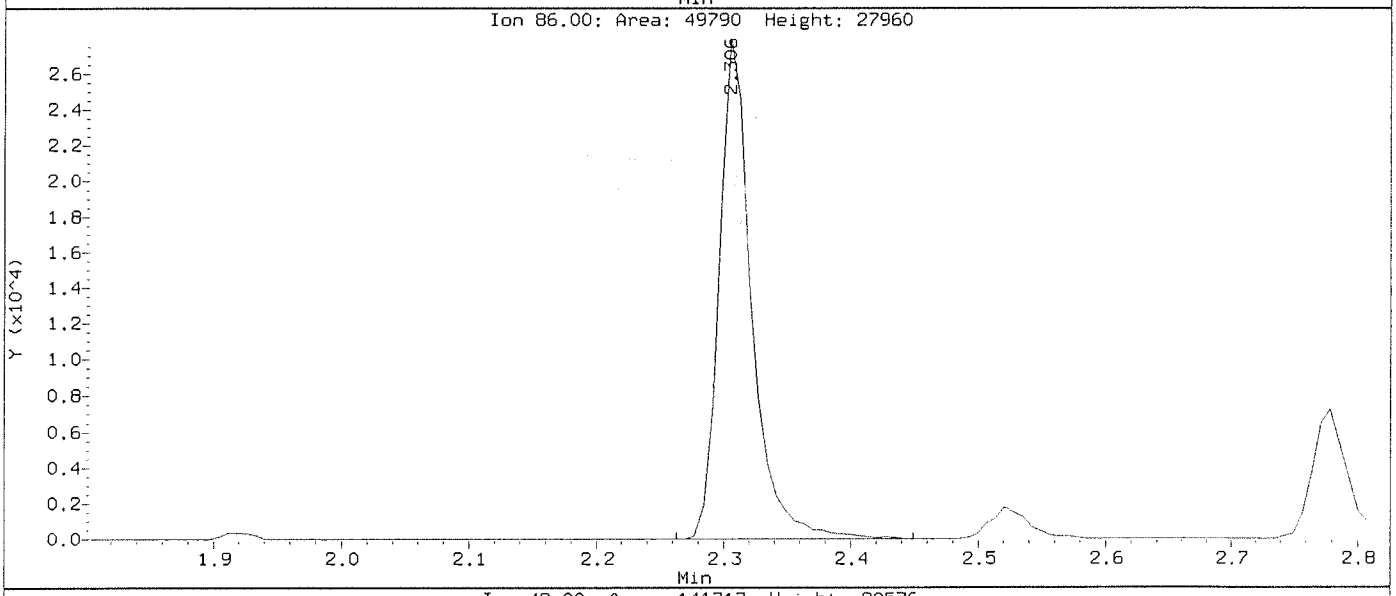
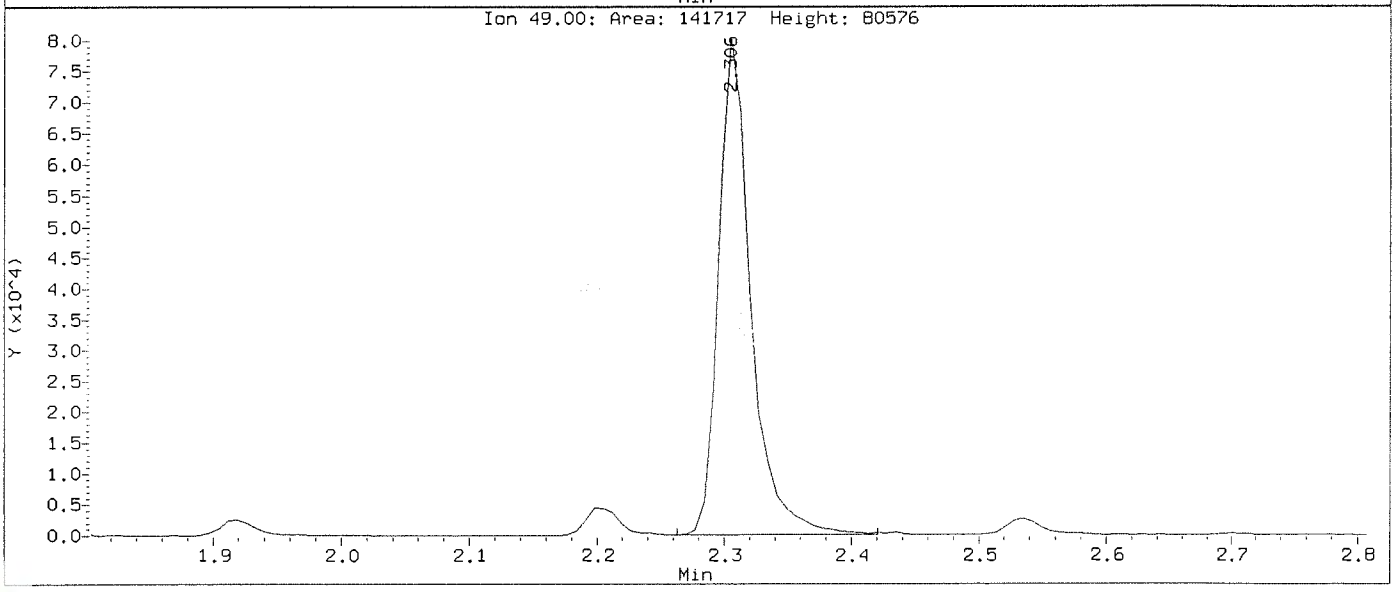
Instrument: voa6.i
Client Sample ID: HS20070055-03MSD

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







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Report Date: 13-Aug-2020 12:56

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200708.b\X070819.D
Lab Smp Id: HS20070055-04MS Client Smp ID: HS20070055-04MS
Inj Date : 08-JUL-2020 18:13
Operator : PC Inst ID: voa6.i
Smp Info : HS20070055-04MS;HS20070055-04MS;3;;MS
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200708.b\8260W.m
Meth Date : 13-Aug-2020 12:56 voa6.i Quant Type: ISTD
Cal Date : 07-JUL-2020 13:53 Cal File: X070708.D
Als bottle: 18 QC Sample: MS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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

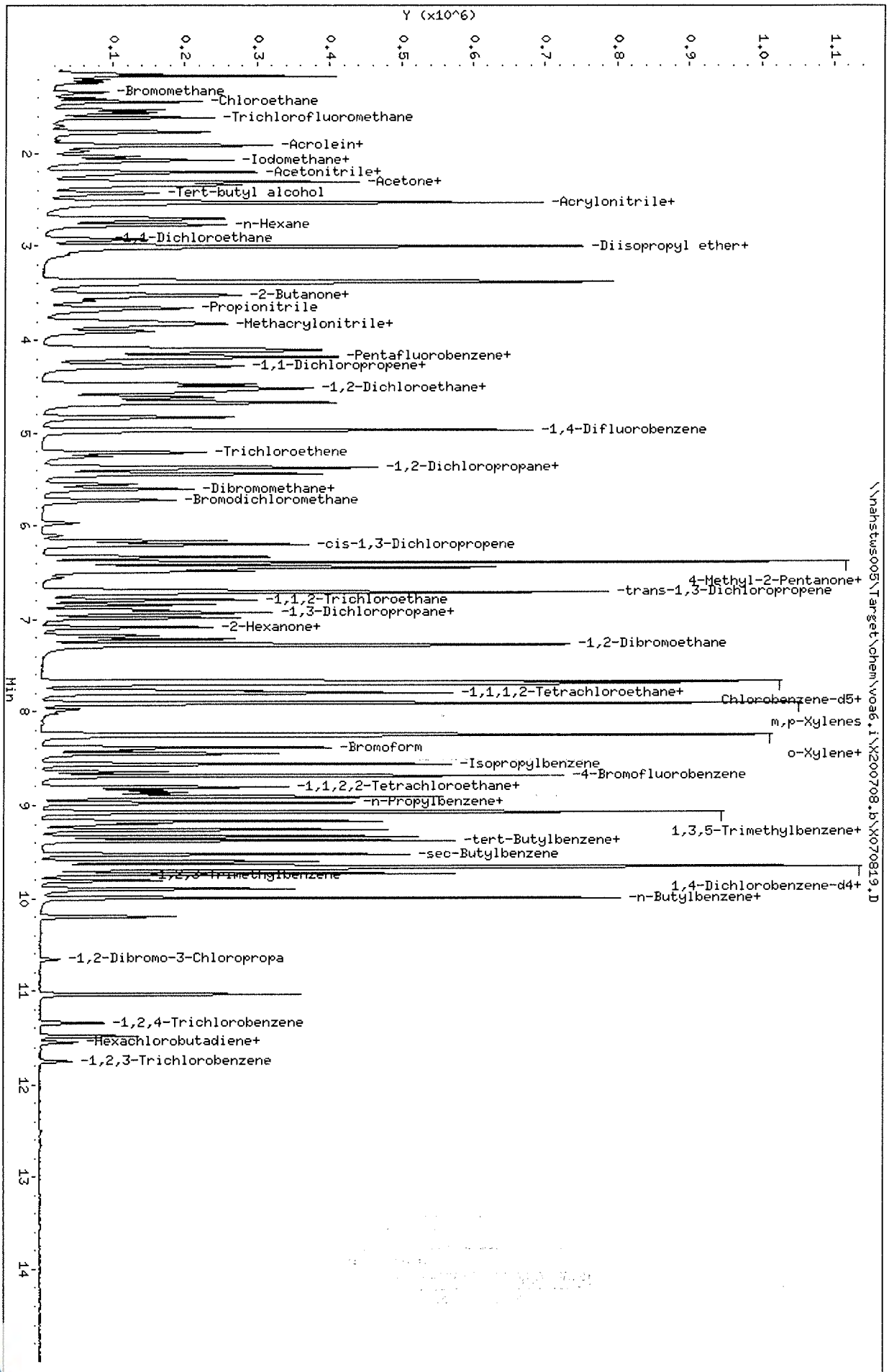
Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
*	1 Pentafluorobenzene	168	4.189	4.189	(1.000)	316702	50.0000	
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	494232	50.0000	
*	47 Chlorobenzene-d5	117	7.670	7.671	(1.000)	426175	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	186067	50.0000	
$	30 Dibromofluoromethane	113	4.103	4.103	(0.979)	161150	46.7195	46.71
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	212729	44.8192	44.81
$	48 Toluene-d8	98	6.388	6.388	(0.833)	568626	50.7515	50.75
$	69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	200986	49.5154	49.51
	60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	66715	20.3884	20.38
	31 1,1,1-Trichloroethane	97	4.089	4.089	(0.976)	111625	19.2400	19.24
	68 1,1,2,2-Tetrachloroethane	83	8.845	8.845	(0.915)	69790	18.9720	18.97
	53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	53162	19.7193	19.71
	22 1,1-Dichloroethane	63	2.929	2.929	(0.699)	159830	17.8073	17.80
	11 1,1-Dichloroethene	96	1.919	1.919	(0.458)	48712	16.6107	16.61
	32 1,1-Dichloropropene	75	4.282	4.283	(0.862)	96654	19.8595	19.85
	93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.215)	11572	20.6649	20.66
	71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	60119	18.5349	18.53(M)
	90 1,2,4-Trichlorobenzene	180	11.345	11.338	(1.173)	23314	20.8962	20.89
	79 1,2,4-Trimethylbenzene	105	9.382	9.383	(0.970)	236393	21.6041	21.60
	89 1,2-Dibromo-3-Chloropropane	155	10.657	10.658	(1.102)	5104	16.5315	16.53
	57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	65091	19.0015	19.00
	88 1,2-Dichlorobenzene	146	9.998	9.991	(1.034)	109600	20.1536	20.15

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
33	1,2-Dichloroethane	62	4.562	4.562	(0.918)	114084	18.6052	18.60
42	1,2-Dichloropropane	63	5.443	5.443	(1.095)	90366	19.6545	19.65
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	235277	22.1931	22.19
83	1,3-Dichlorobenzene	146	9.612	9.605	(0.994)	125062	20.9939	20.99
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	108963	19.2018	19.20
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	127333	22.3681	22.36
26	2,2-Dichloropropane	77	3.516	3.516	(0.839)	109012	19.8814	19.88
24	2-Butanone	43	3.580	3.581	(0.855)	87026	25.5614	25.56
76	2-Chlorotoluene	91	8.974	8.974	(0.928)	202006	21.6311	21.63
52	2-Hexanone	43	7.090	7.090	(0.924)	143694	32.9292	32.92
77	4-Chlorotoluene	91	9.074	9.075	(0.939)	226873	21.4228	21.42
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	237228	22.4209	22.42
45	4-Methyl-2-Pentanone	43	6.331	6.324	(0.825)	218363	35.9154	35.91
10	Acetone	43	2.305	1.976	(0.550)	184337	61.8421	61.84
37	Benzene	78	4.519	4.519	(0.909)	278316	19.7371	19.73
74	Bromobenzene	156	8.809	8.810	(0.911)	75760	21.3427	21.34
29	Bromochloromethane	128	3.802	3.795	(0.908)	37628	17.1063	17.10
39	Bromodichloromethane	83	5.729	5.729	(1.153)	95038	19.1981	19.19
66	Bromoform	173	8.415	8.416	(1.097)	43241	18.2778	18.27
6	Bromomethane	94	1.338	1.339	(0.320)	39493	17.7093	17.70
19	Carbon Disulfide	76	2.069	2.069	(0.494)	300170	31.1703	31.17
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	95551	20.2583	20.25
59	Chlorobenzene	112	7.699	7.699	(1.004)	174604	20.1097	20.10
7	Chloroethane	64	1.403	1.403	(0.335)	47995	15.5603	15.56
28	Chloroform	83	3.910	3.910	(0.933)	128926	18.5779	18.57
3	Chloromethane	50	1.080	1.081	(0.258)	124992	19.2053	19.20
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.843)	76020	18.3636	18.36
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	113998	19.1101	19.11
55	Dibromochloromethane	129	7.176	7.176	(0.936)	67318	19.2294	19.22
44	Dibromomethane	93	5.557	5.558	(1.118)	45687	18.4371	18.43
2	Dichlorodifluoromethane	85	0.973	0.973	(0.232)	65366	17.0493	17.04
61	Ethylbenzene	106	7.799	7.800	(1.017)	96050	20.9019	20.90
91	Hexachlorobutadiene	225	11.481	11.481	(1.187)	20151	23.2618	23.26
67	Isopropylbenzene	105	8.566	8.566	(1.117)	285311	20.9319	20.93
62	m,p-Xylenes	106	7.907	7.907	(1.031)	228425	41.3359	41.33
17	Methylene Chloride	84	2.305	2.306	(0.550)	51233	14.7935	14.79(M)
87	n-Butylbenzene	91	9.998	9.999	(1.034)	211036	22.3605	22.36
73	n-Propylbenzene	91	8.917	8.917	(0.922)	342592	22.5757	22.57
92	Naphthalene	128	11.546	11.546	(1.194)	34435	19.2658	19.26
63	o-Xylene	106	8.244	8.244	(1.075)	110358	20.3850	20.38
81	sec-Butylbenzene	105	9.526	9.526	(0.985)	276311	22.1506	22.15
64	Styrene	104	8.265	8.258	(1.078)	190700	20.2690	20.26
78	tert-Butylbenzene	119	9.339	9.340	(0.966)	191881	22.4791	22.47
56	Tetrachloroethene	164	6.933	6.933	(0.904)	56360	21.6510	21.65
50	Toluene	91	6.453	6.453	(0.841)	285353	20.9867	20.98
20	trans-1,2-Dichloroethene	96	2.535	2.535	(0.605)	66004	19.0682	19.06
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	99579	18.5797	18.57
38	Trichloroethene	130	5.214	5.214	(1.049)	73357	20.0050	20.00
8	Trichlorofluoromethane	101	1.560	1.561	(0.373)	95578	17.5004	17.50
5	Vinyl Chloride	62	1.145	1.145	(0.273)	103416	18.5881	18.58

QC Flag Legend

M - Compound response manually integrated.



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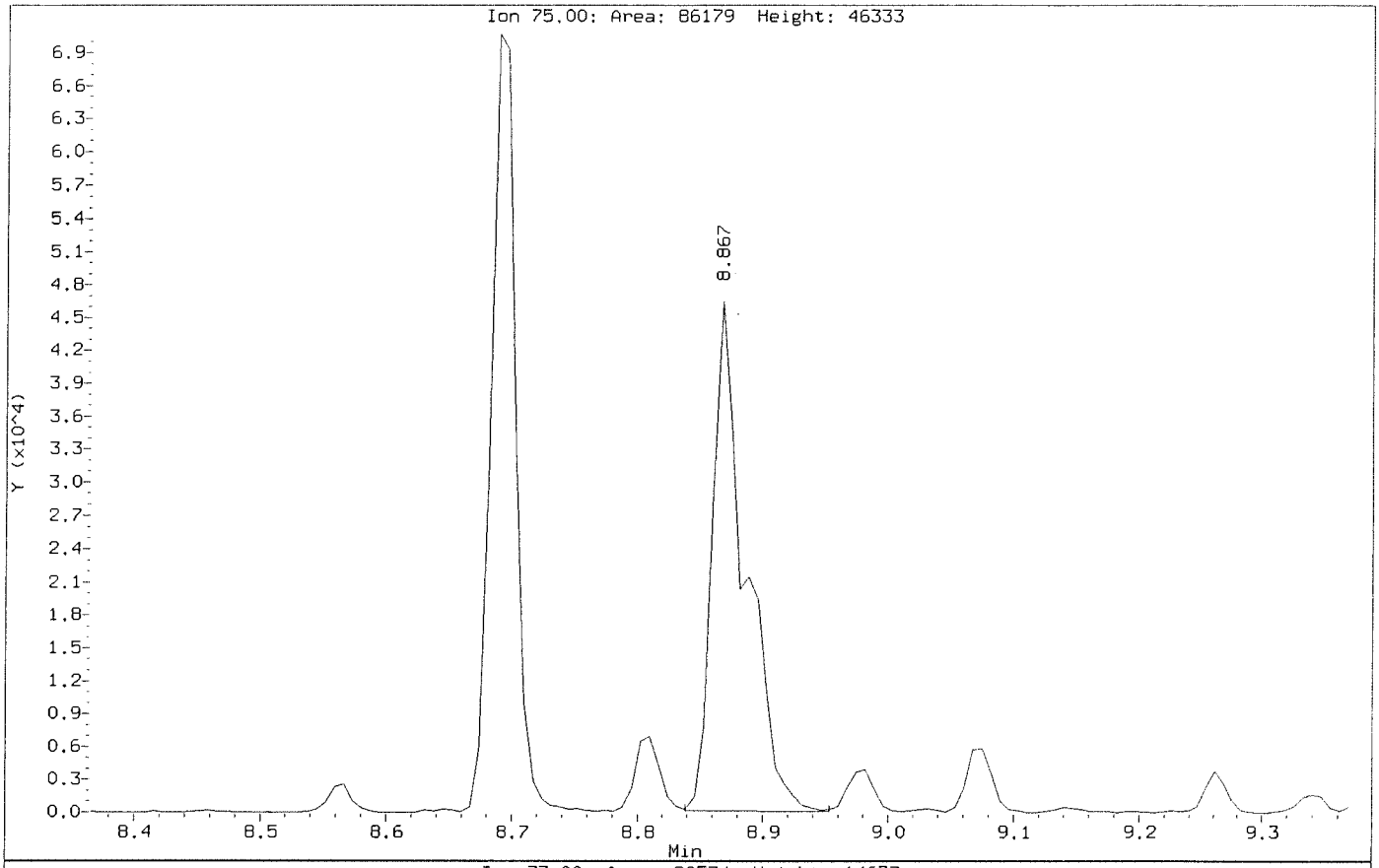
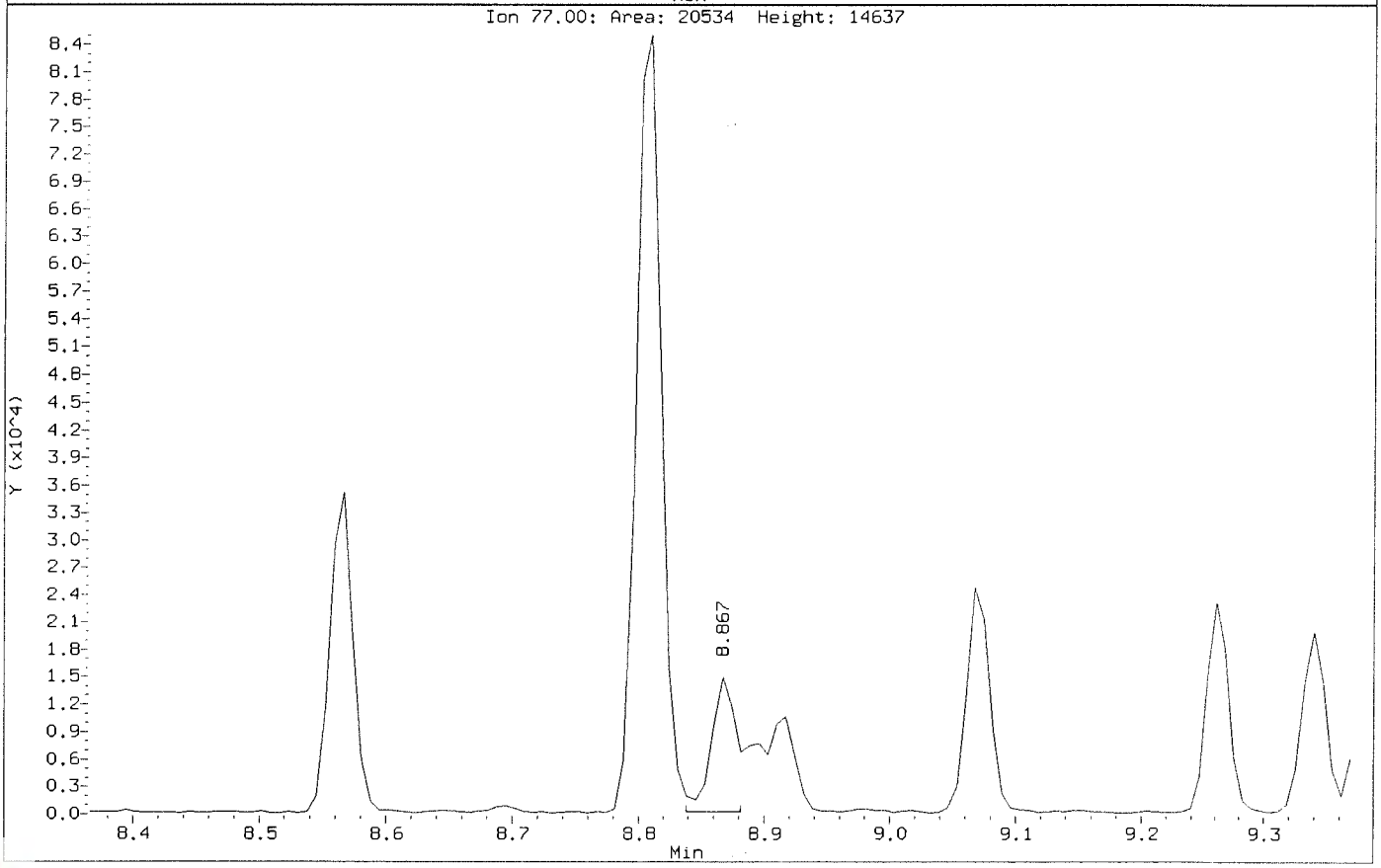
Sample Info: HS200700055-04MS;HS200700055-04MS;3;;MS
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\nahstws005\Target\chem\voa6.i\X200708.b\Before\X070819.D
Injection Date: 08-JUL-2020 18:13
Instrument: voa6.i
Client Sample ID: HS20070055-04MS

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





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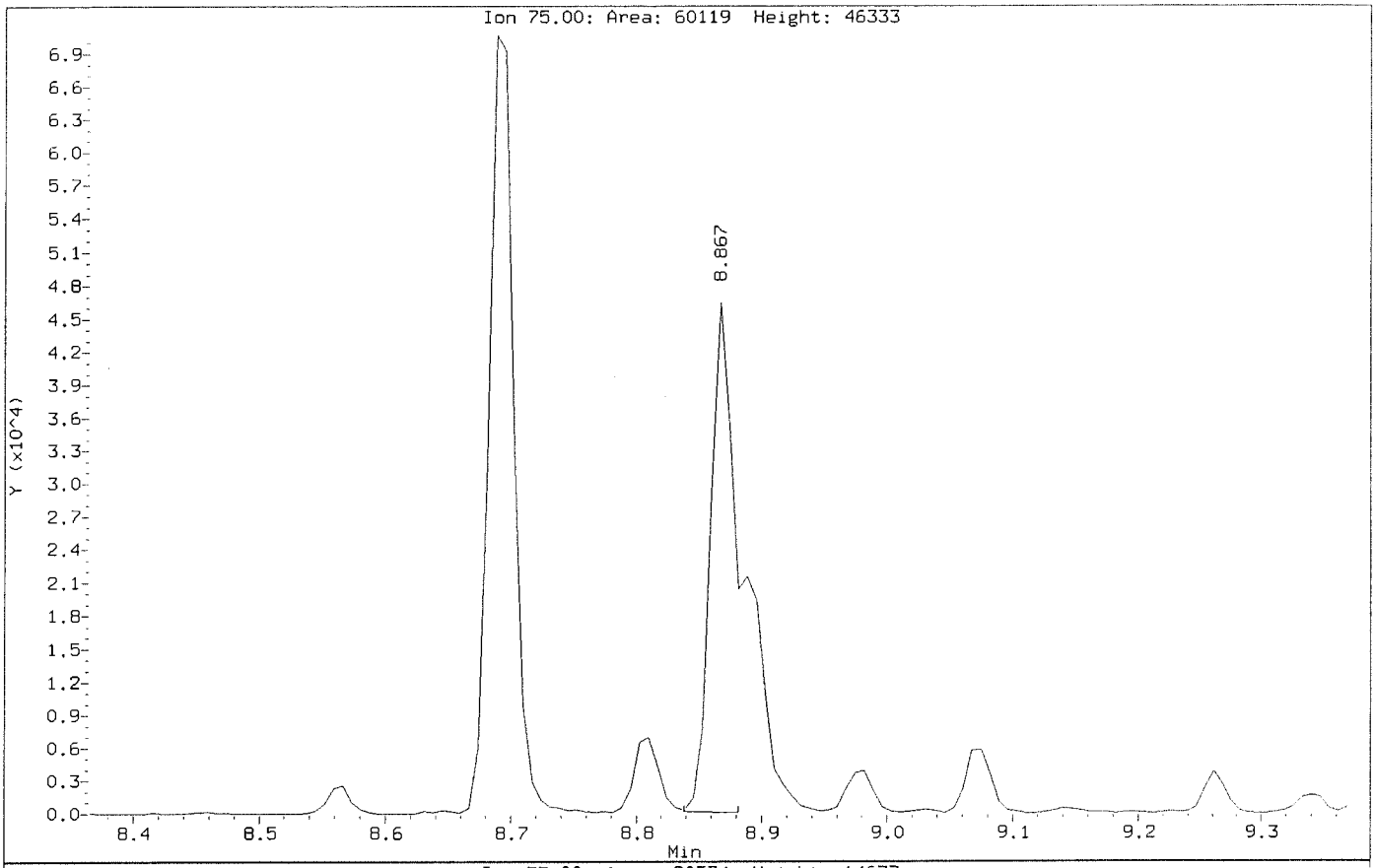
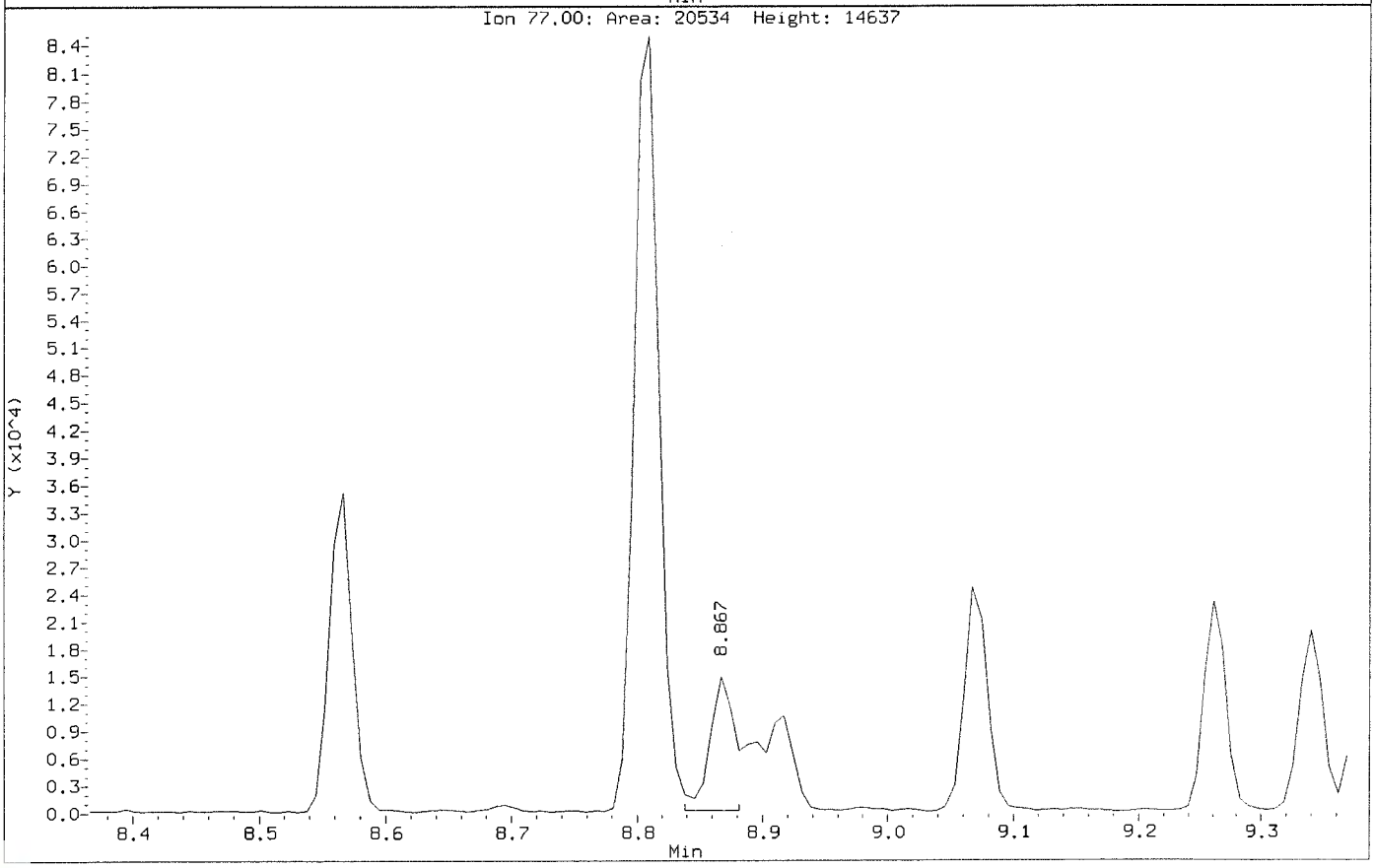
Instrument: voa6.i
Client Sample ID: HS20070055-04MS

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





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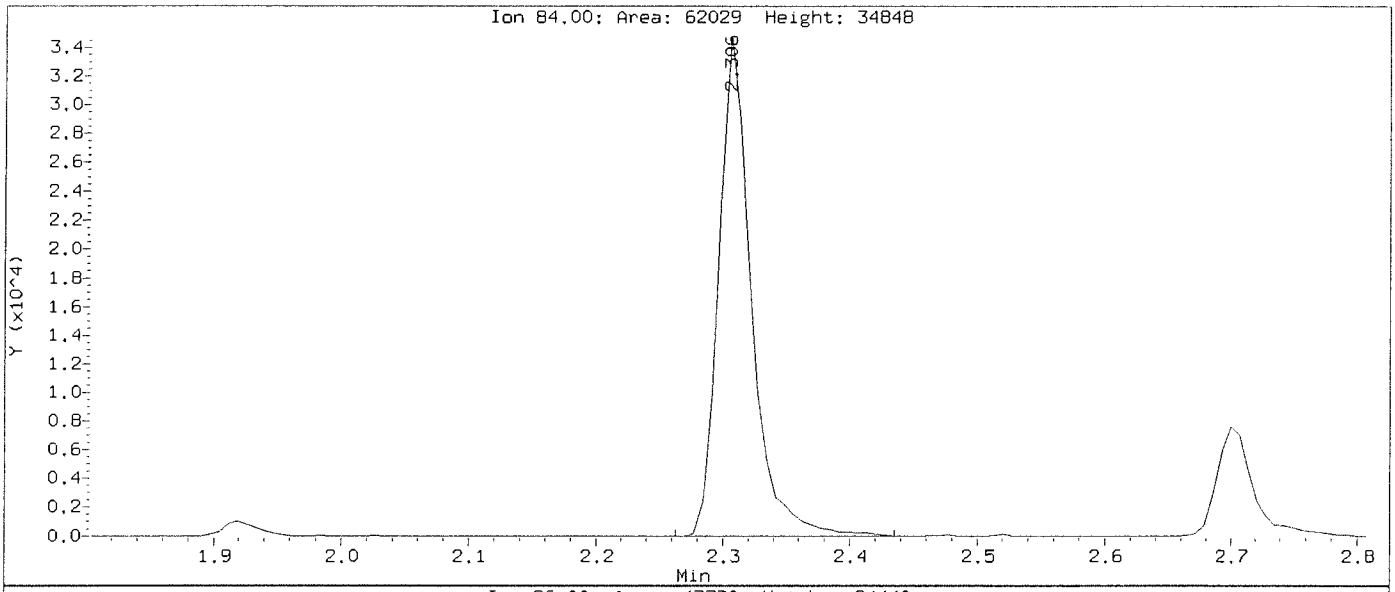
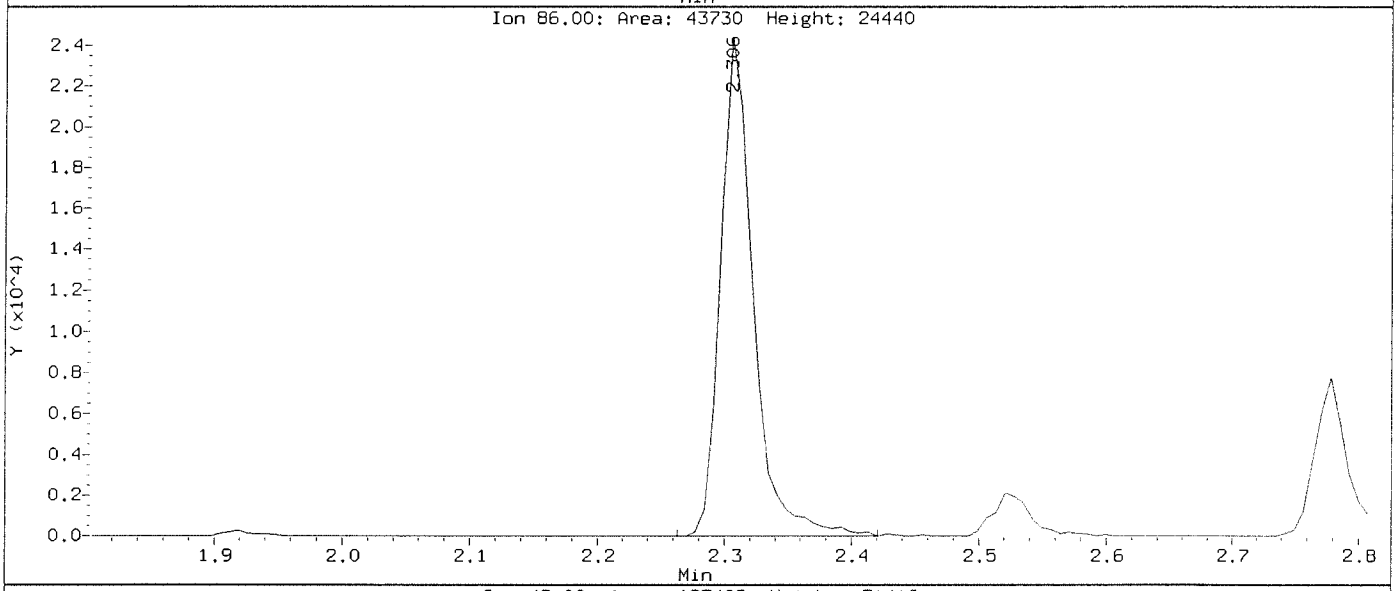
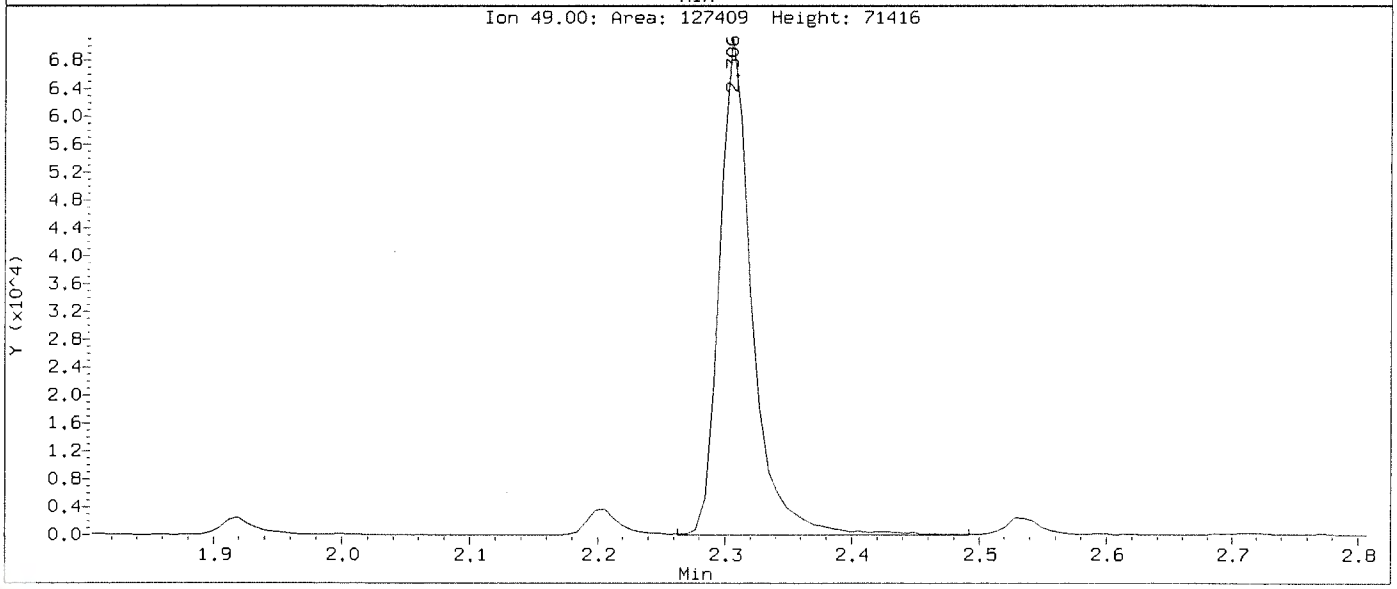
Injection Date: 08-JUL-2020 18:13
Instrument: voa6.i
Client Sample ID: HS20070055-04MS

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







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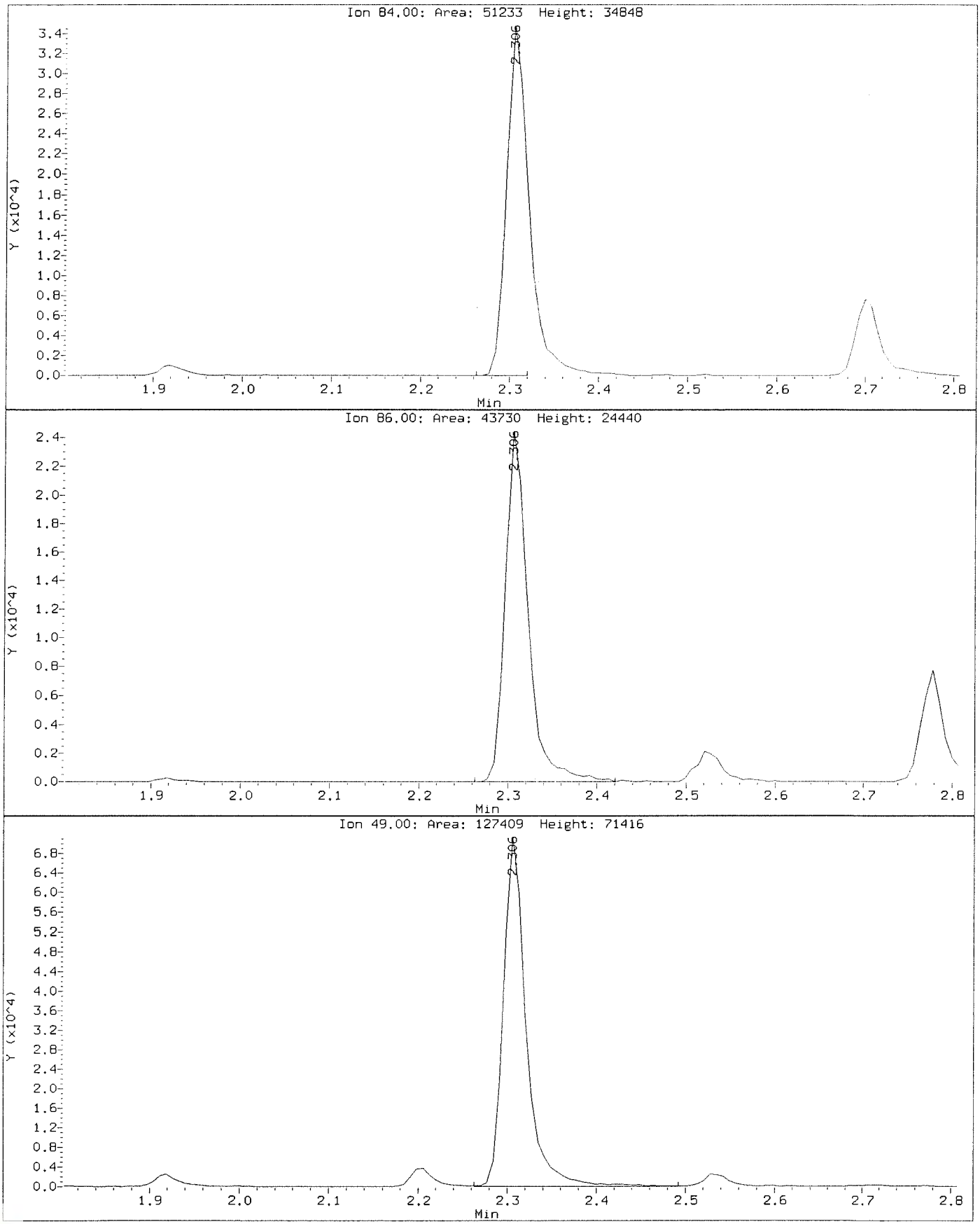
Client Sample ID: HS20070055-04MS

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



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Report Date: 13-Aug-2020 12:56

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Data file : \\nahstws005\Target\chem\voa6.i\X200708.b\X070820.D
Lab Smp Id: HS20070055-04MSD Client Smp ID: HS20070055-04MSD
Inj Date : 08-JUL-2020 18:37
Operator : PC Inst ID: voa6.i
Smp Info : HS20070055-04MSD;HS20070055-04MSD;3;;MSD
Misc Info : HS18090001;WATER;0;1;
Comment   :
Method   : \\nahstws005\Target\chem\voa6.i\X200708.b\8260W.m
Meth Date : 13-Aug-2020 12:56 voa6.i Quant Type: ISTD
Cal Date : 07-JUL-2020 13:53 Cal File: X070708.D
Als bottle: 18 QC Sample: MSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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

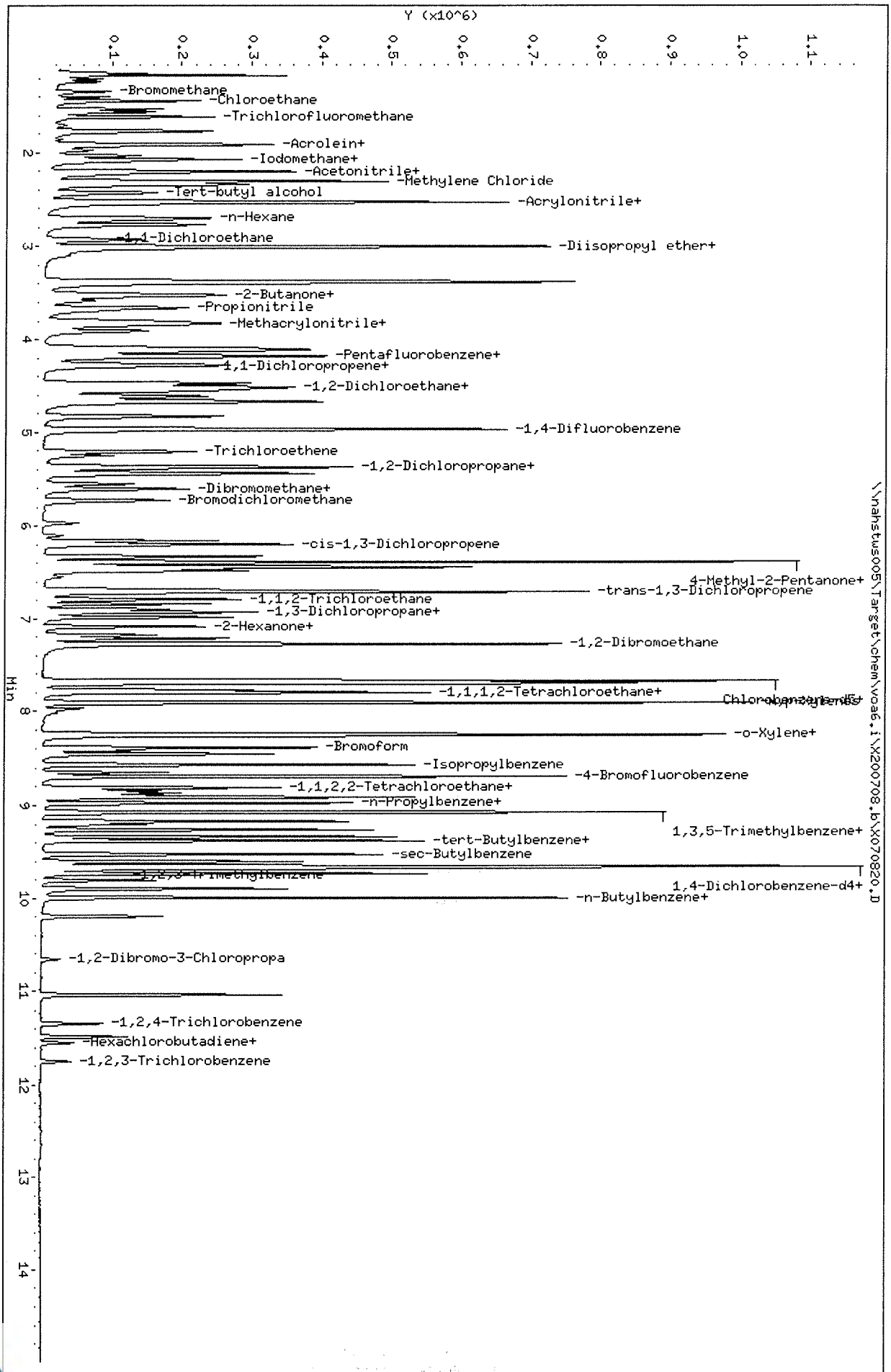
Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.189	4.189	(1.000)	313191	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	492723	50.0000	
* 47 Chlorobenzene-d5	117	7.670	7.671	(1.000)	428230	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.669	(1.000)	197403	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.979)	158236	46.3826	46.38
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	205507	43.7671	43.76
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	564706	50.1597	50.15
$ 69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	206617	50.6835	50.68
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	64410	19.5895	19.58
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.976)	107517	18.7397	18.73
68 1,1,2,2-Tetrachloroethane	83	8.838	8.845	(0.915)	68928	17.6617	17.66
53 1,1,2-Trichloroethane	83	6.839	6.840	(0.892)	51806	19.1241	19.12
22 1,1-Dichloroethane	63	2.928	2.929	(0.699)	158672	17.8764	17.87
11 1,1-Dichloroethene	96	1.918	1.919	(0.458)	48925	16.8704	16.87
32 1,1-Dichloropropene	75	4.289	4.283	(0.863)	90864	18.7270	18.72
93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.216)	11467	19.4046	19.40
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.918)	61089	17.7524	17.75(M)
90 1,2,4-Trichlorobenzene	180	11.345	11.338	(1.174)	23253	19.7229	19.72
79 1,2,4-Trimethylbenzene	105	9.382	9.383	(0.971)	233633	20.1257	20.12
89 1,2-Dibromo-3-Chloropropane	155	10.657	10.658	(1.103)	5100	15.4679	15.46
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	64317	18.6855	18.68
88 1,2-Dichlorobenzene	146	9.998	9.991	(1.035)	108512	18.8077	18.80

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
33	1,2-Dichloroethane	62	4.562	4.562	(0.918)	112752	18.4443	18.44
42	1,2-Dichloropropane	63	5.443	5.443	(1.095)	87111	19.0046	19.00
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	226665	20.1529	20.15
83	1,3-Dichlorobenzene	146	9.604	9.605	(0.994)	122315	19.3537	19.35
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	107597	18.8701	18.87
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.002)	122333	20.2368	20.23
26	2,2-Dichloropropane	77	3.516	3.516	(0.839)	103042	19.0033	19.00
24	2-Butanone	43	3.580	3.581	(0.855)	86598	25.7600	25.75
76	2-Chlorotoluene	91	8.974	8.974	(0.929)	192226	19.4018	19.40
52	2-Hexanone	43	7.090	7.090	(0.924)	144693	33.0070	33.00
77	4-Chlorotoluene	91	9.074	9.075	(0.939)	222499	19.8033	19.80
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	228018	20.3129	20.31
45	4-Methyl-2-Pentanone	43	6.324	6.324	(0.824)	217457	35.5659	35.56
10	Acetone	43	2.234	1.976	(0.533)	78342	6.93796	6.93
37	Benzene	78	4.519	4.519	(0.909)	264477	18.8131	18.81
74	Bromobenzene	156	8.809	8.810	(0.912)	72992	19.3821	19.38
29	Bromochloromethane	128	3.802	3.795	(0.908)	36379	16.7239	16.72
39	Bromodichloromethane	83	5.729	5.729	(1.153)	93554	18.9562	18.95
66	Bromoform	173	8.415	8.416	(1.097)	42342	17.8120	17.81
6	Bromomethane	94	1.338	1.339	(0.320)	40901	18.5499	18.54
19	Carbon Disulfide	76	2.076	2.069	(0.496)	322620	33.8771	33.87
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	91171	19.3889	19.38
59	Chlorobenzene	112	7.699	7.699	(1.004)	168905	19.3600	19.35
7	Chloroethane	64	1.403	1.403	(0.335)	48384	15.8995	15.89
28	Chloroform	83	3.910	3.910	(0.933)	123005	17.9234	17.92
3	Chloromethane	50	1.080	1.081	(0.258)	112085	17.4152	17.41
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.843)	73210	17.8831	17.88
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	109818	18.4658	18.46
55	Dibromochloromethane	129	7.176	7.176	(0.936)	66826	18.9973	18.99
44	Dibromomethane	93	5.557	5.558	(1.118)	44107	17.8540	17.85
2	Dichlorodifluoromethane	85	0.973	0.973	(0.232)	60445	15.9425	15.94
61	Ethylbenzene	106	7.799	7.800	(1.017)	91337	19.7809	19.78
91	Hexachlorobutadiene	225	11.481	11.481	(1.188)	19318	21.1487	21.14
67	Isopropylbenzene	105	8.566	8.566	(1.117)	273393	19.9613	19.96
62	m,p-Xylenes	106	7.907	7.907	(1.031)	217894	39.2410	39.24
17	Methylene Chloride	84	2.305	2.306	(0.550)	60631	17.7035	17.70(M)
87	n-Butylbenzene	91	9.998	9.999	(1.035)	205316	20.5052	20.50
73	n-Propylbenzene	91	8.917	8.917	(0.923)	327048	20.3138	20.31
92	Naphthalene	128	11.546	11.546	(1.195)	31669	16.7405	16.74
63	o-Xylene	106	8.243	8.244	(1.075)	106168	19.5170	19.51
81	sec-Butylbenzene	105	9.526	9.526	(0.986)	266505	20.1376	20.13
64	Styrene	104	8.265	8.258	(1.078)	182481	19.3023	19.30
78	tert-Butylbenzene	119	9.339	9.340	(0.967)	186851	20.6328	20.63
56	Tetrachloroethene	164	6.933	6.933	(0.904)	53744	20.5470	20.54
50	Toluene	91	6.453	6.453	(0.841)	273899	20.0476	20.04
20	trans-1,2-Dichloroethene	96	2.535	2.535	(0.605)	63976	18.6895	18.68
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	98723	18.4764	18.47
38	Trichloroethene	130	5.206	5.214	(1.048)	70285	19.2259	19.22
8	Trichlorofluoromethane	101	1.560	1.561	(0.373)	95040	17.5969	17.59
5	Vinyl Chloride	62	1.145	1.145	(0.273)	90739	16.4924	16.49

QC Flag Legend

M - Compound response manually integrated.



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Column phase: DB624

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

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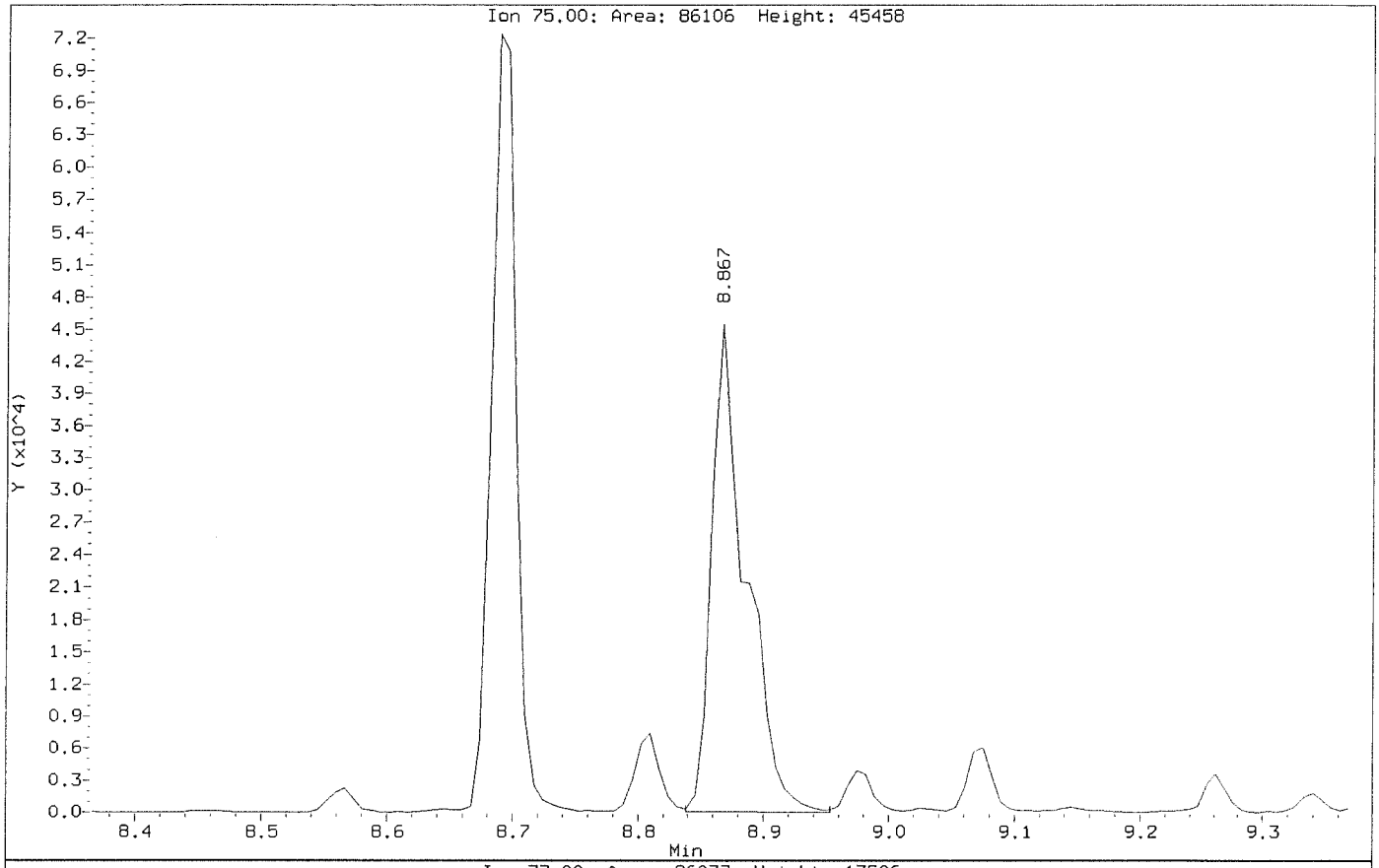
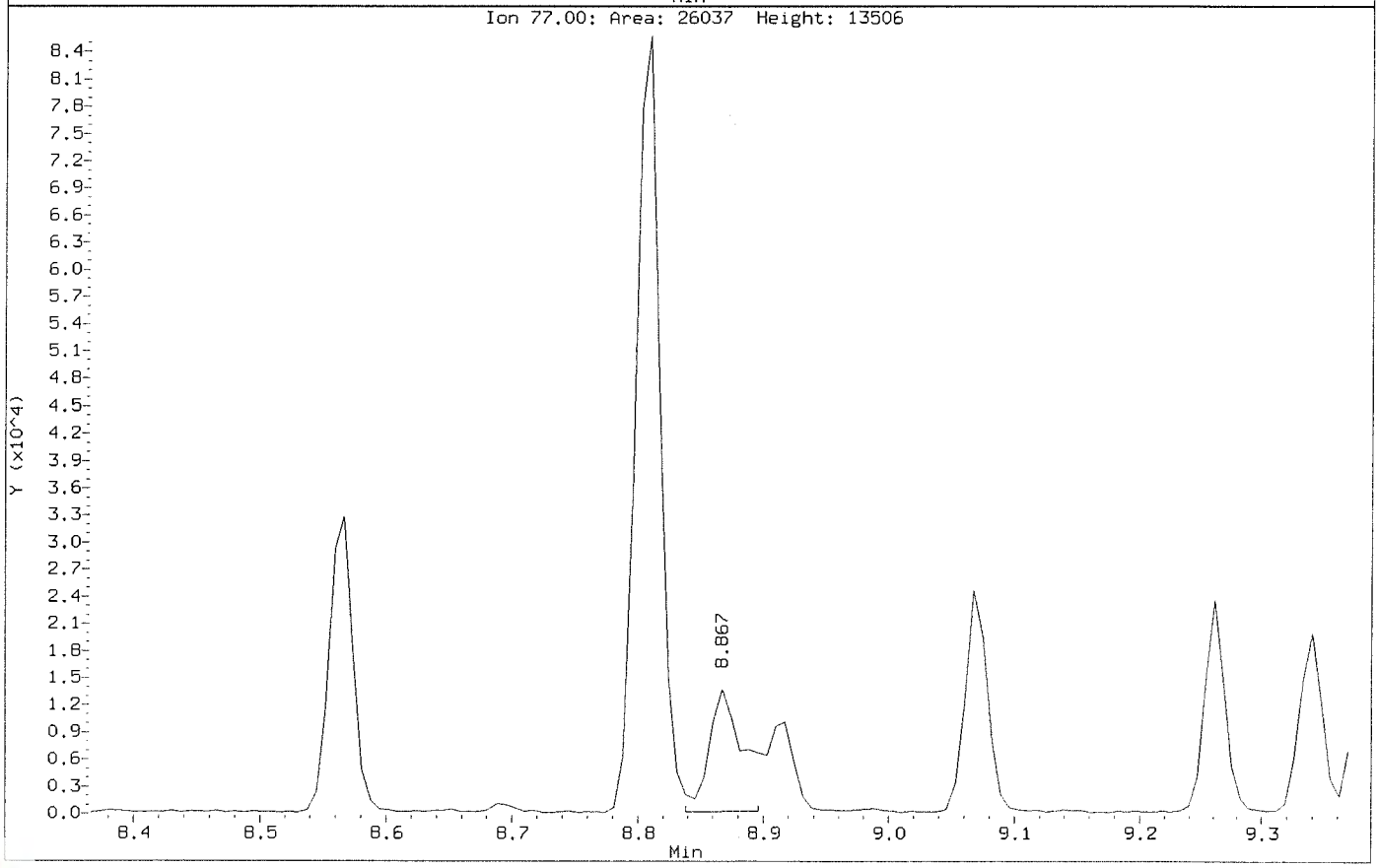
Instrument: voa6.i
Client Sample ID: HS20070055-04MSD

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





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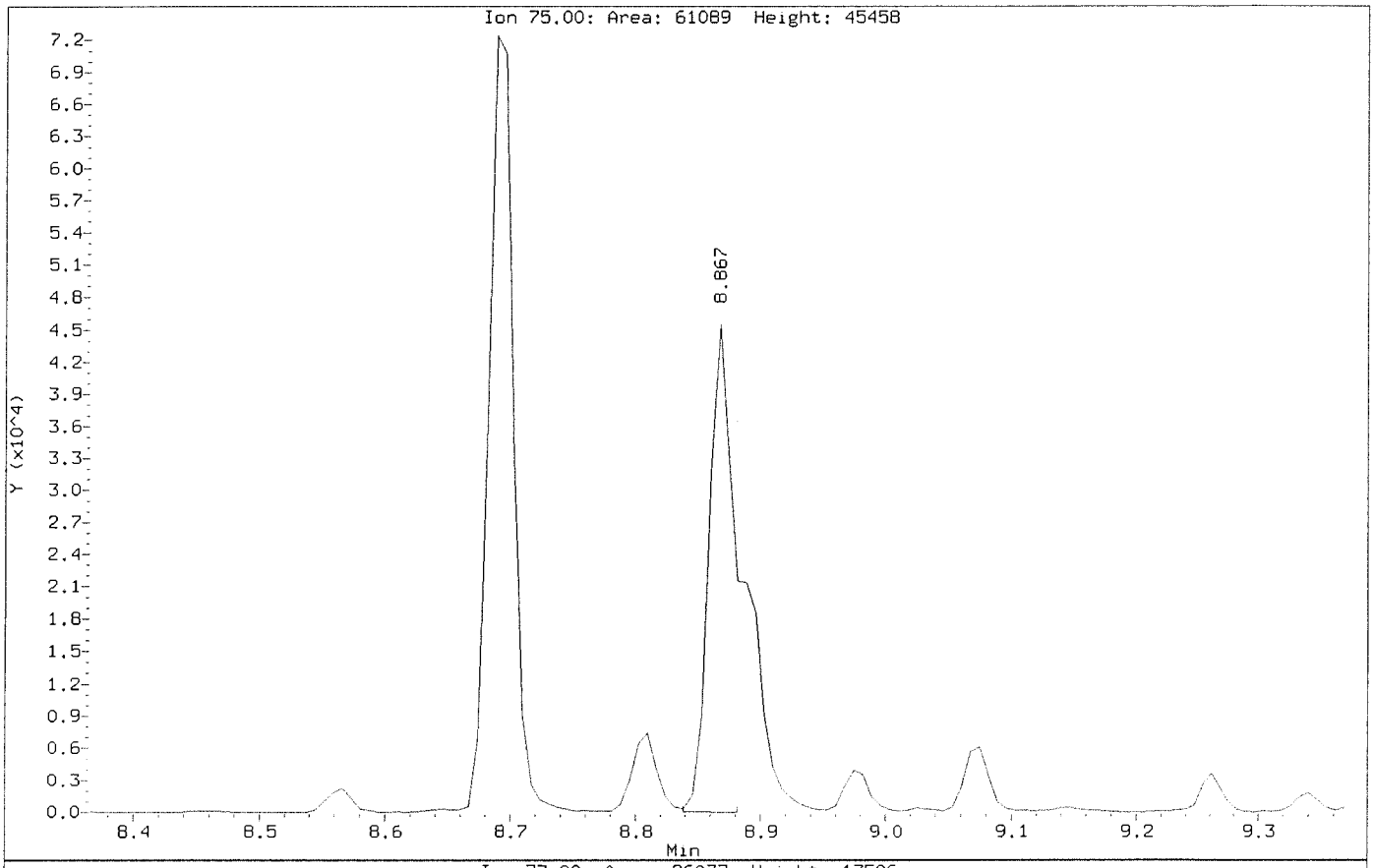
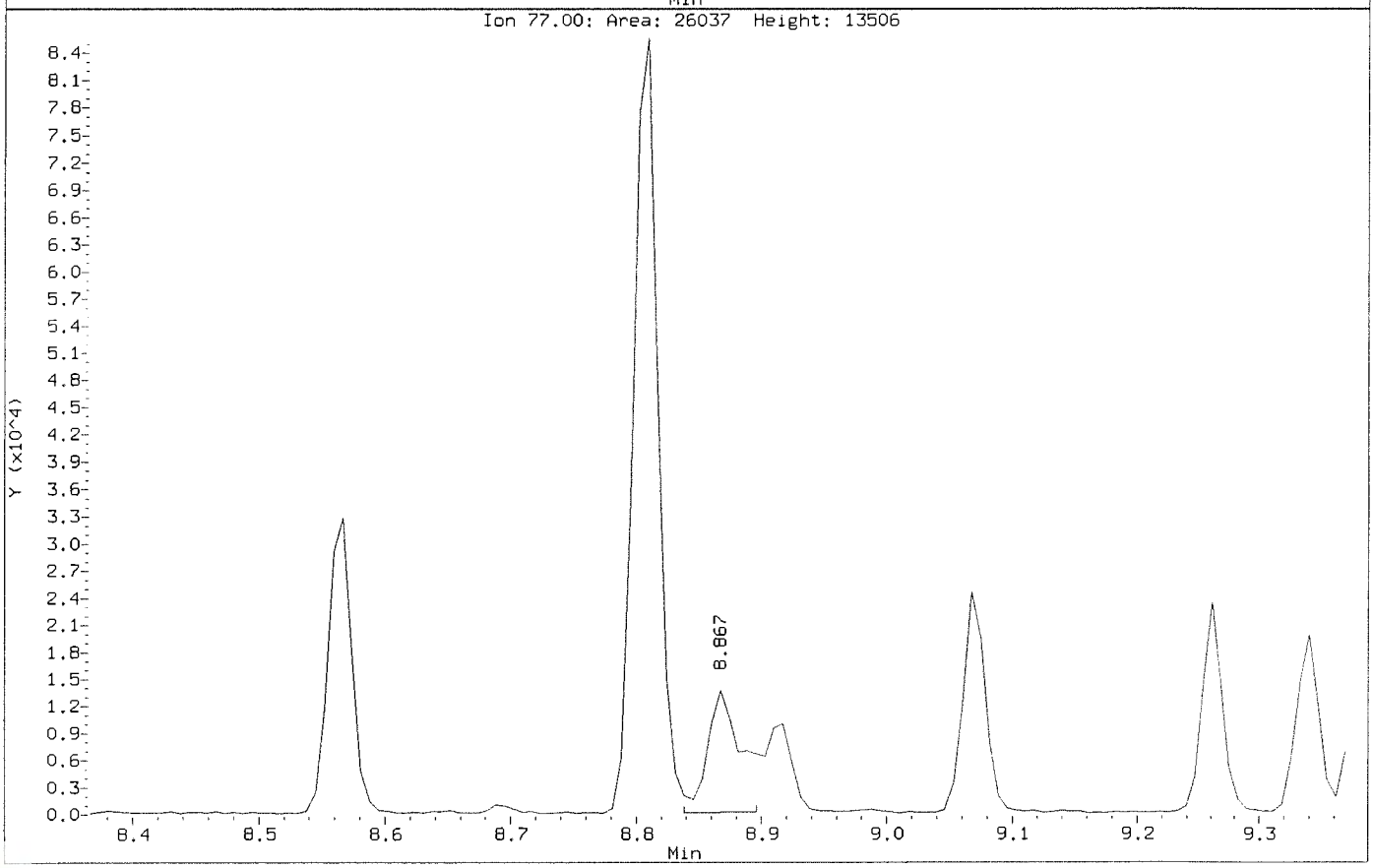
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





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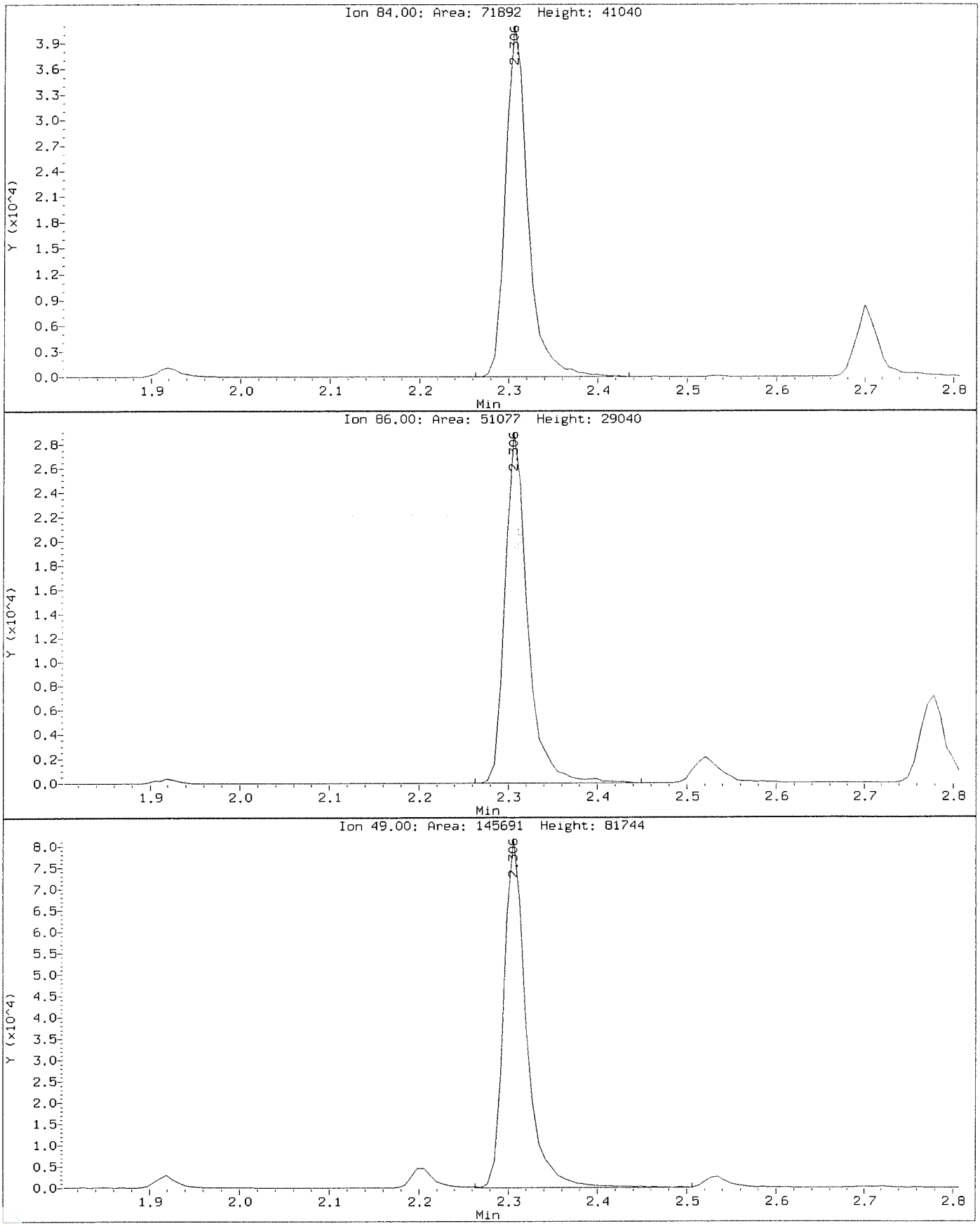
Instrument: voa6.i
Client Sample ID: HS20070055-04MSD

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



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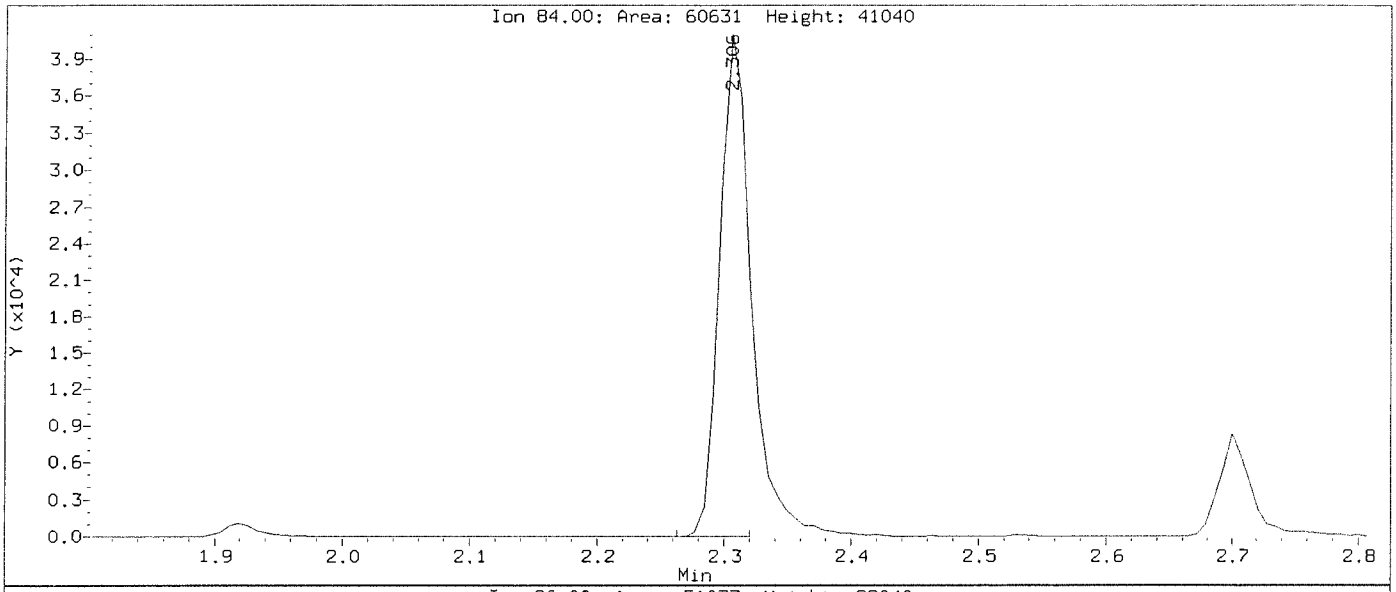
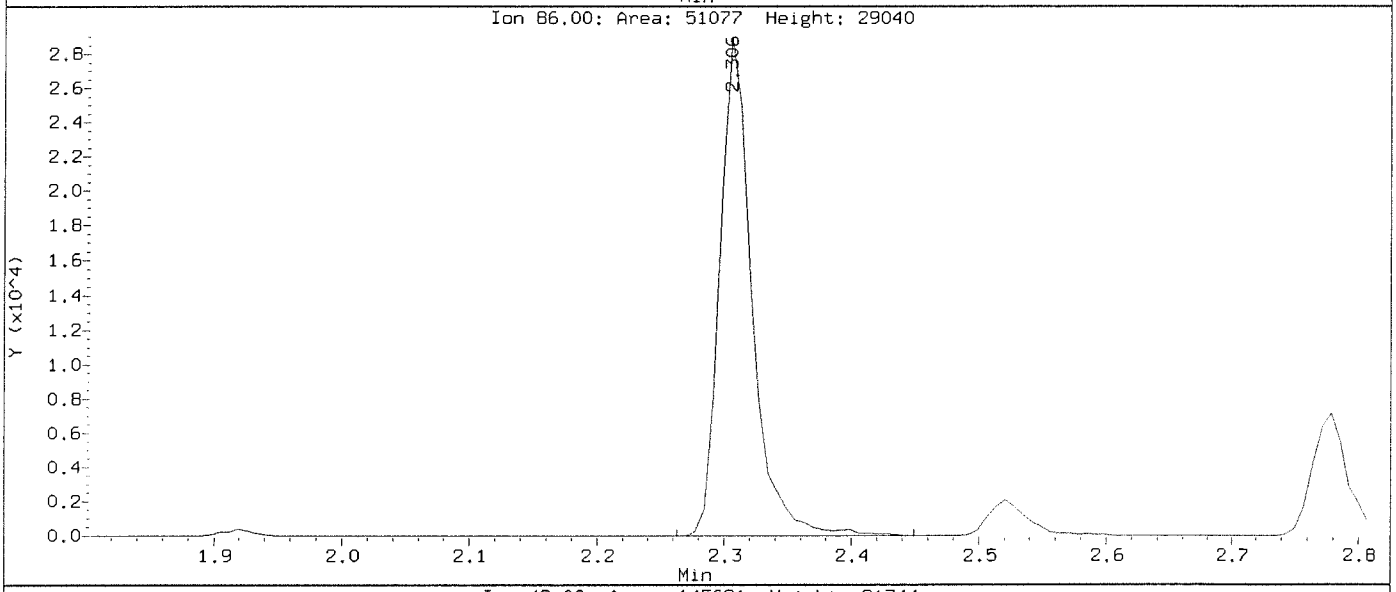
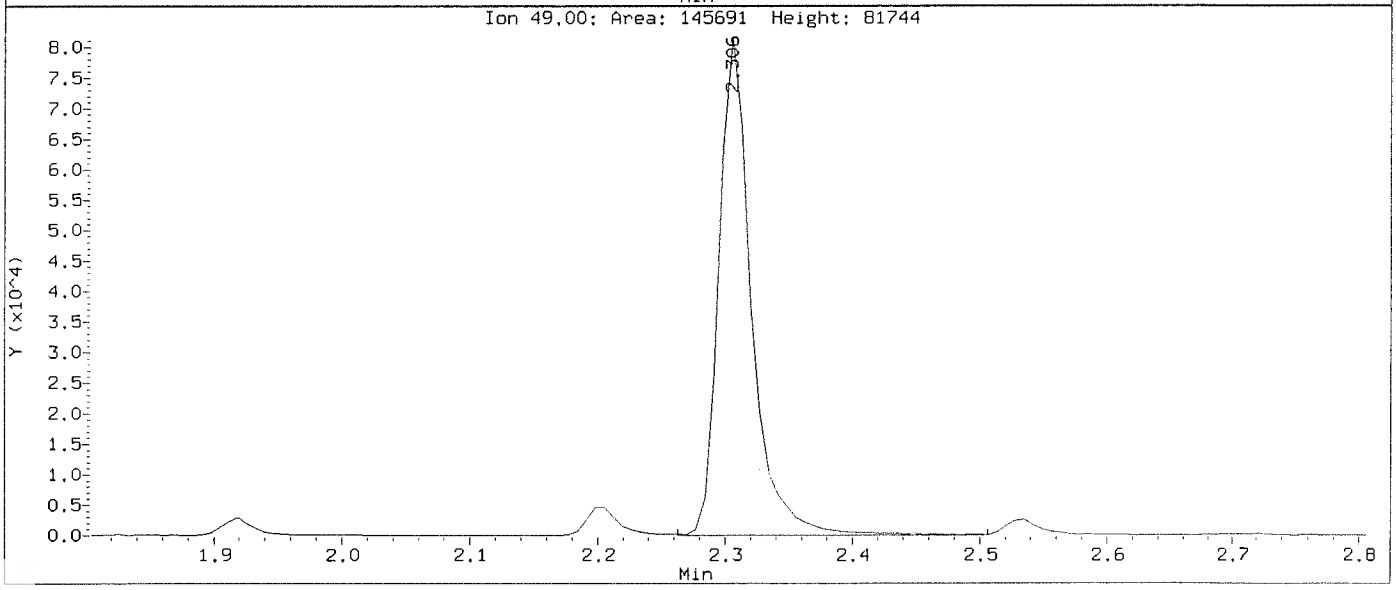
CAS Number: 75-09-2







ALS Laboratory Group

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Inj Date : 08-JUL-2020 23:00
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Misc Info : HS18090001;WATER;0;1;
Comment :
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Cal Date : 07-JUL-2020 13:53 Cal File: X070708.D
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Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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

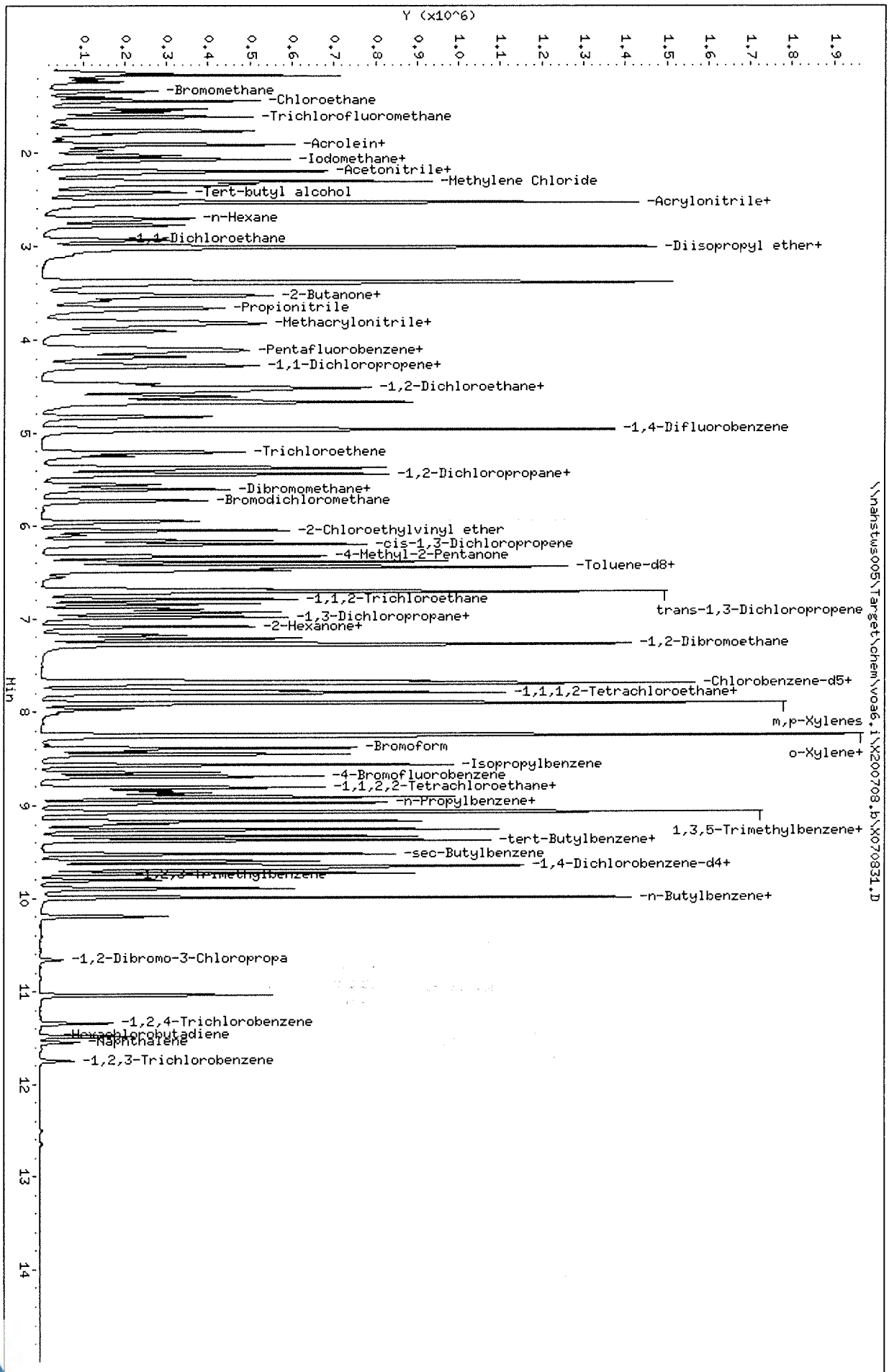
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.189	4.189	(1.000)	259246	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	433635	50.0000	
* 47 Chlorobenzene-d5	117	7.670	7.670	(1.000)	378119	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	158930	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.979)	143824	50.0000	51.01
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	195481	50.0000	50.39
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	508350	50.0000	51.13
$ 69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	181330	50.0000	50.36
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	137504	50.0000	47.36
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.976)	213915	50.0000	45.04
68 1,1,2,2-Tetrachloroethane	83	8.845	8.845	(0.915)	128957	50.0000	41.04
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	115636	50.0000	48.34
22 1,1-Dichloroethane	63	2.929	2.929	(0.699)	341591	50.0000	46.49
11 1,1-Dichloroethene	96	1.919	1.919	(0.458)	105218	50.0000	43.83
32 1,1-Dichloropropene	75	4.282	4.282	(0.862)	178495	50.0000	41.80
93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.215)	19777	50.0000	39.78
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	120938	50.0000	43.65(M)
90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	44530	50.0000	45.11
79 1,2,4-Trimethylbenzene	105	9.382	9.382	(0.970)	453626	50.0000	48.53
89 1,2-Dibromo-3-Chloropropane	155	10.657	10.657	(1.102)	9595	50.0000	38.48
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	137800	50.0000	45.33
88 1,2-Dichlorobenzene	146	9.998	9.998	(1.034)	220522	50.0000	47.47

Data File: \\nahstws005\Target\chem\voa6.i\X200708.b\X070831.D Page 2
Report Date: 13-Aug-2020 12:56

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)
33	1,2-Dichloroethane	62	4.562	4.562	(0.918)	253414	50.0000	47.10
42	1,2-Dichloropropane	63	5.443	5.443	(1.095)	191802	50.0000	47.54
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	423347	50.0000	46.75
83	1,3-Dichlorobenzene	146	9.605	9.605	(0.993)	221717	50.0000	43.57
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	235071	50.0000	46.68
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	226425	50.0000	46.78
26	2,2-Dichloropropane	77	3.516	3.516	(0.839)	193832	50.0000	43.18
24	2-Butanone	43	3.580	3.580	(0.855)	205501	100.000	85.56
76	2-Chlorotoluene	91	8.974	8.974	(0.928)	379564	50.0000	47.58
52	2-Hexanone	43	7.090	7.090	(0.924)	310019	100.000	85.44
77	4-Chlorotoluene	91	9.074	9.074	(0.939)	440953	50.0000	48.74
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	372808	50.0000	41.25
45	4-Methyl-2-Pentanone	43	6.324	6.324	(0.824)	461491	100.000	90.02
10	Acetone	43	1.976	1.976	(0.472)	156388	100.000	65.34
37	Benzene	78	4.519	4.519	(0.909)	578361	50.0000	46.74
74	Bromobenzene	156	8.809	8.809	(0.911)	153836	50.0000	50.73
29	Bromochloromethane	128	3.802	3.802	(0.908)	79653	50.0000	44.23
39	Bromodichloromethane	83	5.729	5.729	(1.153)	208248	50.0000	47.94
66	Bromoform	173	8.415	8.415	(1.097)	91064	50.0000	43.38
6	Bromomethane	94	1.338	1.338	(0.320)	89813	50.0000	49.33
19	Carbon Disulfide	76	2.076	2.076	(0.496)	650174	100.000	82.47
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	173156	50.0000	41.84
59	Chlorobenzene	112	7.699	7.699	(1.004)	353453	50.0000	45.88
7	Chloroethane	64	1.403	1.403	(0.335)	106688	50.0000	45.54
28	Chloroform	83	3.910	3.910	(0.933)	271040	50.0000	47.71
3	Chloromethane	50	1.080	1.080	(0.258)	246396	50.0000	46.24
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.843)	162943	50.0000	48.08
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	239967	50.0000	45.84
55	Dibromochloromethane	129	7.176	7.176	(0.936)	145596	50.0000	46.87
44	Dibromomethane	93	5.557	5.557	(1.118)	98993	50.0000	45.53
2	Dichlorodifluoromethane	85	0.973	0.973	(0.232)	130986	50.0000	41.73
61	Ethylbenzene	106	7.799	7.799	(1.017)	180377	50.0000	44.24
91	Hexachlorobutadiene	225	11.481	11.481	(1.187)	34793	50.0000	45.65
67	Isopropylbenzene	105	8.566	8.566	(1.117)	500259	50.0000	41.36
62	m,p-Xylenes	106	7.907	7.907	(1.031)	409662	100.000	83.55
17	Methylene Chloride	84	2.305	2.305	(0.550)	127996	50.0000	45.14(M)
87	n-Butylbenzene	91	9.998	9.998	(1.034)	354436	50.0000	43.96
73	n-Propylbenzene	91	8.917	8.917	(0.922)	594217	50.0000	45.84
92	Naphthalene	128	11.546	11.546	(1.194)	60239	50.0000	39.14
63	o-Xylene	106	8.244	8.244	(1.075)	214051	50.0000	44.56
81	sec-Butylbenzene	105	9.526	9.526	(0.985)	449385	50.0000	42.17
64	Styrene	104	8.265	8.265	(1.078)	377181	50.0000	45.18
78	tert-Butylbenzene	119	9.339	9.339	(0.966)	337122	50.0000	46.23
56	Tetrachloroethene	164	6.933	6.933	(0.904)	101479	50.0000	43.93
50	Toluene	91	6.453	6.453	(0.841)	570228	50.0000	47.26
20	trans-1,2-Dichloroethene	96	2.535	2.535	(0.605)	134449	50.0000	47.44
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	210805	50.0000	44.82
38	Trichloroethene	130	5.214	5.214	(1.049)	152540	50.0000	47.41
8	Trichlorofluoromethane	101	1.560	1.560	(0.373)	191362	50.0000	42.80
5	Vinyl Chloride	62	1.145	1.145	(0.273)	198429	50.0000	43.57

QC Flag Legend

M - Compound response manually integrated.



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Column phase: DB624

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

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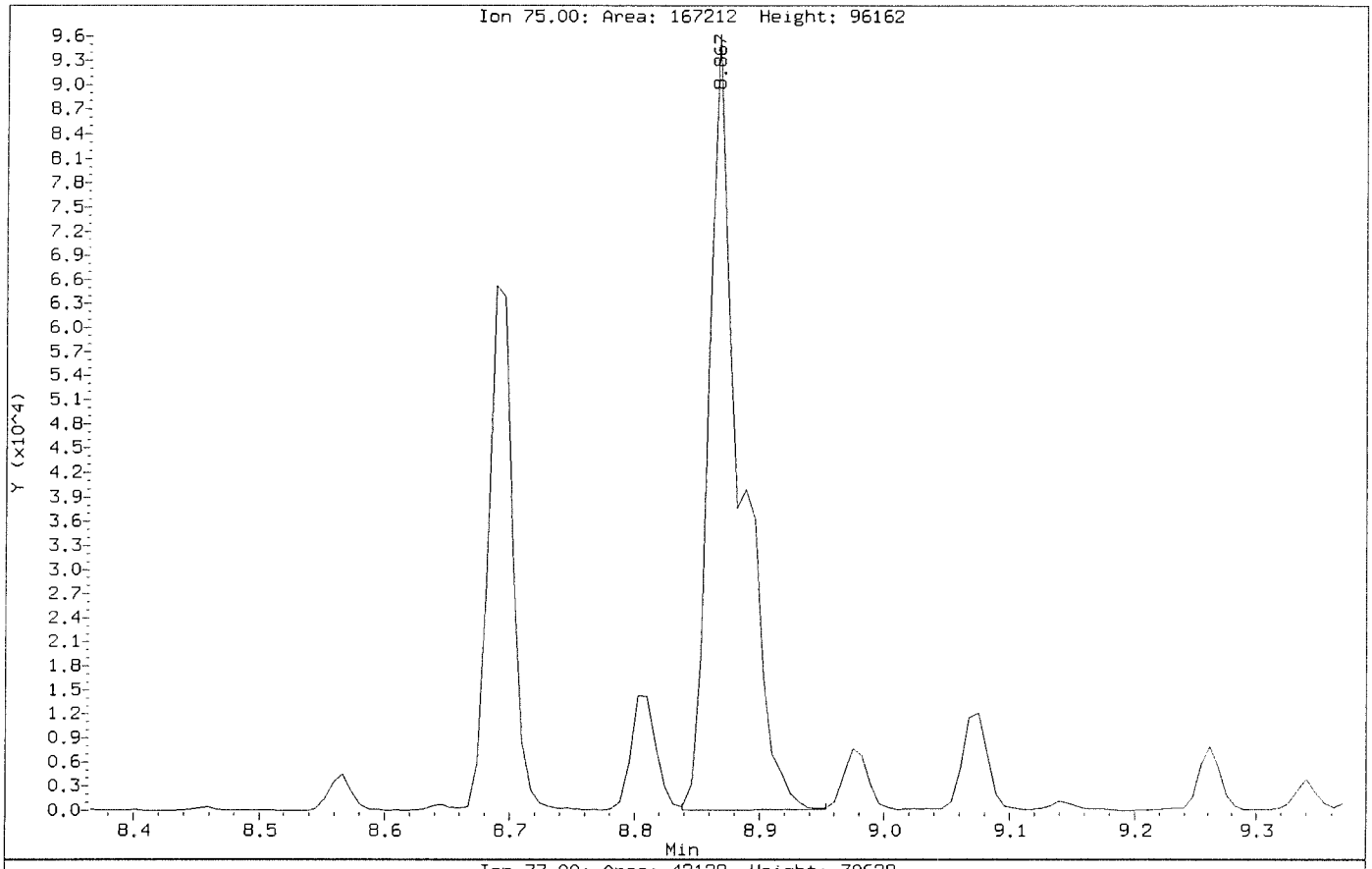
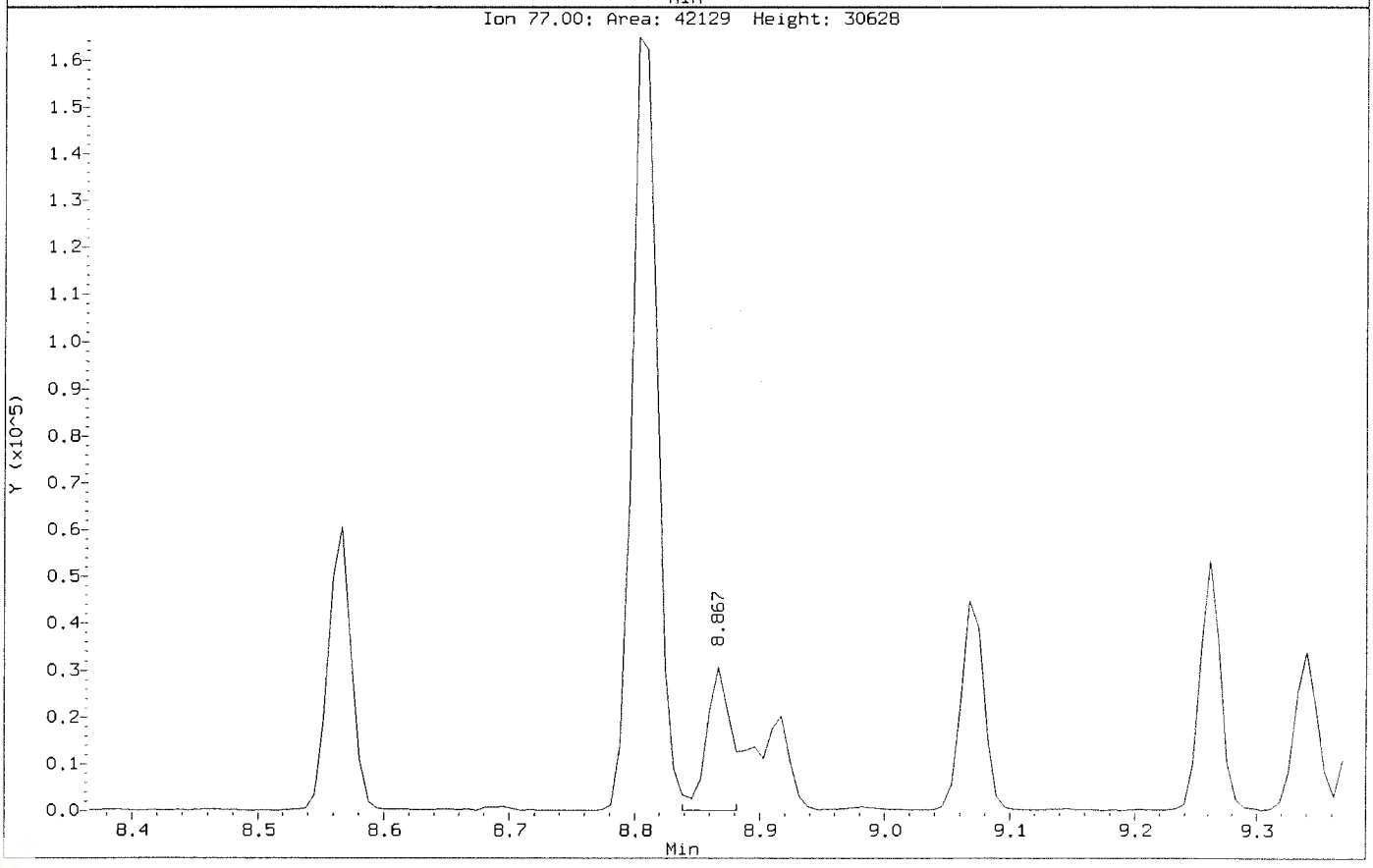
Instrument: voa6.i
Client Sample ID: CCV-END

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





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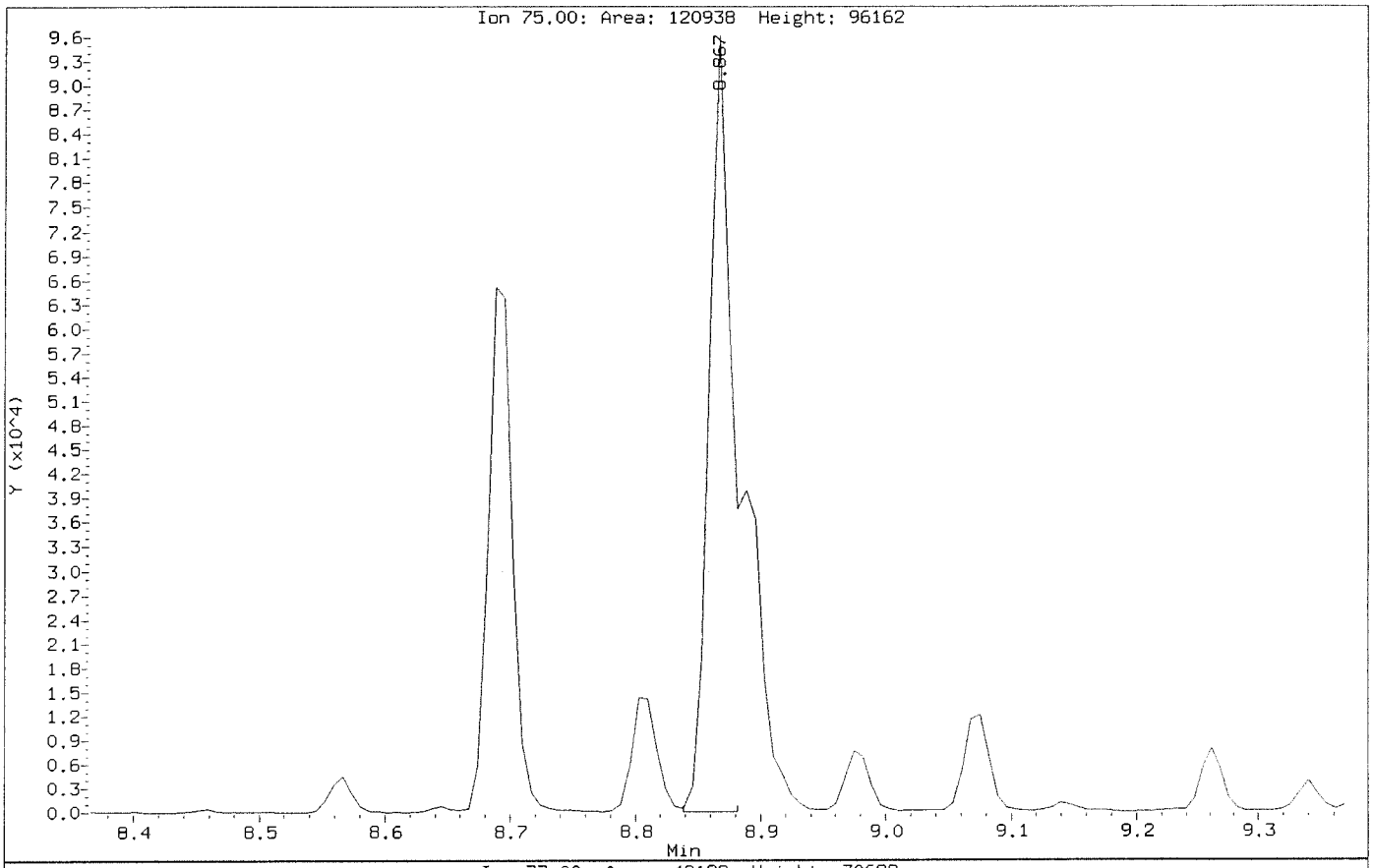
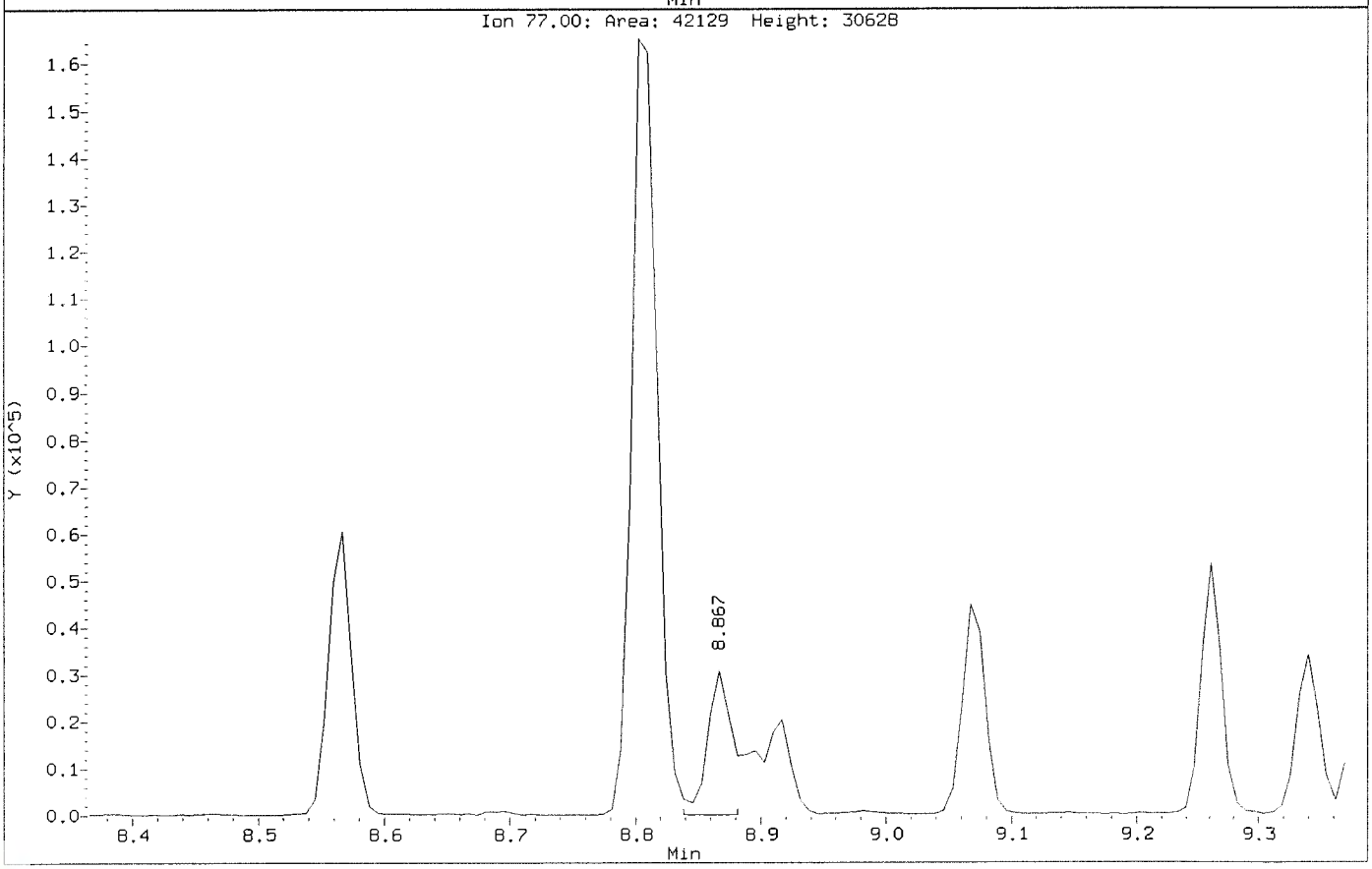
Instrument: voa6.i
Client Sample ID: CCV-END

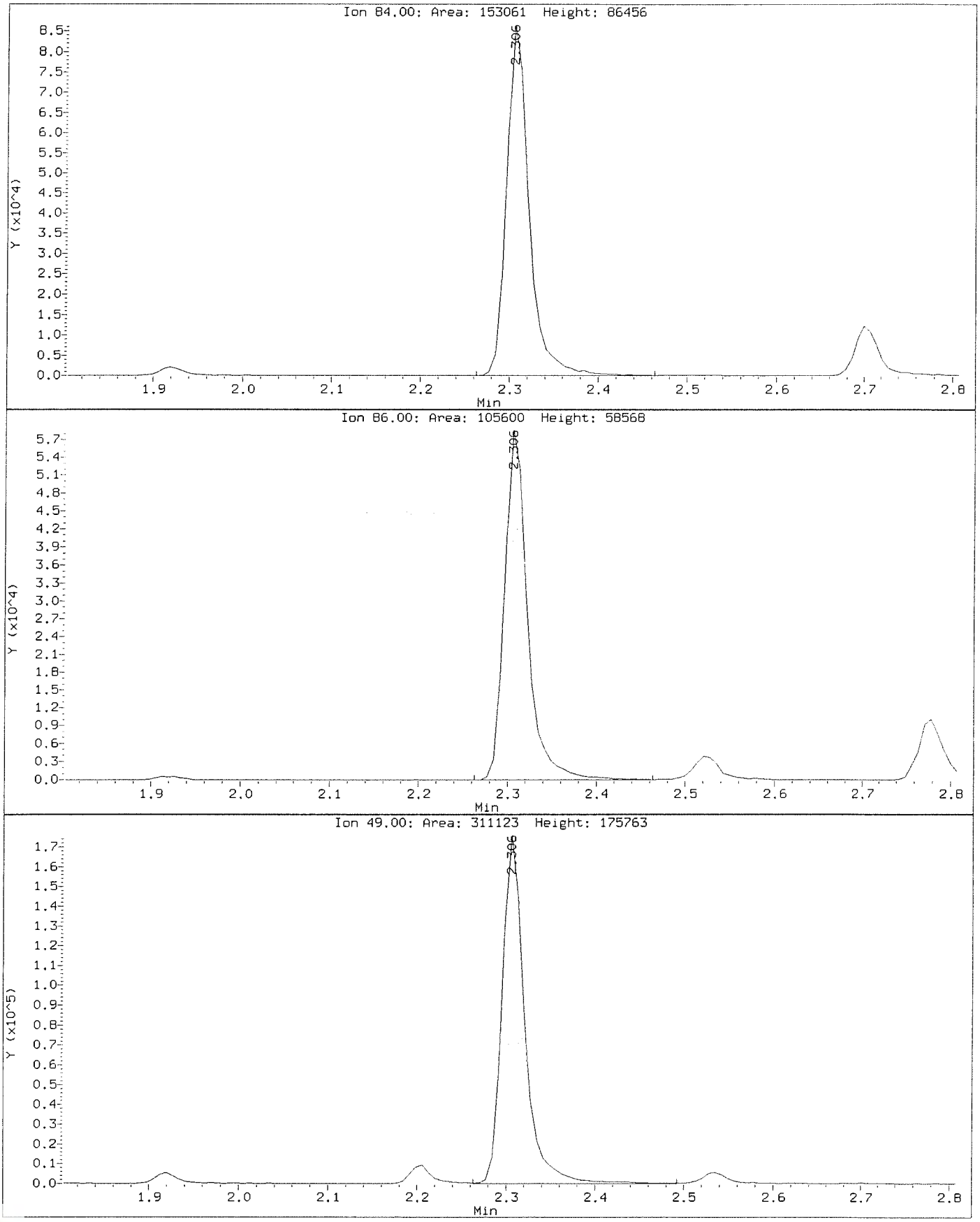
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





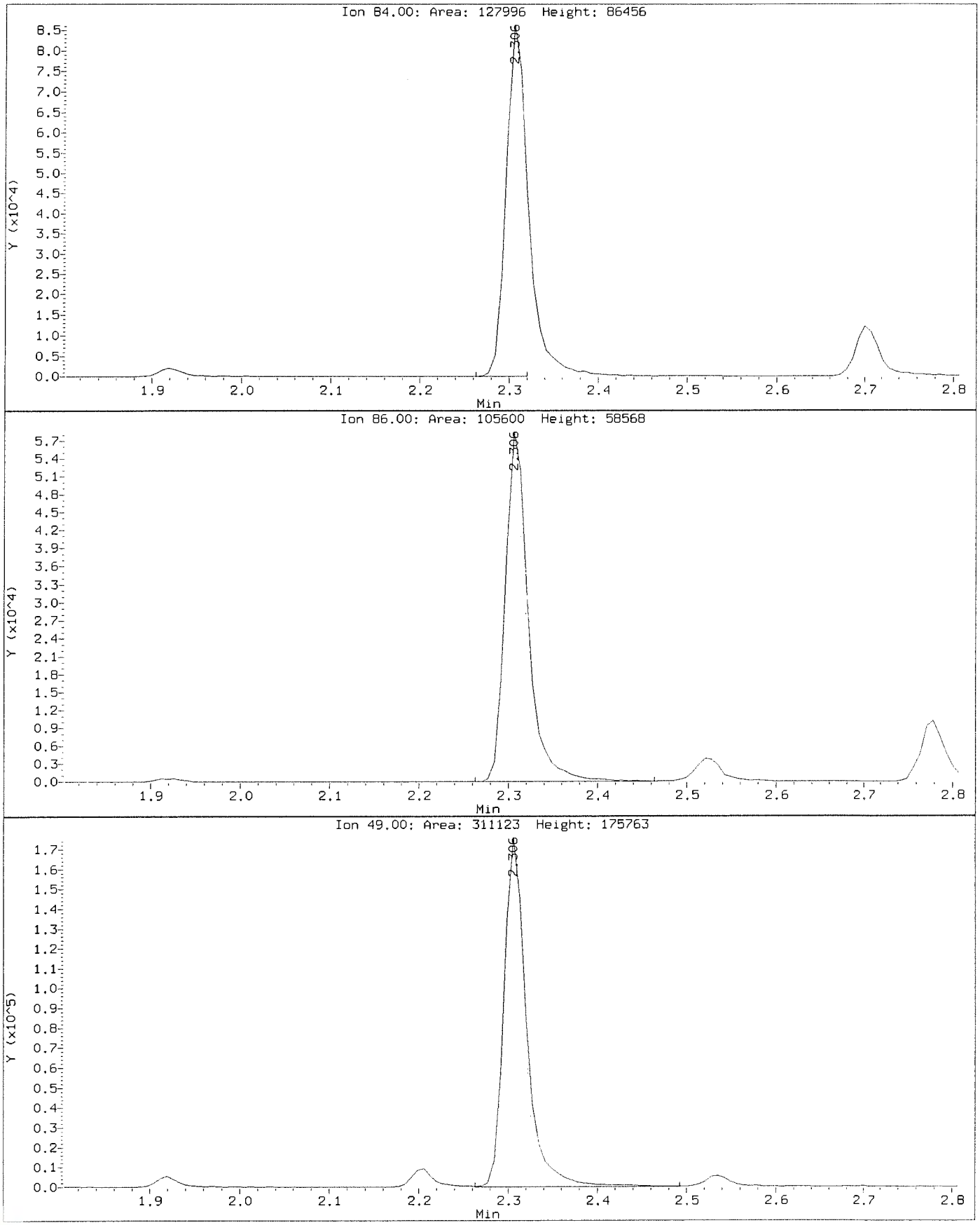
Data File: \\nahstws005\Target\chem\voa6.i\X200708.b\Before\X070831.D
Injection Date: 08-JUL-2020 23:00
Instrument: voa6.i
Client Sample ID: CCV-END

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



Data File: \\nahstws005\Target\chem\voa6.i\X200708.b\X070831.D
Injection Date: 08-JUL-2020 23:00
Instrument: voa6.i
Client Sample ID: CCV-END

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



HS20061390 - ME - ICP_W_DOD

ALS WO# HS20061390

ALS Houston, US Date: 15-Jul-20

FORM 12 - PREPARATION LOG

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
WorkOrder: HS20061390
Start Date: 29-Jun-2020 10:30 End Date: 29-Jun-2020 14:30

Batch ID: 154955
Prep Code: 3010A
Method: SW3010A
Technician:

SampID	ClientID	Matrix	Init Wt	Init Vol	FinalVol (mL)	PrepFac
HS20061218-02MS				10	10	1
HS20061218-02MSD				10	10	1
HS20061218-02PDS				10	10	1
HS20061218-02SD				10	10	1
HS20061390-08	LHSMW06_062520	Groundwater		10	10	1
LCS-154955				10	10	1
MBLK-154955				10	10	1

FORM 13 - ANALYSIS RUN LOG

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
WorkOrder: HS20061390
Start Date: 02-Jul-2020 End Date: 02-Jul-2020

Run ID:ICPMS06_364391
Instrument:ICPMS06
Method:

Sample No.	D/F	Time	FileID	Analytes
ICPMS06_364391_Tune	1	02-Jul-2020 00:00	ICPMS06_364391_Tune_1	
CAL BLK	1	02-Jul-2020 11:19	011CALB.d_5647952	AS
2/10/200	1	02-Jul-2020 11:21	012CALS.d_5647953	AS
5/25/500	1	02-Jul-2020 11:23	013CALS.d_5647954	AS
10/50/100	1	02-Jul-2020 11:25	014CALS.d_5647955	AS
100/500/10K	1	02-Jul-2020 11:27	015CALS.d_5647956	AS
200/1000/20K	1	02-Jul-2020 11:29	016CALS.d_5647957	AS
ICV	1	02-Jul-2020 11:34	018_ICV.d_5647959	AS
LLICV5	1	02-Jul-2020 11:37	020LCV5.d_5647961	AS
ICB	1	02-Jul-2020 11:39	021_ICB.d_5647962	AS
LLICV2	1	02-Jul-2020 11:48	022LCV2.d_5647963	AS
ICSA	1	02-Jul-2020 11:50	023ICSA.d_5647964	AS
ICSAB	1	02-Jul-2020 11:52	024ICSB.d_5647965	AS
CCV 1	1	02-Jul-2020 12:20	033_CCV.d_5648601	AS
CCB 1	1	02-Jul-2020 12:22	034_CCB.d_5648602	AS
MBLK-154955	1	02-Jul-2020 12:25	035SMPL.d_5648603	AS
LCS-154955	1	02-Jul-2020 12:27	036SMPL.d_5648604	AS
ZZZZZZSD	5	02-Jul-2020 12:35	039SMPL.d_5648606	AS
ZZZZZZMS	1	02-Jul-2020 12:37	040SMPL.d_5648607	AS
ZZZZZZMSD	1	02-Jul-2020 12:39	041SMPL.d_5648608	AS
ZZZZZZPDS	1	02-Jul-2020 12:41	042SMPL.d_5648609	AS
CCV 2	1	02-Jul-2020 12:45	044_CCV.d_5648611	AS
CCB 2	1	02-Jul-2020 12:46	045_CCB.d_5648612	AS
LHSMW06_062520	1	02-Jul-2020 13:00	052SMPL.d_5648597	AS
CCV 3	1	02-Jul-2020 13:08	054_CCV.d_5648599	AS
CCB 3	1	02-Jul-2020 13:10	055_CCB.d_5648600	AS
CCV 4	1	02-Jul-2020 13:33	066_CCV.d_5648646	AS
CCB 4	1	02-Jul-2020 13:35	067_CCB.d_5648647	AS
CCV 5	1	02-Jul-2020 13:50	075_CCV.d_5648655	AS
CCB 5	1	02-Jul-2020 13:52	076_CCB.d_5648656	AS
CCV 6	1	02-Jul-2020 14:38	084_CCV.d_5648852	AS
CCB 6	1	02-Jul-2020 14:39	085_CCB.d_5648853	AS
CCV 7	1	02-Jul-2020 15:08	096_CCV.d_5648883	AS
CCB 7	1	02-Jul-2020 15:10	097_CCB.d_5648884	AS
CCV 8	1	02-Jul-2020 15:34	108_CCV.d_5648886	AS
CCB 8	1	02-Jul-2020 15:36	109_CCB.d_5648887	AS

ALS Houston, US Date: 15-Jul-20

Form 2 - Initial and Continuing Calibration Verification

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
WorkOrder: HS20061390

Run ID: ICPMS06_364391
Instrument: ICPMS06
Method: SW6020

ICV	Date: 02-Jul-2020 11:34		Seq: 5647959	ICV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Arsenic	100	101.253	101	90-110	

CCV1	Date: 02-Jul-2020 12:20		Seq: 5648601	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Arsenic	100	99.887	100	90-110	

CCV2	Date: 02-Jul-2020 12:45		Seq: 5648611	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Arsenic	100	99.002	99	90-110	

CCV3	Date: 02-Jul-2020 13:08		Seq: 5648599	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Arsenic	100	98.371	98	90-110	

CCV4	Date: 02-Jul-2020 13:33		Seq: 5648646	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Arsenic	100	100.547	101	90-110	

CCV5	Date: 02-Jul-2020 13:50		Seq: 5648655	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Arsenic	100	98.837	99	90-110	

CCV6	Date: 02-Jul-2020 14:38		Seq: 5648852	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Arsenic	100	98.837	99	90-110	

CCV7	Date: 02-Jul-2020 15:08		Seq: 5648883	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Arsenic	100	99.407	99	90-110	

CCV8	Date: 02-Jul-2020 15:34		Seq: 5648886	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Arsenic	100	103.145	103	90-110	

Form 3 - BLANKS

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
WorkOrder: HS20061390

Run ID: ICPMS06_364391
Instrument: ICPMS06
Method: SW6020

ICB	Date: 02-Jul-2020 11:39		Seq: 5647962	ICB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Arsenic	5	0.4	5	U	
CCB1	Date: 02-Jul-2020 12:22		Seq: 5648602	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Arsenic	2	0.4	2	U	
MBLK-154955	Date: 02-Jul-2020 12:25		Seq: 5648603	MBLK	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Arsenic	5	0.4	5	U	
CCB2	Date: 02-Jul-2020 12:46		Seq: 5648612	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Arsenic	2	0.4	2	U	
CCB3	Date: 02-Jul-2020 13:10		Seq: 5648600	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Arsenic	2	0.4	2	U	
CCB4	Date: 02-Jul-2020 13:35		Seq: 5648647	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Arsenic	2	0.4	2	U	
CCB5	Date: 02-Jul-2020 13:52		Seq: 5648656	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Arsenic	2	0.4	2	U	
CCB6	Date: 02-Jul-2020 14:39		Seq: 5648853	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Arsenic	2	0.4	2	U	
CCB7	Date: 02-Jul-2020 15:10		Seq: 5648884	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Arsenic	2	0.4	2	U	
CCB8	Date: 02-Jul-2020 15:36		Seq: 5648887	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Arsenic	2	0.4	2	U	

ALS Houston, US Date: 15-Jul-20

Form 4 - ICP Interference Check Sample

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
WorkOrder: HS20061390

Run ID: ICPMS06_364391
Instrument: ICPMS06
Method: SW6020

ICSA	Date: 02-Jul-2020 11:50	Seq: 5647964	ICSA	Units: ug/L
Analyte	**True**	**Found**	**%R**	
Arsenic		0.056	0	

ICSAB	Date: 02-Jul-2020 11:52	Seq: 5647965	ICSAB	Units: ug/L
Analyte	**True**	**Found**	**%R**	
Arsenic	100	115	115	

ALS Houston, US Date: 15-Jul-20

Form 5A - Matrix Spike/Matrix Spike Duplicate Recovery

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
WorkOrder: HS20061390

Date Analyzed: 02-Jul-2020 12:39
Date Extracted: 29-Jun-2020 14:30
Units: ug/L

Matrix Spike: HS20061218-02MS
Client Sample ID:

Analysis Method: SW6020

Analyte	Sample Result	MS Result	Spike Amount	% Rec	MSD Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
Arsenic	1.189	49.66	50.00	96.9	48.75	50.00	95.1	84-116	1.85	20

ALS Houston, US Date: 15-Jul-20

Form 5B - Post Digest Sample Recovery

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
WorkOrder: HS20061390

Date Analyzed: 02-Jul-2020 12:41
Date Extracted: 29-Jun-2020 14:30
Units: ug/L

Lab Sample ID: HS20061218-02PDS
Client Sample ID:

Analysis Method: SW6020

Analyte	Sample Result	PDS Result	Spike Amount	% Rec	% Rec Limits
Arsenic	1.189	112.2	100	111	80-120

ALS Houston, US Date: 15-Jul-20

Form 7 - Laboratory Control Sample

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
WorkOrder: HS20061390

Date Analyzed: 02-Jul-2020 12:27
Date Extracted: 29-Jun-2020 14:30
Units: ug/L

Lab Sample ID: LCS-154955 Analysis Method: SW6020

Analyte	Spike Amount	LCS Result	% Rec	% Rec Limits
Arsenic	50	48.16	96	84-116

ALS Houston, US Date: 15-Jul-20

Form 8 - ICP Serial Dilutions

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
WorkOrder: HS20061390

Date Analyzed: 02-Jul-2020 12:35
Date Extracted: 29-Jun-2020 14:30
Units: ug/L

Lab Sample ID: HS20061218-02SD
Client Sample ID:

Analysis Method: SW6020

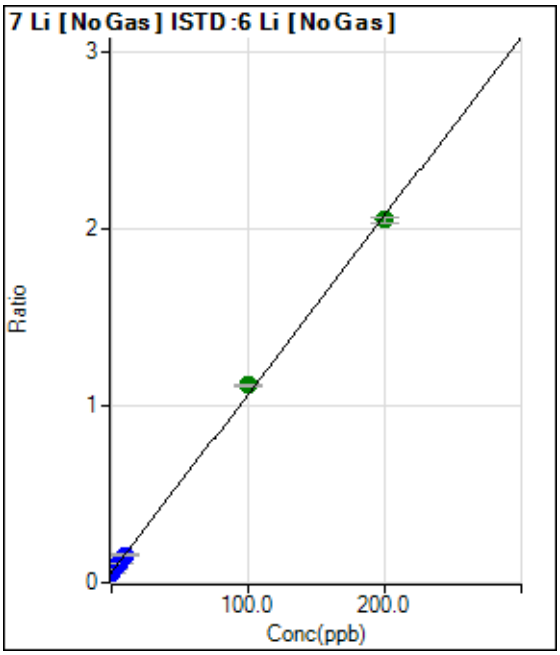
Analyte	Sample Result	C	SD Result	C	RPD	Q
Arsenic	1.189	J	0	U	0	

Calibration for 018_ICV.d

Batch Folder: C:\Agilent\ICPMH\1\DATA\070220A.b\
Analysis File: 070220A.batch.bin
DA Date-Time: 7/2/2020 9:54:05 PM
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	011CALB.d	CAL BLK	7/2/2020 11:19:56 AM
2	012CALS.d	2/10/200	7/2/2020 11:21:49 AM
3	013CALS.d	5/25/500	7/2/2020 11:23:40 AM
4	014CALS.d	10/50/100	7/2/2020 11:25:32 AM
5	015CALS.d	100/500/10K	7/2/2020 11:27:23 AM
6	016CALS.d	200/1000/20K	7/2/2020 11:29:05 AM

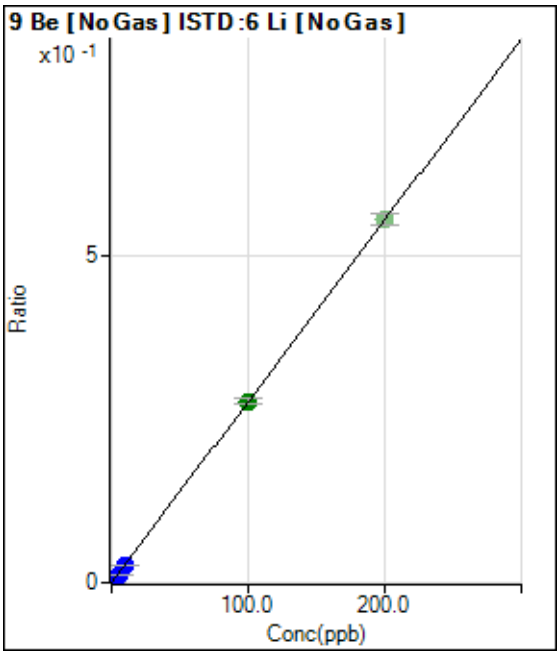
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	193582.19	0.0575	P	0.3
2	☐	2.000	1.971	253968.22	0.0774	P	1.0
3	☐	5.000	4.933	355153.27	0.1073	P	1.4
4	☐	10.000	9.781	519900.30	0.1562	P	3.0
5	☐	100.000	104.815	3600309.22	1.1155	A	1.1
6	☐	200.000	197.606	6465449.48	2.0521	A	1.6

y = 0.0101 * x + 0.0575
R = 0.9996
DL = 0.04621
BEC = 5.694

Weight: <None>
Min Conc: <None>

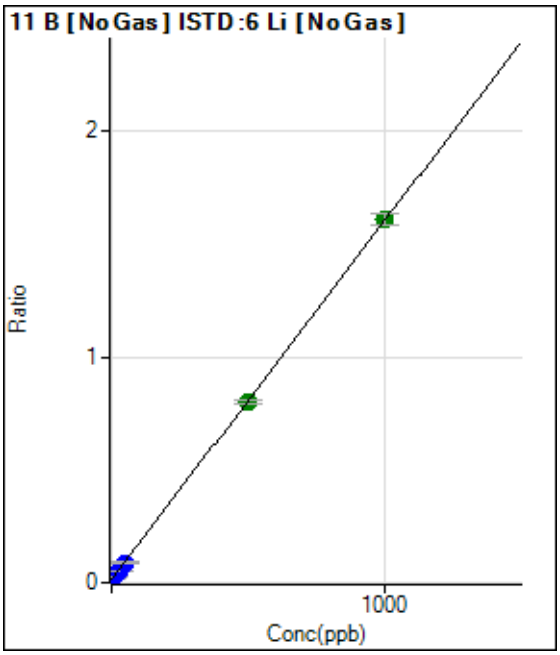


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	35.00	0.0000	P	52.9
2	☐	2.000	1.853	16860.18	0.0051	P	1.5
3	☐	5.000	4.632	42454.00	0.0128	P	1.2
4	☐	10.000	9.262	85300.79	0.0256	P	3.0
5	☐	100.000	100.095	893557.02	0.2769	A	3.1
6	☑	200.000		1745335.29	0.5540	A	3.0

y = 0.0028 * x + 1.0460E-005
R = 1.0000
DL = 0.005999
BEC = 0.003782

Weight: <None>
Min Conc: <None>

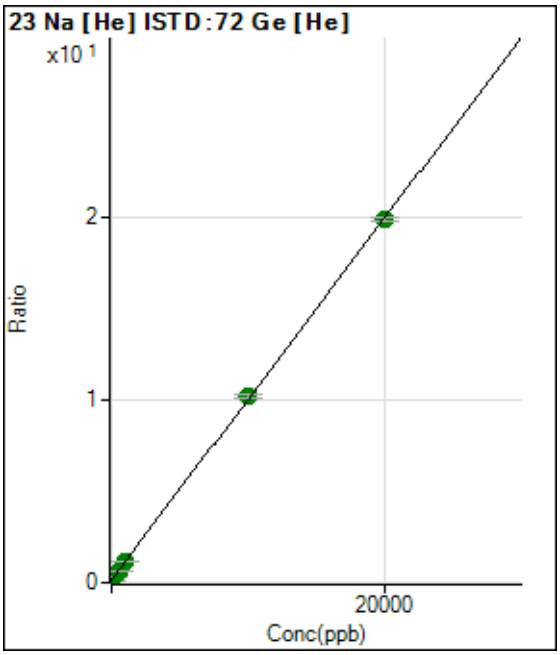
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	45704.31	0.0136	P	2.1
2	☐	10.000	9.074	91896.43	0.0280	P	2.1
3	☐	25.000	23.095	166431.73	0.0503	P	2.8
4	☐	50.000	47.022	293842.46	0.0883	P	3.6
5	☐	500.000	494.251	2578808.56	0.7991	A	2.5
6	☐	1000.000	1003.080	5065547.84	1.6077	A	3.1

y = 0.0016 * x + 0.0136
R = 1.0000
DL = 0.532
BEC = 8.541

Weight: <None>
Min Conc: <None>

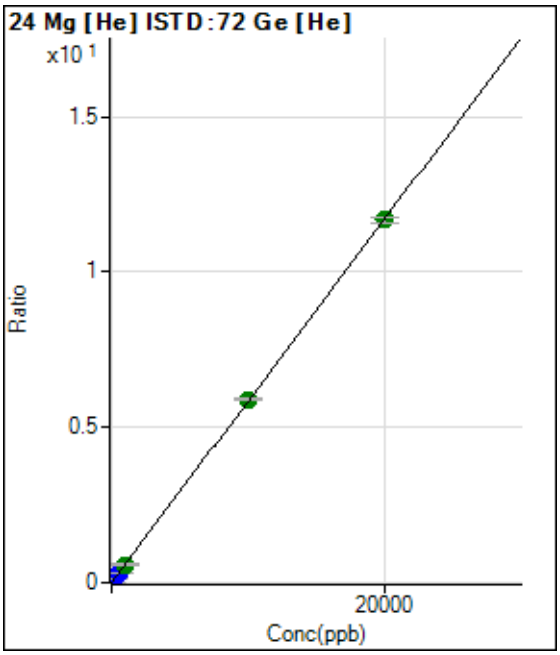


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	325832.34	0.1531	P	2.9
2	☐	200.000	191.530	723317.59	0.3430	A	3.9
3	☐	500.000	504.858	1351530.87	0.6537	A	0.6
4	☐	1000.000	981.632	2355171.27	1.1264	A	1.7
5	☐	10000.00	10176.32	21342974.68	10.2427	A	1.4
6	☐	20000.00	19912.72	40275192.73	19.8962	A	1.1

y = 9.9148E-004 * x + 0.1531
R = 0.9999
DL = 13.38
BEC = 154.4

Weight: <None>
Min Conc: <None>

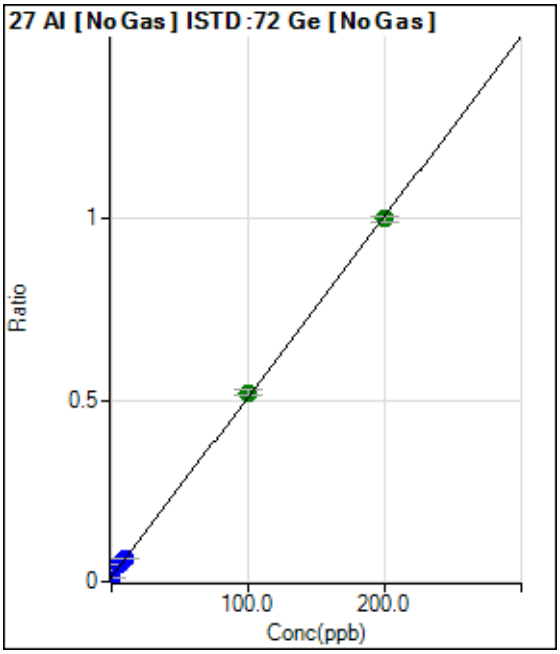
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1796.81	0.0008	P	7.3
2	☐	200.000	200.366	248901.78	0.1180	P	2.3
3	☐	500.000	512.242	621123.05	0.3004	P	1.4
4	☐	1000.000	1001.145	1226116.88	0.5863	A	2.6
5	☐	10000.00	10070.49	12273329.82	5.8903	A	1.3
6	☐	20000.00	19964.38	23635522.98	11.6765	A	1.3

y = 5.8482E-004 * x + 8.4497E-004
R = 1.0000
DL = 0.3144
BEC = 1.445

Weight: <None>
Min Conc: <None>

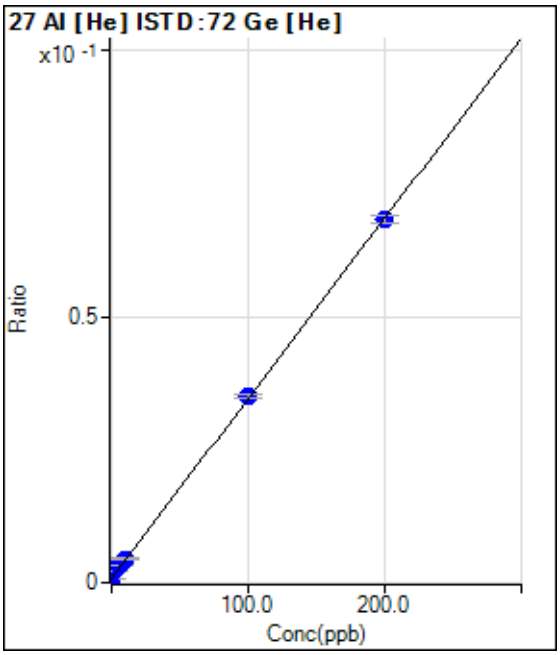


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	73457.45	0.0117	P	2.9
2	☐	2.000	4.564	216035.96	0.0344	P	10.3
3	☐	5.000	7.014	290954.61	0.0466	P	0.4
4	☐	10.000	10.161	397019.36	0.0622	P	1.5
5	☐	100.000	102.533	3250265.06	0.5210	A	2.9
6	☐	200.000	198.649	6049705.95	0.9984	A	1.8

y = 0.0050 * x + 0.0117
R = 0.9998
DL = 0.2041
BEC = 2.364

Weight: <None>
Min Conc: <None>

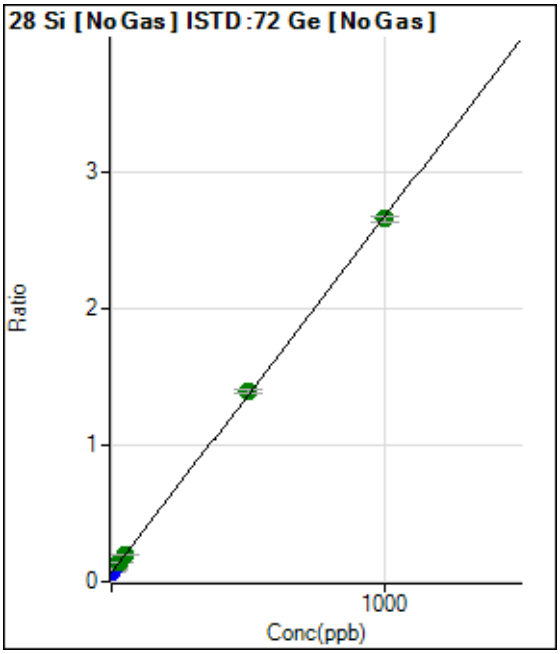
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1646.79	0.0008	P	2.6
2	☐	2.000	4.461	4820.95	0.0023	P	8.2
3	☐	5.000	6.948	6458.33	0.0031	P	3.3
4	☐	10.000	10.830	9277.09	0.0044	P	7.0
5	☐	100.000	101.275	73004.88	0.0350	P	1.9
6	☐	200.000	199.248	138007.11	0.0682	P	1.9

y = 3.3831E-004 * x + 7.7385E-004
R = 0.9999
DL = 0.1752
BEC = 2.287

Weight: <None>
Min Conc: <None>

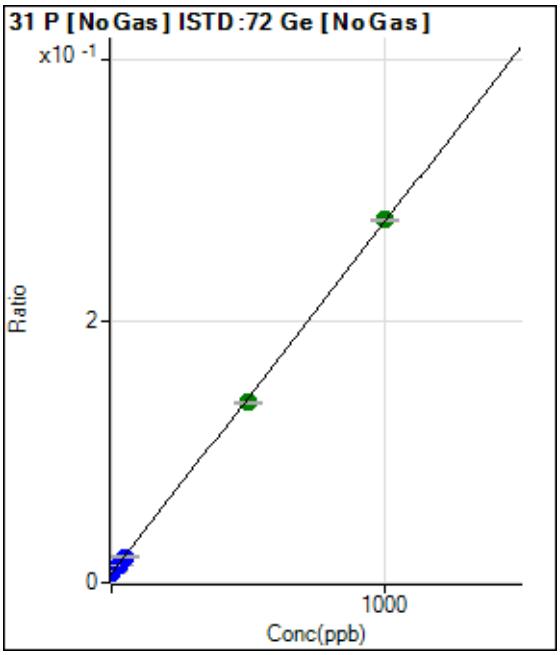


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	406074.31	0.0649	P	2.4
2	☐	10.000	10.482	579389.62	0.0922	P	2.1
3	☐	25.000	28.013	861068.37	0.1378	A	1.2
4	☐	50.000	50.289	1249930.71	0.1959	A	2.8
5	☐	500.000	510.910	8705232.16	1.3953	A	1.6
6	☐	1000.000	994.451	16083943.51	2.6545	A	1.3

y = 0.0026 * x + 0.0649
R = 0.9999
DL = 1.813
BEC = 24.92

Weight: <None>
Min Conc: <None>

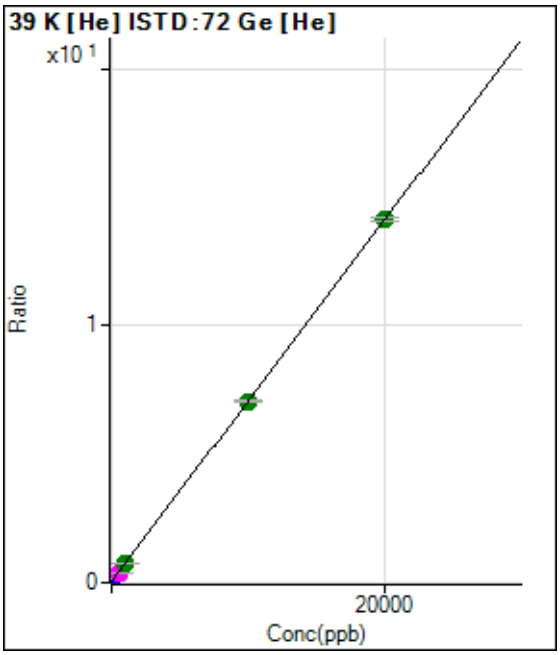
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	44849.37	0.0072	P	0.8
2	☐	10.000	9.124	60441.90	0.0096	P	2.6
3	☐	25.000	24.230	85452.02	0.0137	P	1.5
4	☐	50.000	47.140	126623.77	0.0198	P	0.5
5	☐	500.000	487.202	862145.17	0.1382	A	0.9
6	☐	1000.000	1006.570	1683351.90	0.2778	A	0.9

y = 2.6889E-004 * x + 0.0072
R = 0.9999
DL = 0.6243
BEC = 26.64

Weight: <None>
Min Conc: <None>

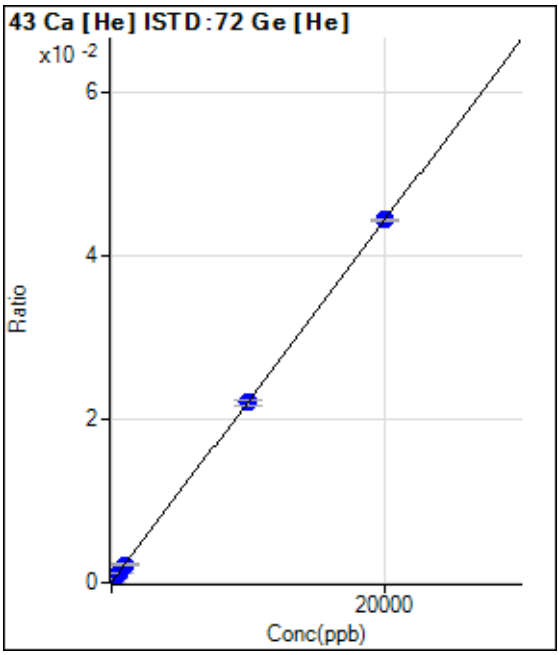


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	109136.12	0.0513	P	2.8
2	☐	200.000	195.217	397456.87	0.1885	P	2.4
3	☐	500.000	501.659	834994.75	0.4039	M	0.5
4	☐	1000.000	988.727	1560277.27	0.7462	A	1.9
5	☐	10000.00	9976.621	14716456.86	7.0629	A	1.3
6	☐	20000.00	20012.26	28573733.74	14.1159	A	1.2

y = 7.0280E-004 * x + 0.0513
R = 1.0000
DL = 6.207
BEC = 72.98

Weight: <None>
Min Conc: <None>

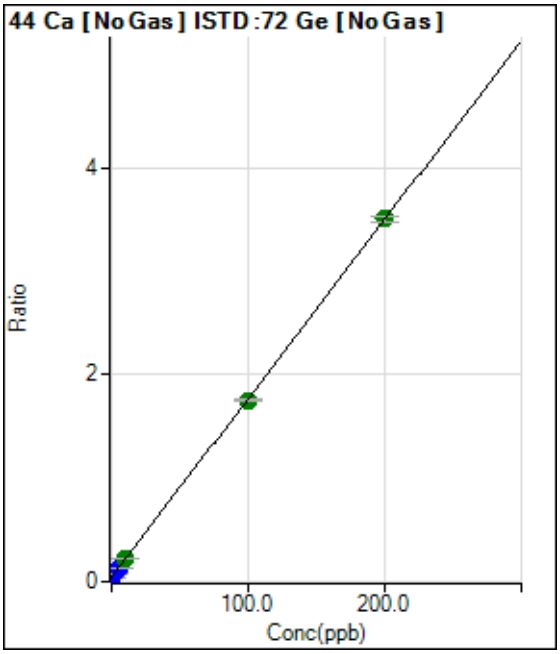
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	66.67	0.0000	P	8.6
2	☐	200.000	200.009	1000.05	0.0005	P	8.7
3	☐	500.000	497.996	2346.91	0.0011	P	3.9
4	☐	1000.000	965.224	4540.85	0.0022	P	8.4
5	☐	10000.00	9944.989	45973.93	0.0221	P	2.7
6	☐	20000.00	20029.29	89906.07	0.0444	P	0.7

y = 2.2158E-006 * x + 3.1321E-005
R = 1.0000
DL = 3.667
BEC = 14.14

Weight: <None>
Min Conc: <None>

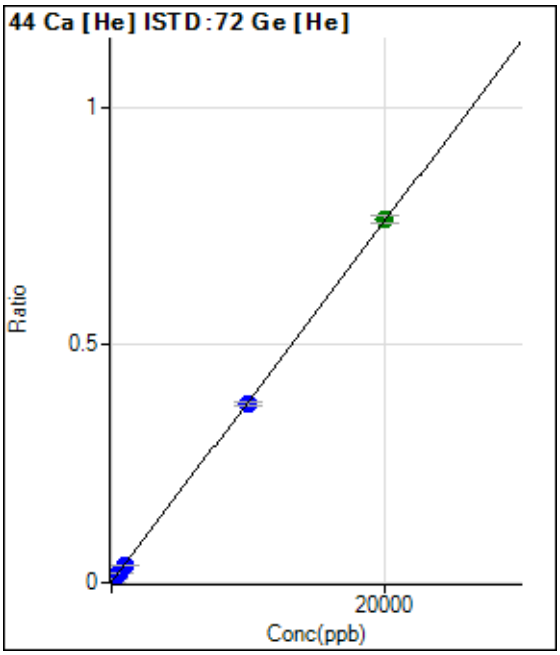


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	261358.00	0.0418	P	3.7
2	☐	2.000	1.951	474153.67	0.0755	P	2.8
3	☐	5.000	4.853	784394.44	0.1256	P	1.2
4	☐	10.000	10.362	1408377.38	0.2207	A	2.3
5	☐	100.000	99.025	10927582.76	1.7515	A	1.4
6	☐	200.000	200.473	21225239.69	3.5031	A	1.8

y = 0.0173 * x + 0.0418
R = 1.0000
DL = 0.2711
BEC = 2.42

Weight: <None>
Min Conc: <None>

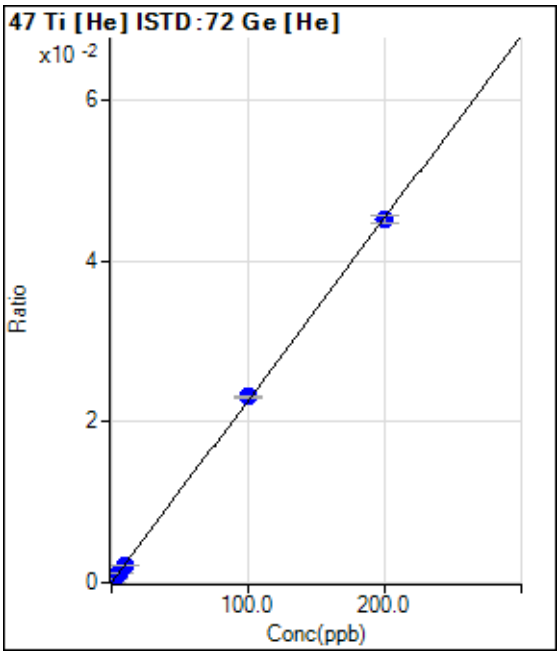
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2543.62	0.0012	P	5.8
2	☐	200.000	197.369	18319.17	0.0087	P	2.0
3	☐	500.000	488.379	40804.25	0.0197	P	1.6
4	☐	1000.000	959.461	78654.73	0.0376	P	0.4
5	☐	10000.00	9857.119	781917.02	0.3753	P	2.6
6	☐	20000.00	20073.78	1544859.20	0.7631	A	2.1

y = 3.7955E-005 * x + 0.0012
R = 1.0000
DL = 5.483
BEC = 31.5

Weight: <None>
Min Conc: <None>

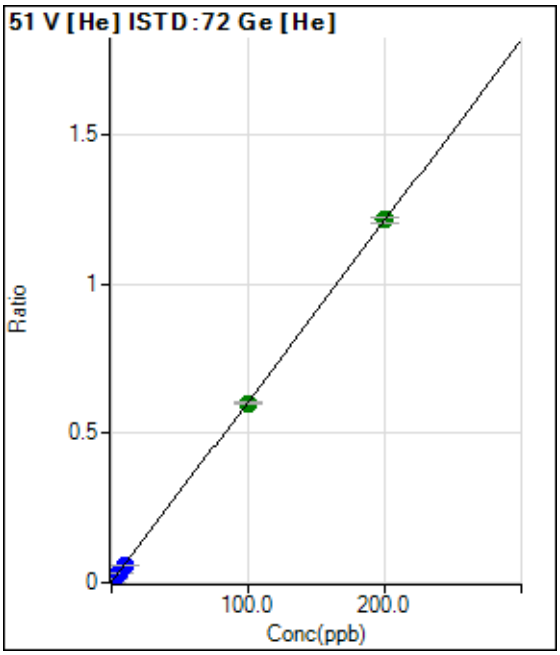


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	13.33	0.0000	P	86.6
2	☐	2.000	1.707	830.04	0.0004	P	5.1
3	☐	5.000	5.162	2433.60	0.0012	P	5.0
4	☐	10.000	9.366	4454.14	0.0021	P	7.4
5	☐	100.000	102.067	48225.43	0.0231	P	1.4
6	☐	200.000	198.997	91322.79	0.0451	P	2.1

y = 2.2670E-004 * x + 6.3445E-006
R = 0.9999
DL = 0.07272
BEC = 0.02799

Weight: <None>
Min Conc: <None>

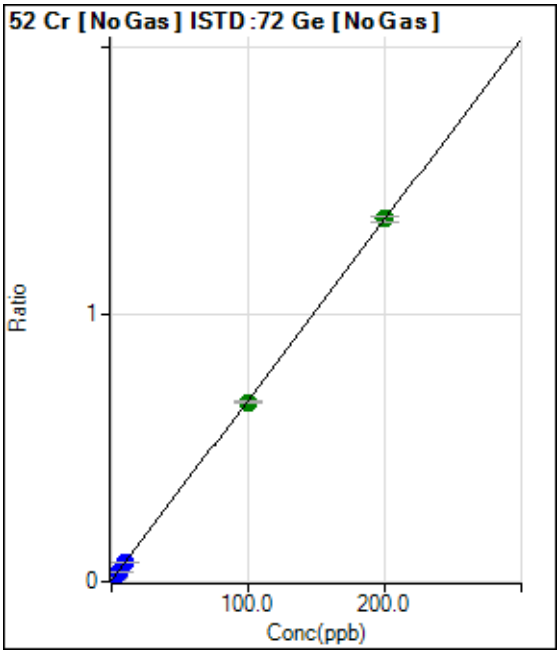
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2430.23	0.0011	P	1.9
2	☐	2.000	1.876	26326.39	0.0125	P	2.7
3	☐	5.000	4.780	62123.67	0.0301	P	1.9
4	☐	10.000	9.493	122430.15	0.0586	P	2.0
5	☐	100.000	99.121	1251485.92	0.6006	A	1.3
6	☐	200.000	200.471	2456660.88	1.2136	A	1.6

y = 0.0060 * x + 0.0011
R = 1.0000
DL = 0.0107
BEC = 0.1888

Weight: <None>
Min Conc: <None>

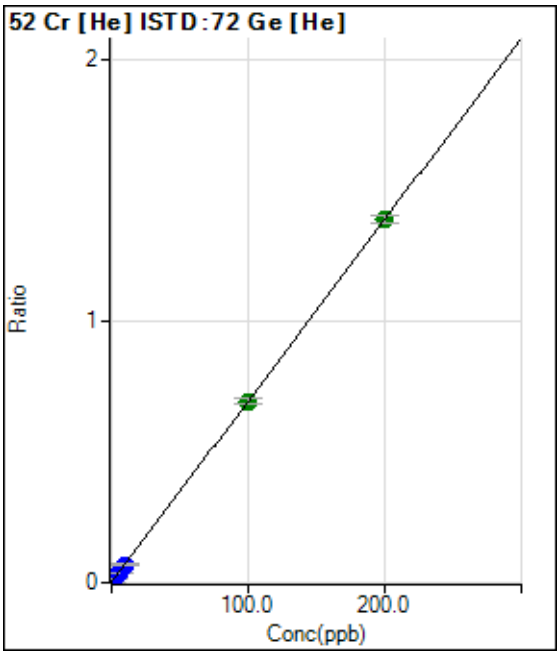


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	25083.23	0.0040	P	0.5
2	☐	2.000	1.956	108002.74	0.0172	P	1.6
3	☐	5.000	4.954	233455.23	0.0374	P	0.6
4	☐	10.000	9.658	440759.99	0.0691	P	1.1
5	☐	100.000	98.893	4180902.13	0.6701	A	1.3
6	☐	200.000	200.572	8209680.92	1.3550	A	1.9

y = 0.0067 * x + 0.0040
R = 1.0000
DL = 0.008085
BEC = 0.5949

Weight: <None>
Min Conc: <None>

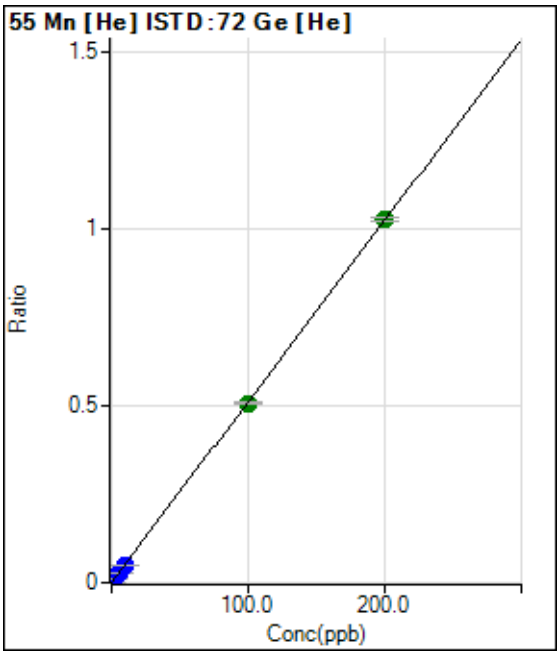
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2653.64	0.0012	P	3.3
2	☐	2.000	1.944	30985.47	0.0147	P	3.0
3	☐	5.000	4.850	71962.46	0.0348	P	2.0
4	☐	10.000	9.878	145498.43	0.0696	P	3.1
5	☐	100.000	100.062	1445189.25	0.6936	A	2.9
6	☐	200.000	199.979	2803288.09	1.3849	A	2.2

y = 0.0069 * x + 0.0012
R = 1.0000
DL = 0.01788
BEC = 0.1801

Weight: <None>
Min Conc: <None>

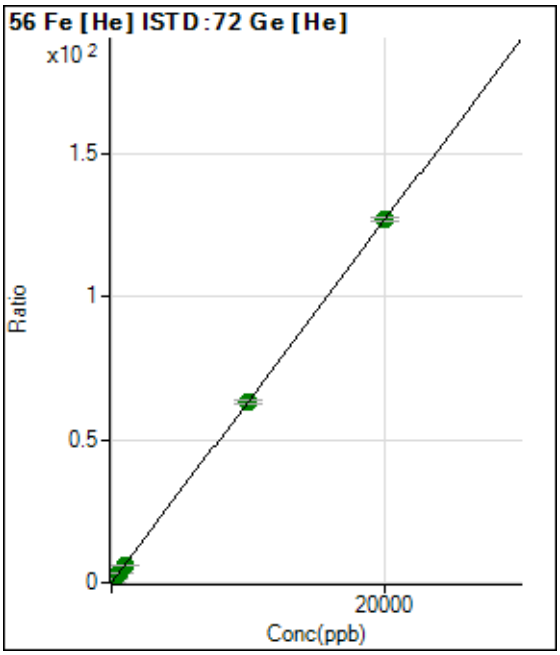


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1206.74	0.0006	P	6.1
2	☐	2.000	1.928	21967.99	0.0104	P	4.7
3	☐	5.000	4.899	52949.89	0.0256	P	1.3
4	☐	10.000	9.743	105311.84	0.0504	P	3.0
5	☐	100.000	99.212	1057849.41	0.5077	A	1.7
6	☐	200.000	200.410	2074905.28	1.0250	A	1.0

y = 0.0051 * x + 5.6715E-004
R = 1.0000
DL = 0.02022
BEC = 0.111

Weight: <None>
Min Conc: <None>

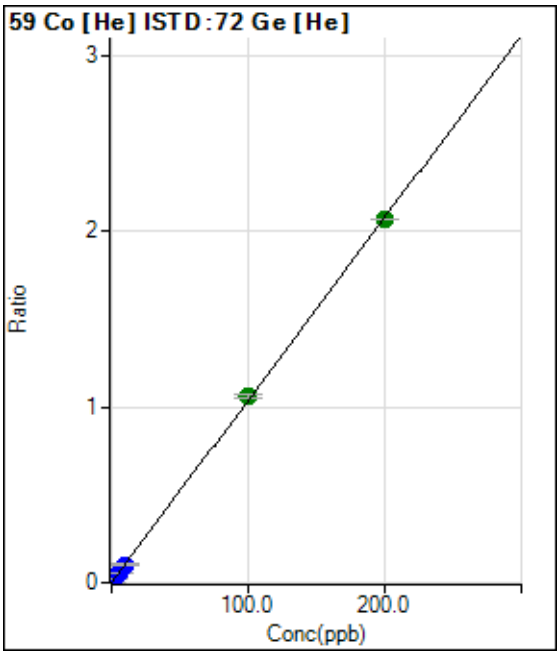
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	26173.96	0.0123	P	47.4
2	☐	200.000	196.550	2653096.47	1.2579	A	1.6
3	☐	500.000	487.388	6411675.32	3.1011	A	0.7
4	☐	1000.000	969.900	12877665.23	6.1590	A	1.8
5	☐	10000.00	9956.256	131489571.3	63.1100	A	1.9
6	☐	20000.00	20023.72	256913629.5	126.912	A	0.9

y = 0.0063 * x + 0.0123
R = 1.0000
DL = 2.764
BEC = 1.943

Weight: <None>
Min Conc: <None>

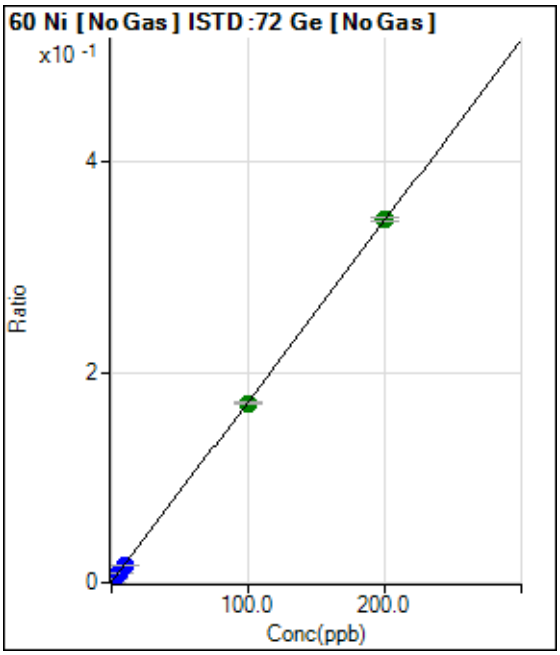


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	350.01	0.0002	P	13.8
2	☐	2.000	1.932	42677.07	0.0202	P	1.5
3	☐	5.000	5.006	107875.61	0.0522	P	2.1
4	☐	10.000	9.969	216894.91	0.1038	P	4.2
5	☐	100.000	102.221	2213459.34	1.0623	A	1.6
6	☐	200.000	198.892	4184088.48	2.0668	A	0.1

y = 0.0104 * x + 1.6453E-004
R = 0.9999
DL = 0.006568
BEC = 0.01583

Weight: <None>
Min Conc: <None>

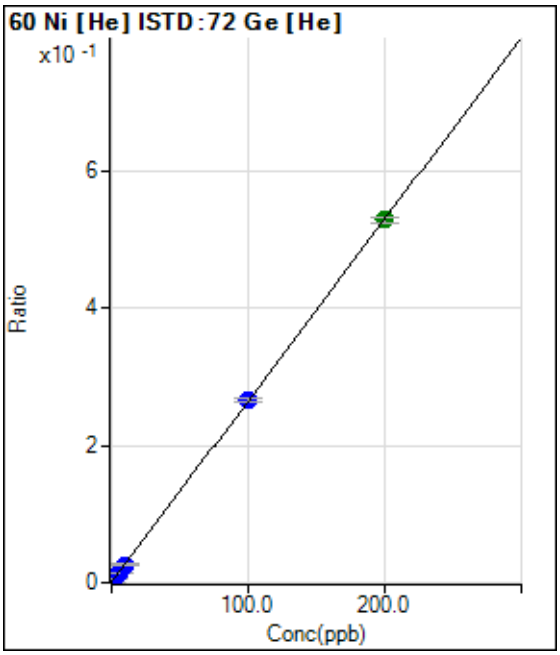
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2213.55	0.0004	P	4.8
2	☐	2.000	1.832	22041.45	0.0035	P	2.4
3	☐	5.000	4.877	54650.29	0.0087	P	1.3
4	☐	10.000	9.682	108625.57	0.0170	P	0.8
5	☐	100.000	99.203	1067767.85	0.1711	A	1.0
6	☐	200.000	200.419	2092542.37	0.3454	A	1.1

y = 0.0017 * x + 3.5343E-004
R = 1.0000
DL = 0.02927
BEC = 0.2053

Weight: <None>
Min Conc: <None>

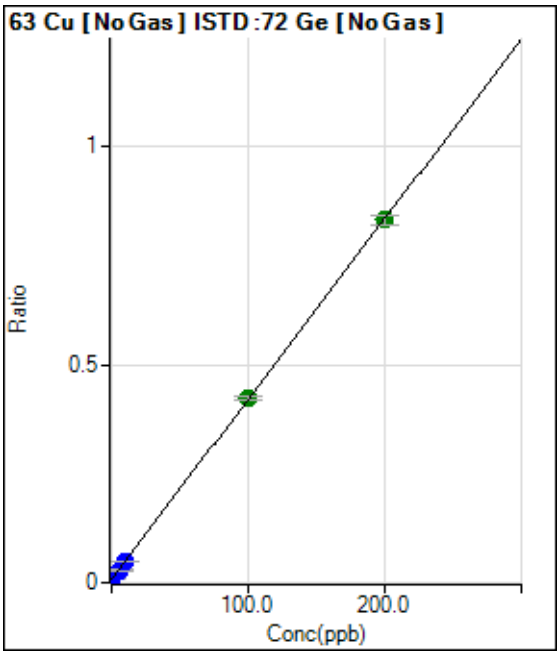


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	970.05	0.0005	P	11.2
2	☐	2.000	1.838	11234.88	0.0053	P	0.5
3	☐	5.000	4.913	27855.52	0.0135	P	2.3
4	☐	10.000	9.849	55500.19	0.0265	P	3.2
5	☐	100.000	100.574	556017.98	0.2669	P	2.6
6	☐	200.000	199.724	1071851.55	0.5295	A	1.4

y = 0.0026 * x + 4.5647E-004
R = 1.0000
DL = 0.05764
BEC = 0.1723

Weight: <None>
Min Conc: <None>

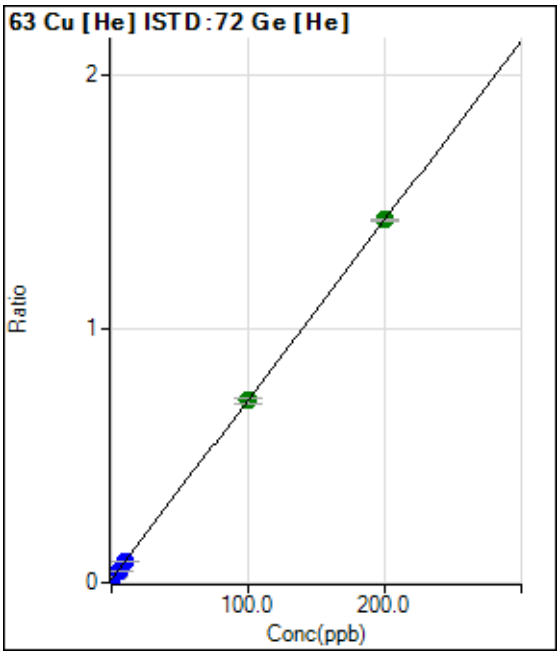
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	49493.41	0.0079	P	3.2
2	☐	2.000	1.951	100348.87	0.0160	P	0.5
3	☐	5.000	5.010	178602.70	0.0286	P	2.4
4	☐	10.000	9.782	308211.71	0.0483	P	2.1
5	☐	100.000	100.858	2647580.17	0.4243	A	1.8
6	☐	200.000	199.582	5039470.86	0.8318	A	2.6

y = 0.0041 * x + 0.0079
R = 1.0000
DL = 0.1821
BEC = 1.916

Weight: <None>
Min Conc: <None>

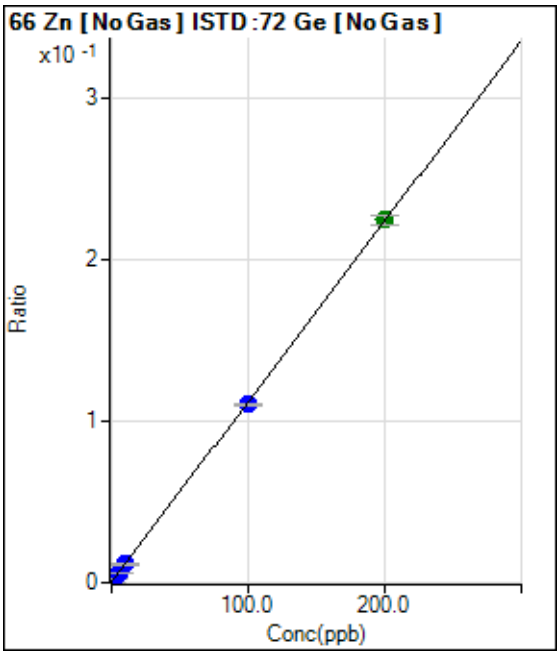


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	28443.48	0.0134	P	2.5
2	☐	2.000	1.870	56109.23	0.0266	P	3.1
3	☐	5.000	5.023	101188.67	0.0489	P	1.2
4	☐	10.000	9.829	173473.65	0.0830	P	3.0
5	☐	100.000	99.547	1496849.04	0.7184	A	3.5
6	☐	200.000	200.236	2897752.87	1.4315	A	0.8

y = 0.0071 * x + 0.0134
R = 1.0000
DL = 0.1426
BEC = 1.887

Weight: <None>
Min Conc: <None>

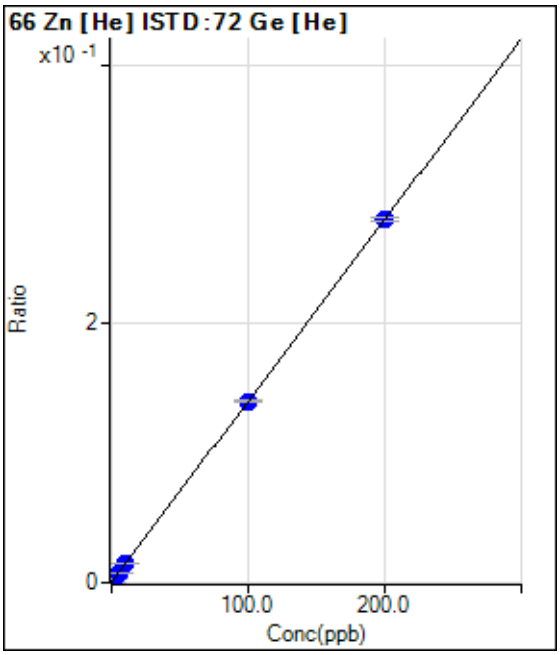
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1910.17	0.0003	P	10.7
2	☐	2.000	1.968	15749.36	0.0025	P	3.8
3	☐	5.000	5.039	37104.56	0.0059	P	2.0
4	☐	10.000	9.851	72235.78	0.0113	P	0.5
5	☐	100.000	98.542	689249.31	0.1105	P	1.0
6	☐	200.000	200.736	1361583.42	0.2247	A	2.5

y = 0.0011 * x + 3.0563E-004
R = 1.0000
DL = 0.08783
BEC = 0.2734

Weight: <None>
Min Conc: <None>

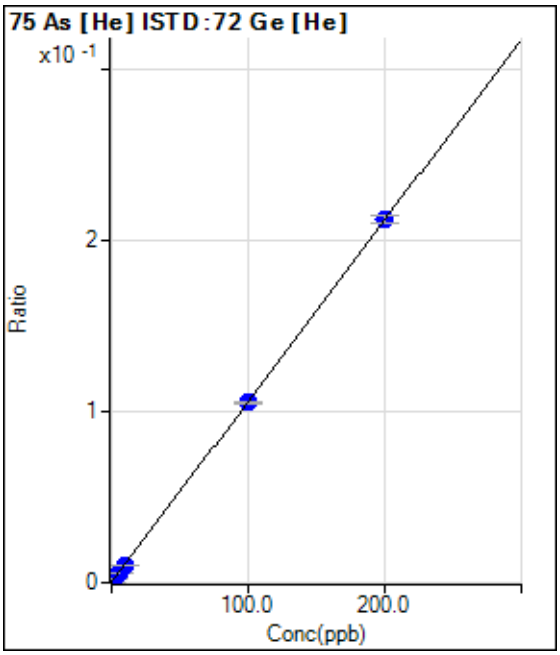


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	690.04	0.0003	P	8.9
2	☐	2.000	1.928	6381.58	0.0030	P	1.9
3	☐	5.000	5.010	15182.05	0.0073	P	3.0
4	☐	10.000	10.017	30016.84	0.0144	P	0.5
5	☐	100.000	99.935	292354.16	0.1403	P	0.9
6	☐	200.000	200.032	567817.41	0.2805	P	1.1

y = 0.0014 * x + 3.2392E-004
R = 1.0000
DL = 0.06164
BEC = 0.2313

Weight: <None>
Min Conc: <None>

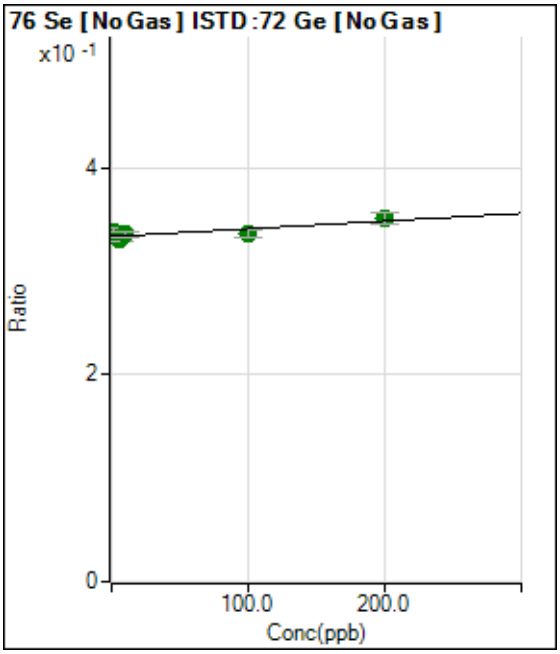
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	472.23	0.0002	P	12.5
2	☐	2.000	1.896	4699.73	0.0022	P	2.6
3	☐	5.000	4.956	11309.23	0.0055	P	0.5
4	☐	10.000	9.608	21737.54	0.0104	P	1.9
5	☐	100.000	99.439	219884.81	0.1055	P	1.3
6	☐	200.000	200.302	429800.32	0.2123	P	2.0

y = 0.0011 * x + 2.2140E-004
R = 1.0000
DL = 0.07818
BEC = 0.2091

Weight: <None>
Min Conc: <None>

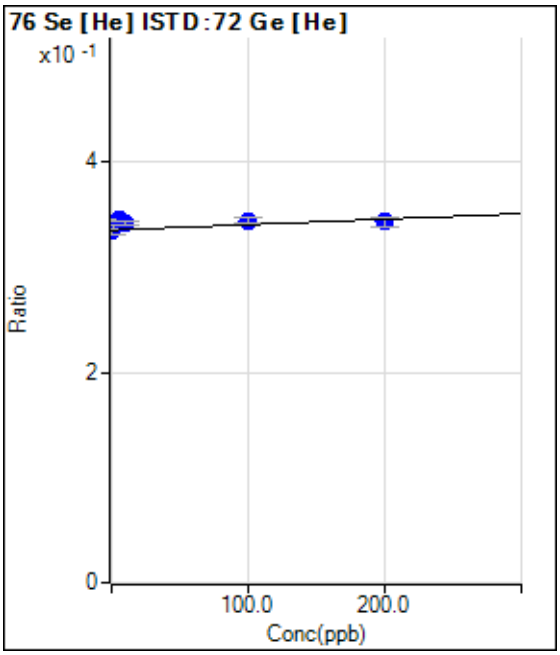


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2086182.16	0.3333	A	1.1
2	☐	2.000	68.416	2127032.73	0.3385	A	2.1
3	☐	5.000	-32.856	2067015.28	0.3309	A	1.1
4	☐	10.000	29.720	2141669.50	0.3356	A	1.9
5	☐	100.000	43.996	2100039.14	0.3366	A	2.4
6	☐	200.000	227.298	2122601.27	0.3503	A	3.1

y = 7.4663E-005 * x + 0.3333
R = 0.8705
DL = 150.5
BEC = 4465

Weight: <None>
Min Conc: <None>

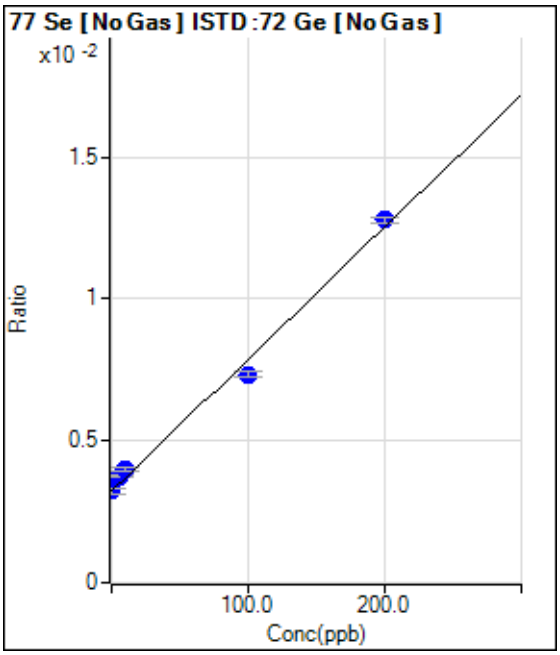
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	713776.08	0.3354	P	2.7
2	☐	2.000	126.825	721301.71	0.3421	P	2.8
3	☐	5.000	184.872	713613.61	0.3451	P	0.7
4	☐	10.000	114.716	713995.75	0.3415	P	0.9
5	☐	100.000	176.639	718235.59	0.3447	P	1.3
6	☐	200.000	150.700	694927.62	0.3433	P	2.4

y = 5.2442E-005 * x + 0.3354
R = 0.3749
DL = 520.7
BEC = 6396

Weight: <None>
Min Conc: <None>

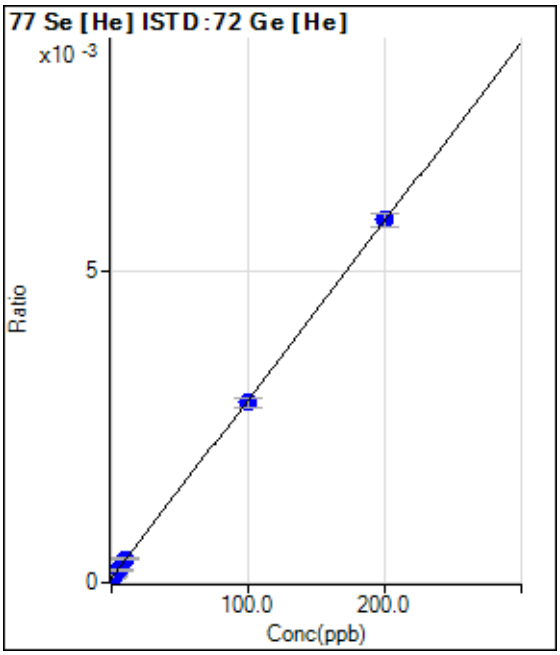


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	20182.14	0.0032	P	5.6
2	☐	2.000	9.616	23103.48	0.0037	P	1.8
3	☐	5.000	11.389	23474.13	0.0038	P	2.6
4	☐	10.000	16.691	25554.63	0.0040	P	2.2
5	☐	100.000	88.314	45784.66	0.0073	P	3.2
6	☐	200.000	205.273	77472.36	0.0128	P	1.4

y = 4.6571E-005 * x + 0.0032
R = 0.9960
DL = 11.67
BEC = 69.29

Weight: <None>
Min Conc: <None>

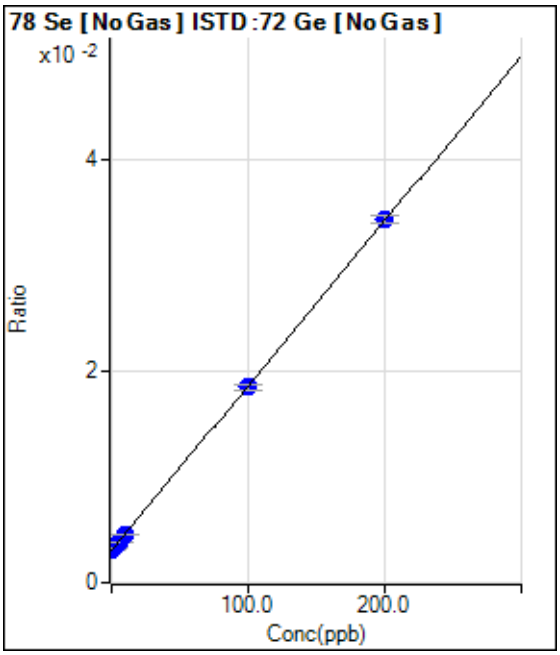
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	150.00	0.0001	P	45.9
2	☐	2.000	1.318	226.67	0.0001	P	23.1
3	☐	5.000	4.652	420.01	0.0002	P	15.1
4	☐	10.000	10.684	786.70	0.0004	P	10.4
5	☐	100.000	98.521	6024.80	0.0029	P	5.6
6	☐	200.000	200.721	11772.03	0.0058	P	3.7

y = 2.8628E-005 * x + 7.0068E-005
R = 0.9999
DL = 3.369
BEC = 2.448

Weight: <None>
Min Conc: <None>

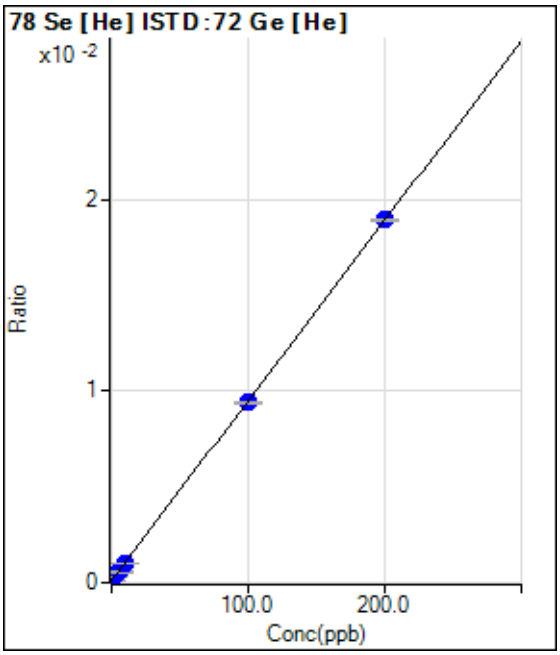


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	19100.41	0.0031	P	3.7
2	☐	2.000	1.679	20819.70	0.0033	P	5.5
3	☐	5.000	4.951	23881.49	0.0038	P	0.9
4	☐	10.000	9.356	28771.03	0.0045	P	2.6
5	☐	100.000	98.873	114978.71	0.0184	P	2.3
6	☐	200.000	200.600	207516.55	0.0342	P	2.0

y = 1.5552E-004 * x + 0.0031
R = 1.0000
DL = 2.201
BEC = 19.63

Weight: <None>
Min Conc: <None>

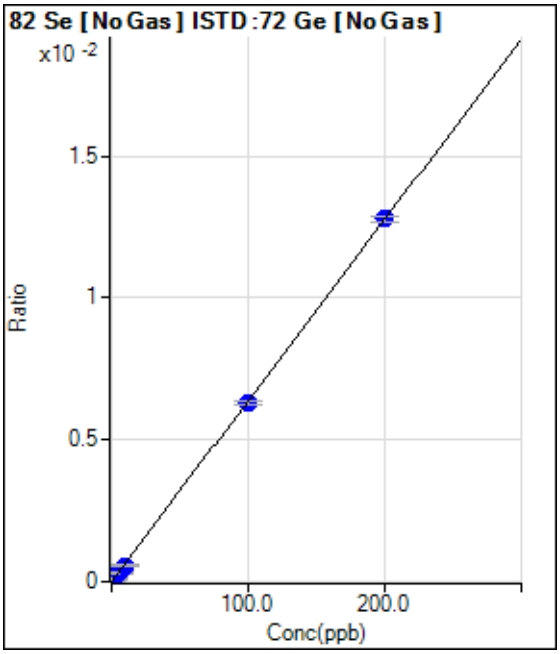
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	251.33	0.0001	P	6.9
2	☐	2.000	1.937	634.02	0.0003	P	10.3
3	☐	5.000	4.745	1165.39	0.0006	P	4.8
4	☐	10.000	9.424	2098.17	0.0010	P	1.0
5	☐	100.000	99.015	19624.27	0.0094	P	1.4
6	☐	200.000	200.528	38366.42	0.0190	P	0.7

y = 9.3926E-005 * x + 1.1812E-004
R = 1.0000
DL = 0.2598
BEC = 1.258

Weight: <None>
Min Conc: <None>

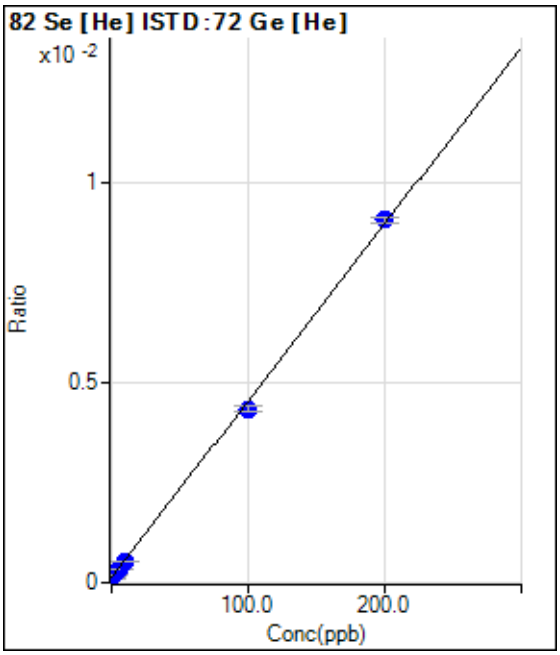


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	22.26	0.0000	P	577.3
2	☐	2.000	1.430	594.79	0.0001	P	51.3
3	☐	5.000	4.842	1949.44	0.0003	P	7.1
4	☐	10.000	8.727	3570.00	0.0006	P	9.3
5	☐	100.000	98.924	39333.07	0.0063	P	1.9
6	☐	200.000	200.611	77437.28	0.0128	P	1.5

y = 6.3692E-005 * x + 3.5704E-006
R = 1.0000
DL = 0.9708
BEC = 0.05606

Weight: <None>
Min Conc: <None>

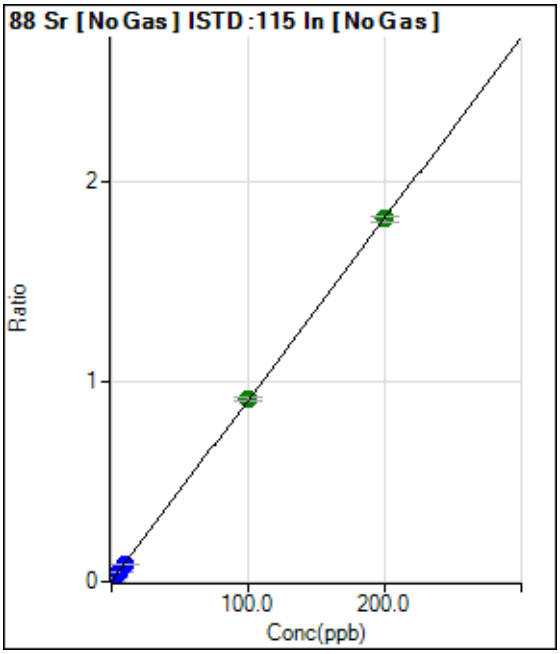
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	273.34	0.0001	P	30.9
2	☐	2.000	1.255	386.68	0.0002	P	8.2
3	☐	5.000	4.581	683.36	0.0003	P	9.2
4	☐	10.000	8.906	1090.06	0.0005	P	3.1
5	☐	100.000	95.401	9036.52	0.0043	P	3.3
6	☐	200.000	202.372	18339.50	0.0091	P	1.3

y = 4.4128E-005 * x + 1.2813E-004
R = 0.9997
DL = 2.694
BEC = 2.904

Weight: <None>
Min Conc: <None>

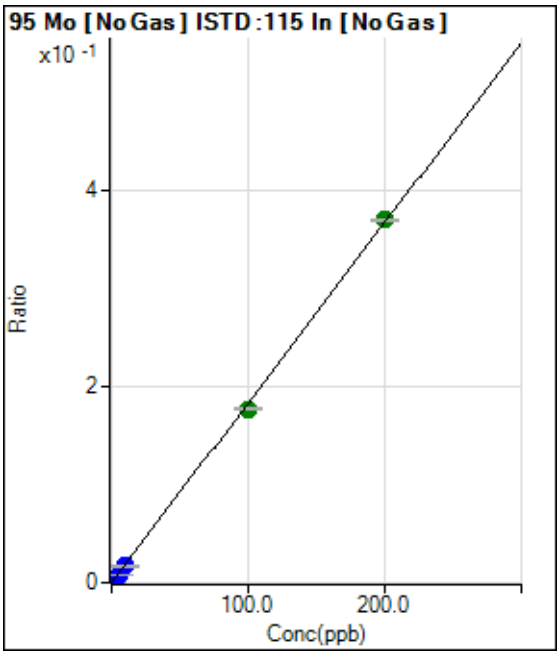


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	9743.72	0.0014	P	7.2
2	☐	2.000	1.998	128778.53	0.0196	P	3.6
3	☐	5.000	4.753	298416.08	0.0446	P	1.1
4	☐	10.000	9.215	582187.65	0.0852	P	4.3
5	☐	100.000	100.338	6057353.45	0.9134	A	2.4
6	☐	200.000	199.877	11730386.91	1.8182	A	1.6

y = 0.0091 * x + 0.0014
R = 1.0000
DL = 0.03402
BEC = 0.1571

Weight: <None>
Min Conc: <None>

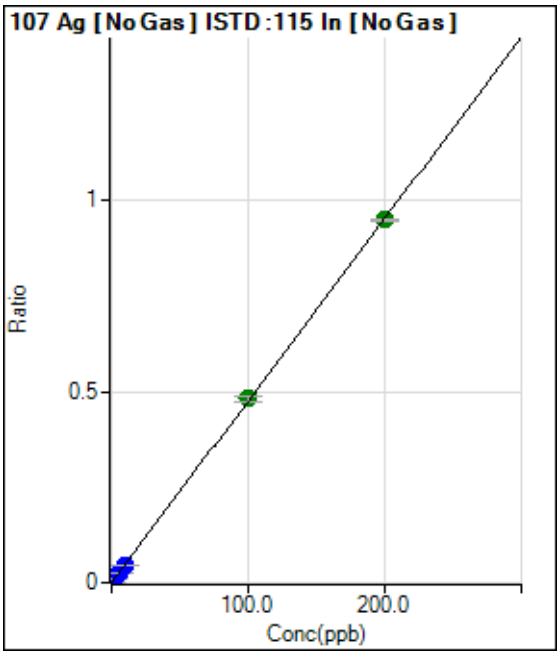
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	116.67	0.0000	P	22.4
2	☐	2.000	1.907	23113.89	0.0035	P	4.0
3	☐	5.000	4.618	56748.18	0.0085	P	4.6
4	☐	10.000	9.094	114127.09	0.0167	P	4.4
5	☐	100.000	96.699	1176764.46	0.1774	A	0.8
6	☐	200.000	201.707	2387861.89	0.3701	A	0.7

y = 0.0018 * x + 1.7092E-005
R = 0.9998
DL = 0.006257
BEC = 0.009316

Weight: <None>
Min Conc: <None>

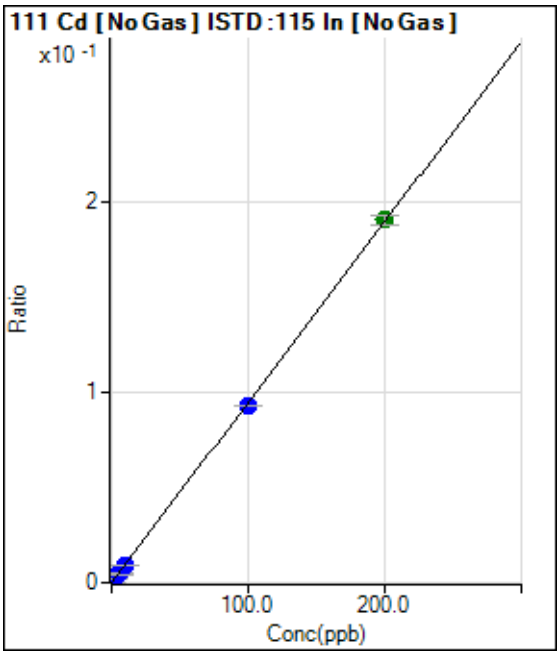


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	220.01	0.0000	P	18.3
2	☐	2.000	1.971	61912.23	0.0094	P	3.5
3	☐	5.000	4.886	155723.47	0.0233	P	0.8
4	☐	10.000	9.548	310872.54	0.0455	P	3.0
5	☐	100.000	100.999	3188539.75	0.4808	A	2.3
6	☐	200.000	199.526	6129250.12	0.9498	A	0.9

y = 0.0048 * x + 3.2147E-005
R = 1.0000
DL = 0.003716
BEC = 0.006753

Weight: <None>
Min Conc: <None>

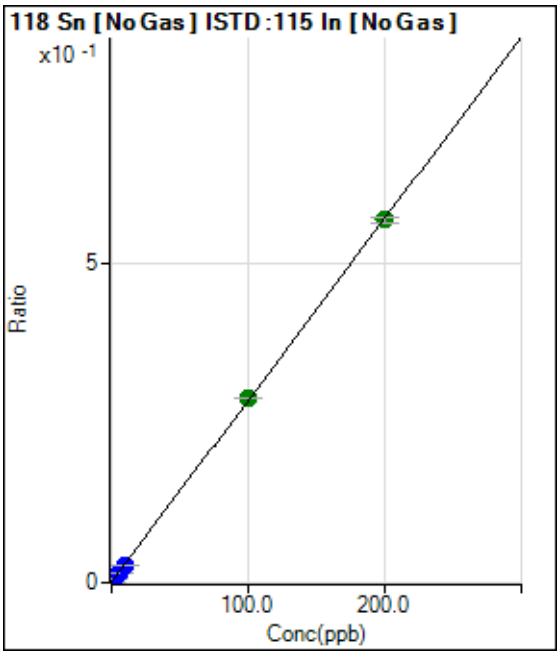
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	16.67	0.0000	P	127.1
2	☐	2.000	1.917	11948.96	0.0018	P	5.9
3	☐	5.000	4.796	30375.45	0.0045	P	3.8
4	☐	10.000	9.569	61975.73	0.0091	P	0.7
5	☐	100.000	97.914	614855.41	0.0927	P	0.8
6	☐	200.000	201.070	1228614.10	0.1904	A	2.9

y = 9.4682E-004 * x + 2.4559E-006
R = 0.9999
DL = 0.009893
BEC = 0.002594

Weight: <None>
Min Conc: <None>

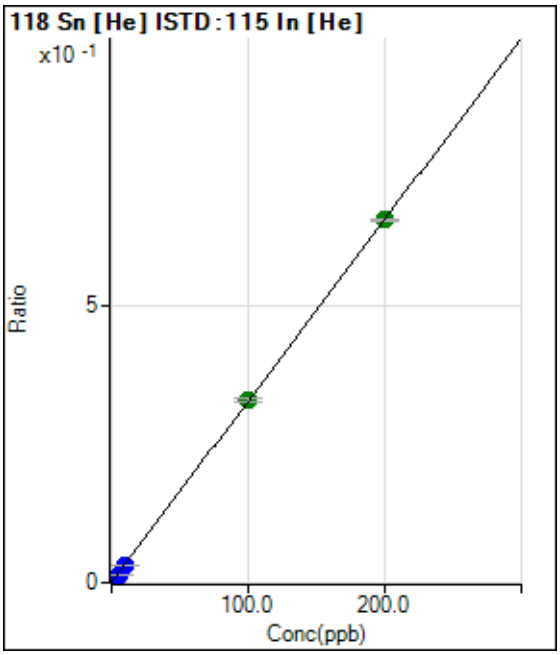


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	6088.15	0.0009	P	79.1
2	☐	2.000	1.674	37240.09	0.0057	P	2.6
3	☐	5.000	4.485	91301.39	0.0137	P	0.5
4	☐	10.000	9.134	183660.06	0.0269	P	3.5
5	☐	100.000	101.247	1915490.18	0.2888	A	0.8
6	☐	200.000	199.436	3665244.32	0.5680	A	1.9

y = 0.0028 * x + 9.0261E-004
R = 1.0000
DL = 0.7528
BEC = 0.3174

Weight: <None>
Min Conc: <None>

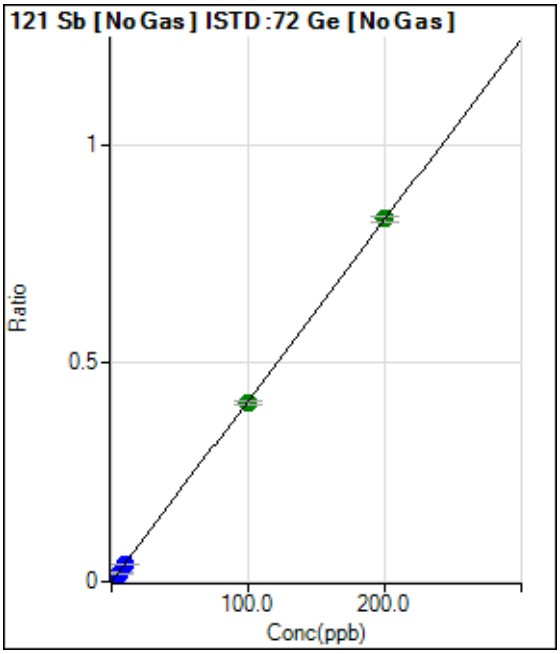
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2206.89	0.0006	P	10.3
2	☐	2.000	1.791	22519.72	0.0065	P	3.1
3	☐	5.000	4.426	54413.54	0.0151	P	3.2
4	☐	10.000	9.003	107993.10	0.0300	P	1.1
5	☐	100.000	100.177	1145544.80	0.3280	A	2.2
6	☐	200.000	199.978	2258057.99	0.6542	A	0.5

y = 0.0033 * x + 6.0136E-004
R = 1.0000
DL = 0.05706
BEC = 0.184

Weight: <None>
Min Conc: <None>

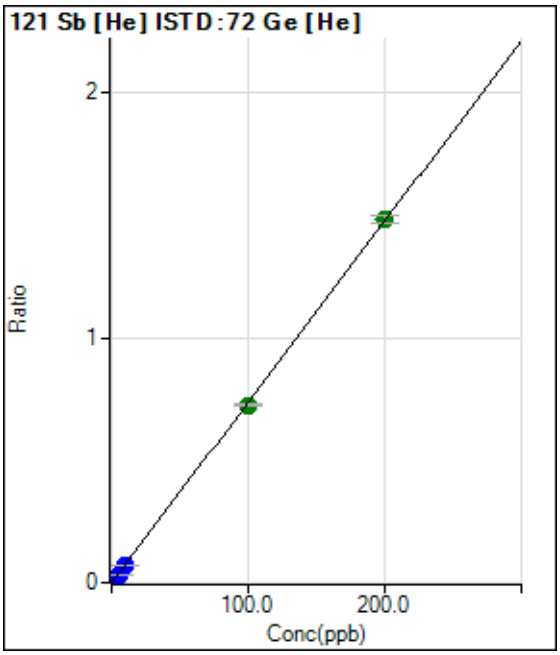


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1453.44	0.0002	P	10.7
2	☐	2.000	1.817	48747.69	0.0078	P	1.1
3	☐	5.000	4.725	123634.44	0.0198	P	1.7
4	☐	10.000	9.273	246483.40	0.0386	P	1.0
5	☐	100.000	98.839	2554253.71	0.4094	A	3.0
6	☐	200.000	200.625	5034347.43	0.8308	A	1.7

y = 0.0041 * x + 2.3205E-004
R = 1.0000
DL = 0.018
BEC = 0.05605

Weight: <None>
Min Conc: <None>

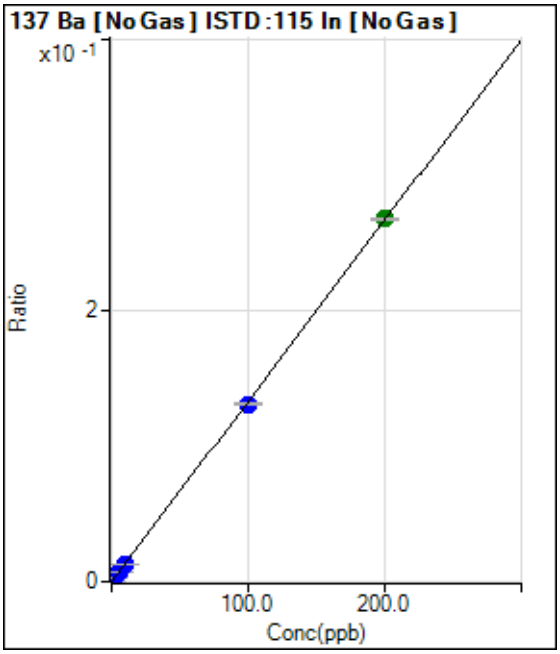
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	710.04	0.0003	P	18.5
2	☐	2.000	1.812	28848.74	0.0137	P	2.7
3	☐	5.000	4.634	71270.56	0.0345	P	1.6
4	☐	10.000	9.170	141956.76	0.0679	P	1.3
5	☐	100.000	98.367	1510935.40	0.7250	A	0.5
6	☐	200.000	200.869	2996542.77	1.4802	A	2.3

y = 0.0074 * x + 3.3314E-004
R = 1.0000
DL = 0.02515
BEC = 0.04522

Weight: <None>
Min Conc: <None>

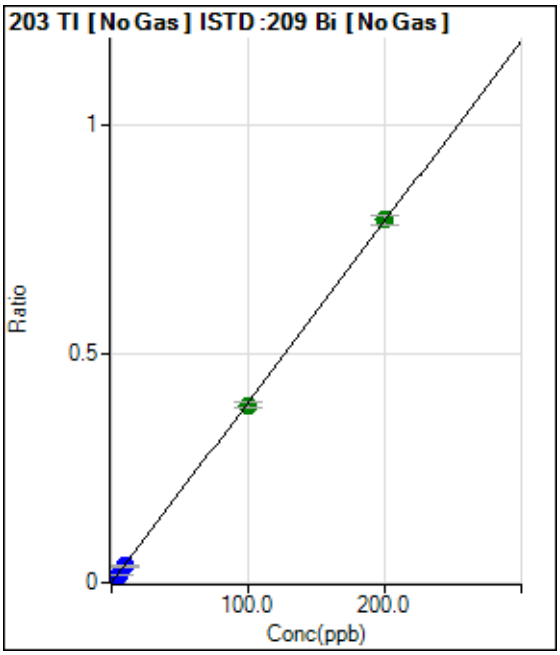


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1096.73	0.0002	P	11.8
2	☐	2.000	2.024	18743.93	0.0029	P	4.7
3	☐	5.000	4.917	44771.20	0.0067	P	0.9
4	☐	10.000	9.383	86324.78	0.0126	P	3.8
5	☐	100.000	98.134	866192.64	0.1306	P	1.3
6	☐	200.000	200.966	1724607.06	0.2673	A	0.4

y = 0.0013 * x + 1.6052E-004
R = 0.9999
DL = 0.04276
BEC = 0.1208

Weight: <None>
Min Conc: <None>

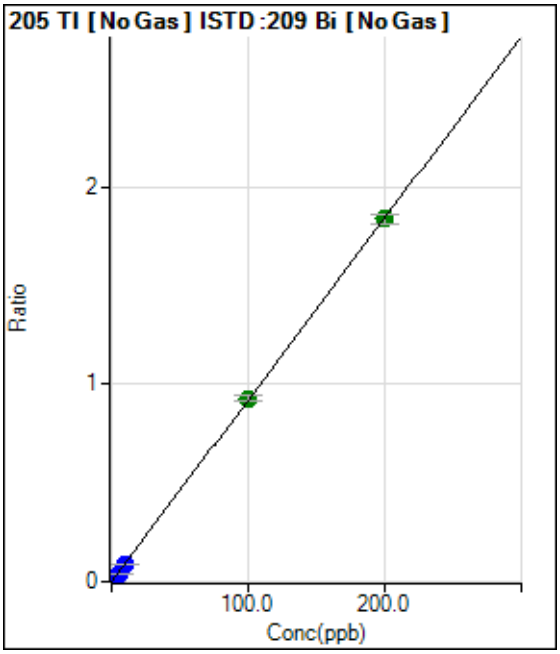
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	76.67	0.0000	P	32.6
2	☐	2.000	1.888	35664.93	0.0075	P	5.7
3	☐	5.000	4.474	85762.12	0.0177	P	2.1
4	☐	10.000	9.065	174784.91	0.0358	P	0.9
5	☐	100.000	98.458	1831350.96	0.3884	A	4.2
6	☐	200.000	200.832	3726763.38	0.7923	A	2.3

y = 0.0039 * x + 1.5905E-005
R = 1.0000
DL = 0.003949
BEC = 0.004032

Weight: <None>
Min Conc: <None>

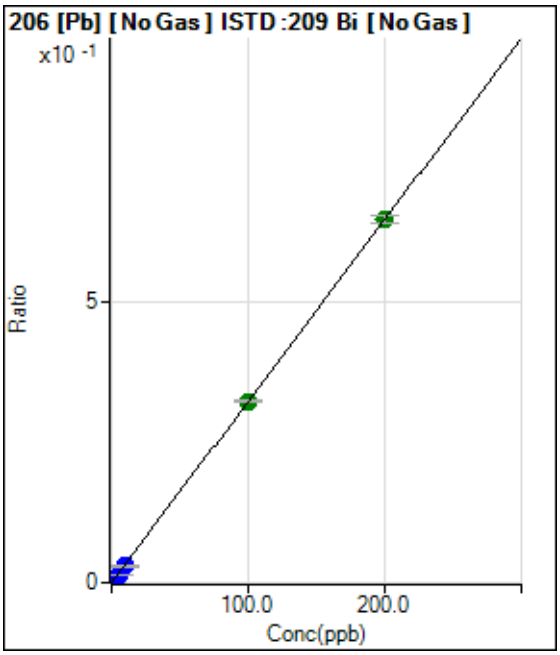


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	160.00	0.0000	P	25.1
2	☐	2.000	1.905	83960.96	0.0176	P	4.2
3	☐	5.000	4.633	207106.16	0.0427	P	2.6
4	☐	10.000	9.239	415436.74	0.0851	P	2.0
5	☐	100.000	100.716	4370727.64	0.9268	A	3.5
6	☐	200.000	199.690	8643389.25	1.8376	A	2.4

y = 0.0092 * x + 3.3211E-005
R = 1.0000
DL = 0.002716
BEC = 0.003609

Weight: <None>
Min Conc: <None>

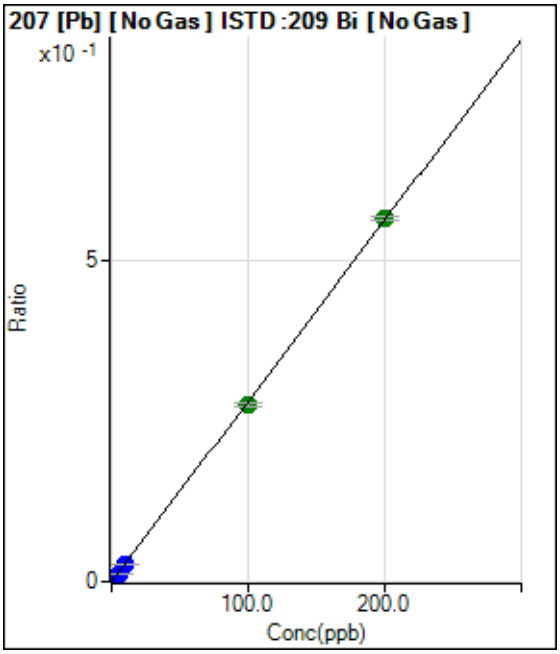
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	303.34	0.0001	P	13.5
2	☐	2.000	1.881	29421.94	0.0062	P	4.7
3	☐	5.000	4.520	71367.92	0.0147	P	3.6
4	☐	10.000	9.087	144067.70	0.0295	P	4.0
5	☐	100.000	100.048	1529653.62	0.3242	A	1.0
6	☐	200.000	200.035	3048607.14	0.6481	A	2.0

y = 0.0032 * x + 6.2959E-005
R = 1.0000
DL = 0.007885
BEC = 0.01943

Weight: <None>
Min Conc: <None>

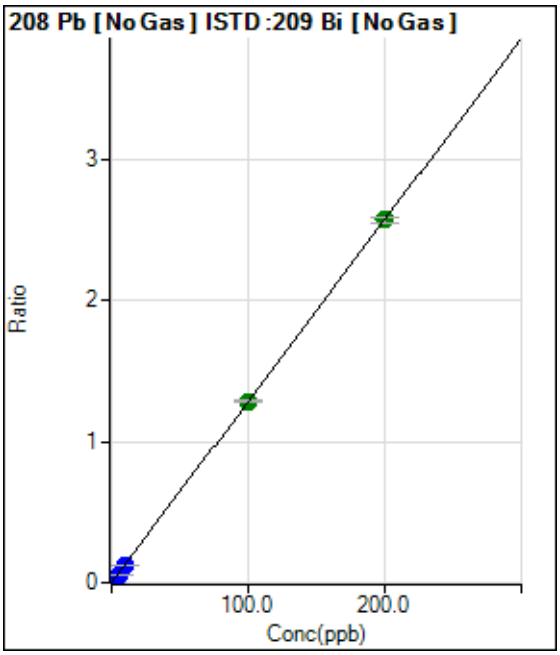


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	230.01	0.0000	P	26.0
2	☐	2.000	1.896	25643.64	0.0054	P	2.7
3	☐	5.000	4.635	63318.95	0.0130	P	0.8
4	☐	10.000	9.265	127054.22	0.0260	P	4.8
5	☐	100.000	98.147	1298122.95	0.2752	A	2.5
6	☐	200.000	200.974	2650809.13	0.5635	A	0.9

y = 0.0028 * x + 4.7686E-005
R = 0.9999
DL = 0.01329
BEC = 0.01701

Weight: <None>
Min Conc: <None>

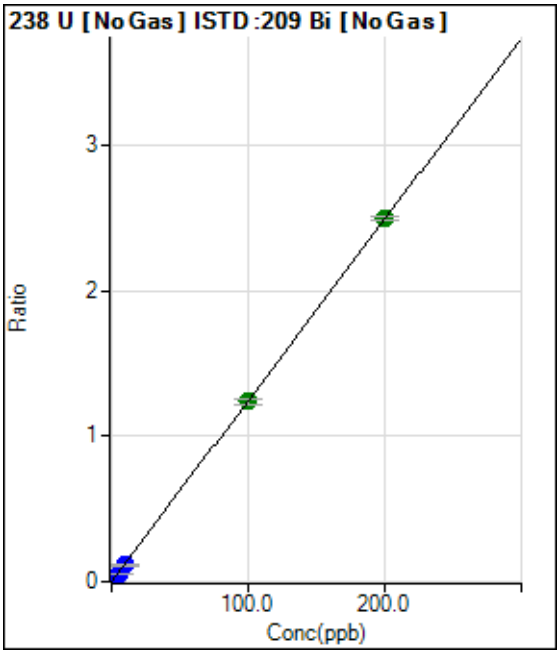
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1150.05	0.0002	P	3.7
2	☐	2.000	1.886	116953.70	0.0245	P	3.0
3	☐	5.000	4.600	287945.69	0.0593	P	0.9
4	☐	10.000	9.240	580557.46	0.1189	P	2.9
5	☐	100.000	99.932	6054525.90	1.2833	A	1.3
6	☐	200.000	200.083	12085835.55	2.5692	A	1.3

y = 0.0128 * x + 2.3863E-004
R = 1.0000
DL = 0.00208
BEC = 0.01859

Weight: <None>
Min Conc: <None>

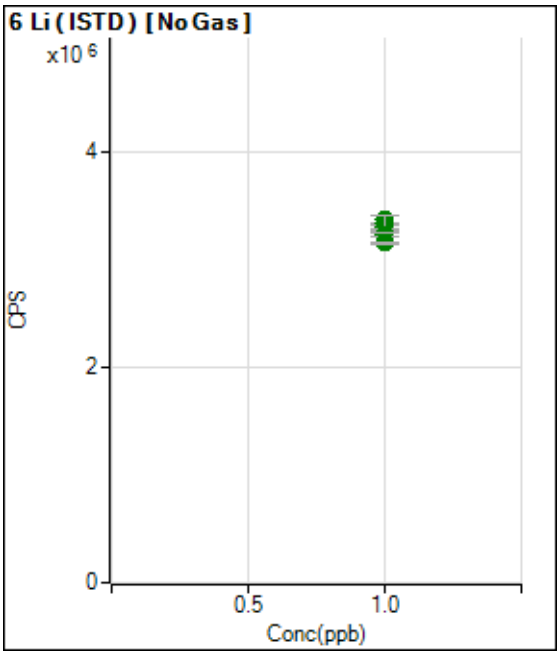


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	20.00	0.0000	P	0.5
2	☐	2.000	1.829	108859.24	0.0228	P	2.3
3	☐	5.000	4.518	273038.50	0.0562	P	0.2
4	☐	10.000	9.066	551270.46	0.1128	P	1.0
5	☐	100.000	99.365	5833204.29	1.2367	A	2.5
6	☐	200.000	200.378	11730613.57	2.4938	A	1.1

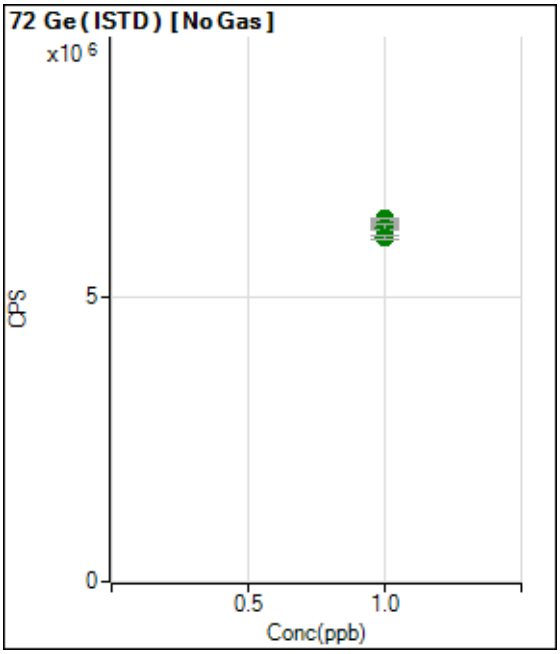
y = 0.0124 * x + 4.1502E-006
R = 1.0000
DL = 5.481E-06
BEC = 0.0003335

Weight: <None>
Min Conc: <None>

Calibration for 018_ICV.d

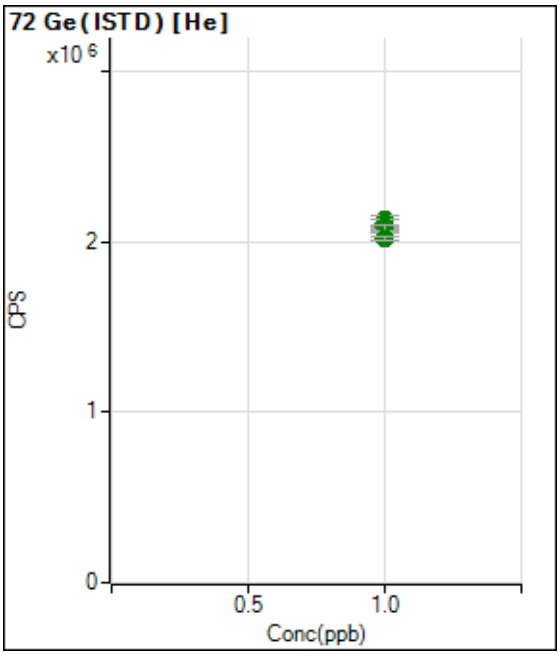


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		3367912.03		A	2.0
2	☐	1.000		3282944.31		A	1.8
3	☐	1.000		3311163.90		A	1.4
4	☐	1.000		3331060.60		A	4.3
5	☐	1.000		3227889.91		A	1.4
6	☐	1.000		3150844.63		A	0.6

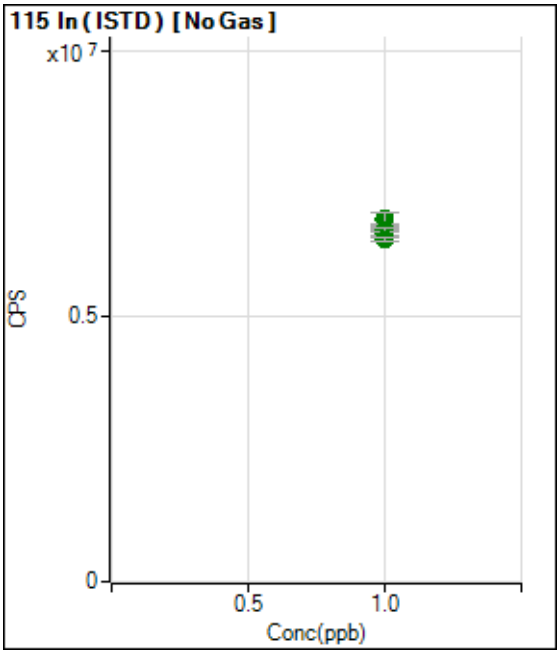


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		6259186.57		A	2.1
2	☐	1.000		6285838.24		A	1.8
3	☐	1.000		6246972.82		A	0.9
4	☐	1.000		6382107.61		A	0.3
5	☐	1.000		6239614.70		A	1.3
6	☐	1.000		6059339.28		A	0.9

Calibration for 018_ICV.d

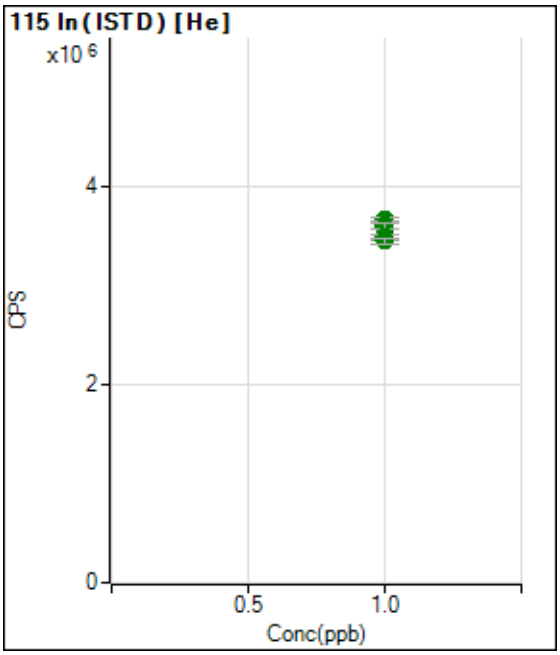


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		2128792.47		A	2.3
2	☐	1.000		2109518.72		A	2.5
3	☐	1.000		2067634.81		A	1.2
4	☐	1.000		2091168.41		A	1.2
5	☐	1.000		2083969.29		A	1.8
6	☐	1.000		2024410.34		A	1.2

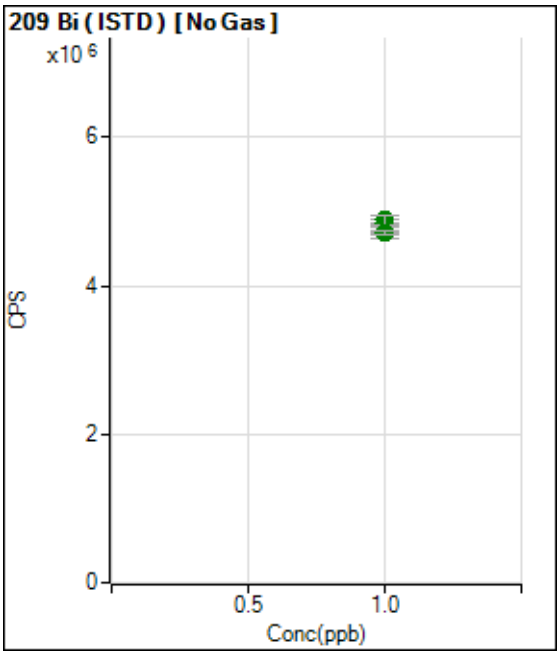


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		6832905.70		A	4.1
2	☐	1.000		6578216.25		A	1.8
3	☐	1.000		6686730.85		A	1.8
4	☐	1.000		6839438.66		A	3.3
5	☐	1.000		6632404.29		A	1.0
6	☐	1.000		6452380.02		A	1.3

Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		3666722.58		A	1.2
2	☐	1.000		3489822.74		A	1.4
3	☐	1.000		3613260.12		A	2.5
4	☐	1.000		3596745.54		A	1.6
5	☐	1.000		3492740.29		A	1.3
6	☐	1.000		3451331.86		A	1.8



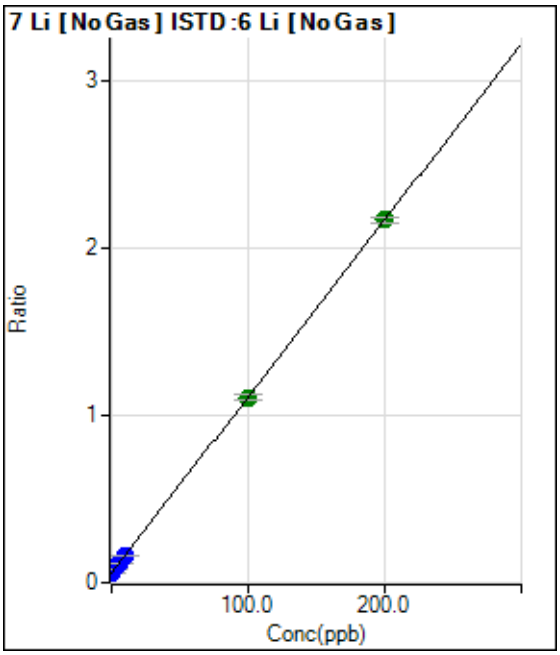
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		4819187.01		A	0.5
2	☐	1.000		4783999.51		A	2.7
3	☐	1.000		4855667.11		A	2.1
4	☐	1.000		4886188.78		A	2.8
5	☐	1.000		4718795.87		A	3.0
6	☐	1.000		4704128.47		A	1.2

Calibration for 197_ICV.d

Batch Folder: C:\Agilent\ICPMH\1\DATA\070220A.b\
Analysis File: 070220A.batch.bin
DA Date-Time: 7/2/2020 9:54:05 PM
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	190CALB.d	CAL BLK	7/2/2020 9:10:33 PM
2	191CALS.d	2/10/200	7/2/2020 9:12:32 PM
3	192CALS.d	5/25/500	7/2/2020 9:14:32 PM
4	193CALS.d	10/50/100	7/2/2020 9:16:23 PM
5	194CALS.d	100/500/10K	7/2/2020 9:18:15 PM
6	195CALS.d	200/1000/20K	7/2/2020 9:19:58 PM

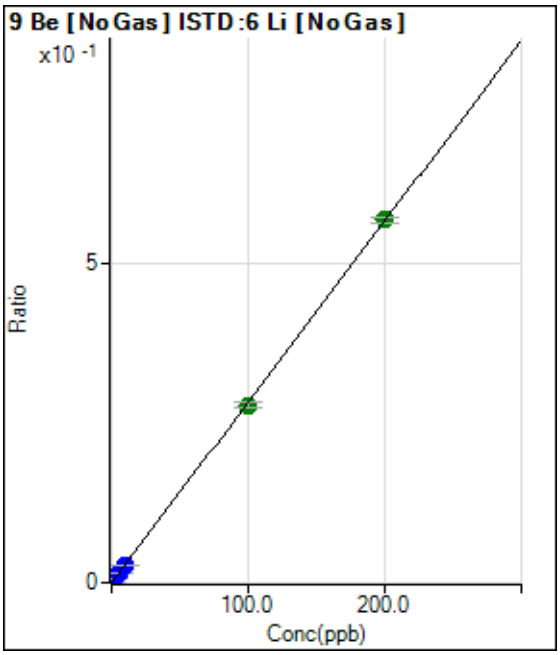
Calibration for 197_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	169837.52	0.0573	P	1.9
2	☐	2.000	2.302	241741.95	0.0815	P	3.0
3	☐	5.000	5.587	351805.61	0.1161	P	2.1
4	☐	10.000	10.053	490636.49	0.1632	P	0.5
5	☐	100.000	99.610	3154029.23	1.1065	A	3.5
6	☐	200.000	200.175	5892413.66	2.1657	A	1.7

y = 0.0105 * x + 0.0573
R = 1.0000
DL = 0.312
BEC = 5.437

Weight: <None>
Min Conc: <None>

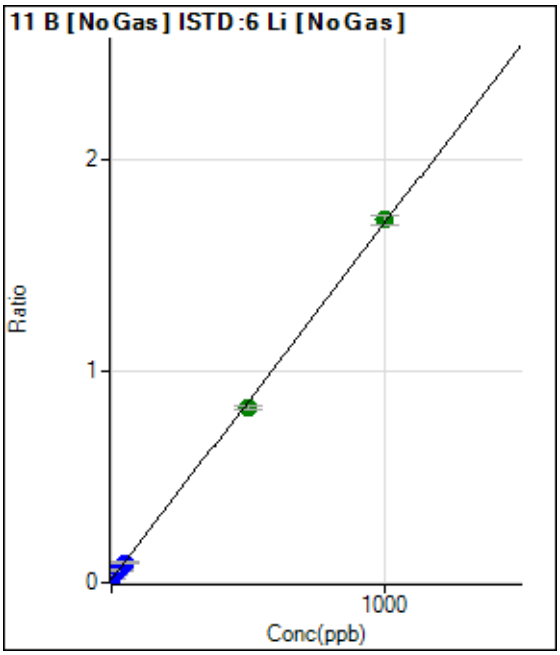


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	65.00	0.0000	P	36.5
2	☐	2.000	2.251	18987.87	0.0064	P	2.7
3	☐	5.000	5.435	46752.50	0.0154	P	1.6
4	☐	10.000	9.557	81531.30	0.0271	P	1.8
5	☐	100.000	98.414	795489.91	0.2790	A	2.3
6	☐	200.000	200.802	1548894.87	0.5693	A	1.7

y = 0.0028 * x + 2.1824E-005
R = 0.9999
DL = 0.008438
BEC = 0.007698

Weight: <None>
Min Conc: <None>

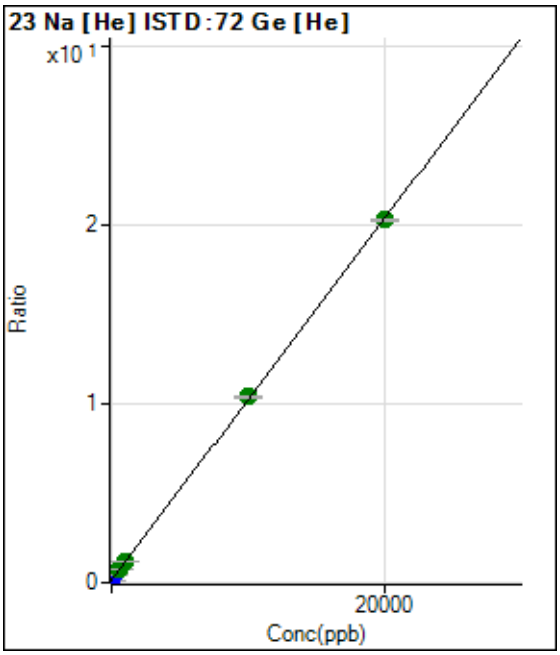
Calibration for 197_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	42612.71	0.0144	P	2.3
2	☐	10.000	10.851	96849.59	0.0327	P	4.2
3	☐	25.000	26.698	179977.94	0.0594	P	1.3
4	☐	50.000	48.090	287068.61	0.0955	P	2.4
5	☐	500.000	481.209	2355529.60	0.8260	A	1.7
6	☐	1000.000	1009.440	4670936.18	1.7169	A	2.4

y = 0.0017 * x + 0.0144
R = 0.9997
DL = 0.5986
BEC = 8.52

Weight: <None>
Min Conc: <None>

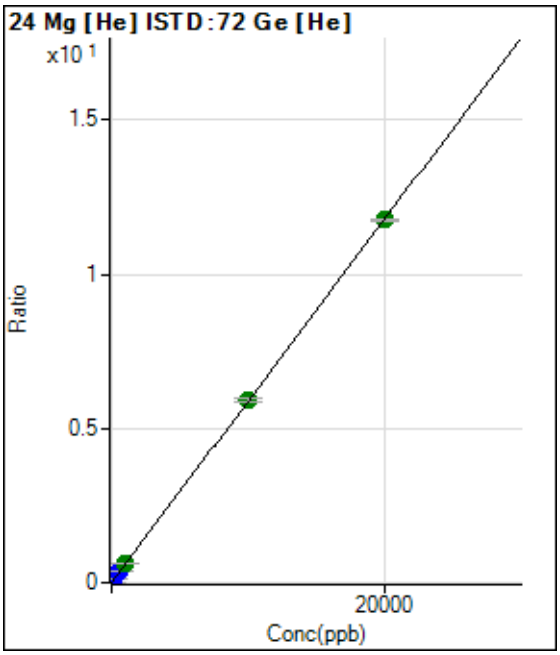


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	262320.50	0.1390	P	0.6
2	☐	200.000	246.511	722341.94	0.3880	P	1.8
3	☐	500.000	606.763	1384334.41	0.7520	A	1.4
4	☐	1000.000	1038.141	2242619.29	1.1878	A	2.9
5	☐	10000.00	10128.21	18751312.22	10.3712	A	0.5
6	☐	20000.00	19930.85	36040750.29	20.2745	A	0.2

y = 0.0010 * x + 0.1390
R = 1.0000
DL = 2.679
BEC = 137.6

Weight: <None>
Min Conc: <None>

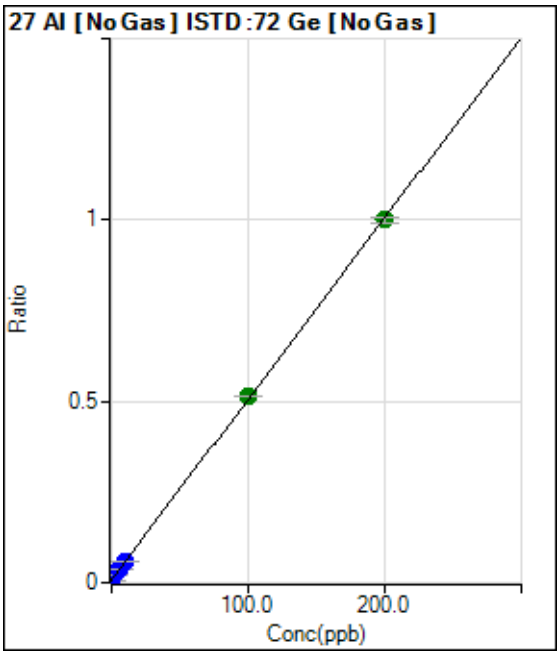
Calibration for 197_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1343.42	0.0007	P	17.2
2	☐	200.000	244.729	269529.66	0.1448	P	2.9
3	☐	500.000	603.154	655062.36	0.3558	P	1.1
4	☐	1000.000	1033.553	1150248.08	0.6093	A	1.6
5	☐	10000.00	10057.99	10709074.63	5.9228	A	2.2
6	☐	20000.00	19966.29	20899488.02	11.7568	A	0.7

y = 5.8880E-004 * x + 7.1239E-004
R = 1.0000
DL = 0.6245
BEC = 1.21

Weight: <None>
Min Conc: <None>

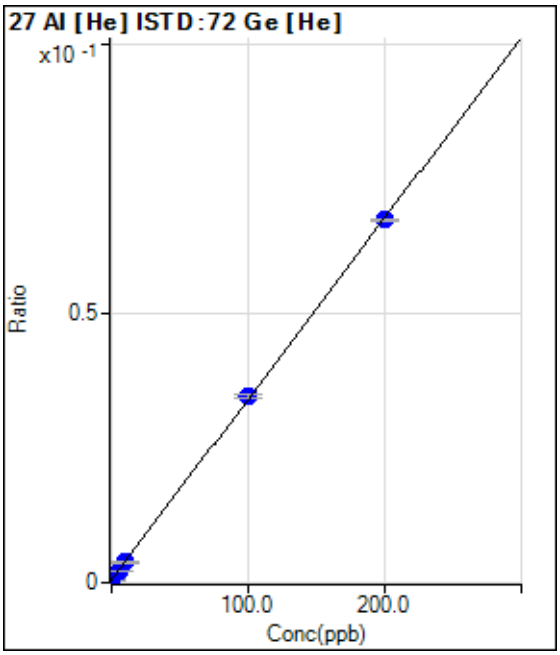


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	47675.15	0.0077	P	1.3
2	☐	2.000	2.330	121071.34	0.0193	P	1.7
3	☐	5.000	5.539	225279.36	0.0353	P	1.2
4	☐	10.000	9.779	356368.53	0.0564	P	0.8
5	☐	100.000	101.671	3189201.41	0.5146	A	0.5
6	☐	200.000	199.159	6080257.41	1.0006	A	1.5

y = 0.0050 * x + 0.0077
R = 0.9999
DL = 0.06036
BEC = 1.543

Weight: <None>
Min Conc: <None>

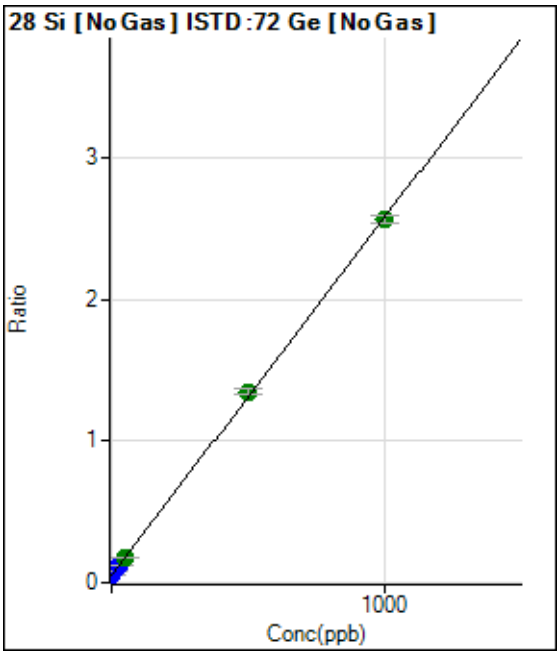
Calibration for 197_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	993.39	0.0005	P	6.5
2	☐	2.000	2.256	2386.92	0.0013	P	3.6
3	☐	5.000	5.234	4197.37	0.0023	P	2.6
4	☐	10.000	9.687	7121.99	0.0038	P	2.4
5	☐	100.000	101.592	62487.17	0.0346	P	1.6
6	☐	200.000	199.211	119574.25	0.0673	P	0.7

y = 3.3502E-004 * x + 5.2655E-004
R = 1.0000
DL = 0.3057
BEC = 1.572

Weight: <None>
Min Conc: <None>

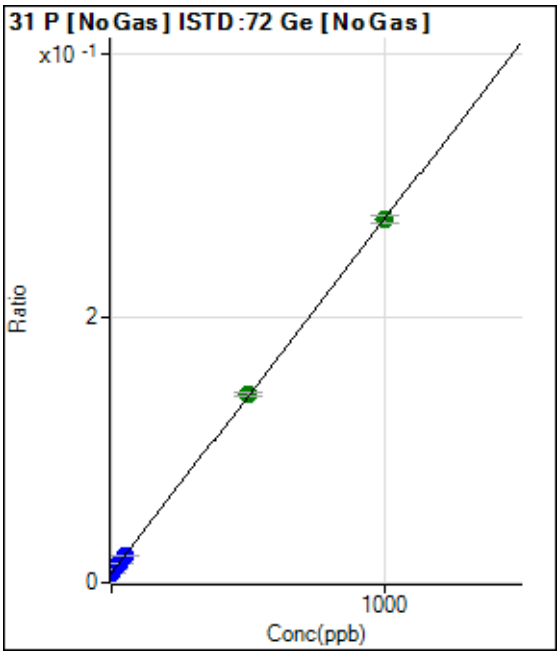


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	315161.78	0.0509	P	1.3
2	☐	10.000	10.981	492904.16	0.0786	P	2.2
3	☐	25.000	27.729	771635.38	0.1209	P	0.6
4	☐	50.000	51.018	1134893.45	0.1798	A	2.9
5	☐	500.000	512.320	8337010.29	1.3454	A	2.9
6	☐	1000.000	993.711	15566049.77	2.5617	A	2.0

y = 0.0025 * x + 0.0509
R = 0.9999
DL = 0.8001
BEC = 20.13

Weight: <None>
Min Conc: <None>

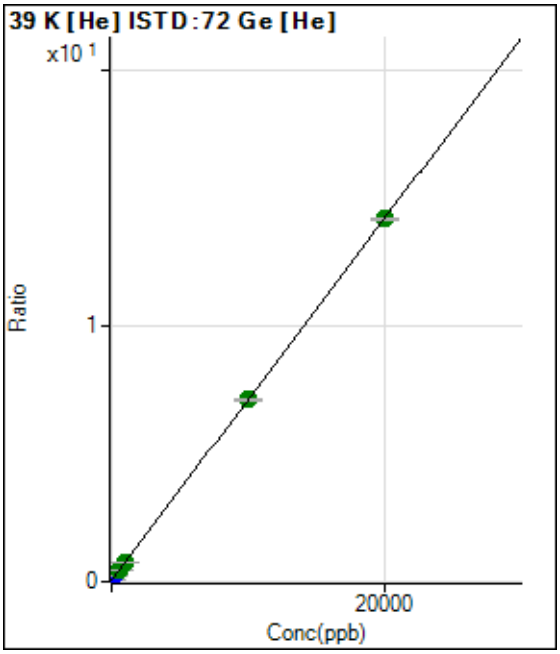
Calibration for 197_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	45558.27	0.0074	P	1.1
2	☐	10.000	11.379	65173.21	0.0104	P	1.8
3	☐	25.000	27.608	94000.17	0.0147	P	1.6
4	☐	50.000	49.080	129234.39	0.0205	P	1.7
5	☐	500.000	503.467	879507.30	0.1419	A	2.0
6	☐	1000.000	998.234	1665916.54	0.2742	A	2.2

y = 2.6728E-004 * x + 0.0074
R = 1.0000
DL = 0.8939
BEC = 27.51

Weight: <None>
Min Conc: <None>

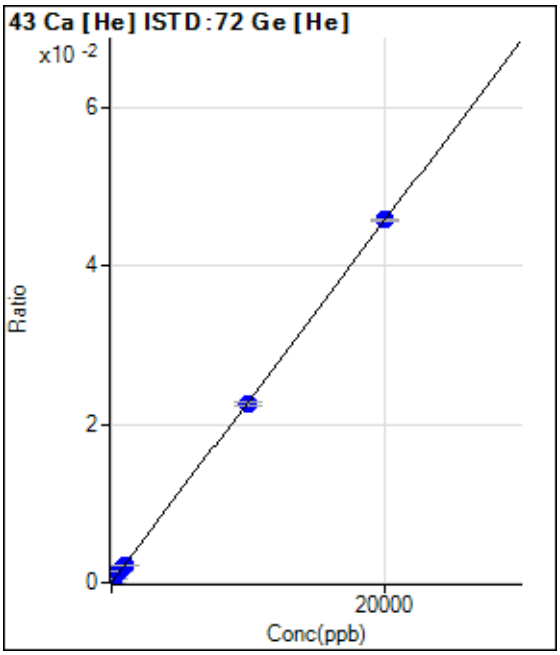


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	94267.37	0.0500	P	2.4
2	☐	200.000	238.644	407383.48	0.2188	P	1.5
3	☐	500.000	584.786	853763.71	0.4638	A	1.1
4	☐	1000.000	1036.018	1478550.03	0.7831	A	0.7
5	☐	10000.00	10008.78	12896542.73	7.1329	A	1.0
6	☐	20000.00	19991.30	25237654.62	14.1973	A	0.2

y = 7.0767E-004 * x + 0.0500
R = 1.0000
DL = 5.1
BEC = 70.59

Weight: <None>
Min Conc: <None>

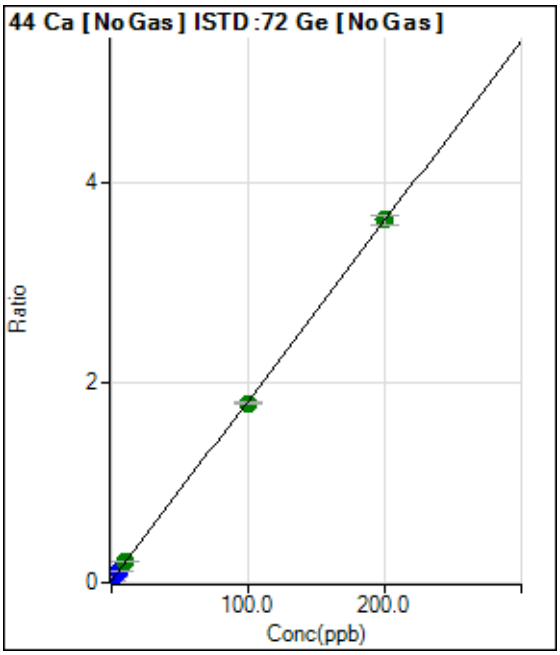
Calibration for 197_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	36.67	0.0000	P	83.3
2	☐	200.000	233.618	1030.06	0.0006	P	10.8
3	☐	500.000	588.224	2510.28	0.0014	P	2.2
4	☐	1000.000	977.410	4254.06	0.0023	P	3.8
5	☐	10000.00	9882.541	40864.25	0.0226	P	1.5
6	☐	20000.00	20057.31	81504.21	0.0458	P	0.6

y = 2.2850E-006 * x + 1.9371E-005
R = 1.0000
DL = 21.19
BEC = 8.478

Weight: <None>
Min Conc: <None>

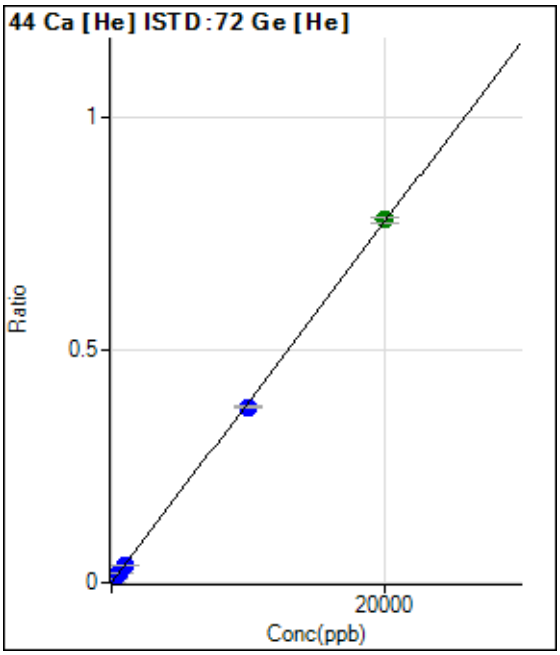


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	128815.91	0.0208	P	1.6
2	☐	2.000	2.311	391305.11	0.0624	P	0.9
3	☐	5.000	5.522	767270.40	0.1202	P	0.1
4	☐	10.000	10.550	1330900.50	0.2108	A	0.9
5	☐	100.000	98.761	11154373.58	1.7996	A	1.4
6	☐	200.000	200.576	22075384.67	3.6334	A	2.9

y = 0.0180 * x + 0.0208
R = 1.0000
DL = 0.0565
BEC = 1.154

Weight: <None>
Min Conc: <None>

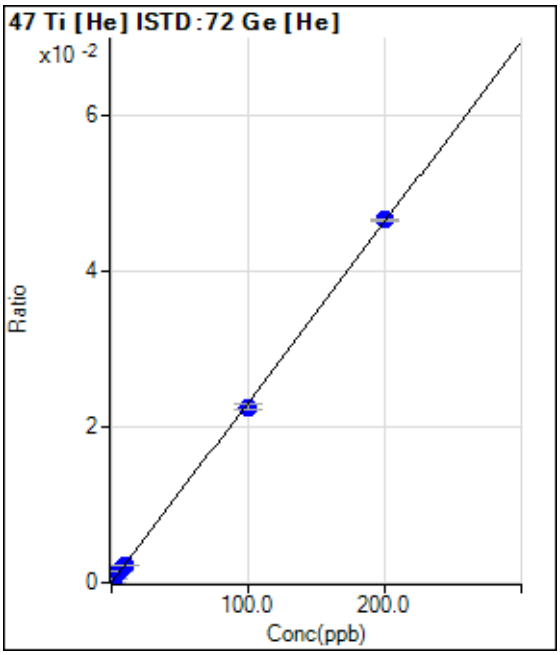
Calibration for 197_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1226.74	0.0007	P	18.4
2	☐	200.000	228.046	17668.26	0.0095	P	2.5
3	☐	500.000	548.882	40362.91	0.0219	P	2.2
4	☐	1000.000	966.187	71948.19	0.0381	P	1.5
5	☐	10000.00	9743.898	684078.53	0.3784	P	1.5
6	☐	20000.00	20128.23	1388203.26	0.7809	A	1.5

y = 3.8765E-005 * x + 6.5096E-004
R = 0.9999
DL = 9.286
BEC = 16.79

Weight: <None>
Min Conc: <None>

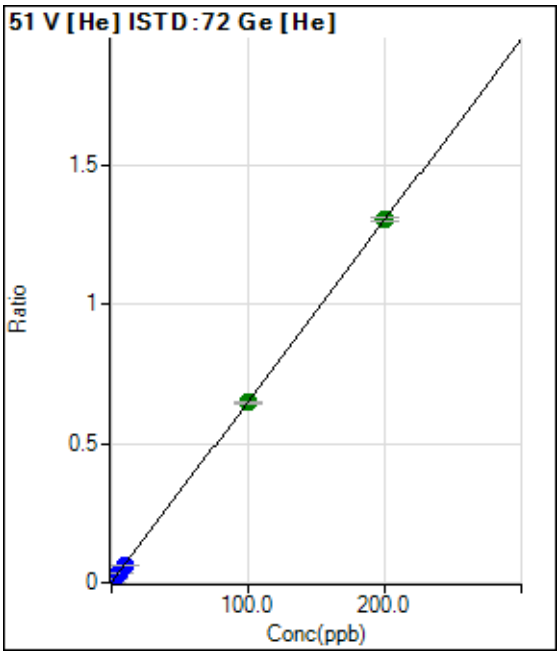


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	13.33	0.0000	P	86.6
2	☐	2.000	2.181	953.39	0.0005	P	3.7
3	☐	5.000	5.930	2540.29	0.0014	P	2.0
4	☐	10.000	9.531	4177.38	0.0022	P	3.5
5	☐	100.000	97.504	40814.41	0.0226	P	2.9
6	☐	200.000	201.246	82819.24	0.0466	P	0.5

y = 2.3147E-004 * x + 7.0198E-006
R = 0.9999
DL = 0.0788
BEC = 0.03033

Weight: <None>
Min Conc: <None>

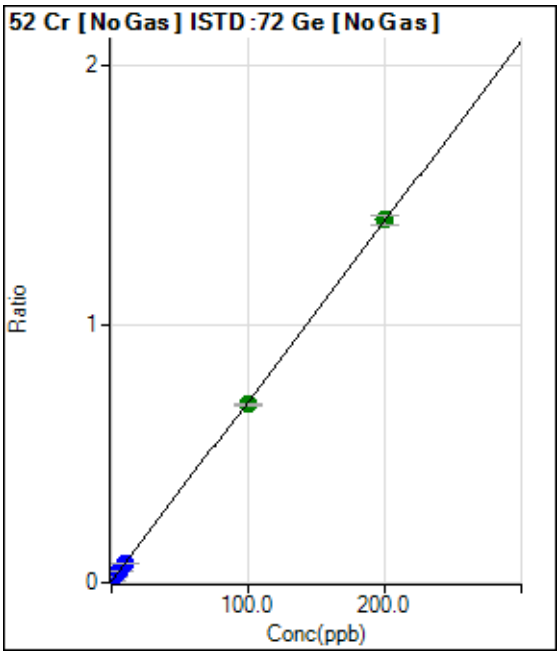
Calibration for 197_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2060.17	0.0011	P	5.3
2	☐	2.000	2.249	29261.25	0.0157	P	2.2
3	☐	5.000	5.468	67471.88	0.0367	P	1.9
4	☐	10.000	9.471	118363.45	0.0627	P	0.6
5	☐	100.000	99.535	1172470.99	0.6485	A	1.2
6	☐	200.000	200.245	2317249.77	1.3035	A	1.1

y = 0.0065 * x + 0.0011
R = 1.0000
DL = 0.02678
BEC = 0.1678

Weight: <None>
Min Conc: <None>

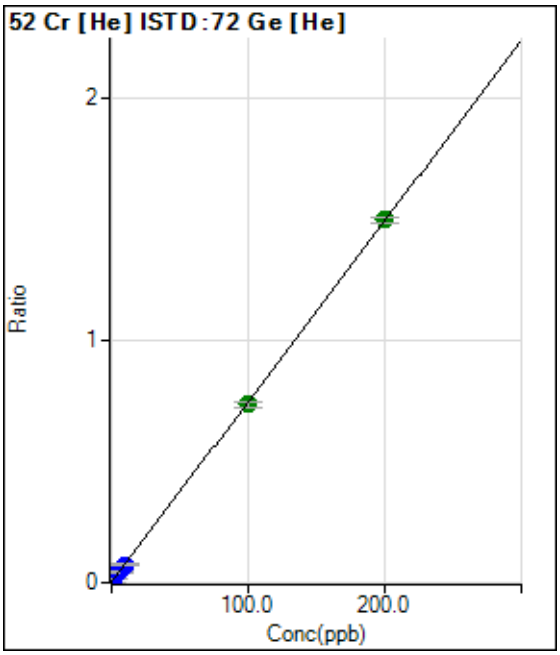


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	26205.35	0.0042	P	0.7
2	☐	2.000	2.182	121994.56	0.0195	P	0.8
3	☐	5.000	5.462	270155.15	0.0423	P	1.4
4	☐	10.000	9.917	463557.60	0.0734	P	0.8
5	☐	100.000	98.504	4285898.48	0.6915	A	1.1
6	☐	200.000	200.739	8535967.37	1.4049	A	2.7

y = 0.0070 * x + 0.0042
R = 1.0000
DL = 0.01243
BEC = 0.6061

Weight: <None>
Min Conc: <None>

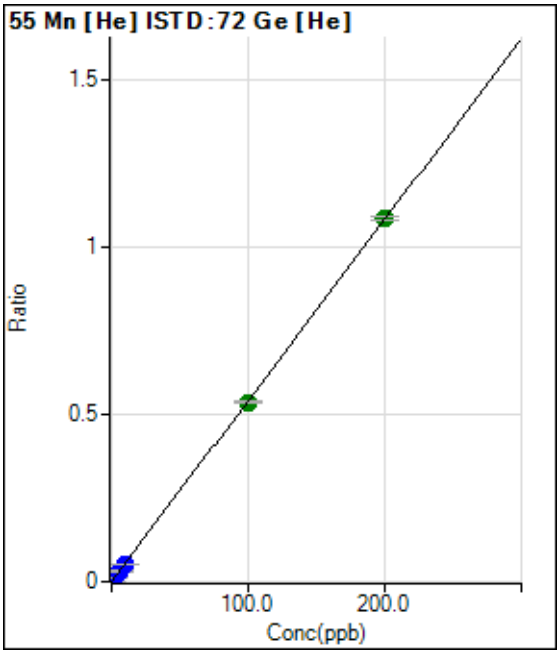
Calibration for 197_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3740.63	0.0020	P	7.5
2	☐	2.000	2.168	33748.75	0.0181	P	1.4
3	☐	5.000	5.613	80583.88	0.0438	P	0.7
4	☐	10.000	9.807	141597.80	0.0750	P	1.3
5	☐	100.000	98.610	1331022.98	0.7362	A	3.0
6	☐	200.000	200.688	2659996.94	1.4963	A	1.8

y = 0.0074 * x + 0.0020
R = 1.0000
DL = 0.05996
BEC = 0.266

Weight: <None>
Min Conc: <None>

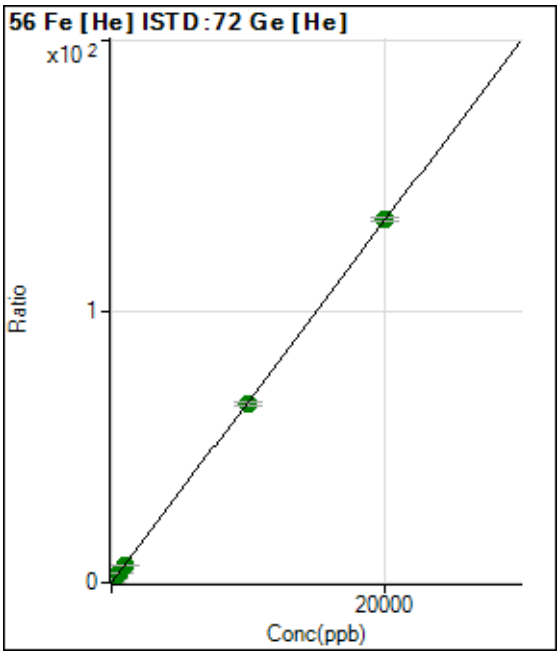


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1176.74	0.0006	P	9.8
2	☐	2.000	2.361	24933.06	0.0134	P	2.6
3	☐	5.000	5.701	57916.59	0.0315	P	3.0
4	☐	10.000	9.898	102255.30	0.0542	P	0.9
5	☐	100.000	99.063	969850.38	0.5364	A	1.7
6	☐	200.000	200.452	1928452.68	1.0848	A	0.9

y = 0.0054 * x + 6.2308E-004
R = 1.0000
DL = 0.03402
BEC = 0.1152

Weight: <None>
Min Conc: <None>

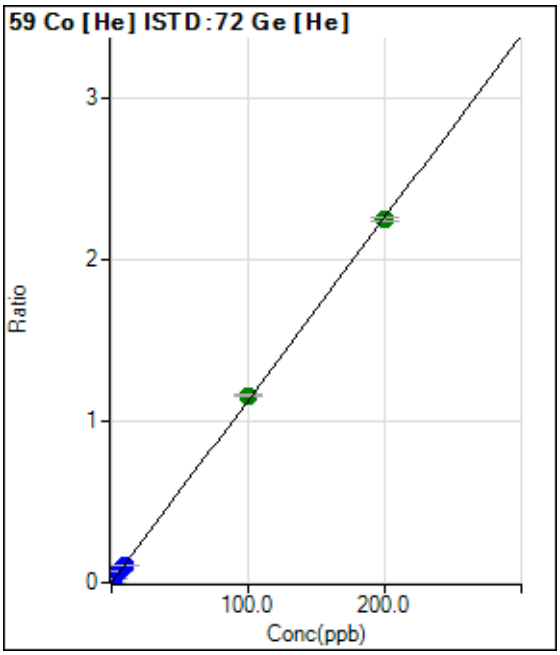
Calibration for 197_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	24495.90	0.0130	P	2.4
2	☐	200.000	234.525	2940319.43	1.5797	A	2.7
3	☐	500.000	571.305	7049828.44	3.8296	A	0.5
4	☐	1000.000	990.736	12520055.65	6.6315	A	0.2
5	☐	10000.00	9874.680	119287678.2	65.9803	A	1.8
6	☐	20000.00	20060.99	238260116.4	134.029	A	1.2

y = 0.0067 * x + 0.0130
R = 1.0000
DL = 0.137
BEC = 1.943

Weight: <None>
Min Conc: <None>

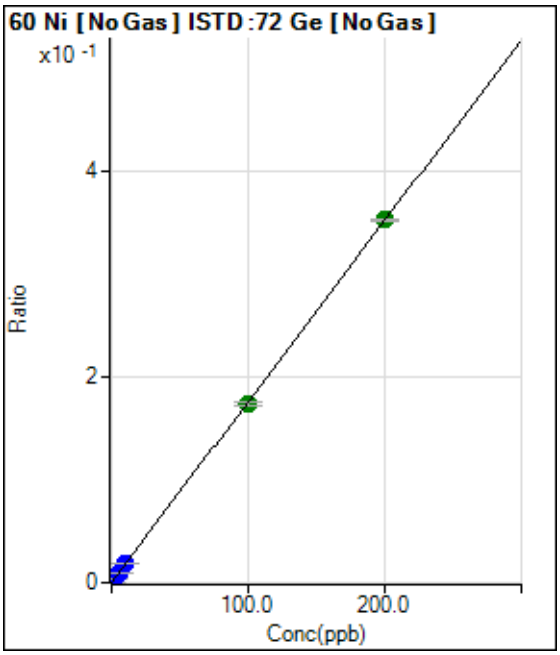


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	336.68	0.0002	P	9.3
2	☐	2.000	2.290	48463.37	0.0260	P	2.2
3	☐	5.000	5.839	121721.33	0.0661	P	0.6
4	☐	10.000	9.940	212257.65	0.1124	P	1.0
5	☐	100.000	102.298	2089117.78	1.1554	A	1.0
6	☐	200.000	198.830	3991795.88	2.2456	A	0.9

y = 0.0113 * x + 1.7843E-004
R = 0.9999
DL = 0.004425
BEC = 0.0158

Weight: <None>
Min Conc: <None>

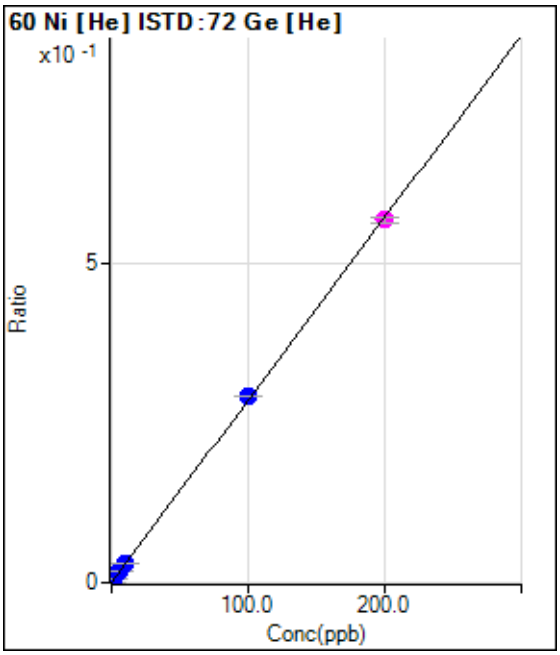
Calibration for 197_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1360.10	0.0002	P	8.9
2	☐	2.000	2.267	26295.73	0.0042	P	1.7
3	☐	5.000	5.563	63628.88	0.0100	P	2.3
4	☐	10.000	10.090	113054.61	0.0179	P	1.0
5	☐	100.000	98.744	1074135.71	0.1733	A	2.3
6	☐	200.000	200.607	2138782.36	0.3519	A	0.2

y = 0.0018 * x + 2.1962E-004
R = 1.0000
DL = 0.03351
BEC = 0.1253

Weight: <None>
Min Conc: <None>

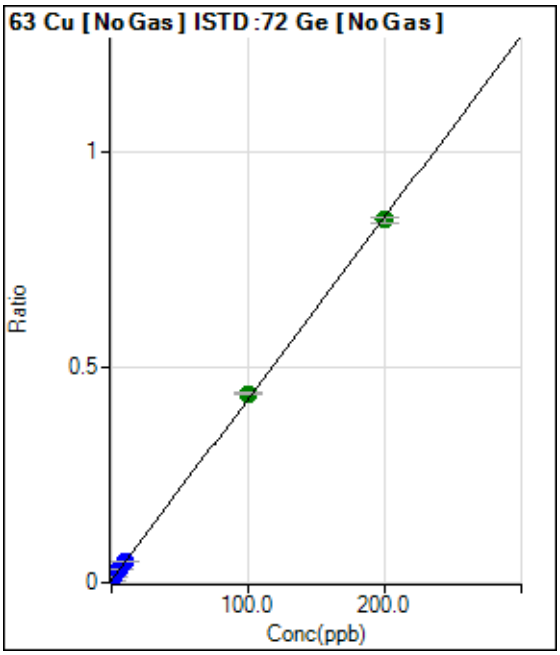


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	586.69	0.0003	P	20.0
2	☐	2.000	2.335	13013.12	0.0070	P	2.0
3	☐	5.000	5.861	31430.06	0.0171	P	3.7
4	☐	10.000	10.047	54847.54	0.0291	P	0.7
5	☐	100.000	102.338	529856.36	0.2931	P	0.4
6	☐	200.000	198.804	1011494.86	0.5690	M	1.5

y = 0.0029 * x + 3.1136E-004
R = 0.9999
DL = 0.06526
BEC = 0.1088

Weight: <None>
Min Conc: <None>

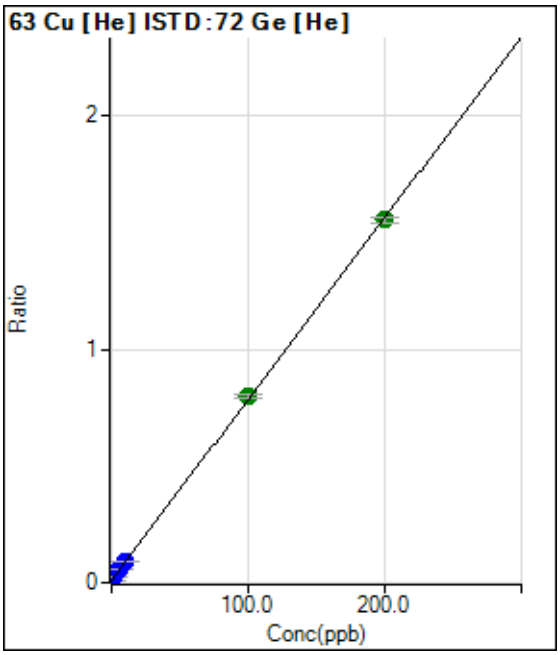
Calibration for 197_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	33618.47	0.0054	P	2.9
2	☐	2.000	2.365	96557.72	0.0154	P	0.4
3	☐	5.000	5.731	188785.27	0.0296	P	2.2
4	☐	10.000	10.214	306132.67	0.0485	P	0.5
5	☐	100.000	102.800	2719869.44	0.4389	A	1.2
6	☐	200.000	198.568	5120795.13	0.8426	A	1.2

y = 0.0042 * x + 0.0054
R = 0.9999
DL = 0.1111
BEC = 1.287

Weight: <None>
Min Conc: <None>

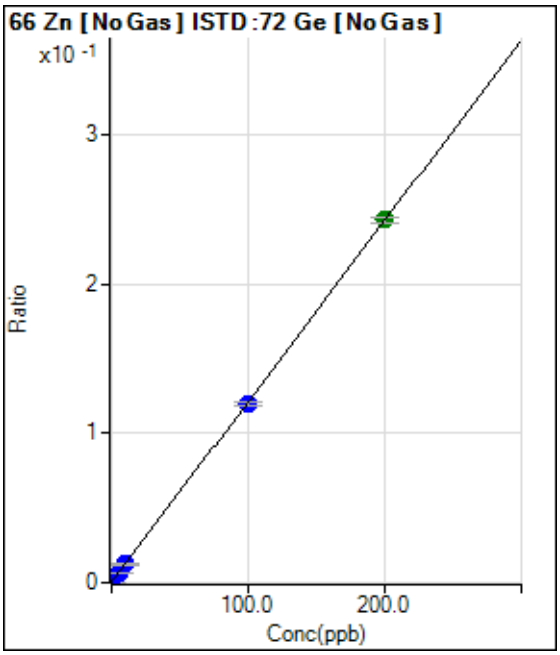


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	17478.12	0.0093	P	1.0
2	☐	2.000	2.383	51658.46	0.0277	P	1.3
3	☐	5.000	5.912	101484.60	0.0551	P	1.4
4	☐	10.000	10.168	166419.80	0.0882	P	1.1
5	☐	100.000	101.894	1446036.44	0.7998	A	1.4
6	☐	200.000	199.018	2761260.69	1.5534	A	1.4

y = 0.0078 * x + 0.0093
R = 0.9999
DL = 0.0369
BEC = 1.194

Weight: <None>
Min Conc: <None>

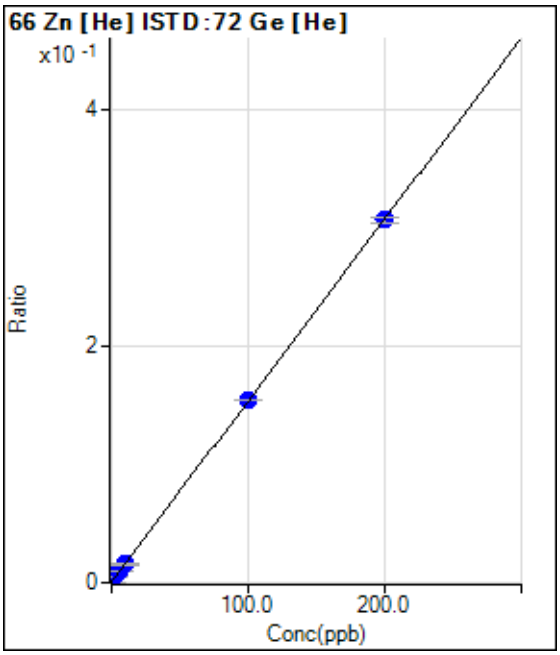
Calibration for 197_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2006.86	0.0003	P	6.0
2	☐	2.000	2.711	22565.72	0.0036	P	2.8
3	☐	5.000	5.484	44346.37	0.0069	P	3.4
4	☐	10.000	9.857	77229.14	0.0122	P	2.5
5	☐	100.000	98.821	741998.95	0.1197	P	1.4
6	☐	200.000	200.577	1474598.83	0.2427	A	1.7

y = 0.0012 * x + 3.2384E-004
R = 1.0000
DL = 0.04803
BEC = 0.268

Weight: <None>
Min Conc: <None>

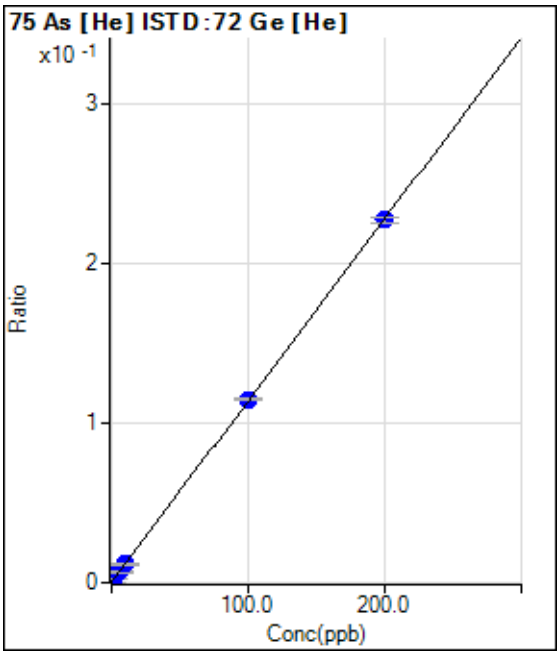


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	666.70	0.0004	P	12.5
2	☐	2.000	2.814	8679.65	0.0047	P	3.1
3	☐	5.000	5.852	17147.75	0.0093	P	1.5
4	☐	10.000	9.846	29134.86	0.0154	P	1.3
5	☐	100.000	100.458	278816.27	0.1542	P	0.4
6	☐	200.000	199.749	544430.46	0.3063	P	1.4

y = 0.0015 * x + 3.5295E-004
R = 1.0000
DL = 0.08652
BEC = 0.2305

Weight: <None>
Min Conc: <None>

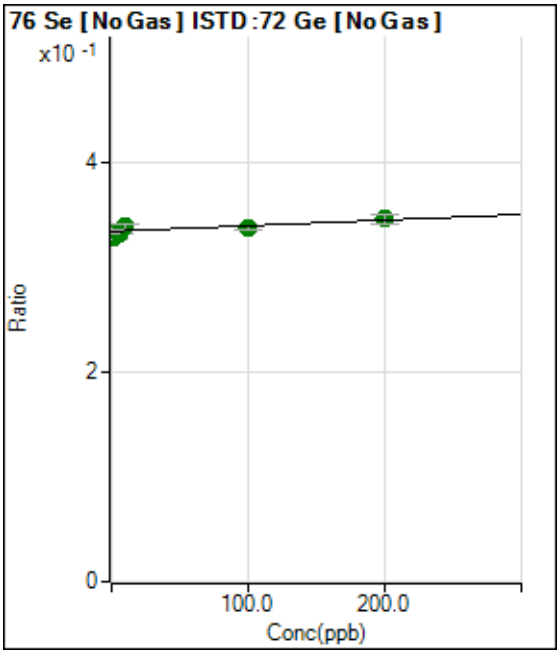
Calibration for 197_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	386.67	0.0002	P	4.2
2	☐	2.000	2.226	5086.54	0.0027	P	8.7
3	☐	5.000	5.703	12305.66	0.0067	P	2.8
4	☐	10.000	9.903	21632.91	0.0115	P	0.7
5	☐	100.000	100.730	207321.79	0.1147	P	0.8
6	☐	200.000	199.620	403592.30	0.2270	P	1.3

y = 0.0011 * x + 2.0492E-004
R = 1.0000
DL = 0.0229
BEC = 0.1803

Weight: <None>
Min Conc: <None>

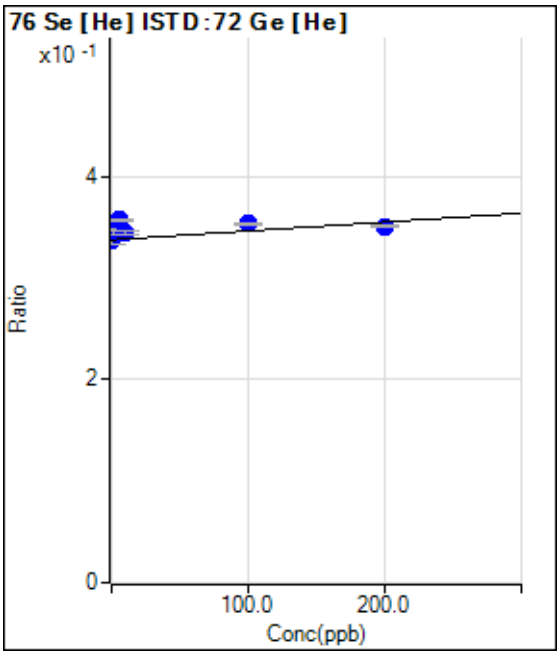


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2072167.21	0.3345	A	2.0
2	☐	2.000	-98.617	2063797.78	0.3291	A	1.1
3	☐	5.000	-42.071	2119660.13	0.3322	A	0.3
4	☐	10.000	78.108	2138264.45	0.3387	A	1.3
5	☐	100.000	58.326	2092370.44	0.3376	A	1.3
6	☐	200.000	219.614	2104253.56	0.3463	A	2.7

y = 5.3950E-005 * x + 0.3345
R = 0.8553
DL = 380
BEC = 6200

Weight: <None>
Min Conc: <None>

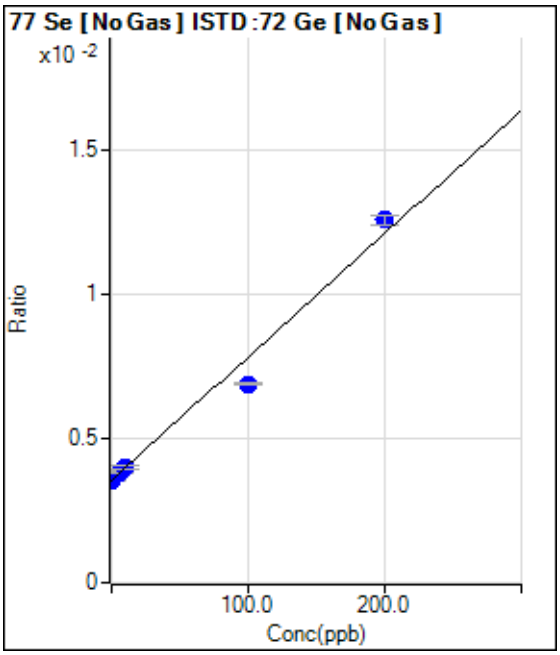
Calibration for 197_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	637807.28	0.3380	P	2.5
2	☐	2.000	91.730	644212.32	0.3461	P	2.1
3	☐	5.000	223.373	658382.59	0.3577	P	0.8
4	☐	10.000	71.313	649951.80	0.3443	P	1.2
5	☐	100.000	177.445	639355.39	0.3536	P	0.2
6	☐	200.000	151.855	624593.60	0.3514	P	0.7

y = 8.7929E-005 * x + 0.3380
R = 0.3735
DL = 285.7
BEC = 3844

Weight: <None>
Min Conc: <None>

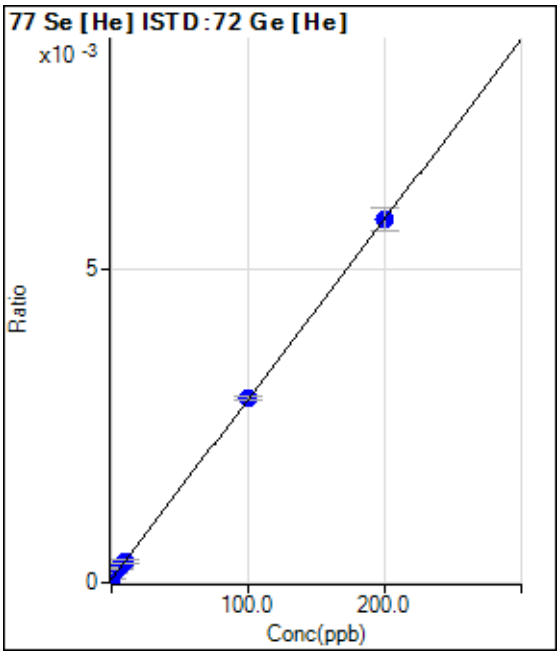


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	22108.45	0.0036	P	2.0
2	☐	2.000	3.176	23223.73	0.0037	P	2.2
3	☐	5.000	6.114	24435.95	0.0038	P	1.1
4	☐	10.000	9.605	25117.07	0.0040	P	3.6
5	☐	100.000	77.847	42758.17	0.0069	P	1.1
6	☐	200.000	211.057	76547.24	0.0126	P	2.7

y = 4.2787E-005 * x + 0.0036
R = 0.9915
DL = 5.093
BEC = 83.39

Weight: <None>
Min Conc: <None>

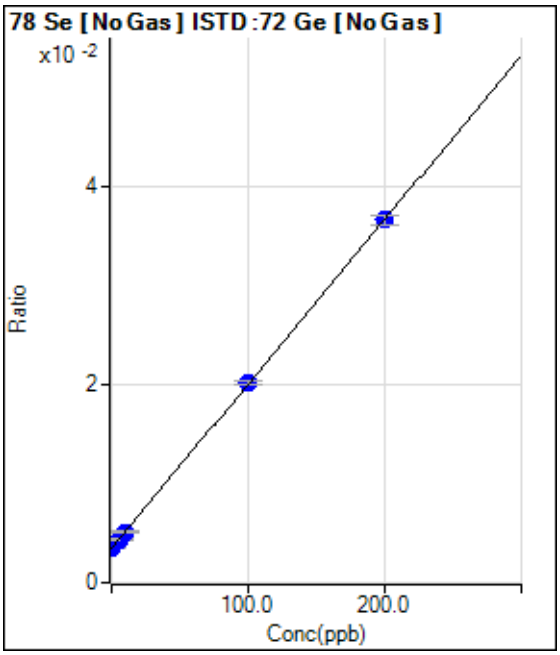
Calibration for 197_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	103.33	0.0001	P	31.1
2	☐	2.000	3.507	290.01	0.0002	P	7.3
3	☐	5.000	6.349	436.69	0.0002	P	14.2
4	☐	10.000	9.942	643.36	0.0003	P	14.3
5	☐	100.000	100.530	5327.83	0.0029	P	2.4
6	☐	200.000	199.689	10307.54	0.0058	P	6.5

y = 2.8765E-005 * x + 5.4760E-005
R = 1.0000
DL = 1.774
BEC = 1.904

Weight: <None>
Min Conc: <None>

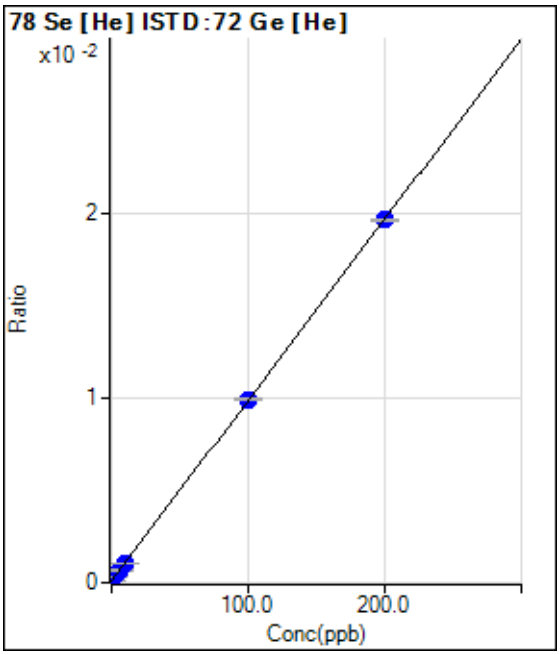


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	21587.62	0.0035	P	1.6
2	☐	2.000	2.129	24065.27	0.0038	P	1.1
3	☐	5.000	5.265	27812.37	0.0044	P	1.0
4	☐	10.000	9.517	31974.98	0.0051	P	3.5
5	☐	100.000	100.253	124801.43	0.0201	P	2.0
6	☐	200.000	199.890	222903.92	0.0367	P	3.0

y = 1.6611E-004 * x + 0.0035
R = 1.0000
DL = 0.9991
BEC = 20.98

Weight: <None>
Min Conc: <None>

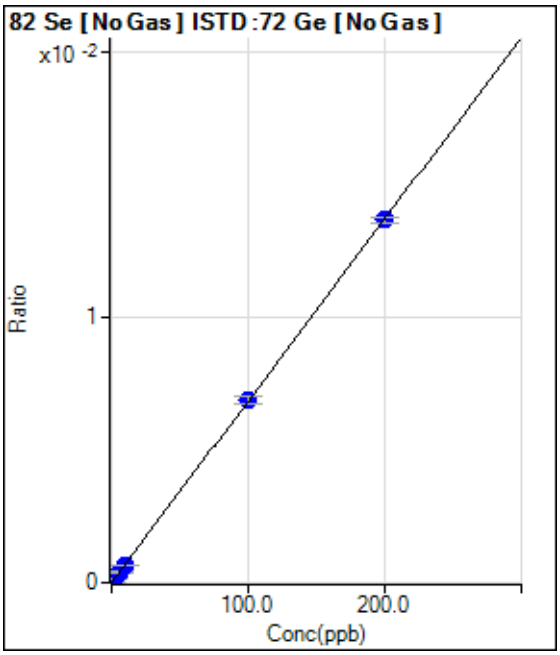
Calibration for 197_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	195.33	0.0001	P	15.3
2	☐	2.000	2.257	602.69	0.0003	P	5.7
3	☐	5.000	5.846	1242.06	0.0007	P	1.8
4	☐	10.000	9.994	2038.83	0.0011	P	1.0
5	☐	100.000	100.335	17911.89	0.0099	P	1.4
6	☐	200.000	199.809	34889.67	0.0196	P	0.5

y = 9.7711E-005 * x + 1.0341E-004
R = 1.0000
DL = 0.4853
BEC = 1.058

Weight: <None>
Min Conc: <None>

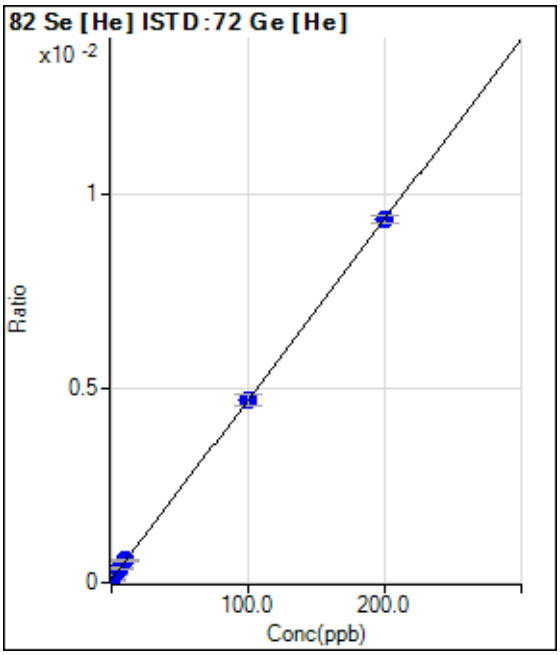


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	-24.07	0.0000	P	-732.2
2	☐	2.000	2.466	1032.65	0.0002	P	8.2
3	☐	5.000	5.598	2419.94	0.0004	P	11.9
4	☐	10.000	9.723	4177.15	0.0007	P	3.2
5	☐	100.000	100.585	42656.59	0.0069	P	3.8
6	☐	200.000	199.702	83071.19	0.0137	P	1.3

y = 6.8473E-005 * x - 4.1382E-006
R = 1.0000
DL = 1.328
BEC = -0.06044

Weight: <None>
Min Conc: <None>

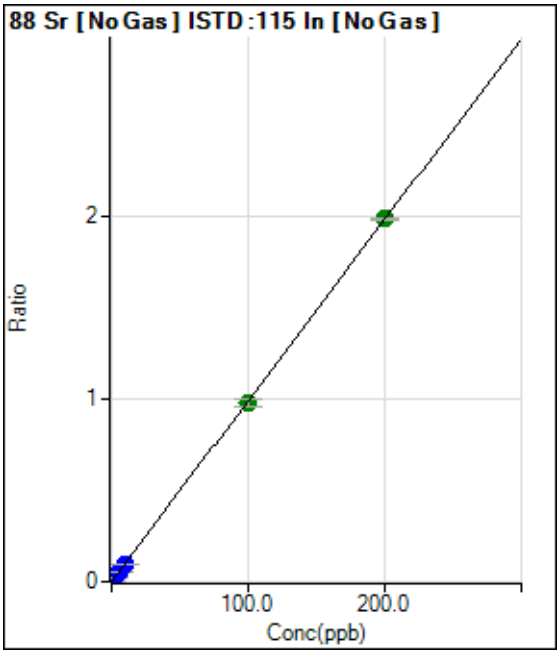
Calibration for 197_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	143.34	0.0001	P	57.4
2	☐	2.000	3.005	400.01	0.0002	P	31.7
3	☐	5.000	6.283	676.70	0.0004	P	5.3
4	☐	10.000	10.727	1083.40	0.0006	P	14.6
5	☐	100.000	100.260	8562.90	0.0047	P	6.2
6	☐	200.000	199.792	16643.92	0.0094	P	1.9

y = 4.6484E-005 * x + 7.5660E-005
R = 1.0000
DL = 2.805
BEC = 1.628

Weight: <None>
Min Conc: <None>

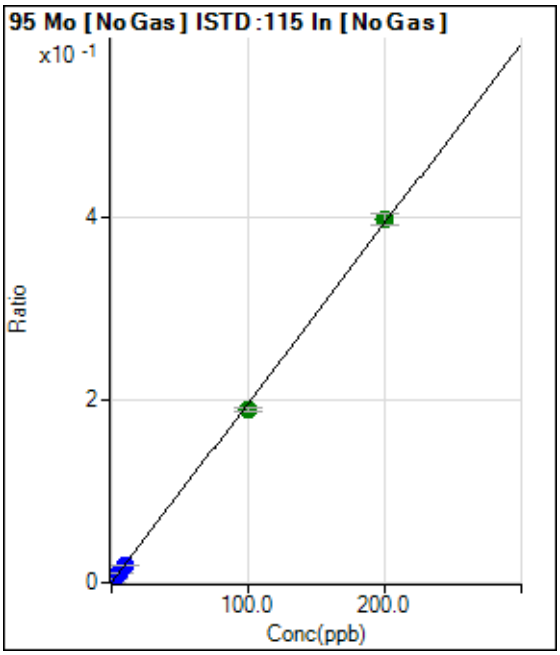


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	4694.25	0.0007	P	6.5
2	☐	2.000	2.275	158828.77	0.0232	P	2.4
3	☐	5.000	5.504	377690.70	0.0552	P	0.5
4	☐	10.000	9.626	662446.70	0.0961	P	2.1
5	☐	100.000	98.863	6569711.36	0.9806	A	3.3
6	☐	200.000	200.572	12982627.31	1.9886	A	0.8

y = 0.0099 * x + 6.8252E-004
R = 1.0000
DL = 0.01352
BEC = 0.06886

Weight: <None>
Min Conc: <None>

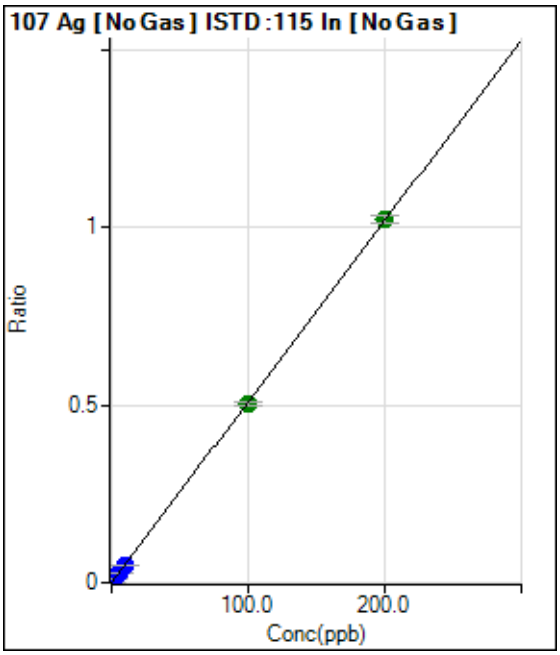
Calibration for 197_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	130.00	0.0000	P	12.9
2	☐	2.000	2.134	28741.53	0.0042	P	2.8
3	☐	5.000	5.253	70564.48	0.0103	P	1.8
4	☐	10.000	9.309	126002.07	0.0183	P	0.8
5	☐	100.000	95.980	1261193.44	0.1882	A	2.1
6	☐	200.000	202.037	2586431.94	0.3962	A	3.1

y = 0.0020 * x + 1.8897E-005
R = 0.9997
DL = 0.00373
BEC = 0.009636

Weight: <None>
Min Conc: <None>

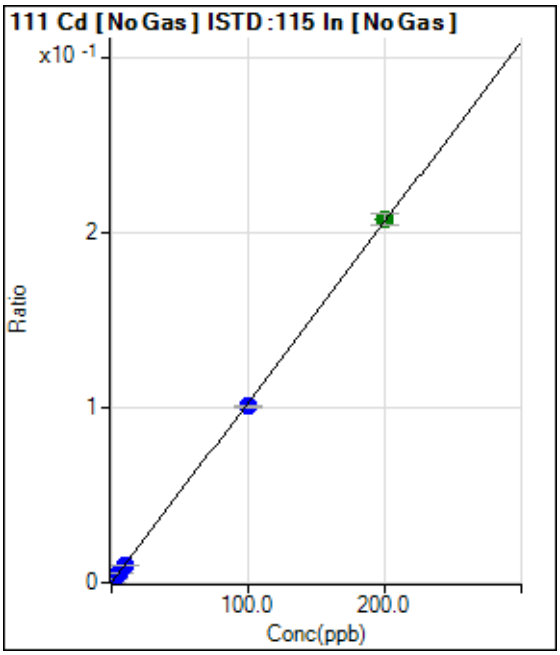


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	260.01	0.0000	P	20.0
2	☐	2.000	2.303	80475.50	0.0118	P	3.7
3	☐	5.000	5.533	192934.28	0.0282	P	1.2
4	☐	10.000	9.813	344812.70	0.0500	P	0.5
5	☐	100.000	98.703	3368303.39	0.5027	A	1.5
6	☐	200.000	200.641	6670603.23	1.0219	A	2.2

y = 0.0051 * x + 3.7850E-005
R = 1.0000
DL = 0.004449
BEC = 0.007432

Weight: <None>
Min Conc: <None>

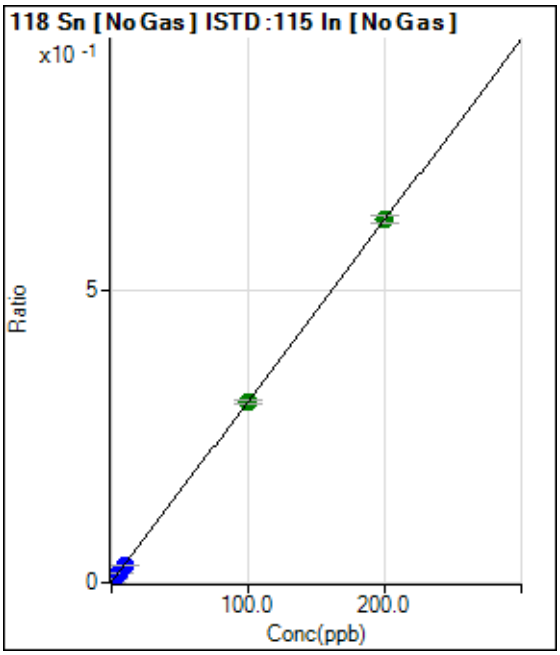
Calibration for 197_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	16.67	0.0000	P	34.3
2	☐	2.000	2.251	15859.89	0.0023	P	5.0
3	☐	5.000	5.556	39108.63	0.0057	P	0.4
4	☐	10.000	9.618	68257.04	0.0099	P	1.0
5	☐	100.000	97.609	672961.37	0.1004	P	1.7
6	☐	200.000	201.198	1351434.46	0.2070	A	3.1

y = 0.0010 * x + 2.4210E-006
R = 0.9999
DL = 0.002421
BEC = 0.002353

Weight: <None>
Min Conc: <None>

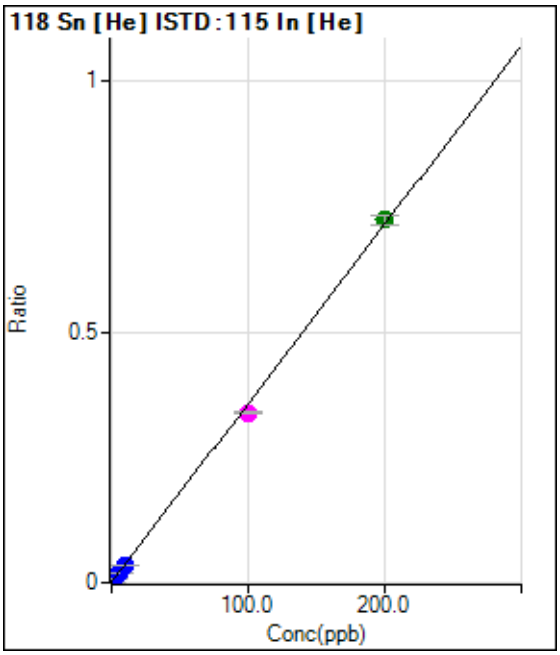


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	4971.06	0.0007	P	5.6
2	☐	2.000	2.131	50210.14	0.0073	P	4.5
3	☐	5.000	5.319	117858.83	0.0172	P	2.6
4	☐	10.000	9.558	209608.32	0.0304	P	1.1
5	☐	100.000	99.536	2075625.28	0.3098	A	2.1
6	☐	200.000	200.245	4063587.86	0.6225	A	2.3

y = 0.0031 * x + 7.2263E-004
R = 1.0000
DL = 0.03939
BEC = 0.2327

Weight: <None>
Min Conc: <None>

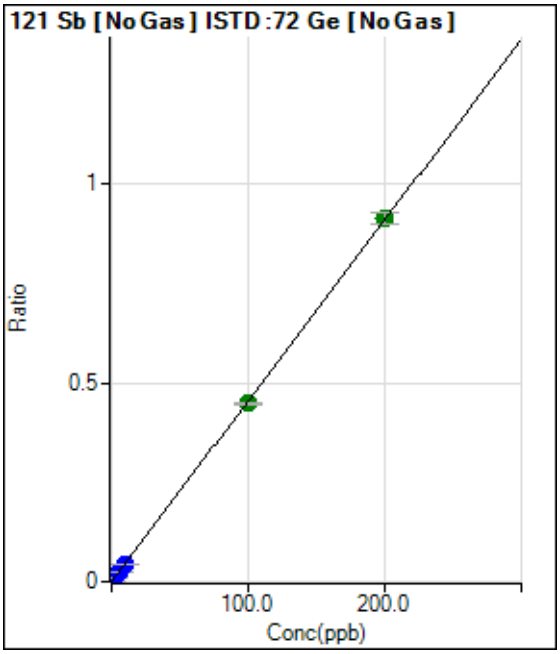
Calibration for 197_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2643.65	0.0008	P	4.8
2	☐	2.000	2.162	27449.18	0.0085	P	2.4
3	☐	5.000	5.177	63072.11	0.0193	P	1.1
4	☐	10.000	9.341	112171.78	0.0341	P	2.0
5	☐	100.000	94.682	1077034.12	0.3387	M	0.9
6	☐	200.000	202.686	2222744.66	0.7240	A	2.4

y = 0.0036 * x + 8.1515E-004
R = 0.9995
DL = 0.03298
BEC = 0.2284

Weight: <None>
Min Conc: <None>

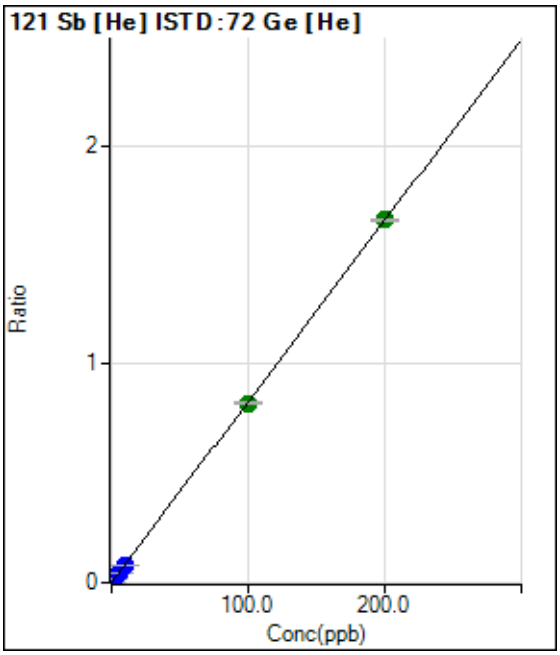


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1136.74	0.0002	P	9.0
2	☐	2.000	2.192	63618.17	0.0101	P	2.8
3	☐	5.000	5.313	155227.46	0.0243	P	1.6
4	☐	10.000	9.656	278177.73	0.0441	P	2.0
5	☐	100.000	98.484	2774783.50	0.4477	A	1.4
6	☐	200.000	200.766	5544034.50	0.9125	A	3.3

y = 0.0045 * x + 1.8347E-004
R = 1.0000
DL = 0.01093
BEC = 0.04037

Weight: <None>
Min Conc: <None>

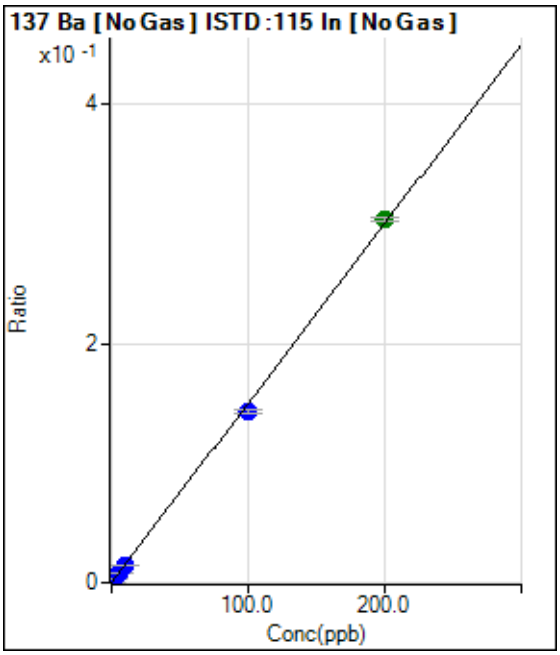
Calibration for 197_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	736.70	0.0004	P	9.7
2	☐	2.000	2.199	34609.23	0.0186	P	3.8
3	☐	5.000	5.407	83129.77	0.0452	P	0.8
4	☐	10.000	9.430	148117.42	0.0785	P	2.1
5	☐	100.000	99.171	1485351.96	0.8215	A	1.1
6	☐	200.000	200.431	2950681.62	1.6599	A	0.2

y = 0.0083 * x + 3.9005E-004
R = 1.0000
DL = 0.01373
BEC = 0.04711

Weight: <None>
Min Conc: <None>

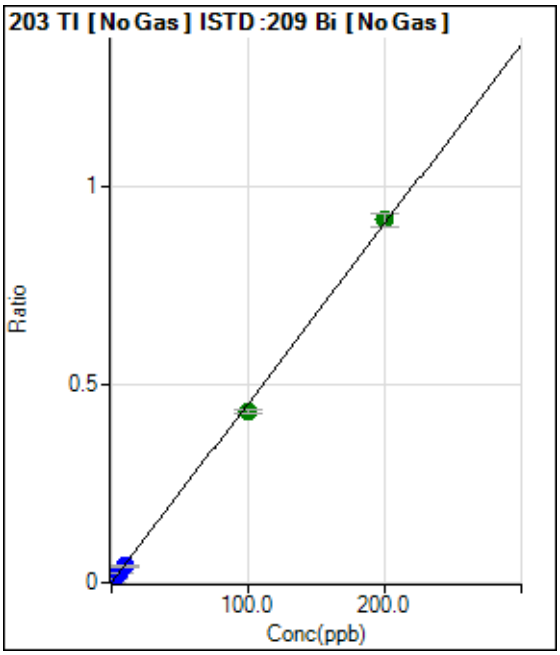


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	846.71	0.0001	P	14.8
2	☐	2.000	2.139	22760.32	0.0033	P	1.8
3	☐	5.000	5.378	55920.90	0.0082	P	3.3
4	☐	10.000	9.247	96357.98	0.0140	P	3.2
5	☐	100.000	95.504	959482.93	0.1432	P	2.4
6	☐	200.000	202.275	1979301.69	0.3032	A	1.0

y = 0.0015 * x + 1.2305E-004
R = 0.9996
DL = 0.03649
BEC = 0.08213

Weight: <None>
Min Conc: <None>

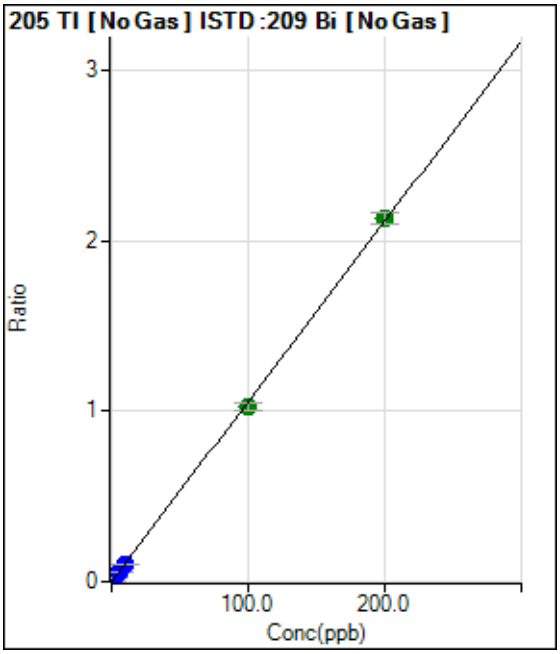
Calibration for 197_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	93.34	0.0000	P	65.2
2	☐	2.000	2.095	46611.48	0.0095	P	4.2
3	☐	5.000	5.148	114056.07	0.0234	P	3.0
4	☐	10.000	9.117	201047.51	0.0414	P	1.8
5	☐	100.000	95.533	2072410.34	0.4333	A	3.1
6	☐	200.000	202.273	4297209.41	0.9175	A	4.0

y = 0.0045 * x + 1.9076E-005
R = 0.9996
DL = 0.008224
BEC = 0.004206

Weight: <None>
Min Conc: <None>

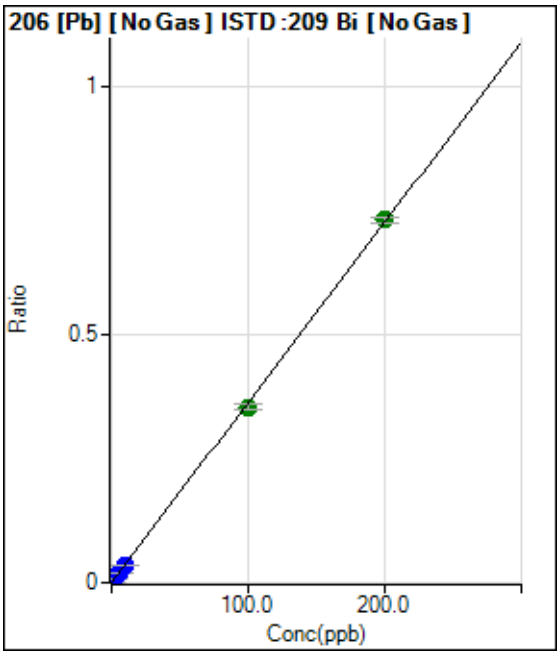


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	156.67	0.0000	P	24.9
2	☐	2.000	2.175	112687.31	0.0230	P	1.5
3	☐	5.000	5.317	274366.08	0.0562	P	1.4
4	☐	10.000	9.416	483447.28	0.0995	P	2.0
5	☐	100.000	97.106	4906709.51	1.0259	A	3.7
6	☐	200.000	201.467	9969985.89	2.1283	A	3.0

y = 0.0106 * x + 3.1880E-005
R = 0.9998
DL = 0.002255
BEC = 0.003018

Weight: <None>
Min Conc: <None>

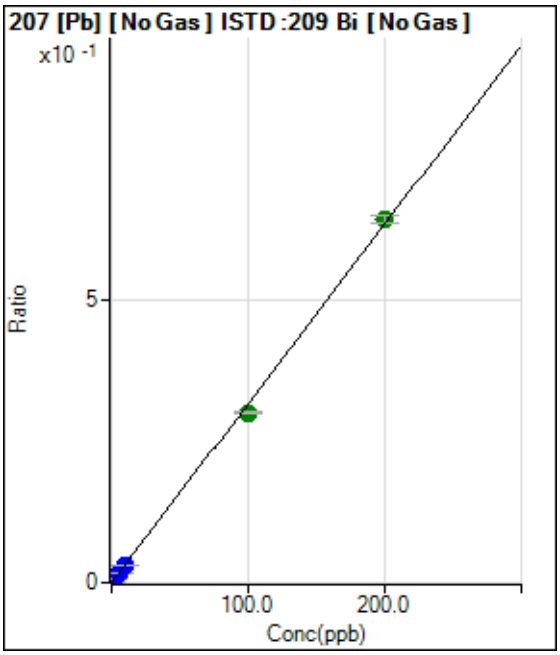
Calibration for 197_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	286.68	0.0001	P	22.1
2	☐	2.000	2.181	39095.50	0.0080	P	1.5
3	☐	5.000	5.282	93986.24	0.0193	P	1.8
4	☐	10.000	9.333	165021.79	0.0340	P	3.7
5	☐	100.000	97.215	1689914.61	0.3533	A	3.2
6	☐	200.000	201.417	3429198.28	0.7319	A	1.8

y = 0.0036 * x + 5.8221E-005
R = 0.9999
DL = 0.01062
BEC = 0.01602

Weight: <None>
Min Conc: <None>

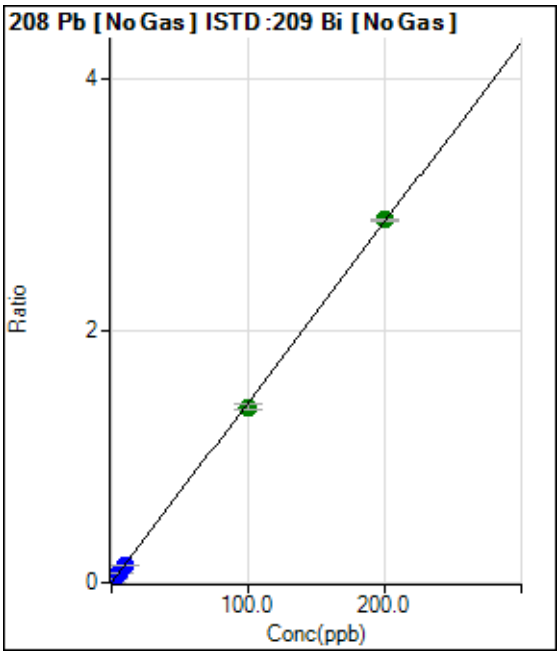


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	226.67	0.0000	P	26.8
2	☐	2.000	2.138	33308.85	0.0068	P	3.5
3	☐	5.000	5.224	80833.50	0.0166	P	1.2
4	☐	10.000	9.304	143113.16	0.0295	P	2.0
5	☐	100.000	94.968	1436176.59	0.3002	A	1.4
6	☐	200.000	202.544	2999801.10	0.6403	A	2.0

y = 0.0032 * x + 4.6283E-005
R = 0.9995
DL = 0.01177
BEC = 0.01464

Weight: <None>
Min Conc: <None>

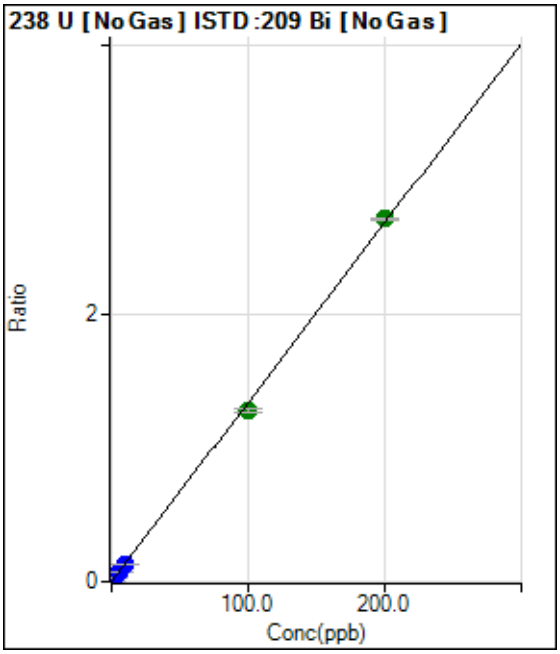
Calibration for 197_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1073.37	0.0002	P	4.6
2	☐	2.000	2.183	154190.96	0.0315	P	1.3
3	☐	5.000	5.283	370449.77	0.0759	P	1.2
4	☐	10.000	9.428	657272.19	0.1353	P	1.9
5	☐	100.000	97.390	6674396.87	1.3953	A	2.8
6	☐	200.000	201.325	13515392.40	2.8841	A	0.6

y = 0.0143 * x + 2.1880E-004
R = 0.9999
DL = 0.002102
BEC = 0.01527

Weight: <None>
Min Conc: <None>

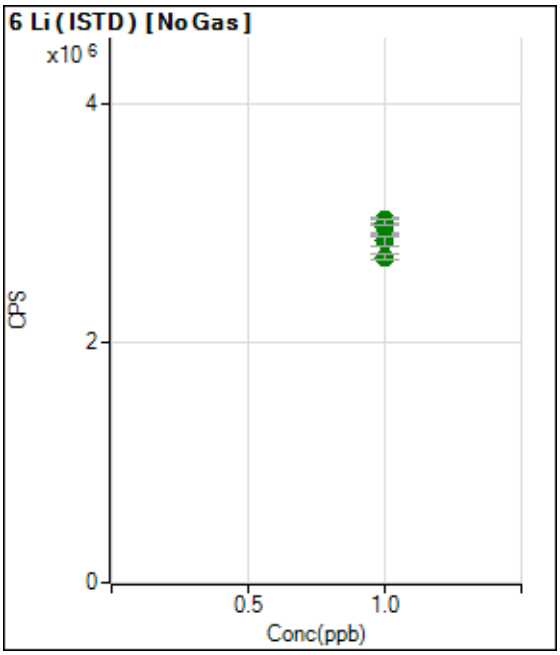


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	26.67	0.0000	P	76.2
2	☐	2.000	2.083	136394.93	0.0279	P	1.2
3	☐	5.000	5.112	333703.93	0.0684	P	3.0
4	☐	10.000	9.204	598036.33	0.1231	P	0.9
5	☐	100.000	95.411	6103066.16	1.2758	A	1.7
6	☐	200.000	202.331	12679614.81	2.7055	A	0.4

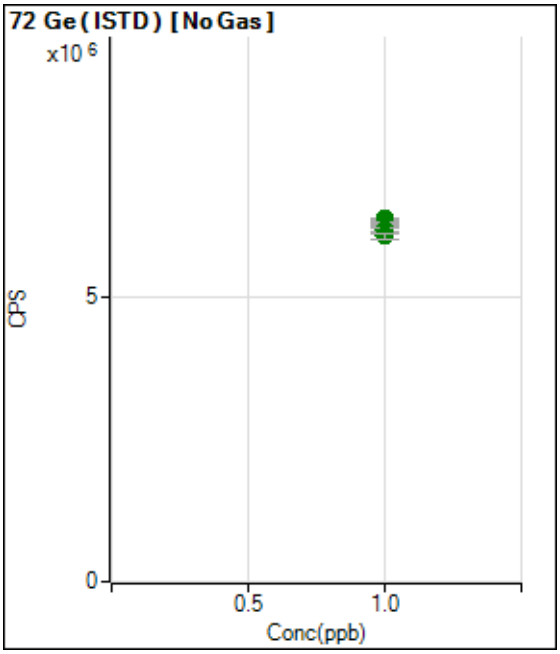
y = 0.0134 * x + 5.3717E-006
R = 0.9996
DL = 0.000918
BEC = 0.0004017

Weight: <None>
Min Conc: <None>

Calibration for 197_ICV.d

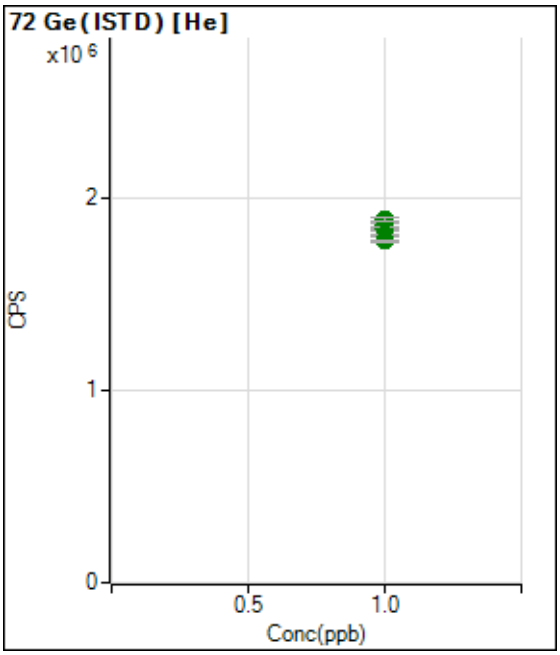


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		2966506.33		A	2.6
2	☐	1.000		2967777.38		A	4.2
3	☐	1.000		3030325.04		A	1.6
4	☐	1.000		3007190.79		A	1.6
5	☐	1.000		2852089.36		A	2.4
6	☐	1.000		2721105.89		A	1.5

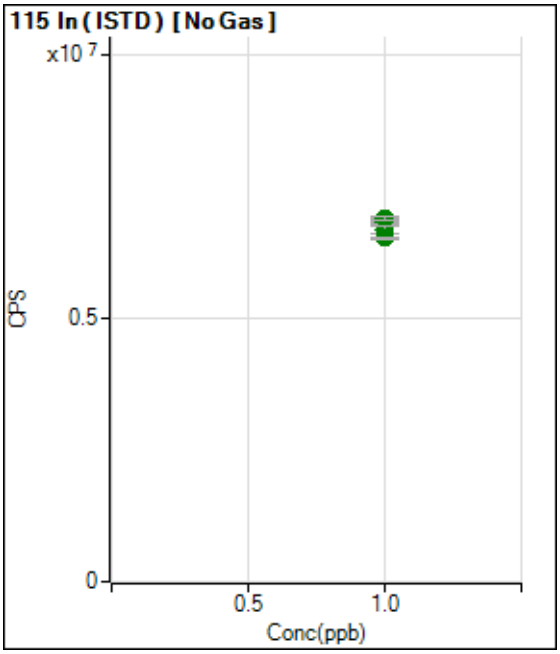


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		6196628.87		A	1.5
2	☐	1.000		6270208.45		A	0.5
3	☐	1.000		6380678.03		A	0.3
4	☐	1.000		6313482.62		A	0.7
5	☐	1.000		6198068.66		A	1.1
6	☐	1.000		6077878.04		A	1.9

Calibration for 197_ICV.d

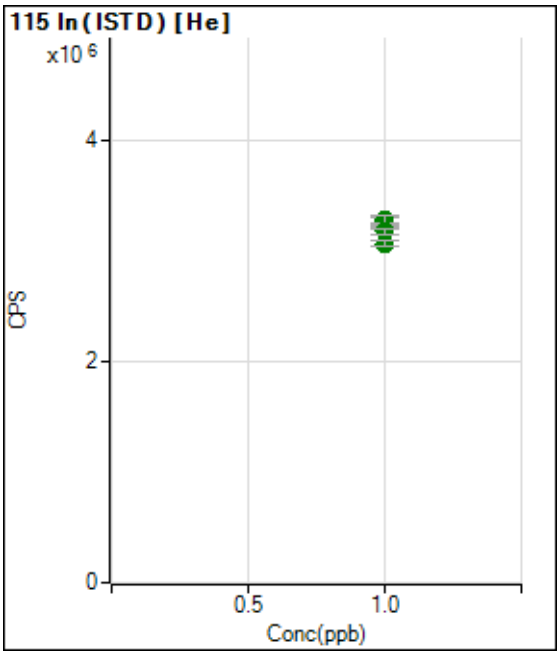


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1887289.56		A	1.2
2	☐	1.000		1861930.34		A	1.9
3	☐	1.000		1840947.16		A	1.0
4	☐	1.000		1887964.82		A	1.0
5	☐	1.000		1808049.66		A	0.6
6	☐	1.000		1777644.61		A	0.2

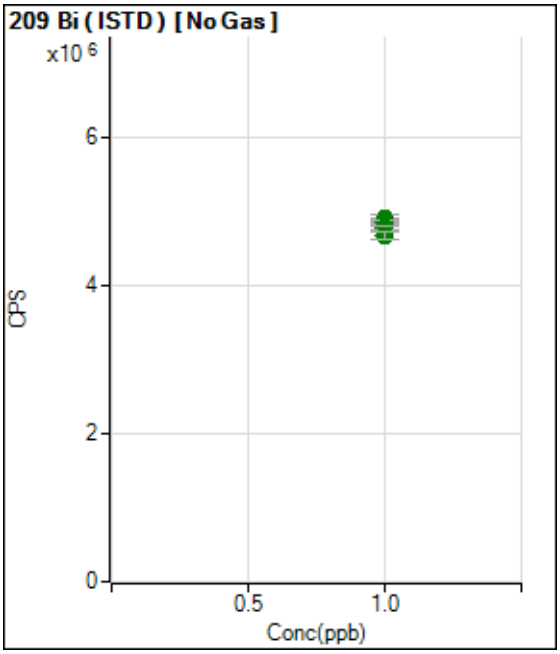


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		6876834.26		A	0.9
2	☐	1.000		6839608.83		A	1.2
3	☐	1.000		6837414.67		A	0.9
4	☐	1.000		6894866.84		A	0.9
5	☐	1.000		6701744.89		A	2.2
6	☐	1.000		6528727.38		A	1.0

Calibration for 197_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		3243089.31		A	0.3
2	☐	1.000		3218468.35		A	0.6
3	☐	1.000		3270428.62		A	2.4
4	☐	1.000		3285520.68		A	2.0
5	☐	1.000		3180523.60		A	1.6
6	☐	1.000		3070757.31		A	1.8



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		4906027.32		A	2.5
2	☐	1.000		4896895.55		A	1.1
3	☐	1.000		4881769.93		A	1.4
4	☐	1.000		4859392.74		A	1.4
5	☐	1.000		4783517.64		A	1.0
6	☐	1.000		4686428.99		A	2.1

Calibration Blank Report

Sample Table

Sample Name	CAL BLK
Data File Name	011CALB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\070220A.b
Acq Date Time	2020-07-02T11:19:56-05:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li	7	1	No Gas	193582	0.00
Be	9	1	No Gas	35	147.17
V	51	2	He	2430	0.06
Cr	52	2	He	2654	0.17
Fe	56	2	He	26174	0.18
Se	78	2	He	251	2.46
Sn	118	2	He	2207	0.52
As	75	2	He	472	3.15
Ca	44	2	He	2544	0.16
Na	23	2	He	325832	0.00
Mg	24	2	He	1797	0.29
K	39	2	He	109136	0.00
Mn	55	2	He	1207	0.44
Co	59	2	He	350	3.74
Ni	60	2	He	970	0.93
Cu	63	2	He	28443	0.01
Zn	66	2	He	690	1.47
Al	27	2	He	1647	0.08
B	11	1	No Gas	45704	0.00
Al	27	1	No Gas	73457	0.00
Si	28	1	No Gas	406074	0.00
P	31	1	No Gas	44849	0.01
Ag	107	1	No Gas	220	9.01
Cd	111	1	No Gas	17	749.40
Sr	88	1	No Gas	9744	0.05
Mo	95	1	No Gas	117	18.49
Sn	118	1	No Gas	6088	1.26
Sb	121	1	No Gas	1453	0.82
Ba	137	1	No Gas	1097	1.11
Tl	205	1	No Gas	160	15.63
Tl	203	1	No Gas	77	42.82
Pb	208	1	No Gas	1150	0.35
U	238	1	No Gas	20	0.00
Ca	43	2	He	67	12.99
Sb	121	2	He	710	2.73
Ti	47	2	He	13	649.52
Cu	63	1	No Gas	49493	0.00

Calibration Blank Report

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li	6	1	No Gas	3367912	2.03
Ge	72	2	He	2128792	2.35

Calibration Blank Report

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Ge	72	1	No Gas	6259187	2.10
In	115	1	No Gas	6832906	4.06
Bi	209	1	No Gas	4819187	0.55

Calibration Standard Report

Sample Table

Sample Name	2/10/200
Data File Name	012CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\070220A.b
Acq Date Time	2020-07-02T11:21:49-05:00
Sample Type	CalStd
Level	2
Dilution	1
Comment	
ISTD Ref File Name	011CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	No Gas	16860	0.00
V	51	2	He	26326	0.00
Cr	52	2	He	30985	0.00
Fe	56	2	He	2653096	0.00
Se	78	2	He	634	2.02
Sn	118	2	He	22520	0.01
As	75	2	He	4700	0.00
Ca	44	2	He	18319	0.00
Na	23	2	He	723318	0.00
Mg	24	2	He	248902	0.00
K	39	2	He	397457	0.00
Mn	55	2	He	21968	0.01
Co	59	2	He	42677	0.00
Ni	60	2	He	11235	0.03
Cu	63	2	He	56109	0.00
Zn	66	2	He	6382	0.05
Al	27	2	He	4821	0.22
B	11	1	No Gas	91896	0.00
Al	27	1	No Gas	216036	0.00
Si	28	1	No Gas	579390	0.00
P	31	1	No Gas	60442	0.00
Ag	107	1	No Gas	61912	0.00
Cd	111	1	No Gas	11949	0.04
Sr	88	1	No Gas	128779	0.00
Mo	95	1	No Gas	23114	0.01
Sn	118	1	No Gas	37240	0.01
Sb	121	1	No Gas	48748	0.00
Ba	137	1	No Gas	18744	0.02
Tl	205	1	No Gas	83961	0.00
Tl	203	1	No Gas	35665	0.01
Pb	208	1	No Gas	116954	0.00
U	238	1	No Gas	108859	0.00
Ca	43	2	He	1000	0.75
Sb	121	2	He	28849	0.00
Cu	63	1	No Gas	100349	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	3282944	1.78	3367912	97.48	70	120	

Calibration Standard Report

Ge	72	2	He	2109519	2.55	2128792	99.09	70	120	
Ge	72	1	No Gas	6285838	1.75	6259187	100.43	70	120	
In	115	1	No Gas	6578216	1.81	6832906	96.27	70	120	
Bi	209	1	No Gas	4784000	2.74	4819187	99.27	70	120	

Calibration Standard Report

Sample Table

Sample Name	5/25/500
Data File Name	013CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\070220A.b
Acq Date Time	2020-07-02T11:23:40-05:00
Sample Type	CalStd
Level	3
Dilution	1
Comment	
ISTD Ref File Name	011CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	No Gas	42454	0.00
V	51	2	He	62124	0.00
Cr	52	2	He	71962	0.00
Fe	56	2	He	6411675	0.00
Se	78	2	He	1165	0.33
Sn	118	2	He	54414	0.00
As	75	2	He	11309	0.01
Ca	44	2	He	40804	0.01
Na	23	2	He	1351531	0.00
Mg	24	2	He	621123	0.00
K	39	2	He	834995	0.00
Mn	55	2	He	52950	0.00
Co	59	2	He	107876	0.00
Ni	60	2	He	27856	0.01
Cu	63	2	He	101189	0.00
Zn	66	2	He	15182	0.03
Al	27	2	He	6458	0.03
B	11	1	No Gas	166432	0.00
Al	27	1	No Gas	290955	0.00
Si	28	1	No Gas	861068	0.00
P	31	1	No Gas	85452	0.00
Ag	107	1	No Gas	155723	0.00
Cd	111	1	No Gas	30375	0.01
Sr	88	1	No Gas	298416	0.00
Mo	95	1	No Gas	56748	0.01
Sn	118	1	No Gas	91301	0.00
Sb	121	1	No Gas	123634	0.00
Ba	137	1	No Gas	44771	0.00
Tl	205	1	No Gas	207106	0.00
Tl	203	1	No Gas	85762	0.00
Pb	208	1	No Gas	287946	0.00
U	238	1	No Gas	273039	0.00
Ca	43	2	He	2347	0.21
Sb	121	2	He	71271	0.00
Cu	63	1	No Gas	178603	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	3311164	1.42	3367912	98.32	70	120	

Calibration Standard Report

Ge	72	2	He	2067635	1.24	2128792	97.13	70	120	
Ge	72	1	No Gas	6246973	0.87	6259187	99.80	70	120	
In	115	1	No Gas	6686731	1.82	6832906	97.86	70	120	
Bi	209	1	No Gas	4855667	2.07	4819187	100.76	70	120	

Calibration Standard Report

Sample Table

Sample Name	10/50/100
Data File Name	014CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\070220A.b
Acq Date Time	2020-07-02T11:25:32-05:00
Sample Type	CalStd
Level	4
Dilution	1
Comment	
ISTD Ref File Name	011CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	No Gas	85301	0.00
V	51	2	He	122430	0.00
Cr	52	2	He	145498	0.00
Fe	56	2	He	12877665	0.00
Se	78	2	He	2098	0.09
Sn	118	2	He	107993	0.00
As	75	2	He	21738	0.00
Ca	44	2	He	78655	0.00
Na	23	2	He	2355171	0.00
Mg	24	2	He	1226117	0.00
K	39	2	He	1560277	0.00
Mn	55	2	He	105312	0.00
Co	59	2	He	216895	0.00
Ni	60	2	He	55500	0.00
Cu	63	2	He	173474	0.00
Zn	66	2	He	30017	0.00
Al	27	2	He	9277	0.07
B	11	1	No Gas	293842	0.00
Al	27	1	No Gas	397019	0.00
Si	28	1	No Gas	1249931	0.00
P	31	1	No Gas	126624	0.00
Ag	107	1	No Gas	310873	0.00
Cd	111	1	No Gas	61976	0.00
Sr	88	1	No Gas	582188	0.00
Mo	95	1	No Gas	114127	0.00
Sn	118	1	No Gas	183660	0.00
Sb	121	1	No Gas	246483	0.00
Ba	137	1	No Gas	86325	0.00
Tl	205	1	No Gas	415437	0.00
Tl	203	1	No Gas	174785	0.00
Pb	208	1	No Gas	580557	0.00
U	238	1	No Gas	551270	0.00
Ca	43	2	He	4541	0.21
Sb	121	2	He	141957	0.00
Cu	63	1	No Gas	308212	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	3331061	4.32	3367912	98.91	70	120	

Calibration Standard Report

Ge	72	2	He	2091168	1.23	2128792	98.23	70	120	
Ge	72	1	No Gas	6382108	0.31	6259187	101.96	70	120	
In	115	1	No Gas	6839439	3.30	6832906	100.10	70	120	
Bi	209	1	No Gas	4886189	2.83	4819187	101.39	70	120	

Calibration Standard Report

Sample Table

Sample Name	100/500/10K
Data File Name	015CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\070220A.b
Acq Date Time	2020-07-02T11:27:23-05:00
Sample Type	CalStd
Level	5
Dilution	1
Comment	
ISTD Ref File Name	011CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	No Gas	893557	0.00
V	51	2	He	1251486	0.00
Cr	52	2	He	1445189	0.00
Fe	56	2	He	131489571	0.00
Se	78	2	He	19624	0.00
Sn	118	2	He	1145545	0.00
As	75	2	He	219885	0.00
Ca	44	2	He	781917	0.00
Na	23	2	He	21342975	0.00
Mg	24	2	He	12273330	0.00
K	39	2	He	14716457	0.00
Mn	55	2	He	1057849	0.00
Co	59	2	He	2213459	0.00
Ni	60	2	He	556018	0.00
Cu	63	2	He	1496849	0.00
Zn	66	2	He	292354	0.00
Al	27	2	He	73005	0.00
B	11	1	No Gas	2578809	0.00
Al	27	1	No Gas	3250265	0.00
Si	28	1	No Gas	8705232	0.00
P	31	1	No Gas	862145	0.00
Ag	107	1	No Gas	3188540	0.00
Cd	111	1	No Gas	614855	0.00
Sr	88	1	No Gas	6057353	0.00
Mo	95	1	No Gas	1176764	0.00
Sn	118	1	No Gas	1915490	0.00
Sb	121	1	No Gas	2554254	0.00
Ba	137	1	No Gas	866193	0.00
Tl	205	1	No Gas	4370728	0.00
Tl	203	1	No Gas	1831351	0.00
Pb	208	1	No Gas	6054526	0.00
U	238	1	No Gas	5833204	0.00
Ca	43	2	He	45974	0.00
Sb	121	2	He	1510935	0.00
Cu	63	1	No Gas	2647580	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	3227890	1.45	3367912	95.84	70	120	

Calibration Standard Report

Ge	72	2	He	2083969	1.82	2128792	97.89	70	120	
Ge	72	1	No Gas	6239615	1.28	6259187	99.69	70	120	
In	115	1	No Gas	6632404	1.02	6832906	97.07	70	120	
Bi	209	1	No Gas	4718796	3.02	4819187	97.92	70	120	

Calibration Standard Report

Sample Table

Sample Name	200/1000/20K
Data File Name	016CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\070220A.b
Acq Date Time	2020-07-02T11:29:05-05:00
Sample Type	CalStd
Level	6
Dilution	1
Comment	
ISTD Ref File Name	011CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	No Gas	1745335	0.00
V	51	2	He	2456661	0.00
Cr	52	2	He	2803288	0.00
Fe	56	2	He	256913630	0.00
Se	78	2	He	38366	0.00
Sn	118	2	He	2258058	0.00
As	75	2	He	429800	0.00
Ca	44	2	He	1544859	0.00
Na	23	2	He	40275193	0.00
Mg	24	2	He	23635523	0.00
K	39	2	He	28573734	0.00
Mn	55	2	He	2074905	0.00
Co	59	2	He	4184088	0.00
Ni	60	2	He	1071852	0.00
Cu	63	2	He	2897753	0.00
Zn	66	2	He	567817	0.00
Al	27	2	He	138007	0.00
B	11	1	No Gas	5065548	0.00
Al	27	1	No Gas	6049706	0.00
Si	28	1	No Gas	16083944	0.00
P	31	1	No Gas	1683352	0.00
Ag	107	1	No Gas	6129250	0.00
Cd	111	1	No Gas	1228614	0.00
Sr	88	1	No Gas	11730387	0.00
Mo	95	1	No Gas	2387862	0.00
Sn	118	1	No Gas	3665244	0.00
Sb	121	1	No Gas	5034347	0.00
Ba	137	1	No Gas	1724607	0.00
Tl	205	1	No Gas	8643389	0.00
Tl	203	1	No Gas	3726763	0.00
Pb	208	1	No Gas	12085836	0.00
U	238	1	No Gas	11730614	0.00
Ca	43	2	He	89906	0.00
Sb	121	2	He	2996543	0.00
Cu	63	1	No Gas	5039471	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	3150845	0.64	3367912	93.55	70	120	

Calibration Standard Report

Ge	72	2	He	2024410	1.20	2128792	95.10	70	120	
Ge	72	1	No Gas	6059339	0.92	6259187	96.81	70	120	
In	115	1	No Gas	6452380	1.33	6832906	94.43	70	120	
Bi	209	1	No Gas	4704128	1.15	4819187	97.61	70	120	

Initial Calibration Verification (ICV) Report

Sample Table

Sample Name	ICV
Data File Name	018_ICV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\070220A.b
Acq Date Time	2020-07-02T11:34:22-05:00
Sample Type	ICV
Dilution	1
Comment	
ISTD Ref File Name	011CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	1	No Gas	104.286	2.355	3541370	0.33	100	104.3	90	110	
Be	9	1	No Gas	99.566	1.483	879714	1.61	100	99.6	90	110	
V	51	2	He	100.971	1.986	1280533	0.49	100	101.0	90	110	
Cr	52	2	He	101.981	2.348	1479476	0.85	100	102.0	90	110	
Fe	56	2	He	10205.240	1.776	135400871	0.77	10000	102.1	90	110	
Se	78	2	He	101.692	4.508	20234	2.96	100	101.7	90	110	
Sn	118	2	He	100.651	2.322	1140169	2.40	100	100.7	90	110	
As	75	2	He	101.253	1.095	224920	0.66	100	101.3	90	110	
Ca	44	2	He	10166.201	1.807	810140	0.18	10000	101.7	90	110	
Na	23	2	He	10151.475	0.499	21392845	2.15	10000	101.5	90	110	
Mg	24	2	He	10208.122	0.885	12499177	1.32	10000	102.1	90	110	
K	39	2	He	10230.110	1.536	15156854	0.77	10000	102.3	90	110	
Mn	55	2	He	103.519	3.391	1108585	1.82	100	103.5	90	110	
Co	59	2	He	101.818	2.474	2214698	1.32	100	101.8	90	110	
Ni	60	2	He	100.599	0.454	558816	1.23	100	100.6	90	110	
Cu	63	2	He	100.558	1.044	1518777	1.15	100	100.6	90	110	
Zn	66	2	He	102.195	1.029	300361	2.12	100	102.2	90	110	
Al	27	2	He	105.199	2.594	76114	1.96	100	105.2	90	110	
B	11	1	No Gas	498.514	1.772	2571024	1.62	500	99.7	90	110	
Al	27	1	No Gas	104.222	1.598	3285726	0.61	100	104.2	90	110	
Si	28	1	No Gas	508.767	1.723	8625782	0.53	500	101.8	90	110	
P	31	1	No Gas	509.558	1.339	894916	0.34	500	101.9	90	110	
Ag	107	1	No Gas	101.200	1.733	3223005	1.71	100	101.2	90	110	
Cd	111	1	No Gas	98.728	1.487	625459	2.59	100	98.7	90	110	
Sr	88	1	No Gas	101.263	4.271	6163727	1.37	100	101.3	90	110	
Mo	95	1	No Gas	97.889	3.207	1201246	1.06	100	97.9	90	110	
Sn	118	1	No Gas	101.995	1.782	1946210	1.85	100	102.0	90	110	
Sb	121	1	No Gas	99.615	1.164	2561323	1.39	100	99.6	90	110	
Ba	137	1	No Gas	97.423	4.182	866894	1.44	100	97.4	90	110	
Tl	205	1	No Gas	104.921	1.800	4509590	0.23	100	104.9	90	110	
Tl	203	1	No Gas	101.720	4.413	1873859	3.06	100	101.7	90	110	
Pb	208	1	No Gas	102.394	2.000	6141704	1.39	100	102.4	90	110	
U	238	1	No Gas	100.808	1.410	5860770	2.01	100	100.8	90	110	
Ca	43	2	He	10244.888	2.750	47576	1.22	10000	102.4	90	110	
Sb	121	2	He	100.786	0.791	1555034	1.01	100	100.8	90	110	
Ti	47	2	He	101.968	3.389	48389	1.86	100	102.0	90	110	
Cu	63	1	No Gas	102.314	0.784	2671055	1.82	100	102.3	90	110	

QC ISTD Table

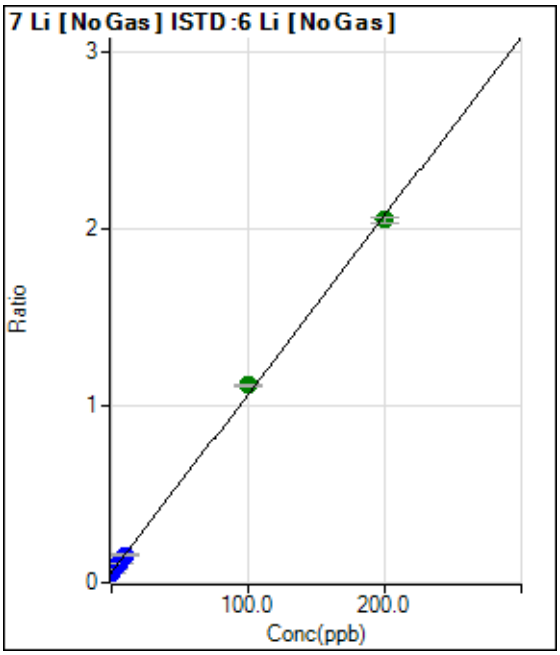
Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	3191044	2.11	3367912	94.75	70	120	
Ge	72	2	He	2093512	1.67	2128792	98.34	70	120	
Ge	72	1	No Gas	6207442	1.16	6259187	99.17	70	120	
In	115	1	No Gas	6691764	2.94	6832906	97.93	70	120	
Bi	209	1	No Gas	4671597	1.82	4819187	96.94	70	120	

Calibration for 018_ICV.d

Batch Folder: C:\Agilent\ICPMH\1\DATA\070220A.b\
Analysis File: 070220A.batch.bin
DA Date-Time: 7/2/2020 9:54:05 PM
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	011CALB.d	CAL BLK	7/2/2020 11:19:56 AM
2	012CALS.d	2/10/200	7/2/2020 11:21:49 AM
3	013CALS.d	5/25/500	7/2/2020 11:23:40 AM
4	014CALS.d	10/50/100	7/2/2020 11:25:32 AM
5	015CALS.d	100/500/10K	7/2/2020 11:27:23 AM
6	016CALS.d	200/1000/20K	7/2/2020 11:29:05 AM

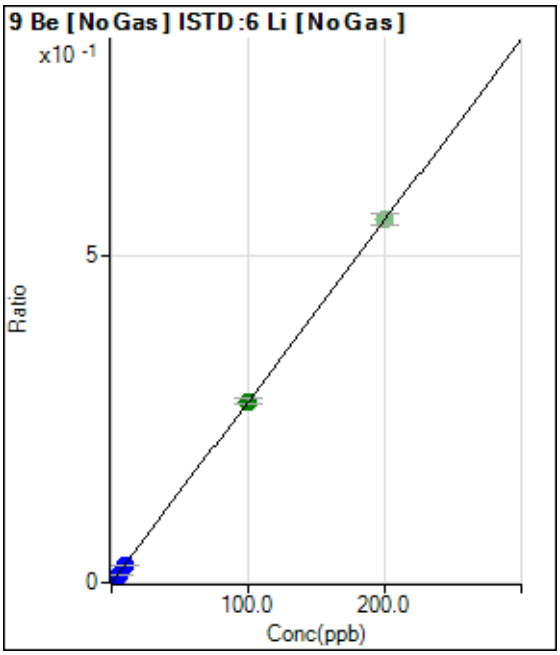
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	193582.19	0.0575	P	0.3
2	☐	2.000	1.971	253968.22	0.0774	P	1.0
3	☐	5.000	4.933	355153.27	0.1073	P	1.4
4	☐	10.000	9.781	519900.30	0.1562	P	3.0
5	☐	100.000	104.815	3600309.22	1.1155	A	1.1
6	☐	200.000	197.606	6465449.48	2.0521	A	1.6

y = 0.0101 * x + 0.0575
R = 0.9996
DL = 0.04621
BEC = 5.694

Weight: <None>
Min Conc: <None>

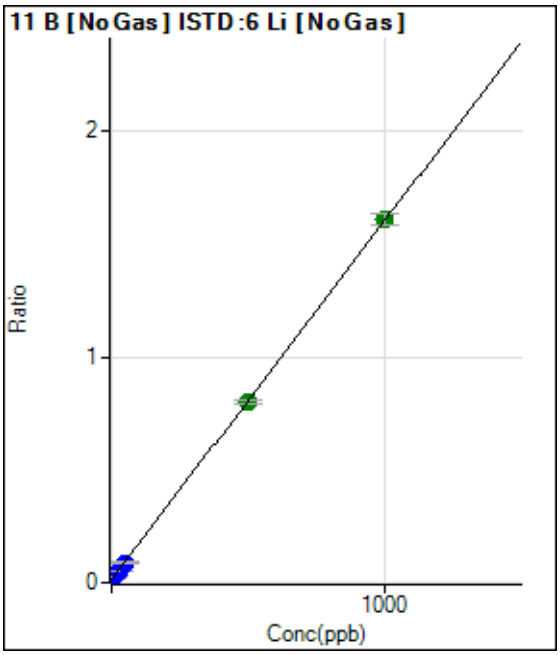


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	35.00	0.0000	P	52.9
2	☐	2.000	1.853	16860.18	0.0051	P	1.5
3	☐	5.000	4.632	42454.00	0.0128	P	1.2
4	☐	10.000	9.262	85300.79	0.0256	P	3.0
5	☐	100.000	100.095	893557.02	0.2769	A	3.1
6	☑	200.000		1745335.29	0.5540	A	3.0

y = 0.0028 * x + 1.0460E-005
R = 1.0000
DL = 0.005999
BEC = 0.003782

Weight: <None>
Min Conc: <None>

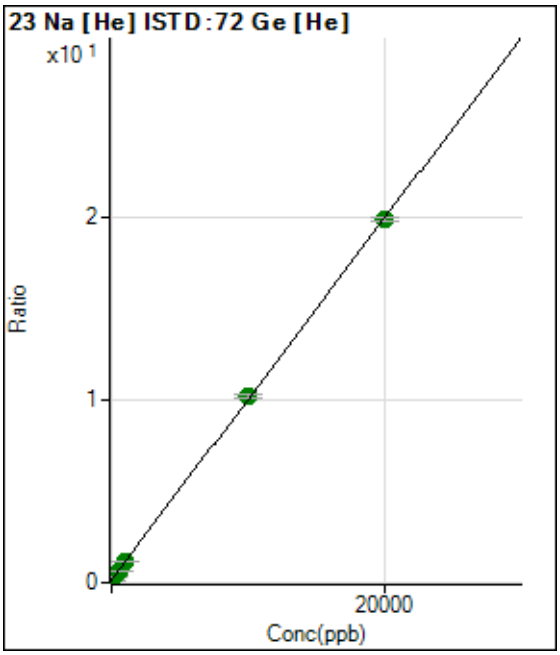
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	45704.31	0.0136	P	2.1
2	☐	10.000	9.074	91896.43	0.0280	P	2.1
3	☐	25.000	23.095	166431.73	0.0503	P	2.8
4	☐	50.000	47.022	293842.46	0.0883	P	3.6
5	☐	500.000	494.251	2578808.56	0.7991	A	2.5
6	☐	1000.000	1003.080	5065547.84	1.6077	A	3.1

y = 0.0016 * x + 0.0136
R = 1.0000
DL = 0.532
BEC = 8.541

Weight: <None>
Min Conc: <None>

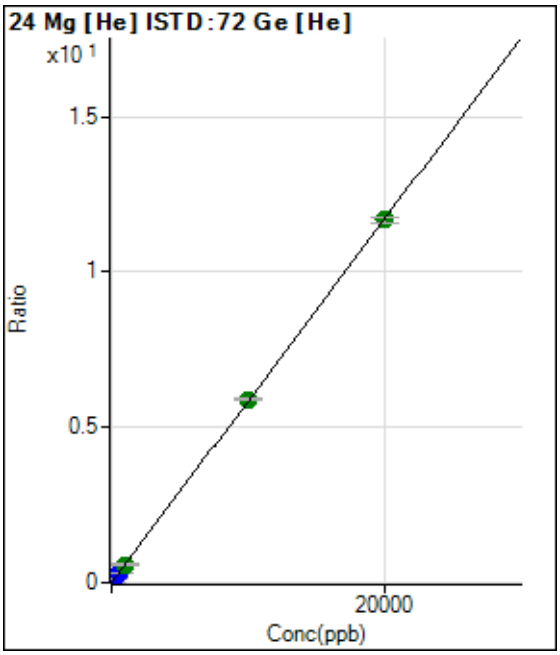


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	325832.34	0.1531	P	2.9
2	☐	200.000	191.530	723317.59	0.3430	A	3.9
3	☐	500.000	504.858	1351530.87	0.6537	A	0.6
4	☐	1000.000	981.632	2355171.27	1.1264	A	1.7
5	☐	10000.00	10176.32	21342974.68	10.2427	A	1.4
6	☐	20000.00	19912.72	40275192.73	19.8962	A	1.1

y = 9.9148E-004 * x + 0.1531
R = 0.9999
DL = 13.38
BEC = 154.4

Weight: <None>
Min Conc: <None>

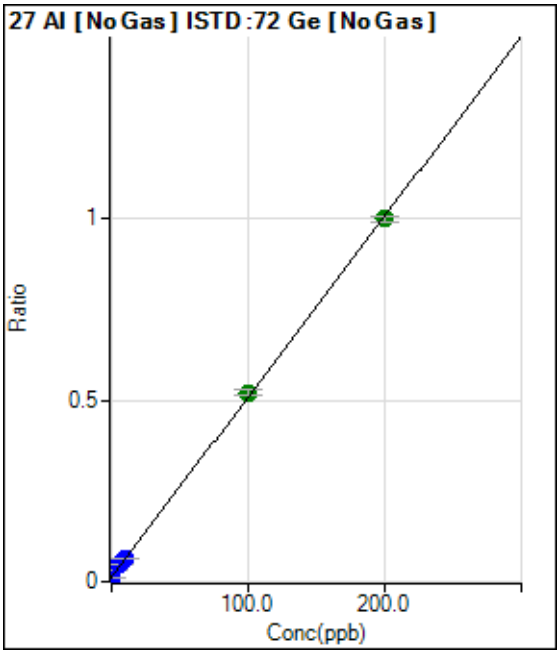
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1796.81	0.0008	P	7.3
2	☐	200.000	200.366	248901.78	0.1180	P	2.3
3	☐	500.000	512.242	621123.05	0.3004	P	1.4
4	☐	1000.000	1001.145	1226116.88	0.5863	A	2.6
5	☐	10000.00	10070.49	12273329.82	5.8903	A	1.3
6	☐	20000.00	19964.38	23635522.98	11.6765	A	1.3

y = 5.8482E-004 * x + 8.4497E-004
R = 1.0000
DL = 0.3144
BEC = 1.445

Weight: <None>
Min Conc: <None>

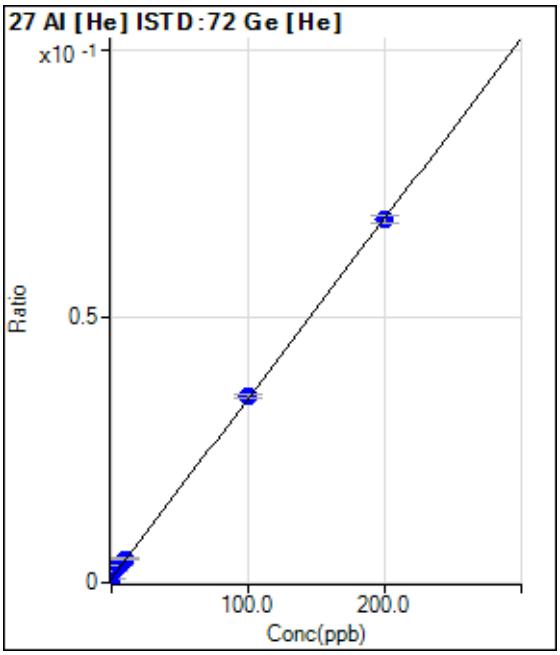


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	73457.45	0.0117	P	2.9
2	☐	2.000	4.564	216035.96	0.0344	P	10.3
3	☐	5.000	7.014	290954.61	0.0466	P	0.4
4	☐	10.000	10.161	397019.36	0.0622	P	1.5
5	☐	100.000	102.533	3250265.06	0.5210	A	2.9
6	☐	200.000	198.649	6049705.95	0.9984	A	1.8

y = 0.0050 * x + 0.0117
R = 0.9998
DL = 0.2041
BEC = 2.364

Weight: <None>
Min Conc: <None>

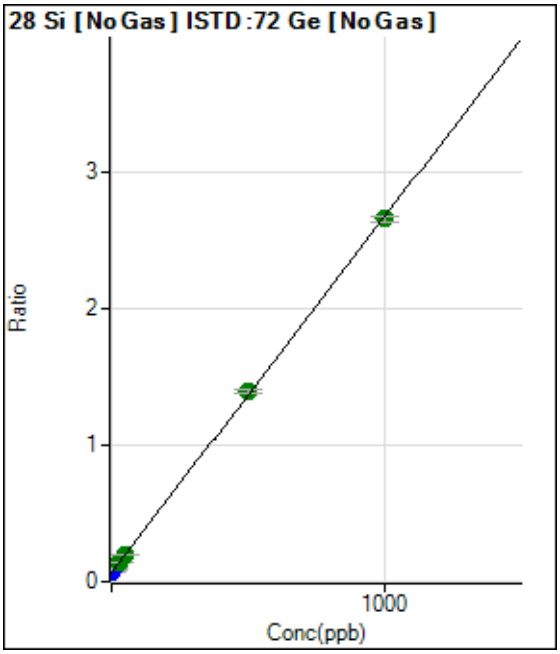
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1646.79	0.0008	P	2.6
2	☐	2.000	4.461	4820.95	0.0023	P	8.2
3	☐	5.000	6.948	6458.33	0.0031	P	3.3
4	☐	10.000	10.830	9277.09	0.0044	P	7.0
5	☐	100.000	101.275	73004.88	0.0350	P	1.9
6	☐	200.000	199.248	138007.11	0.0682	P	1.9

y = 3.3831E-004 * x + 7.7385E-004
R = 0.9999
DL = 0.1752
BEC = 2.287

Weight: <None>
Min Conc: <None>

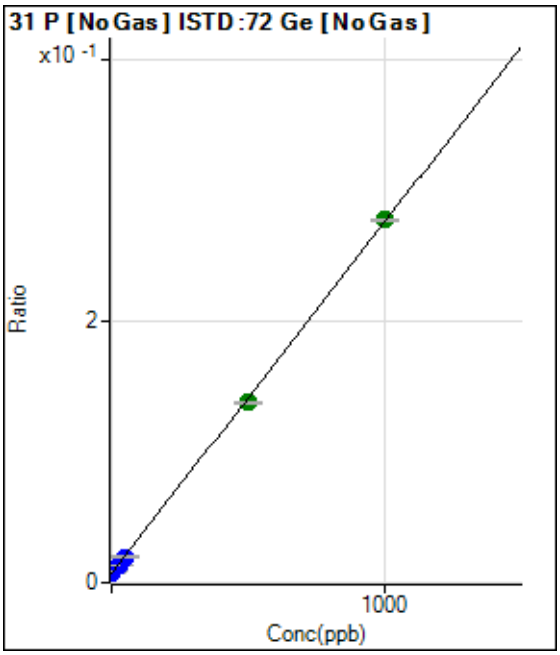


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	406074.31	0.0649	P	2.4
2	☐	10.000	10.482	579389.62	0.0922	P	2.1
3	☐	25.000	28.013	861068.37	0.1378	A	1.2
4	☐	50.000	50.289	1249930.71	0.1959	A	2.8
5	☐	500.000	510.910	8705232.16	1.3953	A	1.6
6	☐	1000.000	994.451	16083943.51	2.6545	A	1.3

y = 0.0026 * x + 0.0649
R = 0.9999
DL = 1.813
BEC = 24.92

Weight: <None>
Min Conc: <None>

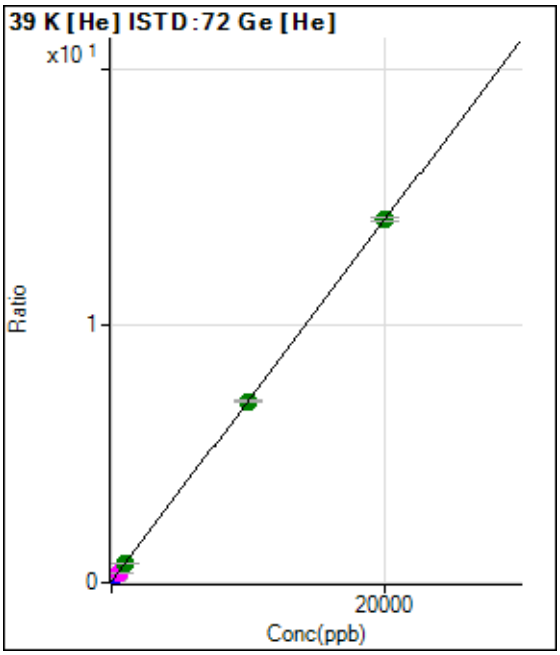
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	44849.37	0.0072	P	0.8
2	☐	10.000	9.124	60441.90	0.0096	P	2.6
3	☐	25.000	24.230	85452.02	0.0137	P	1.5
4	☐	50.000	47.140	126623.77	0.0198	P	0.5
5	☐	500.000	487.202	862145.17	0.1382	A	0.9
6	☐	1000.000	1006.570	1683351.90	0.2778	A	0.9

y = 2.6889E-004 * x + 0.0072
R = 0.9999
DL = 0.6243
BEC = 26.64

Weight: <None>
Min Conc: <None>

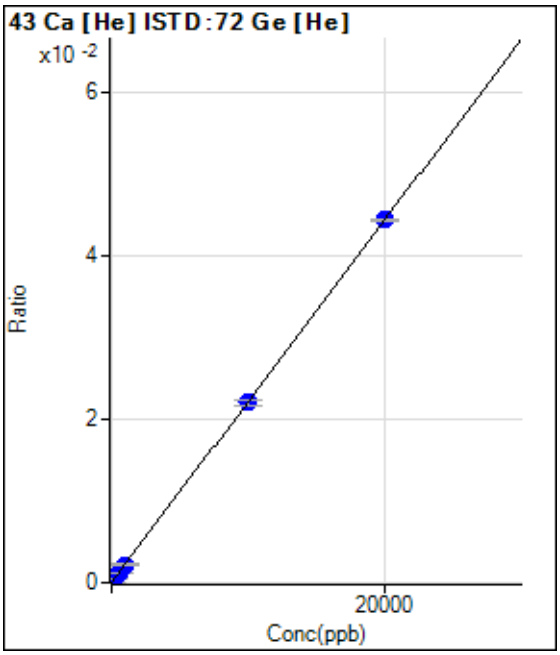


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	109136.12	0.0513	P	2.8
2	☐	200.000	195.217	397456.87	0.1885	P	2.4
3	☐	500.000	501.659	834994.75	0.4039	M	0.5
4	☐	1000.000	988.727	1560277.27	0.7462	A	1.9
5	☐	10000.00	9976.621	14716456.86	7.0629	A	1.3
6	☐	20000.00	20012.26	28573733.74	14.1159	A	1.2

y = 7.0280E-004 * x + 0.0513
R = 1.0000
DL = 6.207
BEC = 72.98

Weight: <None>
Min Conc: <None>

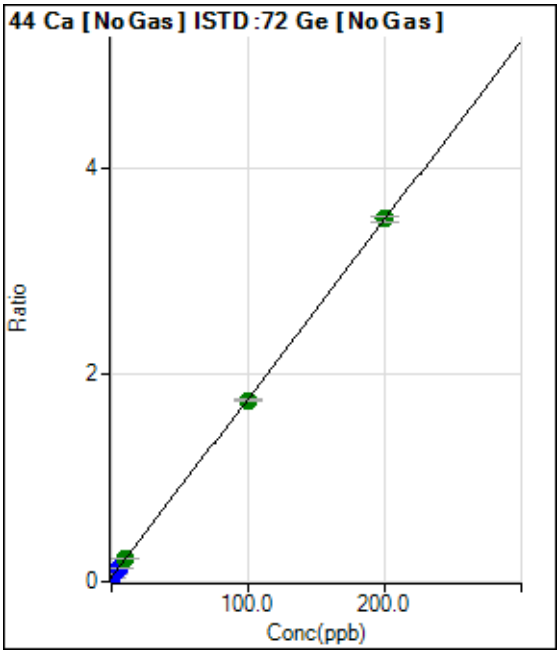
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	66.67	0.0000	P	8.6
2	☐	200.000	200.009	1000.05	0.0005	P	8.7
3	☐	500.000	497.996	2346.91	0.0011	P	3.9
4	☐	1000.000	965.224	4540.85	0.0022	P	8.4
5	☐	10000.00	9944.989	45973.93	0.0221	P	2.7
6	☐	20000.00	20029.29	89906.07	0.0444	P	0.7

y = 2.2158E-006 * x + 3.1321E-005
R = 1.0000
DL = 3.667
BEC = 14.14

Weight: <None>
Min Conc: <None>

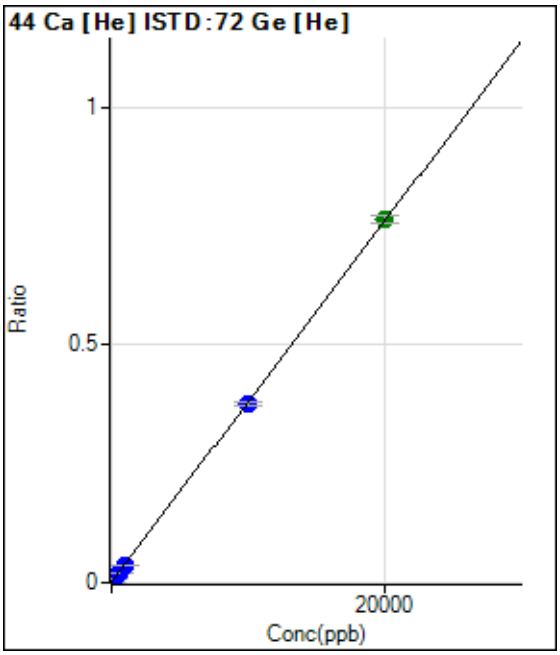


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	261358.00	0.0418	P	3.7
2	☐	2.000	1.951	474153.67	0.0755	P	2.8
3	☐	5.000	4.853	784394.44	0.1256	P	1.2
4	☐	10.000	10.362	1408377.38	0.2207	A	2.3
5	☐	100.000	99.025	10927582.76	1.7515	A	1.4
6	☐	200.000	200.473	21225239.69	3.5031	A	1.8

y = 0.0173 * x + 0.0418
R = 1.0000
DL = 0.2711
BEC = 2.42

Weight: <None>
Min Conc: <None>

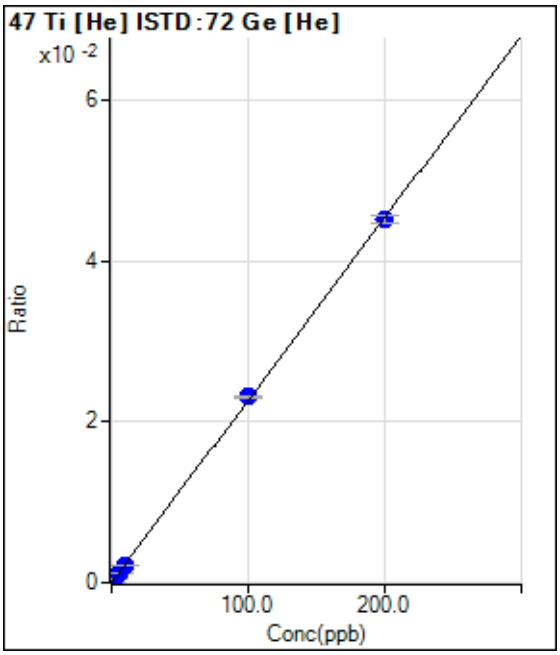
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2543.62	0.0012	P	5.8
2	☐	200.000	197.369	18319.17	0.0087	P	2.0
3	☐	500.000	488.379	40804.25	0.0197	P	1.6
4	☐	1000.000	959.461	78654.73	0.0376	P	0.4
5	☐	10000.00	9857.119	781917.02	0.3753	P	2.6
6	☐	20000.00	20073.78	1544859.20	0.7631	A	2.1

y = 3.7955E-005 * x + 0.0012
R = 1.0000
DL = 5.483
BEC = 31.5

Weight: <None>
Min Conc: <None>

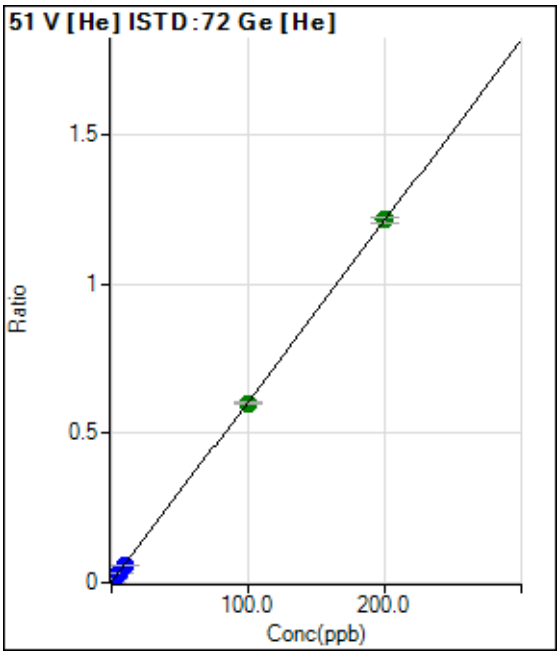


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	13.33	0.0000	P	86.6
2	☐	2.000	1.707	830.04	0.0004	P	5.1
3	☐	5.000	5.162	2433.60	0.0012	P	5.0
4	☐	10.000	9.366	4454.14	0.0021	P	7.4
5	☐	100.000	102.067	48225.43	0.0231	P	1.4
6	☐	200.000	198.997	91322.79	0.0451	P	2.1

y = 2.2670E-004 * x + 6.3445E-006
R = 0.9999
DL = 0.07272
BEC = 0.02799

Weight: <None>
Min Conc: <None>

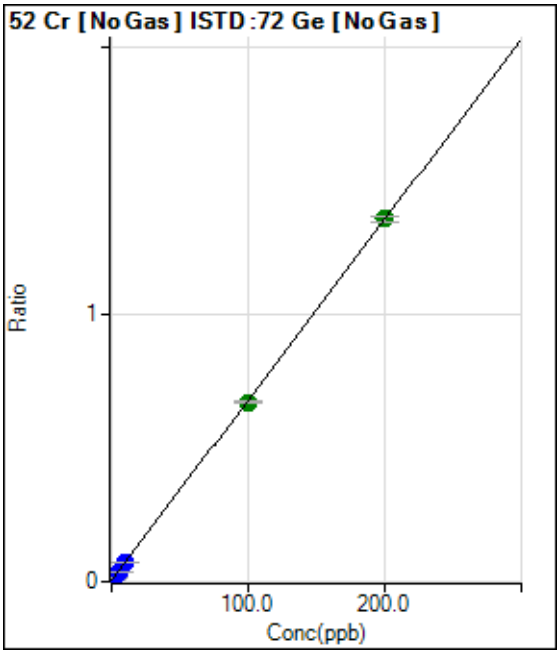
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2430.23	0.0011	P	1.9
2	☐	2.000	1.876	26326.39	0.0125	P	2.7
3	☐	5.000	4.780	62123.67	0.0301	P	1.9
4	☐	10.000	9.493	122430.15	0.0586	P	2.0
5	☐	100.000	99.121	1251485.92	0.6006	A	1.3
6	☐	200.000	200.471	2456660.88	1.2136	A	1.6

y = 0.0060 * x + 0.0011
R = 1.0000
DL = 0.0107
BEC = 0.1888

Weight: <None>
Min Conc: <None>

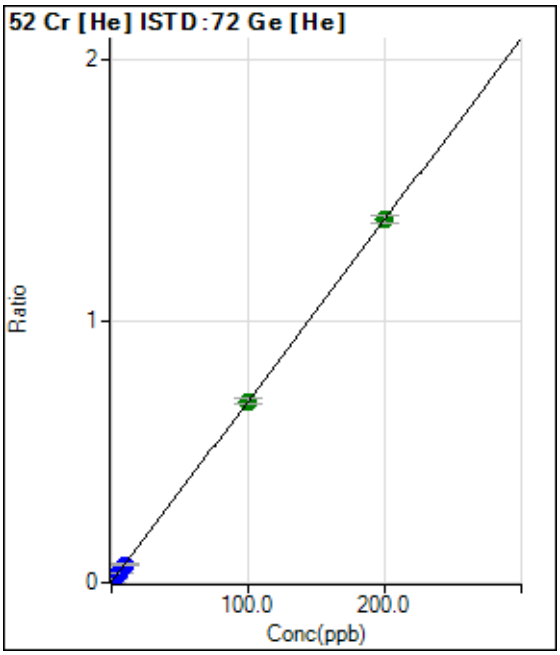


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	25083.23	0.0040	P	0.5
2	☐	2.000	1.956	108002.74	0.0172	P	1.6
3	☐	5.000	4.954	233455.23	0.0374	P	0.6
4	☐	10.000	9.658	440759.99	0.0691	P	1.1
5	☐	100.000	98.893	4180902.13	0.6701	A	1.3
6	☐	200.000	200.572	8209680.92	1.3550	A	1.9

y = 0.0067 * x + 0.0040
R = 1.0000
DL = 0.008085
BEC = 0.5949

Weight: <None>
Min Conc: <None>

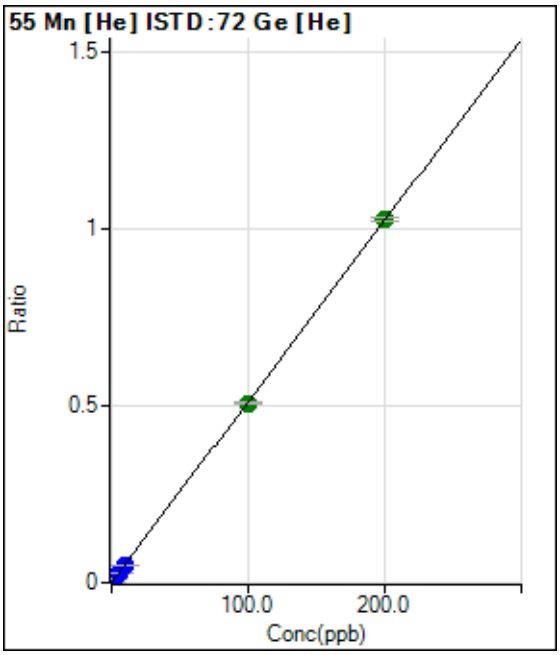
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2653.64	0.0012	P	3.3
2	☐	2.000	1.944	30985.47	0.0147	P	3.0
3	☐	5.000	4.850	71962.46	0.0348	P	2.0
4	☐	10.000	9.878	145498.43	0.0696	P	3.1
5	☐	100.000	100.062	1445189.25	0.6936	A	2.9
6	☐	200.000	199.979	2803288.09	1.3849	A	2.2

y = 0.0069 * x + 0.0012
R = 1.0000
DL = 0.01788
BEC = 0.1801

Weight: <None>
Min Conc: <None>

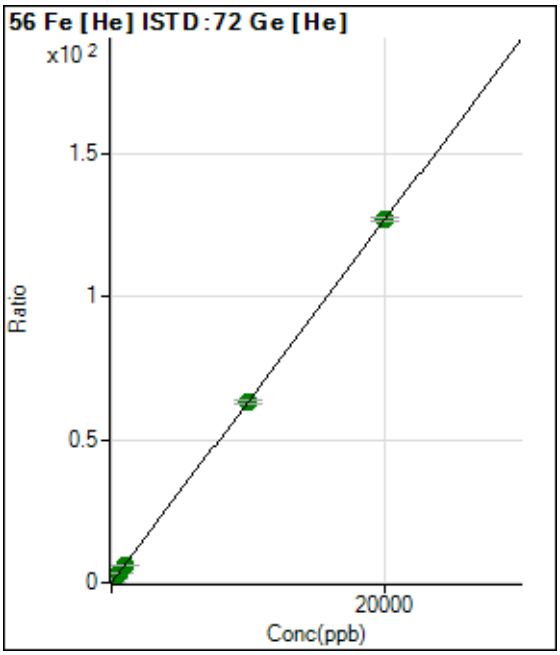


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1206.74	0.0006	P	6.1
2	☐	2.000	1.928	21967.99	0.0104	P	4.7
3	☐	5.000	4.899	52949.89	0.0256	P	1.3
4	☐	10.000	9.743	105311.84	0.0504	P	3.0
5	☐	100.000	99.212	1057849.41	0.5077	A	1.7
6	☐	200.000	200.410	2074905.28	1.0250	A	1.0

y = 0.0051 * x + 5.6715E-004
R = 1.0000
DL = 0.02022
BEC = 0.111

Weight: <None>
Min Conc: <None>

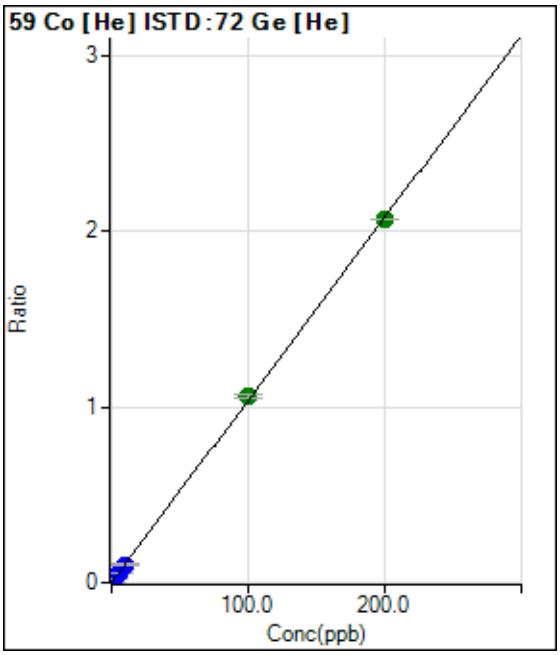
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	26173.96	0.0123	P	47.4
2	☐	200.000	196.550	2653096.47	1.2579	A	1.6
3	☐	500.000	487.388	6411675.32	3.1011	A	0.7
4	☐	1000.000	969.900	12877665.23	6.1590	A	1.8
5	☐	10000.00	9956.256	131489571.3	63.1100	A	1.9
6	☐	20000.00	20023.72	256913629.5	126.912	A	0.9

y = 0.0063 * x + 0.0123
R = 1.0000
DL = 2.764
BEC = 1.943

Weight: <None>
Min Conc: <None>

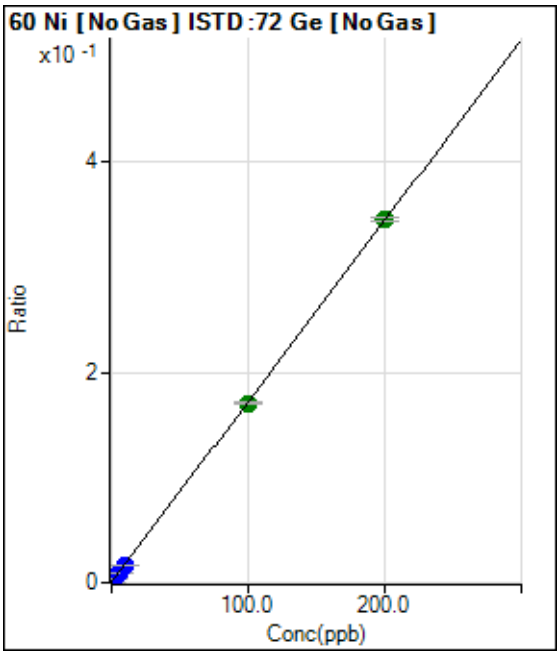


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	350.01	0.0002	P	13.8
2	☐	2.000	1.932	42677.07	0.0202	P	1.5
3	☐	5.000	5.006	107875.61	0.0522	P	2.1
4	☐	10.000	9.969	216894.91	0.1038	P	4.2
5	☐	100.000	102.221	2213459.34	1.0623	A	1.6
6	☐	200.000	198.892	4184088.48	2.0668	A	0.1

y = 0.0104 * x + 1.6453E-004
R = 0.9999
DL = 0.006568
BEC = 0.01583

Weight: <None>
Min Conc: <None>

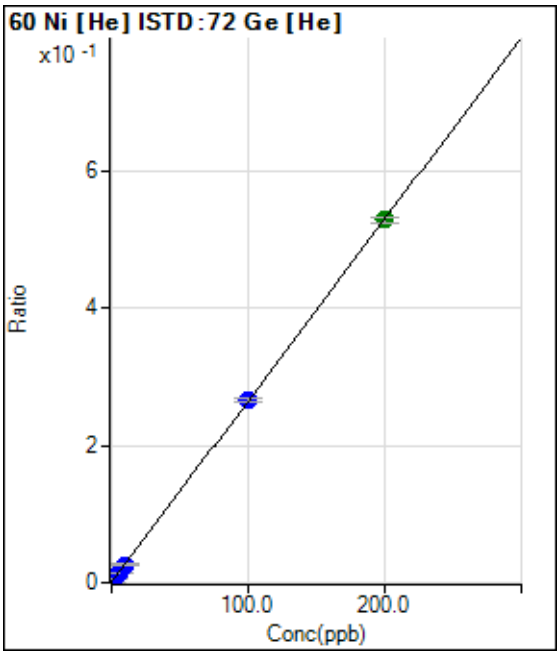
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2213.55	0.0004	P	4.8
2	☐	2.000	1.832	22041.45	0.0035	P	2.4
3	☐	5.000	4.877	54650.29	0.0087	P	1.3
4	☐	10.000	9.682	108625.57	0.0170	P	0.8
5	☐	100.000	99.203	1067767.85	0.1711	A	1.0
6	☐	200.000	200.419	2092542.37	0.3454	A	1.1

y = 0.0017 * x + 3.5343E-004
R = 1.0000
DL = 0.02927
BEC = 0.2053

Weight: <None>
Min Conc: <None>

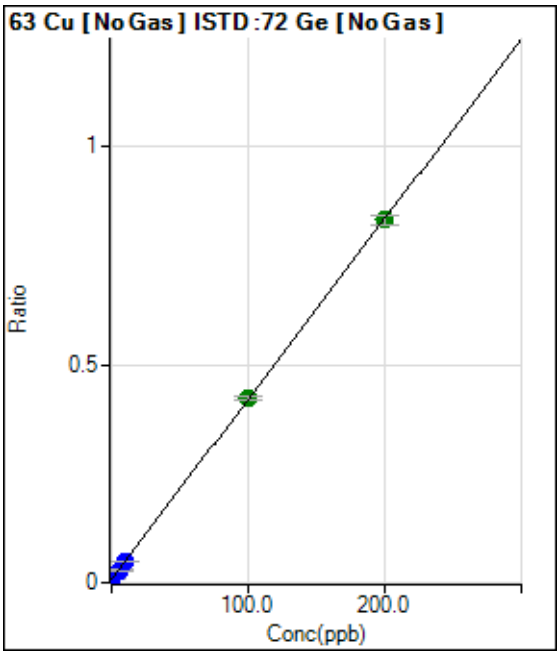


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	970.05	0.0005	P	11.2
2	☐	2.000	1.838	11234.88	0.0053	P	0.5
3	☐	5.000	4.913	27855.52	0.0135	P	2.3
4	☐	10.000	9.849	55500.19	0.0265	P	3.2
5	☐	100.000	100.574	556017.98	0.2669	P	2.6
6	☐	200.000	199.724	1071851.55	0.5295	A	1.4

y = 0.0026 * x + 4.5647E-004
R = 1.0000
DL = 0.05764
BEC = 0.1723

Weight: <None>
Min Conc: <None>

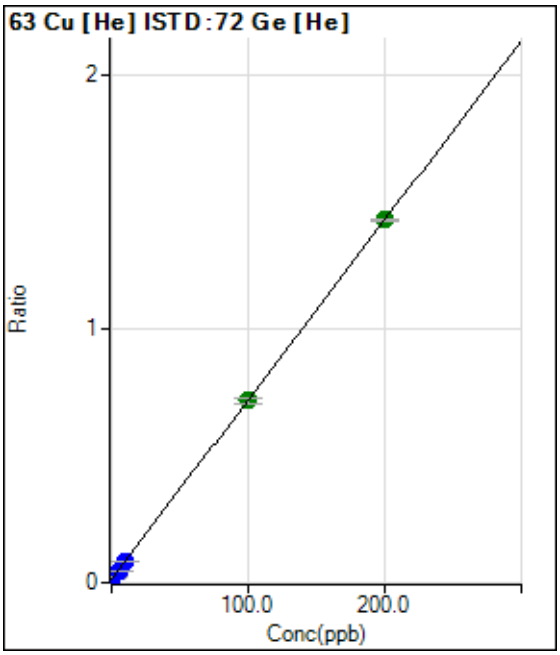
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	49493.41	0.0079	P	3.2
2	☐	2.000	1.951	100348.87	0.0160	P	0.5
3	☐	5.000	5.010	178602.70	0.0286	P	2.4
4	☐	10.000	9.782	308211.71	0.0483	P	2.1
5	☐	100.000	100.858	2647580.17	0.4243	A	1.8
6	☐	200.000	199.582	5039470.86	0.8318	A	2.6

y = 0.0041 * x + 0.0079
R = 1.0000
DL = 0.1821
BEC = 1.916

Weight: <None>
Min Conc: <None>

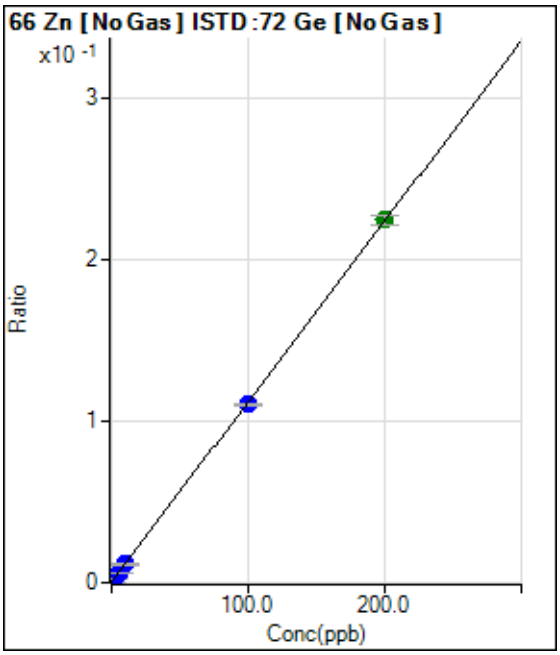


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	28443.48	0.0134	P	2.5
2	☐	2.000	1.870	56109.23	0.0266	P	3.1
3	☐	5.000	5.023	101188.67	0.0489	P	1.2
4	☐	10.000	9.829	173473.65	0.0830	P	3.0
5	☐	100.000	99.547	1496849.04	0.7184	A	3.5
6	☐	200.000	200.236	2897752.87	1.4315	A	0.8

y = 0.0071 * x + 0.0134
R = 1.0000
DL = 0.1426
BEC = 1.887

Weight: <None>
Min Conc: <None>

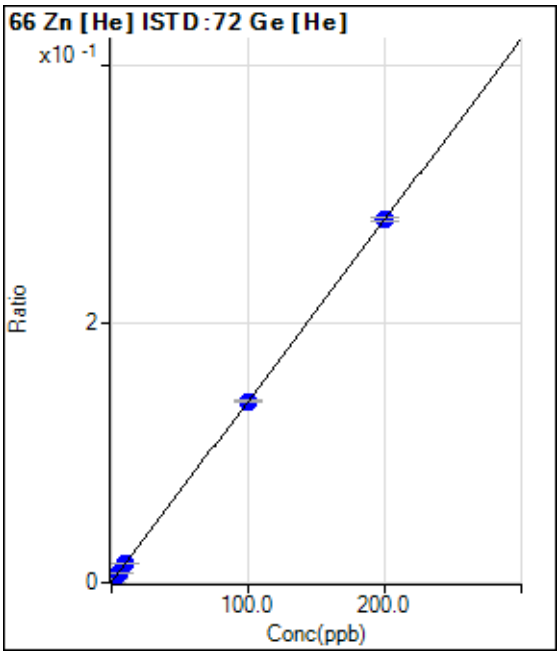
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1910.17	0.0003	P	10.7
2	☐	2.000	1.968	15749.36	0.0025	P	3.8
3	☐	5.000	5.039	37104.56	0.0059	P	2.0
4	☐	10.000	9.851	72235.78	0.0113	P	0.5
5	☐	100.000	98.542	689249.31	0.1105	P	1.0
6	☐	200.000	200.736	1361583.42	0.2247	A	2.5

y = 0.0011 * x + 3.0563E-004
R = 1.0000
DL = 0.08783
BEC = 0.2734

Weight: <None>
Min Conc: <None>

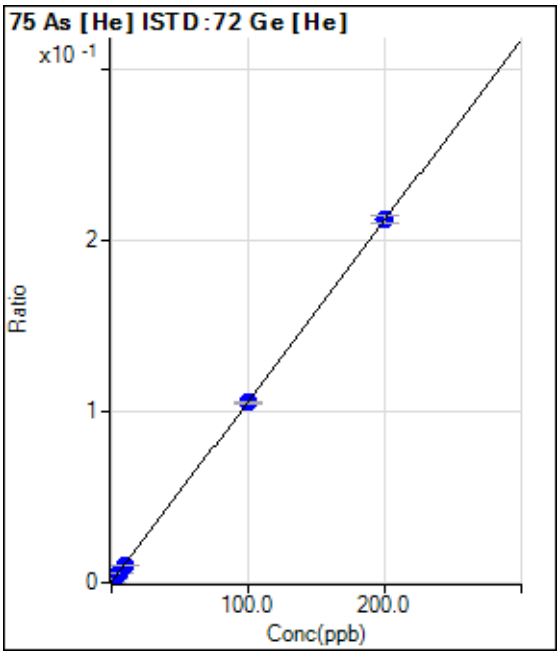


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	690.04	0.0003	P	8.9
2	☐	2.000	1.928	6381.58	0.0030	P	1.9
3	☐	5.000	5.010	15182.05	0.0073	P	3.0
4	☐	10.000	10.017	30016.84	0.0144	P	0.5
5	☐	100.000	99.935	292354.16	0.1403	P	0.9
6	☐	200.000	200.032	567817.41	0.2805	P	1.1

y = 0.0014 * x + 3.2392E-004
R = 1.0000
DL = 0.06164
BEC = 0.2313

Weight: <None>
Min Conc: <None>

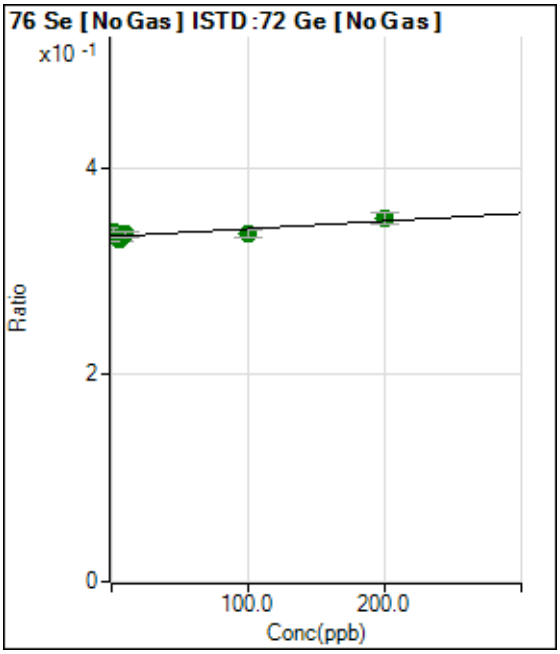
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	472.23	0.0002	P	12.5
2	☐	2.000	1.896	4699.73	0.0022	P	2.6
3	☐	5.000	4.956	11309.23	0.0055	P	0.5
4	☐	10.000	9.608	21737.54	0.0104	P	1.9
5	☐	100.000	99.439	219884.81	0.1055	P	1.3
6	☐	200.000	200.302	429800.32	0.2123	P	2.0

y = 0.0011 * x + 2.2140E-004
R = 1.0000
DL = 0.07818
BEC = 0.2091

Weight: <None>
Min Conc: <None>

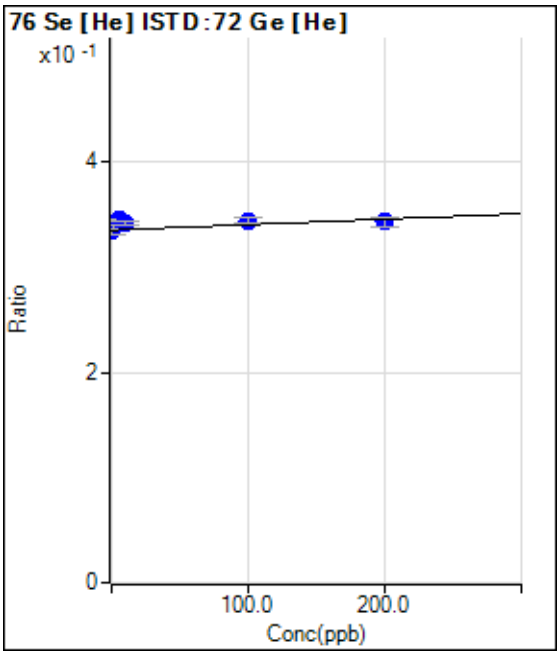


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2086182.16	0.3333	A	1.1
2	☐	2.000	68.416	2127032.73	0.3385	A	2.1
3	☐	5.000	-32.856	2067015.28	0.3309	A	1.1
4	☐	10.000	29.720	2141669.50	0.3356	A	1.9
5	☐	100.000	43.996	2100039.14	0.3366	A	2.4
6	☐	200.000	227.298	2122601.27	0.3503	A	3.1

y = 7.4663E-005 * x + 0.3333
R = 0.8705
DL = 150.5
BEC = 4465

Weight: <None>
Min Conc: <None>

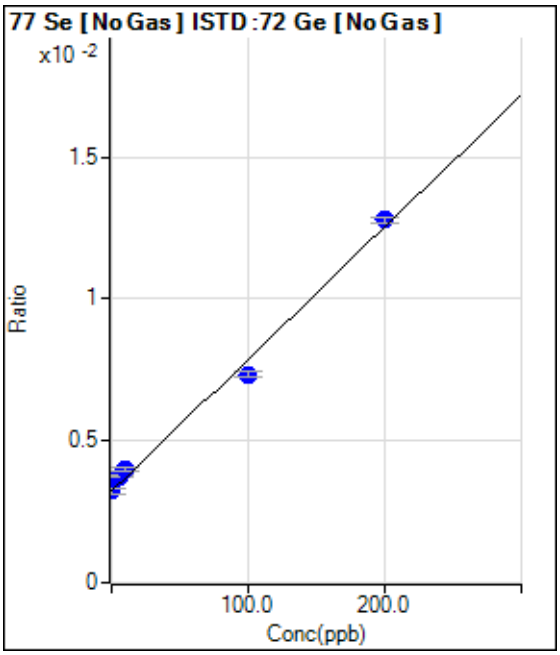
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	713776.08	0.3354	P	2.7
2	☐	2.000	126.825	721301.71	0.3421	P	2.8
3	☐	5.000	184.872	713613.61	0.3451	P	0.7
4	☐	10.000	114.716	713995.75	0.3415	P	0.9
5	☐	100.000	176.639	718235.59	0.3447	P	1.3
6	☐	200.000	150.700	694927.62	0.3433	P	2.4

y = 5.2442E-005 * x + 0.3354
R = 0.3749
DL = 520.7
BEC = 6396

Weight: <None>
Min Conc: <None>

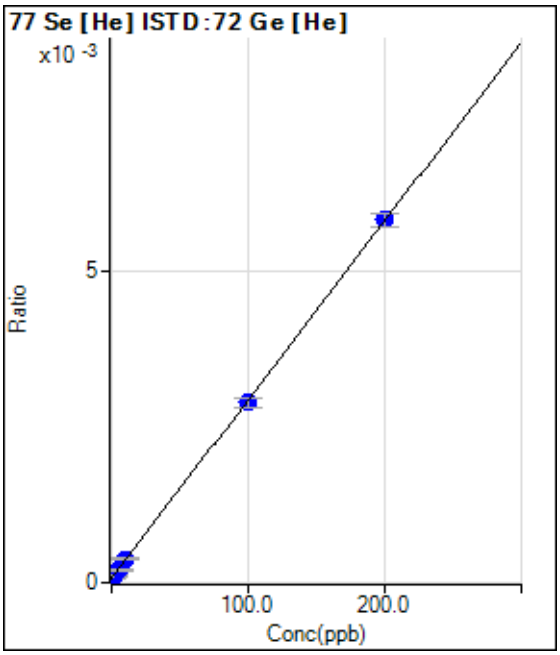


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	20182.14	0.0032	P	5.6
2	☐	2.000	9.616	23103.48	0.0037	P	1.8
3	☐	5.000	11.389	23474.13	0.0038	P	2.6
4	☐	10.000	16.691	25554.63	0.0040	P	2.2
5	☐	100.000	88.314	45784.66	0.0073	P	3.2
6	☐	200.000	205.273	77472.36	0.0128	P	1.4

y = 4.6571E-005 * x + 0.0032
R = 0.9960
DL = 11.67
BEC = 69.29

Weight: <None>
Min Conc: <None>

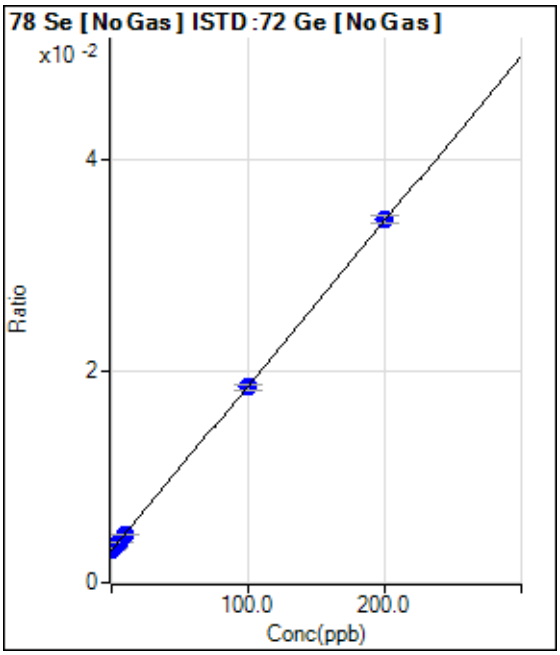
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	150.00	0.0001	P	45.9
2	☐	2.000	1.318	226.67	0.0001	P	23.1
3	☐	5.000	4.652	420.01	0.0002	P	15.1
4	☐	10.000	10.684	786.70	0.0004	P	10.4
5	☐	100.000	98.521	6024.80	0.0029	P	5.6
6	☐	200.000	200.721	11772.03	0.0058	P	3.7

y = 2.8628E-005 * x + 7.0068E-005
R = 0.9999
DL = 3.369
BEC = 2.448

Weight: <None>
Min Conc: <None>

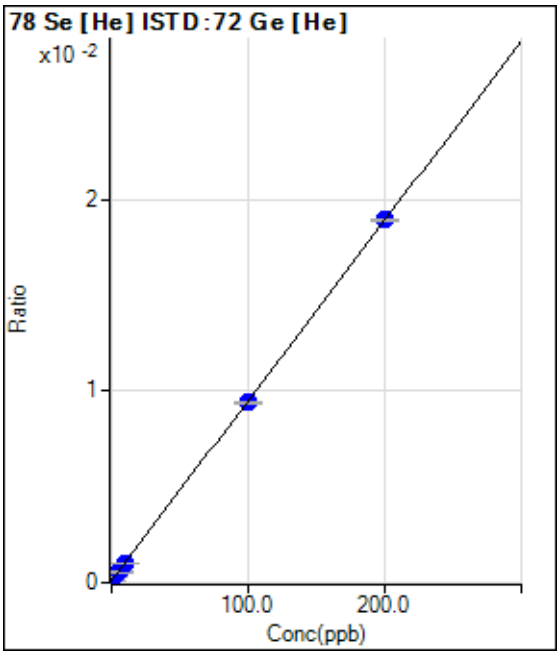


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	19100.41	0.0031	P	3.7
2	☐	2.000	1.679	20819.70	0.0033	P	5.5
3	☐	5.000	4.951	23881.49	0.0038	P	0.9
4	☐	10.000	9.356	28771.03	0.0045	P	2.6
5	☐	100.000	98.873	114978.71	0.0184	P	2.3
6	☐	200.000	200.600	207516.55	0.0342	P	2.0

y = 1.5552E-004 * x + 0.0031
R = 1.0000
DL = 2.201
BEC = 19.63

Weight: <None>
Min Conc: <None>

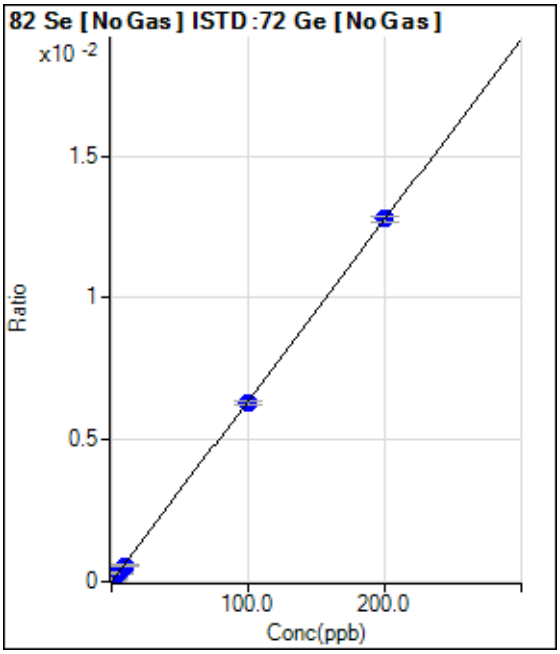
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	251.33	0.0001	P	6.9
2	☐	2.000	1.937	634.02	0.0003	P	10.3
3	☐	5.000	4.745	1165.39	0.0006	P	4.8
4	☐	10.000	9.424	2098.17	0.0010	P	1.0
5	☐	100.000	99.015	19624.27	0.0094	P	1.4
6	☐	200.000	200.528	38366.42	0.0190	P	0.7

y = 9.3926E-005 * x + 1.1812E-004
R = 1.0000
DL = 0.2598
BEC = 1.258

Weight: <None>
Min Conc: <None>

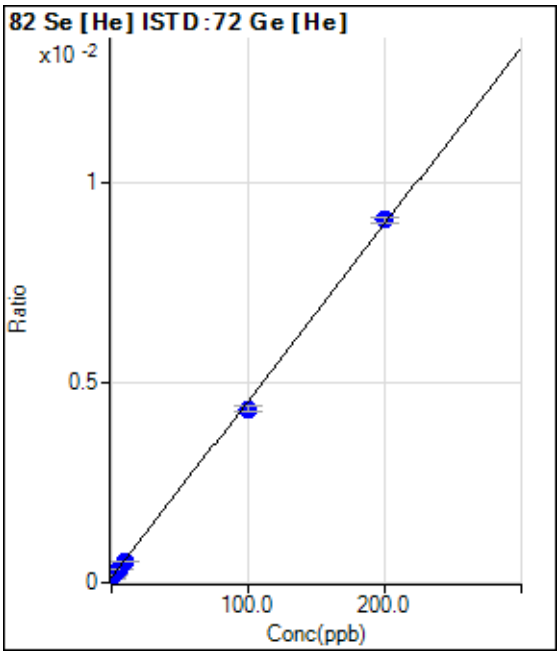


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	22.26	0.0000	P	577.3
2	☐	2.000	1.430	594.79	0.0001	P	51.3
3	☐	5.000	4.842	1949.44	0.0003	P	7.1
4	☐	10.000	8.727	3570.00	0.0006	P	9.3
5	☐	100.000	98.924	39333.07	0.0063	P	1.9
6	☐	200.000	200.611	77437.28	0.0128	P	1.5

y = 6.3692E-005 * x + 3.5704E-006
R = 1.0000
DL = 0.9708
BEC = 0.05606

Weight: <None>
Min Conc: <None>

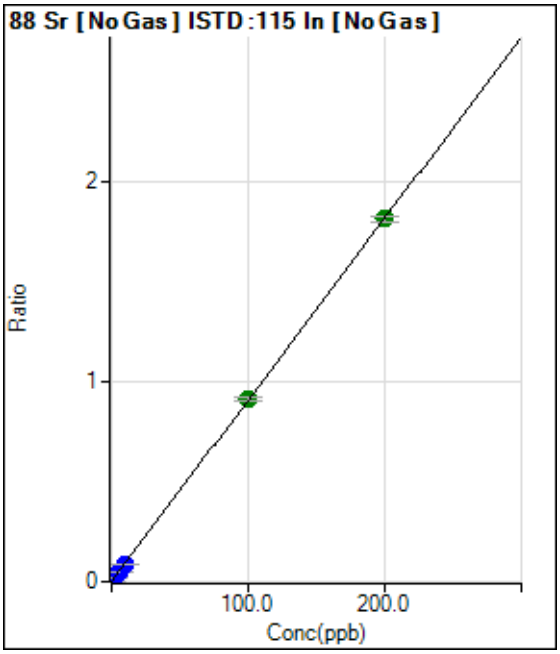
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	273.34	0.0001	P	30.9
2	☐	2.000	1.255	386.68	0.0002	P	8.2
3	☐	5.000	4.581	683.36	0.0003	P	9.2
4	☐	10.000	8.906	1090.06	0.0005	P	3.1
5	☐	100.000	95.401	9036.52	0.0043	P	3.3
6	☐	200.000	202.372	18339.50	0.0091	P	1.3

y = 4.4128E-005 * x + 1.2813E-004
R = 0.9997
DL = 2.694
BEC = 2.904

Weight: <None>
Min Conc: <None>

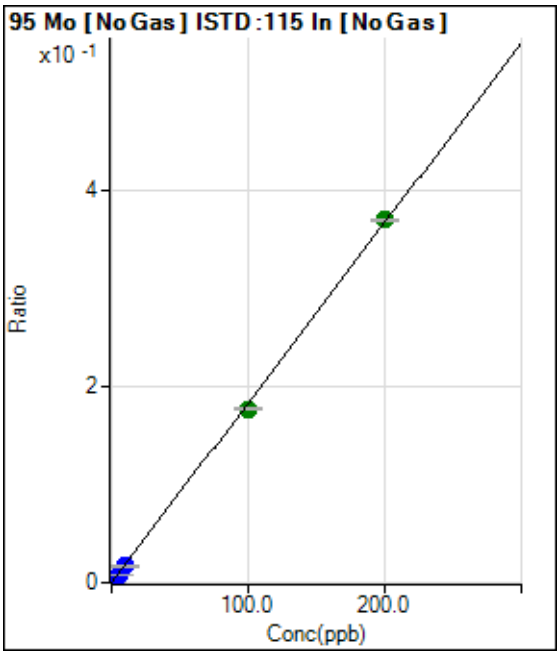


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	9743.72	0.0014	P	7.2
2	☐	2.000	1.998	128778.53	0.0196	P	3.6
3	☐	5.000	4.753	298416.08	0.0446	P	1.1
4	☐	10.000	9.215	582187.65	0.0852	P	4.3
5	☐	100.000	100.338	6057353.45	0.9134	A	2.4
6	☐	200.000	199.877	11730386.91	1.8182	A	1.6

y = 0.0091 * x + 0.0014
R = 1.0000
DL = 0.03402
BEC = 0.1571

Weight: <None>
Min Conc: <None>

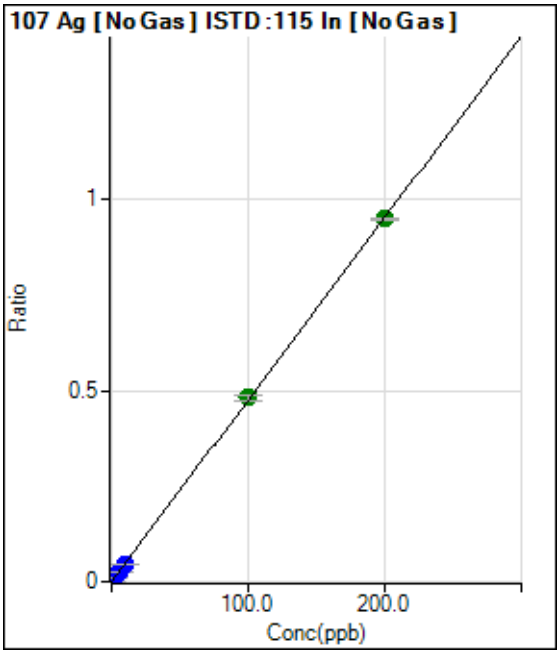
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	116.67	0.0000	P	22.4
2	☐	2.000	1.907	23113.89	0.0035	P	4.0
3	☐	5.000	4.618	56748.18	0.0085	P	4.6
4	☐	10.000	9.094	114127.09	0.0167	P	4.4
5	☐	100.000	96.699	1176764.46	0.1774	A	0.8
6	☐	200.000	201.707	2387861.89	0.3701	A	0.7

y = 0.0018 * x + 1.7092E-005
R = 0.9998
DL = 0.006257
BEC = 0.009316

Weight: <None>
Min Conc: <None>

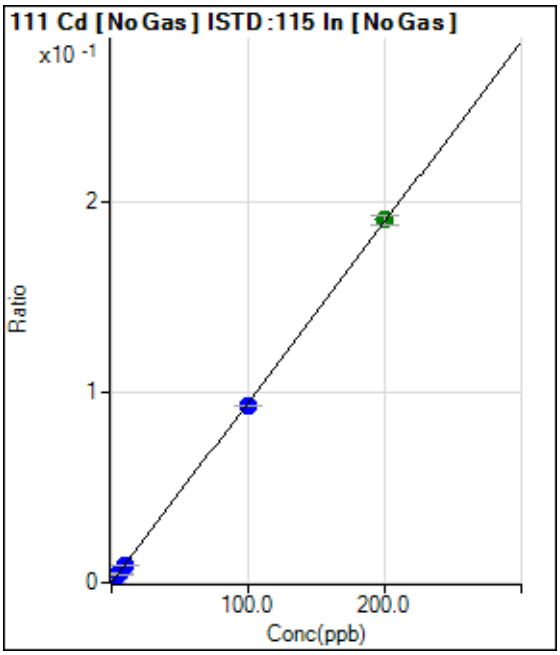


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	220.01	0.0000	P	18.3
2	☐	2.000	1.971	61912.23	0.0094	P	3.5
3	☐	5.000	4.886	155723.47	0.0233	P	0.8
4	☐	10.000	9.548	310872.54	0.0455	P	3.0
5	☐	100.000	100.999	3188539.75	0.4808	A	2.3
6	☐	200.000	199.526	6129250.12	0.9498	A	0.9

y = 0.0048 * x + 3.2147E-005
R = 1.0000
DL = 0.003716
BEC = 0.006753

Weight: <None>
Min Conc: <None>

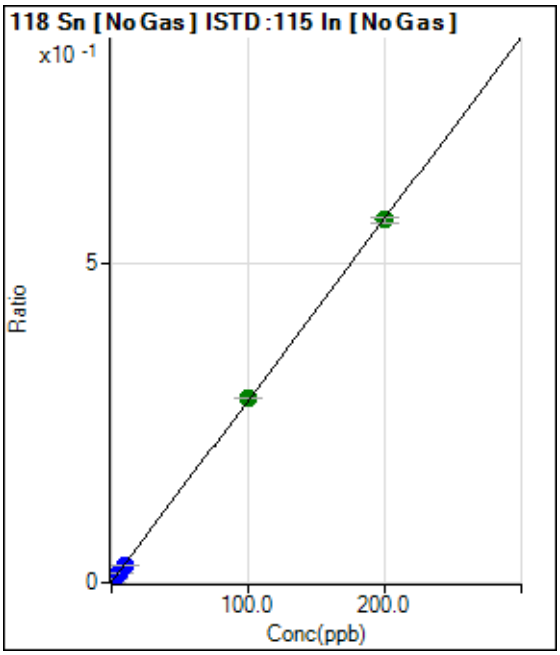
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	16.67	0.0000	P	127.1
2	☐	2.000	1.917	11948.96	0.0018	P	5.9
3	☐	5.000	4.796	30375.45	0.0045	P	3.8
4	☐	10.000	9.569	61975.73	0.0091	P	0.7
5	☐	100.000	97.914	614855.41	0.0927	P	0.8
6	☐	200.000	201.070	1228614.10	0.1904	A	2.9

y = 9.4682E-004 * x + 2.4559E-006
R = 0.9999
DL = 0.009893
BEC = 0.002594

Weight: <None>
Min Conc: <None>

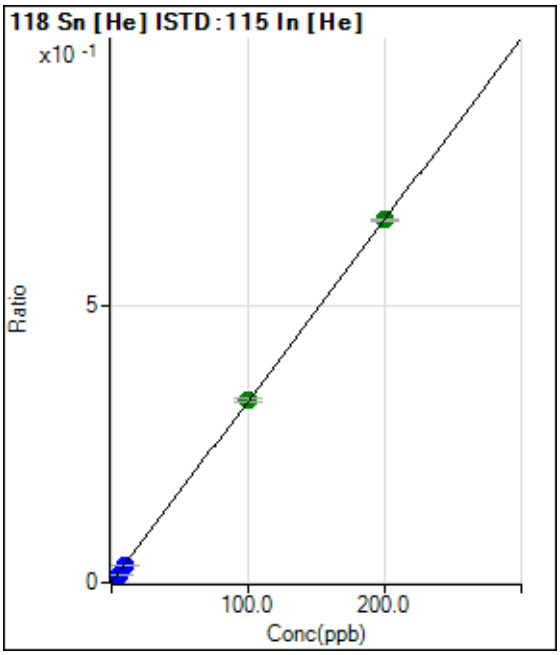


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	6088.15	0.0009	P	79.1
2	☐	2.000	1.674	37240.09	0.0057	P	2.6
3	☐	5.000	4.485	91301.39	0.0137	P	0.5
4	☐	10.000	9.134	183660.06	0.0269	P	3.5
5	☐	100.000	101.247	1915490.18	0.2888	A	0.8
6	☐	200.000	199.436	3665244.32	0.5680	A	1.9

y = 0.0028 * x + 9.0261E-004
R = 1.0000
DL = 0.7528
BEC = 0.3174

Weight: <None>
Min Conc: <None>

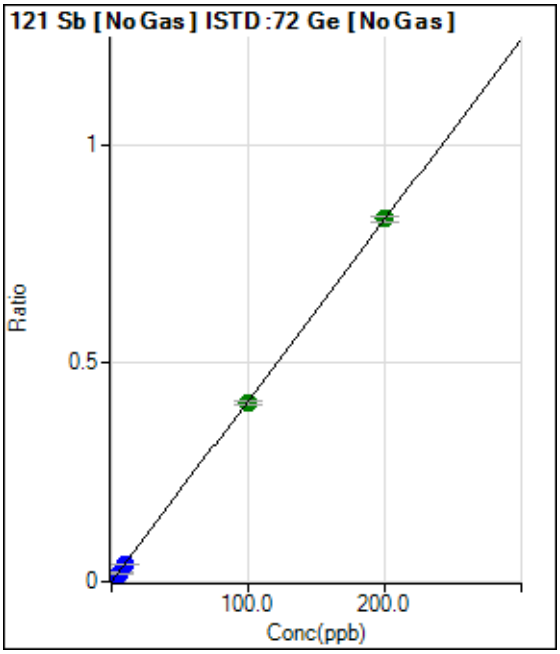
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2206.89	0.0006	P	10.3
2	☐	2.000	1.791	22519.72	0.0065	P	3.1
3	☐	5.000	4.426	54413.54	0.0151	P	3.2
4	☐	10.000	9.003	107993.10	0.0300	P	1.1
5	☐	100.000	100.177	1145544.80	0.3280	A	2.2
6	☐	200.000	199.978	2258057.99	0.6542	A	0.5

y = 0.0033 * x + 6.0136E-004
R = 1.0000
DL = 0.05706
BEC = 0.184

Weight: <None>
Min Conc: <None>

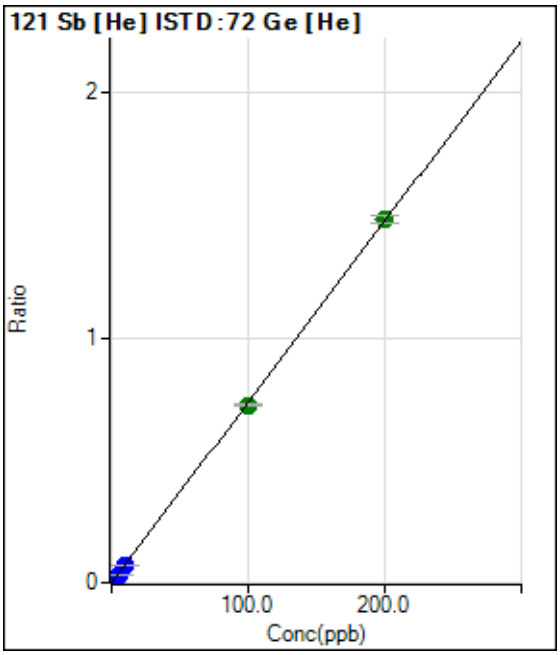


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1453.44	0.0002	P	10.7
2	☐	2.000	1.817	48747.69	0.0078	P	1.1
3	☐	5.000	4.725	123634.44	0.0198	P	1.7
4	☐	10.000	9.273	246483.40	0.0386	P	1.0
5	☐	100.000	98.839	2554253.71	0.4094	A	3.0
6	☐	200.000	200.625	5034347.43	0.8308	A	1.7

y = 0.0041 * x + 2.3205E-004
R = 1.0000
DL = 0.018
BEC = 0.05605

Weight: <None>
Min Conc: <None>

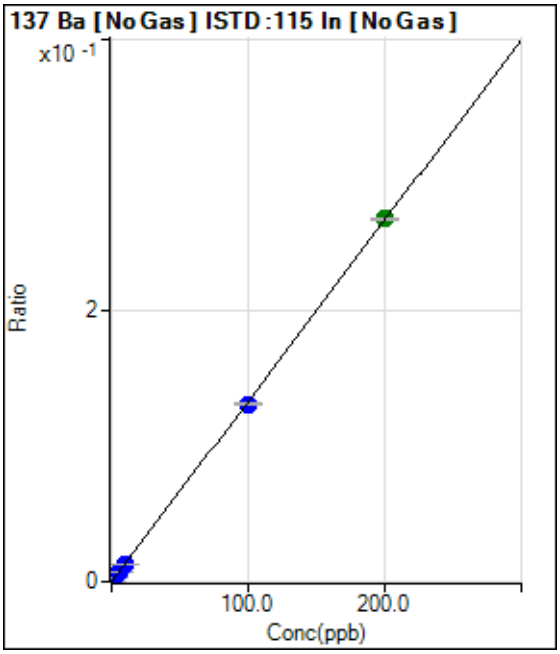
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	710.04	0.0003	P	18.5
2	☐	2.000	1.812	28848.74	0.0137	P	2.7
3	☐	5.000	4.634	71270.56	0.0345	P	1.6
4	☐	10.000	9.170	141956.76	0.0679	P	1.3
5	☐	100.000	98.367	1510935.40	0.7250	A	0.5
6	☐	200.000	200.869	2996542.77	1.4802	A	2.3

y = 0.0074 * x + 3.3314E-004
R = 1.0000
DL = 0.02515
BEC = 0.04522

Weight: <None>
Min Conc: <None>

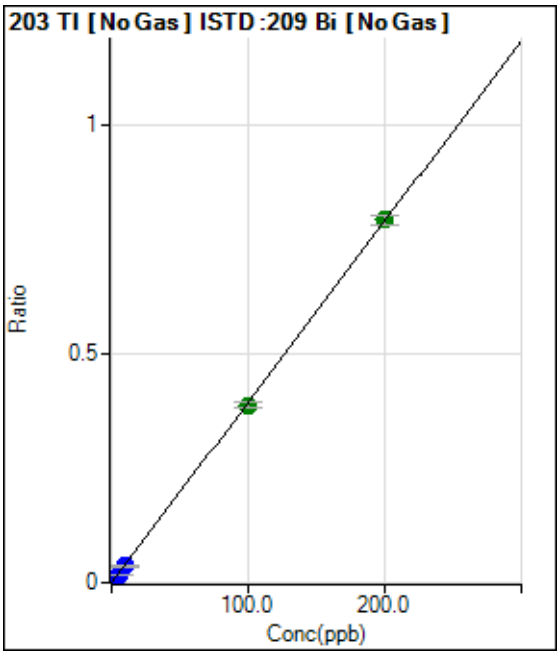


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1096.73	0.0002	P	11.8
2	☐	2.000	2.024	18743.93	0.0029	P	4.7
3	☐	5.000	4.917	44771.20	0.0067	P	0.9
4	☐	10.000	9.383	86324.78	0.0126	P	3.8
5	☐	100.000	98.134	866192.64	0.1306	P	1.3
6	☐	200.000	200.966	1724607.06	0.2673	A	0.4

y = 0.0013 * x + 1.6052E-004
R = 0.9999
DL = 0.04276
BEC = 0.1208

Weight: <None>
Min Conc: <None>

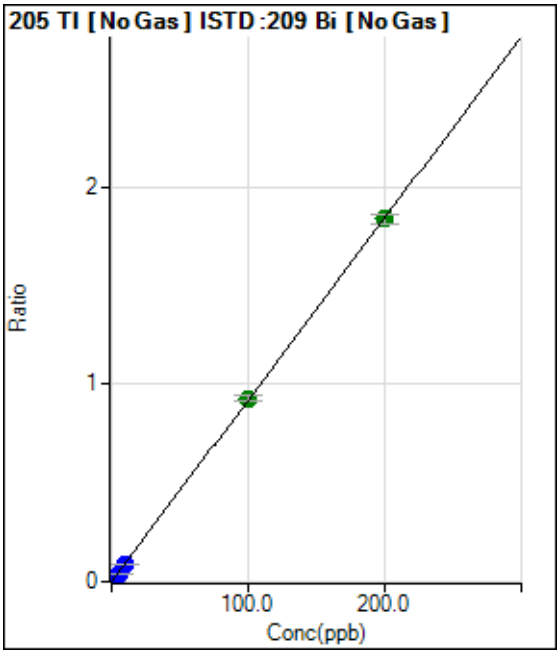
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	76.67	0.0000	P	32.6
2	☐	2.000	1.888	35664.93	0.0075	P	5.7
3	☐	5.000	4.474	85762.12	0.0177	P	2.1
4	☐	10.000	9.065	174784.91	0.0358	P	0.9
5	☐	100.000	98.458	1831350.96	0.3884	A	4.2
6	☐	200.000	200.832	3726763.38	0.7923	A	2.3

y = 0.0039 * x + 1.5905E-005
R = 1.0000
DL = 0.003949
BEC = 0.004032

Weight: <None>
Min Conc: <None>

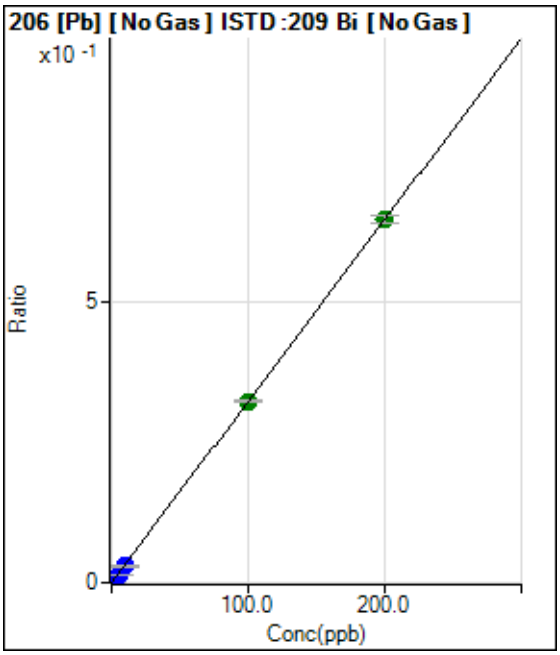


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	160.00	0.0000	P	25.1
2	☐	2.000	1.905	83960.96	0.0176	P	4.2
3	☐	5.000	4.633	207106.16	0.0427	P	2.6
4	☐	10.000	9.239	415436.74	0.0851	P	2.0
5	☐	100.000	100.716	4370727.64	0.9268	A	3.5
6	☐	200.000	199.690	8643389.25	1.8376	A	2.4

y = 0.0092 * x + 3.3211E-005
R = 1.0000
DL = 0.002716
BEC = 0.003609

Weight: <None>
Min Conc: <None>

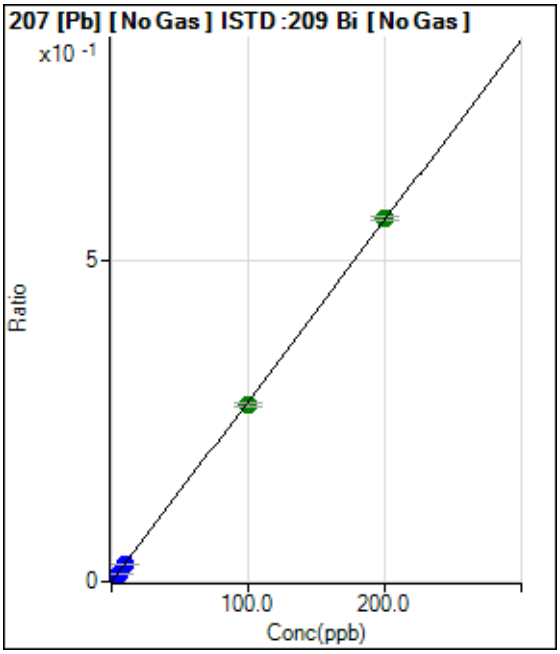
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	303.34	0.0001	P	13.5
2	☐	2.000	1.881	29421.94	0.0062	P	4.7
3	☐	5.000	4.520	71367.92	0.0147	P	3.6
4	☐	10.000	9.087	144067.70	0.0295	P	4.0
5	☐	100.000	100.048	1529653.62	0.3242	A	1.0
6	☐	200.000	200.035	3048607.14	0.6481	A	2.0

y = 0.0032 * x + 6.2959E-005
R = 1.0000
DL = 0.007885
BEC = 0.01943

Weight: <None>
Min Conc: <None>

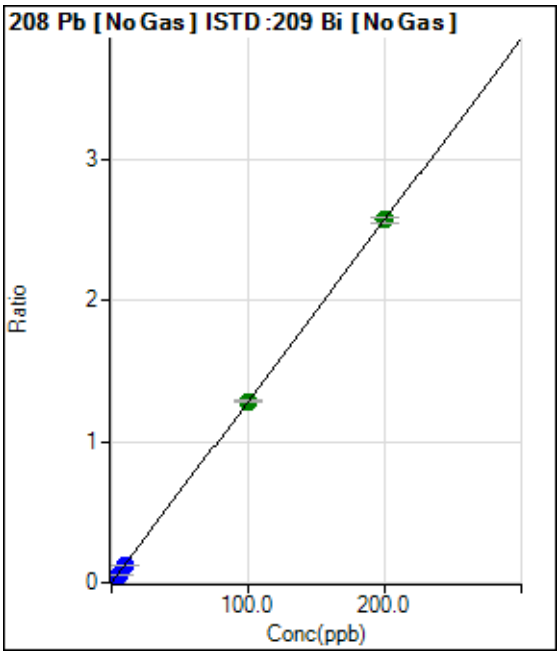


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	230.01	0.0000	P	26.0
2	☐	2.000	1.896	25643.64	0.0054	P	2.7
3	☐	5.000	4.635	63318.95	0.0130	P	0.8
4	☐	10.000	9.265	127054.22	0.0260	P	4.8
5	☐	100.000	98.147	1298122.95	0.2752	A	2.5
6	☐	200.000	200.974	2650809.13	0.5635	A	0.9

y = 0.0028 * x + 4.7686E-005
R = 0.9999
DL = 0.01329
BEC = 0.01701

Weight: <None>
Min Conc: <None>

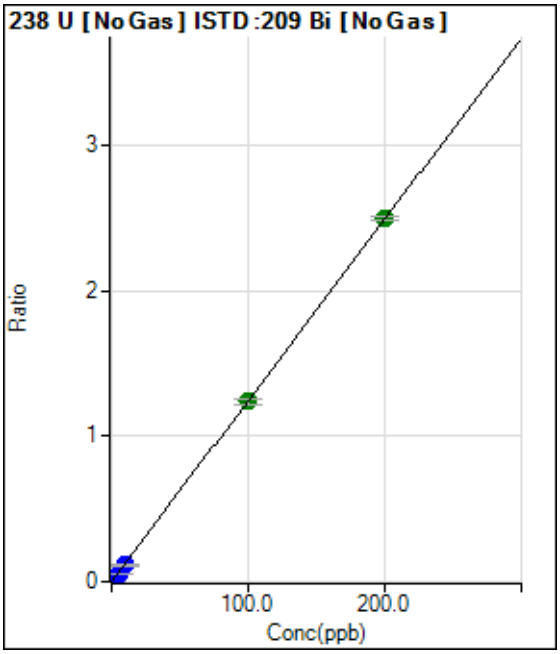
Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1150.05	0.0002	P	3.7
2	☐	2.000	1.886	116953.70	0.0245	P	3.0
3	☐	5.000	4.600	287945.69	0.0593	P	0.9
4	☐	10.000	9.240	580557.46	0.1189	P	2.9
5	☐	100.000	99.932	6054525.90	1.2833	A	1.3
6	☐	200.000	200.083	12085835.55	2.5692	A	1.3

y = 0.0128 * x + 2.3863E-004
R = 1.0000
DL = 0.00208
BEC = 0.01859

Weight: <None>
Min Conc: <None>

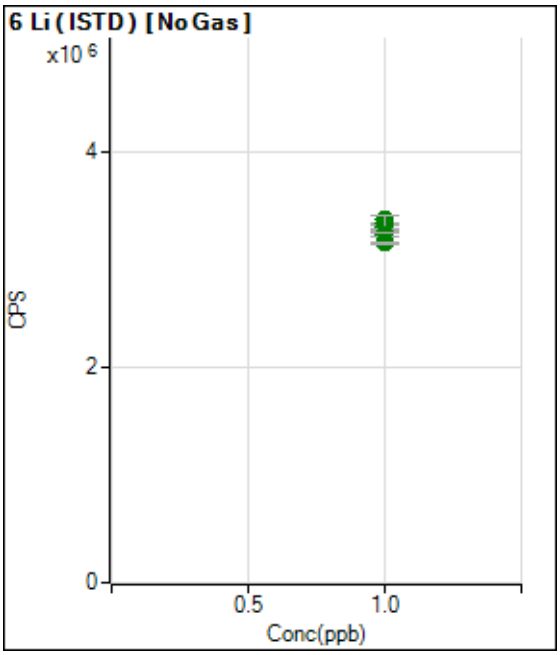


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	20.00	0.0000	P	0.5
2	☐	2.000	1.829	108859.24	0.0228	P	2.3
3	☐	5.000	4.518	273038.50	0.0562	P	0.2
4	☐	10.000	9.066	551270.46	0.1128	P	1.0
5	☐	100.000	99.365	5833204.29	1.2367	A	2.5
6	☐	200.000	200.378	11730613.57	2.4938	A	1.1

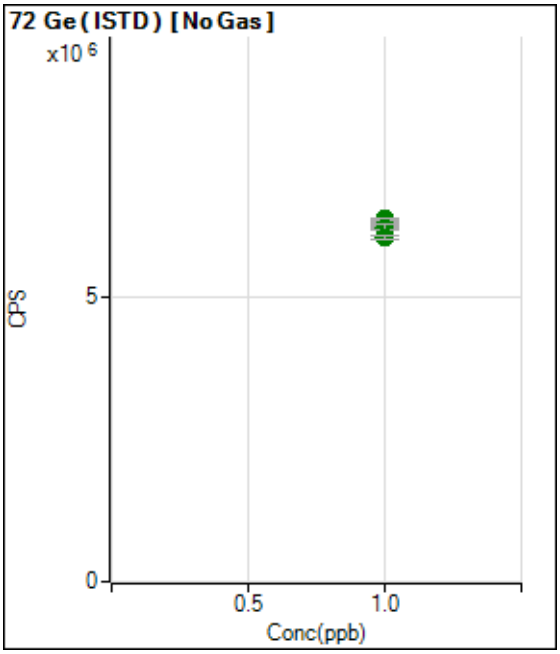
y = 0.0124 * x + 4.1502E-006
R = 1.0000
DL = 5.481E-06
BEC = 0.0003335

Weight: <None>
Min Conc: <None>

Calibration for 018_ICV.d

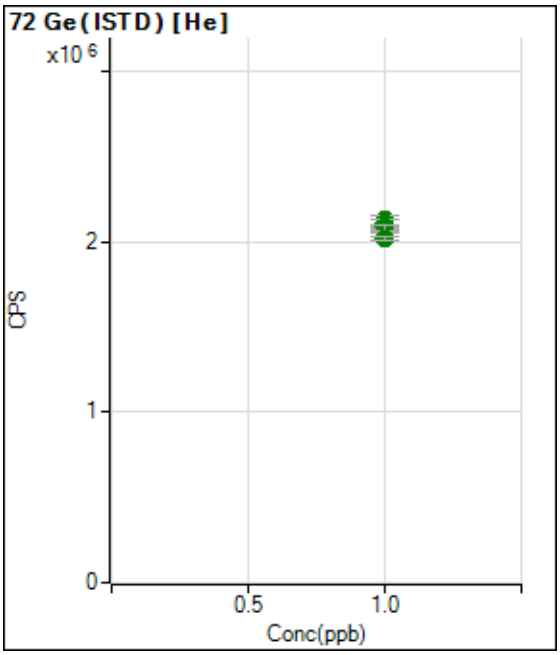


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		3367912.03		A	2.0
2	☐	1.000		3282944.31		A	1.8
3	☐	1.000		3311163.90		A	1.4
4	☐	1.000		3331060.60		A	4.3
5	☐	1.000		3227889.91		A	1.4
6	☐	1.000		3150844.63		A	0.6

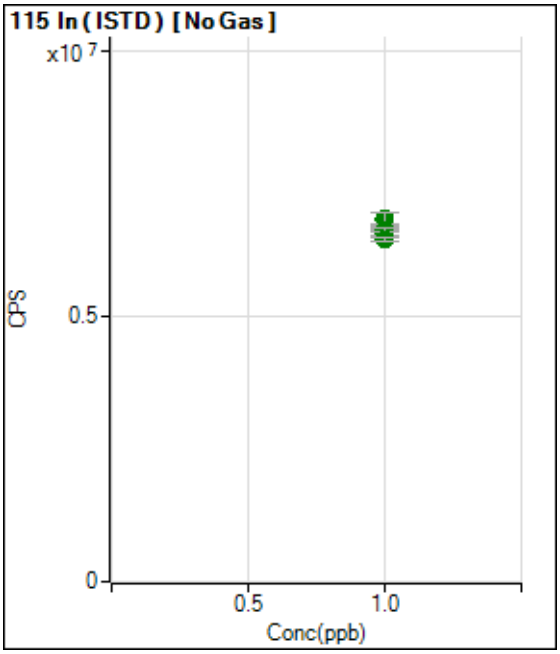


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		6259186.57		A	2.1
2	☐	1.000		6285838.24		A	1.8
3	☐	1.000		6246972.82		A	0.9
4	☐	1.000		6382107.61		A	0.3
5	☐	1.000		6239614.70		A	1.3
6	☐	1.000		6059339.28		A	0.9

Calibration for 018_ICV.d

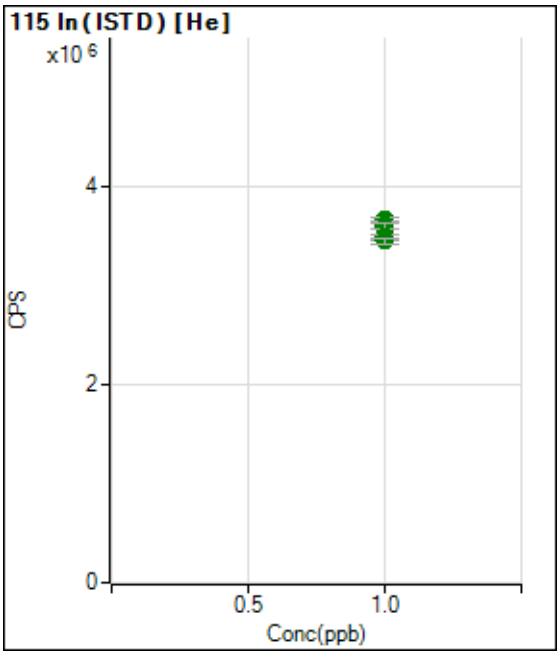


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		2128792.47		A	2.3
2	☐	1.000		2109518.72		A	2.5
3	☐	1.000		2067634.81		A	1.2
4	☐	1.000		2091168.41		A	1.2
5	☐	1.000		2083969.29		A	1.8
6	☐	1.000		2024410.34		A	1.2

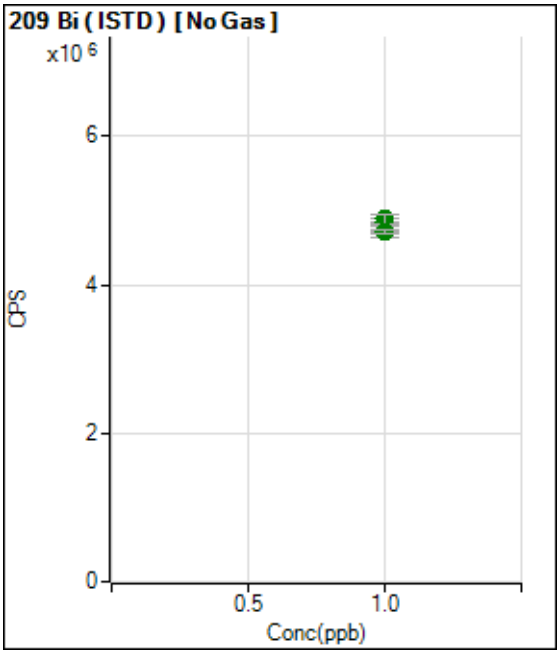


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		6832905.70		A	4.1
2	☐	1.000		6578216.25		A	1.8
3	☐	1.000		6686730.85		A	1.8
4	☐	1.000		6839438.66		A	3.3
5	☐	1.000		6632404.29		A	1.0
6	☐	1.000		6452380.02		A	1.3

Calibration for 018_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		3666722.58		A	1.2
2	☐	1.000		3489822.74		A	1.4
3	☐	1.000		3613260.12		A	2.5
4	☐	1.000		3596745.54		A	1.6
5	☐	1.000		3492740.29		A	1.3
6	☐	1.000		3451331.86		A	1.8



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		4819187.01		A	0.5
2	☐	1.000		4783999.51		A	2.7
3	☐	1.000		4855667.11		A	2.1
4	☐	1.000		4886188.78		A	2.8
5	☐	1.000		4718795.87		A	3.0
6	☐	1.000		4704128.47		A	1.2

Sample Report

Sample Table

Sample Name	LLICV5
Data File Name	020LCV5.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\070220A.b
Acq Date Time	2020-07-02T11:37:56-05:00
Sample Type	LLCCV5
Dilution	1
Comment	
ISTD Ref FileName	011CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	1	No Gas	4.770	4.770	5.05	347762	0.00	5	
Be	9	1	No Gas	4.596	4.596	1.29	41944	0.01	5	
V	51	2	He	4.690	4.690	0.22	61950	0.01	5	
Cr	52	2	He	4.823	4.823	2.48	72687	0.01	5	
Fe	56	2	He	477.153	477.153	1.04	6374881	0.01	500	
Se	78	2	He	4.808	4.808	5.34	1196	0.40	5	
Sn	118	2	He	4.546	4.546	2.49	55481	0.01	5	
As	75	2	He	4.688	4.688	0.92	10889	0.04	5	
Ca	44	2	He	484.564	484.564	1.39	41125	1.18	500	
Na	23	2	He	465.421	465.421	2.60	1290383	0.04	500	
Mg	24	2	He	505.972	505.972	0.29	623050	0.08	500	
K	39	2	He	492.664	492.664	1.52	834653	0.06	500	
Mn	55	2	He	4.751	4.751	3.54	52177	0.01	5	
Co	59	2	He	4.927	4.927	0.87	107839	0.00	5	
Ni	60	2	He	4.858	4.858	1.13	27979	0.02	5	
Cu	63	2	He	4.619	4.619	3.01	96750	0.00	5	
Zn	66	2	He	5.126	5.126	5.51	15756	0.03	5	
Al	27	2	He	7.274	7.274	1.82	6792	0.11	5	NewName2 Main CR1 Failed
B	11	1	No Gas	31.328	31.328	4.59	208529	0.02	25	
Al	27	1	No Gas	7.255	7.255	7.34	296328	0.00	5	NewName2 Main CR1 Failed
Si	28	1	No Gas	34.952	34.952	30.31	967416	0.00	25	NewName2 Main CR1 Failed
P	31	1	No Gas	25.146	25.146	2.90	86408	0.03	25	
Ag	107	1	No Gas	4.790	4.790	1.45	153817	0.00	5	
Cd	111	1	No Gas	4.610	4.610	2.95	29423	0.02	5	
Sr	88	1	No Gas	4.723	4.723	3.59	298644	0.00	5	
Mo	95	1	No Gas	4.572	4.572	2.86	56594	0.01	5	
Sn	118	1	No Gas	4.458	4.458	1.58	91460	0.00	5	
Sb	121	1	No Gas	4.721	4.721	0.75	122713	0.00	5	
Ba	137	1	No Gas	4.761	4.761	1.37	43697	0.01	5	
Tl	205	1	No Gas	4.743	4.743	2.76	207627	0.00	5	
Tl	203	1	No Gas	4.673	4.673	2.40	87709	0.01	5	
Pb	208	1	No Gas	4.674	4.674	2.31	286450	0.00	5	
U	238	1	No Gas	4.514	4.514	1.93	267123	0.00	5	
Ca	43	2	He	506.109	506.109	11.44	2420	20.91	500	
Sb	121	2	He	4.651	4.651	0.67	72641	0.01	5	
Ti	47	2	He	4.917	4.917	3.19	2354	0.21	5	
Cu	63	1	No Gas	4.730	4.730	1.66	170241	0.00	5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	3293803	3.49	3367912	97.80	70	120	
Ge	72	2	He	2099579	0.10	2128792	98.63	70	120	
Ge	72	1	No Gas	6205377	1.38	6259187	99.14	70	120	
In	115	1	No Gas	6735887	2.54	6832906	98.58	70	120	
Bi	209	1	No Gas	4754853	1.40	4819187	98.67	70	120	

Initial Calibration Blank (ICB) Report

Sample Table

Sample Name	ICB
Data File Name	021_ICB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\070220A.b
Acq Date Time	2020-07-02T11:39:49-05:00
Sample Type	ICB
Dilution	1
Comment	
ISTD Ref File Name	011CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	1	No Gas	0.006	2409.7	193169	0.9	0.5	
Be	9	1	No Gas	0.007	41.4	102	28.8	0.5	
V	51	2	He	-0.033	-28.0	2008	6.1	2.5	
Cr	52	2	He	-0.025	-83.6	2287	13.8	2.5	
Fe	56	2	He	-0.784	-3.6	15626	1.9	100	
Se	78	2	He	-0.096	-164.4	232	13.5	1	
Sn	118	2	He	-0.012	-66.2	1997	5.3	2.5	
As	75	2	He	-0.025	-48.0	414	6.8	2.5	
Ca	44	2	He	7.720	16.4	3167	2.9	100	
Na	23	2	He	-25.449	-5.9	272090	0.9	100	
Mg	24	2	He	-0.338	-24.0	1377	7.3	100	
K	39	2	He	-0.651	-41.9	108142	0.6	100	
Mn	55	2	He	-0.013	-165.0	1063	22.1	2.5	
Co	59	2	He	0.001	278.3	367	12.3	2.5	
Ni	60	2	He	-0.100	-21.8	407	30.6	2.5	
Cu	63	2	He	-0.292	-12.0	24028	1.9	1	
Zn	66	2	He	-0.066	-51.1	493	20.5	2.5	
Al	27	2	He	3.637	4.2	4264	2.6	5	
B	11	1	No Gas	5.014	1.1	72342	1.7	0.5	ICB Main CR1 Failed
Al	27	1	No Gas	3.633	5.0	188387	1.3	5	
Si	28	1	No Gas	-2.764	-6.8	365055	1.2	10	
P	31	1	No Gas	0.602	73.9	46348	0.9	10	
Ag	107	1	No Gas	0.004	35.2	330	10.9	2.5	
Cd	111	1	No Gas	0.000	7735.9	17	124.9	1	
Sr	88	1	No Gas	0.071	1.8	13871	1.5	2.5	
Mo	95	1	No Gas	0.004	62.9	167	21.1	2.5	
Sn	118	1	No Gas	-0.130	-6.7	3567	3.3	5	
Sb	121	1	No Gas	0.049	5.5	2740	1.8	2.5	
Ba	137	1	No Gas	0.018	103.0	1233	13.0	2.5	
Tl	205	1	No Gas	0.024	35.9	1223	32.8	1	
Tl	203	1	No Gas	0.023	20.8	510	19.3	1	
Pb	208	1	No Gas	0.008	23.0	1590	7.7	2.5	
U	238	1	No Gas	0.001	17.7	70	14.3	2.5	
Ca	43	2	He	13.434	87.5	130	42.8	100	
Sb	121	2	He	0.045	15.1	1420	7.3	2.5	
Ti	47	2	He	-0.007	-289.7	10	100.0	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	3358079	1.65	3367912	99.71	70	120	
Ge	72	2	He	2127472	0.48	2128792	99.94	70	120	
Ge	72	1	No Gas	6327414	2.07	6259187	101.09	70	120	
In	115	1	No Gas	6697279	1.72	6832906	98.02	70	120	
Bi	209	1	No Gas	4720112	1.60	4819187	97.94	70	120	

Sample Report

Sample Table

Sample Name	LLICV2
Data File Name	022LCV2.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\070220A.b
Acq Date Time	2020-07-02T11:48:00-05:00
Sample Type	LLCCV2
Dilution	1
Comment	
ISTD Ref FileName	011CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	1	No Gas	2.023	2.023	6.55	258361	0.00	2	
Be	9	1	No Gas	1.827	1.827	2.50	16795	0.01	2	
V	51	2	He	1.863	1.863	1.49	26251	0.01	2	
Cr	52	2	He	1.894	1.894	1.82	30354	0.01	2	
Fe	56	2	He	189.963	189.963	1.94	2572588	0.01	200	
Se	78	2	He	1.669	1.669	6.61	581	0.29	2	
Sn	118	2	He	1.712	1.712	4.14	22329	0.01	2	
As	75	2	He	1.897	1.897	0.73	4718	0.04	2	
Ca	44	2	He	187.191	187.191	3.89	17558	1.07	200	
Na	23	2	He	147.881	147.881	3.71	634016	0.02	200	
Mg	24	2	He	201.431	201.431	0.60	250984	0.08	200	
K	39	2	He	196.229	196.229	0.19	400232	0.05	200	
Mn	55	2	He	1.950	1.950	2.02	22289	0.01	2	
Co	59	2	He	1.896	1.896	0.94	42015	0.00	2	
Ni	60	2	He	1.780	1.780	2.37	10941	0.02	2	
Cu	63	2	He	1.477	1.477	6.68	50401	0.00	2	
Zn	66	2	He	1.836	1.836	4.60	6125	0.03	2	
Al	27	2	He	2.246	2.246	7.76	3244	0.07	2	
B	11	1	No Gas	10.806	10.806	2.38	101978	0.01	10	
Al	27	1	No Gas	2.159	2.159	10.06	137258	0.00	2	
Si	28	1	No Gas	8.891	8.891	3.28	538294	0.00	10	
P	31	1	No Gas	11.858	11.858	7.68	63277	0.02	10	
Ag	107	1	No Gas	1.975	1.975	3.51	61142	0.00	2	
Cd	111	1	No Gas	1.934	1.934	1.27	11892	0.02	2	
Sr	88	1	No Gas	1.917	1.917	2.59	122203	0.00	2	
Mo	95	1	No Gas	1.856	1.856	3.76	22176	0.01	2	
Sn	118	1	No Gas	1.708	1.708	3.88	37344	0.00	2	
Sb	121	1	No Gas	1.891	1.891	2.22	49287	0.00	2	
Ba	137	1	No Gas	1.853	1.853	2.68	17011	0.01	2	
Tl	205	1	No Gas	1.892	1.892	5.74	83941	0.00	2	
Tl	203	1	No Gas	1.829	1.829	5.61	34809	0.01	2	
Pb	208	1	No Gas	1.855	1.855	3.77	115820	0.00	2	
U	238	1	No Gas	1.758	1.758	2.78	105369	0.00	2	
Ca	43	2	He	189.379	189.379	18.46	953	19.86	200	
Sb	121	2	He	1.823	1.823	2.45	29109	0.01	2	
Ti	47	2	He	2.017	2.017	13.63	980	0.21	200	
Cu	63	1	No Gas	1.630	1.630	3.03	89484	0.00	2	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	3316936	1.26	3367912	98.49	70	120	
Ge	72	2	He	2115407	1.01	2128792	99.37	70	120	

Sample Report

Ge	72	1	No Gas	6113556	1.84	6259187	97.67	70	120	
In	115	1	No Gas	6484563	2.43	6832906	94.90	70	120	
Bi	209	1	No Gas	4819046	3.52	4819187	100.00	70	120	

Interference Check Solution A (ICS-A) Report

Sample Table

Sample Name	ICSA
Data File Name	023ICSA.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\070220A.b
Acq Date Time	2020-07-02T11:50:05-05:00
Sample Type	ICSA
Dilution	1
Comment	
ISTD Ref File Name	011CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	1	No Gas	0.726	4.3	196356	1.5	0	ICSA Main CR1 Failed
Be	9	1	No Gas	0.002	138.1	45	40.1	0	ICSA Main CR1 Failed
V	51	2	He	-0.008	-187.1	2154	8.6	0	ICSA Main CR1 Failed
Cr	52	2	He	0.934	4.5	15135	2.8	0	ICSA Main CR1 Failed
Fe	56	2	He	100133.960	0.7	1246000808	0.5	0	
Se	78	2	He	0.183	155.4	265	18.9	0	ICSA Main CR1 Failed
Sn	118	2	He	0.052	21.6	2540	4.3	0	ICSA Main CR1 Failed
As	75	2	He	0.056	22.8	551	4.0	0	ICSA Main CR1 Failed
Ca	44	2	He	98302.955	1.9	7327554	1.2	0	
Na	23	2	He	101052.494	0.8	197021884	1.0	0	
Mg	24	2	He	100496.884	1.4	115394332	1.0	0	
K	39	2	He	101480.614	1.3	140127791	0.6	0	
Mn	55	2	He	0.146	5.0	2584	3.7	0	ICSA Main CR1 Failed
Co	59	2	He	0.206	4.3	4527	3.8	0	ICSA Main CR1 Failed
Ni	60	2	He	0.128	10.6	1560	4.0	0	ICSA Main CR1 Failed
Cu	63	2	He	-0.513	-5.3	19107	2.1	0	ICSA Main CR1 Failed
Zn	66	2	He	0.406	9.7	1753	6.3	0	ICSA Main CR1 Failed
Al	27	2	He	97971.347	1.6	65074547	0.9	0	
B	11	1	No Gas	3.488	7.9	57912	1.4	0	
Al	27	1	No Gas	98986.662	2.0	2881347477	1.4	0	
Si	28	1	No Gas	38.593	2.3	969475	2.1	0	
P	31	1	No Gas	96874.277	1.7	152709998	1.3	0	
Ag	107	1	No Gas	0.014	17.6	617	13.5	0	ICSA Main CR1 Failed
Cd	111	1	No Gas	1.531	4.3	8856	4.8	0	ICSA Main CR1 Failed
Sr	88	1	No Gas	1.039	1.1	66301	1.2	0	ICSA Main CR1 Failed
Mo	95	1	No Gas	1999.309	0.9	22374109	0.8	0	
Sn	118	1	No Gas	-0.079	-6.2	4134	0.5	0	ICSA Main CR1 Failed
Sb	121	1	No Gas	0.081	10.5	3314	5.5	0	ICSA Main CR1 Failed
Ba	137	1	No Gas	0.194	13.4	2554	6.9	0	ICSA Main CR1 Failed
Tl	205	1	No Gas	0.013	19.9	647	15.5	0	ICSA Main CR1 Failed
Tl	203	1	No Gas	0.014	21.1	307	16.4	0	ICSA Main CR1 Failed
Pb	208	1	No Gas	0.035	3.6	3014	2.0	0	ICSA Main CR1 Failed
U	238	1	No Gas	0.003	5.4	183	6.3	0	ICSA Main CR1 Failed
Ca	43	2	He	97624.368	1.1	424775	0.8	0	
Sb	121	2	He	0.076	11.0	1750	7.7	0	ICSA Main CR1 Failed
Ti	47	2	He	1996.161	0.7	888513	0.9	0	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	3029713	1.14	3367912	89.96	70	120	
Ge	72	2	He	1963481	0.89	2128792	92.23	70	120	
Ge	72	1	No Gas	5861190	0.94	6259187	93.64	70	120	
In	115	1	No Gas	6099971	1.61	6832906	89.27	70	120	
Bi	209	1	No Gas	4343017	1.45	4819187	90.12	70	120	

Interference Check Solution AB (ICS-AB) Report

Sample Table

Sample Name	ICSAB
Data File Name	024ICSB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\070220A.b
Acq Date Time	2020-07-02T11:52:07-05:00
Sample Type	ICSB
Dilution	1
Comment	
ISTD Ref File Name	011CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	1	No Gas	111.192	0.521	3577173	1.87	100	111.2	180	120	ICSB Main CR1 Failed
Be	9	1	No Gas	110.931	1.801	930059	0.16	100	110.9	80	120	
V	51	2	He	115.388	1.132	1363421	1.38	100	115.4	80	120	
Cr	52	2	He	115.712	1.098	1564087	1.25	100	115.7	80	120	
Fe	56	2	He	107468.031	0.914	1328480327	1.09	100	107468.0	80	120	ICSB Main CR1 Failed
Se	78	2	He	117.093	1.335	21683	1.89	100	117.1	80	120	
Sn	118	2	He	111.993	1.317	1188157	3.12	100	112.0	80	120	
As	75	2	He	114.957	1.176	237875	0.45	100	115.0	80	120	
Ca	44	2	He	105264.342	1.666	7795275	1.78	100	105264.3	80	120	ICSB Main CR1 Failed
Na	23	2	He	109744.335	0.187	212536357	0.91	100	109744.3	80	120	
Mg	24	2	He	106847.965	1.065	121879398	0.53	100	106848.0	80	120	ICSB Main CR1 Failed
K	39	2	He	108867.785	2.085	149325831	1.45	100	108867.8	80	120	ICSB Main CR1 Failed
Mn	55	2	He	114.522	0.617	1142929	0.42	100	114.5	80	120	
Co	59	2	He	113.654	1.871	2303642	1.20	100	113.7	80	120	
Ni	60	2	He	110.169	1.188	570098	0.55	100	110.2	80	120	
Cu	63	2	He	110.563	1.411	1553277	0.71	100	110.6	80	120	
Zn	66	2	He	112.307	0.695	307461	0.61	100	112.3	80	120	
Al	27	2	He	95110.223	1.380	62763226	1.59	100	95110.2	80	120	ICSB Main CR1 Failed
B	11	1	No Gas	555.843	2.507	2718818	1.54	100	555.8	80	120	
Al	27	1	No Gas	93680.705	2.301	2778547692	1.42	100	93680.7	80	120	ICSB Main CR1 Failed
Si	28	1	No Gas	559.797	0.833	9093514	0.58	100	559.8	80	120	
P	31	1	No Gas	90701.349	0.447	145707334	1.29	100	90701.3	80	120	ICSB Main CR1 Failed
Ag	107	1	No Gas	107.729	2.400	3238650	1.31	100	107.7	80	120	
Cd	111	1	No Gas	109.906	0.872	657237	0.91	100	109.9	80	120	
Sr	88	1	No Gas	112.143	2.460	6446039	1.67	100	112.1	80	120	
Mo	95	1	No Gas	2014.152	1.835	23337625	1.02	100	2014.2	80	120	ICSB Main CR1 Failed
Sn	118	1	No Gas	112.350	2.408	2023013	1.06	100	112.4	80	120	
Sb	121	1	No Gas	112.582	2.052	2784630	1.02	100	112.6	80	120	
Ba	137	1	No Gas	110.458	3.504	928011	2.18	100	110.5	80	120	
Tl	205	1	No Gas	114.546	1.999	4656008	1.50	100	114.5	80	120	
Tl	203	1	No Gas	114.101	2.537	1988437	2.73	100	114.1	80	120	
Pb	208	1	No Gas	113.098	1.011	6415320	0.45	100	113.1	80	120	
U	238	1	No Gas	114.218	1.430	6278811	0.52	100	114.2	80	120	
Ca	43	2	He	103448.767	1.329	447160	1.31	100	103448.8	80	120	ICSB Main CR1 Failed
Sb	121	2	He	113.437	1.145	1630812	1.74	100	113.4	80	120	
Ti	47	2	He	2092.244	0.834	925188	1.52	100	2092.2	80	120	
Cu	63	1	No Gas	110.339	2.247	2767196	0.90	100	110.3	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	3031867	1.64	3367912	90.02	70	120	
Ge	72	2	He	1950533	0.73	2128792	91.63	70	120	
Ge	72	1	No Gas	5972612	1.38	6259187	95.42	70	120	
In	115	1	No Gas	6316081	1.36	6832906	92.44	70	120	
Bi	209	1	No Gas	4417470	1.10	4819187	91.66	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	033_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\070220A.b
Acq Date Time	2020-07-02T12:20:55-05:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	011CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	No Gas	102.953	3.047	3466118	3.44	100	103.0	90	110	
Be	9	1	No Gas	98.622	0.653	862041	0.67	100	98.6	90	110	
V	51	2	He	100.250	3.202	1241906	1.13	100	100.2	90	110	
Cr	52	2	He	102.375	1.417	1451157	1.01	100	102.4	90	110	
Fe	56	2	He	9998.319	1.168	129609518	1.06	10000	100.0	90	110	
Se	78	2	He	99.549	2.720	19360	1.18	100	99.5	90	110	
Sn	118	2	He	99.610	2.036	1115968	1.50	100	99.6	90	110	
As	75	2	He	99.887	1.342	216780	1.15	100	99.9	90	110	
Ca	44	2	He	9955.089	1.094	775186	1.31	10000	99.6	90	110	
Na	23	2	He	10140.884	1.918	20874268	1.39	10000	101.4	90	110	
Mg	24	2	He	10168.193	2.448	12163818	2.83	10000	101.7	90	110	
K	39	2	He	10061.747	3.228	14562524	1.41	10000	100.6	90	110	
Mn	55	2	He	100.952	2.142	1056399	1.23	100	101.0	90	110	
Co	59	2	He	101.003	2.285	2146563	1.88	100	101.0	90	110	
Ni	60	2	He	100.162	2.999	543419	1.25	100	100.2	90	110	
Cu	63	2	He	100.050	2.390	1476207	1.21	100	100.0	90	110	
Zn	66	2	He	99.839	1.996	286628	1.02	100	99.8	90	110	
Al	27	2	He	102.073	1.798	72204	1.85	100	102.1	90	110	
B	11	1	No Gas	479.073	1.595	2448924	1.40	500	95.8	90	110	
Al	27	1	No Gas	101.609	0.669	3159594	1.14	100	101.6	90	110	
Si	28	1	No Gas	510.445	3.264	8528905	2.62	5000	10.2	90	110	CCV Main CR1-2 Failed
P	31	1	No Gas	491.969	2.549	853172	2.13	500	98.4	90	110	
Ag	107	1	No Gas	101.586	2.500	3172344	0.64	100	101.6	90	110	
Cd	111	1	No Gas	98.828	1.884	613869	0.74	100	98.8	90	110	
Sr	88	1	No Gas	102.049	3.911	6093336	2.68	100	102.0	90	110	
Mo	95	1	No Gas	97.496	3.449	1173364	1.68	100	97.5	90	110	
Sn	118	1	No Gas	102.276	1.237	1913888	0.85	100	102.3	90	110	
Sb	121	1	No Gas	98.289	2.352	2490957	2.21	100	98.3	90	110	
Ba	137	1	No Gas	96.469	2.492	842319	2.69	100	96.5	90	110	
Tl	205	1	No Gas	99.713	4.375	4352360	2.89	100	99.7	90	110	
Tl	203	1	No Gas	98.217	3.919	1837871	2.24	100	98.2	90	110	
Pb	208	1	No Gas	98.195	1.571	5982813	0.13	100	98.2	90	110	
U	238	1	No Gas	96.545	0.421	5701953	2.03	100	96.5	90	110	
Ca	43	2	He	10160.903	1.412	46108	1.15	10000	101.6	90	110	
Sb	121	2	He	98.276	2.297	1481176	1.15	100	98.3	90	110	
Ti	47	2	He	103.147	2.511	47824	0.59	100	103.1	90	110	
Cu	63	1	No Gas	101.160	1.510	2603497	1.71	100	101.2	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	3160408	1.31	3367912	93.84	70	120	
Ge	72	2	He	2045372	2.03	2128792	96.08	70	120	
Ge	72	1	No Gas	6118352	0.55	6259187	97.75	70	120	
In	115	1	No Gas	6561629	1.86	6832906	96.03	70	120	
Bi	209	1	No Gas	4745263	1.64	4819187	98.47	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	034_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\070220A.b
Acq Date Time	2020-07-02T12:22:39-05:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	011CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	1	No Gas	0.025	361.2	192154	0.4	0.5	
Be	9	1	No Gas	0.008	4.8	110	4.5	0.5	
V	51	2	He	-0.009	-110.2	2187	4.0	2.5	
Cr	52	2	He	-0.027	-14.8	2130	1.7	2.5	
Fe	56	2	He	0.199	25.6	27308	2.0	100	
Se	78	2	He	-0.019	-824.1	234	11.8	2	
As	75	2	He	-0.081	-14.7	272	8.6	2.5	
Ca	44	2	He	7.003	26.4	2940	4.7	100	
Na	23	2	He	-5.805	-60.3	296443	1.1	100	
Mg	24	2	He	0.344	38.4	2104	6.1	100	
K	39	2	He	0.708	51.8	104188	1.1	100	
Mn	55	2	He	0.157	14.3	2754	7.2	2.5	
Co	59	2	He	0.002	96.6	383	13.4	2.5	
Ni	60	2	He	-0.068	-21.0	557	12.6	2.5	
Cu	63	2	He	-0.831	-5.2	15042	3.5	2	
Zn	66	2	He	0.180	9.4	1160	4.8	2.5	
Al	27	2	He	2.022	12.1	2934	6.2	5	
B	11	1	No Gas	11.153	11.2	104151	5.6	0.5	CCB Main CR1 Failed
Al	27	1	No Gas	1.762	2.2	127907	1.3	5	
Si	28	1	No Gas	-0.219	-122.2	401538	0.5	10	
P	31	1	No Gas	-3.745	-5.2	38437	0.3	10	
Ag	107	1	No Gas	0.007	64.6	433	31.2	2.5	
Cd	111	1	No Gas	-0.001	-158.3	10	100.0	1	
Sr	88	1	No Gas	0.001	435.1	9630	2.1	2.5	
Mo	95	1	No Gas	0.049	17.5	720	13.4	2.5	
Sn	118	1	No Gas	-0.031	-55.3	5468	4.9	5	
Sb	121	1	No Gas	0.264	13.4	8276	11.3	2.5	
Ba	137	1	No Gas	-0.020	-125.8	903	23.9	2.5	
Tl	205	1	No Gas	0.230	66.8	10159	66.4	1	
Tl	203	1	No Gas	0.225	63.1	4258	62.7	1	
Pb	208	1	No Gas	0.022	14.7	2477	8.6	2.5	
U	238	1	No Gas	0.008	33.5	490	32.8	2.5	
Ca	43	2	He	3.779	97.6	80	21.7	100	
Sb	121	2	He	0.195	17.4	3564	15.2	2.5	
Ti	47	2	He	0.001	965.7	13	43.3	2.5	
Cu	63	1	No Gas	-0.869	-3.5	26980	1.9	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	3328685	1.31	3367912	98.84	70	120	
Ge	72	2	He	2011968	1.54	2128792	94.51	70	120	
Ge	72	1	No Gas	6242564	1.07	6259187	99.73	70	120	
In	115	1	No Gas	6718376	1.47	6832906	98.32	70	120	
Bi	209	1	No Gas	4706326	0.69	4819187	97.66	70	120	

Sample Report

Sample Table

Sample Name	MBLK-154955
Data File Name	035SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\070220A.b
Acq Date Time	2020-07-02T12:25:27-05:00
Sample Type	Sample
Dilution	1
Comment	DOD TW 154955
ISTD Ref FileName	011CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	1	No Gas	0.021	0.021	685.65	194786	0.00	2000	
Be	9	1	No Gas	0.003	0.003	16.82	65	0.00	2000	
V	51	2	He	-0.019	-0.019	-55.95	2135	0.00	2000	
Cr	52	2	He	0.007	0.007	116.56	2694	0.00	2000	
Fe	56	2	He	1.180	1.180	6.75	41236	0.00	200000	
Se	78	2	He	-0.174	-0.174	-21.28	212	-0.08	2000	
Sn	118	2	He	-0.020	-0.020	-119.29	1904	0.00	200	
As	75	2	He	-0.091	-0.091	-27.78	261	-0.03	2000	
Ca	44	2	He	7.199	7.199	17.45	3060	0.24	200000	
Na	23	2	He	-3.534	-3.534	-66.08	311671	0.00	200000	
Mg	24	2	He	13.862	13.862	4.17	18646	0.07	200000	
K	39	2	He	2.859	2.859	59.24	111018	0.00	200000	
Mn	55	2	He	0.259	0.259	6.93	3944	0.01	2000	
Co	59	2	He	0.000	0.000	-1757.52	337	0.00	2000	
Ni	60	2	He	-0.067	-0.067	-19.69	580	-0.01	2000	
Cu	63	2	He	-0.949	-0.949	-1.15	13834	-0.01	2000	
Zn	66	2	He	0.915	0.915	8.66	3344	0.03	2000	
Al	27	2	He	6.445	6.445	1.21	6155	0.10	2000	
B	11	1	No Gas	2.689	2.689	19.70	60310	0.00	2000	
Al	27	1	No Gas	6.281	6.281	2.70	269914	0.00	2000	
Si	28	1	No Gas	90.477	90.477	2.19	1889278	0.00	2000	
Ag	107	1	No Gas	0.009	0.009	11.25	510	0.00	2000	
Cd	111	1	No Gas	0.001	0.001	241.62	23	0.00	2000	
Sr	88	1	No Gas	-0.018	-0.018	-17.14	8740	0.00	2000	
Mo	95	1	No Gas	0.039	0.039	12.99	610	0.01	2000	
Sn	118	1	No Gas	-0.155	-0.155	-4.34	3194	0.00	2000	
Sb	121	1	No Gas	0.068	0.068	10.05	3240	0.00	2000	
Ba	137	1	No Gas	0.031	0.031	31.70	1393	0.00	2000	
Tl	205	1	No Gas	0.008	0.008	33.44	513	0.00	2000	
Tl	203	1	No Gas	0.008	0.008	34.45	233	0.00	2000	
Pb	208	1	No Gas	0.012	0.012	15.93	1877	0.00	2000	
U	238	1	No Gas	0.001	0.001	20.21	100	0.00	2000	
Ca	43	2	He	7.558	7.558	78.18	100	7.56	200000	
Sb	121	2	He	0.081	0.081	8.49	1937	0.00	2000	
Ti	47	2	He	0.064	0.064	39.06	43	0.15	2000	
Cu	63	1	No Gas	-0.953	-0.953	-1.91	24993	0.00	2000	
Zn	66	1	No Gas	0.880	0.880	6.40	8106	0.01	2000	
Se	82	1	No Gas	-0.134	-0.134	-167.91	-31	0.44	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	3377613	2.01	3367912	100.29	70	120	

Sample Report

Ge	72	2	He	2083185	0.76	2128792	97.86	70	120	
Ge	72	1	No Gas	6288023	1.74	6259187	100.46	70	120	
In	115	1	No Gas	6906840	1.63	6832906	101.08	70	120	
Bi	209	1	No Gas	4811430	1.43	4819187	99.84	70	120	

Sample Report

Sample Table

Sample Name	LCS-154955
Data File Name	036SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\070220A.b
Acq Date Time	2020-07-02T12:27:20-05:00
Sample Type	Sample
Dilution	1
Comment	DOD TW 154955
ISTD Ref FileName	011CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	1	No Gas	0.014	0.014	384.63	190208	0.00	2000	
Be	9	1	No Gas	46.744	46.744	1.63	426766	0.01	2000	
V	51	2	He	46.341	46.341	1.14	591457	0.01	2000	
Cr	52	2	He	47.059	47.059	1.26	686977	0.01	2000	
Fe	56	2	He	4724.813	4724.813	1.09	62961207	0.01	200000	
Se	78	2	He	49.705	49.705	1.45	10060	0.49	2000	
Sn	118	2	He	-0.004	-0.004	-295.03	2064	0.00	200	
As	75	2	He	48.155	48.155	1.47	107645	0.04	2000	
Ca	44	2	He	4595.573	4595.573	2.08	369112	1.25	200000	
Na	23	2	He	4738.951	4738.951	3.38	10195873	0.05	200000	
Mg	24	2	He	4768.090	4768.090	1.05	5863347	0.08	200000	
K	39	2	He	4747.793	4747.793	2.39	7120192	0.07	200000	
Mn	55	2	He	47.473	47.473	1.38	511227	0.01	2000	
Co	59	2	He	49.075	49.075	1.27	1072126	0.00	2000	
Ni	60	2	He	48.274	48.274	2.42	269704	0.02	2000	
Cu	63	2	He	47.619	47.619	2.68	736817	0.01	2000	
Zn	66	2	He	50.015	50.015	0.84	147928	0.03	2000	
Al	27	2	He	53.153	53.153	1.79	39420	0.13	2000	
B	11	1	No Gas	0.560	0.560	63.85	47729	0.00	2000	
Al	27	1	No Gas	54.348	54.348	2.49	1768070	0.00	2000	
Si	28	1	No Gas	101.012	101.012	1.45	2058744	0.00	2000	
Ag	107	1	No Gas	48.712	48.712	0.59	1538498	0.00	2000	
Cd	111	1	No Gas	48.218	48.218	1.83	302825	0.02	2000	
Sr	88	1	No Gas	0.024	0.024	12.74	10905	0.00	2000	
Mo	95	1	No Gas	45.690	45.690	0.63	556199	0.01	2000	
Sn	118	1	No Gas	-0.127	-0.127	-1.28	3587	0.00	2000	
Sb	121	1	No Gas	46.754	46.754	0.63	1216607	0.00	2000	
Ba	137	1	No Gas	46.112	46.112	1.49	407613	0.01	2000	
Tl	205	1	No Gas	47.814	47.814	1.94	2122931	0.00	2000	
Tl	203	1	No Gas	44.554	44.554	3.01	847828	0.01	2000	
Pb	208	1	No Gas	46.560	46.560	1.87	2885439	0.00	2000	
U	238	1	No Gas	0.001	0.001	87.19	57	0.00	2000	
Ca	43	2	He	4628.414	4628.414	1.63	21624	21.40	200000	
Sb	121	2	He	45.559	45.559	1.57	706134	0.01	2000	
Ti	47	2	He	46.465	46.465	2.60	22158	0.21	2000	
Cu	63	1	No Gas	49.450	49.450	2.81	1331008	0.00	2000	
Zn	66	1	No Gas	50.049	50.049	0.79	353197	0.01	2000	
Se	82	1	No Gas	48.539	48.539	3.18	19431	0.25	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	3301292	1.73	3367912	98.02	70	120	
Ge	72	2	He	2102012	1.34	2128792	98.74	70	120	
Ge	72	1	No Gas	6278182	1.08	6259187	100.30	70	120	

Sample Report

In	115	1	No Gas	6634070	1.68	6832906	97.09	70	120	
Bi	209	1	No Gas	4827108	4.00	4819187	100.16	70	120	

Sample Report

Sample Table

Sample Name	HS20061218-02SD
Data File Name	039SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\070220A.b
Acq Date Time	2020-07-02T12:35:28-05:00
Sample Type	Sample
Dilution	1
Comment	DOD TW 154955
ISTD Ref FileName	011CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	1	No Gas	29.183	29.183	3.20	1138044	0.00	2000	
Be	9	1	No Gas	0.046	0.046	16.33	445	0.01	2000	
V	51	2	He	0.289	0.289	3.32	5997	0.00	2000	
Cr	52	2	He	0.027	0.027	55.81	2977	0.00	2000	
Fe	56	2	He	1312.674	1312.674	2.82	17282894	0.01	200000	
Se	78	2	He	0.159	0.159	59.33	276	0.06	2000	
Sn	118	2	He	-0.044	-0.044	-42.27	1593	0.00	200	
As	75	2	He	0.168	0.168	8.14	828	0.02	2000	
Ca	44	2	He	59742.825	59742.825	3.35	4705996	1.27	200000	
Na	23	2	He	144232.067	144232.067	1.64	297007316	0.05	200000	
Mg	24	2	He	30186.269	30186.269	2.61	36623095	0.08	200000	
K	39	2	He	227.749	227.749	2.25	438487	0.05	200000	
Mn	55	2	He	532.986	532.986	1.76	5653851	0.01	2000	
Co	59	2	He	0.132	0.132	7.72	3187	0.00	2000	
Ni	60	2	He	0.097	0.097	12.77	1480	0.01	2000	
Cu	63	2	He	-0.614	-0.614	-8.24	18700	0.00	2000	
Zn	66	2	He	1.022	1.022	12.68	3637	0.03	2000	
Al	27	2	He	7.714	7.714	1.63	7022	0.11	2000	
B	11	1	No Gas	5.637	5.637	5.56	72819	0.01	2000	
Al	27	1	No Gas	7.626	7.626	3.20	305490	0.00	2000	
Si	28	1	No Gas	2865.638	2865.638	2.40	46344884	0.01	2000	>LDR
Ag	107	1	No Gas	0.004	0.004	19.45	327	0.00	2000	
Cd	111	1	No Gas	0.017	0.017	29.71	123	0.01	2000	
Sr	88	1	No Gas	1441.755	1441.755	1.91	85129645	0.00	2000	
Mo	95	1	No Gas	0.024	0.024	25.71	393	0.01	2000	
Sn	118	1	No Gas	-0.174	-0.174	-9.49	2644	-0.01	2000	
Sb	121	1	No Gas	0.078	0.078	22.31	3401	0.00	2000	
Ba	137	1	No Gas	8.425	8.425	2.98	73777	0.01	2000	
Tl	205	1	No Gas	0.000	0.000	600.60	160	0.00	2000	
Tl	203	1	No Gas	0.001	0.001	135.00	93	0.00	2000	
Pb	208	1	No Gas	0.050	0.050	8.00	3970	0.00	2000	
U	238	1	No Gas	3.940	3.940	0.82	220339	0.00	2000	
Ca	43	2	He	62129.336	62129.336	1.45	285693	21.75	200000	
Sb	121	2	He	0.082	0.082	10.29	1950	0.00	2000	
Ti	47	2	He	0.319	0.319	24.68	163	0.20	2000	
Cu	63	1	No Gas	-0.043	-0.043	-119.05	47624	0.00	2000	
Zn	66	1	No Gas	1.427	1.427	2.92	11705	0.01	2000	
Se	82	1	No Gas	0.874	0.874	16.28	365	0.24	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	3232488	1.61	3367912	95.98	70	120	
Ge	72	2	He	2075172	2.04	2128792	97.48	70	120	
Ge	72	1	No Gas	6159322	2.40	6259187	98.40	70	120	
In	115	1	No Gas	6495863	0.63	6832906	95.07	70	120	
Bi	209	1	No Gas	4493192	1.77	4819187	93.24	70	120	

Sample Report

Sample Table

Sample Name	HS20061218-02MS
Data File Name	040SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\070220A.b
Acq Date Time	2020-07-02T12:37:21-05:00
Sample Type	Sample
Dilution	1
Comment	DOD TW 154955
ISTD Ref FileName	011CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	1	No Gas	144.843	144.843	3.07	4539754	0.00	2000	
Be	9	1	No Gas	46.176	46.176	3.88	381516	0.01	2000	
V	51	2	He	48.186	48.186	0.68	580785	0.01	2000	
Cr	52	2	He	46.008	46.008	0.60	634403	0.01	2000	
Fe	56	2	He	11019.483	11019.483	0.56	138655668	0.01	200000	
Se	78	2	He	49.423	49.423	2.06	9449	0.52	2000	
Sn	118	2	He	-0.009	-0.009	-195.09	1894	0.00	200	
As	75	2	He	49.662	49.662	0.78	104844	0.05	2000	
Ca	44	2	He	311683.074	311683.074	1.01	23485760	1.33	200000	>LDR
Na	23	2	He	742314.767	742314.767	0.84	1461323872	0.05	200000	>LDR
Mg	24	2	He	155170.408	155170.408	1.24	180140944	0.09	200000	
K	39	2	He	5890.532	5890.532	1.92	8319855	0.07	200000	
Mn	55	2	He	2755.395	2755.395	1.20	27959842	0.01	2000	>LDR
Co	59	2	He	45.926	45.926	1.05	947656	0.00	2000	
Ni	60	2	He	44.992	44.992	0.58	237497	0.02	2000	
Cu	63	2	He	42.694	42.694	1.04	626738	0.01	2000	
Zn	66	2	He	47.288	47.288	1.84	132119	0.04	2000	
Al	27	2	He	82.714	82.714	3.57	57078	0.14	2000	
B	11	1	No Gas	29.335	29.335	4.19	179831	0.02	2000	
Al	27	1	No Gas	86.600	86.600	5.40	2587618	0.00	2000	
Si	28	1	No Gas	14632.520	14632.520	1.98	223494517	0.01	2000	>LDR
Ag	107	1	No Gas	43.555	43.555	2.14	1253285	0.00	2000	
Cd	111	1	No Gas	43.469	43.469	0.64	248782	0.02	2000	
Sr	88	1	No Gas	7377.501	7377.501	3.21	405227474	0.00	2000	>LDR
Mo	95	1	No Gas	46.178	46.178	2.06	512130	0.01	2000	
Sn	118	1	No Gas	-0.137	-0.137	-9.36	3104	0.00	2000	
Sb	121	1	No Gas	43.486	43.486	1.75	1055468	0.00	2000	
Ba	137	1	No Gas	86.741	86.741	3.05	697692	0.01	2000	
Tl	205	1	No Gas	48.935	48.935	1.55	1791121	0.00	2000	
Tl	203	1	No Gas	45.114	45.114	1.47	707827	0.01	2000	
Pb	208	1	No Gas	46.594	46.594	1.50	2380352	0.00	2000	
U	238	1	No Gas	20.612	20.612	1.24	1020031	0.00	2000	
Ca	43	2	He	329975.804	329975.804	0.93	1451467	22.73	200000	>LDR
Sb	121	2	He	43.839	43.839	1.68	641755	0.01	2000	
Ti	47	2	He	48.498	48.498	1.67	21838	0.22	2000	
Cu	63	1	No Gas	46.891	46.891	2.22	1179689	0.00	2000	
Zn	66	1	No Gas	47.935	47.935	1.12	315575	0.02	2000	
Se	82	1	No Gas	53.201	53.201	3.55	19858	0.27	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2989256	2.84	3367912	88.76	70	120	
Ge	72	2	He	1985128	0.66	2128792	93.25	70	120	
Ge	72	1	No Gas	5855828	1.13	6259187	93.56	70	120	
In	115	1	No Gas	6044323	1.15	6832906	88.46	70	120	
Bi	209	1	No Gas	3976710	1.56	4819187	82.52	70	120	

Sample Report

Sample Table

Sample Name	HS20061218-02MSD
Data File Name	041SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\070220A.b
Acq Date Time	2020-07-02T12:39:21-05:00
Sample Type	Sample
Dilution	1
Comment	DOD TW 154955
ISTD Ref FileName	011CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	1	No Gas	146.044	146.044	1.52	4472922	0.00	2000	
Be	9	1	No Gas	45.783	45.783	0.93	369838	0.01	2000	
V	51	2	He	47.385	47.385	1.96	547466	0.01	2000	
Cr	52	2	He	45.616	45.616	1.16	602992	0.01	2000	
Fe	56	2	He	10812.885	10812.885	1.66	130418505	0.01	200000	
Se	78	2	He	46.909	46.909	1.54	8609	0.54	2000	
Sn	118	2	He	-0.014	-0.014	-116.31	1757	0.00	200	
As	75	2	He	48.751	48.751	1.92	98655	0.05	2000	
Ca	44	2	He	305915.359	305915.359	1.37	22096654	1.38	200000	>LDR
Na	23	2	He	745754.742	745754.742	0.63	1407414112	0.05	200000	>LDR
Mg	24	2	He	152986.098	152986.098	1.82	170252064	0.09	200000	
K	39	2	He	5813.278	5813.278	1.51	7872760	0.07	200000	
Mn	55	2	He	2751.514	2751.514	1.94	26763762	0.01	2000	>LDR
Co	59	2	He	44.907	44.907	1.33	888262	0.01	2000	
Ni	60	2	He	44.093	44.093	2.14	223112	0.02	2000	
Cu	63	2	He	42.760	42.760	1.76	601662	0.01	2000	
Zn	66	2	He	46.272	46.272	2.26	123943	0.04	2000	
Al	27	2	He	81.605	81.605	2.15	54022	0.15	2000	
B	11	1	No Gas	28.947	28.947	3.13	173983	0.02	2000	
Al	27	1	No Gas	83.586	83.586	1.64	2463657	0.00	2000	
Si	28	1	No Gas	14551.923	14551.923	2.13	219041897	0.01	2000	>LDR
Ag	107	1	No Gas	43.120	43.120	1.58	1221486	0.00	2000	
Cd	111	1	No Gas	43.123	43.123	1.16	242950	0.02	2000	
Sr	88	1	No Gas	7282.836	7282.836	1.68	393862114	0.00	2000	>LDR
Mo	95	1	No Gas	45.508	45.508	3.26	496808	0.01	2000	
Sn	118	1	No Gas	-0.149	-0.149	-11.17	2850	-0.01	2000	
Sb	121	1	No Gas	42.688	42.688	1.50	1021230	0.00	2000	
Ba	137	1	No Gas	87.000	87.000	2.24	688956	0.01	2000	
Tl	205	1	No Gas	48.222	48.222	1.52	1743891	0.00	2000	
Tl	203	1	No Gas	44.997	44.997	0.85	697607	0.01	2000	
Pb	208	1	No Gas	45.821	45.821	0.24	2312862	0.00	2000	
U	238	1	No Gas	20.269	20.269	0.67	991299	0.00	2000	
Ca	43	2	He	326266.275	326266.275	1.79	1375873	23.71	200000	>LDR
Sb	121	2	He	43.539	43.539	1.81	610993	0.01	2000	
Ti	47	2	He	46.963	46.963	2.24	20269	0.23	2000	
Cu	63	1	No Gas	47.654	47.654	2.82	1180901	0.00	2000	
Zn	66	1	No Gas	47.484	47.484	0.27	308148	0.02	2000	
Se	82	1	No Gas	52.032	52.032	0.97	19147	0.27	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2920659	0.98	3367912	86.72	70	120	
Ge	72	2	He	1903197	1.82	2128792	89.40	70	120	
Ge	72	1	No Gas	5771613	1.40	6259187	92.21	70	120	
In	115	1	No Gas	5950557	1.29	6832906	87.09	70	120	
Bi	209	1	No Gas	3929687	0.26	4819187	81.54	70	120	

Sample Report

Sample Table

Sample Name	HS20061218-02PDS
Data File Name	042SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\070220A.b
Acq Date Time	2020-07-02T12:41:19-05:00
Sample Type	Sample
Dilution	1
Comment	DOD TW 154955
ISTD Ref FileName	011CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	1	No Gas	154.030	154.030	0.89	4617789	0.00	2000	
Be	9	1	No Gas	104.596	104.596	2.76	828594	0.01	2000	
V	51	2	He	111.314	111.314	0.74	1279226	0.01	2000	
Cr	52	2	He	106.941	106.941	3.10	1405554	0.01	2000	
Fe	56	2	He	17149.498	17149.498	3.12	206124324	0.01	200000	
Se	78	2	He	111.338	111.338	2.56	20057	0.56	2000	
Sn	118	2	He	0.010	0.010	43.66	1970	0.00	200	
As	75	2	He	112.187	112.187	2.64	225731	0.05	2000	
Ca	44	2	He	328361.178	328361.178	0.88	23643600	1.39	200000	>LDR
Na	23	2	He	783193.335	783193.335	2.80	1472849311	0.05	200000	>LDR
Mg	24	2	He	168400.865	168400.865	1.44	186802591	0.09	200000	
K	39	2	He	11999.635	11999.635	2.70	16090352	0.07	200000	
Mn	55	2	He	2907.109	2907.109	2.07	28184731	0.01	2000	>LDR
Co	59	2	He	105.000	105.000	2.91	2069296	0.01	2000	
Ni	60	2	He	102.982	102.982	2.57	518208	0.02	2000	
Cu	63	2	He	102.605	102.605	4.16	1403096	0.01	2000	
Zn	66	2	He	105.545	105.545	2.83	280995	0.04	2000	
Al	27	2	He	147.620	147.620	3.89	96170	0.15	2000	
B	11	1	No Gas	31.062	31.062	3.24	180235	0.02	2000	
Al	27	1	No Gas	147.987	147.987	2.16	4222766	0.00	2000	
Si	28	1	No Gas	14970.678	14970.678	0.53	220819623	0.01	2000	>LDR
Ag	107	1	No Gas	102.399	102.399	2.50	2816650	0.00	2000	
Cd	111	1	No Gas	101.164	101.164	2.31	553467	0.02	2000	
Sr	88	1	No Gas	7821.381	7821.381	2.08	410795207	0.00	2000	>LDR
Mo	95	1	No Gas	105.917	105.917	2.89	1122856	0.01	2000	
Sn	118	1	No Gas	-0.117	-0.117	-13.83	3290	0.00	2000	
Sb	121	1	No Gas	96.939	96.939	0.90	2270703	0.00	2000	
Ba	137	1	No Gas	151.524	151.524	3.85	1164652	0.01	2000	
Tl	205	1	No Gas	113.435	113.435	1.11	4009171	0.00	2000	
Tl	203	1	No Gas	111.127	111.127	1.72	1683793	0.01	2000	
Pb	208	1	No Gas	108.044	108.044	0.44	5329075	0.00	2000	
U	238	1	No Gas	21.306	21.306	1.28	1018347	0.00	2000	
Ca	43	2	He	344489.046	344489.046	0.69	1448156	23.79	200000	>LDR
Sb	121	2	He	99.641	99.641	3.31	1392617	0.01	2000	
Ti	47	2	He	109.913	109.913	1.34	47282	0.23	2000	
Cu	63	1	No Gas	103.913	103.913	0.41	2470492	0.00	2000	
Zn	66	1	No Gas	105.787	105.787	0.42	670501	0.02	2000	
Se	82	1	No Gas	113.857	113.857	1.09	41028	0.28	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2864445	1.65	3367912	85.05	70	120	
Ge	72	2	He	1897160	2.27	2128792	89.12	70	120	
Ge	72	1	No Gas	5654858	0.11	6259187	90.34	70	120	
In	115	1	No Gas	5779973	2.18	6832906	84.59	70	120	
Bi	209	1	No Gas	3840873	1.45	4819187	79.70	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	044_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\070220A.b
Acq Date Time	2020-07-02T12:45:08-05:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	011CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	No Gas	99.090	3.316	3450076	1.98	100	99.1	90	110	
Be	9	1	No Gas	95.296	3.681	860047	4.18	100	95.3	90	110	
V	51	2	He	100.722	1.737	1266502	0.76	100	100.7	90	110	
Cr	52	2	He	100.287	2.121	1442562	1.08	100	100.3	90	110	
Fe	56	2	He	10136.004	1.346	133336061	0.55	10000	101.4	90	110	
Se	78	2	He	98.342	2.326	19413	1.05	100	98.3	90	110	
Sn	118	2	He	100.984	1.767	1174854	1.85	100	101.0	90	110	
As	75	2	He	99.002	1.626	218034	0.40	100	99.0	90	110	
Ca	44	2	He	9803.122	1.846	774621	0.80	10000	98.0	90	110	
Na	23	2	He	10091.315	2.227	21080955	1.43	10000	100.9	90	110	
Mg	24	2	He	9893.979	2.677	12008670	1.58	10000	98.9	90	110	
K	39	2	He	9835.024	0.689	14451788	0.77	10000	98.4	90	110	
Mn	55	2	He	99.375	1.308	1055377	0.09	100	99.4	90	110	
Co	59	2	He	103.188	1.616	2225446	0.59	100	103.2	90	110	
Ni	60	2	He	100.553	2.386	553680	1.14	100	100.6	90	110	
Cu	63	2	He	101.170	2.912	1514487	1.67	100	101.2	90	110	
Zn	66	2	He	100.093	1.323	291628	0.12	100	100.1	90	110	
Al	27	2	He	97.689	1.146	70205	2.29	100	97.7	90	110	
B	11	1	No Gas	477.031	3.742	2516681	1.19	500	95.4	90	110	
Al	27	1	No Gas	97.834	1.590	3259757	0.91	100	97.8	90	110	
Si	28	1	No Gas	495.133	1.832	8870494	0.64	5000	9.9	90	110	CCV Main CR1-2 Failed
P	31	1	No Gas	475.859	0.845	885232	2.04	500	95.2	90	110	
Ag	107	1	No Gas	99.699	1.239	3272802	2.99	100	99.7	90	110	
Cd	111	1	No Gas	96.823	1.374	632043	2.14	100	96.8	90	110	
Sr	88	1	No Gas	99.762	4.251	6257296	0.75	100	99.8	90	110	
Mo	95	1	No Gas	96.107	5.206	1214785	2.08	100	96.1	90	110	
Sn	118	1	No Gas	101.848	2.560	2002389	1.67	100	101.8	90	110	
Sb	121	1	No Gas	99.220	3.164	2691498	1.16	100	99.2	90	110	
Ba	137	1	No Gas	98.326	3.561	901667	0.68	100	98.3	90	110	
Tl	205	1	No Gas	102.582	1.691	4607941	2.92	100	102.6	90	110	
Tl	203	1	No Gas	100.559	1.206	1936154	1.57	100	100.6	90	110	
Pb	208	1	No Gas	101.833	0.275	6382989	2.03	100	101.8	90	110	
U	238	1	No Gas	96.552	1.277	5864438	1.38	100	96.6	90	110	
Ca	43	2	He	9925.624	0.776	45709	0.48	10000	99.3	90	110	
Sb	121	2	He	99.533	2.917	1522270	1.77	100	99.5	90	110	
Ti	47	2	He	100.796	2.627	47429	1.45	100	100.8	90	110	
Cu	63	1	No Gas	98.246	2.636	2708071	0.87	100	98.2	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	3263276	2.53	3367912	96.89	70	120	
Ge	72	2	He	2075509	1.24	2128792	97.50	70	120	
Ge	72	1	No Gas	6551649	2.14	6259187	104.67	70	120	
In	115	1	No Gas	6896503	3.49	6832906	100.93	70	120	
Bi	209	1	No Gas	4880830	1.78	4819187	101.28	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	045_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\070220A.b
Acq Date Time	2020-07-02T12:46:50-05:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	011CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	1	No Gas	0.063	272.6	197002	0.6	0.5	
Be	9	1	No Gas	0.008	13.5	115	7.5	0.5	
V	51	2	He	-0.038	-31.9	1918	5.7	2.5	
Cr	52	2	He	-0.042	-22.7	2010	5.2	2.5	
Fe	56	2	He	0.415	12.6	31554	1.5	100	
Se	78	2	He	-0.070	-147.0	235	6.4	2	
As	75	2	He	-0.083	-7.1	282	5.9	2.5	
Ca	44	2	He	3.241	44.2	2787	6.6	100	
Na	23	2	He	87.910	3.9	507347	1.1	100	
Mg	24	2	He	1.053	7.9	3084	0.9	100	
K	39	2	He	-0.327	-595.3	107783	0.3	100	
Mn	55	2	He	0.236	7.1	3741	2.6	2.5	
Co	59	2	He	0.004	81.3	427	15.1	2.5	
Ni	60	2	He	-0.062	-22.7	617	12.0	2.5	
Cu	63	2	He	-0.828	-1.7	15836	2.9	2	
Zn	66	2	He	0.143	30.0	1107	12.2	2.5	
Al	27	2	He	1.513	13.9	2714	3.9	5	
B	11	1	No Gas	8.912	16.0	93946	5.5	0.5	CCB Main CR1 Failed
Al	27	1	No Gas	1.714	3.5	133130	2.1	5	
Si	28	1	No Gas	-0.376	-71.3	420080	1.1	10	
P	31	1	No Gas	-3.725	-20.0	40499	2.8	10	
Ag	107	1	No Gas	0.010	48.1	563	28.9	2.5	
Cd	111	1	No Gas	0.005	85.4	47	53.9	1	
Sr	88	1	No Gas	0.060	6.6	13721	2.6	2.5	
Mo	95	1	No Gas	0.042	39.2	660	32.1	2.5	
Sn	118	1	No Gas	-0.004	-731.0	6205	7.9	5	
Sb	121	1	No Gas	0.444	8.5	13601	7.3	2.5	
Ba	137	1	No Gas	-0.030	-29.0	843	8.9	2.5	
Tl	205	1	No Gas	0.212	67.2	9929	67.2	1	
Tl	203	1	No Gas	0.197	65.9	3958	65.7	1	
Pb	208	1	No Gas	0.024	12.2	2757	8.7	2.5	
U	238	1	No Gas	0.006	15.2	417	15.4	2.5	
Ca	43	2	He	2.991	192.2	80	33.1	100	
Sb	121	2	He	0.363	3.8	6355	1.8	2.5	
Ti	47	2	He	-0.001	-4755.5	13	114.6	2.5	
Cu	63	1	No Gas	-0.807	-5.0	30097	3.1	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	3391747	2.59	3367912	100.71	70	120	
Ge	72	2	He	2111902	2.50	2128792	99.21	70	120	
Ge	72	1	No Gas	6572273	1.07	6259187	105.00	70	120	
In	115	1	No Gas	6959375	0.80	6832906	101.85	70	120	
Bi	209	1	No Gas	4983454	1.85	4819187	103.41	70	120	

Sample Report

Sample Table

Sample Name	HS20061390-08
Data File Name	052SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\070220A.b
Acq Date Time	2020-07-02T13:00:57-05:00
Sample Type	Sample
Dilution	1
Comment	DOD TW 154955
ISTD Ref FileName	011CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	1	No Gas	91.318	91.318	2.72	2974971	0.00	2000	
Be	9	1	No Gas	0.020	0.020	14.81	200	0.01	2000	
V	51	2	He	0.483	0.483	5.91	8056	0.01	2000	
Cr	52	2	He	11.673	11.673	2.24	162739	0.01	2000	
Fe	56	2	He	118.721	118.721	1.40	1517500	0.01	200000	
Se	78	2	He	0.176	0.176	56.60	267	0.07	2000	
Sn	118	2	He	-0.056	-0.056	-15.86	1403	0.00	200	
As	75	2	He	0.177	0.177	14.87	811	0.02	2000	
Ca	44	2	He	102036.401	102036.401	2.86	7686707	1.33	200000	
Na	23	2	He	304294.586	304294.586	1.09	599052204	0.05	200000	>LDR
Mg	24	2	He	49520.407	49520.407	1.10	57472117	0.09	200000	
K	39	2	He	701.914	701.914	1.38	1080709	0.06	200000	
Mn	55	2	He	193.133	193.133	2.17	1960203	0.01	2000	
Co	59	2	He	0.362	0.362	3.01	7782	0.00	2000	
Ni	60	2	He	15.909	15.909	1.84	84546	0.02	2000	
Cu	63	2	He	-0.538	-0.538	-7.48	18957	0.00	2000	
Zn	66	2	He	3.959	3.959	4.29	11645	0.03	2000	
Al	27	2	He	33.371	33.371	4.26	23941	0.14	2000	
B	11	1	No Gas	17.793	17.793	2.87	127152	0.01	2000	
Al	27	1	No Gas	34.402	34.402	6.11	1140772	0.00	2000	
Si	28	1	No Gas	13966.384	13966.384	1.91	227593157	0.01	2000	>LDR
Ag	107	1	No Gas	0.003	0.003	48.68	303	0.00	2000	
Cd	111	1	No Gas	0.272	0.272	12.81	1667	0.02	2000	
Sr	88	1	No Gas	2366.866	2366.866	1.99	138247705	0.00	2000	>LDR
Mo	95	1	No Gas	0.528	0.528	4.01	6332	0.01	2000	
Sn	118	1	No Gas	-0.185	-0.185	-4.32	2414	-0.01	2000	
Sb	121	1	No Gas	0.078	0.078	5.40	3464	0.00	2000	
Ba	137	1	No Gas	26.919	26.919	1.88	230937	0.01	2000	
Tl	205	1	No Gas	0.010	0.010	22.72	537	0.00	2000	
Tl	203	1	No Gas	0.009	0.009	43.48	220	0.00	2000	
Pb	208	1	No Gas	0.066	0.066	1.88	4640	0.00	2000	
U	238	1	No Gas	2.155	2.155	2.17	114987	0.00	2000	
Ca	43	2	He	105417.678	105417.678	2.70	463548	22.74	200000	
Sb	121	2	He	0.089	0.089	17.93	1957	0.00	2000	
Ti	47	2	He	0.832	0.832	17.38	387	0.22	2000	
Cu	63	1	No Gas	0.629	0.629	2.68	65638	0.00	2000	
Zn	66	1	No Gas	4.284	4.284	2.01	31831	0.01	2000	
Se	82	1	No Gas	1.747	1.747	36.87	719	0.24	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	3038881	1.80	3367912	90.23	70	120	
Ge	72	2	He	1984582	1.08	2128792	93.23	70	120	
Ge	72	1	No Gas	6246804	0.64	6259187	99.80	70	120	
In	115	1	No Gas	6427003	1.64	6832906	94.06	70	120	
Bi	209	1	No Gas	4288602	2.00	4819187	88.99	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	054_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\070220A.b
Acq Date Time	2020-07-02T13:08:28-05:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	011CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	No Gas	103.513	1.061	3469437	2.06	100	103.5	90	110	
Be	9	1	No Gas	95.994	0.819	835665	1.99	100	96.0	90	110	
V	51	2	He	99.818	0.630	1198656	1.39	100	99.8	90	110	
Cr	52	2	He	102.295	0.994	1405106	0.62	100	102.3	90	110	
Fe	56	2	He	9952.047	0.851	125011735	0.66	10000	99.5	90	110	
Se	78	2	He	95.980	1.803	18099	1.91	100	96.0	90	110	
Sn	118	2	He	98.042	2.717	1076425	1.47	100	98.0	90	110	
As	75	2	He	98.371	1.384	206872	0.48	100	98.4	90	110	
Ca	44	2	He	9816.338	0.962	740704	0.73	10000	98.2	90	110	
Na	23	2	He	10223.067	1.690	20388283	0.53	10000	102.2	90	110	
Mg	24	2	He	10172.821	1.981	11790243	0.88	10000	101.7	90	110	
K	39	2	He	9953.586	1.046	13964061	0.47	10000	99.5	90	110	
Mn	55	2	He	99.796	1.570	1012203	2.65	100	99.8	90	110	
Co	59	2	He	103.038	2.168	2121807	1.02	100	103.0	90	110	
Ni	60	2	He	100.489	1.323	528400	0.58	100	100.5	90	110	
Cu	63	2	He	102.265	2.934	1461641	2.48	100	102.3	90	110	
Zn	66	2	He	101.244	1.387	281656	0.24	100	101.2	90	110	
Al	27	2	He	99.427	3.437	68184	2.73	100	99.4	90	110	
B	11	1	No Gas	482.683	1.016	2456753	0.53	500	96.5	90	110	
Al	27	1	No Gas	100.238	4.326	3175791	2.16	100	100.2	90	110	
Si	28	1	No Gas	499.178	3.900	8506211	1.79	5000	10.0	90	110	CCV Main CR1-2 Failed
P	31	1	No Gas	480.798	3.300	850494	1.20	500	96.2	90	110	
Ag	107	1	No Gas	103.419	1.611	3289127	2.01	100	103.4	90	110	
Cd	111	1	No Gas	99.080	0.728	626688	0.62	100	99.1	90	110	
Sr	88	1	No Gas	101.790	1.388	6189855	0.67	100	101.8	90	110	
Mo	95	1	No Gas	99.877	0.864	1224257	0.88	100	99.9	90	110	
Sn	118	1	No Gas	103.232	3.548	1966397	2.21	100	103.2	90	110	
Sb	121	1	No Gas	98.701	2.542	2548562	0.68	100	98.7	90	110	
Ba	137	1	No Gas	96.039	2.998	853659	2.04	100	96.0	90	110	
Tl	205	1	No Gas	100.731	1.420	4328060	1.76	100	100.7	90	110	
Tl	203	1	No Gas	100.330	3.454	1847334	1.22	100	100.3	90	110	
Pb	208	1	No Gas	100.870	0.977	6049120	2.73	100	100.9	90	110	
U	238	1	No Gas	98.941	0.523	5750001	2.22	100	98.9	90	110	
Ca	43	2	He	10017.367	1.672	44051	1.92	10000	100.2	90	110	
Sb	121	2	He	101.131	1.308	1477071	0.32	100	101.1	90	110	
Ti	47	2	He	99.978	0.729	44927	0.57	100	100.0	90	110	
Cu	63	1	No Gas	99.392	0.942	2607545	1.21	100	99.4	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	3147258	1.38	3367912	93.45	70	120	
Ge	72	2	He	1981802	1.17	2128792	93.10	70	120	
Ge	72	1	No Gas	6235683	2.07	6259187	99.62	70	120	
In	115	1	No Gas	6680603	1.33	6832906	97.77	70	120	
Bi	209	1	No Gas	4669999	2.73	4819187	96.90	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	055_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\070220A.b
Acq Date Time	2020-07-02T13:10:12-05:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	011CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	1	No Gas	0.016	394.4	190385	0.7	0.5	
Be	9	1	No Gas	0.008	34.3	108	23.7	0.5	
V	51	2	He	-0.050	-9.8	1699	2.2	2.5	
Cr	52	2	He	-0.045	-28.4	1887	9.9	2.5	
Fe	56	2	He	0.320	32.4	29001	4.3	100	
Se	78	2	He	0.027	128.5	244	3.8	2	
As	75	2	He	-0.075	-39.2	286	20.9	2.5	
Ca	44	2	He	3.737	53.7	2704	4.3	100	
Na	23	2	He	32.107	15.0	373972	1.3	100	
Mg	24	2	He	0.721	19.0	2564	7.7	100	
K	39	2	He	-1.719	-97.8	101259	1.0	100	
Mn	55	2	He	0.214	16.1	3360	10.1	2.5	
Co	59	2	He	0.007	51.5	487	15.1	2.5	
Ni	60	2	He	-0.051	-31.9	650	12.6	2.5	
Cu	63	2	He	-0.795	-5.2	15633	2.5	2	
Zn	66	2	He	0.169	12.9	1133	6.9	2.5	
Al	27	2	He	2.129	22.2	3024	11.8	5	
B	11	1	No Gas	8.427	16.0	88996	6.2	0.5	CCB Main CR1 Failed
Al	27	1	No Gas	1.783	6.4	130244	2.8	5	
Si	28	1	No Gas	-0.168	-719.0	407473	3.8	10	
P	31	1	No Gas	-3.010	-17.7	40182	1.5	10	
Ag	107	1	No Gas	0.008	36.5	497	20.2	2.5	
Cd	111	1	No Gas	0.005	25.4	50	20.0	1	
Sr	88	1	No Gas	0.112	121.7	16794	45.8	2.5	
Mo	95	1	No Gas	0.041	22.7	640	16.2	2.5	
Sn	118	1	No Gas	-0.027	-81.2	5745	3.3	5	
Sb	121	1	No Gas	0.268	13.9	8476	11.1	2.5	
Ba	137	1	No Gas	-0.015	-96.5	977	13.4	2.5	
Tl	205	1	No Gas	0.216	70.5	9725	69.5	1	
Tl	203	1	No Gas	0.200	63.2	3878	62.0	1	
Pb	208	1	No Gas	0.021	20.0	2447	11.1	2.5	
U	238	1	No Gas	0.006	30.7	387	28.8	2.5	
Ca	43	2	He	5.259	174.0	87	46.6	100	
Sb	121	2	He	0.188	10.3	3481	7.7	2.5	
Ti	47	2	He	-0.021	-61.2	3	173.2	2.5	
Cu	63	1	No Gas	-0.842	-2.2	28059	2.9	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	3303283	1.77	3367912	98.08	70	120	
Ge	72	2	He	2022355	1.40	2128792	95.00	70	120	
Ge	72	1	No Gas	6323502	1.24	6259187	101.03	70	120	
In	115	1	No Gas	6974334	4.14	6832906	102.07	70	120	
Bi	209	1	No Gas	4811689	0.68	4819187	99.84	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	066_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\070220A.b
Acq Date Time	2020-07-02T13:33:58-05:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	011CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	No Gas	101.012	2.339	3535108	1.11	100	101.0	90	110	
Be	9	1	No Gas	94.701	3.359	859688	2.71	100	94.7	90	110	
V	51	2	He	101.499	0.178	1261673	0.90	100	101.5	90	110	
Cr	52	2	He	103.563	1.200	1472570	1.02	100	103.6	90	110	
Fe	56	2	He	10186.048	1.478	132448911	0.88	10000	101.9	90	110	
Se	78	2	He	99.898	1.468	19491	1.53	100	99.9	90	110	
Sn	118	2	He	102.791	1.636	1168410	0.64	100	102.8	90	110	
As	75	2	He	100.547	1.457	218880	0.40	100	100.5	90	110	
Ca	44	2	He	10026.947	0.478	783190	0.70	10000	100.3	90	110	
Na	23	2	He	10220.277	2.124	21099658	1.04	10000	102.2	90	110	
Mg	24	2	He	10122.167	0.893	12146169	1.37	10000	101.2	90	110	
K	39	2	He	10097.527	1.422	14664458	2.00	10000	101.0	90	110	
Mn	55	2	He	101.370	3.512	1064192	3.56	100	101.4	90	110	
Co	59	2	He	104.561	1.284	2229093	0.24	100	104.6	90	110	
Ni	60	2	He	102.671	0.801	558930	1.84	100	102.7	90	110	
Cu	63	2	He	103.812	2.937	1535987	3.82	100	103.8	90	110	
Zn	66	2	He	104.091	1.072	299794	1.95	100	104.1	90	110	
Al	27	2	He	100.664	1.053	71454	1.51	100	100.7	90	110	
B	11	1	No Gas	478.655	2.240	2541285	1.32	500	95.7	90	110	
Al	27	1	No Gas	101.795	6.596	3345377	3.47	100	101.8	90	110	
Si	28	1	No Gas	497.035	3.801	8794576	0.64	5000	9.9	90	110	CCV Main CR1-2 Failed
P	31	1	No Gas	484.424	3.405	889273	0.88	500	96.9	90	110	
Ag	107	1	No Gas	103.584	0.757	3345003	1.23	100	103.6	90	110	
Cd	111	1	No Gas	101.126	1.198	649503	1.67	100	101.1	90	110	
Sr	88	1	No Gas	104.242	0.931	6436453	0.61	100	104.2	90	110	
Mo	95	1	No Gas	101.785	0.978	1266818	0.81	100	101.8	90	110	
Sn	118	1	No Gas	103.659	1.233	2005423	1.37	100	103.7	90	110	
Sb	121	1	No Gas	99.442	2.631	2665796	0.66	100	99.4	90	110	
Ba	137	1	No Gas	100.160	0.934	904080	0.86	100	100.2	90	110	
Tl	205	1	No Gas	103.722	2.625	4661835	1.86	100	103.7	90	110	
Tl	203	1	No Gas	100.566	2.511	1937546	0.63	100	100.6	90	110	
Pb	208	1	No Gas	102.878	1.749	6453423	1.94	100	102.9	90	110	
U	238	1	No Gas	99.706	2.276	6061654	2.62	100	99.7	90	110	
Ca	43	2	He	10100.976	1.245	45981	1.42	10000	101.0	90	110	
Sb	121	2	He	101.194	0.886	1530214	1.83	100	101.2	90	110	
Ti	47	2	He	100.623	2.800	46810	2.97	100	100.6	90	110	
Cu	63	1	No Gas	102.416	1.284	2788162	1.90	100	102.4	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	3282844	1.75	3367912	97.47	70	120	
Ge	72	2	He	2051539	1.06	2128792	96.37	70	120	
Ge	72	1	No Gas	6475071	3.03	6259187	103.45	70	120	
In	115	1	No Gas	6783039	0.47	6832906	99.27	70	120	
Bi	209	1	No Gas	4886236	3.17	4819187	101.39	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	067_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\070220A.b
Acq Date Time	2020-07-02T13:35:41-05:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	011CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	1	No Gas	-0.060	-180.2	190933	1.4	0.5	
Be	9	1	No Gas	0.013	16.6	152	12.5	0.5	
V	51	2	He	-0.049	-6.4	1743	3.1	2.5	
Cr	52	2	He	-0.038	-9.5	2030	3.4	2.5	
Fe	56	2	He	0.206	55.3	28096	5.2	100	
Se	78	2	He	-0.067	-119.5	231	5.8	2	
As	75	2	He	-0.098	-5.8	242	4.2	2.5	
Ca	44	2	He	1.011	188.5	2547	6.6	100	
Na	23	2	He	-12.520	-20.9	290291	0.8	100	
Mg	24	2	He	0.703	29.2	2590	8.6	100	
K	39	2	He	-1.070	-127.7	104256	1.0	100	
Mn	55	2	He	0.160	8.1	2860	5.2	2.5	
Co	59	2	He	0.006	75.6	477	22.2	2.5	
Ni	60	2	He	-0.044	-54.4	700	17.8	2.5	
Cu	63	2	He	-0.868	-2.1	14895	2.6	2	
Zn	66	2	He	0.159	17.8	1127	7.7	2.5	
Al	27	2	He	1.571	10.6	2694	5.3	5	
B	11	1	No Gas	7.825	10.2	87335	5.0	0.5	CCB Main CR1 Failed
Al	27	1	No Gas	3.247	84.0	182715	47.8	5	
Si	28	1	No Gas	-2.052	-22.5	391392	0.9	10	
P	31	1	No Gas	-1.425	-17.5	44578	2.2	10	
Ag	107	1	No Gas	0.011	35.0	573	20.2	2.5	
Cd	111	1	No Gas	0.007	77.5	63	55.5	1	
Sr	88	1	No Gas	0.025	14.3	11498	3.6	2.5	
Mo	95	1	No Gas	0.040	10.5	630	6.9	2.5	
Sn	118	1	No Gas	-0.036	-88.3	5558	9.5	5	
Sb	121	1	No Gas	0.335	16.4	10635	14.1	2.5	
Ba	137	1	No Gas	-0.021	-40.0	923	10.2	2.5	
Tl	205	1	No Gas	0.225	65.2	10513	64.8	1	
Tl	203	1	No Gas	0.219	70.1	4401	69.4	1	
Pb	208	1	No Gas	0.027	6.4	2884	3.5	2.5	
U	238	1	No Gas	0.007	17.5	483	17.8	2.5	
Ca	43	2	He	9.893	116.0	110	48.1	100	
Sb	121	2	He	0.270	9.0	4798	7.3	2.5	
Ti	47	2	He	0.029	212.8	27	108.3	2.5	
Cu	63	1	No Gas	-0.914	-1.6	27194	2.1	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	3357652	0.52	3367912	99.70	70	120	
Ge	72	2	He	2063226	1.03	2128792	96.92	70	120	
Ge	72	1	No Gas	6573058	1.19	6259187	105.01	70	120	
In	115	1	No Gas	6949258	1.82	6832906	101.70	70	120	
Bi	209	1	No Gas	4973241	1.43	4819187	103.20	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	075_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\070220A.b
Acq Date Time	2020-07-02T13:50:54-05:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	011CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	No Gas	104.428	3.749	3579273	1.45	100	104.4	90	110	
Be	9	1	No Gas	96.407	3.622	858629	1.60	100	96.4	90	110	
V	51	2	He	97.996	2.118	1184980	2.51	100	98.0	90	110	
Cr	52	2	He	98.904	1.909	1368166	2.49	100	98.9	90	110	
Fe	56	2	He	9956.505	1.081	125938578	1.38	10000	99.6	90	110	
Se	78	2	He	96.577	1.245	18336	1.14	100	96.6	90	110	
Sn	118	2	He	102.101	2.314	1124960	1.90	100	102.1	90	110	
As	75	2	He	98.837	1.153	209294	0.57	100	98.8	90	110	
Ca	44	2	He	9850.941	1.874	748421	1.29	10000	98.5	90	110	
Na	23	2	He	10213.898	1.207	20512434	0.64	10000	102.1	90	110	
Mg	24	2	He	9972.224	2.215	11638238	1.64	10000	99.7	90	110	
K	39	2	He	9935.084	1.397	14034723	0.88	10000	99.4	90	110	
Mn	55	2	He	98.224	1.322	1003004	0.89	100	98.2	90	110	
Co	59	2	He	103.681	2.386	2149920	1.81	100	103.7	90	110	
Ni	60	2	He	102.256	1.464	541404	1.04	100	102.3	90	110	
Cu	63	2	He	104.488	0.905	1503279	0.80	100	104.5	90	110	
Zn	66	2	He	102.600	0.706	287409	0.18	100	102.6	90	110	
Al	27	2	He	98.436	1.875	67996	1.84	100	98.4	90	110	
B	11	1	No Gas	510.160	3.043	2654661	1.15	500	102.0	90	110	
Al	27	1	No Gas	103.197	3.645	3314693	1.14	100	103.2	90	110	
Si	28	1	No Gas	511.018	3.398	8824842	1.91	5000	10.2	90	110	CCV Main CR1-2 Failed
P	31	1	No Gas	493.748	1.789	885056	2.03	500	98.7	90	110	
Ag	107	1	No Gas	102.347	2.132	3391377	1.17	100	102.3	90	110	
Cd	111	1	No Gas	99.836	0.734	658093	1.82	100	99.8	90	110	
Sr	88	1	No Gas	102.169	3.024	6472595	0.69	100	102.2	90	110	
Mo	95	1	No Gas	98.862	2.622	1262497	0.62	100	98.9	90	110	
Sn	118	1	No Gas	103.460	3.351	2053466	1.11	100	103.5	90	110	
Sb	121	1	No Gas	104.120	2.196	2727301	0.41	100	104.1	90	110	
Ba	137	1	No Gas	98.599	1.991	913284	0.59	100	98.6	90	110	
Tl	205	1	No Gas	105.589	2.222	4713372	1.84	100	105.6	90	110	
Tl	203	1	No Gas	102.337	1.936	1958370	1.47	100	102.3	90	110	
Pb	208	1	No Gas	103.518	0.623	6448954	1.16	100	103.5	90	110	
U	238	1	No Gas	100.213	1.258	6050211	1.28	100	100.2	90	110	
Ca	43	2	He	9859.808	3.532	43653	3.04	10000	98.6	90	110	
Sb	121	2	He	102.602	2.152	1508984	2.04	100	102.6	90	110	
Ti	47	2	He	99.357	1.453	44957	1.47	100	99.4	90	110	
Cu	63	1	No Gas	99.759	1.070	2654820	1.63	100	99.8	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	3221634	2.08	3367912	95.66	70	120	
Ge	72	2	He	1995465	0.59	2128792	93.74	70	120	
Ge	72	1	No Gas	6326024	2.52	6259187	101.07	70	120	
In	115	1	No Gas	6962651	2.54	6832906	101.90	70	120	
Bi	209	1	No Gas	4851060	0.60	4819187	100.66	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	076_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\070220A.b
Acq Date Time	2020-07-02T13:52:39-05:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	011CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	1	No Gas	0.069	220.7	189437	1.0	0.5	
Be	9	1	No Gas	0.011	32.1	133	22.9	0.5	
V	51	2	He	-0.050	-19.6	1709	7.1	2.5	
Cr	52	2	He	-0.034	-33.2	2057	7.3	2.5	
Fe	56	2	He	0.013	553.6	25227	2.4	100	
Se	78	2	He	-0.103	-52.3	221	5.0	2	
As	75	2	He	-0.096	-16.1	243	14.8	2.5	
Ca	44	2	He	-0.864	-86.9	2367	2.4	100	
Na	23	2	He	34.069	11.0	380360	0.8	100	
Mg	24	2	He	0.131	122.5	1877	11.2	100	
K	39	2	He	-3.272	-62.0	99689	1.9	100	
Mn	55	2	He	0.139	3.6	2597	1.1	2.5	
Co	59	2	He	0.008	6.1	497	3.1	2.5	
Ni	60	2	He	-0.049	-8.9	663	2.3	2.5	
Cu	63	2	He	-0.862	-3.2	14778	2.5	2	
Zn	66	2	He	0.184	14.7	1183	5.8	2.5	
Al	27	2	He	1.979	7.5	2937	2.5	5	
B	11	1	No Gas	23.343	5.1	165047	4.0	0.5	CCB Main CR1 Failed
Al	27	1	No Gas	1.685	11.3	131781	2.2	5	
Si	28	1	No Gas	-0.727	-300.8	413839	11.8	10	
P	31	1	No Gas	-2.602	-33.6	42368	0.9	10	
Ag	107	1	No Gas	0.015	10.9	713	7.7	2.5	
Cd	111	1	No Gas	0.004	93.4	43	58.1	1	
Sr	88	1	No Gas	0.026	12.4	11672	1.4	2.5	
Mo	95	1	No Gas	0.050	35.4	757	28.0	2.5	
Sn	118	1	No Gas	-0.010	-90.3	6132	4.6	5	
Sb	121	1	No Gas	0.427	8.7	13130	9.2	2.5	
Ba	137	1	No Gas	-0.010	-106.2	1027	8.4	2.5	
Tl	205	1	No Gas	0.221	68.2	10473	65.2	1	
Tl	203	1	No Gas	0.214	69.4	4354	66.2	1	
Pb	208	1	No Gas	0.024	25.0	2760	12.5	2.5	
U	238	1	No Gas	0.007	38.1	463	34.9	2.5	
Ca	43	2	He	2.901	166.2	77	27.2	100	
Sb	121	2	He	0.359	3.0	6055	2.8	2.5	
Ti	47	2	He	0.023	242.6	23	107.9	2.5	
Cu	63	1	No Gas	-0.938	-7.0	26463	4.5	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	3257472	2.00	3367912	96.72	70	120	
Ge	72	2	He	2035373	1.36	2128792	95.61	70	120	
Ge	72	1	No Gas	6557994	2.79	6259187	104.77	70	120	
In	115	1	No Gas	7000967	2.18	6832906	102.46	70	120	
Bi	209	1	No Gas	5105576	1.80	4819187	105.94	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	084_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\070220A.b
Acq Date Time	2020-07-02T14:38:16-05:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	011CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	No Gas	103.053	0.999	3451139	1.60	100	103.1	90	110	
Be	9	1	No Gas	97.955	3.403	851619	2.47	100	98.0	90	110	
V	51	2	He	101.443	2.484	1227921	0.80	100	101.4	90	110	
Cr	52	2	He	100.970	0.776	1398468	1.10	100	101.0	90	110	
Fe	56	2	He	10102.749	1.845	127943825	0.83	10000	101.0	90	110	
Se	78	2	He	98.719	0.419	18764	1.57	100	98.7	90	110	
Sn	118	2	He	106.006	2.651	1159464	2.18	100	106.0	90	110	
As	75	2	He	98.837	1.653	209564	0.33	100	98.8	90	110	
Ca	44	2	He	9903.457	0.898	753447	0.87	10000	99.0	90	110	
Na	23	2	He	10155.672	1.911	20423739	1.22	10000	101.6	90	110	
Mg	24	2	He	9967.938	1.465	11649462	1.33	10000	99.7	90	110	
K	39	2	He	10053.011	1.992	14217824	0.38	10000	100.5	90	110	
Mn	55	2	He	101.025	2.763	1032789	1.46	100	101.0	90	110	
Co	59	2	He	102.443	1.881	2127040	0.73	100	102.4	90	110	
Ni	60	2	He	100.529	2.012	532957	1.07	100	100.5	90	110	
Cu	63	2	He	102.585	3.115	1478002	1.36	100	102.6	90	110	
Zn	66	2	He	102.080	1.920	286308	0.25	100	102.1	90	110	
Al	27	2	He	99.007	1.217	68475	1.56	100	99.0	90	110	
B	11	1	No Gas	496.353	0.596	2522767	1.47	500	99.3	90	110	
Al	27	1	No Gas	102.211	2.039	3252732	1.20	100	102.2	90	110	
Si	28	1	No Gas	525.005	4.716	8970872	5.13	5000	10.5	90	110	CCV Main CR1-2 Failed
P	31	1	No Gas	501.357	1.024	889195	0.46	500	100.3	90	110	
Ag	107	1	No Gas	102.181	0.902	3316714	1.27	100	102.2	90	110	
Cd	111	1	No Gas	99.178	0.791	640258	0.91	100	99.2	90	110	
Sr	88	1	No Gas	101.071	1.982	6273569	2.30	100	101.1	90	110	
Mo	95	1	No Gas	97.155	0.321	1215485	0.83	100	97.2	90	110	
Sn	118	1	No Gas	104.835	0.720	2038519	0.37	100	104.8	90	110	
Sb	121	1	No Gas	103.631	1.627	2688371	1.24	100	103.6	90	110	
Ba	137	1	No Gas	97.926	1.391	888484	1.01	100	97.9	90	110	
Tl	205	1	No Gas	102.831	2.268	4598040	1.35	100	102.8	90	110	
Tl	203	1	No Gas	100.858	2.450	1933253	1.17	100	100.9	90	110	
Pb	208	1	No Gas	103.907	2.569	6483356	1.49	100	103.9	90	110	
U	238	1	No Gas	99.921	2.541	6044381	3.58	100	99.9	90	110	
Ca	43	2	He	10143.090	0.895	44971	0.96	10000	101.4	90	110	
Sb	121	2	He	100.688	0.788	1482851	0.90	100	100.7	90	110	
Ti	47	2	He	100.122	3.460	45352	1.89	100	100.1	90	110	
Cu	63	1	No Gas	100.976	0.640	2660398	1.23	100	101.0	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	3144071	1.41	3367912	93.35	70	120	
Ge	72	2	He	1998295	1.68	2128792	93.87	70	120	
Ge	72	1	No Gas	6263248	0.81	6259187	100.06	70	120	
In	115	1	No Gas	6818072	0.53	6832906	99.78	70	120	
Bi	209	1	No Gas	4860286	2.20	4819187	100.85	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	085_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\070220A.b
Acq Date Time	2020-07-02T14:39:58-05:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	011CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	1	No Gas	-0.017	-290.2	190425	1.2	0.5	
Be	9	1	No Gas	0.011	17.1	140	14.3	0.5	
V	51	2	He	-0.018	-65.5	2089	5.5	2.5	
Cr	52	2	He	-0.017	-89.0	2284	7.9	2.5	
Fe	56	2	He	-0.081	-109.0	23918	3.1	100	
Se	78	2	He	0.014	573.6	242	4.3	2	
As	75	2	He	-0.051	-18.1	340	7.4	2.5	
Ca	44	2	He	2.888	128.8	2650	12.3	100	
Na	23	2	He	-16.331	-30.4	277620	1.8	100	
Mg	24	2	He	0.322	38.1	2097	8.2	100	
K	39	2	He	-2.458	-84.9	100486	1.0	100	
Mn	55	2	He	0.136	8.6	2557	3.0	2.5	
Co	59	2	He	0.004	61.5	410	10.6	2.5	
Ni	60	2	He	-0.064	-23.2	580	12.4	2.5	
Cu	63	2	He	-0.930	-6.1	13737	4.4	2	
Zn	66	2	He	0.192	24.6	1203	10.8	2.5	
Al	27	2	He	1.857	10.4	2844	5.1	5	
B	11	1	No Gas	10.619	13.3	101105	6.0	0.5	CCB Main CR1 Failed
Al	27	1	No Gas	1.732	2.6	131341	0.7	5	
Si	28	1	No Gas	-3.364	-7.2	362489	1.5	10	
P	31	1	No Gas	0.570	37.1	47251	0.3	10	
Ag	107	1	No Gas	0.009	45.8	510	24.5	2.5	
Cd	111	1	No Gas	0.004	95.8	43	58.1	1	
Sr	88	1	No Gas	0.031	33.2	11669	3.6	2.5	
Mo	95	1	No Gas	0.033	17.5	537	15.1	2.5	
Sn	118	1	No Gas	0.003	1575.6	6226	14.5	5	
Sb	121	1	No Gas	0.392	10.7	11976	8.8	2.5	
Ba	137	1	No Gas	-0.024	-57.5	873	12.8	2.5	
Tl	205	1	No Gas	0.229	66.0	10399	66.6	1	
Tl	203	1	No Gas	0.220	61.0	4288	61.4	1	
Pb	208	1	No Gas	0.030	10.4	3004	8.0	2.5	
U	238	1	No Gas	0.007	13.9	417	14.7	2.5	
Ca	43	2	He	4.443	82.3	83	18.3	100	
Sb	121	2	He	0.312	7.1	5335	4.8	2.5	
Ti	47	2	He	0.023	50.5	23	24.7	2.5	
Cu	63	1	No Gas	-0.978	-2.7	25013	2.1	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	3323037	2.03	3367912	98.67	70	120	
Ge	72	2	He	2028293	1.99	2128792	95.28	70	120	
Ge	72	1	No Gas	6457127	0.90	6259187	103.16	70	120	
In	115	1	No Gas	6836666	2.28	6832906	100.06	70	120	
Bi	209	1	No Gas	4825275	1.61	4819187	100.13	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	096_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\070220A.b
Acq Date Time	2020-07-02T15:08:39-05:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	011CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	No Gas	101.940	0.689	3496148	1.17	100	101.9	90	110	
Be	9	1	No Gas	94.624	1.796	842196	1.92	100	94.6	90	110	
V	51	2	He	99.382	1.907	1192613	1.62	100	99.4	90	110	
Cr	52	2	He	102.766	3.993	1410487	3.23	100	102.8	90	110	
Fe	56	2	He	10123.092	0.301	127090951	1.24	10000	101.2	90	110	
Se	78	2	He	96.692	1.717	18220	0.91	100	96.7	90	110	
Sn	118	2	He	102.772	0.367	1123051	1.34	100	102.8	90	110	
As	75	2	He	99.407	0.704	208934	0.74	100	99.4	90	110	
Ca	44	2	He	9813.140	1.924	739983	1.35	10000	98.1	90	110	
Na	23	2	He	10256.324	1.265	20442674	1.00	10000	102.6	90	110	
Mg	24	2	He	10060.601	2.188	11652859	0.86	10000	100.6	90	110	
K	39	2	He	9943.424	1.675	13940729	0.39	10000	99.4	90	110	
Mn	55	2	He	100.542	0.840	1019097	1.87	100	100.5	90	110	
Co	59	2	He	103.978	1.536	2140013	0.89	100	104.0	90	110	
Ni	60	2	He	101.016	0.828	530911	1.71	100	101.0	90	110	
Cu	63	2	He	101.728	1.397	1453458	2.10	100	101.7	90	110	
Zn	66	2	He	100.503	0.962	279442	0.50	100	100.5	90	110	
Al	27	2	He	100.077	2.543	68576	1.06	100	100.1	90	110	
B	11	1	No Gas	477.768	1.473	2487323	2.56	500	95.6	90	110	
Al	27	1	No Gas	100.344	1.862	3222563	1.34	100	100.3	90	110	
Si	28	1	No Gas	493.214	2.328	8523098	1.15	5000	9.9	90	110	CCV Main CR1-2 Failed
P	31	1	No Gas	486.979	2.951	872430	2.09	500	97.4	90	110	
Ag	107	1	No Gas	101.667	3.944	3226622	3.13	100	101.7	90	110	
Cd	111	1	No Gas	98.548	2.460	622089	1.44	100	98.5	90	110	
Sr	88	1	No Gas	104.787	3.209	6359326	2.39	100	104.8	90	110	
Mo	95	1	No Gas	99.636	3.225	1218787	2.14	100	99.6	90	110	
Sn	118	1	No Gas	102.726	0.760	1953742	1.29	100	102.7	90	110	
Sb	121	1	No Gas	98.526	0.934	2578324	0.73	100	98.5	90	110	
Ba	137	1	No Gas	99.330	2.655	881352	2.45	100	99.3	90	110	
Tl	205	1	No Gas	102.044	3.960	4370147	3.14	100	102.0	90	110	
Tl	203	1	No Gas	100.658	4.759	1847503	2.90	100	100.7	90	110	
Pb	208	1	No Gas	101.466	1.318	6065199	1.41	100	101.5	90	110	
U	238	1	No Gas	99.103	1.755	5740766	1.26	100	99.1	90	110	
Ca	43	2	He	9935.994	1.423	43663	0.03	10000	99.4	90	110	
Sb	121	2	He	101.468	2.000	1481028	0.88	100	101.5	90	110	
Ti	47	2	He	100.367	2.178	45071	1.50	100	100.4	90	110	
Cu	63	1	No Gas	99.006	0.463	2632101	0.82	100	99.0	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	3218040	1.26	3367912	95.55	70	120	
Ge	72	2	He	1980660	1.44	2128792	93.04	70	120	
Ge	72	1	No Gas	6317852	1.06	6259187	100.94	70	120	
In	115	1	No Gas	6668439	1.67	6832906	97.59	70	120	
Bi	209	1	No Gas	4655614	2.42	4819187	96.61	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	097_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\070220A.b
Acq Date Time	2020-07-02T15:10:23-05:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	011CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	1	No Gas	0.002	8461.8	189674	0.7	0.5	
Be	9	1	No Gas	0.009	25.2	117	17.3	0.5	
V	51	2	He	-0.029	-16.4	1976	1.5	2.5	
Cr	52	2	He	-0.029	-36.8	2130	4.2	2.5	
Fe	56	2	He	-0.088	-73.3	23988	0.4	100	
Se	78	2	He	-0.047	-391.0	233	17.5	2	
As	75	2	He	-0.011	-111.1	428	3.7	2.5	
Ca	44	2	He	-1.781	-99.3	2300	2.3	100	
Na	23	2	He	5.928	112.7	324341	0.7	100	
Mg	24	2	He	0.273	21.2	2050	3.9	100	
K	39	2	He	-0.153	-1132.4	104448	1.7	100	
Mn	55	2	He	0.387	3.3	5198	2.7	2.5	
Co	59	2	He	0.006	33.9	457	12.1	2.5	
Ni	60	2	He	-0.061	-24.4	600	10.9	2.5	
Cu	63	2	He	-0.688	-10.7	17311	3.2	2	
Zn	66	2	He	0.139	51.1	1053	15.6	2.5	
Al	27	2	He	1.767	1.3	2800	3.5	5	
B	11	1	No Gas	14.120	4.5	118862	3.9	0.5	CCB Main CR1 Failed
Al	27	1	No Gas	1.821	7.1	133213	2.4	5	
Si	28	1	No Gas	-2.354	-1.7	376738	1.2	10	
P	31	1	No Gas	0.228	277.7	46314	1.2	10	
Ag	107	1	No Gas	0.005	48.6	390	20.4	2.5	
Cd	111	1	No Gas	0.002	154.1	27	57.3	1	
Sr	88	1	No Gas	0.070	12.9	14034	2.8	2.5	
Mo	95	1	No Gas	0.038	15.0	593	11.2	2.5	
Sn	118	1	No Gas	0.007	444.7	6272	8.7	5	
Sb	121	1	No Gas	0.347	8.2	10695	6.4	2.5	
Ba	137	1	No Gas	-0.029	-34.3	833	10.8	2.5	
Tl	205	1	No Gas	0.222	63.0	9869	63.5	1	
Tl	203	1	No Gas	0.213	63.8	4071	64.1	1	
Pb	208	1	No Gas	0.024	11.0	2570	6.5	2.5	
U	238	1	No Gas	0.006	43.0	370	42.0	2.5	
Ca	43	2	He	8.000	50.5	100	17.3	100	
Sb	121	2	He	0.284	2.7	4958	5.6	2.5	
Ti	47	2	He	-0.006	-12.8	10	0.0	2.5	
Cu	63	1	No Gas	-0.741	-2.3	31109	2.6	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	3299914	1.82	3367912	97.98	70	120	
Ge	72	2	He	2041907	3.73	2128792	95.92	70	120	
Ge	72	1	No Gas	6410666	1.18	6259187	102.42	70	120	
In	115	1	No Gas	6806308	1.30	6832906	99.61	70	120	
Bi	209	1	No Gas	4737424	1.62	4819187	98.30	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	108_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\070220A.b
Acq Date Time	2020-07-02T15:34:25-05:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	011CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	No Gas	104.824	2.425	3847958	1.90	100	104.8	90	110	
Be	9	1	No Gas	100.802	3.782	961428	1.90	100	100.8	90	110	
V	51	2	He	104.166	2.168	1374839	1.44	100	104.2	90	110	
Cr	52	2	He	103.639	1.105	1564919	0.14	100	103.6	90	110	
Fe	56	2	He	10491.880	2.702	144874285	2.22	10000	104.9	90	110	
Se	78	2	He	102.363	1.077	21203	0.43	100	102.4	90	110	
Sn	118	2	He	107.474	2.773	1262853	2.08	100	107.5	90	110	
As	75	2	He	103.145	0.982	238443	0.17	100	103.1	90	110	
Ca	44	2	He	10155.183	2.567	842254	2.07	10000	101.6	90	110	
Na	23	2	He	10760.351	1.760	23578365	2.42	10000	107.6	90	110	
Mg	24	2	He	10417.876	1.606	13274592	1.18	10000	104.2	90	110	
K	39	2	He	10450.467	2.073	16111876	1.74	10000	104.5	90	110	
Mn	55	2	He	103.397	0.496	1152702	0.69	100	103.4	90	110	
Co	59	2	He	108.083	3.708	2446577	2.75	100	108.1	90	110	
Ni	60	2	He	105.380	2.279	609105	1.77	100	105.4	90	110	
Cu	63	2	He	107.991	1.036	1695328	1.14	100	108.0	90	110	
Zn	66	2	He	104.742	0.361	320334	0.65	100	104.7	90	110	
Al	27	2	He	103.938	1.828	78293	1.94	100	103.9	90	110	
B	11	1	No Gas	555.218	2.604	3090176	1.53	500	111.0	90	110	CCV Main CR1-2 Failed
Al	27	1	No Gas	109.022	0.186	3721688	1.13	100	109.0	90	110	
Si	28	1	No Gas	568.401	1.547	10393003	0.49	5000	11.4	90	110	CCV Main CR1-2 Failed
P	31	1	No Gas	536.768	1.339	1019252	2.21	500	107.4	90	110	
Ag	107	1	No Gas	110.805	0.917	3739168	1.30	100	110.8	90	110	CCV Main CR1-2 Failed
Cd	111	1	No Gas	106.416	0.083	714217	0.79	100	106.4	90	110	
Sr	88	1	No Gas	113.244	2.633	7305598	2.11	100	113.2	90	110	CCV Main CR1-2 Failed
Mo	95	1	No Gas	108.562	2.195	1411883	1.65	100	108.6	90	110	
Sn	118	1	No Gas	108.941	0.750	2202059	0.19	100	108.9	90	110	
Sb	121	1	No Gas	102.132	1.170	2845764	0.25	100	102.1	90	110	
Ba	137	1	No Gas	104.478	1.081	985424	0.44	100	104.5	90	110	
Tl	205	1	No Gas	108.171	2.514	4944498	1.86	100	108.2	90	110	
Tl	203	1	No Gas	106.452	0.824	2086214	0.77	100	106.5	90	110	
Pb	208	1	No Gas	107.005	1.075	6825958	0.45	100	107.0	90	110	
U	238	1	No Gas	102.304	2.270	6324386	1.55	100	102.3	90	110	
Ca	43	2	He	10457.039	3.096	50553	3.55	10000	104.6	90	110	
Sb	121	2	He	104.268	2.907	1674300	3.06	100	104.3	90	110	
Ti	47	2	He	104.113	2.430	51426	1.50	100	104.1	90	110	
Cu	63	1	No Gas	105.777	2.491	2990243	1.23	100	105.8	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	3450385	2.67	3367912	102.45	70	120	
Ge	72	2	He	2178650	0.97	2128792	102.34	70	120	
Ge	72	1	No Gas	6727407	1.22	6259187	107.48	70	120	
In	115	1	No Gas	7088353	0.70	6832906	103.74	70	120	
Bi	209	1	No Gas	4967729	0.72	4819187	103.08	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	109_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\070220A.b
Acq Date Time	2020-07-02T15:36:08-05:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	011CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	1	No Gas	0.233	23.1	215236	0.1	0.5	
Be	9	1	No Gas	0.011	29.4	145	22.6	0.5	
V	51	2	He	0.014	51.4	2644	3.2	2.5	
Cr	52	2	He	-0.030	-32.8	2227	6.8	2.5	
Fe	56	2	He	0.105	91.7	27919	4.2	100	
Se	78	2	He	-0.063	-146.6	241	8.3	2	
As	75	2	He	-0.042	-35.2	380	8.5	2.5	
Ca	44	2	He	-0.265	-692.7	2550	6.2	100	
Na	23	2	He	194.785	1.7	744684	1.5	100	CCB Main CR1 Failed
Mg	24	2	He	1.097	10.2	3197	4.0	100	
K	39	2	He	6.942	11.9	120792	0.6	100	
Mn	55	2	He	0.353	5.1	5104	4.3	2.5	
Co	59	2	He	0.007	20.3	513	6.8	2.5	
Ni	60	2	He	-0.065	-27.9	613	16.3	2.5	
Cu	63	2	He	0.220	22.1	32092	2.4	2	
Zn	66	2	He	0.164	18.1	1190	7.2	2.5	
Al	27	2	He	1.933	14.2	3070	6.3	5	
B	11	1	No Gas	45.837	4.3	310889	3.7	0.5	CCB Main CR1 Failed
Al	27	1	No Gas	1.954	1.3	149782	0.6	5	
Si	28	1	No Gas	3.565	11.6	518125	0.7	10	
P	31	1	No Gas	0.213	113.0	50445	0.8	10	
Ag	107	1	No Gas	0.011	17.7	650	10.1	2.5	
Cd	111	1	No Gas	0.004	55.3	50	34.6	1	
Sr	88	1	No Gas	0.063	5.9	15155	0.9	2.5	
Mo	95	1	No Gas	0.043	6.1	730	4.7	2.5	
Sn	118	1	No Gas	-0.023	-71.0	6325	4.5	5	
Sb	121	1	No Gas	0.267	16.6	9347	13.7	2.5	
Ba	137	1	No Gas	-0.016	-41.0	1053	6.3	2.5	
Tl	205	1	No Gas	0.217	65.5	10356	64.8	1	
Tl	203	1	No Gas	0.212	66.5	4338	65.6	1	
Pb	208	1	No Gas	0.021	3.1	2594	3.1	2.5	
U	238	1	No Gas	0.007	27.4	460	25.6	2.5	
Ca	43	2	He	8.269	82.5	107	30.1	100	
Sb	121	2	He	0.209	7.7	4024	5.8	2.5	
Ti	47	2	He	0.041	128.2	33	75.5	2.5	
Cu	63	1	No Gas	0.214	10.7	61432	0.3	2.5	

QC ISTD Table

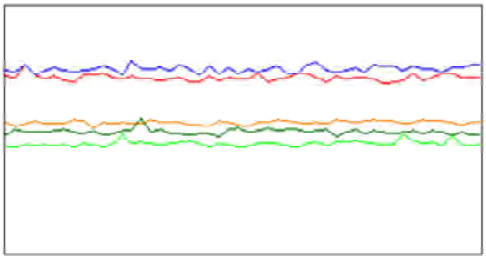
Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	3597481	1.03	3367912	106.82	70	120	
Ge	72	2	He	2150618	0.55	2128792	101.03	70	120	
Ge	72	1	No Gas	6985165	1.05	6259187	111.60	70	120	
In	115	1	No Gas	7559608	1.01	6832906	110.64	70	120	
Bi	209	1	No Gas	5101838	1.58	4819187	105.87	70	120	

Tune Check Report

Operator Name	ALSHS NoUser
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\070220A.b
Acq. Date-Time	7/2/2020 9:59:49 AM
Report Comment	---
Instrument Name	G8421A SG18523544

[No Gas]

Sensitivity



Sampling Period [sec]	0.514
Integration Time [sec]	0.1

Mass	Range	Count	Resp [cps/ug/l]	Resp (Required) [cps/ug/l]	Resp (Flag)
9	10000	7115	71153.18		
24	50000	22256	222562.94		
59	50000	37300	373002.08		
115	100000	53020	530202.46		
208	50000	24676	246763.03		

Mass	Resp Ratio	Resp Ratio (Required)	Resp Ratio (Flag)
9		-	
24		-	
59		-	
115		-	
208		-	

Mass	RSD%	RSD% (Required)	RSD% (Flag)
9	1.816	5.000	
24	2.693	5.000	
59	1.730	5.000	
115	1.603	5.000	
208	2.297	5.000	

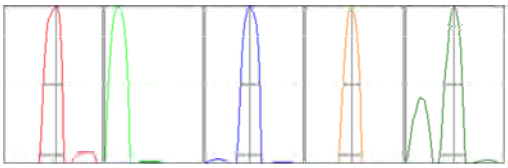
Mass	Background	Background (Required)	Background (Flag)
9	0.200		
24	0.600		
59	0.300		
115	1.000		
208	2.400		

Oxide/Doubly Charged Ratio

Oxide	156 / 140 0.793 %
Doubly Charged	70 / 140 1.475 %

Tune Check Report

Resolution/Axis



Integration Time [sec]	0.1
Acquisition Time [sec]	37.4
Y Axis	Linear

Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
9	7181.70	9.10	8.90 - 9.10	
24	22426.16	23.95	23.90 - 24.10	
59	37828.53	58.90	58.90 - 59.10	
115	53977.37	114.95	114.90 - 115.10	
208	24812.77	208.00	207.90 - 208.10	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (Flag)
9	0.60	0.734		
24	0.62	0.736		
59	0.57	0.732		
115	0.51	0.684		
208	0.56	0.769		

Tune Parameters

Plasma Parameters

Plasma Mode	---	Nebulizer Gas	0.45 L/min	Dilution Gas	0.55 L/min
RF Power	1600 W	Option Gas	---	Auxiliary Gas	0.90 L/min
RF Matching	1.80 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min
Sample Depth	8.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	9.1 V	Deflect	12.6 V
Extract 2	-195.0 V	Cell Entrance	-30 V	Plate Bias	-35 V
Omega Bias	-90 V	Cell Exit	-50 V		

Cell Parameters

Use Gas	No	3rd Gas Flow	---	Energy Discrimination	5.0 V
He Flow	0.0 mL/min	OctP Bias	-8.0 V		
H2 Flow	---	OctP RF	190 V		

QP Parameters

Mass Gain	132	Axis Gain	1.0003	QP Bias	-3.0 V
Mass Offset	126	Axis Offset	0.05		

Hardware Settings

Torch

Torch H	-0.3 mm	Torch V	0.2 mm

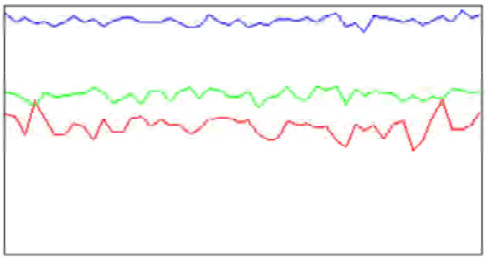
EM

Discriminator	3.1 mV	Analog HV	2384 V	Pulse HV	1167 V

[He]

Tune Check Report

Sensitivity



Sampling Period [sec]	0.306
Integration Time [sec]	0.1

Mass	Range	Count	Resp [cps/ug/l]	Resp (Required) [cps/ug/l]	Resp (Flag)
9	500	258	2577.04		
24	2000	1283	12831.86		
59	20000	18861	188606.93		

Mass	Resp Ratio	Resp Ratio (Required)	Resp Ratio (Flag)
9		-	
24		-	
59		-	

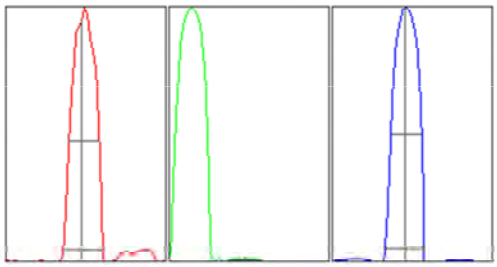
Mass	RSD%	RSD% (Required)	RSD% (Flag)
9	8.046	5.000	Fail
24	3.252	5.000	
59	1.783	5.000	

Mass	Background	Background (Required)	Background (Flag)
9	0.000		
24	0.300		
59	0.000		

Oxide/Doubly Charged Ratio

Oxide	156 / 140 0.435 %
Doubly Charged	70 / 140 1.130 %

Resolution/Axis



Integration Time [sec]	0.1
Acquisition Time [sec]	22.24
Y Axis	Linear

Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
9	250.03	8.95	8.90 - 9.10	
24	1252.61	23.95	23.90 - 24.10	
59	19507.06	58.90	58.90 - 59.10	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (Flag)
9	0.58	0.737		
24	0.62	0.735		

Tune Check Report

Mass	W-50%	W-5%	W-5% (Required)	W-5% (Flag)
59	0.56	0.728		

Tune Parameters

Plasma Parameters

Plasma Mode	---	Nebulizer Gas	0.45 L/min	Dilution Gas	0.55 L/min
RF Power	1600 W	Option Gas	---	Auxiliary Gas	0.90 L/min
RF Matching	1.80 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min
Sample Depth	8.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	10.0 V	Deflect	0.0 V
Extract 2	-195.0 V	Cell Entrance	-40 V	Plate Bias	-60 V
Omega Bias	-80 V	Cell Exit	-60 V		

Cell Parameters

Use Gas	Yes	3rd Gas Flow	---	Energy Discrimination	3.0 V
He Flow	4.0 mL/min	OctP Bias	-18.0 V		
H2 Flow	---	OctP RF	200 V		

QP Parameters

Mass Gain	132	Axis Gain	1.0003	QP Bias	-15.0 V
Mass Offset	126	Axis Offset	0.05		

Hardware Settings

Torch

Torch H	-0.3 mm	Torch V	0.2 mm

EM

Discriminator	3.1 mV	Analog HV	2384 V	Pulse HV	1167 V

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WorkOrder: HS20070055

LHAAP-58

Bhate Environmental Associates, Inc.

Marcia Olive
445 Union Blvd Ste 129
Lakewood CO 80228

13-Aug-2020

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HS20070055 LHAAP58 Final

ALS WO# HS20070055

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July 13, 2020

Marcia Olive
Bhate Environmental Associates, Inc.
445 Union Blvd Ste 129
Lakewood, CO 80228

Work Order: **HS20070055**

Laboratory Results for: **LHAAP-58**

Dear Marcia Olive,

ALS Environmental received 6 sample(s) on Jul 01, 2020 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: 13-Jul-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
Work Order: HS20070055

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS20070055-01	35AWW21_062920	Groundwater		29-Jun-2020 07:55	01-Jul-2020 09:40	☐
HS20070055-02	35AWW21_062920_a	Groundwater		29-Jun-2020 07:55	01-Jul-2020 09:40	☐
HS20070055-03	35AWW13_062920	Groundwater		29-Jun-2020 08:50	01-Jul-2020 09:40	☐
HS20070055-04	35AWW10_062920	Groundwater		29-Jun-2020 09:40	01-Jul-2020 09:40	☐
HS20070055-05	35AWW17_062920	Groundwater		29-Jun-2020 10:30	01-Jul-2020 09:40	☐
HS20070055-06	Trip Blank	Water	CG 042320 -61	29-Jun-2020 00:00	01-Jul-2020 09:40	☐

ALS Houston, US Date: 13-Jul-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
Work Order: HS20070055

CASE NARRATIVE

GCMS Volatiles by Method SW8260

Batch ID: R364746

Sample ID: 35AWW13_062920 (HS20070055-03MS)

- 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 failed recovery of the MS may be due to sample matrix interference.

Sample ID: 35AWW13_062920 (HS20070055-03MSD)

- The recovery of the Matrix Spike Duplicate (MSD) 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.

  The RPD between the MS and MSD was outside of the control limit.

Batch ID: R364892

Sample ID: VLCSW-200710

- 1,2,3-Trichlorobenzene, 1,2,4-Trichlorobenzene and Naphthalene exceeded QC limits for LCS. Samples are ND for these compounds.

Sample ID: HS20070043-17MS

- MS and MSD are for an unrelated sample

ALS Houston, US Date: 13-Jul-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
Sample ID: 35AWW21_062920
Collection Date: 29-Jun-2020 07:55

ANALYTICAL REPORT
WorkOrder:HS20070055
Lab ID:HS20070055-01
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	10-Jul-2020 14:20
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	10-Jul-2020 14:20
1,1,2,2-Tetrachloroethane	1.0	U	0.50	1.0	1.0	UG/L	1	10-Jul-2020 14:20
1,1,2-Trichloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	10-Jul-2020 14:20
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	10-Jul-2020 14:20
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	10-Jul-2020 14:20
1,1-Dichloropropene	1.0	U	0.30	1.0	1.0	UG/L	1	10-Jul-2020 14:20
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	10-Jul-2020 14:20
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	10-Jul-2020 14:20
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	10-Jul-2020 14:20
1,2,4-Trimethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	10-Jul-2020 14:20
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	10-Jul-2020 14:20
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	UG/L	1	10-Jul-2020 14:20
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	10-Jul-2020 14:20
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	10-Jul-2020 14:20
1,2-Dichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	10-Jul-2020 14:20
1,3,5-Trimethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	10-Jul-2020 14:20
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	10-Jul-2020 14:20
1,3-Dichloropropane	1.0	U	0.30	1.0	1.0	UG/L	1	10-Jul-2020 14:20
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	10-Jul-2020 14:20
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	10-Jul-2020 14:20
2-Butanone	1.0	U	0.50	1.0	2.0	UG/L	1	10-Jul-2020 14:20
2-Chlorotoluene	1.0	U	0.30	1.0	1.0	UG/L	1	10-Jul-2020 14:20
2-Hexanone	2.0	U	1.0	2.0	2.0	UG/L	1	10-Jul-2020 14:20
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	UG/L	1	10-Jul-2020 14:20
4-Isopropyltoluene	1.0	U	0.30	1.0	1.0	UG/L	1	10-Jul-2020 14:20
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	UG/L	1	10-Jul-2020 14:20
Acetone	1.0	U	0.40	1.0	2.0	UG/L	1	10-Jul-2020 14:20
Benzene	0.50	U	0.20	0.50	1.0	UG/L	1	10-Jul-2020 14:20
Bromobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	10-Jul-2020 14:20
Bromochloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	10-Jul-2020 14:20
Bromodichloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	10-Jul-2020 14:20
Bromoform	1.0	U	0.40	1.0	1.0	UG/L	1	10-Jul-2020 14:20
Bromomethane	1.0	U	0.40	1.0	1.0	UG/L	1	10-Jul-2020 14:20
Carbon disulfide	1.0	U	0.60	1.0	2.0	UG/L	1	10-Jul-2020 14:20
Carbon tetrachloride	1.0	U	0.50	1.0	1.0	UG/L	1	10-Jul-2020 14:20
Chlorobenzene	1.0	U	0.30	1.0	1.0	UG/L	1	10-Jul-2020 14:20
Chloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	10-Jul-2020 14:20
Chloroform	0.50	U	0.20	0.50	1.0	UG/L	1	10-Jul-2020 14:20

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

ALS Houston, US Date: 13-Jul-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
Sample ID: 35AWW21_062920
Collection Date: 29-Jun-2020 07:55

ANALYTICAL REPORT
WorkOrder:HS20070055
Lab ID:HS20070055-01
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
Chloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	10-Jul-2020 14:20
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	10-Jul-2020 14:20
cis-1,3-Dichloropropene	0	U	0.10	0	1.0	UG/L	1	10-Jul-2020 14:20
Dibromochloromethane	1.0	U	0.30	1.0	1.0	UG/L	1	10-Jul-2020 14:20
Dibromomethane	0.50	U	0.20	0.50	1.0	UG/L	1	10-Jul-2020 14:20
Dichlorodifluoromethane	1.0	U	0.30	1.0	1.0	UG/L	1	10-Jul-2020 14:20
Ethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	10-Jul-2020 14:20
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	UG/L	1	10-Jul-2020 14:20
Isopropylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	10-Jul-2020 14:20
m,p-Xylene	1.0	U	0.50	1.0	2.0	UG/L	1	10-Jul-2020 14:20
Methylene chloride	1.0	U	0.40	1.0	2.0	UG/L	1	10-Jul-2020 14:20
n-Butylbenzene	1.0	U	0.40	1.0	1.0	UG/L	1	10-Jul-2020 14:20
n-Propylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	10-Jul-2020 14:20
Naphthalene	1.0	U	0.30	1.0	1.0	UG/L	1	10-Jul-2020 14:20
o-Xylene	1.0	U	0.30	1.0	1.0	UG/L	1	10-Jul-2020 14:20
sec-Butylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	10-Jul-2020 14:20
Styrene	1.0	U	0.30	1.0	1.0	UG/L	1	10-Jul-2020 14:20
tert-Butylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	10-Jul-2020 14:20
Tetrachloroethene	1.0	U	0.30	1.0	1.0	UG/L	1	10-Jul-2020 14:20
Toluene	0.50	U	0.20	0.50	1.0	UG/L	1	10-Jul-2020 14:20
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	10-Jul-2020 14:20
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	UG/L	1	10-Jul-2020 14:20
Trichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	10-Jul-2020 14:20
Trichlorofluoromethane	1.0	U	0.30	1.0	1.0	UG/L	1	10-Jul-2020 14:20
Vinyl chloride	0.50	U	0.20	0.50	1.0	UG/L	1	10-Jul-2020 14:20
Surr: 1,2-Dichloroethane-d4	*86.4*			**0**	*81-118*	*%REC*	*1*	*10-Jul-2020 14:20*
Surr: 4-Bromofluorobenzene	*99.0*			**0**	*85-114*	*%REC*	*1*	*10-Jul-2020 14:20*
Surr: Dibromofluoromethane	*90.8*			**0**	*80-119*	*%REC*	*1*	*10-Jul-2020 14:20*
Surr: Toluene-d8	*104*			**0**	*89-112*	*%REC*	*1*	*10-Jul-2020 14:20*

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

ALS Houston, US Date: 13-Jul-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
Sample ID: 35AWW21_062920_a
Collection Date: 29-Jun-2020 07:55

ANALYTICAL REPORT
WorkOrder:HS20070055
Lab ID:HS20070055-02
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 15:01
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 15:01
1,1,2,2-Tetrachloroethane	1.0	U	0.50	1.0	1.0	UG/L	1	08-Jul-2020 15:01
1,1,2-Trichloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 15:01
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 15:01
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 15:01
1,1-Dichloropropene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 15:01
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	08-Jul-2020 15:01
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	08-Jul-2020 15:01
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	08-Jul-2020 15:01
1,2,4-Trimethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 15:01
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 15:01
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 15:01
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	08-Jul-2020 15:01
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 15:01
1,2-Dichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	08-Jul-2020 15:01
1,3,5-Trimethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 15:01
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	08-Jul-2020 15:01
1,3-Dichloropropane	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 15:01
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	08-Jul-2020 15:01
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 15:01
2-Butanone	1.0	U	0.50	1.0	2.0	UG/L	1	08-Jul-2020 15:01
2-Chlorotoluene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 15:01
2-Hexanone	2.0	U	1.0	2.0	2.0	UG/L	1	08-Jul-2020 15:01
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	UG/L	1	08-Jul-2020 15:01
4-Isopropyltoluene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 15:01
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	UG/L	1	08-Jul-2020 15:01
Acetone	1.0	U	0.40	1.0	2.0	UG/L	1	08-Jul-2020 15:01
Benzene	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 15:01
Bromobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	08-Jul-2020 15:01
Bromochloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 15:01
Bromodichloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 15:01
Bromoform	1.0	U	0.40	1.0	1.0	UG/L	1	08-Jul-2020 15:01
Bromomethane	1.0	U	0.40	1.0	1.0	UG/L	1	08-Jul-2020 15:01
Carbon disulfide	1.0	U	0.60	1.0	2.0	UG/L	1	08-Jul-2020 15:01
Carbon tetrachloride	1.0	U	0.50	1.0	1.0	UG/L	1	08-Jul-2020 15:01
Chlorobenzene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 15:01
Chloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 15:01
Chloroform	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 15:01

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

ALS Houston, US Date: 13-Jul-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
Sample ID: 35AWW21_062920_a
Collection Date: 29-Jun-2020 07:55

ANALYTICAL REPORT
WorkOrder:HS20070055
Lab ID:HS20070055-02
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
Chloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 15:01
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 15:01
cis-1,3-Dichloropropene	0	U	0.10	0	1.0	UG/L	1	08-Jul-2020 15:01
Dibromochloromethane	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 15:01
Dibromomethane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 15:01
Dichlorodifluoromethane	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 15:01
Ethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 15:01
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	UG/L	1	08-Jul-2020 15:01
Isopropylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 15:01
m,p-Xylene	1.0	U	0.50	1.0	2.0	UG/L	1	08-Jul-2020 15:01
Methylene chloride	1.0	U	0.40	1.0	2.0	UG/L	1	08-Jul-2020 15:01
n-Butylbenzene	1.0	U	0.40	1.0	1.0	UG/L	1	08-Jul-2020 15:01
n-Propylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 15:01
Naphthalene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 15:01
o-Xylene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 15:01
sec-Butylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 15:01
Styrene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 15:01
tert-Butylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 15:01
Tetrachloroethene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 15:01
Toluene	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 15:01
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 15:01
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 15:01
Trichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 15:01
Trichlorofluoromethane	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 15:01
Vinyl chloride	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 15:01
Surr: 1,2-Dichloroethane-d4	*87.6*			**0**	*81-118*	*%REC*	*1*	*08-Jul-2020 15:01*
Surr: 4-Bromofluorobenzene	*96.6*			**0**	*85-114*	*%REC*	*1*	*08-Jul-2020 15:01*
Surr: Dibromofluoromethane	*91.3*			**0**	*80-119*	*%REC*	*1*	*08-Jul-2020 15:01*
Surr: Toluene-d8	*106*			**0**	*89-112*	*%REC*	*1*	*08-Jul-2020 15:01*

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

ALS Houston, US Date: 13-Jul-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
Sample ID: 35AWW13_062920
Collection Date: 29-Jun-2020 08:50

ANALYTICAL REPORT
WorkOrder:HS20070055
Lab ID:HS20070055-03
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 15:49
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 15:49
1,1,2,2-Tetrachloroethane	1.0	U	0.50	1.0	1.0	UG/L	1	08-Jul-2020 15:49
1,1,2-Trichloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 15:49
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 15:49
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 15:49
1,1-Dichloropropene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 15:49
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	08-Jul-2020 15:49
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	08-Jul-2020 15:49
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	08-Jul-2020 15:49
1,2,4-Trimethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 15:49
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 15:49
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 15:49
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	08-Jul-2020 15:49
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 15:49
1,2-Dichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	08-Jul-2020 15:49
1,3,5-Trimethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 15:49
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	08-Jul-2020 15:49
1,3-Dichloropropane	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 15:49
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	08-Jul-2020 15:49
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 15:49
2-Butanone	1.0	U	0.50	1.0	2.0	UG/L	1	08-Jul-2020 15:49
2-Chlorotoluene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 15:49
2-Hexanone	2.0	U	1.0	2.0	2.0	UG/L	1	08-Jul-2020 15:49
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	UG/L	1	08-Jul-2020 15:49
4-Isopropyltoluene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 15:49
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	UG/L	1	08-Jul-2020 15:49
Acetone	1.0	U	0.40	1.0	2.0	UG/L	1	08-Jul-2020 15:49
Benzene	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 15:49
Bromobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	08-Jul-2020 15:49
Bromochloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 15:49
Bromodichloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 15:49
Bromoform	1.0	U	0.40	1.0	1.0	UG/L	1	08-Jul-2020 15:49
Bromomethane	1.0	U	0.40	1.0	1.0	UG/L	1	08-Jul-2020 15:49
Carbon disulfide	1.0	U	0.60	1.0	2.0	UG/L	1	08-Jul-2020 15:49
Carbon tetrachloride	1.0	U	0.50	1.0	1.0	UG/L	1	08-Jul-2020 15:49
Chlorobenzene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 15:49
Chloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 15:49
Chloroform	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 15:49

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

ALS Houston, US Date: 13-Jul-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
Sample ID: 35AWW13_062920
Collection Date: 29-Jun-2020 08:50

ANALYTICAL REPORT
WorkOrder:HS20070055
Lab ID:HS20070055-03
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
Chloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 15:49
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 15:49
cis-1,3-Dichloropropene	0	U	0.10	0	1.0	UG/L	1	08-Jul-2020 15:49
Dibromochloromethane	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 15:49
Dibromomethane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 15:49
Dichlorodifluoromethane	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 15:49
Ethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 15:49
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	UG/L	1	08-Jul-2020 15:49
Isopropylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 15:49
m,p-Xylene	1.0	U	0.50	1.0	2.0	UG/L	1	08-Jul-2020 15:49
Methylene chloride	1.0	U	0.40	1.0	2.0	UG/L	1	08-Jul-2020 15:49
n-Butylbenzene	1.0	U	0.40	1.0	1.0	UG/L	1	08-Jul-2020 15:49
n-Propylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 15:49
Naphthalene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 15:49
o-Xylene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 15:49
sec-Butylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 15:49
Styrene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 15:49
tert-Butylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 15:49
Tetrachloroethene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 15:49
Toluene	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 15:49
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 15:49
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 15:49
Trichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 15:49
Trichlorofluoromethane	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 15:49
Vinyl chloride	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 15:49
Surr: 1,2-Dichloroethane-d4	*94.2*			**0**	*81-118*	*%REC*	*1*	*08-Jul-2020 15:49*
Surr: 4-Bromofluorobenzene	*106*			**0**	*85-114*	*%REC*	*1*	*08-Jul-2020 15:49*
Surr: Dibromofluoromethane	*97.4*			**0**	*80-119*	*%REC*	*1*	*08-Jul-2020 15:49*
Surr: Toluene-d8	*102*			**0**	*89-112*	*%REC*	*1*	*08-Jul-2020 15:49*

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

ALS Houston, US Date: 13-Jul-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
Sample ID: 35AWW10_062920
Collection Date: 29-Jun-2020 09:40

ANALYTICAL REPORT
WorkOrder:HS20070055
Lab ID:HS20070055-04
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 16:13
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 16:13
1,1,2,2-Tetrachloroethane	1.0	U	0.50	1.0	1.0	UG/L	1	08-Jul-2020 16:13
1,1,2-Trichloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 16:13
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 16:13
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 16:13
1,1-Dichloropropene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 16:13
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	08-Jul-2020 16:13
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	08-Jul-2020 16:13
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	08-Jul-2020 16:13
1,2,4-Trimethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 16:13
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 16:13
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 16:13
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	08-Jul-2020 16:13
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 16:13
1,2-Dichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	08-Jul-2020 16:13
1,3,5-Trimethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 16:13
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	08-Jul-2020 16:13
1,3-Dichloropropane	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 16:13
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	08-Jul-2020 16:13
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 16:13
2-Butanone	1.0	U	0.50	1.0	2.0	UG/L	1	08-Jul-2020 16:13
2-Chlorotoluene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 16:13
2-Hexanone	2.0	U	1.0	2.0	2.0	UG/L	1	08-Jul-2020 16:13
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	UG/L	1	08-Jul-2020 16:13
4-Isopropyltoluene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 16:13
4-Methyl-2-pentanone	1.0	U	0.70	1.0	2.0	UG/L	1	08-Jul-2020 16:13
Acetone	1.0	U	0.40	1.0	2.0	UG/L	1	08-Jul-2020 16:13
Benzene	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 16:13
Bromobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	08-Jul-2020 16:13
Bromochloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 16:13
Bromodichloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 16:13
Bromoform	1.0	U	0.40	1.0	1.0	UG/L	1	08-Jul-2020 16:13
Bromomethane	1.0	U	0.40	1.0	1.0	UG/L	1	08-Jul-2020 16:13
Carbon disulfide	1.0	U	0.60	1.0	2.0	UG/L	1	08-Jul-2020 16:13
Carbon tetrachloride	1.0	U	0.50	1.0	1.0	UG/L	1	08-Jul-2020 16:13
Chlorobenzene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 16:13
Chloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 16:13
Chloroform	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 16:13

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

ALS Houston, US Date: 13-Jul-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
Sample ID: 35AWW10_062920
Collection Date: 29-Jun-2020 09:40

ANALYTICAL REPORT
WorkOrder:HS20070055
Lab ID:HS20070055-04
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
Chloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 16:13
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 16:13
cis-1,3-Dichloropropene	0	U	0.10	0	1.0	UG/L	1	08-Jul-2020 16:13
Dibromochloromethane	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 16:13
Dibromomethane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 16:13
Dichlorodifluoromethane	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 16:13
Ethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 16:13
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	UG/L	1	08-Jul-2020 16:13
Isopropylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 16:13
m,p-Xylene	1.0	U	0.50	1.0	2.0	UG/L	1	08-Jul-2020 16:13
Methylene chloride	1.0	U	0.40	1.0	2.0	UG/L	1	08-Jul-2020 16:13
n-Butylbenzene	1.0	U	0.40	1.0	1.0	UG/L	1	08-Jul-2020 16:13
n-Propylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 16:13
Naphthalene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 16:13
o-Xylene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 16:13
sec-Butylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 16:13
Styrene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 16:13
tert-Butylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 16:13
Tetrachloroethene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 16:13
Toluene	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 16:13
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 16:13
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 16:13
Trichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 16:13
Trichlorofluoromethane	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 16:13
Vinyl chloride	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 16:13
Surr: 1,2-Dichloroethane-d4	*94.8*			**0**	*81-118*	*%REC*	*1*	*08-Jul-2020 16:13*
Surr: 4-Bromofluorobenzene	*104*			**0**	*85-114*	*%REC*	*1*	*08-Jul-2020 16:13*
Surr: Dibromofluoromethane	*97.9*			**0**	*80-119*	*%REC*	*1*	*08-Jul-2020 16:13*
Surr: Toluene-d8	*101*			**0**	*89-112*	*%REC*	*1*	*08-Jul-2020 16:13*

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

ALS Houston, US Date: 13-Jul-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
Sample ID: 35AWW17_062920
Collection Date: 29-Jun-2020 10:30

ANALYTICAL REPORT
WorkOrder:HS20070055
Lab ID:HS20070055-05
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 16:36
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 16:36
1,1,2,2-Tetrachloroethane	1.0	U	0.50	1.0	1.0	UG/L	1	08-Jul-2020 16:36
1,1,2-Trichloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 16:36
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 16:36
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 16:36
1,1-Dichloropropene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 16:36
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	08-Jul-2020 16:36
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	08-Jul-2020 16:36
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	08-Jul-2020 16:36
1,2,4-Trimethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 16:36
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 16:36
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 16:36
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	08-Jul-2020 16:36
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 16:36
1,2-Dichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	08-Jul-2020 16:36
1,3,5-Trimethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 16:36
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	08-Jul-2020 16:36
1,3-Dichloropropane	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 16:36
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	08-Jul-2020 16:36
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 16:36
2-Butanone	1.0	U	0.50	1.0	2.0	UG/L	1	08-Jul-2020 16:36
2-Chlorotoluene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 16:36
2-Hexanone	2.0	U	1.0	2.0	2.0	UG/L	1	08-Jul-2020 16:36
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	UG/L	1	08-Jul-2020 16:36
4-Isopropyltoluene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 16:36
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	UG/L	1	08-Jul-2020 16:36
Acetone	1.0	U	0.40	1.0	2.0	UG/L	1	08-Jul-2020 16:36
Benzene	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 16:36
Bromobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	08-Jul-2020 16:36
Bromochloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 16:36
Bromodichloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 16:36
Bromoform	1.0	U	0.40	1.0	1.0	UG/L	1	08-Jul-2020 16:36
Bromomethane	1.0	U	0.40	1.0	1.0	UG/L	1	08-Jul-2020 16:36
Carbon disulfide	1.0	U	0.60	1.0	2.0	UG/L	1	08-Jul-2020 16:36
Carbon tetrachloride	1.0	U	0.50	1.0	1.0	UG/L	1	08-Jul-2020 16:36
Chlorobenzene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 16:36
Chloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 16:36
Chloroform	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 16:36

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

ALS Houston, US Date: 13-Jul-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
Sample ID: 35AWW17_062920
Collection Date: 29-Jun-2020 10:30

ANALYTICAL REPORT
WorkOrder:HS20070055
Lab ID:HS20070055-05
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
Chloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 16:36
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 16:36
cis-1,3-Dichloropropene	0	U	0.10	0	1.0	UG/L	1	08-Jul-2020 16:36
Dibromochloromethane	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 16:36
Dibromomethane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 16:36
Dichlorodifluoromethane	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 16:36
Ethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 16:36
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	UG/L	1	08-Jul-2020 16:36
Isopropylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 16:36
m,p-Xylene	1.0	U	0.50	1.0	2.0	UG/L	1	08-Jul-2020 16:36
Methylene chloride	1.0	U	0.40	1.0	2.0	UG/L	1	08-Jul-2020 16:36
n-Butylbenzene	1.0	U	0.40	1.0	1.0	UG/L	1	08-Jul-2020 16:36
n-Propylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 16:36
Naphthalene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 16:36
o-Xylene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 16:36
sec-Butylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 16:36
Styrene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 16:36
tert-Butylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 16:36
Tetrachloroethene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 16:36
Toluene	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 16:36
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 16:36
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 16:36
Trichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 16:36
Trichlorofluoromethane	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 16:36
Vinyl chloride	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 16:36
Surr: 1,2-Dichloroethane-d4	*95.3*			**0**	*81-118*	*%REC*	*1*	*08-Jul-2020 16:36*
Surr: 4-Bromofluorobenzene	*101*			**0**	*85-114*	*%REC*	*1*	*08-Jul-2020 16:36*
Surr: Dibromofluoromethane	*96.7*			**0**	*80-119*	*%REC*	*1*	*08-Jul-2020 16:36*
Surr: Toluene-d8	*98.4*			**0**	*89-112*	*%REC*	*1*	*08-Jul-2020 16:36*

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

ALS Houston, US Date: 13-Jul-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
Sample ID: Trip Blank
Collection Date: 29-Jun-2020 00:00

ANALYTICAL REPORT
WorkOrder:HS20070055
Lab ID:HS20070055-06
Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 15:25
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 15:25
1,1,2,2-Tetrachloroethane	1.0	U	0.50	1.0	1.0	UG/L	1	08-Jul-2020 15:25
1,1,2-Trichloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 15:25
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 15:25
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 15:25
1,1-Dichloropropene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 15:25
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	08-Jul-2020 15:25
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	08-Jul-2020 15:25
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	08-Jul-2020 15:25
1,2,4-Trimethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 15:25
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 15:25
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 15:25
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	08-Jul-2020 15:25
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 15:25
1,2-Dichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	08-Jul-2020 15:25
1,3,5-Trimethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 15:25
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	08-Jul-2020 15:25
1,3-Dichloropropane	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 15:25
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	08-Jul-2020 15:25
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 15:25
2-Butanone	1.0	U	0.50	1.0	2.0	UG/L	1	08-Jul-2020 15:25
2-Chlorotoluene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 15:25
2-Hexanone	2.0	U	1.0	2.0	2.0	UG/L	1	08-Jul-2020 15:25
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	UG/L	1	08-Jul-2020 15:25
4-Isopropyltoluene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 15:25
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	UG/L	1	08-Jul-2020 15:25
Acetone	1.0	U	0.40	1.0	2.0	UG/L	1	08-Jul-2020 15:25
Benzene	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 15:25
Bromobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	08-Jul-2020 15:25
Bromochloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 15:25
Bromodichloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 15:25
Bromoform	1.0	U	0.40	1.0	1.0	UG/L	1	08-Jul-2020 15:25
Bromomethane	1.0	U	0.40	1.0	1.0	UG/L	1	08-Jul-2020 15:25
Carbon disulfide	1.0	U	0.60	1.0	2.0	UG/L	1	08-Jul-2020 15:25
Carbon tetrachloride	1.0	U	0.50	1.0	1.0	UG/L	1	08-Jul-2020 15:25
Chlorobenzene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 15:25
Chloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 15:25
Chloroform	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 15:25

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

ALS Houston, US Date: 13-Jul-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
Sample ID: Trip Blank
Collection Date: 29-Jun-2020 00:00

ANALYTICAL REPORT
WorkOrder:HS20070055
Lab ID:HS20070055-06
Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
Chloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 15:25
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 15:25
cis-1,3-Dichloropropene	0	U	0.10	0	1.0	UG/L	1	08-Jul-2020 15:25
Dibromochloromethane	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 15:25
Dibromomethane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 15:25
Dichlorodifluoromethane	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 15:25
Ethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 15:25
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	UG/L	1	08-Jul-2020 15:25
Isopropylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 15:25
m,p-Xylene	1.0	U	0.50	1.0	2.0	UG/L	1	08-Jul-2020 15:25
Methylene chloride	1.0	U	0.40	1.0	2.0	UG/L	1	08-Jul-2020 15:25
n-Butylbenzene	1.0	U	0.40	1.0	1.0	UG/L	1	08-Jul-2020 15:25
n-Propylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 15:25
Naphthalene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 15:25
o-Xylene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 15:25
sec-Butylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 15:25
Styrene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 15:25
tert-Butylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 15:25
Tetrachloroethene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 15:25
Toluene	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 15:25
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 15:25
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 15:25
Trichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 15:25
Trichlorofluoromethane	1.0	U	0.30	1.0	1.0	UG/L	1	08-Jul-2020 15:25
Vinyl chloride	0.50	U	0.20	0.50	1.0	UG/L	1	08-Jul-2020 15:25
Surr: 1,2-Dichloroethane-d4	*94.7*			**0**	*81-118*	*%REC*	*1*	*08-Jul-2020 15:25*
Surr: 4-Bromofluorobenzene	*87.5*			**0**	*85-114*	*%REC*	*1*	*08-Jul-2020 15:25*
Surr: Dibromofluoromethane	*97.3*			**0**	*80-119*	*%REC*	*1*	*08-Jul-2020 15:25*
Surr: Toluene-d8	*106*			**0**	*89-112*	*%REC*	*1*	*08-Jul-2020 15:25*

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

ALS Houston, US Date: 13-Jul-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
WorkOrder: HS20070055

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: R364746 (0)	**Test Name :** VOLATILES ORGANICS BY METHOD 8260C				**Matrix:** Water	
HS20070055-06	Trip Blank	29 Jun 2020 00:00			08 Jul 2020 15:25	1
Batch ID: R364746 (0)	**Test Name :** VOLATILES ORGANICS BY METHOD 8260C				**Matrix:** Groundwater	
HS20070055-02	35AWW21_062920_a	29 Jun 2020 07:55			08 Jul 2020 15:01	1
HS20070055-03	35AWW13_062920	29 Jun 2020 08:50			08 Jul 2020 15:49	1
HS20070055-04	35AWW10_062920	29 Jun 2020 09:40			08 Jul 2020 16:13	1
HS20070055-05	35AWW17_062920	29 Jun 2020 10:30			08 Jul 2020 16:36	1
Batch ID: R364892 (0)	**Test Name :** VOLATILES ORGANICS BY METHOD 8260C				**Matrix:** Groundwater	
HS20070055-01	35AWW21_062920	29 Jun 2020 07:55			10 Jul 2020 14:20	1

ALS Houston, US Date: 13-Jul-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
WorkOrder: HS20070055

QC BATCH REPORT

Batch ID: R364746 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MBLK Sample ID: **VBLKW-200708** Units: **UG/L** Analysis Date: **08-Jul-2020 13:49**
Client ID: Run ID: **VOA6_364746** SeqNo: **5655577** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	1.0	1.0								U
1,1,1-Trichloroethane	0.50	1.0								U
1,1,2,2-Tetrachloroethane	1.0	1.0								U
1,1,2-Trichloroethane	1.0	1.0								U
1,1-Dichloroethane	0.50	1.0								U
1,1-Dichloroethene	0.50	1.0								U
1,1-Dichloropropene	1.0	1.0								U
1,2,3-Trichlorobenzene	1.0	1.0								U
1,2,3-Trichloropropane	1.0	1.0								U
1,2,4-Trichlorobenzene	1.0	1.0								U
1,2,4-Trimethylbenzene	1.0	1.0								U
1,2-Dibromo-3-chloropropane	0.50	1.0								U
1,2-Dibromoethane	0.50	1.0								U
1,2-Dichlorobenzene	1.0	1.0								U
1,2-Dichloroethane	0.50	1.0								U
1,2-Dichloropropane	1.0	1.0								U
1,3,5-Trimethylbenzene	1.0	1.0								U
1,3-Dichlorobenzene	1.0	1.0								U
1,3-Dichloropropane	1.0	1.0								U
1,4-Dichlorobenzene	1.0	1.0								U
2,2-Dichloropropane	0.50	1.0								U
2-Butanone	1.0	2.0								U
2-Chlorotoluene	1.0	1.0								U
2-Hexanone	2.0	2.0								U
4-Chlorotoluene	1.0	1.0								U
4-Isopropyltoluene	1.0	1.0								U
4-Methyl-2-pentanone	2.0	2.0								U
Acetone	1.0	2.0								U
Benzene	0.50	1.0								U
Bromobenzene	1.0	1.0								U
Bromochloromethane	0.50	1.0								U
Bromodichloromethane	0.50	1.0								U
Bromoform	1.0	1.0								U
Bromomethane	1.0	1.0								U

ALS Houston, US Date: 13-Jul-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
WorkOrder: HS20070055

QC BATCH REPORT

Batch ID: R364746 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MBLK Sample ID: **VBLKW-200708** Units: **UG/L** Analysis Date: **08-Jul-2020 13:49**
Client ID: Run ID: **VOA6_364746** SeqNo: **5655577** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Carbon disulfide	1.0	2.0								U
Carbon tetrachloride	1.0	1.0								U
Chlorobenzene	1.0	1.0								U
Chloroethane	1.0	1.0								U
Chloroform	0.50	1.0								U
Chloromethane	0.50	1.0								U
cis-1,2-Dichloroethene	0.50	1.0								U
cis-1,3-Dichloropropene	0	1.0								U
Dibromochloromethane	1.0	1.0								U
Dibromomethane	0.50	1.0								U
Dichlorodifluoromethane	1.0	1.0								U
Ethylbenzene	1.0	1.0								U
Hexachlorobutadiene	1.0	1.0								U
Isopropylbenzene	1.0	1.0								U
m,p-Xylene	1.0	2.0								U
Methylene chloride	1.0	2.0								U
Naphthalene	1.0	1.0								U
n-Butylbenzene	1.0	1.0								U
n-Propylbenzene	1.0	1.0								U
o-Xylene	1.0	1.0								U
sec-Butylbenzene	1.0	1.0								U
Styrene	1.0	1.0								U
tert-Butylbenzene	1.0	1.0								U
Tetrachloroethene	1.0	1.0								U
Toluene	0.50	1.0								U
trans-1,2-Dichloroethene	0.50	1.0								U
trans-1,3-Dichloropropene	0.50	1.0								U
Trichloroethene	0.50	1.0								U
Trichlorofluoromethane	1.0	1.0								U
Vinyl chloride	0.50	1.0								U
Surr: 1,2-Dichloroethane-d4	*44.73*	*1.0*	*50*	*0*	*89.5*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*50.31*	*1.0*	*50*	*0*	*101*	*85 - 114*				
Surr: Dibromofluoromethane	*47.03*	*1.0*	*50*	*0*	*94.1*	*80 - 119*				
Surr: Toluene-d8	*52.05*	*1.0*	*50*	*0*	*104*	*89 - 112*				

ALS Houston, US Date: 13-Jul-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
WorkOrder: HS20070055

QC BATCH REPORT

Batch ID: R364746 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

LCS Sample ID: **VLCSW-200708** Units: **UG/L** Analysis Date: **08-Jul-2020 12:36**
Client ID: Run ID: **VOA6_364746** SeqNo: **5655576** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	19.38	1.0	20	0	96.9	78 - 124				
1,1,1-Trichloroethane	19.17	1.0	20	0	95.9	74 - 131				
1,1,2,2-Tetrachloroethane	17.67	1.0	20	0	88.4	71 - 121				
1,1,2-Trichloroethane	18.86	1.0	20	0	94.3	80 - 119				
1,1-Dichloroethane	18.55	1.0	20	0	92.8	77 - 125				
1,1-Dichloroethene	19.51	1.0	20	0	97.5	71 - 131				
1,1-Dichloropropene	18.73	1.0	20	0	93.7	78 - 125				
1,2,3-Trichlorobenzene	21.47	1.0	20	0	107	69 - 129				
1,2,3-Trichloropropane	17.83	1.0	20	0	89.2	73 - 122				
1,2,4-Trichlorobenzene	21.55	1.0	20	0	108	69 - 130				
1,2,4-Trimethylbenzene	19.14	1.0	20	0	95.7	76 - 124				
1,2-Dibromo-3-chloropropane	14.77	1.0	20	0	73.8	62 - 128				
1,2-Dibromoethane	18.65	1.0	20	0	93.2	77 - 121				
1,2-Dichlorobenzene	18.07	1.0	20	0	90.3	80 - 119				
1,2-Dichloroethane	19.73	1.0	20	0	98.6	73 - 128				
1,2-Dichloropropane	19.8	1.0	20	0	99.0	78 - 122				
1,3,5-Trimethylbenzene	19.58	1.0	20	0	97.9	75 - 124				
1,3-Dichlorobenzene	19.11	1.0	20	0	95.5	80 - 119				
1,3-Dichloropropane	18.9	1.0	20	0	94.5	80 - 119				
1,4-Dichlorobenzene	19.88	1.0	20	0	99.4	79 - 118				
2,2-Dichloropropane	20.66	1.0	20	0	103	60 - 139				
2-Butanone	33.67	2.0	40	0	84.2	56 - 143				
2-Chlorotoluene	18.84	1.0	20	0	94.2	79 - 122				
2-Hexanone	34.66	2.0	40	0	86.6	57 - 139				
4-Chlorotoluene	19.51	1.0	20	0	97.6	78 - 122				
4-Isopropyltoluene	19.47	1.0	20	0	97.4	77 - 127				
4-Methyl-2-pentanone	35.68	2.0	40	0	89.2	67 - 130				
Acetone	18.47	2.0	40	0	46.2	39 - 160				
Benzene	19.21	1.0	20	0	96.1	79 - 120				
Bromobenzene	19.39	1.0	20	0	97.0	80 - 120				
Bromochloromethane	17.34	1.0	20	0	86.7	78 - 123				
Bromodichloromethane	19.84	1.0	20	0	99.2	79 - 125				
Bromoform	17.78	1.0	20	0	88.9	66 - 130				
Bromomethane	20.32	1.0	20	0	102	53 - 141				

ALS Houston, US Date: 13-Jul-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
WorkOrder: HS20070055

QC BATCH REPORT

Batch ID: R364746 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

LCS Sample ID: **VLCSW-200708** Units: **UG/L** Analysis Date: **08-Jul-2020 12:36**
Client ID: Run ID: **VOA6_364746** SeqNo: **5655576** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Carbon disulfide	38.58	2.0	40	0	96.5	64 - 133				
Carbon tetrachloride	19.08	1.0	20	0	95.4	72 - 136				
Chlorobenzene	19.12	1.0	20	0	95.6	82 - 118				
Chloroethane	16.68	1.0	20	0	83.4	60 - 138				
Chloroform	19.06	1.0	20	0	95.3	79 - 124				
Chloromethane	18.29	1.0	20	0	91.5	50 - 139				
cis-1,2-Dichloroethene	19.13	1.0	20	0	95.6	78 - 123				
cis-1,3-Dichloropropene	19.51	1.0	20	0	97.6	75 - 124				
Dibromochloromethane	19.13	1.0	20	0	95.6	74 - 126				
Dibromomethane	19.46	1.0	20	0	97.3	79 - 123				
Dichlorodifluoromethane	18.49	1.0	20	0	92.4	32 - 152				
Ethylbenzene	19.12	1.0	20	0	95.6	79 - 121				
Hexachlorobutadiene	24.39	1.0	20	0	122	66 - 134				
Isopropylbenzene	18.99	1.0	20	0	94.9	72 - 131				
m,p-Xylene	38.39	2.0	40	0	96.0	80 - 121				
Methylene chloride	20.43	2.0	20	0	102	74 - 124				
Naphthalene	18.3	1.0	20	0	91.5	61 - 128				
n-Butylbenzene	19.63	1.0	20	0	98.1	75 - 128				
n-Propylbenzene	19.36	1.0	20	0	96.8	76 - 126				
o-Xylene	19.01	1.0	20	0	95.1	78 - 122				
sec-Butylbenzene	19.09	1.0	20	0	95.4	77 - 126				
Styrene	18.62	1.0	20	0	93.1	78 - 123				
tert-Butylbenzene	19.8	1.0	20	0	99.0	78 - 124				
Tetrachloroethene	19.31	1.0	20	0	96.5	74 - 129				
Toluene	19.54	1.0	20	0	97.7	80 - 121				
trans-1,2-Dichloroethene	19.43	1.0	20	0	97.1	75 - 124				
trans-1,3-Dichloropropene	19.05	1.0	20	0	95.2	73 - 127				
Trichloroethene	19.06	1.0	20	0	95.3	79 - 123				
Trichlorofluoromethane	18.38	1.0	20	0	91.9	65 - 141				
Vinyl chloride	16.8	1.0	20	0	84.0	58 - 137				
Surr: 1,2-Dichloroethane-d4	*49.73*	*1.0*	*50*	*0*	*99.5*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*49.44*	*1.0*	*50*	*0*	*98.9*	*85 - 114*				
Surr: Dibromofluoromethane	*49.6*	*1.0*	*50*	*0*	*99.2*	*80 - 119*				
Surr: Toluene-d8	*48.05*	*1.0*	*50*	*0*	*96.1*	*89 - 112*				

ALS Houston, US Date: 13-Jul-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
WorkOrder: HS20070055

QC BATCH REPORT

Batch ID: R364746 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MS Sample ID: **HS20070055-04MS** Units: **UG/L** Analysis Date: **08-Jul-2020 18:13**
Client ID: **35AWW10_062920** Run ID: **VOA6_364746** SeqNo: **5655587** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	20.39	1.0	20	0	102	78 - 124				
1,1,1-Trichloroethane	19.24	1.0	20	0	96.2	74 - 131				
1,1,2,2-Tetrachloroethane	18.97	1.0	20	0	94.9	71 - 121				
1,1,2-Trichloroethane	19.72	1.0	20	0	98.6	80 - 119				
1,1-Dichloroethane	17.81	1.0	20	0	89.0	77 - 125				
1,1-Dichloroethene	16.61	1.0	20	0	83.1	71 - 131				
1,1-Dichloropropene	19.86	1.0	20	0	99.3	78 - 125				
1,2,3-Trichlorobenzene	20.66	1.0	20	0	103	69 - 129				
1,2,3-Trichloropropane	18.53	1.0	20	0	92.7	73 - 122				
1,2,4-Trichlorobenzene	20.9	1.0	20	0	104	69 - 130				
1,2,4-Trimethylbenzene	21.6	1.0	20	0	108	76 - 124				
1,2-Dibromo-3-chloropropane	16.53	1.0	20	0	82.7	62 - 128				
1,2-Dibromoethane	19	1.0	20	0	95.0	77 - 121				
1,2-Dichlorobenzene	20.15	1.0	20	0	101	80 - 119				
1,2-Dichloroethane	18.61	1.0	20	0	93.0	73 - 128				
1,2-Dichloropropane	19.65	1.0	20	0	98.3	78 - 122				
1,3,5-Trimethylbenzene	22.19	1.0	20	0	111	75 - 124				
1,3-Dichlorobenzene	20.99	1.0	20	0	105	80 - 119				
1,3-Dichloropropane	19.2	1.0	20	0	96.0	80 - 119				
1,4-Dichlorobenzene	22.37	1.0	20	0	112	79 - 118				
2,2-Dichloropropane	19.88	1.0	20	0	99.4	60 - 139				
2-Butanone	25.56	2.0	40	0	63.9	56 - 143				
2-Chlorotoluene	21.63	1.0	20	0	108	79 - 122				
2-Hexanone	32.93	2.0	40	0	82.3	57 - 139				
4-Chlorotoluene	21.42	1.0	20	0	107	78 - 122				
4-Isopropyltoluene	22.42	1.0	20	0	112	77 - 127				
4-Methyl-2-pentanone	35.92	2.0	40	0	89.8	67 - 130				
Acetone	61.84	2.0	40	0	155	39 - 160				
Benzene	19.74	1.0	20	0	98.7	79 - 120				
Bromobenzene	21.34	1.0	20	0	107	80 - 120				
Bromochloromethane	17.11	1.0	20	0	85.5	78 - 123				
Bromodichloromethane	19.2	1.0	20	0	96.0	79 - 125				
Bromoform	18.28	1.0	20	0	91.4	66 - 130				
Bromomethane	17.71	1.0	20	0	88.5	53 - 141				

ALS Houston, US Date: 13-Jul-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
WorkOrder: HS20070055

QC BATCH REPORT

Batch ID: R364746 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MS Sample ID: **HS20070055-04MS** Units: **UG/L** Analysis Date: **08-Jul-2020 18:13**
Client ID: **35AWW10_062920** Run ID: **VOA6_364746** SeqNo: **5655587** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Carbon disulfide	31.17	2.0	40	0	77.9	64 - 133				
Carbon tetrachloride	20.26	1.0	20	0	101	72 - 136				
Chlorobenzene	20.11	1.0	20	0	101	82 - 118				
Chloroethane	15.56	1.0	20	0	77.8	60 - 138				
Chloroform	18.58	1.0	20	0	92.9	79 - 124				
Chloromethane	19.21	1.0	20	0	96.0	50 - 139				
cis-1,2-Dichloroethene	18.36	1.0	20	0	91.8	78 - 123				
cis-1,3-Dichloropropene	19.11	1.0	20	0	95.6	75 - 124				
Dibromochloromethane	19.23	1.0	20	0	96.1	74 - 126				
Dibromomethane	18.44	1.0	20	0	92.2	79 - 123				
Dichlorodifluoromethane	17.05	1.0	20	0	85.2	32 - 152				
Ethylbenzene	20.9	1.0	20	0	105	79 - 121				
Hexachlorobutadiene	23.26	1.0	20	0	116	66 - 134				
Isopropylbenzene	20.93	1.0	20	0	105	72 - 131				
m,p-Xylene	41.34	2.0	40	0	103	80 - 121				
Methylene chloride	14.79	2.0	20	0	74.0	74 - 124				S
Naphthalene	19.27	1.0	20	0	96.3	61 - 128				
n-Butylbenzene	22.36	1.0	20	0	112	75 - 128				
n-Propylbenzene	22.58	1.0	20	0	113	76 - 126				
o-Xylene	20.39	1.0	20	0	102	78 - 122				
sec-Butylbenzene	22.15	1.0	20	0	111	77 - 126				
Styrene	20.27	1.0	20	0	101	78 - 123				
tert-Butylbenzene	22.48	1.0	20	0	112	78 - 124				
Tetrachloroethene	21.65	1.0	20	0	108	74 - 129				
Toluene	20.99	1.0	20	0	105	80 - 121				
trans-1,2-Dichloroethene	19.07	1.0	20	0	95.3	75 - 124				
trans-1,3-Dichloropropene	18.58	1.0	20	0	92.9	73 - 127				
Trichloroethene	20	1.0	20	0	100	79 - 123				
Trichlorofluoromethane	17.5	1.0	20	0	87.5	65 - 141				
Vinyl chloride	18.59	1.0	20	0	92.9	58 - 137				
Surr: 1,2-Dichloroethane-d4	*44.82*	*1.0*	*50*	*0*	*89.6*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*49.52*	*1.0*	*50*	*0*	*99.0*	*85 - 114*				
Surr: Dibromofluoromethane	*46.72*	*1.0*	*50*	*0*	*93.4*	*80 - 119*				
Surr: Toluene-d8	*50.75*	*1.0*	*50*	*0*	*102*	*89 - 112*				

ALS Houston, US Date: 13-Jul-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
WorkOrder: HS20070055

QC BATCH REPORT

Batch ID: R364746 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MS Sample ID: **HS20070055-03MS** Units: **UG/L** Analysis Date: **08-Jul-2020 17:25**
Client ID: **35AWW13_062920** Run ID: **VOA6_364746** SeqNo: **5655585** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	19.89	1.0	20	0	99.5	78 - 124				
1,1,1-Trichloroethane	19.34	1.0	20	0	96.7	74 - 131				
1,1,2,2-Tetrachloroethane	20.58	1.0	20	0	103	71 - 121				
1,1,2-Trichloroethane	19.52	1.0	20	0	97.6	80 - 119				
1,1-Dichloroethane	18.25	1.0	20	0	91.3	77 - 125				
1,1-Dichloroethene	19.32	1.0	20	0	96.6	71 - 131				
1,1-Dichloropropene	19.67	1.0	20	0	98.3	78 - 125				
1,2,3-Trichlorobenzene	18.24	1.0	20	0	91.2	69 - 129				
1,2,3-Trichloropropane	20	1.0	20	0	100	73 - 122				
1,2,4-Trichlorobenzene	20.41	1.0	20	0	102	69 - 130				
1,2,4-Trimethylbenzene	19.41	1.0	20	0	97.0	76 - 124				
1,2-Dibromo-3-chloropropane	17.64	1.0	20	0	88.2	62 - 128				
1,2-Dibromoethane	18.48	1.0	20	0	92.4	77 - 121				
1,2-Dichlorobenzene	21.38	1.0	20	0	107	80 - 119				
1,2-Dichloroethane	18.47	1.0	20	0	92.3	73 - 128				
1,2-Dichloropropane	19.73	1.0	20	0	98.7	78 - 122				
1,3,5-Trimethylbenzene	23.36	1.0	20	0	117	75 - 124				
1,3-Dichlorobenzene	19.68	1.0	20	0	98.4	80 - 119				
1,3-Dichloropropane	19.32	1.0	20	0	96.6	80 - 119				
1,4-Dichlorobenzene	20.53	1.0	20	0	103	79 - 118				
2,2-Dichloropropane	20.49	1.0	20	0	102	60 - 139				
2-Butanone	26.69	2.0	40	0	66.7	56 - 143				
2-Chlorotoluene	23	1.0	20	0	115	79 - 122				
2-Hexanone	33.24	2.0	40	0	83.1	57 - 139				
4-Chlorotoluene	22.7	1.0	20	0	113	78 - 122				
4-Isopropyltoluene	21.13	1.0	20	0	106	77 - 127				
4-Methyl-2-pentanone	36.52	2.0	40	0	91.3	67 - 130				
Acetone	8.695	2.0	40	0	21.7	39 - 160				S
Benzene	19.46	1.0	20	0	97.3	79 - 120				
Bromobenzene	23.16	1.0	20	0	116	80 - 120				
Bromochloromethane	16.99	1.0	20	0	84.9	78 - 123				
Bromodichloromethane	19.4	1.0	20	0	97.0	79 - 125				
Bromoform	17.83	1.0	20	0	89.2	66 - 130				
Bromomethane	20.16	1.0	20	0	101	53 - 141				

ALS Houston, US Date: 13-Jul-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
WorkOrder: HS20070055

QC BATCH REPORT

Batch ID: R364746 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MS Sample ID: **HS20070055-03MS** Units: **UG/L** Analysis Date: **08-Jul-2020 17:25**
Client ID: **35AWW13_062920** Run ID: **VOA6_364746** SeqNo: **5655585** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Carbon disulfide	39.68	2.0	40	0	99.2	64 - 133				
Carbon tetrachloride	20.19	1.0	20	0	101	72 - 136				
Chlorobenzene	19.7	1.0	20	0	98.5	82 - 118				
Chloroethane	17.03	1.0	20	0	85.1	60 - 138				
Chloroform	18.42	1.0	20	0	92.1	79 - 124				
Chloromethane	19.23	1.0	20	0	96.1	50 - 139				
cis-1,2-Dichloroethene	18.92	1.0	20	0	94.6	78 - 123				
cis-1,3-Dichloropropene	19.2	1.0	20	0	96.0	75 - 124				
Dibromochloromethane	19.07	1.0	20	0	95.3	74 - 126				
Dibromomethane	18.38	1.0	20	0	91.9	79 - 123				
Dichlorodifluoromethane	17.83	1.0	20	0	89.2	32 - 152				
Ethylbenzene	20.27	1.0	20	0	101	79 - 121				
Hexachlorobutadiene	25.4	1.0	20	0	127	66 - 134				
Isopropylbenzene	20.53	1.0	20	0	103	72 - 131				
m,p-Xylene	40.28	2.0	40	0	101	80 - 121				
Methylene chloride	17.8	2.0	20	0	89.0	74 - 124				
Naphthalene	16.18	1.0	20	0	80.9	61 - 128				
n-Butylbenzene	23.91	1.0	20	0	120	75 - 128				
n-Propylbenzene	23.83	1.0	20	0	119	76 - 126				
o-Xylene	19.93	1.0	20	0	99.7	78 - 122				
sec-Butylbenzene	20.02	1.0	20	0	100	77 - 126				
Styrene	19.56	1.0	20	0	97.8	78 - 123				
tert-Butylbenzene	20.41	1.0	20	0	102	78 - 124				
Tetrachloroethene	21.77	1.0	20	0	109	74 - 129				
Toluene	21	1.0	20	0	105	80 - 121				
trans-1,2-Dichloroethene	19.64	1.0	20	0	98.2	75 - 124				
trans-1,3-Dichloropropene	18.8	1.0	20	0	94.0	73 - 127				
Trichloroethene	19.78	1.0	20	0	98.9	79 - 123				
Trichlorofluoromethane	19.08	1.0	20	0	95.4	65 - 141				
Vinyl chloride	19.63	1.0	20	0	98.1	58 - 137				
Surr: 1,2-Dichloroethane-d4	*44.6*	*1.0*	*50*	*0*	*89.2*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*48.69*	*1.0*	*50*	*0*	*97.4*	*85 - 114*				
Surr: Dibromofluoromethane	*46.96*	*1.0*	*50*	*0*	*93.9*	*80 - 119*				
Surr: Toluene-d8	*50.94*	*1.0*	*50*	*0*	*102*	*89 - 112*				

ALS Houston, US Date: 13-Jul-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
WorkOrder: HS20070055

QC BATCH REPORT

Batch ID: R364746 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MSD Sample ID: **HS20070055-04MSD** Units: **UG/L** Analysis Date: **08-Jul-2020 18:37**
Client ID: **35AWW10_062920** Run ID: **VOA6_364746** SeqNo: **5655588** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	19.59	1.0	20	0	97.9	78 - 124	20.39	4	20	
1,1,1-Trichloroethane	18.74	1.0	20	0	93.7	74 - 131	19.24	2.63	20	
1,1,2,2-Tetrachloroethane	17.66	1.0	20	0	88.3	71 - 121	18.97	7.15	20	
1,1,2-Trichloroethane	19.12	1.0	20	0	95.6	80 - 119	19.72	3.06	20	
1,1-Dichloroethane	17.88	1.0	20	0	89.4	77 - 125	17.81	0.388	20	
1,1-Dichloroethene	16.87	1.0	20	0	84.4	71 - 131	16.61	1.55	20	
1,1-Dichloropropene	18.73	1.0	20	0	93.6	78 - 125	19.86	5.87	20	
1,2,3-Trichlorobenzene	19.4	1.0	20	0	97.0	69 - 129	20.66	6.29	20	
1,2,3-Trichloropropane	17.75	1.0	20	0	88.8	73 - 122	18.53	4.31	20	
1,2,4-Trichlorobenzene	19.72	1.0	20	0	98.6	69 - 130	20.9	5.78	20	
1,2,4-Trimethylbenzene	20.13	1.0	20	0	101	76 - 124	21.6	7.09	20	
1,2-Dibromo-3-chloropropane	15.47	1.0	20	0	77.3	62 - 128	16.53	6.65	20	
1,2-Dibromoethane	18.69	1.0	20	0	93.4	77 - 121	19	1.68	20	
1,2-Dichlorobenzene	18.81	1.0	20	0	94.0	80 - 119	20.15	6.91	20	
1,2-Dichloroethane	18.44	1.0	20	0	92.2	73 - 128	18.61	0.869	20	
1,2-Dichloropropane	19	1.0	20	0	95.0	78 - 122	19.65	3.36	20	
1,3,5-Trimethylbenzene	20.15	1.0	20	0	101	75 - 124	22.19	9.64	20	
1,3-Dichlorobenzene	19.35	1.0	20	0	96.8	80 - 119	20.99	8.13	20	
1,3-Dichloropropane	18.87	1.0	20	0	94.4	80 - 119	19.2	1.74	20	
1,4-Dichlorobenzene	20.24	1.0	20	0	101	79 - 118	22.37	10	20	
2,2-Dichloropropane	19	1.0	20	0	95.0	60 - 139	19.88	4.52	20	
2-Butanone	25.76	2.0	40	0	64.4	56 - 143	25.56	0.774	20	
2-Chlorotoluene	19.4	1.0	20	0	97.0	79 - 122	21.63	10.9	20	
2-Hexanone	33.01	2.0	40	0	82.5	57 - 139	32.93	0.236	20	
4-Chlorotoluene	19.8	1.0	20	0	99.0	78 - 122	21.42	7.86	20	
4-Isopropyltoluene	20.31	1.0	20	0	102	77 - 127	22.42	9.87	20	
4-Methyl-2-pentanone	35.57	2.0	40	0	88.9	67 - 130	35.92	0.978	20	
Acetone	6.938	2.0	40	0	17.3	39 - 160	61.84	160	20	SR
Benzene	18.81	1.0	20	0	94.1	79 - 120	19.74	4.79	20	
Bromobenzene	19.38	1.0	20	0	96.9	80 - 120	21.34	9.63	20	
Bromochloromethane	16.72	1.0	20	0	83.6	78 - 123	17.11	2.26	20	
Bromodichloromethane	18.96	1.0	20	0	94.8	79 - 125	19.2	1.27	20	
Bromoform	17.81	1.0	20	0	89.1	66 - 130	18.28	2.58	20	
Bromomethane	18.55	1.0	20	0	92.7	53 - 141	17.71	4.64	20	

ALS Houston, US Date: 13-Jul-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
WorkOrder: HS20070055

QC BATCH REPORT

Batch ID: R364746 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MSD Sample ID: **HS20070055-04MSD** Units: **UG/L** Analysis Date: **08-Jul-2020 18:37**
Client ID: **35AWW10_062920** Run ID: **VOA6_364746** SeqNo: **5655588** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
Carbon disulfide	33.88	2.0	40	0	84.7	64 - 133	31.17	8.32	20	
Carbon tetrachloride	19.39	1.0	20	0	96.9	72 - 136	20.26	4.39	20	
Chlorobenzene	19.36	1.0	20	0	96.8	82 - 118	20.11	3.8	20	
Chloroethane	15.9	1.0	20	0	79.5	60 - 138	15.56	2.16	20	
Chloroform	17.92	1.0	20	0	89.6	79 - 124	18.58	3.59	20	
Chloromethane	17.42	1.0	20	0	87.1	50 - 139	19.21	9.78	20	
cis-1,2-Dichloroethene	17.88	1.0	20	0	89.4	78 - 123	18.36	2.65	20	
cis-1,3-Dichloropropene	18.47	1.0	20	0	92.3	75 - 124	19.11	3.43	20	
Dibromochloromethane	19	1.0	20	0	95.0	74 - 126	19.23	1.21	20	
Dibromomethane	17.85	1.0	20	0	89.3	79 - 123	18.44	3.21	20	
Dichlorodifluoromethane	15.94	1.0	20	0	79.7	32 - 152	17.05	6.71	20	
Ethylbenzene	19.78	1.0	20	0	98.9	79 - 121	20.9	5.51	20	
Hexachlorobutadiene	21.15	1.0	20	0	106	66 - 134	23.26	9.52	20	
Isopropylbenzene	19.96	1.0	20	0	99.8	72 - 131	20.93	4.75	20	
m,p-Xylene	39.24	2.0	40	0	98.1	80 - 121	41.34	5.2	20	
Methylene chloride	17.7	2.0	20	0	88.5	74 - 124	14.79	17.9	20	
Naphthalene	16.74	1.0	20	0	83.7	61 - 128	19.27	14	20	
n-Butylbenzene	20.51	1.0	20	0	103	75 - 128	22.36	8.66	20	
n-Propylbenzene	20.31	1.0	20	0	102	76 - 126	22.58	10.5	20	
o-Xylene	19.52	1.0	20	0	97.6	78 - 122	20.39	4.35	20	
sec-Butylbenzene	20.14	1.0	20	0	101	77 - 126	22.15	9.52	20	
Styrene	19.3	1.0	20	0	96.5	78 - 123	20.27	4.89	20	
tert-Butylbenzene	20.63	1.0	20	0	103	78 - 124	22.48	8.57	20	
Tetrachloroethene	20.55	1.0	20	0	103	74 - 129	21.65	5.23	20	
Toluene	20.05	1.0	20	0	100	80 - 121	20.99	4.58	20	
trans-1,2-Dichloroethene	18.69	1.0	20	0	93.4	75 - 124	19.07	2.01	20	
trans-1,3-Dichloropropene	18.48	1.0	20	0	92.4	73 - 127	18.58	0.558	20	
Trichloroethene	19.23	1.0	20	0	96.1	79 - 123	20	3.97	20	
Trichlorofluoromethane	17.6	1.0	20	0	88.0	65 - 141	17.5	0.55	20	
Vinyl chloride	16.49	1.0	20	0	82.5	58 - 137	18.59	11.9	20	
Surr: 1,2-Dichloroethane-d4	*43.77*	*1.0*	*50*	*0*	*87.5*	*81 - 118*	*44.82*	*2.38*	*20*	
Surr: 4-Bromofluorobenzene	*50.68*	*1.0*	*50*	*0*	*101*	*85 - 114*	*49.52*	*2.33*	*20*	
Surr: Dibromofluoromethane	*46.38*	*1.0*	*50*	*0*	*92.8*	*80 - 119*	*46.72*	*0.724*	*20*	
Surr: Toluene-d8	*50.16*	*1.0*	*50*	*0*	*100*	*89 - 112*	*50.75*	*1.17*	*20*	

ALS Houston, US Date: 13-Jul-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
WorkOrder: HS20070055

QC BATCH REPORT

Batch ID: R364746 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MSD Sample ID: **HS20070055-03MSD** Units: **UG/L** Analysis Date: **08-Jul-2020 17:49**
Client ID: **35AWW13_062920** Run ID: **VOA6_364746** SeqNo: **5655586** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	19.6	1.0	20	0	98.0	78 - 124	19.89	1.46	20	
1,1,1-Trichloroethane	18.76	1.0	20	0	93.8	74 - 131	19.34	3.02	20	
1,1,2,2-Tetrachloroethane	18.25	1.0	20	0	91.2	71 - 121	20.58	12	20	
1,1,2-Trichloroethane	19.51	1.0	20	0	97.6	80 - 119	19.52	0.00862	20	
1,1-Dichloroethane	17.54	1.0	20	0	87.7	77 - 125	18.25	3.97	20	
1,1-Dichloroethene	17.88	1.0	20	0	89.4	71 - 131	19.32	7.73	20	
1,1-Dichloropropene	18.94	1.0	20	0	94.7	78 - 125	19.67	3.79	20	
1,2,3-Trichlorobenzene	17.91	1.0	20	0	89.5	69 - 129	18.24	1.84	20	
1,2,3-Trichloropropane	18.07	1.0	20	0	90.4	73 - 122	20	10.1	20	
1,2,4-Trichlorobenzene	19.69	1.0	20	0	98.5	69 - 130	20.41	3.56	20	
1,2,4-Trimethylbenzene	19.46	1.0	20	0	97.3	76 - 124	19.41	0.268	20	
1,2-Dibromo-3-chloropropane	16.41	1.0	20	0	82.0	62 - 128	17.64	7.23	20	
1,2-Dibromoethane	18.37	1.0	20	0	91.9	77 - 121	18.48	0.57	20	
1,2-Dichlorobenzene	16.68	1.0	20	0	83.4	80 - 119	21.38	24.7	20	R
1,2-Dichloroethane	18.64	1.0	20	0	93.2	73 - 128	18.47	0.943	20	
1,2-Dichloropropane	19.58	1.0	20	0	97.9	78 - 122	19.73	0.762	20	
1,3,5-Trimethylbenzene	21.44	1.0	20	0	107	75 - 124	23.36	8.57	20	
1,3-Dichlorobenzene	19.62	1.0	20	0	98.1	80 - 119	19.68	0.305	20	
1,3-Dichloropropane	18.91	1.0	20	0	94.5	80 - 119	19.32	2.19	20	
1,4-Dichlorobenzene	20.9	1.0	20	0	105	79 - 118	20.53	1.79	20	
2,2-Dichloropropane	19.88	1.0	20	0	99.4	60 - 139	20.49	3.05	20	
2-Butanone	25.42	2.0	40	0	63.6	56 - 143	26.69	4.88	20	
2-Chlorotoluene	20.54	1.0	20	0	103	79 - 122	23	11.3	20	
2-Hexanone	33.25	2.0	40	0	83.1	57 - 139	33.24	0.0178	20	
4-Chlorotoluene	20.91	1.0	20	0	105	78 - 122	22.7	8.18	20	
4-Isopropyltoluene	21.42	1.0	20	0	107	77 - 127	21.13	1.4	20	
4-Methyl-2-pentanone	34.27	2.0	40	0	85.7	67 - 130	36.52	6.38	20	
Acetone	8.021	2.0	40	0	20.1	39 - 160	8.695	8.06	20	S
Benzene	19.02	1.0	20	0	95.1	79 - 120	19.46	2.28	20	
Bromobenzene	20.39	1.0	20	0	102	80 - 120	23.16	12.7	20	
Bromochloromethane	16.66	1.0	20	0	83.3	78 - 123	16.99	1.95	20	
Bromodichloromethane	18.46	1.0	20	0	92.3	79 - 125	19.4	4.97	20	
Bromoform	17.88	1.0	20	0	89.4	66 - 130	17.83	0.301	20	
Bromomethane	19.39	1.0	20	0	96.9	53 - 141	20.16	3.93	20	

ALS Houston, US Date: 13-Jul-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
WorkOrder: HS20070055

QC BATCH REPORT

Batch ID: R364746 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MSD Sample ID: **HS20070055-03MSD** Units: **UG/L** Analysis Date: **08-Jul-2020 17:49**
Client ID: **35AWW13_062920** Run ID: **VOA6_364746** SeqNo: **5655586** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
Carbon disulfide	37.63	2.0	40	0	94.1	64 - 133	39.68	5.3	20	
Carbon tetrachloride	19.56	1.0	20	0	97.8	72 - 136	20.19	3.2	20	
Chlorobenzene	19.67	1.0	20	0	98.3	82 - 118	19.7	0.139	20	
Chloroethane	15.53	1.0	20	0	77.7	60 - 138	17.03	9.19	20	
Chloroform	18.08	1.0	20	0	90.4	79 - 124	18.42	1.89	20	
Chloromethane	18.32	1.0	20	0	91.6	50 - 139	19.23	4.85	20	
cis-1,2-Dichloroethene	17.95	1.0	20	0	89.8	78 - 123	18.92	5.27	20	
cis-1,3-Dichloropropene	18.52	1.0	20	0	92.6	75 - 124	19.2	3.57	20	
Dibromochloromethane	18.51	1.0	20	0	92.6	74 - 126	19.07	2.96	20	
Dibromomethane	18.21	1.0	20	0	91.1	79 - 123	18.38	0.935	20	
Dichlorodifluoromethane	16.99	1.0	20	0	85.0	32 - 152	17.83	4.83	20	
Ethylbenzene	20.15	1.0	20	0	101	79 - 121	20.27	0.631	20	
Hexachlorobutadiene	21.74	1.0	20	0	109	66 - 134	25.4	15.5	20	
Isopropylbenzene	20.25	1.0	20	0	101	72 - 131	20.53	1.36	20	
m,p-Xylene	40.02	2.0	40	0	100	80 - 121	40.28	0.642	20	
Methylene chloride	17.33	2.0	20	0	86.6	74 - 124	17.8	2.72	20	
Naphthalene	16.57	1.0	20	0	82.9	61 - 128	16.18	2.43	20	
n-Butylbenzene	18.32	1.0	20	0	91.6	75 - 128	23.91	26.5	20	R
n-Propylbenzene	21.49	1.0	20	0	107	76 - 126	23.83	10.3	20	
o-Xylene	19.8	1.0	20	0	99.0	78 - 122	19.93	0.653	20	
sec-Butylbenzene	21.13	1.0	20	0	106	77 - 126	20.02	5.41	20	
Styrene	19.46	1.0	20	0	97.3	78 - 123	19.56	0.534	20	
tert-Butylbenzene	21.59	1.0	20	0	108	78 - 124	20.41	5.62	20	
Tetrachloroethene	20.67	1.0	20	0	103	74 - 129	21.77	5.18	20	
Toluene	20.28	1.0	20	0	101	80 - 121	21	3.51	20	
trans-1,2-Dichloroethene	18.76	1.0	20	0	93.8	75 - 124	19.64	4.57	20	
trans-1,3-Dichloropropene	18.68	1.0	20	0	93.4	73 - 127	18.8	0.645	20	
Trichloroethene	18.9	1.0	20	0	94.5	79 - 123	19.78	4.55	20	
Trichlorofluoromethane	18.28	1.0	20	0	91.4	65 - 141	19.08	4.29	20	
Vinyl chloride	17.94	1.0	20	0	89.7	58 - 137	19.63	8.97	20	
Surr: 1,2-Dichloroethane-d4	*44.66*	*1.0*	*50*	*0*	*89.3*	*81 - 118*	*44.6*	*0.142*	*20*	
Surr: 4-Bromofluorobenzene	*48.96*	*1.0*	*50*	*0*	*97.9*	*85 - 114*	*48.69*	*0.546*	*20*	
Surr: Dibromofluoromethane	*46.85*	*1.0*	*50*	*0*	*93.7*	*80 - 119*	*46.96*	*0.242*	*20*	
Surr: Toluene-d8	*50.65*	*1.0*	*50*	*0*	*101*	*89 - 112*	*50.94*	*0.588*	*20*	

ALS Houston, US Date: 13-Jul-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
WorkOrder: HS20070055

QC BATCH REPORT

Batch ID: R364746 (0)	Instrument: VOA6	Method: VOLATILES ORGANICS BY METHOD 8260C

The following samples were analyzed in this batch:

HS20070055-02	HS20070055-03	HS20070055-04	HS20070055-05
HS20070055-06			

ALS Houston, US Date: 13-Jul-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
WorkOrder: HS20070055

QC BATCH REPORT

Batch ID: R364892 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MBLK Sample ID: **VBLKW-200710** Units: **UG/L** Analysis Date: **10-Jul-2020 13:56**
Client ID: Run ID: **VOA6_364892** SeqNo: **5658729** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	1.0	1.0								U
1,1,1-Trichloroethane	0.50	1.0								U
1,1,2,2-Tetrachloroethane	1.0	1.0								U
1,1,2-Trichloroethane	1.0	1.0								U
1,1-Dichloroethane	0.50	1.0								U
1,1-Dichloroethene	0.50	1.0								U
1,1-Dichloropropene	1.0	1.0								U
1,2,3-Trichlorobenzene	1.0	1.0								U
1,2,3-Trichloropropane	1.0	1.0								U
1,2,4-Trichlorobenzene	1.0	1.0								U
1,2,4-Trimethylbenzene	1.0	1.0								U
1,2-Dibromo-3-chloropropane	0.50	1.0								U
1,2-Dibromoethane	0.50	1.0								U
1,2-Dichlorobenzene	1.0	1.0								U
1,2-Dichloroethane	0.50	1.0								U
1,2-Dichloropropane	1.0	1.0								U
1,3,5-Trimethylbenzene	1.0	1.0								U
1,3-Dichlorobenzene	1.0	1.0								U
1,3-Dichloropropane	1.0	1.0								U
1,4-Dichlorobenzene	1.0	1.0								U
2,2-Dichloropropane	0.50	1.0								U
2-Butanone	1.0	2.0								U
2-Chlorotoluene	1.0	1.0								U
2-Hexanone	2.0	2.0								U
4-Chlorotoluene	1.0	1.0								U
4-Isopropyltoluene	1.0	1.0								U
4-Methyl-2-pentanone	2.0	2.0								U
Acetone	1.0	2.0								U
Benzene	0.50	1.0								U
Bromobenzene	1.0	1.0								U
Bromochloromethane	0.50	1.0								U
Bromodichloromethane	0.50	1.0								U
Bromoform	1.0	1.0								U
Bromomethane	1.0	1.0								U

ALS Houston, US Date: 13-Jul-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
WorkOrder: HS20070055

QC BATCH REPORT

Batch ID: R364892 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MBLK Sample ID: **VBLKW-200710** Units: **UG/L** Analysis Date: **10-Jul-2020 13:56**
Client ID: Run ID: **VOA6_364892** SeqNo: **5658729** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Carbon disulfide	1.0	2.0								U
Carbon tetrachloride	1.0	1.0								U
Chlorobenzene	1.0	1.0								U
Chloroethane	1.0	1.0								U
Chloroform	0.50	1.0								U
Chloromethane	0.50	1.0								U
cis-1,2-Dichloroethene	0.50	1.0								U
cis-1,3-Dichloropropene	0	1.0								U
Dibromochloromethane	1.0	1.0								U
Dibromomethane	0.50	1.0								U
Dichlorodifluoromethane	1.0	1.0								U
Ethylbenzene	1.0	1.0								U
Hexachlorobutadiene	1.0	1.0								U
Isopropylbenzene	1.0	1.0								U
m,p-Xylene	1.0	2.0								U
Methylene chloride	1.0	2.0								U
Naphthalene	1.0	1.0								U
n-Butylbenzene	1.0	1.0								U
n-Propylbenzene	1.0	1.0								U
o-Xylene	1.0	1.0								U
sec-Butylbenzene	1.0	1.0								U
Styrene	1.0	1.0								U
tert-Butylbenzene	1.0	1.0								U
Tetrachloroethene	1.0	1.0								U
Toluene	0.50	1.0								U
trans-1,2-Dichloroethene	0.50	1.0								U
trans-1,3-Dichloropropene	0.50	1.0								U
Trichloroethene	0.50	1.0								U
Trichlorofluoromethane	1.0	1.0								U
Vinyl chloride	0.50	1.0								U
Surr: 1,2-Dichloroethane-d4	*45.2*	*1.0*	*50*	*0*	*90.4*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*49.38*	*1.0*	*50*	*0*	*98.8*	*85 - 114*				
Surr: Dibromofluoromethane	*46.39*	*1.0*	*50*	*0*	*92.8*	*80 - 119*				
Surr: Toluene-d8	*47.93*	*1.0*	*50*	*0*	*95.9*	*89 - 112*				

ALS Houston, US Date: 13-Jul-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
WorkOrder: HS20070055

QC BATCH REPORT

Batch ID: R364892 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

LCS Sample ID: **VLCSW-200710** Units: **UG/L** Analysis Date: **10-Jul-2020 13:07**
Client ID: Run ID: **VOA6_364892** SeqNo: **5658728** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	19.68	1.0	20	0	98.4	78 - 124				
1,1,1-Trichloroethane	17.81	1.0	20	0	89.0	74 - 131				
1,1,2,2-Tetrachloroethane	22.16	1.0	20	0	111	71 - 121				
1,1,2-Trichloroethane	20.3	1.0	20	0	102	80 - 119				
1,1-Dichloroethane	18.26	1.0	20	0	91.3	77 - 125				
1,1-Dichloroethene	17.16	1.0	20	0	85.8	71 - 131				
1,1-Dichloropropene	17.02	1.0	20	0	85.1	78 - 125				
1,2,3-Trichlorobenzene	31.68	1.0	20	0	158	69 - 129				S
1,2,3-Trichloropropane	22.86	1.0	20	0	114	73 - 122				
1,2,4-Trichlorobenzene	28.82	1.0	20	0	144	69 - 130				S
1,2,4-Trimethylbenzene	19.91	1.0	20	0	99.6	76 - 124				
1,2-Dibromo-3-chloropropane	24.65	1.0	20	0	123	62 - 128				
1,2-Dibromoethane	20.17	1.0	20	0	101	77 - 121				
1,2-Dichlorobenzene	19.19	1.0	20	0	96.0	80 - 119				
1,2-Dichloroethane	19.43	1.0	20	0	97.1	73 - 128				
1,2-Dichloropropane	19.44	1.0	20	0	97.2	78 - 122				
1,3,5-Trimethylbenzene	19.22	1.0	20	0	96.1	75 - 124				
1,3-Dichlorobenzene	18.1	1.0	20	0	90.5	80 - 119				
1,3-Dichloropropane	19.35	1.0	20	0	96.7	80 - 119				
1,4-Dichlorobenzene	18.87	1.0	20	0	94.4	79 - 118				
2,2-Dichloropropane	19.79	1.0	20	0	98.9	60 - 139				
2-Butanone	38.76	2.0	40	0	96.9	56 - 143				
2-Chlorotoluene	19.78	1.0	20	0	98.9	79 - 122				
2-Hexanone	43.11	2.0	40	0	108	57 - 139				
4-Chlorotoluene	20.34	1.0	20	0	102	78 - 122				
4-Isopropyltoluene	16.43	1.0	20	0	82.2	77 - 127				
4-Methyl-2-pentanone	43.5	2.0	40	0	109	67 - 130				
Acetone	18.79	2.0	40	0	47.0	39 - 160				
Benzene	18.57	1.0	20	0	92.8	79 - 120				
Bromobenzene	21.47	1.0	20	0	107	80 - 120				
Bromochloromethane	18.76	1.0	20	0	93.8	78 - 123				
Bromodichloromethane	19.19	1.0	20	0	95.9	79 - 125				
Bromoform	19.93	1.0	20	0	99.7	66 - 130				
Bromomethane	20.71	1.0	20	0	104	53 - 141				

ALS Houston, US Date: 13-Jul-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
WorkOrder: HS20070055

QC BATCH REPORT

Batch ID: R364892 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

LCS Sample ID: **VLCSW-200710** Units: **UG/L** Analysis Date: **10-Jul-2020 13:07**
Client ID: Run ID: **VOA6_364892** SeqNo: **5658728** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Carbon disulfide	35.35	2.0	40	0	88.4	64 - 133				
Carbon tetrachloride	16.8	1.0	20	0	84.0	72 - 136				
Chlorobenzene	19.14	1.0	20	0	95.7	82 - 118				
Chloroethane	16.48	1.0	20	0	82.4	60 - 138				
Chloroform	19.16	1.0	20	0	95.8	79 - 124				
Chloromethane	18.28	1.0	20	0	91.4	50 - 139				
cis-1,2-Dichloroethene	19.24	1.0	20	0	96.2	78 - 123				
cis-1,3-Dichloropropene	18.85	1.0	20	0	94.2	75 - 124				
Dibromochloromethane	19.93	1.0	20	0	99.7	74 - 126				
Dibromomethane	19.04	1.0	20	0	95.2	79 - 123				
Dichlorodifluoromethane	15.27	1.0	20	0	76.4	32 - 152				
Ethylbenzene	17.71	1.0	20	0	88.6	79 - 121				
Hexachlorobutadiene	25.89	1.0	20	0	129	66 - 134				
Isopropylbenzene	17.11	1.0	20	0	85.5	72 - 131				
m,p-Xylene	34.53	2.0	40	0	86.3	80 - 121				
Methylene chloride	18.7	2.0	20	0	93.5	74 - 124				
Naphthalene	28.68	1.0	20	0	143	61 - 128				S
n-Butylbenzene	16.02	1.0	20	0	80.1	75 - 128				
n-Propylbenzene	18.99	1.0	20	0	94.9	76 - 126				
o-Xylene	18.48	1.0	20	0	92.4	78 - 122				
sec-Butylbenzene	17.68	1.0	20	0	88.4	77 - 126				
Styrene	18.81	1.0	20	0	94.1	78 - 123				
tert-Butylbenzene	18.63	1.0	20	0	93.2	78 - 124				
Tetrachloroethene	17.63	1.0	20	0	88.1	74 - 129				
Toluene	19.23	1.0	20	0	96.1	80 - 121				
trans-1,2-Dichloroethene	18.78	1.0	20	0	93.9	75 - 124				
trans-1,3-Dichloropropene	19.46	1.0	20	0	97.3	73 - 127				
Trichloroethene	17.76	1.0	20	0	88.8	79 - 123				
Trichlorofluoromethane	17.16	1.0	20	0	85.8	65 - 141				
Vinyl chloride	16.01	1.0	20	0	80.0	58 - 137				
Surr: 1,2-Dichloroethane-d4	*52.8*	*1.0*	*50*	*0*	*106*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*51.09*	*1.0*	*50*	*0*	*102*	*85 - 114*				
Surr: Dibromofluoromethane	*51.33*	*1.0*	*50*	*0*	*103*	*80 - 119*				
Surr: Toluene-d8	*49.04*	*1.0*	*50*	*0*	*98.1*	*89 - 112*				

ALS Houston, US Date: 13-Jul-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
WorkOrder: HS20070055

QC BATCH REPORT

Batch ID: R364892 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MS Sample ID: **HS20070043-17MS** Units: **UG/L** Analysis Date: **10-Jul-2020 15:55**
Client ID: Run ID: **VOA6_364892** SeqNo: **5658734** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	19.31	1.0	20	0	96.5	78 - 124				
1,1,1-Trichloroethane	17.18	1.0	20	0	85.9	74 - 131				
1,1,2,2-Tetrachloroethane	19.68	1.0	20	0	98.4	71 - 121				
1,1,2-Trichloroethane	19.79	1.0	20	0	98.9	80 - 119				
1,1-Dichloroethane	16.02	1.0	20	0.6579	76.8	77 - 125				S
1,1-Dichloroethene	17.92	1.0	20	1.621	81.5	71 - 131				
1,1-Dichloropropene	18.6	1.0	20	0	93.0	78 - 125				
1,2,3-Trichlorobenzene	22.78	1.0	20	0	114	69 - 129				
1,2,3-Trichloropropane	19.75	1.0	20	0	98.8	73 - 122				
1,2,4-Trichlorobenzene	23.21	1.0	20	0	116	69 - 130				
1,2,4-Trimethylbenzene	19.29	1.0	20	0	96.4	76 - 124				
1,2-Dibromo-3-chloropropane	21.8	1.0	20	0	109	62 - 128				
1,2-Dibromoethane	19.43	1.0	20	0	97.2	77 - 121				
1,2-Dichlorobenzene	19.41	1.0	20	0	97.0	80 - 119				
1,2-Dichloroethane	18.65	1.0	20	0	93.3	73 - 128				
1,2-Dichloropropane	19.14	1.0	20	0	95.7	78 - 122				
1,3,5-Trimethylbenzene	19.63	1.0	20	0	98.1	75 - 124				
1,3-Dichlorobenzene	19.13	1.0	20	0	95.6	80 - 119				
1,3-Dichloropropane	19.33	1.0	20	0	96.6	80 - 119				
1,4-Dichlorobenzene	20.11	1.0	20	0	101	79 - 118				
2,2-Dichloropropane	17.79	1.0	20	0	89.0	60 - 139				
2-Butanone	28.82	2.0	40	0	72.0	56 - 143				
2-Chlorotoluene	19.14	1.0	20	0	95.7	79 - 122				
2-Hexanone	41.91	2.0	40	0	105	57 - 139				
4-Chlorotoluene	19.44	1.0	20	0	97.2	78 - 122				
4-Isopropyltoluene	19.47	1.0	20	0	97.4	77 - 127				
4-Methyl-2-pentanone	41.44	2.0	40	0	104	67 - 130				
Acetone	9.401	2.0	40	0	23.5	39 - 160				S
Benzene	18.49	1.0	20	0	92.4	79 - 120				
Bromobenzene	19.56	1.0	20	0	97.8	80 - 120				
Bromochloromethane	16.14	1.0	20	0	80.7	78 - 123				
Bromodichloromethane	18.96	1.0	20	0	94.8	79 - 125				
Bromoform	19.61	1.0	20	0	98.1	66 - 130				
Bromomethane	18.33	1.0	20	0	91.6	53 - 141				

ALS Houston, US Date: 13-Jul-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
WorkOrder: HS20070055

QC BATCH REPORT

Batch ID: R364892 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MS Sample ID: **HS20070043-17MS** Units: **UG/L** Analysis Date: **10-Jul-2020 15:55**
Client ID: Run ID: **VOA6_364892** SeqNo: **5658734** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Carbon disulfide	31.59	2.0	40	0	79.0	64 - 133				
Carbon tetrachloride	19.32	1.0	20	0	96.6	72 - 136				
Chlorobenzene	19.22	1.0	20	0	96.1	82 - 118				
Chloroethane	16.46	1.0	20	0	82.3	60 - 138				
Chloroform	16.9	1.0	20	0	84.5	79 - 124				
Chloromethane	19.7	1.0	20	0	98.5	50 - 139				
cis-1,2-Dichloroethene	27.72	1.0	20	15.39	61.7	78 - 123				S
cis-1,3-Dichloropropene	20.76	1.0	20	0	104	75 - 124				
Dibromochloromethane	19.72	1.0	20	0	98.6	74 - 126				
Dibromomethane	18.55	1.0	20	0	92.7	79 - 123				
Dichlorodifluoromethane	17.02	1.0	20	0	85.1	32 - 152				
Ethylbenzene	19.76	1.0	20	0	98.8	79 - 121				
Hexachlorobutadiene	22.36	1.0	20	0	112	66 - 134				
Isopropylbenzene	20.11	1.0	20	0	101	72 - 131				
m,p-Xylene	39.02	2.0	40	0	97.6	80 - 121				
Methylene chloride	17.85	2.0	20	0	89.2	74 - 124				
Naphthalene	21.89	1.0	20	0	109	61 - 128				
n-Butylbenzene	19.82	1.0	20	0	99.1	75 - 128				
n-Propylbenzene	19.62	1.0	20	0	98.1	76 - 126				
o-Xylene	19.5	1.0	20	0	97.5	78 - 122				
sec-Butylbenzene	19.43	1.0	20	0	97.1	77 - 126				
Styrene	19.19	1.0	20	0	96.0	78 - 123				
tert-Butylbenzene	19.72	1.0	20	0	98.6	78 - 124				
Tetrachloroethene	20.3	1.0	20	0	102	74 - 129				
Toluene	19.8	1.0	20	0	99.0	80 - 121				
trans-1,2-Dichloroethene	16.48	1.0	20	0.4181	80.3	75 - 124				
trans-1,3-Dichloropropene	22.2	1.0	20	0	111	73 - 127				
Trichloroethene	79.03	1.0	20	77.74	6.45	79 - 123				S
Trichlorofluoromethane	18.6	1.0	20	0	93.0	65 - 141				
Vinyl chloride	18.79	1.0	20	0.7027	90.4	58 - 137				
Surr: 1,2-Dichloroethane-d4	*42.88*	*1.0*	*50*	*0*	*85.8*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*50.92*	*1.0*	*50*	*0*	*102*	*85 - 114*				
Surr: Dibromofluoromethane	*44.55*	*1.0*	*50*	*0*	*89.1*	*80 - 119*				
Surr: Toluene-d8	*50.25*	*1.0*	*50*	*0*	*100*	*89 - 112*				

ALS Houston, US Date: 13-Jul-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
WorkOrder: HS20070055

QC BATCH REPORT

Batch ID: R364892 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MSD Sample ID: **HS20070043-17MSD** Units: **UG/L** Analysis Date: **10-Jul-2020 16:19**
Client ID: Run ID: **VOA6_364892** SeqNo: **5658735** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	18.98	1.0	20	0	94.9	78 - 124	19.31	1.72	20	
1,1,1-Trichloroethane	17.74	1.0	20	0	88.7	74 - 131	17.18	3.24	20	
1,1,2,2-Tetrachloroethane	20.42	1.0	20	0	102	71 - 121	19.68	3.73	20	
1,1,2-Trichloroethane	19.66	1.0	20	0	98.3	80 - 119	19.79	0.624	20	
1,1-Dichloroethane	17.52	1.0	20	0.6579	84.3	77 - 125	16.02	8.92	20	
1,1-Dichloroethene	16.76	1.0	20	1.621	75.7	71 - 131	17.92	6.65	20	
1,1-Dichloropropene	18.42	1.0	20	0	92.1	78 - 125	18.6	0.998	20	
1,2,3-Trichlorobenzene	23.64	1.0	20	0	118	69 - 129	22.78	3.73	20	
1,2,3-Trichloropropane	20.65	1.0	20	0	103	73 - 122	19.75	4.43	20	
1,2,4-Trichlorobenzene	23.2	1.0	20	0	116	69 - 130	23.21	0.025	20	
1,2,4-Trimethylbenzene	19.69	1.0	20	0	98.4	76 - 124	19.29	2.06	20	
1,2-Dibromo-3-chloropropane	23.32	1.0	20	0	117	62 - 128	21.8	6.76	20	
1,2-Dibromoethane	19.26	1.0	20	0	96.3	77 - 121	19.43	0.909	20	
1,2-Dichlorobenzene	19.82	1.0	20	0	99.1	80 - 119	19.41	2.1	20	
1,2-Dichloroethane	19.31	1.0	20	0	96.6	73 - 128	18.65	3.48	20	
1,2-Dichloropropane	18.85	1.0	20	0	94.3	78 - 122	19.14	1.49	20	
1,3,5-Trimethylbenzene	19.81	1.0	20	0	99.0	75 - 124	19.63	0.9	20	
1,3-Dichlorobenzene	19.86	1.0	20	0	99.3	80 - 119	19.13	3.75	20	
1,3-Dichloropropane	19.07	1.0	20	0	95.4	80 - 119	19.33	1.33	20	
1,4-Dichlorobenzene	20.59	1.0	20	0	103	79 - 118	20.11	2.37	20	
2,2-Dichloropropane	19.03	1.0	20	0	95.2	60 - 139	17.79	6.73	20	
2-Butanone	33.05	2.0	40	0	82.6	56 - 143	28.82	13.7	20	
2-Chlorotoluene	19.37	1.0	20	0	96.9	79 - 122	19.14	1.22	20	
2-Hexanone	41.68	2.0	40	0	104	57 - 139	41.91	0.565	20	
4-Chlorotoluene	19.34	1.0	20	0	96.7	78 - 122	19.44	0.566	20	
4-Isopropyltoluene	20.36	1.0	20	0	102	77 - 127	19.47	4.43	20	
4-Methyl-2-pentanone	43.07	2.0	40	0	108	67 - 130	41.44	3.86	20	
Acetone	10.87	2.0	40	0	27.2	39 - 160	9.401	14.4	20	S
Benzene	18.72	1.0	20	0	93.6	79 - 120	18.49	1.25	20	
Bromobenzene	19.46	1.0	20	0	97.3	80 - 120	19.56	0.518	20	
Bromochloromethane	16.35	1.0	20	0	81.8	78 - 123	16.14	1.27	20	
Bromodichloromethane	18.61	1.0	20	0	93.0	79 - 125	18.96	1.88	20	
Bromoform	19.66	1.0	20	0	98.3	66 - 130	19.61	0.236	20	
Bromomethane	16.22	1.0	20	0	81.1	53 - 141	18.33	12.2	20	

ALS Houston, US Date: 13-Jul-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
WorkOrder: HS20070055

QC BATCH REPORT

Batch ID: R364892 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MSD Sample ID: **HS20070043-17MSD** Units: **UG/L** Analysis Date: **10-Jul-2020 16:19**
Client ID: Run ID: **VOA6_364892** SeqNo: **5658735** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
Carbon disulfide	30.04	2.0	40	0	75.1	64 - 133	31.59	5.04	20	
Carbon tetrachloride	18.75	1.0	20	0	93.7	72 - 136	19.32	3.02	20	
Chlorobenzene	18.98	1.0	20	0	94.9	82 - 118	19.22	1.26	20	
Chloroethane	14.25	1.0	20	0	71.3	60 - 138	16.46	14.3	20	
Chloroform	17.88	1.0	20	0	89.4	79 - 124	16.9	5.63	20	
Chloromethane	17.48	1.0	20	0	87.4	50 - 139	19.7	12	20	
cis-1,2-Dichloroethene	29.82	1.0	20	15.39	72.2	78 - 123	27.72	7.31	20	S
cis-1,3-Dichloropropene	18.55	1.0	20	0	92.7	75 - 124	20.76	11.3	20	
Dibromochloromethane	18.85	1.0	20	0	94.2	74 - 126	19.72	4.54	20	
Dibromomethane	18.71	1.0	20	0	93.5	79 - 123	18.55	0.853	20	
Dichlorodifluoromethane	15.28	1.0	20	0	76.4	32 - 152	17.02	10.7	20	
Ethylbenzene	19.11	1.0	20	0	95.5	79 - 121	19.76	3.37	20	
Hexachlorobutadiene	20.91	1.0	20	0	105	66 - 134	22.36	6.68	20	
Isopropylbenzene	19.5	1.0	20	0	97.5	72 - 131	20.11	3.12	20	
m,p-Xylene	37.89	2.0	40	0	94.7	80 - 121	39.02	2.94	20	
Methylene chloride	18.26	2.0	20	0	91.3	74 - 124	17.85	2.29	20	
Naphthalene	25.31	1.0	20	0	127	61 - 128	21.89	14.5	20	
n-Butylbenzene	20.74	1.0	20	0	104	75 - 128	19.82	4.55	20	
n-Propylbenzene	20.16	1.0	20	0	101	76 - 126	19.62	2.72	20	
o-Xylene	19.05	1.0	20	0	95.2	78 - 122	19.5	2.35	20	
sec-Butylbenzene	20.02	1.0	20	0	100	77 - 126	19.43	2.98	20	
Styrene	18.69	1.0	20	0	93.5	78 - 123	19.19	2.64	20	
tert-Butylbenzene	20.12	1.0	20	0	101	78 - 124	19.72	1.99	20	
Tetrachloroethene	19.5	1.0	20	0	97.5	74 - 129	20.3	4.01	20	
Toluene	19.19	1.0	20	0	96.0	80 - 121	19.8	3.14	20	
trans-1,2-Dichloroethene	18.18	1.0	20	0.4181	88.8	75 - 124	16.48	9.81	20	
trans-1,3-Dichloropropene	18.95	1.0	20	0	94.7	73 - 127	22.2	15.8	20	
Trichloroethene	77.51	1.0	20	77.74	-1.16	79 - 123	79.03	1.94	20	S
Trichlorofluoromethane	16.77	1.0	20	0	83.9	65 - 141	18.6	10.3	20	
Vinyl chloride	16.91	1.0	20	0.7027	81.0	58 - 137	18.79	10.5	20	
Surr: 1,2-Dichloroethane-d4	*44.65*	*1.0*	*50*	*0*	*89.3*	*81 - 118*	*42.88*	*4.06*	*20*	
Surr: 4-Bromofluorobenzene	*50.44*	*1.0*	*50*	*0*	*101*	*85 - 114*	*50.92*	*0.942*	*20*	
Surr: Dibromofluoromethane	*46.84*	*1.0*	*50*	*0*	*93.7*	*80 - 119*	*44.55*	*5.01*	*20*	
Surr: Toluene-d8	*49.49*	*1.0*	*50*	*0*	*99.0*	*89 - 112*	*50.25*	*1.52*	*20*	

ALS Houston, US Date: 13-Jul-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
WorkOrder: HS20070055

QC BATCH REPORT

Batch ID:	R364892 (0)	Instrument:	VOA6	Method:	VOLATILES ORGANICS BY METHOD 8260C

The following samples were analyzed in this batch: HS20070055-01

ALS Houston, US Date: 13-Jul-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
WorkOrder: **HS20070055**

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

CERTIFICATIONS,ACCREDITATIONS & LICENSES

Agency	Number	Expire Date
Arkansas	20-030-0	26-Mar-2021
Dept of Defense	ANAB L2231 V009	22-Dec-2021
Illinois	2000322020-4	09-May-2021
Kansas	E-10352 2019-2020	31-Jul-2020
North Carolina	624-2020	31-Dec-2020
Oklahoma	2019-141	31-Aug-2020
Texas	T104704231-20-26	30-Apr-2021

ALS Houston, US Date: 13-Jul-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP-58
Work Order: HS20070055

SAMPLE TRACKING

Lab Samp ID	Client Sample ID	Action	Date	Person	New Location
HS20070055-01	35AWW21_062920	Login	7/1/2020 4:57:25 PM	JRM	VOA214
HS20070055-02	35AWW21_062920_a	Login	7/1/2020 4:57:25 PM	JRM	VOA214
HS20070055-03	35AWW13_062920	Login	7/1/2020 4:57:25 PM	JRM	VOA214
HS20070055-04	35AWW10_062920	Login	7/1/2020 4:57:25 PM	JRM	VOA214
HS20070055-05	35AWW17_062920	Login	7/1/2020 4:57:25 PM	JRM	VOA214
HS20070055-06	Trip Blank	Login	7/1/2020 4:57:25 PM	JRM	VOA214

ALS Houston, US Date: 13-Jul-20

Sample Receipt Checklist

Work Order ID: HS20070055 **Date/Time Received:** **01-Jul-2020 09:40**

Client Name: Bhate Environmental **Received by:** **Paresh M. Giga**

Completed By:	/S/ Jared R. Makan	01-Jul-2020 17:01	**Reviewed by:**	/S/ RJ Modashia	10-Jul-2020 15:55
	eSignature	Date/Time		eSignature	Date/Time

Matrices: **Water** Carrier name: **ALS Courier**

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):	1.3°C/1.3°C UC/C	IR25
Cooler(s)/Kit(s):	43739	
Date/Time sample(s) sent to storage:	07/01/2020 17:05	

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:

HS20070055 8260 Raw Data

ALS WO# HS20070055

MSVOA06 -Logbook

Batch: 41076 **Analyst:** Presenta Cabascango

Date: 07-07-2020 **Reviewer:**

Method: 8260 **Laboratory:** Houston

Comments:

#	Samp ID	Type	Analyzed	DF	Init Wt/Vol	Final Vol	File ID	Matrix	Status	pH
1	BFB	TUNE	07-07-2020 10:42 am	1.00	50 mL	50 mL	X070701.D	Liquid	Y	NA
	Auto find/ purged									
2	VSTD000.25	ICAL1	07-07-2020 11:06 am	1.00	50 mL	50 mL	X070702.D	Liquid	Y	NA
	0.1 uL cal std/100 mL DI									
3	VSTD000.5	ICAL2	07-07-2020 11:30 am	1.00	50 mL	50 mL	X070703.D	Liquid	Y	NA
	0.10 uL cal std/50 mL DI									
4	VSTD001	ICAL3	07-07-2020 12:18 pm	1.00	50 mL	50 mL	X070704.D	Liquid	Y	NA
	0.20 uL cal std/50 mL DI									
5	VSTD002	ICAL4	07-07-2020 12:42 pm	1.00	50 mL	50 mL	X070705.D	Liquid	Y	NA
	0.40 uL cal std/50 mL DI									
6	VSTD005	ICAL5	07-07-2020 01:06 pm	1.00	50 mL	50 mL	X070706.D	Liquid	Y	NA
	1.0 uL cal std/50 mL DI									
7	VSTD020	ICAL6	07-07-2020 01:29 pm	1.00	50 mL	50 mL	X070707.D	Liquid	Y	NA
	4.0 uL cal std/50 mL DI									
8	VSTD050	ICAL7	07-07-2020 01:53 pm	1.00	50 mL	50 mL	X070708.D	Liquid	Y	NA
	10 uL cal std/50 mL DI									
9	VSTD100	ICAL8	07-07-2020 02:17 pm	1.00	50 mL	50 mL	X070709.D	Liquid	Y	NA
	20 uL cal std/50 mL DI									
10	VSTD150	ICAL9	07-07-2020 02:41 pm	1.00	50 mL	50 mL	X070710.D	Liquid	Y	NA
	30 uL cal std/50 mL DI									
11	VSTD200	ICAL	07-07-2020 03:05 pm	1.00	50 mL	50 mL	X070711.D	Liquid	Y	NA
	40 uL cal std/50 mL DI									
12	BLANK	SAMP	07-07-2020 03:29 pm	1.00	50 mL	50 mL	X070712.D	Liquid	Y	NA
13	BLANK	SAMP	07-07-2020 04:17 pm	1.00	50 mL	50 mL	X070713.D	Liquid	Y	NA
14	BFB	TUNE	07-07-2020 05:31 pm	1.00	50 mL	50 mL	Y070701.D	Liquid	Y	NA
	Auto find/ purged									
15	CCV	ICV	07-07-2020 05:55 pm	1.00	50 mL	50 mL	Y070702.D	Liquid	Y	NA
	10 uL ical std/50 mL DI									
16	CCV	CCV	07-07-2020 06:19 pm	1.00	50 mL	50 mL	Y070703.D	Liquid	Y	NA
	10 uL cal std/50 mL DI									
17	CCB	SAMP	07-07-2020 06:43 pm	1.00	50 mL	50 mL	Y070704.D	Liquid	Y	NA
18	VLCSW-200707	LCS	07-07-2020 07:07 pm	1.00	50 mL	50 mL	Y070705.D	Liquid	Y	NA
	4.0 uL cal std/50 mL DI									
19	BLANK	SAMP	07-07-2020 07:31 pm	1.00	50 mL	50 mL	Y070706.D	Liquid	Y	NA
20	BLANK	SAMP	07-07-2020 07:55 pm	1.00	50 mL	50 mL	Y070707.D	Liquid	Y	NA
21	VBLKW-200707	MBLK	07-07-2020 08:19 pm	1.00	50 mL	50 mL	Y070708.D	Liquid	Y	NA
22	HS20061218-07	SAMP	07-07-2020 08:43 pm	1.00	50 mL	50 mL	Y070709.D	Liquid	Y	<2
23	HS20061390-11	SAMP	07-07-2020 09:07 pm	1.00	50 mL	50 mL	Y070710.D	Liquid	Y	<2
24	HS20061218-01	SAMP	07-07-2020 09:31 pm	1.00	50 mL	50 mL	Y070711.D	Liquid	Y	<2
25	HS20061218-02	SAMP	07-07-2020 09:55 pm	1.00	50 mL	50 mL	Y070712.D	Liquid	Y	<2
26	HS20061218-01MS	MS	07-07-2020 10:19 pm	1.00	50 mL	50 mL	Y070713.D	Liquid	Y	<2
	3.5 uL cal std/40 mL samp									
27	HS20061218-01MSD	MSD	07-07-2020 10:43 pm	1.00	50 mL	50 mL	Y070714.D	Liquid	Y	<2
	3.5 uL cal std/40 mL samp									
28	HS20061218-02	SAMP	07-07-2020 11:07 pm	25.00	2 mL	50 mL	Y070715.D	Liquid	Y	<2
29	HS20061218-03	SAMP	07-07-2020 11:31 pm	1.00	50 mL	50 mL	Y070716.D	Liquid	Y	<2
30	HS20061218-04	SAMP	07-07-2020 11:55 pm	1.00	50 mL	50 mL	Y070717.D	Liquid	Y	<2
31	HS20061218-05	SAMP	07-08-2020 12:20 am	1.00	50 mL	50 mL	Y070718.D	Liquid	Y	<2
32	HS20061218-06	SAMP	07-08-2020 12:44 am	1.00	50 mL	50 mL	Y070719.D	Liquid	Y	<2

MSVOA06 -Logbook

#	Samp ID	Type	Analyzed	DF	Init Wt/Vol	Final Vol	File ID	Matrix	Status	pH
33	HS20061390-01	SAMP	07-08-2020 01:08 am	1.00	50 mL	50 mL	Y070720.D	Liquid	Y	<2
34	HS20061390-02	SAMP	07-08-2020 01:32 am	1.00	50 mL	50 mL	Y070721.D	Liquid	Y	<2
35	HS20061390-03	SAMP	07-08-2020 01:56 am	1.00	50 mL	50 mL	Y070722.D	Liquid	Y	<2
36	HS20061390-04	SAMP	07-08-2020 02:20 am	1.00	50 mL	50 mL	Y070723.D	Liquid	Y	<2
37	HS20061390-05	SAMP	07-08-2020 02:44 am	1.00	50 mL	50 mL	Y070724.D	Liquid	Y	<2
38	HS20061390-06	SAMP	07-08-2020 03:08 am	1.00	50 mL	50 mL	Y070725.D	Liquid	Y	<2
39	HS20061390-07	SAMP	07-08-2020 03:32 am	1.00	50 mL	50 mL	Y070726.D	Liquid	Y	<2
40	HS20061390-08	SAMP	07-08-2020 03:56 am	1.00	50 mL	50 mL	Y070727.D	Liquid	Y	<2
41	HS20061390-09	SAMP	07-08-2020 04:20 am	1.00	50 mL	50 mL	Y070728.D	Liquid	Y	<2
42	HS20061390-10n/r	SAMP	07-08-2020 04:44 am	1.00	50 mL	50 mL	Y070729.D	Liquid	Y	<2
43	CCV-END	CCV	07-08-2020 05:08 am	1.00	50 mL	50 mL	Y070730.D	Liquid	Y	NA
	10 uL cal std/50 mL DI									
44	BLANK	SAMP	07-08-2020 05:32 am	1.00	50 mL	50 mL	Y070731.D	Liquid	Y	NA

Chemical	Value
SURR SPK ID	31106-34-06
IS ID	31106-34-06
CAL STD ID	31106-37-01/02
BFB ID	31106-34-06

FORM 3
WATER VOLATILE METHOD SPIKE RECOVERY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20070055

Matrix Spike - Sample No.: ICV

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE AMOUNT ()	% REC #	QC. LIMITS REC.
cis-1,3-Dichloropropene	50.00	45.96	92	80-120
trans-1,3-Dichloroprope	50.00	46.20	92	80-120
1,3-Dichlorobenzene	50.00	45.07	90	80-120
2,2-Dichloropropane	50.00	49.60	99	80-120
1,1-Dichloropropene	50.00	44.63	89	80-120
Dibromomethane	50.00	44.89	90	80-120
1,2-Dibromoethane	50.00	43.94	88	80-120
trans-1,2-Dichloroethen	50.00	48.12	96	80-120
1,1,1,2-Tetrachloroetha	50.00	46.91	94	80-120
1,1,1-Trichloroethane	50.00	47.71	95	80-120
1,1,2,2-Tetrachloroetha	50.00	40.20	80	80-120
1,1,2-Trichloroethane	50.00	45.35	91	80-120
1,1-Dichloroethane	50.00	45.41	91	80-120
1,1-Dichloroethene	50.00	49.14	98	80-120
Trichloroethene	50.00	45.66	91	80-120
1,2,3-Trichlorobenzene	50.00	46.89	94	80-120
Trichlorofluoromethane	50.00	50.21	100	80-120
1,2,4-Trichlorobenzene	50.00	49.10	98	80-120
1,2,4-Trimethylbenzene	50.00	45.96	92	80-120
Tetrachloroethene	50.00	47.39	95	80-120
1,2-Dichlorobenzene	50.00	43.86	88	80-120
1,2-Dichloroethane	50.00	44.66	89	80-120
1,2-Dichloropropane	50.00	46.90	94	80-120
1,3,5-Trimethylbenzene	50.00	46.49	93	80-120
1,3-Dichloropropane	50.00	44.45	89	80-120
1,4-Dichlorobenzene	50.00	46.98	94	80-120
Toluene	50.00	46.83	94	80-120
2-Butanone	100.00	89.03	89	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 3
WATER VOLATILE METHOD SPIKE RECOVERY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20070055

Matrix Spike - Sample No.: ICV

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE AMOUNT ()	% REC #	QC. LIMITS REC.
2-Chlorotoluene	50.00	45.41	91	80-120
2-Hexanone	100.00	87.00	87	80-120
4-Chlorotoluene	50.00	45.86	92	80-120
tert-Butylbenzene	50.00	46.48	93	80-120
4-Methyl-2-Pentanone	100.00	88.11	88	80-120
Acetone	100.00	86.84	87	80-120
Benzene	50.00	46.07	92	80-120
Bromobenzene	50.00	45.84	92	80-120
Bromochloromethane	50.00	42.61	85	80-120
Bromodichloromethane	50.00	47.17	94	80-120
Bromoform	50.00	44.49	89	80-120
Bromomethane	50.00	50.59	101	80-120
Carbon Disulfide	100.00	97.31	97	80-120
Carbon Tetrachloride	50.00	46.20	92	80-120
Chlorobenzene	50.00	46.08	92	80-120
Chloroethane	50.00	48.34	97	80-120
Chloroform	50.00	46.29	92	80-120
Chloromethane	50.00	47.14	94	80-120
cis-1,2-Dichloroethene	50.00	46.63	93	80-120
Dibromochloromethane	50.00	45.83	92	80-120
Dichlorodifluoromethane	50.00	49.83	100	80-120
Ethylbenzene	50.00	46.27	92	80-120
Hexachlorobutadiene	50.00	55.77	112	80-120
Isopropylbenzene	50.00	46.24	92	80-120
m,p-Xylenes	100.00	93.34	93	80-120
Methylene Chloride	50.00	57.72	115	80-120
n-Butylbenzene	50.00	48.53	97	80-120
n-Propylbenzene	50.00	46.87	94	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 3
WATER VOLATILE METHOD SPIKE RECOVERY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20070055

Matrix Spike - Sample No.: ICV

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE AMOUNT ()	% REC #	QC. LIMITS REC.
Naphthalene	50.00	40.99	82	80-120
o-Xylene	50.00	45.70	91	80-120
sec-Butylbenzene	50.00	46.89	94	80-120
Styrene	50.00	45.40	91	80-120
Vinyl Chloride	50.00	47.99	96	80-120
1,2,3-Trichloropropane	50.00	42.21	84	80-120
p-Isopropyltoluene	50.00	47.33	95	80-120
1,2-Dibromo-3-Chloropro	50.00	40.45	81	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: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20070055

Lab File ID: X070701 BFB Injection Date: 07/07/20

Instrument ID: VOA6 BFB Injection Time: 1042

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	31.5
75	30.0 - 60.0% of mass 95	53.4
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.9
173	Less than 2.0% of mass 174	0.5 (0.9)1
174	Greater than 50.0% of mass 95	53.1
175	5.0 - 9.0% of mass 174	4.4 (8.3)1
176	95.0 - 101.0% of mass 174	51.5 (96.8)1
177	5.0 - 9.0% of mass 176	3.4 (6.7)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	X070702	07/07/20	1106
02	VSTD000.5	VSTD000.5	X070703	07/07/20	1130
03	VSTD001	VSTD001	X070704	07/07/20	1218
04	VSTD002	VSTD002	X070705	07/07/20	1242
05	VSTD005	VSTD005	X070706	07/07/20	1306
06	VSTD020	VSTD020	X070707	07/07/20	1329
07	VSTD050	VSTD050	X070708	07/07/20	1353
08	VSTD100	VSTD100	X070709	07/07/20	1417
09	VSTD150	VSTD150	X070710	07/07/20	1441
10	VSTD200	VSTD200	X070711	07/07/20	1505
11	ICV	ICV	Y070702	07/07/20	1755
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20070055

Instrument ID: VOA6 Calibration Date(s): 07/07/20 07/07/20

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1106 1505

LAB FILE ID: RF0.25: X070702 RF0.5: X070703 RF1: X070704
RF2: X070705 RF5: X070706 RF20: X070707

COMPOUND	RF0.25	RF0.5	RF1	RF2	RF5	RF20
cis-1,3-Dichloropropene		0.733	0.565	0.566	0.629	0.572
trans-1,3-Dichloropropene		0.603	0.531	0.504	0.573	0.523
1,3-Dichlorobenzene		2.022	1.498	1.521	1.640	1.550
2,2-Dichloropropane		1.076	0.894	0.742	0.909	0.862
1,1-Dichloropropene		0.558	0.557	0.481	0.503	0.458
Dibromomethane		0.311	0.228	0.242	0.267	0.244
1,2-Dibromoethane		0.510	0.403	0.395	0.425	0.397
trans-1,2-Dichloroethene		0.613	0.525	0.506	0.591	0.551
1,1,1,2-Tetrachloroethane		0.452	0.369	0.373	0.397	0.373
1,1,1-Trichloroethane		0.990	0.873	0.859	0.978	0.902
1,1,2,2-Tetrachloroethane		1.257	1.018	0.980	1.158	0.960
1,1,2-Trichloroethane		0.390	0.286	0.312	0.353	0.322
1,1-Dichloroethane		1.887	1.456	1.272	1.483	1.338
1,1-Dichloroethene		0.564	0.426	0.433	0.475	0.446
Trichloroethene		0.463	0.332	0.323	0.396	0.360
1,2,3-Trichlorobenzene			716	1800	4185	12636
Trichlorofluoromethane		0.907	0.852	0.750	0.855	0.860
1,2,4-Trichlorobenzene		839	1386	3441	7921	24701
1,2,4-Trimethylbenzene		3.733	2.863	2.686	2.985	2.842
Tetrachloroethene		0.376	0.260	0.292	0.326	0.311
1,2-Dichlorobenzene		1.923	1.415	1.396	1.565	1.388
1,2-Dichloroethane		0.742	0.620	0.574	0.657	0.617
1,2-Dichloropropane		0.491	0.450	0.458	0.504	0.456
1,3,5-Trimethylbenzene		3.508	2.695	2.573	2.925	2.768
1,3-Dichloropropane		0.819	0.685	0.677	0.709	0.650
1,4-Dichlorobenzene		4670	6719	12018	32551	120181
Toluene		1.901	1.647	1.520	1.708	1.543
2-Butanone		4038	8248	14432	38898	122100
2-Chlorotoluene		3.314	2.441	2.366	2.609	2.334
2-Hexanone		5501	8043	19454	54537	183102
4-Chlorotoluene		3.566	2.542	2.584	3.050	2.739
tert-Butylbenzene		2.883	2.150	2.099	2.360	2.214
4-Methyl-2-Pentanone		9002	14318	26164	73042	248616
Acetone		47904	48306	56307	78299	132631
Benzene		1.706	1.451	1.281	1.493	1.386
Bromobenzene		1.099	0.926	0.902	0.998	0.931
Bromochloromethane		0.435	0.371	0.393	0.365	0.325
Bromodichloromethane		0.543	0.498	0.463	0.520	0.484
Bromoform		0.312	0.280	0.257	0.302	0.276
Bromomethane		1573	2882	4741	10361	35913
Carbon Disulfide		1.728	1.475	1.420	1.573	1.471
Carbon Tetrachloride		0.520	0.491	0.436	0.500	0.450
Chlorobenzene		1.310	1.022	0.948	1.060	0.968
Chloroethane		1996	2977	6029	14118	55533

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS2007005

Instrument ID: VOA6 Calibration Date(s): 07/07/20 07/07/20

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1106 1505

LAB FILE ID: RF0.25: X070702 RF0.5: X070703 RF1: X070704
RF2: X070705 RF5: X070706 RF20: X070707

COMPOUND	RF0.25	RF0.5	RF1	RF2	RF5	RF20
Chloroform		1.290	1.086	1.045	1.163	1.078
Chloromethane		1.271	1.007	0.963	1.022	0.923
cis-1,2-Dichloroethene		0.792	0.657	0.594	0.694	0.650
Dibromochloromethane		0.492	0.378	0.410	0.440	0.392
Dichlorodifluoromethane		0.713	0.523	0.538	0.617	0.585
Ethylbenzene		0.630	0.580	0.493	0.571	0.522
Hexachlorobutadiene		964	1140	2378	4900	17457
Isopropylbenzene		2.017	1.496	1.463	1.682	1.565
m,p-Xylenes		0.828	0.634	0.609	0.689	0.625
Methylene Chloride		0.473	0.634	0.449	0.590	0.588
n-Butylbenzene		3.206	2.342	2.242	2.472	2.439
n-Propylbenzene		4.977	3.764	3.623	4.224	3.936
Naphthalene		1869	3173	5731	13133	40238
o-Xylene		0.773	0.654	0.581	0.677	0.624
sec-Butylbenzene		4.190	3.166	3.017	3.441	3.203
Styrene		1.380	1.027	1.067	1.150	1.088
Vinyl Chloride		0.997	0.837	0.828	0.895	0.830
1,2,3-Trichloropropane		0.981	0.835	0.937	0.990	0.873
p-Isopropyltoluene		3.468	2.635	2.544	2.903	2.767
1,2-Dibromo-3-Chloropropane		171	296	800	2373	6863
1,2-Dichloroethane-d4		3020	5456	8551	23738	81727
Dibromofluoromethane		2185	3277	6445	17474	60811
Toluene-d8		1.637	1.340	1.266	1.346	1.250
4-Bromofluorobenzene		3626	5370	8990	23624	79496

FORM VI VOA

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS2007005

Instrument ID: VOA6 Calibration Date(s): 07/07/20 07/07/20

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1106 1505

LAB FILE ID: RF50: X070708 RF100: X070709 RF150: X070710
RF200: X070711

COMPOUND	RF50	RF100	RF150	RF200
cis-1,3-Dichloropropene	0.597	0.585	0.596	0.589
trans-1,3-Dichloropropene	0.540	0.532	0.539	0.535
1,3-Dichlorobenzene	1.568	1.528	1.543	1.536
2,2-Dichloropropane	0.867	0.820	0.836	0.783
1,1-Dichloropropene	0.470	0.464	0.477	0.465
Dibromomethane	0.246	0.240	0.242	0.237
1,2-Dibromoethane	0.385	0.371	0.369	0.363
trans-1,2-Dichloroethene	0.559	0.525	0.530	0.517
1,1,1,2-Tetrachloroethane	0.375	0.373	0.374	0.366
1,1,1-Trichloroethane	0.924	0.894	0.921	0.901
1,1,2,2-Tetrachloroethane	0.907	0.884	0.862	0.869
1,1,2-Trichloroethane	0.308	0.295	0.294	0.287
1,1-Dichloroethane	1.378	1.312	1.334	1.293
1,1-Dichloroethene	0.474	0.453	0.457	0.440
Trichloroethene	0.377	0.360	0.368	0.360
1,2,3-Trichlorobenzene	25695	55251	79399	113093
Trichlorofluoromethane	0.905	0.872	0.894	0.866
1,2,4-Trichlorobenzene	51947	107787	155239	223355
1,2,4-Trimethylbenzene	2.897	2.793	2.850	2.814
Tetrachloroethene	0.300	0.295	0.298	0.289
1,2-Dichlorobenzene	1.419	1.356	1.348	1.340
1,2-Dichloroethane	0.610	0.590	0.593	0.580
1,2-Dichloropropane	0.468	0.453	0.457	0.448
1,3,5-Trimethylbenzene	2.851	2.738	2.812	2.769
1,3-Dichloropropane	0.629	0.616	0.609	0.598
1,4-Dichlorobenzene	284407	530827	790661	1025151
Toluene	1.548	1.514	1.506	1.469
2-Butanone	258420	455606	643926	836660
2-Chlorotoluene	2.430	2.339	2.400	2.353
2-Hexanone	391819	730128	1049289	1371530
4-Chlorotoluene	2.832	2.777	2.782	2.741
tert-Butylbenzene	2.273	2.194	2.258	2.212
4-Methyl-2-Pentanone	554737	1037472	1488543	1953538
Acetone	227994	370679	497386	616921
Benzene	1.414	1.366	1.388	1.353
Bromobenzene	0.941	0.917	0.939	0.932
Bromochloromethane	0.320	0.306	0.313	0.296
Bromodichloromethane	0.504	0.497	0.502	0.495
Bromoform	0.275	0.269	0.266	0.261
Bromomethane	85523	181570	258225	336728
Carbon Disulfide	1.565	1.480	1.517	1.454
Carbon Tetrachloride	0.466	0.469	0.484	0.478
Chlorobenzene	0.980	0.963	0.966	0.951
Chloroethane	119616	231987	327112	412328

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS2007005

Instrument ID: VOA6 Calibration Date(s): 07/07/20 07/07/20

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1106 1505

LAB FILE ID: RF50: X070708 RF100: X070709 RF150: X070710
RF200: X070711

COMPOUND	RF50	RF100	RF150	RF200
Chloroform	1.089	1.030	1.056	1.021
Chloromethane	0.989	0.983	1.041	1.048
cis-1,2-Dichloroethene	0.650	0.617	0.626	0.602
Dibromochloromethane	0.402	0.398	0.394	0.392
Dichlorodifluoromethane	0.610	0.600	0.633	0.629
Ethylbenzene	0.518	0.513	0.519	0.506
Hexachlorobutadiene	37898	87052	125138	167946
Isopropylbenzene	1.575	1.527	1.555	1.512
m,p-Xylenes	0.626	0.611	0.616	0.596
Methylene Chloride	0.548	0.546	0.544	0.549
n-Butylbenzene	2.606	2.480	2.558	2.481
n-Propylbenzene	4.069	3.970	4.086	4.052
Naphthalene	83775	165996	242788	339317
o-Xylene	0.617	0.600	0.599	0.590
sec-Butylbenzene	3.356	3.238	3.324	3.233
Styrene	1.080	1.068	1.042	1.033
Vinyl Chloride	0.897	0.859	0.890	0.871
1,2,3-Trichloropropane	0.856	0.810	0.785	0.777
p-Isopropyltoluene	2.866	2.752	2.858	2.796
1,2-Dibromo-3-Chloropropane	14963	27599	38494	51251
1,2-Dichloroethane-d4	193703	380559	544077	711398
Dibromofluoromethane	141276	276479	399110	511371
Toluene-d8	1.261	1.269	1.244	1.217
4-Bromofluorobenzene	190894	370763	536443	687661

FORM VI VOA

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS2007005

Instrument ID: VOA6 Calibration Date(s): 07/07/20 07/07/20

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1106 1505

COMPOUND	CURVE	COEFFICENTS A0	COEFFICENTS A1	%RSD OR R^2	MAX %RSD OR R^2
cis-1,3-Dichloropropene	AVRG		0.60349437	8.689	15.000
trans-1,3-Dichloropropene	AVRG		0.54221185	5.402	15.000
1,3-Dichlorobenzene	AVRG		1.60078114	10.189	15.000
2,2-Dichloropropane	AVRG		0.86565624	10.942	15.000
1,1-Dichloropropene	AVRG		0.49236911	7.916	15.000
Dibromomethane	AVRG		0.25069074	9.872	15.000
1,2-Dibromoethane	AVRG		0.40189663	11.150	15.000
trans-1,2-Dichloroethene	AVRG		0.54648752	6.588	15.000
1,1,1,2-Tetrachloroethane	AVRG		0.38390374	7.066	15.000
1,1,1-Trichloroethane	AVRG		0.91595738	4.779	15.000
1,1,2,2-Tetrachloroethane	AVRG		0.98850834	13.883	15.000
1,1,2-Trichloroethane	AVRG		0.31629508	10.963	15.000
1,1-Dichloroethane	AVRG		1.41703507	13.404	15.000
1,1-Dichloroethene	AVRG		0.46298543	8.956	15.000
Trichloroethene	AVRG		0.37097303	11.008	15.000
1,2,3-Trichlorobenzene	LINR	3.126e-002	6.14275671	0.9961507	0.9900000
Trichlorofluoromethane	AVRG		0.86224441	5.455	15.000
1,2,4-Trichlorobenzene	LINR	2.611e-002	3.12702574	0.9960302	0.9900000
1,2,4-Trimethylbenzene	AVRG		2.94035470	10.468	15.000
Tetrachloroethene	AVRG		0.30540368	10.371	15.000
1,2-Dichlorobenzene	AVRG		1.46136524	12.709	15.000
1,2-Dichloroethane	AVRG		0.62033824	8.424	15.000
1,2-Dichloropropane	AVRG		0.46513819	4.200	15.000
1,3,5-Trimethylbenzene	AVRG		2.84880498	9.336	15.000
1,3-Dichloropropane	AVRG		0.66576337	10.331	15.000
1,4-Dichlorobenzene	LINR	-4.e-003	0.65956419	0.9998495	0.9900000
Toluene	AVRG		1.59521768	8.594	15.000
2-Butanone	LINR	-0.1254893	2.31712051	0.9982783	0.9900000
2-Chlorotoluene	AVRG		2.50949721	12.481	15.000
2-Hexanone	LINR	-7.51e-002	2.17591025	0.9993852	0.9900000
4-Chlorotoluene	AVRG		2.84581625	10.777	15.000
tert-Butylbenzene	AVRG		2.29378715	10.162	15.000
4-Methyl-2-Pentanone	LINR	-6.47e-002	1.52822376	0.9995597	0.9900000
Acetone	LINR	-0.6888002	3.30836801	0.9960733	0.9900000
Benzene	AVRG		1.42657559	8.452	15.000
Bromobenzene	AVRG		0.95387490	6.334	15.000
Bromochloromethane	AVRG		0.34727619	13.461	15.000
Bromodichloromethane	AVRG		0.50081614	4.398	15.000
Bromoform	AVRG		0.27755733	6.584	15.000
Bromomethane	LINR	-1.53e-003	2.85253789	0.9996352	0.9900000
Carbon Disulfide	AVRG		1.52035898	6.092	15.000
Carbon Tetrachloride	AVRG		0.47716841	5.356	15.000
Chlorobenzene	AVRG		1.01866323	11.313	15.000
Chloroethane	LINR	-3.83e-002	2.30643152	0.9982402	0.9900000

FORM VI VOA

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS2007005

Instrument ID: VOA6 Calibration Date(s): 07/07/20 07/07/20

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1106 1505

COMPOUND	CURVE	COEFFICENTS A0	COEFFICENTS A1	%RSD OR R^2	MAX %RSD OR R^2
Chloroform	AVRG		1.09563060	7.690	15.000
Chloromethane	AVRG		1.02749779	9.668	15.000
cis-1,2-Dichloroethene	AVRG		0.65356543	9.210	15.000
Dibromochloromethane	AVRG		0.41072157	8.499	15.000
Dichlorodifluoromethane	AVRG		0.60529225	9.218	15.000
Ethylbenzene	AVRG		0.53913118	8.264	15.000
Hexachlorobutadiene	LINR	2.678e-002	4.04851806	0.9985599	0.9900000
Isopropylbenzene	AVRG		1.59916105	10.541	15.000
m,p-Xylenes	AVRG		0.64833333	11.163	15.000
Methylene Chloride	AVRG		0.54676003	10.430	15.000
n-Butylbenzene	AVRG		2.53614962	10.780	15.000
n-Propylbenzene	AVRG		4.07790031	9.371	15.000
Naphthalene	LINR	5.962e-003	2.04981196	0.9977387	0.9900000
o-Xylene	AVRG		0.63514686	9.482	15.000
sec-Butylbenzene	AVRG		3.35206887	10.048	15.000
Styrene	AVRG		1.10382680	9.966	15.000
Vinyl Chloride	AVRG		0.87835920	5.932	15.000
1,2,3-Trichloropropane	AVRG		0.87160873	9.265	15.000
p-Isopropyltoluene	AVRG		2.84324348	9.165	15.000
1,2-Dibromo-3-Chloropropane	LINR	-3.51e-002	13.3313497	0.9993120	0.9900000
1,2-Dichloroethane-d4	LINR	-1.38e-002	1.35500319	0.9998000	0.9900000
Dibromofluoromethane	LINR	-1.8e-002	1.87178805	0.9993538	0.9900000
Toluene-d8	AVRG		1.31449843	9.760	15.000
4-Bromofluorobenzene	LINR	-2.17e-002	2.14592362	0.9994374	0.9900000

FORM VI VOA

Data File: \\nahstws005\Target\chem\voa6.i\X200707.b\X070701.D

Date : 07-JUL-2020 10:42

Client ID: BFB

Instrument: voa6.i

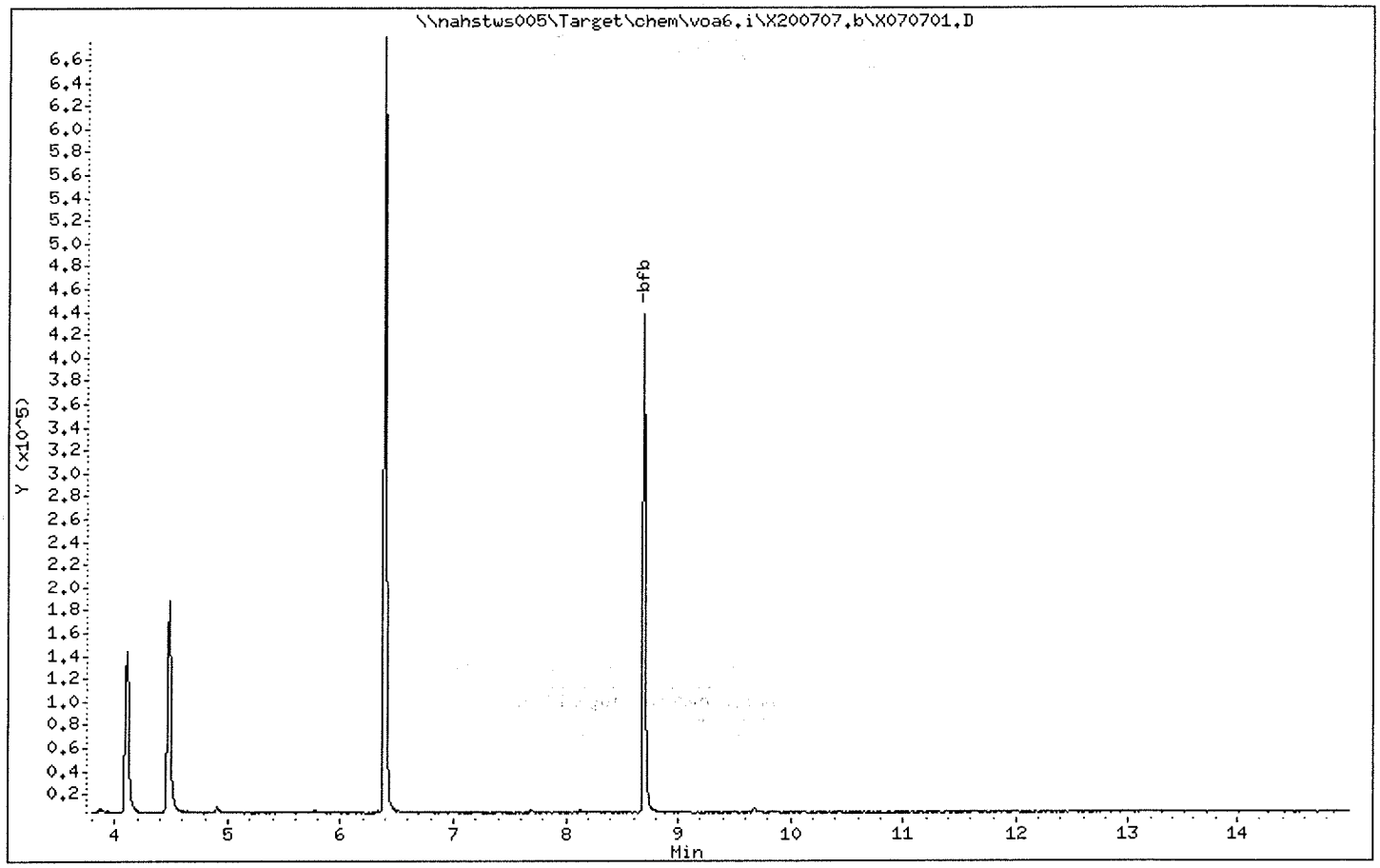
Sample Info: BFB;BFB;3;;BFB

Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

Column diameter: 0.25



Data File: \\nahstws005\Target\chem\voa6.i\X200707.b\X070701.D

Date : 07-JUL-2020 10:42

Client ID: BFB

Instrument: voa6.i

Sample Info: BFB;BFB;3;;BFB

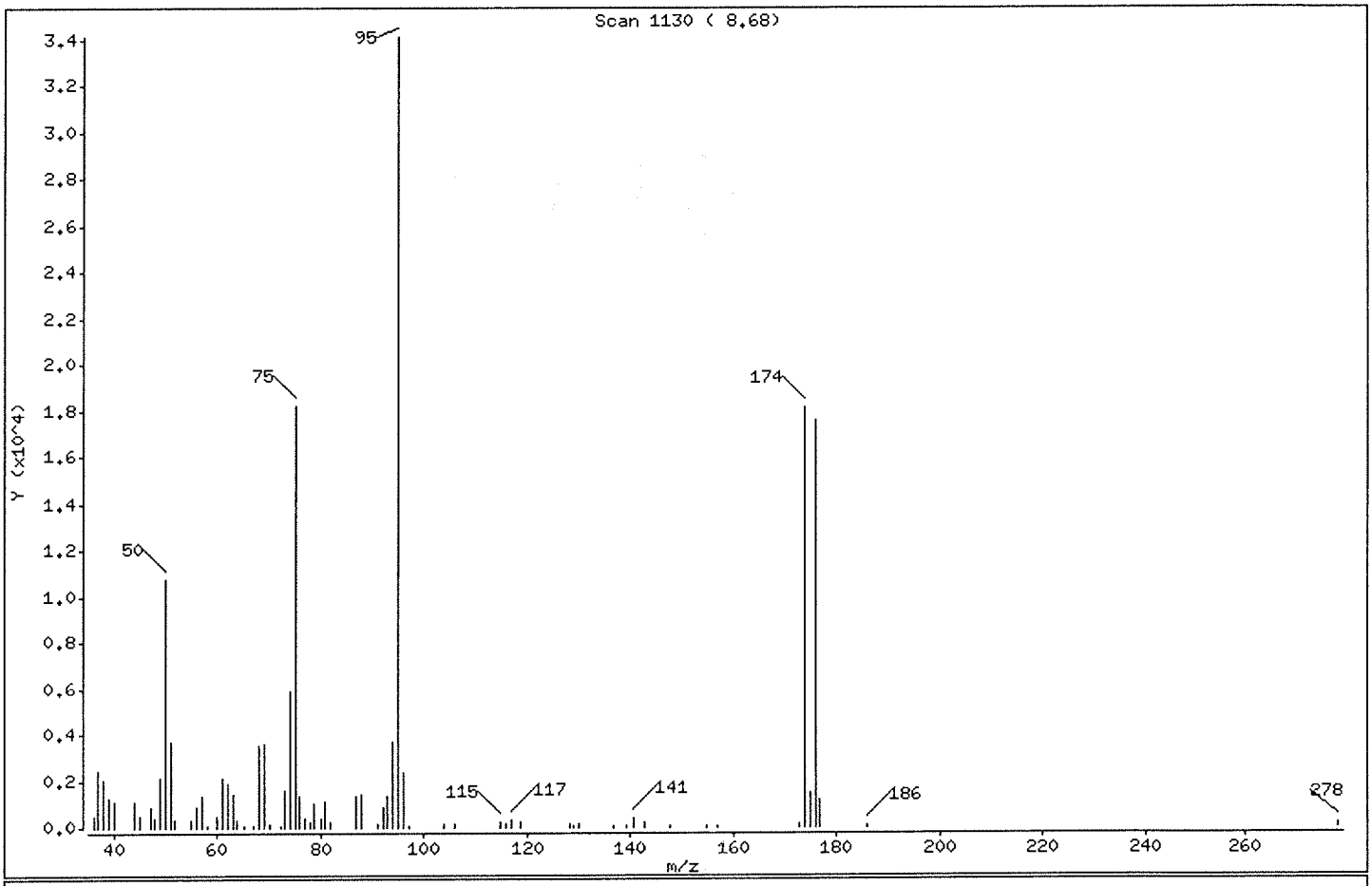
Volume Injected (uL): 2.0

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	31.54
75	30.00 - 60.00% of mass 95	53.42
96	5.00 - 9.00% of mass 95	6.89
173	Less than 2.00% of mass 174	0.47 (0.88)
174	Greater than 50.00% of mass 95	53.14
175	5.00 - 9.00% of mass 174	4.39 (8.26)
176	95.00 - 101.00% of mass 174	51.45 (96.83)
177	5.00 - 9.00% of mass 176	3.44 (6.68)

Data File: \\nahstws005\Target\chem\voa6.i\X200707.b\X070701.D

Date : 07-JUL-2020 10:42

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: X070701.D
Spectrum: Scan 1130 (8.68)
Location of Maximum: 95.00
Number of points: 70

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.10	509	60.90	2085	80.90	1096	129.00	83
37.00	2471	62.00	1904	81.90	254	130.00	180
38.00	2023	63.00	1446	86.90	1296	136.90	66
39.00	1258	63.90	336	88.00	1448	139.10	78
39.90	1064	65.20	110	91.00	138	140.80	397
44.00	1079	66.80	108	92.00	832	142.90	263
44.90	454	67.90	3534	92.90	1360	147.70	87
47.00	875	69.00	3625	94.00	3702	154.90	86
48.00	411	70.00	157	95.00	34144	157.00	68
49.00	2120	72.20	77	96.00	2353	173.00	159
50.00	10768	73.00	1607	97.10	80	173.90	18144
51.00	3726	74.00	5851	103.80	133	174.90	1498
51.80	310	75.00	18240	106.00	137	175.90	17568
55.00	307	76.00	1359	114.80	239	176.90	1173
55.90	830	76.90	411	115.90	120	186.10	55
57.00	1296	78.00	205	116.90	323	278.10	164
58.00	82	78.80	990	118.80	218		
60.00	496	79.90	431	128.10	183		

Data File: \\nahstws005\Target\chem\voa6.i\X200707.b\X070702.D Page 1
Report Date: 12-Aug-2020 15:35

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200707.b\X070702.D
Lab Smp Id: VSTD000.25 Client Smp ID: VSTD000.25
Inj Date : 07-JUL-2020 11:06
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\X200707.b\8260W.m
Meth Date : 12-Aug-2020 15:35 voa6.i Quant Type: ISTD
Cal Date : 07-JUL-2020 13:53 Cal File: X070708.D
Als bottle: 2 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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

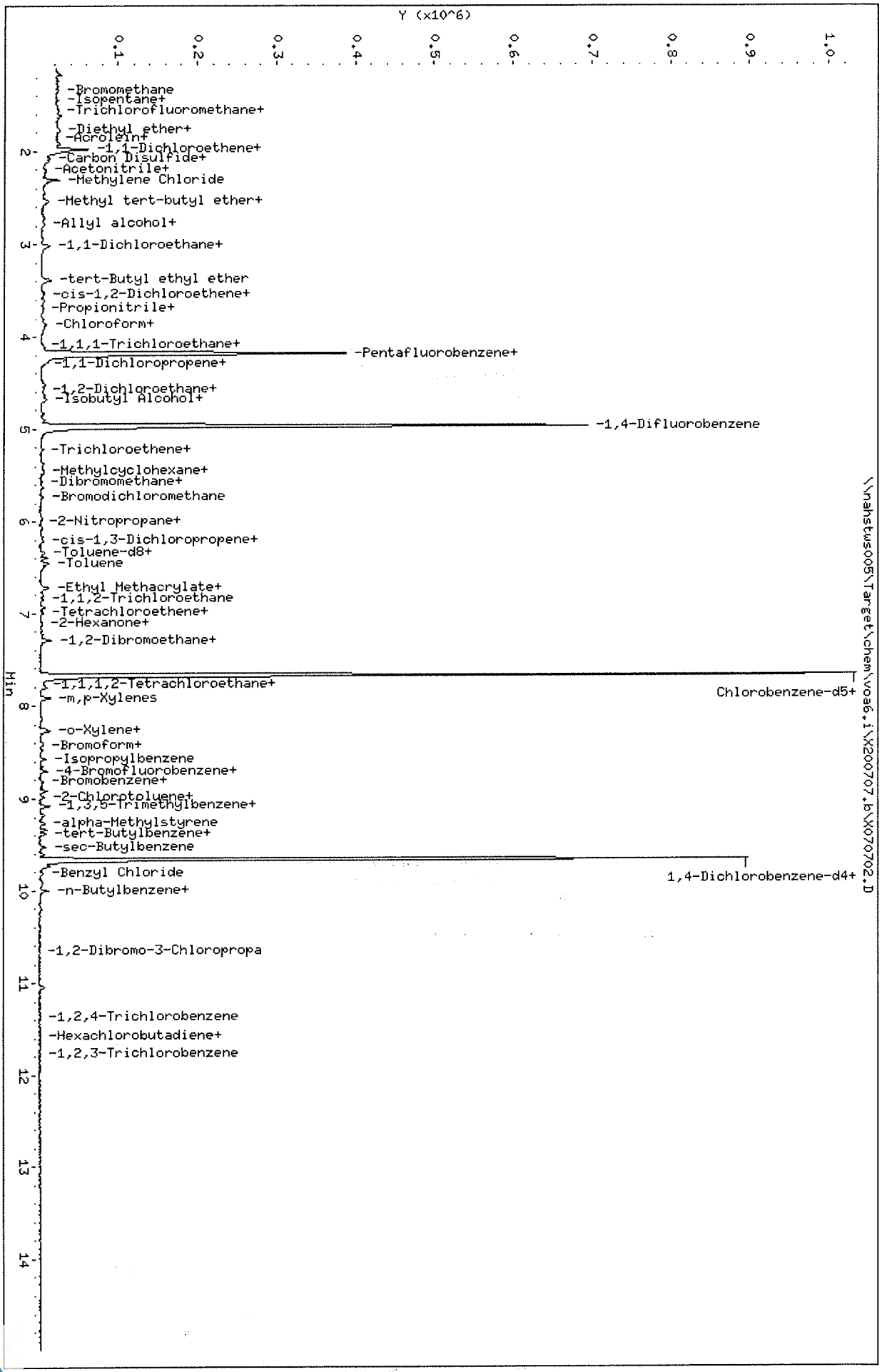
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.189	4.189	(1.000)	306082	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	510067	50.0000	
* 47 Chlorobenzene-d5	117	7.670	7.670	(1.000)	446154	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	206242	50.0000	
$ 30 Dibromofluoromethane	113	4.118	4.118	(0.983)	1254	0.25000	(a)
$ 35 1,2-Dichloroethane-d4	65	4.483	4.483	(1.070)	1712	0.25000	(Ta)
$ 48 Toluene-d8	98	6.395	6.395	(0.834)	4352	0.25000	0.37(Ta)
$ 69 4-Bromofluorobenzene	95	8.702	8.702	(1.134)	2767	0.25000	(a)
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	1134	0.25000	0.33(a)
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.976)	1562	0.25000	0.27(a)
68 1,1,2,2-Tetrachloroethane	83	8.845	8.845	(0.915)	1426	0.25000	0.34(aM)
53 1,1,2-Trichloroethane	83	6.847	6.847	(0.893)	944	0.25000	0.33(a)
22 1,1-Dichloroethane	63	2.929	2.929	(0.699)	2542	0.25000	0.29(Ta)
11 1,1-Dichloroethene	96	1.911	1.911	(0.456)	978	0.25000	0.34(a)
32 1,1-Dichloropropene	75	4.290	4.290	(0.863)	1650	0.25000	0.32(a)
93 1,2,3-Trichlorobenzene	180	11.761	11.761	(1.216)	185	0.25000	1.83(aM)
71 1,2,3-Trichloropropane	75	8.874	8.874	(0.918)	1081	0.25000	0.30(aM)
90 1,2,4-Trichlorobenzene	180	11.359	11.359	(1.175)	487	0.25000	1.67(aM)
79 1,2,4-Trimethylbenzene	105	9.390	9.390	(0.971)	3863	0.25000	0.31(a)
89 1,2-Dibromo-3-Chloropropane	155	10.650	10.650	(1.101)	28	0.25000	(aM)
57 1,2-Dibromoethane	107	7.269	7.269	(0.948)	1264	0.25000	0.35(a)
88 1,2-Dichlorobenzene	146	9.998	9.998	(1.034)	1980	0.25000	0.32(a)

Data File: \\nahstws005\Target\chem\voa6.i\X200707.b\X070702.D Page 2
Report Date: 12-Aug-2020 15:35

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
33 1,2-Dichloroethane	62	4.569	4.569	(0.919)	2308	0.25000	0.36(a)
42 1,2-Dichloropropane	63	5.443	5.443	(1.095)	522	0.25000	0.11(aM)
75 1,3,5-Trimethylbenzene	105	9.074	9.074	(0.939)	3560	0.25000	0.30(a)
83 1,3-Dichlorobenzene	146	9.612	9.612	(0.994)	2025	0.25000	0.30(a)
54 1,3-Dichloropropane	76	6.990	6.990	(0.911)	1661	0.25000	0.27(aM)
84 1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	2179	0.25000	0.14(a)
26 2,2-Dichloropropane	77	3.523	3.523	(0.841)	1629	0.25000	0.30(aM)
24 2-Butanone	43	3.602	3.602	(0.860)	2182	0.50000	(aM)
76 2-Chlorotoluene	91	8.981	8.981	(0.929)	3634	0.25000	0.35(a)
52 2-Hexanone	43	7.105	7.105	(0.926)	2527	0.50000	(a)
77 4-Chlorotoluene	91	9.082	9.082	(0.939)	3661	0.25000	0.31(a)
82 p-Isopropyltoluene	119	9.655	9.655	(0.999)	3422	0.25000	0.29(a)
45 4-Methyl-2-Pentanone	43	6.338	6.338	(0.826)	4865	0.50000	(aM)
10 Acetone	43	1.969	1.969	(0.470)	10435	0.50000	(aM)
37 Benzene	78	4.526	4.526	(0.911)	4885	0.25000	0.33(a)
74 Bromobenzene	156	8.817	8.817	(0.912)	1187	0.25000	0.30(a)
29 Bromochloromethane	128	3.795	3.795	(0.906)	885	0.25000	0.41(aM)
39 Bromodichloromethane	83	5.729	5.729	(1.153)	1667	0.25000	0.32(aM)
66 Bromoform	173	8.415	8.415	(1.097)	719	0.25000	0.29(aM)
6 Bromomethane	94	1.338	1.338	(0.320)	935	0.25000	0.35(aM)
19 Carbon Disulfide	76	2.076	2.076	(0.496)	6334	0.50000	0.68(a)
34 Carbon Tetrachloride	117	4.268	4.268	(0.859)	1350	0.25000	0.27(aM)
59 Chlorobenzene	112	7.699	7.699	(1.004)	2558	0.25000	0.28(a)
7 Chloroethane	64	1.410	1.410	(0.337)	1384	0.25000	(aM)
28 Chloroform	83	3.917	3.917	(0.935)	1841	0.25000	0.27(a)
3 Chloromethane	50	1.080	1.080	(0.258)	2307	0.25000	0.36(a)
27 cis-1,2-Dichloroethene	96	3.537	3.537	(0.844)	1365	0.25000	0.34(a)
46 cis-1,3-Dichloropropene	75	6.166	6.166	(1.241)	1727	0.25000	0.28(a)
55 Dibromochloromethane	129	7.183	7.183	(0.937)	1262	0.25000	0.34(a)
44 Dibromomethane	93	5.565	5.565	(1.120)	851	0.25000	0.33(a)
2 Dichlorodifluoromethane	85	0.973	0.973	(0.232)	1068	0.25000	0.28(aM)
61 Ethylbenzene	106	7.807	7.807	(1.018)	1421	0.25000	0.29(a)
91 Hexachlorobutadiene	225	11.488	11.488	(1.188)	183	0.25000	1.51(aM)
67 Isopropylbenzene	105	8.566	8.566	(1.117)	4418	0.25000	0.30(a)
62 m,p-Xylenes	106	7.907	7.907	(1.031)	3360	0.50000	0.58(a)
17 Methylene Chloride	84	2.298	2.298	(0.549)	1154	0.25000	0.34(aM)
87 n-Butylbenzene	91	10.006	10.006	(1.035)	3163	0.25000	0.30(a)
73 n-Propylbenzene	91	8.917	8.917	(0.922)	4653	0.25000	0.27(aM)
92 Naphthalene	128	11.574	11.574	(1.197)	939	0.25000	0.76(aM)
63 o-Xylene	106	8.251	8.251	(1.076)	1821	0.25000	0.32(a)
81 sec-Butylbenzene	105	9.526	9.526	(0.985)	4276	0.25000	0.30(a)
64 Styrene	104	8.265	8.265	(1.078)	2911	0.25000	0.29(a)
78 tert-Butylbenzene	119	9.339	9.339	(0.966)	3094	0.25000	0.32(a)
56 Tetrachloroethene	164	6.933	6.933	(0.904)	944	0.25000	0.34(a)
50 Toluene	91	6.460	6.460	(0.842)	4228	0.25000	0.29(a)
20 trans-1,2-Dichloroethene	96	2.542	2.542	(0.607)	1236	0.25000	0.36(a)
51 trans-1,3-Dichloropropene	75	6.696	6.696	(1.347)	1670	0.25000	0.30(a)
38 Trichloroethene	130	5.221	5.221	(1.050)	1045	0.25000	0.27(a)
8 Trichlorofluoromethane	101	1.560	1.560	(0.373)	1760	0.25000	0.33(a)
5 Vinyl Chloride	62	1.145	1.145	(0.273)	1976	0.25000	0.36(a)

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\X200707.b\X070702.D
Date : 07-JUL-2020 11:06
Client ID: VSTD000.25
Sample Info: VSTD000.25;VSTD000.25;1;1;
Purge Volume: 5.0
Column phase: DB624

\\nahstws005\Target\chem\voa6.i\X200707.b\X070702.D
Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\nahstws005\Target\chem\voa6.i\X200707.b\X070703.D Page 1
Report Date: 12-Aug-2020 15:35

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200707.b\X070703.D
Lab Smp Id: VSTD000.5 Client Smp ID: VSTD000.5
Inj Date : 07-JUL-2020 11:30
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\X200707.b\8260W.m
Meth Date : 12-Aug-2020 15:35 voa6.i Quant Type: ISTD
Cal Date : 07-JUL-2020 11:06 Cal File: X070702.D
Als bottle: 3 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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

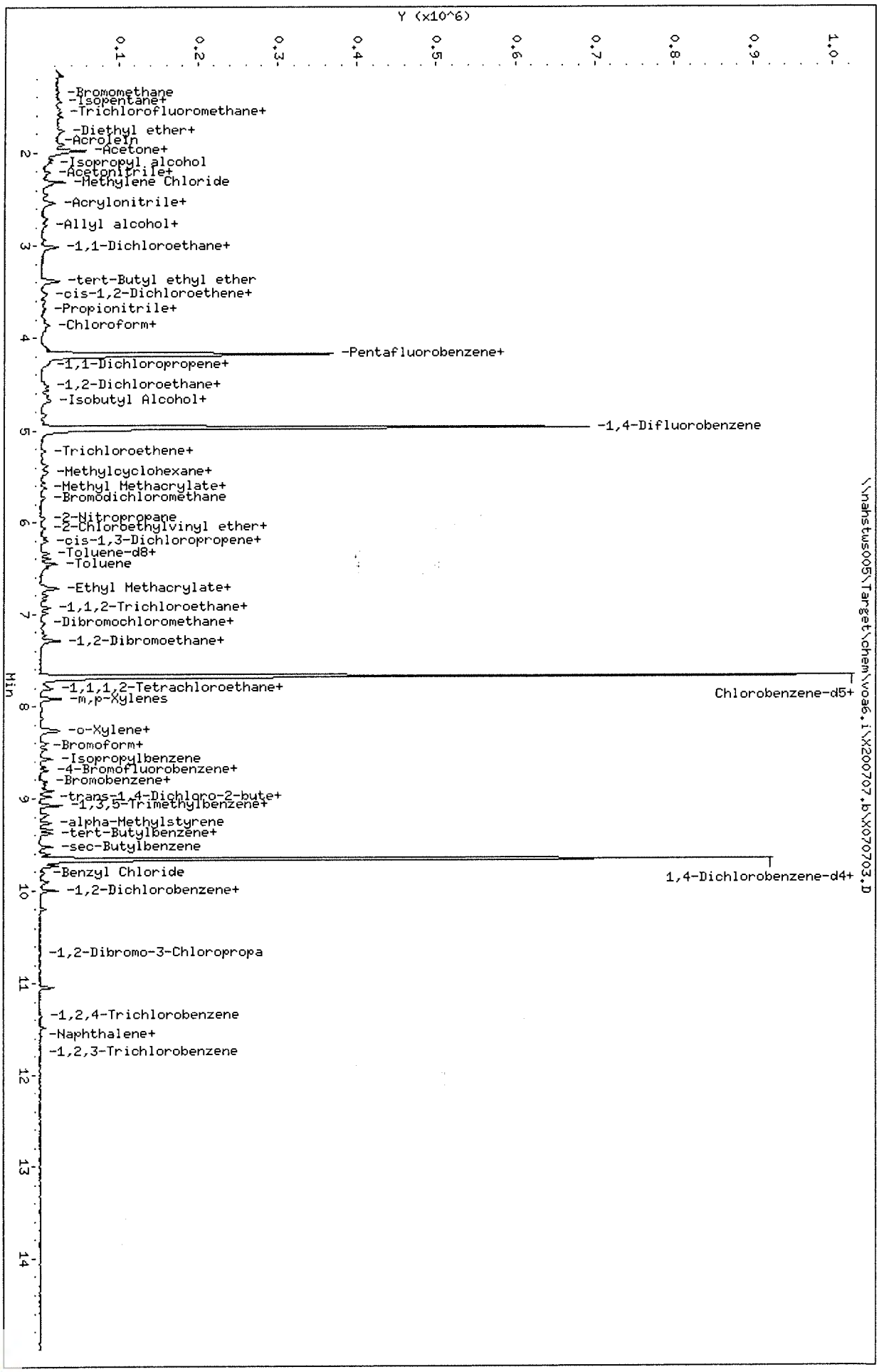
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)
* 1	Pentafluorobenzene	168	4.189	4.189	(1.000)	289846	50.0000	
* 36	1,4-Difluorobenzene	114	4.970	4.970	(1.000)	489976	50.0000	
* 47	Chlorobenzene-d5	117	7.671	7.671	(1.000)	439026	50.0000	
* 70	1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	207323	50.0000	
$ 30	Dibromofluoromethane	113	4.103	4.103	(0.979)	2185	0.50000	(a)
$ 35	1,2-Dichloroethane-d4	65	4.483	4.483	(1.070)	3020	0.50000	0.01(Ta)
$ 48	Toluene-d8	98	6.396	6.396	(0.834)	7187	0.50000	0.62(a)
$ 69	4-Bromofluorobenzene	95	8.695	8.695	(1.134)	3626	0.50000	(a)
60	1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	1986	0.50000	0.58(a)
31	1,1,1-Trichloroethane	97	4.096	4.096	(0.978)	2870	0.50000	0.54(a)
68	1,1,2,2-Tetrachloroethane	83	8.845	8.845	(0.915)	2607	0.50000	0.63(aM)
53	1,1,2-Trichloroethane	83	6.847	6.847	(0.893)	1712	0.50000	0.61(a)
22	1,1-Dichloroethane	63	2.929	2.929	(0.699)	5469	0.50000	0.66(Ta)
11	1,1-Dichloroethene	96	1.919	1.919	(0.458)	1635	0.50000	0.60(a)
32	1,1-Dichloropropene	75	4.290	4.290	(0.863)	2732	0.50000	0.56(aM)
93	1,2,3-Trichlorobenzene	180	11.746	11.746	(1.215)	450	0.50000	2.22(aM)
71	1,2,3-Trichloropropane	75	8.874	8.874	(0.918)	2034	0.50000	0.56(aM)
90	1,2,4-Trichlorobenzene	180	11.352	11.352	(1.174)	839	0.50000	1.93(aM)
79	1,2,4-Trimethylbenzene	105	9.383	9.383	(0.970)	7739	0.50000	0.63(a)
89	1,2-Dibromo-3-Chloropropane	155	10.665	10.665	(1.103)	171	0.50000	(aM)
57	1,2-Dibromoethane	107	7.270	7.270	(0.948)	2238	0.50000	0.63(a)
88	1,2-Dichlorobenzene	146	9.999	9.999	(1.034)	3987	0.50000	0.65(a)

Data File: \\nahstws005\Target\chem\voa6.i\X200707.b\X070703.D Page 2
Report Date: 12-Aug-2020 15:35

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
33	1,2-Dichloroethane	62	4.569	4.569	(0.919)	3638	0.50000	0.59(a)
42	1,2-Dichloropropane	63	5.443	5.443	(1.095)	2406	0.50000	0.52(aM)
75	1,3,5-Trimethylbenzene	105	9.075	9.075	(0.939)	7272	0.50000	0.61(a)
83	1,3-Dichlorobenzene	146	9.612	9.612	(0.994)	4193	0.50000	0.63(aM)
54	1,3-Dichloropropane	76	6.990	6.990	(0.911)	3596	0.50000	0.61(a)
84	1,4-Dichlorobenzene	146	9.691	9.691	(1.002)	4670	0.50000	0.54(a)
26	2,2-Dichloropropane	77	3.516	3.516	(0.839)	3118	0.50000	0.62(aM)
24	2-Butanone	43	3.602	3.602	(0.860)	4038	1.00000	(aM)
76	2-Chlorotoluene	91	8.982	8.982	(0.929)	6870	0.50000	0.66(aM)
52	2-Hexanone	43	7.105	7.105	(0.926)	5501	1.00000	(aM)
77	4-Chlorotoluene	91	9.075	9.075	(0.939)	7393	0.50000	0.62(aM)
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	7189	0.50000	0.60(a)
45	4-Methyl-2-Pentanone	43	6.338	6.338	(0.826)	9002	1.00000	(aM)
10	Acetone	43	1.976	1.976	(0.472)	47904	1.00000	(a)
37	Benzene	78	4.519	4.519	(0.909)	8358	0.50000	0.59(a)
74	Bromobenzene	156	8.817	8.817	(0.912)	2278	0.50000	0.57(a)
29	Bromochloromethane	128	3.803	3.803	(0.908)	1262	0.50000	0.62(aM)
39	Bromodichloromethane	83	5.737	5.737	(1.154)	2660	0.50000	0.54(aM)
66	Bromoform	173	8.416	8.416	(1.097)	1370	0.50000	0.56(Ta)
6	Bromomethane	94	1.346	1.346	(0.321)	1573	0.50000	0.69(aM)
19	Carbon Disulfide	76	2.069	2.069	(0.494)	10020	1.00000	1.13(a)
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	2549	0.50000	0.54(aM)
59	Chlorobenzene	112	7.699	7.699	(1.004)	5752	0.50000	0.64(a)
7	Chloroethane	64	1.403	1.403	(0.335)	1996	0.50000	(aM)
28	Chloroform	83	3.910	3.910	(0.933)	3740	0.50000	0.58(a)
3	Chloromethane	50	1.081	1.081	(0.258)	3684	0.50000	0.61(a)
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.843)	2295	0.50000	0.60(a)
46	cis-1,3-Dichloropropene	75	6.166	6.166	(1.241)	3591	0.50000	0.60(a)
55	Dibromochloromethane	129	7.184	7.184	(0.937)	2159	0.50000	0.59(a)
44	Dibromomethane	93	5.565	5.565	(1.120)	1522	0.50000	0.61(a)
2	Dichlorodifluoromethane	85	0.973	0.973	(0.232)	2066	0.50000	0.58(a)
61	Ethylbenzene	106	7.814	7.814	(1.019)	2765	0.50000	0.58(a)
91	Hexachlorobutadiene	225	11.481	11.481	(1.187)	964	0.50000	2.28(aM)
67	Isopropylbenzene	105	8.566	8.566	(1.117)	8856	0.50000	0.63(a)
62	m,p-Xylenes	106	7.914	7.914	(1.032)	7272	1.00000	1.27(a)
17	Methylene Chloride	84	2.298	2.298	(0.549)	1372	0.50000	0.43(aM)
87	n-Butylbenzene	91	9.999	9.999	(1.034)	6647	0.50000	0.63(aM)
73	n-Propylbenzene	91	8.917	8.917	(0.922)	10319	0.50000	0.61(aM)
92	Naphthalene	128	11.560	11.560	(1.196)	1869	0.50000	1.22(a)
63	o-Xylene	106	8.251	8.251	(1.076)	3394	0.50000	0.60(a)
81	sec-Butylbenzene	105	9.526	9.526	(0.985)	8687	0.50000	0.62(a)
64	Styrene	104	8.265	8.265	(1.077)	6060	0.50000	0.62(a)
78	tert-Butylbenzene	119	9.340	9.340	(0.966)	5977	0.50000	0.62(a)
56	Tetrachloroethene	164	6.940	6.940	(0.905)	1650	0.50000	0.61(a)
50	Toluene	91	6.453	6.453	(0.841)	8347	0.50000	0.59(a)
20	trans-1,2-Dichloroethene	96	2.542	2.542	(0.607)	1778	0.50000	0.56(a)
51	trans-1,3-Dichloropropene	75	6.697	6.697	(1.347)	2956	0.50000	0.55(a)
38	Trichloroethene	130	5.221	5.221	(1.050)	2267	0.50000	0.62(a)
8	Trichlorofluoromethane	101	1.561	1.561	(0.373)	2630	0.50000	0.52(aM)
5	Vinyl Chloride	62	1.145	1.145	(0.273)	2889	0.50000	0.56(aM)

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.



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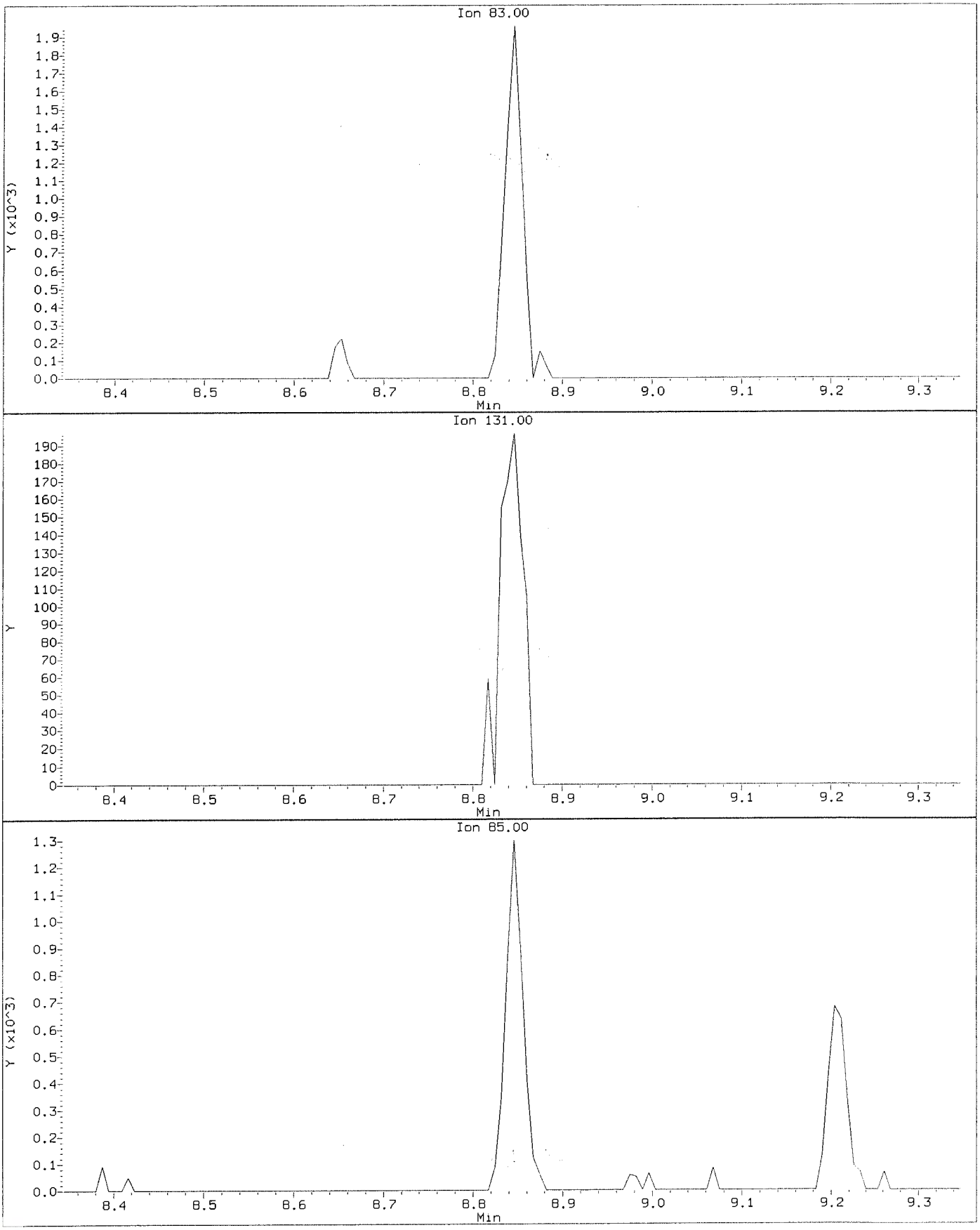
Date : 07-JUL-2020 11:30
Client ID: VSTD000.5
Sample Info: VSTD000.5;VSTD000.5;1;2;
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\nahstws005\Target\chem\voa6.i\X200707.b\Before\X070703.D
Injection Date: 07-JUL-2020 11:30
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: 1,1,2,2-Tetrachloroethane
CAS Number: 79-34-5



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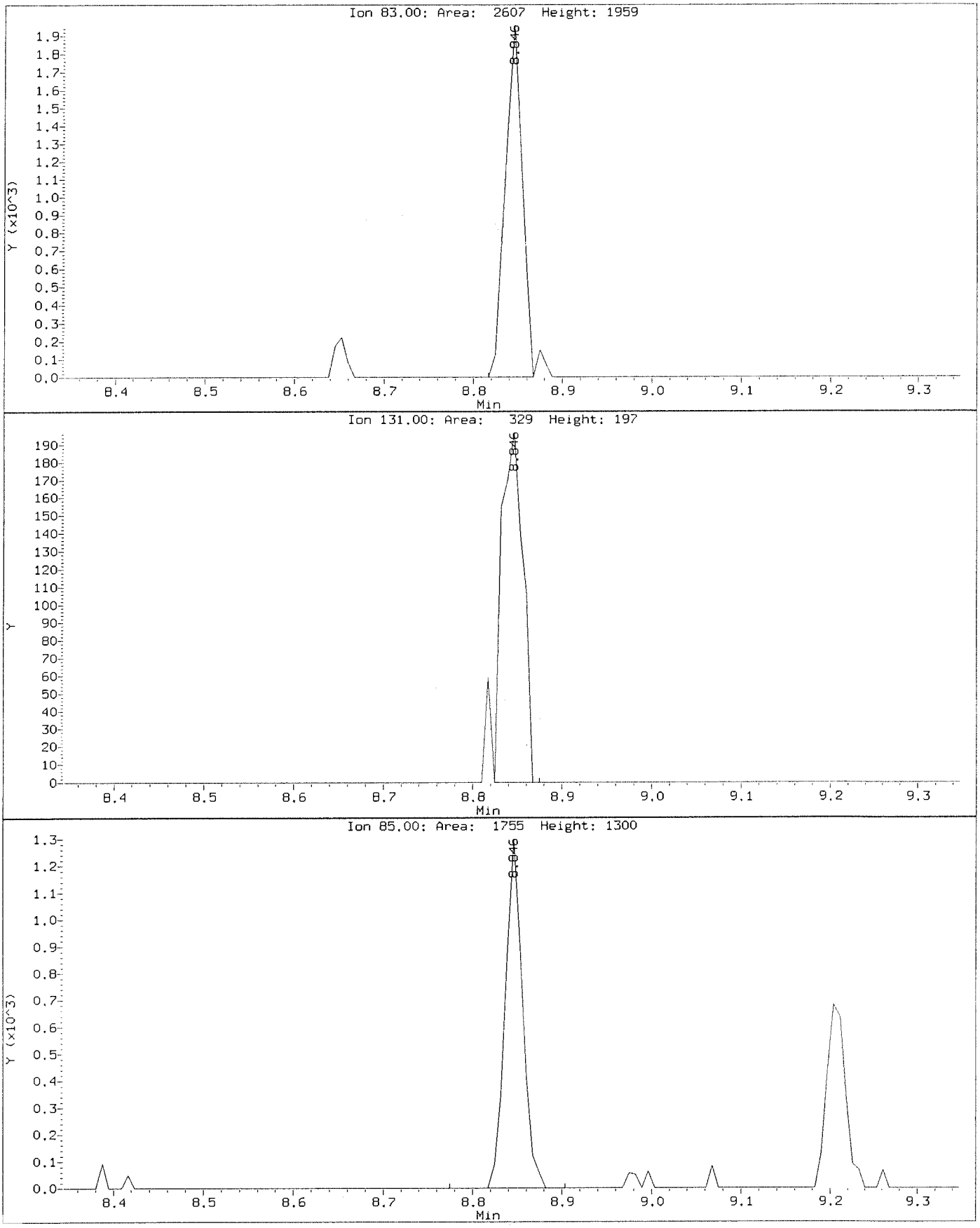
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: 1,1,2,2-Tetrachloroethane
CAS Number: 79-34-5



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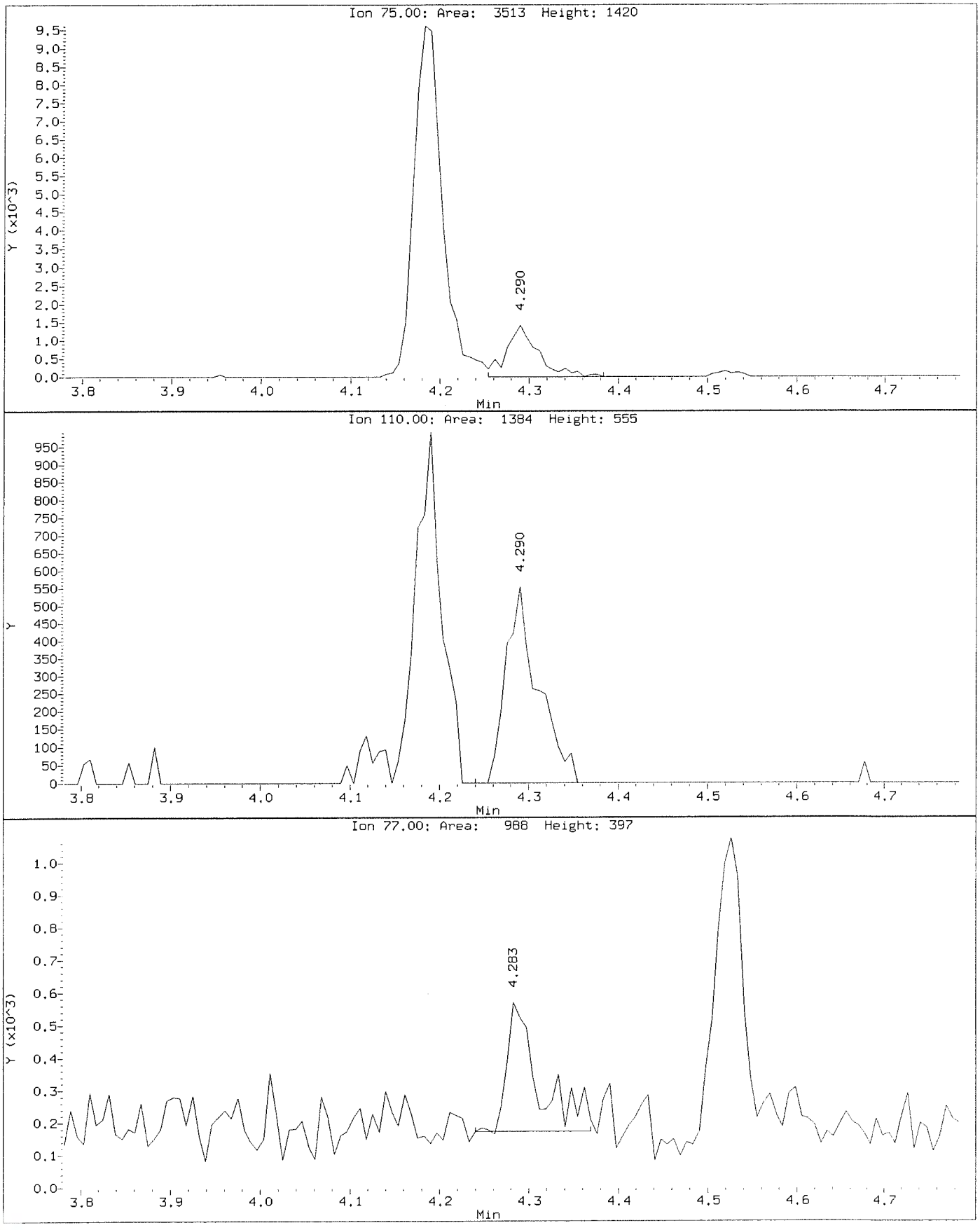
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: 1,1-Dichloropropene
CAS Number: 563-58-6



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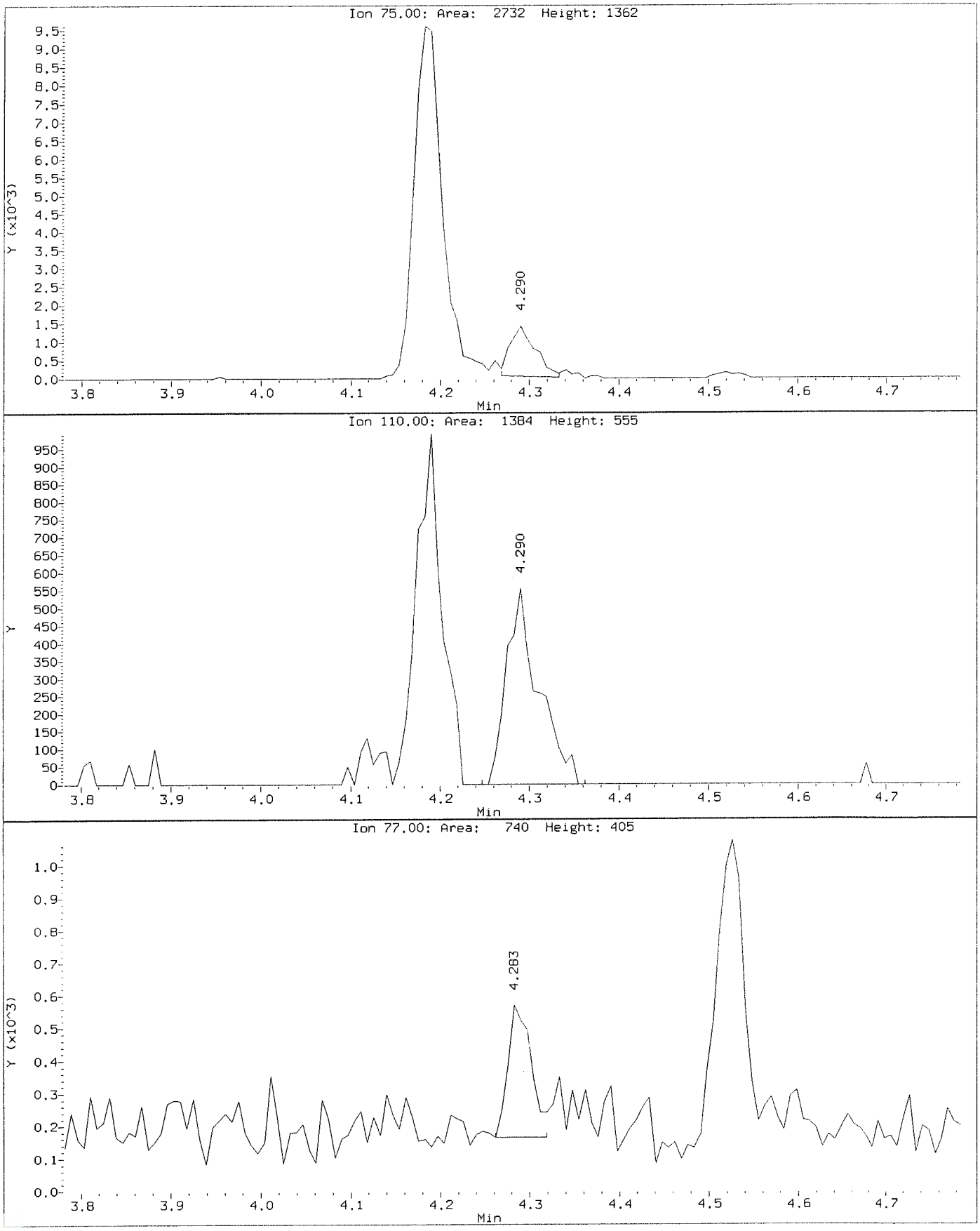
Client Sample ID: VSTD000.5

Compound: 1,1-Dichloropropene
CAS Number: 563-58-6



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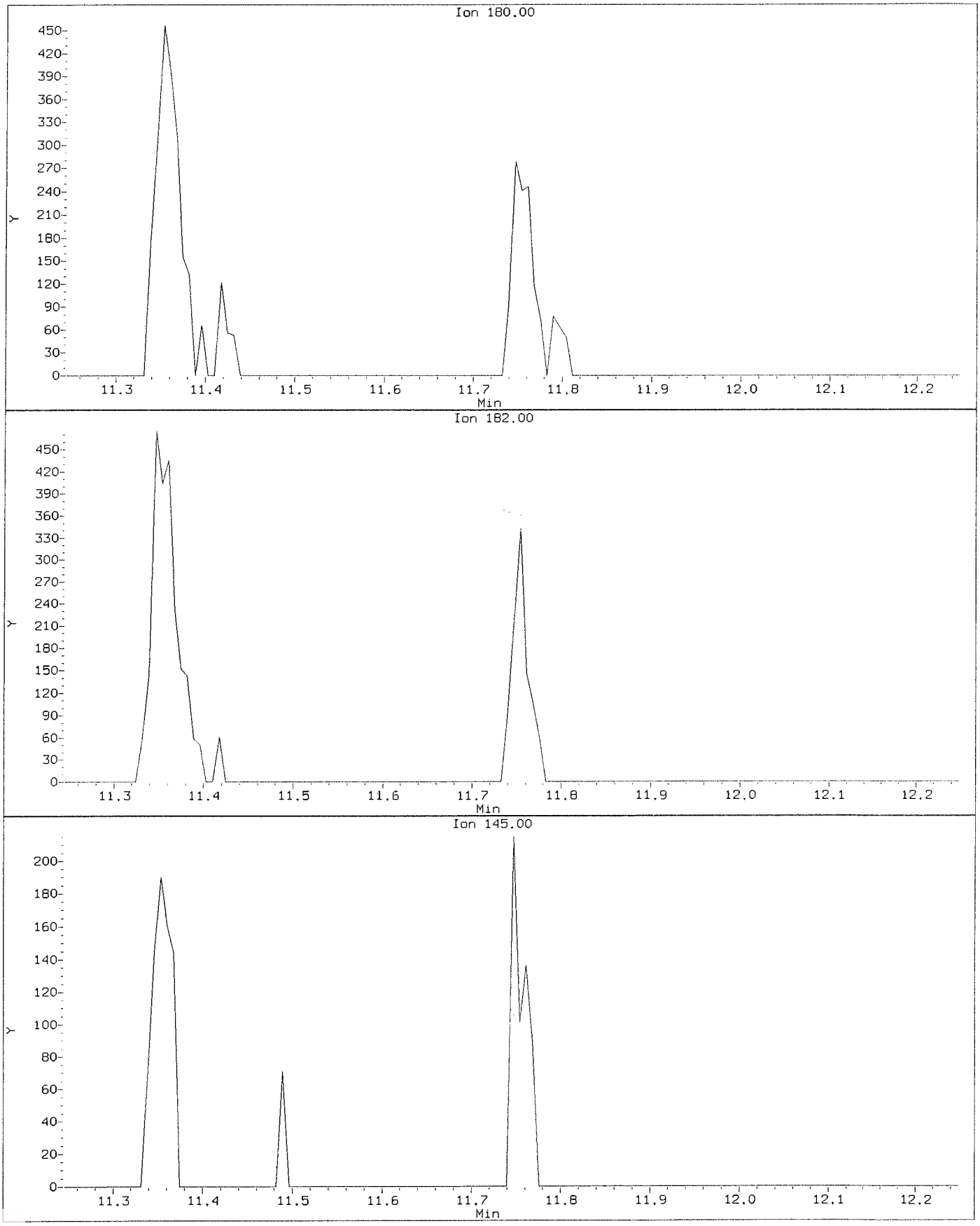
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: 1,2,3-Trichlorobenzene
CAS Number: 87-61-6



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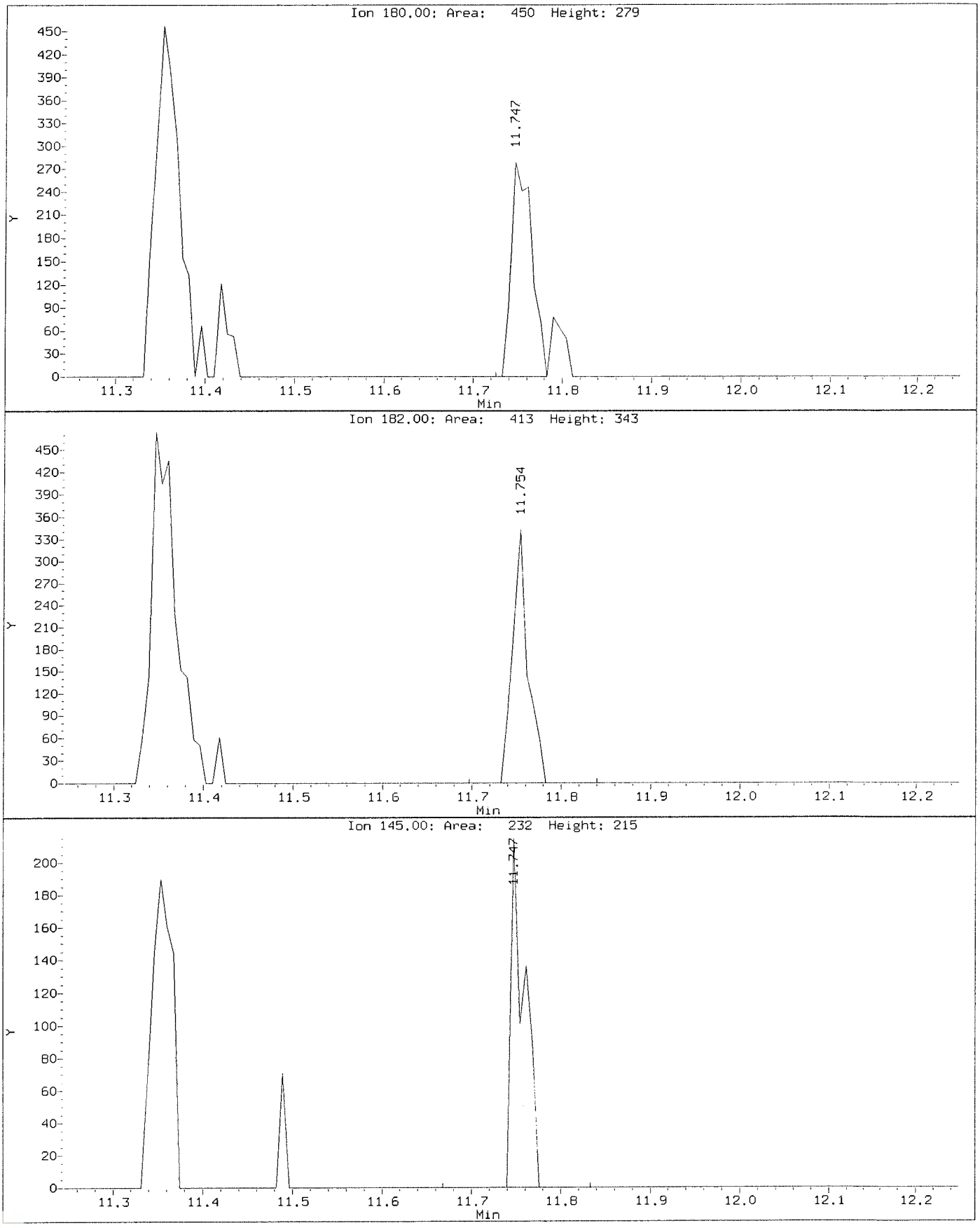
Compound: 1,2,3-Trichlorobenzene
CAS Number: 87-61-6



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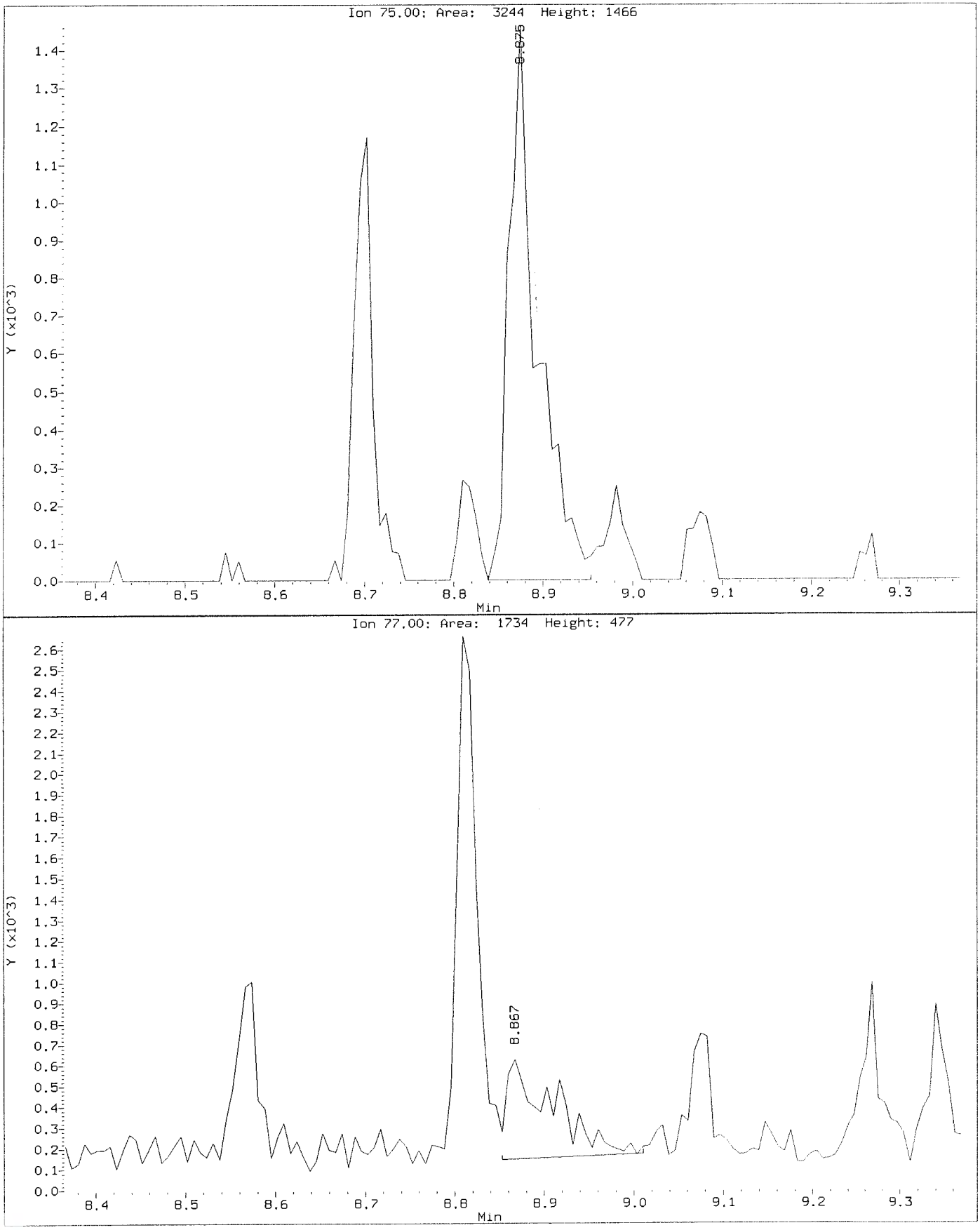
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4



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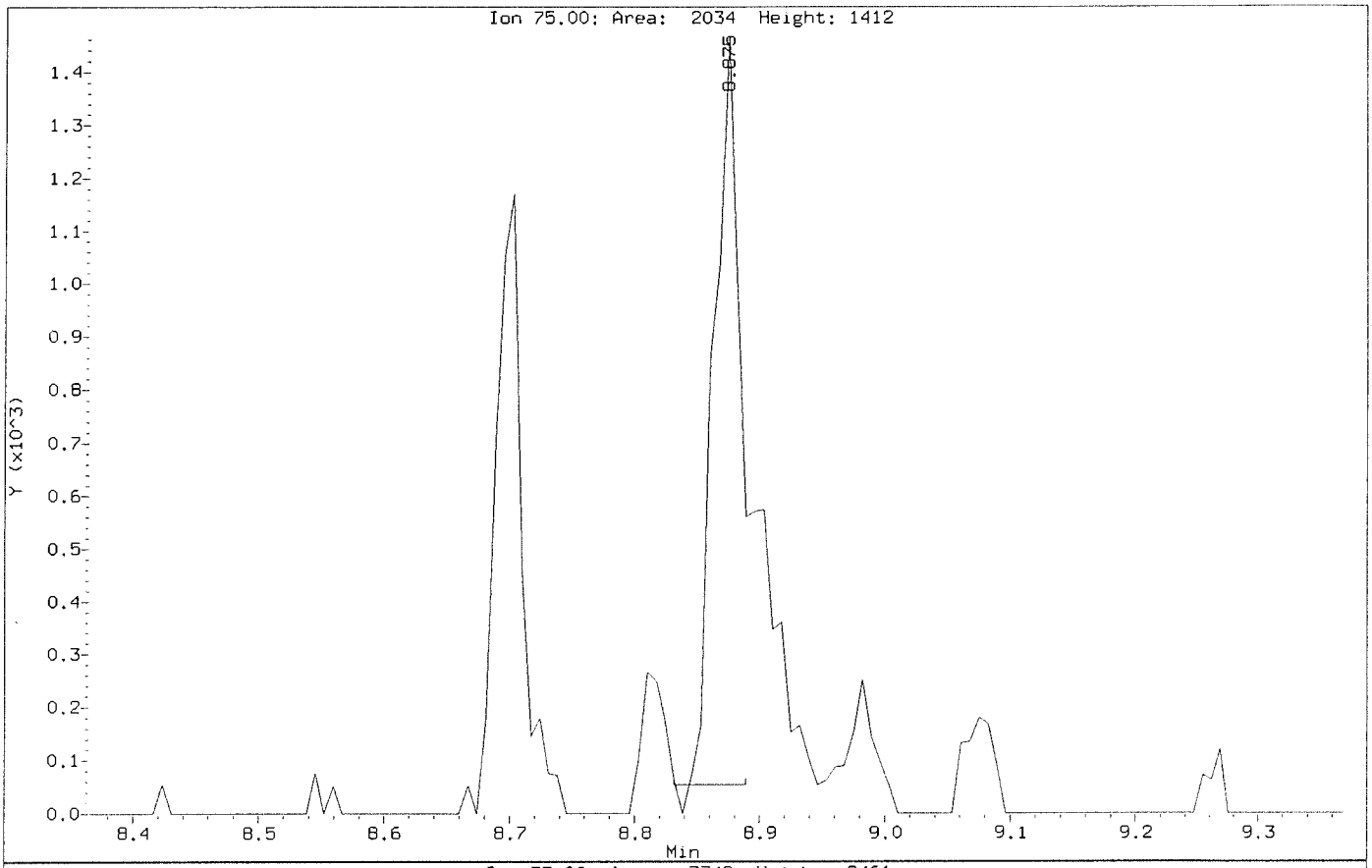
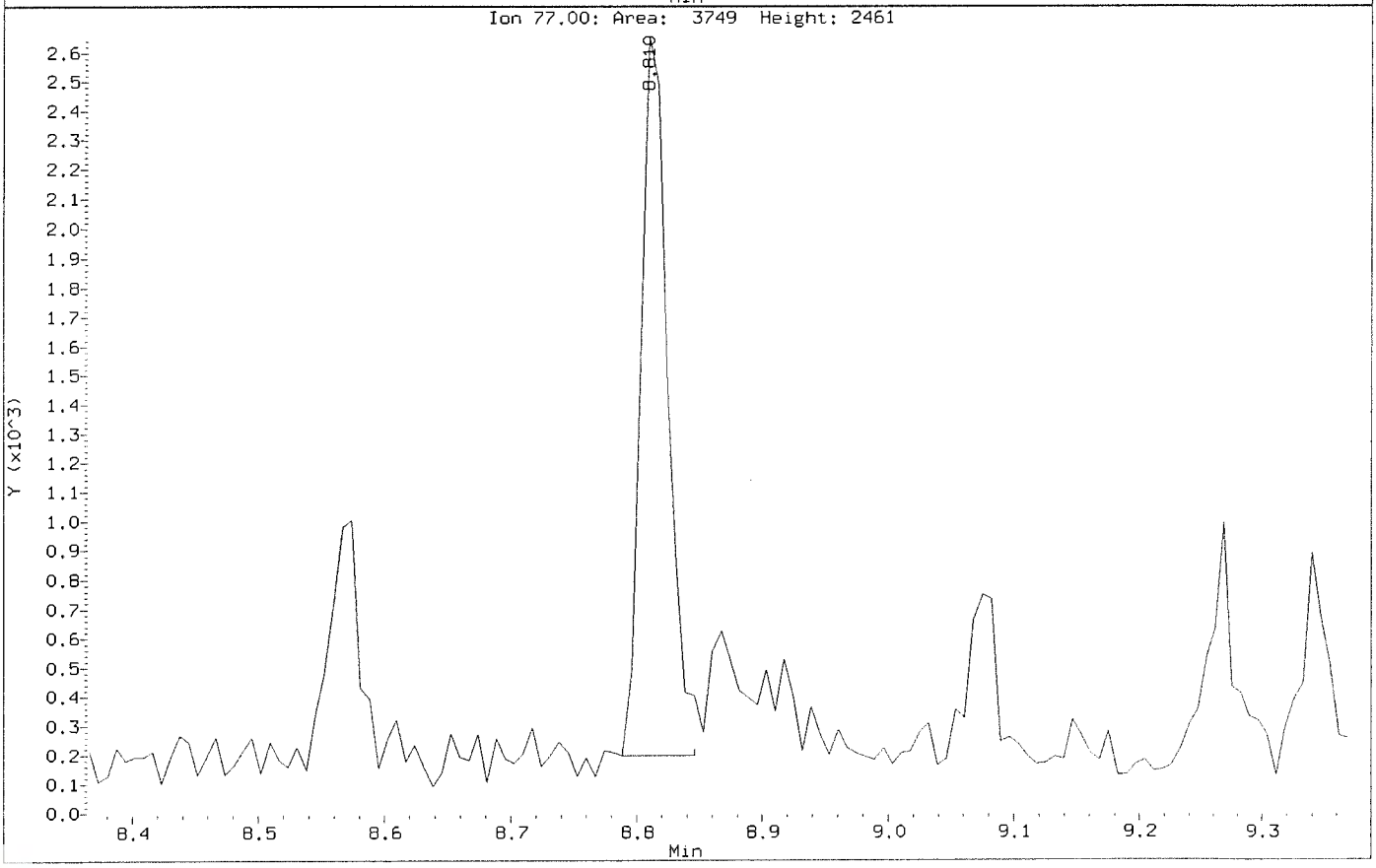
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





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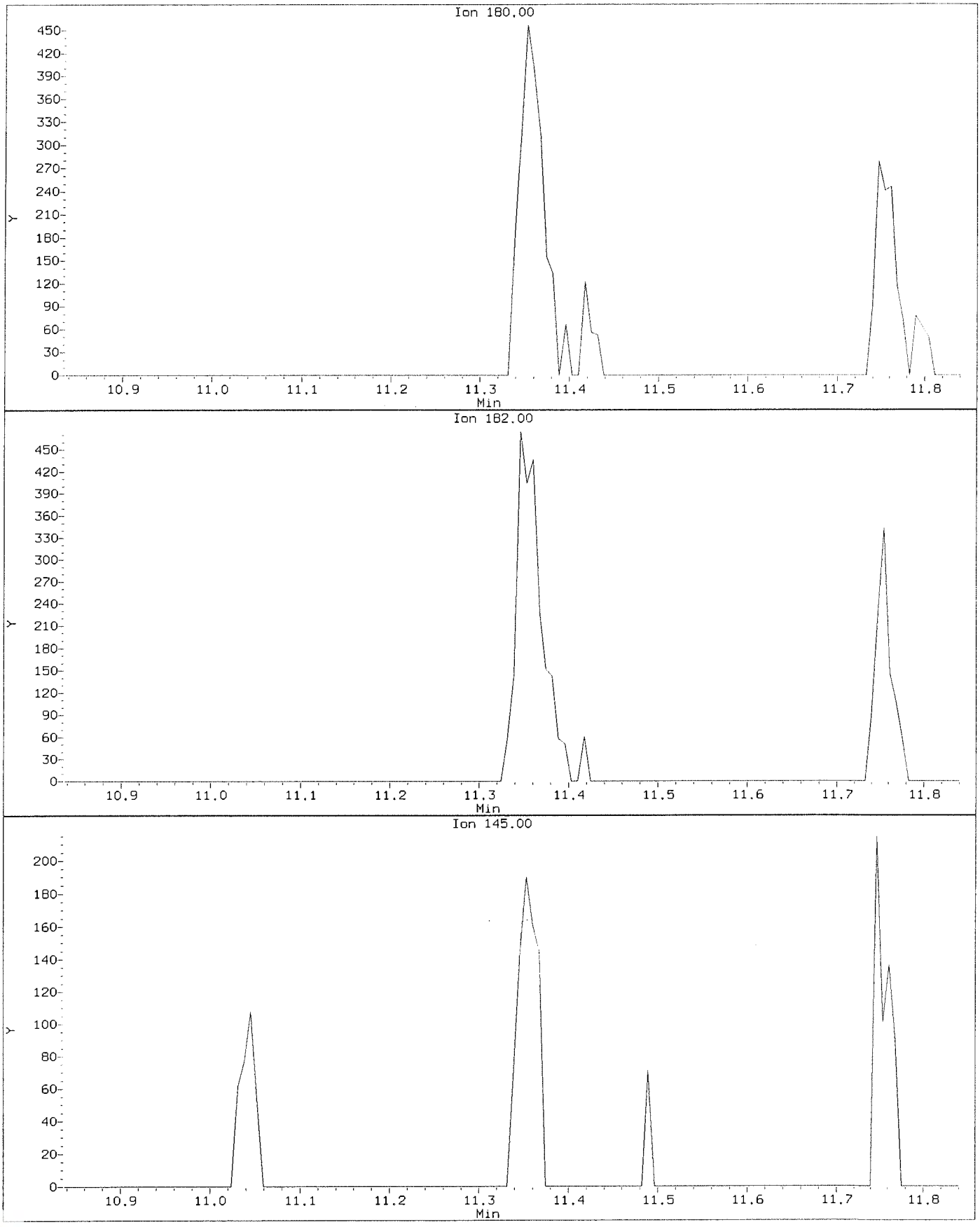
Injection Date: 07-JUL-2020 11:30
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: 1,2,4-Trichlorobenzene
CAS Number: 120-82-1



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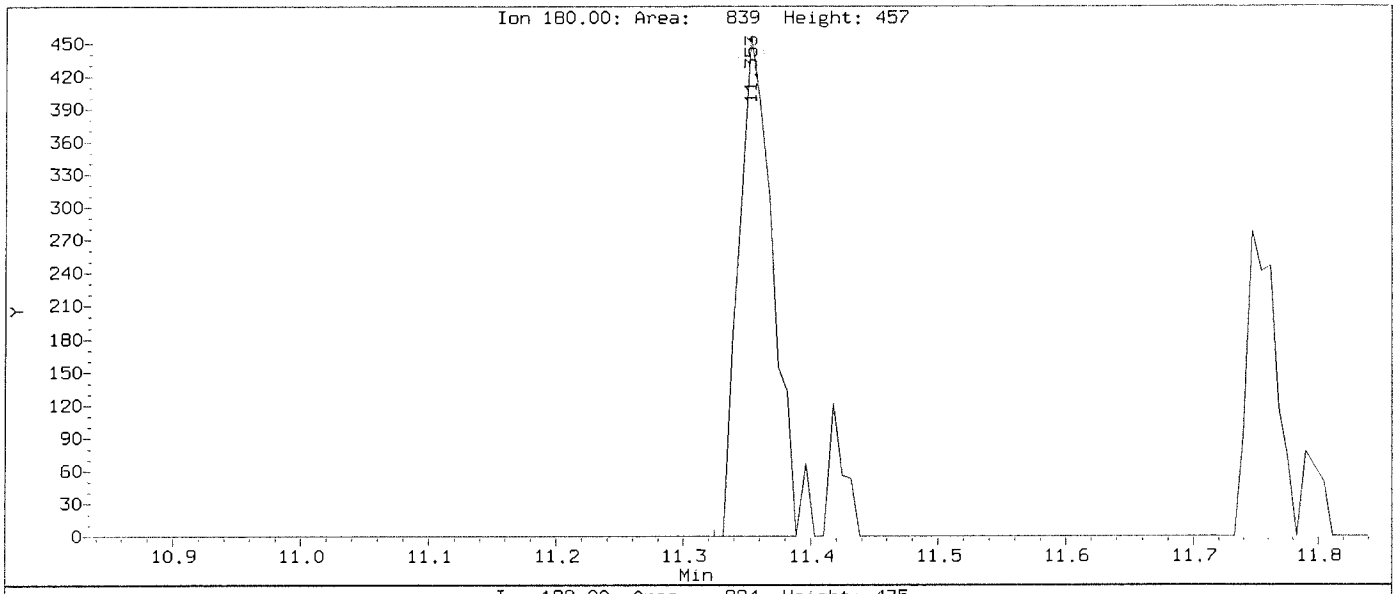
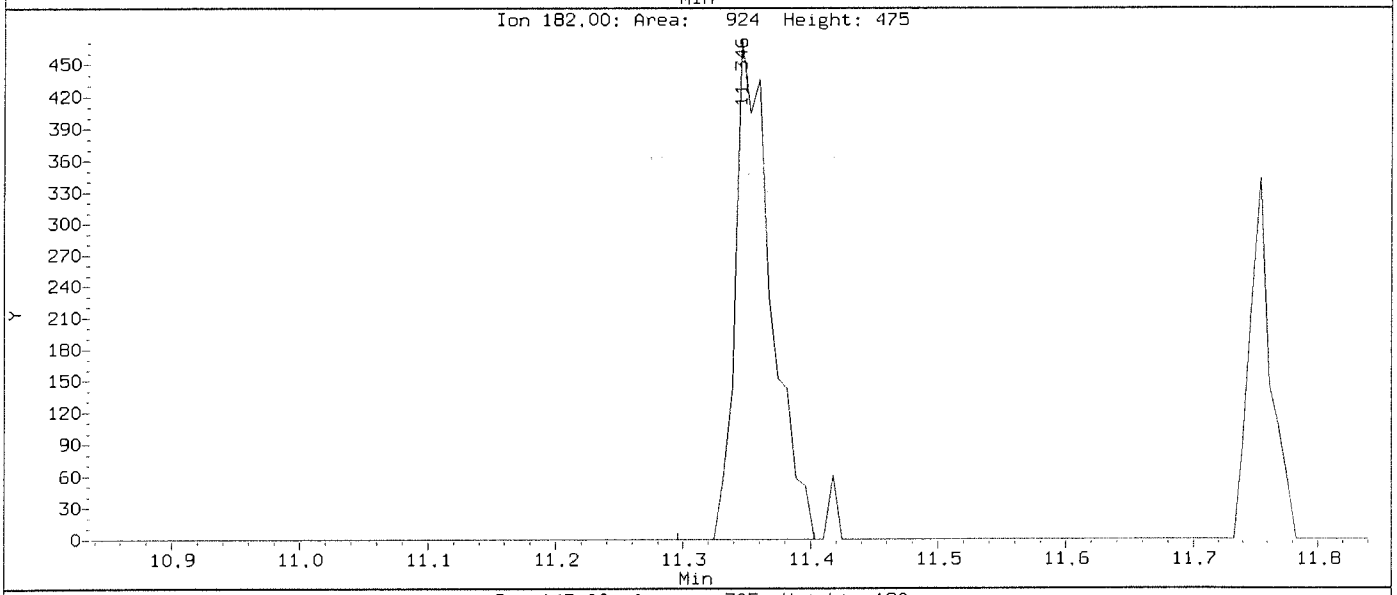
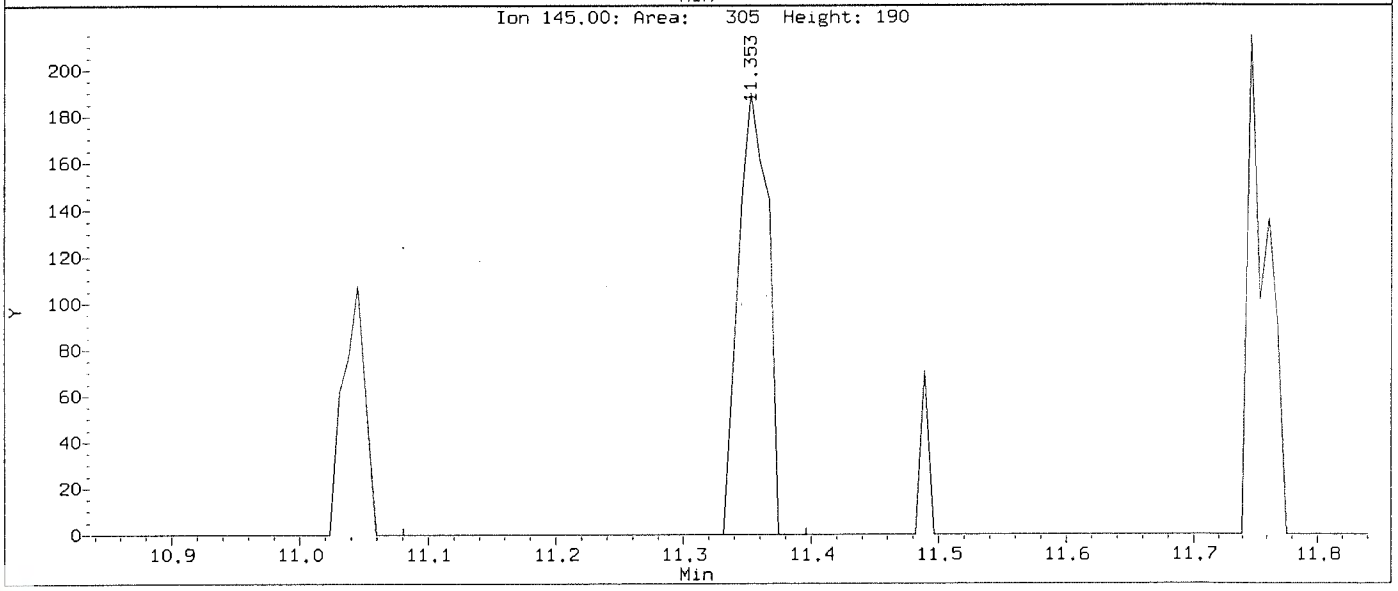
Client Sample ID: VSTD000.5

Compound: 1,2,4-Trichlorobenzene
CAS Number: 120-82-1







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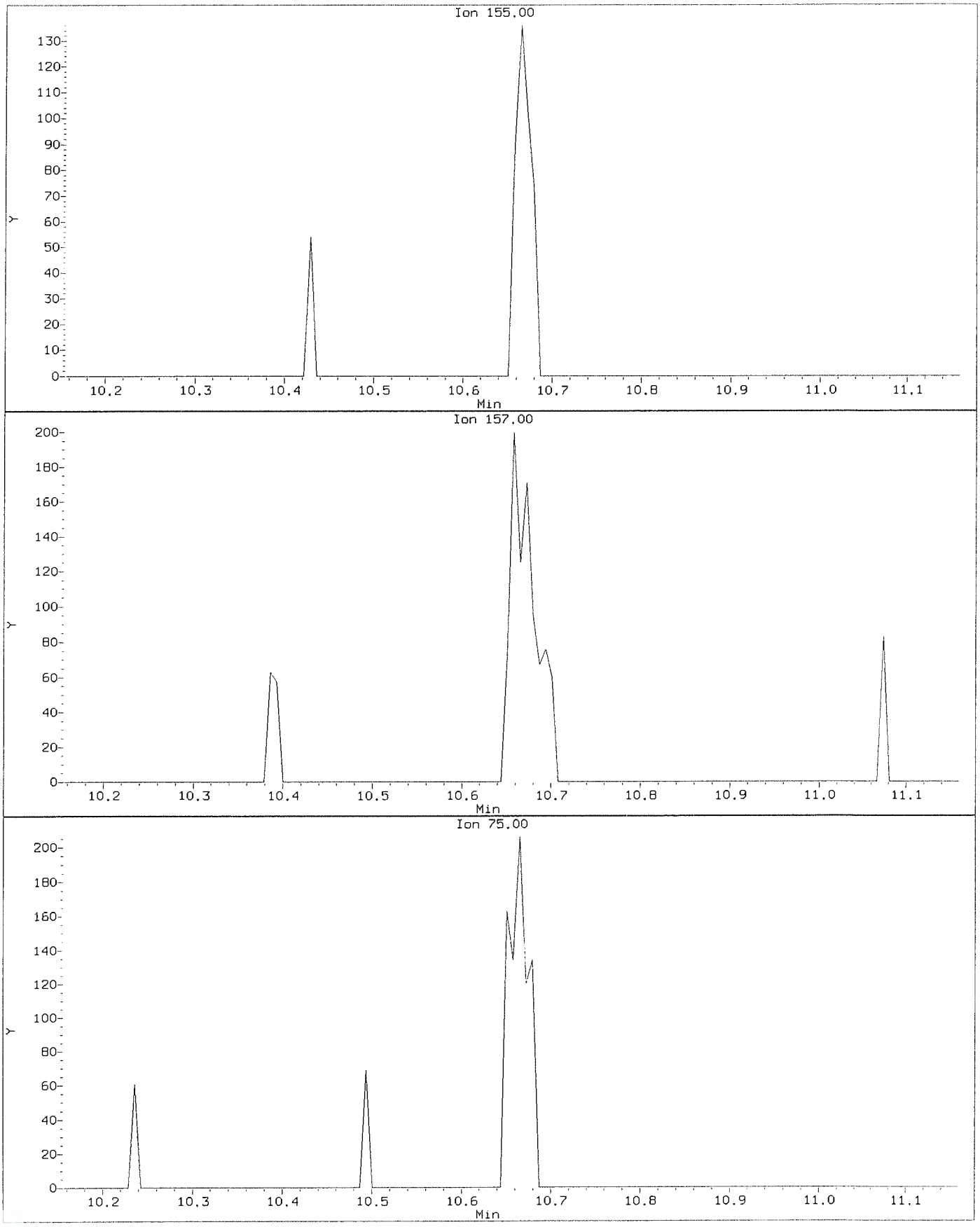
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: 1,2-Dibromo-3-Chloropropane
CAS Number: 96-12-8



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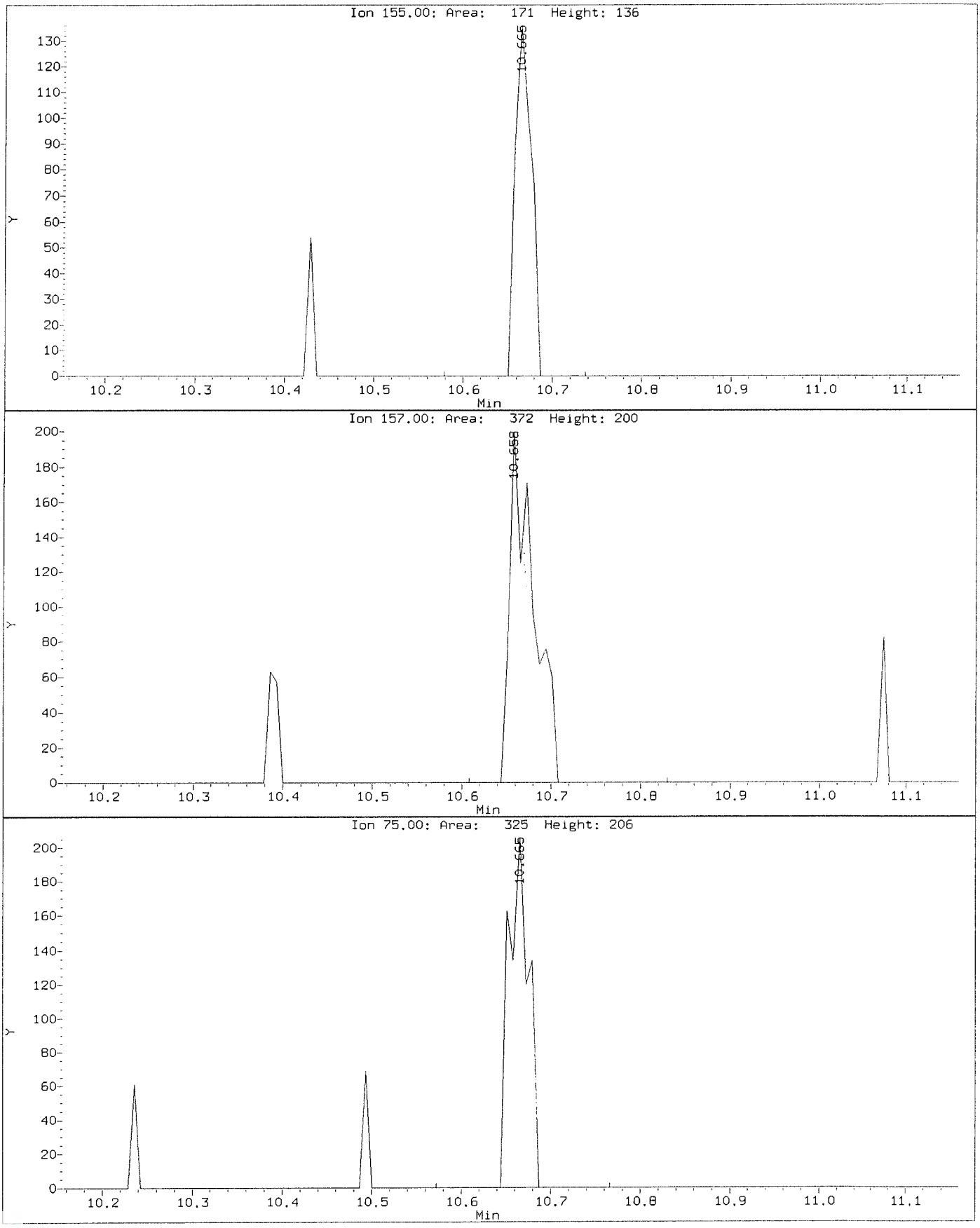
Client Sample ID: VSTD000.5

Compound: 1,2-Dibromo-3-Chloropropane
CAS Number: 96-12-8



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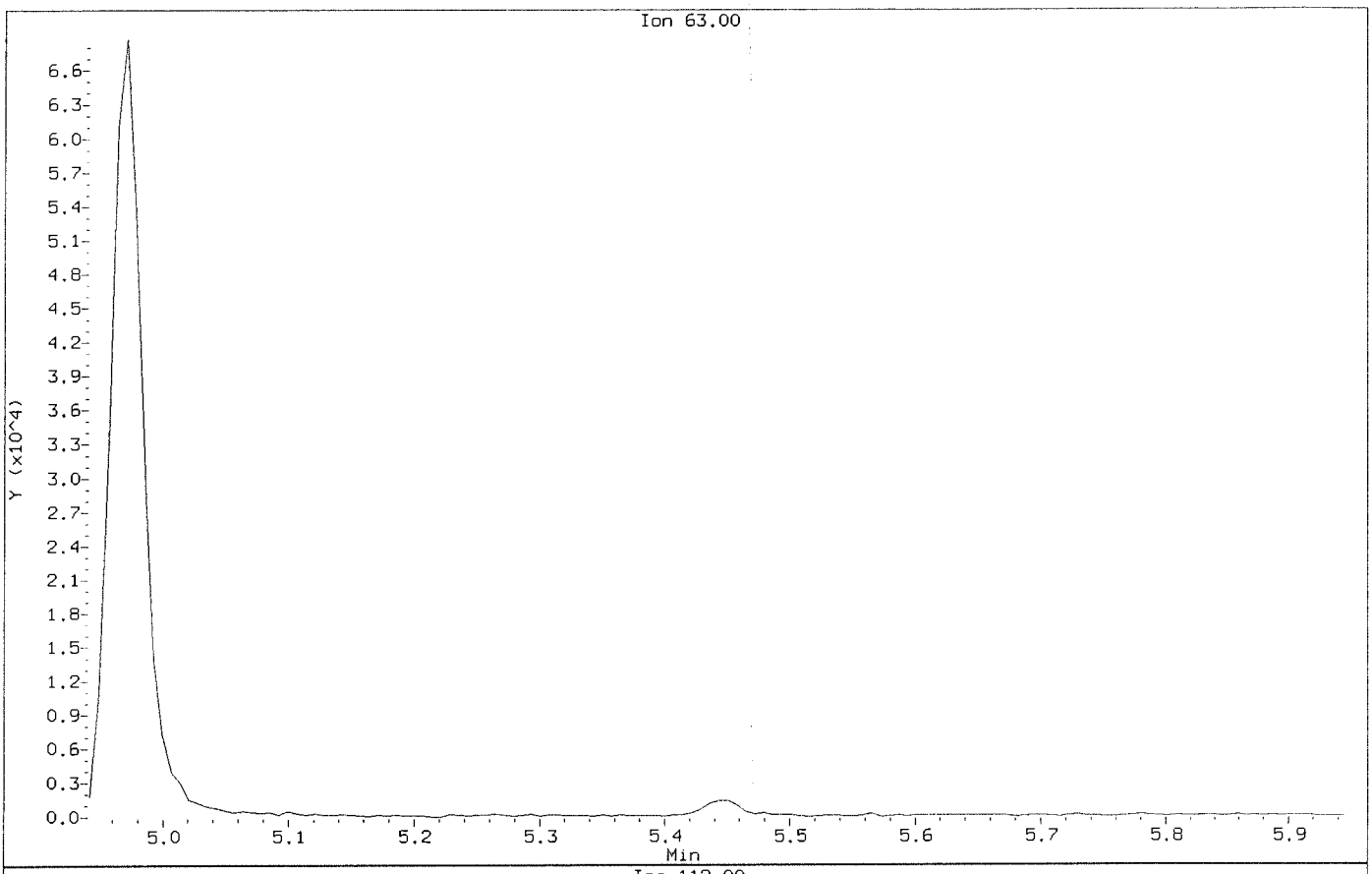
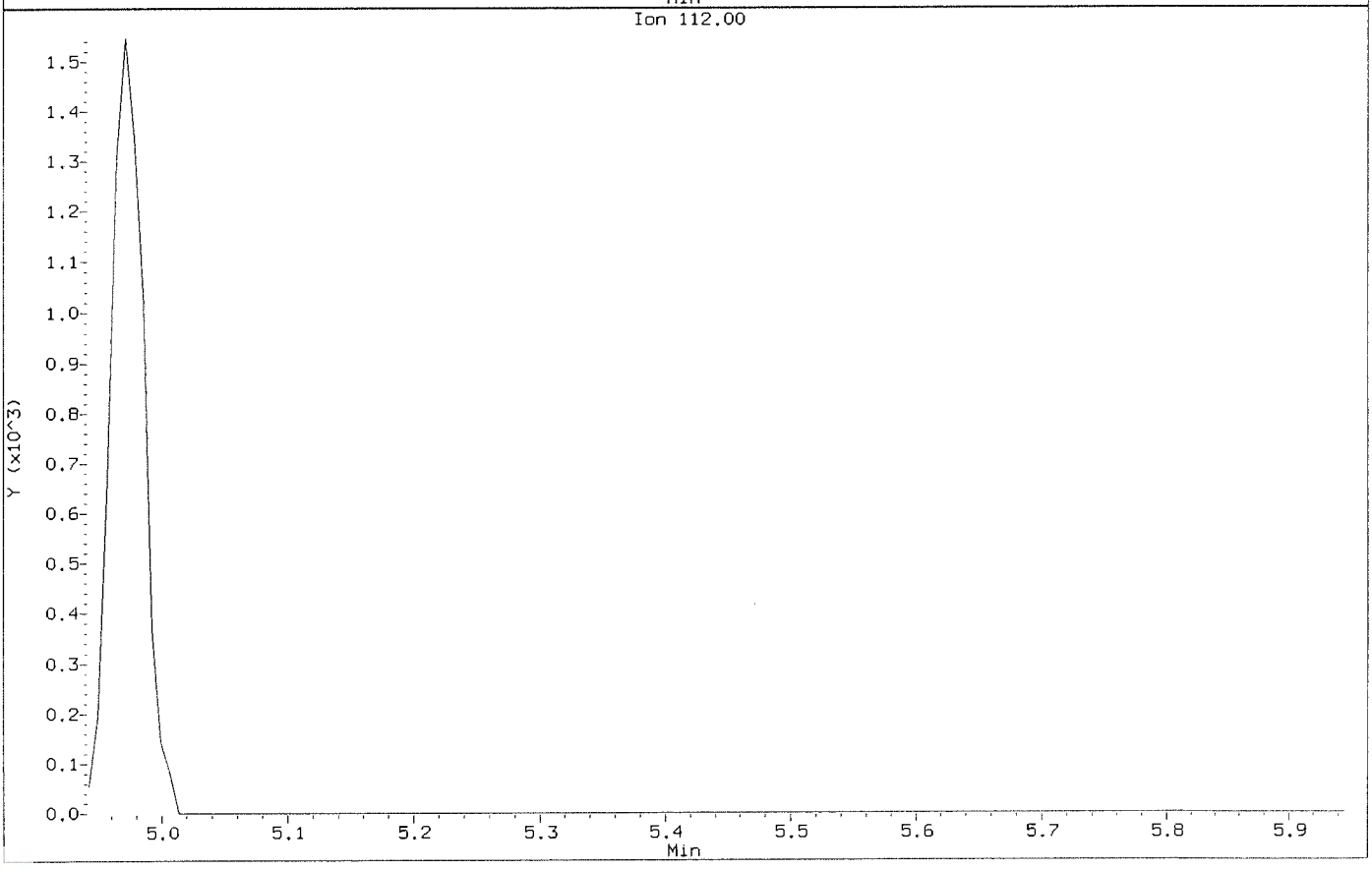
Injection Date: 07-JUL-2020 11:30
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: 1,2-Dichloropropane
CAS Number: 78-87-5





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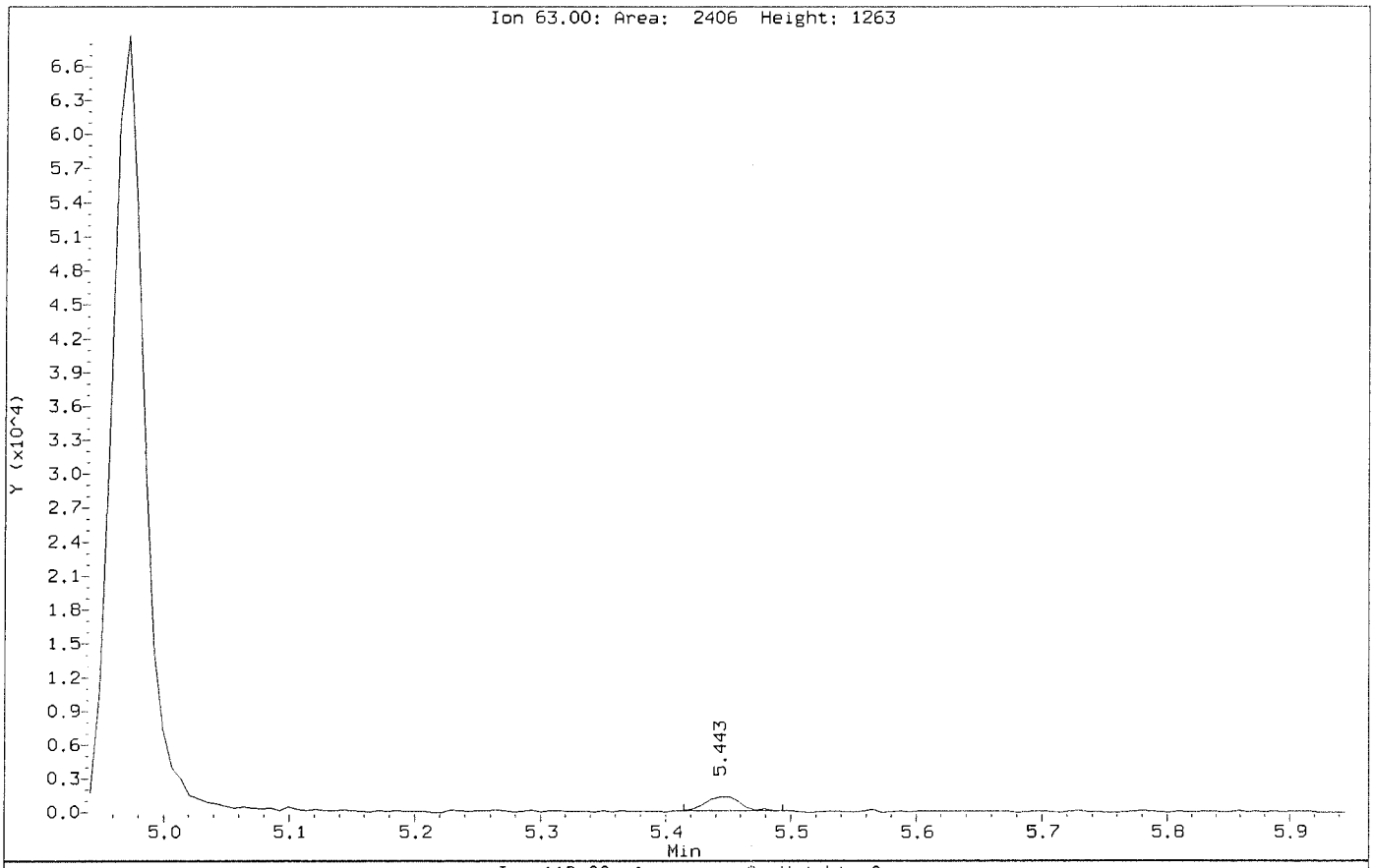
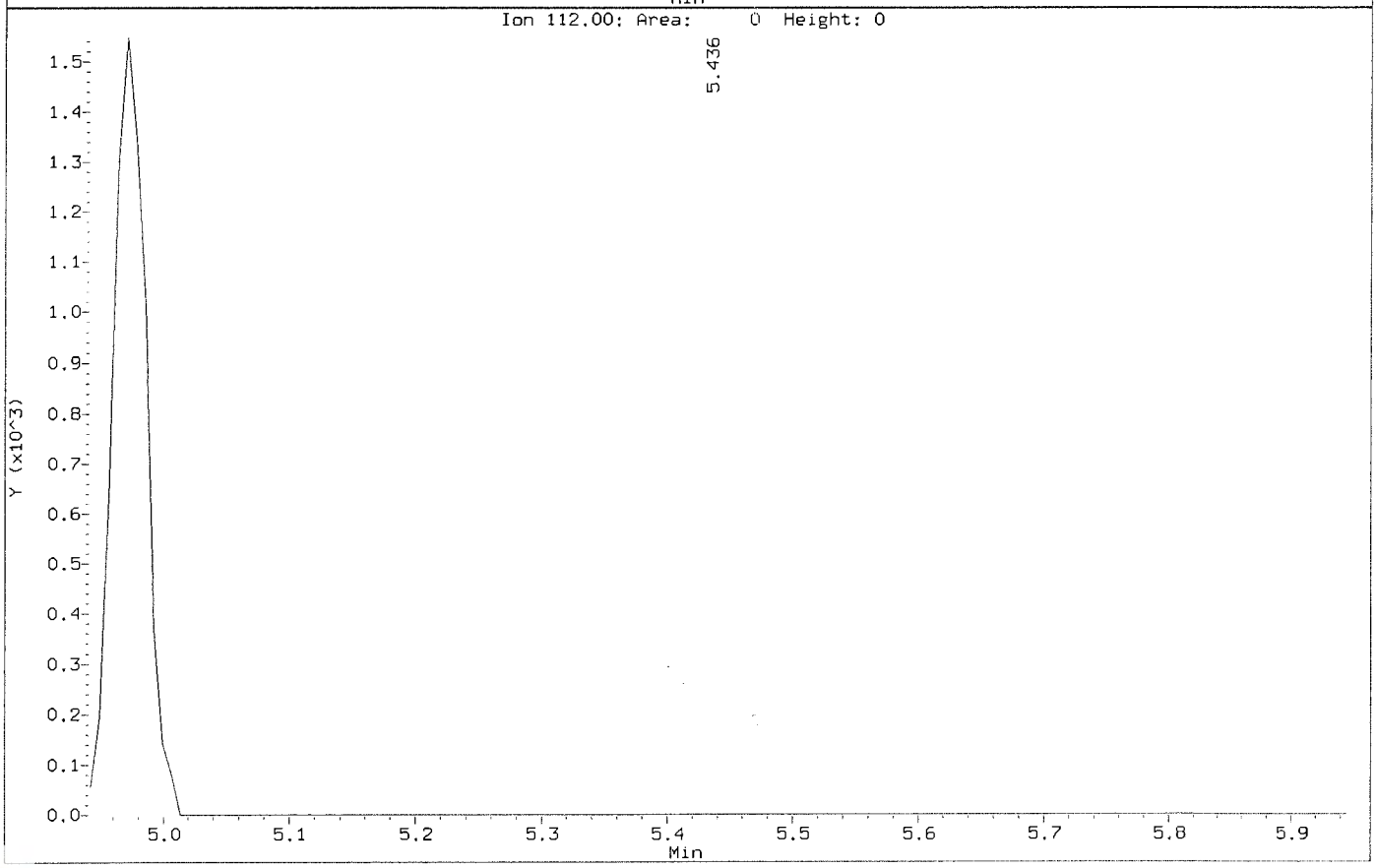
Client Sample ID: VSTD000.5

Compound: 1,2-Dichloropropane
CAS Number: 78-87-5





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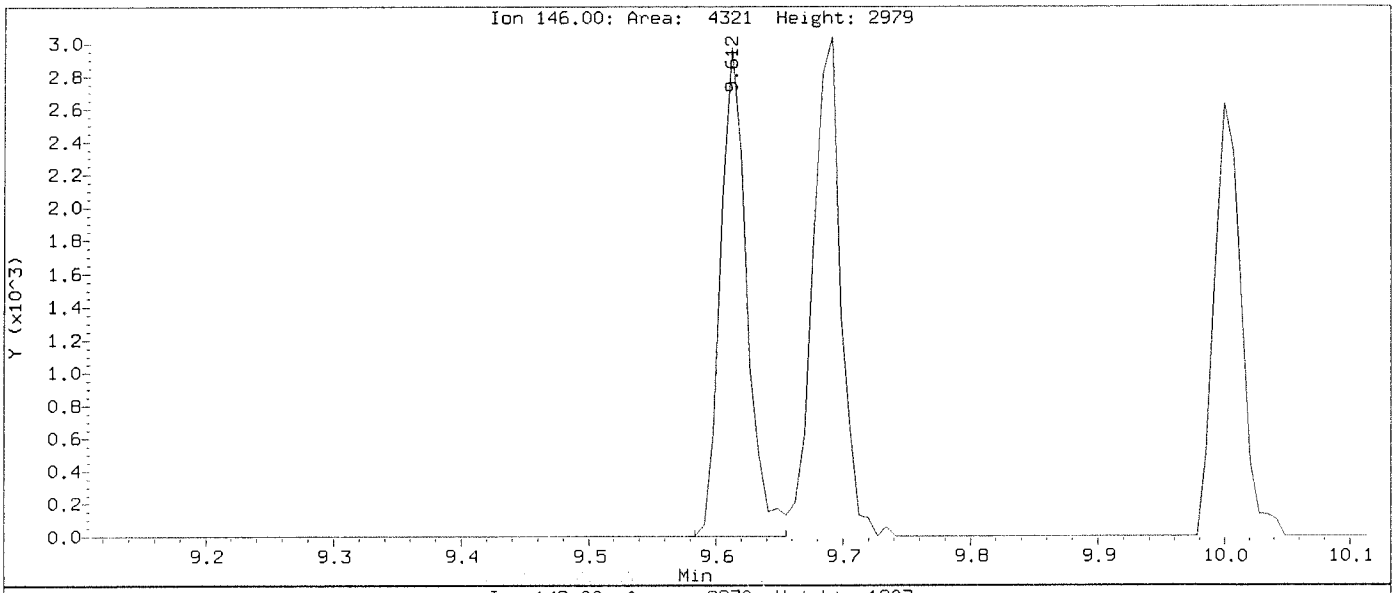
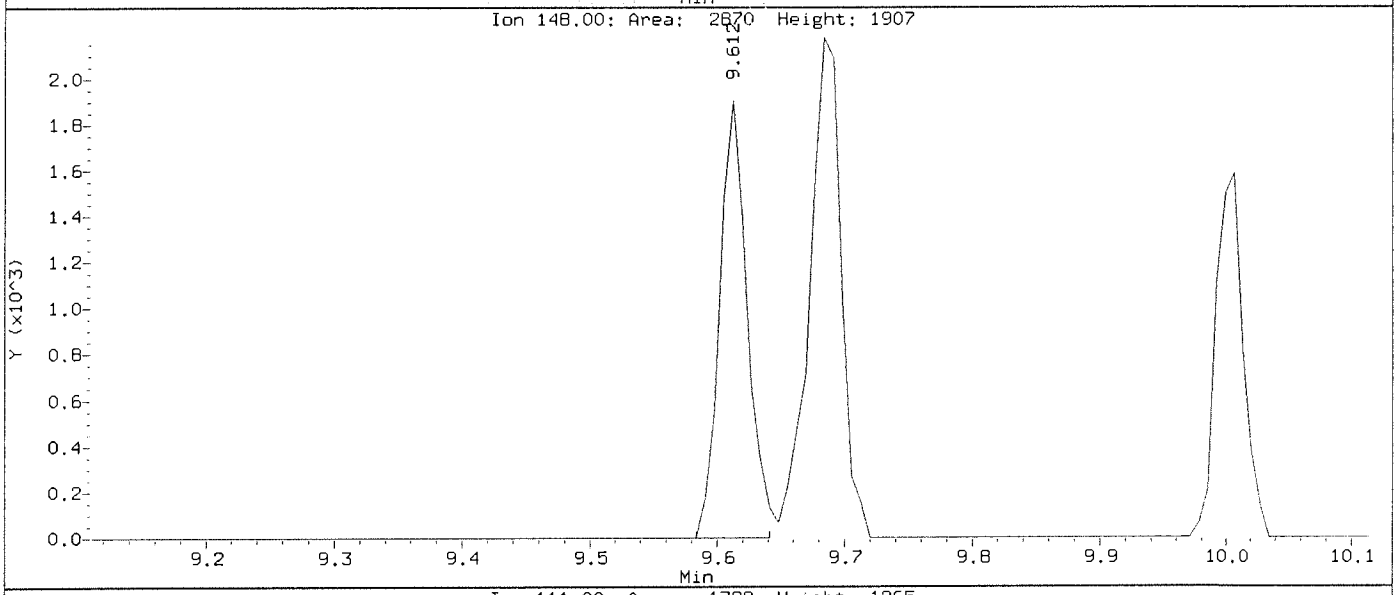
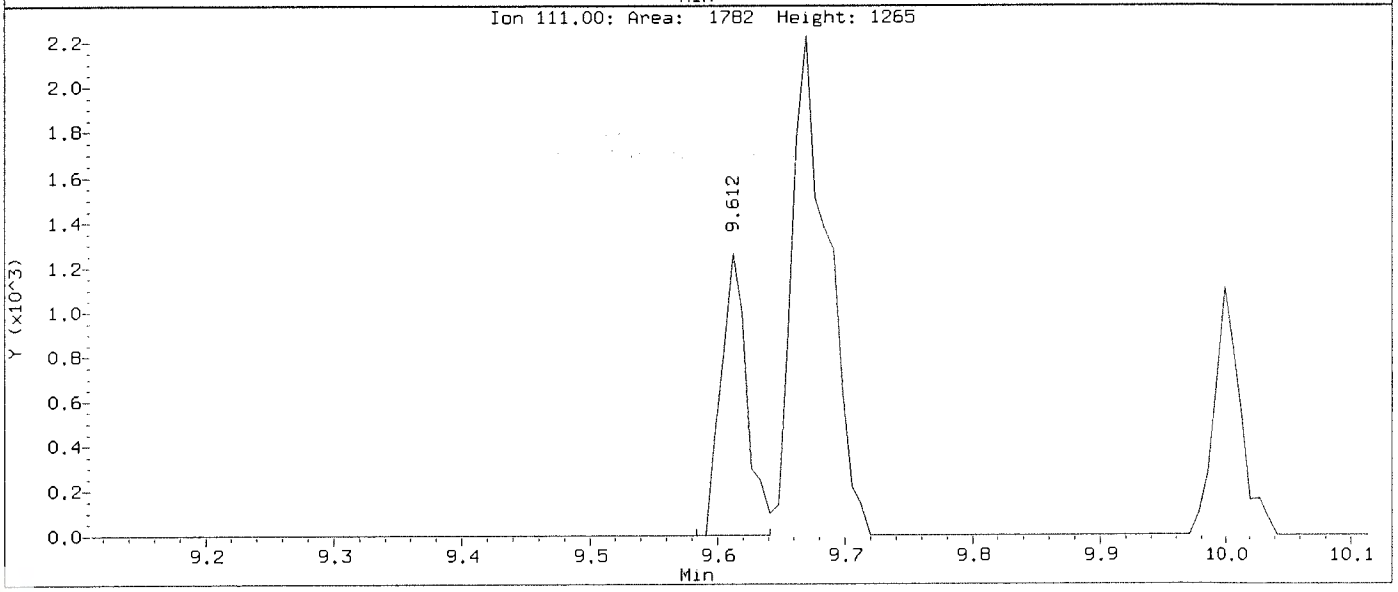
Injection Date: 07-JUL-2020 11:30
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: 1,3-Dichlorobenzene
CAS Number: 541-73-1







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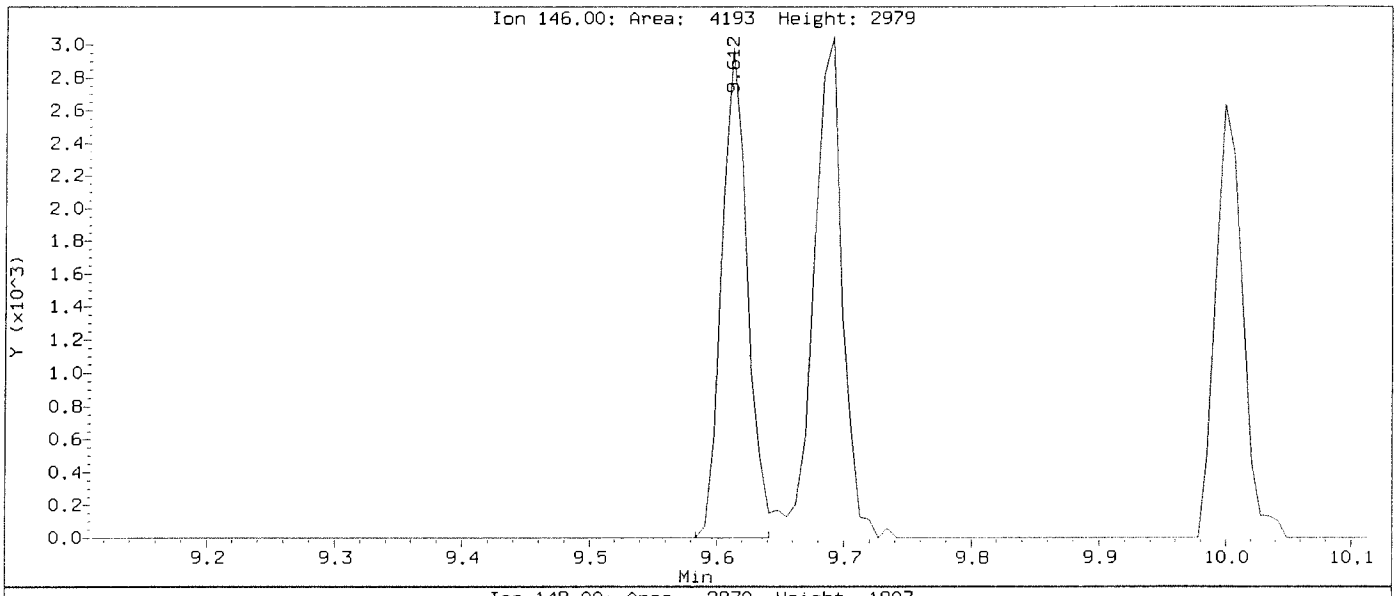
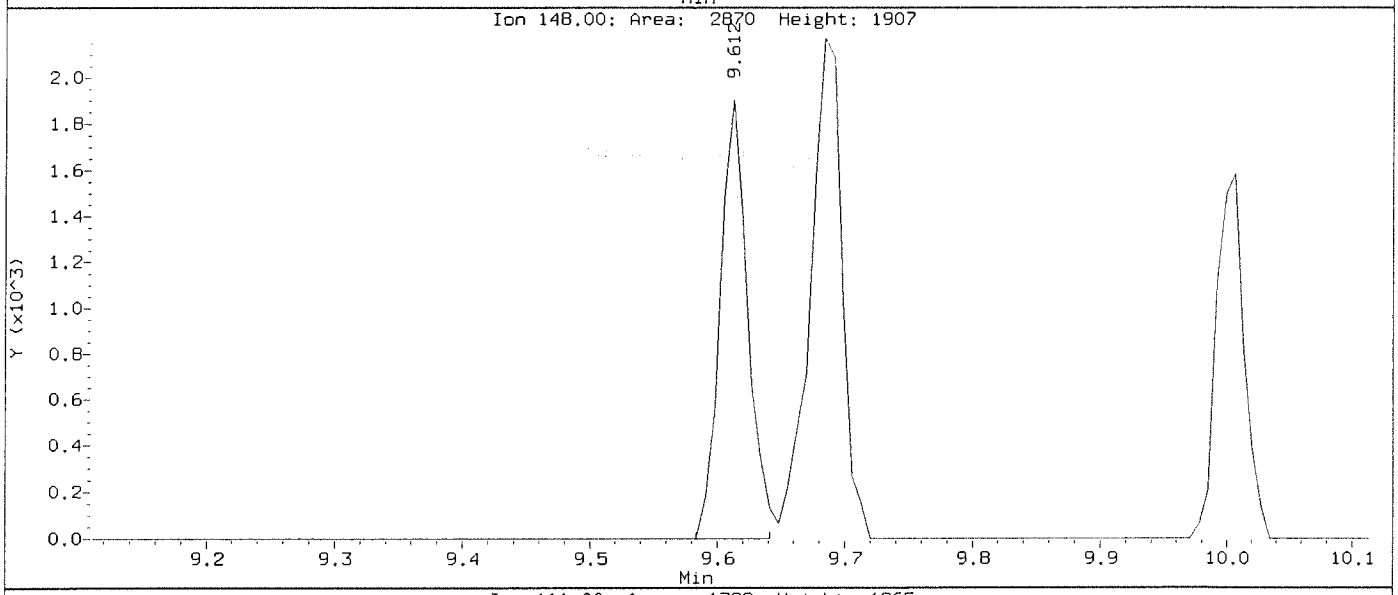
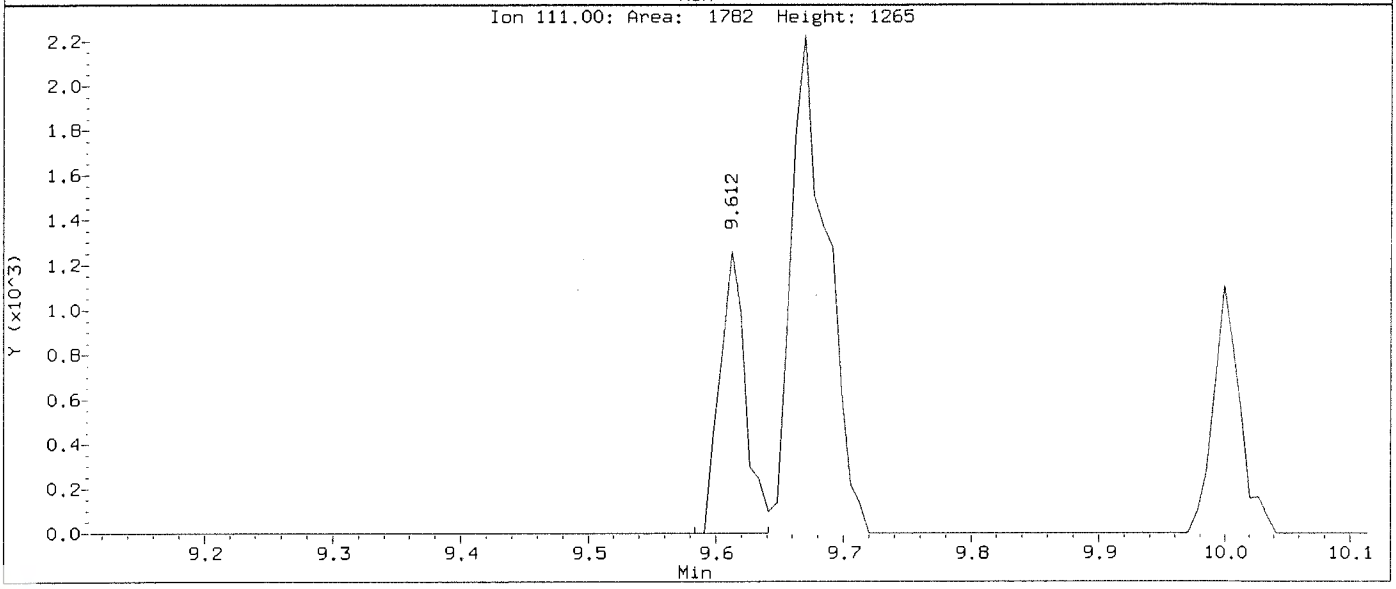
Injection Date: 07-JUL-2020 11:30
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: 1,3-Dichlorobenzene
CAS Number: 541-73-1







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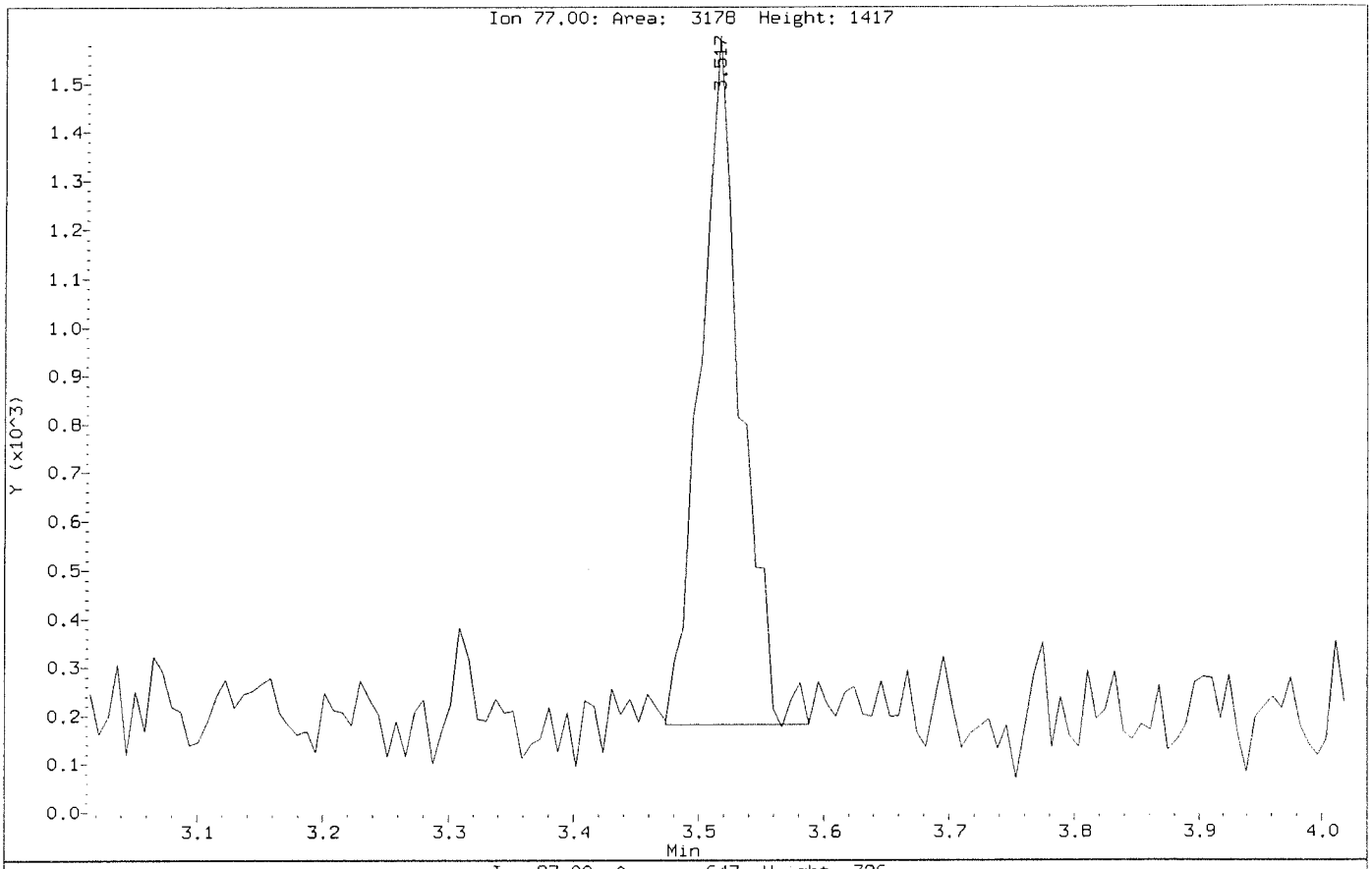
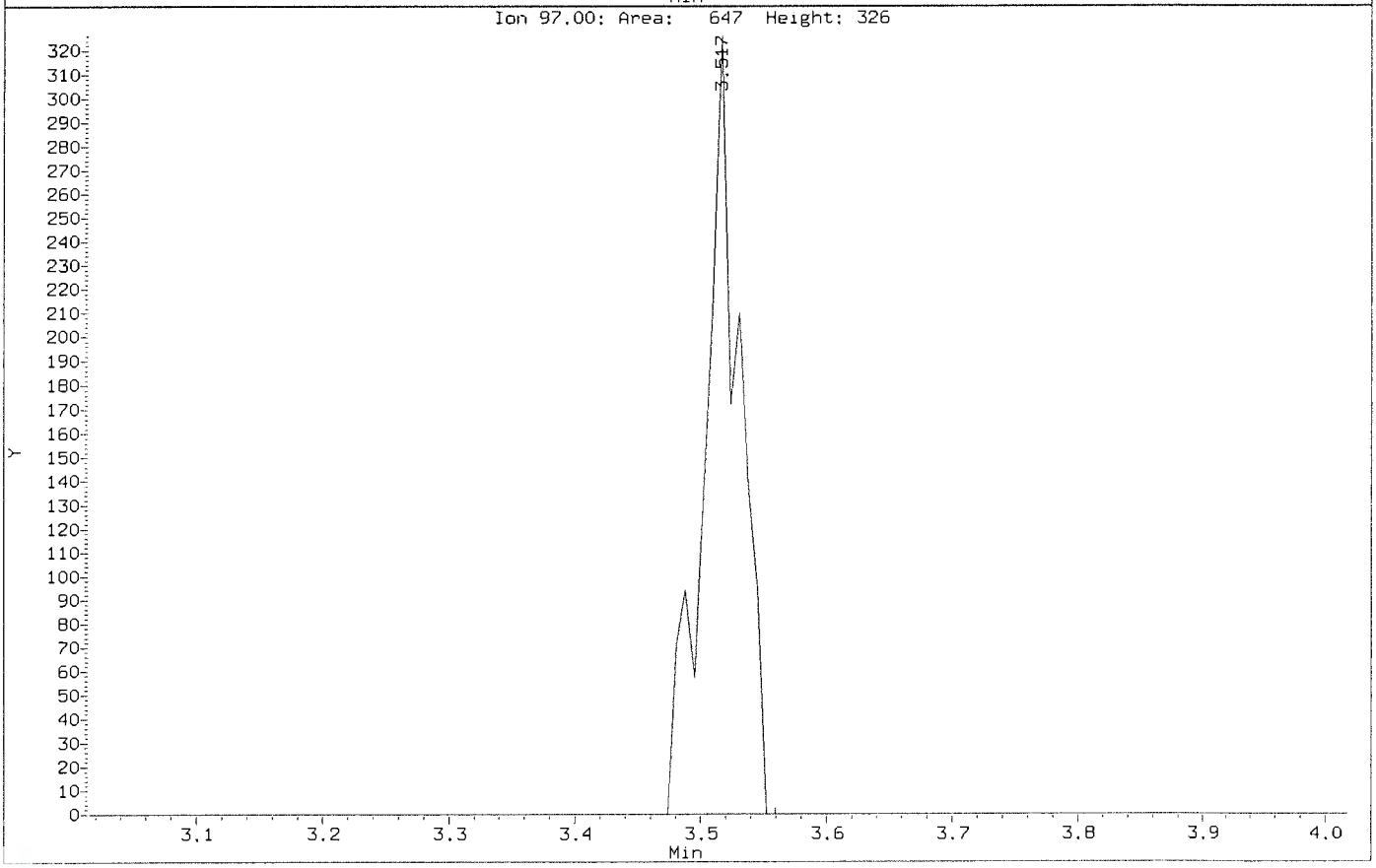
Injection Date: 07-JUL-2020 11:30
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: 2,2-Dichloropropane
CAS Number: 594-20-7





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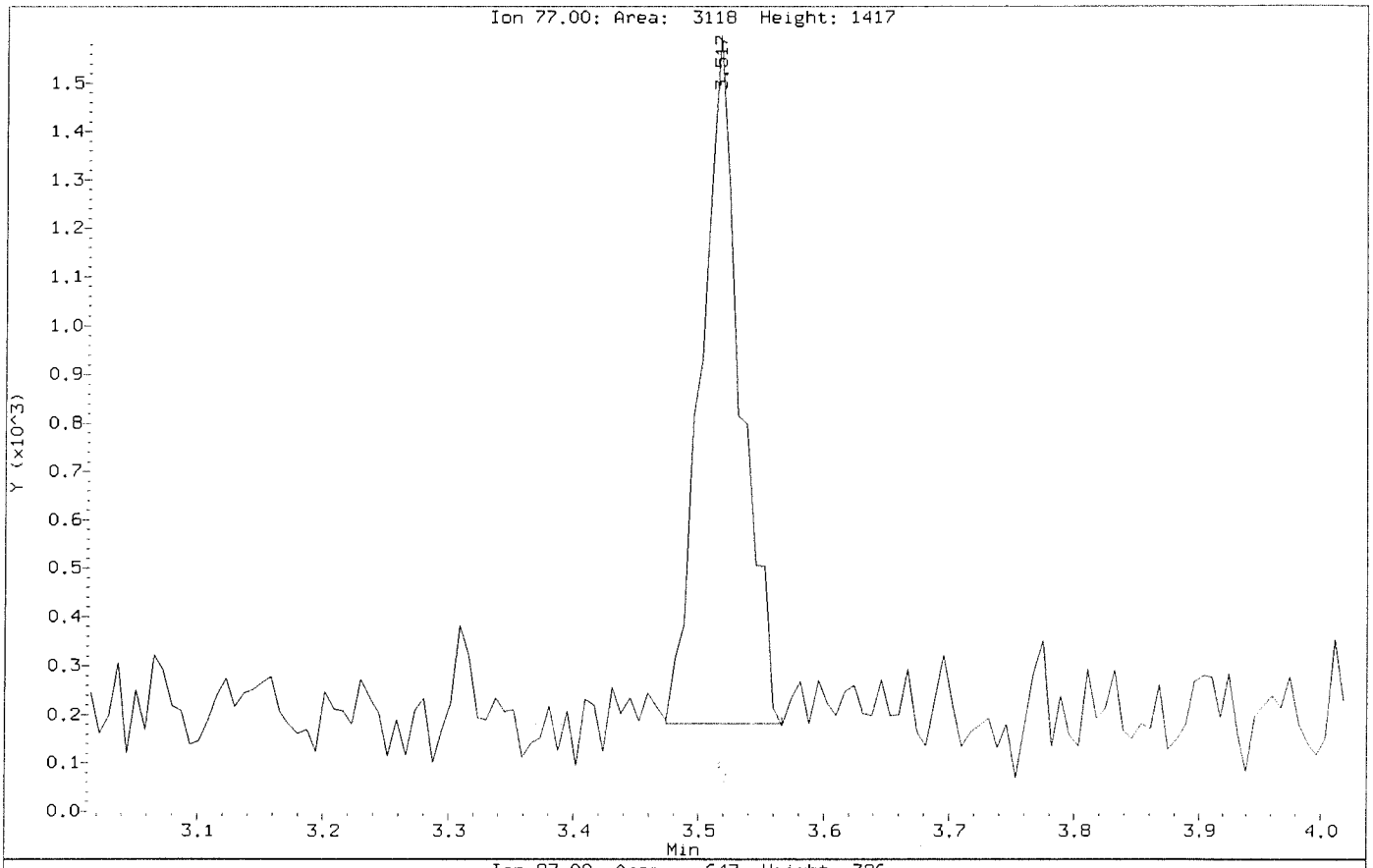
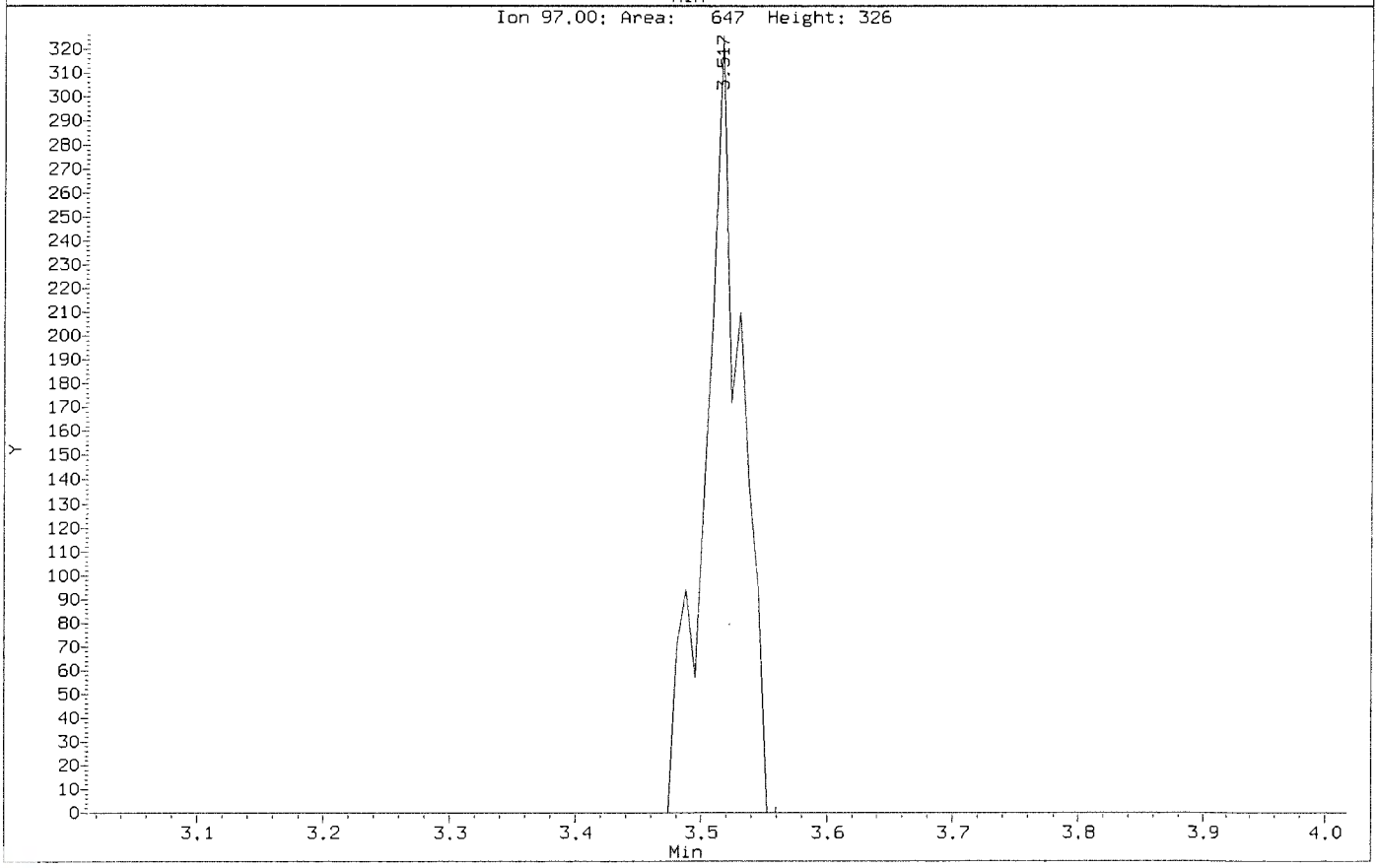
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: 2,2-Dichloropropane
CAS Number: 594-20-7





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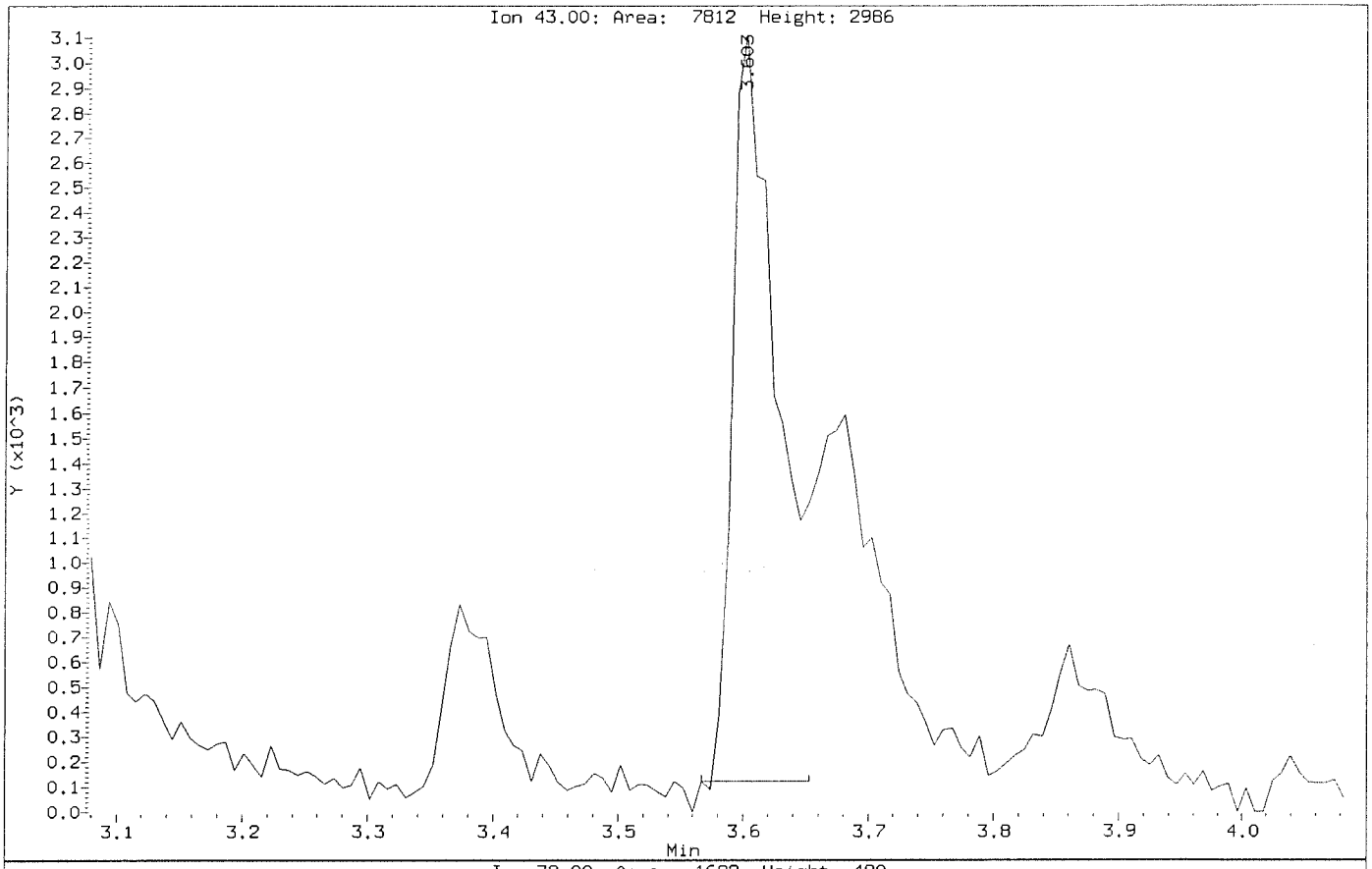
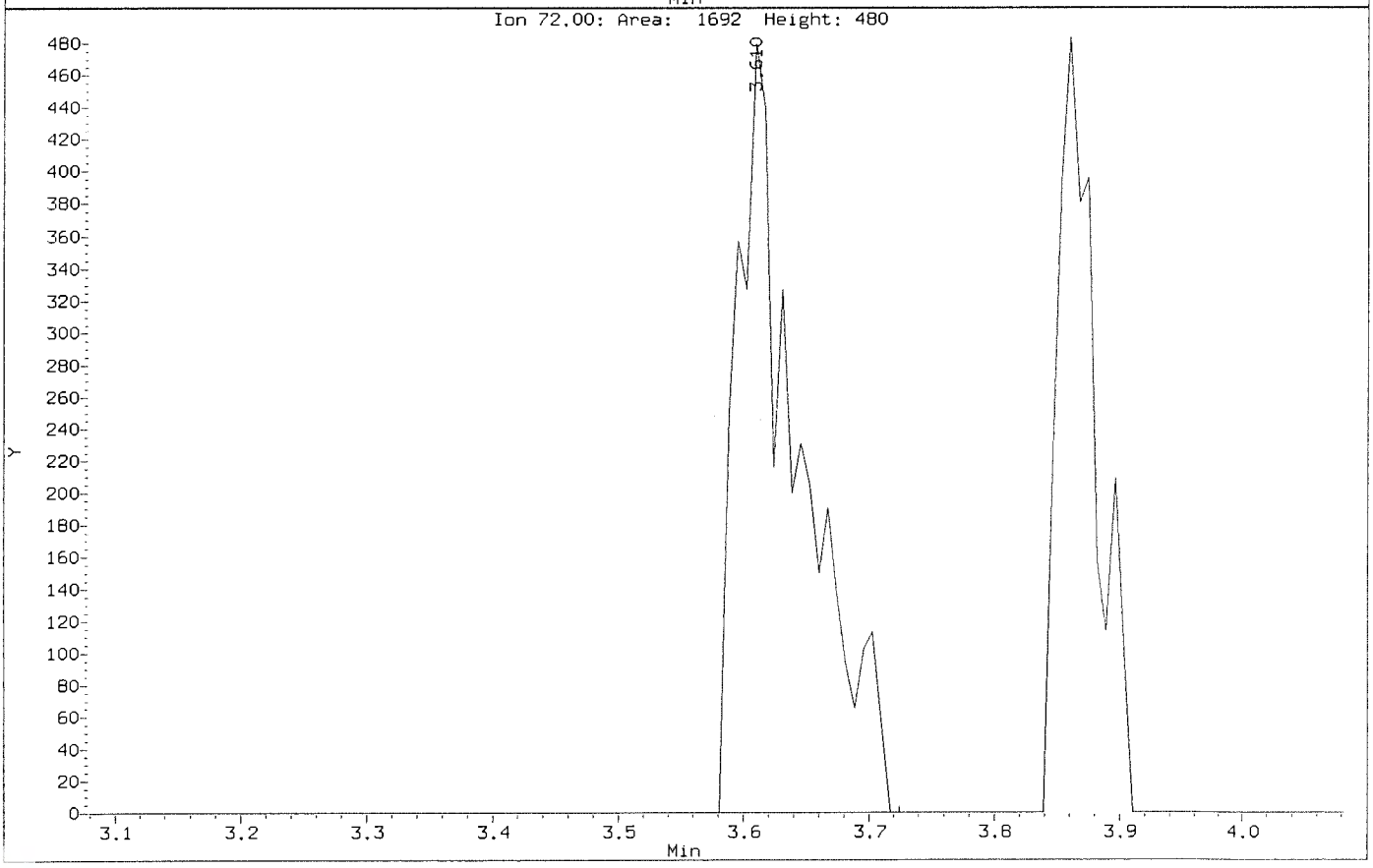
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: 2-Butanone
CAS Number: 78-93-3





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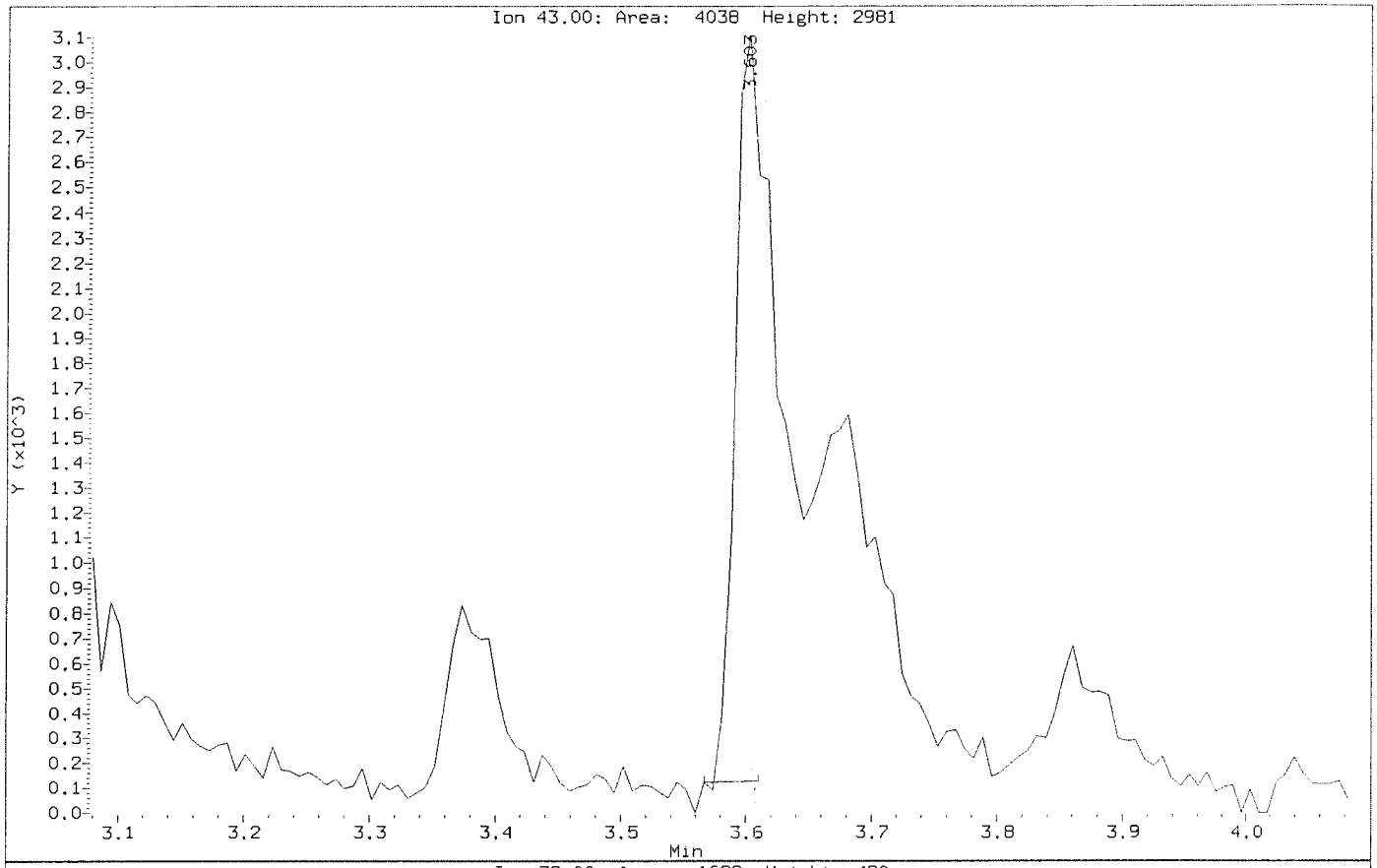
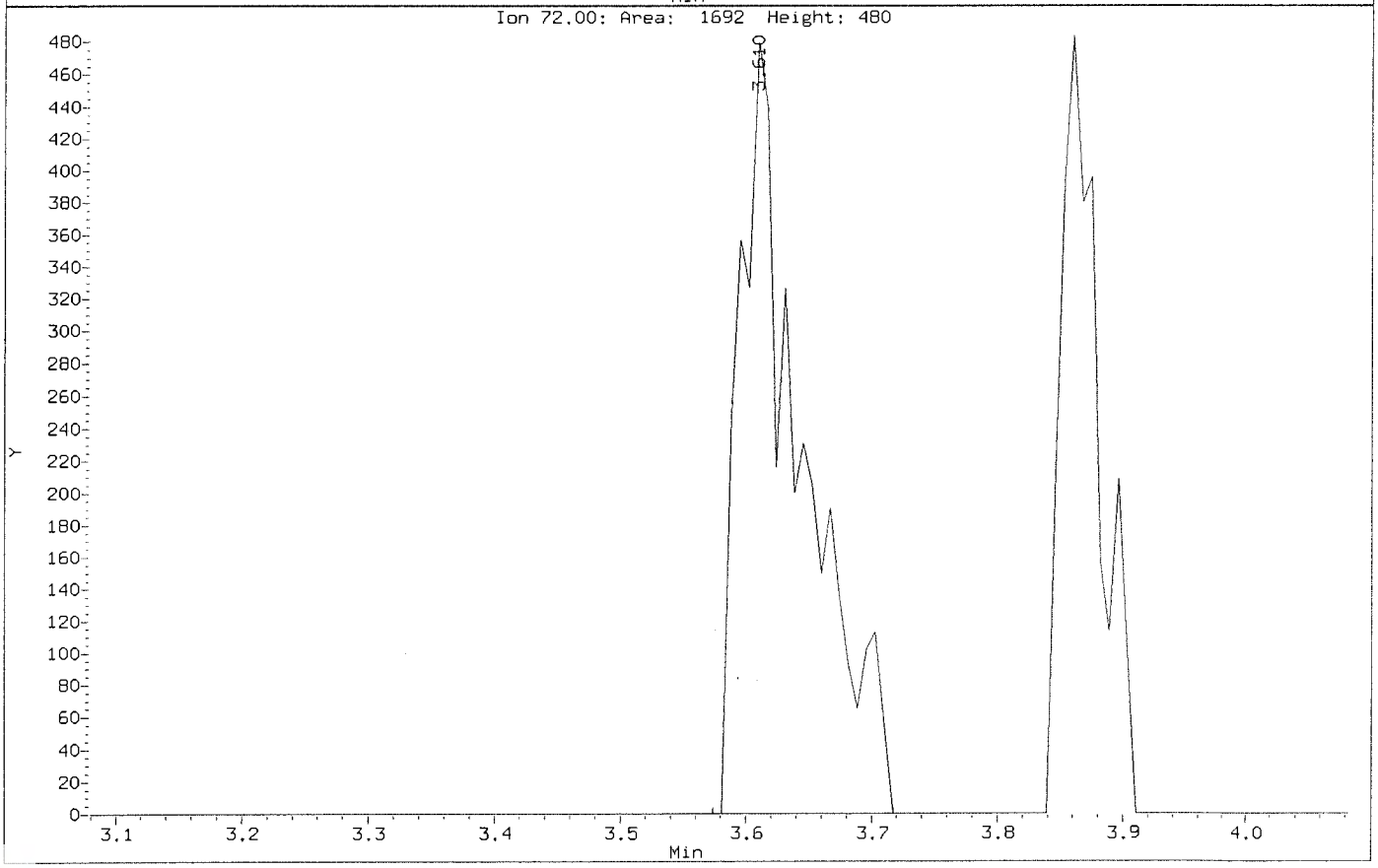
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: 2-Butanone
CAS Number: 78-93-3





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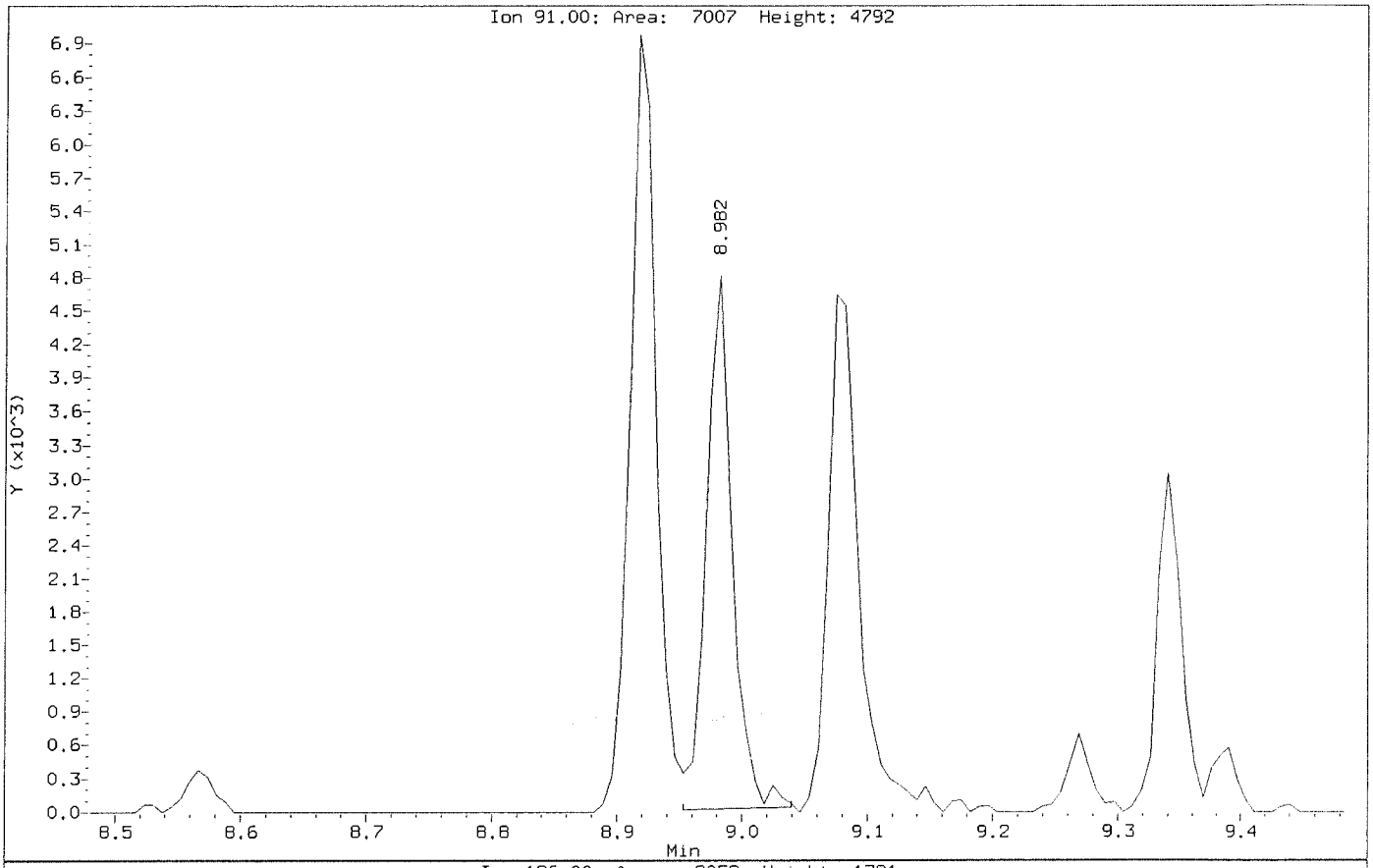
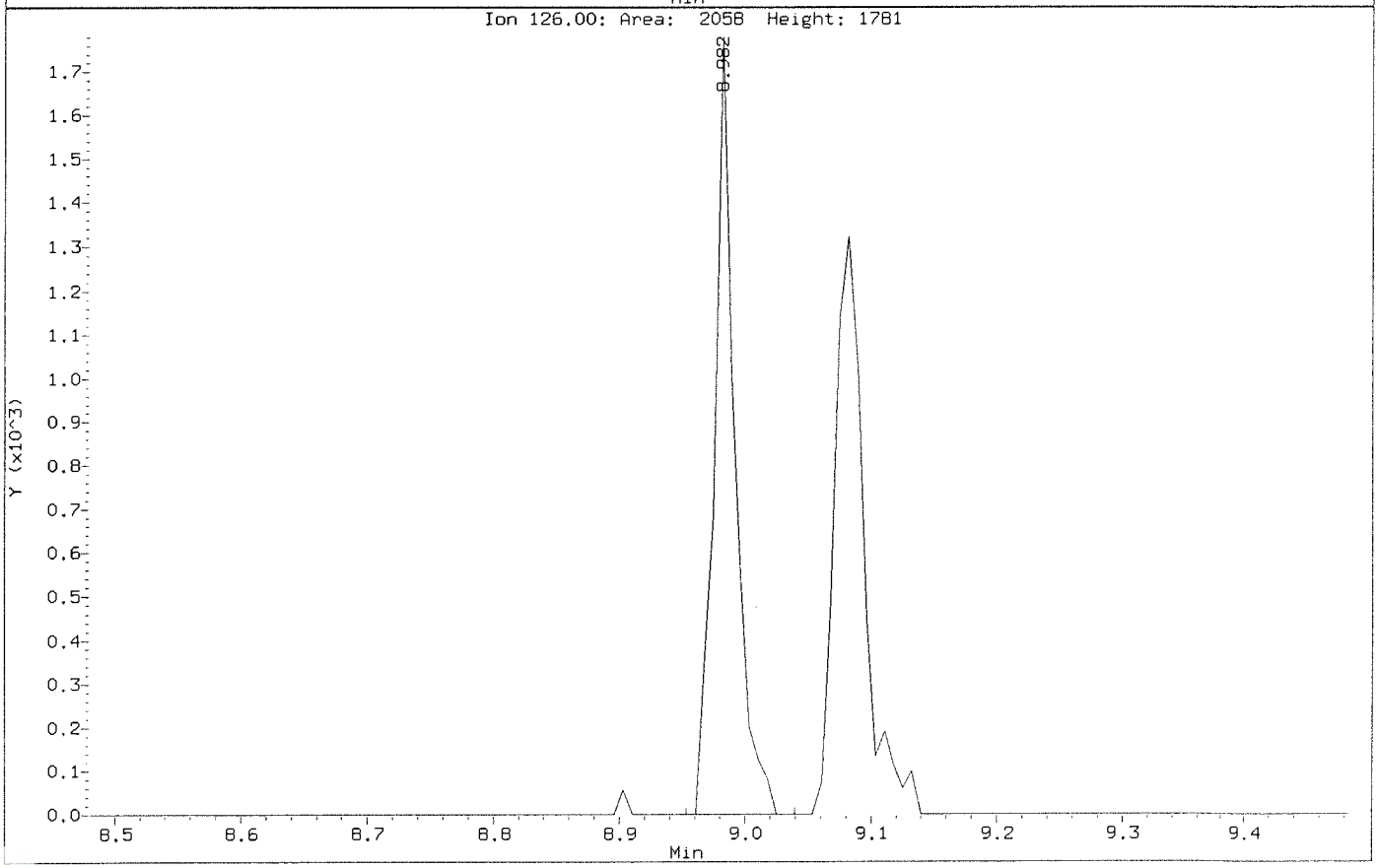
Injection Date: 07-JUL-2020 11:30
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: 2-Chlorotoluene
CAS Number: 95-49-8





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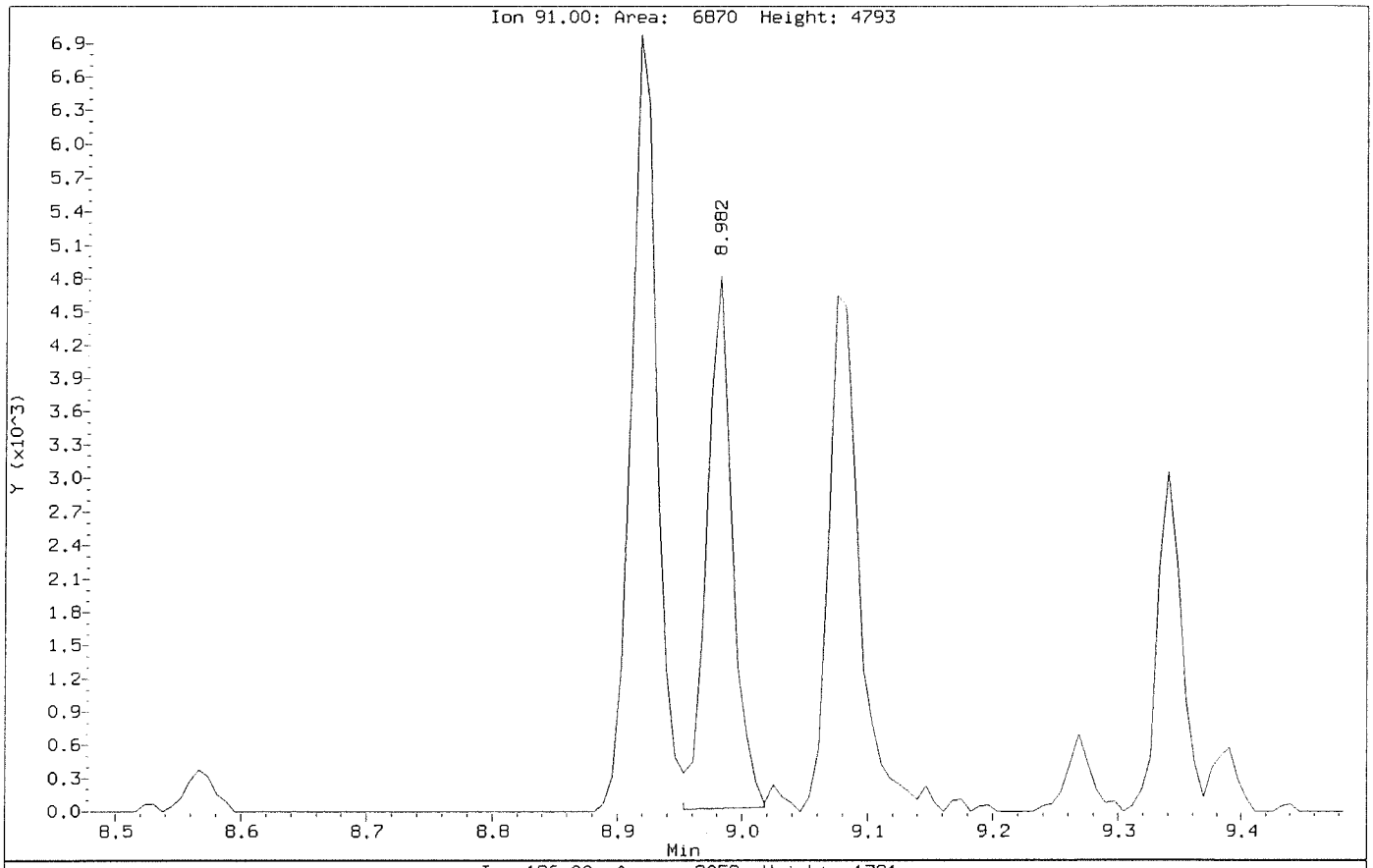
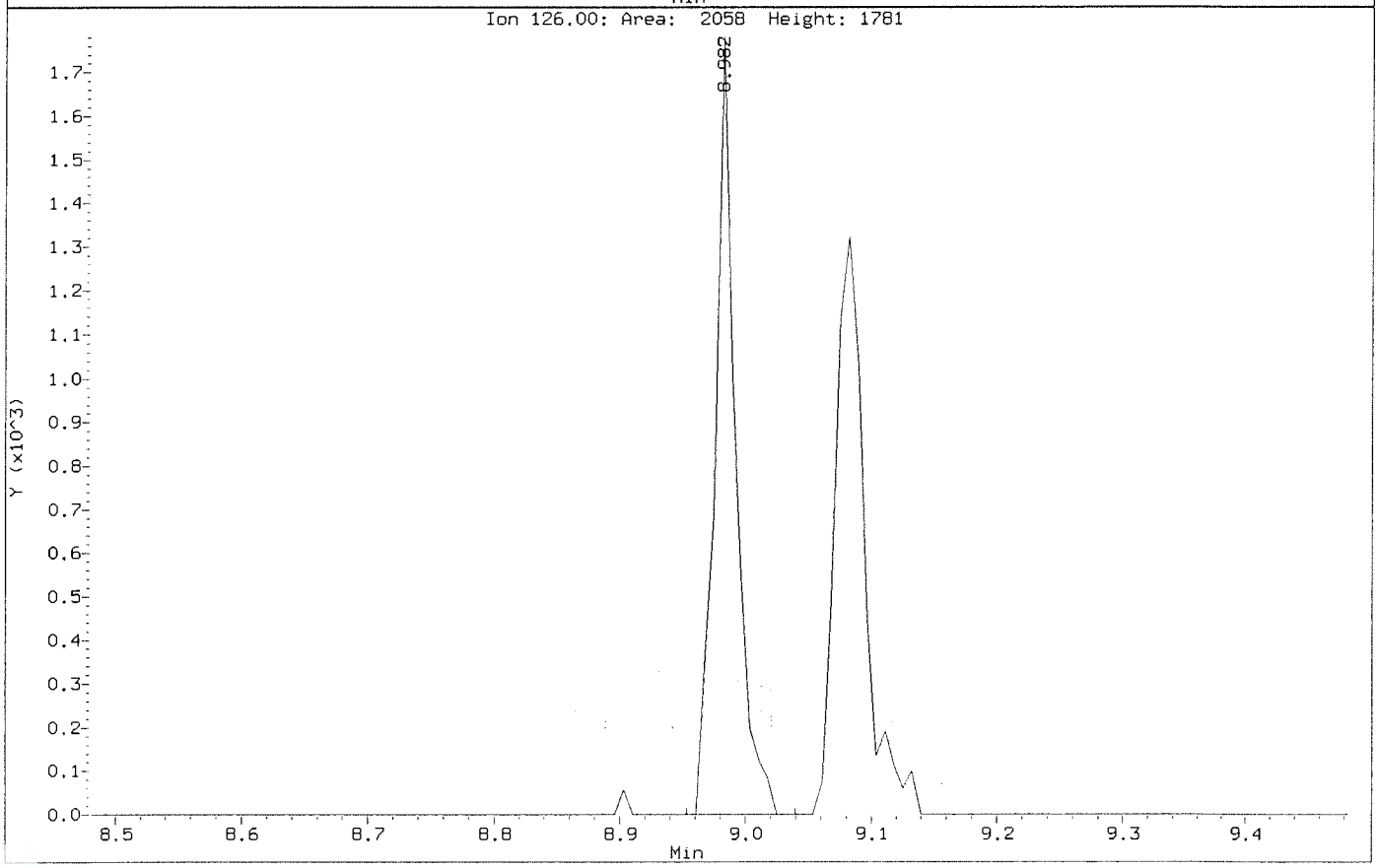
Injection Date: 07-JUL-2020 11:30
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: 2-Chlorotoluene
CAS Number: 95-49-8





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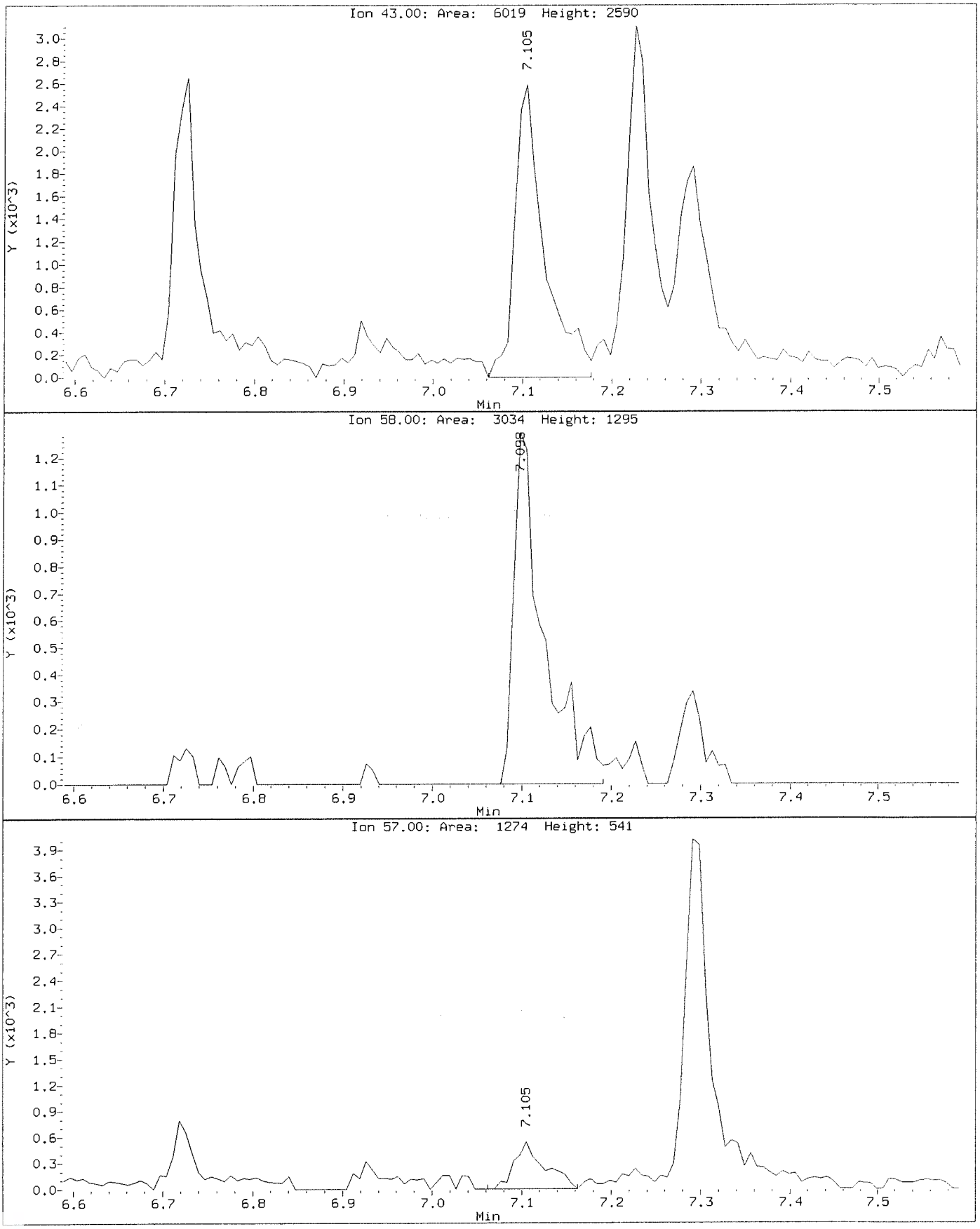
Injection Date: 07-JUL-2020 11:30
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: 2-Hexanone
CAS Number: 591-78-6



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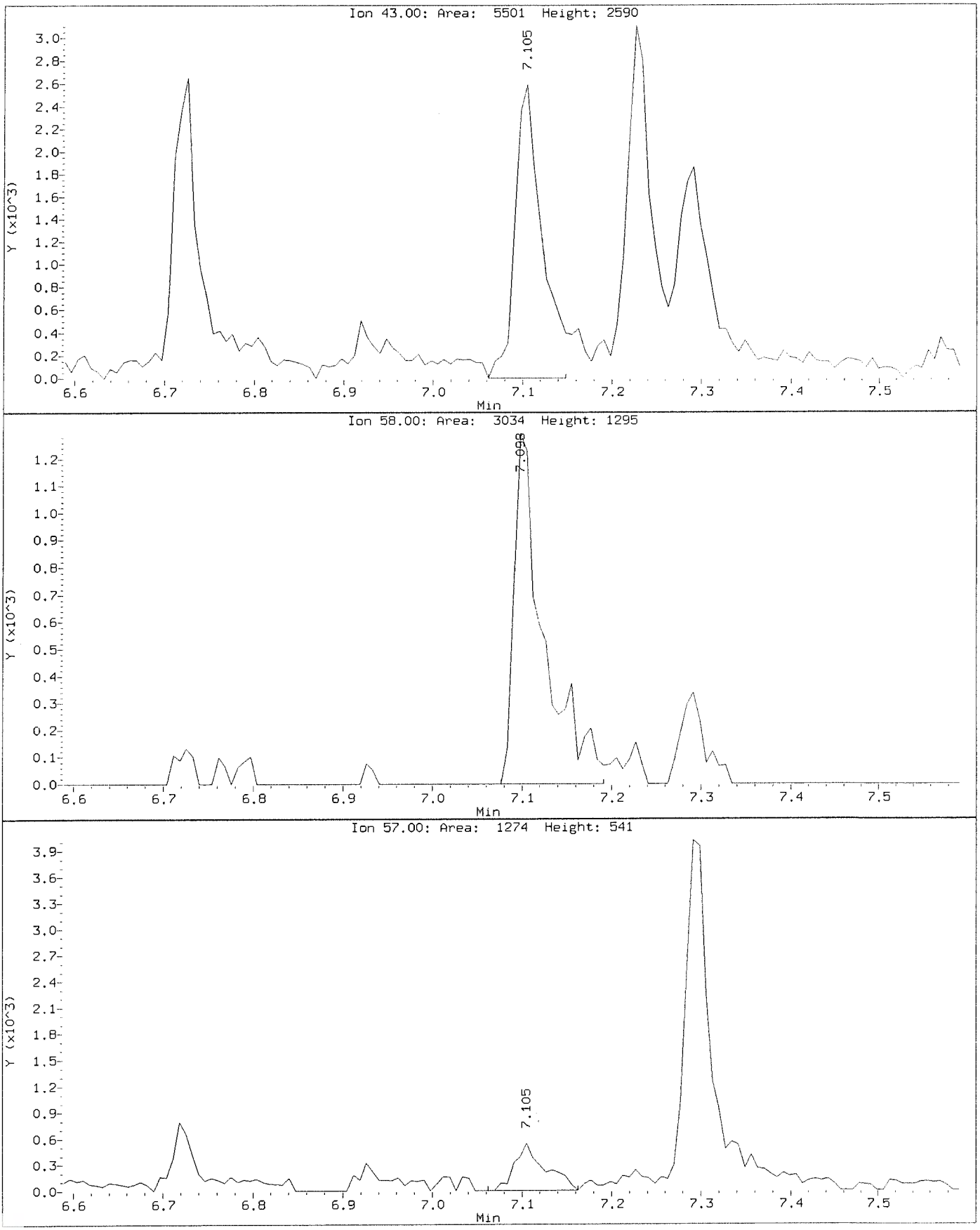
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: 2-Hexanone
CAS Number: 591-78-6



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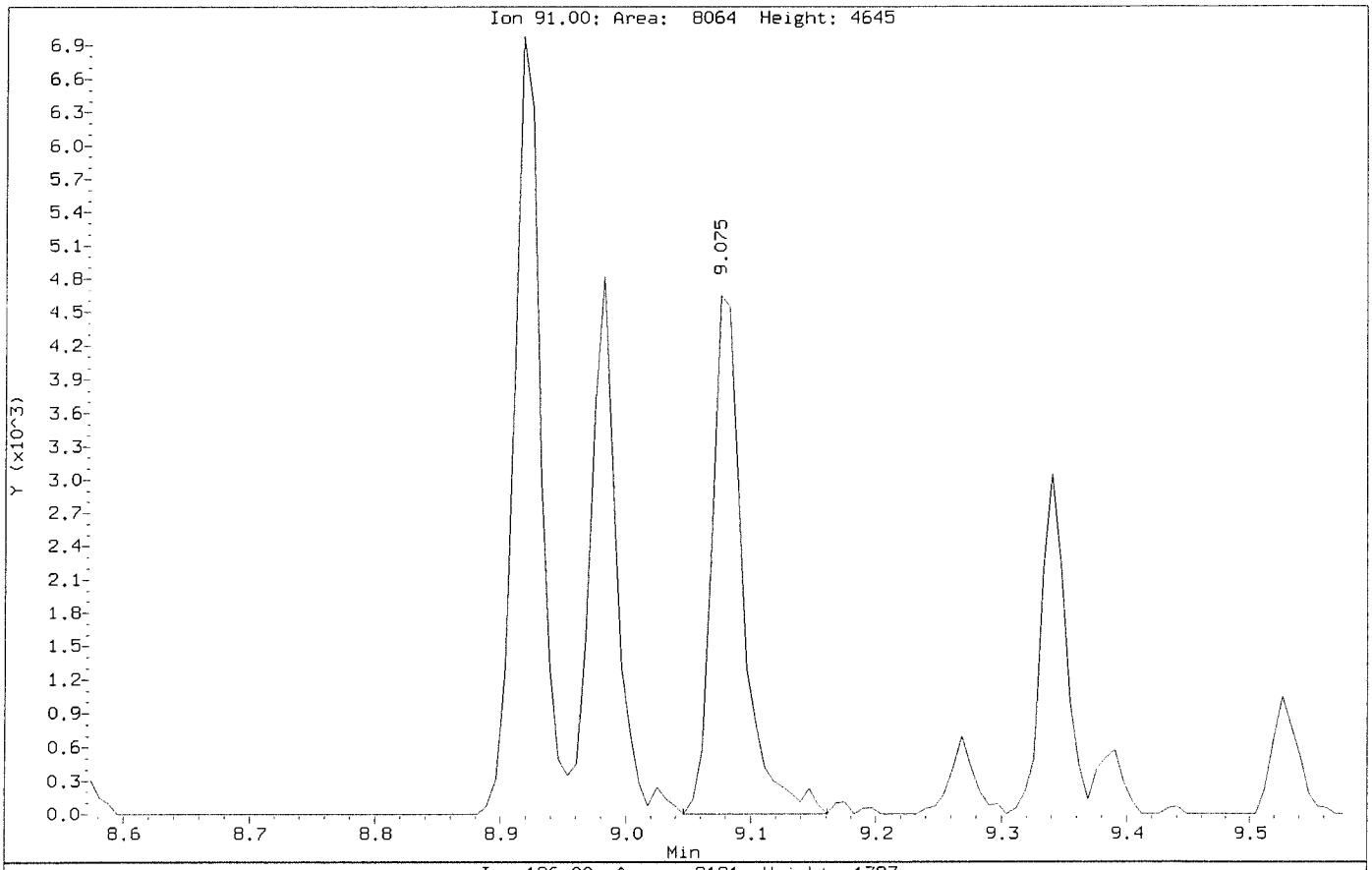
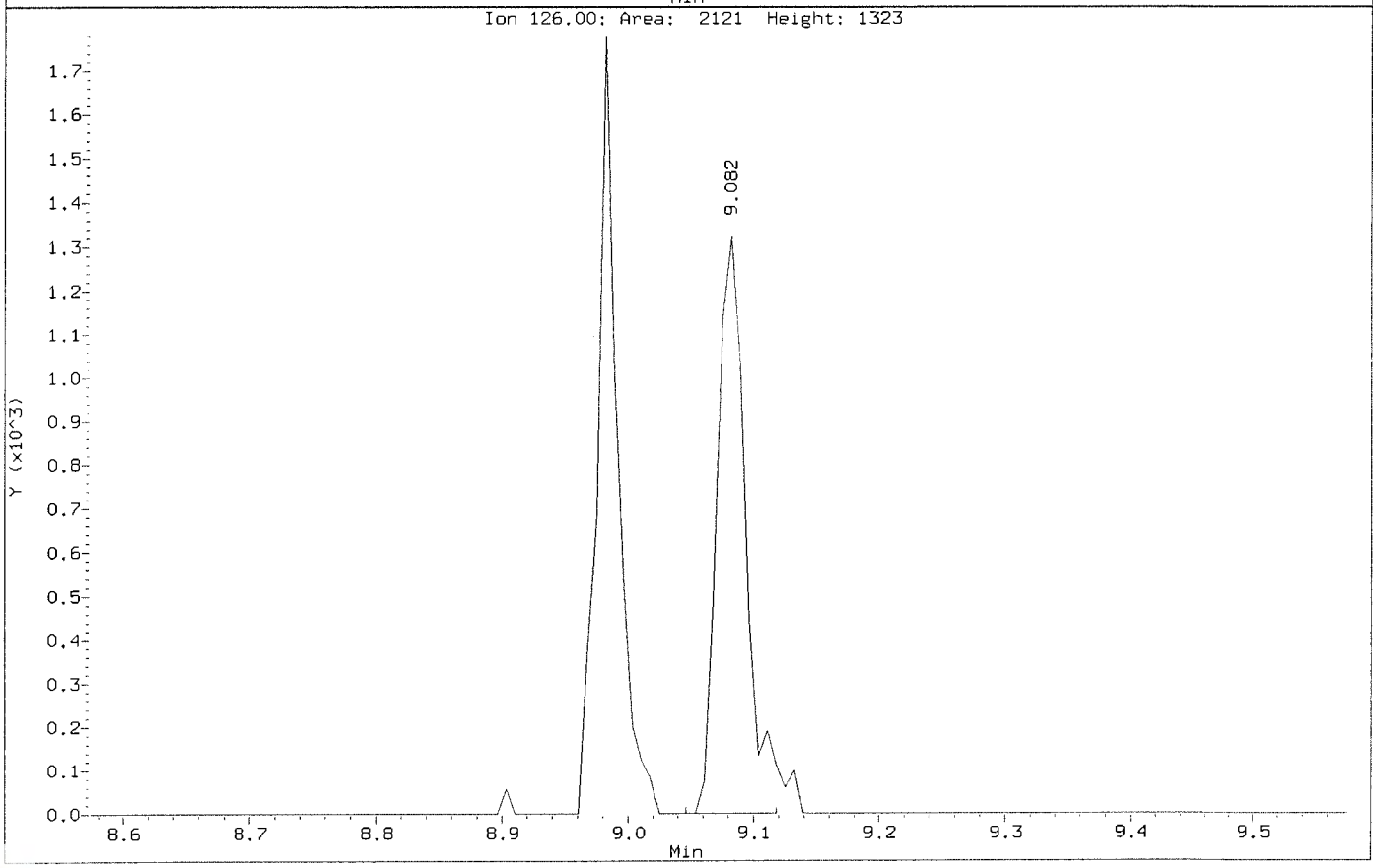
Injection Date: 07-JUL-2020 11:30
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: 4-Chlorotoluene
CAS Number: 106-43-4





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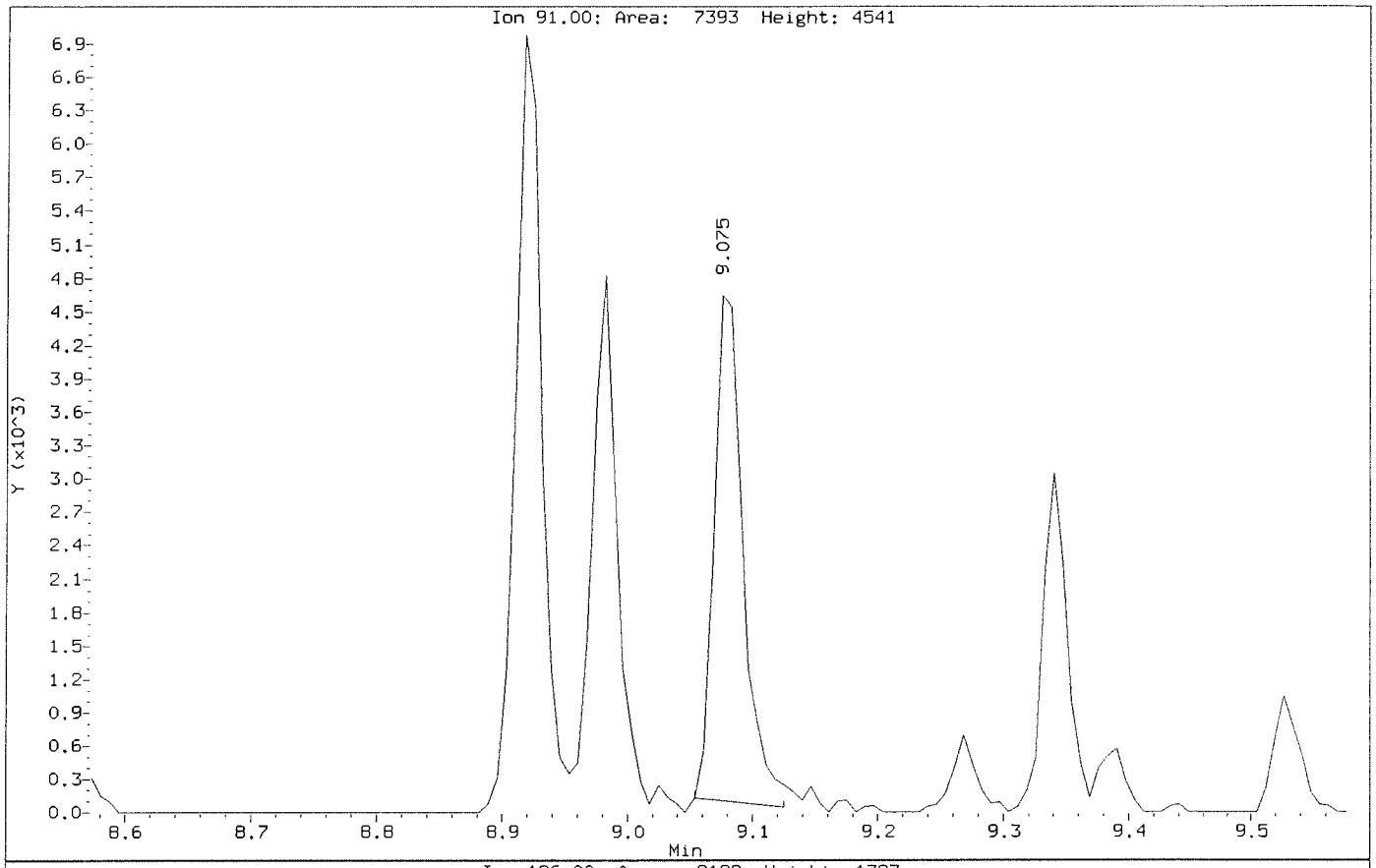
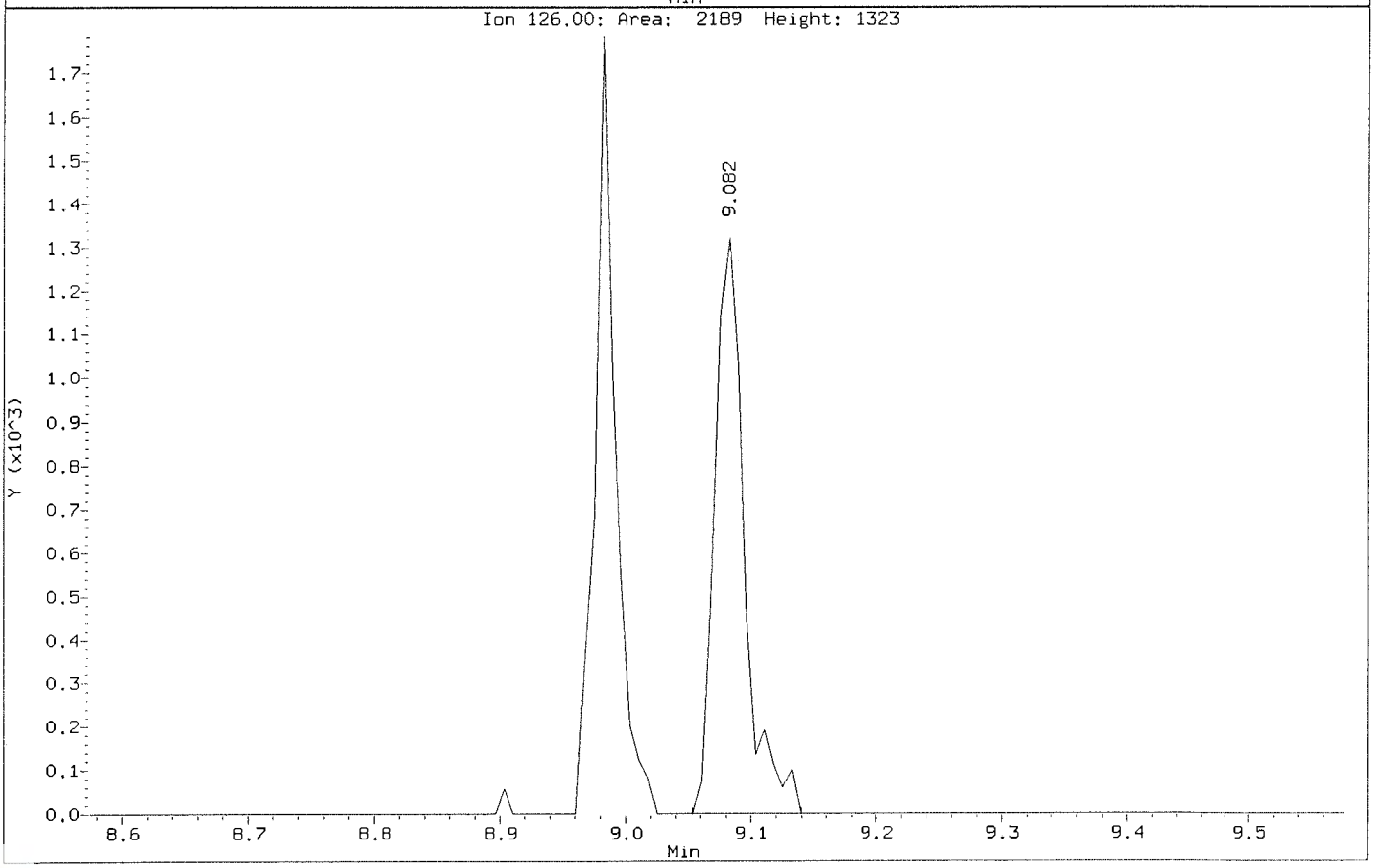
Injection Date: 07-JUL-2020 11:30
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: 4-Chlorotoluene
CAS Number: 106-43-4





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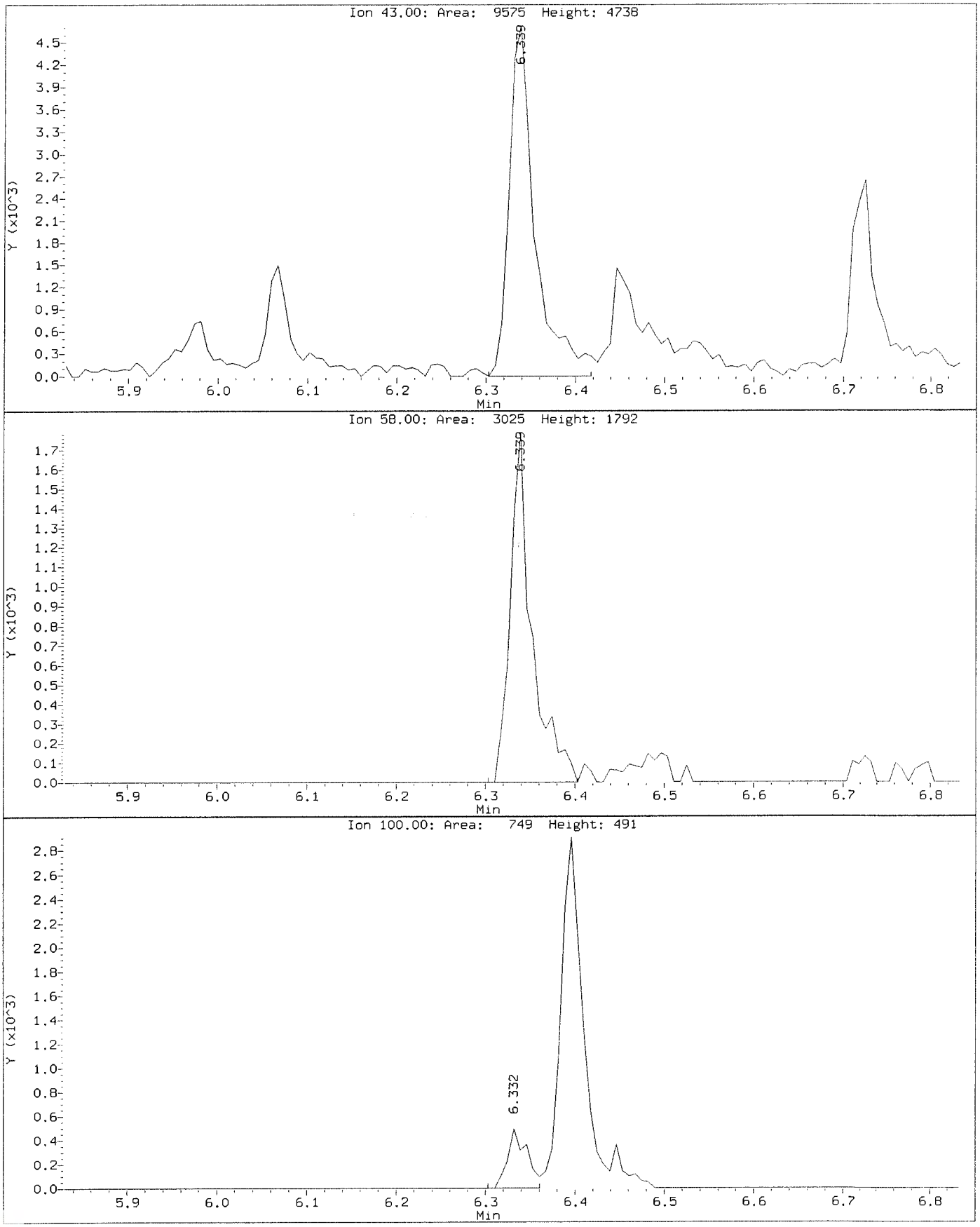
Injection Date: 07-JUL-2020 11:30
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: 4-Methyl-2-Pentanone
CAS Number: 108-10-1



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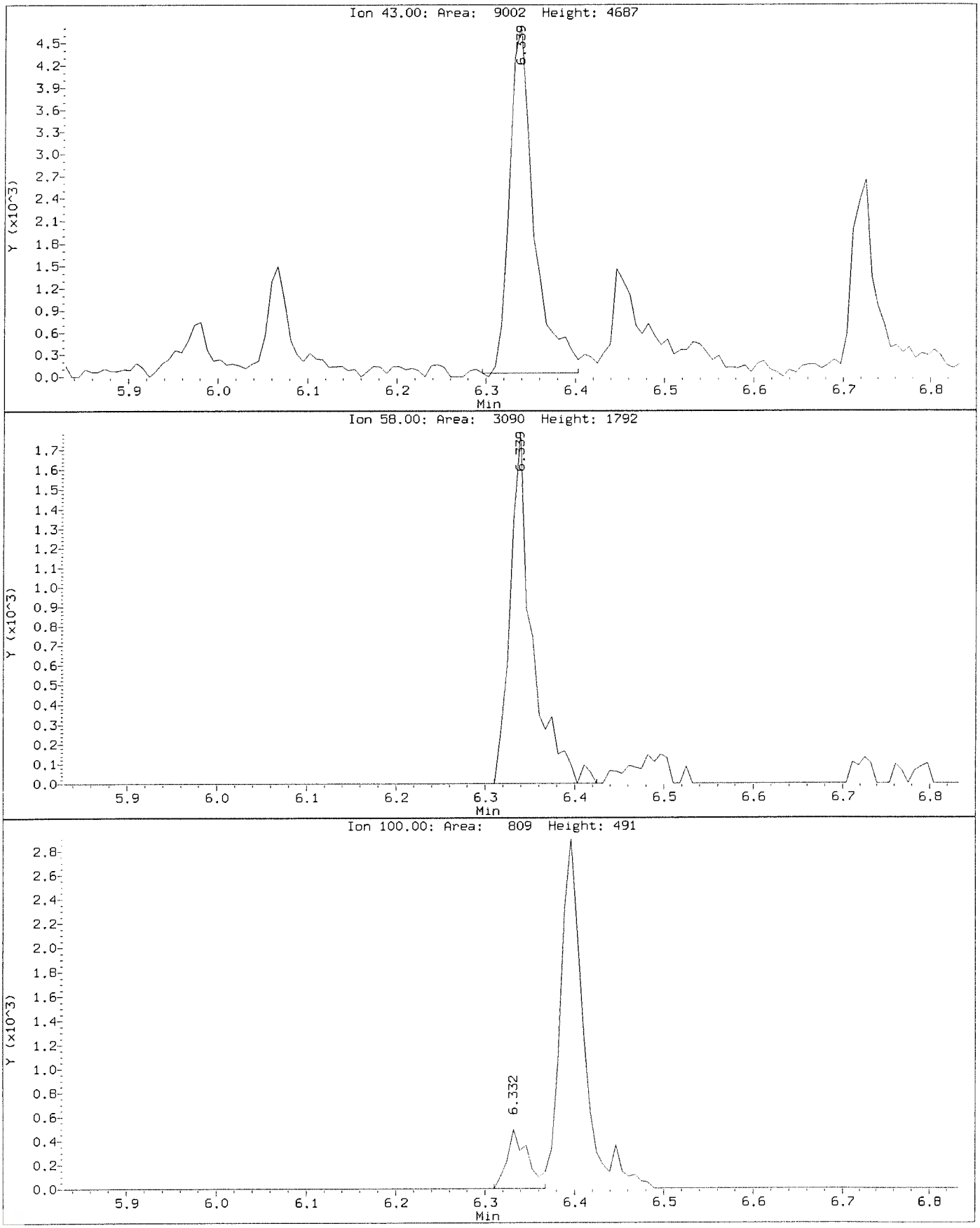
Injection Date: 07-JUL-2020 11:30
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: 4-Methyl-2-Pentanone
CAS Number: 108-10-1



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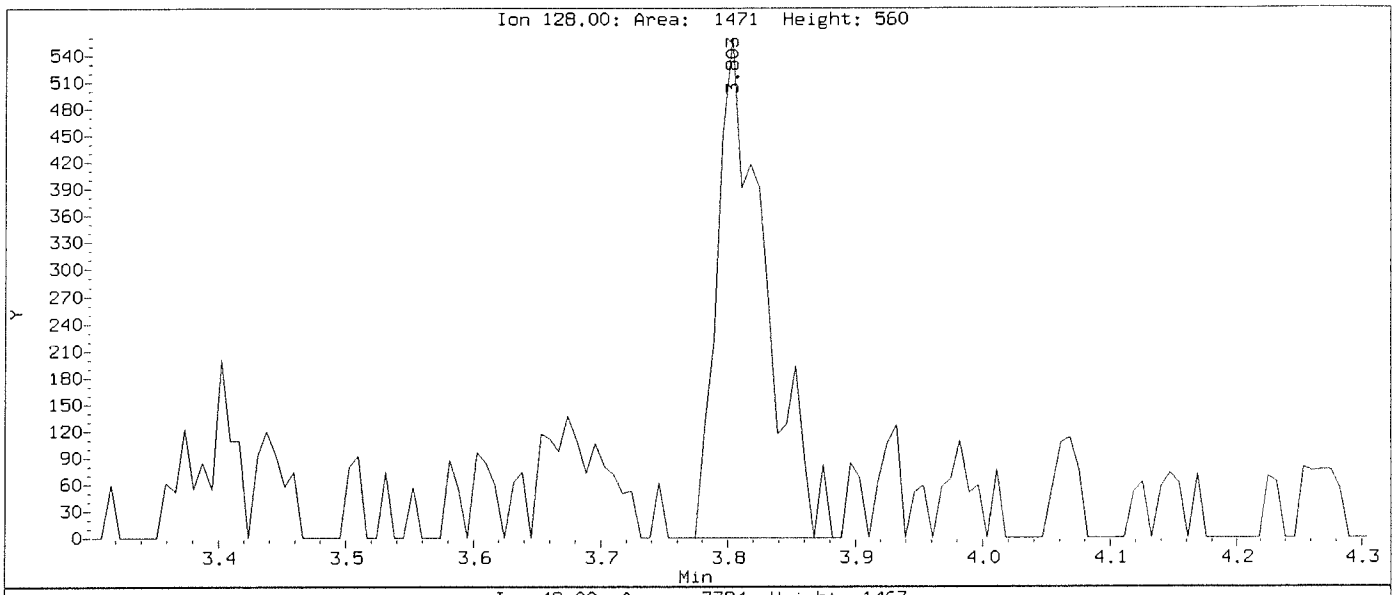
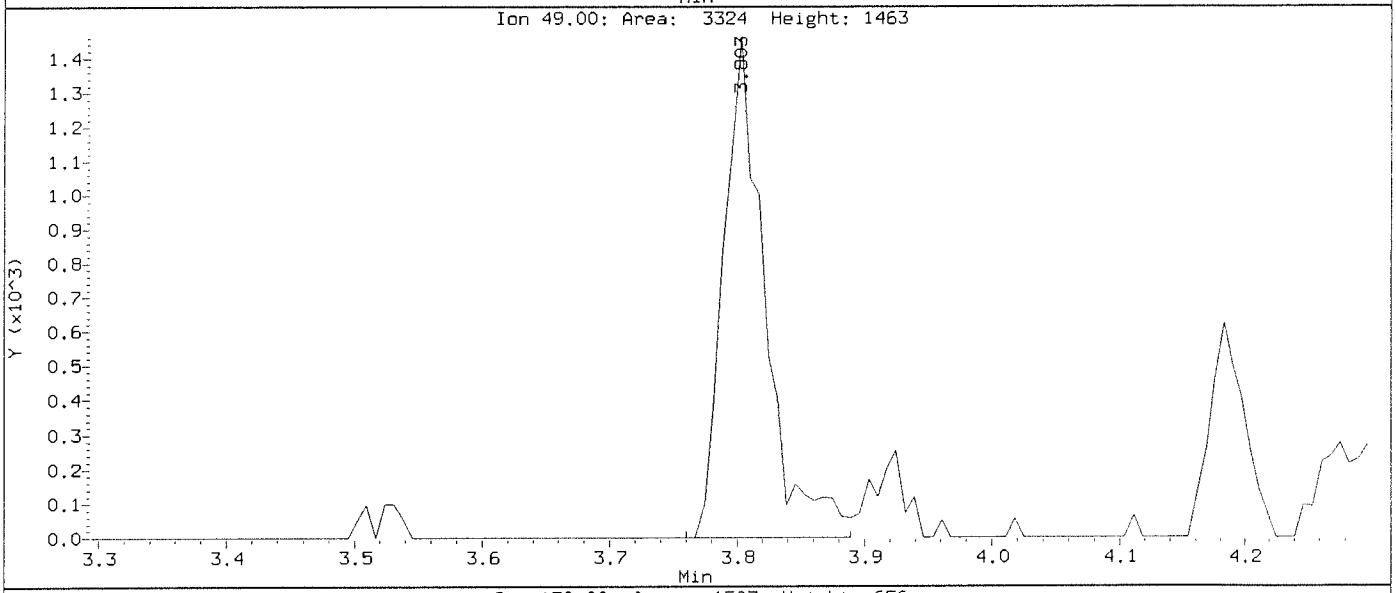
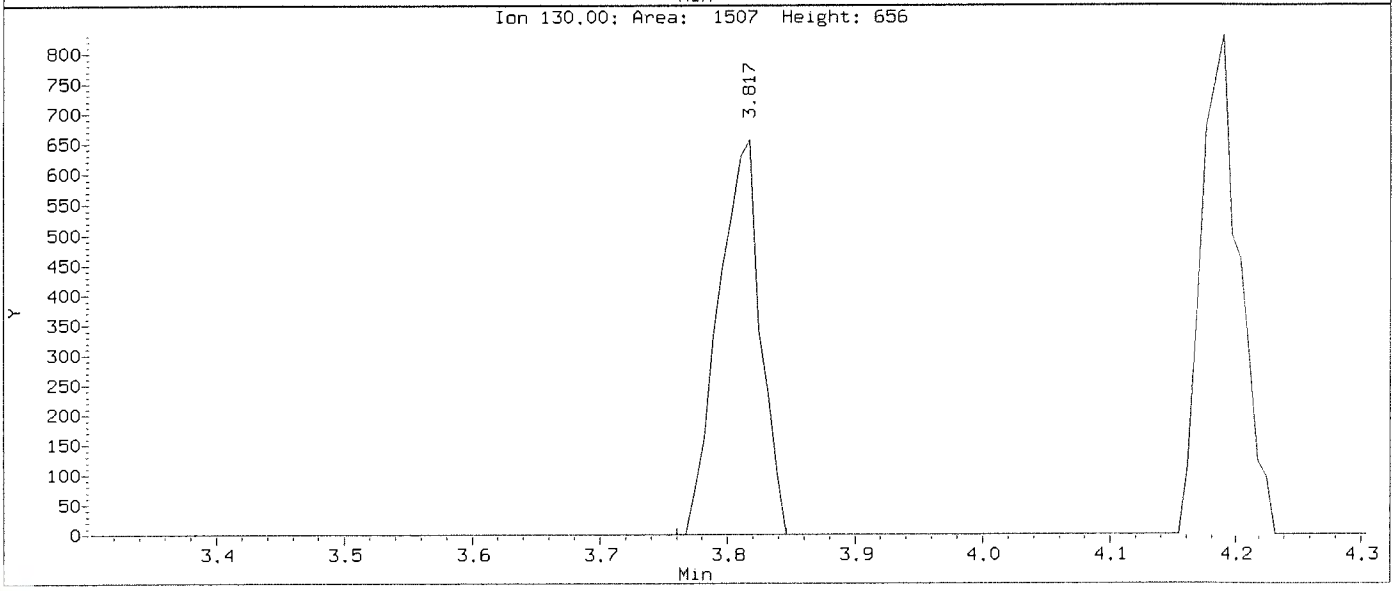
Injection Date: 07-JUL-2020 11:30
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Bromochloromethane
CAS Number: 74-97-5







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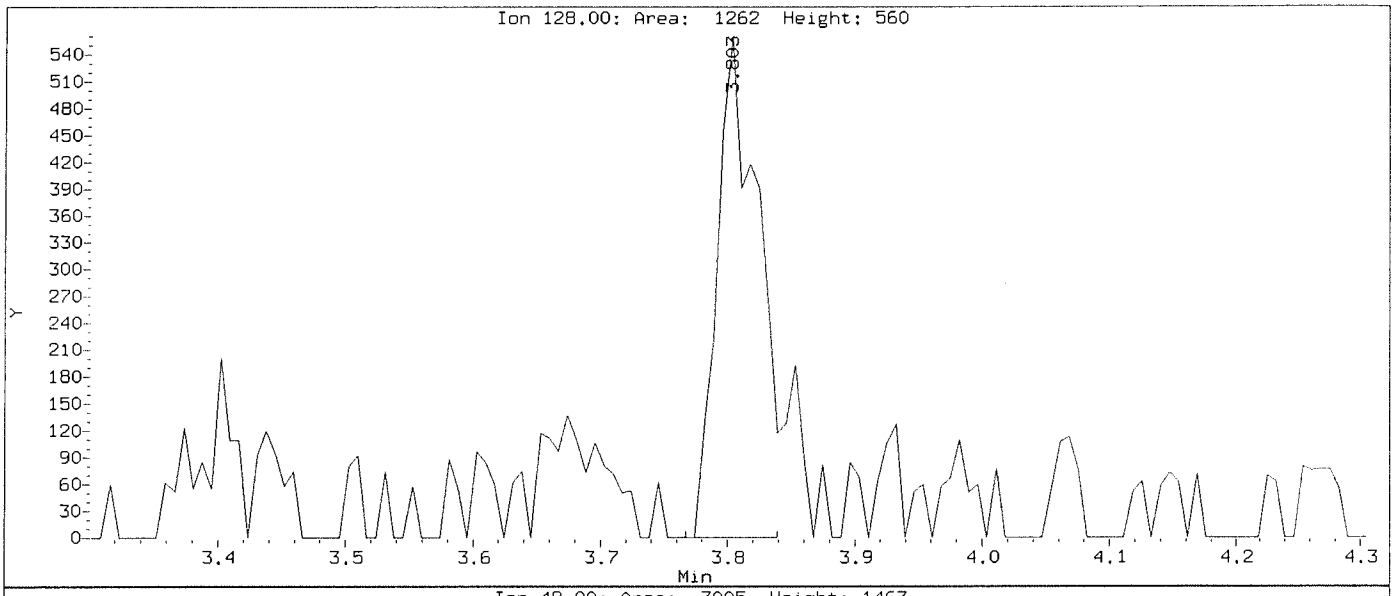
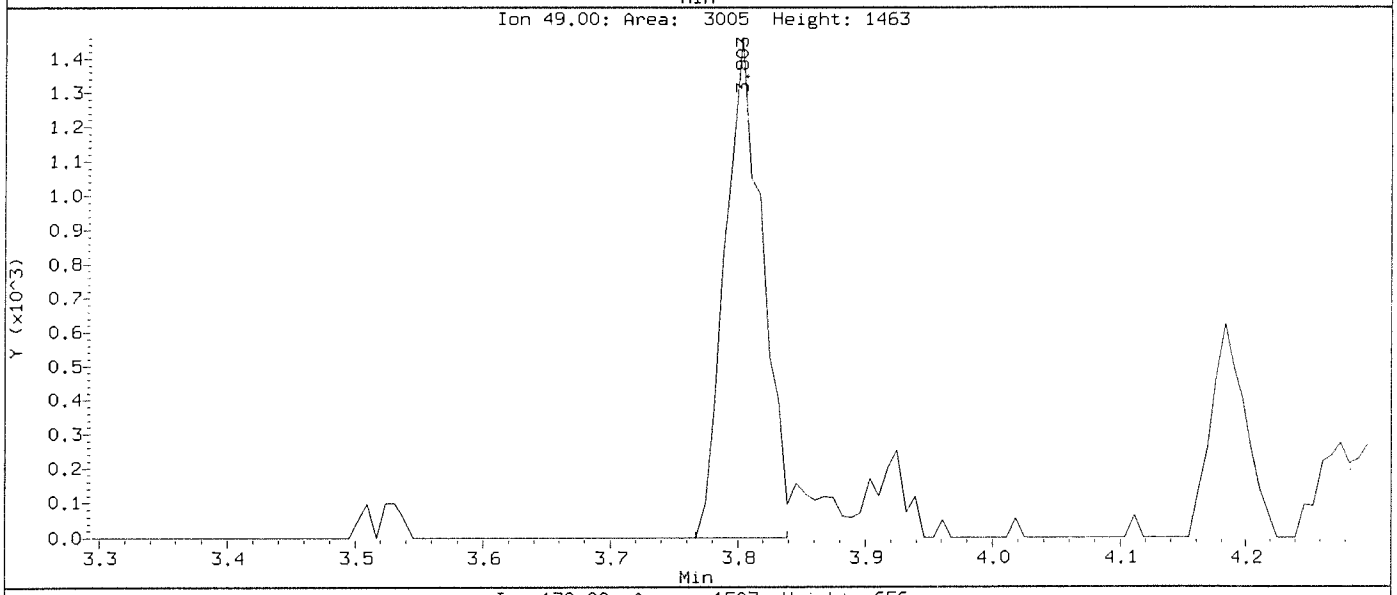
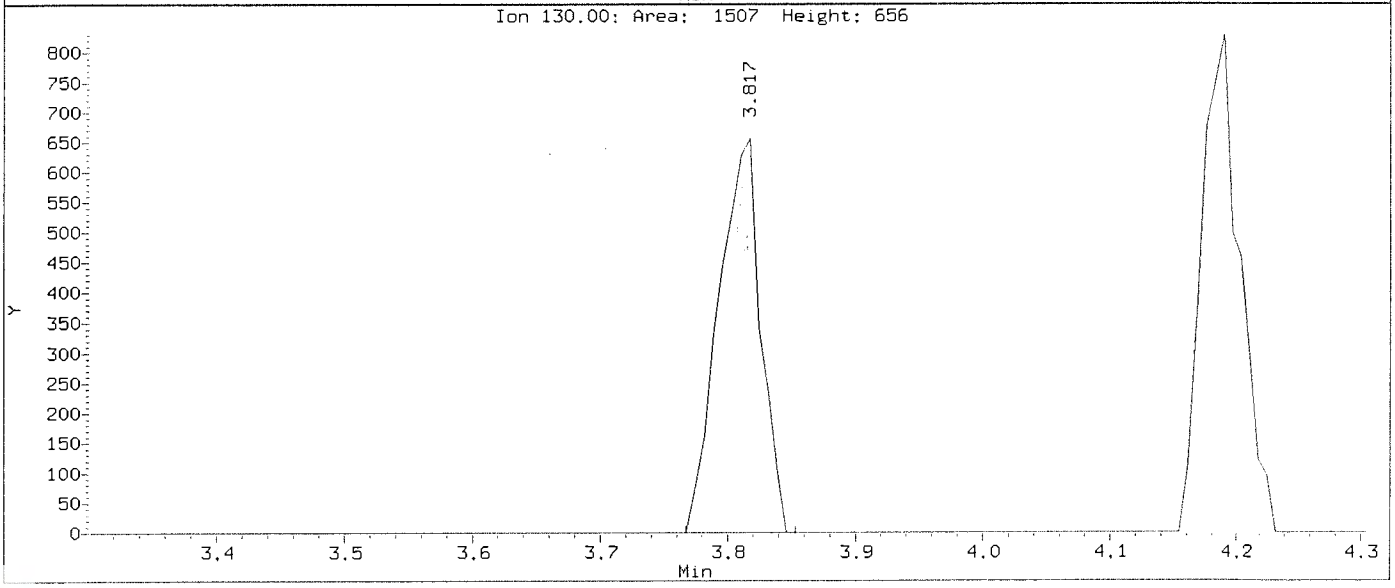
Injection Date: 07-JUL-2020 11:30
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Bromochloromethane
CAS Number: 74-97-5







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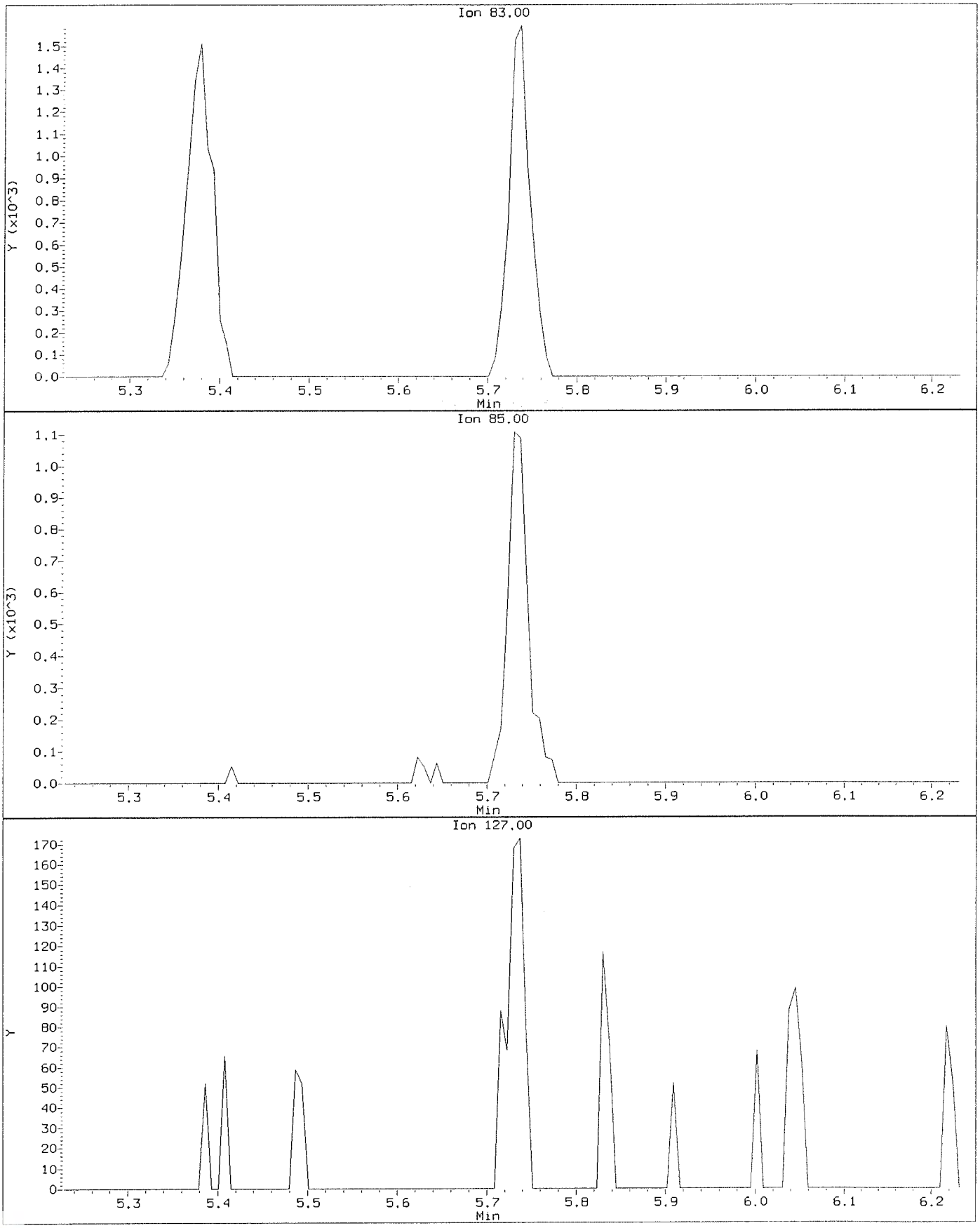
Injection Date: 07-JUL-2020 11:30
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Bromodichloromethane
CAS Number: 75-27-4



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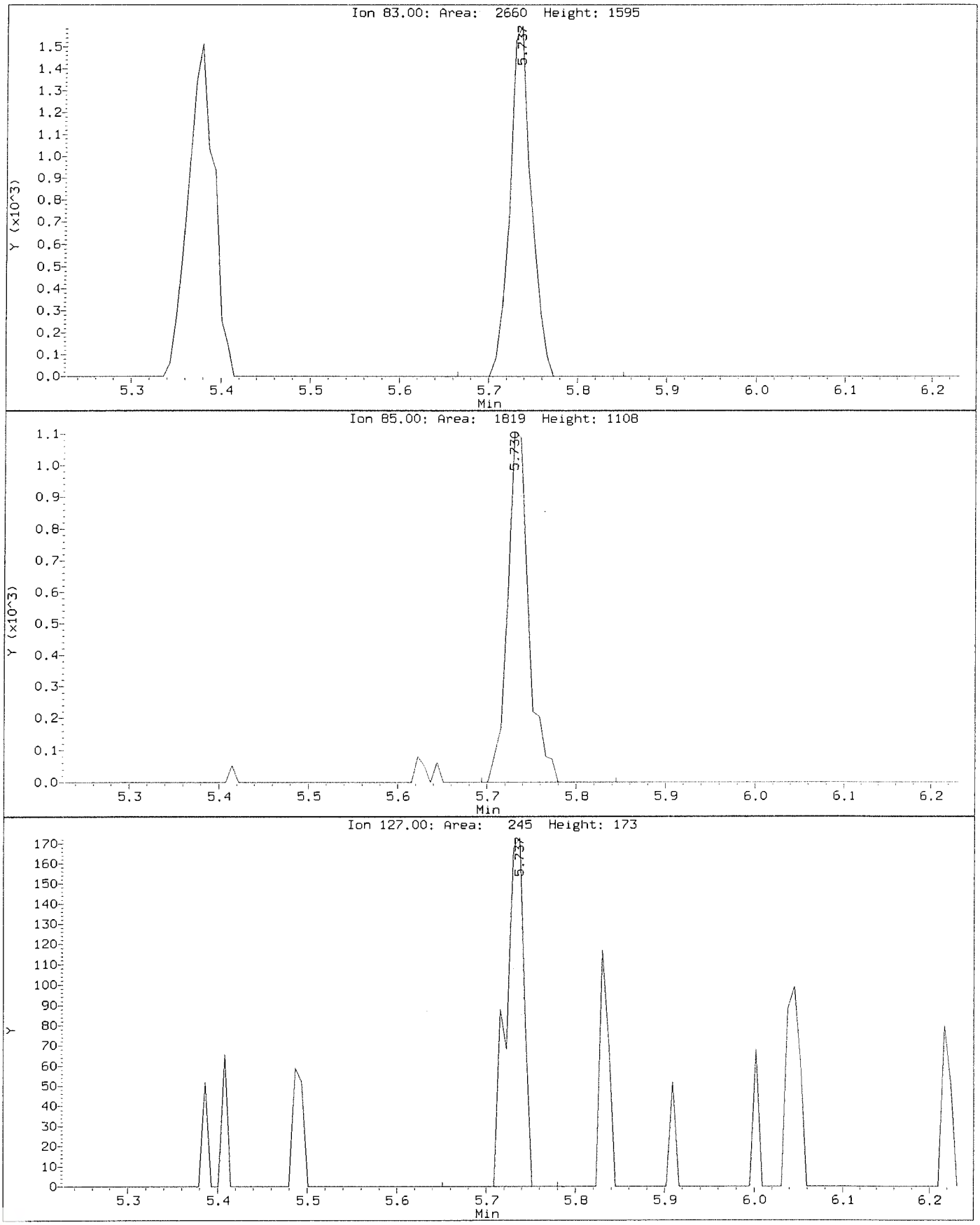
Injection Date: 07-JUL-2020 11:30
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Bromodichloromethane
CAS Number: 75-27-4



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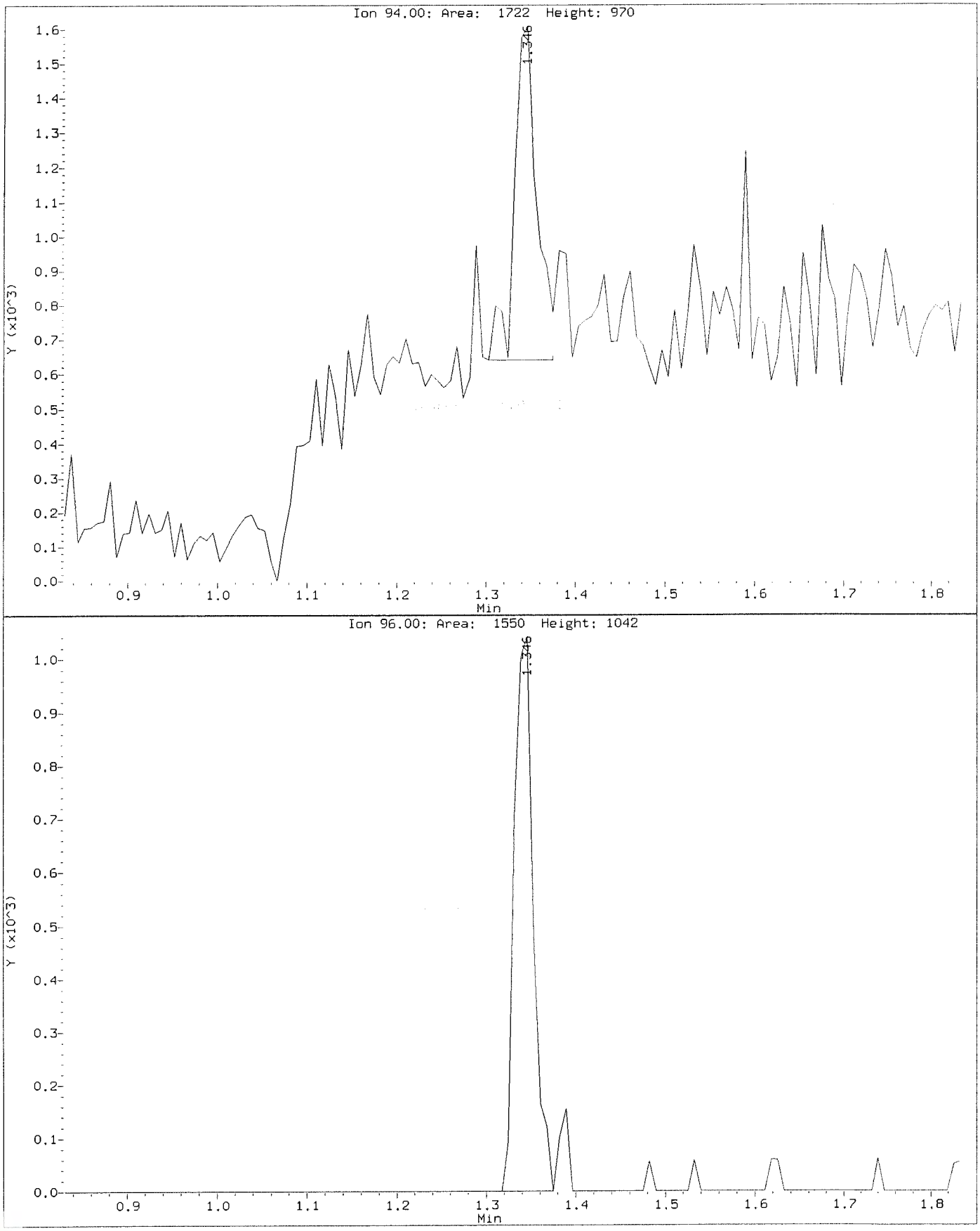
Injection Date: 07-JUL-2020 11:30
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Bromomethane
CAS Number: 74-83-9



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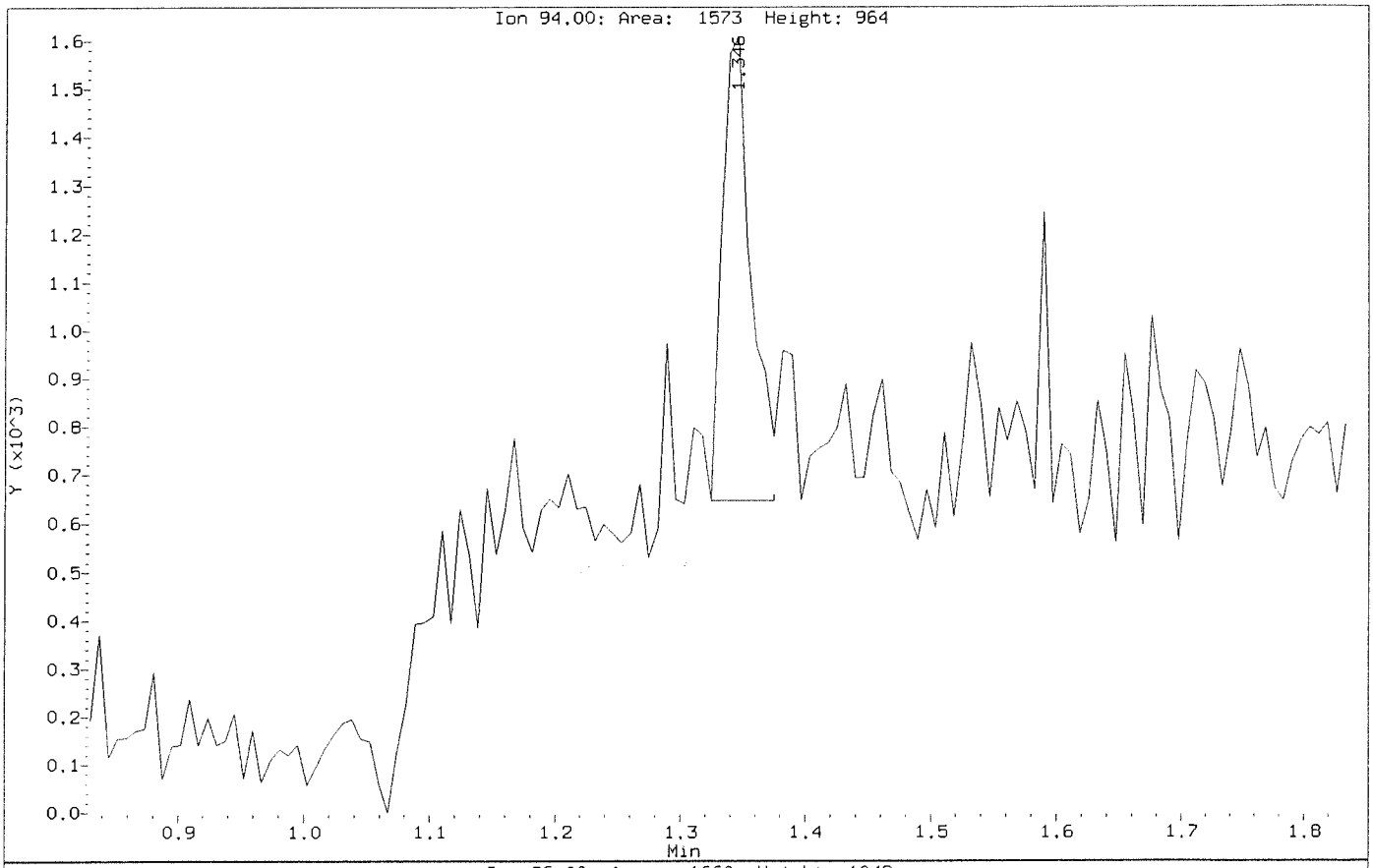
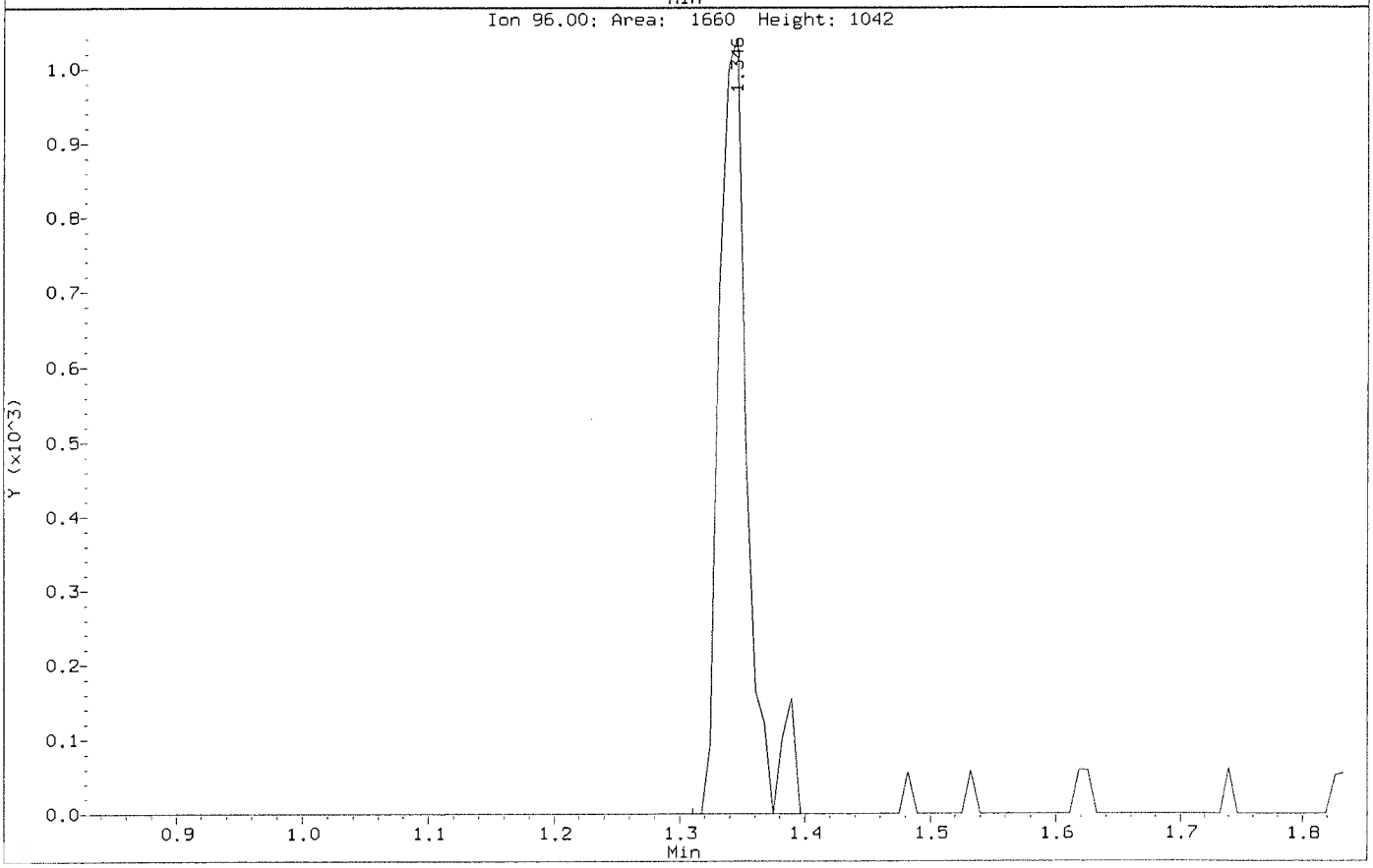
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Bromomethane
CAS Number: 74-83-9





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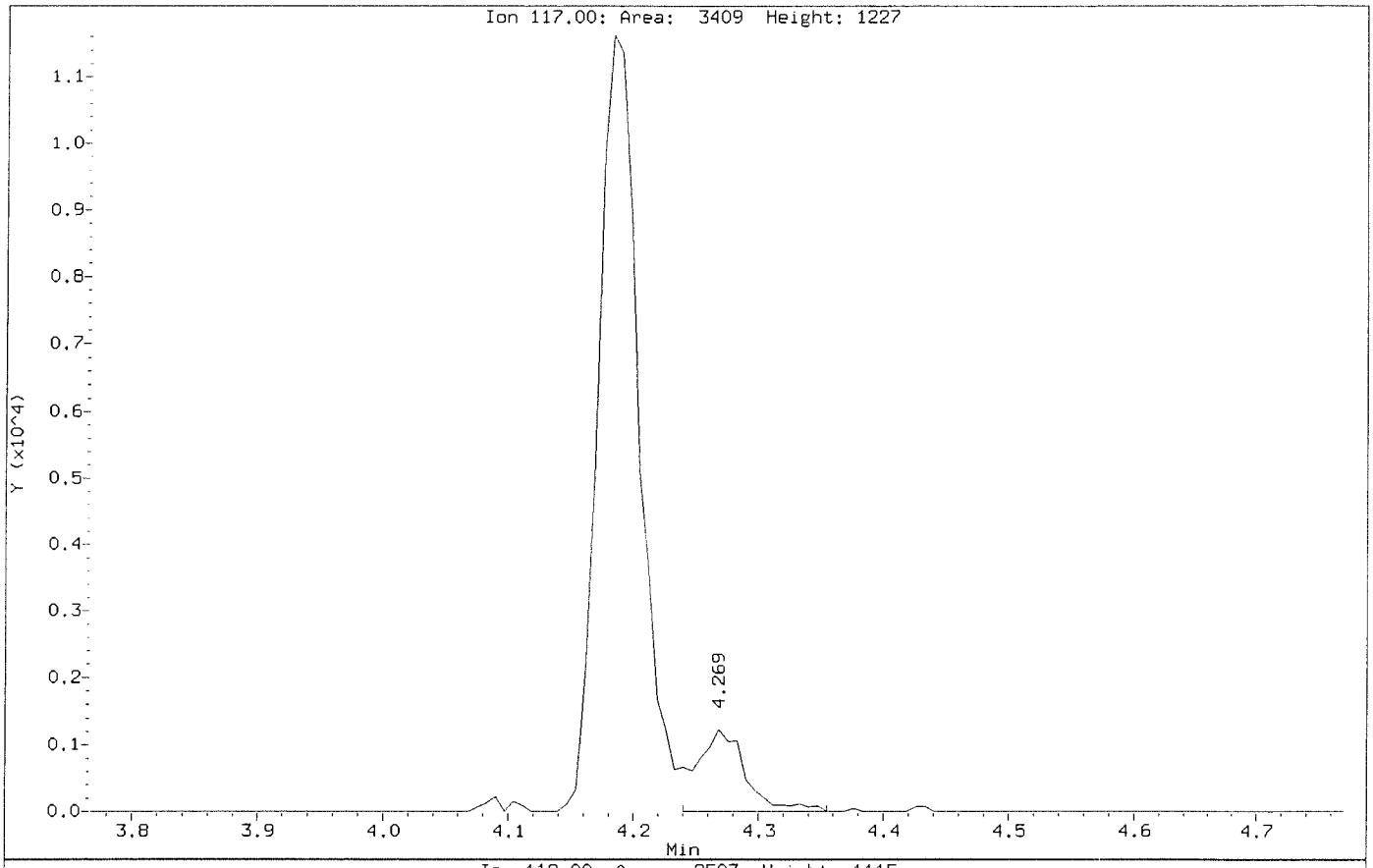
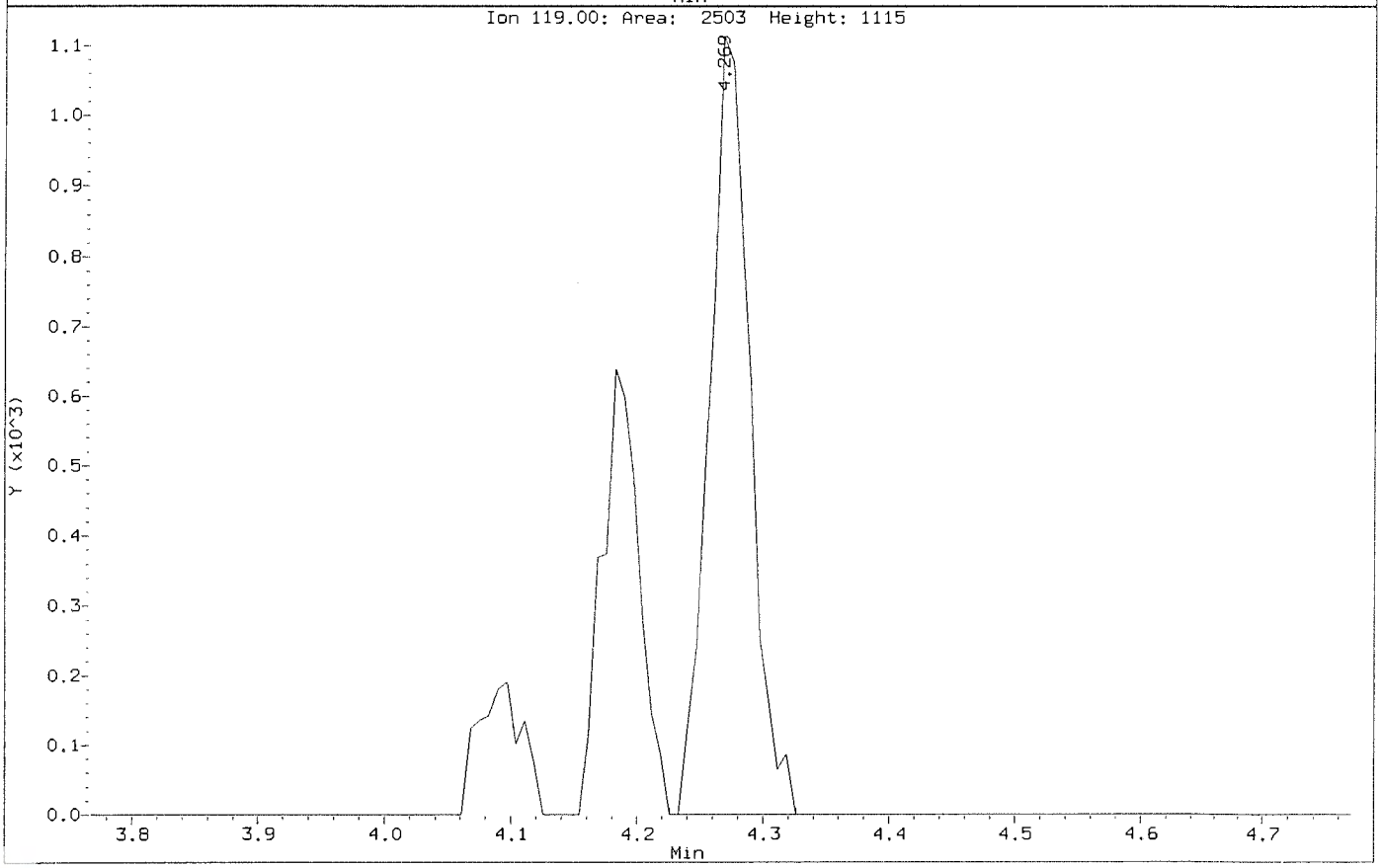
Injection Date: 07-JUL-2020 11:30
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Carbon Tetrachloride
CAS Number: 56-23-5





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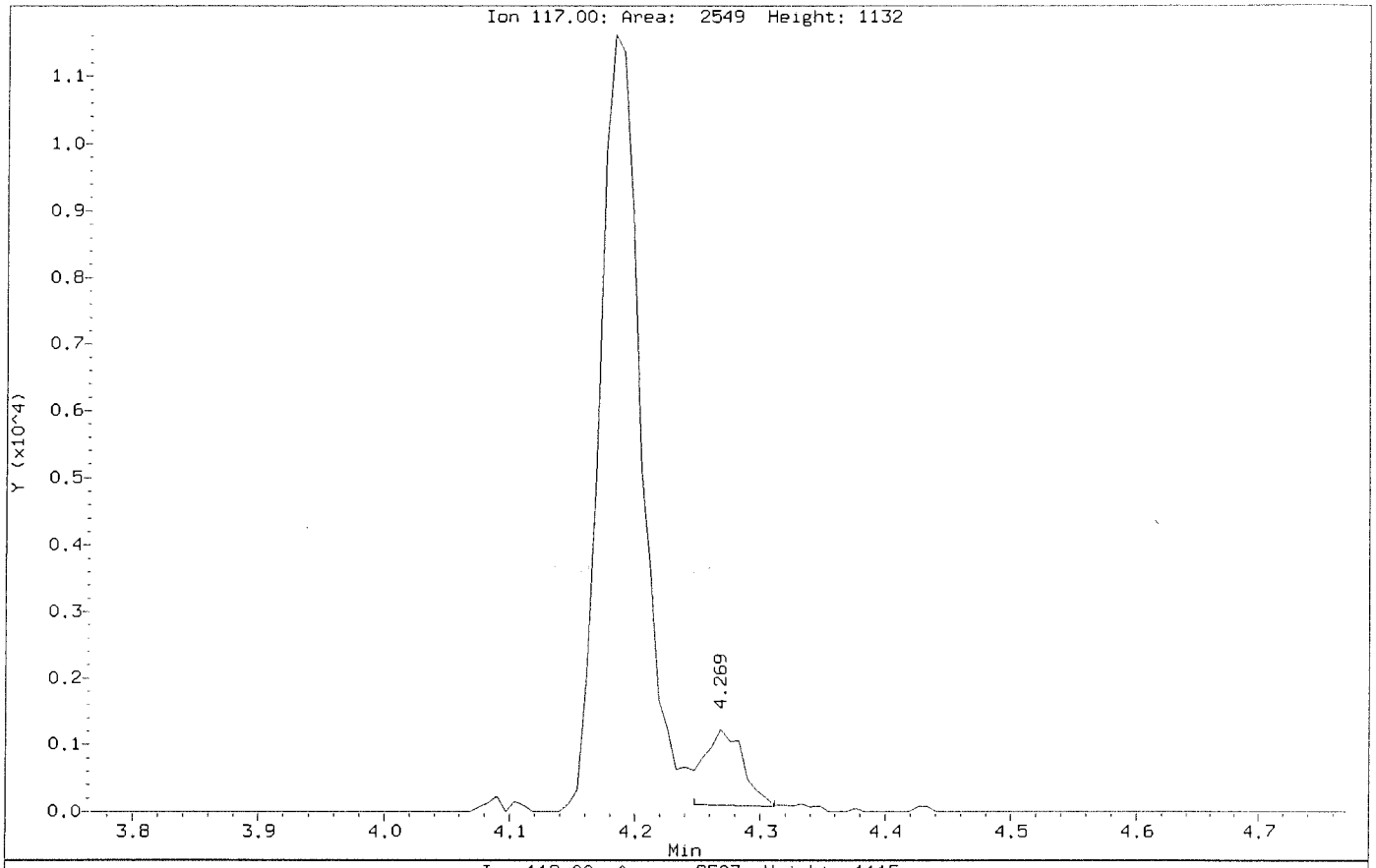
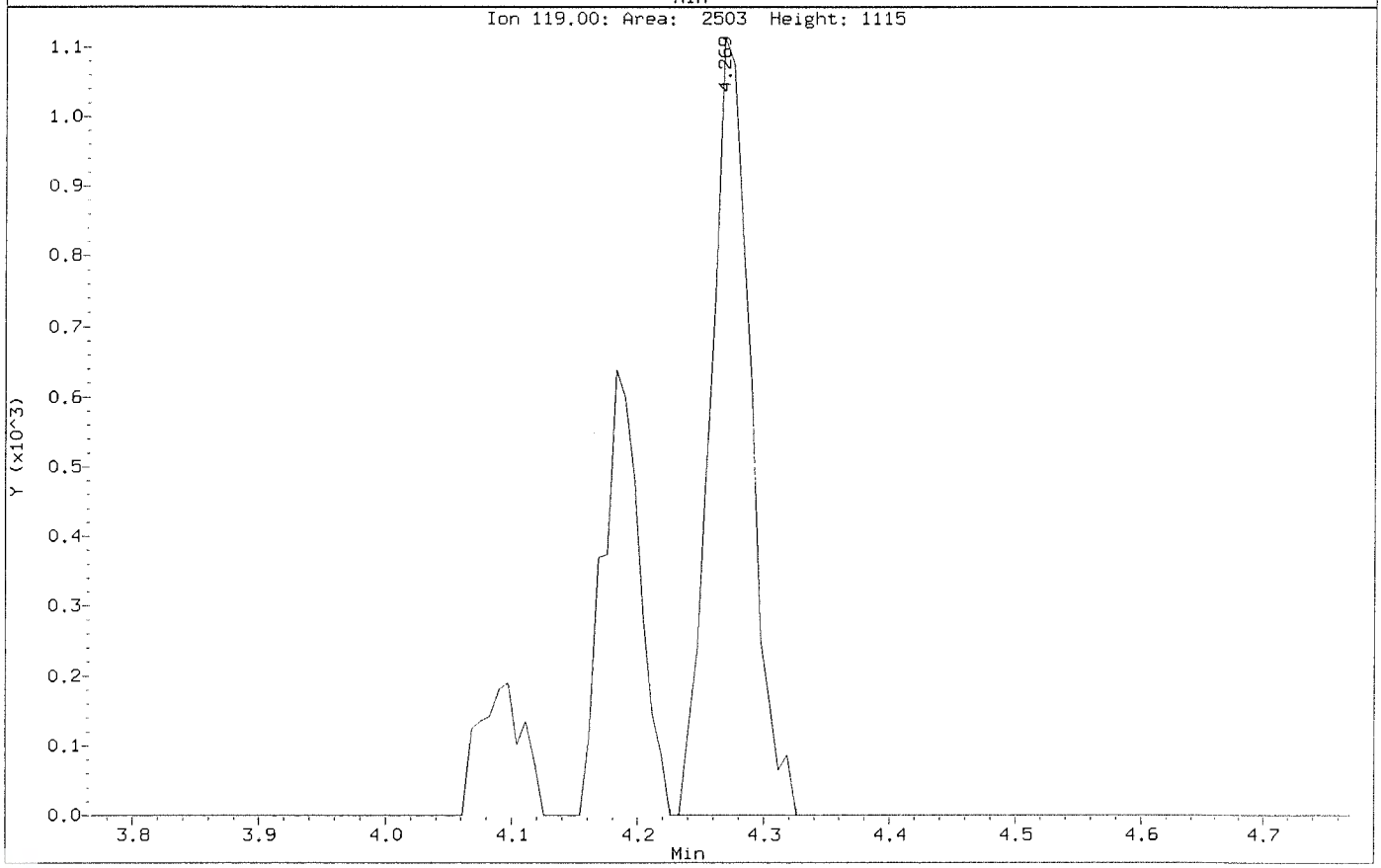
Injection Date: 07-JUL-2020 11:30
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Carbon Tetrachloride
CAS Number: 56-23-5





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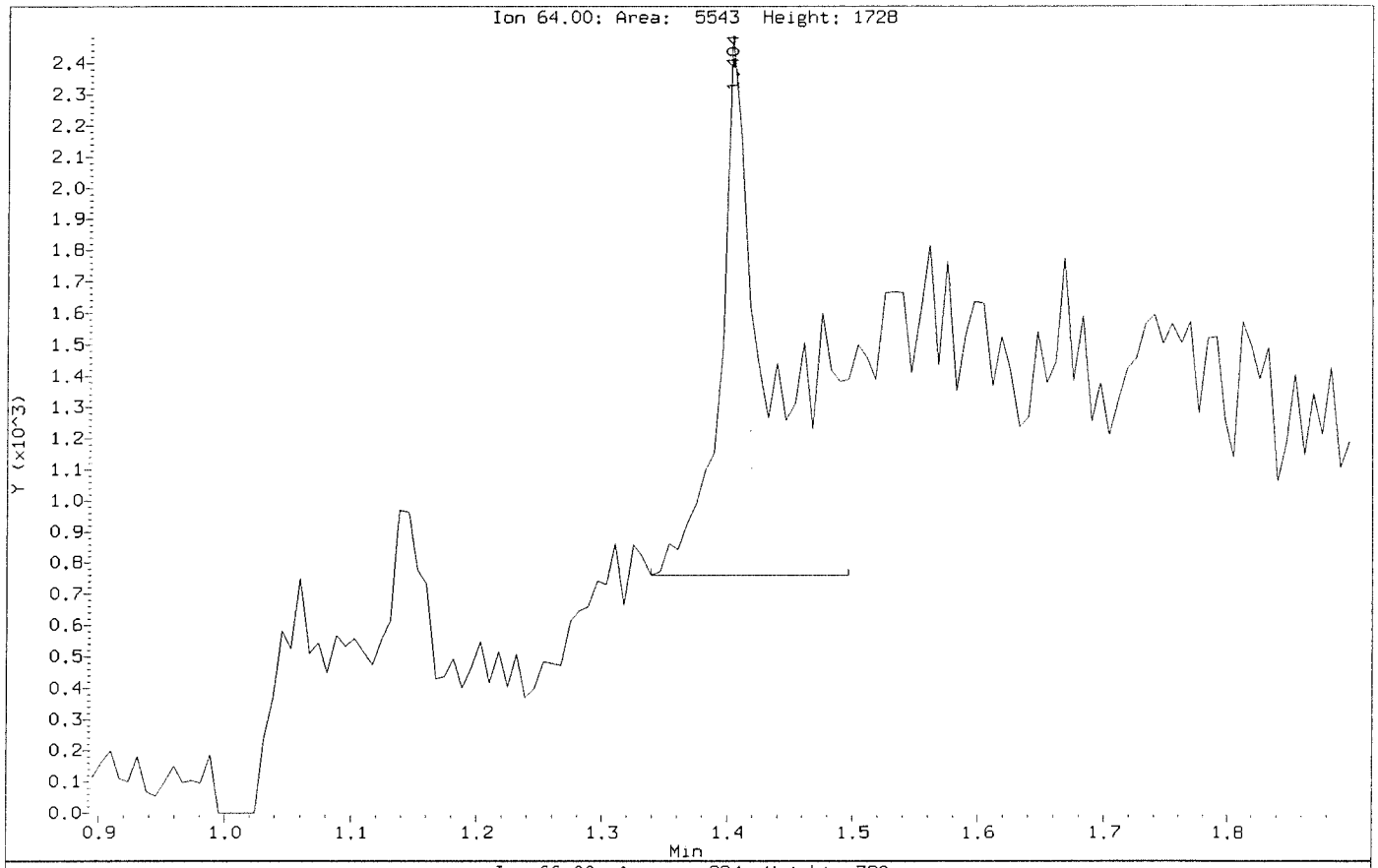
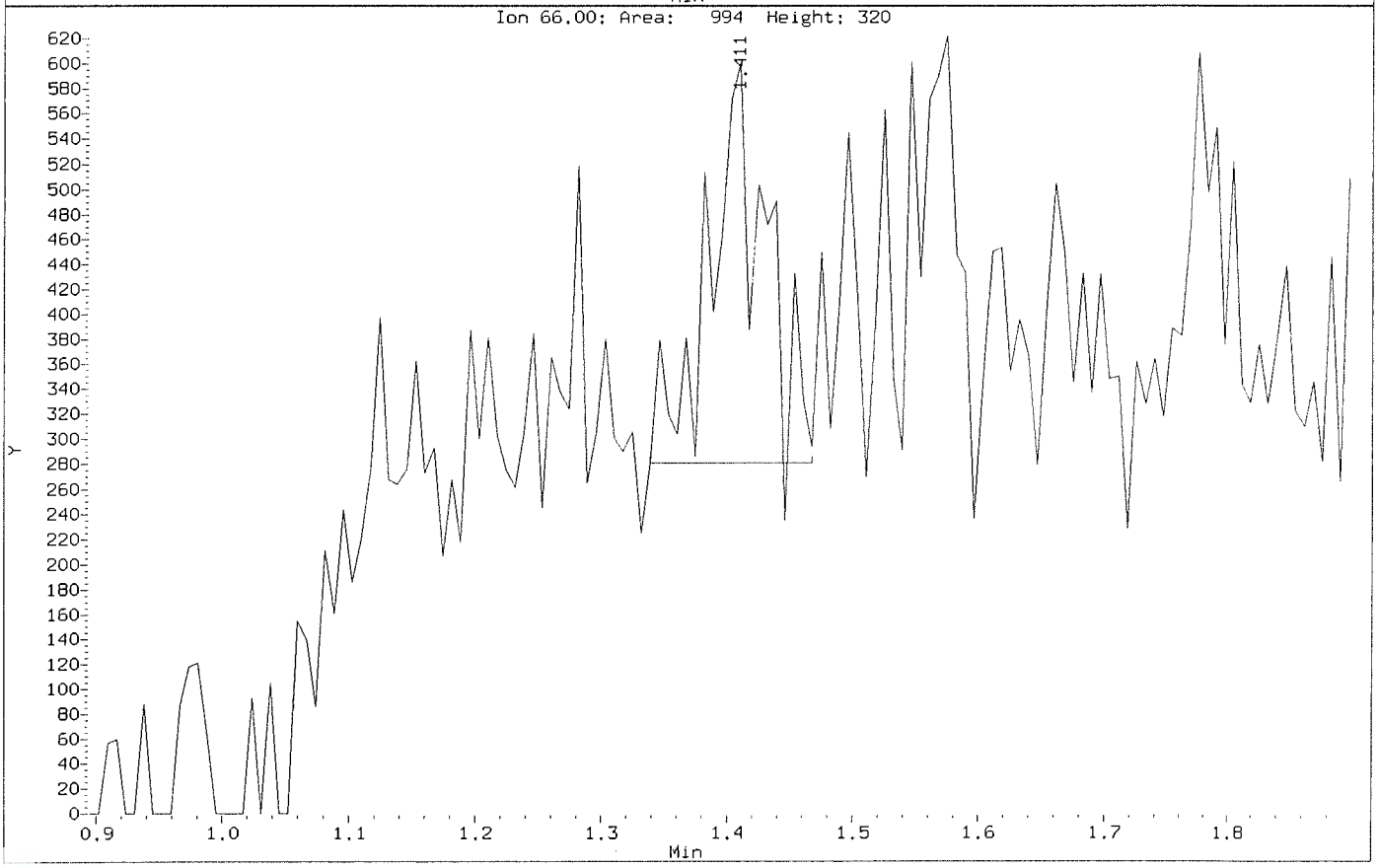
Injection Date: 07-JUL-2020 11:30
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Chloroethane
CAS Number: 75-00-3





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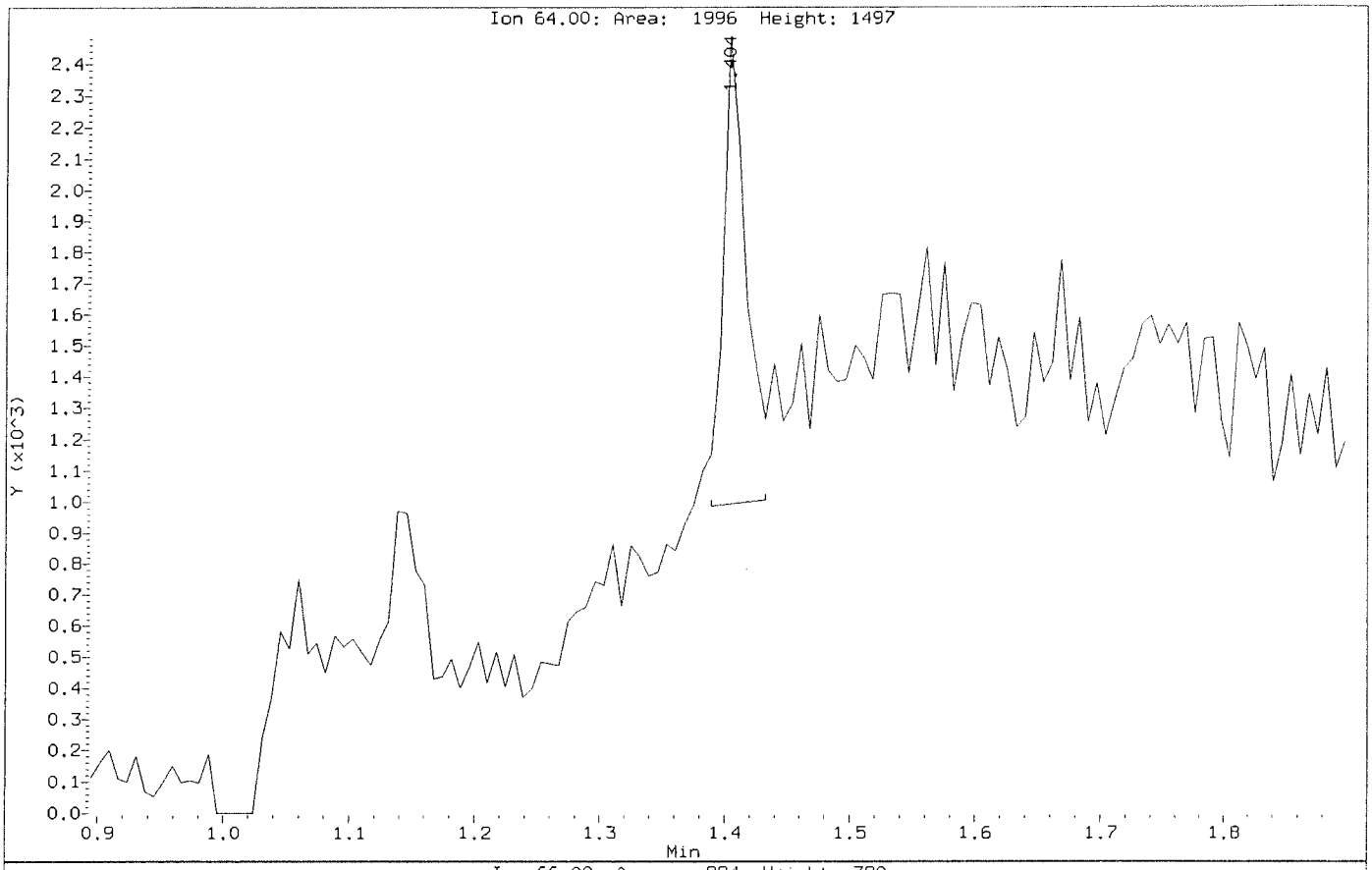
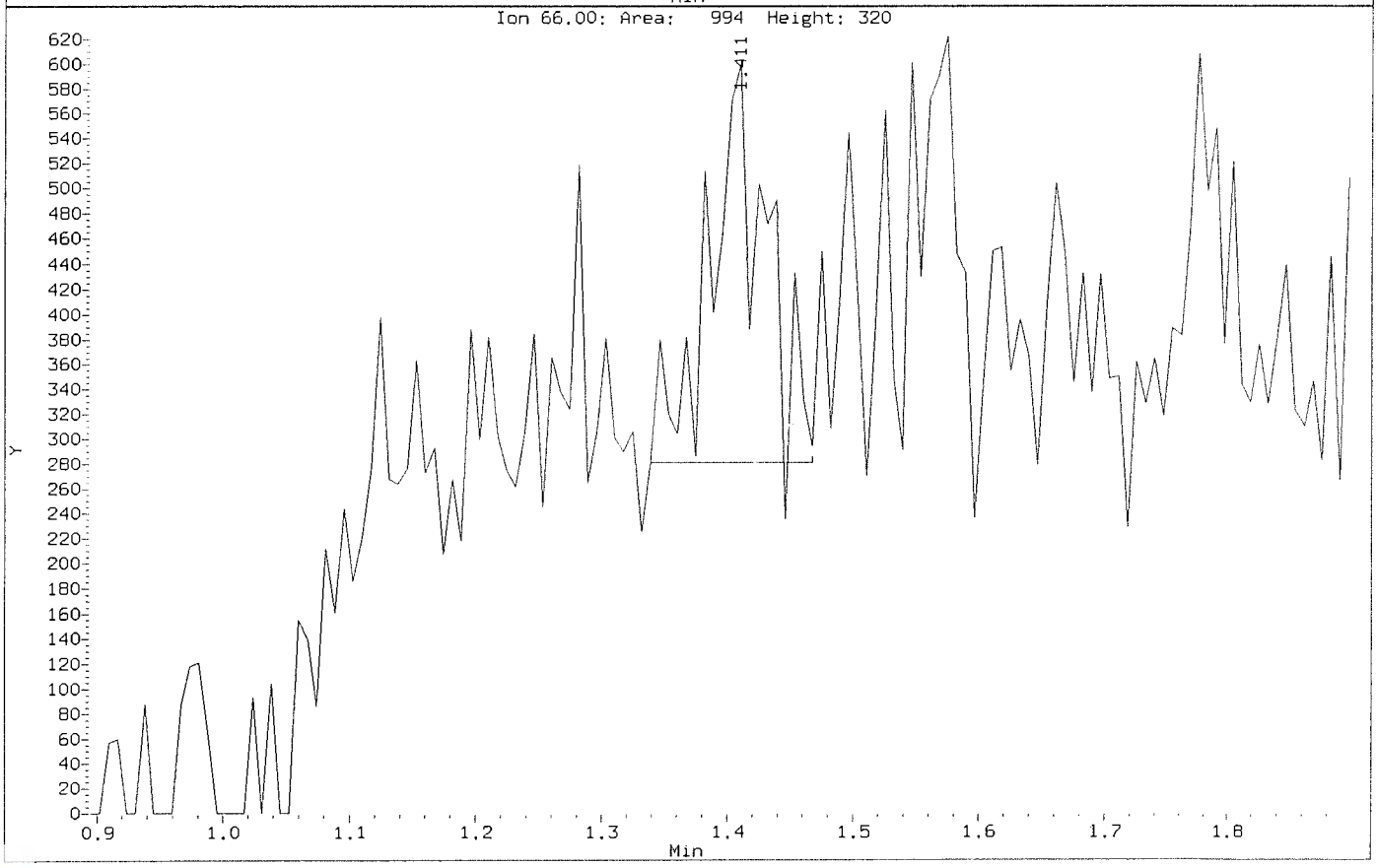
Injection Date: 07-JUL-2020 11:30
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Chloroethane
CAS Number: 75-00-3





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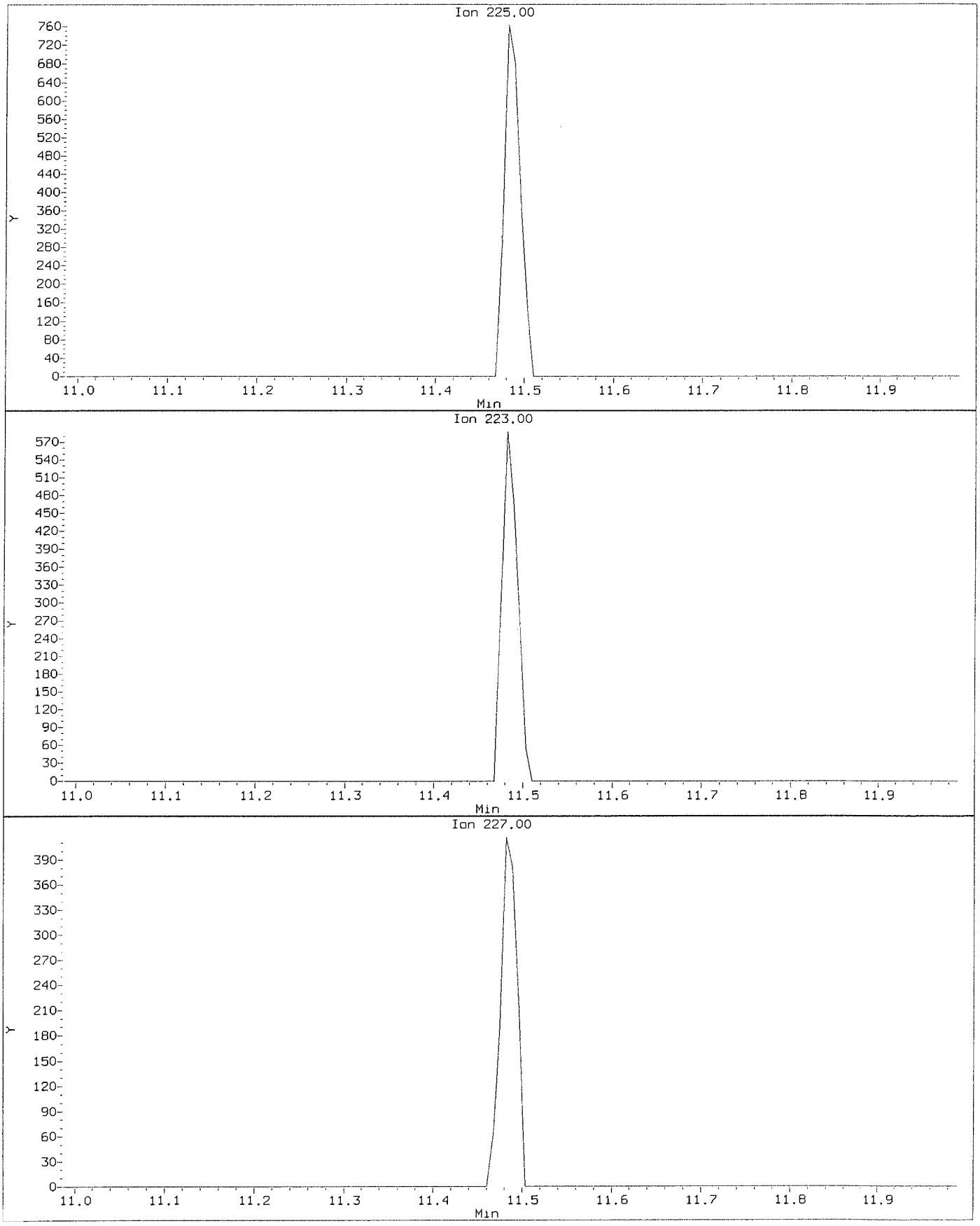
Injection Date: 07-JUL-2020 11:30
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Hexachlorobutadiene
CAS Number: 87-68-3



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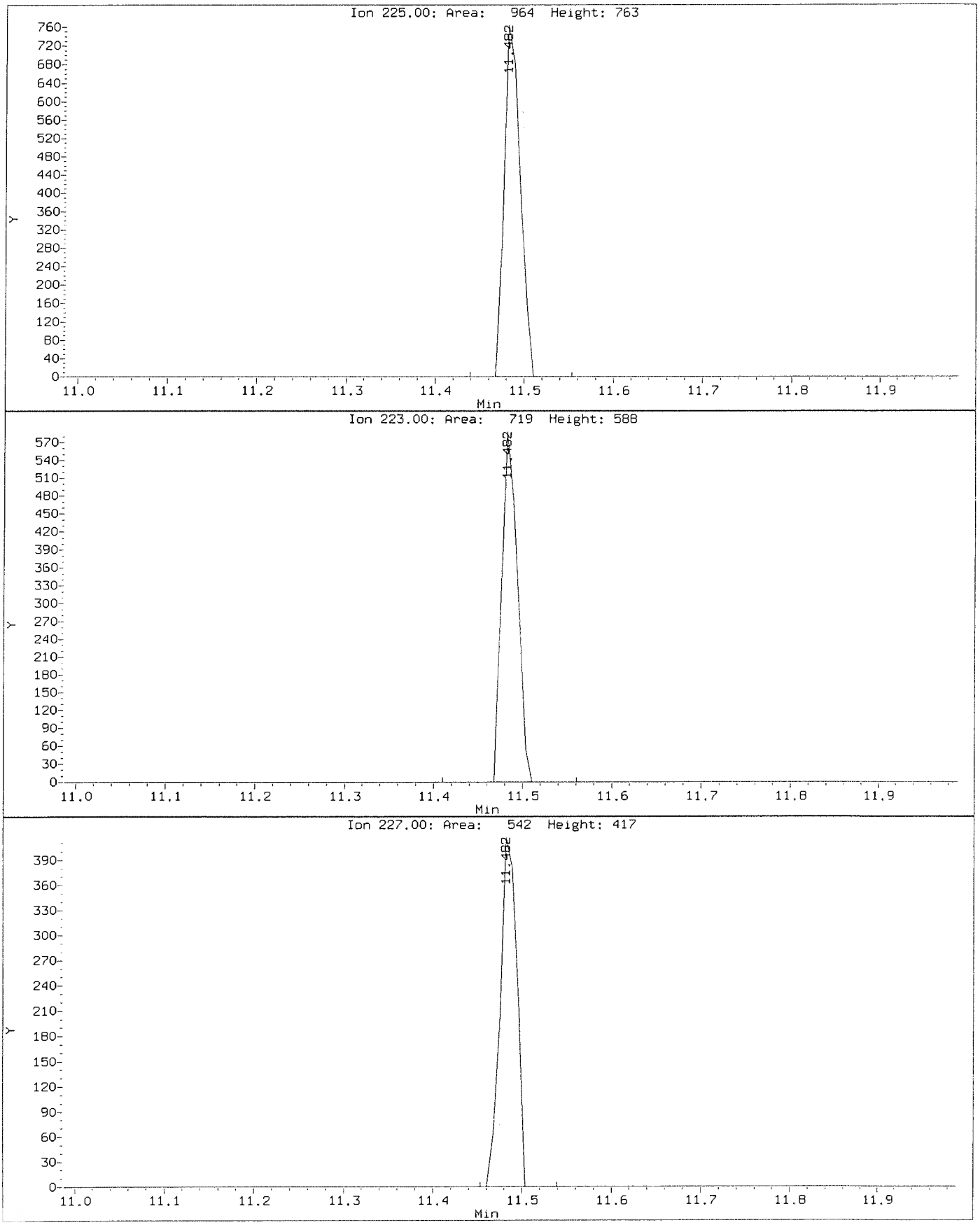
Injection Date: 07-JUL-2020 11:30
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Hexachlorobutadiene
CAS Number: 87-68-3



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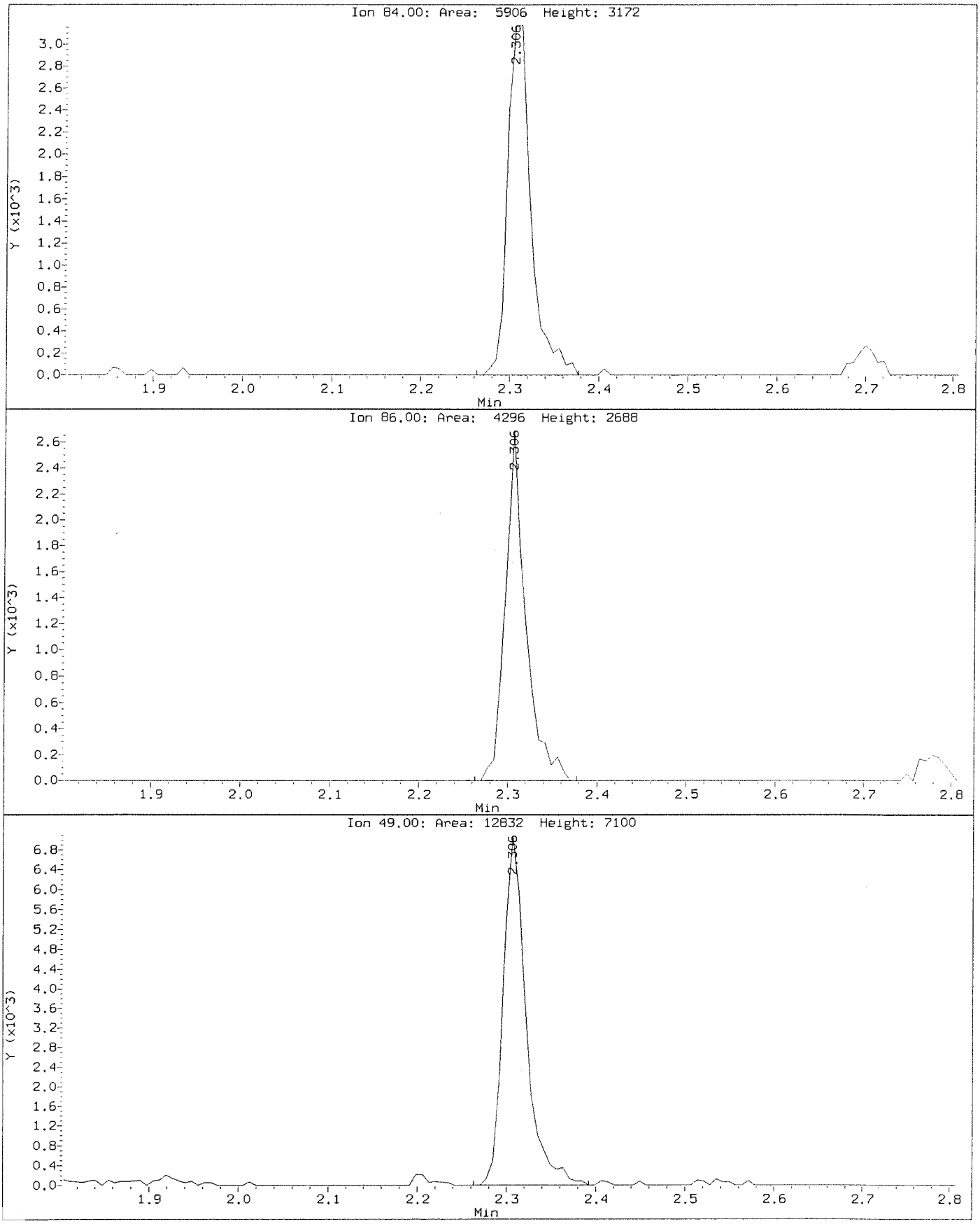
Injection Date: 07-JUL-2020 11:30
Instrument: voa6.i
Client Sample ID: VSTD000.5

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



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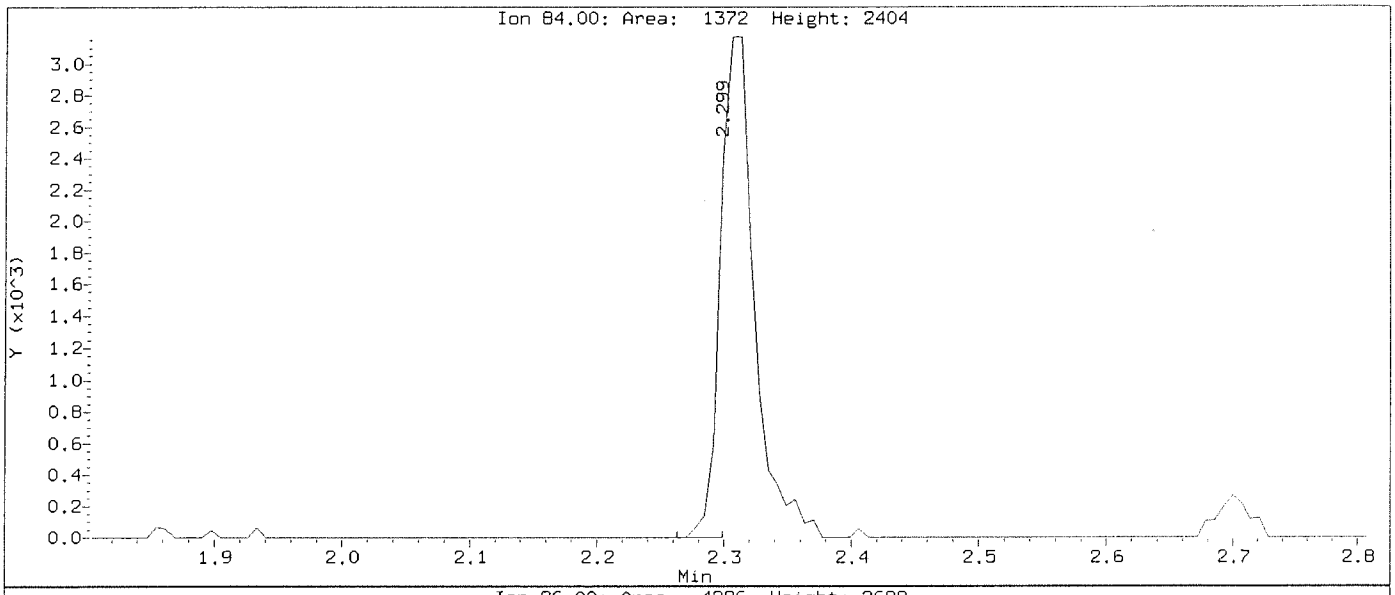
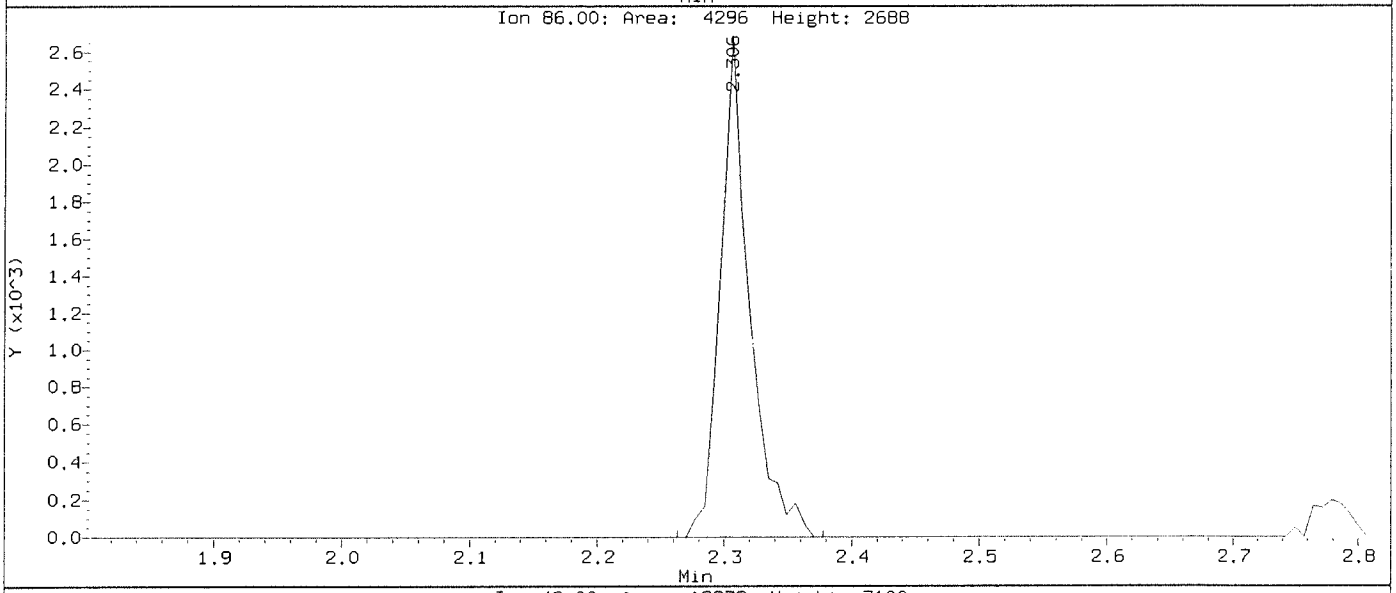
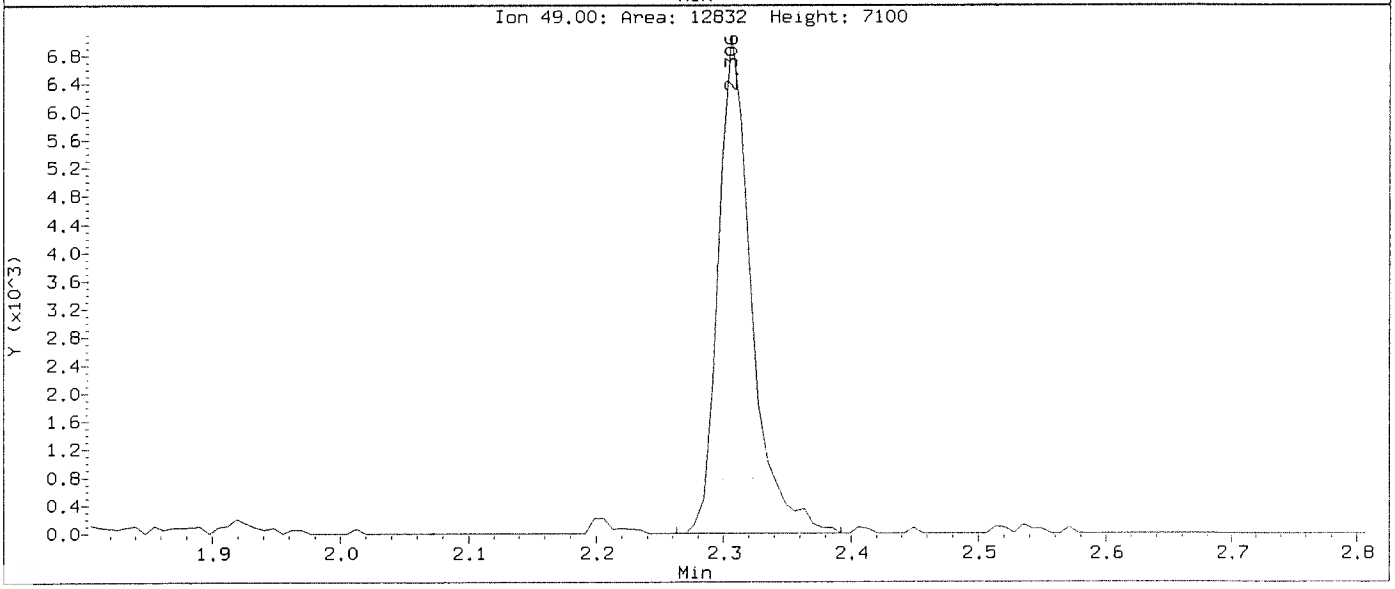
Injection Date: 07-JUL-2020 11:30
Instrument: voa6.i
Client Sample ID: VSTD000.5

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

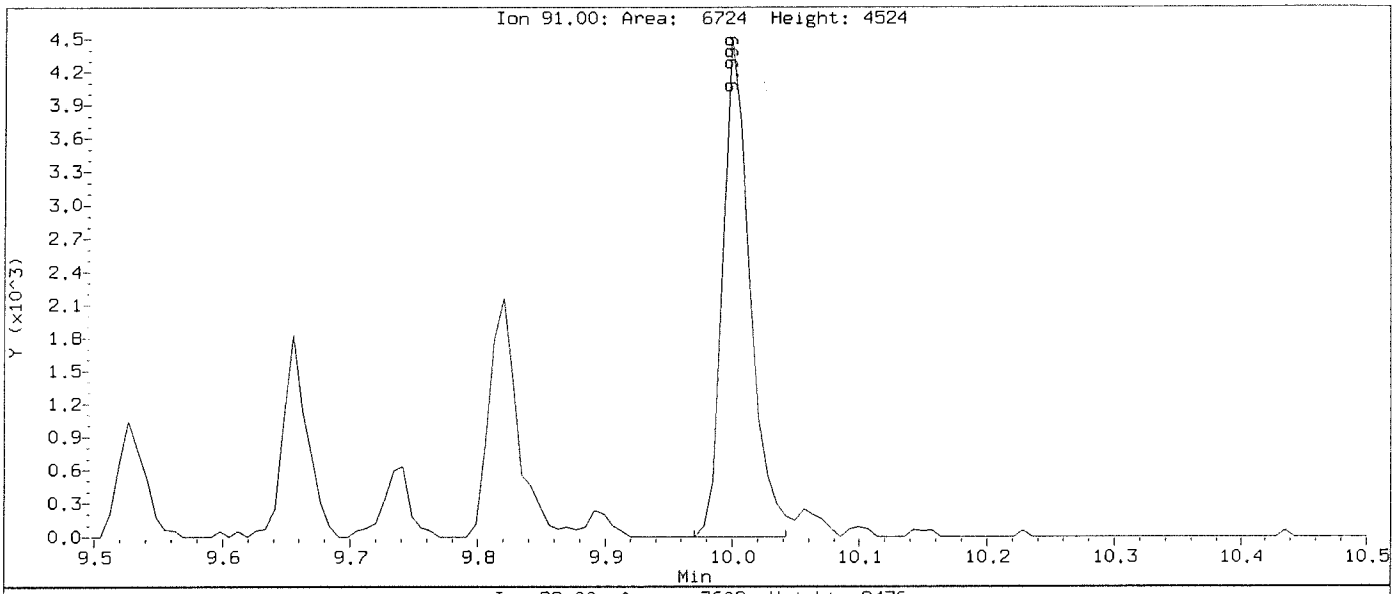


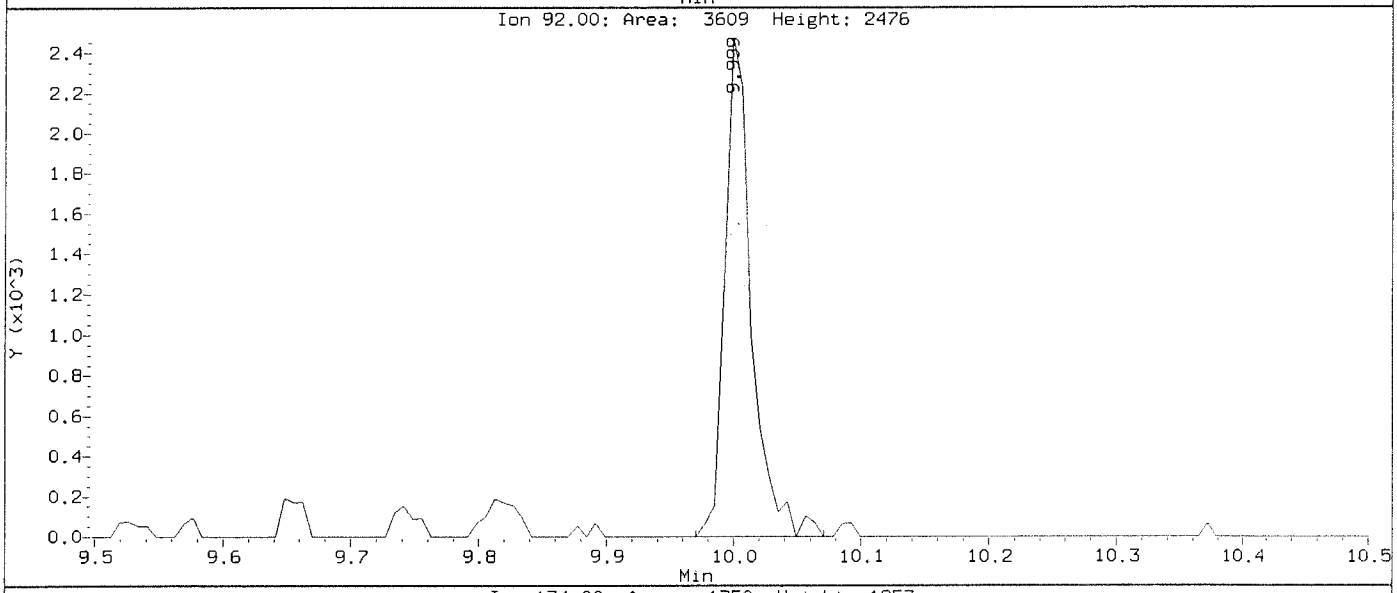


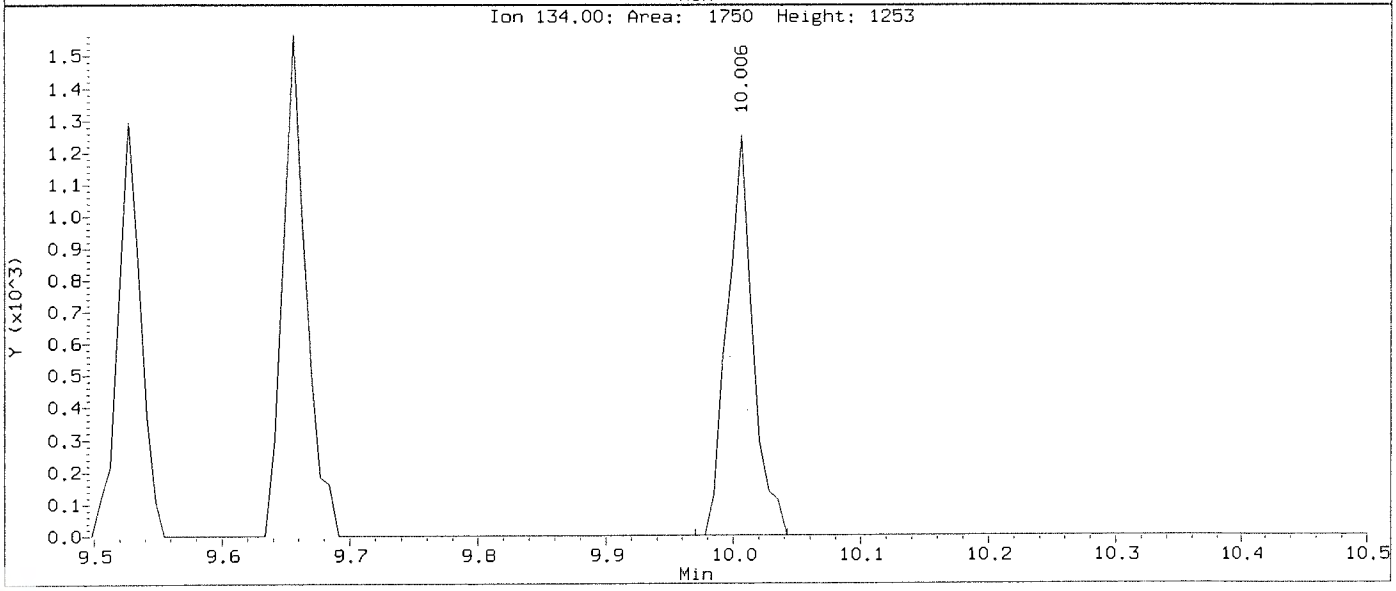


Data File: \\nahstws005\Target\chem\voa6.i\X200707.b\Before\X070703.D
Injection Date: 07-JUL-2020 11:30
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: n-Butylbenzene
CAS Number: 104-51-8

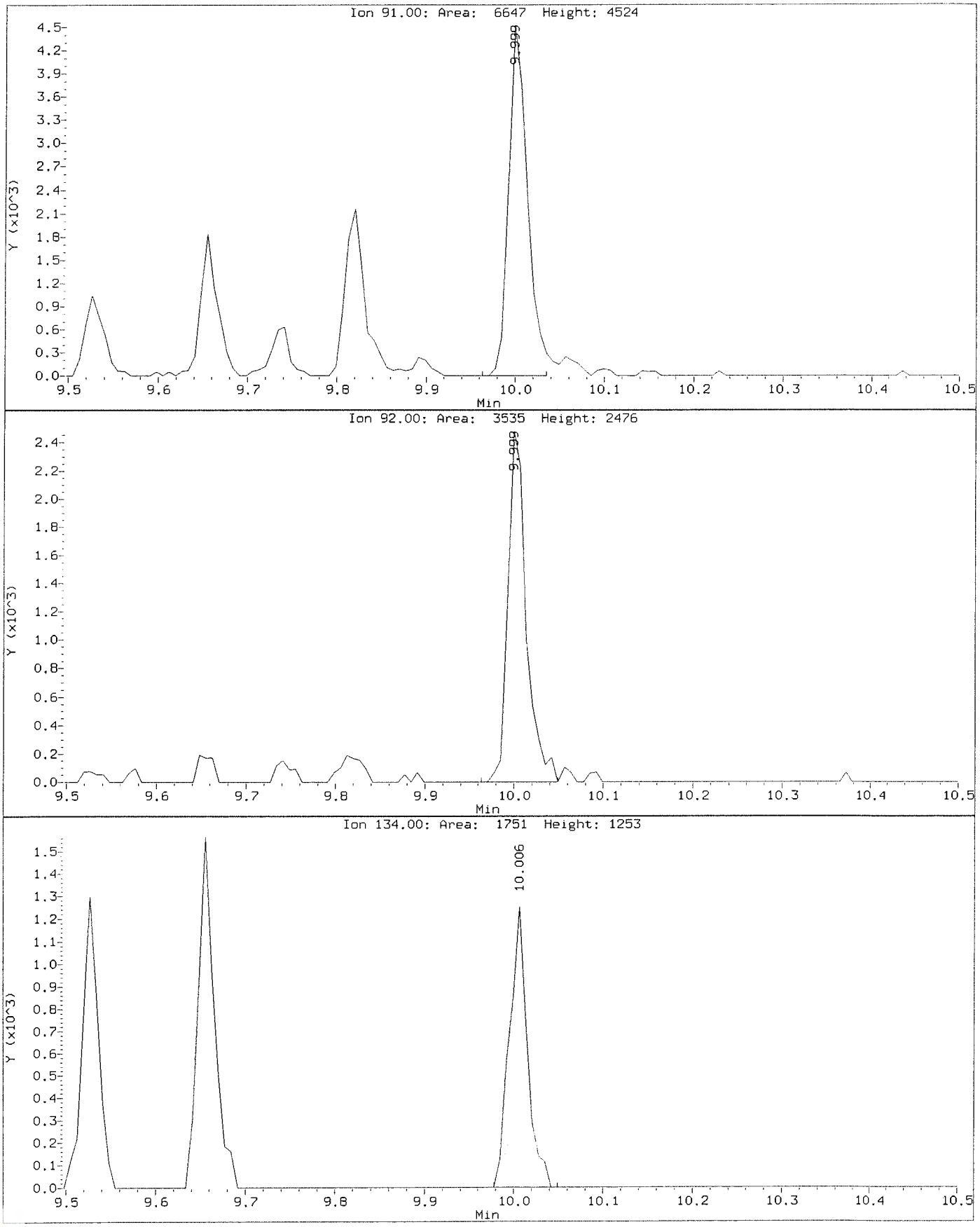






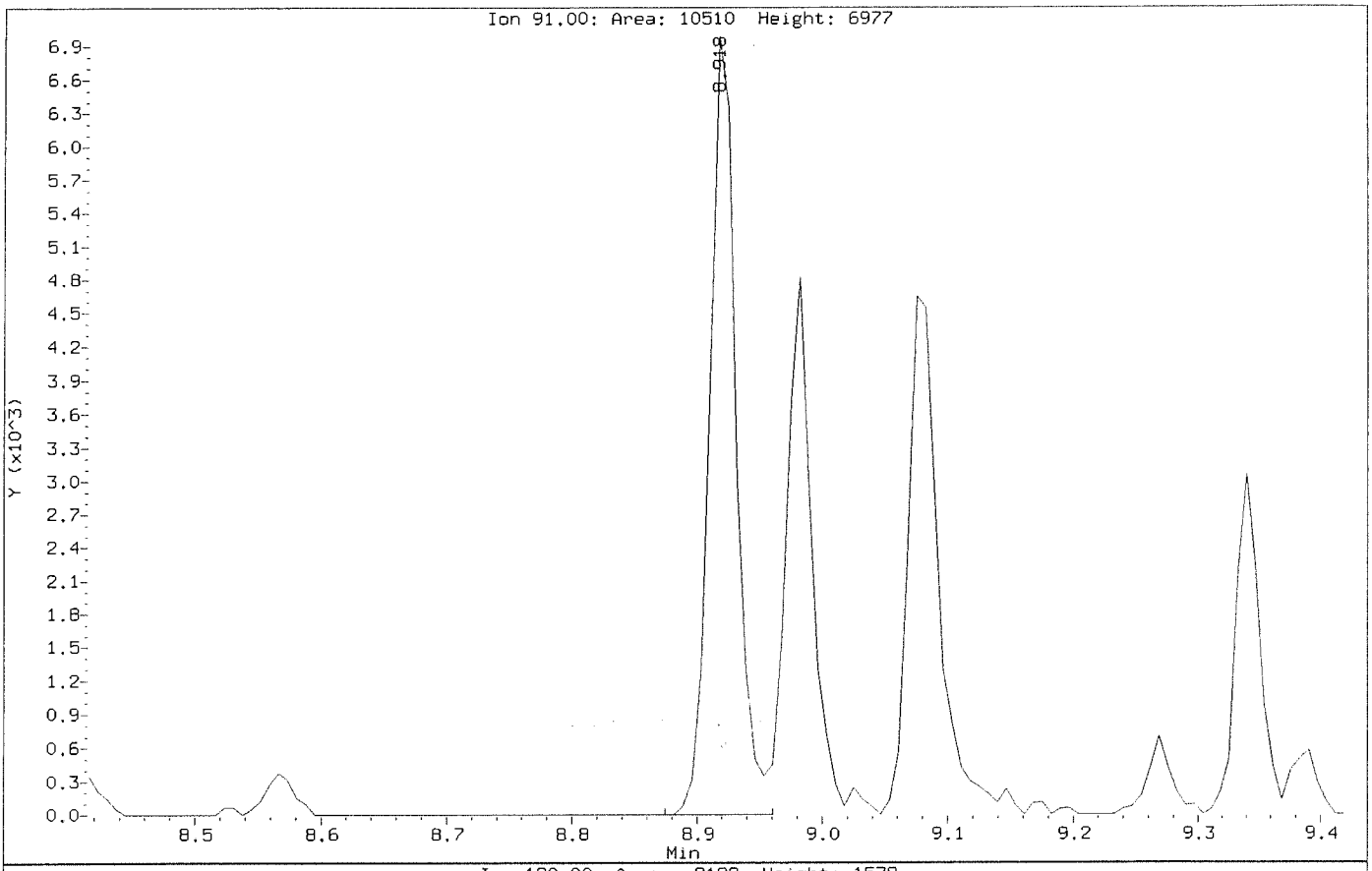
Data File: \\nahstws005\Target\chem\voa6.i\X200707.b\X070703.D
Injection Date: 07-JUL-2020 11:30
Instrument: voa6.i
Client Sample ID: VSTD000.5

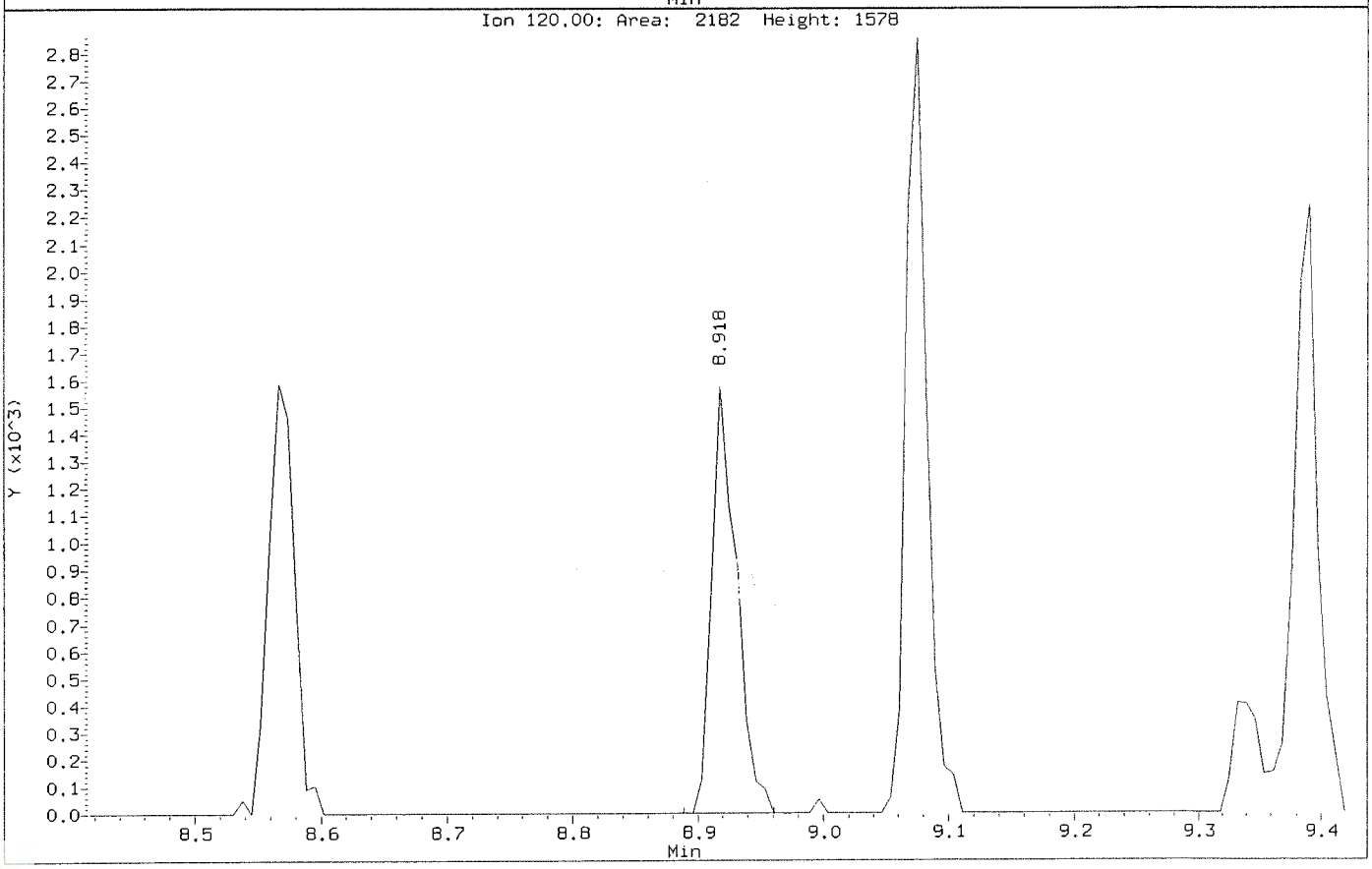
Compound: n-Butylbenzene
CAS Number: 104-51-8



Data File: \\nahstws005\Target\chem\voa6.i\X200707.b\Before\X070703.D
Injection Date: 07-JUL-2020 11:30
Instrument: voa6.i
Client Sample ID: VSTD000.5

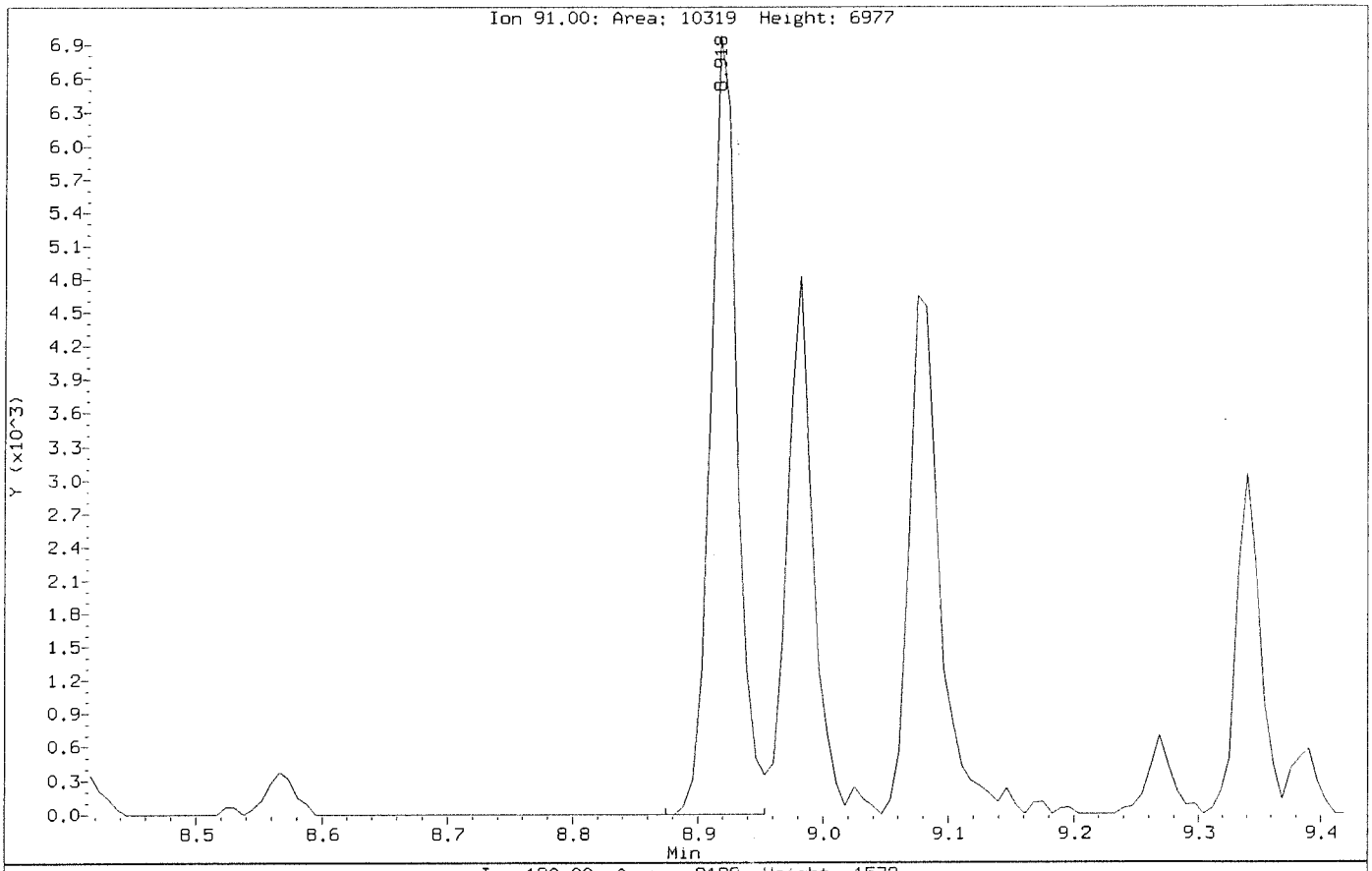
Compound: n-Propylbenzene
CAS Number: 106-65-1

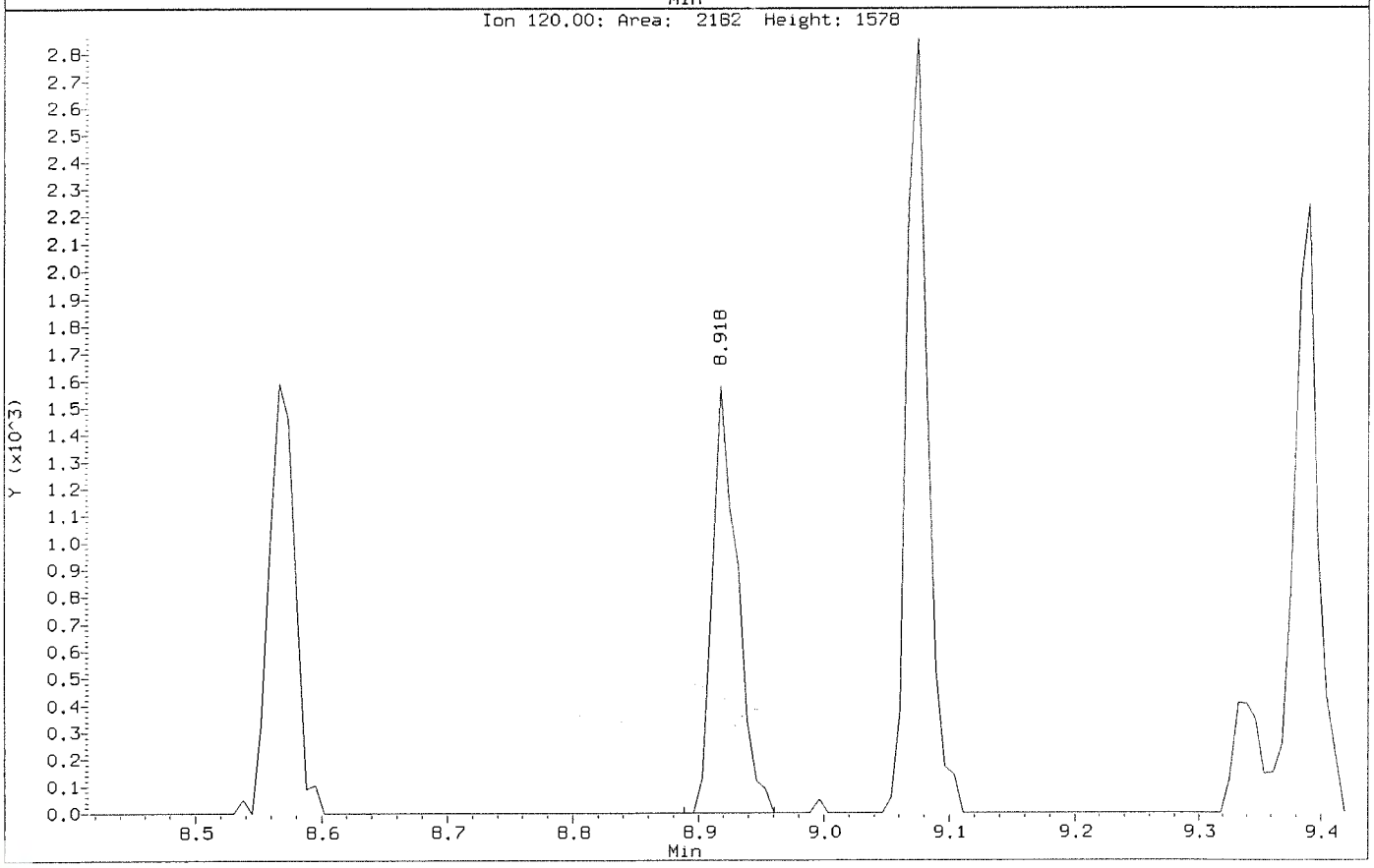




Data File: \\nahstws005\Target\chem\voa6.i\X200707.b\X070703.D
Injection Date: 07-JUL-2020 11:30
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: n-Propylbenzene
CAS Number: 106-65-1





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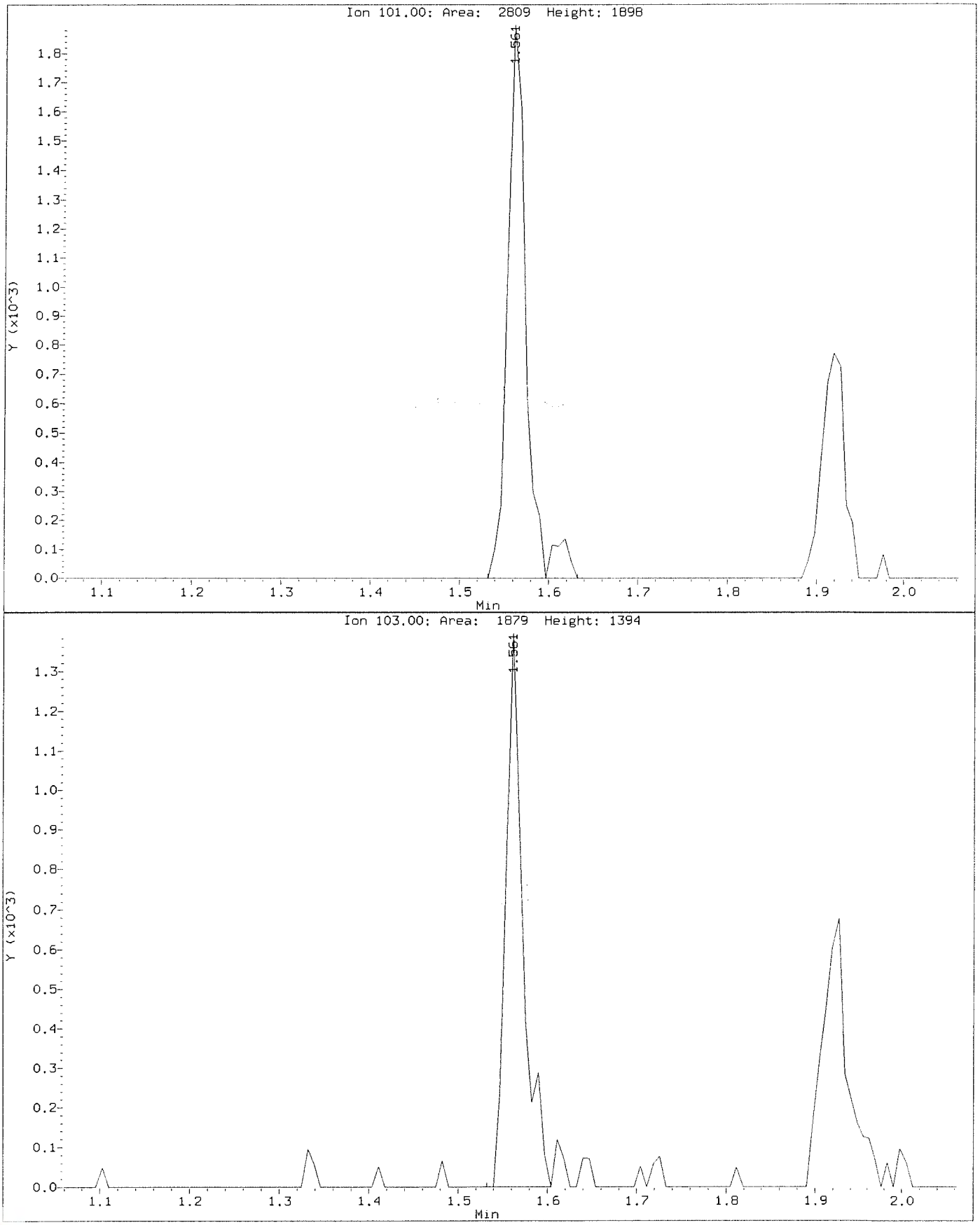
Injection Date: 07-JUL-2020 11:30
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Trichlorofluoromethane
CAS Number: 75-69-4



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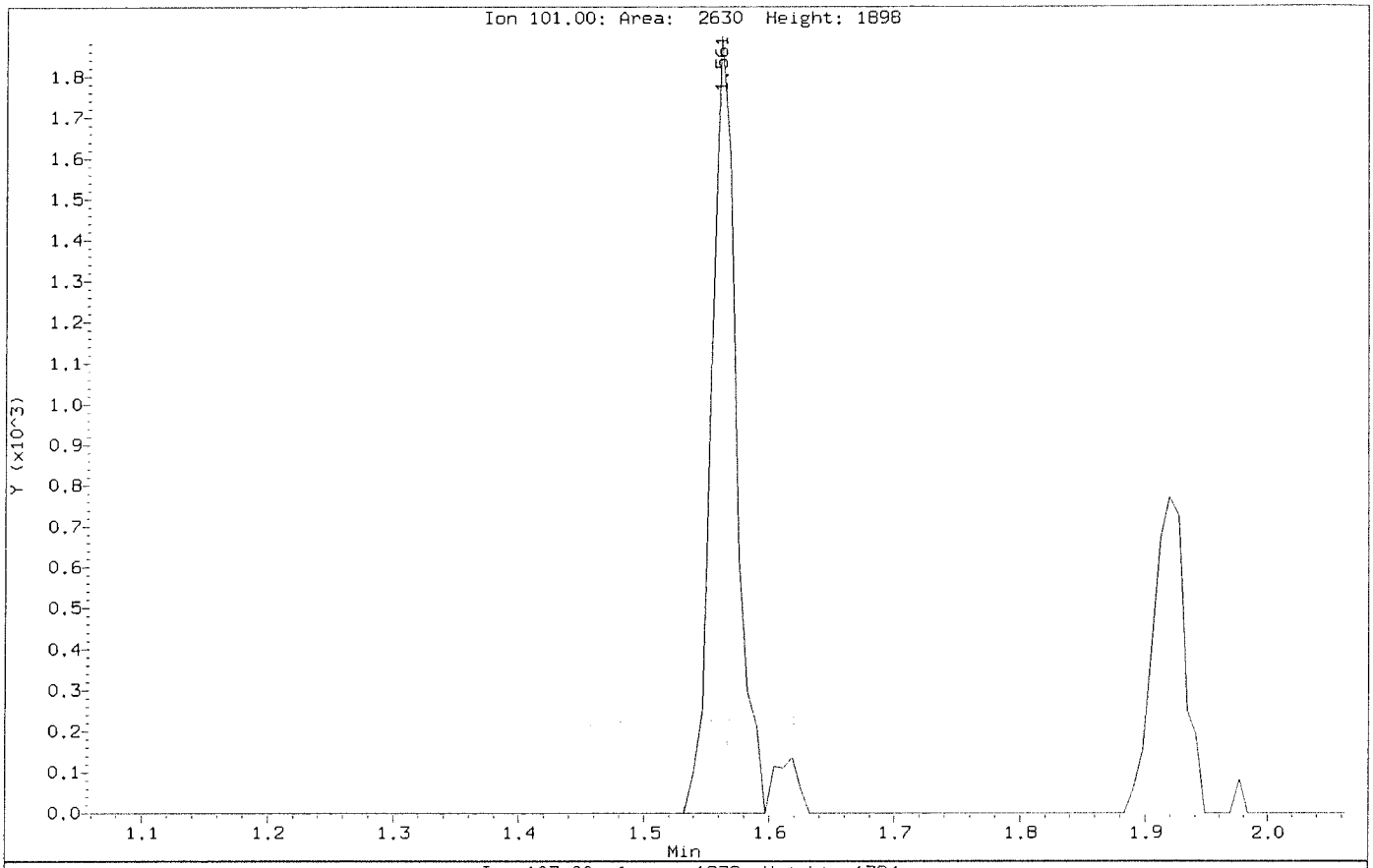
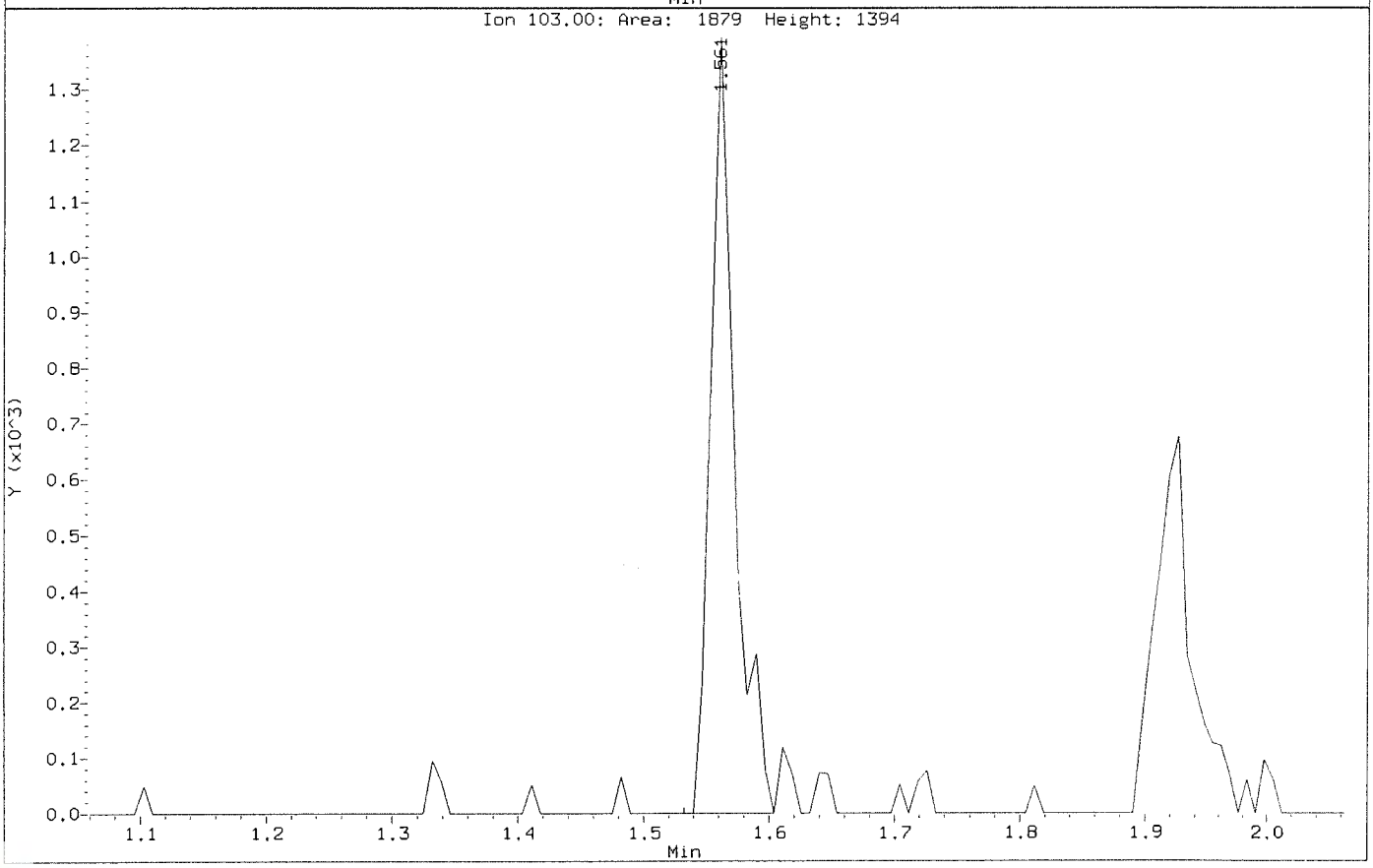
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Trichlorofluoromethane
CAS Number: 75-69-4





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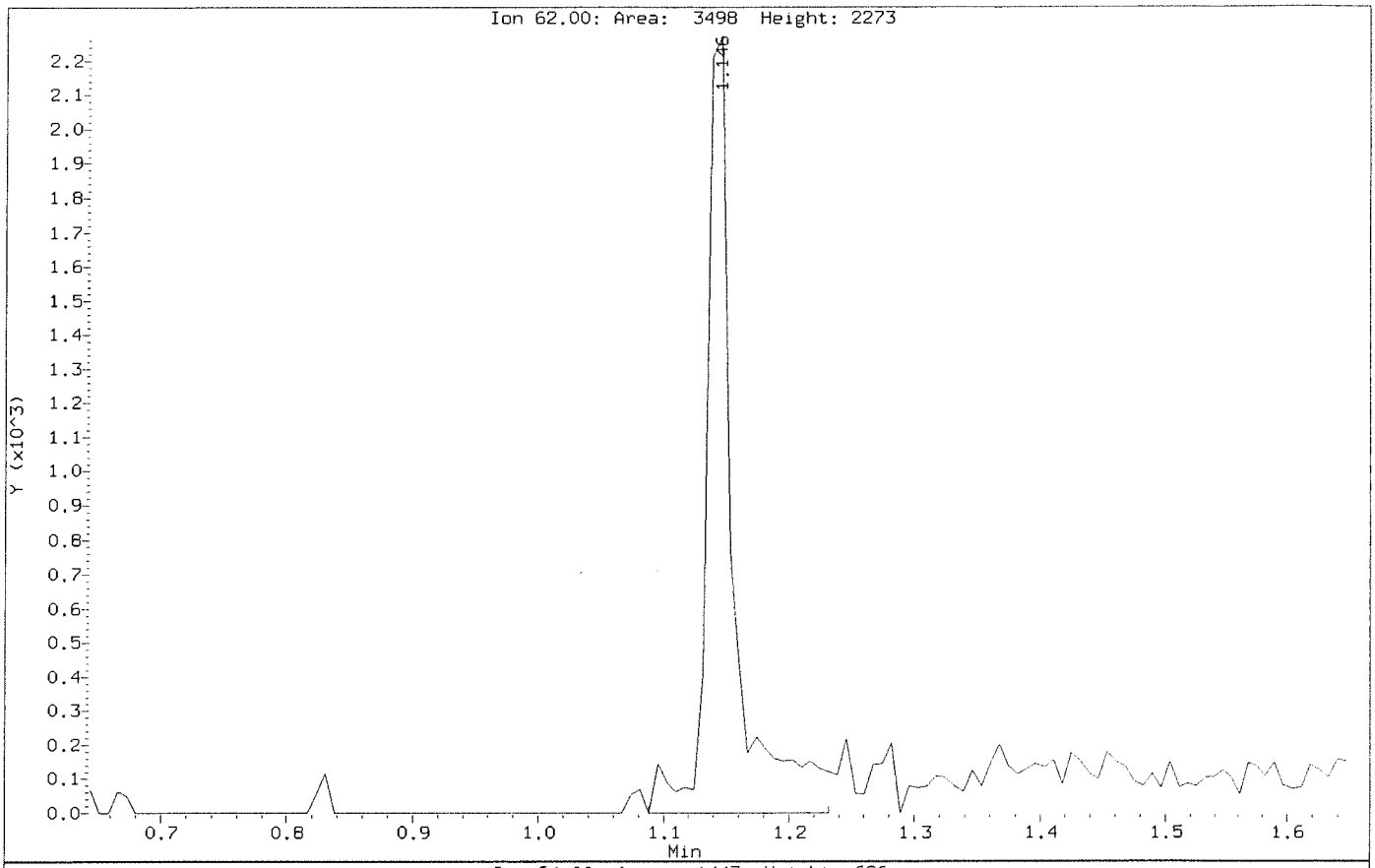
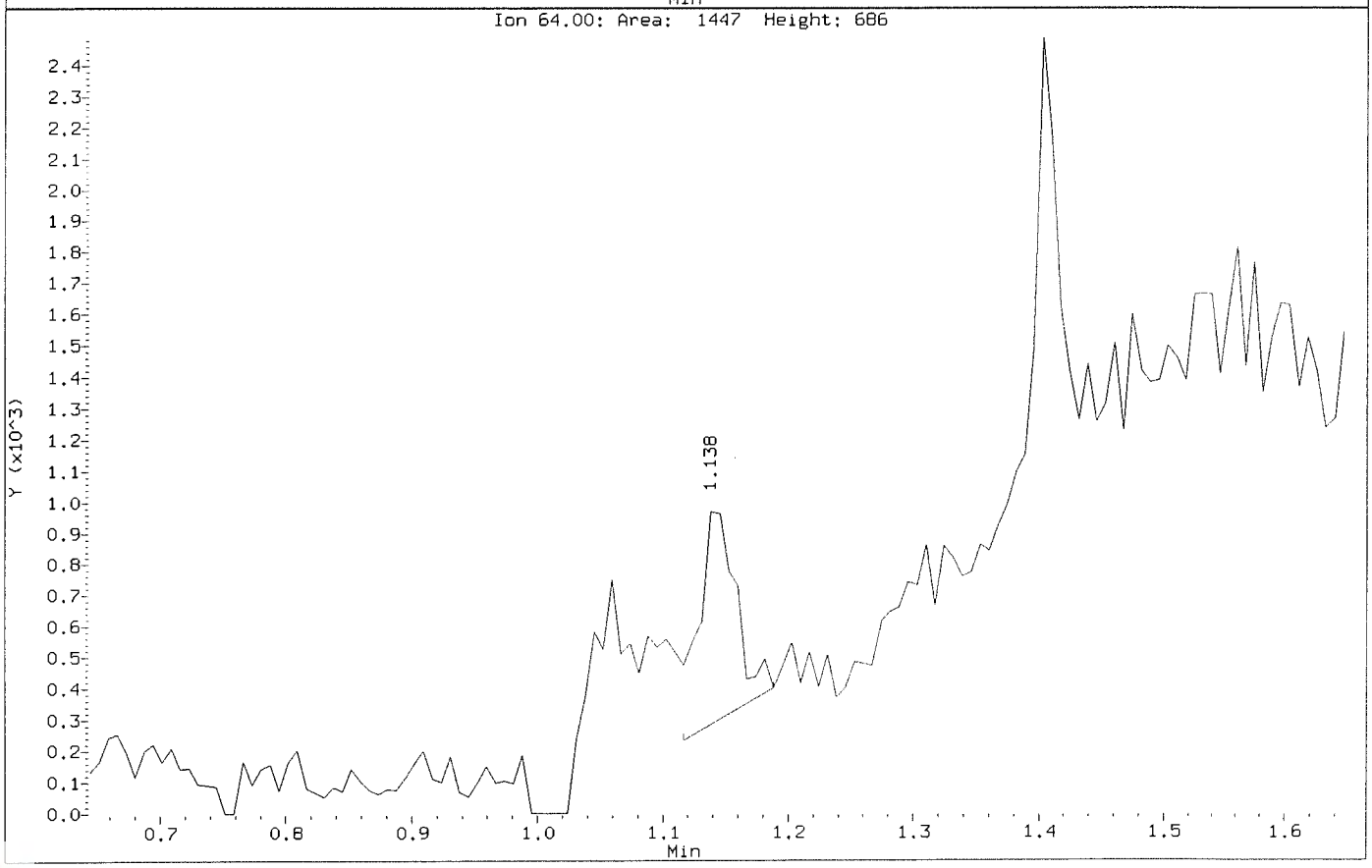
Instrument: voa6.i
Client Sample ID: VSTD000.5

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





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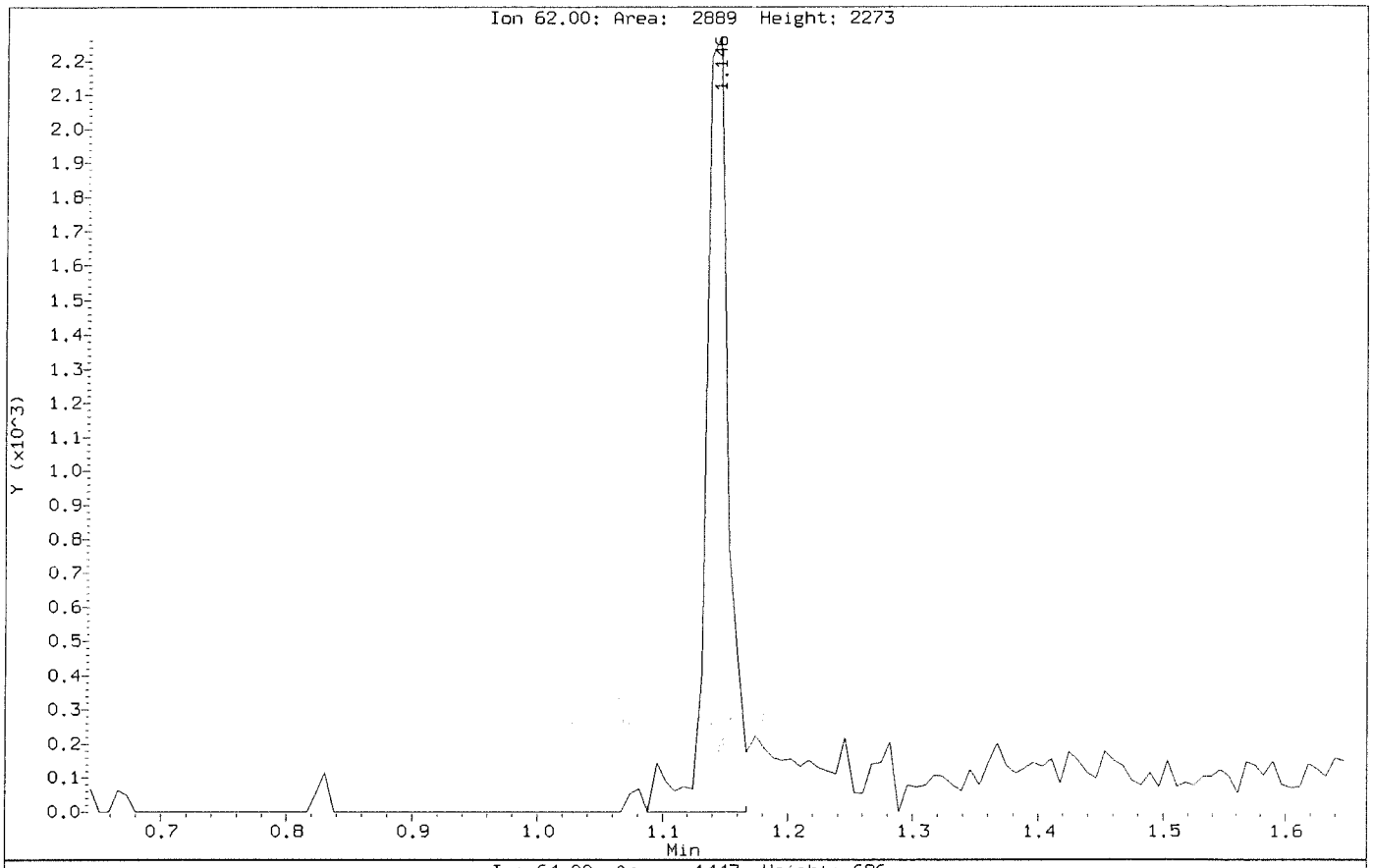
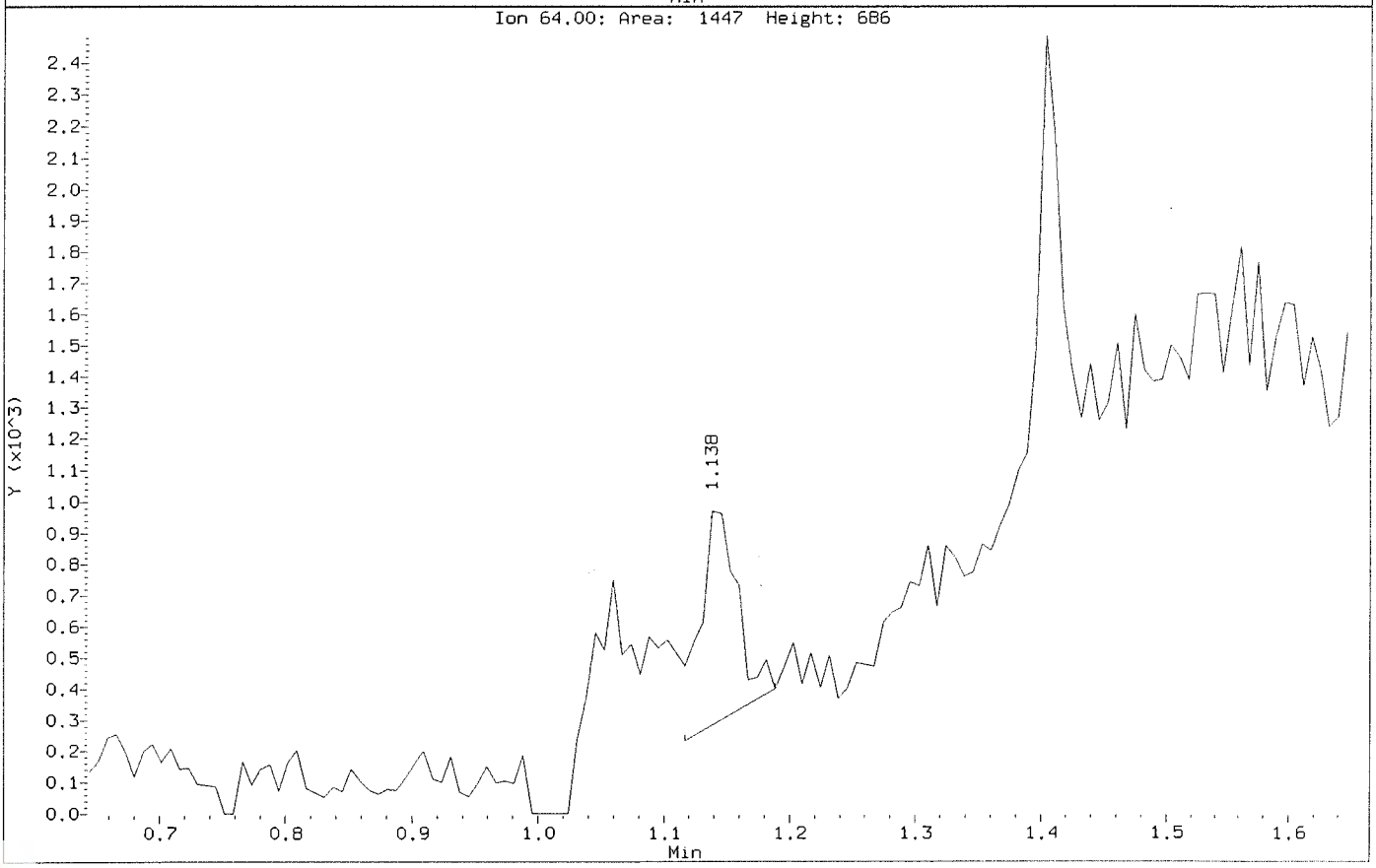
Injection Date: 07-JUL-2020 11:30
Instrument: voa6.i
Client Sample ID: VSTD000.5

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





ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200707.b\X070704.D
Lab Smp Id: VSTD001 Client Smp ID: VSTD001
Inj Date : 07-JUL-2020 12:18
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\X200707.b\8260W.m
Meth Date : 12-Aug-2020 15:35 voa6.i Quant Type: ISTD
Cal Date : 07-JUL-2020 11:30 Cal File: X070703.D
Als bottle: 5 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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

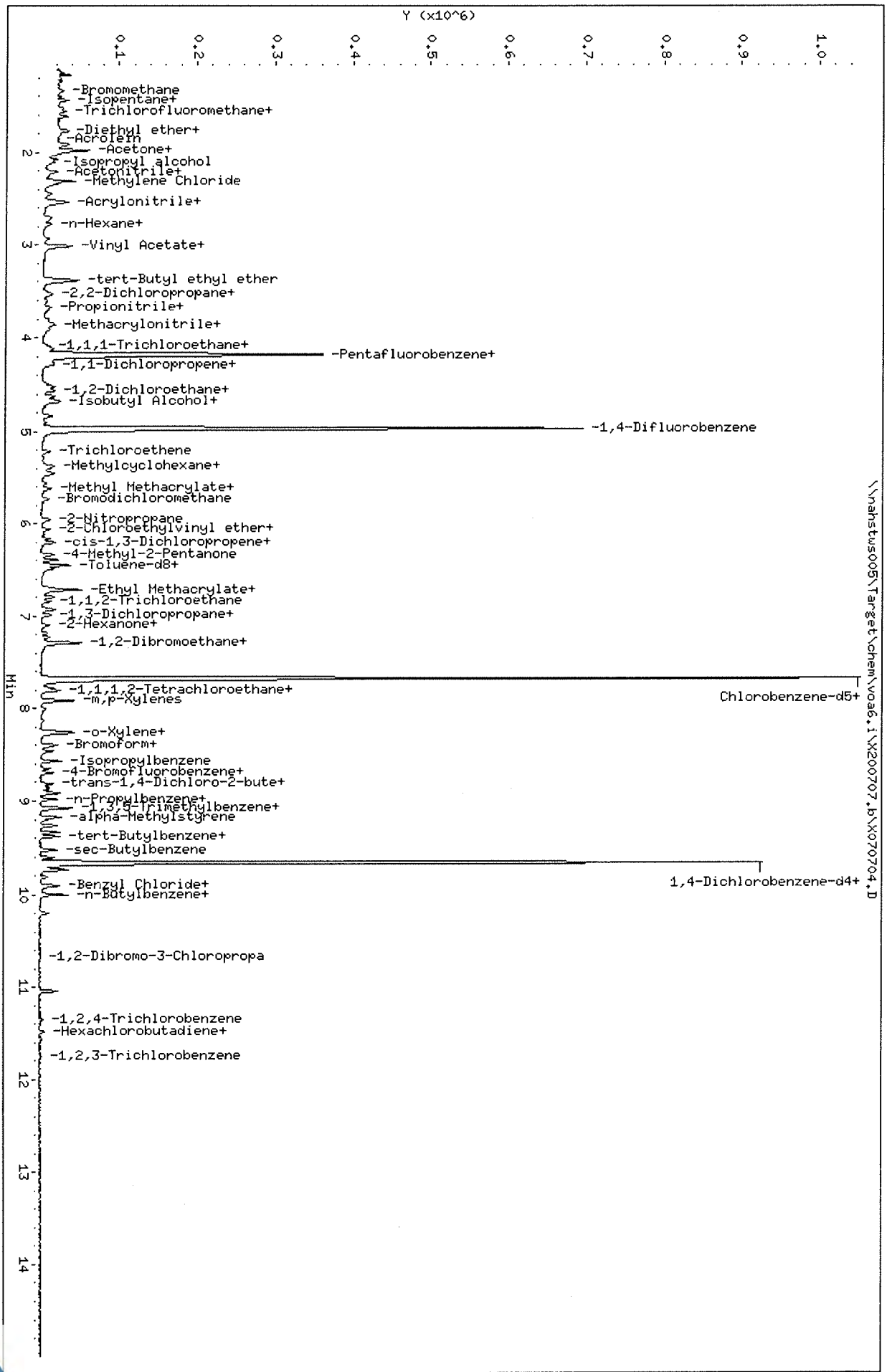
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)
*	1 Pentafluorobenzene	168	4.189	4.189	(1.000)	287665	50.0000	
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	489068	50.0000	
*	47 Chlorobenzene-d5	117	7.670	7.670	(1.000)	442544	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	206795	50.0000	
$	30 Dibromofluoromethane	113	4.103	4.103	(0.979)	3277	1.00000	0.16(a)
$	35 1,2-Dichloroethane-d4	65	4.483	4.483	(1.070)	5456	1.00000	0.59(a)
$	48 Toluene-d8	98	6.395	6.395	(0.834)	11865	1.00000	1.01(a)
$	69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	5370	1.00000	0.21(a)
	60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	3270	1.00000	0.96(a)
	31 1,1,1-Trichloroethane	97	4.089	4.089	(0.976)	5025	1.00000	0.95(a)
	68 1,1,2,2-Tetrachloroethane	83	8.845	8.845	(0.915)	4211	1.00000	1.02(aM)
	53 1,1,2-Trichloroethane	83	6.847	6.847	(0.893)	2530	1.00000	0.90(a)
	22 1,1-Dichloroethane	63	2.929	2.929	(0.699)	8376	1.00000	1.02(a)
	11 1,1-Dichloroethene	96	1.911	1.911	(0.456)	2451	1.00000	0.92(a)
	32 1,1-Dichloropropene	75	4.289	4.289	(0.863)	5445	1.00000	1.13(a)
	93 1,2,3-Trichlorobenzene	180	11.753	11.753	(1.216)	716	1.00000	2.62(aM)
	71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	3452	1.00000	0.95(aM)
	90 1,2,4-Trichlorobenzene	180	11.345	11.345	(1.173)	1386	1.00000	2.35(aM)
	79 1,2,4-Trimethylbenzene	105	9.382	9.382	(0.970)	11840	1.00000	0.97(a)
	89 1,2-Dibromo-3-Chloropropane	155	10.665	10.665	(1.103)	296	1.00000	(aM)
	57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	3564	1.00000	1.00(a)
	88 1,2-Dichlorobenzene	146	9.998	9.998	(1.034)	5853	1.00000	0.96(a)

Data File: \\nahstws005\Target\chem\voa6.i\X200707.b\X070704.D Page 2
Report Date: 12-Aug-2020 15:35

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
33	1,2-Dichloroethane	62	4.569	4.569	(0.919)	6061	1.00000	0.99(a)
42	1,2-Dichloropropane	63	5.443	5.443	(1.095)	4404	1.00000	0.96(aM)
75	1,3,5-Trimethylbenzene	105	9.074	9.074	(0.939)	11148	1.00000	0.94(a)
83	1,3-Dichlorobenzene	146	9.612	9.612	(0.994)	6195	1.00000	0.93(a)
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	6067	1.00000	1.02(a)
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	6719	1.00000	0.87(a)
26	2,2-Dichloropropane	77	3.523	3.523	(0.841)	5145	1.00000	1.03(a)
24	2-Butanone	43	3.602	3.602	(0.860)	8248	2.00000	(aM)
76	2-Chlorotoluene	91	8.981	8.981	(0.929)	10095	1.00000	0.97(a)
52	2-Hexanone	43	7.097	7.097	(0.925)	8043	2.00000	(a)
77	4-Chlorotoluene	91	9.074	9.074	(0.939)	10512	1.00000	0.89(a)
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	10898	1.00000	0.92(a)
45	4-Methyl-2-Pentanone	43	6.331	6.331	(0.825)	14318	2.00000	(a)
10	Acetone	43	1.976	1.976	(0.472)	48306	2.00000	(a)
37	Benzene	78	4.519	4.519	(0.909)	14195	1.00000	1.01(a)
74	Bromobenzene	156	8.817	8.817	(0.912)	3830	1.00000	0.97(a)
29	Bromochloromethane	128	3.802	3.802	(0.908)	2137	1.00000	1.06(a)
39	Bromodichloromethane	83	5.736	5.736	(1.154)	4874	1.00000	0.99(aM)
66	Bromoform	173	8.423	8.423	(1.098)	2480	1.00000	1.00(Ta)
6	Bromomethane	94	1.338	1.338	(0.320)	2882	1.00000	1.35(aM)
19	Carbon Disulfide	76	2.069	2.069	(0.494)	16970	2.00000	1.94(a)
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	4805	1.00000	1.02(a)
59	Chlorobenzene	112	7.699	7.699	(1.004)	9050	1.00000	1.00(a)
7	Chloroethane	64	1.403	1.403	(0.335)	2977	1.00000	(aM)
28	Chloroform	83	3.910	3.910	(0.933)	6251	1.00000	0.99(a)
3	Chloromethane	50	1.080	1.080	(0.258)	5793	1.00000	0.97(a)
27	cis-1,2-Dichloroethene	96	3.537	3.537	(0.844)	3779	1.00000	1.00(a)
46	cis-1,3-Dichloropropene	75	6.166	6.166	(1.241)	5523	1.00000	0.93(a)
55	Dibromochloromethane	129	7.183	7.183	(0.937)	3342	1.00000	0.91(a)
44	Dibromomethane	93	5.565	5.565	(1.120)	2234	1.00000	0.91(a)
2	Dichlorodifluoromethane	85	0.973	0.973	(0.232)	3008	1.00000	0.86(a)
61	Ethylbenzene	106	7.799	7.799	(1.017)	5130	1.00000	1.07(a)
91	Hexachlorobutadiene	225	11.488	11.488	(1.188)	1140	1.00000	2.45(a)
67	Isopropylbenzene	105	8.566	8.566	(1.117)	13237	1.00000	0.93(a)
62	m,p-Xylenes	106	7.914	7.914	(1.032)	11232	2.00000	1.95(a)
17	Methylene Chloride	84	2.305	2.305	(0.550)	3648	1.00000	1.15(aM)
87	n-Butylbenzene	91	9.998	9.998	(1.034)	9685	1.00000	0.92(a)
73	n-Propylbenzene	91	8.917	8.917	(0.922)	15566	1.00000	0.92(a)
92	Naphthalene	128	11.560	11.560	(1.196)	3173	1.00000	1.87(a)
63	o-Xylene	106	8.251	8.251	(1.076)	5792	1.00000	1.03(a)
81	sec-Butylbenzene	105	9.526	9.526	(0.985)	13093	1.00000	0.94(a)
64	Styrene	104	8.265	8.265	(1.078)	9093	1.00000	0.93(a)
78	tert-Butylbenzene	119	9.339	9.339	(0.966)	8891	1.00000	0.93(a)
56	Tetrachloroethene	164	6.933	6.933	(0.904)	2306	1.00000	0.85(aM)
50	Toluene	91	6.453	6.453	(0.841)	14579	1.00000	1.03(a)
20	trans-1,2-Dichloroethene	96	2.542	2.542	(0.607)	3019	1.00000	0.96(a)
51	trans-1,3-Dichloropropene	75	6.689	6.689	(1.346)	5191	1.00000	0.97(a)
38	Trichloroethene	130	5.214	5.214	(1.049)	3243	1.00000	0.89(a)
8	Trichlorofluoromethane	101	1.560	1.560	(0.373)	4899	1.00000	0.98(a)
5	Vinyl Chloride	62	1.138	1.138	(0.272)	4817	1.00000	0.95(a)

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.



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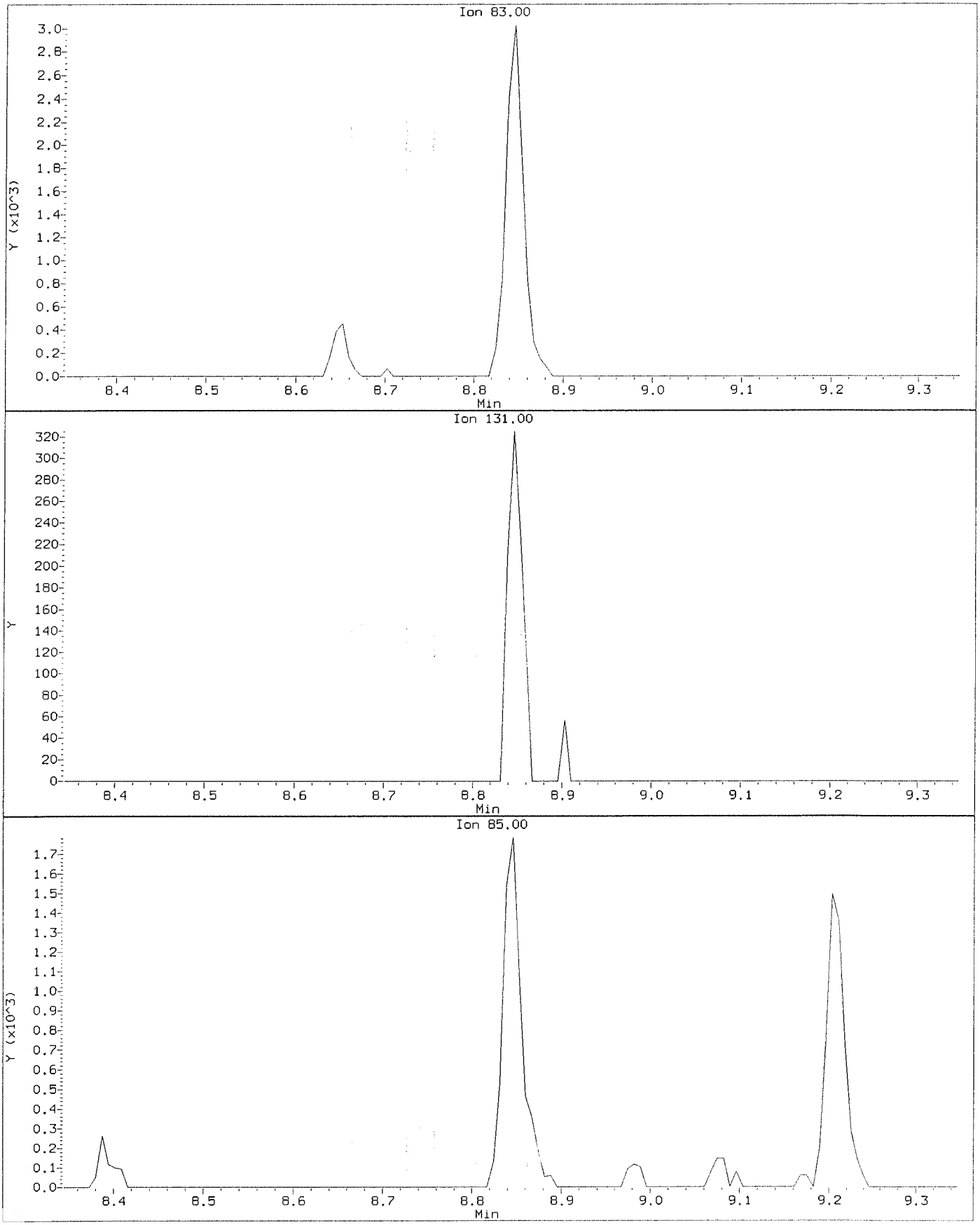
Sample Info: VSTD001;VSTD001;1;3;
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\nahstws005\Target\chem\voa6.i\X200707.b\Before\X070704.D
Injection Date: 07-JUL-2020 12:18
Instrument: voa6.i
Client Sample ID: VSTD001

Compound: 1,1,2,2-Tetrachloroethane
CAS Number: 79-34-5



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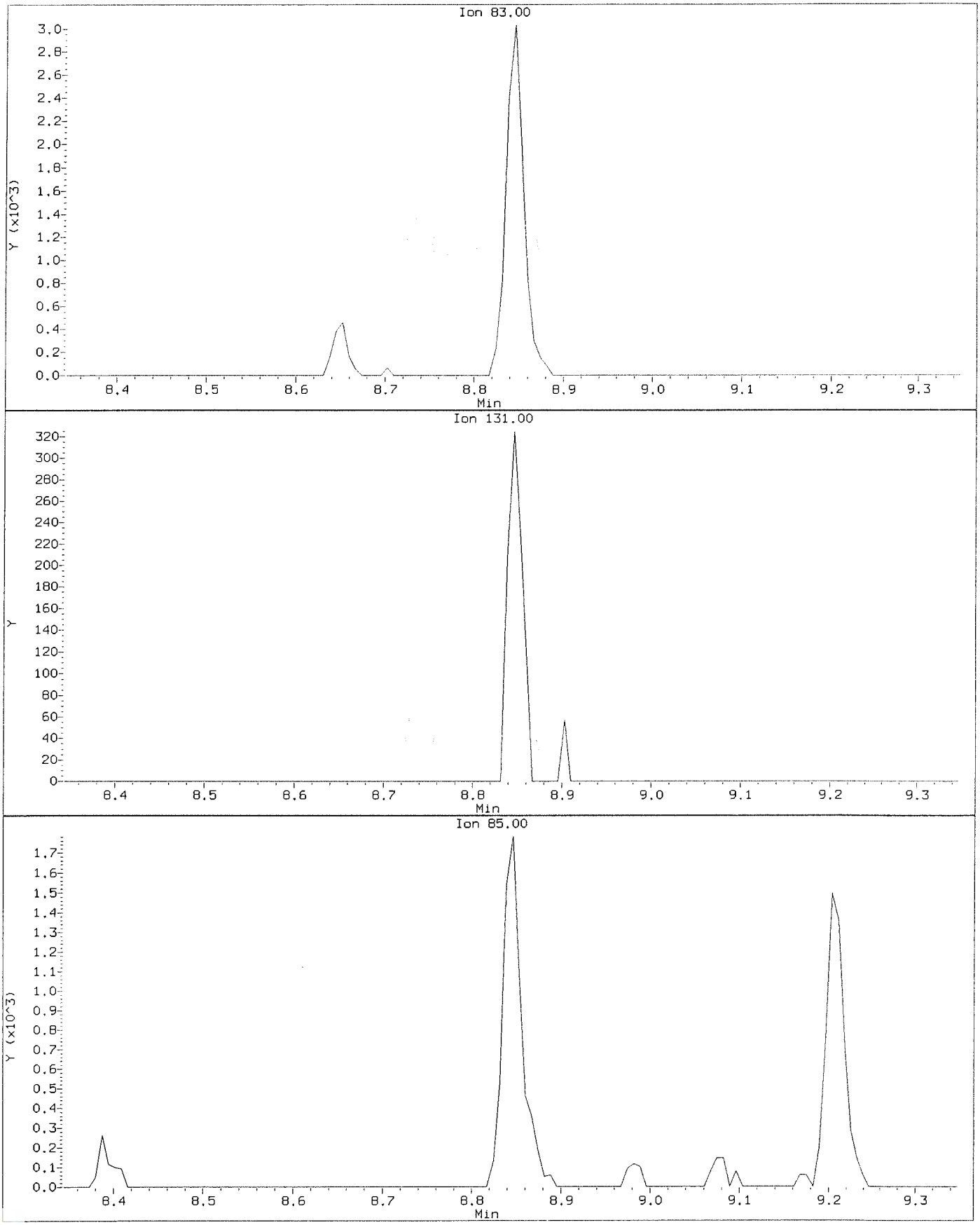
Instrument: voa6.i
Client Sample ID: VSTD001

Compound: 1,1,2,2-Tetrachloroethane
CAS Number: 79-34-5



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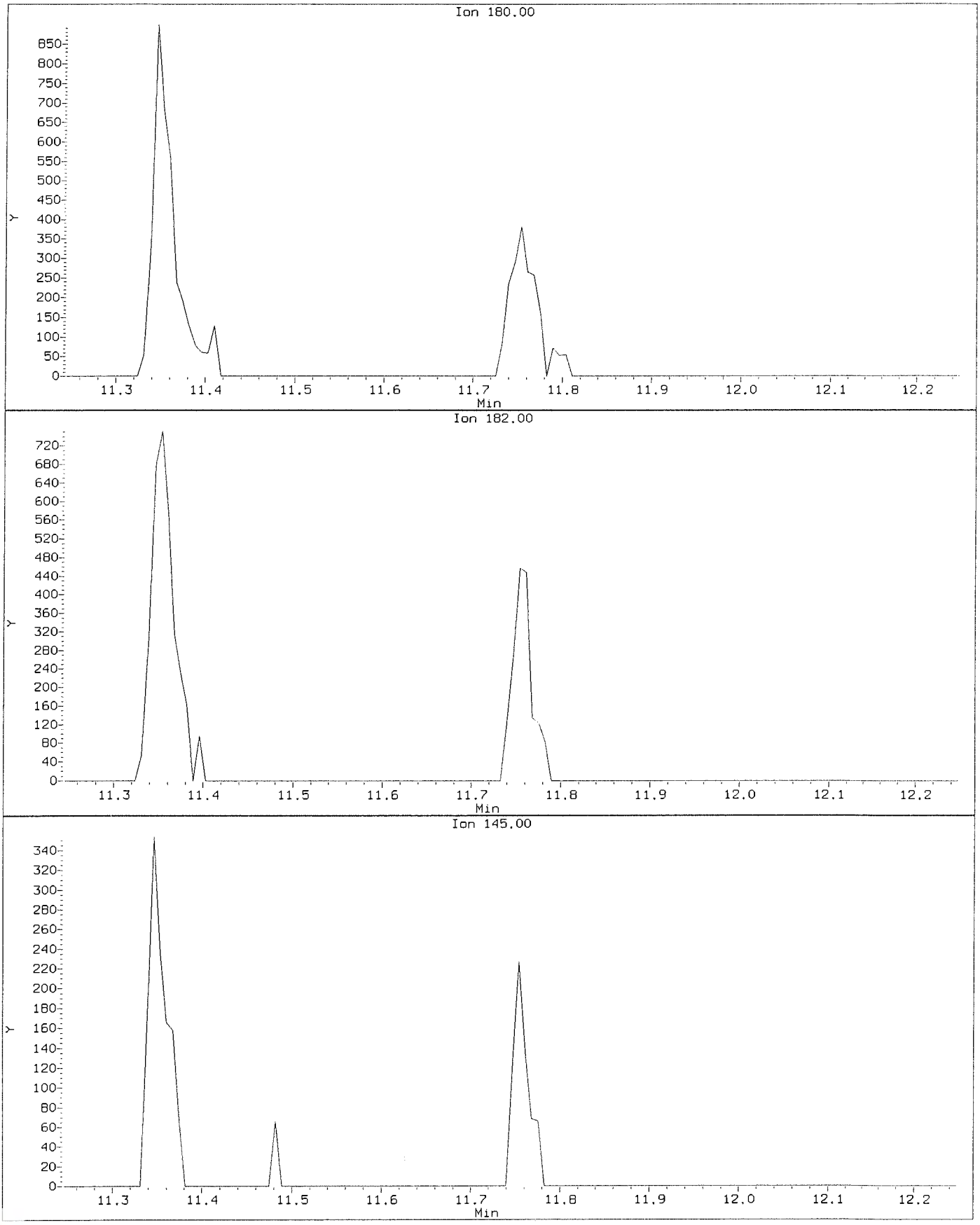
Instrument: voa6.i
Client Sample ID: VSTD001

Compound: 1,2,3-Trichlorobenzene
CAS Number: 87-61-6



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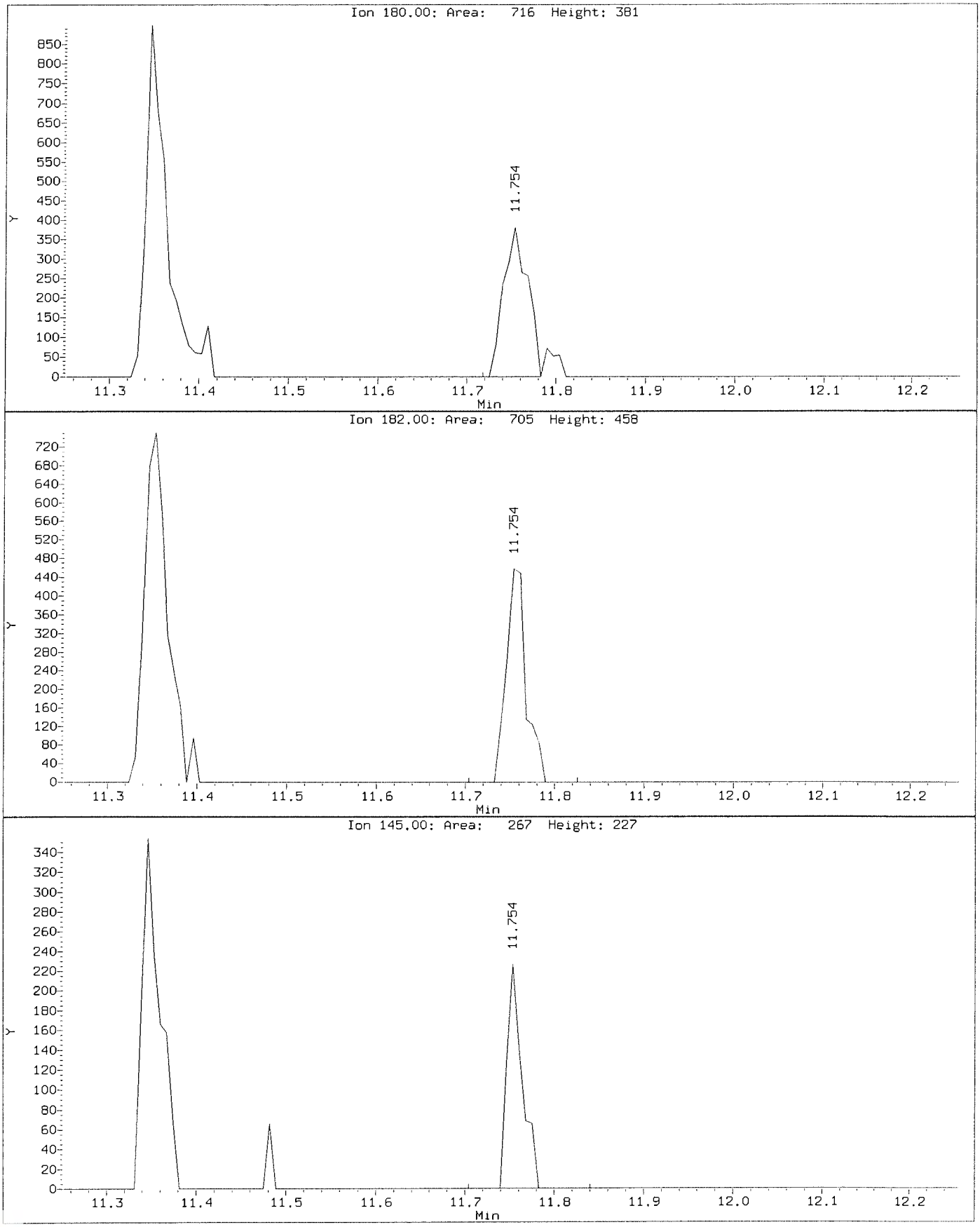
Instrument: voa6.i
Client Sample ID: VSTD001

Compound: 1,2,3-Trichlorobenzene
CAS Number: 87-61-6



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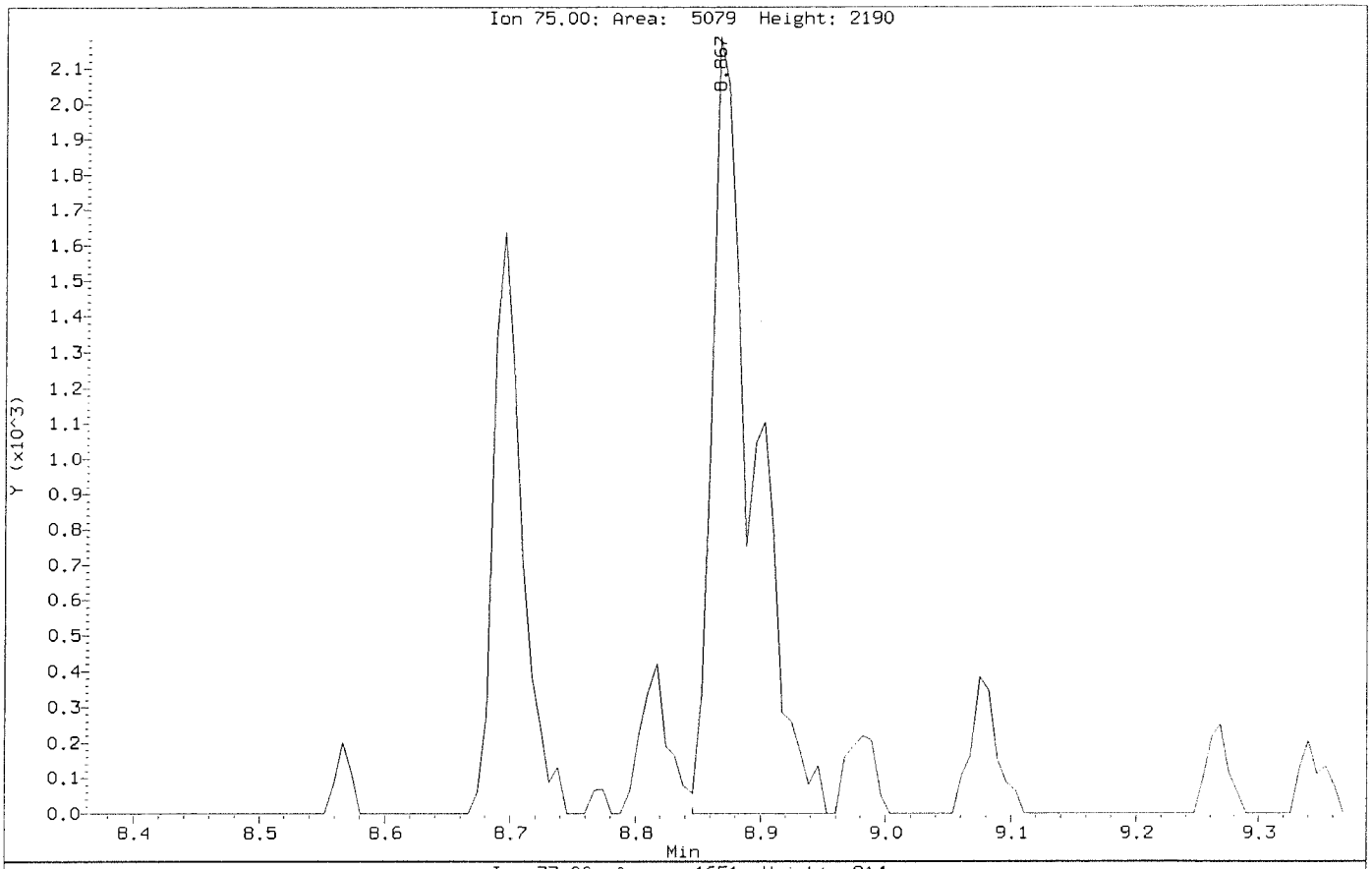
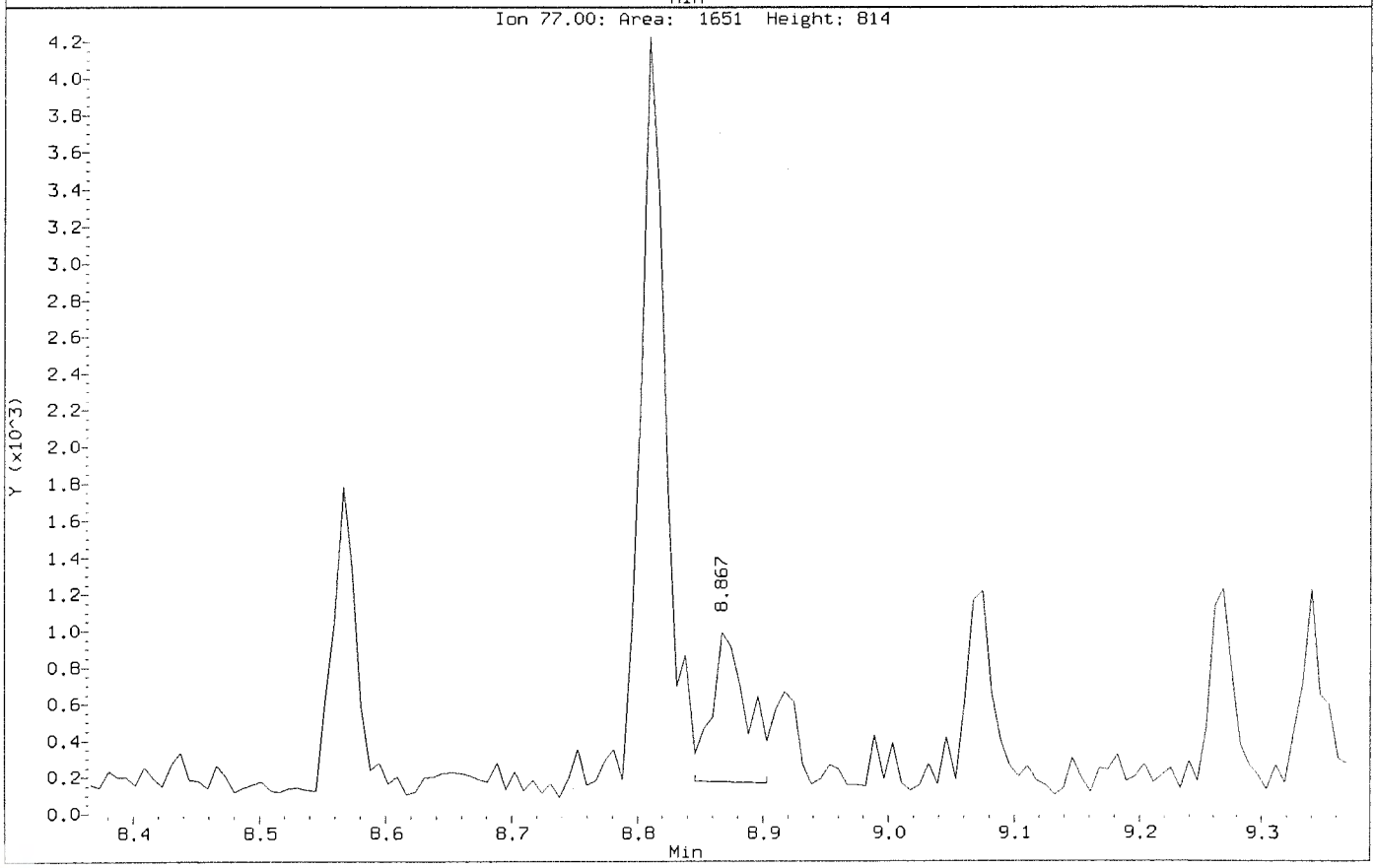
Injection Date: 07-JUL-2020 12:18
Instrument: voa6.i
Client Sample ID: VSTD001

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





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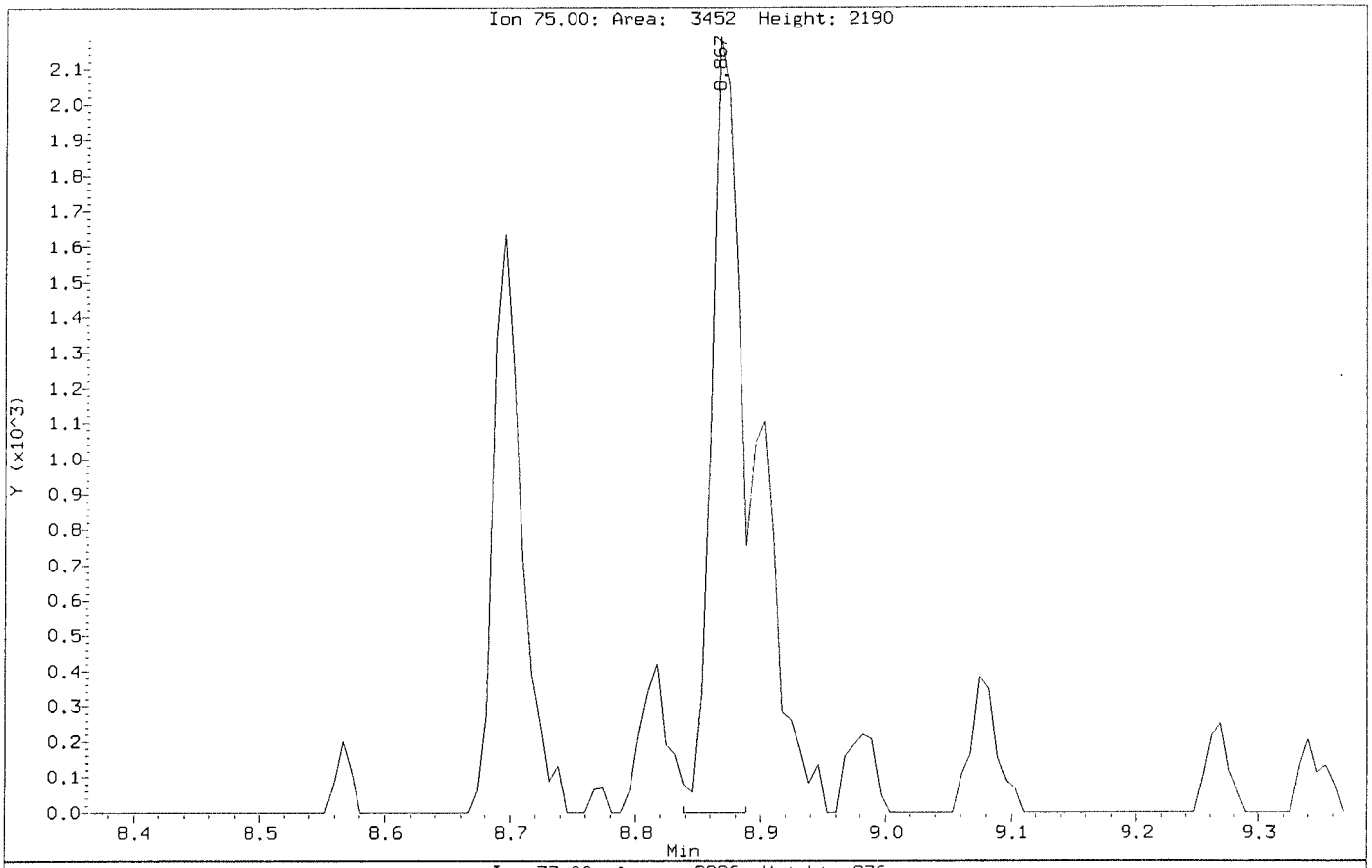
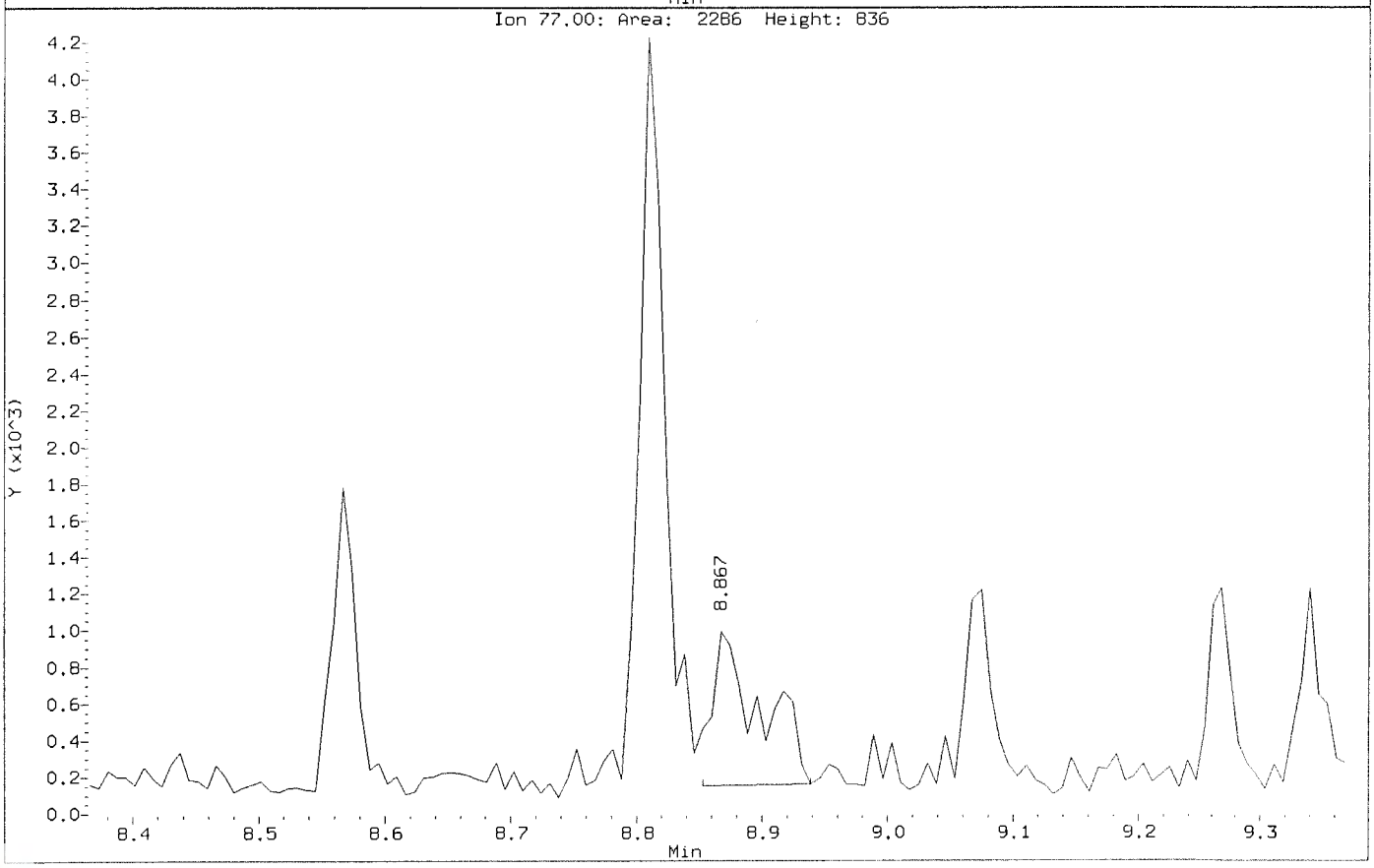
Client Sample ID: VSTD001

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





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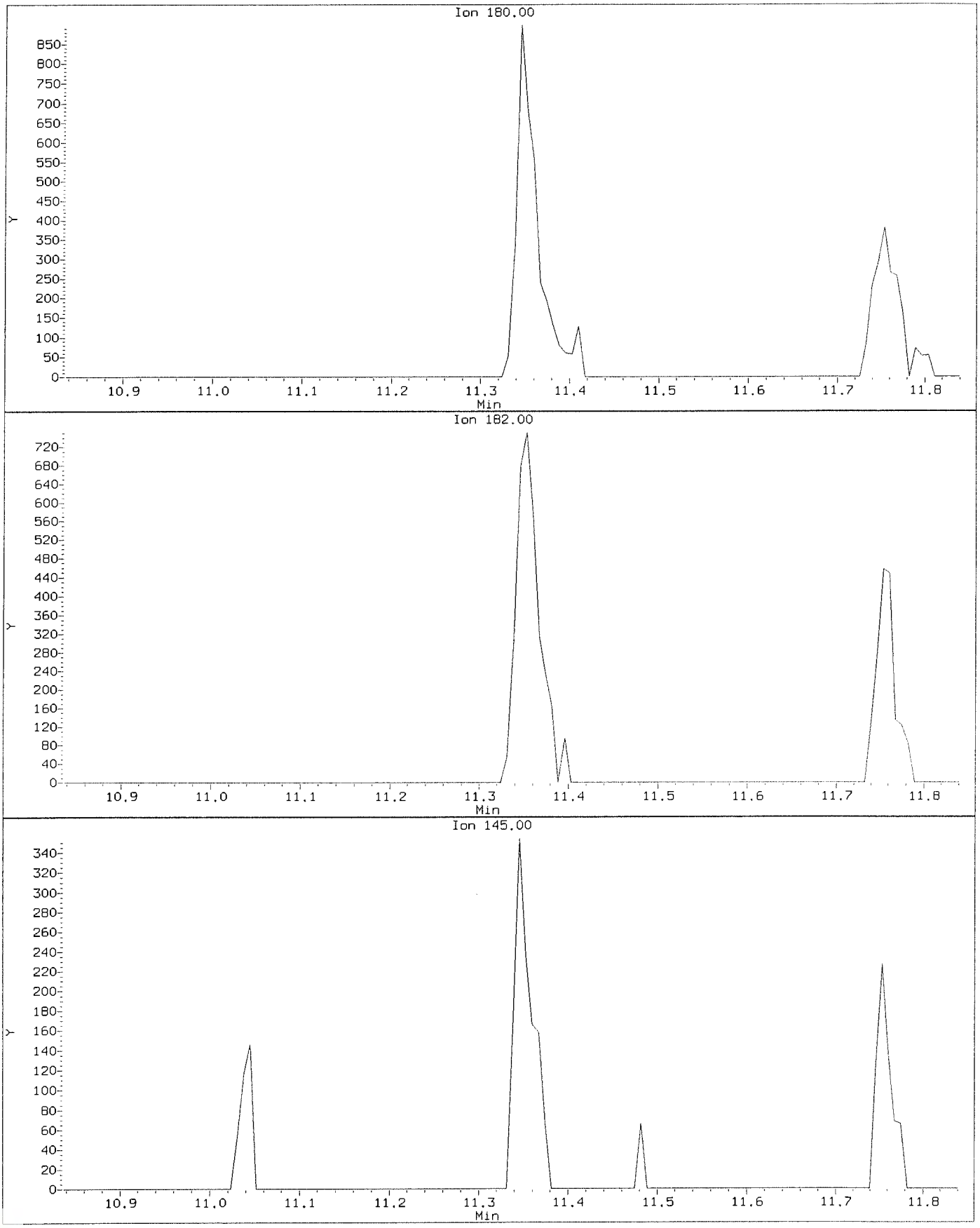
Injection Date: 07-JUL-2020 12:18
Instrument: voa6.i
Client Sample ID: VSTD001

Compound: 1,2,4-Trichlorobenzene
CAS Number: 120-82-1



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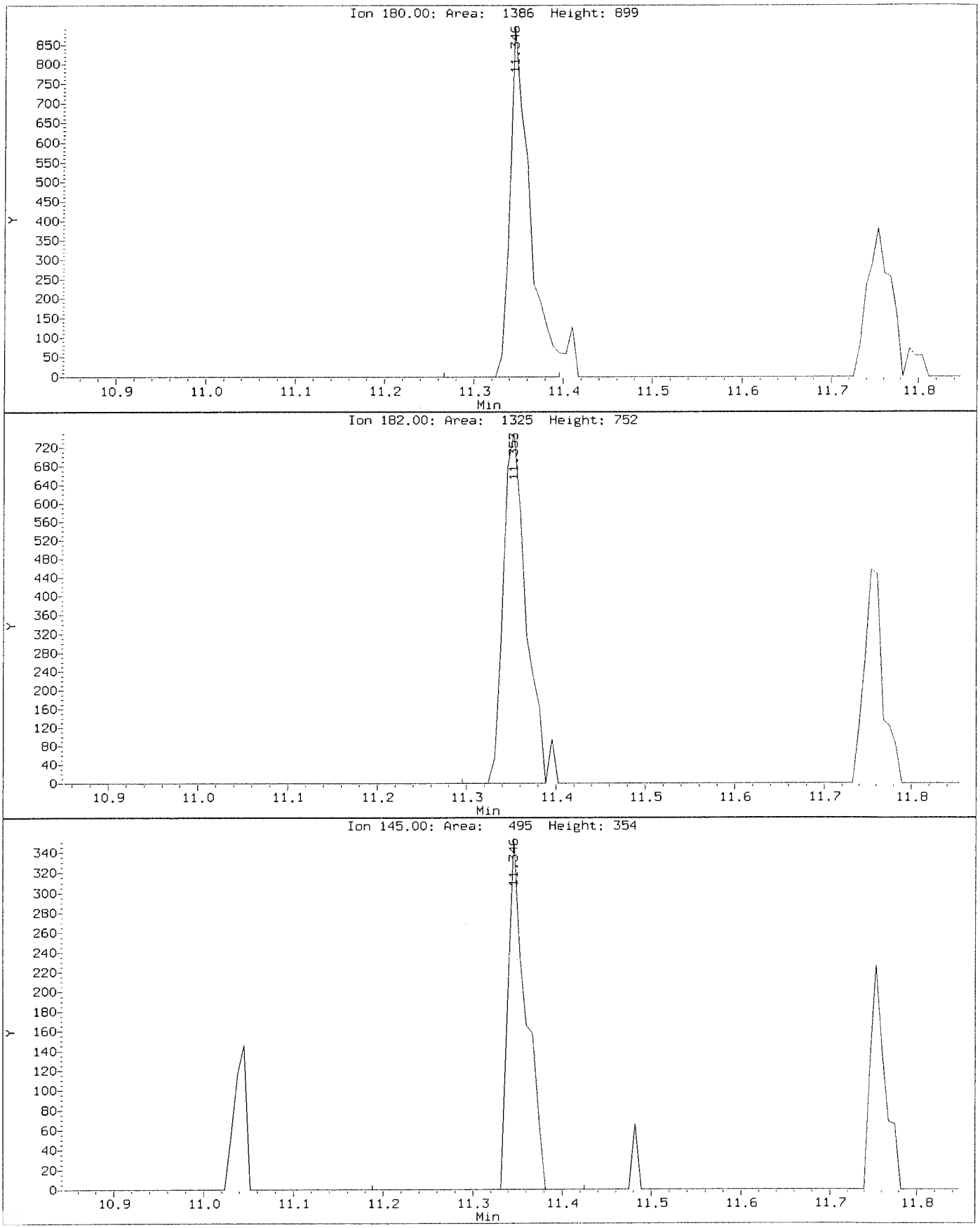
Instrument: voa6.i
Client Sample ID: VSTD001

Compound: 1,2,4-Trichlorobenzene
CAS Number: 120-82-1



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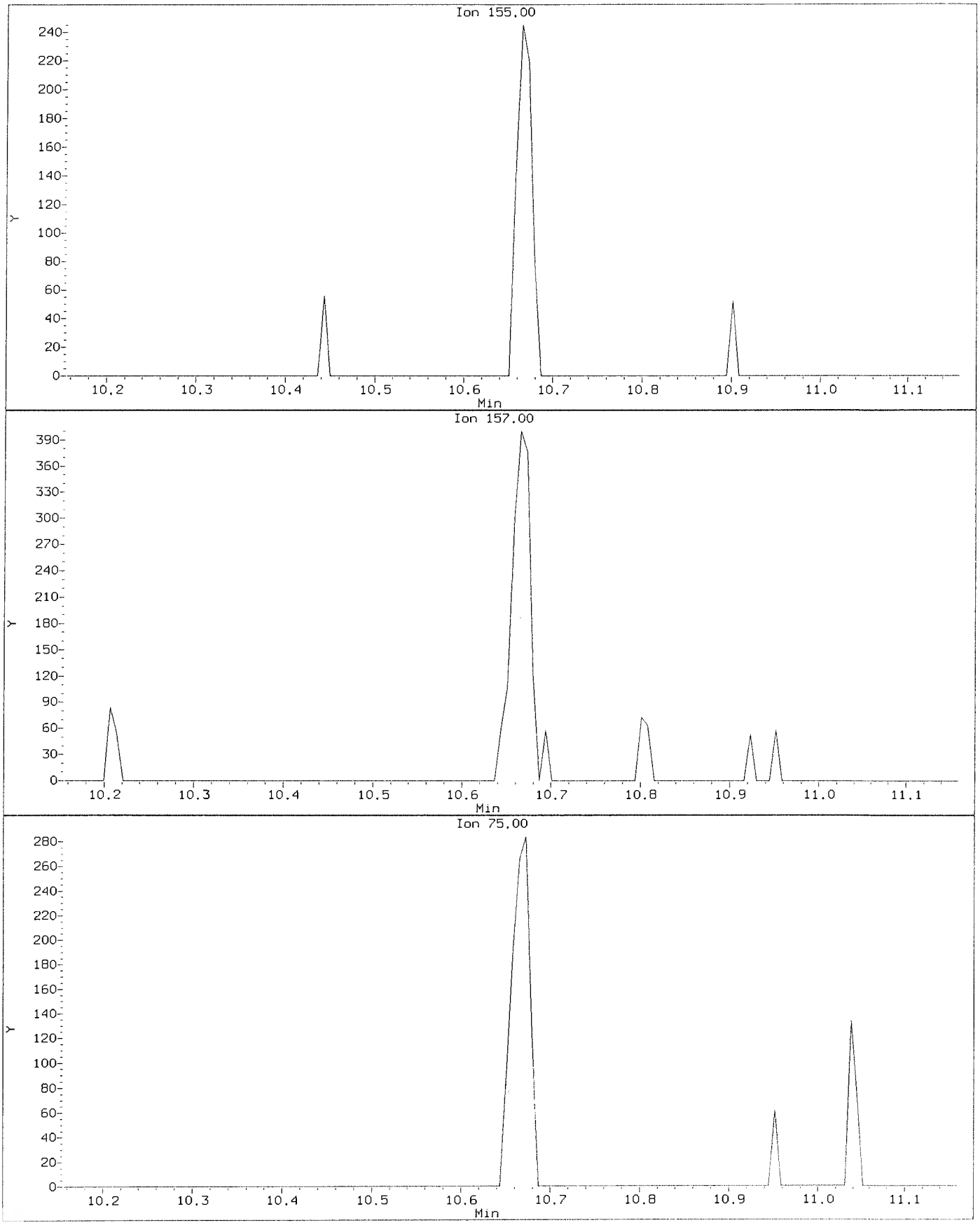
Injection Date: 07-JUL-2020 12:18
Instrument: voa6.i
Client Sample ID: VSTD001

Compound: 1,2-Dibromo-3-Chloropropane
CAS Number: 96-12-8



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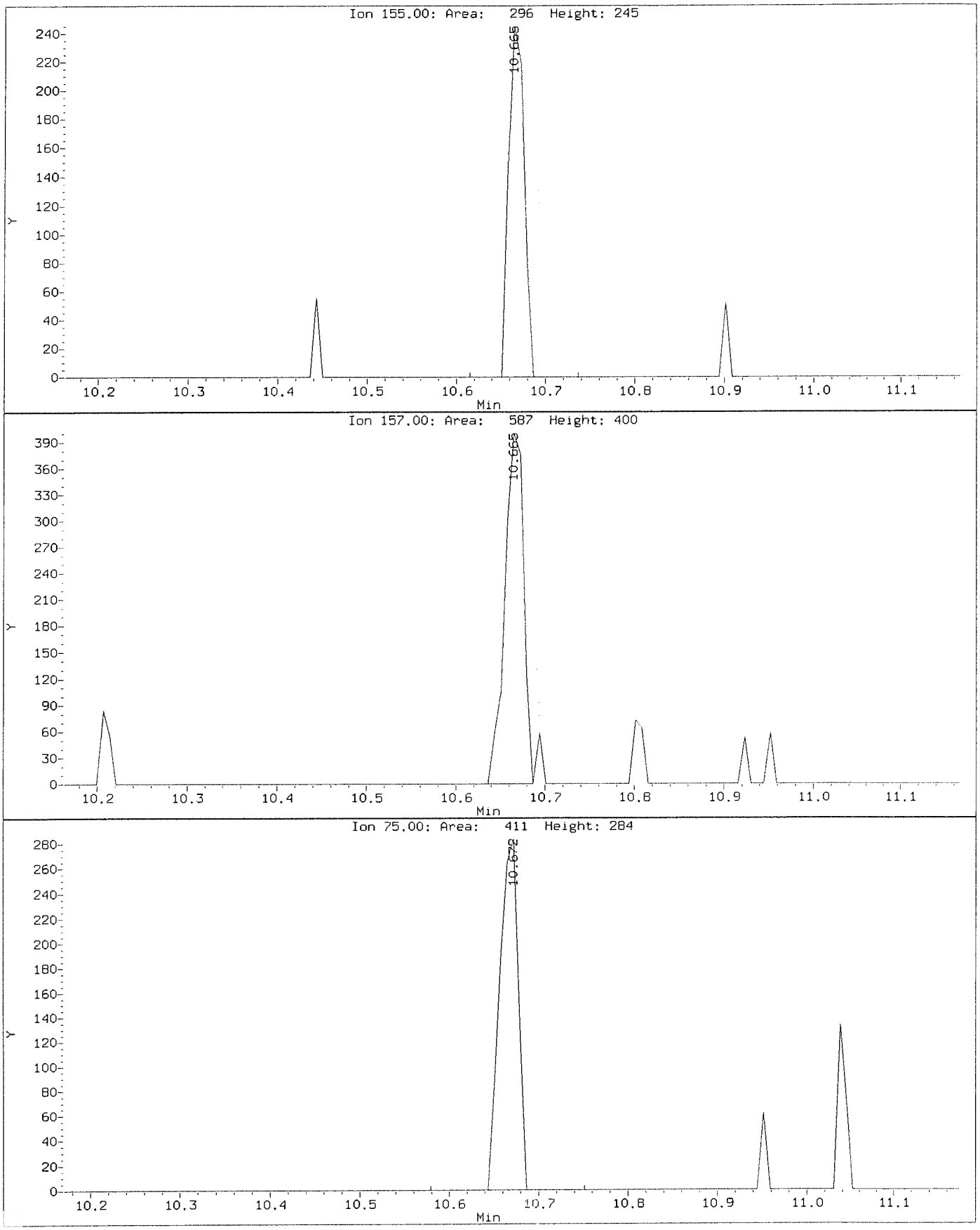
Injection Date: 07-JUL-2020 12:18
Instrument: voa6.i
Client Sample ID: VSTD001

Compound: 1,2-Dibromo-3-Chloropropane
CAS Number: 96-12-8



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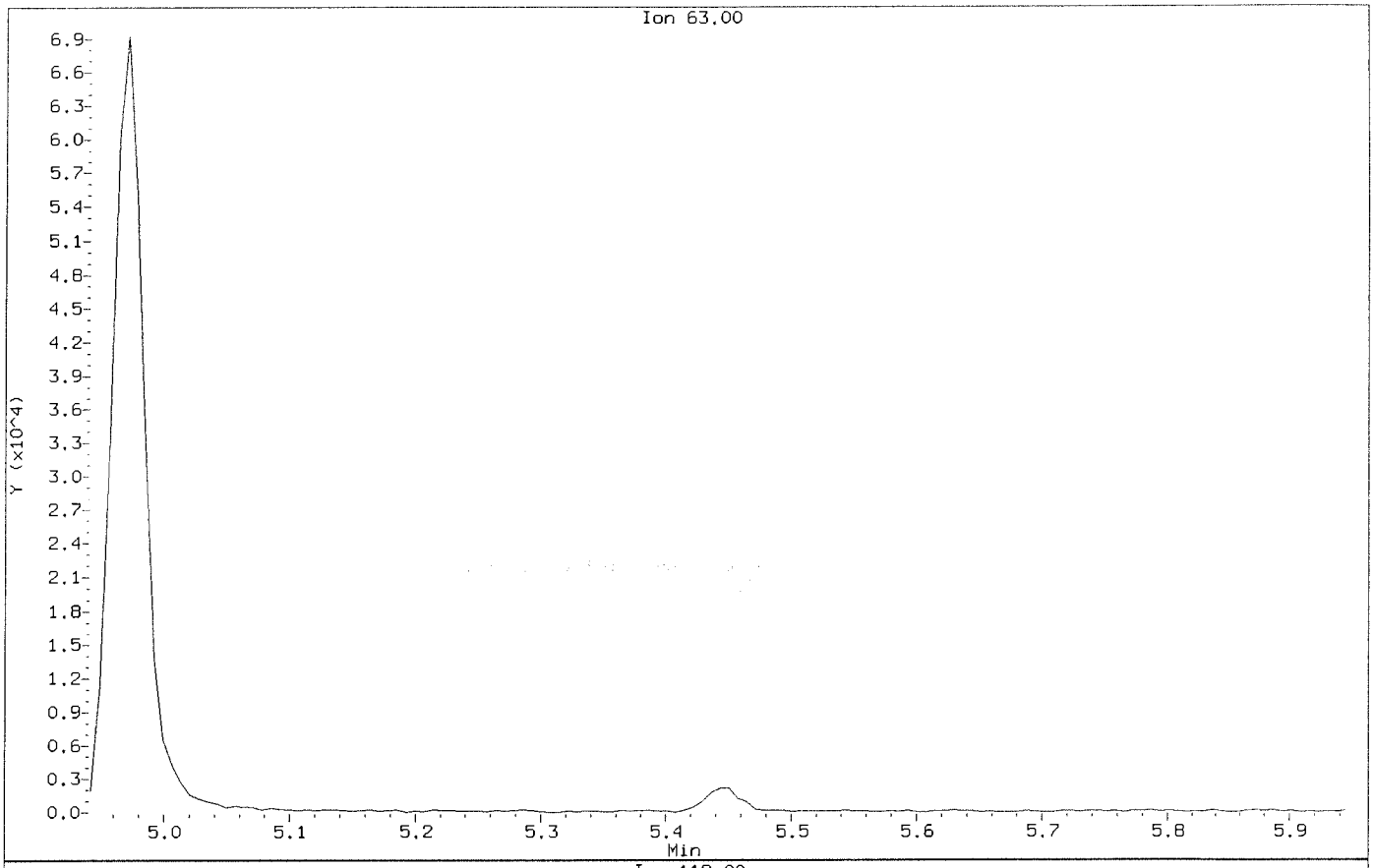
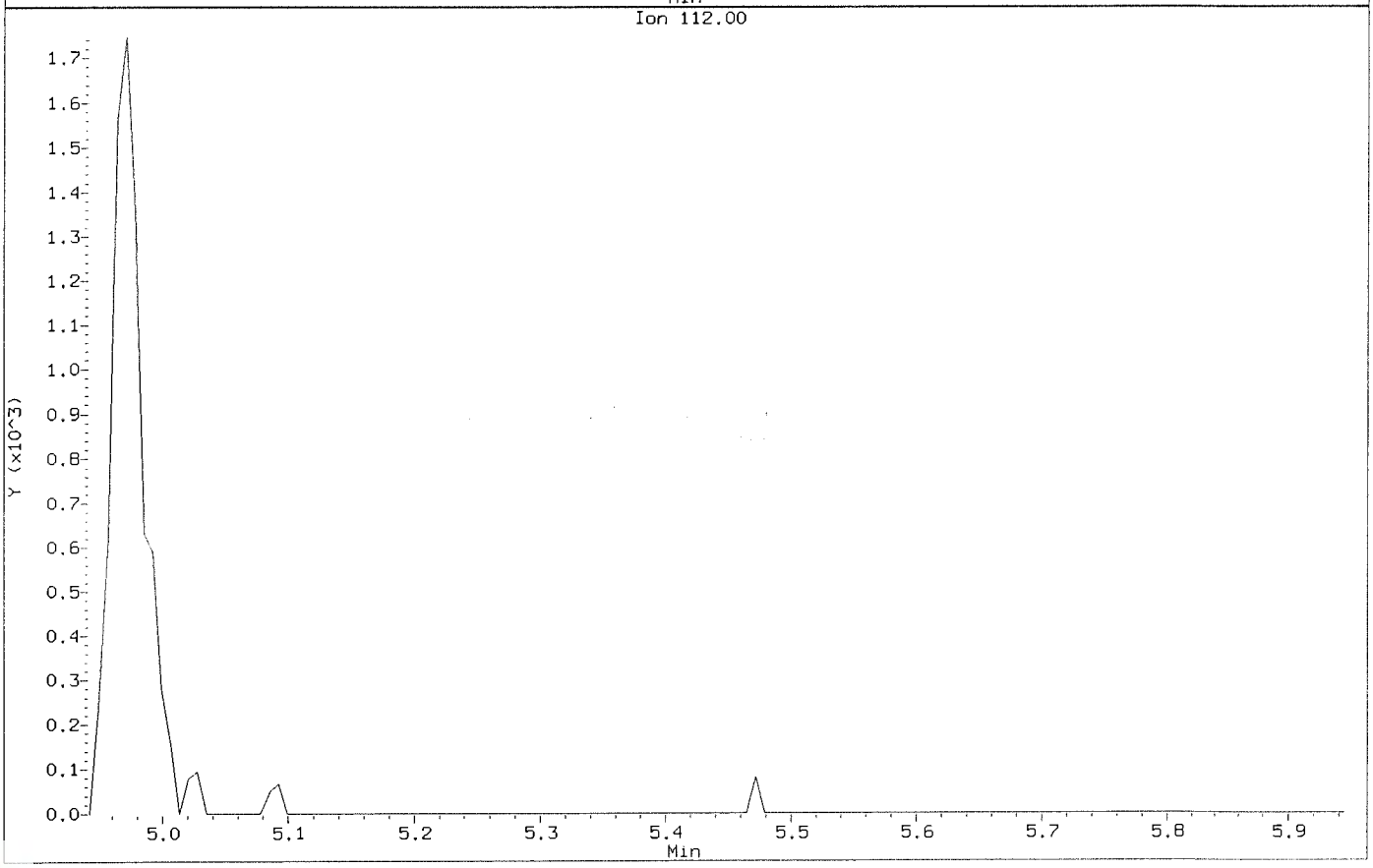
Injection Date: 07-JUL-2020 12:18
Instrument: voa6.i
Client Sample ID: VSTD001

Compound: 1,2-Dichloropropane
CAS Number: 78-87-5





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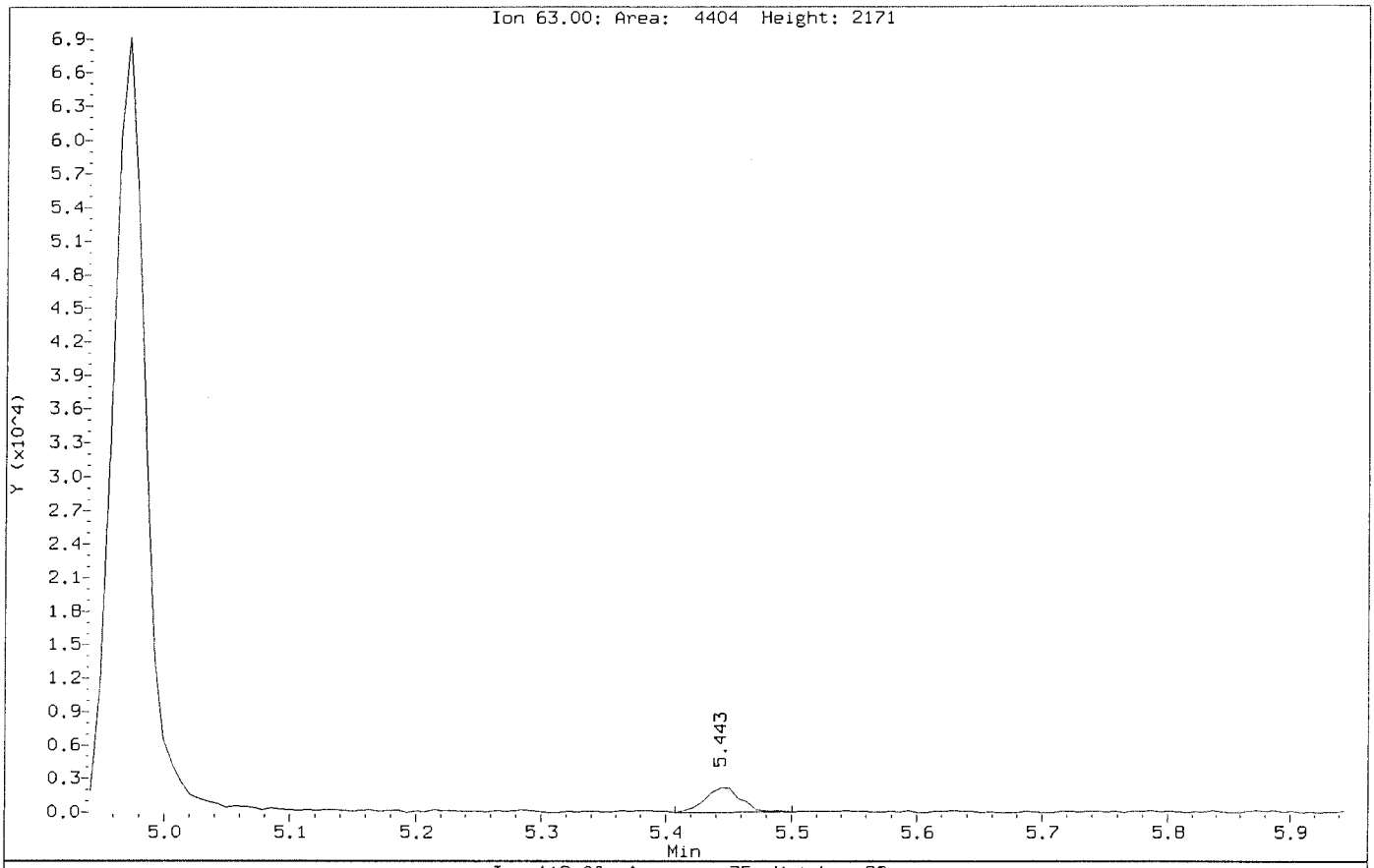
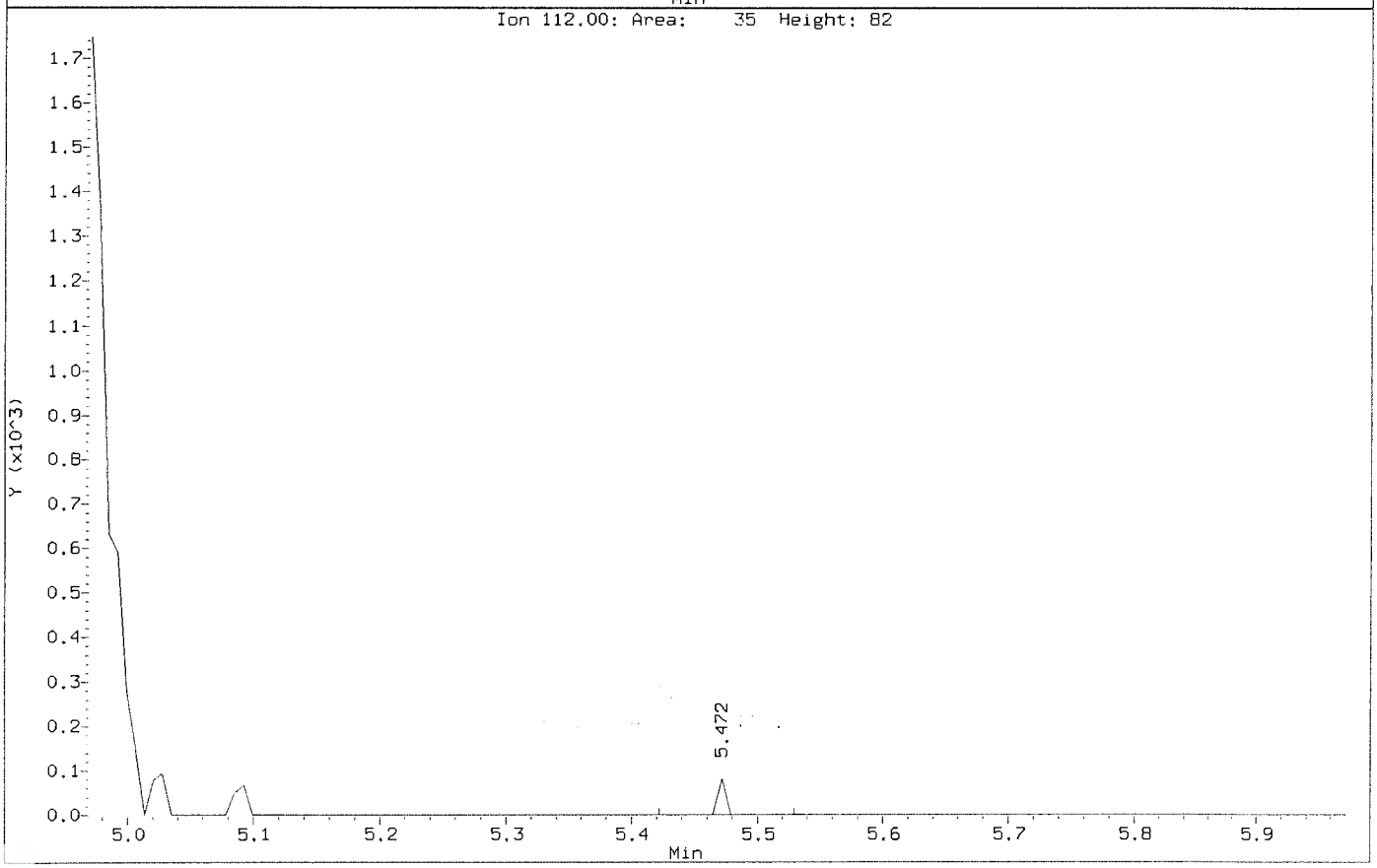
Injection Date: 07-JUL-2020 12:18
Instrument: voa6.i
Client Sample ID: VSTD001

Compound: 1,2-Dichloropropane
CAS Number: 78-87-5





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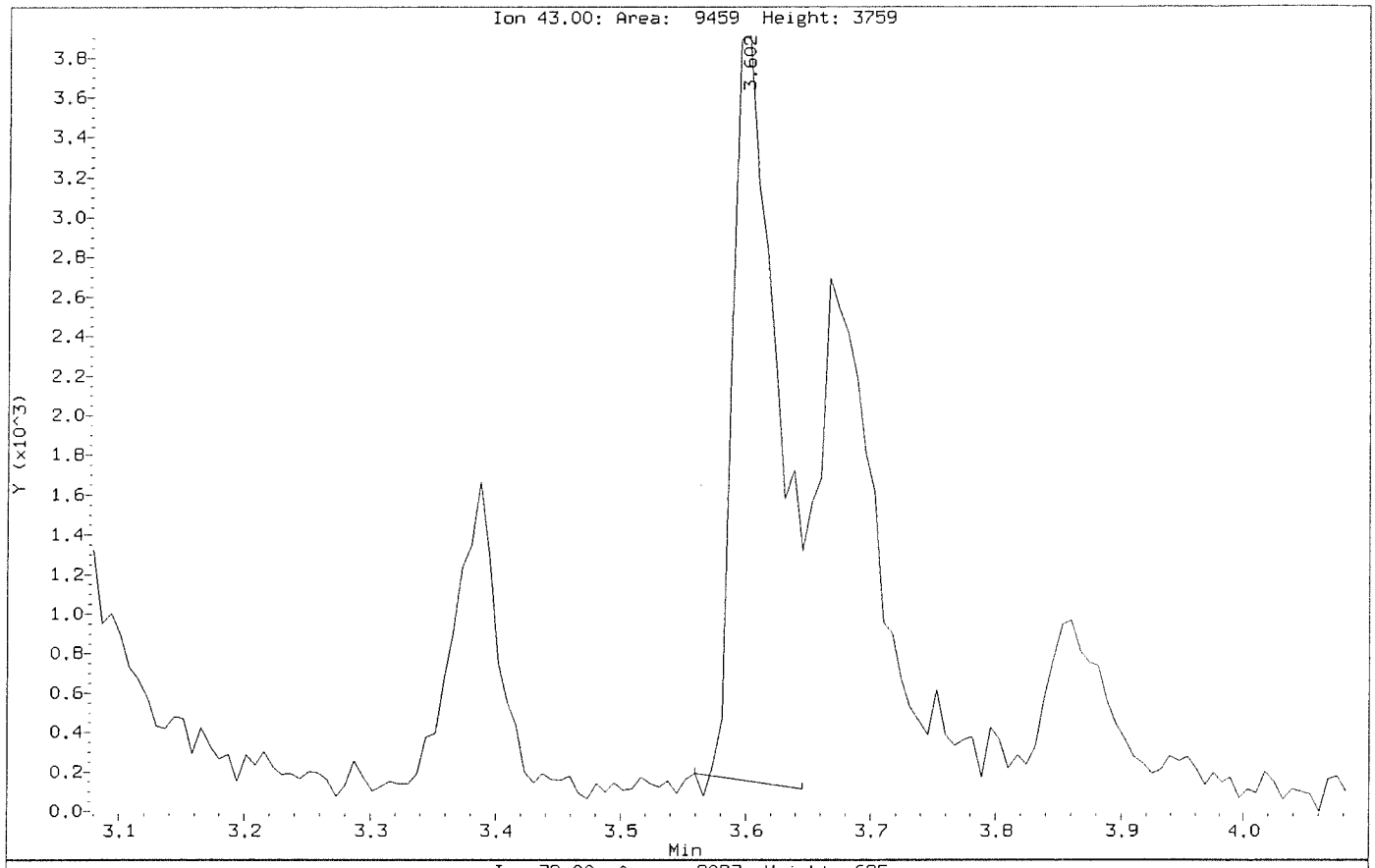
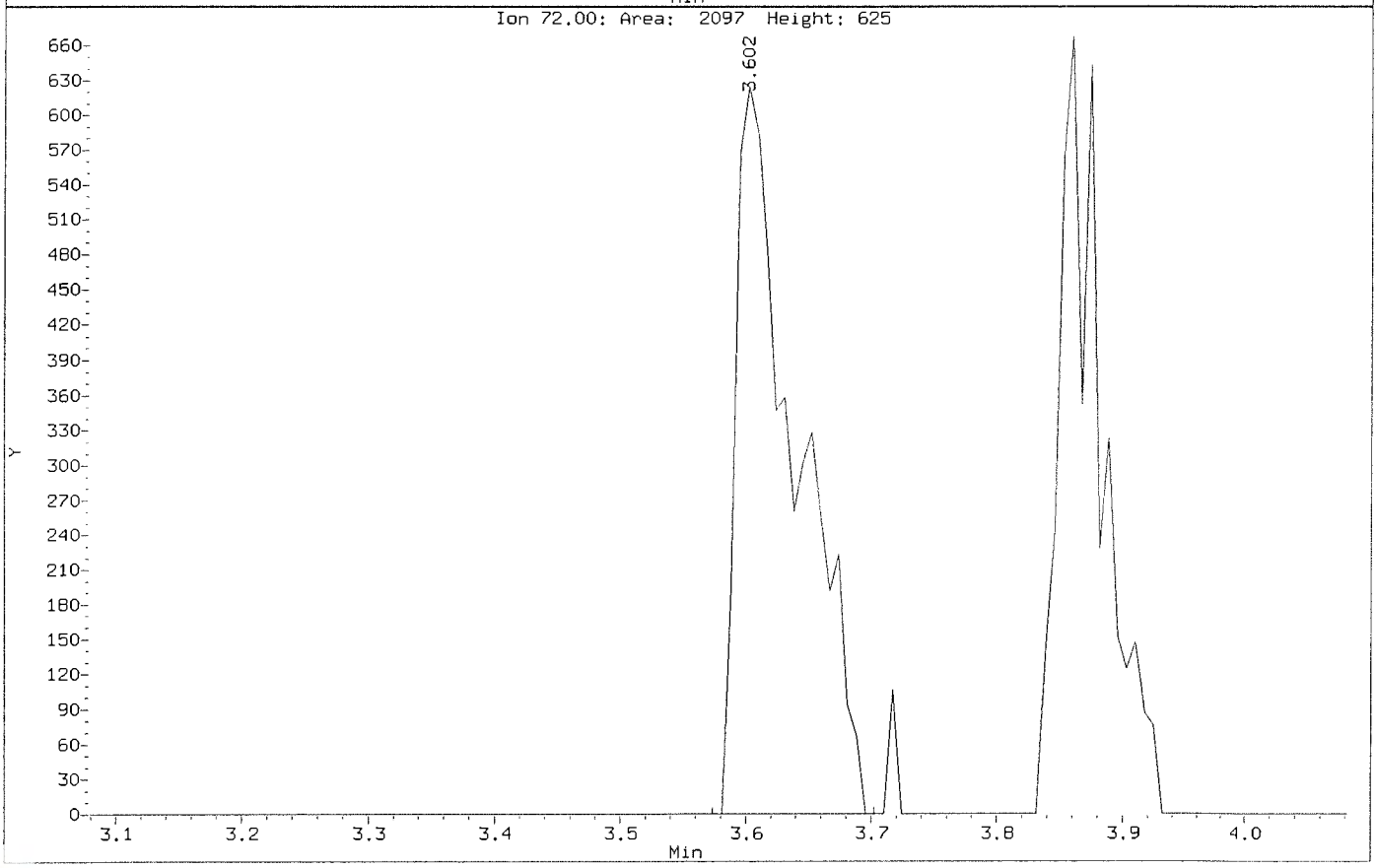
Injection Date: 07-JUL-2020 12:18
Instrument: voa6.i
Client Sample ID: VSTD001

Compound: 2-Butanone
CAS Number: 78-93-3





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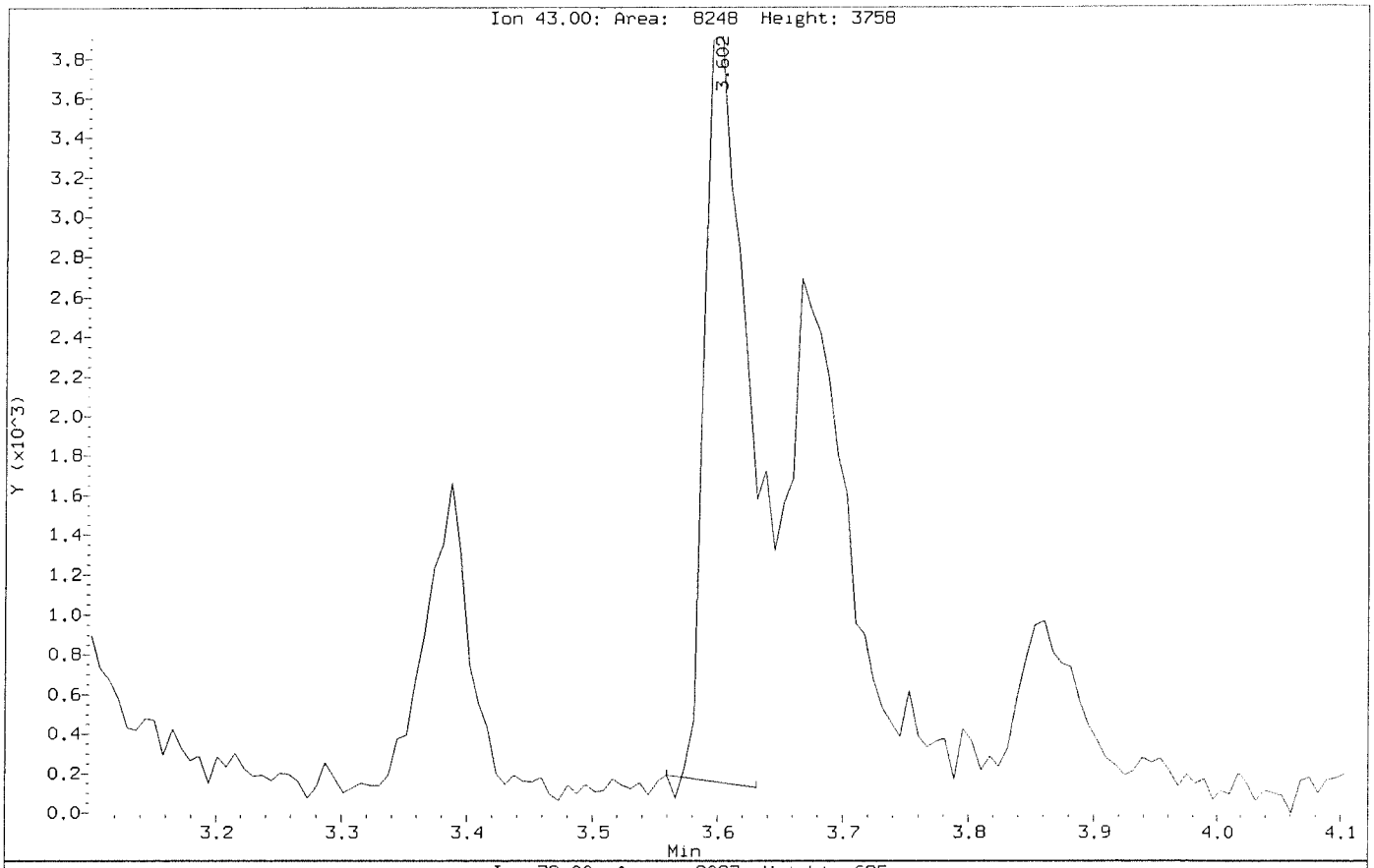
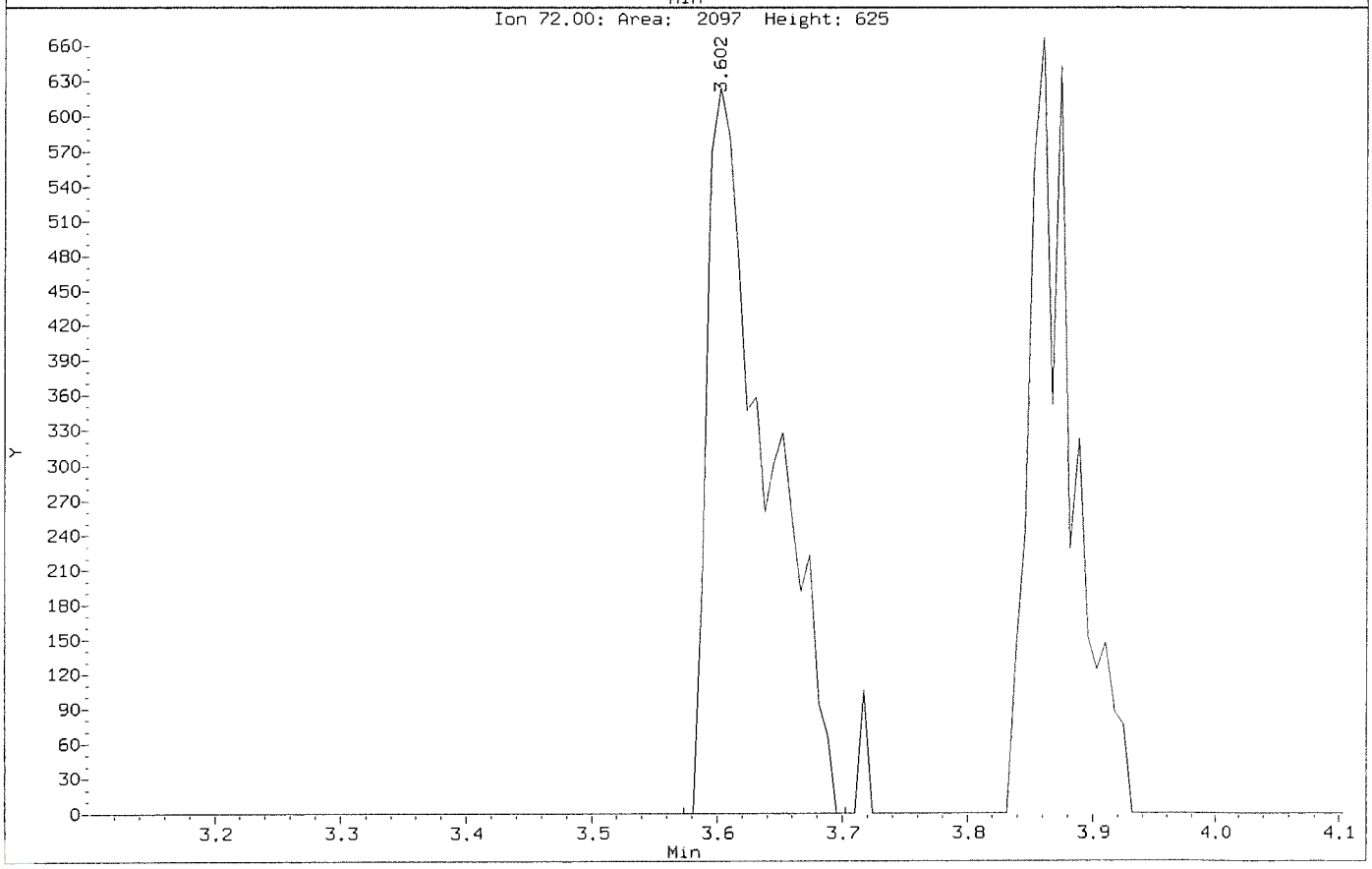
Injection Date: 07-JUL-2020 12:18
Instrument: voa6.i
Client Sample ID: VSTD001

Compound: 2-Butanone
CAS Number: 78-93-3





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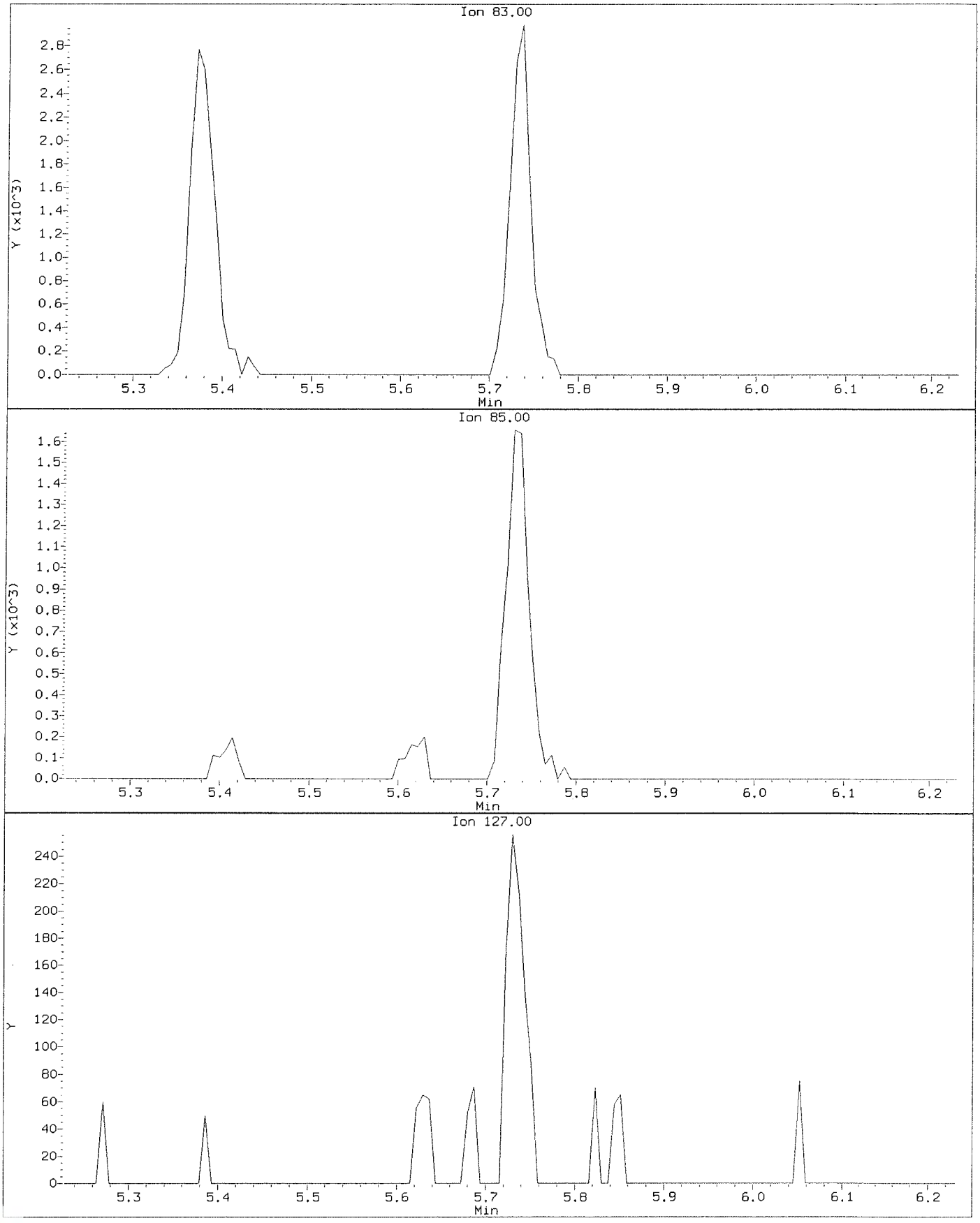
Injection Date: 07-JUL-2020 12:18
Instrument: voa6.i
Client Sample ID: VSTD001

Compound: Bromodichloromethane
CAS Number: 75-27-4



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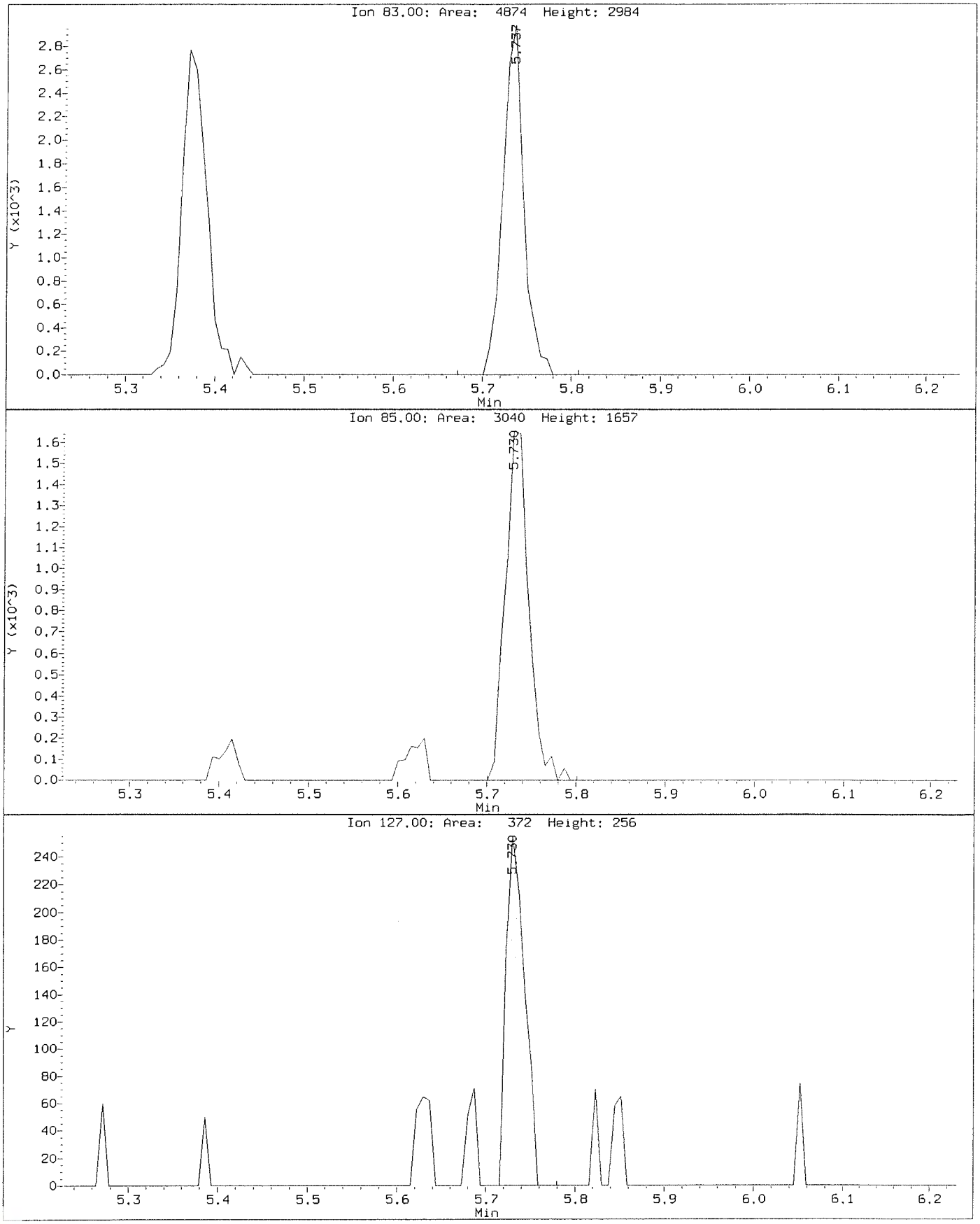
Instrument: voa6.i
Client Sample ID: VSTD001

Compound: Bromodichloromethane
CAS Number: 75-27-4



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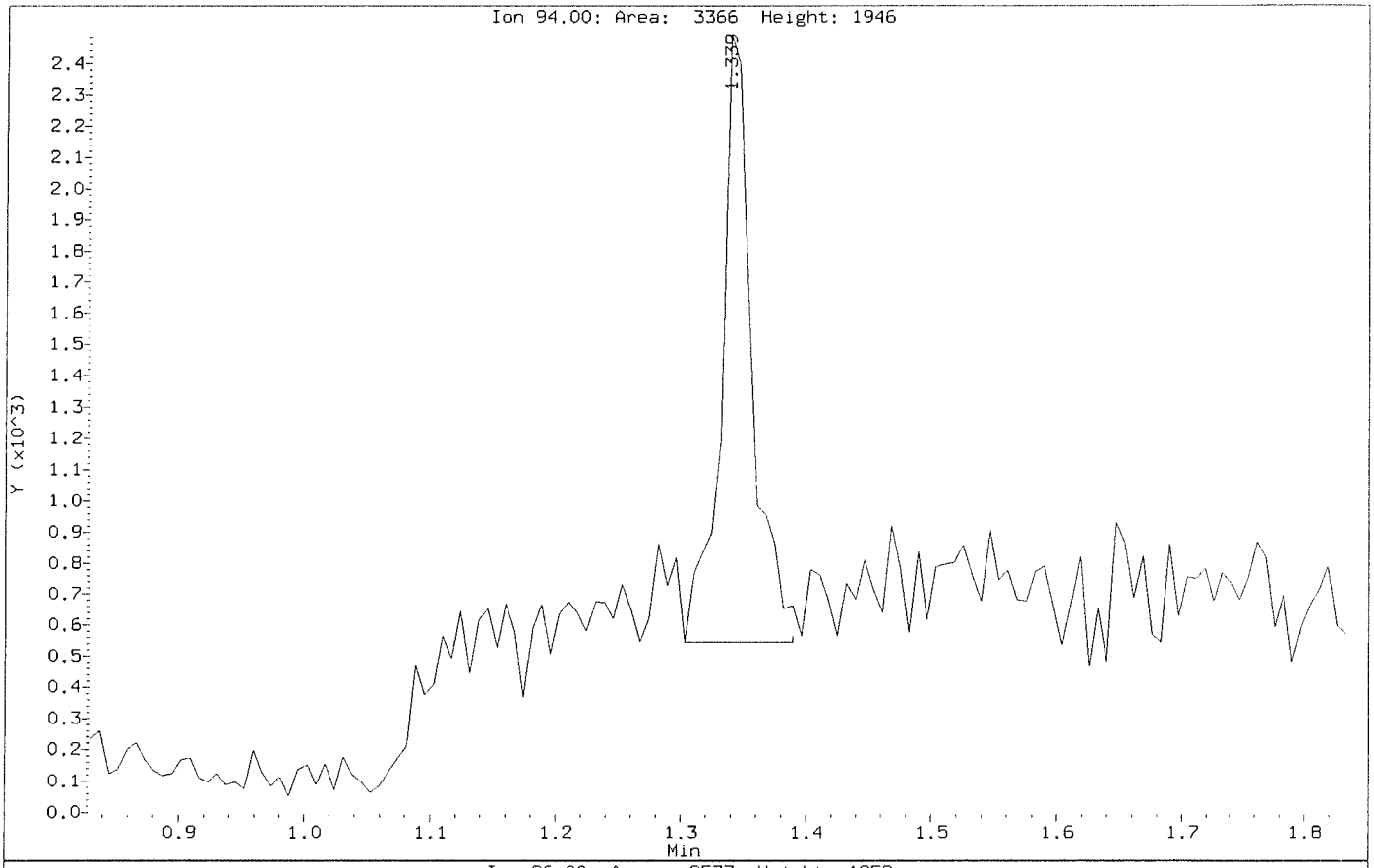
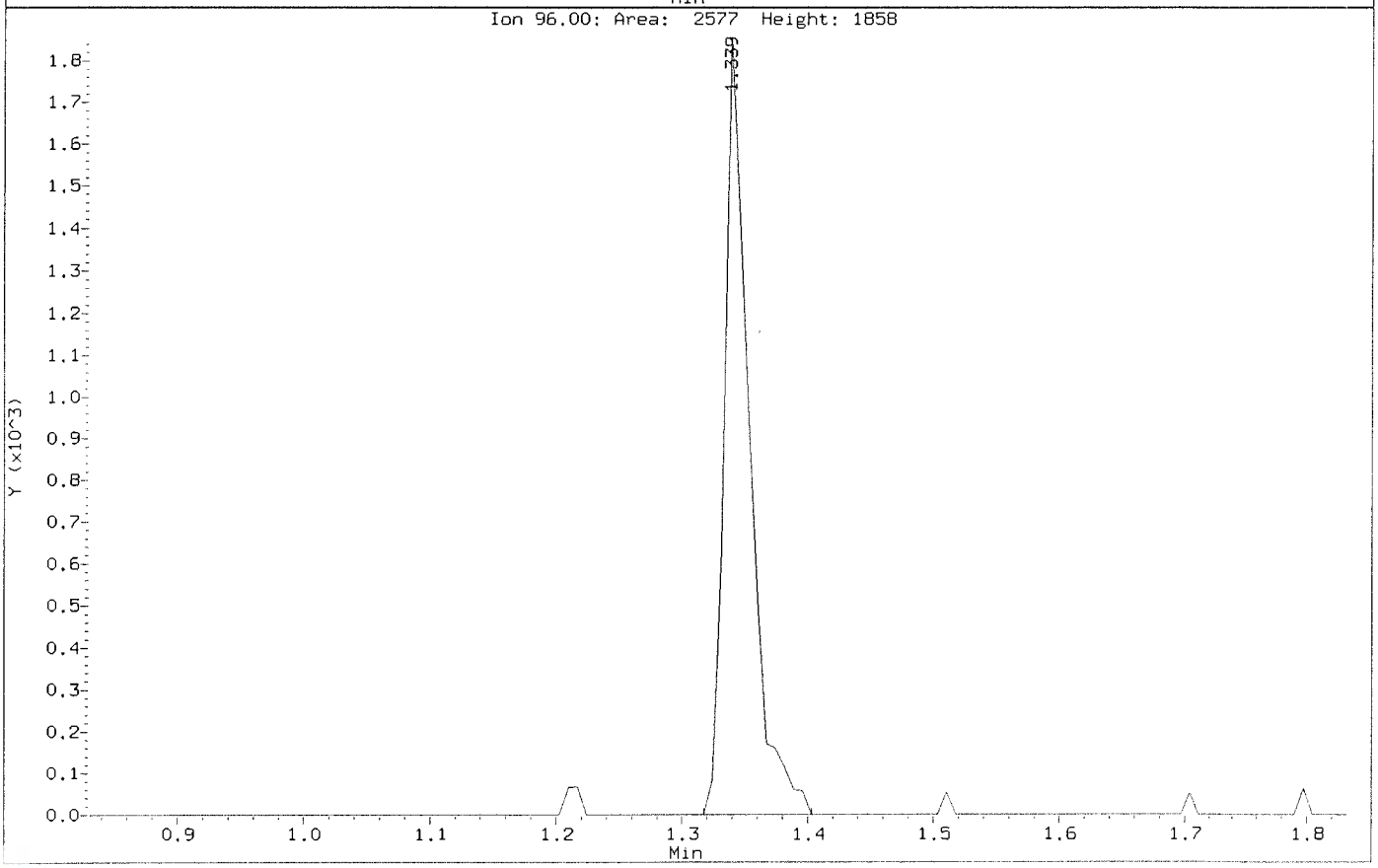
Injection Date: 07-JUL-2020 12:18
Instrument: voa6.i
Client Sample ID: VSTD001

Compound: Bromomethane
CAS Number: 74-83-9





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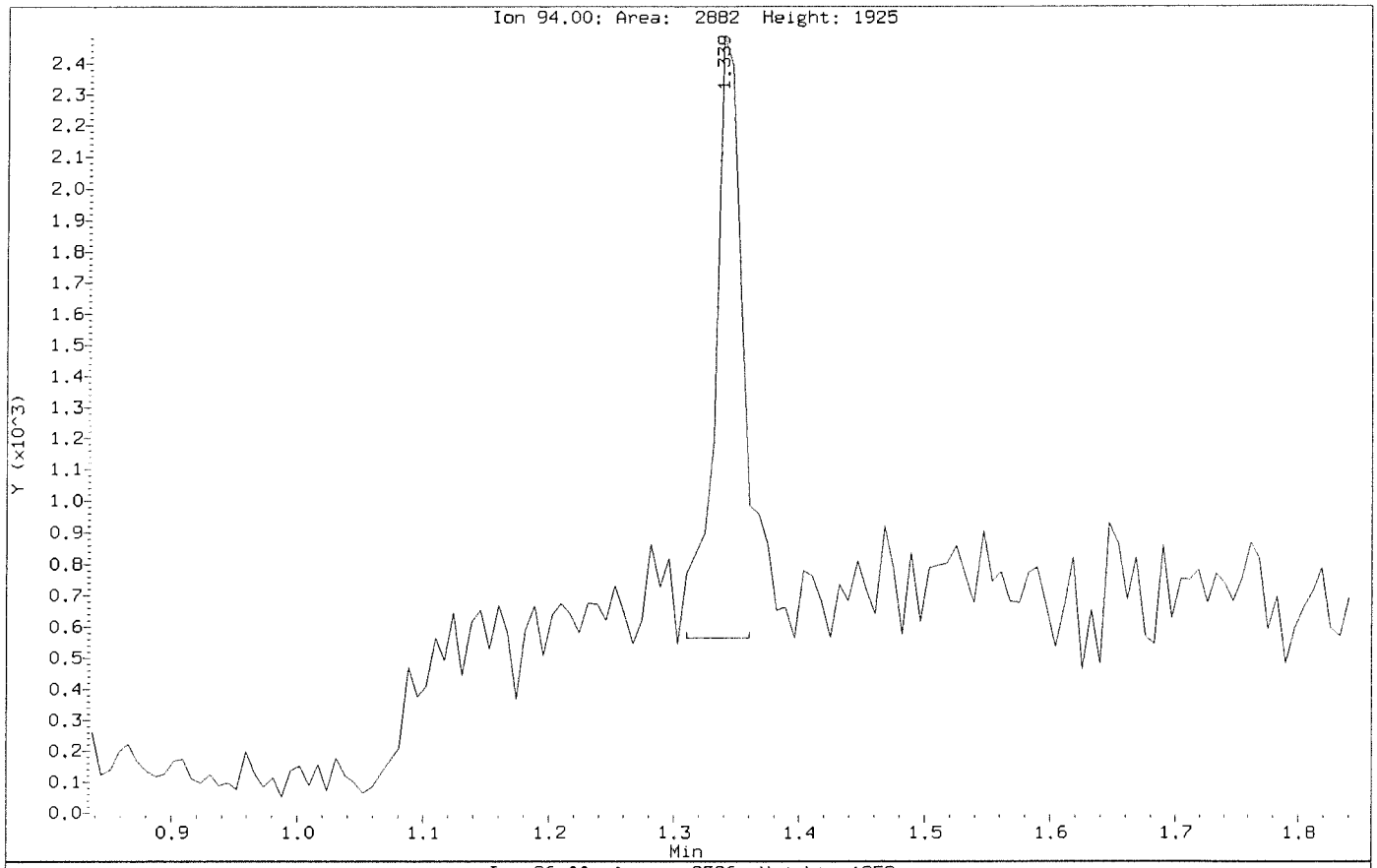
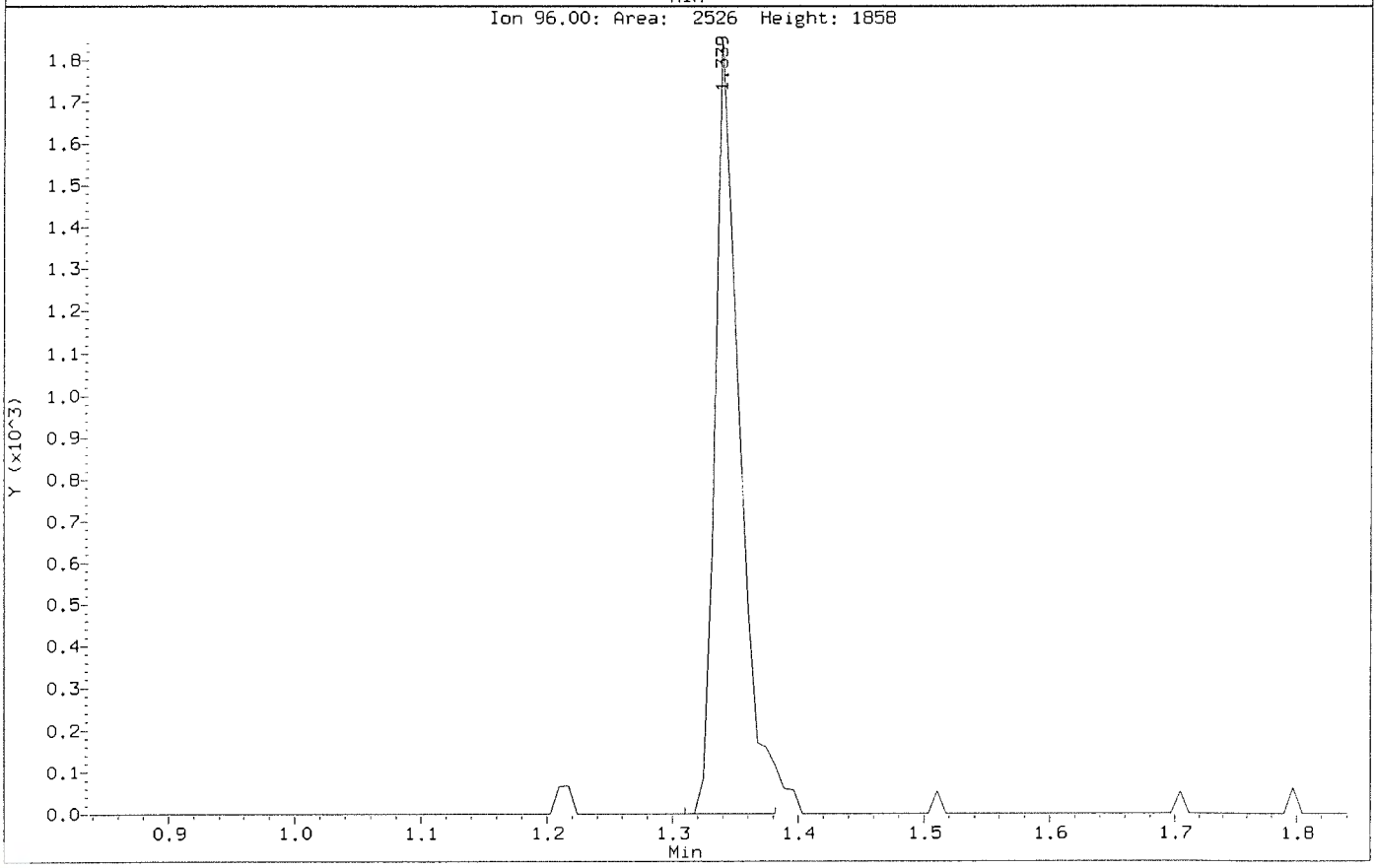
Instrument: voa6.i
Client Sample ID: VSTD001

Compound: Bromomethane
CAS Number: 74-83-9





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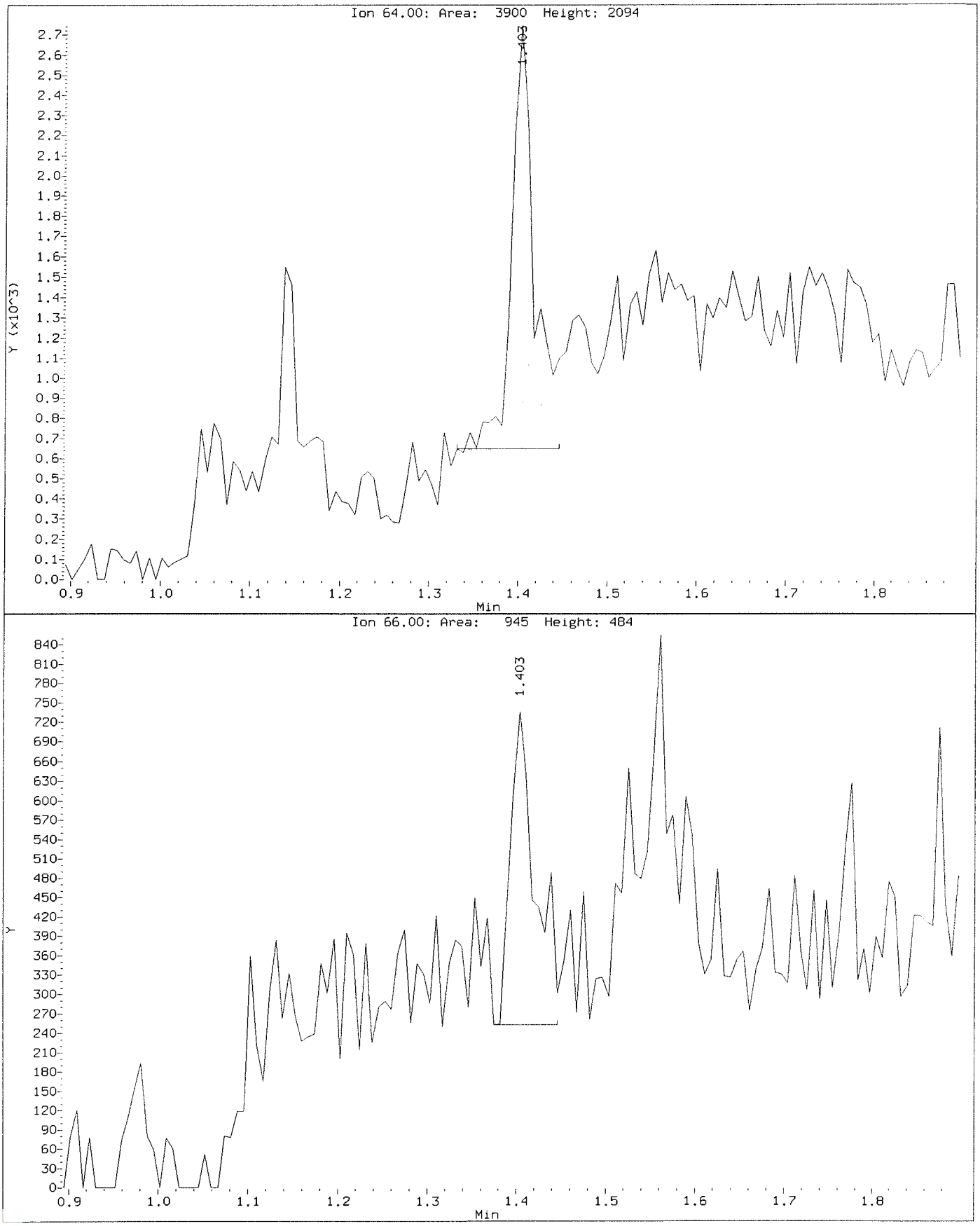
Injection Date: 07-JUL-2020 12:18
Instrument: voa6.i
Client Sample ID: VSTD001

Compound: Chloroethane
CAS Number: 75-00-3



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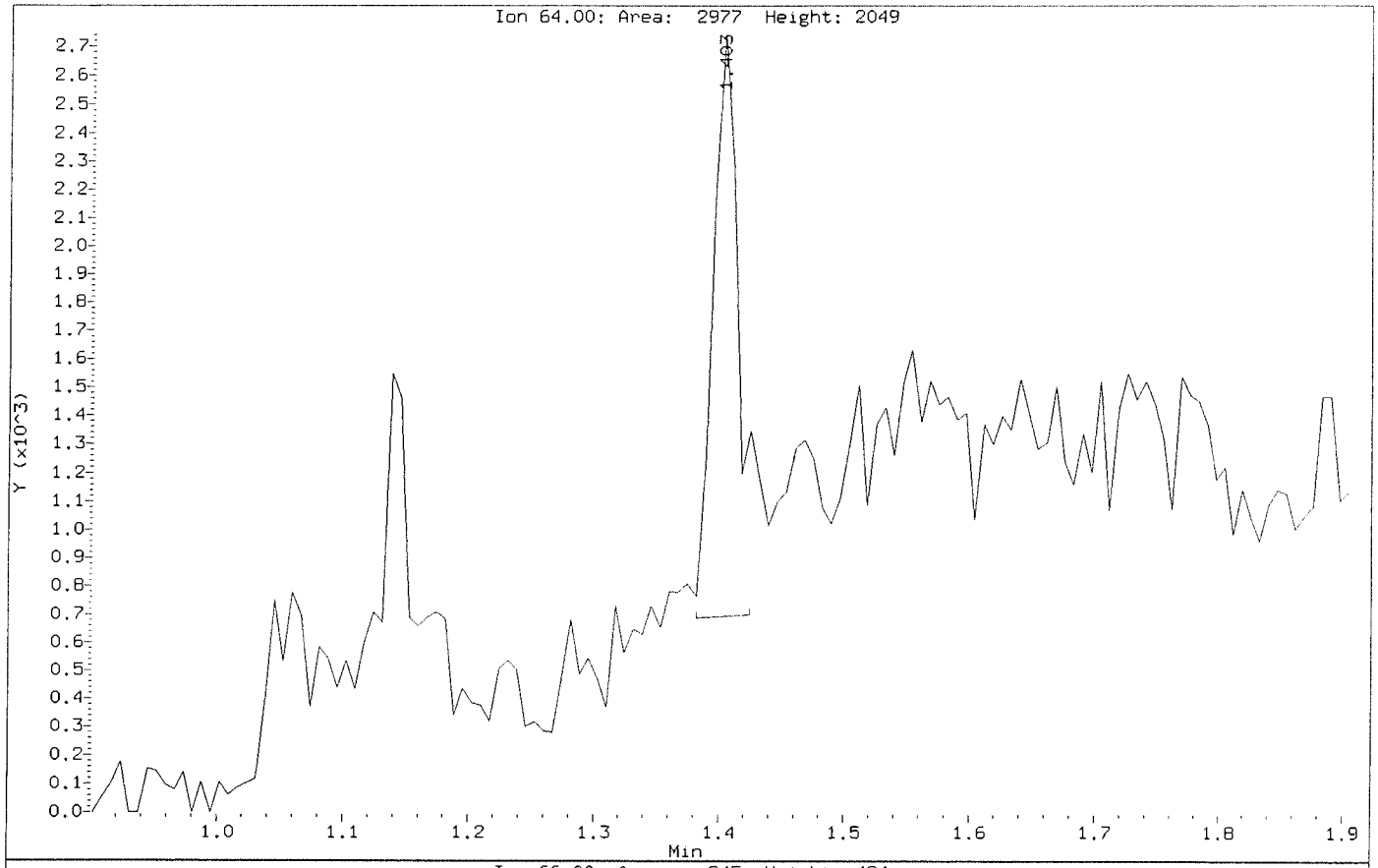
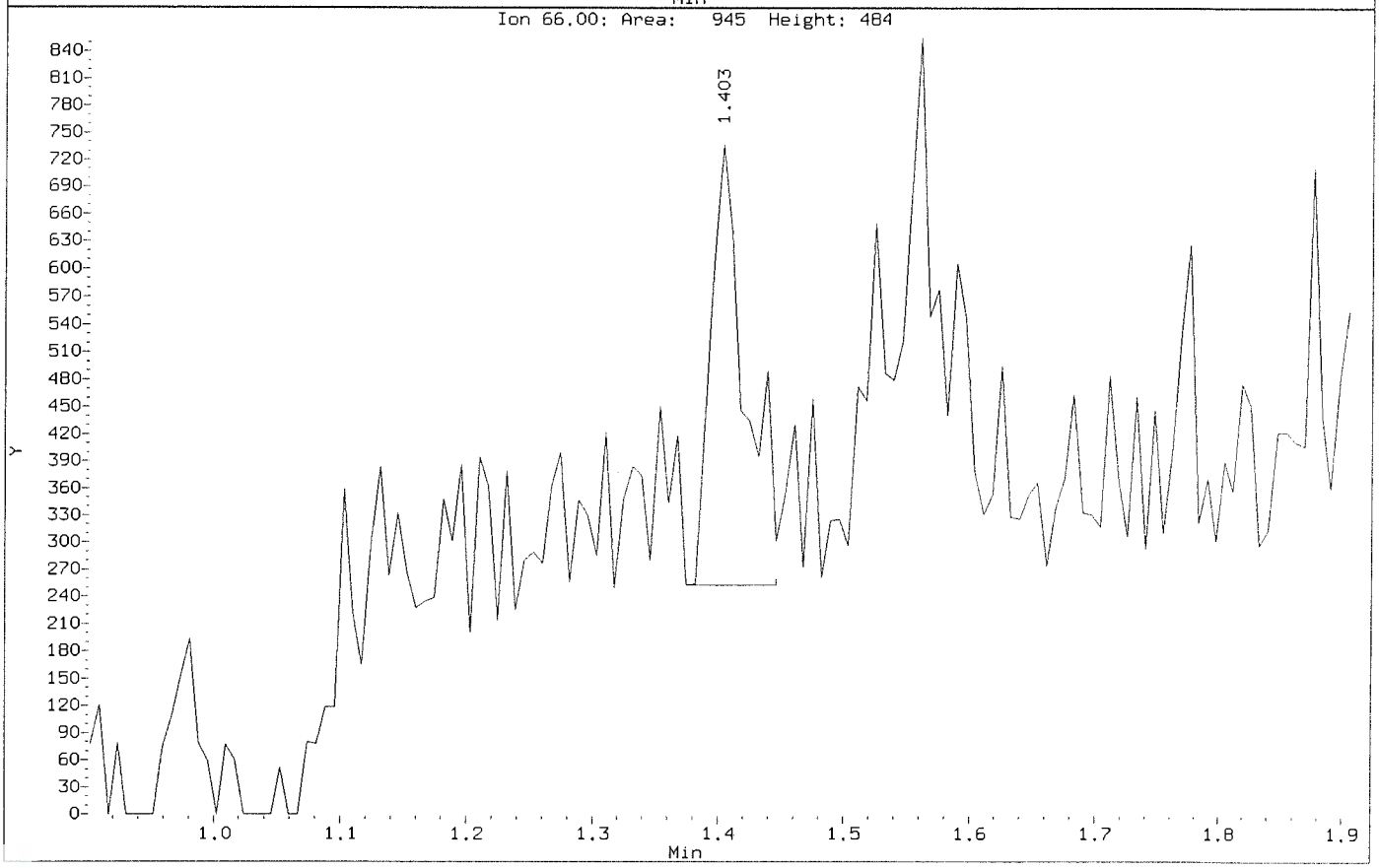
Client Sample ID: VSTD001

Compound: Chloroethane
CAS Number: 75-00-3





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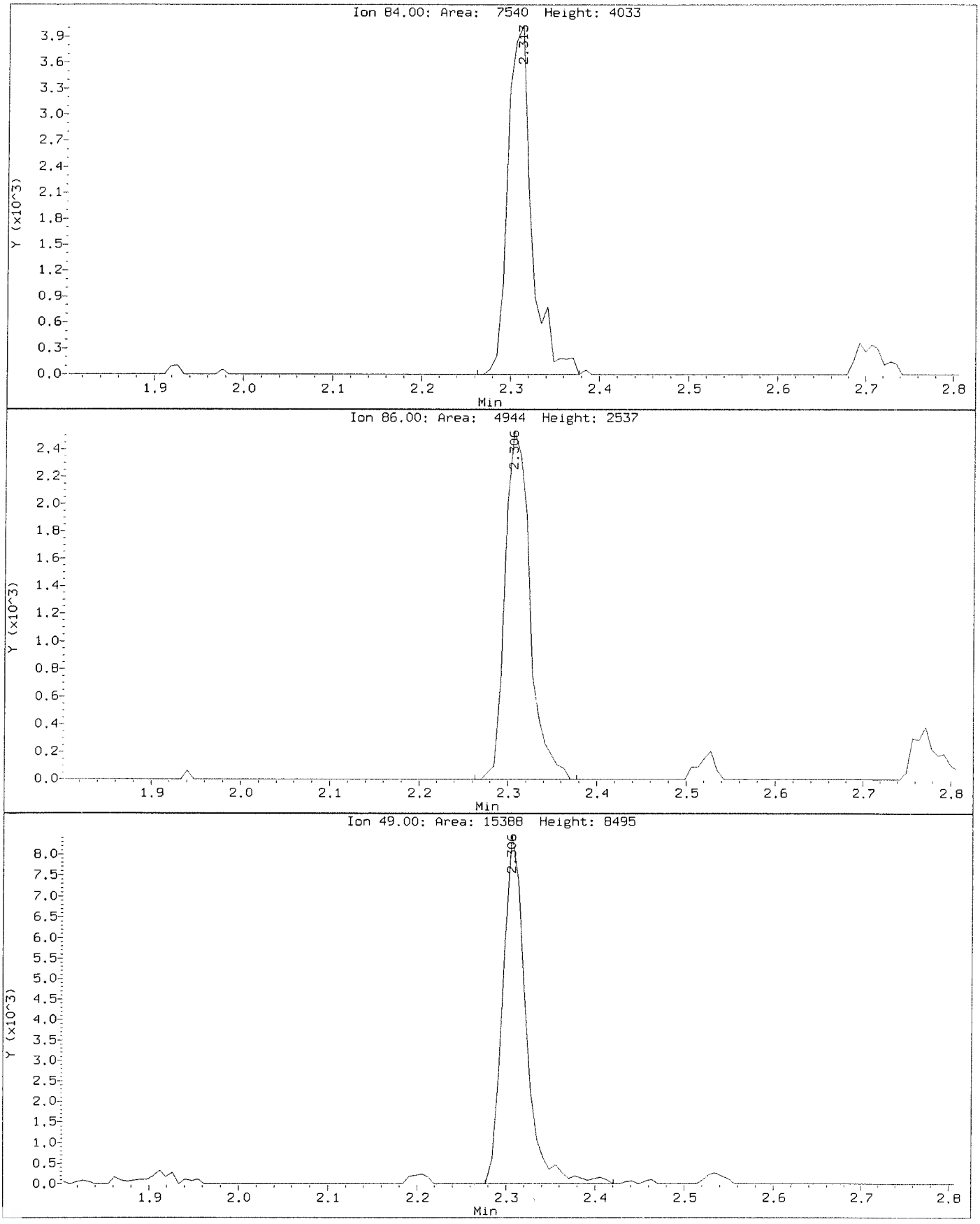
Injection Date: 07-JUL-2020 12:18
Instrument: voa6.i
Client Sample ID: VSTD001

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



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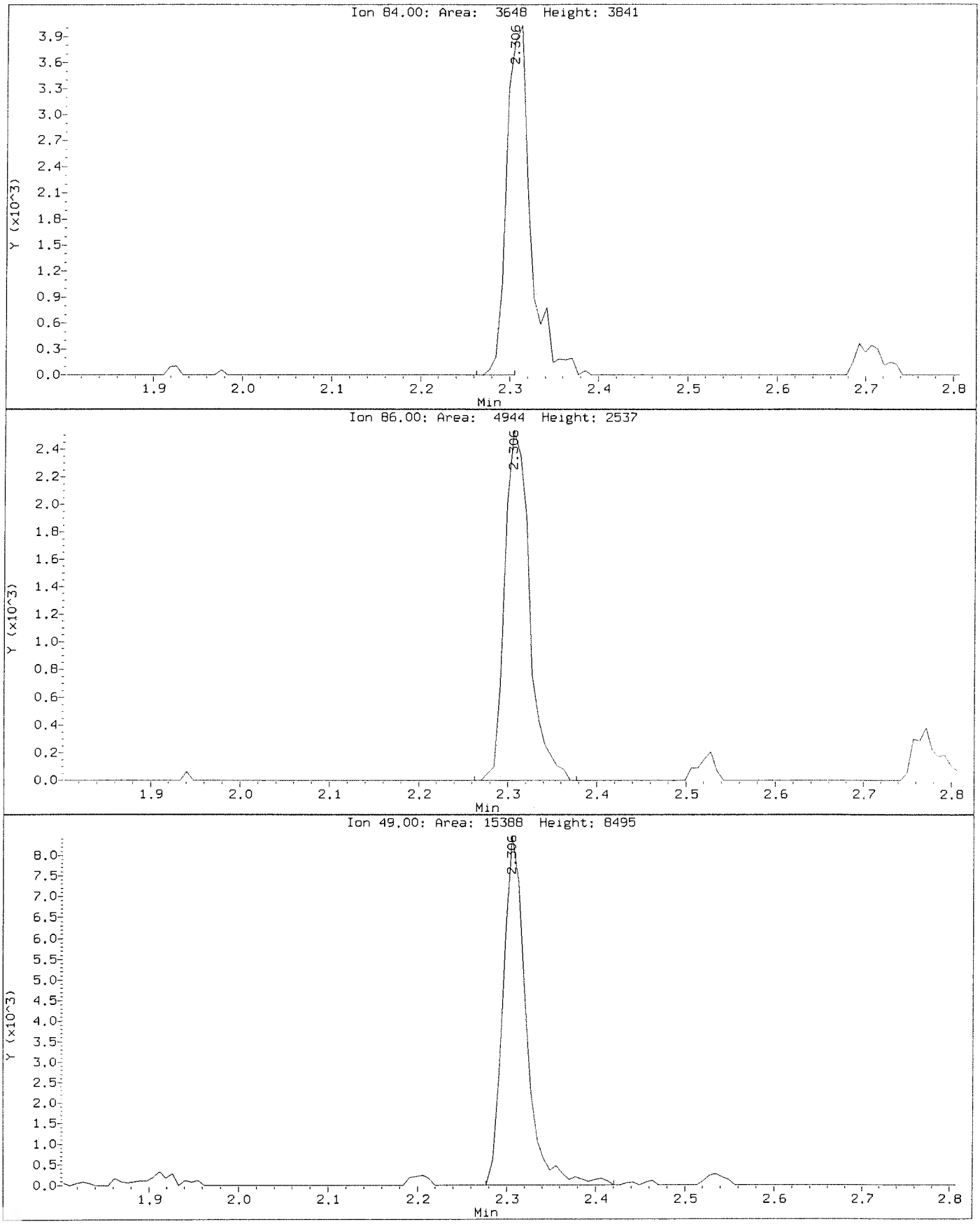
Instrument: voa6.i
Client Sample ID: VSTD001

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



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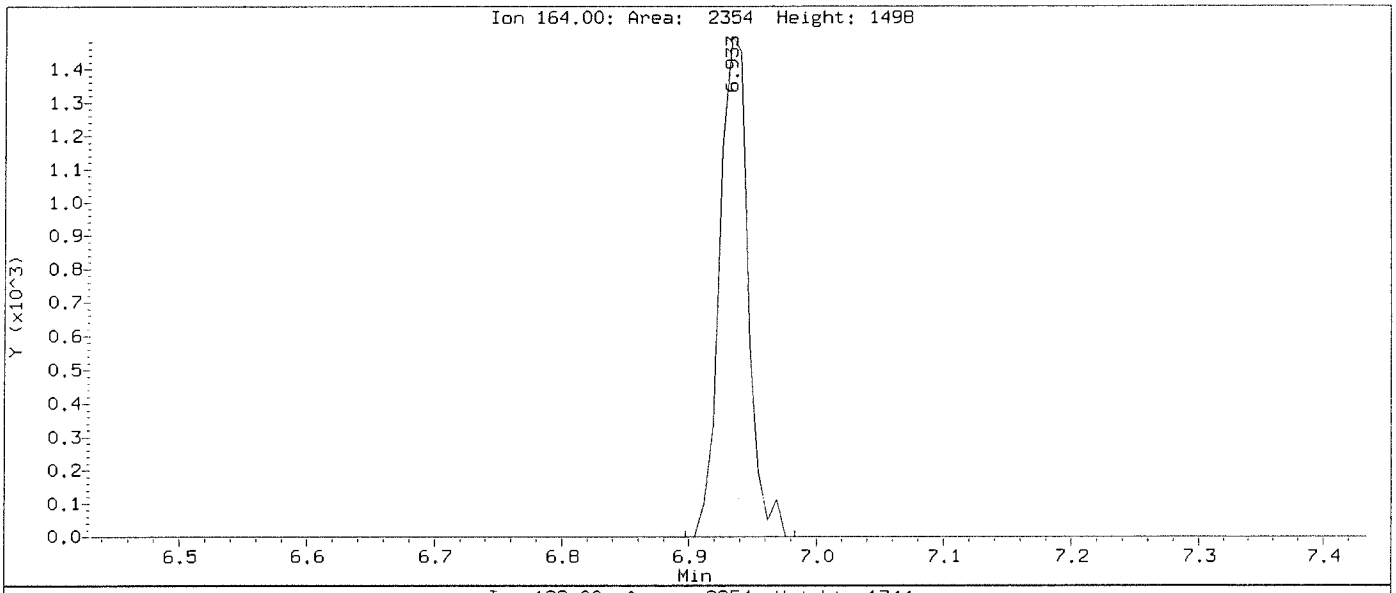
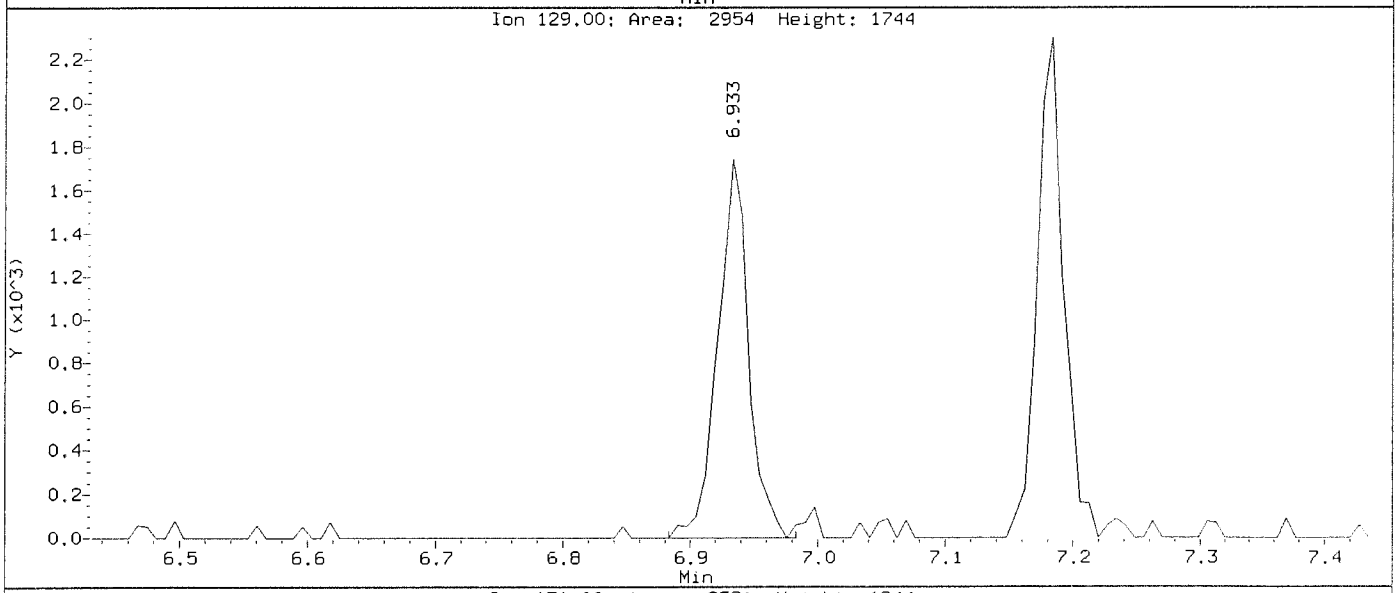
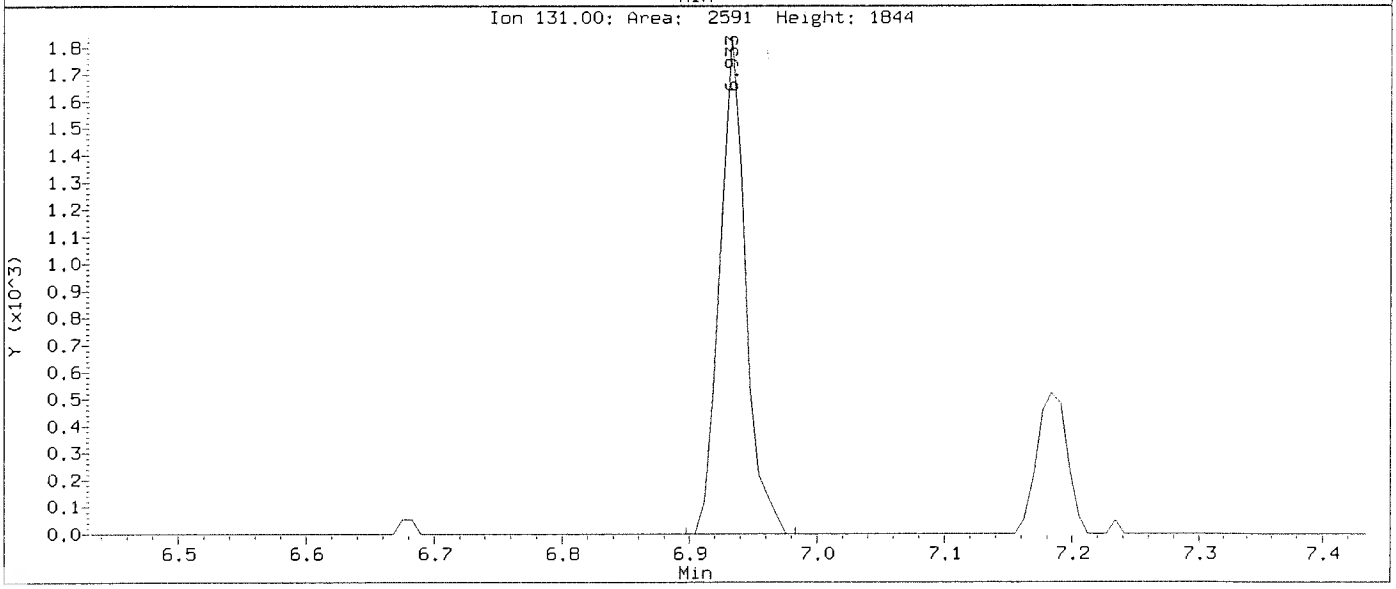
Injection Date: 07-JUL-2020 12:18
Instrument: voa6.i
Client Sample ID: VSTD001

Compound: Tetrachloroethene
CAS Number: 127-18-4







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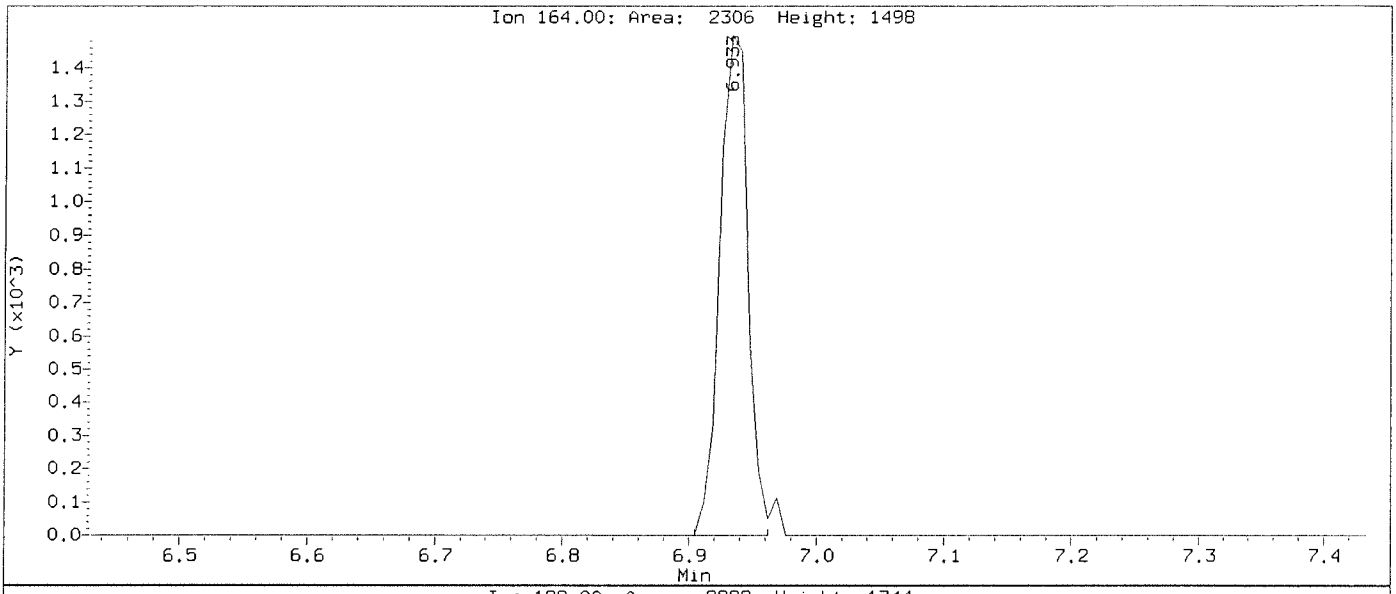
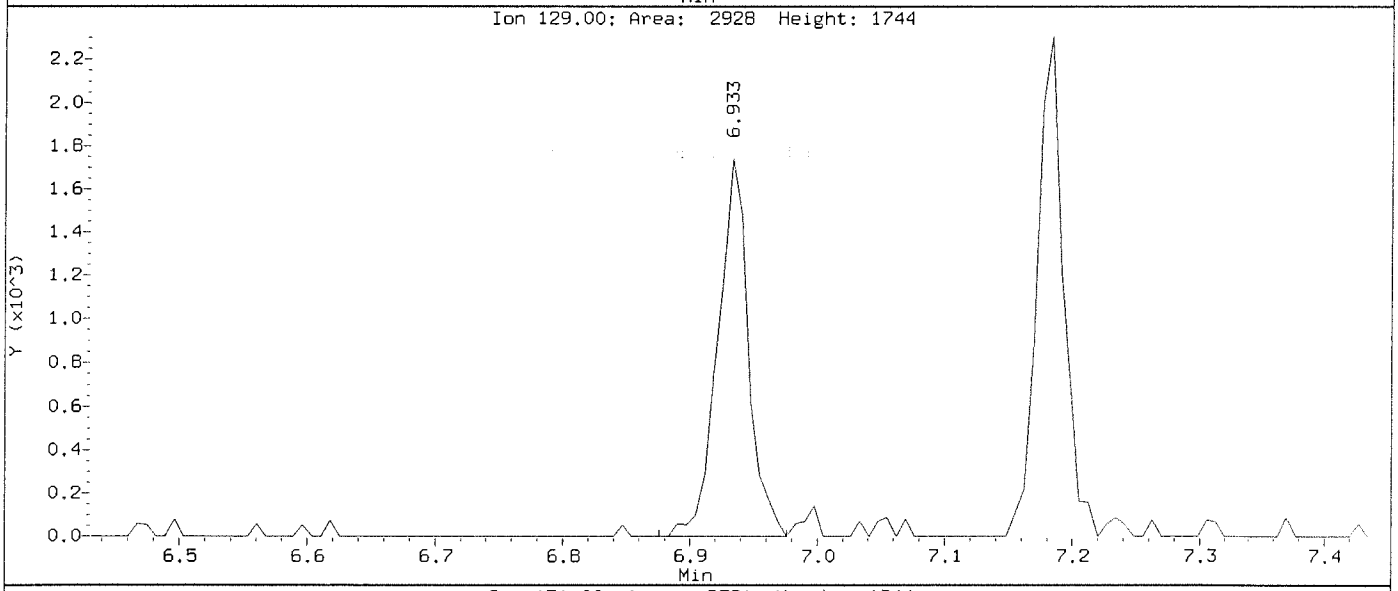
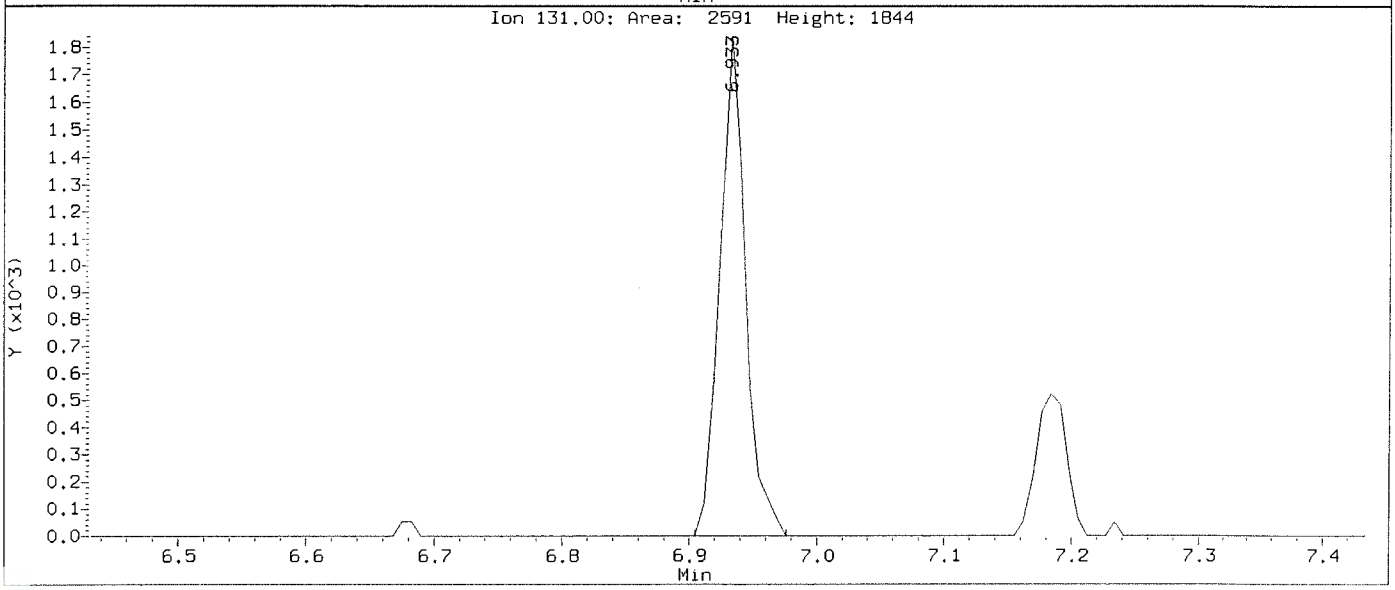
Client Sample ID: VSTD001

Compound: Tetrachloroethene
CAS Number: 127-18-4







Data File: \\nahstws005\Target\chem\voa6.i\X200707.b\X070705.D Page 1
Report Date: 12-Aug-2020 15:35

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200707.b\X070705.D
Lab Smp Id: VSTD002 Client Smp ID: VSTD002
Inj Date : 07-JUL-2020 12:42
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\X200707.b\8260W.m
Meth Date : 12-Aug-2020 15:35 voa6.i Quant Type: ISTD
Cal Date : 07-JUL-2020 12:18 Cal File: X070704.D
Als bottle: 6 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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

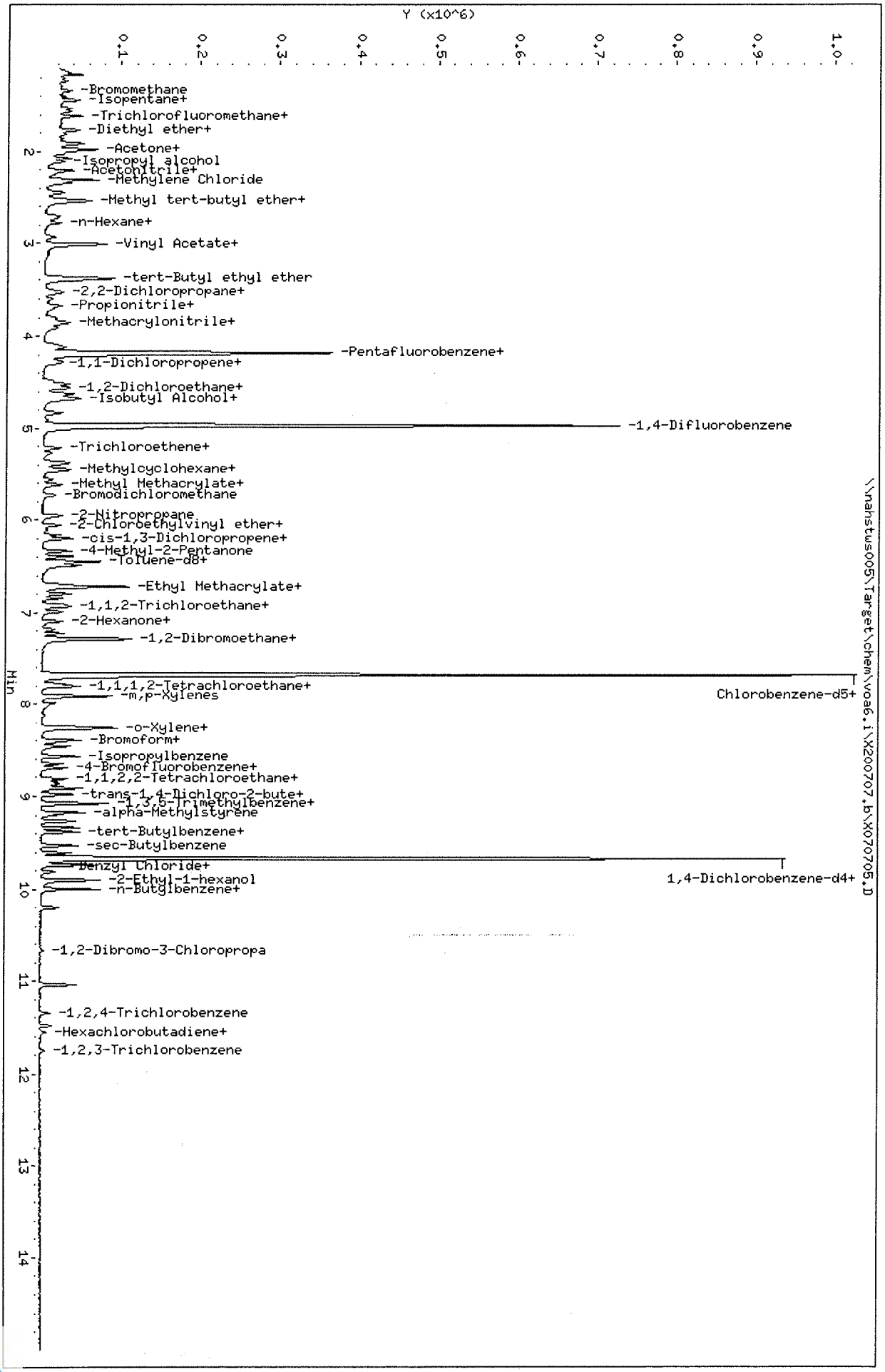
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
*	1 Pentafluorobenzene	168	4.189	4.189	(1.000)	287329	50.0000	
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	487637	50.0000	
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	437656	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	208366	50.0000	
$	30 Dibromofluoromethane	113	4.110	4.110	(0.981)	6445	2.00000	1.19(a)
$	35 1,2-Dichloroethane-d4	65	4.483	4.483	(1.070)	8551	2.00000	1.32(a)
$	48 Toluene-d8	98	6.395	6.395	(0.834)	22164	2.00000	1.92(a)
$	69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	8990	2.00000	1.11(a)
	60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	6538	2.00000	1.94(a)
	31 1,1,1-Trichloroethane	97	4.096	4.096	(0.978)	9877	2.00000	1.87(a)
	68 1,1,2,2-Tetrachloroethane	83	8.845	8.845	(0.915)	8164	2.00000	1.98(a)
	53 1,1,2-Trichloroethane	83	6.847	6.847	(0.893)	5459	2.00000	1.97(a)
	22 1,1-Dichloroethane	63	2.929	2.929	(0.699)	14621	2.00000	1.79(a)
	11 1,1-Dichloroethene	96	1.919	1.919	(0.458)	4974	2.00000	1.86(a)
	32 1,1-Dichloropropene	75	4.290	4.290	(0.863)	9379	2.00000	1.95(a)
	93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.215)	1800	2.00000	4.21(a)
	71 1,2,3-Trichloropropane	75	8.874	8.874	(0.918)	7810	2.00000	2.15(aM)
	90 1,2,4-Trichlorobenzene	180	11.345	11.345	(1.173)	3441	2.00000	3.88(a)
	79 1,2,4-Trimethylbenzene	105	9.382	9.382	(0.970)	22388	2.00000	1.82(a)
	89 1,2-Dibromo-3-Chloropropane	155	10.665	10.665	(1.103)	800	2.00000	0.80(a)
	57 1,2-Dibromoethane	107	7.269	7.269	(0.948)	6908	2.00000	1.96(a)
	88 1,2-Dichlorobenzene	146	9.999	9.999	(1.034)	11639	2.00000	1.91(a)

Data File: \\nahstws005\Target\chem\voa6.i\X200707.b\X070705.D Page 2
Report Date: 12-Aug-2020 15:35

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
33 1,2-Dichloroethane	62	4.562	4.562	(0.918)	11198	2.00000	1.85(a)
42 1,2-Dichloropropane	63	5.443	5.443	(1.095)	8933	2.00000	1.96(aM)
75 1,3,5-Trimethylbenzene	105	9.074	9.074	(0.939)	21445	2.00000	1.80(a)
83 1,3-Dichlorobenzene	146	9.612	9.612	(0.994)	12676	2.00000	1.90(a)
54 1,3-Dichloropropane	76	6.990	6.990	(0.911)	11847	2.00000	2.03(a)
84 1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	12018	2.00000	1.70(a)
26 2,2-Dichloropropane	77	3.516	3.516	(0.839)	8530	2.00000	1.71(a)
24 2-Butanone	43	3.595	3.595	(0.858)	14432	4.00000	(aM)
76 2-Chlorotoluene	91	8.981	8.981	(0.929)	19717	2.00000	1.88(a)
52 2-Hexanone	43	7.097	7.097	(0.925)	19454	4.00000	1.08(a)
77 4-Chlorotoluene	91	9.074	9.074	(0.939)	21540	2.00000	1.81(a)
82 p-Isopropyltoluene	119	9.655	9.655	(0.999)	21205	2.00000	1.78(a)
45 4-Methyl-2-Pentanone	43	6.331	6.331	(0.825)	26164	4.00000	1.33(a)
10 Acetone	43	1.976	1.976	(0.472)	56307	4.00000	(a)
37 Benzene	78	4.519	4.519	(0.909)	24995	2.00000	1.79(a)
74 Bromobenzene	156	8.809	8.809	(0.911)	7514	2.00000	1.89(a)
29 Bromochloromethane	128	3.802	3.802	(0.908)	4515	2.00000	2.26(a)
39 Bromodichloromethane	83	5.729	5.729	(1.153)	9039	2.00000	1.85(a)
66 Bromoform	173	8.415	8.415	(1.097)	4505	2.00000	1.85(Ta)
6 Bromomethane	94	1.338	1.338	(0.320)	4741	2.00000	2.27(a)
19 Carbon Disulfide	76	2.069	2.069	(0.494)	32636	4.00000	3.73(a)
34 Carbon Tetrachloride	117	4.268	4.268	(0.859)	8498	2.00000	1.82(a)
59 Chlorobenzene	112	7.699	7.699	(1.004)	16593	2.00000	1.86(a)
7 Chloroethane	64	1.403	1.403	(0.335)	6029	2.00000	0.50(aM)
28 Chloroform	83	3.910	3.910	(0.933)	12010	2.00000	1.90(a)
3 Chloromethane	50	1.081	1.081	(0.258)	11069	2.00000	1.87(a)
27 cis-1,2-Dichloroethene	96	3.537	3.537	(0.844)	6832	2.00000	1.81(a)
46 cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	11034	2.00000	1.87(a)
55 Dibromochloromethane	129	7.183	7.183	(0.937)	7177	2.00000	1.99(a)
44 Dibromomethane	93	5.565	5.565	(1.120)	4711	2.00000	1.92(a)
2 Dichlorodifluoromethane	85	0.973	0.973	(0.232)	6179	2.00000	1.77(a)
61 Ethylbenzene	106	7.807	7.807	(1.018)	8638	2.00000	1.83(a)
91 Hexachlorobutadiene	225	11.481	11.481	(1.187)	2378	2.00000	3.64(a)
67 Isopropylbenzene	105	8.566	8.566	(1.117)	25615	2.00000	1.82(a)
62 m,p-Xylenes	106	7.907	7.907	(1.031)	21309	4.00000	3.75(a)
17 Methylene Chloride	84	2.305	2.305	(0.550)	5166	2.00000	1.64(aM)
87 n-Butylbenzene	91	9.999	9.999	(1.034)	18691	2.00000	1.76(a)
73 n-Propylbenzene	91	8.917	8.917	(0.922)	30197	2.00000	1.77(a)
92 Naphthalene	128	11.553	11.553	(1.195)	5731	2.00000	3.11(a)
63 o-Xylene	106	8.244	8.244	(1.075)	10176	2.00000	1.83(a)
81 sec-Butylbenzene	105	9.526	9.526	(0.985)	25143	2.00000	1.79(a)
64 Styrene	104	8.265	8.265	(1.078)	18673	2.00000	1.93(a)
78 tert-Butylbenzene	119	9.340	9.340	(0.966)	17498	2.00000	1.83(a)
56 Tetrachloroethene	164	6.933	6.933	(0.904)	5118	2.00000	1.91(aM)
50 Toluene	91	6.453	6.453	(0.841)	26607	2.00000	1.90(a)
20 trans-1,2-Dichloroethene	96	2.535	2.535	(0.605)	5817	2.00000	1.85(a)
51 trans-1,3-Dichloropropene	75	6.689	6.689	(1.346)	9828	2.00000	1.85(a)
38 Trichloroethene	130	5.214	5.214	(1.049)	6294	2.00000	1.73(a)
8 Trichlorofluoromethane	101	1.560	1.560	(0.373)	8621	2.00000	1.73(a)
5 Vinyl Chloride	62	1.138	1.138	(0.272)	9523	2.00000	1.88(a)

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.



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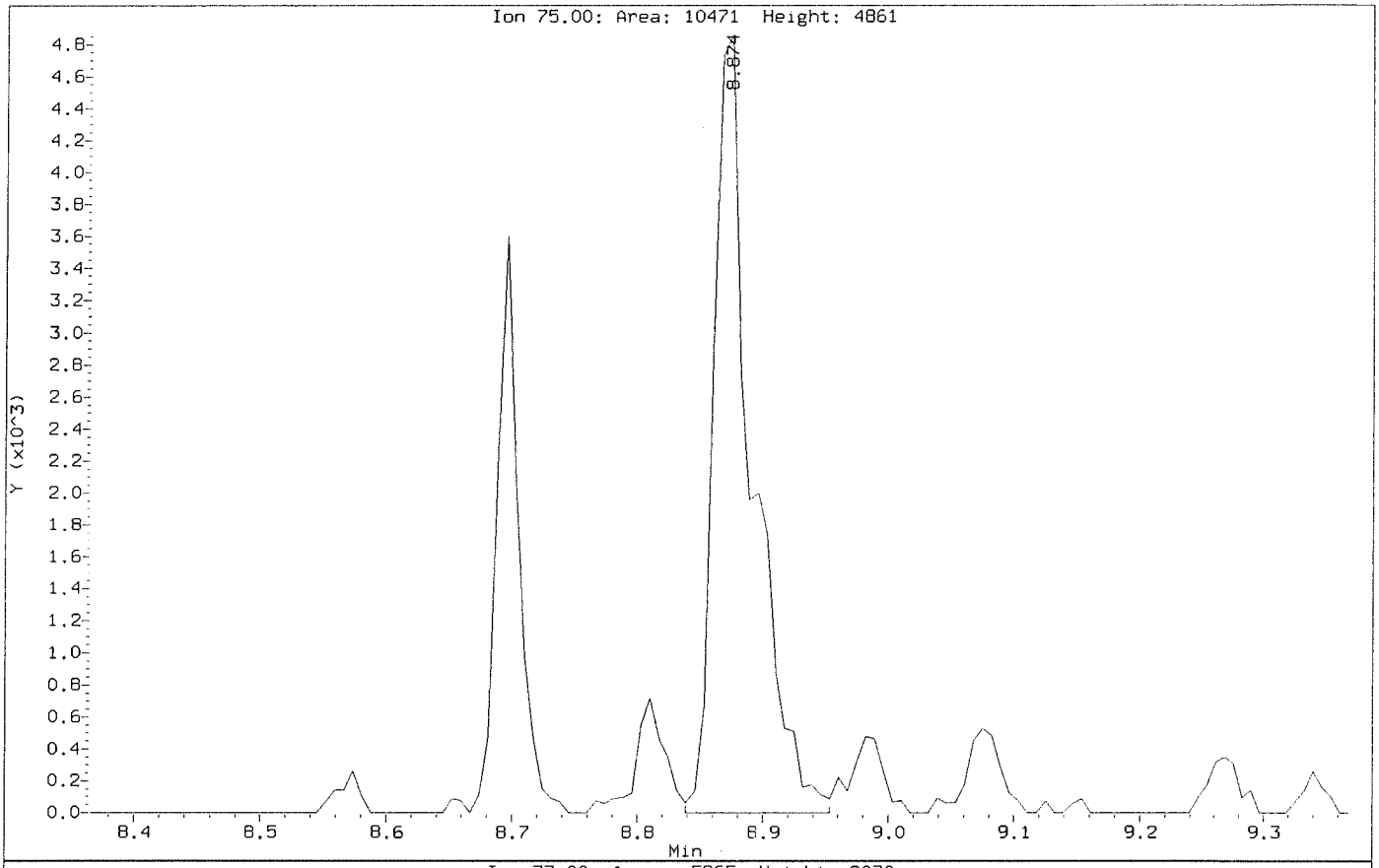
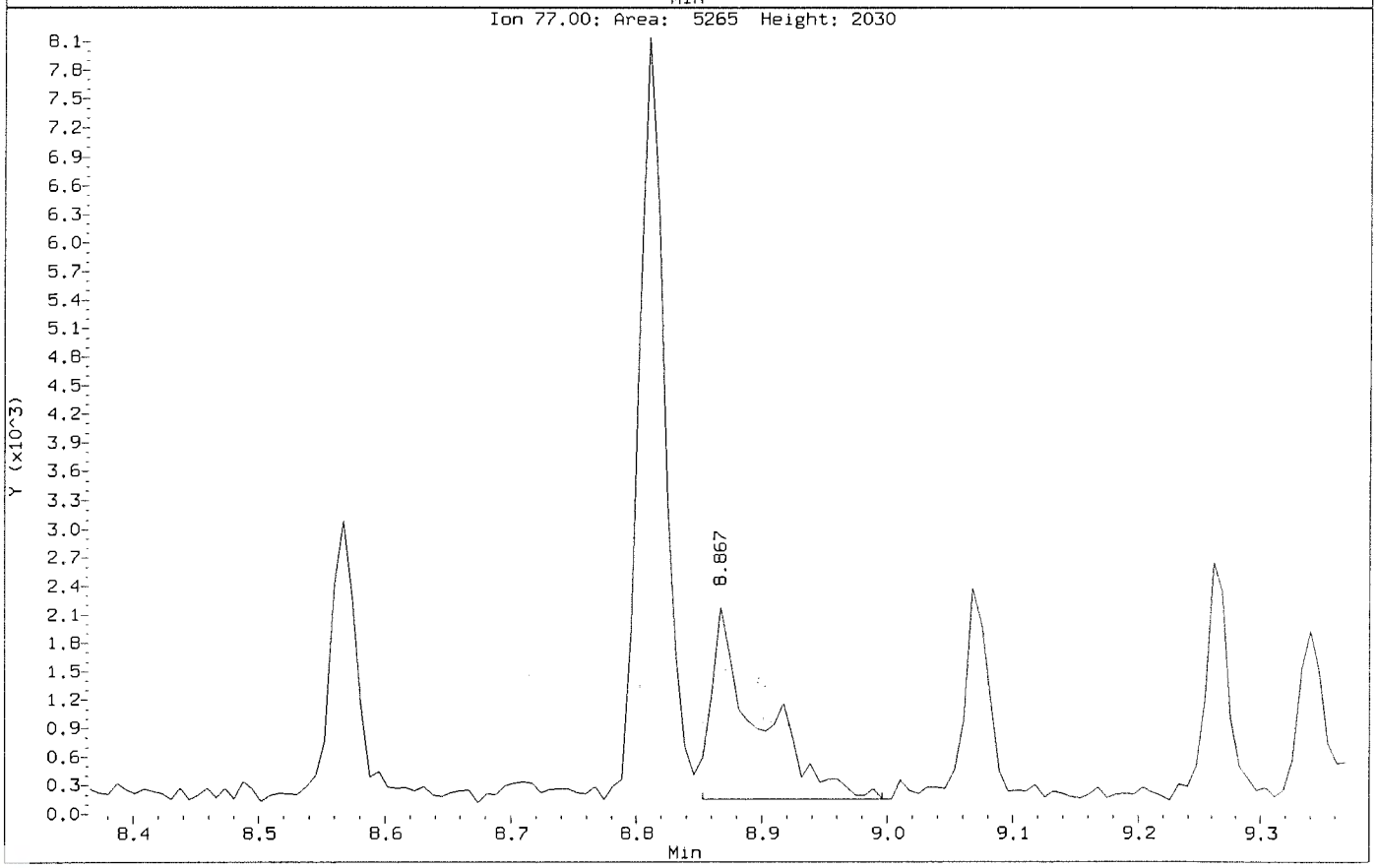
Client ID: VSTD002
Sample Info: VSTD002;VSTD002;1;4;
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\nahstws005\Target\chem\voa6.i\X200707.b\Before\X070705.D
Injection Date: 07-JUL-2020 12:42
Instrument: voa6.i
Client Sample ID: VSTD002

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





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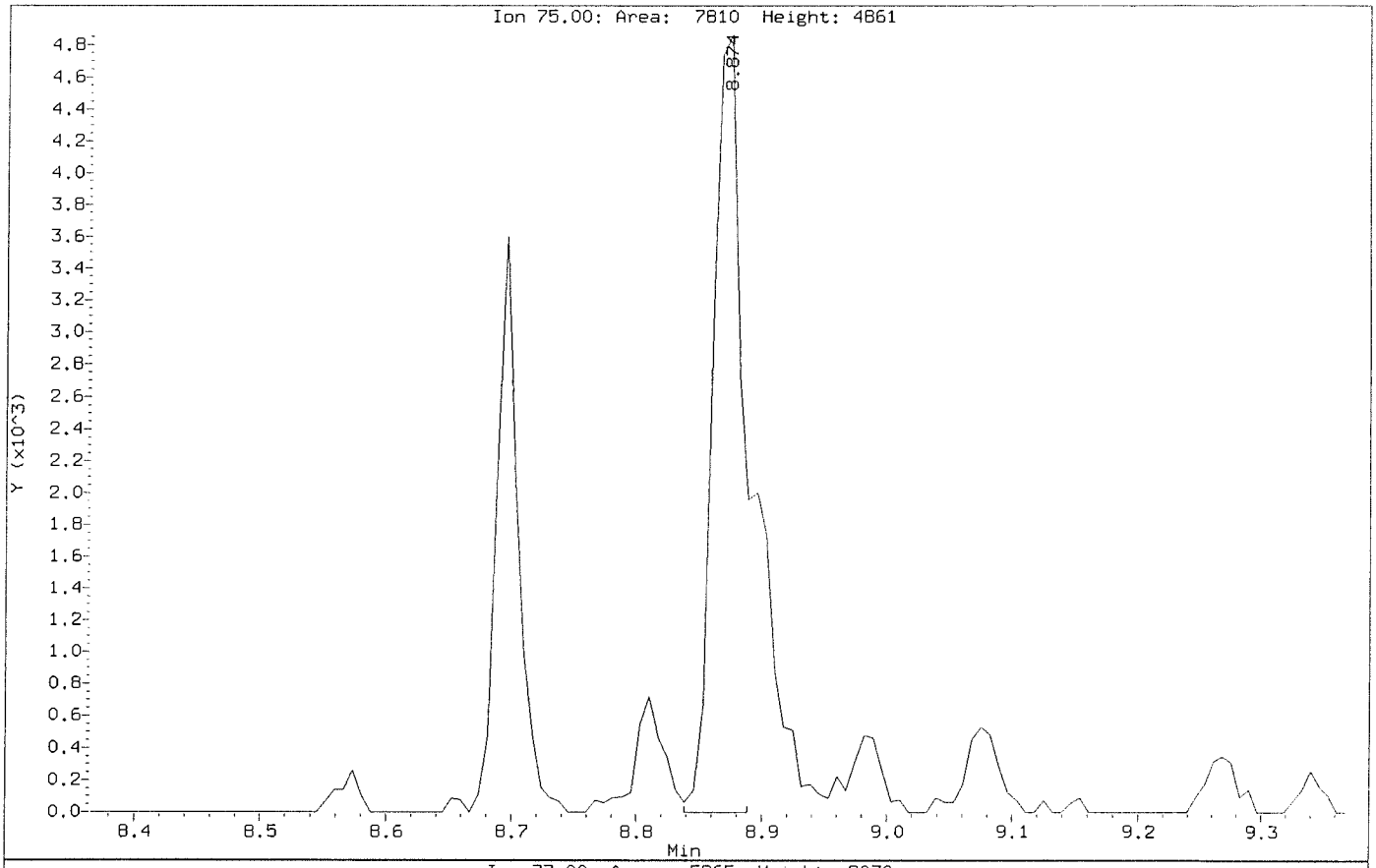
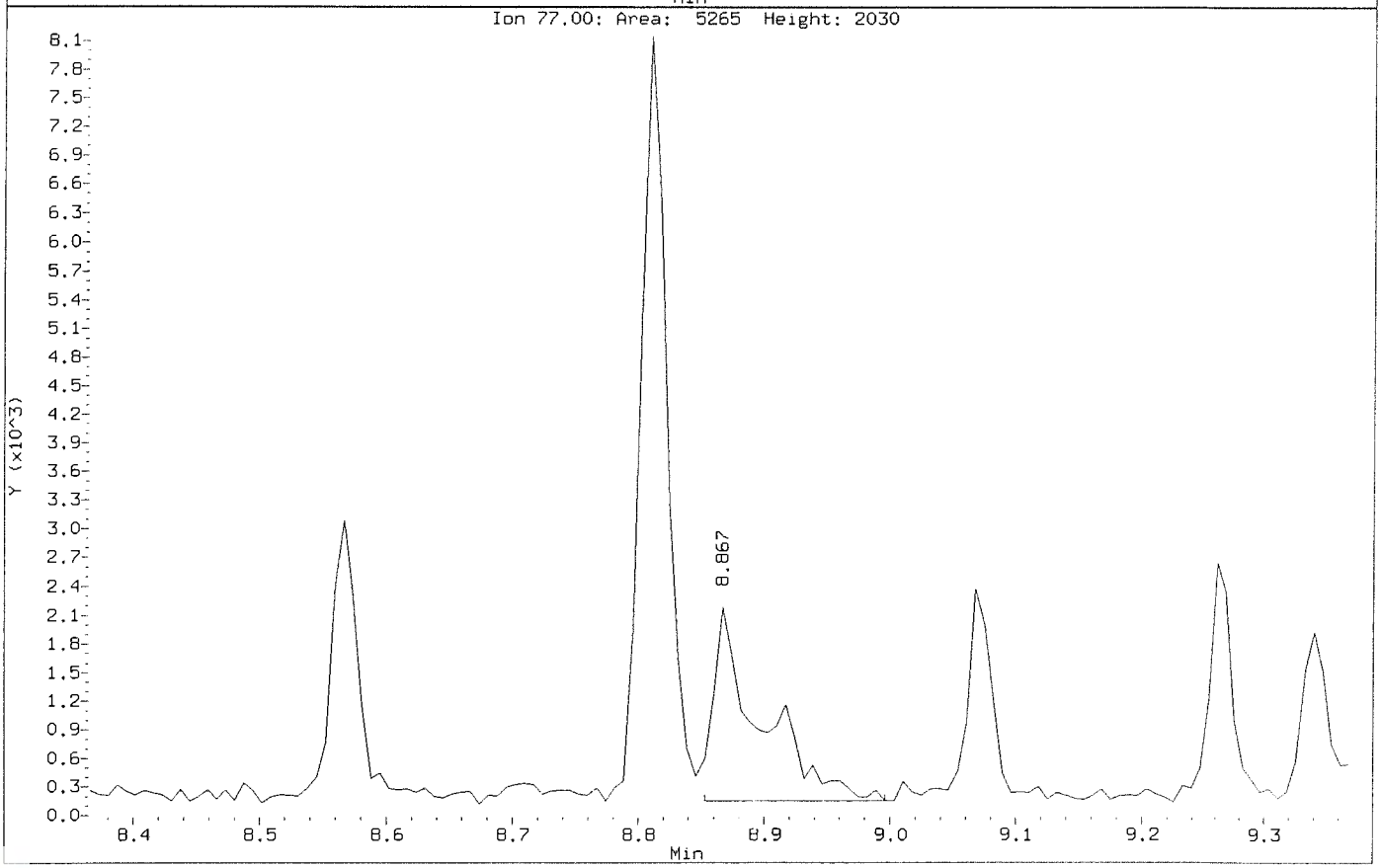
Instrument: voa6.i
Client Sample ID: VSTD002

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





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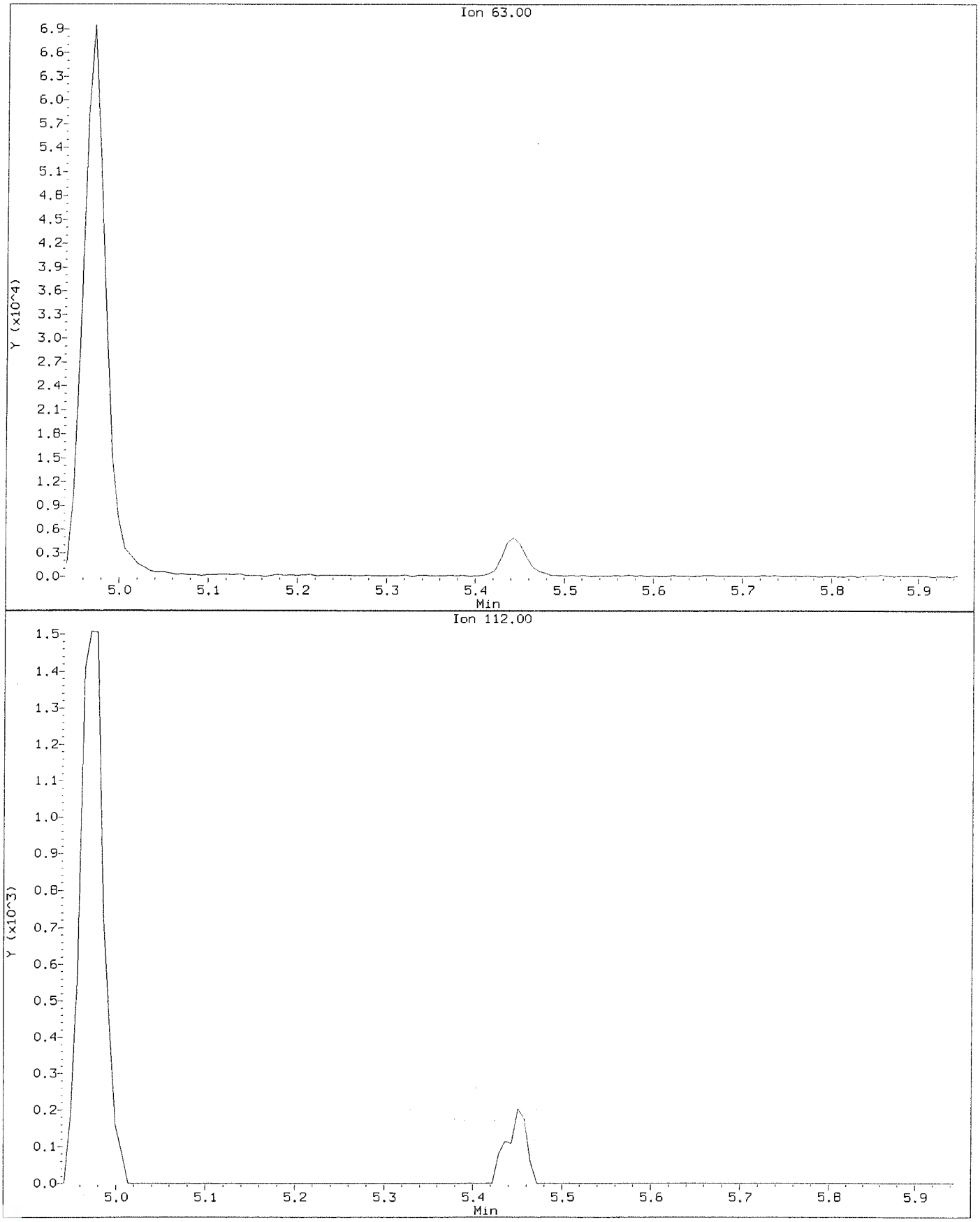
Instrument: voa6.i
Client Sample ID: VSTD002

Compound: 1,2-Dichloropropane
CAS Number: 78-87-5



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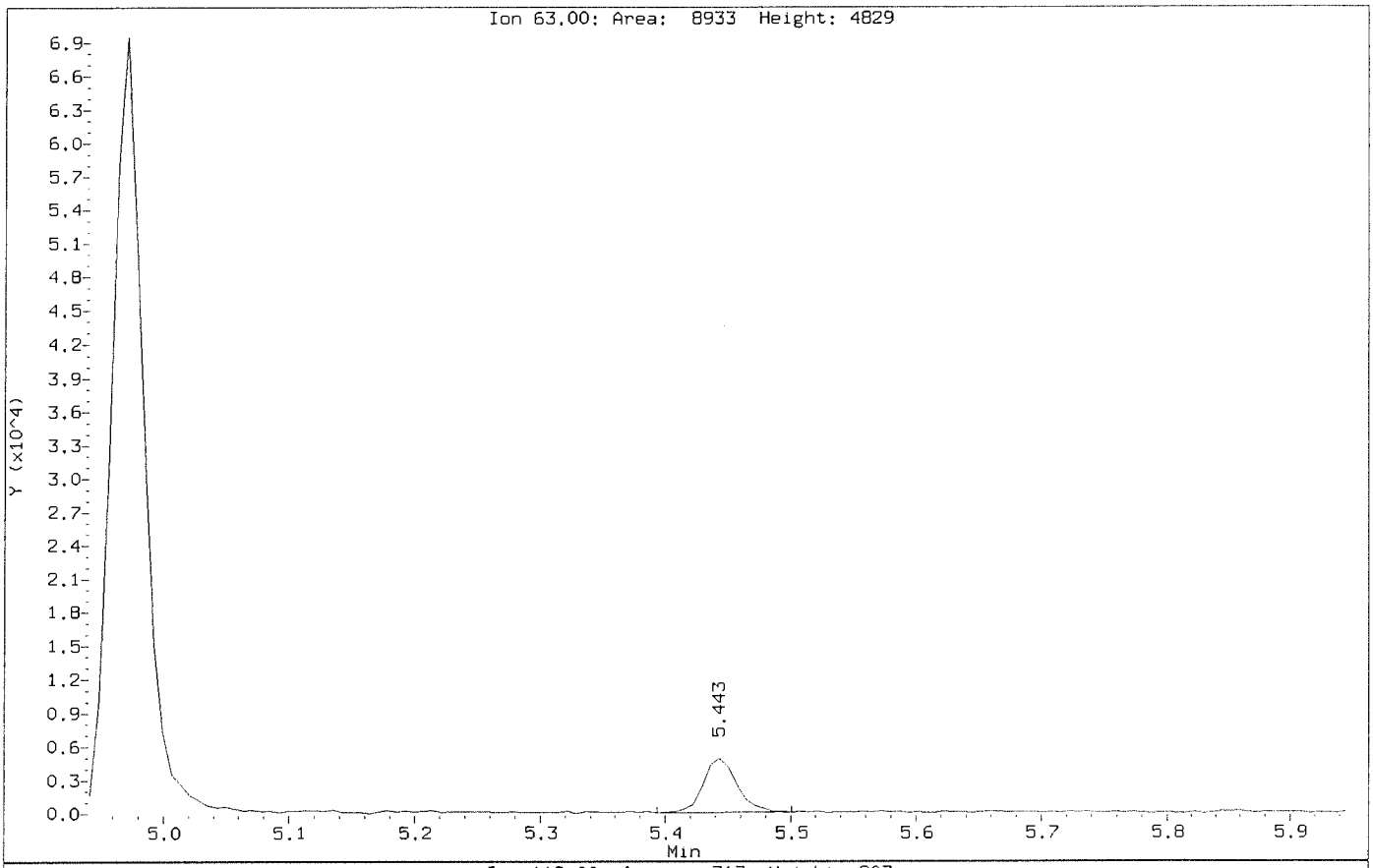
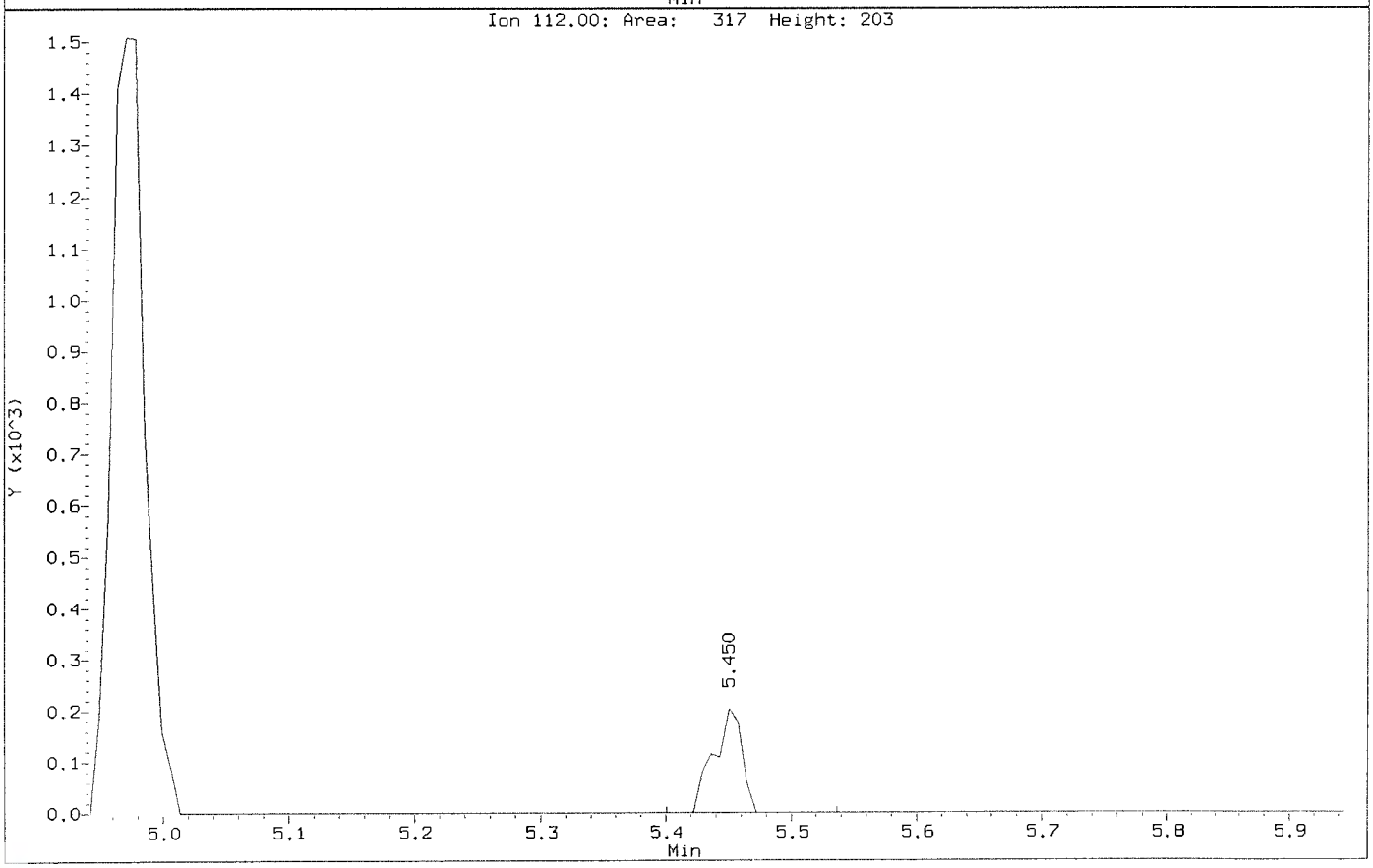
Instrument: voa6.i
Client Sample ID: VSTD002

Compound: 1,2-Dichloropropane
CAS Number: 78-87-5





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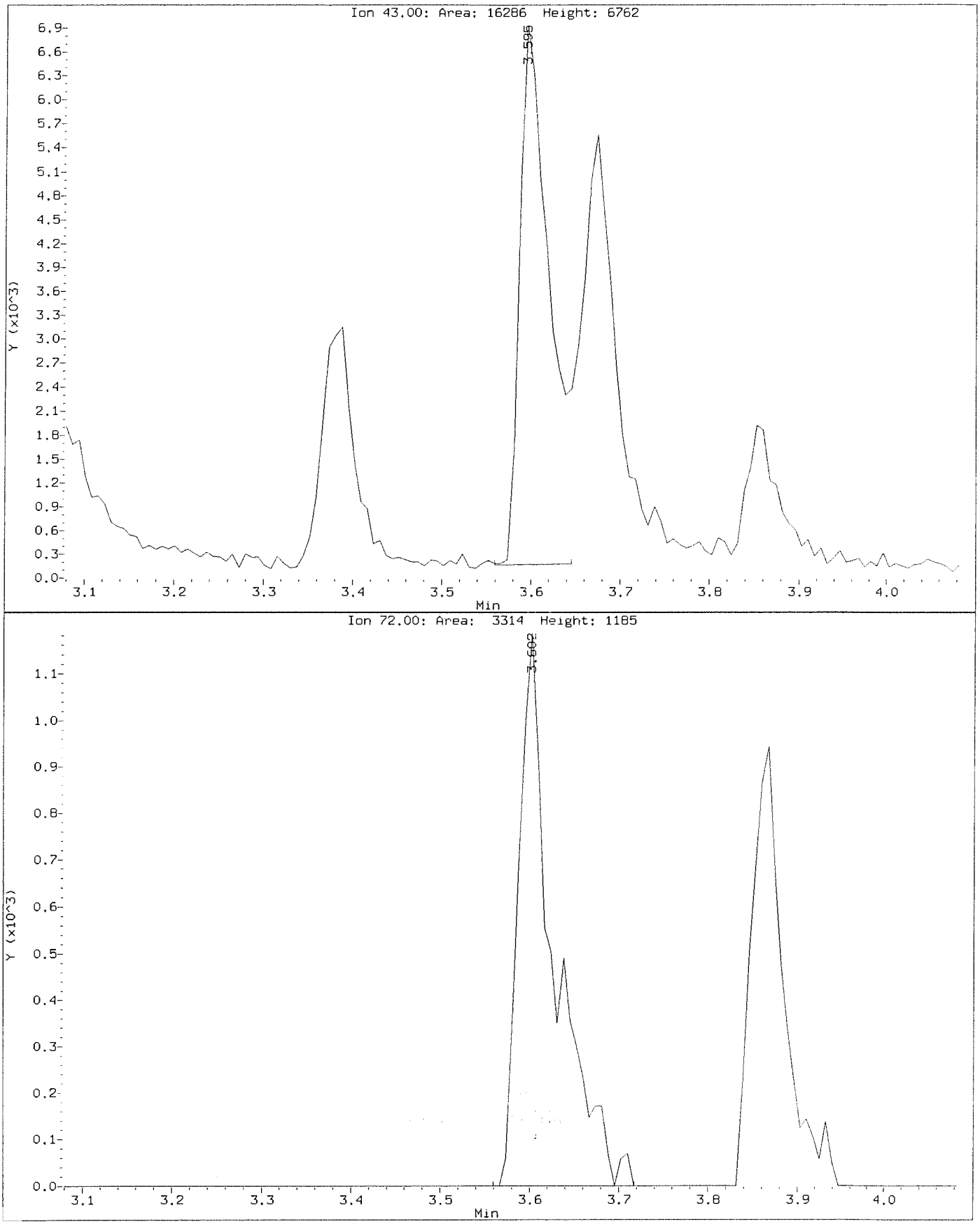
Instrument: voa6.i
Client Sample ID: VSTD002

Compound: 2-Butanone
CAS Number: 78-93-3



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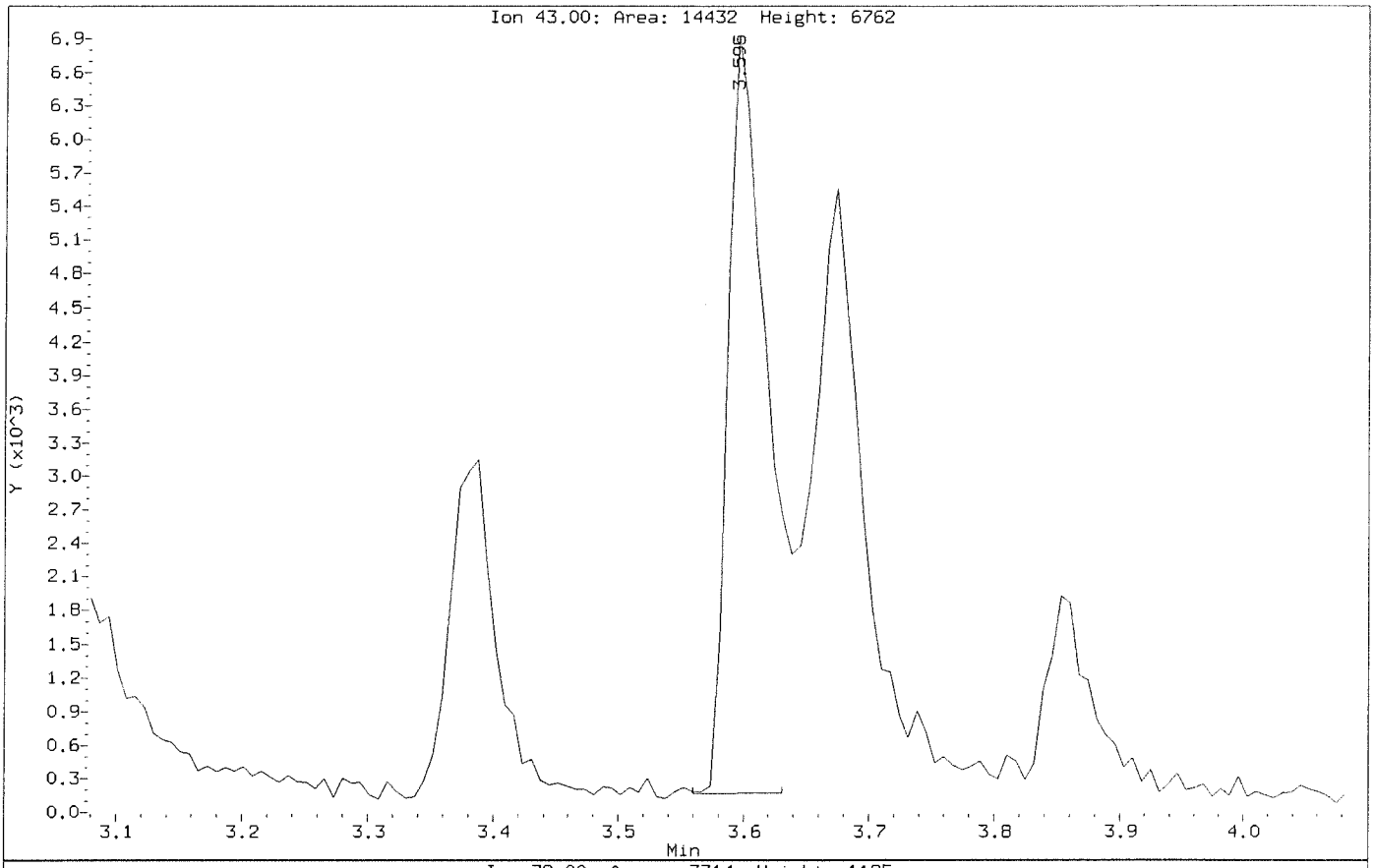
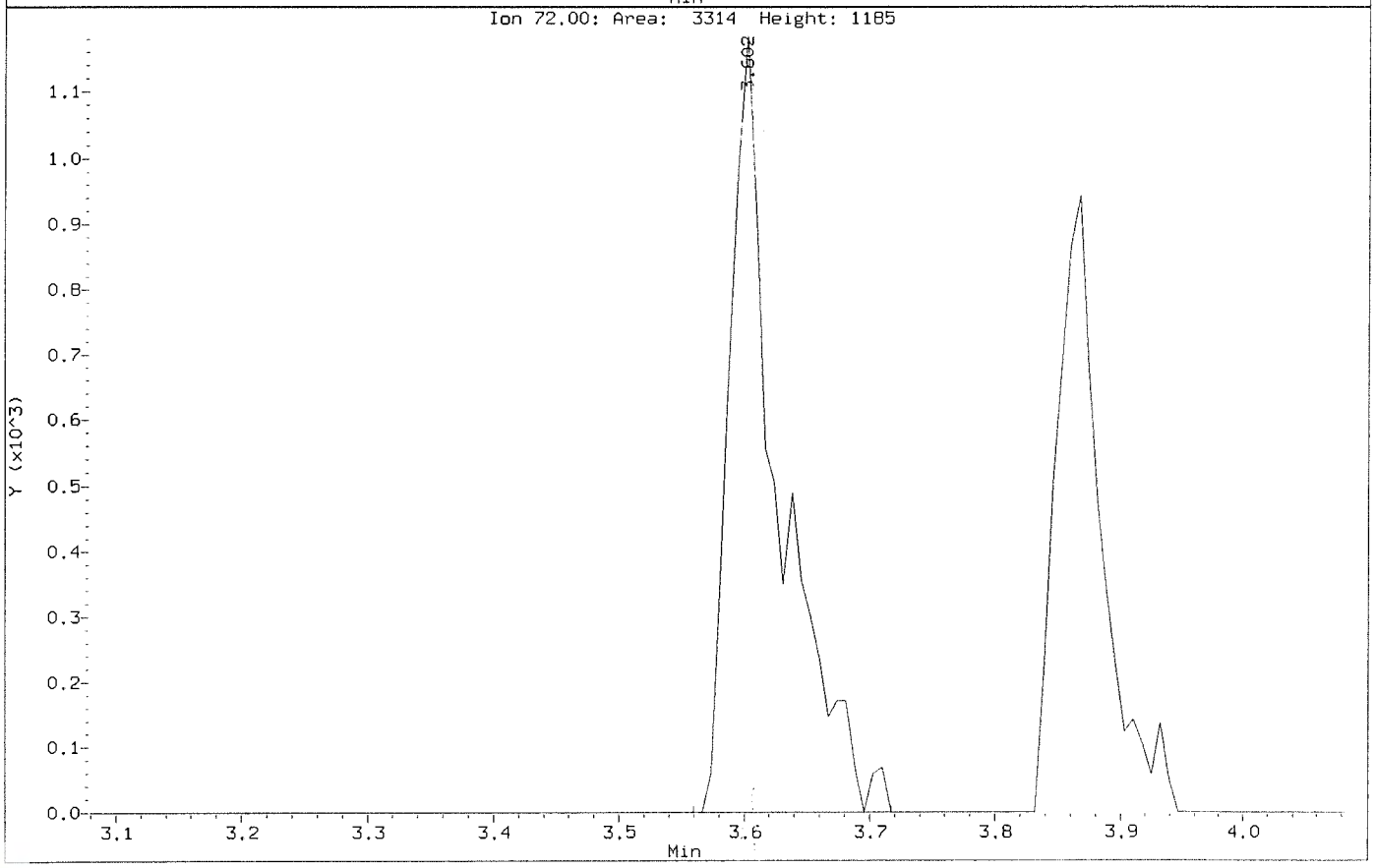
Instrument: voa6.i
Client Sample ID: VSTD002

Compound: 2-Butanone
CAS Number: 78-93-3





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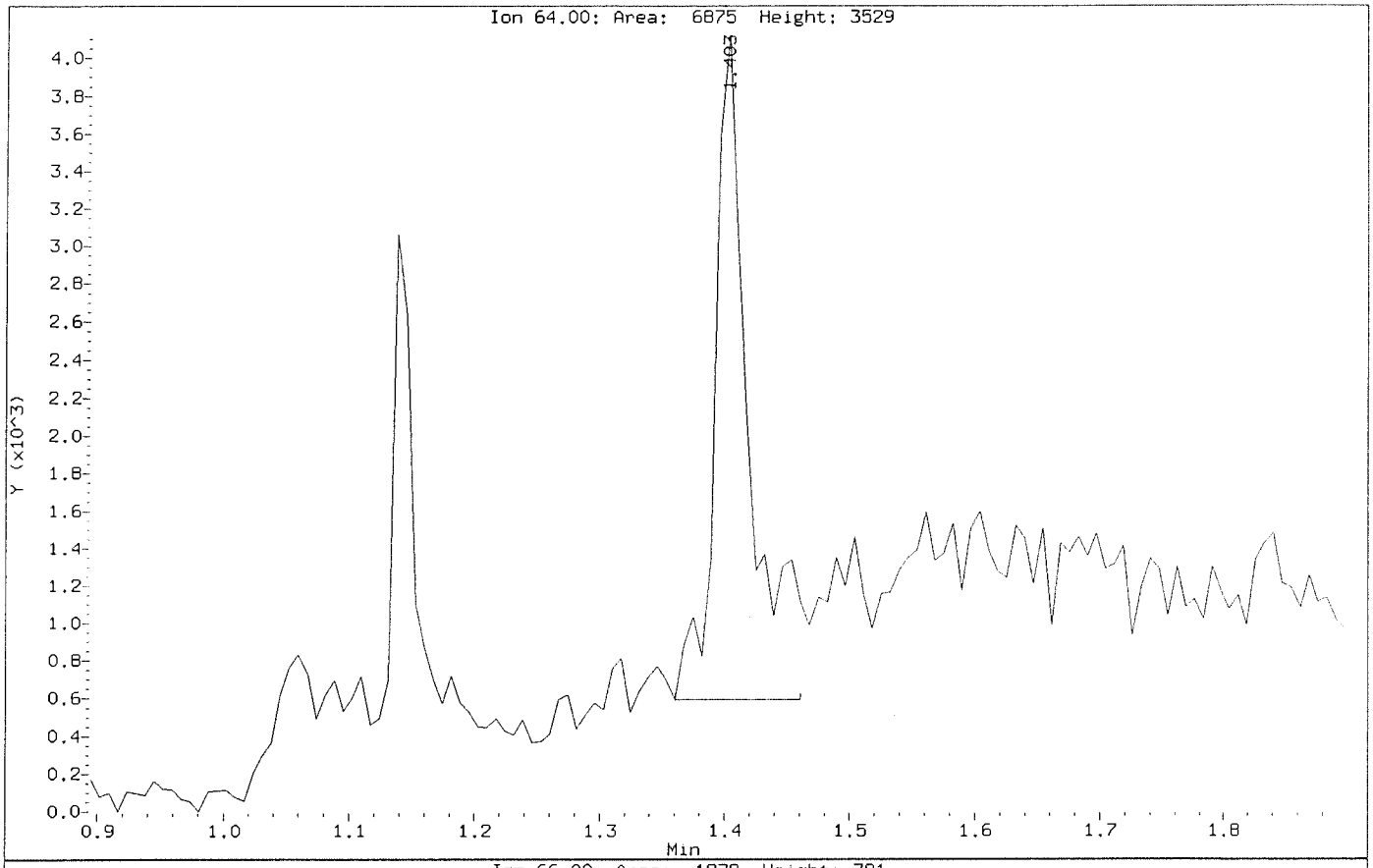
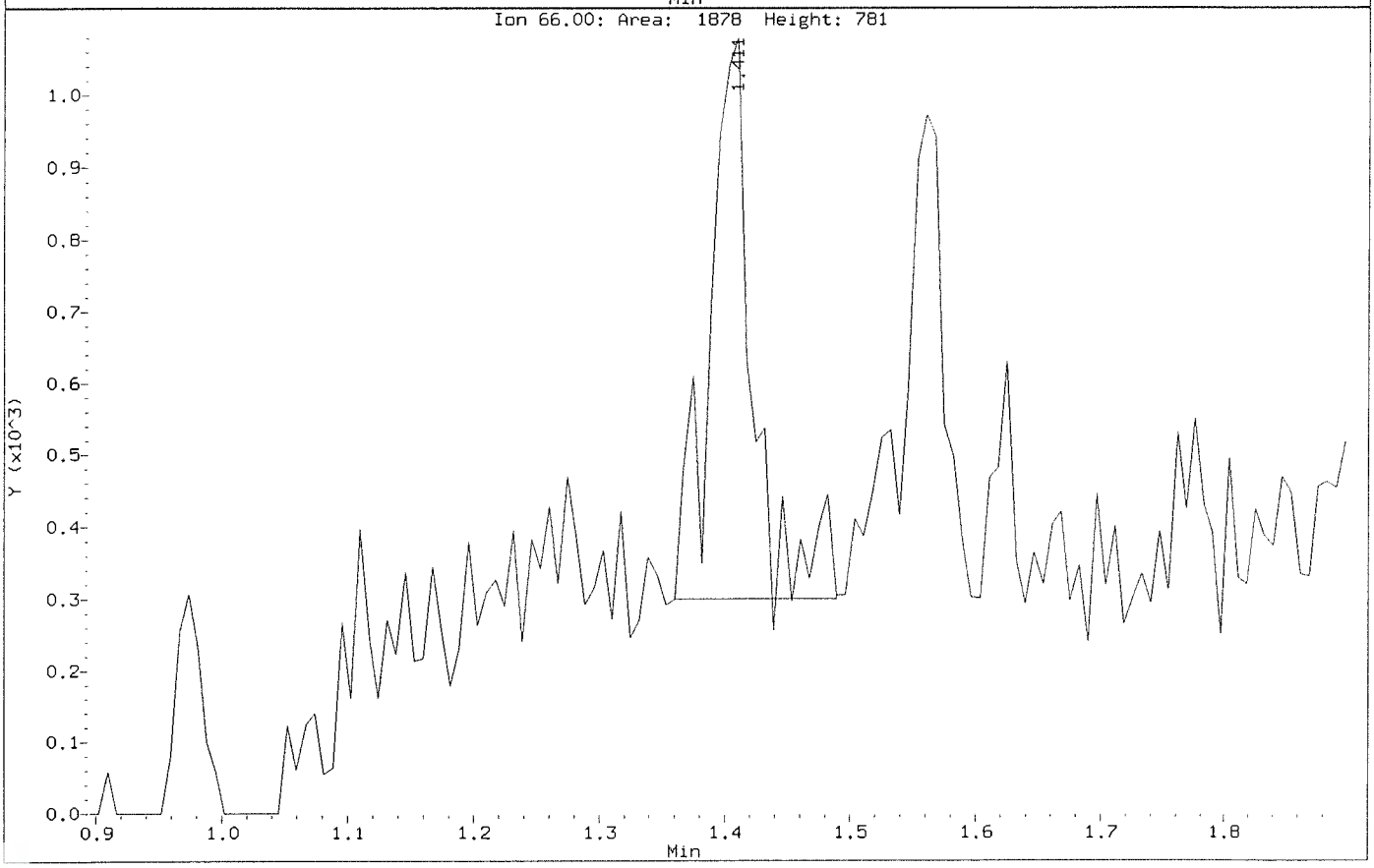
Instrument: voa6.i
Client Sample ID: VSTD002

Compound: Chloroethane
CAS Number: 75-00-3





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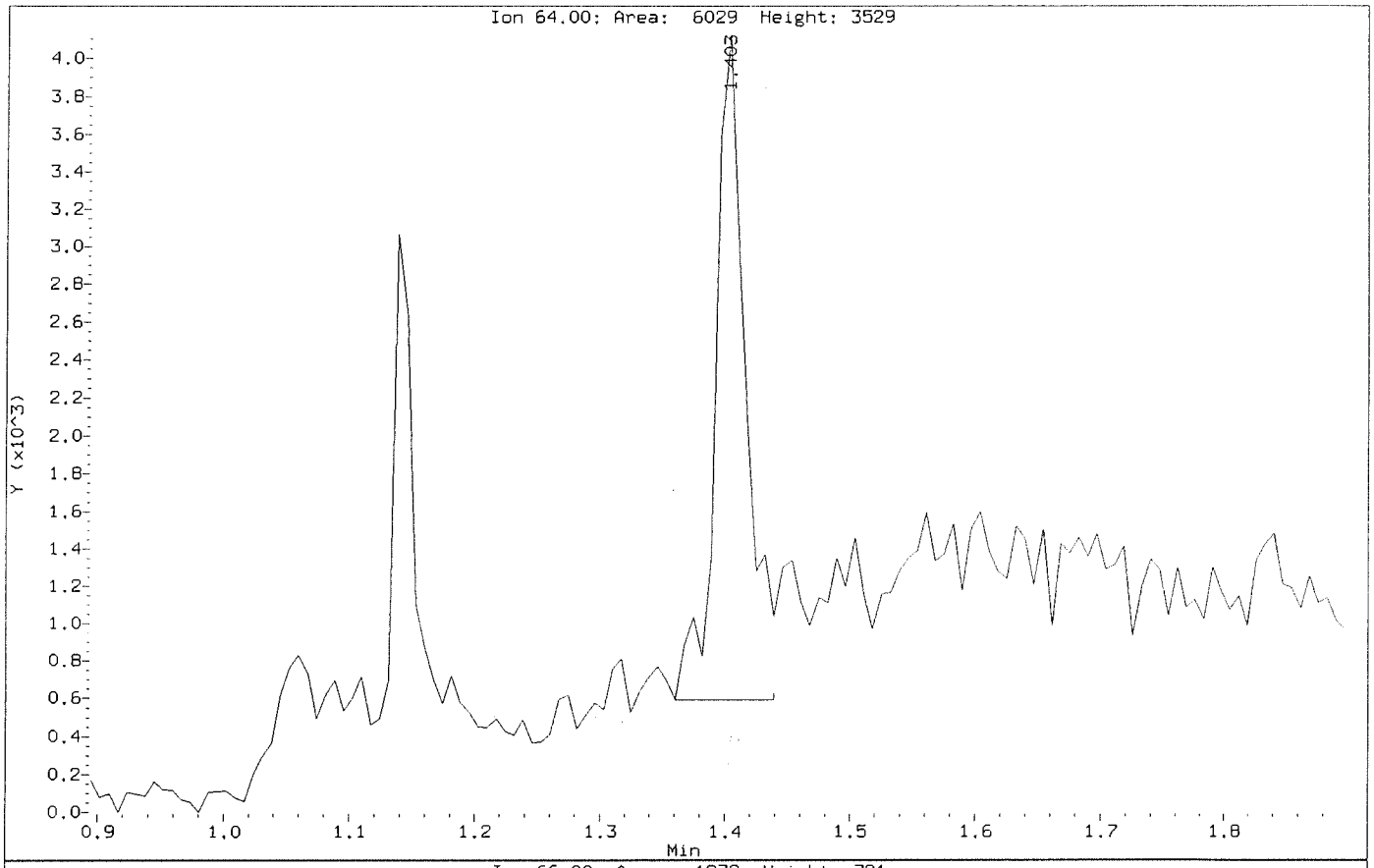
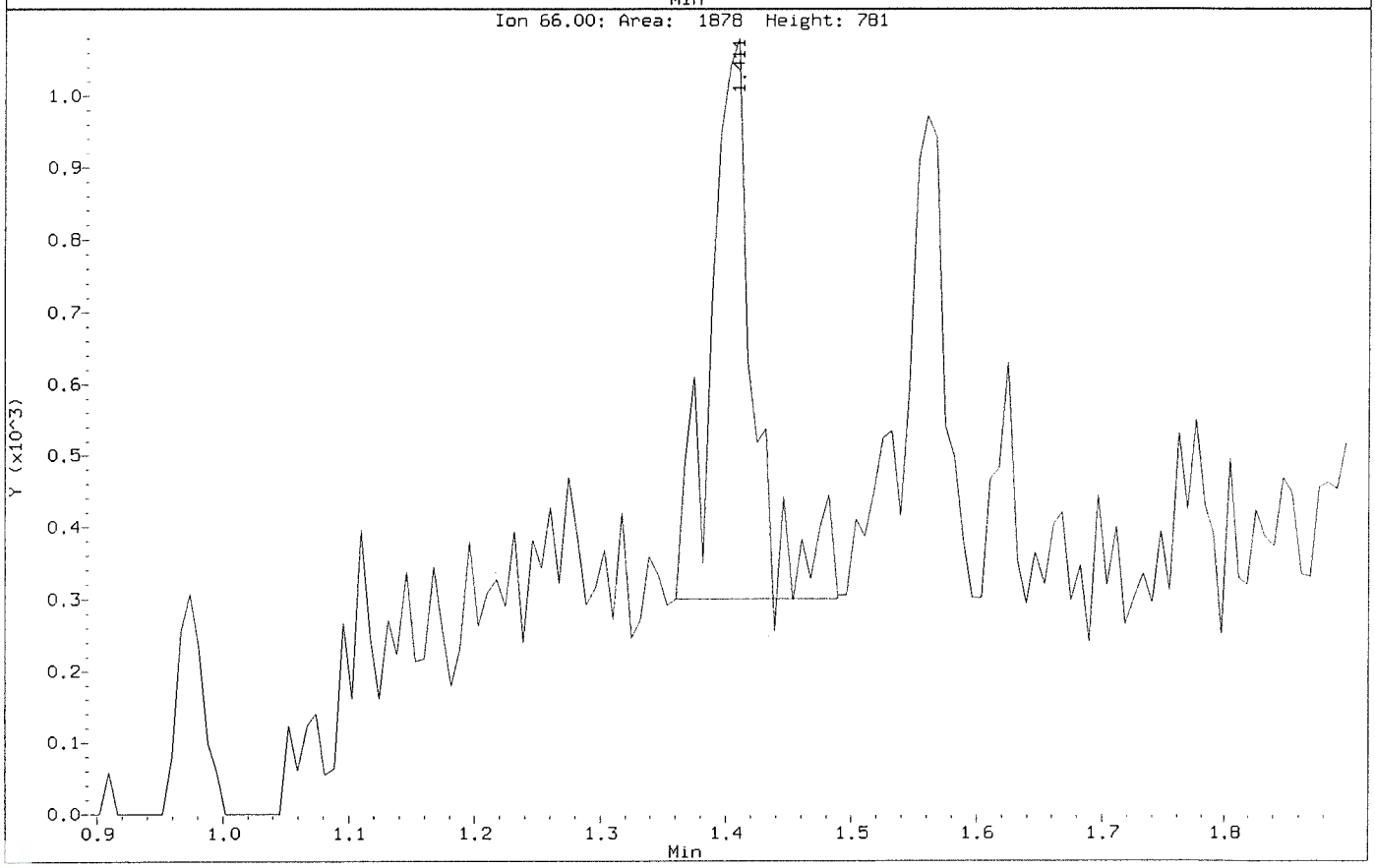
Instrument: voa6.i
Client Sample ID: VSTD002

Compound: Chloroethane
CAS Number: 75-00-3





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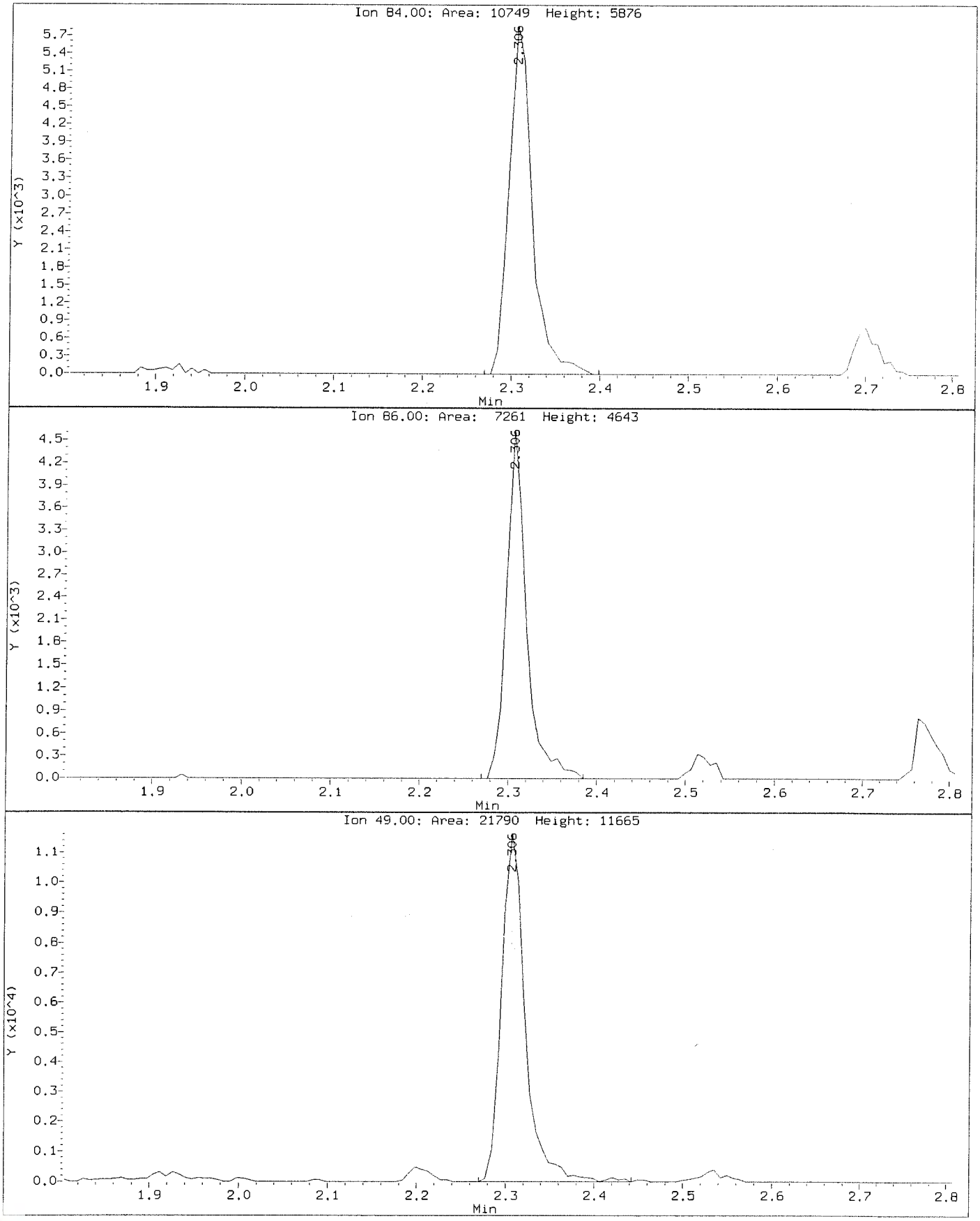
Instrument: voa6.i
Client Sample ID: VSTD002

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



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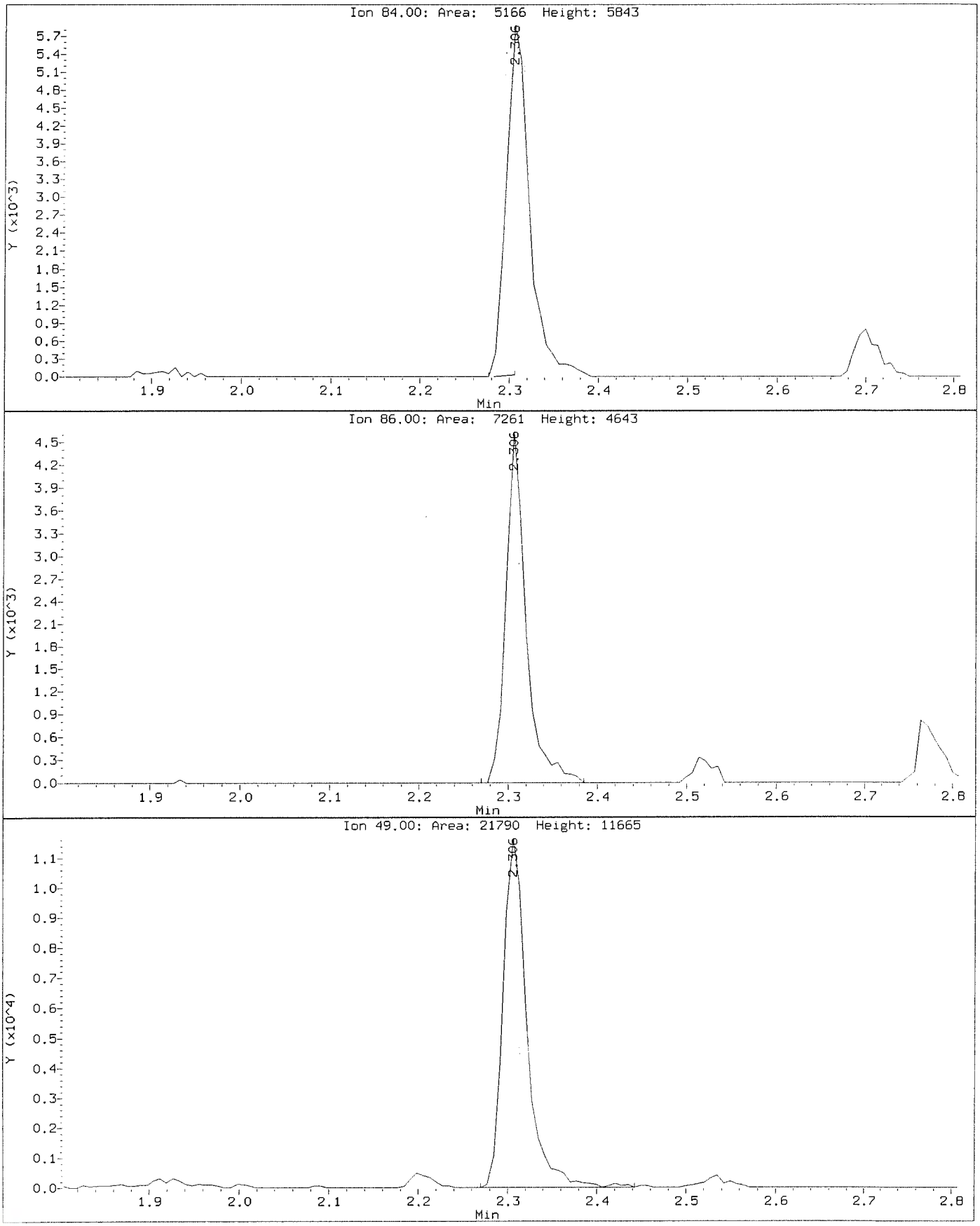
Client Sample ID: VSTD002

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



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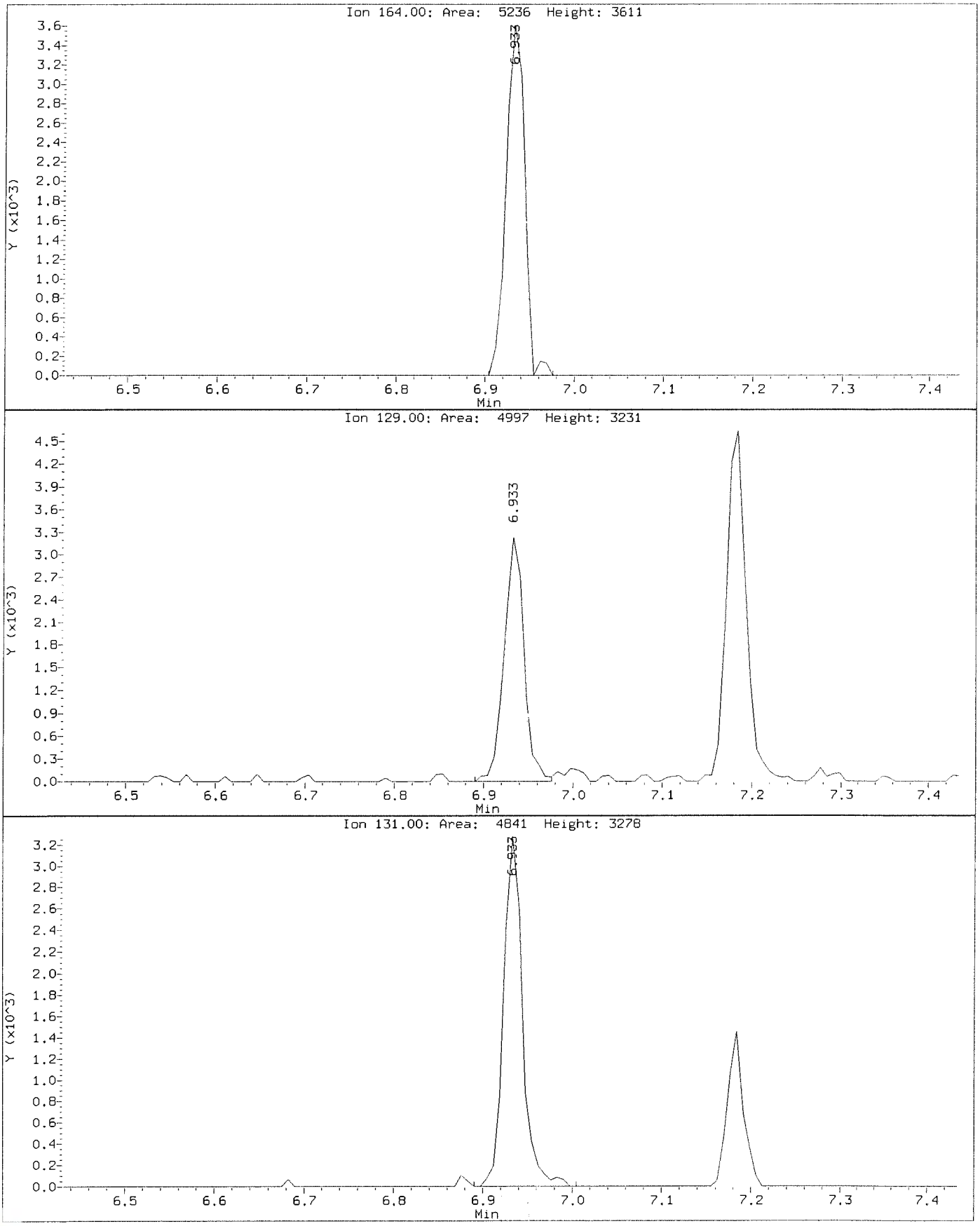
Injection Date: 07-JUL-2020 12:42
Instrument: voa6.i
Client Sample ID: VSTD002

Compound: Tetrachloroethene
CAS Number: 127-18-4



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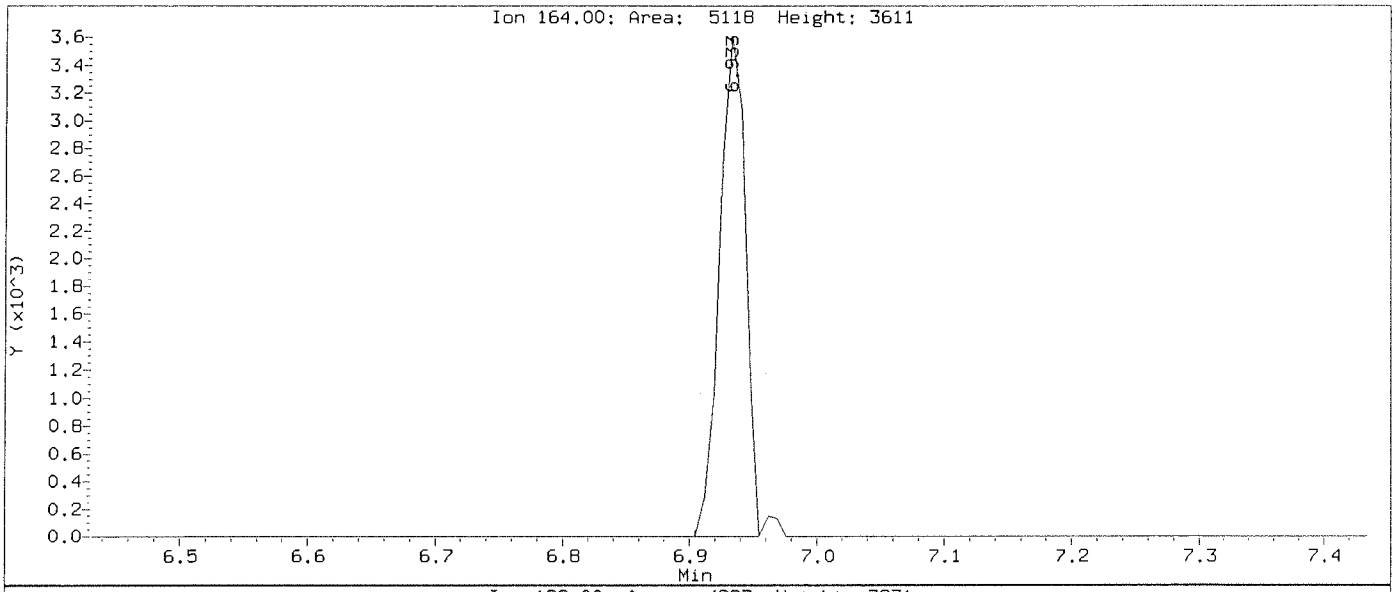
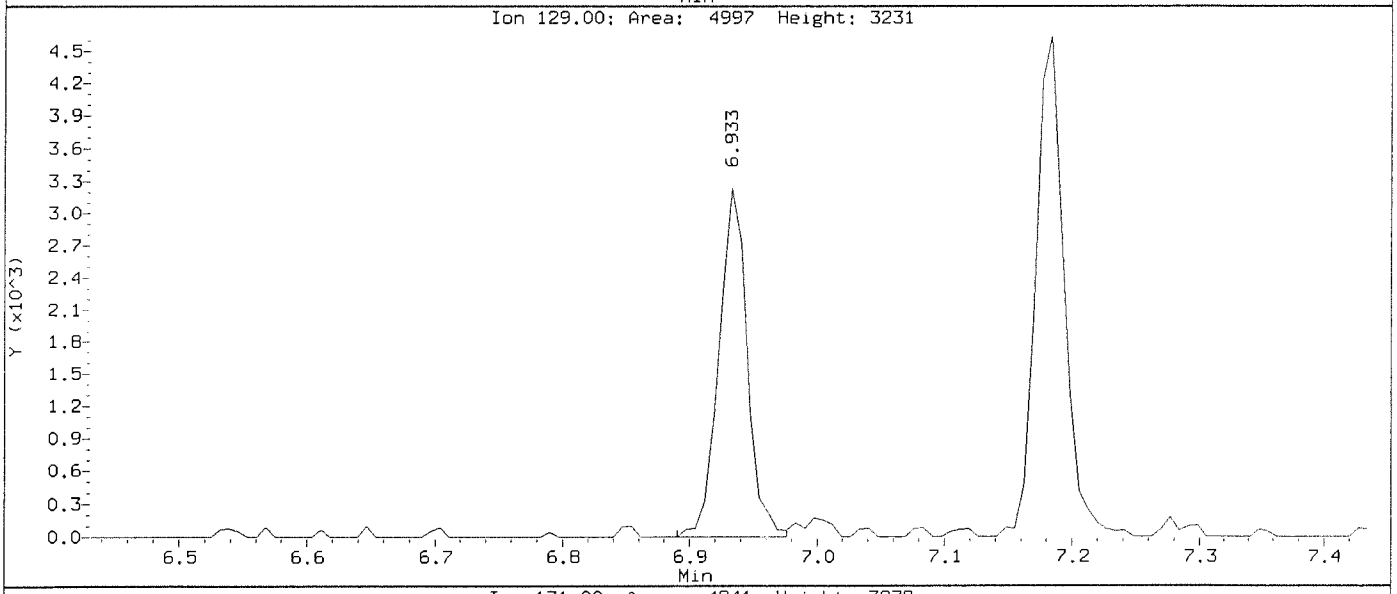
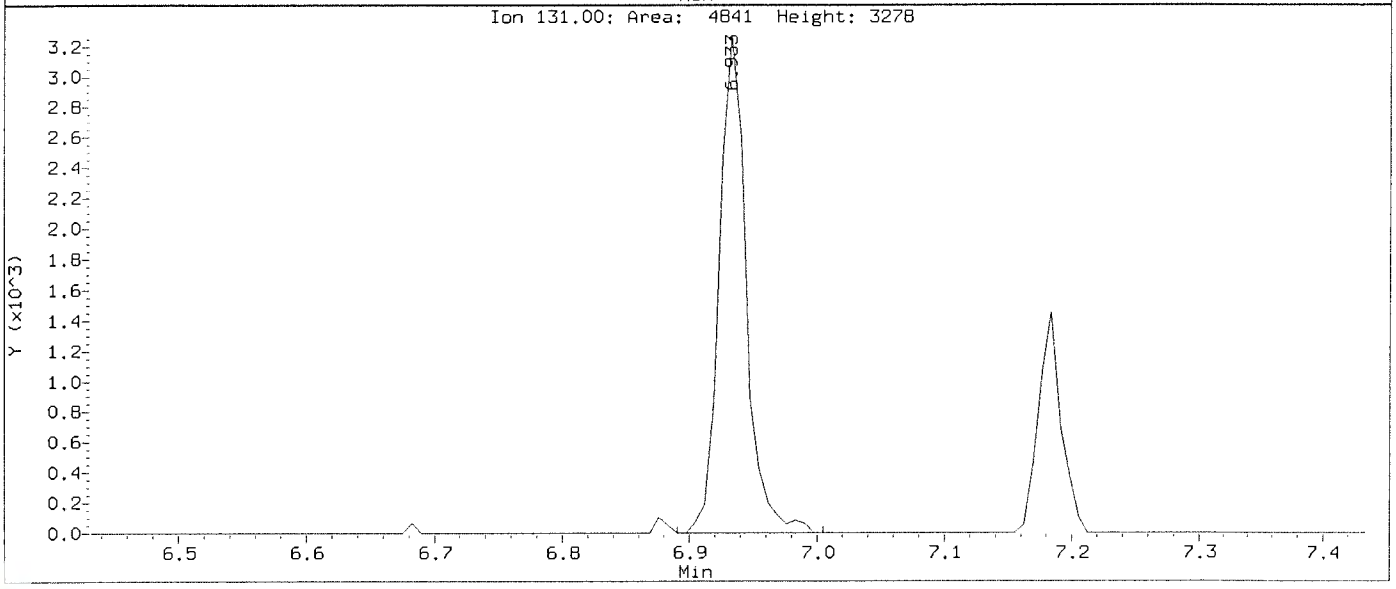
Client Sample ID: VSTD002

Compound: Tetrachloroethene
CAS Number: 127-18-4







Data File: \\nahstws005\Target\chem\voa6.i\X200707.b\X070706.D Page 1
Report Date: 12-Aug-2020 15:35

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200707.b\X070706.D
Lab Smp Id: VSTD005 Client Smp ID: VSTD005
Inj Date : 07-JUL-2020 13:06
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\X200707.b\8260W.m
Meth Date : 12-Aug-2020 15:35 voa6.i Quant Type: ISTD
Cal Date : 07-JUL-2020 12:42 Cal File: X070705.D
Als bottle: 7 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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

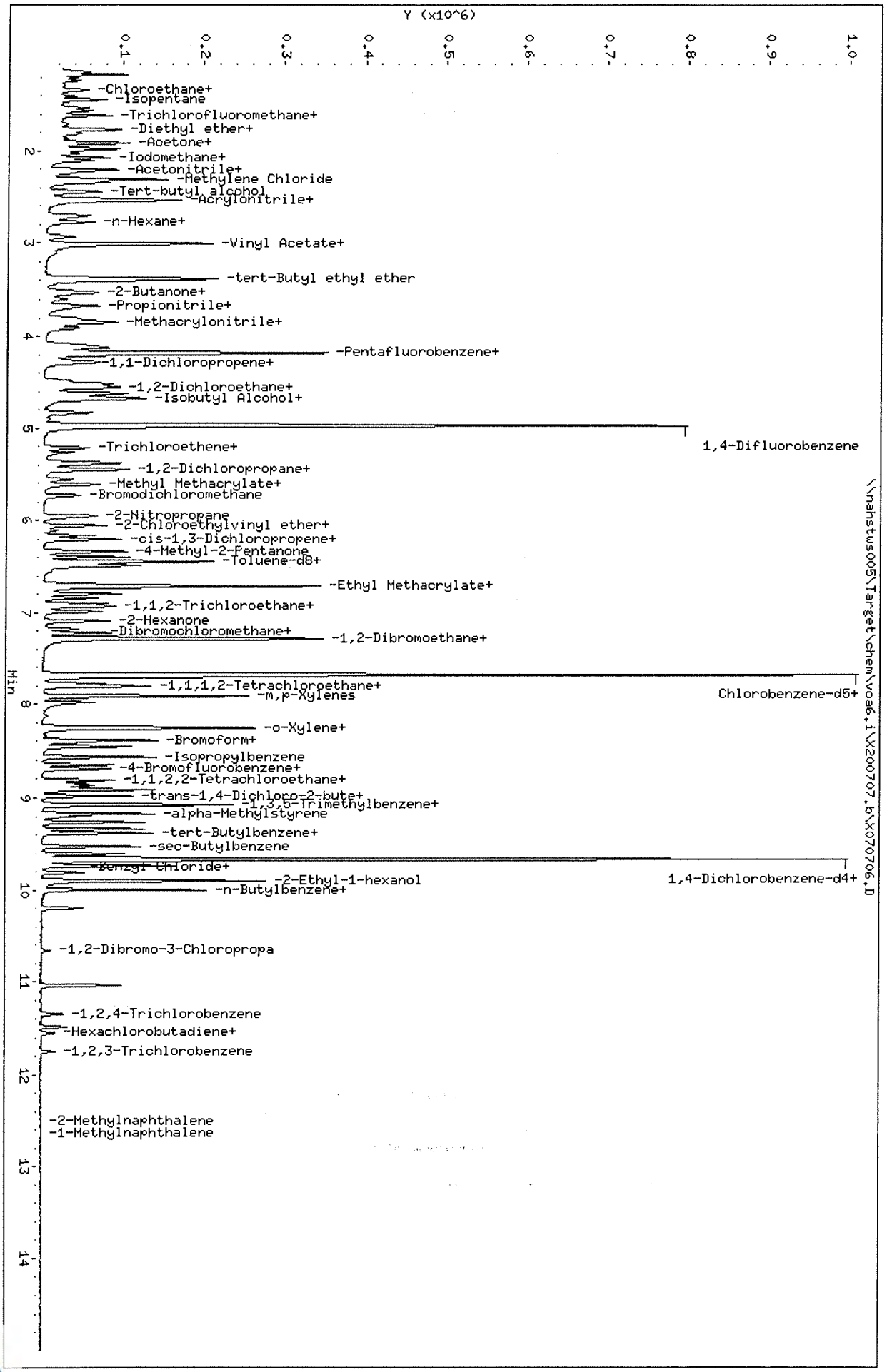
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)
*	1 Pentafluorobenzene	168	4.189	4.189	(1.000)	275112	50.0000	
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	464824	50.0000	
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	419648	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	198648	50.0000	
$	30 Dibromofluoromethane	113	4.111	4.111	(0.981)	17474	5.00000	5.04
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	23738	5.00000	5.15
$	48 Toluene-d8	98	6.388	6.388	(0.833)	56496	5.00000	5.12
$	69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	23624	5.00000	4.95(a)
	60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	16678	5.00000	5.17
	31 1,1,1-Trichloroethane	97	4.089	4.089	(0.976)	26900	5.00000	5.33
	68 1,1,2,2-Tetrachloroethane	83	8.845	8.845	(0.915)	23012	5.00000	5.85
	53 1,1,2-Trichloroethane	83	6.847	6.847	(0.893)	14806	5.00000	5.57
	22 1,1-Dichloroethane	63	2.929	2.929	(0.699)	40807	5.00000	5.23
	11 1,1-Dichloroethene	96	1.912	1.912	(0.456)	13079	5.00000	5.13
	32 1,1-Dichloropropene	75	4.290	4.290	(0.863)	23386	5.00000	5.10
	93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.215)	4185	5.00000	8.03(M)
	71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	19668	5.00000	5.67(M)
	90 1,2,4-Trichlorobenzene	180	11.345	11.345	(1.173)	7921	5.00000	7.54
	79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.970)	59290	5.00000	5.07
	89 1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.102)	2373	5.00000	6.20
	57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	17825	5.00000	5.28
	88 1,2-Dichlorobenzene	146	9.999	9.999	(1.034)	31094	5.00000	5.35

Data File: \\nahstws005\Target\chem\voa6.i\X200707.b\X070706.D Page 2
Report Date: 12-Aug-2020 15:35

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
33 1,2-Dichloroethane	62	4.562	4.562	(0.918)	30545	5.00000	5.29
42 1,2-Dichloropropane	63	5.443	5.443	(1.095)	23437	5.00000	5.42
75 1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	58108	5.00000	5.13
83 1,3-Dichlorobenzene	146	9.612	9.612	(0.994)	32589	5.00000	5.12
54 1,3-Dichloropropane	76	6.983	6.983	(0.910)	29768	5.00000	5.32
84 1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	32551	5.00000	5.20
26 2,2-Dichloropropane	77	3.516	3.516	(0.839)	25011	5.00000	5.25
24 2-Butanone	43	3.588	3.588	(0.856)	38898	10.0000	10.10
76 2-Chlorotoluene	91	8.981	8.981	(0.929)	51836	5.00000	5.19
52 2-Hexanone	43	7.090	7.090	(0.924)	54537	10.0000	10.38
77 4-Chlorotoluene	91	9.075	9.075	(0.939)	60584	5.00000	5.35
82 p-Isopropyltoluene	119	9.655	9.655	(0.999)	57677	5.00000	5.10
45 4-Methyl-2-Pentanone	43	6.331	6.331	(0.825)	73042	10.0000	10.06
10 Acetone	43	1.976	1.976	(0.472)	78299	10.0000	12.63
37 Benzene	78	4.519	4.519	(0.909)	69383	5.00000	5.23
74 Bromobenzene	156	8.810	8.810	(0.911)	19827	5.00000	5.23
29 Bromochloromethane	128	3.803	3.803	(0.908)	10051	5.00000	5.26
39 Bromodichloromethane	83	5.729	5.729	(1.153)	24184	5.00000	5.19
66 Bromoform	173	8.416	8.416	(1.097)	12661	5.00000	5.43
6 Bromomethane	94	1.339	1.339	(0.320)	10361	5.00000	5.29(M)
19 Carbon Disulfide	76	2.069	2.069	(0.494)	86529	10.0000	10.34
34 Carbon Tetrachloride	117	4.268	4.268	(0.859)	23230	5.00000	5.23
59 Chlorobenzene	112	7.699	7.699	(1.004)	44474	5.00000	5.20
7 Chloroethane	64	1.403	1.403	(0.335)	14118	5.00000	4.00(a)
28 Chloroform	83	3.910	3.910	(0.933)	32005	5.00000	5.30
3 Chloromethane	50	1.081	1.081	(0.258)	28111	5.00000	4.97(a)
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.843)	19083	5.00000	5.30
46 cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	29252	5.00000	5.21
55 Dibromochloromethane	129	7.184	7.184	(0.937)	18452	5.00000	5.35
44 Dibromomethane	93	5.558	5.558	(1.118)	12413	5.00000	5.32
2 Dichlorodifluoromethane	85	0.973	0.973	(0.232)	16987	5.00000	5.10
61 Ethylbenzene	106	7.807	7.807	(1.018)	23972	5.00000	5.29
91 Hexachlorobutadiene	225	11.489	11.489	(1.188)	4900	5.00000	6.33
67 Isopropylbenzene	105	8.566	8.566	(1.117)	70593	5.00000	5.25
62 m,p-Xylenes	106	7.907	7.907	(1.031)	57805	10.0000	10.62
17 Methylene Chloride	84	2.306	2.306	(0.550)	16219	5.00000	5.39(M)
87 n-Butylbenzene	91	9.999	9.999	(1.034)	49103	5.00000	4.87(a)
73 n-Propylbenzene	91	8.917	8.917	(0.922)	83901	5.00000	5.17
92 Naphthalene	128	11.546	11.546	(1.194)	13133	5.00000	7.07
63 o-Xylene	106	8.244	8.244	(1.075)	28405	5.00000	5.32
81 sec-Butylbenzene	105	9.526	9.526	(0.985)	68360	5.00000	5.13
64 Styrene	104	8.265	8.265	(1.078)	48257	5.00000	5.20
78 tert-Butylbenzene	119	9.340	9.340	(0.966)	46887	5.00000	5.14
56 Tetrachloroethene	164	6.933	6.933	(0.904)	13669	5.00000	5.33
50 Toluene	91	6.453	6.453	(0.841)	71698	5.00000	5.35
20 trans-1,2-Dichloroethene	96	2.535	2.535	(0.605)	16269	5.00000	5.41
51 trans-1,3-Dichloropropene	75	6.689	6.689	(1.346)	26654	5.00000	5.28
38 Trichloroethene	130	5.214	5.214	(1.049)	18430	5.00000	5.34
8 Trichlorofluoromethane	101	1.561	1.561	(0.373)	23519	5.00000	4.95(a)
5 Vinyl Chloride	62	1.138	1.138	(0.272)	24629	5.00000	5.09

QC Flag Legend

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



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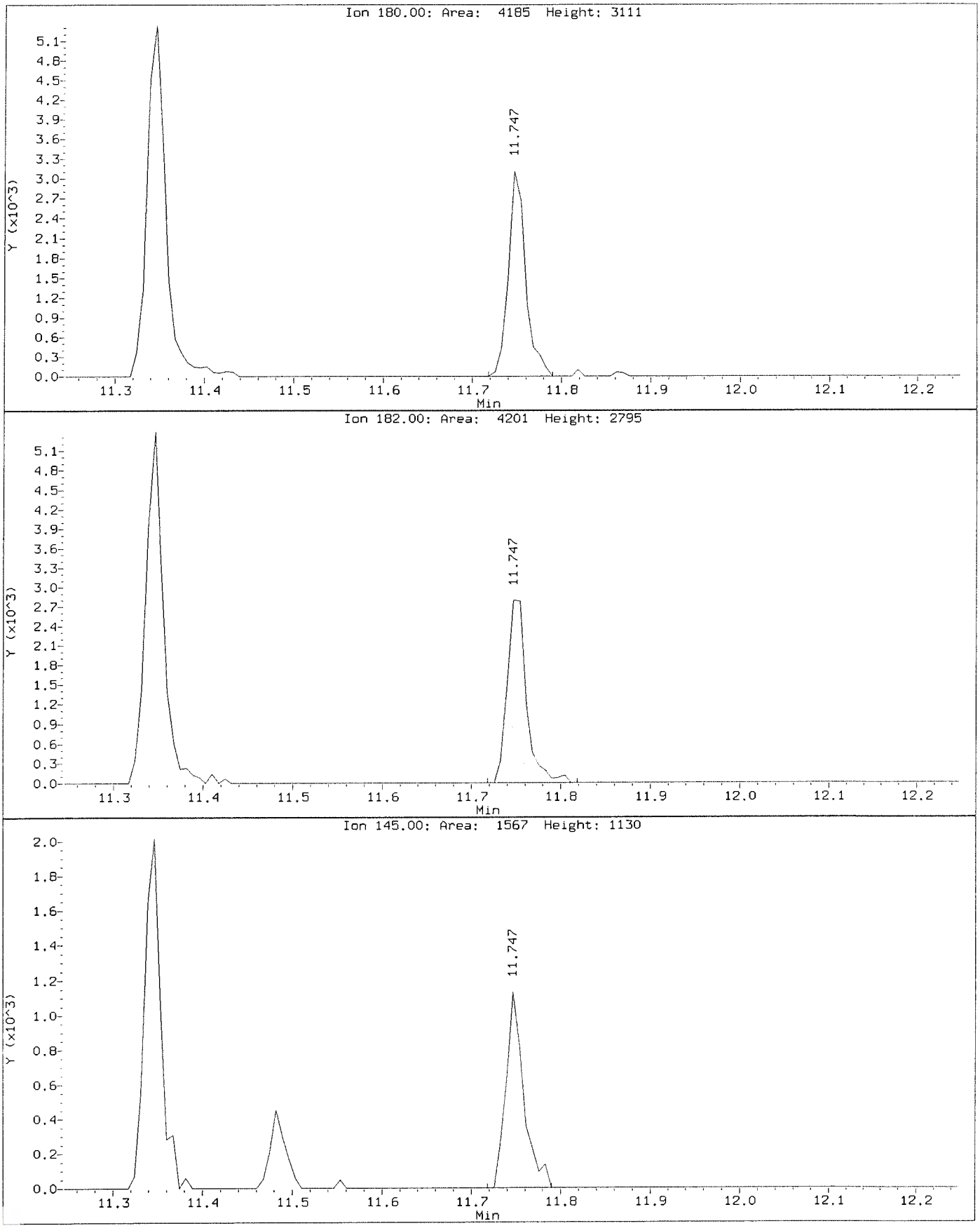
Date : 07-JUL-2020 13:06
Client ID: VSTD005
Sample Info: VSTD005;VSTD005;1;5;
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\nahstws005\Target\chem\voa6.i\X200707.b\Before\X070706.D
Injection Date: 07-JUL-2020 13:06
Instrument: voa6.i
Client Sample ID: VSTD005

Compound: 1,2,3-Trichlorobenzene
CAS Number: 87-61-6



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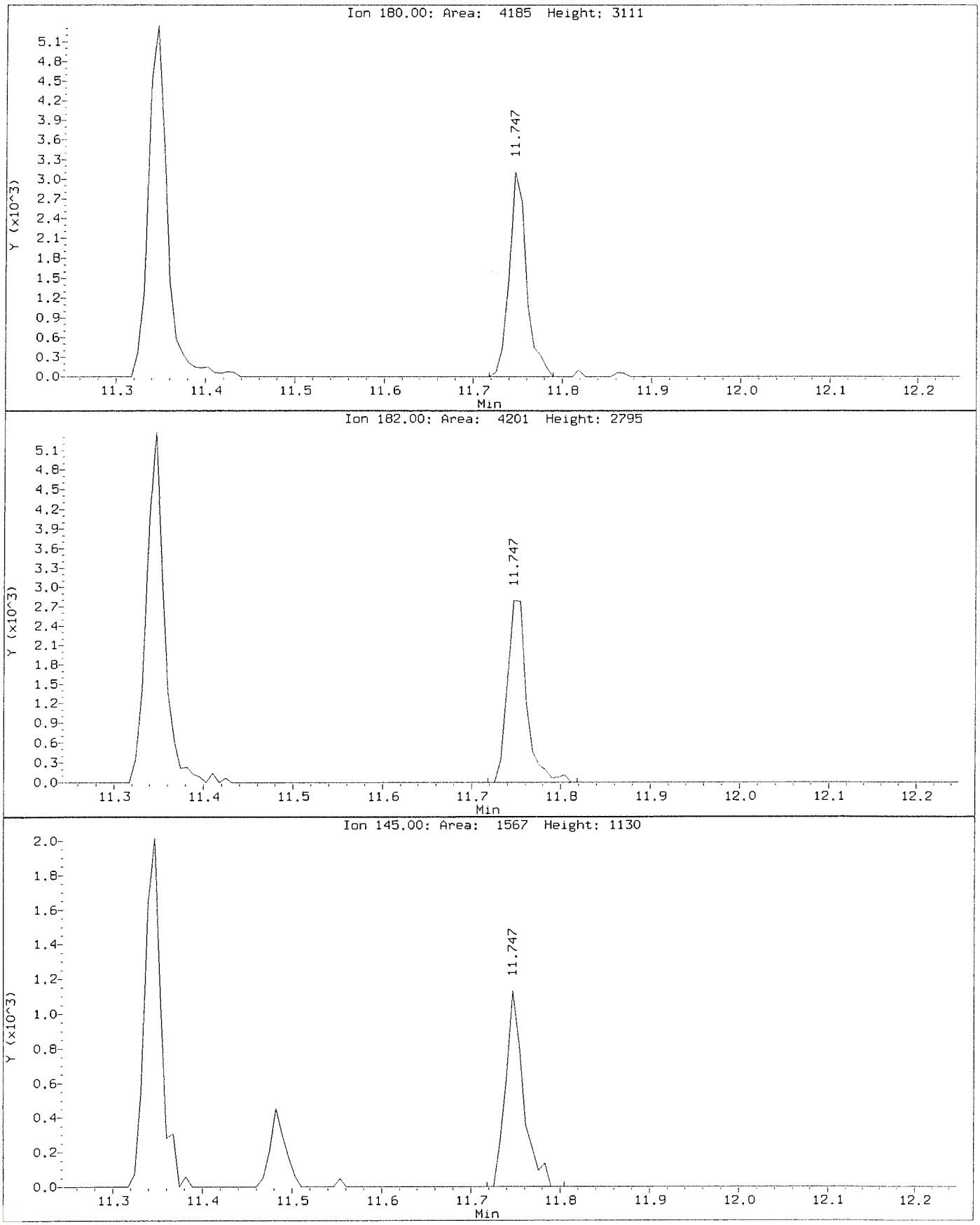
Injection Date: 07-JUL-2020 13:06
Instrument: voa6.i
Client Sample ID: VSTD005

Compound: 1,2,3-Trichlorobenzene
CAS Number: 87-61-6



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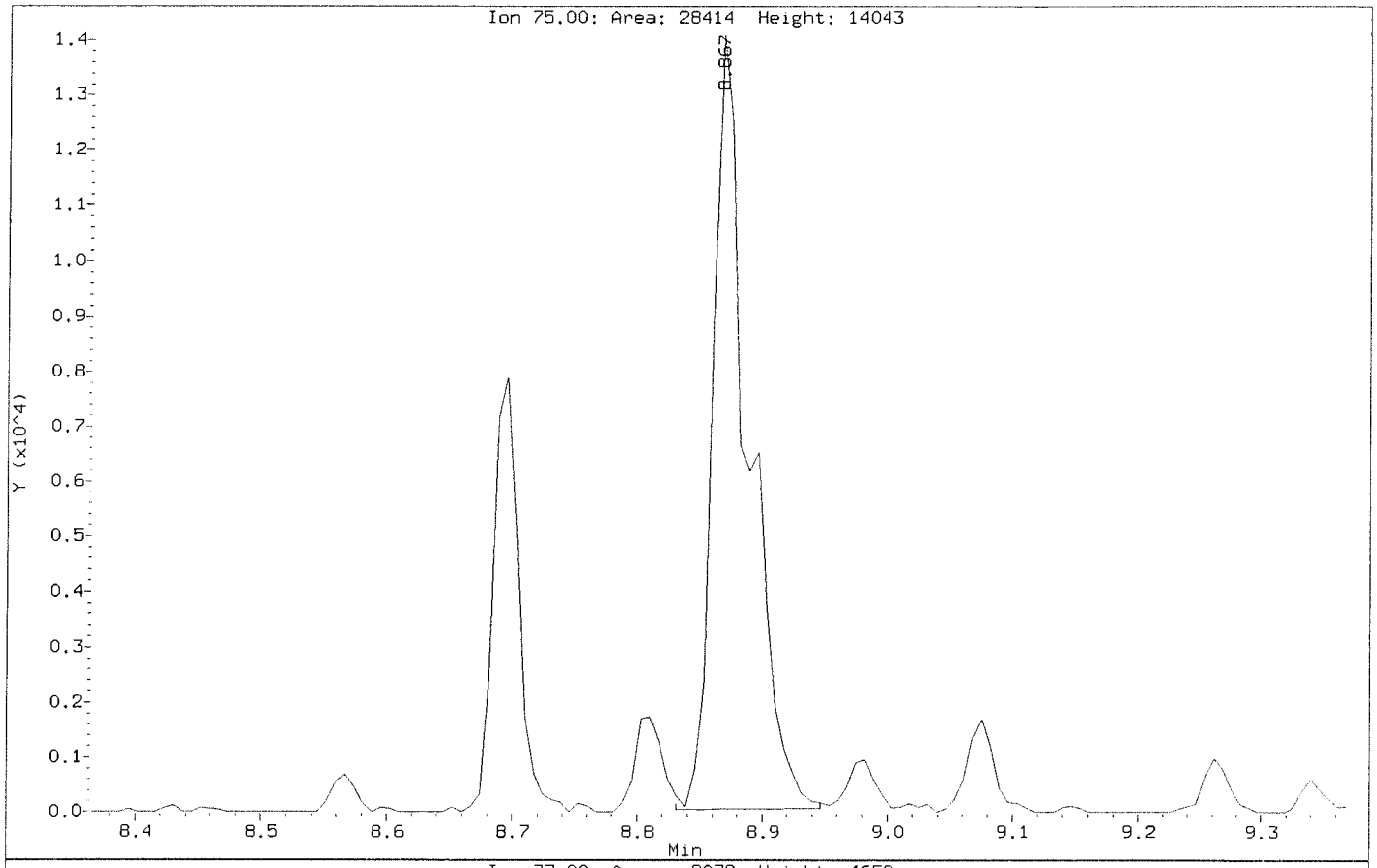
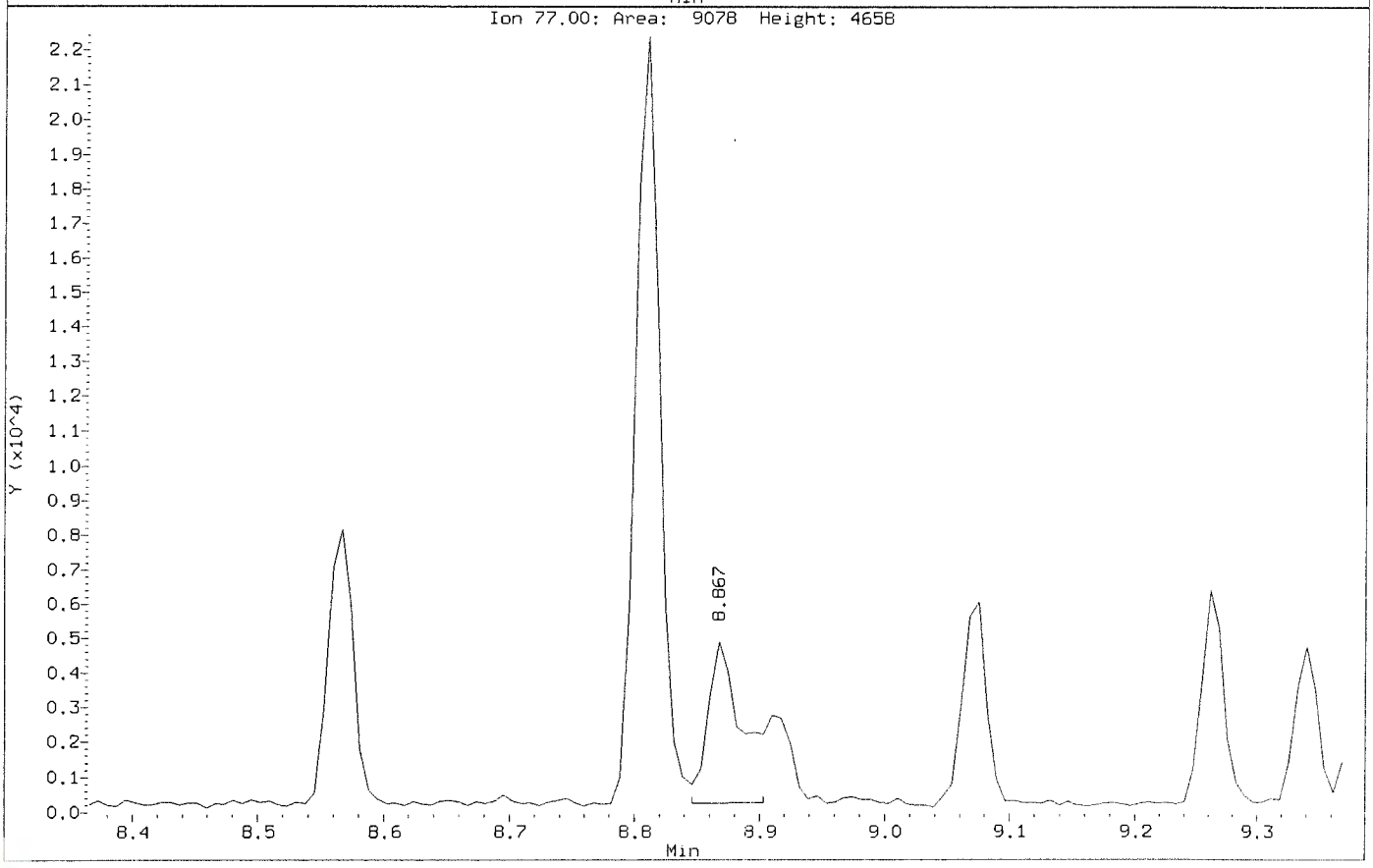
Injection Date: 07-JUL-2020 13:06
Instrument: voa6.i
Client Sample ID: VSTD005

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





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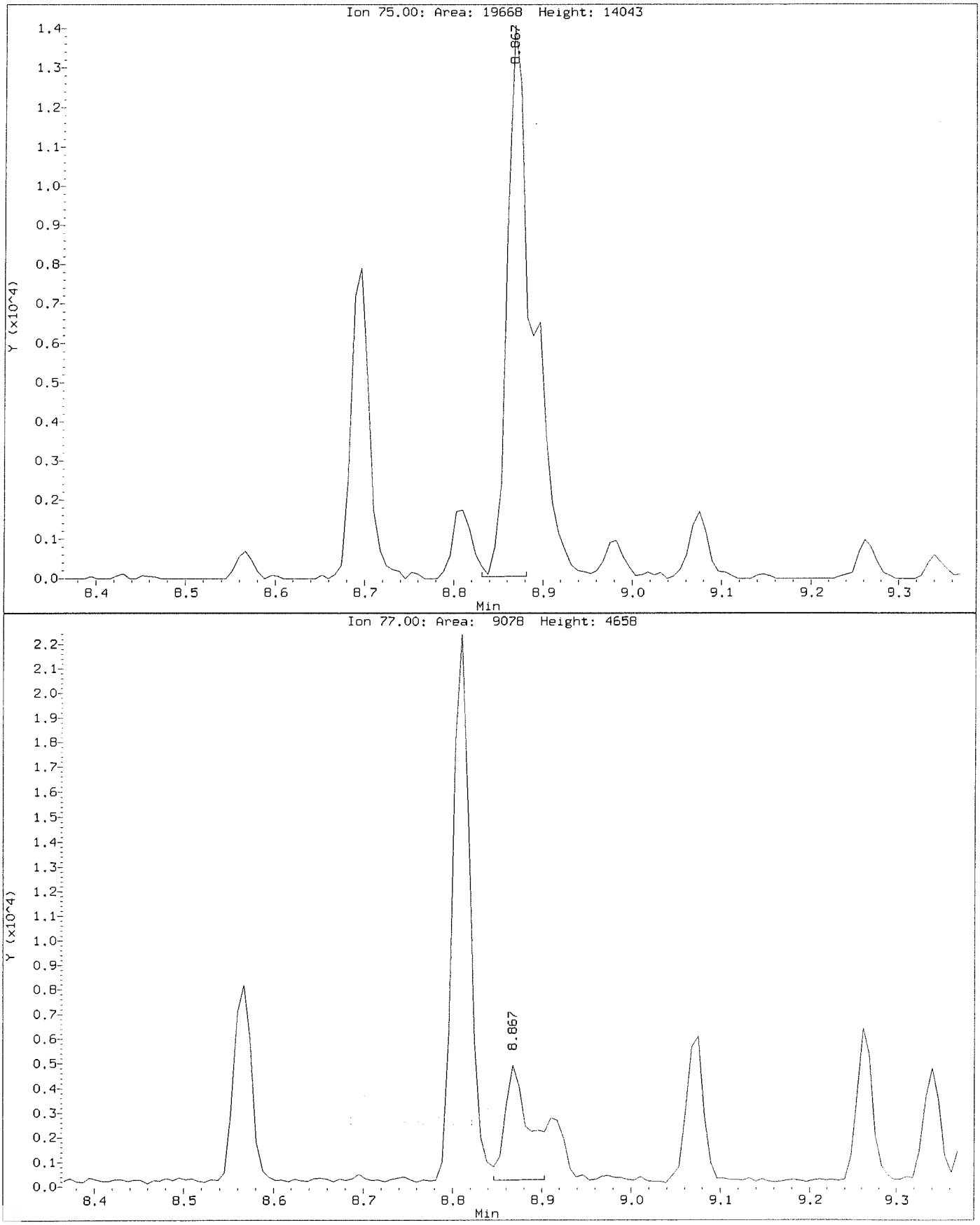
Instrument: voa6.i
Client Sample ID: VSTD005

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4



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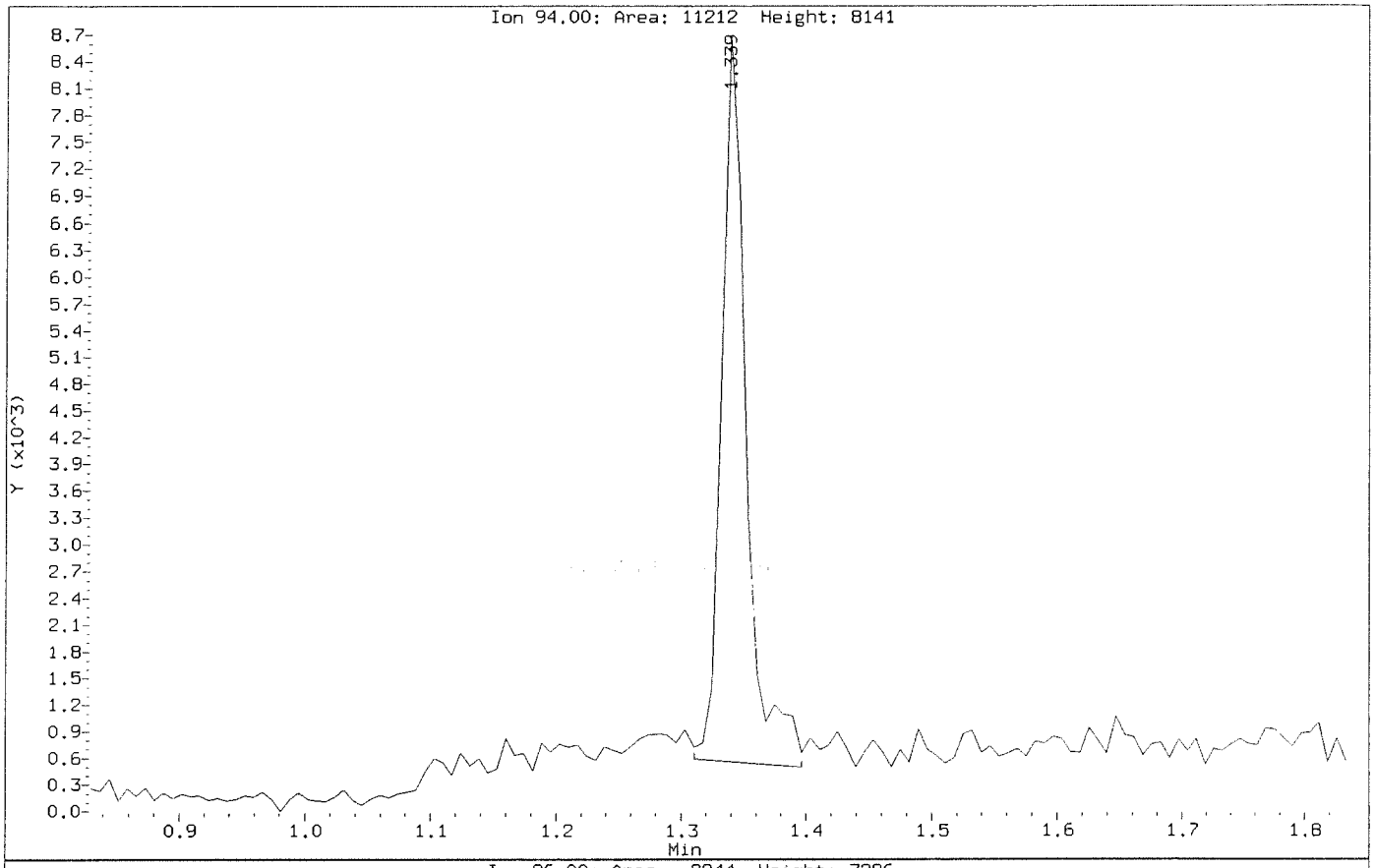
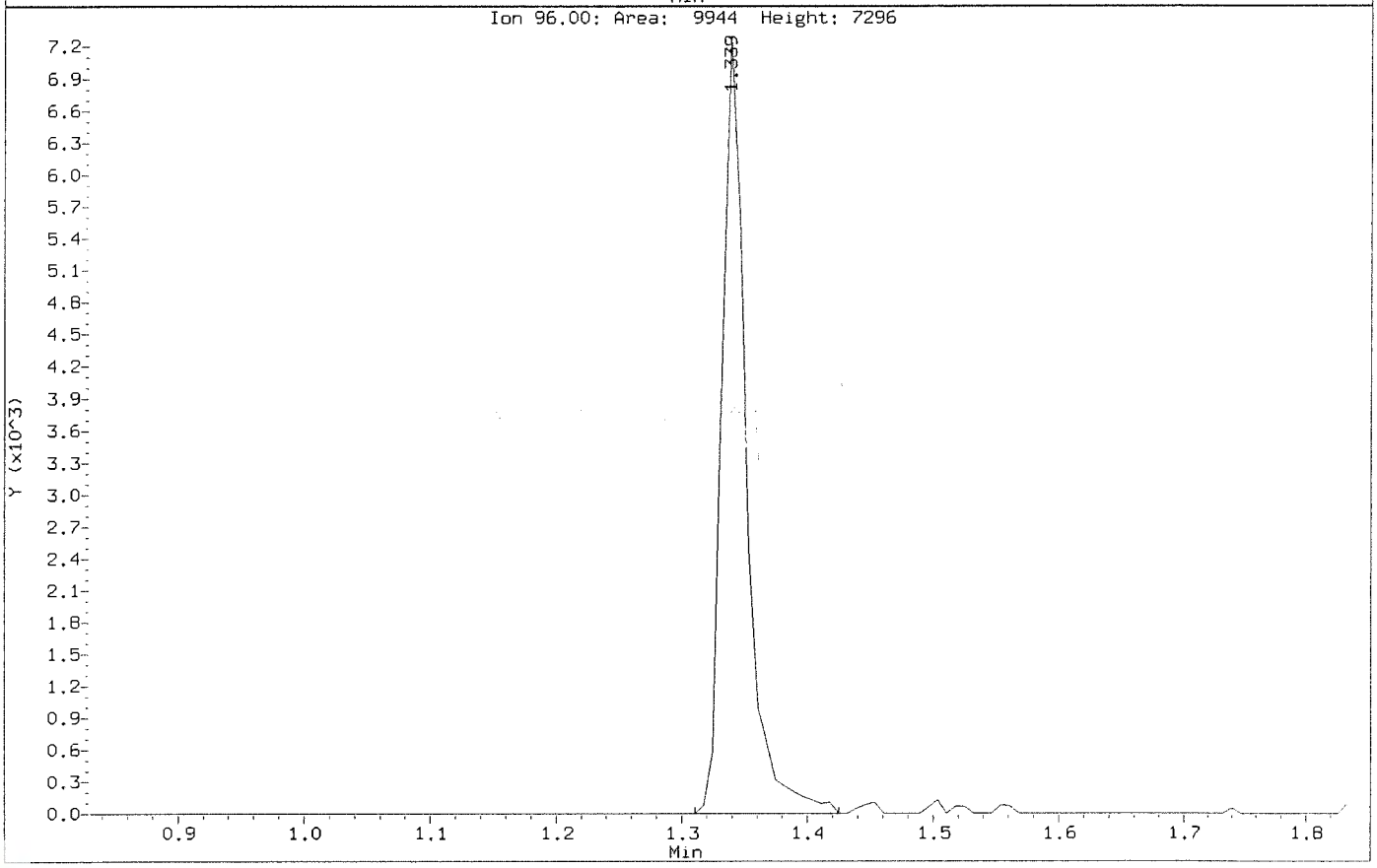
Instrument: voa6.i
Client Sample ID: VSTD005

Compound: Bromomethane
CAS Number: 74-83-9





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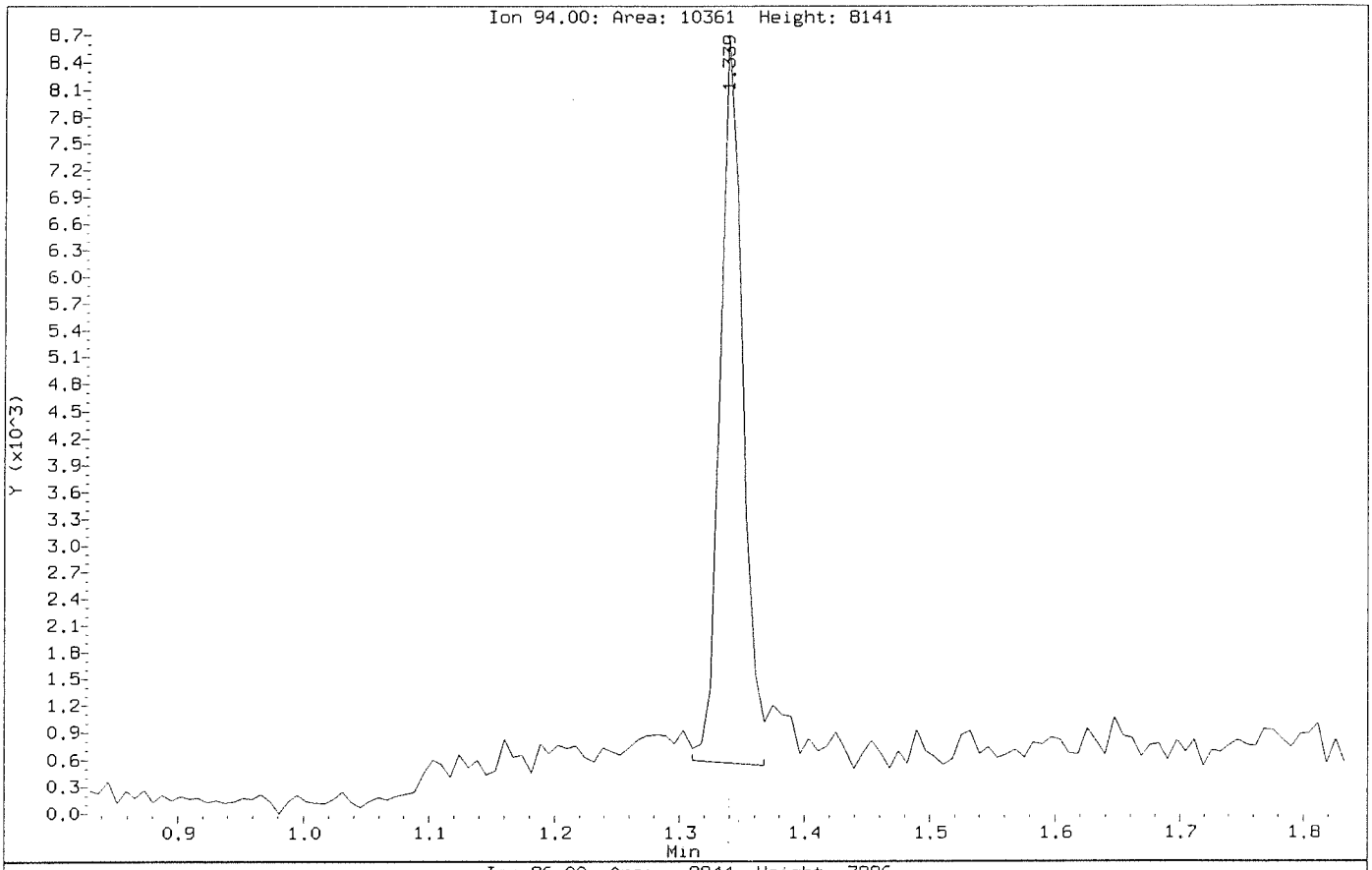
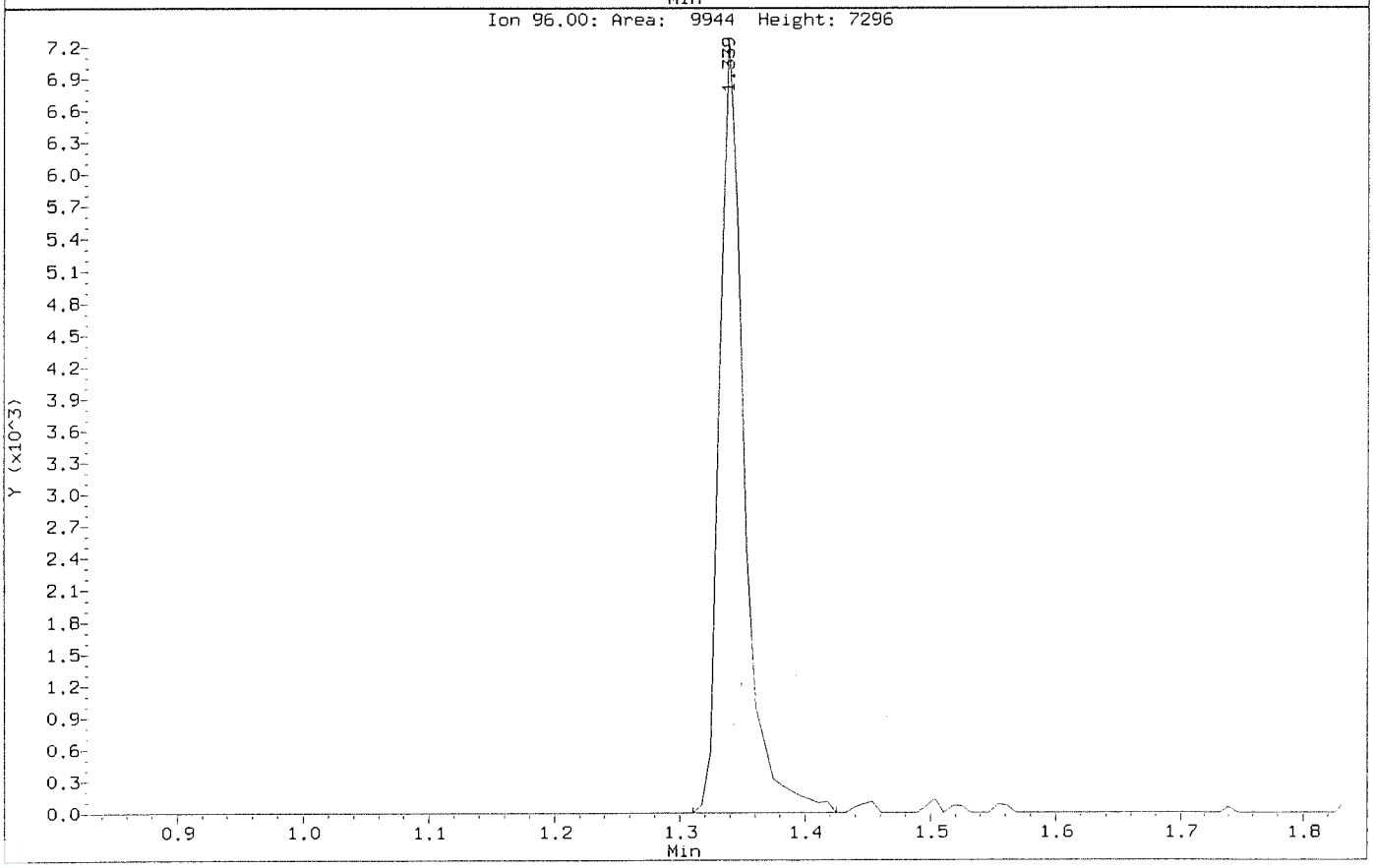
Instrument: voa6.i
Client Sample ID: VSTD005

Compound: Bromomethane
CAS Number: 74-83-9





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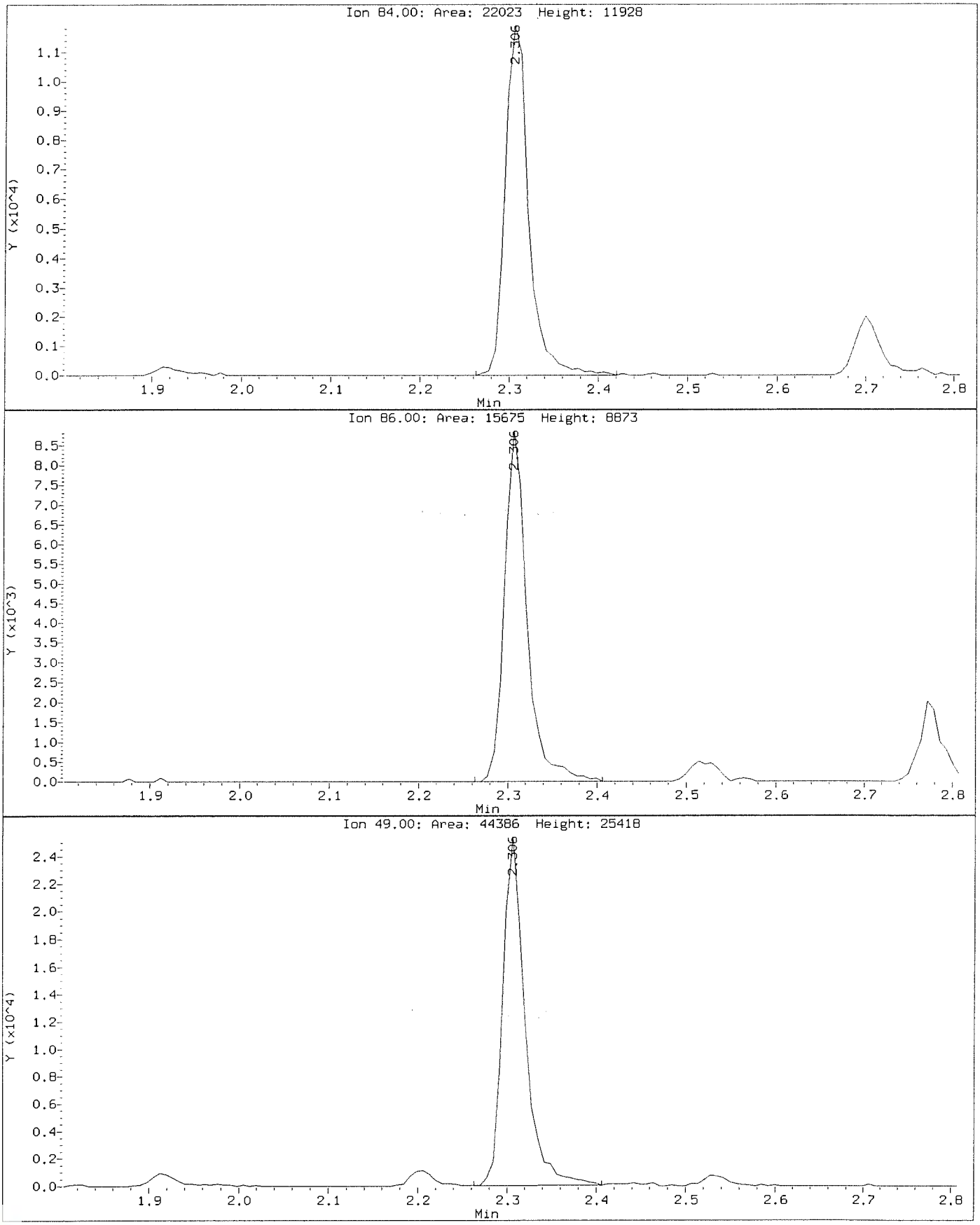
Instrument: voa6.i
Client Sample ID: VSTD005

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



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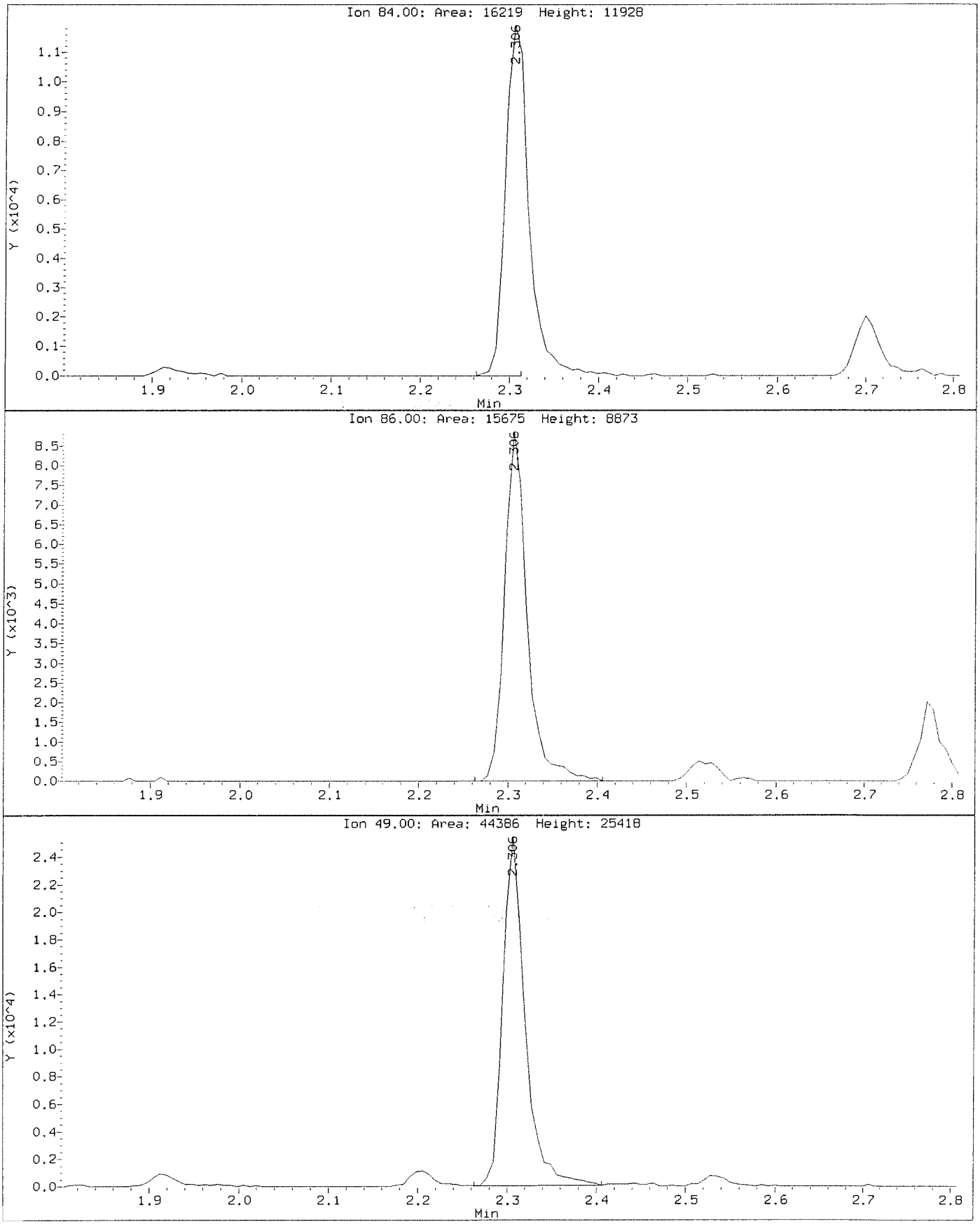
Injection Date: 07-JUL-2020 13:06
Instrument: voa6.i
Client Sample ID: VSTD005

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



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Data file : \\nahstws005\Target\chem\voa6.i\X200707.b\X070707.D
Lab Smp Id: VSTD020 Client Smp ID: VSTD020
Inj Date : 07-JUL-2020 13:29
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\X200707.b\8260W.m
Meth Date : 12-Aug-2020 15:35 voa6.i Quant Type: ISTD
Cal Date : 07-JUL-2020 13:06 Cal File: X070706.D
Als bottle: 8 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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

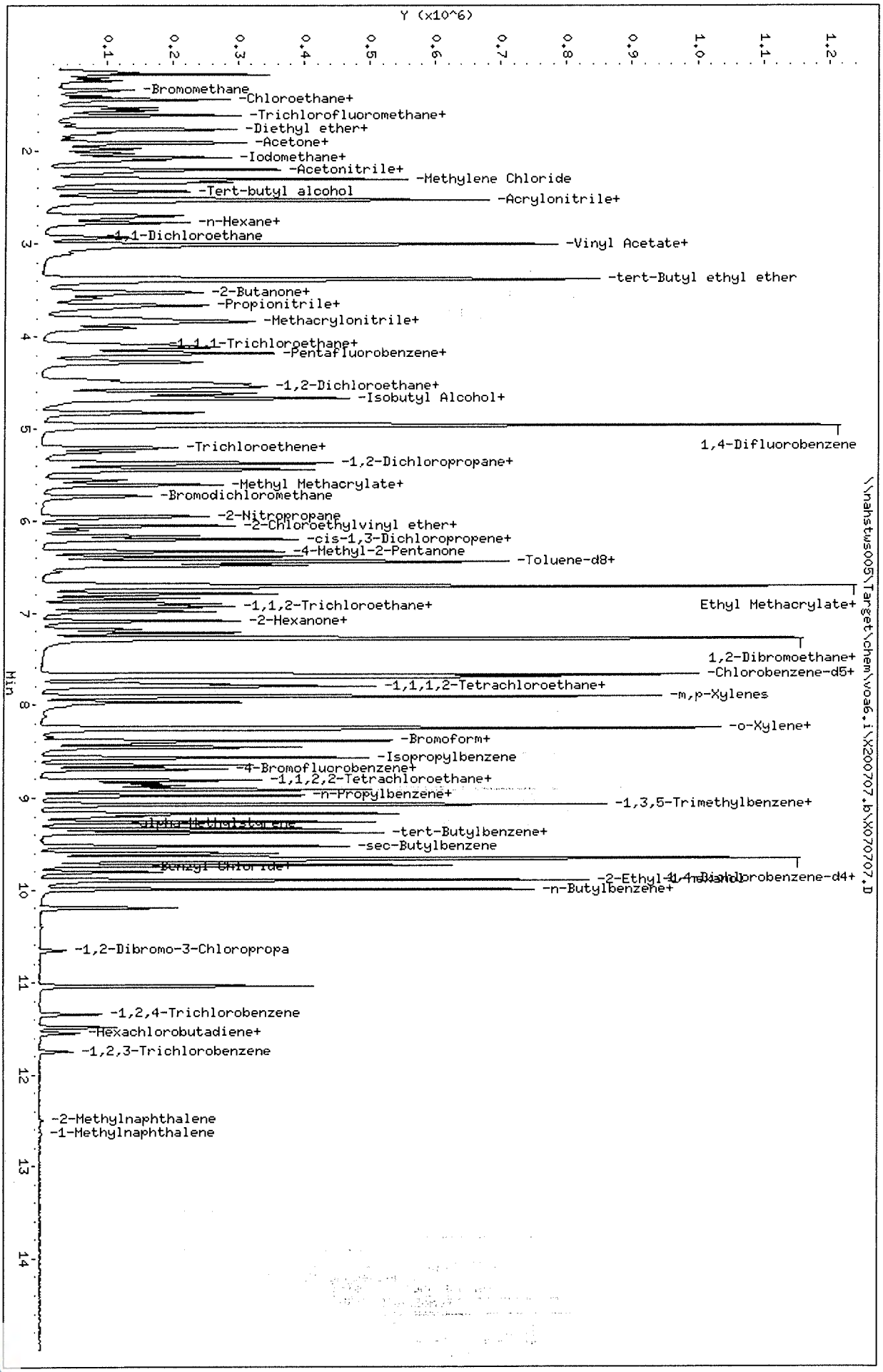
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)
*	1 Pentafluorobenzene	168	4.189	4.189	(1.000)	268905	50.0000	
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	451202	50.0000	
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	408645	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	195089	50.0000	
$	30 Dibromofluoromethane	113	4.103	4.103	(0.979)	60811	20.0000	20.26
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	81727	20.0000	19.90
$	48 Toluene-d8	98	6.388	6.388	(0.833)	204328	20.0000	19.01
$	69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	79496	20.0000	19.78
	60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	60983	20.0000	19.43
	31 1,1,1-Trichloroethane	97	4.089	4.089	(0.976)	97061	20.0000	19.70
	68 1,1,2,2-Tetrachloroethane	83	8.845	8.845	(0.915)	74946	20.0000	19.43
	53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	52625	20.0000	20.35
	22 1,1-Dichloroethane	63	2.929	2.929	(0.699)	143968	20.0000	18.89
	11 1,1-Dichloroethene	96	1.919	1.919	(0.458)	47920	20.0000	19.24
	32 1,1-Dichloropropene	75	4.282	4.282	(0.862)	82612	20.0000	18.59
	93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.215)	12636	20.0000	21.45
	71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	68148	20.0000	20.03(M)
	90 1,2,4-Trichlorobenzene	180	11.345	11.345	(1.173)	24701	20.0000	21.10
	79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.970)	221763	20.0000	19.32
	89 1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.102)	6863	20.0000	21.69
	57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	64899	20.0000	19.75
	88 1,2-Dichlorobenzene	146	9.999	9.999	(1.034)	108348	20.0000	19.00

Data File: \\nahstws005\Target\chem\voa6.i\X200707.b\X070707.D Page 2
Report Date: 12-Aug-2020 15:35

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
33	1,2-Dichloroethane	62	4.562	4.562	(0.918)	111420	20.0000	19.90
42	1,2-Dichloropropane	63	5.443	5.443	(1.095)	82315	20.0000	19.61
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	215977	20.0000	19.43
83	1,3-Dichlorobenzene	146	9.612	9.612	(0.994)	121002	20.0000	19.37
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	106168	20.0000	19.51
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	120181	20.0000	20.11
26	2,2-Dichloropropane	77	3.516	3.516	(0.839)	92762	20.0000	19.92
24	2-Butanone	43	3.580	3.580	(0.855)	122100	40.0000	46.33
76	2-Chlorotoluene	91	8.974	8.974	(0.928)	182135	20.0000	18.60
52	2-Hexanone	43	7.090	7.090	(0.924)	183102	40.0000	44.99
77	4-Chlorotoluene	91	9.075	9.075	(0.939)	213720	20.0000	19.24
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	215948	20.0000	19.46
45	4-Methyl-2-Pentanone	43	6.331	6.331	(0.825)	248616	40.0000	43.25
10	Acetone	43	1.976	1.976	(0.472)	132631	40.0000	47.14
37	Benzene	78	4.519	4.519	(0.909)	250058	20.0000	19.42
74	Bromobenzene	156	8.809	8.809	(0.911)	72659	20.0000	19.52
29	Bromochloromethane	128	3.803	3.803	(0.908)	34947	20.0000	18.71
39	Bromodichloromethane	83	5.729	5.729	(1.153)	87426	20.0000	19.34
66	Bromoform	173	8.416	8.416	(1.097)	45041	20.0000	19.85
6	Bromomethane	94	1.338	1.338	(0.320)	35913	20.0000	18.97
19	Carbon Disulfide	76	2.069	2.069	(0.494)	316447	40.0000	38.70
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	81313	20.0000	18.88
59	Chlorobenzene	112	7.699	7.699	(1.004)	158162	20.0000	18.99
7	Chloroethane	64	1.403	1.403	(0.335)	55533	20.0000	21.89
28	Chloroform	83	3.910	3.910	(0.933)	115938	20.0000	19.67
3	Chloromethane	50	1.081	1.081	(0.258)	99257	20.0000	17.96
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.843)	69871	20.0000	19.87
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	103237	20.0000	18.95
55	Dibromochloromethane	129	7.176	7.176	(0.936)	64031	20.0000	19.07
44	Dibromomethane	93	5.557	5.557	(1.118)	44054	20.0000	19.47
2	Dichlorodifluoromethane	85	0.973	0.973	(0.232)	62910	20.0000	19.32
61	Ethylbenzene	106	7.800	7.800	(1.017)	85244	20.0000	19.34
91	Hexachlorobutadiene	225	11.488	11.488	(1.188)	17457	20.0000	19.45
67	Isopropylbenzene	105	8.566	8.566	(1.117)	255805	20.0000	19.57
62	m,p-Xylenes	106	7.907	7.907	(1.031)	204410	40.0000	38.57
17	Methylene Chloride	84	2.305	2.305	(0.550)	63246	20.0000	21.50(M)
87	n-Butylbenzene	91	9.999	9.999	(1.034)	190321	20.0000	19.23
73	n-Propylbenzene	91	8.917	8.917	(0.922)	307136	20.0000	19.30
92	Naphthalene	128	11.546	11.546	(1.194)	40238	20.0000	21.43
63	o-Xylene	106	8.244	8.244	(1.075)	102056	20.0000	19.66
81	sec-Butylbenzene	105	9.526	9.526	(0.985)	249960	20.0000	19.11
64	Styrene	104	8.265	8.265	(1.078)	177823	20.0000	19.71
78	tert-Butylbenzene	119	9.340	9.340	(0.966)	172814	20.0000	19.30
56	Tetrachloroethene	164	6.933	6.933	(0.904)	50813	20.0000	20.35
50	Toluene	91	6.453	6.453	(0.841)	252164	20.0000	19.34
20	trans-1,2-Dichloroethene	96	2.535	2.535	(0.605)	59242	20.0000	20.15
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	94321	20.0000	19.27
38	Trichloroethene	130	5.214	5.214	(1.049)	65008	20.0000	19.41
8	Trichlorofluoromethane	101	1.560	1.560	(0.373)	92485	20.0000	19.94
5	Vinyl Chloride	62	1.145	1.145	(0.273)	89279	20.0000	18.89

QC Flag Legend

M - Compound response manually integrated.



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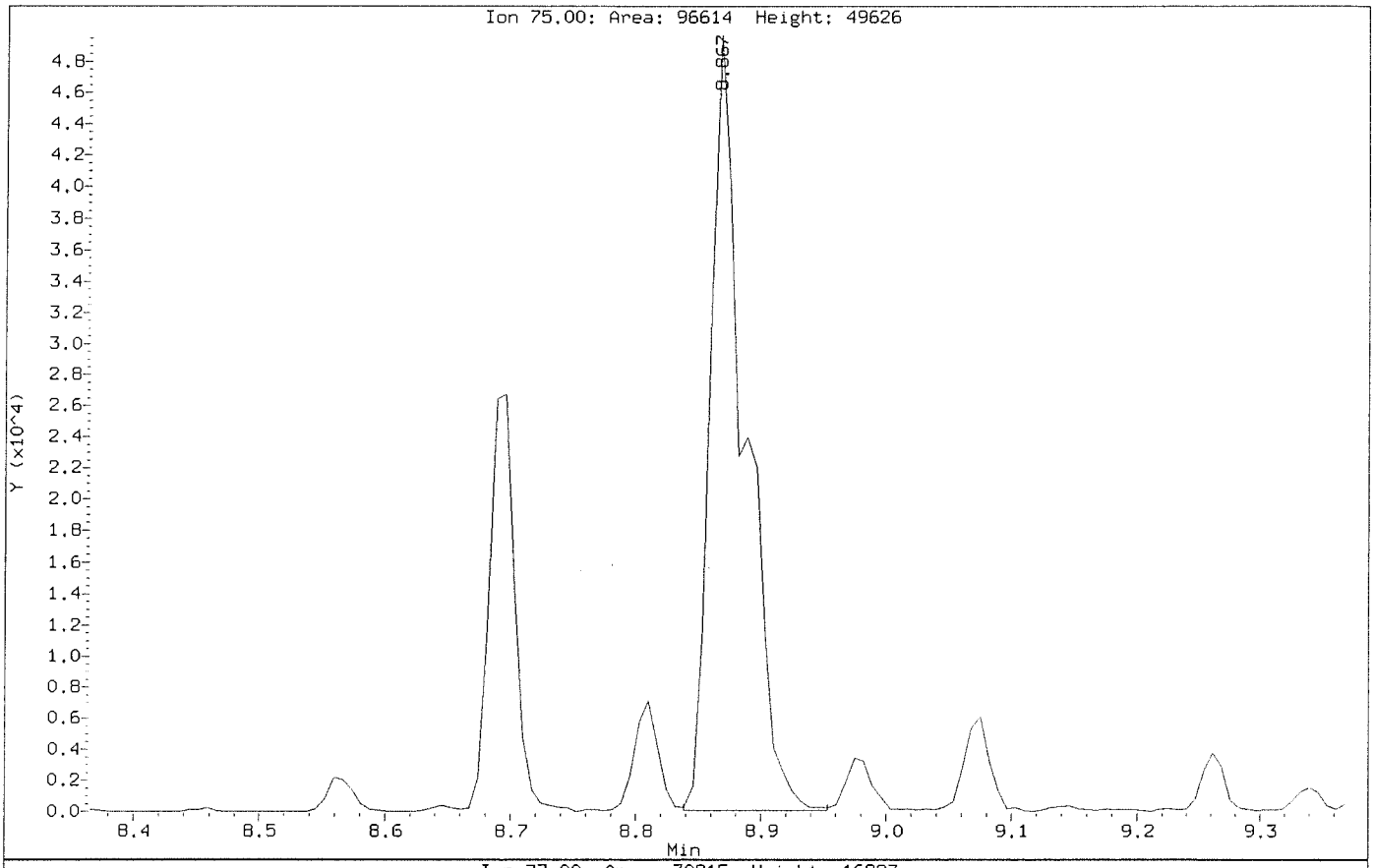
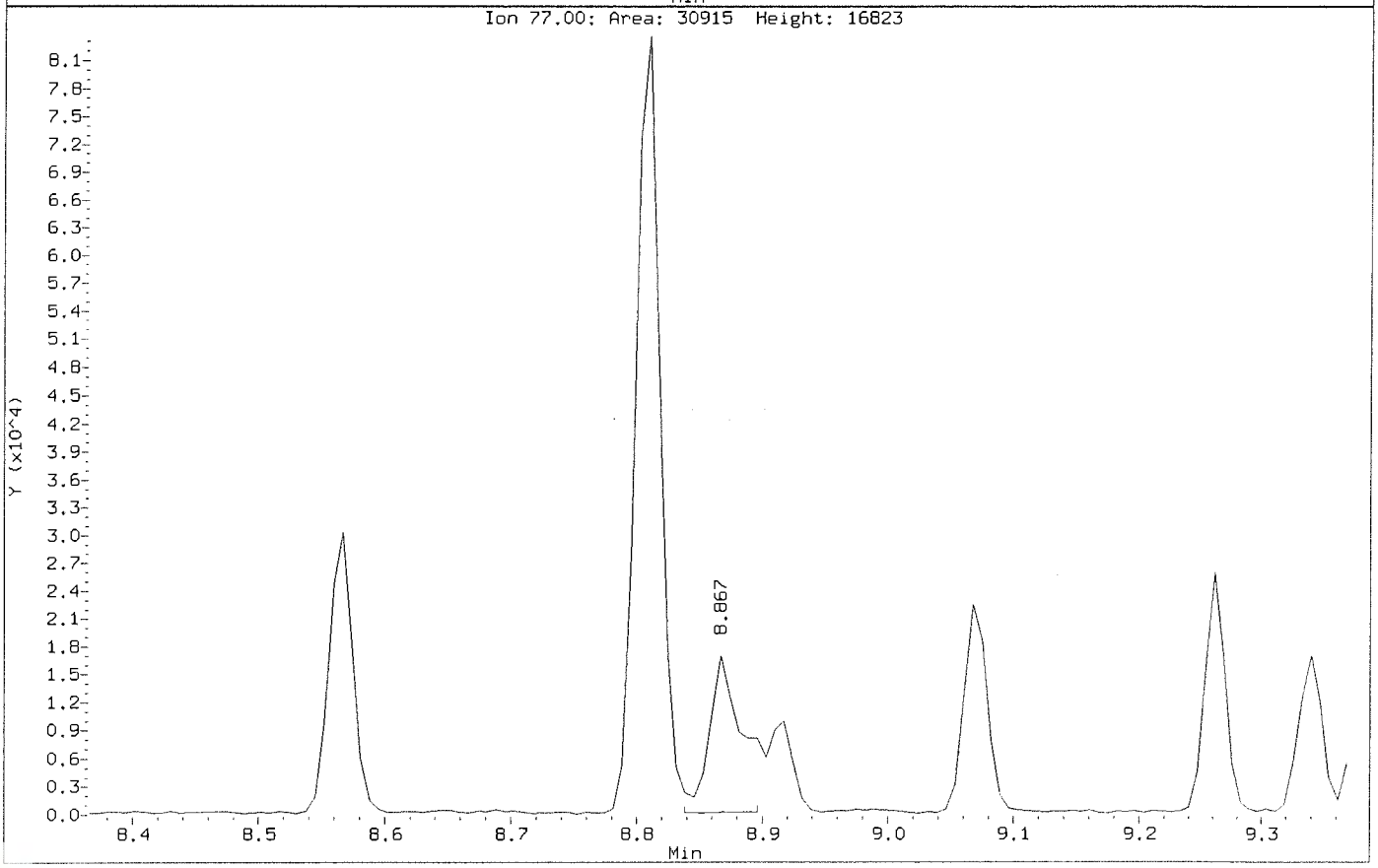
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\nahstws005\Target\chem\voa6.i\X200707.b\Before\X070707.D
Injection Date: 07-JUL-2020 13:29
Instrument: voa6.i
Client Sample ID: VSTD020

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





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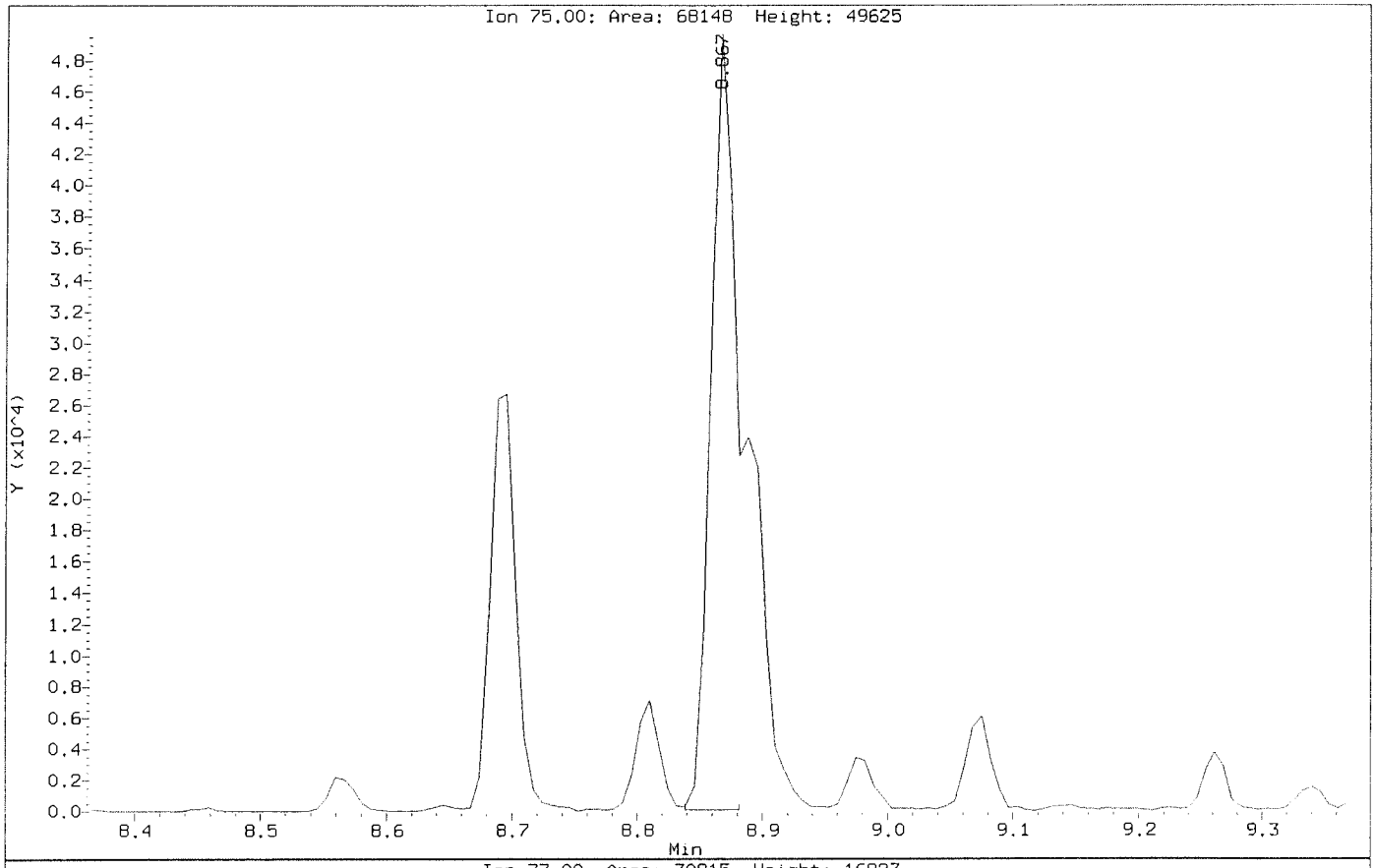
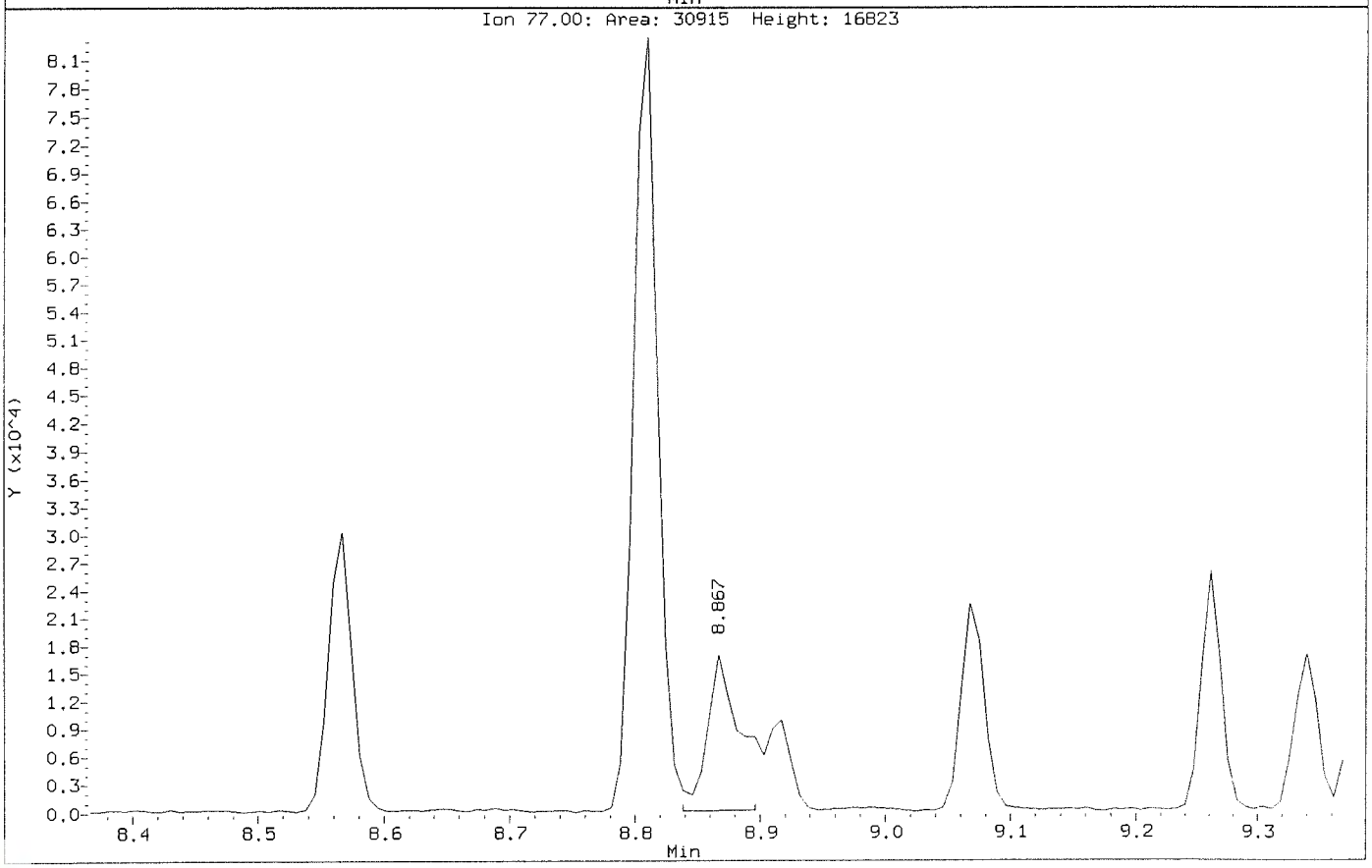
Client Sample ID: VSTD020

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





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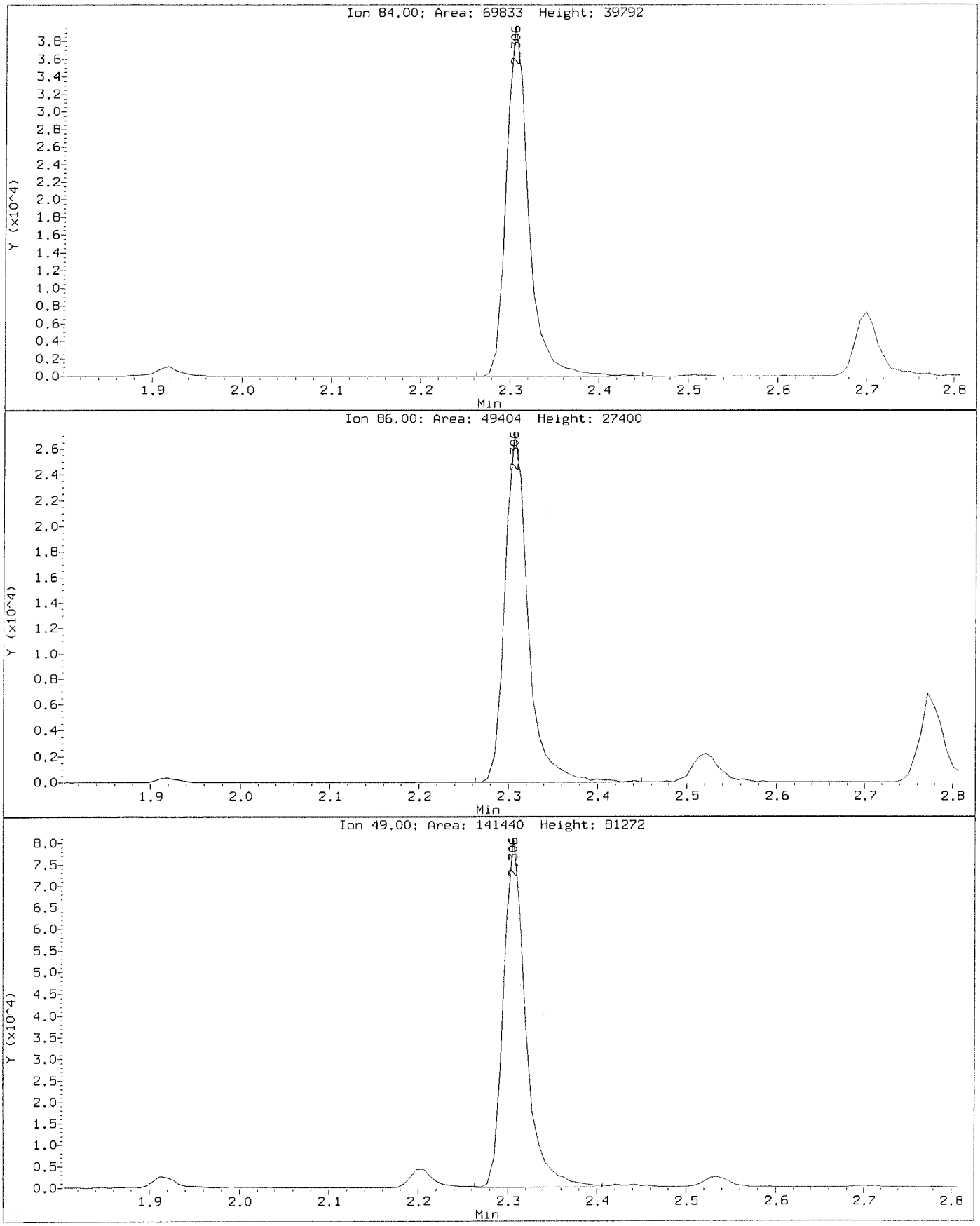
Injection Date: 07-JUL-2020 13:29
Instrument: voa6.i
Client Sample ID: VSTD020

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



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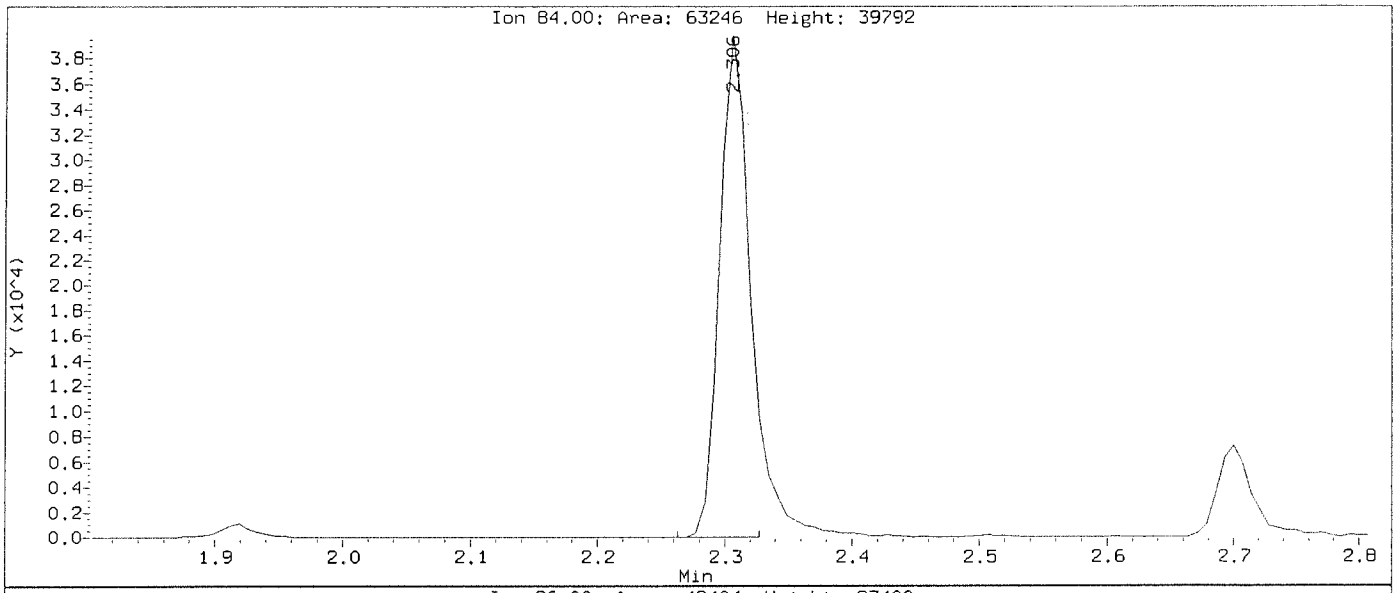
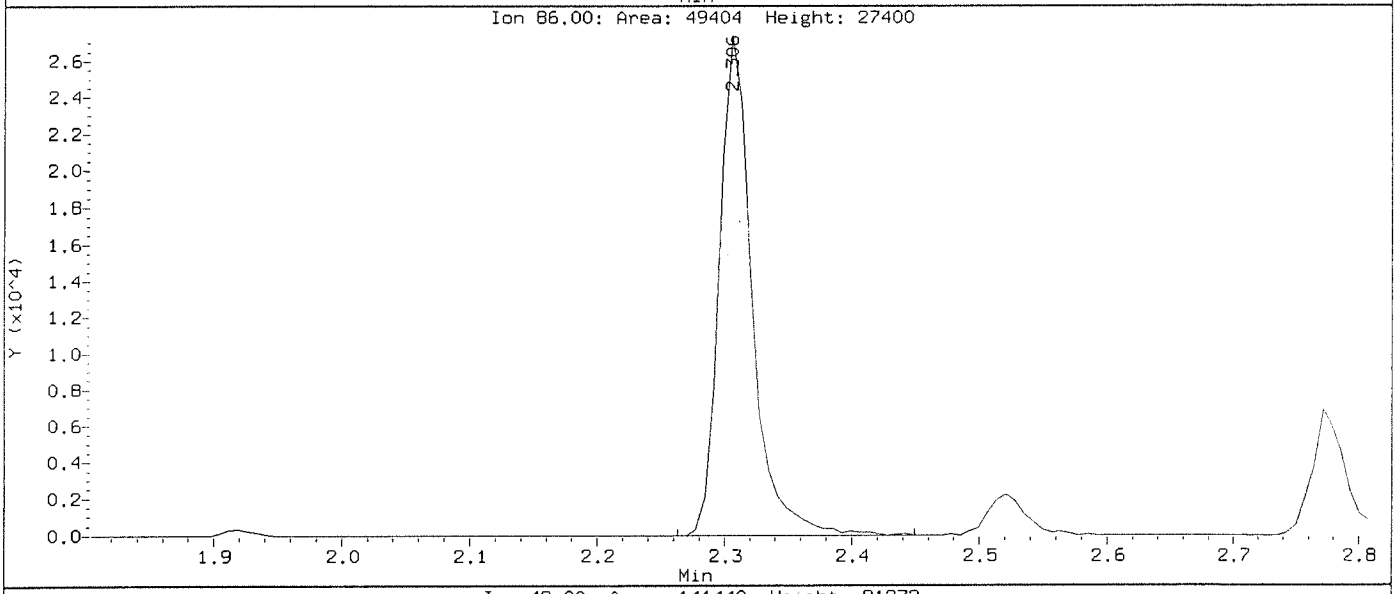
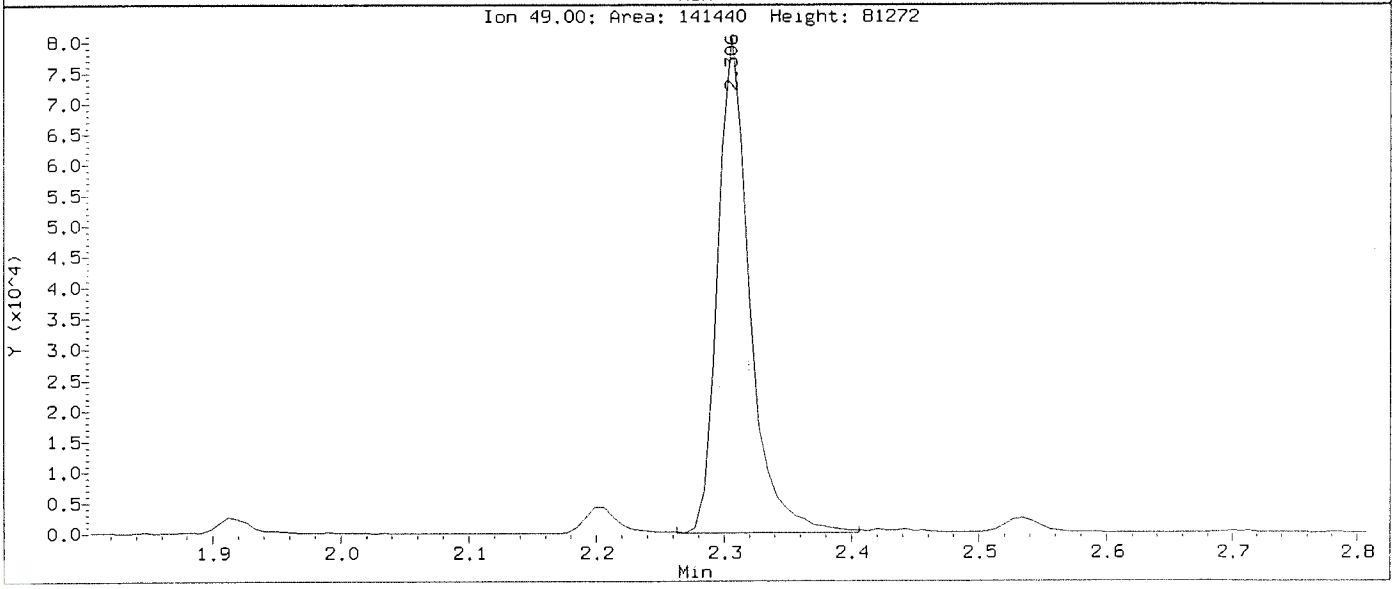
Instrument: voa6.i
Client Sample ID: VSTD020

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







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Report Date: 12-Aug-2020 15:35

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Data file : \\nahstws005\Target\chem\voa6.i\X200707.b\X070708.D
Lab Smp Id: VSTD050 Client Smp ID: VSTD050
Inj Date : 07-JUL-2020 13:53
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\X200707.b\8260W.m
Meth Date : 12-Aug-2020 15:35 voa6.i Quant Type: ISTD
Cal Date : 07-JUL-2020 13:29 Cal File: X070707.D
Als bottle: 9 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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

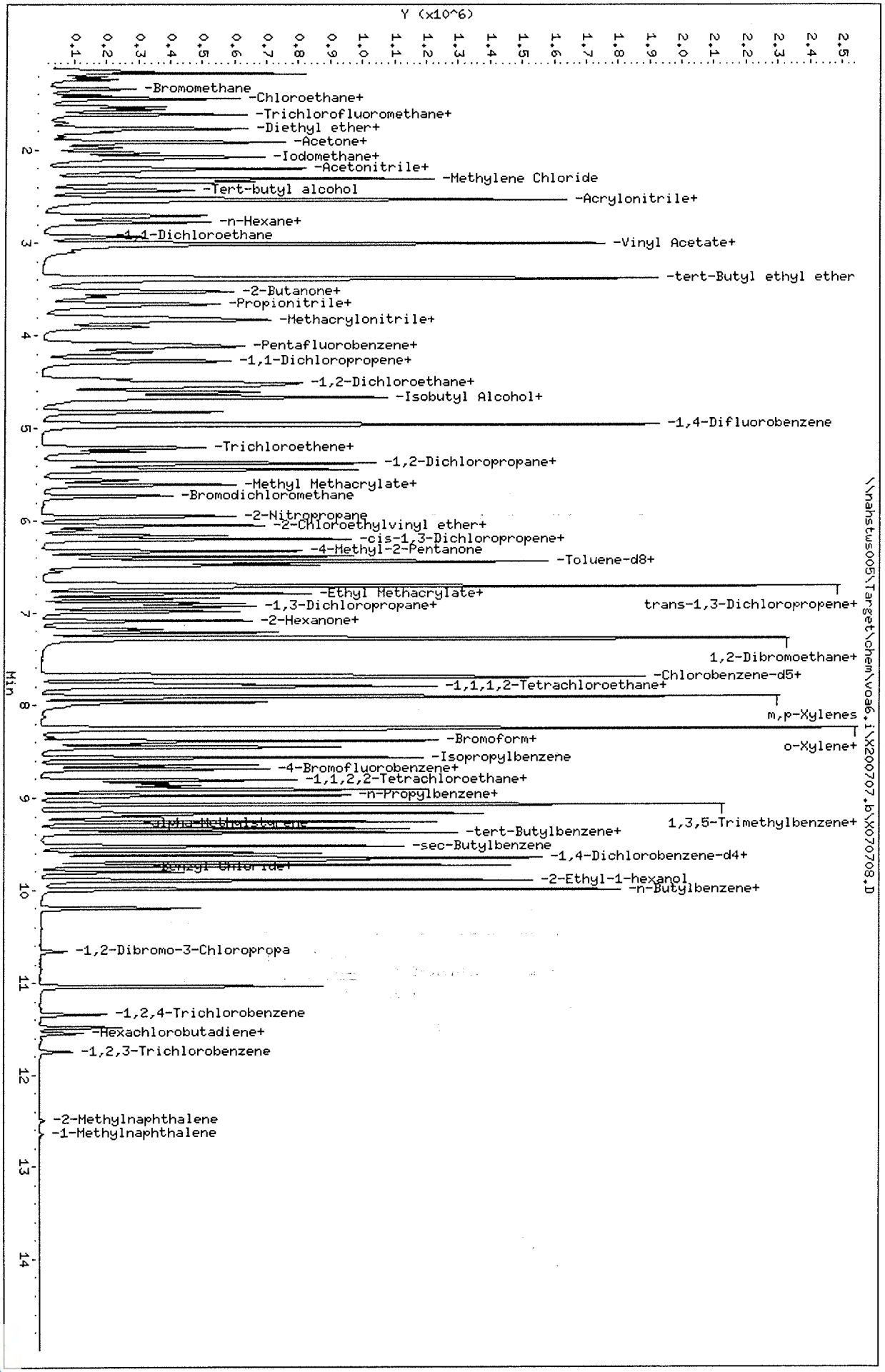
Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1	Pentafluorobenzene	168	4.189	4.189	(1.000)	253263	50.0000	
* 36	1,4-Difluorobenzene	114	4.970	4.970	(1.000)	423192	50.0000	
* 47	Chlorobenzene-d5	117	7.671	7.671	(1.000)	392139	50.0000	
* 70	1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	182702	50.0000	
$ 30	Dibromofluoromethane	113	4.103	4.103	(0.979)	141276	50.0000	51.30
$ 35	1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	193703	50.0000	51.12
$ 48	Toluene-d8	98	6.388	6.388	(0.833)	494527	50.0000	47.96
$ 69	4-Bromofluorobenzene	95	8.695	8.695	(1.134)	190894	50.0000	51.14
60	1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	147156	50.0000	48.87
31	1,1,1-Trichloroethane	97	4.089	4.089	(0.976)	234096	50.0000	50.45
68	1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.914)	165711	50.0000	45.87
53	1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	120890	50.0000	48.73
22	1,1-Dichloroethane	63	2.929	2.929	(0.699)	348914	50.0000	48.61
11	1,1-Dichloroethene	96	1.919	1.919	(0.458)	119960	50.0000	51.15
32	1,1-Dichloropropene	75	4.282	4.282	(0.862)	198929	50.0000	47.73
93	1,2,3-Trichlorobenzene	180	11.746	11.746	(1.215)	25695	50.0000	44.75
71	1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	156477	50.0000	49.13(M)
90	1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	51947	50.0000	45.76
79	1,2,4-Trimethylbenzene	105	9.383	9.383	(0.970)	529356	50.0000	49.26
89	1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.102)	14963	50.0000	52.83
57	1,2-Dibromoethane	107	7.262	7.262	(0.947)	151070	50.0000	47.92
88	1,2-Dichlorobenzene	146	9.999	9.999	(1.034)	259270	50.0000	48.55

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
33	1,2-Dichloroethane	62	4.562	4.562	(0.918)	257992	50.0000	49.13
42	1,2-Dichloropropane	63	5.443	5.443	(1.095)	198135	50.0000	50.32
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	520906	50.0000	50.04
83	1,3-Dichlorobenzene	146	9.605	9.605	(0.993)	286433	50.0000	48.96
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	246499	50.0000	47.20
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	284407	50.0000	51.13
26	2,2-Dichloropropane	77	3.516	3.516	(0.839)	219591	50.0000	50.08
24	2-Butanone	43	3.580	3.580	(0.855)	258420	100.000	111.94
76	2-Chlorotoluene	91	8.974	8.974	(0.928)	443961	50.0000	48.41
52	2-Hexanone	43	7.090	7.090	(0.924)	391819	100.000	104.95
77	4-Chlorotoluene	91	9.075	9.075	(0.939)	517343	50.0000	49.75
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	523543	50.0000	50.39
45	4-Methyl-2-Pentanone	43	6.324	6.324	(0.824)	554737	100.000	104.85
10	Acetone	43	1.976	1.976	(0.472)	227994	100.000	114.47
37	Benzene	78	4.519	4.519	(0.909)	598607	50.0000	49.57
74	Bromobenzene	156	8.810	8.810	(0.911)	171970	50.0000	49.33
29	Bromochloromethane	128	3.803	3.803	(0.908)	81152	50.0000	46.13
39	Bromodichloromethane	83	5.729	5.729	(1.153)	213349	50.0000	50.33
66	Bromoform	173	8.416	8.416	(1.097)	107797	50.0000	49.52
6	Bromomethane	94	1.338	1.338	(0.320)	85523	50.0000	48.08
19	Carbon Disulfide	76	2.069	2.069	(0.494)	792573	100.000	102.91
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	197241	50.0000	48.83
59	Chlorobenzene	112	7.699	7.699	(1.004)	384127	50.0000	48.08
7	Chloroethane	64	1.403	1.403	(0.335)	119616	50.0000	52.55
28	Chloroform	83	3.910	3.910	(0.933)	275874	50.0000	49.71
3	Chloromethane	50	1.081	1.081	(0.258)	250438	50.0000	48.11
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.843)	164749	50.0000	49.76
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	252596	50.0000	49.45
55	Dibromochloromethane	129	7.176	7.176	(0.936)	157619	50.0000	48.93
44	Dibromomethane	93	5.557	5.557	(1.118)	104290	50.0000	49.15
2	Dichlorodifluoromethane	85	0.973	0.973	(0.232)	154544	50.0000	50.40
61	Ethylbenzene	106	7.800	7.800	(1.017)	203192	50.0000	48.05
91	Hexachlorobutadiene	225	11.481	11.481	(1.187)	37898	50.0000	43.32
67	Isopropylbenzene	105	8.566	8.566	(1.117)	617562	50.0000	49.24
62	m,p-Xylenes	106	7.907	7.907	(1.031)	491233	100.000	96.60
17	Methylene Chloride	84	2.305	2.305	(0.550)	138674	50.0000	50.07(M)
87	n-Butylbenzene	91	9.999	9.999	(1.034)	476099	50.0000	51.37
73	n-Propylbenzene	91	8.917	8.917	(0.922)	743464	50.0000	49.89
92	Naphthalene	128	11.546	11.546	(1.194)	83775	50.0000	47.29
63	o-Xylene	106	8.244	8.244	(1.075)	241800	50.0000	48.54
81	sec-Butylbenzene	105	9.526	9.526	(0.985)	613245	50.0000	50.06
64	Styrene	104	8.265	8.265	(1.078)	423323	50.0000	48.89
78	tert-Butylbenzene	119	9.340	9.340	(0.966)	415216	50.0000	49.53
56	Tetrachloroethene	164	6.933	6.933	(0.904)	117871	50.0000	49.21
50	Toluene	91	6.453	6.453	(0.841)	607209	50.0000	48.53
20	trans-1,2-Dichloroethene	96	2.535	2.535	(0.605)	141687	50.0000	51.18
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	228653	50.0000	49.82
38	Trichloroethene	130	5.214	5.214	(1.049)	159413	50.0000	50.77
8	Trichlorofluoromethane	101	1.561	1.561	(0.373)	229104	50.0000	52.45
5	Vinyl Chloride	62	1.145	1.145	(0.273)	227208	50.0000	51.06

QC Flag Legend

M - Compound response manually integrated.



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Purge Volume: 5.0
Column phase: DB624

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

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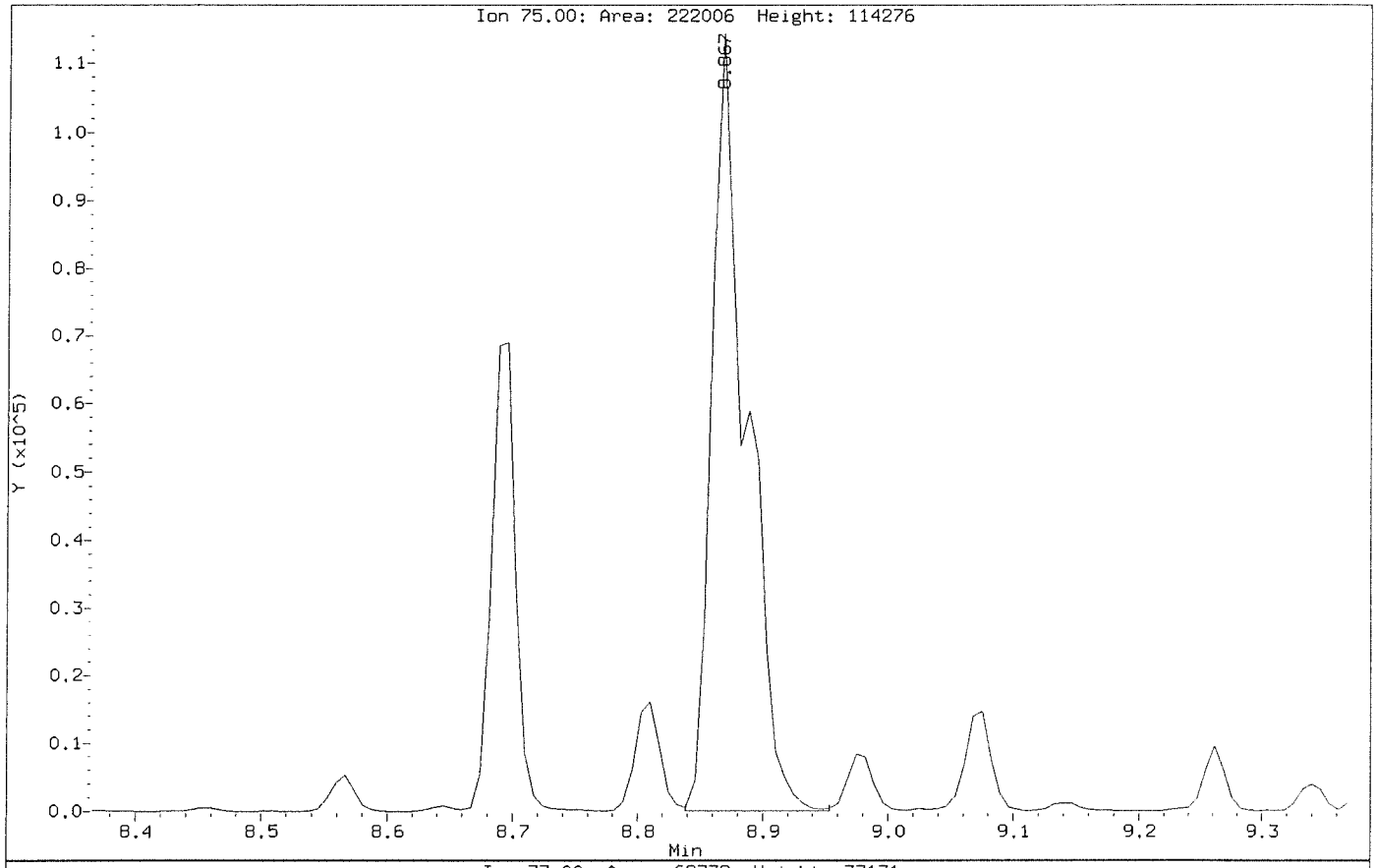
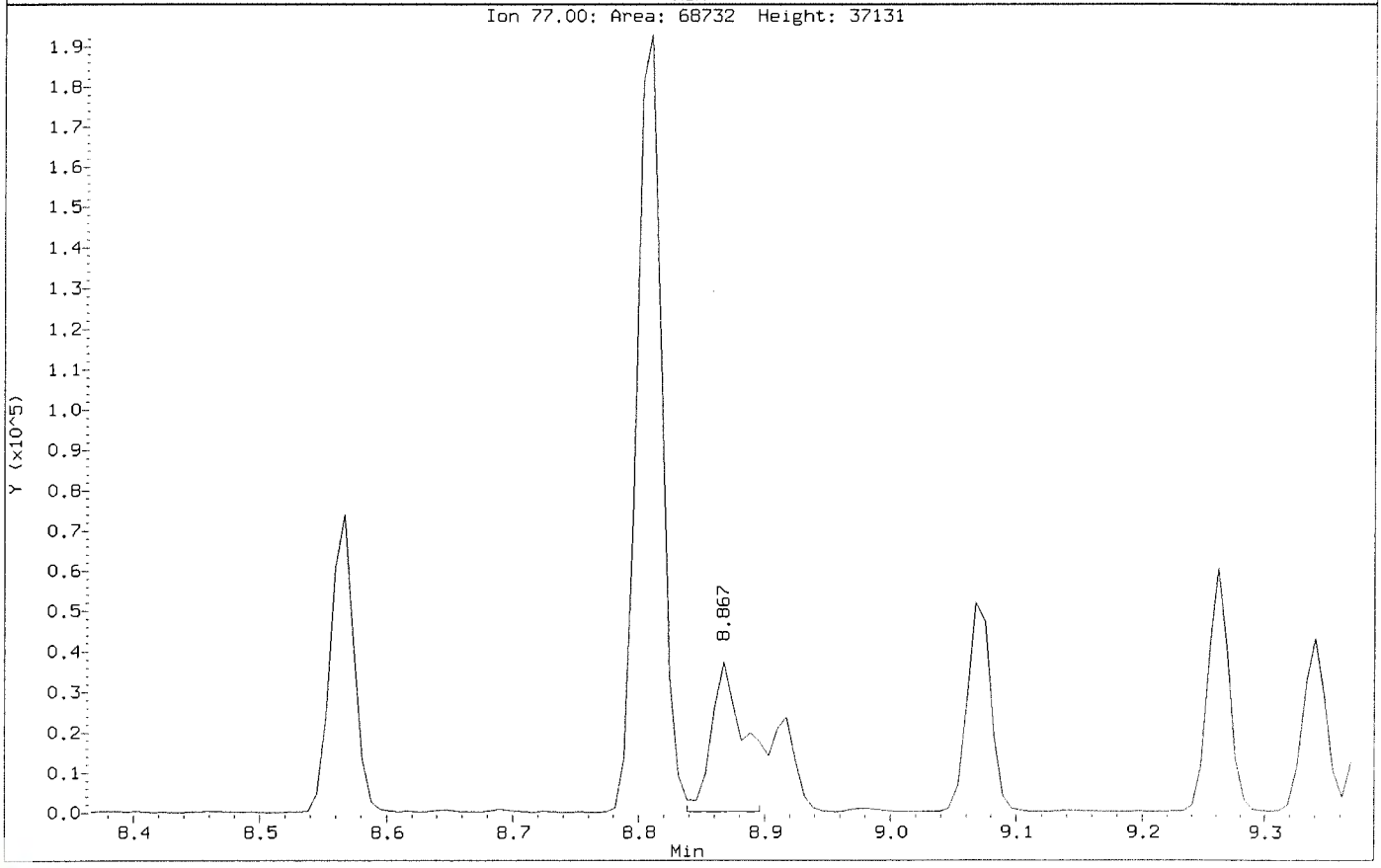
Instrument: voa6.i
Client Sample ID: VSTD050

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





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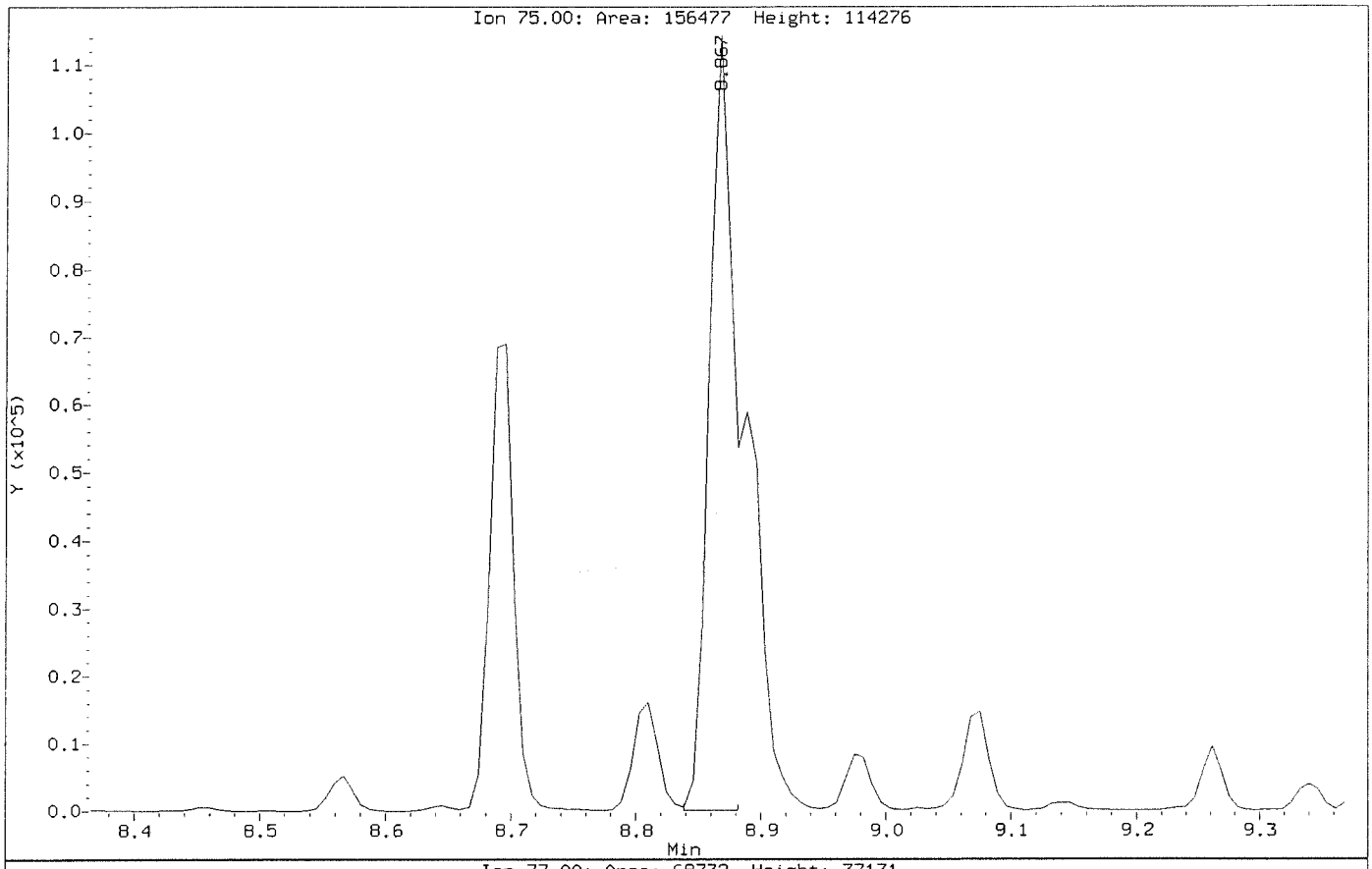
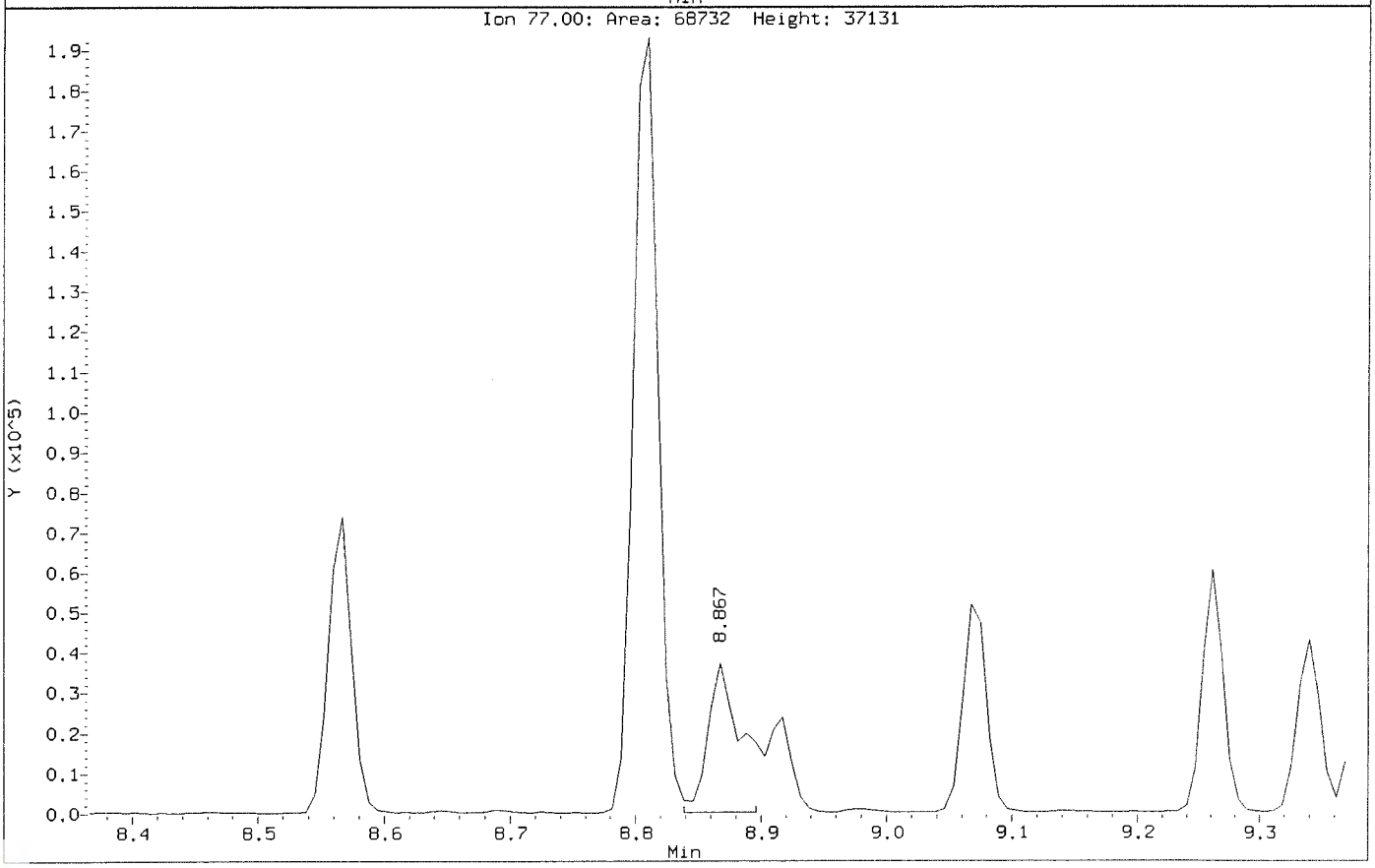
Instrument: voa6.i
Client Sample ID: VSTD050

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





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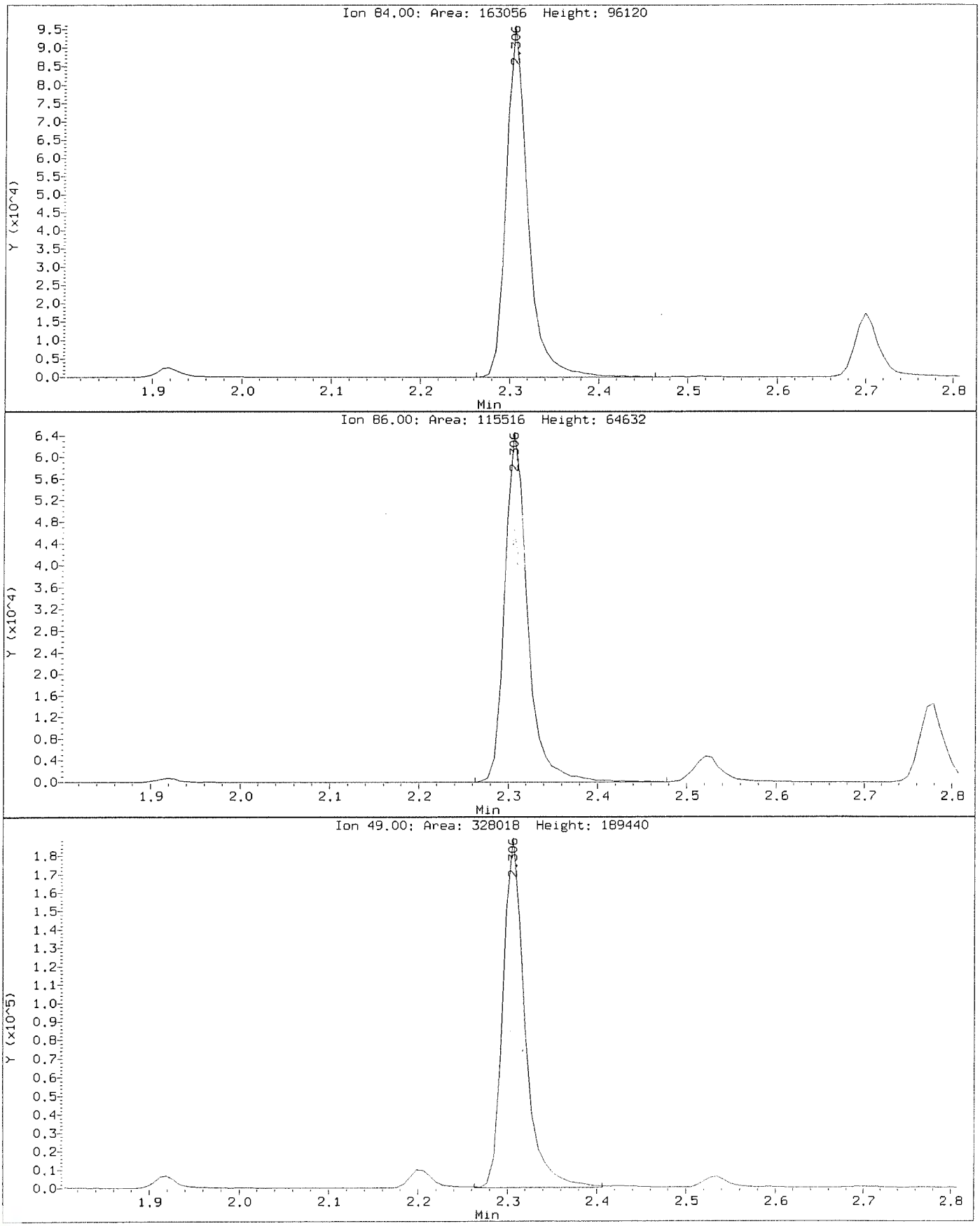
Instrument: voa6.i
Client Sample ID: VSTD050

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



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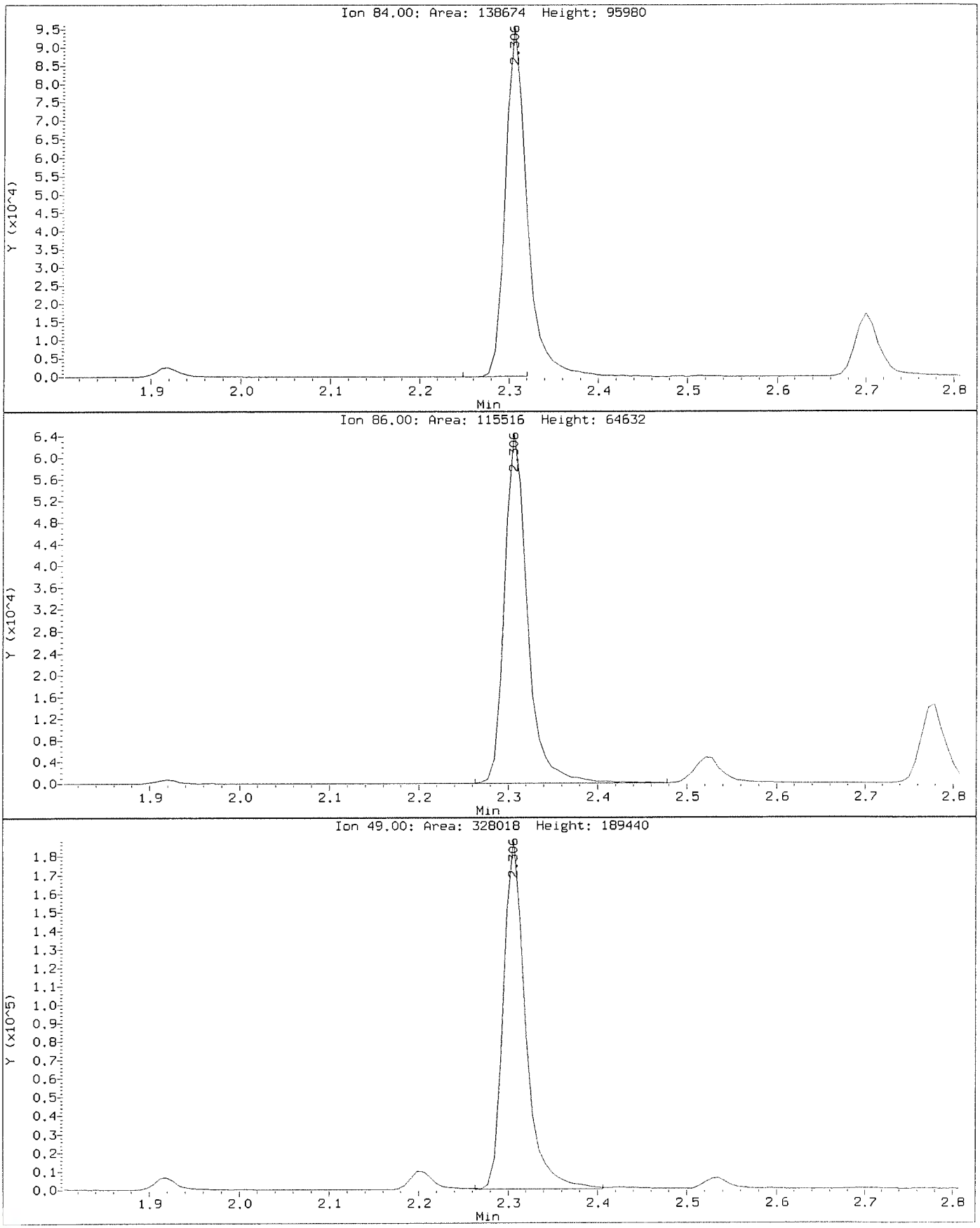
Instrument: voa6.i
Client Sample ID: VSTD050

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



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Report Date: 12-Aug-2020 15:35

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200707.b\X070709.D
Lab Smp Id: VSTD100 Client Smp ID: VSTD100
Inj Date : 07-JUL-2020 14:17
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\X200707.b\8260W.m
Meth Date : 12-Aug-2020 15:35 voa6.i Quant Type: ISTD
Cal Date : 07-JUL-2020 13:53 Cal File: X070708.D
Als bottle: 10 Calibration Sample, Level: 8
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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

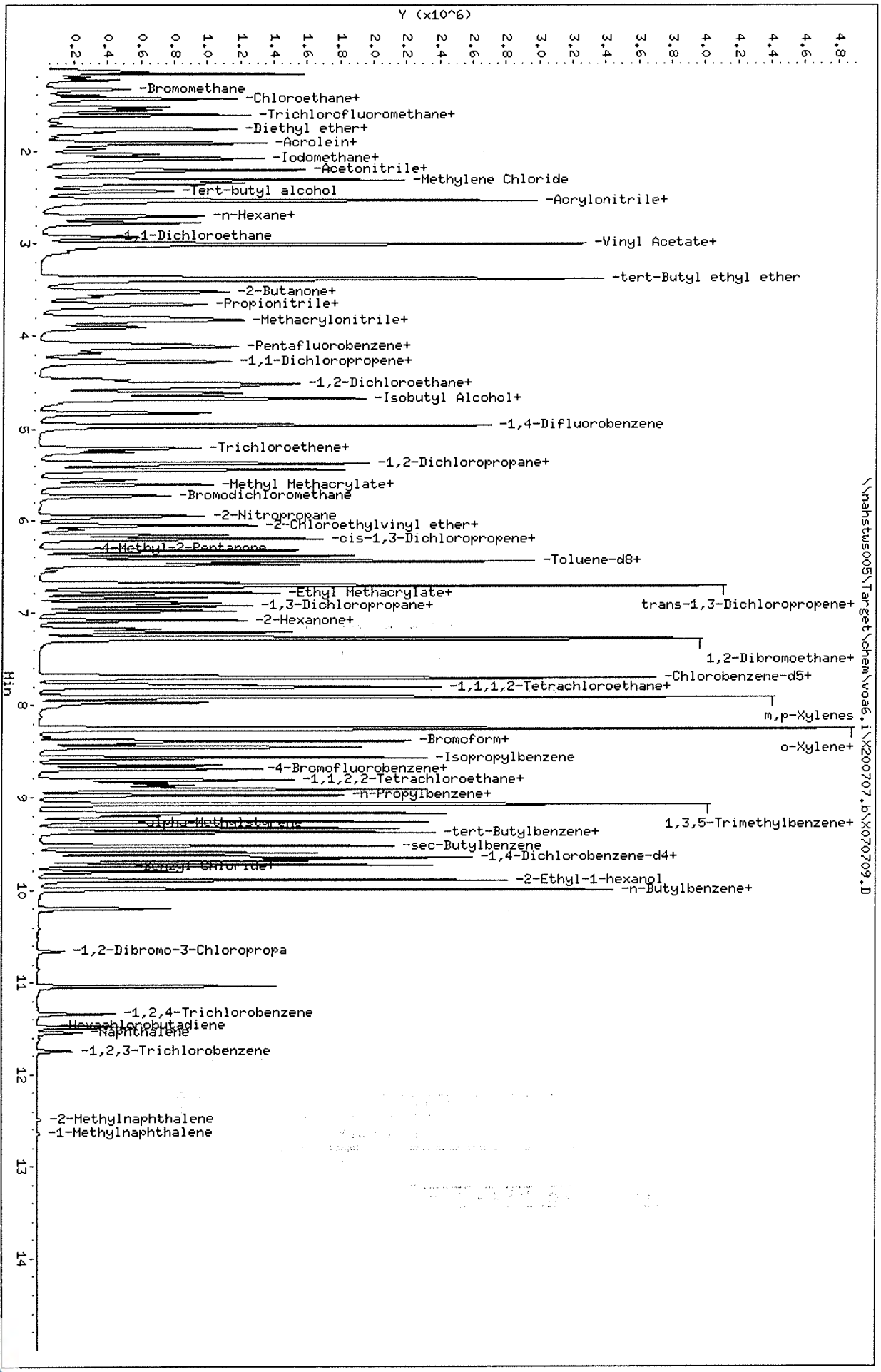
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1	Pentafluorobenzene	168	4.189	4.189	(1.000)	254814	50.0000	
* 36	1,4-Difluorobenzene	114	4.970	4.970	(1.000)	415120	50.0000	
* 47	Chlorobenzene-d5	117	7.671	7.671	(1.000)	383282	50.0000	
* 70	1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	178296	50.0000	
$ 30	Dibromofluoromethane	113	4.103	4.103	(0.979)	276479	100.000	100.64
$ 35	1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	380559	100.000	100.49
$ 48	Toluene-d8	98	6.388	6.388	(0.833)	972650	100.000	96.52
$ 69	4-Bromofluorobenzene	95	8.688	8.688	(1.133)	370763	100.000	102.70
60	1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	286216	100.000	97.25
31	1,1,1-Trichloroethane	97	4.089	4.089	(0.976)	455521	100.000	97.58
68	1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.914)	315324	100.000	89.45
53	1,1,2-Trichloroethane	83	6.847	6.847	(0.893)	226369	100.000	93.36
22	1,1-Dichloroethane	63	2.929	2.929	(0.699)	668553	100.000	92.57
11	1,1-Dichloroethene	96	1.919	1.919	(0.458)	230722	100.000	97.78
32	1,1-Dichloropropene	75	4.282	4.282	(0.862)	384840	100.000	94.14
93	1,2,3-Trichlorobenzene	180	11.746	11.746	(1.215)	55251	100.000	96.74
71	1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	288791	100.000	92.91(M)
90	1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	107787	100.000	95.82
79	1,2,4-Trimethylbenzene	105	9.383	9.383	(0.970)	996015	100.000	94.99
89	1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.102)	27599	100.000	101.42
57	1,2-Dibromoethane	107	7.262	7.262	(0.947)	284355	100.000	92.29
88	1,2-Dichlorobenzene	146	9.999	9.999	(1.034)	483479	100.000	92.77

Data File: \\nahstws005\Target\chem\voa6.i\X200707.b\X070709.D Page 2
Report Date: 12-Aug-2020 15:35

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
33 1,2-Dichloroethane	62	4.562	4.562	(0.918)	489510	100.000	95.04
42 1,2-Dichloropropane	63	5.443	5.443	(1.095)	376197	100.000	97.41
75 1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	976493	100.000	96.12
83 1,3-Dichlorobenzene	146	9.605	9.605	(0.993)	544919	100.000	95.46
54 1,3-Dichloropropane	76	6.983	6.983	(0.910)	472401	100.000	92.56
84 1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	530827	100.000	97.98
26 2,2-Dichloropropane	77	3.516	3.516	(0.839)	418119	100.000	94.77
24 2-Butanone	43	3.573	3.573	(0.853)	455606	200.000	200.87(A)
76 2-Chlorotoluene	91	8.974	8.974	(0.928)	834090	100.000	93.20
52 2-Hexanone	43	7.090	7.090	(0.924)	730128	200.000	203.49(A)
77 4-Chlorotoluene	91	9.075	9.075	(0.939)	990222	100.000	97.57
82 p-Isopropyltoluene	119	9.655	9.655	(0.999)	981195	100.000	96.77
45 4-Methyl-2-Pentanone	43	6.324	6.324	(0.824)	1037472	200.000	203.59(A)
10 Acetone	43	1.976	1.976	(0.472)	370679	200.000	206.19(A)
37 Benzene	78	4.519	4.519	(0.909)	1134413	100.000	95.77
74 Bromobenzene	156	8.810	8.810	(0.911)	326997	100.000	96.13
29 Bromochloromethane	128	3.803	3.803	(0.908)	156028	100.000	88.16
39 Bromodichloromethane	83	5.729	5.729	(1.153)	412599	100.000	99.23
66 Bromoform	173	8.416	8.416	(1.097)	206121	100.000	96.87
6 Bromomethane	94	1.338	1.338	(0.320)	181570	100.000	101.55
19 Carbon Disulfide	76	2.069	2.069	(0.494)	1508992	200.000	194.75
34 Carbon Tetrachloride	117	4.268	4.268	(0.859)	389564	100.000	98.33
59 Chlorobenzene	112	7.699	7.699	(1.004)	738580	100.000	94.58
7 Chloroethane	64	1.403	1.403	(0.335)	231987	100.000	103.07
28 Chloroform	83	3.910	3.910	(0.933)	525140	100.000	94.04
3 Chloromethane	50	1.081	1.081	(0.258)	501139	100.000	95.70
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.843)	314306	100.000	94.36
46 cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	485585	100.000	96.91
55 Dibromochloromethane	129	7.176	7.176	(0.936)	305403	100.000	97.00
44 Dibromomethane	93	5.557	5.557	(1.118)	198845	100.000	95.53
2 Dichlorodifluoromethane	85	0.973	0.973	(0.232)	305540	100.000	99.04
61 Ethylbenzene	106	7.800	7.800	(1.017)	393381	100.000	95.18
91 Hexachlorobutadiene	225	11.481	11.481	(1.187)	87052	100.000	100.17
67 Isopropylbenzene	105	8.566	8.566	(1.117)	1170779	100.000	95.50
62 m,p-Xylenes	106	7.907	7.907	(1.031)	936717	200.000	188.47
17 Methylene Chloride	84	2.305	2.305	(0.550)	278105	100.000	99.80(M)
87 n-Butylbenzene	91	9.999	9.999	(1.034)	884170	100.000	97.76
73 n-Propylbenzene	91	8.917	8.917	(0.922)	1415674	100.000	97.35
92 Naphthalene	128	11.546	11.546	(1.194)	165996	100.000	95.71
63 o-Xylene	106	8.244	8.244	(1.075)	459774	100.000	94.43
81 sec-Butylbenzene	105	9.526	9.526	(0.985)	1154751	100.000	96.60
64 Styrene	104	8.258	8.258	(1.077)	818753	100.000	96.76
78 tert-Butylbenzene	119	9.340	9.340	(0.966)	782359	100.000	95.64
56 Tetrachloroethene	164	6.933	6.933	(0.904)	226468	100.000	96.73
50 Toluene	91	6.453	6.453	(0.841)	1160893	100.000	94.93
20 trans-1,2-Dichloroethene	96	2.535	2.535	(0.605)	267523	100.000	96.05
51 trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	441875	100.000	98.15
38 Trichloroethene	130	5.207	5.207	(1.048)	299347	100.000	97.19
8 Trichlorofluoromethane	101	1.561	1.561	(0.373)	444501	100.000	101.15
5 Vinyl Chloride	62	1.145	1.145	(0.273)	437640	100.000	97.76

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.
M - Compound response manually integrated.



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Purge Volume: 5.0
Column phase: DB624

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

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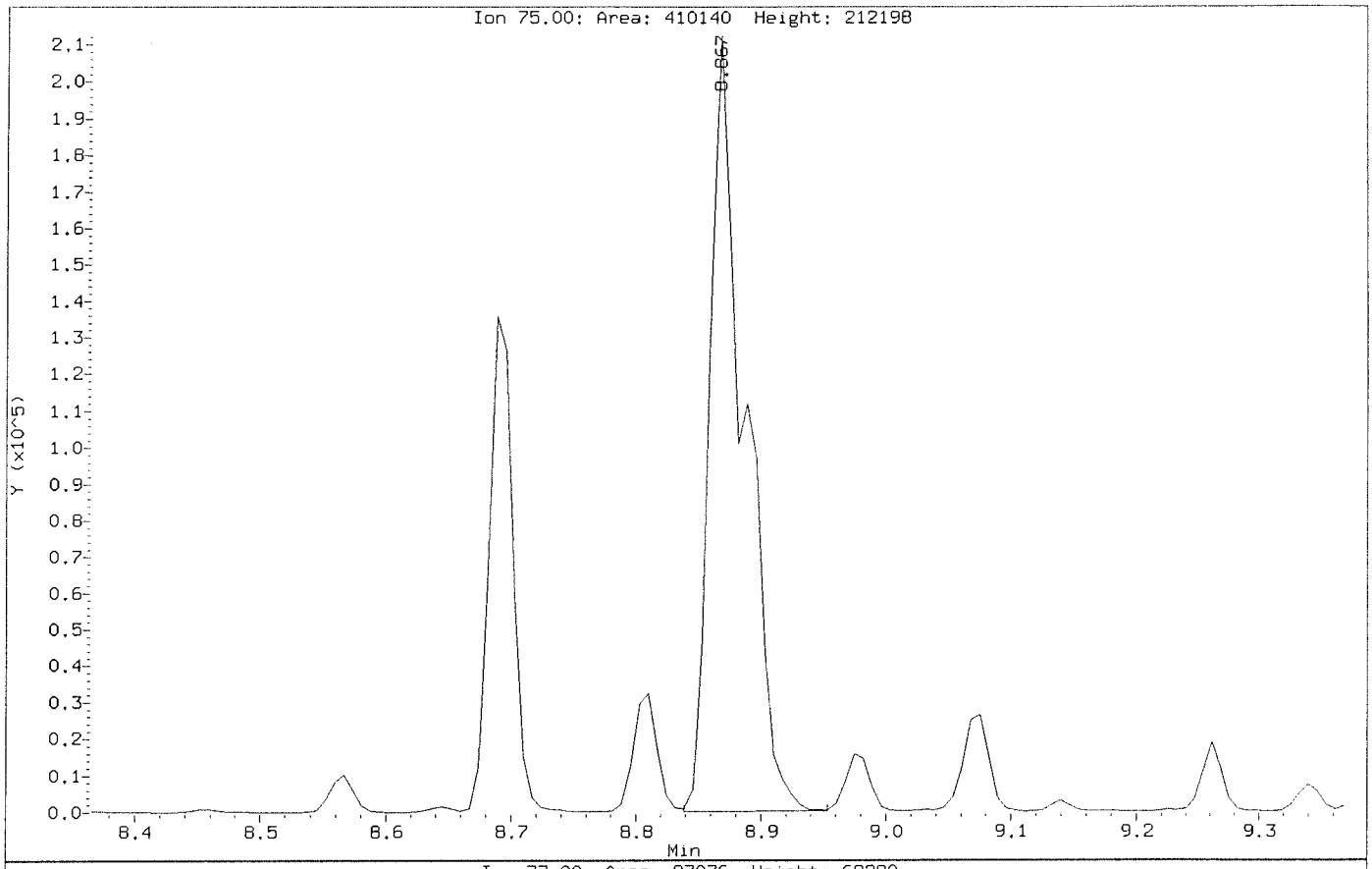
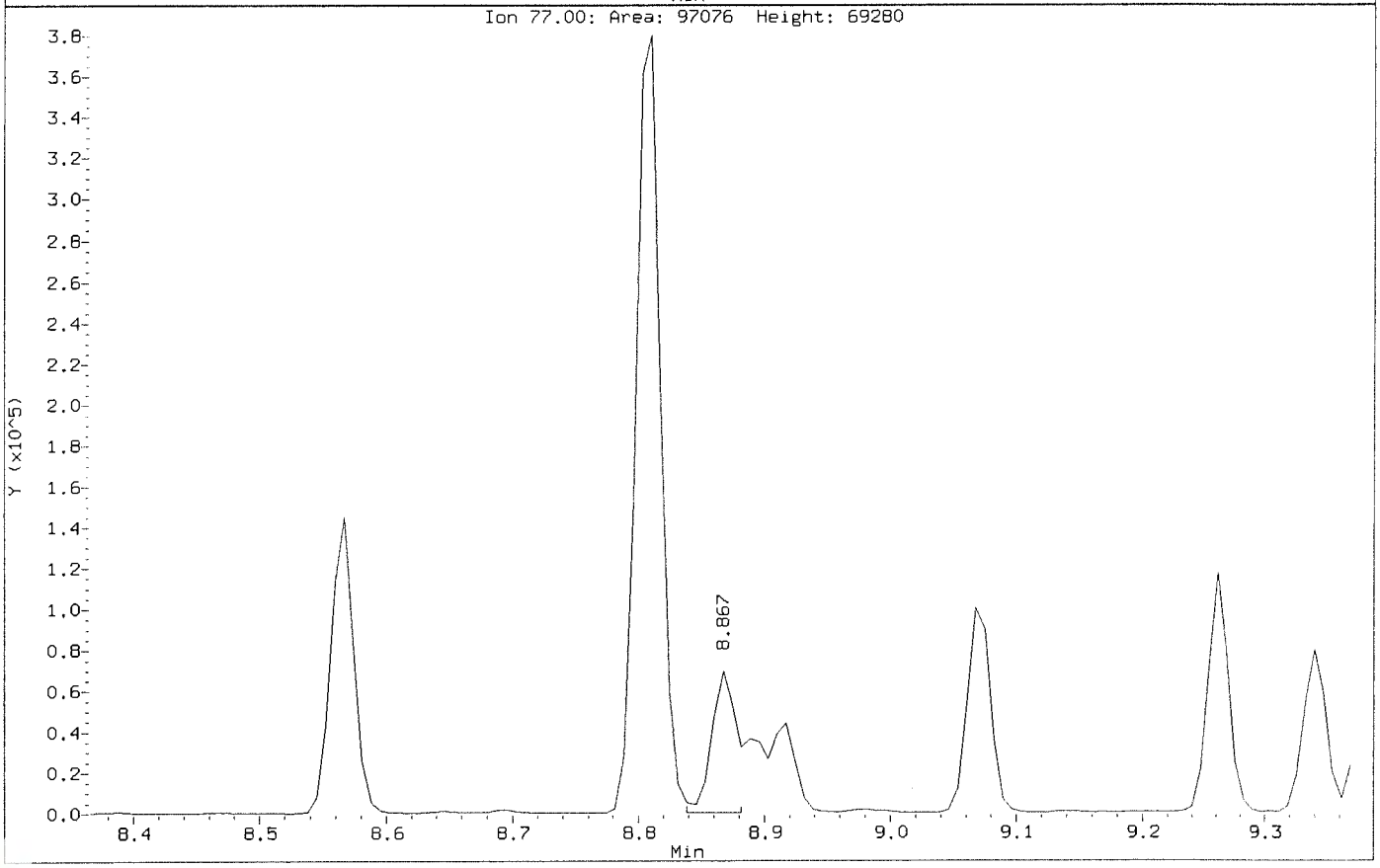
Injection Date: 07-JUL-2020 14:17
Instrument: voa6.i
Client Sample ID: VSTD100

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





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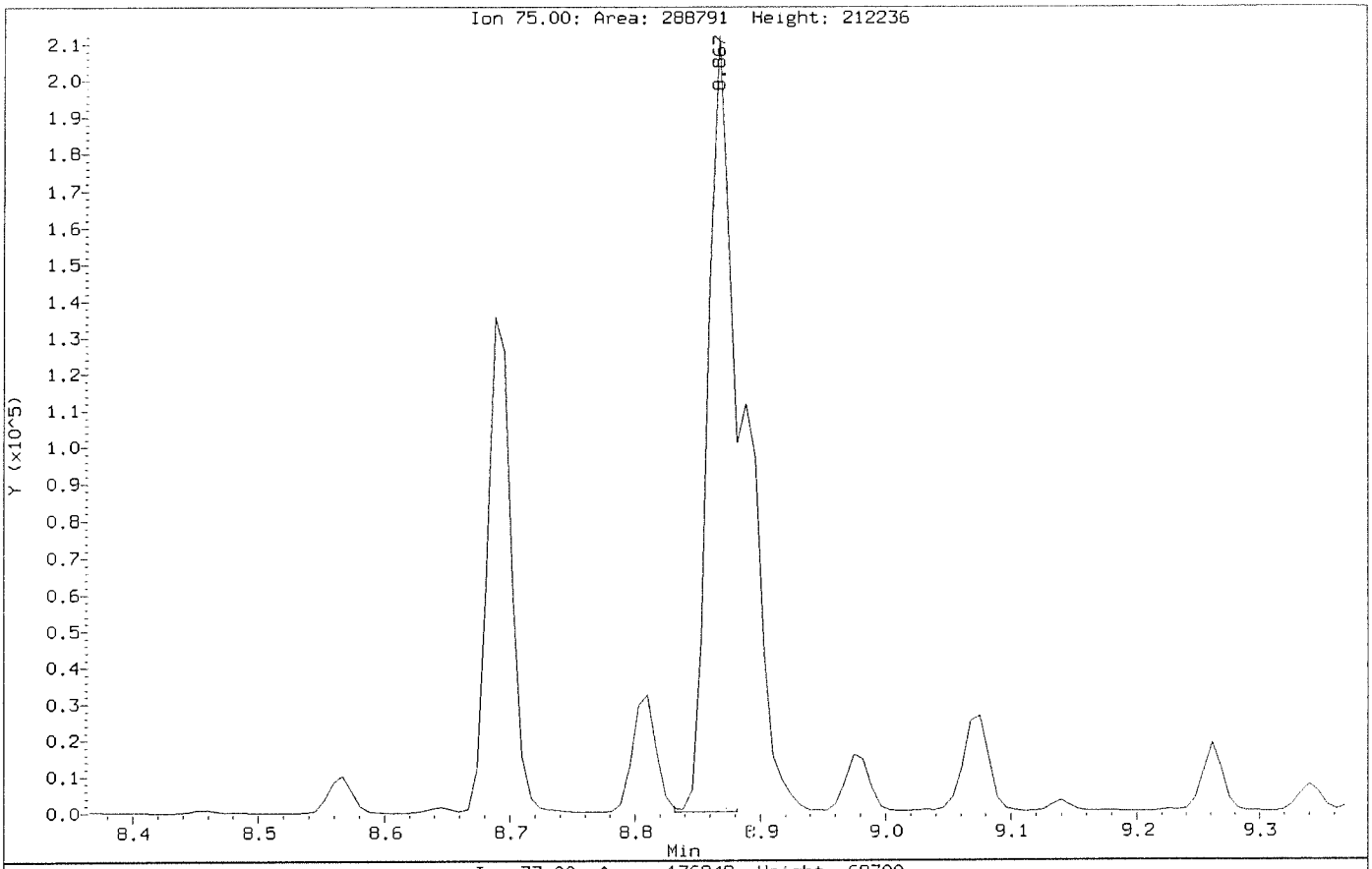
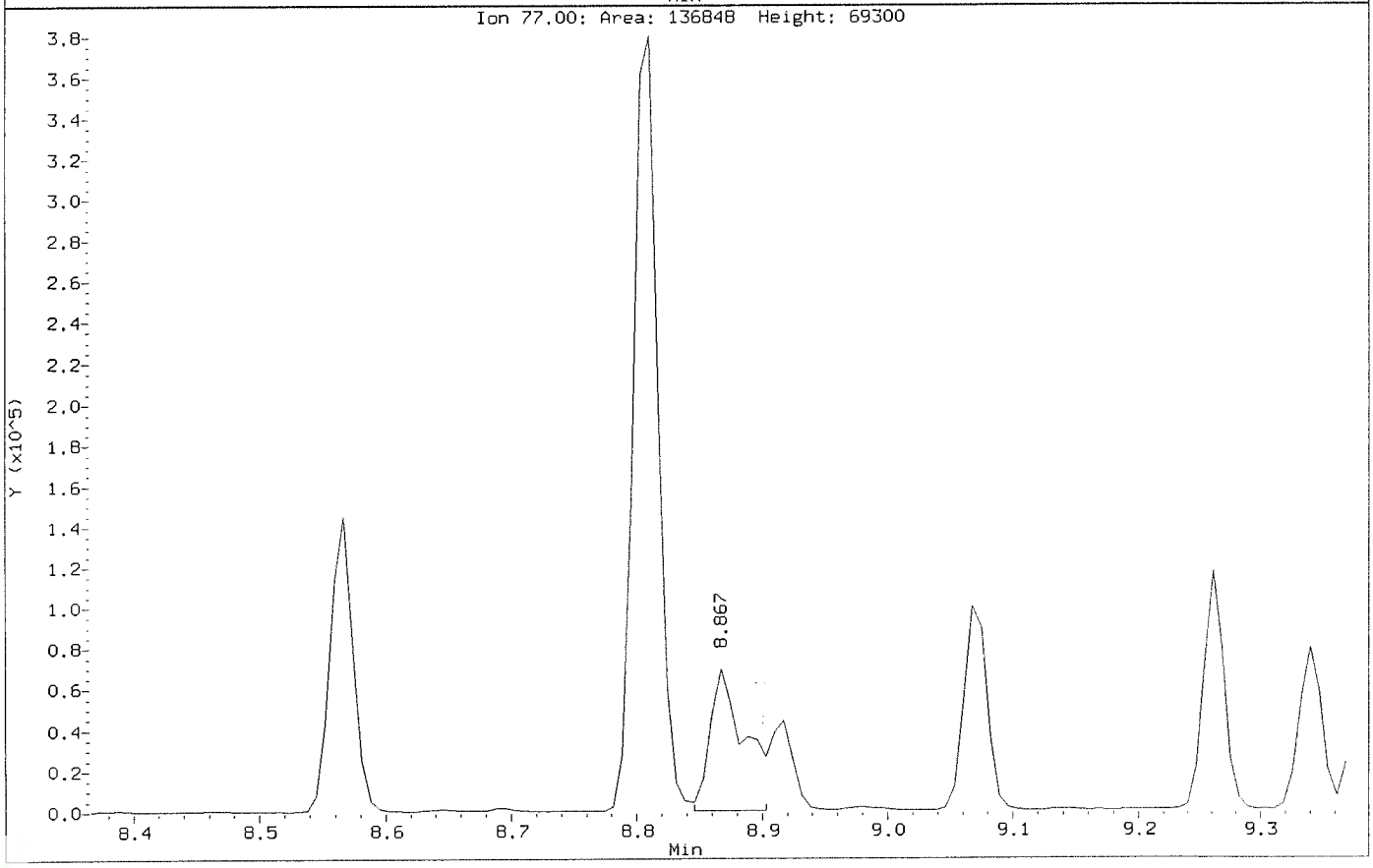
Client Sample ID: VSTD100

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





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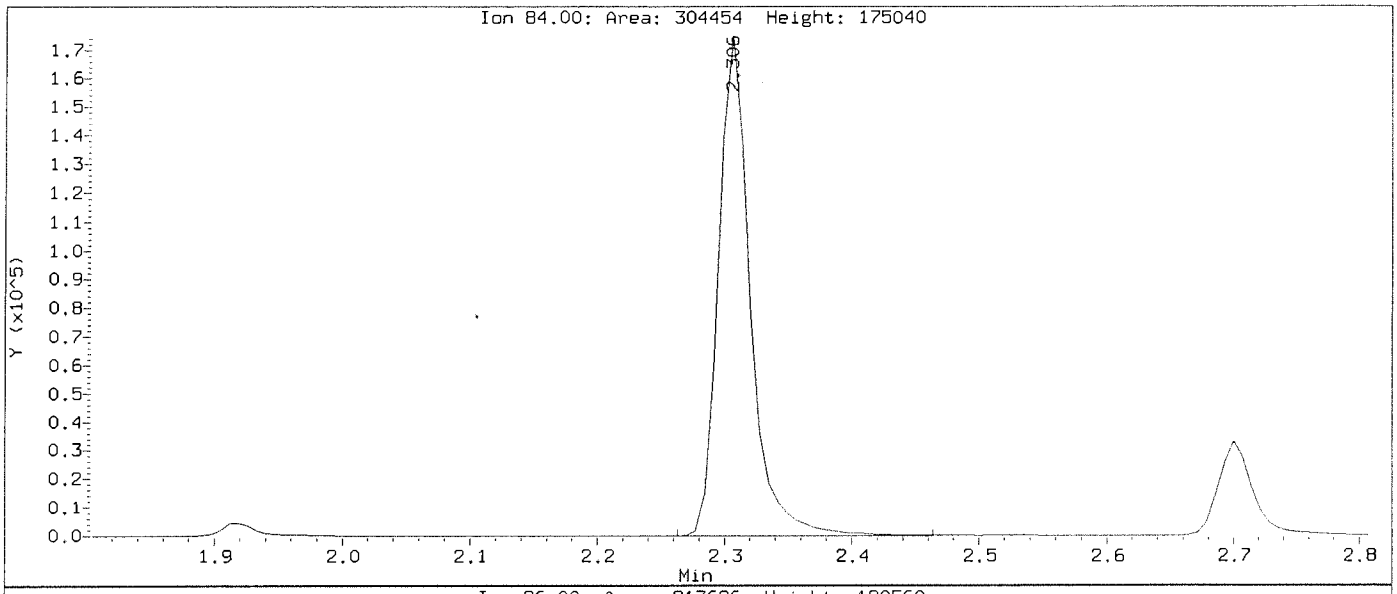
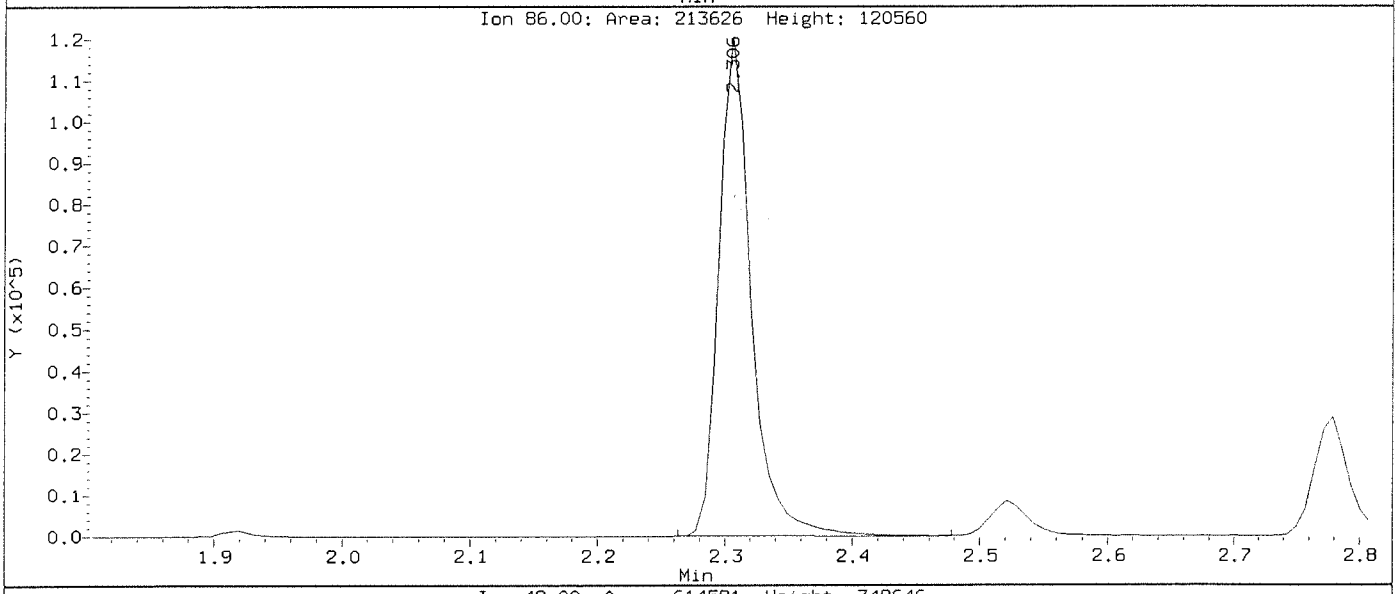
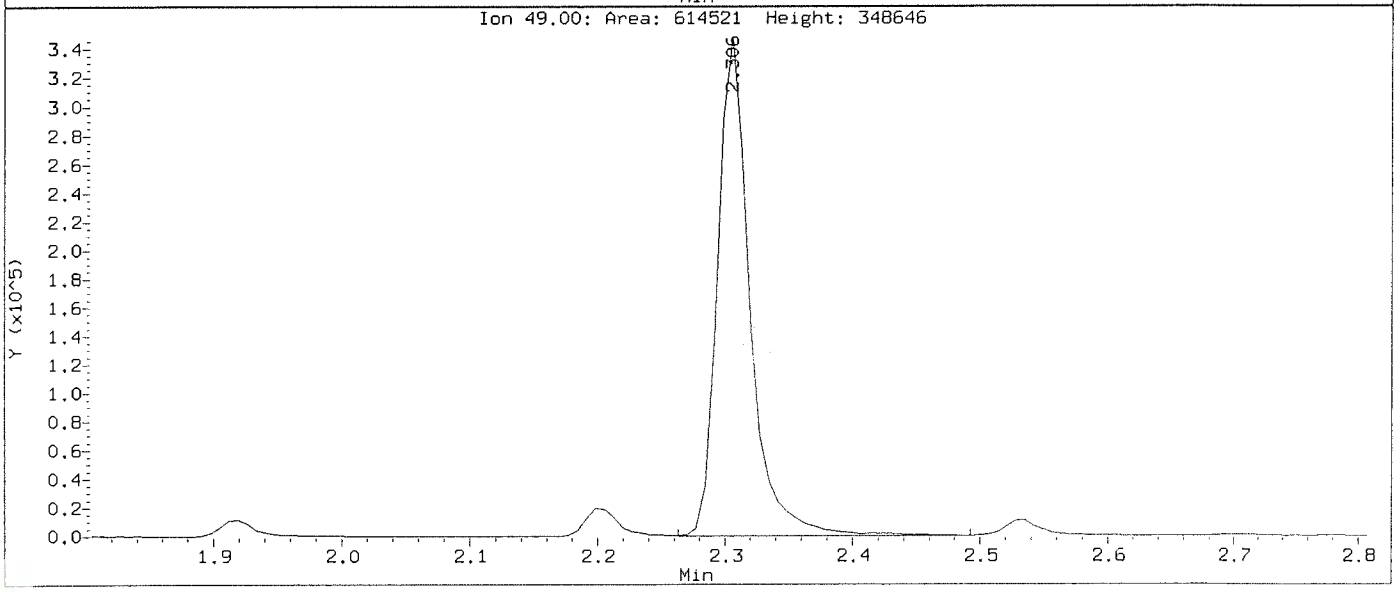
Instrument: voa6.i
Client Sample ID: VSTD100

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







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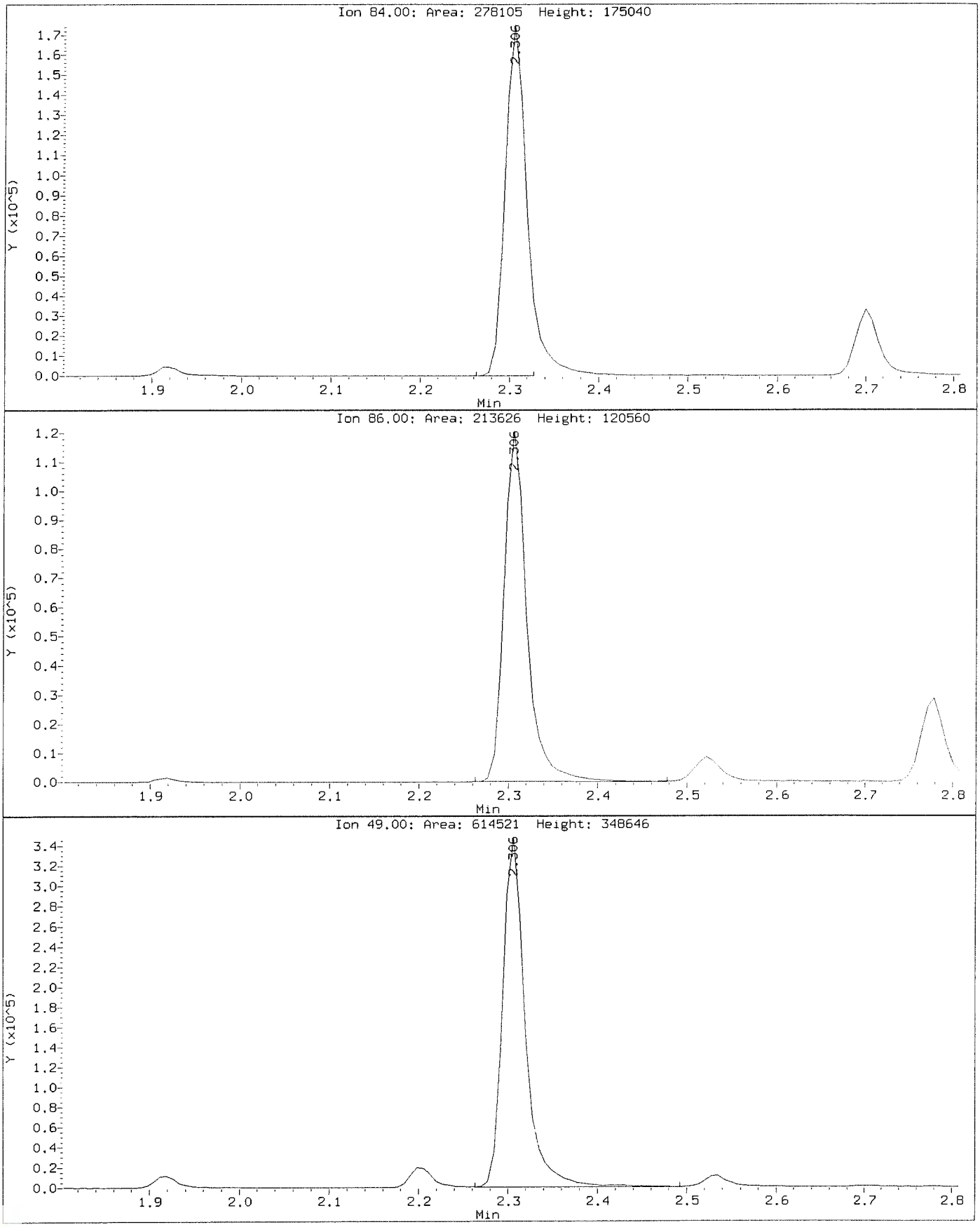
Injection Date: 07-JUL-2020 14:17
Instrument: voa6.i
Client Sample ID: VSTD100

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



Data File: \\nahstws005\Target\chem\voa6.i\X200707.b\X070710.D Page 1
Report Date: 12-Aug-2020 15:35

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200707.b\X070710.D
Lab Smp Id: VSTD150 Client Smp ID: VSTD150
Inj Date : 07-JUL-2020 14:41
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\X200707.b\8260W.m
Meth Date : 12-Aug-2020 15:35 voa6.i Quant Type: ISTD
Cal Date : 07-JUL-2020 14:17 Cal File: X070709.D
Als bottle: 11 Calibration Sample, Level: 9
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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

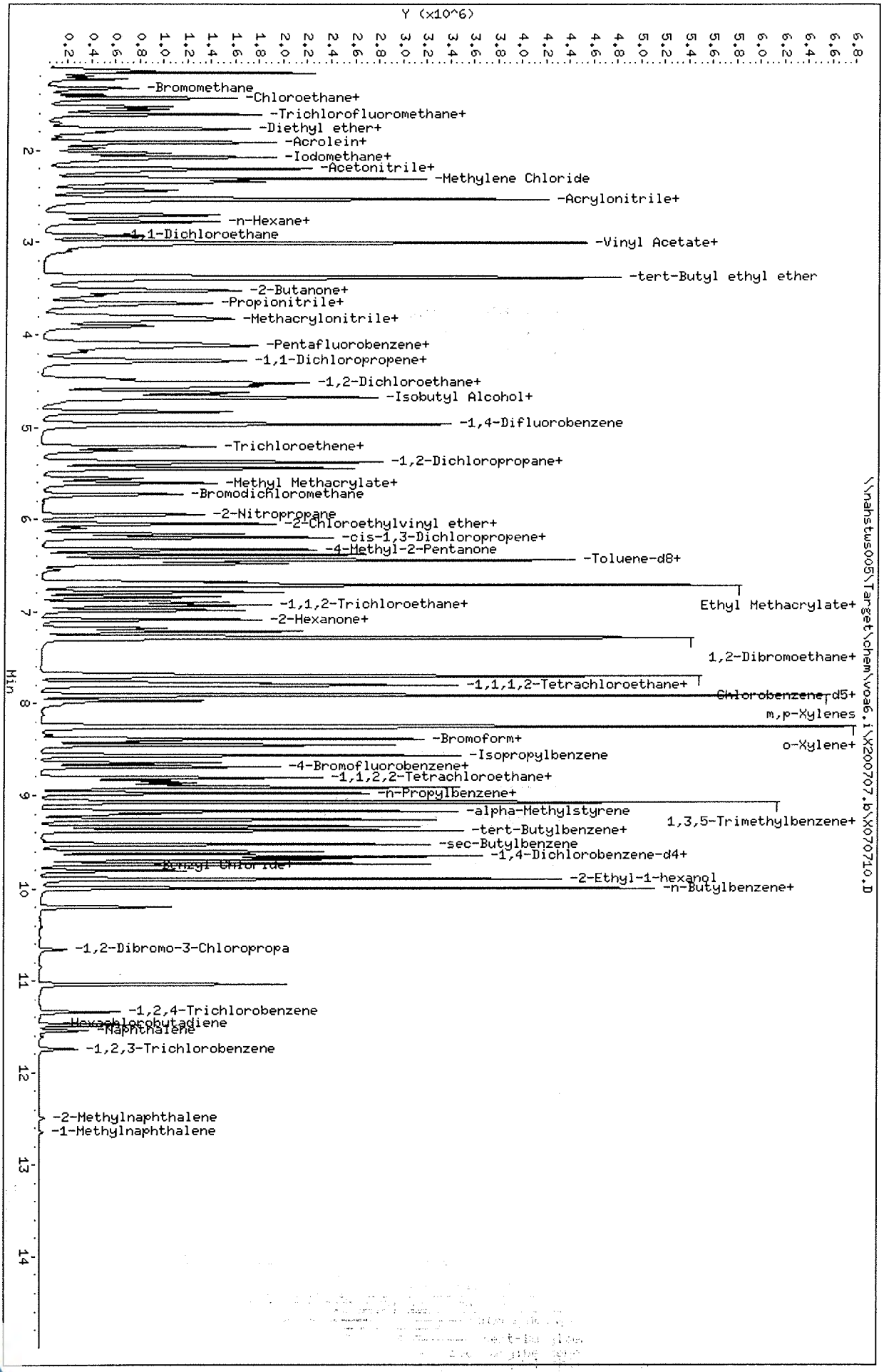
		QUANT SIG					AMOUNTS	
	Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/l)	ON-COL (ug/l)
*	1 Pentafluorobenzene	168	4.189	4.189	(1.000)	241832	50.0000	
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	401050	50.0000	
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	375988	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	172370	50.0000	
$	30 Dibromofluoromethane	113	4.103	4.103	(0.979)	399110	150.000	153.55
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	544077	150.000	151.73
$	48 Toluene-d8	98	6.388	6.388	(0.833)	1402858	150.000	141.92
$	69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	536443	150.000	151.99
	60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	422034	150.000	146.19
	31 1,1,1-Trichloroethane	97	4.089	4.089	(0.976)	668277	150.000	150.84
	68 1,1,2,2-Tetrachloroethane	83	8.845	8.845	(0.915)	445719	150.000	130.79
	53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	331664	150.000	139.44
	22 1,1-Dichloroethane	63	2.929	2.929	(0.699)	967625	150.000	141.18
	11 1,1-Dichloroethene	96	1.919	1.919	(0.458)	331437	150.000	148.00
	32 1,1-Dichloropropene	75	4.282	4.282	(0.862)	573482	150.000	145.21
	93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.215)	79399	150.000	143.04
	71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	405923	150.000	135.09(M)
	90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	155239	150.000	142.11
	79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.970)	1473699	150.000	145.38
	89 1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.102)	38494	150.000	147.10
	57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	416493	150.000	137.81
	88 1,2-Dichlorobenzene	146	9.999	9.999	(1.034)	697359	150.000	138.42

Data File: \\nahstws005\Target\chem\voa6.i\X200707.b\X070710.D Page 2
Report Date: 12-Aug-2020 15:35

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
33 1,2-Dichloroethane	62	4.562	4.562	(0.918)	713434	150.000	143.38
42 1,2-Dichloropropane	63	5.443	5.443	(1.095)	549790	150.000	147.36
75 1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	1454141	150.000	148.06
83 1,3-Dichlorobenzene	146	9.612	9.612	(0.994)	797938	150.000	144.59
54 1,3-Dichloropropane	76	6.983	6.983	(0.910)	686799	150.000	137.18
84 1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	790661	150.000	151.07
26 2,2-Dichloropropane	77	3.516	3.516	(0.839)	606750	150.000	144.91
24 2-Butanone	43	3.581	3.581	(0.855)	643926	300.000	302.21(A)
76 2-Chlorotoluene	91	8.981	8.981	(0.929)	1241143	150.000	143.46
52 2-Hexanone	43	7.090	7.090	(0.924)	1049289	300.000	299.86(A)
77 4-Chlorotoluene	91	9.075	9.075	(0.939)	1438640	150.000	146.64
82 p-Isopropyltoluene	119	9.655	9.655	(0.999)	1477945	150.000	150.78
45 4-Methyl-2-Pentanone	43	6.331	6.331	(0.825)	1488543	300.000	299.27(A)
10 Acetone	43	1.976	1.976	(0.472)	497386	300.000	305.78(A)
37 Benzene	78	4.519	4.519	(0.909)	1670646	150.000	146.00
74 Bromobenzene	156	8.810	8.810	(0.911)	485620	150.000	147.67
29 Bromochloromethane	128	3.795	3.795	(0.906)	227289	150.000	135.31
39 Bromodichloromethane	83	5.729	5.729	(1.153)	603643	150.000	150.27
66 Bromoform	173	8.416	8.416	(1.097)	300170	150.000	143.81
6 Bromomethane	94	1.338	1.338	(0.320)	258225	150.000	152.21
19 Carbon Disulfide	76	2.069	2.069	(0.494)	2201316	300.000	299.35(A)
34 Carbon Tetrachloride	117	4.268	4.268	(0.859)	582078	150.000	152.08
59 Chlorobenzene	112	7.699	7.699	(1.004)	1089859	150.000	142.27
7 Chloroethane	64	1.403	1.403	(0.335)	327112	150.000	154.07
28 Chloroform	83	3.910	3.910	(0.933)	766487	150.000	144.64
3 Chloromethane	50	1.081	1.081	(0.258)	755577	150.000	152.03
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.843)	454490	150.000	143.77
46 cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	717591	150.000	148.24
55 Dibromochloromethane	129	7.176	7.176	(0.936)	444050	150.000	143.77
44 Dibromomethane	93	5.557	5.557	(1.118)	290829	150.000	144.63
2 Dichlorodifluoromethane	85	0.973	0.973	(0.232)	459425	150.000	156.92
61 Ethylbenzene	106	7.807	7.807	(1.018)	585123	150.000	144.32
91 Hexachlorobutadiene	225	11.481	11.481	(1.187)	125138	150.000	148.29
67 Isopropylbenzene	105	8.566	8.566	(1.117)	1754156	150.000	145.87
62 m,p-Xylenes	106	7.907	7.907	(1.031)	1389163	300.000	284.93(A)
17 Methylene Chloride	84	2.305	2.305	(0.550)	394864	150.000	149.31(M)
87 n-Butylbenzene	91	9.999	9.999	(1.034)	1322550	150.000	151.26
73 n-Propylbenzene	91	8.917	8.917	(0.922)	2112864	150.000	150.29
92 Naphthalene	128	11.546	11.546	(1.194)	242788	150.000	144.65
63 o-Xylene	106	8.244	8.244	(1.075)	676073	150.000	141.55
81 sec-Butylbenzene	105	9.526	9.526	(0.985)	1718736	150.000	148.73
64 Styrene	104	8.265	8.265	(1.078)	1174868	150.000	141.54
78 tert-Butylbenzene	119	9.340	9.340	(0.966)	1167709	150.000	147.66
56 Tetrachloroethene	164	6.933	6.933	(0.904)	336320	150.000	146.44
50 Toluene	91	6.453	6.453	(0.841)	1698619	150.000	141.60
20 trans-1,2-Dichloroethene	96	2.535	2.535	(0.605)	384909	150.000	145.62
51 trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	648104	150.000	149.02
38 Trichloroethene	130	5.207	5.207	(1.048)	443143	150.000	148.92
8 Trichlorofluoromethane	101	1.561	1.561	(0.373)	648549	150.000	155.51
5 Vinyl Chloride	62	1.145	1.145	(0.273)	645732	150.000	151.99

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.
M - Compound response manually integrated.



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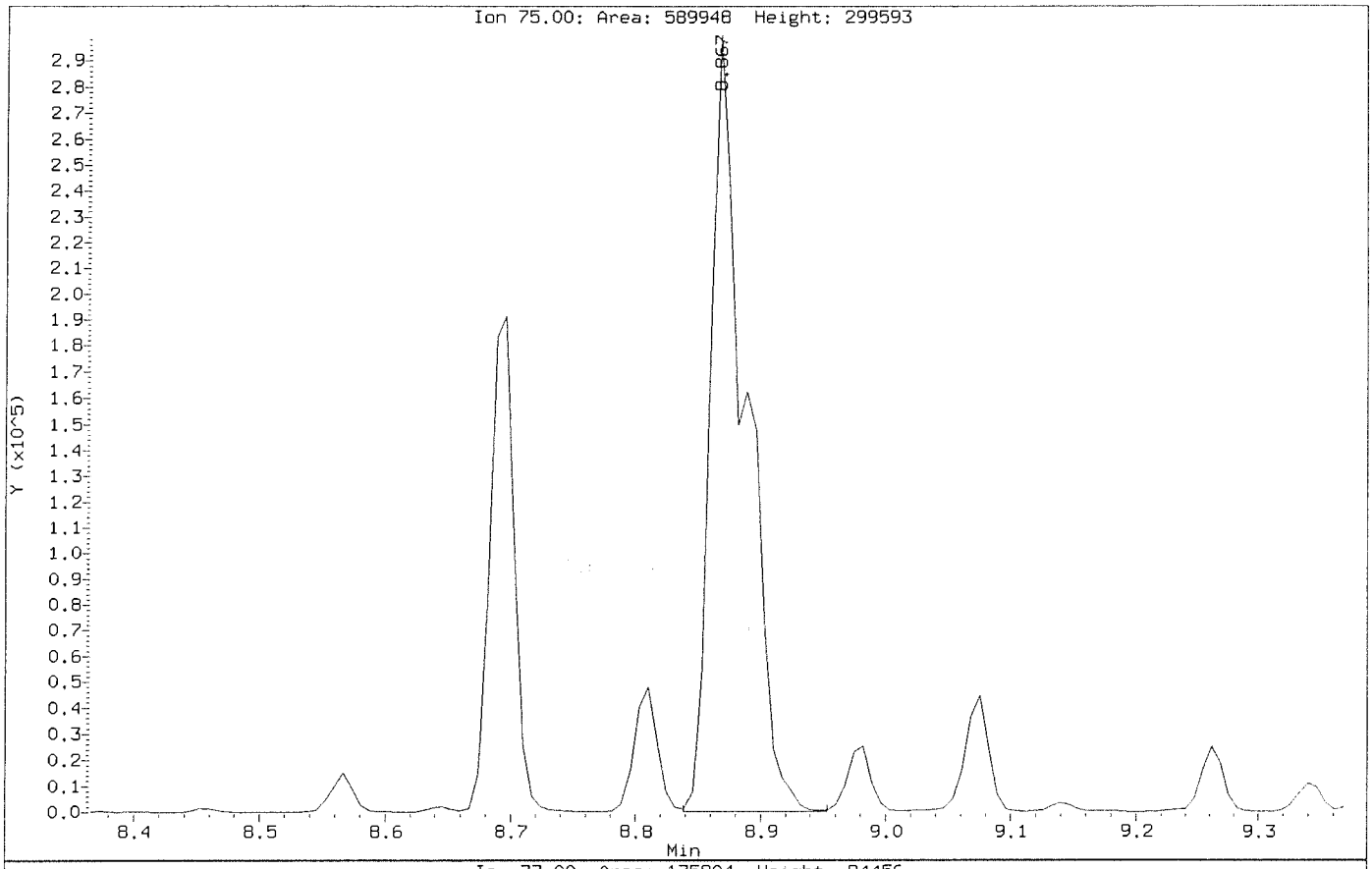
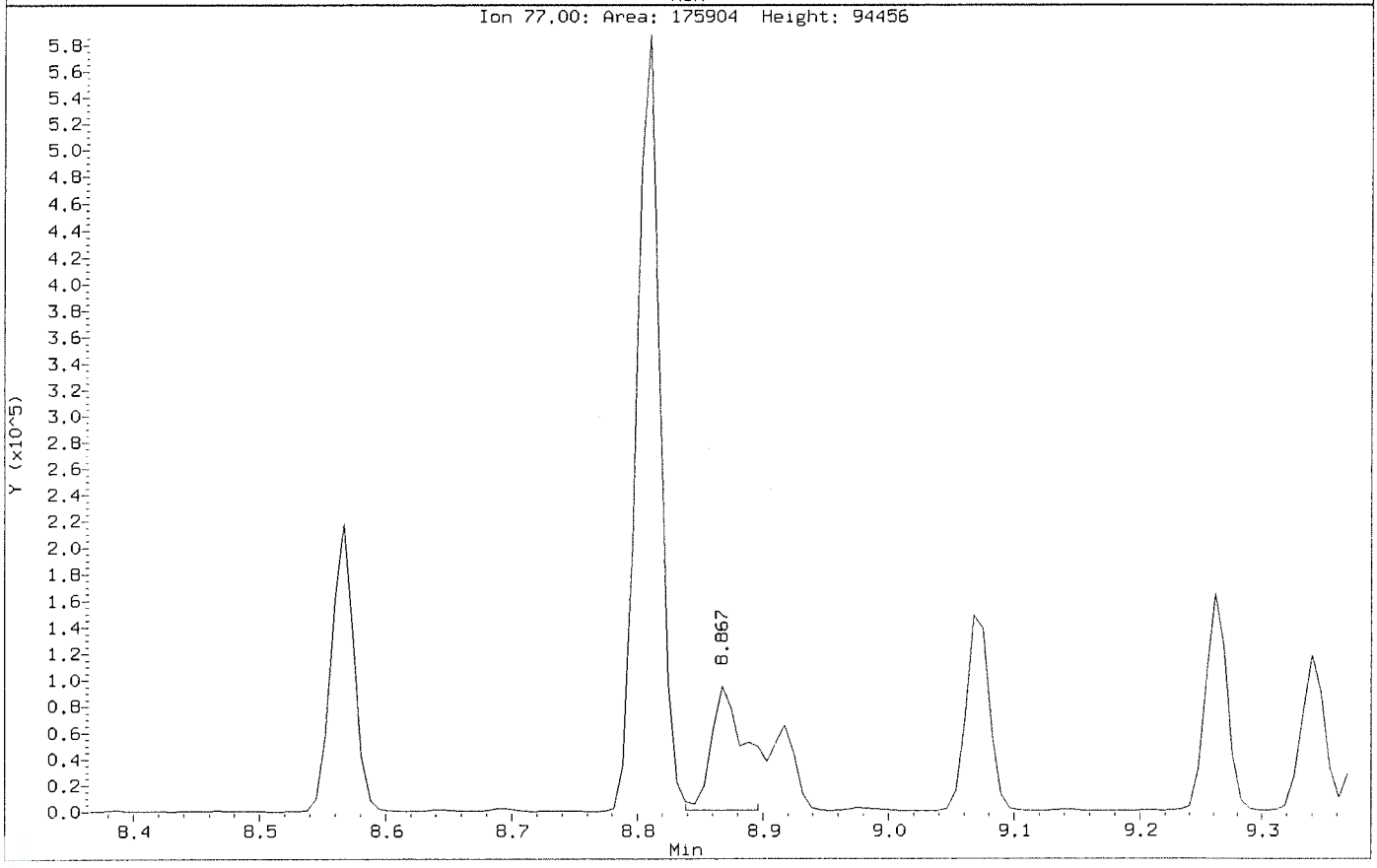
Client ID: VSTD150
Sample Info: VSTD150;VSTD150;1;9;
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\nahstws005\Target\chem\voa6.i\X200707.b\Before\X070710.D
Injection Date: 07-JUL-2020 14:41
Instrument: voa6.i
Client Sample ID: VSTD150

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





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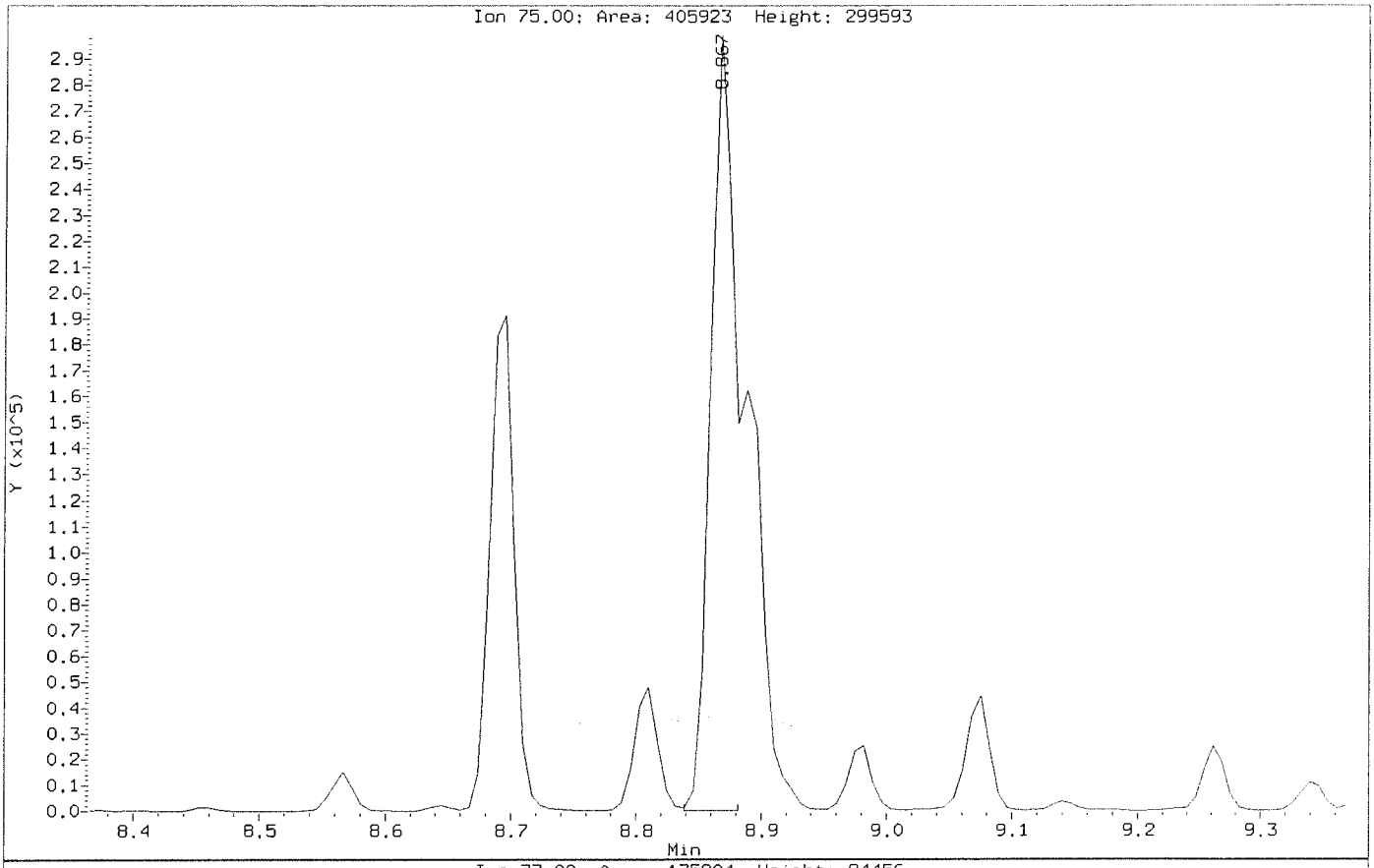
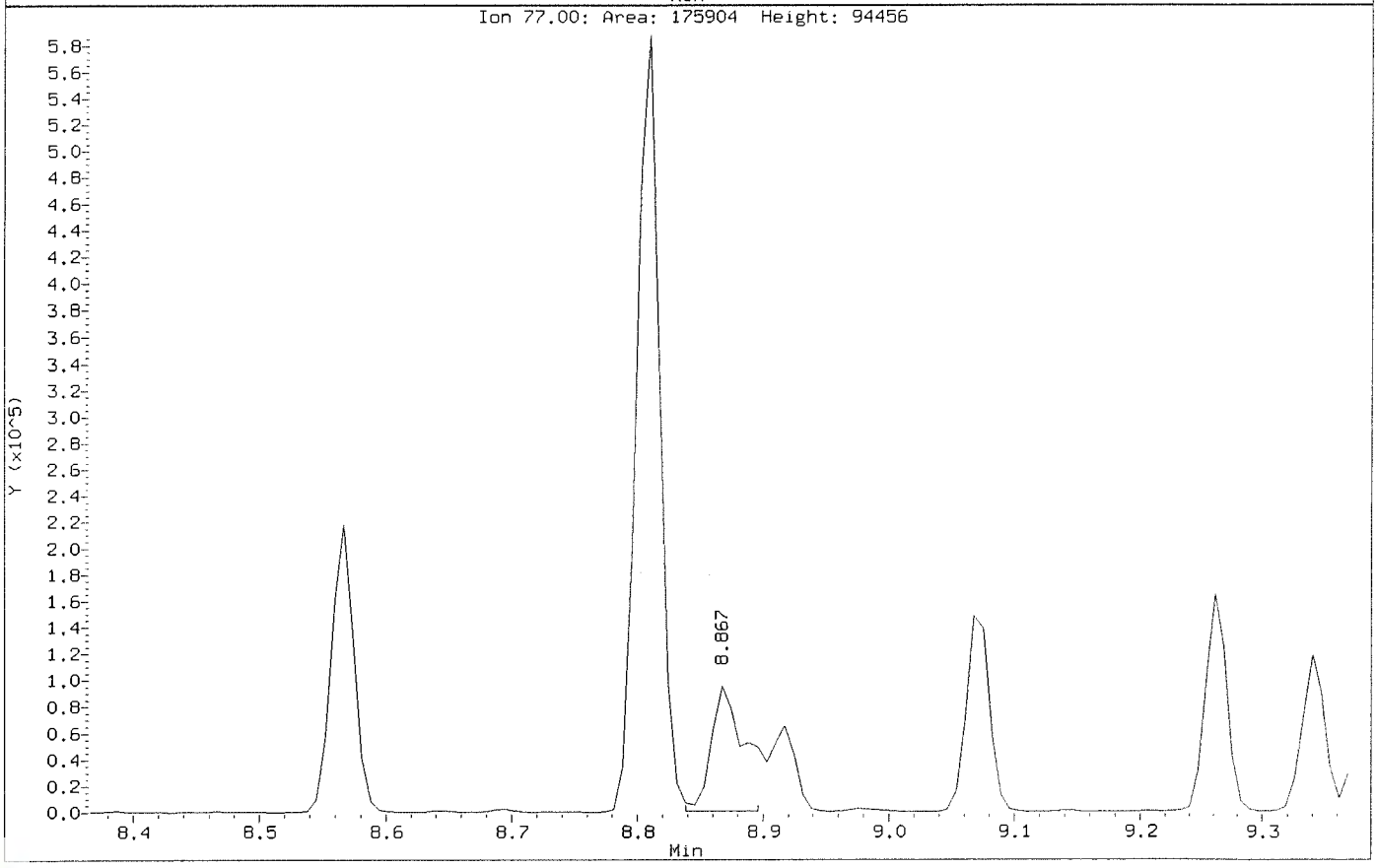
Instrument: voa6.i
Client Sample ID: VSTD150

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





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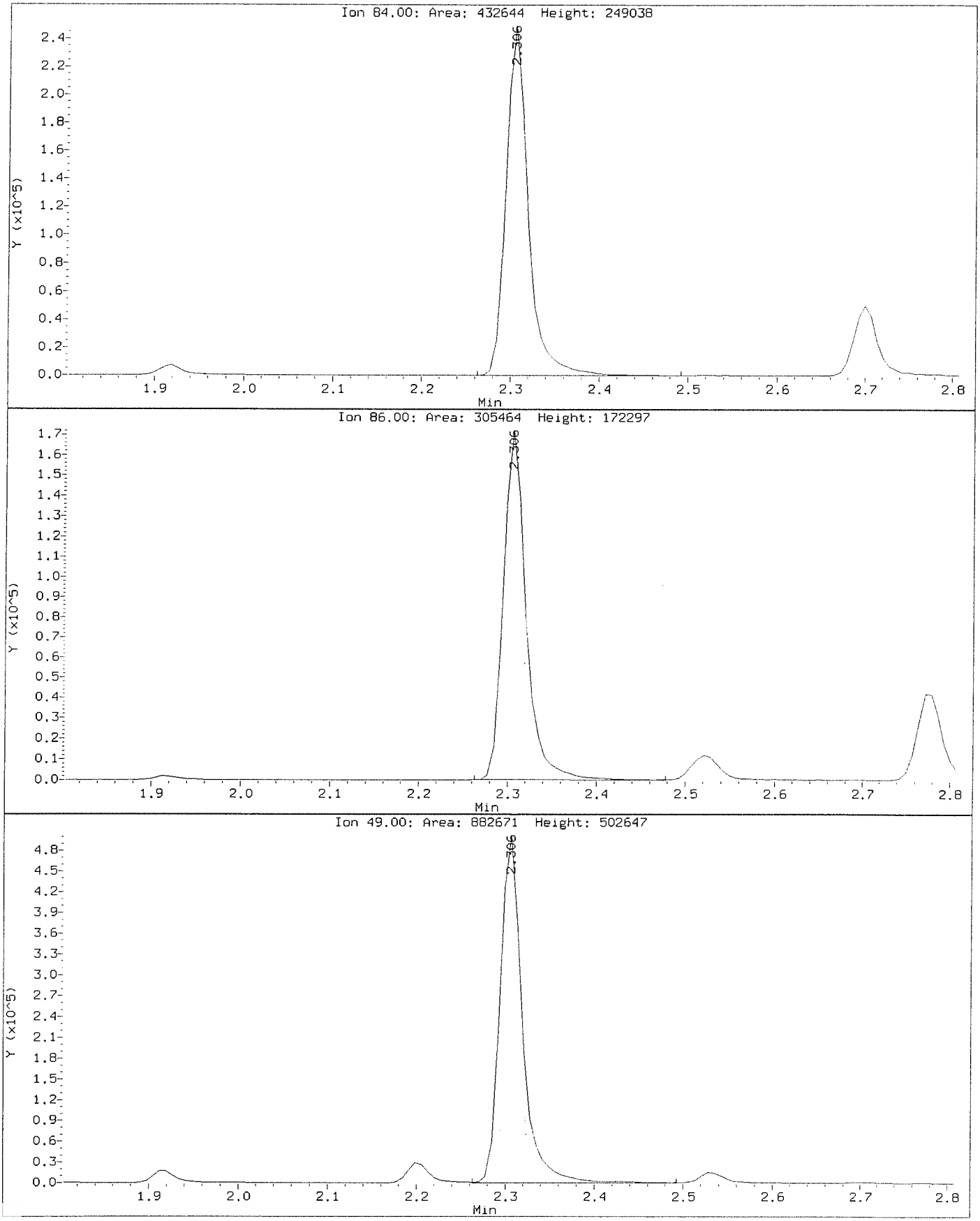
Injection Date: 07-JUL-2020 14:41
Instrument: voa6.i
Client Sample ID: VSTD150

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



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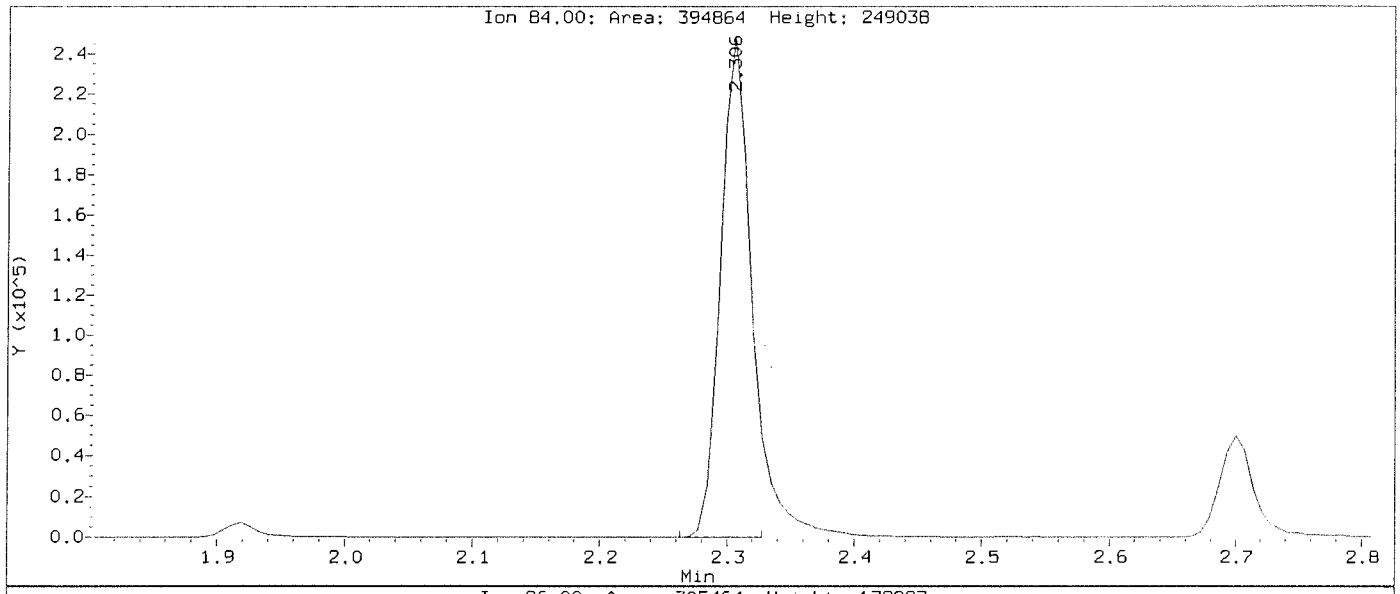
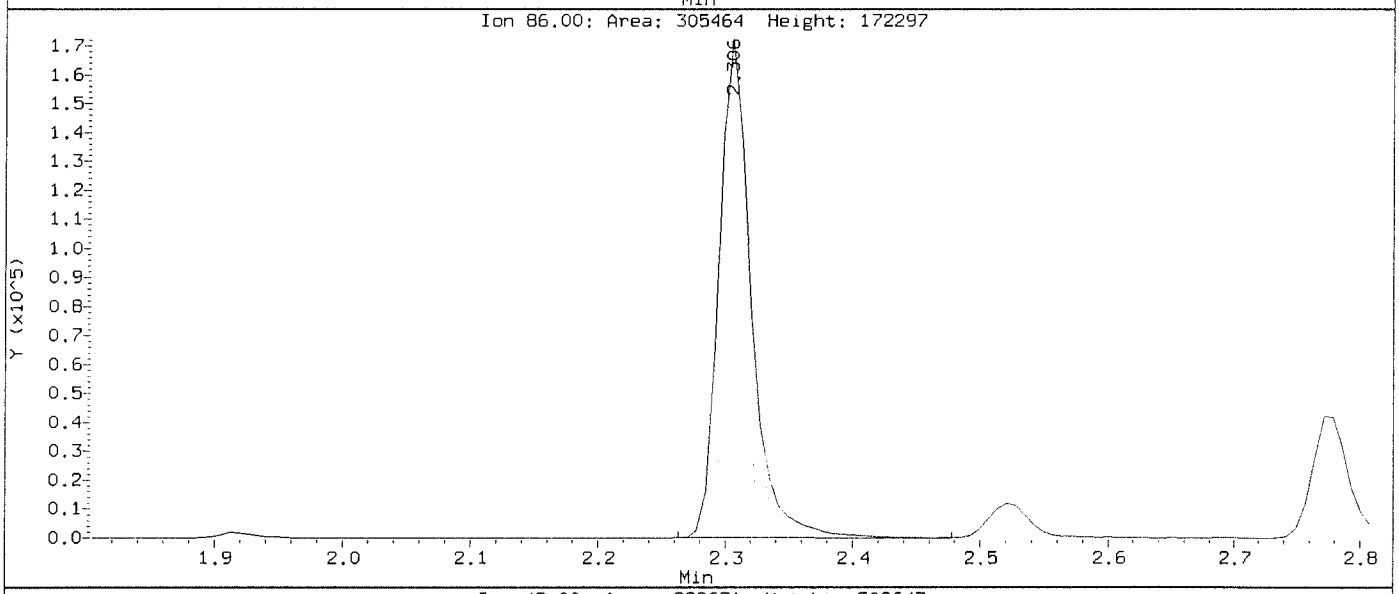
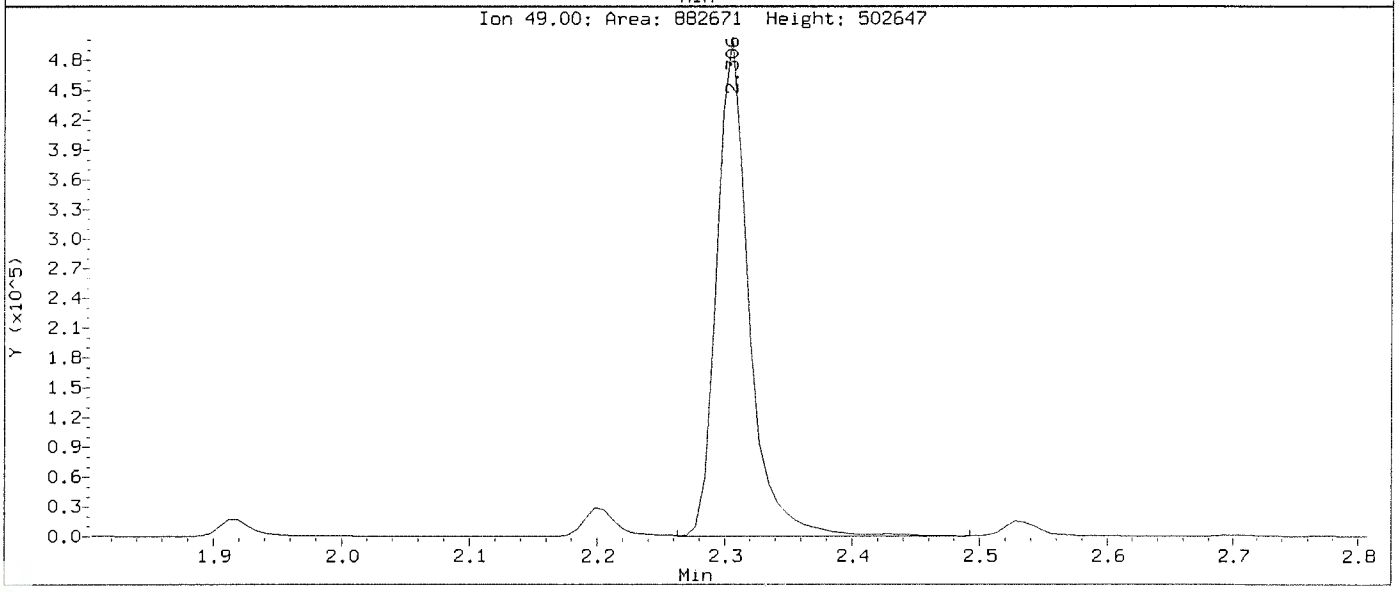
Injection Date: 07-JUL-2020 14:41
Instrument: voa6.i
Client Sample ID: VSTD150

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







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Data file : \\nahstws005\Target\chem\voa6.i\X200707.b\X070711.D
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Inj Date : 07-JUL-2020 15:05
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\X200707.b\8260W.m
Meth Date : 12-Aug-2020 15:35 voa6.i Quant Type: ISTD
Cal Date : 07-JUL-2020 14:41 Cal File: X070710.D
Als bottle: 12 Calibration Sample, Level: 10
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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

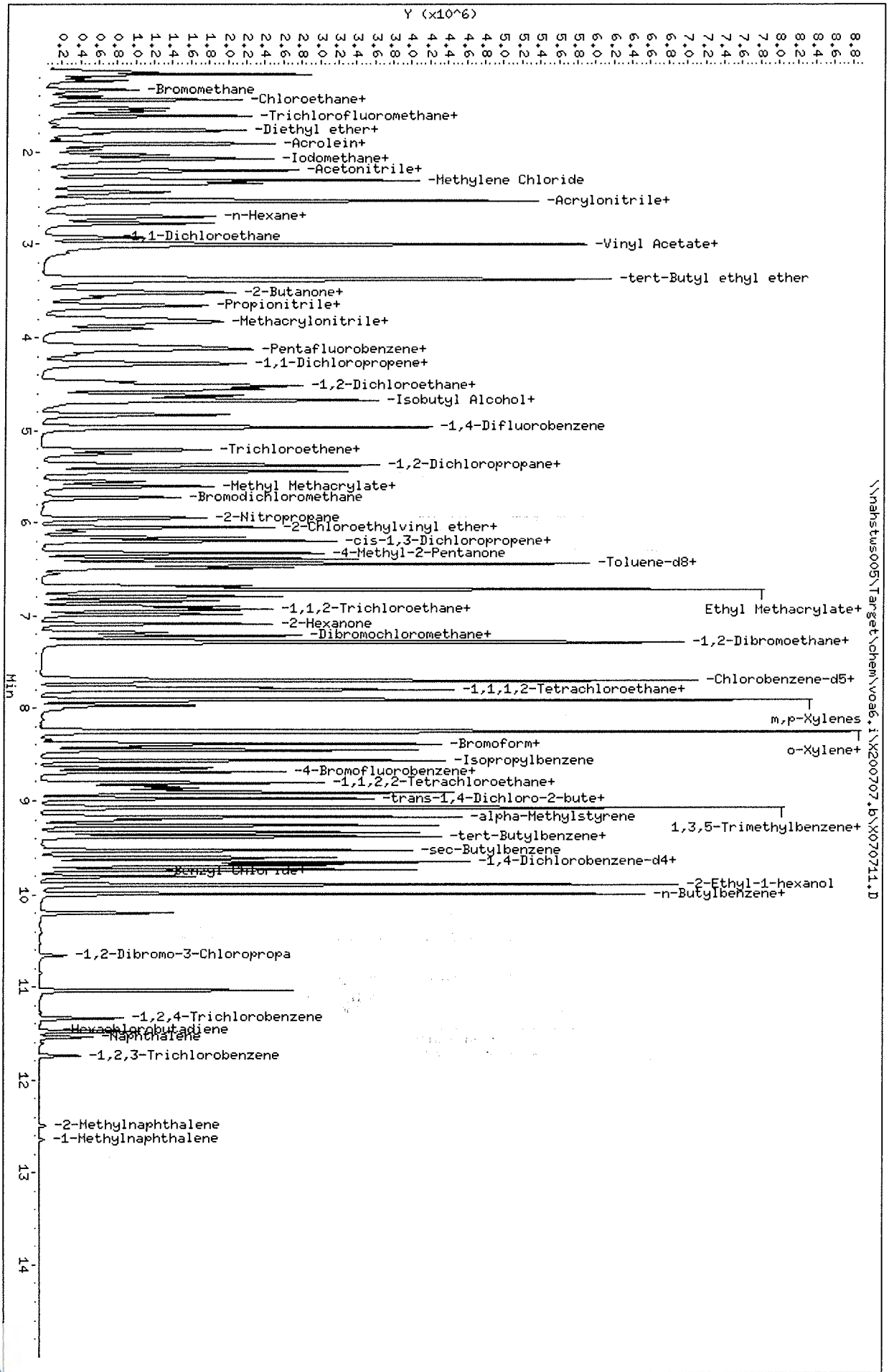
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
*	1 Pentafluorobenzene	168	4.189	4.189	(1.000)	242407	50.0000	
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	398460	50.0000	
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	372909	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	168975	50.0000	
$	30 Dibromofluoromethane	113	4.103	4.103	(0.979)	511371	200.000	196.52
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	711398	200.000	198.13
$	48 Toluene-d8	98	6.388	6.388	(0.833)	1815153	200.000	185.14
$	69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	687661	200.000	196.77
	60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	546748	200.000	190.95
	31 1,1,1-Trichloroethane	97	4.089	4.089	(0.976)	873834	200.000	196.77
	68 1,1,2,2-Tetrachloroethane	83	8.845	8.845	(0.915)	587613	200.000	175.89
	53 1,1,2-Trichloroethane	83	6.847	6.847	(0.893)	427548	200.000	181.24
	22 1,1-Dichloroethane	63	2.922	2.922	(0.697)	1254145	200.000	182.55
	11 1,1-Dichloroethene	96	1.912	1.912	(0.456)	426479	200.000	190.00
	32 1,1-Dichloropropene	75	4.283	4.283	(0.862)	741356	200.000	188.93
	93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.215)	113093	200.000	207.12(A)
	71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	525181	200.000	178.29(M)
	90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	223355	200.000	207.97(A)
	79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.970)	1902387	200.000	191.44
	89 1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.102)	51251	200.000	200.42(A)
	57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	541159	200.000	180.54
	88 1,2-Dichlorobenzene	146	9.999	9.999	(1.034)	905947	200.000	183.43

Data File: \\nahstws005\Target\chem\voa6.i\X200707.b\X070711.D Page 2
Report Date: 12-Aug-2020 15:35

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
33	1,2-Dichloroethane	62	4.562	4.562	(0.918)	924632	200.000	187.03
42	1,2-Dichloropropane	63	5.443	5.443	(1.095)	714698	200.000	192.80
75	1,3,5-Trimethylbenzene	105	9.075	9.075	(0.939)	1871450	200.000	194.38
83	1,3-Dichlorobenzene	146	9.612	9.612	(0.994)	1038005	200.000	191.87
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	891960	200.000	179.63
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	1025151	200.000	199.87
26	2,2-Dichloropropane	77	3.516	3.516	(0.839)	759583	200.000	180.99
24	2-Butanone	43	3.581	3.581	(0.855)	836660	400.000	393.59(A)
76	2-Chlorotoluene	91	8.981	8.981	(0.929)	1590182	200.000	187.50
52	2-Hexanone	43	7.090	7.090	(0.924)	1371530	400.000	396.38(A)
77	4-Chlorotoluene	91	9.075	9.075	(0.939)	1852777	200.000	192.64
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	1890131	200.000	196.70
45	4-Methyl-2-Pentanone	43	6.331	6.331	(0.825)	1953538	400.000	397.05(A)
10	Acetone	43	1.976	1.976	(0.472)	616921	400.000	386.54(A)
37	Benzene	78	4.519	4.519	(0.909)	2156630	200.000	189.69
74	Bromobenzene	156	8.810	8.810	(0.911)	629913	200.000	195.40
29	Bromochloromethane	128	3.803	3.803	(0.908)	286703	200.000	170.28
39	Bromodichloromethane	83	5.729	5.729	(1.153)	789341	200.000	197.77
66	Bromoform	173	8.416	8.416	(1.097)	389719	200.000	188.26
6	Bromomethane	94	1.331	1.331	(0.318)	336728	200.000	198.04
19	Carbon Disulfide	76	2.069	2.069	(0.494)	2820046	400.000	382.59(A)
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	761833	200.000	200.34(A)
59	Chlorobenzene	112	7.699	7.699	(1.004)	1418235	200.000	186.67
7	Chloroethane	64	1.396	1.396	(0.333)	412328	200.000	194.24
28	Chloroform	83	3.910	3.910	(0.933)	990403	200.000	186.45
3	Chloromethane	50	1.081	1.081	(0.258)	1016387	200.000	204.03(A)
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.843)	583793	200.000	184.24
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	938320	200.000	195.10
55	Dibromochloromethane	129	7.184	7.184	(0.937)	584290	200.000	190.74
44	Dibromomethane	93	5.558	5.558	(1.118)	377535	200.000	188.97
2	Dichlorodifluoromethane	85	0.973	0.973	(0.232)	609945	200.000	207.85(A)
61	Ethylbenzene	106	7.807	7.807	(1.018)	755551	200.000	187.90
91	Hexachlorobutadiene	225	11.489	11.489	(1.188)	167946	200.000	202.53(A)
67	Isopropylbenzene	105	8.566	8.566	(1.117)	2255410	200.000	189.10
62	m,p-Xylenes	106	7.907	7.907	(1.031)	1779702	400.000	368.05(A)
17	Methylene Chloride	84	2.306	2.306	(0.550)	532203	200.000	200.77(AM)
87	n-Butylbenzene	91	9.999	9.999	(1.034)	1677085	200.000	195.67
73	n-Propylbenzene	91	8.917	8.917	(0.922)	2739089	200.000	198.75
92	Naphthalene	128	11.546	11.546	(1.194)	339317	200.000	206.10(A)
63	o-Xylene	106	8.244	8.244	(1.075)	880899	200.000	185.95
81	sec-Butylbenzene	105	9.526	9.526	(0.985)	2185305	200.000	192.90
64	Styrene	104	8.265	8.265	(1.078)	1541009	200.000	187.18
78	tert-Butylbenzene	119	9.340	9.340	(0.966)	1495338	200.000	192.90
56	Tetrachloroethene	164	6.933	6.933	(0.904)	431289	200.000	189.34
50	Toluene	91	6.453	6.453	(0.841)	2190728	200.000	184.13
20	trans-1,2-Dichloroethene	96	2.535	2.535	(0.605)	501326	200.000	189.21
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	852410	200.000	197.27
38	Trichloroethene	130	5.214	5.214	(1.049)	573146	200.000	193.86
8	Trichlorofluoromethane	101	1.561	1.561	(0.373)	839445	200.000	200.81(A)
5	Vinyl Chloride	62	1.145	1.145	(0.273)	845008	200.000	198.43

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.
M - Compound response manually integrated.



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Sample Info: VSTD200;VSTD200;1;10;
Purge Volume: 5.0
Column phase: DB624

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

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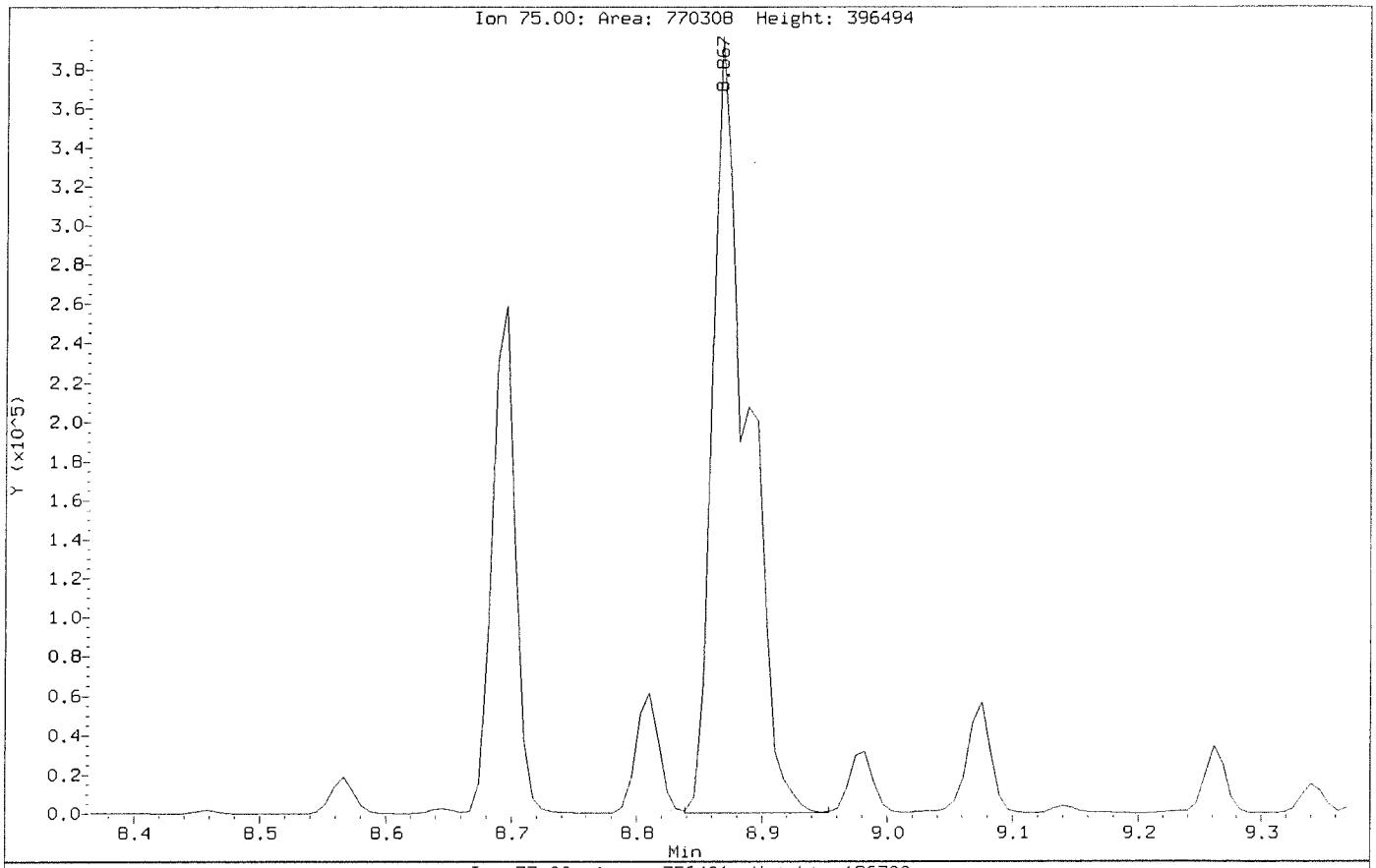
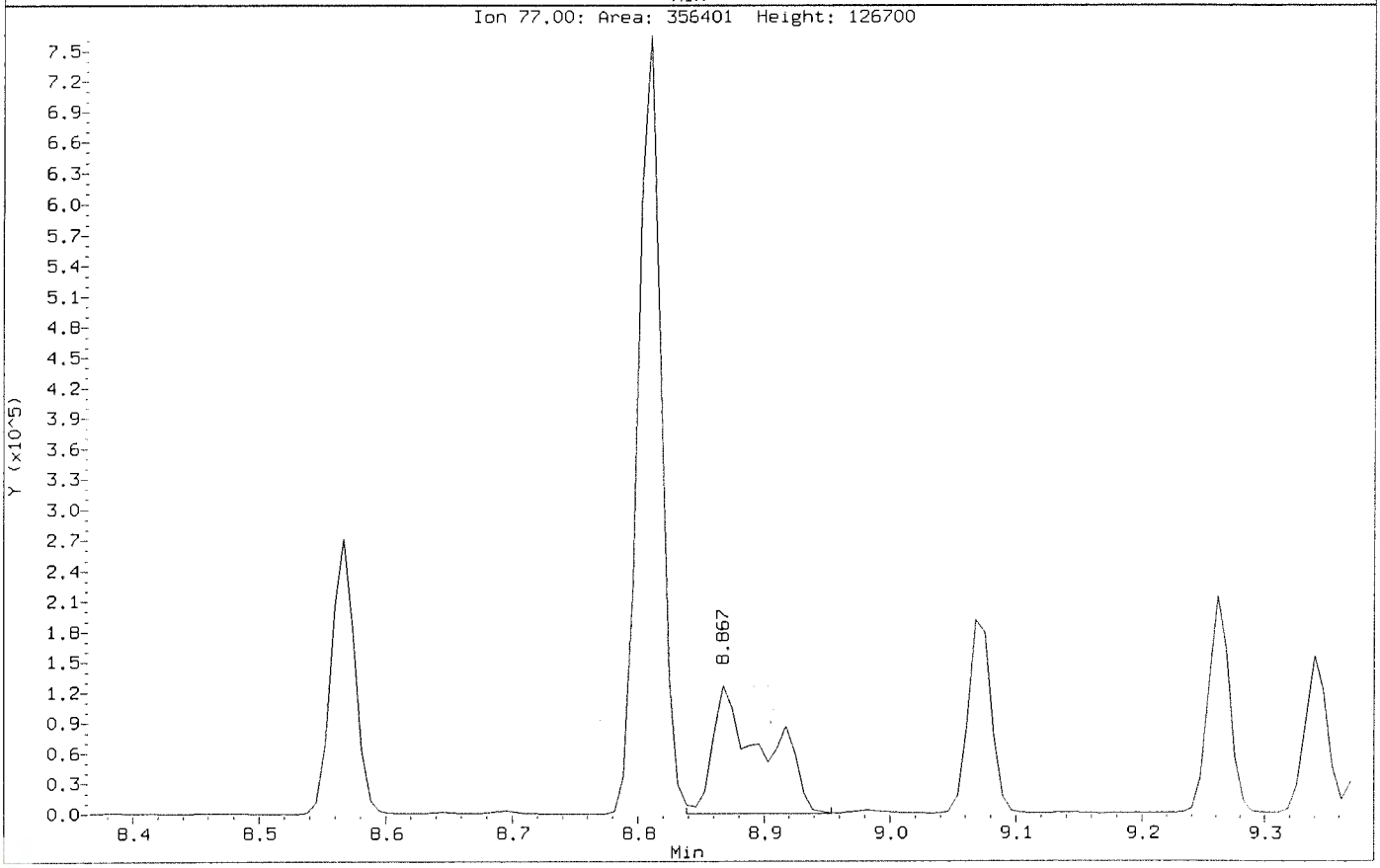
Injection Date: 07-JUL-2020 15:05
Instrument: voa6.i
Client Sample ID: VSTD200

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





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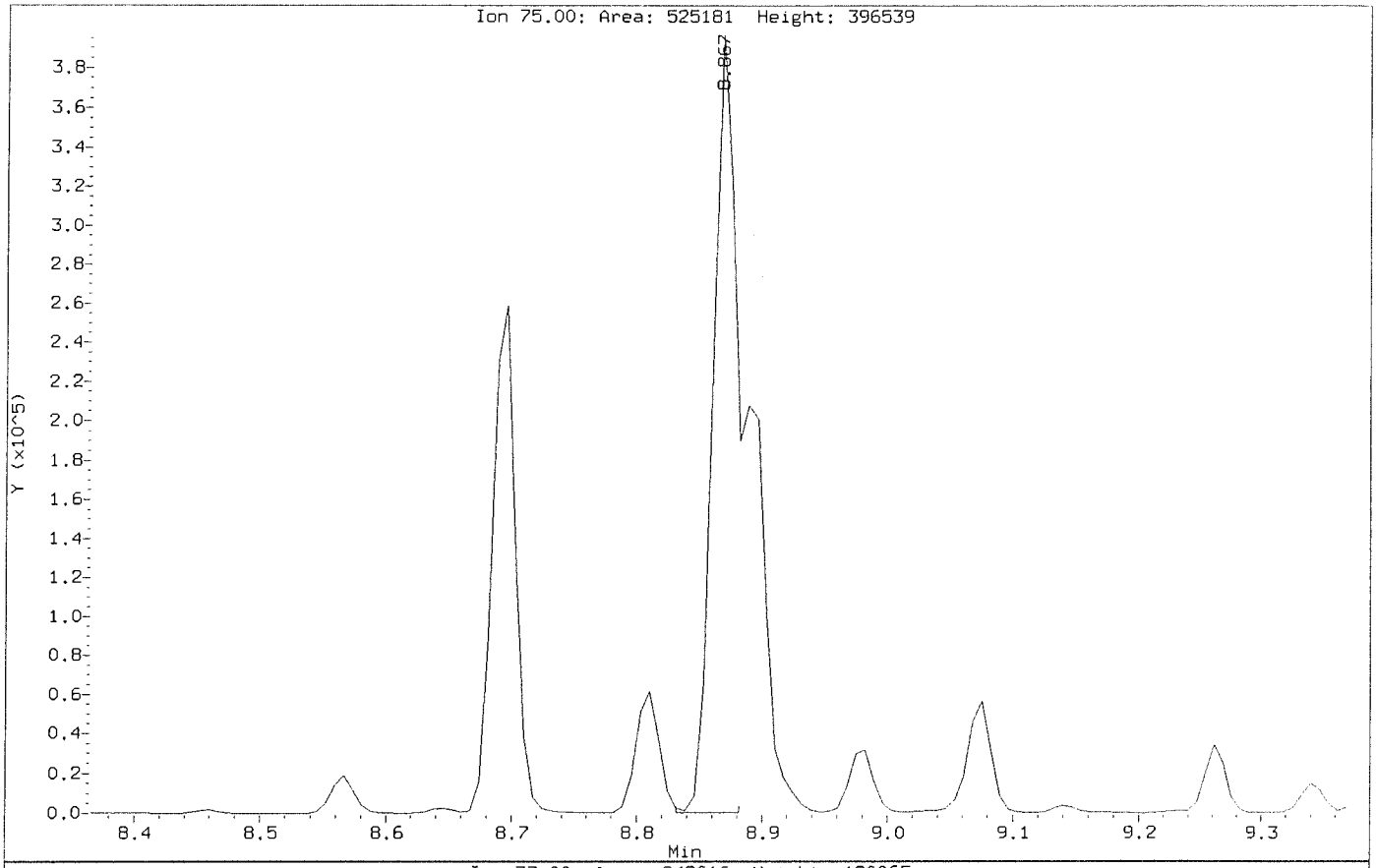
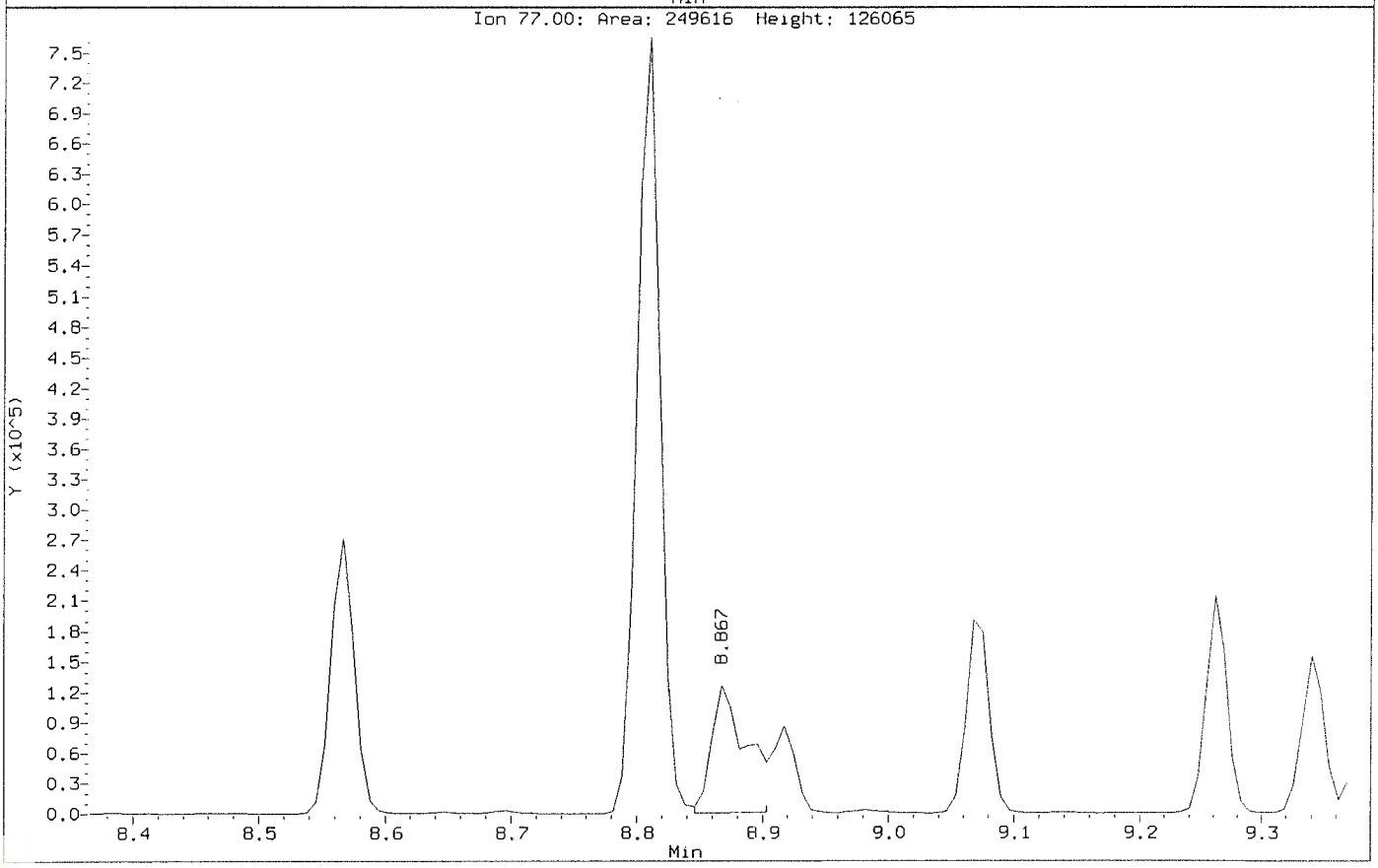
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





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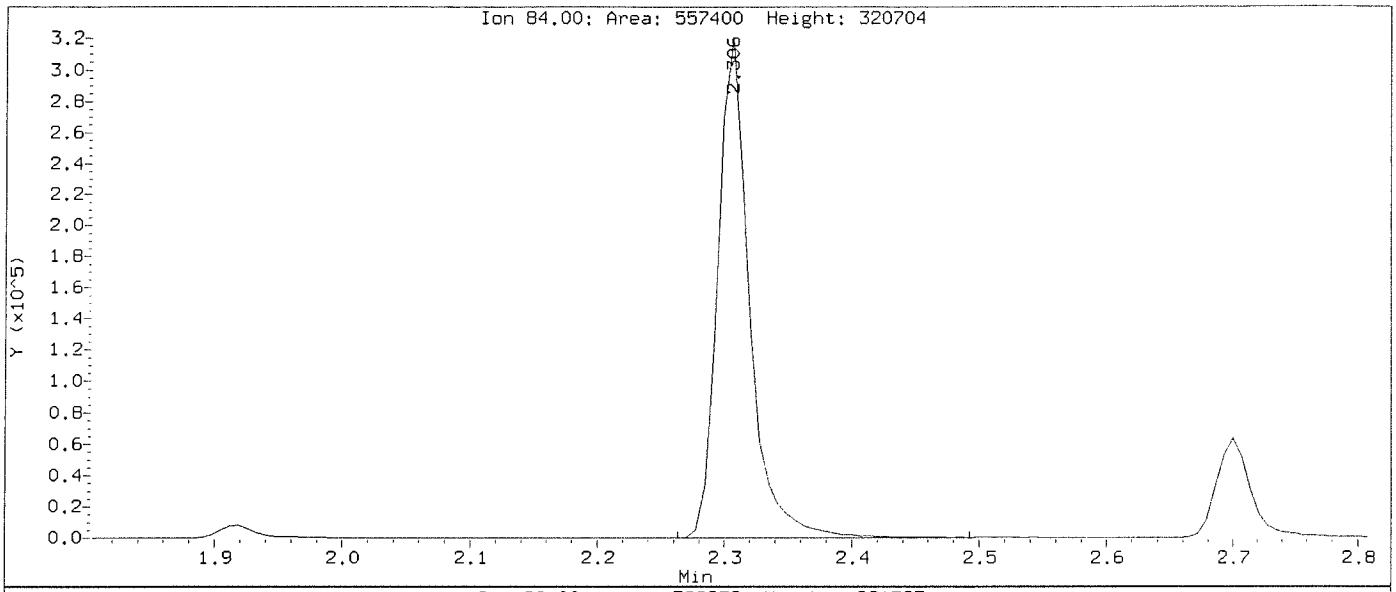
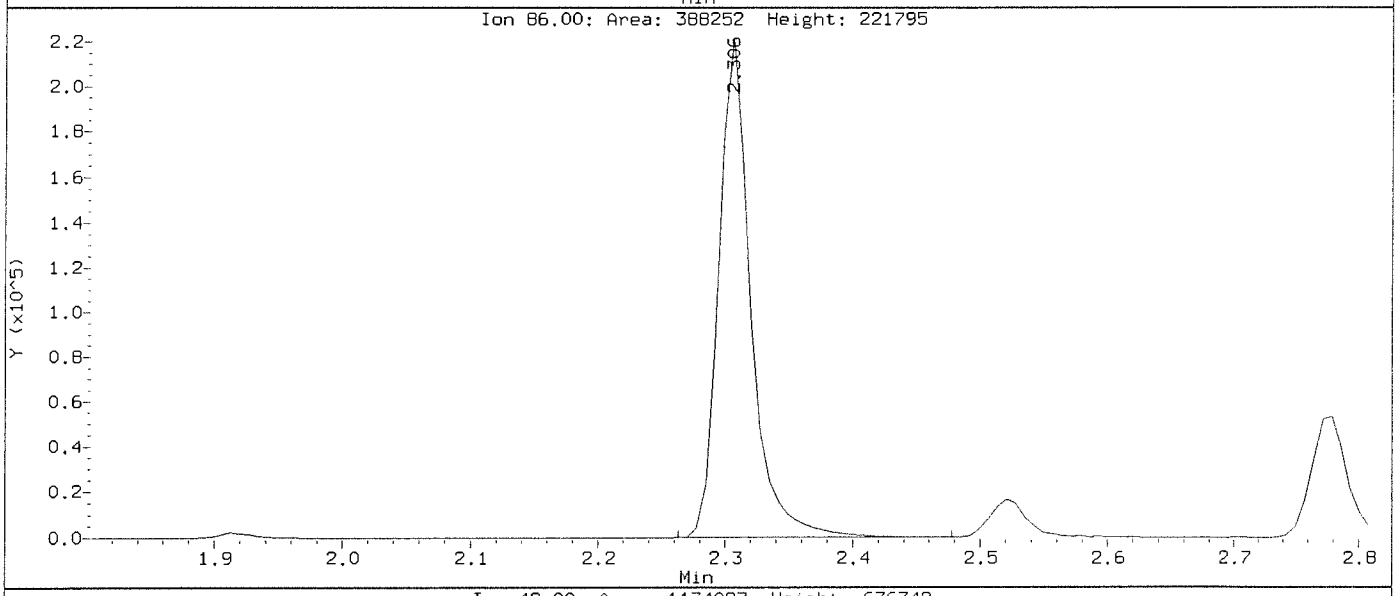
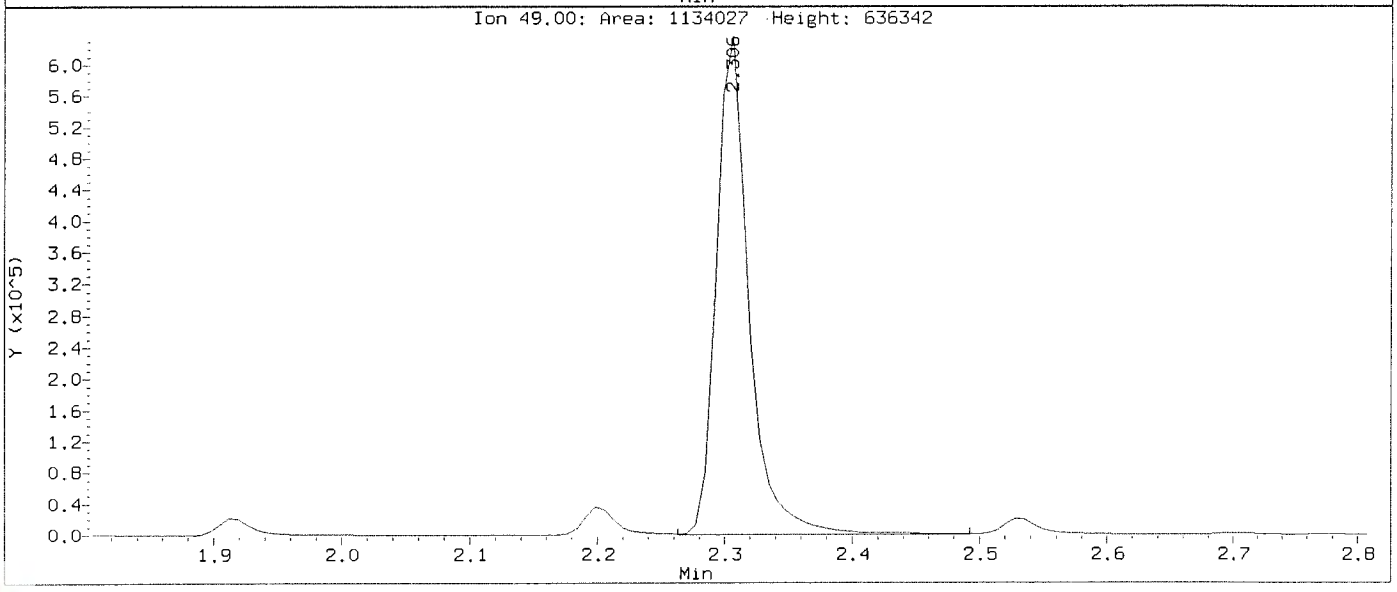
Injection Date: 07-JUL-2020 15:05
Instrument: voa6.i
Client Sample ID: VSTD200

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







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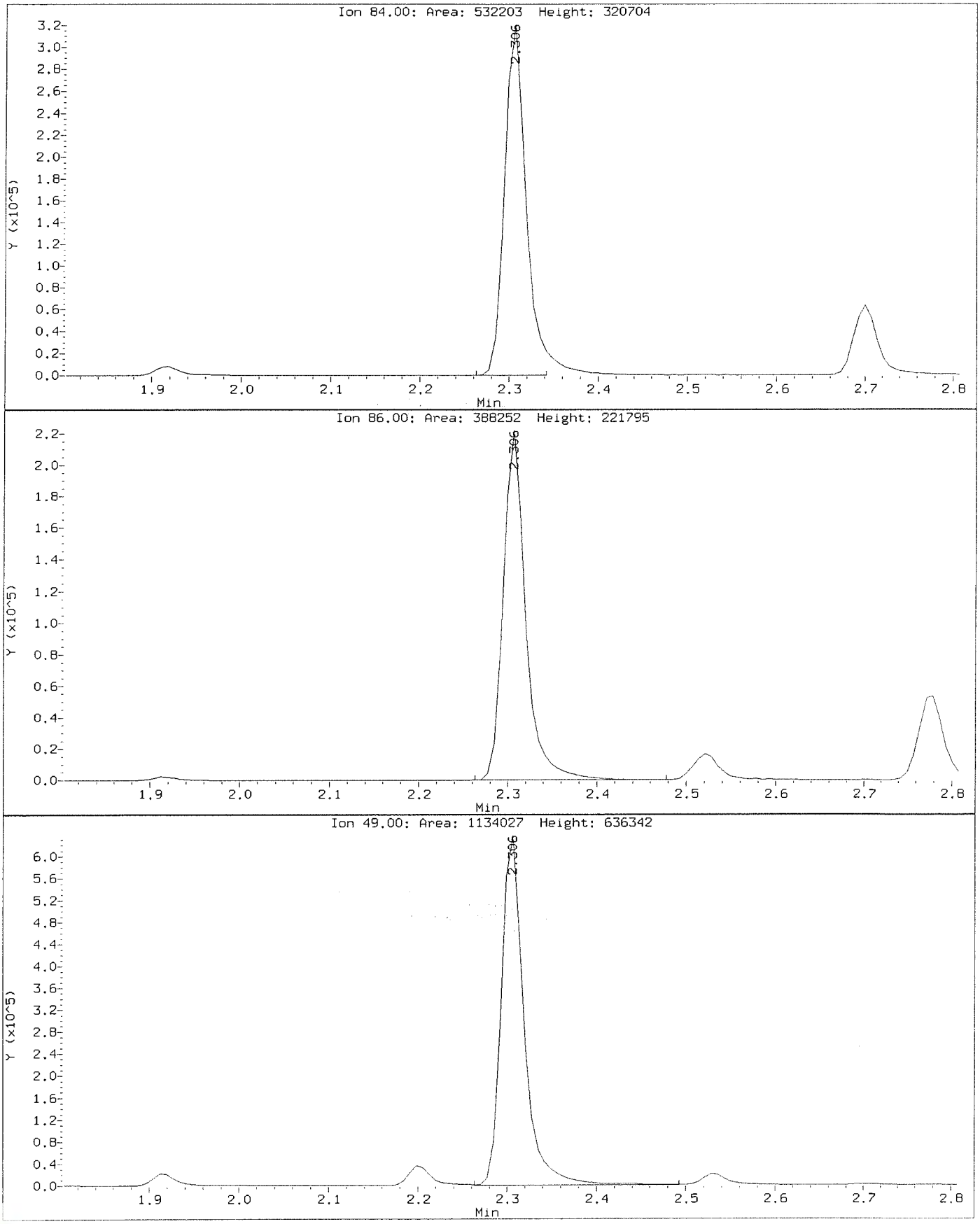
Client Sample ID: VSTD200

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



Data File: \\nahstws005\Target\chem\voa6.i\X200707.b\Y070702.D Page 1
Report Date: 12-Aug-2020 15:35

ALS Laboratory Group

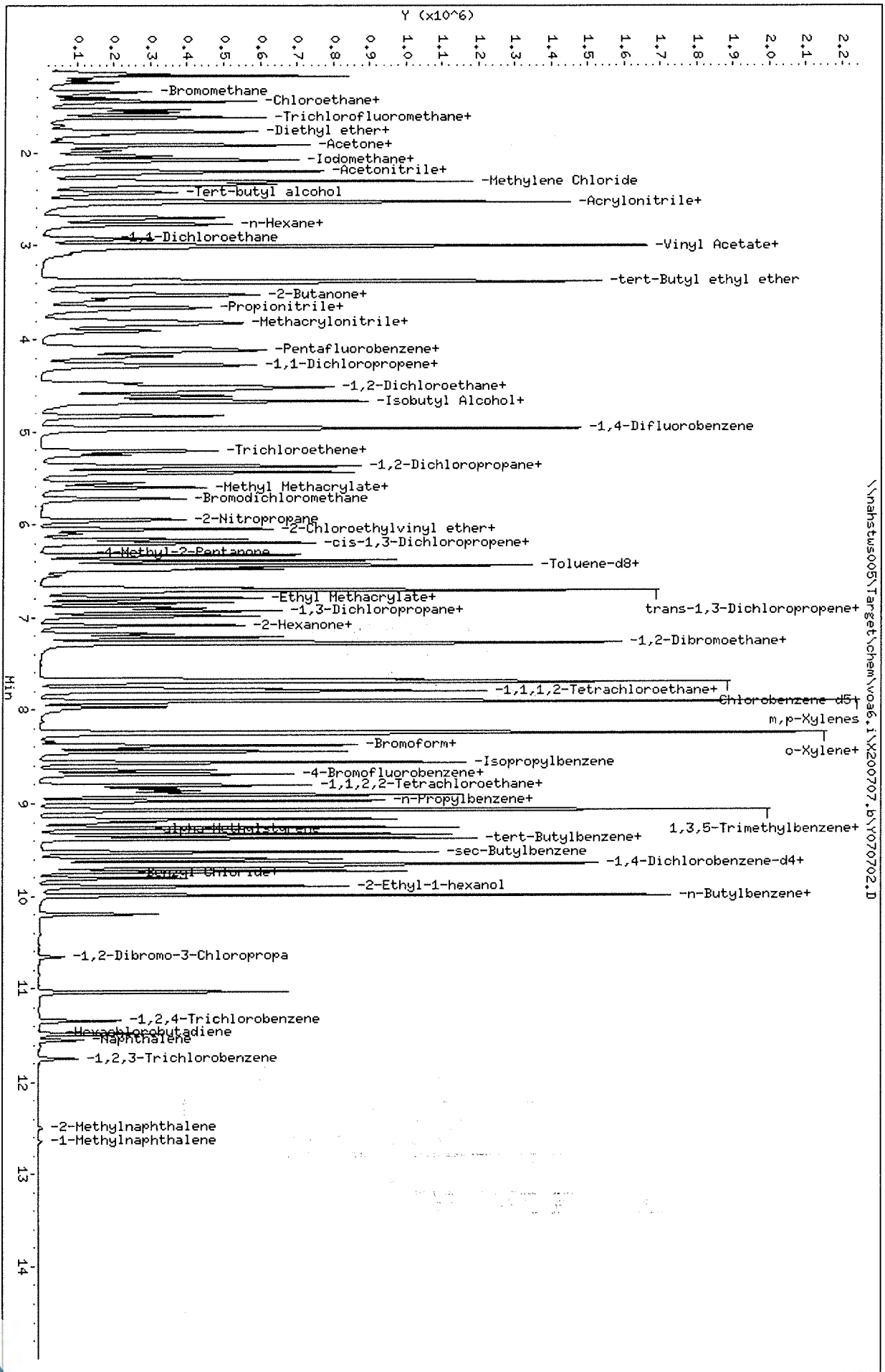
Data file : \\nahstws005\Target\chem\voa6.i\X200707.b\Y070702.D
Lab Smp Id: ICV Client Smp ID: ICV
Inj Date : 07-JUL-2020 17:55
Operator : PC Inst ID: voa6.i
Smp Info : CCV;CCV;2;;;ICV
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200707.b\8260W.m
Meth Date : 12-Aug-2020 15:35 voa6.i Quant Type: ISTD
Cal Date : 07-JUL-2020 15:05 Cal File: X070711.D
Als bottle: 17 QC Sample: METHSPIKE
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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	4.189	4.189	(1.000)	268686	50.0000	
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	446022	50.0000	
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	401301	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	188931	50.0000	
$	30 Dibromofluoromethane	113	4.103	4.103	(0.979)	145034	49.6163	49.61
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	194428	48.3371	48.33
$	48 Toluene-d8	98	6.388	6.388	(0.833)	501404	47.5256	47.52
$	69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	189870	49.6798	49.67
	60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	144552	46.9139	46.91
	31 1,1,1-Trichloroethane	97	4.089	4.089	(0.976)	234841	47.7116	47.71
	68 1,1,2,2-Tetrachloroethane	83	8.838	8.845	(0.914)	150169	40.2038	40.20
	53 1,1,2-Trichloroethane	83	6.840	6.847	(0.892)	115138	45.3551	45.35
	22 1,1-Dichloroethane	63	2.929	2.922	(0.699)	345838	45.4169	45.41
	11 1,1-Dichloroethene	96	1.919	1.912	(0.458)	122268	49.1440	49.14
	32 1,1-Dichloropropene	75	4.282	4.283	(0.862)	196057	44.6381	44.63
	93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.215)	27885	46.8948	46.89
	71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	139034	42.2149	42.21(M)
	90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	57765	49.1095	49.10
	79 1,2,4-Trimethylbenzene	105	9.382	9.383	(0.970)	510732	45.9685	45.96
	89 1,2-Dibromo-3-Chloropropane	155	10.657	10.658	(1.102)	11963	40.4535	40.45
	57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	141760	43.9480	43.94
	88 1,2-Dichlorobenzene	146	9.998	9.999	(1.034)	242201	43.8615	43.86

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
33	1,2-Dichloroethane	62	4.562	4.562	(0.918)	247188	44.6697	44.66
42	1,2-Dichloropropane	63	5.443	5.443	(1.095)	194629	46.9072	46.90
75	1,3,5-Trimethylbenzene	105	9.067	9.075	(0.938)	500515	46.4966	46.49
83	1,3-Dichlorobenzene	146	9.612	9.612	(0.994)	272664	45.0778	45.07
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	237525	44.4518	44.45
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	270313	46.9834	46.98
26	2,2-Dichloropropane	77	3.516	3.516	(0.839)	230748	49.6041	49.60
24	2-Butanone	43	3.580	3.581	(0.855)	221040	89.0368	89.03
76	2-Chlorotoluene	91	8.974	8.981	(0.928)	430644	45.4149	45.41
52	2-Hexanone	43	7.090	7.090	(0.924)	334778	87.0072	87.00
77	4-Chlorotoluene	91	9.074	9.075	(0.939)	493208	45.8659	45.86
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	508577	47.3379	47.33
45	4-Methyl-2-Pentanone	43	6.324	6.331	(0.824)	479743	88.1112	88.11
10	Acetone	43	1.976	1.976	(0.472)	196997	86.8426	86.84
37	Benzene	78	4.519	4.519	(0.909)	586290	46.0714	46.07
74	Bromobenzene	156	8.809	8.810	(0.911)	165250	45.8476	45.84
29	Bromochloromethane	128	3.802	3.803	(0.908)	79535	42.6195	42.61
39	Bromodichloromethane	83	5.729	5.729	(1.153)	210732	47.1700	47.17
66	Bromoform	173	8.415	8.416	(1.097)	99110	44.4902	44.49
6	Bromomethane	94	1.338	1.331	(0.320)	95465	50.5994	50.59
19	Carbon Disulfide	76	2.076	2.069	(0.496)	795057	97.3144	97.31
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	196676	46.2055	46.20
59	Chlorobenzene	112	7.699	7.699	(1.004)	376773	46.0839	46.08
7	Chloroethane	64	1.403	1.396	(0.335)	117110	48.3481	48.34
28	Chloroform	83	3.910	3.910	(0.933)	272572	46.2958	46.29
3	Chloromethane	50	1.081	1.081	(0.258)	260290	47.1413	47.14
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.843)	163788	46.6356	46.63
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	247464	45.9677	45.96
55	Dibromochloromethane	129	7.176	7.184	(0.936)	151100	45.8371	45.83
44	Dibromomethane	93	5.557	5.558	(1.118)	100387	44.8903	44.89
2	Dichlorodifluoromethane	85	0.973	0.973	(0.232)	162096	49.8347	49.83
61	Ethylbenzene	106	7.799	7.807	(1.017)	200248	46.2779	46.27
91	Hexachlorobutadiene	225	11.488	11.489	(1.188)	50803	55.7708	55.77
67	Isopropylbenzene	105	8.566	8.566	(1.117)	593517	46.2424	46.24
62	m,p-Xylenes	106	7.907	7.907	(1.031)	485701	93.3406	93.34
17	Methylene Chloride	84	2.305	2.306	(0.550)	169597	57.7227	57.72(M)
87	n-Butylbenzene	91	9.998	9.999	(1.034)	465106	48.5338	48.53
73	n-Propylbenzene	91	8.917	8.917	(0.922)	722217	46.8703	46.87
92	Naphthalene	128	11.546	11.546	(1.194)	75028	40.9990	40.99
63	o-Xylene	106	8.244	8.244	(1.075)	232988	45.7045	45.70
81	sec-Butylbenzene	105	9.526	9.526	(0.985)	593924	46.8905	46.89
64	Styrene	104	8.265	8.265	(1.078)	402300	45.4097	45.40
78	tert-Butylbenzene	119	9.339	9.340	(0.966)	402938	46.4892	46.48
56	Tetrachloroethene	164	6.933	6.933	(0.904)	116167	47.3924	47.39
50	Toluene	91	6.446	6.453	(0.840)	599697	46.8394	46.83
20	trans-1,2-Dichloroethene	96	2.535	2.535	(0.605)	141337	48.1283	48.12
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	223471	46.2025	46.20
38	Trichloroethene	130	5.214	5.214	(1.049)	151130	45.6691	45.66
8	Trichlorofluoromethane	101	1.560	1.561	(0.373)	232659	50.2128	50.21
5	Vinyl Chloride	62	1.145	1.145	(0.273)	226532	47.9935	47.99



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Purge Volume: 5.0
Column phase: DB624

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

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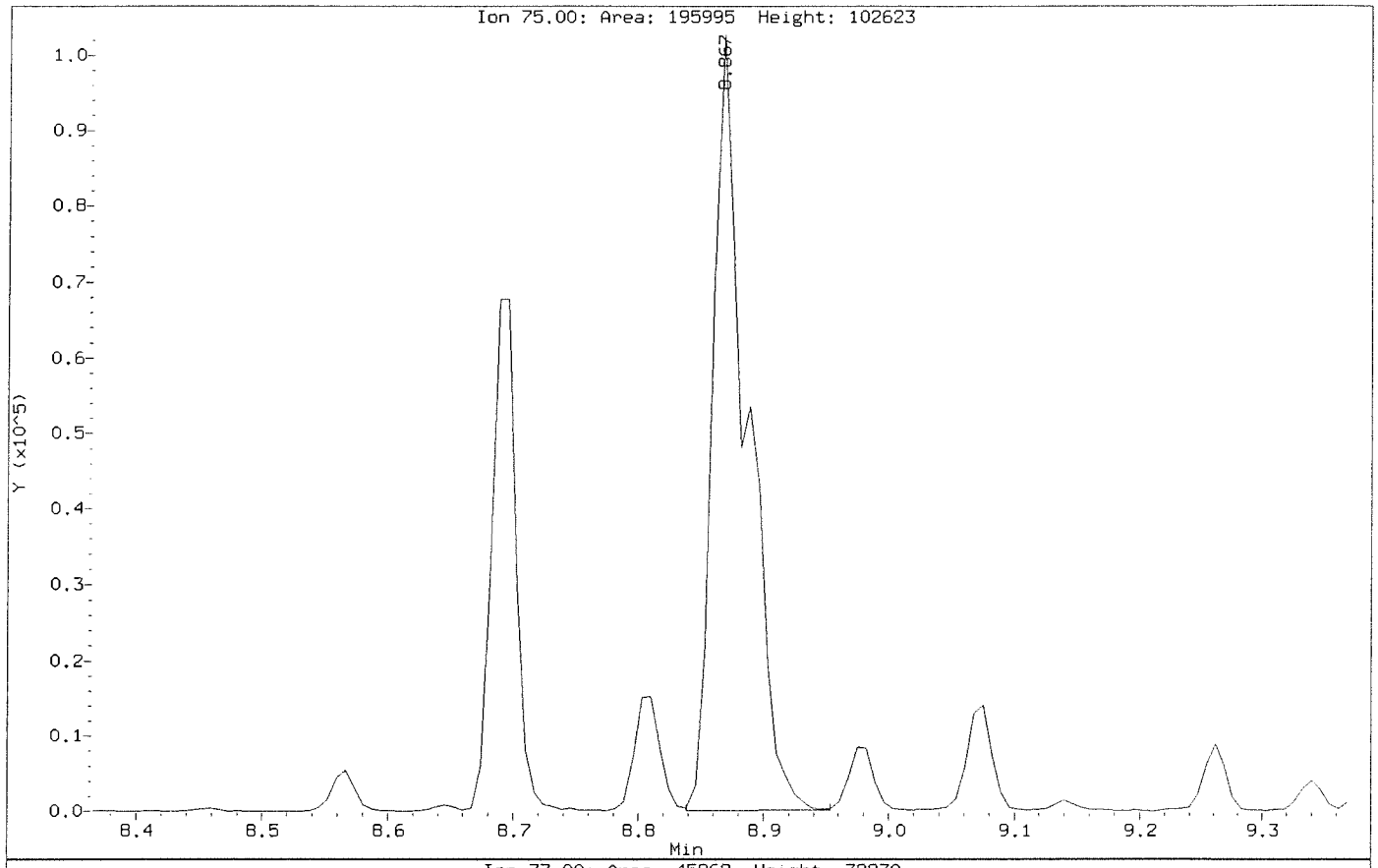
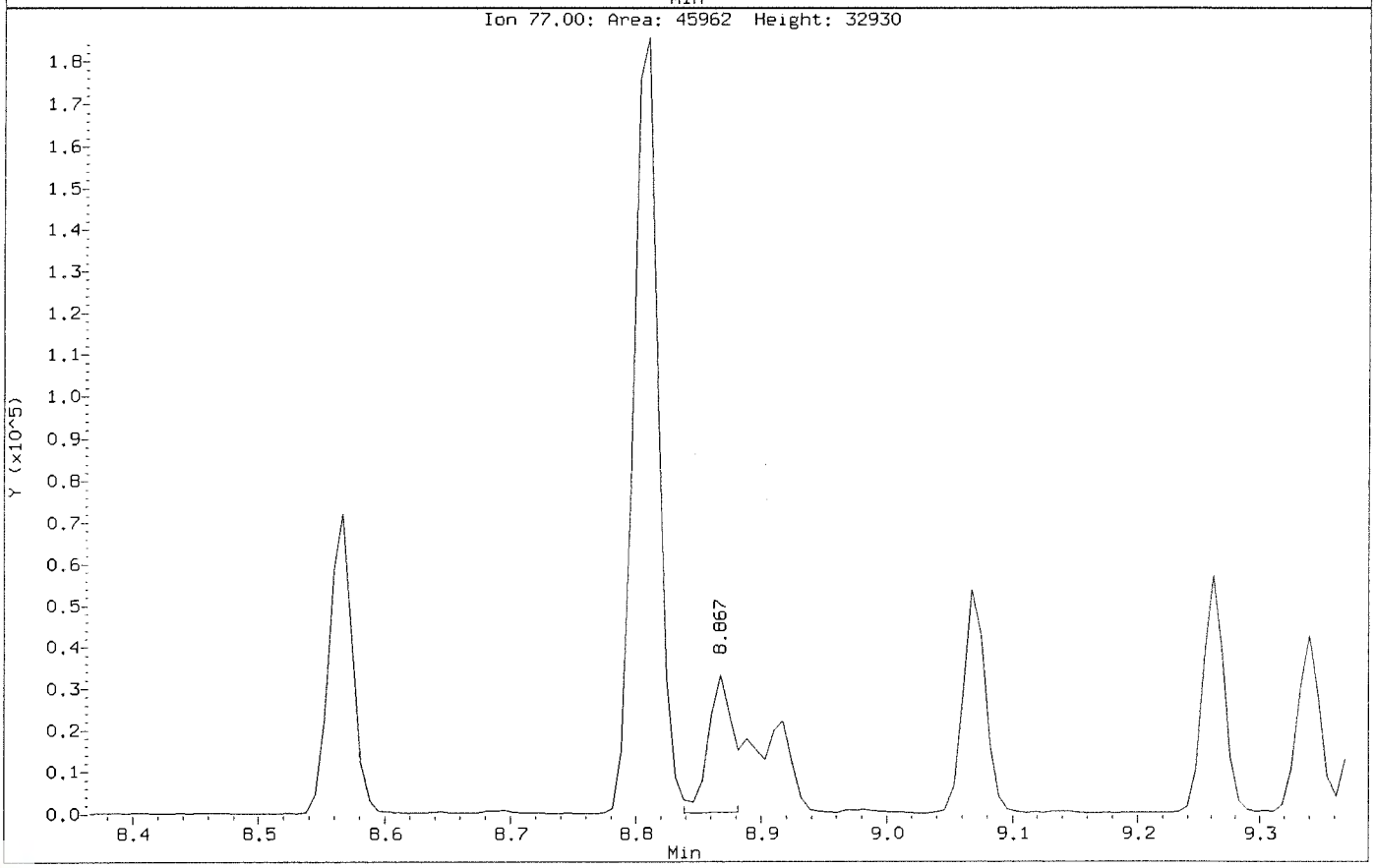
Injection Date: 07-JUL-2020 17:55
Instrument: voa6.i
Client Sample ID: ICV

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





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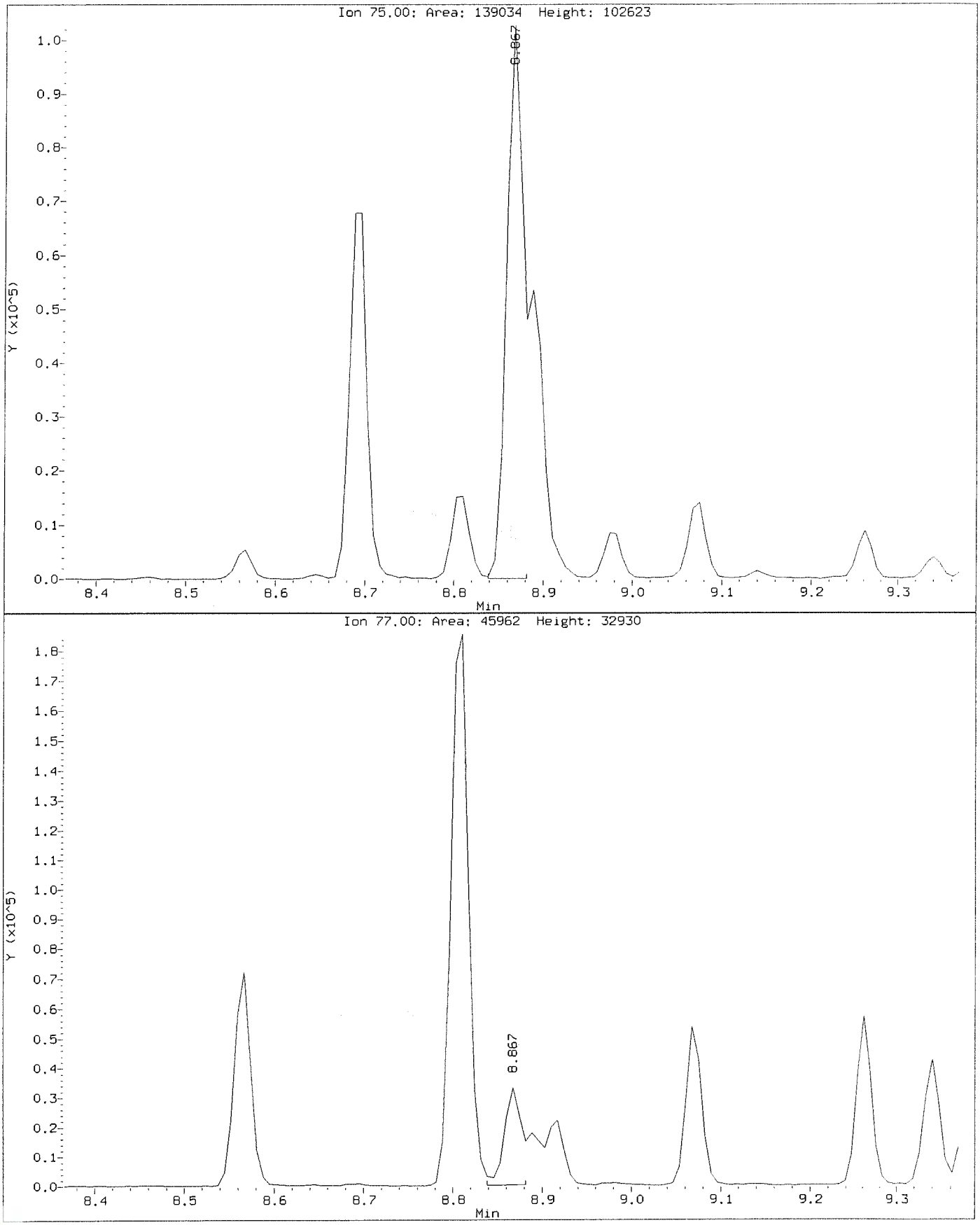
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4



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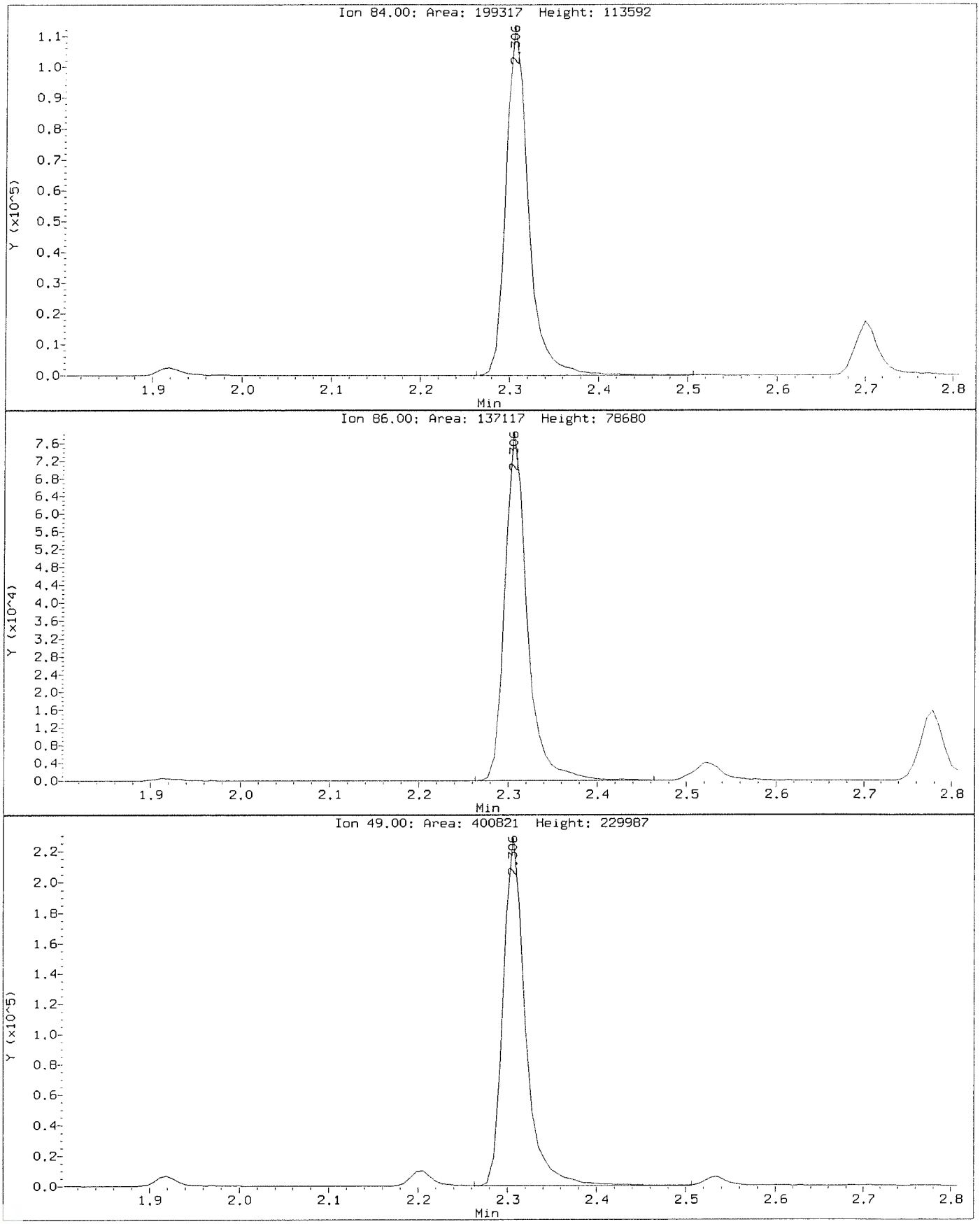
Instrument: voa6.i
Client Sample ID: ICV

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



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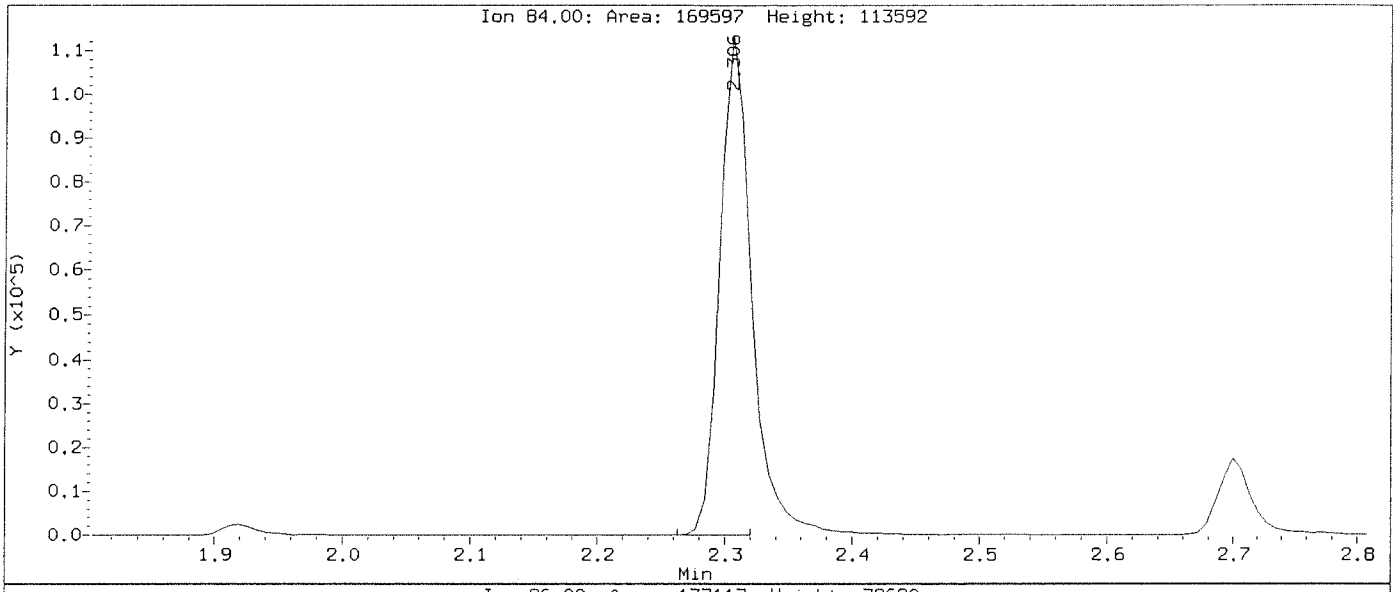
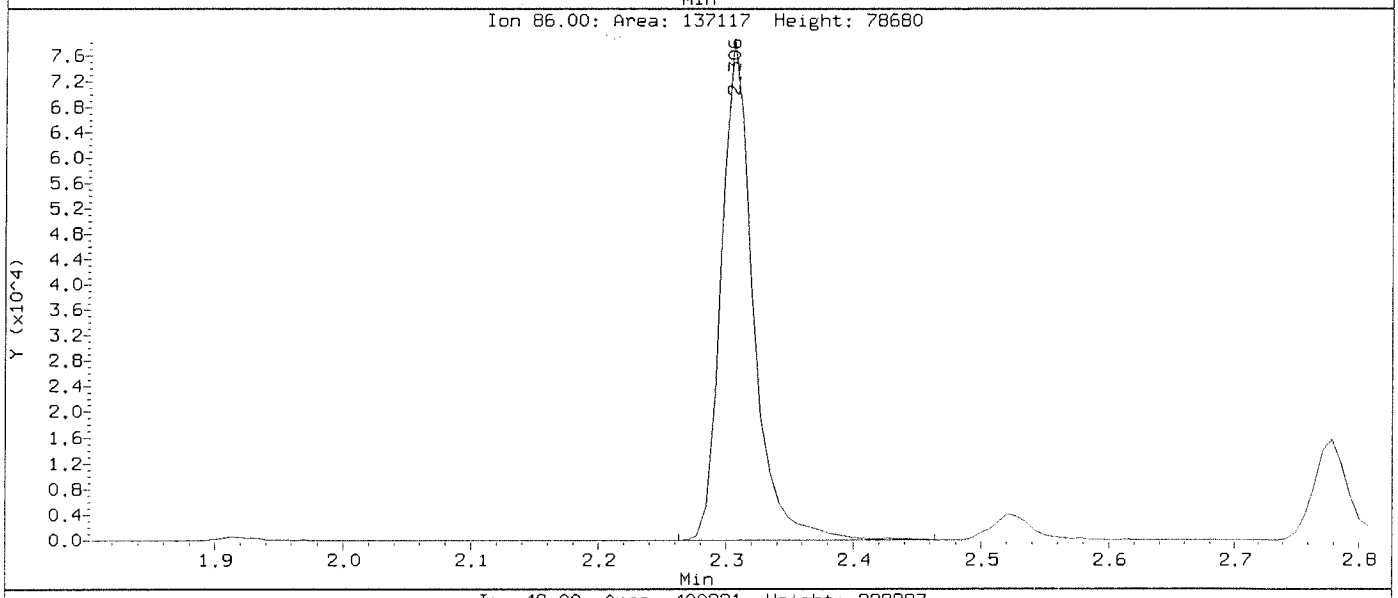
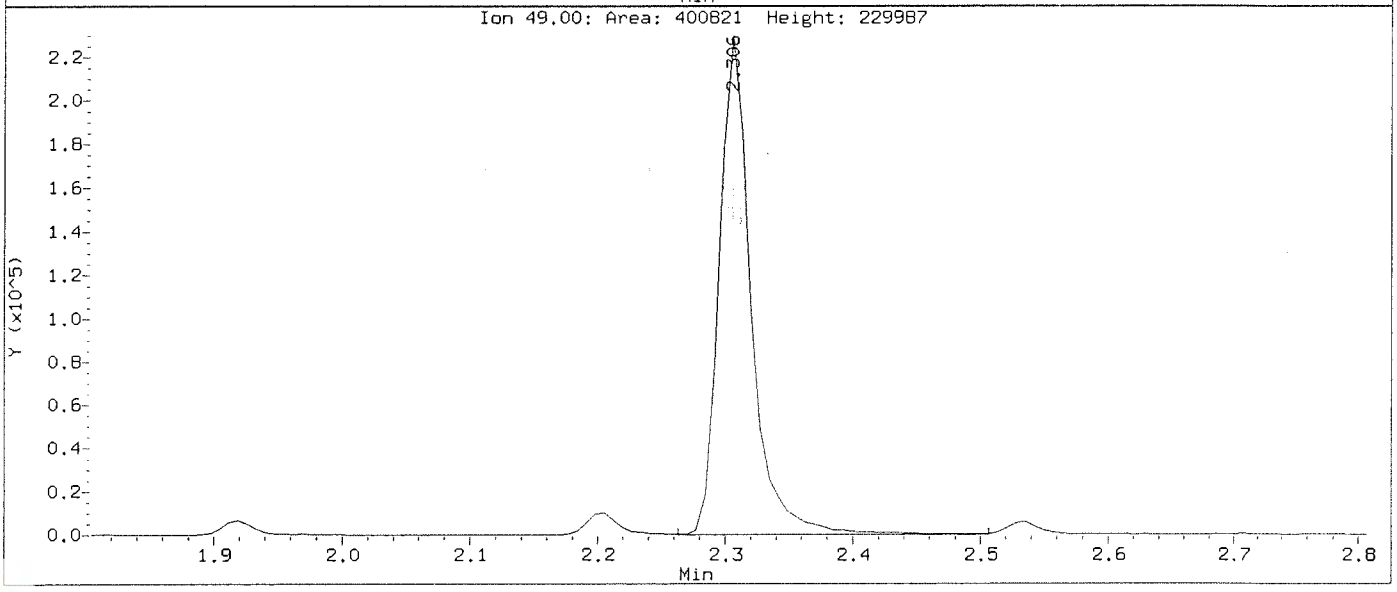
Instrument: voa6.i
Client Sample ID: ICV

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







MSVOA06 -Logbook

Batch: 41080 **Analyst:** Presenta Cabascango

Date: 07-08-2020 **Reviewer:**

Method: 8260 **Laboratory:** Houston

Comments:

#	Samp ID	Type	Analyzed	DF	Init Wt/Vol	Final Vol	File ID	Matrix	Status	pH
1	BFB	TUNE	07-08-2020 11:01 am	1.00	50 mL	50 mL	X070801.D	Liquid	Y	NA
	auto find/ purged									
2	CCV	CCV	07-08-2020 11:25 am	1.00	50 mL	50 mL	X070802a.D	Liquid	Y	NA
	10 uL cal std/50 mL DI									
3	CCV	CCV	07-08-2020 11:49 am	1.00	50 mL	50 mL	X070803.D	Liquid	Y	NA
	10 uL cal std/50 mL DI									
4	CCB	SAMP	07-08-2020 12:13 pm	1.00	50 mL	50 mL	X070804.D	Liquid	Y	NA
5	VLCSW-200708	LCS	07-08-2020 12:36 pm	1.00	50 mL	50 mL	X070805.D	Liquid	Y	NA
	4.0 uL cal std/50 mL DI									
6	BLANK	SAMP	07-08-2020 01:01 pm	1.00	50 mL	50 mL	X070806.D	Liquid	Y	NA
7	BLANK	SAMP	07-08-2020 01:25 pm	1.00	50 mL	50 mL	X070807.D	Liquid	Y	NA
8	VBLKW-200708	MBLK	07-08-2020 01:49 pm	1.00	50 mL	50 mL	X070808.D	Liquid	Y	<2
9	HS20070055-01n/r	SAMP	07-08-2020 02:13 pm	1.00	50 mL	50 mL	X070809.D	Liquid	Y	<2
10	HS20061390-10	SAMP	07-08-2020 02:37 pm	1.00	50 mL	50 mL	X070810.D	Liquid	Y	<2
11	HS20070055-02	SAMP	07-08-2020 03:01 pm	1.00	50 mL	50 mL	X070811.D	Liquid	Y	<2
12	HS20070055-06	SAMP	07-08-2020 03:25 pm	1.00	50 mL	50 mL	X070812.D	Liquid	Y	<2
13	HS20070055-03	SAMP	07-08-2020 03:49 pm	1.00	50 mL	50 mL	X070813.D	Liquid	Y	<2
14	HS20070055-04	SAMP	07-08-2020 04:13 pm	1.00	50 mL	50 mL	X070814.D	Liquid	Y	<2
15	HS20070055-05	SAMP	07-08-2020 04:36 pm	1.00	50 mL	50 mL	X070815.D	Liquid	Y	<2
16	HS20070043-01	SAMP	07-08-2020 05:01 pm	1.00	50 mL	50 mL	X070816.D	Liquid	Y	<2
17	HS20070055-03MS	MS	07-08-2020 05:25 pm	1.00	50 mL	50 mL	X070817.D	Liquid	Y	<2
	3.5 uL cal std/40 mL samp									
18	HS20070055-03MSD	MSD	07-08-2020 05:49 pm	1.00	50 mL	50 mL	X070818.D	Liquid	Y	<2
	3.5 uL cal std/40 mL samp									
19	HS20070055-04MS	MS	07-08-2020 06:13 pm	1.00	50 mL	50 mL	X070819.D	Liquid	Y	<2
	3.5 uL cal std/40 mL samp									
20	HS20070055-04MSD	MSD	07-08-2020 06:37 pm	1.00	50 mL	50 mL	X070820.D	Liquid	Y	<2
	3.5 uL cal std/40 mL samp									
21	HS20070043-01	SAMP	07-08-2020 07:01 pm	25.00	2 mL	50 mL	X070821.D	Liquid	Y	<2
22	HS20070043-15	SAMP	07-08-2020 07:25 pm	1.00	50 mL	50 mL	X070822.D	Liquid	Y	<2
23	HS20070043-20	SAMP	07-08-2020 07:49 pm	1.00	50 mL	50 mL	X070823.D	Liquid	Y	<2
24	HS20070043-04	SAMP	07-08-2020 08:12 pm	1.00	50 mL	50 mL	X070824.D	Liquid	Y	<2
25	HS20070043-16	SAMP	07-08-2020 08:36 pm	1.00	50 mL	50 mL	X070825.D	Liquid	Y	<2
26	HS20070043-14	SAMP	07-08-2020 09:00 pm	1.00	50 mL	50 mL	X070826.D	Liquid	Y	<2
27	HS20070043-02	SAMP	07-08-2020 09:24 pm	10.00	5 mL	50 mL	X070827.D	Liquid	Y	<2
28	HS20070043-02	SAMP	07-08-2020 09:48 pm	100.0(	500 µL	50 mL	X070828.D	Liquid	Y	<2
29	HS20070043-03	SAMP	07-08-2020 10:12 pm	10.00	5 mL	50 mL	X070829.D	Liquid	Y	<2
30	HS20070043-03	SAMP	07-08-2020 10:36 pm	100.0(	500 µL	50 mL	X070830.D	Liquid	Y	<2
31	CCV-END	CCV	07-08-2020 11:00 pm	1.00	50 mL	50 mL	X070831.D	Liquid	Y	na
	10 uL cal std/50 mL DI									

MSVOA06 -Logbook

Chemical	Value
SURR SPK ID	31106-34-06
IS ID	31106-34-06
CAL STD ID	31106-37-01/02
BFB ID	31106-34-06

FORM 2
WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20070055

	CLIENT SAMPLE NO.	SMC1 (DCE) #	SMC2 #	SMC3 (TOL) #	OTHER #	TOT OUT
01	VLCSW-200708	99	99	96	99	0
02	VBLKW-200708	89	94	104	101	0
03	HS20070055-02	88	91	106	97	0
04	HS20070055-06	95	97	106	87	0
05	HS20070055-03	94	97	102	106	0
06	HS20070055-04	95	98	101	104	0
07	HS20070055-05	95	97	98	101	0
08						
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10						
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27						
28						

		QC LIMITS
SMC1 (DCE)	= 1,2-Dichloroethane-d4	(0-130)
SMC2	= Dibromofluoromethane	(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-200708

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20070055

Lab File ID: X070808 Lab Sample ID: VBLKW-200708

Date Analyzed: 07/08/20 Time Analyzed: 1349

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-200708	VLCSW-200708	X070805	1236
02	HS20070055-0	HS20070055-02	X070811	1501
03	HS20070055-0	HS20070055-06	X070812	1525
04	HS20070055-0	HS20070055-03	X070813	1549
05	HS20070055-0	HS20070055-04	X070814	1613
06	HS20070055-0	HS20070055-05	X070815	1636
07	HS20070055-0	HS20070055-03M	X070817	1725
08	HS20070055-0	HS20070055-03M	X070818	1749
09	HS20070055-0	HS20070055-04M	X070819	1813
10	HS20070055-0	HS20070055-04M	X070820	1837
11				
12				
13				
14				
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30				

COMMENTS:

FORM 5
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20070055

Lab File ID: X070801 BFB Injection Date: 07/08/20

Instrument ID: VOA6 BFB Injection Time: 1101

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	29.3
75	30.0 - 60.0% of mass 95	51.2
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	1.0 (1.6)1
174	Greater than 50.0% of mass 95	61.3
175	5.0 - 9.0% of mass 174	4.9 (8.0)1
176	95.0 - 101.0% of mass 174	59.4 (96.9)1
177	5.0 - 9.0% of mass 176	5.0 (8.4)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	X070803	07/08/20	1149
02	VLCSW-200708	VLCSW-200708	X070805	07/08/20	1236
03	VBLKW-200708	VBLKW-200708	X070808	07/08/20	1349
04	HS20070055-0	HS20070055-02	X070811	07/08/20	1501
05	HS20070055-0	HS20070055-06	X070812	07/08/20	1525
06	HS20070055-0	HS20070055-03	X070813	07/08/20	1549
07	HS20070055-0	HS20070055-04	X070814	07/08/20	1613
08	HS20070055-0	HS20070055-05	X070815	07/08/20	1636
09	HS20070055-0	HS20070055-03M	X070817	07/08/20	1725
10	HS20070055-0	HS20070055-03M	X070818	07/08/20	1749
11	HS20070055-0	HS20070055-04M	X070819	07/08/20	1813
12	HS20070055-0	HS20070055-04M	X070820	07/08/20	1837
13	CCV-END	CCV-END	X070831	07/08/20	2300
14					
15					
16					
17					
18					
19					
20					
21					
22					

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20070055

Instrument ID: VOA6 Calibration Date: 07/08/20 Time: 1149

Lab File ID: X070803 Init. Calib. Date(s): 07/07/20 07/07/20

Init. Calib. Times: 1106 1505

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
cis-1,3-Dichloropropene	0.6040000	0.5633118	0.5633118	0.2	6.74	20.00	AVRG
trans-1,3-Dichloropropene	0.5420000	0.5027638	0.5027638	0.1	7.24	20.00	AVRG
1,3-Dichlorobenzene	1.6010000	1.4473017	1.4473017	0.6	9.60	20.00	AVRG
2,2-Dichloropropane	0.8650000	0.8582356	0.8582356	0.1	0.78	20.00	AVRG
1,1-Dichloropropene	0.4920000	0.4274527	0.4274527	0.1	13.12	20.00	AVRG
Dibromomethane	0.2510000	0.2286322	0.2286322	0.1	8.91	20.00	AVRG
1,2-Dibromoethane	0.4020000	0.3597863	0.3597863	0.1	10.50	20.00	AVRG
trans-1,2-Dichloroethene	0.5460000	0.5137722	0.5137722	0.1	5.90	20.00	AVRG
1,1,1,2-Tetrachloroethane	0.3840000	0.3599124	0.3599124	0.1	6.27	20.00	AVRG
1,1,1-Trichloroethane	0.9160000	0.8386042	0.8386042	0.1	8.45	20.00	AVRG
1,1,2,2-Tetrachloroethane	0.9880000	0.8309345	0.8309345	0.3	15.90	20.00	AVRG
1,1,2-Trichloroethane	0.3160000	0.2889578	0.2889578	0.1	8.56	20.00	AVRG
1,1-Dichloroethane	1.4170000	1.2636490	1.2636490	0.2	10.82	20.00	AVRG
1,1-Dichloroethene	0.4630000	0.4107052	0.4107052	0.1	11.29	20.00	AVRG
Trichloroethene	0.3710000	0.3385976	0.3385976	0.2	8.73	20.00	AVRG
1,2,3-Trichlorobenzene	44.976767	50.000000	0.1413487	0.01	10.05	20.00	LINR
Trichlorofluoromethane	0.8620000	0.7913366	0.7913366	0.1	8.20	20.00	AVRG
1,2,4-Trichlorobenzene	45.749586	50.000000	0.2842573	0.1	8.50	20.00	LINR
1,2,4-Trimethylbenzene	2.9400000	2.6740640	2.6740640	0.1	9.04	20.00	AVRG
Tetrachloroethene	0.3050000	0.2782148	0.2782148	0.2	8.78	20.00	AVRG
1,2-Dichlorobenzene	1.4610000	1.2866352	1.2866352	0.4	11.93	20.00	AVRG
1,2-Dichloroethane	0.6200000	0.5624100	0.5624100	0.1	9.29	20.00	AVRG
1,2-Dichloropropane	0.4650000	0.4319186	0.4319186	0.1	7.11	20.00	AVRG
1,3,5-Trimethylbenzene	2.8490000	2.5953478	2.5953478	0.1	8.90	20.00	AVRG
1,3-Dichloropropane	0.6660000	0.6009431	0.6009431	0.1	9.77	20.00	AVRG
1,4-Dichlorobenzene	47.371331	50.000000	1.4425132	0.4	5.26	20.00	LINR
Toluene	1.5950000	1.4686894	1.4686894	0.4	7.92	20.00	AVRG
2-Butanone	95.442788	100.00000	0.4389813	0.1	4.56	20.00	LINR
2-Chlorotoluene	2.5100000	2.2479180	2.2479180	0.1	10.44	20.00	AVRG
2-Hexanone	93.044514	100.00000	0.4448621	0.1	6.96	20.00	LINR
4-Chlorotoluene	2.8460000	2.6271550	2.6271550	0.1	7.69	20.00	AVRG
tert-Butylbenzene	2.2940000	2.0742549	2.0742549	0.1	9.58	20.00	AVRG
4-Methyl-2-Pentanone	91.047980	100.00000	0.6169516	0.1	8.95	20.00	LINR
Acetone	85.979313	100.00000	0.3639841	0.1	14.02	20.00	LINR
Benzene	1.4260000	1.3067037	1.3067037	0.5	8.36	20.00	AVRG
Bromobenzene	0.9540000	0.8912110	0.8912110	0.1	6.58	20.00	AVRG
Bromochloromethane	0.3470000	0.3046351	0.3046351	0.1	12.21	20.00	AVRG
Bromodichloromethane	0.5010000	0.4648491	0.4648491	0.2	7.22	20.00	AVRG
Bromoform	0.2780000	0.2554371	0.2554371	0.1	8.12	20.00	AVRG
Bromomethane	50.033744	50.000000	0.3513371	0.1	-0.07	20.00	LINR
Carbon Disulfide	1.5200000	1.4078148	1.4078148	0.1	7.38	20.00	AVRG
Carbon Tetrachloride	0.4770000	0.4200734	0.4200734	0.1	11.93	20.00	AVRG

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS2007005

Instrument ID: VOA6 Calibration Date: 07/08/20 Time: 1149

Lab File ID: X070803 Init. Calib. Date(s): 07/07/20 07/07/20

Init. Calib. Times: 1106 1505

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
Chlorobenzene	1.0190000	0.9327719	0.9327719	0.5	8.46	20.00	AVRG
Chloroethane	47.779193	50.000000	0.4309289	0.1	4.44	20.00	LINR
Chloroform	1.0950000	1.0130864	1.0130864	0.2	7.48	20.00	AVRG
Chloromethane	1.0270000	0.9441318	0.9441318	0.1	8.07	20.00	AVRG
cis-1,2-Dichloroethene	0.6540000	0.5968295	0.5968295	0.1	8.74	20.00	AVRG
Dibromochloromethane	0.4110000	0.3844361	0.3844361	0.1	6.46	20.00	AVRG
Dichlorodifluoromethane	0.6050000	0.5357305	0.5357305	0.1	11.45	20.00	AVRG
Ethylbenzene	0.5390000	0.4903495	0.4903495	0.1	9.03	20.00	AVRG
Hexachlorobutadiene	47.841148	50.000000	0.2297238	0.1	4.32	20.00	LINR
Isopropylbenzene	1.5990000	1.4263407	1.4263407	0.1	10.80	20.00	AVRG
m,p-Xylenes	0.6480000	0.5844237	0.5844237	0.1	9.81	20.00	AVRG
Methylene Chloride	0.5470000	0.5169511	0.5169511	0.1	5.49	20.00	AVRG
n-Butylbenzene	2.5360000	2.3192168	2.3192168	0.5	8.55	20.00	AVRG
n-Propylbenzene	4.0780000	3.7066565	3.7066565	0.1	9.11	20.00	AVRG
Naphthalene	41.896338	50.000000	0.4058739	0.2	16.21	20.00	LINR
o-Xylene	0.6350000	0.5800021	0.5800021	0.3	8.66	20.00	AVRG
sec-Butylbenzene	3.3520000	2.9871724	2.9871724	0.1	10.88	20.00	AVRG
Styrene	1.1040000	1.0024978	1.0024978	0.3	9.19	20.00	AVRG
Vinyl Chloride	0.8780000	0.7961967	0.7961967	0.1	9.32	20.00	AVRG
1,2,3-Trichloropropane	0.8720000	0.7601156	0.7601156	0.1	12.83	20.00	AVRG
p-Isopropyltoluene	2.8430000	2.5346895	2.5346895	0.1	10.84	20.00	AVRG
1,2-Dibromo-3-Chloropropane	40.079330	50.000000	6.28e-002	0.05	19.84	20.00	LINR
1,2-Dichloroethane-d4	50.228470	50.000000	0.7515427	0.1	-0.46	20.00	LINR
Dibromofluoromethane	51.458044	50.000000	0.5594694	0.1	-2.92	20.00	LINR
Toluene-d8	1.3140000	1.2730351	1.2730351	0.1	3.12	20.00	AVRG
4-Bromofluorobenzene	50.517498	50.000000	0.4809437	0.1	-1.03	20.00	LINR

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20070055

Instrument ID: VOA6 Calibration Date: 07/08/20 Time: 2300

Lab File ID: X070831 Init. Calib. Date(s): 07/07/20 07/07/20

Init. Calib. Times: 1106 1505

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
cis-1,3-Dichloropropene	0.6040000	0.5533848	0.5533848	0.2	8.38	50.00	AVRG
trans-1,3-Dichloropropene	0.5420000	0.4861347	0.4861347	0.1	10.31	50.00	AVRG
1,3-Dichlorobenzene	1.6010000	1.3950607	1.3950607	0.6	12.86	50.00	AVRG
2,2-Dichloropropane	0.8650000	0.7476760	0.7476760	0.1	13.56	50.00	AVRG
1,1-Dichloropropene	0.4920000	0.4116250	0.4116250	0.1	16.34	50.00	AVRG
Dibromomethane	0.2510000	0.2282865	0.2282865	0.1	9.05	50.00	AVRG
1,2-Dibromoethane	0.4020000	0.3644355	0.3644355	0.1	9.34	50.00	AVRG
trans-1,2-Dichloroethene	0.5460000	0.5186155	0.5186155	0.1	5.02	50.00	AVRG
1,1,1,2-Tetrachloroethane	0.3840000	0.3636527	0.3636527	0.1	5.30	50.00	AVRG
1,1,1-Trichloroethane	0.9160000	0.8251429	0.8251429	0.1	9.92	50.00	AVRG
1,1,2,2-Tetrachloroethane	0.9880000	0.8114075	0.8114075	0.3	17.87	50.00	AVRG
1,1,2-Trichloroethane	0.3160000	0.3058191	0.3058191	0.1	3.22	50.00	AVRG
1,1-Dichloroethane	1.4170000	1.3176327	1.3176327	0.2	7.01	50.00	AVRG
1,1-Dichloroethene	0.4630000	0.4058616	0.4058616	0.1	12.34	50.00	AVRG
Trichloroethene	0.3710000	0.3517705	0.3517705	0.2	5.18	50.00	AVRG
1,2,3-Trichlorobenzene	39.782968	50.000000	0.1244384	0.01	20.43	50.00	LINR
Trichlorofluoromethane	0.8620000	0.7381483	0.7381483	0.1	14.37	50.00	AVRG
1,2,4-Trichlorobenzene	45.113069	50.000000	0.2801862	0.1	9.77	50.00	LINR
1,2,4-Trimethylbenzene	2.9400000	2.8542503	2.8542503	0.1	2.92	50.00	AVRG
Tetrachloroethene	0.3050000	0.2683785	0.2683785	0.2	12.01	50.00	AVRG
1,2-Dichlorobenzene	1.4610000	1.3875417	1.3875417	0.4	5.03	50.00	AVRG
1,2-Dichloroethane	0.6200000	0.5843947	0.5843947	0.1	5.74	50.00	AVRG
1,2-Dichloropropane	0.4650000	0.4423121	0.4423121	0.1	4.88	50.00	AVRG
1,3,5-Trimethylbenzene	2.8490000	2.6637325	2.6637325	0.1	6.50	50.00	AVRG
1,3-Dichloropropane	0.6660000	0.6216852	0.6216852	0.1	6.65	50.00	AVRG
1,4-Dichlorobenzene	46.783352	50.000000	1.4246838	0.4	6.43	50.00	LINR
Toluene	1.5950000	1.5080649	1.5080649	0.4	5.45	50.00	AVRG
2-Butanone	85.563128	100.00000	0.3963436	0.1	14.44	50.00	LINR
2-Chlorotoluene	2.5100000	2.3882464	2.3882464	0.1	4.85	50.00	AVRG
2-Hexanone	85.447724	100.00000	0.4099490	0.1	14.55	50.00	LINR
4-Chlorotoluene	2.8460000	2.7745108	2.7745108	0.1	2.51	50.00	AVRG
tert-Butylbenzene	2.2940000	2.1211980	2.1211980	0.1	7.53	50.00	AVRG
4-Methyl-2-Pentanone	90.023171	100.00000	0.6102457	0.1	9.98	50.00	LINR
Acetone	65.347270	100.00000	0.3016209	0.1	34.65	50.00	LINR
Benzene	1.4260000	1.3337507	1.3337507	0.5	6.47	50.00	AVRG
Bromobenzene	0.9540000	0.9679482	0.9679482	0.1	-1.46	50.00	AVRG
Bromochloromethane	0.3470000	0.3072487	0.3072487	0.1	11.46	50.00	AVRG
Bromodichloromethane	0.5010000	0.4802380	0.4802380	0.2	4.14	50.00	AVRG
Bromoform	0.2780000	0.2408342	0.2408342	0.1	13.37	50.00	AVRG
Bromomethane	49.335185	50.000000	0.3464393	0.1	1.33	50.00	LINR
Carbon Disulfide	1.5200000	1.2539711	1.2539711	0.1	17.50	50.00	AVRG
Carbon Tetrachloride	0.4770000	0.3993128	0.3993128	0.1	16.29	50.00	AVRG

FORM VII VOA

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS2007005

Instrument ID: VOA6 Calibration Date: 07/08/20 Time: 2300

Lab File ID: X070831 Init. Calib. Date(s): 07/07/20 07/07/20

Init. Calib. Times: 1106 1505

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
Chlorobenzene	1.0190000	0.9347666	0.9347666	0.5	8.27	50.00	AVRG
Chloroethane	45.542303	50.000000	0.4115319	0.1	8.92	50.00	LINR
Chloroform	1.0950000	1.0454935	1.0454935	0.2	4.52	50.00	AVRG
Chloromethane	1.0270000	0.9504332	0.9504332	0.1	7.46	50.00	AVRG
cis-1,2-Dichloroethene	0.6540000	0.6285266	0.6285266	0.1	3.90	50.00	AVRG
Dibromochloromethane	0.4110000	0.3850534	0.3850534	0.1	6.31	50.00	AVRG
Dichlorodifluoromethane	0.6050000	0.5052576	0.5052576	0.1	16.49	50.00	AVRG
Ethylbenzene	0.5390000	0.4770377	0.4770377	0.1	11.50	50.00	AVRG
Hexachlorobutadiene	45.654244	50.000000	0.2189203	0.1	8.69	50.00	LINR
Isopropylbenzene	1.5990000	1.3230200	1.3230200	0.1	17.26	50.00	AVRG
m,p-Xylenes	0.6480000	0.5417104	0.5417104	0.1	16.40	50.00	AVRG
Methylene Chloride	0.5470000	0.4937241	0.4937241	0.1	9.74	50.00	AVRG
n-Butylbenzene	2.5360000	2.2301391	2.2301391	0.5	12.06	50.00	AVRG
n-Propylbenzene	4.0780000	3.7388599	3.7388599	0.1	8.32	50.00	AVRG
Naphthalene	39.144942	50.000000	0.3790285	0.2	21.71	50.00	LINR
o-Xylene	0.6350000	0.5660943	0.5660943	0.3	10.85	50.00	AVRG
sec-Butylbenzene	3.3520000	2.8275656	2.8275656	0.1	15.64	50.00	AVRG
Styrene	1.1040000	0.9975193	0.9975193	0.3	9.64	50.00	AVRG
Vinyl Chloride	0.8780000	0.7654081	0.7654081	0.1	12.82	50.00	AVRG
1,2,3-Trichloropropane	0.8720000	0.7609514	0.7609514	0.1	12.73	50.00	AVRG
p-Isopropyltoluene	2.8430000	2.3457371	2.3457371	0.1	17.49	50.00	AVRG
1,2-Dibromo-3-Chloropropane	38.489203	50.000000	6.04e-002	0.05	23.02	50.00	LINR
1,2-Dichloroethane-d4	50.397442	50.000000	0.7540367	0.1	-0.79	50.00	LINR
Dibromofluoromethane	51.018990	50.000000	0.5547781	0.1	-2.04	50.00	LINR
Toluene-d8	1.3140000	1.3444180	1.3444180	0.1	-2.31	50.00	AVRG
4-Bromofluorobenzene	50.368819	50.000000	0.4795580	0.1	-0.74	50.00	LINR

FORM VII VOA

FORM 8
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20070055

Lab File ID (Standard): X070803 Date Analyzed: 07/08/20

Instrument ID: VOA6 Time Analyzed: 1149

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

		IS1(CBZ) AREA #	RT #	IS2(DFB) AREA #	RT #	IS3(DCB) AREA #	RT #
	12 HOUR STD	396352	7.67	437983	4.97	183355	9.67
	UPPER LIMIT	792704	8.17	875966	5.47	366710	10.17
	LOWER LIMIT	198176	7.17	218992	4.47	91678	9.17
	CLIENT SAMPLE NO.						
01	VLCSW-200708	407148	7.67	447593	4.97	185535	9.67
02	VBLKW-200708	449679	7.67	531625	4.97	192440	9.67
03	HS20070055-02	434512	7.67	522923	4.97	173401	9.67
04	HS20070055-06	462112	7.67	564935	4.97	195592	9.67
05	HS20070055-03	475033	7.67	544207	4.97	218970	9.67
06	HS20070055-04	479368	7.67	552390	4.97	220318	9.67
07	HS20070055-05	492190	7.67	558752	4.97	221540	9.67
08	HS20070055-03	423204	7.67	495334	4.97	166192	9.67
09	HS20070055-03	421669	7.67	494544	4.97	185130	9.66
10	HS20070055-04	426175	7.67	494232	4.97	186067	9.67
11	HS20070055-04	428230	7.67	492723	4.97	197403	9.66
12							
13							
14							
15							
16							
17							
18							
19							
20							

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

Lab Code: Case No.: SAS No.: SDG No.: HS20070055

Lab File ID (Standard): X070803 Date Analyzed: 07/08/20

Instrument ID: VOA6 Time Analyzed: 1149

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

		IS4 AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	261723	4.19				
	UPPER LIMIT	523446	4.69				
	LOWER LIMIT	130862	3.69				
	CLIENT SAMPLE NO.						
01	VLCSW-200708	274577	4.19				
02	VBLKW-200708	336025	4.19				
03	HS20070055-02	339049	4.18				
04	HS20070055-06	353111	4.19				
05	HS20070055-03	338021	4.19				
06	HS20070055-04	340448	4.19				
07	HS20070055-05	342133	4.19				
08	HS20070055-03	314779	4.19				
09	HS20070055-03	314292	4.19				
10	HS20070055-04	316702	4.19				
11	HS20070055-04	313191	4.19				
12							
13							
14							
15							
16							
17							
18							
19							
20							

IS4 = Pentafluorobenzene

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\X200708.b\X070801.D

Date : 08-JUL-2020 11:01

Client ID: BFB

Instrument: voa6.i

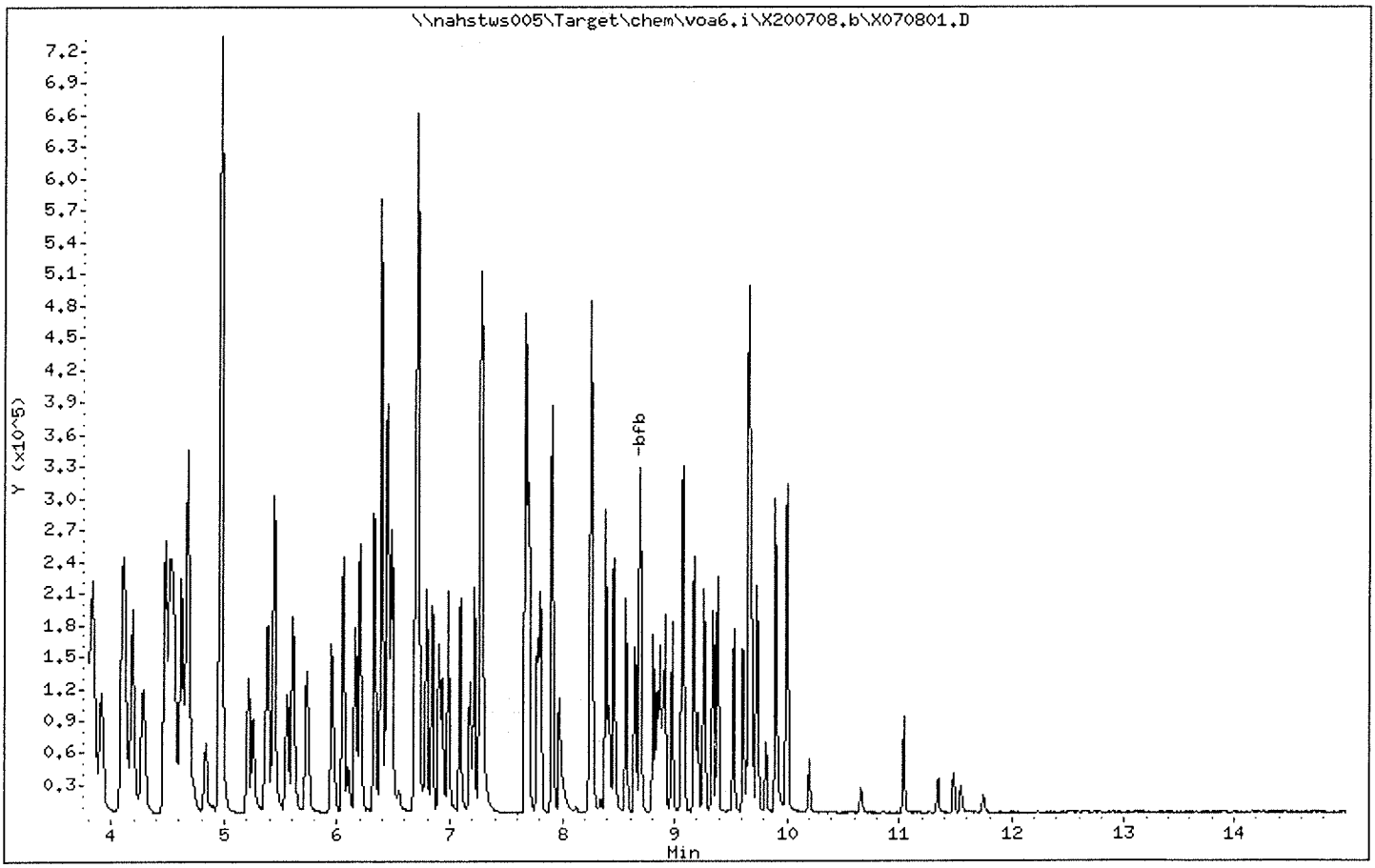
Sample Info: BFB;BFB;3;;BFB

Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

Column diameter: 0.25



Data File: \\nahstws005\Target\chem\voa6.i\X200708.b\X070801.D

Date : 08-JUL-2020 11:01

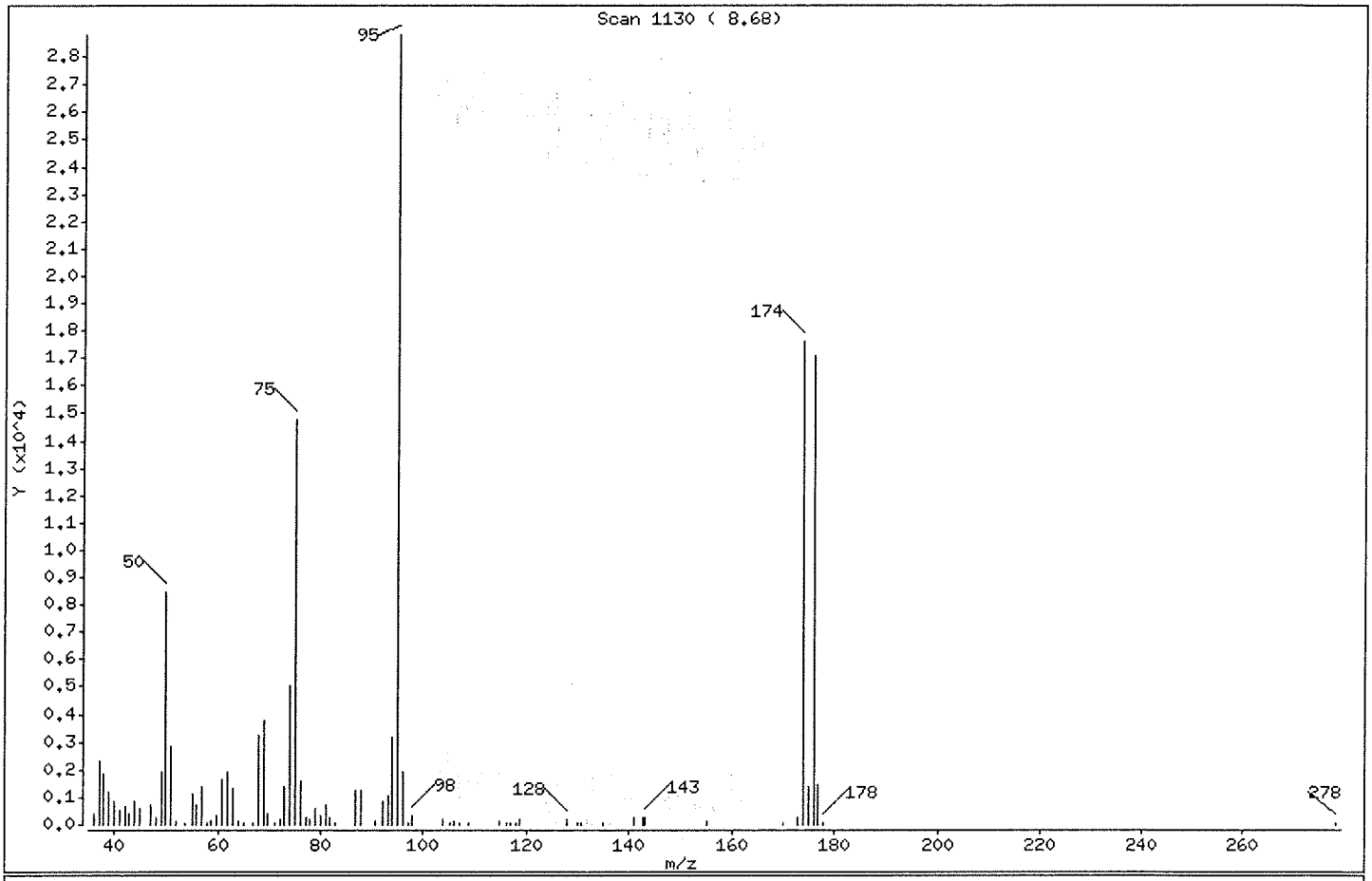
Client ID: BFB Instrument: voa6.i

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	29.34
75	30.00 - 60.00% of mass 95	51.17
96	5.00 - 9.00% of mass 95	6.60
173	Less than 2.00% of mass 174	0.97 (1.58)
174	Greater than 50.00% of mass 95	61.25
175	5.00 - 9.00% of mass 174	4.90 (7.99)
176	95.00 - 101.00% of mass 174	59.36 (96.92)
177	5.00 - 9.00% of mass 176	5.01 (8.45)

Data File: \\nahstws005\Target\chem\voa6.i\X200708.b\X070801.D

Date : 08-JUL-2020 11:01

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: X070801.D
Spectrum: Scan 1130 (8.68)
Location of Maximum: 95.00
Number of points: 81

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	425	58.90	108	80.90	759	118.00	62
37.00	2288	59.80	351	81.80	239	118.80	188
37.90	1845	60.90	1655	83.00	58	127.80	190
39.00	1205	62.00	1928	86.90	1244	130.00	79
40.00	845	63.00	1310	87.90	1249	130.80	61
41.10	506	64.10	121	90.80	150	134.80	54
42.00	632	65.10	64	91.90	859	140.90	249
42.90	374	67.00	98	93.00	1044	142.70	241
44.00	839	68.00	3224	93.90	3152	143.00	250
44.90	564	69.00	3760	95.00	28800	155.00	125
47.10	705	69.90	429	96.00	1901	169.90	82
48.00	265	71.10	87	97.00	95	172.80	279
49.00	1952	72.10	169	97.90	328	174.00	17640
50.00	8451	73.00	1411	103.90	180	174.90	1410
51.00	2880	74.00	5046	105.10	50	175.90	17096
52.00	151	75.00	14736	106.00	106	176.90	1444
53.80	72	76.00	1577	106.90	69	177.80	85
55.10	1148	77.00	280	108.60	75	278.20	70
56.00	735	77.90	208	114.80	134		
57.00	1393	78.80	619	116.00	60		
58.20	96	80.00	305	116.80	99		

ata File: \\nahstws005\Target\chem\voa6.i\X200708.b\X0[illegible]
eport Date: 13-Aug-2020 12:56

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200708.b\X070803.D
Lab Smp Id: CCV Client Smp ID: CCV
Inj Date : 08-JUL-2020 11:49
Operator : PC Inst ID: voa6.i
Smp Info : CCV;CCV;2;;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200708.b\8260W.m
Meth Date : 13-Aug-2020 12:56 voa6.i Quant Type: ISTD
Cal Date : 07-JUL-2020 13:53 Cal File: X070708.D
Als bottle: 3 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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

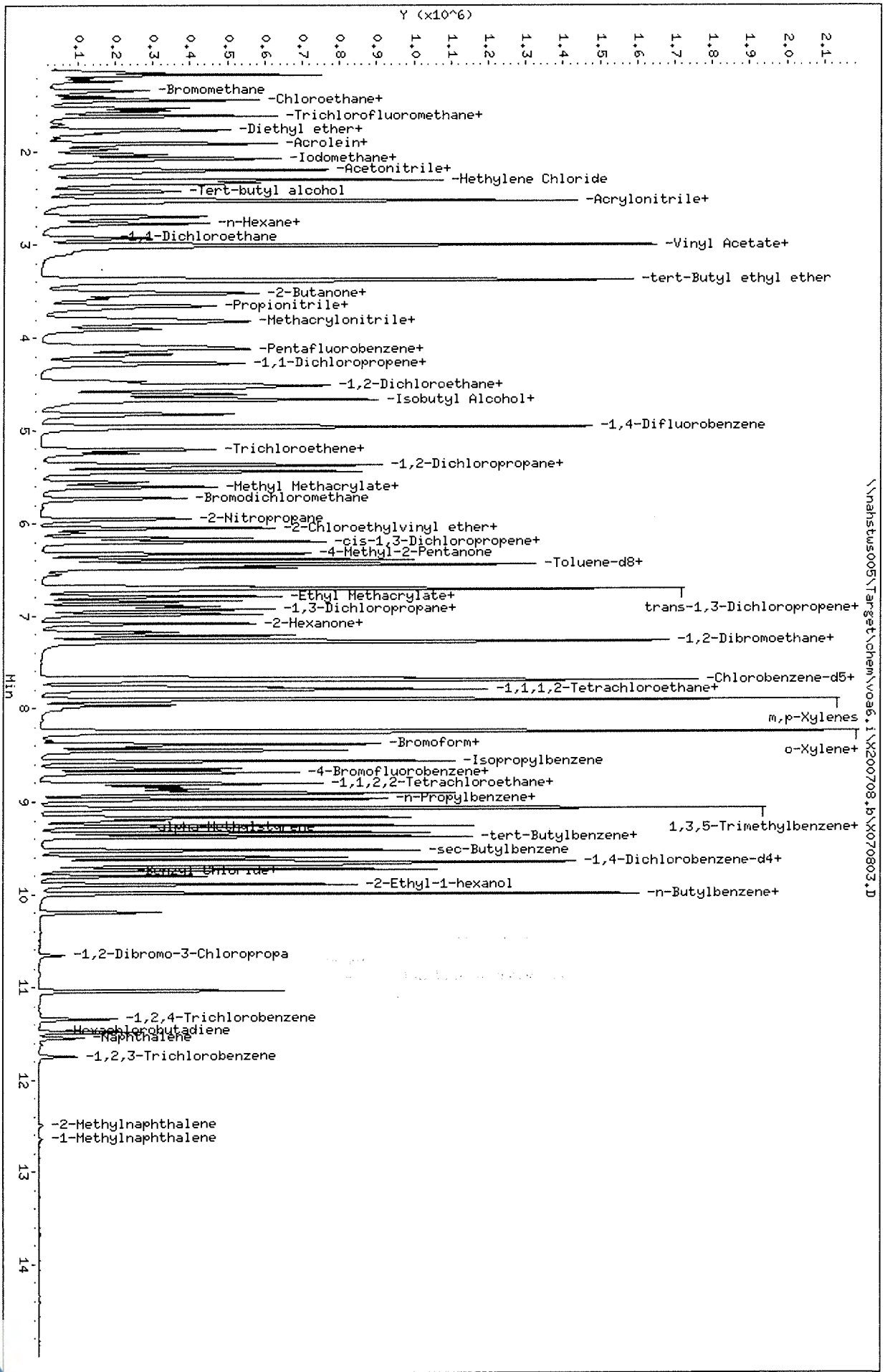
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
*	1 Pentafluorobenzene	168	4.189	4.189	(1.000)	261723	50.0000	
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	437983	50.0000	
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	396352	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	183355	50.0000	
$	30 Dibromofluoromethane	113	4.103	4.103	(0.979)	146426	50.0000	51.45
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	196696	50.0000	50.22
$	48 Toluene-d8	98	6.388	6.388	(0.833)	504570	50.0000	48.42
$	69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	190623	50.0000	50.51
	60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	142652	50.0000	46.87
	31 1,1,1-Trichloroethane	97	4.089	4.089	(0.976)	219482	50.0000	45.77
	68 1,1,2,2-Tetrachloroethane	83	8.845	8.845	(0.915)	152356	50.0000	42.02
	53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	114529	50.0000	45.67
	22 1,1-Dichloroethane	63	2.929	2.929	(0.699)	330726	50.0000	44.58
	11 1,1-Dichloroethene	96	1.919	1.919	(0.458)	107491	50.0000	44.35
	32 1,1-Dichloropropene	75	4.283	4.283	(0.862)	187217	50.0000	43.40
	93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.215)	25917	50.0000	44.97
	71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	139371	50.0000	43.60(M)
	90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	52120	50.0000	45.74
	79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.970)	490303	50.0000	45.47
	9 1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.102)	11507	50.0000	40.07(M)
	1,2-Dibromoethane	107	7.262	7.262	(0.947)	142602	50.0000	44.76
	1,2-Dichlorobenzene	146	9.991	9.991	(1.033)	235911	50.0000	44.02

Data File: \\nahstws005\Target\chem\voa6.i\X200708.b\X070803.D Page 2
Report Date: 13-Aug-2020 12:56

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
33	1,2-Dichloroethane	62	4.562	4.562	(0.918)	246326	50.0000	45.33
42	1,2-Dichloropropane	63	5.443	5.443	(1.095)	189173	50.0000	46.42
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	475870	50.0000	45.55
83	1,3-Dichlorobenzene	146	9.605	9.605	(0.993)	265370	50.0000	45.20
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	238185	50.0000	45.13
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	264492	50.0000	47.37
26	2,2-Dichloropropane	77	3.516	3.516	(0.839)	224620	50.0000	49.57
24	2-Butanone	43	3.581	3.581	(0.855)	229783	100.000	95.44
76	2-Chlorotoluene	91	8.974	8.974	(0.928)	412167	50.0000	44.78
52	2-Hexanone	43	7.090	7.090	(0.924)	352644	100.000	93.04
77	4-Chlorotoluene	91	9.075	9.075	(0.939)	481702	50.0000	46.15
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	464748	50.0000	44.57
45	4-Methyl-2-Pentanone	43	6.324	6.324	(0.824)	489060	100.000	91.04
10	Acetone	43	1.976	1.976	(0.472)	190526	100.000	85.97
37	Benzene	78	4.519	4.519	(0.909)	572314	50.0000	45.79
74	Bromobenzene	156	8.810	8.810	(0.911)	163408	50.0000	46.71
29	Bromochloromethane	128	3.795	3.795	(0.906)	79730	50.0000	43.86
39	Bromodichloromethane	83	5.729	5.729	(1.153)	203596	50.0000	46.40
66	Bromoform	173	8.416	8.416	(1.097)	101243	50.0000	46.01
6	Bromomethane	94	1.339	1.339	(0.320)	91953	50.0000	50.03
19	Carbon Disulfide	76	2.069	2.069	(0.494)	736915	100.000	92.59
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	183985	50.0000	44.01
59	Chlorobenzene	112	7.699	7.699	(1.004)	369706	50.0000	45.78
7	Chloroethane	64	1.403	1.403	(0.335)	112784	50.0000	47.77
28	Chloroform	83	3.910	3.910	(0.933)	265148	50.0000	46.23
3	Chloromethane	50	1.081	1.081	(0.258)	247101	50.0000	45.94
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.843)	156204	50.0000	45.65
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	246721	50.0000	46.67
55	Dibromochloromethane	129	7.176	7.176	(0.936)	152372	50.0000	46.80
44	Dibromomethane	93	5.558	5.558	(1.118)	100137	50.0000	45.60
2	Dichlorodifluoromethane	85	0.973	0.973	(0.232)	140213	50.0000	44.25
61	Ethylbenzene	106	7.800	7.800	(1.017)	194351	50.0000	45.47
91	Hexachlorobutadiene	225	11.481	11.481	(1.187)	42121	50.0000	47.84
67	Isopropylbenzene	105	8.566	8.566	(1.117)	565333	50.0000	44.59
62	m,p-Xylenes	106	7.907	7.907	(1.031)	463275	100.000	90.14
17	Methylene Chloride	84	2.306	2.306	(0.550)	135298	50.0000	47.27(M)
87	n-Butylbenzene	91	9.999	9.999	(1.034)	425240	50.0000	45.72
73	n-Propylbenzene	91	8.917	8.917	(0.922)	679634	50.0000	45.44
92	Naphthalene	128	11.546	11.546	(1.194)	74419	50.0000	41.89
63	o-Xylene	106	8.244	8.244	(1.075)	229885	50.0000	45.65
81	sec-Butylbenzene	105	9.526	9.526	(0.985)	547713	50.0000	44.55
64	Styrene	104	8.258	8.258	(1.077)	397342	50.0000	45.41
78	tert-Butylbenzene	119	9.340	9.340	(0.966)	380325	50.0000	45.21
56	Tetrachloroethene	164	6.933	6.933	(0.904)	110271	50.0000	45.54
50	Toluene	91	6.453	6.453	(0.841)	582118	50.0000	46.03
20	trans-1,2-Dichloroethene	96	2.535	2.535	(0.605)	134466	50.0000	47.00
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	220202	50.0000	46.36
38	Trichloroethene	130	5.214	5.214	(1.049)	148300	50.0000	45.63
8	Trichlorofluoromethane	101	1.561	1.561	(0.373)	207111	50.0000	45.88
5	Vinyl Chloride	62	1.145	1.145	(0.273)	208383	50.0000	45.32

QC Flag Legend

M - Compound response manually integrated.



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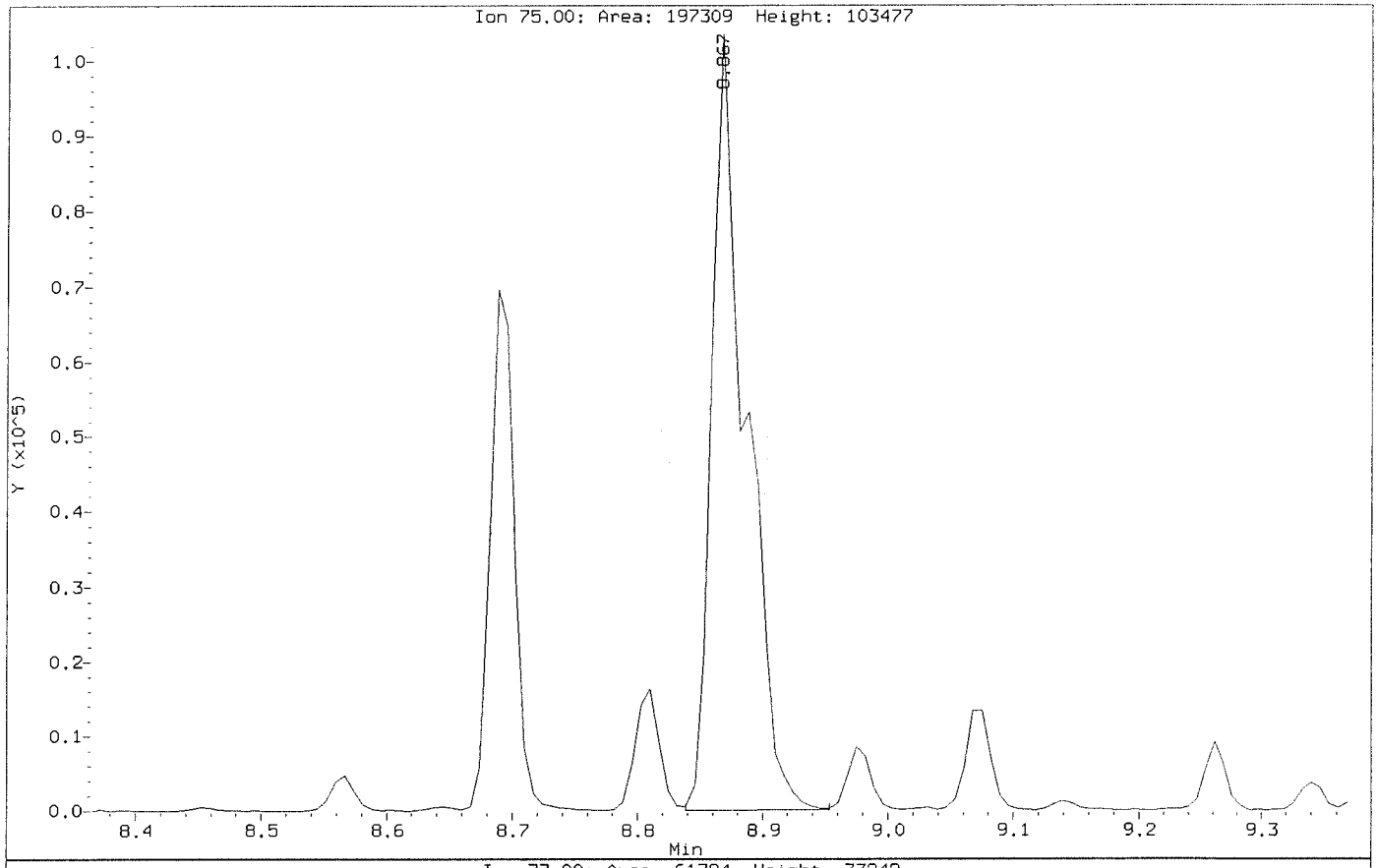
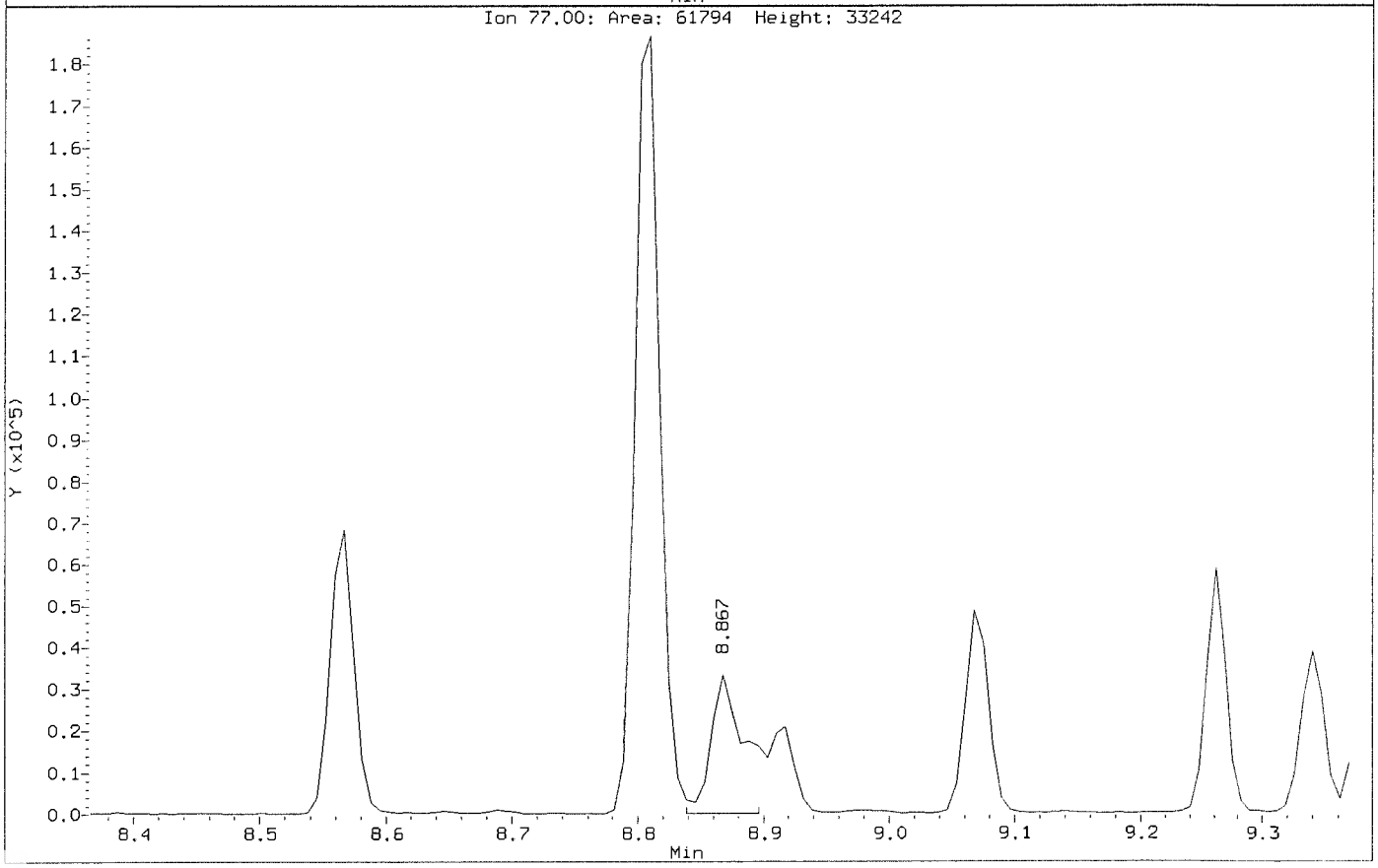
Date : 08-JUL-2020 11:49
Client ID: CCV
Sample Info: CCV;CCV;2;;;
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\nahstws005\Target\chem\voa6.i\X200708.b\Before\X070803.D
Injection Date: 08-JUL-2020 11:49
Instrument: voa6.i
Client Sample ID: CCV

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





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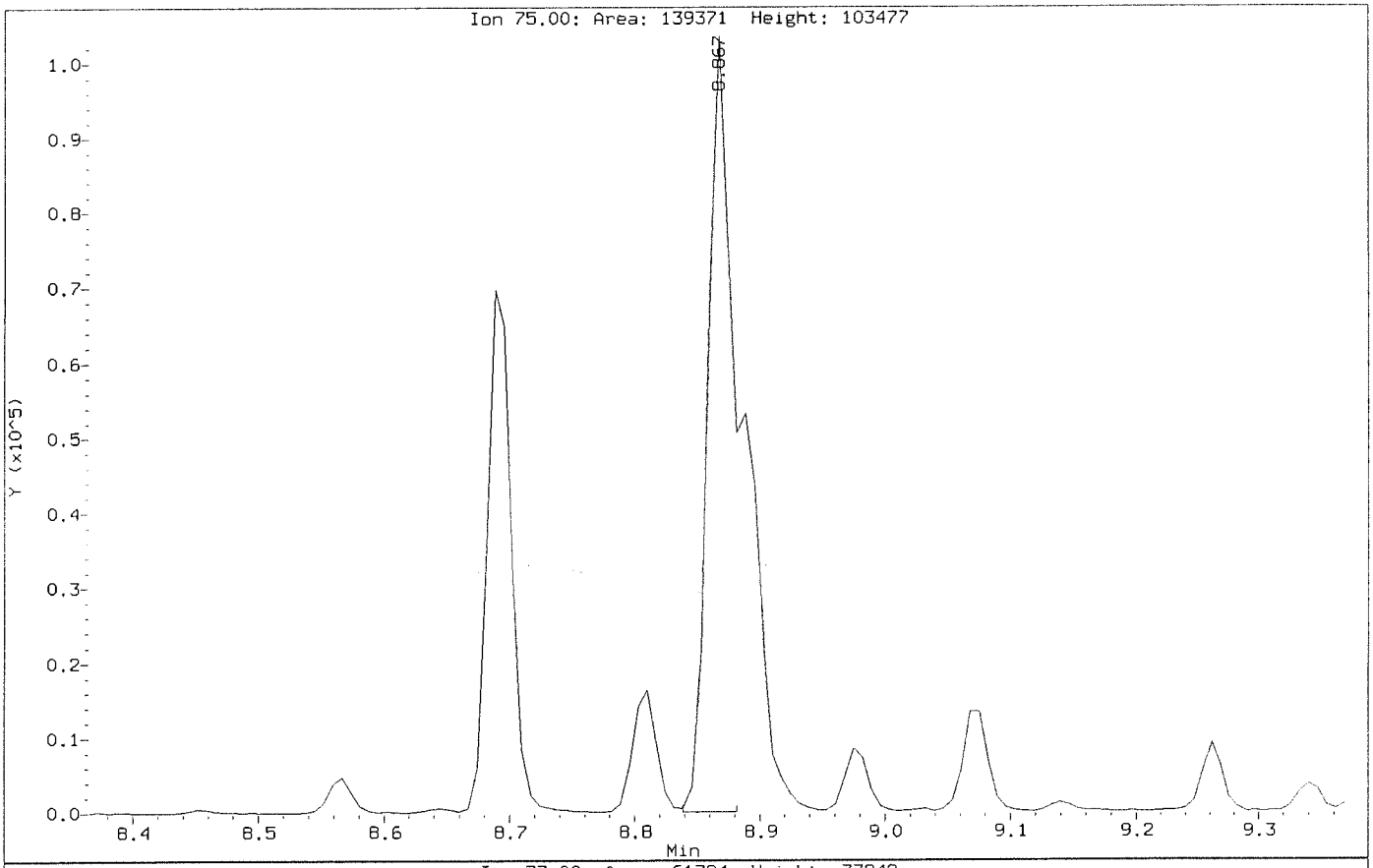
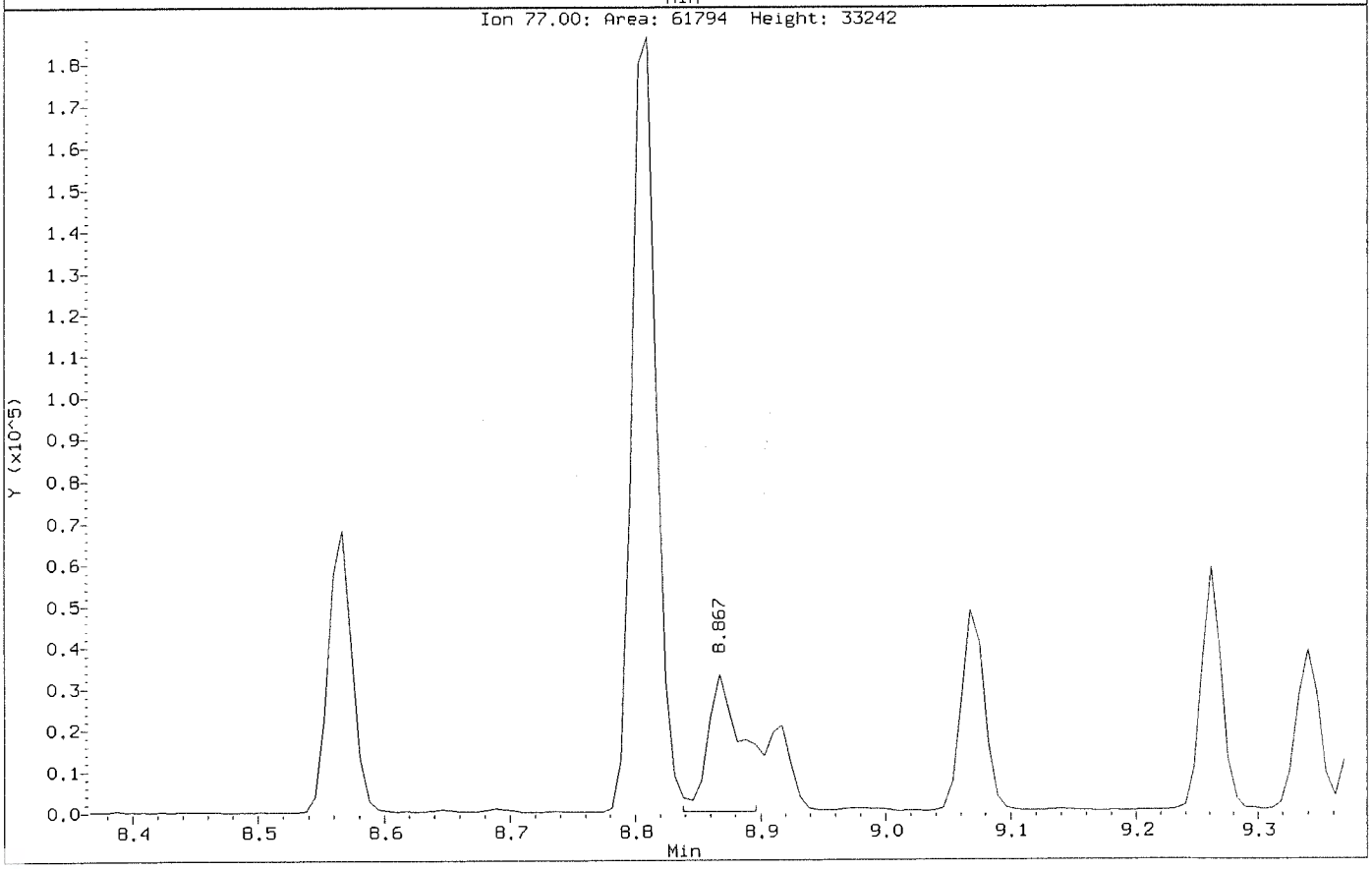
Injection Date: 08-JUL-2020 11:49
Instrument: voa6.i
Client Sample ID: CCV

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





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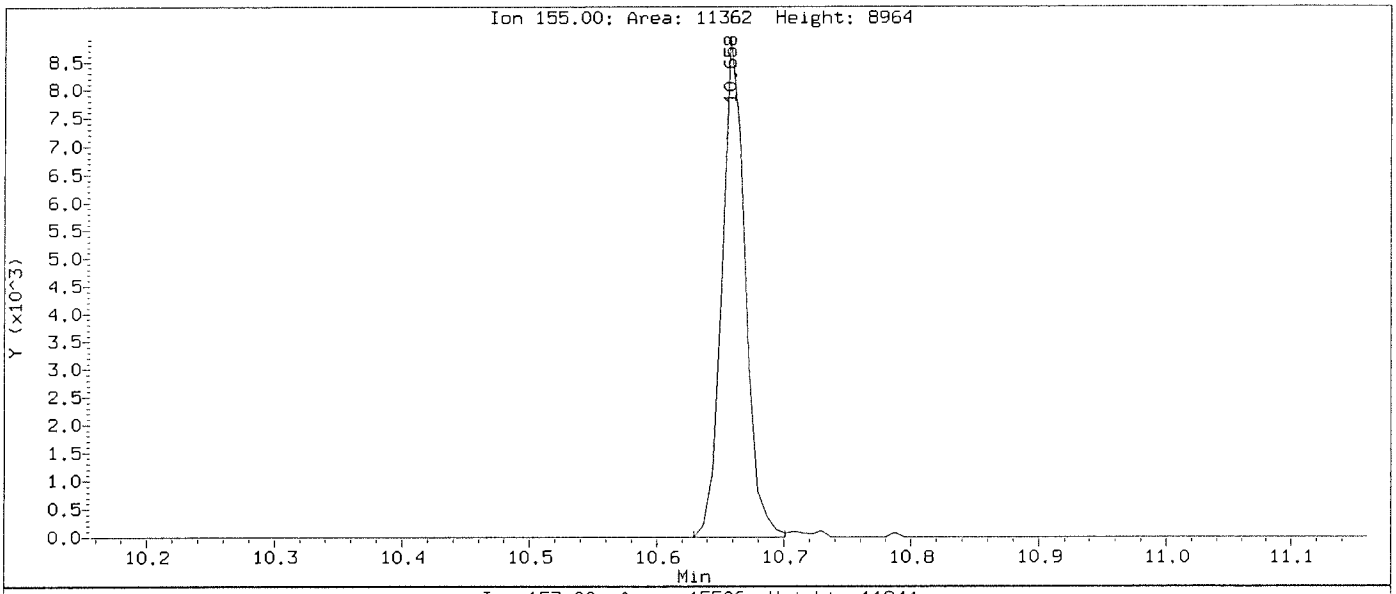
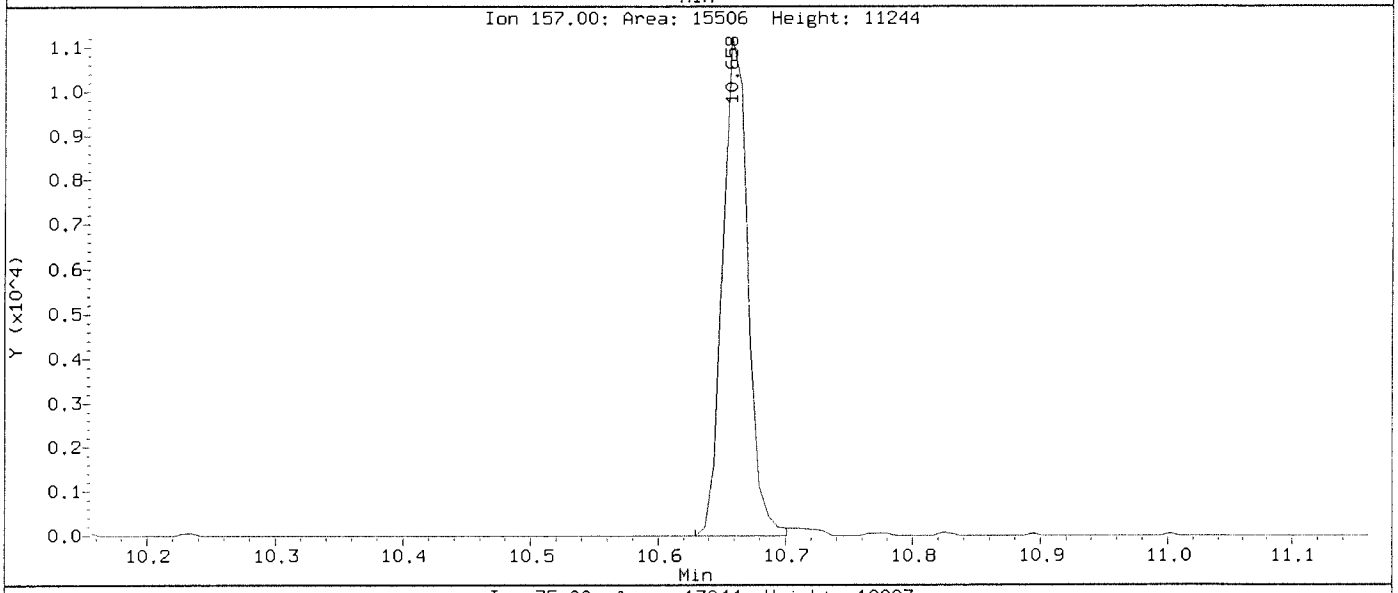
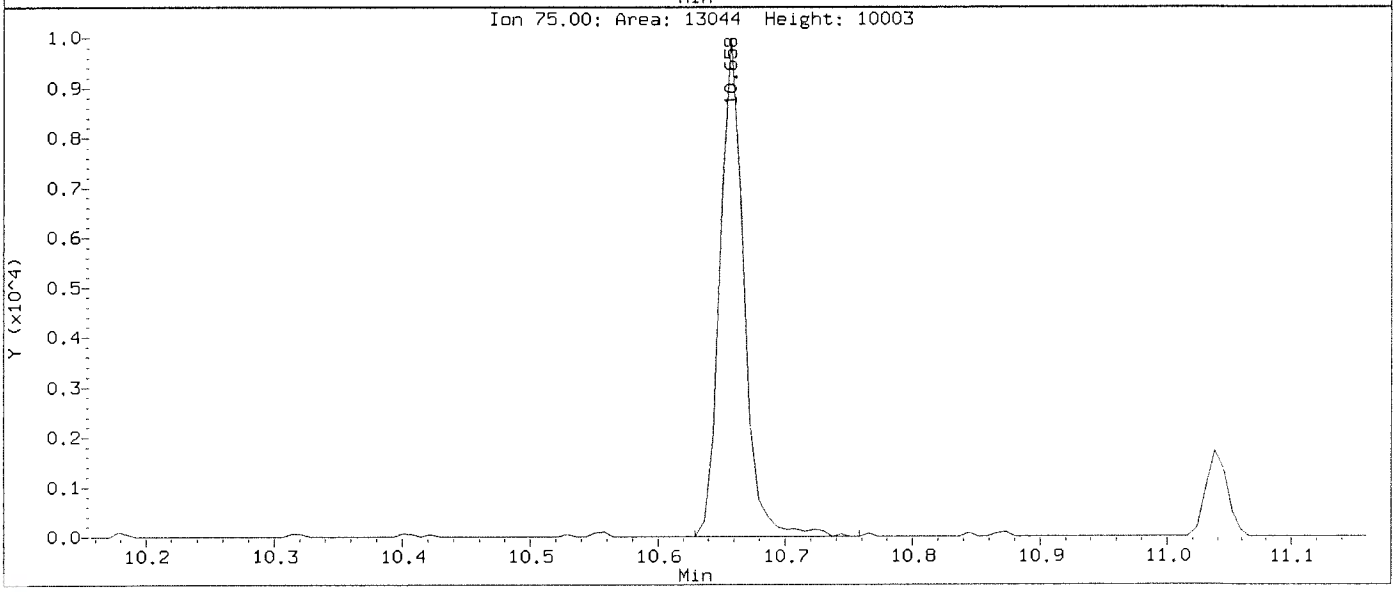
Injection Date: 08-JUL-2020 11:49
Instrument: voa6.i
Client Sample ID: CCV

Compound: 1,2-Dibromo-3-Chloropropane
CAS Number: 96-12-8







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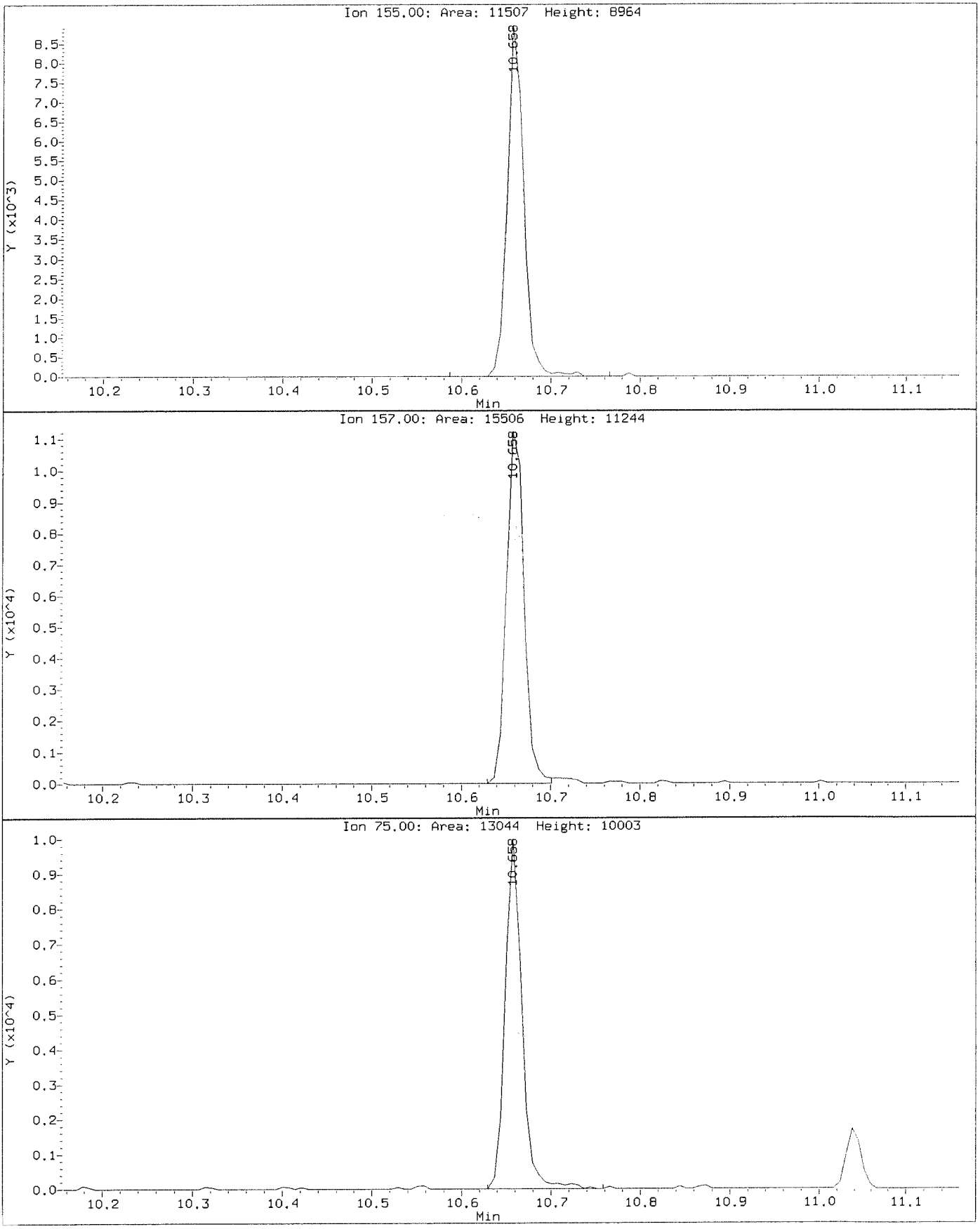
Instrument: voa6.i
Client Sample ID: CCV

Compound: 1,2-Dibromo-3-Chloropropane
CAS Number: 96-12-8



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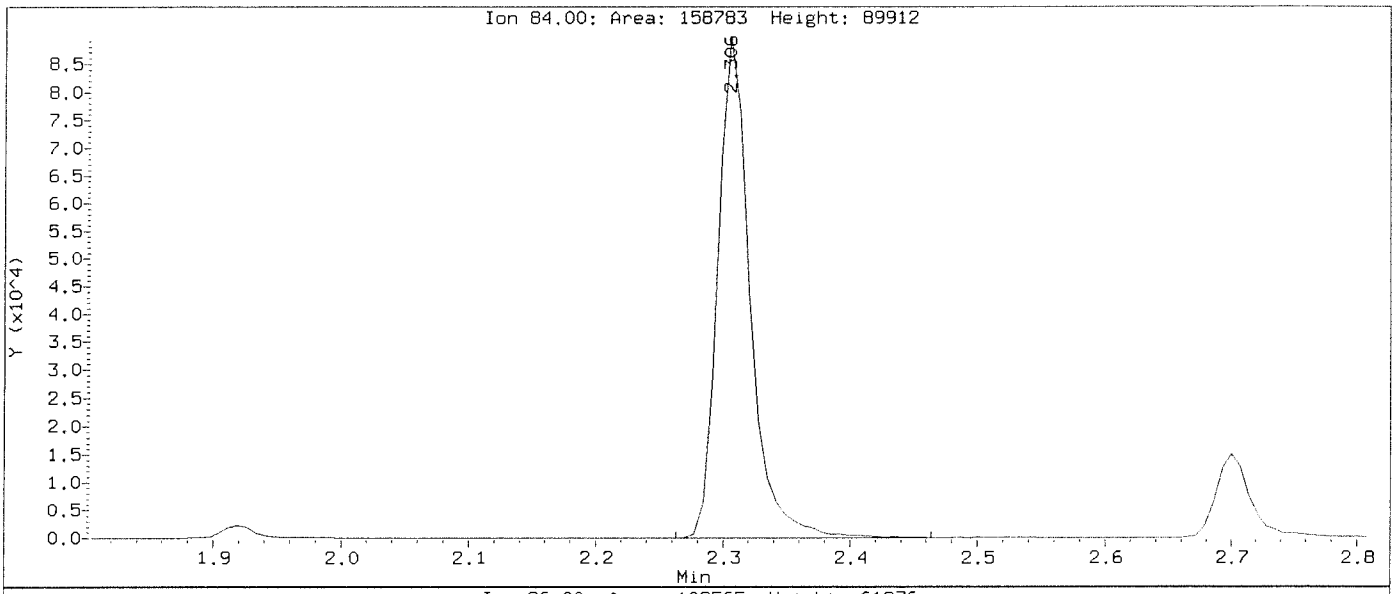
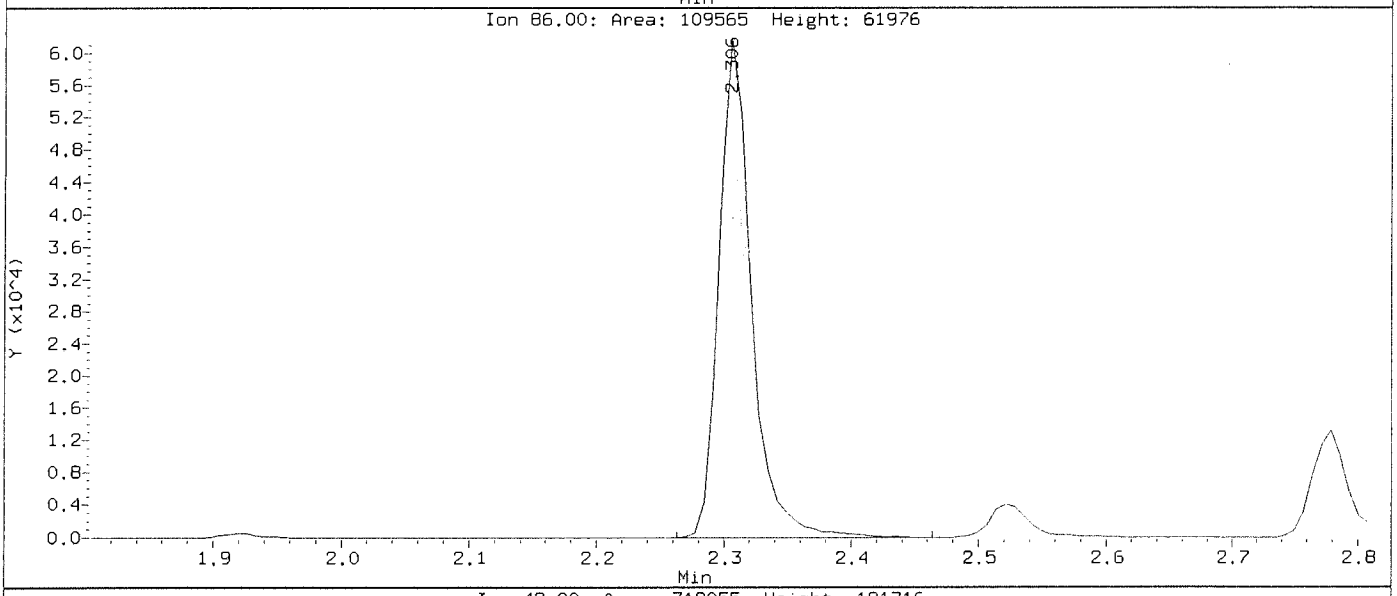
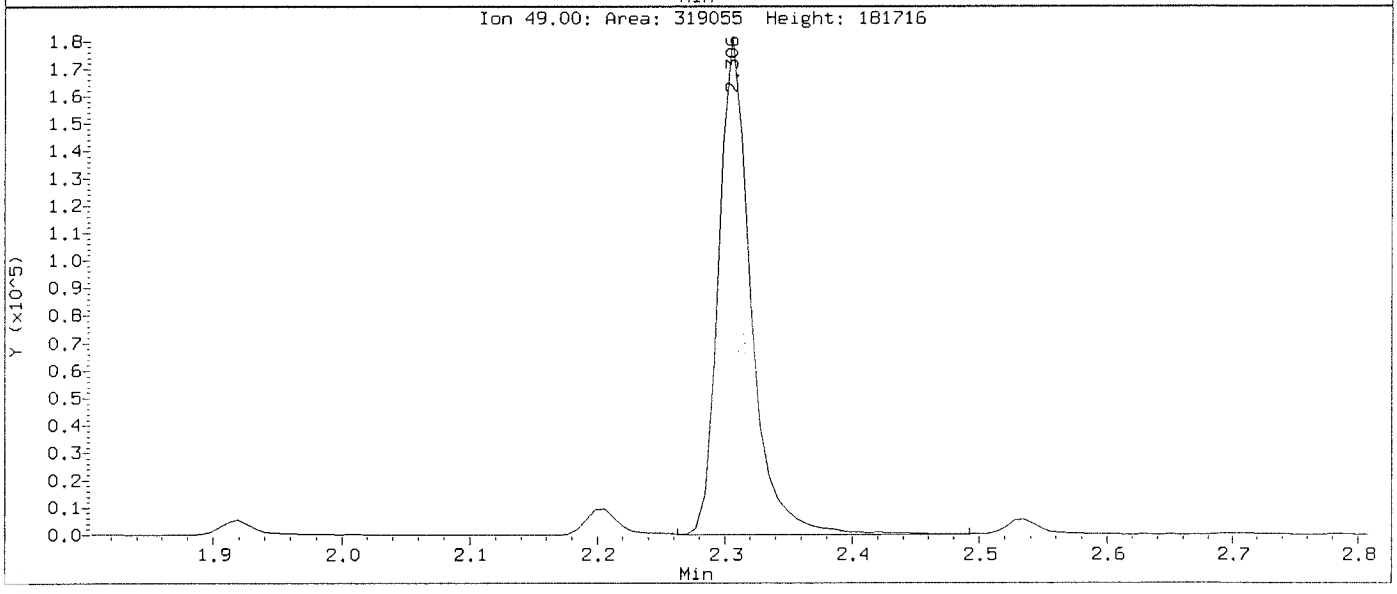
Injection Date: 08-JUL-2020 11:49
Instrument: voa6.i
Client Sample ID: CCV

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







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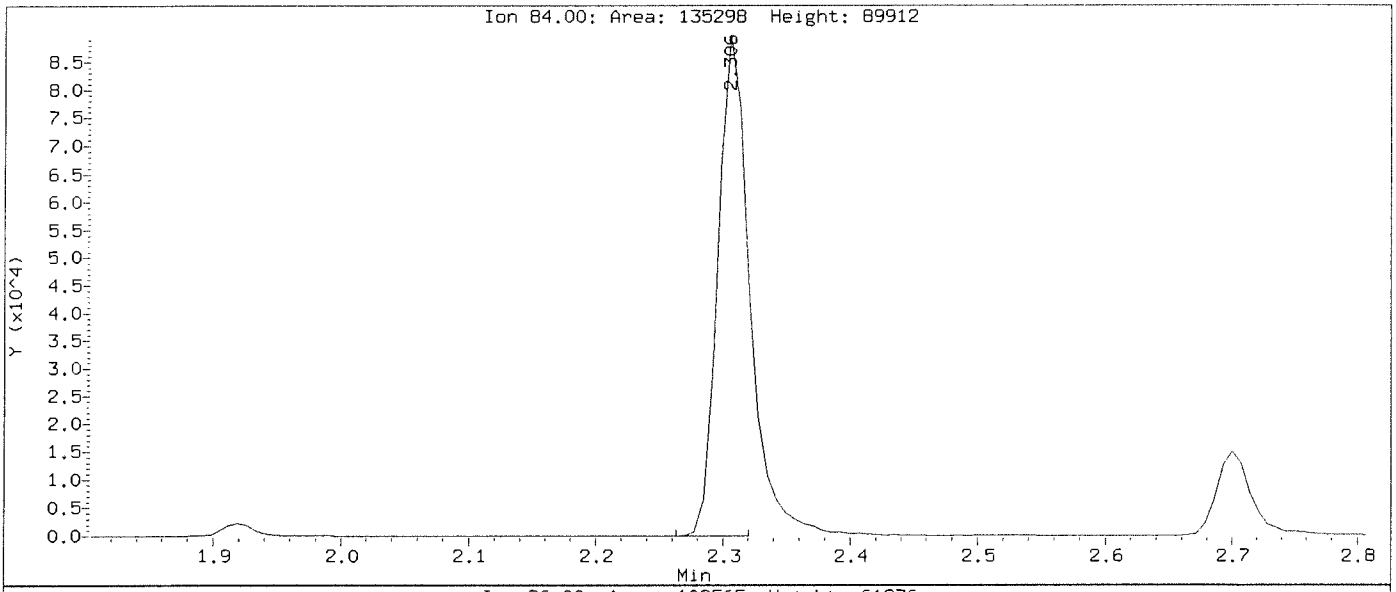
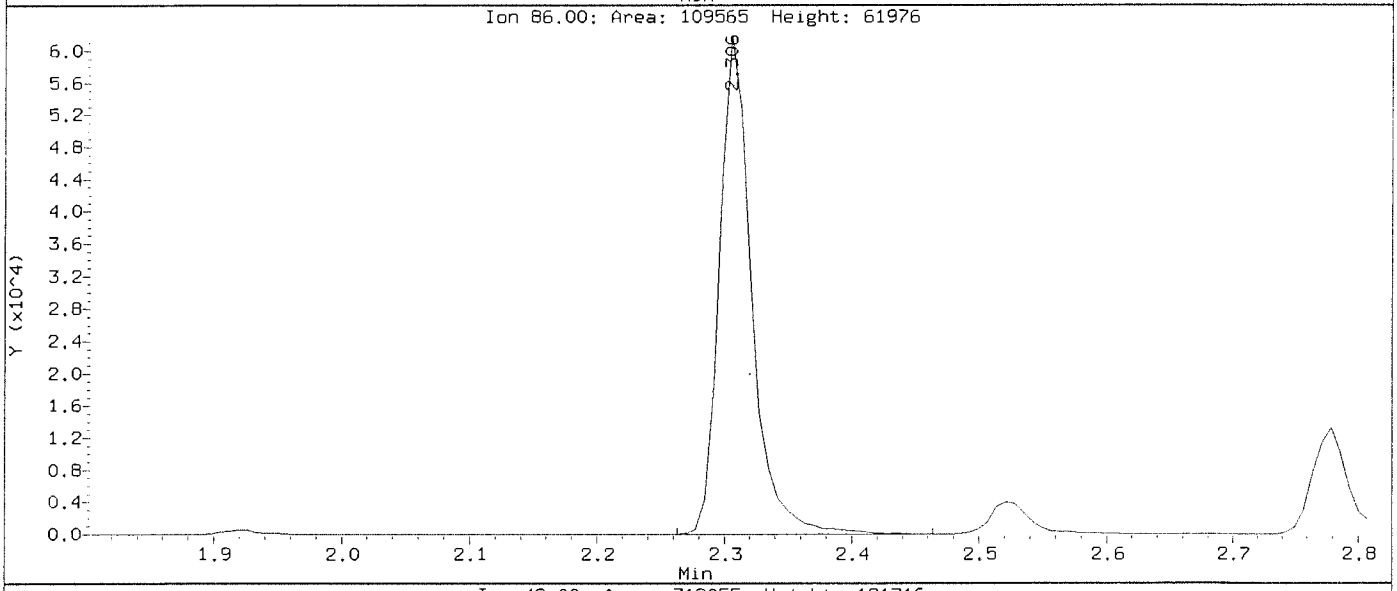
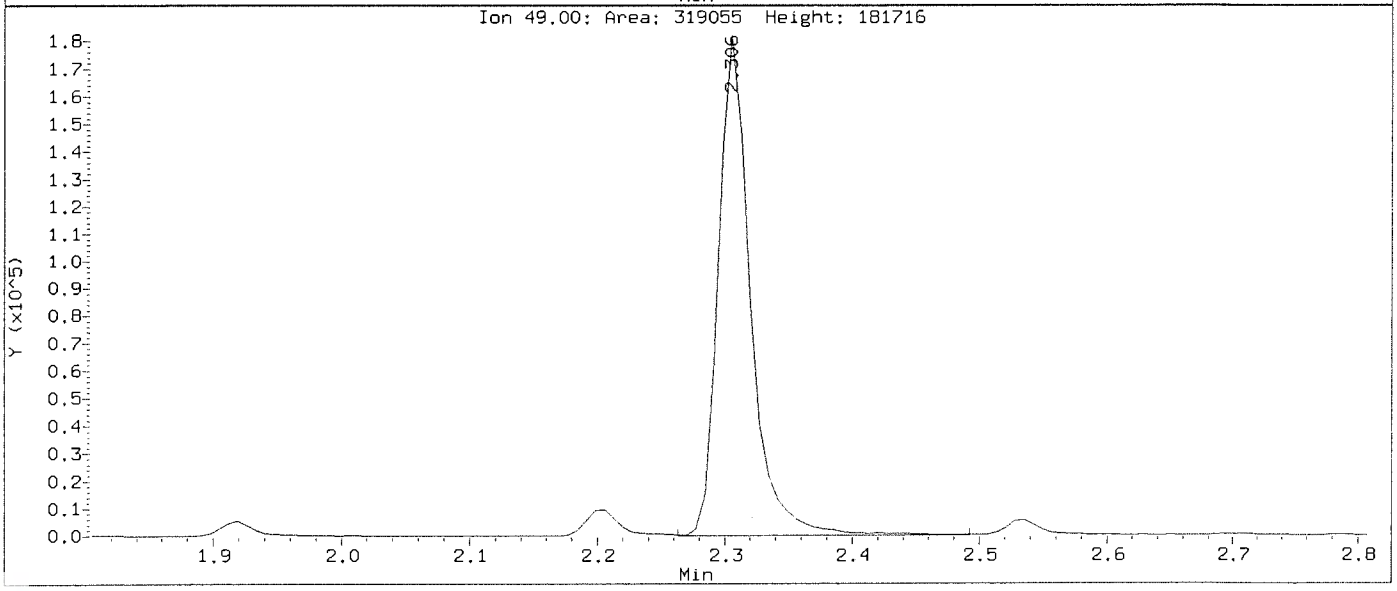
Injection Date: 08-JUL-2020 11:49
Instrument: voa6.i
Client Sample ID: CCV

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







Data File: \\nahstws005\Target\chem\voa6.i\X200708.b\X070805.D Page 1
Report Date: 13-Aug-2020 12:56

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200708.b\X070805.D
Lab Smp Id: VLCSW-200708 Client Smp ID: VLCSW-200708
Inj Date : 08-JUL-2020 12:36
Operator : PC Inst ID: voa6.i
Smp Info : VLCSW-200708;VLCSW-200708;3;;LCS
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200708.b\8260W.m
Meth Date : 13-Aug-2020 12:56 voa6.i Quant Type: ISTD
Cal Date : 07-JUL-2020 13:53 Cal File: X070708.D
Als bottle: 5 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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

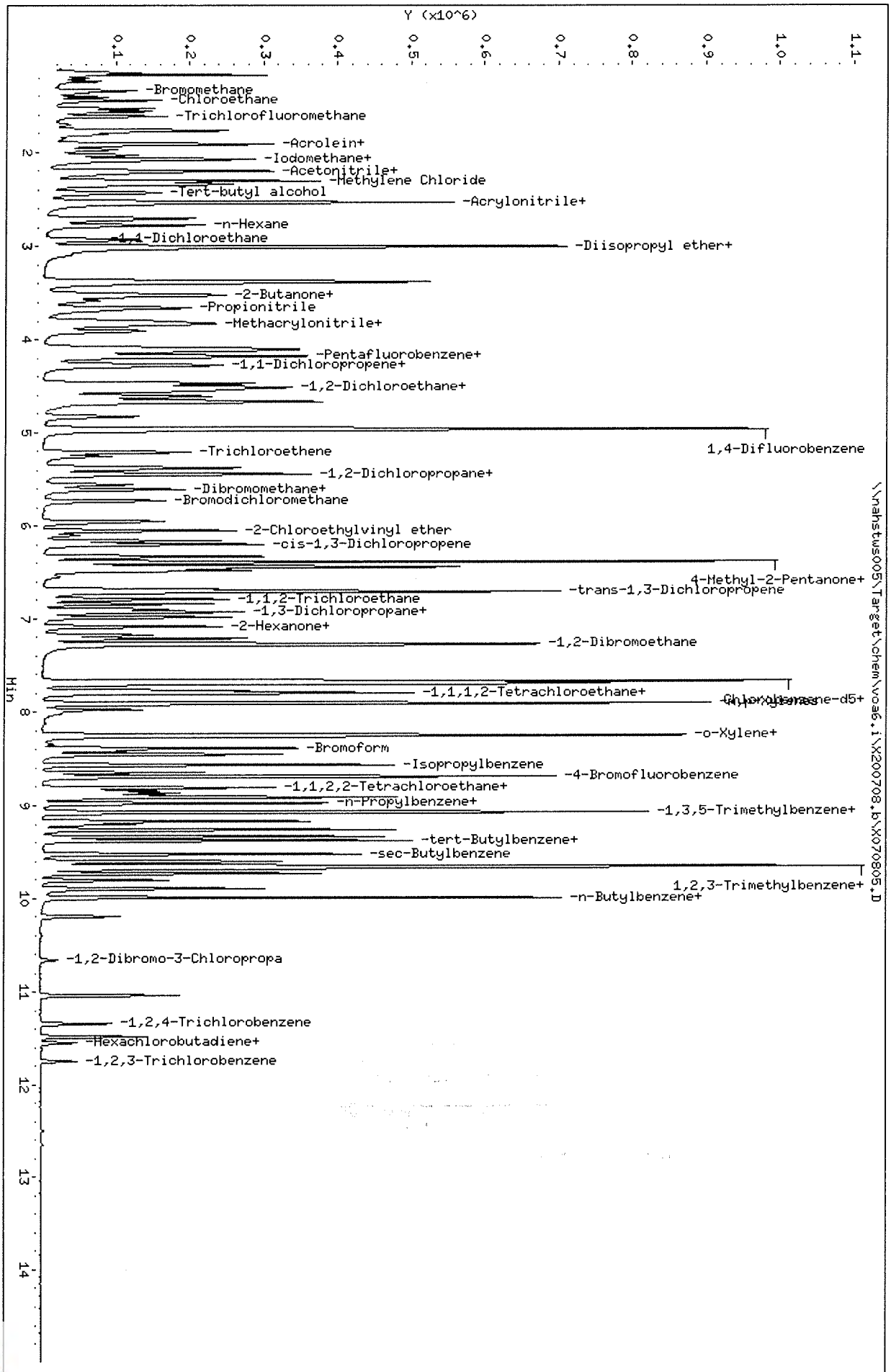
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.189	4.189	(1.000)	274577	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	447593	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	407148	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	185535	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.979)	148178	49.6040	49.60
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	204331	49.7287	49.72
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	514305	48.0483	48.04
$ 69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	191726	49.4398	49.43
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	60595	19.3835	19.38
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.976)	96432	19.1713	19.17
68 1,1,2,2-Tetrachloroethane	83	8.845	8.845	(0.915)	64824	17.6726	17.67
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	48587	18.8645	18.86
22 1,1-Dichloroethane	63	2.929	2.929	(0.699)	144362	18.5515	18.55
11 1,1-Dichloroethene	96	1.919	1.919	(0.458)	49601	19.5087	19.50
32 1,1-Dichloropropene	75	4.282	4.283	(0.862)	82556	18.7303	18.73
93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.215)	12027	21.4729	21.47
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	57681	17.8343	17.83(M)
90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	24021	21.5482	21.54
79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.970)	208808	19.1378	19.13
89 1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.102)	4599	14.7696	14.76
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	61024	18.6468	18.64
88 1,2-Dichlorobenzene	146	9.999	9.991	(1.034)	97981	18.0687	18.06

Data File: \\nahstws005\Target\chem\voa6.i\X200708.b\X070805.D Page 2
Report Date: 13-Aug-2020 12:56

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
33	1,2-Dichloroethane	62	4.562	4.562	(0.918)	109553	19.7280	19.72
42	1,2-Dichloropropane	63	5.443	5.443	(1.095)	82459	19.8035	19.80
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	206982	19.5801	19.58
83	1,3-Dichlorobenzene	146	9.612	9.605	(0.994)	113492	19.1063	19.10
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	102438	18.8955	18.89
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	112977	19.8811	19.88
26	2,2-Dichloropropane	77	3.516	3.516	(0.839)	98211	20.6595	20.65
24	2-Butanone	43	3.580	3.581	(0.855)	94674	33.6726	33.67
76	2-Chlorotoluene	91	8.974	8.974	(0.928)	175474	18.8439	18.84
52	2-Hexanone	43	7.090	7.090	(0.924)	143748	34.6579	34.65
77	4-Chlorotoluene	91	9.075	9.075	(0.939)	206070	19.5143	19.51
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	205454	19.4735	19.47
45	4-Methyl-2-Pentanone	43	6.331	6.324	(0.825)	207342	35.6767	35.67
10	Acetone	43	1.976	1.976	(0.472)	87833	18.4748	18.47
37	Benzene	78	4.519	4.519	(0.909)	245380	19.2146	19.21
74	Bromobenzene	156	8.809	8.810	(0.911)	68633	19.3904	19.39
29	Bromochloromethane	128	3.803	3.795	(0.908)	33071	17.3412	17.34
39	Bromodichloromethane	83	5.729	5.729	(1.153)	88941	19.8386	19.83
66	Bromoform	173	8.416	8.416	(1.097)	40183	17.7790	17.77
6	Bromomethane	94	1.338	1.339	(0.320)	39257	20.3154	20.31
19	Carbon Disulfide	76	2.076	2.069	(0.496)	322130	38.5825	38.58
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	81511	19.0823	19.08
59	Chlorobenzene	112	7.699	7.699	(1.004)	158596	19.1196	19.11
7	Chloroethane	64	1.403	1.403	(0.335)	44274	16.6788	16.67
28	Chloroform	83	3.917	3.910	(0.935)	114658	19.0566	19.05
3	Chloromethane	50	1.081	1.081	(0.258)	103210	18.2914	18.29
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.843)	68642	19.1252	19.12
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	105425	19.5145	19.51
55	Dibromochloromethane	129	7.176	7.176	(0.936)	63969	19.1267	19.12
44	Dibromomethane	93	5.557	5.558	(1.118)	43672	19.4604	19.46
2	Dichlorodifluoromethane	85	0.973	0.973	(0.232)	61452	18.4874	18.48
61	Ethylbenzene	106	7.799	7.800	(1.017)	83937	19.1195	19.11
91	Hexachlorobutadiene	225	11.481	11.481	(1.187)	21128	24.3906	24.39
67	Isopropylbenzene	105	8.566	8.566	(1.117)	247251	18.9873	18.98
62	m,p-Xylenes	106	7.907	7.907	(1.031)	202659	38.3871	38.38
17	Methylene Chloride	84	2.305	2.306	(0.550)	61332	20.4266	20.42(M)
87	n-Butylbenzene	91	9.999	9.999	(1.034)	184722	19.6285	19.62
73	n-Propylbenzene	91	8.917	8.917	(0.922)	292932	19.3586	19.35
92	Naphthalene	128	11.546	11.546	(1.194)	32587	18.2993	18.29
63	o-Xylene	106	8.244	8.244	(1.075)	98339	19.0138	19.01
81	sec-Butylbenzene	105	9.526	9.526	(0.985)	237416	19.0872	19.08
64	Styrene	104	8.265	8.258	(1.078)	167392	18.6231	18.62
78	tert-Butylbenzene	119	9.340	9.340	(0.966)	168544	19.8018	19.80
56	Tetrachloroethene	164	6.933	6.933	(0.904)	48017	19.3081	19.30
50	Toluene	91	6.453	6.453	(0.841)	253853	19.5425	19.54
20	trans-1,2-Dichloroethene	96	2.535	2.535	(0.605)	58300	19.4265	19.42
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	92443	19.0455	19.04
38	Trichloroethene	130	5.214	5.214	(1.049)	63287	19.0572	19.05
8	Trichlorofluoromethane	101	1.560	1.561	(0.373)	87049	18.3840	18.38
5	Vinyl Chloride	62	1.145	1.145	(0.273)	81047	16.8024	16.80

QC Flag Legend

M - Compound response manually integrated.



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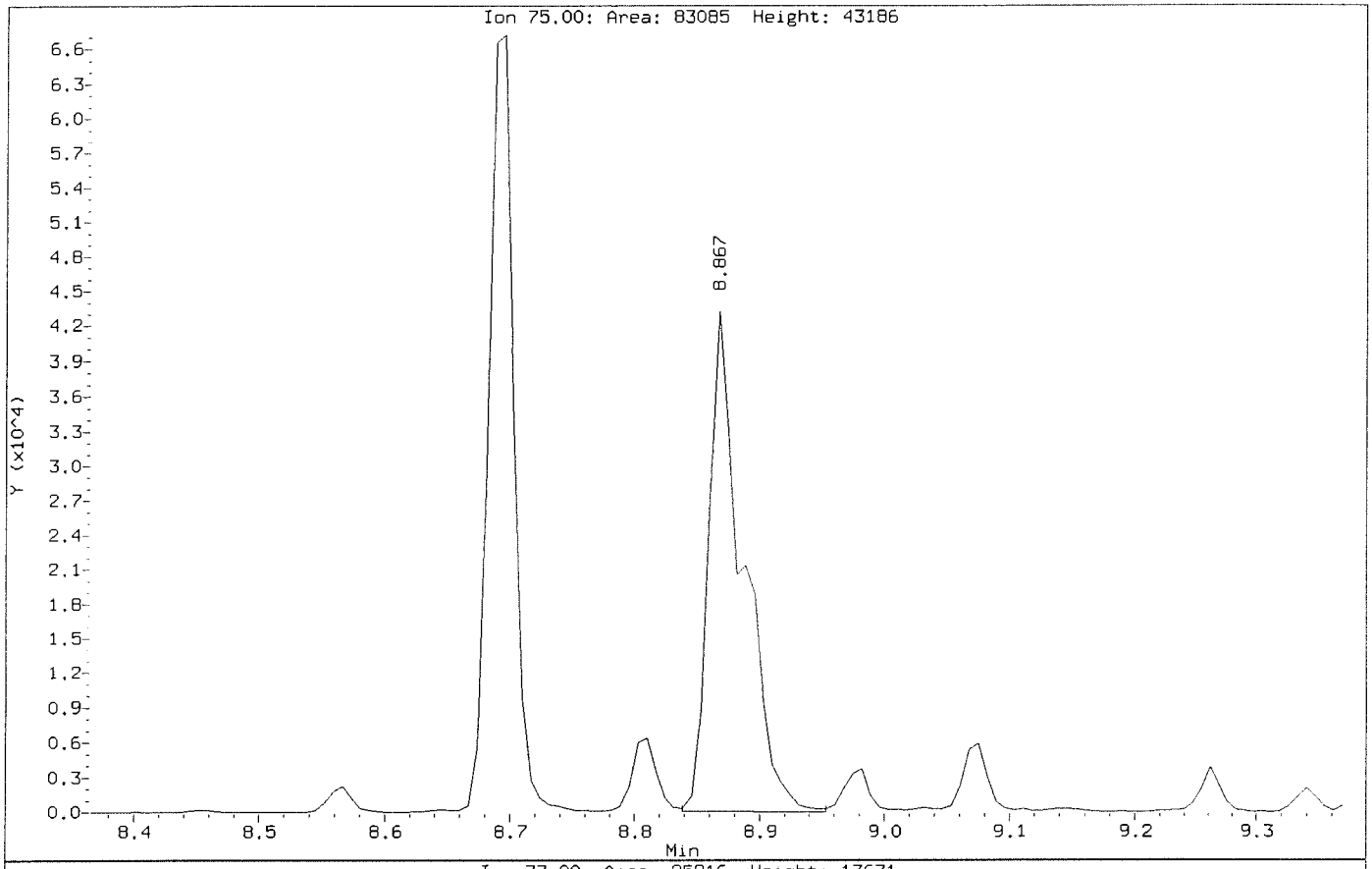
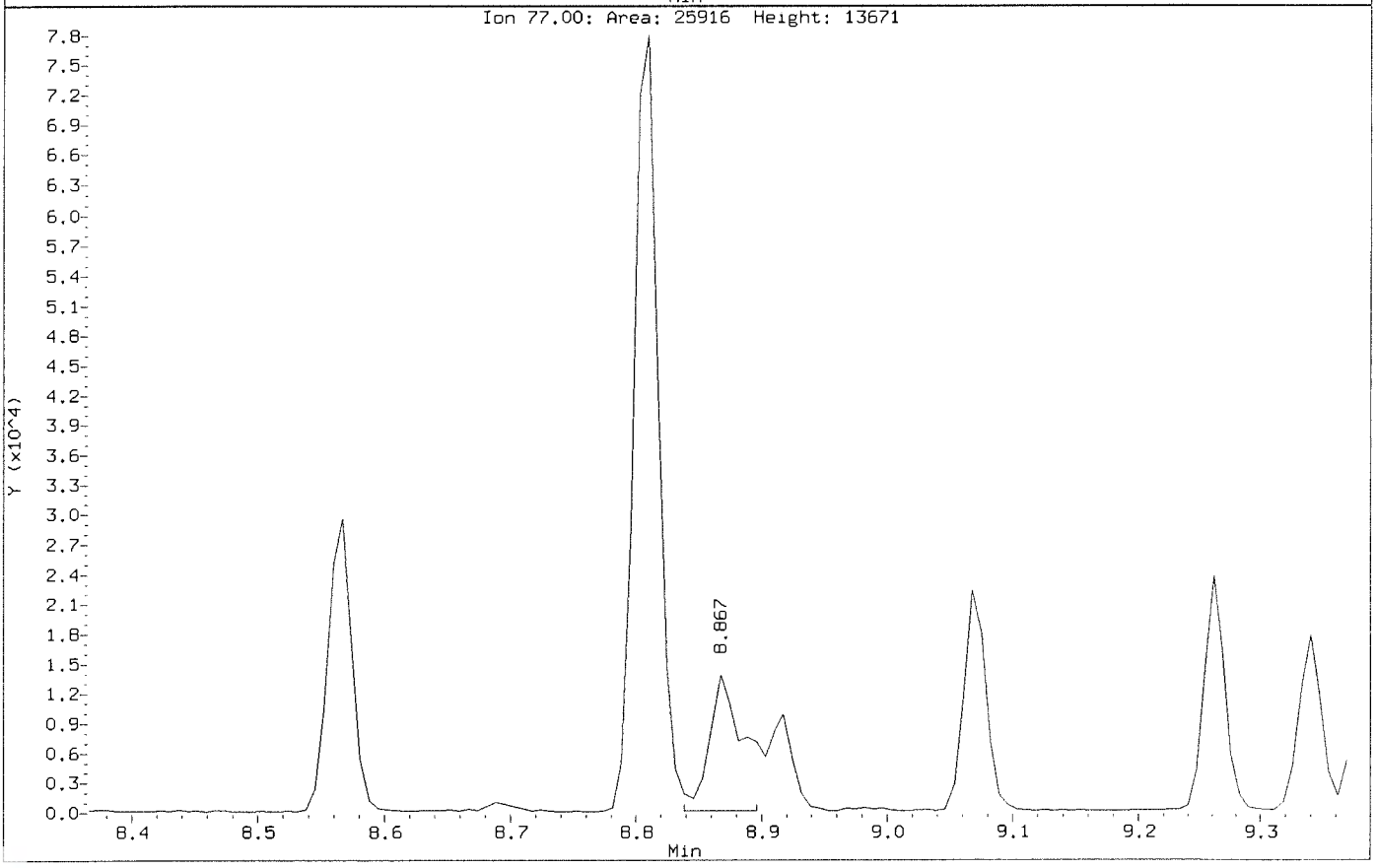
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\nahstws005\Target\chem\voa6.i\X200708.b\Before\X070805.D
Injection Date: 08-JUL-2020 12:36
Instrument: voa6.i
Client Sample ID: VLCSW-200708

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





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Instrument: voa6.i
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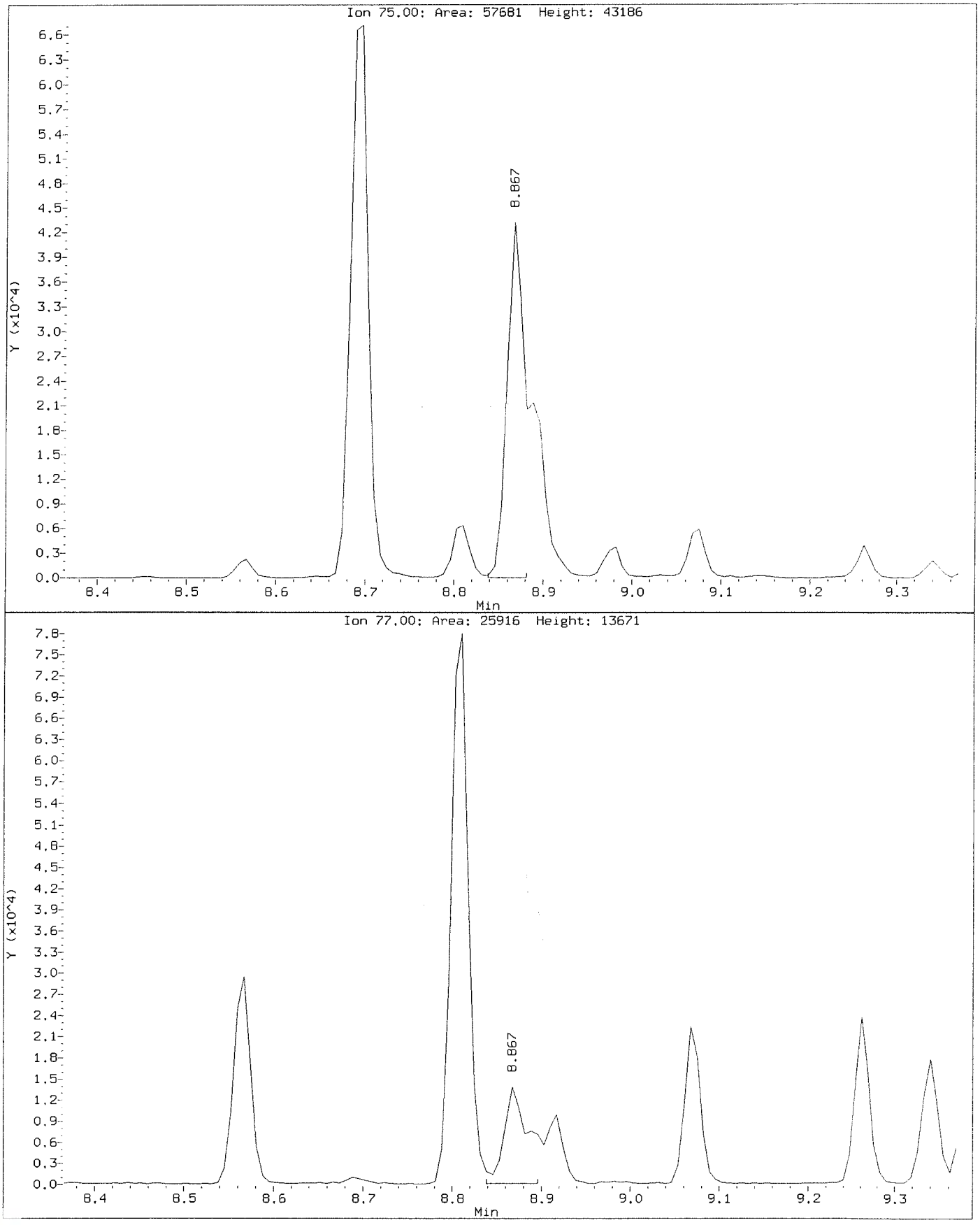
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4



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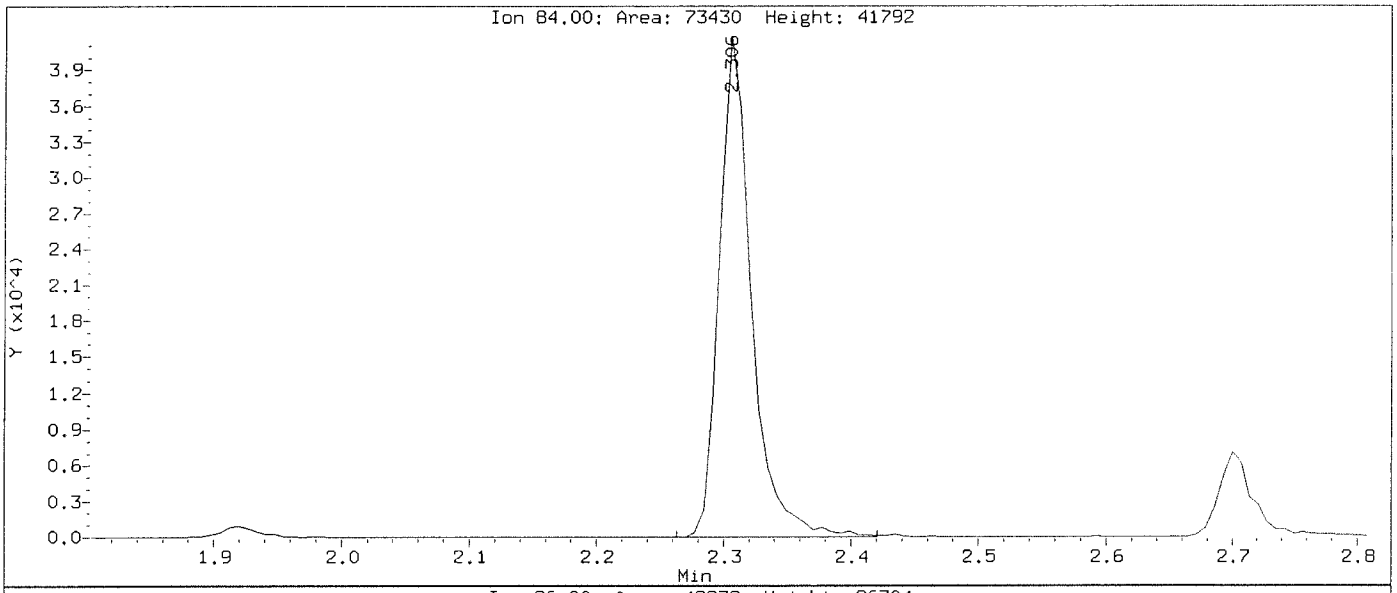
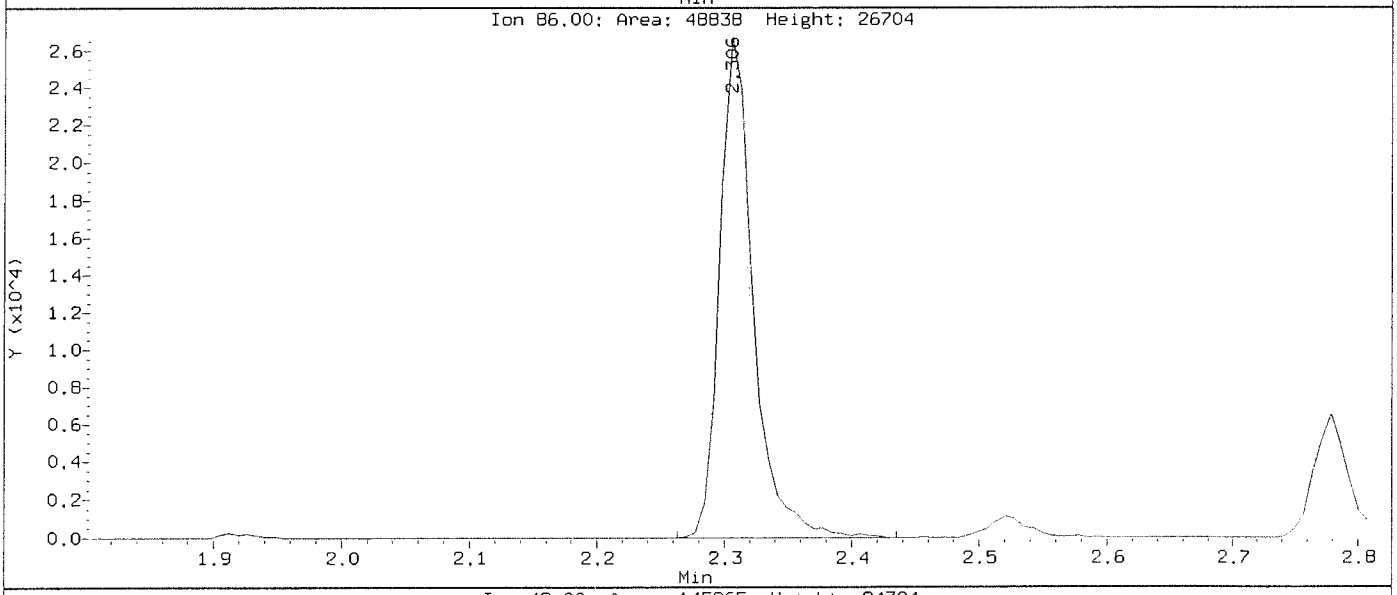
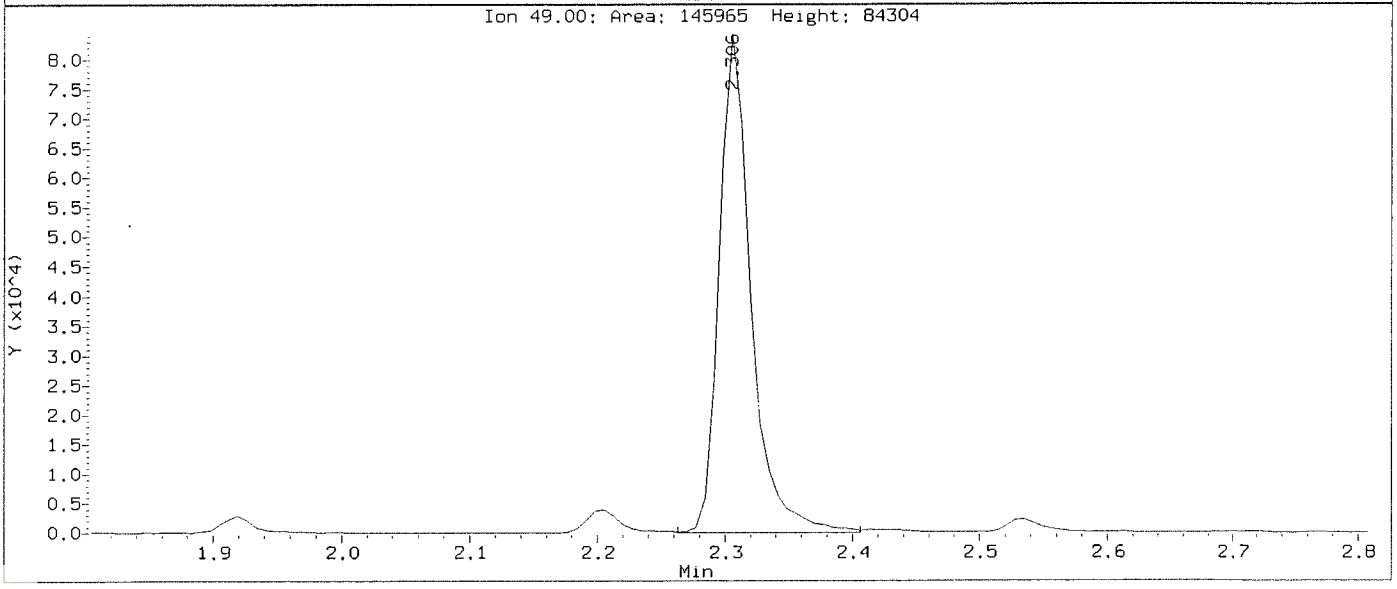
Injection Date: 08-JUL-2020 12:36
Instrument: voa6.i
Client Sample ID: VLCSW-200708

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







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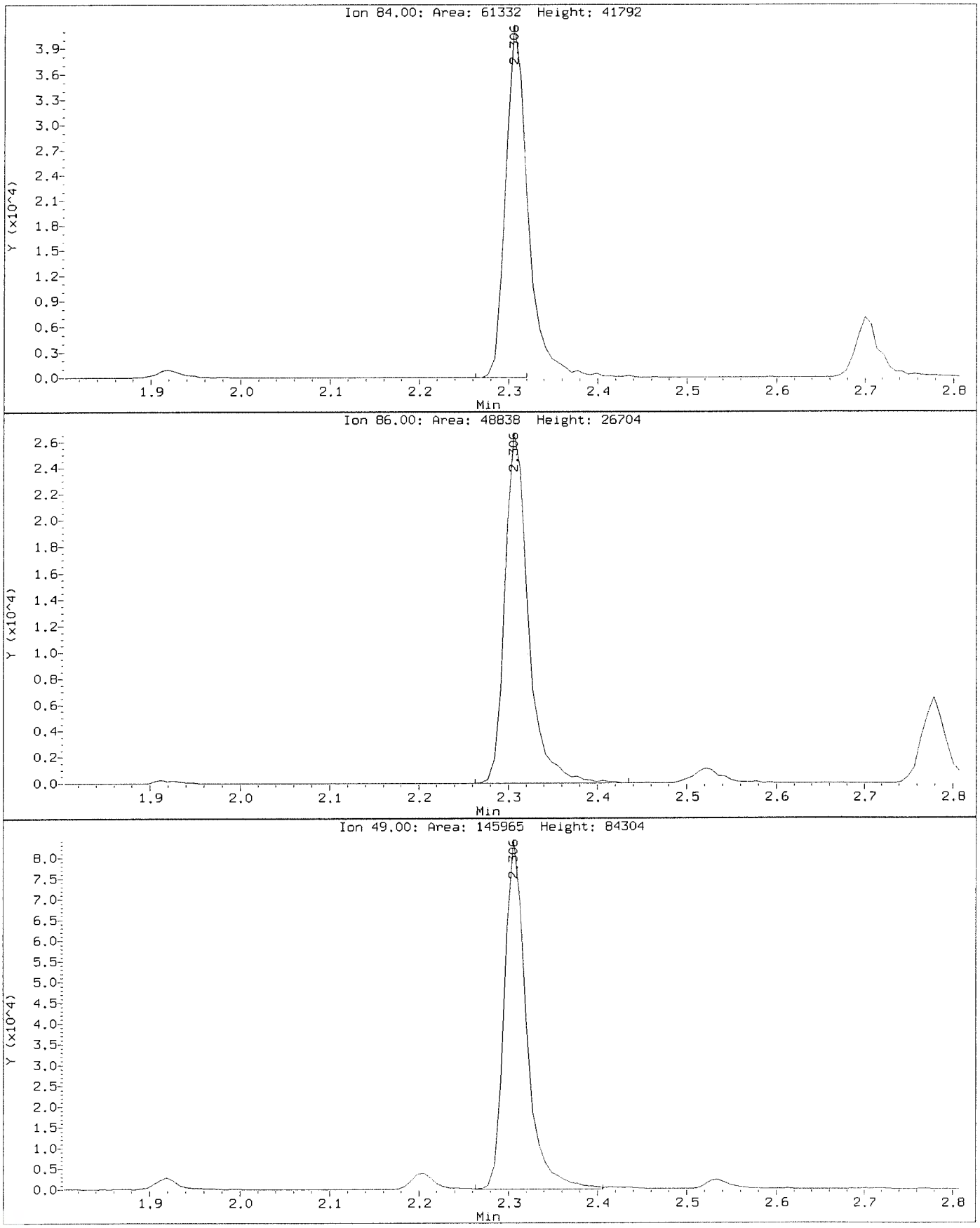
Injection Date: 08-JUL-2020 12:36
Instrument: voa6.i
Client Sample ID: VLCSW-200708

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



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Report Date: 13-Aug-2020 12:56

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200708.b\X070808.D
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Inj Date : 08-JUL-2020 13:49
Operator : PC Inst ID: voa6.i
Smp Info : VBLKW-200708;VBLKW-200708;3;;BLANK
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200708.b\8260W.m
Meth Date : 13-Aug-2020 12:56 voa6.i Quant Type: ISTD
Cal Date : 07-JUL-2020 13:53 Cal File: X070708.D
Als bottle: 8 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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	4.189	4.189	(1.000)	336025	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	531625	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	449679	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	192440	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.979)	172105	47.0322	47.03
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	225281	44.7330	44.73
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	615367	52.0525	52.05
$ 69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	215388	50.3070	50.30

Data File: \\nahstws005\Target\chem\voa6.i\X200708.b\X070808.D

Date : 08-JUL-2020 13:49

Client ID: VBLKW-200708

Instrument: voa6.i

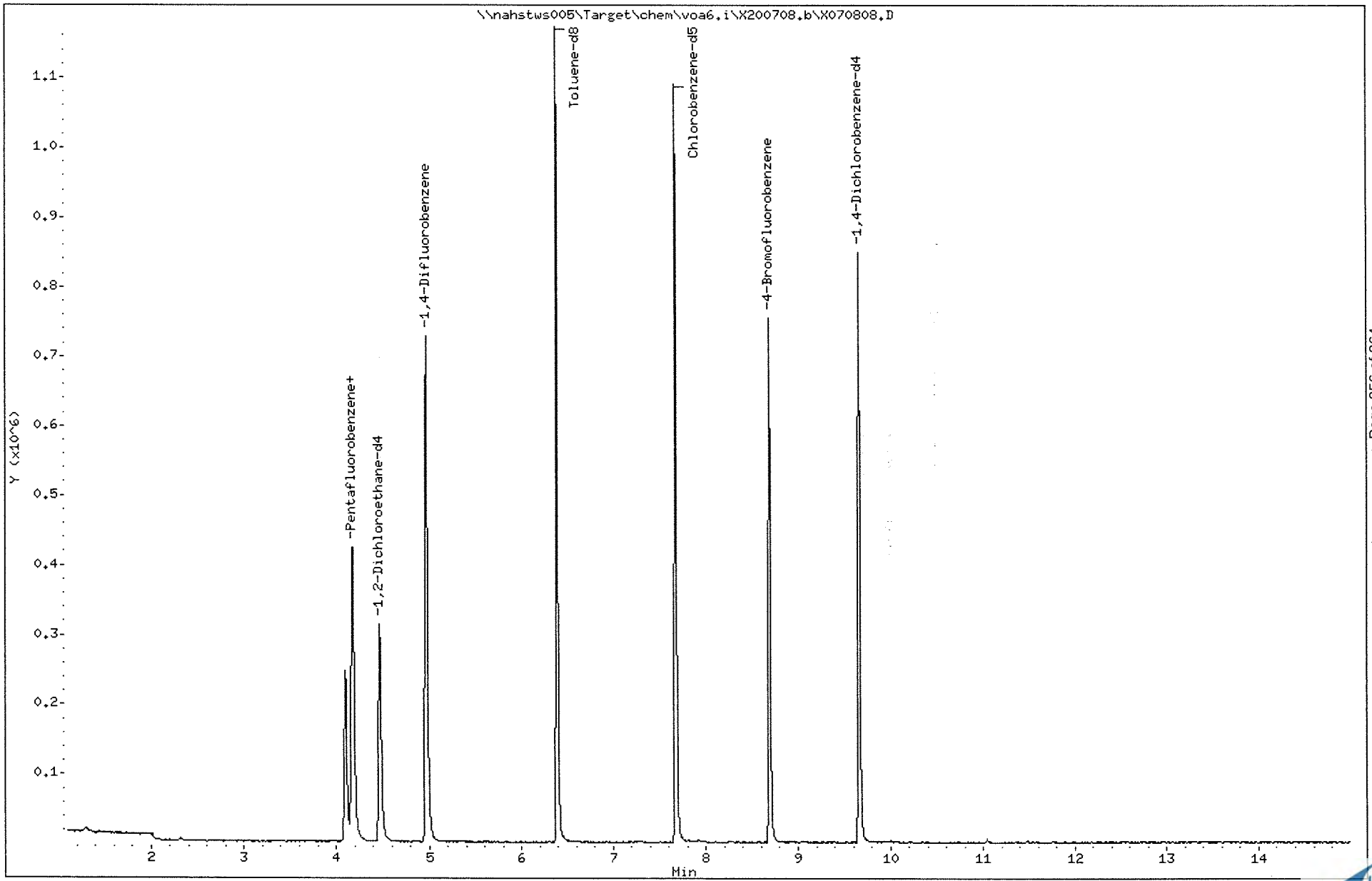
Sample Info: VBLKW-200708;VBLKW-200708;3;;BLANK

Purge Volume: 5.0

Operator: PC

Column phase: DB624

Column diameter: 0.18



ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200708.b\X070811.D
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Inj Date : 08-JUL-2020 15:01
Operator : PC Inst ID: voa6.i
Smp Info : HS20070055-02;HS20070055-02;;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200708.b\8260W.m
Meth Date : 13-Aug-2020 12:57 voa6.i Quant Type: ISTD
Cal Date : 07-JUL-2020 13:53 Cal File: X070708.D
Als bottle: 11
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

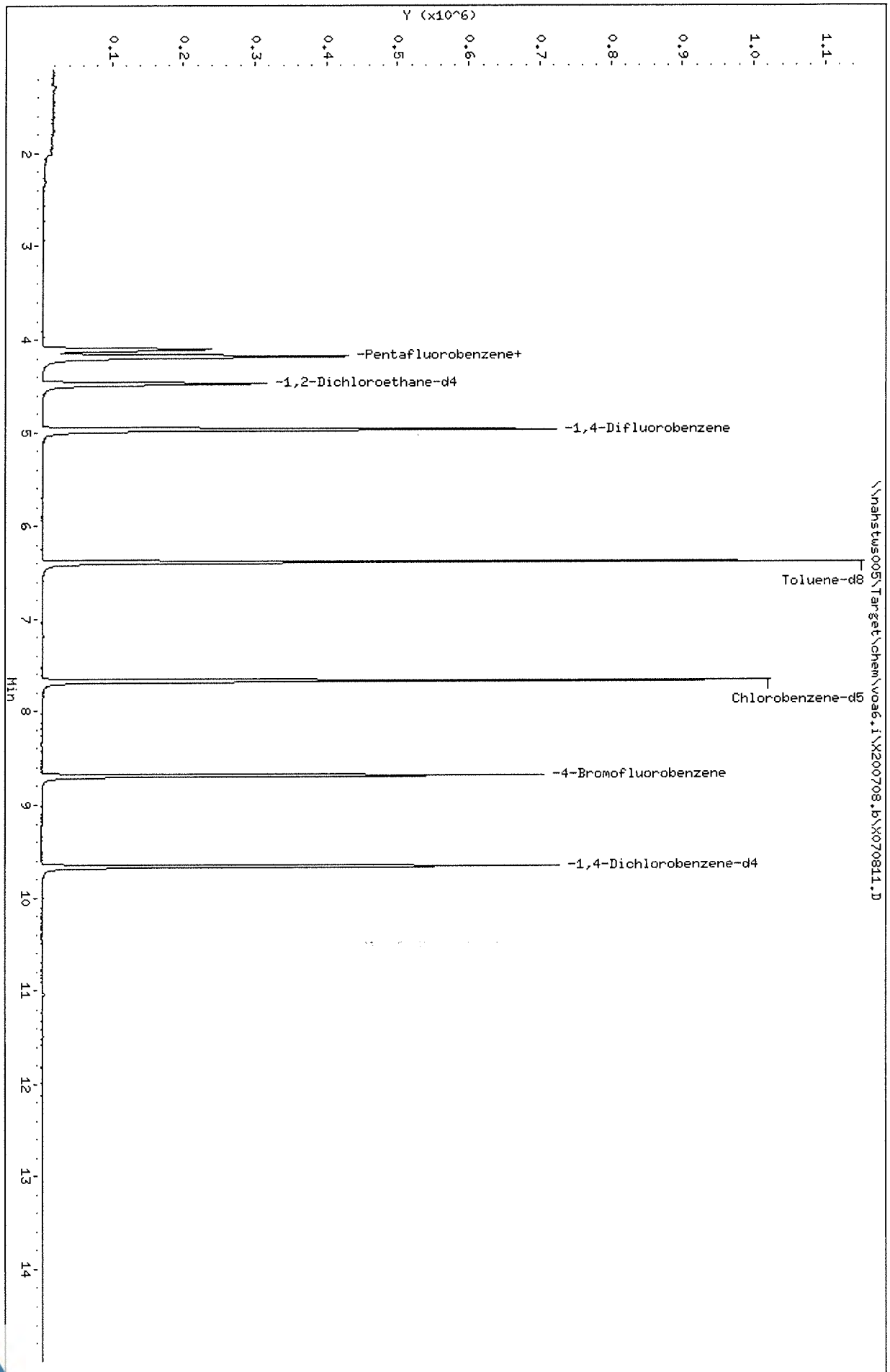
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

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	4.189	(1.000)	339049	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	522923	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.670	(1.000)	434512	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	173401	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	168642	45.6487	45.64
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	222517	43.7756	43.77
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	604257	52.8969	52.89
$ 69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	200001	48.3013	48.30

Data File: \\nahstws005\Target\chem\voa6.i\X200708.b\X070811.D
Date : 08-JUL-2020 15:01
Client ID: HS200700S5-02
Sample Info: HS200700S5-02;HS200700S5-02;;;
Purge Volume: 5.0
Column phase: DB624

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



Data File: \\nahstws005\Target\chem\voa6.i\X200708.b\X070812.D Page 1
Report Date: 13-Aug-2020 13:02

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200708.b\X070812.D
Lab Smp Id: HS20070055-06 Client Smp ID: HS20070055-06
Inj Date : 08-JUL-2020 15:25
Operator : PC Inst ID: voa6.i
Smp Info : HS20070055-06;HS20070055-06;;;
Misc Info : HS18090001;WATER;0;1;
Comment   :
Method   : \\nahstws005\Target\chem\voa6.i\X200708.b\8260W.m
Meth Date : 13-Aug-2020 12:57 voa6.i Quant Type: ISTD
Cal Date : 07-JUL-2020 13:53 Cal File: X070708.D
Als bottle: 12
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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	4.189	4.189	(1.000)	353111	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	564935	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.670	(1.000)	462112	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	195592	50.0000	
$ 30 Dibromofluoromethane	113	4.104	4.103	(0.979)	187003	48.6614	48.66
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	250390	47.3528	47.35
$ 48 Toluene-d8	98	6.389	6.388	(0.833)	642117	52.8539	52.85
$ 69 4-Bromofluorobenzene	95	8.688	8.695	(1.133)	193067	43.7416	43.74

Data File: \\nahstws005\Target\chem\voa6.i\X200708.b\X070812.D

Date : 08-JUL-2020 15:25

Client ID: HS20070055-06

Instrument: voa6.i

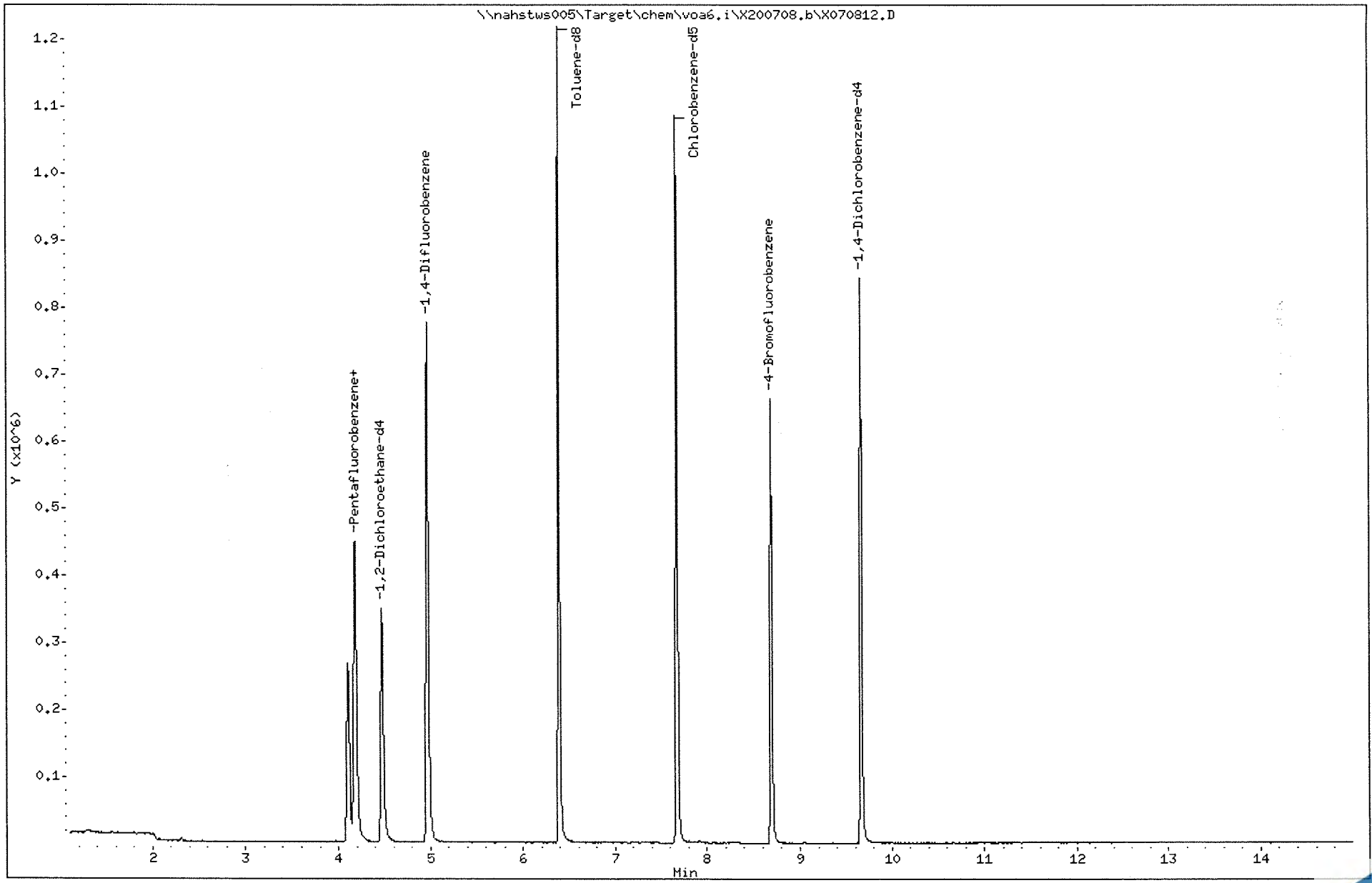
Sample Info: HS20070055-06;HS20070055-06;;;

Purge Volume: 5.0

Operator: PC

Column phase: DB624

Column diameter: 0.18



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eport Date: 13-Aug-2020 13:02

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Data file : \\nahstws005\Target\chem\voa6.i\X200708.b\X070813.D
Lab Smp Id: HS20070055-03 Client Smp ID: HS20070055-03
Inj Date : 08-JUL-2020 15:49
Operator : PC Inst ID: voa6.i
Smp Info : HS20070055-03;HS20070055-03;;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200708.b\8260W.m
Meth Date : 13-Aug-2020 12:57 voa6.i Quant Type: ISTD
Cal Date : 07-JUL-2020 13:53 Cal File: X070708.D
Als bottle: 13
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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	4.189	4.189	(1.000)	338021	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	544207	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.670	(1.000)	475033	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	218970	50.0000	
$ 30 Dibromofluoromethane	113	4.104	4.103	(0.979)	179183	48.7088	48.70
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	238317	47.0776	47.07
$ 48 Toluene-d8	98	6.389	6.388	(0.833)	636034	50.9292	50.92
$ 69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	238919	52.8789	52.87

Data File: \\nahstws005\Target\chem\voa6.i\X200708.b\X070813.D

Date : 08-JUL-2020 15:49

Client ID: HS20070055-03

Instrument: voa6.i

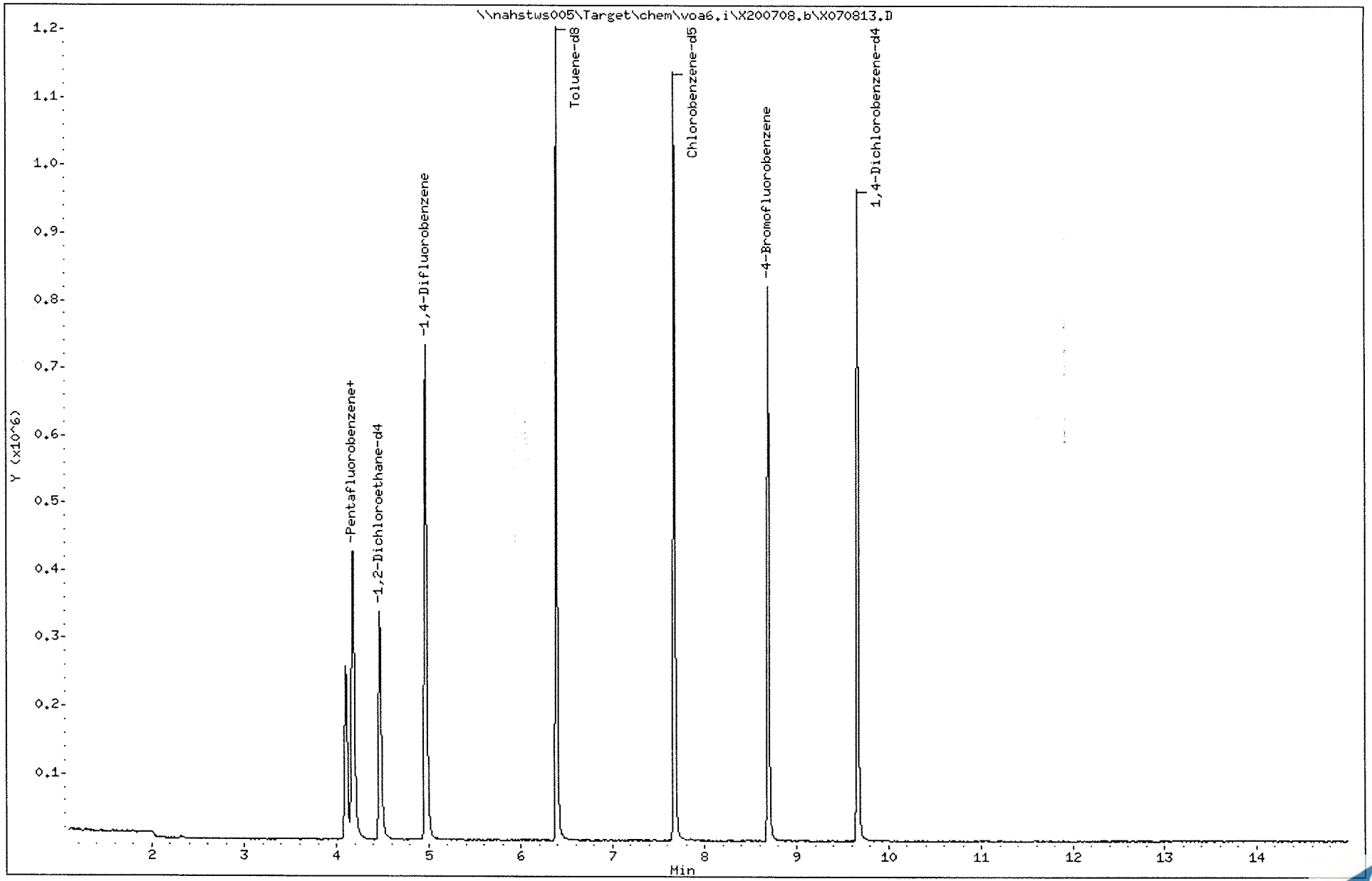
Sample Info: HS20070055-03;HS20070055-03;;;

Purge Volume: 5.0

Operator: PC

Column phase: DB624

Column diameter: 0.18



Data File: \\nahstws005\Target\chem\voa6.i\X200708.b\X070814.D Page 1
Report Date: 13-Aug-2020 13:02

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Data file : \\nahstws005\Target\chem\voa6.i\X200708.b\X070814.D
Lab Smp Id: HS20070055-04 Client Smp ID: HS20070055-04
Inj Date : 08-JUL-2020 16:13
Operator : PC Inst ID: voa6.i
Smp Info : HS20070055-04;HS20070055-04;;;
Misc Info : HS18090001;WATER;0;1;
Comment   :
Method   : \\nahstws005\Target\chem\voa6.i\X200708.b\8260W.m
Meth Date : 13-Aug-2020 12:57 voa6.i Quant Type: ISTD
Cal Date : 07-JUL-2020 13:53 Cal File: X070708.D
Als bottle: 14
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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

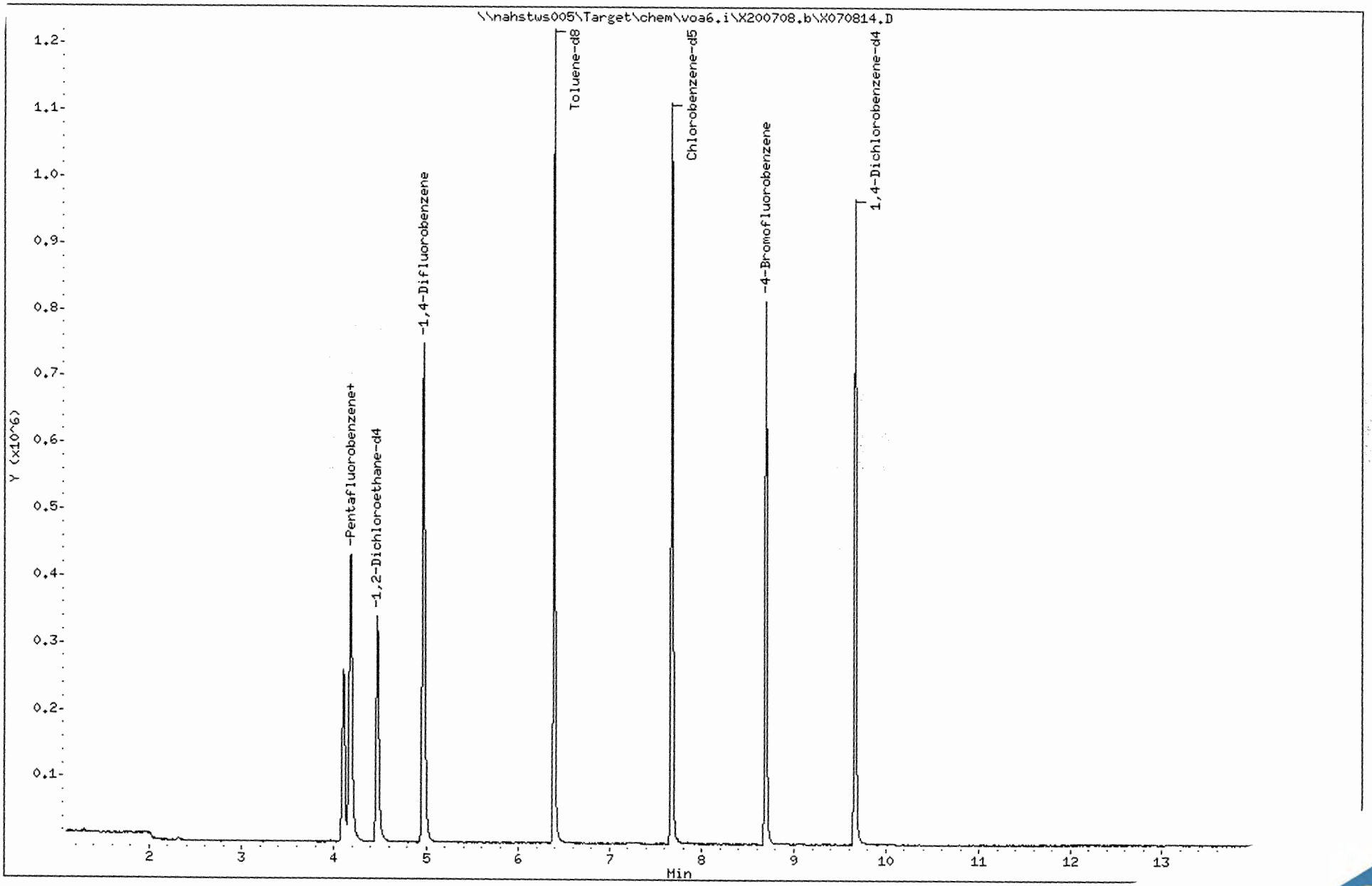
Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.189	4.189	(1.000)	340448	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	552390	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.670	(1.000)	479368	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	220318	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.979)	181269	48.9286	48.92
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	241529	47.3763	47.37
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	638864	50.6932	50.69
$ 69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	236852	51.9283	51.92

Data File: \\nahstws005\Target\chem\voa6.i\X200708.b\X070814.D
Date : 08-JUL-2020 16:13
Client ID: HS20070055-04
Sample Info: HS20070055-04;HS20070055-04;;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i

Operator: PC
Column diameter: 0.18



Data File: \\nahstws005\Target\chem\voa6.i\X200708.b\X070815.D Page 1
Report Date: 13-Aug-2020 13:02

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Data file : \\nahstws005\Target\chem\voa6.i\X200708.b\X070815.D
Lab Smp Id: HS20070055-05 Client Smp ID: HS20070055-05
Inj Date : 08-JUL-2020 16:36
Operator : PC Inst ID: voa6.i
Smp Info : HS20070055-05;HS20070055-05;;;
Misc Info : HS18090001;WATER;0;1;
Comment   :
Method   : \\nahstws005\Target\chem\voa6.i\X200708.b\8260W.m
Meth Date : 13-Aug-2020 12:57 voa6.i Quant Type: ISTD
Cal Date : 07-JUL-2020 13:53 Cal File: X070708.D
Als bottle: 15
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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	4.189	4.189	(1.000)	342133	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	558752	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.670	(1.000)	492190	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	221540	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.979)	180101	48.3637	48.36
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	244001	47.6291	47.62
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	636688	49.2044	49.20
$ 69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	236956	50.5699	50.56

Data File: \\nahstws005\Target\chem\voa6.i\X200708.b\X070815.D

Date : 08-JUL-2020 16:36

Client ID: HS20070055-05

Instrument: voa6.i

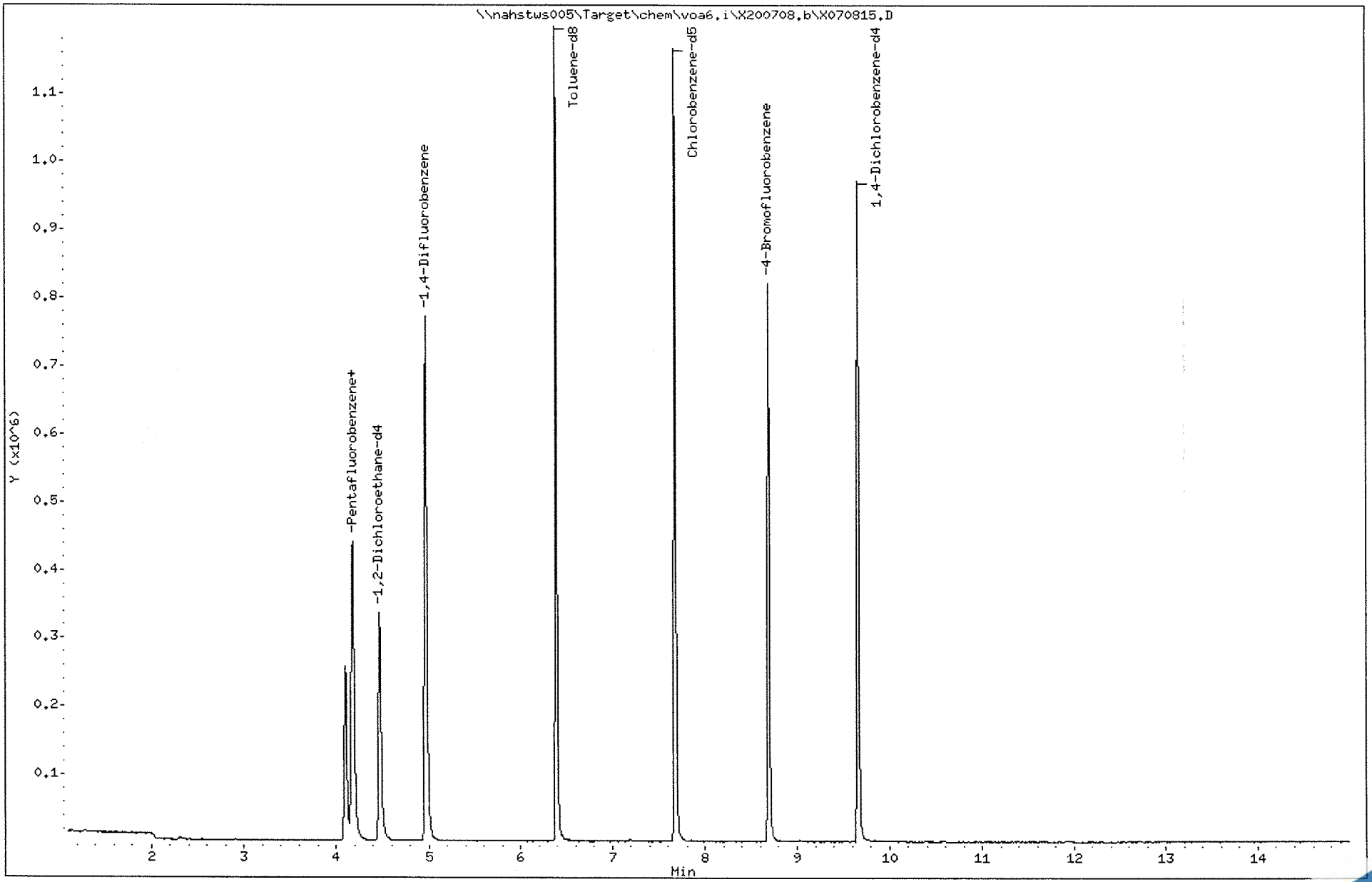
Sample Info: HS20070055-05;HS20070055-05;;;

Purge Volume: 5.0

Operator: PC

Column phase: DB624

Column diameter: 0.18



Data File: \\nahstws005\Target\chem\voa6.i\X200708.b\X070817.D Page 1
Report Date: 13-Aug-2020 12:56

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Data file : \\nahstws005\Target\chem\voa6.i\X200708.b\X070817.D
Lab Smp Id: HS20070055-03MS Client Smp ID: HS20070055-03MS
Inj Date : 08-JUL-2020 17:25
Operator : PC Inst ID: voa6.i
Smp Info : HS20070055-03MS;HS20070055-03MS;3;;MS
Misc Info : HS18090001;WATER;0;1;
Comment   :
Method   : \\nahstws005\Target\chem\voa6.i\X200708.b\8260W.m
Meth Date : 13-Aug-2020 12:56 voa6.i Quant Type: ISTD
Cal Date : 07-JUL-2020 13:53 Cal File: X070708.D
Als bottle: 17 QC Sample: MS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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

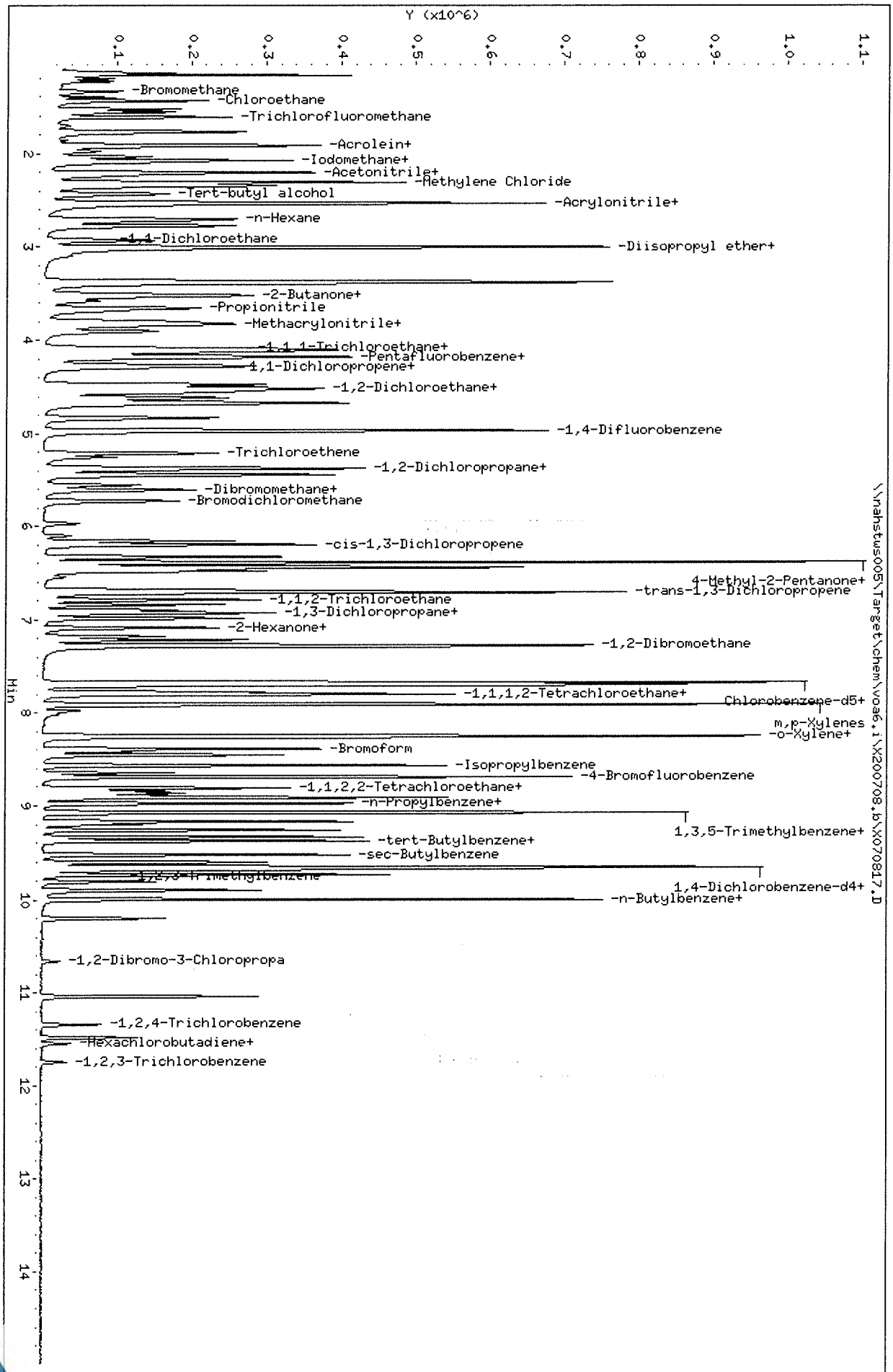
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.189	4.189	(1.000)	314779	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	495334	50.0000	
* 47 Chlorobenzene-d5	117	7.670	7.671	(1.000)	423204	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	166192	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.979)	160983	46.9608	46.96
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	210415	44.5991	44.59
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	566813	50.9448	50.94
$ 69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	196346	48.6943	48.69
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	64635	19.8914	19.89
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.976)	111503	19.3364	19.33
68 1,1,2,2-Tetrachloroethane	83	8.845	8.845	(0.915)	67612	20.5780	20.57
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	52249	19.5167	19.51
22 1,1-Dichloroethane	63	2.929	2.929	(0.699)	162843	18.2538	18.25
11 1,1-Dichloroethene	96	1.919	1.919	(0.458)	56318	19.3216	19.32
32 1,1-Dichloropropene	75	4.290	4.283	(0.863)	95942	19.6693	19.66
93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.215)	9023	18.2385	18.23
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	57947	20.0018	20.00(M)
90 1,2,4-Trichlorobenzene	180	11.345	11.338	(1.173)	20303	20.4064	20.40
79 1,2,4-Trimethylbenzene	105	9.382	9.383	(0.970)	189671	19.4071	19.40
89 1,2-Dibromo-3-Chloropropane	155	10.657	10.658	(1.102)	4835	17.6392	17.63
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	62860	18.4791	18.47
88 1,2-Dichlorobenzene	146	9.998	9.991	(1.034)	103873	21.3847	21.38

Data File: \\nahstws005\Target\chem\voa6.i\X200708.b\X070817.D Page 2
Report Date: 13-Aug-2020 12:56

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
33	1,2-Dichloroethane	62	4.562	4.562	(0.918)	113491	18.4674	18.46
42	1,2-Dichloropropane	63	5.443	5.443	(1.095)	90920	19.7310	19.73
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	221197	23.3602	23.36
83	1,3-Dichlorobenzene	146	9.612	9.605	(0.994)	104702	19.6781	19.67
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	108895	19.3245	19.32
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	104474	20.5311	20.53
26	2,2-Dichloropropane	77	3.516	3.516	(0.839)	111672	20.4910	20.49
24	2-Butanone	43	3.580	3.581	(0.855)	89570	26.6922	26.69
76	2-Chlorotoluene	91	8.974	8.974	(0.928)	191858	23.0013	23.00
52	2-Hexanone	43	7.090	7.090	(0.924)	143903	33.2405	33.24
77	4-Chlorotoluene	91	9.074	9.075	(0.939)	214673	22.6950	22.69
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	199662	21.1272	21.12
45	4-Methyl-2-Pentanone	43	6.324	6.324	(0.824)	220216	36.5249	36.52
10	Acetone	43	2.234	1.976	(0.533)	82083	8.69514	8.69
37	Benzene	78	4.519	4.519	(0.909)	274993	19.4580	19.45
74	Bromobenzene	156	8.809	8.810	(0.911)	73425	23.1586	23.15
29	Bromochloromethane	128	3.802	3.795	(0.908)	37145	16.9899	16.98
39	Bromodichloromethane	83	5.729	5.729	(1.153)	96242	19.3981	19.39
66	Bromoform	173	8.415	8.416	(1.097)	41889	17.8307	17.83
6	Bromomethane	94	1.338	1.339	(0.320)	44666	20.1619	20.16
19	Carbon Disulfide	76	2.076	2.069	(0.496)	379818	39.6820	39.68
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	95448	20.1914	20.19
59	Chlorobenzene	112	7.699	7.699	(1.004)	169813	19.6952	19.69
7	Chloroethane	64	1.403	1.403	(0.335)	51709	17.0278	17.02
28	Chloroform	83	3.910	3.910	(0.933)	127088	18.4249	18.42
3	Chloromethane	50	1.080	1.081	(0.258)	124379	19.2278	19.22
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.843)	77864	18.9240	18.92
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	114774	19.1974	19.19
55	Dibromochloromethane	129	7.176	7.176	(0.936)	66286	19.0675	19.06
44	Dibromomethane	93	5.557	5.558	(1.118)	45656	18.3836	18.38
2	Dichlorodifluoromethane	85	0.973	0.973	(0.232)	67961	17.8344	17.83
61	Ethylbenzene	106	7.799	7.800	(1.017)	92516	20.2741	20.27
91	Hexachlorobutadiene	225	11.481	11.481	(1.187)	19754	25.4000	25.39
67	Isopropylbenzene	105	8.566	8.566	(1.117)	277854	20.5279	20.52
62	m,p-Xylenes	106	7.907	7.907	(1.031)	221015	40.2758	40.27
17	Methylene Chloride	84	2.305	2.306	(0.550)	61278	17.8021	17.80(M)
87	n-Butylbenzene	91	9.998	9.999	(1.034)	201523	23.9061	23.90
73	n-Propylbenzene	91	8.917	8.917	(0.922)	322937	23.8254	23.82
92	Naphthalene	128	11.546	11.546	(1.194)	25747	16.1763	16.17
63	o-Xylene	106	8.244	8.244	(1.075)	107154	19.9322	19.93
81	sec-Butylbenzene	105	9.526	9.526	(0.985)	223084	20.0224	20.02
64	Styrene	104	8.265	8.258	(1.078)	182758	19.5612	19.56
78	tert-Butylbenzene	119	9.339	9.340	(0.966)	155583	20.4065	20.40
56	Tetrachloroethene	164	6.933	6.933	(0.904)	56276	21.7705	21.77
50	Toluene	91	6.453	6.453	(0.841)	283560	21.0013	21.00
20	trans-1,2-Dichloroethene	96	2.535	2.535	(0.605)	67567	19.6390	19.63
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	100970	18.7973	18.79
38	Trichloroethene	130	5.214	5.214	(1.049)	72686	19.7779	19.77
8	Trichlorofluoromethane	101	1.560	1.561	(0.373)	103569	19.0794	19.07
5	Vinyl Chloride	62	1.145	1.145	(0.273)	108538	19.6279	19.62

QC Flag Legend

M - Compound response manually integrated.



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Sample Info: HS20070055-03MS;HS20070055-03MS;3;;MS
Purge Volume: 5.0
Column phase: DB624

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

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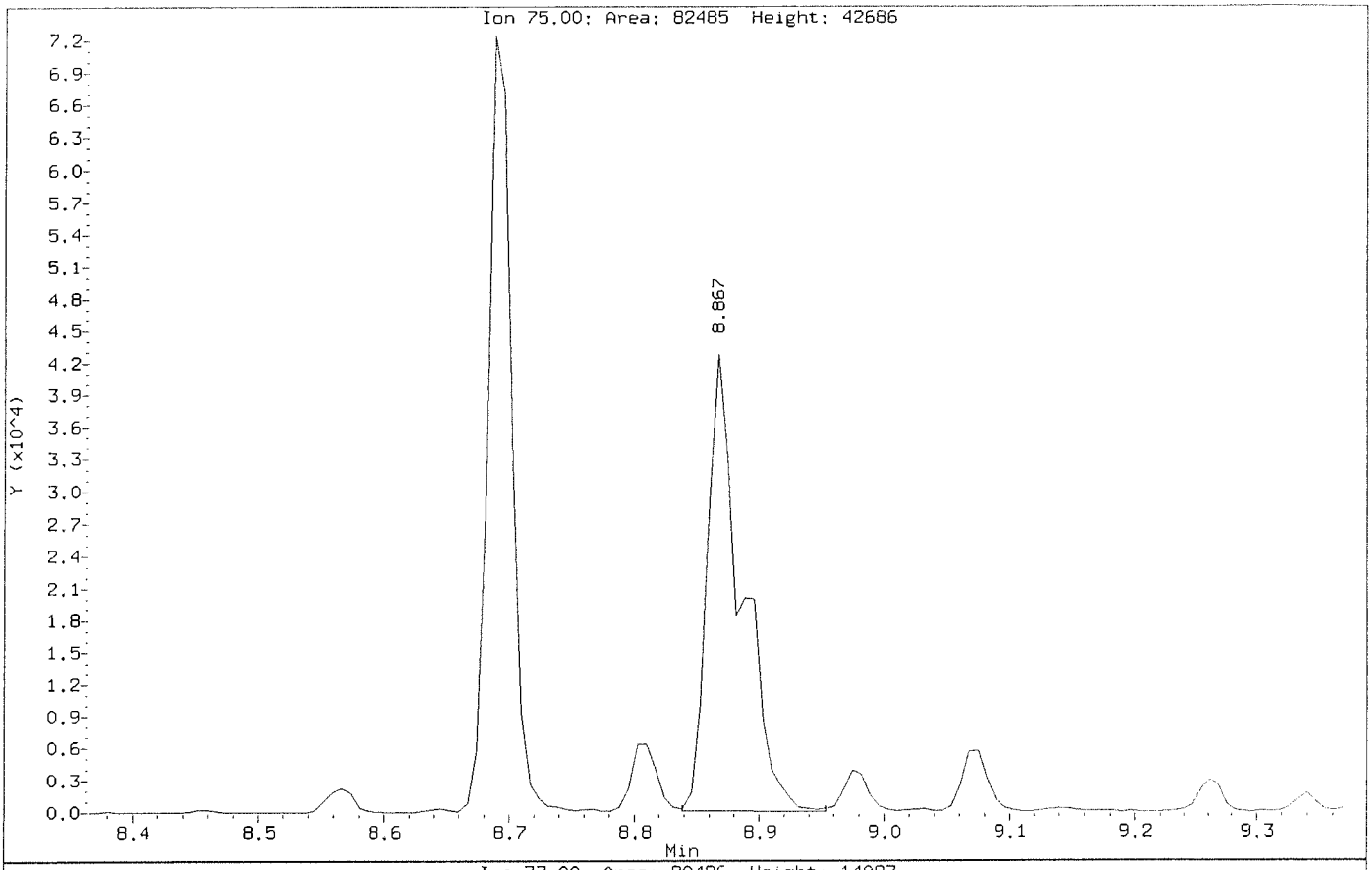
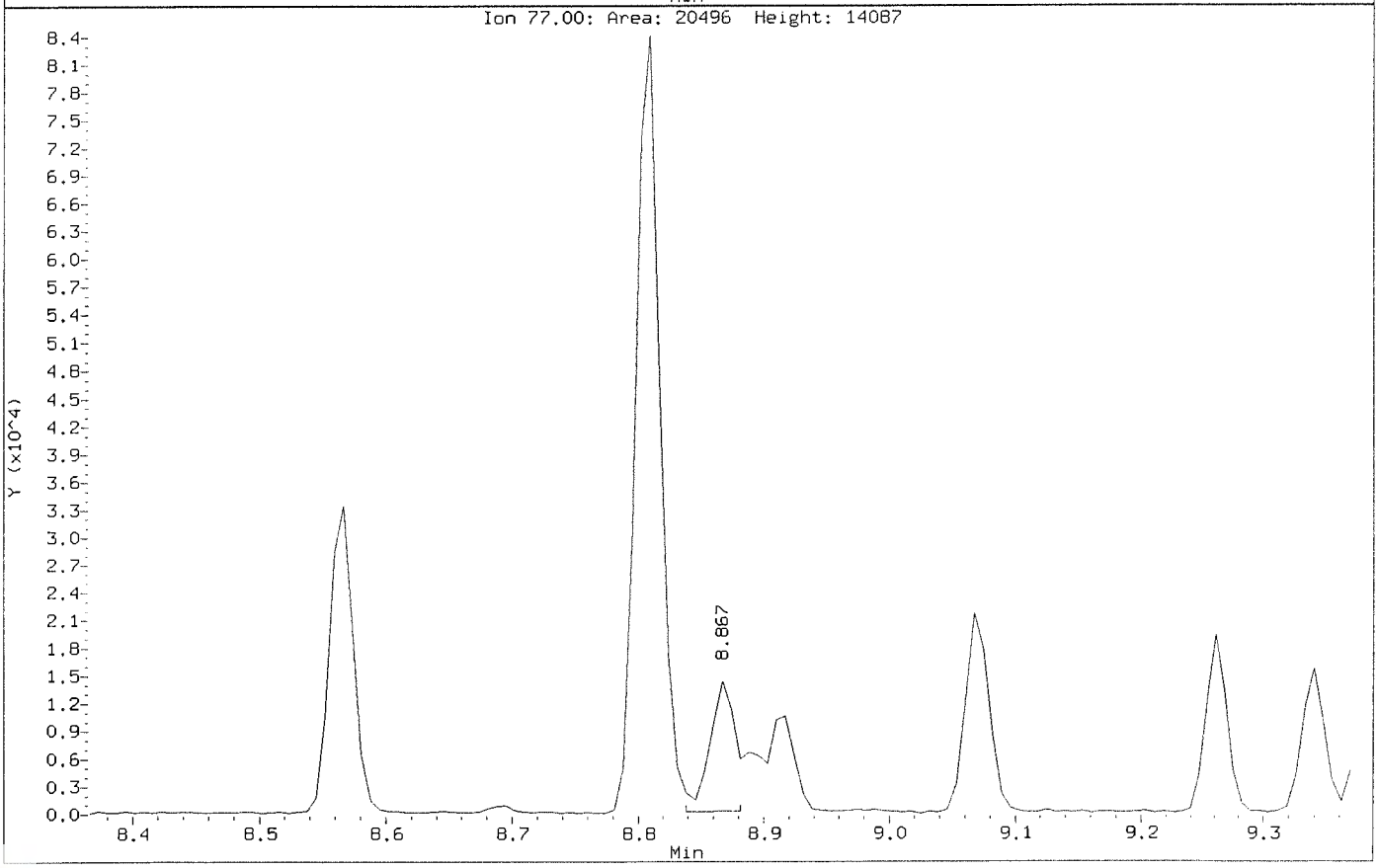
Instrument: voa6.i
Client Sample ID: HS20070055-03MS

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





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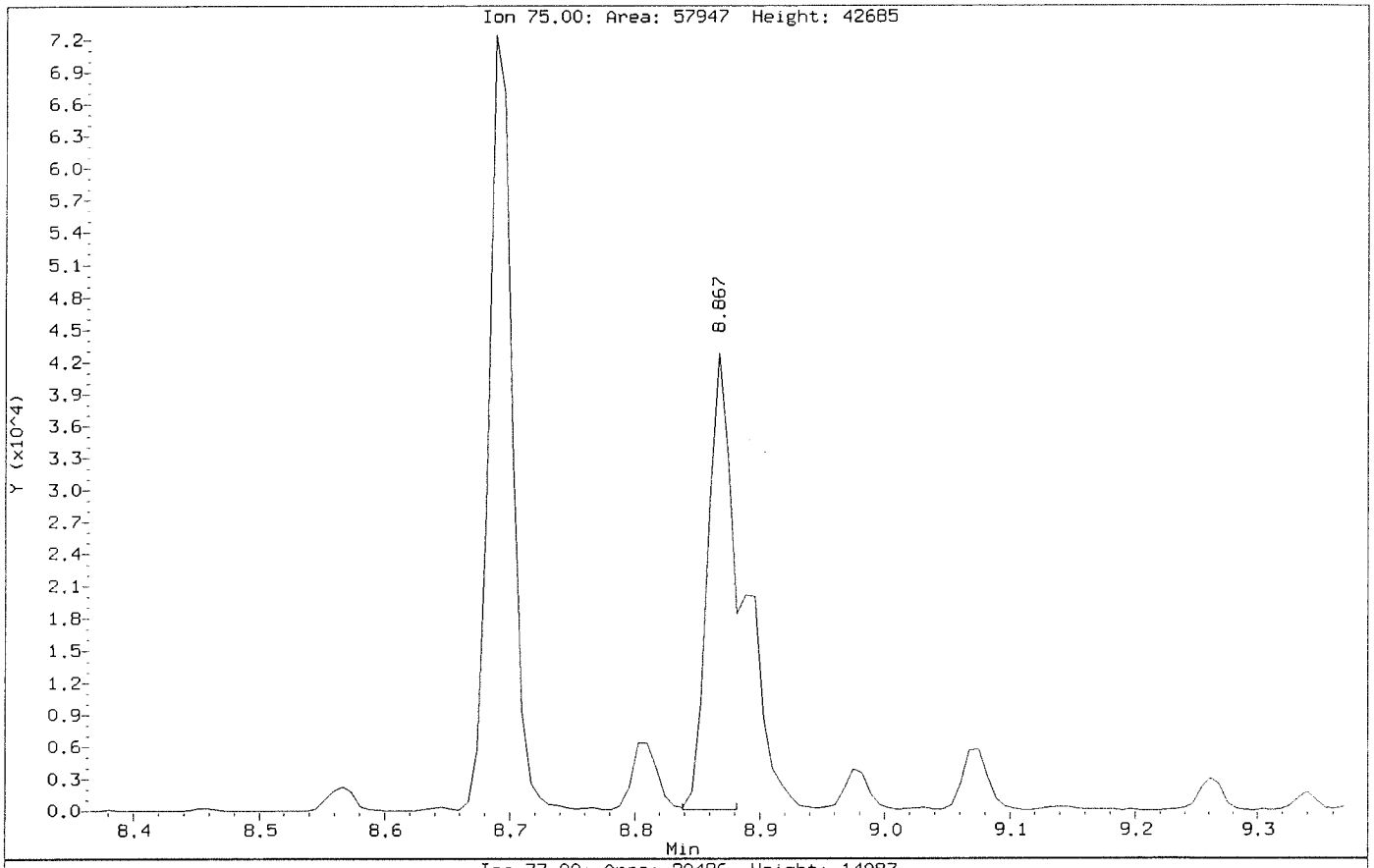
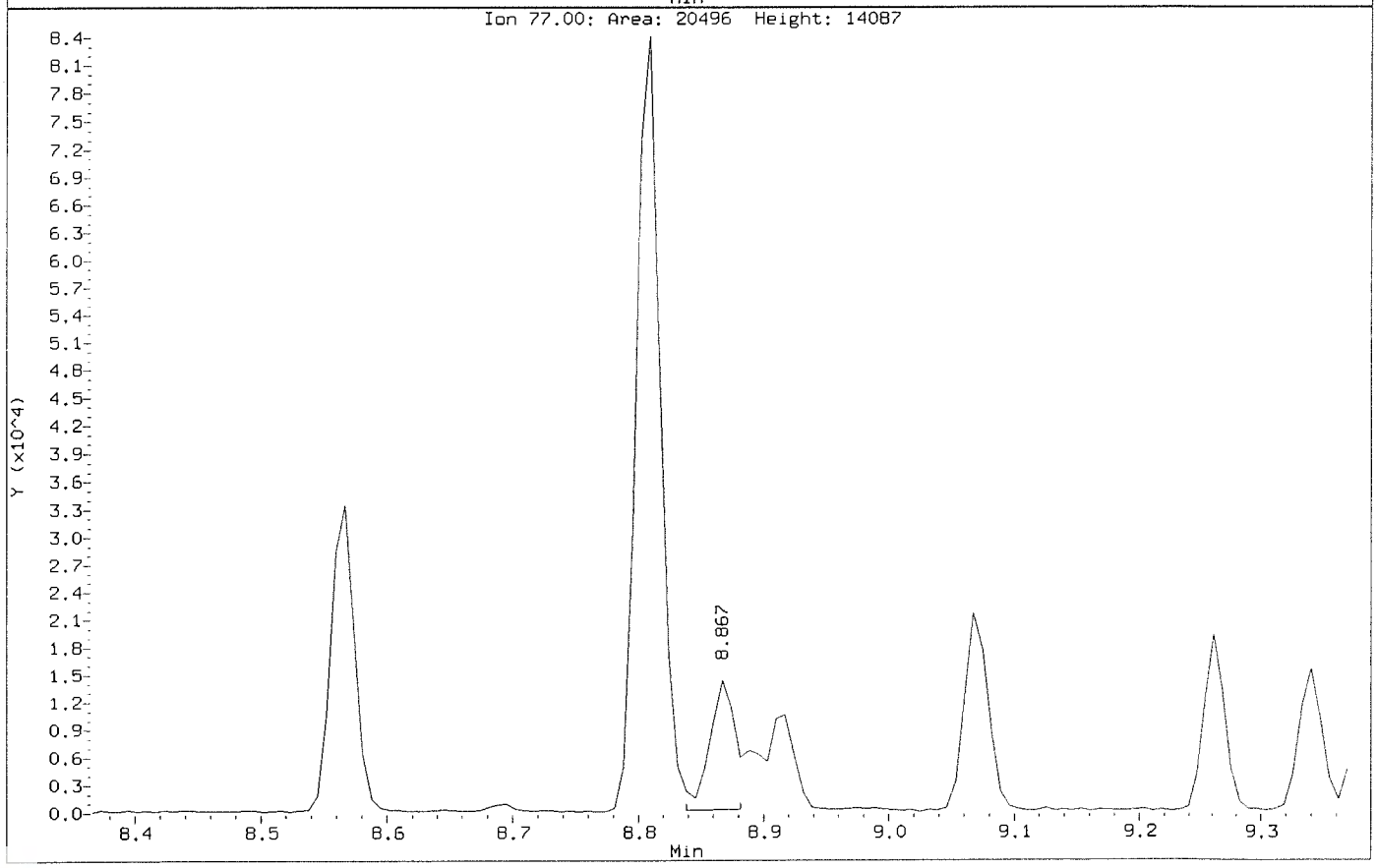
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





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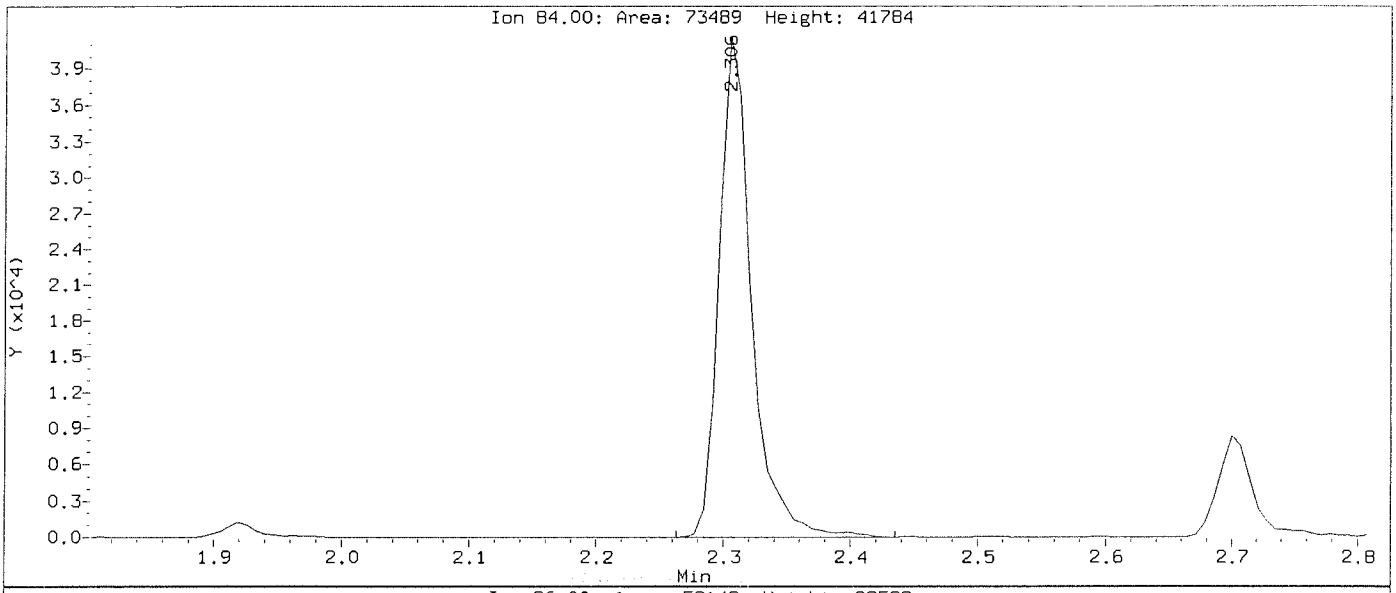
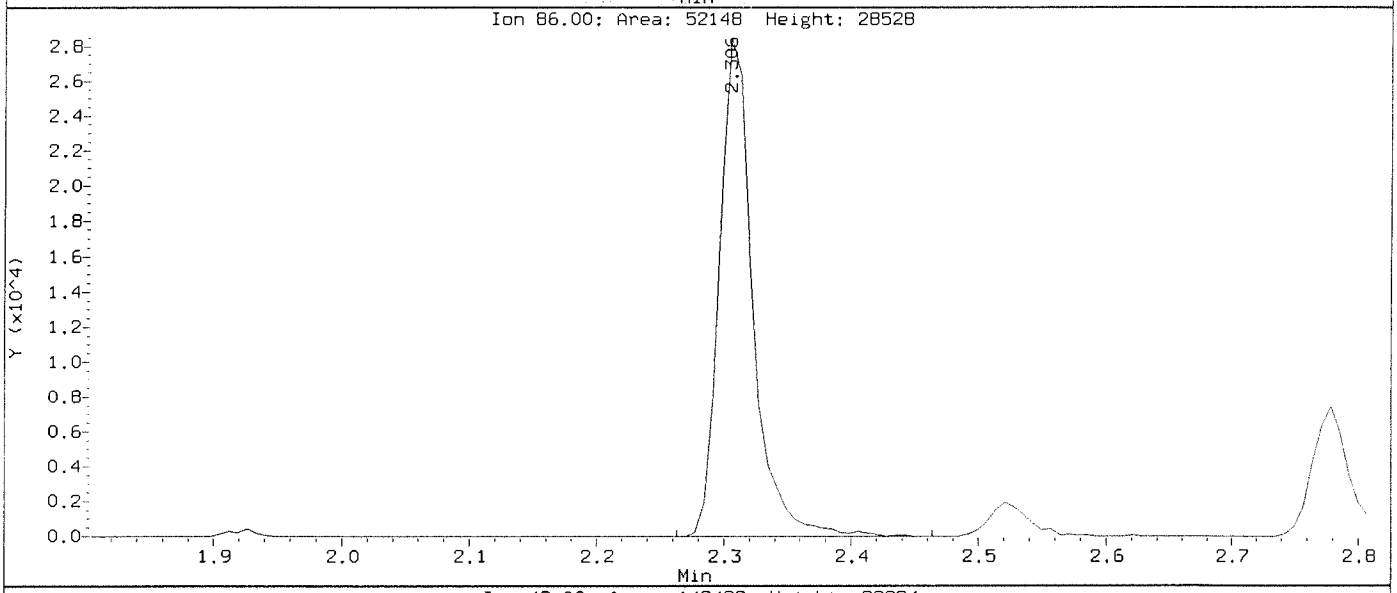
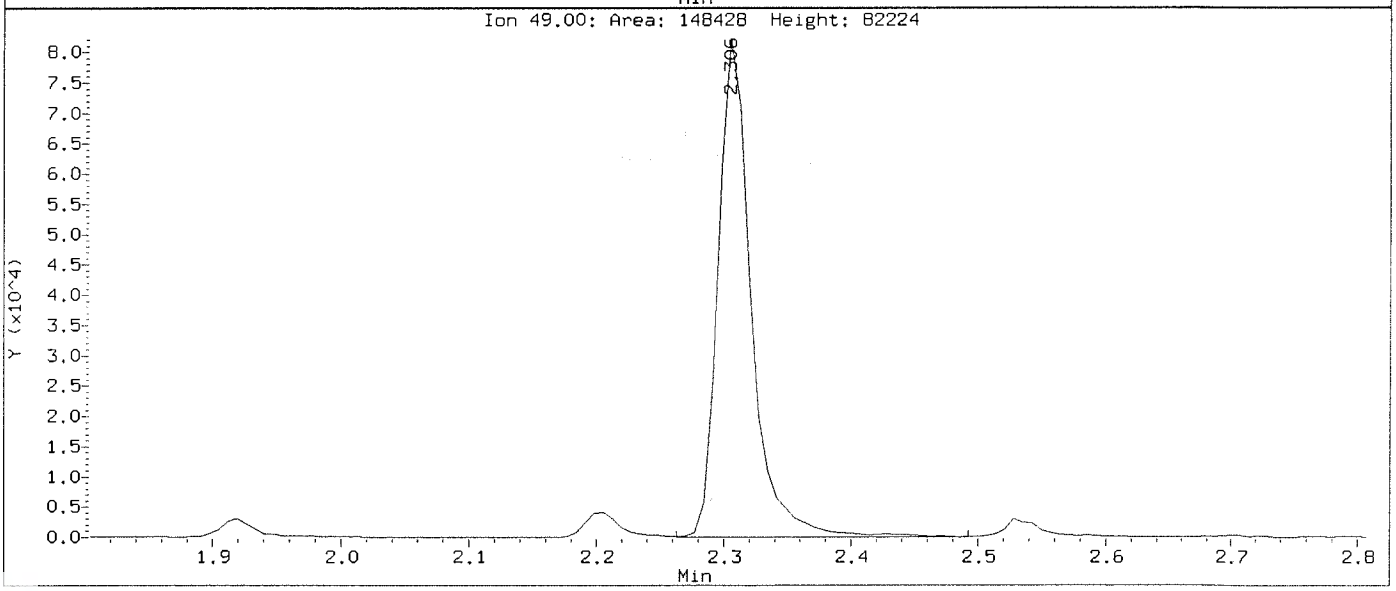
Injection Date: 08-JUL-2020 17:25
Instrument: voa6.i
Client Sample ID: HS20070055-03MS

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







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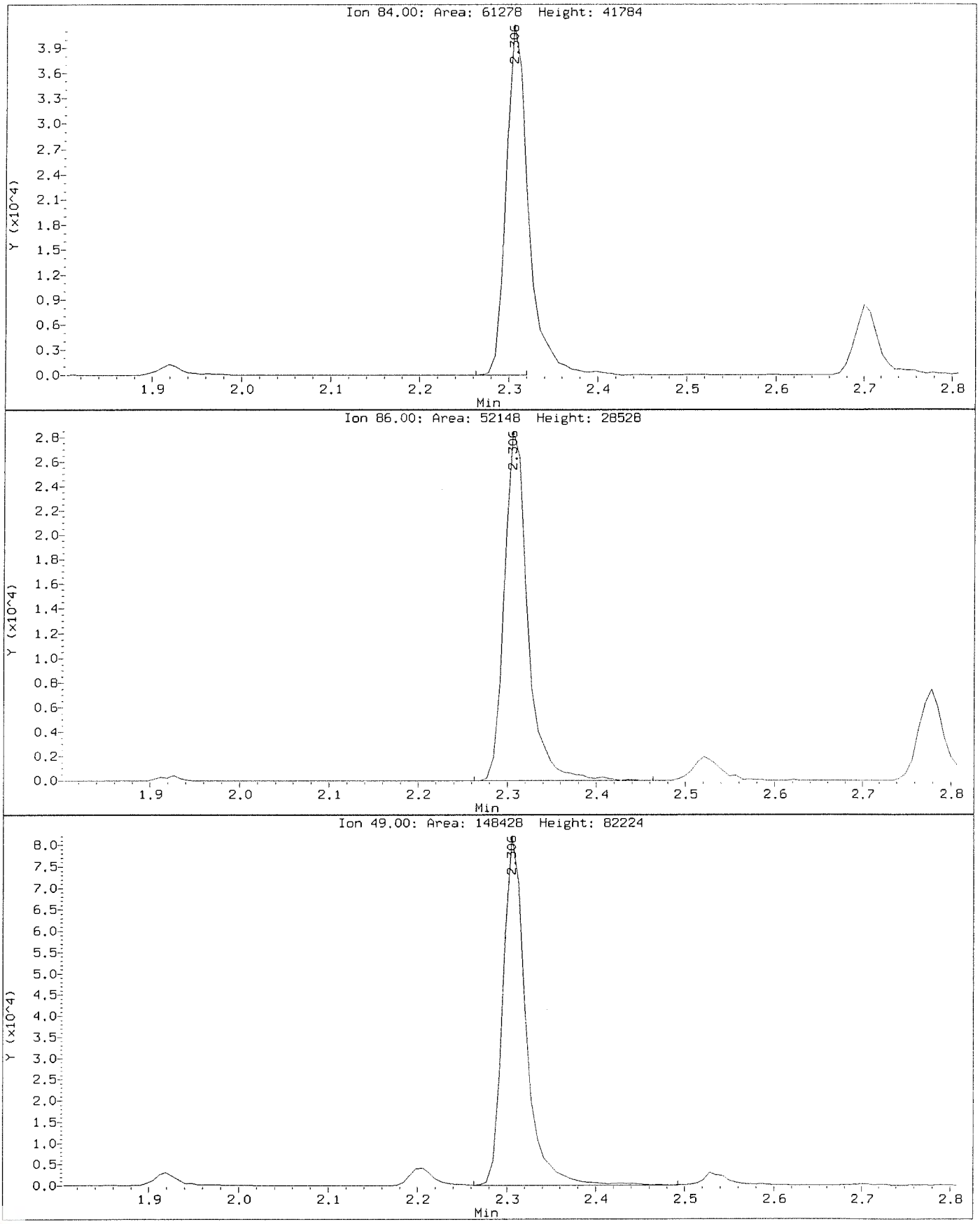
Instrument: voa6.i
Client Sample ID: HS20070055-03MS

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



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Report Date: 13-Aug-2020 12:56

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200708.b\X070818.D
Lab Smp Id: HS20070055-03MSD Client Smp ID: HS20070055-03MSD
Inj Date : 08-JUL-2020 17:49
Operator : PC Inst ID: voa6.i
Smp Info : HS20070055-03MSD;HS20070055-03MSD;3;;MSD
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200708.b\8260W.m
Meth Date : 13-Aug-2020 12:56 voa6.i Quant Type: ISTD
Cal Date : 07-JUL-2020 13:53 Cal File: X070708.D
Als bottle: 17 QC Sample: MSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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

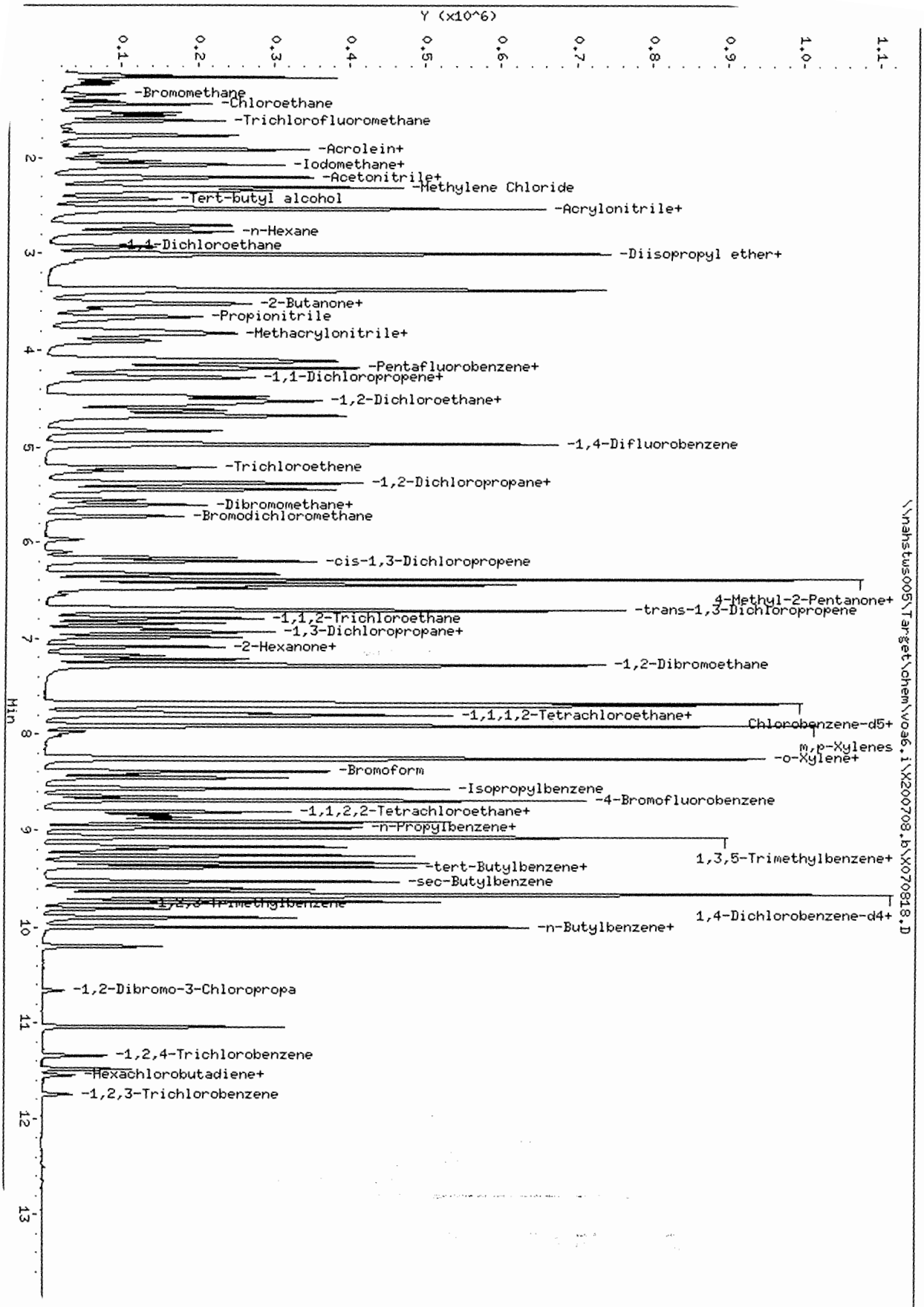
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.189	4.189	(1.000)	314292	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	494544	50.0000	
* 47 Chlorobenzene-d5	117	7.670	7.671	(1.000)	421669	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.669	(1.000)	185130	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.979)	160352	46.8470	46.84
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	210383	44.6624	44.66
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	561445	50.6460	50.64
$ 69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	196682	48.9610	48.96
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	63469	19.6037	19.60
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.976)	108016	18.7607	18.76
68 1,1,2,2-Tetrachloroethane	83	8.838	8.845	(0.915)	66780	18.2456	18.24
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	52055	19.5150	19.51
22 1,1-Dichloroethane	63	2.929	2.929	(0.699)	156259	17.5429	17.54
11 1,1-Dichloroethene	96	1.919	1.919	(0.458)	52045	17.8833	17.88
32 1,1-Dichloropropene	75	4.282	4.283	(0.862)	92224	18.9373	18.93
93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.216)	9851	17.9064	17.90
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.918)	58324	18.0725	18.07(M)
90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	21771	19.6923	19.69
9 1,2,4-Trimethylbenzene	105	9.382	9.383	(0.971)	211852	19.4592	19.45
1,2-Dibromo-3-Chloropropane	155	10.657	10.658	(1.103)	5044	16.4080	16.40
1,2-Dibromoethane	107	7.262	7.262	(0.947)	62276	18.3740	18.37
.2-Dichlorobenzene	146	9.998	9.991	(1.035)	90236	16.6769	16.67

Data File: \\nahstws005\Target\chem\voa6.i\X200708.b\X070818.D Page 2
Report Date: 13-Aug-2020 12:56

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
33 1,2-Dichloroethane	62	4.562	4.562	(0.918)	114384	18.6424	18.64
42 1,2-Dichloropropane	63	5.443	5.443	(1.095)	90086	19.5812	19.58
75 1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	226164	21.4414	21.44
83 1,3-Dichlorobenzene	146	9.612	9.605	(0.995)	116278	19.6182	19.61
54 1,3-Dichloropropane	76	6.983	6.983	(0.910)	106151	18.9061	18.90
84 1,4-Dichlorobenzene	146	9.683	9.683	(1.002)	118464	20.9025	20.90
26 2,2-Dichloropropane	77	3.516	3.516	(0.839)	108151	19.8757	19.87
24 2-Butanone	43	3.580	3.581	(0.855)	85983	25.4211	25.42
76 2-Chlorotoluene	91	8.974	8.974	(0.929)	190830	20.5378	20.53
52 2-Hexanone	43	7.090	7.090	(0.924)	143404	33.2464	33.24
77 4-Chlorotoluene	91	9.074	9.075	(0.939)	220348	20.9120	20.91
82 p-Isopropyltoluene	119	9.655	9.655	(0.999)	225541	21.4242	21.42
45 4-Methyl-2-Pentanone	43	6.331	6.324	(0.825)	206964	34.2682	34.26
10 Acetone	43	2.234	1.976	(0.533)	80676	8.02144	8.02
37 Benzene	78	4.519	4.519	(0.909)	268373	19.0199	19.01
74 Bromobenzene	156	8.809	8.810	(0.912)	72015	20.3904	20.39
29 Bromochloromethane	128	3.802	3.795	(0.908)	36373	16.6625	16.66
39 Bromodichloromethane	83	5.729	5.729	(1.153)	91429	18.4574	18.45
66 Bromoform	173	8.415	8.416	(1.097)	41863	17.8845	17.88
6 Bromomethane	94	1.338	1.339	(0.320)	42886	19.3855	19.38
19 Carbon Disulfide	76	2.076	2.069	(0.496)	359636	37.6317	37.63
34 Carbon Tetrachloride	117	4.275	4.268	(0.860)	92296	19.5558	19.55
59 Chlorobenzene	112	7.699	7.699	(1.004)	168962	19.6678	19.66
7 Chloroethane	64	1.403	1.403	(0.335)	47550	15.5311	15.53
28 Chloroform	83	3.910	3.910	(0.933)	124510	18.0791	18.07
3 Chloromethane	50	1.080	1.081	(0.258)	118312	18.3183	18.31
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.843)	73750	17.9519	17.95
46 cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	110576	18.5248	18.52
55 Dibromochloromethane	129	7.176	7.176	(0.936)	64119	18.5113	18.51
44 Dibromomethane	93	5.557	5.558	(1.118)	45159	18.2126	18.21
2 Dichlorodifluoromethane	85	0.973	0.973	(0.232)	64657	16.9937	16.99
61 Ethylbenzene	106	7.799	7.800	(1.017)	91601	20.1467	20.14
91 Hexachlorobutadiene	225	11.488	11.481	(1.189)	18656	21.7381	21.73
67 Isopropylbenzene	105	8.566	8.566	(1.117)	273101	20.2502	20.25
62 m,p-Xylenes	106	7.907	7.907	(1.031)	218804	40.0180	40.01
17 Methylene Chloride	84	2.305	2.306	(0.550)	59544	17.3252	17.32(M)
87 n-Butylbenzene	91	9.998	9.999	(1.035)	172040	18.3209	18.32
73 n-Propylbenzene	91	8.917	8.917	(0.923)	324428	21.4870	21.48
92 Naphthalene	128	11.546	11.546	(1.195)	29401	16.5749	16.57
63 o-Xylene	106	8.244	8.244	(1.075)	106070	19.8024	19.80
81 sec-Butylbenzene	105	9.526	9.526	(0.986)	262312	21.1348	21.13
64 Styrene	104	8.265	8.258	(1.078)	181126	19.4571	19.45
78 tert-Butylbenzene	119	9.339	9.340	(0.967)	183329	21.5860	21.58
56 Tetrachloroethene	164	6.933	6.933	(0.904)	53243	20.6722	20.67
50 Toluene	91	6.453	6.453	(0.841)	272783	20.2766	20.27
20 trans-1,2-Dichloroethene	96	2.535	2.535	(0.605)	64447	18.7611	18.76
51 trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	100161	18.6765	18.67
38 Trichloroethene	130	5.214	5.214	(1.049)	69341	18.8979	18.89
8 Trichlorofluoromethane	101	1.560	1.561	(0.373)	99064	18.2777	18.27
5 Vinyl Chloride	62	1.145	1.145	(0.273)	99066	17.9428	17.94

QC Flag Legend

M - Compound response manually integrated.



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Sample Info: HS20070055-03MSD;HS20070055-03MSD;3;;MSD
Purge Volume: 5.0
Column phase: DB624

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

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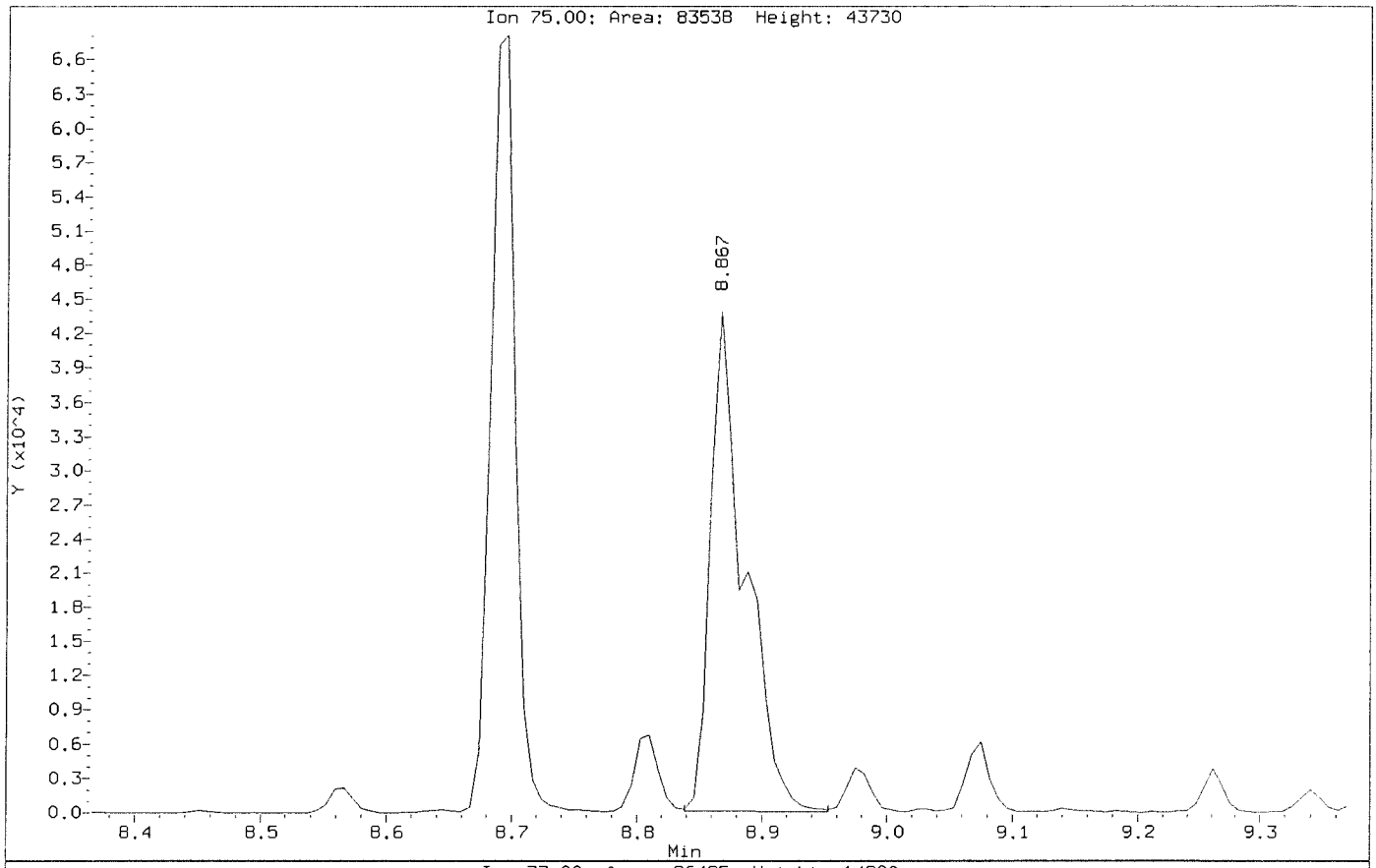
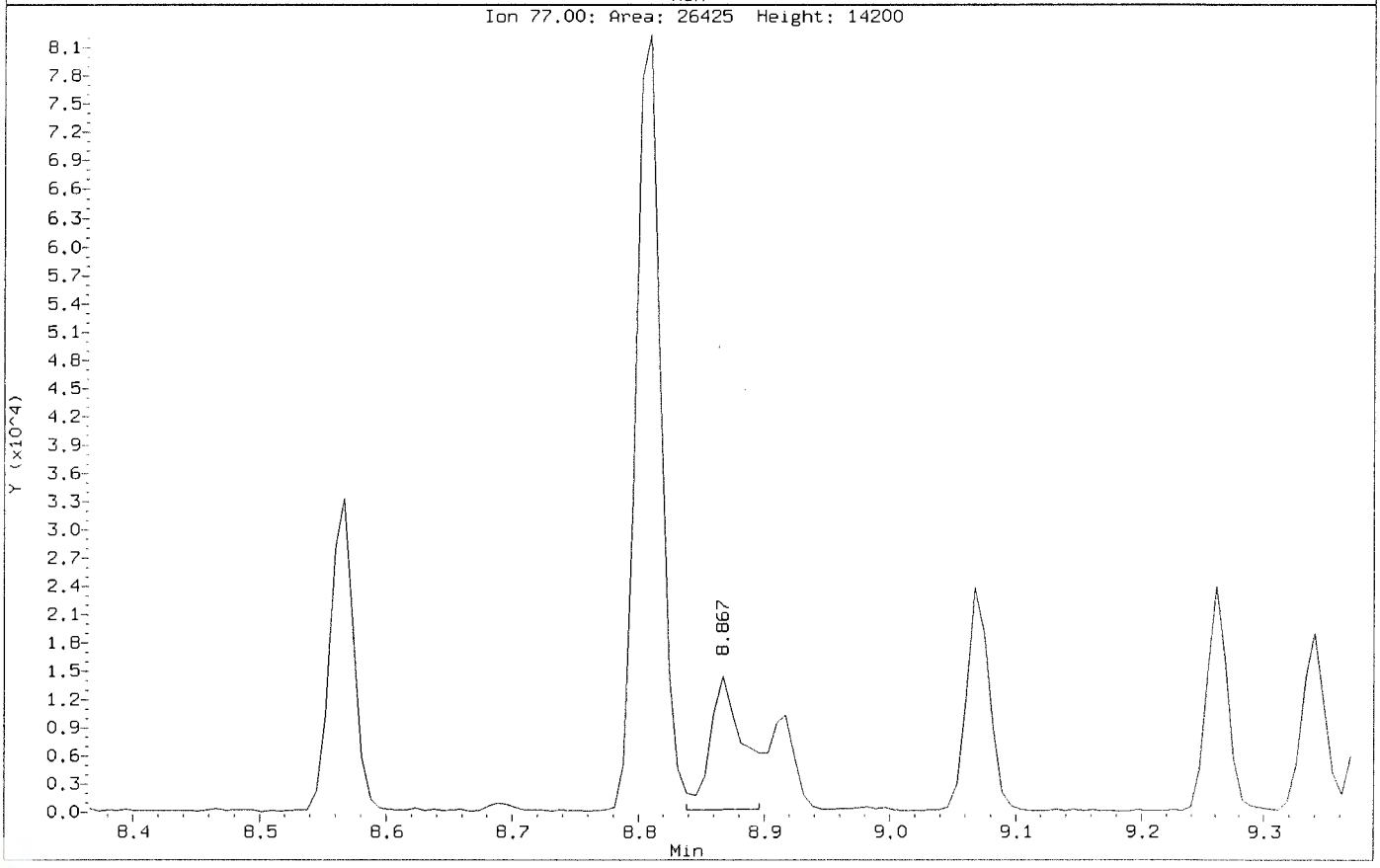
Injection Date: 08-JUL-2020 17:49
Instrument: voa6.i
Client Sample ID: HS20070055-03MSD

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





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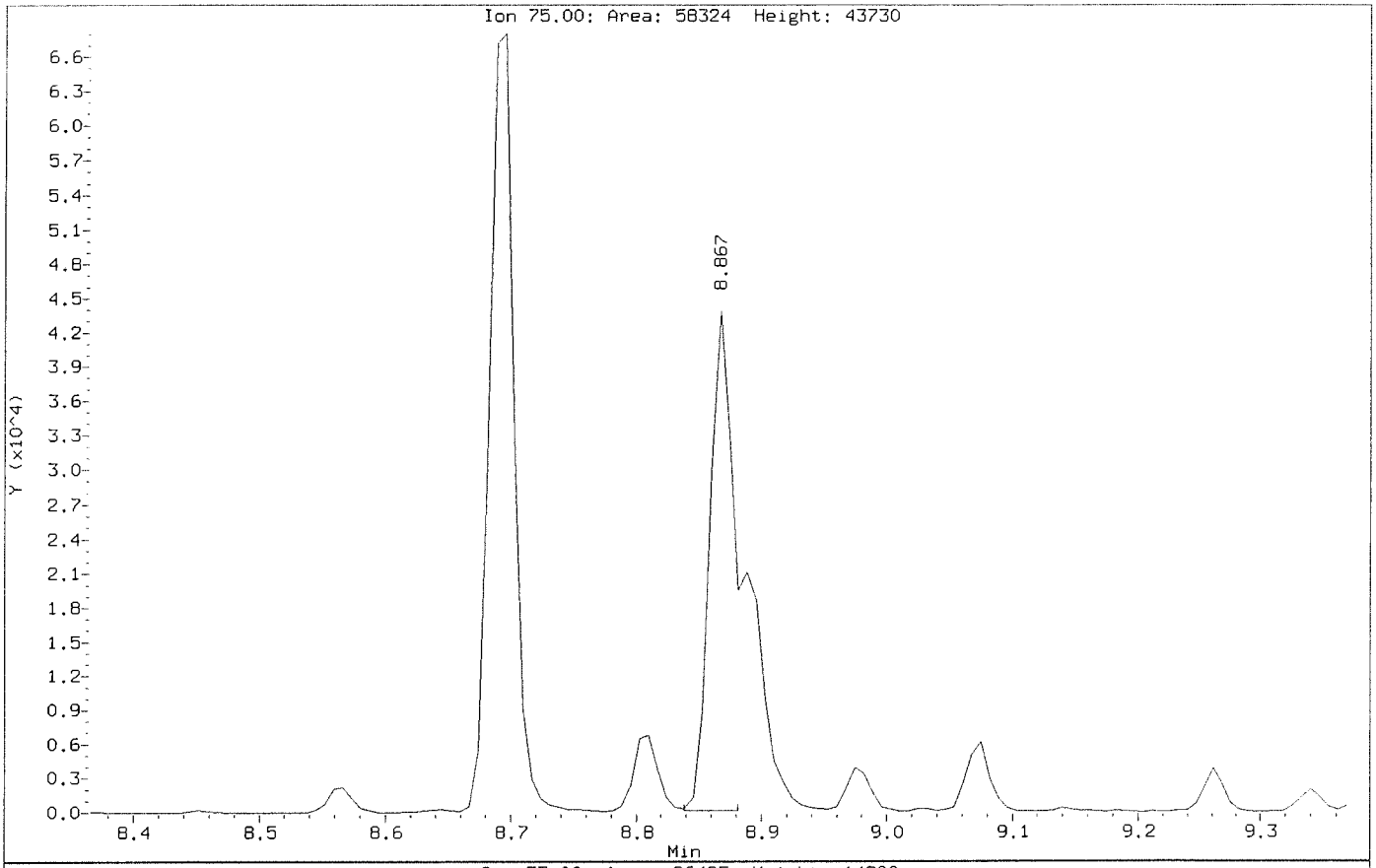
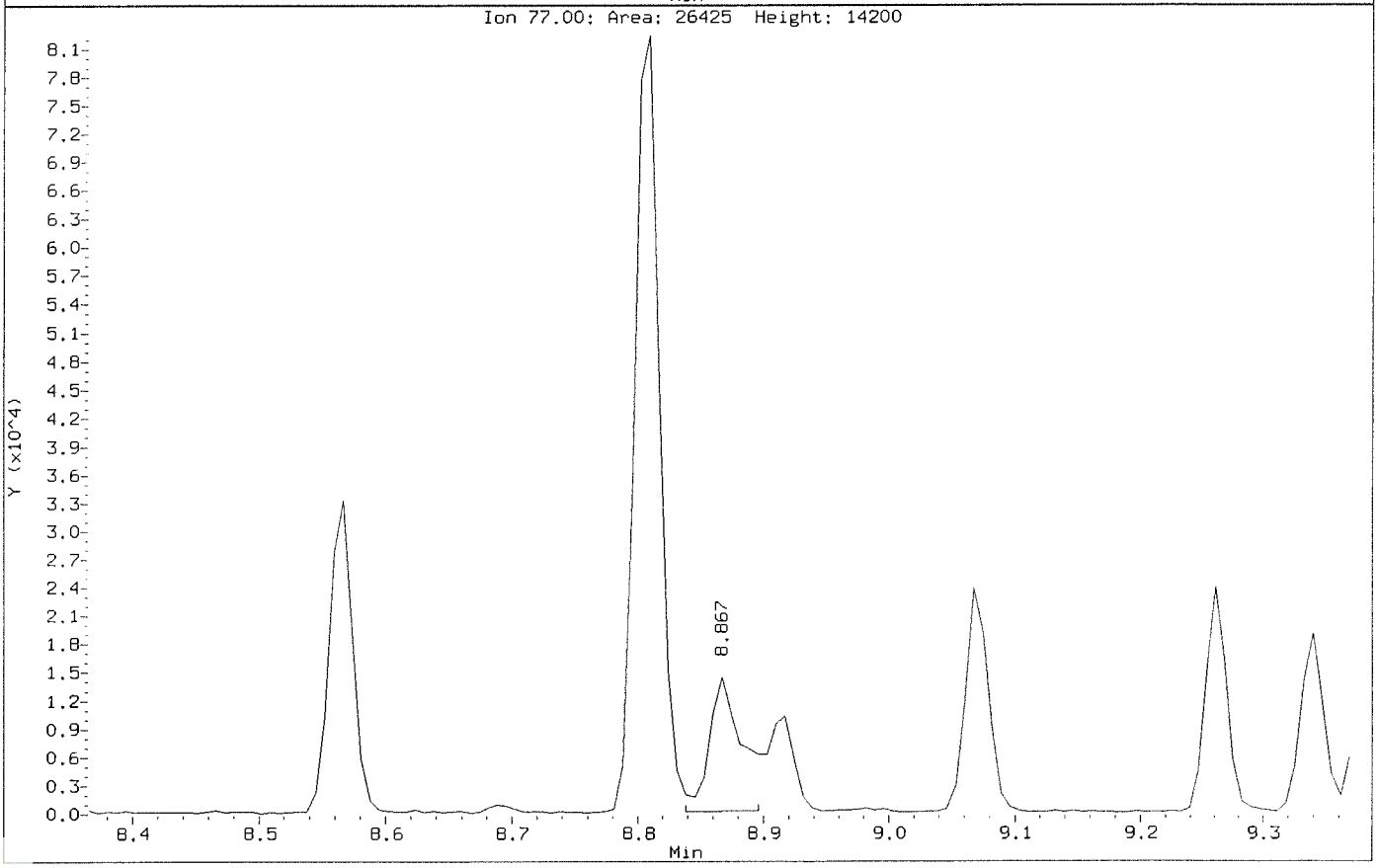
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





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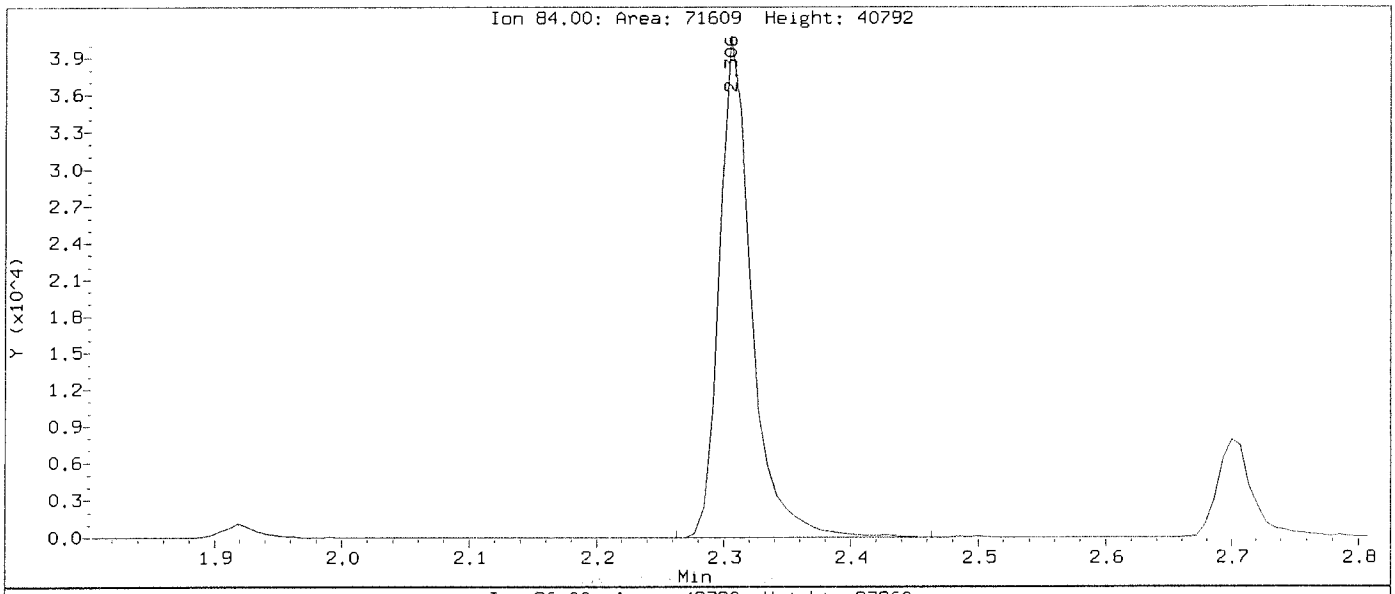
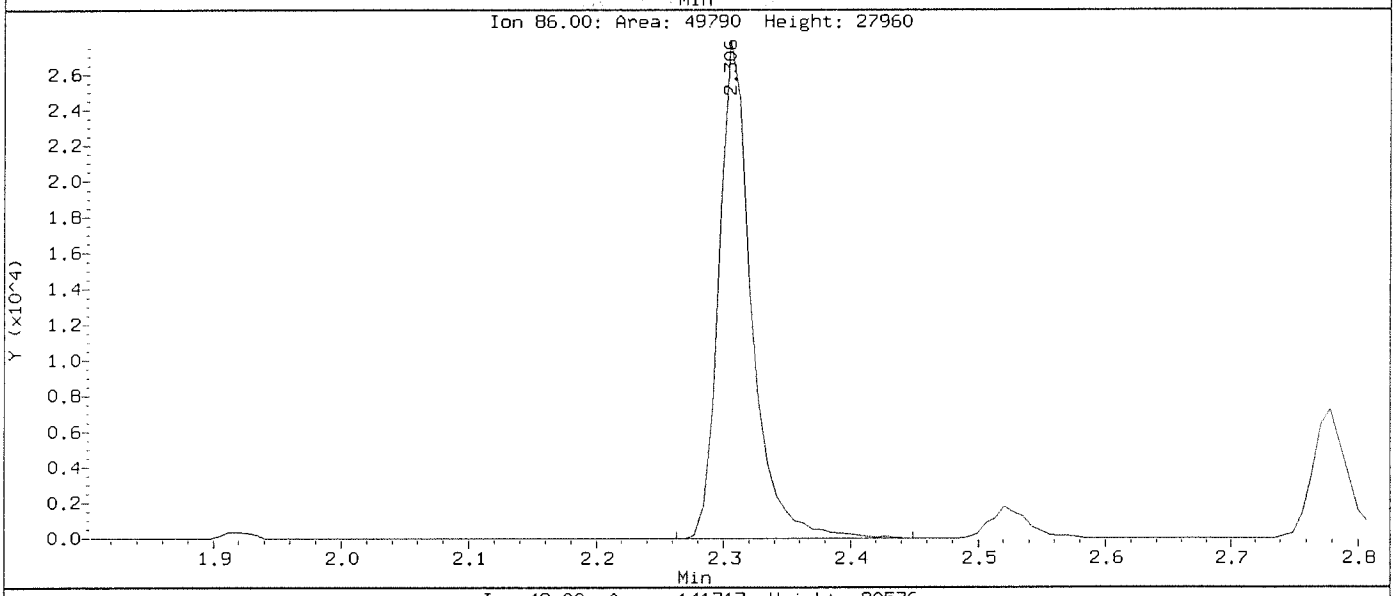
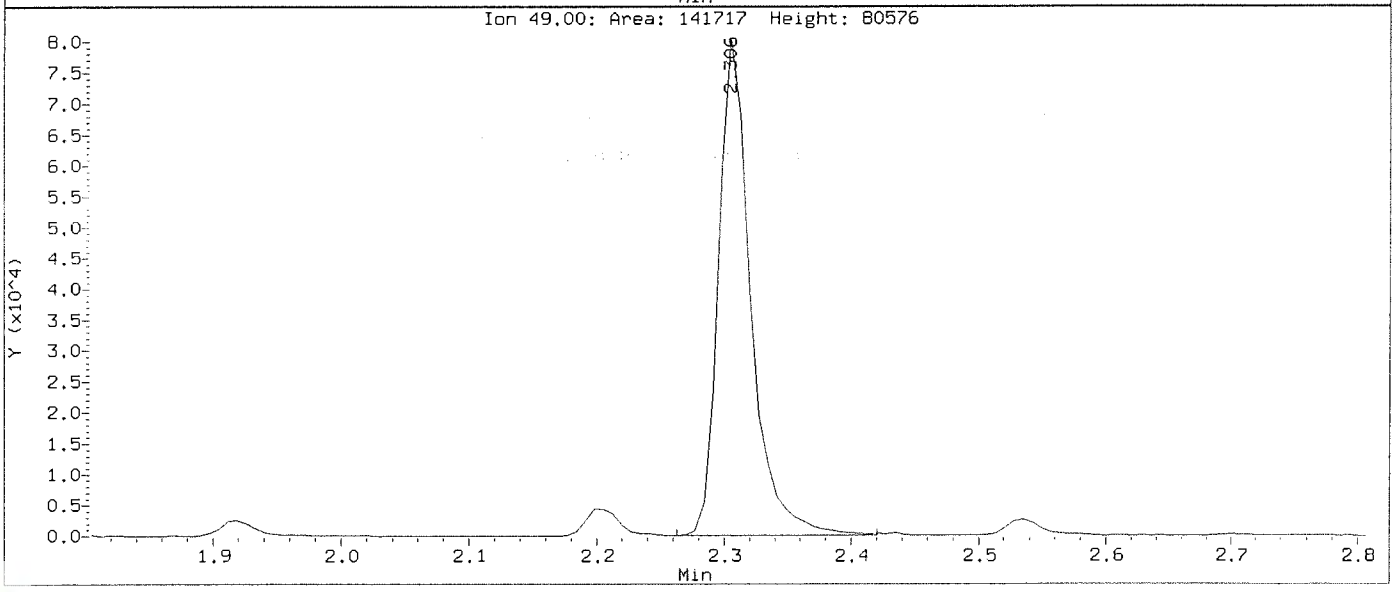
Injection Date: 08-JUL-2020 17:49
Instrument: voa6.i
Client Sample ID: HS20070055-03MSD

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







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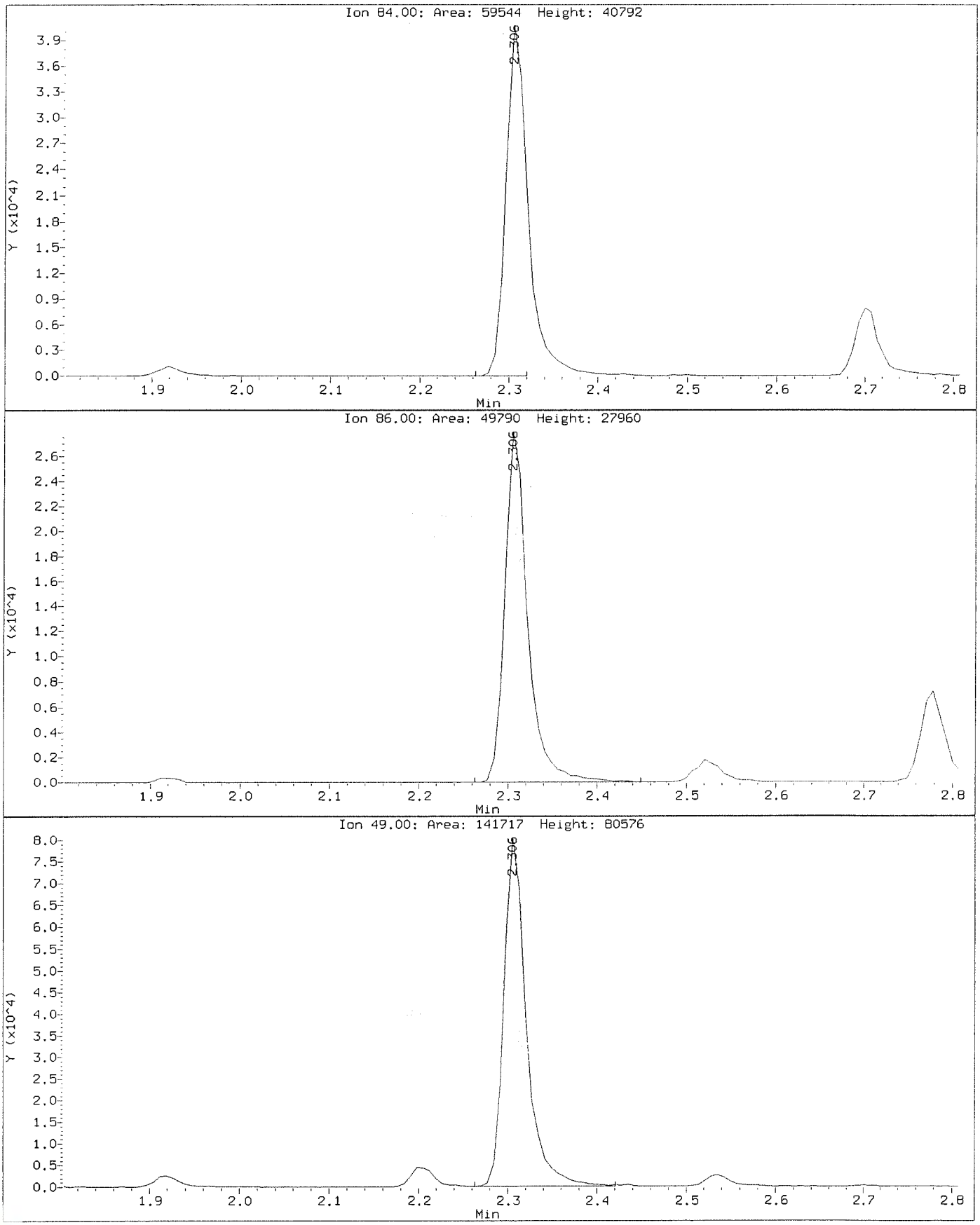
Client Sample ID: HS20070055-03MSD

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



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Report Date: 13-Aug-2020 12:56

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Data file : \\nahstws005\Target\chem\voa6.i\X200708.b\X070819.D
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Inj Date : 08-JUL-2020 18:13
Operator : PC Inst ID: voa6.i
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Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200708.b\8260W.m
Meth Date : 13-Aug-2020 12:56 voa6.i Quant Type: ISTD
Cal Date : 07-JUL-2020 13:53 Cal File: X070708.D
Als bottle: 18 QC Sample: MS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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

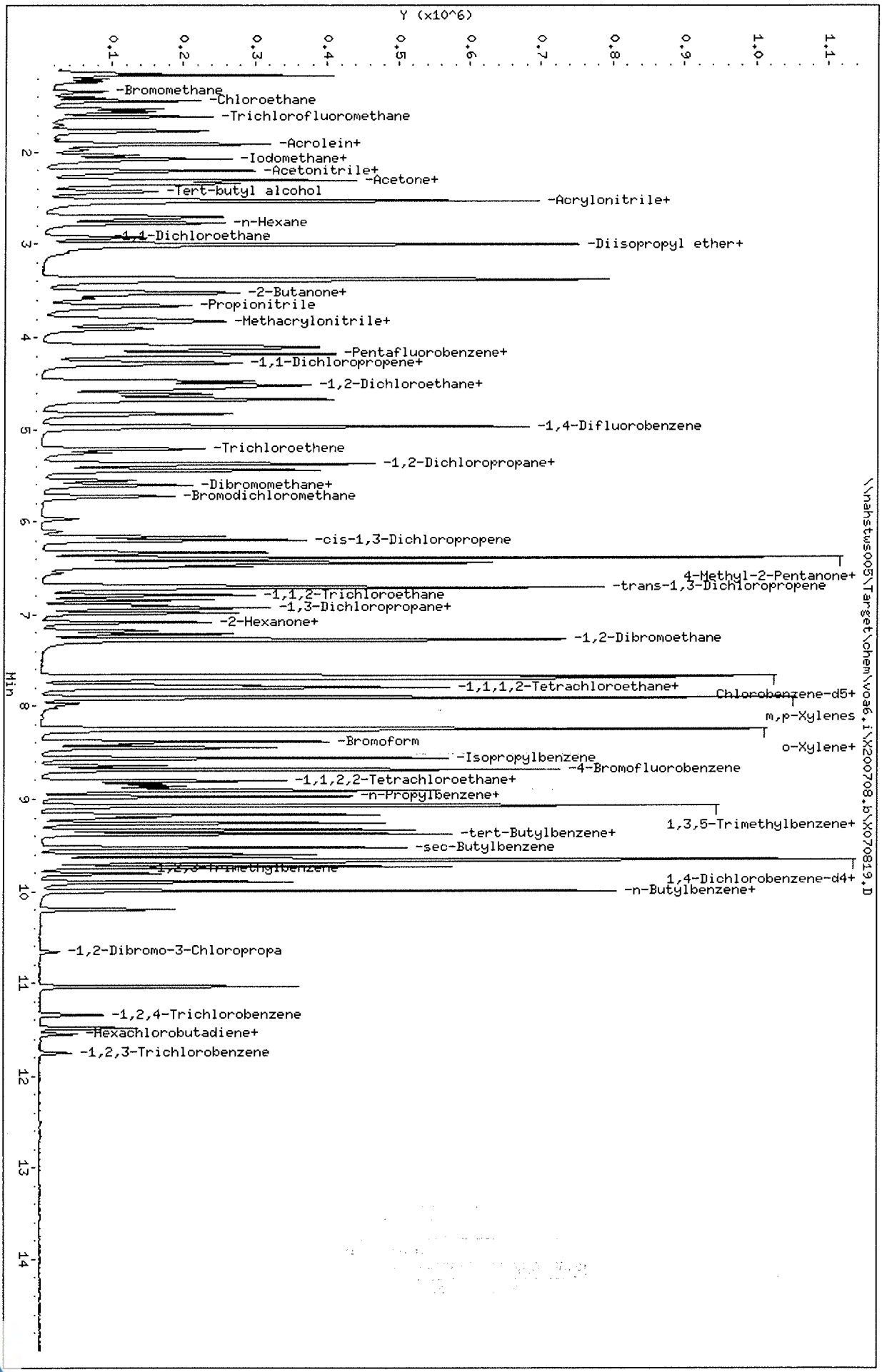
Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.189	4.189	(1.000)	316702	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	494232	50.0000	
* 47 Chlorobenzene-d5	117	7.670	7.671	(1.000)	426175	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	186067	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.979)	161150	46.7195	46.71
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	212729	44.8192	44.81
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	568626	50.7515	50.75
$ 69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	200986	49.5154	49.51
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	66715	20.3884	20.38
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.976)	111625	19.2400	19.24
68 1,1,2,2-Tetrachloroethane	83	8.845	8.845	(0.915)	69790	18.9720	18.97
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	53162	19.7193	19.71
22 1,1-Dichloroethane	63	2.929	2.929	(0.699)	159830	17.8073	17.80
11 1,1-Dichloroethene	96	1.919	1.919	(0.458)	48712	16.6107	16.61
32 1,1-Dichloropropene	75	4.282	4.283	(0.862)	96654	19.8595	19.85
93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.215)	11572	20.6649	20.66
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	60119	18.5349	18.53(M)
90 1,2,4-Trichlorobenzene	180	11.345	11.338	(1.173)	23314	20.8962	20.89
79 1,2,4-Trimethylbenzene	105	9.382	9.383	(0.970)	236393	21.6041	21.60
89 1,2-Dibromo-3-Chloropropane	155	10.657	10.658	(1.102)	5104	16.5315	16.53
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	65091	19.0015	19.00
88 1,2-Dichlorobenzene	146	9.998	9.991	(1.034)	109600	20.1536	20.15

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
33	1,2-Dichloroethane	62	4.562	4.562	(0.918)	114084	18.6052	18.60
42	1,2-Dichloropropane	63	5.443	5.443	(1.095)	90366	19.6545	19.65
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	235277	22.1931	22.19
83	1,3-Dichlorobenzene	146	9.612	9.605	(0.994)	125062	20.9939	20.99
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	108963	19.2018	19.20
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	127333	22.3681	22.36
26	2,2-Dichloropropane	77	3.516	3.516	(0.839)	109012	19.8814	19.88
24	2-Butanone	43	3.580	3.581	(0.855)	87026	25.5614	25.56
76	2-Chlorotoluene	91	8.974	8.974	(0.928)	202006	21.6311	21.63
52	2-Hexanone	43	7.090	7.090	(0.924)	143694	32.9292	32.92
77	4-Chlorotoluene	91	9.074	9.075	(0.939)	226873	21.4228	21.42
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	237228	22.4209	22.42
45	4-Methyl-2-Pentanone	43	6.331	6.324	(0.825)	218363	35.9154	35.91
10	Acetone	43	2.305	1.976	(0.550)	184337	61.8421	61.84
37	Benzene	78	4.519	4.519	(0.909)	278316	19.7371	19.73
74	Bromobenzene	156	8.809	8.810	(0.911)	75760	21.3427	21.34
29	Bromochloromethane	128	3.802	3.795	(0.908)	37628	17.1063	17.10
39	Bromodichloromethane	83	5.729	5.729	(1.153)	95038	19.1981	19.19
66	Bromoform	173	8.415	8.416	(1.097)	43241	18.2778	18.27
6	Bromomethane	94	1.338	1.339	(0.320)	39493	17.7093	17.70
19	Carbon Disulfide	76	2.069	2.069	(0.494)	300170	31.1703	31.17
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	95551	20.2583	20.25
59	Chlorobenzene	112	7.699	7.699	(1.004)	174604	20.1097	20.10
7	Chloroethane	64	1.403	1.403	(0.335)	47995	15.5603	15.56
28	Chloroform	83	3.910	3.910	(0.933)	128926	18.5779	18.57
3	Chloromethane	50	1.080	1.081	(0.258)	124992	19.2053	19.20
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.843)	76020	18.3636	18.36
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	113998	19.1101	19.11
55	Dibromochloromethane	129	7.176	7.176	(0.936)	67318	19.2294	19.22
44	Dibromomethane	93	5.557	5.558	(1.118)	45687	18.4371	18.43
2	Dichlorodifluoromethane	85	0.973	0.973	(0.232)	65366	17.0493	17.04
61	Ethylbenzene	106	7.799	7.800	(1.017)	96050	20.9019	20.90
91	Hexachlorobutadiene	225	11.481	11.481	(1.187)	20151	23.2618	23.26
67	Isopropylbenzene	105	8.566	8.566	(1.117)	285311	20.9319	20.93
62	m,p-Xylenes	106	7.907	7.907	(1.031)	228425	41.3359	41.33
17	Methylene Chloride	84	2.305	2.306	(0.550)	51233	14.7935	14.79(M)
87	n-Butylbenzene	91	9.998	9.999	(1.034)	211036	22.3605	22.36
73	n-Propylbenzene	91	8.917	8.917	(0.922)	342592	22.5757	22.57
92	Naphthalene	128	11.546	11.546	(1.194)	34435	19.2658	19.26
63	o-Xylene	106	8.244	8.244	(1.075)	110358	20.3850	20.38
81	sec-Butylbenzene	105	9.526	9.526	(0.985)	276311	22.1506	22.15
64	Styrene	104	8.265	8.258	(1.078)	190700	20.2690	20.26
78	tert-Butylbenzene	119	9.339	9.340	(0.966)	191881	22.4791	22.47
56	Tetrachloroethene	164	6.933	6.933	(0.904)	56360	21.6510	21.65
50	Toluene	91	6.453	6.453	(0.841)	285353	20.9867	20.98
20	trans-1,2-Dichloroethene	96	2.535	2.535	(0.605)	66004	19.0682	19.06
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	99579	18.5797	18.57
38	Trichloroethene	130	5.214	5.214	(1.049)	73357	20.0050	20.00
8	Trichlorofluoromethane	101	1.560	1.561	(0.373)	95578	17.5004	17.50
5	Vinyl Chloride	62	1.145	1.145	(0.273)	103416	18.5881	18.58

QC Flag Legend

M - Compound response manually integrated.



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Purge Volume: 5.0
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Instrument: voa6.i
Operator: PC
Column diameter: 0.18

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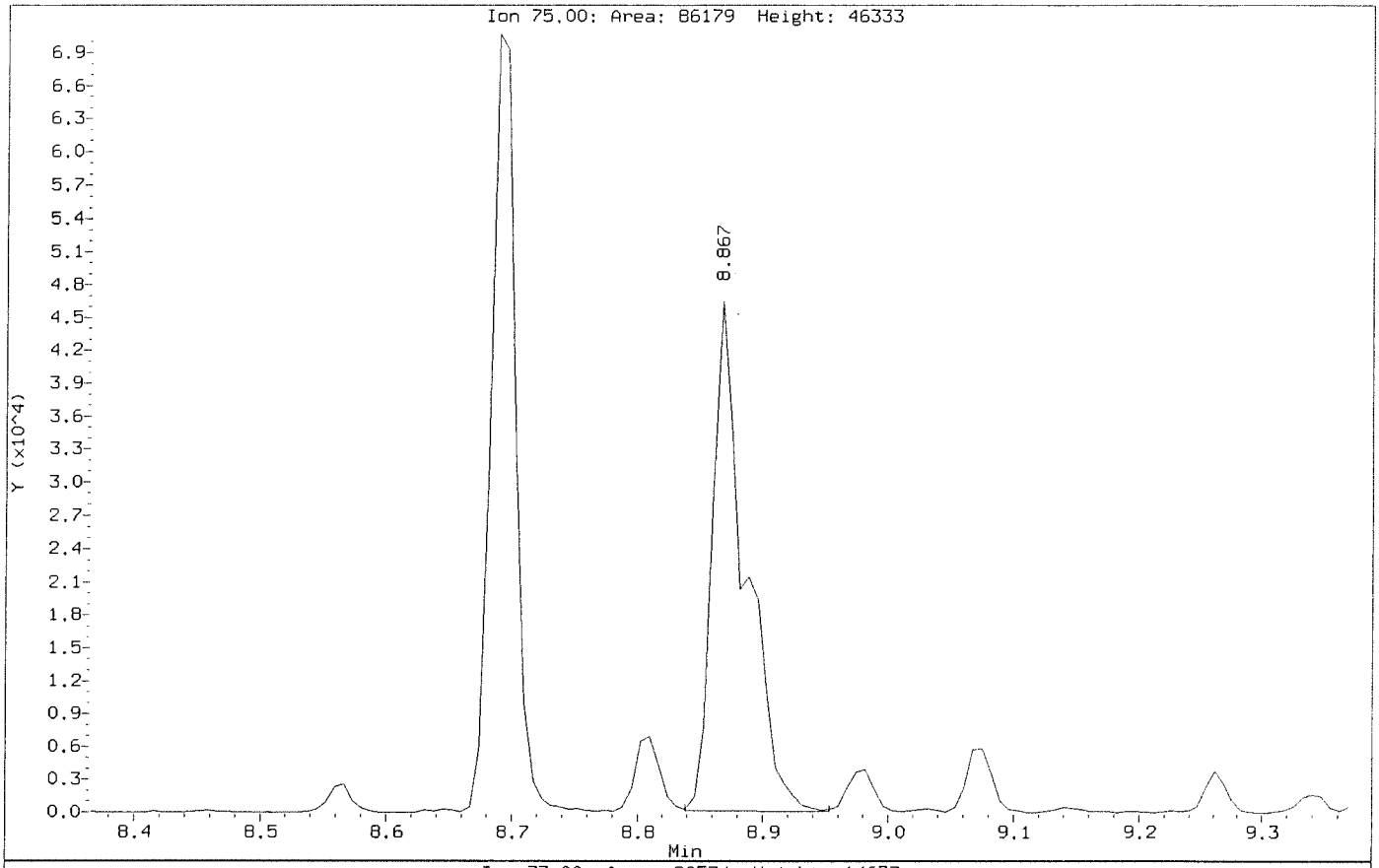
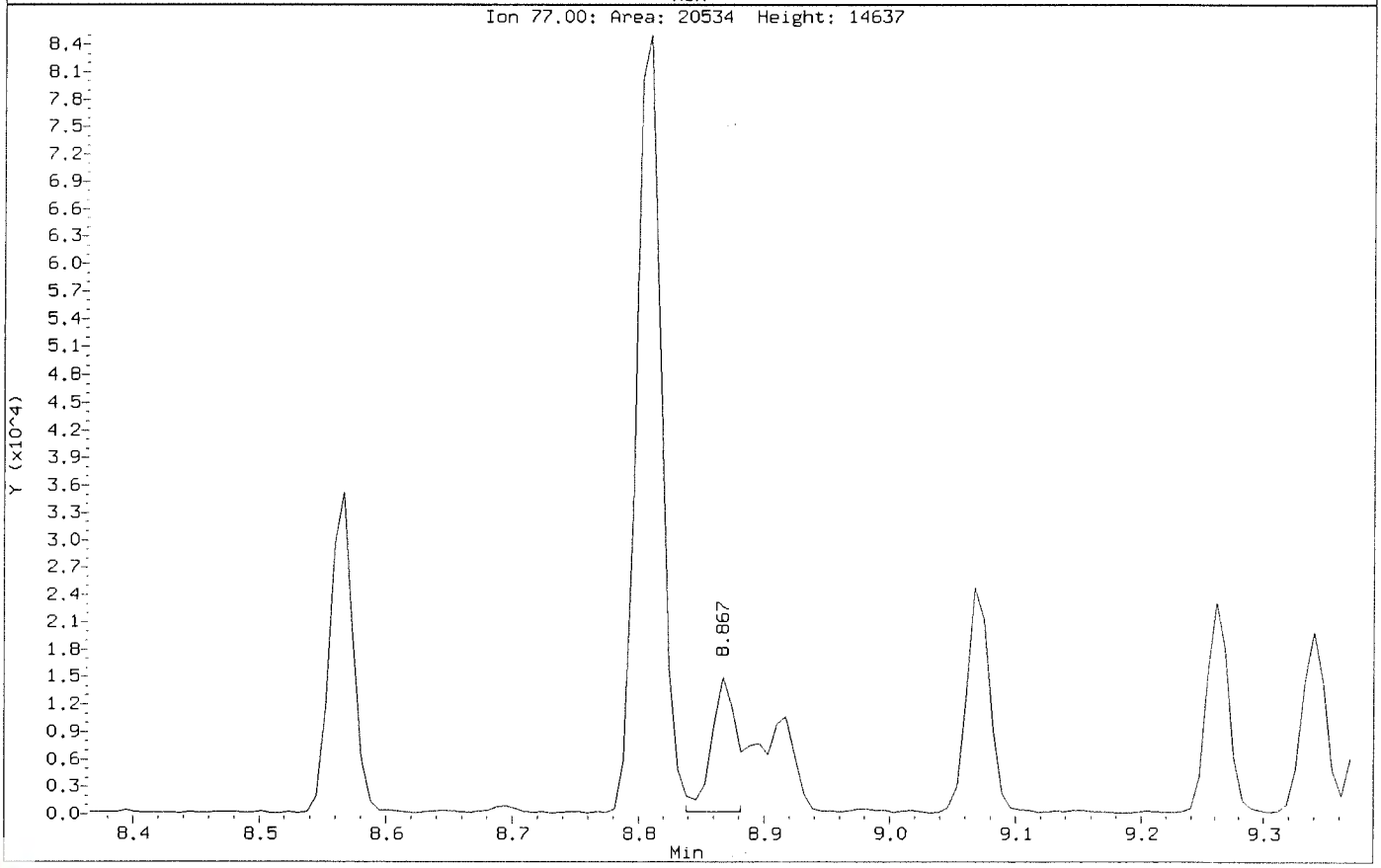
Instrument: voa6.i
Client Sample ID: HS20070055-04MS

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





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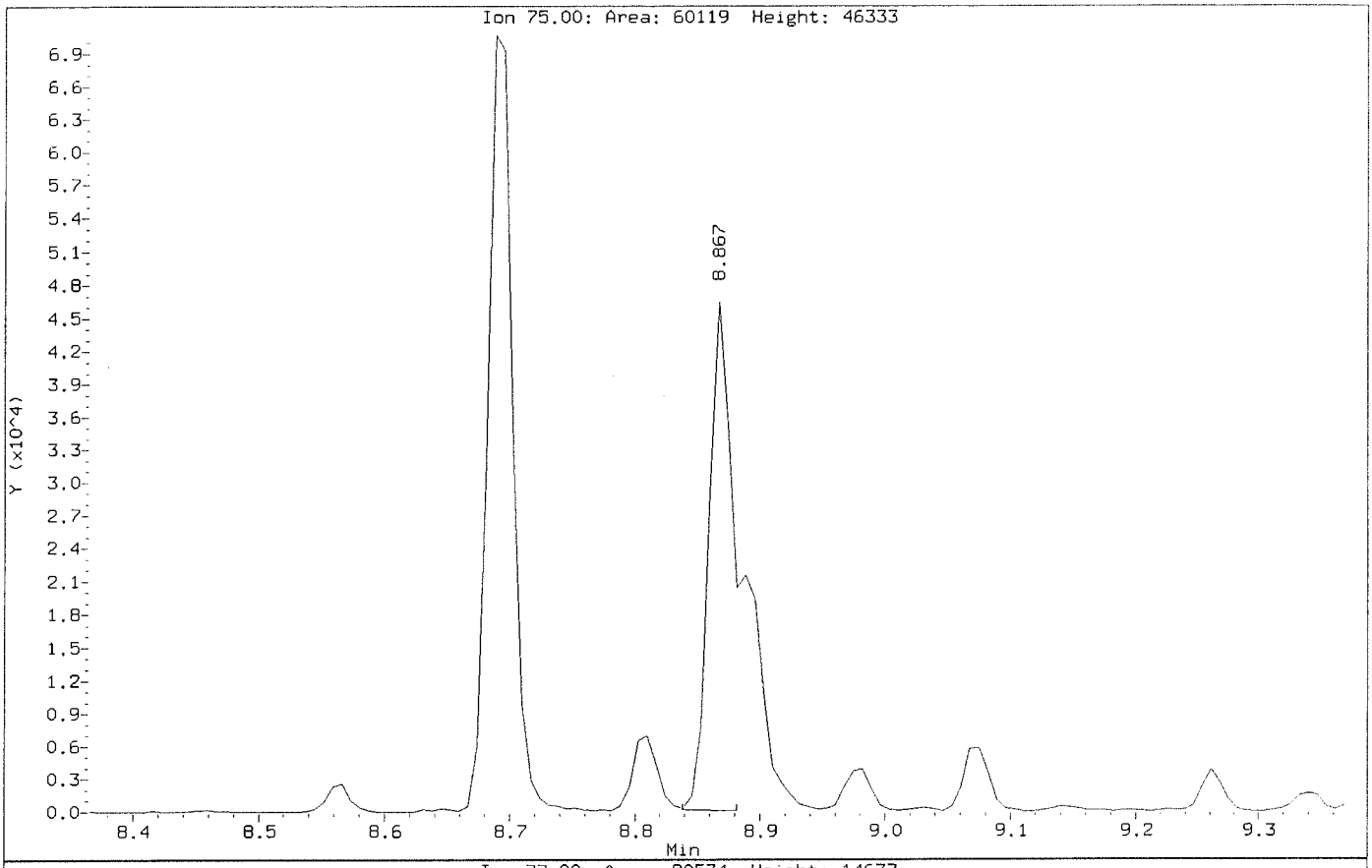
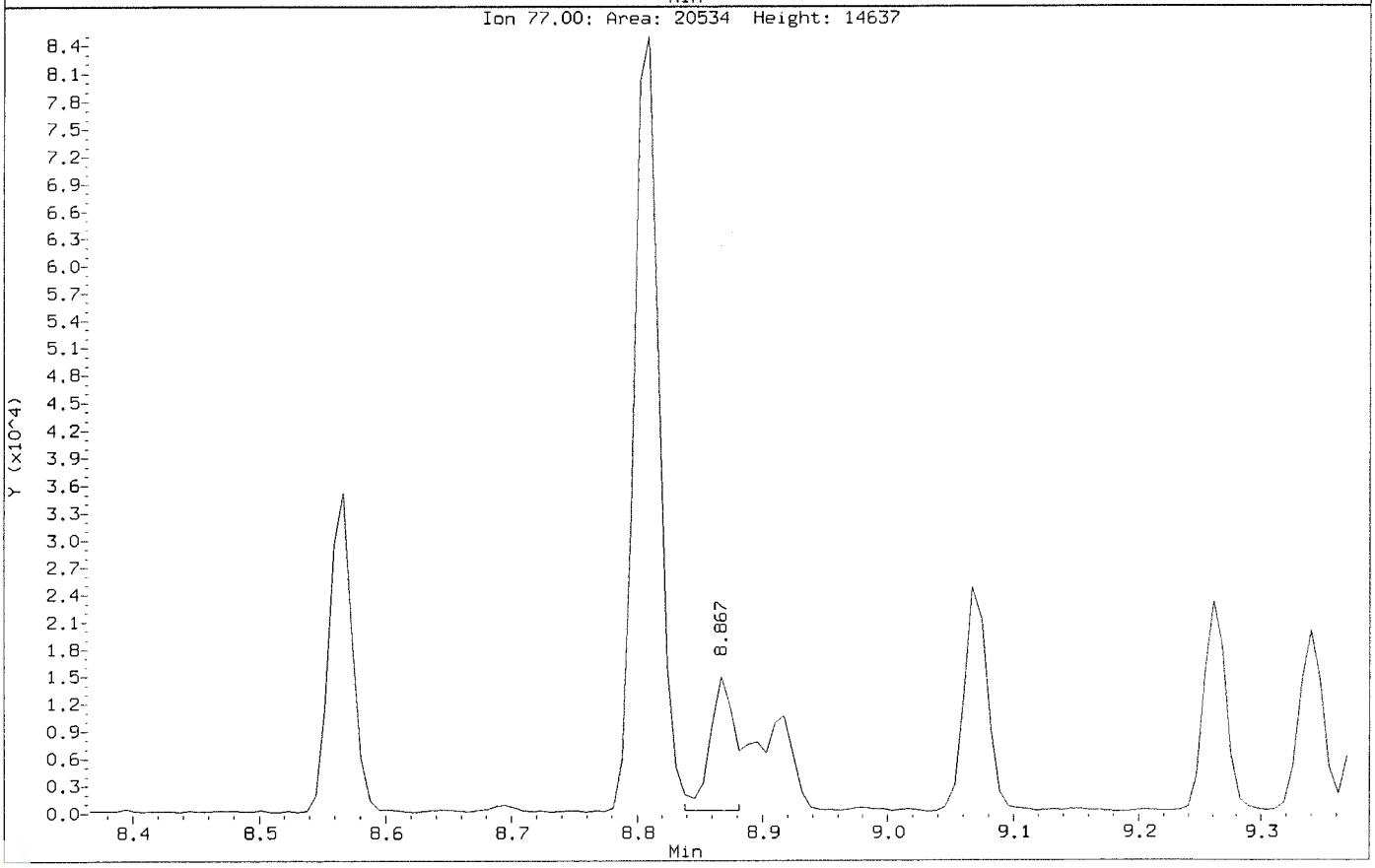
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





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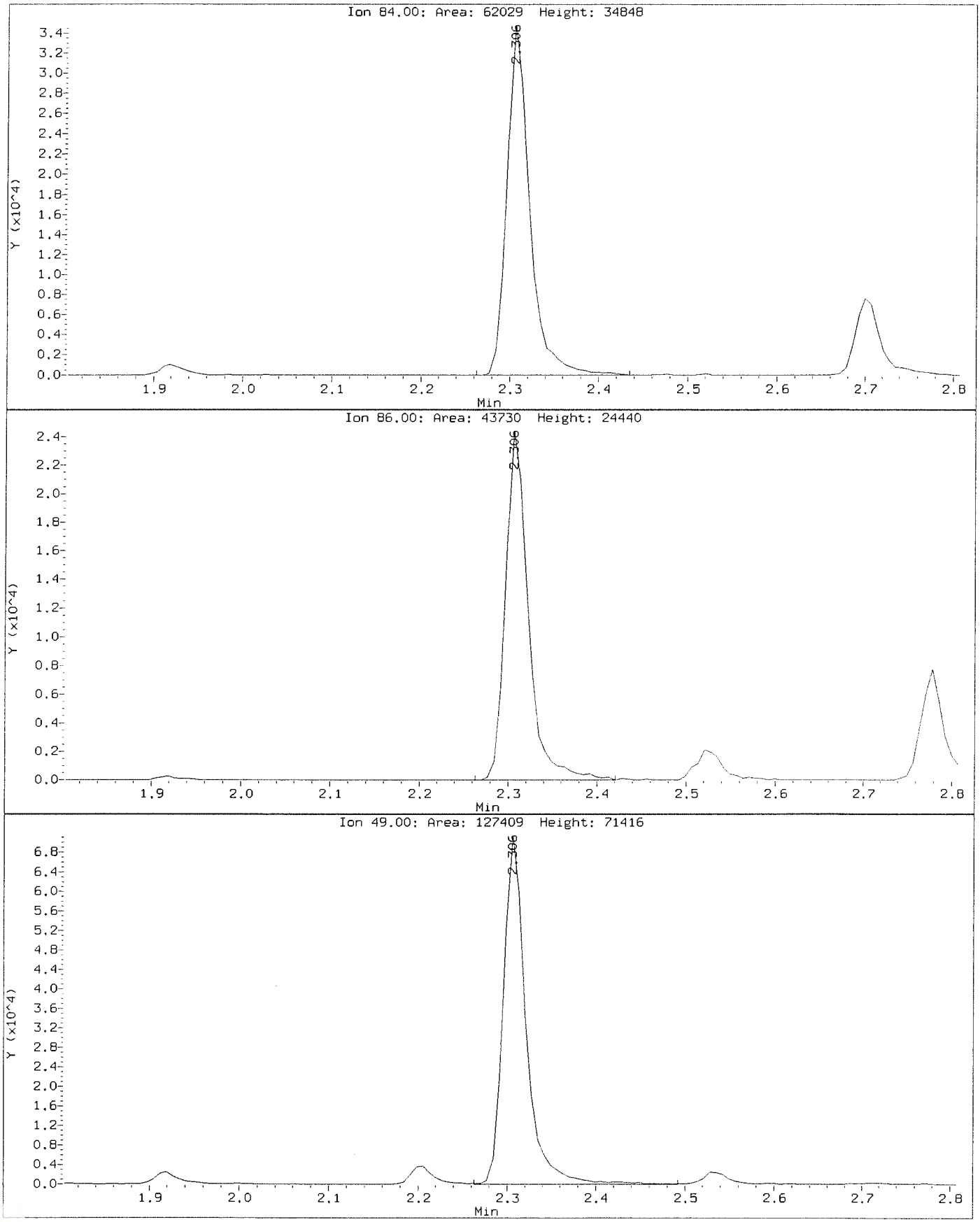
Instrument: voa6.i
Client Sample ID: HS20070055-04MS

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



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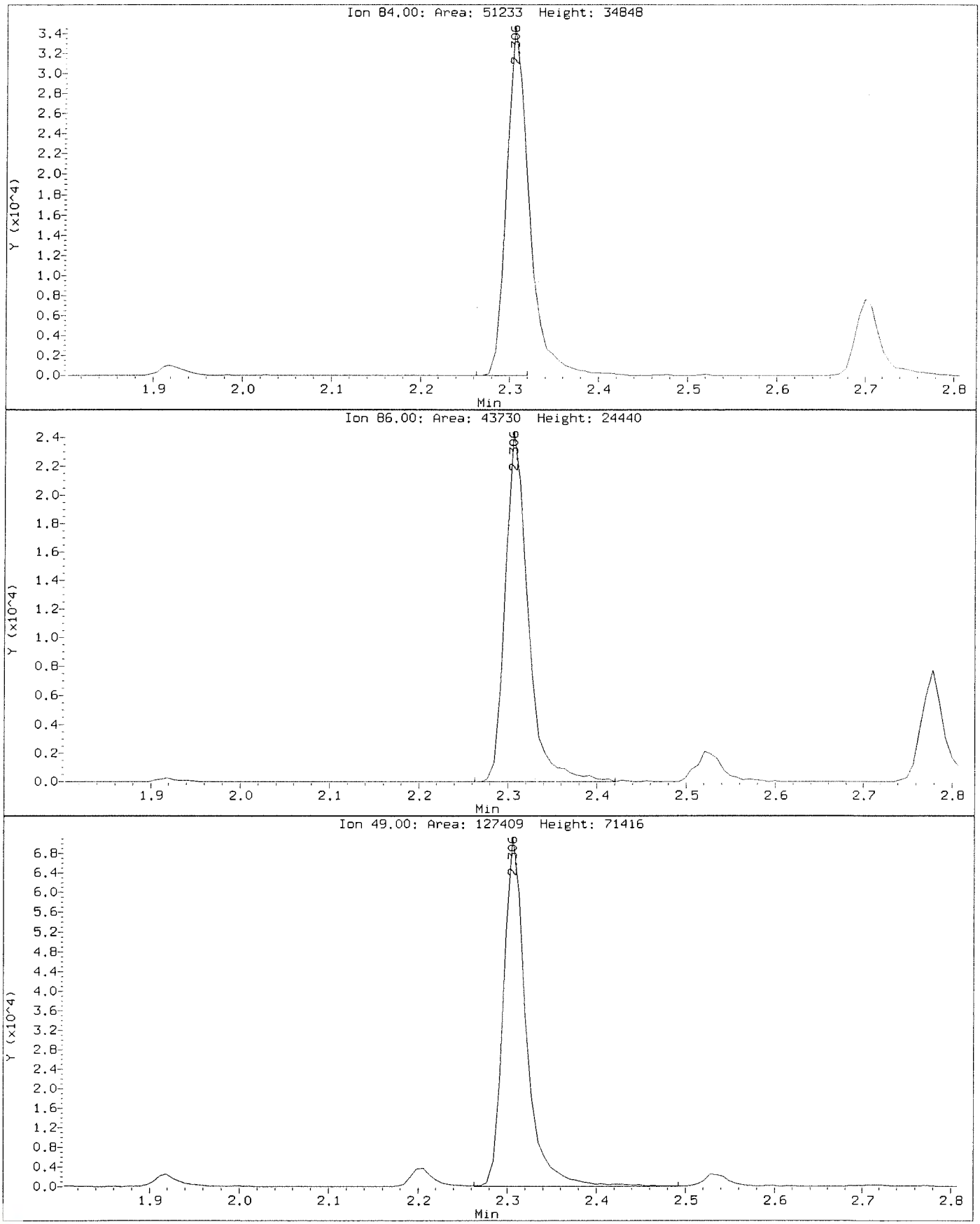
Instrument: voa6.i
Client Sample ID: HS20070055-04MS

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



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Report Date: 13-Aug-2020 12:56

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200708.b\X070820.D
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Inj Date : 08-JUL-2020 18:37
Operator : PC Inst ID: voa6.i
Smp Info : HS20070055-04MSD;HS20070055-04MSD;3;;MSD
Misc Info : HS18090001;WATER;0;1;
Comment :
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Cal Date : 07-JUL-2020 13:53 Cal File: X070708.D
Als bottle: 18 QC Sample: MSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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

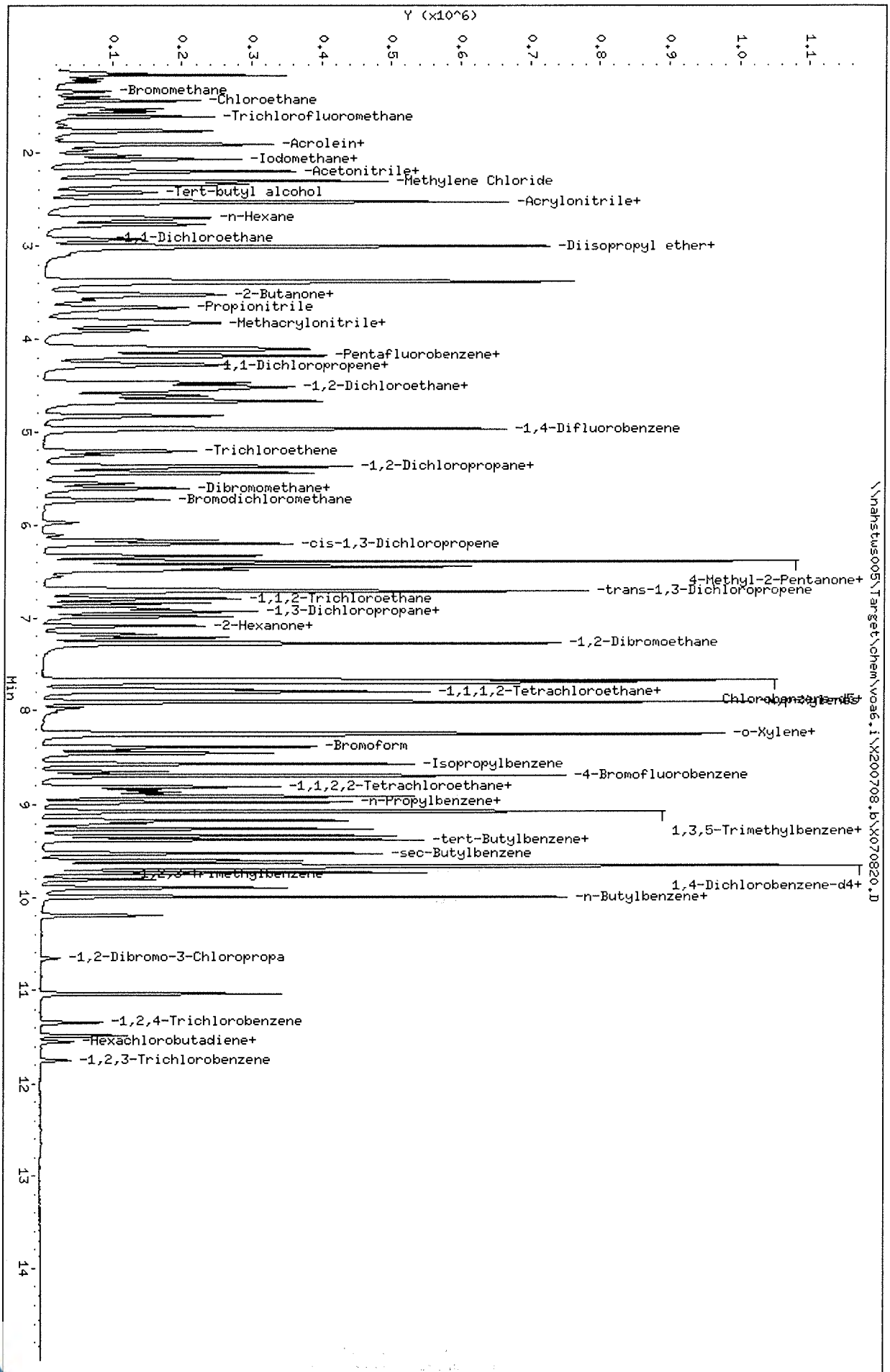
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.189	4.189	(1.000)	313191	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	492723	50.0000	
* 47 Chlorobenzene-d5	117	7.670	7.671	(1.000)	428230	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.669	(1.000)	197403	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.979)	158236	46.3826	46.38
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	205507	43.7671	43.76
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	564706	50.1597	50.15
$ 69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	206617	50.6835	50.68
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	64410	19.5895	19.58
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.976)	107517	18.7397	18.73
68 1,1,2,2-Tetrachloroethane	83	8.838	8.845	(0.915)	68928	17.6617	17.66
53 1,1,2-Trichloroethane	83	6.839	6.840	(0.892)	51806	19.1241	19.12
22 1,1-Dichloroethane	63	2.928	2.929	(0.699)	158672	17.8764	17.87
11 1,1-Dichloroethene	96	1.918	1.919	(0.458)	48925	16.8704	16.87
32 1,1-Dichloropropene	75	4.289	4.283	(0.863)	90864	18.7270	18.72
93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.216)	11467	19.4046	19.40
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.918)	61089	17.7524	17.75(M)
90 1,2,4-Trichlorobenzene	180	11.345	11.338	(1.174)	23253	19.7229	19.72
79 1,2,4-Trimethylbenzene	105	9.382	9.383	(0.971)	233633	20.1257	20.12
89 1,2-Dibromo-3-Chloropropane	155	10.657	10.658	(1.103)	5100	15.4679	15.46
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	64317	18.6855	18.68
88 1,2-Dichlorobenzene	146	9.998	9.991	(1.035)	108512	18.8077	18.80

Data File: \\nahstws005\Target\chem\voa6.i\X200708.b\X070820.D Page 2
Report Date: 13-Aug-2020 12:56

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
33	1,2-Dichloroethane	62	4.562	4.562	(0.918)	112752	18.4443	18.44
42	1,2-Dichloropropane	63	5.443	5.443	(1.095)	87111	19.0046	19.00
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	226665	20.1529	20.15
83	1,3-Dichlorobenzene	146	9.604	9.605	(0.994)	122315	19.3537	19.35
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	107597	18.8701	18.87
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.002)	122333	20.2368	20.23
26	2,2-Dichloropropane	77	3.516	3.516	(0.839)	103042	19.0033	19.00
24	2-Butanone	43	3.580	3.581	(0.855)	86598	25.7600	25.75
76	2-Chlorotoluene	91	8.974	8.974	(0.929)	192226	19.4018	19.40
52	2-Hexanone	43	7.090	7.090	(0.924)	144693	33.0070	33.00
77	4-Chlorotoluene	91	9.074	9.075	(0.939)	222499	19.8033	19.80
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	228018	20.3129	20.31
45	4-Methyl-2-Pentanone	43	6.324	6.324	(0.824)	217457	35.5659	35.56
10	Acetone	43	2.234	1.976	(0.533)	78342	6.93796	6.93
37	Benzene	78	4.519	4.519	(0.909)	264477	18.8131	18.81
74	Bromobenzene	156	8.809	8.810	(0.912)	72992	19.3821	19.38
29	Bromochloromethane	128	3.802	3.795	(0.908)	36379	16.7239	16.72
39	Bromodichloromethane	83	5.729	5.729	(1.153)	93554	18.9562	18.95
66	Bromoform	173	8.415	8.416	(1.097)	42342	17.8120	17.81
6	Bromomethane	94	1.338	1.339	(0.320)	40901	18.5499	18.54
19	Carbon Disulfide	76	2.076	2.069	(0.496)	322620	33.8771	33.87
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	91171	19.3889	19.38
59	Chlorobenzene	112	7.699	7.699	(1.004)	168905	19.3600	19.35
7	Chloroethane	64	1.403	1.403	(0.335)	48384	15.8995	15.89
28	Chloroform	83	3.910	3.910	(0.933)	123005	17.9234	17.92
3	Chloromethane	50	1.080	1.081	(0.258)	112085	17.4152	17.41
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.843)	73210	17.8831	17.88
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	109818	18.4658	18.46
55	Dibromochloromethane	129	7.176	7.176	(0.936)	66826	18.9973	18.99
44	Dibromomethane	93	5.557	5.558	(1.118)	44107	17.8540	17.85
2	Dichlorodifluoromethane	85	0.973	0.973	(0.232)	60445	15.9425	15.94
61	Ethylbenzene	106	7.799	7.800	(1.017)	91337	19.7809	19.78
91	Hexachlorobutadiene	225	11.481	11.481	(1.188)	19318	21.1487	21.14
67	Isopropylbenzene	105	8.566	8.566	(1.117)	273393	19.9613	19.96
62	m,p-Xylenes	106	7.907	7.907	(1.031)	217894	39.2410	39.24
17	Methylene Chloride	84	2.305	2.306	(0.550)	60631	17.7035	17.70(M)
87	n-Butylbenzene	91	9.998	9.999	(1.035)	205316	20.5052	20.50
73	n-Propylbenzene	91	8.917	8.917	(0.923)	327048	20.3138	20.31
92	Naphthalene	128	11.546	11.546	(1.195)	31669	16.7405	16.74
63	o-Xylene	106	8.243	8.244	(1.075)	106168	19.5170	19.51
81	sec-Butylbenzene	105	9.526	9.526	(0.986)	266505	20.1376	20.13
64	Styrene	104	8.265	8.258	(1.078)	182481	19.3023	19.30
78	tert-Butylbenzene	119	9.339	9.340	(0.967)	186851	20.6328	20.63
56	Tetrachloroethene	164	6.933	6.933	(0.904)	53744	20.5470	20.54
50	Toluene	91	6.453	6.453	(0.841)	273899	20.0476	20.04
20	trans-1,2-Dichloroethene	96	2.535	2.535	(0.605)	63976	18.6895	18.68
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	98723	18.4764	18.47
38	Trichloroethene	130	5.206	5.214	(1.048)	70285	19.2259	19.22
8	Trichlorofluoromethane	101	1.560	1.561	(0.373)	95040	17.5969	17.59
5	Vinyl Chloride	62	1.145	1.145	(0.273)	90739	16.4924	16.49

QC Flag Legend

M - Compound response manually integrated.



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

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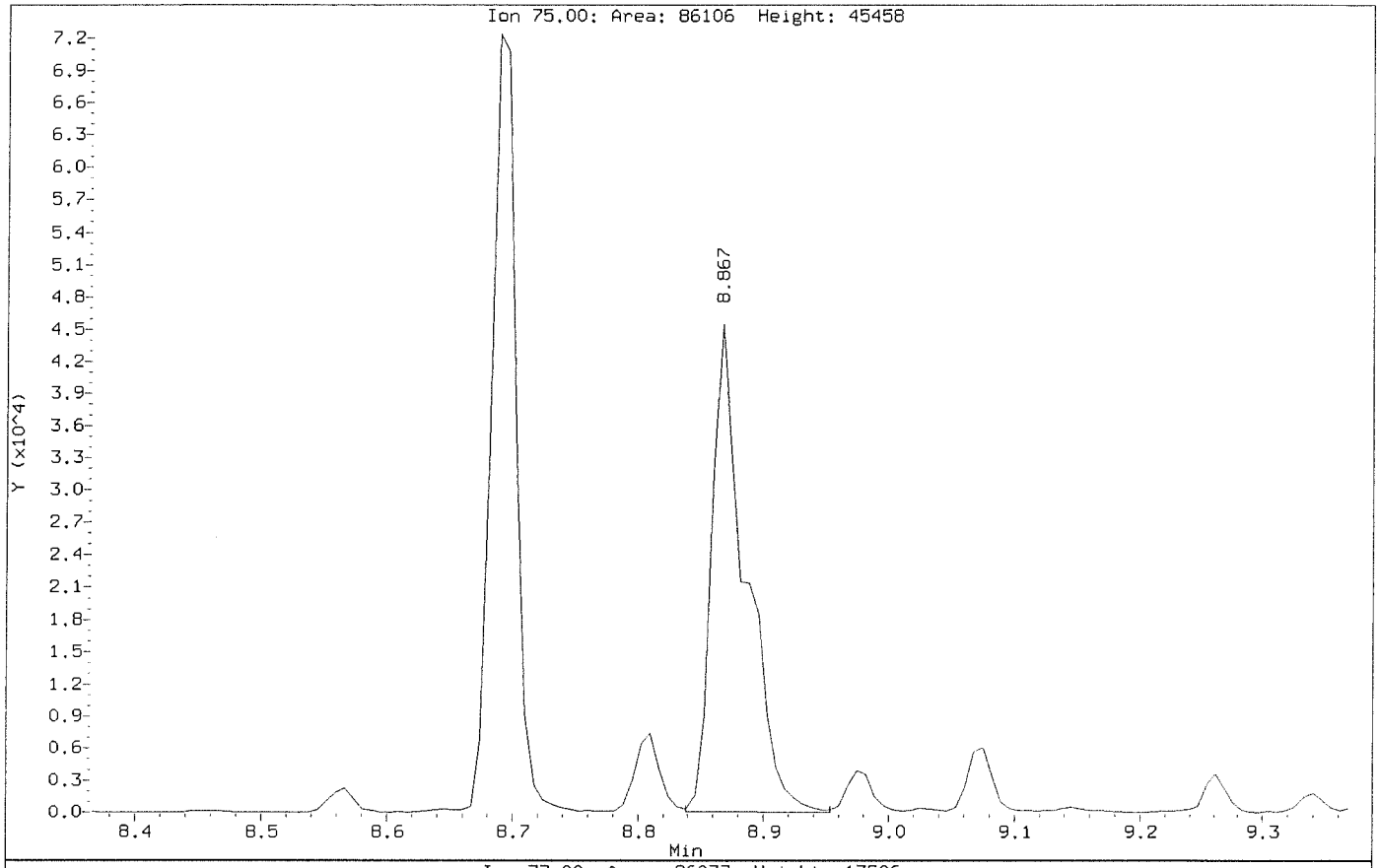
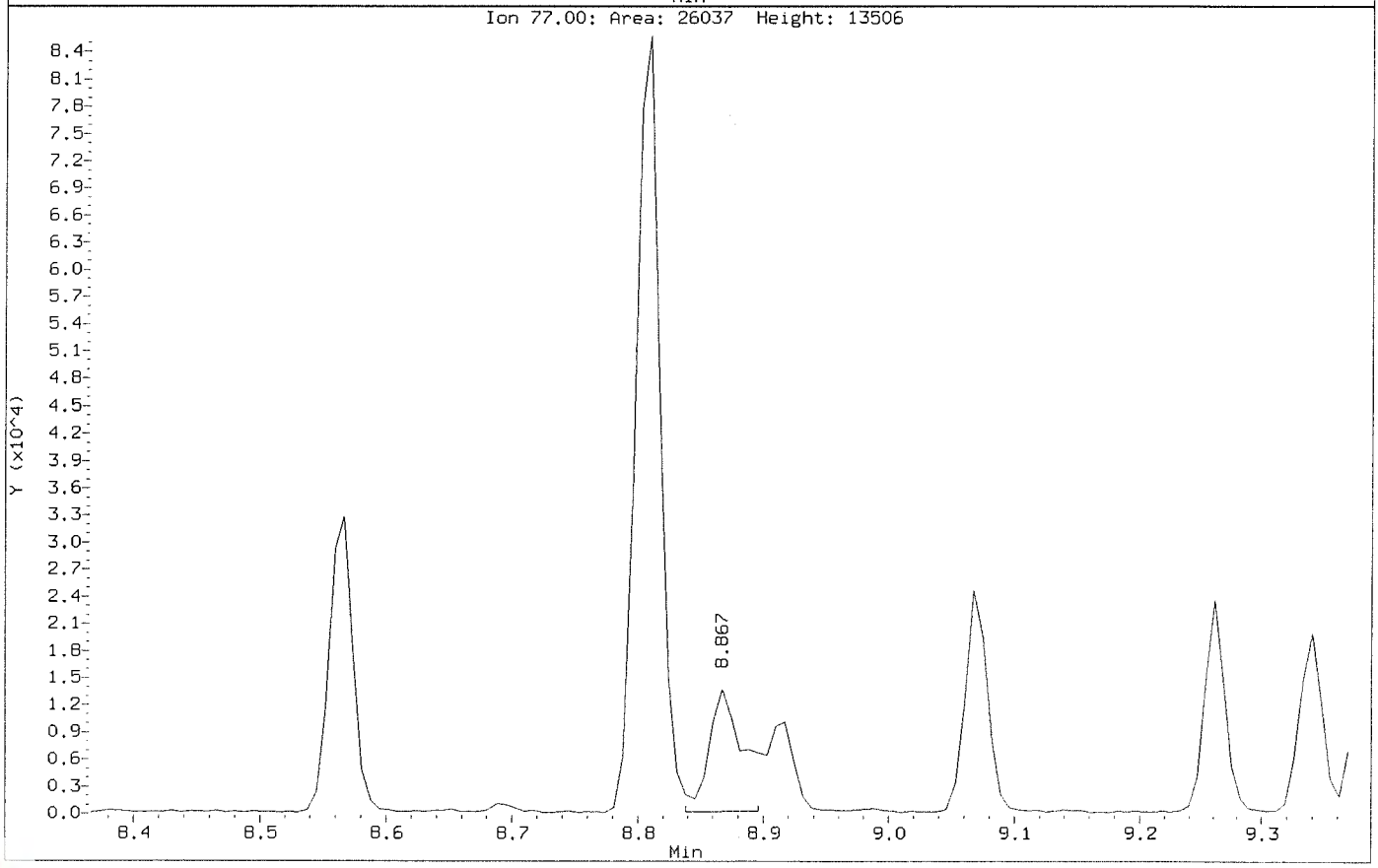
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





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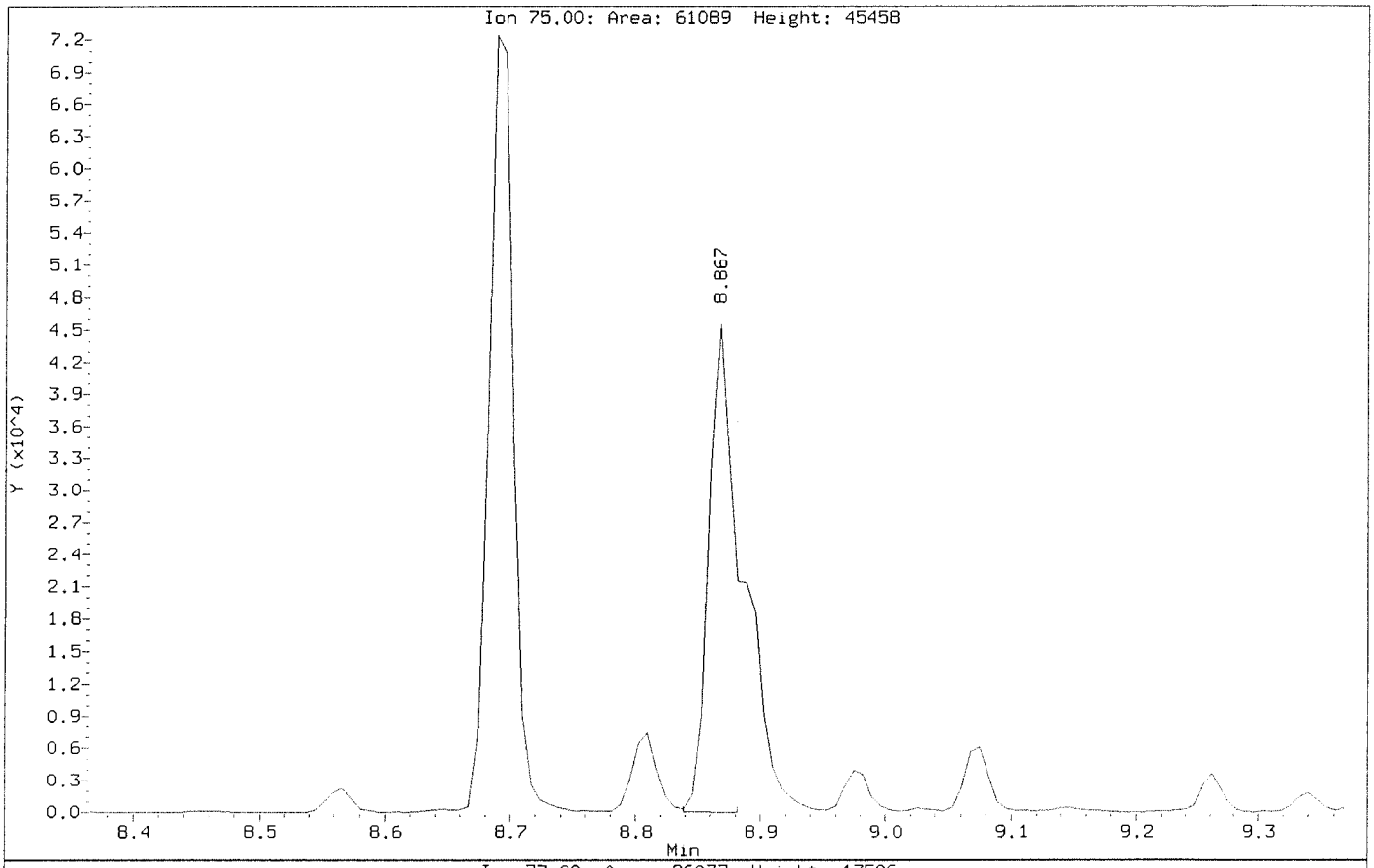
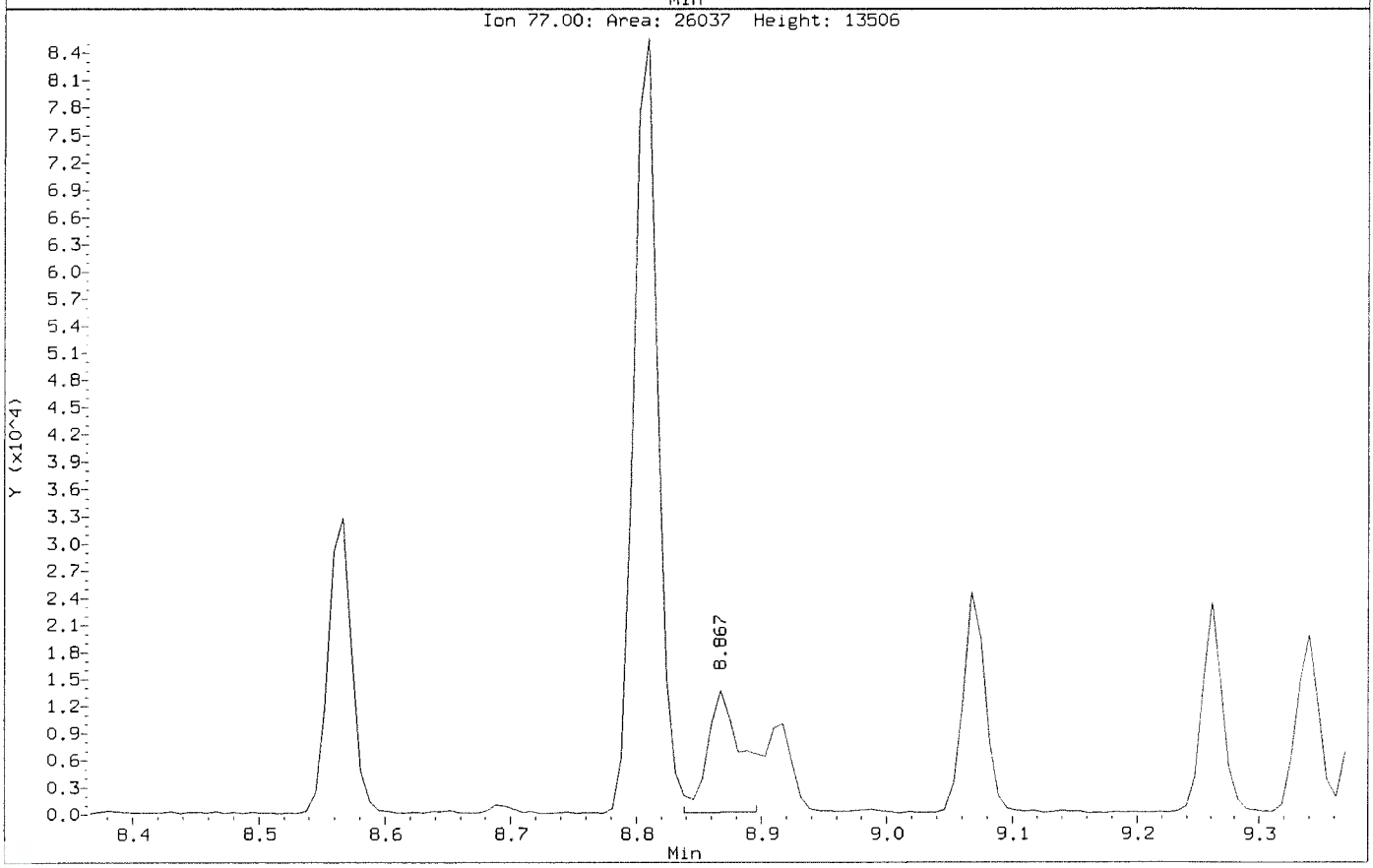
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





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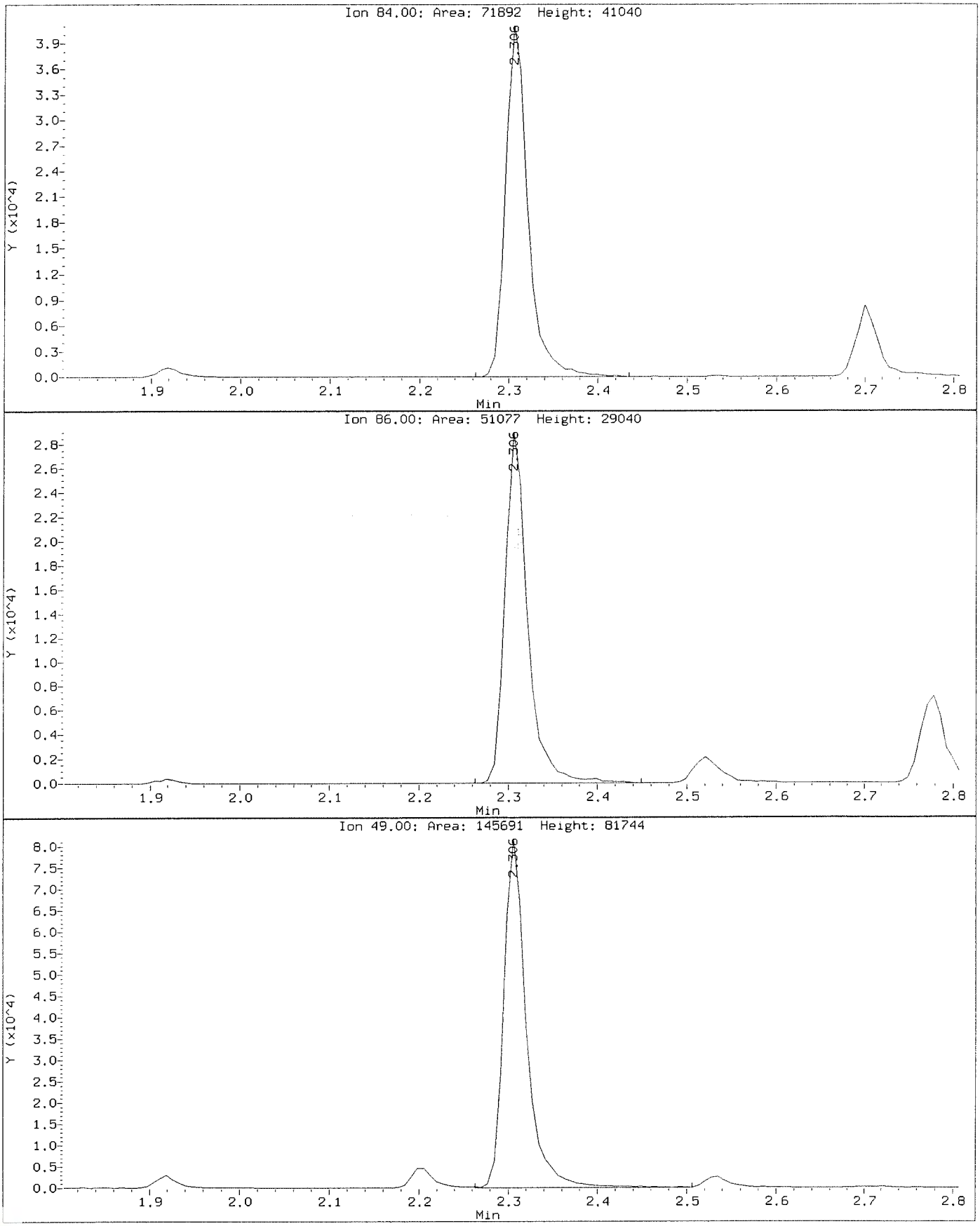
Injection Date: 08-JUL-2020 18:37
Instrument: voa6.i
Client Sample ID: HS20070055-04MSD

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



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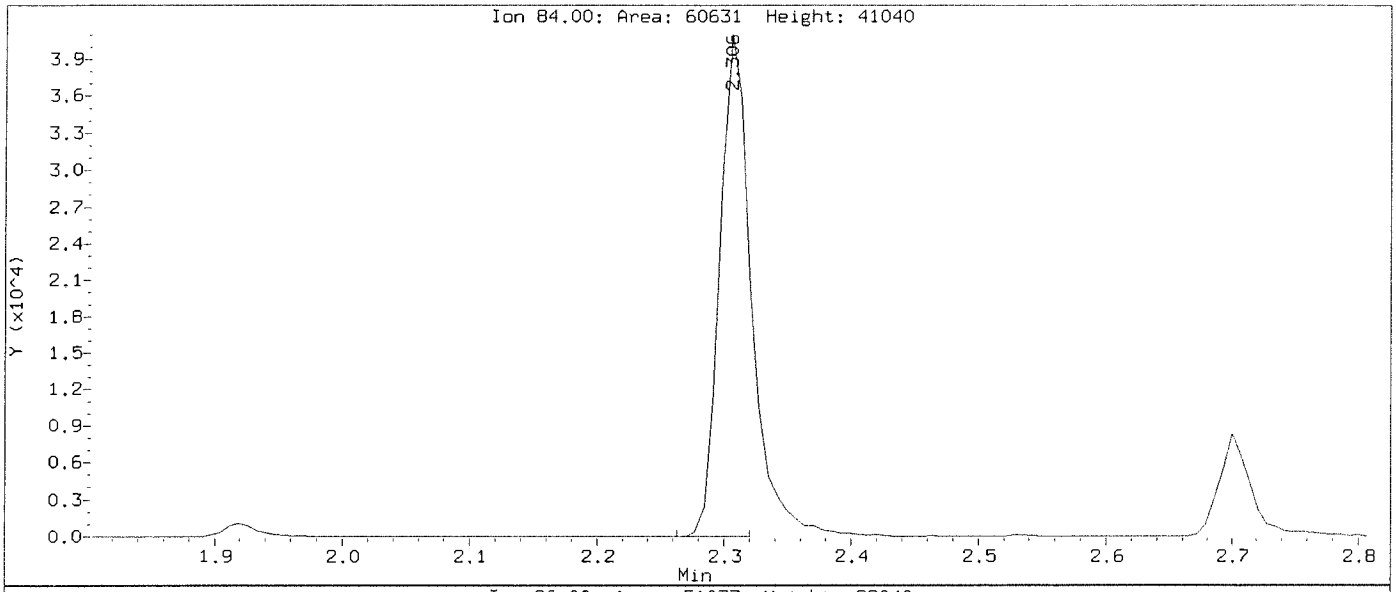
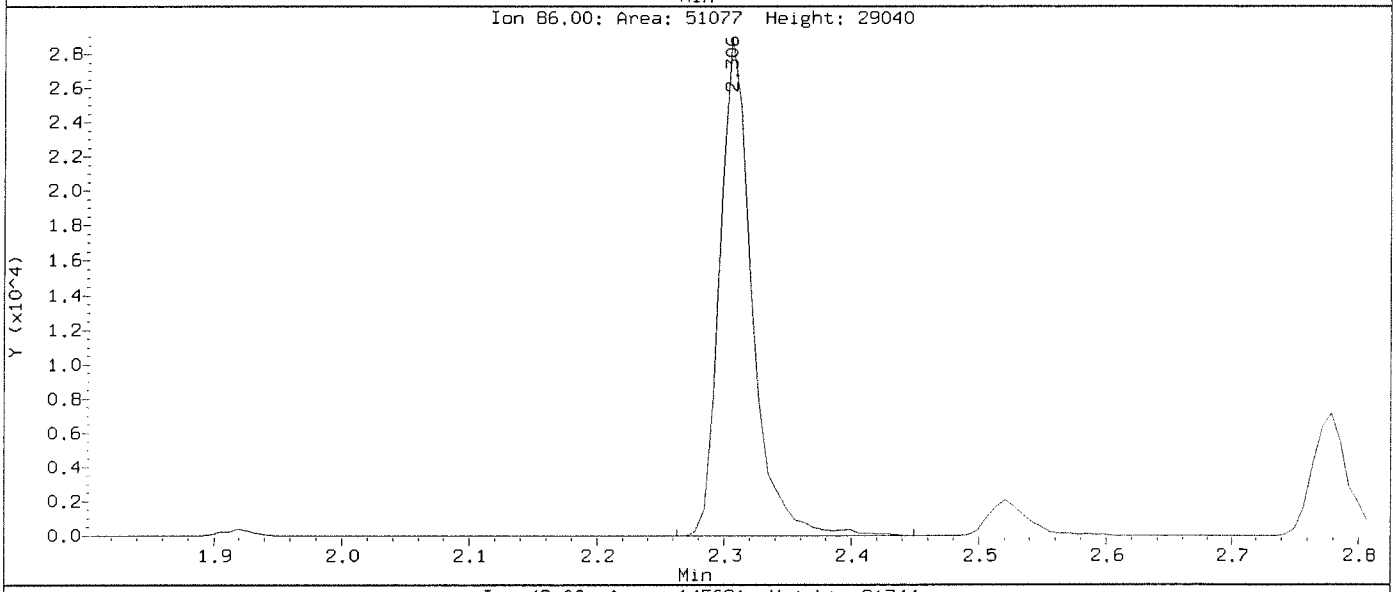
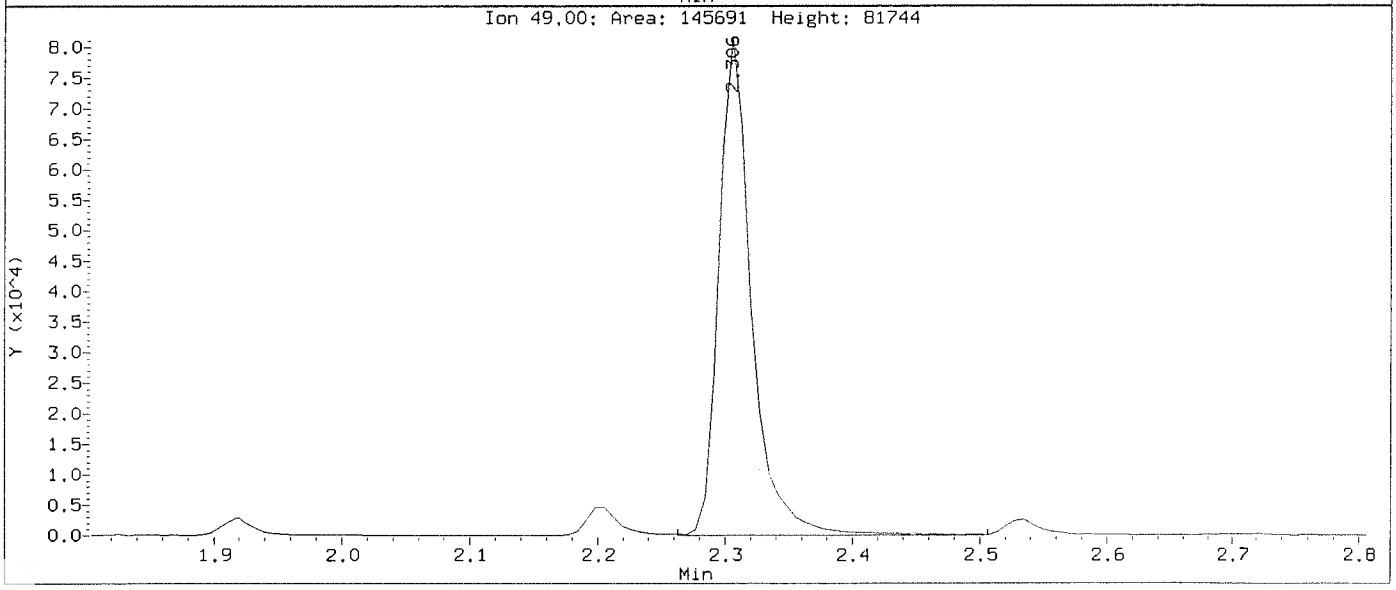
Injection Date: 08-JUL-2020 18:37
Instrument: voa6.i
Client Sample ID: HS20070055-04MSD

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







Data File: \\nahstws005\Target\chem\voa6.i\X200708.b\X070831.D Page 1
Report Date: 13-Aug-2020 12:56

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200708.b\X070831.D
Lab Smp Id: CCV-END Client Smp ID: CCV-END
Inj Date : 08-JUL-2020 23:00
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\X200708.b\8260W.m
Meth Date : 13-Aug-2020 12:56 voa6.i Quant Type: ISTD
Cal Date : 07-JUL-2020 13:53 Cal File: X070708.D
Als bottle: 29 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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

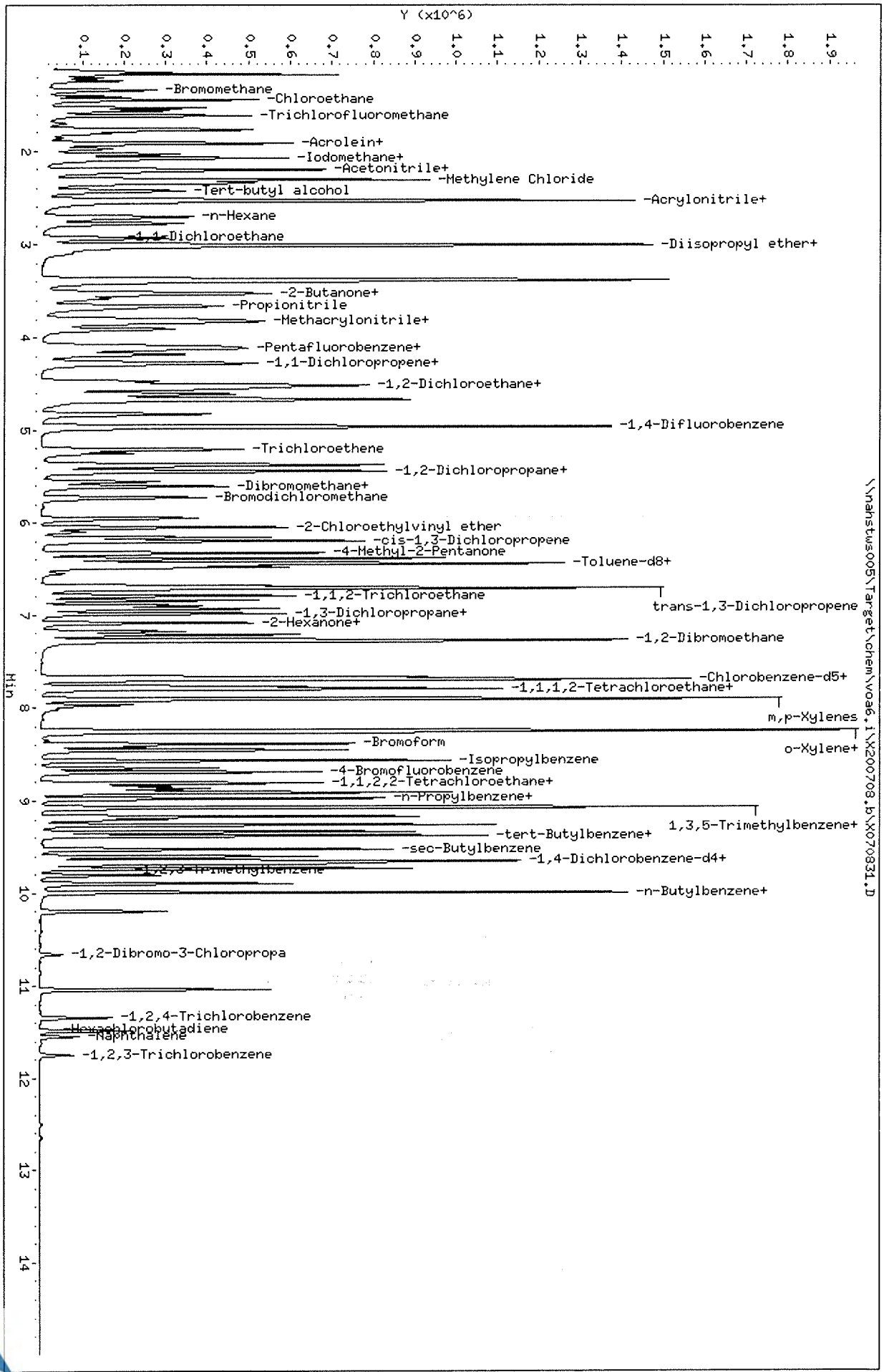
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.189	4.189	(1.000)	259246	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	433635	50.0000	
* 47 Chlorobenzene-d5	117	7.670	7.670	(1.000)	378119	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	158930	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.979)	143824	50.0000	51.01
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	195481	50.0000	50.39
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	508350	50.0000	51.13
$ 69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	181330	50.0000	50.36
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	137504	50.0000	47.36
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.976)	213915	50.0000	45.04
68 1,1,2,2-Tetrachloroethane	83	8.845	8.845	(0.915)	128957	50.0000	41.04
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	115636	50.0000	48.34
22 1,1-Dichloroethane	63	2.929	2.929	(0.699)	341591	50.0000	46.49
11 1,1-Dichloroethene	96	1.919	1.919	(0.458)	105218	50.0000	43.83
32 1,1-Dichloropropene	75	4.282	4.282	(0.862)	178495	50.0000	41.80
93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.215)	19777	50.0000	39.78
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	120938	50.0000	43.65(M)
90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	44530	50.0000	45.11
79 1,2,4-Trimethylbenzene	105	9.382	9.382	(0.970)	453626	50.0000	48.53
89 1,2-Dibromo-3-Chloropropane	155	10.657	10.657	(1.102)	9595	50.0000	38.48
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	137800	50.0000	45.33
88 1,2-Dichlorobenzene	146	9.998	9.998	(1.034)	220522	50.0000	47.47

Data File: \\nahstws005\Target\chem\voa6.i\X200708.b\X070831.D Page 2
Report Date: 13-Aug-2020 12:56

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
33 1,2-Dichloroethane	62	4.562	4.562	(0.918)	253414	50.0000	47.10
42 1,2-Dichloropropane	63	5.443	5.443	(1.095)	191802	50.0000	47.54
75 1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	423347	50.0000	46.75
83 1,3-Dichlorobenzene	146	9.605	9.605	(0.993)	221717	50.0000	43.57
54 1,3-Dichloropropane	76	6.983	6.983	(0.910)	235071	50.0000	46.68
84 1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	226425	50.0000	46.78
26 2,2-Dichloropropane	77	3.516	3.516	(0.839)	193832	50.0000	43.18
24 2-Butanone	43	3.580	3.580	(0.855)	205501	100.000	85.56
76 2-Chlorotoluene	91	8.974	8.974	(0.928)	379564	50.0000	47.58
52 2-Hexanone	43	7.090	7.090	(0.924)	310019	100.000	85.44
77 4-Chlorotoluene	91	9.074	9.074	(0.939)	440953	50.0000	48.74
82 p-Isopropyltoluene	119	9.655	9.655	(0.999)	372808	50.0000	41.25
45 4-Methyl-2-Pentanone	43	6.324	6.324	(0.824)	461491	100.000	90.02
10 Acetone	43	1.976	1.976	(0.472)	156388	100.000	65.34
37 Benzene	78	4.519	4.519	(0.909)	578361	50.0000	46.74
74 Bromobenzene	156	8.809	8.809	(0.911)	153836	50.0000	50.73
29 Bromochloromethane	128	3.802	3.802	(0.908)	79653	50.0000	44.23
39 Bromodichloromethane	83	5.729	5.729	(1.153)	208248	50.0000	47.94
66 Bromoform	173	8.415	8.415	(1.097)	91064	50.0000	43.38
6 Bromomethane	94	1.338	1.338	(0.320)	89813	50.0000	49.33
19 Carbon Disulfide	76	2.076	2.076	(0.496)	650174	100.000	82.47
34 Carbon Tetrachloride	117	4.268	4.268	(0.859)	173156	50.0000	41.84
59 Chlorobenzene	112	7.699	7.699	(1.004)	353453	50.0000	45.88
7 Chloroethane	64	1.403	1.403	(0.335)	106688	50.0000	45.54
28 Chloroform	83	3.910	3.910	(0.933)	271040	50.0000	47.71
3 Chloromethane	50	1.080	1.080	(0.258)	246396	50.0000	46.24
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.843)	162943	50.0000	48.08
46 cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	239967	50.0000	45.84
55 Dibromochloromethane	129	7.176	7.176	(0.936)	145596	50.0000	46.87
44 Dibromomethane	93	5.557	5.557	(1.118)	98993	50.0000	45.53
2 Dichlorodifluoromethane	85	0.973	0.973	(0.232)	130986	50.0000	41.73
61 Ethylbenzene	106	7.799	7.799	(1.017)	180377	50.0000	44.24
91 Hexachlorobutadiene	225	11.481	11.481	(1.187)	34793	50.0000	45.65
67 Isopropylbenzene	105	8.566	8.566	(1.117)	500259	50.0000	41.36
62 m,p-Xylenes	106	7.907	7.907	(1.031)	409662	100.000	83.55
17 Methylene Chloride	84	2.305	2.305	(0.550)	127996	50.0000	45.14(M)
87 n-Butylbenzene	91	9.998	9.998	(1.034)	354436	50.0000	43.96
73 n-Propylbenzene	91	8.917	8.917	(0.922)	594217	50.0000	45.84
92 Naphthalene	128	11.546	11.546	(1.194)	60239	50.0000	39.14
63 o-Xylene	106	8.244	8.244	(1.075)	214051	50.0000	44.56
81 sec-Butylbenzene	105	9.526	9.526	(0.985)	449385	50.0000	42.17
64 Styrene	104	8.265	8.265	(1.078)	377181	50.0000	45.18
78 tert-Butylbenzene	119	9.339	9.339	(0.966)	337122	50.0000	46.23
56 Tetrachloroethene	164	6.933	6.933	(0.904)	101479	50.0000	43.93
50 Toluene	91	6.453	6.453	(0.841)	570228	50.0000	47.26
20 trans-1,2-Dichloroethene	96	2.535	2.535	(0.605)	134449	50.0000	47.44
51 trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	210805	50.0000	44.82
38 Trichloroethene	130	5.214	5.214	(1.049)	152540	50.0000	47.41
8 Trichlorofluoromethane	101	1.560	1.560	(0.373)	191362	50.0000	42.80
5 Vinyl Chloride	62	1.145	1.145	(0.273)	198429	50.0000	43.57

QC Flag Legend

M - Compound response manually integrated.



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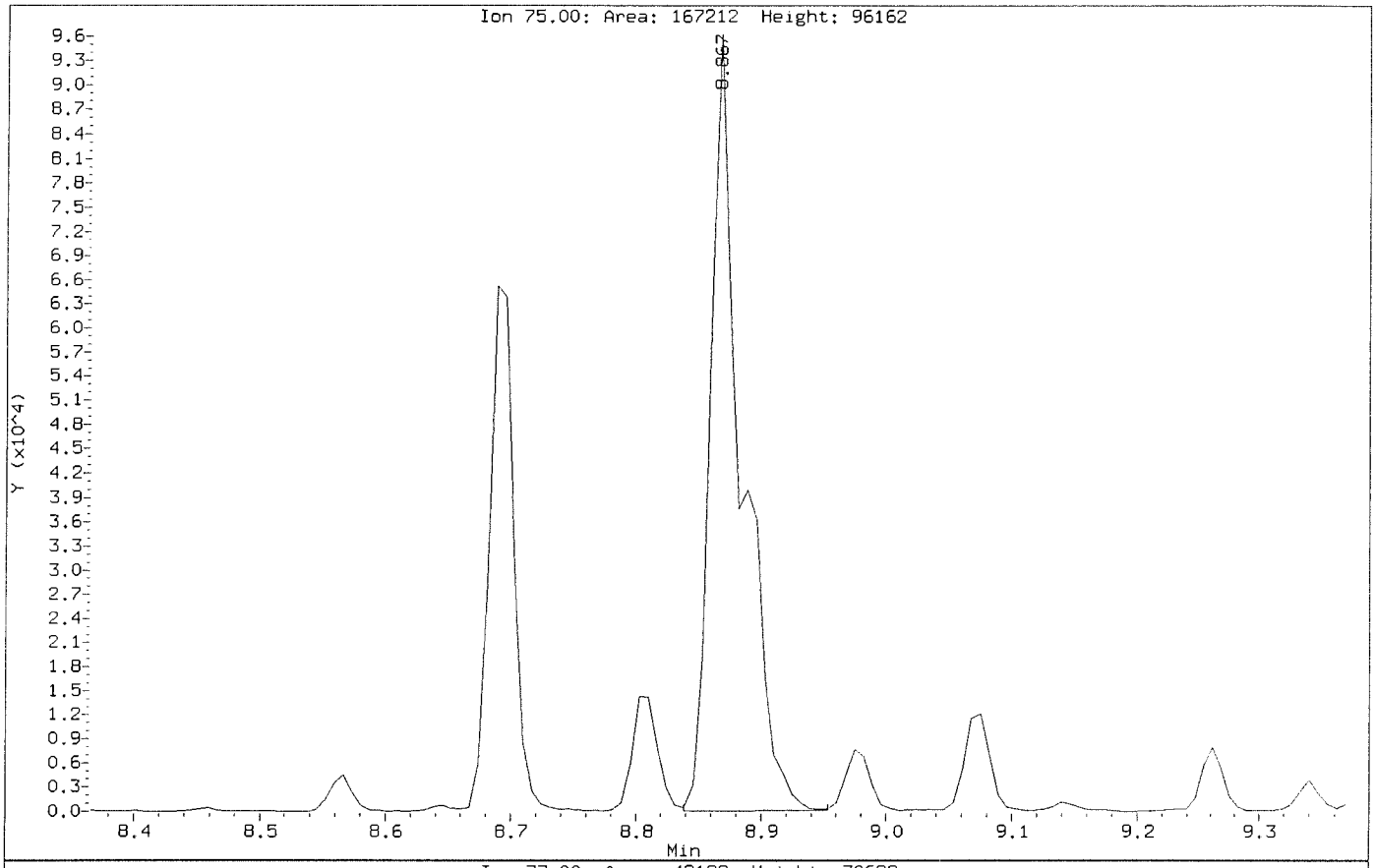
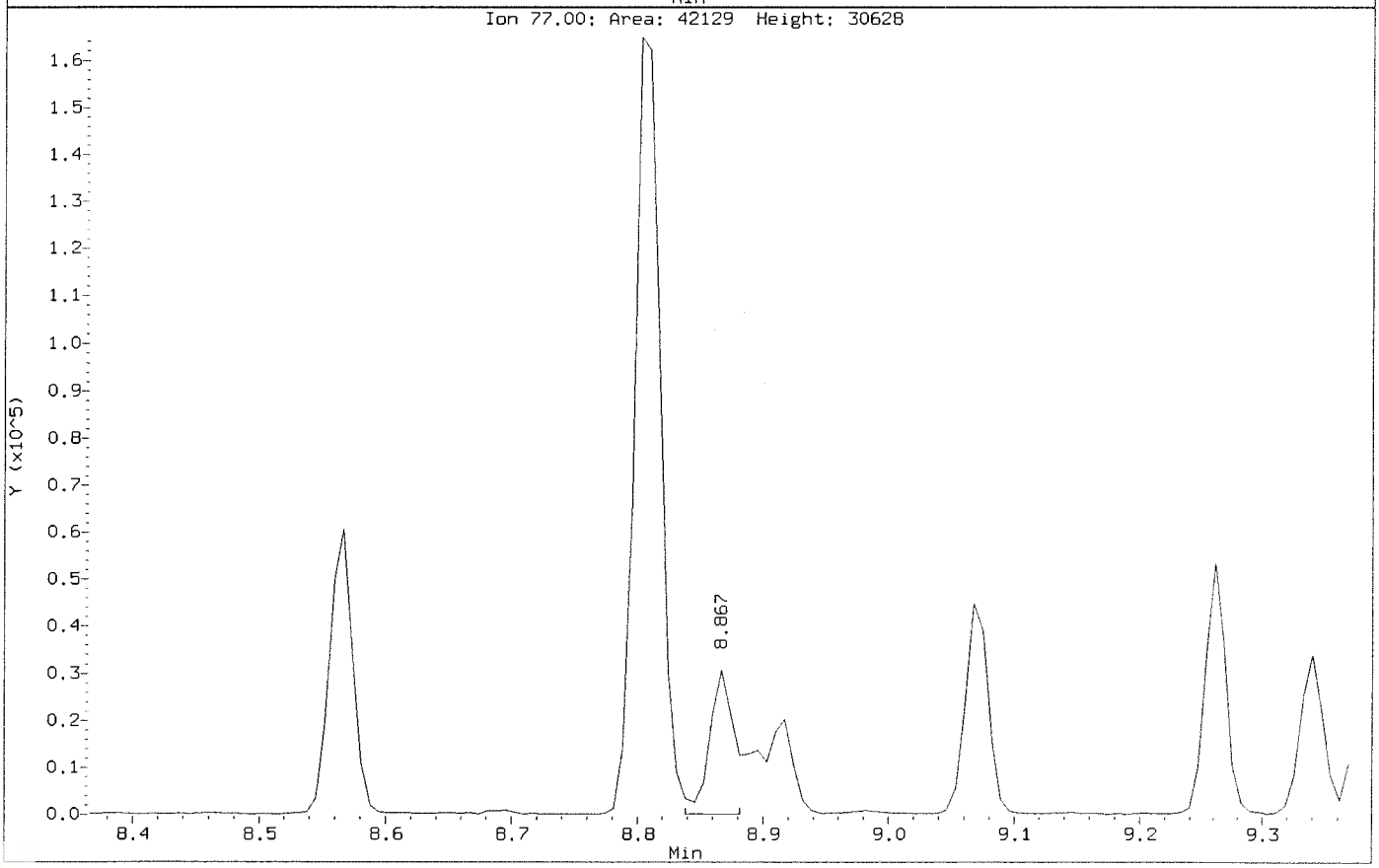
Date : 08-JUL-2020 23:00
Client ID: CCV-END
Sample Info: CCV-END;CCV-END;2;;;
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\nahstws005\Target\chem\voa6.i\X200708.b\Before\X070831.D
Injection Date: 08-JUL-2020 23:00
Instrument: voa6.i
Client Sample ID: CCV-END

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





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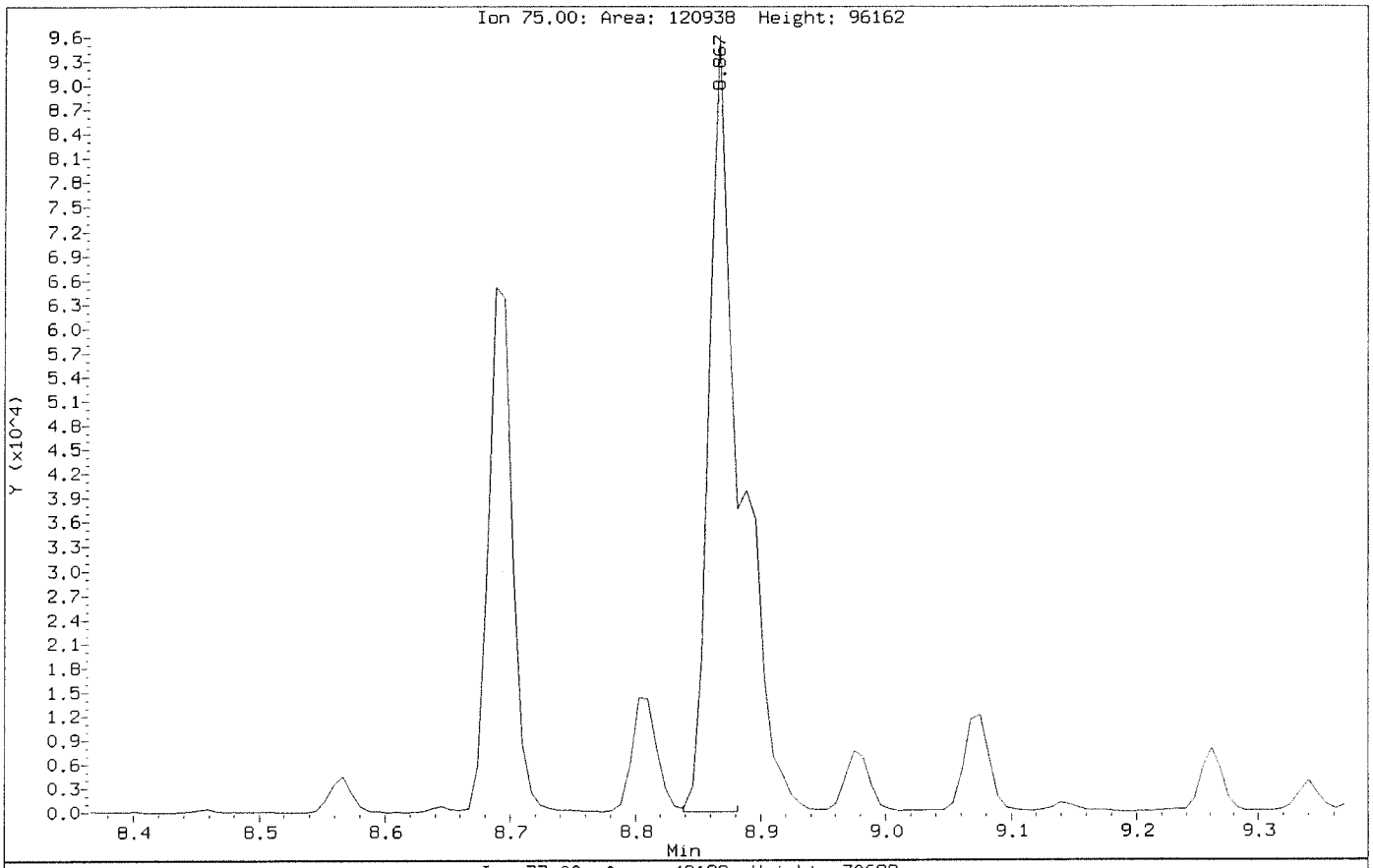
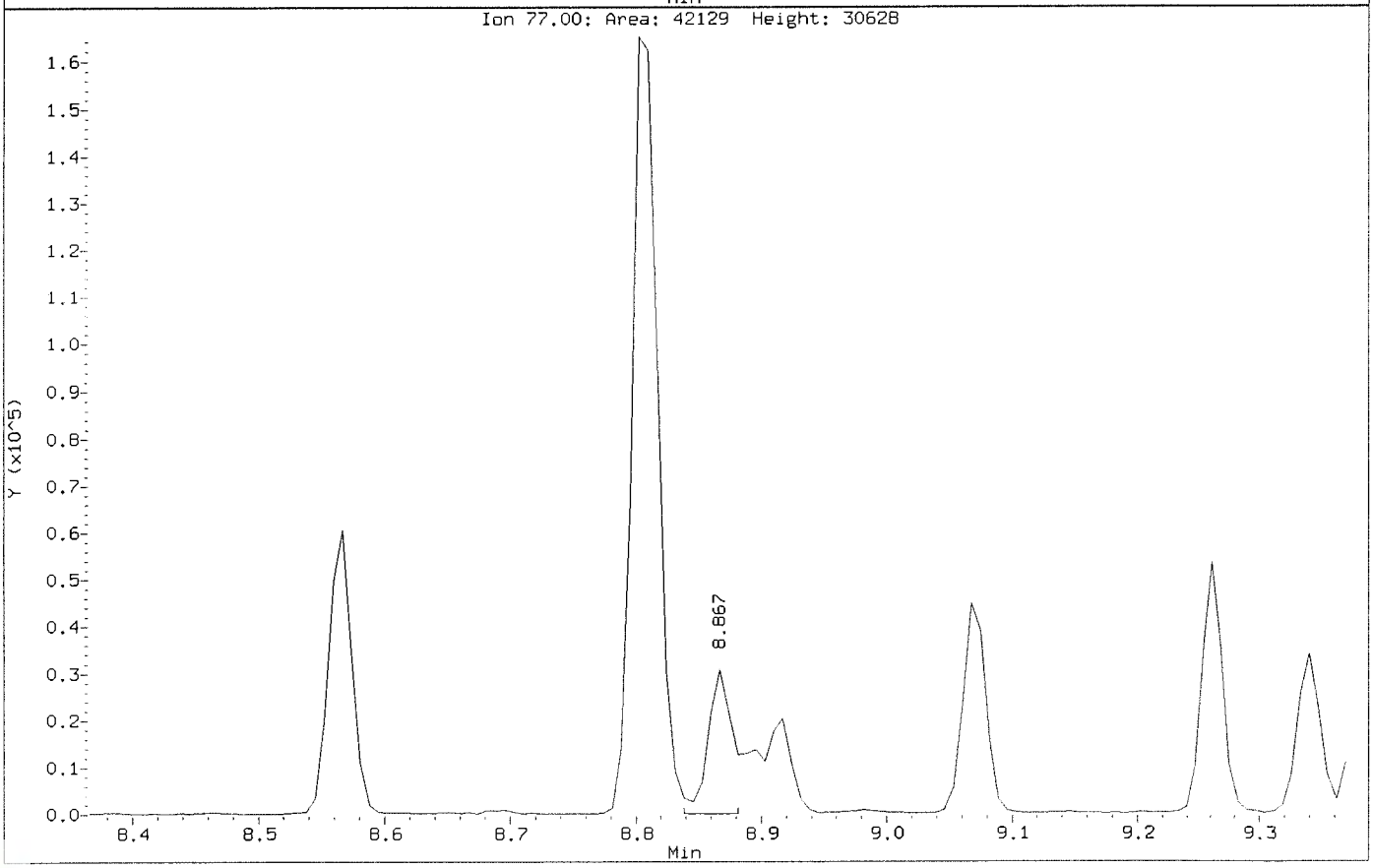
Instrument: voa6.i
Client Sample ID: CCV-END

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





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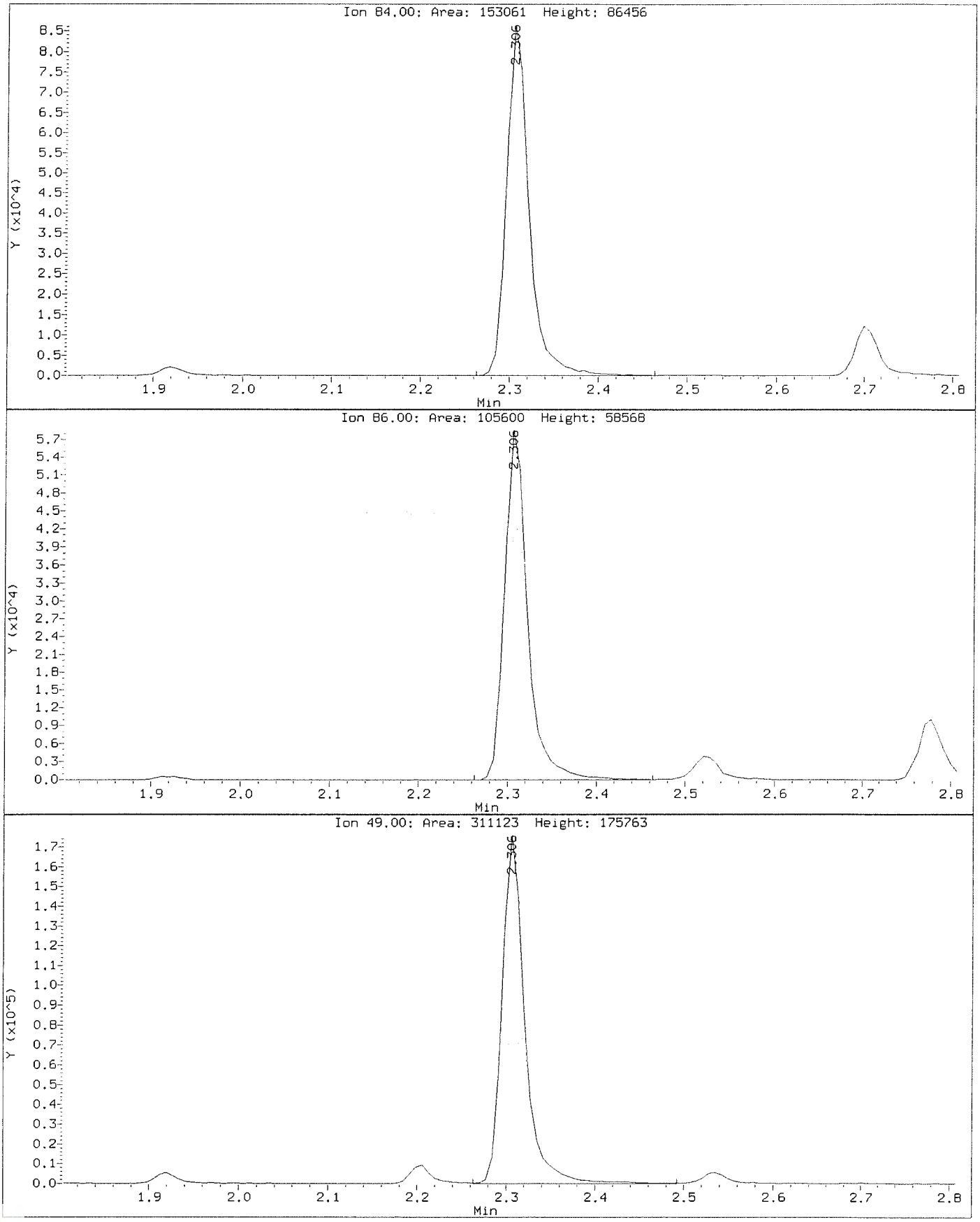
Injection Date: 08-JUL-2020 23:00
Instrument: voa6.i
Client Sample ID: CCV-END

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



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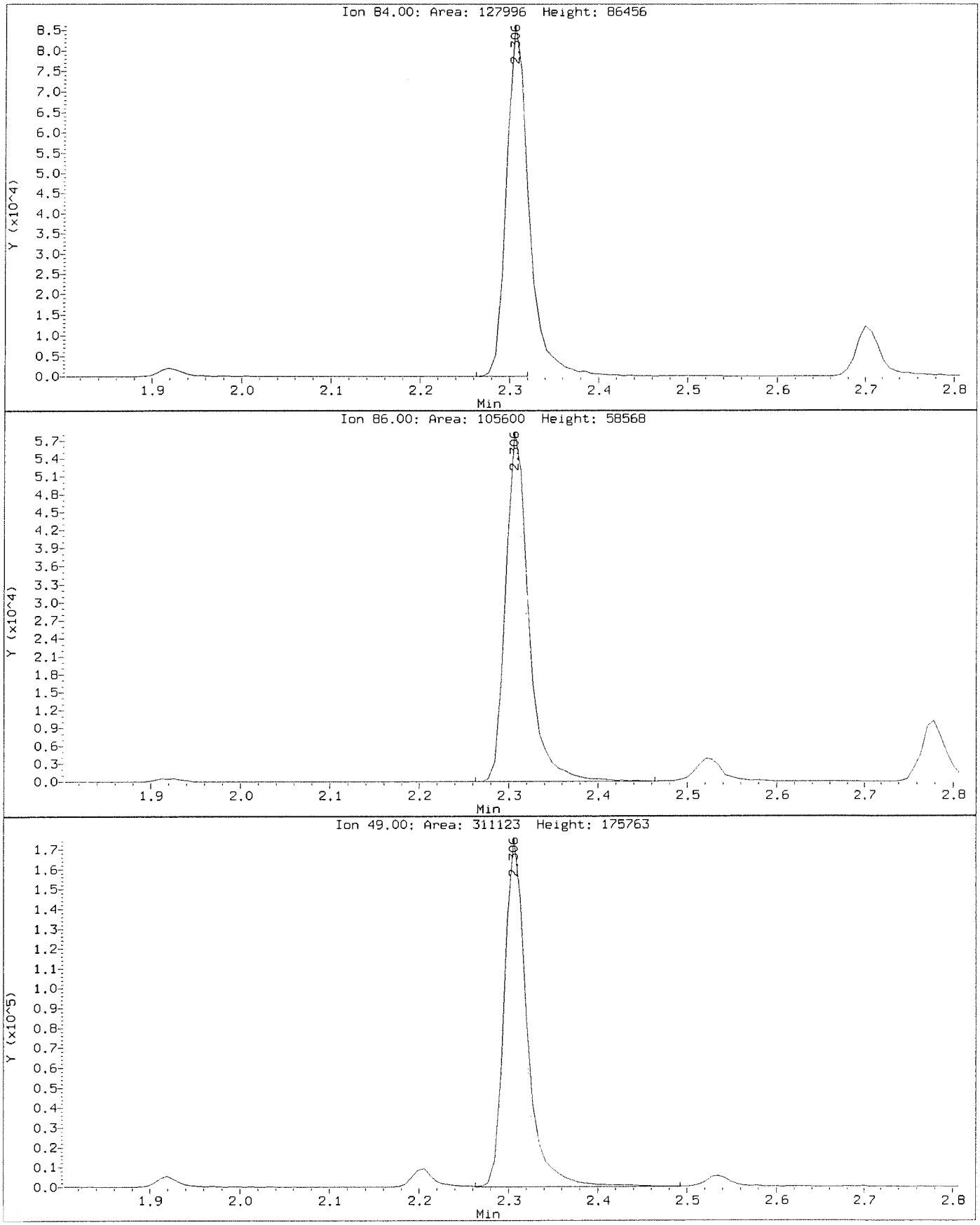
Injection Date: 08-JUL-2020 23:00
Instrument: voa6.i
Client Sample ID: CCV-END

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



MSVOA06 -Logbook

Batch: 41084 **Analyst:** Presenta Cabascango

Date: 07-10-2020 **Reviewer:**

Method: 8260 **Laboratory:** Houston

Comments:

#	Samp ID	Type	Analyzed	DF	Init Wt/Vol	Final Vol	File ID	Matrix	Status	pH
1	BFB	TUNE	07-10-2020 11:32 am	1.00	50 mL	50 mL	X071001.D	Liquid	Y	NA
	Auto find/ purged									
2	CCV	CCV	07-10-2020 11:56 am	1.00	50 mL	50 mL	X071002a.D	Liquid	Y	NA
	10 uL cal std/50 mL DI									
3	CCV	CCV	07-10-2020 12:20 pm	1.00	50 mL	50 mL	X071003.D	Liquid	Y	NA
	10 uL cal std/50 mL DI									
4	CCB	SAMP	07-10-2020 12:44 pm	1.00	50 mL	50 mL	X071004.D	Liquid	Y	NA
5	VLCSW-200710	LCS	07-10-2020 01:07 pm	1.00	50 mL	50 mL	X071005.D	Liquid	Y	NA
	4.0 uL cal std/50 mL DI									
6	BLANK	SAMP	07-10-2020 01:31 pm	1.00	50 mL	50 mL	X071006.D	Liquid	Y	NA
7	VBLKW-200710	MBLK	07-10-2020 01:56 pm	1.00	50 mL	50 mL	X071007.D	Liquid	Y	NA
8	HS20070055-01	SAMP	07-10-2020 02:20 pm	1.00	50 mL	50 mL	X071008.D	Liquid	Y	<2
9	HS20070043-17	SAMP	07-10-2020 02:44 pm	1.00	50 mL	50 mL	X071009.D	Liquid	Y	<2
10	HS20070043-07	SAMP	07-10-2020 03:08 pm	1.00	50 mL	50 mL	X071010.D	Liquid	Y	<2
11	HS20070043-13	SAMP	07-10-2020 03:31 pm	5.00	10 mL	50 mL	X071011.D	Liquid	Y	<2
12	HS20070043-17MS	MS	07-10-2020 03:55 pm	1.00	50 mL	50 mL	X071012.D	Liquid	Y	<2
	3.5 uL cal std/40 mL samp									
13	HS20070043-17MSD	MSD	07-10-2020 04:19 pm	1.00	50 mL	50 mL	X071013.D	Liquid	Y	<2
	3.5 uL cal std/40 mL samp									
14	HS20070043-07	SAMP	07-10-2020 04:43 pm	25.00	2 mL	50 mL	X071014.D	Liquid	Y	<2
15	HS20070043-08	SAMP	07-10-2020 05:07 pm	10.00	5 mL	50 mL	X071015.D	Liquid	Y	<2
16	HS20070043-08	SAMP	07-10-2020 05:31 pm	100.0(	500 µL	50 mL	X071016.D	Liquid	Y	<2
17	HS20070043-09	SAMP	07-10-2020 05:55 pm	10.00	5 mL	50 mL	X071017.D	Liquid	Y	<2
18	HS20070043-09	SAMP	07-10-2020 06:19 pm	100.0(	500 µL	50 mL	X071018.D	Liquid	Y	<2
19	HS20070043-12	SAMP	07-10-2020 06:43 pm	10.00	5 mL	50 mL	X071019.D	Liquid	Y	<2
20	HS20070043-12	SAMP	07-10-2020 07:07 pm	100.0(	500 µL	50 mL	X071020.D	Liquid	Y	<2
21	HS20070043-18	SAMP	07-10-2020 07:30 pm	10.00	5 mL	50 mL	X071021.D	Liquid	Y	<2
22	HS20070043-18	SAMP	07-10-2020 07:54 pm	100.0(	500 µL	50 mL	X071022.D	Liquid	Y	<2
23	HS20070043-10	SAMP	07-10-2020 08:18 pm	20.00	2.5 mL	50 mL	X071023.D	Liquid	Y	<2
24	HS20070043-10n/r	SAMP	07-10-2020 08:42 pm	250.0(	200 µL	50 mL	X071024.D	Liquid	Y	<2
25	HS20070043-13	SAMP	07-10-2020 09:06 pm	1.00	50 mL	50 mL	X071025.D	Liquid	Y	<2
26	CCV-END	CCV	07-10-2020 09:30 pm	1.00	50 mL	50 mL	X071026.D	Liquid	Y	na
	10 uL cal std/50 mL DI									
27	MBLK-155252	MBLK	07-10-2020 09:54 pm	20.00	2.5 mL	50 mL	X071027.D	Liquid	Y	na
	tclps									
28	HS20070298-01	SAMP	07-10-2020 10:18 pm	20.00	2.5 mL	50 mL	X071028.D	Liquid	Y	na
29	MBLK-155258	MBLK	07-10-2020 10:42 pm	20.00	2.5 mL	50 mL	X071029.D	Liquid	Y	na
30	HS20070317-01	SAMP	07-10-2020 11:06 pm	20.00	2.5 mL	50 mL	X071030.D	Liquid	Y	na
31	HS20070317-02	SAMP	07-10-2020 11:30 pm	20.00	2.5 mL	50 mL	X071031.D	Liquid	Y	<2
32	BLANK	SAMP	07-10-2020 11:54 pm	1.00	50 mL	50 mL	X071032.D	Liquid	Y	<2

Chemical	Value
SURR SPK ID	31106-34-06
IS ID	31106-34-06
CAL STD ID	31106-37-01/02
BFB ID	31106-34-06

FORM 2
WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20070055

	CLIENT SAMPLE NO.	SMC1 (DCE) #	SMC2 #	SMC3 (TOL) #	OTHER #	TOT OUT
01	VLCSW-200710	106	103	98	102	0
02	VBLKW-200710	90	93	96	99	0
03	HS20070055-01	86	91	104	99	0
04						
05						
06						
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27						
28						

		QC LIMITS
SMC1 (DCE)	= 1,2-Dichloroethane-d4	(0-130)
SMC2	= Dibromofluoromethane	(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-200710

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20070055

Lab File ID: X071007 Lab Sample ID: VBLKW-200710

Date Analyzed: 07/10/20 Time Analyzed: 1356

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-200710	VLCSW-200710	X071005	1307
02	HS20070055-0	HS20070055-01	X071008	1420
03	HS20070043-1	HS20070043-17M	X071012	1555
04	HS20070043-1	HS20070043-17M	X071013	1619
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COMMENTS:

FORM 5
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20070055

Lab File ID: X071001 BFB Injection Date: 07/10/20

Instrument ID: VOA6 BFB Injection Time: 1132

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	23.2
75	30.0 - 60.0% of mass 95	47.5
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	0.6 (0.7)1
174	Greater than 50.0% of mass 95	85.7
175	5.0 - 9.0% of mass 174	6.6 (7.7)1
176	95.0 - 101.0% of mass 174	81.9 (95.6)1
177	5.0 - 9.0% of mass 176	5.1 (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	X071003	07/10/20	1220
02	VLCSW-200710	VLCSW-200710	X071005	07/10/20	1307
03	VBLKW-200710	VBLKW-200710	X071007	07/10/20	1356
04	HS20070055-0	HS20070055-01	X071008	07/10/20	1420
05	HS20070043-1	HS20070043-17M	X071012	07/10/20	1555
06	HS20070043-1	HS20070043-17M	X071013	07/10/20	1619
07	CCV-END	CCV-END	X071026	07/10/20	2130
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FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20070055

Instrument ID: VOA6 Calibration Date: 07/10/20 Time: 1220

Lab File ID: X071003 Init. Calib. Date(s): 07/07/20 07/07/20

Init. Calib. Times: 1106 1505

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
cis-1,3-Dichloropropene	0.6040000	0.6030131	0.6030131	0.2	0.16	20.00	AVRG
trans-1,3-Dichloropropene	0.5420000	0.5529521	0.5529521	0.1	-2.02	20.00	AVRG
1,3-Dichlorobenzene	1.6010000	1.4385411	1.4385411	0.6	10.15	20.00	AVRG
2,2-Dichloropropane	0.8650000	0.8722550	0.8722550	0.1	-0.84	20.00	AVRG
1,1-Dichloropropene	0.4920000	0.4267247	0.4267247	0.1	13.27	20.00	AVRG
Dibromomethane	0.2510000	0.2398807	0.2398807	0.1	4.43	20.00	AVRG
1,2-Dibromoethane	0.4020000	0.4038997	0.4038997	0.1	-0.47	20.00	AVRG
trans-1,2-Dichloroethene	0.5460000	0.5235798	0.5235798	0.1	4.11	20.00	AVRG
1,1,1,2-Tetrachloroethane	0.3840000	0.3745306	0.3745306	0.1	2.46	20.00	AVRG
1,1,1-Trichloroethane	0.9160000	0.8522980	0.8522980	0.1	6.95	20.00	AVRG
1,1,2,2-Tetrachloroethane	0.9880000	0.9204787	0.9204787	0.3	6.83	20.00	AVRG
1,1,2-Trichloroethane	0.3160000	0.3183194	0.3183194	0.1	-0.73	20.00	AVRG
1,1-Dichloroethane	1.4170000	1.3436643	1.3436643	0.2	5.18	20.00	AVRG
1,1-Dichloroethene	0.4630000	0.3867645	0.3867645	0.1	16.46	20.00	AVRG
Trichloroethene	0.3710000	0.3342051	0.3342051	0.2	9.92	20.00	AVRG
1,2,3-Trichlorobenzene	53.967536	50.000000	0.1706215	0.01	-7.94	20.00	LINR
Trichlorofluoromethane	0.8620000	0.7317819	0.7317819	0.1	15.11	20.00	AVRG
1,2,4-Trichlorobenzene	48.169891	50.000000	0.2997372	0.1	3.66	20.00	LINR
1,2,4-Trimethylbenzene	2.9400000	2.6001771	2.6001771	0.1	11.56	20.00	AVRG
Tetrachloroethene	0.3050000	0.2651753	0.2651753	0.2	13.06	20.00	AVRG
1,2-Dichlorobenzene	1.4610000	1.3219182	1.3219182	0.4	9.52	20.00	AVRG
1,2-Dichloroethane	0.6200000	0.6176060	0.6176060	0.1	0.39	20.00	AVRG
1,2-Dichloropropane	0.4650000	0.4555451	0.4555451	0.1	2.03	20.00	AVRG
1,3,5-Trimethylbenzene	2.8490000	2.4090883	2.4090883	0.1	15.44	20.00	AVRG
1,3-Dichloropropane	0.6660000	0.6524384	0.6524384	0.1	2.04	20.00	AVRG
1,4-Dichlorobenzene	48.516064	50.000000	1.4772250	0.4	2.97	20.00	LINR
Toluene	1.5950000	1.4881273	1.4881273	0.4	6.70	20.00	AVRG
2-Butanone	113.82664	100.00000	0.5183205	0.1	-13.83	20.00	LINR
2-Chlorotoluene	2.5100000	2.1283103	2.1283103	0.1	15.21	20.00	AVRG
2-Hexanone	110.90757	100.00000	0.5269568	0.1	-10.91	20.00	LINR
4-Chlorotoluene	2.8460000	2.5028619	2.5028619	0.1	12.06	20.00	AVRG
tert-Butylbenzene	2.2940000	1.8935736	1.8935736	0.1	17.46	20.00	AVRG
4-Methyl-2-Pentanone	109.25452	100.00000	0.7360869	0.1	-9.25	20.00	LINR
Acetone	80.918704	100.00000	0.3486877	0.1	19.08	20.00	LINR
Benzene	1.4260000	1.3613872	1.3613872	0.5	4.53	20.00	AVRG
Bromobenzene	0.9540000	0.8720210	0.8720210	0.1	8.59	20.00	AVRG
Bromochloromethane	0.3470000	0.3227265	0.3227265	0.1	7.00	20.00	AVRG
Bromodichloromethane	0.5010000	0.4912840	0.4912840	0.2	1.94	20.00	AVRG
Bromoform	0.2780000	0.2898709	0.2898709	0.1	-4.27	20.00	AVRG
Bromomethane	49.782161	50.000000	0.3495732	0.1	0.44	20.00	LINR
Carbon Disulfide	1.5200000	1.2329012	1.2329012	0.1	18.89	20.00	AVRG
Carbon Tetrachloride	0.4770000	0.4232791	0.4232791	0.1	11.26	20.00	AVRG

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS2007005

Instrument ID: VOA6 Calibration Date: 07/10/20 Time: 1220

Lab File ID: X071003 Init. Calib. Date(s): 07/07/20 07/07/20

Init. Calib. Times: 1106 1505

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
Chlorobenzene	1.0190000	0.9686411	0.9686411	0.5	4.94	20.00	AVRG
Chloroethane	43.709660	50.000000	0.3956403	0.1	12.58	20.00	LINR
Chloroform	1.0950000	1.0691648	1.0691648	0.2	2.36	20.00	AVRG
Chloromethane	1.0270000	0.9633921	0.9633921	0.1	6.19	20.00	AVRG
cis-1,2-Dichloroethene	0.6540000	0.6411704	0.6411704	0.1	1.96	20.00	AVRG
Dibromochloromethane	0.4110000	0.4117320	0.4117320	0.1	-0.18	20.00	AVRG
Dichlorodifluoromethane	0.6050000	0.4939566	0.4939566	0.1	18.35	20.00	AVRG
Ethylbenzene	0.5390000	0.4855463	0.4855463	0.1	9.92	20.00	AVRG
Hexachlorobutadiene	40.408950	50.000000	0.1930081	0.1	19.18	20.00	LINR
Isopropylbenzene	1.5990000	1.3284736	1.3284736	0.1	16.92	20.00	AVRG
m,p-Xylenes	0.6480000	0.5782326	0.5782326	0.1	10.77	20.00	AVRG
Methylene Chloride	0.5470000	0.4912339	0.4912339	0.1	10.19	20.00	AVRG
n-Butylbenzene	2.5360000	2.1501485	2.1501485	0.5	15.21	20.00	AVRG
n-Propylbenzene	4.0780000	3.4053696	3.4053696	0.1	16.49	20.00	AVRG
Naphthalene	54.519861	50.000000	0.5290415	0.2	-9.04	20.00	LINR
o-Xylene	0.6350000	0.5766775	0.5766775	0.3	9.18	20.00	AVRG
sec-Butylbenzene	3.3520000	2.7070947	2.7070947	0.1	19.24	20.00	AVRG
Styrene	1.1040000	1.0211264	1.0211264	0.3	7.51	20.00	AVRG
Vinyl Chloride	0.8780000	0.7460287	0.7460287	0.1	15.03	20.00	AVRG
1,2,3-Trichloropropane	0.8720000	0.8614189	0.8614189	0.1	1.21	20.00	AVRG
p-Isopropyltoluene	2.8430000	2.3893122	2.3893122	0.1	15.96	20.00	AVRG
1,2-Dibromo-3-Chloropropane	56.305934	50.000000	8.71e-002	0.05	-12.61	20.00	LINR
1,2-Dichloroethane-d4	50.443335	50.000000	0.7547141	0.1	-0.89	20.00	LINR
Dibromofluoromethane	51.421873	50.000000	0.5590829	0.1	-2.84	20.00	LINR
Toluene-d8	1.3140000	1.2487115	1.2487115	0.1	4.97	20.00	AVRG
4-Bromofluorobenzene	49.715287	50.000000	0.4734671	0.1	0.57	20.00	LINR

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20070055

Instrument ID: VOA6 Calibration Date: 07/10/20 Time: 2130

Lab File ID: X071026 Init. Calib. Date(s): 07/07/20 07/07/20

Init. Calib. Times: 1106 1505

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
cis-1,3-Dichloropropene	0.6040000	0.5442085	0.5442085	0.2	9.90	50.00	AVRG
trans-1,3-Dichloropropene	0.5420000	0.4989945	0.4989945	0.1	7.93	50.00	AVRG
1,3-Dichlorobenzene	1.6010000	1.2625990	1.2625990	0.6	21.14	50.00	AVRG
2,2-Dichloropropane	0.8650000	0.6426714	0.6426714	0.1	25.70	50.00	AVRG
1,1-Dichloropropene	0.4920000	0.3876702	0.3876702	0.1	21.20	50.00	AVRG
Dibromomethane	0.2510000	0.2454741	0.2454741	0.1	2.20	50.00	AVRG
1,2-Dibromoethane	0.4020000	0.3824297	0.3824297	0.1	4.87	50.00	AVRG
trans-1,2-Dichloroethene	0.5460000	0.5325312	0.5325312	0.1	2.47	50.00	AVRG
1,1,1,2-Tetrachloroethane	0.3840000	0.3400073	0.3400073	0.1	11.46	50.00	AVRG
1,1,1-Trichloroethane	0.9160000	0.8228832	0.8228832	0.1	10.16	50.00	AVRG
1,1,2,2-Tetrachloroethane	0.9880000	0.9340466	0.9340466	0.3	5.46	50.00	AVRG
1,1,2-Trichloroethane	0.3160000	0.3090640	0.3090640	0.1	2.19	50.00	AVRG
1,1-Dichloroethane	1.4170000	1.3683756	1.3683756	0.2	3.43	50.00	AVRG
1,1-Dichloroethene	0.4630000	0.3694000	0.3694000	0.1	20.22	50.00	AVRG
Trichloroethene	0.3710000	0.3317262	0.3317262	0.2	10.58	50.00	AVRG
1,2,3-Trichlorobenzene	36.245862	50.000000	0.1129221	0.01	27.51	50.00	LINR
Trichlorofluoromethane	0.8620000	0.6803962	0.6803962	0.1	21.07	50.00	AVRG
1,2,4-Trichlorobenzene	38.613013	50.000000	0.2386128	0.1	22.77	50.00	LINR
1,2,4-Trimethylbenzene	2.9400000	2.2321971	2.2321971	0.1	24.07	50.00	AVRG
Tetrachloroethene	0.3050000	0.2248884	0.2248884	0.2	26.27	50.00	AVRG
1,2-Dichlorobenzene	1.4610000	1.1716101	1.1716101	0.4	19.81	50.00	AVRG
1,2-Dichloroethane	0.6200000	0.6035537	0.6035537	0.1	2.65	50.00	AVRG
1,2-Dichloropropane	0.4650000	0.4480779	0.4480779	0.1	3.64	50.00	AVRG
1,3,5-Trimethylbenzene	2.8490000	2.0554887	2.0554887	0.1	27.85	50.00	AVRG
1,3-Dichloropropane	0.6660000	0.6404395	0.6404395	0.1	3.84	50.00	AVRG
1,4-Dichlorobenzene	42.992857	50.000000	1.3097445	0.4	14.01	50.00	LINR
Toluene	1.5950000	1.3910141	1.3910141	0.4	12.79	50.00	AVRG
2-Butanone	117.88784	100.00000	0.5358475	0.1	-17.89	50.00	LINR
2-Chlorotoluene	2.5100000	1.9510924	1.9510924	0.1	22.27	50.00	AVRG
2-Hexanone	111.03129	100.00000	0.5275254	0.1	-11.03	50.00	LINR
4-Chlorotoluene	2.8460000	2.2214587	2.2214587	0.1	21.94	50.00	AVRG
tert-Butylbenzene	2.2940000	1.6100678	1.6100678	0.1	29.81	50.00	AVRG
4-Methyl-2-Pentanone	111.44639	100.00000	0.7504295	0.1	-11.45	50.00	LINR
Acetone	71.553020	100.00000	0.3203786	0.1	28.45	50.00	LINR
Benzene	1.4260000	1.3036823	1.3036823	0.5	8.58	50.00	AVRG
Bromobenzene	0.9540000	0.8426755	0.8426755	0.1	11.67	50.00	AVRG
Bromochloromethane	0.3470000	0.3434601	0.3434601	0.1	1.02	50.00	AVRG
Bromodichloromethane	0.5010000	0.4924850	0.4924850	0.2	1.70	50.00	AVRG
Bromoform	0.2780000	0.2876980	0.2876980	0.1	-3.49	50.00	AVRG
Bromomethane	43.849159	50.000000	0.3079751	0.1	12.30	50.00	LINR
Carbon Disulfide	1.5200000	1.1340400	1.1340400	0.1	25.39	50.00	AVRG
Carbon Tetrachloride	0.4770000	0.3767242	0.3767242	0.1	21.02	50.00	AVRG

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS2007005

Instrument ID: VOA6 Calibration Date: 07/10/20 Time: 2130

Lab File ID: X071026 Init. Calib. Date(s): 07/07/20 07/07/20

Init. Calib. Times: 1106 1505

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
Chlorobenzene	1.0190000	0.9084003	0.9084003	0.5	10.85	50.00	AVRG
Chloroethane	42.179297	50.000000	0.3823699	0.1	15.64	50.00	LINR
Chloroform	1.0950000	1.0749287	1.0749287	0.2	1.83	50.00	AVRG
Chloromethane	1.0270000	0.9311916	0.9311916	0.1	9.33	50.00	AVRG
cis-1,2-Dichloroethene	0.6540000	0.6628208	0.6628208	0.1	-1.35	50.00	AVRG
Dibromochloromethane	0.4110000	0.4018658	0.4018658	0.1	2.22	50.00	AVRG
Dichlorodifluoromethane	0.6050000	0.4439467	0.4439467	0.1	26.62	50.00	AVRG
Ethylbenzene	0.5390000	0.4290523	0.4290523	0.1	20.40	50.00	AVRG
Hexachlorobutadiene	26.998048	50.000000	0.1267572	0.1	46.00	50.00	LINR
Isopropylbenzene	1.5990000	1.2037260	1.2037260	0.1	24.72	50.00	AVRG
m,p-Xylenes	0.6480000	0.5001757	0.5001757	0.1	22.81	50.00	AVRG
Methylene Chloride	0.5470000	0.5079499	0.5079499	0.1	7.14	50.00	AVRG
n-Butylbenzene	2.5360000	1.5812285	1.5812285	0.5	37.65	50.00	AVRG
n-Propylbenzene	4.0780000	2.8970522	2.8970522	0.1	28.96	50.00	AVRG
Naphthalene	39.139666	50.000000	0.3789770	0.2	21.72	50.00	LINR
o-Xylene	0.6350000	0.5330266	0.5330266	0.3	16.06	50.00	AVRG
sec-Butylbenzene	3.3520000	2.1390924	2.1390924	0.1	36.18	50.00	AVRG
Styrene	1.1040000	0.9729641	0.9729641	0.3	11.87	50.00	AVRG
Vinyl Chloride	0.8780000	0.7011229	0.7011229	0.1	20.14	50.00	AVRG
1,2,3-Trichloropropane	0.8720000	0.8615178	0.8615178	0.1	1.20	50.00	AVRG
p-Isopropyltoluene	2.8430000	1.9288513	1.9288513	0.1	32.15	50.00	AVRG
1,2-Dibromo-3-Chloropropane	51.735415	50.000000	8.02e-002	0.05	-3.47	50.00	LINR
1,2-Dichloroethane-d4	56.442218	50.000000	0.8432583	0.1	-12.88	50.00	LINR
Dibromofluoromethane	56.244785	50.000000	0.6106156	0.1	-12.49	50.00	LINR
Toluene-d8	1.3140000	1.2697205	1.2697205	0.1	3.37	50.00	AVRG
4-Bromofluorobenzene	53.016118	50.000000	0.5042308	0.1	-6.03	50.00	LINR

FORM 8
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20070055

Lab File ID (Standard): X071003 Date Analyzed: 07/10/20

Instrument ID: VOA6 Time Analyzed: 1220

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

		IS1(CBZ) AREA #		IS2(DFB) AREA #		IS3(DCB) AREA #	
			RT #		RT #		RT #
	12 HOUR STD	370389	7.67	402250	4.97	175060	9.66
	UPPER LIMIT	740778	8.17	804500	5.47	350120	10.16
	LOWER LIMIT	185195	7.17	201125	4.47	87530	9.16
	CLIENT SAMPLE NO.						
01	VLCSW-200710	367109	7.67	421776	4.97	156901	9.67
02	VBLKW-200710	419273	7.67	508395	4.97	180571	9.67
03	HS20070055-01	434891	7.67	484929	4.97	188342	9.67
04	HS20070043-17	426761	7.67	416095	4.97	201696	9.67
05	HS20070043-17	423243	7.67	476906	4.97	195173	9.66
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IS1 (CBZ) = Chlorobenzene-d5
IS2 (DFB) = 1,4-Difluorobenzene
IS3 (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: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20070055

Lab File ID (Standard): X071003 Date Analyzed: 07/10/20

Instrument ID: VOA6 Time Analyzed: 1220

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

		IS4 AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	241669	4.19				
	UPPER LIMIT	483338	4.69				
	LOWER LIMIT	120835	3.69				
	CLIENT SAMPLE NO.						
01	VLCSW-200710	253237	4.19				
02	VBLKW-200710	329382	4.19				
03	HS20070055-01	295462	4.19				
04	HS20070043-17	278486	4.19				
05	HS20070043-17	307162	4.19				
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IS4 = Pentafluorobenzene

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\X200710.b\X071001.D Page 1

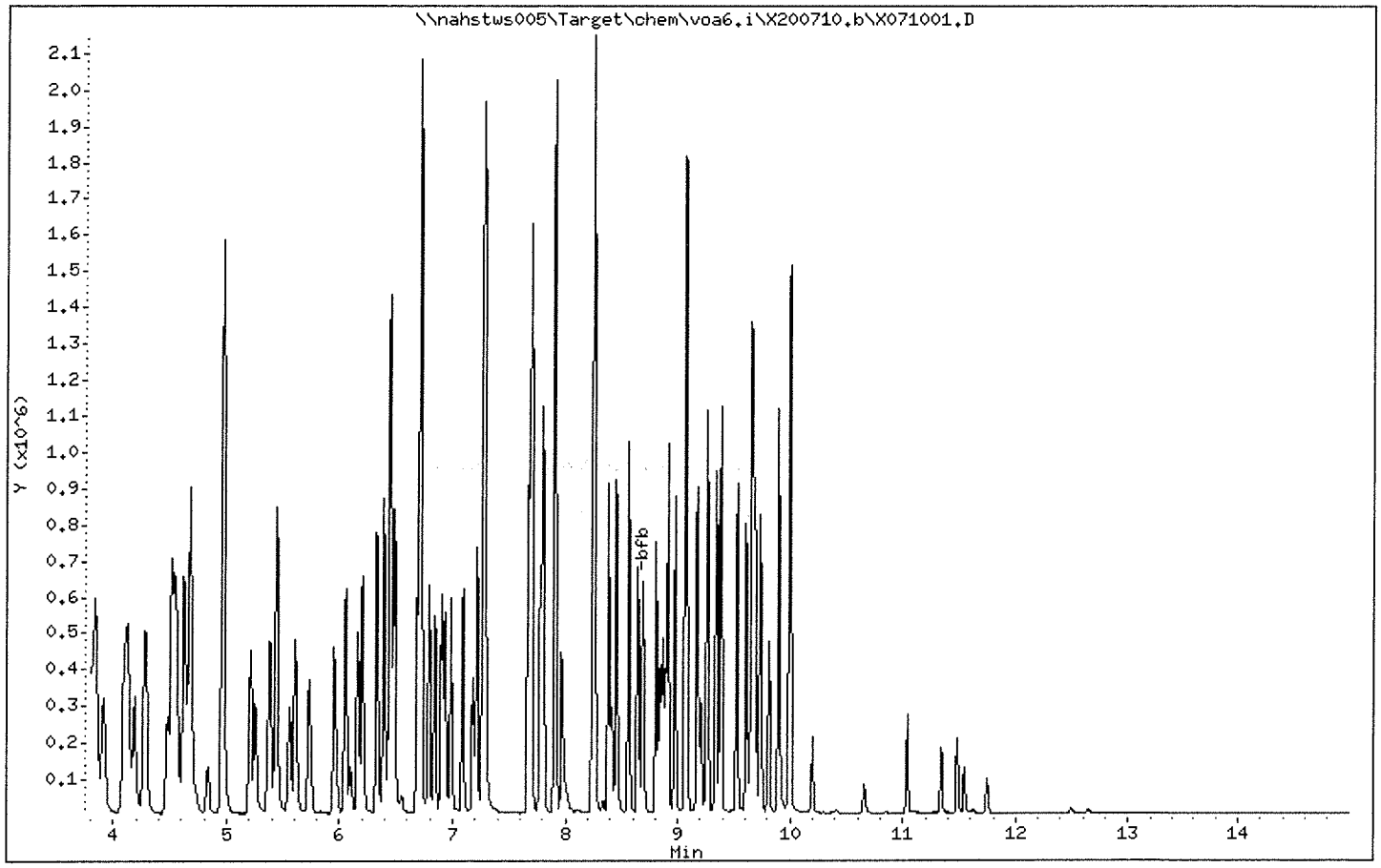
Date : 10-JUL-2020 11:32

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



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Date : 10-JUL-2020 11:32

Client ID: BFB

Instrument: voa6.i

Sample Info: BFB;BFB;3;;BFB

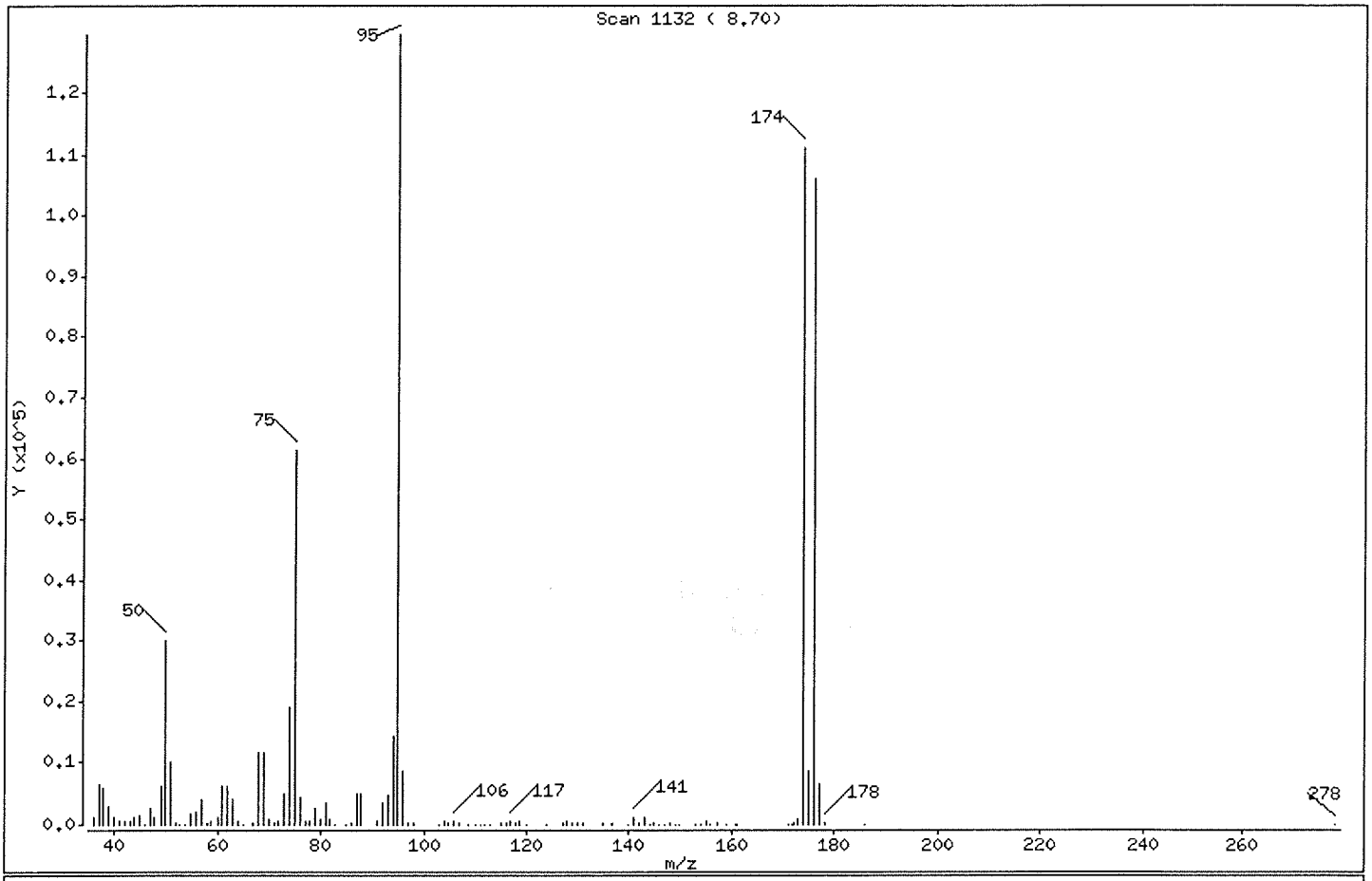
Volume Injected (uL): 2.0

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	23.21
75	30.00 - 60.00% of mass 95	47.45
96	5.00 - 9.00% of mass 95	6.56
173	Less than 2.00% of mass 174	0.62 (0.72)
174	Greater than 50.00% of mass 95	85.70
175	5.00 - 9.00% of mass 174	6.56 (7.66)
176	95.00 - 101.00% of mass 174	81.93 (95.61)
177	5.00 - 9.00% of mass 176	5.06 (6.17)

Data File: \\nahstws005\Target\chem\voa6.i\X200710.b\X071001.D Page 3

Date : 10-JUL-2020 11:32

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: X071001.D
Spectrum: Scan 1132 (8.70)
Location of Maximum: 95.00
Number of points: 113

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	1105	65.00	110	98.10	294	143.90	84
37.00	6518	67.00	383	102.90	118	144.90	153
38.00	5857	68.00	11476	103.90	535	145.90	139
39.00	2890	69.00	11588	104.90	353	146.90	91
39.90	1081	69.90	944	105.90	555	147.90	321
41.00	601	71.00	298	106.90	181	148.90	124
42.00	613	72.00	684	108.60	55	149.80	75
43.00	710	73.00	4963	109.90	78	152.80	61
44.00	1276	74.00	19104	111.00	104	153.90	134
45.00	1569	75.00	61488	112.00	94	154.90	458
45.90	74	76.00	4617	112.80	54	155.90	75
47.00	2537	77.00	723	114.90	157	157.00	341
47.90	1125	77.80	622	116.00	270	158.80	143
49.00	6135	78.90	2663	116.80	692	160.60	81
50.00	30072	79.90	756	117.90	392	161.10	90
51.00	10013	80.90	3426	118.70	632	171.00	122
51.90	426	81.90	963	120.00	116	171.70	85
52.80	102	82.90	130	123.80	73	172.10	184
53.90	57	85.10	67	127.00	191	172.90	797
55.00	1648	86.00	150	127.90	625	173.90	111048
56.00	2039	87.00	5140	129.00	203	174.90	8503
57.00	4205	87.90	5066	129.90	424	175.90	106168
58.10	262	90.90	491	131.00	197	176.90	6554
58.90	465	92.00	3467	134.80	188	177.90	165
60.00	1085	93.00	4907	136.80	270	186.00	126
61.00	6253	94.00	14299	139.90	93	278.00	121
62.00	6139	95.00	129576	140.90	1269		
63.00	4209	96.00	8503	141.90	260		
63.90	479	97.00	192	142.90	1116		

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Data file : \\nahstws005\Target\chem\voa6.i\X200710.b\X071003.D
Lab Smp Id: CCV Client Smp ID: CCV
Inj Date : 10-JUL-2020 12:20
Operator : PC Inst ID: voa6.i
Smp Info : CCV;CCV;2;;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200710.b\8260W.m
Meth Date : 13-Aug-2020 13:43 voa6.i Quant Type: ISTD
Cal Date : 07-JUL-2020 13:53 Cal File: X070708.D
Als bottle: 3 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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

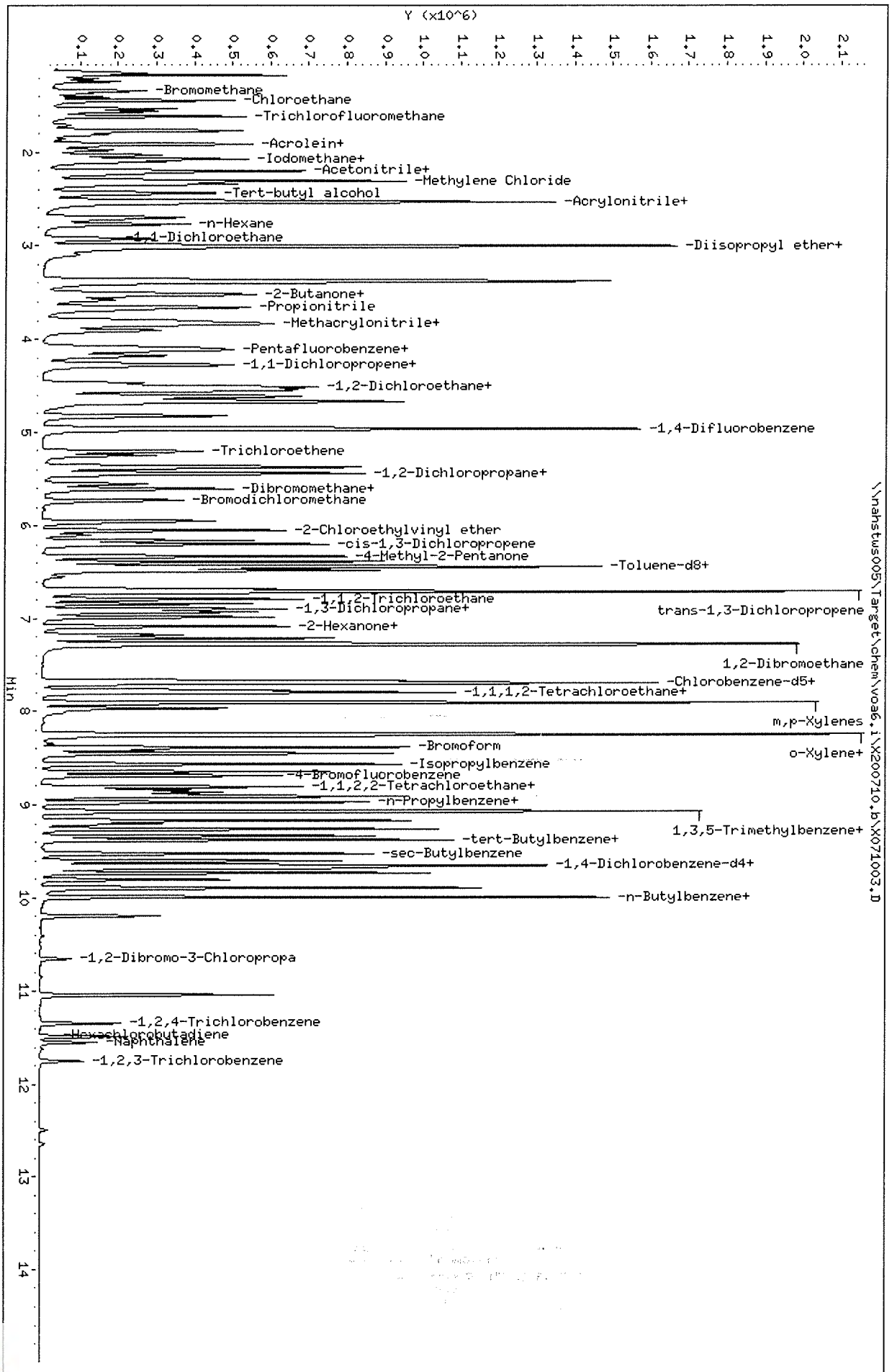
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
*	1 Pentafluorobenzene	168	4.189	4.189	(1.000)	241669	50.0000	
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	402250	50.0000	
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	370389	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	175060	50.0000	
$	30 Dibromofluoromethane	113	4.103	4.103	(0.979)	135113	50.0000	51.42
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	182391	50.0000	50.44
$	48 Toluene-d8	98	6.388	6.388	(0.833)	462509	50.0000	47.49
$	69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	175367	50.0000	49.71
	60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	138722	50.0000	48.77
	31 1,1,1-Trichloroethane	97	4.089	4.089	(0.976)	205974	50.0000	46.52
	68 1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.915)	161139	50.0000	46.55
	53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	117902	50.0000	50.32
	22 1,1-Dichloroethane	63	2.929	2.929	(0.699)	324722	50.0000	47.41
	11 1,1-Dichloroethene	96	1.919	1.919	(0.458)	93469	50.0000	41.76
	32 1,1-Dichloropropene	75	4.282	4.282	(0.862)	171650	50.0000	43.33
	93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.216)	29869	50.0000	53.96
	71 1,2,3-Trichloropropane	75	8.867	8.867	(0.918)	150800	50.0000	49.41(M)
	90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	52472	50.0000	48.16
	79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.971)	455187	50.0000	44.21
	89 1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.103)	15248	50.0000	56.30
	57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	149600	50.0000	50.24
	88 1,2-Dichlorobenzene	146	9.999	9.999	(1.035)	231415	50.0000	45.22

Data File: \\nahstws005\Target\chem\voa6.i\X200710.b\X071003.D Page 2
Report Date: 13-Aug-2020 13:43

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)
33	1,2-Dichloroethane	62	4.562	4.562	(0.918)	248432	50.0000	49.77
42	1,2-Dichloropropane	63	5.443	5.443	(1.095)	183243	50.0000	48.96
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	421735	50.0000	42.28
83	1,3-Dichlorobenzene	146	9.605	9.605	(0.994)	251831	50.0000	44.93
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	241656	50.0000	48.99
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.002)	258603	50.0000	48.51
26	2,2-Dichloropropane	77	3.516	3.516	(0.839)	210797	50.0000	50.38
24	2-Butanone	43	3.581	3.581	(0.855)	250524	100.000	113.82
76	2-Chlorotoluene	91	8.974	8.974	(0.929)	372582	50.0000	42.40
52	2-Hexanone	43	7.090	7.090	(0.924)	390358	100.000	110.90
77	4-Chlorotoluene	91	9.075	9.075	(0.939)	438151	50.0000	43.97
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	418273	50.0000	42.01
45	4-Methyl-2-Pentanone	43	6.331	6.331	(0.825)	545277	100.000	109.25
10	Acetone	43	1.976	1.976	(0.472)	168534	100.000	80.91
37	Benzene	78	4.519	4.519	(0.909)	547618	50.0000	47.71
74	Bromobenzene	156	8.810	8.810	(0.912)	152656	50.0000	45.70
29	Bromochloromethane	128	3.803	3.803	(0.908)	77993	50.0000	46.46
39	Bromodichloromethane	83	5.729	5.729	(1.153)	197619	50.0000	49.04
66	Bromoform	173	8.416	8.416	(1.097)	107365	50.0000	52.21
6	Bromomethane	94	1.338	1.338	(0.320)	84481	50.0000	49.78
19	Carbon Disulfide	76	2.069	2.069	(0.494)	595908	100.000	81.09
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	170264	50.0000	44.35
59	Chlorobenzene	112	7.699	7.699	(1.004)	358774	50.0000	47.54
7	Chloroethane	64	1.403	1.403	(0.335)	95614	50.0000	43.70
28	Chloroform	83	3.910	3.910	(0.933)	258384	50.0000	48.79
3	Chloromethane	50	1.081	1.081	(0.258)	232822	50.0000	46.88
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.843)	154951	50.0000	49.05
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	242562	50.0000	49.96
55	Dibromochloromethane	129	7.176	7.176	(0.936)	152501	50.0000	50.12
44	Dibromomethane	93	5.557	5.557	(1.118)	96492	50.0000	47.84
2	Dichlorodifluoromethane	85	0.973	0.973	(0.232)	119374	50.0000	40.80
61	Ethylbenzene	106	7.800	7.800	(1.017)	179841	50.0000	45.03
91	Hexachlorobutadiene	225	11.481	11.481	(1.188)	33788	50.0000	40.40
67	Isopropylbenzene	105	8.566	8.566	(1.117)	492052	50.0000	41.53
62	m,p-Xylenes	106	7.907	7.907	(1.031)	428342	100.000	89.18
17	Methylene Chloride	84	2.305	2.305	(0.550)	118716	50.0000	44.92(M)
87	n-Butylbenzene	91	9.999	9.999	(1.035)	376405	50.0000	42.39
73	n-Propylbenzene	91	8.917	8.917	(0.923)	596144	50.0000	41.75
92	Naphthalene	128	11.546	11.546	(1.195)	92614	50.0000	54.51
63	o-Xylene	106	8.244	8.244	(1.075)	213595	50.0000	45.39
81	sec-Butylbenzene	105	9.526	9.526	(0.986)	473904	50.0000	40.37
64	Styrene	104	8.258	8.258	(1.077)	378214	50.0000	46.25
78	tert-Butylbenzene	119	9.340	9.340	(0.967)	331489	50.0000	41.27
56	Tetrachloroethene	164	6.933	6.933	(0.904)	98218	50.0000	43.41
50	Toluene	91	6.446	6.446	(0.840)	551186	50.0000	46.64
20	trans-1,2-Dichloroethene	96	2.535	2.535	(0.605)	126533	50.0000	47.90
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	222425	50.0000	50.99
38	Trichloroethene	130	5.207	5.207	(1.048)	134434	50.0000	45.04
8	Trichlorofluoromethane	101	1.561	1.561	(0.373)	176849	50.0000	42.43
5	Vinyl Chloride	62	1.145	1.145	(0.273)	180292	50.0000	42.46

QC Flag Legend

M - Compound response manually integrated.



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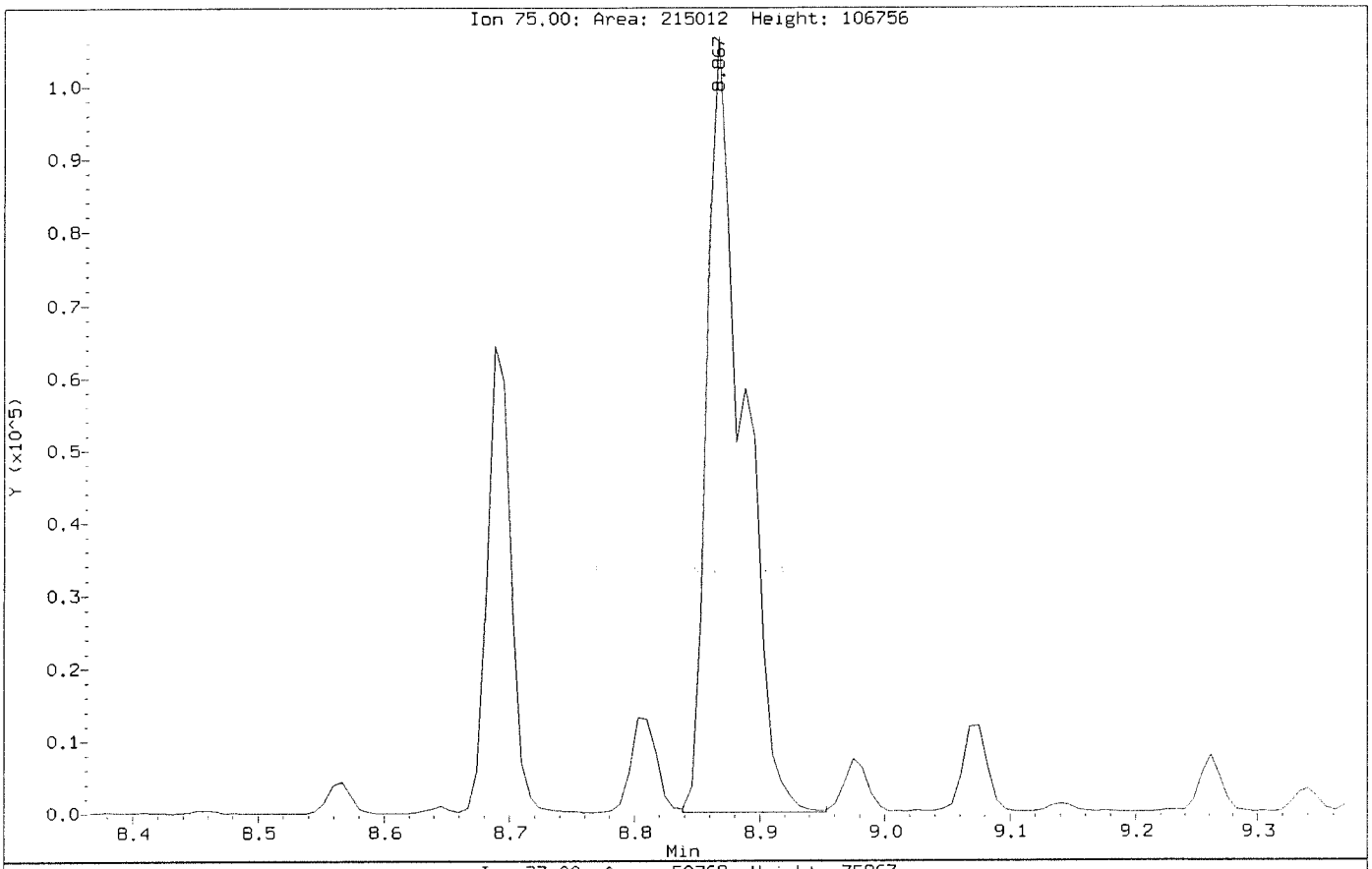
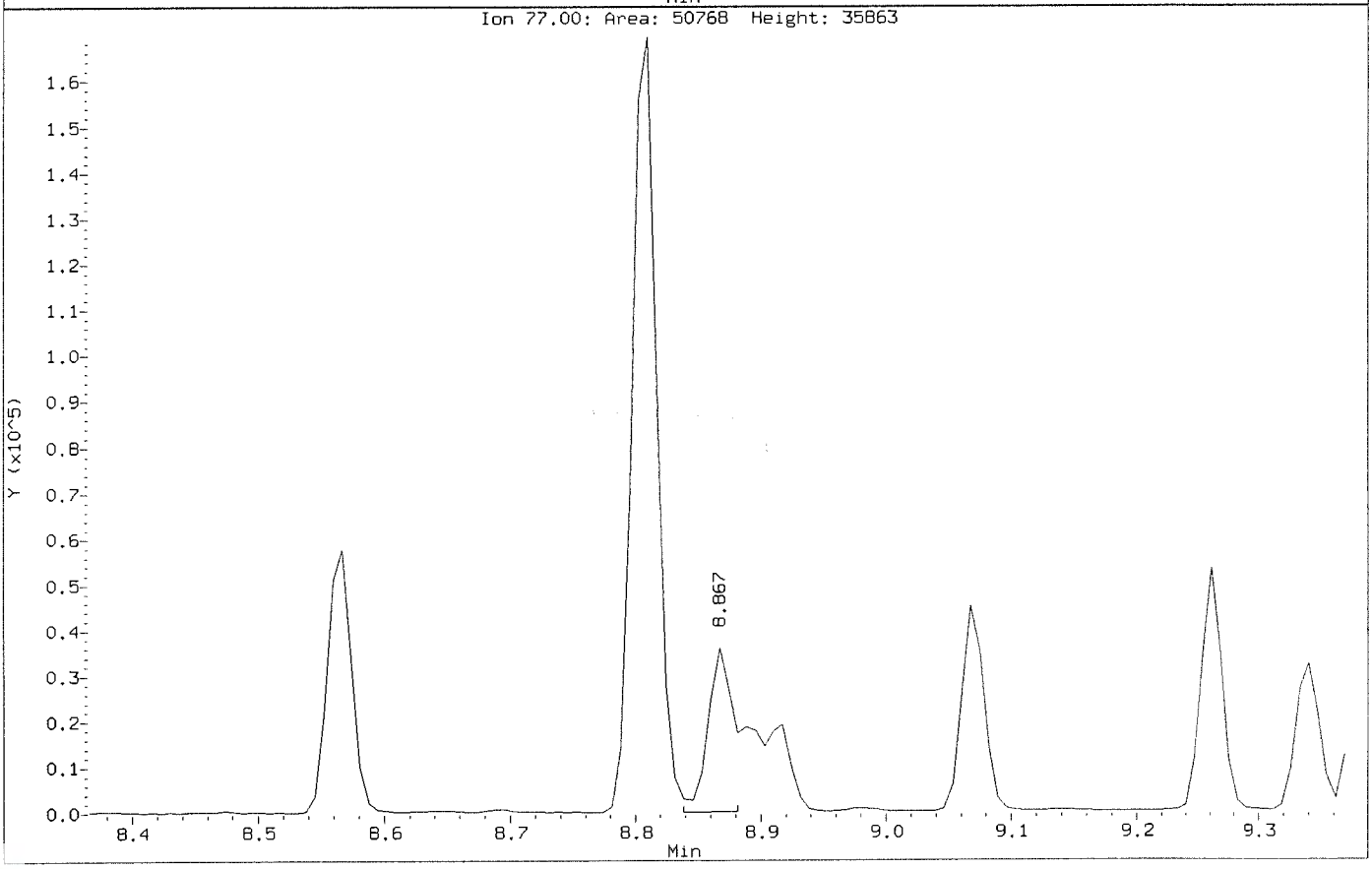
Date : 10-JUL-2020 12:20
Client ID: CCV
Sample Info: CCV;CCV;2;;;
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\nahstws005\Target\chem\voa6.i\X200710.b\Before\X071003.D
Injection Date: 10-JUL-2020 12:20
Instrument: voa6.i
Client Sample ID: CCV

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





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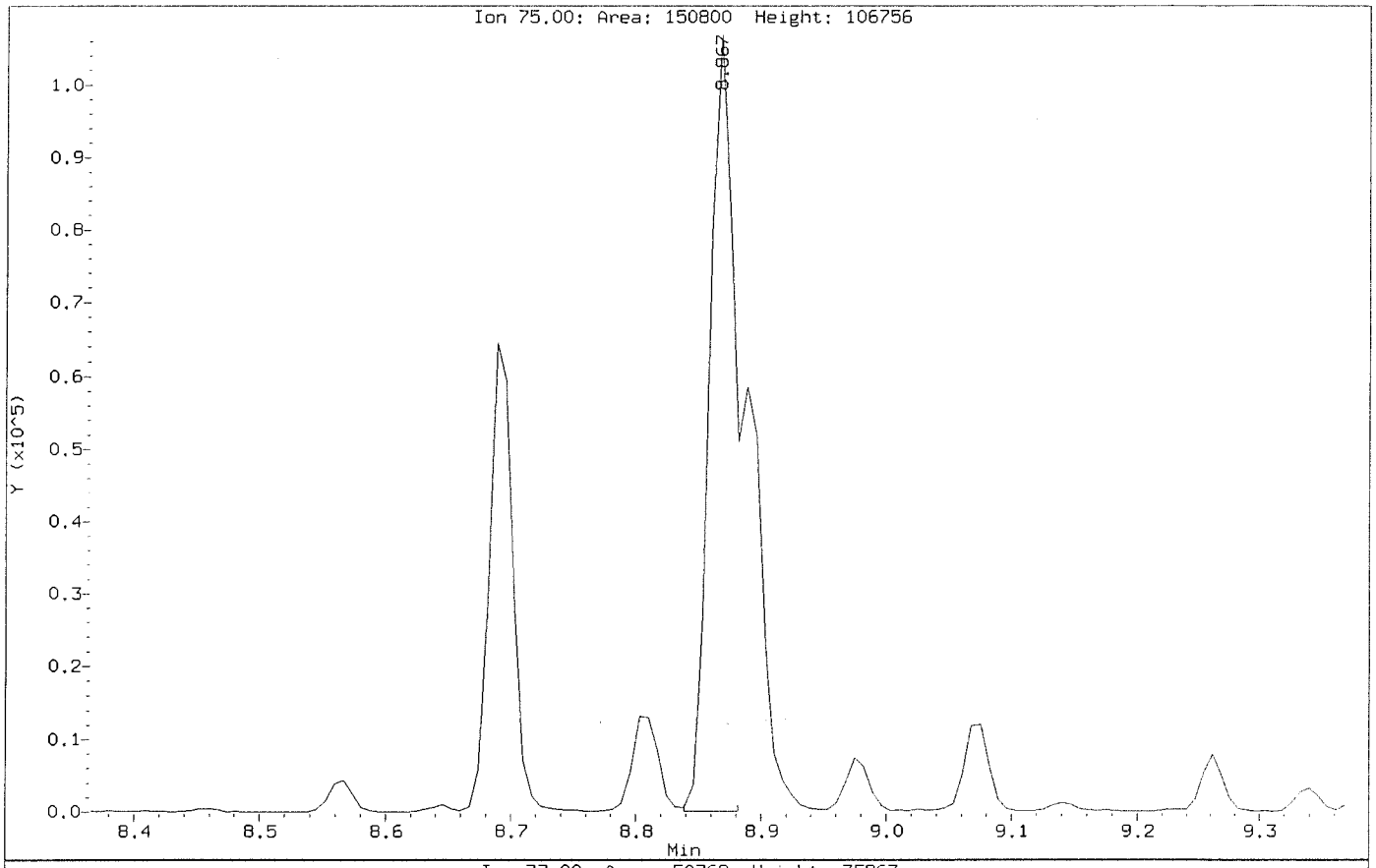
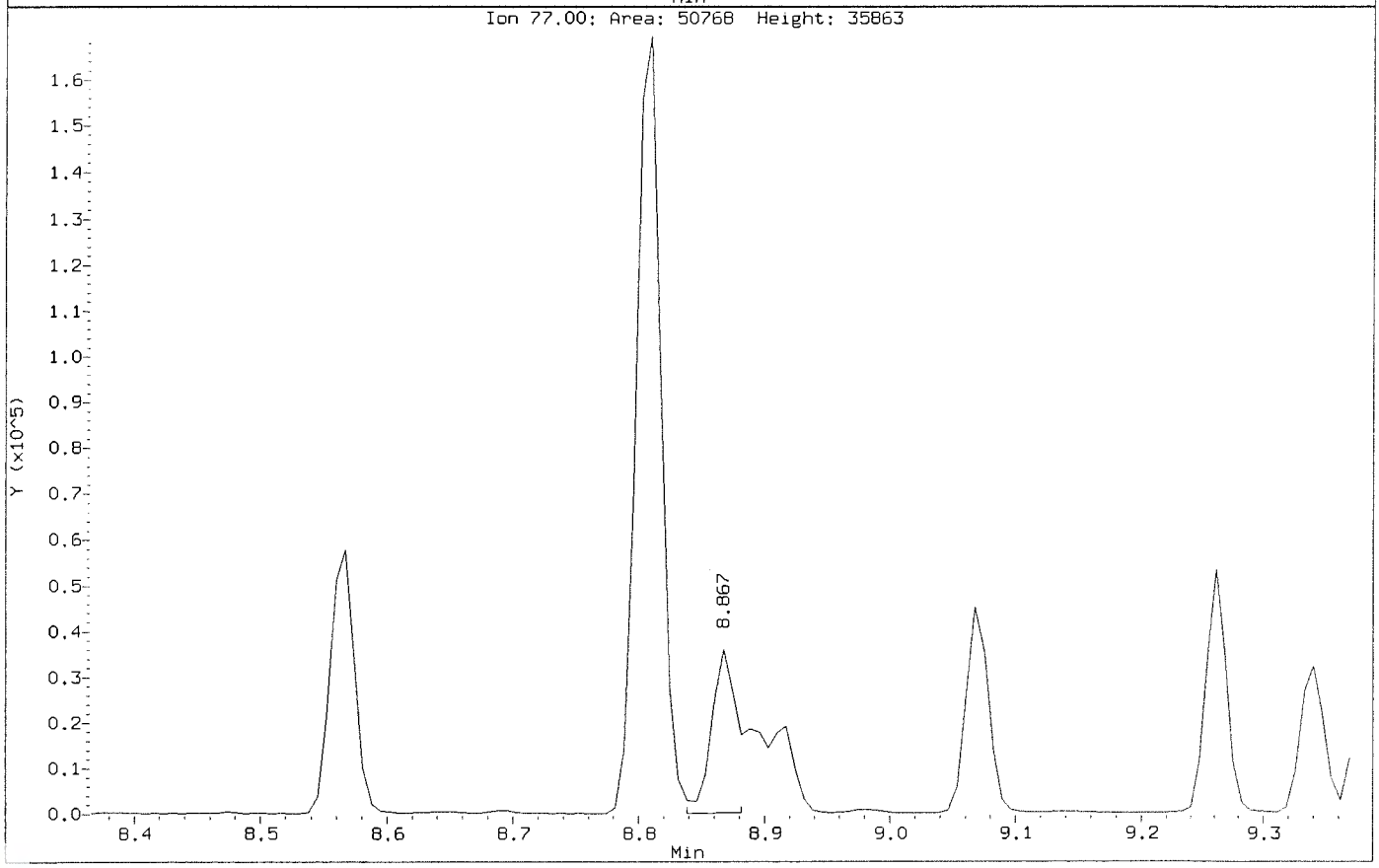
Injection Date: 10-JUL-2020 12:20
Instrument: voa6.i
Client Sample ID: CCV

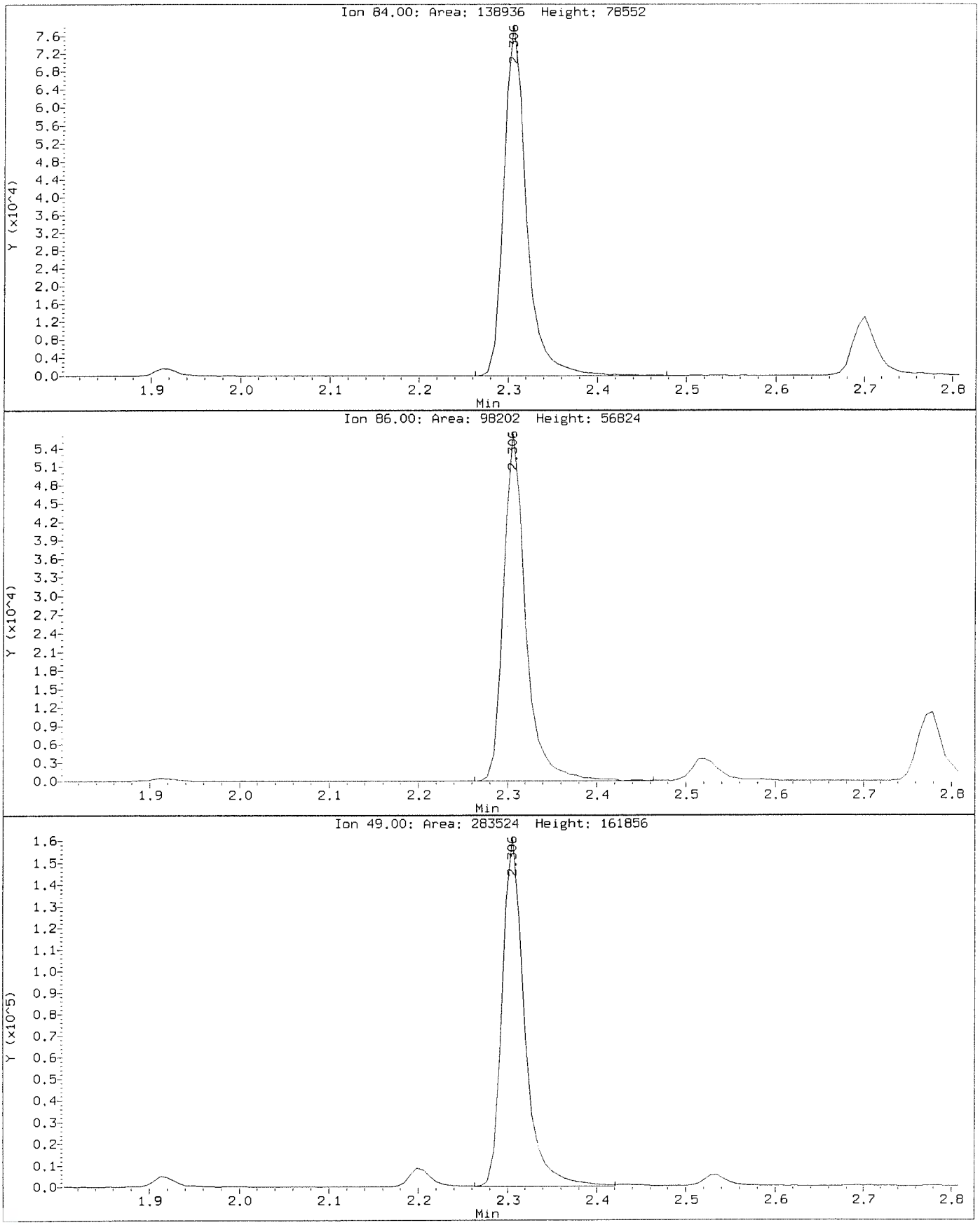
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





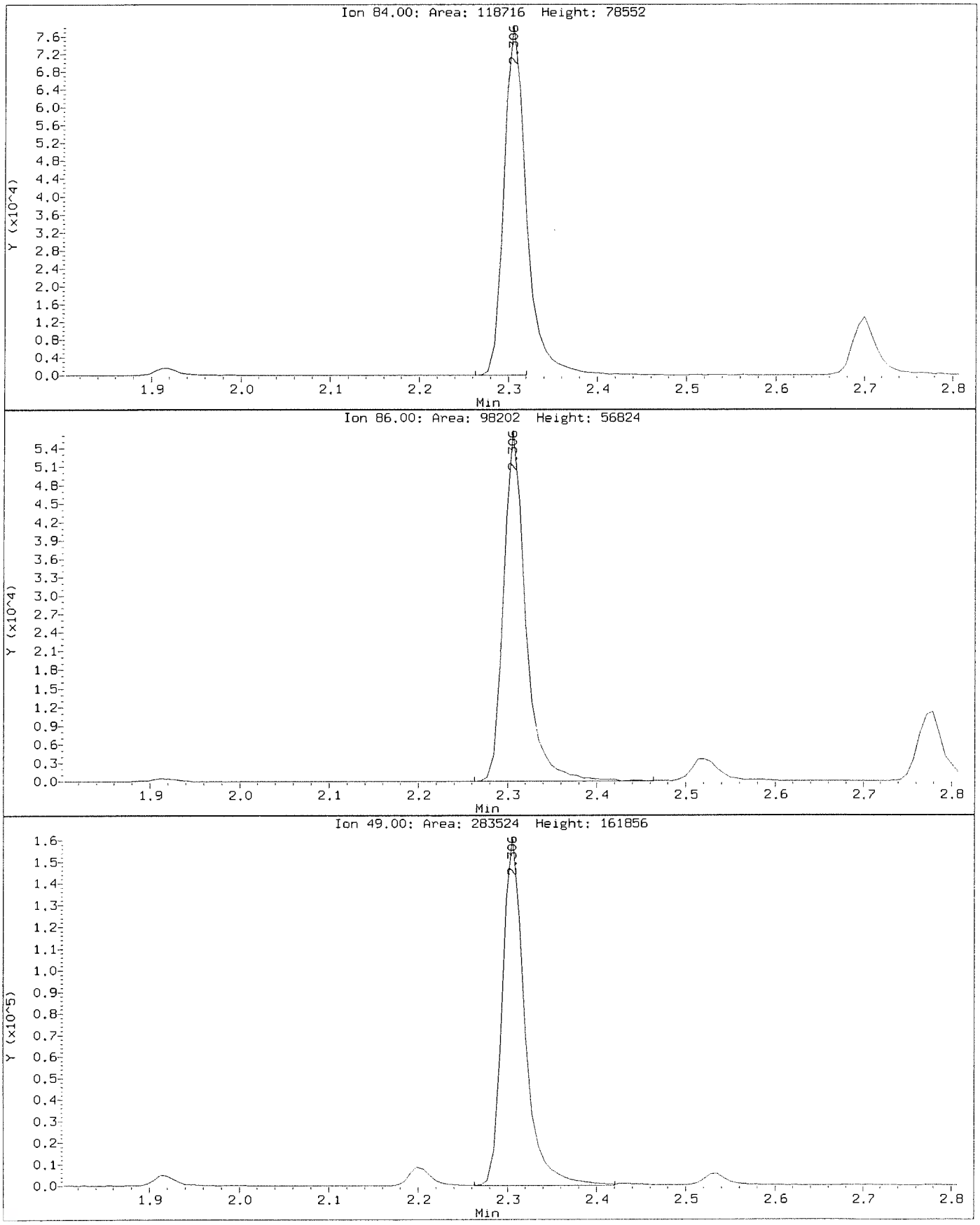
Data File: \\nahstws005\Target\chem\voa6.i\X200710.b\Before\X071003.D
Injection Date: 10-JUL-2020 12:20
Instrument: voa6.i
Client Sample ID: CCV

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



Data File: \\nahstws005\Target\chem\voa6.i\X200710.b\X071003.D
Injection Date: 10-JUL-2020 12:20
Instrument: voa6.i
Client Sample ID: CCV

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



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Data file : \\nahstws005\Target\chem\voa6.i\X200710.b\X071005.D
Lab Smp Id: VLCSW-200710 Client Smp ID: VLCSW-200710
Inj Date : 10-JUL-2020 13:07
Operator : PC Inst ID: voa6.i
Smp Info : VLCSW-200710;VLCSW-200710;3;;LCS
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200710.b\8260W.m
Meth Date : 13-Aug-2020 13:43 voa6.i Quant Type: ISTD
Cal Date : 07-JUL-2020 13:53 Cal File: X070708.D
Als bottle: 5 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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

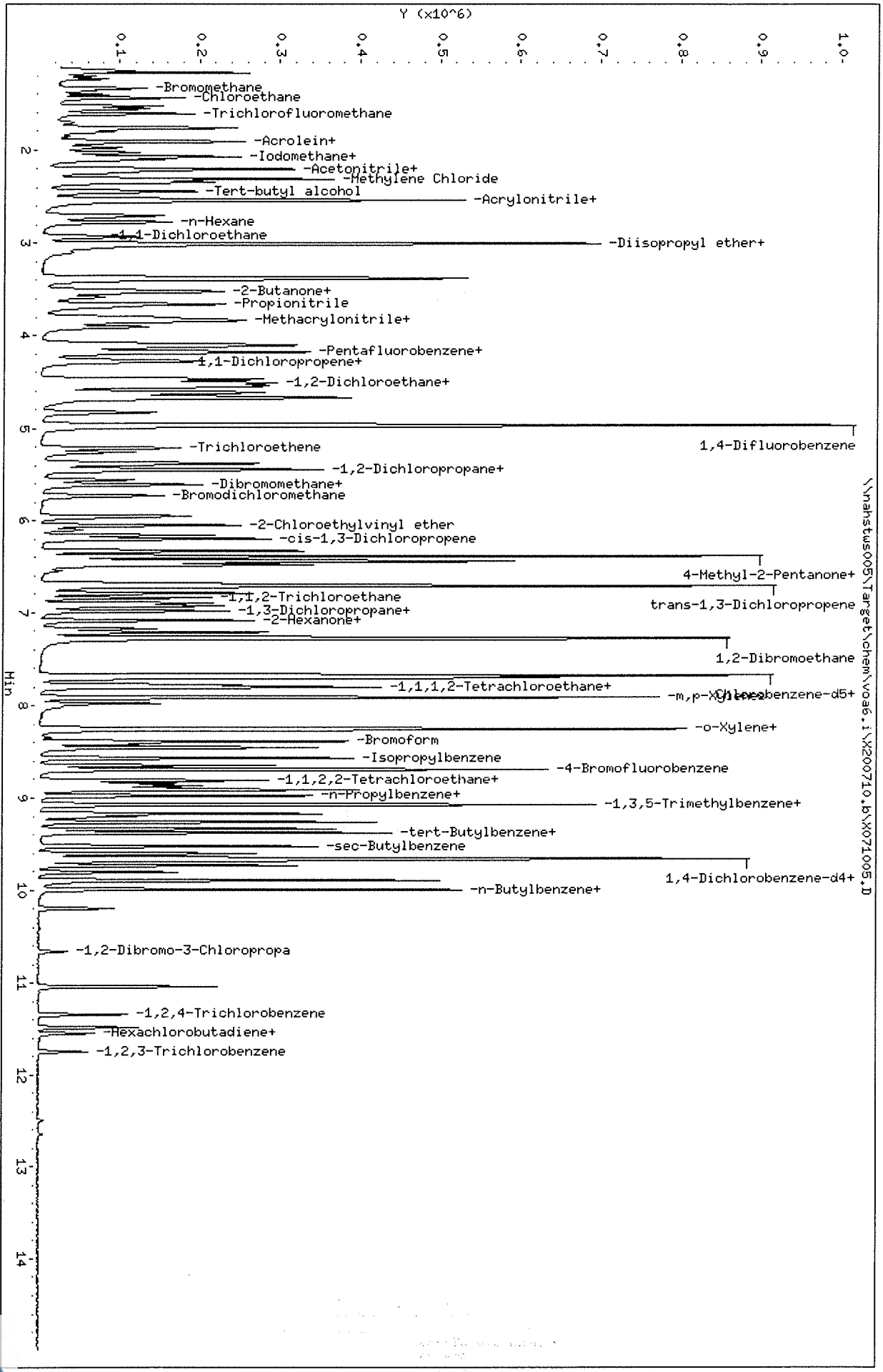
Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
* 1	Pentafluorobenzene	168	4.189	4.189	(1.000)	253237	50.0000	
* 36	1,4-Difluorobenzene	114	4.970	4.970	(1.000)	421776	50.0000	
* 47	Chlorobenzene-d5	117	7.670	7.671	(1.000)	367109	50.0000	
* 70	1,4-Dichlorobenzene-d4	152	9.669	9.662	(1.000)	156901	50.0000	
$ 30	Dibromofluoromethane	113	4.103	4.103	(0.979)	141345	51.3348	51.33
$ 35	1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	199938	52.8021	52.80
$ 48	Toluene-d8	98	6.388	6.388	(0.833)	473325	49.0427	49.04
$ 69	4-Bromofluorobenzene	95	8.688	8.688	(1.133)	178523	51.0916	51.09
60	1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	55469	19.6790	19.67
31	1,1,1-Trichloroethane	97	4.089	4.089	(0.976)	82599	17.8050	17.80
68	1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.914)	68747	22.1624	22.16
53	1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	47147	20.3019	20.30
22	1,1-Dichloroethane	63	2.929	2.929	(0.699)	131032	18.2574	18.25
11	1,1-Dichloroethene	96	1.919	1.919	(0.458)	40237	17.1594	17.15
32	1,1-Dichloropropene	75	4.290	4.282	(0.863)	70685	17.0186	17.01
93	1,2,3-Trichlorobenzene	180	11.746	11.746	(1.215)	15384	31.6778	31.67
71	1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	62531	22.8622	22.86(M)
90	1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	27611	28.8199	28.81
79	1,2,4-Trimethylbenzene	105	9.382	9.383	(0.970)	183715	19.9108	19.91
89	1,2-Dibromo-3-Chloropropane	155	10.657	10.658	(1.102)	6216	24.6545	24.65
57	1,2-Dibromoethane	107	7.262	7.262	(0.947)	59510	20.1674	20.16
88	1,2-Dichlorobenzene	146	9.998	9.999	(1.034)	88008	19.1914	19.19

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
33	1,2-Dichloroethane	62	4.562	4.562	(0.918)	101661	19.4274	19.42
42	1,2-Dichloropropane	63	5.443	5.443	(1.095)	76260	19.4358	19.43
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	171828	19.2210	19.22
83	1,3-Dichlorobenzene	146	9.605	9.605	(0.993)	90913	18.0983	18.09
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	94563	19.3453	19.34
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	90752	18.8745	18.87
26	2,2-Dichloropropane	77	3.516	3.516	(0.839)	86752	19.7869	19.78
24	2-Butanone	43	3.580	3.581	(0.855)	98444	38.7637	38.76
76	2-Chlorotoluene	91	8.974	8.974	(0.928)	155760	19.7794	19.77
52	2-Hexanone	43	7.090	7.090	(0.924)	158128	43.1089	43.10
77	4-Chlorotoluene	91	9.074	9.075	(0.939)	181680	20.3444	20.34
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	146625	16.4338	16.43
45	4-Methyl-2-Pentanone	43	6.331	6.331	(0.825)	224528	43.4979	43.49
10	Acetone	43	1.976	1.976	(0.472)	81486	18.7879	18.78
37	Benzene	78	4.519	4.519	(0.909)	223437	18.5673	18.56
74	Bromobenzene	156	8.809	8.810	(0.911)	64252	21.4654	21.46
29	Bromochloromethane	128	3.802	3.803	(0.908)	32991	18.7570	18.75
39	Bromodichloromethane	83	5.729	5.729	(1.153)	81068	19.1893	19.18
66	Bromoform	173	8.415	8.416	(1.097)	40616	19.9306	19.93
6	Bromomethane	94	1.338	1.338	(0.320)	36898	20.7051	20.70
19	Carbon Disulfide	76	2.069	2.069	(0.494)	272214	35.3514	35.35
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	67619	16.7991	16.79
59	Chlorobenzene	112	7.699	7.699	(1.004)	143178	19.1435	19.14
7	Chloroethane	64	1.403	1.403	(0.335)	40396	16.4797	16.47
28	Chloroform	83	3.910	3.910	(0.933)	106316	19.1592	19.15
3	Chloromethane	50	1.080	1.081	(0.258)	95129	18.2799	18.27
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.843)	63679	19.2376	19.23
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	95947	18.8472	18.84
55	Dibromochloromethane	129	7.176	7.176	(0.936)	60111	19.9334	19.93
44	Dibromomethane	93	5.557	5.557	(1.118)	40257	19.0367	19.03
2	Dichlorodifluoromethane	85	0.973	0.973	(0.232)	46827	15.2747	15.27
61	Ethylbenzene	106	7.799	7.800	(1.017)	70109	17.7115	17.71
91	Hexachlorobutadiene	225	11.481	11.481	(1.187)	19026	25.8855	25.88
67	Isopropylbenzene	105	8.566	8.566	(1.117)	200839	17.1053	17.10
62	m,p-Xylenes	106	7.907	7.907	(1.031)	164363	34.5287	34.52
17	Methylene Chloride	84	2.305	2.305	(0.550)	51771	18.6953	18.69(M)
87	n-Butylbenzene	91	9.998	9.999	(1.034)	127497	16.0203	16.02
73	n-Propylbenzene	91	8.917	8.917	(0.922)	242945	18.9852	18.98
92	Naphthalene	128	11.546	11.546	(1.194)	43446	28.6778	28.67
63	o-Xylene	106	8.244	8.244	(1.075)	86192	18.4828	18.48
81	sec-Butylbenzene	105	9.526	9.526	(0.985)	185964	17.6791	17.67
64	Styrene	104	8.265	8.258	(1.078)	152485	18.8149	18.81
78	tert-Butylbenzene	119	9.339	9.340	(0.966)	134102	18.6306	18.63
56	Tetrachloroethene	164	6.933	6.933	(0.904)	39529	17.6285	17.62
50	Toluene	91	6.446	6.446	(0.840)	225185	19.2262	19.22
20	trans-1,2-Dichloroethene	96	2.535	2.535	(0.605)	51985	18.7819	18.78
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	89026	19.4642	19.46
38	Trichloroethene	130	5.214	5.207	(1.049)	55578	17.7602	17.76
8	Trichlorofluoromethane	101	1.560	1.561	(0.373)	74928	17.1576	17.15
5	Vinyl Chloride	62	1.145	1.145	(0.273)	71210	16.0071	16.00

QC Flag Legend

M - Compound response manually integrated.



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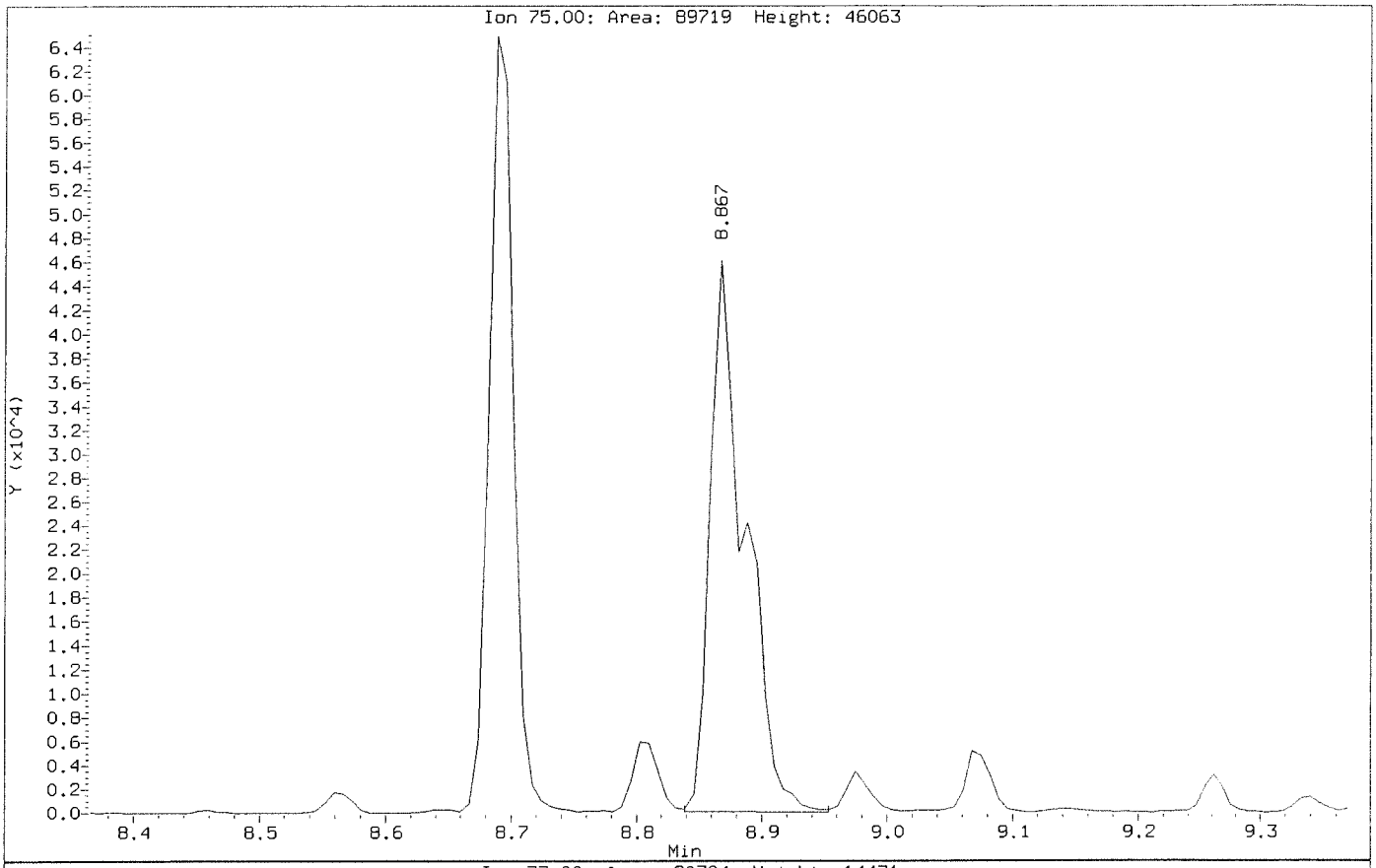
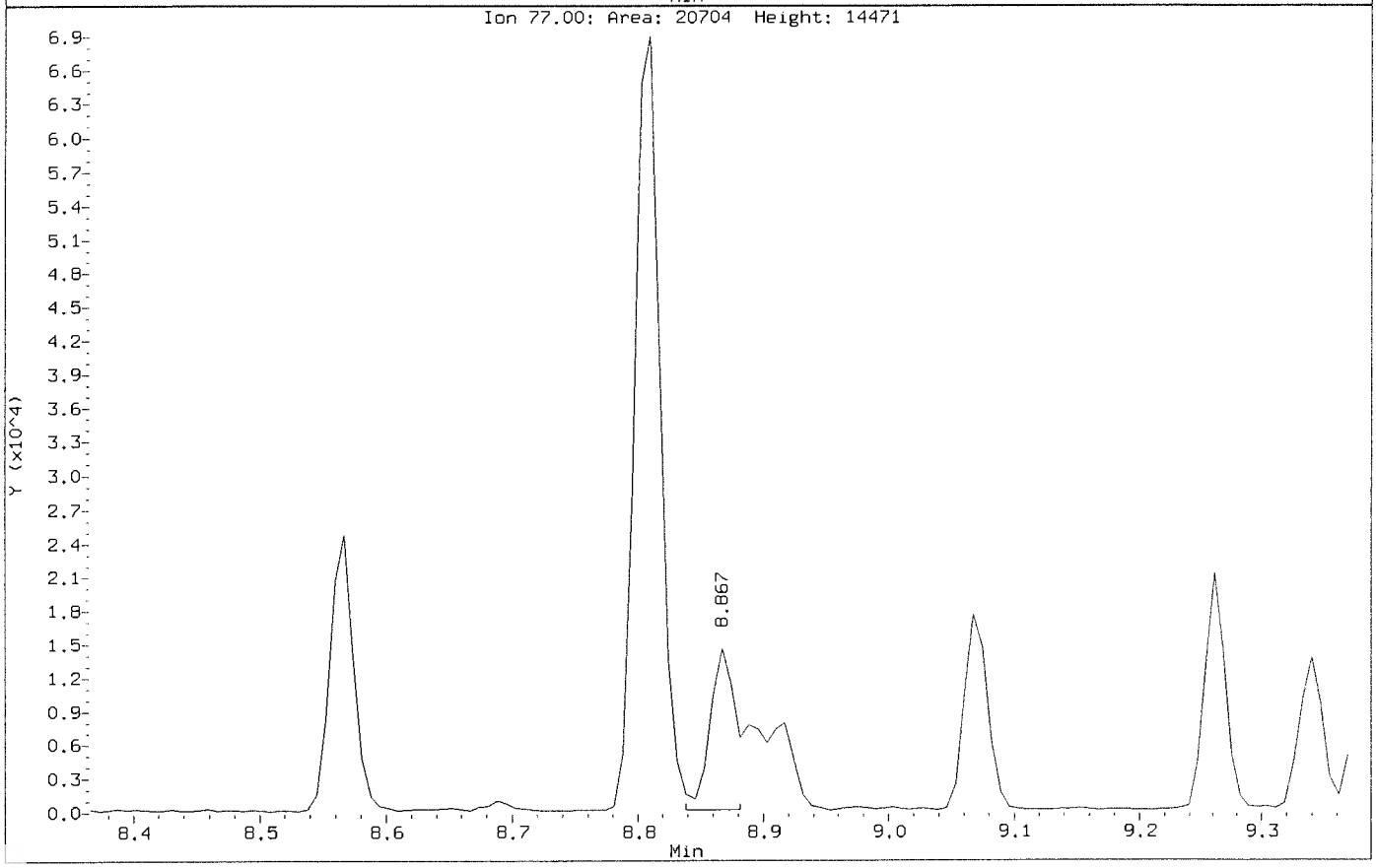
Date : 10-JUL-2020 13:07
Client ID: VLCSW-200710
Sample Info: VLCSW-200710;VLCSW-200710;3;;LCS
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\nahstws005\Target\chem\voa6.i\X200710.b\Before\X071005.D
Injection Date: 10-JUL-2020 13:07
Instrument: voa6.i
Client Sample ID: VLCSW-200710

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





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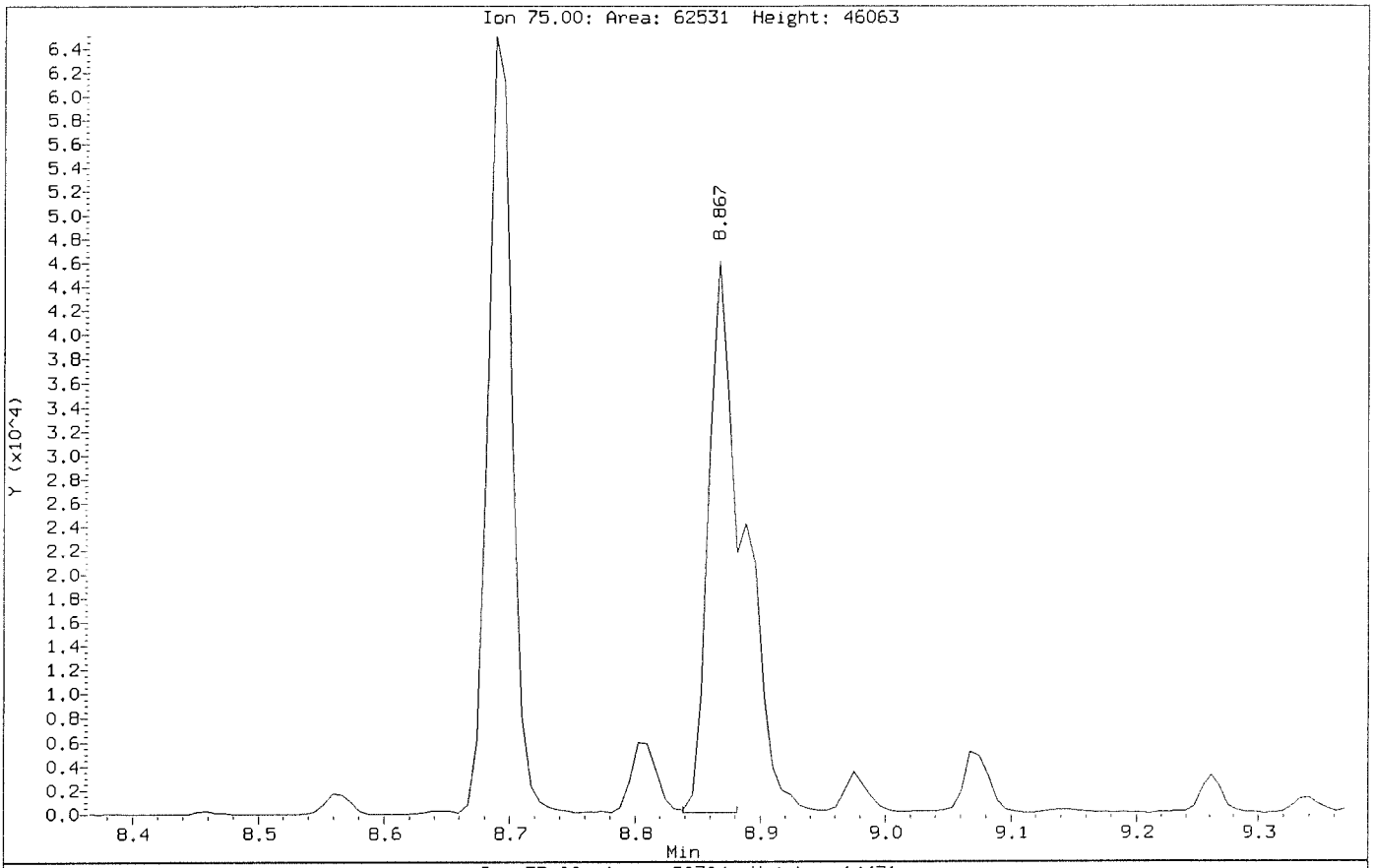
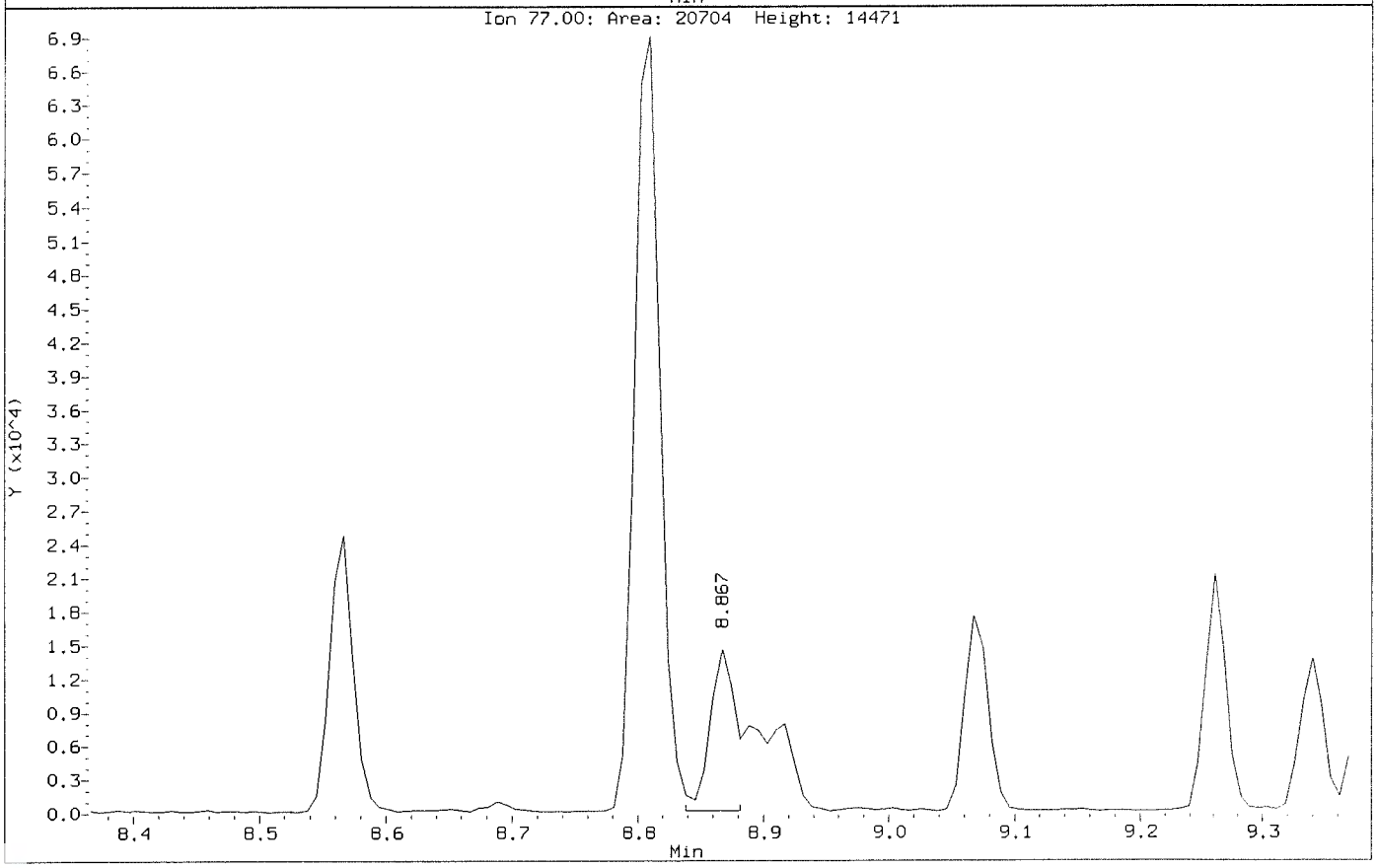
Injection Date: 10-JUL-2020 13:07
Instrument: voa6.i
Client Sample ID: VLCSW-200710

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





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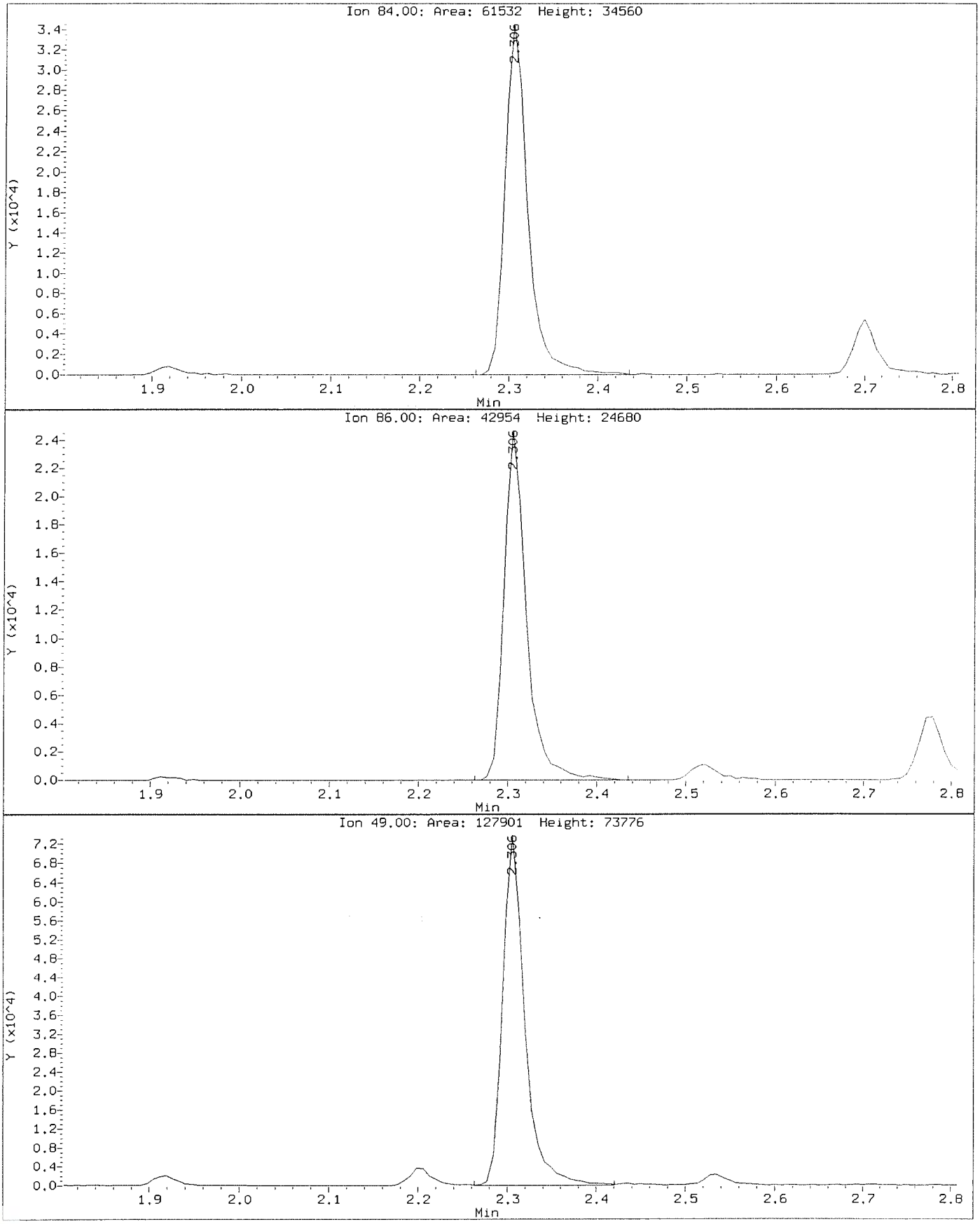
Injection Date: 10-JUL-2020 13:07
Instrument: voa6.i
Client Sample ID: VLCSW-200710

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



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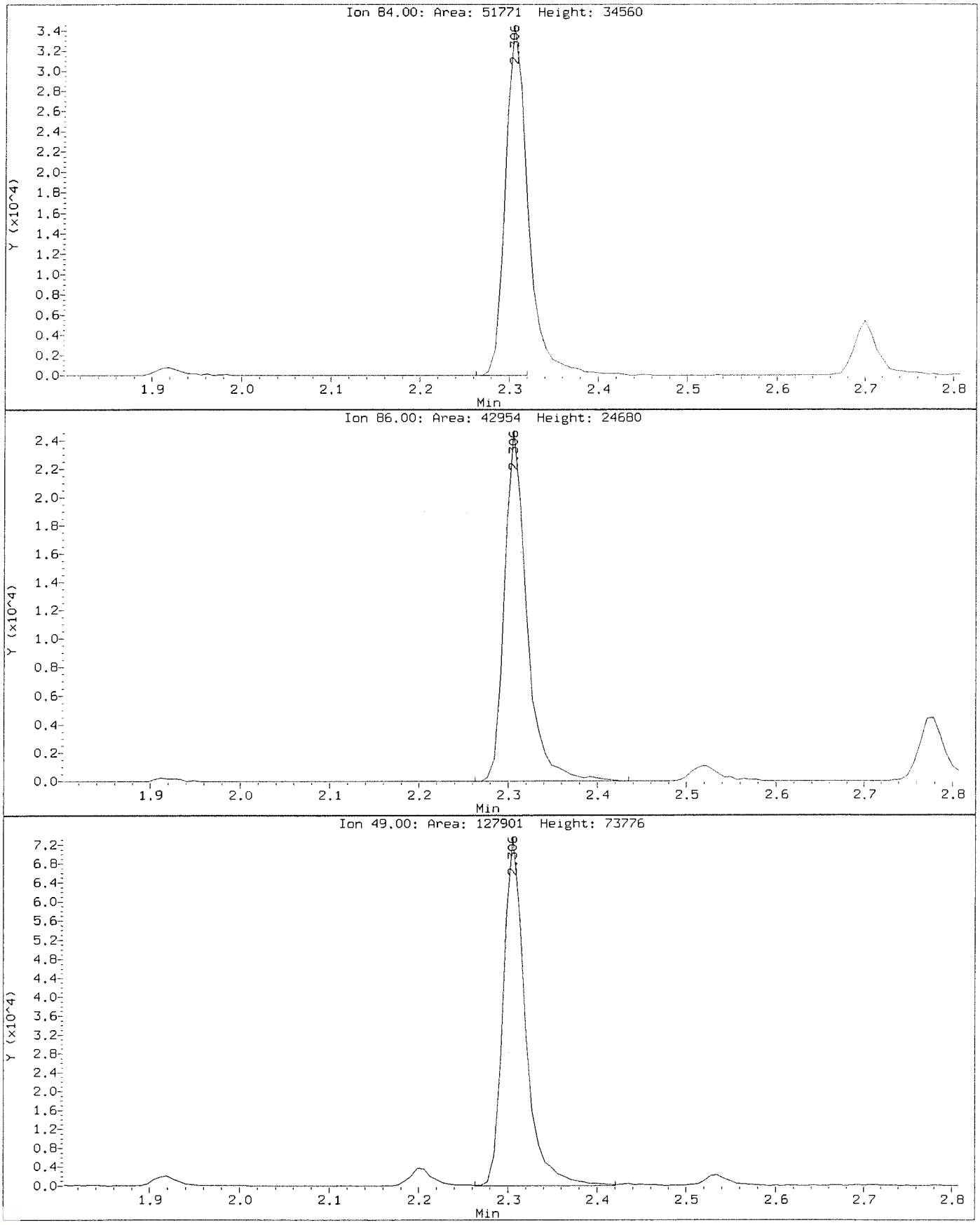
Injection Date: 10-JUL-2020 13:07
Instrument: voa6.i
Client Sample ID: VLCSW-200710

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



Data File: \\nahstws005\Target\chem\voa6.i\X200710.b\X071007.D Page 1
Report Date: 13-Aug-2020 13:44

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200710.b\X071007.D
Lab Smp Id: VBLKW-200710 Client Smp ID: VBLKW-200710
Inj Date : 10-JUL-2020 13:56
Operator : PC Inst ID: voa6.i
Smp Info : VBLKW-200710;VBLKW-200710;3;;BLANK
Misc Info : HS18090001;WATER;0;1;
Comment   :
Method   : \\nahstws005\Target\chem\voa6.i\X200710.b\8260W.m
Meth Date : 13-Aug-2020 13:43 voa6.i Quant Type: ISTD
Cal Date : 07-JUL-2020 13:53 Cal File: X070708.D
Als bottle: 7 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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	4.189	4.189	(1.000)	329382	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	508395	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	419273	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.662	(1.000)	180571	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.979)	166455	46.3936	46.39
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	223089	45.1982	45.19
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	528280	47.9267	47.92
$ 69 4-Bromofluorobenzene	95	8.695	8.688	(1.134)	197220	49.3847	49.38

Data File: \\nahstws005\Target\chem\voa6.i\X200710.b\X071007.D

Date : 10-JUL-2020 13:56

Client ID: VBLKW-200710

Sample Info: VBLKW-200710;VBLKW-200710;3;;BLANK

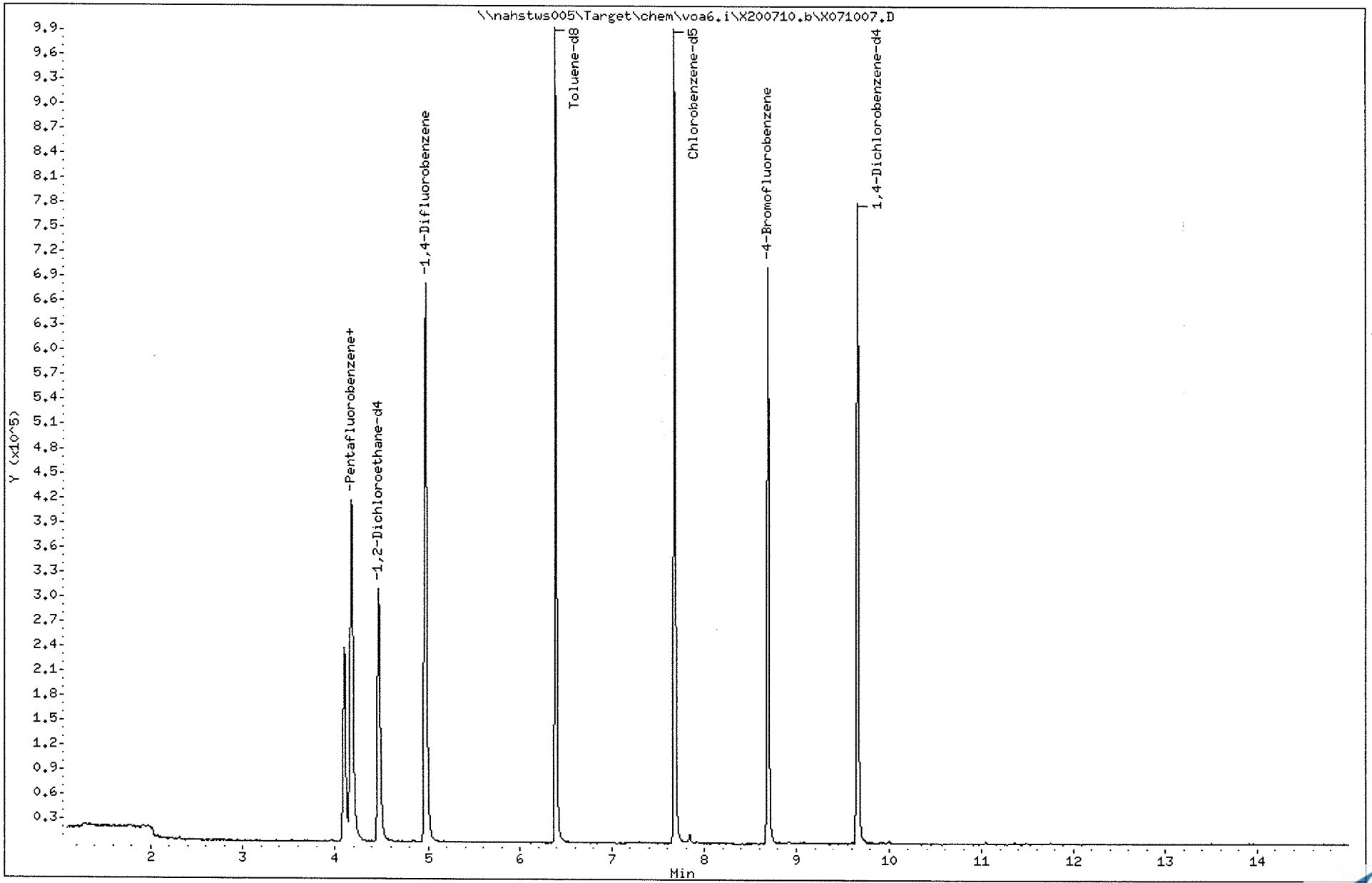
Purge Volume: 5.0

Column phase: DB624

Instrument: voa6.i

Operator: PC

Column diameter: 0.18



Data File: \\nahstws005\Target\chem\voa6.i\X200710.b\X071008.D Page 1
Report Date: 13-Aug-2020 13:40

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200710.b\X071008.D
Lab Smp Id: HS20070055-01 Client Smp ID: HS20070055-01
Inj Date : 10-JUL-2020 14:20
Operator : PC Inst ID: voa6.i
Smp Info : HS20070055-01;HS20070055-01;;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200710.b\8260W.m
Meth Date : 13-Aug-2020 13:40 dev.giga Quant Type: ISTD
Cal Date : 07-JUL-2020 13:53 Cal File: X070708.D
Als bottle: 8
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

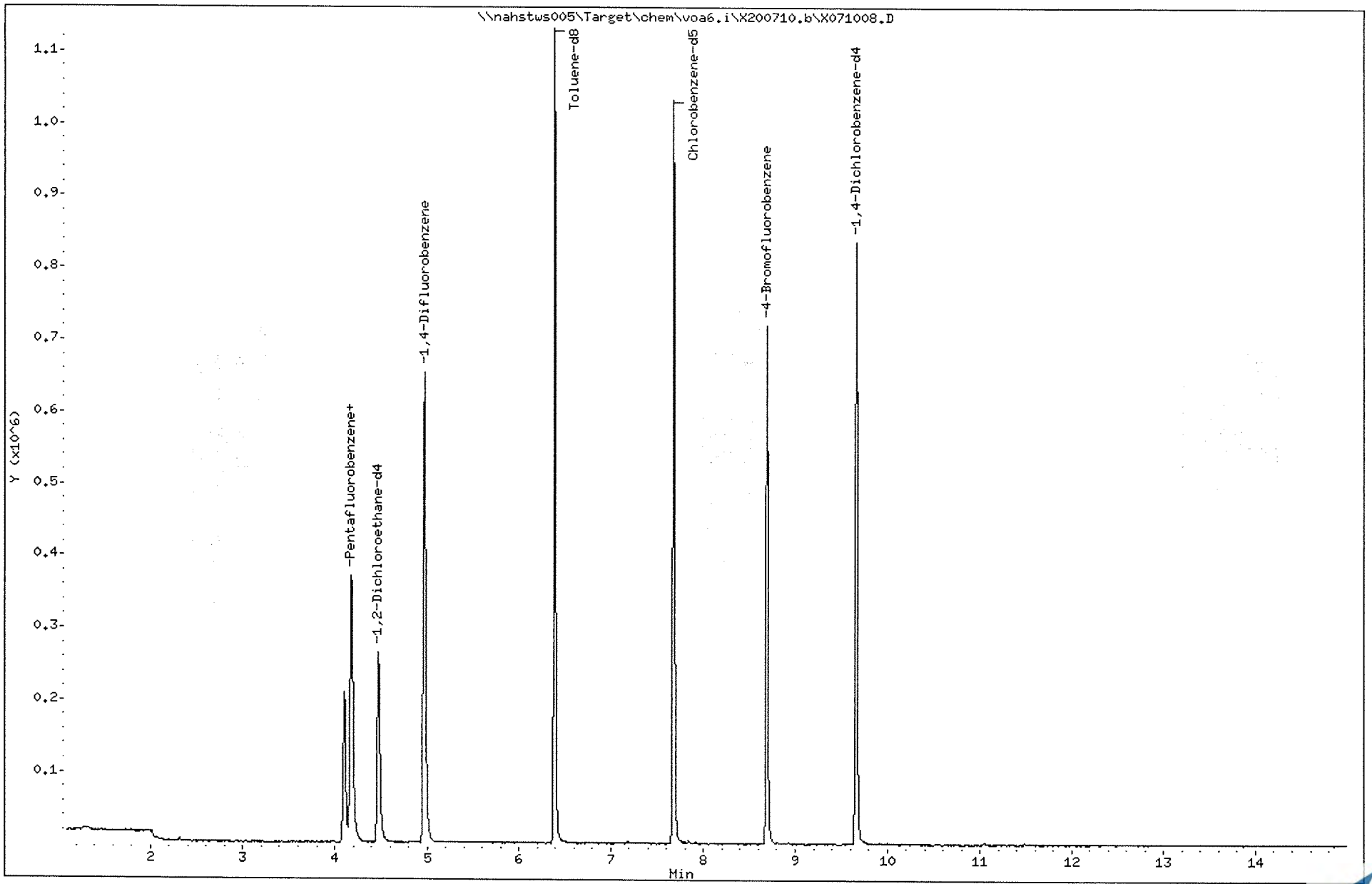
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

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	4.189	4.182	(1.000)	295462	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	484929	50.0000	
* 47 Chlorobenzene-d5	117	7.670	7.671	(1.000)	434891	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.662	(1.000)	188342	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.979)	146158	45.3941	45.39
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	191364	43.1916	43.19
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	593488	51.9089	51.90
$ 69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	205100	49.5163	49.51

Data File: \\nahstws005\Target\chem\voa6.i\X200710.b\X071008.D
Date : 10-JUL-2020 14:20
Client ID: HS20070055-01
Sample Info: HS20070055-01;HS20070055-01;;;
Purge Volume: 5.0
Column phase: DB624

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



Data File: \\nahstws005\Target\chem\voa6.i\X200710.b\X071012.D
Report Date: 13-Aug-2020 13:44

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Data file : \\nahstws005\Target\chem\voa6.i\X200710.b\X071012.D
Lab Smp Id: HS20070043-17MS Client Smp ID: HS20070043-17MS
Inj Date : 10-JUL-2020 15:55
Operator : PC Inst ID: voa6.i
Smp Info : HS20070043-17MS;HS20070043-17MS;3;;MS
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200710.b\8260W.m
Meth Date : 13-Aug-2020 13:43 voa6.i Quant Type: ISTD
Cal Date : 07-JUL-2020 13:53 Cal File: X070708.D
Als bottle: 12 QC Sample: MS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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

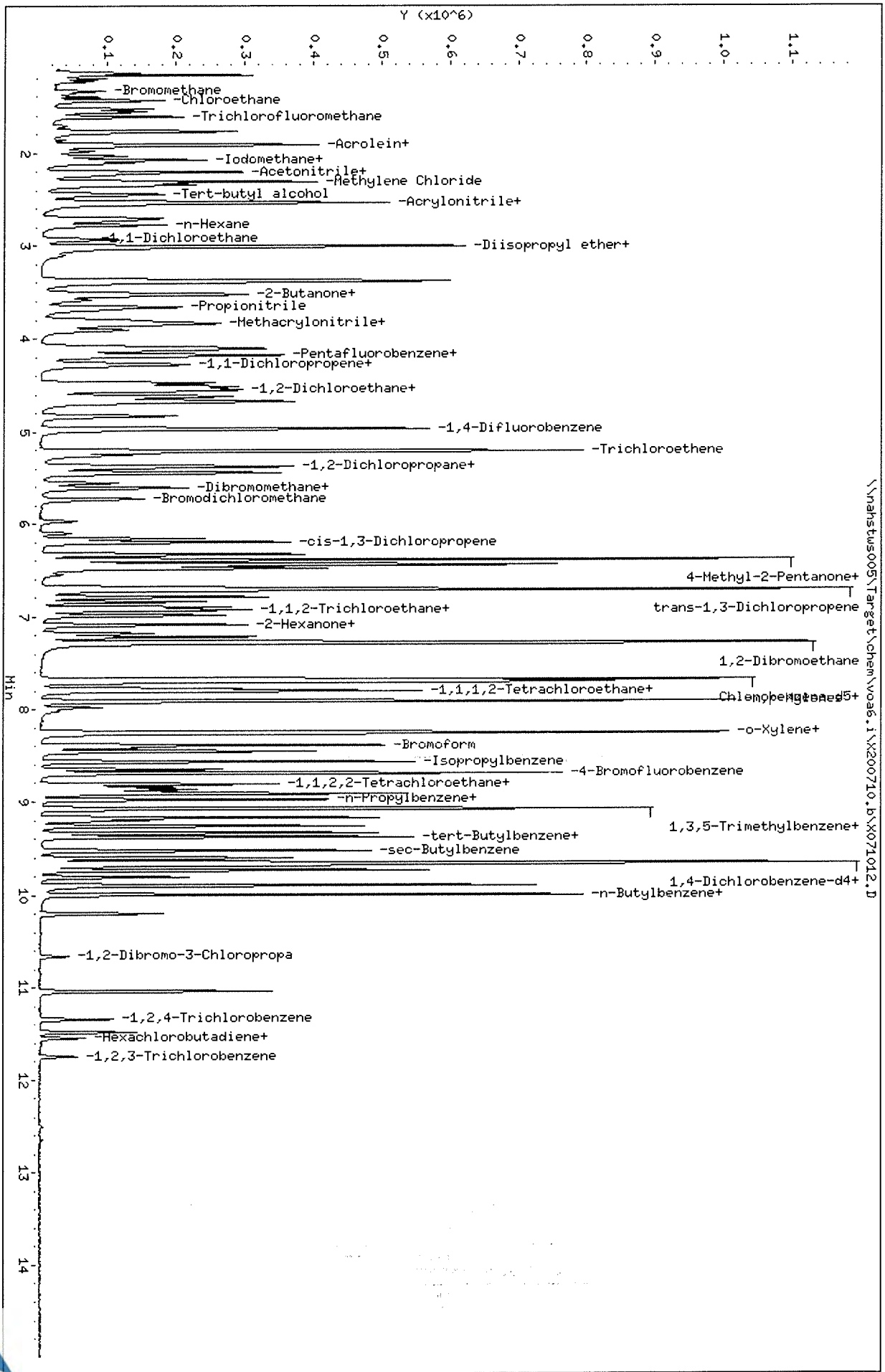
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
* 1	Pentafluorobenzene	168	4.189	4.189	(1.000)	278486	50.0000	
* 36	1,4-Difluorobenzene	114	4.970	4.970	(1.000)	416095	50.0000	
* 47	Chlorobenzene-d5	117	7.671	7.671	(1.000)	426761	50.0000	
* 70	1,4-Dichlorobenzene-d4	152	9.669	9.662	(1.000)	201696	50.0000	
$ 30	Dibromofluoromethane	113	4.103	4.103	(0.979)	135241	44.5474	44.54
$ 35	1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	179068	42.8751	42.87
$ 48	Toluene-d8	98	6.388	6.388	(0.833)	563758	50.2479	50.24
$ 69	4-Bromofluorobenzene	95	8.695	8.688	(1.134)	206848	50.9198	50.91
60	1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	63260	19.3060	19.30
31	1,1,1-Trichloroethane	97	4.089	4.089	(0.976)	87631	17.1771	17.17
68	1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.914)	78461	19.6764	19.67
53	1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	53417	19.7867	19.78
22	1,1-Dichloroethane	63	2.929	2.929	(0.699)	126435	16.0197	16.01
11	1,1-Dichloroethene	96	1.912	1.919	(0.456)	46201	17.9164	17.91
32	1,1-Dichloropropene	75	4.282	4.282	(0.862)	76213	18.6001	18.60
93	1,2,3-Trichlorobenzene	180	11.746	11.746	(1.215)	13932	22.7785	22.77
71	1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	69452	19.7531	19.75(M)
90	1,2,4-Trichlorobenzene	180	11.345	11.338	(1.173)	28254	23.2076	23.20
79	1,2,4-Trimethylbenzene	105	9.383	9.383	(0.970)	228756	19.2861	19.28
89	1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.102)	7126	21.7970	21.79
57	1,2-Dibromoethane	107	7.262	7.262	(0.947)	66664	19.4340	19.43
3	1,2-Dichlorobenzene	146	9.999	9.999	(1.034)	114411	19.4080	19.40

Data File: \\nahstws005\Target\chem\voa6.i\X200710.b\X071012.D Page 2
Report Date: 13-Aug-2020 13:44

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
33	1,2-Dichloroethane	62	4.562	4.562	(0.918)	96287	18.6516	18.65
42	1,2-Dichloropropane	63	5.443	5.443	(1.095)	74079	19.1377	19.13
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	225579	19.6295	19.62
83	1,3-Dichlorobenzene	146	9.612	9.605	(0.994)	123517	19.1279	19.12
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	109830	19.3280	19.32
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	124236	20.1130	20.11
26	2,2-Dichloropropane	77	3.516	3.516	(0.839)	85783	17.7919	17.79
24	2-Butanone	43	3.580	3.581	(0.855)	84356	28.8194	28.81
76	2-Chlorotoluene	91	8.974	8.974	(0.928)	193729	19.1373	19.13
52	2-Hexanone	43	7.090	7.090	(0.924)	179124	41.9111	41.91
77	4-Chlorotoluene	91	9.075	9.075	(0.939)	223224	19.4449	19.44
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	223335	19.4722	19.47
45	4-Methyl-2-Pentanone	43	6.331	6.331	(0.825)	249496	41.4360	41.43
10	Acetone	43	2.234	1.976	(0.533)	73808	9.40134	9.40
37	Benzene	78	4.519	4.519	(0.909)	219464	18.4861	18.48
74	Bromobenzene	156	8.810	8.810	(0.911)	75261	19.5592	19.55
29	Bromochloromethane	128	3.803	3.803	(0.908)	31227	16.1444	16.14
39	Bromodichloromethane	83	5.729	5.729	(1.153)	79027	18.9616	18.96
66	Bromoform	173	8.416	8.416	(1.097)	46468	19.6149	19.61
6	Bromomethane	94	1.338	1.338	(0.320)	35933	18.3267	18.32
19	Carbon Disulfide	76	2.069	2.069	(0.494)	267530	31.5932	31.59
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	76731	19.3231	19.32
59	Chlorobenzene	112	7.699	7.699	(1.004)	167094	19.2183	19.21
7	Chloroethane	64	1.403	1.403	(0.335)	44365	16.4554	16.45
28	Chloroform	83	3.910	3.910	(0.933)	103113	16.8972	16.89
3	Chloromethane	50	1.081	1.081	(0.258)	112766	19.7044	19.70
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.843)	100911	27.7215	27.72
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	104266	20.7609	20.76
55	Dibromochloromethane	129	7.176	7.176	(0.936)	69133	19.7207	19.72
44	Dibromomethane	93	5.557	5.557	(1.118)	38695	18.5479	18.54
2	Dichlorodifluoromethane	85	0.973	0.973	(0.232)	57368	17.0165	17.01
61	Ethylbenzene	106	7.800	7.800	(1.017)	90935	19.7616	19.76
91	Hexachlorobutadiene	225	11.481	11.481	(1.187)	20944	22.3589	22.35
67	Isopropylbenzene	105	8.566	8.566	(1.117)	274523	20.1128	20.11
62	m,p-Xylenes	106	7.907	7.907	(1.031)	215950	39.0248	39.02
17	Methylene Chloride	84	2.305	2.305	(0.550)	54345	17.8455	17.84(M)
87	n-Butylbenzene	91	9.999	9.999	(1.034)	202776	19.8205	19.82
73	n-Propylbenzene	91	8.917	8.917	(0.922)	322727	19.6188	19.61
92	Naphthalene	128	11.546	11.546	(1.194)	42494	21.8912	21.89
63	o-Xylene	106	8.244	8.244	(1.075)	105720	19.5015	19.50
81	sec-Butylbenzene	105	9.526	9.526	(0.985)	262713	19.4286	19.42
64	Styrene	104	8.265	8.258	(1.078)	180806	19.1910	19.19
78	tert-Butylbenzene	119	9.340	9.340	(0.966)	182456	19.7187	19.71
56	Tetrachloroethene	164	6.933	6.933	(0.904)	52922	20.3024	20.30
50	Toluene	91	6.453	6.446	(0.841)	269633	19.8033	19.80
20	trans-1,2-Dichloroethene	96	2.535	2.535	(0.605)	50166	16.4815	16.48
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	100163	22.1981	22.19
38	Trichloroethene	130	5.214	5.207	(1.049)	243991	79.0331	79.03
8	Trichlorofluoromethane	101	1.561	1.561	(0.373)	89338	18.6025	18.60
5	Vinyl Chloride	62	1.138	1.145	(0.272)	91907	18.7864	18.78

QC Flag Legend

M - Compound response manually integrated.



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Purge Volume: 5.0
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Instrument: voa6.i
Operator: PC
Column diameter: 0.18

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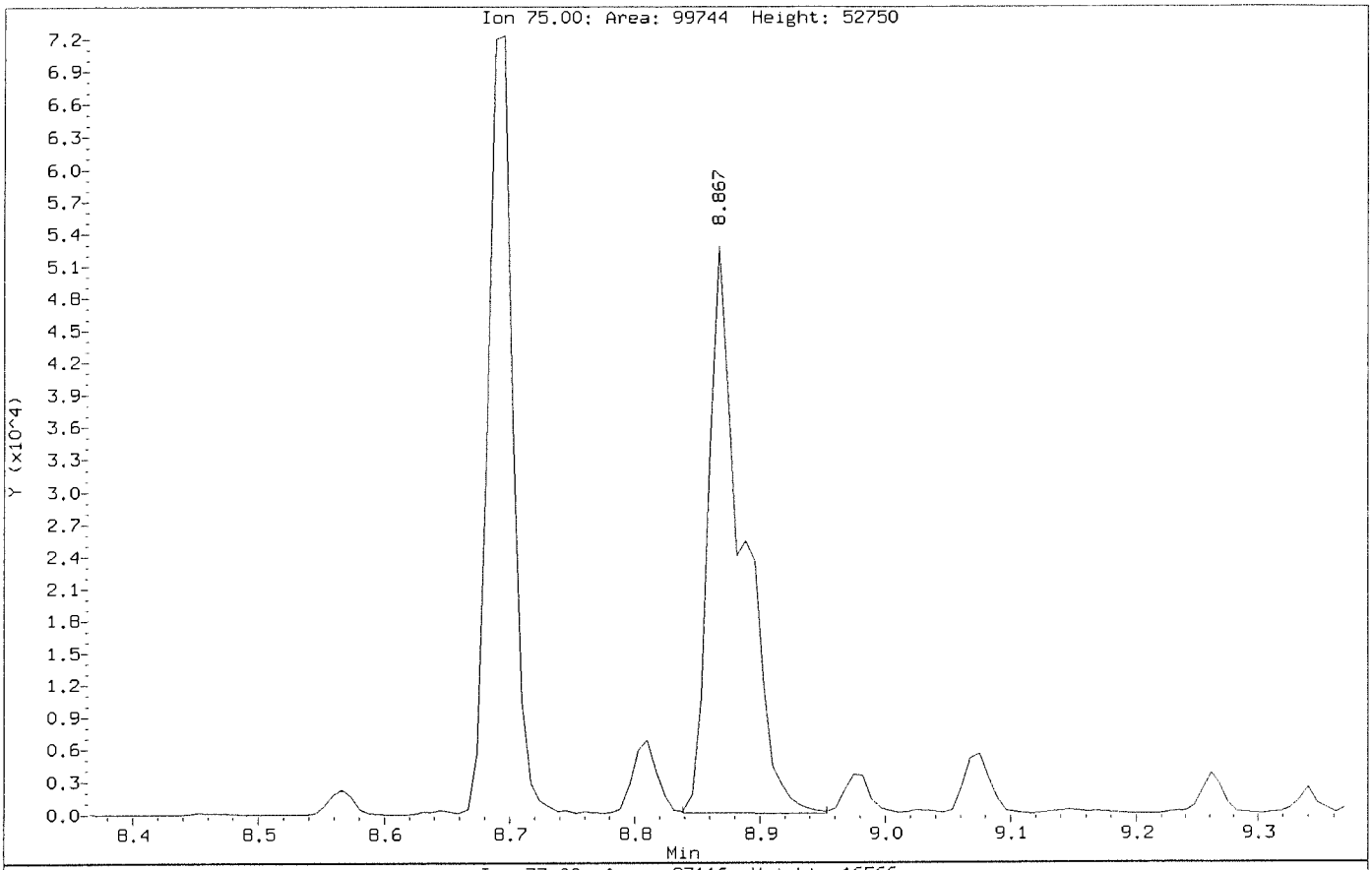
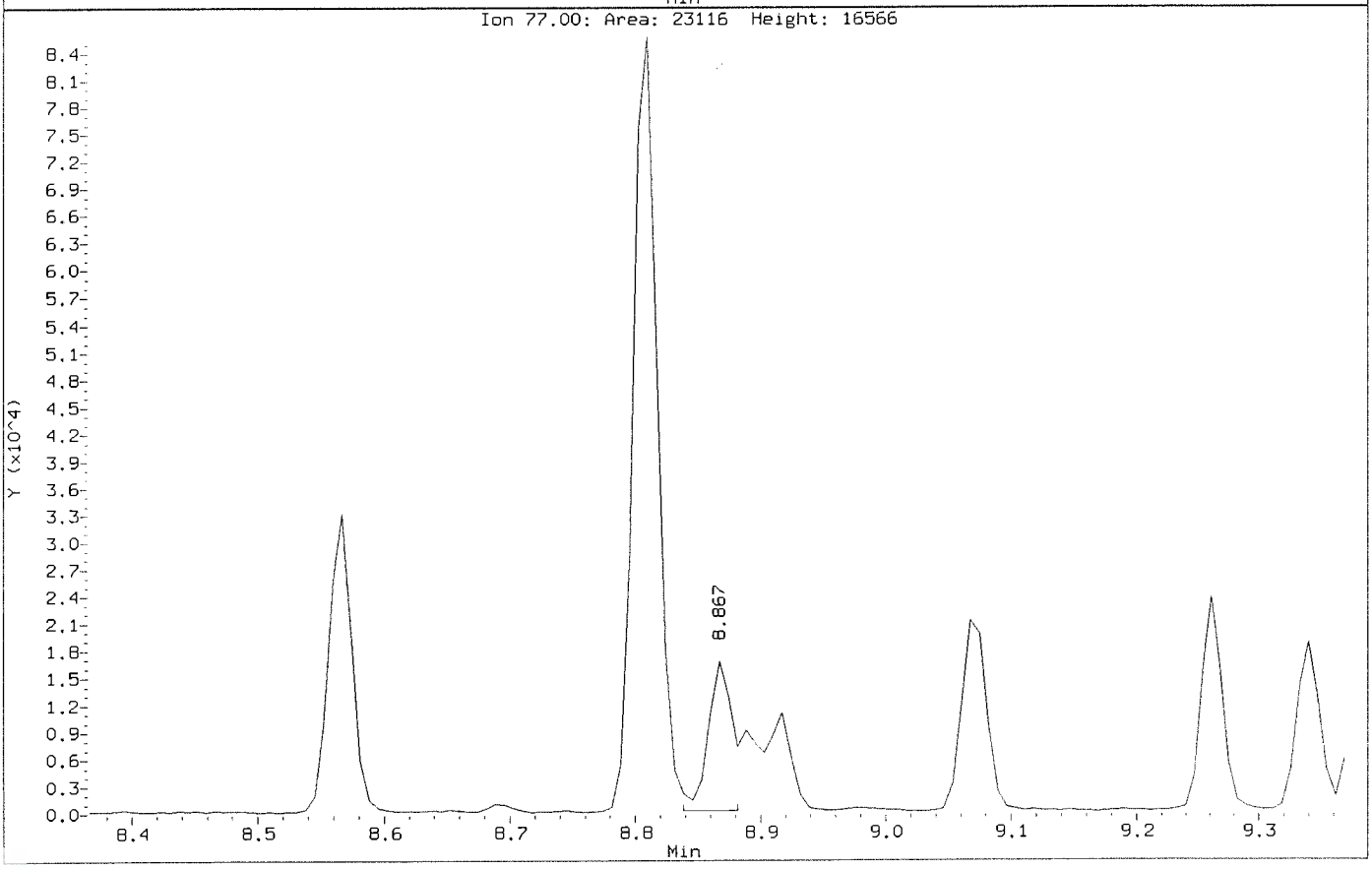
Instrument: voa6.i
Client Sample ID: HS20070043-17MS

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





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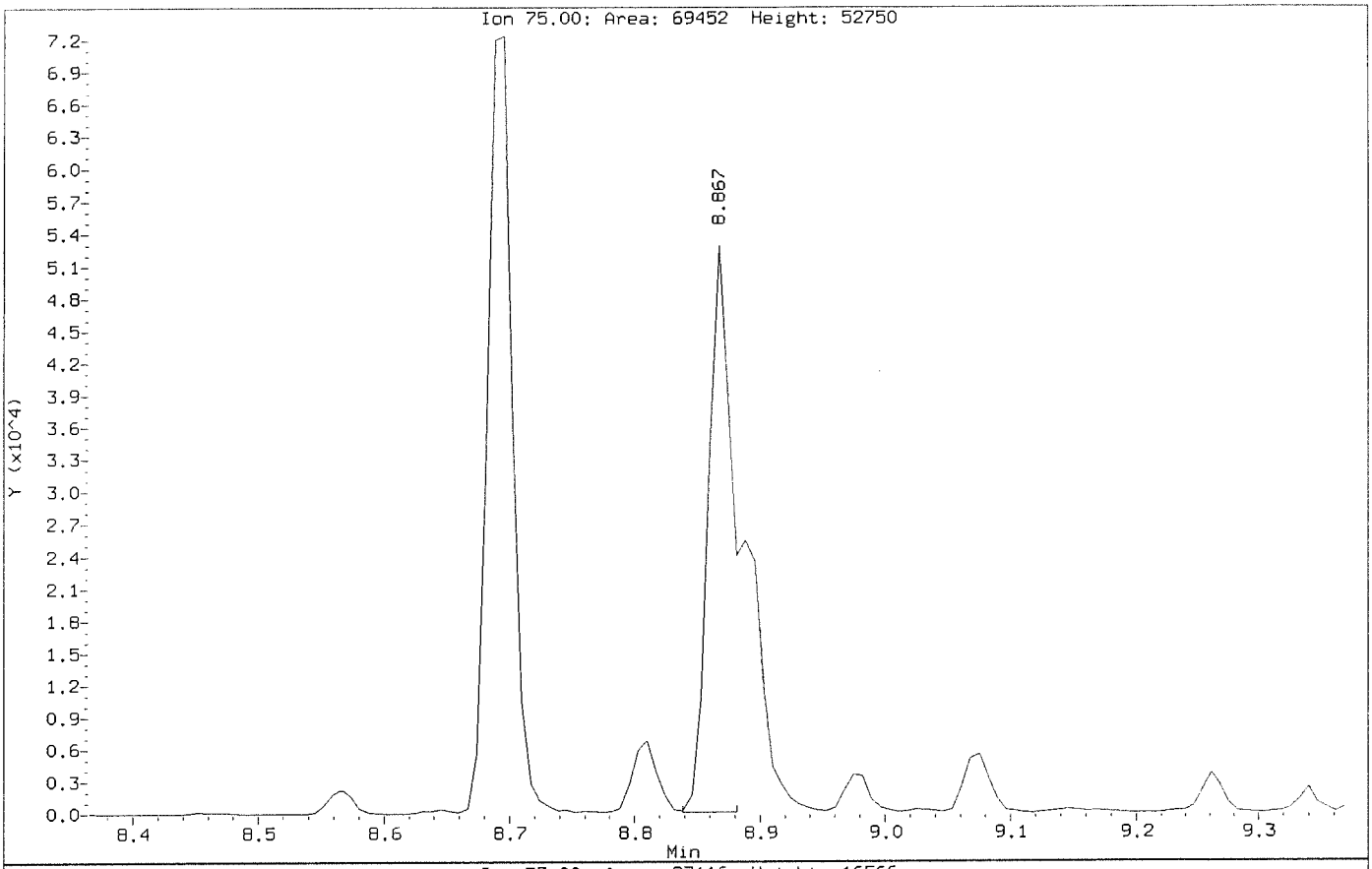
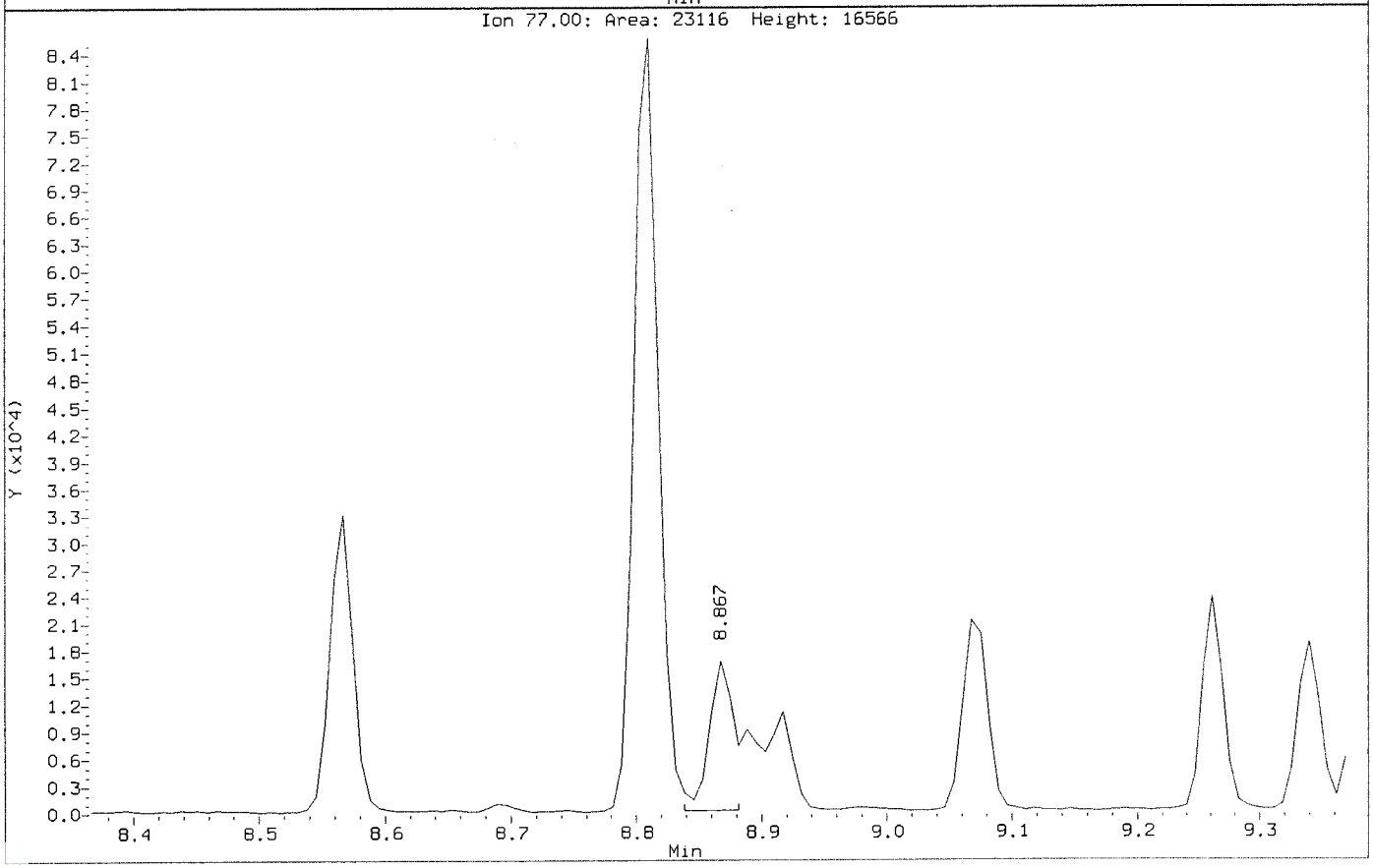
Client Sample ID: HS20070043-17MS

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





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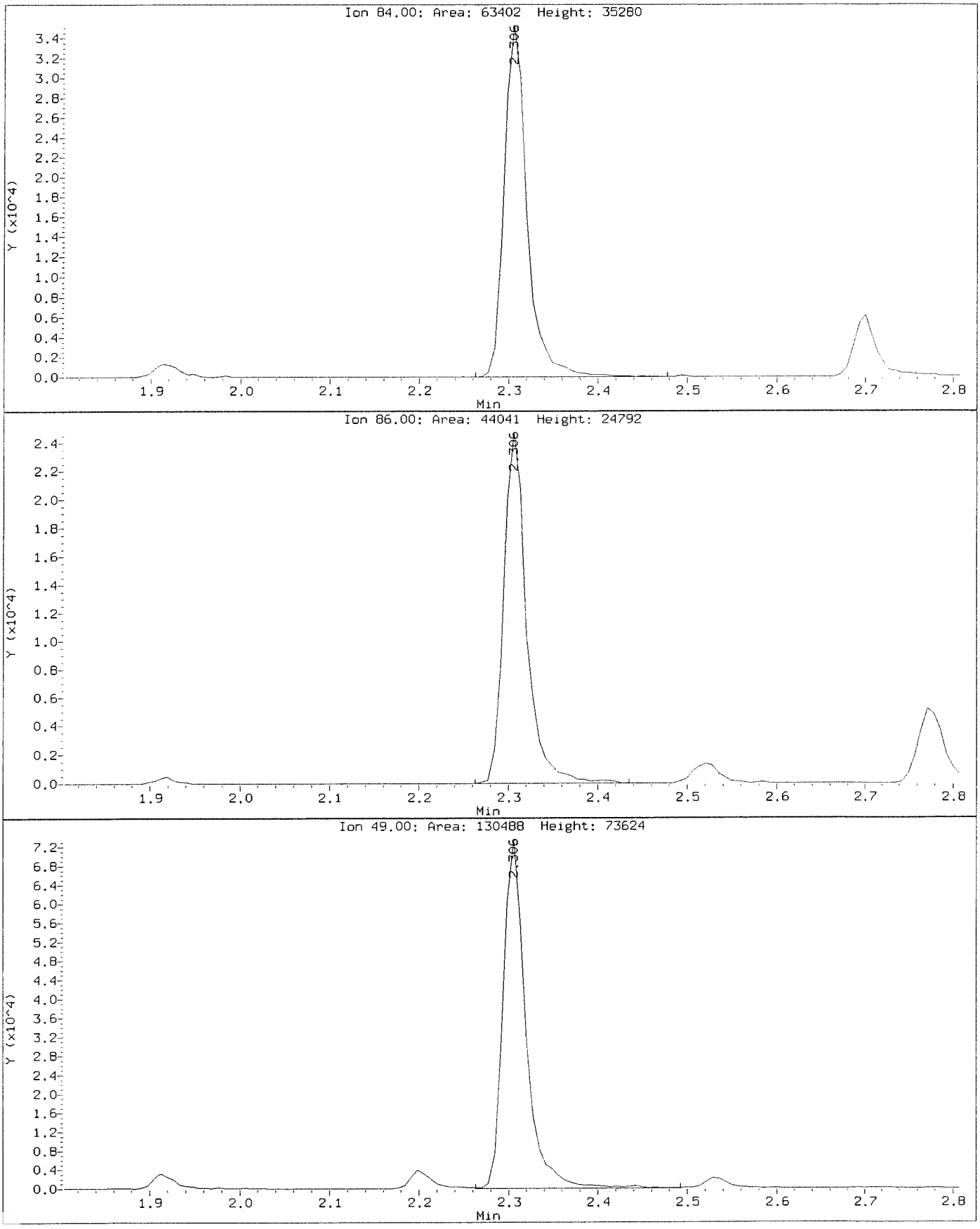
Instrument: voa6.i
Client Sample ID: HS20070043-17MS

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



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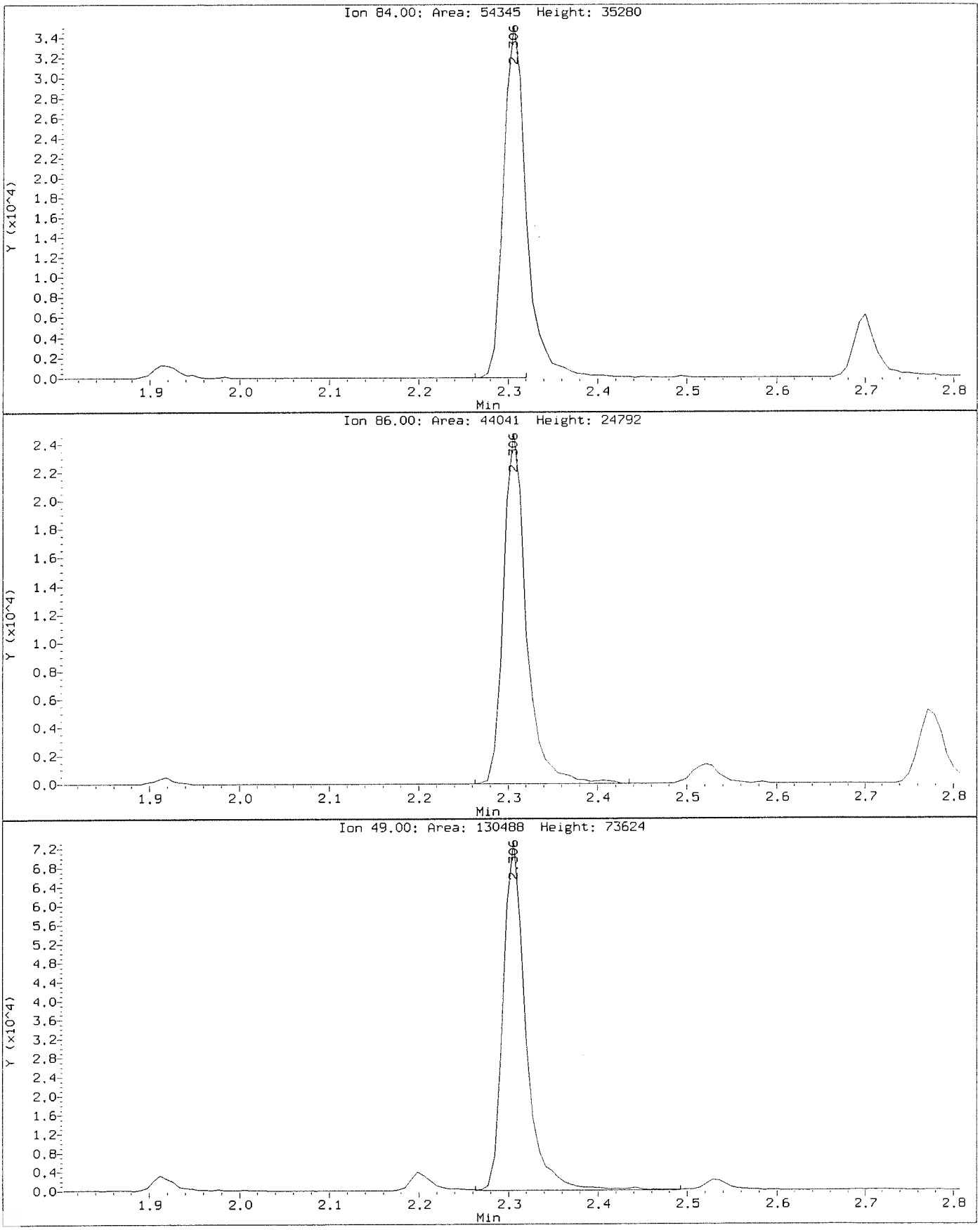
Instrument: voa6.i
Client Sample ID: HS20070043-17MS

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



Data File: \\nahstws005\Target\chem\voa6.i\X200710.b\X071013.D Page 1
Report Date: 13-Aug-2020 13:44

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200710.b\X071013.D
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Inj Date : 10-JUL-2020 16:19
Operator : PC Inst ID: voa6.i
Smp Info : HS20070043-17MSD;HS20070043-17MSD;3;;MSD
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200710.b\8260W.m
Meth Date : 13-Aug-2020 13:43 voa6.i Quant Type: ISTD
Cal Date : 07-JUL-2020 13:53 Cal File: X070708.D
Als bottle: 12 QC Sample: MSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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

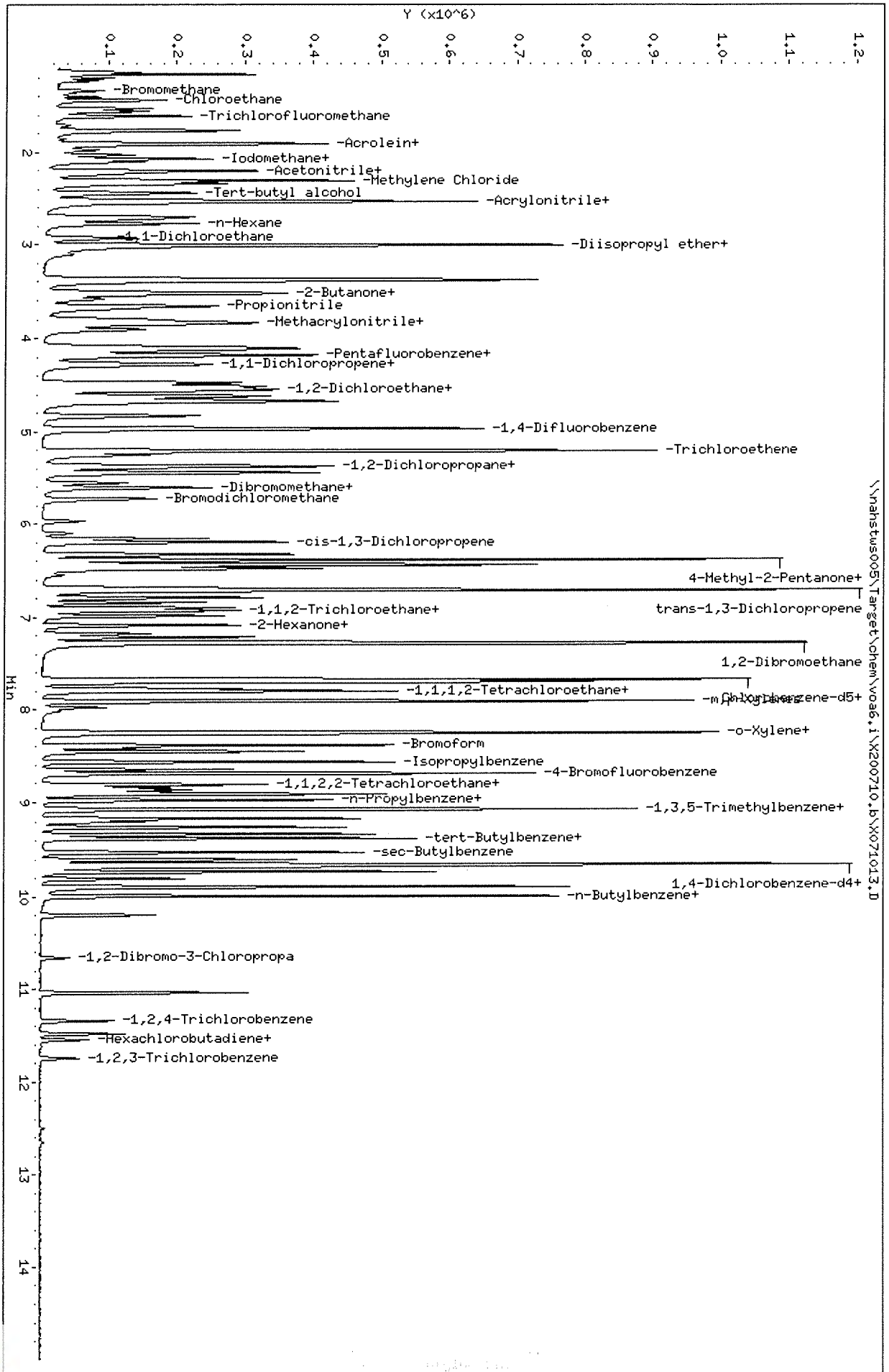
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.189	4.189	(1.000)	307162	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	476906	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	423243	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	195173	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.979)	156683	46.8375	46.83
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	205569	44.6533	44.65
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	550702	49.4922	49.49
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	203259	50.4422	50.44
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	61671	18.9775	18.97
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.976)	99839	17.7430	17.74
68 1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.915)	78811	20.4248	20.42
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	52647	19.6635	19.66
22 1,1-Dichloroethane	63	2.929	2.929	(0.699)	152477	17.5156	17.51
11 1,1-Dichloroethene	96	1.911	1.919	(0.456)	47678	16.7631	16.76
32 1,1-Dichloropropene	75	4.282	4.282	(0.862)	86484	18.4154	18.41
93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.216)	14031	23.6434	23.64
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.918)	70254	20.6490	20.64(M)
90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	27333	23.2018	23.20
79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.971)	225974	19.6883	19.68
89 1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.103)	7342	23.3217	23.32
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	65516	19.2581	19.25
88 1,2-Dichlorobenzene	146	9.991	9.999	(1.034)	113057	19.8193	19.81

Data File: \\nahstws005\Target\chem\voa6.i\X200710.b\X071013.D Page 2
Report Date: 13-Aug-2020 13:44

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
33	1,2-Dichloroethane	62	4.562	4.562	(0.918)	114264	19.3116	19.31
42	1,2-Dichloropropane	63	5.443	5.443	(1.095)	83650	18.8548	18.85
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	220258	19.8070	19.80
83	1,3-Dichlorobenzene	146	9.605	9.605	(0.994)	124094	19.8595	19.85
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	107489	19.0732	19.07
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.002)	123067	20.5944	20.59
26	2,2-Dichloropropane	77	3.516	3.516	(0.839)	101206	19.0311	19.03
24	2-Butanone	43	3.588	3.581	(0.856)	104252	33.0475	33.04
76	2-Chlorotoluene	91	8.974	8.974	(0.929)	189774	19.3732	19.37
52	2-Hexanone	43	7.090	7.090	(0.924)	176729	41.6751	41.67
77	4-Chlorotoluene	91	9.075	9.075	(0.939)	214786	19.3352	19.33
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	225911	20.3551	20.35
45	4-Methyl-2-Pentanone	43	6.331	6.331	(0.825)	256479	43.0680	43.06
10	Acetone	43	2.234	1.976	(0.533)	84126	10.8650	10.86
37	Benzene	78	4.519	4.519	(0.909)	254704	18.7188	18.71
74	Bromobenzene	156	8.809	8.810	(0.912)	72451	19.4582	19.45
29	Bromochloromethane	128	3.803	3.803	(0.908)	34882	16.3504	16.35
39	Bromodichloromethane	83	5.729	5.729	(1.153)	88891	18.6087	18.60
66	Bromoform	173	8.416	8.416	(1.097)	46194	19.6613	19.66
6	Bromomethane	94	1.338	1.338	(0.320)	35093	16.2186	16.21
19	Carbon Disulfide	76	2.069	2.069	(0.494)	280564	30.0392	30.03
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	85332	18.7490	18.74
59	Chlorobenzene	112	7.699	7.699	(1.004)	163644	18.9780	18.97
7	Chloroethane	64	1.403	1.403	(0.335)	43066	14.2526	14.25
28	Chloroform	83	3.910	3.910	(0.933)	120318	17.8759	17.87
3	Chloromethane	50	1.081	1.081	(0.258)	110311	17.4759	17.47
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.843)	119745	29.8243	29.82
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	106755	18.5461	18.54
55	Dibromochloromethane	129	7.176	7.176	(0.936)	65519	18.8452	18.84
44	Dibromomethane	93	5.557	5.557	(1.118)	44730	18.7067	18.70
2	Dichlorodifluoromethane	85	0.973	0.973	(0.232)	56830	15.2832	15.28
61	Ethylbenzene	106	7.799	7.800	(1.017)	87200	19.1074	19.10
91	Hexachlorobutadiene	225	11.481	11.481	(1.188)	18874	20.9145	20.91
67	Isopropylbenzene	105	8.566	8.566	(1.117)	263900	19.4952	19.49
62	m,p-Xylenes	106	7.907	7.907	(1.031)	207959	37.8931	37.89
17	Methylene Chloride	84	2.305	2.305	(0.550)	61330	18.2591	18.25(M)
87	n-Butylbenzene	91	9.999	9.999	(1.035)	205361	20.7440	20.74
73	n-Propylbenzene	91	8.917	8.917	(0.923)	320895	20.1594	20.15
92	Naphthalene	128	11.546	11.546	(1.195)	47639	25.3146	25.31
63	o-Xylene	106	8.244	8.244	(1.075)	102417	19.0493	19.04
81	sec-Butylbenzene	105	9.526	9.526	(0.986)	261907	20.0163	20.01
64	Styrene	104	8.265	8.258	(1.078)	174645	18.6911	18.69
78	tert-Butylbenzene	119	9.340	9.340	(0.967)	180113	20.1160	20.11
56	Tetrachloroethene	164	6.933	6.933	(0.904)	50422	19.5041	19.50
50	Toluene	91	6.453	6.446	(0.841)	259134	19.1904	19.19
20	trans-1,2-Dichloroethene	96	2.535	2.535	(0.605)	61039	18.1815	18.18
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	98003	18.9499	18.94
38	Trichloroethene	130	5.206	5.207	(1.048)	274267	77.5119	77.51
8	Trichlorofluoromethane	101	1.560	1.561	(0.373)	88848	16.7733	16.77
5	Vinyl Chloride	62	1.138	1.145	(0.272)	91229	16.9069	16.90

QC Flag Legend

M - Compound response manually integrated.



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Sample Info: HS200700043-17MSD:HS200700043-17MSD:3::MSD
Purge Volume: 5.0
Column phase: DB624

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

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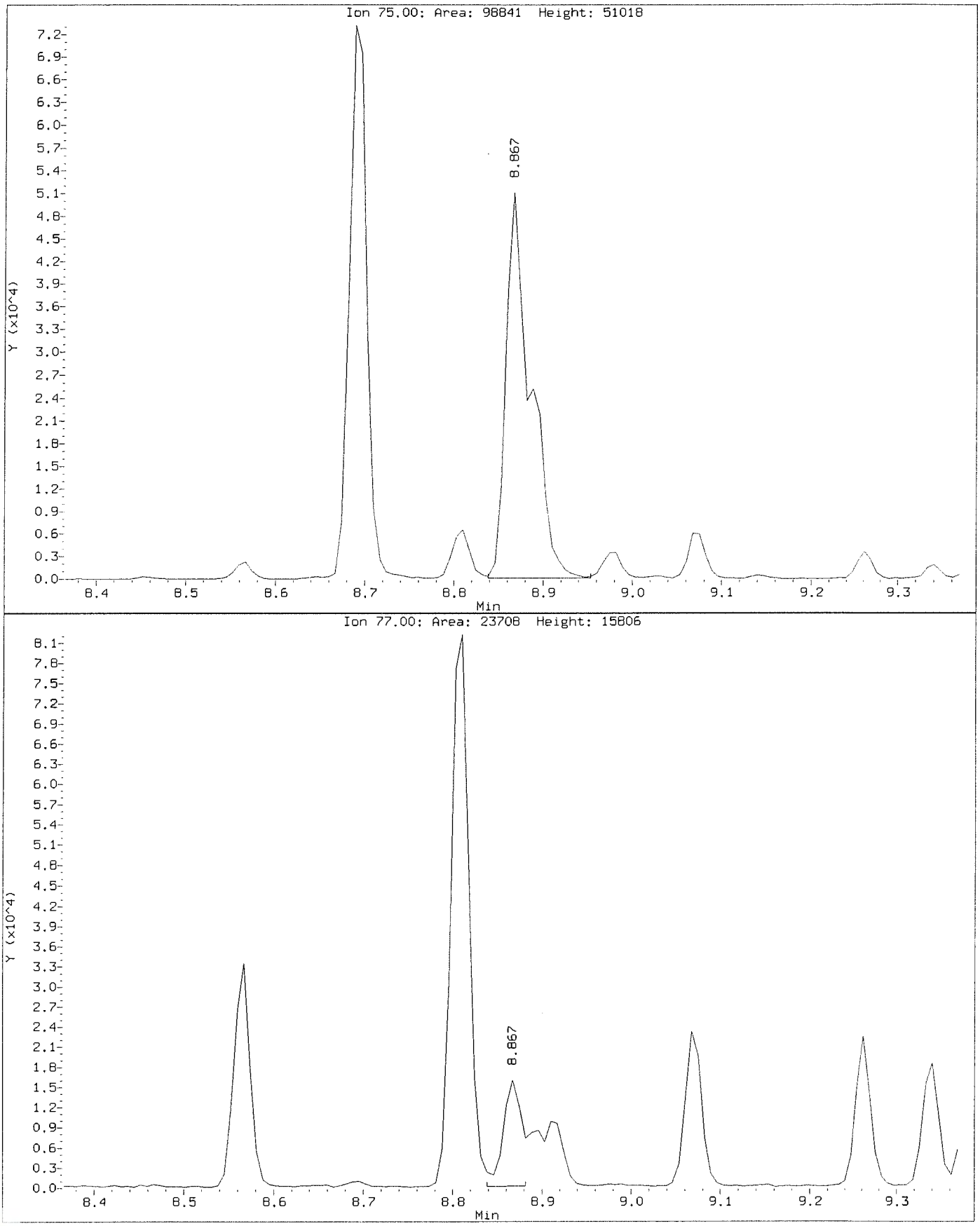
Injection Date: 10-JUL-2020 16:19
Instrument: voa6.i
Client Sample ID: HS20070043-17MSD

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4



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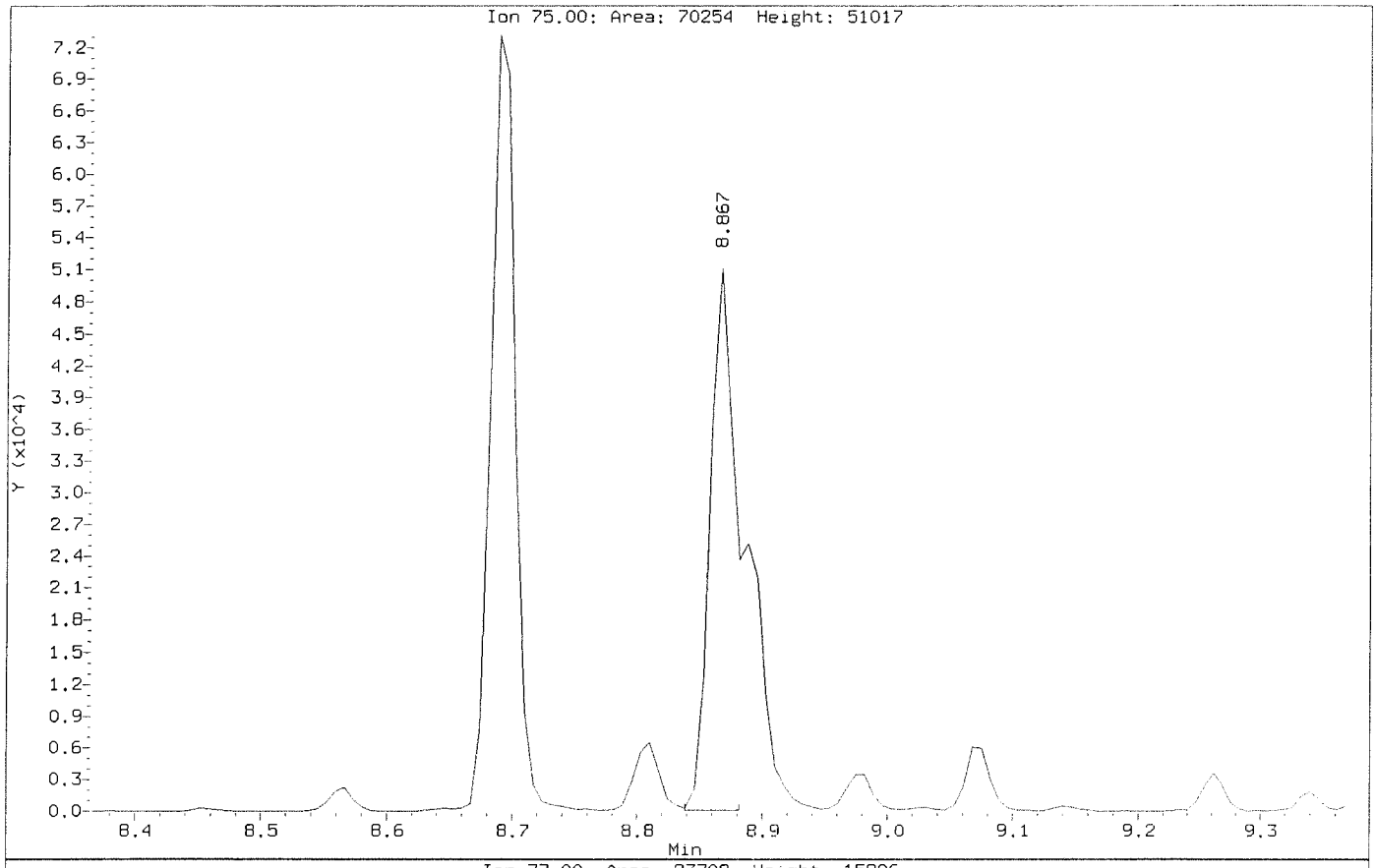
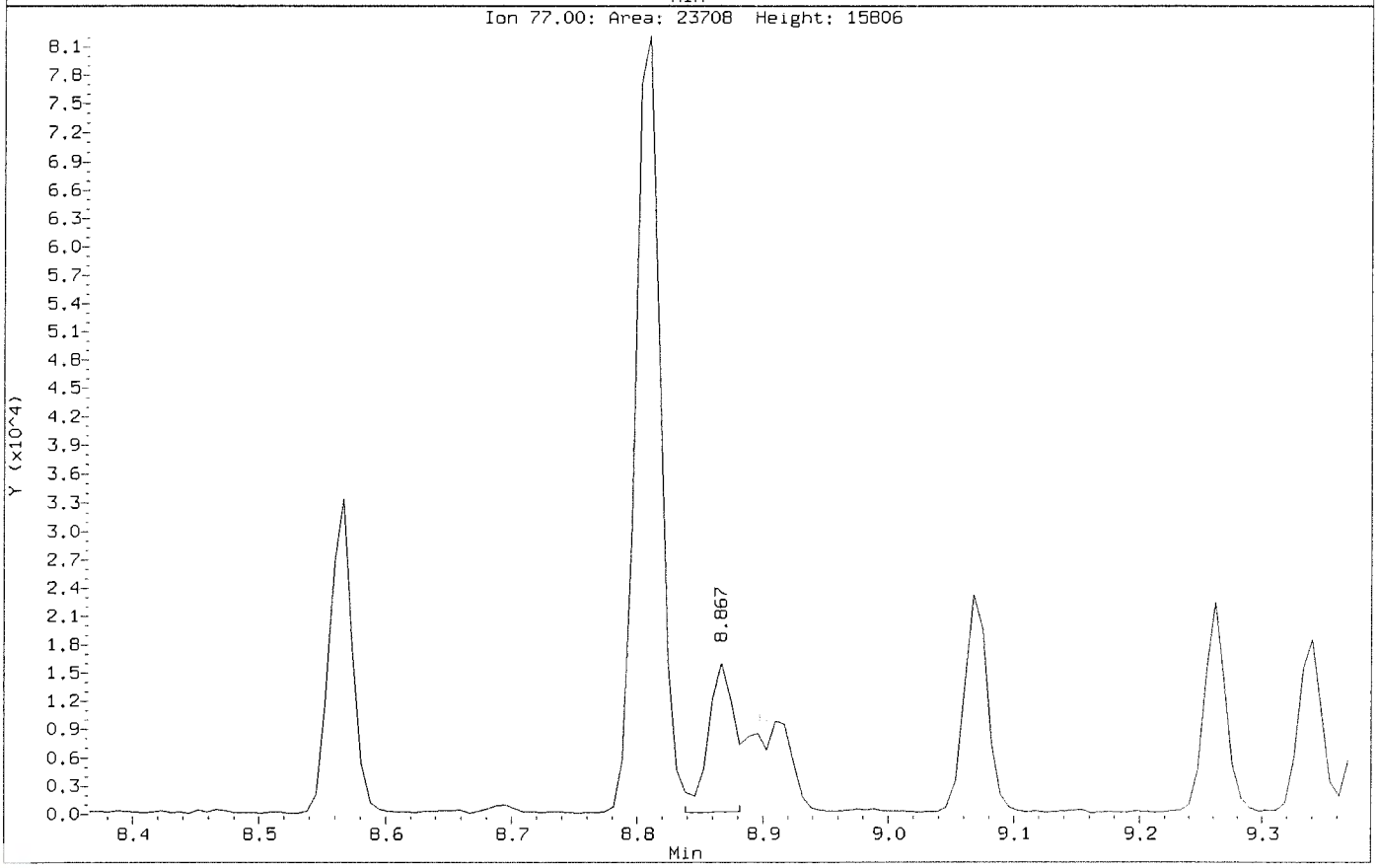
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





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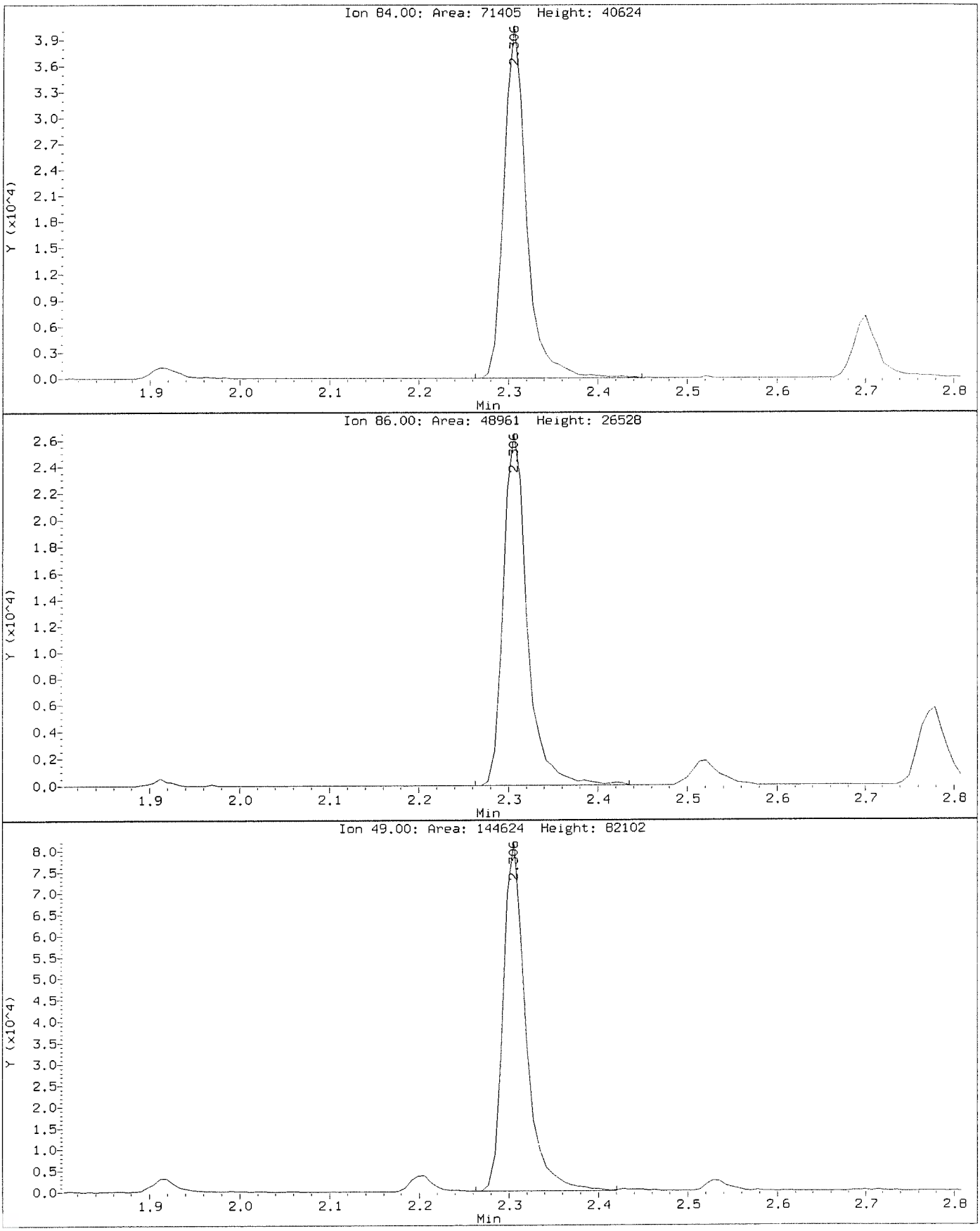
Instrument: voa6.i
Client Sample ID: HS20070043-17MSD

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



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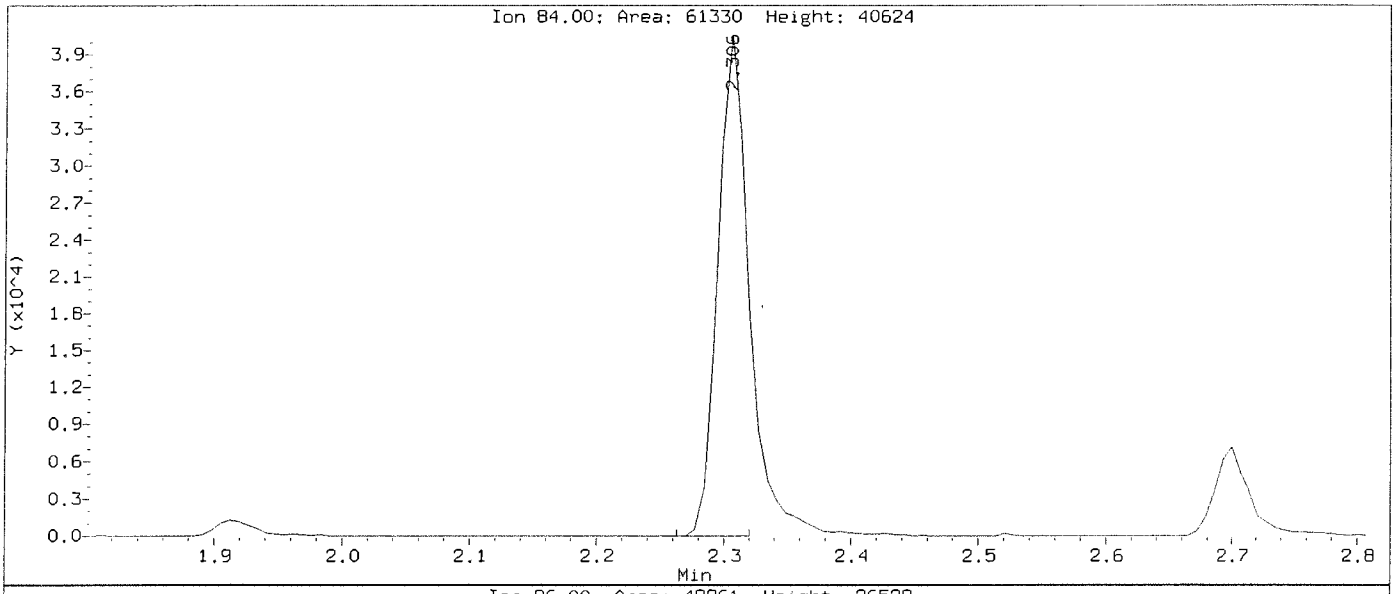
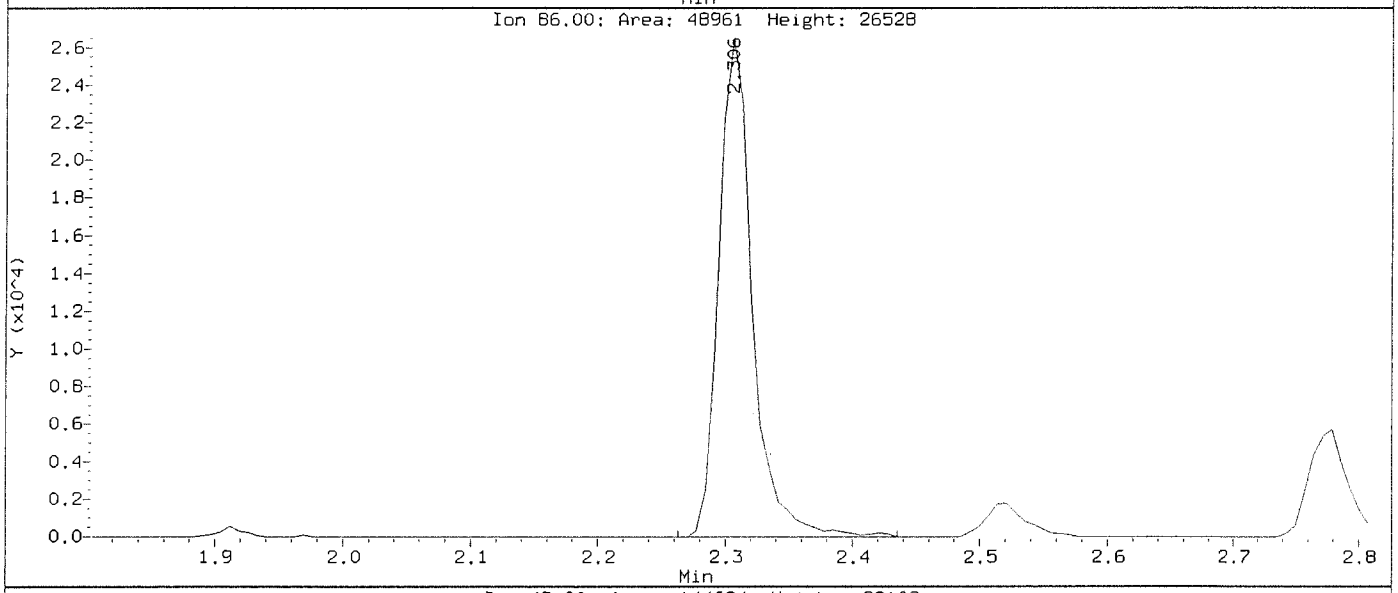
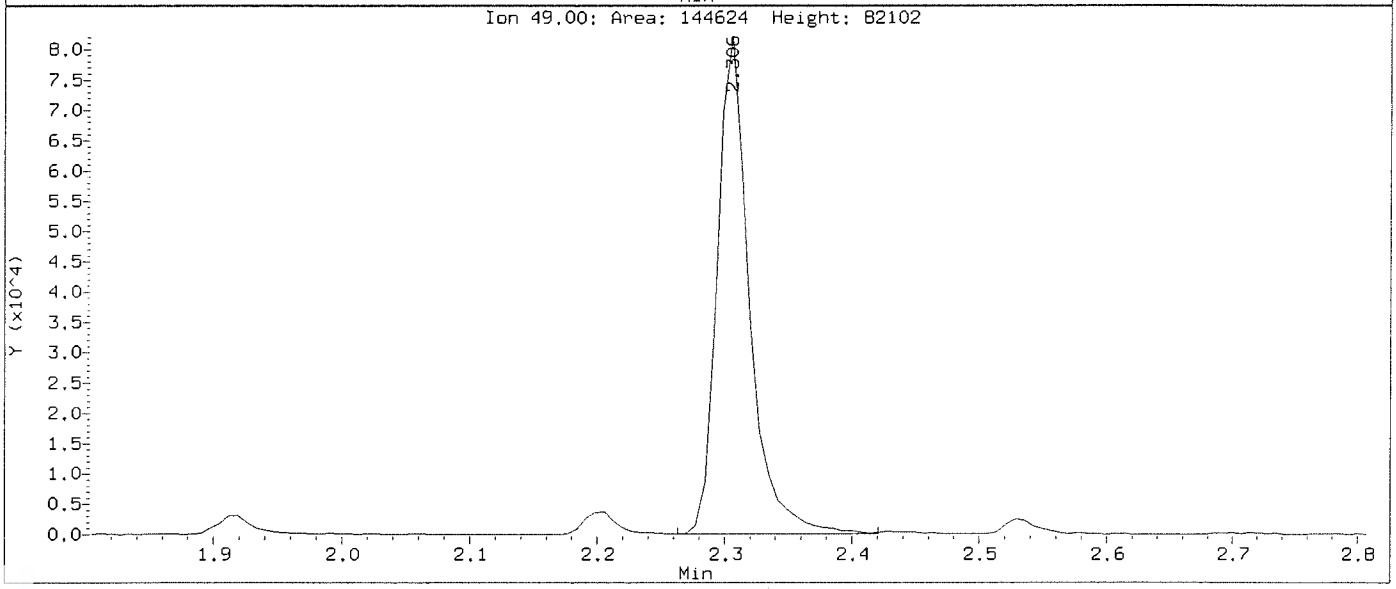
Instrument: voa6.i
Client Sample ID: HS20070043-17MSD

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







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Report Date: 13-Aug-2020 13:44

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Data file : \\nahstws005\Target\chem\voa6.i\X200710.b\X071026.D
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Inj Date : 10-JUL-2020 21:30
Operator : PC Inst ID: voa6.i
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Misc Info : HS18090001;WATER;0;1;
Comment   :
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Meth Date : 13-Aug-2020 13:44 voa6.i Quant Type: ISTD
Cal Date : 07-JUL-2020 13:53 Cal File: X070708.D
Als bottle: 25 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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

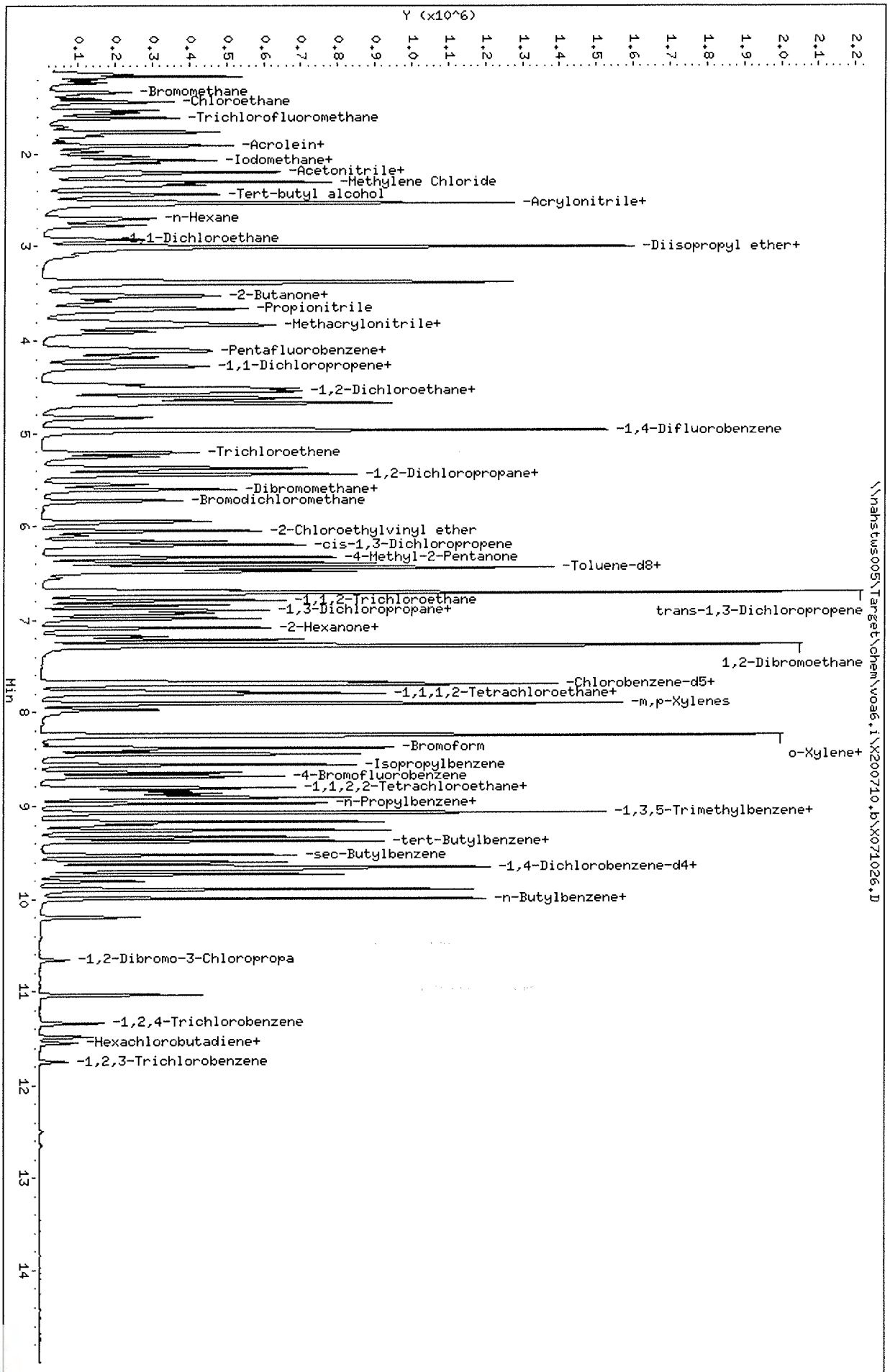
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
*	1 Pentafluorobenzene	168	4.182	4.182	(1.000)	230379	50.0000	
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	402796	50.0000	
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	358560	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	175351	50.0000	
$	30 Dibromofluoromethane	113	4.103	4.103	(0.981)	140673	50.0000	56.24
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	194269	50.0000	56.44
$	48 Toluene-d8	98	6.388	6.388	(0.833)	455271	50.0000	48.29
$	69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	180797	50.0000	53.01
	60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	121913	50.0000	44.28
	31 1,1,1-Trichloroethane	97	4.089	4.089	(0.978)	189575	50.0000	44.91
	68 1,1,2,2-Tetrachloroethane	83	8.845	8.845	(0.915)	163786	50.0000	47.24
	53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	110818	50.0000	48.85
	22 1,1-Dichloroethane	63	2.929	2.929	(0.700)	315245	50.0000	48.28
	11 1,1-Dichloroethene	96	1.912	1.912	(0.457)	85102	50.0000	39.89
	32 1,1-Dichloropropene	75	4.283	4.283	(0.862)	156152	50.0000	39.36
	93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.216)	19801	50.0000	36.24
	71 1,2,3-Trichloropropane	75	8.867	8.867	(0.918)	151068	50.0000	49.42(M)
	90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	41841	50.0000	38.61
	79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.971)	391418	50.0000	37.95
	89 1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.103)	14071	50.0000	51.73
	57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	137124	50.0000	47.57
	88 1,2-Dichlorobenzene	146	9.999	9.999	(1.035)	205443	50.0000	40.08

Data File: \\nahstws005\Target\chem\voa6.i\X200710.b\X071026.D Page 2
Report Date: 13-Aug-2020 13:44

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
33	1,2-Dichloroethane	62	4.562	4.562	(0.918)	243109	50.0000	48.64
42	1,2-Dichloropropane	63	5.443	5.443	(1.095)	180484	50.0000	48.16
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	360432	50.0000	36.07
83	1,3-Dichlorobenzene	146	9.612	9.612	(0.995)	221398	50.0000	39.43
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	229636	50.0000	48.09
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.002)	229665	50.0000	42.99
26	2,2-Dichloropropane	77	3.516	3.516	(0.841)	148058	50.0000	37.12
24	2-Butanone	43	3.581	3.581	(0.856)	246896	100.000	117.88
76	2-Chlorotoluene	91	8.974	8.974	(0.929)	342126	50.0000	38.87
52	2-Hexanone	43	7.090	7.090	(0.924)	378299	100.000	111.03
77	4-Chlorotoluene	91	9.075	9.075	(0.939)	389535	50.0000	39.03
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	338226	50.0000	33.91
45	4-Methyl-2-Pentanone	43	6.331	6.331	(0.825)	538148	100.000	111.44
10	Acetone	43	1.976	1.976	(0.473)	147617	100.000	71.55
37	Benzene	78	4.519	4.519	(0.909)	525118	50.0000	45.69
74	Bromobenzene	156	8.810	8.810	(0.912)	147764	50.0000	44.17
29	Bromochloromethane	128	3.803	3.803	(0.909)	79126	50.0000	49.45
39	Bromodichloromethane	83	5.729	5.729	(1.153)	198371	50.0000	49.16
66	Bromoform	173	8.416	8.416	(1.097)	103157	50.0000	51.82
6	Bromomethane	94	1.339	1.339	(0.320)	70951	50.0000	43.84
19	Carbon Disulfide	76	2.069	2.069	(0.495)	522518	100.000	74.59
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	151743	50.0000	39.47
59	Chlorobenzene	112	7.699	7.699	(1.004)	325716	50.0000	44.58
7	Chloroethane	64	1.403	1.403	(0.336)	88090	50.0000	42.17
28	Chloroform	83	3.910	3.910	(0.935)	247641	50.0000	49.05
3	Chloromethane	50	1.081	1.081	(0.258)	214527	50.0000	45.31
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	152700	50.0000	50.70
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	219205	50.0000	45.08
55	Dibromochloromethane	129	7.176	7.176	(0.936)	144093	50.0000	48.92
44	Dibromomethane	93	5.558	5.558	(1.118)	98876	50.0000	48.95
2	Dichlorodifluoromethane	85	0.973	0.973	(0.233)	102276	50.0000	36.67
61	Ethylbenzene	106	7.800	7.800	(1.017)	153841	50.0000	39.79
91	Hexachlorobutadiene	225	11.481	11.481	(1.188)	22227	50.0000	26.99
67	Isopropylbenzene	105	8.566	8.566	(1.117)	431608	50.0000	37.63
62	m,p-Xylenes	106	7.907	7.907	(1.031)	358686	100.000	77.14
17	Methylene Chloride	84	2.306	2.306	(0.551)	117021	50.0000	46.45(M)
87	n-Butylbenzene	91	9.999	9.999	(1.035)	277270	50.0000	31.17
73	n-Propylbenzene	91	8.917	8.917	(0.923)	508001	50.0000	35.52
92	Naphthalene	128	11.546	11.546	(1.195)	66454	50.0000	39.13
63	o-Xylene	106	8.244	8.244	(1.075)	191122	50.0000	41.96
81	sec-Butylbenzene	105	9.526	9.526	(0.986)	375092	50.0000	31.90
64	Styrene	104	8.258	8.258	(1.077)	348866	50.0000	44.07
78	tert-Butylbenzene	119	9.340	9.340	(0.967)	282327	50.0000	35.09
56	Tetrachloroethene	164	6.933	6.933	(0.904)	80636	50.0000	36.81
50	Toluene	91	6.446	6.446	(0.840)	498762	50.0000	43.59
20	trans-1,2-Dichloroethene	96	2.535	2.535	(0.606)	122684	50.0000	48.72
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	200993	50.0000	46.01
38	Trichloroethene	130	5.207	5.207	(1.048)	133618	50.0000	44.71
8	Trichlorofluoromethane	101	1.561	1.561	(0.373)	156749	50.0000	39.45
5	Vinyl Chloride	62	1.145	1.145	(0.274)	161524	50.0000	39.91

QC Flag Legend

M - Compound response manually integrated.



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Sample Info: CCV-END;CCV-END;2;;;
Purge Volume: 5.0
Column phase: DB624

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

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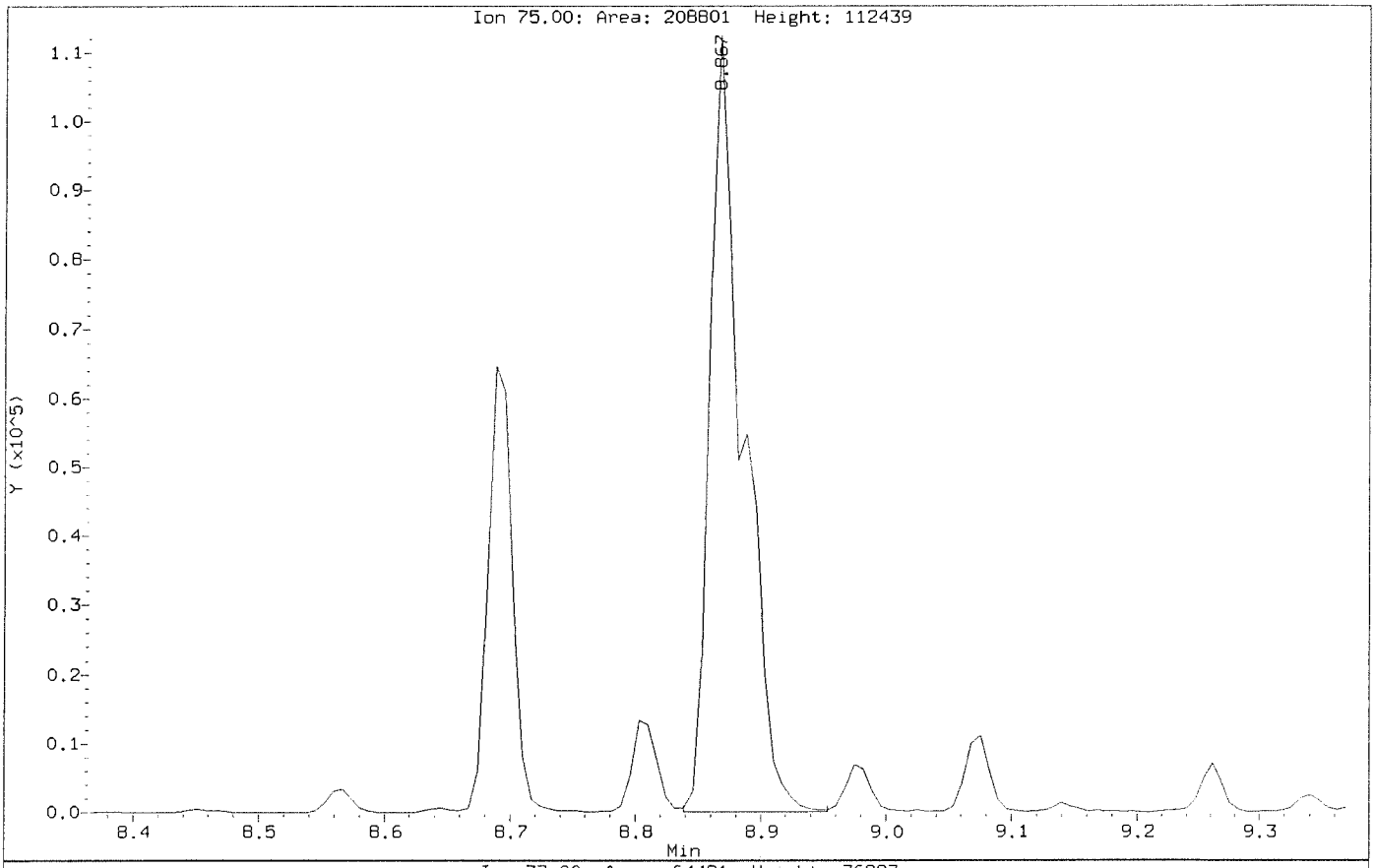
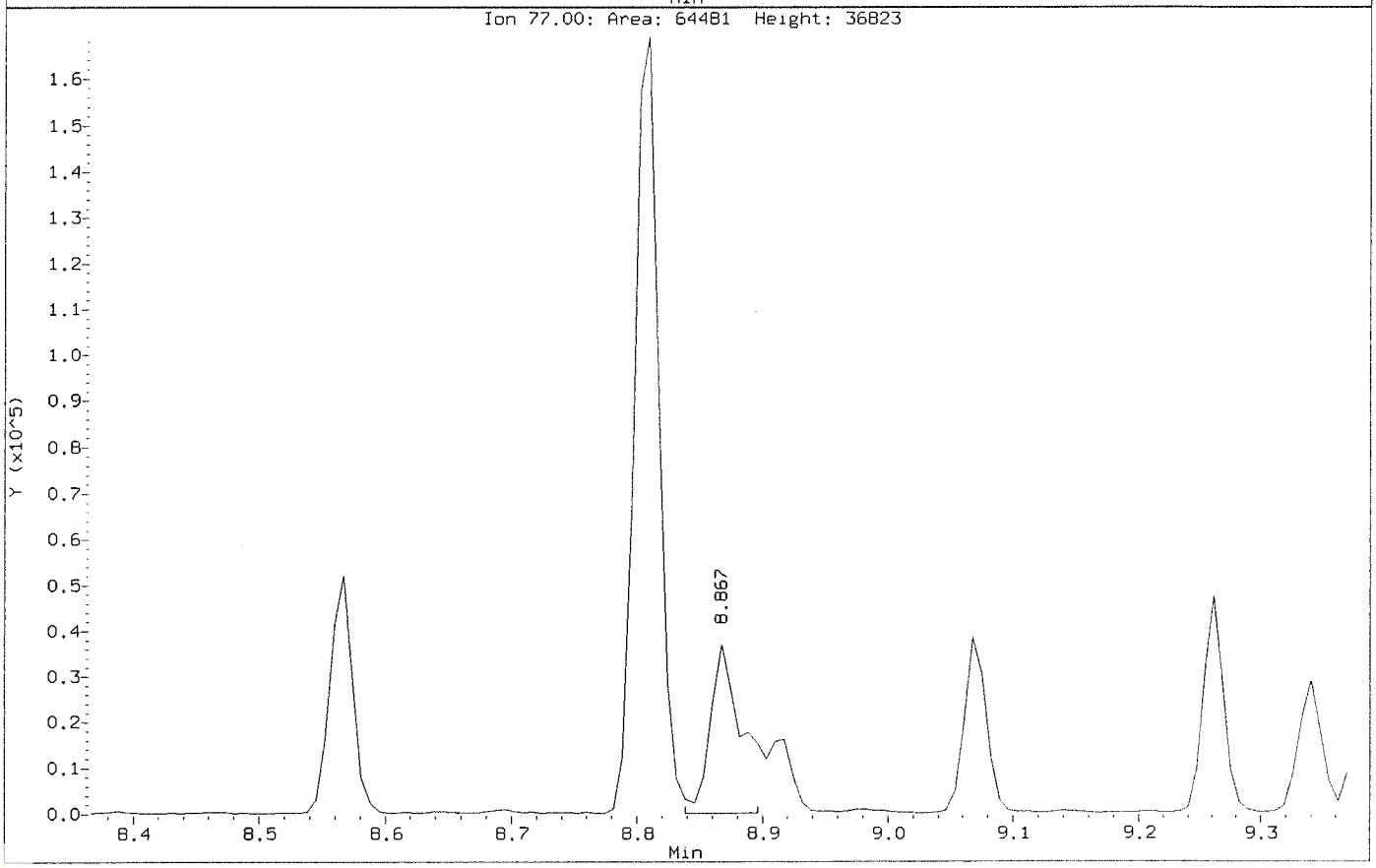
Injection Date: 10-JUL-2020 21:30
Instrument: voa6.i
Client Sample ID: CCV-END

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





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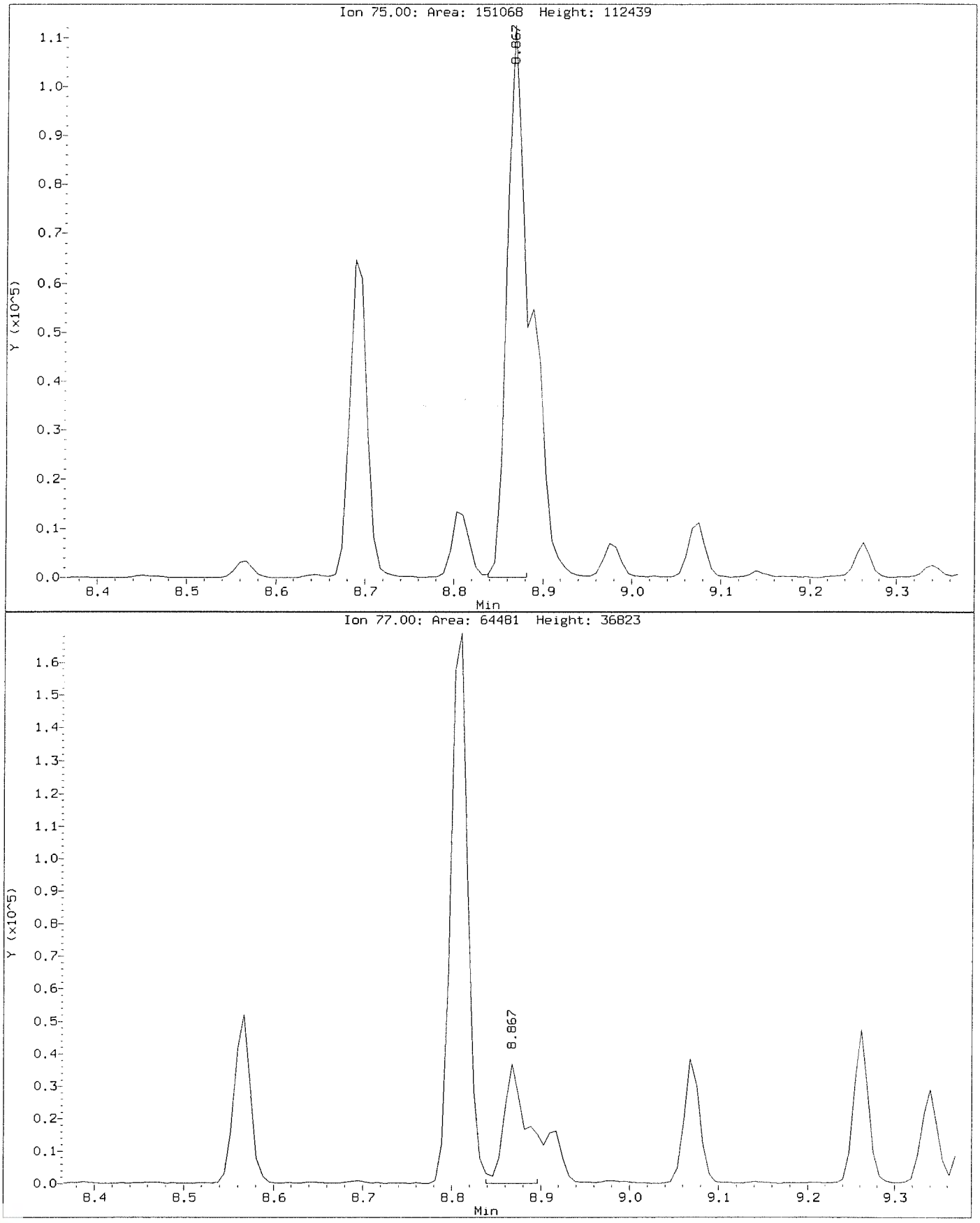
Instrument: voa6.i
Client Sample ID: CCV-END

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4



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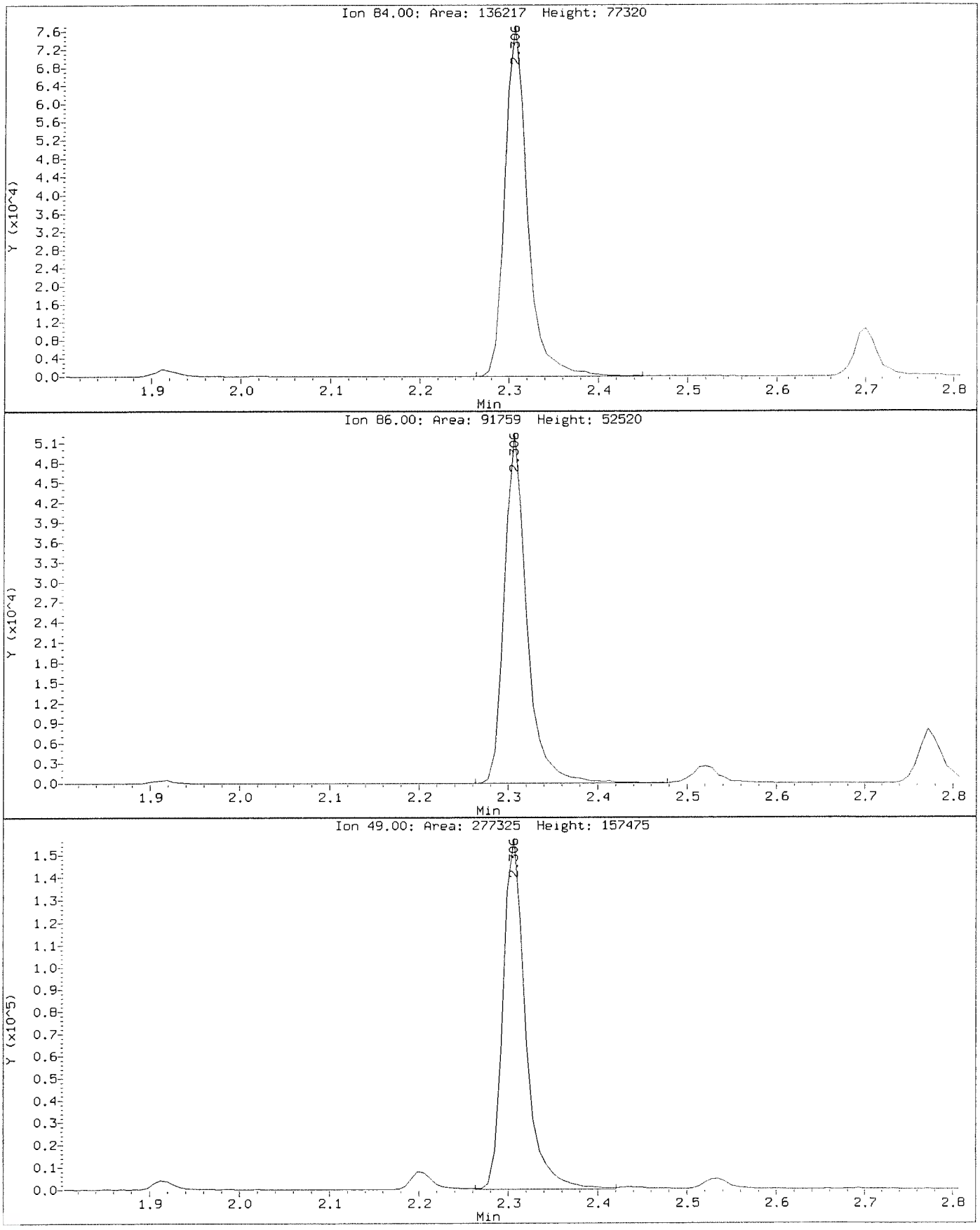
Injection Date: 10-JUL-2020 21:30
Instrument: voa6.i
Client Sample ID: CCV-END

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



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Injection Date: 10-JUL-2020 21:30
Instrument: voa6.i
Client Sample ID: CCV-END

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

