LONGHORN ARMY AMMUNITION PLANT KARNACK, TEXAS

ADMINISTRATIVE RECORD

Volume 18

2023

Bate Stamp Numbers
01166144 – 01168145

Prepared for

Department of the Army
Longhorn Army Ammunition Plant

1976–2023

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

VOLUME 18

2023

A.	Title:	(Cont'd) Report—**cont'd** Appendix D, **File 2**—Level IV DoD, Draft Final Second Annual Remedial Action Operation Report, LHAAP-16 Landfill, Longhorn Army Ammunition Plant (LHAAP), Karnack, Texas, March 2023
	Author(s):	Department of the Army
	Recipient:	Environmental Protection Agency and Texas Commission on Environmental Quality
	Date:	March 17, 2023
	Bate Stamp:	01166144 – 01168145

The above Level IV DoD labs were omitted in the previous Admin Record, so that is why they are out of date sequence and added to this April thru June 2023 Admin Record.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2100813
Project:	HS21071038	**Date Analyzed:**	8/2/21 22:41

Internal Standard Area and RT Summary

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

File ID:	I:\LCMS01\DATA\20210802\20210802_056	**Lab Code:**	EQ2100479-05
Instrument ID:	E-LCMS-01	**Analysis Lot:**	733464
Analytical Method:	6850	**Signal ID:**	1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	100,675	2.79
	Upper Limit ==>	151,013	4.79
	Lower Limit ==>	50,338	0.79
Associated Analyses			
Continuing Calibration Verification	EQ2100479-05	106,145	2.79

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

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2100813
Project:	HS21071038	**Date Analyzed:**	8/3/21 00:15

Internal Standard Area and RT Summary

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

File ID:	I:\LCMS01\DATA\20210802\20210802_067	**Lab Code:**	EQ2100479-06
Instrument ID:	E-LCMS-01	**Analysis Lot:**	733464
Analytical Method:	6850	**Signal ID:**	1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	100,675	2.79
	Upper Limit ==>	151,013	4.79
	Lower Limit ==>	50,338	0.79
Associated Analyses			
Continuing Calibration Verification	EQ2100479-06	97,407	2.79

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

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2100813
Project:	HS21071038	**Date Analyzed:**	8/3/21 01:57

Internal Standard Area and RT Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

File ID:	I:\LCMS01\DATA\20210802\20210802_079	**Lab Code:**	EQ2100479-07
Instrument ID:	E-LCMS-01	**Analysis Lot:**	733464
Analytical Method:	6850	**Signal ID:**	1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	100,675	2.79
	Upper Limit ==>	151,013	4.79
	Lower Limit ==>	50,338	0.79
Associated Analyses			
Continuing Calibration Verification	EQ2100479-07	99,099	2.79

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

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2100813
Project:	HS21071038	**Date Analyzed:**	8/3/21 03:32

Internal Standard Area and RT Summary

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

File ID:	I:\LCMS01\DATA\20210802\20210802_090	**Lab Code:**	EQ2100479-08
Instrument ID:	E-LCMS-01	**Analysis Lot:**	733464
Analytical Method:	6850	**Signal ID:**	1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	100,675	2.79
	Upper Limit ==>	151,013	4.79
	Lower Limit ==>	50,338	0.79
Associated Analyses			
Continuing Calibration Verification	EQ2100479-08	91,777	2.78

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

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2100813
Project:	HS21071038	**Date Analyzed:**	8/3/21 05:06

Internal Standard Area and RT Summary

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

File ID:	I:\LCMS01\DATA\20210802\20210802_101	**Lab Code:**	EQ2100479-09
Instrument ID:	E-LCMS-01	**Analysis Lot:**	733464
Analytical Method:	6850	**Signal ID:**	1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	100,675	2.79
	Upper Limit ==>	151,013	4.79
	Lower Limit ==>	50,338	0.79
Associated Analyses			
Continuing Calibration Verification	EQ2100479-09	96,244	2.78

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

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2100813
Project:	HS21071038	**Date Analyzed:**	8/3/21 05:57

Internal Standard Area and RT Summary

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

File ID:	I:\LCMS01\DATA\20210802\20210802_107	**Lab Code:**	EQ2100479-10
Instrument ID:	E-LCMS-01	**Analysis Lot:**	733464
Analytical Method:	6850	**Signal ID:**	1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	100,675	2.79
	Upper Limit ==>	151,013	4.79
	Lower Limit ==>	50,338	0.79
Associated Analyses			
Continuing Calibration Verification	EQ2100479-10	96,420	2.78

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

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2100813
Project:	HS21071038	**Date Analyzed:**	8/3/21 10:20

Internal Standard Area and RT Summary

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

File ID:	I:\LCMS01\DATA\20210803\20210803_008	**Lab Code:**	EQ2100485-01
Instrument ID:	E-LCMS-01	**Analysis Lot:**	733599
Analytical Method:	6850	**Signal ID:**	1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	100,675	2.79
	Upper Limit ==>	151,013	4.79
	Lower Limit ==>	50,338	0.79
Associated Analyses			
Continuing Calibration Verification	EQ2100485-01	58,248	2.78

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

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2100813
Project:	HS21071038	**Date Analyzed:**	8/3/21 11:54

Internal Standard Area and RT Summary

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

File ID:	I:\LCMS01\DATA\20210803\20210803_019	**Lab Code:**	EQ2100485-02
Instrument ID:	E-LCMS-01	**Analysis Lot:**	733599
Analytical Method:	6850	**Signal ID:**	1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	100,675	2.79
	Upper Limit ==>	151,013	4.79
	Lower Limit ==>	50,338	0.79
Associated Analyses			
Continuing Calibration Verification	EQ2100485-02	52,044	2.78
16WW29-210720	E2100813-006	97,321	2.77
16WW29-210720-FD	E2100813-007	98,490	2.77

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

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2100813
Project:	HS21071038	**Date Analyzed:**	8/3/21 14:29

Internal Standard Area and RT Summary

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

File ID:	I:\LCMS01\DATA\20210803\20210803_025	**Lab Code:**	EQ2100485-03
Instrument ID:	E-LCMS-01	**Analysis Lot:**	733599
Analytical Method:	6850	**Signal ID:**	1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	100,675	2.79
	Upper Limit ==>	151,013	4.79
	Lower Limit ==>	50,338	0.79
Associated Analyses			
Continuing Calibration Verification	EQ2100485-03	74,203	2.67

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

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2100813
Project:	HS21071038	**Date Analyzed:**	8/3/21 15:55

Internal Standard Area and RT Summary

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

File ID:	I:\LCMS01\DATA\20210803\20210803_035	**Lab Code:**	EQ2100485-04
Instrument ID:	E-LCMS-01	**Analysis Lot:**	733599
Analytical Method:	6850	**Signal ID:**	1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	100,675	2.79
	Upper Limit ==>	151,013	4.79
	Lower Limit ==>	50,338	0.79
Associated Analyses			
Continuing Calibration Verification	EQ2100485-04	78,807	2.79

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

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2100813
Project:	HS21071038	**Date Analyzed:**	8/3/21 16:21

Internal Standard Area and RT Summary

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

File ID:	I:\LCMS01\DATA\20210803\20210803_038	**Lab Code:**	EQ2100485-05
Instrument ID:	E-LCMS-01	**Analysis Lot:**	733599
Analytical Method:	6850	**Signal ID:**	1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	100,675	2.79
	Upper Limit ==>	151,013	4.79
	Lower Limit ==>	50,338	0.79
Associated Analyses			
Continuing Calibration Verification	EQ2100485-05	76,042	2.79

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

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2100813
Project:	HS21071038	**Date Analyzed:**	8/3/21 18:09

Internal Standard Area and RT Summary

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

File ID:	I:\LCMS01\DATA\20210803\20210803_047	**Lab Code:**	EQ2100485-06
Instrument ID:	E-LCMS-01	**Analysis Lot:**	733599
Analytical Method:	6850	**Signal ID:**	1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	100,675	2.79
	Upper Limit ==>	151,013	4.79
	Lower Limit ==>	50,338	0.79
Associated Analyses			
Continuing Calibration Verification	EQ2100485-06	74,110	2.79
16WW21-210720	E2100813-005	65,746	2.79

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

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2100813
Project:	HS21071038	**Date Analyzed:**	8/3/21 19:43

Internal Standard Area and RT Summary

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

File ID:	I:\LCMS01\DATA\20210803\20210803_058	**Lab Code:**	EQ2100485-07
Instrument ID:	E-LCMS-01	**Analysis Lot:**	733599
Analytical Method:	6850	**Signal ID:**	1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	100,675	2.79
	Upper Limit ==>	151,013	4.79
	Lower Limit ==>	50,338	0.79
Associated Analyses			
Continuing Calibration Verification	EQ2100485-07	74,204	2.78

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

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2100813
Project:	HS21071038	**Date Analyzed:**	8/3/21 21:17

Internal Standard Area and RT Summary

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

File ID:	I:\LCMS01\DATA\20210803\20210803_069	**Lab Code:**	EQ2100485-08
Instrument ID:	E-LCMS-01	**Analysis Lot:**	733599
Analytical Method:	6850	**Signal ID:**	1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	100,675	2.79
	Upper Limit ==>	151,013	4.79
	Lower Limit ==>	50,338	0.79
Associated Analyses			
Continuing Calibration Verification	EQ2100485-08	72,950	2.78

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

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2100813
Project:	HS21071038	**Date Analyzed:**	8/3/21 21:42

Internal Standard Area and RT Summary

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

File ID:	I:\LCMS01\DATA\20210803\20210803_072	**Lab Code:**	EQ2100485-09
Instrument ID:	E-LCMS-01	**Analysis Lot:**	733599
Analytical Method:	6850	**Signal ID:**	1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	100,675	2.79
	Upper Limit ==>	151,013	4.79
	Lower Limit ==>	50,338	0.79
Associated Analyses			
Continuing Calibration Verification	EQ2100485-09	73,828	2.78

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

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2100813
Project:	HS21071038	**Date Analyzed:**	8/3/21 23:17

Internal Standard Area and RT Summary

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

File ID:	I:\LCMS01\DATA\20210803\20210803_083	**Lab Code:**	EQ2100485-10
Instrument ID:	E-LCMS-01	**Analysis Lot:**	733599
Analytical Method:	6850	**Signal ID:**	1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	100,675	2.79
	Upper Limit ==>	151,013	4.79
	Lower Limit ==>	50,338	0.79
Associated Analyses			
Continuing Calibration Verification	EQ2100485-10	76,995	2.78

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

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2100813
Project:	HS21071038	**Date Analyzed:**	8/4/21 00:42

Internal Standard Area and RT Summary

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

File ID:	I:\LCMS01\DATA\20210803\20210803_093	**Lab Code:**	EQ2100485-11
Instrument ID:	E-LCMS-01	**Analysis Lot:**	733599
Analytical Method:	6850	**Signal ID:**	1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	100,675	2.79
	Upper Limit ==>	151,013	4.79
	Lower Limit ==>	50,338	0.79
Associated Analyses			
Continuing Calibration Verification	EQ2100485-11	96,087	2.77

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

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2100813
Project:	HS21071038	**Date Analyzed:**	8/4/21 01:34

Internal Standard Area and RT Summary

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

File ID:	I:\LCMS01\DATA\20210803\20210803_099	**Lab Code:**	EQ2100485-12
Instrument ID:	E-LCMS-01	**Analysis Lot:**	733599
Analytical Method:	6850	**Signal ID:**	1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	100,675	2.79
	Upper Limit ==>	151,013	4.79
	Lower Limit ==>	50,338	0.79
Associated Analyses			
Continuing Calibration Verification	EQ2100485-12	94,885	2.77

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

Insight Report

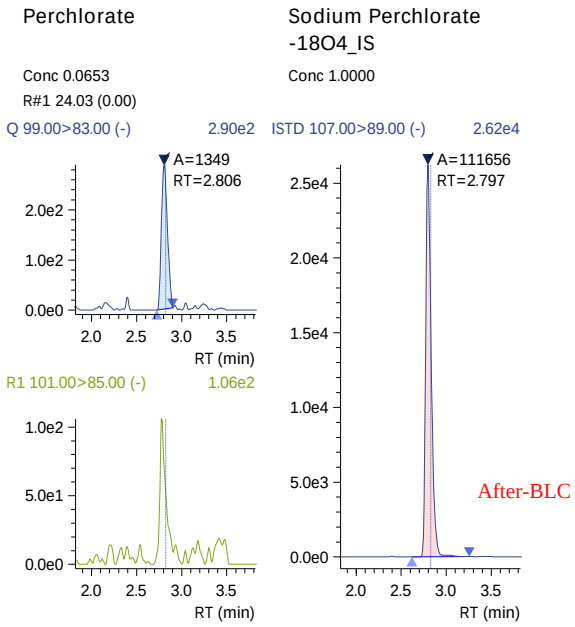
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Project File: I:\LCMS01\DATA\20210722\20210722.damlp

20210722_006

Sample ID: LODV
Date Acquired: 7/22/2021 9:56:19 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210722\20210722_006.lcd
Vial: 31 | Inj. Volume: 50.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.806	1349	111656	1	0.0653	ng/mL	----	24.03
Sodium Perchlorate-18O4 _IS	M	2.797	111656	111656	1	1.0000	ng/mL	----	----



Insight Report

Printed at 8/23/2021 12:00:28 PM

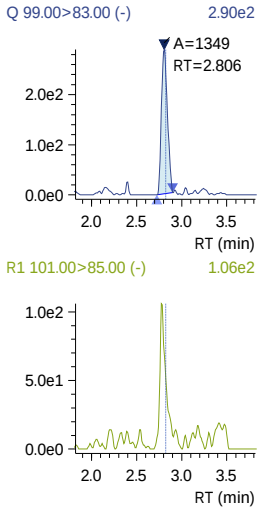
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20210722_006

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Vial: 31 | Inj. Volume: 50.0000uL | Tray: 1

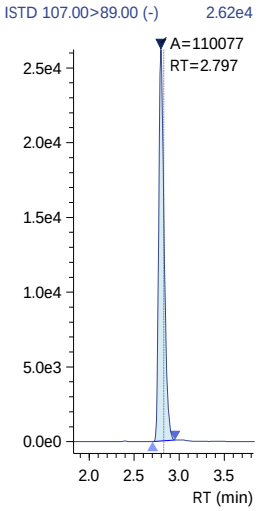
Perchlorate

Conc 0.0665
R#1 24.03 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.0000



Insight Report

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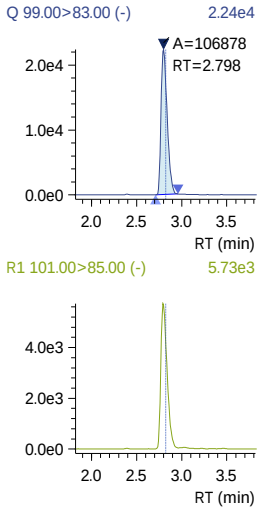
20210722_007

Sample ID: PERCHLORATE7
Date Acquired: 7/22/2021 10:04:54 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210722\20210722_007.lcd
Vial: 26 | Inj. Volume: 50.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.798	106878	82887	1	9.6211	ng/mL	10.0000	25.93
Sodium Perchlorate-18O4_IS	Auto	2.796	82887	82887	1	1.0000	ng/mL	1.0000	----

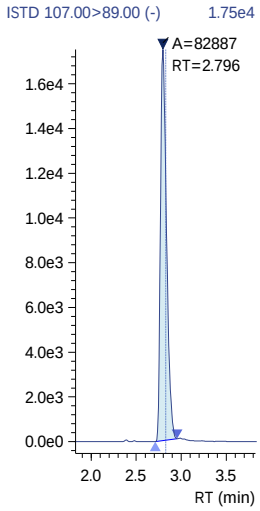
Perchlorate

Conc 9.6211
R#1 25.93 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.0000



Insight Report

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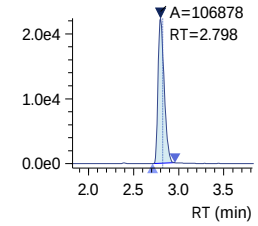
20210722_007

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Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210722\Before\20210722_007.lcd
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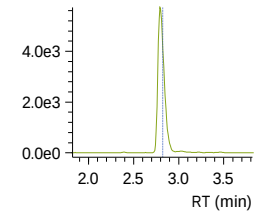
Perchlorate

Conc 9.6211
R#1 25.93 (0.00)

Q 99.00>83.00 (-) 2.24e4



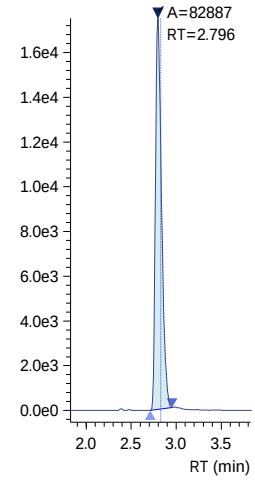
R1 101.00>85.00 (-) 5.73e3



Sodium Perchlorate -18O4_IS

Conc 1.0000

ISTD 107.00>89.00 (-) 1.75e4



Insight Report

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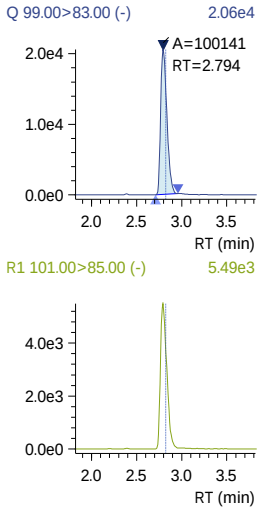
20210722_018

Sample ID: PERCHLORATE7
Date Acquired: 7/22/2021 12:15:13 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210722\20210722_018.lcd
Vial: 26 | Inj. Volume: 50.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.794	100141	78552	1	9.5118	ng/mL	10.0000	26.64
Sodium Perchlorate-18O4_IS	Auto	2.793	78552	78552	1	1.0000	ng/mL	1.0000	----

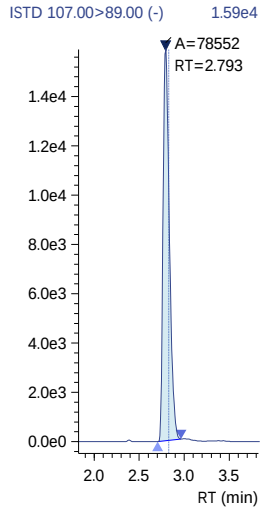
Perchlorate

Conc 9.5118
R#1 26.64 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.0000



Insight Report

Printed at 8/23/2021 12:00:28 PM

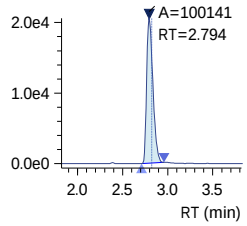
20210722_018

Sample ID: PERCHLORATE7
Date Acquired: 7/22/2021 12:15:13 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210722\Before\20210722_018.lcd
Vial: 26 | Inj. Volume: 50.0000uL | Tray: 1

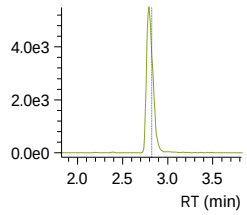
Perchlorate

Conc 9.5118
R#1 26.64 (0.00)

Q 99.00>83.00 (-) 2.06e4



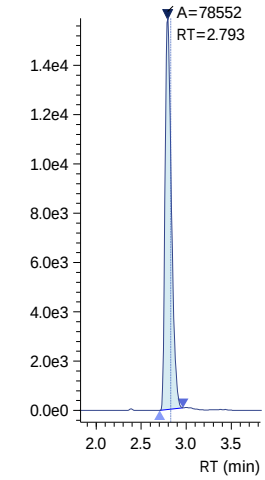
R1 101.00>85.00 (-) 5.49e3



Sodium Perchlorate -18O4_IS

Conc 1.0000

ISTD 107.00>89.00 (-) 1.59e4



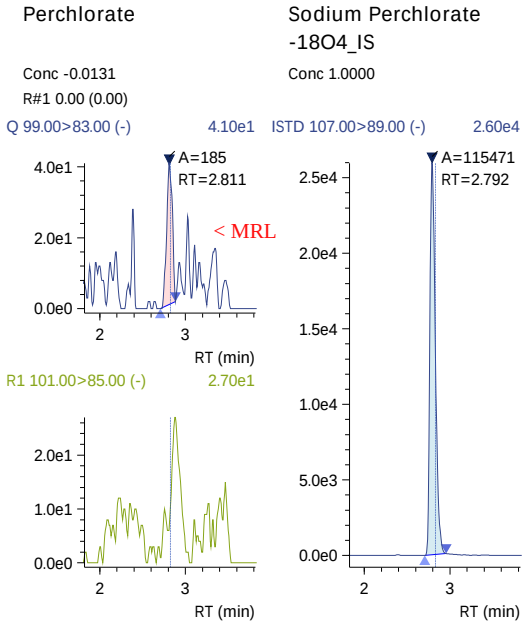
Insight Report

Printed at 8/23/2021 11:57:12 AM

20210722_019

Sample ID: EQ2100452-01
Date Acquired: 7/22/2021 12:23:49 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210722\20210722_019.lcd
Vial: 40 | Inj. Volume: 50.0000uL | Tray: 4

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	M	2.811	185	115471	1	-0.0131	ng/mL	----	0.00
Sodium Perchlorate-18O4 _IS	Auto	2.792	1154 71	115471	1	1.0000	ng/mL	----	----



Insight Report

Printed at 8/23/2021 12:00:28 PM

20210722_019

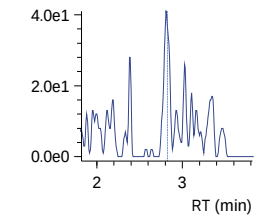
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Date Acquired: 7/22/2021 12:23:49 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210722\Before\20210722_019.lcd
Vial: 40 | Inj. Volume: 50.0000uL | Tray: 4

Perchlorate

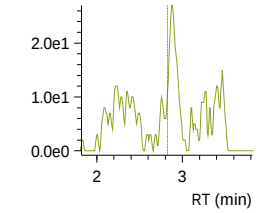
Conc ----

R#1 ---- (0.00)

Q 99.00>83.00 (-) 4.10e1



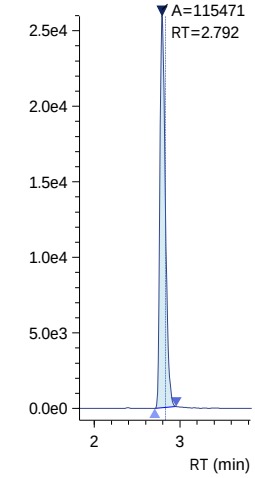
R1 101.00>85.00 (-) 2.70e1



Sodium Perchlorate -18O4_IS

Conc 1.0000

ISTD 107.00>89.00 (-) 2.60e4



Insight Report

Printed at 8/23/2021 11:57:12 AM

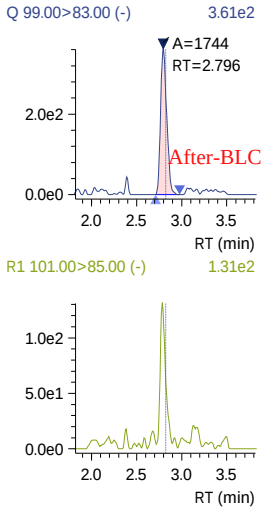
20210722_020

Sample ID: EQ2100452-02
Date Acquired: 7/22/2021 12:32:24 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210722\20210722_020.lcd
Vial: 41 | Inj. Volume: 50.0000uL | Tray: 4

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	M	2.796	1744	111997	1	0.0914	ng/mL	----	33.43
Sodium Perchlorate-18O4 _IS	Auto	2.791	1119 97	111997	1	1.0000	ng/mL	----	----

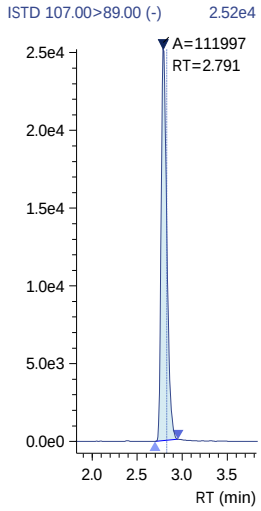
Perchlorate

Conc 0.0914
R#1 33.43 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.0000



Insight Report

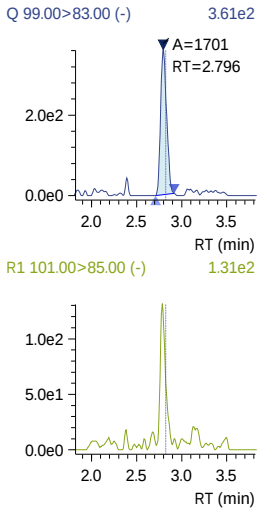
Printed at 8/23/2021 12:00:28 PM

20210722_020

Sample ID: EQ2100452-02
Date Acquired: 7/22/2021 12:32:24 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210722\Before\20210722_020.lcd
Vial: 41 | Inj. Volume: 50.0000uL | Tray: 4

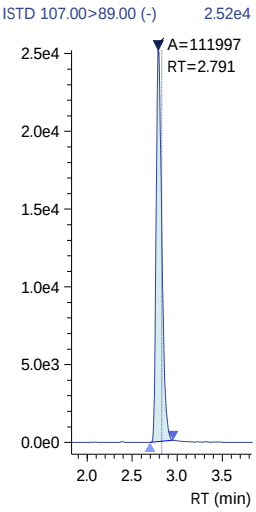
Perchlorate

Conc 0.0885
R#1 33.15 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.0000



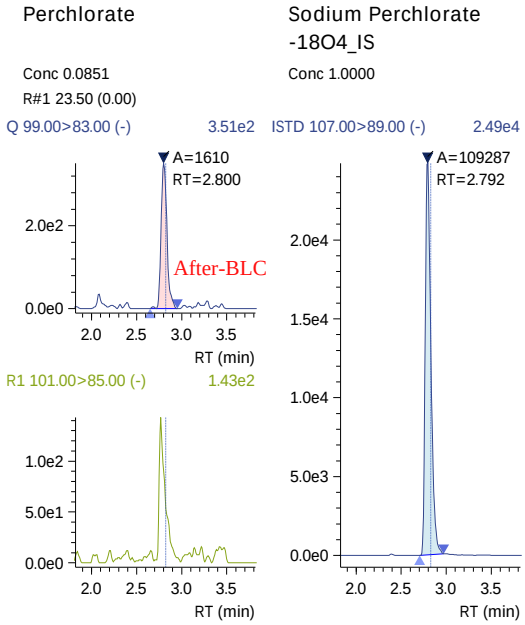
Insight Report

Printed at 8/23/2021 11:57:12 AM

20210722_021

Sample ID: EQ2100452-03
Date Acquired: 7/22/2021 12:40:59 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210722\20210722_021.lcd
Vial: 42 | Inj. Volume: 50.0000uL | Tray: 4

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	M	2.800	1610	109287	1	0.0851	ng/mL	----	23.50
Sodium Perchlorate-18O4 _IS	Auto	2.792	1092 87	109287	1	1.0000	ng/mL	----	----



Insight Report

Printed at 8/23/2021 12:00:28 PM

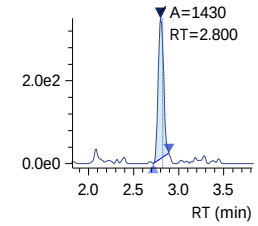
20210722_021

Sample ID: EQ2100452-03
Date Acquired: 7/22/2021 12:40:59 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210722\Before\20210722_021.lcd
Vial: 42 | Inj. Volume: 50.0000uL | Tray: 4

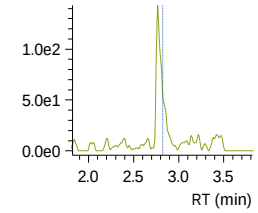
Perchlorate

Conc 0.0728
R#1 24.04 (0.00)

Q 99.00>83.00 (-) 3.51e2



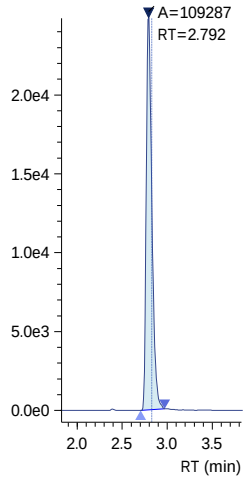
R1 101.00>85.00 (-) 1.43e2



Sodium Perchlorate -18O4_IS

Conc 1.0000

ISTD 107.00>89.00 (-) 2.49e4



Insight Report

Printed at 8/23/2021 11:57:12 AM

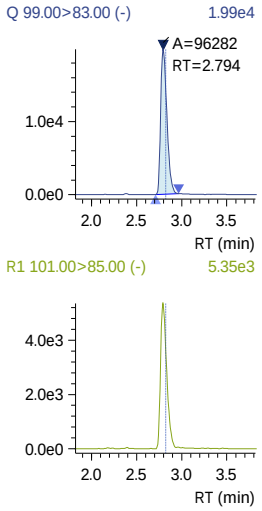
20210722_025

Sample ID: PERCHLORATE7
Date Acquired: 7/22/2021 2:13:15 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210722\20210722_025.lcd
Vial: 26 | Inj. Volume: 50.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.794	96282	75303	1	9.5399	ng/mL	10.0000	26.91
Sodium Perchlorate-18O4 _IS	Auto	2.792	75303	75303	1	1.0000	ng/mL	1.0000	----

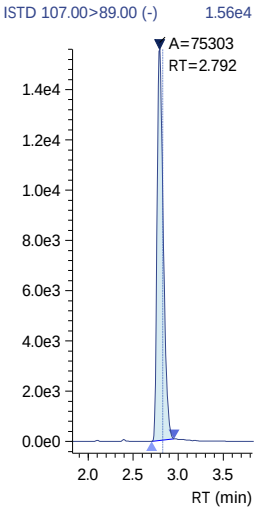
Perchlorate

Conc 9.5399
R#1 26.91 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.0000



Insight Report

Printed at 8/23/2021 12:00:28 PM

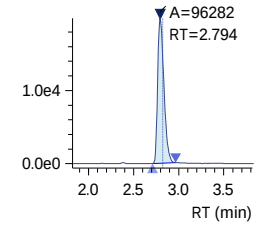
20210722_025

Sample ID: PERCHLORATE7
Date Acquired: 7/22/2021 2:13:15 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210722\Before\20210722_025.lcd
Vial: 26 | Inj. Volume: 50.0000uL | Tray: 1

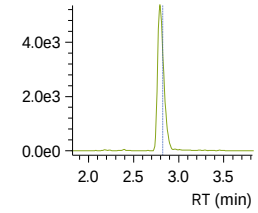
Perchlorate

Conc 9.5399
R#1 26.91 (0.00)

Q 99.00>83.00 (-) 1.99e4



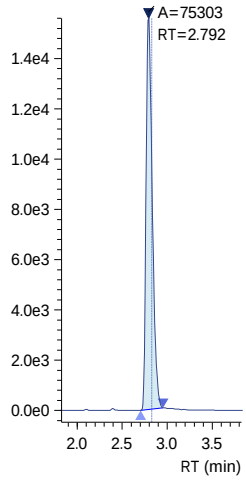
R1 101.00>85.00 (-) 5.35e3



Sodium Perchlorate -18O4_IS

Conc 1.0000

ISTD 107.00>89.00 (-) 1.56e4



Insight Report

Printed at 8/18/2021 10:37:32 AM

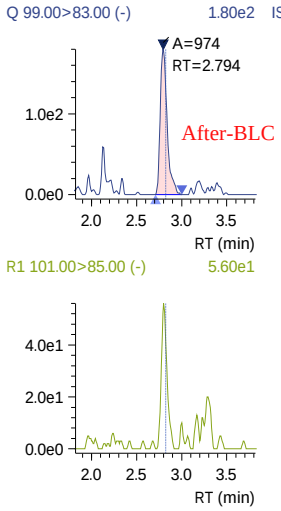
20210802_020

Sample ID: LODV
Date Acquired: 8/2/2021 5:33:34 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210802\20210802_020.lcd
Vial: 31 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	M	2.794	974	112159	1	0.0589	ng/mL	----	27.37
Sodium Perchlorate-18O4 _IS	Auto	2.788	1121 59	112159	1	1.0000	ng/mL	----	----

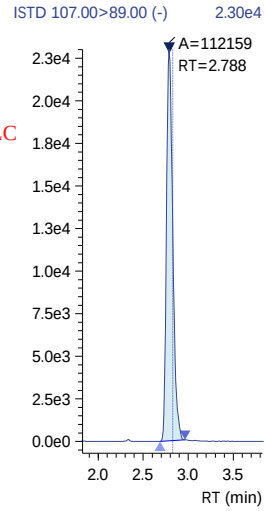
Perchlorate

Conc 0.0589
R#1 27.37 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.0000



Insight Report

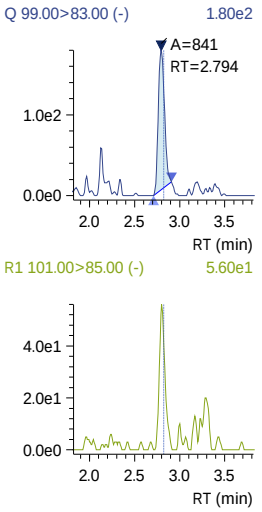
Printed at 8/18/2021 10:42:57 AM

20210802_020

Sample ID: LODV
Date Acquired: 8/2/2021 5:33:34 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210802\Before\20210802_020.lcd
Vial: 31 | Inj. Volume: 25.0000uL | Tray: 1

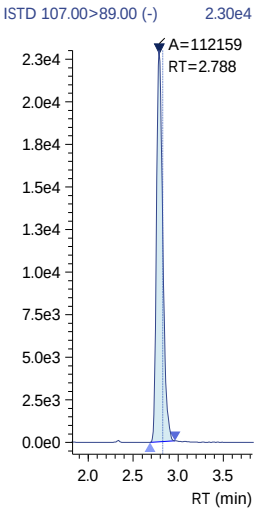
Perchlorate

Conc 0.0200
R#1 30.23 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.0000



Insight Report

Printed at 8/18/2021 10:37:32 AM

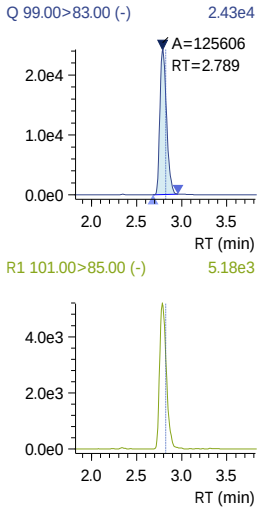
20210802_021

Sample ID: PERCHLORATE7
Date Acquired: 8/2/2021 5:42:08 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210802\20210802_021.lcd
Vial: 26 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.789	125606	84210	1	10.1247	ng/mL	10.0000	21.60
Sodium Perchlorate-18O4_IS	Auto	2.789	84210	84210	1	1.0000	ng/mL	1.0000	----

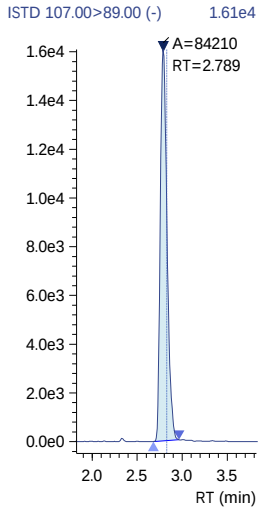
Perchlorate

Conc 10.1247
R#1 21.60 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.0000



Insight Report

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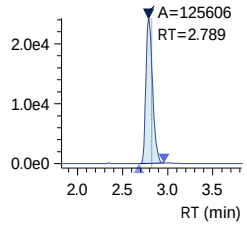
20210802_021

Sample ID: PERCHLORATE7
Date Acquired: 8/2/2021 5:42:08 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210802\Before\20210802_021.lcd
Vial: 26 | Inj. Volume: 25.0000uL | Tray: 1

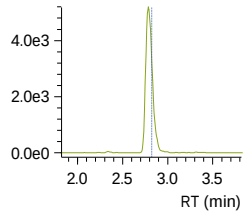
Perchlorate

Conc 9.3624
R#1 21.60 (0.00)

Q 99.00>83.00 (-) 2.43e4



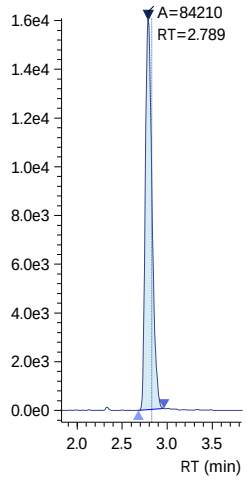
R1 101.00>85.00 (-) 5.18e3



Sodium Perchlorate -18O4_IS

Conc 1.0000

ISTD 107.00>89.00 (-) 1.61e4



Insight Report

Printed at 8/18/2021 10:37:32 AM

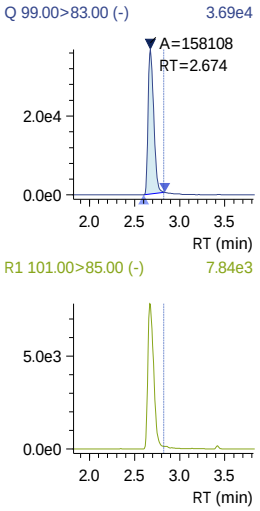
20210802_022

Sample ID: E2100813-001X20
Date Acquired: 8/2/2021 5:51:51 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210802\20210802_022.lcd
Vial: 44 | Inj. Volume: 25.0000uL | Tray: 4

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.674	158108	52558	1	20.4197	ng/mL	----	21.91
Sodium Perchlorate-18O4_IS	Auto	2.673	52558	52558	1	1.0000	ng/mL	----	----

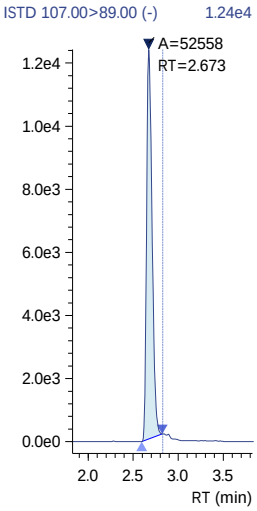
Perchlorate

Conc 20.4197
R#1 21.91 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.0000



Insight Report

Printed at 8/18/2021 10:42:57 AM

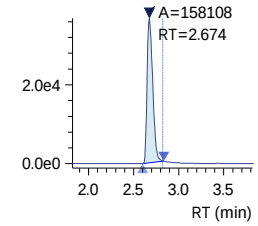
20210802_022

Sample ID: E2100813-001X20
Date Acquired: 8/2/2021 5:51:51 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210802\Before\20210802_022.lcd
Vial: 44 | Inj. Volume: 25.0000uL | Tray: 4

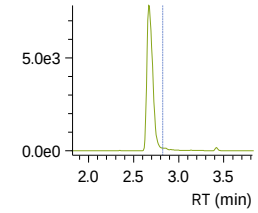
Perchlorate

Conc 18.9100
R#1 21.91 (0.00)

Q 99.00>83.00 (-) 3.69e4



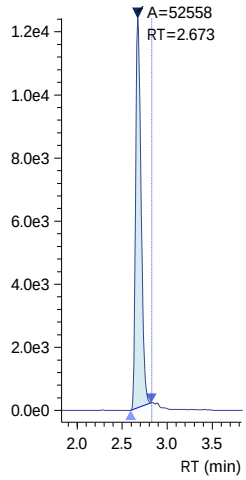
R1 101.00>85.00 (-) 7.84e3



Sodium Perchlorate -18O4_IS

Conc 1.0000

ISTD 107.00>89.00 (-) 1.24e4



Insight Report

Printed at 8/18/2021 10:37:32 AM

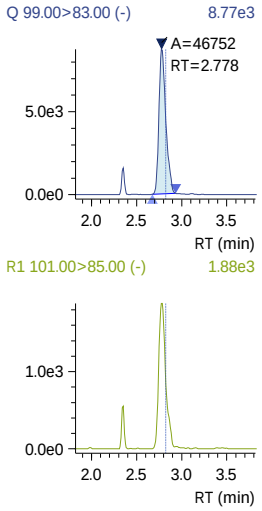
20210802_023

Sample ID: E2100813-004X20
Date Acquired: 8/2/2021 6:00:23 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210802\20210802_023.lcd
Vial: 47 | Inj. Volume: 25.0000uL | Tray: 4

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.778	46752	59318	1	5.3499	ng/mL	----	21.55
Sodium Perchlorate-18O4 _IS	Auto	2.776	59318	59318	1	1.0000	ng/mL	----	----

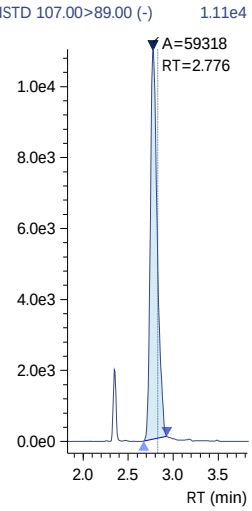
Perchlorate

Conc 5.3499
R#1 21.55 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.0000



Insight Report

Printed at 8/18/2021 10:42:57 AM

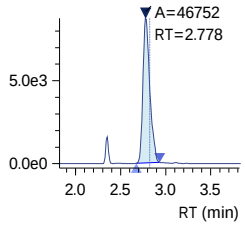
20210802_023

Sample ID: E2100813-004X20
Date Acquired: 8/2/2021 6:00:23 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210802\Before\20210802_023.lcd
Vial: 47 | Inj. Volume: 25.0000uL | Tray: 4

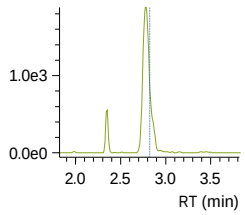
Perchlorate

Conc 4.9343
R#1 21.55 (0.00)

Q 99.00>83.00 (-) 8.77e3



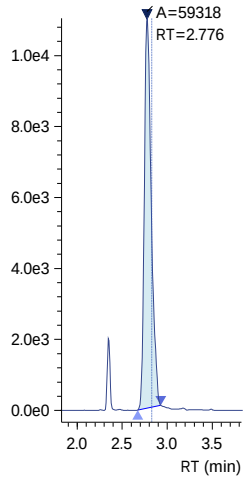
R1 101.00>85.00 (-) 1.88e3



Sodium Perchlorate -18O4_IS

Conc 1.0000

ISTD 107.00>89.00 (-) 1.11e4



Insight Report

Printed at 8/18/2021 10:37:32 AM

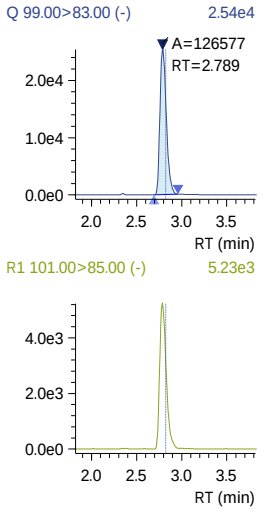
20210802_029

Sample ID: PERCHLORATE7
Date Acquired: 8/2/2021 6:51:32 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210802\20210802_029.lcd
Vial: 26 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.789	126577	84148	1	10.2104	ng/mL	10.0000	20.76
Sodium Perchlorate-18O4_IS	Auto	2.787	84148	84148	1	1.0000	ng/mL	1.0000	----

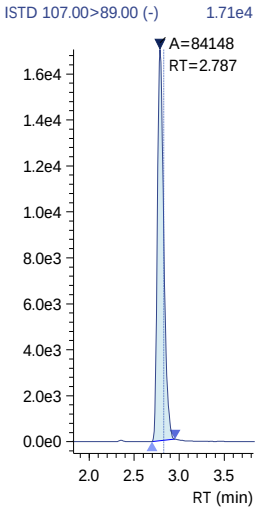
Perchlorate

Conc 10.2104
R#1 20.76 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.0000



Insight Report

Printed at 8/18/2021 10:42:57 AM

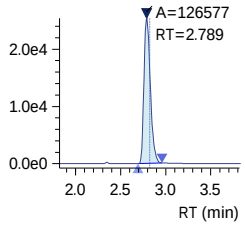
20210802_029

Sample ID: PERCHLORATE7
Date Acquired: 8/2/2021 6:51:32 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210802\Before\20210802_029.lcd
Vial: 26 | Inj. Volume: 25.0000uL | Tray: 1

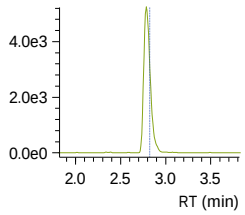
Perchlorate

Conc 9.4419
R#1 20.76 (0.00)

Q 99.00>83.00 (-) 2.54e4



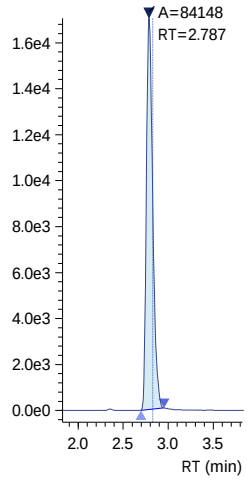
R1 101.00>85.00 (-) 5.23e3



Sodium Perchlorate -18O4_IS

Conc 1.0000

ISTD 107.00>89.00 (-) 1.71e4



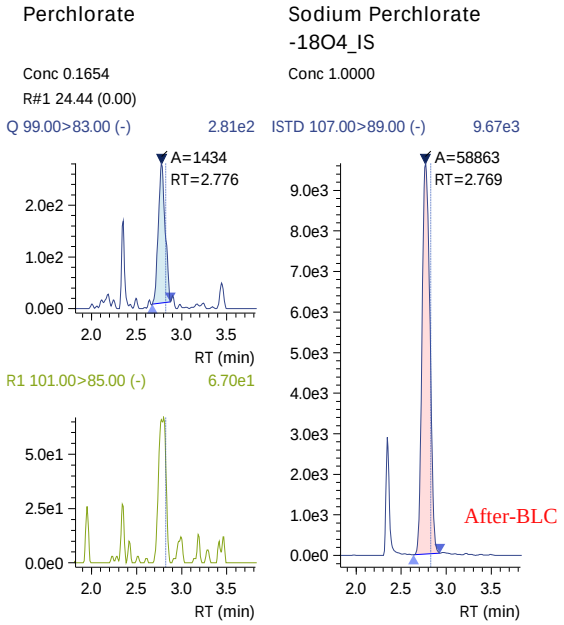
Insight Report

Printed at 8/18/2021 10:37:32 AM

20210802_030

Sample ID: EQ2100452-04
Date Acquired: 8/2/2021 7:00:02 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210802\20210802_030.lcd
Vial: 4 | Inj. Volume: 25.0000uL | Tray: 5

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.776	1434	58863	1	0.1654	ng/mL	----	24.44
Sodium Perchlorate-18O4 _IS	M	2.769	58863	58863	1	1.0000	ng/mL	----	----



Insight Report

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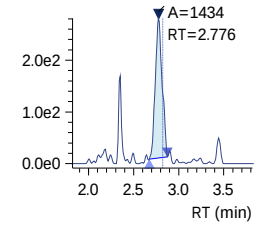
20210802_030

Sample ID: EQ2100452-04
Date Acquired: 8/2/2021 7:00:02 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210802\Before\20210802_030.lcd
Vial: 4 | Inj. Volume: 25.0000uL | Tray: 5

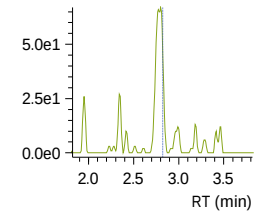
Perchlorate

Conc 0.1288
R#1 24.44 (0.00)

Q 99.00>83.00 (-) 2.81e2



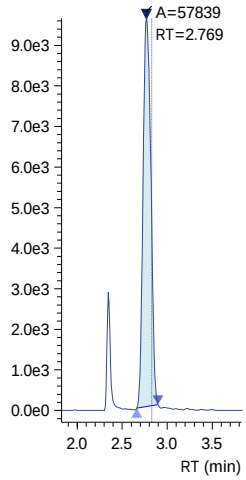
R1 101.00>85.00 (-) 6.70e1



Sodium Perchlorate -18O4_IS

Conc 1.0000

ISTD 107.00>89.00 (-) 9.67e3



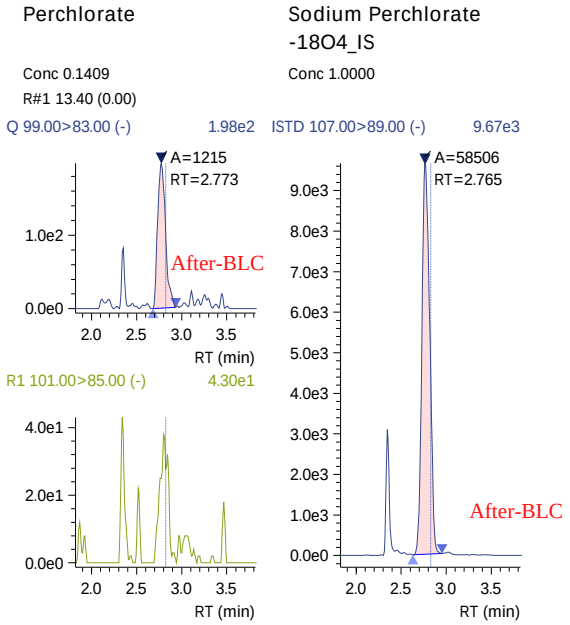
Insight Report

Printed at 8/18/2021 10:37:32 AM

20210802_031

Sample ID: EQ2100452-05
Date Acquired: 8/2/2021 7:08:32 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210802\20210802_031.lcd
Vial: 5 | Inj. Volume: 25.0000uL | Tray: 5

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	M	2.773	1215	58506	1	0.1409	ng/mL	----	13.40
Sodium Perchlorate-18O4 _IS	M	2.765	58506	58506	1	1.0000	ng/mL	----	----



Insight Report

Printed at 8/18/2021 10:42:57 AM

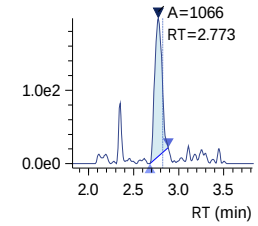
20210802_031

Sample ID: EQ2100452-05
Date Acquired: 8/2/2021 7:08:32 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210802\Before\20210802_031.lcd
Vial: 5 | Inj. Volume: 25.0000uL | Tray: 5

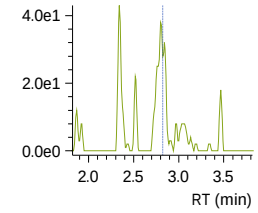
Perchlorate

Conc 0.0914
R#1 13.44 (0.00)

Q 99.00>83.00 (-) 1.98e2



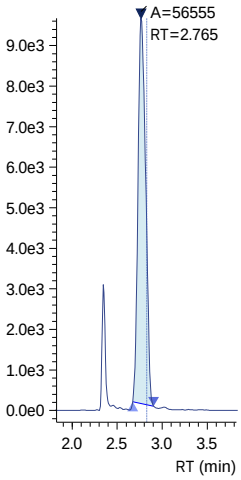
R1 101.00>85.00 (-) 4.30e1



Sodium Perchlorate -18O4_IS

Conc 1.0000

ISTD 107.00>89.00 (-) 9.67e3



Insight Report

Printed at 8/18/2021 10:37:32 AM

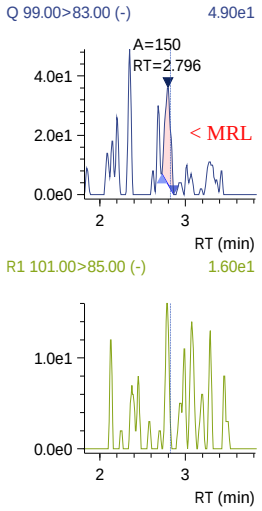
20210802_032

Sample ID: E2100813-002
Date Acquired: 8/2/2021 7:17:05 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210802\20210802_032.lcd
Vial: 45 | Inj. Volume: 25.0000uL | Tray: 4

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	M	2.796	150	59319	1	0.0171	ng/mL	----	51.61
Sodium Perchlorate-18O4 _IS	Auto	2.766	59319	59319	1	1.0000	ng/mL	----	----

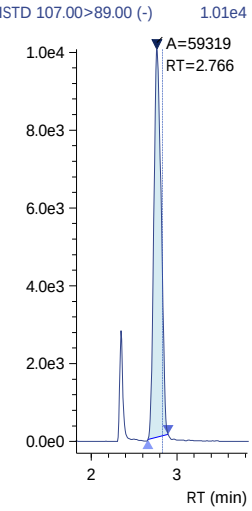
Perchlorate

Conc 0.0171
R#1 51.61 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.0000



Insight Report

Printed at 8/18/2021 10:42:57 AM

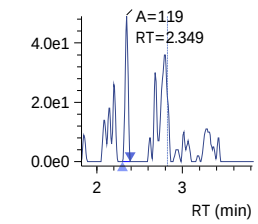
20210802_032

Sample ID: E2100813-002
Date Acquired: 8/2/2021 7:17:05 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210802\Before\20210802_032.lcd
Vial: 45 | Inj. Volume: 25.0000uL | Tray: 4

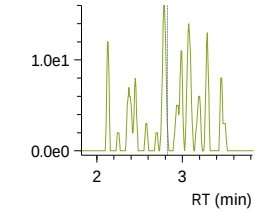
Perchlorate

Conc ----
R#1 ---- (0.00)

Q 99.00>83.00 (-) 4.90e1



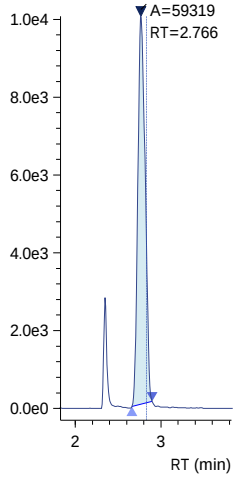
R1 101.00>85.00 (-) 1.60e1



Sodium Perchlorate -18O4_IS

Conc 1.0000

ISTD 107.00>89.00 (-) 1.01e4



Insight Report

Printed at 8/18/2021 10:37:32 AM

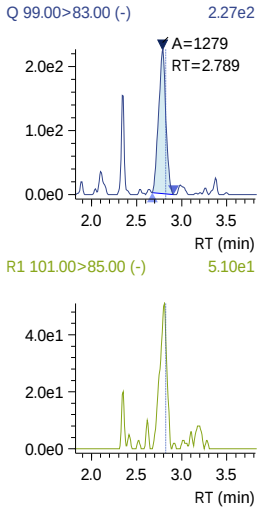
20210802_033

Sample ID: E2100813-003
Date Acquired: 8/2/2021 7:25:40 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210802\20210802_033.lcd
Vial: 46 | Inj. Volume: 25.0000uL | Tray: 4

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.789	1279	58574	1	0.1482	ng/mL	----	18.18
Sodium Perchlorate-18O4 _IS	Auto	2.776	58574	58574	1	1.0000	ng/mL	----	----

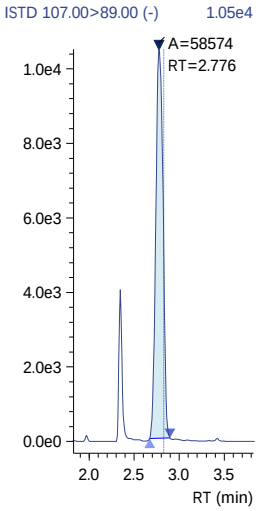
Perchlorate

Conc 0.1482
R#1 18.18 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.0000



Insight Report

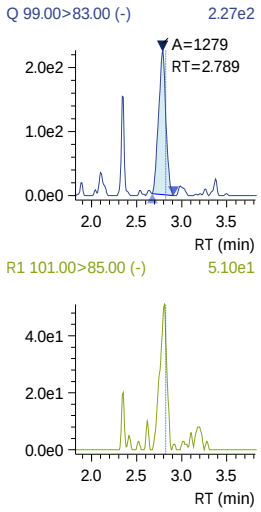
Printed at 8/18/2021 10:42:57 AM

20210802_033

Sample ID: E2100813-003
Date Acquired: 8/2/2021 7:25:40 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210802\Before\20210802_033.lcd
Vial: 46 | Inj. Volume: 25.0000uL | Tray: 4

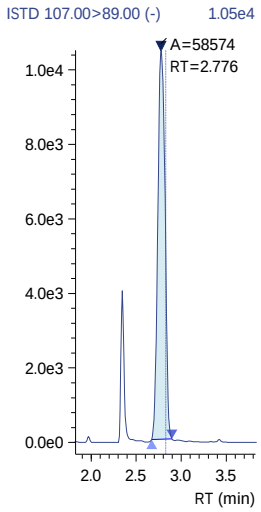
Perchlorate

Conc 0.1103
R#1 18.18 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.0000



Insight Report

Printed at 8/18/2021 10:37:32 AM

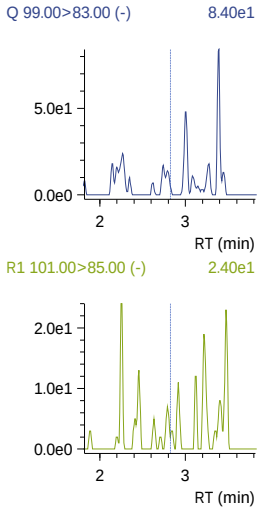
20210802_037

Sample ID: E2100813-008
Date Acquired: 8/2/2021 7:59:47 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210802\20210802_037.lcd
Vial: 51 | Inj. Volume: 25.0000uL | Tray: 4

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	ND(W/B)	----	----	74878	1	----	ng/mL	----	----
Sodium Perchlorate-18O4_IS	Auto	2.779	74878	74878	1	1.0000	ng/mL	----	----

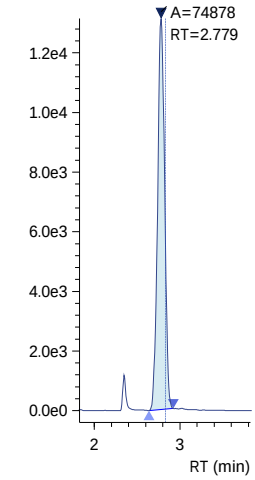
Perchlorate

Conc ----
R#1 ---- (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.0000



Insight Report

Printed at 8/18/2021 10:42:57 AM

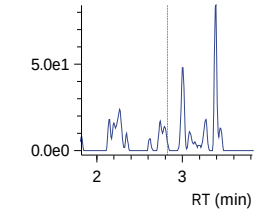
20210802_037

Sample ID: E2100813-008
Date Acquired: 8/2/2021 7:59:47 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210802\Before\20210802_037.lcd
Vial: 51 | Inj. Volume: 25.0000uL | Tray: 4

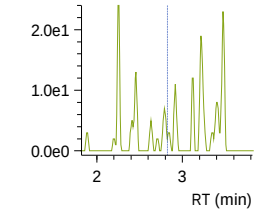
Perchlorate

Conc ----
R#1 ---- (0.00)

Q 99.00>83.00 (-) 8.40e1



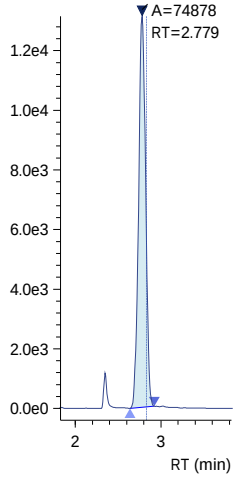
R1 101.00>85.00 (-) 2.40e1



Sodium Perchlorate -18O4_IS

Conc 1.0000

ISTD 107.00>89.00 (-) 1.32e4



Insight Report

Printed at 8/18/2021 10:37:32 AM

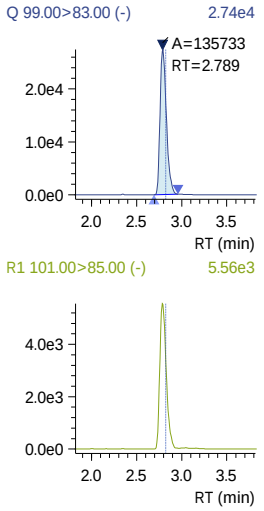
20210802_038

Sample ID: PERCHLORATE7
Date Acquired: 8/2/2021 8:08:19 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210802\20210802_038.lcd
Vial: 26 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.789	135733	91252	1	10.0967	ng/mL	10.0000	20.55
Sodium Perchlorate-18O4_IS	Auto	2.789	91252	91252	1	1.0000	ng/mL	1.0000	----

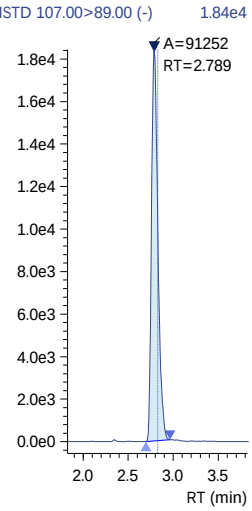
Perchlorate

Conc 10.0967
R#1 20.55 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.0000



Insight Report

Printed at 8/18/2021 10:42:57 AM

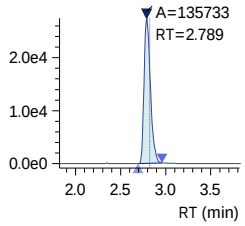
20210802_038

Sample ID: PERCHLORATE7
Date Acquired: 8/2/2021 8:08:19 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210802\Before\20210802_038.lcd
Vial: 26 | Inj. Volume: 25.0000uL | Tray: 1

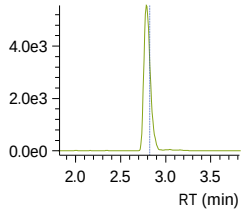
Perchlorate

Conc 9.3364
R#1 20.55 (0.00)

Q 99.00>83.00 (-) 2.74e4



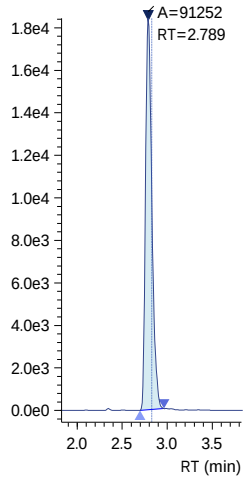
R1 101.00>85.00 (-) 5.56e3



Sodium Perchlorate -18O4_IS

Conc 1.0000

ISTD 107.00>89.00 (-) 1.84e4



Insight Report

Printed at 8/18/2021 10:37:32 AM

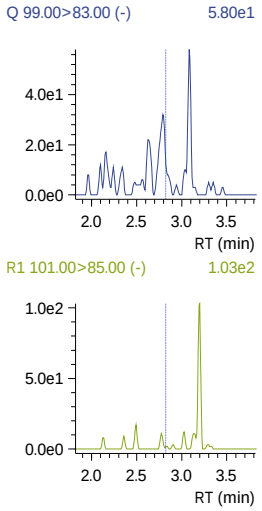
20210802_039

Sample ID: E2100813-009
Date Acquired: 8/2/2021 8:16:54 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210802\20210802_039.lcd
Vial: 52 | Inj. Volume: 25.0000uL | Tray: 4

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	ND(W/B)	----	----	62790	1	----	ng/mL	----	----
Sodium Perchlorate-18O4_IS	Auto	2.772	62790	62790	1	1.0000	ng/mL	----	----

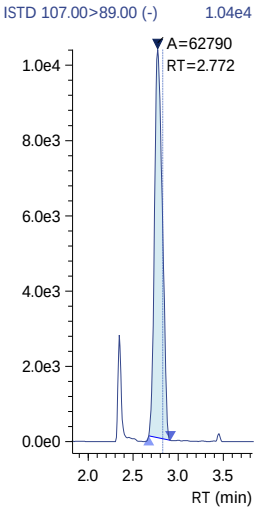
Perchlorate

Conc ----
R#1 ---- (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.0000



Insight Report

Printed at 8/18/2021 10:42:57 AM

20210802_039

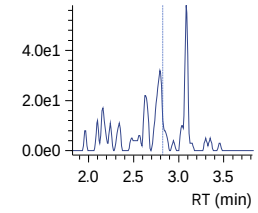
Sample ID: E2100813-009
Date Acquired: 8/2/2021 8:16:54 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210802\Before\20210802_039.lcd
Vial: 52 | Inj. Volume: 25.0000uL | Tray: 4

Perchlorate

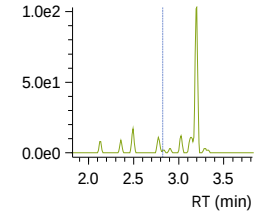
Conc ----

R#1 ---- (0.00)

Q 99.00>83.00 (-) 5.80e1



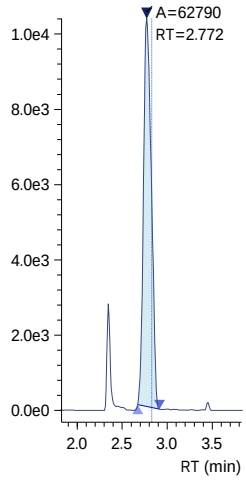
R1 101.00>85.00 (-) 1.03e2



Sodium Perchlorate -18O4_IS

Conc 1.0000

ISTD 107.00>89.00 (-) 1.04e4



Insight Report

Printed at 8/18/2021 10:48:40 AM

Method File: I:\LCMS01\DATA\20210803\20210802.lcm
Project File: I:\LCMS01\DATA\20210803\20210803.damlp

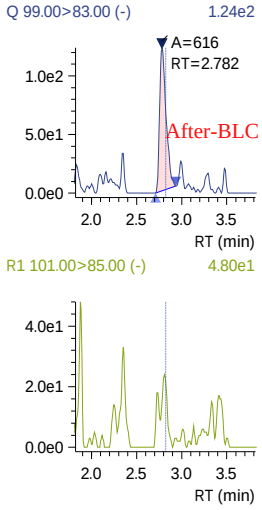
20210803_007

Sample ID: LODV
Date Acquired: 8/3/2021 10:11:40 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210803\20210803_007.lcd
Vial: 31 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	M	2.782	616	70530	1	0.0592	ng/mL	----	4.24
Sodium Perchlorate-18O4 _IS	Auto	2.775	70530	70530	1	1.0000	ng/mL	----	----

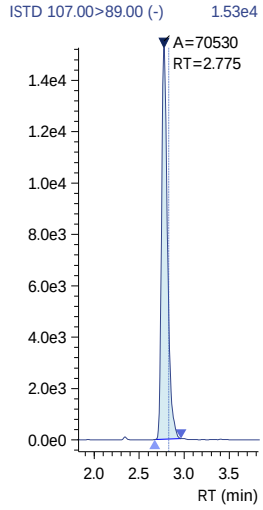
Perchlorate

Conc 0.0592
R#1 4.24 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.0000



Insight Report

Printed at 8/18/2021 10:53:14 AM

Method File: I:\LCMS01\DATA\20210803\20210802.lcm

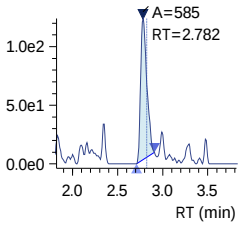
20210803_007

Sample ID: LODV
Date Acquired: 8/3/2021 10:11:40 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210803\Before\20210803_007.lcd
Vial: 31 | Inj. Volume: 25.0000uL | Tray: 1

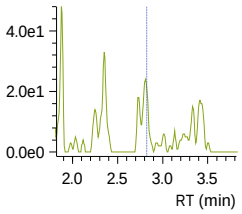
Perchlorate

Conc 0.0567
R#1 5.17 (0.00)

Q 99.00>83.00 (-) 1.24e2



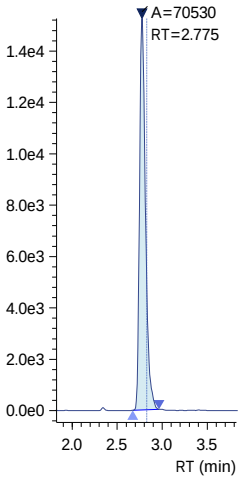
R1 101.00>85.00 (-) 4.80e1



Sodium Perchlorate -18O4_IS

Conc 1.0000

ISTD 107.00>89.00 (-) 1.53e4



Insight Report

Printed at 8/18/2021 10:48:40 AM

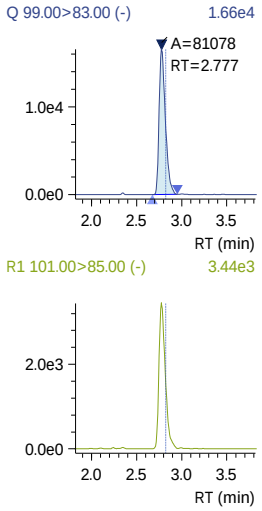
20210803_008

Sample ID: PERCHLORATE7
Date Acquired: 8/3/2021 10:20:13 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210803\20210803_008.lcd
Vial: 26 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.777	81078	58248	1	9.4484	ng/mL	10.0000	20.79
Sodium Perchlorate-18O4 _IS	Auto	2.776	58248	58248	1	1.0000	ng/mL	1.0000	----

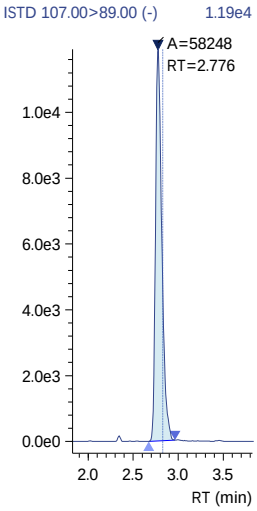
Perchlorate

Conc 9.4484
R#1 20.79 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.0000



Insight Report

Printed at 8/18/2021 10:53:14 AM

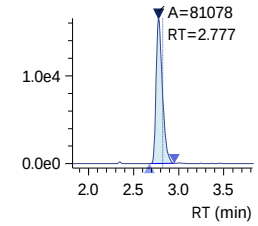
20210803_008

Sample ID: PERCHLORATE7
Date Acquired: 8/3/2021 10:20:13 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210803\Before\20210803_008.lcd
Vial: 26 | Inj. Volume: 25.0000uL | Tray: 1

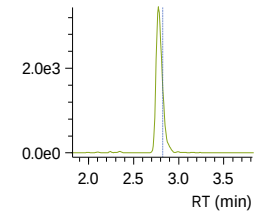
Perchlorate

Conc 9.5221
R#1 20.79 (0.00)

Q 99.00>83.00 (-) 1.66e4



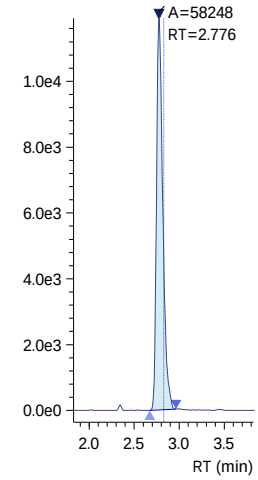
R1 101.00>85.00 (-) 3.44e3



Sodium Perchlorate -18O4_IS

Conc 1.0000

ISTD 107.00>89.00 (-) 1.19e4



Insight Report

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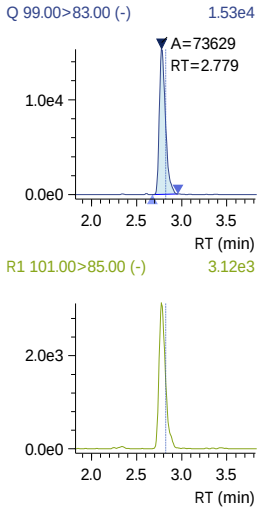
20210803_019

Sample ID: PERCHLORATE7
Date Acquired: 8/3/2021 11:54:16 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210803\20210803_019.lcd
Vial: 26 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.779	73629	52044	1	9.6032	ng/mL	10.0000	20.38
Sodium Perchlorate-18O4_IS	Auto	2.777	52044	52044	1	1.0000	ng/mL	1.0000	----

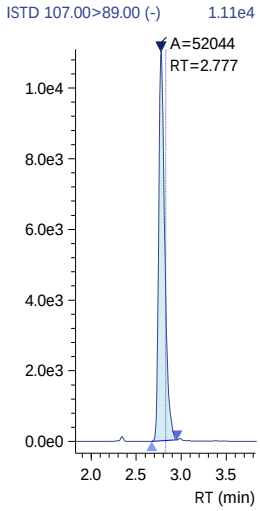
Perchlorate

Conc 9.6032
R#1 20.38 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.0000



Insight Report

Printed at 8/18/2021 10:53:14 AM

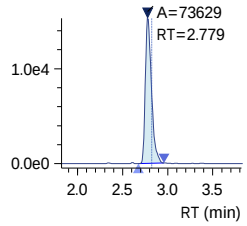
20210803_019

Sample ID: PERCHLORATE7
Date Acquired: 8/3/2021 11:54:16 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210803\Before\20210803_019.lcd
Vial: 26 | Inj. Volume: 25.0000uL | Tray: 1

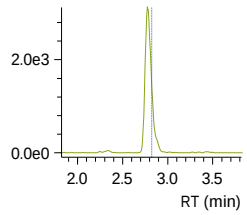
Perchlorate

Conc 9.6780
R#1 20.38 (0.00)

Q 99.00>83.00 (-) 1.53e4



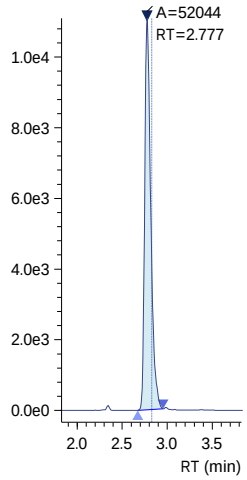
R1 101.00>85.00 (-) 3.12e3



Sodium Perchlorate -18O4_IS

Conc 1.0000

ISTD 107.00>89.00 (-) 1.11e4



Insight Report

Printed at 8/18/2021 10:48:40 AM

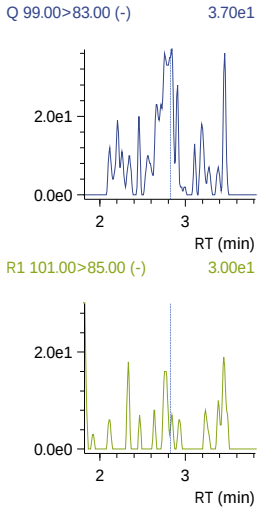
20210803_023

Sample ID: E2100813-006X5
Date Acquired: 8/3/2021 12:28:25 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210803\20210803_023.lcd
Vial: 49 | Inj. Volume: 25.0000uL | Tray: 4

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	ND(W/B)	----	----	97321	1	----	ng/mL	----	----
Sodium Perchlorate-18O4_IS	Auto	2.766	97321	97321	1	1.0000	ng/mL	----	----

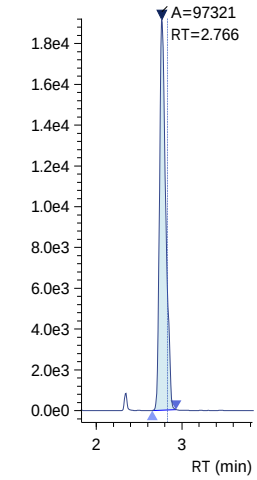
Perchlorate

Conc ----
R#1 ---- (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.0000



Insight Report

Printed at 8/18/2021 10:53:14 AM

20210803_023

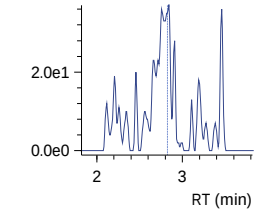
Sample ID: E2100813-006X5
Date Acquired: 8/3/2021 12:28:25 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210803\Before\20210803_023.lcd
Vial: 49 | Inj. Volume: 25.0000uL | Tray: 4

Perchlorate

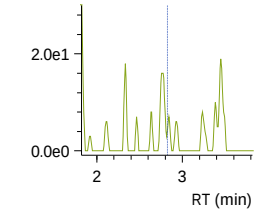
Conc ----

R#1 ---- (0.00)

Q 99.00>83.00 (-) 3.70e1



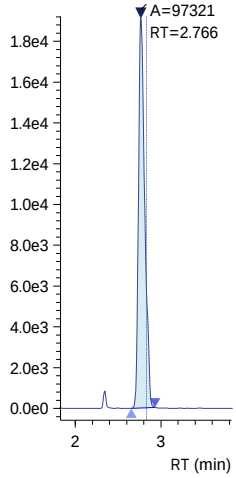
R1 101.00>85.00 (-) 3.00e1



Sodium Perchlorate -18O4_IS

Conc 1.0000

ISTD 107.00>89.00 (-) 1.92e4



Insight Report

Printed at 8/18/2021 10:48:40 AM

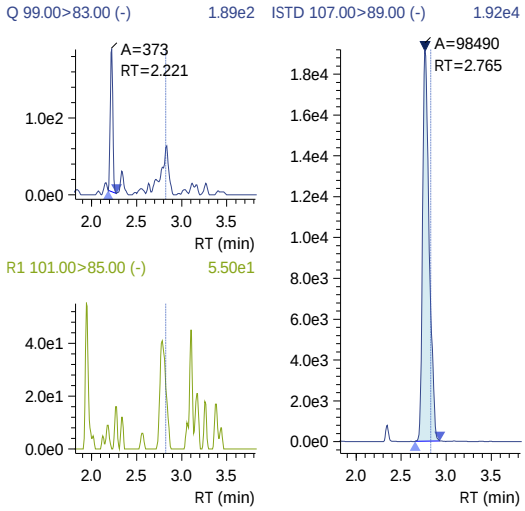
20210803_024

Sample ID: E2100813-007X5
Date Acquired: 8/3/2021 12:36:55 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210803\20210803_024.lcd
Vial: 50 | Inj. Volume: 25.0000uL | Tray: 4

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	ND(W/B)	----	----	98490	1	----	ng/mL	----	----
Sodium Perchlorate-18O4_IS	Auto	2.765	98490	98490	1	1.0000	ng/mL	----	----

Perchlorate

Conc ----
R#1 ---- (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.0000

Insight Report

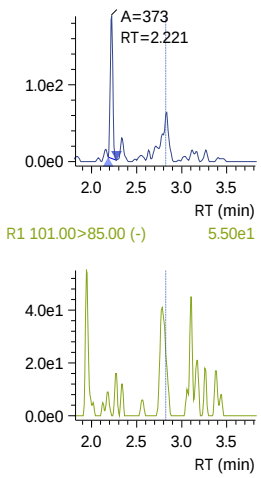
Printed at 8/18/2021 10:53:14 AM

20210803_024

Sample ID: E2100813-007X5
Date Acquired: 8/3/2021 12:36:55 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210803\Before\20210803_024.lcd
Vial: 50 | Inj. Volume: 25.0000uL | Tray: 4

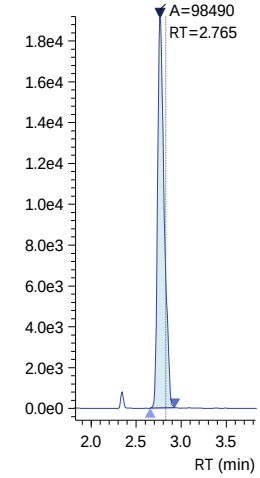
Perchlorate

Conc ----
R#1 ---- (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.0000



Insight Report

Printed at 8/18/2021 10:48:40 AM

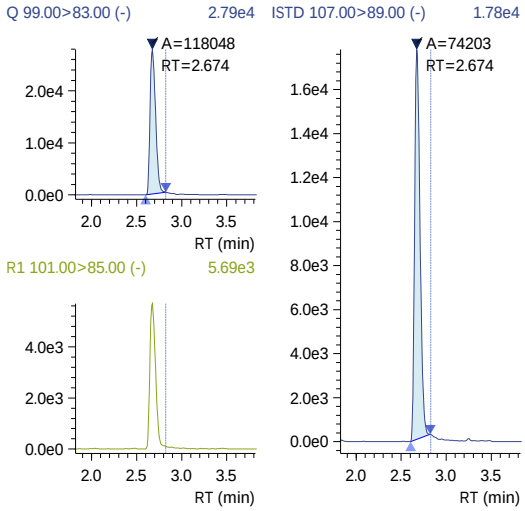
20210803_025

Sample ID: PERCHLORATE7
Date Acquired: 8/3/2021 2:29:59 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210803\20210803_025.lcd
Vial: 26 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.674	118048	74203	1	10.7988	ng/mL	10.0000	20.68
Sodium Perchlorate-18O4_IS	Auto	2.674	74203	74203	1	1.0000	ng/mL	1.0000	----

Perchlorate

Conc 10.7988
R#1 20.68 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.0000

Insight Report

Printed at 8/18/2021 10:53:14 AM

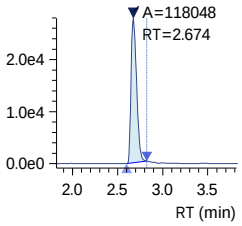
20210803_025

Sample ID: PERCHLORATE7
Date Acquired: 8/3/2021 2:29:59 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210803\Before\20210803_025.lcd
Vial: 26 | Inj. Volume: 25.0000uL | Tray: 1

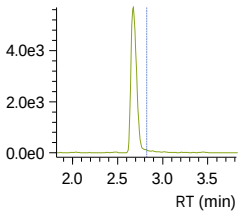
Perchlorate

Conc 10.8829
R#1 20.68 (0.00)

Q 99.00>83.00 (-) 2.79e4



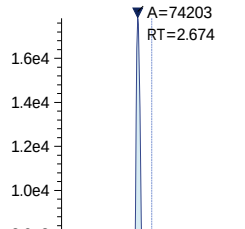
R1 101.00>85.00 (-) 5.69e3



Sodium Perchlorate -18O4_IS

Conc 1.0000

ISTD 107.00>89.00 (-) 1.78e4



Insight Report

Printed at 8/18/2021 10:48:40 AM

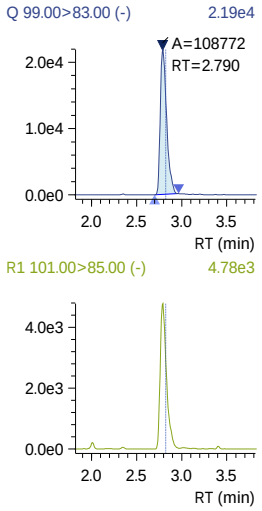
20210803_047

Sample ID: PERCHLORATE7
Date Acquired: 8/3/2021 6:09:24 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210803\20210803_047.lcd
Vial: 26 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.790	108772	74110	1	9.9627	ng/mL	10.0000	21.92
Sodium Perchlorate-18O4_IS	Auto	2.789	74110	74110	1	1.0000	ng/mL	1.0000	----

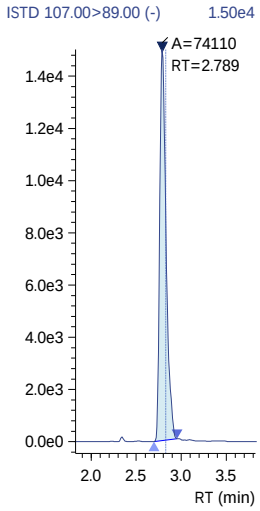
Perchlorate

Conc 9.9627
R#1 21.92 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.0000



Insight Report

Printed at 8/18/2021 10:53:14 AM

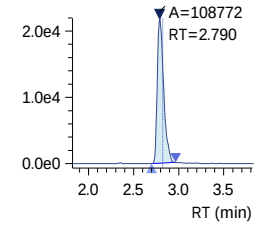
20210803_047

Sample ID: PERCHLORATE7
Date Acquired: 8/3/2021 6:09:24 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210803\Before\20210803_047.lcd
Vial: 26 | Inj. Volume: 25.0000uL | Tray: 1

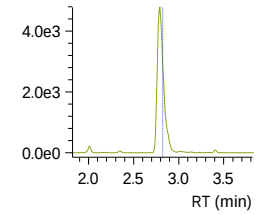
Perchlorate

Conc 10.0403
R#1 21.92 (0.00)

Q 99.00>83.00 (-) 2.19e4



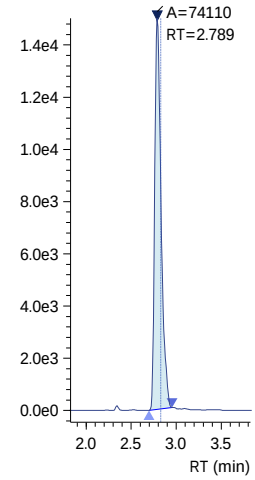
R1 101.00>85.00 (-) 4.78e3



Sodium Perchlorate -18O4_IS

Conc 1.0000

ISTD 107.00>89.00 (-) 1.50e4



Insight Report

Printed at 8/18/2021 10:48:40 AM

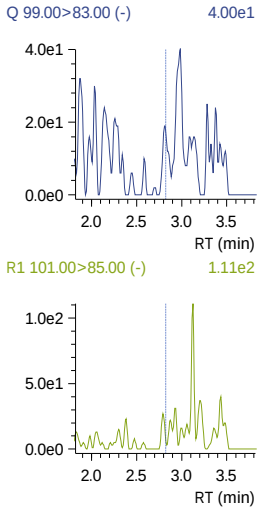
20210803_048

Sample ID: E2100813-005X10
Date Acquired: 8/3/2021 6:17:56 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210803\20210803_048.lcd
Vial: 48 | Inj. Volume: 25.0000uL | Tray: 4

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	ND(W/B)	----	----	65746	1	----	ng/mL	----	----
Sodium Perchlorate-18O4_IS	Auto	2.788	65746	65746	1	1.0000	ng/mL	----	----

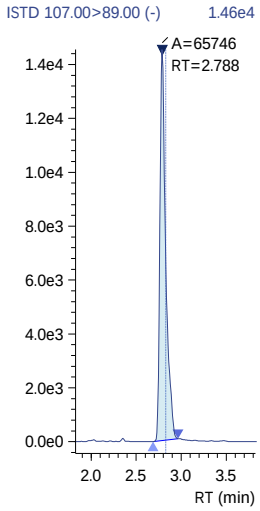
Perchlorate

Conc ----
R#1 ---- (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.0000



Insight Report

Printed at 8/18/2021 10:53:14 AM

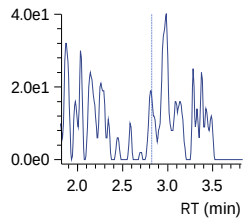
20210803_048

Sample ID: E2100813-005X10
Date Acquired: 8/3/2021 6:17:56 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210803\Before\20210803_048.lcd
Vial: 48 | Inj. Volume: 25.0000uL | Tray: 4

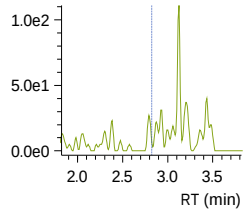
Perchlorate

Conc ----
R#1 ---- (0.00)

Q 99.00>83.00 (-) 4.00e1



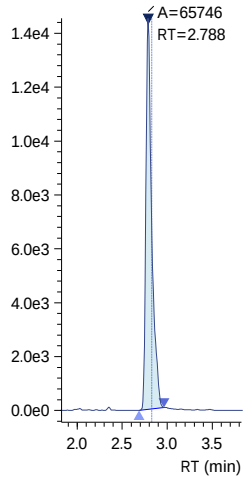
R1 101.00>85.00 (-) 1.11e2



Sodium Perchlorate -18O4_IS

Conc 1.0000

ISTD 107.00>89.00 (-) 1.46e4



Insight Report

Printed at 8/18/2021 10:48:40 AM

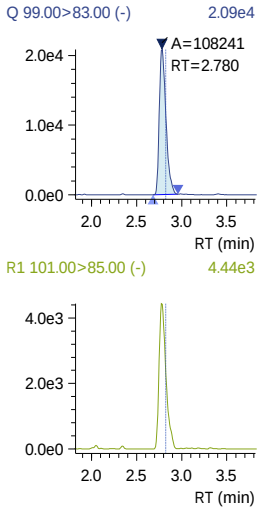
20210803_058

Sample ID: PERCHLORATE7
Date Acquired: 8/3/2021 7:43:12 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210803\20210803_058.lcd
Vial: 26 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.780	108241	74204	1	9.9015	ng/mL	10.0000	21.44
Sodium Perchlorate-18O4_IS	Auto	2.780	74204	74204	1	1.0000	ng/mL	1.0000	----

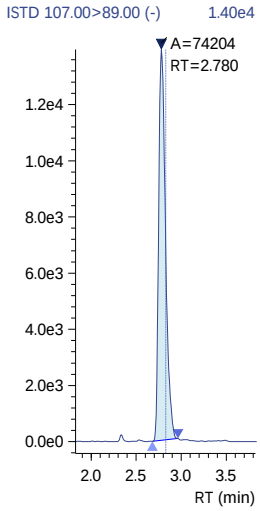
Perchlorate

Conc 9.9015
R#1 21.44 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.0000



Insight Report

Printed at 8/18/2021 10:53:14 AM

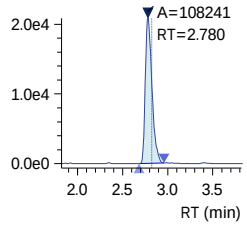
20210803_058

Sample ID: PERCHLORATE7
Date Acquired: 8/3/2021 7:43:12 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210803\Before\20210803_058.lcd
Vial: 26 | Inj. Volume: 25.0000uL | Tray: 1

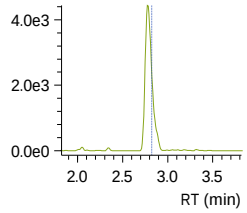
Perchlorate

Conc 9.9786
R#1 21.44 (0.00)

Q 99.00>83.00 (-) 2.09e4



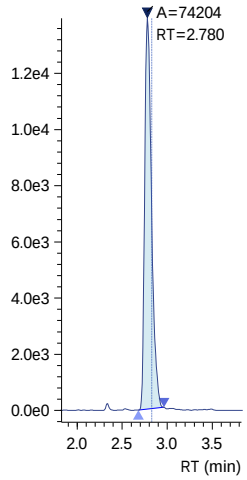
R1 101.00>85.00 (-) 4.44e3



Sodium Perchlorate -18O4_IS

Conc 1.0000

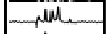
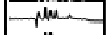
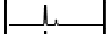
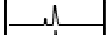
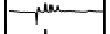
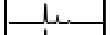
ISTD 107.00>89.00 (-) 1.40e4



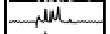
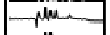
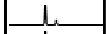
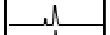
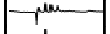
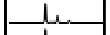
HS21071038 Wet Chem IC Raw Data

ALS WO# HS21071038

Sequence: 072121
Last Update Operator: alshs.nouser

CD	Name	Comment	Type	Position	Dilution	Level	Instrument Method	Processing Method
	STD1		Calibration	RE1	1.00	1	Anions Program ISO37mM 150mm short 0.4	Anions Processing Method ISO
	STD2		Calibration	RE2	1.00	2	Anions Program ISO37mM 150mm short 0.4	Anions Processing Method ISO
	STD3		Calibration	RE3	1.00	3	Anions Program ISO37mM 150mm short 0.4	Anions Processing Method ISO
	STD4		Calibration	RE4	1.00	4	Anions Program ISO37mM 150mm short 0.4	Anions Processing Method ISO
	STD5		Calibration	RE5	1.00	5	Anions Program ISO37mM 150mm short 0.4	Anions Processing Method ISO
	STD6		Calibration	RE6	1.00	6	Anions Program ISO37mM 150mm short 0.4	Anions Processing Method ISO
	ICV		Unknown	RE7	1.00		Anions Program ISO37mM 150mm short 0.4	Anions Processing Method ISO
	ICB		Unknown	RE8	1.00		Anions Program ISO37mM 150mm short 0.4	Anions Processing Method ISO
	CCV		Unknown	R1	1.00		Anions Program ISO37mM 150mm short 0.4	Anions Processing Method ISO
	CCB		Unknown	R4	1.00		Anions Program ISO37mM 150mm short 0.4	Anions Processing Method ISO
	MBLK		Unknown	R5	1.00		Anions Program ISO37mM 150mm short 0.4	Anions Processing Method ISO
	LCS		Unknown	R2	1.00		Anions Program ISO37mM 150mm short 0.4	Anions Processing Method ISO
	CCV1		Unknown	R3	1.00		Anions Program ISO37mM 150mm short 0.4	Anions Processing Method ISO
	CCB		Unknown	R6	1.00		Anions Program ISO37mM 150mm short 0.4	Anions Processing Method ISO
	HS21071038-01DF2		Unknown	RA1	2.00		Anions Program ISO37mM 150mm short 0.4	Anions Processing Method ISO
	HS21071038-02DF2		Unknown	RA2	2.00		Anions Program ISO37mM 150mm short 0.4	Anions Processing Method ISO
	HS21071038-02MSDF2		Unknown	RA3	2.00		Anions Program ISO37mM 150mm short 0.4	Anions Processing Method ISO
	HS21071038-02MSDDF2		Unknown	RA4	2.00		Anions Program ISO37mM 150mm short 0.4	Anions Processing Method ISO
	HS21071038-03DF2		Unknown	RA5	2.00		Anions Program ISO37mM 150mm short 0.4	Anions Processing Method ISO
	HS21071038-04DF10		Unknown	RA6	10.00		Anions Program ISO37mM 150mm short 0.4	Anions Processing Method ISO
	HS21071038-06DF5		Unknown	RA7	5.00		Anions Program ISO37mM 150mm short 0.4	Anions Processing Method ISO
	HS21071038-07DF5		Unknown	RA8	5.00		Anions Program ISO37mM 150mm short 0.4	Anions Processing Method ISO
	CCV		Unknown	R1	1.00		Anions Program ISO37mM 150mm short 0.4	Anions Processing Method ISO
	CCB		Unknown	R4	1.00		Anions Program ISO37mM 150mm short 0.4	Anions Processing Method ISO
	CCV		Unknown	R1	1.00		Anions Program ISO37mM 150mm short 0.4	Anions Processing Method ISO
	CCB		Unknown	R4	1.00		Anions Program ISO37mM 150mm short 0.4	Anions Processing Method ISO
	HS21071049-17		Unknown	RC8	1.00		Anions Program ISO37mM 150mm short 0.4	Anions Processing Method ISO
	HS21071049-17MS		Unknown	RD1	1.00		Anions Program ISO37mM 150mm short 0.4	Anions Processing Method ISO
	HS21071049-17MSD		Unknown	RD2	1.00		Anions Program ISO37mM 150mm short 0.4	Anions Processing Method ISO
	CCV1		Unknown	R3	1.00		Anions Program ISO37mM 150mm short 0.4	Anions Processing Method ISO
	CCB		Unknown	R6	1.00		Anions Program ISO37mM 150mm short 0.4	Anions Processing Method ISO

Sequence: 072121
Last Update Operator: alshs.nouser

CD	Name	Volume	Status	Inject Time
	STD1	5.0	Finished	6/26/2021 7:08:27 AM -05:00
	STD2	5.0	Finished	6/26/2021 7:15:51 AM -05:00
	STD3	5.0	Finished	6/26/2021 7:23:13 AM -05:00
	STD4	5.0	Finished	6/26/2021 7:30:36 AM -05:00
	STD5	5.0	Finished	6/26/2021 7:38:00 AM -05:00
	STD6	5.0	Finished	6/26/2021 7:45:22 AM -05:00
	ICV	5.0	Finished	6/26/2021 7:52:45 AM -05:00
	ICB	5.0	Finished	6/26/2021 8:07:30 AM -05:00
	CCV	5.0	Finished	7/21/2021 10:10:34 AM -05:00
	CCB	5.0	Finished	7/21/2021 10:17:59 AM -05:00
	MBLK	5.0	Finished	7/21/2021 10:25:23 AM -05:00
	LCS	5.0	Finished	7/21/2021 10:32:47 AM -05:00
	CCV1	5.0	Finished	7/21/2021 10:55:00 AM -05:00
	CCB	5.0	Finished	7/21/2021 11:02:24 AM -05:00
	HS21071038-01DF2	5.0	Finished	7/21/2021 12:42:43 PM -05:00
	HS21071038-02DF2	5.0	Finished	7/21/2021 12:50:07 PM -05:00
	HS21071038-02MSDF2	5.0	Finished	7/21/2021 12:57:31 PM -05:00
	HS21071038-02MSDDF2	5.0	Finished	7/21/2021 1:05:06 PM -05:00
	HS21071038-03DF2	5.0	Finished	7/21/2021 1:12:32 PM -05:00
	HS21071038-04DF10	5.0	Finished	7/21/2021 1:20:07 PM -05:00
	HS21071038-06DF5	5.0	Finished	7/21/2021 1:27:30 PM -05:00
	HS21071038-07DF5	5.0	Finished	7/21/2021 1:34:54 PM -05:00
	CCV	5.0	Finished	7/21/2021 1:49:43 PM -05:00
	CCB	5.0	Finished	7/21/2021 1:57:08 PM -05:00
	CCV	5.0	Finished	7/21/2021 4:03:16 PM -05:00
	CCB	5.0	Finished	7/21/2021 4:10:40 PM -05:00
	HS21071049-17	5.0	Finished	7/21/2021 4:18:04 PM -05:00
	HS21071049-17MS	5.0	Finished	7/21/2021 4:25:28 PM -05:00
	HS21071049-17MSD	5.0	Finished	7/21/2021 4:32:52 PM -05:00
	CCV1	5.0	Finished	7/21/2021 6:56:29 PM -05:00
	CCB	5.0	Finished	7/21/2021 7:04:03 PM -05:00

Sequence: 071521
Injection #6: STD6

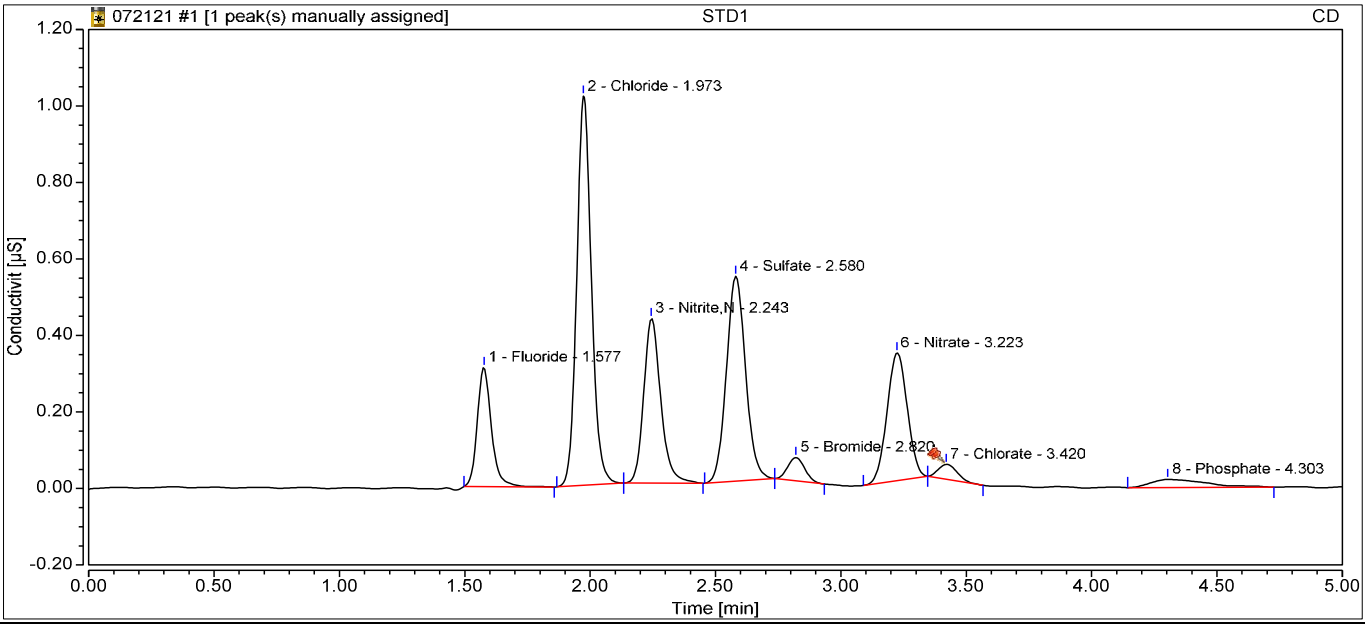
Calibration

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*	*20.2589*	*0.99769*	*0.0030*	*0.2038*	*0.0000*
2	Chloride	Lin, WithOffset, 1/	Area	6	3.8673	0.99992	0.0009	0.1330	0.0000
3	Nitrite,N	Quad, WithOffset,	Area	6	5.7709	0.99983	0.0054	0.2948	-0.0029
4	Sulfate	Lin, WithOffset, 1/	Area	6	4.1076	0.99991	-0.0020	0.0963	0.0000
5	Bromide	Lin, WithOffset, 1/	Area	6	10.7478	0.99944	-0.0010	0.0519	0.0000
6	Nitrate	Lin, WithOffset, 1/	Area	6	4.3880	0.99990	0.0007	0.3035	0.0000
7	Chlorate	Quad, WithOffset,	Area	6	4.0947	0.99992	-0.0001	0.0348	-0.0004
8	Phosphate	Lin, WithOffset, 1/	Area	6	27.9718	0.99729	-0.0098	0.1152	0.0000
Maximum					**27.9718**	0.99992			
Minimum					3.8673	**0.99729**			

1 STD1

Sample Name:	**STD1**	*Injection Volume:*	**5.00**
Vial Number:	**RE1**	*Channel:*	**CD**
Sample Type:	**Calibration Standard**	*Wavelength:*	**210**
Control Program:	**Anions Program ISO37mM 150mm short 0.4**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method ISO**	*Dilution Factor:*	**1.0000**
Recording Time:	**06/26/2021 07:08**	*Sample Weight:*	**1.0000**

Run Time:



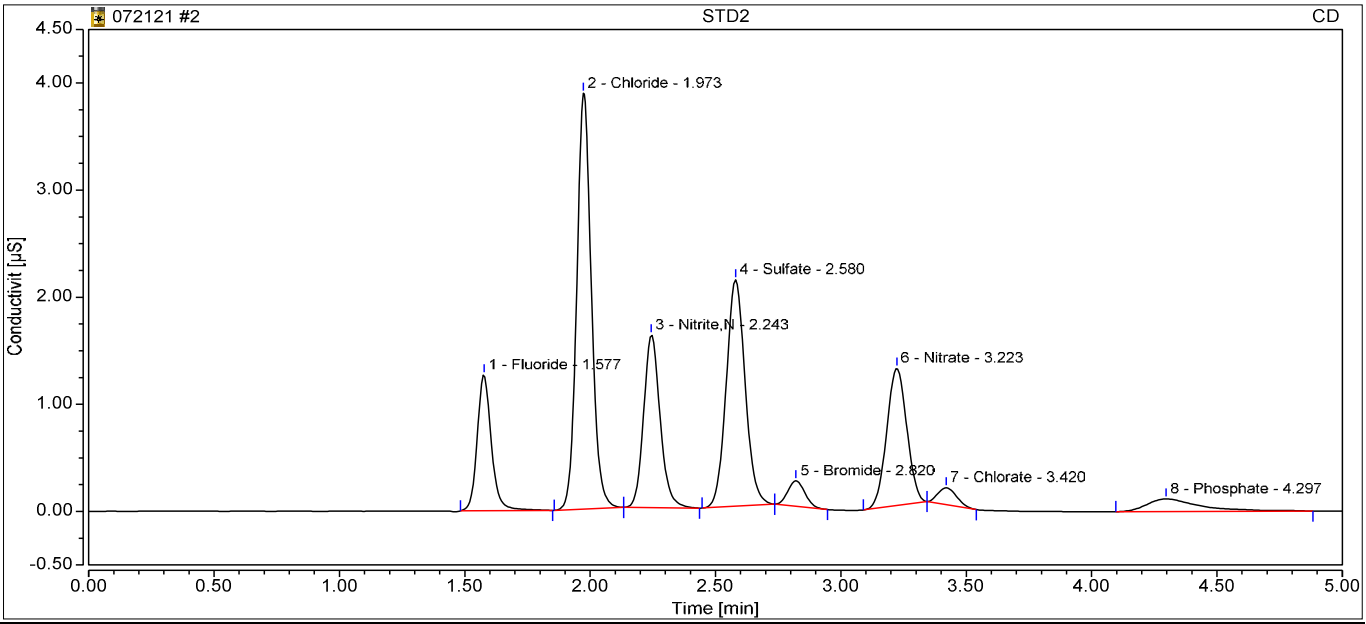
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	1.58	Fluoride	BMB	0.020	0.0853	0.0853	1.0000
2	1.97	Chloride	BMB	0.069	0.5112	0.5112	1.0000
3	2.24	Nitrite,N	BMB	0.034	0.0972	0.0972	1.0000
4	2.58	Sulfate	BMB	0.047	0.5123	0.5123	1.0000
5	2.82	Bromide	BMB	0.005	0.1111	0.1111	1.0000
6	3.22	Nitrate	BMB	0.031	0.1006	0.1006	1.0000
7	3.42	Chlorate	BMB^	0.003	0.1002	0.1002	1.0000
8	4.30	Phosphate	BMB	0.005	0.1325	0.1325	1.0000
Total:			**0.000**	**0.216**		**1.65**	

2 STD2

Sample Name:	**STD2**	*Injection Volume:*	**5.00**
Vial Number:	**RE2**	*Channel:*	**CD**
Sample Type:	**Calibration Standard**	*Wavelength:*	**210**
Control Program:	**Anions Program ISO37mM 150mm short 0.4**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method ISO**	*Dilution Factor:*	**1.0000**
Recording Time:	**06/26/2021 07:15**	*Sample Weight:*	**1.0000**

Run Time:



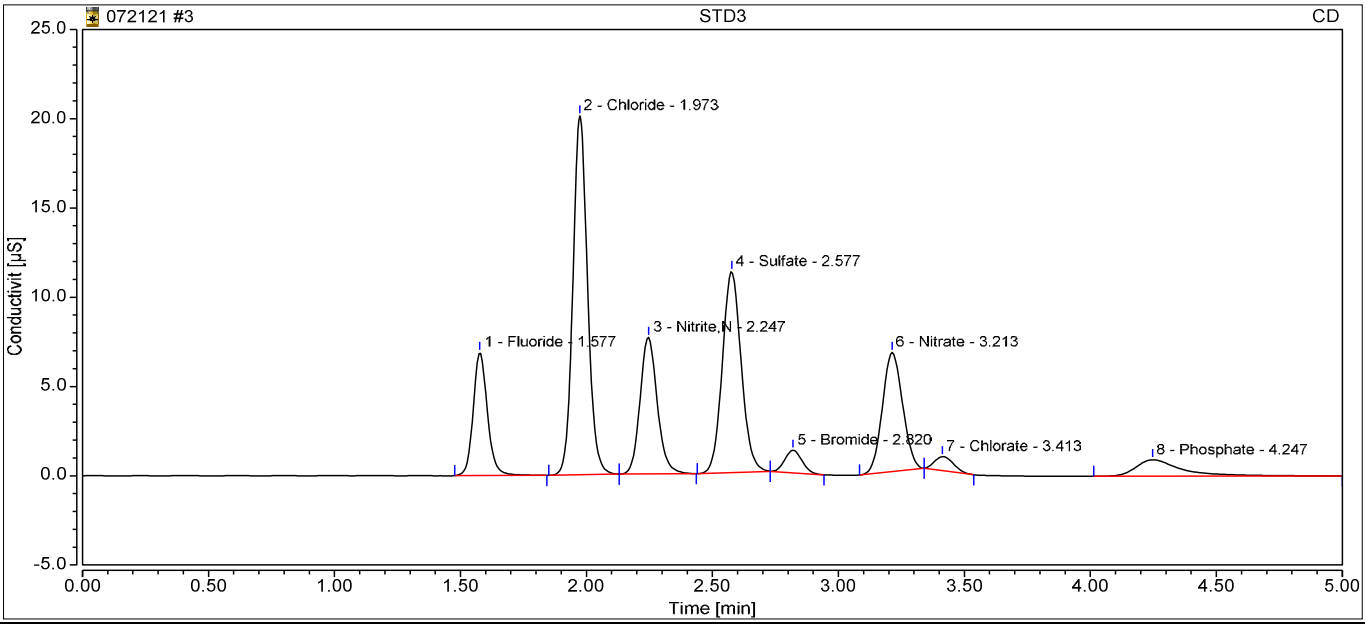
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	1.58	Fluoride	BMB	0.083	0.3949	0.3949	1.0000
2	1.97	Chloride	BMB	0.262	1.9605	1.9605	1.0000
3	2.24	Nitrite,N	BMB	0.123	0.4013	0.4013	1.0000
4	2.58	Sulfate	BMB	0.185	1.9450	1.9450	1.0000
5	2.82	Bromide	BMB	0.019	0.3820	0.3820	1.0000
6	3.22	Nitrate	BMB	0.119	0.3898	0.3898	1.0000
7	3.42	Chlorate	BMB	0.014	0.3985	0.3985	1.0000
8	4.30	Phosphate	BMB	0.029	0.3369	0.3369	1.0000
Total:			**0.000**	**0.834**		**6.21**	

3 STD3

Sample Name:	**STD3**	*Injection Volume:*	**5.00**
Vial Number:	**RE3**	*Channel:*	**CD**
Sample Type:	**Calibration Standard**	*Wavelength:*	**210**
Control Program:	**Anions Program ISO37mM 150mm short 0.4**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method ISO**	*Dilution Factor:*	**1.0000**
Recording Time:	**06/26/2021 07:23**	*Sample Weight:*	**1.0000**

Run Time:



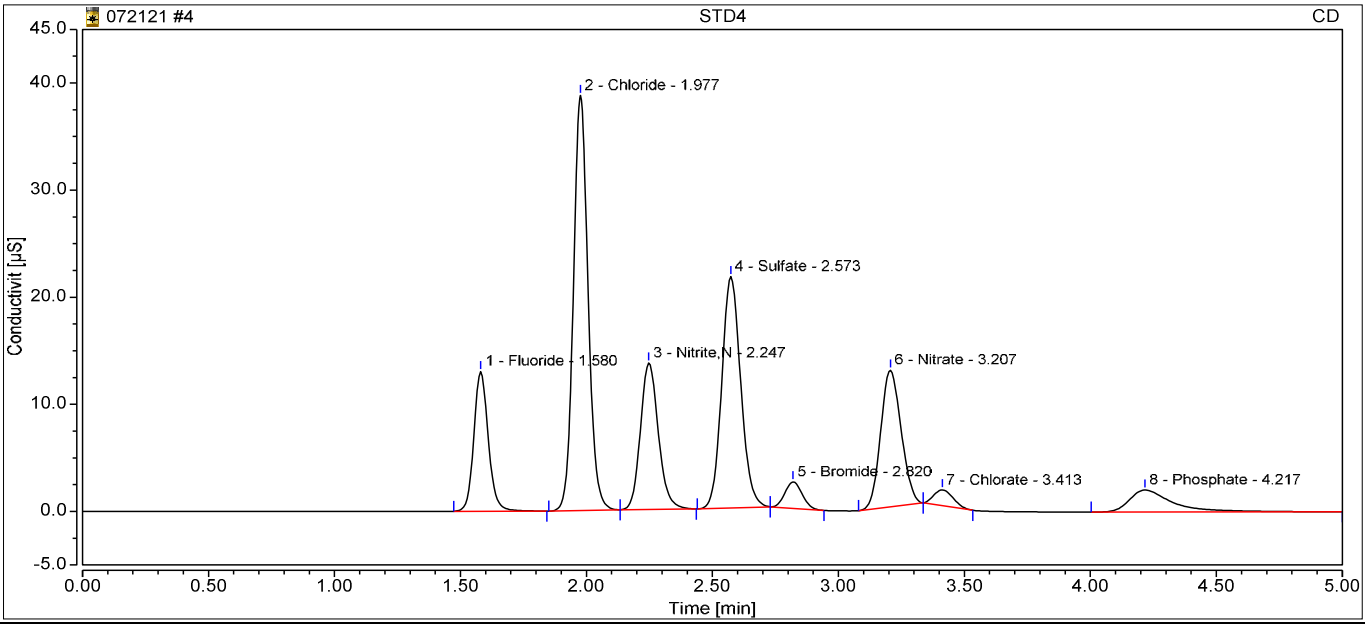
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	1.58	Fluoride	BMB	0.452	2.2036	2.2036	1.0000
2	1.97	Chloride	BMB	1.352	10.1565	10.1565	1.0000
3	2.25	Nitrite,N	BMB	0.607	2.0827	2.0827	1.0000
4	2.58	Sulfate	BMB	0.981	10.1974	10.1974	1.0000
5	2.82	Bromide	BMB	0.100	1.9471	1.9471	1.0000
6	3.21	Nitrate	BMB	0.622	2.0467	2.0467	1.0000
7	3.41	Chlorate	BMB	0.069	2.0284	2.0284	1.0000
8	4.25	Phosphate	BMB	0.195	1.7750	1.7750	1.0000
Total:			**0.000**	**4.377**		**32.44**	

4 STD4

Sample Name:	**STD4**	*Injection Volume:*	**5.00**
Vial Number:	**RE4**	*Channel:*	**CD**
Sample Type:	**Calibration Standard**	*Wavelength:*	**210**
Control Program:	**Anions Program ISO37mM 150mm short 0.4**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method ISO**	*Dilution Factor:*	**1.0000**
Recording Time:	**06/26/2021 07:30**	*Sample Weight:*	**1.0000**

Run Time:



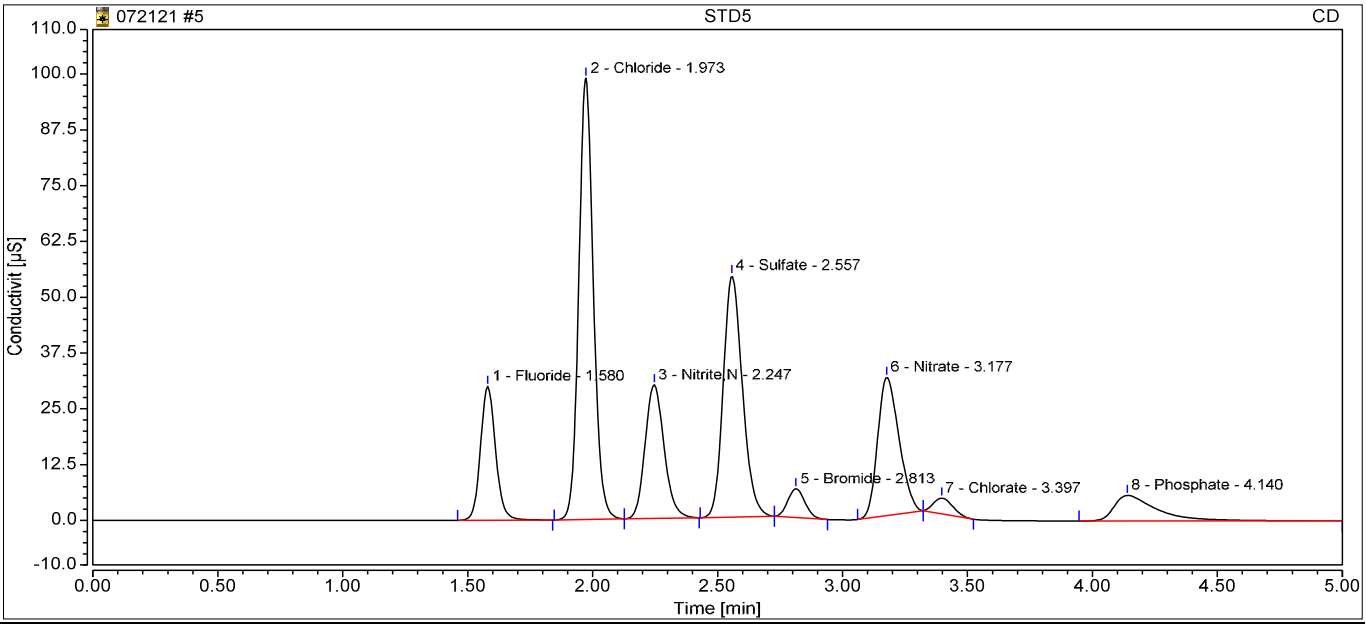
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	1.58	Fluoride	BMB	0.870	4.2518	4.2518	1.0000
2	1.98	Chloride	BMB	2.605	19.5725	19.5725	1.0000
3	2.25	Nitrite,N	BMB	1.127	3.9598	3.9598	1.0000
4	2.57	Sulfate	BMB	1.885	19.5851	19.5851	1.0000
5	2.82	Bromide	BMB	0.196	3.8021	3.8021	1.0000
6	3.21	Nitrate	BMB	1.203	3.9629	3.9629	1.0000
7	3.41	Chlorate	BMB	0.131	3.9255	3.9255	1.0000
8	4.22	Phosphate	BMB	0.412	3.6656	3.6656	1.0000
Total:			**0.000**	**8.430**		**62.73**	

5 STD5

Sample Name:	**STD5**	*Injection Volume:*	**5.00**
Vial Number:	**RE5**	*Channel:*	**CD**
Sample Type:	**Calibration Standard**	*Wavelength:*	**210**
Control Program:	**Anions Program ISO37mM 150mm short 0.4**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method ISO**	*Dilution Factor:*	**1.0000**
Recording Time:	**06/26/2021 07:38**	*Sample Weight:*	**1.0000**

Run Time:



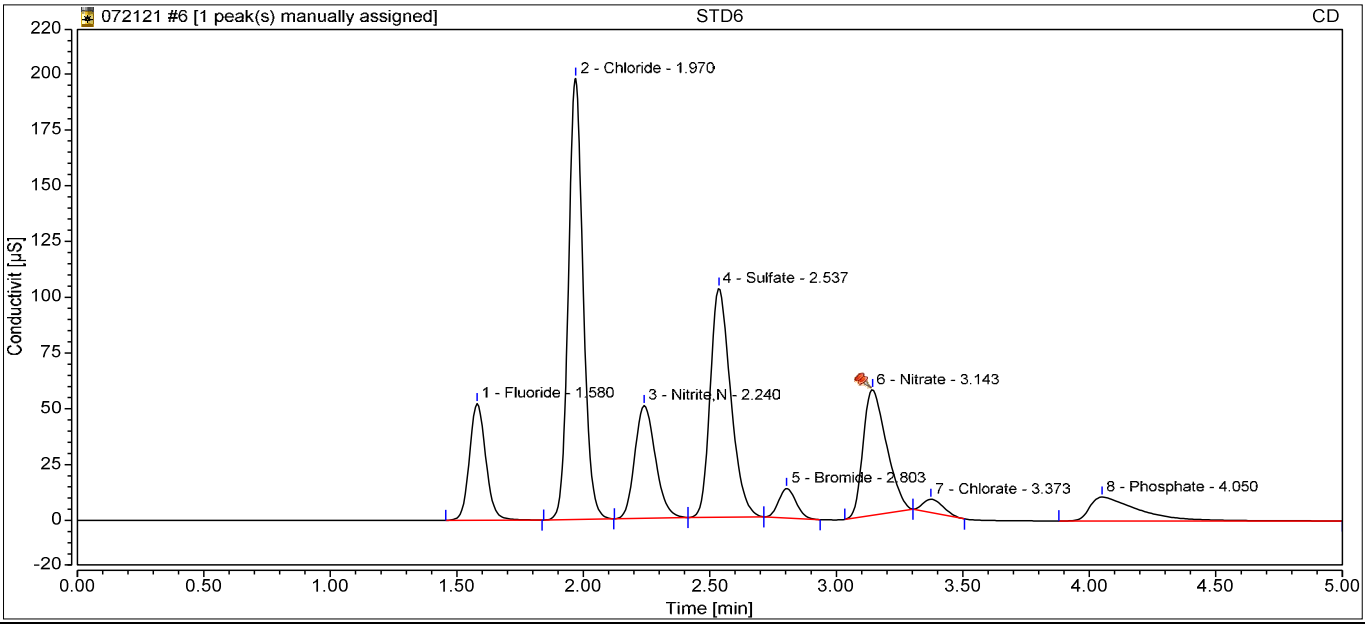
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	1.58	Fluoride	BMB	2.108	10.3258	10.3258	1.0000
2	1.97	Chloride	BMB	6.654	50.0065	50.0065	1.0000
3	2.25	Nitrite,N	BMB	2.641	9.8998	9.8998	1.0000
4	2.56	Sulfate	BMB	4.828	50.1320	50.1320	1.0000
5	2.81	Bromide	BMB	0.514	9.9325	9.9325	1.0000
6	3.18	Nitrate	BMB	3.068	10.1091	10.1091	1.0000
7	3.40	Chlorate	BMB	0.315	10.0792	10.0792	1.0000
8	4.14	Phosphate	BMB	1.140	9.9878	9.9878	1.0000
Total:			**0.000**	**21.269**		**160.47**	

6 STD6

Sample Name:	**STD6**	*Injection Volume:*	**5.00**
Vial Number:	**RE6**	*Channel:*	**CD**
Sample Type:	**Calibration Standard**	*Wavelength:*	**210**
Control Program:	**Anions Program ISO37mM 150mm short 0.4**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method ISO**	*Dilution Factor:*	**1.0000**
Recording Time:	**06/26/2021 07:45**	*Sample Weight:*	**1.0000**

Run Time:



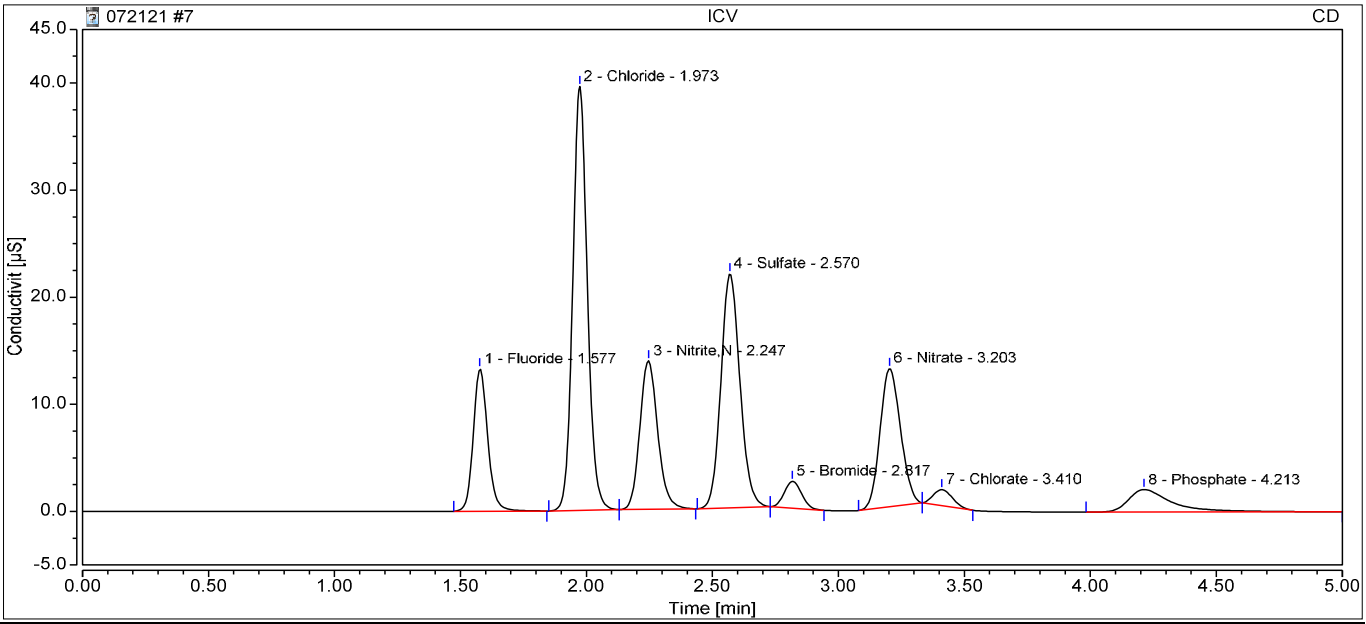
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	1.58	Fluoride	BMB	3.925	19.2385	19.2385	1.0000
2	1.97	Chloride	BMB	13.344	100.2928	100.2928	1.0000
3	2.24	Nitrite,N	BMB	4.761	20.0654	20.0654	1.0000
4	2.54	Sulfate	BMB	9.645	100.1282	100.1282	1.0000
5	2.80	Bromide	BMB	1.053	20.3252	20.3252	1.0000
6	3.14	Nitrate	BMB^	6.037	19.8909	19.8909	1.0000
7	3.37	Chlorate	BMB	0.554	19.9655	19.9655	1.0000
8	4.05	Phosphate	BMB	2.363	20.6022	20.6022	1.0000
Total:			**0.000**	**41.682**		**320.51**	

7 ICV

Sample Name:	**ICV**	*Injection Volume:*	**5.00**
Vial Number:	**RE7**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program ISO37mM 150mm short 0.4**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method ISO**	*Dilution Factor:*	**1.0000**
Recording Time:	**06/26/2021 07:52**	*Sample Weight:*	**1.0000**

Run Time:



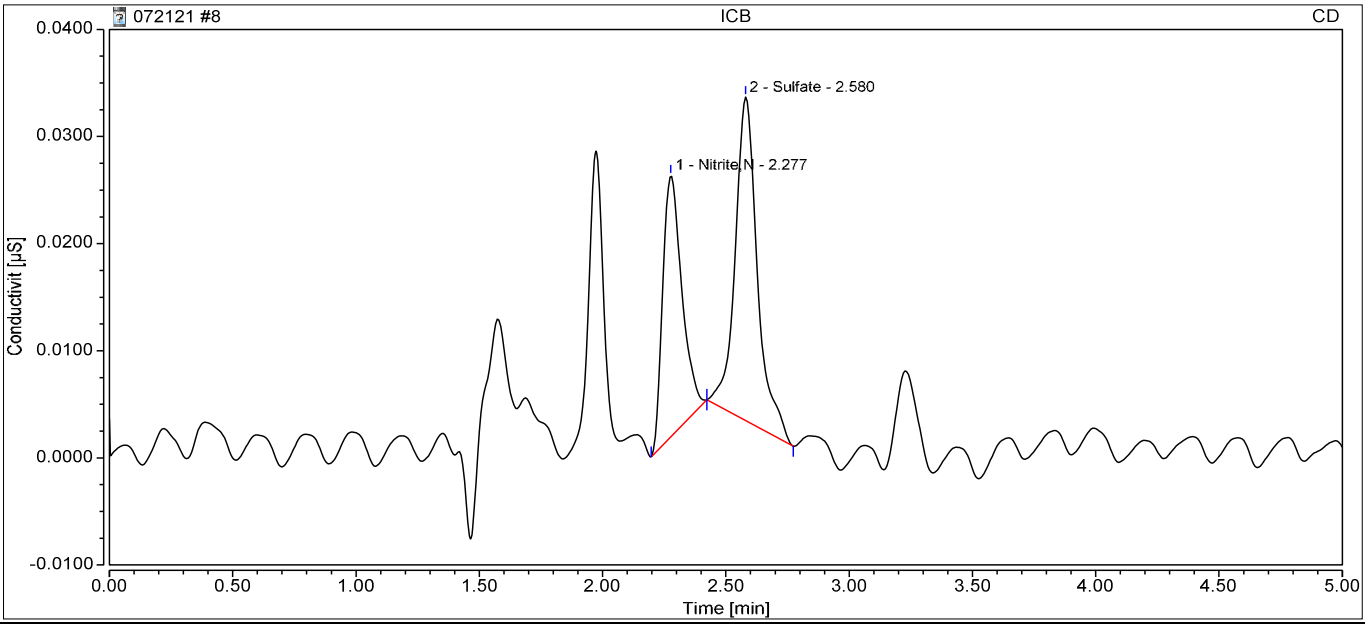
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	1.58	Fluoride	BMB	0.888	4.3392	4.3392	1.0000
2	1.97	Chloride	BMB	2.655	19.9475	19.9475	1.0000
3	2.25	Nitrite,N	BMB	1.144	4.0217	4.0217	1.0000
4	2.57	Sulfate	BMB	1.911	19.8594	19.8594	1.0000
5	2.82	Bromide	BMB	0.200	3.8693	3.8693	1.0000
6	3.20	Nitrate	BMB	1.214	3.9993	3.9993	1.0000
7	3.41	Chlorate	BMB	0.131	3.9285	3.9285	1.0000
8	4.21	Phosphate	BMB	0.422	3.7479	3.7479	1.0000
Total:			**0.000**	**8.565**		**63.71**	

8 ICB

Sample Name:	**ICB**	*Injection Volume:*	**5.00**
Vial Number:	**RE8**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program ISO37mM 150mm short 0.4**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method ISO**	*Dilution Factor:*	**1.0000**
Recording Time:	**06/26/2021 08:07**	*Sample Weight:*	**1.0000**

Run Time:

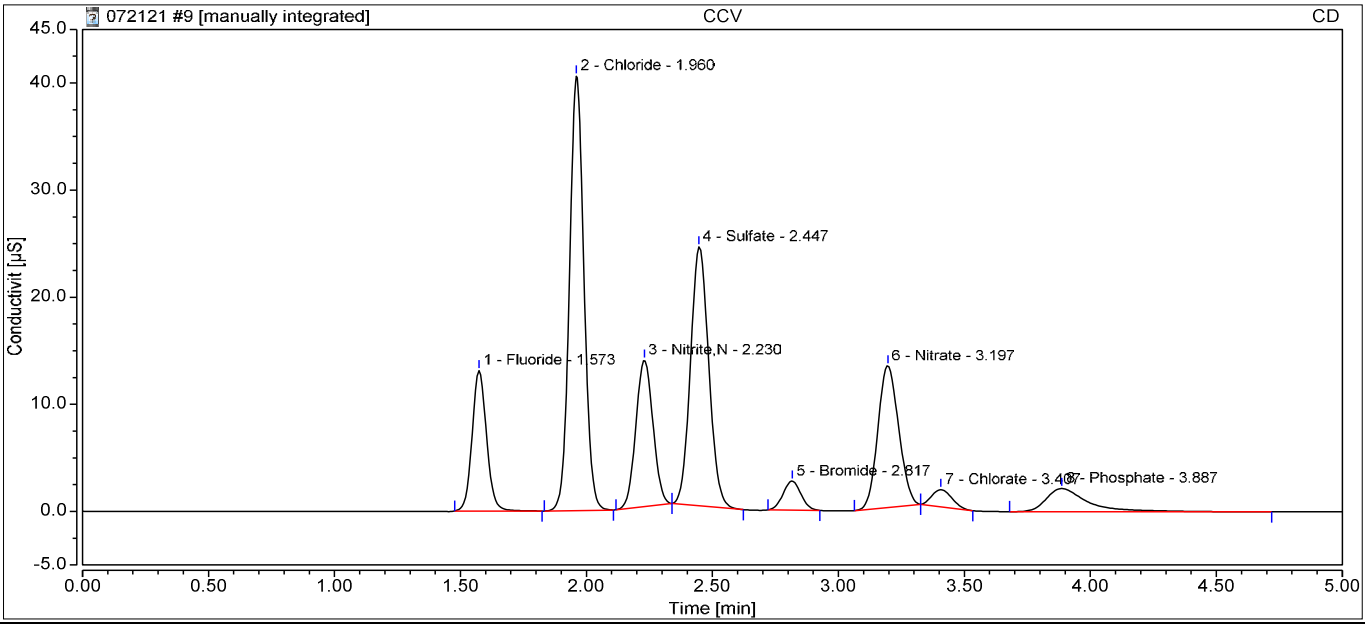


Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Chloride	n.a.	n.a.	n.a.	n.a.	1.0000
1	2.28	Nitrite,N	BMB	0.002	n.a.	n.a.	1.0000
2	2.58	Sulfate	BMB	0.003	0.0531	0.0531	1.0000
n.a.	n.a.	Bromide	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**	**0.005**		**0.05**	

9	*CCV*		
Sample Name:	**CCV**	*Injection Volume:*	**5.00**
Vial Number:	**R1**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program ISO37mM 150mm short 0.4**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method ISO**	*Dilution Factor:*	**1.0000**
Recording Time:	**07/21/2021 10:10**	*Sample Weight:*	**1.0000**

Run Time:



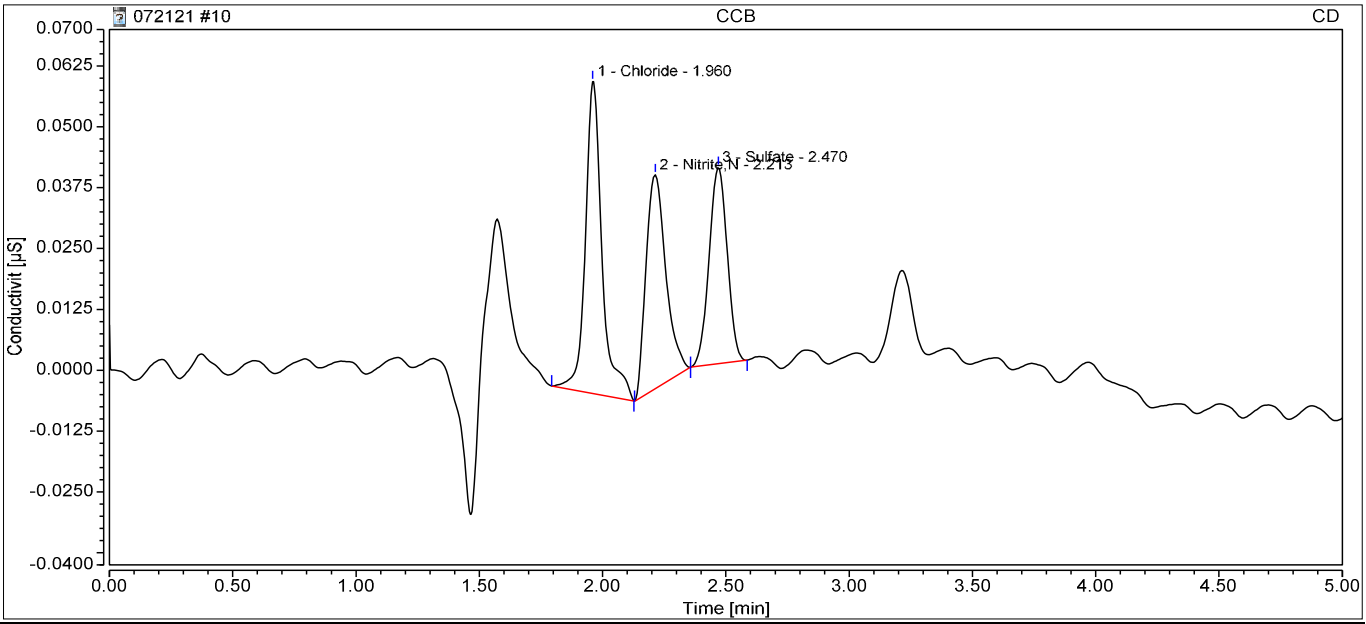
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	1.57	Fluoride	BMB	0.873	4.2659	4.2659	1.0000
2	1.96	Chloride	BMB	2.696	20.2597	20.2597	1.0000
3	2.23	Nitrite,N	BMB	1.078	3.7771	3.7771	1.0000
4	2.45	Sulfate	BMB	2.031	21.0956	21.0956	1.0000
5	2.82	Bromide	BMB*	0.223	4.3252	4.3252	1.0000
6	3.20	Nitrate	BMB	1.267	4.1734	4.1734	1.0000
7	3.41	Chlorate	BMB	0.147	4.4097	4.4097	1.0000
8	3.89	Phosphate	BMB	0.414	3.6803	3.6803	1.0000
Total:			**0.000**	**8.728**		**65.99**	

10 CCB

Sample Name:	**CCB**	*Injection Volume:*	**5.00**
Vial Number:	**R4**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program ISO37mM 150mm short 0.4**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method ISO**	*Dilution Factor:*	**1.0000**
Recording Time:	**07/21/2021 10:17**	*Sample Weight:*	**1.0000**

Run Time:



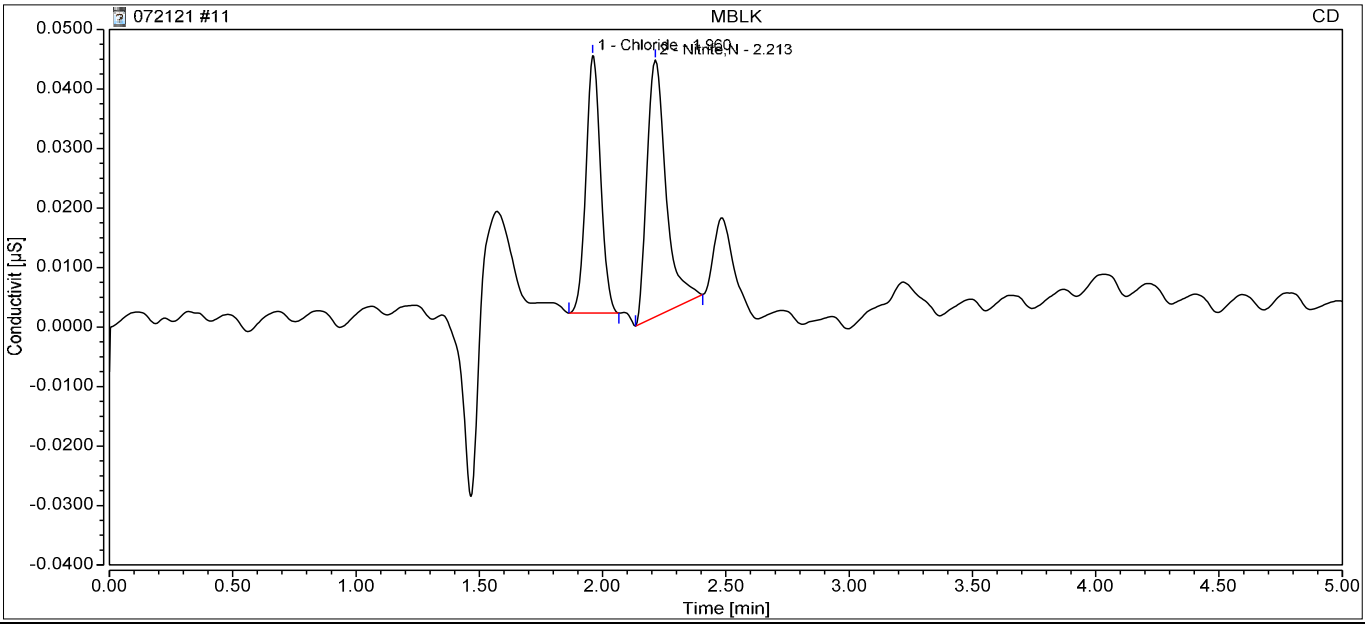
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	1.0000
1	1.96	Chloride	BMB	0.005	0.0307	0.0307	1.0000
2	2.21	Nitrite,N	BMB	0.004	n.a.	n.a.	1.0000
3	2.47	Sulfate	BMB	0.003	0.0560	0.0560	1.0000
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Nitrate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	1.0000
Total:			**0.000**	**0.013**		**0.09**	

11 MBLK

Sample Name:	**MBLK**	*Injection Volume:*	**5.00**
Vial Number:	**R5**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program ISO37mM 150mm short 0.4**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method ISO**	*Dilution Factor:*	**1.0000**
Recording Time:	**07/21/2021 10:25**	*Sample Weight:*	**1.0000**

Run Time:



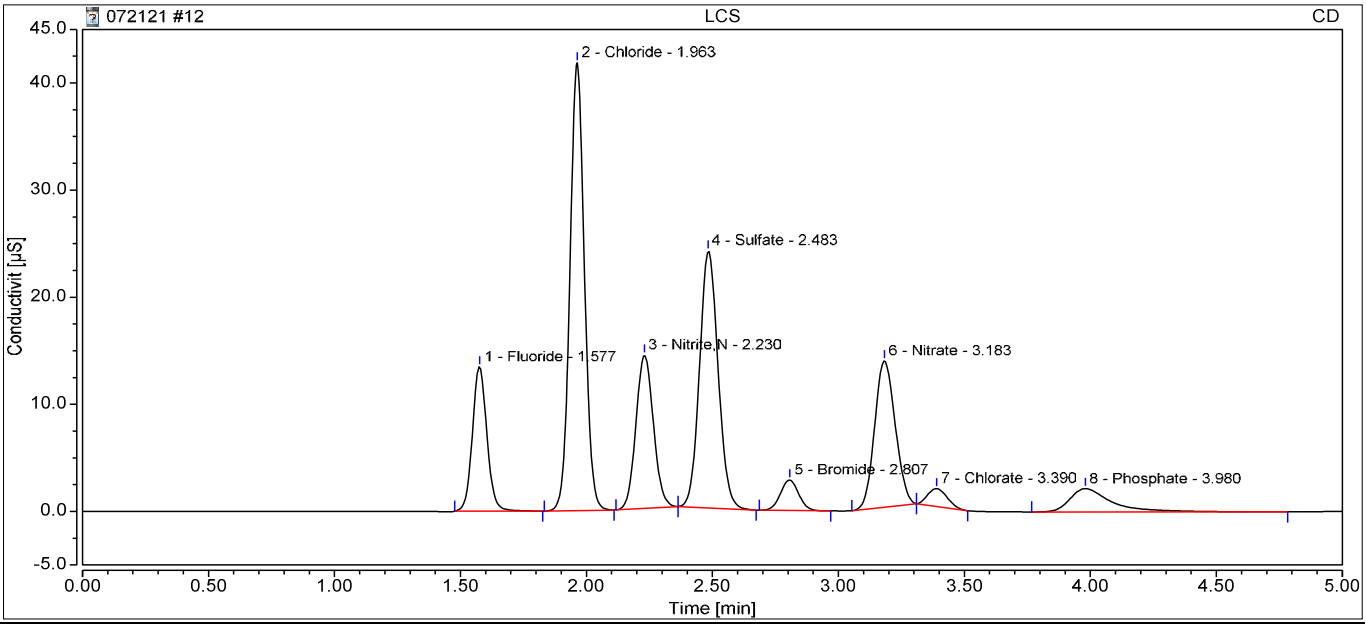
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	1.0000
1	1.96	Chloride	BMB	0.003	0.0154	0.0154	1.0000
2	2.21	Nitrite,N	BMB	0.004	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.	Bromide	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Nitrate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	1.0000
Total:			**0.000**	**0.007**		**0.02**	

12 LCS

Sample Name:	**LCS**	*Injection Volume:*	**5.00**
Vial Number:	**R2**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program ISO37mM 150mm short 0.4**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method ISO**	*Dilution Factor:*	**1.0000**
Recording Time:	**07/21/2021 10:32**	*Sample Weight:*	**1.0000**

Run Time:



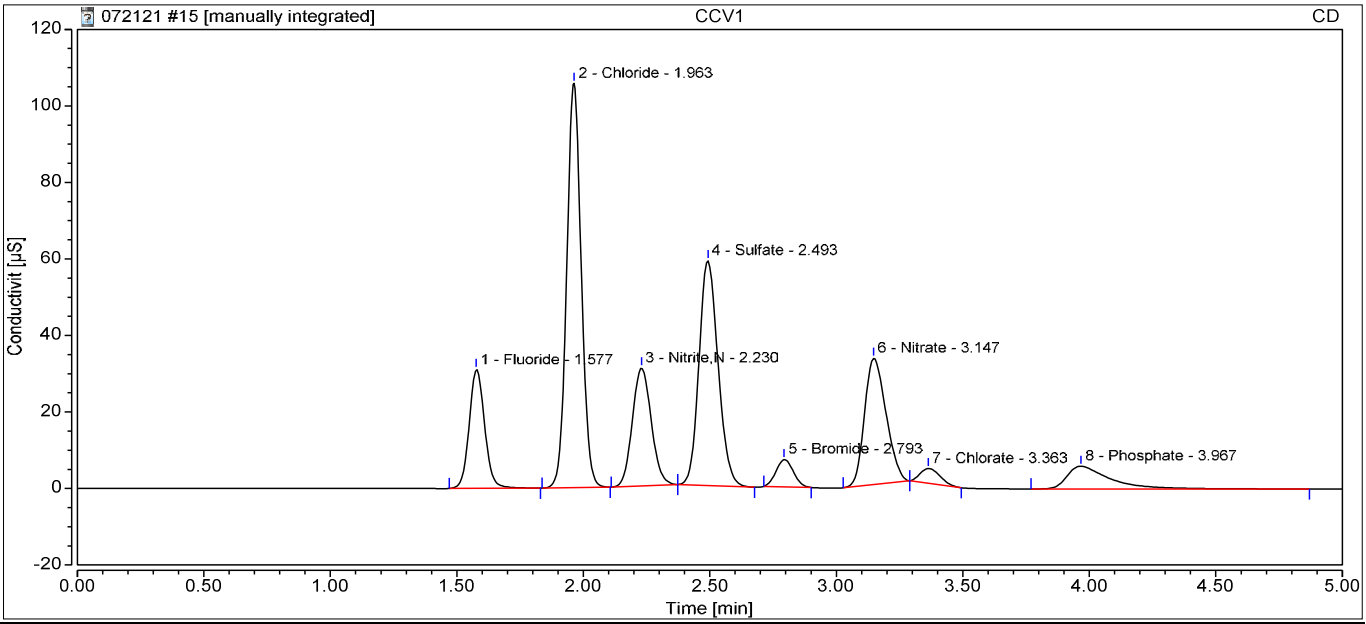
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	1.58	Fluoride	BMB	0.903	4.4144	4.4144	1.0000
2	1.96	Chloride	BMB	2.770	20.8136	20.8136	1.0000
3	2.23	Nitrite,N	BMB	1.151	4.0448	4.0448	1.0000
4	2.48	Sulfate	BMB	2.046	21.2522	21.2522	1.0000
5	2.81	Bromide	BMB	0.238	4.6099	4.6099	1.0000
6	3.18	Nitrate	BMB	1.295	4.2647	4.2647	1.0000
7	3.39	Chlorate	BMB	0.149	4.4964	4.4964	1.0000
8	3.98	Phosphate	BMB	0.420	3.7337	3.7337	1.0000
Total:			**0.000**	**8.972**		**67.63**	

15 CCV1

Sample Name:	**CCV1**	*Injection Volume:*	**5.00**
Vial Number:	**R3**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program ISO37mM 150mm short 0.4**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method ISO**	*Dilution Factor:*	**1.0000**
Recording Time:	**07/21/2021 10:55**	*Sample Weight:*	**1.0000**

Run Time:



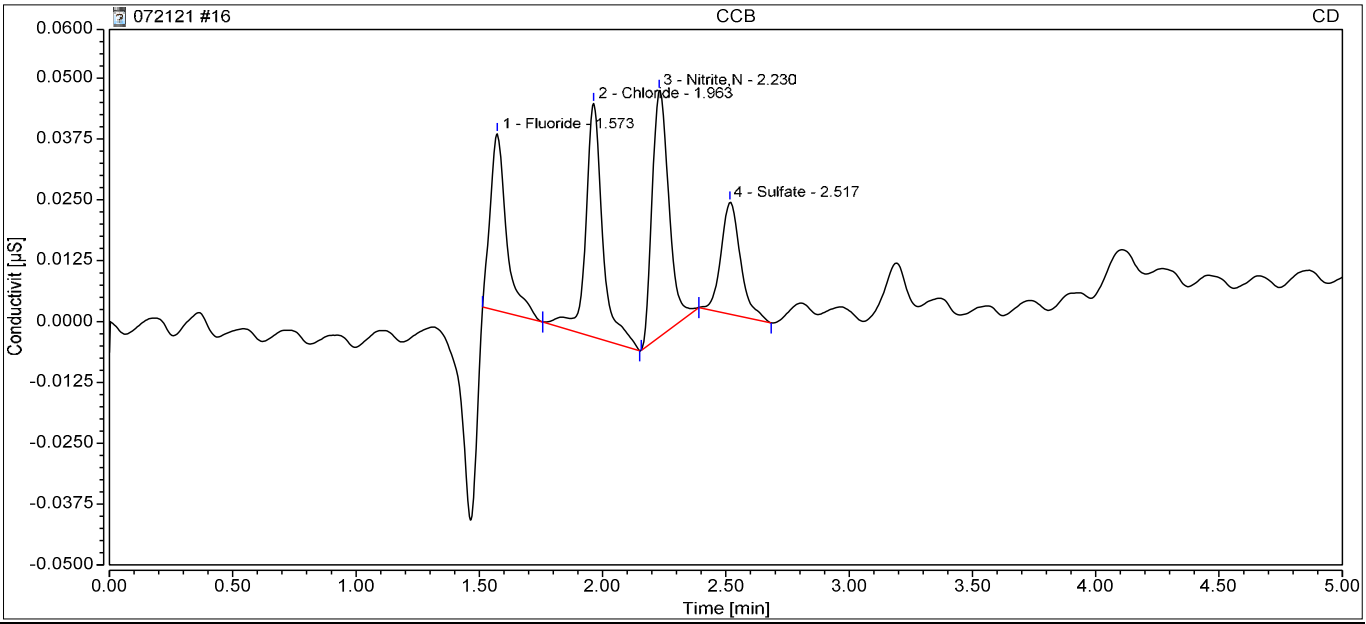
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	1.58	Fluoride	BMB	2.204	10.7976	10.7976	1.0000
2	1.96	Chloride	BMB	7.022	52.7727	52.7727	1.0000
3	2.23	Nitrite,N	BMB	2.672	10.0271	10.0271	1.0000
4	2.49	Sulfate	BMB	5.138	53.3465	53.3465	1.0000
5	2.79	Bromide	BMB*	0.564	10.8974	10.8974	1.0000
6	3.15	Nitrate	BMB	3.256	10.7291	10.7291	1.0000
7	3.36	Chlorate	BMB	0.353	11.4760	11.4760	1.0000
8	3.97	Phosphate	BMB	1.170	10.2407	10.2407	1.0000
Total:			**0.000**	**22.379**		**170.29**	

16 CCB

Sample Name:	**CCB**	*Injection Volume:*	**5.00**
Vial Number:	**R6**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program ISO37mM 150mm short 0.4**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method ISO**	*Dilution Factor:*	**1.0000**
Recording Time:	**07/21/2021 11:02**	*Sample Weight:*	**1.0000**

Run Time:



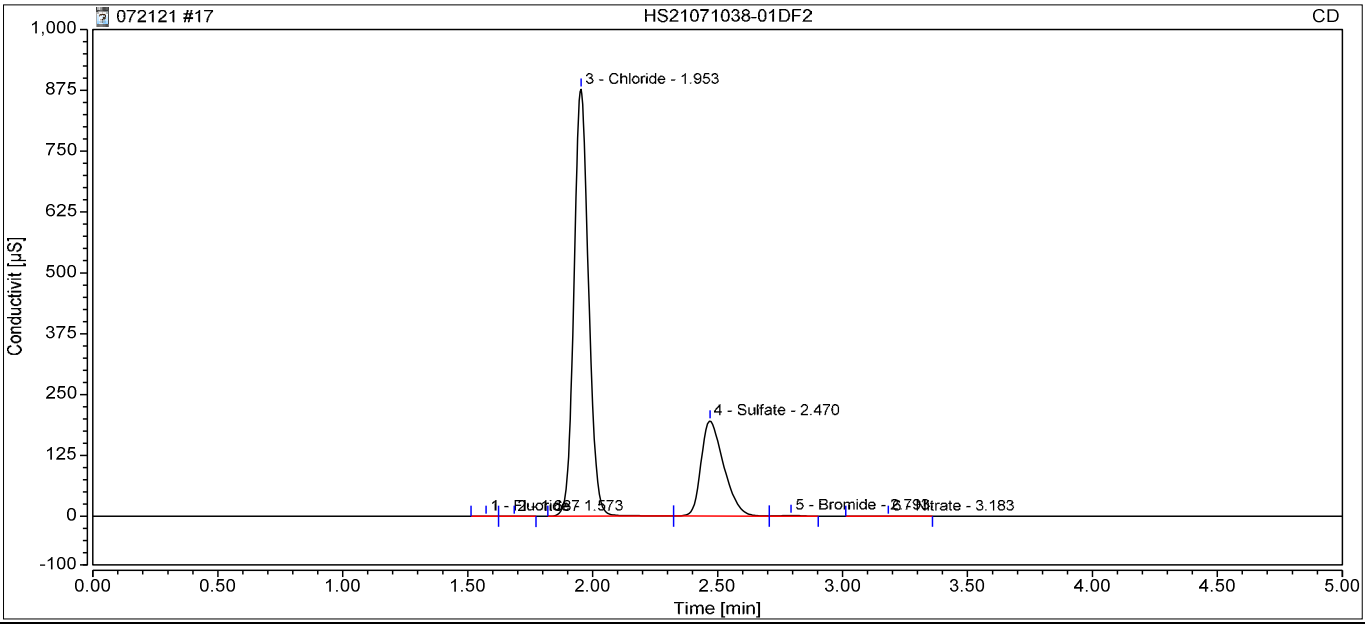
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	1.57	Fluoride	BMB	0.003	n.a.	n.a.	1.0000
2	1.96	Chloride	BMB	0.004	0.0222	0.0222	1.0000
3	2.23	Nitrite,N	BMB	0.004	n.a.	n.a.	1.0000
4	2.52	Sulfate	BMB	0.002	0.0425	0.0425	1.0000
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Nitrate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	1.0000
Total:			**0.000**	**0.013**		**0.06**	

17 HS21071038-01DF2

Sample Name:	**HS21071038-01DF2**	*Injection Volume:*	**5.00**
Vial Number:	**RA1**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program ISO37mM 150mm short 0.4**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method ISO**	*Dilution Factor:*	**2.0000**
Recording Time:	**07/21/2021 12:42**	*Sample Weight:*	**1.0000**

Run Time:



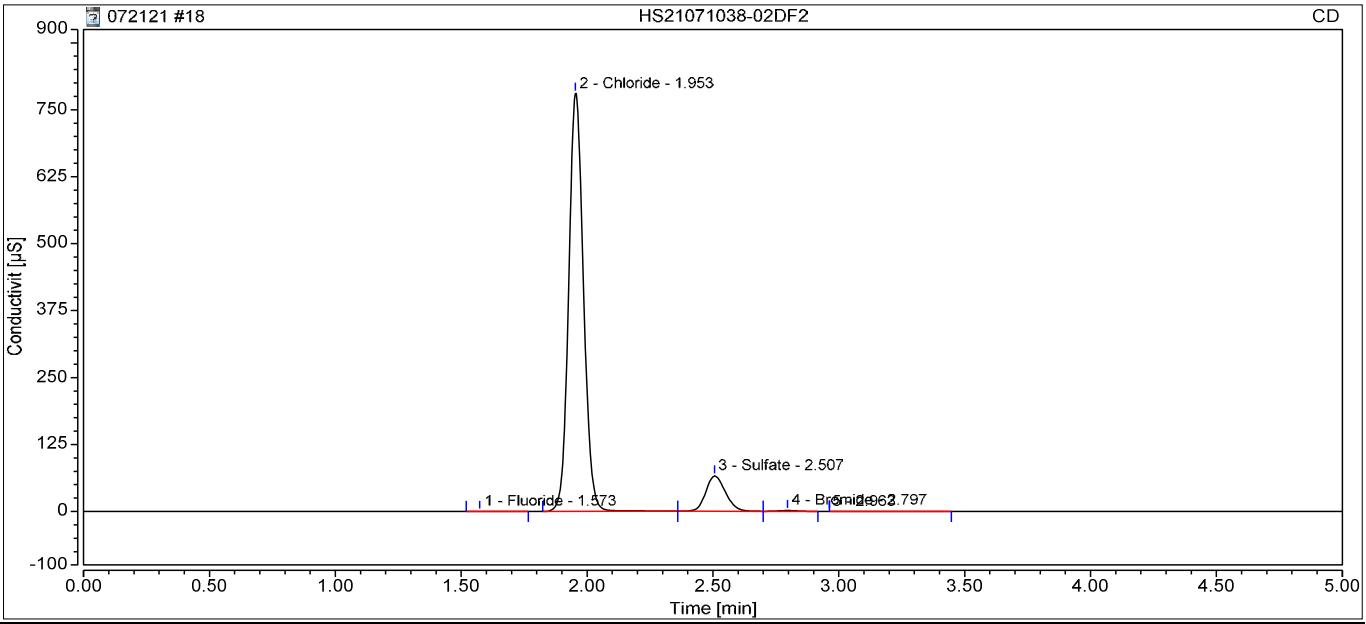
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	1.57	Fluoride	BMB	0.008	0.0258	0.0517	2.0000
3	1.95	Chloride	BMB	59.612	448.0582	896.1164	2.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	2.0000
4	2.47	Sulfate	BMB	20.402	211.7650	423.5301	2.0000
5	2.79	Bromide	BMB	0.111	2.1608	4.3217	2.0000
6	3.18	Nitrate	BMB	0.006	0.0159	0.0319	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**	**80.139**		**1324.05**	

18 HS21071038-02DF2

Sample Name:	**HS21071038-02DF2**	*Injection Volume:*	**5.00**
Vial Number:	**RA2**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program ISO37mM 150mm short 0.4**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method ISO**	*Dilution Factor:*	**2.0000**
Recording Time:	**07/21/2021 12:50**	*Sample Weight:*	**1.0000**

Run Time:



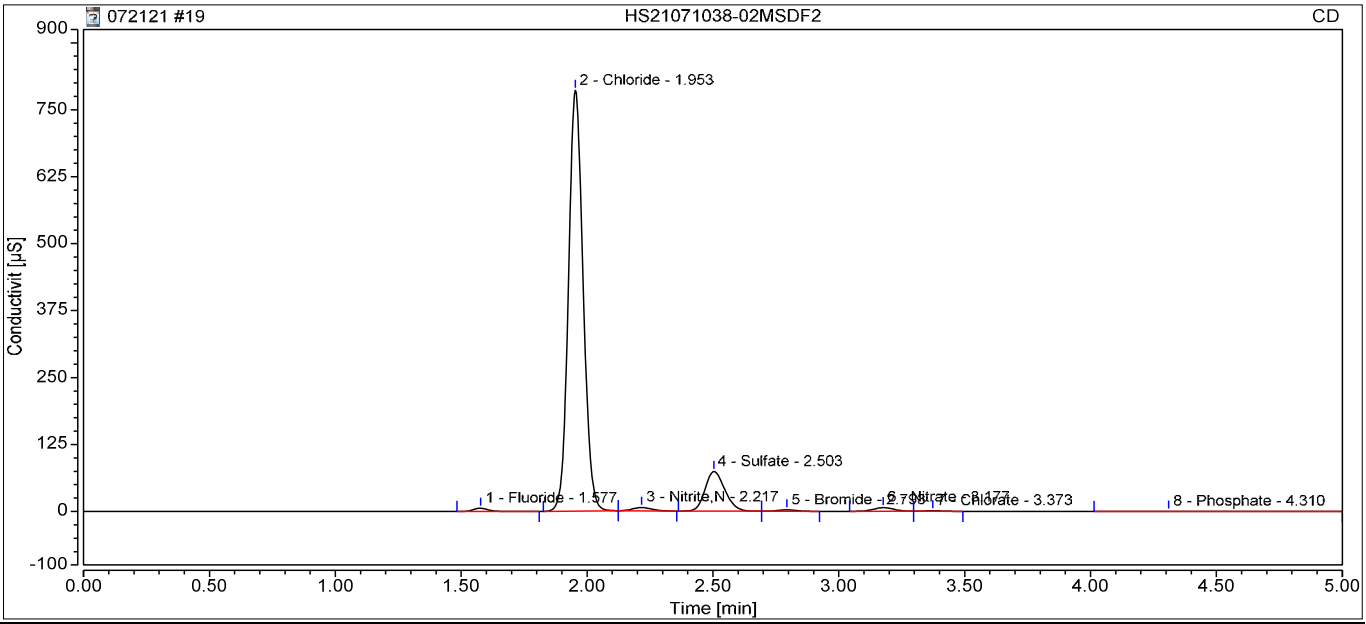
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	1.57	Fluoride	BMB	0.013	0.0476	0.0952	2.0000
2	1.95	Chloride	BMB	53.028	398.5675	797.1349	2.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	2.0000
3	2.51	Sulfate	BMB	5.930	61.5664	123.1328	2.0000
4	2.80	Bromide	BMB	0.110	2.1470	4.2940	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**	**59.081**		**924.66**	

19 HS21071038-02MSDF2

Sample Name:	**HS21071038-02MSDF2**	*Injection Volume:*	**5.00**
Vial Number:	**RA3**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program ISO37mM 150mm short 0.4**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method ISO**	*Dilution Factor:*	**2.0000**
Recording Time:	**07/21/2021 12:57**	*Sample Weight:*	**1.0000**

Run Time:



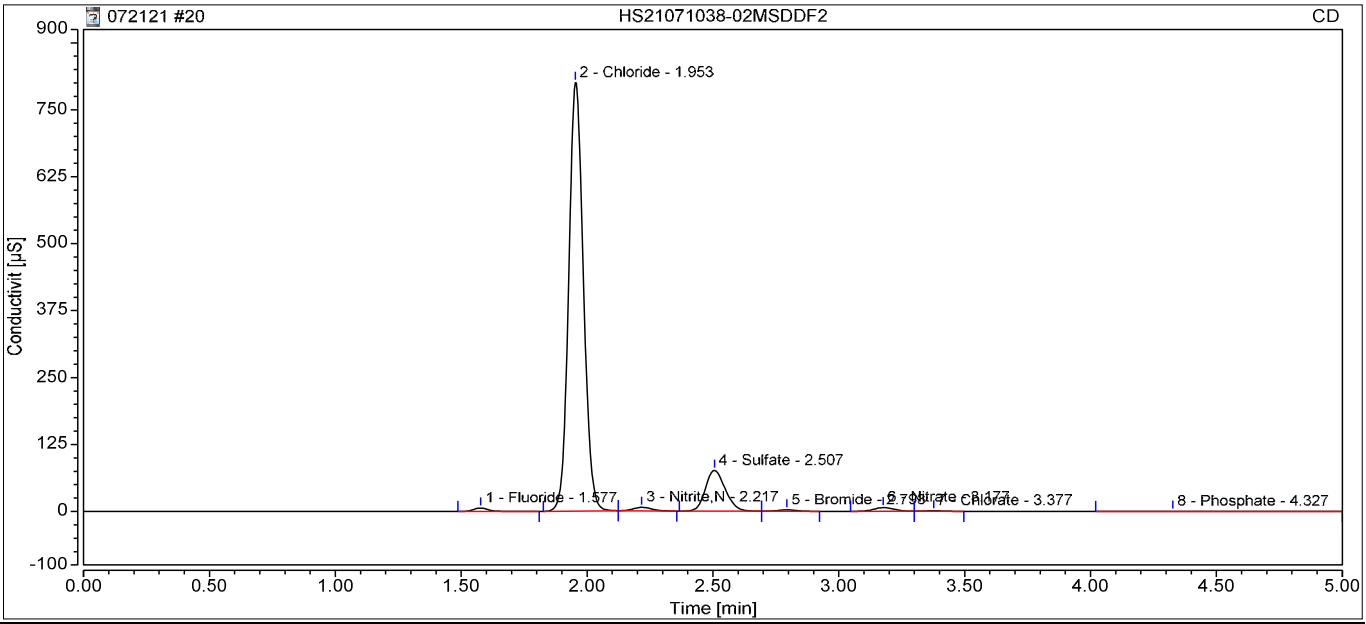
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	1.58	Fluoride	BMB	0.416	2.0245	4.0490	2.0000
2	1.95	Chloride	BMB	52.903	397.6306	795.2611	2.0000
3	2.22	Nitrite,N	BMB	0.537	1.8377	3.6754	2.0000
4	2.50	Sulfate	BMB	6.748	70.0552	140.1103	2.0000
5	2.79	Bromide	BMB	0.220	4.2613	8.5225	2.0000
6	3.18	Nitrate	BMB	0.619	2.0370	4.0740	2.0000
7	3.37	Chlorate	BMB	0.071	2.0782	4.1565	2.0000
8	4.31	Phosphate	BMB	0.080	0.7810	1.5621	2.0000
Total:			**0.000**	**61.594**		**961.41**	

20 HS21071038-02MSDDF2

Sample Name:	**HS21071038-02MSDDF2**	*Injection Volume:*	**5.00**
Vial Number:	**RA4**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program ISO37mM 150mm short 0.4**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method ISO**	*Dilution Factor:*	**2.0000**
Recording Time:	**07/21/2021 13:05**	*Sample Weight:*	**1.0000**

Run Time:



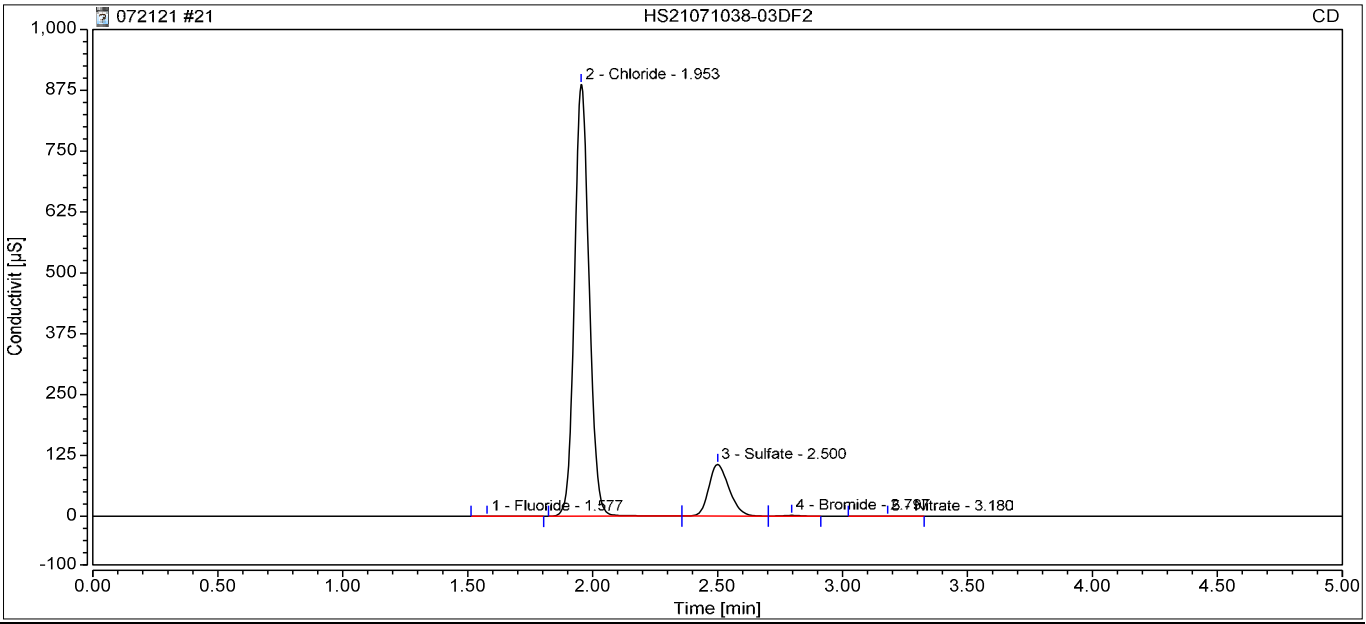
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	1.58	Fluoride	BMB	0.432	2.1050	4.2100	2.0000
2	1.95	Chloride	BMB	53.984	405.7519	811.5037	2.0000
3	2.22	Nitrite,N	BMB	0.549	1.8790	3.7580	2.0000
4	2.51	Sulfate	BMB	6.953	72.1827	144.3655	2.0000
5	2.79	Bromide	BMB	0.224	4.3331	8.6662	2.0000
6	3.18	Nitrate	BMB	0.633	2.0830	4.1659	2.0000
7	3.38	Chlorate	BMB	0.072	2.1190	4.2380	2.0000
8	4.33	Phosphate	BMB	0.086	0.8286	1.6573	2.0000
Total:			**0.000**	**62.932**		**982.56**	

21 HS21071038-03DF2

Sample Name:	**HS21071038-03DF2**	*Injection Volume:*	**5.00**
Vial Number:	**RA5**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program ISO37mM 150mm short 0.4**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method ISO**	*Dilution Factor:*	**2.0000**
Recording Time:	**07/21/2021 13:12**	*Sample Weight:*	**1.0000**

Run Time:



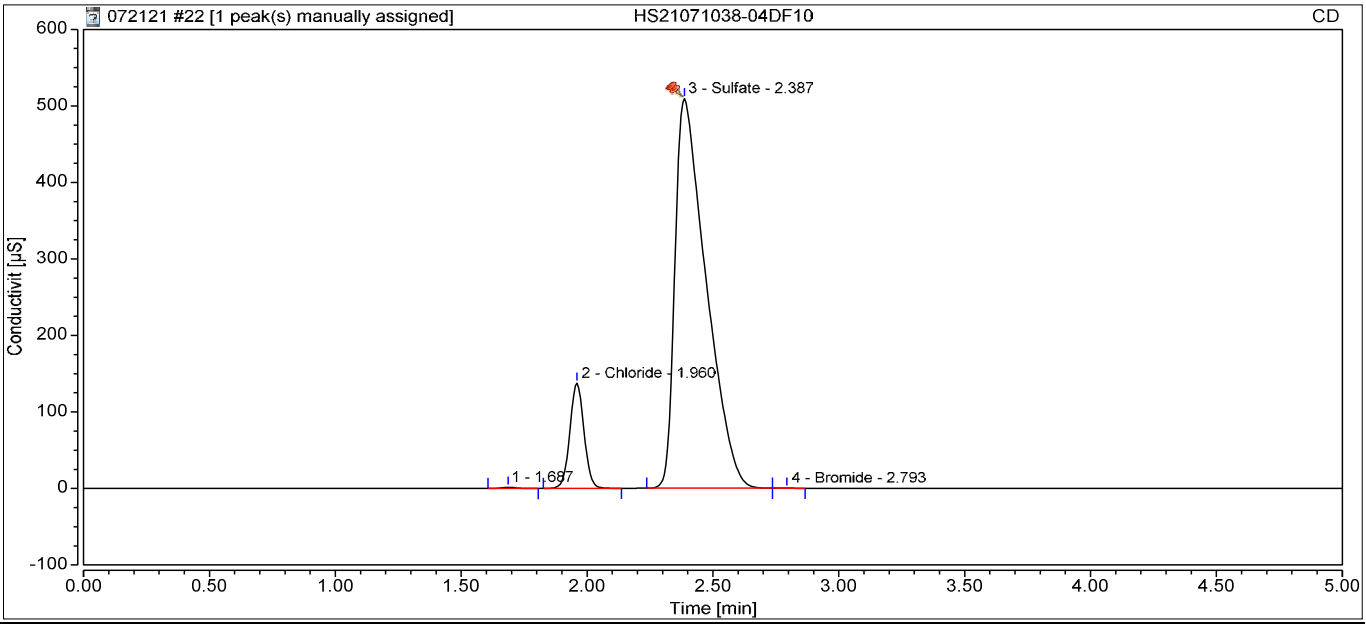
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	1.58	Fluoride	BMB	0.019	0.0789	0.1578	2.0000
2	1.95	Chloride	BMB	60.429	454.1972	908.3944	2.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	2.0000
3	2.50	Sulfate	BMB	9.950	103.2863	206.5727	2.0000
4	2.80	Bromide	BMB	0.125	2.4235	4.8471	2.0000
5	3.18	Nitrate	BMB	0.004	0.0093	0.0186	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**	**70.526**		**1119.99**	

22 HS21071038-04DF10

Sample Name:	**HS21071038-04DF10**	*Injection Volume:*	**5.00**
Vial Number:	**RA6**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program ISO37mM 150mm short 0.4**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method ISO**	*Dilution Factor:*	**10.0000**
Recording Time:	**07/21/2021 13:20**	*Sample Weight:*	**1.0000**

Run Time:



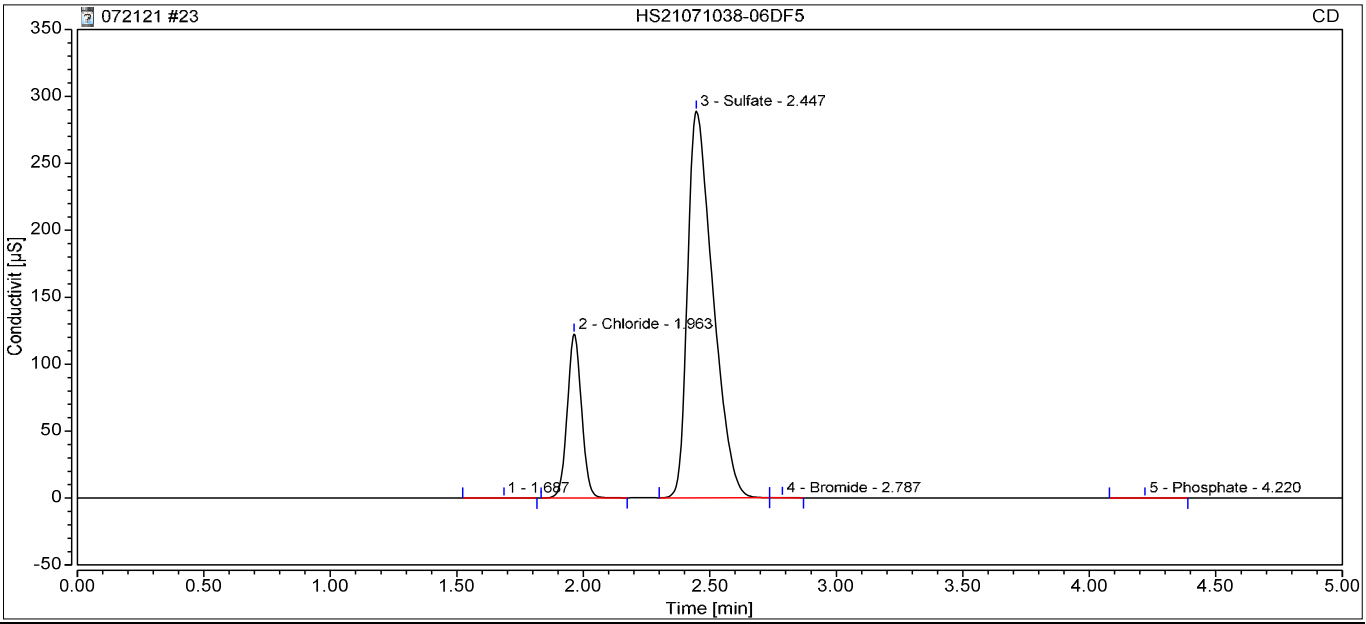
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	10.0000
2	1.96	Chloride	BMB	8.967	67.3953	673.9526	10.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	10.0000
3	2.39	Sulfate	BMB^	72.811	755.7207	7557.2065	10.0000
4	2.79	Bromide	BMB	0.009	0.1921	1.9210	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**	**81.788**		**8233.08**	

23 HS21071038-06DF5

Sample Name:	**HS21071038-06DF5**	*Injection Volume:*	**5.00**
Vial Number:	**RA7**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program ISO37mM 150mm short 0.4**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method ISO**	*Dilution Factor:*	**5.0000**
Recording Time:	**07/21/2021 13:27**	*Sample Weight:*	**1.0000**

Run Time:



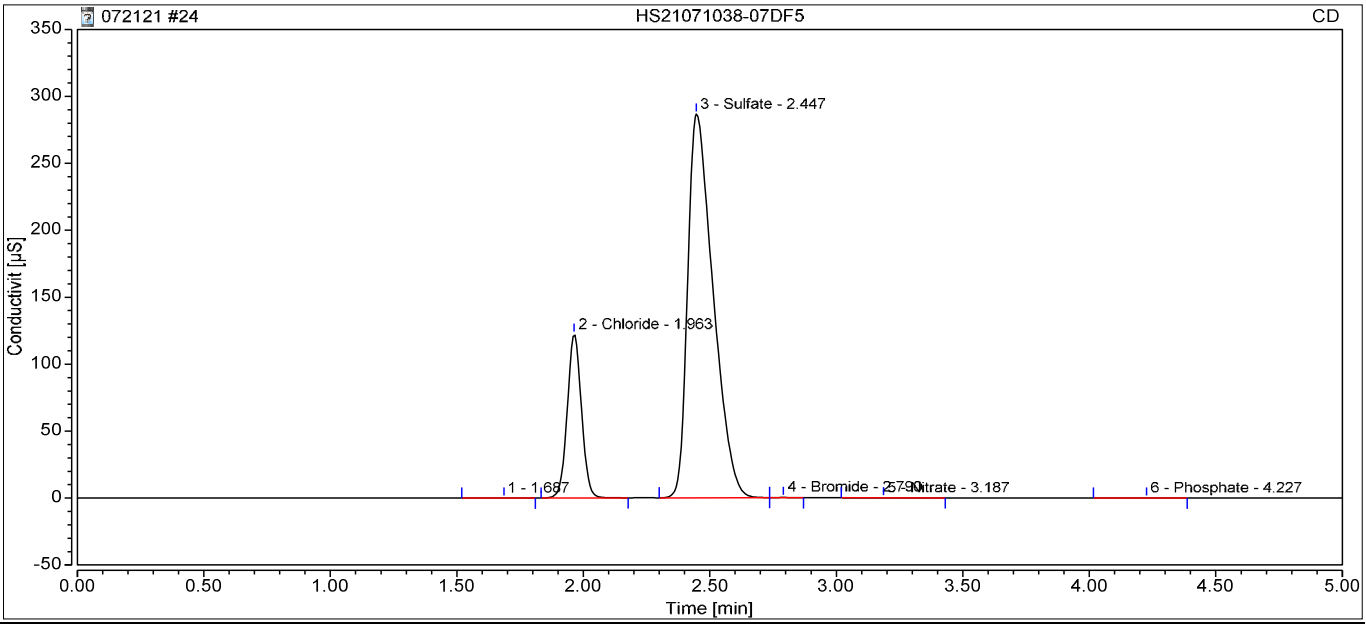
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	5.0000
2	1.96	Chloride	BMB	8.009	60.1888	300.9441	5.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	5.0000
3	2.45	Sulfate	BMB	33.476	347.4655	1737.3277	5.0000
4	2.79	Bromide	BMB	0.008	0.1794	0.8971	5.0000
n.a.	n.a.	Nitrate	n.a.	n.a.	n.a.	n.a.	5.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	5.0000
5	4.22	Phosphate	BMB	0.002	0.1028	0.5140	5.0000
Total:			**0.000**	**41.495**		**2039.68**	

24 HS21071038-07DF5

Sample Name:	**HS21071038-07DF5**	*Injection Volume:*	**5.00**
Vial Number:	**RA8**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program ISO37mM 150mm short 0.4**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method ISO**	*Dilution Factor:*	**5.0000**
Recording Time:	**07/21/2021 13:34**	*Sample Weight:*	**1.0000**

Run Time:

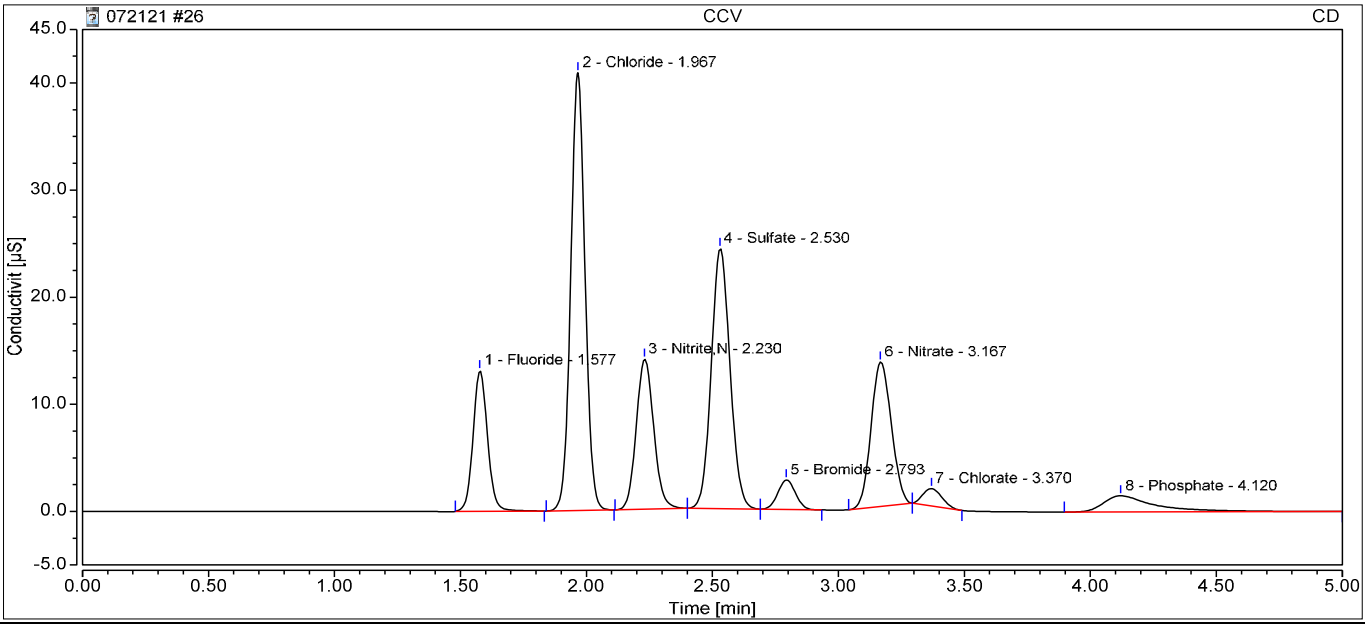


Integration Results

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.	5.0000
2	1.96	Chloride	BMB	7.974	59.9284	299.6422	5.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	5.0000
3	2.45	Sulfate	BMB	33.282	345.4547	1727.2734	5.0000
4	2.79	Bromide	BMB	0.009	0.1833	0.9163	5.0000
5	3.19	Nitrate	BMB	0.002	0.0045	0.0225	5.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	5.0000
6	4.23	Phosphate	BMB	0.002	0.1042	0.5209	5.0000
Total:			**0.000**	**41.269**		**2028.38**	

26 CCV			
Sample Name:	**CCV**	*Injection Volume:*	**5.00**
Vial Number:	**R1**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program ISO37mM 150mm short 0.4**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method ISO**	*Dilution Factor:*	**1.0000**
Recording Time:	**07/21/2021 13:49**	*Sample Weight:*	**1.0000**

Run Time:



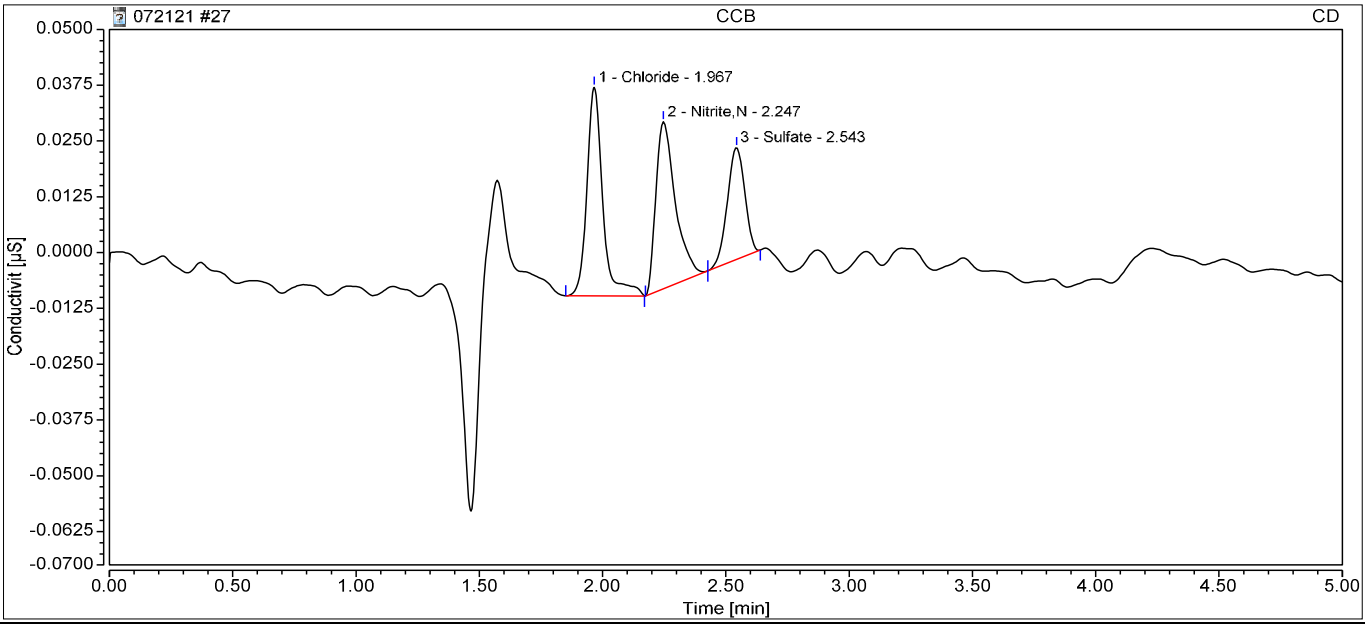
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	1.58	Fluoride	BMB	0.872	4.2650	4.2650	1.0000
2	1.97	Chloride	BMB	2.678	20.1210	20.1210	1.0000
3	2.23	Nitrite,N	BMB	1.129	3.9643	3.9643	1.0000
4	2.53	Sulfate	BMB	2.091	21.7238	21.7238	1.0000
5	2.79	Bromide	BMB	0.224	4.3405	4.3405	1.0000
6	3.17	Nitrate	BMB	1.257	4.1395	4.1395	1.0000
7	3.37	Chlorate	BMB	0.143	4.2820	4.2820	1.0000
8	4.12	Phosphate	BMB	0.365	3.2524	3.2524	1.0000
Total:			**0.000**	**8.758**		**66.09**	

27 CCB

Sample Name:	**CCB**	*Injection Volume:*	**5.00**
Vial Number:	**R4**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program ISO37mM 150mm short 0.4**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method ISO**	*Dilution Factor:*	**1.0000**
Recording Time:	**07/21/2021 13:57**	*Sample Weight:*	**1.0000**

Run Time:



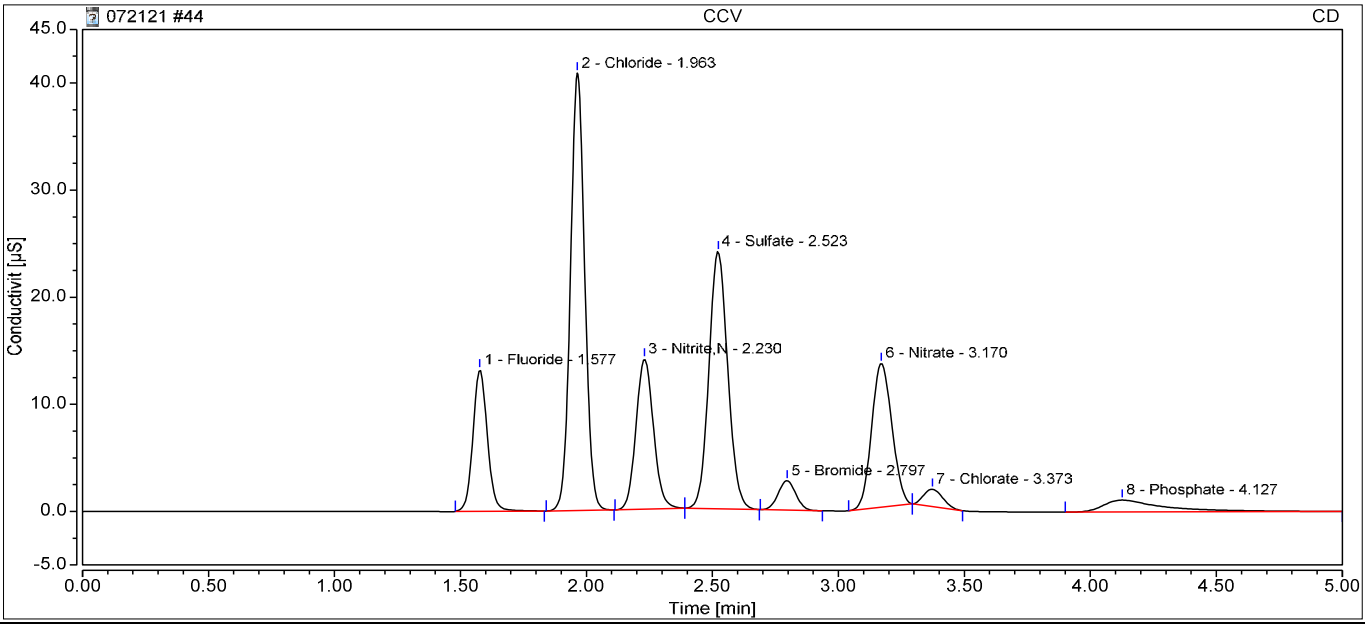
Integration Results

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	1.97	Chloride	BMB	0.003	0.0193	0.0193	1.0000
2	2.25	Nitrite,N	BMB	0.003	n.a.	n.a.	1.0000
3	2.54	Sulfate	BMB	0.002	0.0417	0.0417	1.0000
n.a.	n.a.	Bromide	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**	**0.009**		**0.06**	

44 CCV

Sample Name:	**CCV**	*Injection Volume:*	**5.00**
Vial Number:	**R1**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program ISO37mM 150mm short 0.4**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method ISO**	*Dilution Factor:*	**1.0000**
Recording Time:	**07/21/2021 16:03**	*Sample Weight:*	**1.0000**

Run Time:



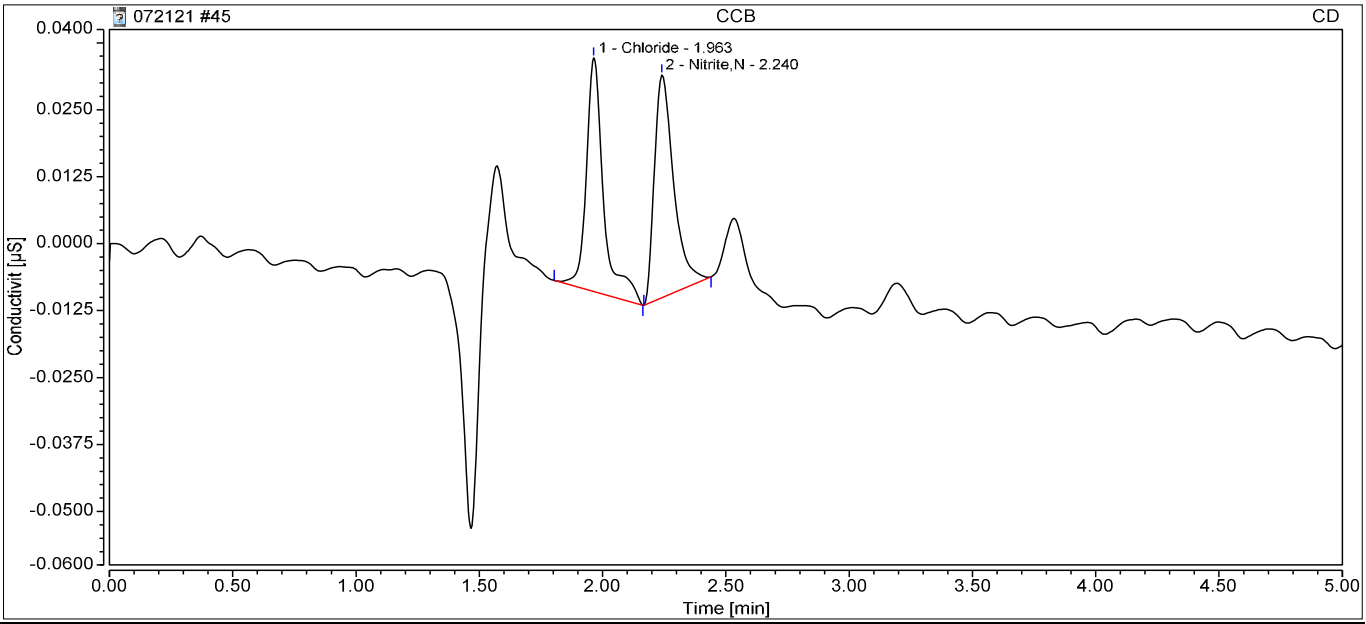
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	1.58	Fluoride	BMB	0.877	4.2901	4.2901	1.0000
2	1.96	Chloride	BMB	2.676	20.1074	20.1074	1.0000
3	2.23	Nitrite,N	BMB	1.128	3.9612	3.9612	1.0000
4	2.52	Sulfate	BMB	2.080	21.6070	21.6070	1.0000
5	2.80	Bromide	BMB	0.224	4.3454	4.3454	1.0000
6	3.17	Nitrate	BMB	1.255	4.1333	4.1333	1.0000
7	3.37	Chlorate	BMB	0.143	4.3051	4.3051	1.0000
8	4.13	Phosphate	BMB	0.316	2.8263	2.8263	1.0000
Total:			**0.000**	**8.700**		**65.58**	

45 CCB

Sample Name:	**CCB**	*Injection Volume:*	**5.00**
Vial Number:	**R4**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program ISO37mM 150mm short 0.4**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method ISO**	*Dilution Factor:*	**1.0000**
Recording Time:	**07/21/2021 16:10**	*Sample Weight:*	**1.0000**

Run Time:



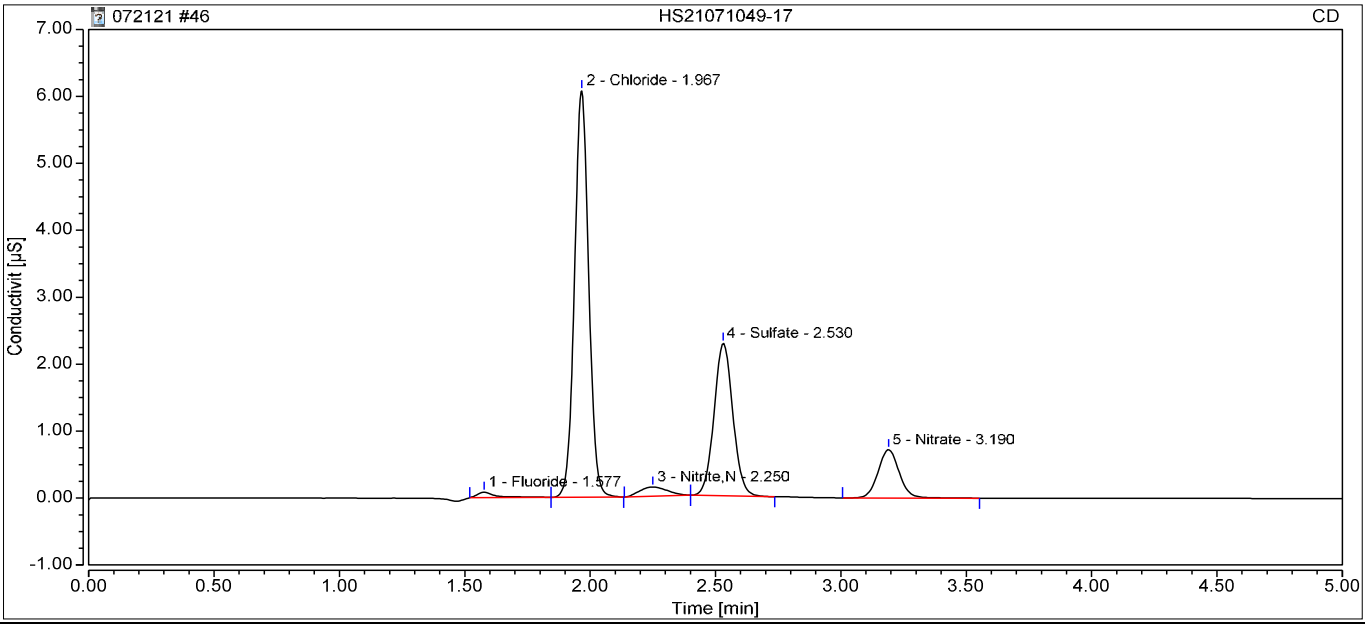
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	1.0000
1	1.96	Chloride	BMB	0.004	0.0197	0.0197	1.0000
2	2.24	Nitrite,N	BMB	0.004	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.	Bromide	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Nitrate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	1.0000
Total:			**0.000**	**0.007**		**0.02**	

46 HS21071049-17

Sample Name:	**HS21071049-17**	*Injection Volume:*	**5.00**
Vial Number:	**RC8**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program ISO37mM 150mm short 0.4**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method ISO**	*Dilution Factor:*	**1.0000**
Recording Time:	**07/21/2021 16:18**	*Sample Weight:*	**1.0000**

Run Time:



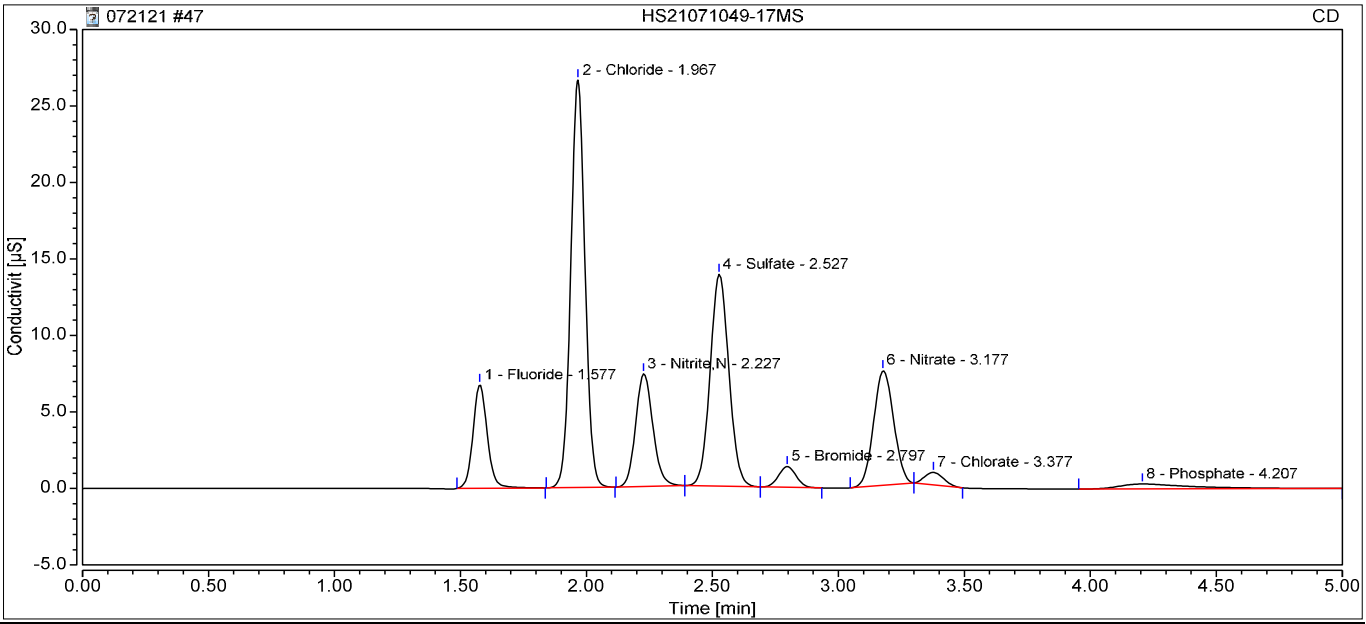
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	1.58	Fluoride	BMB	0.007	0.0202	0.0202	1.0000
2	1.97	Chloride	BMB	0.399	2.9922	2.9922	1.0000
3	2.25	Nitrite,N	BMB	0.018	0.0426	0.0426	1.0000
4	2.53	Sulfate	BMB	0.199	2.0829	2.0829	1.0000
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	1.0000
5	3.19	Nitrate	BMB	0.071	0.2315	0.2315	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**	**0.694**		**5.37**	

47 HS21071049-17MS

Sample Name:	**HS21071049-17MS**	*Injection Volume:*	**5.00**
Vial Number:	**RD1**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program ISO37mM 150mm short 0.4**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method ISO**	*Dilution Factor:*	**1.0000**
Recording Time:	**07/21/2021 16:25**	*Sample Weight:*	**1.0000**

Run Time:



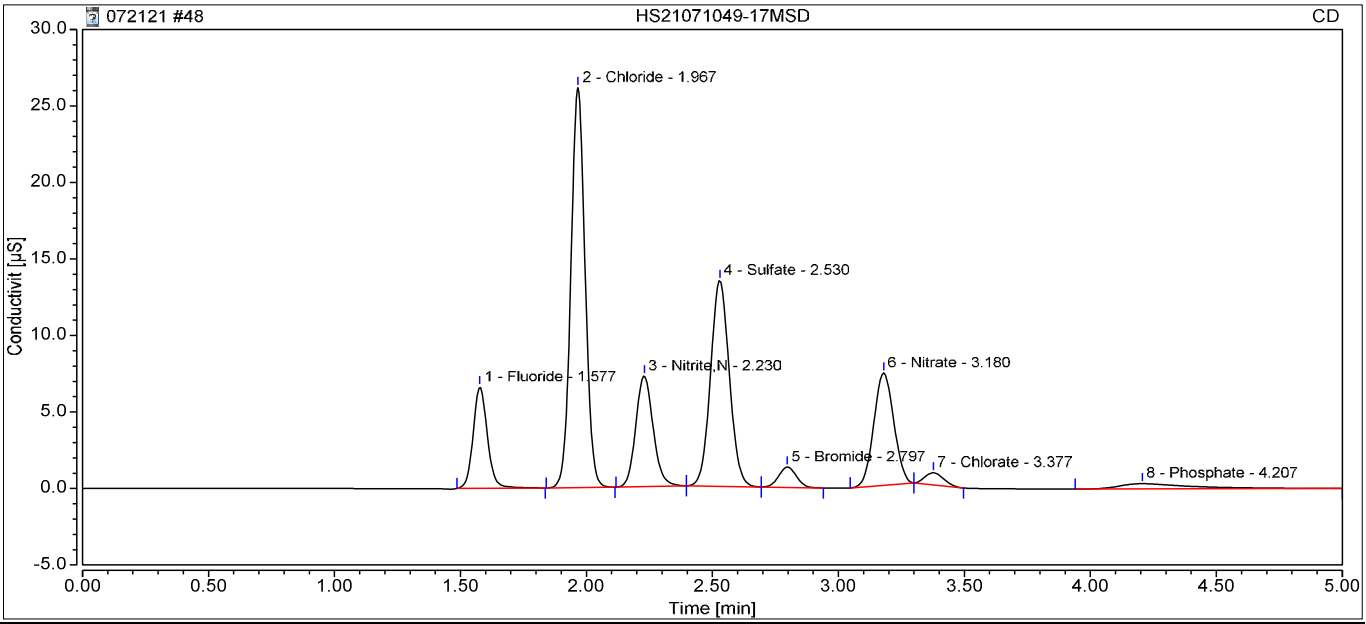
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	1.58	Fluoride	BMB	0.444	2.1650	2.1650	1.0000
2	1.97	Chloride	BMB	1.741	13.0802	13.0802	1.0000
3	2.23	Nitrite,N	BMB	0.587	2.0135	2.0135	1.0000
4	2.53	Sulfate	BMB	1.194	12.4152	12.4152	1.0000
5	2.80	Bromide	BMB	0.111	2.1509	2.1509	1.0000
6	3.18	Nitrate	BMB	0.692	2.2766	2.2766	1.0000
7	3.38	Chlorate	BMB	0.071	2.0791	2.0791	1.0000
8	4.21	Phosphate	BMB	0.109	1.0296	1.0296	1.0000
Total:			**0.000**	**4.949**		**37.21**	

48 HS21071049-17MSD

Sample Name:	**HS21071049-17MSD**	*Injection Volume:*	**5.00**
Vial Number:	**RD2**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program ISO37mM 150mm short 0.4**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method ISO**	*Dilution Factor:*	**1.0000**
Recording Time:	**07/21/2021 16:32**	*Sample Weight:*	**1.0000**

Run Time:



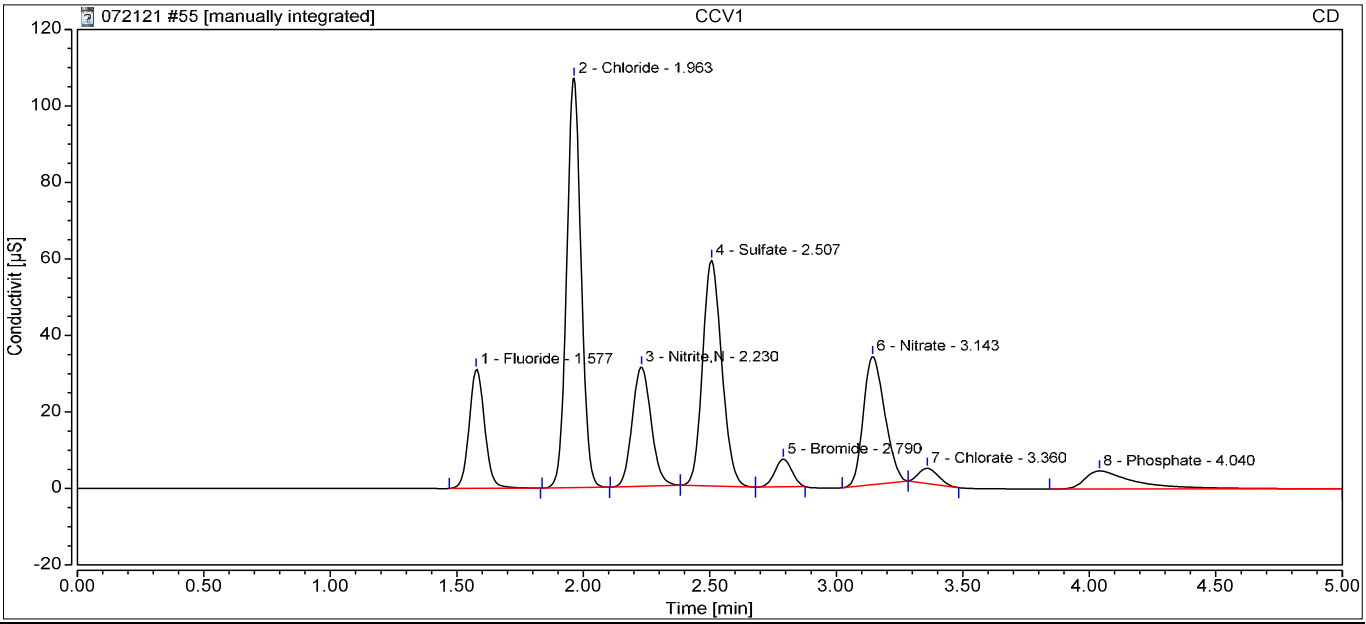
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	1.58	Fluoride	BMB	0.436	2.1236	2.1236	1.0000
2	1.97	Chloride	BMB	1.709	12.8348	12.8348	1.0000
3	2.23	Nitrite,N	BMB	0.579	1.9845	1.9845	1.0000
4	2.53	Sulfate	BMB	1.161	12.0708	12.0708	1.0000
5	2.80	Bromide	BMB	0.108	2.1070	2.1070	1.0000
6	3.18	Nitrate	BMB	0.678	2.2315	2.2315	1.0000
7	3.38	Chlorate	BMB	0.069	2.0253	2.0253	1.0000
8	4.21	Phosphate	BMB	0.115	1.0810	1.0810	1.0000
Total:			**0.000**	**4.854**		**36.46**	

55 CCV1

Sample Name:	**CCV1**	*Injection Volume:*	**5.00**
Vial Number:	**R3**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program ISO37mM 150mm short 0.4**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method ISO**	*Dilution Factor:*	**1.0000**
Recording Time:	**07/21/2021 18:56**	*Sample Weight:*	**1.0000**

Run Time:



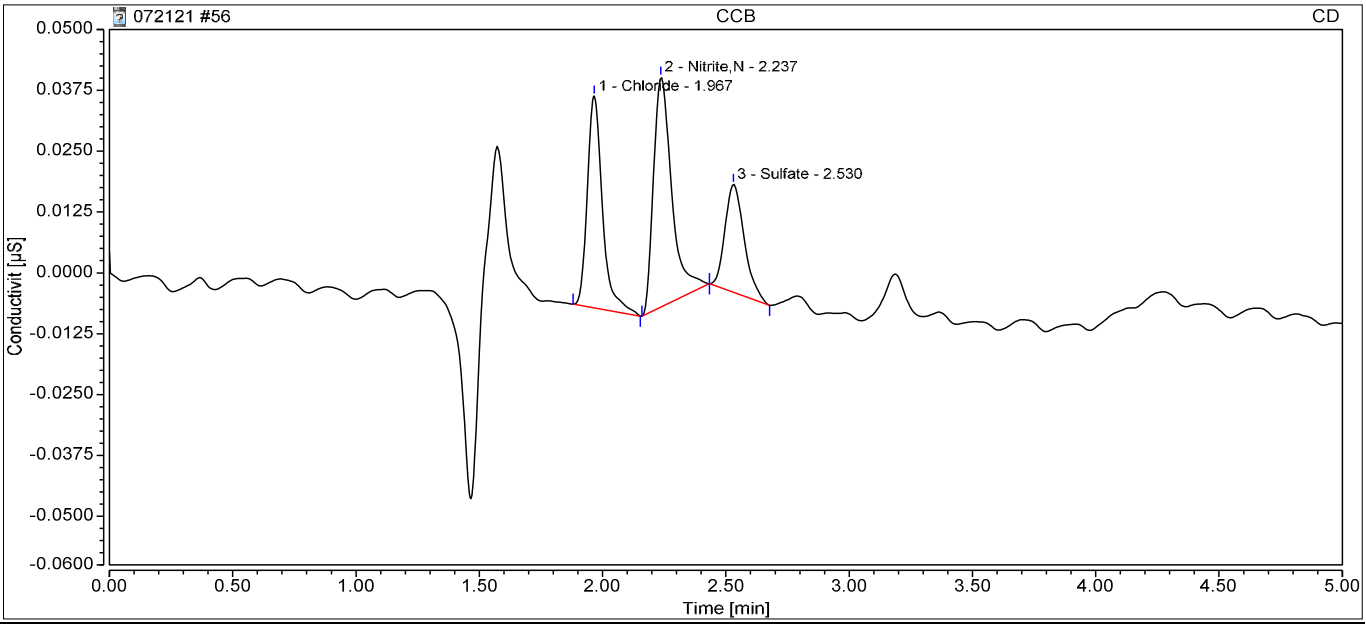
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	1.58	Fluoride	BMB	2.208	10.8160	10.8160	1.0000
2	1.96	Chloride	BMB	7.061	53.0685	53.0685	1.0000
3	2.23	Nitrite,N	BMb*	2.703	10.1605	10.1605	1.0000
4	2.51	Sulfate	bMb*	5.187	53.8606	53.8606	1.0000
5	2.79	Bromide	bMB*	0.565	10.9159	10.9159	1.0000
6	3.14	Nitrate	BMB	3.277	10.7969	10.7969	1.0000
7	3.36	Chlorate	BMB	0.360	11.7573	11.7573	1.0000
8	4.04	Phosphate	BMB	1.079	9.4535	9.4535	1.0000
Total:			**0.000**	**22.441**		**170.83**	

56 CCB

Sample Name:	**CCB**	*Injection Volume:*	**5.00**
Vial Number:	**R6**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program ISO37mM 150mm short 0.4**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method ISO**	*Dilution Factor:*	**1.0000**
Recording Time:	**07/21/2021 19:04**	*Sample Weight:*	**1.0000**

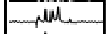
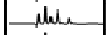
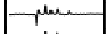
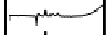
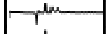
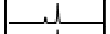
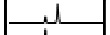
Run Time:



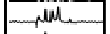
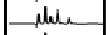
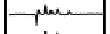
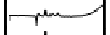
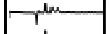
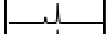
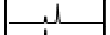
Integration Results

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	1.97	Chloride	BMB	0.003	0.0164	0.0164	1.0000
2	2.24	Nitrite,N	BMB	0.004	n.a.	n.a.	1.0000
3	2.53	Sulfate	BMB	0.002	0.0414	0.0414	1.0000
n.a.	n.a.	Bromide	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**	**0.009**		**0.06**	

Sequence: 072221-
Last Update Operator: alshs.nouser

CD	Name	Comment	Type	Position	Dilution	Level	Instrument Method	Processing Method
	STD1		Calibration	RE1	1.00	1	Anions Program ISO37mM 150mm short 0.4	Anions Processing Method ISO
	STD2		Calibration	RE2	1.00	2	Anions Program ISO37mM 150mm short 0.4	Anions Processing Method ISO
	STD3		Calibration	RE3	1.00	3	Anions Program ISO37mM 150mm short 0.4	Anions Processing Method ISO
	STD4		Calibration	RE4	1.00	4	Anions Program ISO37mM 150mm short 0.4	Anions Processing Method ISO
	STD5		Calibration	RE5	1.00	5	Anions Program ISO37mM 150mm short 0.4	Anions Processing Method ISO
	STD6		Calibration	RE6	1.00	6	Anions Program ISO37mM 150mm short 0.4	Anions Processing Method ISO
	ICV		Unknown	RE7	1.00		Anions Program ISO37mM 150mm short 0.4	Anions Processing Method ISO
	ICB		Unknown	RE8	1.00		Anions Program ISO37mM 150mm short 0.4	Anions Processing Method ISO
	CCV		Unknown	R1	1.00		Anions Program ISO37mM 150mm short 0.4	Anions Processing Method ISO
	CCB		Unknown	R4	1.00		Anions Program ISO37mM 150mm short 0.4	Anions Processing Method ISO
	MBLK		Unknown	R5	1.00		Anions Program ISO37mM 150mm short 0.4	Anions Processing Method ISO
	LCS		Unknown	R2	1.00		Anions Program ISO37mM 150mm short 0.4	Anions Processing Method ISO
	CCV1		Unknown	R3	1.00		Anions Program ISO37mM 150mm short 0.4	Anions Processing Method ISO
	CCB		Unknown	R7	1.00		Anions Program ISO37mM 150mm short 0.4	Anions Processing Method ISO
	HS21071128-04		Unknown	BD4	1.00		Anions Program ISO37mM 150mm short 0.4	Anions Processing Method ISO
	HS21071128-04MS		Unknown	BD5	1.00		Anions Program ISO37mM 150mm short 0.4	Anions Processing Method ISO
	HS21071128-04MSD		Unknown	BD6	1.00		Anions Program ISO37mM 150mm short 0.4	Anions Processing Method ISO
	CCV		Unknown	R1	1.00		Anions Program ISO37mM 150mm short 0.4	Anions Processing Method ISO
	CCB		Unknown	R4	1.00		Anions Program ISO37mM 150mm short 0.4	Anions Processing Method ISO
	CCV1		Unknown	R3	1.00		Anions Program ISO37mM 150mm short 0.4	Anions Processing Method ISO
	CCB		Unknown	R8	1.00		Anions Program ISO37mM 150mm short 0.4	Anions Processing Method ISO
	HS21071038-01DF20		Unknown	RA2	20.00		Anions Program ISO37mM 150mm short 0.4	Anions Processing Method ISO
	HS21071038-02DF20		Unknown	RA3	20.00		Anions Program ISO37mM 150mm short 0.4	Anions Processing Method ISO
	HS21071038-03DF20		Unknown	RA4	20.00		Anions Program ISO37mM 150mm short 0.4	Anions Processing Method ISO
	HS21071038-04DF100		Unknown	RA5	100.00		Anions Program ISO37mM 150mm short 0.4	Anions Processing Method ISO
	HS21071038-06DF50		Unknown	RA6	50.00		Anions Program ISO37mM 150mm short 0.4	Anions Processing Method ISO
	HS21071038-07DF50		Unknown	RA7	50.00		Anions Program ISO37mM 150mm short 0.4	Anions Processing Method ISO
	HS21071112-01		Unknown	RA8	1.00		Anions Program ISO37mM 150mm short 0.4	Anions Processing Method ISO
	HS21071112-01MS		Unknown	RB1	1.00		Anions Program ISO37mM 150mm short 0.4	Anions Processing Method ISO
	HS21071112-01MSD		Unknown	RB2	1.00		Anions Program ISO37mM 150mm short 0.4	Anions Processing Method ISO
	CCV		Unknown	R1	1.00		Anions Program ISO37mM 150mm short 0.4	Anions Processing Method ISO
	CCB		Unknown	R4	1.00		Anions Program ISO37mM 150mm short 0.4	Anions Processing Method ISO

Sequence: 072221-
Last Update Operator: alshs.nouser

CD	Name	Volume	Status	Inject Time
	STD1	5.0	Finished	6/26/2021 7:08:27 AM -05:00
	STD2	5.0	Finished	6/26/2021 7:15:51 AM -05:00
	STD3	5.0	Finished	6/26/2021 7:23:13 AM -05:00
	STD4	5.0	Finished	6/26/2021 7:30:36 AM -05:00
	STD5	5.0	Finished	6/26/2021 7:38:00 AM -05:00
	STD6	5.0	Finished	6/26/2021 7:45:22 AM -05:00
	ICV	5.0	Finished	6/26/2021 7:52:45 AM -05:00
	ICB	5.0	Finished	6/26/2021 8:07:30 AM -05:00
	CCV	5.0	Finished	7/22/2021 12:55:49 PM -05:00
	CCB	5.0	Finished	7/22/2021 1:03:12 PM -05:00
	MBLK	5.0	Finished	7/22/2021 2:28:32 PM -05:00
	LCS	5.0	Finished	7/22/2021 2:35:56 PM -05:00
	CCV1	5.0	Finished	7/22/2021 2:43:21 PM -05:00
	CCB	5.0	Finished	7/22/2021 2:58:11 PM -05:00
	HS21071128-04	5.0	Finished	7/22/2021 4:19:40 PM -05:00
	HS21071128-04MS	5.0	Finished	7/22/2021 4:27:04 PM -05:00
	HS21071128-04MSD	5.0	Finished	7/22/2021 4:34:34 PM -05:00
	CCV	5.0	Finished	7/22/2021 4:49:28 PM -05:00
	CCB	5.0	Finished	7/22/2021 5:04:25 PM -05:00
	CCV1	5.0	Finished	7/22/2021 6:26:06 PM -05:00
	CCB	5.0	Finished	7/22/2021 6:40:55 PM -05:00
	HS21071038-01DF20	5.0	Finished	7/22/2021 6:48:19 PM -05:00
	HS21071038-02DF20	5.0	Finished	7/22/2021 6:55:43 PM -05:00
	HS21071038-03DF20	5.0	Finished	7/22/2021 7:03:07 PM -05:00
	HS21071038-04DF100	5.0	Finished	7/22/2021 7:10:30 PM -05:00
	HS21071038-06DF50	5.0	Finished	7/22/2021 7:17:53 PM -05:00
	HS21071038-07DF50	5.0	Finished	7/22/2021 7:25:17 PM -05:00
	HS21071112-01	5.0	Finished	7/22/2021 7:32:41 PM -05:00
	HS21071112-01MS	5.0	Finished	7/22/2021 7:40:04 PM -05:00
	HS21071112-01MSD	5.0	Finished	7/22/2021 7:47:29 PM -05:00
	CCV	5.0	Finished	7/22/2021 8:02:17 PM -05:00
	CCB	5.0	Finished	7/22/2021 8:09:41 PM -05:00

Sequence: 071521
Injection #6: STD6

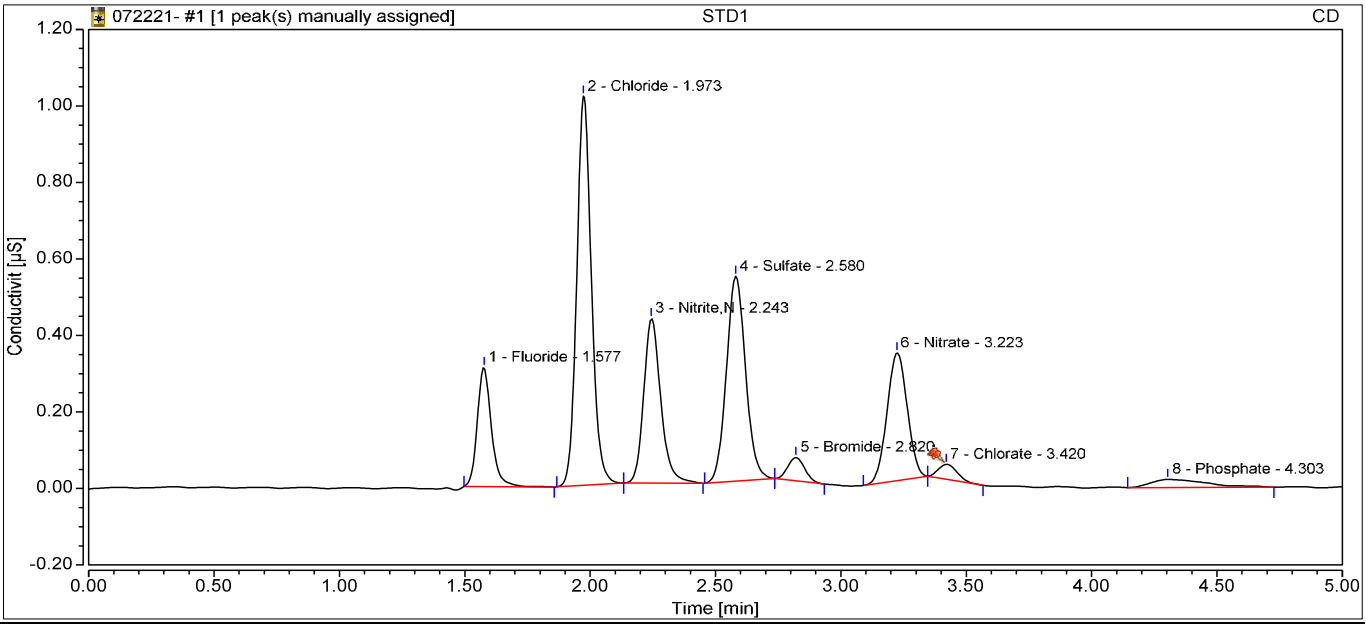
Calibration

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*	*20.2589*	*0.99769*	*0.0030*	*0.2038*	*0.0000*
2	Chloride	Lin, WithOffset, 1/	Area	6	3.8673	0.99992	0.0009	0.1330	0.0000
3	Nitrite,N	Quad, WithOffset,	Area	6	5.7709	0.99983	0.0054	0.2948	-0.0029
4	Sulfate	Lin, WithOffset, 1/	Area	6	4.1076	0.99991	-0.0020	0.0963	0.0000
5	Bromide	Lin, WithOffset, 1/	Area	6	10.7478	0.99944	-0.0010	0.0519	0.0000
6	Nitrate	Lin, WithOffset, 1/	Area	6	4.3880	0.99990	0.0007	0.3035	0.0000
7	Chlorate	Quad, WithOffset,	Area	6	4.0947	0.99992	-0.0001	0.0348	-0.0004
8	Phosphate	Lin, WithOffset, 1/	Area	6	27.9718	0.99729	-0.0098	0.1152	0.0000
Maximum					**27.9718**	0.99992			
Minimum					3.8673	**0.99729**			

1 STD1

Sample Name:	**STD1**	*Injection Volume:*	**5.00**
Vial Number:	**RE1**	*Channel:*	**CD**
Sample Type:	**Calibration Standard**	*Wavelength:*	**210**
Control Program:	**Anions Program ISO37mM 150mm short 0.4**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method ISO**	*Dilution Factor:*	**1.0000**
Recording Time:	**06/26/2021 07:08**	*Sample Weight:*	**1.0000**

Run Time:



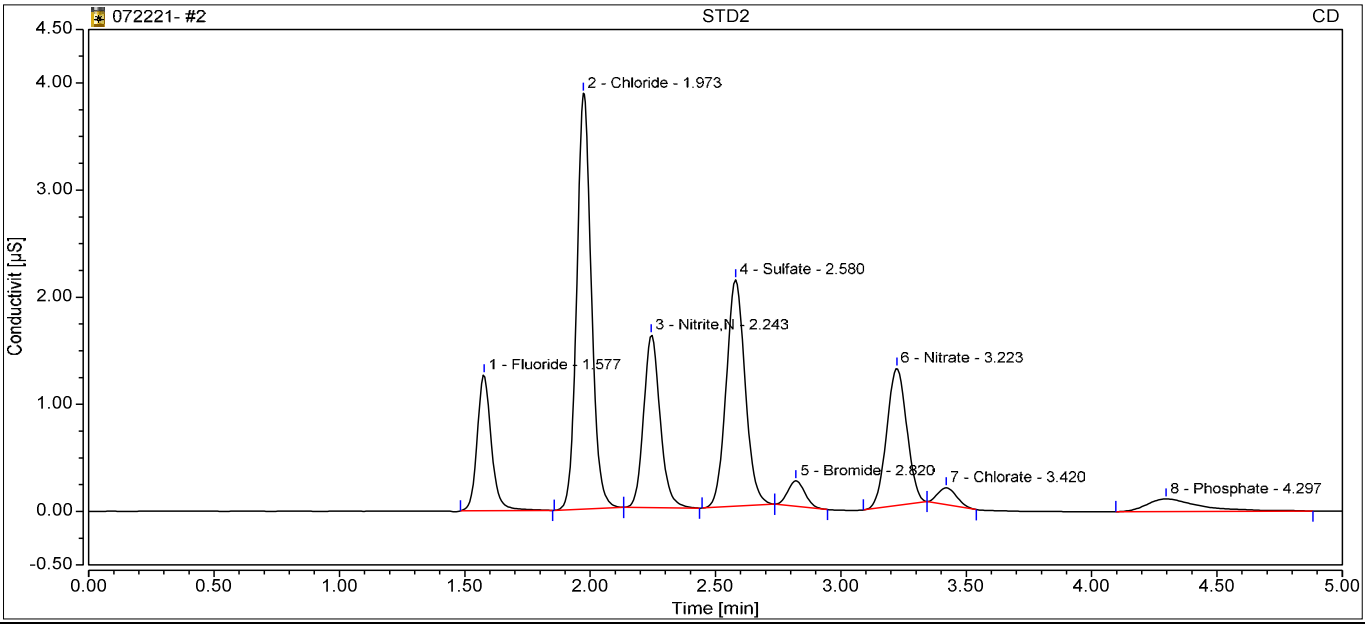
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	1.58	Fluoride	BMB	0.020	0.0853	0.0853	1.0000
2	1.97	Chloride	BMB	0.069	0.5112	0.5112	1.0000
3	2.24	Nitrite,N	BMB	0.034	0.0972	0.0972	1.0000
4	2.58	Sulfate	BMB	0.047	0.5123	0.5123	1.0000
5	2.82	Bromide	BMB	0.005	0.1111	0.1111	1.0000
6	3.22	Nitrate	BMB	0.031	0.1006	0.1006	1.0000
7	3.42	Chlorate	BMB^	0.003	0.1002	0.1002	1.0000
8	4.30	Phosphate	BMB	0.005	0.1325	0.1325	1.0000
Total:			**0.000**	**0.216**		**1.65**	

2 STD2

Sample Name:	**STD2**	*Injection Volume:*	**5.00**
Vial Number:	**RE2**	*Channel:*	**CD**
Sample Type:	**Calibration Standard**	*Wavelength:*	**210**
Control Program:	**Anions Program ISO37mM 150mm short 0.4**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method ISO**	*Dilution Factor:*	**1.0000**
Recording Time:	**06/26/2021 07:15**	*Sample Weight:*	**1.0000**

Run Time:

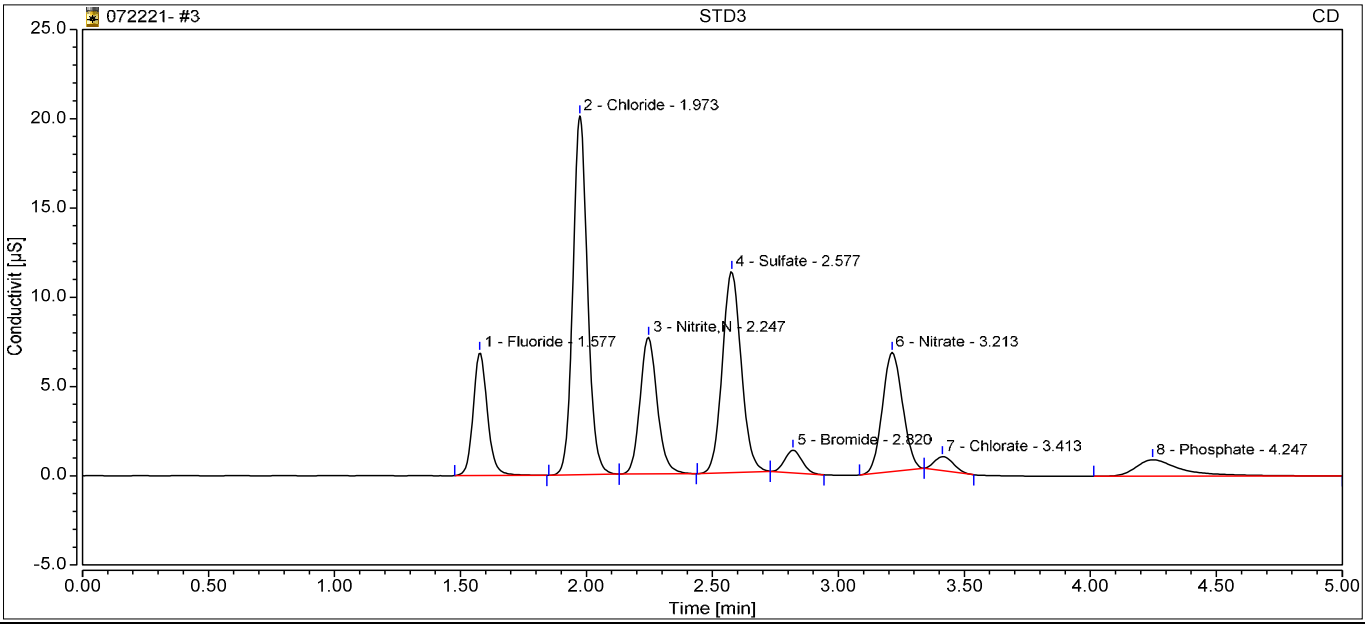


Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	1.58	Fluoride	BMB	0.083	0.3949	0.3949	1.0000
2	1.97	Chloride	BMB	0.262	1.9605	1.9605	1.0000
3	2.24	Nitrite,N	BMB	0.123	0.4013	0.4013	1.0000
4	2.58	Sulfate	BMB	0.185	1.9450	1.9450	1.0000
5	2.82	Bromide	BMB	0.019	0.3820	0.3820	1.0000
6	3.22	Nitrate	BMB	0.119	0.3898	0.3898	1.0000
7	3.42	Chlorate	BMB	0.014	0.3985	0.3985	1.0000
8	4.30	Phosphate	BMB	0.029	0.3369	0.3369	1.0000
Total:			**0.000**	**0.834**		**6.21**	

3 STD3			
Sample Name:	**STD3**	*Injection Volume:*	**5.00**
Vial Number:	**RE3**	*Channel:*	**CD**
Sample Type:	**Calibration Standard**	*Wavelength:*	**210**
Control Program:	**Anions Program ISO37mM 150mm short 0.4**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method ISO**	*Dilution Factor:*	**1.0000**
Recording Time:	**06/26/2021 07:23**	*Sample Weight:*	**1.0000**

Run Time:



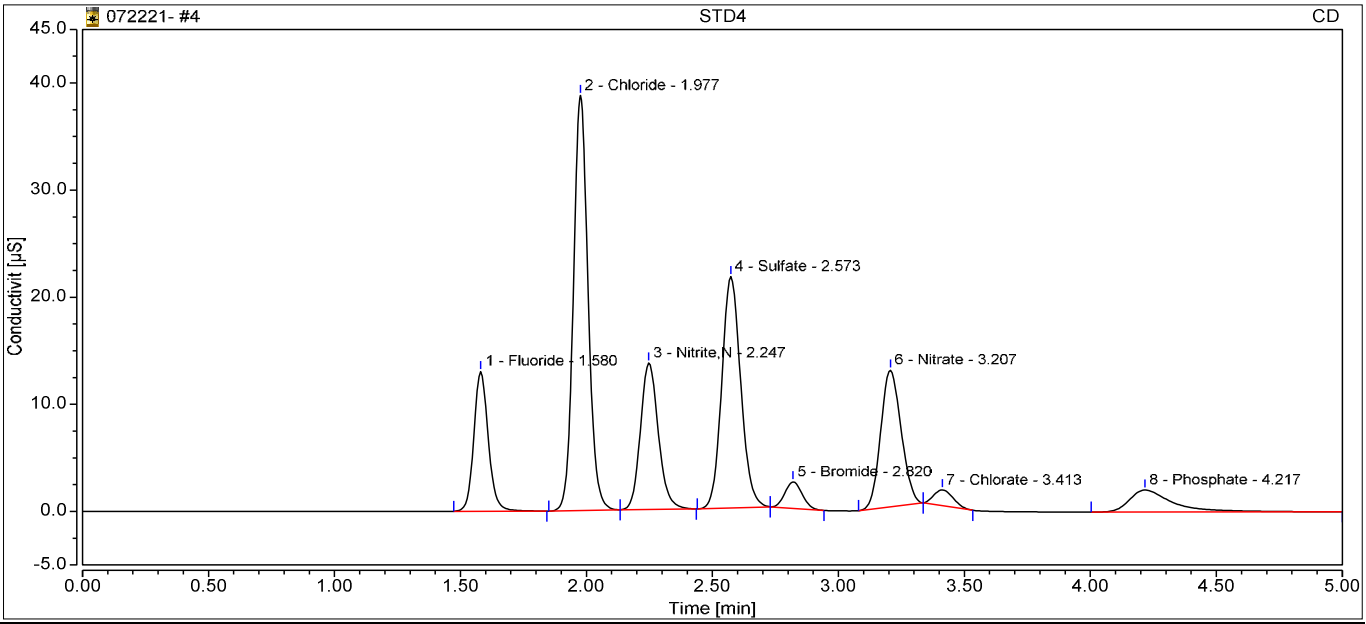
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	1.58	Fluoride	BMB	0.452	2.2036	2.2036	1.0000
2	1.97	Chloride	BMB	1.352	10.1565	10.1565	1.0000
3	2.25	Nitrite,N	BMB	0.607	2.0827	2.0827	1.0000
4	2.58	Sulfate	BMB	0.981	10.1974	10.1974	1.0000
5	2.82	Bromide	BMB	0.100	1.9471	1.9471	1.0000
6	3.21	Nitrate	BMB	0.622	2.0467	2.0467	1.0000
7	3.41	Chlorate	BMB	0.069	2.0284	2.0284	1.0000
8	4.25	Phosphate	BMB	0.195	1.7750	1.7750	1.0000
Total:			**0.000**	**4.377**		**32.44**	

4 STD4

Sample Name:	**STD4**	*Injection Volume:*	**5.00**
Vial Number:	**RE4**	*Channel:*	**CD**
Sample Type:	**Calibration Standard**	*Wavelength:*	**210**
Control Program:	**Anions Program ISO37mM 150mm short 0.4**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method ISO**	*Dilution Factor:*	**1.0000**
Recording Time:	**06/26/2021 07:30**	*Sample Weight:*	**1.0000**

Run Time:



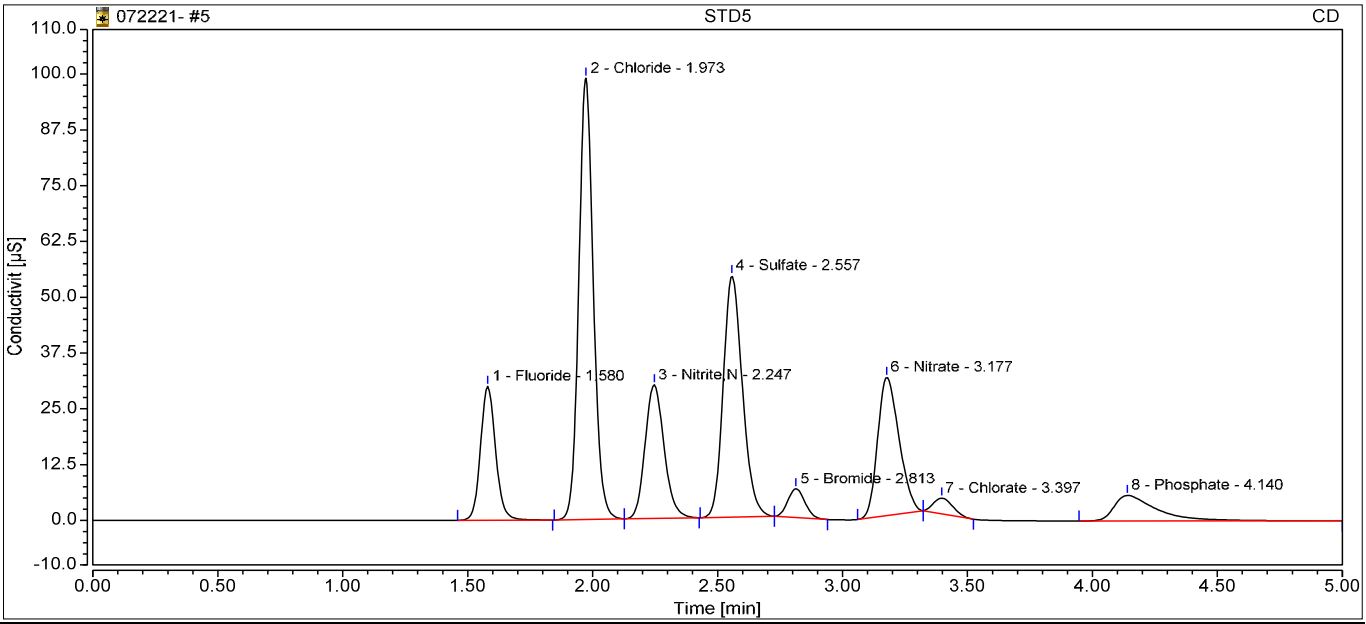
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	1.58	Fluoride	BMB	0.870	4.2518	4.2518	1.0000
2	1.98	Chloride	BMB	2.605	19.5725	19.5725	1.0000
3	2.25	Nitrite,N	BMB	1.127	3.9598	3.9598	1.0000
4	2.57	Sulfate	BMB	1.885	19.5851	19.5851	1.0000
5	2.82	Bromide	BMB	0.196	3.8021	3.8021	1.0000
6	3.21	Nitrate	BMB	1.203	3.9629	3.9629	1.0000
7	3.41	Chlorate	BMB	0.131	3.9255	3.9255	1.0000
8	4.22	Phosphate	BMB	0.412	3.6656	3.6656	1.0000
Total:			**0.000**	**8.430**		**62.73**	

5 STD5

Sample Name:	**STD5**	*Injection Volume:*	**5.00**
Vial Number:	**RE5**	*Channel:*	**CD**
Sample Type:	**Calibration Standard**	*Wavelength:*	**210**
Control Program:	**Anions Program ISO37mM 150mm short 0.4**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method ISO**	*Dilution Factor:*	**1.0000**
Recording Time:	**06/26/2021 07:38**	*Sample Weight:*	**1.0000**

Run Time:



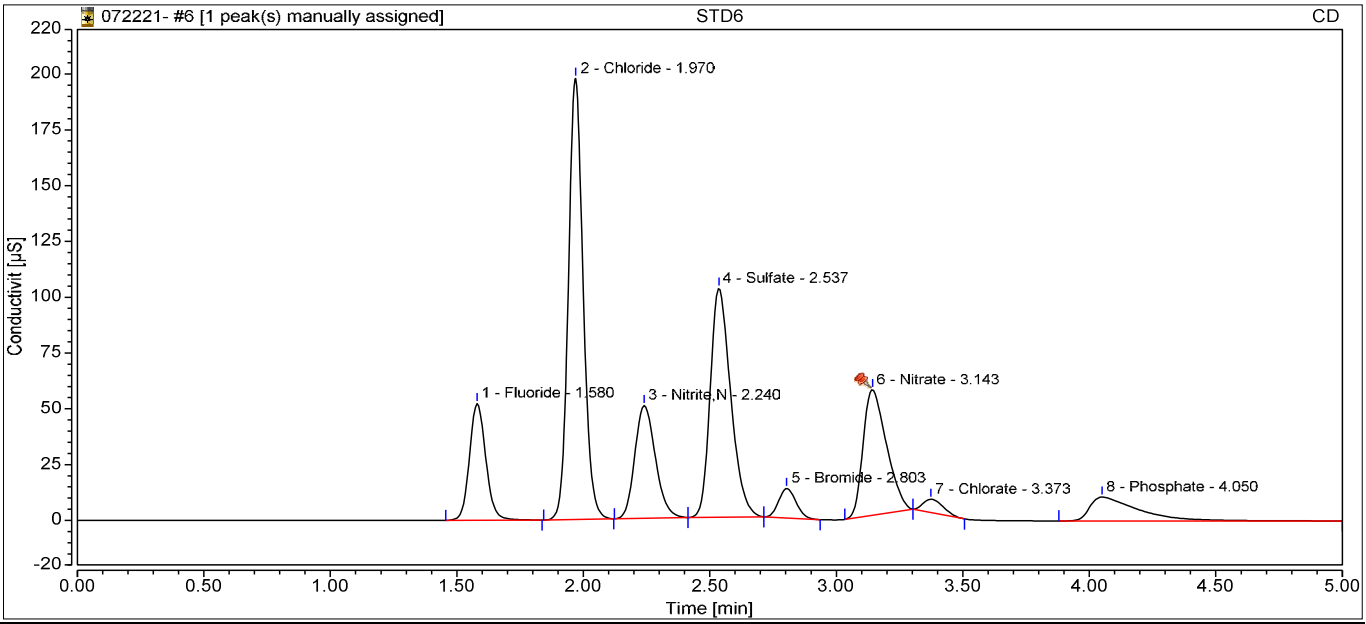
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	1.58	Fluoride	BMB	2.108	10.3258	10.3258	1.0000
2	1.97	Chloride	BMB	6.654	50.0065	50.0065	1.0000
3	2.25	Nitrite,N	BMB	2.641	9.8998	9.8998	1.0000
4	2.56	Sulfate	BMB	4.828	50.1320	50.1320	1.0000
5	2.81	Bromide	BMB	0.514	9.9325	9.9325	1.0000
6	3.18	Nitrate	BMB	3.068	10.1091	10.1091	1.0000
7	3.40	Chlorate	BMB	0.315	10.0792	10.0792	1.0000
8	4.14	Phosphate	BMB	1.140	9.9878	9.9878	1.0000
Total:			**0.000**	**21.269**		**160.47**	

6 STD6

Sample Name:	**STD6**	*Injection Volume:*	**5.00**
Vial Number:	**RE6**	*Channel:*	**CD**
Sample Type:	**Calibration Standard**	*Wavelength:*	**210**
Control Program:	**Anions Program ISO37mM 150mm short 0.4**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method ISO**	*Dilution Factor:*	**1.0000**
Recording Time:	**06/26/2021 07:45**	*Sample Weight:*	**1.0000**

Run Time:



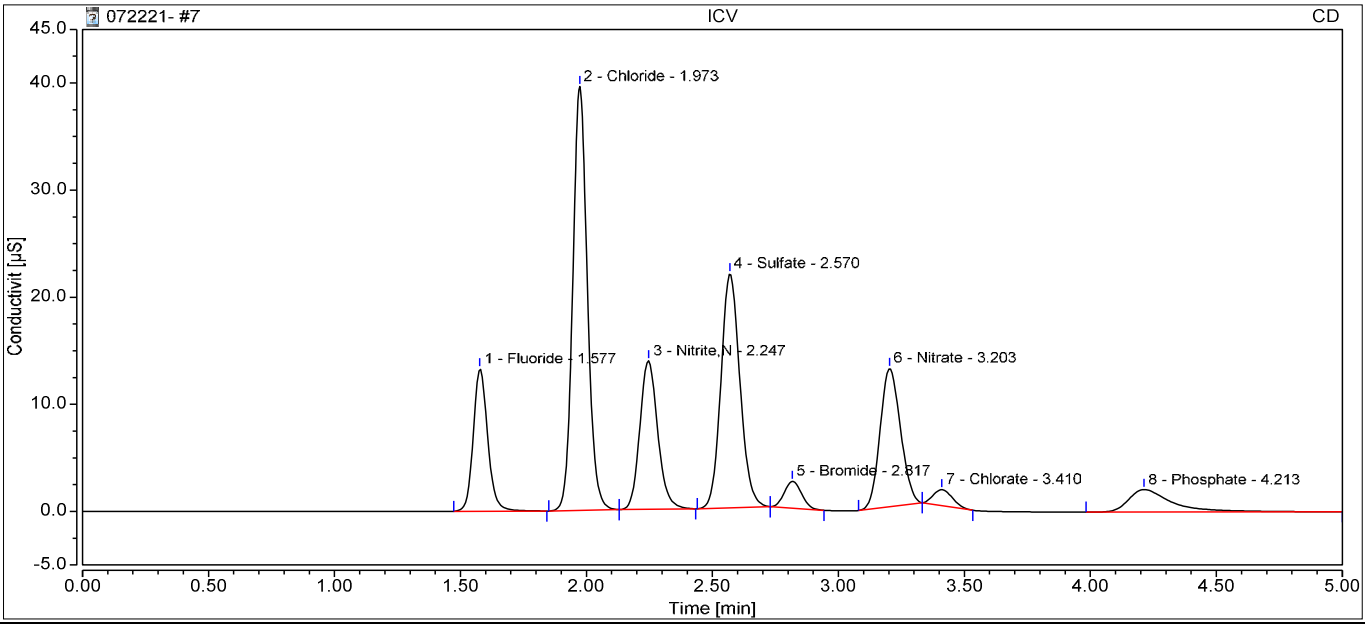
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	1.58	Fluoride	BMB	3.925	19.2385	19.2385	1.0000
2	1.97	Chloride	BMB	13.344	100.2928	100.2928	1.0000
3	2.24	Nitrite,N	BMB	4.761	20.0654	20.0654	1.0000
4	2.54	Sulfate	BMB	9.645	100.1282	100.1282	1.0000
5	2.80	Bromide	BMB	1.053	20.3252	20.3252	1.0000
6	3.14	Nitrate	BMB^	6.037	19.8909	19.8909	1.0000
7	3.37	Chlorate	BMB	0.554	19.9655	19.9655	1.0000
8	4.05	Phosphate	BMB	2.363	20.6022	20.6022	1.0000
Total:			**0.000**	**41.682**		**320.51**	

7 ICV

Sample Name:	**ICV**	*Injection Volume:*	**5.00**
Vial Number:	**RE7**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program ISO37mM 150mm short 0.4**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method ISO**	*Dilution Factor:*	**1.0000**
Recording Time:	**06/26/2021 07:52**	*Sample Weight:*	**1.0000**

Run Time:



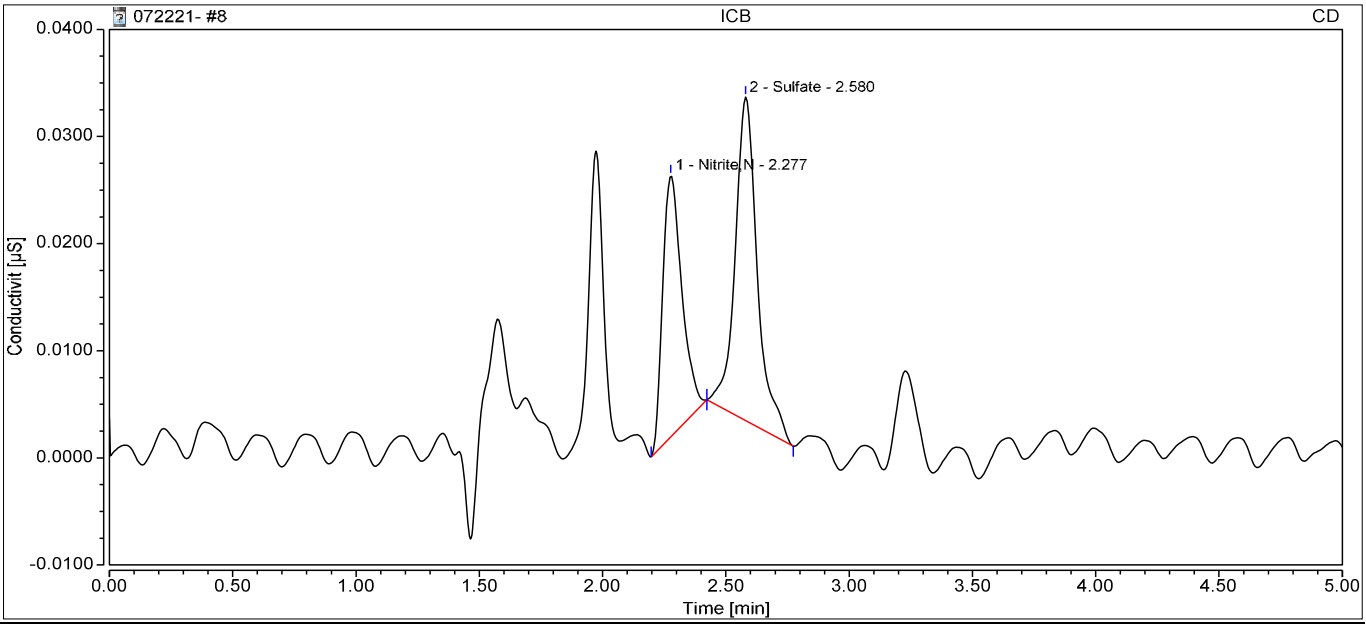
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	1.58	Fluoride	BMB	0.888	4.3392	4.3392	1.0000
2	1.97	Chloride	BMB	2.655	19.9475	19.9475	1.0000
3	2.25	Nitrite,N	BMB	1.144	4.0217	4.0217	1.0000
4	2.57	Sulfate	BMB	1.911	19.8594	19.8594	1.0000
5	2.82	Bromide	BMB	0.200	3.8693	3.8693	1.0000
6	3.20	Nitrate	BMB	1.214	3.9993	3.9993	1.0000
7	3.41	Chlorate	BMB	0.131	3.9285	3.9285	1.0000
8	4.21	Phosphate	BMB	0.422	3.7479	3.7479	1.0000
Total:			**0.000**	**8.565**		**63.71**	

8 ICB

Sample Name:	**ICB**	*Injection Volume:*	**5.00**
Vial Number:	**RE8**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program ISO37mM 150mm short 0.4**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method ISO**	*Dilution Factor:*	**1.0000**
Recording Time:	**06/26/2021 08:07**	*Sample Weight:*	**1.0000**

Run Time:



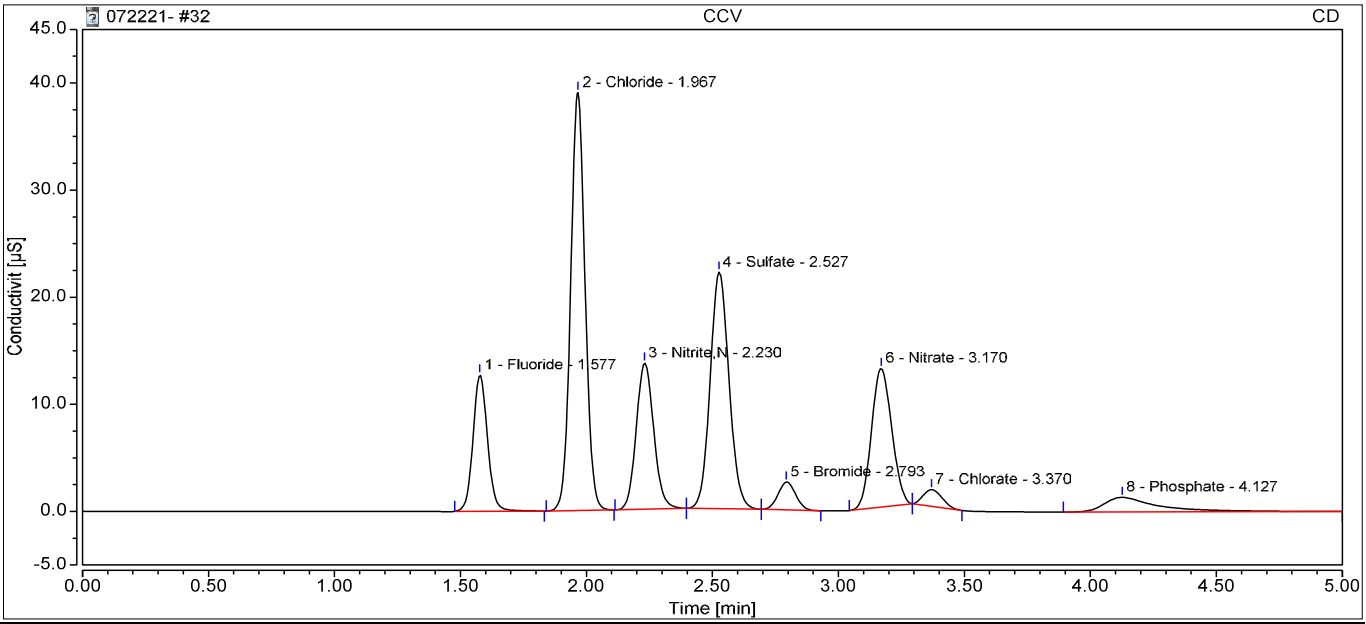
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Chloride	n.a.	n.a.	n.a.	n.a.	1.0000
1	2.28	Nitrite,N	BMB	0.002	n.a.	n.a.	1.0000
2	2.58	Sulfate	BMB	0.003	0.0531	0.0531	1.0000
n.a.	n.a.	Bromide	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**	**0.005**		**0.05**	

32 CCV

Sample Name:	**CCV**	*Injection Volume:*	**5.00**
Vial Number:	**R1**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program ISO37mM 150mm short 0.4**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method ISO**	*Dilution Factor:*	**1.0000**
Recording Time:	**07/22/2021 12:55**	*Sample Weight:*	**1.0000**

Run Time:



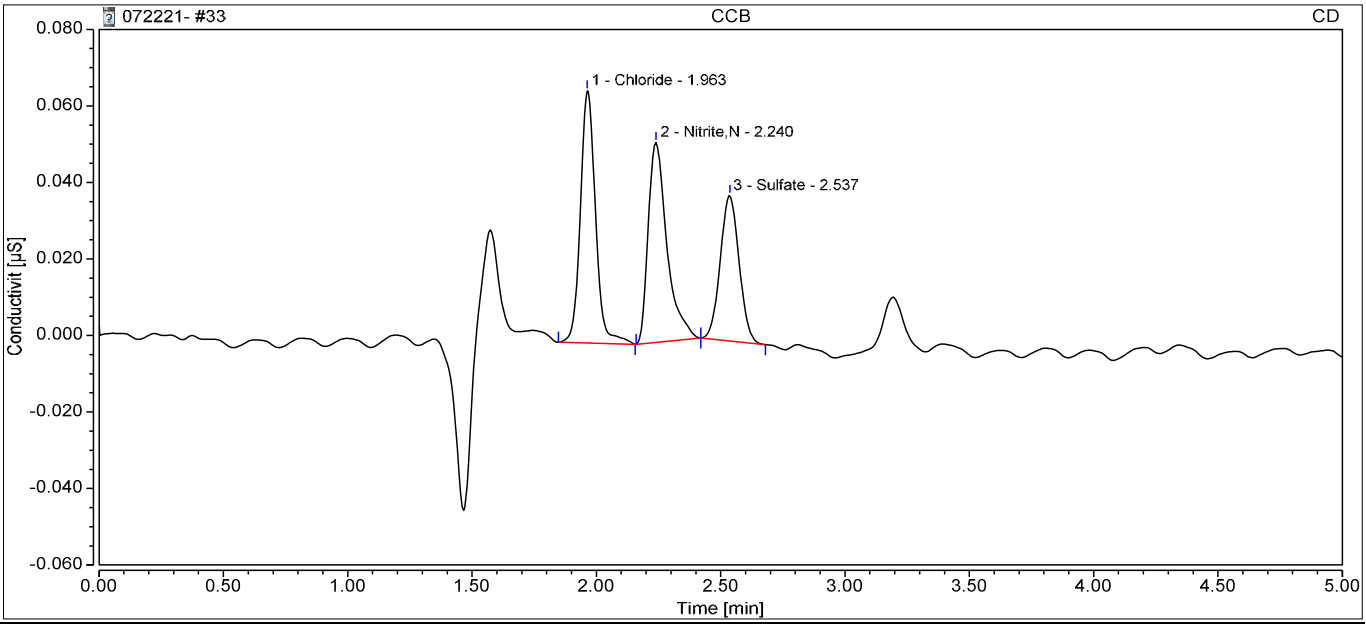
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	1.58	Fluoride	BMB	0.852	4.1637	4.1637	1.0000
2	1.97	Chloride	BMB	2.577	19.3621	19.3621	1.0000
3	2.23	Nitrite,N	BMB	1.099	3.8561	3.8561	1.0000
4	2.53	Sulfate	BMB	1.916	19.9068	19.9068	1.0000
5	2.79	Bromide	BMB	0.211	4.0937	4.0937	1.0000
6	3.17	Nitrate	BMB	1.208	3.9789	3.9789	1.0000
7	3.37	Chlorate	BMB	0.137	4.0957	4.0957	1.0000
8	4.13	Phosphate	BMB	0.342	3.0559	3.0559	1.0000
Total:			**0.000**	**8.342**		**62.51**	

33 CCB

Sample Name:	**CCB**	*Injection Volume:*	**5.00**
Vial Number:	**R4**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program ISO37mM 150mm short 0.4**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method ISO**	*Dilution Factor:*	**1.0000**
Recording Time:	**07/22/2021 13:03**	*Sample Weight:*	**1.0000**

Run Time:



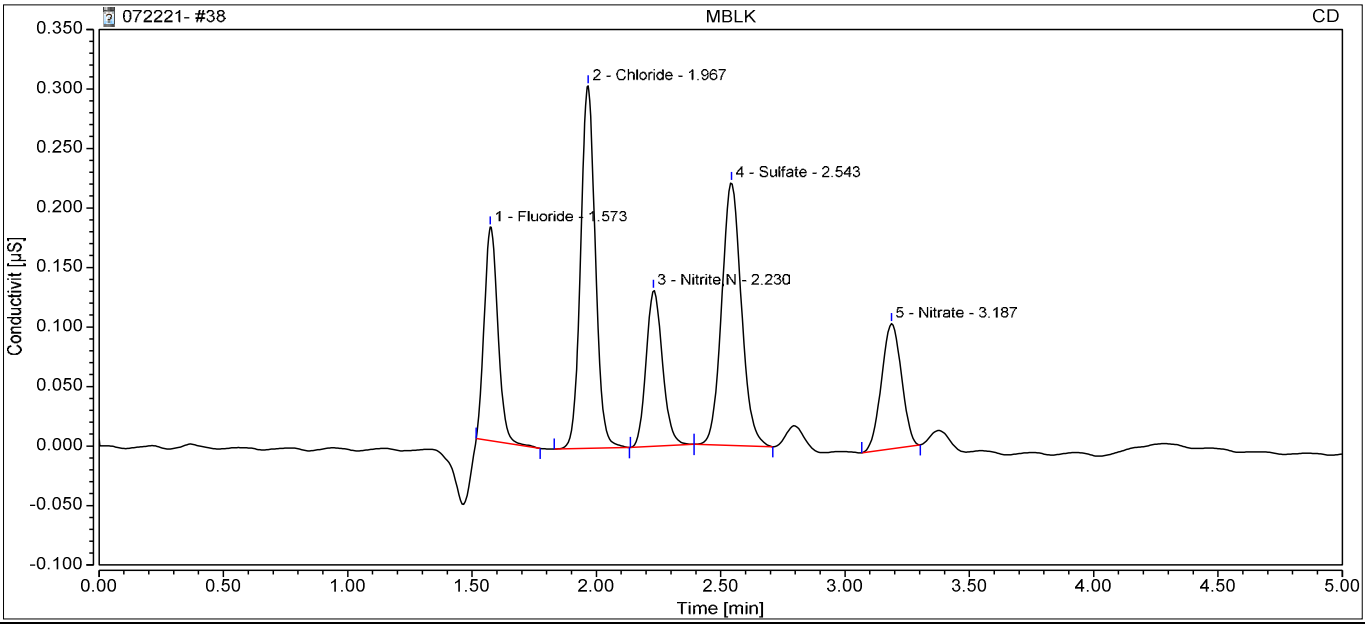
Integration Results

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	1.96	Chloride	BMB	0.005	0.0280	0.0280	1.0000
2	2.24	Nitrite,N	BMB	0.005	n.a.	n.a.	1.0000
3	2.54	Sulfate	BMB	0.003	0.0550	0.0550	1.0000
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Nitrate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	1.0000
Total:			**0.000**	**0.013**		**0.08**	

38 MBLK

Sample Name:	**MBLK**	*Injection Volume:*	**5.00**
Vial Number:	**R5**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program ISO37mM 150mm short 0.4**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method ISO**	*Dilution Factor:*	**1.0000**
Recording Time:	**07/22/2021 14:28**	*Sample Weight:*	**1.0000**

Run Time:



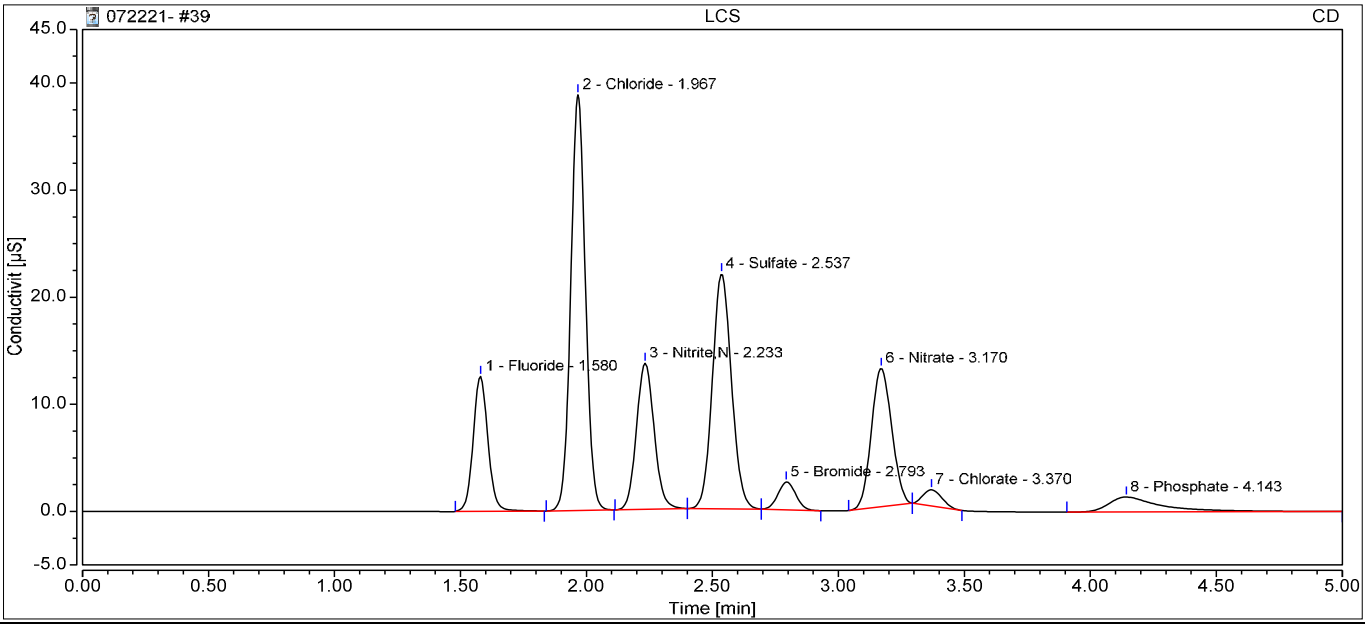
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	1.57	Fluoride	BMB	0.011	0.0412	0.0412	1.0000
2	1.97	Chloride	BMB	0.021	0.1505	0.1505	1.0000
3	2.23	Nitrite,N	BMB	0.010	0.0158	0.0158	1.0000
4	2.54	Sulfate	BMB	0.020	0.2307	0.2307	1.0000
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	1.0000
5	3.19	Nitrate	BMB	0.010	0.0300	0.0300	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**	**0.072**		**0.47**	

39 LCS

Sample Name:	**LCS**	*Injection Volume:*	**5.00**
Vial Number:	**R2**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program ISO37mM 150mm short 0.4**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method ISO**	*Dilution Factor:*	**1.0000**
Recording Time:	**07/22/2021 14:35**	*Sample Weight:*	**1.0000**

Run Time:



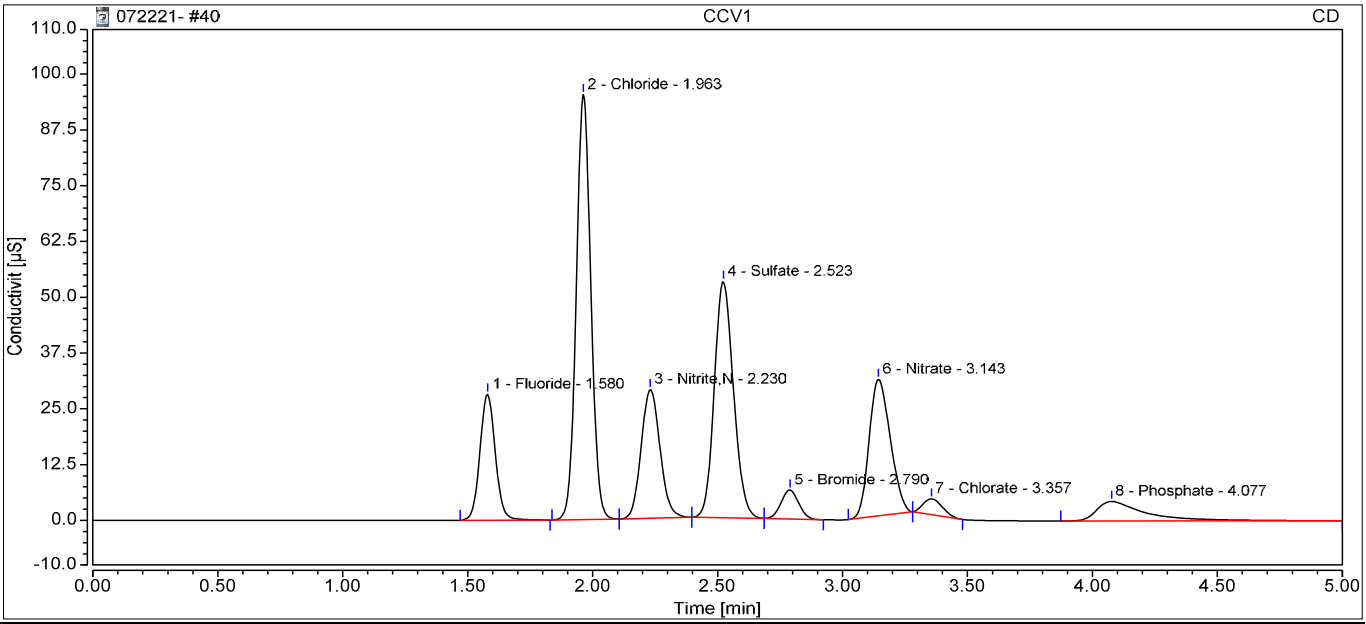
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	1.58	Fluoride	BMB	0.856	4.1842	4.1842	1.0000
2	1.97	Chloride	BMB	2.609	19.6013	19.6013	1.0000
3	2.23	Nitrite,N	BMB	1.113	3.9068	3.9068	1.0000
4	2.54	Sulfate	BMB	1.925	20.0037	20.0037	1.0000
5	2.79	Bromide	BMB	0.211	4.0961	4.0961	1.0000
6	3.17	Nitrate	BMB	1.214	3.9992	3.9992	1.0000
7	3.37	Chlorate	BMB	0.134	4.0031	4.0031	1.0000
8	4.14	Phosphate	BMB	0.346	3.0875	3.0875	1.0000
Total:			**0.000**	**8.408**		**62.88**	

40 CCV1

Sample Name:	**CCV1**	*Injection Volume:*	**5.00**
Vial Number:	**R3**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program ISO37mM 150mm short 0.4**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method ISO**	*Dilution Factor:*	**1.0000**
Recording Time:	**07/22/2021 14:43**	*Sample Weight:*	**1.0000**

Run Time:



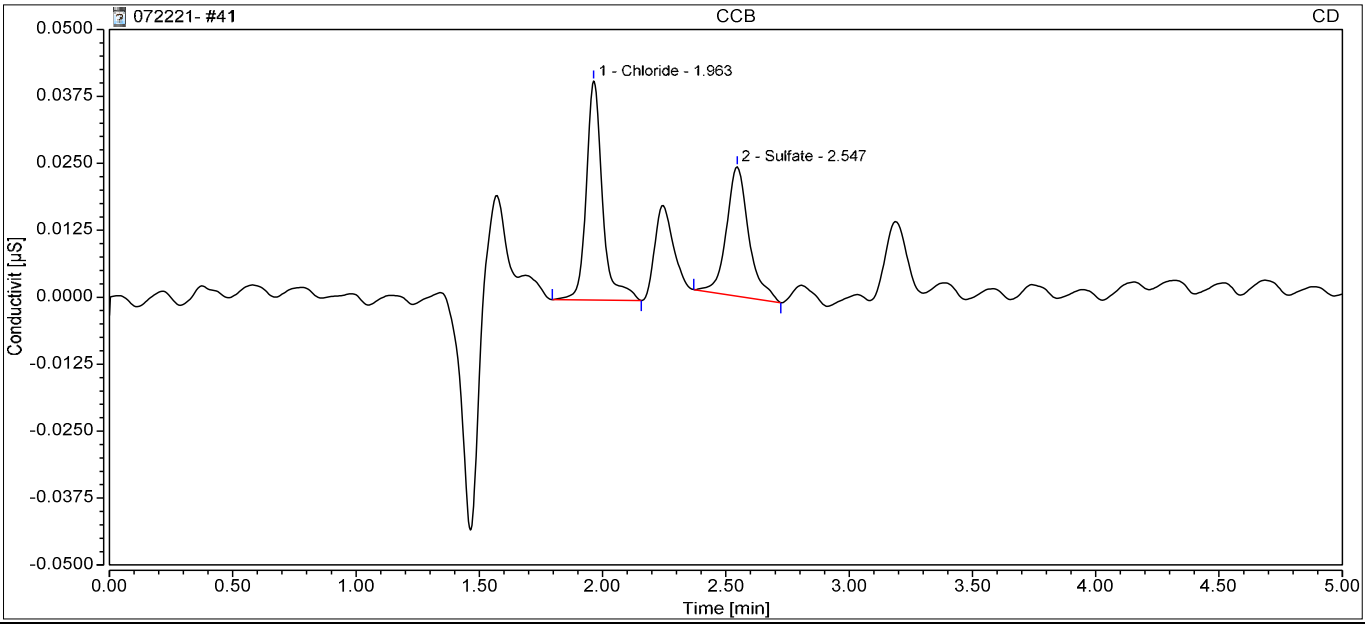
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	1.58	Fluoride	BMB	2.017	9.8783	9.8783	1.0000
2	1.96	Chloride	BMB	6.404	48.1269	48.1269	1.0000
3	2.23	Nitrite,N	BMB	2.517	9.3809	9.3809	1.0000
4	2.52	Sulfate	BMB	4.707	48.8761	48.8761	1.0000
5	2.79	Bromide	BMB	0.531	10.2482	10.2482	1.0000
6	3.14	Nitrate	BMB	2.988	9.8430	9.8430	1.0000
7	3.36	Chlorate	BMB	0.317	10.1690	10.1690	1.0000
8	4.08	Phosphate	BMB	0.986	8.6460	8.6460	1.0000
Total:			**0.000**	**20.466**		**155.17**	

41 CCB

Sample Name:	**CCB**	*Injection Volume:*	**5.00**
Vial Number:	**R7**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program ISO37mM 150mm short 0.4**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method ISO**	*Dilution Factor:*	**1.0000**
Recording Time:	**07/22/2021 14:58**	*Sample Weight:*	**1.0000**

Run Time:



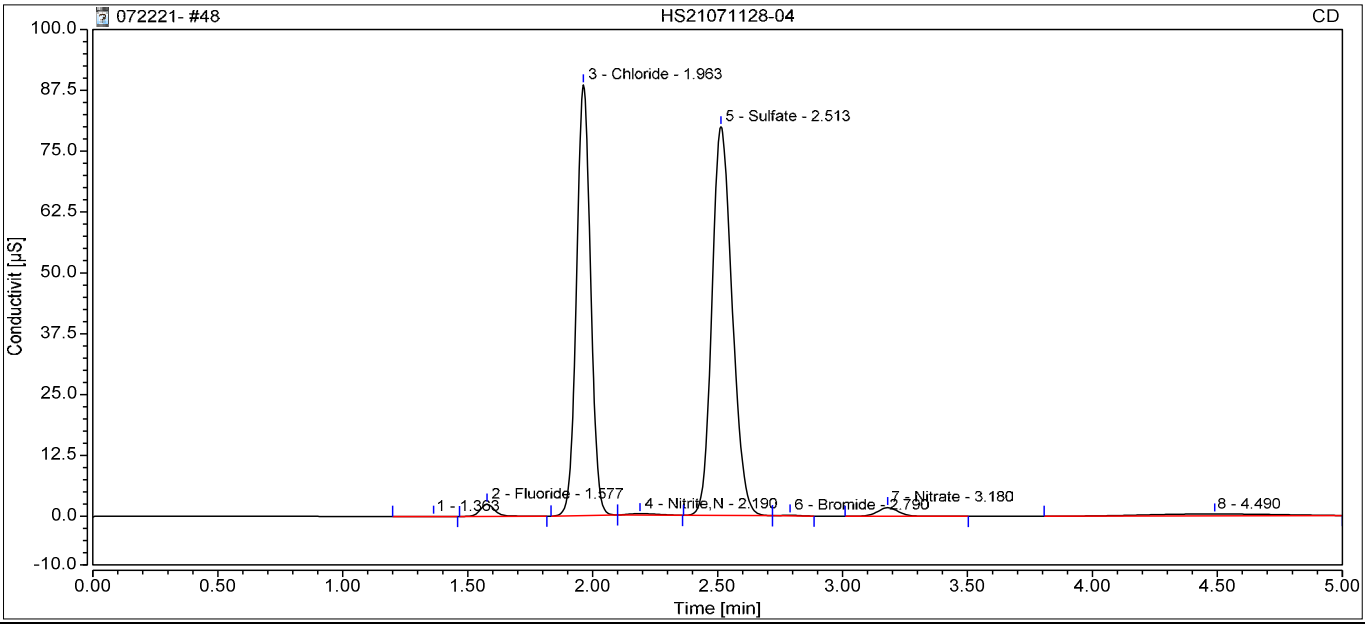
Integration Results

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	1.96	Chloride	BMB	0.003	0.0165	0.0165	1.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	1.0000
2	2.55	Sulfate	BMB	0.003	0.0468	0.0468	1.0000
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Nitrate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	1.0000
Total:			**0.000**	**0.006**		**0.06**	

48 HS21071128-04

Sample Name:	**HS21071128-04**	*Injection Volume:*	**5.00**
Vial Number:	**BD4**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program ISO37mM 150mm short 0.4**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method ISO**	*Dilution Factor:*	**1.0000**
Recording Time:	**07/22/2021 16:19**	*Sample Weight:*	**1.0000**

Run Time:



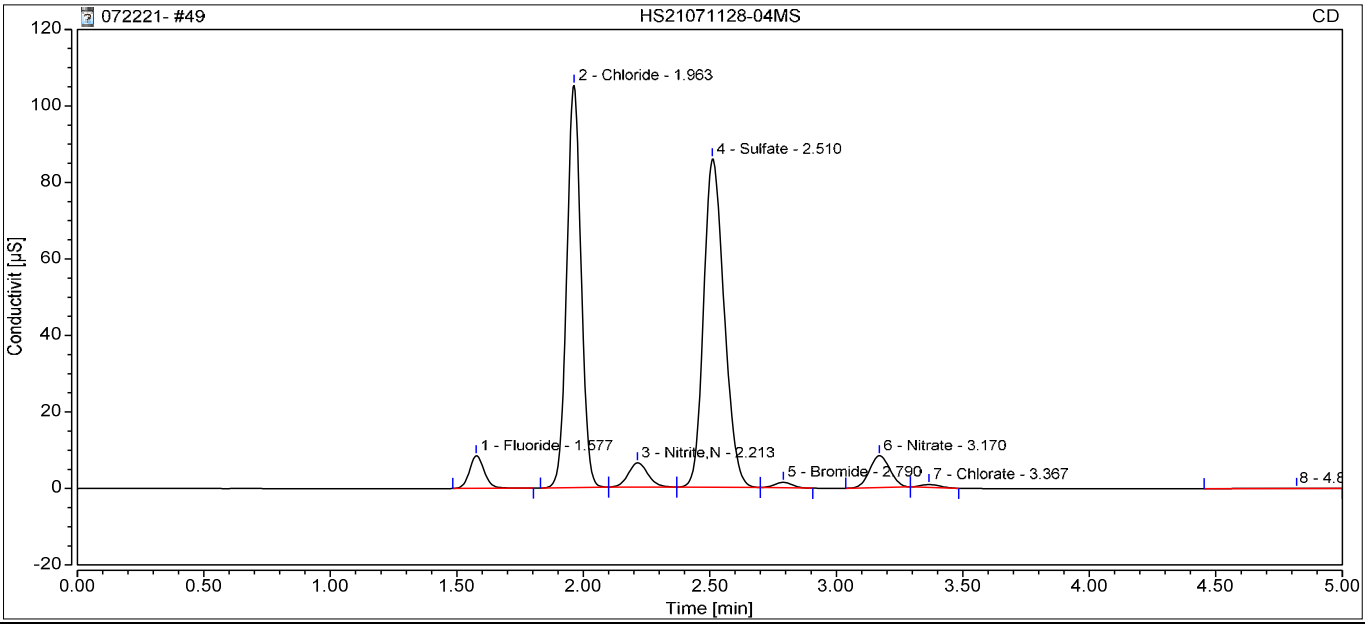
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
2	1.58	Fluoride	BMB	0.172	0.8305	0.8305	1.0000
3	1.96	Chloride	BMB	5.779	43.4275	43.4275	1.0000
4	2.19	Nitrite,N	BMB	0.043	0.1263	0.1263	1.0000
5	2.51	Sulfate	BMB	7.497	77.8258	77.8258	1.0000
6	2.79	Bromide	BMB	0.011	0.2295	0.2295	1.0000
7	3.18	Nitrate	BMB	0.172	0.5655	0.5655	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**	**13.673**		**123.01**	

49 HS21071128-04MS

Sample Name:	**HS21071128-04MS**	*Injection Volume:*	**5.00**
Vial Number:	**BD5**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program ISO37mM 150mm short 0.4**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method ISO**	*Dilution Factor:*	**1.0000**
Recording Time:	**07/22/2021 16:27**	*Sample Weight:*	**1.0000**

Run Time:



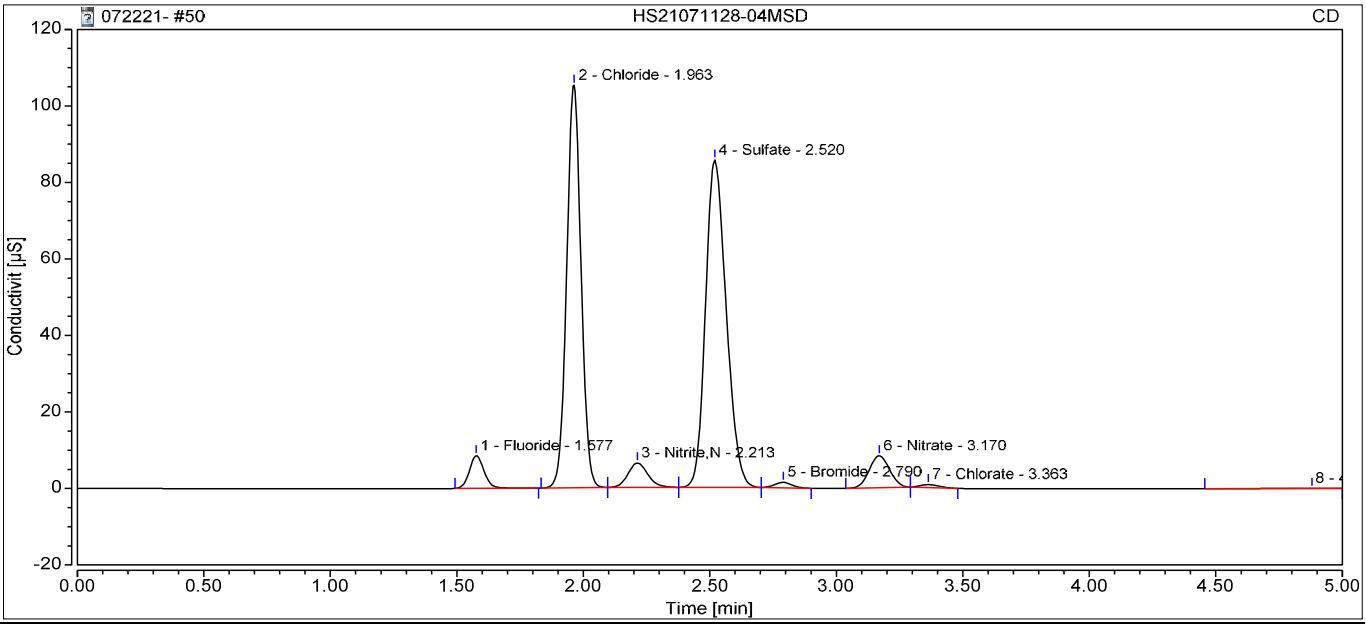
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	1.58	Fluoride	BMB	0.578	2.8184	2.8184	1.0000
2	1.96	Chloride	BMB	6.878	51.6934	51.6934	1.0000
3	2.21	Nitrite,N	BMB	0.572	1.9588	1.9588	1.0000
4	2.51	Sulfate	BMB	8.072	83.7974	83.7974	1.0000
5	2.79	Bromide	BMB	0.114	2.2237	2.2237	1.0000
6	3.17	Nitrate	BMB	0.778	2.5618	2.5618	1.0000
7	3.37	Chlorate	BMB	0.066	1.9466	1.9466	1.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	1.0000
Total:			**0.000**	**17.058**		**147.00**	

50 HS21071128-04MSD

Sample Name:	**HS21071128-04MSD**	*Injection Volume:*	**5.00**
Vial Number:	**BD6**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program ISO37mM 150mm short 0.4**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method ISO**	*Dilution Factor:*	**1.0000**
Recording Time:	**07/22/2021 16:34**	*Sample Weight:*	**1.0000**

Run Time:



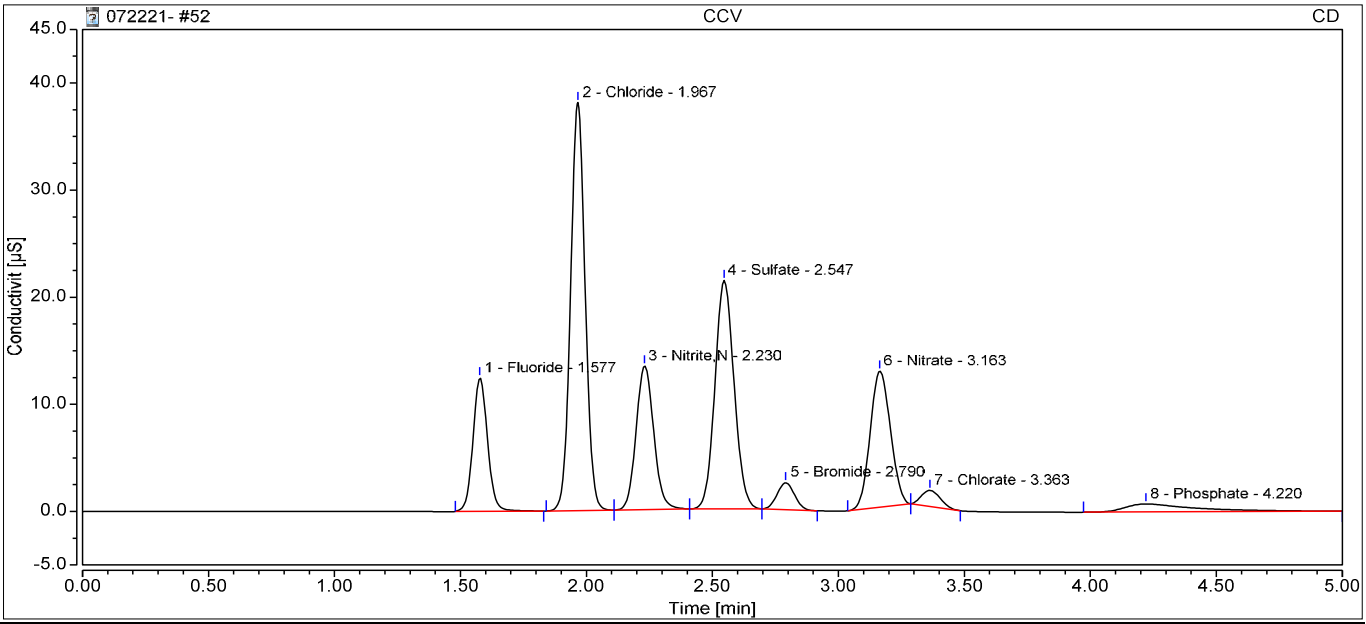
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	1.58	Fluoride	BMB	0.571	2.7889	2.7889	1.0000
2	1.96	Chloride	BMB	6.902	51.8732	51.8732	1.0000
3	2.21	Nitrite,N	BMB	0.578	1.9825	1.9825	1.0000
4	2.52	Sulfate	BMB	8.103	84.1247	84.1247	1.0000
5	2.79	Bromide	BMB	0.111	2.1594	2.1594	1.0000
6	3.17	Nitrate	BMB	0.779	2.5642	2.5642	1.0000
7	3.36	Chlorate	BMB	0.066	1.9242	1.9242	1.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	1.0000
Total:			**0.000**	**17.111**		**147.42**	

52 CCV

Sample Name:	**CCV**	*Injection Volume:*	**5.00**
Vial Number:	**R1**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program ISO37mM 150mm short 0.4**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method ISO**	*Dilution Factor:*	**1.0000**
Recording Time:	**07/22/2021 16:49**	*Sample Weight:*	**1.0000**

Run Time:



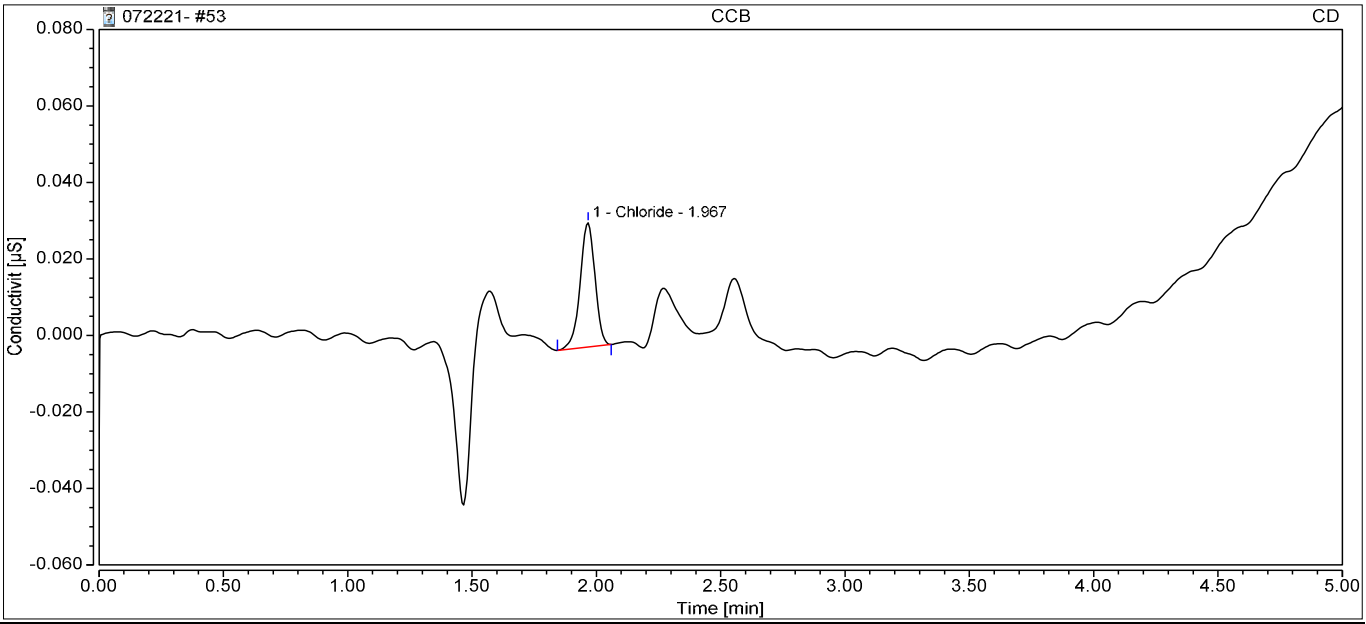
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	1.58	Fluoride	BMB	0.835	4.0809	4.0809	1.0000
2	1.97	Chloride	BMB	2.542	19.0985	19.0985	1.0000
3	2.23	Nitrite,N	BMB	1.090	3.8231	3.8231	1.0000
4	2.55	Sulfate	BMB	1.875	19.4824	19.4824	1.0000
5	2.79	Bromide	BMB	0.202	3.9166	3.9166	1.0000
6	3.16	Nitrate	BMB	1.186	3.9062	3.9062	1.0000
7	3.36	Chlorate	BMB	0.132	3.9422	3.9422	1.0000
8	4.22	Phosphate	BMB	0.249	2.2447	2.2447	1.0000
Total:			**0.000**	**8.111**		**60.49**	

53 CCB

Sample Name:	**CCB**	*Injection Volume:*	**5.00**
Vial Number:	**R4**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program ISO37mM 150mm short 0.4**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method ISO**	*Dilution Factor:*	**1.0000**
Recording Time:	**07/22/2021 17:04**	*Sample Weight:*	**1.0000**

Run Time:



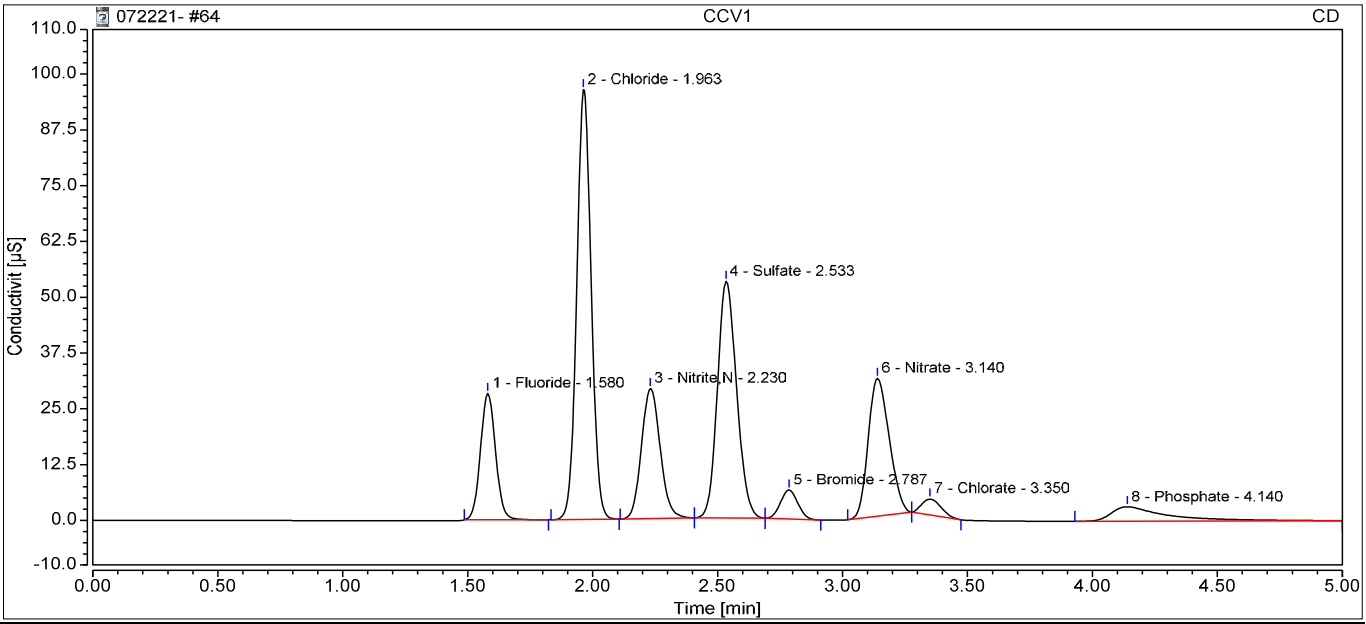
Integration Results

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	1.97	Chloride	BMB	0.002	0.0099	0.0099	1.0000
n.a.	n.a.	Nitrite,N	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.	Bromide	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Nitrate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	1.0000
Total:			**0.000**	**0.002**		**0.01**	

64 CCV1

Sample Name:	**CCV1**	*Injection Volume:*	**5.00**
Vial Number:	**R3**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program ISO37mM 150mm short 0.4**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method ISO**	*Dilution Factor:*	**1.0000**
Recording Time:	**07/22/2021 18:26**	*Sample Weight:*	**1.0000**

Run Time:



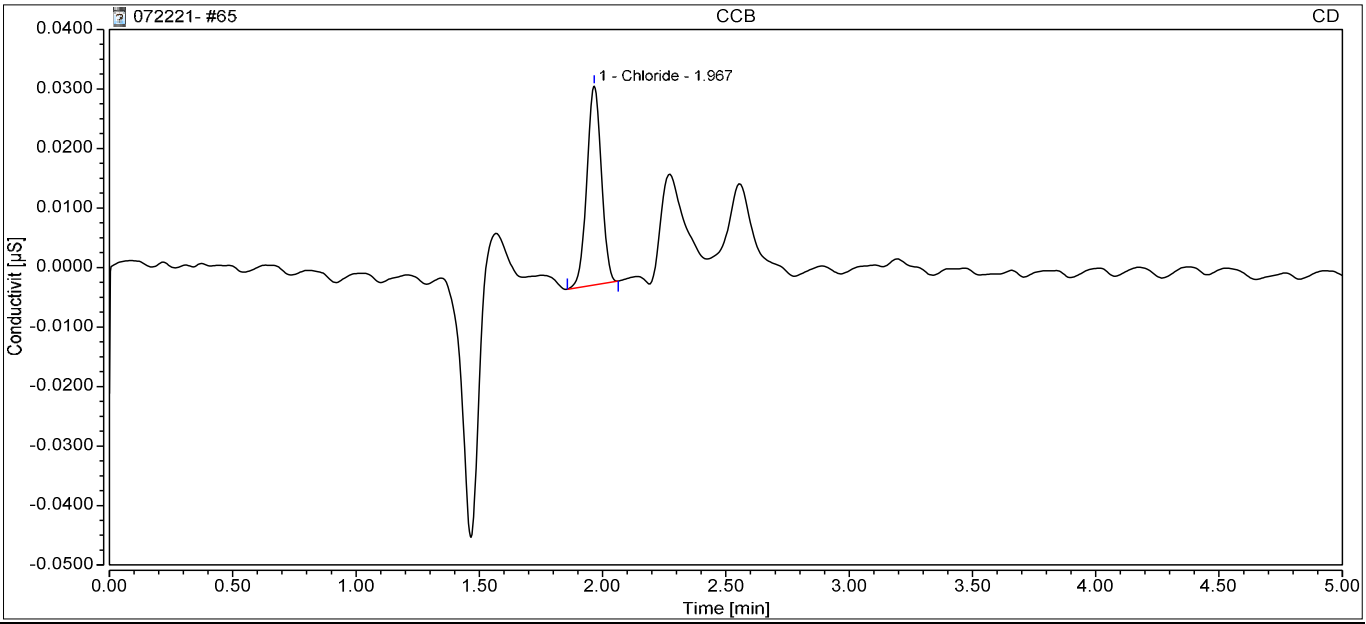
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	1.58	Fluoride	BMB	1.987	9.7342	9.7342	1.0000
2	1.96	Chloride	BMB	6.431	48.3297	48.3297	1.0000
3	2.23	Nitrite,N	BMB	2.532	9.4415	9.4415	1.0000
4	2.53	Sulfate	BMB	4.722	49.0302	49.0302	1.0000
5	2.79	Bromide	BMB	0.522	10.0903	10.0903	1.0000
6	3.14	Nitrate	BMB	3.002	9.8905	9.8905	1.0000
7	3.35	Chlorate	BMB	0.319	10.2294	10.2294	1.0000
8	4.14	Phosphate	BMB	0.837	7.3506	7.3506	1.0000
Total:			**0.000**	**20.352**		**154.10**	

65 CCB

Sample Name:	**CCB**	*Injection Volume:*	**5.00**
Vial Number:	**R8**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program ISO37mM 150mm short 0.4**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method ISO**	*Dilution Factor:*	**1.0000**
Recording Time:	**07/22/2021 18:40**	*Sample Weight:*	**1.0000**

Run Time:



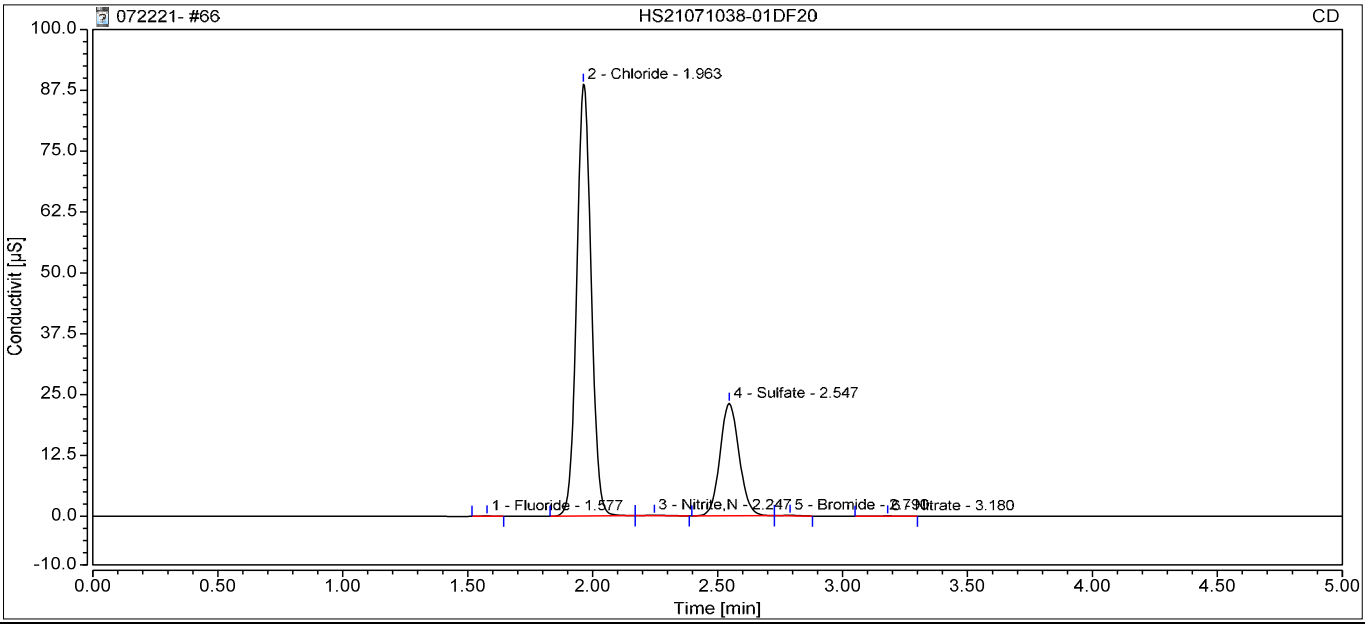
Integration Results

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	1.97	Chloride	BMB	0.002	0.0102	0.0102	1.0000
n.a.	n.a.	Nitrite,N	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.	Bromide	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Nitrate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	1.0000
Total:			**0.000**	**0.002**		**0.01**	

66 HS21071038-01DF20

Sample Name:	**HS21071038-01DF20**	*Injection Volume:*	**5.00**
Vial Number:	**RA2**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program ISO37mM 150mm short 0.4**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method ISO**	*Dilution Factor:*	**20.0000**
Recording Time:	**07/22/2021 18:48**	*Sample Weight:*	**1.0000**

Run Time:



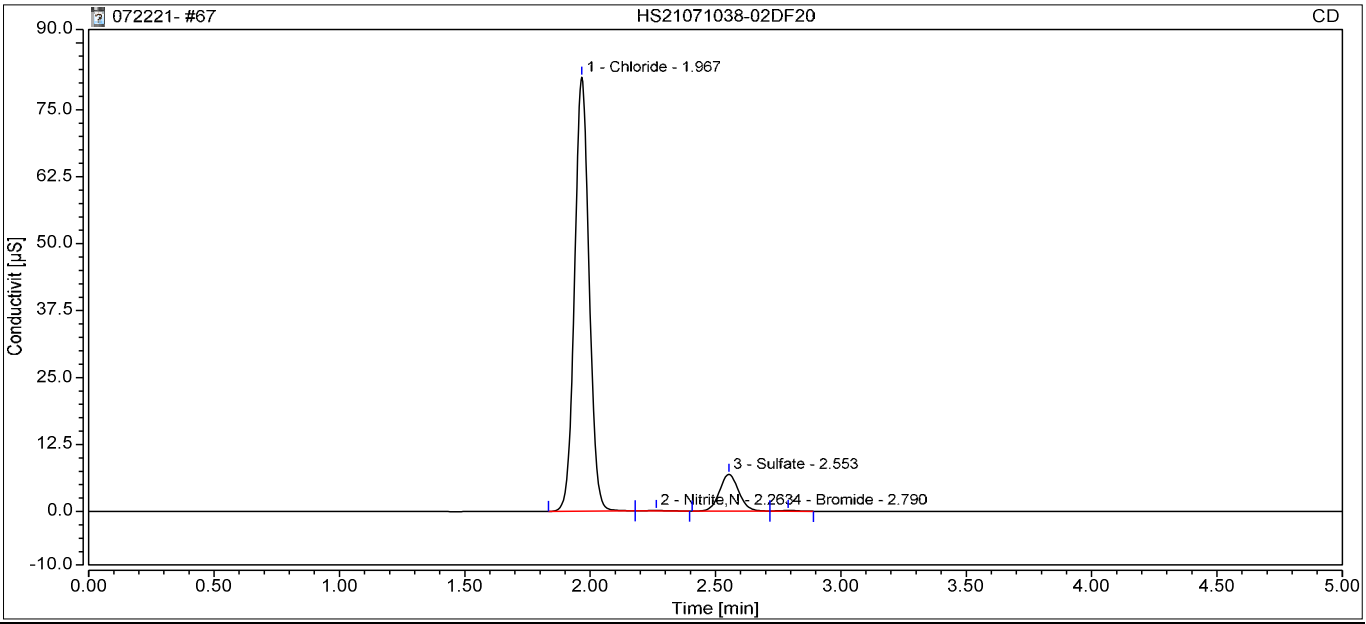
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	1.58	Fluoride	BMB	0.003	0.0021	0.0422	20.0000
2	1.96	Chloride	BMB	5.943	44.6607	893.2134	20.0000
3	2.25	Nitrite,N	BMB	0.010	0.0173	0.3452	20.0000
4	2.55	Sulfate	BMB	2.058	21.3775	427.5495	20.0000
5	2.79	Bromide	BMB	0.008	0.1801	3.6015	20.0000
6	3.18	Nitrate	BMB	0.003	0.0073	0.1451	20.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	20.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	20.0000
Total:			**0.000**	**8.026**		**1324.90**	

67 HS21071038-02DF20

Sample Name:	**HS21071038-02DF20**	*Injection Volume:*	**5.00**
Vial Number:	**RA3**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program ISO37mM 150mm short 0.4**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method ISO**	*Dilution Factor:*	**20.0000**
Recording Time:	**07/22/2021 18:55**	*Sample Weight:*	**1.0000**

Run Time:



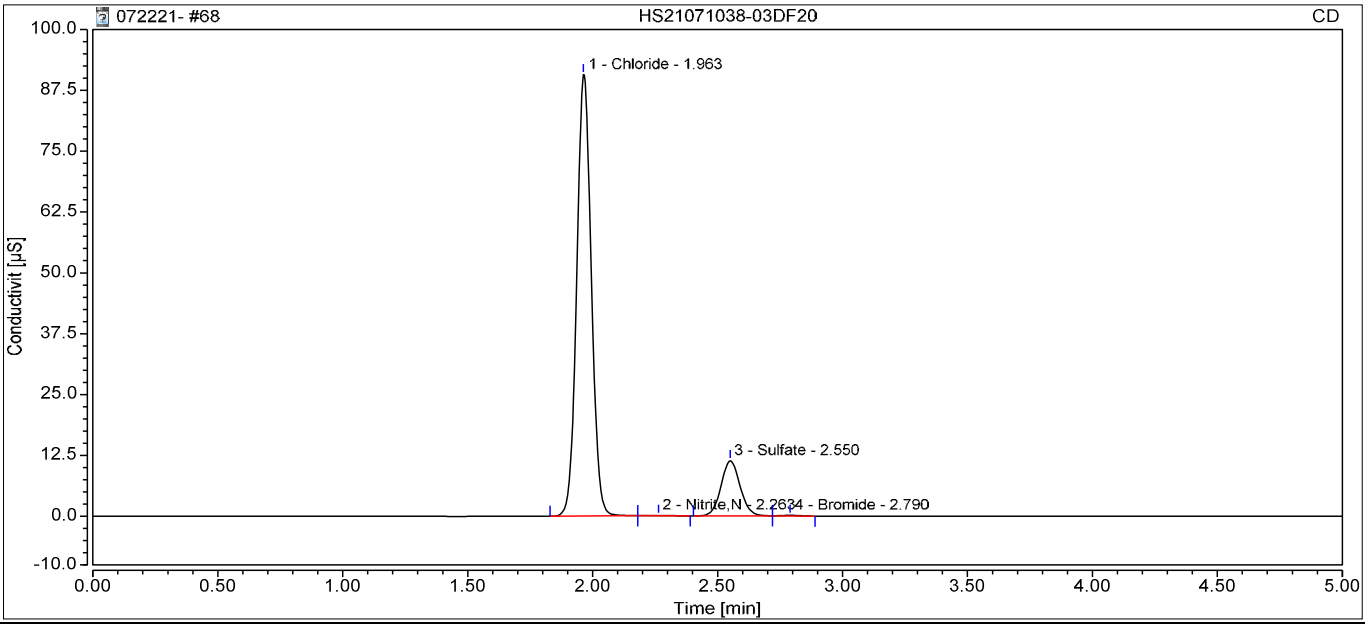
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	20.0000
1	1.97	Chloride	BMB	5.424	40.7621	815.2421	20.0000
2	2.26	Nitrite,N	BMB	0.007	0.0060	0.1195	20.0000
3	2.55	Sulfate	BMB	0.605	6.2987	125.9750	20.0000
4	2.79	Bromide	BMB	0.009	0.1978	3.9561	20.0000
n.a.	n.a.	Nitrate	n.a.	n.a.	n.a.	n.a.	20.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	20.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	20.0000
Total:			**0.000**	**6.045**		**945.29**	

68 HS21071038-03DF20

Sample Name:	**HS21071038-03DF20**	*Injection Volume:*	**5.00**
Vial Number:	**RA4**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program ISO37mM 150mm short 0.4**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method ISO**	*Dilution Factor:*	**20.0000**
Recording Time:	**07/22/2021 19:03**	*Sample Weight:*	**1.0000**

Run Time:



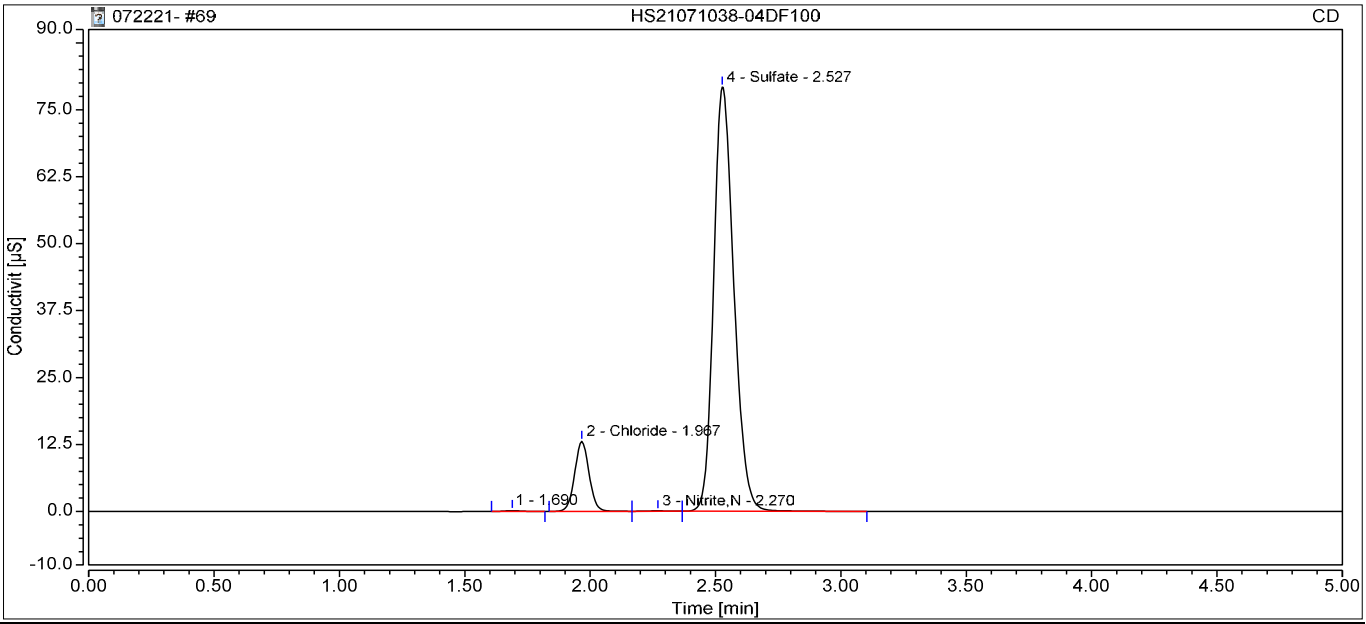
Integration Results

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.	20.0000
1	1.96	Chloride	BMB	6.100	45.8394	916.7871	20.0000
2	2.26	Nitrite,N	BMB	0.008	0.0075	0.1499	20.0000
3	2.55	Sulfate	BMB	1.003	10.4255	208.5097	20.0000
4	2.79	Bromide	BMB	0.010	0.2107	4.2147	20.0000
n.a.	n.a.	Nitrate	n.a.	n.a.	n.a.	n.a.	20.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	20.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	20.0000
Total:			**0.000**	**7.120**		**1129.66**	

69 HS21071038-04DF100

Sample Name:	**HS21071038-04DF100**	*Injection Volume:*	**5.00**
Vial Number:	**RA5**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program ISO37mM 150mm short 0.4**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method ISO**	*Dilution Factor:*	**100.0000**
Recording Time:	**07/22/2021 19:10**	*Sample Weight:*	**1.0000**

Run Time:

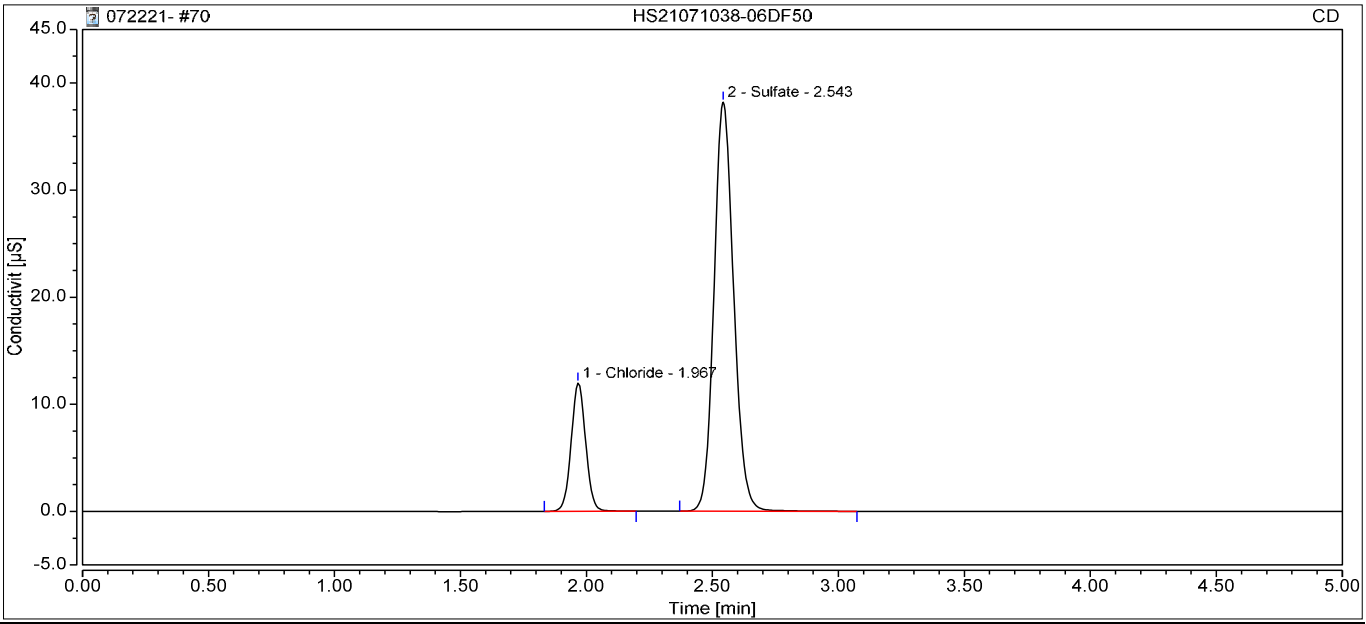


Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	100.0000
2	1.97	Chloride	BMB	0.872	6.5454	654.5414	100.0000
3	2.27	Nitrite,N	BMB	0.007	0.0060	0.5952	100.0000
4	2.53	Sulfate	BMB	7.392	76.7462	7674.6189	100.0000
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	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**	**8.271**		**8329.76**	

70 HS21071038-06DF50			
Sample Name:	**HS21071038-06DF50**	*Injection Volume:*	**5.00**
Vial Number:	**RA6**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program ISO37mM 150mm short 0.4**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method ISO**	*Dilution Factor:*	**50.0000**
Recording Time:	**07/22/2021 19:17**	*Sample Weight:*	**1.0000**

Run Time:



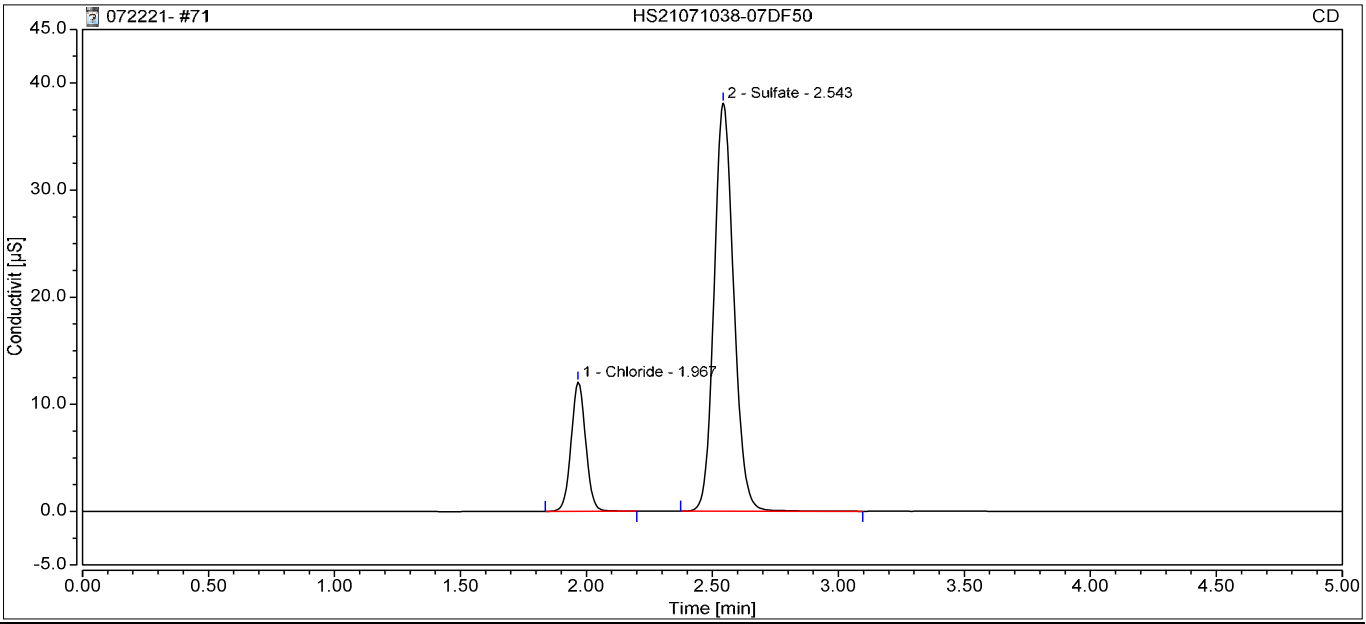
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	50.0000
1	1.97	Chloride	BMB	0.799	6.0009	300.0432	50.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	50.0000
2	2.54	Sulfate	BMB	3.453	35.8594	1792.9707	50.0000
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	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**	**4.252**		**2093.01**	

71 HS21071038-07DF50

Sample Name:	**HS21071038-07DF50**	*Injection Volume:*	**5.00**
Vial Number:	**RA7**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program ISO37mM 150mm short 0.4**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method ISO**	*Dilution Factor:*	**50.0000**
Recording Time:	**07/22/2021 19:25**	*Sample Weight:*	**1.0000**

Run Time:

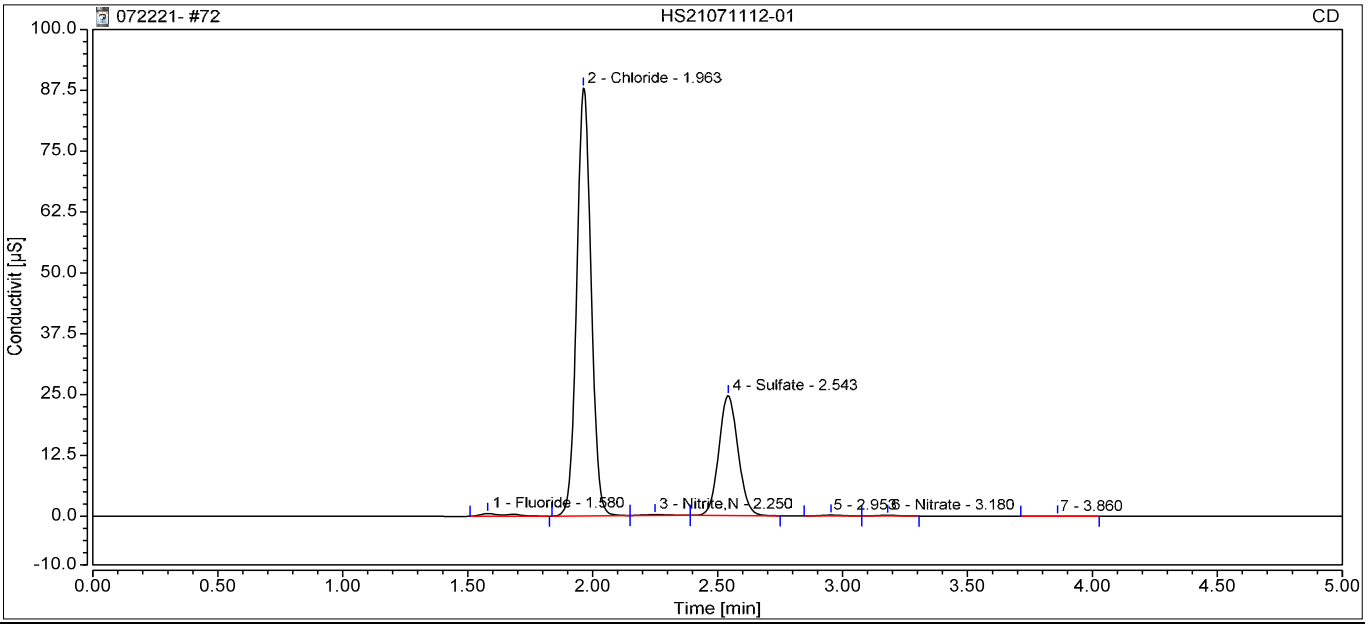


Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	50.0000
1	1.97	Chloride	BMB	0.808	6.0642	303.2106	50.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	50.0000
2	2.54	Sulfate	BMB	3.448	35.8119	1790.5948	50.0000
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	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**	**4.256**		**2093.81**	

72	*HS21071112-01*		
Sample Name:	**HS21071112-01**	*Injection Volume:*	**5.00**
Vial Number:	**RA8**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program ISO37mM 150mm short 0.4**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method ISO**	*Dilution Factor:*	**1.0000**
Recording Time:	**07/22/2021 19:32**	*Sample Weight:*	**1.0000**

Run Time:



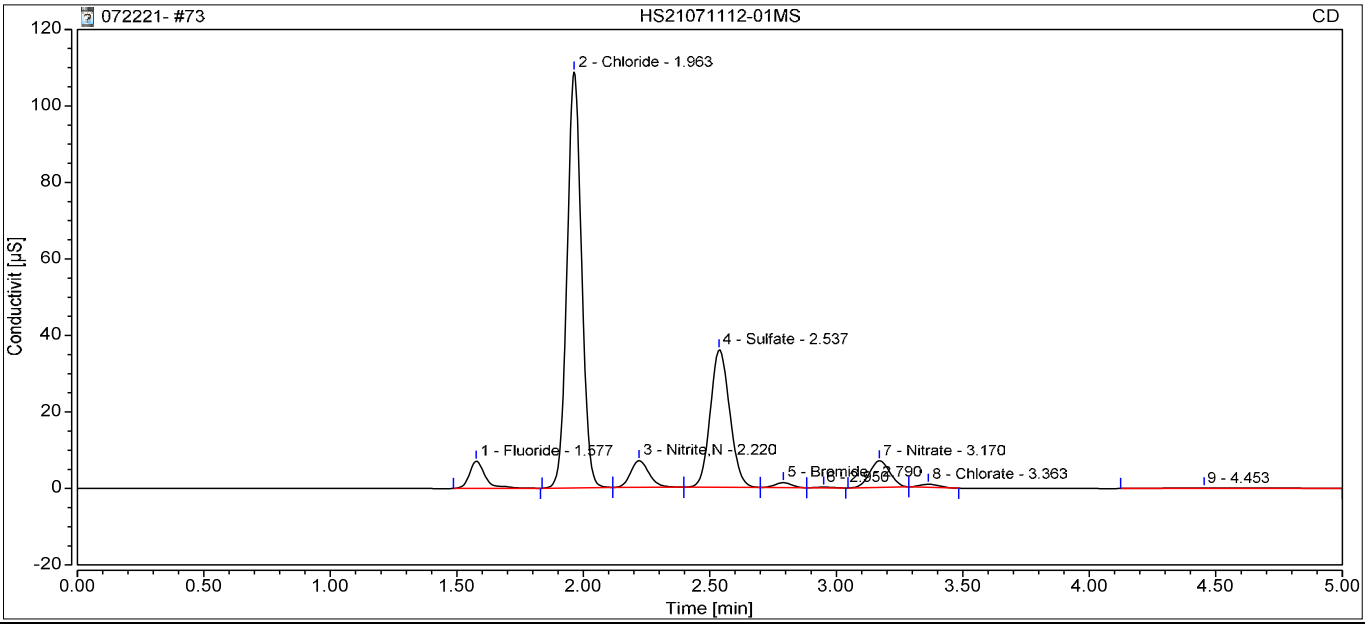
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	1.58	Fluoride	BMB	0.070	0.3284	0.3284	1.0000
2	1.96	Chloride	BMB	5.843	43.9091	43.9091	1.0000
3	2.25	Nitrite,N	BMB	0.019	0.0477	0.0477	1.0000
4	2.54	Sulfate	BMB	2.203	22.8832	22.8832	1.0000
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	1.0000
6	3.18	Nitrate	BMB	0.014	0.0449	0.0449	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**	**8.149**		**67.21**	

73 HS21071112-01MS

Sample Name:	**HS21071112-01MS**	*Injection Volume:*	**5.00**
Vial Number:	**RB1**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program ISO37mM 150mm short 0.4**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method ISO**	*Dilution Factor:*	**1.0000**
Recording Time:	**07/22/2021 19:40**	*Sample Weight:*	**1.0000**

Run Time:



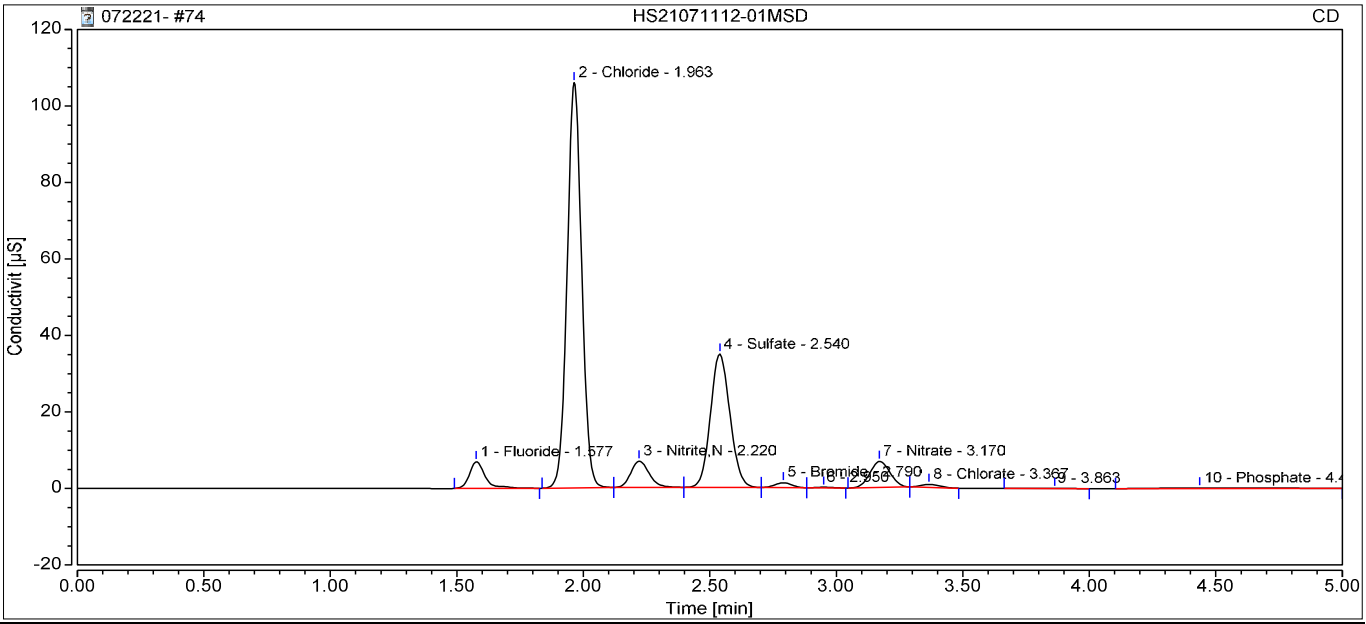
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	1.58	Fluoride	BMB	0.513	2.5027	2.5027	1.0000
2	1.96	Chloride	BMB	7.196	54.0835	54.0835	1.0000
3	2.22	Nitrite,N	BMB	0.586	2.0096	2.0096	1.0000
4	2.54	Sulfate	BMB	3.217	33.4070	33.4070	1.0000
5	2.79	Bromide	BMB	0.099	1.9226	1.9226	1.0000
7	3.17	Nitrate	BMB	0.641	2.1085	2.1085	1.0000
8	3.36	Chlorate	BMB	0.071	2.0870	2.0870	1.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	1.0000
Total:			**0.000**	**12.323**		**98.12**	

74 HS21071112-01MSD

Sample Name:	**HS21071112-01MSD**	*Injection Volume:*	**5.00**
Vial Number:	**RB2**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program ISO37mM 150mm short 0.4**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method ISO**	*Dilution Factor:*	**1.0000**
Recording Time:	**07/22/2021 19:47**	*Sample Weight:*	**1.0000**

Run Time:



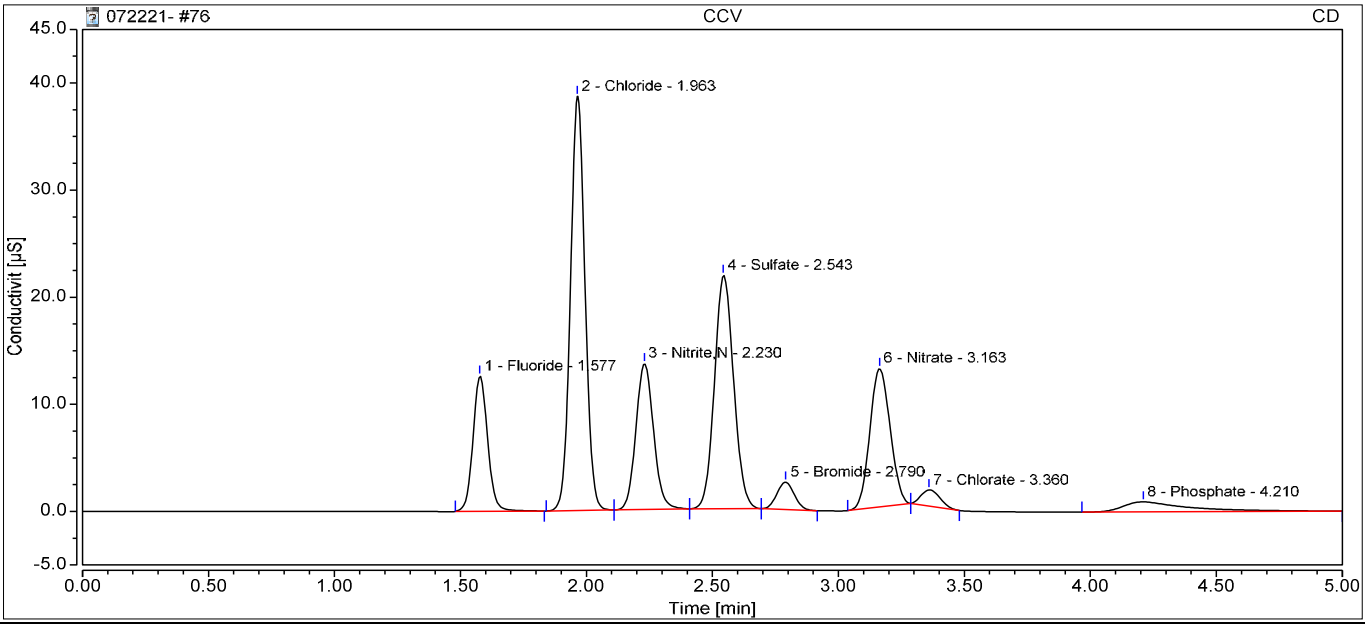
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	1.58	Fluoride	BMB	0.499	2.4353	2.4353	1.0000
2	1.96	Chloride	BMB	7.033	52.8547	52.8547	1.0000
3	2.22	Nitrite,N	BMB	0.574	1.9683	1.9683	1.0000
4	2.54	Sulfate	BMB	3.114	32.3439	32.3439	1.0000
5	2.79	Bromide	BMB	0.097	1.8875	1.8875	1.0000
7	3.17	Nitrate	BMB	0.628	2.0675	2.0675	1.0000
8	3.37	Chlorate	BMB	0.070	2.0415	2.0415	1.0000
10	4.44	Phosphate	BMB	0.061	0.6123	0.6123	1.0000
Total:			**0.000**	**12.076**		**96.21**	

76 CCV

Sample Name:	**CCV**	*Injection Volume:*	**5.00**
Vial Number:	**R1**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program ISO37mM 150mm short 0.4**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method ISO**	*Dilution Factor:*	**1.0000**
Recording Time:	**07/22/2021 20:02**	*Sample Weight:*	**1.0000**

Run Time:



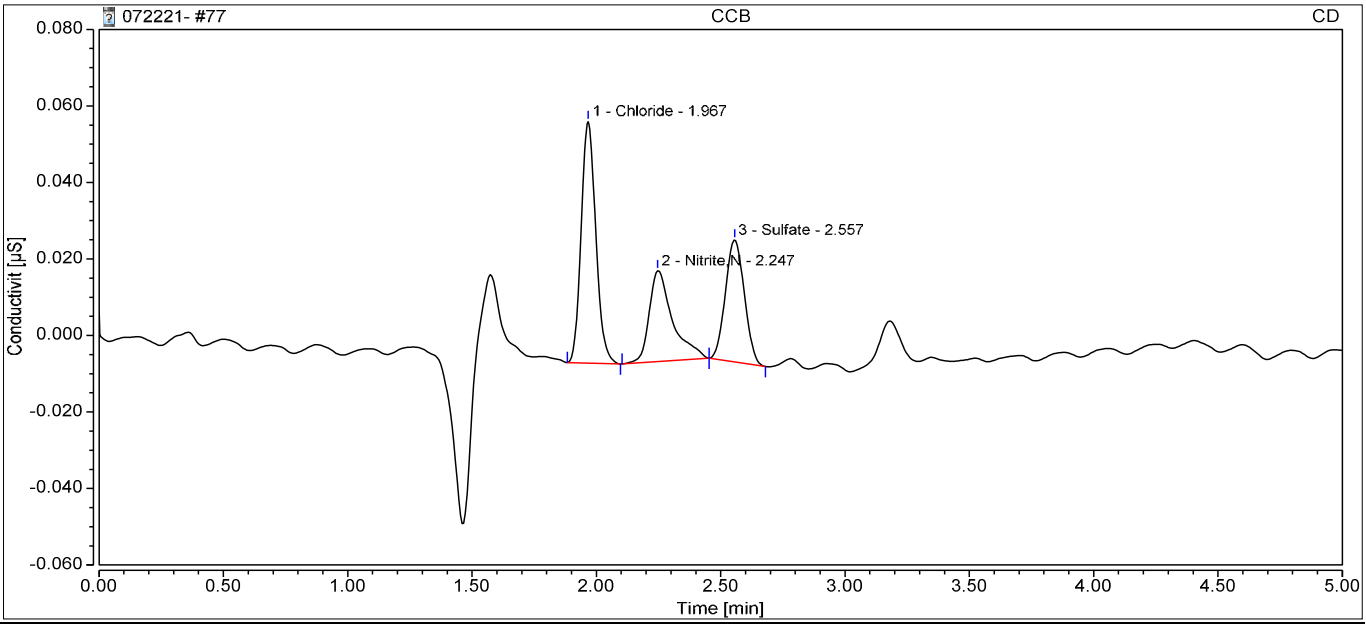
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	1.58	Fluoride	BMB	0.851	4.1608	4.1608	1.0000
2	1.96	Chloride	BMB	2.578	19.3717	19.3717	1.0000
3	2.23	Nitrite,N	BMB	1.107	3.8839	3.8839	1.0000
4	2.54	Sulfate	BMB	1.919	19.9417	19.9417	1.0000
5	2.79	Bromide	BMB	0.206	3.9873	3.9873	1.0000
6	3.16	Nitrate	BMB	1.207	3.9741	3.9741	1.0000
7	3.36	Chlorate	BMB	0.133	3.9978	3.9978	1.0000
8	4.21	Phosphate	BMB	0.282	2.5379	2.5379	1.0000
Total:			**0.000**	**8.284**		**61.86**	

77 CCB

Sample Name:	**CCB**	*Injection Volume:*	**5.00**
Vial Number:	**R4**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program ISO37mM 150mm short 0.4**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method ISO**	*Dilution Factor:*	**1.0000**
Recording Time:	**07/22/2021 20:09**	*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	1.97	Chloride	BMB	0.004	0.0254	0.0254	1.0000
2	2.25	Nitrite,N	BMB	0.003	n.a.	n.a.	1.0000
3	2.56	Sulfate	BMB	0.003	0.0497	0.0497	1.0000
n.a.	n.a.	Bromide	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**	**0.010**		**0.08**	

HS21071038 Wet Chemistry Raw Data

ALS WO# HS21071038

HS21071038

TOC-Control L Report

2021_05_10_001.tlx

Instr.Information

Instrument Options	TOC/ASI/IC Unit/
Catalyst	Regular Sensitivity

Cal. Curve

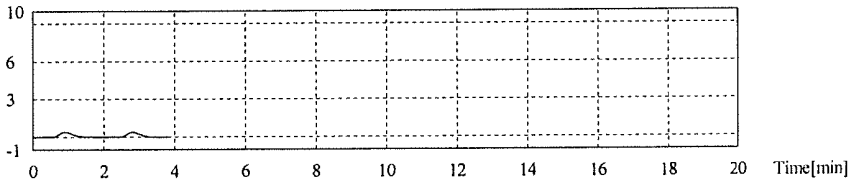
Sample Name:	CAL
Sample ID:	310060415
Cal. Curve:	05_10_2021_CAL.2021_05_10_12_52_50.cal
Status	Completed

Type	Anal.
Standard	TC

Conc: 0.000mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	0.9893	50uL	1.000	*******		5/10/2021 12:56:52 PM
2	0.9139	50uL	1.000	*******		5/10/2021 12:59:02 PM

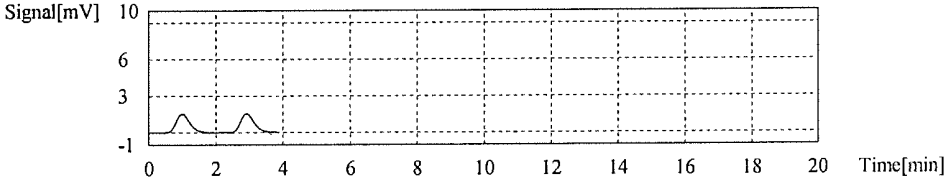
Acid Add. 0.000%
Mean Area 0.9516



Conc: 1.000mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	4.229	50uL	1.000	*******		5/10/2021 1:03:19 PM
2	4.205	50uL	1.000	*******		5/10/2021 1:05:31 PM

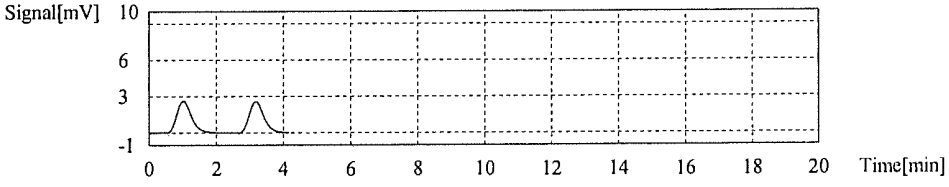
Acid Add. 0.000%
Mean Area 4.217



Conc: 2.000mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	7.619	50uL	1.000	*******		5/10/2021 1:10:01 PM
2	7.637	50uL	1.000	*******		5/10/2021 1:12:18 PM

Acid Add. 0.000%
Mean Area 7.628



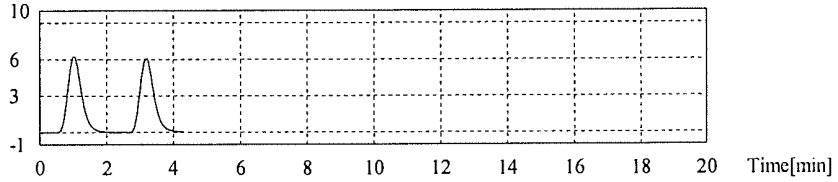
TOC-Control L Report

2021_05_10_001.tlx

Conc: 5.000mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	17.77	50uL	1.000	*******		5/10/2021 1:16:50 PM
2	17.52	50uL	1.000	*******		5/10/2021 1:19:13 PM

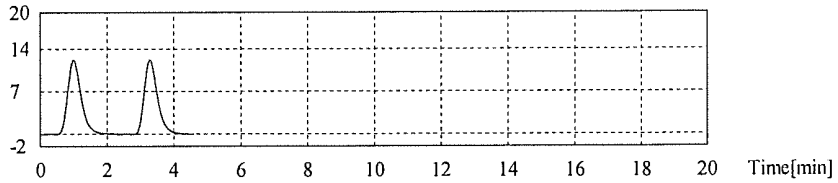
Acid Add. 0.000%
Mean Area 17.65



Conc: 10.00mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	33.49	50uL	1.000	*******		5/10/2021 1:23:52 PM
2	33.68	50uL	1.000	*******		5/10/2021 1:26:26 PM

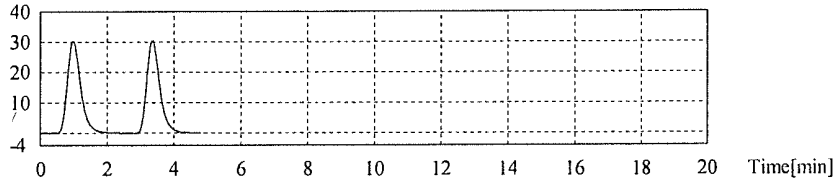
Acid Add. 0.000%
Mean Area 33.59



Conc: 25.00mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	83.01	50uL	1.000	*******		5/10/2021 1:31:09 PM
2	83.18	50uL	1.000	*******		5/10/2021 1:33:52 PM

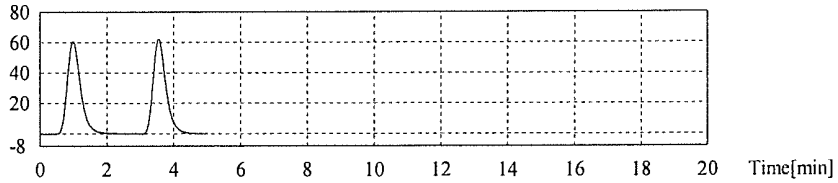
Acid Add. 0.000%
Mean Area 83.09



Conc: 50.00mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	166.1	50uL	1.000	*******		5/10/2021 1:38:47 PM
2	166.5	50uL	1.000	*******		5/10/2021 1:41:31 PM

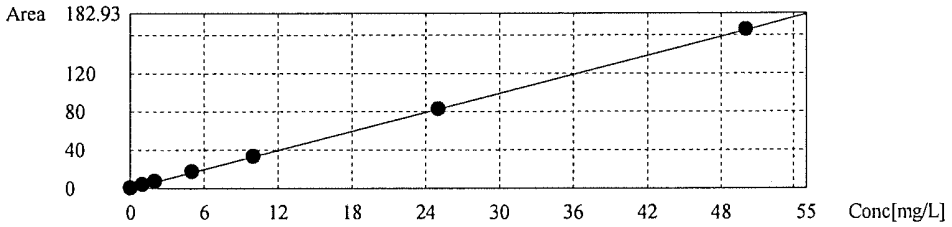
Acid Add. 0.000%
Mean Area 166.3



TOC-Control L Report

2021_05_10_001.tlx

Slope:	3.304
Intercept	0.000
r^2	1.0000
r	1.0000
RSE(%)	N/A
Zero Shift	Yes



C:\TOC-L\Data\2021_07_31_001.tlx

	Type	Analysis	Sample Name	Sample ID	Origin	Result	Notes	Status	Date / Time
1	Unknown	NPOC	CCV	317190805	05_10_2021	NPOC:25.7		Completed	7/31/2021 1
2	Unknown	NPOC	CCB		05_10_2021	NPOC:0.12		Completed	7/31/2021 1
3	Unknown	NPOC	MBLK-073121		05_10_2021	NPOC:0.11		Completed	7/31/2021 1
4	Unknown	NPOC	LCS-07312021	3100603915	05_10_2021	NPOC:10.4		Completed	7/31/2021 1
5	Unknown	NPOC	LCSD-07312021	3100603915	05_10_2021	NPOC:10.3		Completed	7/31/2021 1
6	Unknown	NPOC	HS21071038-01		05_10_2021	NPOC:4.46		Completed	7/31/2021 1
7	Unknown	NPOC	HS21071038-02		05_10_2021	NPOC:1.78		Completed	7/31/2021 1:
8	Unknown	NPOC	HS21071038-02MS		05_10_2021	NPOC:11.6		Completed	7/31/2021 1:
9	Unknown	NPOC	HS21071038-03		05_10_2021	NPOC:2.39		Completed	7/31/2021 1:
10	Unknown	NPOC	HS21071038-04		05_10_2021	NPOC:50.2		Completed	7/31/2021 1:
11	Unknown	NPOC	HS21071038-06		05_10_2021	NPOC:17.4		Completed	7/31/2021 2:
12	Unknown	NPOC	HS21071038-07		05_10_2021	NPOC:16.9		Completed	7/31/2021 2:
13	Unknown	NPOC	CCV	317190805	05_10_2021	NPOC:25.6		Completed	7/31/2021 2:
14	Unknown	NPOC	CCB		05_10_2021	NPOC:0.23		Completed	7/31/2021 2:
15	Unknown	NPOC	HS21071472-01		05_10_2021	NPOC:9.12		Completed	7/31/2021 2:
16	Unknown	NPOC	HS21071480-01		05_10_2021	NPOC:11.2		Completed	7/31/2021 3:
17	Unknown	NPOC	HS21071549-01		05_10_2021	NPOC:23.6		Completed	7/31/2021 3:
18	Unknown	NPOC	HS21071549-02		05_10_2021	NPOC:10.5		Completed	7/31/2021 3:
19	Unknown	NPOC	CCV	317190805	05_10_2021	NPOC:25.9		Completed	7/31/2021 3:
20	Unknown	NPOC	CCB		05_10_2021	NPOC:0.19		Completed	7/31/2021 4:
21	Unknown	NPOC	MBLK-073121		05_10_2021	NPOC:0.14		Completed	7/31/2021 4:
22	Unknown	NPOC	LCS-07312021	3100603915	05_10_2021	NPOC:10.3		Completed	7/31/2021 4:
23	Unknown	NPOC	LCSD-07312021	3100603915	05_10_2021	NPOC:10.1		Completed	7/31/2021 4:
24	Unknown	NPOC	HS21071549-03		05_10_2021	NPOC:6.46		Completed	7/31/2021 4:
25	Unknown	NPOC	HS21071549-04		05_10_2021	NPOC:21.0		Completed	7/31/2021 5:
26	Unknown	NPOC	HS21071588-01		05_10_2021	NPOC:10.8		Completed	7/31/2021 5:
27	Unknown	NPOC	HS21071204-01		05_10_2021	NPOC:15.0		Completed	7/31/2021 5:
28	Unknown	NPOC	HS21071204-02		05_10_2021	NPOC:768.		Completed	7/31/2021 5:
29	Unknown	NPOC	HS21071204-02MS		05_10_2021	NPOC:786.		Completed	7/31/2021 6:
30	Unknown	NPOC	HS21071204-03		05_10_2021	NPOC:1937		Completed	7/31/2021 6:
31	Unknown	NPOC	CCV	317190805	05_10_2021	NPOC:30.1		Completed	7/31/2021 6:
32	Unknown	NPOC	CCB		05_10_2021	NPOC:0.69		Completed	7/31/2021 6:
33	Unknown	NPOC	HS21071204-08		05_10_2021	NPOC:8.24		Completed	7/31/2021 6:
34	Unknown	NPOC	HS21071647-01		05_10_2021	NPOC:14.9		Completed	7/31/2021 7:
35	Unknown	NPOC	HS21071667-36		05_10_2021	NPOC:1.31		Completed	7/31/2021 7:
36	Unknown	NPOC	HS21071667-48		05_10_2021	NPOC:2.07		Completed	7/31/2021 7:
37	Unknown	NPOC	CCV	317190805	05_10_2021	NPOC:28.9		Completed	7/31/2021 7:
38	Unknown	NPOC	CCB		05_10_2021	NPOC:0.31		Completed	7/31/2021 8:
39	Unknown	NPOC	MBLK-073121		05_10_2021	NPOC:0.20		Completed	7/31/2021 8:
40	Unknown	NPOC	LCS-07312021	3100603915	05_10_2021	NPOC:11.7		Completed	7/31/2021 8:
41	Unknown	NPOC	LCSD-07312021	3100603915	05_10_2021	NPOC:11.6		Completed	7/31/2021 8:
42	Unknown	NPOC	HS21071667-49		05_10_2021	NPOC:0.23		Completed	7/31/2021 8:
43	Unknown	NPOC	HS21071667-49MS		05_10_2021	NPOC:11.0		Completed	7/31/2021 9:
44	Unknown	NPOC	HS21071667-51		05_10_2021	NPOC:3.07		Completed	7/31/2021 9:
45	Unknown	NPOC	HS21071667-55		05_10_2021	NPOC:1.53		Completed	7/31/2021 9:
46	Unknown	NPOC	HS21071667-56		05_10_2021	NPOC:2.89		Completed	7/31/2021 9:
47	Unknown	NPOC	HS21071667-57		05_10_2021	NPOC:0.77		Completed	7/31/2021 1
48	Unknown	NPOC	HS21071667-68		05_10_2021	NPOC:2.90		Completed	7/31/2021 1
49	Unknown	NPOC	CCV	317190805	05_10_2021	NPOC:28.1		Completed	7/31/2021 1
50	Unknown	NPOC	CCB		05_10_2021	NPOC:0.20		Completed	7/31/2021 1
51	Unknown	NPOC	HS21071667-69		05_10_2021	NPOC:3.53		Completed	7/31/2021 1

C:\TOC-L\Data\2021_07_31_001.tlx

	Type	Analysis	Sample Name	Sample ID	Origin	Result	Notes	Status	Date / Time
52	Unknown	NPOC	HS21071667-71		05_10_2021	NPOC:0.59		Completed	7/31/2021 1
53	Unknown	NPOC	HS21071394-01		05_10_2021	NPOC:2.97		Completed	7/31/2021 1
54	Unknown	NPOC	HS21071394-02		05_10_2021	NPOC:140.		Completed	7/31/2021 1
55	Unknown	NPOC	CCV	317190805	05_10_2021	NPOC:28.7		Completed	7/31/2021 1
56	Unknown	NPOC	CCB		05_10_2021	NPOC:0.25		Completed	7/31/2021 1

	Vial
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
10	10
11	11
12	12
13	1
14	2
15	13
16	14
17	15
18	16
19	1
20	2
21	3
22	4
23	5
24	17
25	18
26	19
27	20
28	21
29	22
30	23
31	24
32	25
33	26
34	27
35	28
36	29
37	24
38	25
39	3
40	4
41	5
42	30
43	31
44	32
45	33
46	34
47	35
48	36
49	24
50	25
51	37

	Vial
52	38
53	39
54	40
55	24
56	25

C:\TOC-L\Data\2021_08_04_001.tlx

	Type	Analysis	Sample Name	Sample ID	Origin	Result	Notes	Status	Date / Time
1	Unknown	NPOC	CCV	317190113	05_10_2021	NPOC:25.7		Completed	8/4/2021 10:
2	Unknown	NPOC	CCB		05_10_2021	NPOC:0.12		Completed	8/4/2021 10:
3	Unknown	NPOC	MBLK-073121		05_10_2021	NPOC:0.19		Completed	8/4/2021 10:
4	Unknown	NPOC	LCS-07312021	3100603915	05_10_2021	NPOC:11.4		Completed	8/4/2021 10:
5	Unknown	NPOC	LCSD-07312021	3100603915	05_10_2021	NPOC:11.0		Completed	8/4/2021 11:
6	Unknown	NPOC	HS21071079-30		05_10_2021	NPOC:11.4		Completed	8/4/2021 11:
7	Unknown	NPOC	HS21071079-31		05_10_2021	NPOC:11.8		Completed	8/4/2021 11:
8	Unknown	NPOC	HS21071079-32		05_10_2021	NPOC:11.8		Completed	8/4/2021 11:
9	Unknown	NPOC	HS21071079-32MS		05_10_2021	NPOC:23.9		Completed	8/4/2021 11:
10	Unknown	NPOC	HS21071079-33		05_10_2021	NPOC:11.8		Completed	8/4/2021 12:
11	Unknown	NPOC	HS21071038-04DF2		05_10_2021	NPOC:0.00		Completed	8/4/2021 12:
12	Unknown	NPOC	CCV	317190113	05_10_2021	NPOC:24.6		Completed	8/4/2021 12:
13	Unknown	NPOC	CCB		05_10_2021	NPOC:0.19		Completed	8/4/2021 12:
14	Unknown	NPOC	HS21071038-04DF2		05_10_2021	NPOC:26.1		Completed	8/4/2021 1:2
15	Unknown	NPOC	CCV	317190113	05_10_2021	NPOC:25.1		Completed	8/4/2021 1:3
16	Unknown	NPOC	CCB		05_10_2021	NPOC:0.26		Completed	8/4/2021 1:4

	Vial
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
10	10
11	11
12	1
13	2
14	11
15	1
16	2

HS 21071038

Report Date: 07/22/2021 : 7:12

PC-TitratION PLUS
Calibration Report

Calibration Record # 2384

Calibration Settings

Calibration ID	PH CAL 4-7-10	Date	07/22/2021
Channel	1	Time	7:12 PM
Probe Type	pH	Temperature	296.88 K 23.73 C
Probe ID	PH ELECTRODE	Analysis Type	Single Line Fit

Calibration Results

Slope	-58.450	CorrCoeff	0.9998
Intercept	0.167	Equation:	Y = (-58.450) X + (0.167)

Calibration Validity True Operator

	Result	Minimum	Maximum
Slope	-58.450	-65.00	-53.00
Intercept	0.167	-100.00	100.00
Correlation Coefficient	0.9998	0.99	1.00

Note: "True" means the calibration was within the specified ranges
"False" means the calibration was NOT within the specified ranges

Calibration Data	Standard	Reading
	4.00	177.49
	7.00	-3.78
	10.00	-173.21

#388041 (A)

#388042 (B)

#388043 (D)

7/23/2021

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Report Date: 7/23/2021 : 6:38 AM

PC-TitratION PLUS
Water Analysis Report

Run Number 4141 **Order Number** 20210722-2

SampleID	RunDate	RunTime	Temp	cond (uS)	pH	palk-ppm	talk-ppm	bcarb-ppm	carb-ppm	hydr-ppm	mLs @ 8.3	mLs @ 4.5	mLs @ 4.2
ICV-PH	7/22/2021	7:52 PM	23.68	-1.00	6.07	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
TAP WATER	7/22/2021	7:58 PM	23.72	-1.00	7.89	.00	258.52	258.52	.00	.00	.00	2.46	2.46
WBLKW1-210722	7/22/2021	8:03 PM	23.68	-1.00	5.62	.00	.80	.80	.00	.00	.00	.02	.02
LCS1-210722	7/22/2021	8:12 PM	23.76	-1.00	10.86	524.29	1,025.07	.00	1,001.55	23.52	4.99	9.76	9.76
LCSD1-210722	7/22/2021	8:20 PM	24.12	-1.00	10.85	526.01	1,033.43	.00	1,014.86	18.58	5.01	9.84	9.84
HS21071157-04	7/22/2021	8:26 PM	24.12	-1.00	8.10	.00	69.34	69.34	.00	.00	.00	.66	.66
HS21071157-04DUP	7/22/2021	8:33 PM	23.94	-1.00	8.10	.00	68.69	68.69	.00	.00	.00	.65	.65
HS21071157-05	7/22/2021	8:40 PM	23.81	-1.00	8.04	.00	66.61	66.61	.00	.00	.00	.63	.63
HS21071112-01	7/22/2021	8:48 PM	23.81	-1.00	8.11	.00	164.69	164.69	.00	.00	.00	1.57	1.57
HS21071112-02	7/22/2021	8:55 PM	23.62	-1.00	8.24	.00	148.28	148.28	.00	.00	.00	1.41	1.41
HS21071000-01	7/22/2021	9:01 PM	23.51	-1.00	7.93	.00	96.88	96.88	.00	.00	.00	.92	.92
CCV-PH	7/22/2021	9:05 PM	23.56	-1.00	7.08	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
CCV-ALK	7/22/2021	9:13 PM	23.27	-1.00	10.83	524.92	1,030.86	.00	1,011.90	18.97	5.00	9.82	9.82
DI RINSE	7/22/2021	9:18 PM	23.65	-1.00	5.87	.00	.74	.74	.00	.00	.00	.02	.02
HS21070992-01	7/22/2021	9:23 PM	23.81	-1.00	5.48	.00	.23	.23	.00	.00	.00	.02	.02
HS21070587-59	7/22/2021	9:30 PM	23.96	-1.00	7.39	.00	5.18	5.18	.00	.00	.00	.06	.06
HS21070587-60	7/22/2021	9:38 PM	23.81	-1.00	9.06	1.24	10.19	7.70	2.48	.00	.01	.11	.11
HS21071000-02	7/22/2021	9:45 PM	23.56	-1.00	8.31	1.22	171.61	169.16	2.45	.00	.01	1.63	1.63
HS21071000-03	7/22/2021	9:52 PM	23.41	-1.00	8.20	.00	172.40	172.40	.00	.00	.00	1.64	1.64
HS21071000-04	7/22/2021	9:58 PM	23.35	-1.00	8.30	.19	108.89	108.51	.39	.00	.00	1.04	1.04
HS21071000-05	7/22/2021	10:06 PM	23.54	-1.00	8.90	8.24	101.93	85.46	16.48	.00	.08	.97	.97
HS21070835-02	7/22/2021	10:12 PM	23.78	-1.00	6.92	.00	381.61	381.61	.00	.00	.00	3.63	3.63
HS21070835-03	7/22/2021	10:19 PM	23.86	-1.00	6.94	.00	406.21	406.21	.00	.00	.00	3.87	3.87
CCV-PH	7/22/2021	10:22 PM	23.65	-1.00	7.08	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
CCV-ALK	7/22/2021	10:31 PM	23.39	-1.00	10.81	519.44	1,027.28	.00	1,015.68	11.60	4.95	9.78	9.78
DI RINSE	7/22/2021	10:36 PM	23.52	-1.00	5.88	.00	.73	.73	.00	.00	.00	.02	.02
HS21070835-04	7/22/2021	10:43 PM	23.44	-1.00	7.10	.00	646.28	646.28	.00	.00	.00	6.16	6.16

Run Number 4141 **Order Number** 20210722-2

SampleID	RunDate	RunTime	Temp	cond (uS)	pH	palk-ppm	talk-ppm	bcarb-ppm	carb-ppm	hydr-ppm	mLs @ 8.3	mLs @ 4.5	mLs @ 4.2
HS21070835-04DUP	7/22/2021	10:50 PM	23.44	-1.00	7.08	.00	646.58	646.58	.00	.00	.00	6.16	6.16
HS21070835-05	7/22/2021	10:58 PM	23.59	-1.00	7.35	.00	595.45	595.45	.00	.00	.00	5.67	5.67
HS21070835-06	7/22/2021	11:04 PM	23.43	-1.00	7.09	.00	495.90	495.90	.00	.00	.00	4.72	4.72
HS21070900-01	7/22/2021	11:11 PM	23.67	-1.00	7.77	.00	224.44	224.44	.00	.00	.00	2.14	2.14
HS21070900-02	7/22/2021	11:18 PM	23.88	-1.00	8.27	.00	238.35	238.35	.00	.00	.00	2.27	2.27
HS21070900-03	7/22/2021	11:25 PM	23.78	-1.00	8.26	.00	236.38	236.38	.00	.00	.00	2.25	2.25
WLCS2-210722	7/22/2021	11:35 PM	23.46	-1.00	10.83	519.48	1,050.12	11.16	1,038.97	.00	4.95	10.00	10.00
CCV-PH	7/22/2021	11:38 PM	23.46	-1.00	7.08	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
CCVALK	7/22/2021	11:46 PM	23.31	-1.00	10.79	516.59	1,027.95	.00	1,022.73	5.23	4.92	9.79	9.79
DI RINSE	7/22/2021	11:51 PM	23.44	-1.00	5.92	.00	.72	.72	.00	.00	.00	.02	.02
WBLKW2-210722	7/22/2021	11:56 PM	23.51	-1.00	5.51	.00	.38	.38	.00	.00	.00	.02	.02
WLCDS2-210722	7/23/2021	12:05 AM	23.44	-1.00	10.81	518.03	1,028.69	.00	1,021.31	7.38	4.93	9.80	9.80
HS21071038-02	7/23/2021	12:10 AM	23.75	-1.00	6.02	.00	168.13	168.13	.00	.00	.00	1.60	1.60
HS21071038-02DUP	7/23/2021	12:16 AM	23.83	-1.00	6.02	.00	185.20	185.20	.00	.00	.00	1.76	1.76
HS21071038-01	7/23/2021	12:22 AM	23.72	-1.00	6.49	.00	362.89	362.89	.00	.00	.00	3.46	3.46
HS21071038-03	7/23/2021	12:28 AM	23.84	-1.00	5.93	.00	243.06	243.06	.00	.00	.00	2.31	2.31
HS21071038-04	7/23/2021	12:36 AM	23.52	-1.00	7.06	.00	983.48	983.48	.00	.00	.00	9.37	9.37
HS21071038-06	7/23/2021	12:41 AM	23.57	-1.00	6.02	.00	36.49	36.49	.00	.00	.00	.35	.35
HS21071038-07	7/23/2021	12:47 AM	23.67	-1.00	5.93	.00	22.54	22.54	.00	.00	.00	.21	.21
HS21070741-02	7/23/2021	12:54 AM	23.51	-1.00	7.33	.00	546.41	546.41	.00	.00	.00	5.20	5.20
CCV-PH	7/23/2021	12:57 AM	23.60	-1.00	7.08	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
CCV-ALK	7/23/2021	1:06 AM	23.52	-1.00	10.76	531.51	1,050.03	.00	1,037.03	13.00	5.06	10.00	10.00
DI RINSE	7/23/2021	1:11 AM	24.20	-1.00	5.87	.00	.85	.85	.00	.00	.00	.03	.03
HS21070741-03	7/23/2021	1:18 AM	23.80	-1.00	7.10	.00	505.61	505.61	.00	.00	.00	4.82	4.82
HS21070741-04	7/23/2021	1:24 AM	23.60	-1.00	6.69	.00	216.45	216.45	.00	.00	.00	2.06	2.06
HS21070741-05	7/23/2021	1:30 AM	23.62	-1.00	7.16	.00	442.05	442.05	.00	.00	.00	4.21	4.21
HS21070741-06	7/23/2021	1:36 AM	23.54	-1.00	6.79	.00	383.53	383.53	.00	.00	.00	3.65	3.65
HS21070743-02	7/23/2021	1:44 AM	23.56	-1.00	7.29	.00	587.90	587.90	.00	.00	.00	5.60	5.60
HS21070744-01	7/23/2021	1:49 AM	23.68	-1.00	5.78	.00	99.25	99.25	.00	.00	.00	.95	.95
HS21070744-02	7/23/2021	1:54 AM	23.72	-1.00	5.89	.00	126.36	126.36	.00	.00	.00	1.20	1.20

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Run Number 4141 **Order Number** 20210722-2

SampleID	RunDate	RunTime	Temp	cond (uS)	pH	palk-ppm	talk-ppm	bcarb-ppm	carb-ppm	hydr-ppm	mLs @ 8.3	mLs @ 4.5	mLs @ 4.2
HS21070744-03	7/23/2021	2:03 AM	23.88	-1.00	7.33	.00	1,081.61	1,081.61	.00	.00	.00	10.30	10.30
HS21070744-04	7/23/2021	2:09 AM	23.88	-1.00	6.78	.00	461.96	461.96	.00	.00	.00	4.40	4.40
CCV-PH	7/23/2021	2:12 AM	23.84	-1.00	7.11	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
CCV-ALK	7/23/2021	2:21 AM	23.39	-1.00	10.74	528.59	1,046.62	.00	1,036.08	10.55	5.03	9.97	9.97
DI RINSE	7/23/2021	2:27 AM	23.54	-1.00	5.83	.00	.97	.97	.00	.00	.00	.03	.03
HS21070744-05	7/23/2021	2:34 AM	23.78	-1.00	6.04	.00	649.29	649.29	.00	.00	.00	6.18	6.18
HS21071053-01	7/23/2021	2:41 AM	23.70	-1.00	9.26	37.33	229.02	154.36	74.65	.00	.36	2.18	2.18
HS21071055-01	7/23/2021	2:49 AM	23.86	-1.00	9.08	11.86	58.72	34.99	23.73	.00	.11	.56	.56
HS21071056-01	7/23/2021	2:56 AM	23.97	-1.00	9.19	25.97	254.57	202.62	51.95	.00	.25	2.42	2.42
LCS3-210722	7/23/2021	3:06 AM	23.92	-1.00	10.75	504.50	1,046.59	37.60	1,008.99	.00	4.80	9.97	9.97
LCSD3-210722	7/23/2021	3:15 AM	23.83	-1.00	10.75	505.77	1,028.30	16.77	1,011.53	.00	4.82	9.79	9.79
HS21070964-02	7/23/2021	3:23 AM	23.83	-1.00	10.57	32.67	52.20	.00	39.05	13.15	.31	.50	.50
HS21070964-02DUP	7/23/2021	3:31 AM	23.99	-1.00	10.46	33.55	54.33	.00	41.56	12.77	.32	.52	.52
HS21070964-03	7/23/2021	3:38 AM	23.94	-1.00	7.82	.00	439.63	439.63	.00	.00	.00	4.19	4.19
CCV-PH	7/23/2021	3:41 AM	24.02	-1.00	7.07	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
CCV-ALK	7/23/2021	3:50 AM	23.81	-1.00	10.71	505.65	1,053.73	42.43	1,011.30	.00	4.82	10.04	10.04
DI RINSE	7/23/2021	3:55 AM	23.84	-1.00	5.87	.00	.92	.92	.00	.00	.00	.02	.02
WBLKW3-210722	7/23/2021	4:00 AM	23.84	-1.00	5.45	.00	.46	.46	.00	.00	.00	.02	.02
HS21070964-04	7/23/2021	4:07 AM	23.83	-1.00	7.43	.00	77.83	77.83	.00	.00	.00	.74	.74
HS21070964-05	7/23/2021	4:13 AM	23.78	-1.00	7.73	.00	96.76	96.76	.00	.00	.00	.92	.92
HS21070964-06	7/23/2021	4:20 AM	23.83	-1.00	7.57	.00	268.09	268.09	.00	.00	.00	2.55	2.55
HS21070964-08	7/23/2021	4:26 AM	23.99	-1.00	7.75	.00	55.65	55.65	.00	.00	.00	.53	.53
HS21070964-09	7/23/2021	4:33 AM	24.22	-1.00	8.04	.00	144.47	144.47	.00	.00	.00	1.38	1.38
HS21070964-10	7/23/2021	4:40 AM	24.10	-1.00	8.08	.00	68.40	68.40	.00	.00	.00	.65	.65
HS21070964-11	7/23/2021	4:46 AM	24.17	-1.00	7.52	.00	340.36	340.36	.00	.00	.00	3.24	3.24
HS21070964-12	7/23/2021	4:53 AM	24.05	-1.00	7.65	.00	444.94	444.94	.00	.00	.00	4.24	4.24
CCV-PH	7/23/2021	4:56 AM	23.96	-1.00	7.08	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
CCV-ALK	7/23/2021	5:05 AM	23.81	-1.00	10.68	502.40	1,055.85	51.04	1,004.81	.00	4.78	10.06	10.06
DI RINSE	7/23/2021	5:10 AM	24.02	-1.00	5.84	.00	.74	.74	.00	.00	.00	.02	.02
HS21070964-13	7/23/2021	5:17 AM	24.05	-1.00	7.68	.00	448.59	448.59	.00	.00	.00	4.27	4.27

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Run Number 4141 **Order Number** 20210722-2

SampleID	RunDate	RunTime	Temp	cond (uS)	pH	palk-ppm	talk-ppm	bcarb-ppm	carb-ppm	hydr-ppm	mLs @ 8.3	mLs @ 4.5	mLs @ 4.2
HS21070783-02	7/23/2021	5:23 AM	24.10	-1.00	7.94	.00	408.01	408.01	.00	.00	.00	3.89	3.89
HS21070783-05	7/23/2021	5:30 AM	24.24	-1.00	7.91	.00	413.25	413.25	.00	.00	.00	3.94	3.94
HS21071049-02	7/23/2021	5:37 AM	24.17	-1.00	7.69	.00	514.59	514.59	.00	.00	.00	4.90	4.90
HS21071049-04	7/23/2021	5:45 AM	24.12	-1.00	7.80	.00	511.37	511.37	.00	.00	.00	4.87	4.87
HS21071049-07	7/23/2021	5:52 AM	24.14	-1.00	7.68	.00	498.72	498.72	.00	.00	.00	4.75	4.75
HS21071049-08	7/23/2021	5:58 AM	24.14	-1.00	7.76	.00	499.91	499.91	.00	.00	.00	4.76	4.76
HS21071049-10	7/23/2021	6:05 AM	24.15	-1.00	8.08	.00	299.24	299.24	.00	.00	.00	2.85	2.85
HS21071049-11	7/23/2021	6:12 AM	24.14	-1.00	7.67	.00	470.20	470.20	.00	.00	.00	4.48	4.48
HS21071049-12	7/23/2021	6:18 AM	24.12	-1.00	7.73	.00	326.26	326.26	.00	.00	.00	3.11	3.11
CCV-PH	7/23/2021	6:21 AM	24.32	-1.00	7.08	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
CCV-ALK	7/23/2021	6:31 AM	24.20	-1.00	10.64	501.90	1,031.44	27.64	1,003.80	.00	4.78	9.82	9.82
DI RINSE	7/23/2021	6:36 AM	24.25	-1.00	5.96	.00	22.05	22.05	.00	.00	.00	.21	.21

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HS21071204 Longhorn Army Ammunition Plant
LHAAP 16 July 2021 Cover Page

ALS WO# HS21071204

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WorkOrder: HS21071204

Longhorn Army Ammunition Plant LHAAP 16 July 2021

Aptim Environmental & Infrastucture, Inc.

Vicki Graves
10333 Richmond Ave Ste 1030
Houston TX 77042

13-Oct-2021

HS21071204 Longhorn Army Ammunition Plant
LHAAP 16 July 2021 Final

ALS WO# HS21071204

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August 09, 2021

Vicki Graves
Aptim Environmental & Infrastucture, Inc.
10333 Richmond Ave
Ste 1030
Houston, TX 77042

Work Order: **HS21071204**

Laboratory Results for: **Longhorn Army Ammunition Plant LHAAP 16 July 2021**

Dear Vicki Graves ,

ALS Environmental received 9 sample(s) on Jul 23, 2021 for the analysis presented in the following report.

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

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

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

Sincerely,

Generated By: JUMOKE.LAWAL
Ragen Giga
Project Manager

ALS Houston, US Date: 09-Aug-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP 16 July 2021
Work Order: HS21071204

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS21071204-01	16EW03-210722	GW		22-Jul-2021 07:15	23-Jul-2021 09:00	☐
HS21071204-02	16IW10-210722	GW		22-Jul-2021 08:05	23-Jul-2021 09:00	☐
HS21071204-03	16IW03-210722	GW		22-Jul-2021 09:05	23-Jul-2021 09:00	☐
HS21071204-04	16PM09-210722	GW		22-Jul-2021 11:05	23-Jul-2021 09:00	☐
HS21071204-05	16PM14-210722	GW		22-Jul-2021 11:50	23-Jul-2021 09:00	☐
HS21071204-06	16RW11-210722	GW		22-Jul-2021 12:35	23-Jul-2021 09:00	☐
HS21071204-07	16RW11-210722-FD	GW		22-Jul-2021 12:35	23-Jul-2021 09:00	☐
HS21071204-08	16IW20-210722	GW		22-Jul-2021 13:15	23-Jul-2021 09:00	☐
HS21071204-09	Trip Blank-210722	Water	CG-061121-133	22-Jul-2021 00:00	23-Jul-2021 09:00	☐

ALS Houston, US Date: 19-Nov-21

Client: Aptim Environmental & Infrastucture, Inc. **CASE NARRATIVE**
Project: Longhorn Army Ammunition Plant LHAAP 16 July 2021
Work Order: HS21071204

Work Order Comments

- 16RW11-210722 - VOC vial 1 of 3 contains >6mm headspace

Work Order Comments

- .Revision 1
  Data Package revised to include TOC Raw Data which was missing from the original package.
  Pages 621-645.

- The analysis for Perchlorate was subcontracted to ALS Houston Specialty Lab. Final report attached.

GC Semivolatiles by Method RSK-175

Batch ID: R388610

Sample ID: 16IW03-210722 (HS21071204-03)

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

Sample ID: 16IW10-210722 (HS21071204-02MS)

- The recovery of the Matrix Spike (MS) associated to this analyte was outside of the established control limits. However, the LCS was within control limits. The recovery of the MS may be due to sample matrix interference.

Sample ID: 16IW10-210722 (HS21071204-02MSD)

- The recovery of the Matrix Spike (MS) associated to this analyte was outside of the established control limits. However, the LCS was within control limits. The recovery of the MS may be due to sample matrix interference.

Sample ID: HS21071038-02MS

- MS and MSD are for an unrelated sample (Methane)

GCMS Volatiles by Method SW8260

Batch ID: R388373

Sample ID: 16EW03-210722 (HS21071204-01)

- Lowest practical dilution for sample HS21071204-01 due to matrix.

Batch ID: R388821

Sample ID: HS21071731-01MS

- MS and MSD are for an unrelated sample

WetChemistry by Method SM5310B

Batch ID: R388982

Sample ID: 16IW10-210722 (HS21071204-02MS)

- The MS recovery was outside of the control; however, the result in the parent sample is greater than 4x the spike amount.

Batch ID: R389042

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

ALS Houston, US Date: 09-Aug-21

Client: Aptim Environmental & Infrastucture, Inc. **CASE NARRATIVE**
Project: Longhorn Army Ammunition Plant LHAAP 16 July 2021
Work Order: HS21071204

WetChemistry by Method SM2320B

Batch ID: R388430

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

WetChemistry by Method SW9056

Batch ID: R388195

Sample ID: 16EW03-210722 (HS21071204-01)

- Sample ran at 5X due to high concentration of Sulfate

Sample ID: 16IW03-210722 (HS21071204-03)

- The reporting limit is elevated due to dilution for high concentrations of non-target analytes. (Nitrogen, Nitrate (As N))

Sample ID: 16IW10-210722 (HS21071204-02)

- The reporting limit is elevated due to dilution for high concentrations of non-target analytes. (Nitrogen, Nitrate (As N))

Sample ID: 16IW20-210722 (HS21071204-08)

- The reporting limit is elevated due to dilution for high concentrations of non-target analytes. (Nitrogen, Nitrate (As N))

Batch ID: R388294

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

ALS Houston, US Date: 09-Aug-21

Client: Aptim Environmental & Infrastucture, Inc. **ANALYTICAL REPORT**
Project: Longhorn Army Ammunition Plant LHAAP 16 July 2021 WorkOrder:HS21071204
Sample ID: 16EW03-210722 Lab ID:HS21071204-01
Collection Date: 22-Jul-2021 07:15 Matrix:GW

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
1,1,2-Trichloroethane	10	U	3.0	10	10	ug/L	10	27-Jul-2021 19:49
1,1-Dichloroethene	5.0	U	2.0	5.0	10	ug/L	10	27-Jul-2021 19:49
1,2-Dichloroethane	5.0	U	2.0	5.0	10	ug/L	10	27-Jul-2021 19:49
cis-1,2-Dichloroethene	**1,500**		**2.0**	**5.0**	**10**	**ug/L**	10	27-Jul-2021 19:49
Methylene chloride	**15**	J	**4.0**	**10**	**20**	**ug/L**	10	27-Jul-2021 19:49
Trichloroethene	**77**		**2.0**	**5.0**	**10**	**ug/L**	10	27-Jul-2021 19:49
Vinyl chloride	**310**		**2.0**	**5.0**	**10**	**ug/L**	10	27-Jul-2021 19:49
Surr: 1,2-Dichloroethane-d4	*91.6*			**0**	*81-118*	*%REC*	*10*	*27-Jul-2021 19:49*
Surr: 4-Bromofluorobenzene	*94.3*			**0**	*85-114*	*%REC*	*10*	*27-Jul-2021 19:49*
Surr: Dibromofluoromethane	*95.1*			**0**	*80-119*	*%REC*	*10*	*27-Jul-2021 19:49*
Surr: Toluene-d8	*109*			**0**	*89-112*	*%REC*	*10*	*27-Jul-2021 19:49*
DISSOLVED GASES BY RSK-175		**Method:RSK-175**						Analyst: PPM
Ethane	0.000250	U	0.000144	0.000250	0.00100	mg/L	1	30-Jul-2021 12:18
Ethene	**0.701**		**0.0234**	**0.0500**	**0.100**	**mg/L**	100	30-Jul-2021 13:51
Methane	**1.14**		**0.0107**	**0.0250**	**0.0500**	**mg/L**	100	30-Jul-2021 13:51
ALKALINITY BY SM 2320B-2011		**Method:SM2320B**						Analyst: TH
Alkalinity, Total (As CaCO3)	**1,140**		**5.00**	**5.00**	**5.00**	**mg/L**	1	28-Jul-2021 21:11
TOTAL ORGANIC CARBON - SM5310B-2011		**Method:SM5310B**						Analyst: JAC
Organic Carbon, Total	**14.8**		**0.500**	**1.00**	**1.00**	**mg/L**	1	05-Aug-2021 22:08
ANIONS BY SW9056A		**Method:SW9056**						Analyst: YP
Bromide	**3.70**		**0.150**	**0.500**	**0.500**	**mg/L**	5	23-Jul-2021 14:08
Nitrogen, Nitrate (As N)	0.500	U	0.150	0.500	0.500	mg/L	5	23-Jul-2021 14:08
Sulfate	**1,350**		**10.0**	**25.0**	**25.0**	**mg/L**	50	26-Jul-2021 17:05
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: GR
Subcontract Analysis	See Attached		0	0		NA	1	05-Aug-2021 17:18

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

ALS Houston, US Date: 09-Aug-21

Client: Aptim Environmental & Infrastucture, Inc. **ANALYTICAL REPORT**
Project: Longhorn Army Ammunition Plant LHAAP 16 July 2021 WorkOrder:HS21071204
Sample ID: 16IW10-210722 Lab ID:HS21071204-02
Collection Date: 22-Jul-2021 08:05 Matrix:GW

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
1,1,2-Trichloroethane	1.0	U	0.30	1.0	1.0	ug/L	1	27-Jul-2021 13:51
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	27-Jul-2021 13:51
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	27-Jul-2021 13:51
cis-1,2-Dichloroethene	**19**		**0.20**	**0.50**	**1.0**	**ug/L**	1	27-Jul-2021 13:51
Methylene chloride	1.0	U	0.40	1.0	2.0	ug/L	1	27-Jul-2021 13:51
Trichloroethene	**13**		**0.20**	**0.50**	**1.0**	**ug/L**	1	27-Jul-2021 13:51
Vinyl chloride	**1.3**		**0.20**	**0.50**	**1.0**	**ug/L**	1	27-Jul-2021 13:51
Surr: 1,2-Dichloroethane-d4	*91.6*			**0**	*81-118*	*%REC*	*1*	*27-Jul-2021 13:51*
Surr: 4-Bromofluorobenzene	*93.5*			**0**	*85-114*	*%REC*	*1*	*27-Jul-2021 13:51*
Surr: Dibromofluoromethane	*96.1*			**0**	*80-119*	*%REC*	*1*	*27-Jul-2021 13:51*
Surr: Toluene-d8	*109*			**0**	*89-112*	*%REC*	*1*	*27-Jul-2021 13:51*
DISSOLVED GASES BY RSK-175		**Method:RSK-175**						Analyst: PPM
Ethane	0.000250	U	0.000144	0.000250	0.00100	mg/L	1	30-Jul-2021 12:28
Ethene	**0.00268**		**0.000234**	**0.000500**	**0.00100**	**mg/L**	1	30-Jul-2021 12:28
Methane	**0.257**		**0.00107**	**0.00250**	**0.00500**	**mg/L**	10	30-Jul-2021 14:00
ALKALINITY BY SM 2320B-2011		**Method:SM2320B**						Analyst: TH
Alkalinity, Total (As CaCO3)	**1,050**		**5.00**	**5.00**	**5.00**	**mg/L**	1	28-Jul-2021 20:53
TOTAL ORGANIC CARBON - SM5310B-2011		**Method:SM5310B**						Analyst: JAC
Organic Carbon, Total	**630**		**10.0**	**20.0**	**20.0**	**mg/L**	20	06-Aug-2021 12:27
ANIONS BY SW9056A		**Method:SW9056**						Analyst: YP
Bromide	**79.1**		**0.150**	**0.500**	**0.500**	**mg/L**	5	23-Jul-2021 14:15
Nitrogen, Nitrate (As N)	0.500	U	0.150	0.500	0.500	mg/L	5	23-Jul-2021 14:15
Sulfate	2.50	U	1.00	2.50	2.50	mg/L	5	23-Jul-2021 14:15
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: GR
Subcontract Analysis	See Attached		0	0		NA	1	05-Aug-2021 17:18

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

ALS Houston, US Date: 09-Aug-21

Client: Aptim Environmental & Infrastucture, Inc. **ANALYTICAL REPORT**
Project: Longhorn Army Ammunition Plant LHAAP 16 July 2021 WorkOrder:HS21071204
Sample ID: 16IW03-210722 Lab ID:HS21071204-03
Collection Date: 22-Jul-2021 09:05 Matrix:GW

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
1,1,2-Trichloroethane	10	U	3.0	10	10	ug/L	10	27-Jul-2021 19:07
1,1-Dichloroethene	**38**		**2.0**	**5.0**	**10**	**ug/L**	10	27-Jul-2021 19:07
1,2-Dichloroethane	**6.7**	J	**2.0**	**5.0**	**10**	**ug/L**	10	27-Jul-2021 19:07
cis-1,2-Dichloroethene	**10,000**		**20**	**50**	**100**	**ug/L**	100	03-Aug-2021 16:43
Methylene chloride	**16**	J	**4.0**	**10**	**20**	**ug/L**	10	27-Jul-2021 19:07
Trichloroethene	**8,100**		**20**	**50**	**100**	**ug/L**	100	03-Aug-2021 16:43
Vinyl chloride	**2,600**		**20**	**50**	**100**	**ug/L**	100	03-Aug-2021 16:43
Surr: 1,2-Dichloroethane-d4	*89.8*			**0**	*81-118*	*%REC*	*10*	*27-Jul-2021 19:07*
Surr: 1,2-Dichloroethane-d4	*91.7*			**0**	*81-118*	*%REC*	*100*	*03-Aug-2021 16:43*
Surr: 4-Bromofluorobenzene	*94.0*			**0**	*85-114*	*%REC*	*10*	*27-Jul-2021 19:07*
Surr: 4-Bromofluorobenzene	*99.9*			**0**	*85-114*	*%REC*	*100*	*03-Aug-2021 16:43*
Surr: Dibromofluoromethane	*95.8*			**0**	*80-119*	*%REC*	*10*	*27-Jul-2021 19:07*
Surr: Dibromofluoromethane	*91.6*			**0**	*80-119*	*%REC*	*100*	*03-Aug-2021 16:43*
Surr: Toluene-d8	*109*			**0**	*89-112*	*%REC*	*10*	*27-Jul-2021 19:07*
Surr: Toluene-d8	*103*			**0**	*89-112*	*%REC*	*100*	*03-Aug-2021 16:43*
DISSOLVED GASES BY RSK-175		**Method:RSK-175**						Analyst: PPM
Ethane	0.000250	U	0.000144	0.000250	0.00100	mg/L	1	30-Jul-2021 12:39
Ethene	**1.64**		**0.0234**	**0.0500**	**0.100**	**mg/L**	100	30-Jul-2021 14:08
Methane	**2.93**		**0.0107**	**0.0250**	**0.0500**	**mg/L**	100	30-Jul-2021 14:08
ALKALINITY BY SM 2320B-2011		**Method:SM2320B**						Analyst: TH
Alkalinity, Total (As CaCO3)	**1,580**		**5.00**	**5.00**	**5.00**	**mg/L**	1	28-Jul-2021 21:24
TOTAL ORGANIC CARBON - SM5310B-2011		**Method:SM5310B**						Analyst: JAC
Organic Carbon, Total	**2,750**		**50.0**	**100**	**100**	**mg/L**	100	06-Aug-2021 13:29
ANIONS BY SW9056A		**Method:SW9056**						Analyst: YP
Bromide	**3.30**		**0.150**	**0.500**	**0.500**	**mg/L**	5	23-Jul-2021 14:37
Nitrogen, Nitrate (As N)	0.500	U	0.150	0.500	0.500	mg/L	5	23-Jul-2021 14:37
Sulfate	**1.30**	J	**1.00**	**2.50**	**2.50**	**mg/L**	5	23-Jul-2021 14:37
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: GR
Subcontract Analysis	See Attached		0	0		NA	1	05-Aug-2021 17:18

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

ALS Houston, US Date: 09-Aug-21

Client: Aptim Environmental & Infrastucture, Inc. **ANALYTICAL REPORT**
Project: Longhorn Army Ammunition Plant LHAAP 16 July 2021 WorkOrder:HS21071204
Sample ID: 16PM09-210722 Lab ID:HS21071204-04
Collection Date: 22-Jul-2021 11:05 Matrix:GW

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
1,1,2-Trichloroethane	**0.79**	J	**0.30**	**1.0**	**1.0**	**ug/L**	1	27-Jul-2021 18:46
1,1-Dichloroethene	**11**		**0.20**	**0.50**	**1.0**	**ug/L**	1	27-Jul-2021 18:46
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	27-Jul-2021 18:46
cis-1,2-Dichloroethene	**200**		**1.0**	**2.5**	**5.0**	**ug/L**	5	03-Aug-2021 17:04
Methylene chloride	1.0	U	0.40	1.0	2.0	ug/L	1	27-Jul-2021 18:46
Trichloroethene	**370**		**1.0**	**2.5**	**5.0**	**ug/L**	5	03-Aug-2021 17:04
Vinyl chloride	**9.1**		**0.20**	**0.50**	**1.0**	**ug/L**	1	27-Jul-2021 18:46
Surr: 1,2-Dichloroethane-d4	*91.9*			**0**	*81-118*	*%REC*	*1*	*27-Jul-2021 18:46*
Surr: 1,2-Dichloroethane-d4	*90.1*			**0**	*81-118*	*%REC*	*5*	*03-Aug-2021 17:04*
Surr: 4-Bromofluorobenzene	*91.5*			**0**	*85-114*	*%REC*	*1*	*27-Jul-2021 18:46*
Surr: 4-Bromofluorobenzene	*99.3*			**0**	*85-114*	*%REC*	*5*	*03-Aug-2021 17:04*
Surr: Dibromofluoromethane	*96.0*			**0**	*80-119*	*%REC*	*1*	*27-Jul-2021 18:46*
Surr: Dibromofluoromethane	*92.9*			**0**	*80-119*	*%REC*	*5*	*03-Aug-2021 17:04*
Surr: Toluene-d8	*106*			**0**	*89-112*	*%REC*	*1*	*27-Jul-2021 18:46*
Surr: Toluene-d8	*105*			**0**	*89-112*	*%REC*	*5*	*03-Aug-2021 17:04*
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: GR
Subcontract Analysis	See Attached		0	0		NA	1	05-Aug-2021 17:18

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

ALS Houston, US Date: 09-Aug-21

Client: Aptim Environmental & Infrastucture, Inc. **ANALYTICAL REPORT**
Project: Longhorn Army Ammunition Plant LHAAP 16 July 2021 WorkOrder:HS21071204
Sample ID: 16PM14-210722 Lab ID:HS21071204-05
Collection Date: 22-Jul-2021 11:50 Matrix:GW

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
1,1,2-Trichloroethane	10	U	3.0	10	10	ug/L	10	03-Aug-2021 14:37
1,1-Dichloroethene	**15**		**2.0**	**5.0**	**10**	**ug/L**	10	03-Aug-2021 14:37
1,2-Dichloroethane	**21**		**2.0**	**5.0**	**10**	**ug/L**	10	03-Aug-2021 14:37
cis-1,2-Dichloroethene	**3,700**		**20**	**50**	**100**	**ug/L**	100	03-Aug-2021 16:22
Methylene chloride	10	U	4.0	10	20	ug/L	10	03-Aug-2021 14:37
Trichloroethene	**3,700**		**20**	**50**	**100**	**ug/L**	100	03-Aug-2021 16:22
Vinyl chloride	**110**		**2.0**	**5.0**	**10**	**ug/L**	10	03-Aug-2021 14:37
Surr: 1,2-Dichloroethane-d4	*91.9*			**0**	*81-118*	*%REC*	*10*	*03-Aug-2021 14:37*
Surr: 1,2-Dichloroethane-d4	*88.6*			**0**	*81-118*	*%REC*	*100*	*03-Aug-2021 16:22*
Surr: 4-Bromofluorobenzene	*98.0*			**0**	*85-114*	*%REC*	*10*	*03-Aug-2021 14:37*
Surr: 4-Bromofluorobenzene	*101*			**0**	*85-114*	*%REC*	*100*	*03-Aug-2021 16:22*
Surr: Dibromofluoromethane	*92.7*			**0**	*80-119*	*%REC*	*10*	*03-Aug-2021 14:37*
Surr: Dibromofluoromethane	*91.9*			**0**	*80-119*	*%REC*	*100*	*03-Aug-2021 16:22*
Surr: Toluene-d8	*102*			**0**	*89-112*	*%REC*	*10*	*03-Aug-2021 14:37*
Surr: Toluene-d8	*103*			**0**	*89-112*	*%REC*	*100*	*03-Aug-2021 16:22*
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: GR
Subcontract Analysis	See Attached		0	0		NA	1	05-Aug-2021 17:18

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

ALS Houston, US Date: 09-Aug-21

Client: Aptim Environmental & Infrastucture, Inc. **ANALYTICAL REPORT**
Project: Longhorn Army Ammunition Plant LHAAP 16 July 2021 WorkOrder:HS21071204
Sample ID: 16RW11-210722 Lab ID:HS21071204-06
Collection Date: 22-Jul-2021 12:35 Matrix:GW

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
1,1,2-Trichloroethane	1.0	U	0.30	1.0	1.0	ug/L	1	27-Jul-2021 18:03
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	27-Jul-2021 18:03
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	27-Jul-2021 18:03
cis-1,2-Dichloroethene	**1.1**		**0.20**	**0.50**	**1.0**	**ug/L**	1	27-Jul-2021 18:03
Methylene chloride	1.0	U	0.40	1.0	2.0	ug/L	1	27-Jul-2021 18:03
Trichloroethene	**2.3**		**0.20**	**0.50**	**1.0**	**ug/L**	1	27-Jul-2021 18:03
Vinyl chloride	**0.77**	J	**0.20**	**0.50**	**1.0**	**ug/L**	1	27-Jul-2021 18:03
Surr: 1,2-Dichloroethane-d4	*93.8*			**0**	*81-118*	*%REC*	*1*	*27-Jul-2021 18:03*
Surr: 4-Bromofluorobenzene	*92.4*			**0**	*85-114*	*%REC*	*1*	*27-Jul-2021 18:03*
Surr: Dibromofluoromethane	*97.8*			**0**	*80-119*	*%REC*	*1*	*27-Jul-2021 18:03*
Surr: Toluene-d8	*109*			**0**	*89-112*	*%REC*	*1*	*27-Jul-2021 18:03*
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: GR
Subcontract Analysis	See Attached		0	0		NA	1	05-Aug-2021 17:18

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

ALS Houston, US Date: 09-Aug-21

Client: Aptim Environmental & Infrastucture, Inc. **ANALYTICAL REPORT**
Project: Longhorn Army Ammunition Plant LHAAP 16 July 2021 WorkOrder:HS21071204
Sample ID: 16RW11-210722-FD Lab ID:HS21071204-07
Collection Date: 22-Jul-2021 12:35 Matrix:GW

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
1,1,2-Trichloroethane	1.0	U	0.30	1.0	1.0	ug/L	1	27-Jul-2021 18:24
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	27-Jul-2021 18:24
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	27-Jul-2021 18:24
cis-1,2-Dichloroethene	**0.97**	J	**0.20**	**0.50**	**1.0**	**ug/L**	1	27-Jul-2021 18:24
Methylene chloride	1.0	U	0.40	1.0	2.0	ug/L	1	27-Jul-2021 18:24
Trichloroethene	**2.1**		**0.20**	**0.50**	**1.0**	**ug/L**	1	27-Jul-2021 18:24
Vinyl chloride	**0.79**	J	**0.20**	**0.50**	**1.0**	**ug/L**	1	27-Jul-2021 18:24
Surr: 1,2-Dichloroethane-d4	*90.0*			**0**	*81-118*	*%REC*	*1*	*27-Jul-2021 18:24*
Surr: 4-Bromofluorobenzene	*95.0*			**0**	*85-114*	*%REC*	*1*	*27-Jul-2021 18:24*
Surr: Dibromofluoromethane	*95.9*			**0**	*80-119*	*%REC*	*1*	*27-Jul-2021 18:24*
Surr: Toluene-d8	*109*			**0**	*89-112*	*%REC*	*1*	*27-Jul-2021 18:24*
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: GR
Subcontract Analysis	See Attached		0	0		NA	1	05-Aug-2021 17:18

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

ALS Houston, US Date: 09-Aug-21

Client: Aptim Environmental & Infrastucture, Inc. **ANALYTICAL REPORT**
Project: Longhorn Army Ammunition Plant LHAAP 16 July 2021 WorkOrder:HS21071204
Sample ID: 16IW20-210722 Lab ID:HS21071204-08
Collection Date: 22-Jul-2021 13:15 Matrix:GW

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
1,1,2-Trichloroethane	1.0	U	0.30	1.0	1.0	ug/L	1	27-Jul-2021 17:42
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	27-Jul-2021 17:42
1,2-Dichloroethane	**0.56**	J	**0.20**	**0.50**	**1.0**	**ug/L**	1	27-Jul-2021 17:42
cis-1,2-Dichloroethene	**7.2**		**0.20**	**0.50**	**1.0**	**ug/L**	1	27-Jul-2021 17:42
Methylene chloride	1.0	U	0.40	1.0	2.0	ug/L	1	27-Jul-2021 17:42
Trichloroethene	**7.6**		**0.20**	**0.50**	**1.0**	**ug/L**	1	27-Jul-2021 17:42
Vinyl chloride	**10**		**0.20**	**0.50**	**1.0**	**ug/L**	1	27-Jul-2021 17:42
Surr: 1,2-Dichloroethane-d4	*92.2*			**0**	*81-118*	*%REC*	*1*	*27-Jul-2021 17:42*
Surr: 4-Bromofluorobenzene	*92.5*			**0**	*85-114*	*%REC*	*1*	*27-Jul-2021 17:42*
Surr: Dibromofluoromethane	*94.9*			**0**	*80-119*	*%REC*	*1*	*27-Jul-2021 17:42*
Surr: Toluene-d8	*109*			**0**	*89-112*	*%REC*	*1*	*27-Jul-2021 17:42*
DISSOLVED GASES BY RSK-175		**Method:RSK-175**						Analyst: PPM
Ethane	0.000250	U	0.000144	0.000250	0.00100	mg/L	1	30-Jul-2021 12:57
Ethene	**0.0160**		**0.000234**	**0.000500**	**0.00100**	**mg/L**	1	30-Jul-2021 12:57
Methane	**2.17**		**0.0107**	**0.0250**	**0.0500**	**mg/L**	100	30-Jul-2021 14:38
ALKALINITY BY SM 2320B-2011		**Method:SM2320B**						Analyst: TH
Alkalinity, Total (As CaCO3)	**429**		**5.00**	**5.00**	**5.00**	**mg/L**	1	28-Jul-2021 21:30
TOTAL ORGANIC CARBON - SM5310B-2011		**Method:SM5310B**						Analyst: JAC
Organic Carbon, Total	**7.63**		**0.500**	**1.00**	**1.00**	**mg/L**	1	06-Aug-2021 13:41
ANIONS BY SW9056A		**Method:SW9056**						Analyst: YP
Bromide	**6.43**		**0.150**	**0.500**	**0.500**	**mg/L**	5	23-Jul-2021 14:45
Nitrogen, Nitrate (As N)	0.500	U	0.150	0.500	0.500	mg/L	5	23-Jul-2021 14:45
Sulfate	**125**		**1.00**	**2.50**	**2.50**	**mg/L**	5	23-Jul-2021 14:45
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: GR
Subcontract Analysis	See Attached		0	0		NA	1	05-Aug-2021 17:18

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

ALS Houston, US Date: 09-Aug-21

Client: Aptim Environmental & Infrastucture, Inc. **ANALYTICAL REPORT**
Project: Longhorn Army Ammunition Plant LHAAP 16 July 2021 WorkOrder:HS21071204
Sample ID: Trip Blank-210722 Lab ID:HS21071204-09
Collection Date: 22-Jul-2021 00:00 Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,2-Trichloroethane	1.0	U	0.30	1.0	1.0	ug/L	1	27-Jul-2021 17:21
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	27-Jul-2021 17:21
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	27-Jul-2021 17:21
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	27-Jul-2021 17:21
Methylene chloride	1.0	U	0.40	1.0	2.0	ug/L	1	27-Jul-2021 17:21
Trichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	27-Jul-2021 17:21
Vinyl chloride	0.50	U	0.20	0.50	1.0	ug/L	1	27-Jul-2021 17:21
Surr: 1,2-Dichloroethane-d4	*92.1*			**0**	*81-118*	*%REC*	*1*	*27-Jul-2021 17:21*
Surr: 4-Bromofluorobenzene	*89.7*			**0**	*85-114*	*%REC*	*1*	*27-Jul-2021 17:21*
Surr: Dibromofluoromethane	*96.8*			**0**	*80-119*	*%REC*	*1*	*27-Jul-2021 17:21*
Surr: Toluene-d8	*108*			**0**	*89-112*	*%REC*	*1*	*27-Jul-2021 17:21*

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

ALS Houston, US Date: 09-Aug-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP 16 July 2021
WorkOrder: HS21071204

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: R388195 (0)	**Test Name :** ANIONS BY SW9056A				**Matrix:** GW	
HS21071204-01	16EW03-210722	22 Jul 2021 07:15			23 Jul 2021 14:08	5
HS21071204-02	16IW10-210722	22 Jul 2021 08:05			23 Jul 2021 14:15	5
HS21071204-03	16IW03-210722	22 Jul 2021 09:05			23 Jul 2021 14:37	5
HS21071204-08	16IW20-210722	22 Jul 2021 13:15			23 Jul 2021 14:45	5
Batch ID: R388294 (0)	**Test Name :** ANIONS BY SW9056A				**Matrix:** GW	
HS21071204-01	16EW03-210722	22 Jul 2021 07:15			26 Jul 2021 17:05	50
Batch ID: R388373 (0)	**Test Name :** VOLATILES ORGANICS BY METHOD 8260C				**Matrix:** Water	
HS21071204-09	Trip Blank-210722	22 Jul 2021 00:00			27 Jul 2021 17:21	1
Batch ID: R388373 (0)	**Test Name :** VOLATILES ORGANICS BY METHOD 8260C				**Matrix:** GW	
HS21071204-01	16EW03-210722	22 Jul 2021 07:15			27 Jul 2021 19:49	10
HS21071204-02	16IW10-210722	22 Jul 2021 08:05			27 Jul 2021 13:51	1
HS21071204-03	16IW03-210722	22 Jul 2021 09:05			27 Jul 2021 19:07	10
HS21071204-04	16PM09-210722	22 Jul 2021 11:05			27 Jul 2021 18:46	1
HS21071204-06	16RW11-210722	22 Jul 2021 12:35			27 Jul 2021 18:03	1
HS21071204-07	16RW11-210722-FD	22 Jul 2021 12:35			27 Jul 2021 18:24	1
HS21071204-08	16IW20-210722	22 Jul 2021 13:15			27 Jul 2021 17:42	1
Batch ID: R388430 (0)	**Test Name :** ALKALINITY BY SM 2320B-2011				**Matrix:** GW	
HS21071204-01	16EW03-210722	22 Jul 2021 07:15			28 Jul 2021 21:11	1
HS21071204-02	16IW10-210722	22 Jul 2021 08:05			28 Jul 2021 20:53	1
HS21071204-03	16IW03-210722	22 Jul 2021 09:05			28 Jul 2021 21:24	1
HS21071204-08	16IW20-210722	22 Jul 2021 13:15			28 Jul 2021 21:30	1
Batch ID: R388610 (0)	**Test Name :** DISSOLVED GASES BY RSK-175				**Matrix:** GW	
HS21071204-01	16EW03-210722	22 Jul 2021 07:15			30 Jul 2021 13:51	100
HS21071204-01	16EW03-210722	22 Jul 2021 07:15			30 Jul 2021 12:18	1
HS21071204-02	16IW10-210722	22 Jul 2021 08:05			30 Jul 2021 14:00	10
HS21071204-02	16IW10-210722	22 Jul 2021 08:05			30 Jul 2021 12:28	1
HS21071204-03	16IW03-210722	22 Jul 2021 09:05			30 Jul 2021 14:08	100
HS21071204-03	16IW03-210722	22 Jul 2021 09:05			30 Jul 2021 12:39	1
HS21071204-08	16IW20-210722	22 Jul 2021 13:15			30 Jul 2021 14:38	100
HS21071204-08	16IW20-210722	22 Jul 2021 13:15			30 Jul 2021 12:57	1
Batch ID: R388821 (0)	**Test Name :** VOLATILES ORGANICS BY METHOD 8260C				**Matrix:** GW	
HS21071204-03	16IW03-210722	22 Jul 2021 09:05			03 Aug 2021 16:43	100
HS21071204-04	16PM09-210722	22 Jul 2021 11:05			03 Aug 2021 17:04	5
HS21071204-05	16PM14-210722	22 Jul 2021 11:50			03 Aug 2021 16:22	100
HS21071204-05	16PM14-210722	22 Jul 2021 11:50			03 Aug 2021 14:37	10

ALS Houston, US Date: 09-Aug-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP 16 July 2021
WorkOrder: HS21071204

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: R388959 (0)	**Test Name :** SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)				**Matrix:** GW	
HS21071204-01	16EW03-210722	22 Jul 2021 07:15			05 Aug 2021 17:18	1
HS21071204-02	16IW10-210722	22 Jul 2021 08:05			05 Aug 2021 17:18	1
HS21071204-03	16IW03-210722	22 Jul 2021 09:05			05 Aug 2021 17:18	1
HS21071204-04	16PM09-210722	22 Jul 2021 11:05			05 Aug 2021 17:18	1
HS21071204-05	16PM14-210722	22 Jul 2021 11:50			05 Aug 2021 17:18	1
HS21071204-06	16RW11-210722	22 Jul 2021 12:35			05 Aug 2021 17:18	1
HS21071204-07	16RW11-210722-FD	22 Jul 2021 12:35			05 Aug 2021 17:18	1
HS21071204-08	16IW20-210722	22 Jul 2021 13:15			05 Aug 2021 17:18	1
Batch ID: R388982 (0)	**Test Name :** TOTAL ORGANIC CARBON - SM5310B-2011				**Matrix:** GW	
HS21071204-01	16EW03-210722	22 Jul 2021 07:15			05 Aug 2021 22:08	1
Batch ID: R389042 (0)	**Test Name :** TOTAL ORGANIC CARBON - SM5310B-2011				**Matrix:** GW	
HS21071204-02	16IW10-210722	22 Jul 2021 08:05			06 Aug 2021 12:27	20
HS21071204-03	16IW03-210722	22 Jul 2021 09:05			06 Aug 2021 13:29	100
HS21071204-08	16IW20-210722	22 Jul 2021 13:15			06 Aug 2021 13:41	1

ALS Houston, US Date: 09-Aug-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP 16 July 2021
WorkOrder: HS21071204

QC BATCH REPORT

Batch ID: R388610 (0) **Instrument:** FID-4 **Method:** DISSOLVED GASES BY RSK-175

MBLK Sample ID: **MBLK-210730** Units: **mg/L** Analysis Date: **30-Jul-2021 09:55**
Client ID: Run ID: **FID-4_388610** SeqNo: **6208821** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ethane	0.000250	0.00100								U
Ethene	0.000500	0.00100								U
Methane	0.000250	0.000500								U

LCS Sample ID: **LCS-210730** Units: **mg/L** Analysis Date: **30-Jul-2021 10:05**
Client ID: Run ID: **FID-4_388610** SeqNo: **6208822** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ethane	0.0203	0.00100	0.01804	0	113	75 - 125				
Ethene	0.0175	0.00100	0.0168	0	104	75 - 125				
Methane	0.00983	0.000500	0.009647	0	102	75 - 125				

MS Sample ID: **HS21071204-02MS** Units: **mg/L** Analysis Date: **30-Jul-2021 14:47**
Client ID: **16IW10-210722** Run ID: **FID-4_388610** SeqNo: **6208843** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ethane	0.00961	0.00100	0.01804	0	53.3	75 - 125				S
Ethene	0.0105	0.00100	0.0168	0.002684	46.3	75 - 125				S
Methane	0.205	0.000500	0.009647	0.2549	-517	75 - 125				SEO

MS Sample ID: **HS21071038-02MS** Units: **mg/L** Analysis Date: **30-Jul-2021 10:52**
Client ID: Run ID: **FID-4_388610** SeqNo: **6208826** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ethane	0.0166	0.00100	0.01804	0	92.2	75 - 125				
Ethene	0.0160	0.00100	0.0168	0.0007136	91.0	75 - 125				
Methane	0.00757	0.000500	0.009647	0.001677	61.0	75 - 125				S

ALS Houston, US Date: 09-Aug-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP 16 July 2021
WorkOrder: HS21071204

QC BATCH REPORT

Batch ID: R388610 (0) **Instrument:** FID-4 **Method:** DISSOLVED GASES BY RSK-175

MSD Sample ID: **HS21071204-02MSD** Units: **mg/L** Analysis Date: **30-Jul-2021 14:56**
Client ID: **16IW10-210722** Run ID: **FID-4_388610** SeqNo: **6208844** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ethane	0.00943	0.00100	0.01804	0	52.3	75 - 125	0.009611	1.88	30	S
Ethene	0.0108	0.00100	0.0168	0.002684	48.1	75 - 125	0.01047	2.83	30	S
Methane	0.206	0.000500	0.009647	0.2549	-506	75 - 125	0.2051	0.523	30	SEO

MSD Sample ID: **HS21071038-02MSD** Units: **mg/L** Analysis Date: **30-Jul-2021 11:04**
Client ID: Run ID: **FID-4_388610** SeqNo: **6208827** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ethane	0.0166	0.00100	0.01804	0	91.8	75 - 125	0.01663	0.377	30	
Ethene	0.0161	0.00100	0.0168	0.0007136	91.8	75 - 125	0.01601	0.754	30	
Methane	0.00681	0.000500	0.009647	0.001677	53.2	75 - 125	0.007566	10.6	30	S

The following samples were analyzed in this batch: HS21071204-01 HS21071204-02 HS21071204-03 HS21071204-08

ALS Houston, US Date: 09-Aug-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP 16 July 2021
WorkOrder: HS21071204

QC BATCH REPORT

Batch ID: R388373 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MBLK Sample ID: **VBLKW-210727** Units: **ug/L** Analysis Date: **27-Jul-2021 11:44**
Client ID: Run ID: **VOA6_388373** SeqNo: **6203400** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,2-Trichloroethane	1.0	1.0								U
1,1-Dichloroethene	0.50	1.0								U
1,2-Dichloroethane	0.50	1.0								U
cis-1,2-Dichloroethene	0.50	1.0								U
Methylene chloride	1.377	2.0								J
Trichloroethene	0.50	1.0								U
Vinyl chloride	0.50	1.0								U
Surr: 1,2-Dichloroethane-d4	*46.23*	*1.0*	*50*	*0*	*92.5*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*45.27*	*1.0*	*50*	*0*	*90.5*	*85 - 114*				
Surr: Dibromofluoromethane	*47.25*	*1.0*	*50*	*0*	*94.5*	*80 - 119*				
Surr: Toluene-d8	*55.76*	*1.0*	*50*	*0*	*112*	*89 - 112*				

LCS Sample ID: **VLCSW-210727** Units: **ug/L** Analysis Date: **27-Jul-2021 11:23**
Client ID: Run ID: **VOA6_388373** SeqNo: **6203399** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,2-Trichloroethane	18.48	1.0	20	0	92.4	80 - 119				
1,1-Dichloroethene	16.09	1.0	20	0	80.4	71 - 131				
1,2-Dichloroethane	18.75	1.0	20	0	93.8	73 - 128				
cis-1,2-Dichloroethene	18.46	1.0	20	0	92.3	78 - 123				
Methylene chloride	19.85	2.0	20	0	99.2	74 - 124				
Trichloroethene	19.91	1.0	20	0	99.5	79 - 123				
Vinyl chloride	16.28	1.0	20	0	81.4	58 - 137				
Surr: 1,2-Dichloroethane-d4	*48.36*	*1.0*	*50*	*0*	*96.7*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*46.74*	*1.0*	*50*	*0*	*93.5*	*85 - 114*				
Surr: Dibromofluoromethane	*49.95*	*1.0*	*50*	*0*	*99.9*	*80 - 119*				
Surr: Toluene-d8	*49.03*	*1.0*	*50*	*0*	*98.1*	*89 - 112*				

ALS Houston, US Date: 09-Aug-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP 16 July 2021
WorkOrder: HS21071204

QC BATCH REPORT

Batch ID: R388373 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MS Sample ID: **HS21071204-02MS** Units: **ug/L** Analysis Date: **27-Jul-2021 15:15**
Client ID: **16IW10-210722** Run ID: **VOA6_388373** SeqNo: **6203409** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,2-Trichloroethane	19.15	1.0	20	0	95.7	80 - 119				
1,1-Dichloroethene	15.81	1.0	20	0	79.0	71 - 131				
1,2-Dichloroethane	17.9	1.0	20	0	89.5	73 - 128				
cis-1,2-Dichloroethene	41.09	1.0	20	19.12	110	78 - 123				
Methylene chloride	19.15	2.0	20	0	95.8	74 - 124				
Trichloroethene	36.11	1.0	20	13.19	115	79 - 123				
Vinyl chloride	15.87	1.0	20	1.341	72.6	58 - 137				
Surr: 1,2-Dichloroethane-d4	*46.52*	*1.0*	*50*	*0*	*93.0*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*47.98*	*1.0*	*50*	*0*	*96.0*	*85 - 114*				
Surr: Dibromofluoromethane	*49.37*	*1.0*	*50*	*0*	*98.7*	*80 - 119*				
Surr: Toluene-d8	*53.46*	*1.0*	*50*	*0*	*107*	*89 - 112*				

MSD Sample ID: **HS21071204-02MSD** Units: **ug/L** Analysis Date: **27-Jul-2021 15:36**
Client ID: **16IW10-210722** Run ID: **VOA6_388373** SeqNo: **6203410** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,2-Trichloroethane	17.88	1.0	20	0	89.4	80 - 119	19.15	6.87	20	
1,1-Dichloroethene	14.7	1.0	20	0	73.5	71 - 131	15.81	7.28	20	
1,2-Dichloroethane	16.68	1.0	20	0	83.4	73 - 128	17.9	7.03	20	
cis-1,2-Dichloroethene	37.55	1.0	20	19.12	92.2	78 - 123	41.09	9.01	20	
Methylene chloride	18.06	2.0	20	0	90.3	74 - 124	19.15	5.86	20	
Trichloroethene	32.28	1.0	20	13.19	95.4	79 - 123	36.11	11.2	20	
Vinyl chloride	15.41	1.0	20	1.341	70.4	58 - 137	15.87	2.91	20	
Surr: 1,2-Dichloroethane-d4	*46.09*	*1.0*	*50*	*0*	*92.2*	*81 - 118*	*46.52*	*0.931*	*20*	
Surr: 4-Bromofluorobenzene	*47.57*	*1.0*	*50*	*0*	*95.1*	*85 - 114*	*47.98*	*0.869*	*20*	
Surr: Dibromofluoromethane	*48.87*	*1.0*	*50*	*0*	*97.7*	*80 - 119*	*49.37*	*1*	*20*	
Surr: Toluene-d8	*53.19*	*1.0*	*50*	*0*	*106*	*89 - 112*	*53.46*	*0.502*	*20*	

The following samples were analyzed in this batch:

HS21071204-01	HS21071204-02	HS21071204-03	HS21071204-04
HS21071204-06	HS21071204-07	HS21071204-08	HS21071204-09

ALS Houston, US Date: 09-Aug-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP 16 July 2021
WorkOrder: HS21071204

QC BATCH REPORT

Batch ID: R388821 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MBLK Sample ID: **VBLKW-210803** Units: **ug/L** Analysis Date: **03-Aug-2021 13:13**
Client ID: Run ID: **VOA6_388821** SeqNo: **6213698** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,2-Trichloroethane	1.0	1.0								U
1,1-Dichloroethene	0.50	1.0								U
1,2-Dichloroethane	0.50	1.0								U
cis-1,2-Dichloroethene	0.50	1.0								U
Methylene chloride	1.0	2.0								U
Trichloroethene	0.50	1.0								U
Vinyl chloride	0.50	1.0								U
Surr: 1,2-Dichloroethane-d4	*44.87*	*1.0*	*50*	*0*	*89.7*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*50.36*	*1.0*	*50*	*0*	*101*	*85 - 114*				
Surr: Dibromofluoromethane	*45.8*	*1.0*	*50*	*0*	*91.6*	*80 - 119*				
Surr: Toluene-d8	*51.62*	*1.0*	*50*	*0*	*103*	*89 - 112*				

LCS Sample ID: **VLCSW-210803** Units: **ug/L** Analysis Date: **03-Aug-2021 12:09**
Client ID: Run ID: **VOA6_388821** SeqNo: **6213697** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,2-Trichloroethane	19.59	1.0	20	0	98.0	80 - 119				
1,1-Dichloroethene	16.91	1.0	20	0	84.6	71 - 131				
1,2-Dichloroethane	19.08	1.0	20	0	95.4	73 - 128				
cis-1,2-Dichloroethene	18.06	1.0	20	0	90.3	78 - 123				
Methylene chloride	19.21	2.0	20	0	96.0	74 - 124				
Trichloroethene	19.42	1.0	20	0	97.1	79 - 123				
Vinyl chloride	17.1	1.0	20	0	85.5	58 - 137				
Surr: 1,2-Dichloroethane-d4	*48.43*	*1.0*	*50*	*0*	*96.9*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*49.29*	*1.0*	*50*	*0*	*98.6*	*85 - 114*				
Surr: Dibromofluoromethane	*47.57*	*1.0*	*50*	*0*	*95.1*	*80 - 119*				
Surr: Toluene-d8	*46.87*	*1.0*	*50*	*0*	*93.7*	*89 - 112*				

ALS Houston, US Date: 09-Aug-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP 16 July 2021
WorkOrder: HS21071204

QC BATCH REPORT

Batch ID: R388821 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MS Sample ID: **HS21071731-01MS** Units: **ug/L** Analysis Date: **03-Aug-2021 14:58**
Client ID: Run ID: **VOA6_388821** SeqNo: **6213703** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,2-Trichloroethane	17.57	1.0	20	0	87.8	80 - 119				
1,1-Dichloroethene	18.16	1.0	20	0	90.8	71 - 131				
1,2-Dichloroethane	17.5	1.0	20	0	87.5	73 - 128				
cis-1,2-Dichloroethene	39.67	1.0	20	20.07	98.0	78 - 123				
Methylene chloride	17.12	2.0	20	0	85.6	74 - 124				
Trichloroethene	117.6	1.0	20	105.6	60.1	79 - 123				SO
Vinyl chloride	80.97	1.0	20	63.6	86.9	58 - 137				
Surr: 1,2-Dichloroethane-d4	*45.05*	*1.0*	*50*	*0*	*90.1*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*49.19*	*1.0*	*50*	*0*	*98.4*	*85 - 114*				
Surr: Dibromofluoromethane	*45.9*	*1.0*	*50*	*0*	*91.8*	*80 - 119*				
Surr: Toluene-d8	*51.24*	*1.0*	*50*	*0*	*102*	*89 - 112*				

MSD Sample ID: **HS21071731-01MSD** Units: **ug/L** Analysis Date: **03-Aug-2021 15:19**
Client ID: Run ID: **VOA6_388821** SeqNo: **6213704** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,2-Trichloroethane	17.26	1.0	20	0	86.3	80 - 119	17.57	1.79	20	
1,1-Dichloroethene	16.14	1.0	20	0	80.7	71 - 131	18.16	11.8	20	
1,2-Dichloroethane	15.83	1.0	20	0	79.2	73 - 128	17.5	9.99	20	
cis-1,2-Dichloroethene	35.36	1.0	20	20.07	76.5	78 - 123	39.67	11.5	20	S
Methylene chloride	16.01	2.0	20	0	80.1	74 - 124	17.12	6.71	20	
Trichloroethene	108	1.0	20	105.6	12.1	79 - 123	117.6	8.53	20	SO
Vinyl chloride	74.74	1.0	20	63.6	55.7	58 - 137	80.97	8	20	S
Surr: 1,2-Dichloroethane-d4	*45.74*	*1.0*	*50*	*0*	*91.5*	*81 - 118*	*45.05*	*1.51*	*20*	
Surr: 4-Bromofluorobenzene	*50.19*	*1.0*	*50*	*0*	*100*	*85 - 114*	*49.19*	*2.03*	*20*	
Surr: Dibromofluoromethane	*45.96*	*1.0*	*50*	*0*	*91.9*	*80 - 119*	*45.9*	*0.132*	*20*	
Surr: Toluene-d8	*51.95*	*1.0*	*50*	*0*	*104*	*89 - 112*	*51.24*	*1.39*	*20*	

The following samples were analyzed in this batch: HS21071204-03 HS21071204-04 HS21071204-05

ALS Houston, US Date: 09-Aug-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP 16 July 2021
WorkOrder: HS21071204

QC BATCH REPORT

Batch ID: R388195 (0) **Instrument: ICS-Integrion** **Method: ANIONS BY SW9056A**

MBLK Sample ID: **MBLK** Units: **mg/L** Analysis Date: **23-Jul-2021 12:05**
Client ID: Run ID: **ICS-Integrion_388195** SeqNo: **6199365** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Bromide	0.100	0.100								U
Nitrogen, Nitrate (As N)	0.100	0.100								U
Sulfate	0.500	0.500								U

LCS Sample ID: **LCS** Units: **mg/L** Analysis Date: **23-Jul-2021 12:12**
Client ID: Run ID: **ICS-Integrion_388195** SeqNo: **6199366** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Bromide	4.065	0.100	4	0	102	80 - 120				
Nitrogen, Nitrate (As N)	3.91	0.100	4	0	97.7	80 - 120				
Sulfate	18.79	0.500	20	0	94.0	80 - 120				

MS Sample ID: **HS21071204-02MS** Units: **mg/L** Analysis Date: **23-Jul-2021 14:22**
Client ID: **16IW10-210722** Run ID: **ICS-Integrion_388195** SeqNo: **6199381** PrepDate: DF: **5**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Bromide	89.29	0.500	10	79.11	102	80 - 120				O
Nitrogen, Nitrate (As N)	9.558	0.500	10	0	95.6	80 - 120				
Sulfate	43.46	2.50	50	0	86.9	80 - 120				

MS Sample ID: **HS21071183-13MS** Units: **mg/L** Analysis Date: **23-Jul-2021 13:10**
Client ID: Run ID: **ICS-Integrion_388195** SeqNo: **6199372** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Bromide	3.01	0.100	2	1.062	97.4	80 - 120				
Nitrogen, Nitrate (As N)	1.966	0.100	2	0.0084	97.9	80 - 120				
Sulfate	64.53	0.500	10	56.01	85.2	80 - 120				O

ALS Houston, US Date: 09-Aug-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP 16 July 2021
WorkOrder: HS21071204

QC BATCH REPORT

Batch ID: R388195 (0) **Instrument:** ICS-Integrion **Method:** ANIONS BY SW9056A

MSD Sample ID: **HS21071204-02MSD** Units: **mg/L** Analysis Date: **23-Jul-2021 14:30**
Client ID: **16IW10-210722** Run ID: **ICS-Integrion_388195** SeqNo: **6199382** PrepDate: DF: **5**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Bromide	89.61	0.500	10	79.11	105	80 - 120	89.29	0.352	20	O
Nitrogen, Nitrate (As N)	9.6	0.500	10	0	96.0	80 - 120	9.558	0.433	20	
Sulfate	44.24	2.50	50	0	88.5	80 - 120	43.46	1.77	20	

MSD Sample ID: **HS21071183-13MSD** Units: **mg/L** Analysis Date: **23-Jul-2021 13:18**
Client ID: Run ID: **ICS-Integrion_388195** SeqNo: **6199373** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Bromide	3.075	0.100	2	1.062	101	80 - 120	3.01	2.12	20	
Nitrogen, Nitrate (As N)	1.965	0.100	2	0.0084	97.8	80 - 120	1.966	0.0254	20	
Sulfate	65	0.500	10	56.01	89.9	80 - 120	64.53	0.721	20	O

The following samples were analyzed in this batch: HS21071204-01 HS21071204-02 HS21071204-03 HS21071204-08

ALS Houston, US Date: 09-Aug-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP 16 July 2021
WorkOrder: HS21071204

QC BATCH REPORT

Batch ID: R388294 (0) **Instrument: ICS-Integrion** **Method: ANIONS BY SW9056A**

MBLK Sample ID: **MBLK** Units: **mg/L** Analysis Date: **26-Jul-2021 13:48**
Client ID: Run ID: **ICS-Integrion_388294** SeqNo: **6201452** PrepDate: DF: **1**

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

LCS Sample ID: **LCS** Units: **mg/L** Analysis Date: **26-Jul-2021 13:55**
Client ID: Run ID: **ICS-Integrion_388294** SeqNo: **6201453** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfate	18.93	0.500	20	0	94.6	80 - 120				

MS Sample ID: **HS21071096-01MS** Units: **mg/L** Analysis Date: **26-Jul-2021 17:34**
Client ID: Run ID: **ICS-Integrion_388294** SeqNo: **6201458** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfate	66.93	0.500	10	58.25	86.8	80 - 120				O

MSD Sample ID: **HS21071096-01MSD** Units: **mg/L** Analysis Date: **26-Jul-2021 17:42**
Client ID: Run ID: **ICS-Integrion_388294** SeqNo: **6201459** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfate	66.96	0.500	10	58.25	87.1	80 - 120	66.93	0.0478	20	O

The following samples were analyzed in this batch: HS21071204-01

ALS Houston, US Date: 09-Aug-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP 16 July 2021
WorkOrder: HS21071204

QC BATCH REPORT

Batch ID: R388430 (0) **Instrument: ManTech01** **Method: ALKALINITY BY SM 2320B-2011**

MBLK Sample ID: **WBLKW1-210728** Units: **mg/L** Analysis Date: **28-Jul-2021 20:26**
Client ID: Run ID: **ManTech01_388430** SeqNo: **6204845** PrepDate: DF: **1**

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

LCS Sample ID: **LCS1-210728** Units: **mg/L** Analysis Date: **28-Jul-2021 20:34**
Client ID: Run ID: **ManTech01_388430** SeqNo: **6204846** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Alkalinity, Total (As CaCO3)	1025	5.00	1000	0	103	85 - 115				

LCSD Sample ID: **LCSD1-210728** Units: **mg/L** Analysis Date: **28-Jul-2021 20:43**
Client ID: Run ID: **ManTech01_388430** SeqNo: **6204847** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Alkalinity, Total (As CaCO3)	1025	5.00	1000	0	102	85 - 115	1025	0.039	20	

DUP Sample ID: **HS21071204-02DUP** Units: **mg/L** Analysis Date: **28-Jul-2021 21:01**
Client ID: **16IW10-210722** Run ID: **ManTech01_388430** SeqNo: **6204849** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Alkalinity, Total (As CaCO3)	1019	5.00					1055	3.43	20	

The following samples were analyzed in this batch: HS21071204-01 HS21071204-02 HS21071204-03 HS21071204-08

ALS Houston, US Date: 09-Aug-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP 16 July 2021
WorkOrder: HS21071204

QC BATCH REPORT

Batch ID: R388982 (0) **Instrument:** TOC_04 **Method:** TOTAL ORGANIC CARBON - SM5310B-2011

MBLK Sample ID: **MBLK-080521** Units: **mg/L** Analysis Date: **05-Aug-2021 19:28**
Client ID: Run ID: **TOC_04_388982** SeqNo: **6217283** PrepDate: DF: **1**

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

LCS Sample ID: **LCS-08052021** Units: **mg/L** Analysis Date: **05-Aug-2021 19:40**
Client ID: Run ID: **TOC_04_388982** SeqNo: **6217284** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Organic Carbon, Total	10.47	1.00	10	0	105	85 - 115				

LCSD Sample ID: **LCSD-08052021** Units: **mg/L** Analysis Date: **05-Aug-2021 19:52**
Client ID: Run ID: **TOC_04_388982** SeqNo: **6217285** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Organic Carbon, Total	10.59	1.00	10	0	106	85 - 115	10.47	1.14	20	

MS Sample ID: **HS21071204-02MS** Units: **mg/L** Analysis Date: **05-Aug-2021 22:34**
Client ID: **16IW10-210722** Run ID: **TOC_04_388982** SeqNo: **6217293** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Organic Carbon, Total	724.2	1.00	10	708.7	155	80 - 120				SEO

The following samples were analyzed in this batch: HS21071204-01

ALS Houston, US Date: 09-Aug-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP 16 July 2021
WorkOrder: HS21071204

QC BATCH REPORT

Batch ID: R389042 (0) **Instrument:** TOC_04 **Method:** TOTAL ORGANIC CARBON - SM5310B-2011

MBLK Sample ID: **MBLK-080621** Units: **mg/L** Analysis Date: **06-Aug-2021 11:51**
Client ID: Run ID: **TOC_04_389042** SeqNo: **6218603** PrepDate: DF: **1**

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

LCS Sample ID: **LCS-08062021** Units: **mg/L** Analysis Date: **06-Aug-2021 12:03**
Client ID: Run ID: **TOC_04_389042** SeqNo: **6218604** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Organic Carbon, Total	10.88	1.00	10	0	109	85 - 115				

LCSD Sample ID: **LCSD-08062021** Units: **mg/L** Analysis Date: **06-Aug-2021 12:15**
Client ID: Run ID: **TOC_04_389042** SeqNo: **6218605** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Organic Carbon, Total	10.25	1.00	10	0	102	85 - 115	10.88	5.96	20	

MS Sample ID: **HS21071204-02MS** Units: **mg/L** Analysis Date: **06-Aug-2021 12:39**
Client ID: **16IW10-210722** Run ID: **TOC_04_389042** SeqNo: **6218607** PrepDate: DF: **20**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Organic Carbon, Total	799.4	20.0	200	630	84.7	80 - 120				

The following samples were analyzed in this batch: HS21071204-02 HS21071204-03 HS21071204-08

ALS Houston, US Date: 09-Aug-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP 16 July 2021
WorkOrder: **HS21071204**

QUALIFIERS, ACRONYMS, UNITS

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

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

Unit Reported	Description
mg/L	Milligrams per Liter

CERTIFICATIONS,ACCREDITATIONS & LICENSES

Agency	Number	Expire Date
Arkansas	21-022-0	26-Mar-2022
Dept of Defense	PJLA L20-507-R2	22-Dec-2021
Florida	E87611-33	30-Jun-2022
Illinois	2000322021-7	09-May-2022
Kansas	E-10352 2021-2022	31-Jul-2022
Kentucky	123043, 2021-2022	30-Apr-2022
Louisiana	03087, 2021-2022	30-Jun-2022
North Carolina	624-2021	31-Dec-2021
Oklahoma	2020-165	31-Aug-2021
Texas	T104704231-21-27	30-Apr-2022

ALS Houston, US Date: 09-Aug-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP 16 July 2021
Work Order: HS21071204

SAMPLE TRACKING

Lab Samp ID	Client Sample ID	Action	Date	Person	New Location
HS21071204-01	16EW03-210722	Login	7/23/2021 10:32:24 AM	PJM	WET230
HS21071204-01	16EW03-210722	Login	7/23/2021 10:32:24 AM	PJM	Sub
HS21071204-01	16EW03-210722	Login	7/23/2021 10:32:24 AM	PJM	VOA096
HS21071204-01	16EW03-210722	Login	7/23/2021 10:32:24 AM	PJM	RSK010
HS21071204-01	16EW03-210722	Login	7/23/2021 10:32:24 AM	PJM	WET238
HS21071204-02	16IW10-210722	Login	7/23/2021 10:32:24 AM	PJM	WET230
HS21071204-02	16IW10-210722	Login	7/23/2021 10:32:24 AM	PJM	Sub
HS21071204-02	16IW10-210722	Login	7/23/2021 10:32:24 AM	PJM	VOA096
HS21071204-02	16IW10-210722	Login	7/23/2021 10:32:24 AM	PJM	RSK010
HS21071204-02	16IW10-210722	Login	7/23/2021 10:32:24 AM	PJM	WET238
HS21071204-03	16IW03-210722	Login	7/23/2021 10:32:24 AM	PJM	WET230
HS21071204-03	16IW03-210722	Login	7/23/2021 10:32:24 AM	PJM	Sub
HS21071204-03	16IW03-210722	Login	7/23/2021 10:32:24 AM	PJM	VOA096
HS21071204-03	16IW03-210722	Login	7/23/2021 10:32:24 AM	PJM	RSK010
HS21071204-03	16IW03-210722	Login	7/23/2021 10:32:24 AM	PJM	WET238
HS21071204-04	16PM09-210722	Login	7/23/2021 10:32:24 AM	PJM	WET230
HS21071204-04	16PM09-210722	Login	7/23/2021 10:32:24 AM	PJM	Sub
HS21071204-04	16PM09-210722	Login	7/23/2021 10:32:24 AM	PJM	VOA096
HS21071204-04	16PM09-210722	Login	7/23/2021 10:32:24 AM	PJM	RSK010
HS21071204-04	16PM09-210722	Login	7/23/2021 10:32:24 AM	PJM	WET238
HS21071204-05	16PM14-210722	Login	7/23/2021 10:32:24 AM	PJM	Sub
HS21071204-05	16PM14-210722	Login	7/23/2021 10:32:24 AM	PJM	VOA096
HS21071204-06	16RW11-210722	Login	7/23/2021 10:32:24 AM	PJM	Sub
HS21071204-06	16RW11-210722	Login	7/23/2021 10:32:24 AM	PJM	VOA096
HS21071204-07	16RW11-210722-FD	Login	7/23/2021 10:32:24 AM	PJM	Sub
HS21071204-07	16RW11-210722-FD	Login	7/23/2021 10:32:24 AM	PJM	VOA096
HS21071204-08	16IW20-210722	Login	7/23/2021 10:32:24 AM	PJM	WET230
HS21071204-08	16IW20-210722	Login	7/23/2021 10:32:24 AM	PJM	Sub
HS21071204-08	16IW20-210722	Login	7/23/2021 10:32:24 AM	PJM	VOA096
HS21071204-08	16IW20-210722	Login	7/23/2021 10:32:24 AM	PJM	RSK010
HS21071204-08	16IW20-210722	Login	7/23/2021 10:32:24 AM	PJM	WET238
HS21071204-09	Trip Blank-210722	Login	7/23/2021 10:32:24 AM	PJM	VOA096

ALS Houston, US Date: 09-Aug-21

Sample Receipt Checklist

Work Order ID: HS21071204 **Date/Time Received:** 23-Jul-2021 09:00

Client Name: CBI-Houston **Received by:** Jared R. Makan

Completed By:	/S/ Pablo Marinez	23-Jul-2021 10:34	**Reviewed by:**	/S/ Ragen Giga	25-Jul-2021 13:22
	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 ☐	2 Page(s)
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	COC IDs:CLIENT
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):	1.5°C UC/C	IR 31
Cooler(s)/Kit(s):	47502	
Date/Time sample(s) sent to storage:	7/23/21 10:50	

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: 16RW11-210722 - VOC vial 1 of 3 contains >6mm headspace

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

Corrective Action:

CHAIN OF CUSTODY

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

Page 1 of 1

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

Field Sample I.D.	Sample Matrix	Date / Time	MS / MSD	No. OF CONTAINERS	Analyses: VOC by SW 8260B	TOC by SM5310C	MEE by RSK 175	Anions (bromide, sulfate, nitrate) by SW9056 and Alkalinity by SM2320	Bromide by SW9056	Perchlorate by SW6850	Metals (arsenic, chromium, manganese, nickel, thallium) by SW6020	Remarks (Preservatives, etc.)	Lab I.D.#
16EW03-210722	WG	7/22/21/0715		10	X	X	X	X	X	X			
16IW10-210722	WG	7/22/21/0805		10	X	X	X	X	X	X			
16IW10-210722-MS	WG	7/22/21/0805		10	X	X	X	X	X	X			
16IW10-210722-MSD	WG	7/22/21/0805		10	X	X	X	X	X	X			
16IW03-210722	WG	7/22/21/0905		10	X	X	X	X	X	X			
16PM09-210722	WG	7/22/21/1105		4	X					X			
16PM14-210722	WG	7/22/21/1150		4	X					X			
16RW11-210722	WG	7/22/21/1235		4	X					X			

HS21071204

Aptim Environmental & Infrastucture, Inc.

Longhorn Army Ammunition Plant LHAAP 16 July 20

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

Relinquished By:	Date	Time	Received By:	Date	Time	Relinquished By:	Date	Time	Received By:	Date	Time
Scott Beesinger	7/22/21	1430									

For Lab Use Only

Received At Lab By:	Date	Time	Airbill No.	Opened By:	Date	Time	Temp of Container	Seal No.	Condition
J. Mimmack	7/23/21	09.00							

Remarks: Cooler 49502 10851
Temp 1-5C CF-0

CHAIN OF CUSTODY

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

Page 1 of 1

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

Field Sample I.D.	Sample Matrix	Date / Time	MS / MSD	No. OF CONTAINERS	VOC by SW 8260B	TOC by SM5310C	MEE by RSK 175	Anions (bromide, sulfate, nitrate) by SW9056 and Alkalinity by SM2320	Bromide by SW9056	Perchlorate by SW6850	Metals (arsenic, chromium, manganese, nickel, thallium) by SW6020				Remarks (Preservatives, etc.)	Lab I.D.#
16RW11-210722-FD	W6	7/22/21/1235		4	X					X						
16IW20-210722	W6	7/22/21/1315		10	X	X	X	X	X	X						
TRIP BLANK-210722	W6															

HS21071204

Aptim Environmental & Infrastucture, Inc.

Longhorn Army Ammunition Plant LHAAP 16 July 20

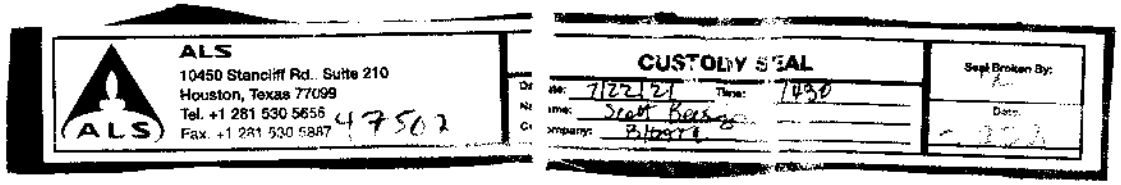
Additional Remarks: Standard TAT on all parameters. Please email results to Vicki.Graves@aptim.com and invoices to fedinvoices@aptim.com

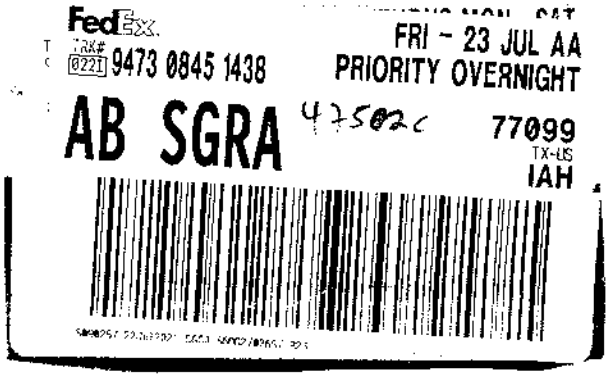
Relinquished By:	Date	Time	Received By:	Date	Time	Relinquished By:	Date	Time	Received By:	Date	Time
Scott Beesinger	7/22/21	1430									

For Lab Use Only

Received At Lab By:	Date	Time	Airbill No.	Opened By:	Date	Time	Temp of Container	Seal No.	Condition
[illegible]	7/23/21	09:30							

Remarks:


ALS
10450 Stanciff Rd., Suite 210
Houston, Texas 77099
Tel. +1 281 530 5656
Fax. +1 281 530 5887
47502
CUSTODY SEAL
Seal Broken By:
Date:
Time:
1430


FedEx
TRK#
0221 9473 0845 1438
FRI - 23 JUL AA
PRIORITY OVERNIGHT
AB SGRA
47502c
77099
TX-US
IAH

August 05, 2021 Service Request No:E2100825

Ragen Giga
ALS Environmental - US
10450 Stancliff Rd Suite 210
Houston, TX 77099

Laboratory Results for: HS21071204

Dear Ragen,

Enclosed are the results of the sample(s) submitted to our laboratory July 23, 2021
For your reference, these analyses have been assigned our service request number **E2100825.**

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

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental



Corey Grandits
Project Manager

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

Certificate of Analysis

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

ALS Environmental

Client:	ALS Houston	**Service Request No.:**	E2100825
Project:	HS21071204	**Date Received:**	07/23/21
Sample Matrix:	W		

CASE NARRATIVE

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

Sample Receipt

Eight samples were received for analysis at ALS Environmental in Houston on 07/23/21.

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

Data Validation Notes and Discussion

Precision and Accuracy:

EQ2100458: Laboratory Control Spike/Duplicate Laboratory Control Spike (LCS/DLCS) samples were analyzed and reported in addition to a MS/MSD for this extraction batch. The LCS & DLCS recoveries are within QC limits. The MS and MSD (E2100825-002) recoveries were recovered above the upper control limit.

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

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

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

Client: ALS Environmental - US **Service Request:**E2100825
Project: HS21071204

SAMPLE CROSS-REFERENCE

SAMPLE #	CLIENT SAMPLE ID	DATE	TIME
E2100825-001	16EW03-210722	7/22/2021	0715
E2100825-002	16IW10-210722	7/22/2021	0805
E2100825-003	16IW03-210722	7/22/2021	0905
E2100825-004	16PM09-210722	7/22/2021	1105
E2100825-005	16PM14-210722	7/22/2021	1150
E2100825-006	16RW11-210722	7/22/2021	1235
E2100825-007	16RW11-210722-FD	7/22/2021	1235
E2100825-008	16IW20-210722	7/22/2021	1315

Service Request Summary

Folder #: **E2100825**
Client Name: ALS Environmental - US
Project Name: HS21071204
Project Number:

Report To: Ragen Giga
ALS Environmental - US
10450 Stancliff Rd Suite 210
Houston, TX 77099
USA
Phone Number:
Cell Number:
Fax Number:
E-mail: ragenp.giga@alsglobal.com

Project Chemist: Corey Grandits
Originating Lab: HOUSTON
Logged By: CGRANDITS
Date Received: 07/23/21
Internal Due Date: 8/6/2021
QAP: LAB QAP
Qualifier Set: Lab Standard
Formset: Lab Standard
Merged?: Y
Report to MDL?: Y
P.O. Number: HS21071204
EDD: No EDD Specified

10 125 mL-Plastic Bottle Plastic
Location: EHRMS-AirArch 1
Pressure Gas:

Lab Samp No.	Client Samp No	Matrix	Collected	HOUSTON ClO4 DOD/6850
E2100825-001	16EW03-210722	Ground Water	07/22/21 0715	**IV**
E2100825-002	16IW10-210722	Ground Water	07/22/21 0805	**IV**
E2100825-003	16IW03-210722	Ground Water	07/22/21 0905	**IV**
E2100825-004	16PM09-210722	Ground Water	07/22/21 1105	**IV**
E2100825-005	16PM14-210722	Ground Water	07/22/21 1150	**IV**
E2100825-006	16RW11-210722	Ground Water	07/22/21 1235	**IV**
E2100825-007	16RW11-210722-FD	Ground Water	07/22/21 1235	**IV**
E2100825-008	16IW20-210722	Ground Water	07/22/21 1315	**IV**

Service Request Summary

Folder #: **E2100825**
Client Name: ALS Environmental - US
Project Name: HS21071204
Project Number:

Report To: Ragen Giga
ALS Environmental - US
10450 Stancliff Rd Suite 210
Houston, TX 77099
USA
Phone Number:
Cell Number:
Fax Number:
E-mail: ragenp.giga@alsglobal.com

Project Chemist: Corey Grandits
Originating Lab: HOUSTON
Logged By: CGRANDITS
Date Received: 07/23/21
Internal Due Date: 8/6/2021
QAP: LAB QAP
Qualifier Set: Lab Standard
Formset: Lab Standard
Merged?: Y
Report to MDL?: Y
P.O. Number: HS21071204
EDD: No EDD Specified

10 125 mL-Plastic Bottle Plastic
Location: EHRMS-AirArch 1
Pressure Gas:

Test Comments:

Group	Test/Method	Samples	Comments
Semivoa GCMS	ClO4 DOD/6850	7	Level IV due 8/13
Semivoa GCMS	ClO4 DOD/6850	1	MS/MSD

Data Qualifiers

Lab Standard

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

Data Qualifiers

Lab Standard

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

ALS Laboratory Group

Acronyms

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

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State Certifications, Accreditations, and Licenses

Agency	Number	Expire Date
American Association for Laboratory Accreditation	2897.01 2020	11/30/2021
Arkansas Department of Environmental Quality	21-022-0	3/26/2022
Arkansas Department of Environmental Quality	19-028-0	6/30/2022
Department of Defense	A2LA 2897.01	11/30/2021
Florida Department of Health	E87611-33	6/30/2022
Hawaii Department of Health	2021-2022	4/30/2022
Kansas Department of Health and Environment	E-10352 2022	7/31/2022
Louisiana Department of Environmental Quality	03087-2021	6/30/2022
Louisiana Department of Health and Hospitals	LA028-2021	12/31/2021
Maine Department of Health and Human Services	2020016	6/5/2022
Minnesota Department of Health	2021671	12/31/2021
New Hampshire Environmental Laboratory Accreditation Program	209421	4/24/2022
Oklahoma Department of Environmental Quality	2020-123	8/31/2021
Pennsylvania Department of Environmental Protection	68-03441-015	6/30/2022
Tennessee Department of Environment and Concervation	04016-2021	4/30/2022
Texas Commision on Environmental Quality	T104704231-21-27	4/30/2022
United States Department of Agriculture	P330-19-00299	10/10/2022

Chain of Custody

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Subcontract Chain of Custody

SAMPLING STATE: **Dept of Defense** **COC ID:** **16547**

SUBCONTRACT TO:

ALS Environmental
10450 Stancliff RoadSuite 210
Houston, TX 77084

Phone: +1 281 530 5656

CUSTOMER INFORMATION:

Company:	ALS Houston
Contact:	Ragen Giga
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Email:	RagenP.Giga@ALSGlobal.com
Alternate Contact:	
Email:	

INVOICE INFORMATION:

Company:	ALS Houston
Contact:	Accounts Payable
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Reference:	HS21071204
TSR:	Sonia West

	LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
	ANALYSIS REQUESTED			DUE DATE
1.	**HS21071204-01**	**16EW03-210722**	**GW**	**22 Jul 2021 07:15**
	Level II and Level IV reports on a seperate pdf. Send WOA to Vicki Graves.			06 Aug 2021
2.	**HS21071204-02**	**16IW10-210722**	**GW**	**22 Jul 2021 08:05**
	Level II and Level IV reports on a seperate pdf. Send WOA to Vicki Graves.			06 Aug 2021
3.	**HS21071204-03**	**16IW03-210722**	**GW**	**22 Jul 2021 09:05**
	Level II and Level IV reports on a seperate pdf. Send WOA to Vicki Graves.			06 Aug 2021
4.	**HS21071204-04**	**16PM09-210722**	**GW**	**22 Jul 2021 11:05**
	Level II and Level IV reports on a seperate pdf. Send WOA to Vicki Graves.			06 Aug 2021
5.	**HS21071204-05**	**16PM14-210722**	**GW**	**22 Jul 2021 11:50**
	Level II and Level IV reports on a seperate pdf. Send WOA to Vicki Graves.			06 Aug 2021
6.	**HS21071204-06**	**16RW11-210722**	**GW**	**22 Jul 2021 12:35**
	Level II and Level IV reports on a seperate pdf. Send WOA to Vicki Graves.			06 Aug 2021
7.	**HS21071204-07**	**16RW11-210722-FD**	**GW**	**22 Jul 2021 12:35**
	Level II and Level IV reports on a seperate pdf. Send WOA to Vicki Graves.			06 Aug 2021
8.	**HS21071204-08**	**16IW20-210722**	**GW**	**22 Jul 2021 13:15**

Subcontract Chain of Custody

SAMPLING STATE: **Dept of Defense** **COC ID: 16547**

LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
ANALYSIS REQUESTED			DUE DATE
	Level II and Level IV reports on a seperate pdf. Send WOA to Vicki Graves.		06 Aug 2021

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

QC Level: DOD IV (DoD Data Package)

Relinquished By: _____ Date/Time: 7 23 21 10:50

Received By: COREY G Date/Time: 7/23/21 10:50

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

ALS Environmental

Cooler Receipt Form

Project Chemist CG

Client/Project ALS-H

Thermometer ID 1231

Date/Time Received: 7/23/21 Initials: CG Date/Time Logged in: 7/23/21 Initials CG

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

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

3. Were custody seals on coolers? ○ Yes ✓ No
   Were they intact? ○ Yes ○ No ✓ N/A
   Were they signed and dated? ○ Yes ○ No ✓ N/A
   If yes, how many and where?

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

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

Cooler Tracking Number	COC ID	Date Opened	Time Opened	Opened By	Temp. °C	Temp Blank?
NA		7/23/21	1050	CG	4.4	☑
						☐
						☐
						☐

6. Were custody papers properly filled out (ink, signed, dated, etc)? ✓ Yes ○ No
7. Did all bottles arrive in good condition (not broken, no signs of leakage)? ✓ Yes ○ No
8. Were all sample labels complete (i.e., sample ID, analysis, preservation, etc)? ✓ Yes ○ No
9. Were appropriate bottles/containers and volumes received for the requested tests? ✓ Yes ○ No
10. Did sample labels and tags agree with custody documents? ✓ Yes ○ No

Notes, Discrepancies, & Resolutions:

Service request Label:

HS-HRMSCoolerReceipt R1.0

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SAMPLE ACCEPTANCE POLICY

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

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

- ✓ Intact on outside of cooler, signed and dated

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

The following is required on each COC:

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

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

Sample Integrity (mandatory):

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

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

Temperature Requirement (varies by sample matrix):

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

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

Preparation Information Benchsheets

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Preparation Information Benchsheet

Prep Run#: 383906 **Prep WorkFlow:** GenExt28Day **Status:** Prepped
Team: Semivoa GCMS/GRIVERA **Prep Method:** Method **Prep Date/Time:** 7/30/21 10:15

#	Lab Code	Client ID	B#	Method /Test	pH	Cl	Matrix	Amt. Ext.	Sample Description
1	E2100824-001	MOSA-21-231359	.01	6850/ClO4 DOD			Water	10mL	
2	E2100824-002	MOSA-21-231360	.01	6850/ClO4 DOD			Water	10mL	
3	E2100824-003	MOSA-21-231361	.01	6850/ClO4 DOD			Water	10mL	
4	E2100825-001	16EW03-210722	.01	6850/ClO4 DOD			Ground Water	10mL	
5	E2100825-002	16IW10-210722	.01	6850/ClO4 DOD			Ground Water	10mL	
6	E2100825-003	16IW03-210722	.01	6850/ClO4 DOD			Ground Water	10mL	
7	E2100825-004	16PM09-210722	.01	6850/ClO4 DOD			Ground Water	10mL	
8	E2100825-005	16PM14-210722	.01	6850/ClO4 DOD			Ground Water	10mL	
9	E2100825-006	16RW11-210722	.01	6850/ClO4 DOD			Ground Water	10mL	
10	E2100825-007	16RW11-210722-FD	.01	6850/ClO4 DOD			Ground Water	10mL	
11	E2100825-008	16IW20-210722	.01	6850/ClO4 DOD			Ground Water	10mL	
12	EQ2100458-01	MB		6850/ClO4 DOD			Liquid	10mL	
13	EQ2100458-02	LCS		6850/ClO4 DOD			Liquid	10mL	
14	EQ2100458-03	DLCS		6850/ClO4 DOD			Liquid	10mL	
15	EQ2100458-04	16IW10-210722 MS	.01	6850/ClO4 DOD			Liquid	10mL	
16	EQ2100458-05	16IW10-210722 DMS	.01	6850/ClO4 DOD			Liquid	10mL	

Spiking Solutions

Name: Sodium Perchlorate 1 ug/mL (IS) (18-O) as CLO4 Inventory ID 214765 Logbook Ref: Sodium Perchlorate Expires On: 12/11/2022

E2100824-001	100.00µL	E2100824-002	100.00µL	E2100824-003	100.00µL	E2100825-001	100.00µL	E2100825-002	100.00µL	E2100825-003	100.00µL
E2100825-004	100.00µL	E2100825-005	100.00µL	E2100825-006	100.00µL	E2100825-007	100.00µL	E2100825-008	100.00µL	EQ2100458-01	100.00µL
EQ2100458-02	100.00µL	EQ2100458-03	100.00µL	EQ2100458-04	100.00µL	EQ2100458-05	100.00µL				

Name: Perchlorate Intermediate Stock1 Inventory ID 217422 Logbook Ref: Perchlorate Expires On: 11/26/2021

EQ2100458-02	1.00µL	EQ2100458-03	1.00µL	EQ2100458-04	1.00µL	EQ2100458-05	1.00µL

Preparation Materials

Water HPLC Grade 07/01/2021 Water (217918) 537M Glass Culture Tubes 537M Glass Tubes (218064)

Preparation Steps

Step: Preparation
Started: 7/30/21 10:15
Finished: 7/30/21 11:15
By: GRIVERA
Comments

Preparation Information Benchsheet

Prep Run#: 383906
Team: Semivoa GCMS/GRIVERA
Prep WorkFlow: GenExt28Day
Prep Method: Method
Status: Prepped
Prep Date/Time: 7/30/21 10:15

Comments:

Reviewed By: GR Date: 7/30/21

Chain of Custody

Relinquished By: Date:

Received By: Date:

Extracts Examined
Yes No

Analytical Results

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ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100825
Project:	HS21071204	**Date Collected:**	7/22/21 0715
Sample Matrix:	Ground Water	**Date Received:**	7/23/21
Sample Name:	16EW03-210722	**Units:**	µg/L
Lab Code:	E2100825-001	**Basis:**	As Received

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

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	1.00	0.500	0.250	10	7/30/21	8/5/21 13:51	383906	733725	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100825
Project:	HS21071204	**Date Collected:**	7/22/21 0805
Sample Matrix:	Ground Water	**Date Received:**	7/23/21
Sample Name:	16IW10-210722	**Units:**	µg/L
Lab Code:	E2100825-002	**Basis:**	As Received

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

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	0.200	0.100	0.0500	2	7/30/21	8/5/21 12:12	383906	733725	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100825
Project:	HS21071204	**Date Collected:**	7/22/21 0905
Sample Matrix:	Ground Water	**Date Received:**	7/23/21
Sample Name:	16IW03-210722	**Units:**	µg/L
Lab Code:	E2100825-003	**Basis:**	As Received

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

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	1.00	0.500	0.250	10	7/30/21	8/5/21 14:35	383906	733725	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100825
Project:	HS21071204	**Date Collected:**	7/22/21 1105
Sample Matrix:	Ground Water	**Date Received:**	7/23/21
Sample Name:	16PM09-210722	**Units:**	µg/L
Lab Code:	E2100825-004	**Basis:**	As Received

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

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	0.100	0.0500	0.0250	1	7/30/21	8/2/21 22:07	383906	733464	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100825
Project:	HS21071204	**Date Collected:**	7/22/21 1150
Sample Matrix:	Ground Water	**Date Received:**	7/23/21
Sample Name:	16PM14-210722	**Units:**	µg/L
Lab Code:	E2100825-005	**Basis:**	As Received

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

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	1.00	0.500	0.250	10	7/30/21	8/5/21 14:00	383906	733725	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100825
Project:	HS21071204	**Date Collected:**	7/22/21 1235
Sample Matrix:	Ground Water	**Date Received:**	7/23/21
Sample Name:	16RW11-210722	**Units:**	µg/L
Lab Code:	E2100825-006	**Basis:**	As Received

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

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	1.00	0.500	0.250	10	7/30/21	8/5/21 13:11	383906	733725	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100825
Project:	HS21071204	**Date Collected:**	7/22/21 1235
Sample Matrix:	Ground Water	**Date Received:**	7/23/21
Sample Name:	16RW11-210722-FD	**Units:**	µg/L
Lab Code:	E2100825-007	**Basis:**	As Received

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

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	1.00	0.500	0.250	10	7/30/21	8/5/21 13:20	383906	733725	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100825
Project:	HS21071204	**Date Collected:**	7/22/21 1315
Sample Matrix:	Ground Water	**Date Received:**	7/23/21
Sample Name:	16IW20-210722	**Units:**	µg/L
Lab Code:	E2100825-008	**Basis:**	As Received

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

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	1.00	0.500	0.250	10	7/30/21	8/5/21 13:28	383906	733725	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100825
Project:	HS21071204	**Date Collected:**	NA
Sample Matrix:	Ground Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	EQ2100458-01	**Basis:**	As Received

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

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	0.100	0.0500	0.0250	1	7/30/21	8/2/21 20:25	383906	733464	

Accuracy & Precision

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ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS21071204
Sample Matrix: Ground Water

Service Request: E2100825
Date Analyzed: 8/ 2/21

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

Analytical Method: 6850
Prep Method: Method

Units: µg/L
Basis: As Received

Extraction Lot: 383906

	Lab Control Sample EQ2100458-02			Duplicate Lab Control Sample EQ2100458-03					
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Perchlorate	0.118	0.100	118	0.119	0.100	119	84 - 119	<1	15

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

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

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100825
Project:	HS21071204	**Date Collected:**	NA
Sample Matrix:	Ground Water	**Date Received:**	NA
Sample Name:	Lab Control Sample	**Units:**	µg/L
Lab Code:	EQ2100458-02	**Basis:**	As Received

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

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.118**		0.100	0.0500	0.0250	1	7/30/21	8/2/21 20:34	383906	733464	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100825
Project:	HS21071204	**Date Collected:**	NA
Sample Matrix:	Ground Water	**Date Received:**	NA
Sample Name:	Duplicate Lab Control Sample	**Units:**	µg/L
Lab Code:	EQ2100458-03	**Basis:**	As Received

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

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.119**		0.100	0.0500	0.0250	1	7/30/21	8/2/21 20:42	383906	733464	

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2100825
Project:	HS21071204	**Date Collected:**	7/22/21
Sample Matrix:	Ground Water	**Date Received:**	7/23/21
		Date Analyzed:	8/ 5/21

Matrix Spike Summary

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

Sample Name:	16IW10-210722	**Units:**	µg/L
Lab Code:	E2100825-002	**Basis:**	As Received

Analytical Method: 6850
Prep Method: Method

		16IW10-210722MS				16IW10-210722DMS					
		Matrix Spike				**Duplicate Matrix Spike**					
		EQ2100458-04				EQ2100458-05					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**% Rec**		**Result**	**Spike Amount**	**% Rec**		**% Rec Limits**	**RPD**	**RPD Limit**
Perchlorate	ND	0.134	0.100	134	*	0.128	0.100	128	*	84 - 119	5	15

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

Results flagged with a pound (#) indicate the control criteria is not applicable.

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

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100825
Project:	HS21071204	**Date Collected:**	7/22/21 0805
Sample Matrix:	Ground Water	**Date Received:**	7/23/21
Sample Name:	16IW10-210722	**Units:**	µg/L
Lab Code:	EQ2100458-04	**Basis:**	As Received
Run Type:	Matrix Spike		

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

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.134**	J	0.200	0.100	0.0500	2	7/30/21	8/5/21 15:32	383906	733725	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100825
Project:	HS21071204	**Date Collected:**	7/22/21 0805
Sample Matrix:	Ground Water	**Date Received:**	7/23/21
Sample Name:	16IW10-210722	**Units:**	µg/L
Lab Code:	EQ2100458-05	**Basis:**	As Received
Run Type:	Duplicate Matrix Spike		

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

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.128**	J	0.200	0.100	0.0500	2	7/30/21	8/5/21 15:50	383906	733725	

HS21071204 8260 Raw Data

ALS WO# HS21071204

MSVOA06 -Logbook

Batch: 45881
Date: 07-26-2021
Method: 8260_W
Comments:

Analyst: Presenta Cabascango
Reviewer:
Laboratory: Houston

#	Samp ID	Type	Analyzed	DF	Init Wt/Vol	Final Vol	File ID	Matrix	Status	p
1	BFB	TUNE	07-26-2021 10:44 am	1.00	50 mL	50 mL	X072601.D	Liquid	Y	N
2	VSTD000.25	ICAL1	07-26-2021 11:05 am	1.00	50 mL	50 mL	X072602.D	Liquid	Y	N
3	VSTD000.5	ICAL2	07-26-2021 11:26 am	1.00	50 mL	50 mL	X072603.D	Liquid	Y	N
4	VSTD001	ICAL3	07-26-2021 12:08 pm	1.00	50 mL	50 mL	X072604.D	Liquid	Y	N
5	VSTD002	ICAL4	07-26-2021 12:29 pm	1.00	50 mL	50 mL	X072605.D	Liquid	Y	N
6	VSTD005	ICAL5	07-26-2021 12:50 pm	1.00	50 mL	50 mL	X072606.D	Liquid	Y	N
7	VSTD020	ICAL6	07-26-2021 01:11 pm	1.00	50 mL	50 mL	X072607.D	Liquid	Y	N
8	VSTD050	ICAL7	07-26-2021 01:31 pm	1.00	50 mL	50 mL	X072608.D	Liquid	Y	N
9	VSTD100	ICAL8	07-26-2021 01:52 pm	1.00	50 mL	50 mL	X072609.D	Liquid	Y	N
10	VSTD150	ICAL9	07-26-2021 02:13 pm	1.00	50 mL	50 mL	X072610.D	Liquid	Y	N
11	VSTD200	ICAL	07-26-2021 02:34 pm	1.00	50 mL	50 mL	X072611.D	Liquid	Y	N
12	BLANK	SAMP	07-26-2021 02:55 pm	1.00	50 mL	50 mL	X072612.D	Liquid	Y	N
13	BLANK	SAMP	07-26-2021 03:16 pm	1.00	50 mL	50 mL	X072613.D	Liquid	Y	N
14	CCV	CCV	07-26-2021 03:37 pm	1.00	50 mL	50 mL	X072614.D	Liquid	Y	N
15	CCB	SAMP	07-26-2021 03:58 pm	1.00	50 mL	50 mL	X072615.D	Liquid	Y	N
16	VLCSW-210726	LCS	07-26-2021 04:19 pm	1.00	50 mL	50 mL	X072616.D	Liquid	Y	N
17	VBLKW-210726	MBLK	07-26-2021 04:40 pm	1.00	50 mL	50 mL	X072617.D	Liquid	Y	N
18	BLANK	SAMP	07-26-2021 05:01 pm	1.00	50 mL	50 mL	X072618.D	Liquid	Y	N
19	HS21070791-05	SAMP	07-26-2021 05:22 pm	1.00	50 mL	50 mL	X072619.D	Liquid	Y	N
20	HS21070791-10	SAMP	07-26-2021 05:43 pm	1.00	50 mL	50 mL	X072620.D	Liquid	Y	N
21	HS21070791-11	SAMP	07-26-2021 06:04 pm	1.00	50 mL	50 mL	X072621.D	Liquid	Y	N
22	HS21070791-12	SAMP	07-26-2021 06:25 pm	1.00	50 mL	50 mL	X072622.D	Liquid	Y	N
23	HS21070791-13	SAMP	07-26-2021 06:46 pm	1.00	50 mL	50 mL	X072623.D	Liquid	Y	N
24	HS21070791-14	SAMP	07-26-2021 07:07 pm	1.00	50 mL	50 mL	X072624.D	Liquid	Y	N
25	HS21070791-15	SAMP	07-26-2021 07:28 pm	1.00	50 mL	50 mL	X072625.D	Liquid	Y	N
26	HS21070791-16	SAMP	07-26-2021 07:50 pm	1.00	50 mL	50 mL	X072626.D	Liquid	Y	N
27	HS21071038-02	SAMP	07-26-2021 08:11 pm	1.00	50 mL	50 mL	X072627.D	Liquid	Y	N
28	HS21071038-03	SAMP	07-26-2021 08:32 pm	1.00	50 mL	50 mL	X072628.D	Liquid	Y	N
29	HS21071038-05	SAMP	07-26-2021 08:53 pm	1.00	50 mL	50 mL	X072629.D	Liquid	Y	N
30	HS21071038-02MS	MS	07-26-2021 09:14 pm	1.00	50 mL	50 mL	X072630.D	Liquid	Y	N
31	HS21071038-02MSD	MSD	07-26-2021 09:35 pm	1.00	50 mL	50 mL	X072631.D	Liquid	Y	N
32	CCV-END	CCV	07-26-2021 09:56 pm	1.00	50 mL	50 mL	X072632.D	Liquid	Y	N
33	BFB	TUNE	07-26-2021 10:17 pm	1.00	50 mL	50 mL	Y072601.D	Liquid	Y	N
34	CCV	CCV	07-26-2021 10:38 pm	1.00	50 mL	50 mL	Y072602a.D	Liquid	Y	N
35	CCV	CCV	07-26-2021 10:58 pm	1.00	50 mL	50 mL	Y072603.D	Liquid	Y	N
36	CCB	SAMP	07-26-2021 11:20 pm	1.00	50 mL	50 mL	Y072604.D	Liquid	Y	N
37	VLCSW-210726	LCS	07-26-2021 11:40 pm	1.00	50 mL	50 mL	Y072605.D	Liquid	Y	N
38	BLANK	SAMP	07-27-2021 12:02 am	1.00	50 mL	50 mL	Y072606.D	Liquid	Y	N
39	VBLKW-210726	MBLK	07-27-2021 12:23 am	1.00	50 mL	50 mL	Y072607.D	Liquid	Y	N
40	HS21071269-01	SAMP	07-27-2021 12:44 am	1.00	50 mL	50 mL	Y072608.D	Liquid	Y	N
41	HS21071269-01MS	MS	07-27-2021 01:05 am	1.00	50 mL	50 mL	Y072609.D	Liquid	Y	N

MSVOA06 -Logbook

#	Samp ID	Type	Analyzed	DF	Init Wt/Vol	Final Vol	File ID	Matrix	Status	p
42	HS21071269-01MSD	MSD	07-27-2021 01:26 am	1.00	50 mL	50 mL	Y072610.D	Liquid	Y	N
43	BLANK	SAMP	07-27-2021 01:47 am	1.00	50 mL	50 mL	Y072611.D	Liquid	Y	N
44	HS21071162-01	SAMP	07-27-2021 02:08 am	1.00	50 mL	50 mL	Y072612.D	Liquid	Y	N
45	HS21071275-01	SAMP	07-27-2021 02:29 am	1.00	50 mL	50 mL	Y072613.D	Liquid	Y	N
46	HS21071275-02	SAMP	07-27-2021 02:50 am	1.00	50 mL	50 mL	Y072614.D	Liquid	Y	N
47	HS21071275-03	SAMP	07-27-2021 03:11 am	1.00	50 mL	50 mL	Y072615.D	Liquid	Y	N
48	HS21071275-04	SAMP	07-27-2021 03:32 am	1.00	50 mL	50 mL	Y072616.D	Liquid	Y	N
49	HS21071275-06	SAMP	07-27-2021 03:53 am	1.00	50 mL	50 mL	Y072617.D	Liquid	Y	N
50	HS21071275-07	SAMP	07-27-2021 04:14 am	1.00	50 mL	50 mL	Y072618.D	Liquid	Y	N
51	HS21071275-08	SAMP	07-27-2021 04:35 am	1.00	50 mL	50 mL	Y072619.D	Liquid	Y	N
52	HS21071275-09	SAMP	07-27-2021 04:56 am	1.00	50 mL	50 mL	Y072620.D	Liquid	Y	N
53	HS21071275-10	SAMP	07-27-2021 05:18 am	1.00	50 mL	50 mL	Y072621.D	Liquid	Y	N
54	HS21071275-11	SAMP	07-27-2021 05:39 am	1.00	50 mL	50 mL	Y072622.D	Liquid	Y	N
55	HS21071275-05	SAMP	07-27-2021 06:00 am	1.00	50 mL	50 mL	Y072623.D	Liquid	Y	N
56	HS21071280-24	SAMP	07-27-2021 06:21 am	1.00	50 mL	50 mL	Y072624.D	Liquid	Y	N
57	HS21071075-01	SAMP	07-27-2021 06:42 am	1.00	50 mL	50 mL	Y072625.D	Liquid	Y	N
58	HS21071075-02	SAMP	07-27-2021 07:03 am	1.00	50 mL	50 mL	Y072626.D	Liquid	Y	N
59	HS21071075-03	SAMP	07-27-2021 07:24 am	1.00	50 mL	50 mL	Y072627.D	Liquid	Y	N
60	HS21071075-04	SAMP	07-27-2021 07:45 am	1.00	50 mL	50 mL	Y072628.D	Liquid	Y	N
61	HS21071075-05	SAMP	07-27-2021 08:06 am	1.00	50 mL	50 mL	Y072629.D	Liquid	Y	N
62	HS21071075-06	SAMP	07-27-2021 08:27 am	1.00	50 mL	50 mL	Y072630.D	Liquid	Y	N
63	BLANK	SAMP	07-27-2021 08:48 am	1.00	50 mL	50 mL	Y072631.D	Liquid	Y	N

FORM 3
WATER VOLATILE METHOD SPIKE RECOVERY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS21071204

Matrix Spike - Sample No.: ICV

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE AMOUNT ()	% REC #	QC. LIMITS REC.
cis-1,2-Dichloroethene	50.00	46.43	93	80-120
Vinyl Chloride	50.00	43.47	87	80-120
Methylene Chloride	50.00	46.77	94	80-120
1,1-Dichloroethene	50.00	43.04	86	80-120
1,2-Dichloroethane	50.00	48.02	96	80-120
Trichloroethene	50.00	45.81	92	80-120
1,1,2-Trichloroethane	50.00	48.68	97	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.: HS21071204

Lab File ID: X072601 BFB Injection Date: 07/26/21

Instrument ID: VOA6 BFB Injection Time: 1044

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	25.4
75	30.0 - 60.0% of mass 95	51.0
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	7.3
173	Less than 2.0% of mass 174	1.0 (1.0)1
174	Greater than 50.0% of mass 95	93.7
175	5.0 - 9.0% of mass 174	6.6 (7.0)1
176	95.0 - 101.0% of mass 174	89.9 (95.9)1
177	5.0 - 9.0% of mass 176	6.0 (6.6)2

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

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD000.25	VSTD000.25	X072602	07/26/21	1105
02	VSTD000.5	VSTD000.5	X072603	07/26/21	1126
03	VSTD001	VSTD001	X072604	07/26/21	1208
04	VSTD002	VSTD002	X072605	07/26/21	1229
05	VSTD005	VSTD005	X072606	07/26/21	1250
06	VSTD020	VSTD020	X072607	07/26/21	1311
07	VSTD050	VSTD050	X072608	07/26/21	1331
08	VSTD100	VSTD100	X072609	07/26/21	1352
09	VSTD150	VSTD150	X072610	07/26/21	1413
10	VSTD200	VSTD200	X072611	07/26/21	1434
11	ICV	ICV	X072614	07/26/21	1537
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.: HS21071204

Instrument ID: VOA6 Calibration Date(s): 07/26/21 07/26/21

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1105 1434

LAB FILE ID: RF0.25: X072602 RF0.5: X072603 RF1: X072604
RF2: X072605 RF5: X072606 RF20: X072607

COMPOUND	RF0.25	RF0.5	RF1	RF2	RF5	RF20
Vinyl Chloride		0.889	0.830	0.794	0.660	0.704
Methylene Chloride		3167	4482	8812	18386	70678
1,1-Dichloroethene		0.720	0.718	0.605	0.533	0.556
1,2-Dichloroethane		0.550	0.551	0.513	0.506	0.496
Trichloroethene		0.357	0.401	0.352	0.345	0.324
1,1,2-Trichloroethane		0.359	0.340	0.273	0.307	0.273
Dibromofluoromethane		0.553	0.381	0.450	0.517	0.523
1,2-Dichloroethane-d4		3364	3987	8738	23278	93162
Toluene-d8		6237	8974	20762	60828	242305
4-Bromofluorobenzene		3690	4058	7396	22712	88412

FORM VI VOA

Data File: \\NAHSTWS005\target\chem\voa6.i\X210726.b\X072601.D Page 1

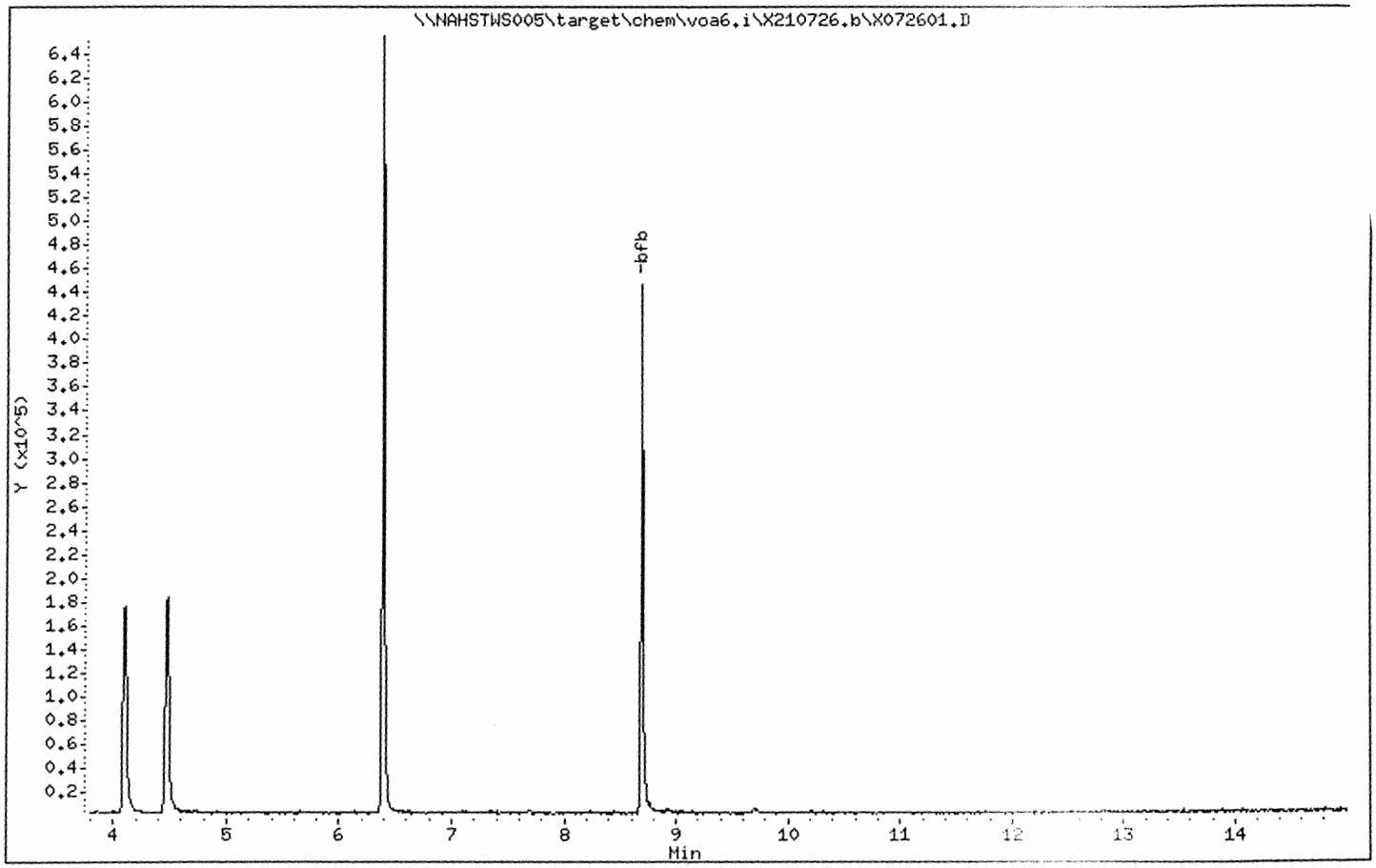
Date : 26-JUL-2021 10:44

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\X210726.b\X072601.D

Date : 26-JUL-2021 10:44

Client ID: BFB

Instrument: voa6.i

Sample Info: BFB;BFB;3;;BFB

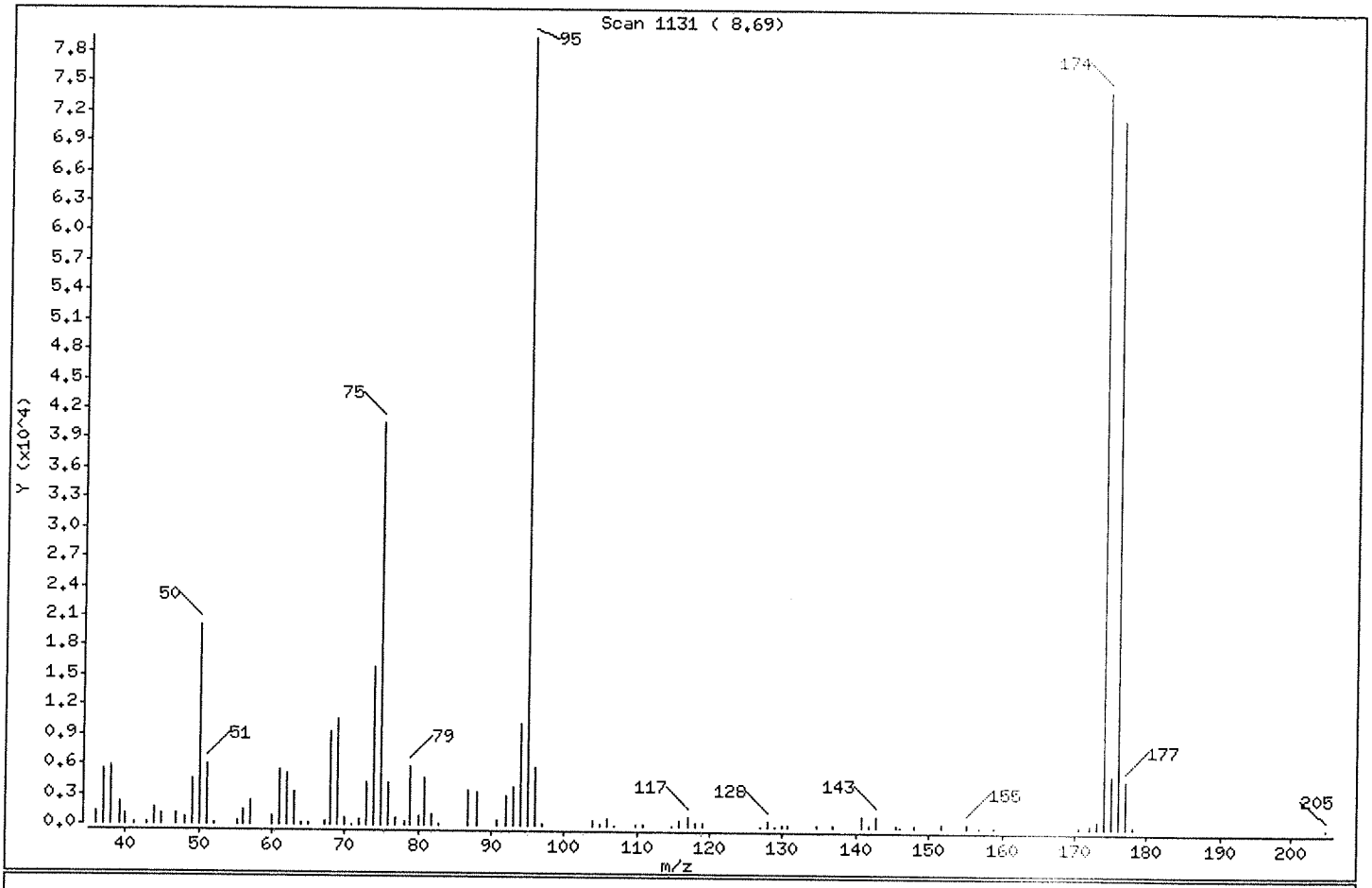
Volume Injected (uL): 2.0

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	25.39
75	30.00 - 60.00% of mass 95	51.01
96	5.00 - 9.00% of mass 95	7.34
173	Less than 2.00% of mass 174	0.96 (1.03)
174	Greater than 50.00% of mass 95	93.67
175	5.00 - 9.00% of mass 174	6.55 (7.00)
176	95.00 - 101.00% of mass 174	89.86 (95.94)
177	5.00 - 9.00% of mass 176	5.97 (6.65)

Data File: \\NAHSTWS005\target\chem\voa6.i\X210726.b\X072601.D

Date : 26-JUL-2021 10:44

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: X072601.D
Spectrum: Scan 1131 (8.69)
Location of Maximum: 95.00
Number of points: 87

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	1264	64.10	229	92.00	2921	134.70	197
37.00	5418	65.10	232	93.00	3798	136.80	233
38.00	5800	67.20	283	94.00	10157	140.80	1111
39.10	2237	68.00	9296	95.00	79440	141.90	125
40.00	1164	69.00	10675	96.00	5827	142.80	1113
41.10	116	70.00	820	97.00	123	145.60	159
42.90	263	70.90	79	103.80	638	146.10	57
44.00	1666	71.90	536	104.80	148	147.90	206
45.00	1153	73.00	4111	105.80	759	151.70	299
47.00	1012	74.00	15956	106.80	91	155.10	300
48.10	661	75.00	40520	109.80	105	156.90	72
49.00	4573	76.00	4202	110.70	108	158.80	75
50.00	20168	76.90	759	114.80	85	170.40	140
51.00	5963	78.10	351	115.70	495	171.90	280
52.00	269	78.90	5816	116.90	900	172.90	764
55.20	314	80.00	892	117.90	368	173.90	74408
56.00	1434	80.90	4731	118.90	308	174.90	5206
57.00	2433	81.90	1060	126.90	76	175.90	71384
59.90	961	82.90	157	127.80	461	176.90	4745
61.00	5529	86.90	3467	128.80	81	177.90	148
62.00	5080	87.90	3204	129.80	245	204.70	78
63.00	3232	90.70	620	130.70	108		

ALS Laboratory Group

Data file : \\NAHSTWS005\target\chem\voa6.i\X210726.b\X072602.D
Lab Smp Id: VSTD000.25 Client Smp ID: VSTD000.25
Inj Date : 26-JUL-2021 11:05
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\X210726.b\8260W.m
Meth Date : 10-Sep-2021 12:14 voa6.i Quant Type: ISTD
Cal Date : 26-JUL-2021 13:31 Cal File: X072608.D
Als bottle: 2 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0474-dod.sub
Target Version: 4.14
Processing Host: NAHSTW7056

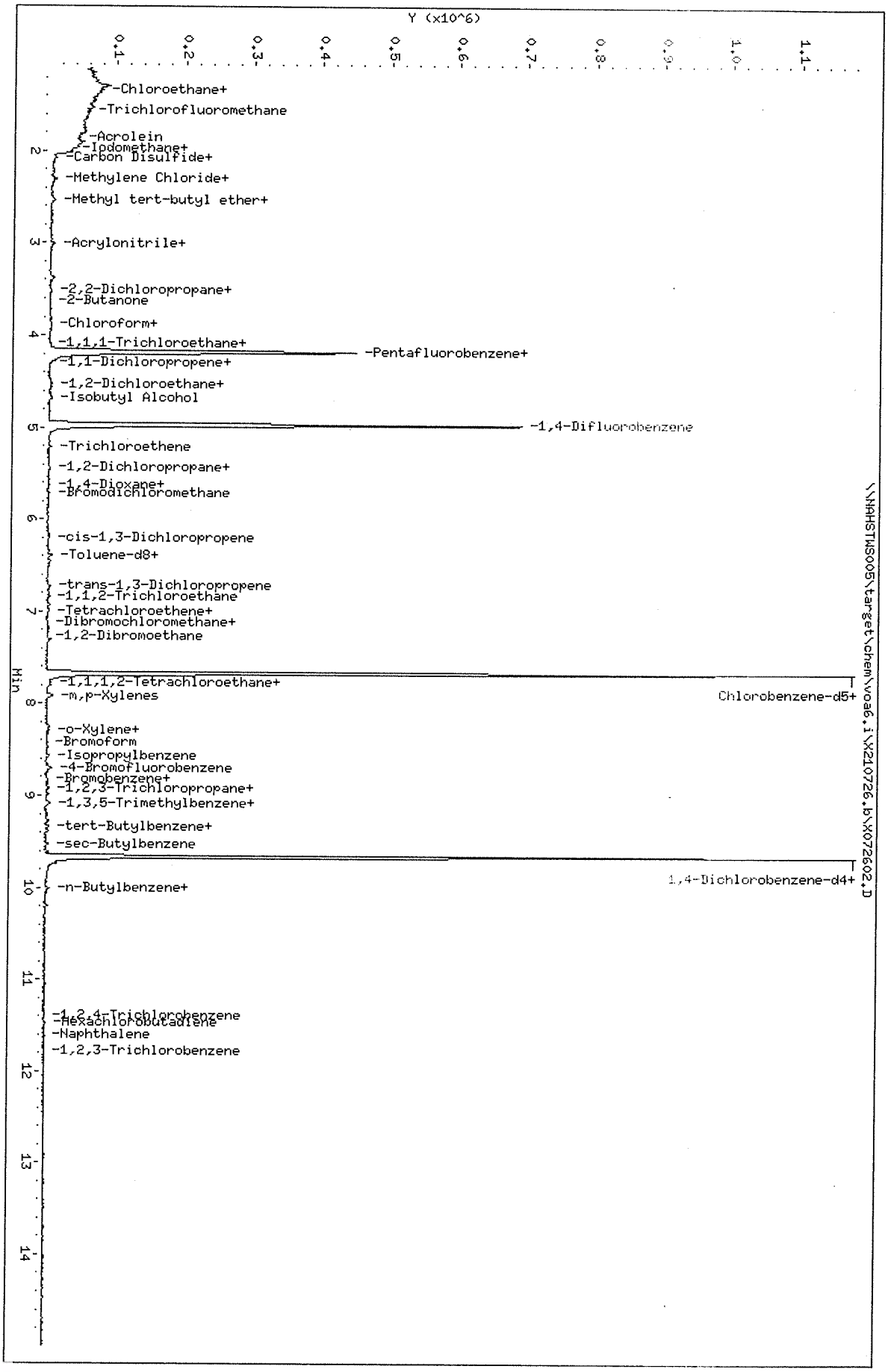
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

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)	377220	50.0000	
$ 30 Dibromofluoromethane	113	4.110	4.110	(0.983)	1194	0.25000	0.31(a)
$ 35 1,2-Dichloroethane-d4	65	4.483	4.483	(1.072)	1302	0.25000	0.83(TaM)
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	554247	50.0000	
* 47 Chlorobenzene-d5	117	7.670	7.670	(1.000)	520018	50.0000	
$ 48 Toluene-d8	98	6.395	6.395	(0.834)	3982	0.25000	1.78(Ta)
$ 69 4-Bromofluorobenzene	95	8.702	8.702	(1.134)	2429	0.25000	2.45(aM)
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	258364	50.0000	
17 Methylene Chloride	84	2.305	2.305	(0.551)	2318	0.25000	1.71(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.

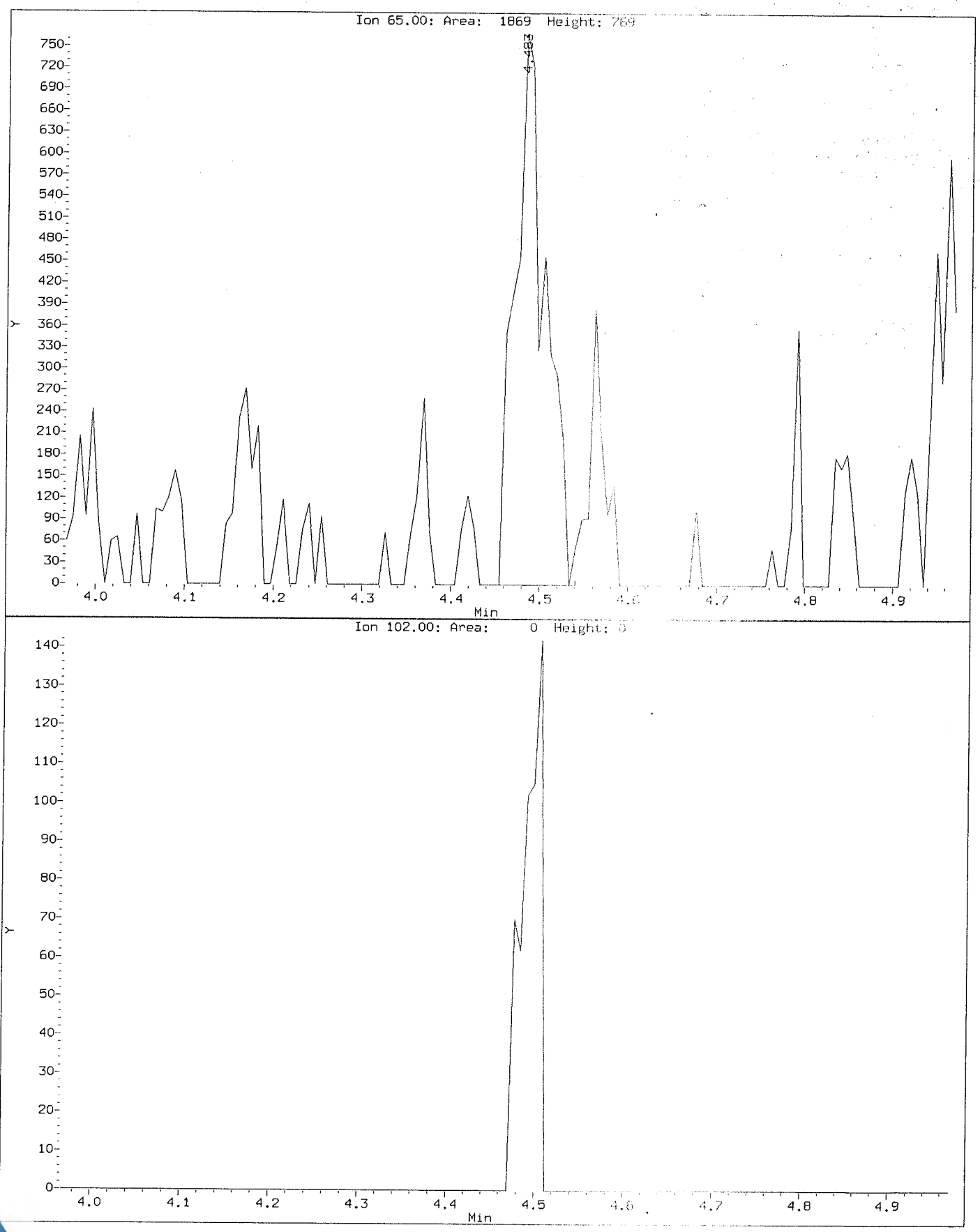


Data File: \\NAHSTWS005\target\chem\voa6.i\X210726.b\X072602.D
Date : 26-JUL-2021 11:05
Client ID: VSTD000.25
Sample Info: VSTD000.25;VSTD000.25;1;1;;
Purge Volume: 5.0
Column phase: DB624

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

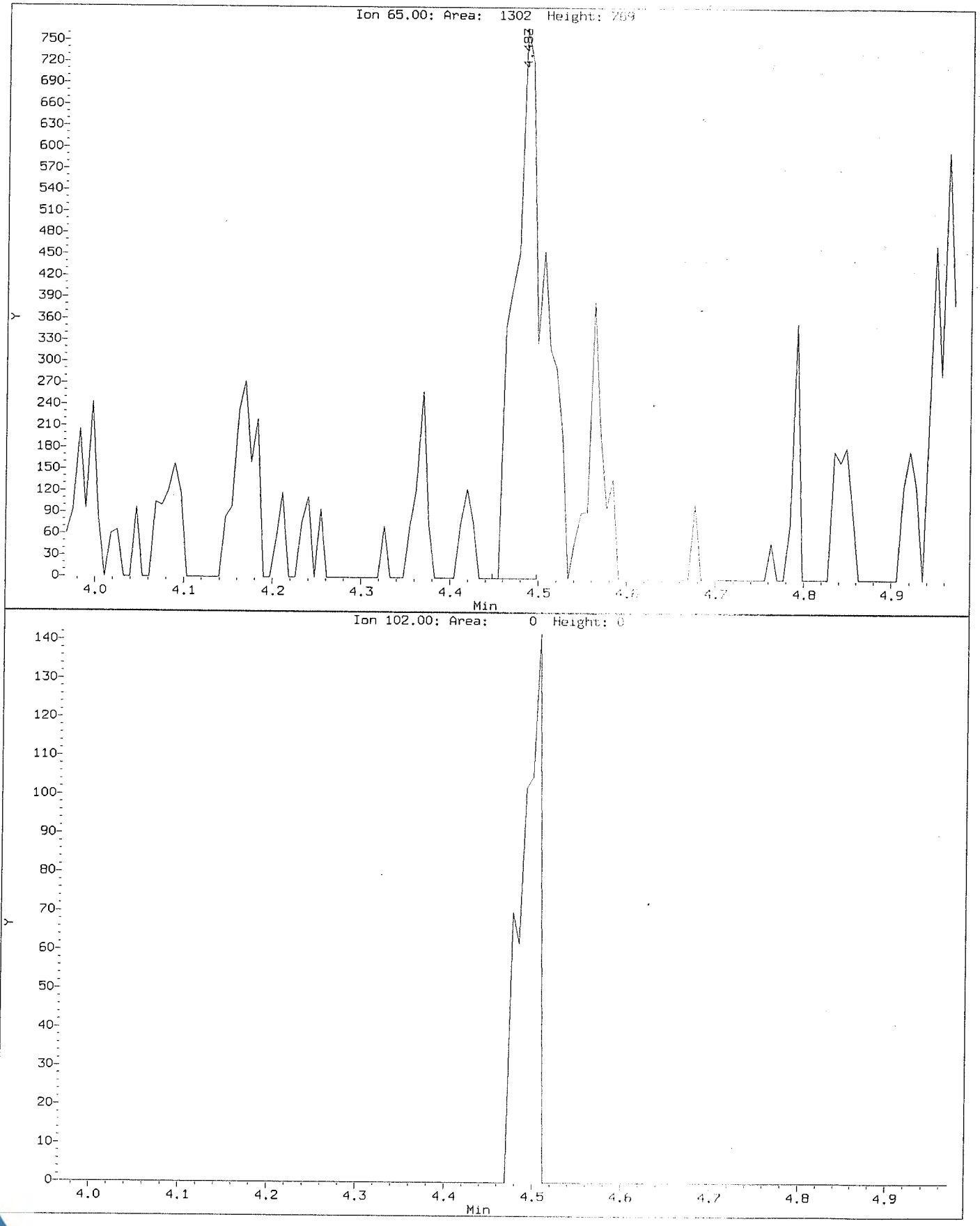
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Injection Date: 26-JUL-2021 11:05
Instrument: voa6.i
Client Sample ID: VSTD000.25

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



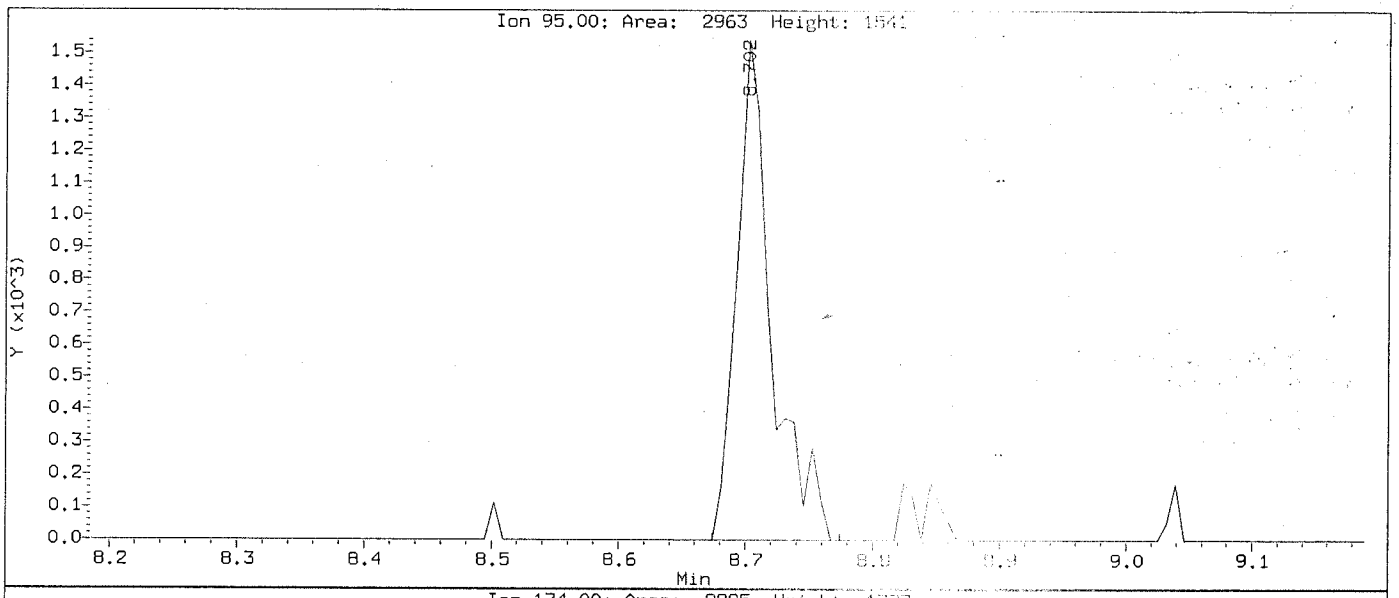
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Injection Date: 26-JUL-2021 11:05
Instrument: voa6.i
Client Sample ID: VSTD000.25

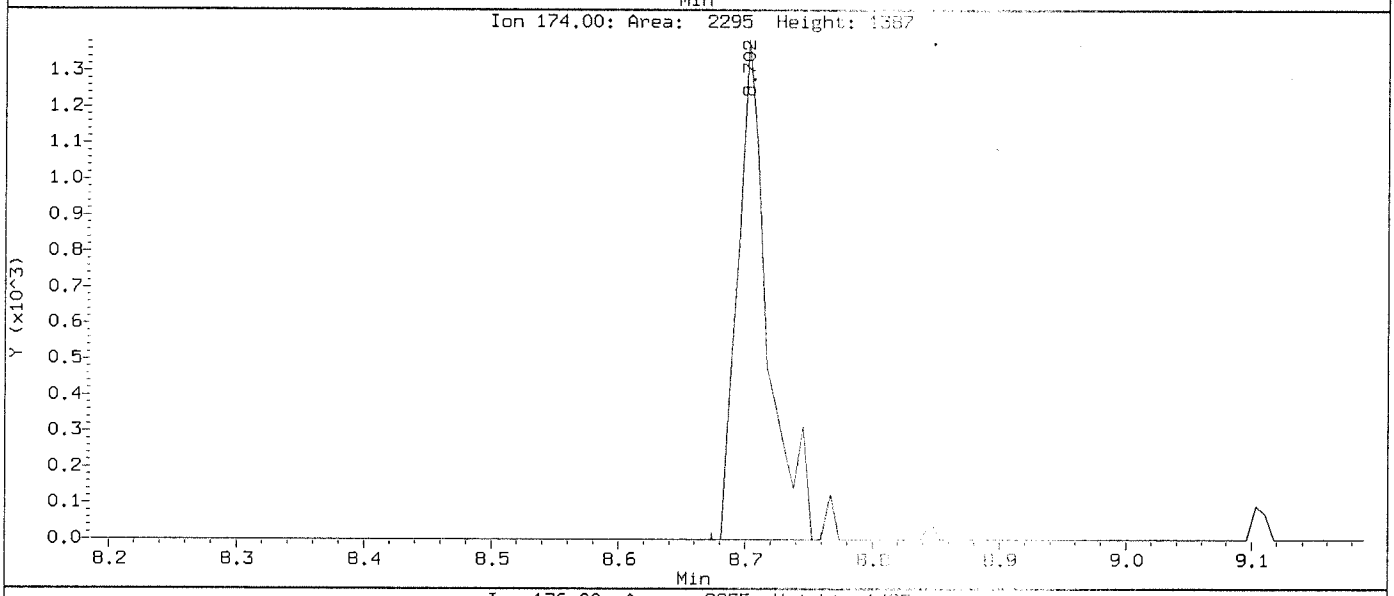
Compound: 1,2-Dichloroethane-d4
CAS Number: 17060-07-0

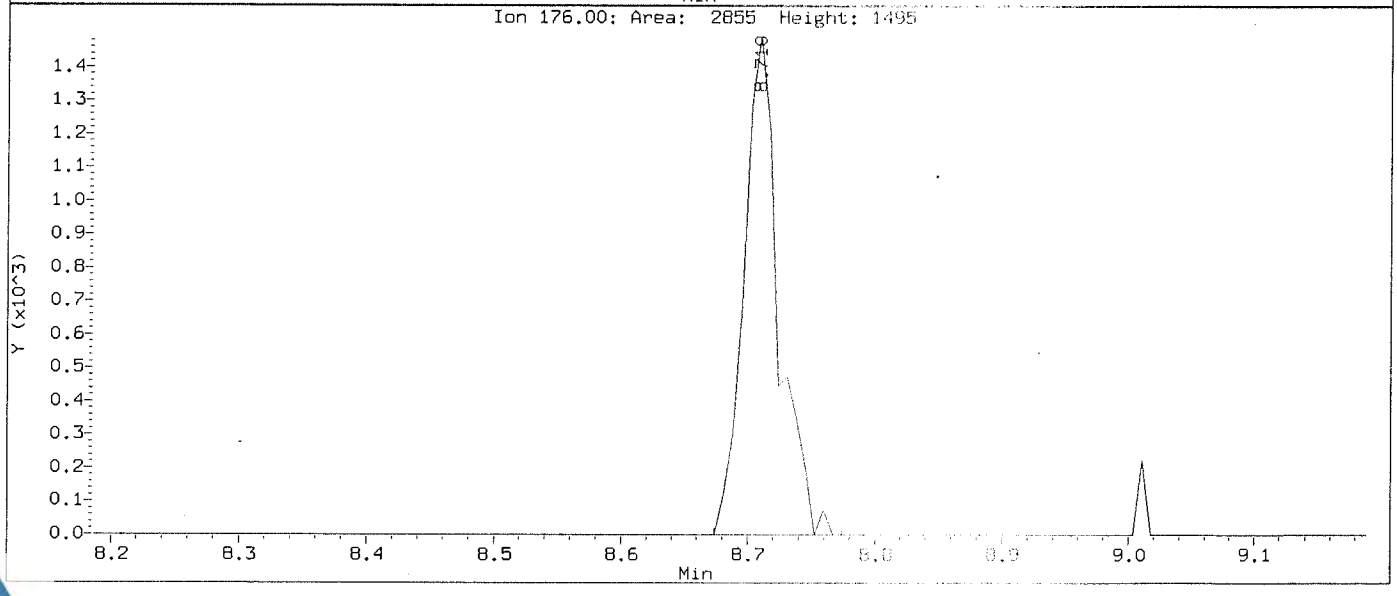


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Injection Date: 26-JUL-2021 11:05
Instrument: voa6.i
Client Sample ID: VSTD000.25

Compound: 4-Bromofluorobenzene
CAS Number: 460-00-4

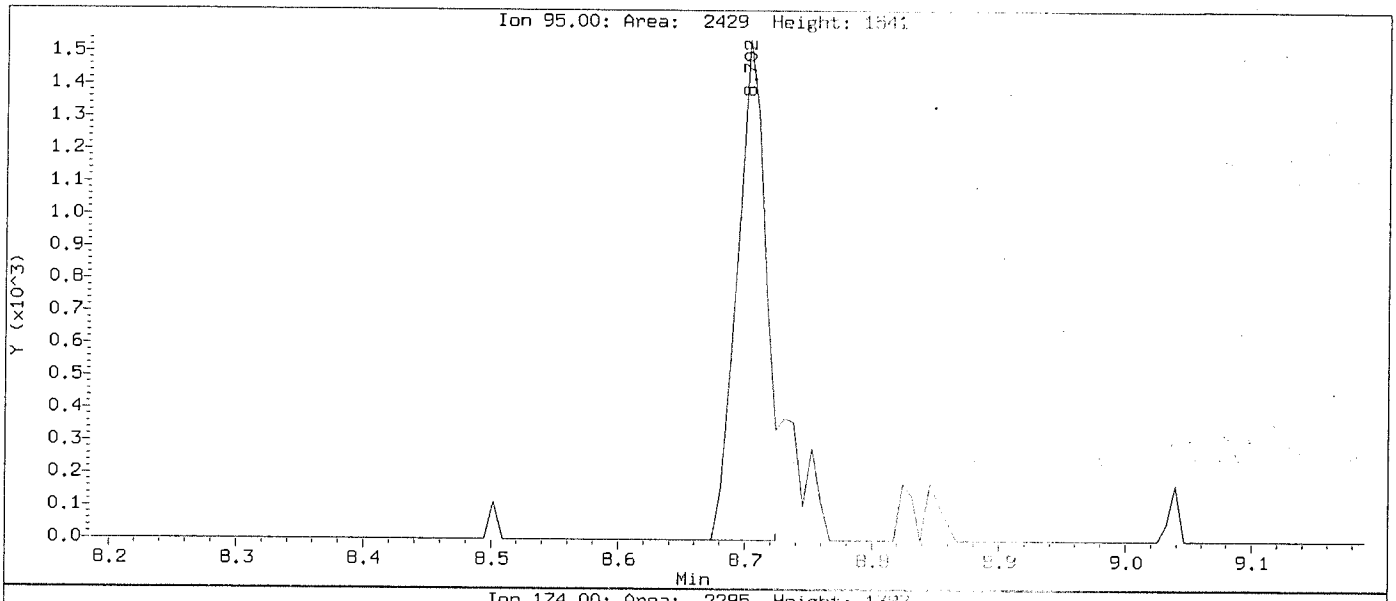


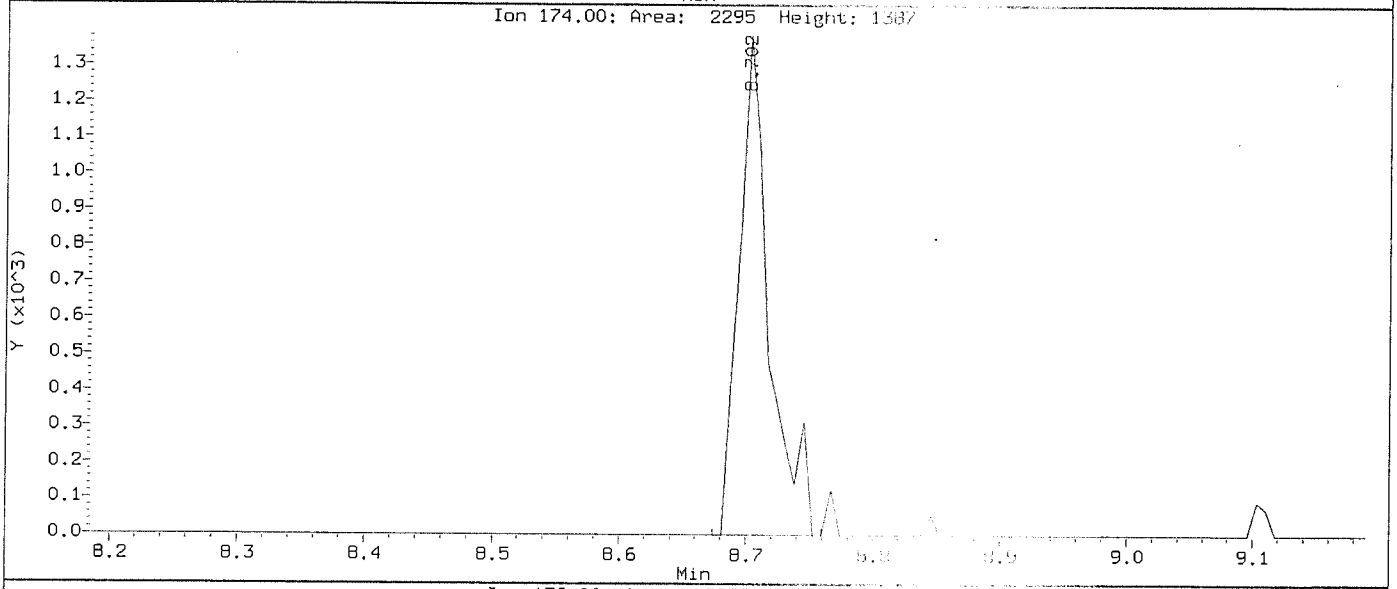


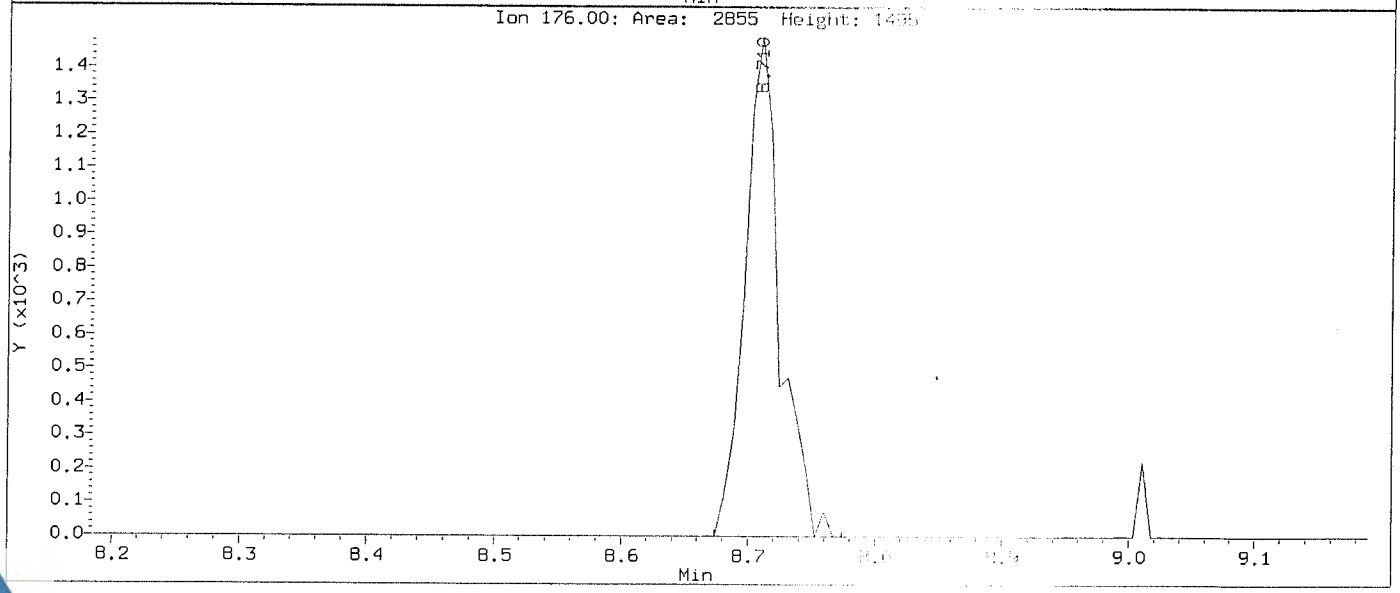


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Injection Date: 26-JUL-2021 11:05
Instrument: voa6.i
Client Sample ID: VSTD000.25

Compound: 4-Bromofluorobenzene
CAS Number: 460-00-4







Data File: \\NAHSTWS005\target\chem\voa6.i\X210726.b\X072603.D Page 1
Report Date: 10-Sep-2021 12:14

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Data file : \\NAHSTWS005\target\chem\voa6.i\X210726.b\X072603.D
Lab Smp Id: VSTD000.5 Client Smp ID: VSTD000.5
Inj Date : 26-JUL-2021 11:26
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\X210726.b\8260W.m
Meth Date : 10-Sep-2021 12:14 voa6.i Quant Type: ISTD
Cal Date : 26-JUL-2021 11:05 Cal File: X072602.D
Als bottle: 3 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0474-dod.sub
Target Version: 4.14
Processing Host: NAHSTW7056

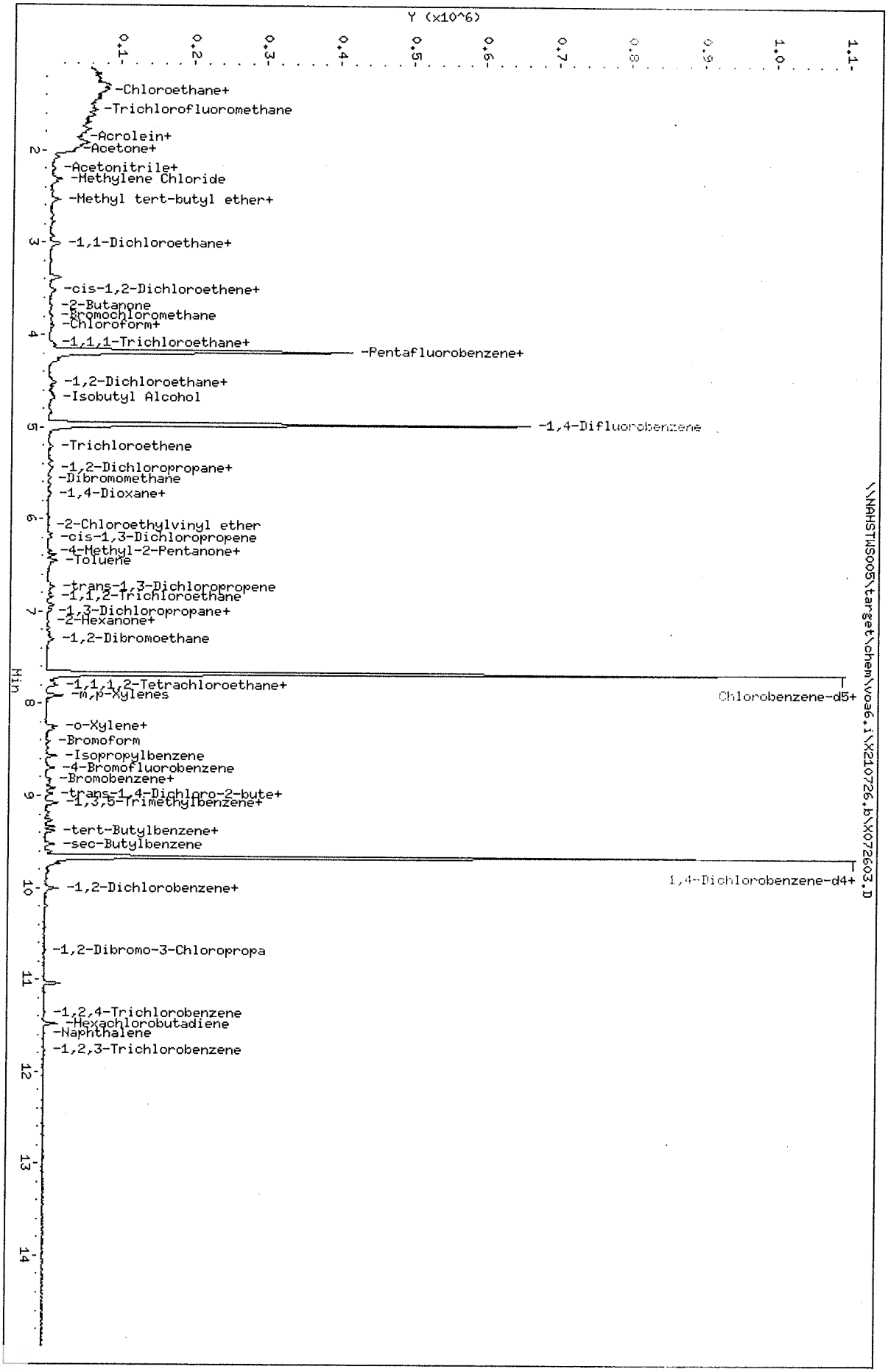
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

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	4.182	4.182	(1.000)	352422	50.0000	
$ 30 Dibromofluoromethane	113	4.111	4.111	(0.983)	1949	0.50000	0.54(a)
$ 35 1,2-Dichloroethane-d4	65	4.490	4.490	(1.074)	3364	0.50000	1.32(TaM)
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	518447	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	481923	50.0000	
$ 48 Toluene-d8	98	6.396	6.396	(0.834)	6237	0.50000	1.99(aM)
$ 69 4-Bromofluorobenzene	95	8.702	8.702	(1.134)	3690	0.50000	2.75(a)
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	334521	50.0000	
5 Vinyl Chloride	62	1.145	1.145	(0.274)	3132	0.50000	0.60(aM)
11 1,1-Dichloroethene	96	1.912	1.912	(0.457)	2539	0.50000	0.60(aM)
17 Methylene Chloride	84	2.298	2.298	(0.550)	3167	0.50000	1.99(a)
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	2177	0.50000	0.57(a)
33 1,2-Dichloroethane	62	4.569	4.569	(0.921)	2849	0.50000	0.52(a)
38 Trichloroethene	130	5.214	5.214	(1.051)	1852	0.50000	0.50(a)
53 1,1,2-Trichloroethane	83	6.847	6.847	(0.893)	1729	0.50000	0.59(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.

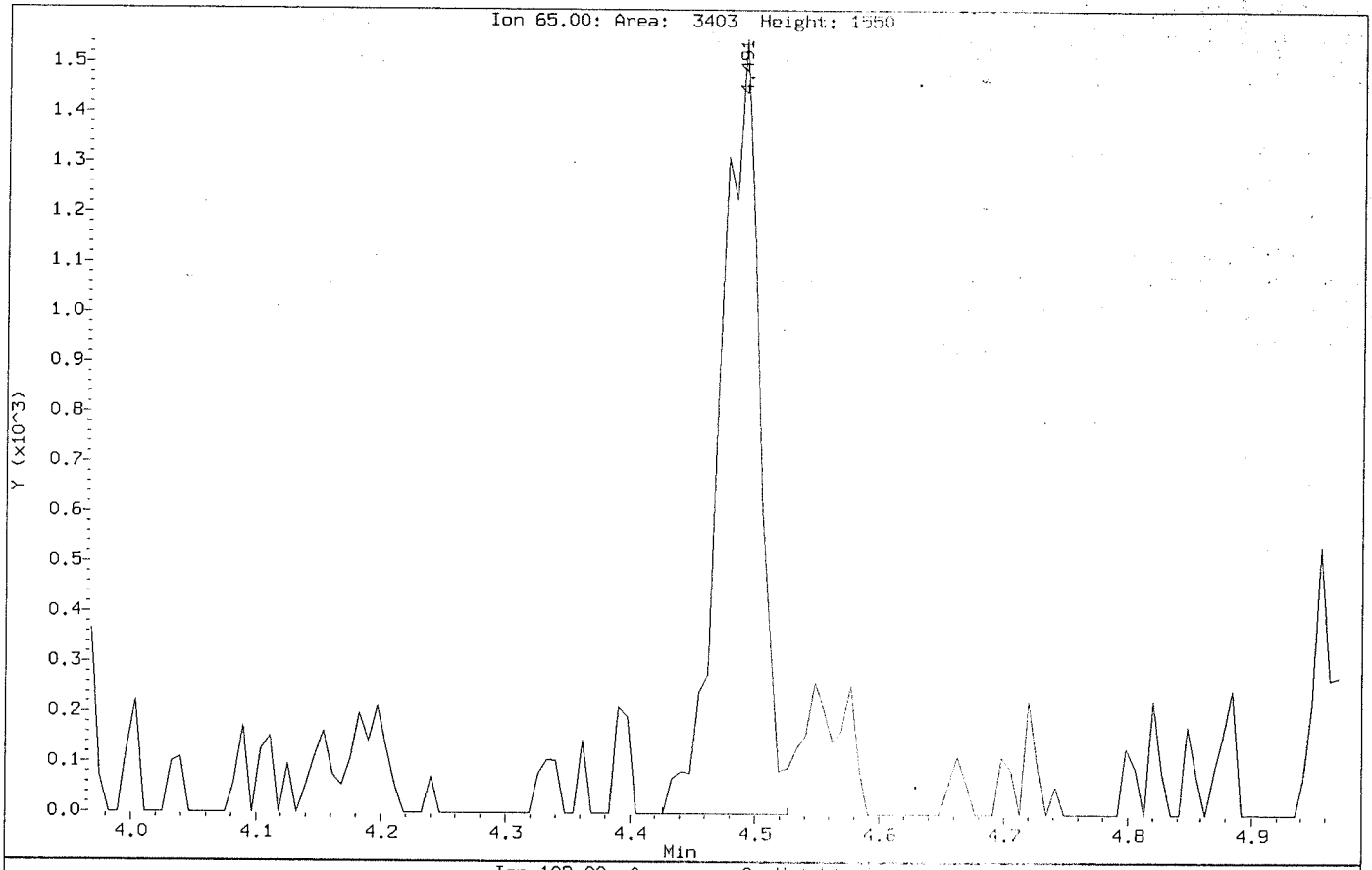


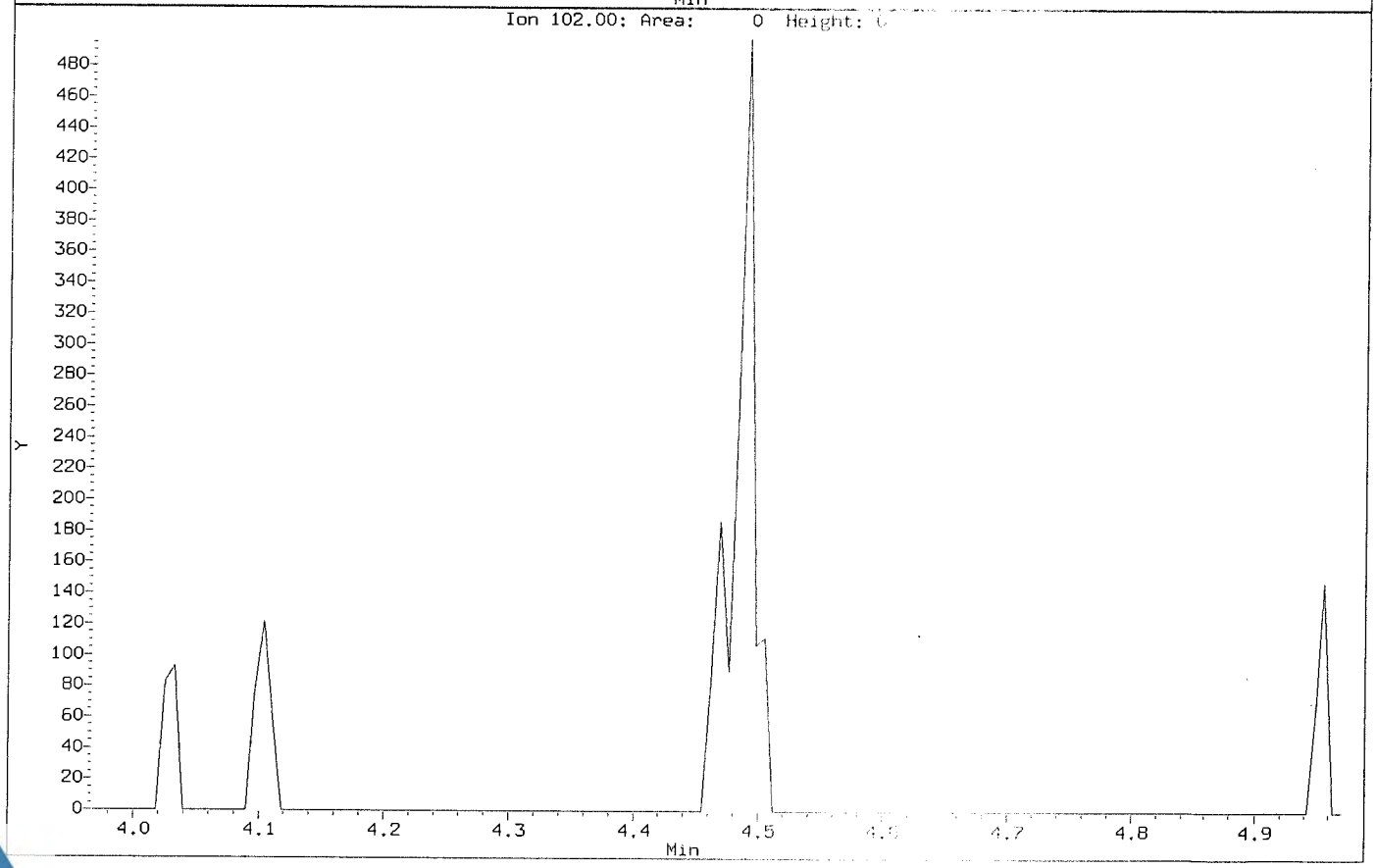
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Date : 26-JUL-2021 11:26
Client ID: VSTD000.5
Sample Info: VSTD000.5;VSTD000.5;1;2;;
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\NAHSTWS005\target\chem\voa6.i\X210726.b\Before\X072603.D
Injection Date: 26-JUL-2021 11:26
Instrument: voa6.i
Client Sample ID: VSTD000.5

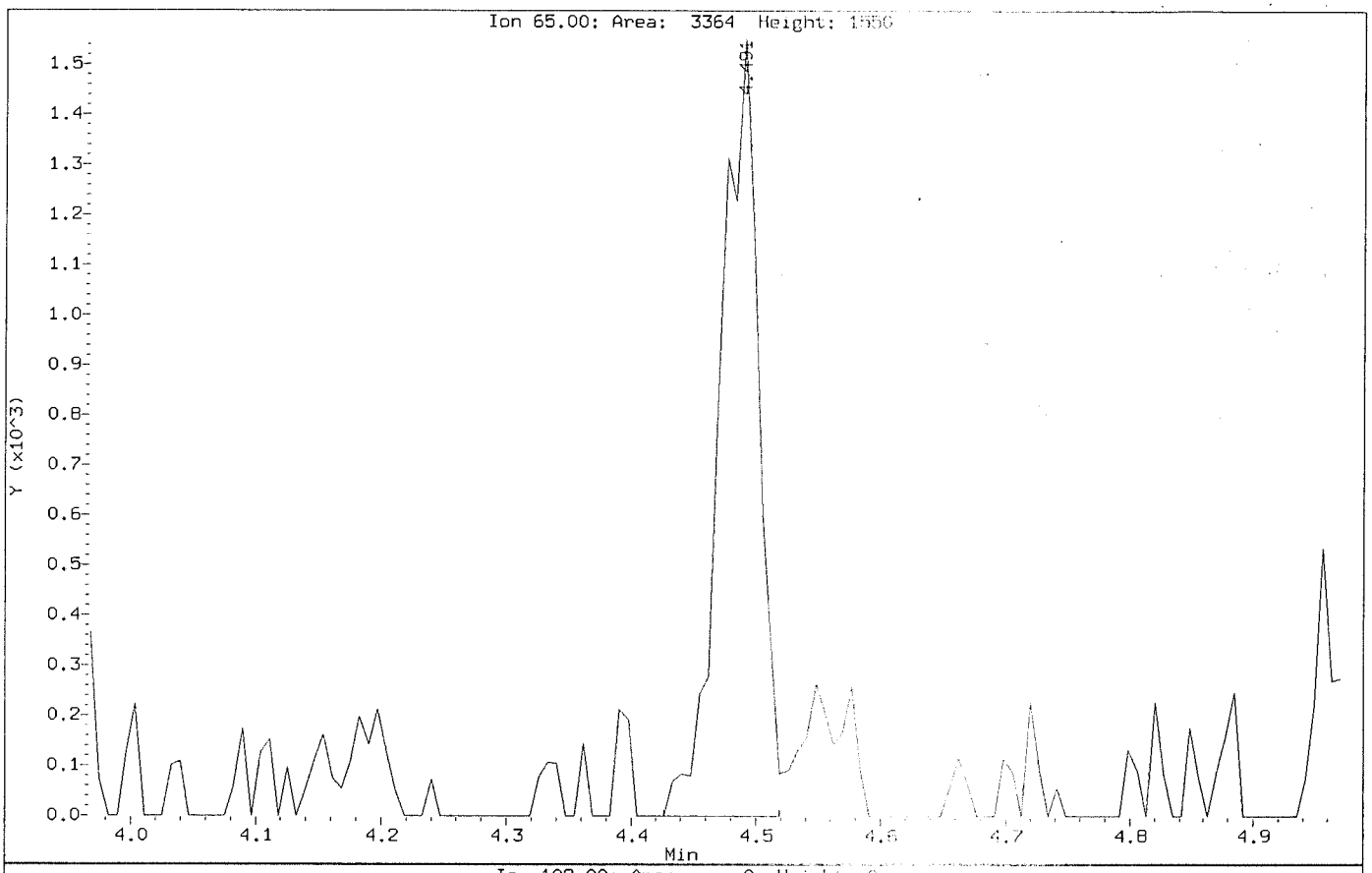
Compound: 1,2-Dichloroethane-d4
CAS Number: 17060-07-0

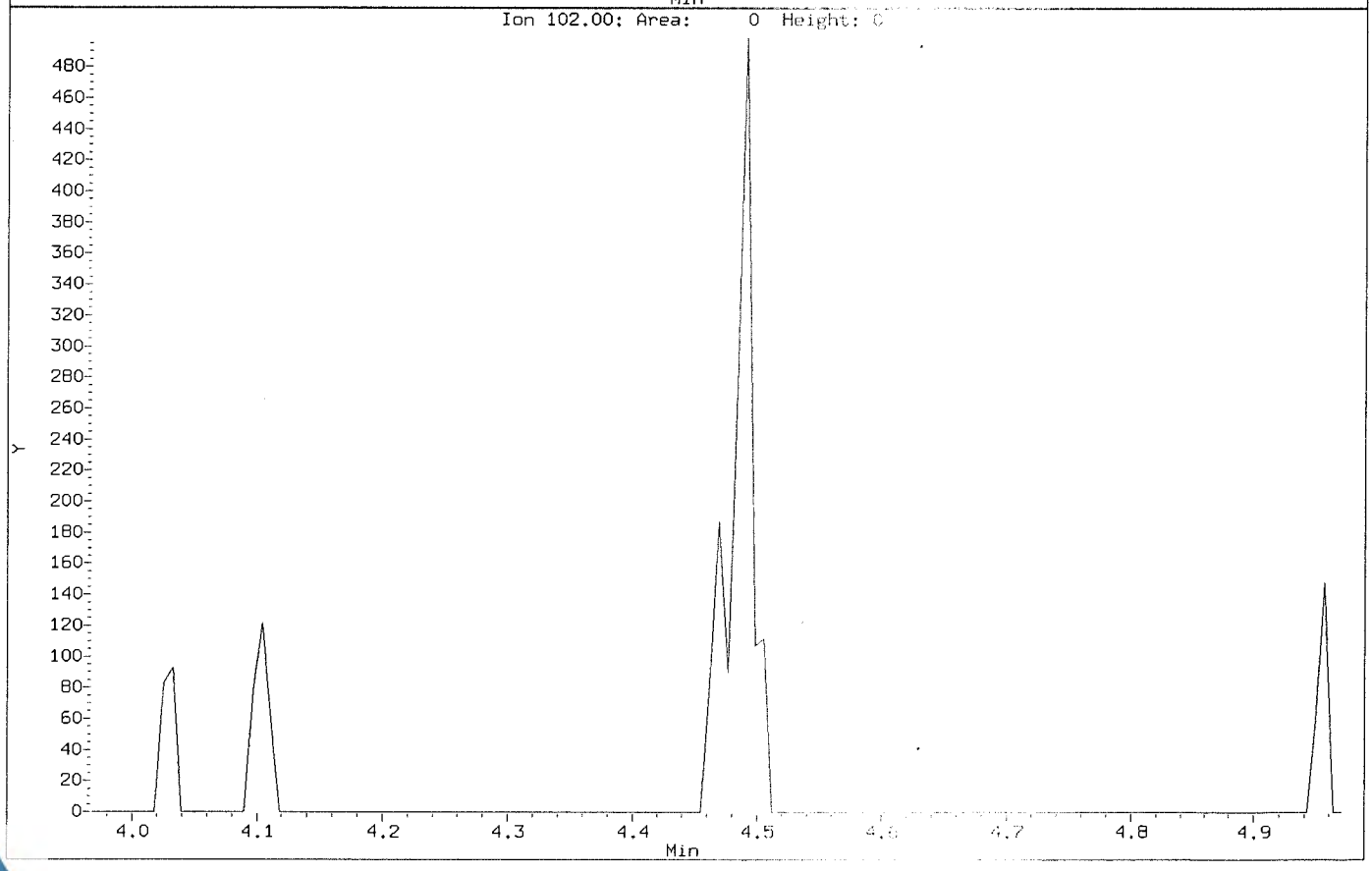




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Injection Date: 26-JUL-2021 11:26
Instrument: voa6.i
Client Sample ID: VSTD000.5

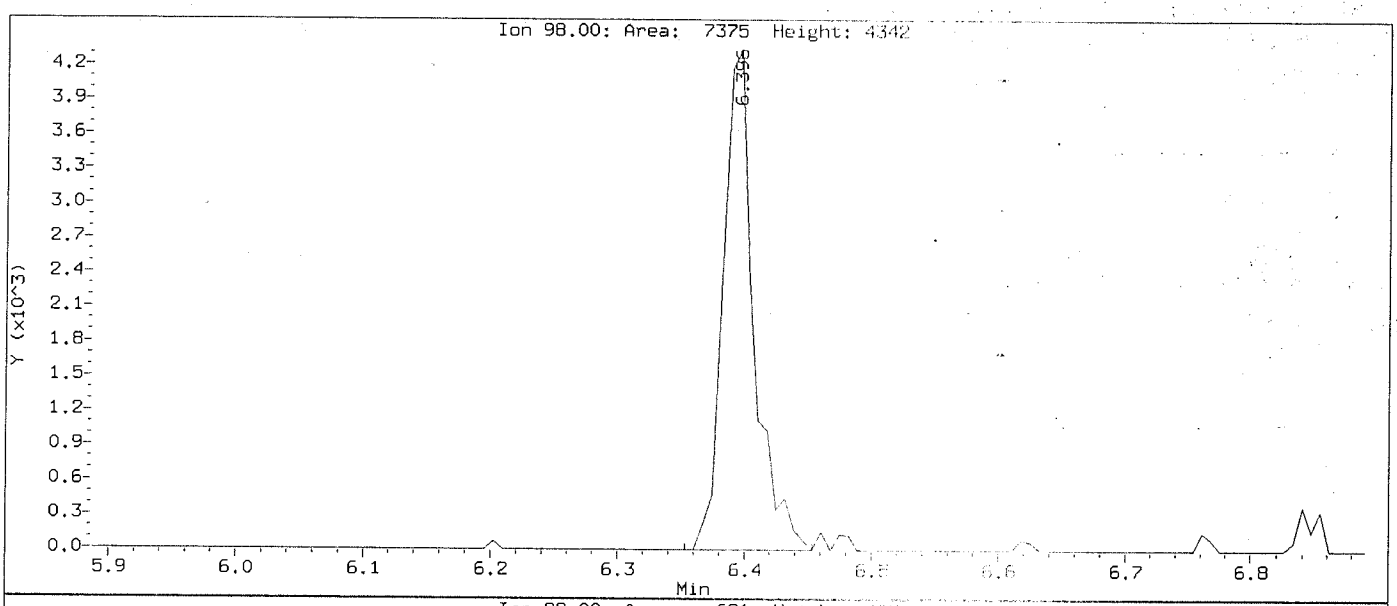
Compound: 1,2-Dichloroethane-d4
CAS Number: 17060-07-0

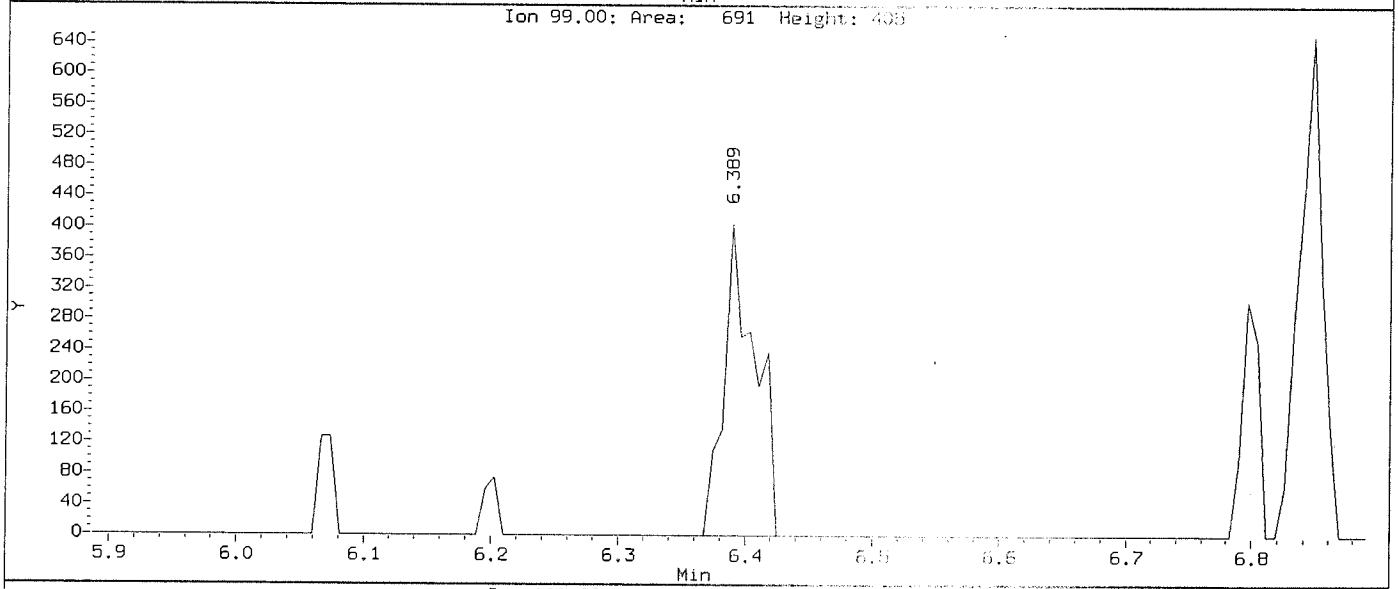


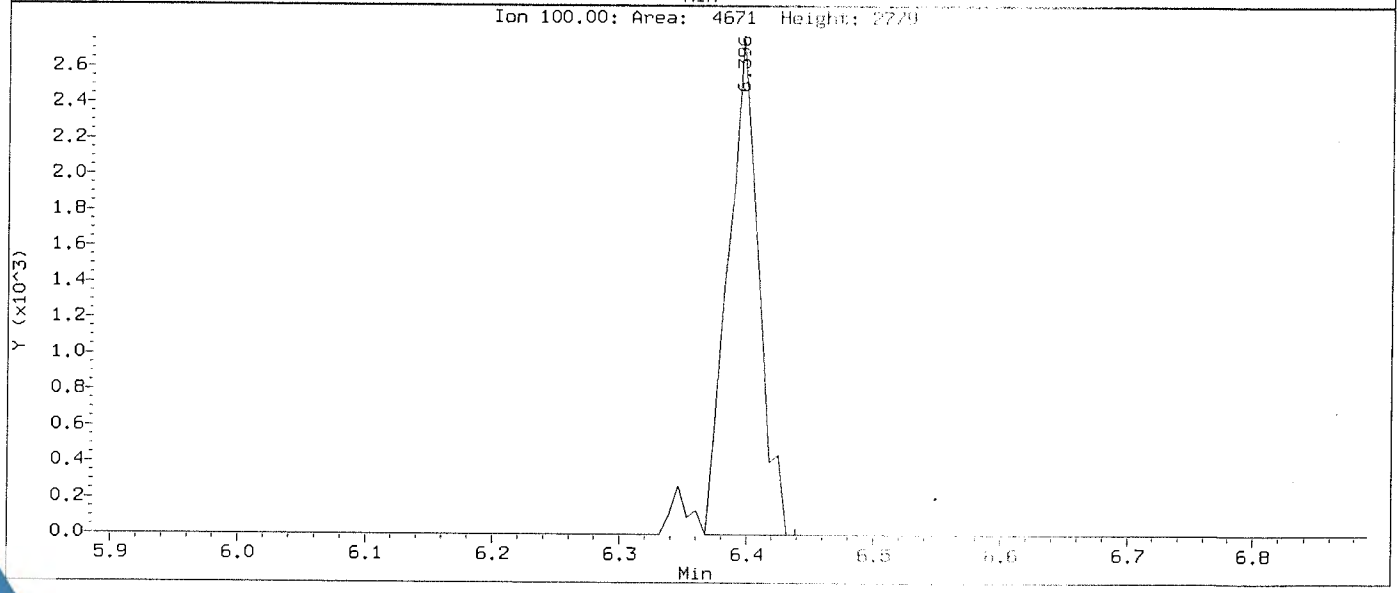


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Injection Date: 26-JUL-2021 11:26
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Toluene-d8
CAS Number: 2037-26-5

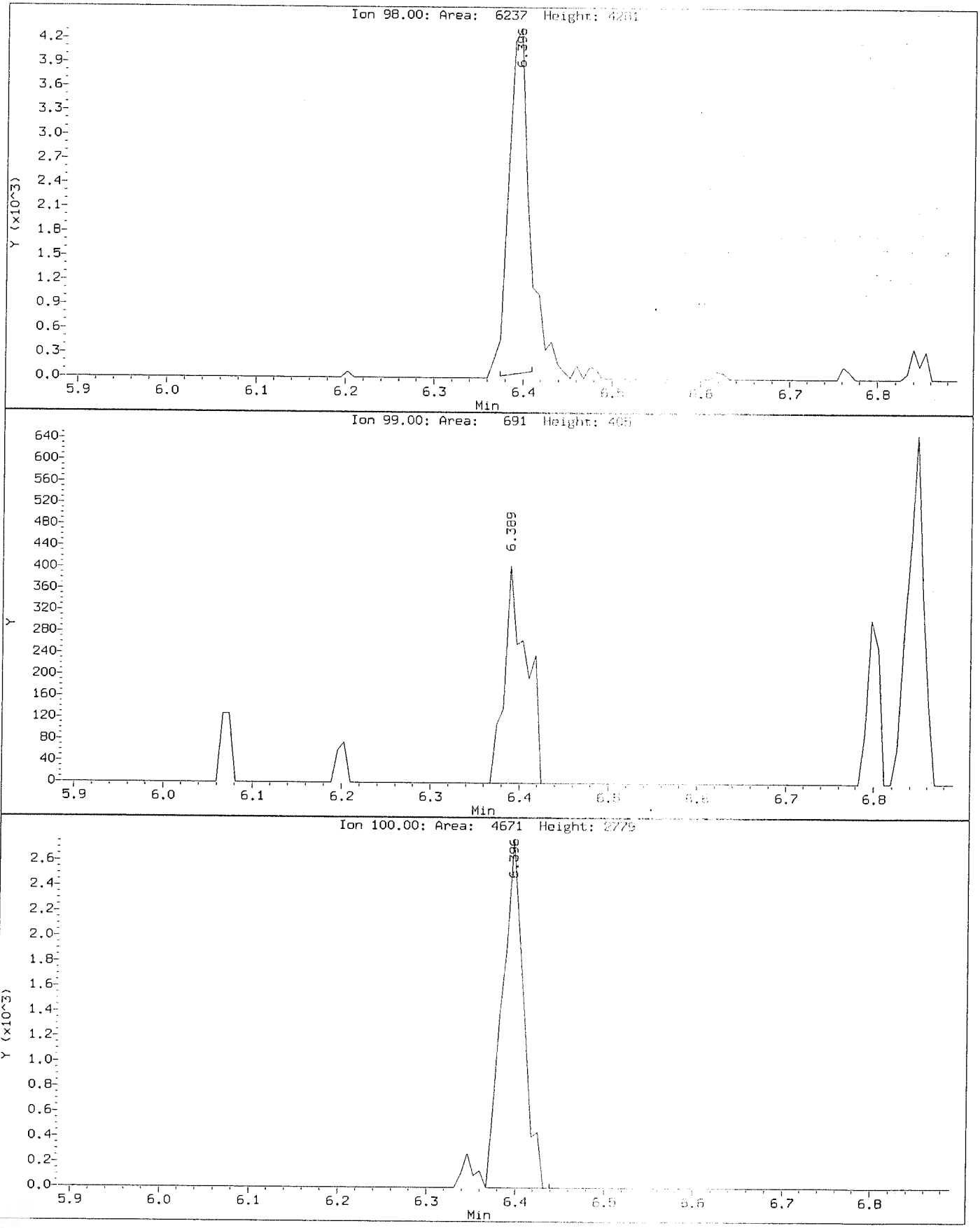






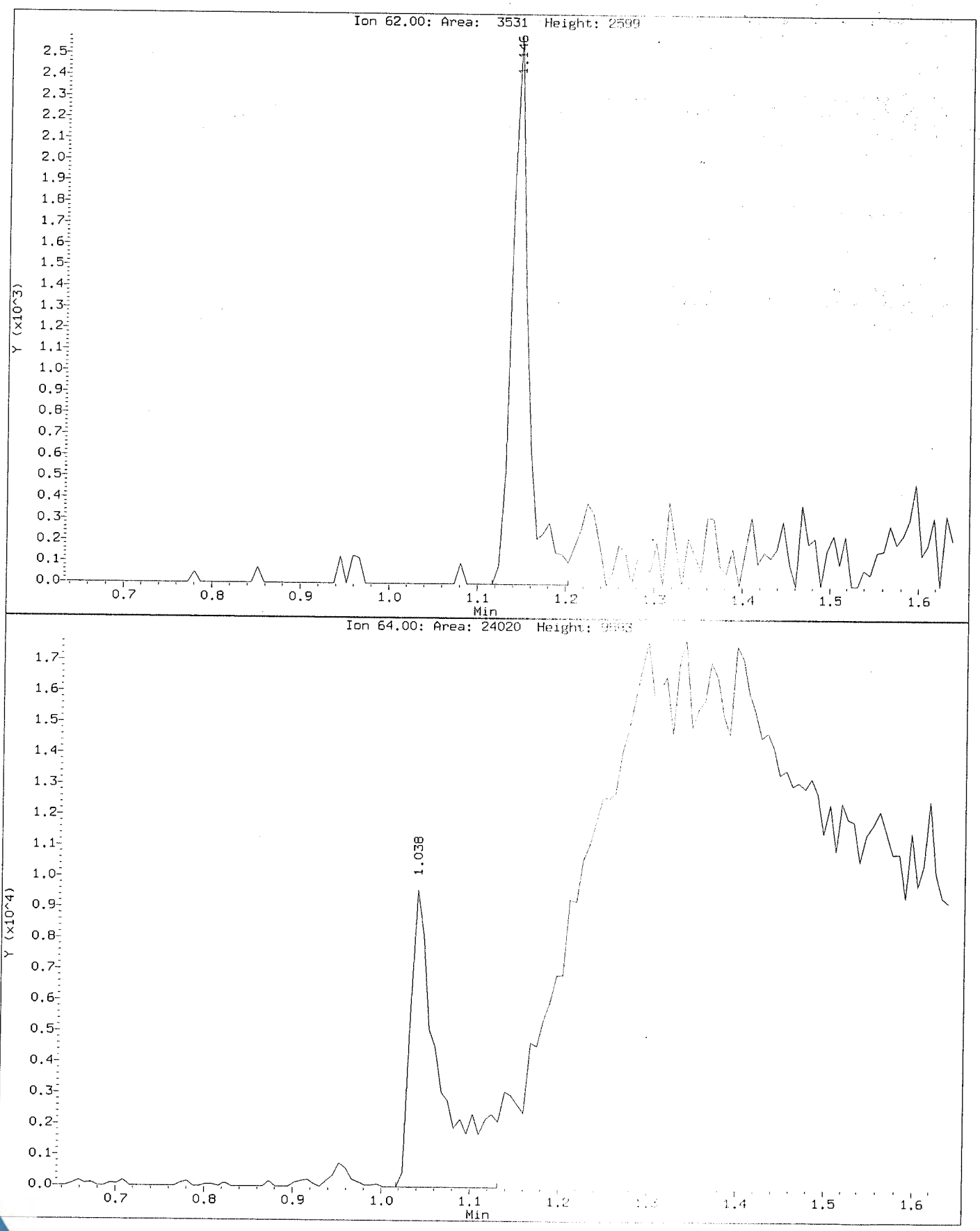
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Injection Date: 26-JUL-2021 11:26
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Toluene-d8
CAS Number: 2037-26-5



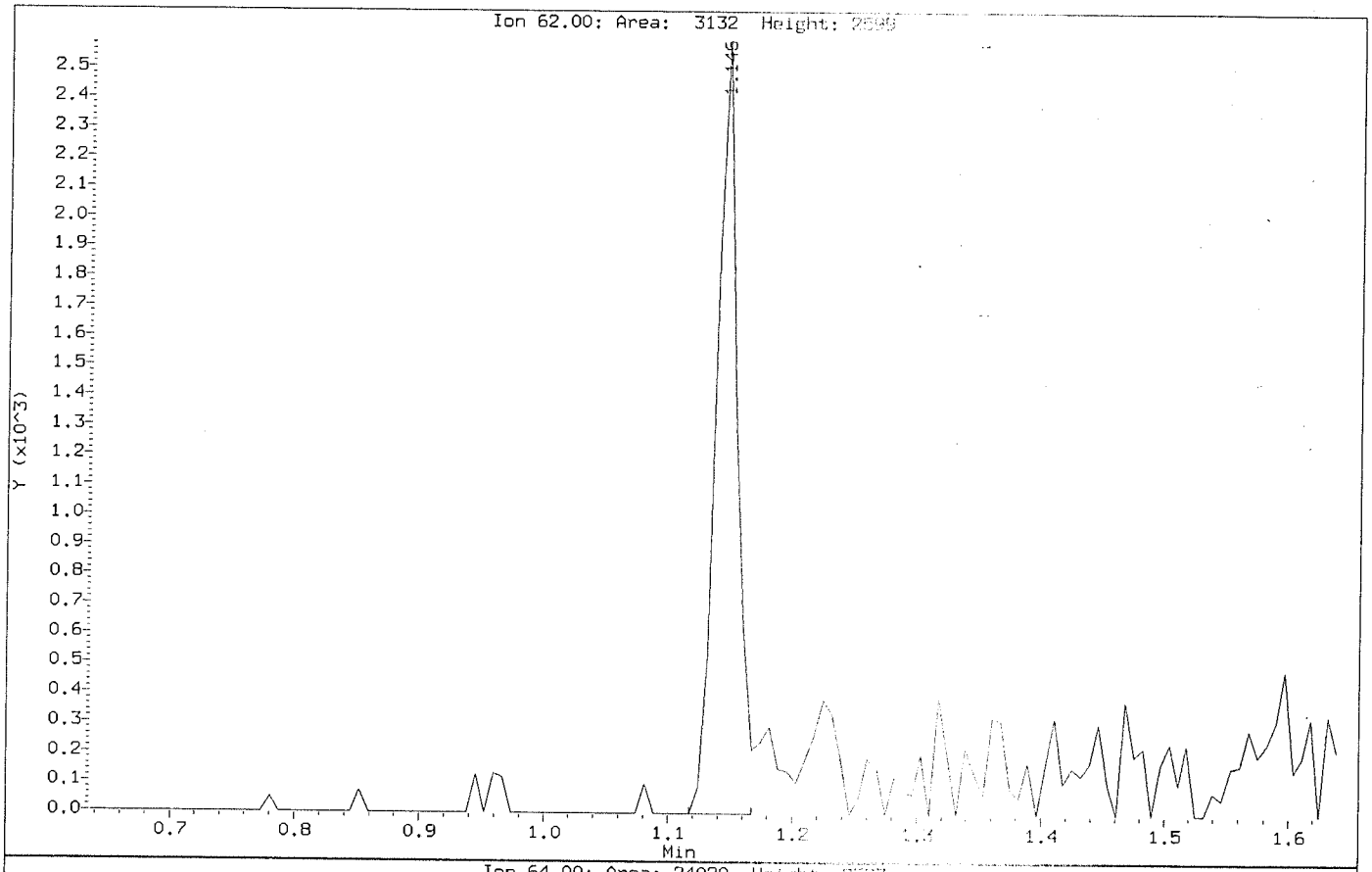
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Injection Date: 26-JUL-2021 11:26
Instrument: voa6.i
Client Sample ID: VSTD000.5

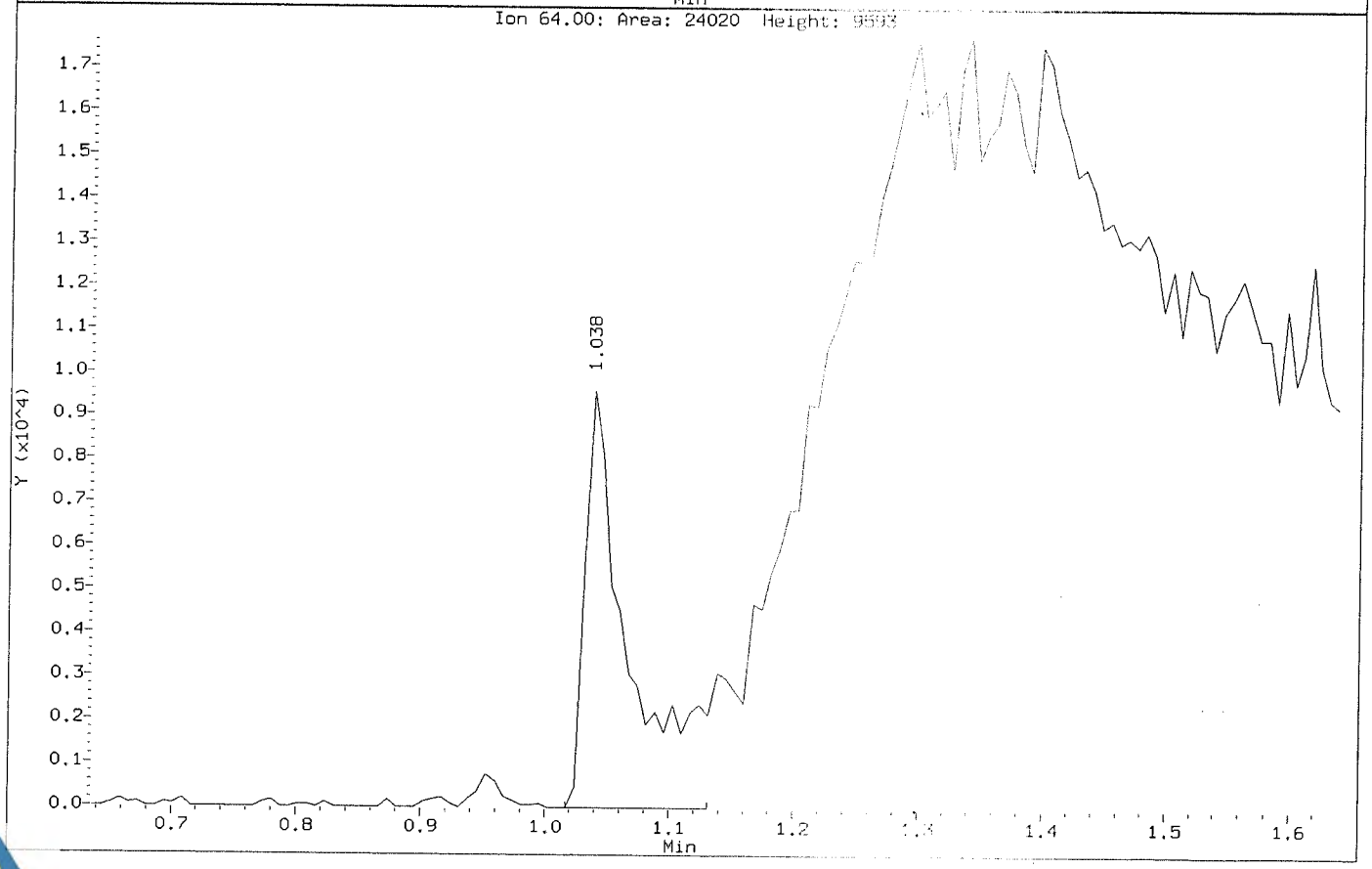
Compound: Vinyl Chloride
CAS Number: 75-01-4



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Injection Date: 26-JUL-2021 11:26
Instrument: voa6.i
Client Sample ID: VSTD000.5

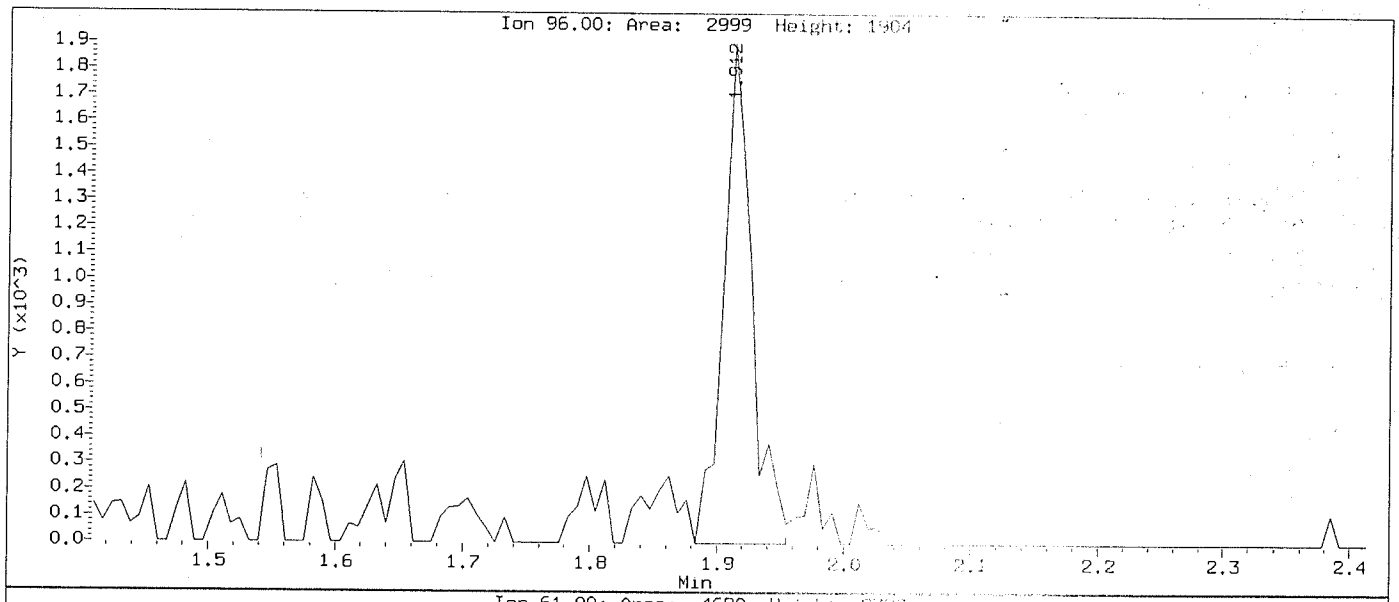
Compound: Vinyl Chloride
CAS Number: 75-01-4

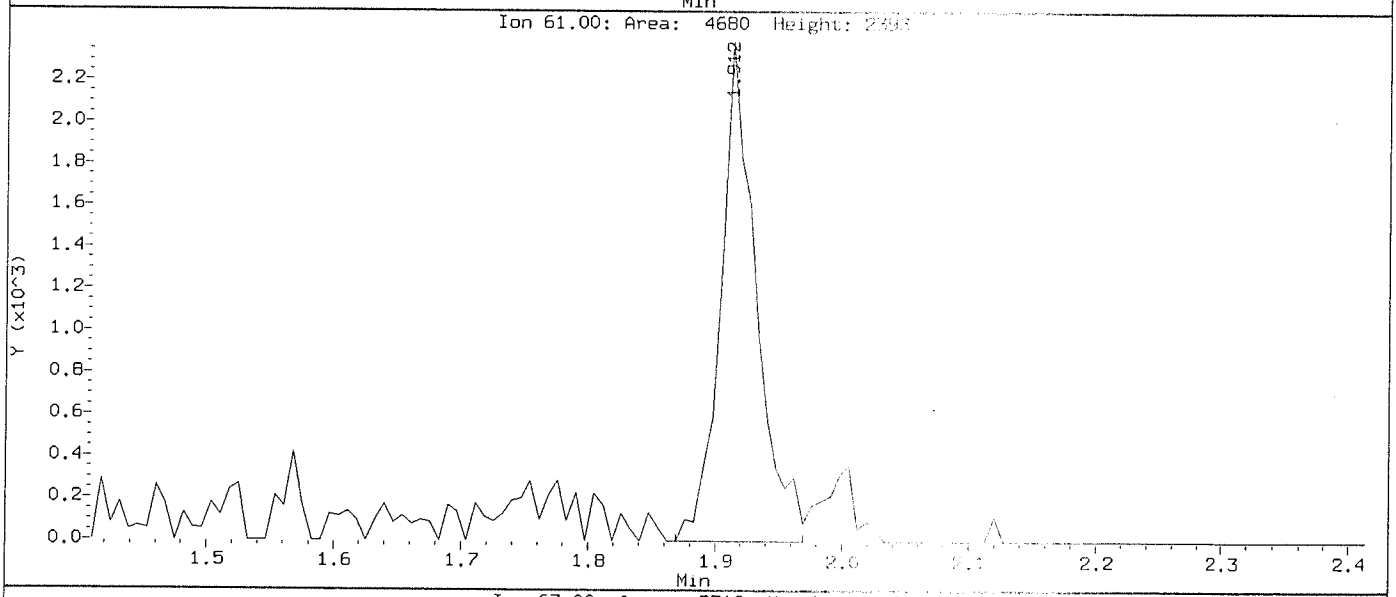


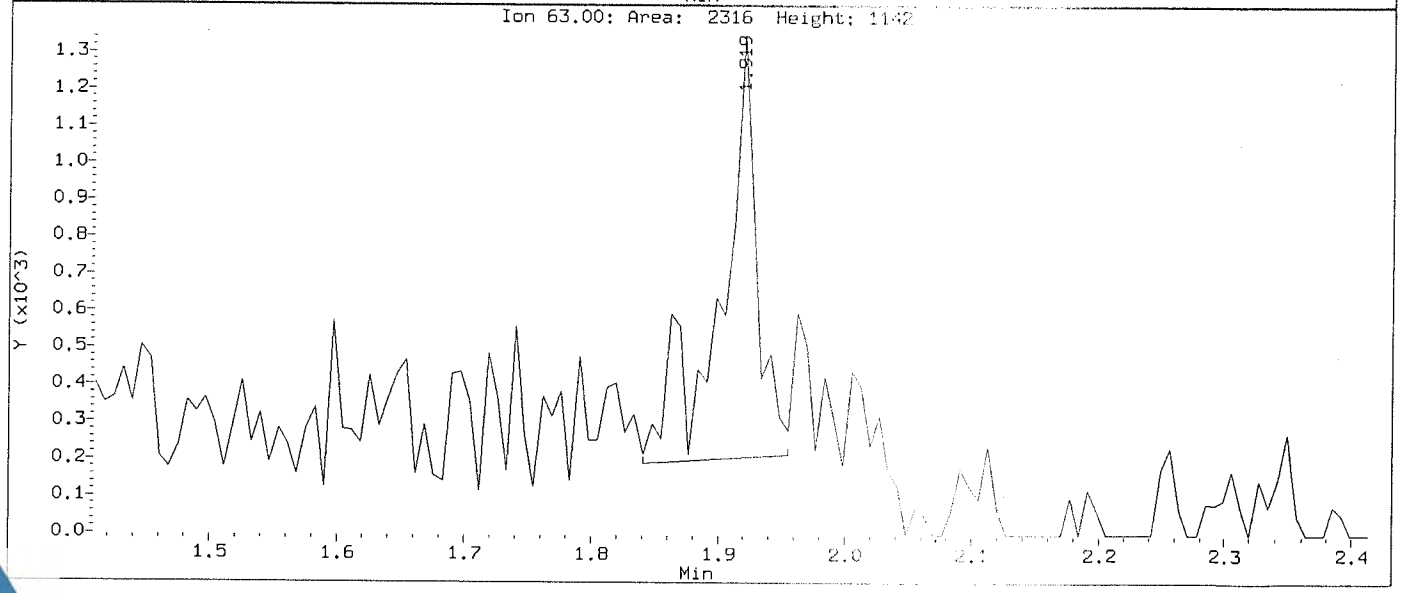


Data File: \\NAHSTWS005\target\chem\voa6.i\X210726.b\Before\X072603.D
Injection Date: 26-JUL-2021 11:26
Instrument: voa6.i
Client Sample ID: VSTD000.5

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

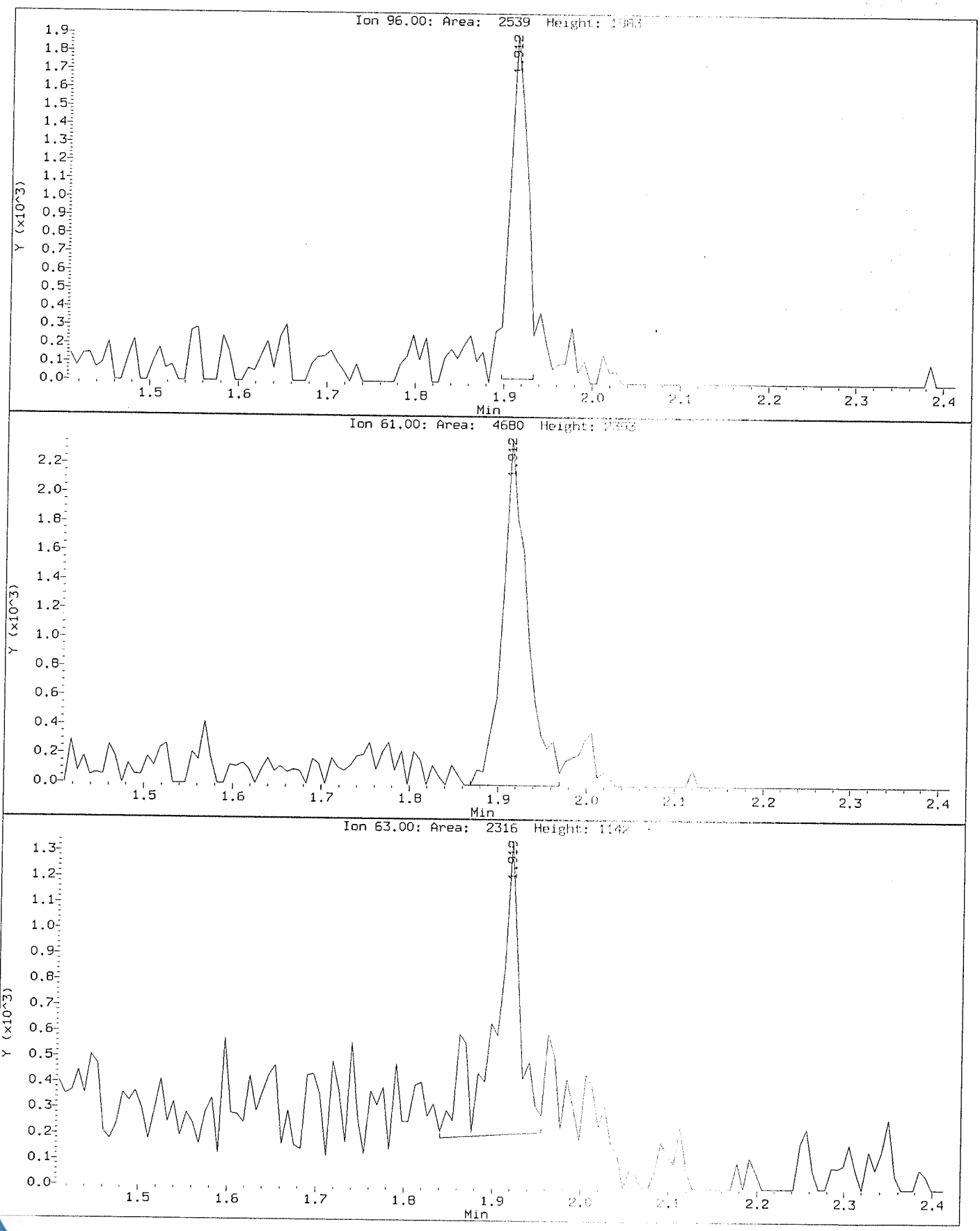






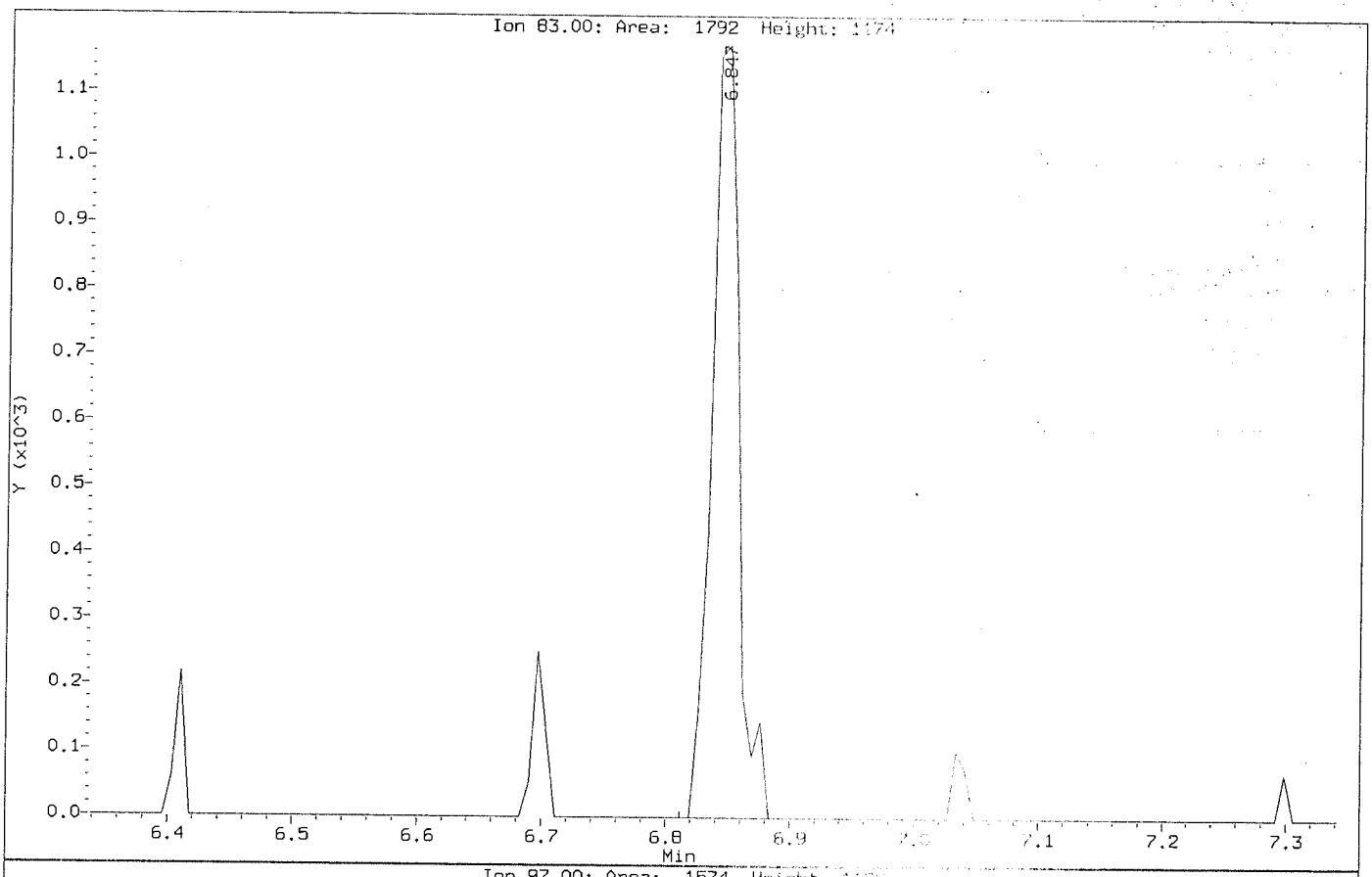
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Injection Date: 26-JUL-2021 11:26
Instrument: voa6.i
Client Sample ID: VSTD000.5

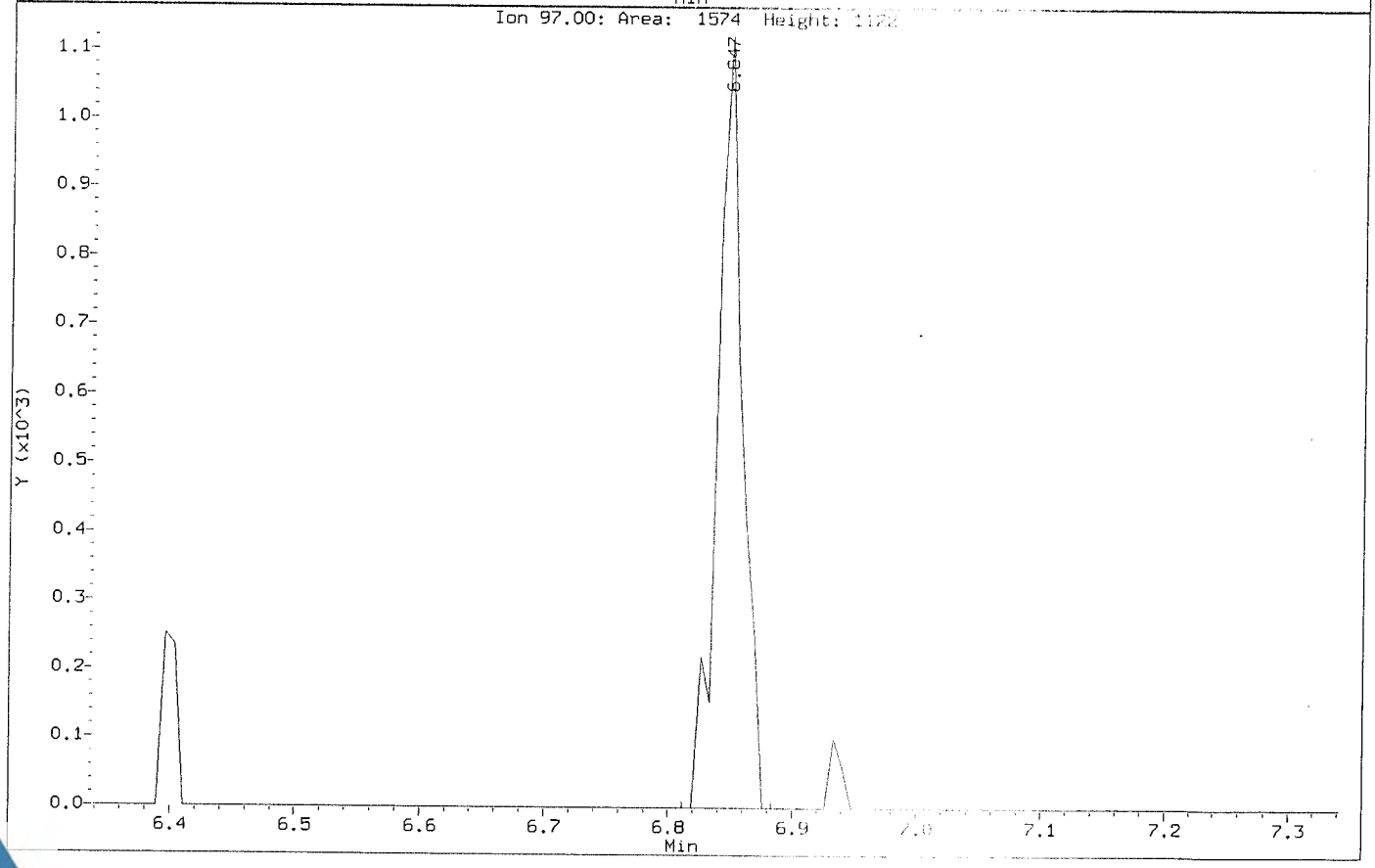
Compound: 1,1-Dichloroethene
CAS Number: 75-35-4



Data File: \\NAHSTWS005\target\chem\voa6.i\X210726.b\Before\X072603.D
Injection Date: 26-JUL-2021 11:26
Instrument: voa6.i
Client Sample ID: VSTD000.5

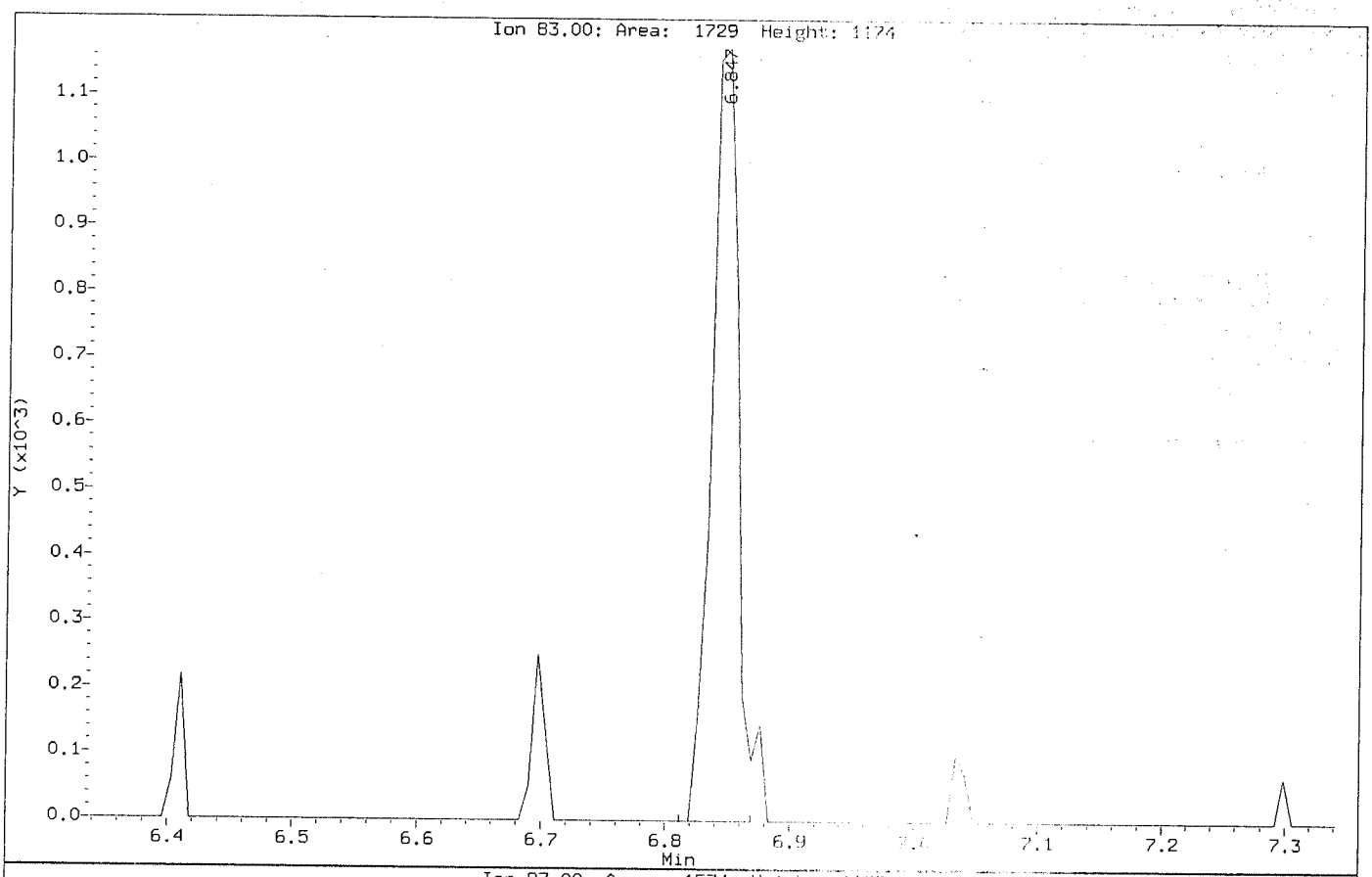
Compound: 1,1,2-Trichloroethane
CAS Number: 79-00-5

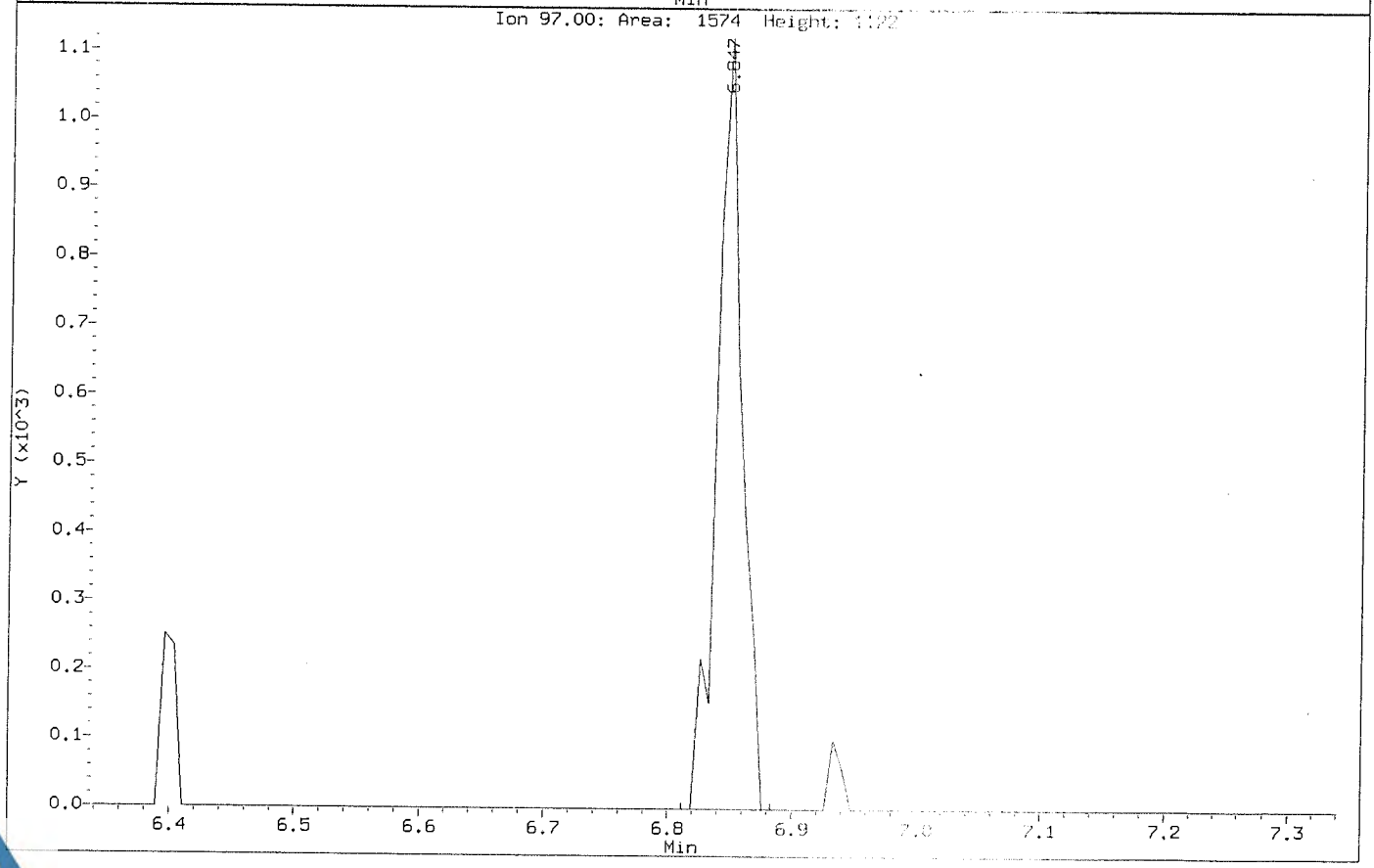




Data File: \\NAHSTWS005\target\chem\voa6.i\X210726.b\X072603.D
Injection Date: 26-JUL-2021 11:26
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: 1,1,2-Trichloroethane
CAS Number: 79-00-5





Data File: \\NAHSTWS005\target\chem\voa6.i\X210726.b\X072604.D Page 1
Report Date: 10-Sep-2021 12:14

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Data file : \\NAHSTWS005\target\chem\voa6.i\X210726.b\X072604.D
Lab Smp Id: VSTD001 Client Smp ID: VSTD001
Inj Date : 26-JUL-2021 12:08
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\X210726.b\8260W.m
Meth Date : 10-Sep-2021 12:14 voa6.i Quant Type: ISTD
Cal Date : 26-JUL-2021 11:26 Cal File: X072603.D
Als bottle: 5 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0474-dod.sub
Target Version: 4.14
Processing Host: NAHSTW7056

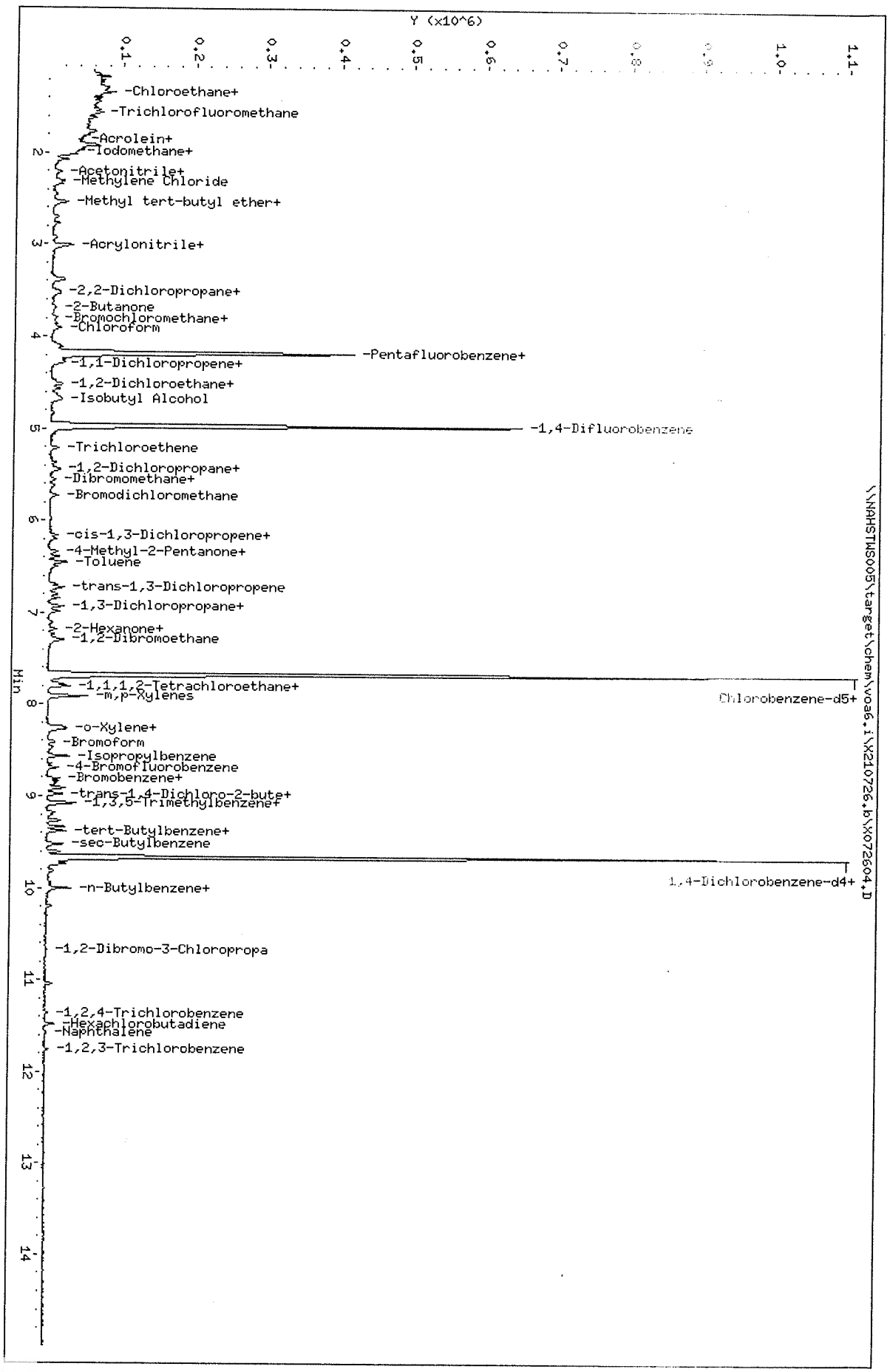
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

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)	342058	50.0000	
$ 30 Dibromofluoromethane	113	4.110	4.110	(0.983)	2605	1.00000	0.75(aM)
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	3987	1.00000	1.48(a)
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	513962	50.0000	
* 47 Chlorobenzene-d5	117	7.670	7.670	(1.000)	477945	50.0000	
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	8974	1.00000	2.23(aM)
$ 69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	4058	1.00000	2.83(a)
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	242136	50.0000	
5 Vinyl Chloride	62	1.145	1.145	(0.274)	5679	1.00000	1.13(aM)
11 1,1-Dichloroethene	96	1.911	1.911	(0.457)	4915	1.00000	1.19(aM)
17 Methylene Chloride	84	2.305	2.305	(0.551)	4482	1.00000	2.40(a)
27 cis-1,2-Dichloroethene	96	3.537	3.537	(0.846)	3733	1.00000	1.00(a)
33 1,2-Dichloroethane	62	4.569	4.569	(0.921)	5624	1.00000	1.05(a)
38 Trichloroethene	130	5.206	5.206	(1.049)	4095	1.00000	1.14(a)
53 1,1,2-Trichloroethane	83	6.839	6.839	(0.892)	3250	1.00000	1.12(aM)

QC Flag Legend

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

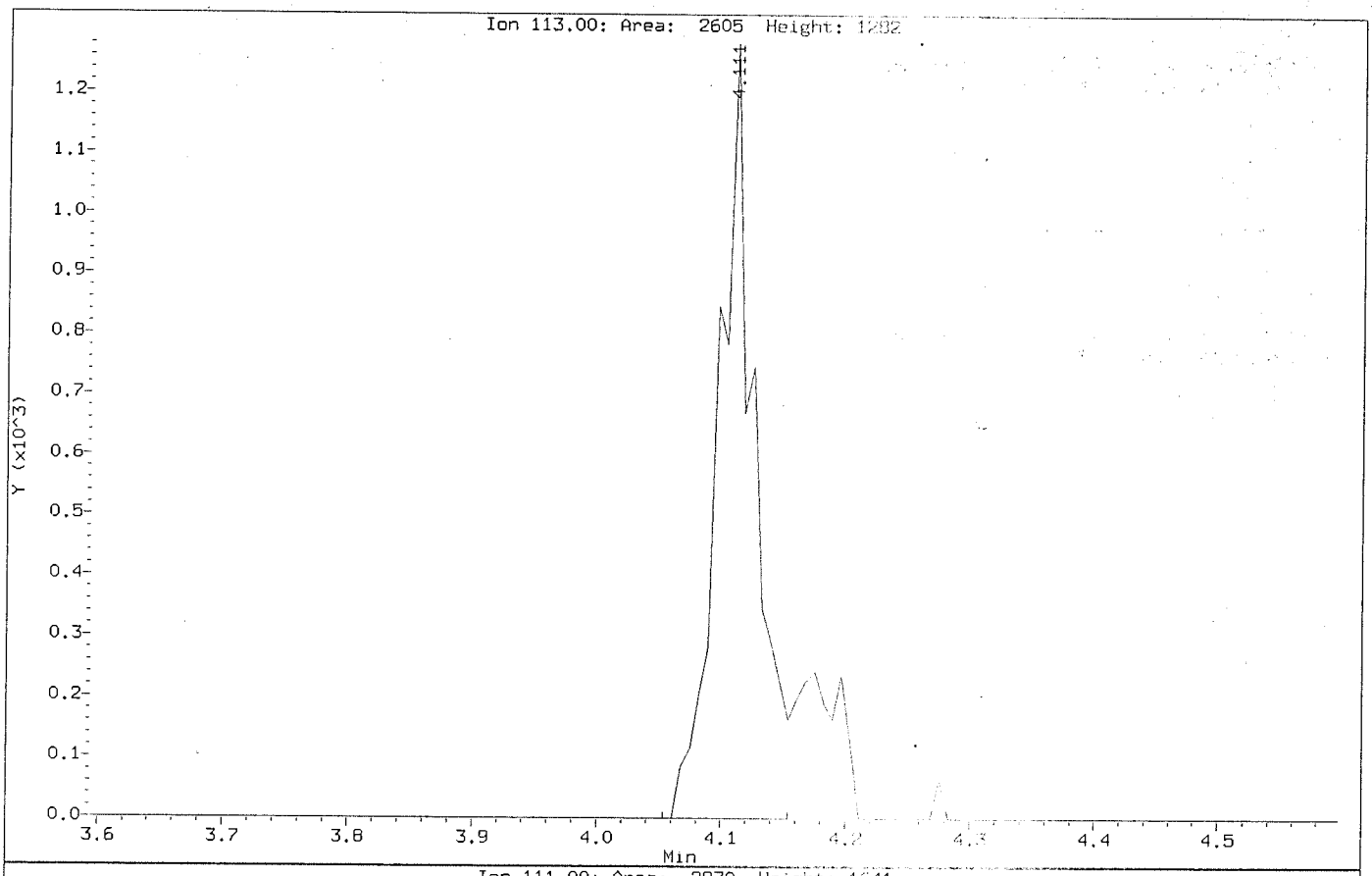


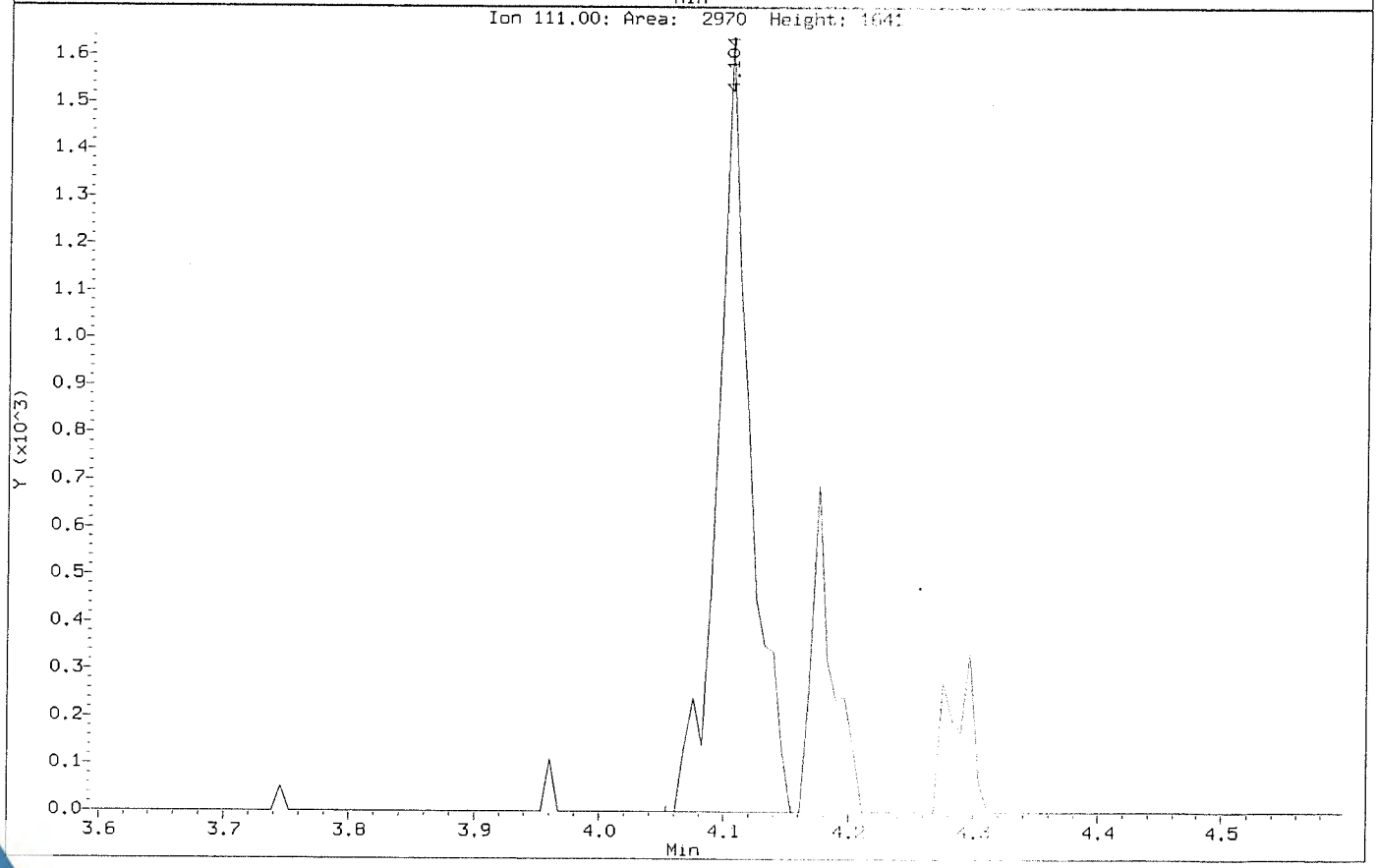
Data File: \\NAHSTWS005\target\chem\voa6.i\X210726.b\X072604.D
Date : 26-JUL-2021 12:08
Client ID: VSTD001
Sample Info: VSTD001;VSTD001;1;3;;
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\NAHSTWS005\target\chem\voa6.i\X210726.b\Before\X072604.D
Injection Date: 26-JUL-2021 12:08
Instrument: voa6.i
Client Sample ID: VSTD001

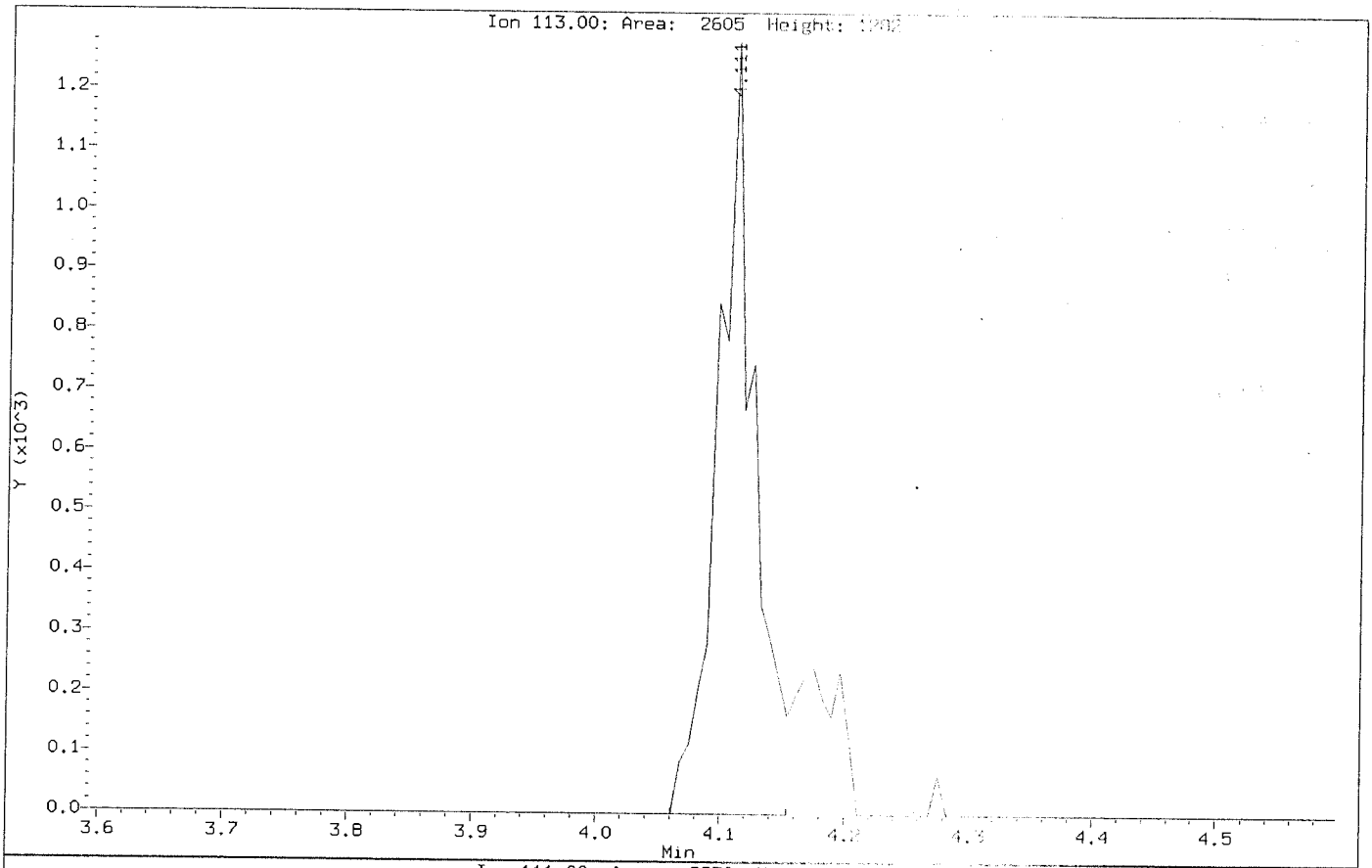
Compound: Dibromofluoromethane
CAS Number: 1868-53-7

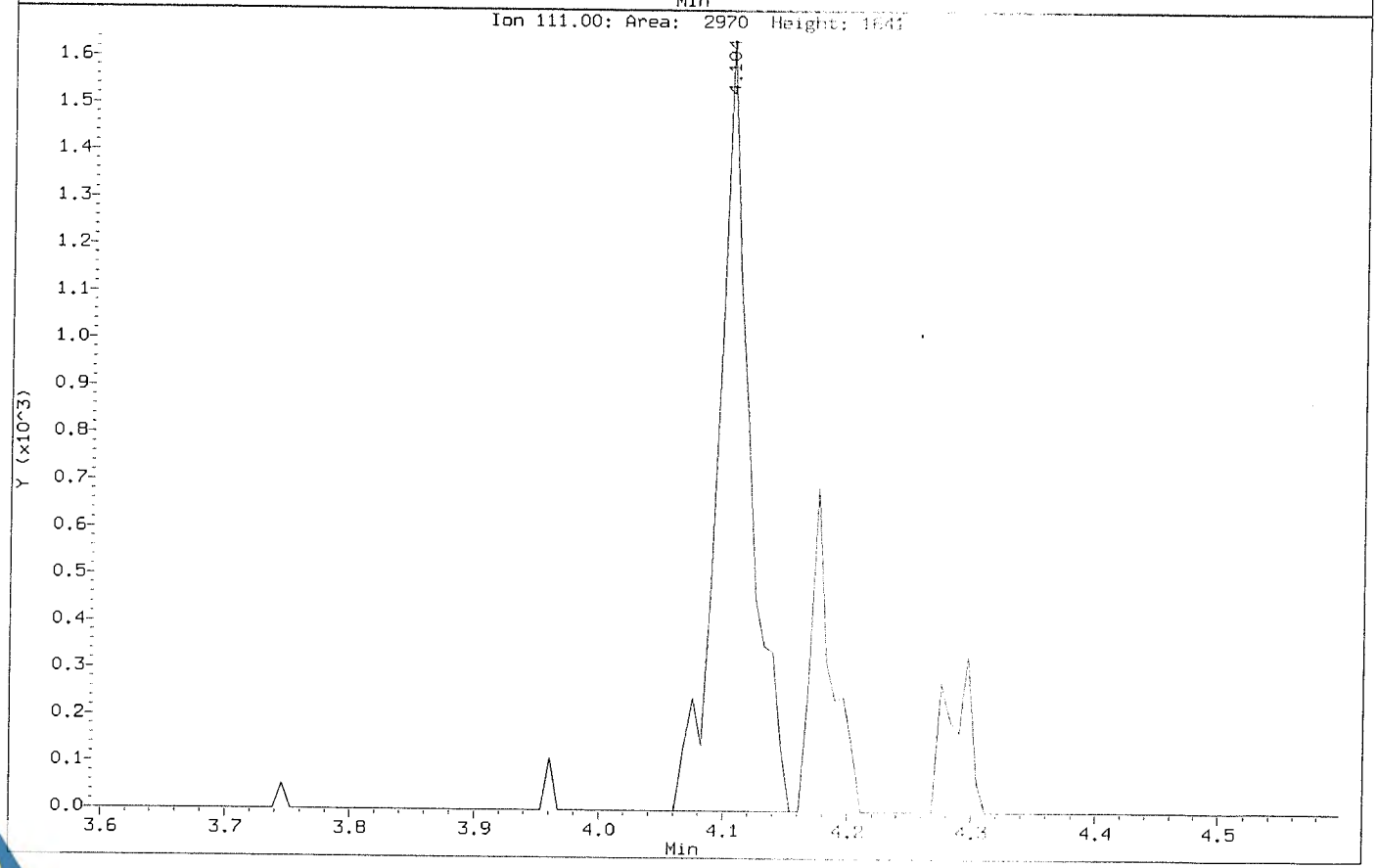




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Injection Date: 26-JUL-2021 12:08
Instrument: voa6.i
Client Sample ID: VSTD001

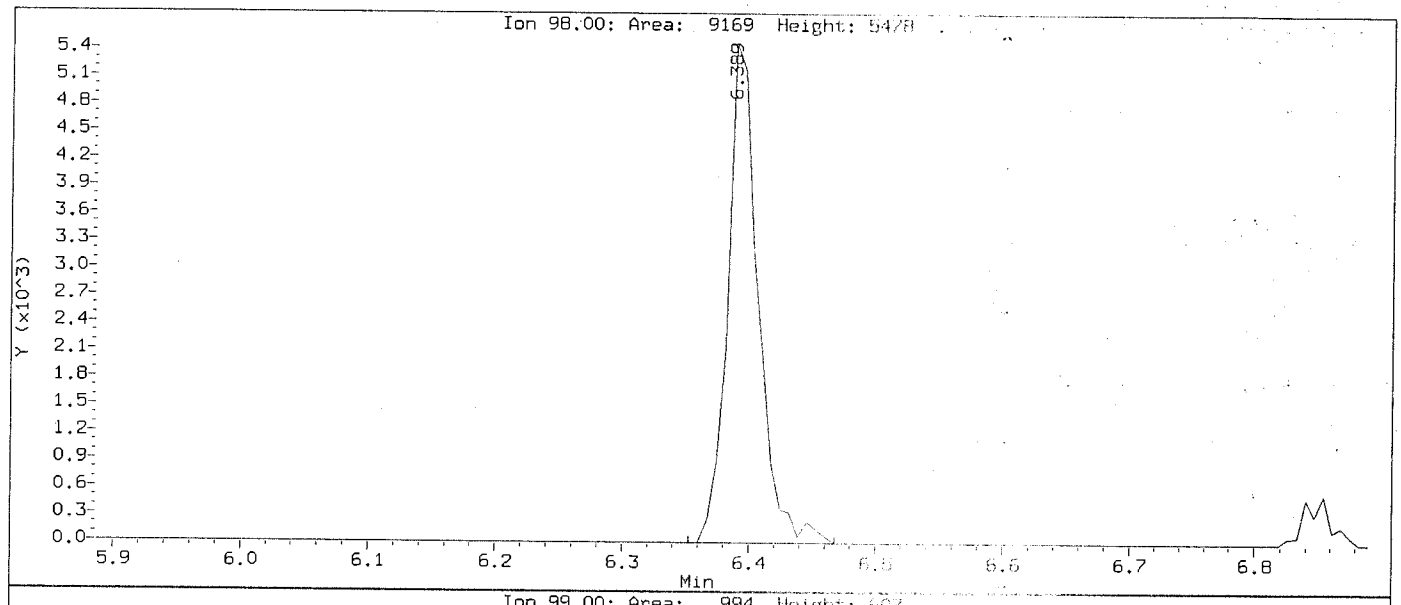
Compound: Dibromofluoromethane
CAS Number: 1868-53-7

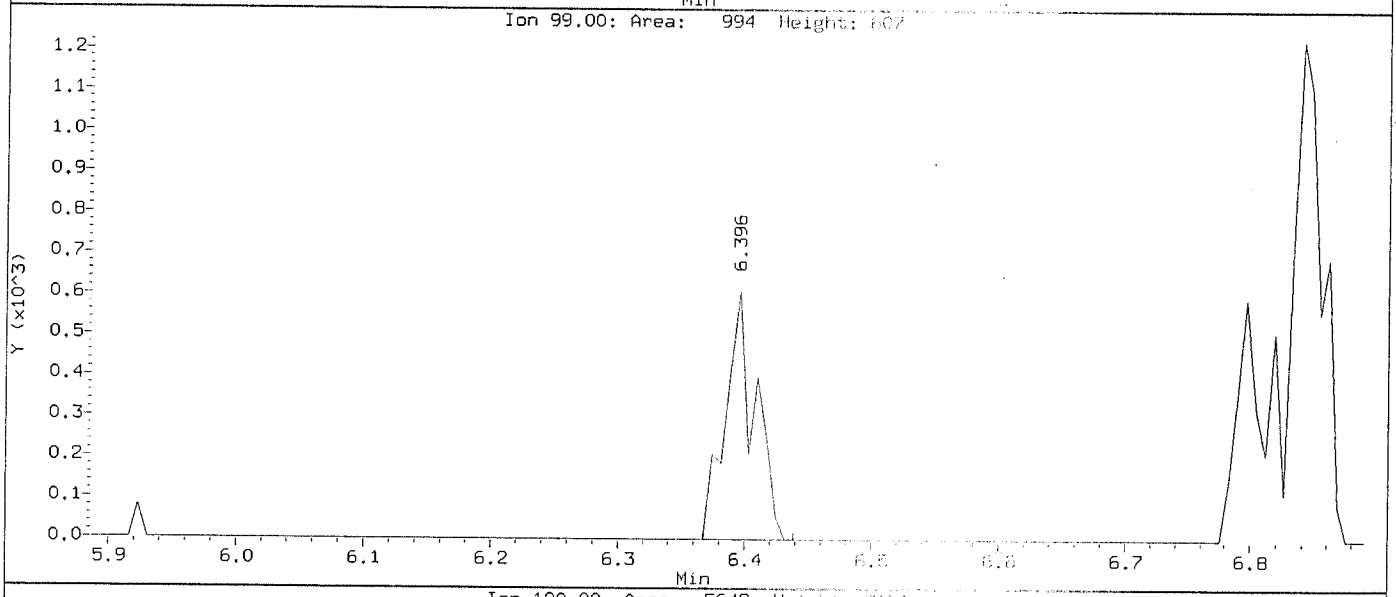


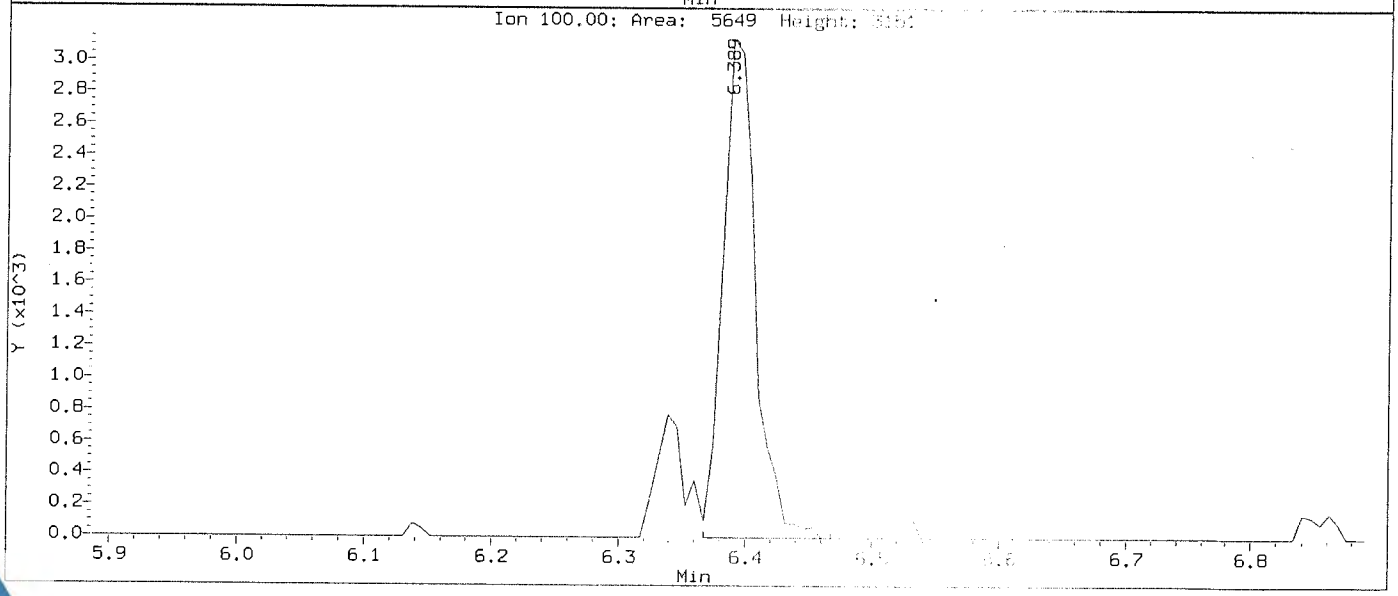


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Injection Date: 26-JUL-2021 12:08
Instrument: voa6.i
Client Sample ID: VSTD001

Compound: Toluene-d8
CAS Number: 2037-26-5

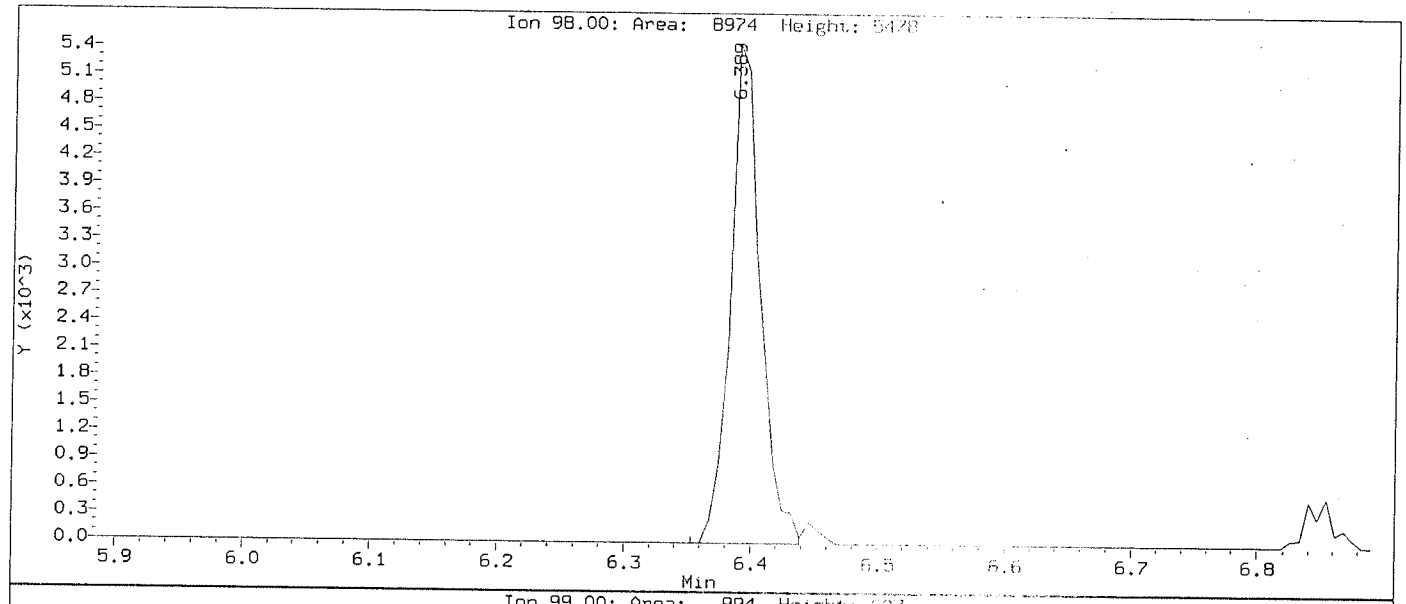


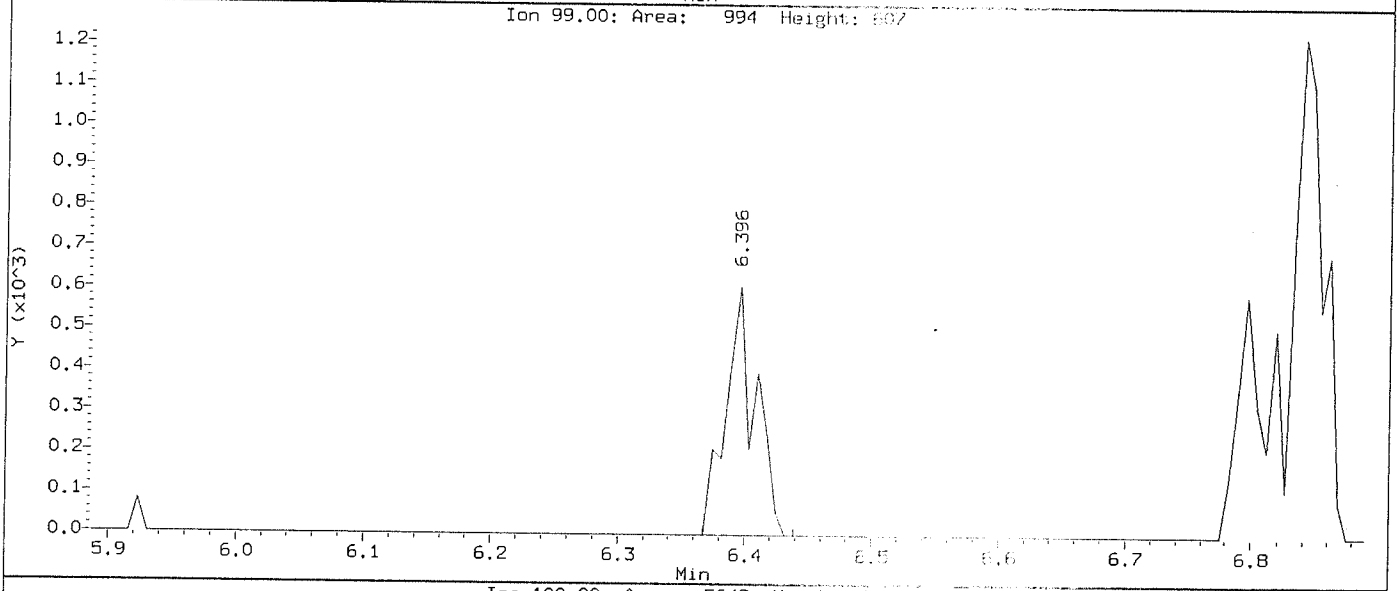


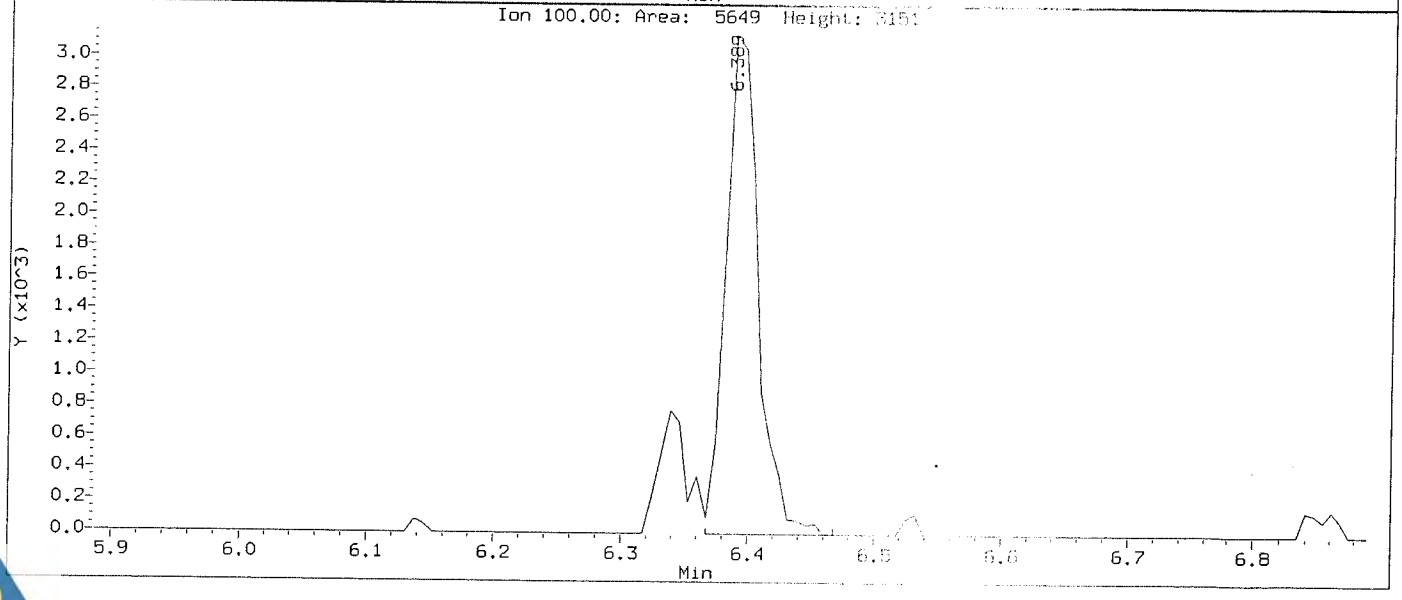


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Injection Date: 26-JUL-2021 12:08
Instrument: voa6.i
Client Sample ID: VSTD001

Compound: Toluene-d8
CAS Number: 2037-26-5

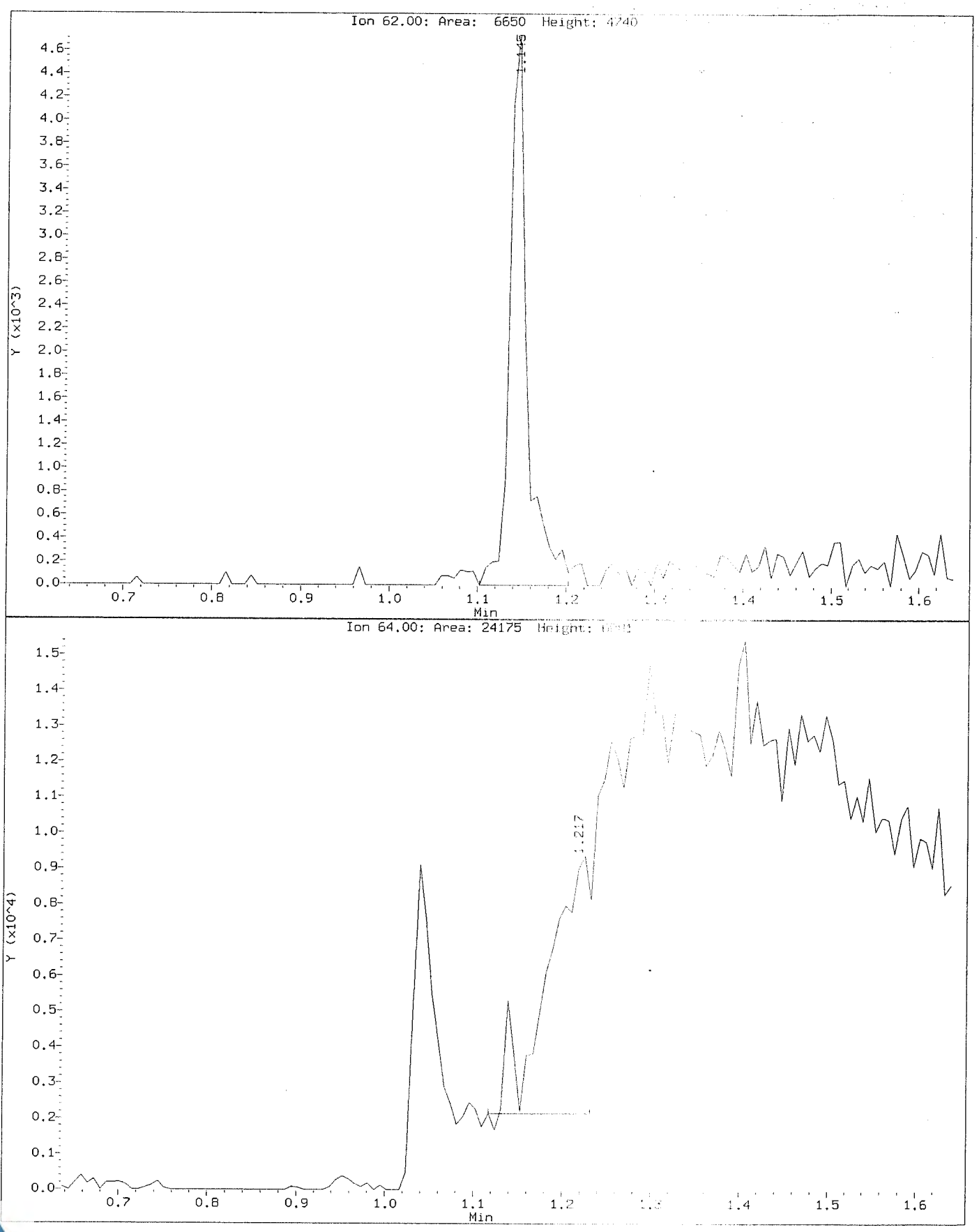






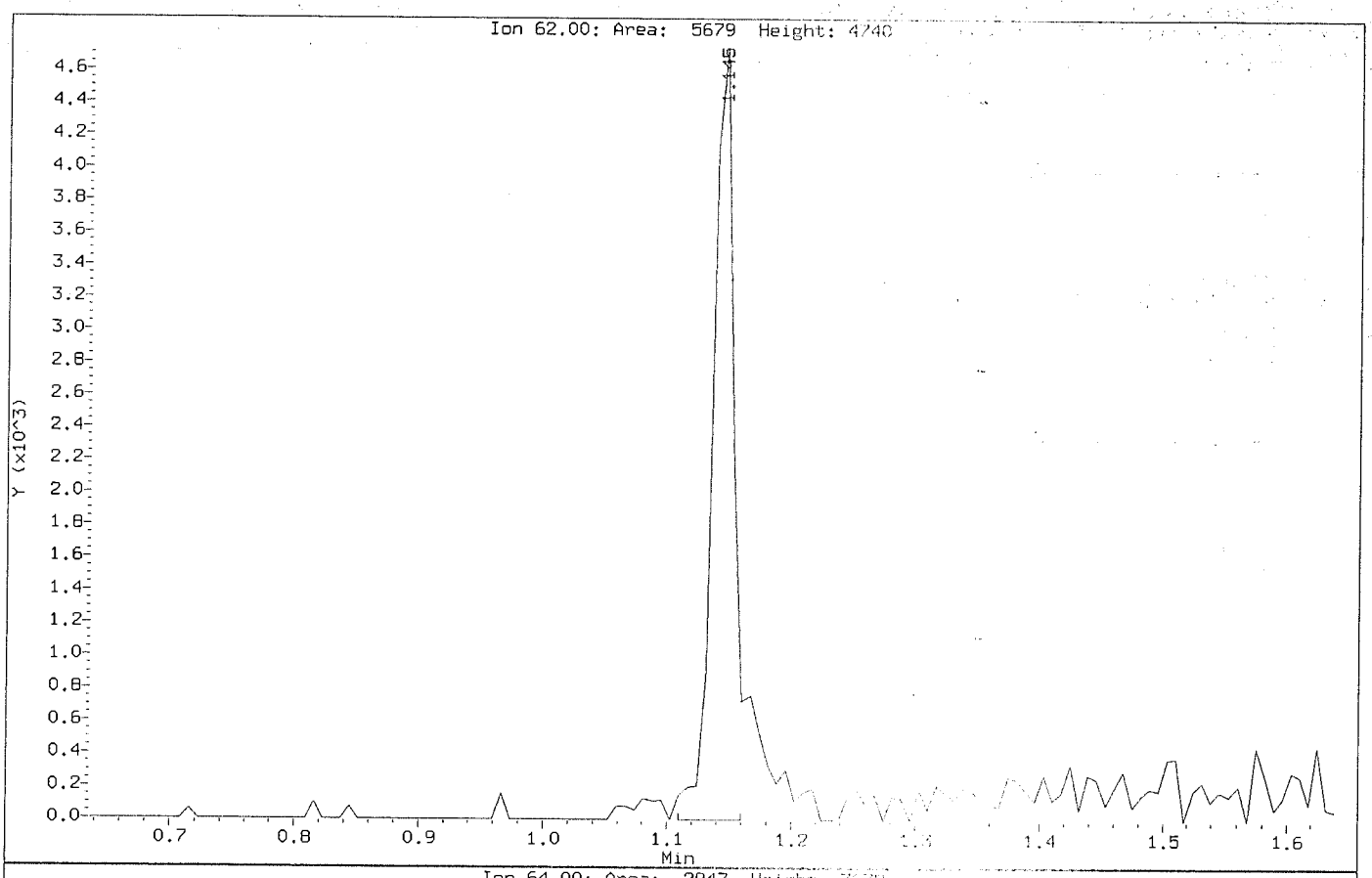
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Injection Date: 26-JUL-2021 12:08
Instrument: voa6.i
Client Sample ID: VSTD001

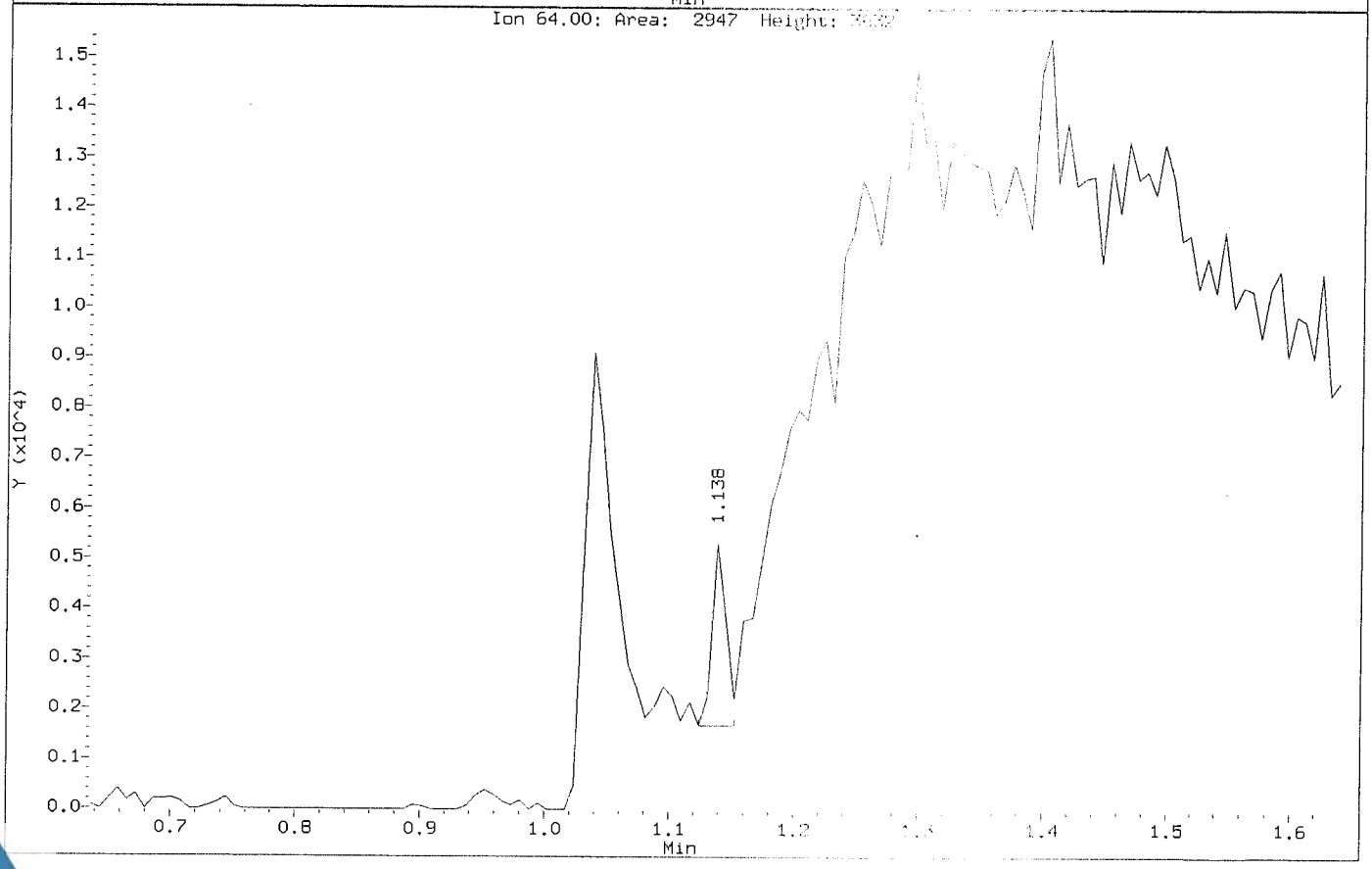
Compound: Vinyl Chloride
CAS Number: 75-01-4



Data File: \\NAHSTWS005\target\chem\voa6.i\X210726.b\X072604.D
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Instrument: voa6.i
Client Sample ID: VSTD001

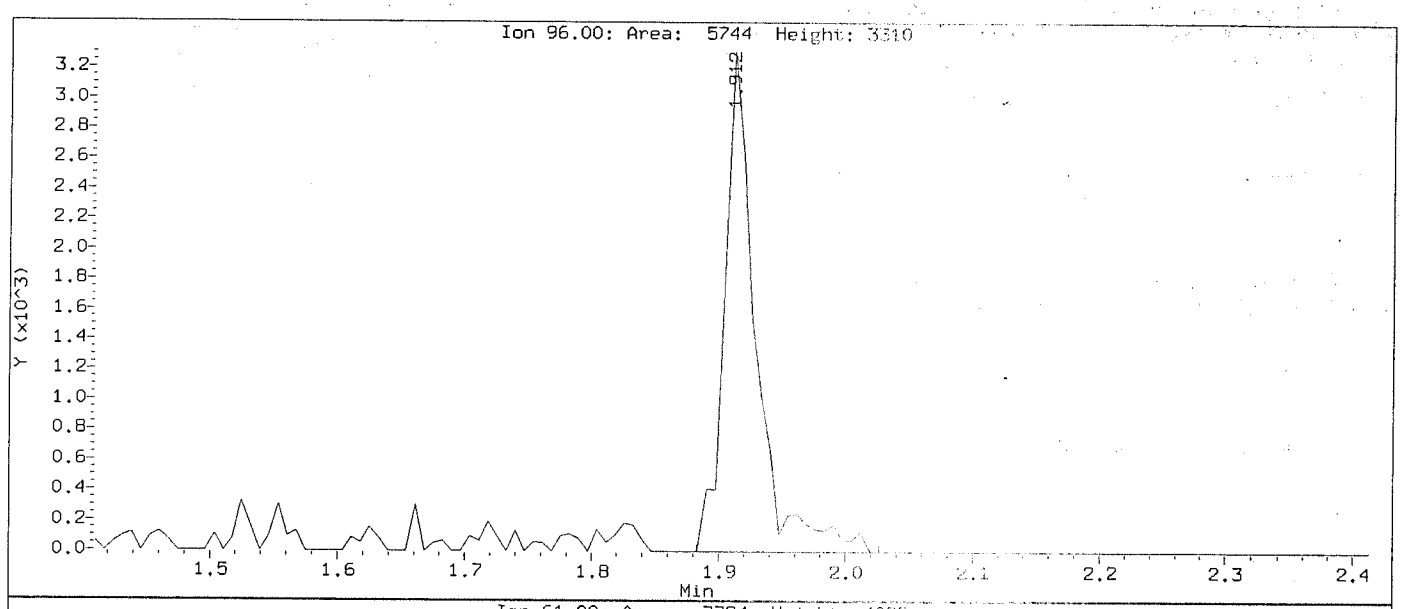
Compound: Vinyl Chloride
CAS Number: 75-01-4

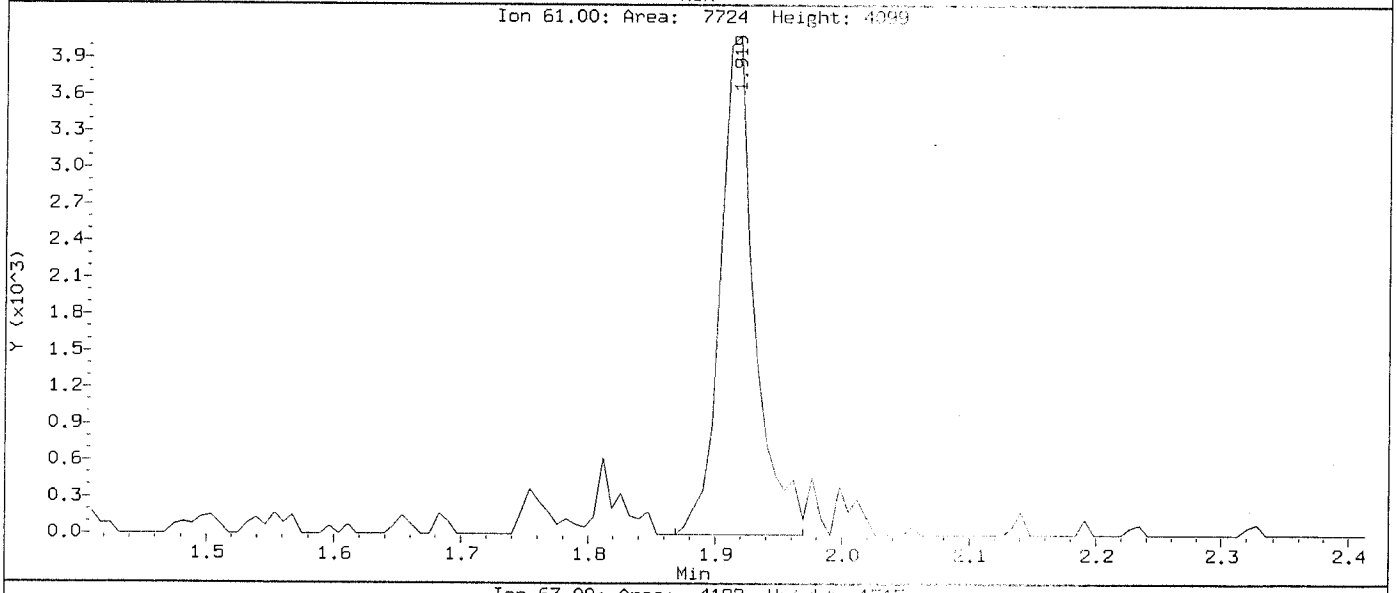


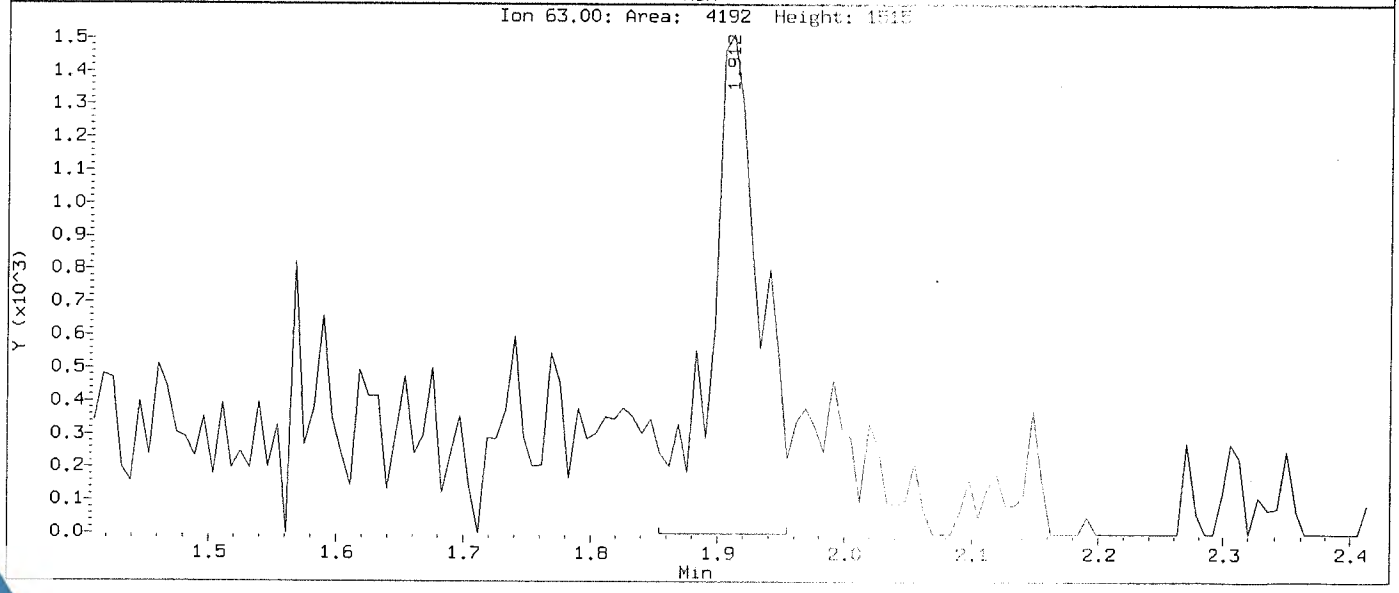


Data File: \\NAHSTWS005\target\chem\voa6.i\X210726.b\Before\X072604.D
Injection Date: 26-JUL-2021 12:08
Instrument: voa6.i
Client Sample ID: VSTD001

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

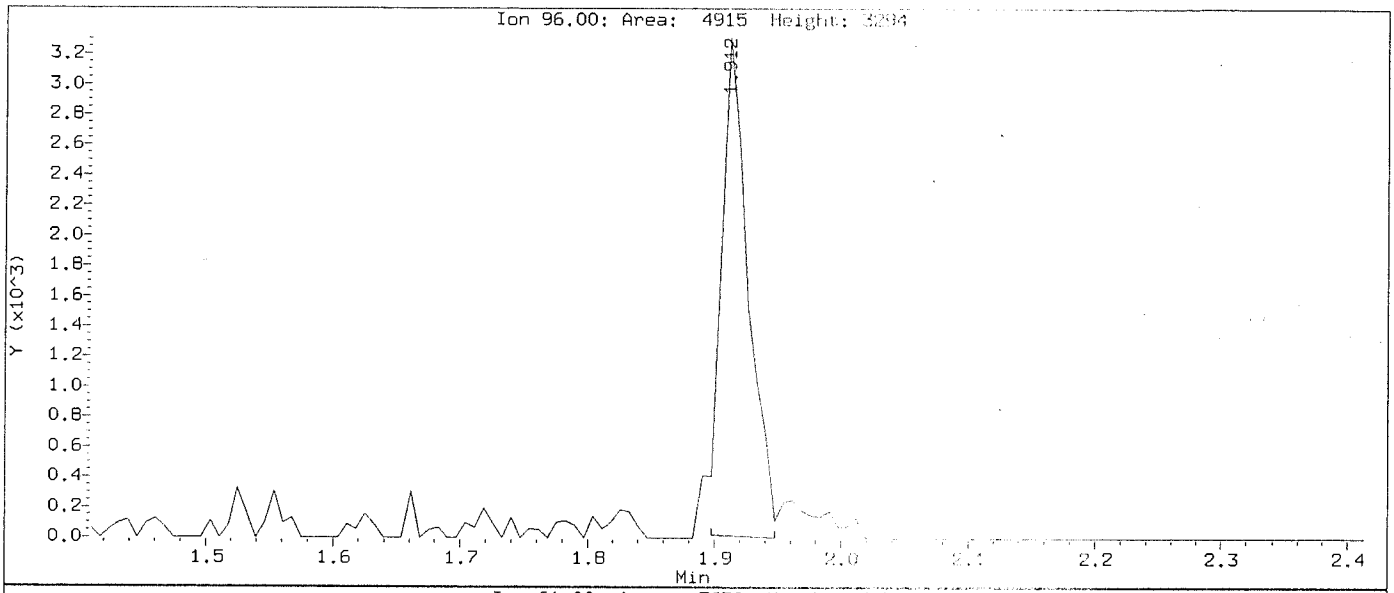


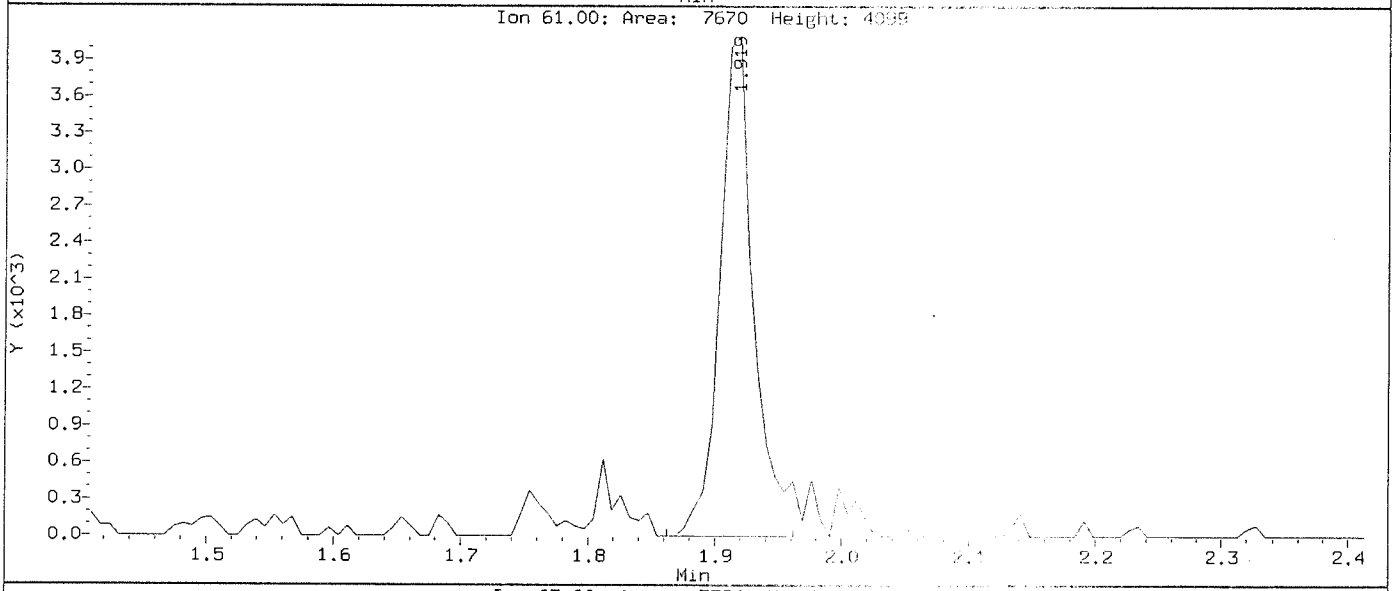


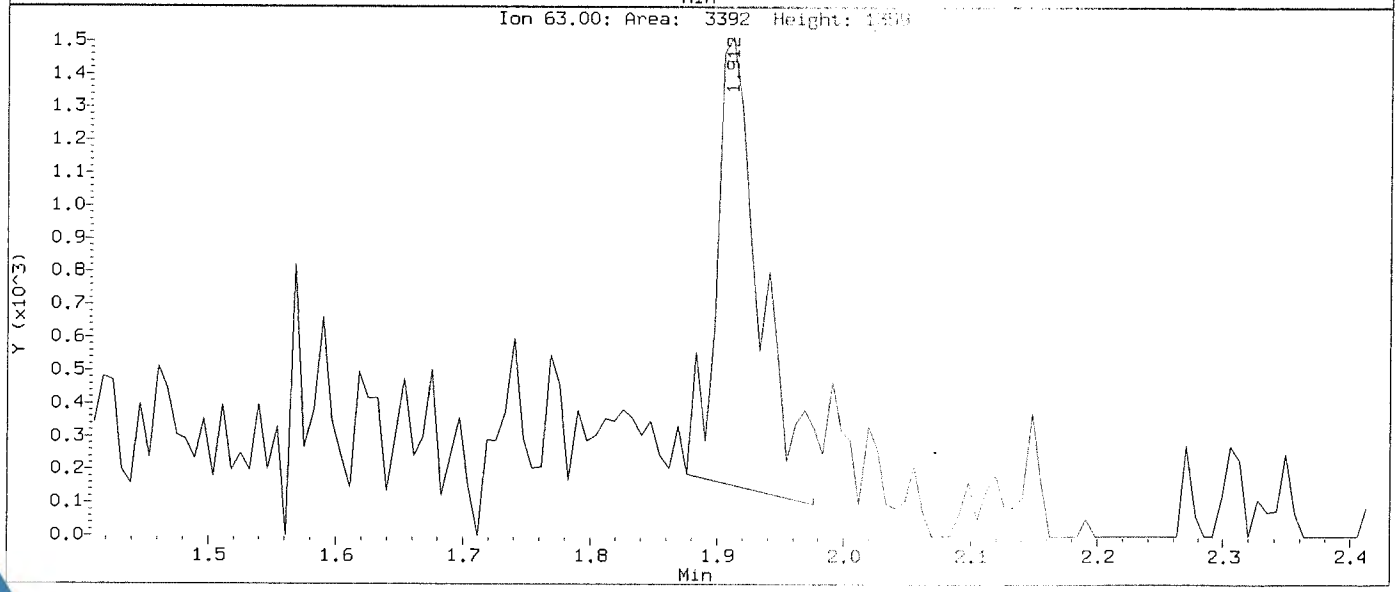


Data File: \\NAHSTWS005\target\chem\voa6.i\X210726.b\X072604.D
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Instrument: voa6.i
Client Sample ID: VSTD001

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

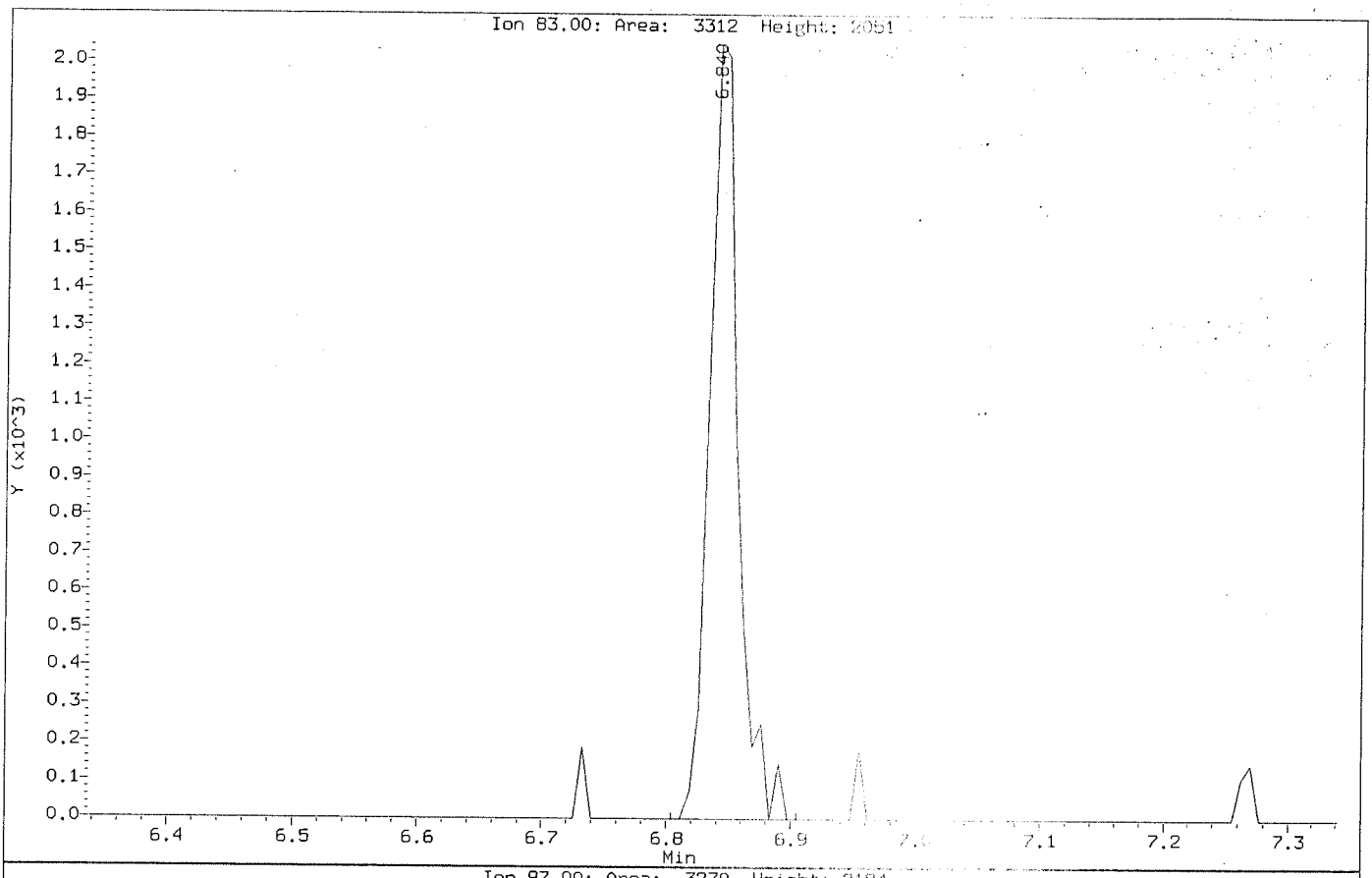


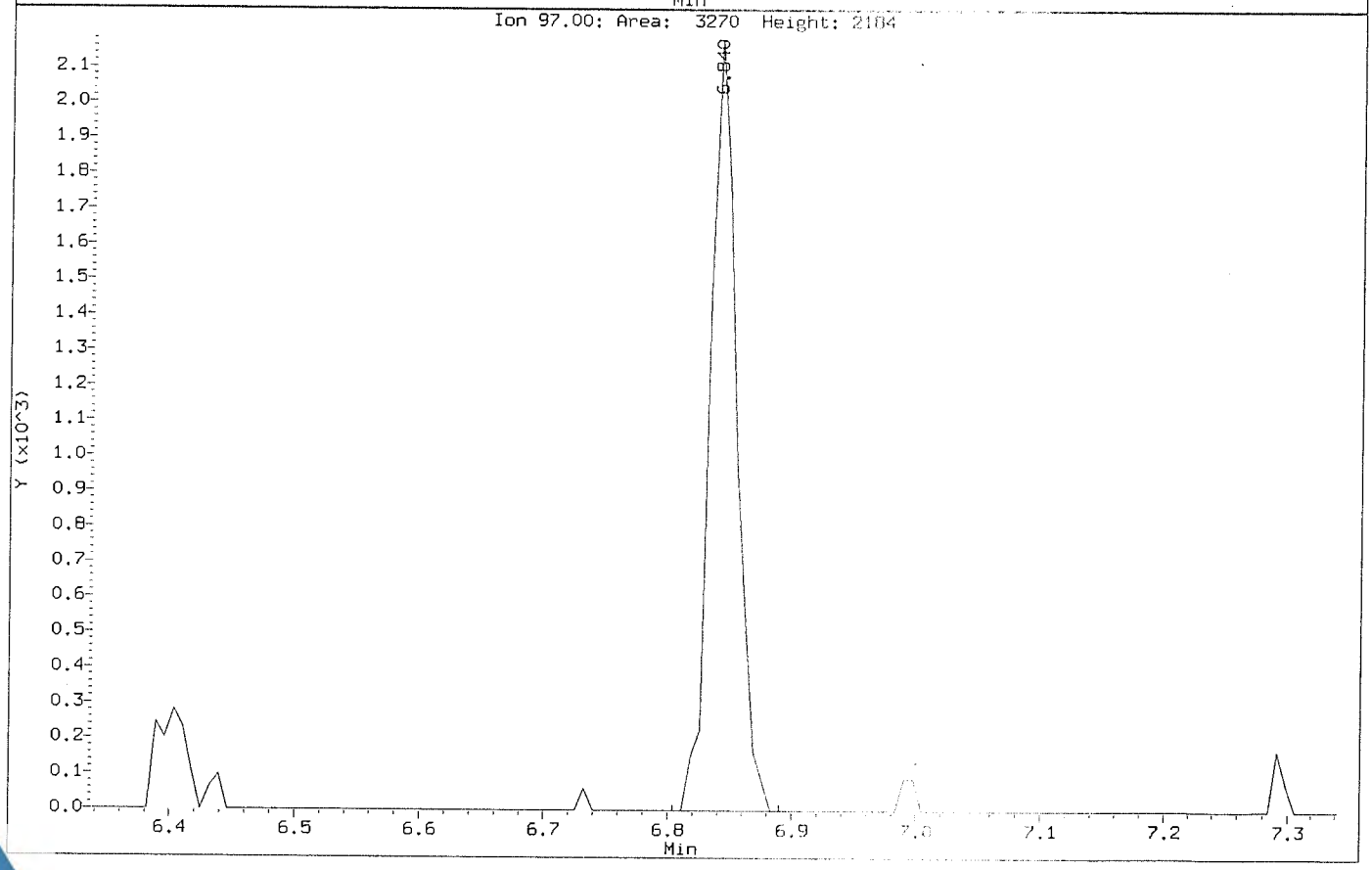




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Injection Date: 26-JUL-2021 12:08
Instrument: voa6.i
Client Sample ID: VSTD001

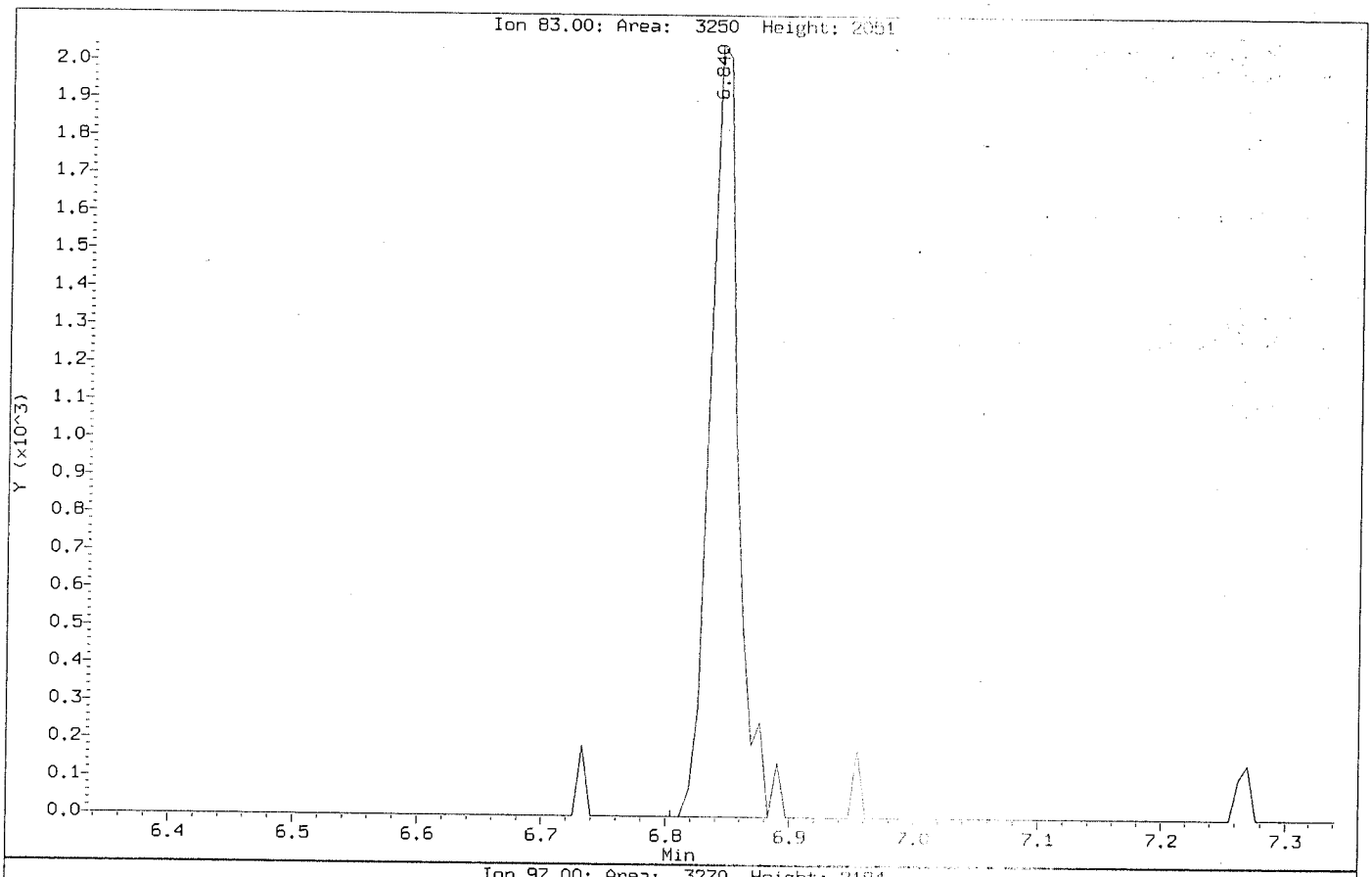
Compound: 1,1,2-Trichloroethane
CAS Number: 79-00-5

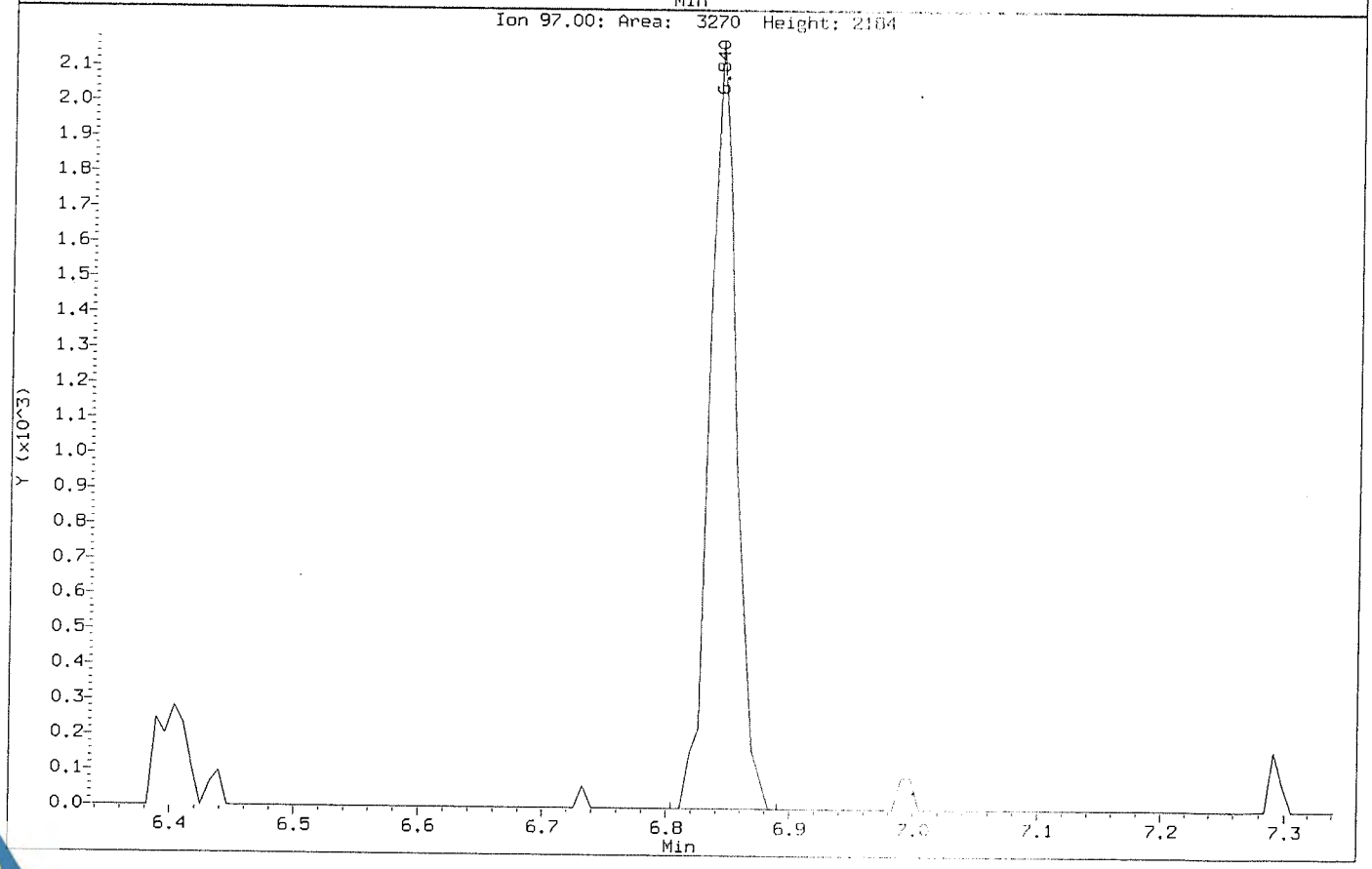




Data File: \\NAHSTWS005\target\chem\voa6.i\X210726.b\X072604.D
Injection Date: 26-JUL-2021 12:08
Instrument: voa6.i
Client Sample ID: VSTD001

Compound: 1,1,2-Trichloroethane
CAS Number: 79-00-5





Data File: \\NAHSTWS005\target\chem\voa6.i\X210726.b\X072605.D Page 1
Report Date: 10-Sep-2021 12:14

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Data file : \\NAHSTWS005\target\chem\voa6.i\X210726.b\X072605.D
Lab Smp Id: VSTD002 Client Smp ID: VSTD002
Inj Date : 26-JUL-2021 12:29
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\X210726.b\8260W.m
Meth Date : 10-Sep-2021 12:14 voa6.i Quant Type: ISTD
Cal Date : 26-JUL-2021 12:08 Cal File: X072604.D
Als bottle: 6 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0474-dod.sub
Target Version: 4.14
Processing Host: NAHSTW7056

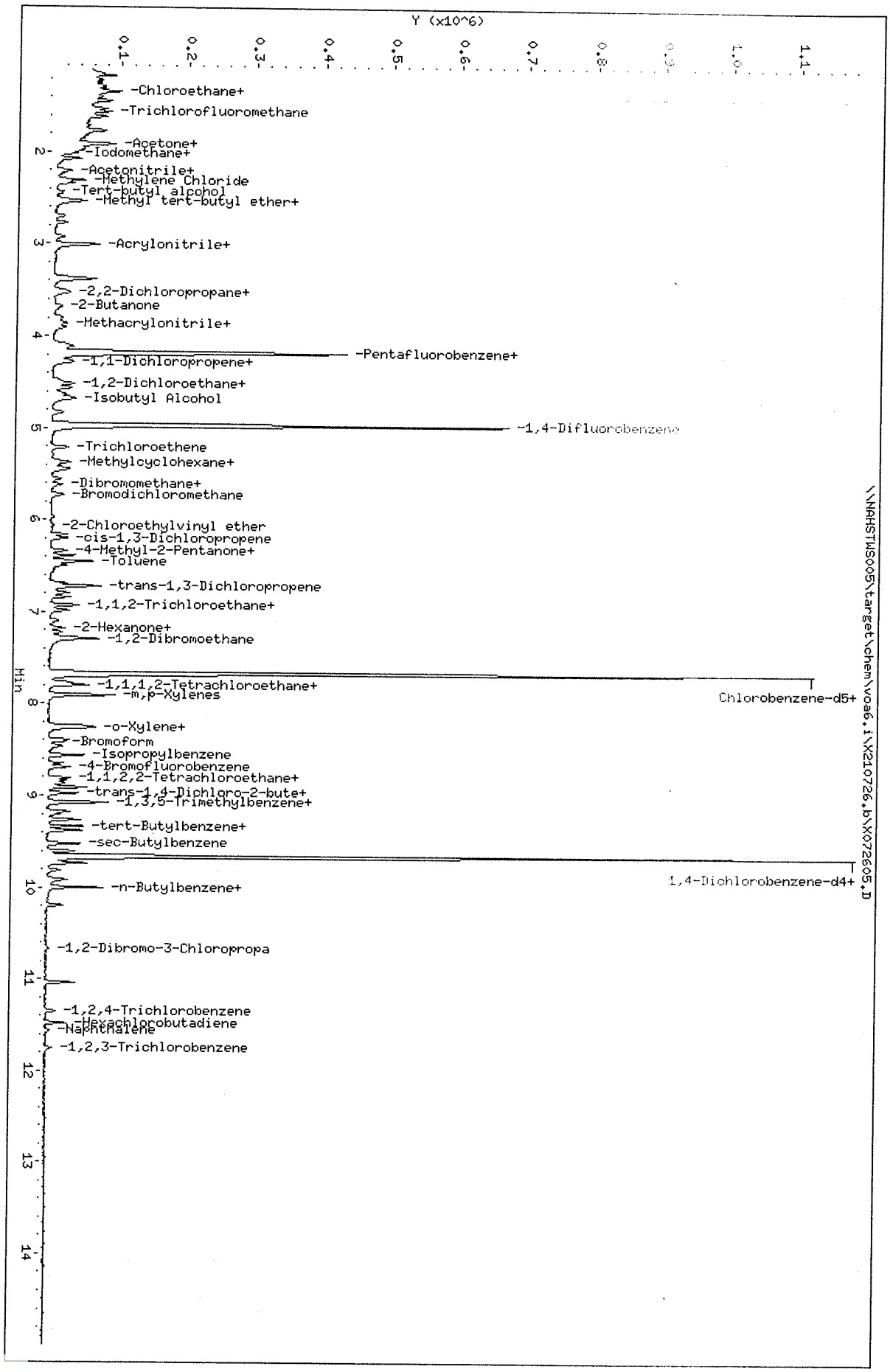
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

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	4.182	4.182	(1.000)	356027	50.0000	
$	30 Dibromofluoromethane	113	4.110	4.110	(0.983)	6416	2.00000	1.78(a)
$	35 1,2-Dichloroethane-d4	65	4.483	4.483	(1.072)	8738	2.00000	2.51(aM)
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	333270	50.0000	
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	300259	50.0000	
$	48 Toluene-d8	98	6.388	6.388	(0.833)	20762	2.00000	3.16(a)
$	69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	7396	2.00000	3.46(a)
*	70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	247288	50.0000	
	5 Vinyl Chloride	62	1.138	1.138	(0.272)	11308	2.00000	2.16(aM)
	11 1,1-Dichloroethene	96	1.911	1.911	(0.457)	8622	2.00000	2.02(a)
	17 Methylene Chloride	84	2.305	2.305	(0.551)	8812	2.00000	3.56(a)
	27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	7067	2.00000	1.83(a)
	33 1,2-Dichloroethane	62	4.562	4.562	(0.918)	11056	2.00000	1.96(a)
	38 Trichloroethene	130	5.214	5.214	(1.049)	7572	2.00000	2.00(a)
	53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	5459	2.00000	1.81(a)

QC Flag Legend

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

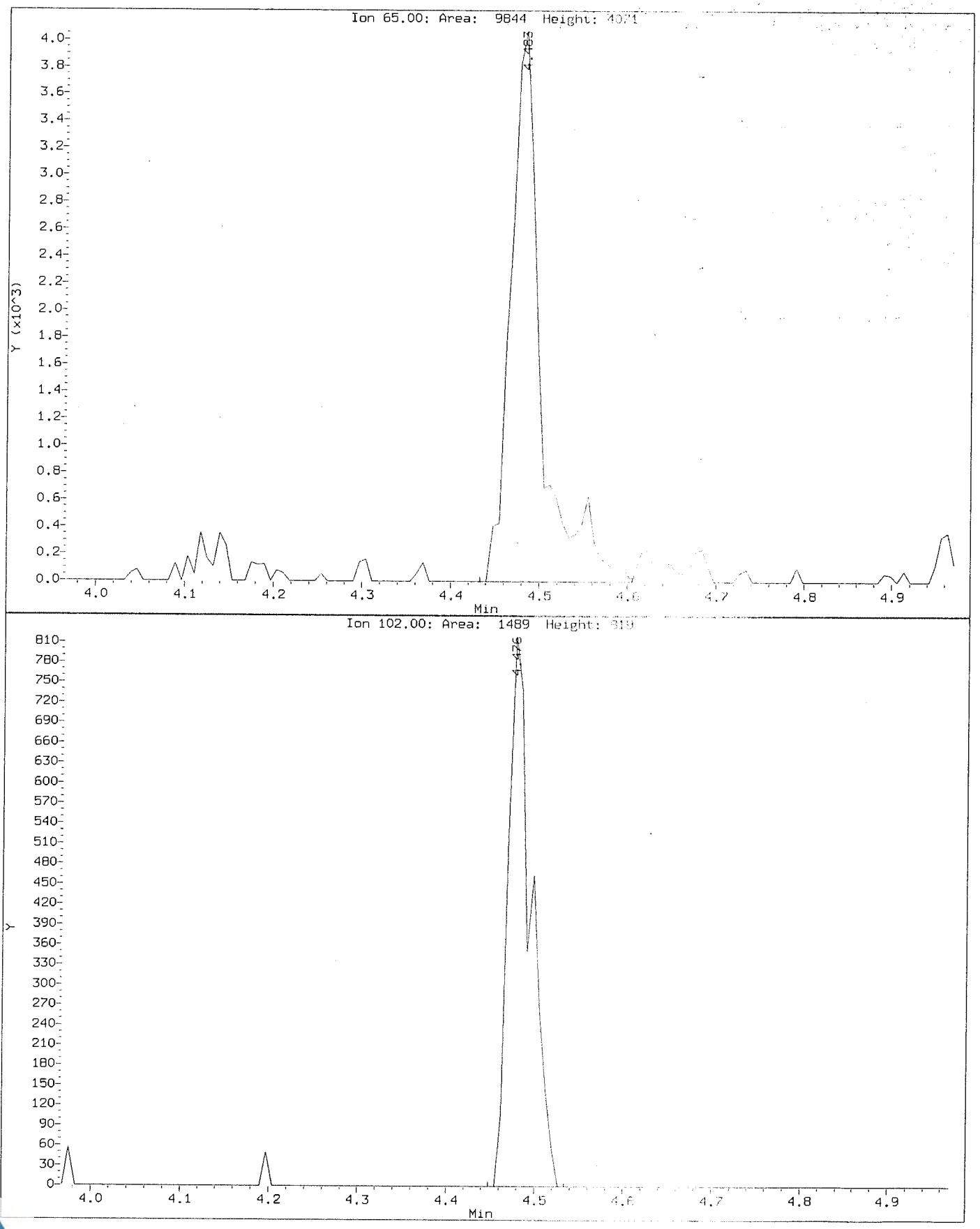


Data File: \\NAHSTWS005\target\chem\voa6.i\X210726.b\X072605.D
Date : 26-JUL-2021 12:29
Client ID: VSTD002
Sample Info: VSTD002;VSTD002;1;4;;
Purge Volume: 5.0
Column phase: DB624

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

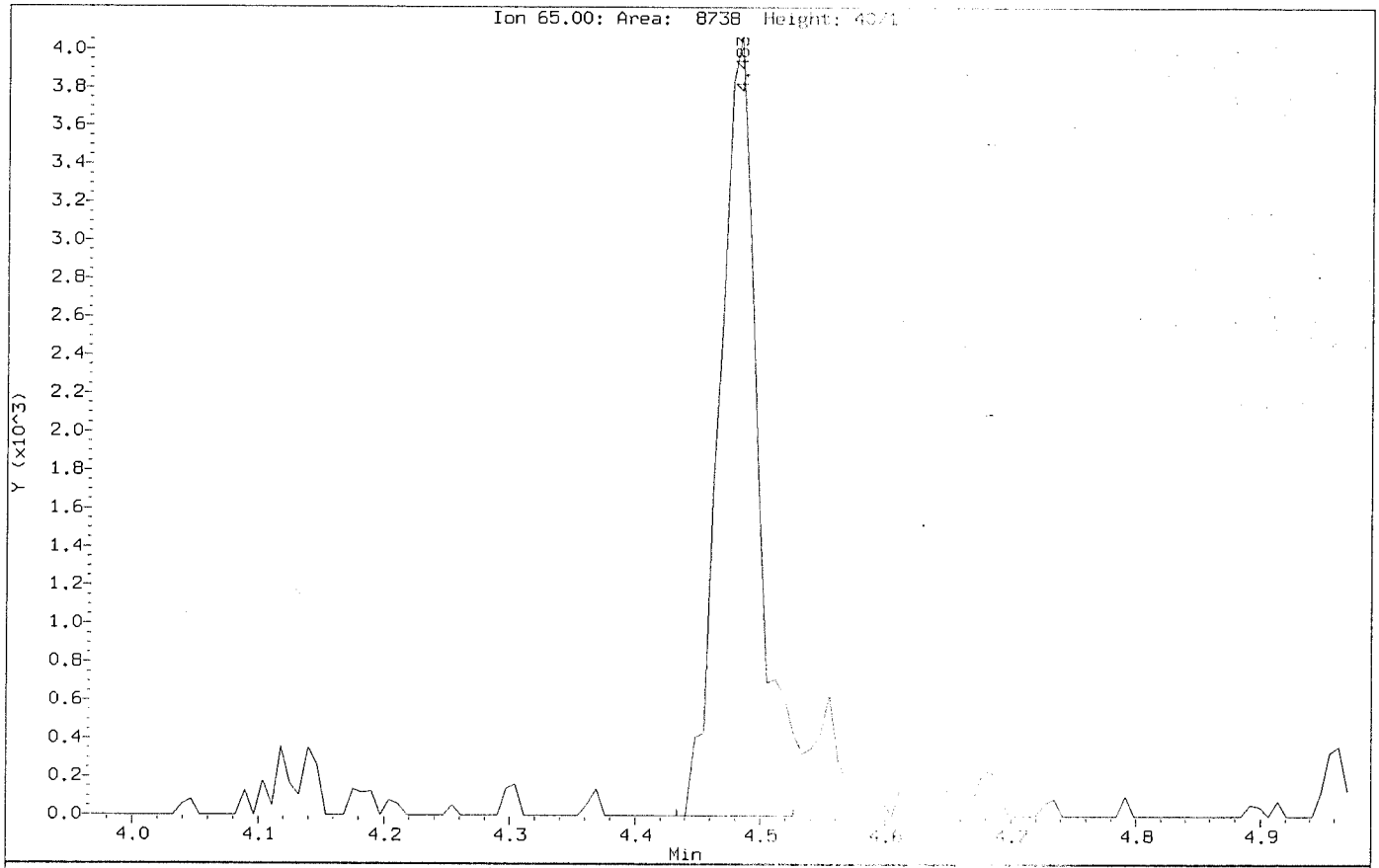
Data File: \\NAHSTWS005\target\chem\voa6.i\X210726.b\Before\X072605.D
Injection Date: 26-JUL-2021 12:29
Instrument: voa6.i
Client Sample ID: VSTD002

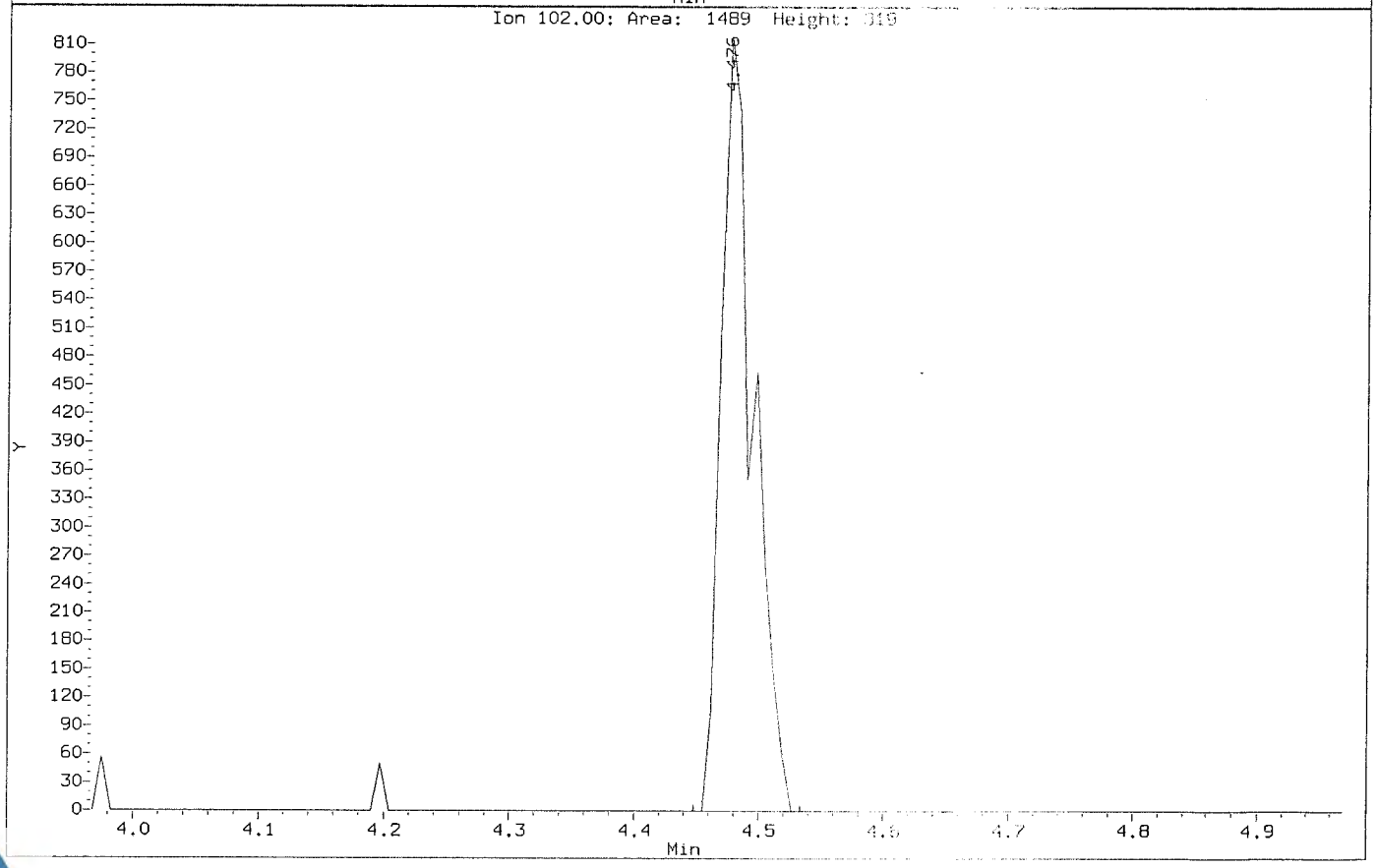
Compound: 1,2-Dichloroethane-d4
CAS Number: 17060-07-0



Data File: \\NAHSTWS005\target\chem\voa6.i\X210726.b\X072605.D
Injection Date: 26-JUL-2021 12:29
Instrument: voa6.i
Client Sample ID: VSTD002

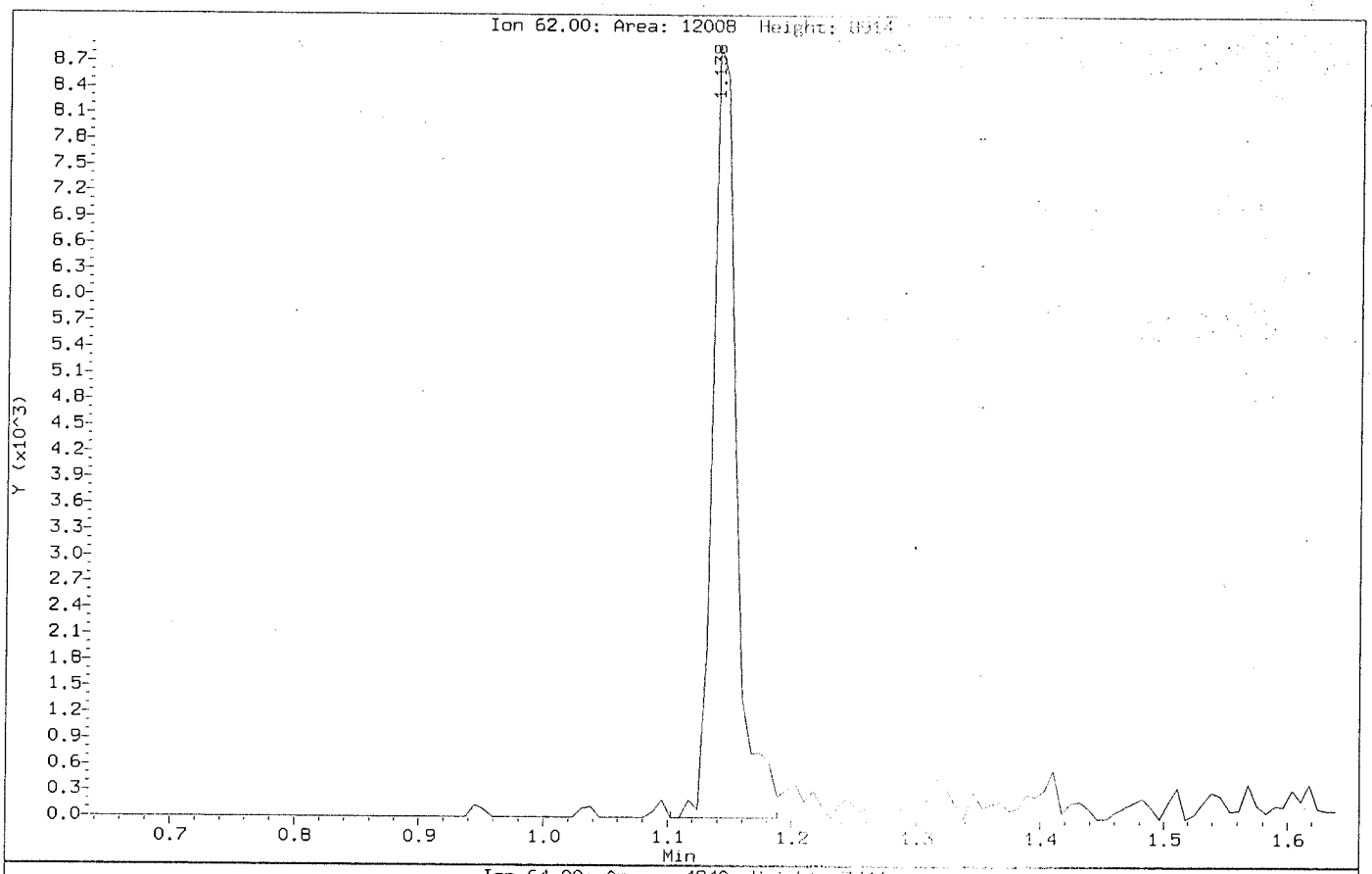
Compound: 1,2-Dichloroethane-d4
CAS Number: 17060-07-0

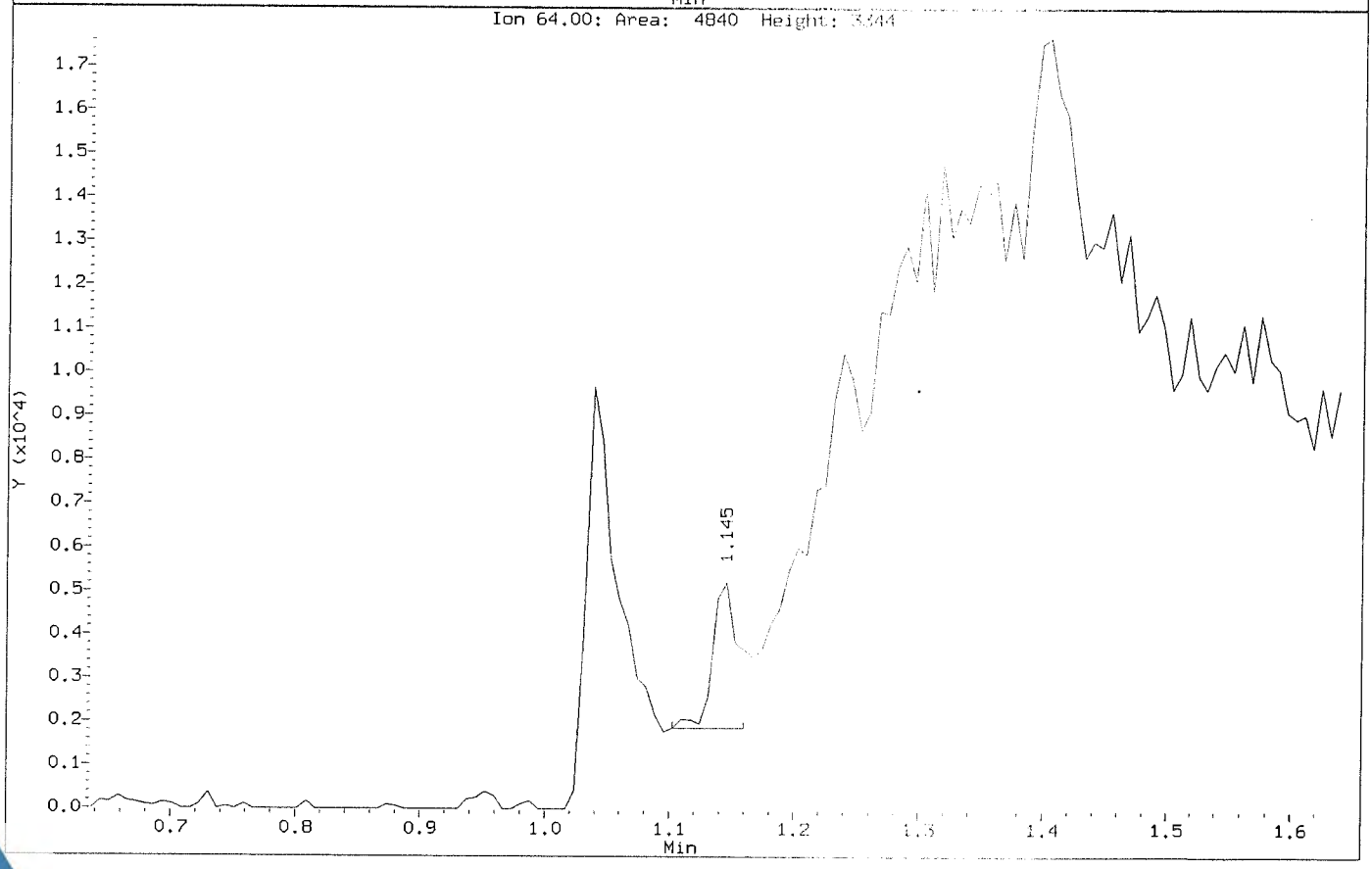




Data File: \\NAHSTWS005\target\chem\voa6.i\X210726.b\Before\X072605.D
Injection Date: 26-JUL-2021 12:29
Instrument: voa6.i
Client Sample ID: VSTD002

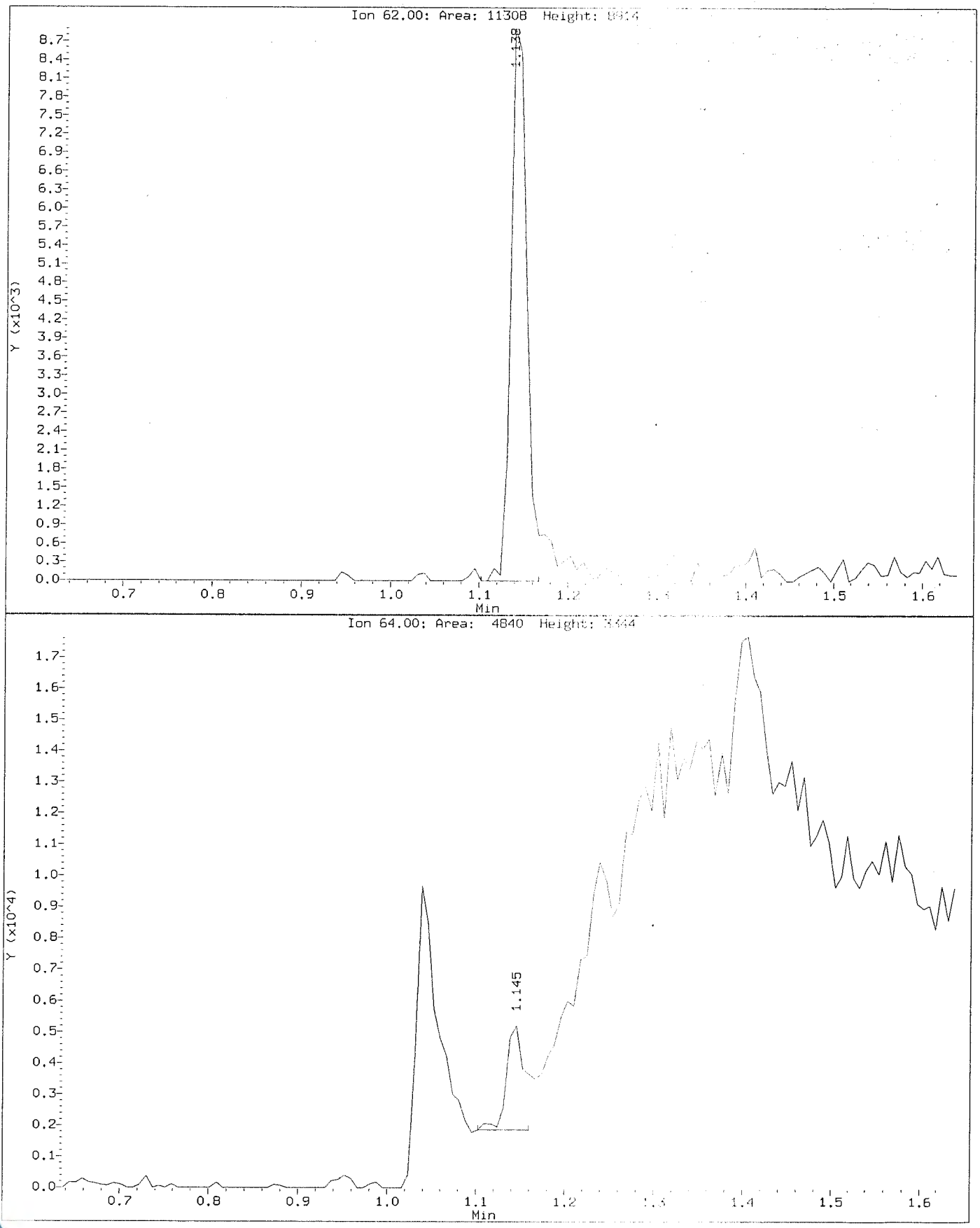
Compound: Vinyl Chloride
CAS Number: 75-01-4





Data File: \\NAHSTWS005\target\chem\voa6.i\X210726.b\X072605.D
Injection Date: 26-JUL-2021 12:29
Instrument: voa6.i
Client Sample ID: VSTD002

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



Data File: \\NAHSTWS005\target\chem\voa6.i\X210726.b\X072606.D Page 1
Report Date: 10-Sep-2021 12:14

ALS Laboratory Group

Data file : \\NAHSTWS005\target\chem\voa6.i\X210726.b\X072606.D
Lab Smp Id: VSTD005 Client Smp ID: VSTD005
Inj Date : 26-JUL-2021 12:50
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\X210726.b\8260W.m
Meth Date : 10-Sep-2021 12:14 voa6.i Quant Type: ISTD
Cal Date : 26-JUL-2021 12:29 Cal File: X072605.D
Als bottle: 7 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0474-dod.sub
Target Version: 4.14
Processing Host: NAHSTW7056

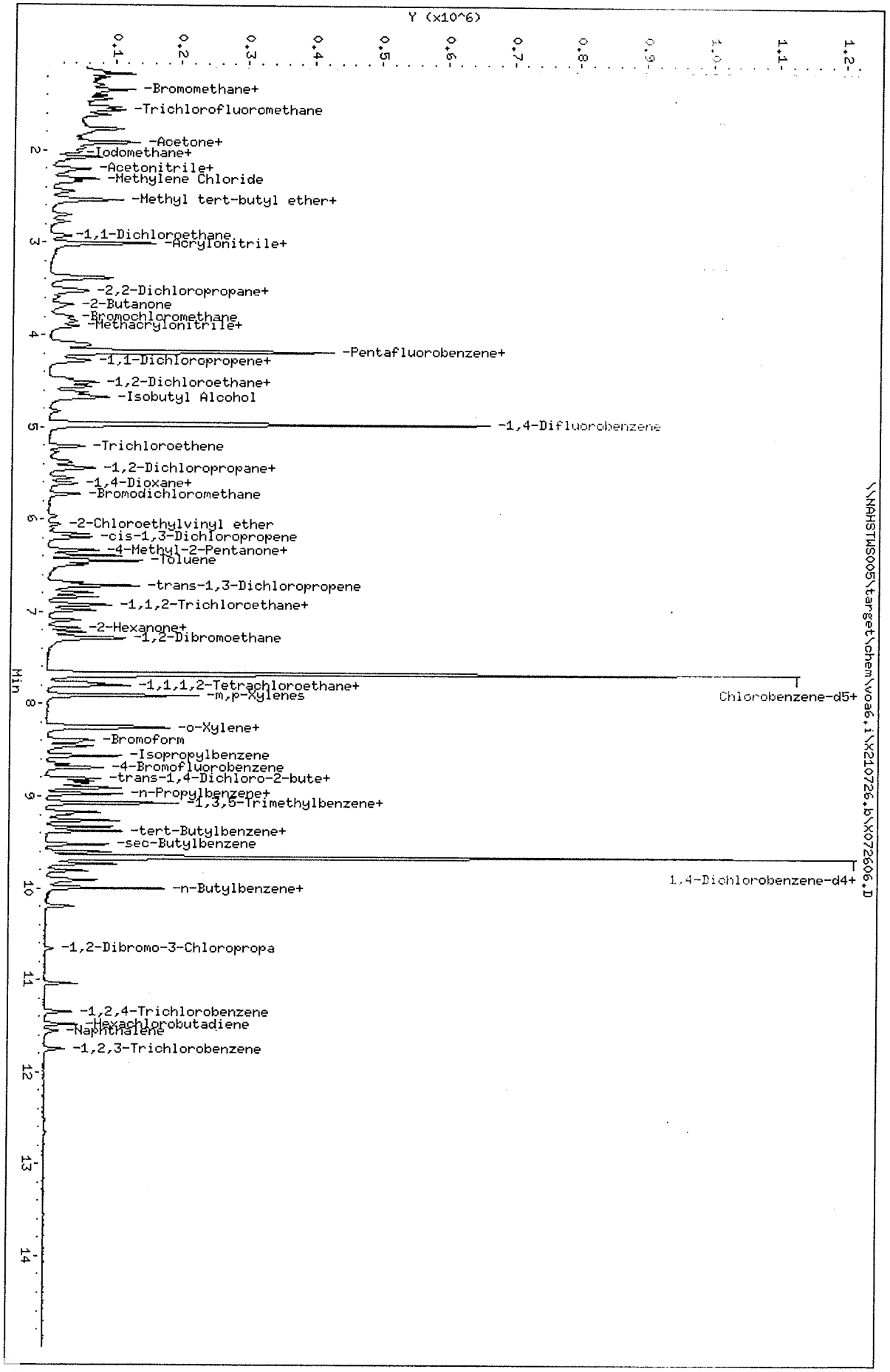
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

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	4.182	4.182	(1.000)	354670	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	18331	5.00000	5.13
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	23278	5.00000	5.77
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	514879	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	486507	50.0000	
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	60828	5.00000	6.56(M)
$ 69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	22712	5.00000	6.66
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	240415	50.0000	
5 Vinyl Chloride	62	1.145	1.145	(0.274)	23401	5.00000	4.50(a)
11 1,1-Dichloroethene	96	1.912	1.912	(0.457)	18912	5.00000	4.44(a)
17 Methylene Chloride	84	2.306	2.306	(0.551)	18386	5.00000	6.25
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	18617	5.00000	4.84(a)
33 1,2-Dichloroethane	62	4.555	4.555	(0.918)	26030	5.00000	4.83(a)
38 Trichloroethene	130	5.207	5.207	(1.049)	17771	5.00000	4.90(a)
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	14941	5.00000	5.10

QC Flag Legend

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

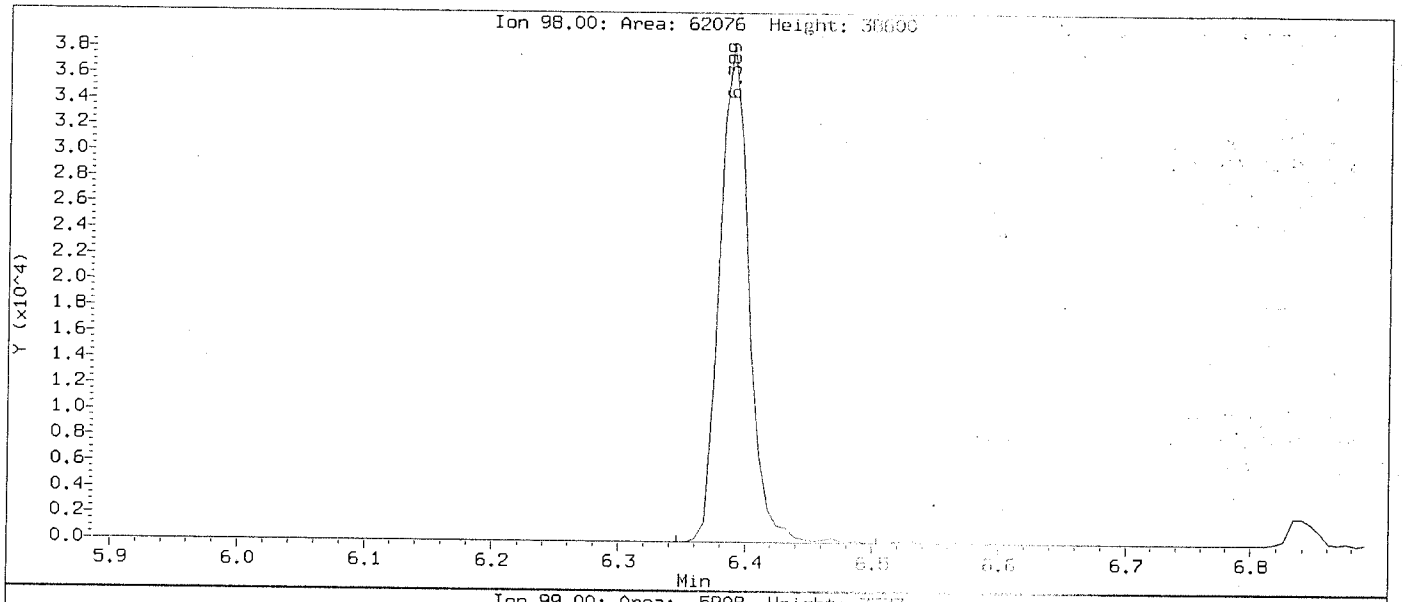


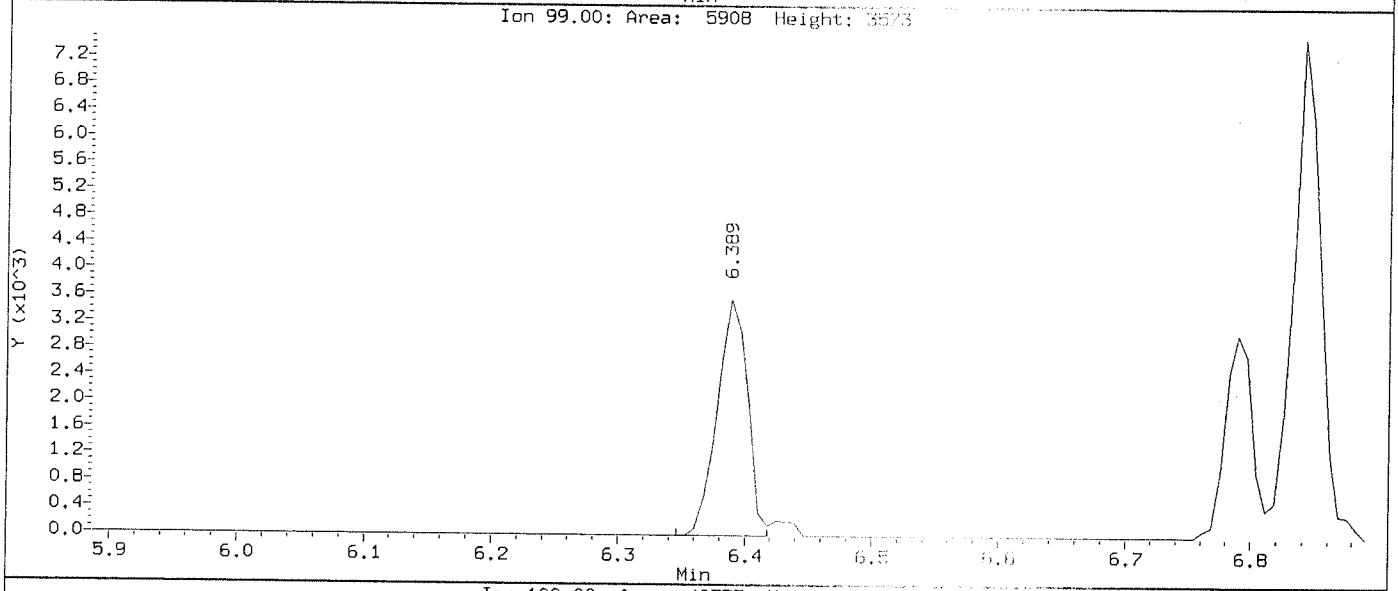
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Client ID: VSTD005
Sample Info: VSTD005;VSTD005;1;5;;
Purge Volume: 5.0
Column phase: DB624

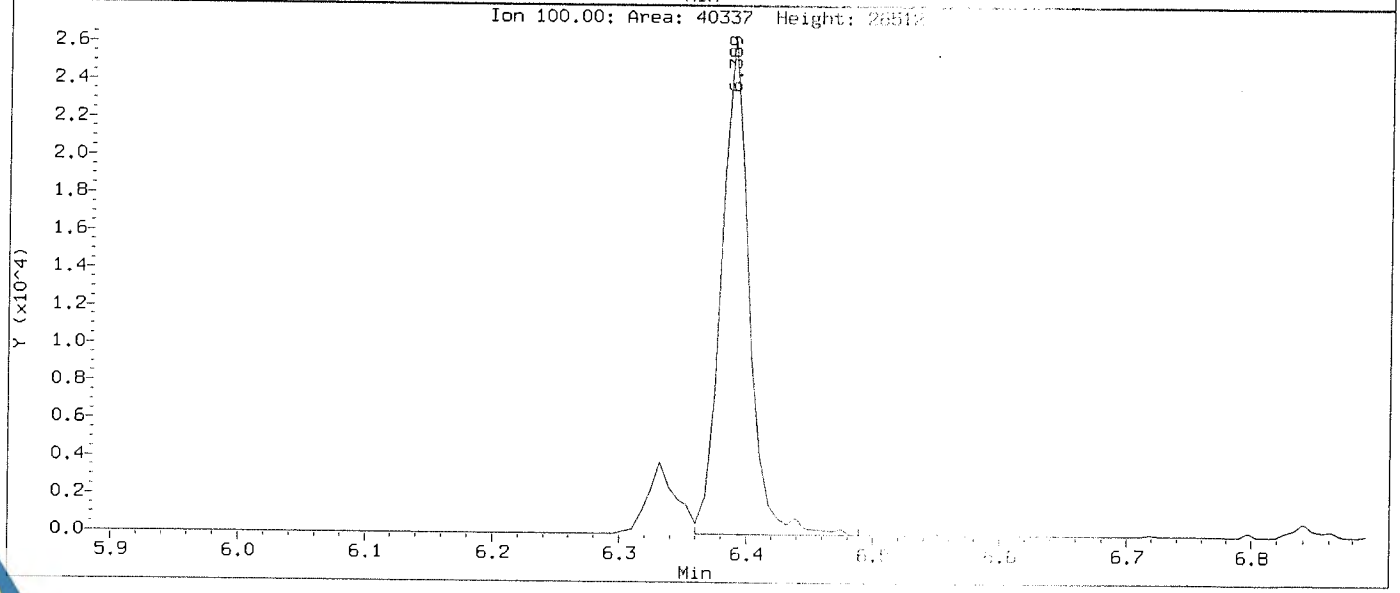
Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\NAHSTWS005\target\chem\voa6.i\X210726.b\Before\X072606.D
Injection Date: 26-JUL-2021 12:50
Instrument: voa6.i
Client Sample ID: VSTD005

Compound: Toluene-d8
CAS Number: 2037-26-5

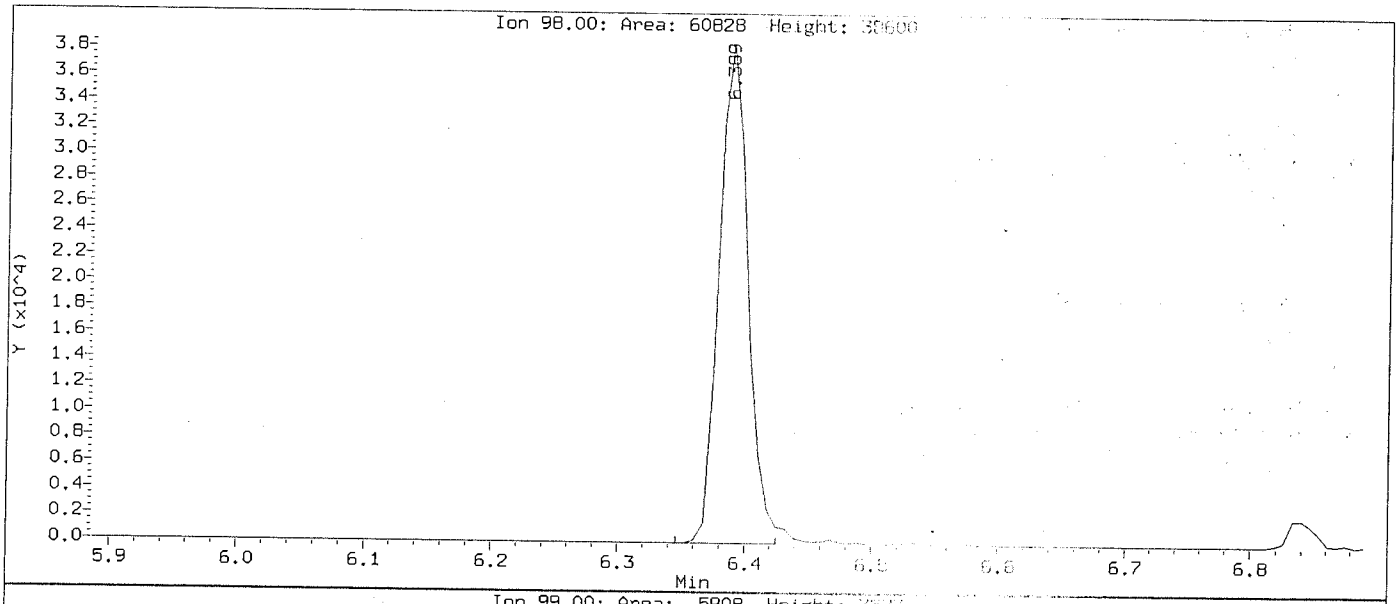


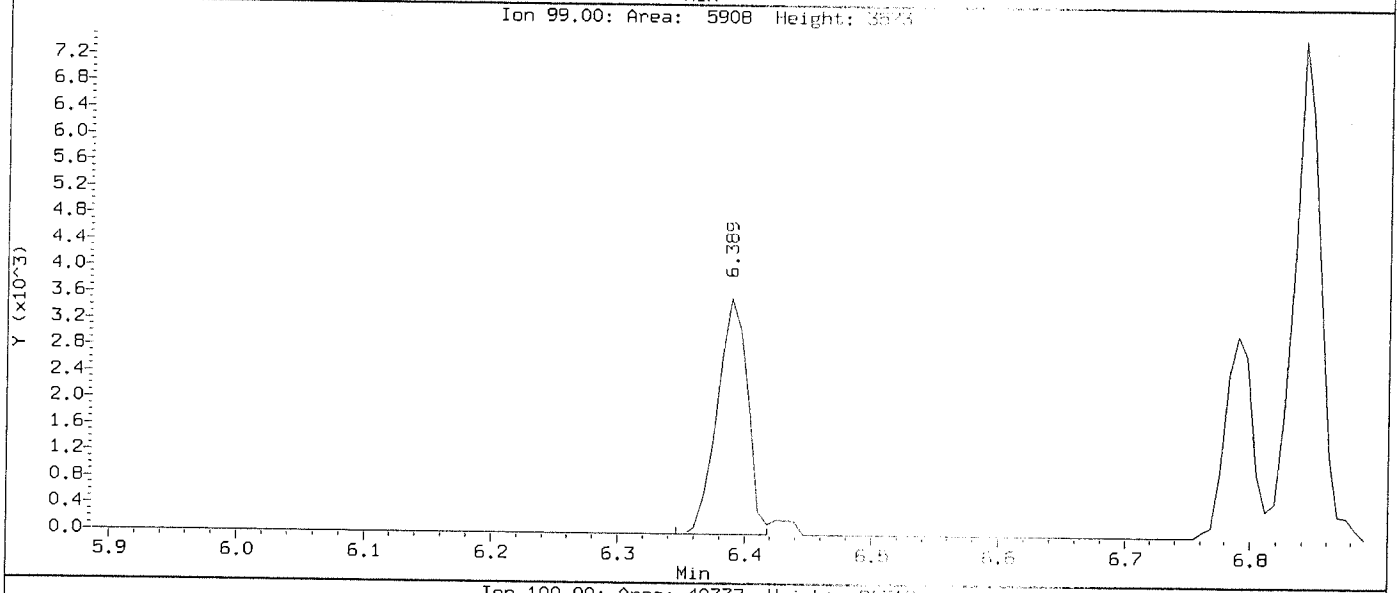


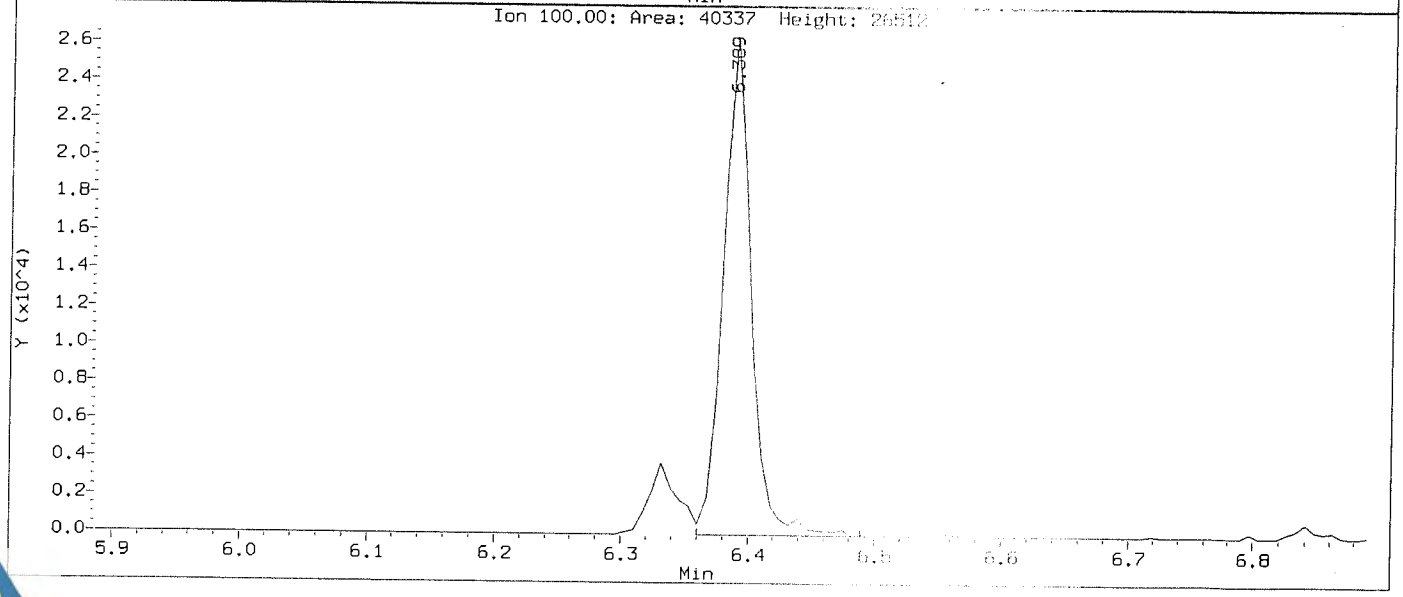


Data File: \\NAHSTWS005\target\chem\voa6.i\X210726.b\X072606.D
Injection Date: 26-JUL-2021 12:50
Instrument: voa6.i
Client Sample ID: VSTD005

Compound: Toluene-d8
CAS Number: 2037-26-5







Data File: \\NAHSTWS005\target\chem\voa6.i\X210726.b\X072607.D Page 1
Report Date: 10-Sep-2021 12:14

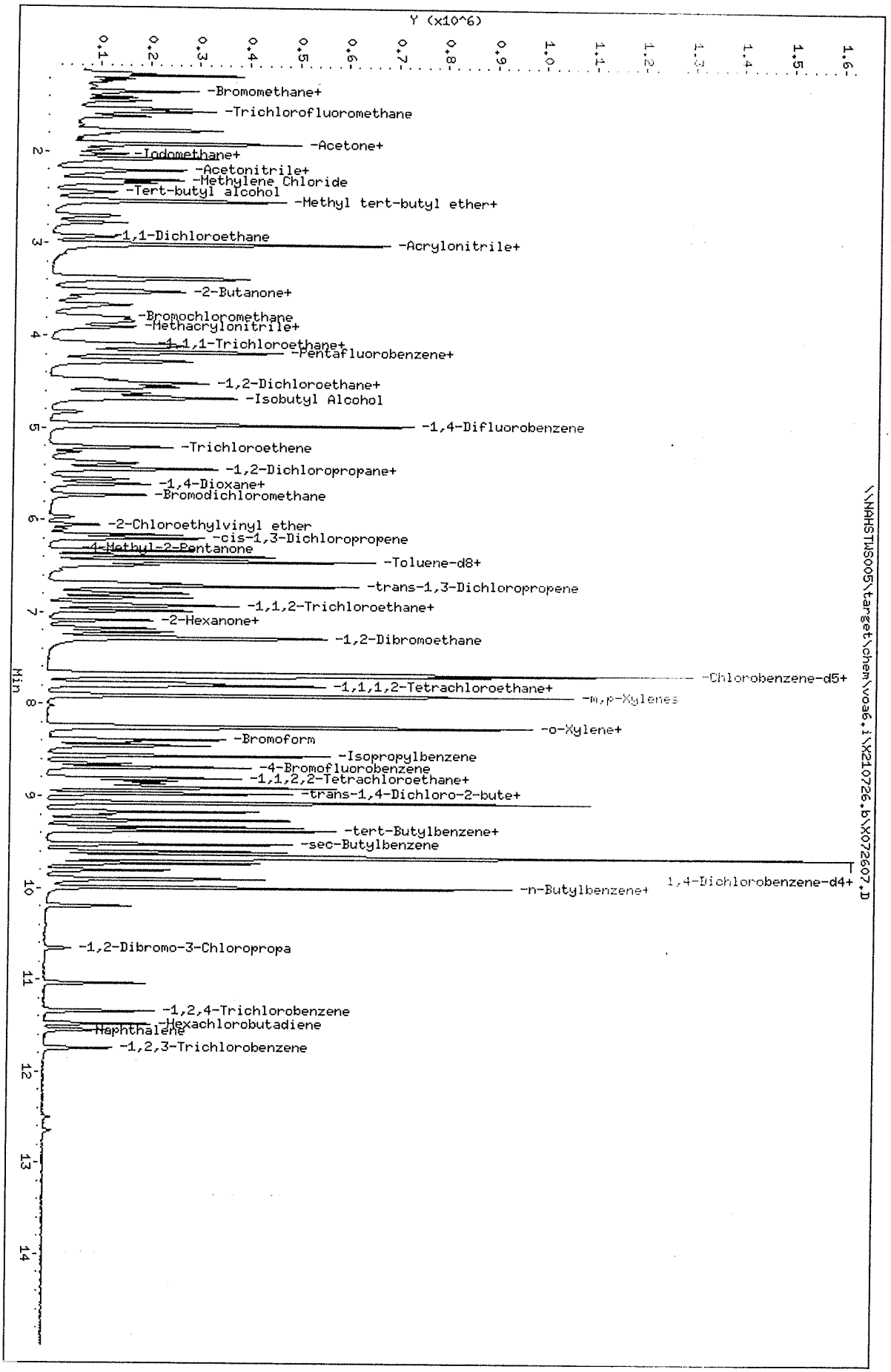
ALS Laboratory Group

Data file : \\NAHSTWS005\target\chem\voa6.i\X210726.b\X072607.D
Lab Smp Id: VSTD020 Client Smp ID: VSTD020
Inj Date : 26-JUL-2021 13:11
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\X210726.b\8260W.m
Meth Date : 10-Sep-2021 12:14 voa6.i Quant Type: ISTD
Cal Date : 26-JUL-2021 12:50 Cal File: X072606.D
Als bottle: 8 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0474-dod.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	4.182	4.182	(1.000)	381920	50.0000	
$	30 Dibromofluoromethane	113	4.104	4.104	(0.981)	79938	20.0000	20.78
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	93162	20.0000	19.91
*	36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	568308	50.0000	
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	537707	50.0000	
$	48 Toluene-d8	98	6.389	6.389	(0.833)	242305	20.0000	19.81
$	69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	88412	20.0000	18.46
*	70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	294843	50.0000	
	5 Vinyl Chloride	62	1.138	1.138	(0.272)	107637	20.0000	19.24
	11 1,1-Dichloroethene	96	1.912	1.912	(0.457)	84896	20.0000	18.54
	17 Methylene Chloride	84	2.298	2.298	(0.550)	70678	20.0000	19.49
	27 cis-1,2-Dichloroethene	96	3.523	3.523	(0.842)	75915	20.0000	18.35
	33 1,2-Dichloroethane	62	4.555	4.555	(0.918)	112603	20.0000	18.94
	38 Trichloroethene	130	5.207	5.207	(1.049)	73579	20.0000	18.42
	53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	58792	20.0000	18.16



Data File: \\NAHSTWS005\target\chem\voa6.i\X210726.b\X072607.D
Date : 26-JUL-2021 13:11
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\X210726.b\X072608.D Page 1
Report Date: 10-Sep-2021 12:14

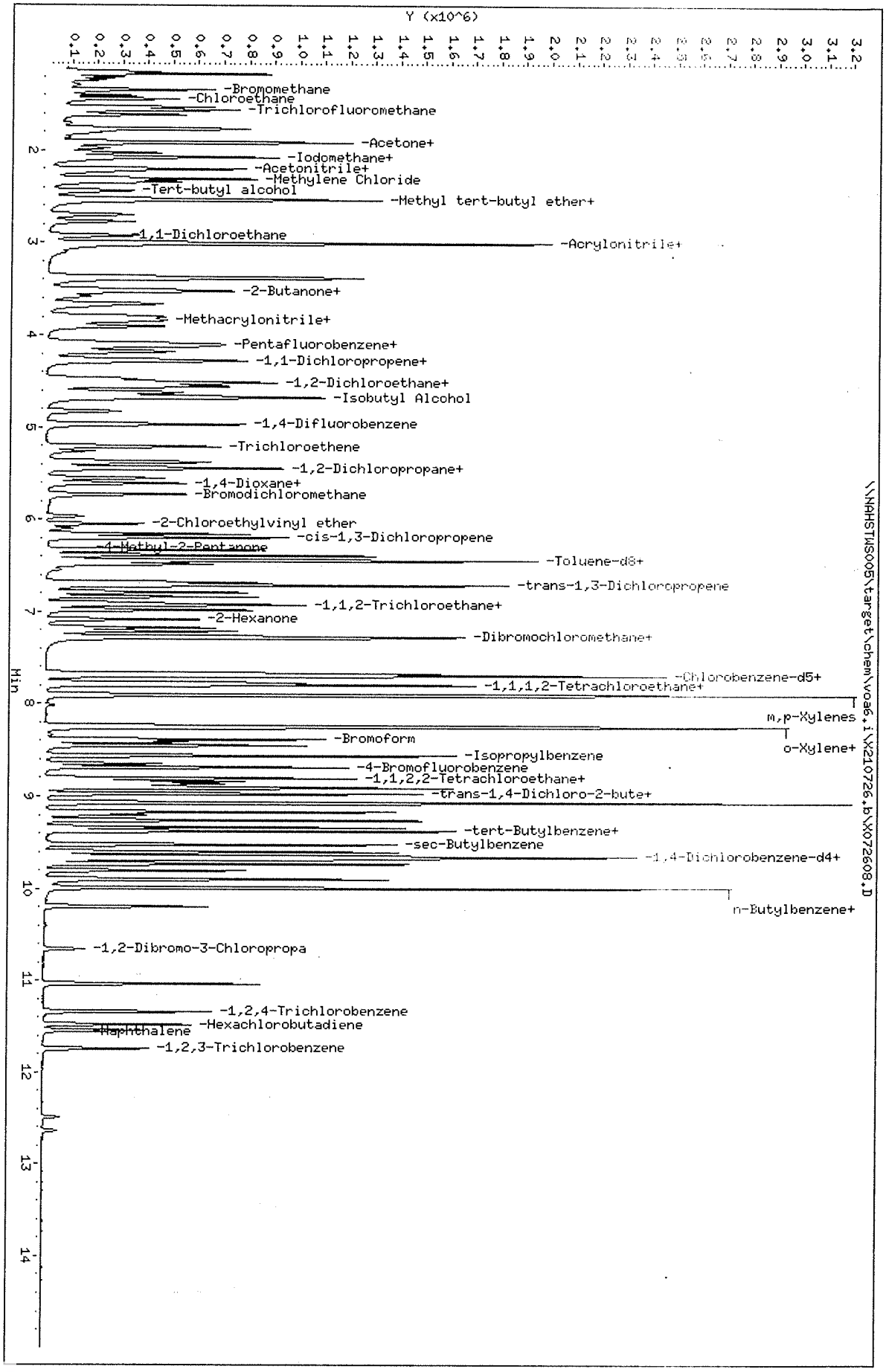
ALS Laboratory Group

Data file : \\NAHSTWS005\target\chem\voa6.i\X210726.b\X072608.D
Lab Smp Id: VSTD050 Client Smp ID: VSTD050
Inj Date : 26-JUL-2021 13:31
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\X210726.b\8260W.m
Meth Date : 10-Sep-2021 12:14 voa6.i Quant Type: ISTD
Cal Date : 26-JUL-2021 13:11 Cal File: X072607.D
Als bottle: 9 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0474-dod.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	4.182	4.182	(1.000)	406946	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	211245	50.0000	51.54
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	249484	50.0000	49.19
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	610722	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	617747	50.0000	
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	695454	50.0000	47.30
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	269888	50.0000	45.76
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	334803	50.0000	
5 Vinyl Chloride	62	1.138	1.138	(0.272)	279144	50.0000	46.82
11 1,1-Dichloroethene	96	1.912	1.912	(0.457)	227558	50.0000	46.66
17 Methylene Chloride	84	2.306	2.306	(0.551)	193378	50.0000	48.33
27 cis-1,2-Dichloroethene	96	3.523	3.523	(0.842)	211542	50.0000	48.00
33 1,2-Dichloroethane	62	4.555	4.555	(0.918)	313905	50.0000	49.12
38 Trichloroethene	130	5.207	5.207	(1.049)	204263	50.0000	47.57
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	170717	50.0000	45.91



Data File: \\NAHSTWS005\target\chem\voa6.i\X210726.b\X072608.D
Date : 26-JUL-2021 13:31
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\X210726.b\X072609.D Page 1
Report Date: 10-Sep-2021 12:14

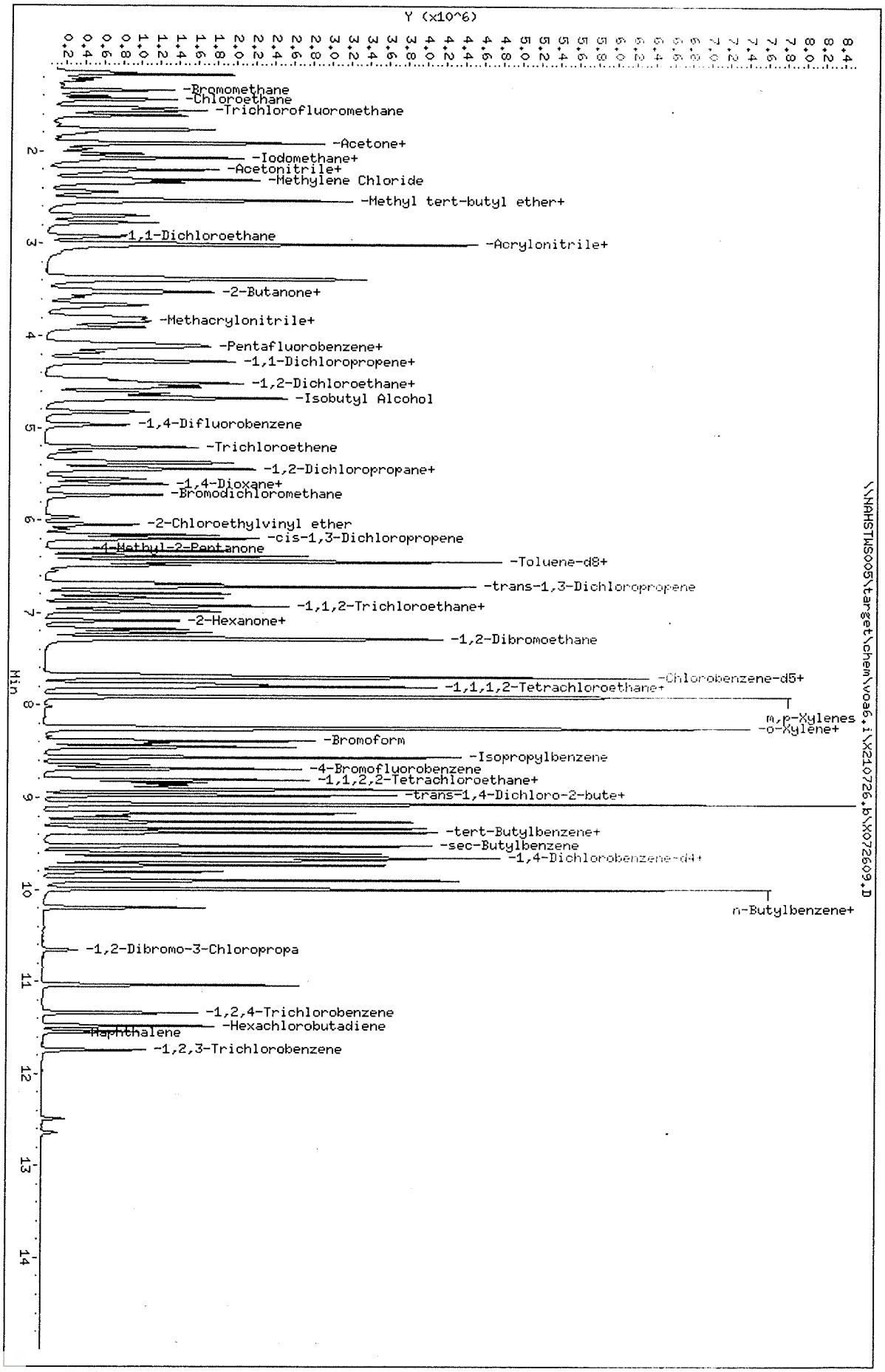
ALS Laboratory Group

Data file : \\NAHSTWS005\target\chem\voa6.i\X210726.b\X072609.D
Lab Smp Id: VSTD100 Client Smp ID: VSTD100
Inj Date : 26-JUL-2021 13:52
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\X210726.b\8260W.m
Meth Date : 10-Sep-2021 12:14 voa6.i Quant Type: ISTD
Cal Date : 26-JUL-2021 13:31 Cal File: X072608.D
Als bottle: 10 Calibration Sample, Level: 8
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0474-dod.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	4.182	4.182	(1.000)	451106	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	456964	100.000	100.58
$ 35 1,2-Dichloroethane-d4	65	4.469	4.469	(1.069)	554262	100.000	98.03
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	672933	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	663564	50.0000	
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	1494135	100.000	93.14
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	621280	100.000	95.80
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	390868	50.0000	
5 Vinyl Chloride	62	1.138	1.138	(0.272)	622904	100.000	94.26
11 1,1-Dichloroethene	96	1.911	1.911	(0.457)	511175	100.000	94.56
17 Methylene Chloride	84	2.305	2.305	(0.551)	430427	100.000	95.95
27 cis-1,2-Dichloroethene	96	3.523	3.523	(0.842)	489089	100.000	100.11
33 1,2-Dichloroethane	62	4.555	4.555	(0.918)	710431	100.000	100.90
38 Trichloroethene	130	5.206	5.206	(1.049)	476923	100.000	100.60
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	383564	100.000	96.03



Data File: \\NAHSTWS005\target\chem\voa6.i\X210726.b\X072609.D
Date : 26-JUL-2021 13:52
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

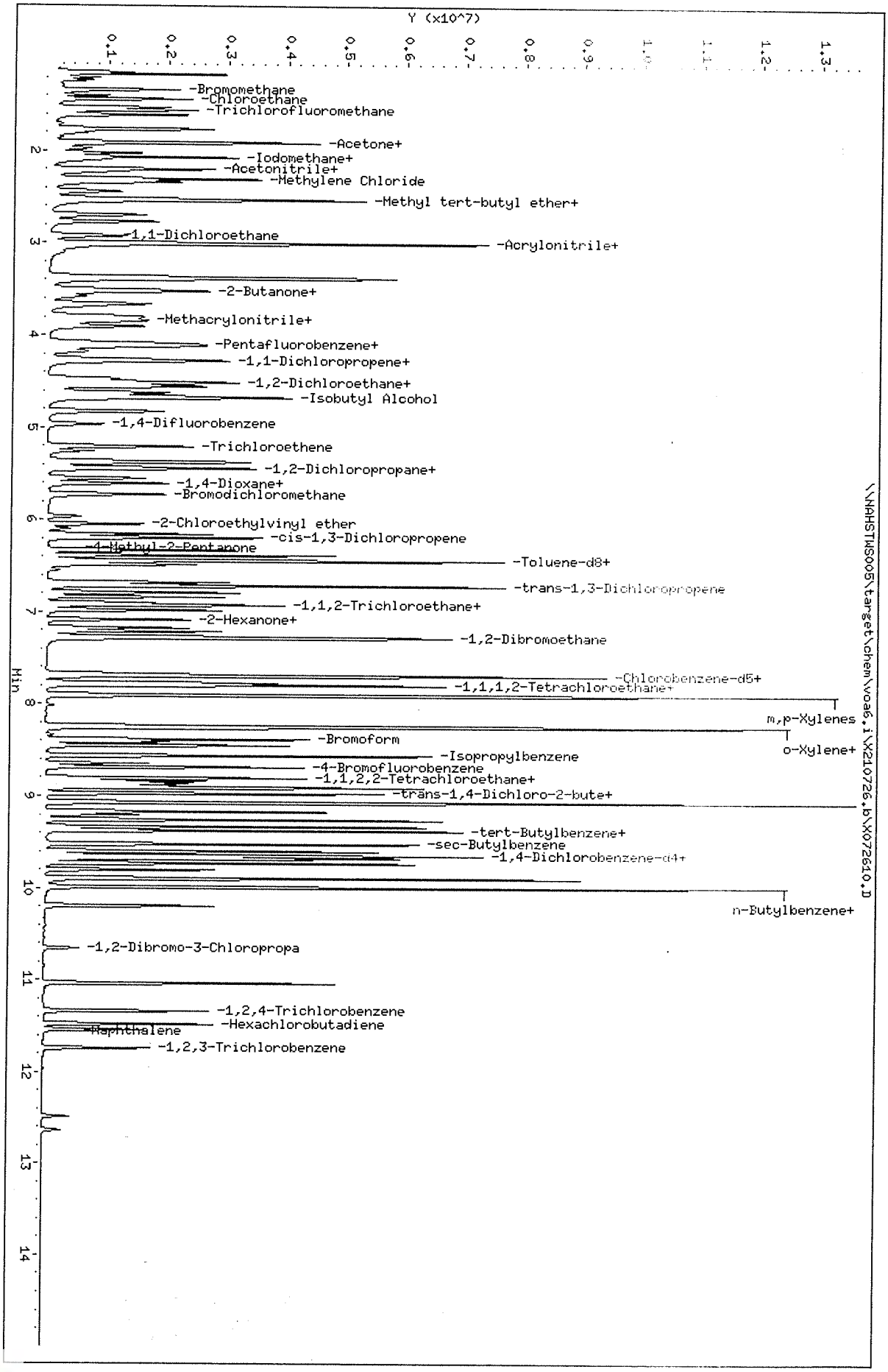
ALS Laboratory Group

Data file : \\NAHSTWS005\target\chem\voa6.i\X210726.b\X072610.D
Lab Smp Id: VSTD150 Client Smp ID: VSTD150
Inj Date : 26-JUL-2021 14:13
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\X210726.b\8260W.m
Meth Date : 10-Sep-2021 12:14 voa6.i Quant Type: ISTD
Cal Date : 26-JUL-2021 13:52 Cal File: X072609.D
Als bottle: 11 Calibration Sample, Level: 9
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0474-dod.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	4.182	4.182	(1.000)	472573	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	737593	150.000	154.98
$ 35 1,2-Dichloroethane-d4	65	4.469	4.469	(1.069)	871905	150.000	146.93
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	704657	50.0000	
* 47 Chlorobenzene-d5	117	7.670	7.670	(1.000)	696417	50.0000	
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	2575809	150.000	152.27
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	1021187	150.000	149.34
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	411225	50.0000	
5 Vinyl Chloride	62	1.138	1.138	(0.272)	939100	150.000	135.66
11 1,1-Dichloroethene	96	1.911	1.911	(0.457)	792795	150.000	139.99
17 Methylene Chloride	84	2.305	2.305	(0.551)	680528	150.000	144.25
27 cis-1,2-Dichloroethene	96	3.523	3.523	(0.842)	780034	150.000	152.42
33 1,2-Dichloroethane	62	4.555	4.555	(0.918)	1104709	150.000	149.84
38 Trichloroethene	130	5.206	5.206	(1.049)	734158	150.000	148.20
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	678658	150.000	147.59



Data File: \\NAHSTWS005\target\chem\voa6.i\X210726.b\X072610.D
Date : 26-JUL-2021 14:13
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\X210726.b\X072611.D Page 1
Report Date: 10-Sep-2021 12:14

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Data file : \\NAHSTWS005\target\chem\voa6.i\X210726.b\X072611.D
Lab Smp Id: VSTD200 Client Smp ID: VSTD200
Inj Date : 26-JUL-2021 14:34
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\X210726.b\8260W.m
Meth Date : 10-Sep-2021 12:14 voa6.i Quant Type: ISTD
Cal Date : 26-JUL-2021 14:13 Cal File: X072610.D
Als bottle: 12 Calibration Sample, Level: 10
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0474-dod.sub
Target Version: 4.14
Processing Host: NAHSTW7056

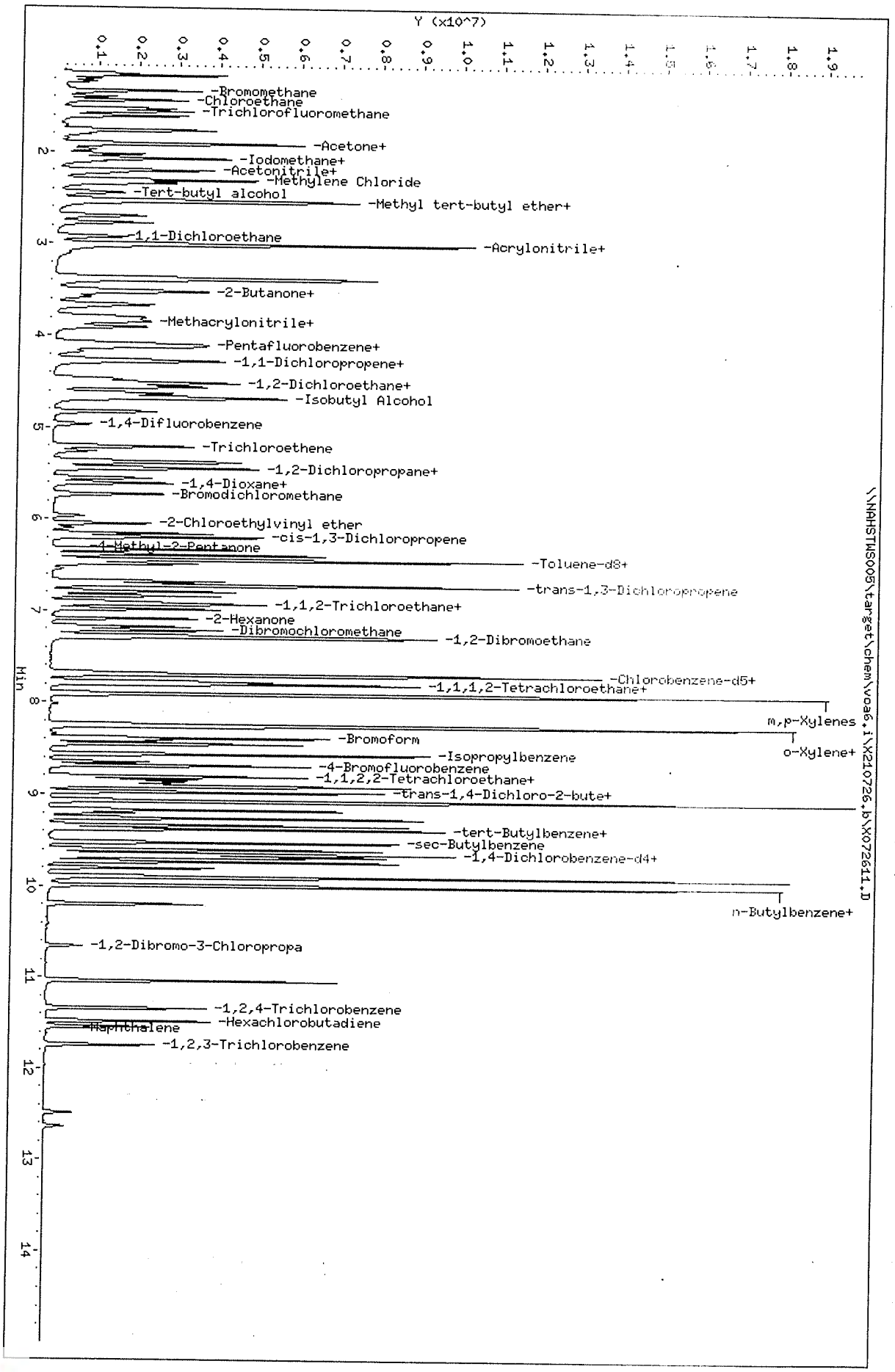
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

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	4.182	4.182	(1.000)	476867	50.0000	
$ 30 Dibromofluoromethane	113	4.096	4.096	(0.979)	1068840	200.000	223.02(A)
$ 35 1,2-Dichloroethane-d4	65	4.469	4.469	(1.068)	1216396	200.000	203.32(A)
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	729323	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	739659	50.0000	
$ 48 Toluene-d8	98	6.389	6.389	(0.833)	3642933	200.000	201.99(A)
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	1486905	200.000	203.41(A)
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	436916	50.0000	
5 Vinyl Chloride	62	1.138	1.138	(0.272)	1285825	200.000	184.46
11 1,1-Dichloroethene	96	1.912	1.912	(0.457)	1093113	200.000	191.68
17 Methylene Chloride	84	2.298	2.298	(0.550)	982029	200.000	206.24(A)
27 cis-1,2-Dichloroethene	96	3.523	3.523	(0.842)	1103024	200.000	214.03(A)
33 1,2-Dichloroethane	62	4.555	4.555	(0.918)	1540782	200.000	201.92(A)
38 Trichloroethene	130	5.207	5.207	(1.049)	1019647	200.000	198.87
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	872884	200.000	196.06

QC Flag Legend

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



Data File: \\NAHSTWS005\target\chem\voa6.i\X210726.b\X072611.D
Date : 26-JUL-2021 14:34
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\X210726.b\X072614.D Page 1
Report Date: 10-Sep-2021 12:14

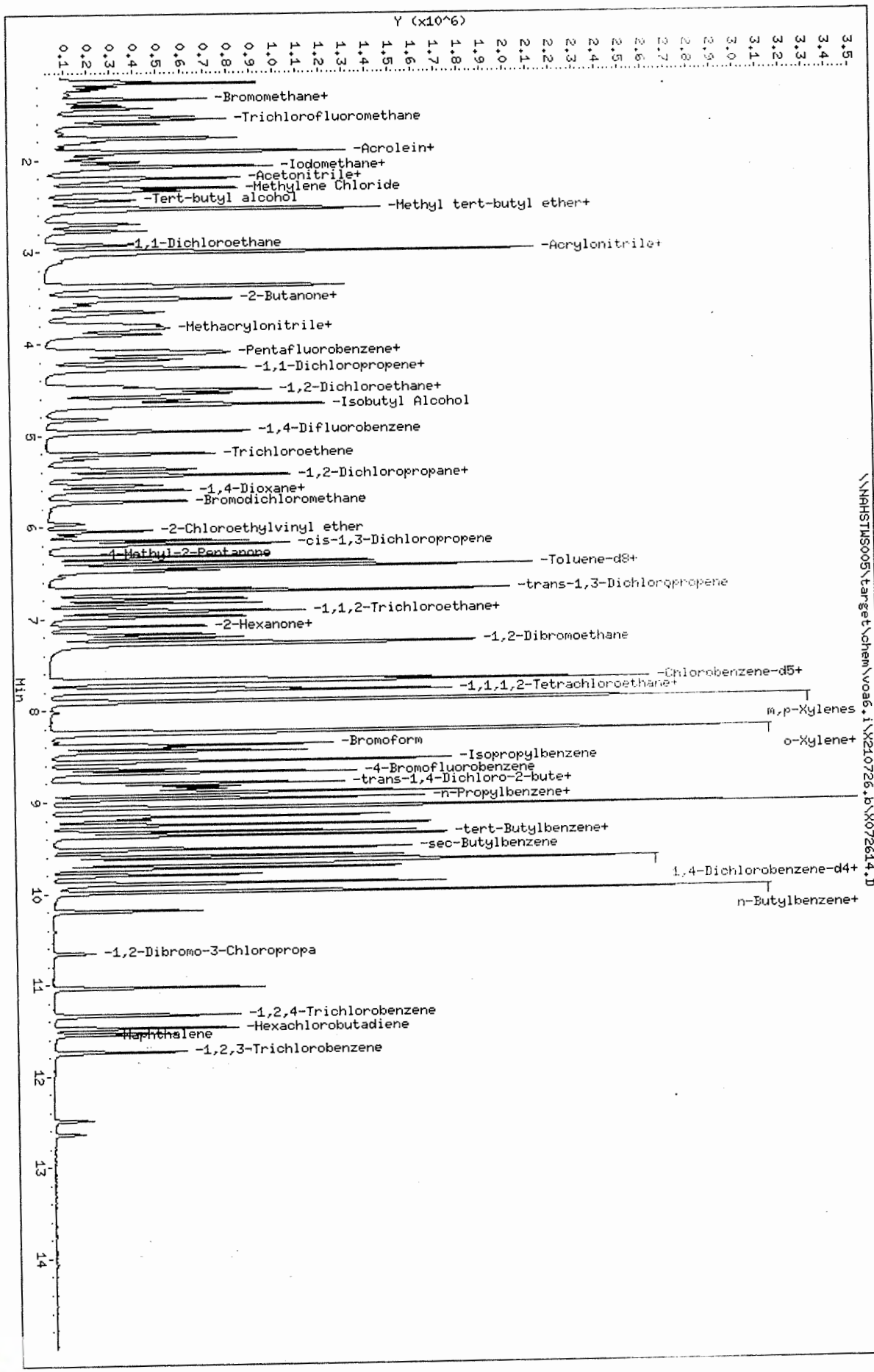
ALS Laboratory Group

Data file : \\NAHSTWS005\target\chem\voa6.i\X210726.b\X072614.D
Lab Smp Id: ICV Client Smp ID: ICV
Inj Date : 26-JUL-2021 15:37
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\X210726.b\8260W.m
Meth Date : 10-Sep-2021 12:14 voa6.i Quant Type: ISTD
Cal Date : 26-JUL-2021 14:34 Cal File: X072611.D
Als bottle: 15 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0474-dod.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	4.182	4.182	(1.000)	459182	50.0000	
$	30 Dibromofluoromethane	113	4.104	4.104	(0.981)	241663	50.0000	52.25
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	291493	50.0000	50.92
*	36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	679873	50.0000	
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	650852	50.0000	
$	48 Toluene-d8	98	6.389	6.389	(0.833)	773505	50.0000	49.85
$	69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	303617	50.0000	48.72
*	70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	364220	50.0000	
	5 Vinyl Chloride	62	1.138	1.138	(0.272)	292381	50.0000	43.47
	11 1,1-Dichloroethene	96	1.912	1.912	(0.457)	236851	50.0000	43.04
	17 Methylene Chloride	84	2.306	2.306	(0.551)	210990	50.0000	46.77
	27 cis-1,2-Dichloroethene	96	3.523	3.523	(0.842)	230885	50.0000	46.43
	33 1,2-Dichloroethane	62	4.555	4.555	(0.918)	347566	50.0000	48.02
	38 Trichloroethene	130	5.207	5.207	(1.049)	213955	50.0000	45.81
	53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	190726	50.0000	48.68



Data File: \\NAHSTWS005\target\chem\voa6.i\X210726.b\X072614.D
Date : 26-JUL-2021 15:37
Client ID: ICV
Sample Info: CCV;CCV;2;;;ICV
Purge Volume: 5.0
Column phase: DB624

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

MSVOA06 -Logbook

Batch: 45882
Date: 07-27-2021
Method: 8260_W
Comments:

Analyst: Presenta Cabascango
Reviewer:
Laboratory: Houston

#	Samp ID	Type	Analyzed	DF	Init Wt/Vol	Final Vol	File ID	Matrix	Status	p
1	BFB	TUNE	07-27-2021 09:59 am	1.00	50 mL	50 mL	X072701.D	Liquid	Y	N
2	CCV	CCV	07-27-2021 10:20 am	1.00	50 mL	50 mL	X072702.D	Liquid	Y	N
3	BLANK	SAMP	07-27-2021 10:41 am	1.00	50 mL	50 mL	X072703.D	Liquid	Y	N
4	CCB	SAMP	07-27-2021 11:02 am	1.00	50 mL	50 mL	X072704.D	Liquid	Y	N
5	VLCSW-210727	LCS	07-27-2021 11:23 am	1.00	50 mL	50 mL	X072705.D	Liquid	Y	N
6	VBLKW-210727	MBLK	07-27-2021 11:44 am	1.00	50 mL	50 mL	X072706.D	Liquid	Y	N
7	BLANK	SAMP	07-27-2021 12:05 pm	1.00	50 mL	50 mL	X072707.D	Liquid	Y	N
8	HS21071038-10	SAMP	07-27-2021 12:27 pm	1.00	50 mL	50 mL	X072708.D	Liquid	Y	N
9	HS21071038-08	SAMP	07-27-2021 12:48 pm	1.00	50 mL	50 mL	X072709.D	Liquid	Y	N
10	HS21071038-06	SAMP	07-27-2021 01:09 pm	1.00	50 mL	50 mL	X072710.D	Liquid	Y	N
11	HS21071038-07	SAMP	07-27-2021 01:30 pm	1.00	50 mL	50 mL	X072711.D	Liquid	Y	N
12	HS21071204-02	SAMP	07-27-2021 01:51 pm	1.00	50 mL	50 mL	X072712.D	Liquid	Y	N
13	HS21071038-09	SAMP	07-27-2021 02:12 pm	5.00	10 mL	50 mL	X072713.D	Liquid	Y	N
14	HS21071038-04	SAMP	07-27-2021 02:33 pm	10.00	5 mL	50 mL	X072714.D	Liquid	Y	N
15	HS21071038-01	SAMP	07-27-2021 02:54 pm	25.00	2 mL	50 mL	X072715.D	Liquid	Y	N
16	HS21071204-02MS	MS	07-27-2021 03:15 pm	1.00	50 mL	50 mL	X072716.D	Liquid	Y	N
17	HS21071204-02MSD	MSD	07-27-2021 03:36 pm	1.00	50 mL	50 mL	X072717.D	Liquid	Y	N
18	HS21071038-09	SAMP	07-27-2021 03:57 pm	25.00	2 mL	50 mL	X072718.D	Liquid	Y	N
19	HS21071038-04	SAMP	07-27-2021 04:18 pm	50.00	1 mL	50 mL	X072719.D	Liquid	Y	N
20	HS21071038-01	SAMP	07-27-2021 04:39 pm	250.0(	200 µL	50 mL	X072720.D	Liquid	Y	N
21	BLANK	SAMP	07-27-2021 05:00 pm	1.00	50 mL	50 mL	X072721.D	Liquid	Y	N
22	HS21071204-09	SAMP	07-27-2021 05:21 pm	1.00	50 mL	50 mL	X072722.D	Liquid	Y	N
23	HS21071204-08	SAMP	07-27-2021 05:42 pm	1.00	50 mL	50 mL	X072723.D	Liquid	Y	N
24	HS21071204-06	SAMP	07-27-2021 06:03 pm	1.00	50 mL	50 mL	X072724.D	Liquid	Y	N
25	HS21071204-07	SAMP	07-27-2021 06:24 pm	1.00	50 mL	50 mL	X072725.D	Liquid	Y	N
26	HS21071204-04	SAMP	07-27-2021 06:46 pm	1.00	50 mL	50 mL	X072726.D	Liquid	Y	N
27	HS21071204-03	SAMP	07-27-2021 07:07 pm	10.00	5 mL	50 mL	X072727.D	Liquid	Y	N
28	HS21071204-03n/r	SAMP	07-27-2021 07:28 pm	50.00	1 mL	50 mL	X072728.D	Liquid	Y	N
29	HS21071204-01	SAMP	07-27-2021 07:49 pm	10.00	5 mL	50 mL	X072729.D	Liquid	Y	N
30	HS21071204-01n/r	SAMP	07-27-2021 08:10 pm	100.0(	500 µL	50 mL	X072730.D	Liquid	Y	N
31	CCV-END	CCV	07-27-2021 08:31 pm	1.00	50 mL	50 mL	X072731.D	Liquid	Y	N
32	BFB	TUNE	07-27-2021 08:52 pm	1.00	50 mL	50 mL	Y072701.D	Liquid	Y	N
33	CCV	CCV	07-27-2021 09:13 pm	1.00	50 mL	50 mL	Y072702a.D	Liquid	Y	N
34	CCV	CCV	07-27-2021 09:33 pm	1.00	50 mL	50 mL	Y072703.D	Liquid	Y	N
35	CCB	SAMP	07-27-2021 09:55 pm	1.00	50 mL	50 mL	Y072704.D	Liquid	Y	N
36	VLCSW-210727	LCS	07-27-2021 10:15 pm	1.00	50 mL	50 mL	Y072705.D	Liquid	Y	N
37	BLANK	SAMP	07-27-2021 10:36 pm	1.00	50 mL	50 mL	Y072706.D	Liquid	Y	N
38	VBLKW-210727	MBLK	07-27-2021 10:58 pm	1.00	50 mL	50 mL	Y072707.D	Liquid	Y	N
39	HS21071130-01	SAMP	07-27-2021 11:19 pm	1.00	50 mL	50 mL	Y072708.D	Liquid	Y	N
40	HS21071130-03	SAMP	07-27-2021 11:40 pm	1.00	50 mL	50 mL	Y072709.D	Liquid	Y	N
41	HS21071351-01	SAMP	07-28-2021 12:01 am	1.00	50 mL	50 mL	Y072710.D	Liquid	Y	N

MSVOA06 -Logbook

#	Samp ID	Type	Analyzed	DF	Init Wt/Vol	Final Vol	File ID	Matrix	Status	g
42	HS21071062-01	SAMP	07-28-2021 12:22 am	1.00	50 mL	50 mL	Y072711.D	Liquid	Y	N
43	HS21071062-02	SAMP	07-28-2021 12:43 am	1.00	50 mL	50 mL	Y072712.D	Liquid	Y	N
44	HS21071062-03	SAMP	07-28-2021 01:04 am	1.00	50 mL	50 mL	Y072713.D	Liquid	Y	N
45	HS21071351-02	SAMP	07-28-2021 01:25 am	1.00	50 mL	50 mL	Y072714.D	Liquid	Y	N
46	HS21071351-03	SAMP	07-28-2021 01:46 am	1.00	50 mL	50 mL	Y072715.D	Liquid	Y	N
47	HS21071062-05	SAMP	07-28-2021 02:07 am	1.00	50 mL	50 mL	Y072716.D	Liquid	Y	N
48	HS21071351-03MS	MS	07-28-2021 02:28 am	1.00	50 mL	50 mL	Y072717.D	Liquid	Y	N
49	HS21071351-03MSD	MSD	07-28-2021 02:49 am	1.00	50 mL	50 mL	Y072718.D	Liquid	Y	N
50	HS21071062-05MS	MS	07-28-2021 03:10 am	1.00	50 mL	50 mL	Y072719.D	Liquid	Y	N
51	HS21071062-05MSD	MSD	07-28-2021 03:31 am	1.00	50 mL	50 mL	Y072720.D	Liquid	Y	N
52	BLANK	SAMP	07-28-2021 03:53 am	1.00	50 mL	50 mL	Y072721.D	Liquid	Y	N
53	HS21071345-08	SAMP	07-28-2021 04:14 am	1.00	50 mL	50 mL	Y072722.D	Liquid	Y	N
54	HS21071062-04	SAMP	07-28-2021 04:35 am	1.00	50 mL	50 mL	Y072723.D	Liquid	Y	N
55	HS21071062-06	SAMP	07-28-2021 04:56 am	1.00	50 mL	50 mL	Y072724.D	Liquid	Y	N
56	HS21071062-08	SAMP	07-28-2021 05:17 am	1.00	50 mL	50 mL	Y072725.D	Liquid	Y	N
57	HS21071062-09	SAMP	07-28-2021 05:38 am	1.00	50 mL	50 mL	Y072726.D	Liquid	Y	N
58	HS21071062-10	SAMP	07-28-2021 05:59 am	1.00	50 mL	50 mL	Y072727.D	Liquid	Y	N
59	HS21071062-11	SAMP	07-28-2021 06:20 am	1.00	50 mL	50 mL	Y072728.D	Liquid	Y	N
60	HS21071062-12	SAMP	07-28-2021 06:41 am	1.00	50 mL	50 mL	Y072729.D	Liquid	Y	N
61	HS21070989-01	SAMP	07-28-2021 07:02 am	1.00	50 mL	50 mL	Y072730.D	Liquid	Y	N
62	HS21070989-02	SAMP	07-28-2021 07:23 am	1.00	50 mL	50 mL	Y072731.D	Liquid	Y	N
63	HS21070989-03	SAMP	07-28-2021 07:44 am	1.00	50 mL	50 mL	Y072732.D	Liquid	Y	N
64	BLANK	SAMP	07-28-2021 08:05 am	1.00	50 mL	50 mL	Y072733.D	Liquid	Y	N

FORM 2
WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS21071204

	CLIENT SAMPLE NO.	SMC1 #	SMC2 (DCE)#	SMC3 (TOL)#	OTHER #	TOT OUT
01	VLCSW-210727	100	97	98	93	0
02	VBLKW-210727	94	92	112	90	0
03	HS21071204-02	96	92	109	94	0
04	HS21071204-02MS	99	93	107	96	0
05	HS21071204-02MSD	98	92	106	95	0
06	HS21071204-09	97	92	108	90	0
07	HS21071204-08	95	92	108	92	0
08	HS21071204-06	98	94	108	92	0
09	HS21071204-07	96	90	109	95	0
10	HS21071204-04	96	92	106	92	0
11	HS21071204-03	96	90	109	94	0
12						
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28						

		QC LIMITS
SMC1	= Dibromofluoromethane	(70-130)
SMC2 (DCE)	= 1,2-Dichloroethane-d4	(70-130)
SMC3 (TOL)	= Toluene-d8	(70-130)
OTHER	= 4-Bromofluorobenzene	(70-130)

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-210727

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS21071204

Lab File ID: X072706 Lab Sample ID: VBLKW-210727

Date Analyzed: 07/27/21 Time Analyzed: 1144

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-210727	VLCSW-210727	X072705	1123
02	HS21071204-02	HS21071204-02	X072712	1351
03	HS21071204-02MS	HS21071204-02MS	X072716	1515
04	HS21071204-02MSD	HS21071204-02MSD	X072717	1536
05	HS21071204-09	HS21071204-09	X072722	1721
06	HS21071204-08	HS21071204-08	X072723	1742
07	HS21071204-06	HS21071204-06	X072724	1803
08	HS21071204-07	HS21071204-07	X072725	1824
09	HS21071204-04	HS21071204-04	X072726	1846
10	HS21071204-03	HS21071204-03	X072727	1907
11	HS21071204-01	HS21071204-01	X072729	1949
12				
13				
14				
15				
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28				
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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.: HS21071204

Lab File ID: X072701 BFB Injection Date: 07/27/21

Instrument ID: VOA6 BFB Injection Time: 0959

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	23.0
75	30.0 - 60.0% of mass 95	52.4
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.7
173	Less than 2.0% of mass 174	0.9 (1.2)1
174	Greater than 50.0% of mass 95	73.7
175	5.0 - 9.0% of mass 174	5.4 (7.4)1
176	95.0 - 101.0% of mass 174	71.9 (97.5)1
177	5.0 - 9.0% of mass 176	4.3 (6.0)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	X072702	07/27/21	1020
02	VLCSW-210727	VLCSW-210727	X072705	07/27/21	1123
03	VBLKW-210727	VBLKW-210727	X072706	07/27/21	1144
04	HS21071204-02	HS21071204-02	X072712	07/27/21	1351
05	HS21071204-02MS	HS21071204-02MS	X072716	07/27/21	1515
06	HS21071204-02MSD	HS21071204-02MSD	X072717	07/27/21	1536
07	HS21071204-09	HS21071204-09	X072722	07/27/21	1721
08	HS21071204-08	HS21071204-08	X072723	07/27/21	1742
09	HS21071204-06	HS21071204-06	X072724	07/27/21	1803
10	HS21071204-07	HS21071204-07	X072725	07/27/21	1824
11	HS21071204-04	HS21071204-04	X072726	07/27/21	1846
12	HS21071204-03	HS21071204-03	X072727	07/27/21	1907
13	HS21071204-01	HS21071204-01	X072729	07/27/21	1949
14	CCV-END	CCV-END	X072731	07/27/21	2031
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.: HS21071204

Instrument ID: VOA6 Calibration Date: 07/27/21 Time: 1020

Lab File ID: X072702 Init. Calib. Date(s): 07/26/21 07/26/21

Init. Calib. Times: 1105 1434

GC Column: DB624 ID: 0.18 (mm)

COMPOUND	RRF or AMOUNT	RRF50.000 or AMOUNT	CCAL RRF50.000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Vinyl Chloride	0.7320000	0.5960645	0.5960645	0.1	18.57	20.00	AVRG
Methylene Chloride	47.358320	50.000000	0.4653219	0.1	5.28	20.00	LINR
1,1-Dichloroethene	0.5990000	0.4825613	0.4825613	0.1	19.44	20.00	AVRG
1,2-Dichloroethane	0.5230000	0.4770489	0.4770489	0.1	8.79	20.00	AVRG
Trichloroethene	0.3520000	0.3439726	0.3439726	0.2	2.28	20.00	AVRG
1,1,2-Trichloroethane	0.3010000	0.2844730	0.2844730	0.1	5.49	20.00	AVRG
Dibromofluoromethane	0.5030000	0.5027593	0.5027593	0.1	0.05	20.00	AVRG
1,2-Dichloroethane-d4	45.430350	50.000000	0.5655816	0.1	9.14	20.00	LINR
Toluene-d8	47.804455	50.000000	1.1380074	0.1	4.39	20.00	LINR
4-Bromofluorobenzene	48.495766	50.000000	0.4641724	0.1	3.01	20.00	LINR

FORM VII VOA

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS21071204

Instrument ID: VOA6 Calibration Date: 07/27/21 Time: 2031

Lab File ID: X072731 Init. Calib. Date(s): 07/26/21 07/26/21

Init. Calib. Times: 1105 1434

GC Column: DB624 ID: 0.18 (mm)

COMPOUND	RRF or AMOUNT	RRF50.000 or AMOUNT	CCAL RRF50.000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Vinyl Chloride	0.7320000	0.5669784	0.5669784	0.1	22.54	50.00	AVRG
Methylene Chloride	48.879495	50.000000	0.4806239	0.1	2.24	50.00	LINR
1,1-Dichloroethene	0.5990000	0.4749540	0.4749540	0.1	20.71	50.00	AVRG
1,2-Dichloroethane	0.5230000	0.4484930	0.4484930	0.1	14.25	50.00	AVRG
Trichloroethene	0.3520000	0.3404557	0.3404557	0.2	3.28	50.00	AVRG
1,1,2-Trichloroethane	0.3010000	0.2721979	0.2721979	0.1	9.57	50.00	AVRG
Dibromofluoromethane	0.5030000	0.5297052	0.5297052	0.1	5.31	50.00	AVRG
1,2-Dichloroethane-d4	46.736634	50.000000	0.5820486	0.1	6.53	50.00	LINR
Toluene-d8	48.549747	50.000000	1.1563127	0.1	2.90	50.00	LINR
4-Bromofluorobenzene	47.983797	50.000000	0.4590631	0.1	4.03	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.: HS21071204

Lab File ID (Standard): X072702 Date Analyzed: 07/27/21

Instrument ID: VOA6 Time Analyzed: 1020

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

		IS1 AREA #	RT #	IS2(DFB) AREA #	RT #	IS3(CBZ) AREA #	RT #
	12 HOUR STD	551588	4.18	818260	4.96	780893	7.67
	UPPER LIMIT	1103176	4.68	1636520	5.46	1561786	8.17
	LOWER LIMIT	275794	3.68	409130	4.46	390447	7.17
	CLIENT SAMPLE NO.						
01	VLCSW-210727	515009	4.18	746996	4.96	721944	7.67
02	VBLKW-210727	593124	4.18	845418	4.96	742090	7.67
03	HS21071204-02	601681	4.18	850623	4.96	784643	7.67
04	HS21071204-02MS	616342	4.18	897855	4.96	813014	7.67
05	HS21071204-02MSD	650780	4.18	946636	4.96	865077	7.67
06	HS21071204-09	620356	4.18	896936	4.96	795036	7.67
07	HS21071204-08	621354	4.18	887528	4.96	790725	7.67
08	HS21071204-06	615507	4.18	887861	4.96	786784	7.67
09	HS21071204-07	632256	4.18	907293	4.96	808643	7.67
10	HS21071204-04	633812	4.18	907020	4.96	822657	7.67
11	HS21071204-03	648563	4.18	916603	4.96	813340	7.67
12	HS21071204-01	634434	4.18	903077	4.96	797900	7.67
13							
14							
15							
16							
17							
18							
19							
20							

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

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

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

FORM 8
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS21071204

Lab File ID (Standard): X072702 Date Analyzed: 07/27/21

Instrument ID: VOA6 Time Analyzed: 1020

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

		IS4 (DCB) AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	430597	9.66				
	UPPER LIMIT	861194	10.16				
	LOWER LIMIT	215299	9.16				
	CLIENT SAMPLE NO.						
01	VLCSW-210727	382068	9.66				
02	VBLKW-210727	354762	9.66				
03	HS21071204-02	399708	9.66				
04	HS21071204-02MS	438242	9.66				
05	HS21071204-02MSD	452313	9.66				
06	HS21071204-09	374492	9.66				
07	HS21071204-08	393758	9.66				
08	HS21071204-06	370354	9.66				
09	HS21071204-07	408023	9.66				
10	HS21071204-04	381473	9.66				
11	HS21071204-03	398328	9.66				
12	HS21071204-01	386998	9.66				
13							
14							
15							
16							
17							
18							
19							
20							

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

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

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

Data File: \\NAHSTWS005\target\chem\voa6.i\X210727.b\X072701.D

Date : 27-JUL-2021 09:59

Client ID: BFB

Instrument: voa6.i

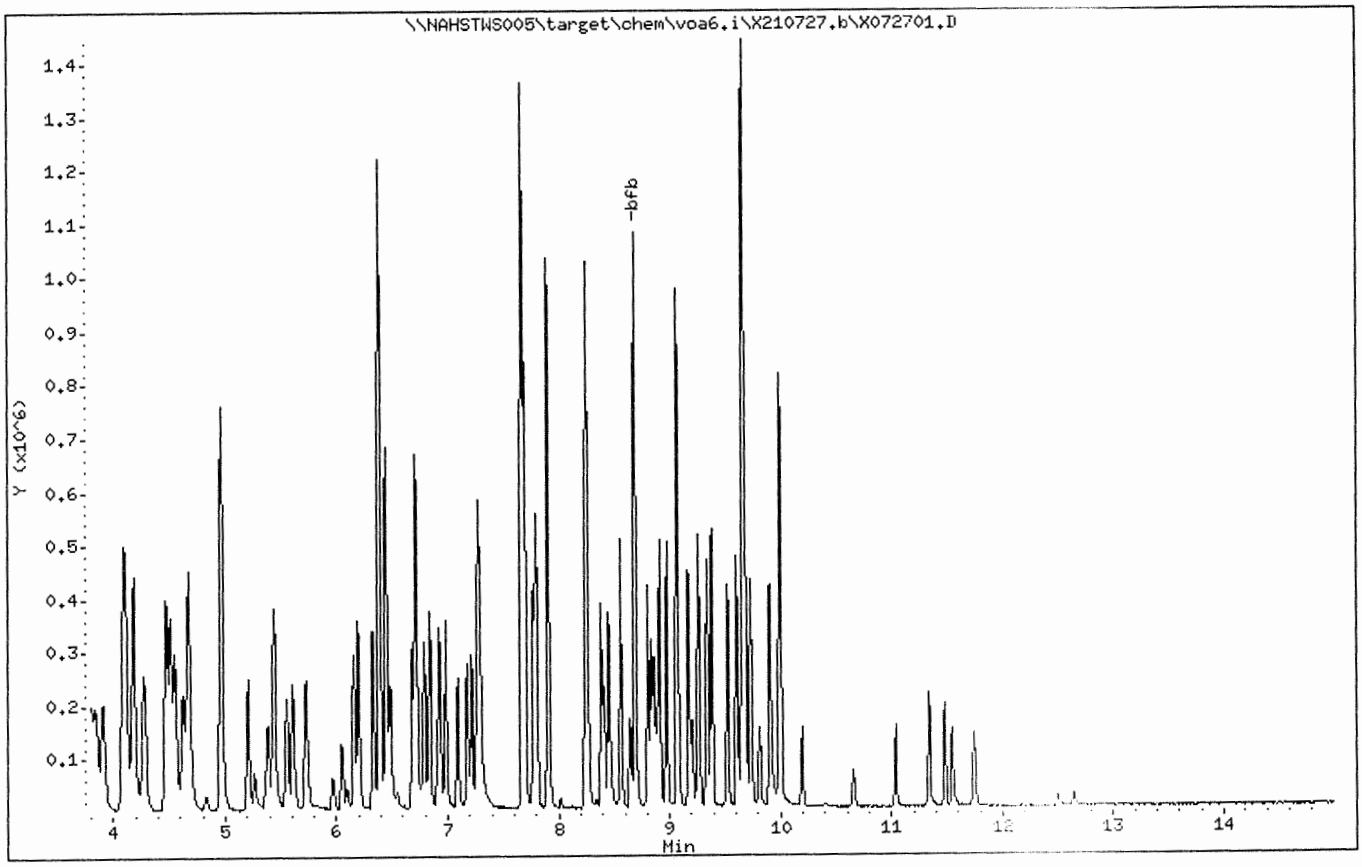
Sample Info: BFB;BFB;3;;BFB

Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

Column diameter: 0.25



Data File: \\NAHSTWS005\target\chem\voa6.i\X210727.b\X072701.D

Date : 27-JUL-2021 09:59

Client ID: BFB

Instrument: voa6.i

Sample Info: BFB;BFB;3;;BFB

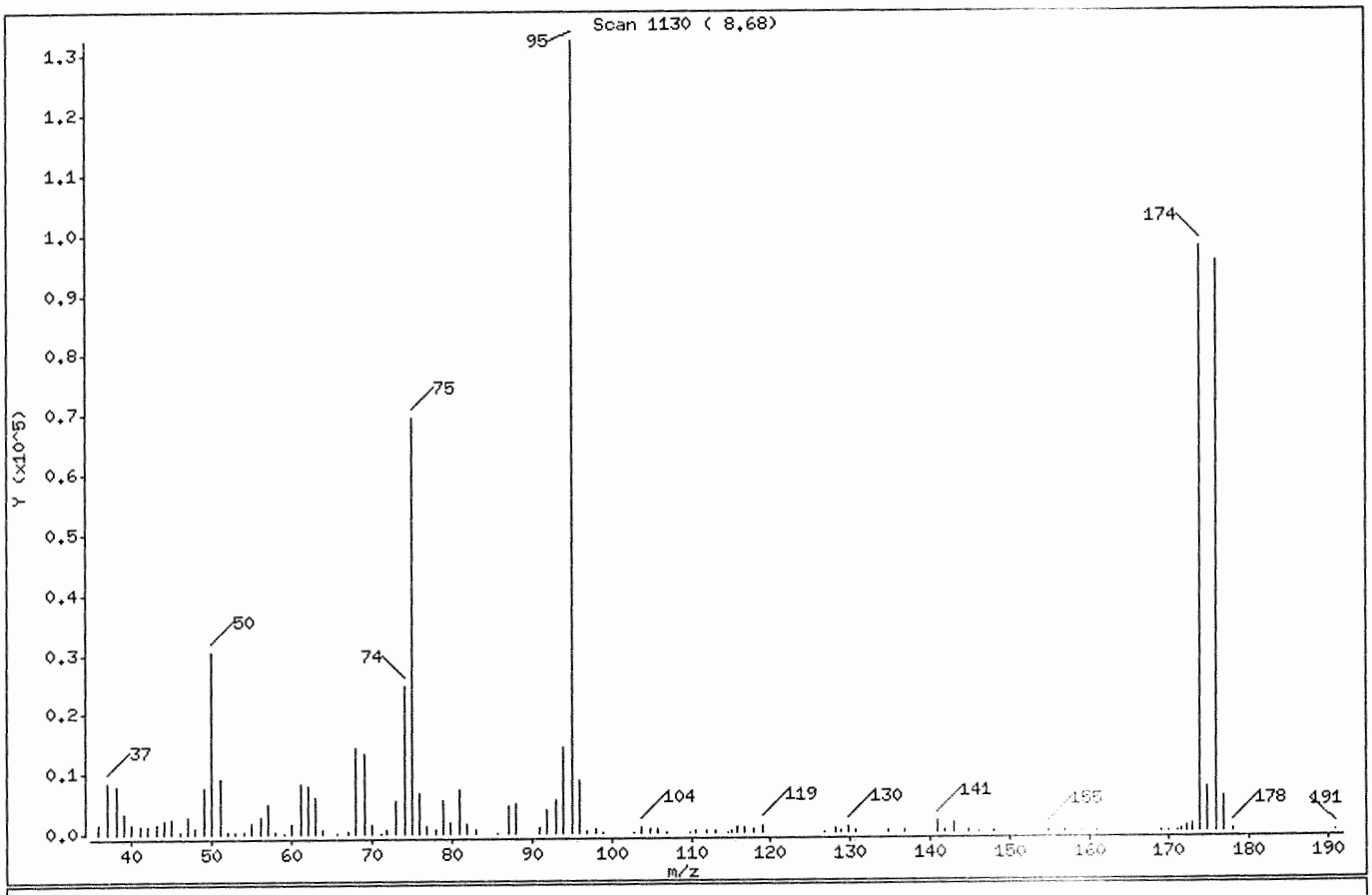
Volume Injected (uL): 2.0

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	23.04
75	30.00 - 60.00% of mass 95	52.40
96	5.00 - 9.00% of mass 95	6.72
173	Less than 2.00% of mass 174	0.88 (1.19)
174	Greater than 50.00% of mass 95	73.71
175	5.00 - 9.00% of mass 174	5.42 (7.36)
176	95.00 - 101.00% of mass 174	71.86 (97.49)
177	5.00 - 9.00% of mass 176	4.34 (6.04)

Data File: \\NAHSTWS005\target\chem\voa6.i\X210727.b\X072701.D

Date : 27-JUL-2021 09:59

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: X072701.D
Spectrum: Scan 1130 (8.68)
Location of Maximum: 95.00
Number of points: 103

m/z	Y	m/z	Y	m/z	Y	m/z	Y
35.90	1589	62.00	8013	93.00	5465	130.70	210
37.00	8556	63.00	6154	93.90	14402	134.80	419
38.10	7827	63.90	477	95.00	132544	136.80	448
39.10	3225	65.70	51	96.00	8902	140.90	1773
39.90	1496	67.00	430	96.90	310	141.80	186
41.00	1260	68.00	14324	98.00	531	142.90	1505
42.00	1363	69.00	13407	98.90	63	144.80	239
43.10	1479	70.00	1675	102.70	152	146.00	129
44.00	2206	71.10	55	103.80	1015	147.90	249
45.00	2331	71.80	589	104.90	495	154.80	430
46.00	245	72.90	5505	105.80	547	156.90	161
46.90	2697	74.00	24656	106.90	140	158.90	176
47.90	1026	75.00	69456	109.90	148	160.80	121
49.00	7500	76.00	6763	110.50	179	169.00	110
50.00	30544	76.90	1067	111.90	274	170.10	118
51.00	9203	77.90	562	113.00	164	171.10	151
52.10	369	78.90	5558	114.60	79	171.70	265
52.80	420	79.90	1899	115.20	159	172.40	815
54.10	308	80.90	7296	115.80	853	172.90	1165
55.00	1926	81.90	1499	116.70	982	173.90	97696
56.00	2781	83.00	461	117.90	647	174.90	7186
57.00	4912	85.80	84	118.90	1235	175.90	95240
57.90	175	87.00	4700	126.80	63	176.90	5749
59.00	125	88.00	4905	128.00	503	178.00	218
59.90	1597	90.90	818	128.70	212	190.90	58
61.00	8158	91.90	4033	129.80	870		

Data File: \\NAHSTWS005\target\chem\voa6.i\X210727.b\X072702.D Page 1
Report Date: 10-Sep-2021 13:05

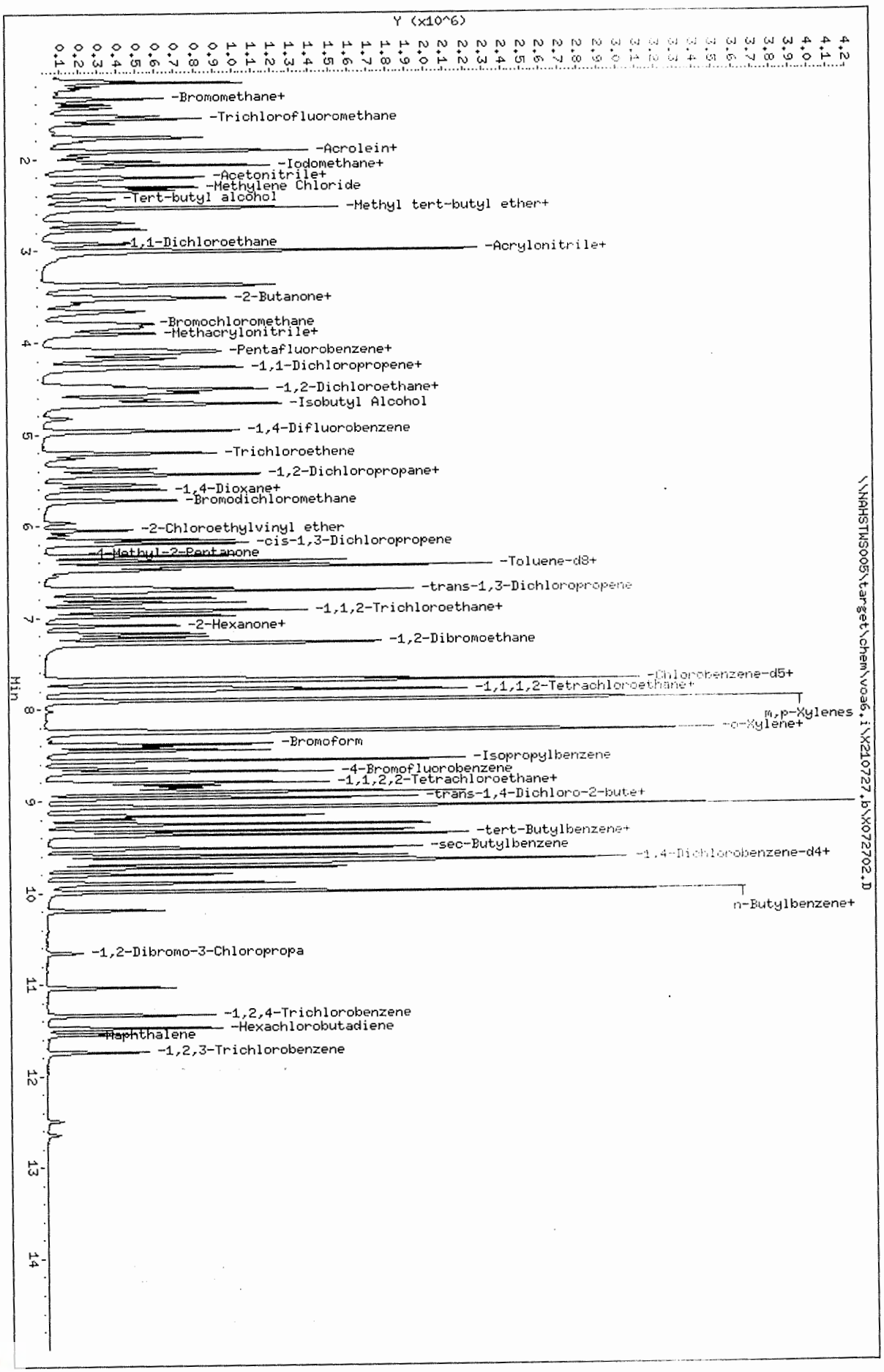
ALS Laboratory Group

Data file : \\NAHSTWS005\target\chem\voa6.i\X210727.b\X072702.D
Lab Smp Id: CCV Client Smp ID: CCV
Inj Date : 27-JUL-2021 10:20
Operator : PC Inst ID: voa6.i
Smp Info : CCV;CCV;2;;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\target\chem\voa6.i\X210727.b\8260W.m
Meth Date : 10-Sep-2021 13:05 voa6.i Quant Type: ISTD
Cal Date : 26-JUL-2021 13:31 Cal File: X072608.D
Als bottle: 2 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0474-dod.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)	551568	50.0000	
$	30 Dibromofluoromethane	113	4.096	4.096	(0.979)	277316	50.0000	49.92
$	35 1,2-Dichloroethane-d4	65	4.469	4.469	(1.069)	311968	50.0000	45.43
*	36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	673260	50.0000	
*	47 Chlorobenzene-d5	117	7.670	7.670	(1.000)	780693	50.0000	
$	48 Toluene-d8	98	6.388	6.388	(0.833)	988867	50.0000	47.80
$	69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	362469	50.0000	48.49
*	70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	430567	50.0000	
	5 Vinyl Chloride	62	1.145	1.145	(0.274)	328782	50.0000	40.69
	11 1,1-Dichloroethene	96	1.911	1.911	(0.457)	266175	50.0000	40.26
	17 Methylene Chloride	84	2.305	2.305	(0.551)	296656	50.0000	47.35
	27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	265777	50.0000	47.84
	33 1,2-Dichloroethane	62	4.555	4.555	(0.918)	390350	50.0000	45.59
	38 Trichloroethene	130	5.206	5.206	(1.049)	281455	50.0000	48.93
	53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	322143	50.0000	47.26
	20 trans-1,2-Dichloroethene	96	2.527	2.527	(0.604)	241575	50.0000	46.71



Data File: \\NAHSTWS005\target\chem\voa6.i\X210727.b\X072702.D
Date : 27-JUL-2021 10:20
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\X210727.b\X072705.D Page 1
Report Date: 10-Sep-2021 13:05

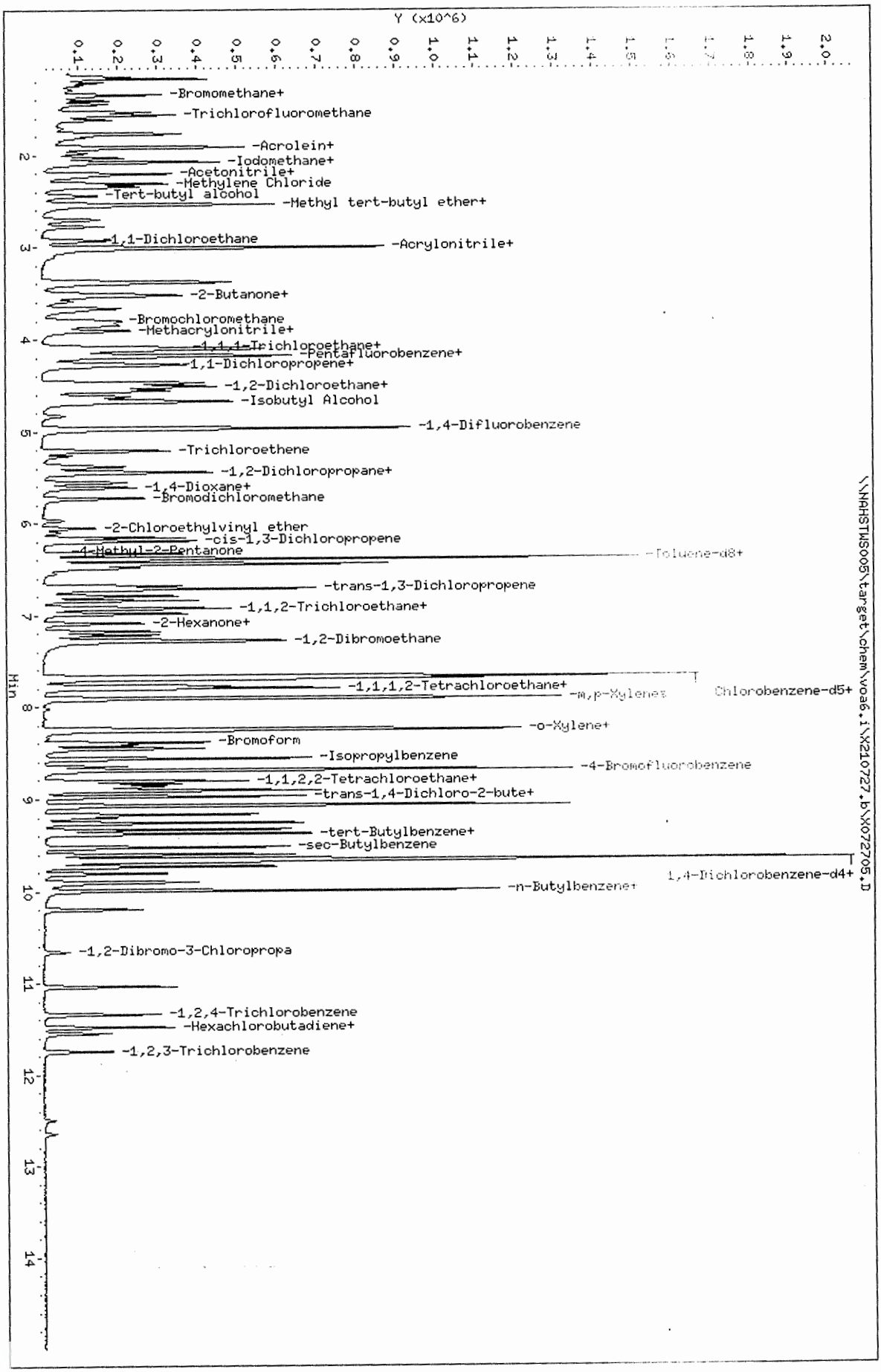
ALS Laboratory Group

Data file : \\NAHSTWS005\target\chem\voa6.i\X210727.b\X072705.D
Lab Smp Id: VLCSW-210727 Client Smp ID: VLCSW-210727
Inj Date : 27-JUL-2021 11:23
Operator : PC Inst ID: voa6.i
Smp Info : VLCSW-210727;VLCSW-210727;3;;LCS
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\target\chem\voa6.i\X210727.b\8260W.m
Meth Date : 10-Sep-2021 13:05 voa6.i Quant Type: ISTD
Cal Date : 26-JUL-2021 13:31 Cal File: X072608.D
Als bottle: 5 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0474-dod.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	4.182	(1.000)	[illegible]	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.096	(0.981)	[illegible]	49.9461	49.94
$ 35 1,2-Dichloroethane-d4	65	4.469	4.469	(1.069)	[illegible]	48.3568	48.35
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	[illegible]	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.670	(1.000)	[illegible]	50.0000	
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	[illegible]	49.0305	49.03
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	[illegible]	46.7370	46.73
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	[illegible]	50.0000	
5 Vinyl Chloride	62	1.145	1.145	(0.274)	[illegible]	16.2788	16.27
11 1,1-Dichloroethene	96	1.911	1.911	(0.457)	[illegible]	16.0852	16.08
17 Methylene Chloride	84	2.305	2.305	(0.551)	[illegible]	19.8467	19.84
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	[illegible]	18.4614	18.46
33 1,2-Dichloroethane	62	4.555	4.555	(0.918)	[illegible]	18.7515	18.75
38 Trichloroethene	130	5.206	5.206	(1.049)	[illegible]	19.9081	19.90
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	[illegible]	18.4778	18.47
20 trans-1,2-Dichloroethene	96	2.527	2.527	(0.604)	[illegible]	18.6009	18.60



Data File: \\NAHSTWS005\target\chem\voa6.i\X210727.b\X072705.D
Date : 27-JUL-2021 11:23
Client ID: VLCSW-210727
Sample Info: VLCSW-210727;VLCSW-210727;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\X210727.b\X072706.D Page 1
Report Date: 10-Sep-2021 13:06

ALS Laboratory Group

Data file : \\NAHSTWS005\target\chem\voa6.i\X210727.b\X072706.D
Lab Smp Id: VBLKW-210727 Client Smp ID: VBLKW-210727
Inj Date : 27-JUL-2021 11:44
Operator : PC Inst ID: voa6.i
Smp Info : VBLKW-210727;VBLKW-210727;3;;BLANK
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\target\chem\voa6.i\X210727.b\8260W.m
Meth Date : 10-Sep-2021 13:05 voa6.i Quant Type: ISTD
Cal Date : 26-JUL-2021 13:31 Cal File: X072608.D
Als bottle: 6 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0474-dod.sub
Target Version: 4.14
Processing Host: NAHSTW7056

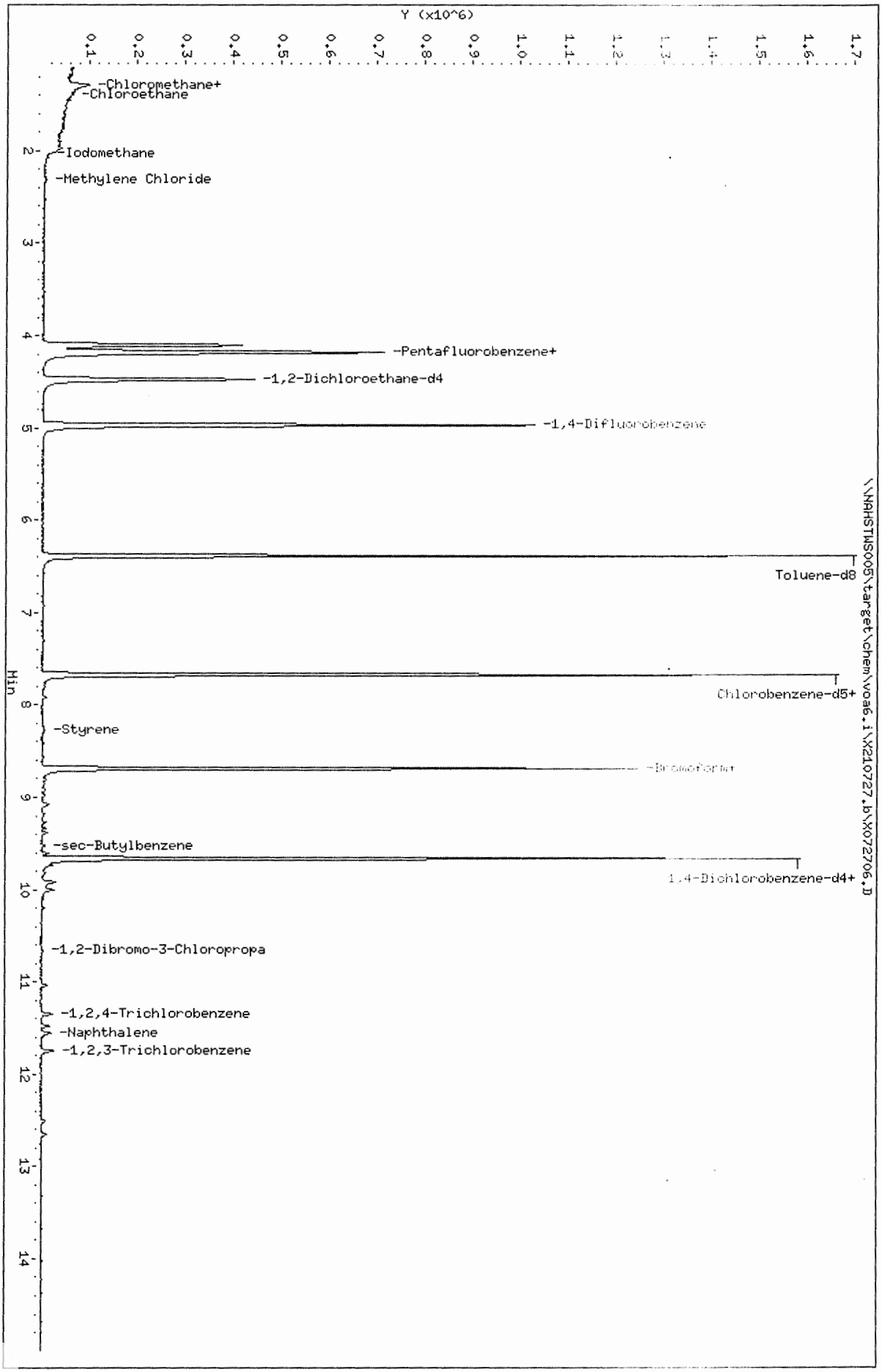
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

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	4.182	(1.000)	[illegible]	50.0000	
$	30 Dibromofluoromethane	113	4.103	4.096	(0.981)	282248	47.2527	47.25
$	35 1,2-Dichloroethane-d4	65	4.469	4.469	(1.069)	341479	46.2273	46.22
*	36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	845418	50.0000	
*	47 Chlorobenzene-d5	117	7.671	7.670	(1.000)	742090	50.0000	
$	48 Toluene-d8	98	6.388	6.388	(0.833)	989494	55.7593	55.75
$	69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	320539	45.2661	45.26
*	70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	634762	50.0000	
	17 Methylene Chloride	84	2.305	2.305	(0.551)	1649	1.37696	1.37(a)

QC Flag Legend

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



Data File: \\NAHSTWS005\target\chem\voa6.i\X210727.b\X072706.D
Date : 27-JUL-2021 11:44
Client ID: VBLKW-210727
Sample Info: VBLKW-210727;VBLKW-210727;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\X210727.b\X072712.D Page 1
Report Date: 10-Sep-2021 13:10

ALS Laboratory Group

Data file : \\NAHSTWS005\target\chem\voa6.i\X210727.b\X072712.D
Lab Smp Id: HS21071204-02 Client Smp ID: HS21071204-02
Inj Date : 27-JUL-2021 13:51
Operator : PC Inst ID: voa6.i
Smp Info : HS21071204-02;HS21071204-02;;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\target\chem\voa6.i\X210727.b\8260W.m
Meth Date : 10-Sep-2021 13:08 Genoveva.R Quant Type: ISTD
Cal Date : 26-JUL-2021 13:31 Cal File: X072608.D
Als bottle: 12
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0474-dod.sub
Target Version: 4.14
Processing Host: NAHSTW7056

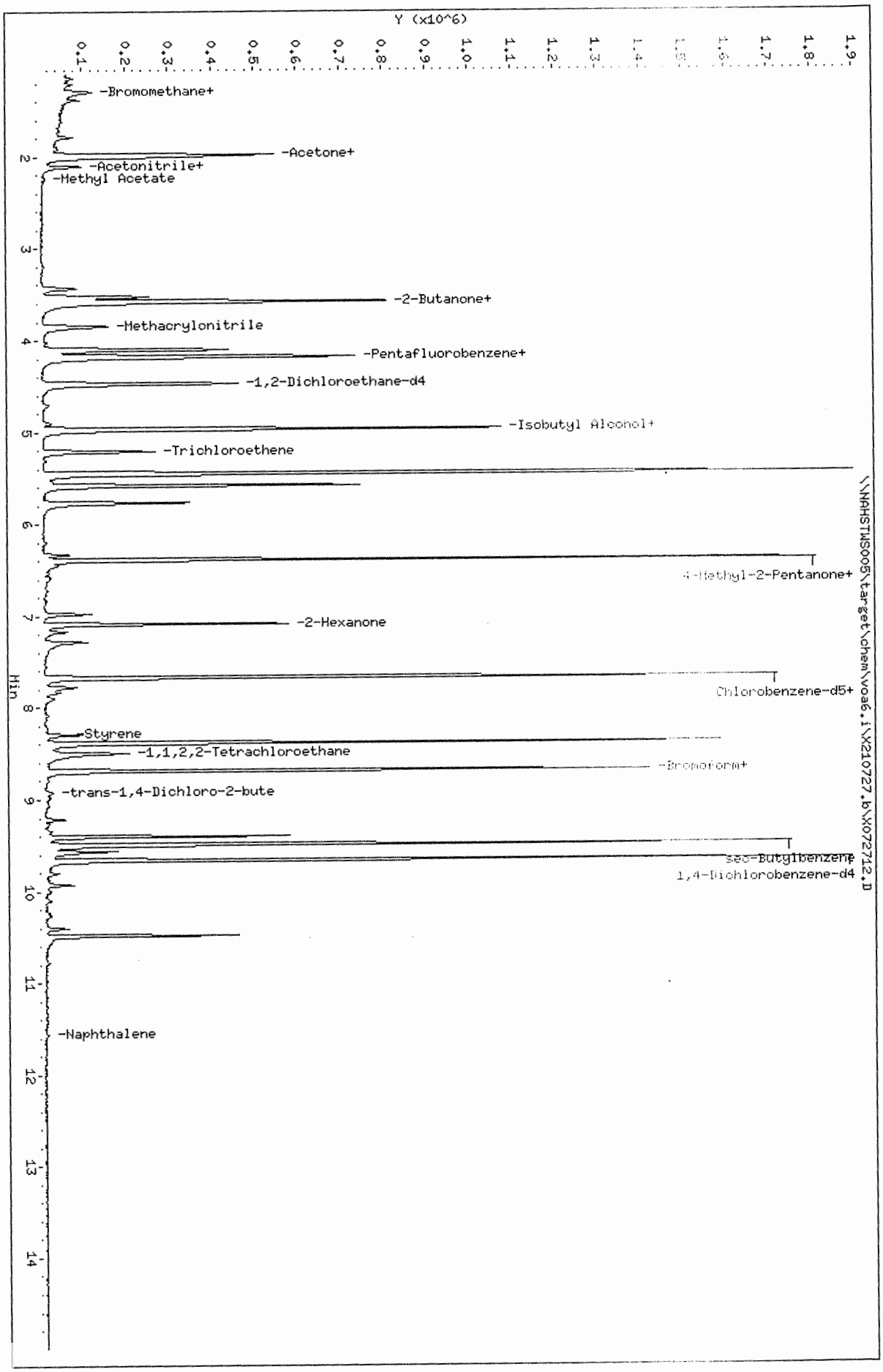
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

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	4.182	(1.000)	601681	50.0000	
$ 30 Dibromofluoromethane	113	4.096	4.103	(0.979)	291210	48.0597	48.05
$ 35 1,2-Dichloroethane-d4	65	4.469	4.476	(1.069)	343079	45.7968	45.79
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	858628	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	784644	50.0000	
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	1023809	54.5957	54.59
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	450732	46.7746	46.77
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	793704	50.0000	
5 Vinyl Chloride	62	1.138	1.145	(0.272)	11821	1.34127	1.34(a)
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	124558	19.1168	19.11
38 Trichloroethene	130	5.207	5.207	(1.049)	78899	13.1936	13.19

QC Flag Legend

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



Data File: \\NAHSTWS005\target\chem\voa6.i\X210727.b\X072712.D
Date : 27-JUL-2021 13:51
Client ID: HS21071204-02
Sample Info: HS21071204-02;HS21071204-02;;;
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\NAHSTWS005\target\chem\voa6.i\X210727.b\X072712.D

Date : 27-JUL-2021 13:51

Client ID: HS21071204-02

Instrument: voa6.i

Sample Info: HS21071204-02;HS21071204-02;;;

Purge Volume: 5.0

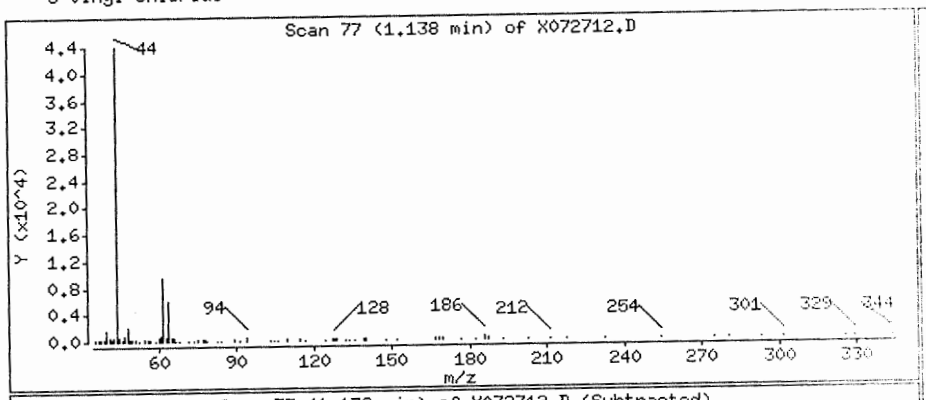
Operator: PC

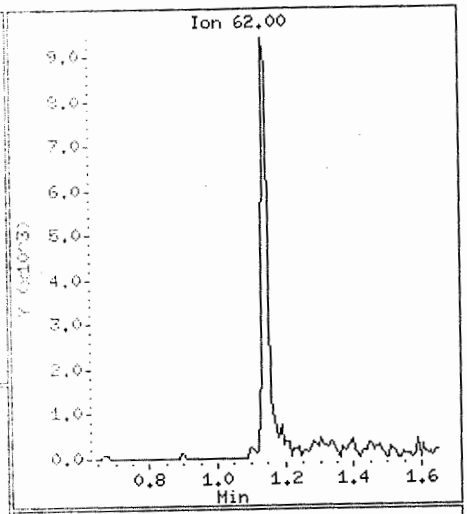
Column phase: DB624

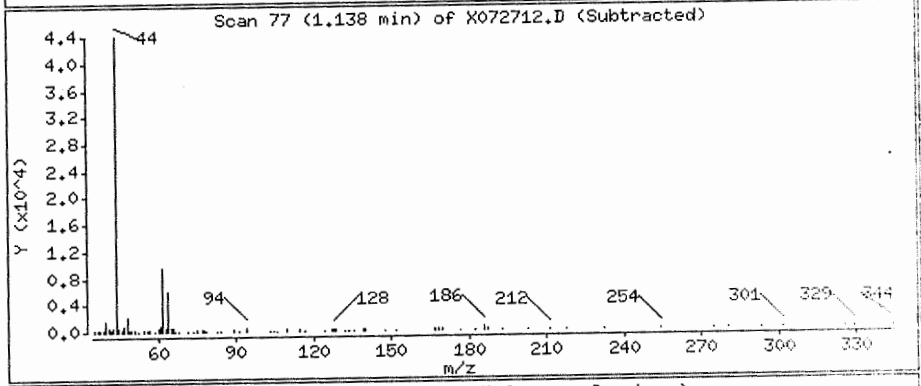
Column diameter: 0.18

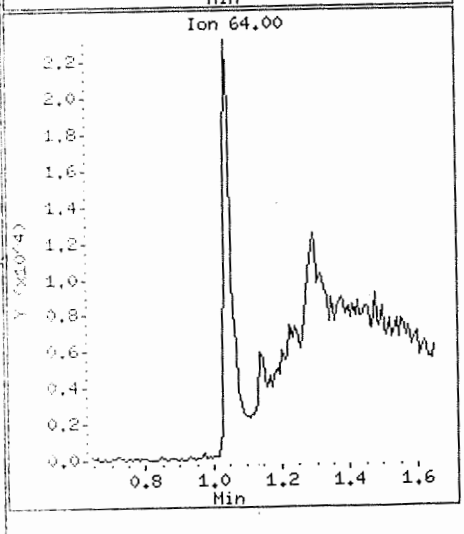
5 Vinyl Chloride

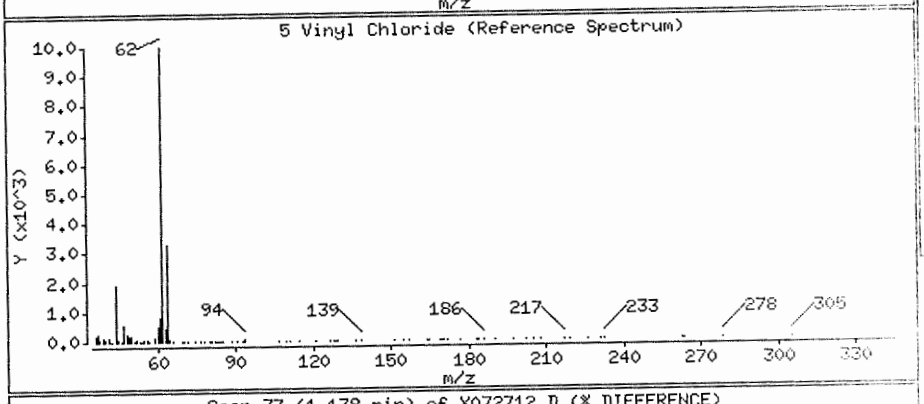
Concentration: 1.34 ug/l

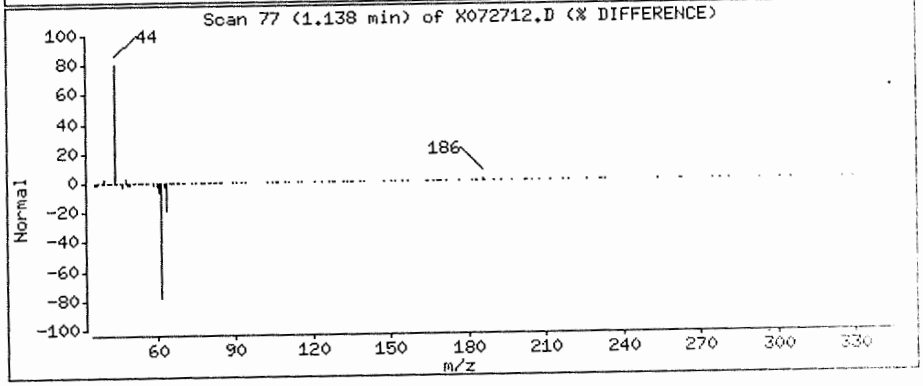












Data File: \\NAHSTWS005\target\chem\voa6.i\X210727.b\X072712.D

Date : 27-JUL-2021 13:51

Client ID: HS21071204-02

Instrument: voa6.i

Sample Info: HS21071204-02;HS21071204-02;;;

Purge Volume: 5.0

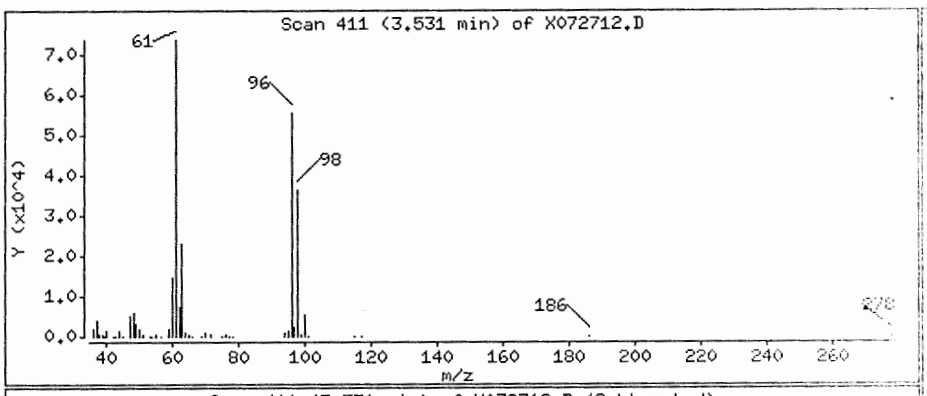
Operator: PC

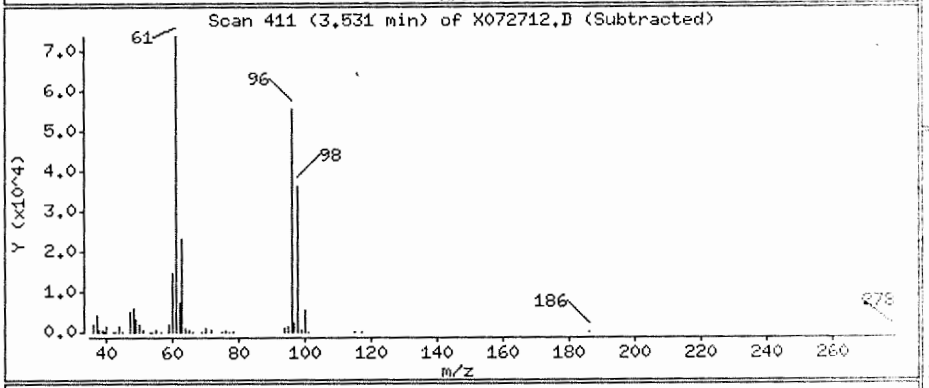
Column phase: DB624

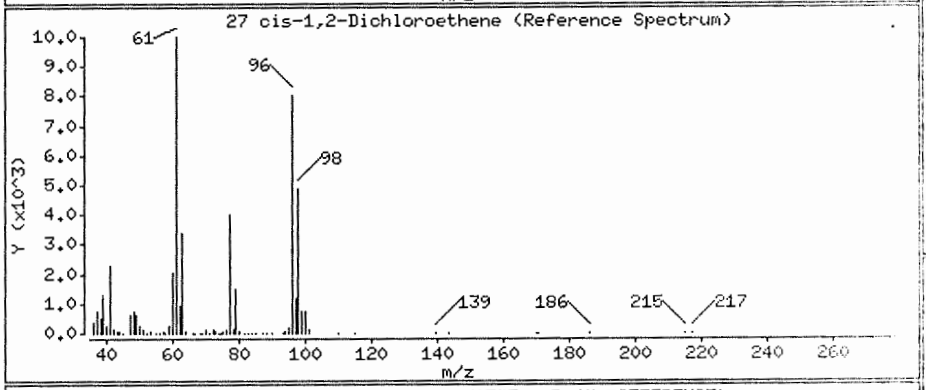
Column diameter: 0.18

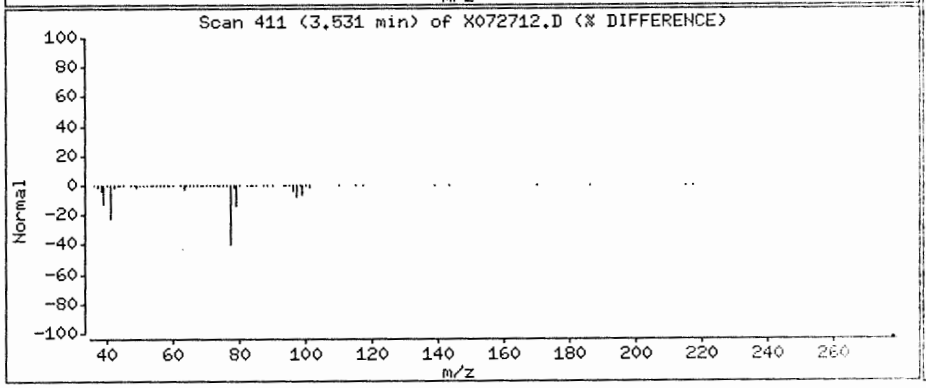
27 cis-1,2-Dichloroethene

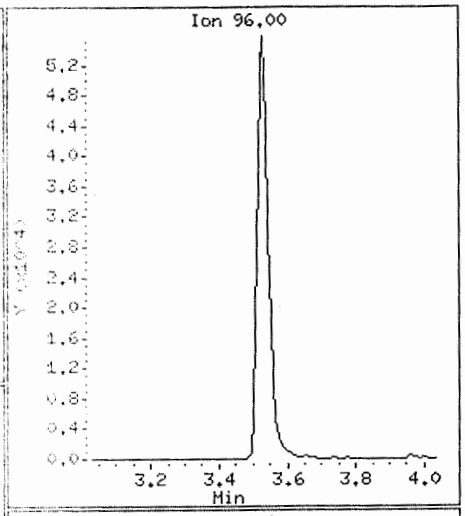
Concentration: 19.11 ug/l

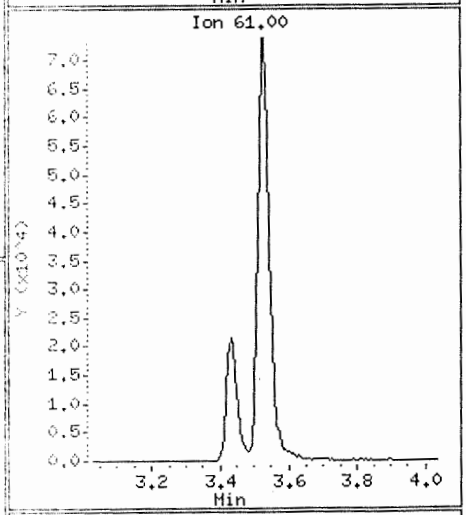


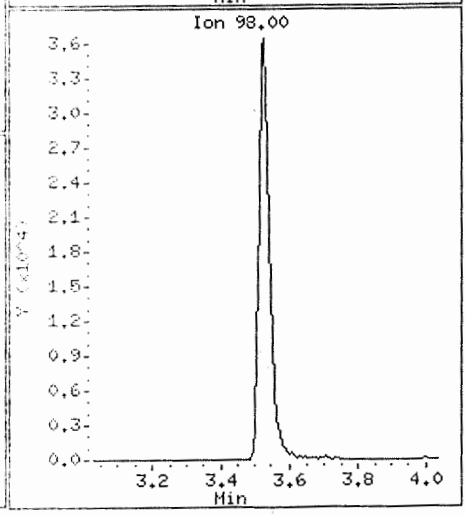












Data File: \\NAHSTWS005\target\chem\voa6.i\X210727.b\X072712.D

Date : 27-JUL-2021 13:51

Client ID: HS21071204-02

Instrument: voa6.i

Sample Info: HS21071204-02;HS21071204-02;;;

Purge Volume: 5.0

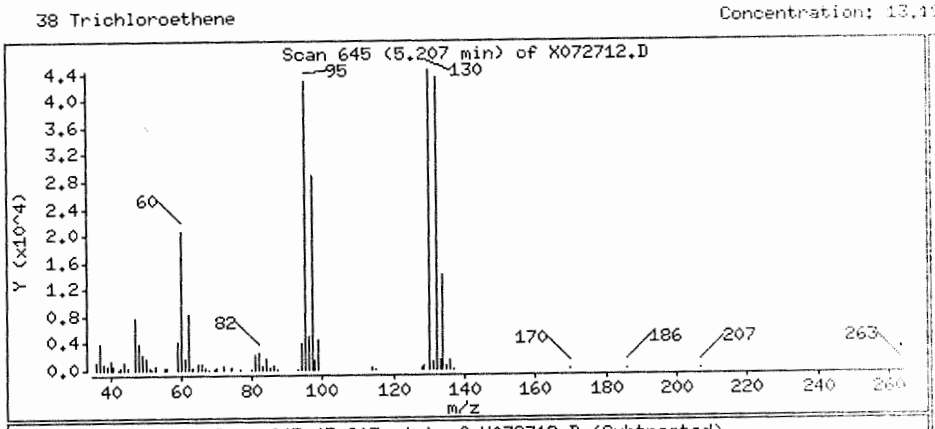
Operator: PC

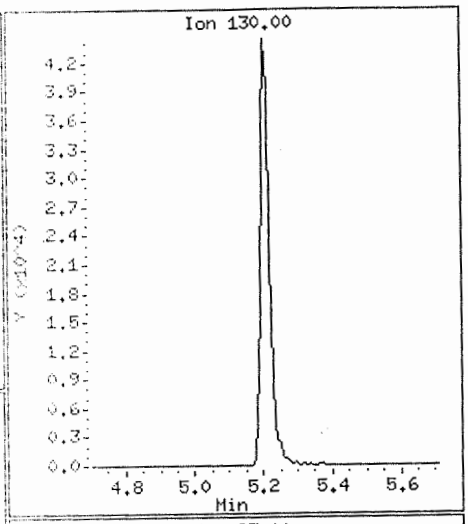
Column phase: DB624

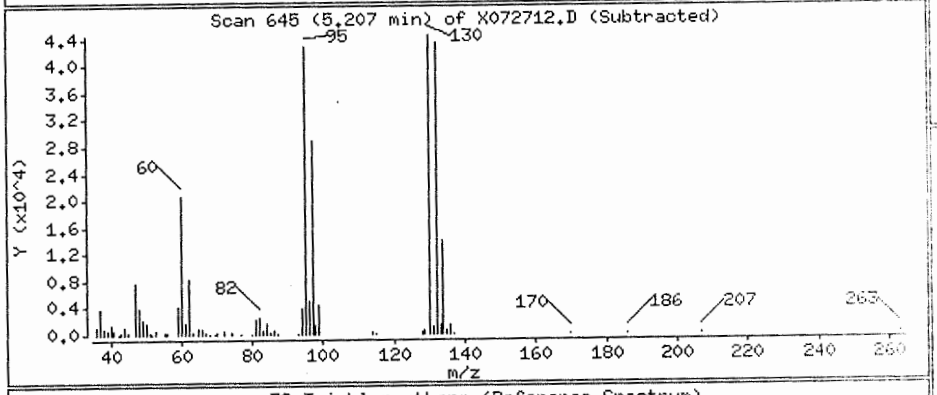
Column diameter: 0.18

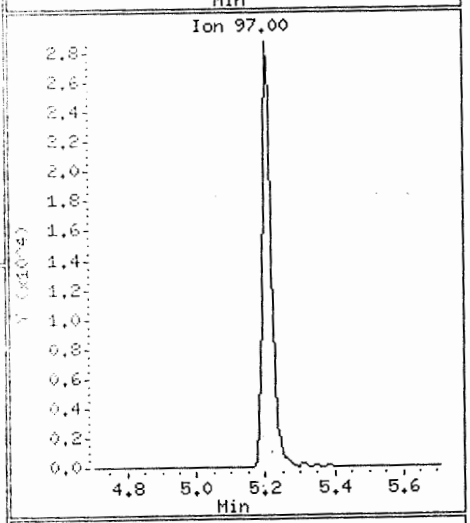
38 Trichloroethene

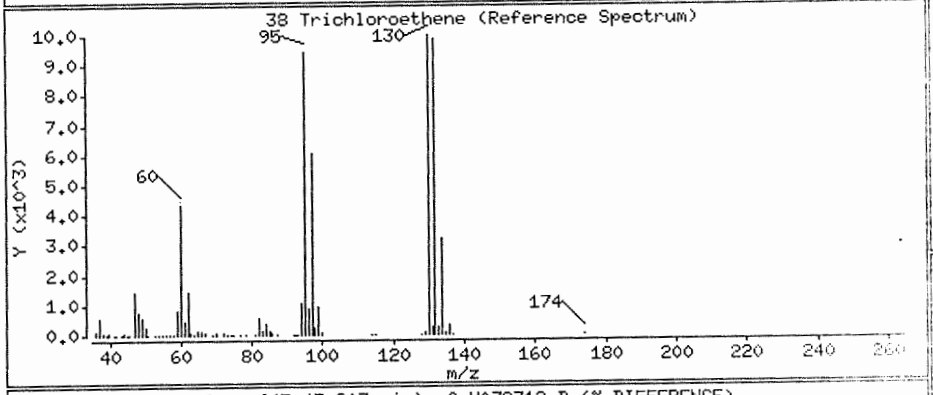
Concentration: 13.10 ug/l

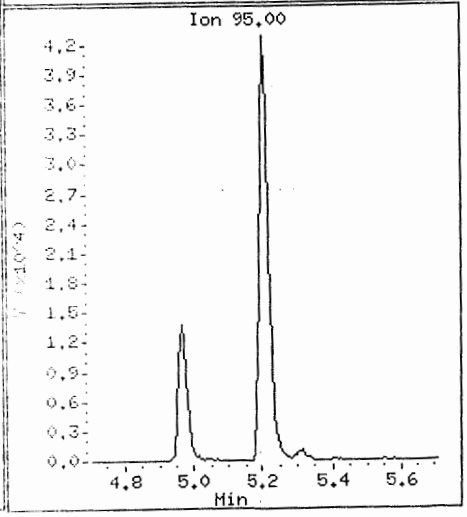


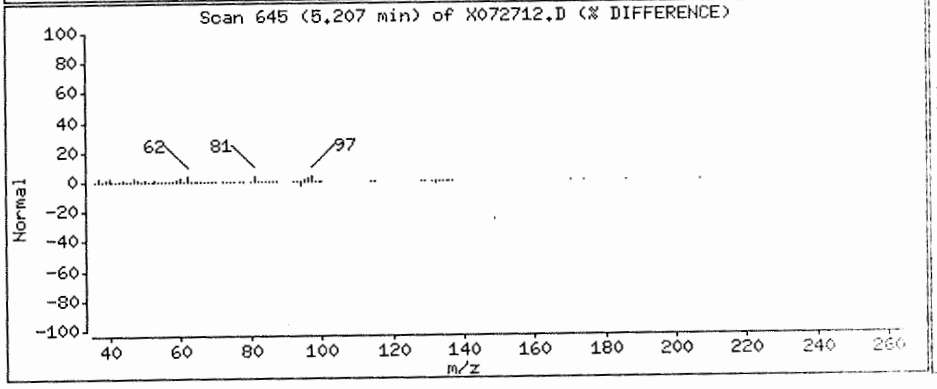












Data File: \\NAHSTWS005\target\chem\voa6.i\X210727.b\X072716.D Page 1
Report Date: 10-Sep-2021 13:06

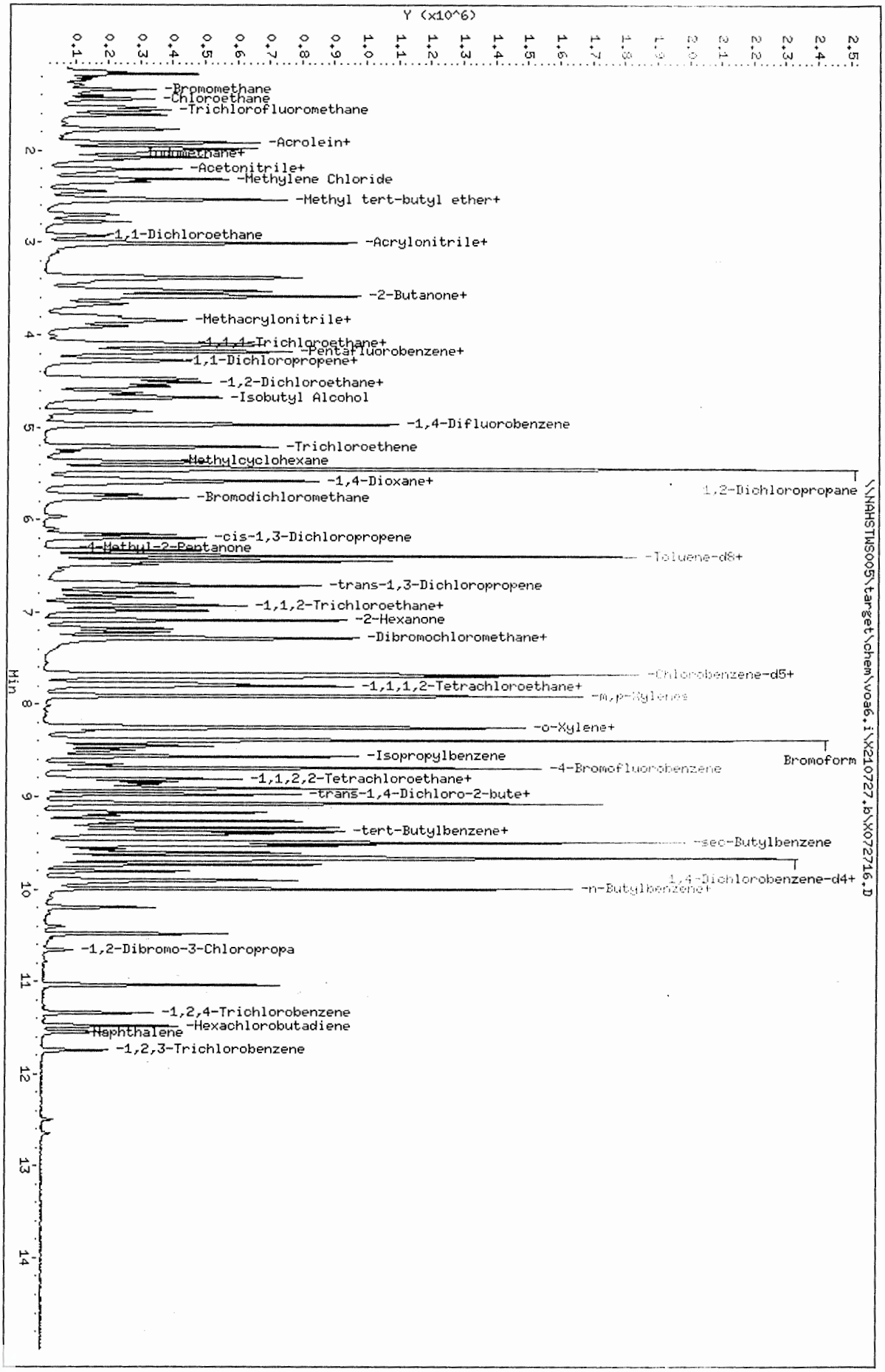
ALS Laboratory Group

Data file : \\NAHSTWS005\target\chem\voa6.i\X210727.b\X072716.D
Lab Smp Id: HS21071204-02MS Client Smp ID: HS21071204-02MS
Inj Date : 27-JUL-2021 15:15
Operator : PC Inst ID: voa6.i
Smp Info : HS21071204-02MS;HS21071204-02MS;3;;MS
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\target\chem\voa6.i\X210727.b\8260W.m
Meth Date : 10-Sep-2021 13:05 voa6.i Quant Type: ISTD
Cal Date : 26-JUL-2021 13:31 Cal File: X072608.D
Als bottle: 16 QC Sample: MS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0474-dod.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	4.182	(1.000)	616342	50.0000	
$ 30 Dibromofluoromethane	113	4.096	4.096	(0.979)	306435	49.3662	49.36
$ 35 1,2-Dichloroethane-d4	65	4.469	4.469	(1.068)	357049	46.5189	46.51
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	897855	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.670	(1.000)	813044	50.0000	
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	1038187	53.4619	53.46
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	377205	47.9819	47.98
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	635867	50.0000	
5 Vinyl Chloride	62	1.145	1.145	(0.274)	163269	15.8689	15.86
11 1,1-Dichloroethene	96	1.912	1.911	(0.457)	156749	15.8072	15.80
17 Methylene Chloride	84	2.306	2.305	(0.551)	211906	19.1532	19.15
27 cis-1,2-Dichloroethene	96	3.523	3.530	(0.842)	474284	41.0905	41.09
33 1,2-Dichloroethane	62	4.555	4.555	(0.918)	166150	17.9006	17.90
38 Trichloroethene	130	5.207	5.206	(1.049)	227935	36.1125	36.11
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	93696	19.1469	19.14
20 trans-1,2-Dichloroethene	96	2.528	2.527	(0.604)	108183	18.7230	18.72



Data File: \\NAHSTWS005\target\chem\voa6.i\X210727.b\X072716.D
Date : 27-JUL-2021 15:15
Client ID: HS21071204-02MS
Sample Info: HS21071204-02MS;HS21071204-02MS;3;;MS
Purge Volume: 5.0
Column phase: DB624

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

Page 2

Data File: \\NAHSTWS005\target\chem\voa6.i\X210727.b\X072717.D Page 1
Report Date: 10-Sep-2021 13:06

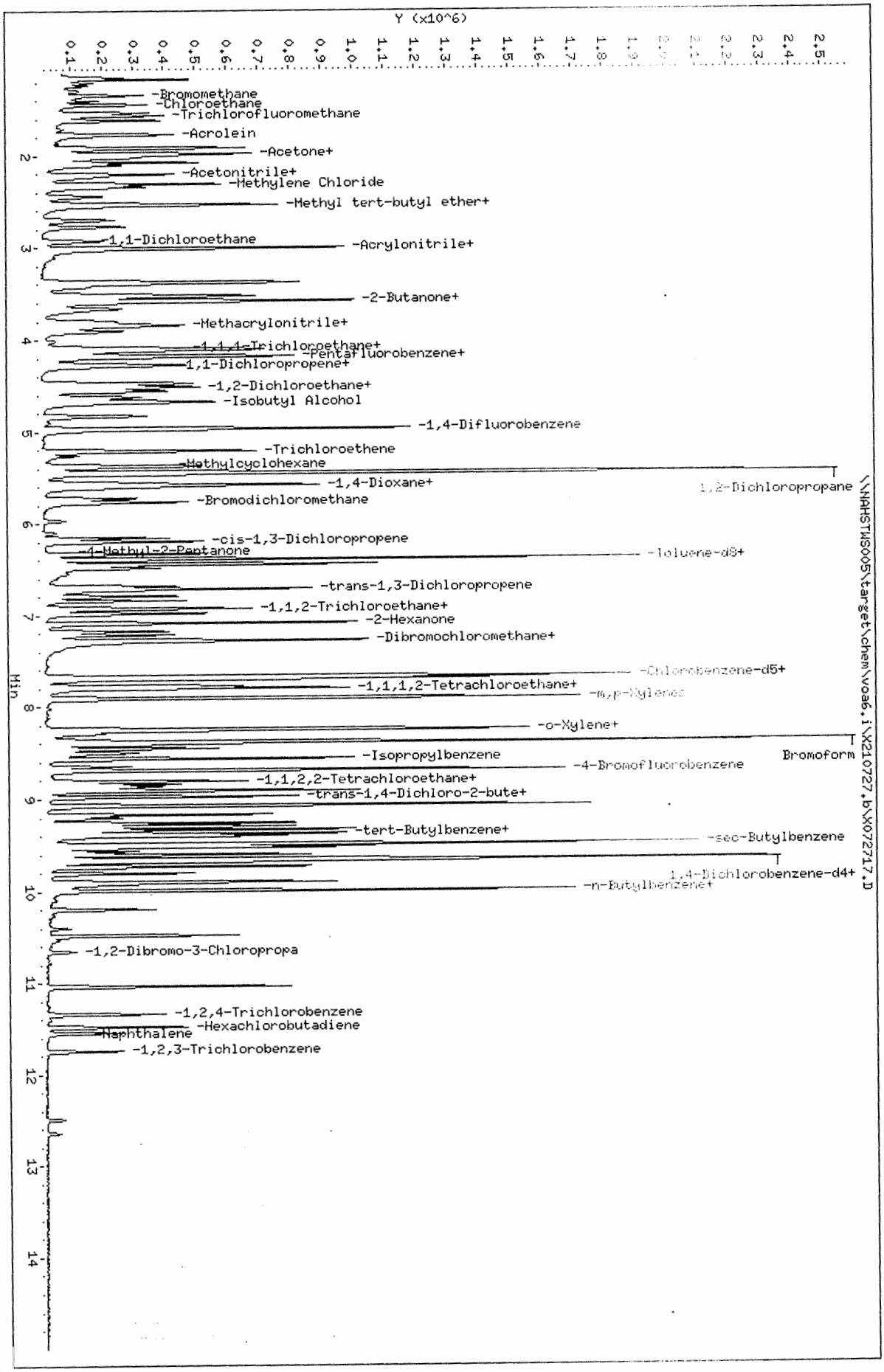
ALS Laboratory Group

Data file : \\NAHSTWS005\target\chem\voa6.i\X210727.b\X072717.D
Lab Smp Id: HS21071204-02MSD Client Smp ID: HS21071204-02MSD
Inj Date : 27-JUL-2021 15:36
Operator : PC Inst ID: voa6.i
Smp Info : HS21071204-02MSD;HS21071204-02MSD;3;;MSD
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\target\chem\voa6.i\X210727.b\8260W.m
Meth Date : 10-Sep-2021 13:05 voa6.i Quant Type: ISTD
Cal Date : 26-JUL-2021 13:31 Cal File: X072608.D
Als bottle: 16 QC Sample: MSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0474-dod.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	4.182	(1.000)	659780	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.096	(0.981)	320306	48.8733	48.87
$ 35 1,2-Dichloroethane-d4	65	4.469	4.469	(1.069)	373464	46.0880	46.08
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	946636	50.0000	
* 47 Chlorobenzene-d5	117	7.670	7.670	(1.000)	866077	50.0000	
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	1098981	53.1941	53.19
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	393525	47.5668	47.56
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	452313	50.0000	
5 Vinyl Chloride	62	1.138	1.145	(0.272)	346934	15.4140	15.41
11 1,1-Dichloroethene	96	1.911	1.911	(0.457)	334636	14.6972	14.69
17 Methylene Chloride	84	2.305	2.305	(0.551)	317044	18.0632	18.06
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	264623	37.5495	37.54
33 1,2-Dichloroethane	62	4.554	4.555	(0.918)	165243	16.6846	16.68
38 Trichloroethene	130	5.206	5.206	(1.049)	214873	32.2797	32.27
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	93078	17.8759	17.87
20 trans-1,2-Dichloroethene	96	2.527	2.527	(0.604)	309657	17.9729	17.97



Data File: \\NAHSTWS005\target\chem\voa6.i\X210727.b\X072717.D
Date : 27-JUL-2021 15:36
Client ID: HS21071204-02HSD
Sample Info: HS21071204-02HSD;HS21071204-02HSD;3;;HSD
Purge Volume: 5.0
Column phase: DB624

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

Page 2

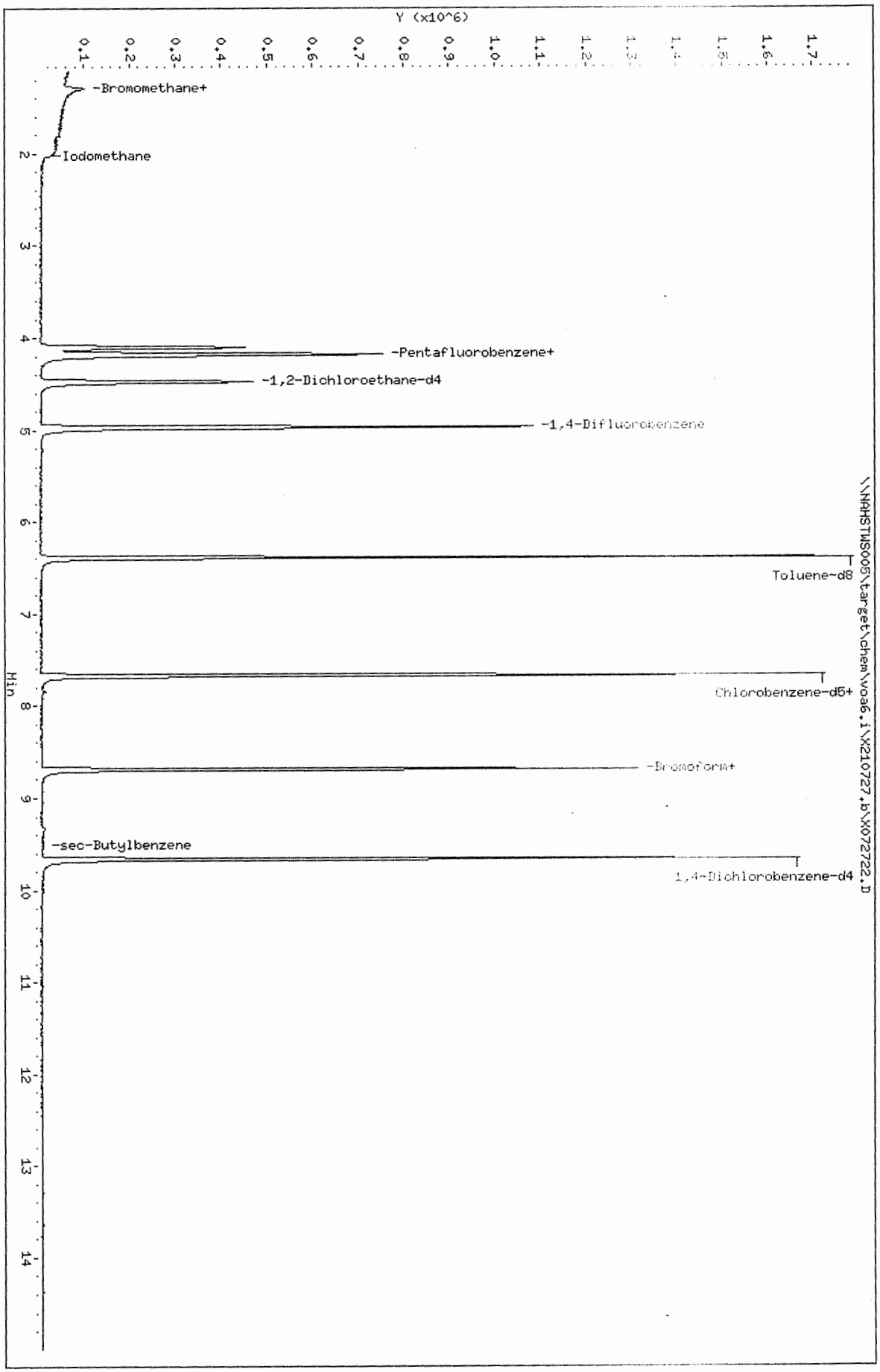
ALS Laboratory Group

Data file : \\NAHSTWS005\target\chem\voa6.i\X210727.b\X072722.D
Lab Smp Id: HS21071204-09 Client Smp ID: HS21071204-09
Inj Date : 27-JUL-2021 17:21
Operator : PC Inst ID: voa6.i
Smp Info : HS21071204-09;HS21071204-09;;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\target\chem\voa6.i\X210727.b\8260W.m
Meth Date : 10-Sep-2021 13:08 Genoveva.R Quant Type: ISTD
Cal Date : 26-JUL-2021 13:31 Cal File: X072608.D
Als bottle: 21
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0474-dod.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	4.182	(1.000)	620356	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	302222	48.3756	48.37
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	[illegible]	46.0306	46.03
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	896936	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	756036	50.0000	
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	1023491	53.8849	53.88
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	340240	44.8667	44.86
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	374492	50.0000	



Data File: \\NAHSTWS005\target\chem\voa6.i\X210727.b\X072722.D
Date : 27-JUL-2021 17:21
Client ID: HS21071204-09
Sample Info: HS21071204-09;HS21071204-09;;;
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\NAHSTWS005\target\chem\voa6.i\X210727.b\X072723.D Page 1
Report Date: 10-Sep-2021 13:10

ALS Laboratory Group

Data file : \\NAHSTWS005\target\chem\voa6.i\X210727.b\X072723.D
Lab Smp Id: HS21071204-08 Client Smp ID: HS21071204-08
Inj Date : 27-JUL-2021 17:42
Operator : PC Inst ID: voa6.i
Smp Info : HS21071204-08;HS21071204-08;;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\target\chem\voa6.i\X210727.b\8260W.m
Meth Date : 10-Sep-2021 13:08 Genoveva.R Quant Type: ISTD
Cal Date : 26-JUL-2021 13:31 Cal File: X072608.D
Als bottle: 22
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0474-dod.sub
Target Version: 4.14
Processing Host: NAHSTW7056

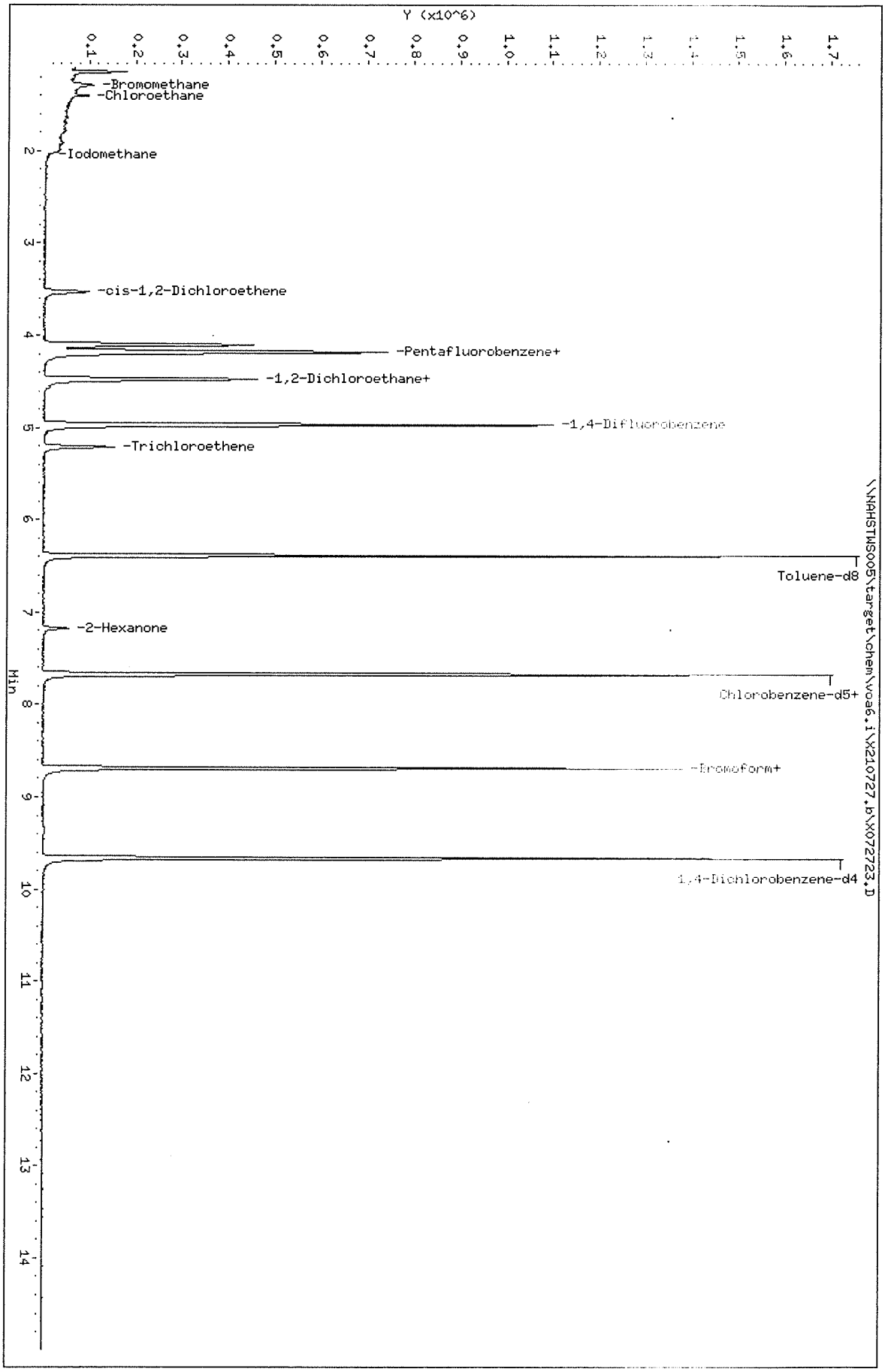
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

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	4.182	(1.000)	621354	50.0000	
$ 30 Dibromofluoromethane	113	4.096	4.103	(0.979)	294048	47.4710	47.47
$ 35 1,2-Dichloroethane-d4	65	4.469	4.476	(1.069)	356613	46.0924	46.09
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	887528	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	793725	50.0000	
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	1005363	54.2671	54.26
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	349418	46.2636	46.26
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	393758	50.0000	
5 Vinyl Chloride	62	1.145	1.145	(0.274)	92247	10.1354	10.13
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	48272	7.17409	7.17
33 1,2-Dichloroethane	62	4.569	4.555	(0.923)	5216	0.56195	0.56(a)
38 Trichloroethene	130	5.206	5.207	(1.049)	44208	7.62757	7.62

QC Flag Legend

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



Data File: \\NAHSTWS005\target\chem\voa6.i\X210727.b\X072723.D
Date : 27-JUL-2021 17:42
Client ID: HS21071204-08
Sample Info: HS21071204-08;HS21071204-08;;;
Purge Volume: 5.0
Column phase: DB624

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

Page 2

Data File: \\NAHSTWS005\target\chem\voa6.i\X210727.b\X072723.D Page 3

Date : 27-JUL-2021 17:42

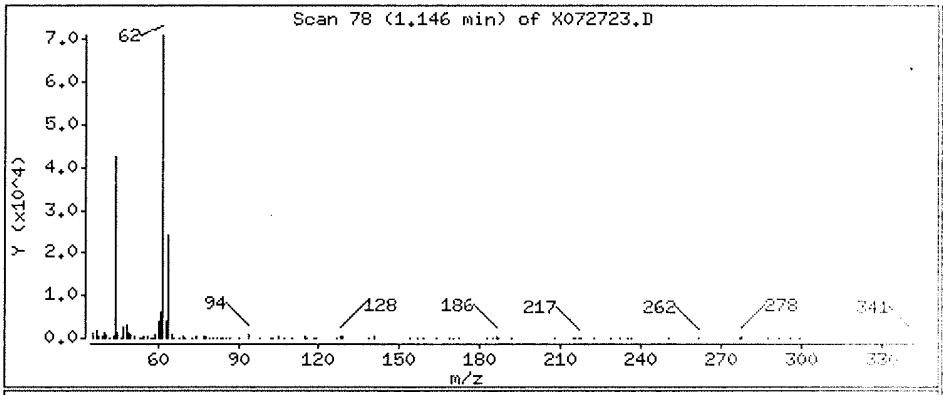
Client ID: HS21071204-08 Instrument: voa6.i

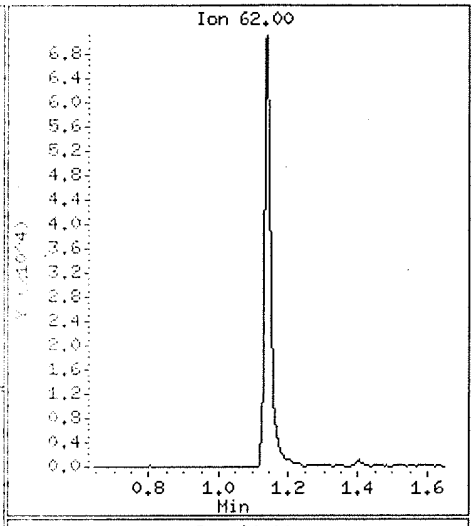
Sample Info: HS21071204-08;HS21071204-08;;;

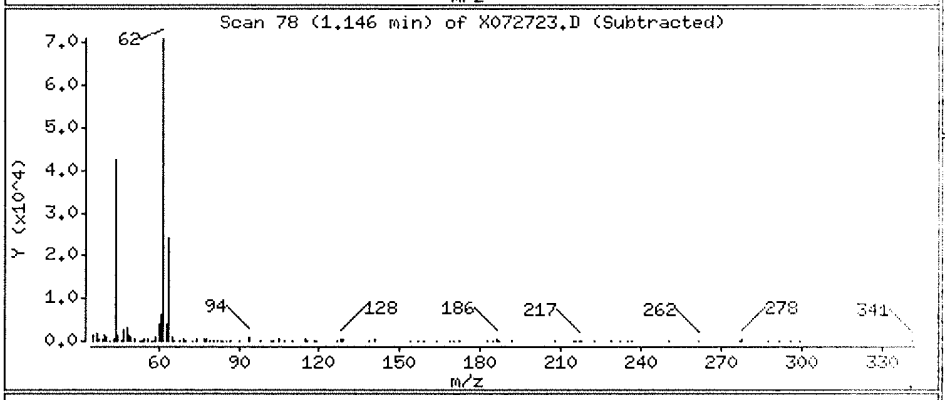
Purge Volume: 5.0 Operator: PC

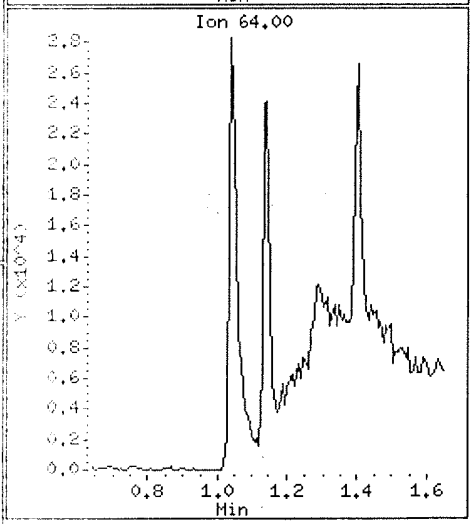
Column phase: DB624 Column diameter: 0.18

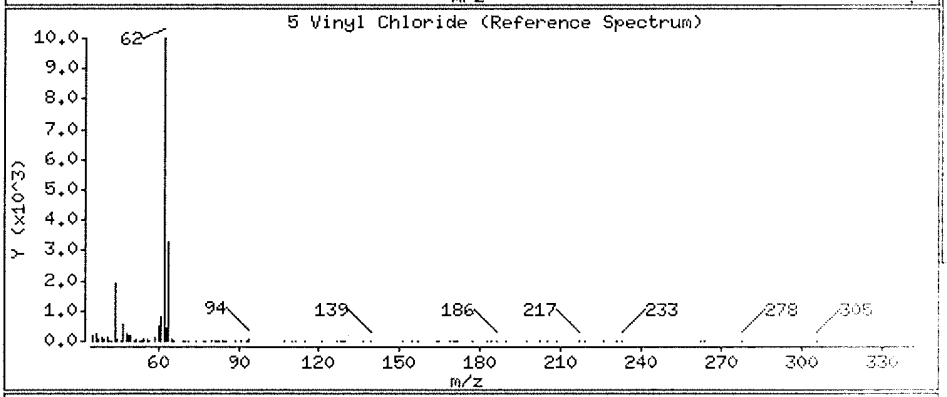
5 Vinyl Chloride Concentration: 10.13 ug/l

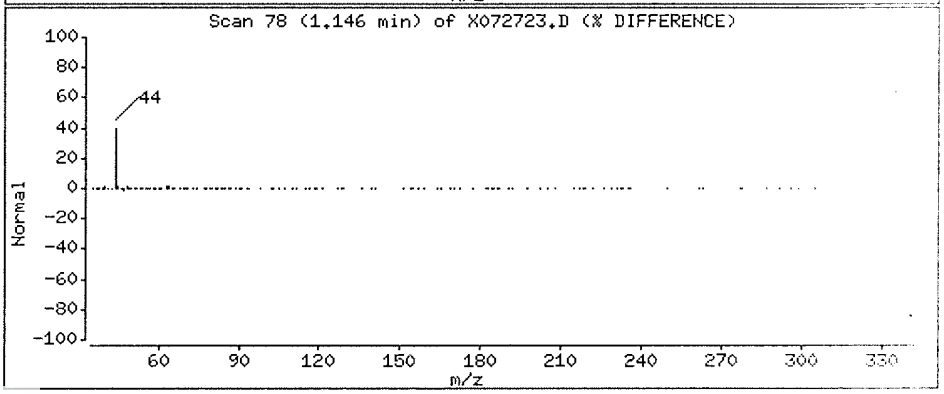












Data File: \\NAHSTWS005\target\chem\voa6.i\X210727.b\X072723.D Page 4

Date : 27-JUL-2021 17:42

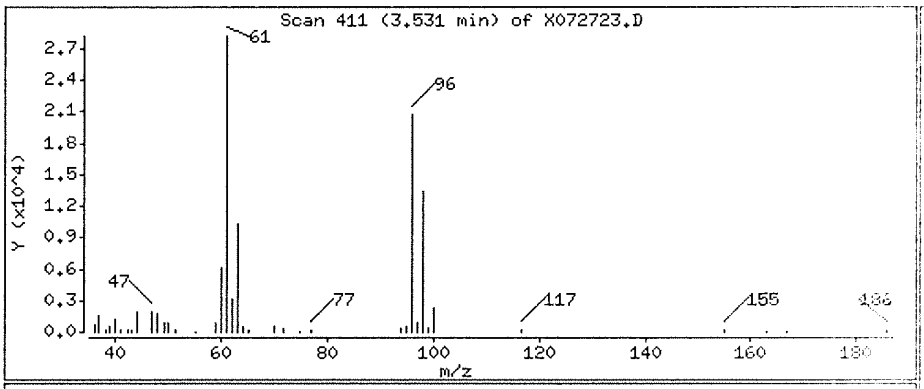
Client ID: HS21071204-08 Instrument: voa6.i

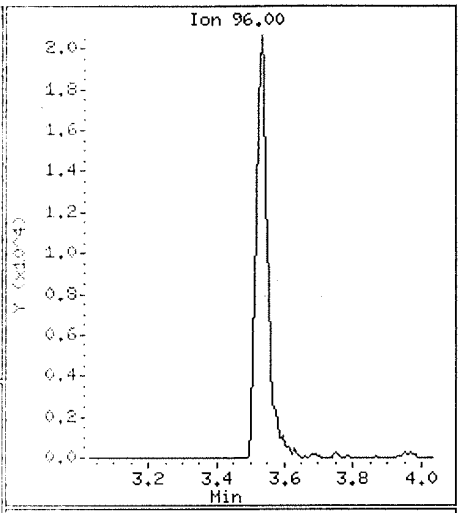
Sample Info: HS21071204-08;HS21071204-08;;;

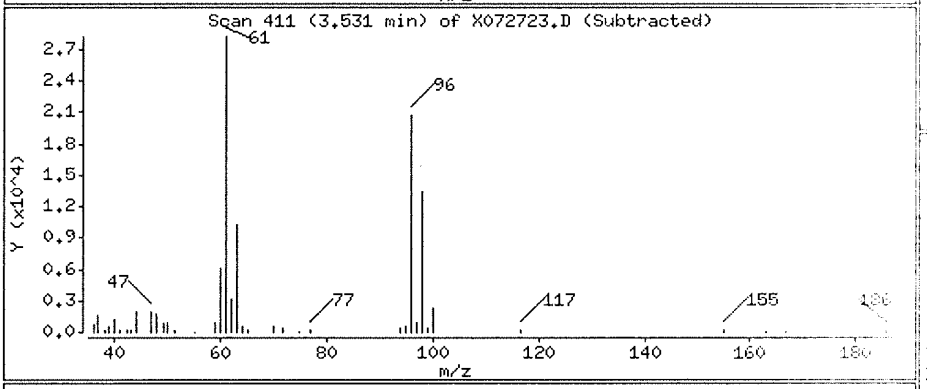
Purge Volume: 5.0 Operator: PC

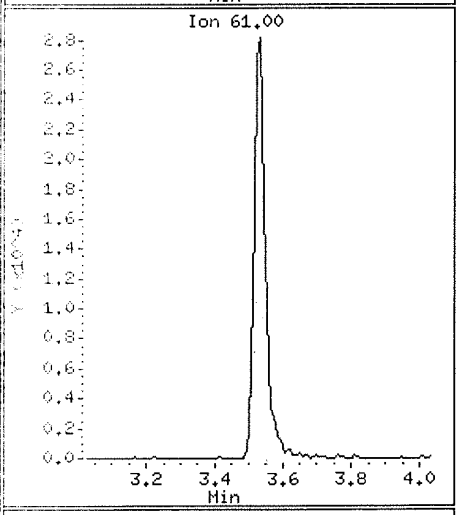
Column phase: DB624 Column diameter: 0.18

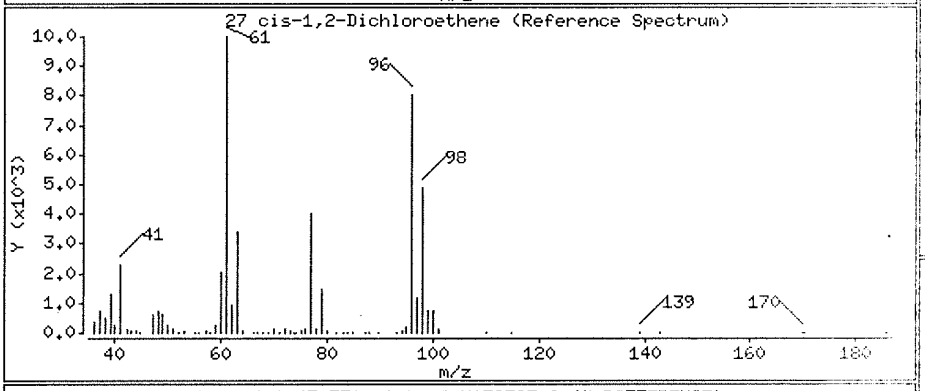
27 cis-1,2-Dichloroethene Concentration: 7.17 ug/l

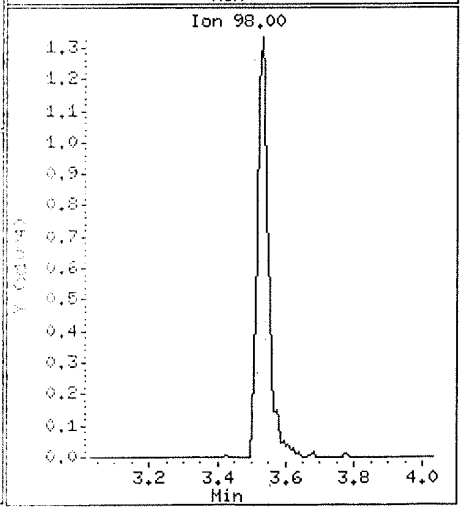


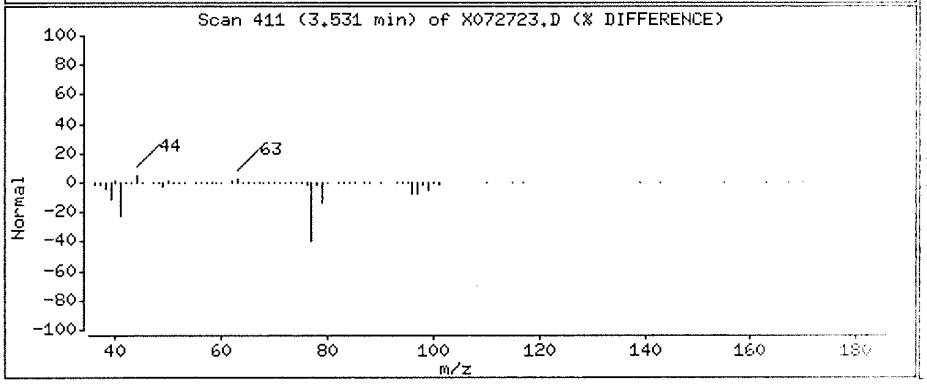












Data File: \\NAHSTWS005\target\chem\voa6.i\X210727.b\X072723.D

Date : 27-JUL-2021 17:42

Client ID: HS21071204-08

Instrument: voa6.i

Sample Info: HS21071204-08;HS21071204-08;;;

Purge Volume: 5.0

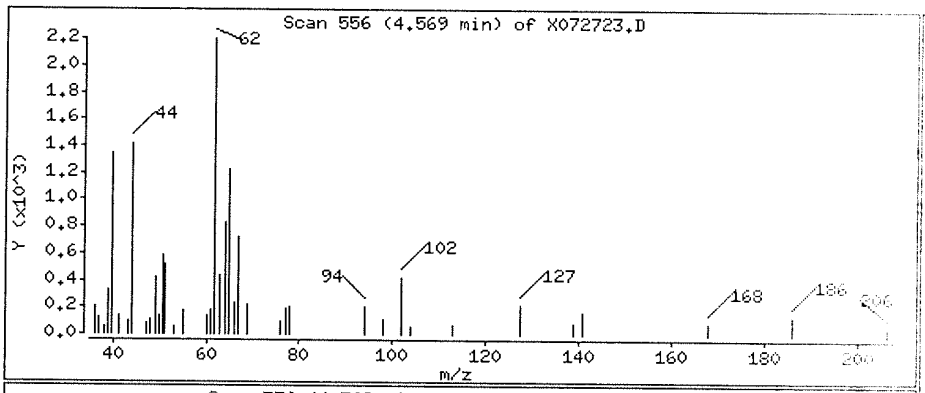
Operator: PC

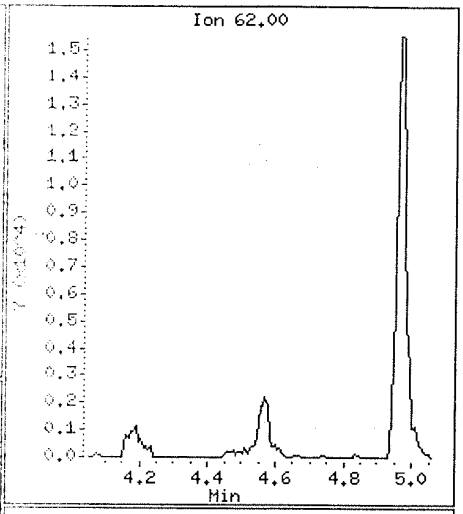
Column phase: DB624

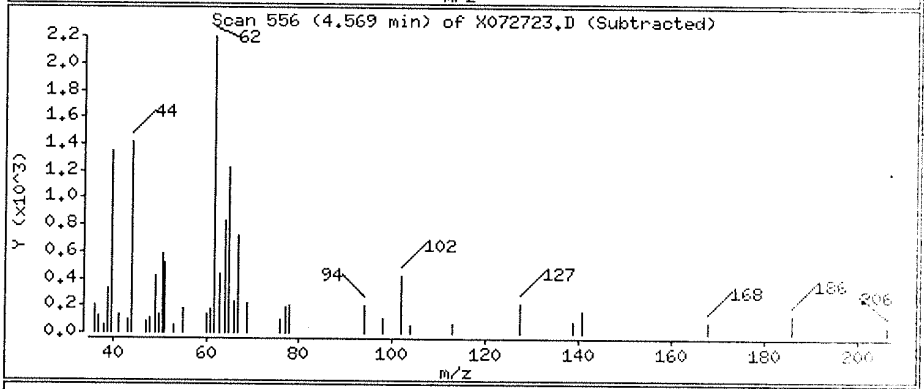
Column diameter: 0.18

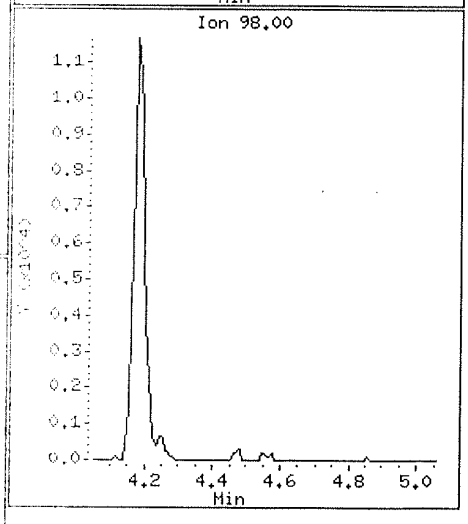
33 1,2-Dichloroethane

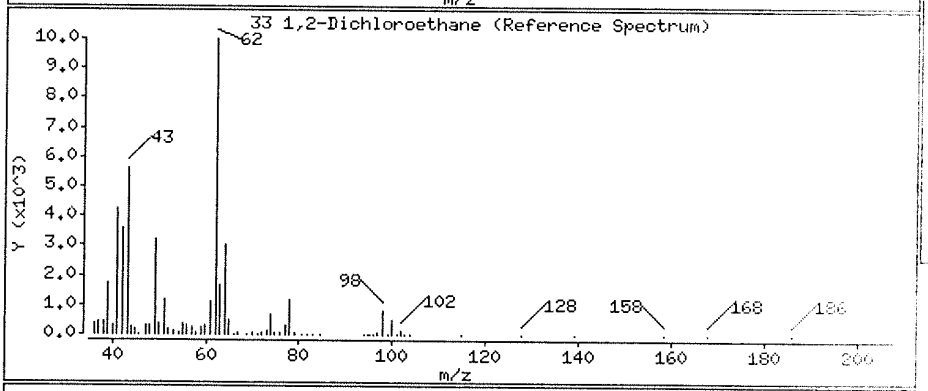
Concentration: 0.56 ug/l

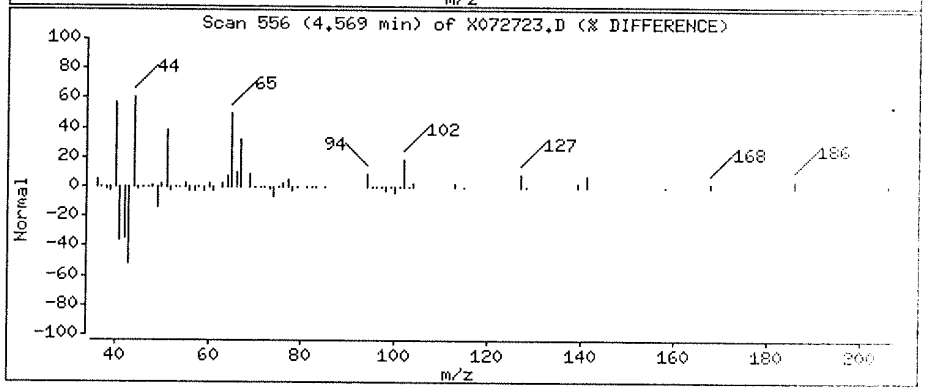












Data File: \\NAHSTWS005\target\chem\voa6.i\X210727.b\X072723.D Page 6

Date : 27-JUL-2021 17:42

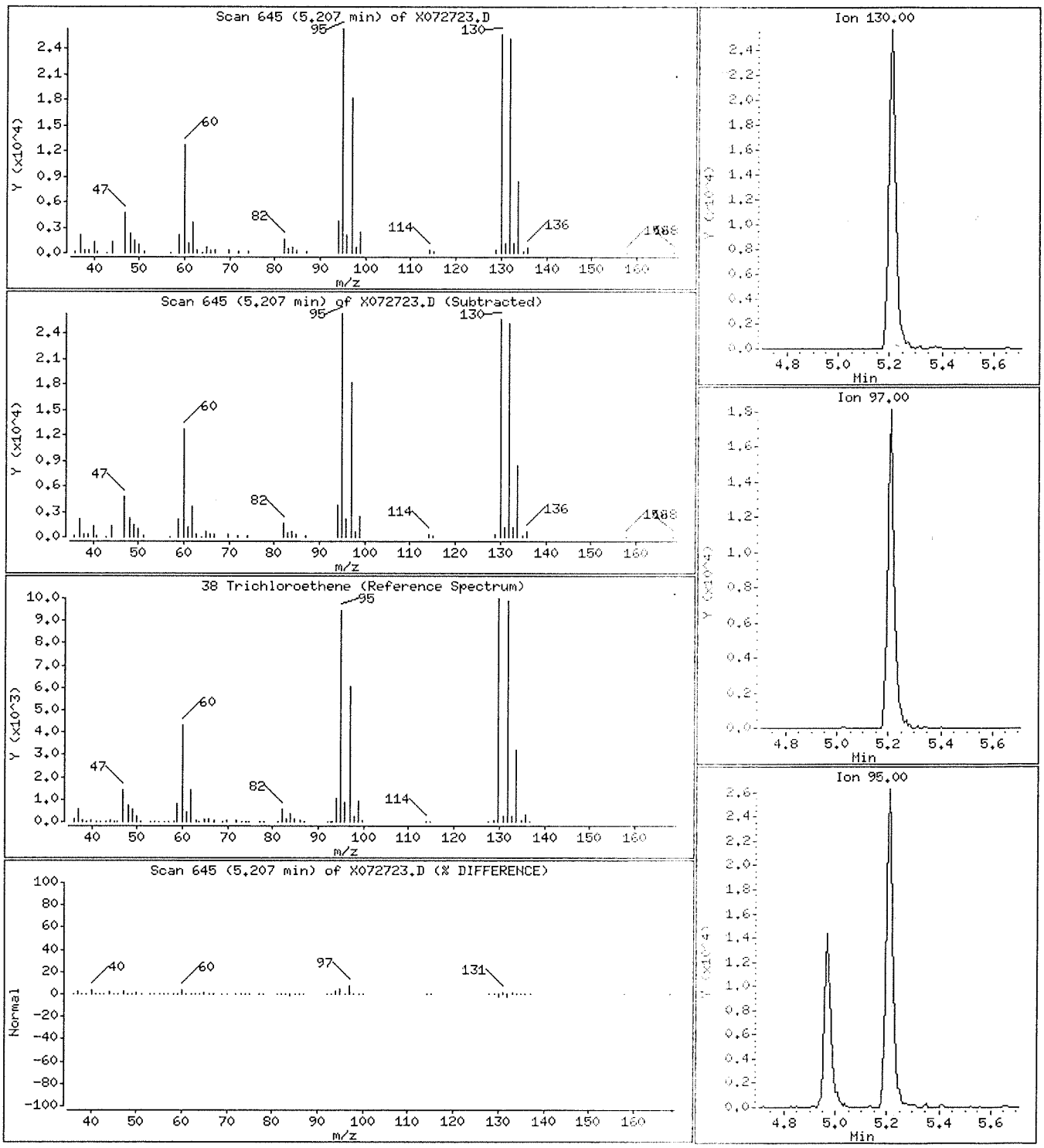
Client ID: HS21071204-08 Instrument: voa6.i

Sample Info: HS21071204-08;HS21071204-08;;;

Purge Volume: 5.0 Operator: PC

Column phase: DB624 Column diameter: 0.18

38 Trichloroethene Concentration: 7.62 ug/l



Data File: \\NAHSTWS005\target\chem\voa6.i\X210727.b\X072724.D Page 1
Report Date: 10-Sep-2021 13:10

ALS Laboratory Group

Data file : \\NAHSTWS005\target\chem\voa6.i\X210727.b\X072724.D
Lab Smp Id: HS21071204-06 Client Smp ID: HS21071204-06
Inj Date : 27-JUL-2021 18:03
Operator : PC Inst ID: voa6.i
Smp Info : HS21071204-06;HS21071204-06;;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\target\chem\voa6.i\X210727.b\8260W.m
Meth Date : 10-Sep-2021 13:08 Genoveva.R Quant Type: ISTD
Cal Date : 26-JUL-2021 13:31 Cal File: X072608.D
Als bottle: 23
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0474-dod.sub
Target Version: 4.14
Processing Host: NAHSTW7056

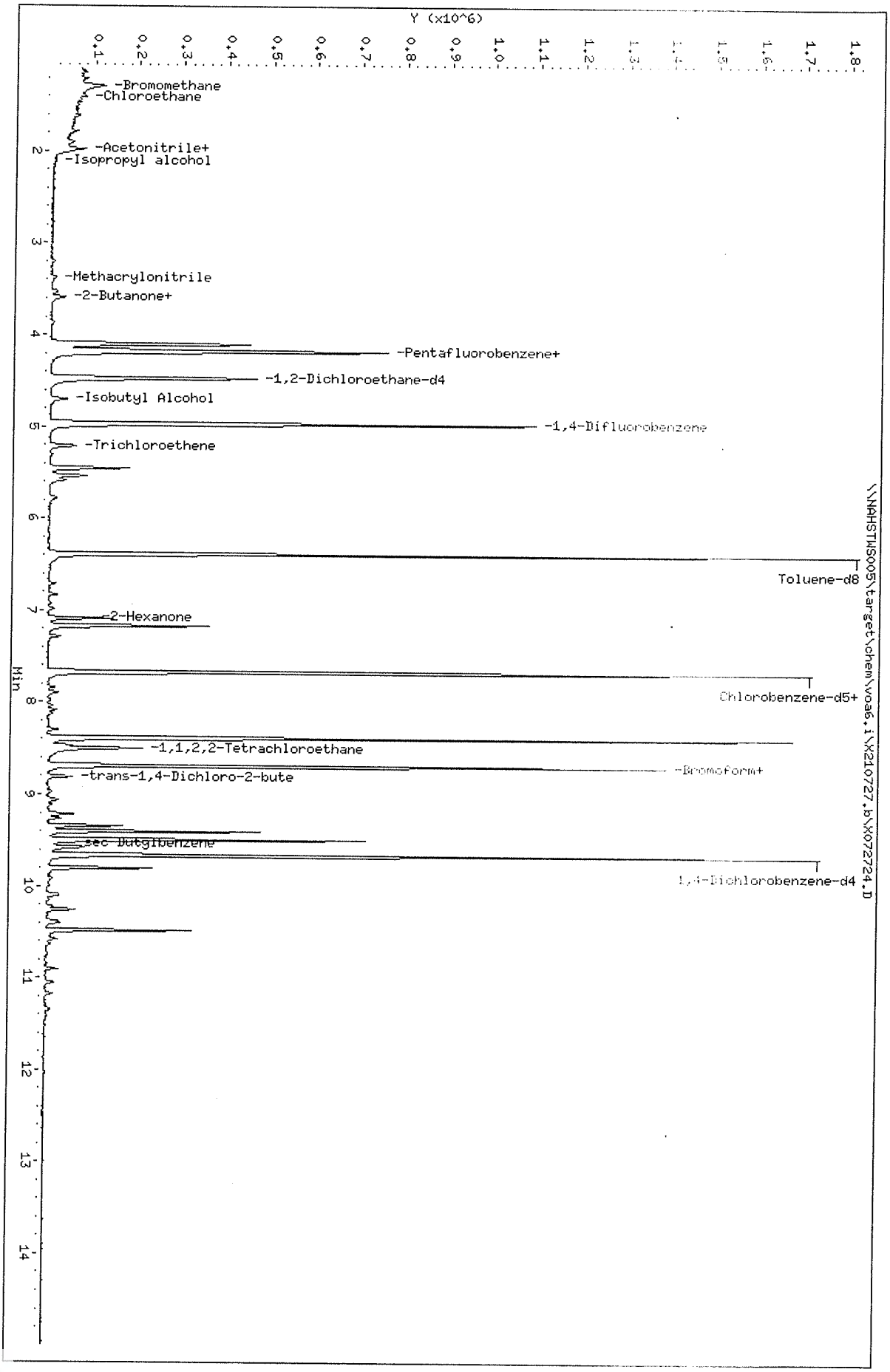
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

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	4.182	(1.000)	[illegible]	50.0000	
$	30 Dibromofluoromethane	113	4.103	4.103	(0.981)	303011	48.8840	48.88
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	359530	46.9010	46.90
*	36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	887861	50.0000	
*	47 Chlorobenzene-d5	117	7.670	7.671	(1.000)	786784	50.0000	
$	48 Toluene-d8	98	6.388	6.388	(0.833)	1029876	54.2548	54.25
$	69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	347259	46.2104	46.21
*	70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	870394	50.0000	
	5 Vinyl Chloride	62	1.145	1.145	(0.274)	6905	0.76588	0.76(a)
	27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	7836	1.10062	1.10(a)
	38 Trichloroethene	130	5.206	5.207	(1.049)	14516	2.32554	2.32(a)

QC Flag Legend

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



Data File: \\NAHSTWS005\target\chem\voa6.i\X210727.b\X072724.D
Date : 27-JUL-2021 18:03
Client ID: HS21071204-06
Sample Info: HS21071204-06;HS21071204-06;;;
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\NAHSTWS005\target\chem\voa6.i\X210727.b\X072724.D

Date : 27-JUL-2021 18:03

Client ID: HS21071204-06

Instrument: voa6.i

Sample Info: HS21071204-06;HS21071204-06;;;

Purge Volume: 5.0

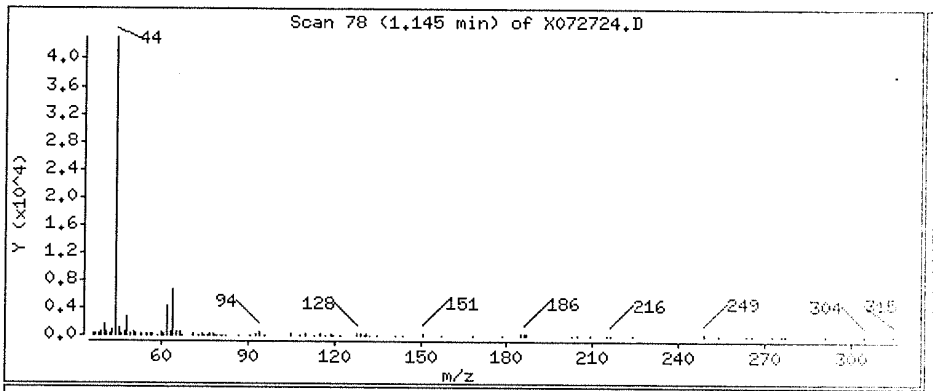
Operator: PC

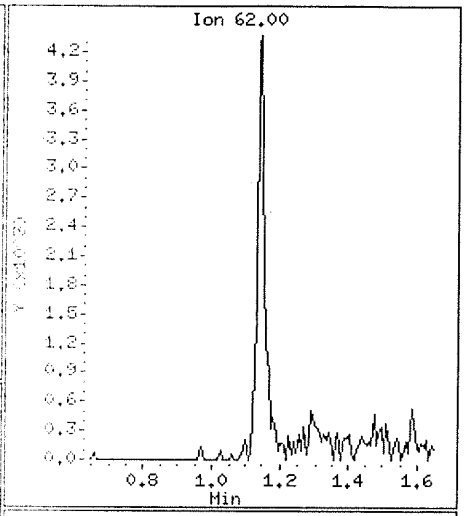
Column phase: DB624

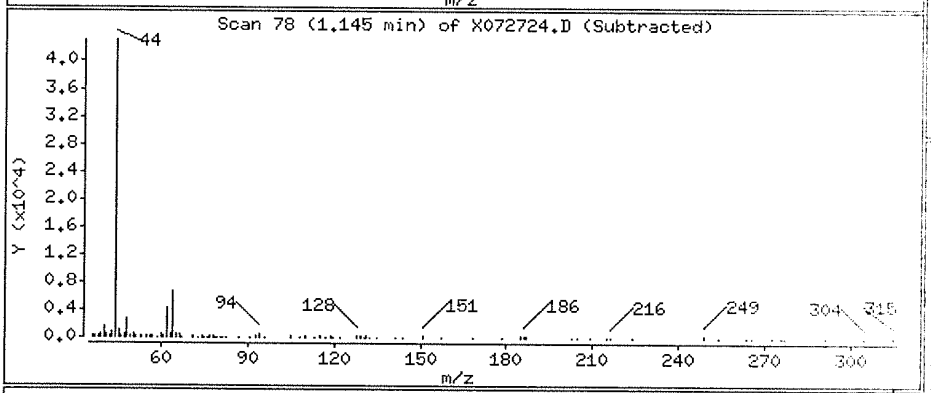
Column diameter: 0.18

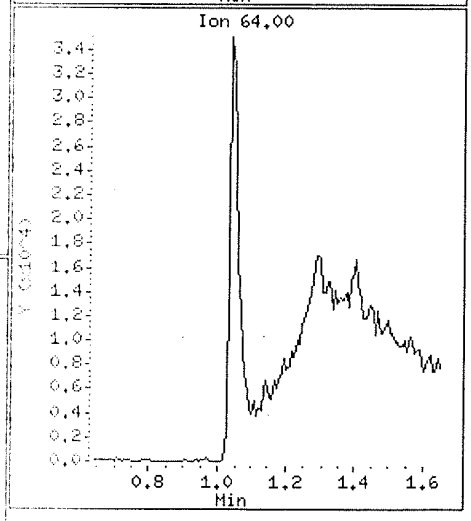
5 Vinyl Chloride

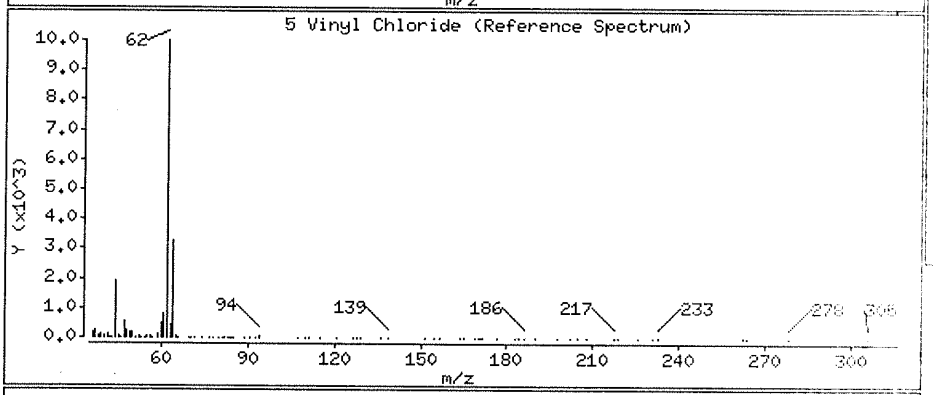
Concentration: 0.76 ug/l

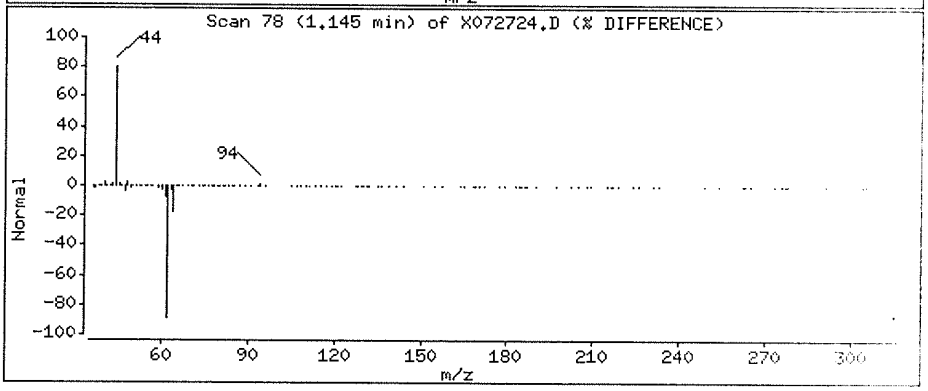












Data File: \\NAHSTWS005\target\chem\voa6.i\X210727.b\X072724.D

Date : 27-JUL-2021 18:03

Client ID: HS21071204-06

Instrument: voa6.i

Sample Info: HS21071204-06;HS21071204-06;;;

Purge Volume: 5.0

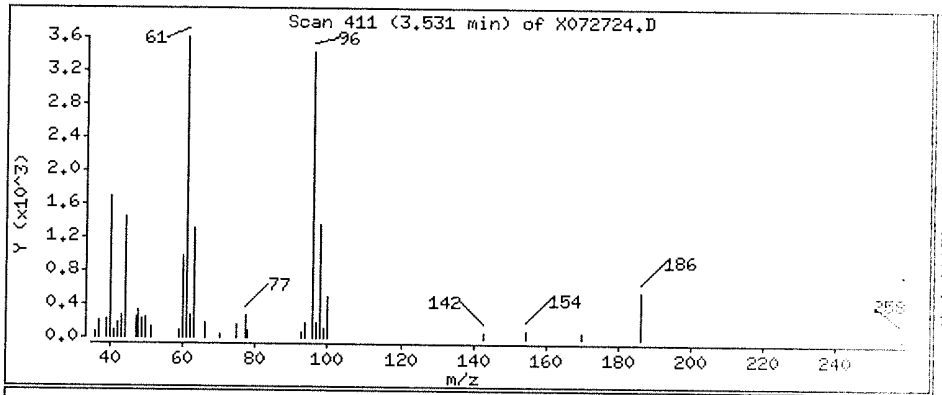
Operator: PC

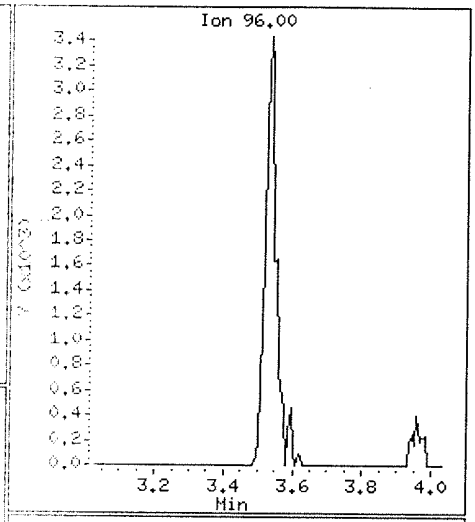
Column phase: DB624

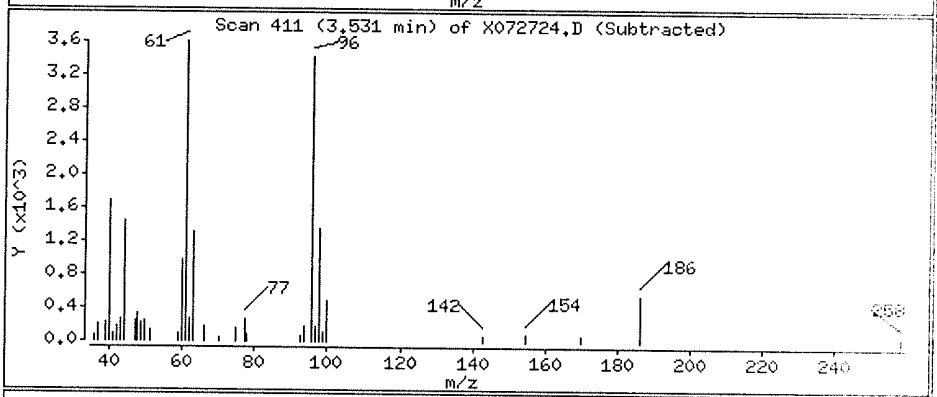
Column diameter: 0.18

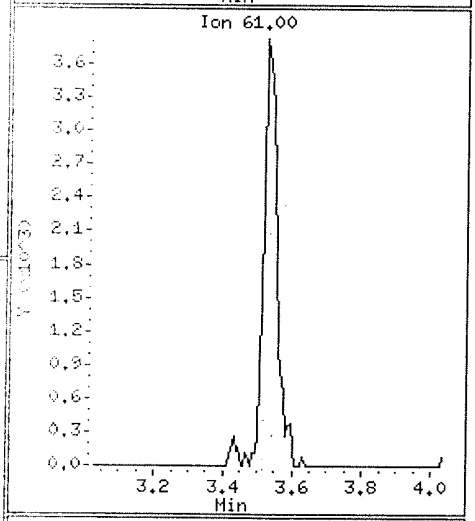
27 cis-1,2-Dichloroethene

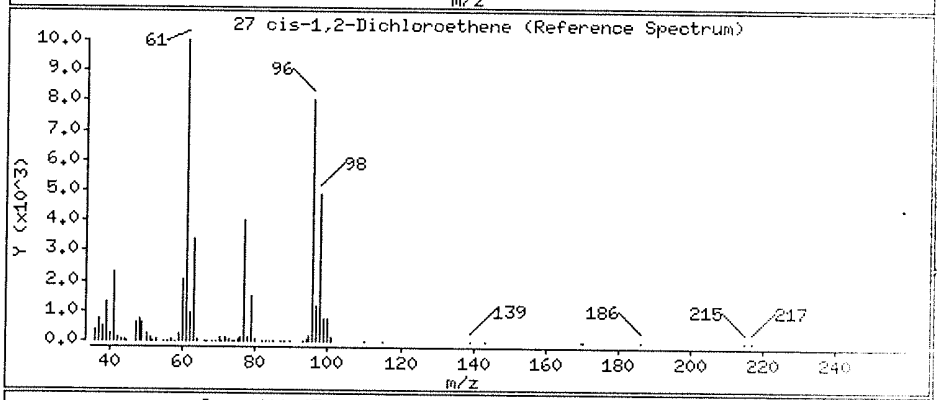
Concentration: 1.10 ug/l

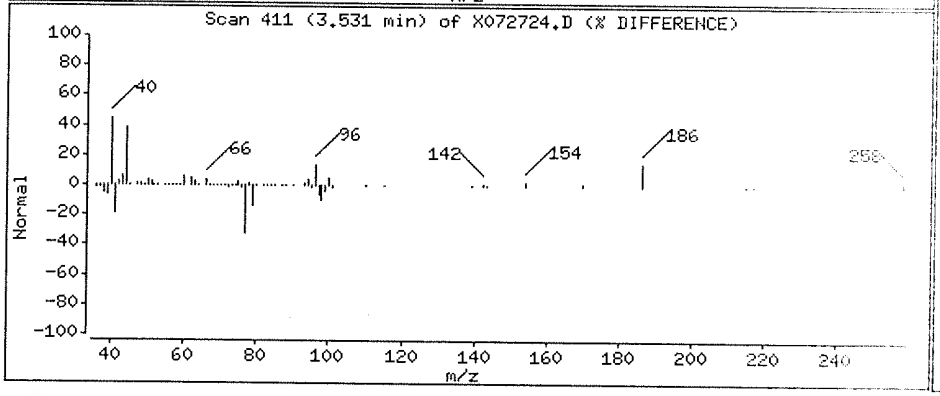


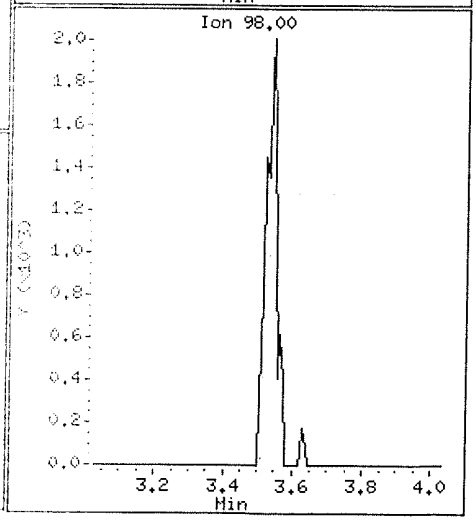












Data File: \\NAHSTWS005\target\chem\voa6.i\X210727.b\X072724.D

Date : 27-JUL-2021 18:03

Client ID: HS21071204-06

Instrument: voa6.i

Sample Info: HS21071204-06;HS21071204-06;;;

Purge Volume: 5.0

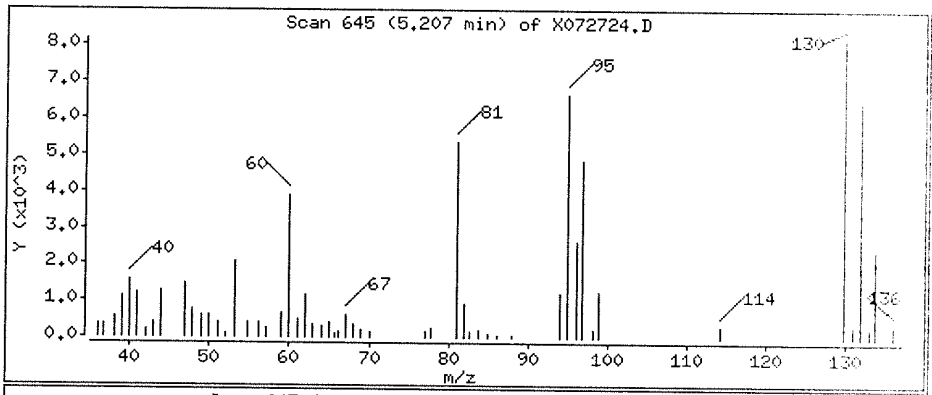
Operator: PC

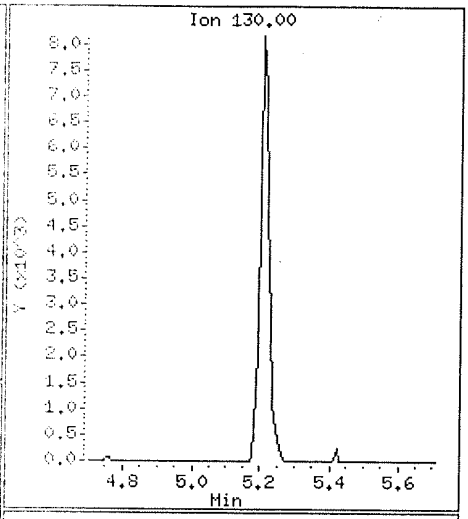
Column phase: DB624

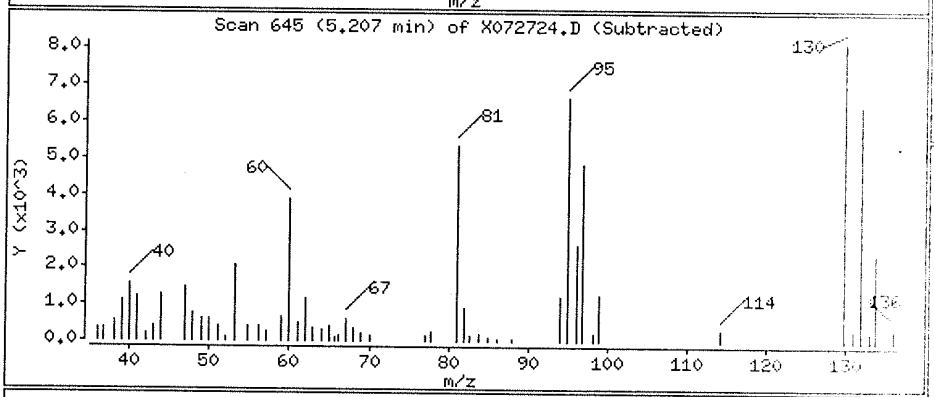
Column diameter: 0.18

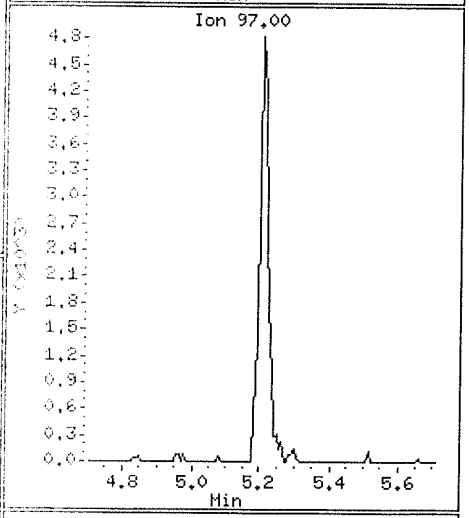
38 Trichloroethene

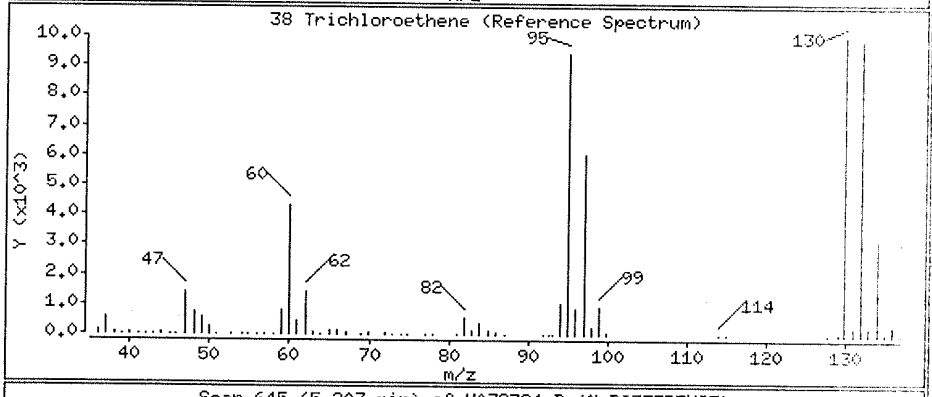
Concentration: 2.32 ug/l

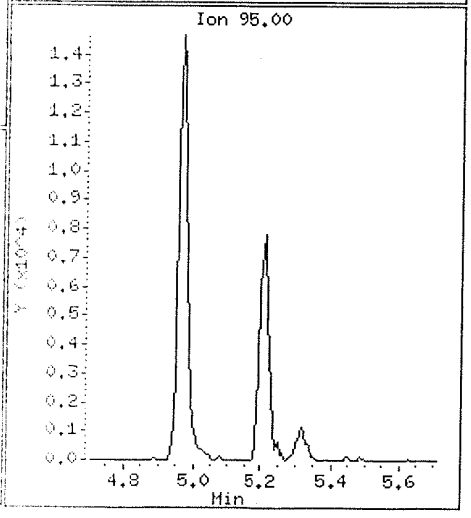


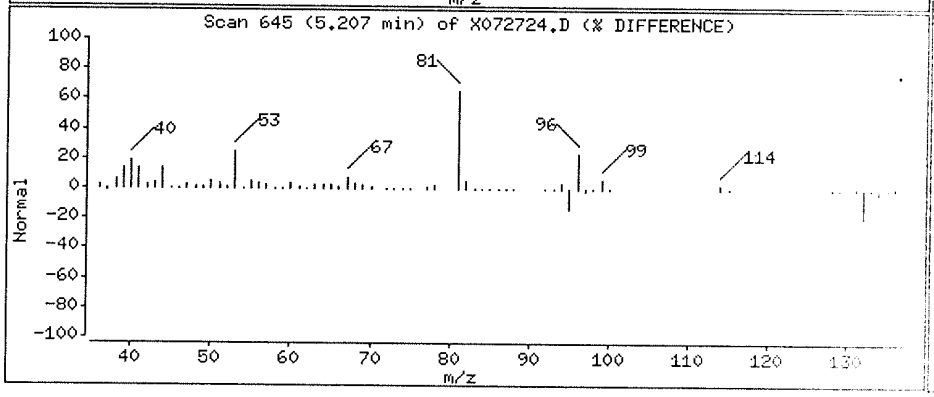












Data File: \\NAHSTWS005\target\chem\voa6.i\X210727.b\X072725.D Page 1
Report Date: 10-Sep-2021 13:10

ALS Laboratory Group

Data file : \\NAHSTWS005\target\chem\voa6.i\X210727.b\X072725.D
Lab Smp Id: HS21071204-07 Client Smp ID: HS21071204-07
Inj Date : 27-JUL-2021 18:24
Operator : PC Inst ID: voa6.i
Smp Info : HS21071204-07;HS21071204-07;;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\target\chem\voa6.i\X210727.b\8260W.m
Meth Date : 10-Sep-2021 13:08 Genoveva.R Quant Type: ISTD
Cal Date : 26-JUL-2021 13:31 Cal File: X072608.D
Als bottle: 24
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0474-dod.sub
Target Version: 4.14
Processing Host: NAHSTW7056

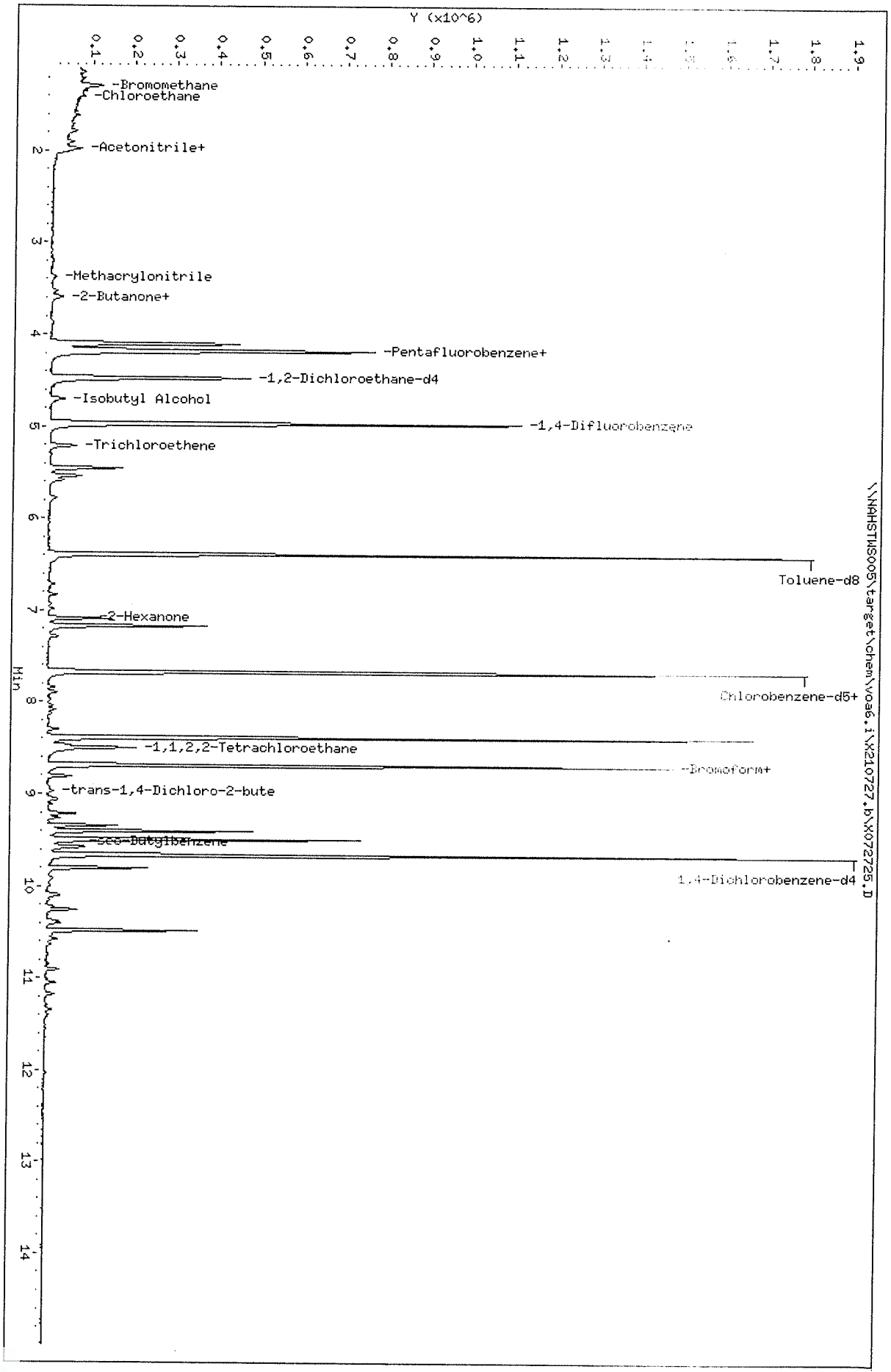
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

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	4.182	(1.000)	632266	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	585174	47.9287	47.92
$ 35 1,2-Dichloroethane-d4	65	4.469	4.476	(1.069)	564730	44.9959	44.99
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	907293	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	808643	50.0000	
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	1053076	54.4925	54.49
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	367446	47.5164	47.51
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	688023	50.0000	
5 Vinyl Chloride	62	1.145	1.145	(0.274)	7357	0.79439	0.79(a)
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	6666	0.97361	0.97(a)
38 Trichloroethene	130	5.207	5.207	(1.049)	13238	2.07552	2.07(a)

QC Flag Legend

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



Data File: \\NAHSTWS005\target\chem\voa6.i\X210727.b\X072725.D
Date : 27-JUL-2021 18:24
Client ID: HS21071204-07
Sample Info: HS21071204-07;HS21071204-07;;;
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\NAHSTWS005\target\chem\voa6.i\X210727.b\X072725.D

Date : 27-JUL-2021 18:24

Client ID: HS21071204-07

Instrument: voa6.i

Sample Info: HS21071204-07;HS21071204-07;;;

Purge Volume: 5.0

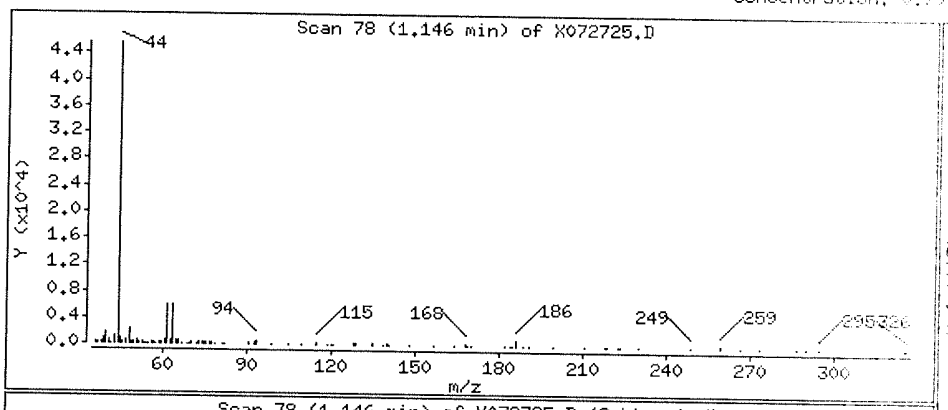
Operator: PC

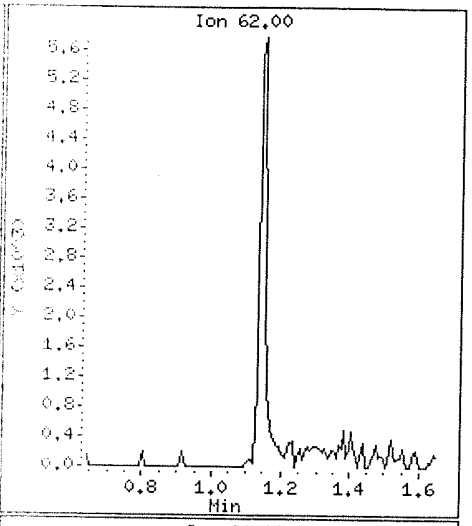
Column phase: DB624

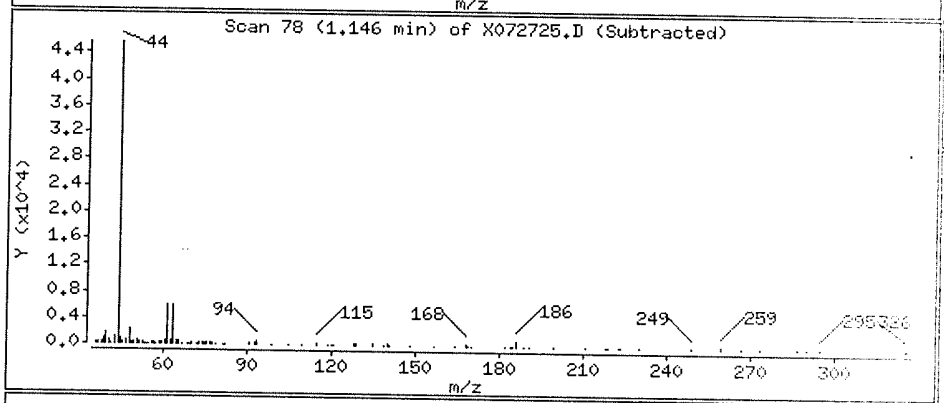
Column diameter: 0.18

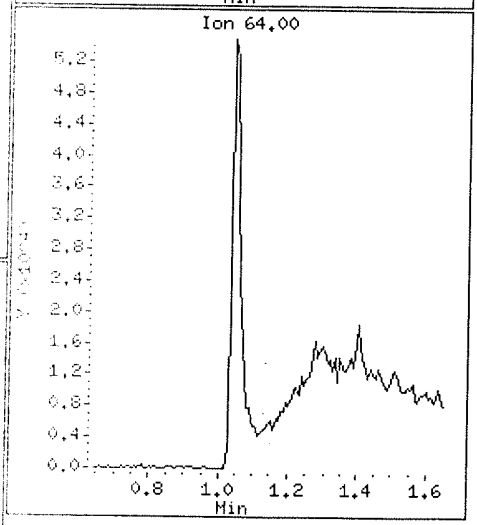
5 Vinyl Chloride

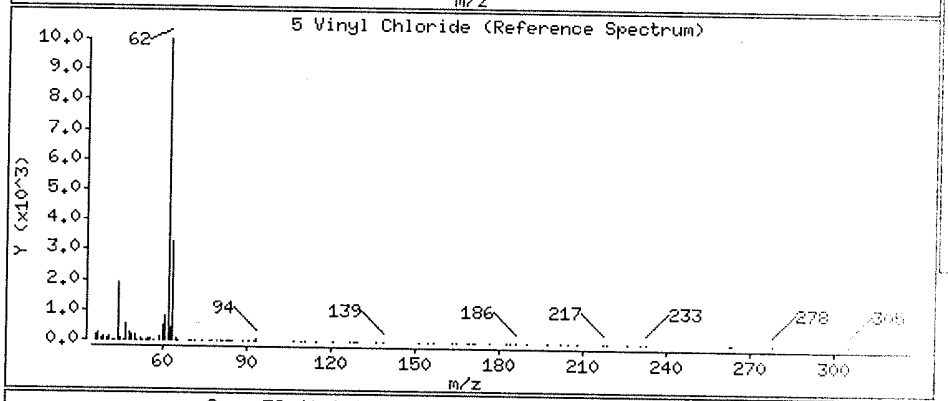
Concentration: 0.79 ug/l

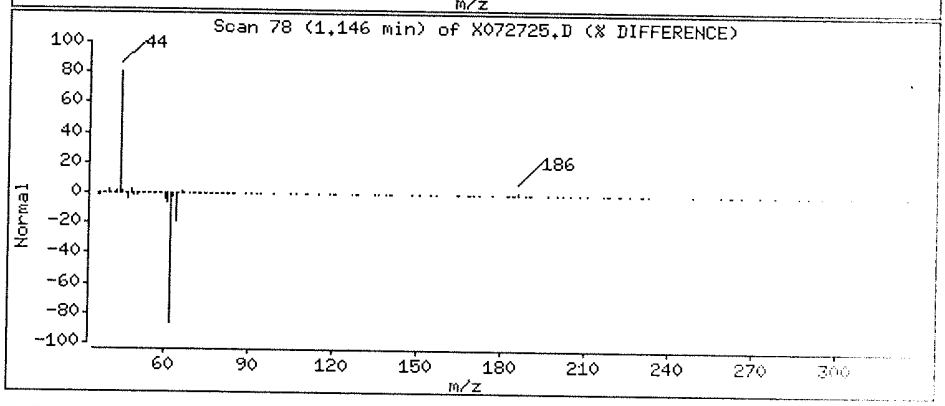












Data File: \\NAHSTWS005\target\chem\voa6.i\X210727.b\X072725.D

Date : 27-JUL-2021 18:24

Client ID: HS21071204-07

Instrument: voa6.i

Sample Info: HS21071204-07;HS21071204-07;;;

Purge Volume: 5.0

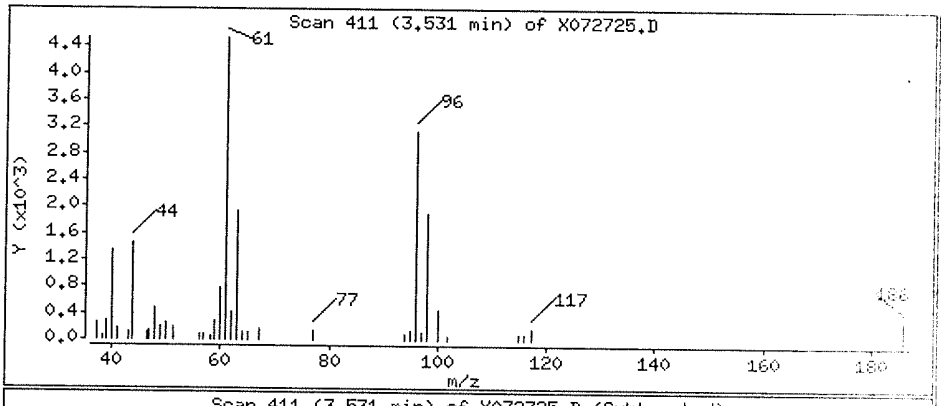
Operator: PC

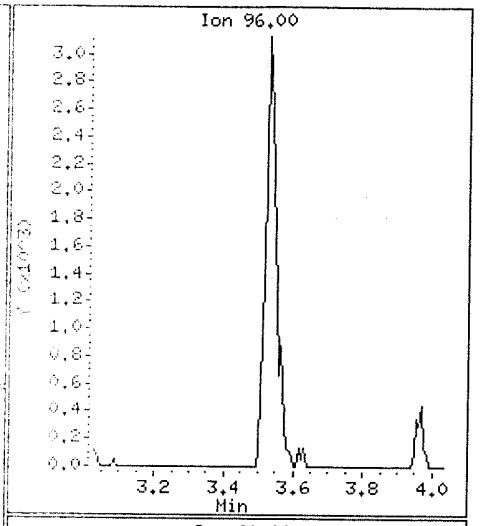
Column phase: DB624

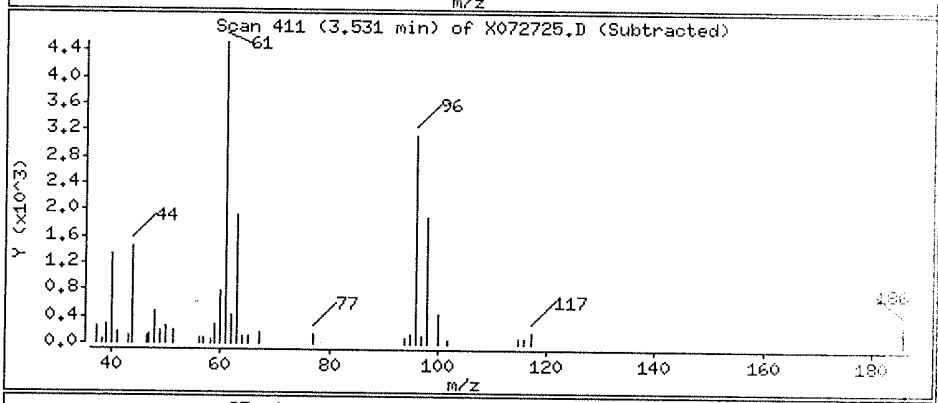
Column diameter: 0.18

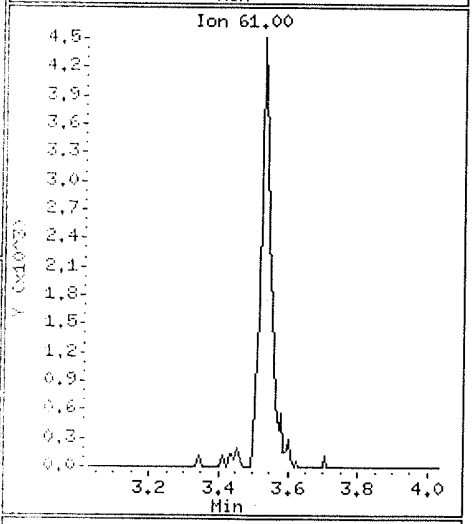
27 cis-1,2-Dichloroethene

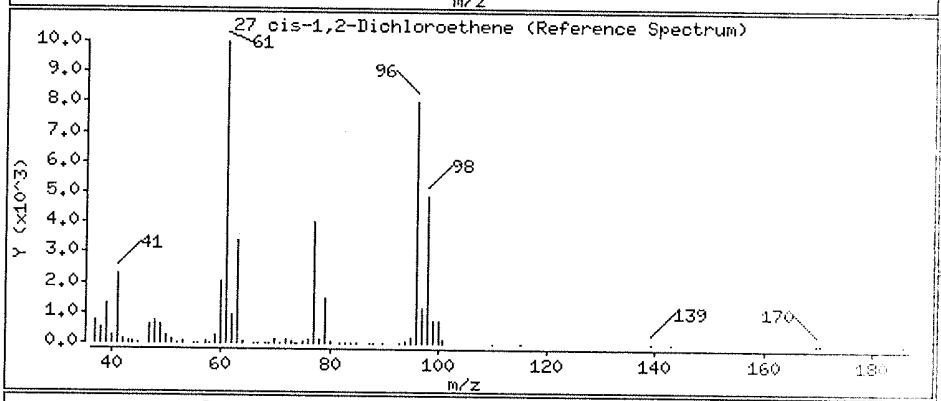
Concentration: 0.97 ug/l

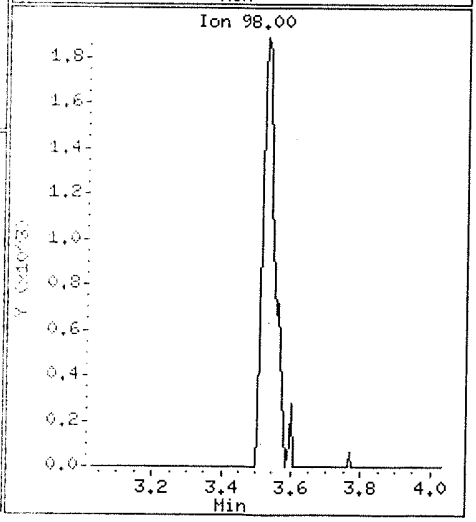


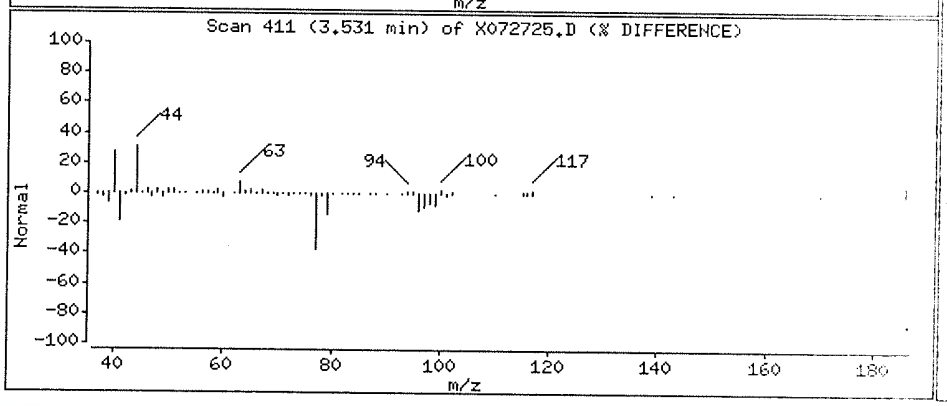












Data File: \\NAHSTWS005\target\chem\voa6.i\X210727.b\X072725.D

Date : 27-JUL-2021 18:24

Client ID: HS21071204-07

Instrument: voa6.i

Sample Info: HS21071204-07;HS21071204-07;;;

Purge Volume: 5.0

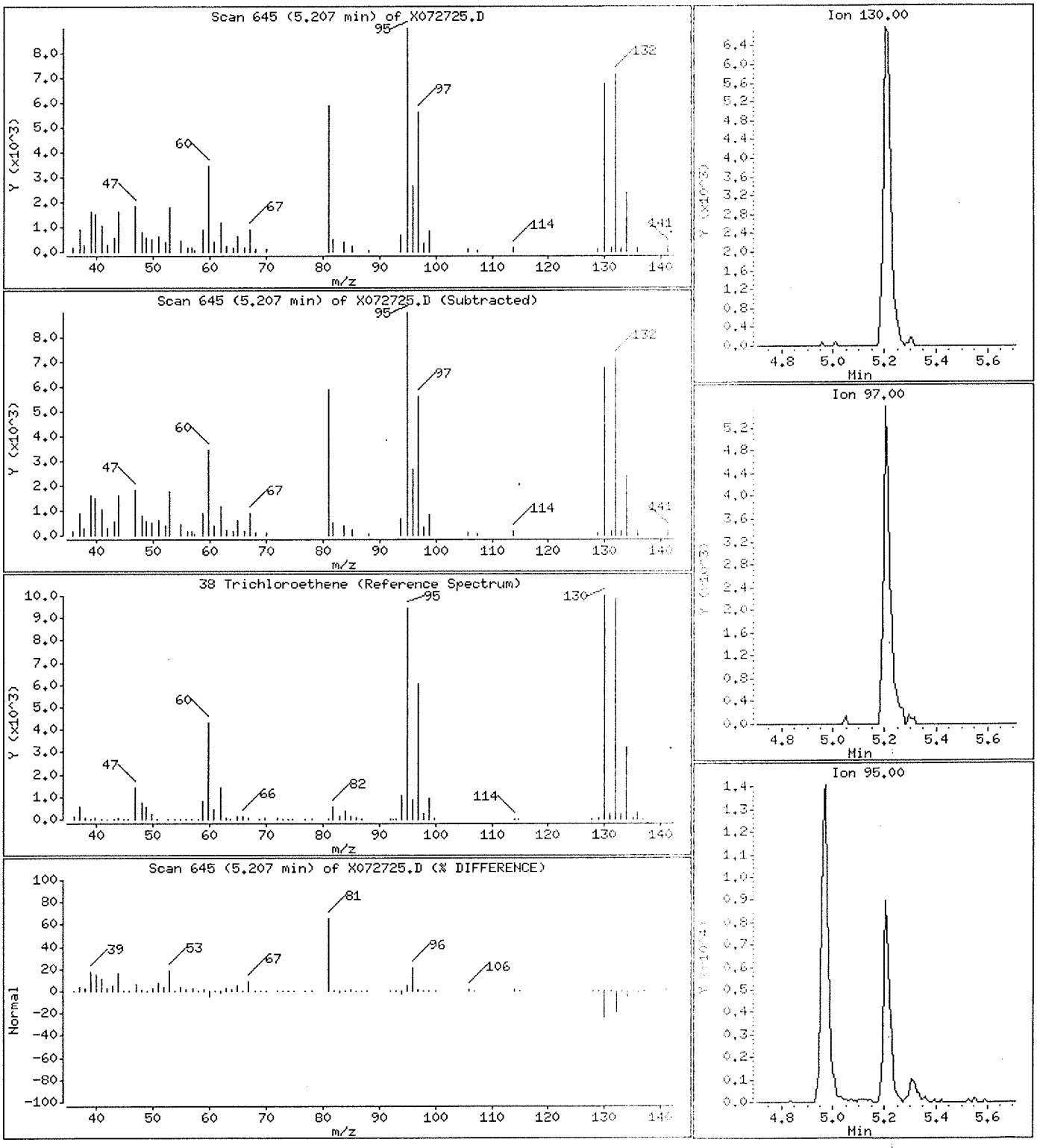
Operator: PC

Column phase: DB624

Column diameter: 0.18

38 Trichloroethene

Concentration: 3.07 ug/l



Data File: \\NAHSTWS005\target\chem\voa6.i\X210727.b\X072726.D Page 1
Report Date: 10-Sep-2021 13:10

ALS Laboratory Group

Data file : \\NAHSTWS005\target\chem\voa6.i\X210727.b\X072726.D
Lab Smp Id: HS21071204-04 Client Smp ID: HS21071204-04
Inj Date : 27-JUL-2021 18:46
Operator : PC Inst ID: voa6.i
Smp Info : HS21071204-04;HS21071204-04;;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\target\chem\voa6.i\X210727.b\8260W.m
Meth Date : 10-Sep-2021 13:08 Genoveva.R Quant Type: ISTD
Cal Date : 26-JUL-2021 13:31 Cal File: X072608.D
Als bottle: 25
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0474-dod.sub
Target Version: 4.14
Processing Host: NAHSTW7056

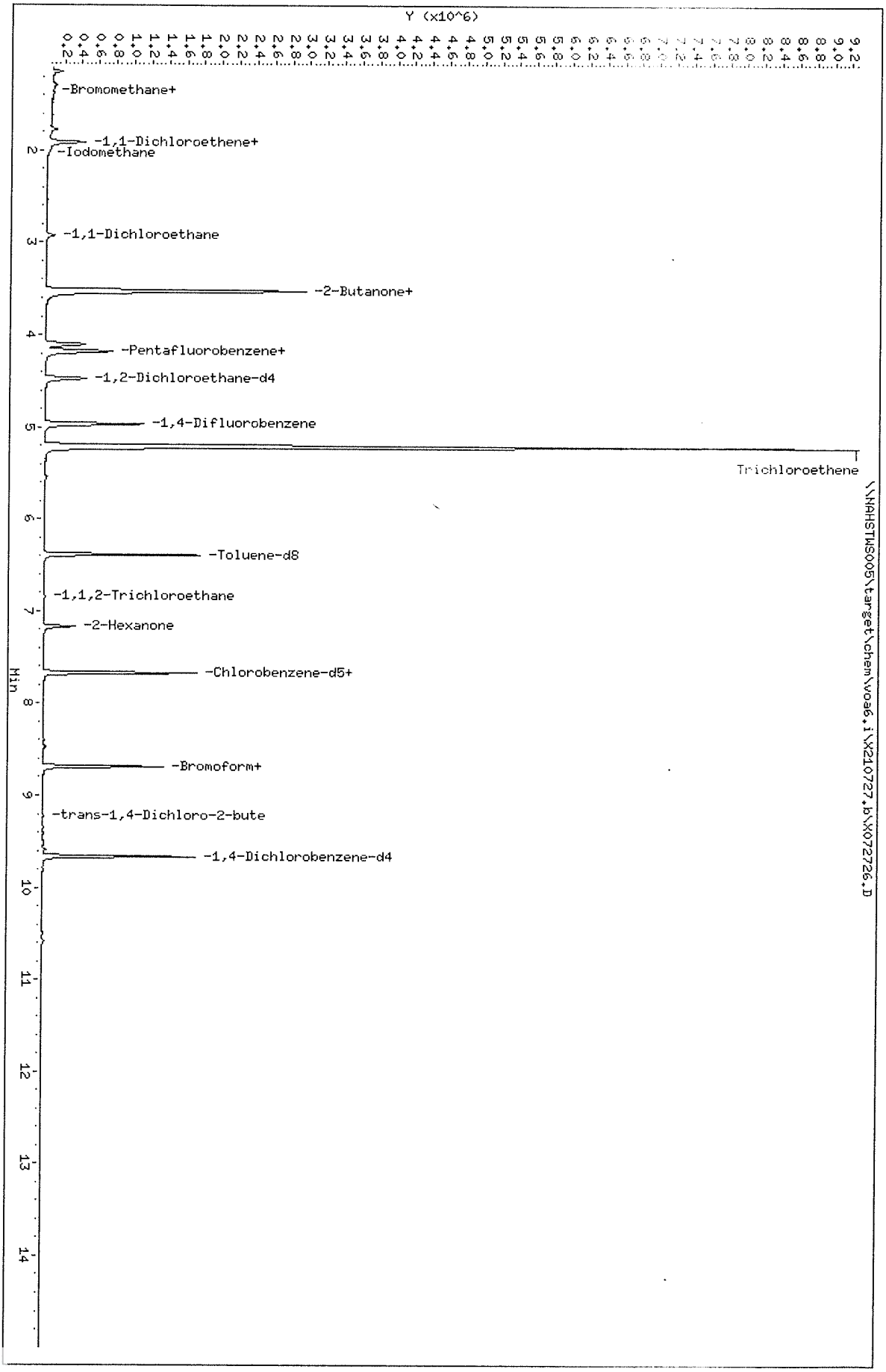
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

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	4.182	(1.000)	633812	50.0000	
$ 30 Dibromofluoromethane	113	4.096	4.103	(0.979)	306267	47.9823	47.98
$ 35 1,2-Dichloroethane-d4	65	4.469	4.476	(1.068)	362696	45.9590	45.95
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	907020	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	822657	50.0000	
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	1043847	53.1335	53.13
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	359469	45.7691	45.76
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	381473	50.0000	
5 Vinyl Chloride	62	1.145	1.145	(0.274)	84859	9.14041	9.14
11 1,1-Dichloroethene	96	1.912	1.912	(0.457)	79980	10.5304	10.53
27 cis-1,2-Dichloroethene	96	3.523	3.530	(0.842)	1489767	217.054	217.05(A)
38 Trichloroethene	130	5.207	5.207	(1.049)	2867806	440.355	440.35(A)
53 1,1,2-Trichloroethane	83	6.847	6.840	(0.893)	3899	0.78743	0.78(a)

QC Flag Legend

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



Data File: \\NAHSTWS005\target\chem\voa6.i\X210727.b\X072726.D
Date : 27-JUL-2021 18:46
Client ID: HS21071204-04
Sample Info: HS21071204-04;HS21071204-04;;;
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\NAHSTWS005\target\chem\voa6.i\X210727.b\X072726.D

Date : 27-JUL-2021 18:46

Client ID: HS21071204-04

Instrument: voa6.i

Sample Info: HS21071204-04;HS21071204-04;;;

Purge Volume: 5.0

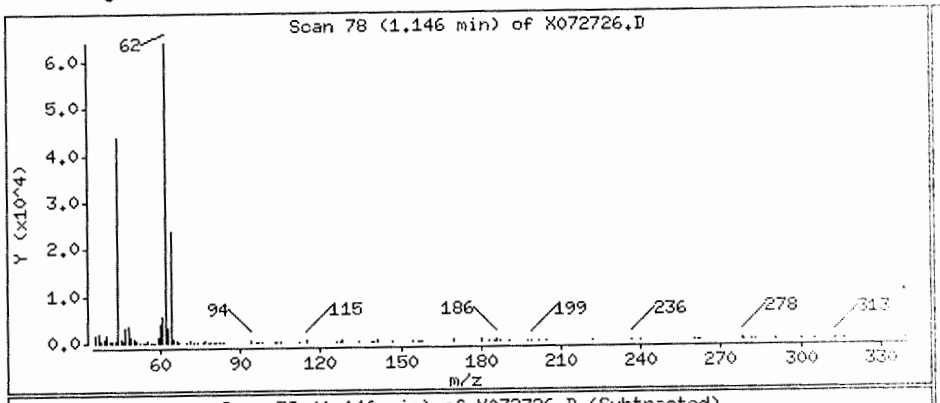
Operator: PC

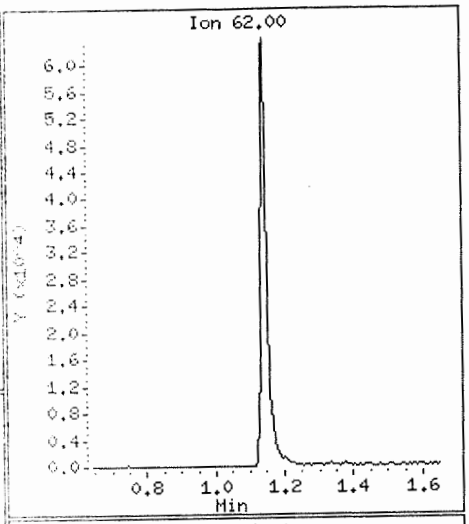
Column phase: DB624

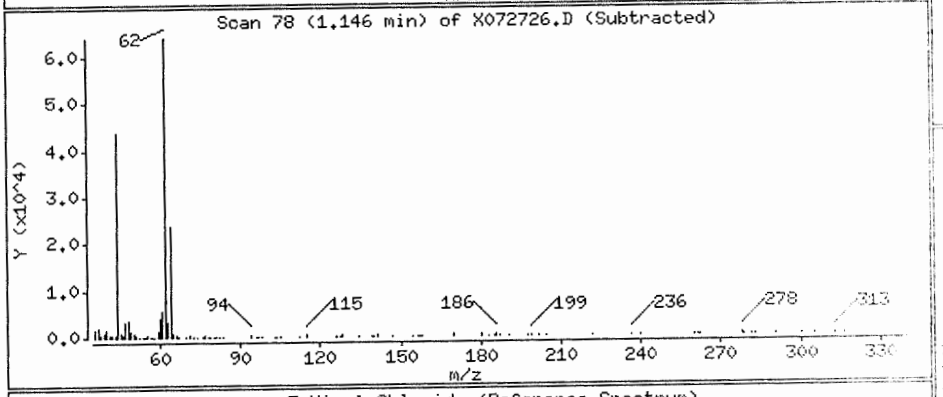
Column diameter: 0.18

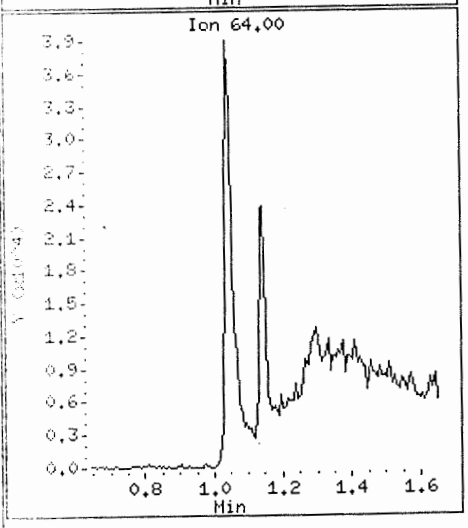
5 Vinyl Chloride

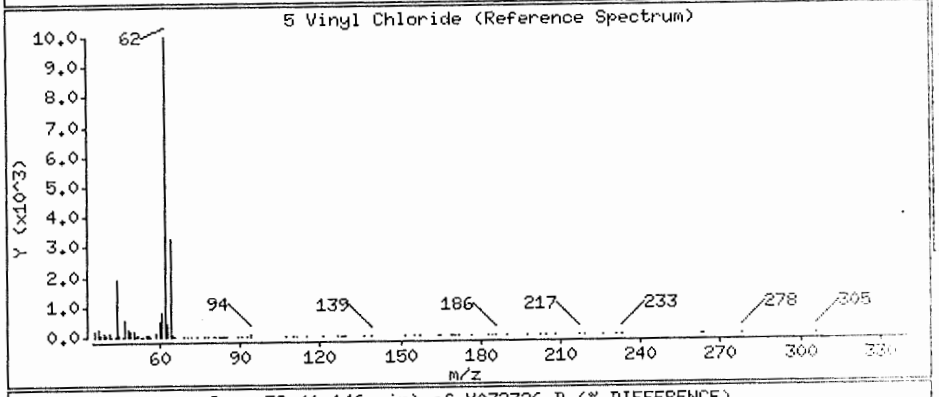
Concentration: 9.14 ug/l

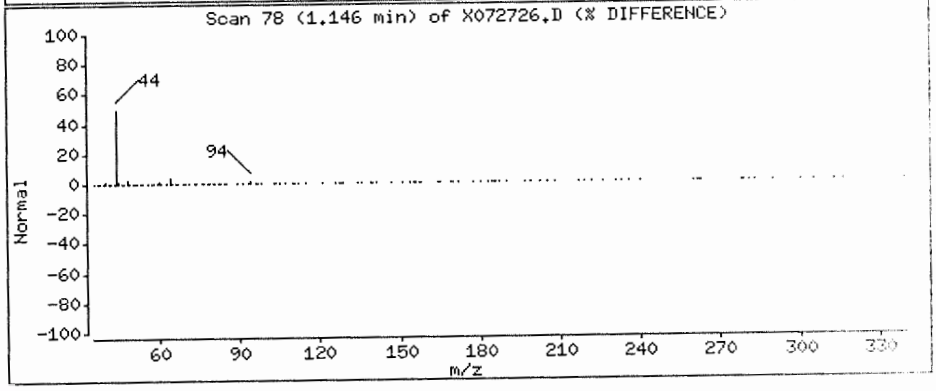












Data File: \\NAHSTWS005\target\chem\voa6.i\X210727.b\X072726.D

Date : 27-JUL-2021 18:46

Client ID: HS21071204-04

Instrument: voa6.i

Sample Info: HS21071204-04;HS21071204-04;;;

Purge Volume: 5.0

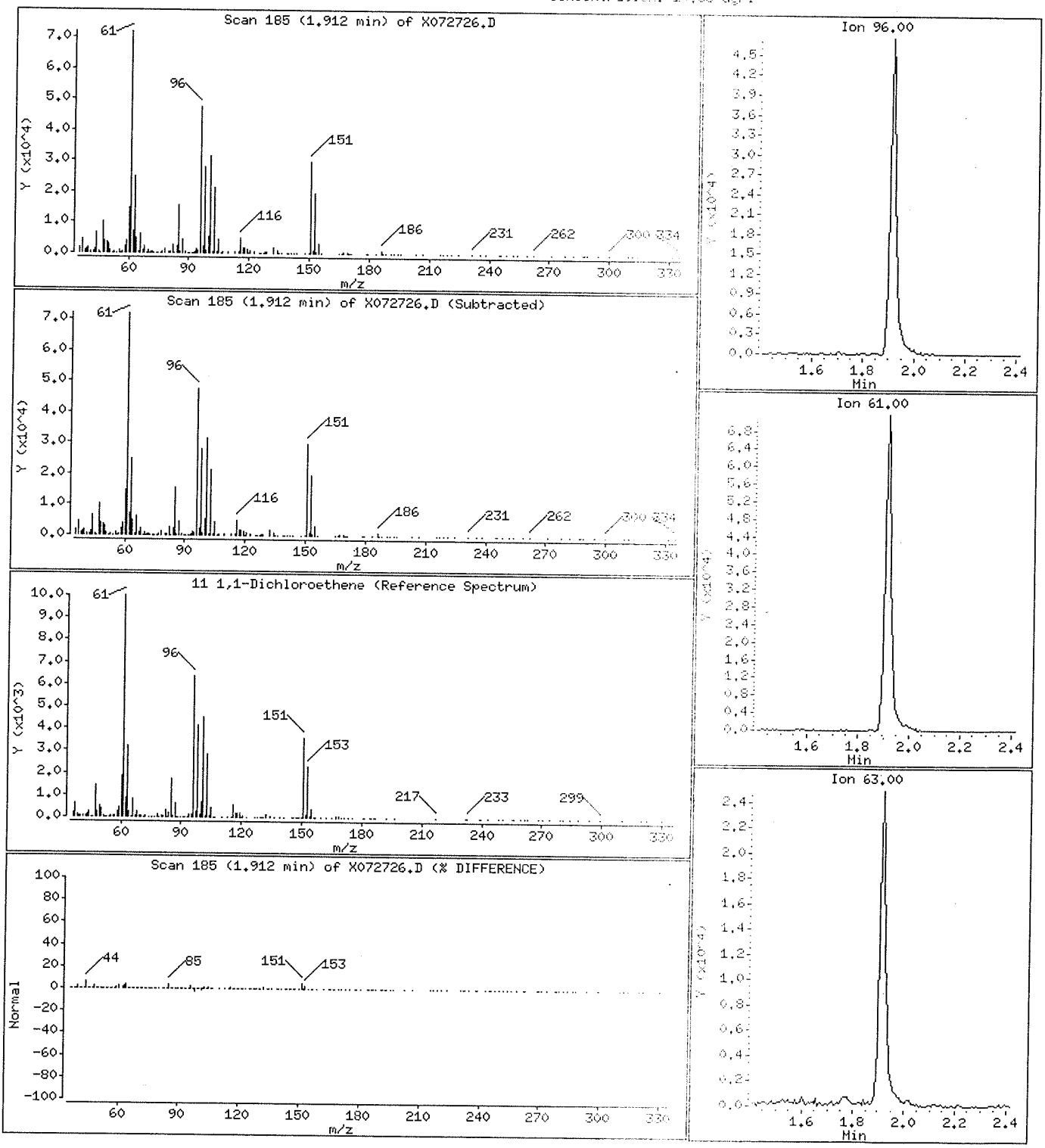
Operator: PC

Column phase: DB624

Column diameter: 0.18

11 1,1-Dichloroethene

Concentration: 10.53 ug/l



Data File: \\NAHSTWS005\target\chem\voa6.i\X210727.b\X072726.D

Date : 27-JUL-2021 18:46

Client ID: HS21071204-04

Instrument: voa6.i

Sample Info: HS21071204-04;HS21071204-04;;;

Purge Volume: 5.0

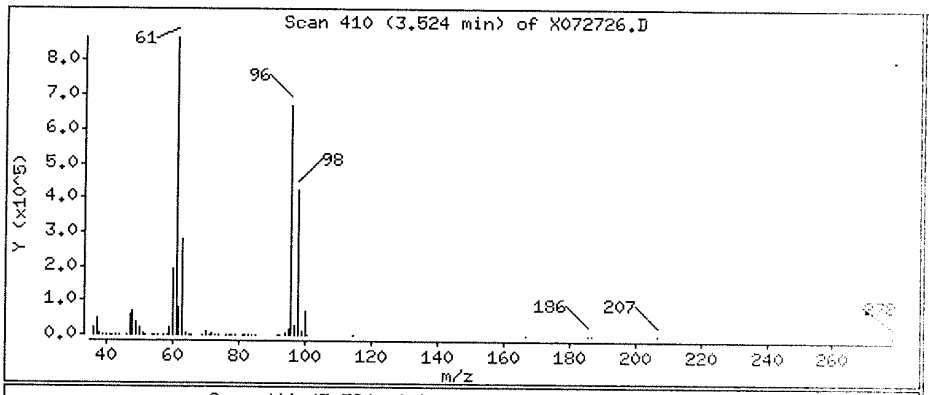
Operator: PC

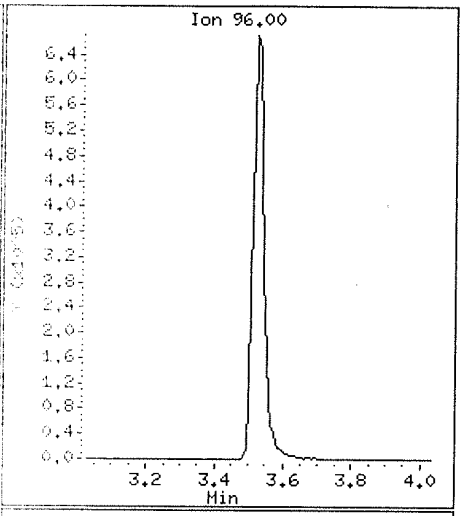
Column phase: DB624

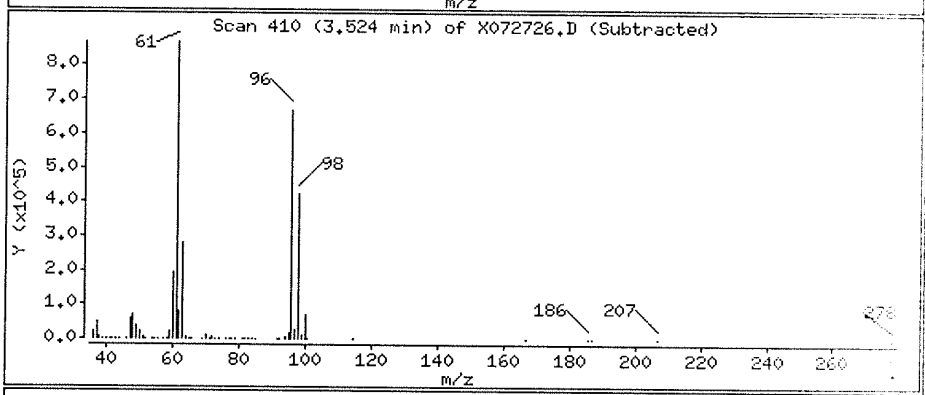
Column diameter: 0.18

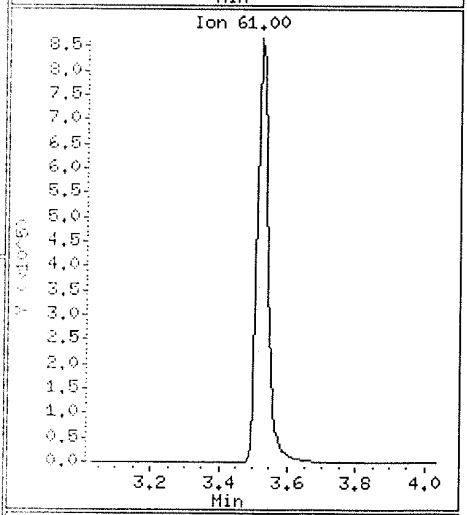
27 cis-1,2-Dichloroethene

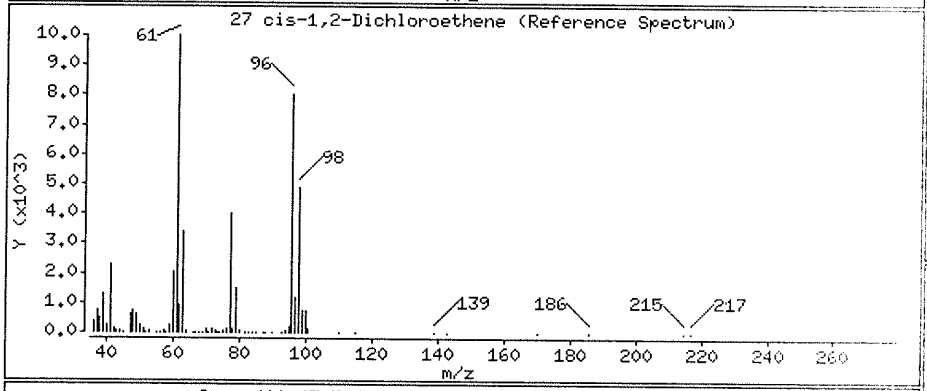
Concentration: 217.05 ug/l

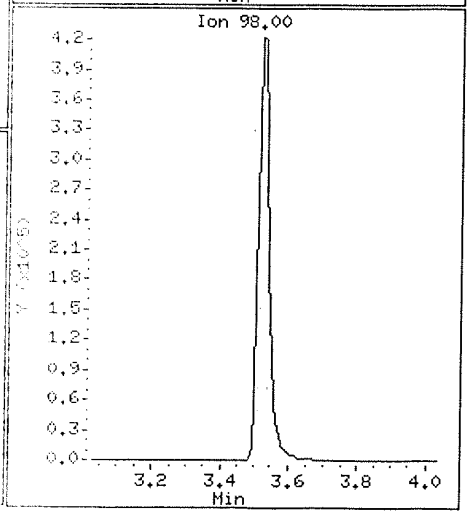


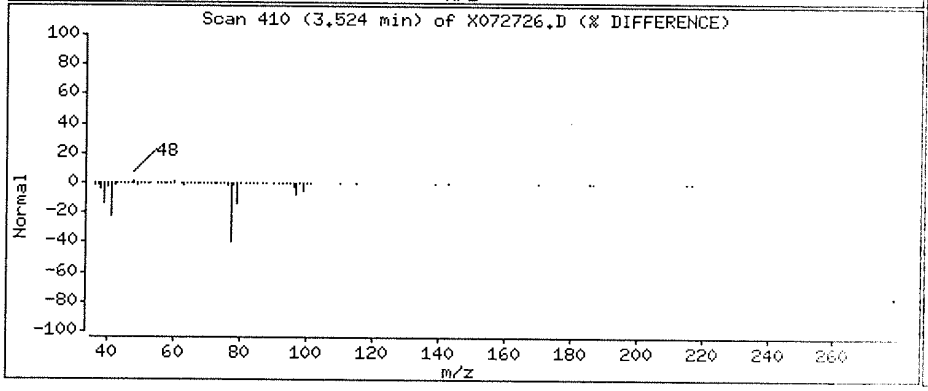












Data File: \\NAHSTWS005\target\chem\voa6.i\X210727.b\X072726.D

Date : 27-JUL-2021 18:46

Client ID: HS21071204-04

Instrument: voa6.i

Sample Info: HS21071204-04;HS21071204-04;;;

Purge Volume: 5.0

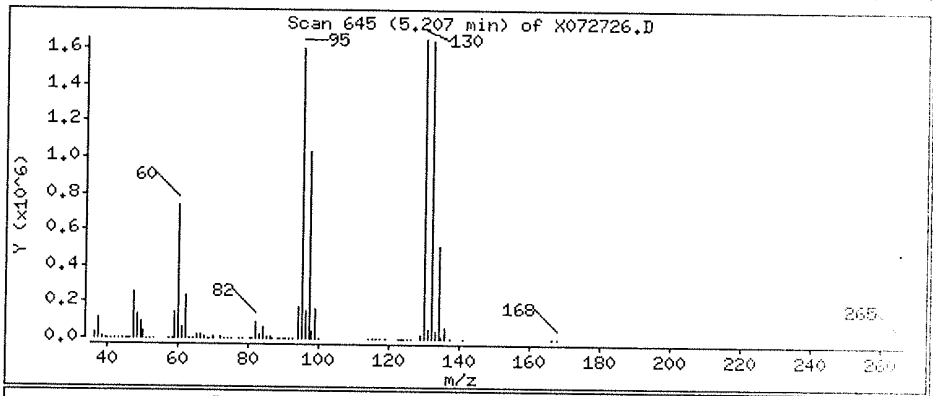
Operator: PC

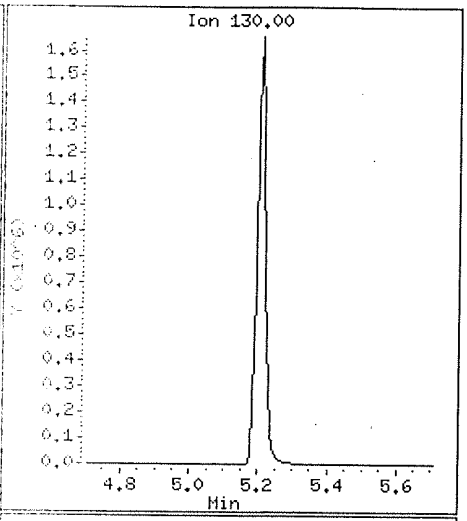
Column phase: DB624

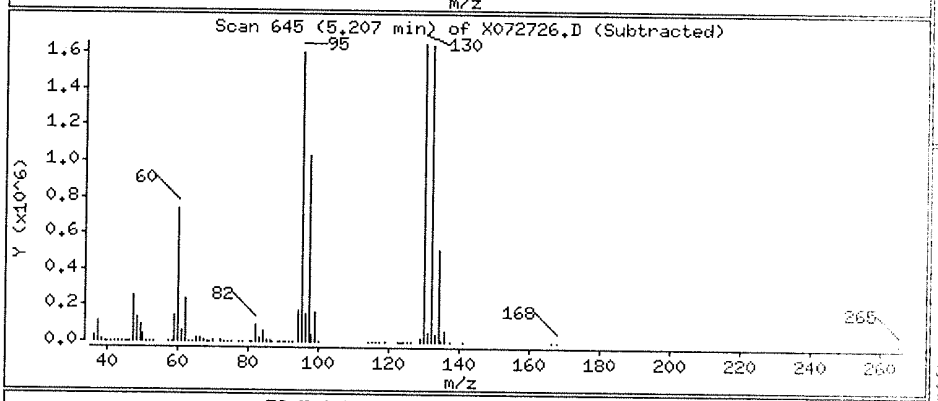
Column diameter: 0.18

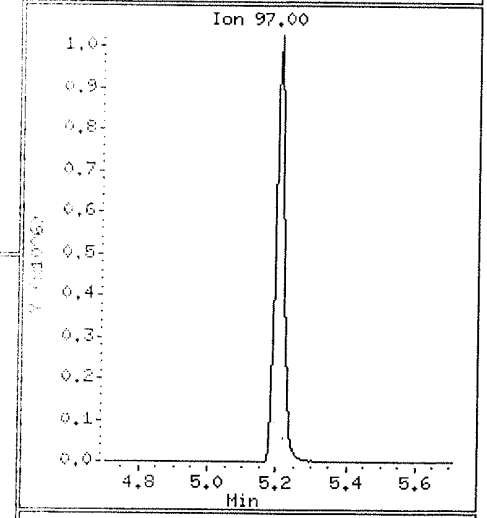
38 Trichloroethene

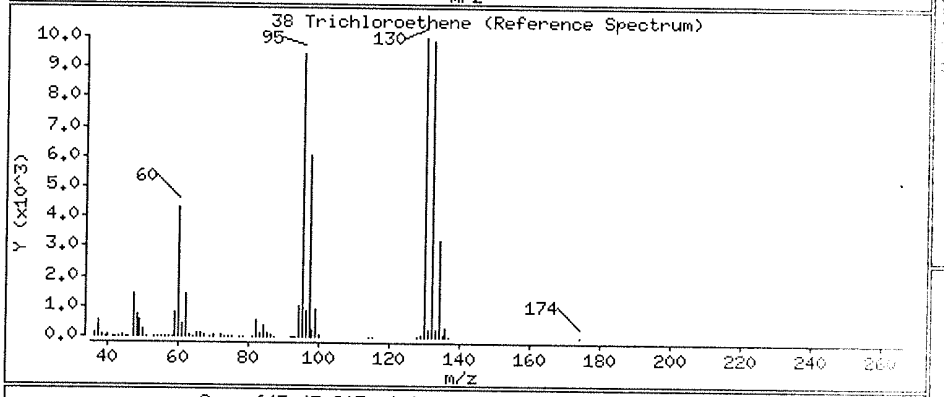
Concentration: 440.35 ug/l

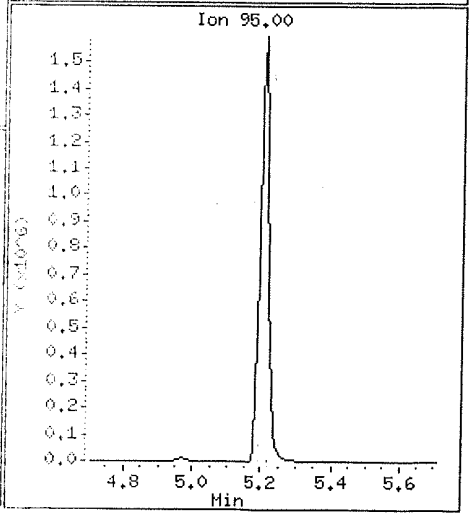


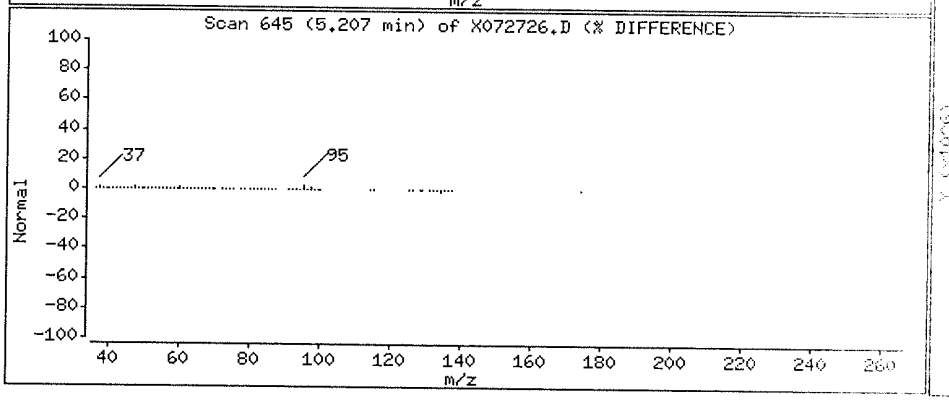












Data File: \\NAHSTWS005\target\chem\voa6.i\X210727.b\X072726.D

Date : 27-JUL-2021 18:46

Client ID: HS21071204-04

Instrument: voa6.i

Sample Info: HS21071204-04;HS21071204-04;;;

Purge Volume: 5.0

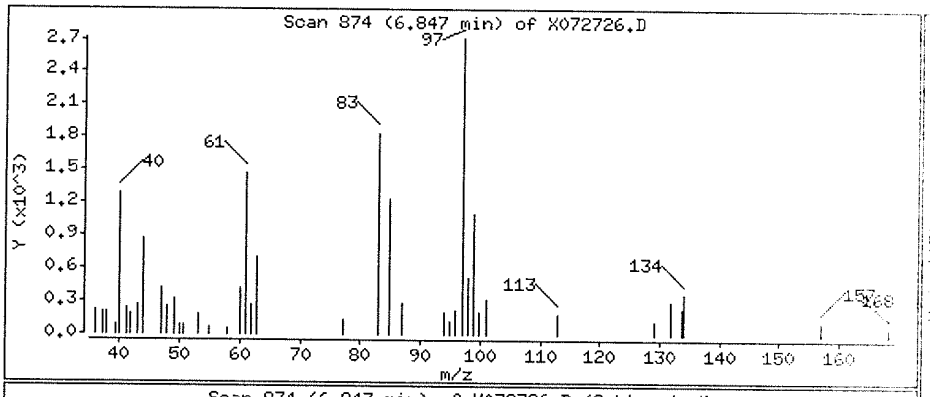
Operator: PC

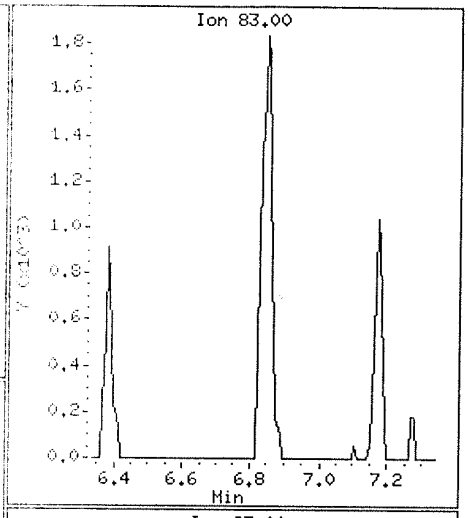
Column phase: DB624

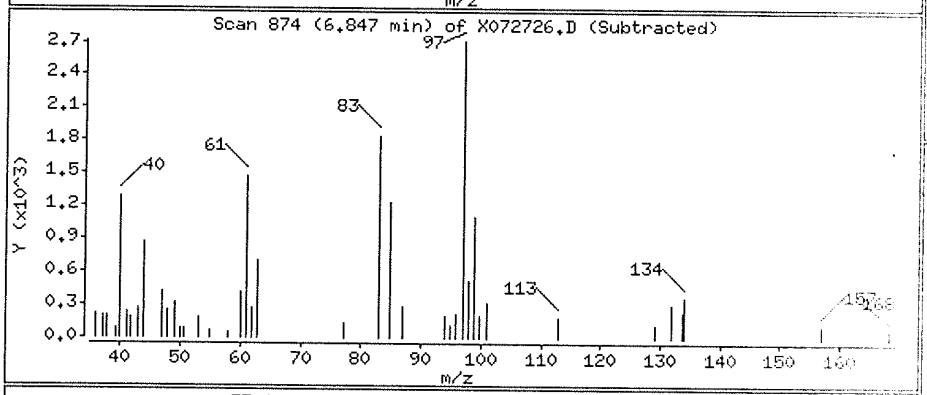
Column diameter: 0.18

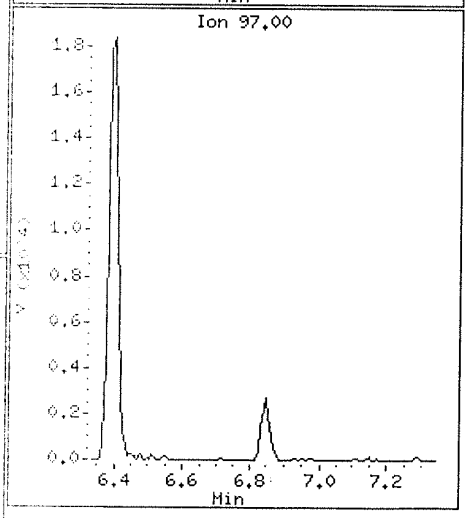
53 1,1,2-Trichloroethane

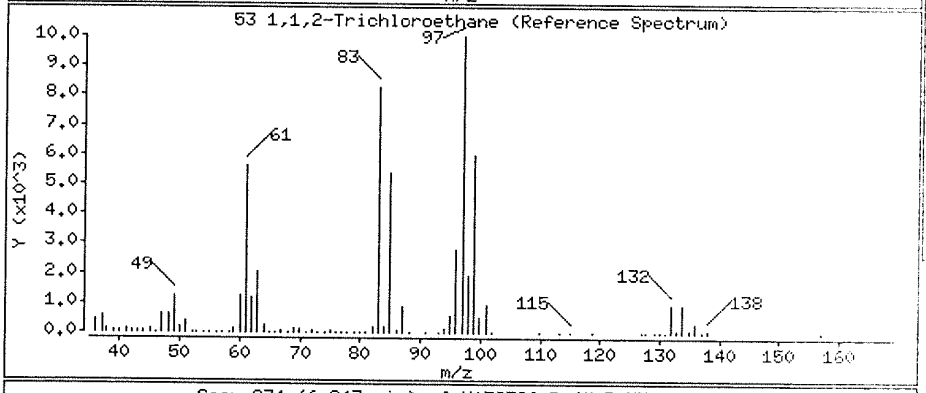
Concentration: 0.78 ug/l

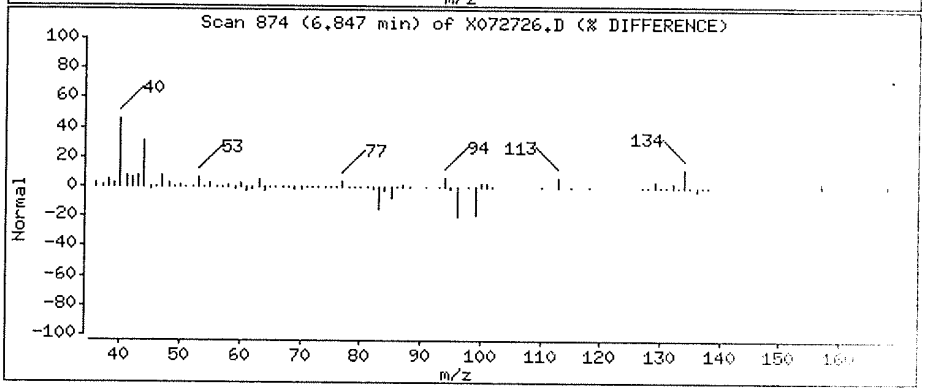












Data File: \\NAHSTWS005\target\chem\voa6.i\X210727.b\X072727.D Page 1
Report Date: 10-Sep-2021 13:10

ALS Laboratory Group

Data file : \\NAHSTWS005\target\chem\voa6.i\X210727.b\X072727.D
Lab Smp Id: HS21071204-03 Client Smp ID: HS21071204-03
Inj Date : 27-JUL-2021 19:07
Operator : PC Inst ID: voa6.i
Smp Info : HS21071204-03;HS21071204-03;;;
Misc Info : HS18090001;WATER;0;10;
Comment :
Method : \\NAHSTWS005\target\chem\voa6.i\X210727.b\8260W.m
Meth Date : 10-Sep-2021 13:08 Genoveva.R Quant Type: ISTD
Cal Date : 26-JUL-2021 13:31 Cal File: X072608.D
Als bottle: 26
Dil Factor: 10.00000
Integrator: HP RTE Compound Sublist: 0474-dod.sub
Target Version: 4.14
Processing Host: NAHSTW7056

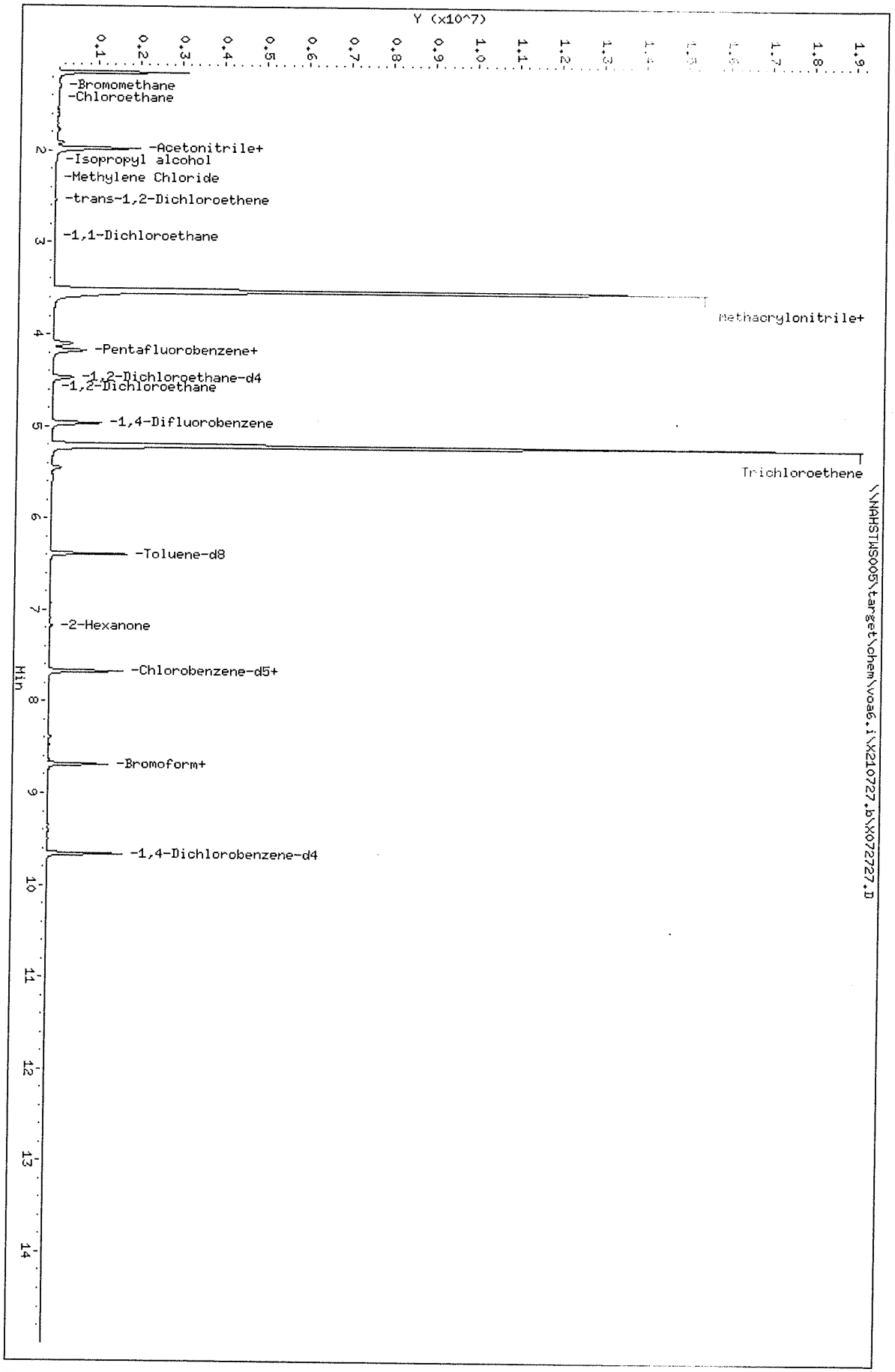
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	10.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	[illegible]	50.0000	
$ 30 Dibromofluoromethane	113	4.104	4.103	(0.981)	[illegible]	47.8837	47.88
$ 35 1,2-Dichloroethane-d4	65	4.469	4.476	(1.068)	[illegible]	44.8828	44.88
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	[illegible]	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	[illegible]	50.0000	
$ 48 Toluene-d8	98	6.389	6.388	(0.833)	[illegible]	54.6733	54.67
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	[illegible]	46.9959	46.99
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	[illegible]	50.0000	
5 Vinyl Chloride	62	1.138	1.145	(0.272)	[illegible]	246.075	2460.74(A)
11 1,1-Dichloroethene	96	1.912	1.912	(0.457)	29360	3.77770	37.77(a)
17 Methylene Chloride	84	2.306	2.305	(0.551)	3160	1.58494	15.84(a)
27 cis-1,2-Dichloroethene	96	3.523	3.530	(0.842)	7583927	1079.54	10795.38(A)
33 1,2-Dichloroethane	62	4.569	4.555	(0.921)	6490	0.66634	6.66(a)
38 Trichloroethene	130	5.207	5.207	(1.049)	5652679	877.254	8772.54(A)
20 trans-1,2-Dichloroethene	96	2.535	2.528	(0.606)	7647	1.25770	12.57(a)

QC Flag Legend

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



Data File: \\NAHSTWS005\target\chem\voa6.i\X210727.b\X072727.D
Date : 27-JUL-2021 19:07
Client ID: HS21071204-03
Sample Info: HS21071204-03;HS21071204-03;;;
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\NAHSTWS005\target\chem\voa6.i\X210727.b\X072727.D

Date : 27-JUL-2021 19:07

Client ID: HS21071204-03

Instrument: voa6.i

Sample Info: HS21071204-03;HS21071204-03;;;

Purge Volume: 5.0

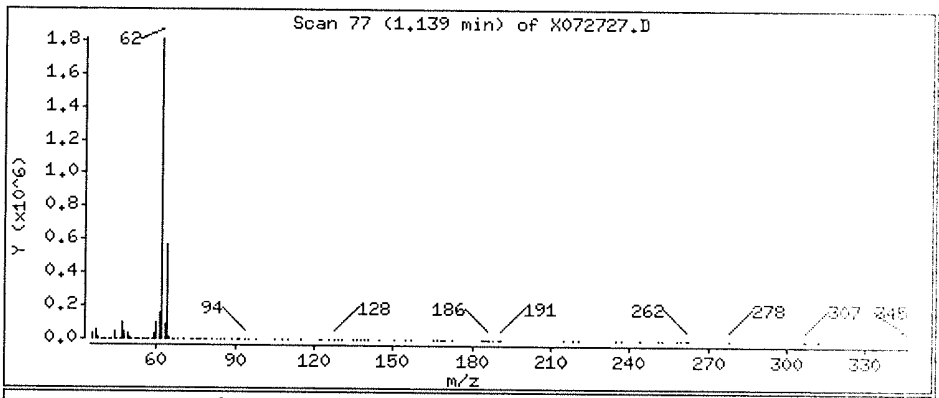
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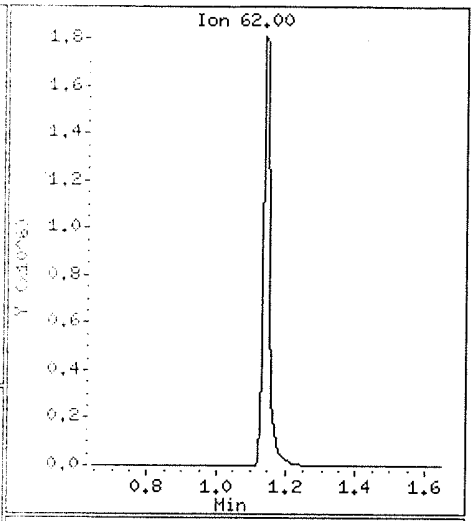
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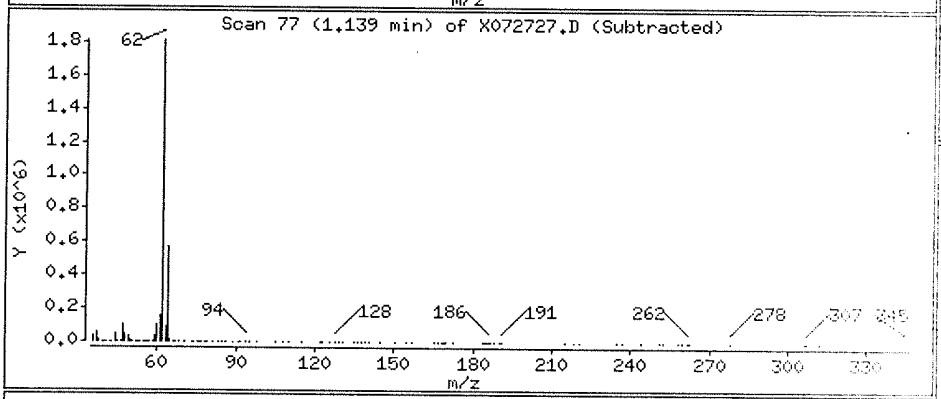
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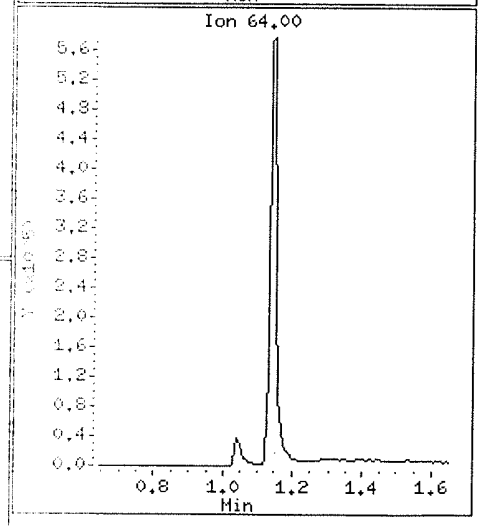
5 Vinyl Chloride

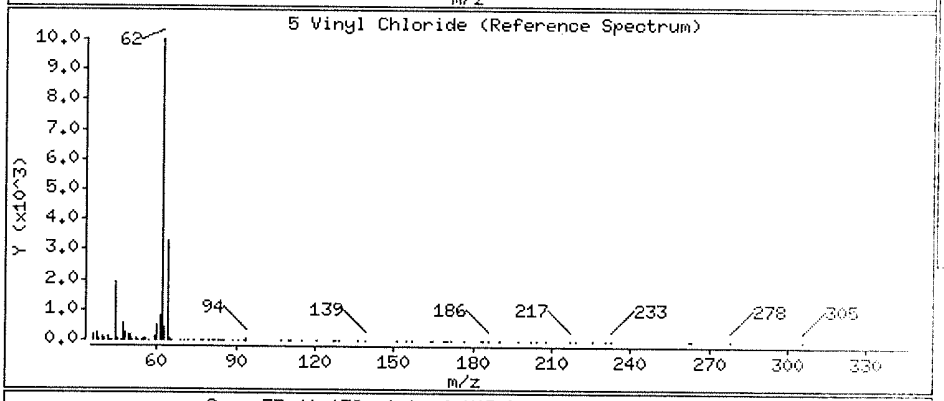
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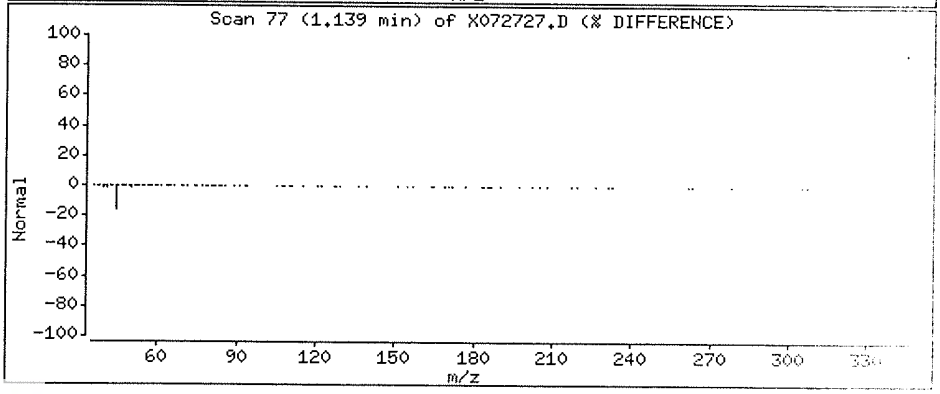












Data File: \\NAHSTWS005\target\chem\voa6.i\X210727.b\X072727.D

Date : 27-JUL-2021 19:07

Client ID: HS21071204-03

Instrument: voa6.i

Sample Info: HS21071204-03;HS21071204-03;;;

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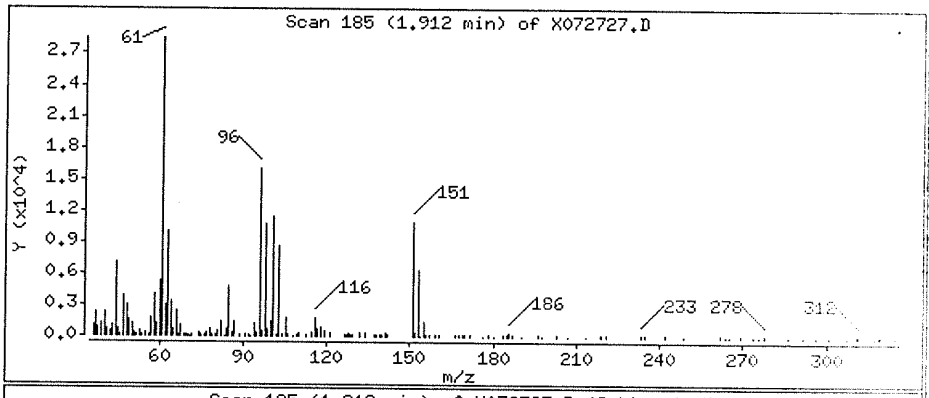
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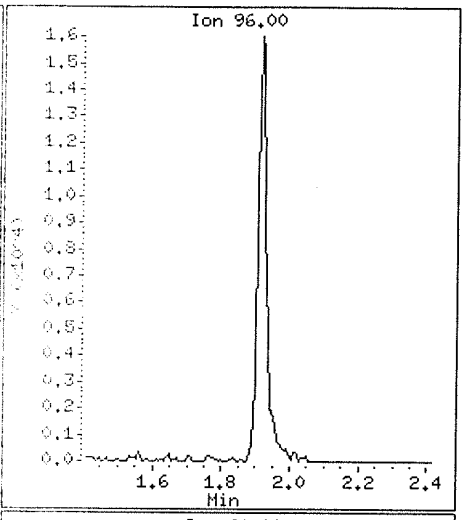
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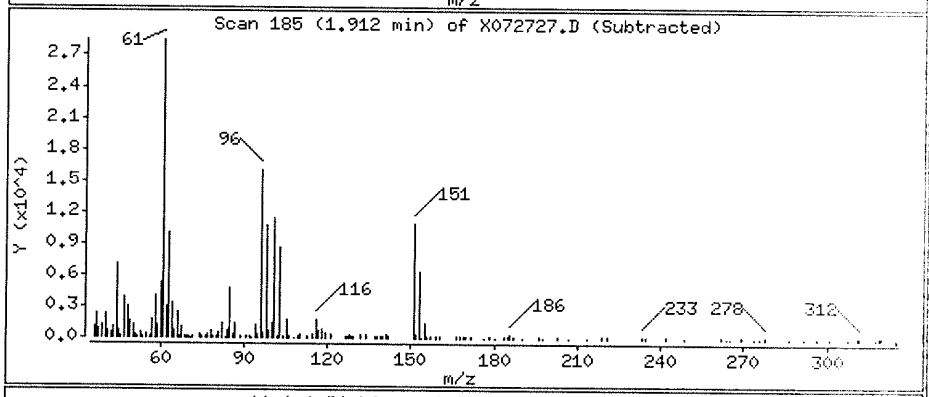
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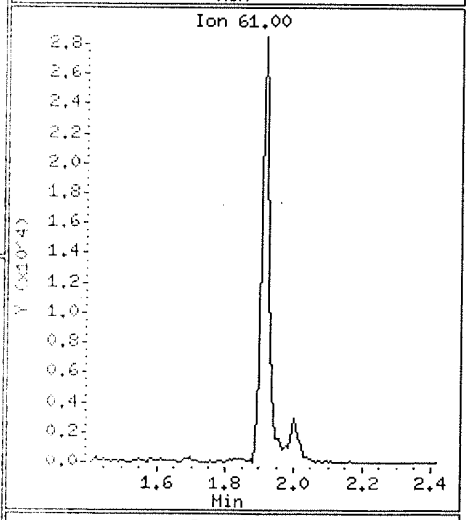
11 1,1-Dichloroethene

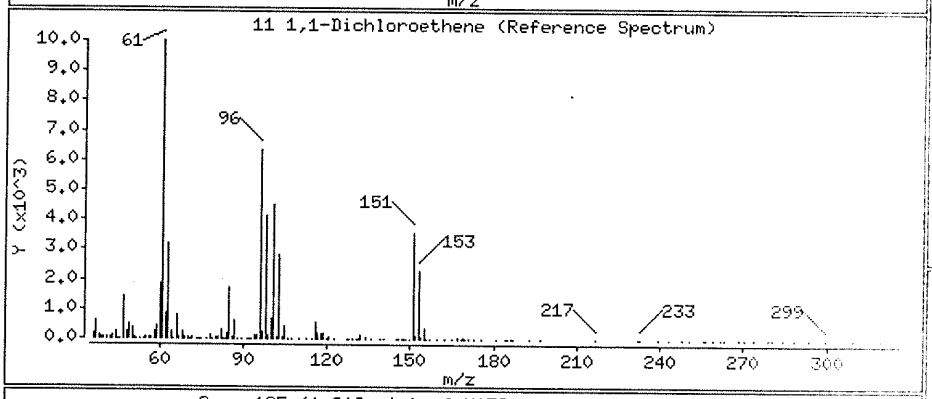
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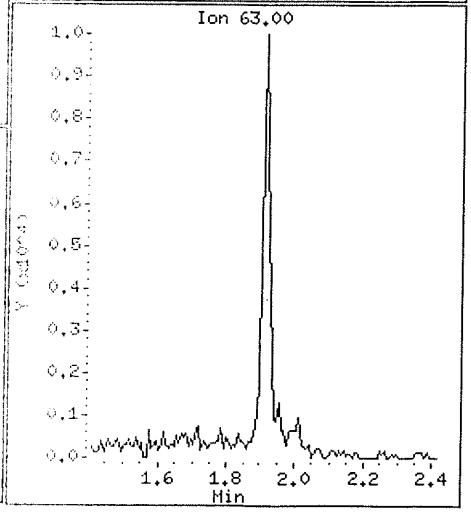


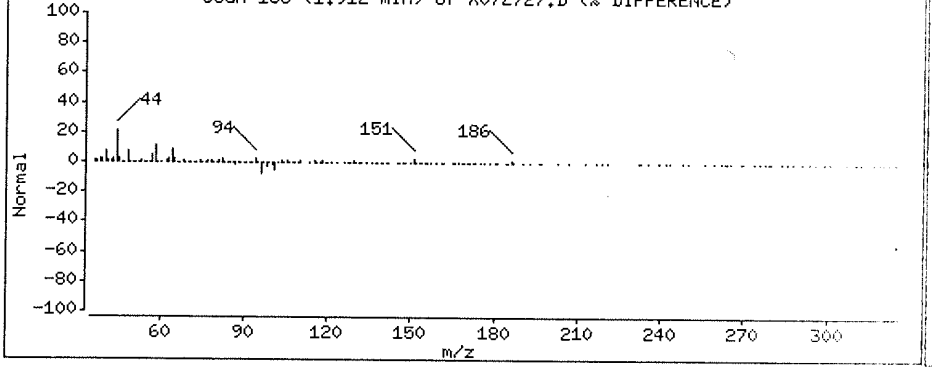












Data File: \\NAHSTWS005\target\chem\voa6.i\X210727.b\X072727.D

Date : 27-JUL-2021 19:07

Client ID: HS21071204-03

Instrument: voa6.i

Sample Info: HS21071204-03;HS21071204-03;;;

Purge Volume: 5.0

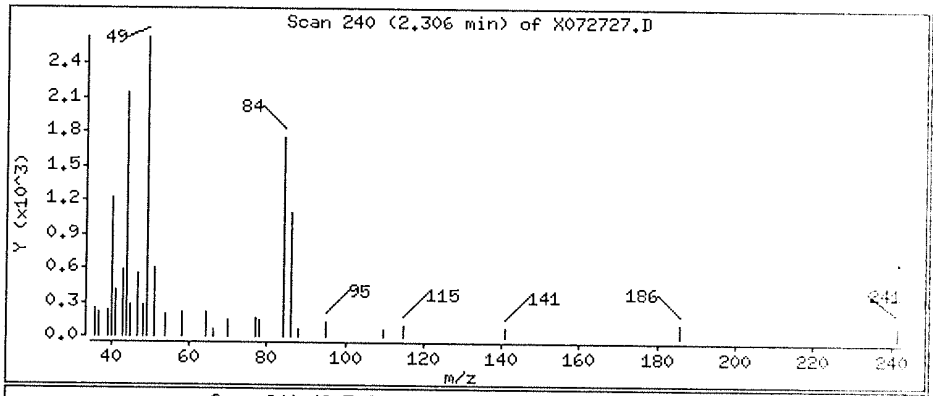
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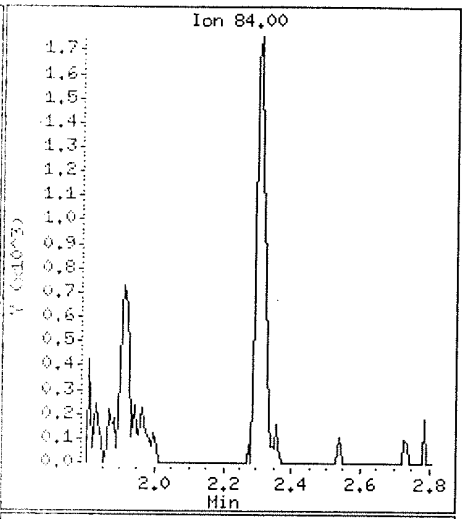
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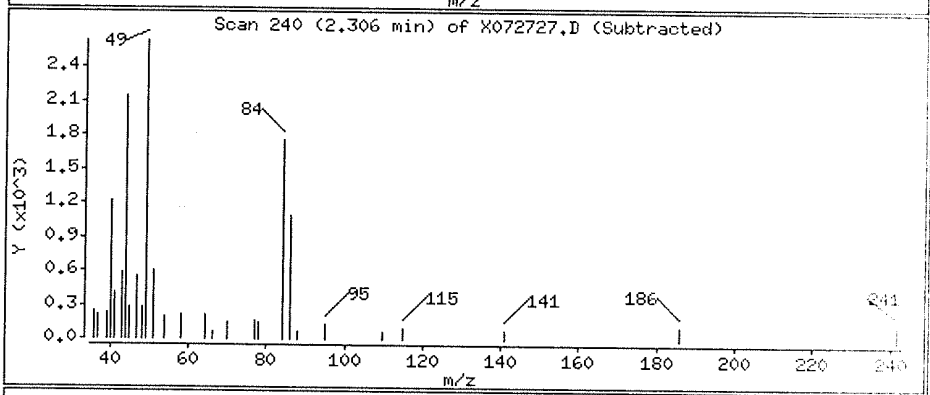
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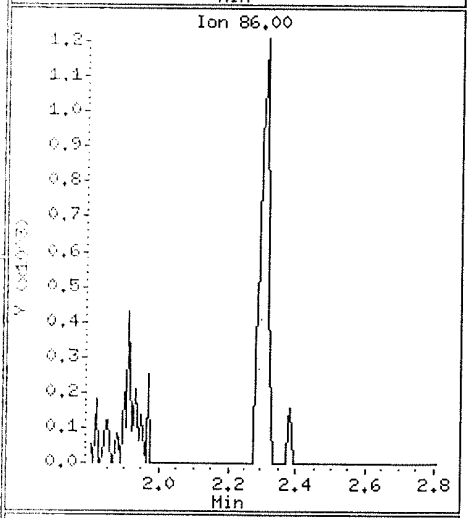
17 Methylene Chloride

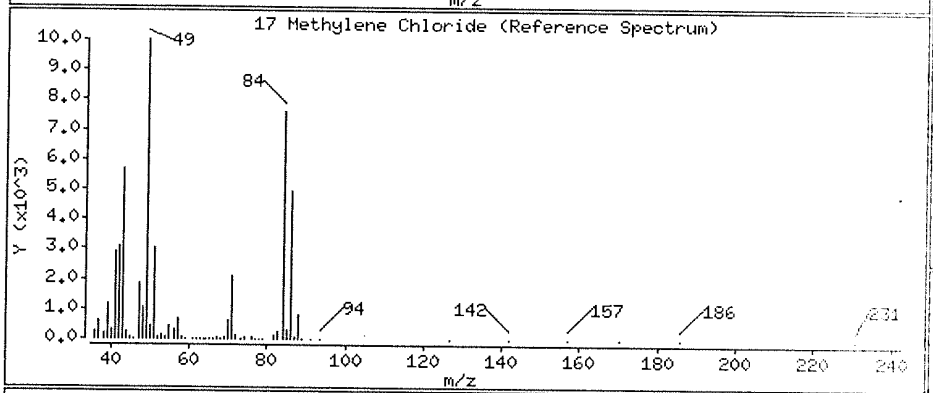
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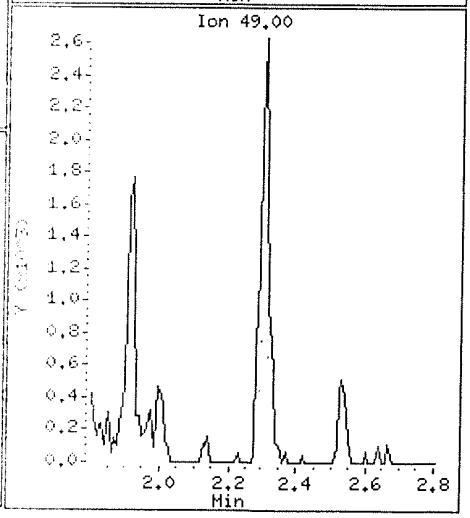


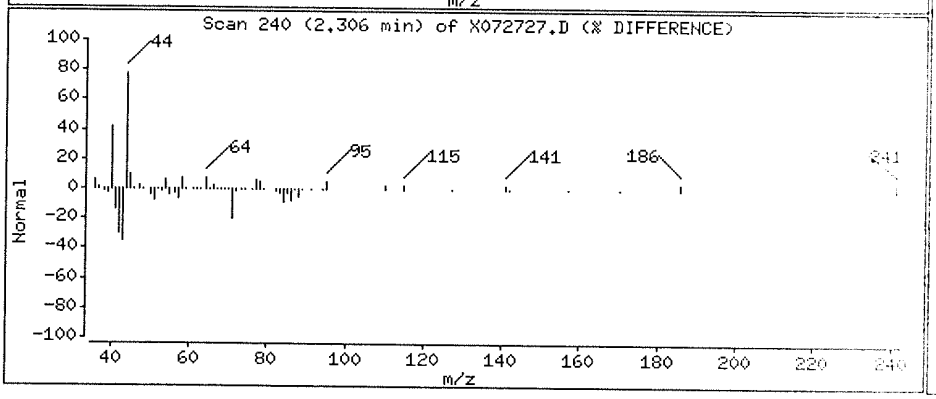












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Date : 27-JUL-2021 19:07

Client ID: HS21071204-03

Instrument: voa6.i

Sample Info: HS21071204-03;HS21071204-03;;;

Purge Volume: 5.0

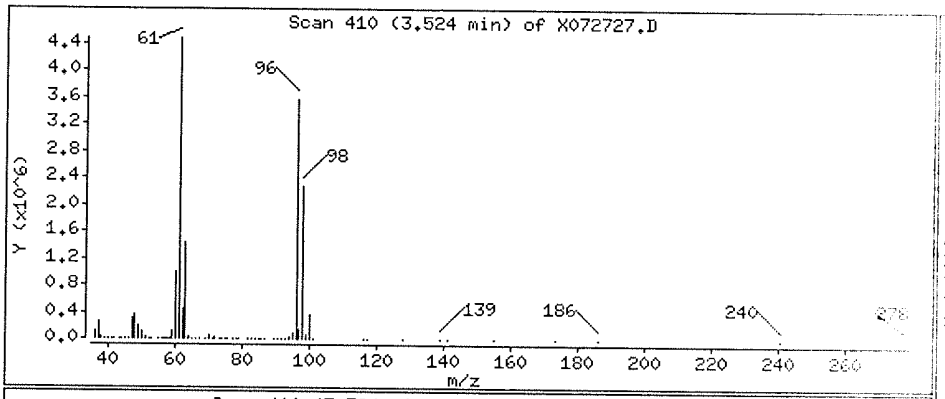
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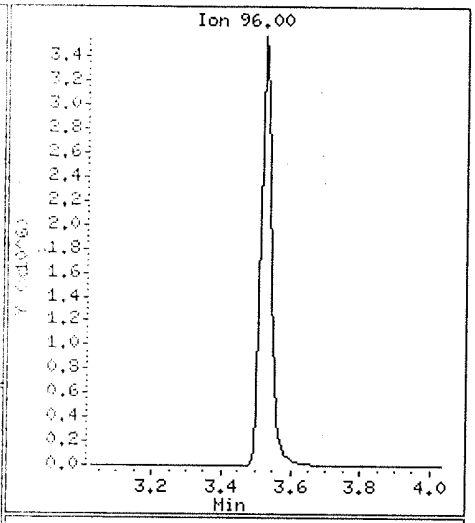
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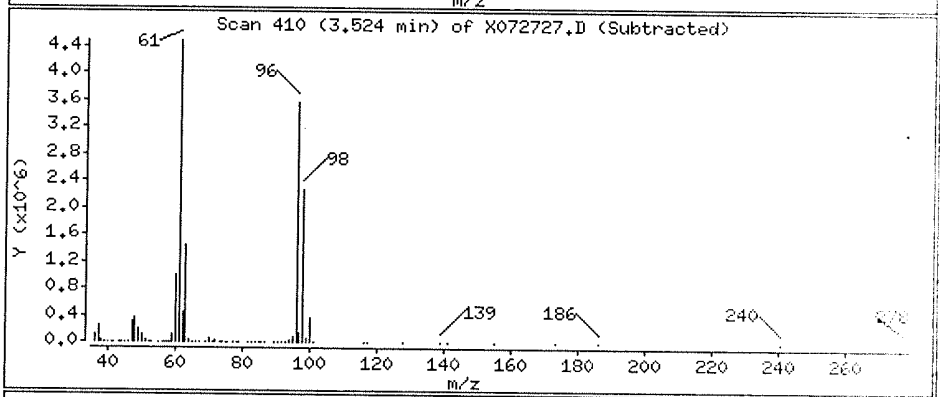
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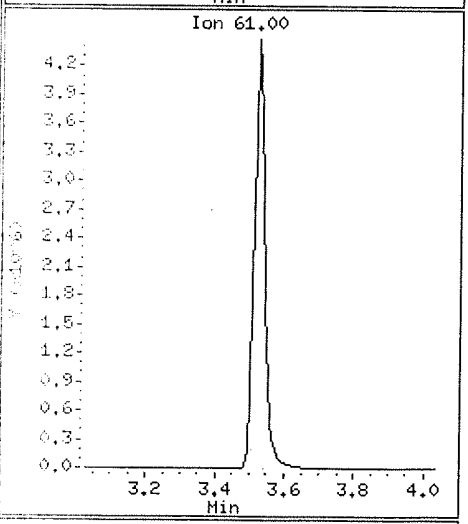
27 cis-1,2-Dichloroethene

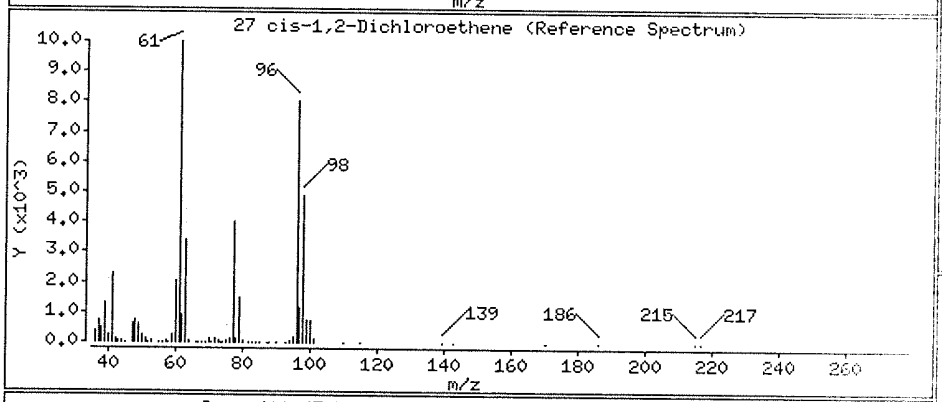
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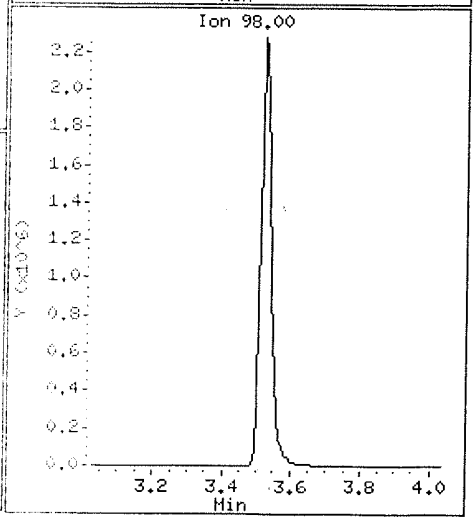


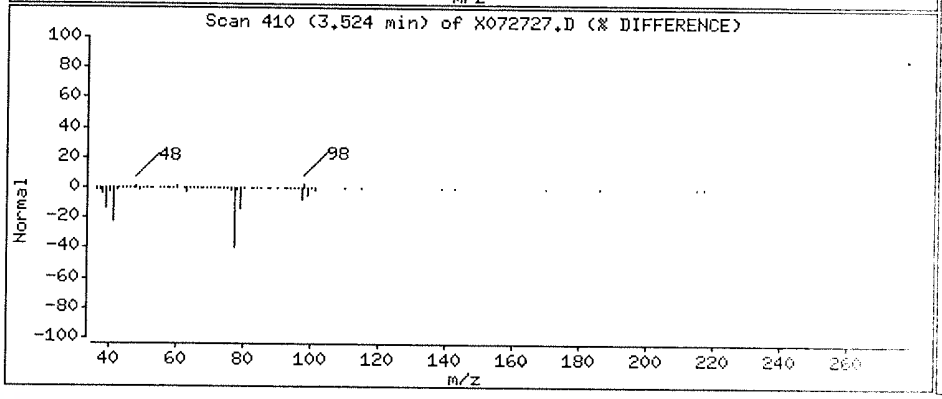












Data File: \\NAHSTWS005\target\chem\voa6.i\X210727.b\X072727.D

Date : 27-JUL-2021 19:07

Client ID: HS21071204-03

Instrument: voa6.i

Sample Info: HS21071204-03;HS21071204-03;;;

Purge Volume: 5.0

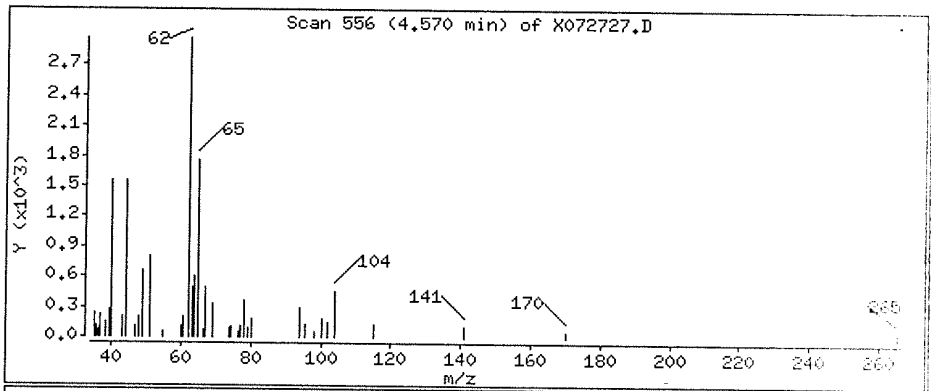
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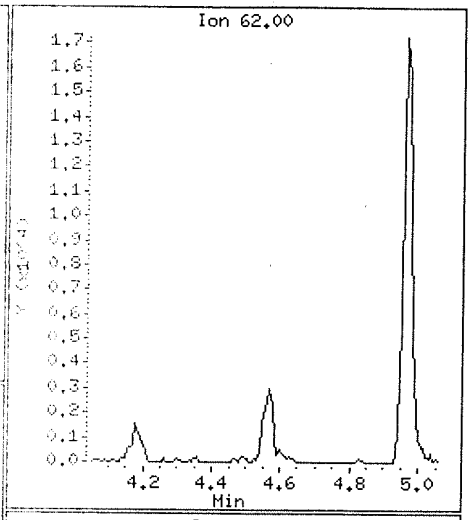
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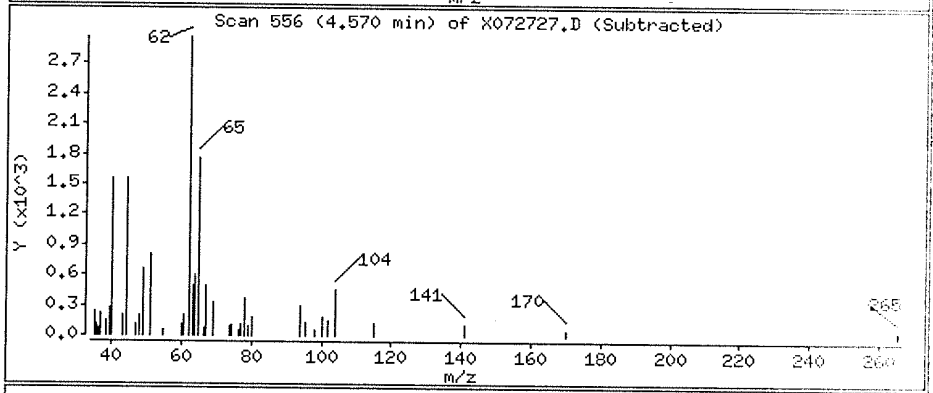
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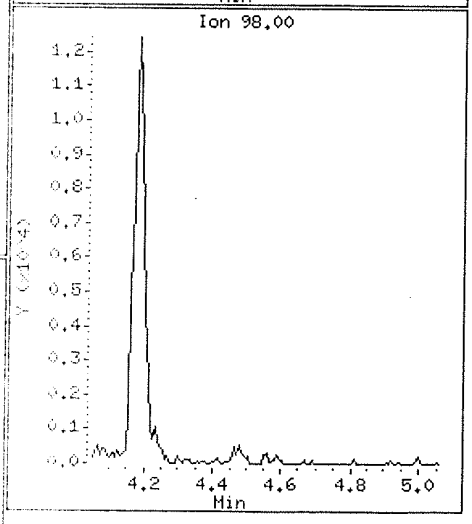
33 1,2-Dichloroethane

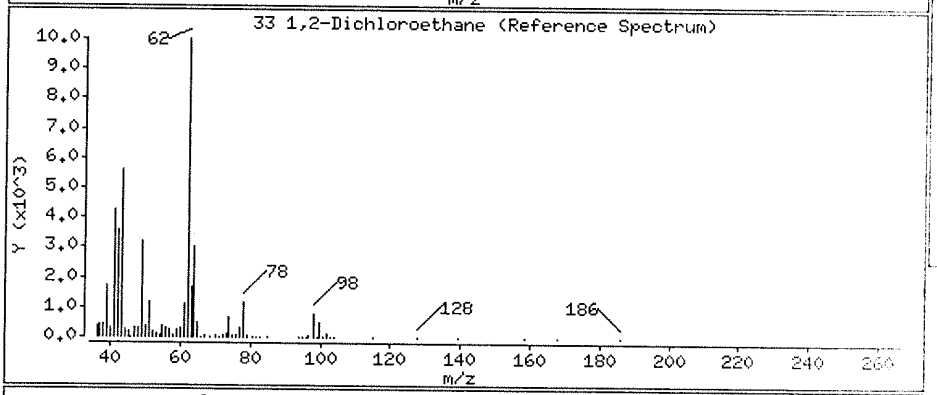
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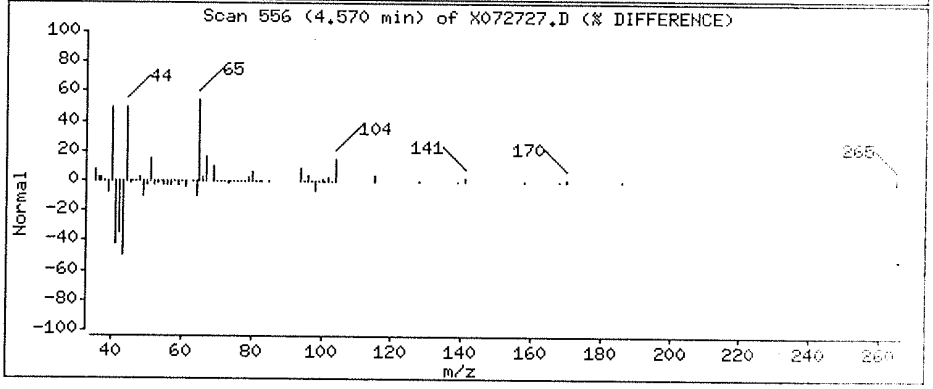












Data File: \\NAHSTWS005\target\chem\voa6.i\X210727.b\X072727.D

Date : 27-JUL-2021 19:07

Client ID: HS21071204-03

Instrument: voa6.i

Sample Info: HS21071204-03;HS21071204-03;;;

Purge Volume: 5.0

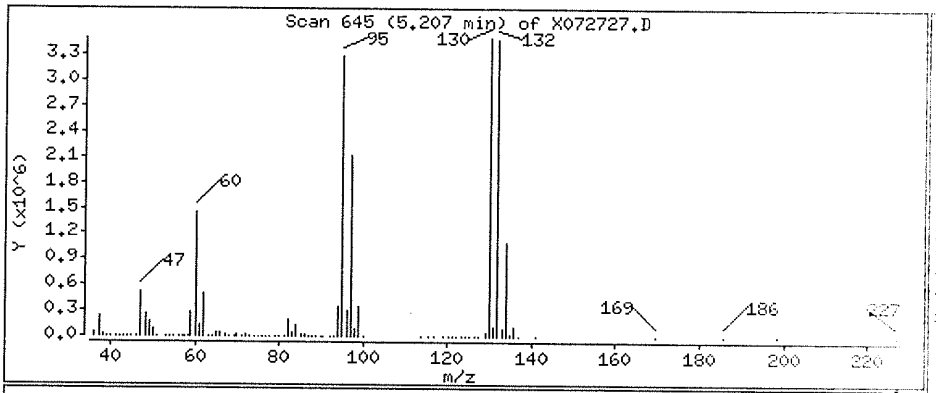
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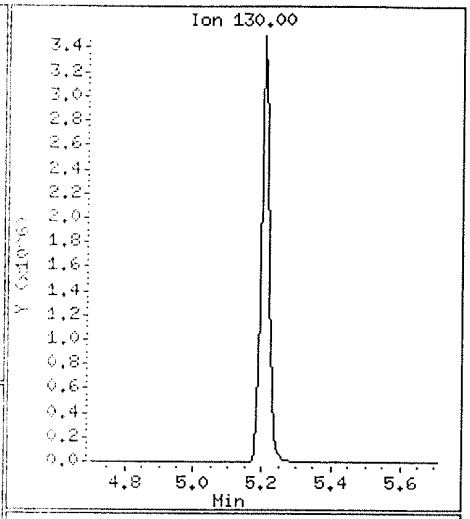
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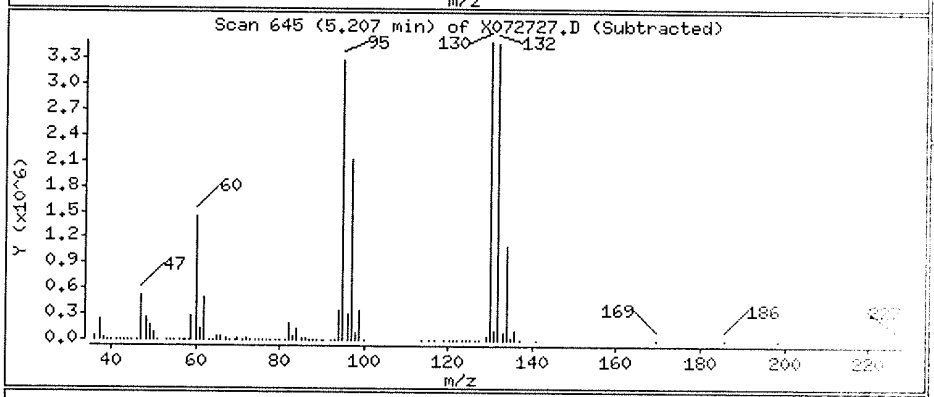
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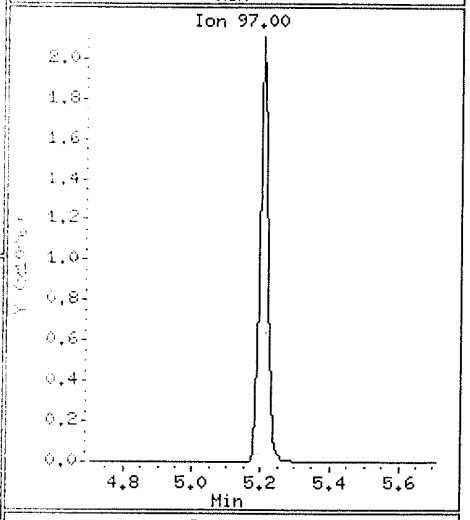
38 Trichloroethene

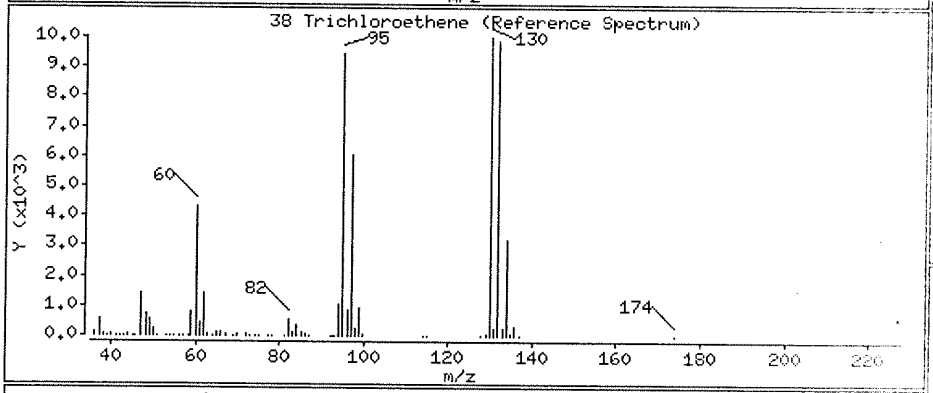
Concentration: 8772.54 ug/l

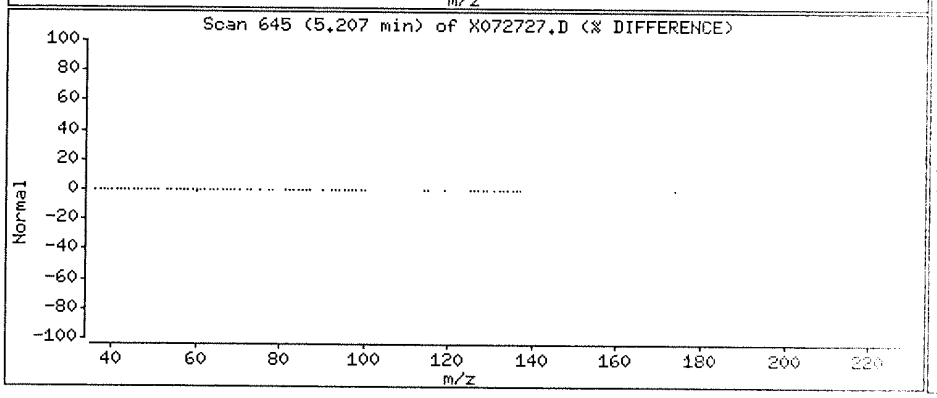


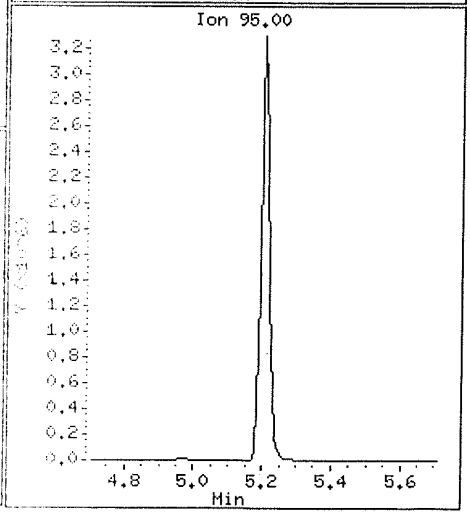












Data File: \\NAHSTWS005\target\chem\voa6.i\X210727.b\X072727.D

Date : 27-JUL-2021 19:07

Client ID: HS21071204-03

Instrument: voa6.i

Sample Info: HS21071204-03;HS21071204-03;;;

Purge Volume: 5.0

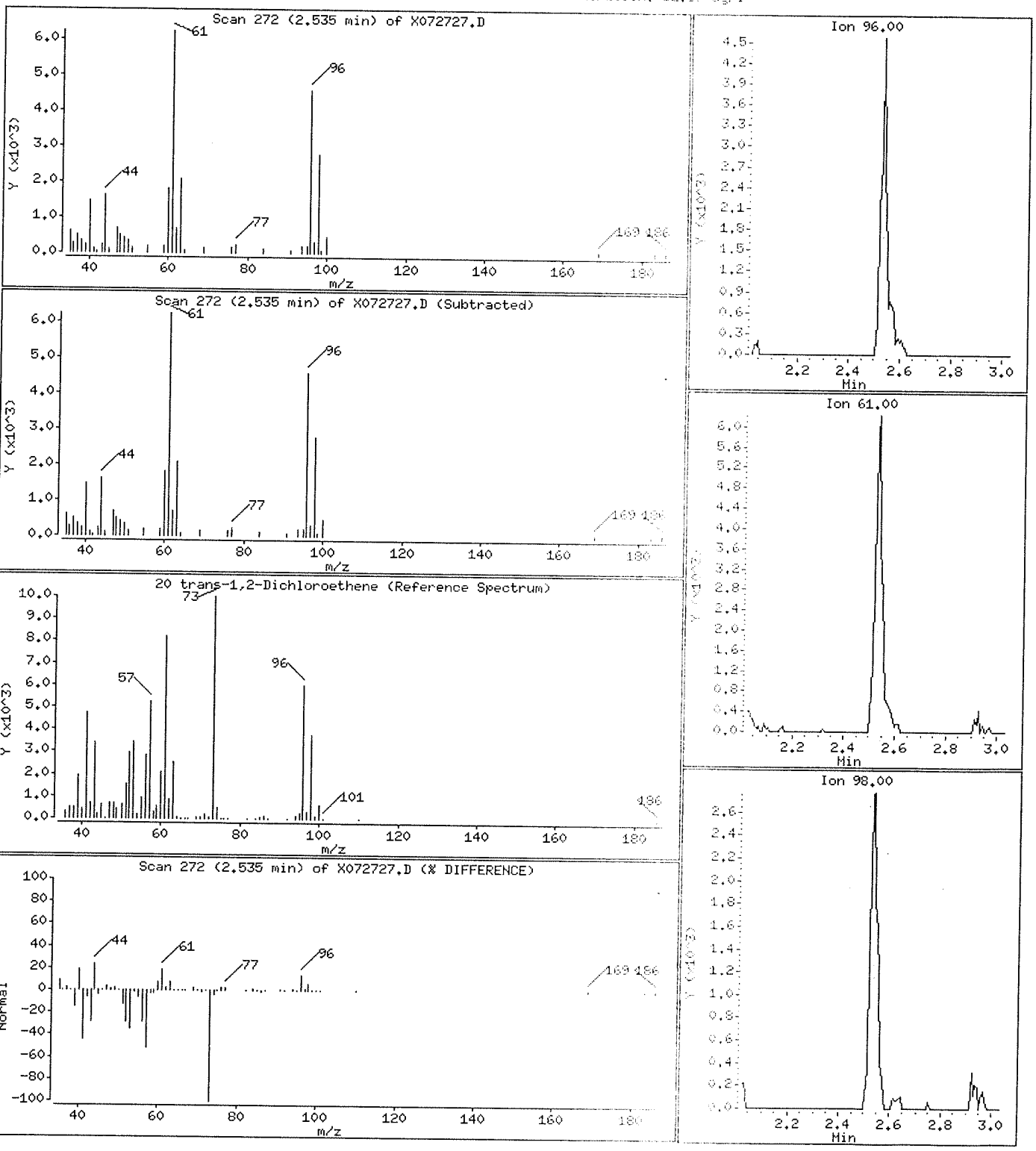
Operator: FC

Column phase: DB624

Column diameter: 0.18

20 trans-1,2-Dichloroethene

Concentration: 12.57 ug/l



Data File: \\NAHSTWS005\target\chem\voa6.i\X210727.b\X072729.D Page 1
Report Date: 10-Sep-2021 13:11

ALS Laboratory Group

Data file : \\NAHSTWS005\target\chem\voa6.i\X210727.b\X072729.D
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Inj Date : 27-JUL-2021 19:49
Operator : PC Inst ID: voa6.i
Smp Info : HS21071204-01;HS21071204-01;;;
Misc Info : HS18090001;WATER;0;10;
Comment :
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Meth Date : 10-Sep-2021 13:08 Genoveva.R Quant Type: ISTD
Cal Date : 26-JUL-2021 13:31 Cal File: X072608.D
Als bottle: 28
Dil Factor: 10.00000
Integrator: HP RTE Compound Sublist: 0474-dod.sub
Target Version: 4.14
Processing Host: NAHSTW7056

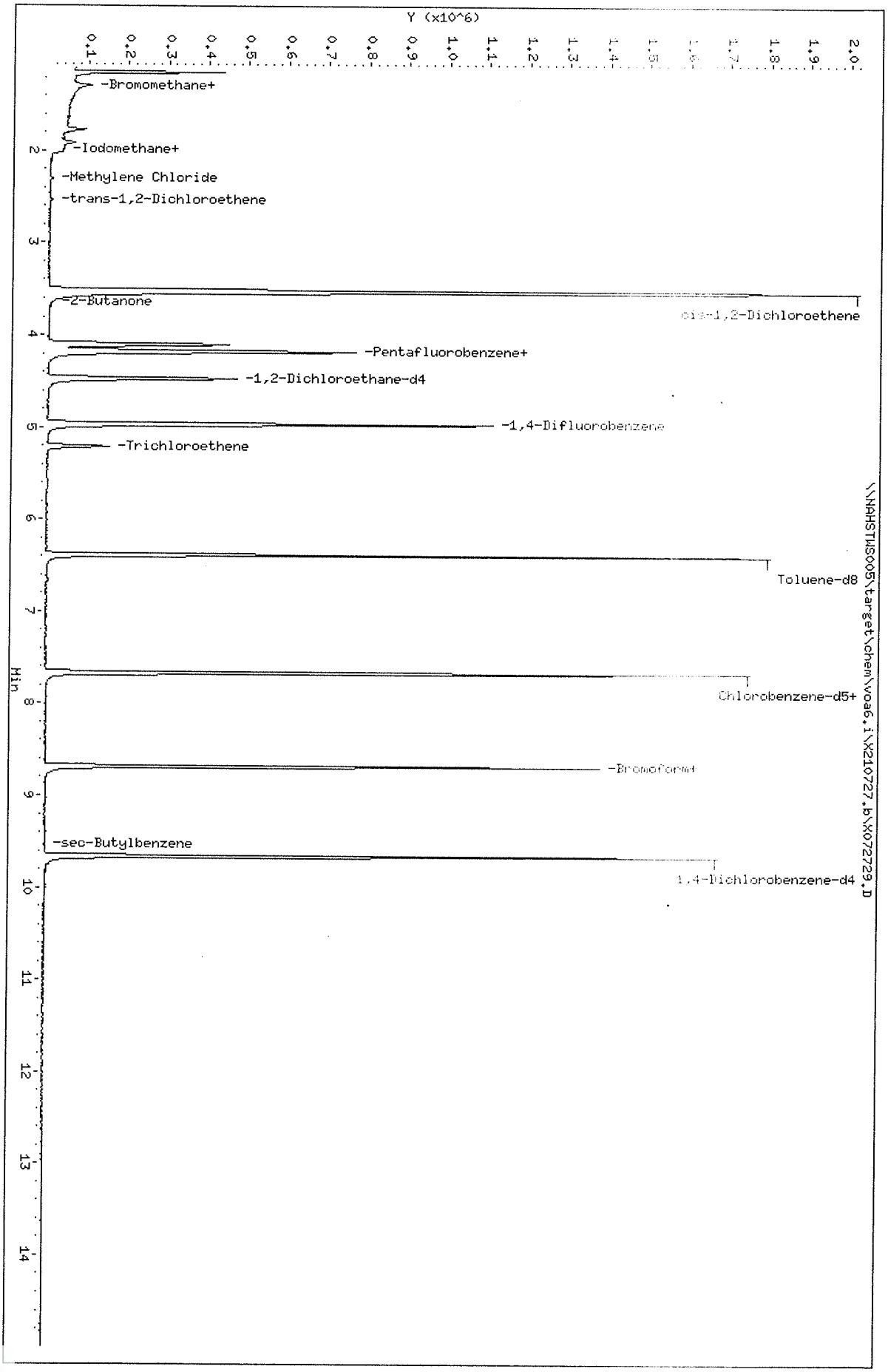
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	10.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	634434	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	303573	47.5292	47.52
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	361862	45.8103	45.81
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	903877	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	797900	50.0000	
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	1043248	54.7049	54.70
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	569566	47.1398	47.13
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	585998	50.0000	
5 Vinyl Chloride	62	1.138	1.145	(0.272)	288004	30.9913	309.91
17 Methylene Chloride	84	2.306	2.305	(0.551)	2463	1.48651	14.86(a)
27 cis-1,2-Dichloroethene	96	3.523	3.530	(0.842)	1026589	149.424	1494.24
38 Trichloroethene	130	5.207	5.207	(1.049)	48999	7.71818	77.18
20 trans-1,2-Dichloroethene	96	2.528	2.528	(0.604)	3748	0.62882	6.28(a)

QC Flag Legend

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



Data File: \\NAHSTWS005\target\chem\voa6.i\X210727.b\X072729.D
Date : 27-JUL-2021 19:49
Client ID: HS21071204-01
Sample Info: HS21071204-01;HS21071204-01;;;
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\NAHSTWS005\target\chem\voa6.i\X210727.b\X072729.D

Date : 27-JUL-2021 19:49

Client ID: HS21071204-01

Instrument: voa6.i

Sample Info: HS21071204-01;HS21071204-01;;;

Purge Volume: 5.0

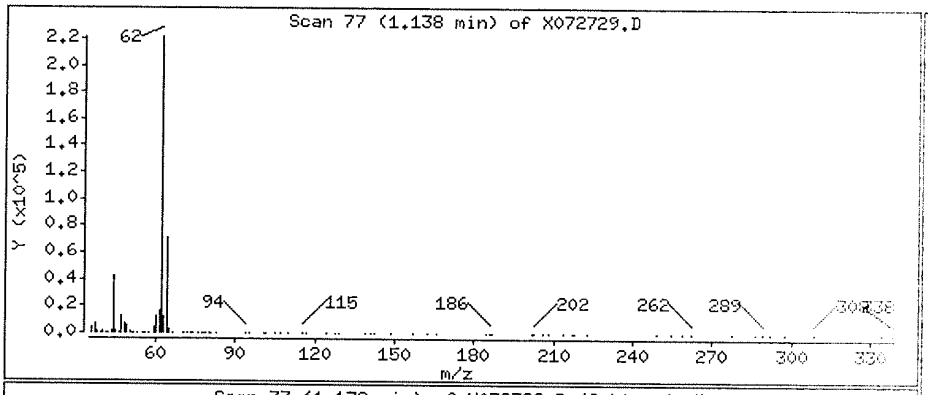
Operator: PC

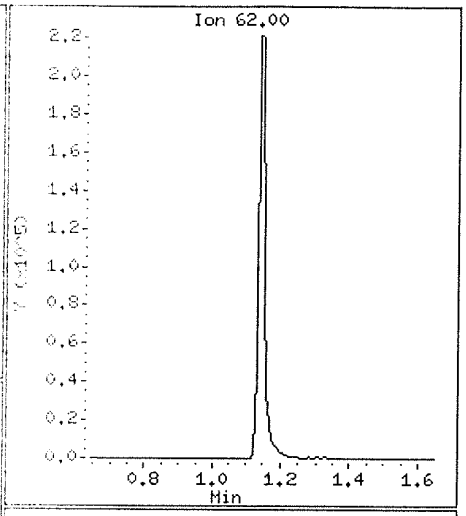
Column phase: DB624

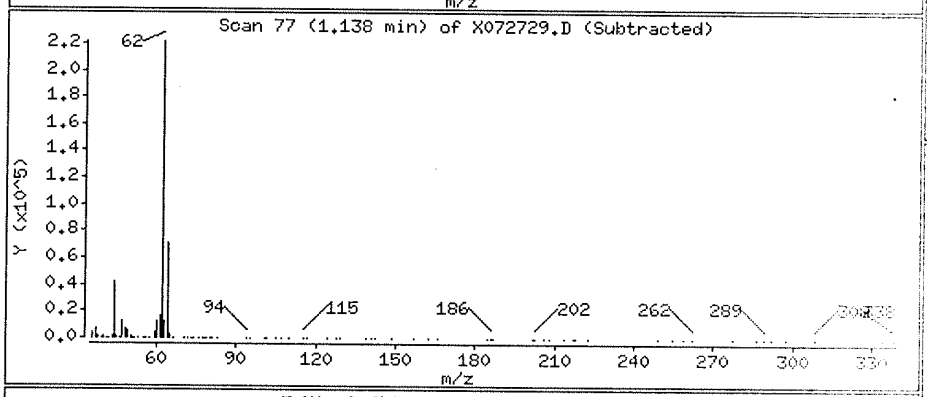
Column diameter: 0.18

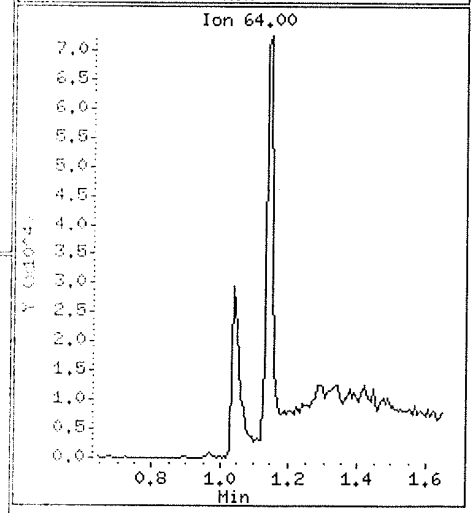
5 Vinyl Chloride

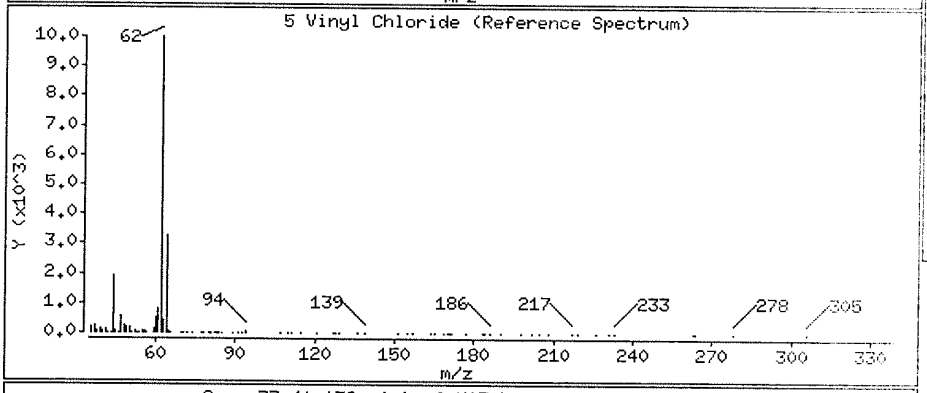
Concentration: 309.31 ug/l

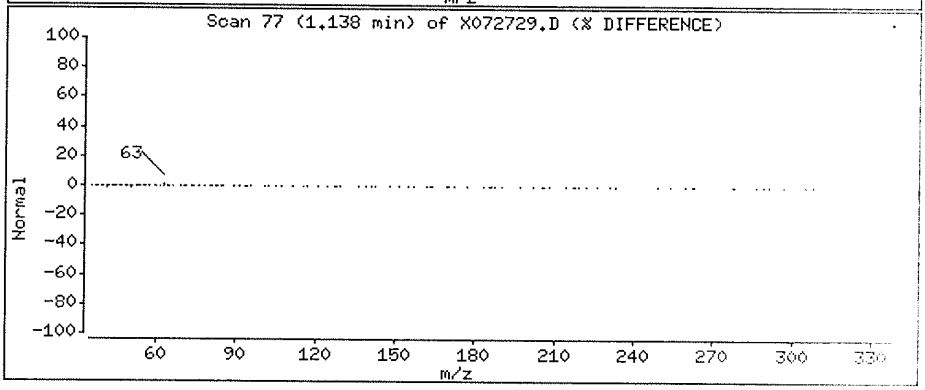












Data File: \\NAHSTWS005\target\chem\voa6.i\X210727.b\X072729.D

Date : 27-JUL-2021 19:49

Client ID: HS21071204-01

Instrument: voa6.i

Sample Info: HS21071204-01;HS21071204-01;;;

Purge Volume: 5.0

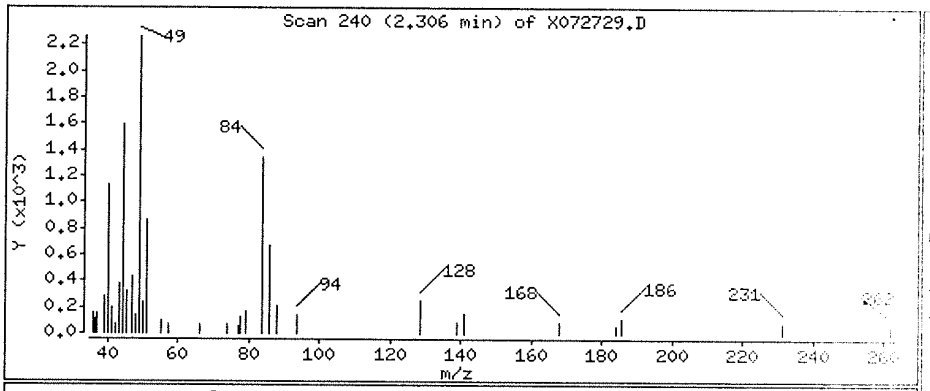
Operator: PC

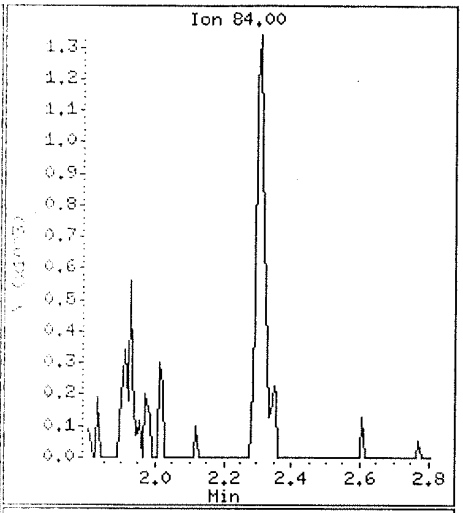
Column phase: DB624

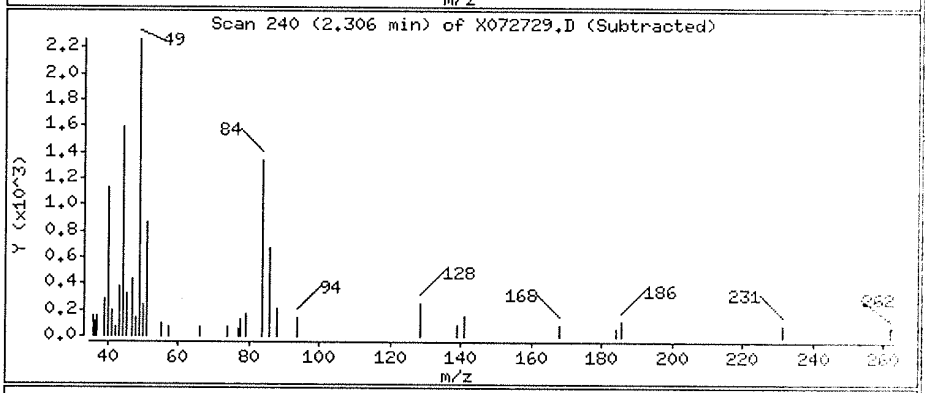
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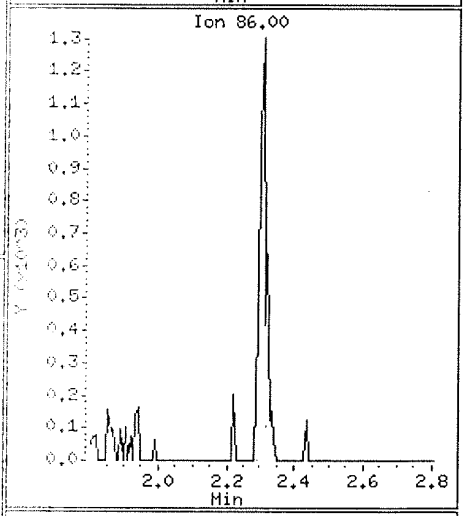
17 Methylene Chloride

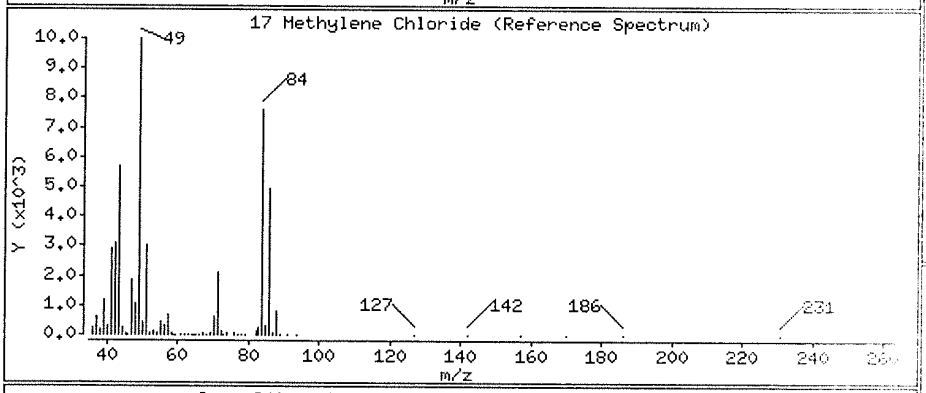
Concentration: 14.86 ug/l

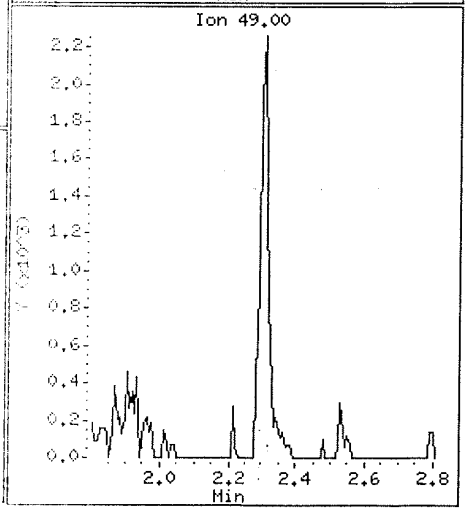


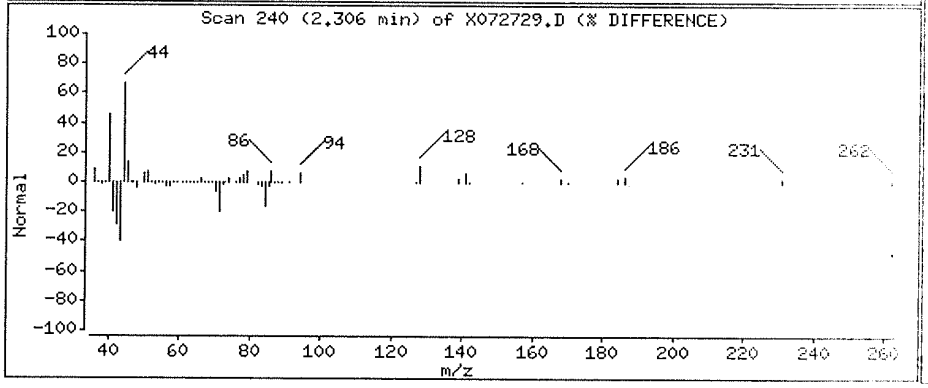












Data File: \\NAHSTWS005\target\chem\voa6.i\X210727.b\X072729.D

Date : 27-JUL-2021 19:49

Client ID: HS21071204-01

Instrument: voa6.i

Sample Info: HS21071204-01;HS21071204-01;;;

Purge Volume: 5.0

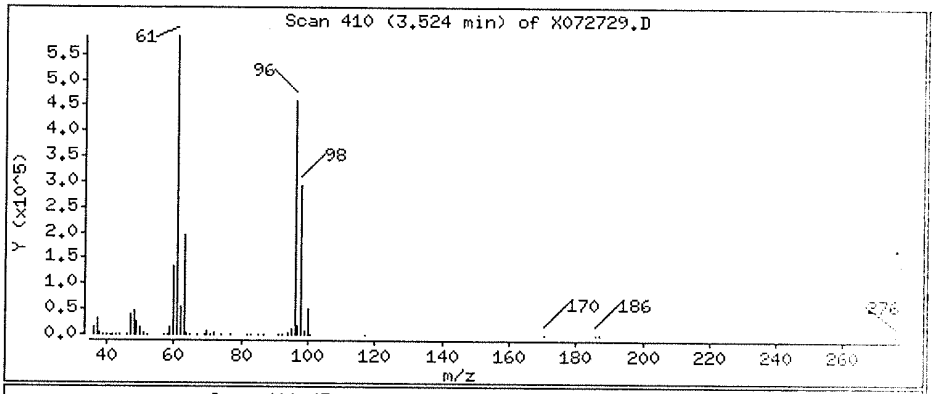
Operator: PC

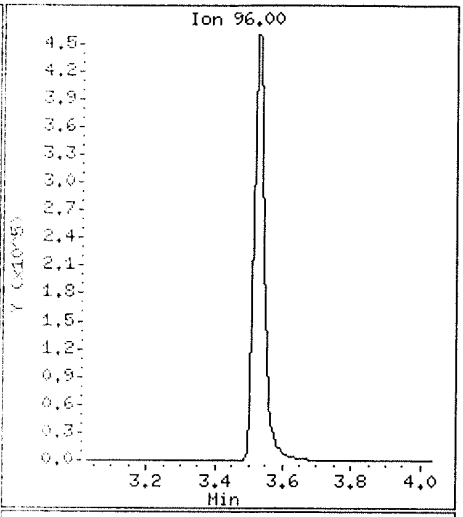
Column phase: DB624

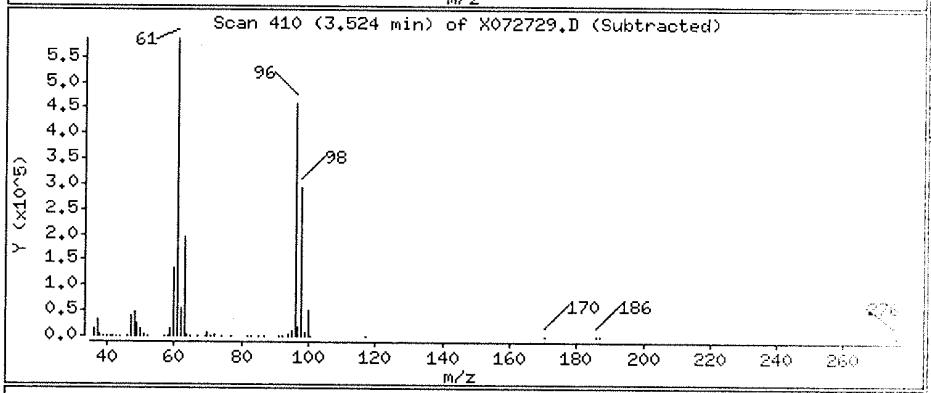
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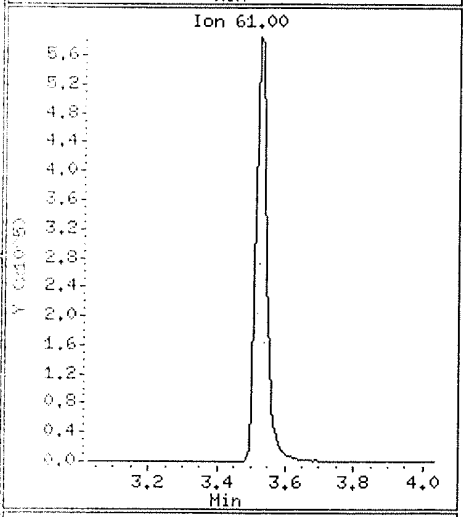
27 cis-1,2-Dichloroethene

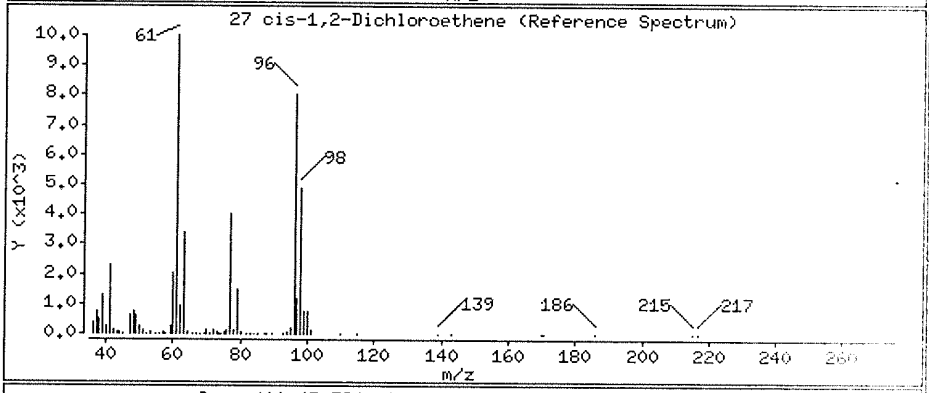
Concentration: 1494.24 ug/l

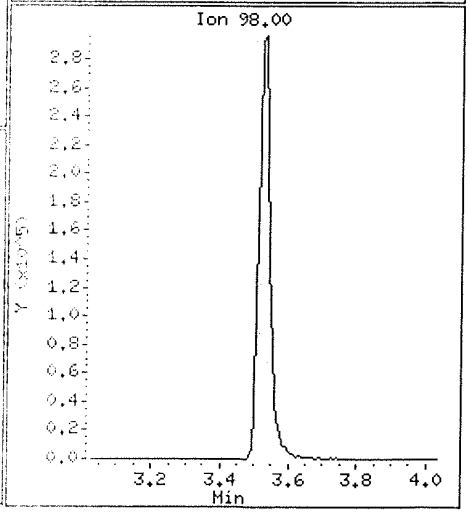


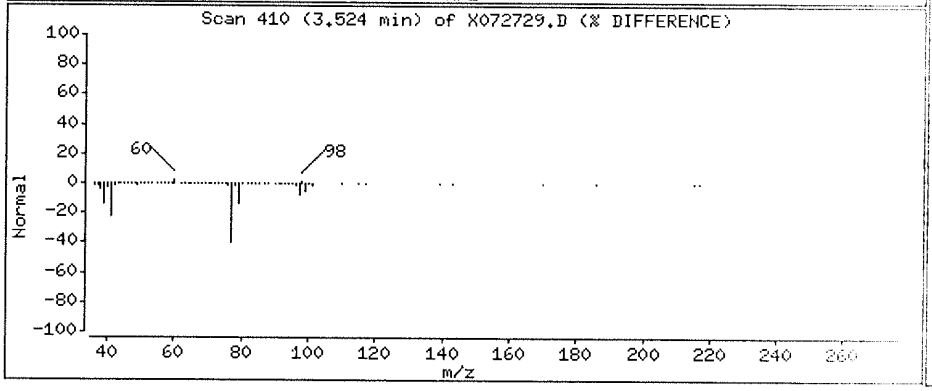












Data File: \\NAHSTWS005\target\chem\voa6.i\X210727.b\X072729.D

Date : 27-JUL-2021 19:49

Client ID: HS21071204-01

Instrument: voa6.i

Sample Info: HS21071204-01;HS21071204-01;;;

Purge Volume: 5.0

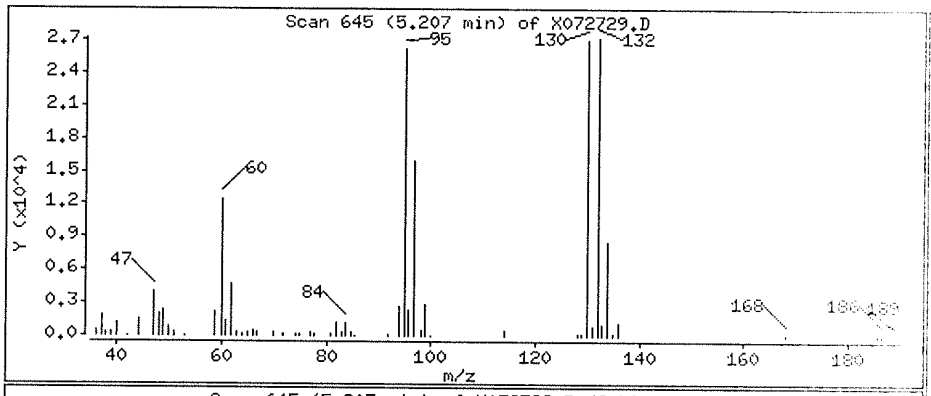
Operator: PC

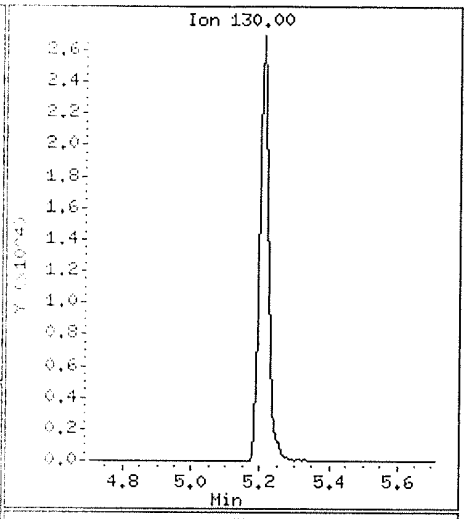
Column phase: DB624

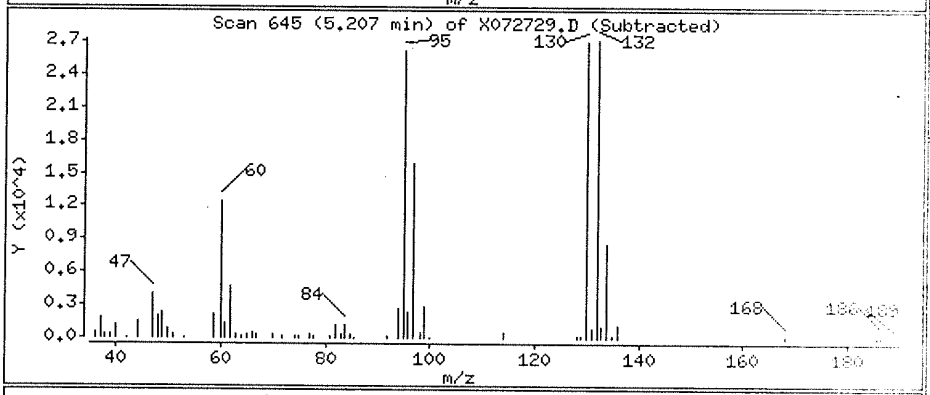
Column diameter: 0.18

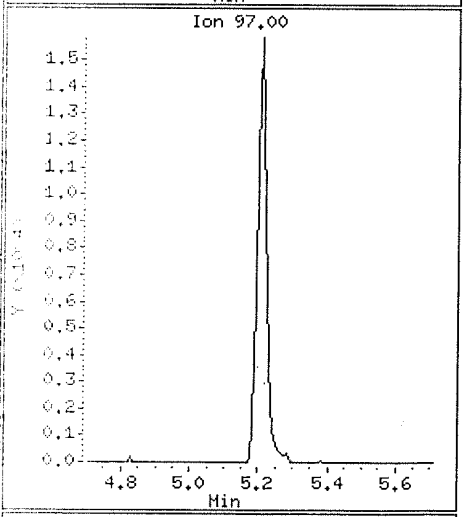
38 Trichloroethene

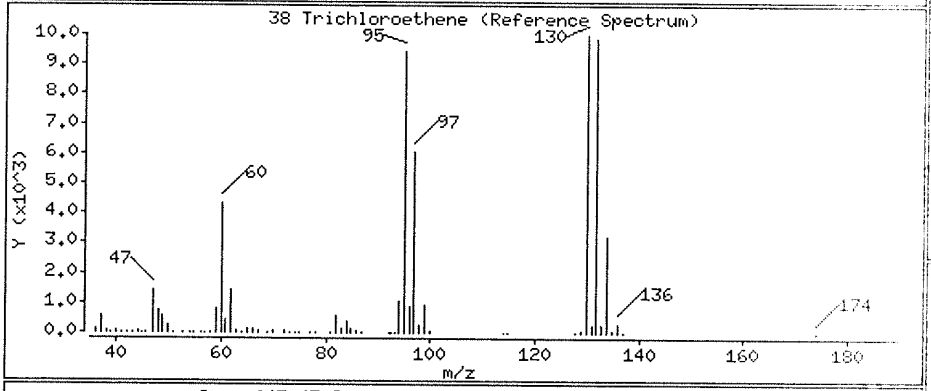
Concentration: 77.18 ug/l

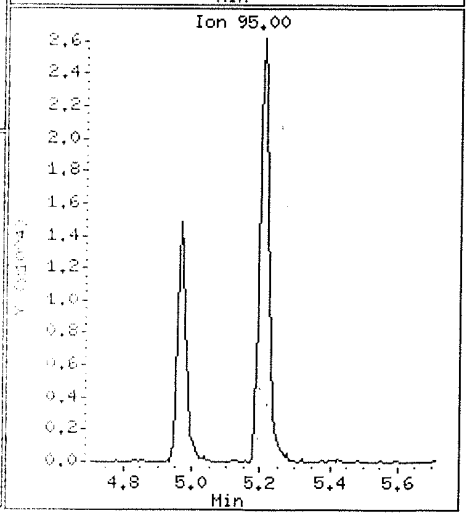


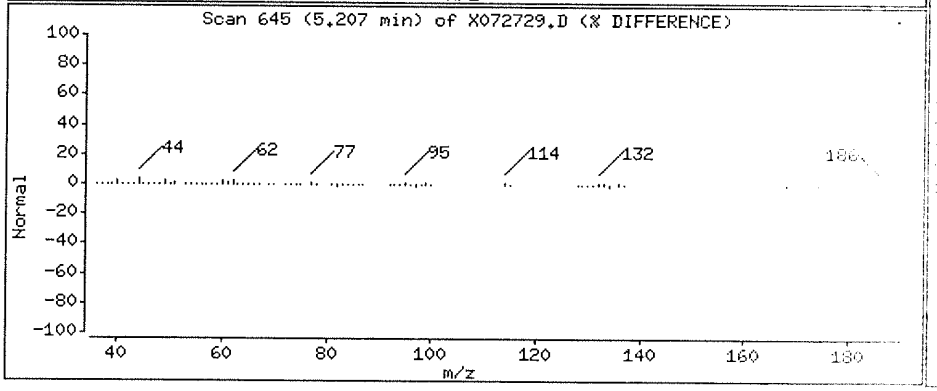












Data File: \\NAHSTWS005\target\chem\voa6.i\X210727.b\X072729.D

Date : 27-JUL-2021 19:49

Client ID: HS21071204-01

Instrument: voa6.i

Sample Info: HS21071204-01;HS21071204-01;;;

Purge Volume: 5.0

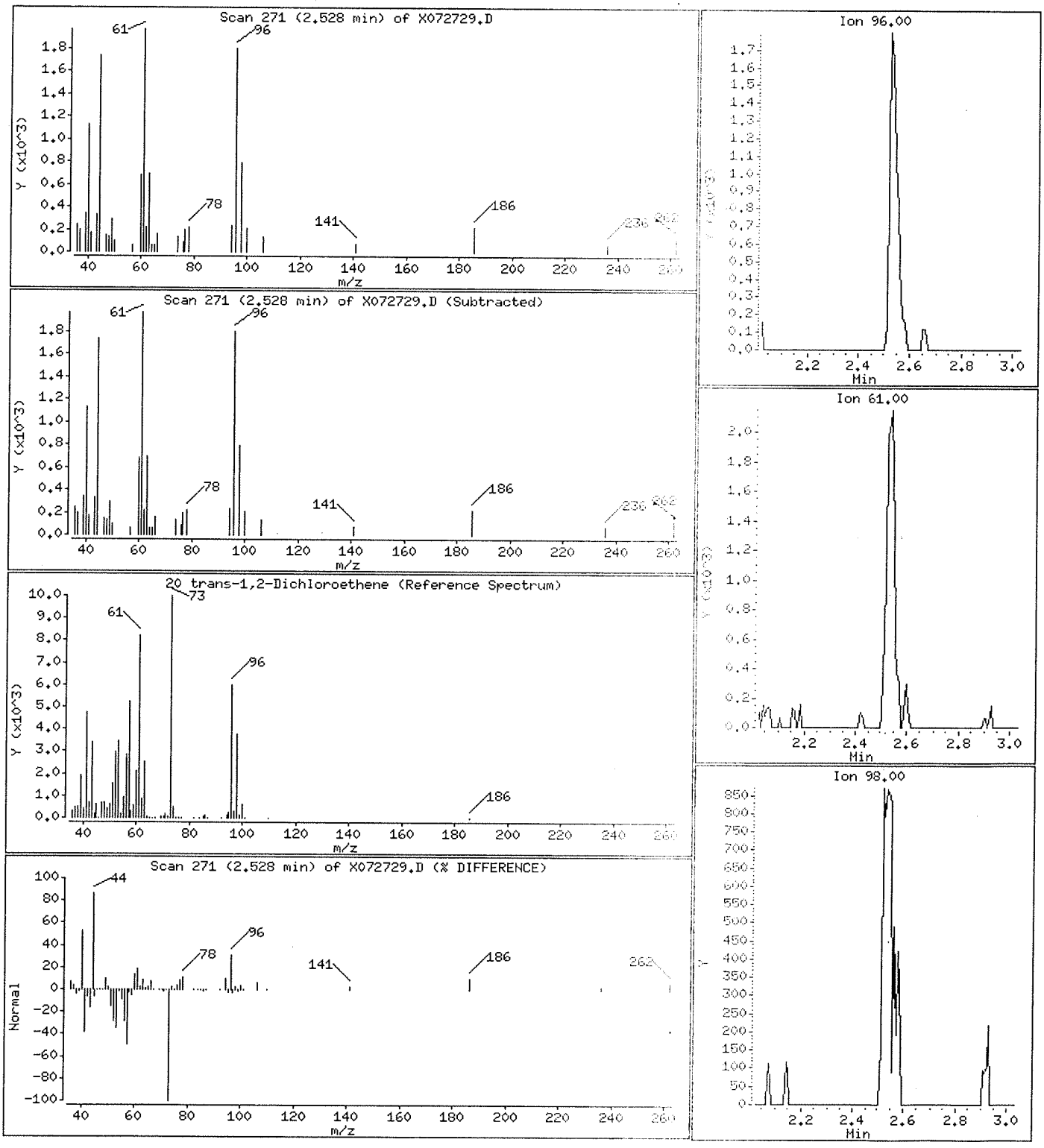
Operator: PC

Column phase: DB624

Column diameter: 0.18

20 trans-1,2-Dichloroethene

Concentration: 6.28 ug/l



Data File: \\NAHSTWS005\target\chem\voa6.i\X210727.b\X072731.D Page 1
Report Date: 10-Sep-2021 13:06

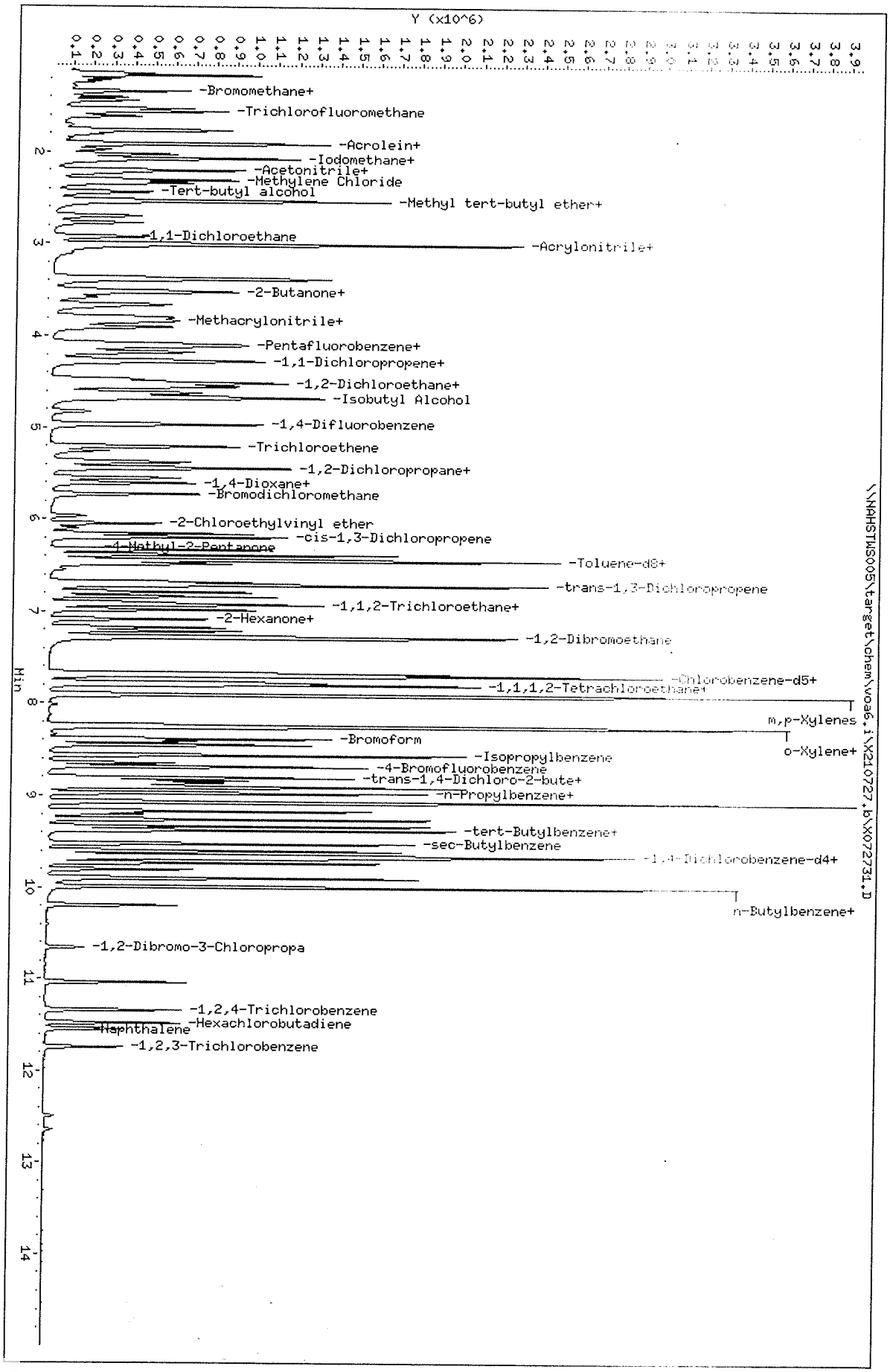
ALS Laboratory Group

Data file : \\NAHSTWS005\target\chem\voa6.i\X210727.b\X072731.D
Lab Smp Id: CCV-END Client Smp ID: CCV-END
Inj Date : 27-JUL-2021 20:31
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\X210727.b\8260W.m
Meth Date : 10-Sep-2021 13:06 voa6.i Quant Type: ISTD
Cal Date : 26-JUL-2021 13:31 Cal File: X072608.D
Als bottle: 30 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0474-dod.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	4.182	4.182	(1.000)	561905	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	227644	50.0000	52.59
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	327856	50.0000	46.73
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	864583	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	839279	50.0000	
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	970469	50.0000	48.54
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	385282	50.0000	47.98
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	434211	50.0000	
5 Vinyl Chloride	62	1.145	1.145	(0.274)	318588	50.0000	38.70
11 1,1-Dichloroethene	96	1.912	1.912	(0.457)	260879	50.0000	39.63
17 Methylene Chloride	84	2.305	2.305	(0.551)	270065	50.0000	48.87
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	297918	50.0000	48.95
33 1,2-Dichloroethane	62	4.555	4.555	(0.918)	387755	50.0000	42.86
38 Trichloroethene	130	5.207	5.207	(1.049)	294342	50.0000	48.42
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	228450	50.0000	45.22
20 trans-1,2-Dichloroethene	96	2.528	2.528	(0.604)	246299	50.0000	47.34



Data File: \\NAHSTWS005\target\chem\voa6.i\X210727.b\X072731.D
Date : 27-JUL-2021 20:31
Client ID: CCV-END
Sample Info: CCV-END;CCV-END;2;;;
Purge Volume: 5.0
Column phase: DB624

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

MSVOA06 -Logbook

Batch: 45933
Date: 07-30-2021
Method: 8260_W
Comments:

Analyst: Presenta Cabascango
Reviewer:
Laboratory: Houston

#	Samp ID	Type	Analyzed	DF	Init Wt/Vol	Final Vol	File ID	Matrix	Status	p
1	BFB	TUNE	07-30-2021 11:08 am	1.00	50 mL	50 mL	X073001.D	Liquid	Y	N
2	VSTD000.25	ICAL1	07-30-2021 11:29 am	1.00	50 mL	50 mL	X073002.D	Liquid	Y	N
3	VSTD000.5	ICAL2	07-30-2021 11:50 am	1.00	50 mL	50 mL	X073003.D	Liquid	Y	N
4	VSTD001	ICAL3	07-30-2021 12:32 pm	1.00	50 mL	50 mL	X073004.D	Liquid	Y	N
5	VSTD002	ICAL4	07-30-2021 12:53 pm	1.00	50 mL	50 mL	X073005.D	Liquid	Y	N
6	VSTD005	ICAL5	07-30-2021 01:14 pm	1.00	50 mL	50 mL	X073006.D	Liquid	Y	N
7	VSTD020	ICAL6	07-30-2021 01:35 pm	1.00	50 mL	50 mL	X073007.D	Liquid	Y	N
8	VSTD050	ICAL7	07-30-2021 01:56 pm	1.00	50 mL	50 mL	X073008.D	Liquid	Y	N
9	VSTD100	ICAL8	07-30-2021 02:17 pm	1.00	50 mL	50 mL	X073009.D	Liquid	Y	N
10	VSTD150	ICAL9	07-30-2021 02:38 pm	1.00	50 mL	50 mL	X073010.D	Liquid	Y	N
11	VSTD200	ICAL	07-30-2021 02:59 pm	1.00	50 mL	50 mL	X073011.D	Liquid	Y	N
12	BLANK	SAMP	07-30-2021 03:20 pm	1.00	50 mL	50 mL	X073012.D	Liquid	Y	N
13	BLANK	CCV	07-30-2021 03:41 pm	1.00	50 mL	50 mL	X073013.D	Liquid	Y	N
14	CCV	CCV	07-30-2021 04:02 pm	1.00	50 mL	50 mL	X073014.D	Liquid	Y	N
15	CCB	SAMP	07-30-2021 04:23 pm	1.00	50 mL	50 mL	X073015.D	Liquid	Y	N
16	VLCSW-210730	LCS	07-30-2021 04:43 pm	1.00	50 mL	50 mL	X073016.D	Liquid	Y	N
17	BLANK	SAMP	07-30-2021 05:39 pm	1.00	50 mL	50 mL	X073017.D	Liquid	Y	N
18	VBLKW-210730	MBLK	07-30-2021 06:00 pm	1.00	50 mL	50 mL	X073018.D	Liquid	Y	N
19	HS21071537-05	SAMP	07-30-2021 06:21 pm	1.00	50 mL	50 mL	X073019.D	Liquid	Y	N
20	HS21071537-01	SAMP	07-30-2021 06:42 pm	1.00	50 mL	50 mL	X073020.D	Liquid	Y	N
21	HS21071537-02	SAMP	07-30-2021 07:03 pm	1.00	50 mL	50 mL	X073021.D	Liquid	Y	N
22	HS21071537-03	SAMP	07-30-2021 07:24 pm	1.00	50 mL	50 mL	X073022.D	Liquid	Y	N
23	HS21071537-04	SAMP	07-30-2021 07:45 pm	1.00	50 mL	50 mL	X073023.D	Liquid	Y	N
24	HS21071537-06	SAMP	07-30-2021 08:06 pm	1.00	50 mL	50 mL	X073024.D	Liquid	Y	N
25	HS21071537-07	SAMP	07-30-2021 08:27 pm	1.00	50 mL	50 mL	X073025.D	Liquid	Y	N
26	HS21071438-01	SAMP	07-30-2021 08:48 pm	1.00	50 mL	50 mL	X073026.D	Liquid	Y	N
27	HS21071536-01	SAMP	07-30-2021 09:09 pm	1.00	50 mL	50 mL	X073027.D	Liquid	Y	N
28	HS21071537-01MS	MS	07-30-2021 09:30 pm	1.00	50 mL	50 mL	X073028.D	Liquid	Y	N
29	HS21071537-01MSD	MSD	07-30-2021 09:51 pm	1.00	50 mL	50 mL	X073029.D	Liquid	Y	N
30	CCV-END	CCV	07-30-2021 10:12 pm	1.00	50 mL	50 mL	X073030.D	Liquid	Y	N
31	BFB	TUNE	07-30-2021 10:33 pm	1.00	50 mL	50 mL	Y073001.D	Liquid	Y	N
32	CCV	CCV	07-30-2021 10:54 pm	1.00	50 mL	50 mL	Y073002a.D	Liquid	Y	N
33	CCV	CCV	07-30-2021 11:15 pm	1.00	50 mL	50 mL	Y073003.D	Liquid	Y	N
34	CCB	SAMP	07-30-2021 11:36 pm	1.00	50 mL	50 mL	Y073004.D	Liquid	Y	N
35	VLCSW-210730	LCS	07-30-2021 11:57 pm	1.00	50 mL	50 mL	Y073005.D	Liquid	Y	N
36	BLANK	SAMP	07-31-2021 12:18 am	1.00	50 mL	50 mL	Y073006.D	Liquid	Y	N
37	BLANK	SAMP	07-31-2021 12:39 am	1.00	50 mL	50 mL	Y073007.D	Liquid	Y	N
38	VBLKW-210730	MBLK	07-31-2021 01:00 am	1.00	50 mL	50 mL	Y073008.D	Liquid	Y	N
39	HS21071586-05	SAMP	07-31-2021 01:21 am	1.00	50 mL	50 mL	Y073009.D	Liquid	Y	N
40	HS21071609-04	SAMP	07-31-2021 01:42 am	1.00	50 mL	50 mL	Y073010.D	Liquid	Y	N
41	HS21071610-04	SAMP	07-31-2021 02:03 am	1.00	50 mL	50 mL	Y073011.D	Liquid	Y	N

MSVOA06 -Logbook

#	Samp ID	Type	Analyzed	DF	Init Wt/Vol	Final Vol	File ID	Matrix	Status	p
42	HS21071610-02	SAMP	07-31-2021 02:24 am	1.00	50 mL	50 mL	Y073012.D	Liquid	Y	N
43	HS21071609-05	SAMP	07-31-2021 02:45 am	1.00	50 mL	50 mL	Y073013.D	Liquid	Y	N
44	HS21071586-03	SAMP	07-31-2021 03:06 am	1.00	50 mL	50 mL	Y073014.D	Liquid	Y	N
45	HS21071586-01	SAMP	07-31-2021 03:28 am	1.00	50 mL	50 mL	Y073015.D	Liquid	Y	N
46	HS21071586-02	SAMP	07-31-2021 03:49 am	1.00	50 mL	50 mL	Y073016.D	Liquid	Y	N
47	HS21071586-04	SAMP	07-31-2021 04:10 am	1.00	50 mL	50 mL	Y073017.D	Liquid	Y	N
48	HS21071609-02	SAMP	07-31-2021 04:31 am	1.00	50 mL	50 mL	Y073018.D	Liquid	Y	N
49	HS21071609-03	SAMP	07-31-2021 04:52 am	1.00	50 mL	50 mL	Y073019.D	Liquid	Y	N
50	HS21071611-01n/r	SAMP	07-31-2021 05:13 am	1.00	50 mL	50 mL	Y073020.D	Liquid	Y	N
51	HS21071611-02c/o	SAMP	07-31-2021 05:34 am	1.00	50 mL	50 mL	Y073021.D	Liquid	Y	N
52	HS21071611-03c/o	SAMP	07-31-2021 05:55 am	1.00	50 mL	50 mL	Y073022.D	Liquid	Y	N
53	HS21071611-04c/o	SAMP	07-31-2021 06:16 am	1.00	50 mL	50 mL	Y073023.D	Liquid	Y	N
54	HS21071611-05c/o	SAMP	07-31-2021 06:37 am	1.00	50 mL	50 mL	Y073024.D	Liquid	Y	N
55	HS21071611-06	SAMP	07-31-2021 06:58 am	1.00	50 mL	50 mL	Y073025.D	Liquid	Y	N
56	HS21071611-07	SAMP	07-31-2021 07:19 am	1.00	50 mL	50 mL	Y073026.D	Liquid	Y	N
57	HS21071610-01c/o	SAMP	07-31-2021 07:40 am	1.00	50 mL	50 mL	Y073027.D	Liquid	Y	N
58	HS21071609-01c/o	SAMP	07-31-2021 08:01 am	1.00	50 mL	50 mL	Y073028.D	Liquid	Y	N
59	HS21071586-03MS	MS	07-31-2021 08:23 am	1.00	50 mL	50 mL	Y073029.D	Liquid	Y	N
60	HS21071586-03MSD	MSD	07-31-2021 08:44 am	1.00	50 mL	50 mL	Y073030.D	Liquid	Y	N
61	CCV-END	CCV	07-31-2021 09:05 am	1.00	50 mL	50 mL	Y073031.D	Liquid	Y	N
62	BLANK	SAMP	07-31-2021 09:26 am	1.00	50 mL	50 mL	Y073032.D	Liquid	Y	N

FORM 3
WATER VOLATILE METHOD SPIKE RECOVERY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS21071204

Matrix Spike - Sample No.: ICV

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE AMOUNT ()	% REC #	QC. LIMITS REC.
cis-1,2-Dichloroethene	50.00	47.66	95	80-120
Vinyl Chloride	50.00	46.99	94	80-120
Methylene Chloride	50.00	48.45	97	80-120
1,1-Dichloroethene	50.00	46.20	92	80-120
1,2-Dichloroethane	50.00	46.66	93	80-120
Trichloroethene	50.00	48.42	97	80-120
1,1,2-Trichloroethane	50.00	48.48	97	80-120

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

* Values outside of QC limits

COMMENTS: _____

FORM 5
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS21071204

Lab File ID: X073001 BFB Injection Date: 07/30/21

Instrument ID: VOA6 BFB Injection Time: 1108

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

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	19.9
75	30.0 - 60.0% of mass 95	48.7
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.6
173	Less than 2.0% of mass 174	0.8 (1.1)1
174	Greater than 50.0% of mass 95	73.7
175	5.0 - 9.0% of mass 174	5.5 (7.5)1
176	95.0 - 101.0% of mass 174	73.6 (99.8)1
177	5.0 - 9.0% of mass 176	5.6 (7.7)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	X073002	07/30/21	1129
02	VSTD000.5	VSTD000.5	X073003	07/30/21	1150
03	VSTD001	VSTD001	X073004	07/30/21	1232
04	VSTD002	VSTD002	X073005	07/30/21	1253
05	VSTD005	VSTD005	X073006	07/30/21	1314
06	VSTD020	VSTD020	X073007	07/30/21	1335
07	VSTD050	VSTD050	X073008	07/30/21	1356
08	VSTD100	VSTD100	X073009	07/30/21	1417
09	VSTD150	VSTD150	X073010	07/30/21	1438
10	VSTD200	VSTD200	X073011	07/30/21	1459
11	ICV	ICV	X073014	07/30/21	1602
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.: HS21071204

Instrument ID: VOA6 Calibration Date(s): 07/30/21 07/30/21

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1129 1459

LAB FILE ID: RF0.25: X073002 RF0.5: X073003 RF1: X073004
RF2: X073005 RF5: X073006 RF20: X073007

COMPOUND	RF0.25	RF0.5	RF1	RF2	RF5	RF20
Vinyl Chloride		0.568	0.528	0.439	0.452	0.460
Methylene Chloride		5291	6903	11889	29963	118046
1,1-Dichloroethene		0.492	0.438	0.426	0.396	0.400
1,2-Dichloroethane		0.469	0.435	0.388	0.402	0.399
Trichloroethene		0.443	0.403	0.317	0.358	0.354
1,1,2-Trichloroethane		0.282	0.267	0.243	0.291	0.252
Dibromofluoromethane		4390	7282	12374	35273	130299
1,2-Dichloroethane-d4		4928	6013	12843	33565	126393
Toluene-d8		1.432	1.243	1.217	1.162	1.112
4-Bromofluorobenzene		6602	8523	15228	41359	158248

FORM VI VOA

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS2107120

Instrument ID: VOA6 Calibration Date(s): 07/30/21 07/30/21

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1129 1459

COMPOUND	CURVE	COEFFICENTS A0	COEFFICENTS A1	%RSD OR R^2	MAX %RSD OR R^2
Vinyl Chloride	AVRG		0.47594663	9.999	15.000
Methylene Chloride	LINR	-4.5e-003	2.39571341	0.9997444	0.9900000
1,1-Dichloroethene	AVRG		0.42072319	8.104	15.000
1,2-Dichloroethane	AVRG		0.40111335	7.960	15.000
Trichloroethene	AVRG		0.36538023	10.181	15.000
1,1,2-Trichloroethane	AVRG		0.26158012	5.941	15.000
Dibromofluoromethane	LINR	-2.05e-002	2.17633740	0.9991893	0.9900000
1,2-Dichloroethane-d4	LINR	-1.76e-002	2.28124803	0.9996604	0.9900000
Toluene-d8	AVRG		1.17277965	9.647	15.000
4-Bromofluorobenzene	LINR	-1.44e-002	2.41836939	0.9997995	0.9900000

FORM VI VOA

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS2107120

Instrument ID: VOA6 Calibration Date(s): 07/30/21 07/30/21

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1129 1459

LAB FILE ID: RF50: X073008 RF100: X073009 RF150: X073010
RF200: X073011

COMPOUND	RF50	RF100	RF150	RF200
Vinyl Chloride	0.410	0.486	0.458	0.481
Methylene Chloride	288156	621769	906937	1282411
1,1-Dichloroethene	0.371	0.432	0.407	0.425
1,2-Dichloroethane	0.366	0.377	0.389	0.385
Trichloroethene	0.334	0.362	0.357	0.361
1,1,2-Trichloroethane	0.252	0.256	0.256	0.256
Dibromofluoromethane	340316	710330	1015199	1392587
1,2-Dichloroethane-d4	321239	661249	974560	1331240
Toluene-d8	1.106	1.125	1.078	1.079
4-Bromofluorobenzene	403767	846415	1227770	1706894

FORM VI VOA

Data File: \\NAHSTWS005\target\chem\voa6.i\X210730.b\X073001.D

Date : 30-JUL-2021 11:08

Client ID: BFB

Instrument: voa6.i

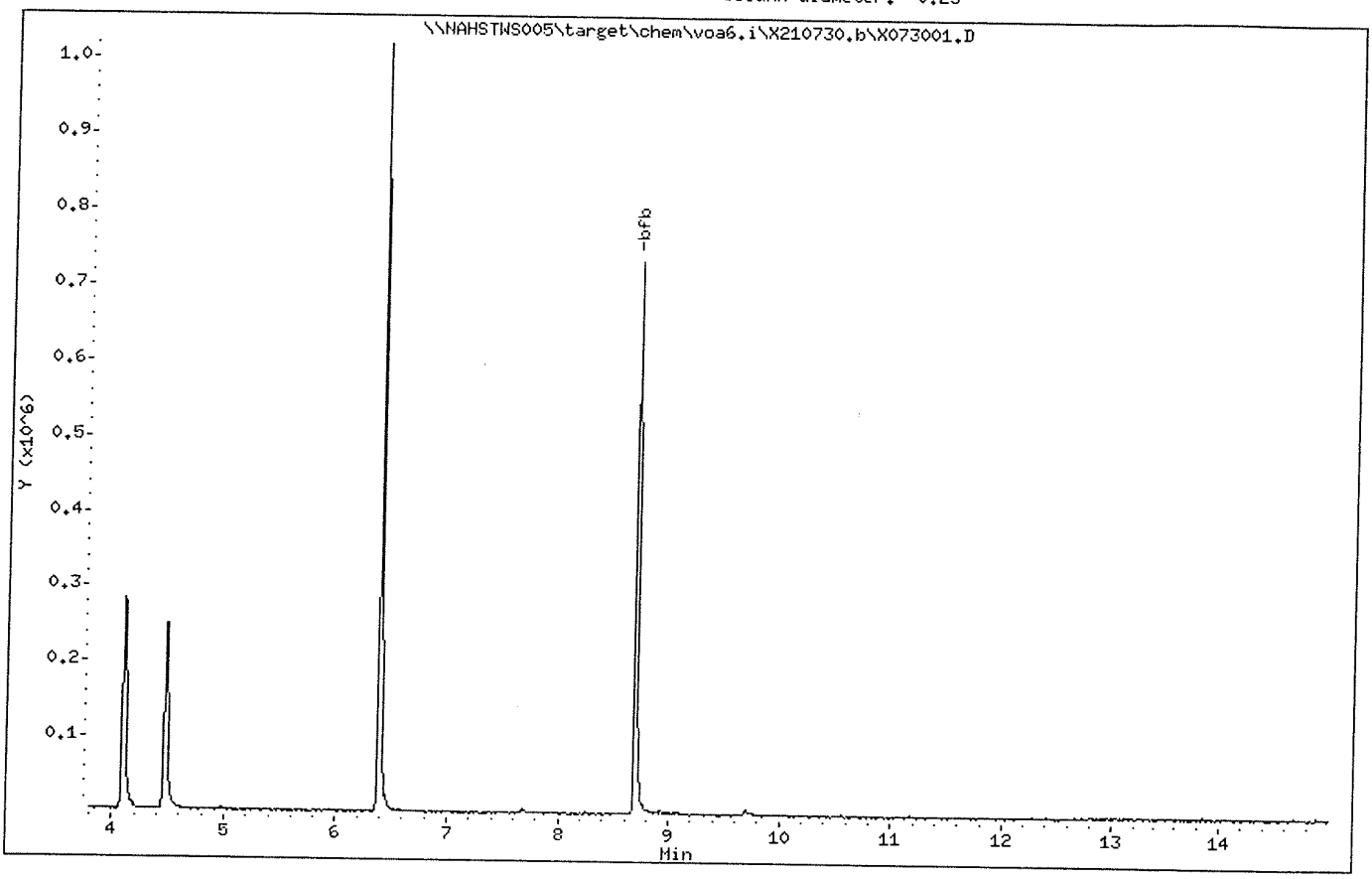
Sample Info: BFB;BFB;3;;BFB

Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

Column diameter: 0.25



Data File: \\NAHSTWS005\target\chem\voa6.i\X210730.b\X073001.D

Date : 30-JUL-2021 11:08

Client ID: BFB

Instrument: voa6.i

Sample Info: BFB;BFB;3;;BFB

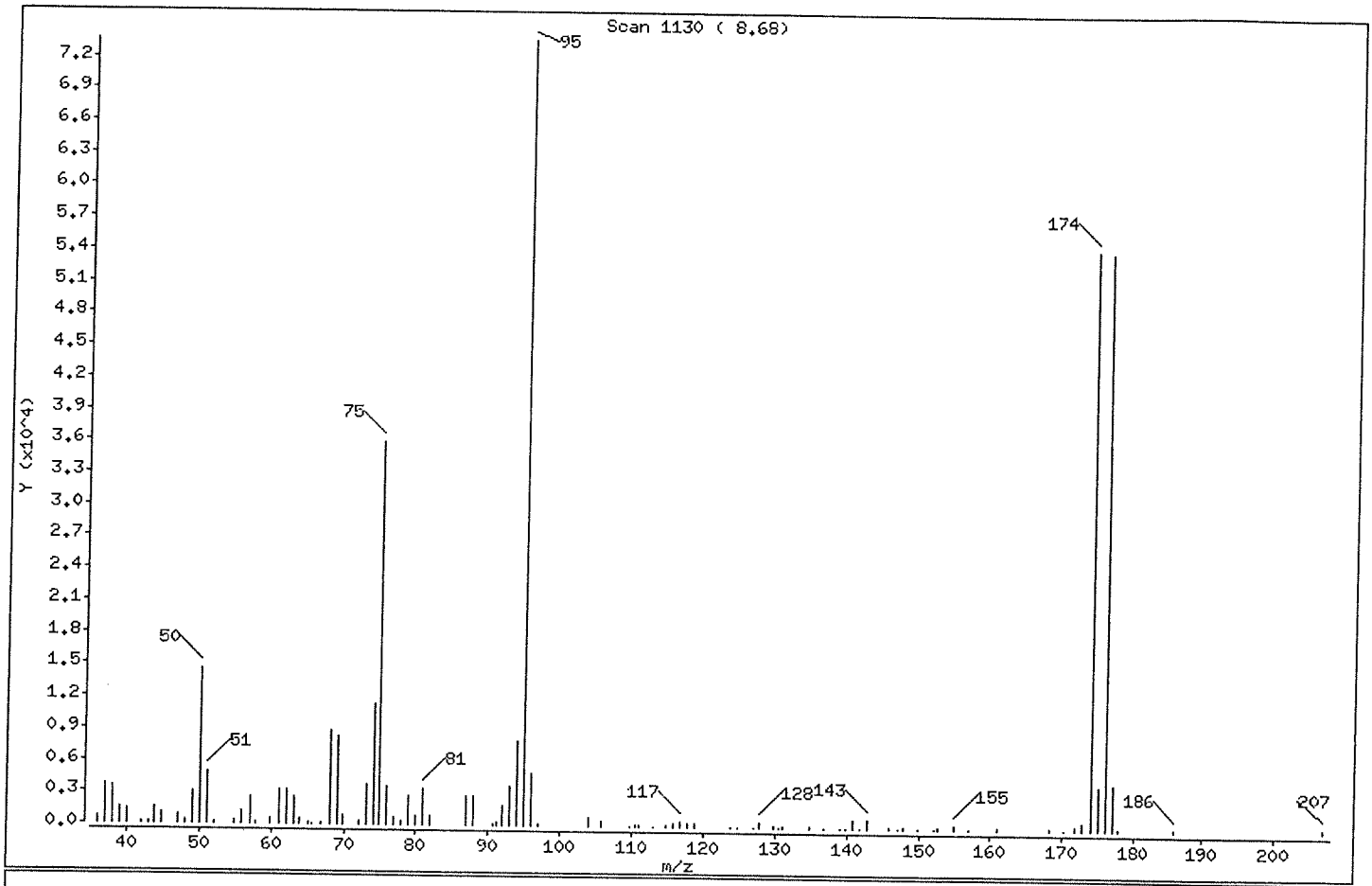
Volume Injected (uL): 2.0

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	19.86
75	30.00 - 60.00% of mass 95	48.66
96	5.00 - 9.00% of mass 95	6.61
173	Less than 2.00% of mass 174	0.83 (1.12)
174	Greater than 50.00% of mass 95	73.73
175	5.00 - 9.00% of mass 174	5.53 (7.50)
176	95.00 - 101.00% of mass 174	73.57 (99.78)
177	5.00 - 9.00% of mass 176	5.64 (7.66)

Data File: \\NAHSTWS005\target\chem\voa6.i\X210730.b\X073001.D

Date : 30-JUL-2021 11:08

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: X073001.D
Spectrum: Scan 1130 (8.68)
Location of Maximum: 95.00
Number of points: 96

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	656	65.70	78	97.00	176	142.80	903
37.00	3776	66.80	116	103.90	785	145.80	163
38.00	3488	68.00	8875	105.70	540	147.00	71
38.90	1543	69.00	8333	109.70	51	147.90	137
40.00	1298	69.90	855	110.50	170	149.90	78
41.90	90	72.00	412	110.90	131	152.00	69
43.00	106	73.00	3776	113.00	67	152.60	90
43.90	1582	74.00	11403	114.80	98	154.80	312
44.90	1059	75.00	35824	115.80	337	156.90	66
47.00	894	75.90	3616	116.80	507	161.00	201
48.10	334	77.00	677	117.80	326	168.20	209
49.00	3051	77.90	348	118.80	401	170.10	68
50.00	14621	78.90	2739	123.80	58	171.70	281
51.00	4991	80.00	777	124.80	70	172.70	608
52.00	99	80.90	3361	127.00	58	173.90	54280
54.90	333	81.80	793	127.80	431	174.90	4072
55.90	1185	87.00	2667	129.70	217	175.90	54160
57.00	2555	88.00	2726	130.50	50	176.90	4149
57.90	118	90.60	205	131.10	144	177.80	170
59.80	467	91.10	368	134.90	105	185.90	124
61.00	3224	91.90	1787	136.80	70	206.80	333
62.00	3226	92.90	3678	139.10	65		
63.00	2593	93.90	7906	139.80	70		
63.90	424	95.00	73616	140.80	849		
65.00	109	96.00	4863	141.80	76		

Data File: \\NAHSTWS005\target\chem\voa6.i\X210730.b\X073002.D Page 1
Report Date: 10-Sep-2021 14:09

ALS Laboratory Group

Data file : \\NAHSTWS005\target\chem\voa6.i\X210730.b\X073002.D
Lab Smp Id: VSTD000.25 Client Smp ID: VSTD000.25
Inj Date : 30-JUL-2021 11:29
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\X210730.b\8260W.m
Meth Date : 10-Sep-2021 14:09 voa6.i Quant Type: ISTD
Cal Date : 30-JUL-2021 14:59 Cal File: X073011.D
Als bottle: 2 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0474-dod.sub
Target Version: 4.14
Processing Host: NAHSTW7056

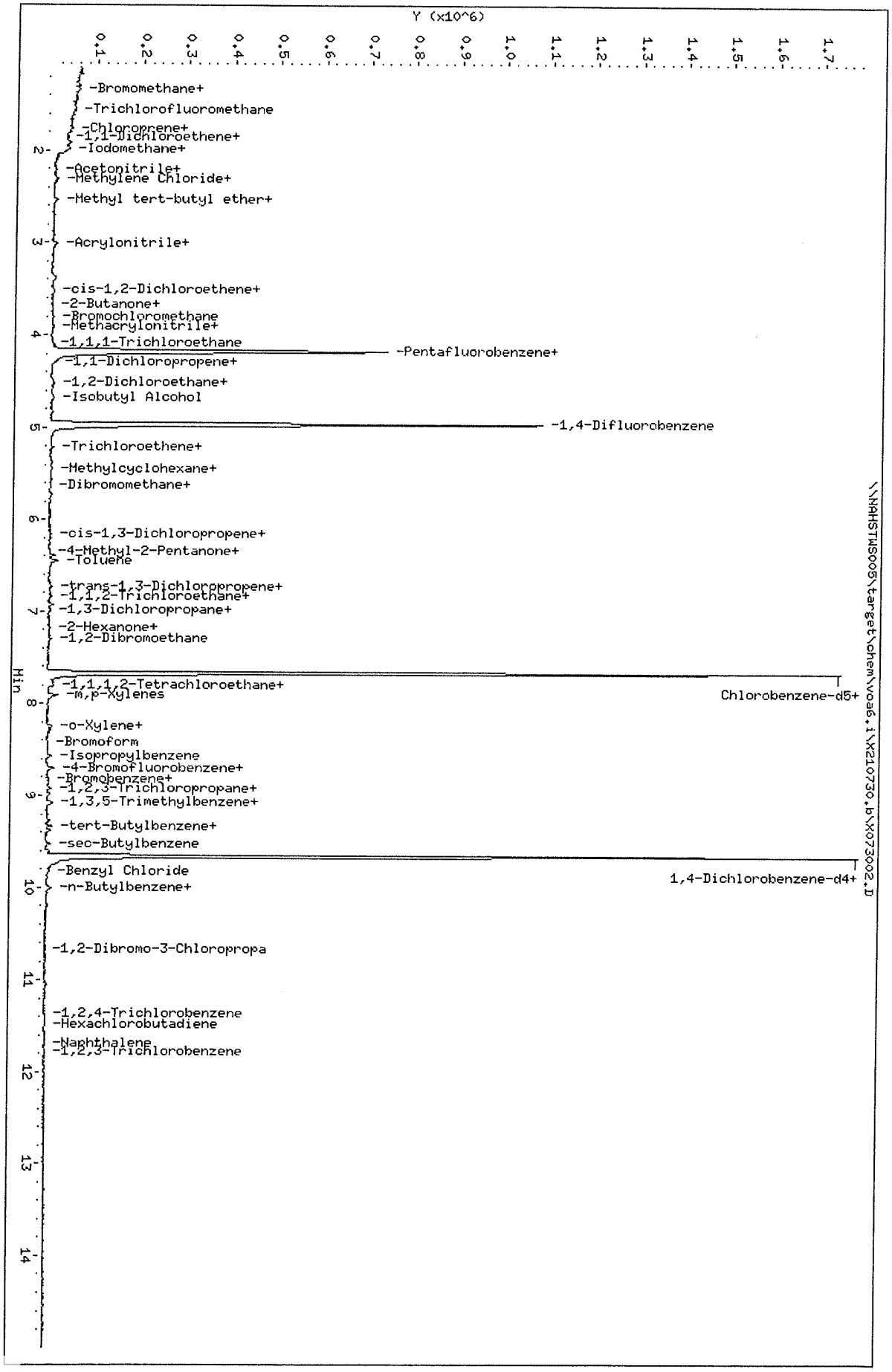
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

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	4.182	4.182	(1.000)	666587	50.0000	
$ 30 Dibromofluoromethane	113	4.096	4.096	(0.979)	2125	0.25000	(a)
$ 35 1,2-Dichloroethane-d4	65	4.490	4.490	(1.074)	2961	0.25000	(Ta)
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	968612	50.0000	
* 47 Chlorobenzene-d5	117	7.670	7.670	(1.000)	883114	50.0000	
$ 48 Toluene-d8	98	6.395	6.395	(0.834)	8108	0.25000	0.39(a)
$ 69 4-Bromofluorobenzene	95	8.702	8.702	(1.134)	6221	0.25000	0.13(a)
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	450871	50.0000	

QC Flag Legend

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



Data File: \\NAHSTWS005\target\chem\voa6.i\X210730.b\X073002.D
Date : 30-JUL-2021 11:29
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\X210730.b\X073003.D Page 1
Report Date: 10-Sep-2021 14:09

ALS Laboratory Group

Data file : \\NAHSTWS005\target\chem\voa6.i\X210730.b\X073003.D
Lab Smp Id: VSTD000.5 Client Smp ID: VSTD000.5
Inj Date : 30-JUL-2021 11:50
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\X210730.b\8260W.m
Meth Date : 10-Sep-2021 14:09 voa6.i Quant Type: ISTD
Cal Date : 30-JUL-2021 11:29 Cal File: X073002.D
Als bottle: 3 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0474-dod.sub
Target Version: 4.14
Processing Host: NAHSTW7056

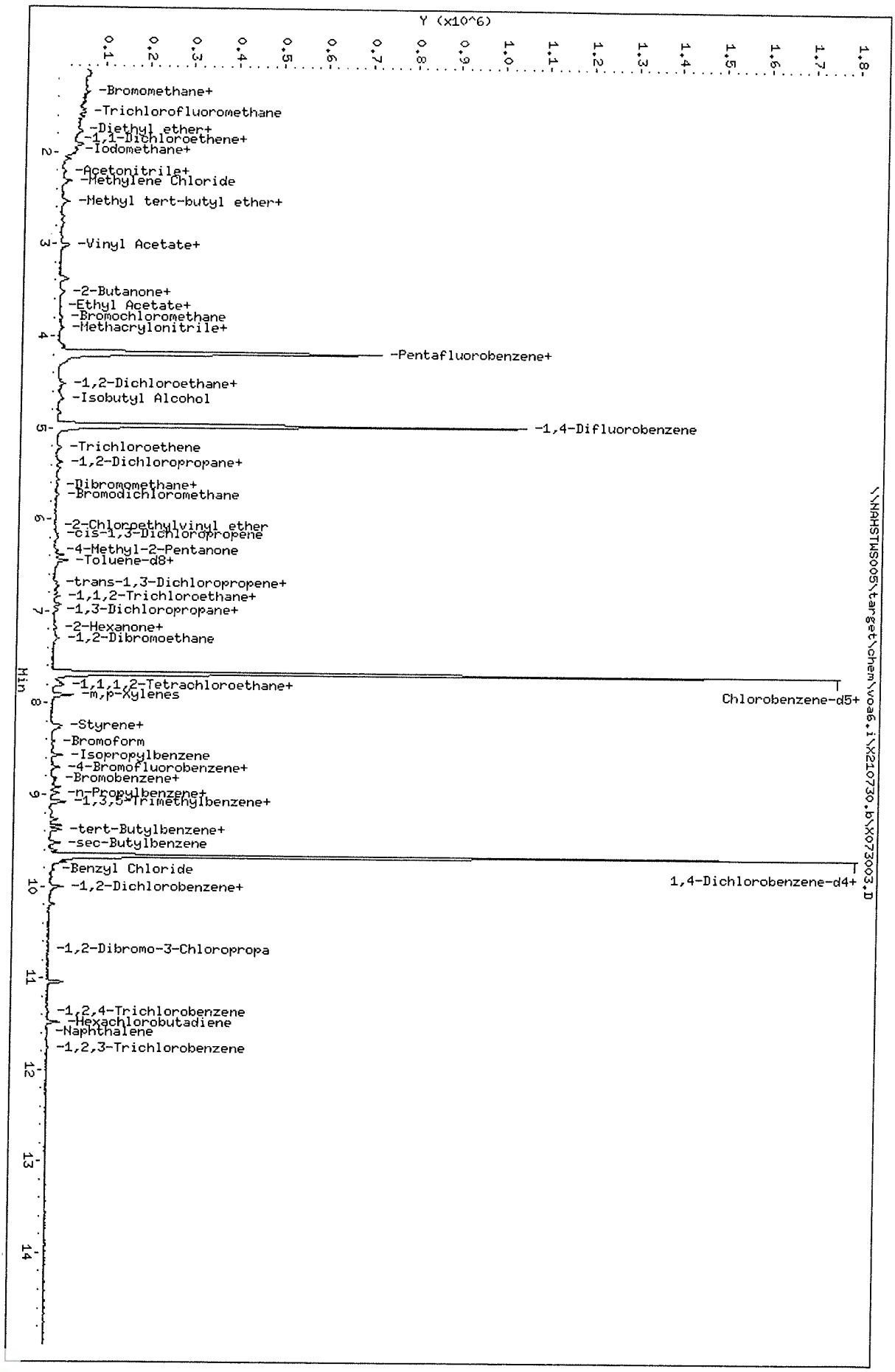
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

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	4.182	4.182	(1.000)	655666	50.0000	
$ 30 Dibromofluoromethane	113	4.110	4.110	(0.983)	4390	0.50000	(a)
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	4928	0.50000	(aM)
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	942256	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	881159	50.0000	
$ 48 Toluene-d8	98	6.395	6.395	(0.834)	12620	0.50000	0.61 (a)
$ 69 4-Bromofluorobenzene	95	8.702	8.702	(1.134)	6602	0.50000	0.18 (a)
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	446795	50.0000	
5 Vinyl Chloride	62	1.145	1.145	(0.274)	3726	0.50000	0.59 (aM)
11 1,1-Dichloroethene	96	1.911	1.911	(0.457)	3229	0.50000	0.58 (a)
17 Methylene Chloride	84	2.305	2.305	(0.551)	5291	0.50000	0.74 (a)
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	3929	0.50000	0.59 (a)
33 1,2-Dichloroethane	62	4.562	4.562	(0.919)	4422	0.50000	0.58 (a)
38 Trichloroethene	130	5.206	5.206	(1.049)	4176	0.50000	0.60 (a)
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	2481	0.50000	0.53 (a)

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\X210730.b\X073003.D
Date : 30-JUL-2021 11:50
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\X210730.b\X073004.D Page 1
Report Date: 10-Sep-2021 14:09

ALS Laboratory Group

Data file : \\NAHSTWS005\target\chem\voa6.i\X210730.b\X073004.D
Lab Smp Id: VSTD001 Client Smp ID: VSTD001
Inj Date : 30-JUL-2021 12:32
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\X210730.b\8260W.m
Meth Date : 10-Sep-2021 14:09 voa6.i Quant Type: ISTD
Cal Date : 30-JUL-2021 11:50 Cal File: X073003.D
Als bottle: 5 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0474-dod.sub
Target Version: 4.14
Processing Host: NAHSTW7056

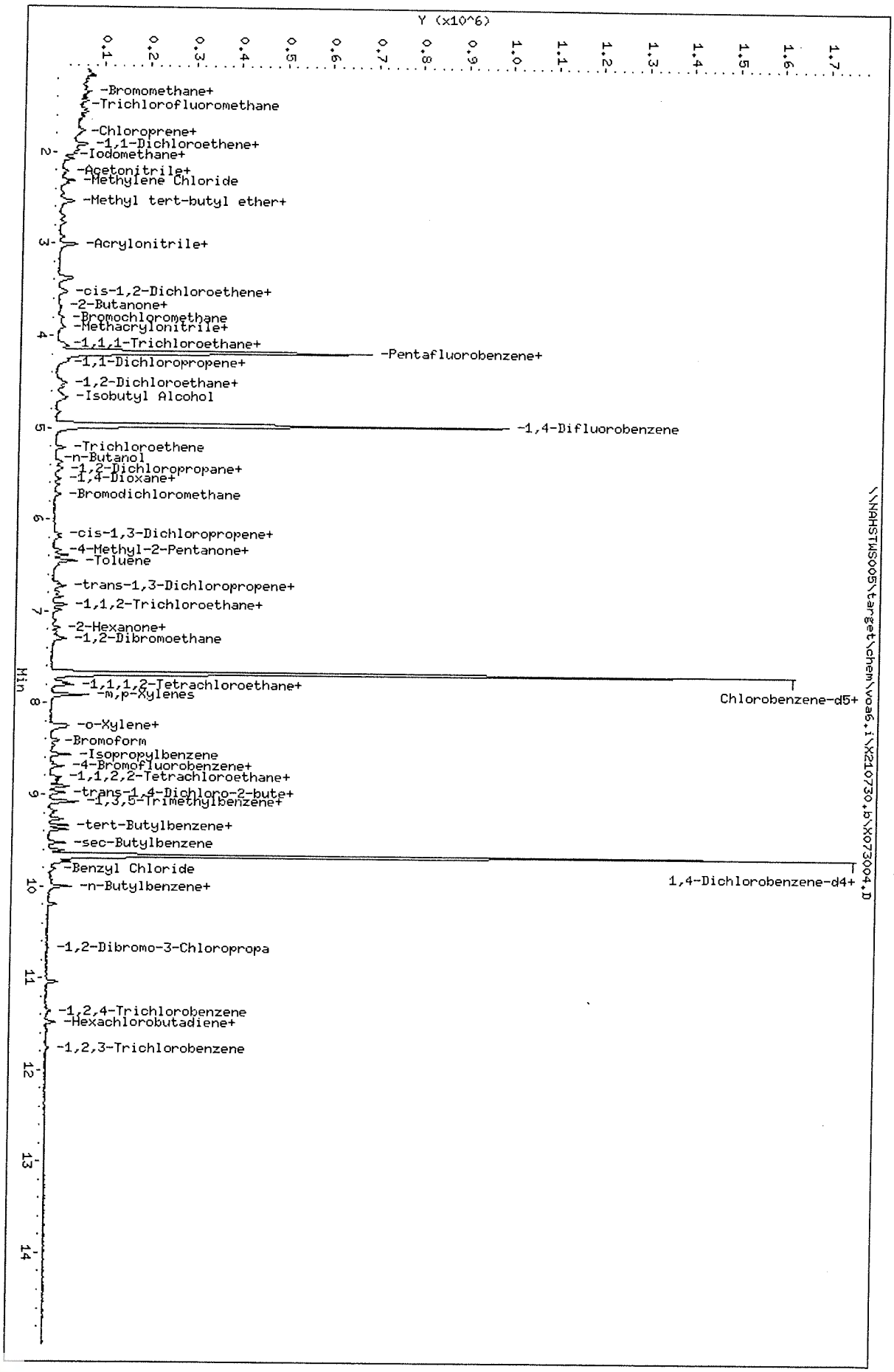
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

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)	623945	50.0000	
$ 30 Dibromofluoromethane	113	4.096	4.096	(0.979)	7282	1.00000	0.24(a)
$ 35 1,2-Dichloroethane-d4	65	4.483	4.483	(1.072)	6013	1.00000	0.21(a)
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	895498	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	839999	50.0000	
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	20880	1.00000	1.05(a)
$ 69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	8523	1.00000	0.50(a)
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	438693	50.0000	
5 Vinyl Chloride	62	1.138	1.138	(0.272)	6585	1.00000	1.10(a)
11 1,1-Dichloroethene	96	1.919	1.919	(0.459)	5463	1.00000	1.04(a)
17 Methylene Chloride	84	2.305	2.305	(0.551)	6903	1.00000	1.10(a)
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	6640	1.00000	1.06(a)
33 1,2-Dichloroethane	62	4.562	4.562	(0.918)	7784	1.00000	1.08(a)
38 Trichloroethene	130	5.206	5.206	(1.048)	7211	1.00000	1.10(a)
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	4492	1.00000	1.02(a)

QC Flag Legend

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



Data File: \\NAHSTWS005\target\chem\voa6.i\X210730.b\X073004.D
Date : 30-JUL-2021 12:32
Client ID: VSTD001
Sample Info: VSTD001;VSTD00111;3;;
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\NAHSTWS005\target\chem\voa6.i\X210730.b\X073005.D Page 1
Report Date: 10-Sep-2021 14:09

ALS Laboratory Group

Data file : \\NAHSTWS005\target\chem\voa6.i\X210730.b\X073005.D
Lab Smp Id: VSTD002 Client Smp ID: VSTD002
Inj Date : 30-JUL-2021 12:53
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\X210730.b\8260W.m
Meth Date : 10-Sep-2021 14:09 voa6.i Quant Type: ISTD
Cal Date : 30-JUL-2021 12:32 Cal File: X073004.D
Als bottle: 6 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0474-dod.sub
Target Version: 4.14
Processing Host: NAHSTW7056

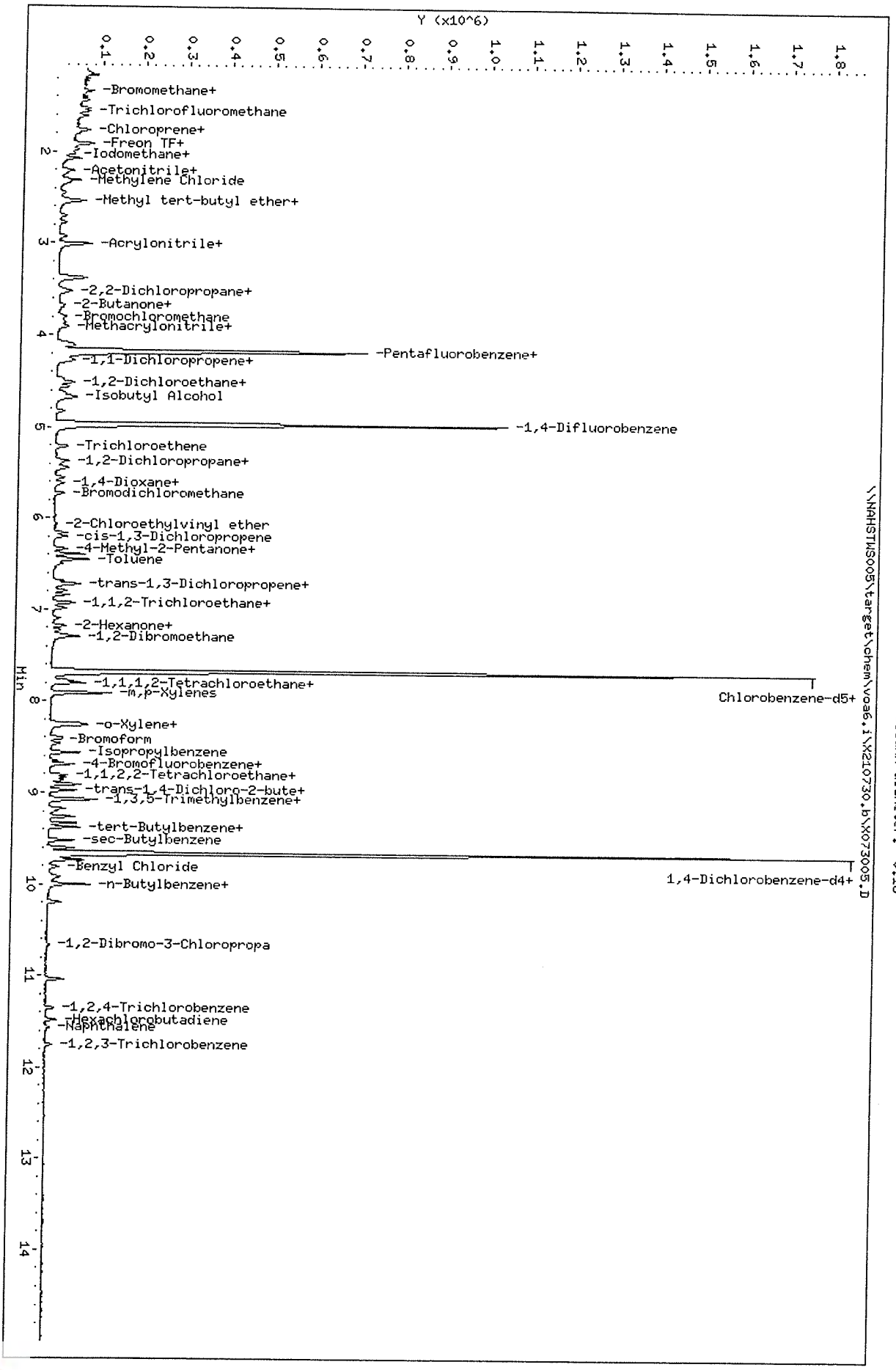
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

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)	644211	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	12374	2.00000	1.06(a)
$ 35 1,2-Dichloroethane-d4	65	4.483	4.483	(1.072)	12843	2.00000	1.39(a)
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	928585	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	870262	50.0000	
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	42373	2.00000	2.07(a)
$ 69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	15228	2.00000	1.39(a)
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	450600	50.0000	
5 Vinyl Chloride	62	1.145	1.145	(0.274)	11319	2.00000	1.84(a)
11 1,1-Dichloroethene	96	1.912	1.912	(0.457)	10979	2.00000	2.02(aM)
17 Methylene Chloride	84	2.306	2.306	(0.551)	11889	2.00000	1.98(a)
27 cis-1,2-Dichloroethene	96	3.538	3.538	(0.846)	11661	2.00000	1.80(a)
33 1,2-Dichloroethane	62	4.562	4.562	(0.919)	14406	2.00000	1.93(a)
38 Trichloroethene	130	5.214	5.214	(1.051)	11781	2.00000	1.73(a)
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	8460	2.00000	1.85(a)

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\X210730.b\X073005.D
Date : 30-JUL-2021 12:53
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\X210730.b\X073006.D Page 1
Report Date: 10-Sep-2021 14:09

ALS Laboratory Group

Data file : \\NAHSTWS005\target\chem\voa6.i\X210730.b\X073006.D
Lab Smp Id: VSTD005 Client Smp ID: VSTD005
Inj Date : 30-JUL-2021 13:14
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\X210730.b\8260W.m
Meth Date : 10-Sep-2021 14:09 voa6.i Quant Type: ISTD
Cal Date : 30-JUL-2021 12:53 Cal File: X073005.D
Als bottle: 7 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0474-dod.sub
Target Version: 4.14
Processing Host: NAHSTW7056

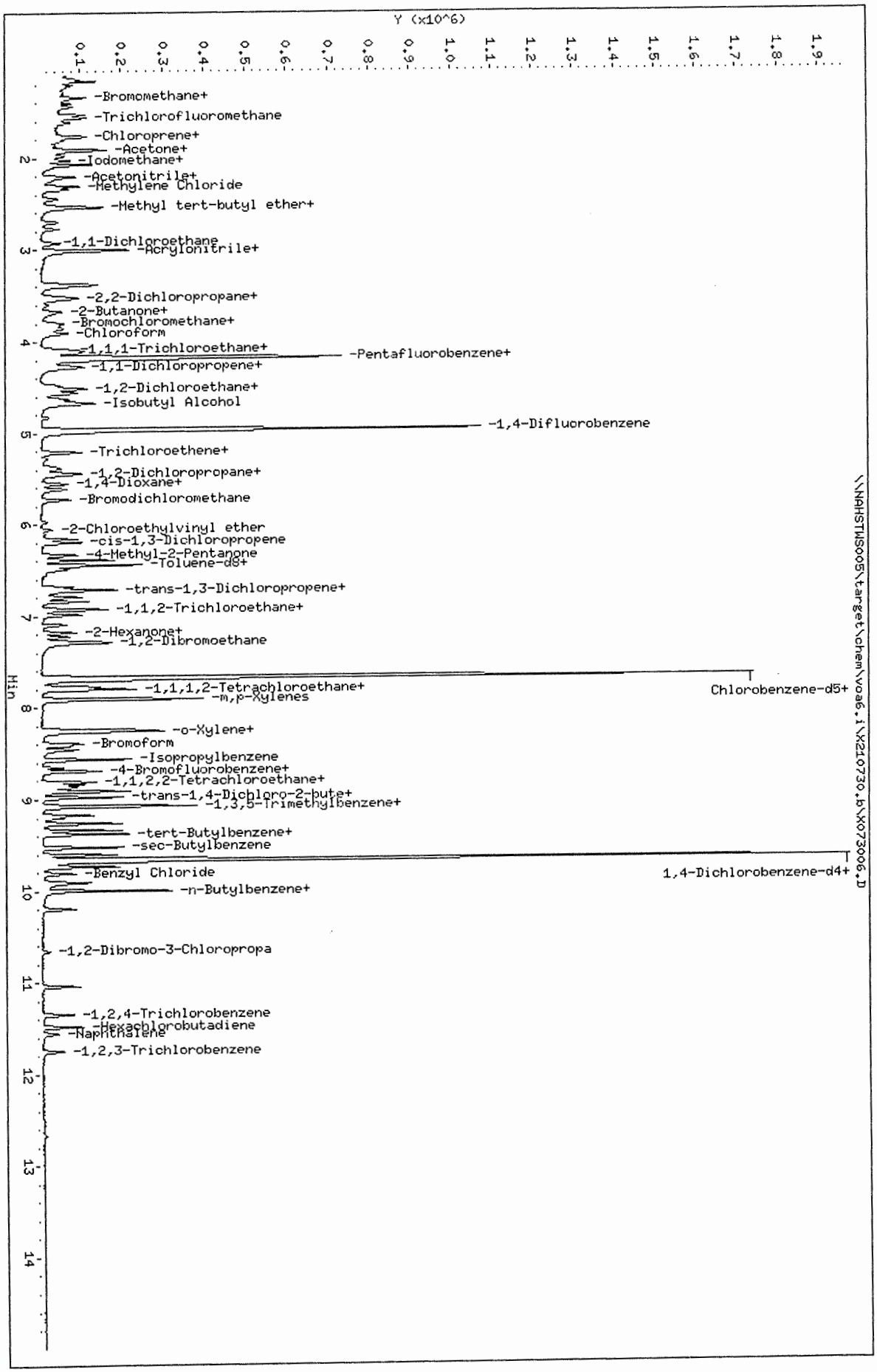
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

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)	655633	50.0000	
$	30 Dibromofluoromethane	113	4.103	4.103	(0.981)	35273	5.00000	4.83(a)
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	33565	5.00000	4.95(a)
*	36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	942260	50.0000	
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	874110	50.0000	
$	48 Toluene-d8	98	6.389	6.389	(0.833)	101562	5.00000	4.95(a)
$	69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	41359	5.00000	5.00
*	70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	453975	50.0000	
	5 Vinyl Chloride	62	1.138	1.138	(0.272)	29673	5.00000	4.75(a)
	11 1,1-Dichloroethene	96	1.912	1.912	(0.457)	25956	5.00000	4.70(a)
	17 Methylene Chloride	84	2.306	2.306	(0.551)	29963	5.00000	5.24
	27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	32078	5.00000	4.87(a)
	33 1,2-Dichloroethane	62	4.562	4.562	(0.919)	37869	5.00000	5.00
	38 Trichloroethene	130	5.207	5.207	(1.049)	33714	5.00000	4.89(a)
	53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	25438	5.00000	5.56

QC Flag Legend

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



Data File: \\NAHSTWS005\target\chem\voa6.i\X210730.b\X073006.D
Date : 30-JUL-2021 13:14
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\X210730.b\X073007.D Page 1
Report Date: 10-Sep-2021 14:09

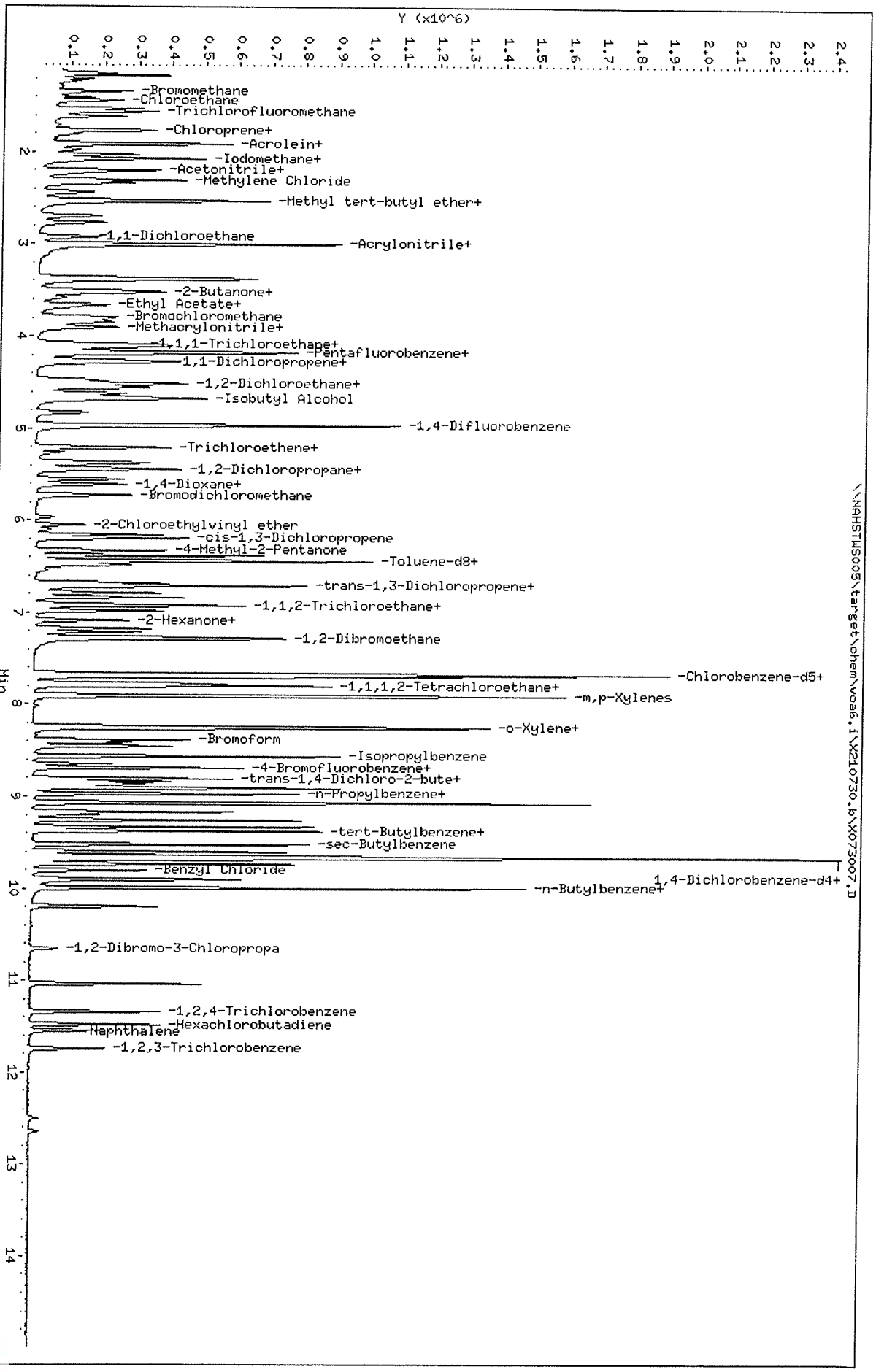
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Data file : \\NAHSTWS005\target\chem\voa6.i\X210730.b\X073007.D
Lab Smp Id: VSTD020 Client Smp ID: VSTD020
Inj Date : 30-JUL-2021 13:35
Operator : PC Inst ID: voa6.i
Smp Info : VSTD020;VSTD020;1;6;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\target\chem\voa6.i\X210730.b\8260W.m
Meth Date : 10-Sep-2021 14:09 voa6.i Quant Type: ISTD
Cal Date : 30-JUL-2021 13:14 Cal File: X073006.D
Als bottle: 8 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0474-dod.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)	681402	50.0000	
$	30 Dibromofluoromethane	113	4.103	4.103	(0.981)	130299	20.0000	19.78
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	126393	20.0000	20.27
*	36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	970724	50.0000	
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	922153	50.0000	
$	48 Toluene-d8	98	6.388	6.388	(0.833)	410374	20.0000	18.97
$	69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	158248	20.0000	20.03
*	70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	500272	50.0000	
	5 Vinyl Chloride	62	1.138	1.138	(0.272)	125365	20.0000	19.32
	11 1,1-Dichloroethene	96	1.919	1.919	(0.459)	108984	20.0000	19.00
	17 Methylene Chloride	84	2.305	2.305	(0.551)	118046	20.0000	20.52
	27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	134779	20.0000	19.71
	33 1,2-Dichloroethane	62	4.555	4.555	(0.918)	154902	20.0000	19.89
	38 Trichloroethene	130	5.206	5.206	(1.049)	137306	20.0000	19.35
	53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	92956	20.0000	19.26



Data File: \\NAHSTMS005\target\chem\voa6.i\X210730.b\X073007.D
Date : 30-JUL-2021 13:35
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\X210730.b\X073008.D Page 1
Report Date: 10-Sep-2021 14:09

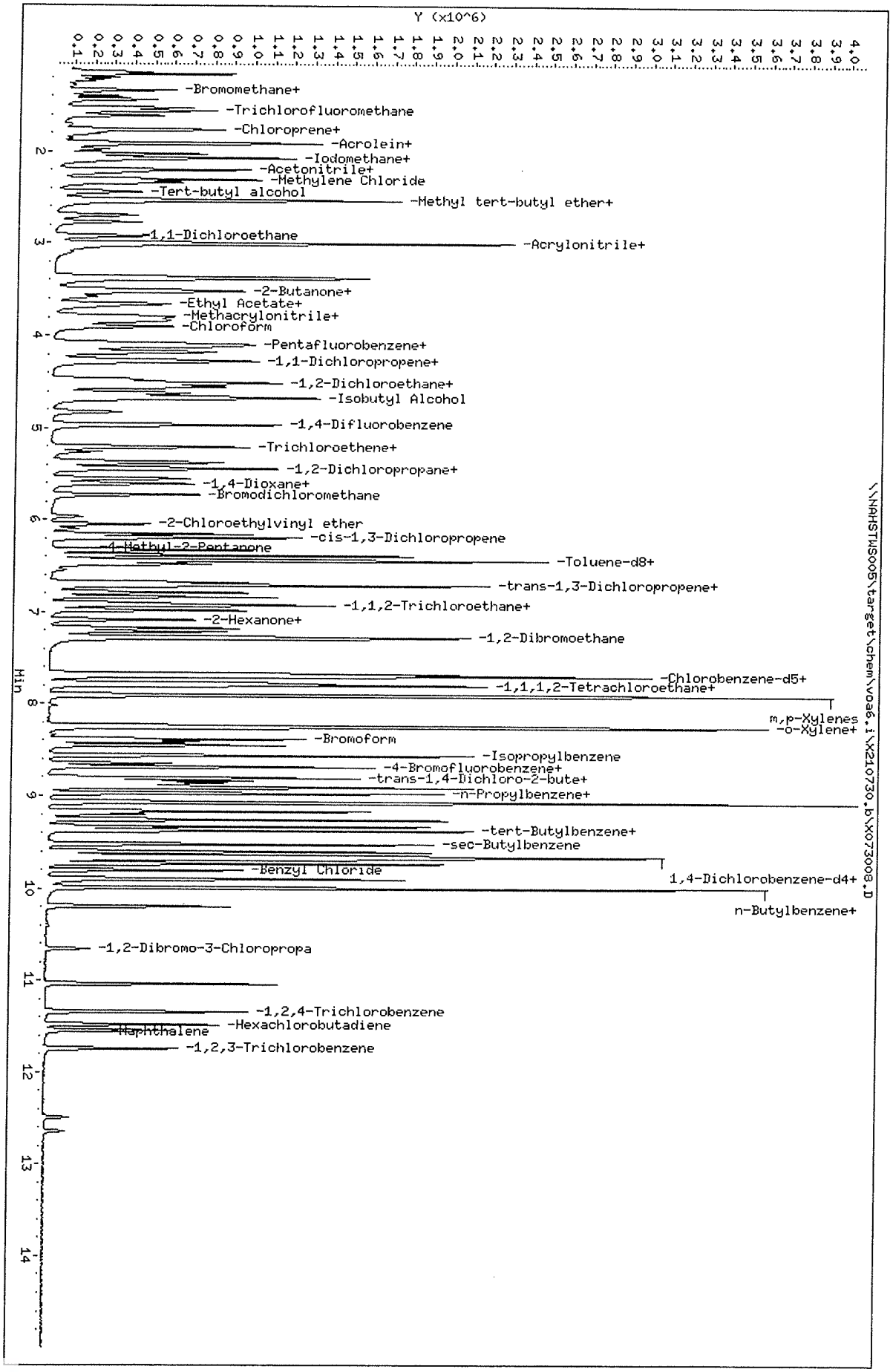
ALS Laboratory Group

Data file : \\NAHSTWS005\target\chem\voa6.i\X210730.b\X073008.D
Lab Smp Id: VSTD050 Client Smp ID: VSTD050
Inj Date : 30-JUL-2021 13:56
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\X210730.b\8260W.m
Meth Date : 10-Sep-2021 14:09 voa6.i Quant Type: ISTD
Cal Date : 30-JUL-2021 13:35 Cal File: X073007.D
Als bottle: 9 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0474-dod.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)	716996	50.0000	
$ 30 Dibromofluoromethane	113	4.096	4.096	(0.979)	340316	50.0000	50.62
$ 35 1,2-Dichloroethane-d4	65	4.469	4.469	(1.068)	321239	50.0000	50.22
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	1014752	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	957935	50.0000	
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	1059416	50.0000	47.15
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	403767	50.0000	50.24
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	509010	50.0000	
5 Vinyl Chloride	62	1.138	1.138	(0.272)	294222	50.0000	43.10
11 1,1-Dichloroethene	96	1.912	1.912	(0.457)	266229	50.0000	44.12
17 Methylene Chloride	84	2.306	2.306	(0.551)	288156	50.0000	47.91
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	336904	50.0000	46.84
33 1,2-Dichloroethane	62	4.555	4.555	(0.918)	371417	50.0000	45.62
38 Trichloroethene	130	5.207	5.207	(1.049)	338544	50.0000	45.65
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	241070	50.0000	48.10



Data File: \\NAHSTWS005\target\chem\voa6.i\X210730.b\X073008.D
Date : 30-JUL-2021 13:56
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\X210730.b\X073009.D Page 1
Report Date: 10-Sep-2021 14:09

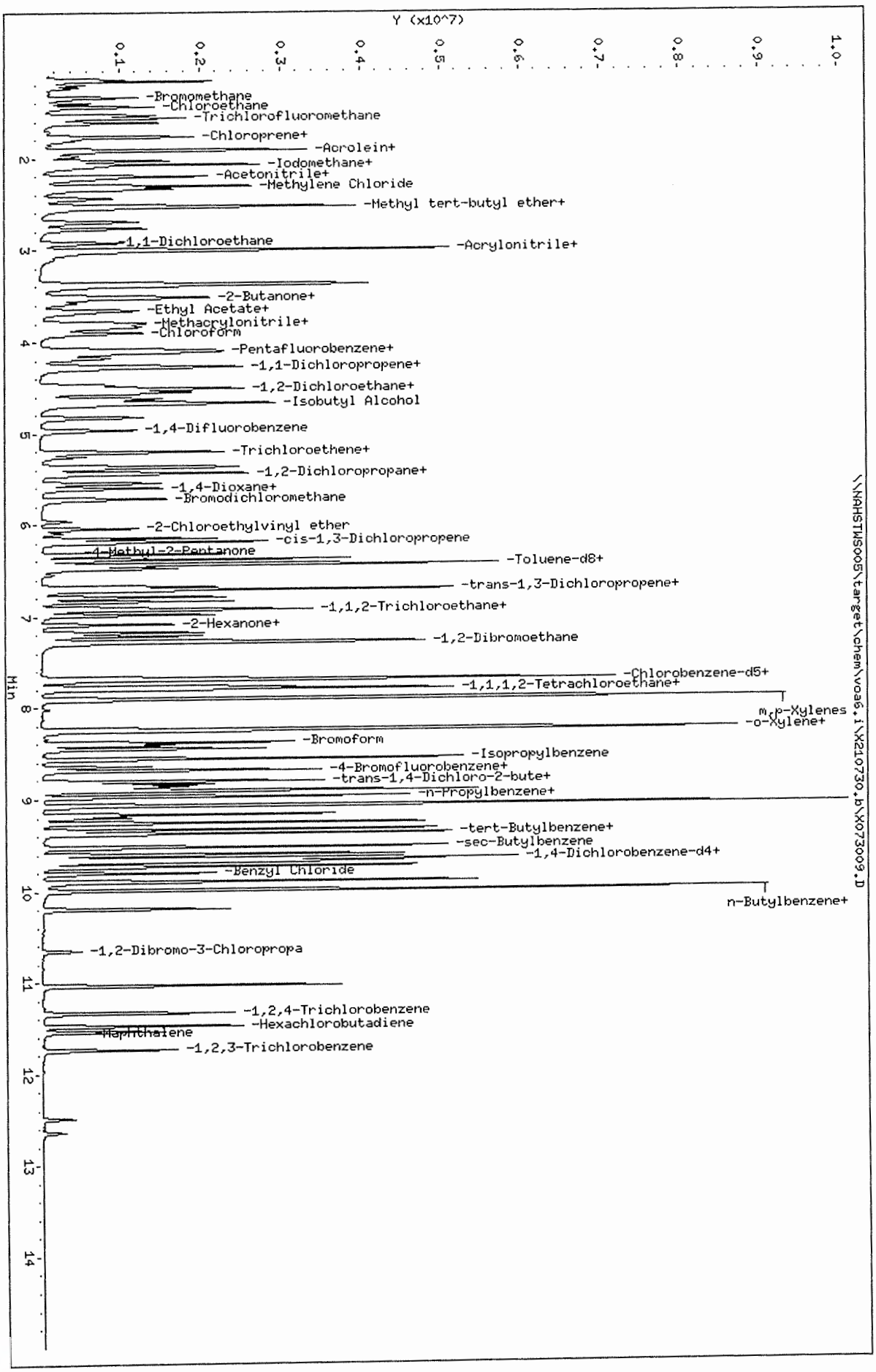
ALS Laboratory Group

Data file : \\NAHSTWS005\target\chem\voa6.i\X210730.b\X073009.D
Lab Smp Id: VSTD100 Client Smp ID: VSTD100
Inj Date : 30-JUL-2021 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\X210730.b\8260W.m
Meth Date : 10-Sep-2021 14:09 voa6.i Quant Type: ISTD
Cal Date : 30-JUL-2021 13:56 Cal File: X073008.D
Als bottle: 10 Calibration Sample, Level: 8
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0474-dod.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)	729025	50.0000	
$ 30 Dibromofluoromethane	113	4.096	4.096	(0.979)	710330	100.000	105.00
$ 35 1,2-Dichloroethane-d4	65	4.469	4.469	(1.069)	661249	100.000	102.57
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	1058066	50.0000	
* 47 Chlorobenzene-d5	117	7.670	7.670	(1.000)	990972	50.0000	
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	2229574	100.000	95.92
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	846415	100.000	102.55
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	547156	50.0000	
5 Vinyl Chloride	62	1.138	1.138	(0.272)	708979	100.000	102.16
11 1,1-Dichloroethene	96	1.911	1.911	(0.457)	629594	100.000	102.63
17 Methylene Chloride	84	2.305	2.305	(0.551)	621769	100.000	101.93
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	728210	100.000	99.58
33 1,2-Dichloroethane	62	4.555	4.555	(0.918)	798237	100.000	94.04
38 Trichloroethene	130	5.206	5.206	(1.049)	767161	100.000	99.21
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	506503	100.000	97.69



Data File: \\NAHSTWS005\target\chem\voa6.i\X210730.b\X073009.D
Date : 30-JUL-2021 14:17
Client ID: VSTD100
Sample Info: VSTD100;VSTD100;1;8;;
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\NAHSTWS005\target\chem\voa6.i\X210730.b\X073010.D Page 1
Report Date: 10-Sep-2021 14:09

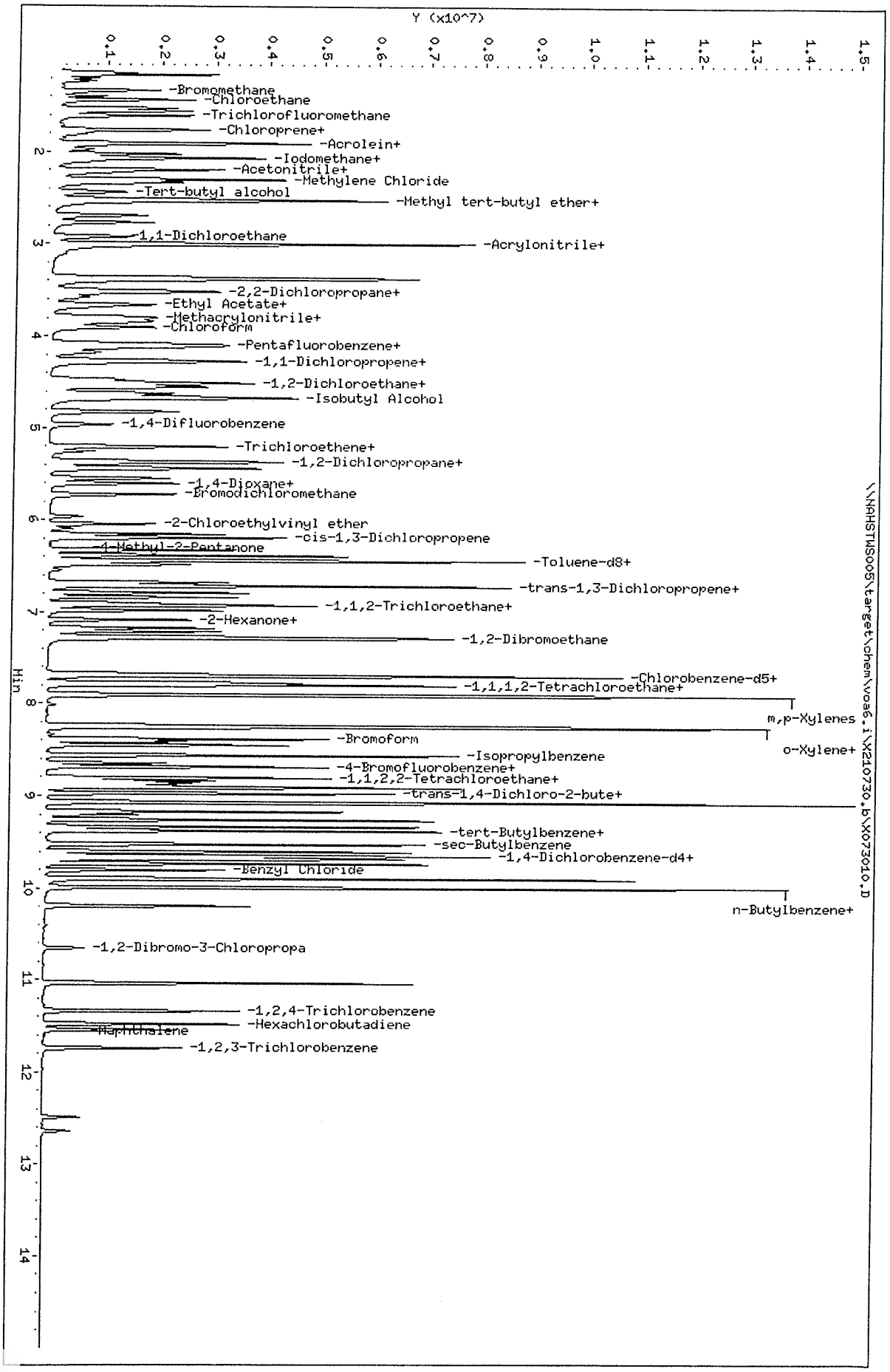
ALS Laboratory Group

Data file : \\NAHSTWS005\target\chem\voa6.i\X210730.b\X073010.D
Lab Smp Id: VSTD150 Client Smp ID: VSTD150
Inj Date : 30-JUL-2021 14:38
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\X210730.b\8260W.m
Meth Date : 10-Sep-2021 14:09 voa6.i Quant Type: ISTD
Cal Date : 30-JUL-2021 14:17 Cal File: X073009.D
Als bottle: 11 Calibration Sample, Level: 9
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0474-dod.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)	730810	50.0000	
$ 30 Dibromofluoromethane	113	4.096	4.096	(0.979)	1015199	150.000	150.13
$ 35 1,2-Dichloroethane-d4	65	4.469	4.469	(1.069)	974560	150.000	151.22
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	1028375	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	986169	50.0000	
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	3189794	150.000	137.90
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	1227770	150.000	149.82
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	541701	50.0000	
5 Vinyl Chloride	62	1.138	1.138	(0.272)	1003557	150.000	144.26
11 1,1-Dichloroethene	96	1.912	1.912	(0.457)	891494	150.000	144.97
17 Methylene Chloride	84	2.298	2.298	(0.550)	906937	150.000	148.42
27 cis-1,2-Dichloroethene	96	3.523	3.523	(0.842)	1068998	150.000	145.82
33 1,2-Dichloroethane	62	4.555	4.555	(0.918)	1199380	150.000	145.38
38 Trichloroethene	130	5.207	5.207	(1.049)	1100990	150.000	146.50
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	758675	150.000	147.05



Data File: \\NAHSTWS005\target\chem\voa6.i\X210730.b\X073010.D
Date : 30-JUL-2021 14:38
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\X210730.b\X073011.D Page 1
Report Date: 10-Sep-2021 14:09

ALS Laboratory Group

Data file : \\NAHSTWS005\target\chem\voa6.i\X210730.b\X073011.D
Lab Smp Id: VSTD200 Client Smp ID: VSTD200
Inj Date : 30-JUL-2021 14:59
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\X210730.b\8260W.m
Meth Date : 10-Sep-2021 14:09 voa6.i Quant Type: ISTD
Cal Date : 30-JUL-2021 14:38 Cal File: X073010.D
Als bottle: 12 Calibration Sample, Level: 10
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0474-dod.sub
Target Version: 4.14
Processing Host: NAHSTW7056

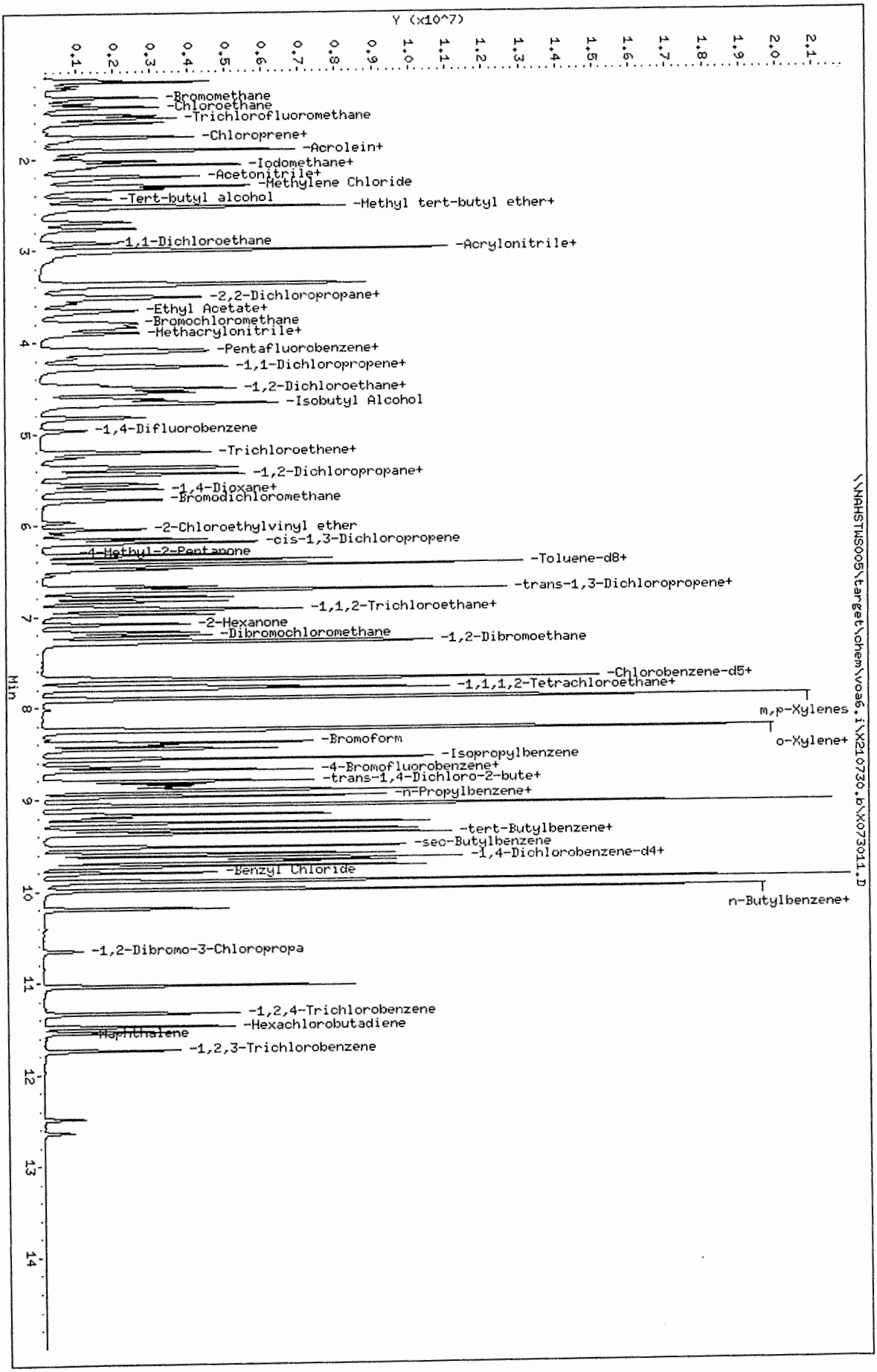
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

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)	764865	50.0000	
$ 30 Dibromofluoromethane	113	4.096	4.096	(0.979)	1392587	200.000	197.09
$ 35 1,2-Dichloroethane-d4	65	4.469	4.469	(1.069)	1331240	200.000	197.64
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	1080527	50.0000	
* 47 Chlorobenzene-d5	117	7.670	7.670	(1.000)	1034693	50.0000	
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	4466623	200.000	184.04
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	1706894	200.000	198.75
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	573296	50.0000	
5 Vinyl Chloride	62	1.138	1.138	(0.272)	1472864	200.000	202.29(A)
11 1,1-Dichloroethene	96	1.911	1.911	(0.457)	1299366	200.000	201.89(A)
17 Methylene Chloride	84	2.298	2.298	(0.550)	1282411	200.000	200.61(A)
27 cis-1,2-Dichloroethene	96	3.523	3.523	(0.842)	1497246	200.000	195.14
33 1,2-Dichloroethane	62	4.555	4.555	(0.918)	1665869	200.000	192.17
38 Trichloroethene	130	5.206	5.206	(1.049)	1560236	200.000	197.59
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	1057752	200.000	195.40

QC Flag Legend

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



Data File: \\NAHSTWS005\target\chem\voa6.i\X210730.b\X073011.D
Date : 30-JUL-2021 14:59
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\X210730.b\X073014.D Page 1
Report Date: 10-Sep-2021 14:09

ALS Laboratory Group

Data file : \\NAHSTWS005\target\chem\voa6.i\X210730.b\X073014.D
Lab Smp Id: ICV Client Smp ID: ICV
Inj Date : 30-JUL-2021 16:02
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\X210730.b\8260W.m
Meth Date : 10-Sep-2021 14:09 voa6.i Quant Type: ISTD
Cal Date : 30-JUL-2021 14:59 Cal File: X073011.D
Als bottle: 15 QC Sample: METHSPIKE
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0474-dod.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	4.182	(1.000)	757820	50.0000	
$ 30 Dibromofluoromethane	113	4.096	4.096	(0.979)	359808	50.6421	50.64
$ 35 1,2-Dichloroethane-d4	65	4.469	4.469	(1.069)	345746	51.1596	51.15
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	1064705	50.0000	
* 47 Chlorobenzene-d5	117	7.670	7.670	(1.000)	1011291	50.0000	
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	1121931	47.2981	47.29
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	428936	50.5668	50.56
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	558538	50.0000	
5 Vinyl Chloride	62	1.138	1.138	(0.272)	339009	46.9956	46.99
11 1,1-Dichloroethene	96	1.911	1.911	(0.457)	294640	46.2061	46.20
17 Methylene Chloride	84	2.305	2.298	(0.551)	307952	48.4518	48.45
27 cis-1,2-Dichloroethene	96	3.530	3.523	(0.844)	362320	47.6634	47.66
33 1,2-Dichloroethane	62	4.555	4.555	(0.918)	398621	46.6696	46.66
38 Trichloroethene	130	5.206	5.206	(1.049)	376752	48.4229	48.42
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	256542	48.4895	48.48

Data File: \\NAHSTWS005\target\chem\voa6.i\X210730.b\X073014.D Page 1
Report Date: 10-Sep-2021 14:09

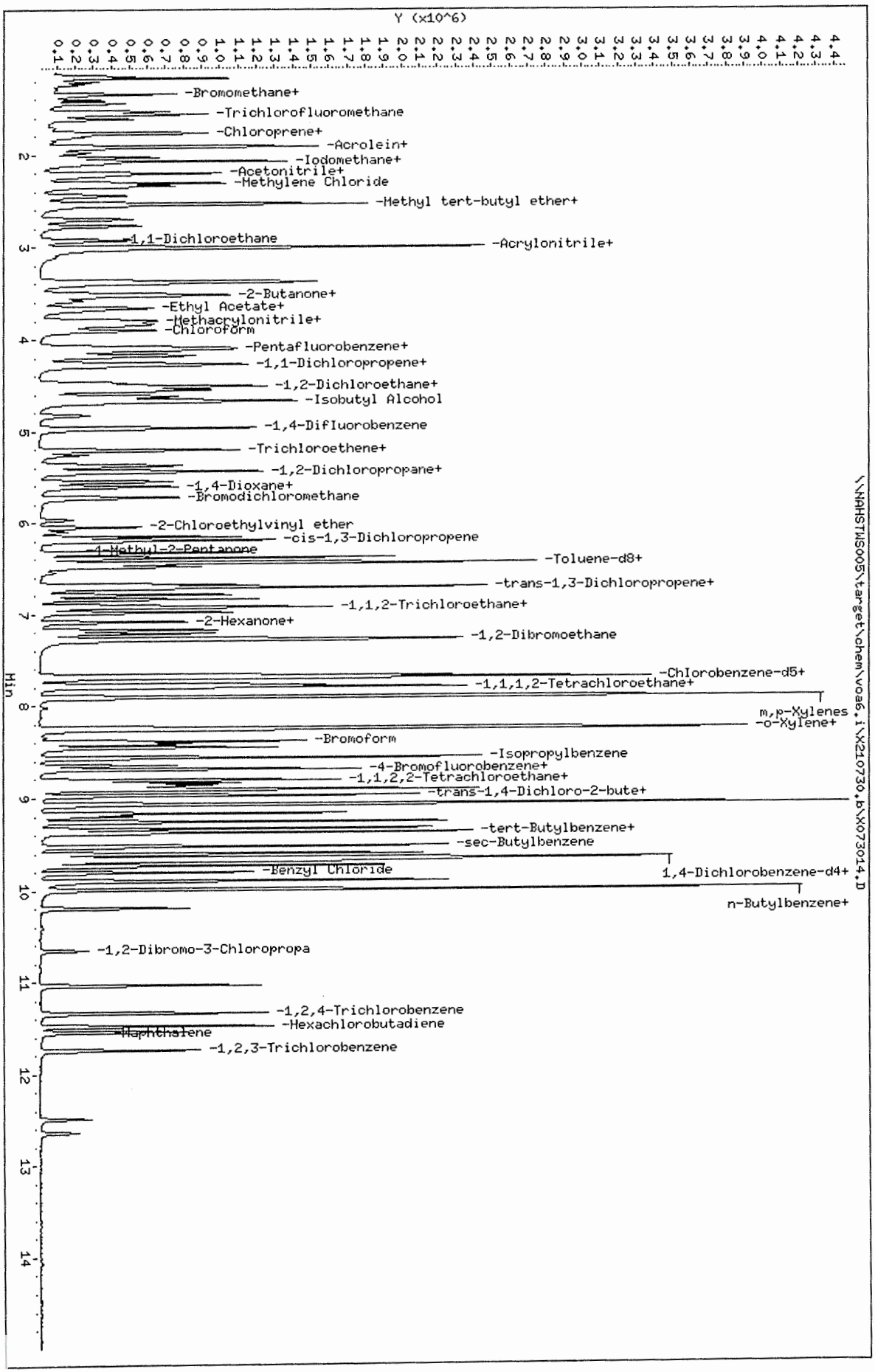
ALS Laboratory Group

Data file : \\NAHSTWS005\target\chem\voa6.i\X210730.b\X073014.D
Lab Smp Id: ICV Client Smp ID: ICV
Inj Date : 30-JUL-2021 16:02
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\X210730.b\8260W.m
Meth Date : 10-Sep-2021 14:09 voa6.i Quant Type: ISTD
Cal Date : 30-JUL-2021 14:59 Cal File: X073011.D
Als bottle: 15 QC Sample: METHSPIKE
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0474-dod.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	4.182	(1.000)	757820	50.0000	
$ 30 Dibromofluoromethane	113	4.096	4.096	(0.979)	359808	50.6421	50.64
$ 35 1,2-Dichloroethane-d4	65	4.469	4.469	(1.069)	345746	51.1596	51.15
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	1064705	50.0000	
* 47 Chlorobenzene-d5	117	7.670	7.670	(1.000)	1011291	50.0000	
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	1121931	47.2981	47.29
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	428936	50.5668	50.56
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	558538	50.0000	
5 Vinyl Chloride	62	1.138	1.138	(0.272)	339009	46.9956	46.99
11 1,1-Dichloroethene	96	1.911	1.911	(0.457)	294640	46.2061	46.20
17 Methylene Chloride	84	2.305	2.298	(0.551)	307952	48.4518	48.45
27 cis-1,2-Dichloroethene	96	3.530	3.523	(0.844)	362320	47.6634	47.66
33 1,2-Dichloroethane	62	4.555	4.555	(0.918)	398621	46.6696	46.66
38 Trichloroethene	130	5.206	5.206	(1.049)	376752	48.4229	48.42
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	256542	48.4895	48.48



Data File: \\NAHSTWS005\target\chem\voa6.i\X210730.b\X073014.D
Date : 30-JUL-2021 16:02
Client ID: ICV
Sample Info: CCV;CCV;2;;;ICV
Purge Volume: 5.0
Column phase: DB624

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

MSVOA06 -Logbook

Batch: 45952
Date: 08-03-2021
Method: 8260_W
Comments:

Analyst: Presenta Cabascango
Reviewer:
Laboratory: Houston

#	Samp ID	Type	Analyzed	DF	Init Wt/Vol	Final Vol	File ID	Matrix	Status	p
1	BFB	TUNE	08-03-2021 10:46 am	1.00	50 mL	50 mL	X080301.D	Liquid	Y	N
2	CCV	CCV	08-03-2021 11:06 am	1.00	50 mL	50 mL	X080302a.D	Liquid	Y	N
3	CCV	CCV	08-03-2021 11:27 am	1.00	50 mL	50 mL	X080303.D	Liquid	Y	N
4	CCB	SAMP	08-03-2021 11:49 am	1.00	50 mL	50 mL	X080304.D	Liquid	Y	N
5	VLCSW-210803	LCS	08-03-2021 12:09 pm	1.00	50 mL	50 mL	X080305.D	Liquid	Y	N
6	BLANK	SAMP	08-03-2021 12:31 pm	1.00	50 mL	50 mL	X080306.D	Liquid	Y	N
7	BLANK	SAMP	08-03-2021 12:52 pm	1.00	50 mL	50 mL	X080307.D	Liquid	Y	N
8	VBLKW-210803	MBLK	08-03-2021 01:13 pm	1.00	50 mL	50 mL	X080308.D	Liquid	Y	N
9	HS21071731-01	SAMP	08-03-2021 01:34 pm	1.00	50 mL	50 mL	X080309.D	Liquid	Y	N
10	HS21071711-01	SAMP	08-03-2021 01:55 pm	10.00	5 mL	50 mL	X080310.D	Liquid	Y	N
11	HS21071712-01	SAMP	08-03-2021 02:16 pm	50.00	1 mL	50 mL	X080311.D	Liquid	Y	N
12	HS21071204-05	SAMP	08-03-2021 02:37 pm	10.00	5 mL	50 mL	X080312.D	Liquid	Y	N
13	HS21071731-01MS	MS	08-03-2021 02:58 pm	1.00	50 mL	50 mL	X080313.D	Liquid	Y	N
14	HS21071731-01MSD	MSD	08-03-2021 03:19 pm	1.00	50 mL	50 mL	X080314.D	Liquid	Y	N
15	HS21071711-01	SAMP	08-03-2021 03:40 pm	100.0(	500 µL	50 mL	X080315.D	Liquid	Y	N
16	HS21071712-01	SAMP	08-03-2021 04:01 pm	2500.0	20 µL	50 mL	X080316.D	Liquid	Y	N
17	HS21071204-05	SAMP	08-03-2021 04:22 pm	100.0(	500 µL	50 mL	X080317.D	Liquid	Y	N
18	HS21071204-03	SAMP	08-03-2021 04:43 pm	100.0(	500 µL	50 mL	X080318.D	Liquid	Y	N
19	HS21071204-04	SAMP	08-03-2021 05:04 pm	5.00	10 mL	50 mL	X080319.D	Liquid	Y	N
20	BLANK	SAMP	08-03-2021 05:25 pm	1.00	50 mL	50 mL	X080320.D	Liquid	Y	N
21	HS21071481-02	SAMP	08-03-2021 05:46 pm	1.00	50 mL	50 mL	X080321.D	Liquid	Y	N
22	HS21071481-01	SAMP	08-03-2021 06:07 pm	1.00	50 mL	50 mL	X080322.D	Liquid	Y	N
23	HS21071405-13	SAMP	08-03-2021 06:28 pm	1.00	50 mL	50 mL	X080323.D	Liquid	Y	N
24	HS21071405-03	SAMP	08-03-2021 06:49 pm	1.00	50 mL	50 mL	X080324.D	Liquid	Y	N
25	HS21071405-06	SAMP	08-03-2021 07:10 pm	1.00	50 mL	50 mL	X080325.D	Liquid	Y	N
26	HS21071405-09	SAMP	08-03-2021 07:31 pm	1.00	50 mL	50 mL	X080326.D	Liquid	Y	N
27	HS21071405-10	SAMP	08-03-2021 07:52 pm	1.00	50 mL	50 mL	X080327.D	Liquid	Y	N
28	HS21071405-12	SAMP	08-03-2021 08:14 pm	1.00	50 mL	50 mL	X080328.D	Liquid	Y	N
29	HS21071405-08	SAMP	08-03-2021 08:35 pm	1.00	50 mL	50 mL	X080329.D	Liquid	Y	N
30	HS21071405-01	SAMP	08-03-2021 08:56 pm	25.00	2 mL	50 mL	X080330.D	Liquid	Y	N
31	HS21071405-01	SAMP	08-03-2021 09:17 pm	250.0(	200 µL	50 mL	X080331.D	Liquid	Y	N
32	CCV-END	CCV	08-03-2021 09:38 pm	1.00	50 mL	50 mL	X080332.D	Liquid	Y	N
33	BFB	TUNE	08-03-2021 09:59 pm	1.00	50 mL	50 mL	Y080301.D	Liquid	Y	N
34	CCV	CCV	08-03-2021 10:19 pm	1.00	50 mL	50 mL	Y080302a.D	Liquid	Y	N
35	CCV	CCV	08-03-2021 10:40 pm	1.00	50 mL	50 mL	Y080303.D	Liquid	Y	N
36	CCB	SAMP	08-03-2021 11:02 pm	1.00	50 mL	50 mL	Y080304.D	Liquid	Y	N
37	VLCSW-210803	LCS	08-03-2021 11:22 pm	1.00	50 mL	50 mL	Y080305.D	Liquid	Y	N
38	BLANK	SAMP	08-03-2021 11:44 pm	1.00	50 mL	50 mL	Y080306.D	Liquid	Y	N
39	VBLKW-210803	MBLK	08-04-2021 12:05 am	1.00	50 mL	50 mL	Y080307.D	Liquid	Y	N
40	HS21071524-01	SAMP	08-04-2021 12:26 am	1.00	50 mL	50 mL	Y080308.D	Liquid	Y	N
41	HS21071524-02	SAMP	08-04-2021 12:47 am	1.00	50 mL	50 mL	Y080309.D	Liquid	Y	N

MSVOA06 -Logbook

#	Samp ID	Type	Analyzed	DF	Init Wt/Vol	Final Vol	File ID	Matrix	Status	p
42	HS21071524-08	SAMP	08-04-2021 01:08 am	1.00	50 mL	50 mL	Y080310.D	Liquid	Y	N
43	HS21071524-06	SAMP	08-04-2021 01:29 am	1.00	50 mL	50 mL	Y080311.D	Liquid	Y	N
44	HS21071524-08MS	MS	08-04-2021 01:50 am	1.00	50 mL	50 mL	Y080312.D	Liquid	Y	N
45	HS21071524-08MSD	MSD	08-04-2021 02:11 am	1.00	50 mL	50 mL	Y080313.D	Liquid	Y	N
46	BLANK	SAMP	08-04-2021 02:32 am	1.00	50 mL	50 mL	Y080314.D	Liquid	Y	N
47	HS21071524-03	SAMP	08-04-2021 02:53 am	1.00	50 mL	50 mL	Y080315.D	Liquid	Y	N
48	HS21071524-04	SAMP	08-04-2021 03:14 am	1.00	50 mL	50 mL	Y080316.D	Liquid	Y	N
49	HS21071524-09	SAMP	08-04-2021 03:35 am	1.00	50 mL	50 mL	Y080317.D	Liquid	Y	N
50	HS21071524-10	SAMP	08-04-2021 03:56 am	1.00	50 mL	50 mL	Y080318.D	Liquid	Y	N
51	HS21071524-11	SAMP	08-04-2021 04:17 am	1.00	50 mL	50 mL	Y080319.D	Liquid	Y	N
52	HS21071524-12	SAMP	08-04-2021 04:38 am	1.00	50 mL	50 mL	Y080320.D	Liquid	Y	N
53	HS21071524-13	SAMP	08-04-2021 04:59 am	1.00	50 mL	50 mL	Y080321.D	Liquid	Y	N
54	HS21071524-14	SAMP	08-04-2021 05:21 am	1.00	50 mL	50 mL	Y080322.D	Liquid	Y	N
55	HS21071524-17	SAMP	08-04-2021 05:42 am	1.00	50 mL	50 mL	Y080323.D	Liquid	Y	N
56	HS21071524-18	SAMP	08-04-2021 06:03 am	1.00	50 mL	50 mL	Y080324.D	Liquid	Y	N
57	HS21071524-07	SAMP	08-04-2021 06:24 am	5.00	10 mL	50 mL	Y080325.D	Liquid	Y	N
58	HS21071524-07n/r	SAMP	08-04-2021 06:45 am	50.00	1 mL	50 mL	Y080326.D	Liquid	Y	N
59	HS21071524-15	SAMP	08-04-2021 07:06 am	10.00	5 mL	50 mL	Y080327.D	Liquid	Y	N
60	HS21071524-15	SAMP	08-04-2021 07:27 am	100.0(	500 µL	50 mL	Y080328.D	Liquid	Y	N
61	HS21071524-05	SAMP	08-04-2021 07:48 am	25.00	2 mL	50 mL	Y080329.D	Liquid	Y	N
62	HS21071524-05	SAMP	08-04-2021 08:09 am	250.0(	200 µL	50 mL	Y080330.D	Liquid	Y	N
63	BLANK	SAMP	08-04-2021 08:30 am	1.00	50 mL	50 mL	Y080331.D	Liquid	Y	N

FORM 2
WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS21071204

	CLIENT SAMPLE NO.	SMC1 #	SMC2 (DCE)#	SMC3 (TOL)#	OTHER #	TOT OUT
01	VLCSW-210803	95	97	94	98	0
02	VBLKW-210803	92	90	103	101	0
03	HS21071204-05	93	92	102	98	0
04	HS21071204-05	92	89	103	101	0
05	HS21071204-03	92	92	103	100	0
06	HS21071204-04	93	90	105	99	0
07						
08						
09						
10						
11						
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16						
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18						
19						
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21						
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25						
26						
27						
28						

		QC LIMITS
SMC1	= Dibromofluoromethane	(70-130)
SMC2 (DCE)	= 1,2-Dichloroethane-d4	(70-130)
SMC3 (TOL)	= Toluene-d8	(70-130)
OTHER	= 4-Bromofluorobenzene	(70-130)

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-210803

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS21071204

Lab File ID: X080308 Lab Sample ID: VBLKW-210803

Date Analyzed: 08/03/21 Time Analyzed: 1313

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-210803	VLCSW-210803	X080305	1209
02	HS21071204-05	HS21071204-05	X080312	1437
03	HS21071731-01MS	HS21071731-01MS	X080313	1458
04	HS21071731-01MSD	HS21071731-01MSD	X080314	1519
05	HS21071204-05	HS21071204-05	X080317	1622
06	HS21071204-03	HS21071204-03	X080318	1643
07	HS21071204-04	HS21071204-04	X080319	1704
08				
09				
10				
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29				
30				

COMMENTS:

FORM 5
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS21071204

Lab File ID: X080301 BFB Injection Date: 08/03/21

Instrument ID: VOA6 BFB Injection Time: 1046

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	15.9
75	30.0 - 60.0% of mass 95	43.0
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.5
173	Less than 2.0% of mass 174	1.1 (1.0)1
174	Greater than 50.0% of mass 95	103.5
175	5.0 - 9.0% of mass 174	7.1 (6.8)1
176	95.0 - 101.0% of mass 174	102.0 (98.5)1
177	5.0 - 9.0% of mass 176	7.3 (7.1)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	X080303	08/03/21	1127
02	VLCSW-210803	VLCSW-210803	X080305	08/03/21	1209
03	VBLKW-210803	VBLKW-210803	X080308	08/03/21	1313
04	HS21071204-05	HS21071204-05	X080312	08/03/21	1437
05	HS21071731-01MS	HS21071731-01MS	X080313	08/03/21	1458
06	HS21071731-01MSD	HS21071731-01MSD	X080314	08/03/21	1519
07	HS21071204-05	HS21071204-05	X080317	08/03/21	1622
08	HS21071204-03	HS21071204-03	X080318	08/03/21	1643
09	HS21071204-04	HS21071204-04	X080319	08/03/21	1704
10	CCV-END	CCV-END	X080332	08/03/21	2138
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

FORM V VOA

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS21071204

Instrument ID: VOA6 Calibration Date: 08/03/21 Time: 1127

Lab File ID: X080303 Init. Calib. Date(s): 07/30/21 07/30/21

Init. Calib. Times: 1129 1459

GC Column: DB624 ID: 0.18 (mm)

COMPOUND	RRF or AMOUNT	RRF50.000 or AMOUNT	CCAL RRF50.000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Vinyl Chloride	0.4760000	0.4251582	0.4251582	0.1	10.68	20.00	AVRG
Methylene Chloride	46.500906	50.000000	0.3900793	0.1	7.00	20.00	LINR
1,1-Dichloroethene	0.4210000	0.3715609	0.3715609	0.1	11.74	20.00	AVRG
1,2-Dichloroethane	0.4010000	0.3670231	0.3670231	0.1	8.47	20.00	AVRG
Trichloroethene	0.3650000	0.3625438	0.3625438	0.2	0.67	20.00	AVRG
1,1,2-Trichloroethane	0.2620000	0.2471294	0.2471294	0.1	5.68	20.00	AVRG
Dibromofluoromethane	47.060799	50.000000	0.4418825	0.1	5.88	20.00	LINR
1,2-Dichloroethane-d4	45.395017	50.000000	0.4056991	0.1	9.21	20.00	LINR
Toluene-d8	1.1730000	1.0749931	1.0749931	0.1	8.36	20.00	AVRG
4-Bromofluorobenzene	47.645212	50.000000	0.3999855	0.1	4.71	20.00	LINR

FORM VII VOA

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS21071204

Instrument ID: VOA6 Calibration Date: 08/03/21 Time: 2138

Lab File ID: X080332 Init. Calib. Date(s): 07/30/21 07/30/21

Init. Calib. Times: 1129 1459

GC Column: DB624 ID: 0.18 (mm)

COMPOUND	RRF or AMOUNT	RRF50.000 or AMOUNT	CCAL RRF50.000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Vinyl Chloride	0.4760000	0.4086157	0.4086157	0.1	14.16	50.00	AVRG
Methylene Chloride	48.665199	50.000000	0.4081474	0.1	2.67	50.00	LINR
1,1-Dichloroethene	0.4210000	0.3606129	0.3606129	0.1	14.34	50.00	AVRG
1,2-Dichloroethane	0.4010000	0.3665715	0.3665715	0.1	8.58	50.00	AVRG
Trichloroethene	0.3650000	0.3400958	0.3400958	0.2	6.82	50.00	AVRG
1,1,2-Trichloroethane	0.2620000	0.2453290	0.2453290	0.1	6.36	50.00	AVRG
Dibromofluoromethane	53.021999	50.000000	0.4966644	0.1	-6.04	50.00	LINR
1,2-Dichloroethane-d4	49.712657	50.000000	0.4435524	0.1	0.57	50.00	LINR
Toluene-d8	1.1730000	1.1272829	1.1272829	0.1	3.90	50.00	AVRG
4-Bromofluorobenzene	50.859671	50.000000	0.4265692	0.1	-1.72	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.: HS21071204

Lab File ID (Standard): X080303 Date Analyzed: 08/03/21

Instrument ID: VOA6 Time Analyzed: 1127

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

		IS1 AREA #	RT #	IS2(DFB) AREA #	RT #	IS3(CBZ) AREA #	RT #
	12 HOUR STD	756923	4.18	1013541	4.96	964515	7.67
	UPPER LIMIT	1513846	4.68	2027082	5.46	1929030	8.17
	LOWER LIMIT	378462	3.68	506771	4.46	482258	7.17
	CLIENT SAMPLE NO.						
01	VLCSW-210803	731926	4.18	978664	4.96	929141	7.67
02	VBLKW-210803	863601	4.18	1131563	4.96	1013297	7.67
03	HS21071204-05	849663	4.18	1123807	4.96	1014191	7.67
04	HS21071731-01MS	878649	4.18	1149588	4.96	1040067	7.67
05	HS21071731-01MSD	924534	4.18	1219564	4.96	1086369	7.67
06	HS21071204-05	874593	4.18	1148860	4.96	1021579	7.67
07	HS21071204-03	867496	4.18	1153089	4.96	1034442	7.67
08	HS21071204-04	866470	4.18	1131121	4.96	1003555	7.67
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							

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

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

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

FORM VIII VOA

FORM 8
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS21071204

Lab File ID (Standard): X080303 Date Analyzed: 08/03/21

Instrument ID: VOA6 Time Analyzed: 1127

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

		IS4(DCB) AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	516981	9.66				
	UPPER LIMIT	1033962	10.16				
	LOWER LIMIT	258491	9.16				
	CLIENT SAMPLE NO.						
01	VLCSW-210803	507073	9.66				
02	VBLKW-210803	516708	9.66				
03	HS21071204-05	497929	9.66				
04	HS21071731-01MS	540074	9.66				
05	HS21071731-01MSD	572373	9.66				
06	HS21071204-05	520213	9.66				
07	HS21071204-03	543948	9.66				
08	HS21071204-04	507548	9.66				
09							
10							
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14							
15							
16							
17							
18							
19							
20							

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

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

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

FORM VIII VOA

Data File: \\NAHSTWS005\target\chem\voa6.i\X210803.b\X080301.D

Date : 03-AUG-2021 10:46

Client ID: BFB

Instrument: voa6.i

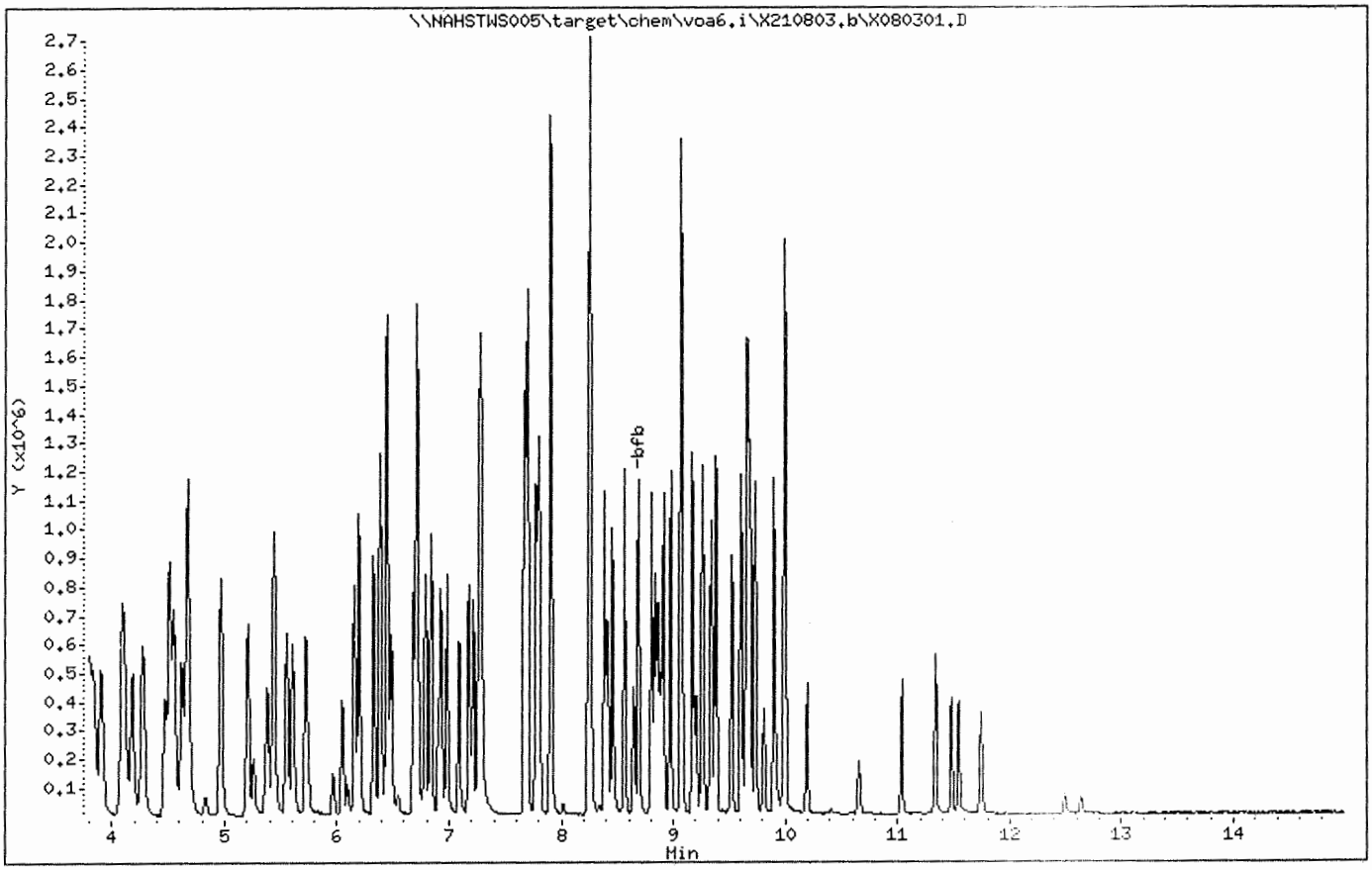
Sample Info: BFB;BFB;3;;BFB

Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

Column diameter: 0.25



Data File: \\NAHSTWS005\target\chem\voa6.i\X210803.b\X080301.D

Date : 03-AUG-2021 10:46

Client ID: BFB

Instrument: voa6.i

Sample Info: BFB;BFB;3;;BFB

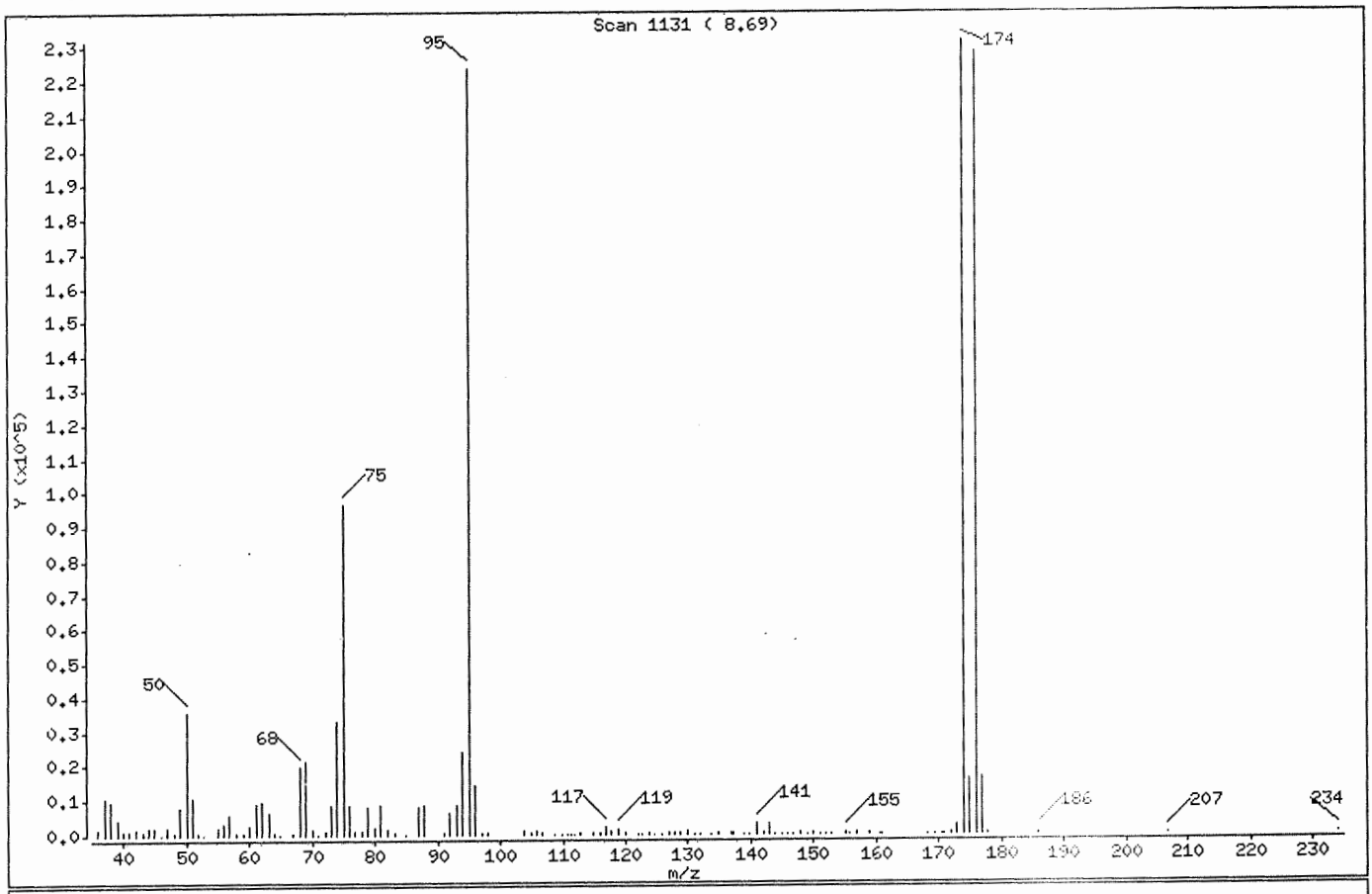
Volume Injected (uL): 2.0

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	15.88
75	30.00 - 60.00% of mass 95	42.96
96	5.00 - 9.00% of mass 95	6.48
173	Less than 2.00% of mass 174	1.08 (1.04)
174	Greater than 50.00% of mass 95	103.49
175	5.00 - 9.00% of mass 174	7.08 (6.84)
176	95.00 - 101.00% of mass 174	101.97 (98.54)
177	5.00 - 9.00% of mass 176	7.29 (7.14)

Data File: \\NAHSTWS005\target\chem\voa6.i\X210803.b\X080301.D

Date : 03-AUG-2021 10:46

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: X080301.D
Spectrum: Scan 1131 (8.69)
Location of Maximum: 173.90
Number of points: 123

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	1752	69.00	21184	109.80	162	143.90	185
37.00	10614	70.00	1462	110.60	56	144.90	141
38.00	9830	71.10	169	111.20	162	145.70	261
39.00	4256	72.00	1121	111.90	58	146.80	71
40.00	1028	73.00	8730	112.80	385	147.80	655
40.90	820	74.00	33168	114.90	482	149.10	203
42.10	1609	75.00	96208	115.90	720	149.90	285
43.00	876	76.00	8481	116.90	1881	151.00	94
44.00	2004	76.90	943	117.80	808	152.00	120
45.00	2292	77.80	988	118.80	1618	152.70	138
46.10	124	78.90	8084	120.00	380	155.00	777
47.00	2204	79.90	2267	122.00	80	155.70	233
48.00	795	80.90	8322	122.70	66	156.80	330
49.00	7751	81.90	1698	123.80	270	158.80	358
50.00	35568	83.10	330	124.70	170	160.60	110
51.00	10806	84.80	186	125.90	200	161.00	185
51.90	764	86.90	8078	127.00	276	168.20	115
52.80	180	87.90	8361	127.80	692	169.20	206
54.90	2267	90.90	609	128.80	510	170.50	243
56.00	3038	91.90	6564	129.90	985	170.80	248
56.90	5715	93.00	8781	130.90	232	171.80	499
57.90	553	94.00	23984	131.80	63	172.80	2417
59.00	571	95.00	223936	133.70	50	173.90	231744
59.90	2445	96.00	14507	134.80	640	174.90	15854
61.00	9285	97.10	438	136.70	334	175.90	228352
62.00	9768	97.90	551	137.00	348	176.90	16314
63.00	6342	103.90	1222	138.90	172	177.80	370
64.10	637	104.90	690	139.80	159	185.90	289
65.00	198	105.90	1043	140.90	3353	206.90	139
66.90	682	106.80	461	142.00	506	233.90	102
68.00	19608	108.70	51	142.90	2931		

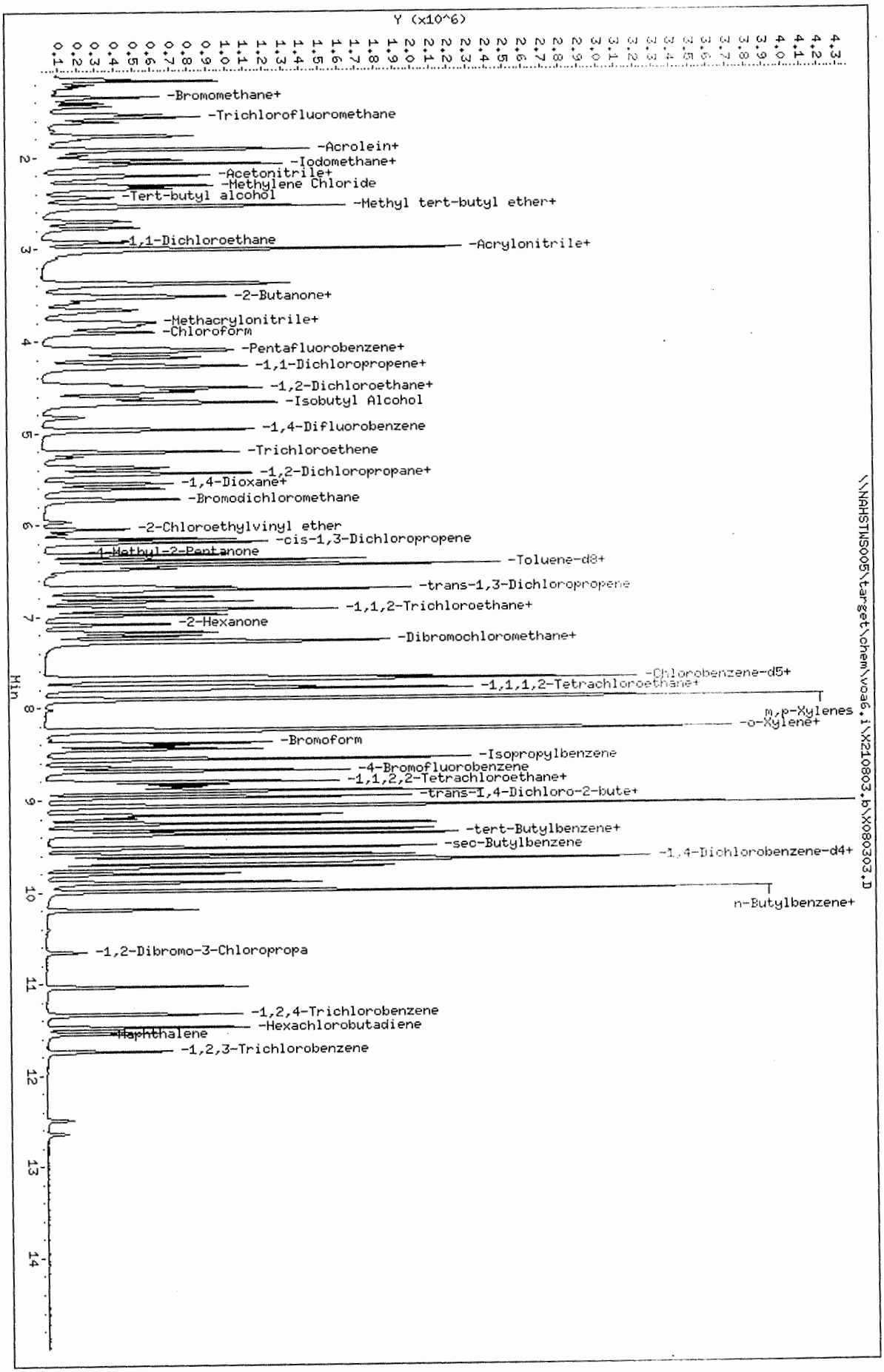
ALS Laboratory Group

Data file : \\NAHSTWS005\target\chem\voa6.i\X210803.b\X080303.D
Lab Smp Id: CCV Client Smp ID: CCV
Inj Date : 03-AUG-2021 11:27
Operator : PC Inst ID: voa6.i
Smp Info : CCV;CCV;2;;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\target\chem\voa6.i\X210803.b\8260W.m
Meth Date : 10-Sep-2021 13:45 voa6.i Quant Type: ISTD
Cal Date : 30-JUL-2021 13:56 Cal File: X073008.D
Als bottle: 3 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0474-dod.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	4.182	4.182	(1.000)	796923	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	334477	50.0000	47.06
$ 35 1,2-Dichloroethane-d4	65	4.469	4.469	(1.069)	307033	50.0000	45.39
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	1013544	50.0000	
* 47 Chlorobenzene-d5	117	7.670	7.670	(1.000)	964515	50.0000	
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	1036847	50.0000	45.83
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	385792	50.0000	47.64
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	516981	50.0000	
5 Vinyl Chloride	62	1.138	1.138	(0.272)	327812	50.0000	44.66
11 1,1-Dichloroethene	96	1.911	1.911	(0.457)	281243	50.0000	44.15
17 Methylene Chloride	84	2.305	2.305	(0.551)	295260	50.0000	46.50
27 cis-1,2-Dichloroethene	96	3.523	3.523	(0.842)	334031	50.0000	43.99
33 1,2-Dichloroethane	62	4.555	4.555	(0.918)	375993	50.0000	45.75
38 Trichloroethene	130	5.206	5.206	(1.049)	367453	50.0000	49.61
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	238360	50.0000	47.23
20 trans-1,2-Dichloroethene	96	2.527	2.527	(0.604)	299028	50.0000	46.40



Data File: \\NAHSTWS005\target\chem\voa6.i\X210803.b\X080303.D
Date : 03-AUG-2021 11:27
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\X210803.b\X080305.D Page 1
Report Date: 10-Sep-2021 13:45

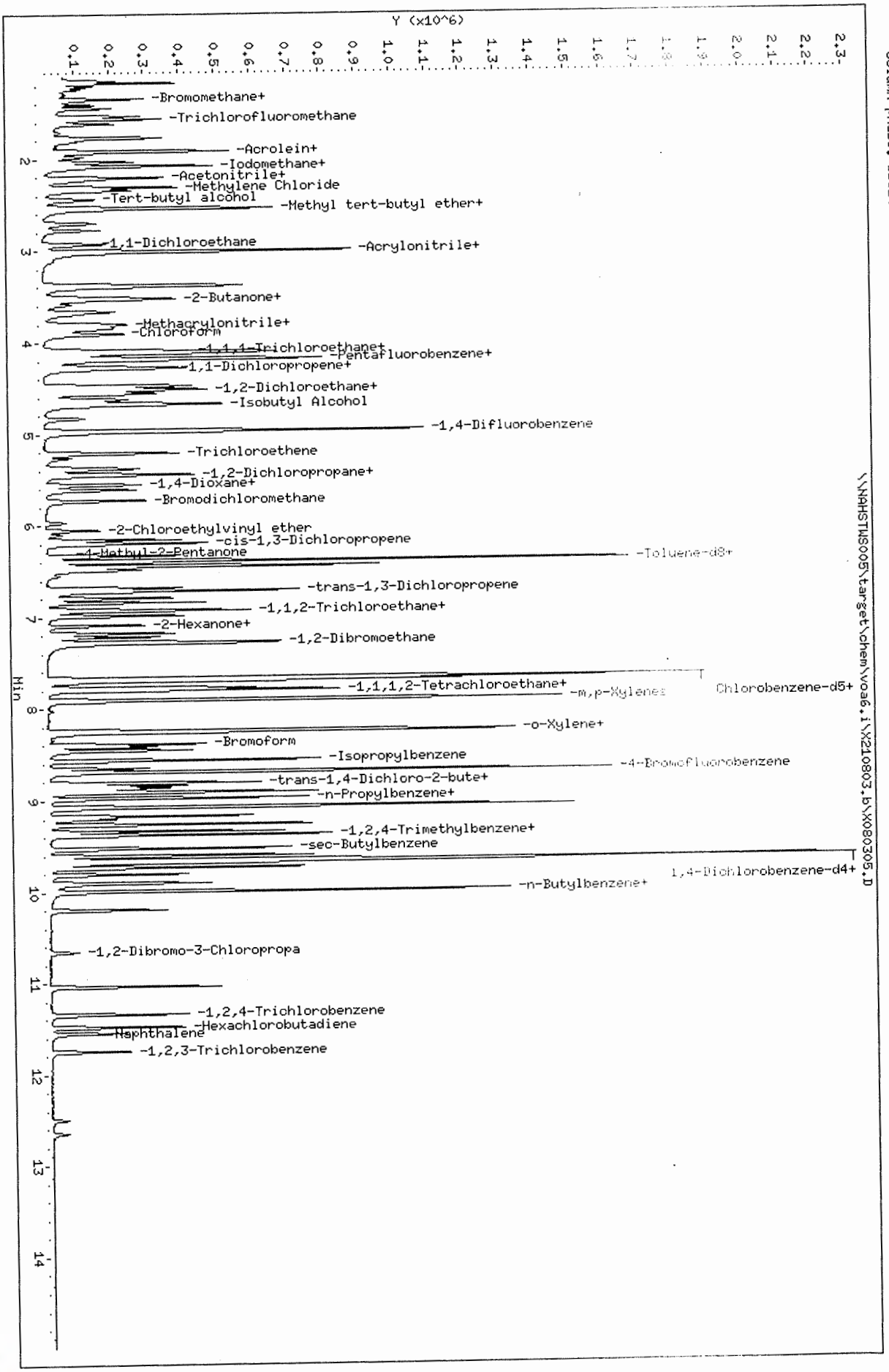
ALS Laboratory Group

Data file : \\NAHSTWS005\target\chem\voa6.i\X210803.b\X080305.D
Lab Smp Id: VLCSW-210803 Client Smp ID: VLCSW-210803
Inj Date : 03-AUG-2021 12:09
Operator : PC Inst ID: voa6.i
Smp Info : VLCSW-210803;VLCSW-210803;3;;LCS
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\target\chem\voa6.i\X210803.b\8260W.m
Meth Date : 10-Sep-2021 13:45 voa6.i Quant Type: ISTD
Cal Date : 30-JUL-2021 13:56 Cal File: X073008.D
Als bottle: 5 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0474-dod.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	4.182	(1.000)	731926	50.0000	
$	30 Dibromofluoromethane	113	4.096	4.103	(0.979)	326870	47.5729	47.57
$	35 1,2-Dichloroethane-d4	65	4.469	4.469	(1.069)	316439	48.4334	48.43
*	36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	978664	50.0000	
*	47 Chlorobenzene-d5	117	7.671	7.670	(1.000)	929141	50.0000	
$	48 Toluene-d8	98	6.389	6.388	(0.833)	1021360	46.8652	46.86
$	69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	384209	49.2884	49.28
*	70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	507073	50.0000	
	5 Vinyl Chloride	62	1.138	1.138	(0.272)	119136	17.0997	17.09
	11 1,1-Dichloroethene	96	1.912	1.911	(0.457)	104162	16.9128	16.91
	17 Methylene Chloride	84	2.306	2.305	(0.551)	218726	19.2055	19.20
	27 cis-1,2-Dichloroethene	96	3.530	3.523	(0.844)	132561	18.0554	18.05
	33 1,2-Dichloroethane	62	4.555	4.555	(0.918)	149307	19.0836	19.08
	38 Trichloroethene	130	5.207	5.206	(1.049)	138806	19.4214	19.42
	53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	96245	19.5937	19.59
	20 trans-1,2-Dichloroethene	96	2.528	2.527	(0.604)	127411	18.2051	18.20


Y (x10^6)
0.1 0.2 0.3 0.4 0.5 0.6 0.7 0.8 0.9 1.0 1.1 1.2 1.3 1.4 1.5 1.6 1.7 1.8 1.9 2.0 2.1 2.2 2.3
Min
2 3 4 5 6 7 8 9 10 11 12 13 14
-Bromomethane+
-Trichlorofluoromethane
-Acrolein+
-Iodomethane+
-Acetonitrile+
-Methylene Chloride
-Tert-butyl alcohol
-Methyl tert-butyl ether+
1,1-Dichloroethane
-Acrylonitrile+
-2-Butanone+
-Methacrylonitrile+
-Chloroform
-1,1,1-Trichloroethane+
-Pentafluorobenzene+
-1,1-Dichloropropene+
-1,2-Dichloroethane+
-Isobutyl Alcohol
-1,4-Difluorobenzene
-Trichloroethene
-1,2-Dichloropropane+
-1,4-Dioxane+
-Bromodichloromethane
-2-Chloroethylvinyl ether
-cis-1,3-Dichloropropene
4-Methyl-2-Pentanone
-Toluene-d8+
-trans-1,3-Dichloropropene
-1,1,2-Trichloroethane+
-2-Hexanone+
-1,2-Dibromoethane
-1,1,1,2-Tetrachloroethane+
-m,p-Xylenes
Chlorobenzene-d5+
-o-Xylene+
-Bromoform
-Isopropylbenzene
-4-Bromofluorobenzene
-trans-1,4-Dichloro-2-bute+
-n-Propylbenzene+
-1,2,4-Trimethylbenzene+
-sec-Butylbenzene
1,4-Dichlorobenzene-d4+
-n-Butylbenzene+
-1,2-Dibromo-3-Chloropropa
-1,2,4-Trichlorobenzene
-Hexachlorobutadiene
-Naphthalene
-1,2,3-Trichlorobenzene
\\NAHSTWS005\target\chem\voa6.i\X210803.b\X080305.D
Data File: \\NAHSTWS005\target\chem\voa6.i\X210803.b\X080305.D
Date : 03-AUG-2021 12:09
Client ID: VLCSW-210803
Sample Info: VLCSW-210803;VLCSW-210803;3;;LCS
Purge Volume: 5.0
Column phase: DB624
Instrument: voa6.i
Operator: PC
Column diameter: 0.18
Page 2

Data File: \\NAHSTWS005\target\chem\voa6.i\X210803.b\X080308.D Page 1
Report Date: 10-Sep-2021 13:45

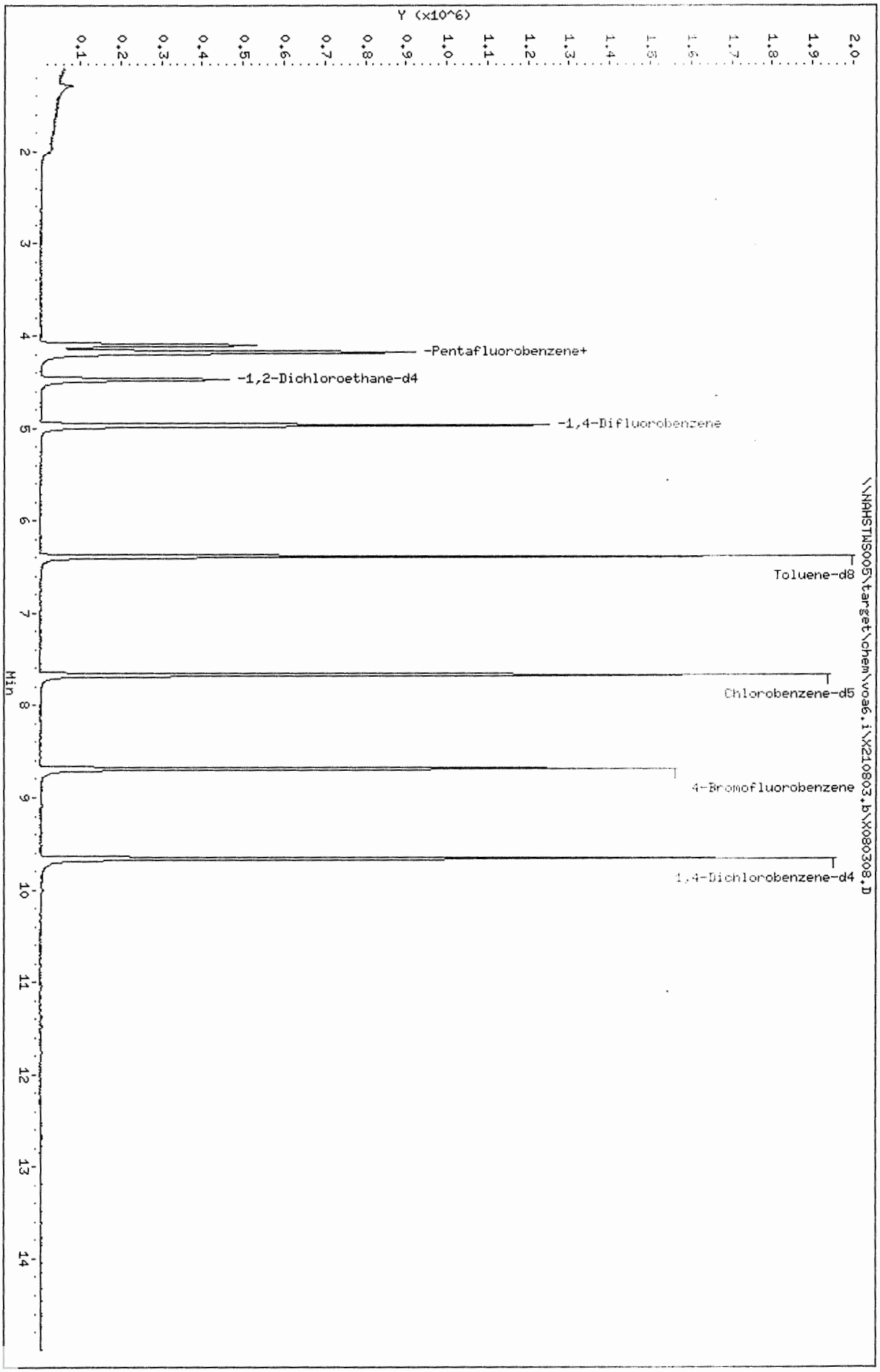
ALS Laboratory Group

Data file : \\NAHSTWS005\target\chem\voa6.i\X210803.b\X080308.D
Lab Smp Id: VBLKW-210803 Client Smp ID: VBLKW-210803
Inj Date : 03-AUG-2021 13:13
Operator : PC Inst ID: voa6.i
Smp Info : VBLKW-210803;VBLKW-210803;3;;BLANK
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\target\chem\voa6.i\X210803.b\8260W.m
Meth Date : 10-Sep-2021 13:45 voa6.i Quant Type: ISTD
Cal Date : 30-JUL-2021 13:56 Cal File: X073008.D
Als bottle: 8 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0474-dod.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	4.182	(1.000)	863601	50.0000	
$ 30 Dibromofluoromethane	113	4.096	4.103	(0.979)	371632	45.8035	45.80
$ 35 1,2-Dichloroethane-d4	65	4.469	4.469	(1.069)	346415	44.8737	44.87
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	1231563	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.670	(1.000)	1013297	50.0000	
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	1126837	51.6183	51.61
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	428041	50.3584	50.35
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	816708	50.0000	



Data File: \\NAHSTWS005\target\chem\voa6.i\X210803.b\X080308.D
Date : 03-AUG-2021 13:13
Client ID: VBLKW-210803
Sample Info: VBLKW-210803;VBLKW-210803;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\X210803.b\X080312.D Page 1
Report Date: 10-Sep-2021 13:43

ALS Laboratory Group

Data file : \\NAHSTWS005\target\chem\voa6.i\X210803.b\X080312.D
Lab Smp Id: HS21071204-05 Client Smp ID: HS21071204-05
Inj Date : 03-AUG-2021 14:37
Operator : PC Inst ID: voa6.i
Smp Info : HS21071204-05;HS21071204-05;;;
Misc Info : HS18090001;WATER;0;10;
Comment :
Method : \\NAHSTWS005\target\chem\voa6.i\X210803.b\8260W.m
Meth Date : 10-Sep-2021 13:41 Genoveva.R Quant Type: ISTD
Cal Date : 30-JUL-2021 13:56 Cal File: X073008.D
Als bottle: 12
Dil Factor: 10.00000
Integrator: HP RTE Compound Sublist: 0474-dod.sub
Target Version: 4.14
Processing Host: NAHSTW7056

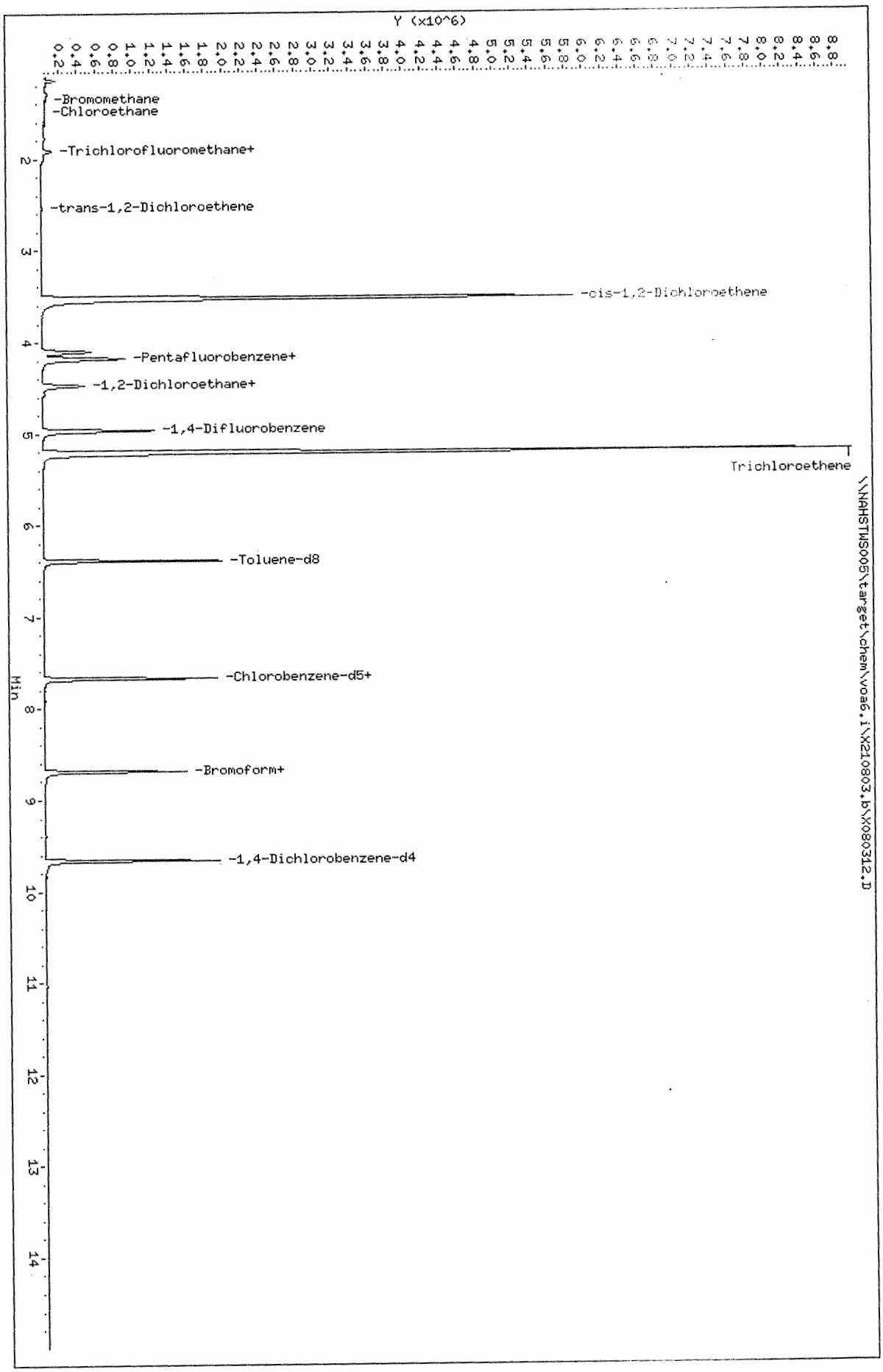
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	10.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	849663	50.0000	
$ 30 Dibromofluoromethane	113	4.096	4.103	(0.979)	370026	46.3660	46.36
$ 35 1,2-Dichloroethane-d4	65	4.469	4.469	(1.068)	348867	45.9534	45.95
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	1123807	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	1014191	50.0000	
$ 48 Toluene-d8	98	6.389	6.388	(0.833)	1212561	50.9727	50.97
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	417097	49.0086	49.00
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	497929	50.0000	
5 Vinyl Chloride	62	1.138	1.138	(0.272)	85999	10.6331	106.33
11 1,1-Dichloroethene	96	1.912	1.911	(0.457)	10698	1.49634	14.96(a)
27 cis-1,2-Dichloroethene	96	3.523	3.523	(0.842)	3240438	380.203	3802.03(A)
33 1,2-Dichloroethane	62	4.562	4.555	(0.919)	19063	2.11447	21.14(a)
38 Trichloroethene	130	5.207	5.206	(1.049)	3064854	373.201	3732.01(A)
20 trans-1,2-Dichloroethene	96	2.535	2.527	(0.606)	8600	0.91930	9.19(a)

QC Flag Legend

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



Data File: \\NAHSTWS005\target\chem\voa6.i\X210803.b\X080312.D
Date : 03-AUG-2021 14:37
Client ID: HS21071204-05
Sample Info: HS21071204-05;HS21071204-05;;;
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\NAHSTWS005\target\chem\voa6.i\X210803.b\X080312.D

Date : 03-AUG-2021 14:37

Client ID: HS21071204-05

Instrument: voa6.i

Sample Info: HS21071204-05;HS21071204-05;;;

Purge Volume: 5.0

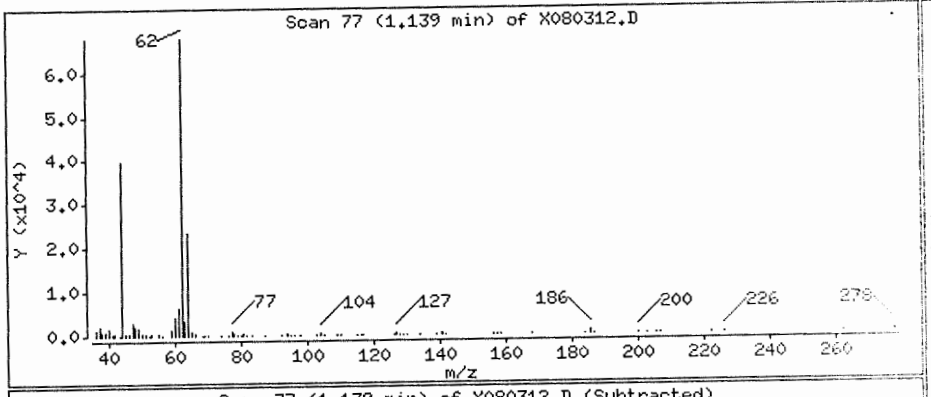
Operator: PC

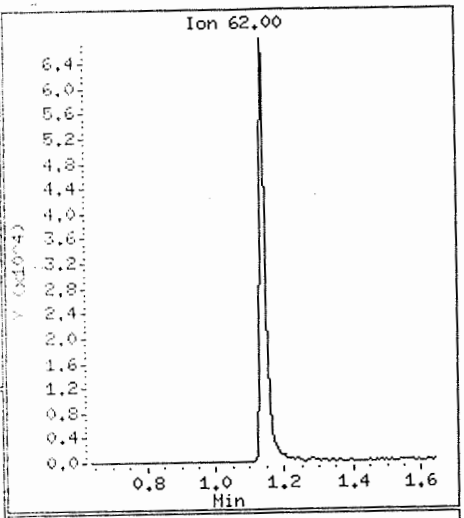
Column phase: DB624

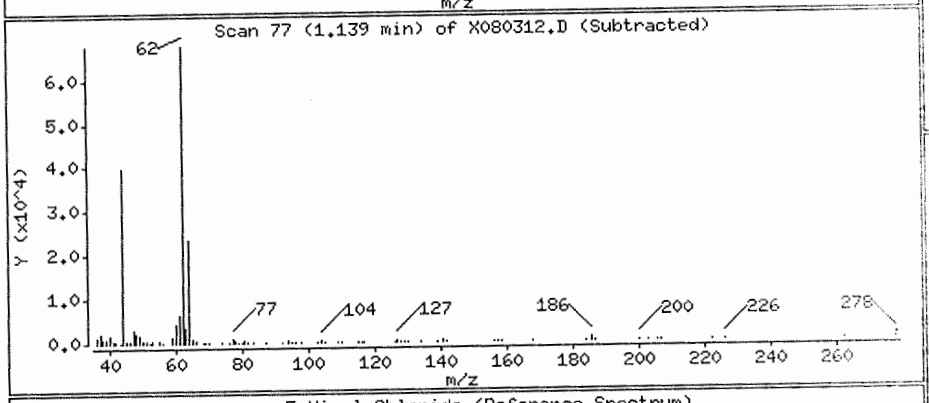
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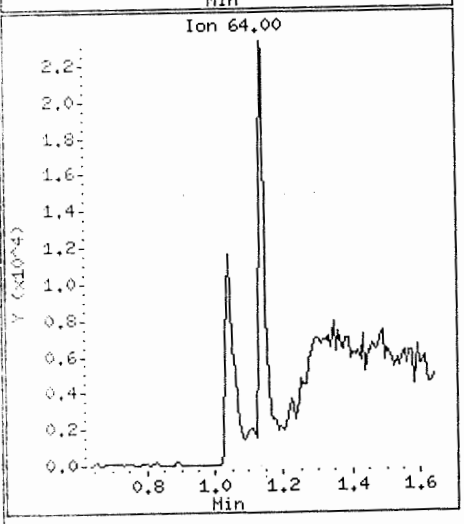
5 Vinyl Chloride

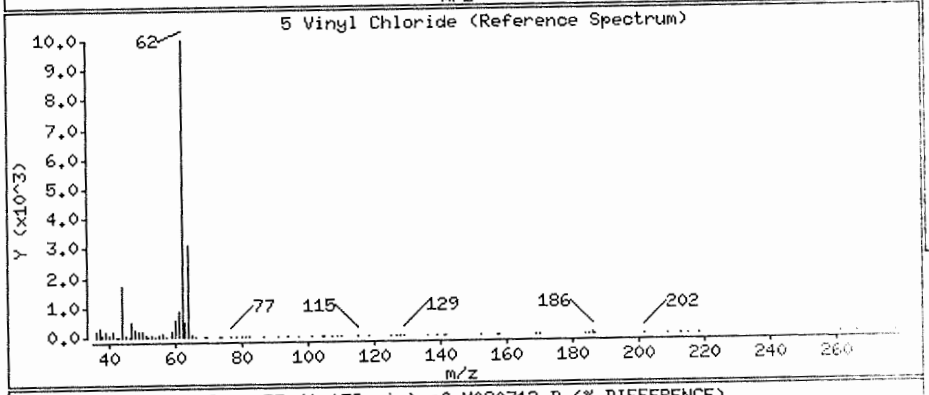
Concentration: 106.33 ug/l

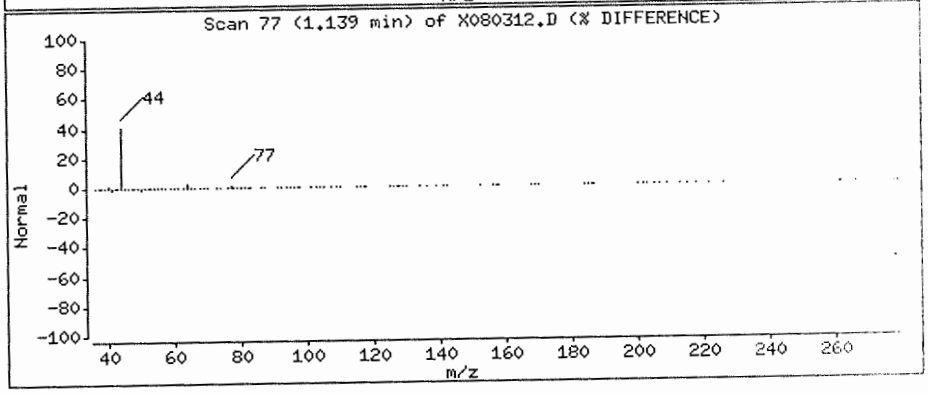












Data File: \\NAHSTWS005\target\chem\voa6.i\X210803.b\X080312.D

Date : 03-AUG-2021 14:37

Client ID: HS21071204-05

Instrument: voa6.i

Sample Info: HS21071204-05;HS21071204-05;;;

Purge Volume: 5.0

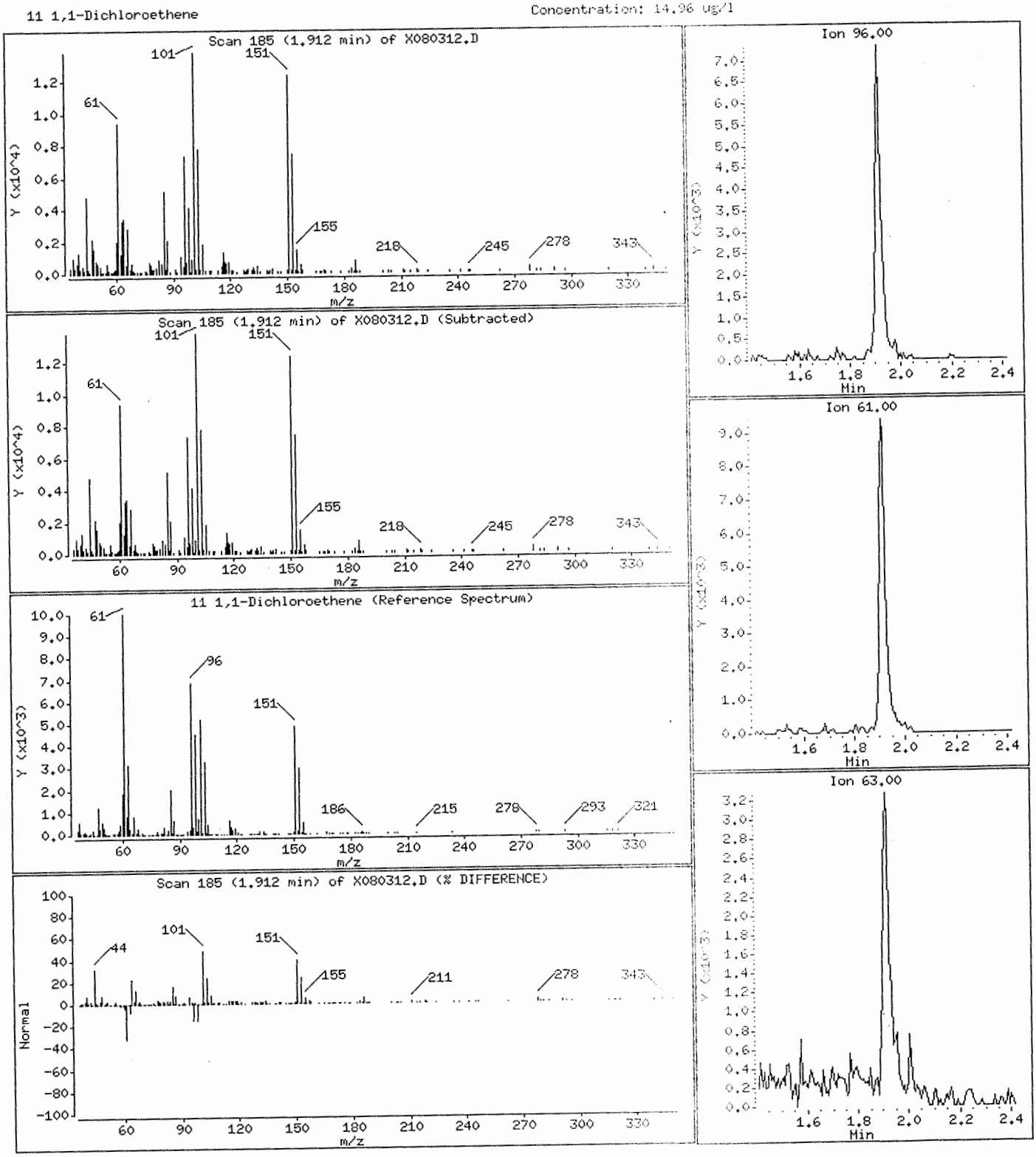
Operator: PC

Column phase: DB624

Column diameter: 0.18

11 1,1-Dichloroethene

Concentration: 14.96 ug/l



Data File: \\NAHSTWS005\target\chem\voa6.i\X210803.b\X080312.D

Date : 03-AUG-2021 14:37

Client ID: HS21071204-05

Instrument: voa6.i

Sample Info: HS21071204-05;HS21071204-05;;;

Purge Volume: 5.0

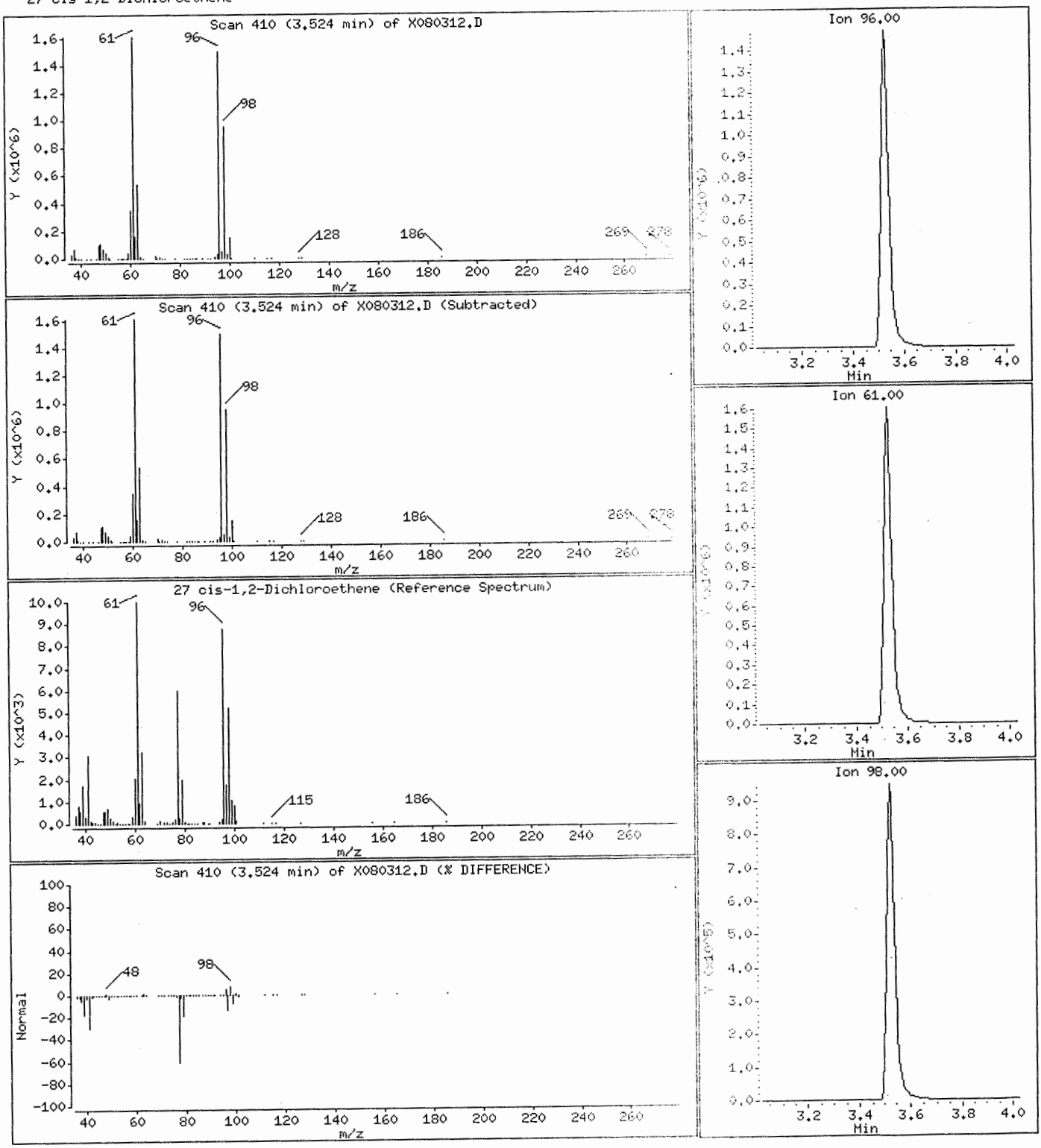
Operator: PC

Column phase: DB624

Column diameter: 0.18

27 cis-1,2-Dichloroethene

Concentration: 3802.03 ug/l



Data File: \\NAHSTWS005\target\chem\voa6.i\X210803.b\X080312.D

Date : 03-AUG-2021 14:37

Client ID: HS21071204-05

Instrument: voa6.i

Sample Info: HS21071204-05;HS21071204-05;;;

Purge Volume: 5.0

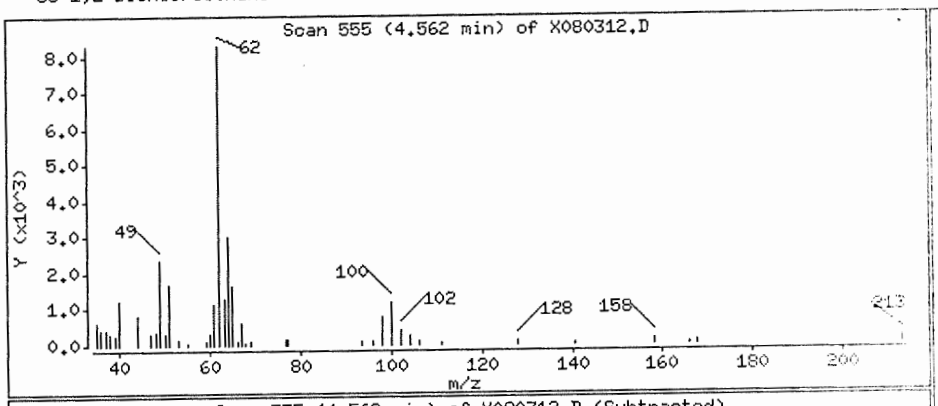
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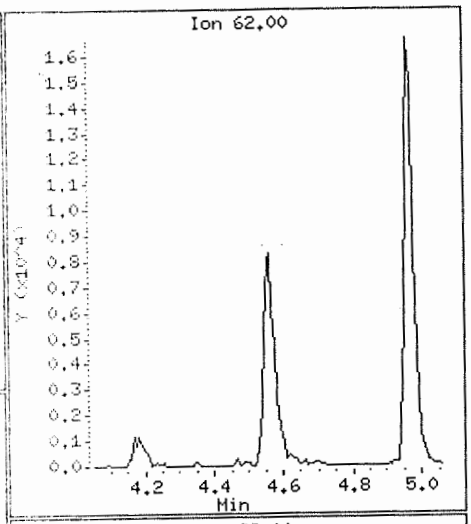
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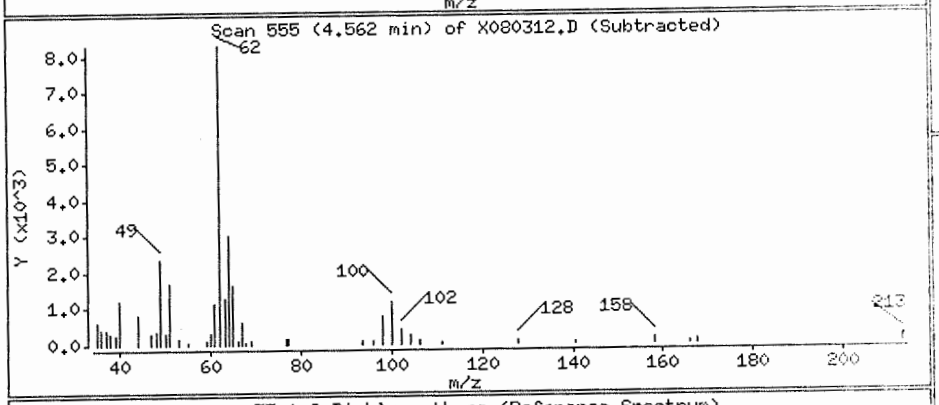
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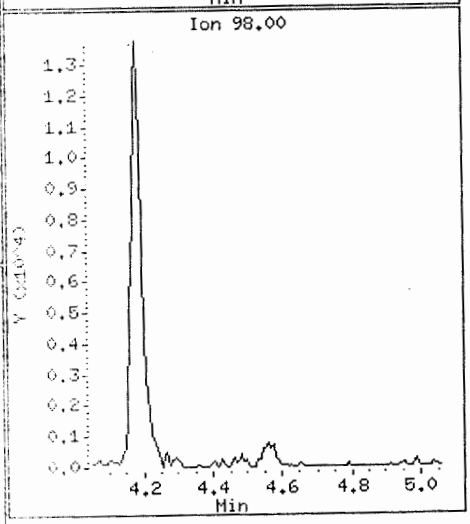
33 1,2-Dichloroethane

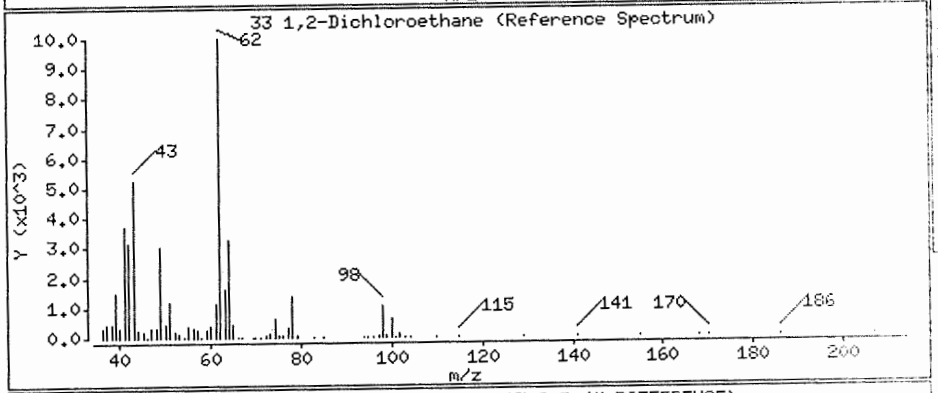
Concentration: 21.14 ug/l

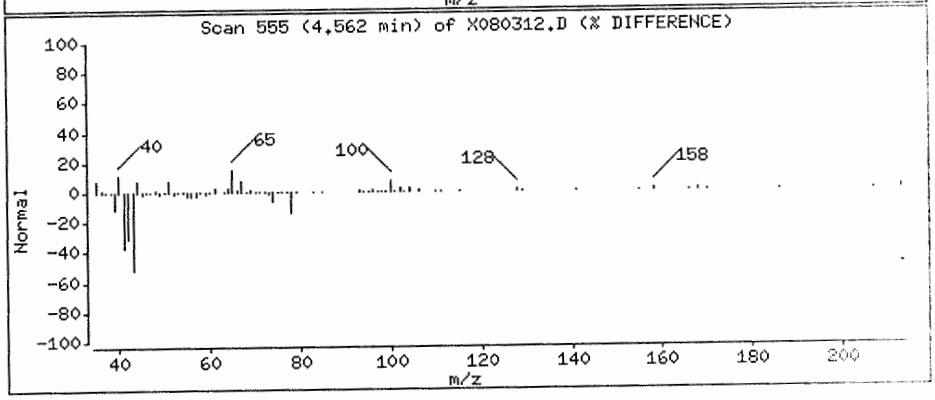












Data File: \\NAHSTWS005\target\chem\voa6.i\X210803.b\X080312.D

Date : 03-AUG-2021 14:37

Client ID: HS21071204-05

Instrument: voa6.i

Sample Info: HS21071204-05;HS21071204-05;;;

Purge Volume: 5.0

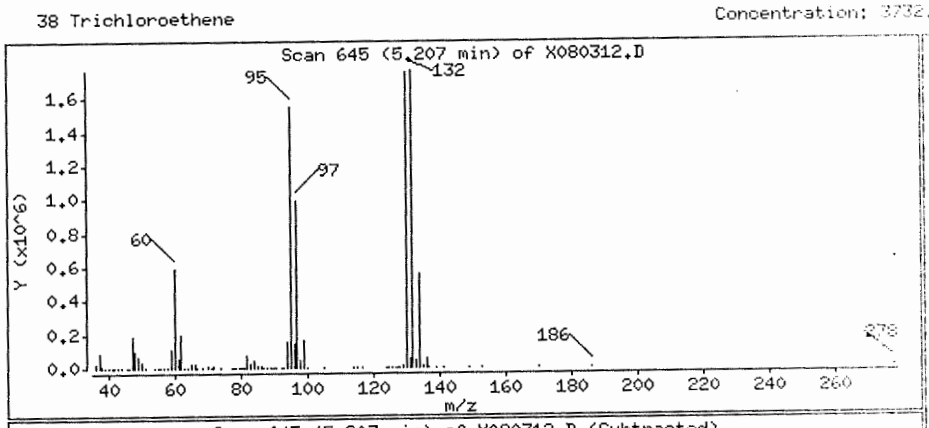
Operator: PC

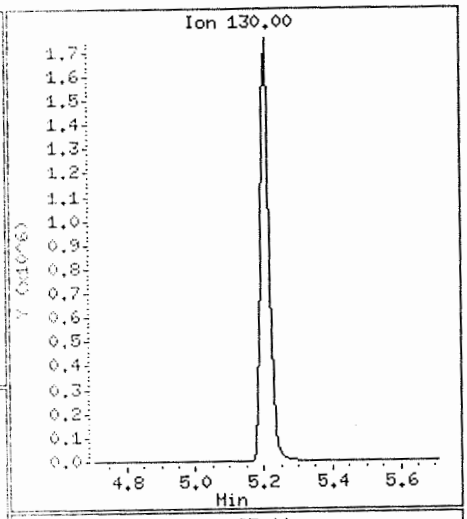
Column phase: DB624

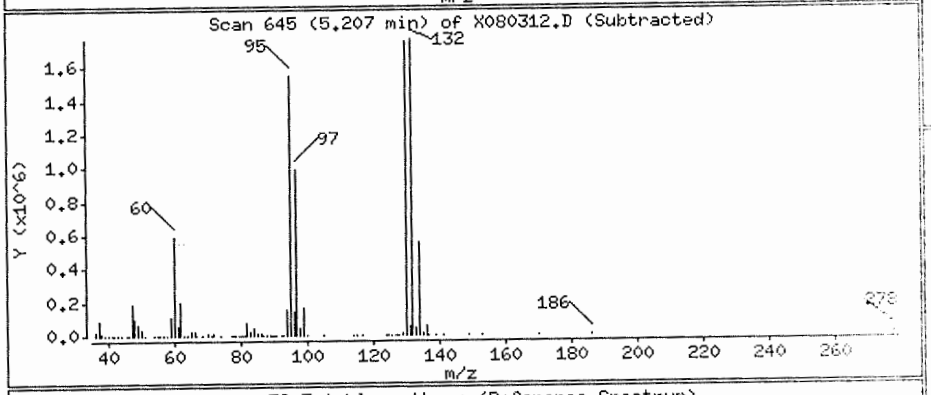
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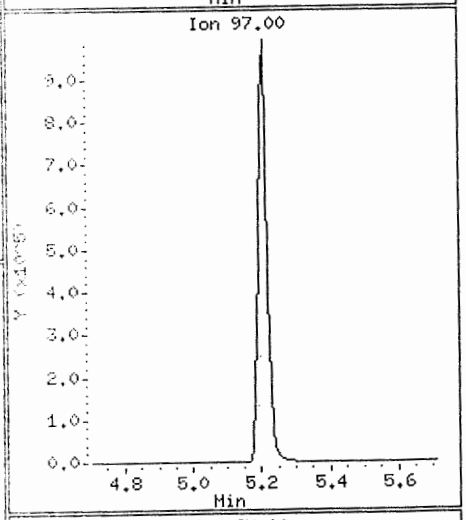
38 Trichloroethene

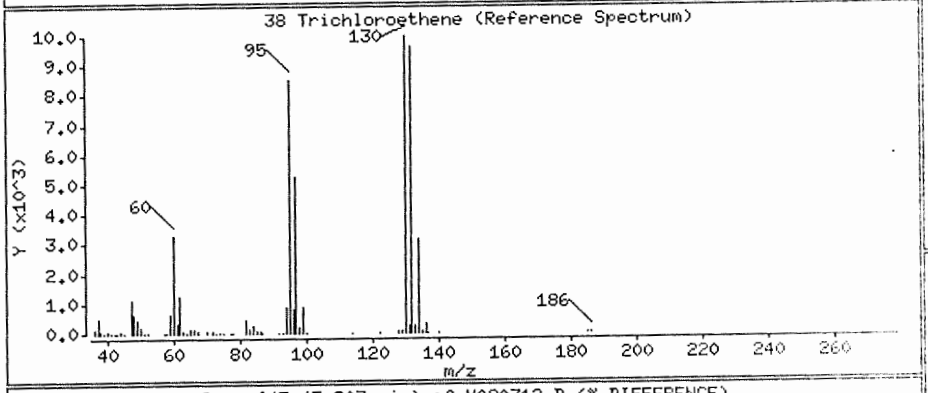
Concentration: 3732.61 ug/l

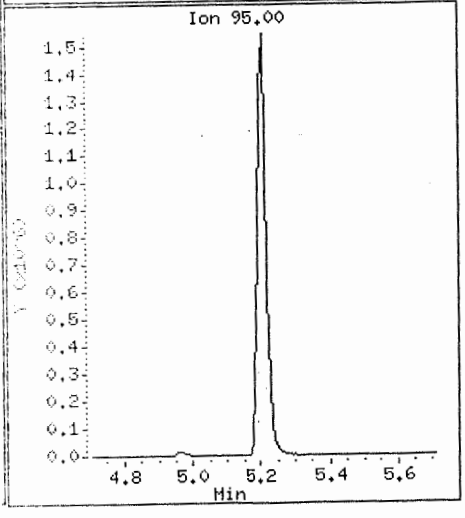


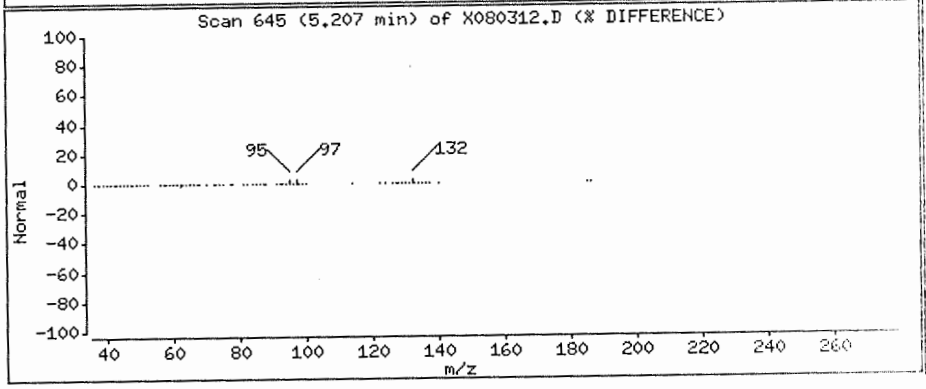












Data File: \\NAHSTWS005\target\chem\voa6.i\X210803.b\X080312.D

Date : 03-AUG-2021 14:37

Client ID: HS21071204-05

Instrument: voa6.i

Sample Info: HS21071204-05;HS21071204-05;;;

Purge Volume: 5.0

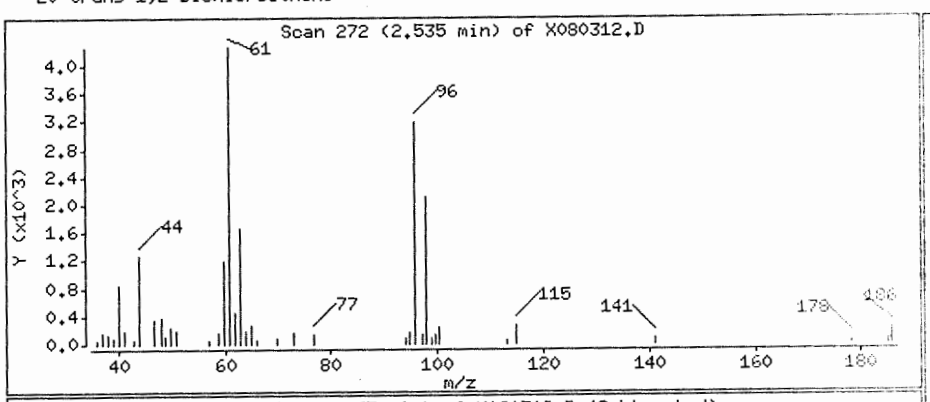
Operator: PC

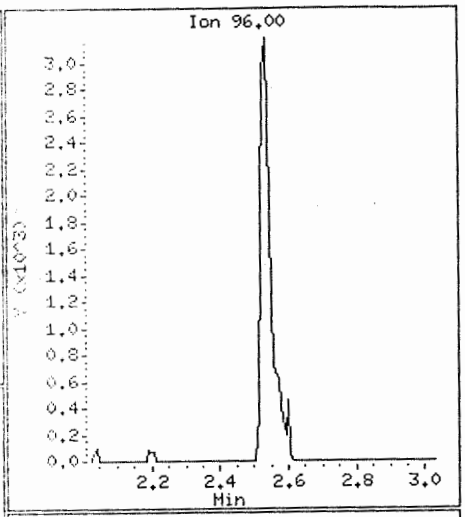
Column phase: DB624

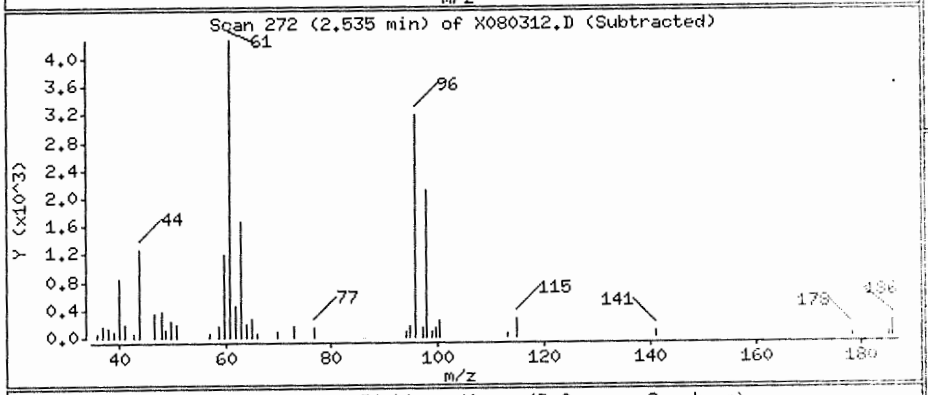
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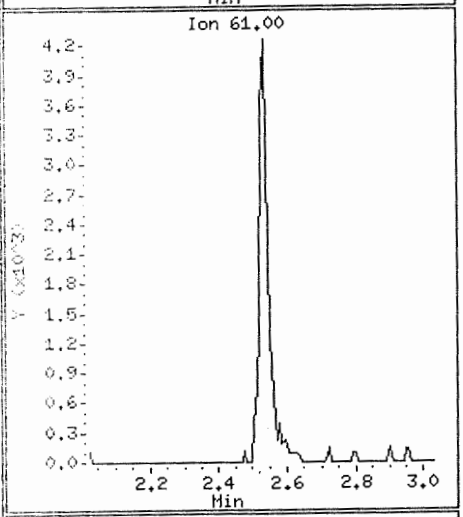
20 trans-1,2-Dichloroethene

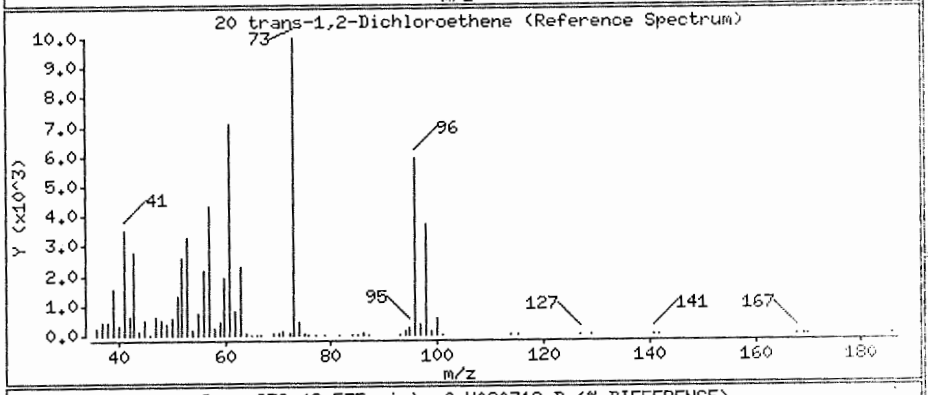
Concentration: 9.19 ug/l

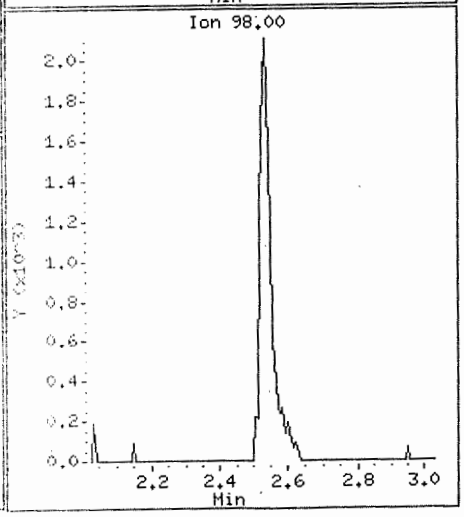


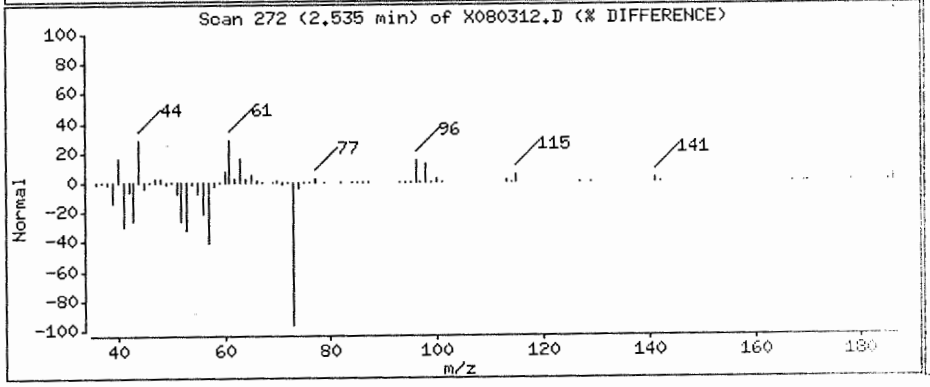












Data File: \\NAHSTWS005\target\chem\voa6.i\X210803.b\X080313.D Page 1
Report Date: 10-Sep-2021 13:45

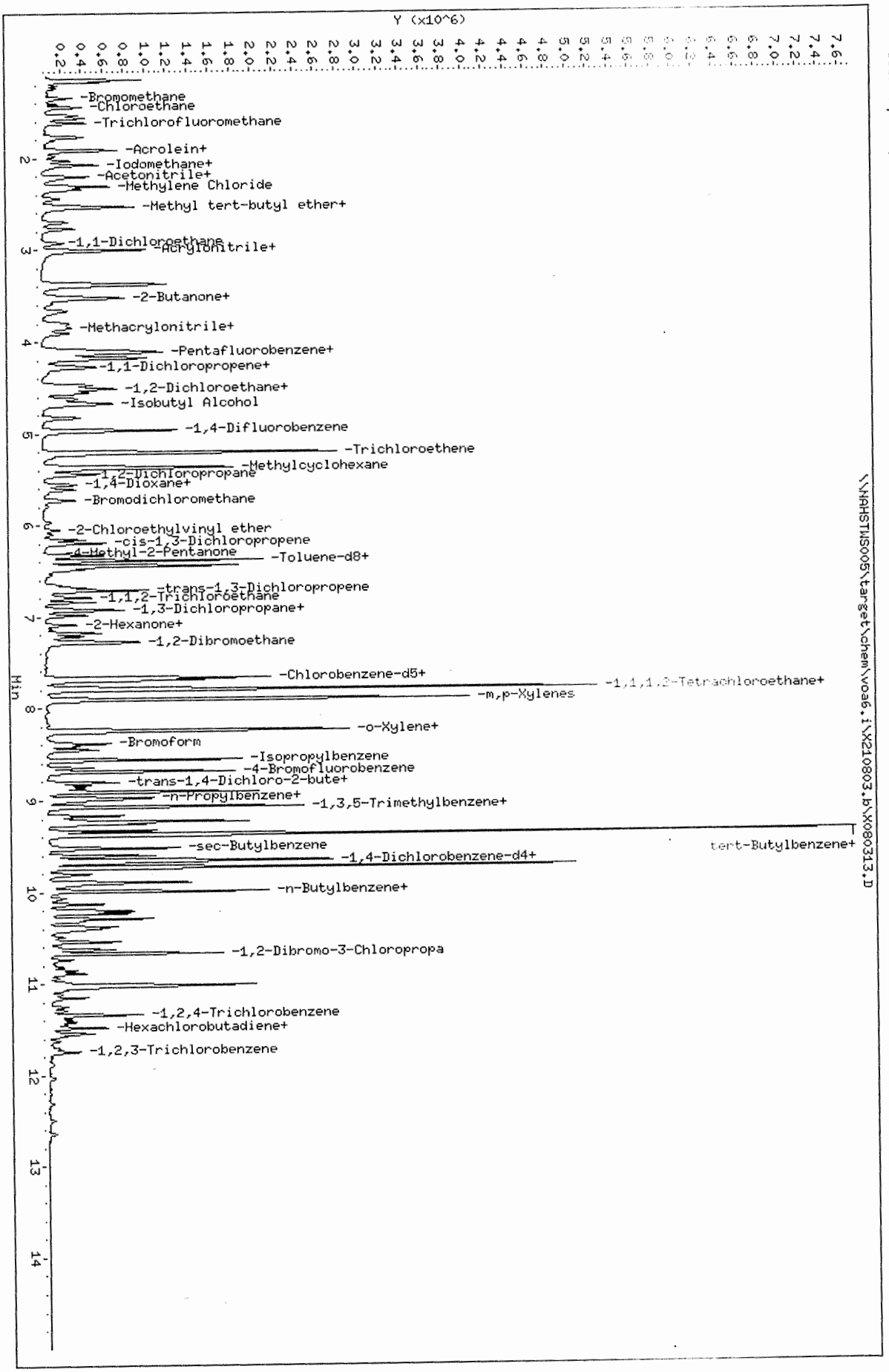
ALS Laboratory Group

Data file : \\NAHSTWS005\target\chem\voa6.i\X210803.b\X080313.D
Lab Smp Id: HS21071731-01MS Client Smp ID: HS21071731-01MS
Inj Date : 03-AUG-2021 14:58
Operator : PC Inst ID: voa6.i
Smp Info : HS21071731-01MS;HS21071731-01MS;3;;MS
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\target\chem\voa6.i\X210803.b\8260W.m
Meth Date : 10-Sep-2021 13:45 voa6.i Quant Type: ISTD
Cal Date : 30-JUL-2021 13:56 Cal File: X073008.D
Als bottle: 13 QC Sample: MS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0474-dod.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	4.182	(1.000)	878649	50.0000	
$	30 Dibromofluoromethane	113	4.103	4.103	(0.981)	378879	45.8991	45.89
$	35 1,2-Dichloroethane-d4	65	4.469	4.469	(1.069)	353823	45.0518	45.05
*	36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	1149588	50.0000	
*	47 Chlorobenzene-d5	117	7.670	7.670	(1.000)	1040067	50.0000	
$	48 Toluene-d8	98	6.388	6.388	(0.833)	1249578	51.2382	51.23
$	69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	429261	49.1856	49.18
*	70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	640874	50.0000	
	5 Vinyl Chloride	62	1.138	1.138	(0.272)	677226	80.9711	80.97
	11 1,1-Dichloroethene	96	1.911	1.911	(0.457)	334239	18.1567	18.15
	17 Methylene Chloride	84	2.305	2.305	(0.551)	297239	17.1214	17.12
	27 cis-1,2-Dichloroethene	96	3.530	3.523	(0.844)	349638	39.6700	39.66
	33 1,2-Dichloroethane	62	4.555	4.555	(0.918)	161374	17.4982	17.49
	38 Trichloroethene	130	5.206	5.206	(1.049)	987794	117.584	117.58
	53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	98602	17.5700	17.56
	20 trans-1,2-Dichloroethene	96	2.527	2.527	(0.604)	283387	19.1405	19.14



Data File: \\NAHSTWS005\target\chem\voa6.i\X210803.b\X080313.D
Date : 03-AUG-2021 14:58
Client ID: HS21071731-01HS
Sample Info: HS21071731-01HS;HS21071731-01HS;3;;HS
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\NAHSTWS005\target\chem\voa6.i\X210803.b\X080314.D Page 1
Report Date: 10-Sep-2021 13:45

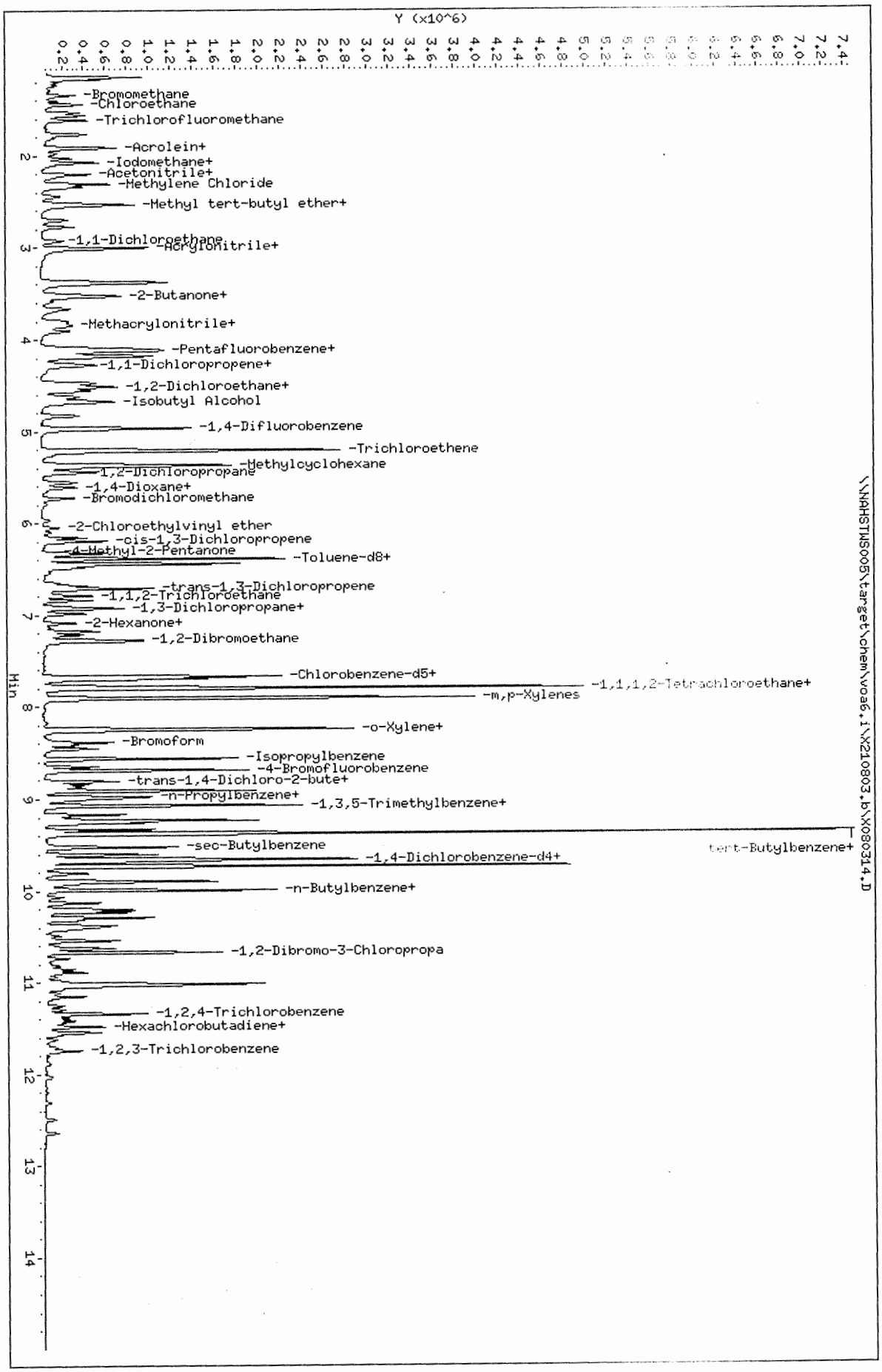
ALS Laboratory Group

Data file : \\NAHSTWS005\target\chem\voa6.i\X210803.b\X080314.D
Lab Smp Id: HS21071731-01MSD Client Smp ID: HS21071731-01MSD
Inj Date : 03-AUG-2021 15:19
Operator : PC Inst ID: voa6.i
Smp Info : HS21071731-01MSD;HS21071731-01MSD;3;;MSD
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\target\chem\voa6.i\X210803.b\8260W.m
Meth Date : 10-Sep-2021 13:45 voa6.i Quant Type: ISTD
Cal Date : 30-JUL-2021 13:56 Cal File: X073008.D
Als bottle: 13 QC Sample: MSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0474-dod.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	4.182	(1.000)	[illegible]	50.0000	
$ 30 Dibromofluoromethane	113	4.096	4.103	(0.979)	[illegible]	45.9597	45.95
$ 35 1,2-Dichloroethane-d4	65	4.469	4.469	(1.069)	[illegible]	45.7391	45.73
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	[illegible]	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.670	(1.000)	[illegible]	50.0000	
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	[illegible]	51.9549	51.95
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	[illegible]	50.1931	50.19
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	[illegible]	50.0000	
5 Vinyl Chloride	62	1.138	1.138	(0.272)	[illegible]	74.7440	74.74
11 1,1-Dichloroethene	96	1.912	1.911	(0.457)	[illegible]	16.1363	16.13
17 Methylene Chloride	84	2.306	2.305	(0.551)	[illegible]	16.0103	16.01
27 cis-1,2-Dichloroethene	96	3.523	3.523	(0.842)	[illegible]	35.3635	35.36
33 1,2-Dichloroethane	62	4.555	4.555	(0.918)	[illegible]	15.8337	15.83
38 Trichloroethene	130	5.207	5.206	(1.049)	[illegible]	107.968	107.96
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	[illegible]	17.2582	17.25
20 trans-1,2-Dichloroethene	96	2.528	2.527	(0.604)	[illegible]	18.1436	18.14



Data File: \\NAHSTWS005\target\chem\voa6.i\X210803.b\X080314.D
Date : 03-AUG-2021 15:19
Client ID: HS21071731-01MSD
Sample Info: HS21071731-01MSD;HS21071731-01MSD;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\X210803.b\X080317.D Page 1
Report Date: 10-Sep-2021 13:43

ALS Laboratory Group

Data file : \\NAHSTWS005\target\chem\voa6.i\X210803.b\X080317.D
Lab Smp Id: HS21071204-05 Client Smp ID: HS21071204-05
Inj Date : 03-AUG-2021 16:22
Operator : PC Inst ID: voa6.i
Smp Info : HS21071204-05;HS21071204-05;;;
Misc Info : HS18090001;WATER;0;100;
Comment :
Method : \\NAHSTWS005\target\chem\voa6.i\X210803.b\8260W.m
Meth Date : 10-Sep-2021 13:41 Genoveva.R Quant Type: ISTD
Cal Date : 30-JUL-2021 13:56 Cal File: X073008.D
Als bottle: 16
Dil Factor: 100.00000
Integrator: HP RTE Compound Sublist: 0474-dod.sub
Target Version: 4.14
Processing Host: NAHSTW7056

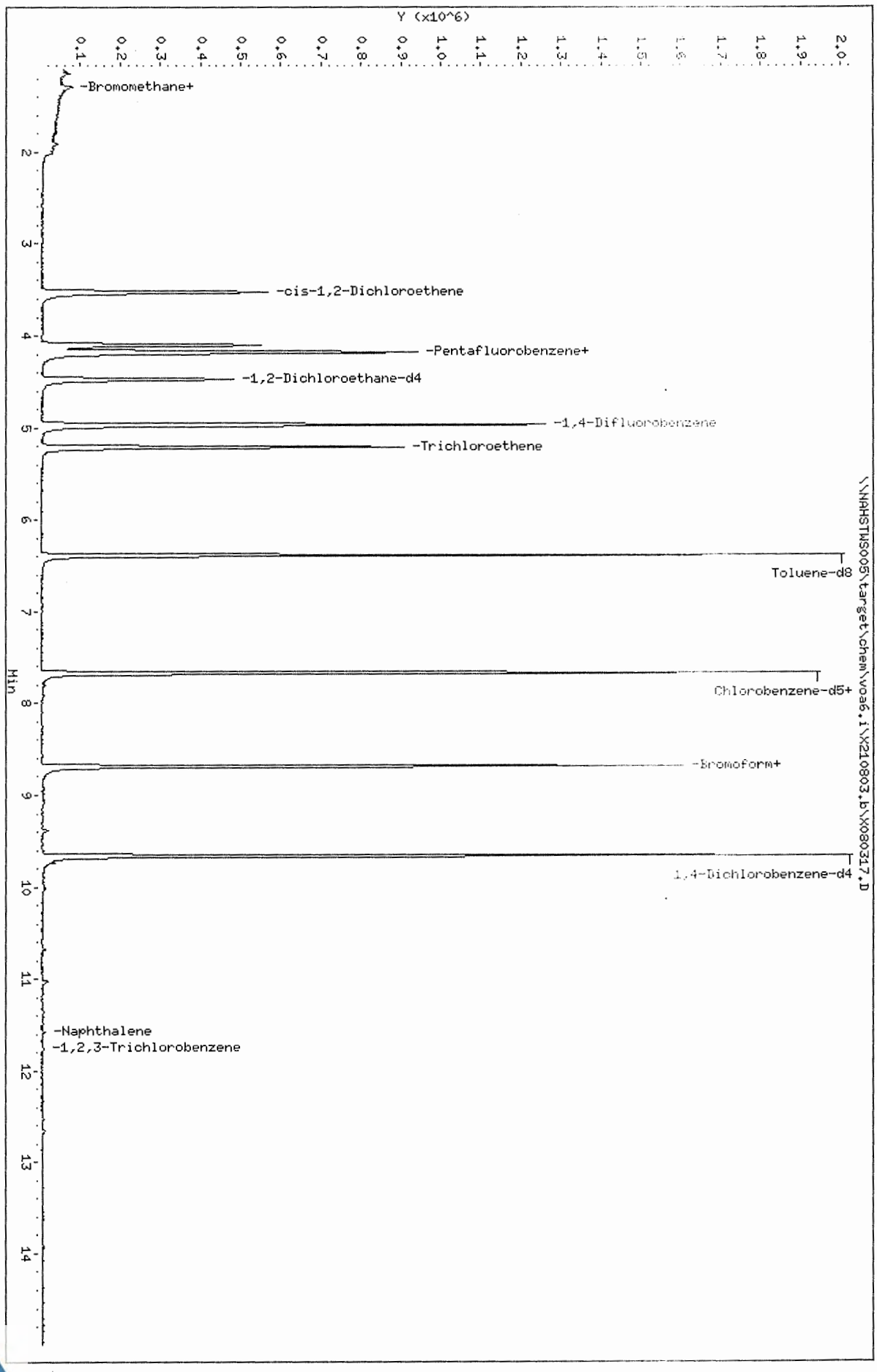
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	100.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	874693	50.0000	
$ 30 Dibromofluoromethane	113	4.096	4.103	(0.979)	377347	45.9260	45.92
$ 35 1,2-Dichloroethane-d4	65	4.469	4.469	(1.069)	346507	44.3099	44.30
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	1045868	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	1021879	50.0000	
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	1233668	51.4766	51.47
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	633744	50.5007	50.50
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	620213	50.0000	
5 Vinyl Chloride	62	1.138	1.138	(0.272)	10868	1.30544	130.54(a)
27 cis-1,2-Dichloroethene	96	3.530	3.523	(0.844)	321397	36.6349	3663.48
38 Trichloroethene	130	5.206	5.206	(1.049)	313060	37.2894	3728.94

QC Flag Legend

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



Data File: \\NAHSTWS005\target\chem\voa6.i\X210803.b\X080317.D
Date : 03-AUG-2021 16:22
Client ID: HS21071204-05
Sample Info: HS21071204-05;HS21071204-05;;;
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\NAHSTWS005\target\chem\voa6.i\X210803.b\X080317.D

Date : 03-AUG-2021 16:22

Client ID: HS21071204-05

Instrument: voa6.i

Sample Info: HS21071204-05;HS21071204-05;;;

Purge Volume: 5.0

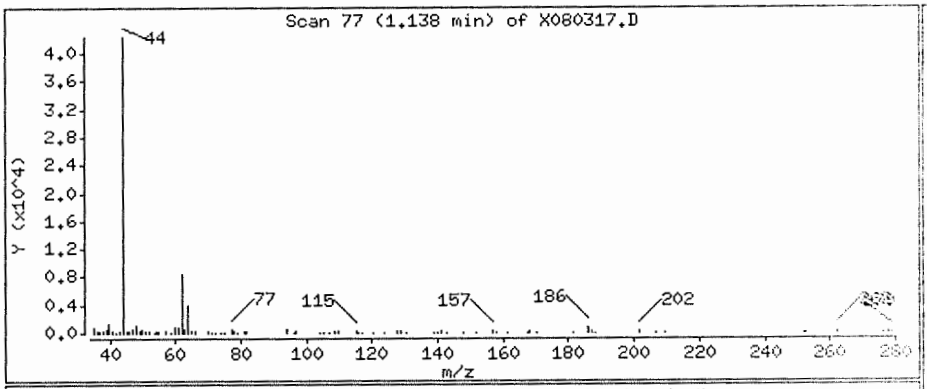
Operator: PC

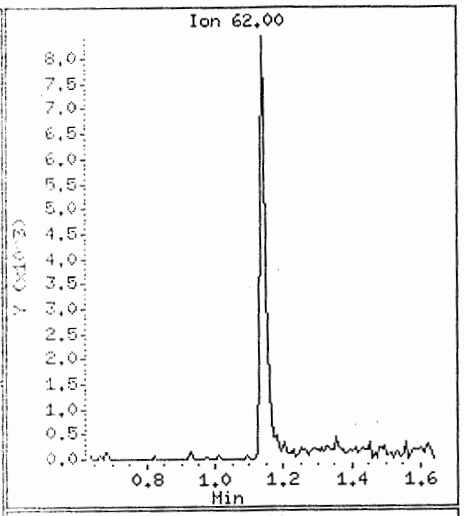
Column phase: DB624

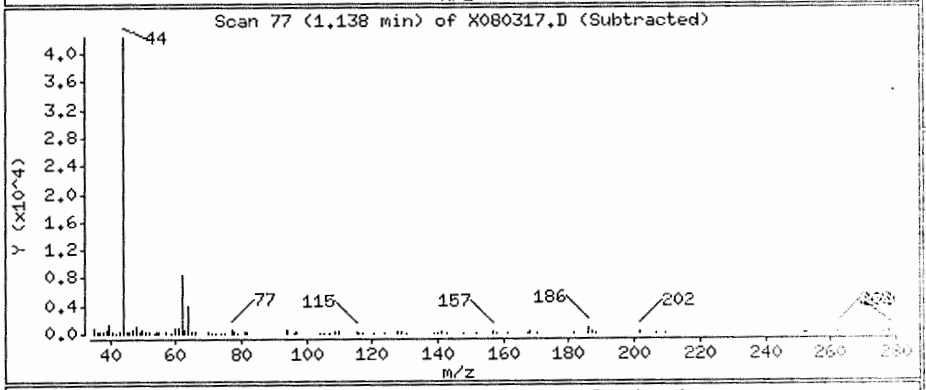
Column diameter: 0.18

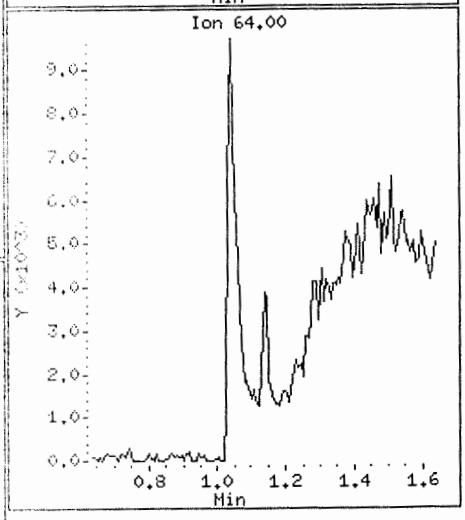
5 Vinyl Chloride

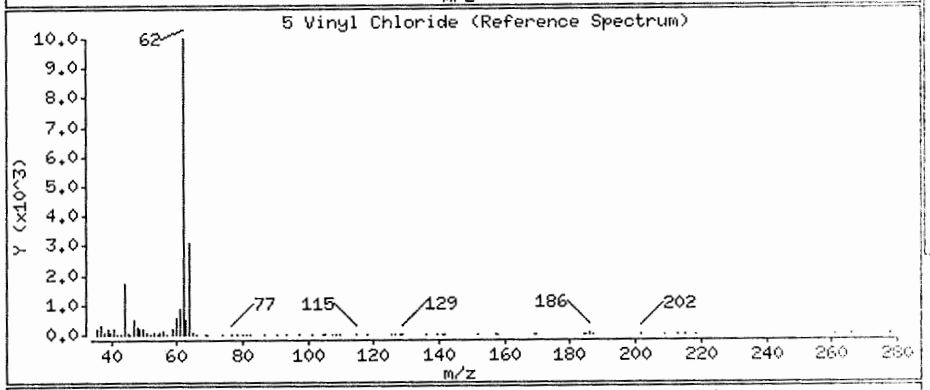
Concentration: 130.54 ug/l

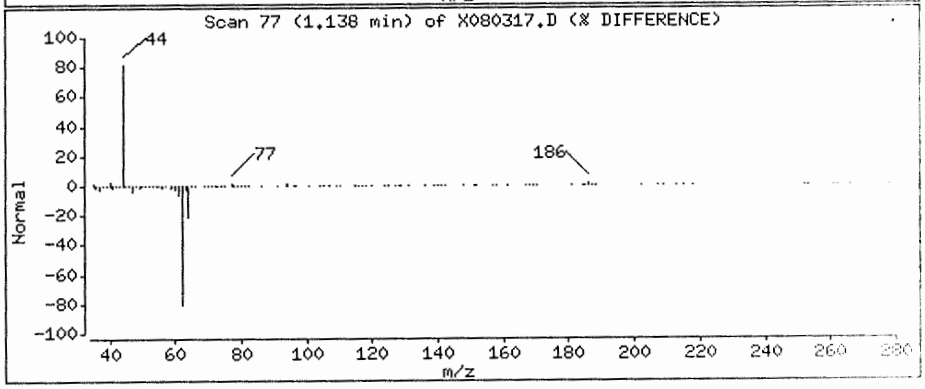












Data File: \\NAHSTWS005\target\chem\voa6.i\X210803.b\X080317.D

Date : 03-AUG-2021 16:22

Client ID: HS21071204-05

Instrument: voa6.i

Sample Info: HS21071204-05;HS21071204-05;;;

Purge Volume: 5.0

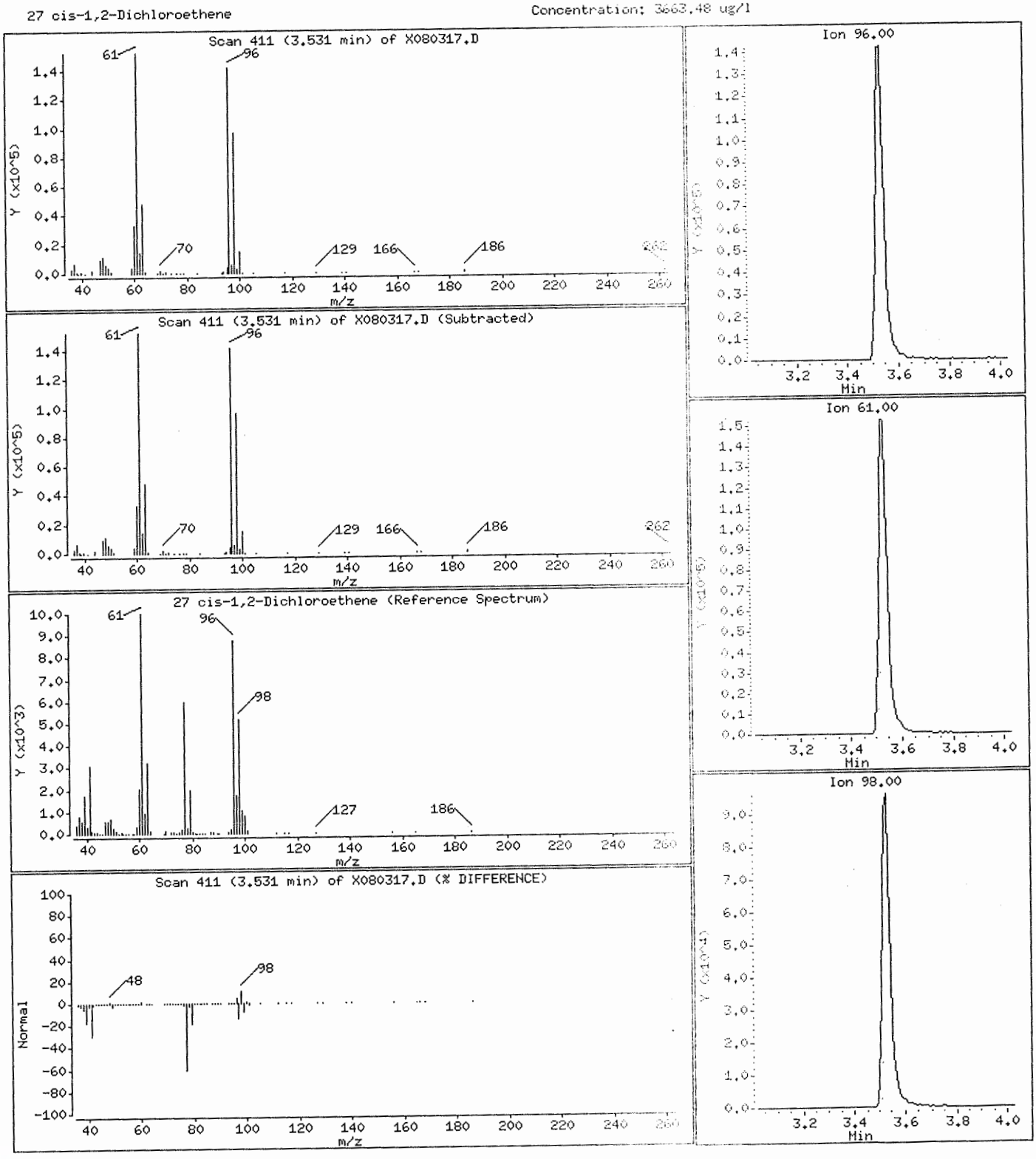
Operator: PC

Column phase: DB624

Column diameter: 0.18

27 cis-1,2-Dichloroethene

Concentration: 3663.48 ug/l



Data File: \\NAHSTWS005\target\chem\voa6.i\X210803.b\X080317.D

Date : 03-AUG-2021 16:22

Client ID: HS21071204-05

Instrument: voa6.i

Sample Info: HS21071204-05;HS21071204-05;;;

Purge Volume: 5.0

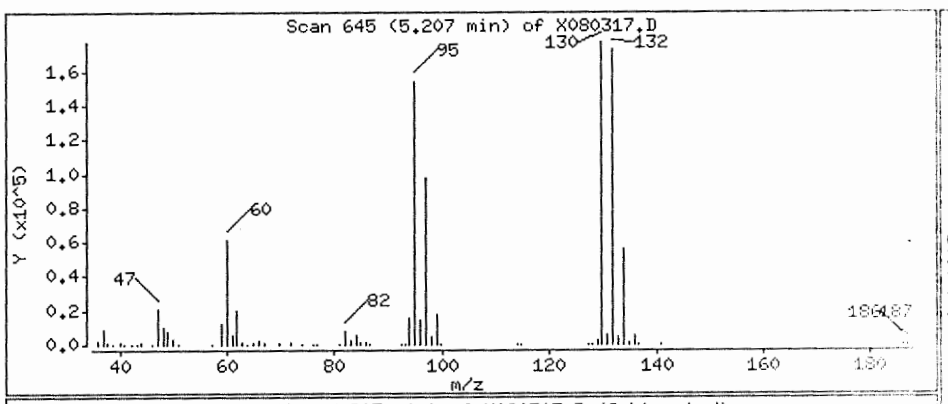
Operator: PC

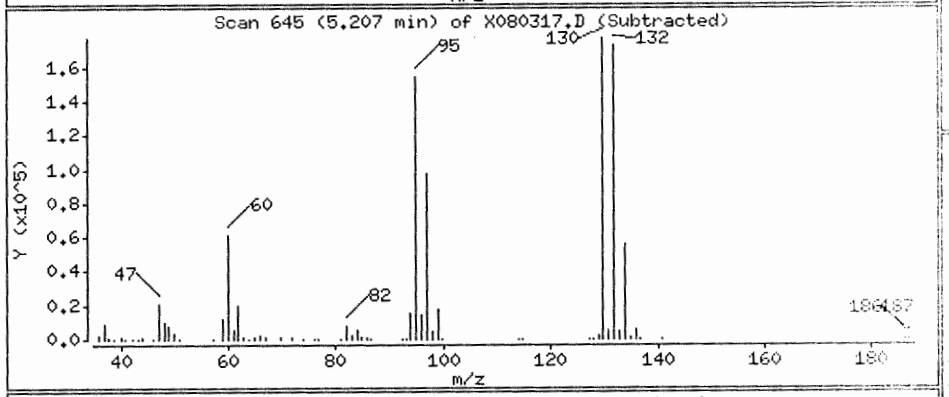
Column phase: DB624

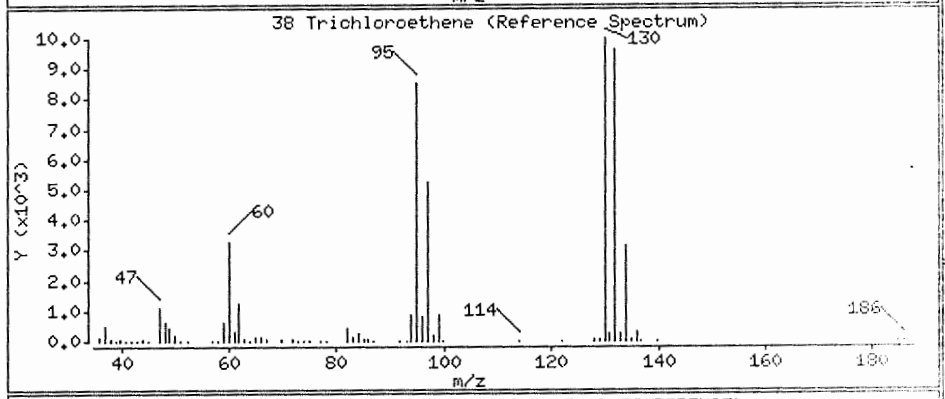
Column diameter: 0.18

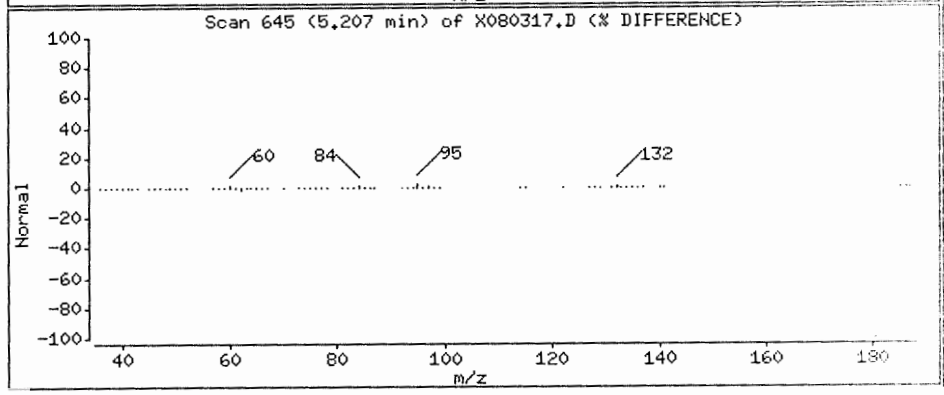
38 Trichloroethene

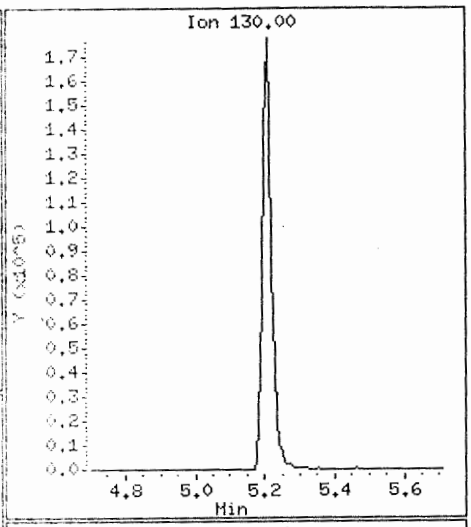
Concentration: 3728.94 ug/l

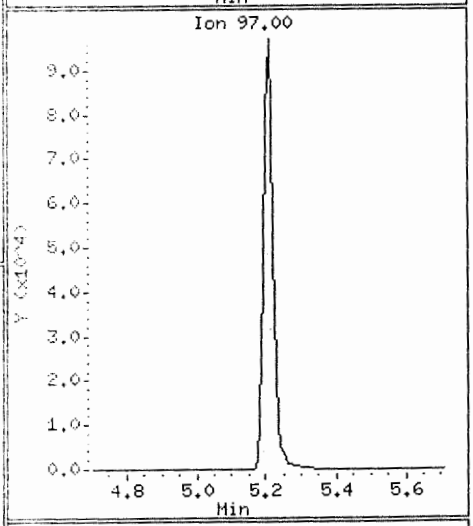


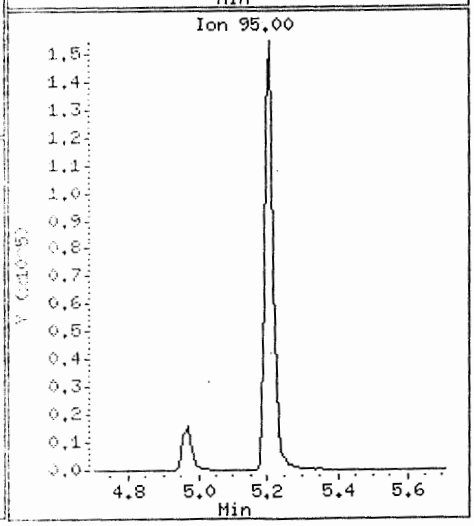












Data File: \\NAHSTWS005\target\chem\voa6.i\X210803.b\X080318.D Page 1
Report Date: 10-Sep-2021 13:43

ALS Laboratory Group

Data file : \\NAHSTWS005\target\chem\voa6.i\X210803.b\X080318.D
Lab Smp Id: HS21071204-03 Client Smp ID: HS21071204-03
Inj Date : 03-AUG-2021 16:43
Operator : PC Inst ID: voa6.i
Smp Info : HS21071204-03;HS21071204-03;;;
Misc Info : HS18090001;WATER;0;100;
Comment :
Method : \\NAHSTWS005\target\chem\voa6.i\X210803.b\8260W.m
Meth Date : 10-Sep-2021 13:41 Genoveva.R Quant Type: ISTD
Cal Date : 30-JUL-2021 13:56 Cal File: X073008.D
Als bottle: 17
Dil Factor: 100.00000
Integrator: HP RTE Compound Sublist: 0474-dod.sub
Target Version: 4.14
Processing Host: NAHSTW7056

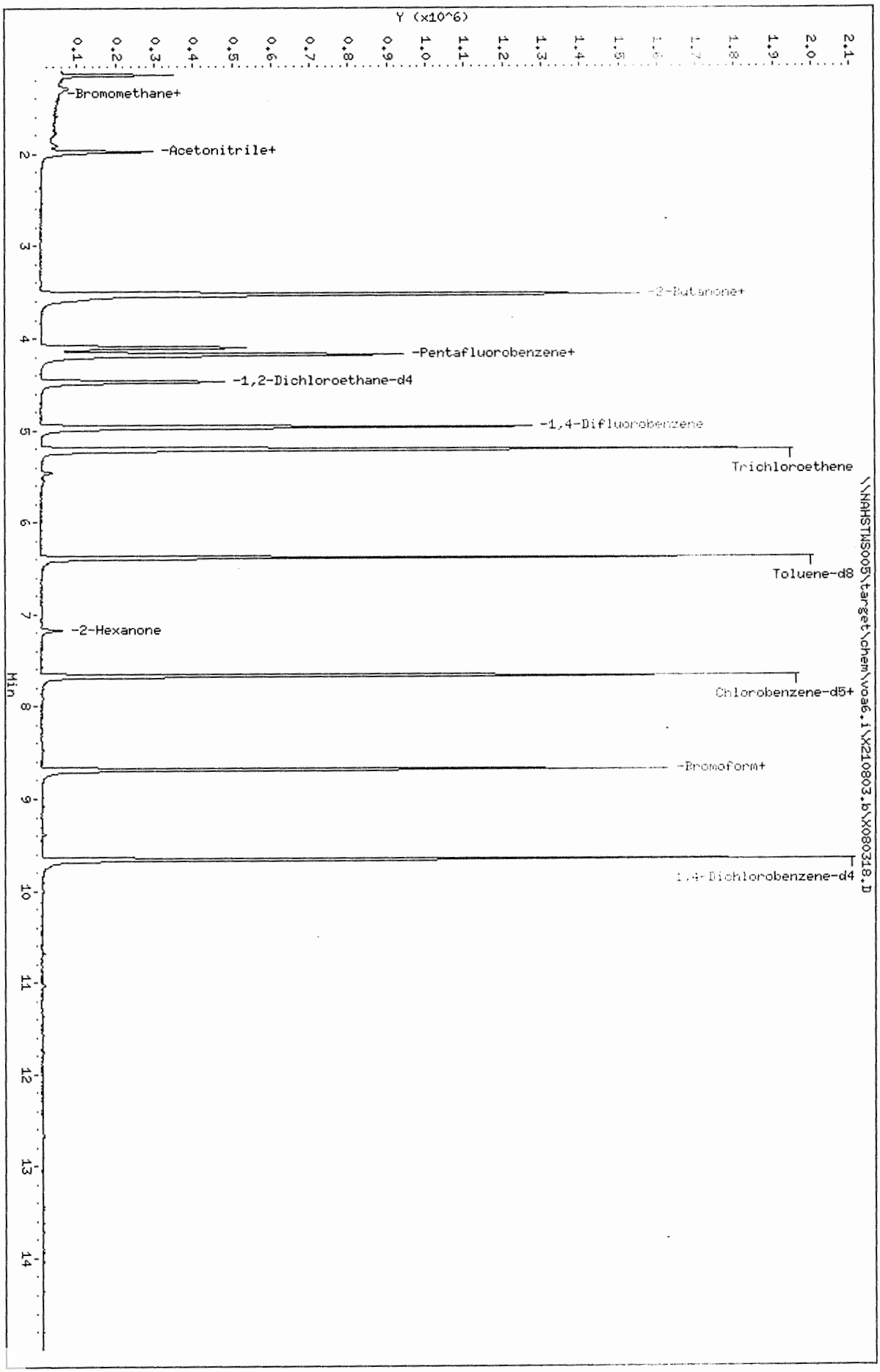
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	100.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	867496	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	373369	45.8112	45.81
$ 35 1,2-Dichloroethane-d4	65	4.469	4.469	(1.069)	355649	45.8554	45.85
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	1153089	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	1034442	50.0000	
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	1246733	51.3832	51.38
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	433482	49.9504	49.95
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	543948	50.0000	
5 Vinyl Chloride	62	1.138	1.138	(0.272)	237725	26.3665	2636.65
11 1,1-Dichloroethene	96	1.911	1.911	(0.457)	3658	0.50113	50.11(a)
27 cis-1,2-Dichloroethene	96	3.523	3.523	(0.842)	875361	100.596	10059.55
38 Trichloroethene	130	5.206	5.206	(1.049)	679793	80.6750	8067.49

QC Flag Legend

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



Data File: \\NAHSTWS005\target\chem\voa6.i\X210803.b\X080318.D
Date : 03-AUG-2021 16:43
Client ID: HS21071204-03
Sample Info: HS21071204-03;HS21071204-03;;;
Purge Volume: 5.0
Column phase: DB624

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

\\NAHSTWS005\target\chem\voa6.i\X210803.b\X080318.D

Data File: \\NAHSTWS005\target\chem\voa6.i\X210803.b\X080318.D

Date : 03-AUG-2021 16:43

Client ID: HS21071204-03

Instrument: voa6.i

Sample Info: HS21071204-03;HS21071204-03;;;

Purge Volume: 5.0

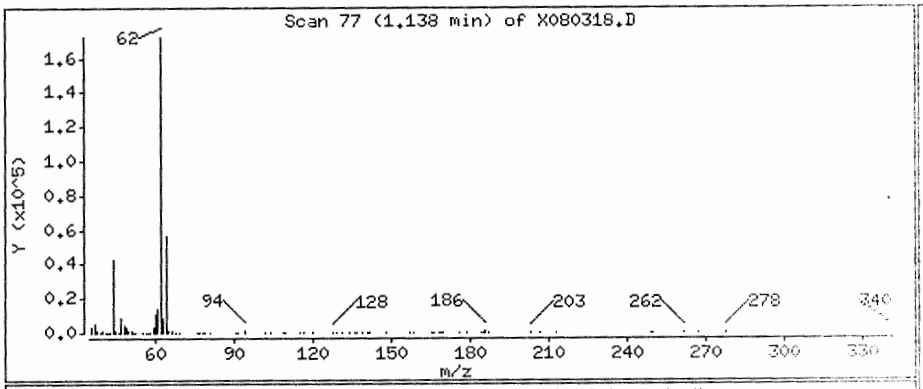
Operator: PC

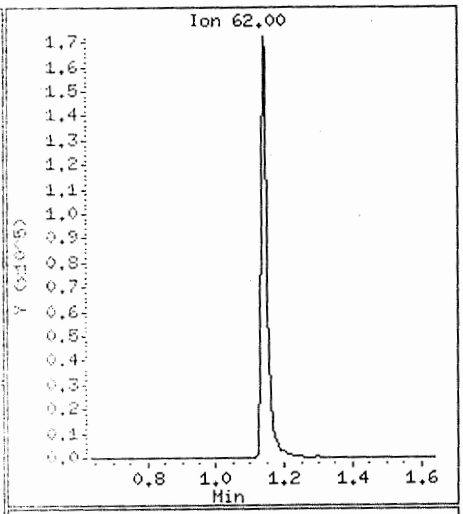
Column phase: DB624

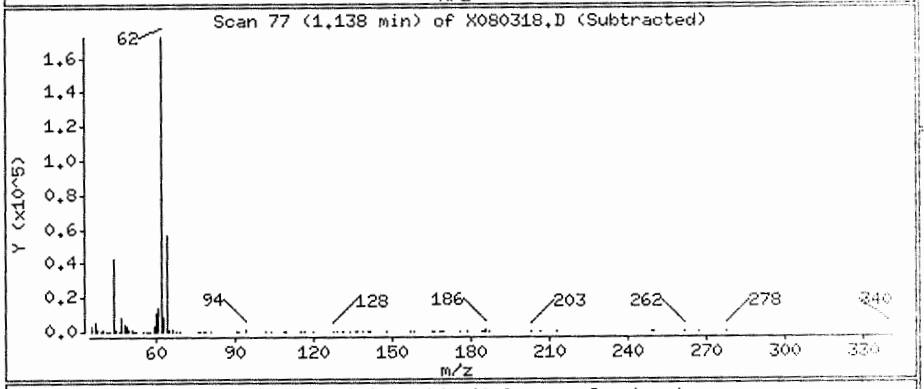
Column diameter: 0.18

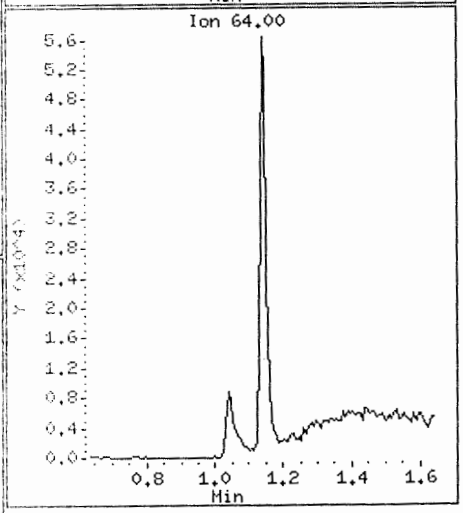
5 Vinyl Chloride

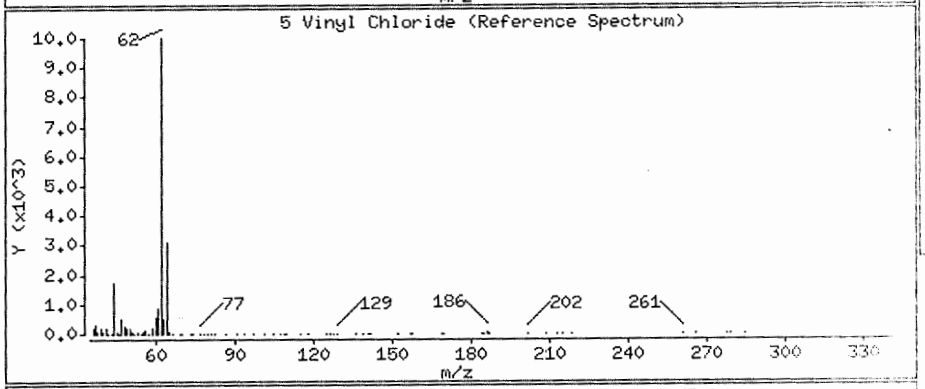
Concentration: 2636.65 ug/l

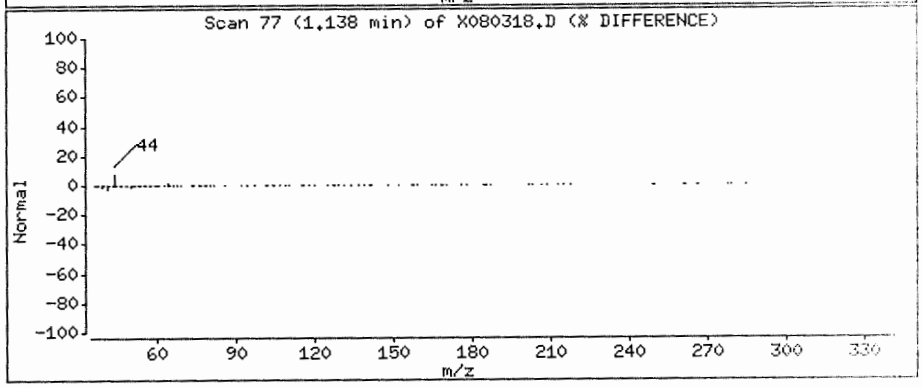












Data File: \\NAHSTWS005\target\chem\voa6.i\X210803.b\X080318.D

Date : 03-AUG-2021 16:43

Client ID: HS21071204-03

Instrument: voa6.i

Sample Info: HS21071204-03;HS21071204-03;;;

Purge Volume: 5.0

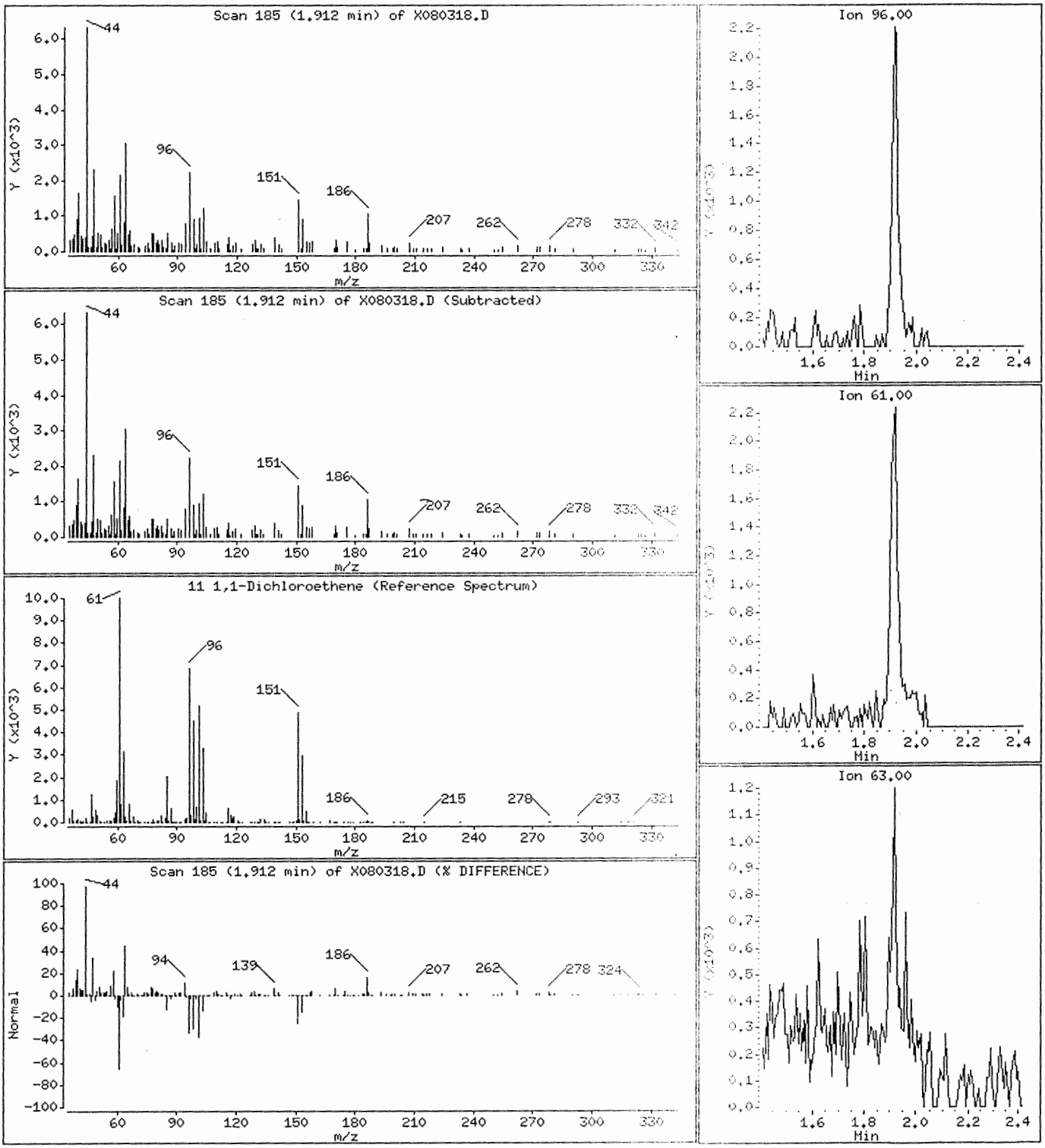
Operator: PC

Column phase: DB624

Column diameter: 0.18

11 1,1-Dichloroethene

Concentration: 50.11 ug/l



Data File: \\NAHSTWS005\target\chem\voa6.i\X210803.b\X080318.D Page 5

Date : 03-AUG-2021 16:43

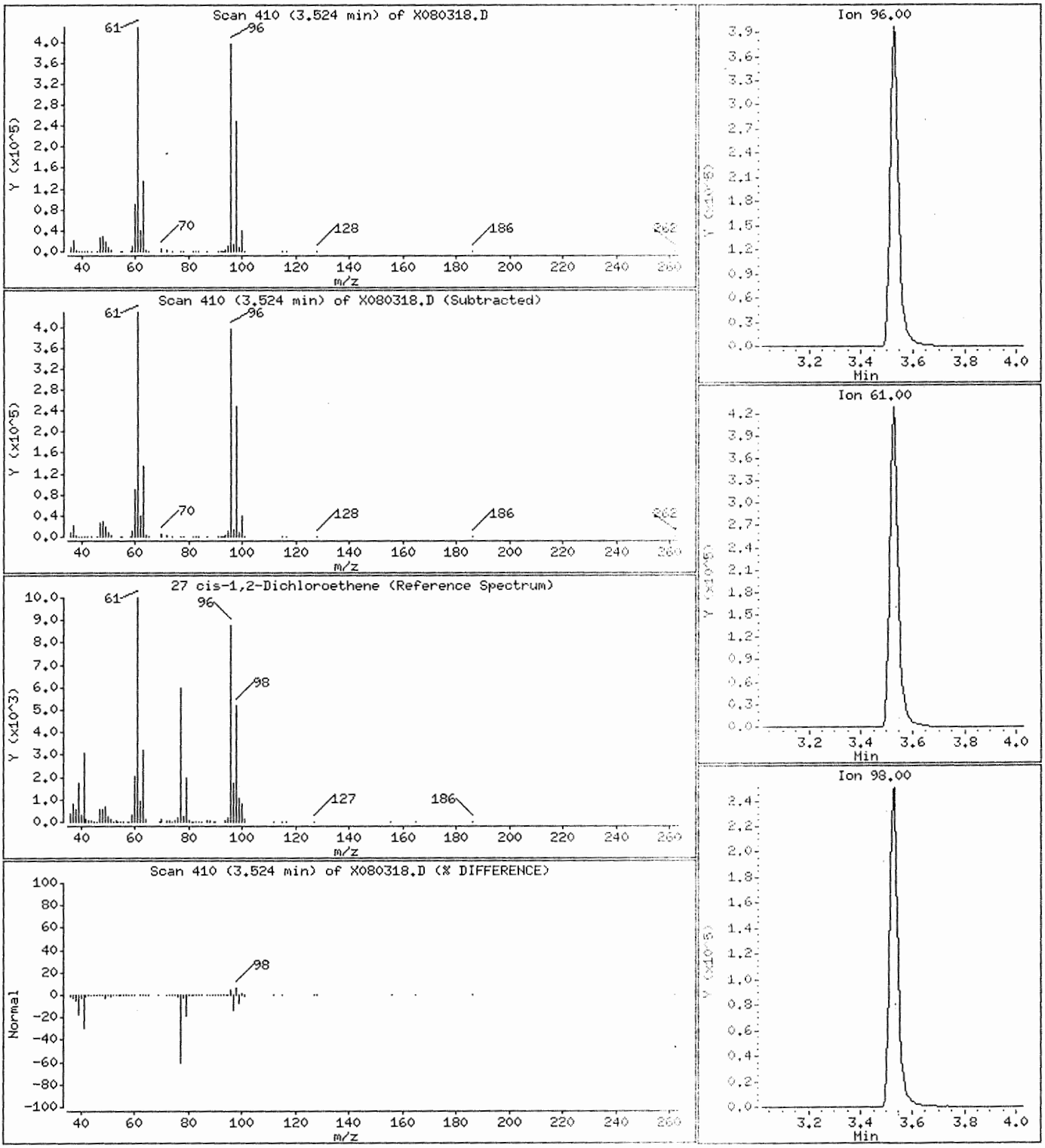
Client ID: HS21071204-03 Instrument: voa6.i

Sample Info: HS21071204-03;HS21071204-03;;;

Purge Volume: 5.0 Operator: PC

Column phase: DB624 Column diameter: 0.18

27 cis-1,2-Dichloroethene Concentration: 10059.55 ug/l



Data File: \\NAHSTWS005\target\chem\voa6.i\X210803.b\X080318.D Page 6

Date : 03-AUG-2021 16:43

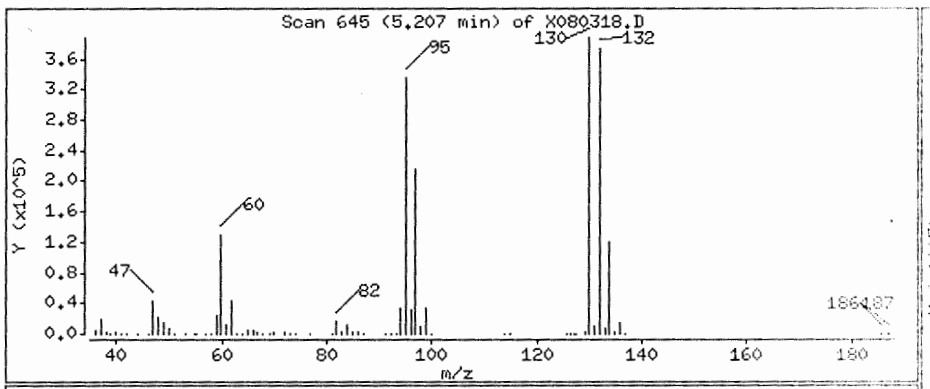
Client ID: HS21071204-03 Instrument: voa6.i

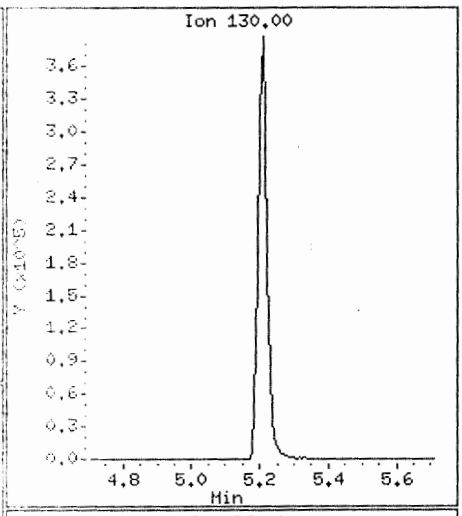
Sample Info: HS21071204-03;HS21071204-03;;;

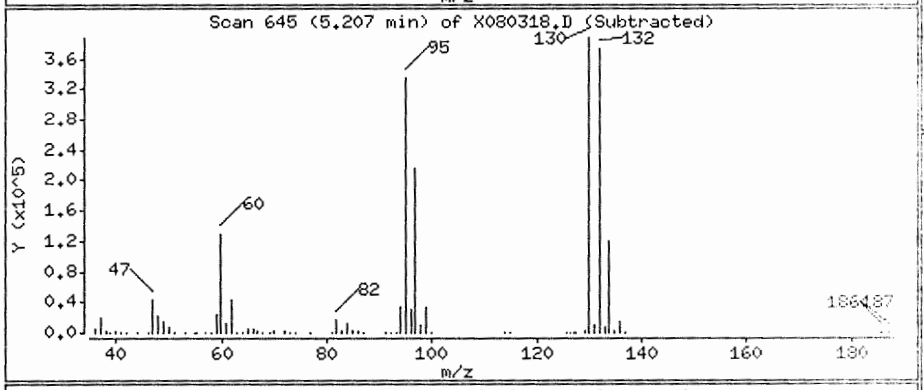
Purge Volume: 5.0 Operator: PC

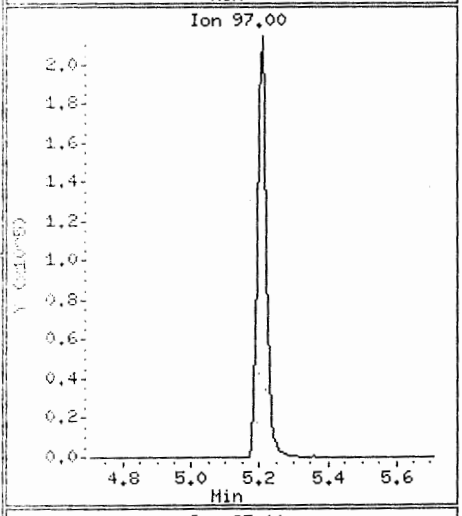
Column phase: DB624 Column diameter: 0.18

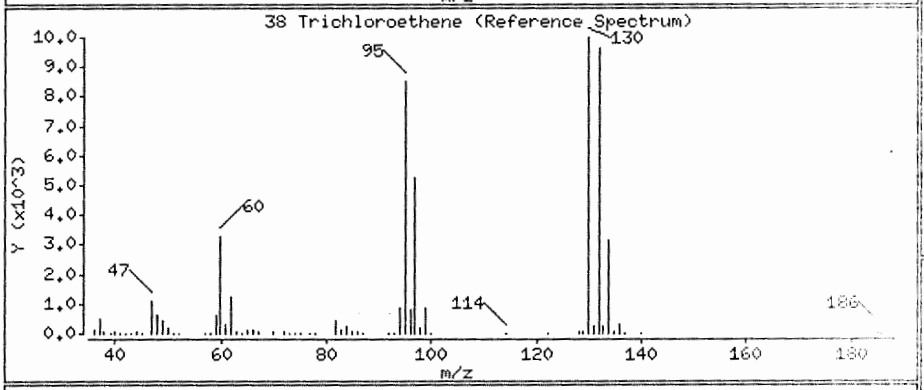
38 Trichloroethene Concentration: 8067.49 ug/l

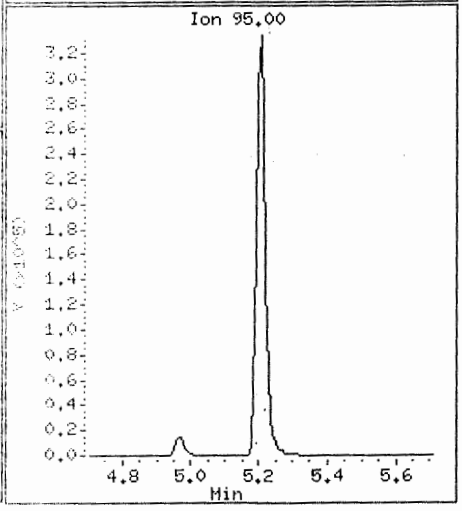


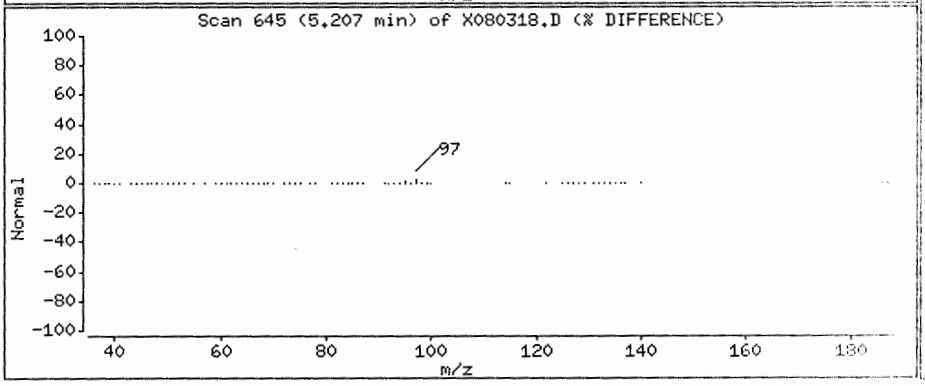












Data File: \\NAHSTWS005\target\chem\voa6.i\X210803.b\X080319.D Page 1
Report Date: 10-Sep-2021 13:43

ALS Laboratory Group

Data file : \\NAHSTWS005\target\chem\voa6.i\X210803.b\X080319.D
Lab Smp Id: HS21071204-04 Client Smp ID: HS21071204-04
Inj Date : 03-AUG-2021 17:04
Operator : PC Inst ID: voa6.i
Smp Info : HS21071204-04;HS21071204-04;;;
Misc Info : HS18090001;WATER;0;5;
Comment :
Method : \\NAHSTWS005\target\chem\voa6.i\X210803.b\8260W.m
Meth Date : 10-Sep-2021 13:41 Genoveva.R Quant Type: ISTD
Cal Date : 30-JUL-2021 13:56 Cal File: X073008.D
Als bottle: 18
Dil Factor: 5.00000
Integrator: HP RTE Compound Sublist: 0474-dod.sub
Target Version: 4.14
Processing Host: NAHSTW7056

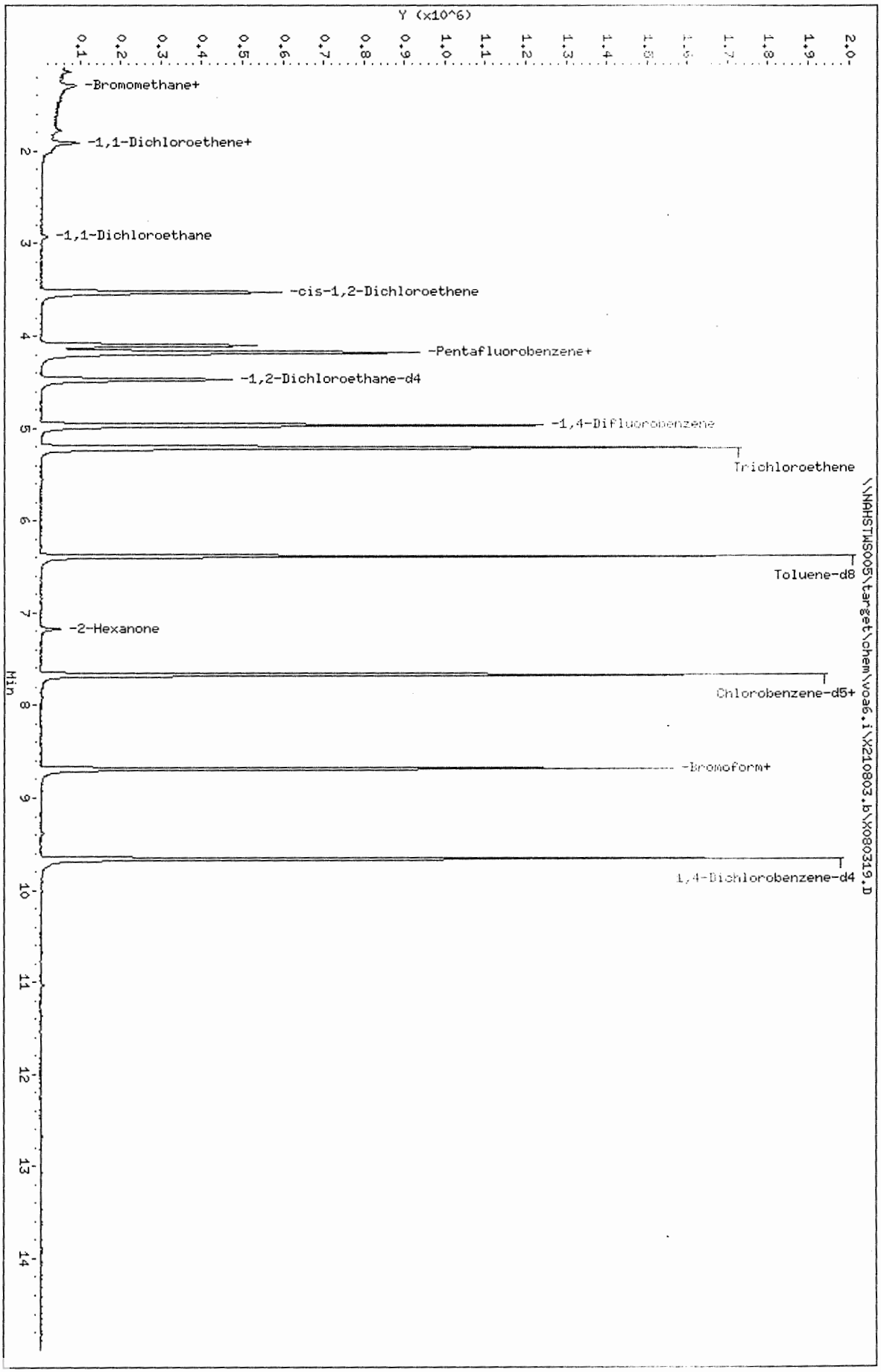
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

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	RES	CONCENTRATIONS ON COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	[illegible]	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	[illegible]	46.4645	46.46
$ 35 1,2-Dichloroethane-d4	65	4.469	4.469	(1.069)	[illegible]	45.0255	45.02
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	[illegible]	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	[illegible]	50.0000	
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	[illegible]	52.4548	52.45
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	[illegible]	49.6588	49.65
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	[illegible]	50.0000	
5 Vinyl Chloride	62	1.138	1.138	(0.272)	[illegible]	1.71559	8.57(a)
11 1,1-Dichloroethene	96	1.911	1.911	(0.457)	[illegible]	1.84655	9.23(a)
27 cis-1,2-Dichloroethene	96	3.530	3.523	(0.844)	[illegible]	39.1333	195.66
38 Trichloroethene	130	5.206	5.206	(1.049)	[illegible]	73.9666	369.83

QC Flag Legend

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



Data File: \\NAHSTWS005\target\chem\voa6.i\X210803.b\X080319.D
Date : 03-AUG-2021 17:04
Client ID: HS21071204-04
Sample Info: HS21071204-04;HS21071204-04;;;
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\NAHSTWS005\target\chem\voa6.i\X210803.b\X080319.D Page 3

Date : 03-AUG-2021 17:04

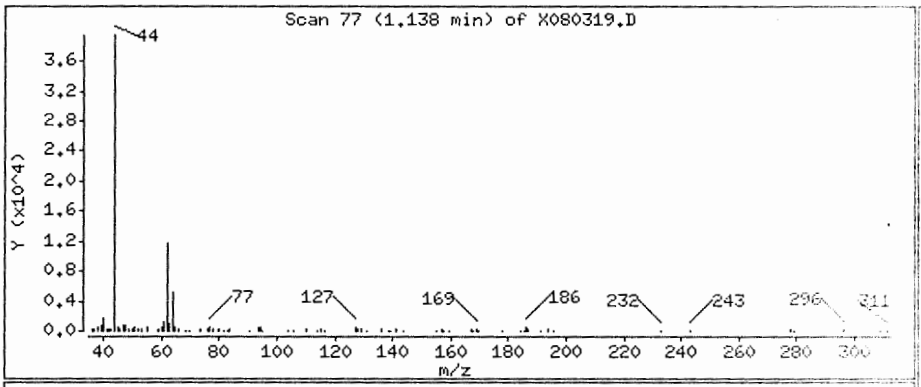
Client ID: HS21071204-04 Instrument: voa6.i

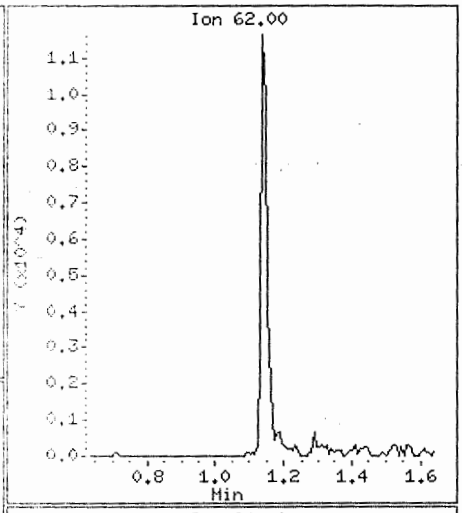
Sample Info: HS21071204-04;HS21071204-04;;;

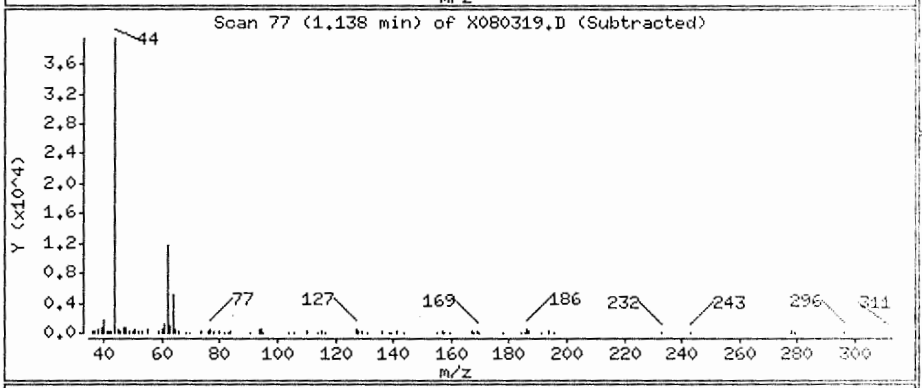
Purge Volume: 5.0 Operator: PC

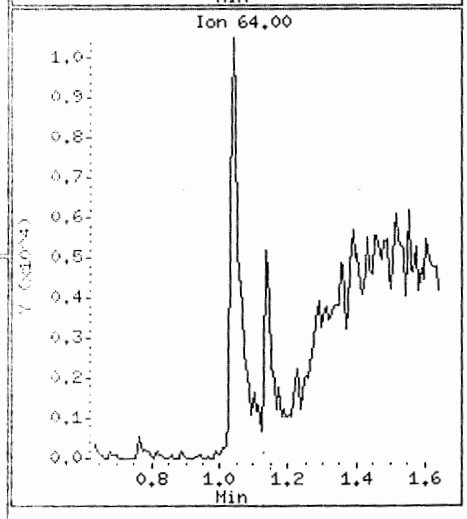
Column phase: DB624 Column diameter: 0.18

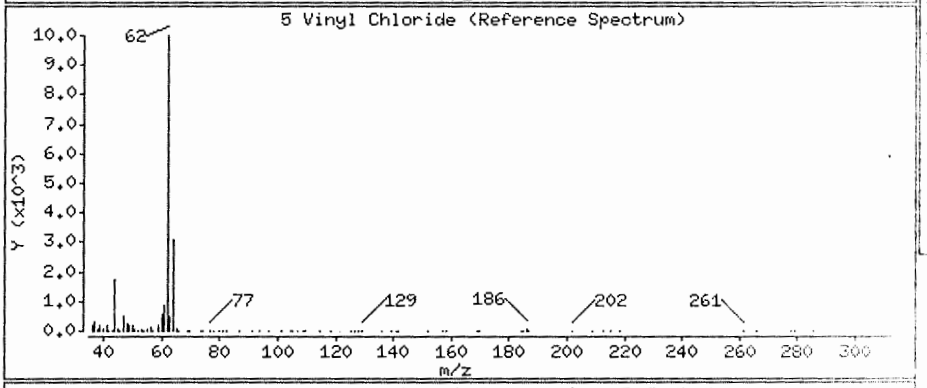
5 Vinyl Chloride Concentration: 8.57 ug/l

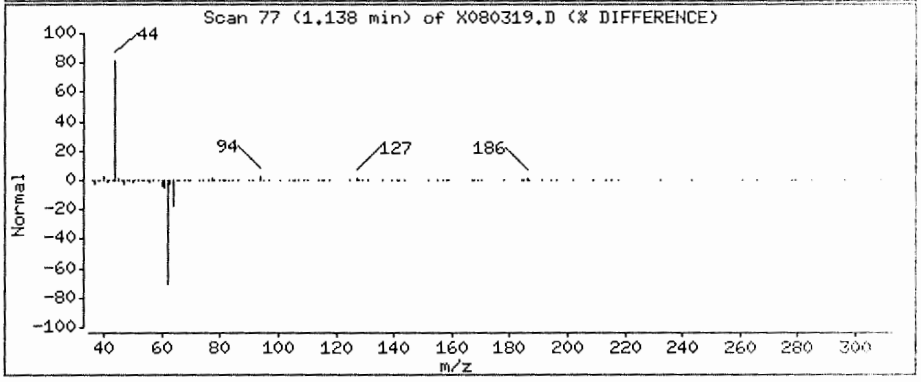












Data File: \\NAHSTWS005\target\chem\voa6.i\X210803.b\X080319.D Page 4

Date : 03-AUG-2021 17:04

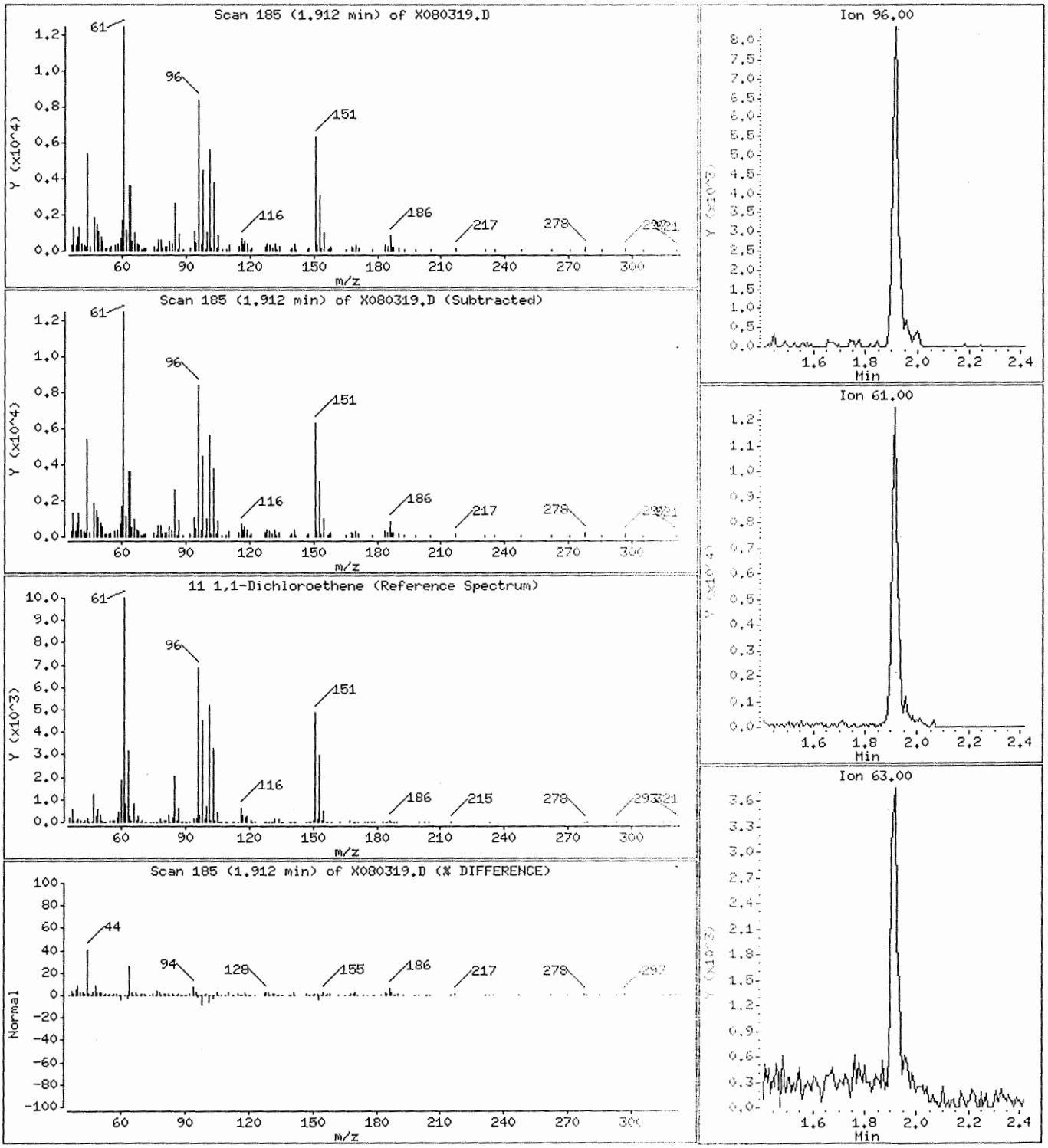
Client ID: HS21071204-04 Instrument: voa6.i

Sample Info: HS21071204-04;HS21071204-04;;;

Purge Volume: 5.0 Operator: PC

Column phase: DB624 Column diameter: 0.18

11 1,1-Dichloroethene Concentration: 9.33 ug/l



Data File: \\NAHSTWS005\target\chem\voa6.i\X210803.b\X080319.D

Date : 03-AUG-2021 17:04

Client ID: HS21071204-04

Instrument: voa6.i

Sample Info: HS21071204-04;HS21071204-04;;;

Purge Volume: 5.0

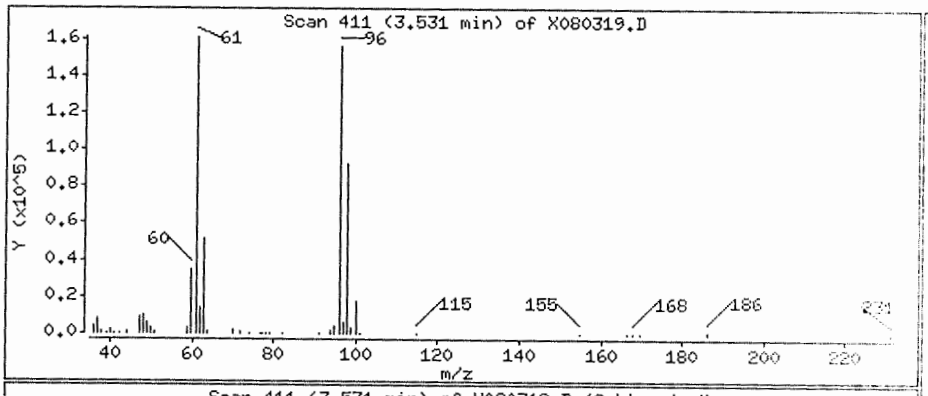
Operator: PC

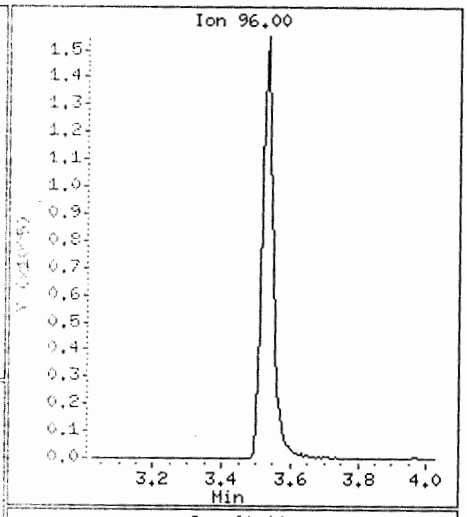
Column phase: DB624

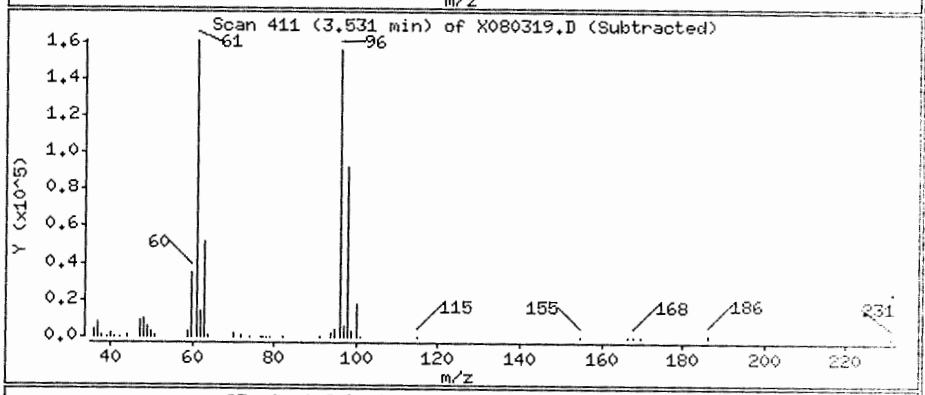
Column diameter: 0.18

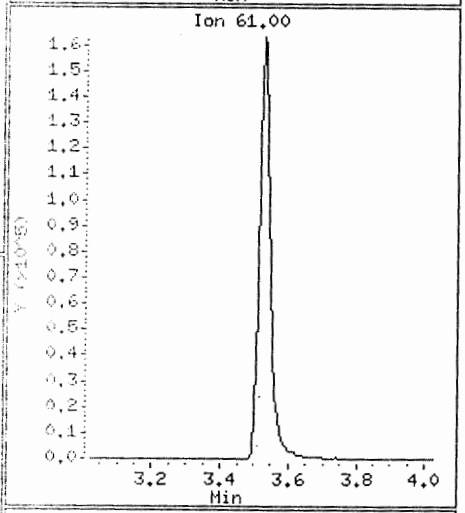
27 cis-1,2-Dichloroethene

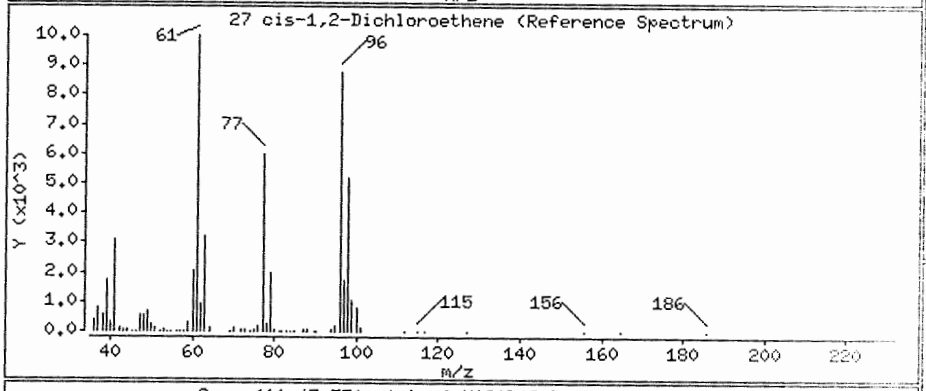
Concentration: 195.66 ug/l

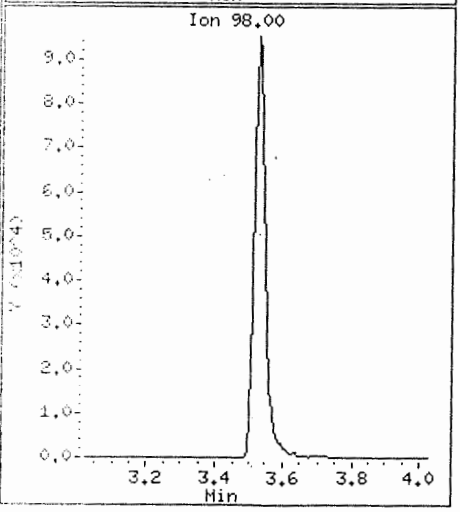


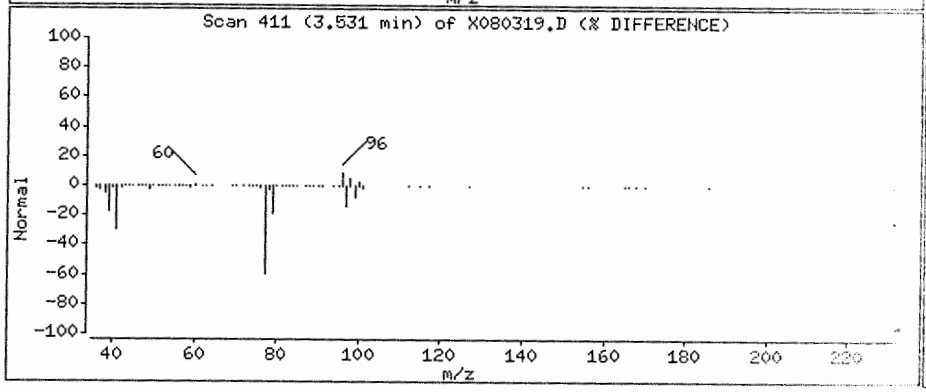












Data File: \\NAHSTWS005\target\chem\voa6.i\X210803.b\X080319.D

Date : 03-AUG-2021 17:04

Client ID: HS21071204-04

Instrument: voa6.i

Sample Info: HS21071204-04;HS21071204-04;;;

Purge Volume: 5.0

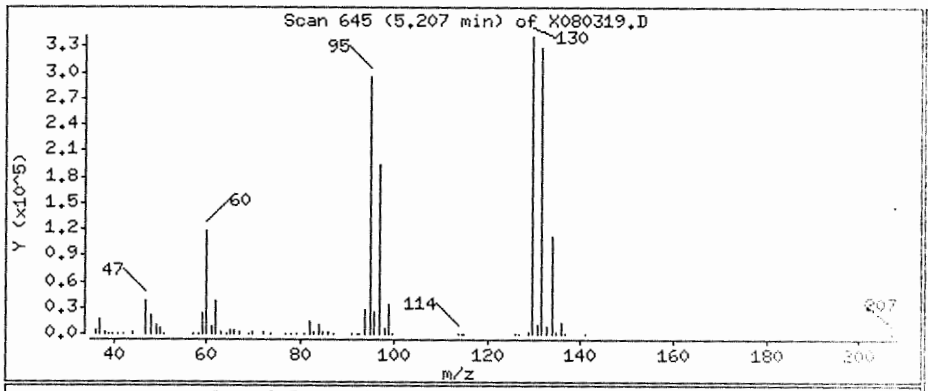
Operator: PC

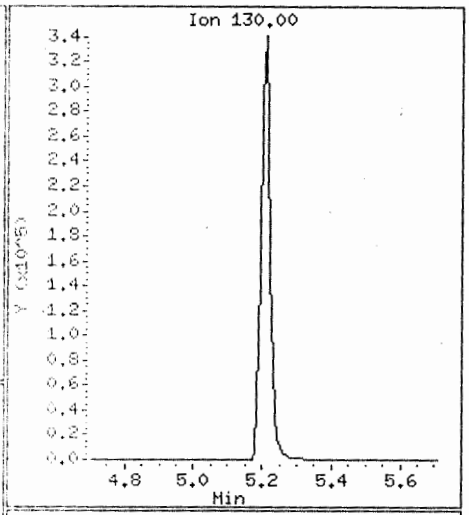
Column phase: DB624

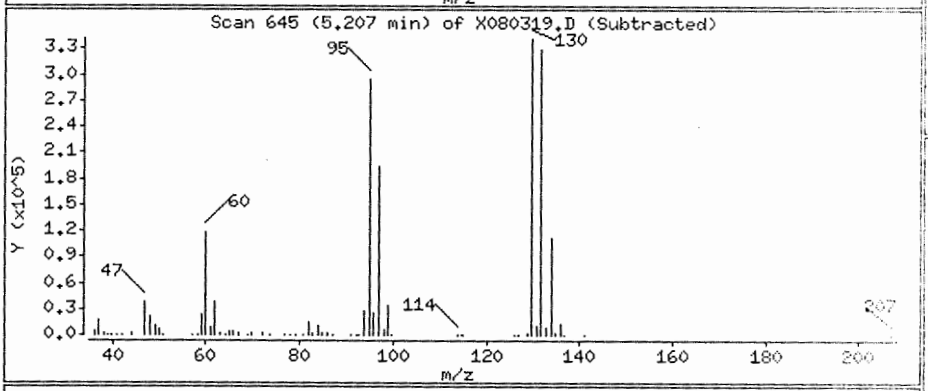
Column diameter: 0.18

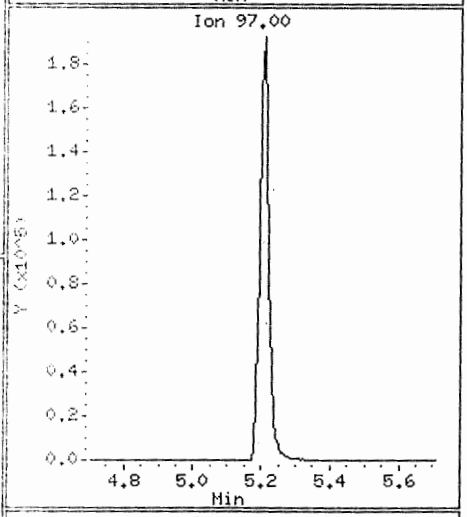
38 Trichloroethene

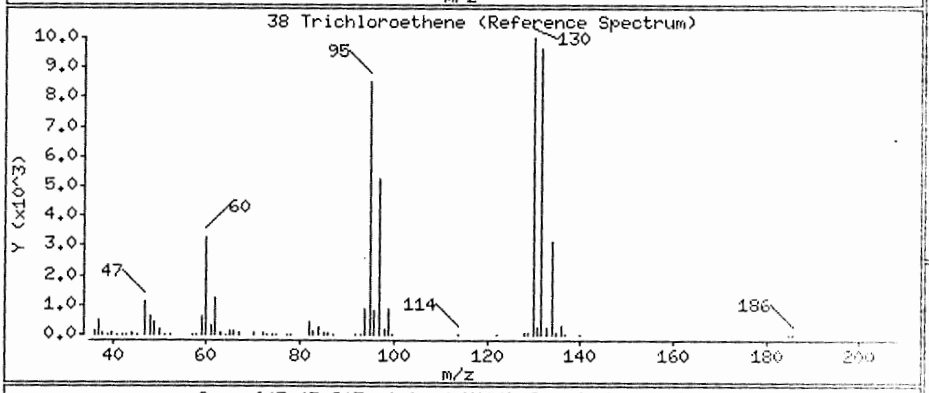
Concentration: 369.33 ug/l

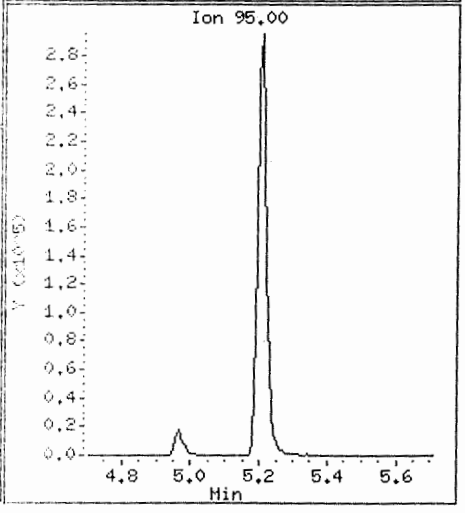


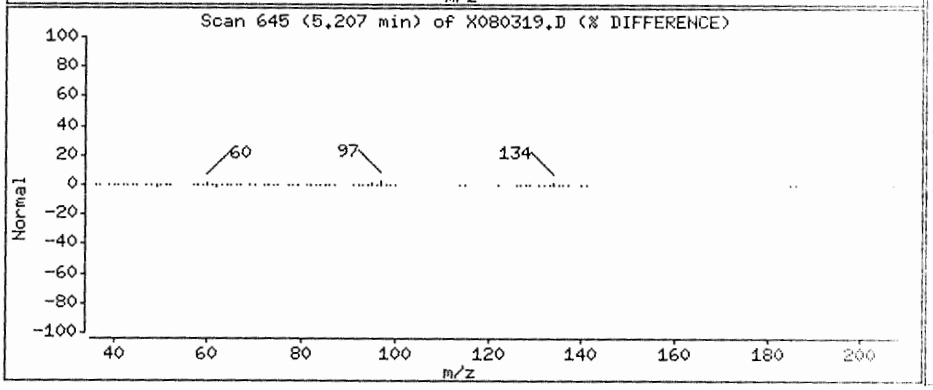












Data File: \\NAHSTWS005\target\chem\voa6.i\X210803.b\X080332.D Page 1
Report Date: 10-Sep-2021 13:45

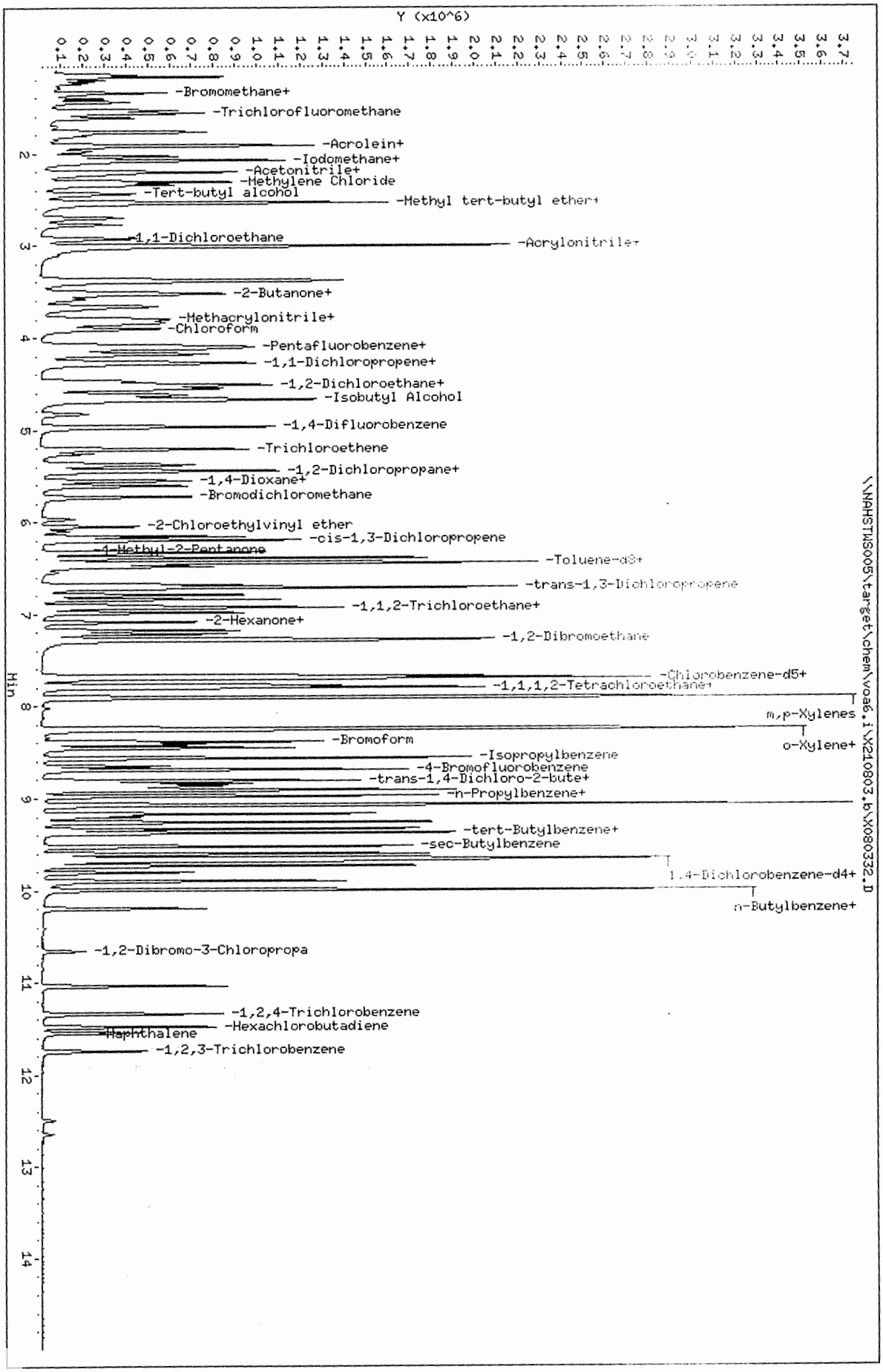
ALS Laboratory Group

Data file : \\NAHSTWS005\target\chem\voa6.i\X210803.b\X080332.D
Lab Smp Id: CCV-END Client Smp ID: CCV-END
Inj Date : 03-AUG-2021 21:38
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\X210803.b\8260W.m
Meth Date : 10-Sep-2021 13:45 voa6.i Quant Type: ISTD
Cal Date : 30-JUL-2021 13:56 Cal File: X073008.D
Als bottle: 31 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0474-dod.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	4.182	4.182	(1.000)	687585	50.0000	
$	30 Dibromofluoromethane	113	4.096	4.096	(0.979)	341499	50.0000	53.02
$	35 1,2-Dichloroethane-d4	65	4.469	4.469	(1.069)	304980	50.0000	49.71
*	36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	977010	50.0000	
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	931162	50.0000	
$	48 Toluene-d8	98	6.388	6.388	(0.833)	1040583	50.0000	48.06
$	69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	397295	50.0000	50.85
*	70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	594467	50.0000	
	5 Vinyl Chloride	62	1.138	1.138	(0.272)	259068	50.0000	42.92
	11 1,1-Dichloroethene	96	1.912	1.912	(0.457)	347952	50.0000	42.85
	17 Methylene Chloride	84	2.306	2.306	(0.551)	280636	50.0000	48.66
	27 cis-1,2-Dichloroethene	96	3.523	3.523	(0.842)	332946	50.0000	48.17
	33 1,2-Dichloroethane	62	4.555	4.555	(0.918)	358144	50.0000	45.69
	38 Trichloroethene	130	5.207	5.207	(1.049)	332277	50.0000	46.53
	53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	228441	50.0000	46.89
	20 trans-1,2-Dichloroethene	96	2.528	2.528	(0.604)	267387	50.0000	45.67



Data File: \\NAHSTWS005\target\chem\voa6.i\X210803.b\X080332.D
Date : 03-AUG-2021 21:38
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

HS21071204 RSK 175 Raw Data

ALS WO# HS21071204

FID04 -Logbook

Batch: 26730
Date: 01-24-2017
Method: RSK 175 ICAL
Comments: Target Sequence 170124

Analyst: Nosa Izekor
Reviewer:
Laboratory: Houston

#	Samp ID	Type	Analyzed	DF	Init Wt/Vol	Final Vol	File ID	Matrix	Status	p
1	ICAL1	CALIB_1	01-24-2017 09:06 am	1.00	0.00 mL	0.00 mL	001.D	Liquid	Y	N
2	ICAL2	CALIB_2	01-24-2017 09:30 am	1.00	0.00 mL	0.00 mL	002.D	Liquid	Y	N
3	ICAL3	CALIB_3	01-24-2017 09:59 am	1.00	0.00 mL	0.00 mL	003.D	Liquid	Y	N
4	ICAL4	CALIB_4	01-24-2017 10:15 am	1.00	0.00 mL	0.00 mL	004.D	Liquid	Y	N
5	ICAL5	CALIB_5	01-24-2017 10:39 am	1.00	0.00 mL	0.00 mL	005.D	Liquid	Y	N
6	ICAL6	CALIB_6	01-24-2017 10:57 am	1.00	0.00 mL	0.00 mL	006.D	Liquid	Y	N
7	ICAL7	CALIB_7	01-24-2017 11:13 am	1.00	0.00 mL	0.00 mL	007.D	Liquid	Y	N
8	ICV	METHSPIKI	01-24-2017 12:05 pm	1.00	0.00 mL	0.00 mL	008.D	Liquid	Y	N
9	LCS-170124	LCS	01-24-2017 12:24 pm	1.00	0.00 mL	0.00 mL	009.D	Liquid	Y	N
10	LCSD-170124	LCSD	01-24-2017 12:40 pm	1.00	0.00 mL	0.00 mL	010.D	Liquid	Y	N
11	MBLK-170124	MBLK	01-24-2017 12:57 pm	1.00	0.00 mL	0.00 mL	011.D	Liquid	Y	N
12	HS17010778-01	SAMP	01-24-2017 01:14 pm	1.00	0.00 mL	0.00 mL	012.D	Liquid	Y	N
13	HS17010779-01	SAMP	01-24-2017 01:31 pm	1.00	0.00 mL	0.00 mL	013.D	Liquid	Y	N
14	HS17010779-01DUP	SAMP	01-24-2017 01:47 pm	1.00	0.00 mL	0.00 mL	014.D	Liquid	Y	N
15	CCV	CCV	01-24-2017 02:01 pm	1.00	0.00 mL	0.00 mL	015.D	Liquid	Y	N

Chemical	Value
ICAL STD ID	30010700217
ICV STD ID	30010700610

FORM 3
WATER GASES METHOD SPIKE RECOVERY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS21071204

Matrix Spike - ENG SC Sample No.: ICV

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE AMOUNT ()	% REC #	QC. LIMITS REC.
Ethene	16.800	19.090	114	75-125
Methane	9.647	9.597	99	75-125
Ethane	18.043	19.657	109	75-125
Propane	26.463	27.238	103	75-125
N-Butane	34.955	36.010	103	75-125

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

COMMENTS: _____

_____

FORM III GASES

FORM 6
GASES INITIAL CALIBRATION DATA

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS21071204

Instrument ID: FID-4 Calibration Date(s): 01/24/17 01/24/17

Column: RTX-PLOT ID: 0.53 (mm) Calibration Time(s): 0906 1113

LAB FILE ID: RF10: 001 RF25: 002 RF50: 003
RF100: 004 RF250: 005 RF500: 006

COMPOUND	RF10	RF25	RF50	RF100	RF250	RF500
Ethene	535.608	567.359	564.985	516.024	665.282	425.678
Methane	968.912	978.238	1019.699	880.798	960.713	930.704
Ethane	602.493	670.177	658.908	597.201	808.513	817.630
Propane	500	1279	2602	4785	18294	38286
N-Butane	438	936	2034	3864	18446	42817

FORM VI GASES

FORM 6
GASES INITIAL CALIBRATION DATA

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS2107120

Instrument ID: FID-4 Calibration Date(s): 01/24/17 01/24/17

Column: RTX-PLOT ID: 0.53 (mm) Calibration Time(s): 0906 1113

RF1000: 007

COMPOUND	RF1000	CURVE	COEFFICENTS A0	A1	A2	%RSD OR R^2	MA
Ethene	828.858	AVRG		586.256273		21.932	
Methane	1081.580	AVRG		974.377787		6.550	
Ethane	999.335	AVRG		736.322546		19.885	
Propane	96509	2ORDR	0.97987006	1.529e-003	-4.58e-009	0.9991365	0
N-Butane	114164	2ORDR	2.46870151	1.834e-003	-5.54e-009	0.9980766	0

FORM VI GASES

Data File: \\nahstws005\Target\chem\FID-4.i\170124A.b\001.D
Report Date: 11-Oct-2021 10:44

ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\nahstws005\Target\chem\FID-4.i\170124A.b\001.D
Lab Smp Id: ICAL1 Client Smp ID: ICAL1
Inj Date : 24-JAN-2017 09:06
Operator : JA Inst ID: FID-4.i
Smp Info : ICAL1;ICAL1;;;
Misc Info :
Comment :
Method : \\nahstws005\Target\chem\FID-4.i\170124A.b\RSKNI2.m
Meth Date : 08-Oct-2021 14:58 linh.pham Quant Type: ESTD
Cal Date : 24-JAN-2017 09:06 Cal File: 001.D
Als bottle: 1 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: stdNIP2.sub
Target Version: 4.14

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
1 Methane	1.043	1.030	0.013	374	0.38600	0.383(a)
2 Ethene	1.553	1.556	-0.003	361	0.67400	0.615(a)
3 Ethane	1.716	1.723	-0.007	435	0.72200	0.590(a)
4 Propane	4.073	4.113	-0.040	500	1.05900	1.743
5 N-Butane	7.640	7.690	-0.050	438	1.39800	3.271

QC Flag Legend

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

Data File: \\nahstws005\Target\chem\FID-4.i\170124A.b\001.D

Date : 24-JAN-2017 09:06

Client ID: ICAL1

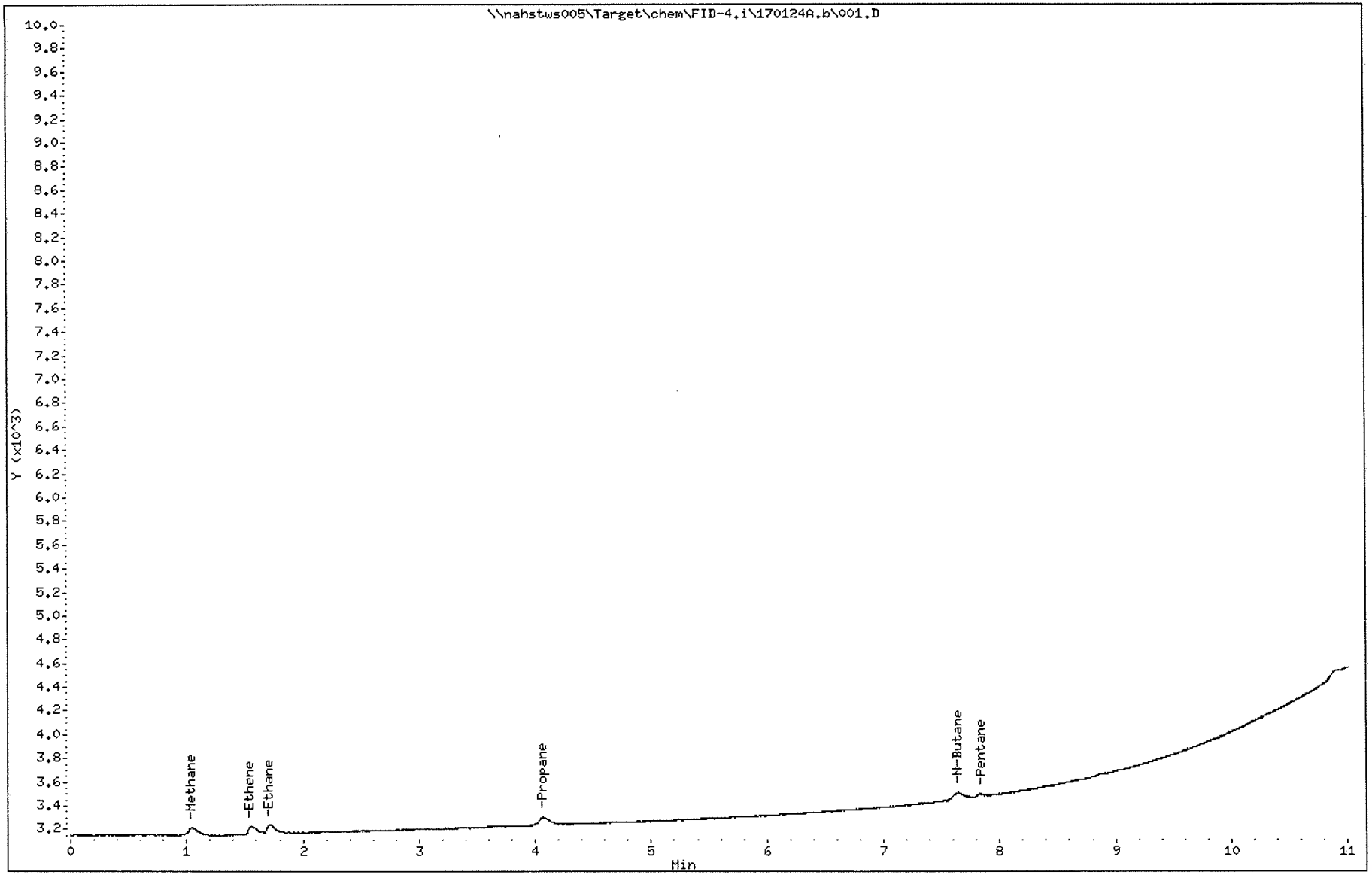
Instrument: FID-4.i

Sample Info: ICAL1;ICAL1;;;

Operator: JA

Column phase: Rtx-PLOT

Column diameter: 0.53



Data File: \\nahstws005\Target\chem\FID-4.i\170124A.b\002.D Page 1
Report Date: 11-Oct-2021 10:44

ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\nahstws005\Target\chem\FID-4.i\170124A.b\002.D
Lab Smp Id: ICAL2 Client Smp ID: ICAL2
Inj Date : 24-JAN-2017 09:30
Operator : MA Inst ID: FID-4.i
Smp Info : ICAL2;ICAL2;;;
Misc Info : ;1;0;1
Comment :
Method : \\nahstws005\Target\chem\FID-4.i\170124A.b\RSKNI2.m
Meth Date : 08-Oct-2021 14:58 linh.pham Quant Type: ESTD
Cal Date : 24-JAN-2017 09:59 Cal File: 003.D
Als bottle: 2 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: stdNIP2.sub
Target Version: 4.14

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

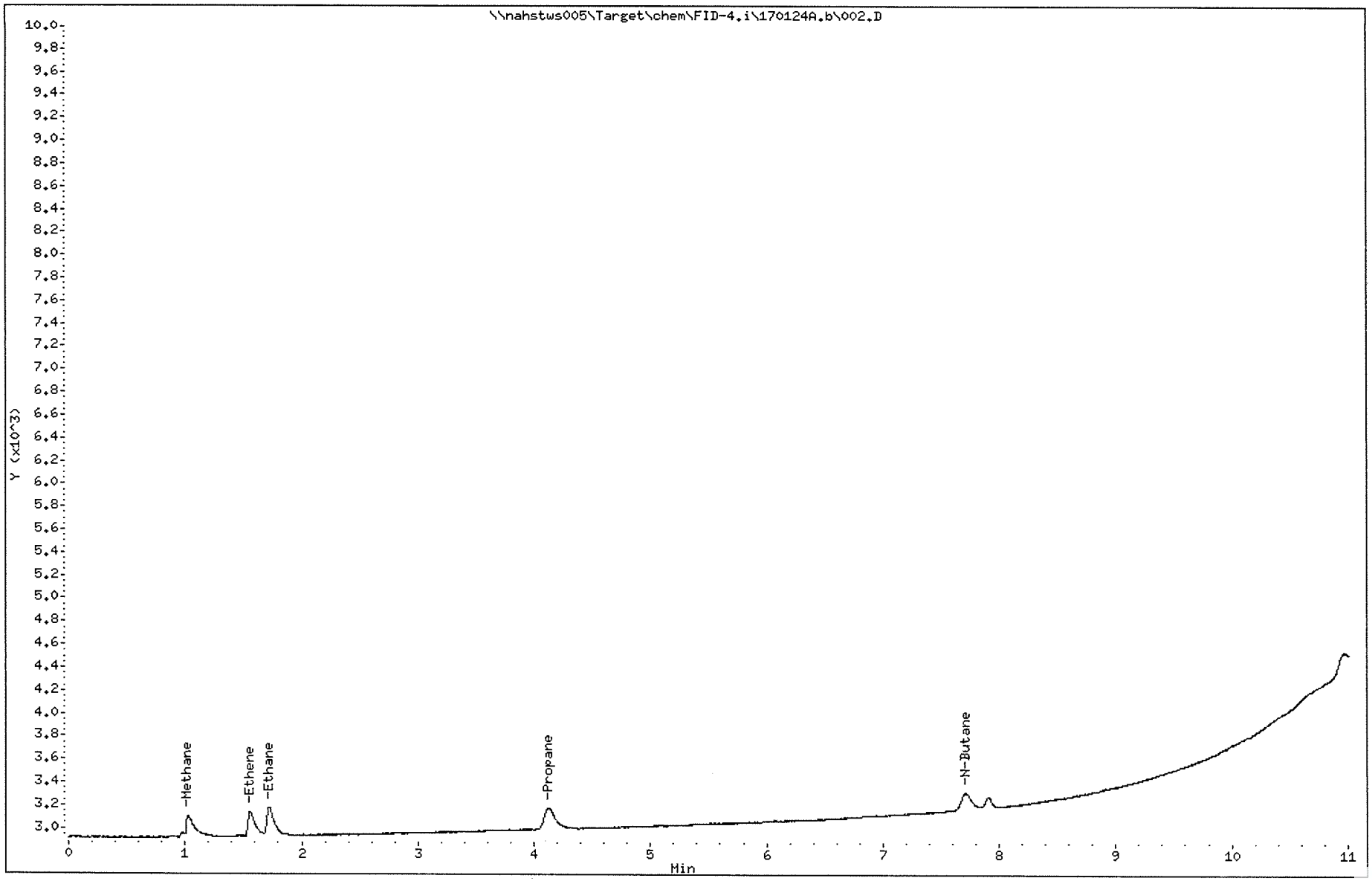
Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
1 Methane	1.023	1.030	-0.007	944	0.96500	0.968
2 Ethene	1.560	1.556	0.004	956	1.68500	1.630
3 Ethane	1.723	1.723	0.000	1209	1.80400	1.641
4 Propane	4.123	4.113	0.010	1279	2.64600	2.927
5 N-Butane	7.716	7.690	0.026	936	3.49600	4.180

Data File: \\nahstws005\Target\chem\FID-4.i\170124A.b\002.D
Date : 24-JAN-2017 09:30
Client ID: ICAL2
Sample Info: ICAL2;ICAL2;;;

Column phase: Rtx-PLOT

Instrument: FID-4.i

Operator: MA
Column diameter: 0.53



Data File: \\nahstws005\Target\chem\FID-4.i\170124A.b\003.D Page 1
Report Date: 11-Oct-2021 10:44

ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\nahstws005\Target\chem\FID-4.i\170124A.b\003.D
Lab Smp Id: ICAL3 Client Smp ID: ICAL3
Inj Date : 24-JAN-2017 09:59
Operator : MA Inst ID: FID-4.i
Smp Info : ICAL3;ICAL3;;;
Misc Info : ;1;0;1
Comment :
Method : \\nahstws005\Target\chem\FID-4.i\170124A.b\RSKNI2.m
Meth Date : 08-Oct-2021 14:58 linh.pham Quant Type: ESTD
Cal Date : 24-JAN-2017 11:13 Cal File: 007.D
Als bottle: 3 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: stdNIP2.sub
Target Version: 4.14

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

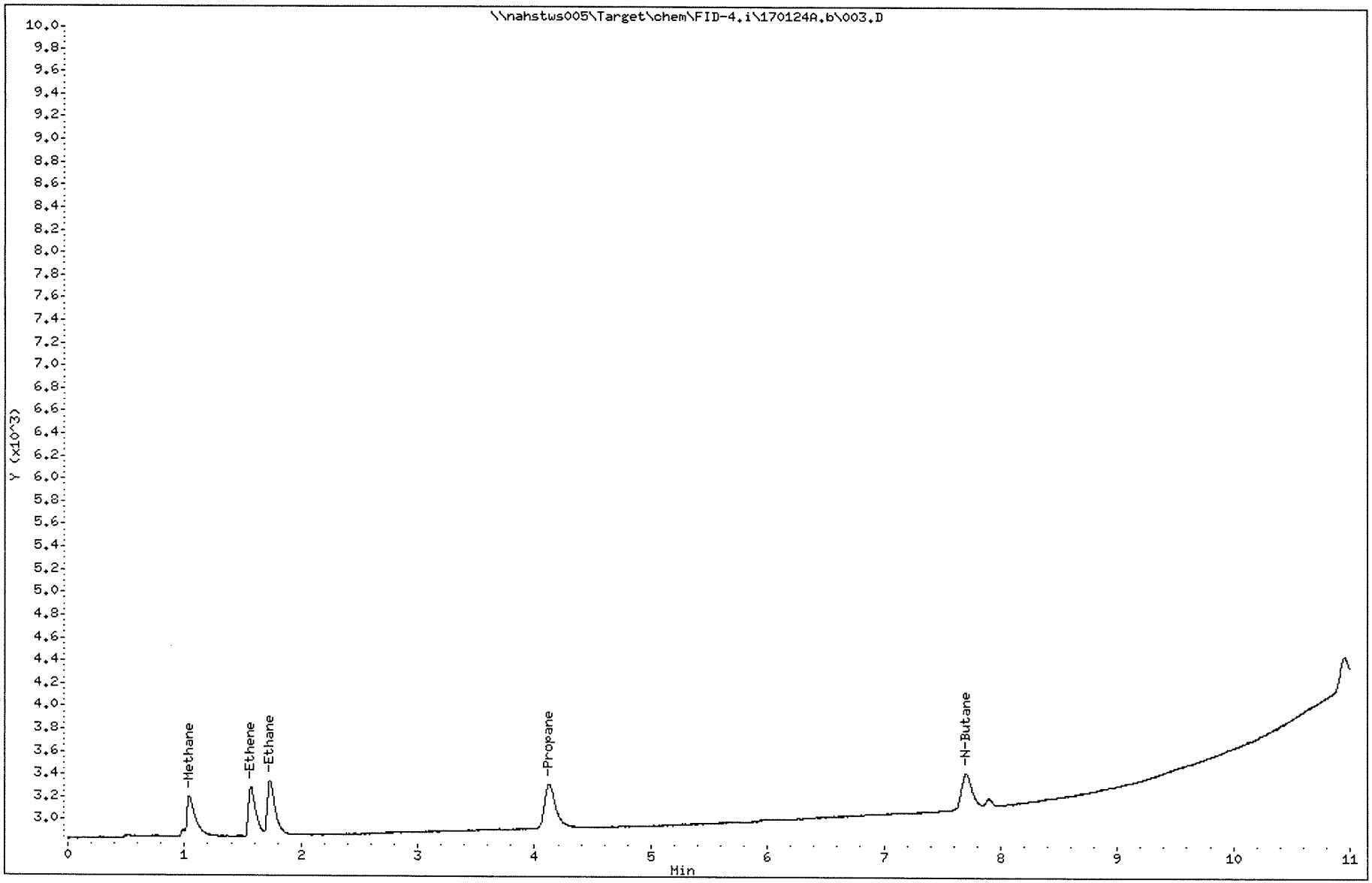
Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
1 Methane	1.043	1.030	0.013	1967	1.92900	2.018
2 Ethene	1.570	1.556	0.014	1904	3.37000	3.247
3 Ethane	1.736	1.723	0.013	2378	3.60900	3.229
4 Propane	4.123	4.113	0.010	2602	5.29300	4.926
5 N-Butane	7.703	7.690	0.013	2034	6.99100	6.176

Data File: \\nahstws005\Target\chem\FID-4.i\170124A.b\003.D
Date : 24-JAN-2017 09:59
Client ID: ICAL3
Sample Info: ICAL3;ICAL3;;;

Column phase: Rtx-PLOT

Instrument: FID-4.i

Operator: MA
Column diameter: 0.53



Data File: \\nahstws005\Target\chem\FID-4.i\170124A.b\004.D Page 1
Report Date: 11-Oct-2021 10:44

ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\nahstws005\Target\chem\FID-4.i\170124A.b\004.D
Lab Smp Id: ICAL4 Client Smp ID: ICAL4
Inj Date : 24-JAN-2017 10:15
Operator : MA Inst ID: FID-4.i
Smp Info : ICAL4;ICAL4;;;
Misc Info : ;1;0;1
Comment :
Method : \\nahstws005\Target\chem\FID-4.i\170124A.b\RSKNI2.m
Meth Date : 08-Oct-2021 14:58 linh.pham Quant Type: ESTD
Cal Date : 24-JAN-2017 09:30 Cal File: 002.D
Als bottle: 4 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: stdNIP2.sub
Target Version: 4.14

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

					AMOUNTS	
					CAL-AMT	ON-COL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/L)	(ug/L)
1 Methane	1.033	1.030	0.003	3399	3.85900	3.488
2 Ethene	1.563	1.556	0.007	3478	6.74000	5.932
3 Ethane	1.726	1.723	0.003	4310	7.21700	5.853
4 Propane	4.120	4.113	0.007	4785	10.5850	8.190
5 N-Butane	7.703	7.690	0.013	3864	13.9820	9.473(M)

QC Flag Legend

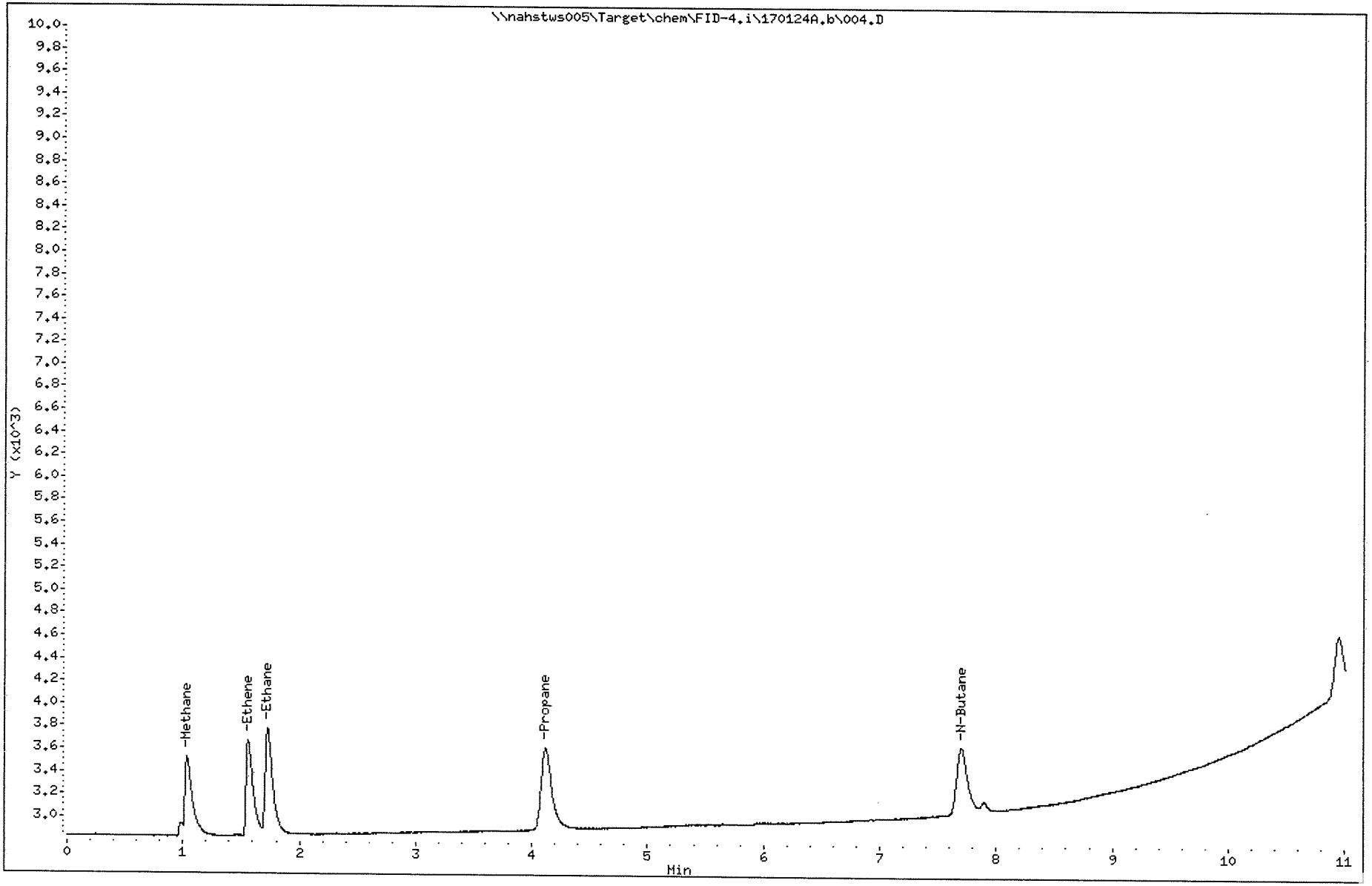
M - Compound response manually integrated.

Data File: \\nahstws005\Target\chem\FID-4.i\170124A.b\004.D
Date : 24-JAN-2017 10:15
Client ID: ICAL4
Sample Info: ICAL4;ICAL4;;;

Column phase: Rtx-PLOT

Instrument: FID-4.i

Operator: MA
Column diameter: 0.53



Data File: \\nahstws005\Target\chem\FID-4.i\170124A.b\005.D Page 1
Report Date: 11-Oct-2021 10:44

ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\nahstws005\Target\chem\FID-4.i\170124A.b\005.D
Lab Smp Id: ICAL5 Client Smp ID: ICAL5
Inj Date : 24-JAN-2017 10:39
Operator : MA Inst ID: FID-4.i
Smp Info : ICAL5;ICAL5;;;
Misc Info : ;1;0;1
Comment :
Method : \\nahstws005\Target\chem\FID-4.i\170124A.b\RSKNI2.m
Meth Date : 08-Oct-2021 14:58 linh.pham Quant Type: ESTD
Cal Date : 24-JAN-2017 10:39 Cal File: 005.D
Als bottle: 5 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: stdNIP2.sub
Target Version: 4.14

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

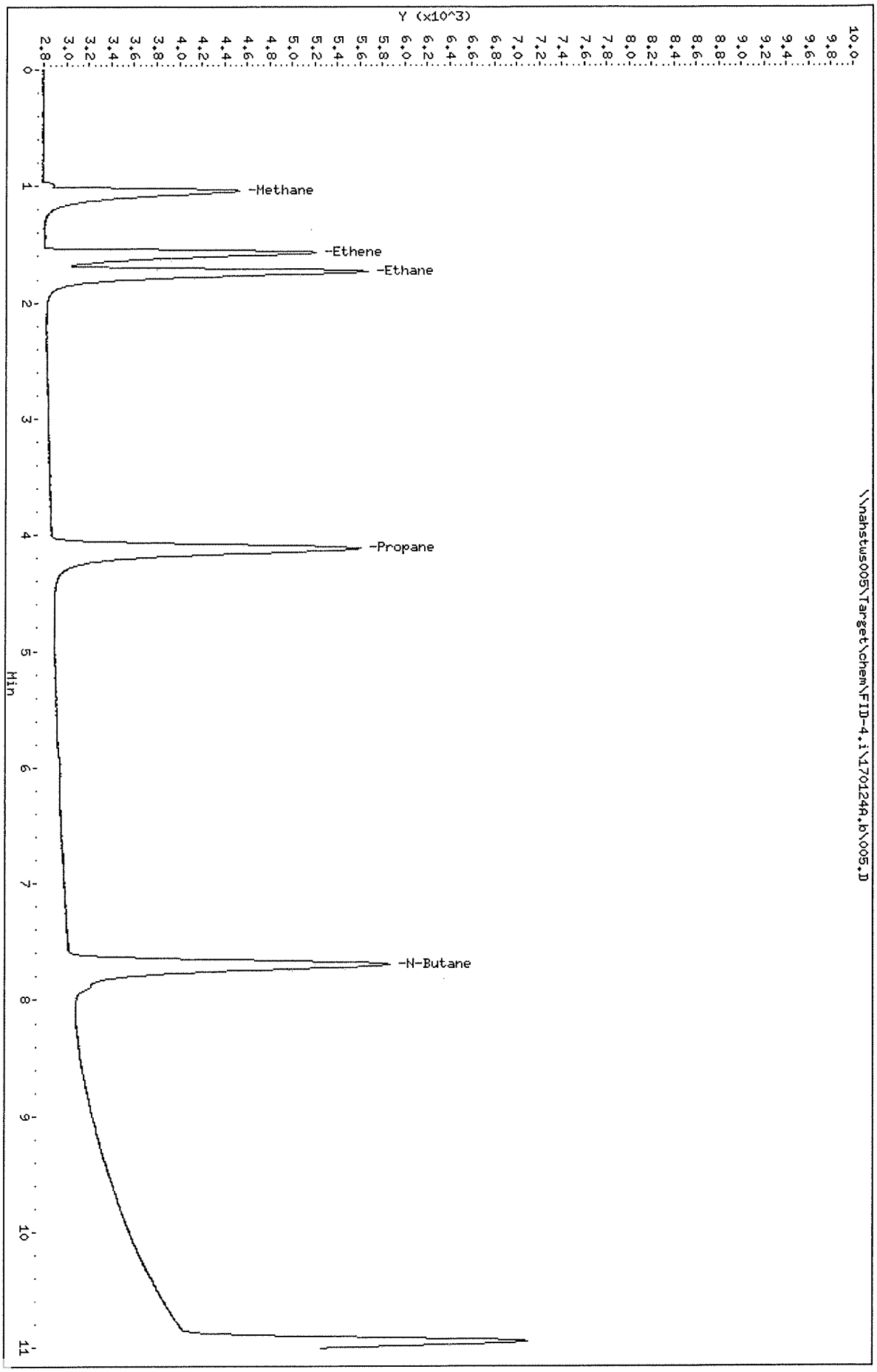
Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
1 Methane	1.043	1.030	0.013	9268	9.64700	9.511
2 Ethene	1.570	1.556	0.014	11210	16.8500	19.121
3 Ethane	1.733	1.723	0.010	14588	18.0430	19.811
4 Propane	4.120	4.113	0.007	18294	26.4630	27.415
5 N-Butane	7.700	7.690	0.010	18446	34.9550	34.419(M)

QC Flag Legend

M - Compound response manually integrated.

Data File: \\nahstws005\Target\chem\FID-4.i\170124A.b\005.D
Date : 24-JAN-2017 10:39
Client ID: ICAL5
Sample Info: ICAL5;ICAL5;;;
Column phase: Rtx-PLOT

Instrument: FID-4.i
Operator: MA
Column diameter: 0.53



Data File: \\nahstws005\Target\chem\FID-4.i\170124A.b\006.D Page 1
Report Date: 11-Oct-2021 10:44

ALS Laboratory Group

Dissolved Gases Analysis

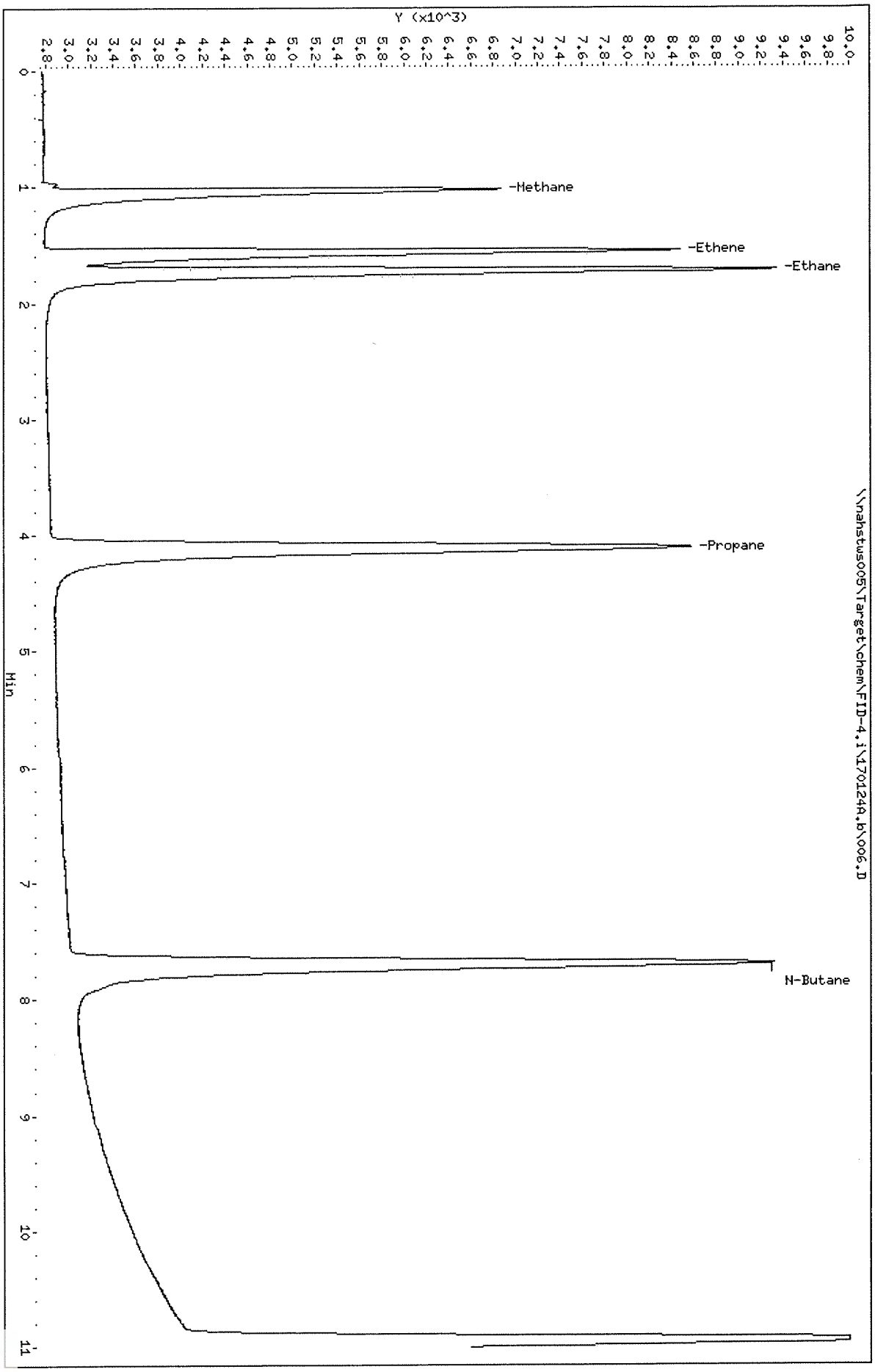
Data file : \\nahstws005\Target\chem\FID-4.i\170124A.b\006.D
Lab Smp Id: ICAL6 Client Smp ID: ICAL6
Inj Date : 24-JAN-2017 10:57
Operator : MA Inst ID: FID-4.i
Smp Info : ICAL6;ICAL6;;;
Misc Info : ;1;0;1
Comment :
Method : \\nahstws005\Target\chem\FID-4.i\170124A.b\RSKNI2.m
Meth Date : 08-Oct-2021 14:58 linh.pham Quant Type: ESTD
Cal Date : 24-JAN-2017 10:39 Cal File: 005.D
Als bottle: 6 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: stdNIP2.sub
Target Version: 4.14

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	ON-COL (ug/L)
1 Methane	1.023	1.030	-0.007	17957	19.2940	18.429
2 Ethene	1.550	1.556	-0.006	22910	53.8200	39.078
3 Ethane	1.716	1.723	-0.007	29505	36.0860	40.070
4 Propane	4.110	4.113	-0.003	38286	52.9260	52.796
5 N-Butane	7.696	7.690	0.006	42817	69.9110	70.855

Data File: \\nahstws005\Target\chem\FID-4.i\170124A.b\006.D
Date : 24-JAN-2017 10:57
Client ID: ICAL6
Sample Info: ICAL6;ICAL6;;;
Column phase: Rtx-PLOT

Instrument: FID-4.i
Operator: MA
Column diameter: 0.53



Data File: \\nahstws005\Target\chem\FID-4.i\170124A.b\007.D Page 1
Report Date: 11-Oct-2021 10:44

ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\nahstws005\Target\chem\FID-4.i\170124A.b\007.D
Lab Smp Id: ICAL7 Client Smp ID: ICAL7
Inj Date : 24-JAN-2017 11:13
Operator : MA Inst ID: FID-4.i
Smp Info : ICAL7;ICAL7;;;
Misc Info : ;1;0;1
Comment :
Method : \\nahstws005\Target\chem\FID-4.i\170124A.b\RSKNI2.m
Meth Date : 08-Oct-2021 14:58 linh.pham Quant Type: ESTD
Cal Date : 24-JAN-2017 10:57 Cal File: 006.D
Als bottle: 7 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: stdNIP2.sub
Target Version: 4.14

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

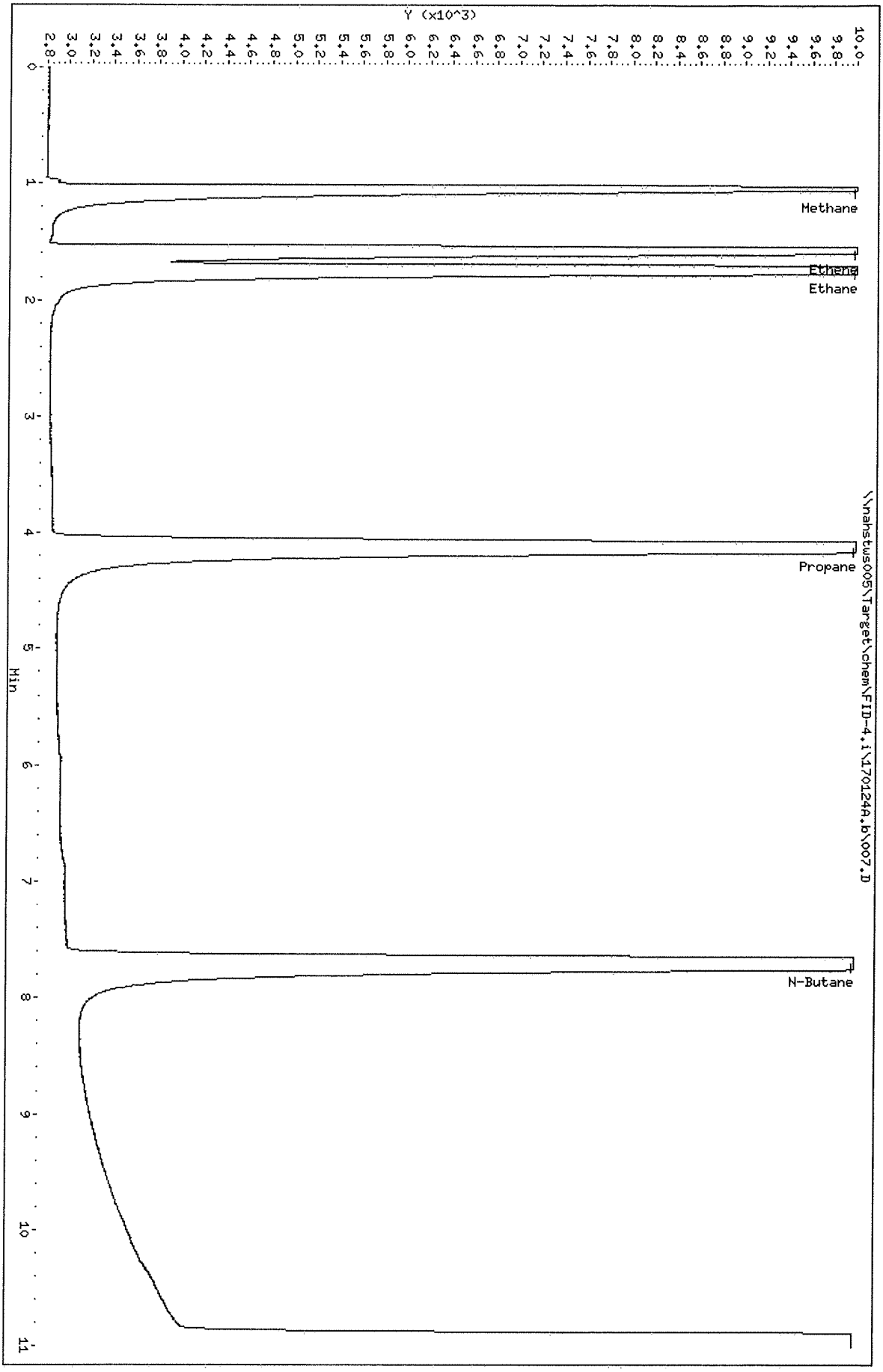
Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	ON-COL (ug/L)
1 Methane	1.030	1.030	0.000	41736	38.5880	42.833(A)
2 Ethene	1.556	1.556	0.000	55865	67.4000	95.291(A)
3 Ethane	1.723	1.723	0.000	72124	72.1720	97.951(A)
4 Propane	4.113	4.113	0.000	96509	105.852	105.844
5 N-Butane	7.690	7.690	0.000	114164	139.821	139.707

QC Flag Legend

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

Data File: \\nahstws005\Target\chem\FID-4.i\170124A.b\007.D
Date : 24-JAN-2017 11:13
Client ID: ICAL7
Sample Info: ICAL7;ICAL7;;;
Column phase: Rtx-PLOT

Instrument: FID-4.i
Operator: MA
Column diameter: 0.53



Data File: \\nahstws005\Target\chem\FID-4.i\170124A.b\008.D Page 1
Report Date: 11-Oct-2021 10:44

ALS Laboratory Group

Dissolved Gases Analysis

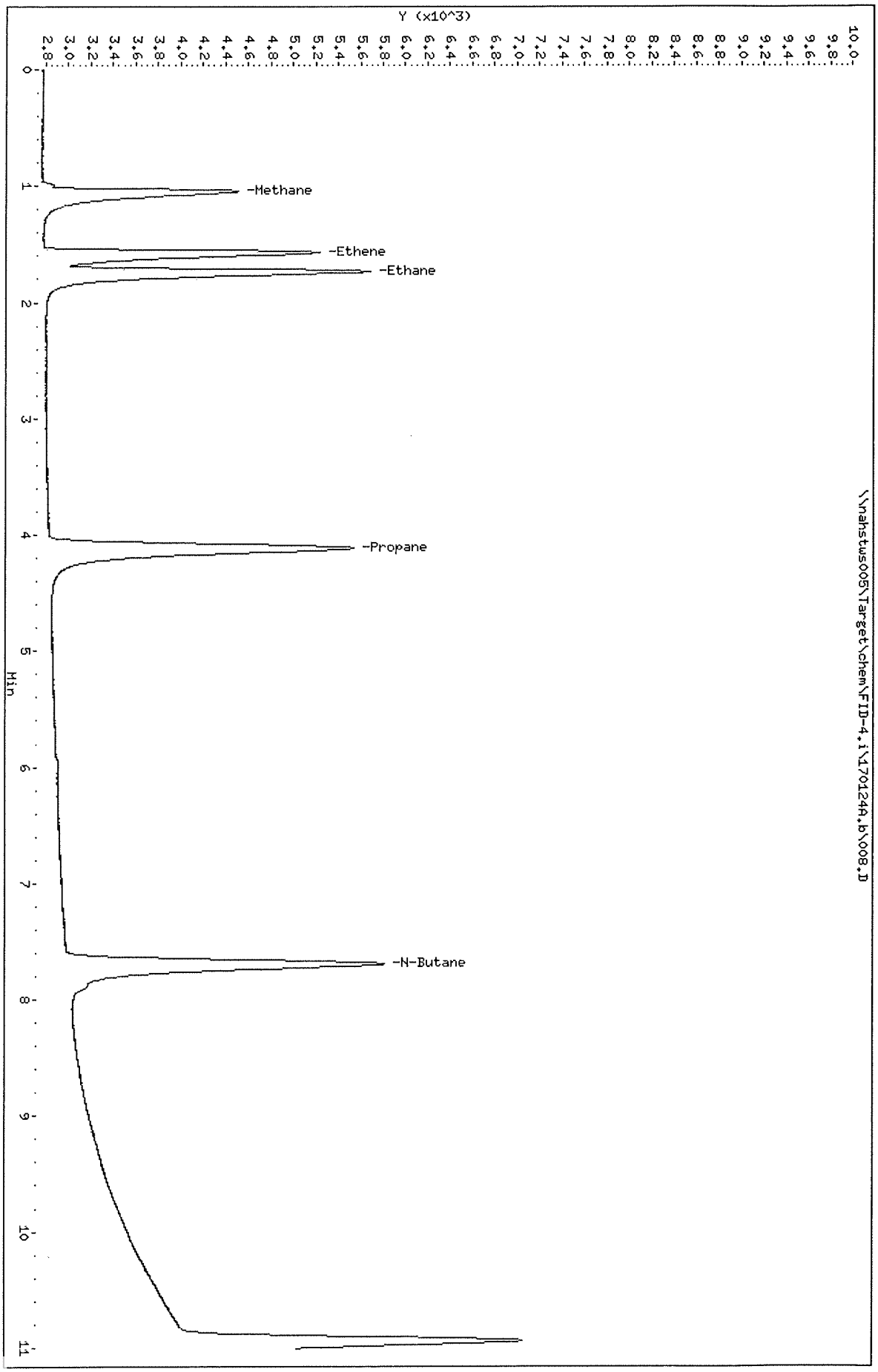
Data file : \\nahstws005\Target\chem\FID-4.i\170124A.b\008.D
Lab Smp Id: ICV Client Smp ID: ICV
Inj Date : 24-JAN-2017 12:05
Operator : MA Inst ID: FID-4.i
Smp Info : ICV;ICV;;;
Misc Info : ;1;0;1
Comment :
Method : \\NAHSTWS005\Target\chem\FID-4.i\170124A.b\RSKNI2.m
Meth Date : 08-Oct-2021 14:58 linh.pham Quant Type: ESTD
Cal Date : 24-JAN-2017 11:13 Cal File: 007.D
Als bottle: 8 QC Sample: METHSPIKE
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: stdNIP2.sub
Target Version: 4.14

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)
1 Methane	1.046	1.030	0.016	9352	9.59792	9.597
2 Ethene	1.573	1.556	0.017	11192	19.0906	19.090
3 Ethane	1.736	1.723	0.013	14474	19.6571	19.657
4 Propane	4.116	4.113	0.003	18164	27.2381	27.238
5 N-Butane	7.696	7.690	0.006	19425	36.0103	36.010

Data File: \\nahstws005\Target\chem\FID-4.i\170124A.b\008.D
Date : 24-JAN-2017 12:05
Client ID: ICV
Sample Info: ICV;ICV;;;
Column phase: Rtx-PLOT

Instrument: FID-4.i
Operator: MA
Column diameter: 0.53



FID04 -Logbook

Batch: 45913
Date: 07-30-2021
Method: RSK175
Comments:

Analyst: Purvi Lad
Reviewer:
Laboratory: Houston

#	Samp ID	Type	Analyzed	DF	Init Wt/Vol	Final Vol	File ID	Matrix	Status	p
1	RSK-CCV	CCV	07-30-2021 09:46 am	1.00	0.00 mL	0.00 mL	001.D	Liquid	Y	N
2	MBLK-210730	MBLK	07-30-2021 09:55 am	1.00	0.00 mL	0.00 mL	002.D	Liquid	Y	N
3	LCS-210730	LCS	07-30-2021 10:05 am	1.00	0.00 mL	0.00 mL	003.D	Liquid	Y	N
4	HS21071114-11	SAMP	07-30-2021 10:19 am	1.00	0.00 mL	0.00 mL	004.D	Liquid	Y	N
5	HS21071038-01	SAMP	07-30-2021 10:33 am	1.00	0.00 mL	0.00 mL	005.D	Liquid	Y	N
6	HS21071038-02	SAMP	07-30-2021 10:42 am	1.00	0.00 mL	0.00 mL	006.D	Liquid	Y	N
7	HS21071038-02MS	MS	07-30-2021 10:52 am	1.00	0.00 mL	0.00 mL	007.D	Liquid	Y	N
8	HS21071038-02MSD	MSD	07-30-2021 11:04 am	1.00	0.00 mL	0.00 mL	008.D	Liquid	Y	N
9	HS21071038-03	SAMP	07-30-2021 11:13 am	1.00	0.00 mL	0.00 mL	009.D	Liquid	Y	N
10	HS21071038-04	SAMP	07-30-2021 11:25 am	1.00	0.00 mL	0.00 mL	010.D	Liquid	Y	N
11	RSK-CCV	CCV	07-30-2021 11:33 am	1.00	0.00 mL	0.00 mL	011.D	Liquid	Y	N
12	HS21071038-06	SAMP	07-30-2021 11:41 am	1.00	0.00 mL	0.00 mL	012.D	Liquid	Y	N
13	HS21071038-07	SAMP	07-30-2021 12:06 pm	1.00	0.00 mL	0.00 mL	013.D	Liquid	Y	N
14	HS21071204-01	SAMP	07-30-2021 12:18 pm	1.00	0.00 mL	0.00 mL	014.D	Liquid	Y	N
15	HS21071204-02	SAMP	07-30-2021 12:28 pm	1.00	0.00 mL	0.00 mL	015.D	Liquid	Y	N
16	HS21071204-03	SAMP	07-30-2021 12:39 pm	1.00	0.00 mL	0.00 mL	016.D	Liquid	Y	N
17	HS21071204-08	SAMP	07-30-2021 12:57 pm	1.00	0.00 mL	0.00 mL	017.D	Liquid	Y	N
18	HS21071038-01	SAMP	07-30-2021 01:17 pm	25.00	0.00 mL	0.00 mL	018.D	Liquid	Y	N
19	HS21071204-01	SAMP	07-30-2021 01:51 pm	100.0(	0.00 mL	0.00 mL	019.D	Liquid	Y	N
20	HS21071204-02	SAMP	07-30-2021 02:00 pm	10.00	0.00 mL	0.00 mL	020.D	Liquid	Y	N
21	HS21071204-03	SAMP	07-30-2021 02:08 pm	100.0(	0.00 mL	0.00 mL	021.D	Liquid	Y	N
22	RSK-CCV	CCV	07-30-2021 02:30 pm	1.00	0.00 mL	0.00 mL	022.D	Liquid	Y	N
23	HS21071204-08	SAMP	07-30-2021 02:38 pm	100.0(	0.00 mL	0.00 mL	023.D	Liquid	Y	N
24	HS21071204-02MS	MS	07-30-2021 02:47 pm	1.00	0.00 mL	0.00 mL	024.D	Liquid	Y	N
25	HS21071204-02MSD	MSD	07-30-2021 02:56 pm	1.00	0.00 mL	0.00 mL	025.D	Liquid	Y	N
26	HS21071544-01	SAMP	07-30-2021 03:07 pm	1.00	0.00 mL	0.00 mL	026.D	Liquid	Y	N
27	HS21071402-01	SAMP	07-30-2021 03:15 pm	1.00	0.00 mL	0.00 mL	027.D	Liquid	Y	N
28	HS21071402-01	SAMP	07-30-2021 03:25 pm	50.00	0.00 mL	0.00 mL	028.D	Liquid	Y	N
29	HS21071405-08	SAMP	07-30-2021 03:33 pm	1.00	0.00 mL	0.00 mL	029.D	Liquid	Y	N
30	RSK-CCV	CCV	07-30-2021 03:47 pm	1.00	0.00 mL	0.00 mL	030.D	Liquid	Y	N

Chemical	Value
pH Paper	300107063-18
CCV/LC/LSD/MS/MSD	300107043-11

FORM 2
WATER GASES SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS21071204

	ENG SC SAMPLE NO.	SMC1 #	SMC2 #	SMC3 #	OTHER	TOT OUT
01	MBLK-210730					0
02	LCS-2107030					0
03	HS21071204-01					0
04	HS21071204-02					0
05	HS21071204-03					0
06	HS21071204-08					0
07	HS21071204-01					0
08	HS21071204-03					0
09	HS21071204-08					0
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						
28						

QC LIMITS

Column to be used to flag recovery values

* Values outside of contract required QC limits

D System Monitoring Compound diluted out

FORM 7B
GASES CALIBRATION VERIFICATION SUMMARY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS21071204

Instrument ID: FID-4 Calibration Date: 07/30/21 Time: 0946

Lab File ID: 001 Init. Calib. Date(s): 01/24/17 01/24/17

Init. Calib. Times: 0906 1113

GC Column: RTX-PLOT ID: 0.53 (mm)

COMPOUND	RRF OR AMOUNT	RRF250.00 OR AMOUNT	MIN RRF	%D OR %DRIFT	MAX %D OR %DRIFT	CURV TYPE
Ethane	719.48900	825.19537	0.01	-14.69	20.00	AVRG
Methane	974.99200	948.37773	0.01	2.73	20.00	AVRG
Ethene	585.76000	575.37092	0.01	1.77	20.00	AVRG

FORM VII GASES

FORM 7B
GASES CALIBRATION VERIFICATION SUMMARY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS21071204

Instrument ID: FID-4 Calibration Date: 07/30/21 Time: 1133

Lab File ID: 011 Init. Calib. Date(s): 01/24/17 01/24/17

Init. Calib. Times: 0906 1113

GC Column: RTX-PLOT ID: 0.53 (mm)

COMPOUND	RRF OR AMOUNT	RRF250.00 OR AMOUNT	MIN RRF	%D OR %DRIFT	MAX %D OR %DRIFT	CURV TYPE
Ethane	719.48900	802.52730	0.01	-11.54	20.00	AVRG
Methane	974.99200	887.42614	0.01	8.98	20.00	AVRG
Ethene	585.76000	584.92582	0.01	0.14	20.00	AVRG

FORM VII GASES

FORM 7B
GASES CALIBRATION VERIFICATION SUMMARY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS21071204

Instrument ID: FID-4 Calibration Date: 07/30/21 Time: 1430

Lab File ID: 022 Init. Calib. Date(s): 01/24/17 01/24/17

Init. Calib. Times: 0906 1113

GC Column: RTX-PLOT ID: 0.53 (mm)

COMPOUND	RRF OR AMOUNT	RRF250.00 OR AMOUNT	MIN RRF	%D OR %DRIFT	MAX %D OR %DRIFT	CURV TYPE
Ethane	719.48900	796.09821	0.01	-10.65	20.00	AVRG
Methane	974.99200	889.08469	0.01	8.81	20.00	AVRG
Ethene	585.76000	564.74777	0.01	3.59	20.00	AVRG

FORM VII GASES

FORM 7B
GASES CALIBRATION VERIFICATION SUMMARY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS21071204

Instrument ID: FID-4 Calibration Date: 07/30/21 Time: 1547

Lab File ID: 030 Init. Calib. Date(s): 01/24/17 01/24/17

Init. Calib. Times: 0906 1113

GC Column: RTX-PLOT ID: 0.53 (mm)

COMPOUND	RRF OR AMOUNT	RRF250.00 OR AMOUNT	MIN RRF	%D OR %DRIFT	MAX %D OR %DRIFT	CURV TYPE
Ethane	719.48900	762.17924	0.01	-5.93	20.00	AVRG
Methane	974.99200	925.36540	0.01	5.09	20.00	AVRG
Ethene	585.76000	560.17804	0.01	4.37	20.00	AVRG

FORM VII GASES

ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\nahstws005\Target\chem\FID-4.i\210730.b\Before\001.D
Lab Smp Id: RSK-CCV Client Smp ID: RSK-CCV
Inj Date : 30-JUL-2021 09:46
Operator : PL Inst ID: FID-4.i
Smp Info : RSK-CCV;RSK-CCV;2;4
Misc Info : ;1;0;1
Comment   :
Method   : \\NAHSTWS005\Target\chem\FID-4.i\210730.b\RSKNI3.m
Meth Date : 12-Oct-2021 14:02 linh.pham Quant Type: ESTD
Cal Date : 24-JAN-2017 10:15 Cal File: 004.D
Als bottle: 1 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: RSK175.sub
Target Version: 4.14
Processing Host: ALSHSW7104

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

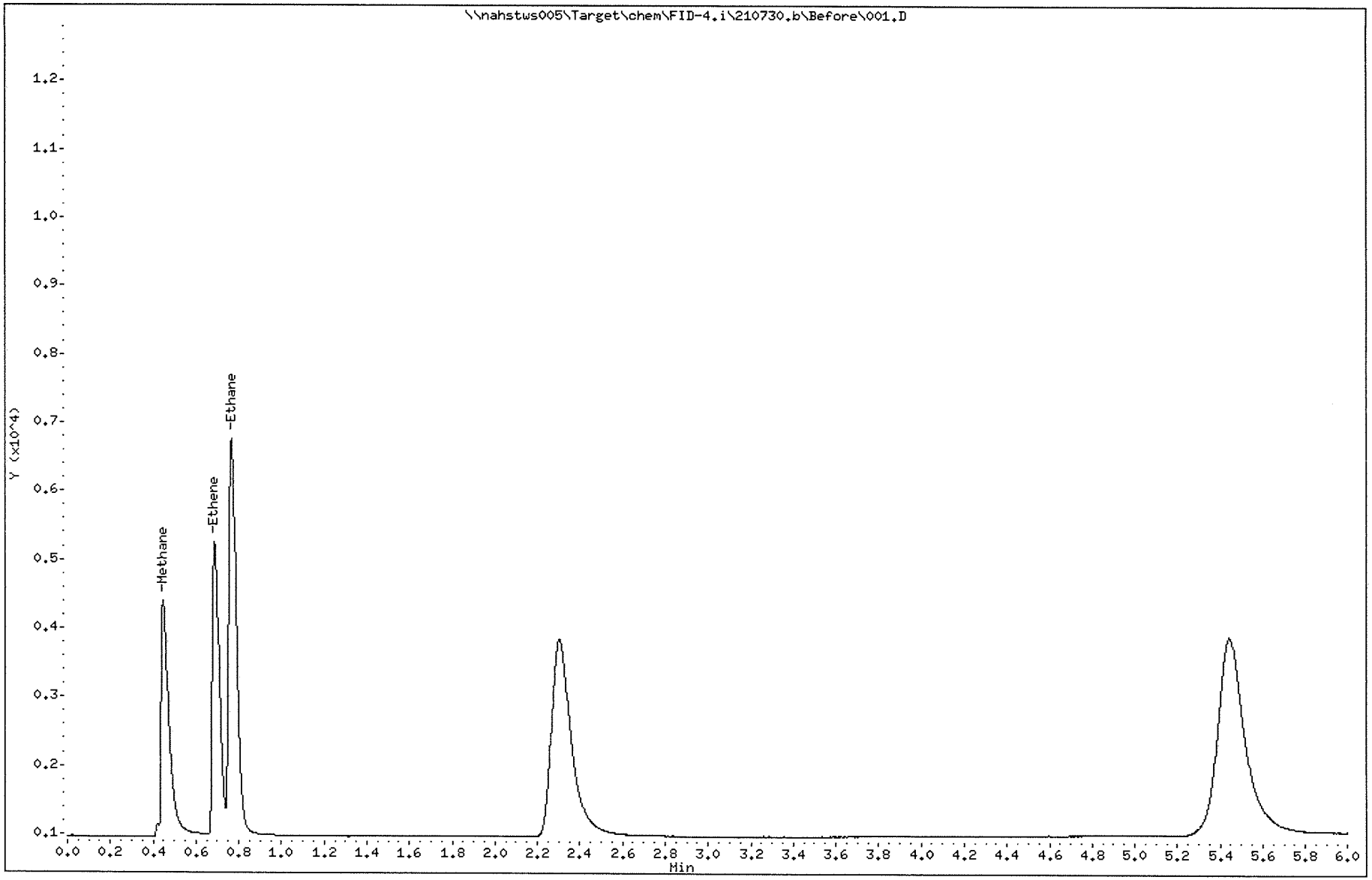
					AMOUNTS	
					CAL-AMT	ON-COL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/L)	(ug/L)
1 Methane	0.446	0.463	-0.017	9011	9.64700	9.242
2 Ethene	0.686	0.703	-0.017	9583	16.8500	16.359
3 Ethane	0.766	0.780	-0.014	14659	18.0430	20.374

Data File: \\nahstws005\Target\chem\FID-4.i\210730.b\Before\001.D
Date : 30-JUL-2021 09:46
Client ID: RSK-CCV
Sample Info: RSK-CCV;RSK-CCV;2;4

Column phase: Rtx-PLOT

Instrument: FID-4.i

Operator: PL
Column diameter: 0.53



Data File: \\nahstws005\Target\chem\FID-4.i\210730.b\001.D Page 1
Report Date: 12-Oct-2021 14:08

ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\nahstws005\Target\chem\FID-4.i\210730.b\001.D
Lab Smp Id: RSK-CCV Client Smp ID: RSK-CCV
Inj Date : 30-JUL-2021 09:46
Operator : PL Inst ID: FID-4.i
Smp Info : RSK-CCV;RSK-CCV;2;4
Misc Info : ;1;0;1
Comment :
Method : \\NAHSTWS005\Target\chem\FID-4.i\210730.b\RSKNI3.m
Meth Date : 12-Oct-2021 14:02 linh.pham Quant Type: ESTD
Cal Date : 24-JAN-2017 10:15 Cal File: 004.D
Als bottle: 1 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: RSK175.sub
Target Version: 4.14
Processing Host: ALSHSW7104

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

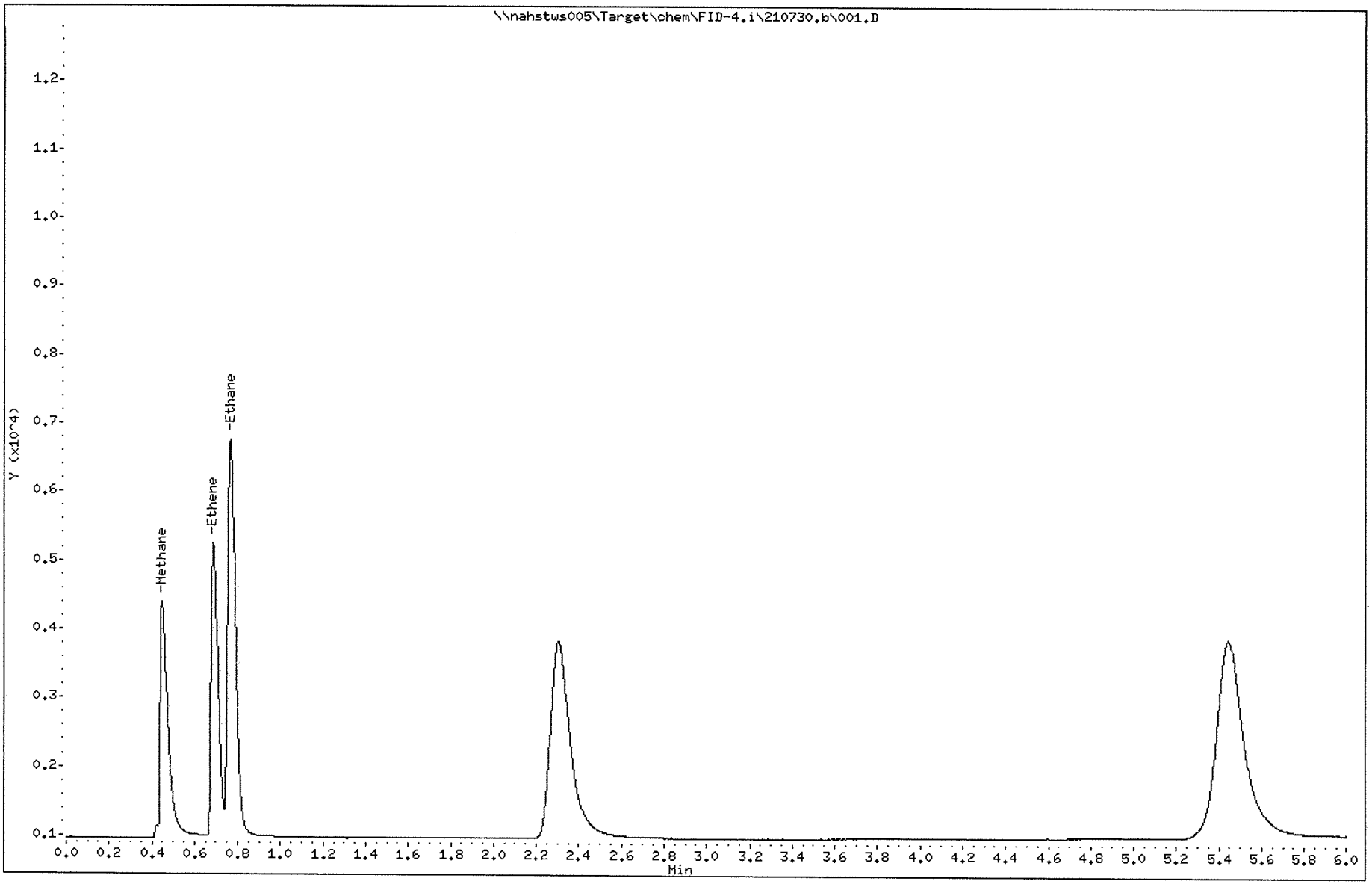
					AMOUNTS	
					CAL-AMT	ON-COL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/L)	(ug/L)
1 Methane	0.446	0.463	-0.017	9149	9.64700	9.383
2 Ethene	0.686	0.703	-0.017	9695	16.8500	16.551
3 Ethane	0.766	0.780	-0.014	14889	18.0430	20.693

Data File: \\nahstws005\Target\chem\FID-4.i\210730.b\001.D
Date : 30-JUL-2021 09:46
Client ID: RSK-CCV
Sample Info: RSK-CCV;RSK-CCV;2;4

Column phase: Rtx-PLOT

Instrument: FID-4.i

Operator: PL
Column diameter: 0.53



Data File: \\nahstws005\Target\chem\FID-4.i\210730.b\Before\002.D Page 1
Report Date: 12-Oct-2021 14:11

ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\nahstws005\Target\chem\FID-4.i\210730.b\Before\002.D
Lab Smp Id: MBLK-210730 Client Smp ID: MBLK-210730
Inj Date : 30-JUL-2021 09:55
Operator : PL Inst ID: FID-4.i
Smp Info : MBLK-210730;MBLK-210730;3;;BLANK
Misc Info : ;1;0;1
Comment :
Method : \\NAHSTWS005\Target\chem\FID-4.i\210730.b\RSKNI3.m
Meth Date : 12-Oct-2021 14:02 linh.pham Quant Type: ESTD
Cal Date : 24-JAN-2017 10:15 Cal File: 004.D
Als bottle: 2 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: RSK175.sub
Target Version: 4.14
Processing Host: ALSHSW7104

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)

Data File: \\nahstws005\Target\chem\FID-4.i\210730.b\Before\002.D

Date : 30-JUL-2021 09:55

Client ID: MBLK-210730

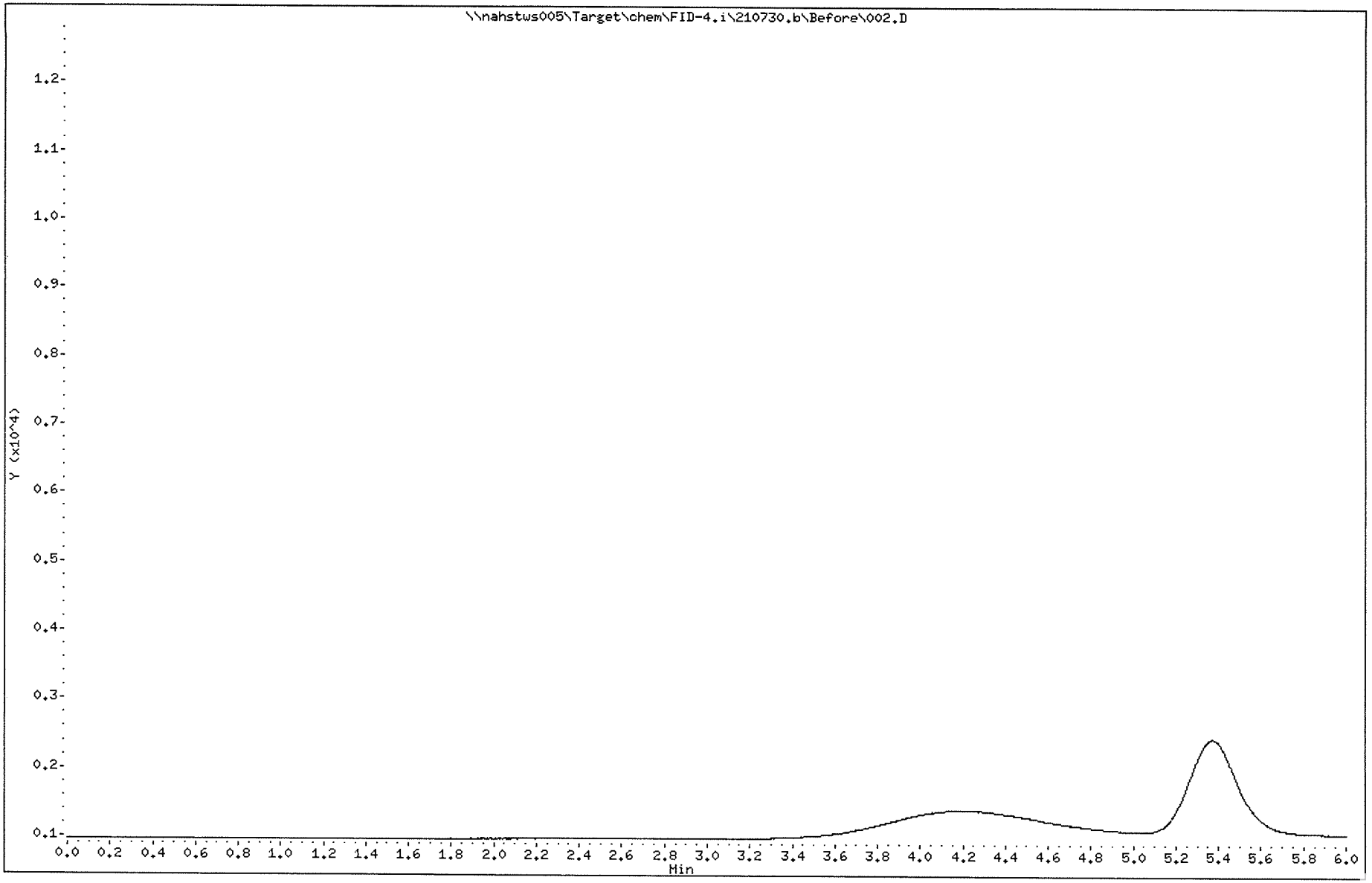
Sample Info: MBLK-210730;MBLK-210730;3;;BLANK

Column phase: Rtx-PLOT

Instrument: FID-4.i

Operator: PL

Column diameter: 0.53



Data File: \\nahstws005\Target\chem\FID-4.i\210730.b\002.D Page 1
Report Date: 12-Oct-2021 14:08

ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\nahstws005\Target\chem\FID-4.i\210730.b\002.D
Lab Smp Id: MBLK-210730 Client Smp ID: MBLK-210730
Inj Date : 30-JUL-2021 09:55
Operator : PL Inst ID: FID-4.i
Smp Info : MBLK-210730;MBLK-210730;3;;BLANK
Misc Info : ;1;0;1
Comment :
Method : \\NAHSTWS005\Target\chem\FID-4.i\210730.b\RSKNI3.m
Meth Date : 12-Oct-2021 14:02 linh.pham Quant Type: ESTD
Cal Date : 24-JAN-2017 10:15 Cal File: 004.D
Als bottle: 2 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: RSK175.sub
Target Version: 4.14
Processing Host: ALSHSW7104

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

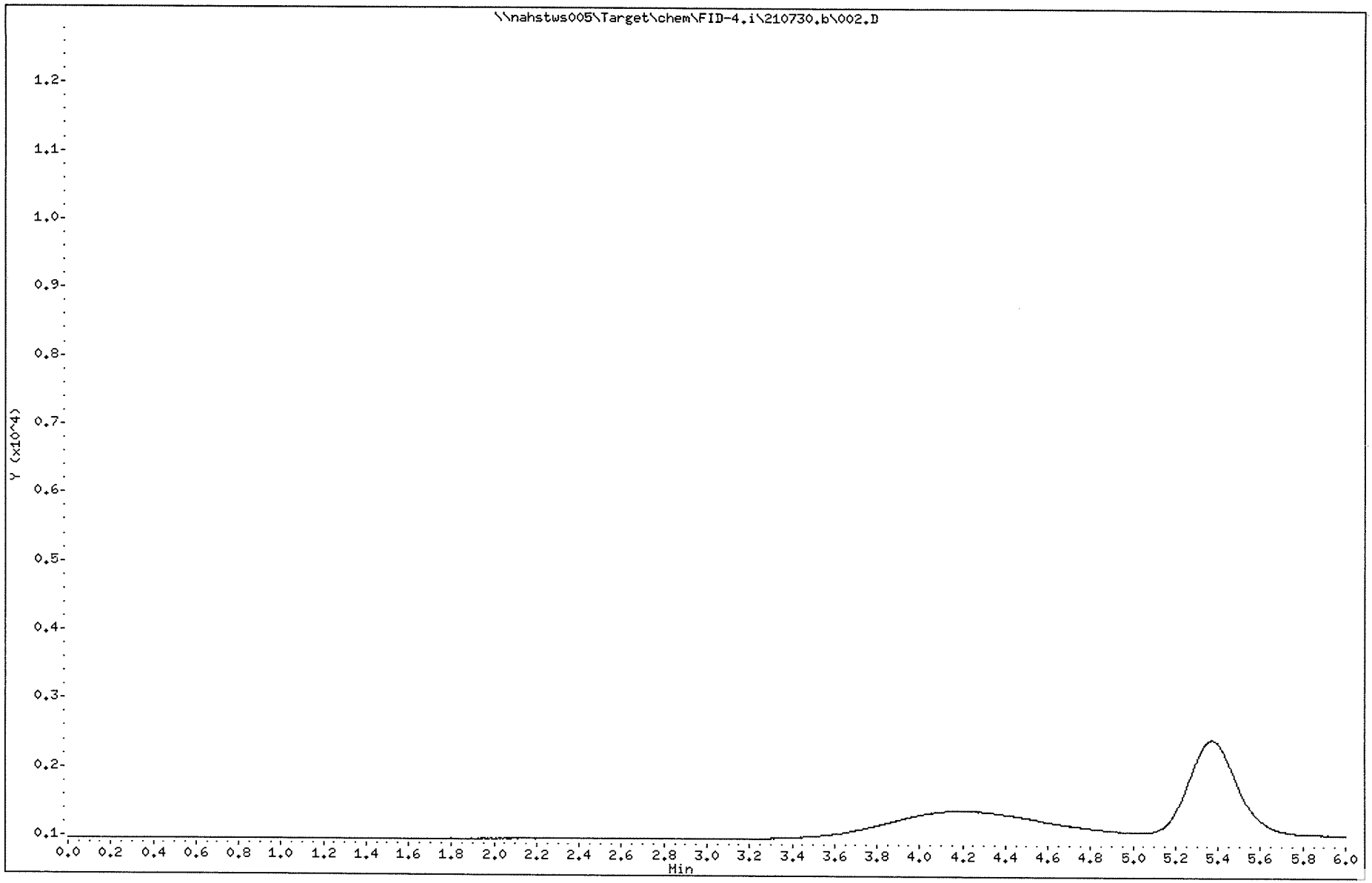
Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)

Data File: \\nahstws005\Target\chem\FID-4.i\210730.b\002.D
Date : 30-JUL-2021 09:55
Client ID: MBLK-210730
Sample Info: MBLK-210730;MBLK-210730;3;;BLANK

Column phase: Rtx-PLOT

Instrument: FID-4.i

Operator: PL
Column diameter: 0.53



Data File: \\nahstws005\Target\chem\FID-4.i\210730.b\Before\003.D Page 1
Report Date: 12-Oct-2021 14:11

ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\nahstws005\Target\chem\FID-4.i\210730.b\Before\003.D
Lab Smp Id: LCS-210730 Client Smp ID: LCS-2107030
Inj Date : 30-JUL-2021 10:05
Operator : PL Inst ID: FID-4.i
Smp Info : LCS-210730;LCS-2107030;3;;LCS
Misc Info : ;1;0;1
Comment :
Method : \\NAHSTWS005\Target\chem\FID-4.i\210730.b\RSKNI3.m
Meth Date : 12-Oct-2021 14:02 linh.pham Quant Type: ESTD
Cal Date : 24-JAN-2017 10:15 Cal File: 004.D
Als bottle: 3 QC Sample: LCS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: RSK175.sub
Target Version: 4.14
Processing Host: ALSHSW7104

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

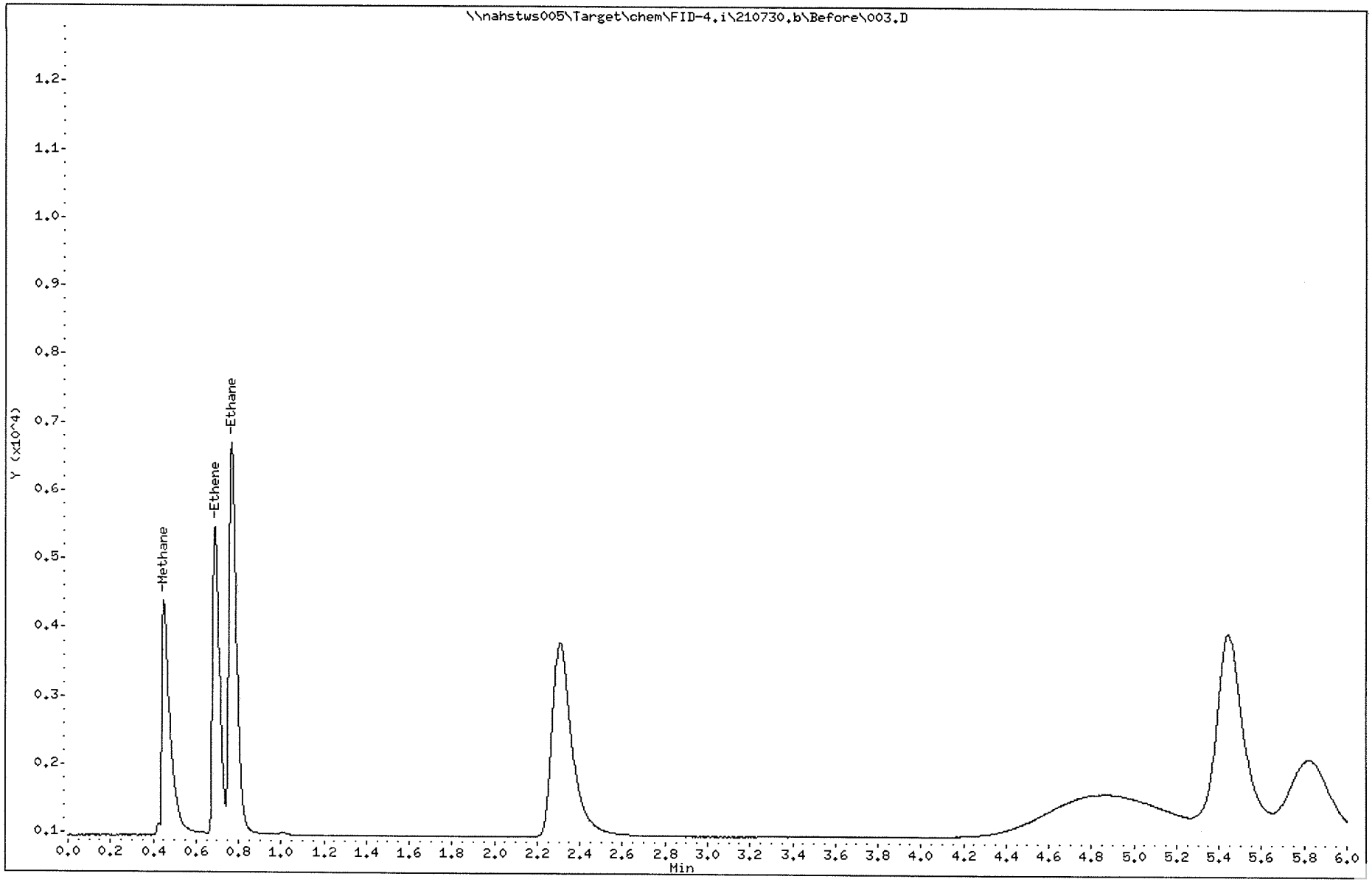
Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)
1 Methane	0.450	0.463	-0.013	9586	9.83187	9.831
2 Ethene	0.690	0.703	-0.013	10229	17.4628	17.462
3 Ethane	0.766	0.780	-0.014	14627	20.3297	20.329

Data File: \\nahstws005\Target\chem\FID-4.i\210730.b\Before\003.D
Date : 30-JUL-2021 10:05
Client ID: LCS-2107030
Sample Info: LCS-210730;LCS-2107030;3;;LCS

Column phase: Rtx-PLOT

Instrument: FID-4.i

Operator: PL
Column diameter: 0.53



Data File: \\nahstws005\Target\chem\FID-4.i\210730.b\003.D Page 1
Report Date: 12-Oct-2021 14:08

ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\nahstws005\Target\chem\FID-4.i\210730.b\003.D
Lab Smp Id: LCS-210730 Client Smp ID: LCS-2107030
Inj Date : 30-JUL-2021 10:05
Operator : PL Inst ID: FID-4.i
Smp Info : LCS-210730;LCS-2107030;3;;LCS
Misc Info : ;1;0;1
Comment :
Method : \\NAHSTWS005\Target\chem\FID-4.i\210730.b\RSKNI3.m
Meth Date : 12-Oct-2021 14:02 linh.pham Quant Type: ESTD
Cal Date : 24-JAN-2017 10:15 Cal File: 004.D
Als bottle: 3 QC Sample: LCS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: RSK175.sub
Target Version: 4.14
Processing Host: ALSHSW7104

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

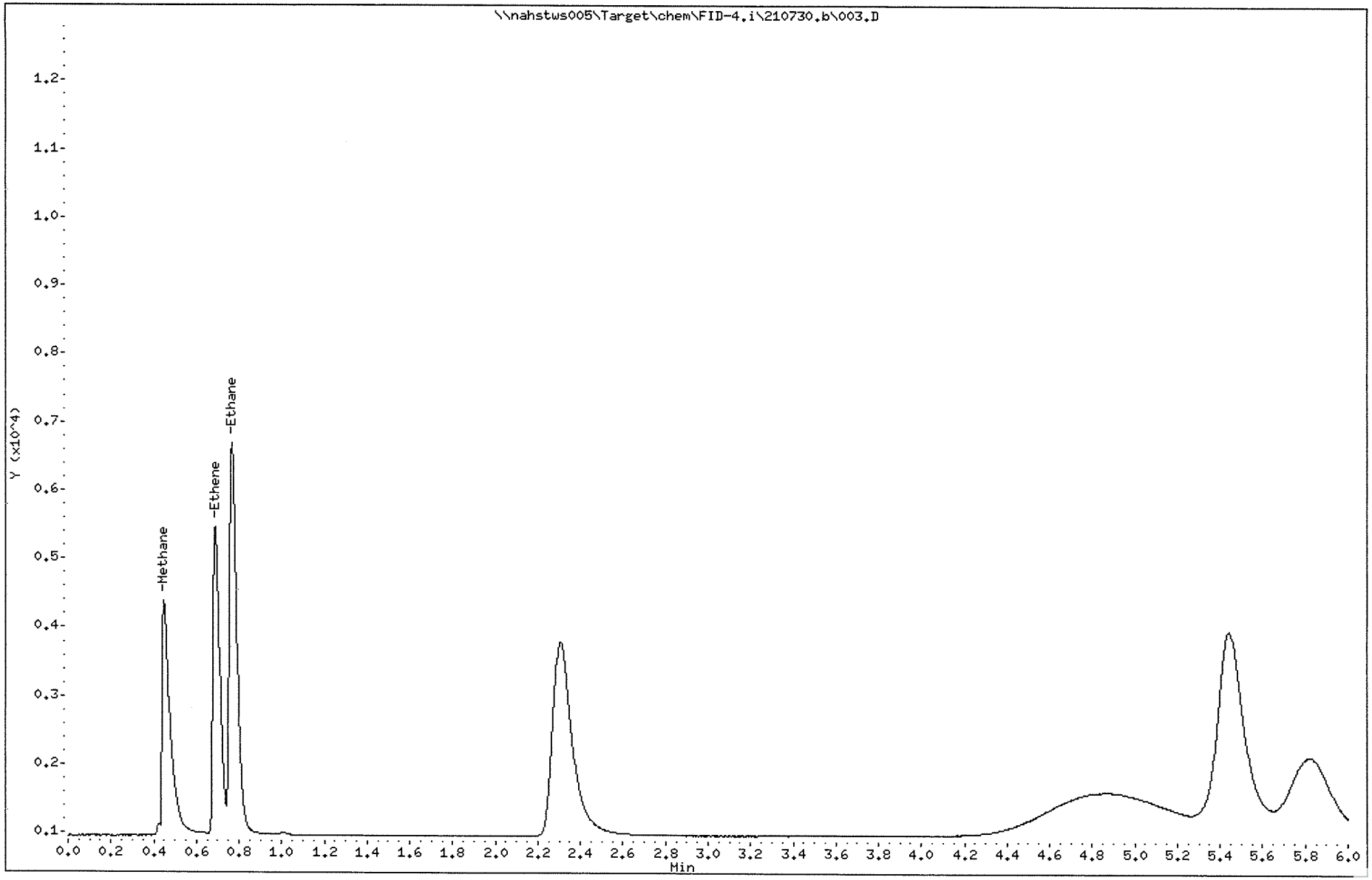
					CONCENTRATIONS	
					ON-COLUMN	FINAL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/L)	(ug/L)
1 Methane	0.450	0.463	-0.013	9586	9.83187	9.831
2 Ethene	0.690	0.703	-0.013	10229	17.4628	17.462
3 Ethane	0.766	0.780	-0.014	14627	20.3297	20.329

Data File: \\nahstws005\Target\chem\FID-4.i\210730.b\003.D
Date : 30-JUL-2021 10:05
Client ID: LCS-2107030
Sample Info: LCS-210730;LCS-2107030;3;;LCS

Column phase: Rtx-PLOT

Instrument: FID-4.i

Operator: PL
Column diameter: 0.53



Data File: \\nahstws005\Target\chem\FID-4.i\210730.b\Before\007.D Page 1
Report Date: 12-Oct-2021 14:11

ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\nahstws005\Target\chem\FID-4.i\210730.b\Before\007.D
Lab Smp Id: HS21071038-02MS Client Smp ID: HS21071038-02MS
Inj Date : 30-JUL-2021 10:52
Operator : PL Inst ID: FID-4.i
Smp Info : HS21071038-02MS;HS21071038-02MS
Misc Info : ;1;0;1
Comment :
Method : \\NAHSTWS005\Target\chem\FID-4.i\210730.b\RSKNI3.m
Meth Date : 12-Oct-2021 14:02 linh.pham Quant Type: ESTD
Cal Date : 24-JAN-2017 10:15 Cal File: 004.D
Als bottle: 7 QC Sample: MS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: RSK175.sub
Target Version: 4.14
Processing Host: ALSHSW7104

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

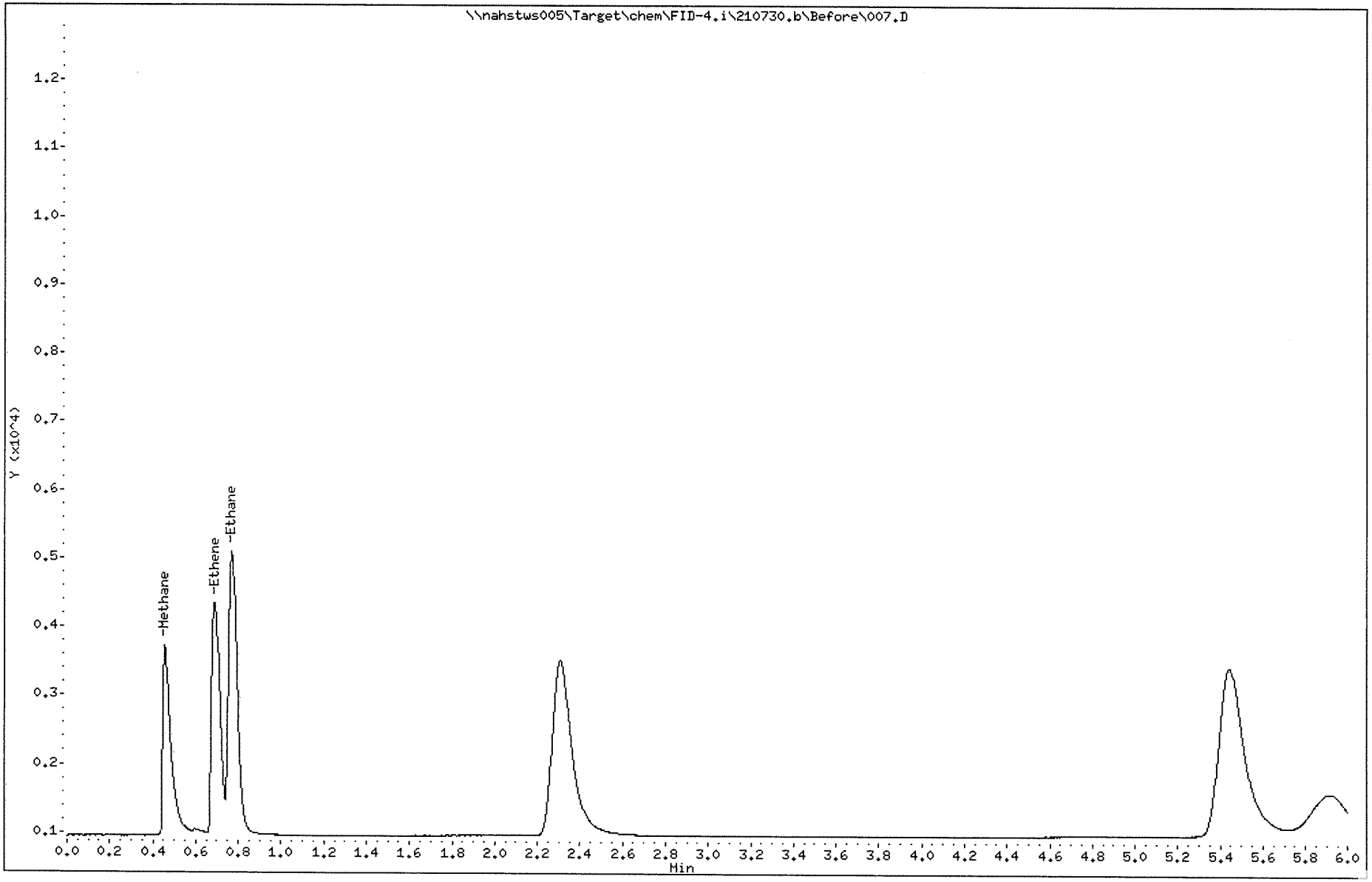
Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)
1 Methane	0.456	0.463	-0.007	7594	7.78878	7.788
2 Ethene	0.690	0.703	-0.013	9281	15.8444	15.844
3 Ethane	0.770	0.780	-0.010	11835	16.4492	16.449

Data File: \\nahstws005\Target\chem\FID-4.i\210730.b\Before\007.D
Date : 30-JUL-2021 10:52
Client ID: HS21071038-02MS
Sample Info: HS21071038-02MS;HS21071038-02MS

Column phase: Rtx-PLOT

Instrument: FID-4.i

Operator: PL
Column diameter: 0.53



Data File: \\nahstws005\Target\chem\FID-4.i\210730.b\007.D Page 1
Report Date: 12-Oct-2021 14:08

ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\nahstws005\Target\chem\FID-4.i\210730.b\007.D
Lab Smp Id: HS21071038-02MS Client Smp ID: HS21071038-02MS
Inj Date : 30-JUL-2021 10:52
Operator : PL Inst ID: FID-4.i
Smp Info : HS21071038-02MS;HS21071038-02MS
Misc Info : ;1;0;1
Comment :
Method : \\NAHSTWS005\Target\chem\FID-4.i\210730.b\RSKNI3.m
Meth Date : 12-Oct-2021 14:02 linh.pham Quant Type: ESTD
Cal Date : 24-JAN-2017 10:15 Cal File: 004.D
Als bottle: 7 QC Sample: MS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: RSK175.sub
Target Version: 4.14
Processing Host: ALSHSW7104

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
1 Methane	0.456	0.463	-0.007	7377	7.56621	7.566(M)
2 Ethene	0.690	0.703	-0.013	9376	16.0065	16.006
3 Ethane	0.770	0.780	-0.010	11967	16.6326	16.632

QC Flag Legend

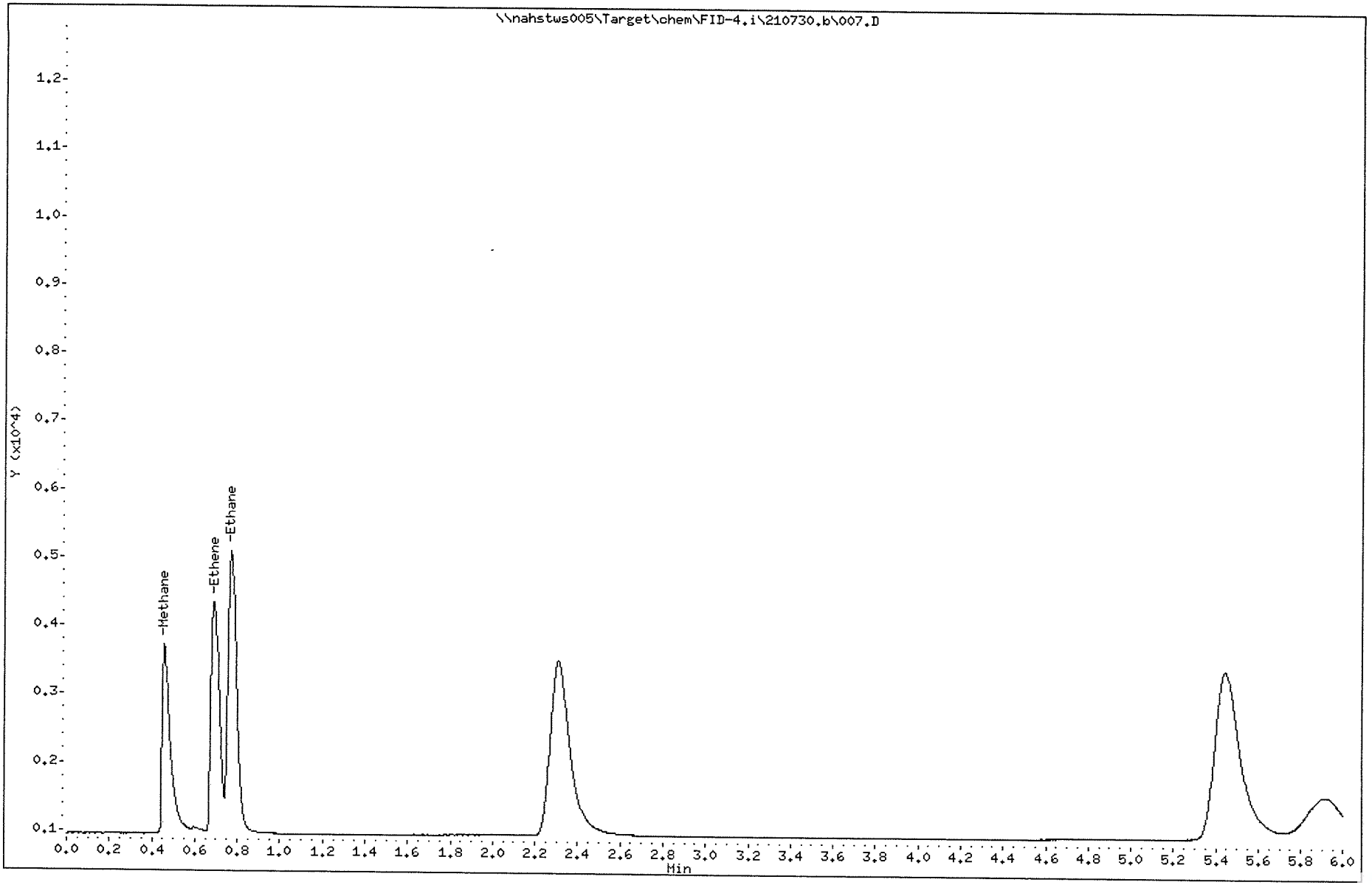
M - Compound response manually integrated.

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Date : 30-JUL-2021 10:52
Client ID: HS21071038-02MS
Sample Info: HS21071038-02MS;HS21071038-02MS

Column phase: Rtx-PLOT

Instrument: FID-4.i

Operator: PL
Column diameter: 0.53



Data File: \\nahstws005\Target\chem\FID-4.i\210730.b\Before\008.D Page 1
Report Date: 12-Oct-2021 14:11

ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\nahstws005\Target\chem\FID-4.i\210730.b\Before\008.D
Lab Smp Id: HS21071038-02MSD Client Smp ID: HS21071038-02MSD
Inj Date : 30-JUL-2021 11:04
Operator : PL Inst ID: FID-4.i
Smp Info : HS21071038-02MSD;HS21071038-02MSD
Misc Info : ;1;0;1
Comment :
Method : \\NAHSTWS005\Target\chem\FID-4.i\210730.b\RSKNI3.m
Meth Date : 12-Oct-2021 14:02 linh.pham Quant Type: ESTD
Cal Date : 24-JAN-2017 10:15 Cal File: 004.D
Als bottle: 8 QC Sample: MSD
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: RSK175.sub
Target Version: 4.14
Processing Host: ALSHSW7104

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

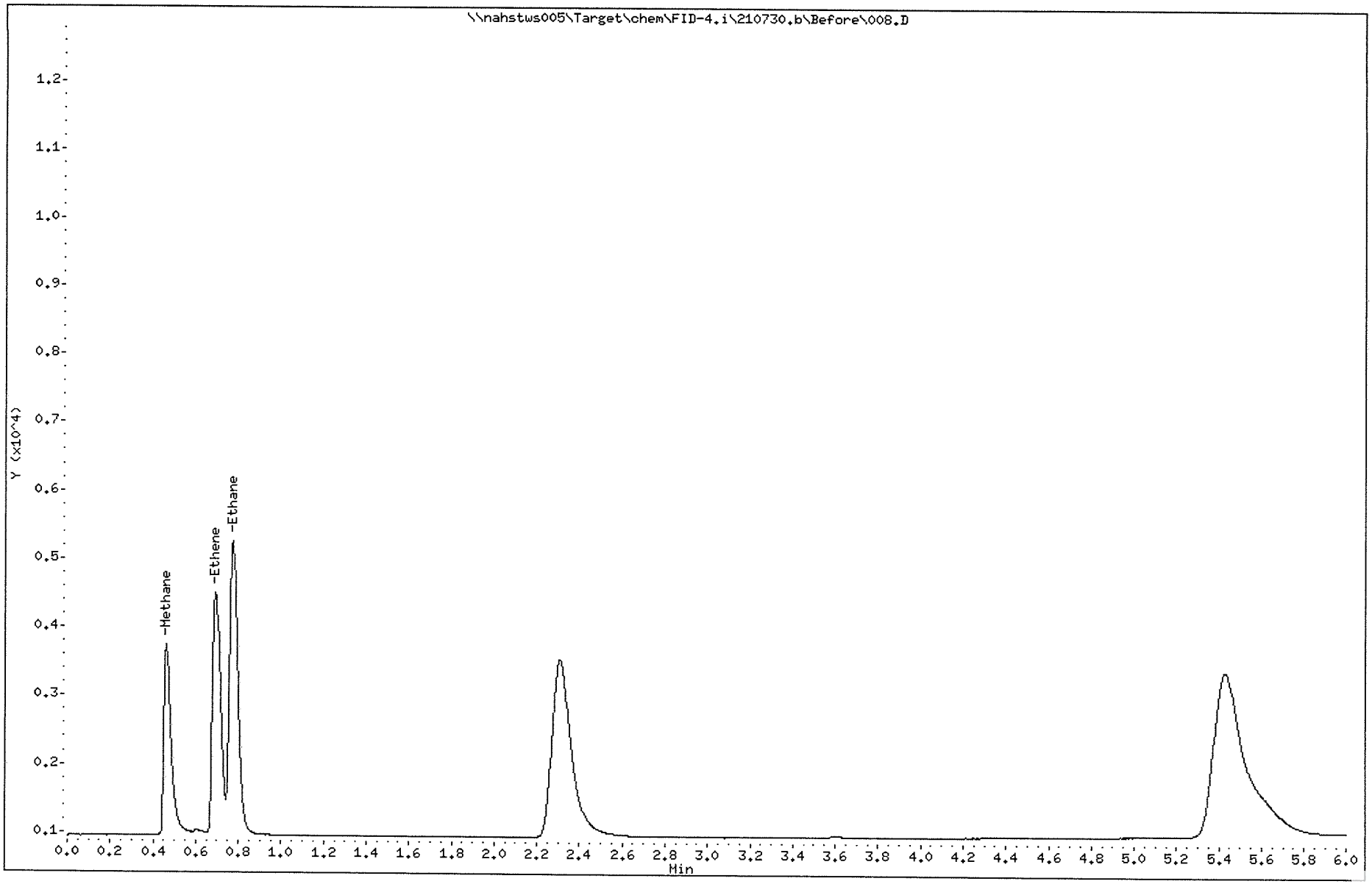
Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)
1 Methane	0.460	0.463	-0.003	6821	6.99595	6.995
2 Ethene	0.693	0.703	-0.010	9348	15.9587	15.958
3 Ethane	0.773	0.780	-0.007	11782	16.3755	16.375

Data File: \\nahstws005\Target\chem\FID-4.i\210730.b\Before\008.D
Date : 30-JUL-2021 11:04
Client ID: HS21071038-02MSD
Sample Info: HS21071038-02MSD;HS21071038-02MSD

Column phase: Rtx-PLOT

Instrument: FID-4.i

Operator: PL
Column diameter: 0.53



Data File: \\nahstws005\Target\chem\FID-4.i\210730.b\008.D Page 1
Report Date: 12-Oct-2021 14:08

ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\nahstws005\Target\chem\FID-4.i\210730.b\008.D
Lab Smp Id: HS21071038-02MSD Client Smp ID: HS21071038-02MSD
Inj Date : 30-JUL-2021 11:04
Operator : PL Inst ID: FID-4.i
Smp Info : HS21071038-02MSD;HS21071038-02MSD
Misc Info : ;1;0;1
Comment :
Method : \\NAHSTWS005\Target\chem\FID-4.i\210730.b\RSKNI3.m
Meth Date : 12-Oct-2021 14:02 linh.pham Quant Type: ESTD
Cal Date : 24-JAN-2017 10:15 Cal File: 004.D
Als bottle: 8 QC Sample: MSD
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: RSK175.sub
Target Version: 4.14

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)
1 Methane	0.460	0.463	-0.003	6636	6.80621	6.806(RM)
2 Ethene	0.693	0.703	-0.010	9447	16.1278	16.127
3 Ethane	0.773	0.780	-0.007	11922	16.5701	16.570

QC Flag Legend

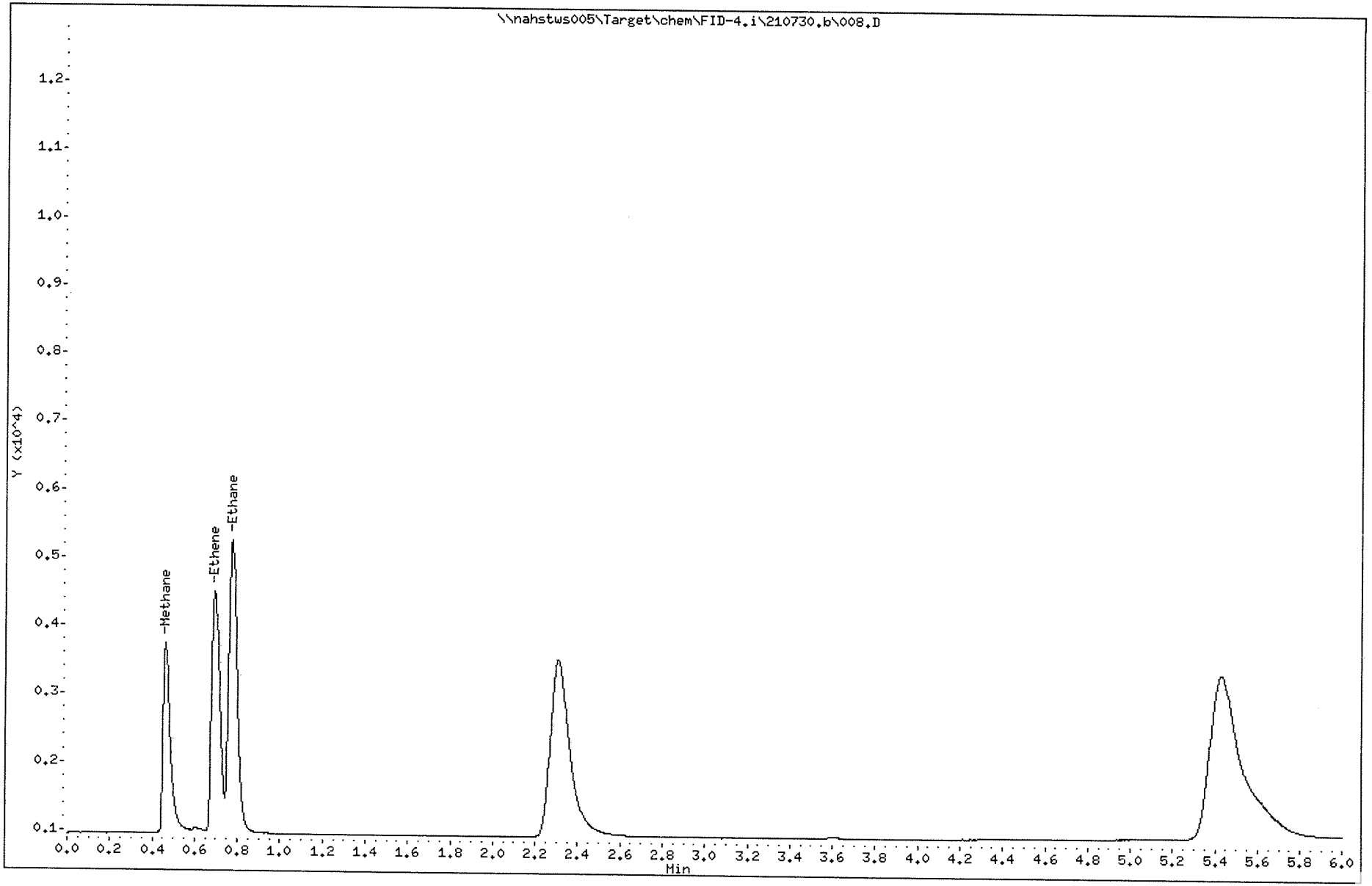
R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

Data File: \\nahstws005\Target\chem\FID-4.i\210730.b\008.D
Date : 30-JUL-2021 11:04
Client ID: HS21071038-02MSD
Sample Info: HS21071038-02MSD;HS21071038-02MSD

Column phase: Rtx-PLOT

Instrument: FID-4.i

Operator: PL
Column diameter: 0.53



Data File: \\nahstws005\Target\chem\FID-4.i\210730.b\Before\011.D Page 1
Report Date: 12-Oct-2021 14:11

ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\nahstws005\Target\chem\FID-4.i\210730.b\Before\011.D
Lab Smp Id: RSK-CCV Client Smp ID: RSK-CCV
Inj Date : 30-JUL-2021 11:33
Operator : PL Inst ID: FID-4.i
Smp Info : RSK-CCV;RSK-CCV;2;4
Misc Info : ;1;0;1
Comment   :
Method   : \\NAHSTWS005\Target\chem\FID-4.i\210730.b\RSKNI3.m
Meth Date : 12-Oct-2021 14:02 linh.pham Quant Type: ESTD
Cal Date : 24-JAN-2017 10:15 Cal File: 004.D
Als bottle: 11 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: RSK175.sub
Target Version: 4.14
Processing Host: ALSHSW7104

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

					AMOUNTS	
					CAL-AMT	ON-COL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/L)	(ug/L)
1 Methane	0.446	0.463	-0.017	8342	9.64700	8.555
2 Ethene	0.686	0.703	-0.017	9654	16.8500	16.481
3 Ethane	0.763	0.780	-0.017	14185	18.0430	19.715

Data File: \\nahstws005\Target\chem\FID-4.i\210730.b\Before\011.D

Date : 30-JUL-2021 11:33

Client ID: RSK-CCV

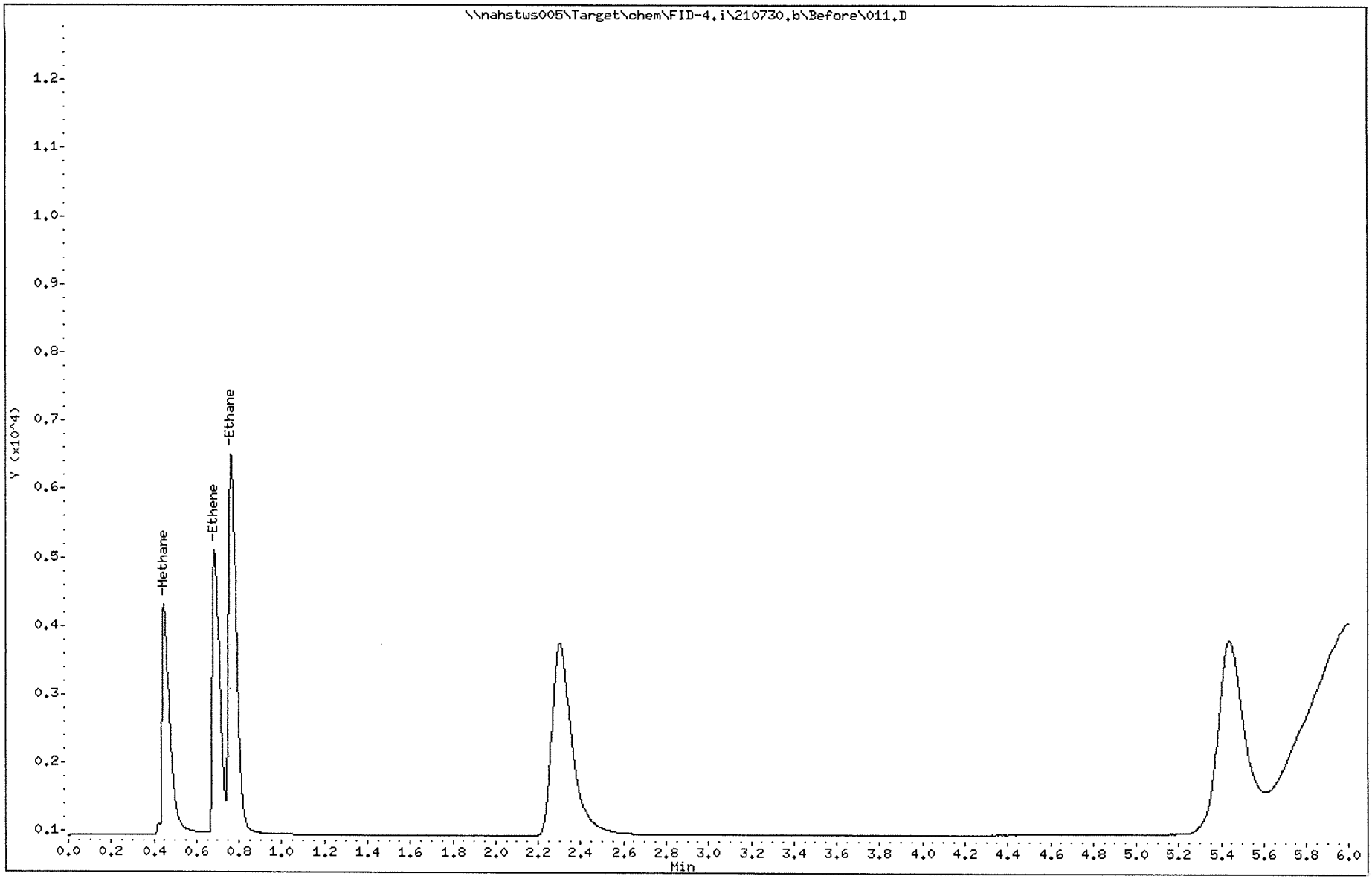
Instrument: FID-4.i

Sample Info: RSK-CCV;RSK-CCV;2;4

Operator: PL

Column phase: Rtx-PLOT

Column diameter: 0.53



Data File: \\nahstws005\Target\chem\FID-4.i\210730.b\011.D Page 1
Report Date: 12-Oct-2021 14:08

ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\nahstws005\Target\chem\FID-4.i\210730.b\011.D
Lab Smp Id: RSK-CCV Client Smp ID: RSK-CCV
Inj Date : 30-JUL-2021 11:33
Operator : PL Inst ID: FID-4.i
Smp Info : RSK-CCV;RSK-CCV;2;4
Misc Info : ;1;0;1
Comment :
Method : \\NAHSTWS005\Target\chem\FID-4.i\210730.b\RSKNI3.m
Meth Date : 12-Oct-2021 14:02 linh.pham Quant Type: ESTD
Cal Date : 24-JAN-2017 10:15 Cal File: 004.D
Als bottle: 11 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: RSK175.sub
Target Version: 4.14
Processing Host: ALSHSW7104

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

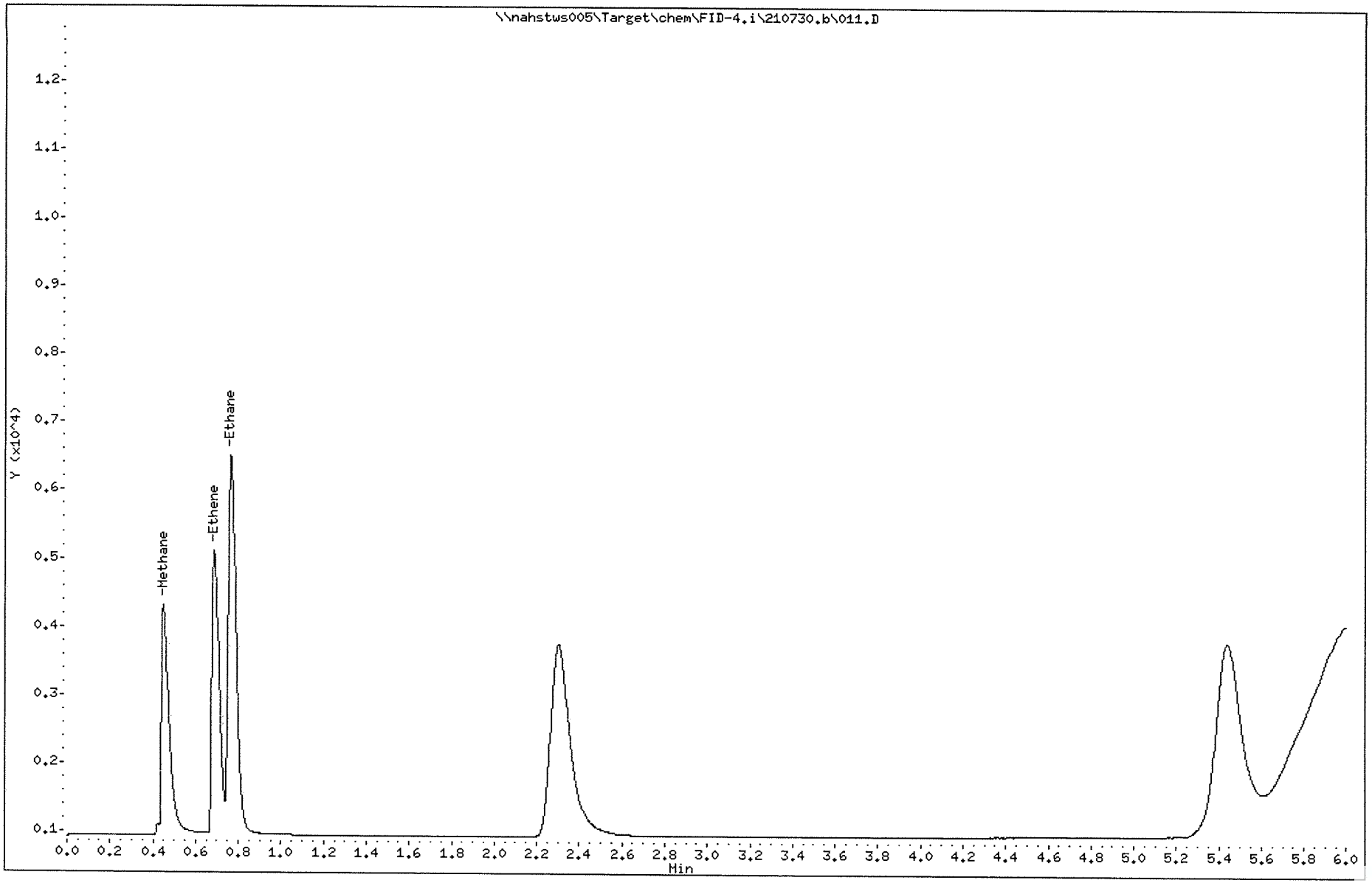
					AMOUNTS	
					CAL-AMT	ON-COL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/L)	(ug/L)
1 Methane	0.446	0.463	-0.017	8561	9.64700	8.780
2 Ethene	0.686	0.703	-0.017	9856	16.8500	16.825
3 Ethane	0.763	0.780	-0.017	14480	18.0430	20.125

Data File: \\nahstws005\Target\chem\FID-4.i\210730.b\011.D
Date : 30-JUL-2021 11:33
Client ID: RSK-CCV
Sample Info: RSK-CCV;RSK-CCV;2;4

Column phase: Rtx-PLOT

Instrument: FID-4.i

Operator: PL
Column diameter: 0.53



ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\nahstws005\Target\chem\FID-4.i\210730.b\Before\014.D
Lab Smp Id: HS21071204-01 Client Smp ID: HS21071204-01
Inj Date : 30-JUL-2021 12:18
Operator : PL Inst ID: FID-4.i
Smp Info : HS21071204-01;HS21071204-01
Misc Info : ;1;0;1
Comment :
Method : \\NAHSTWS005\Target\chem\FID-4.i\210730.b\RSKNI3.m
Meth Date : 12-Oct-2021 14:02 linh.pham Quant Type: ESTD
Cal Date : 24-JAN-2017 10:15 Cal File: 004.D
Als bottle: 14
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: RSK175.sub
Target Version: 4.14
Processing Host: ALSHSW7104

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)
1 Methane	0.460	0.463	-0.003	1040182	1066.86	1066.861(A)
2 Ethene	0.690	0.703	-0.013	379271	647.485	647.484(A)

QC Flag Legend

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

Data File: \\nahstws005\Target\chem\FID-4.i\210730.b\Before\014.D

Date : 30-JUL-2021 12:18

Client ID: HS21071204-01

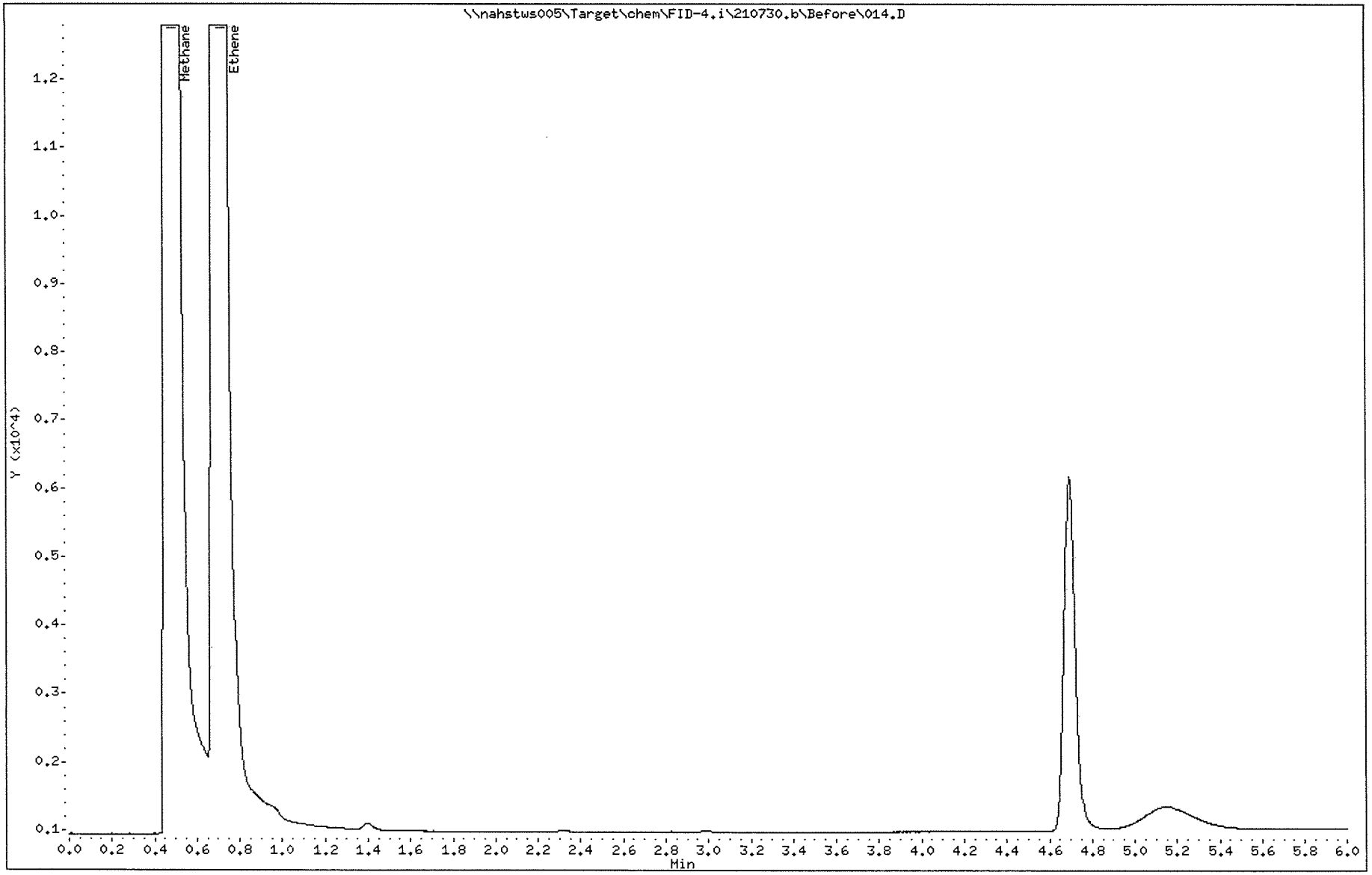
Instrument: FID-4.i

Sample Info: HS21071204-01;HS21071204-01

Operator: PL

Column phase: Rtx-PLOT

Column diameter: 0.53



Data File: \\nahstws005\Target\chem\FID-4.i\210730.b\014.D Page 1
Report Date: 12-Oct-2021 14:08

ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\nahstws005\Target\chem\FID-4.i\210730.b\014.D
Lab Smp Id: HS21071204-01 Client Smp ID: HS21071204-01
Inj Date : 30-JUL-2021 12:18
Operator : PL Inst ID: FID-4.i
Smp Info : HS21071204-01;HS21071204-01
Misc Info : ;1;0;1
Comment :
Method : \\NAHSTWS005\Target\chem\FID-4.i\210730.b\RSKNI3.m
Meth Date : 12-Oct-2021 14:02 linh.pham Quant Type: ESTD
Cal Date : 24-JAN-2017 10:15 Cal File: 004.D
Als bottle: 14
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: RSK175.sub
Target Version: 4.14
Processing Host: ALSHSW7104

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)
1 Methane	0.460	0.463	-0.003	1044473	1071.26	1071.262(A)
2 Ethene	0.690	0.703	-0.013	388348	662.981	662.980(A)

QC Flag Legend

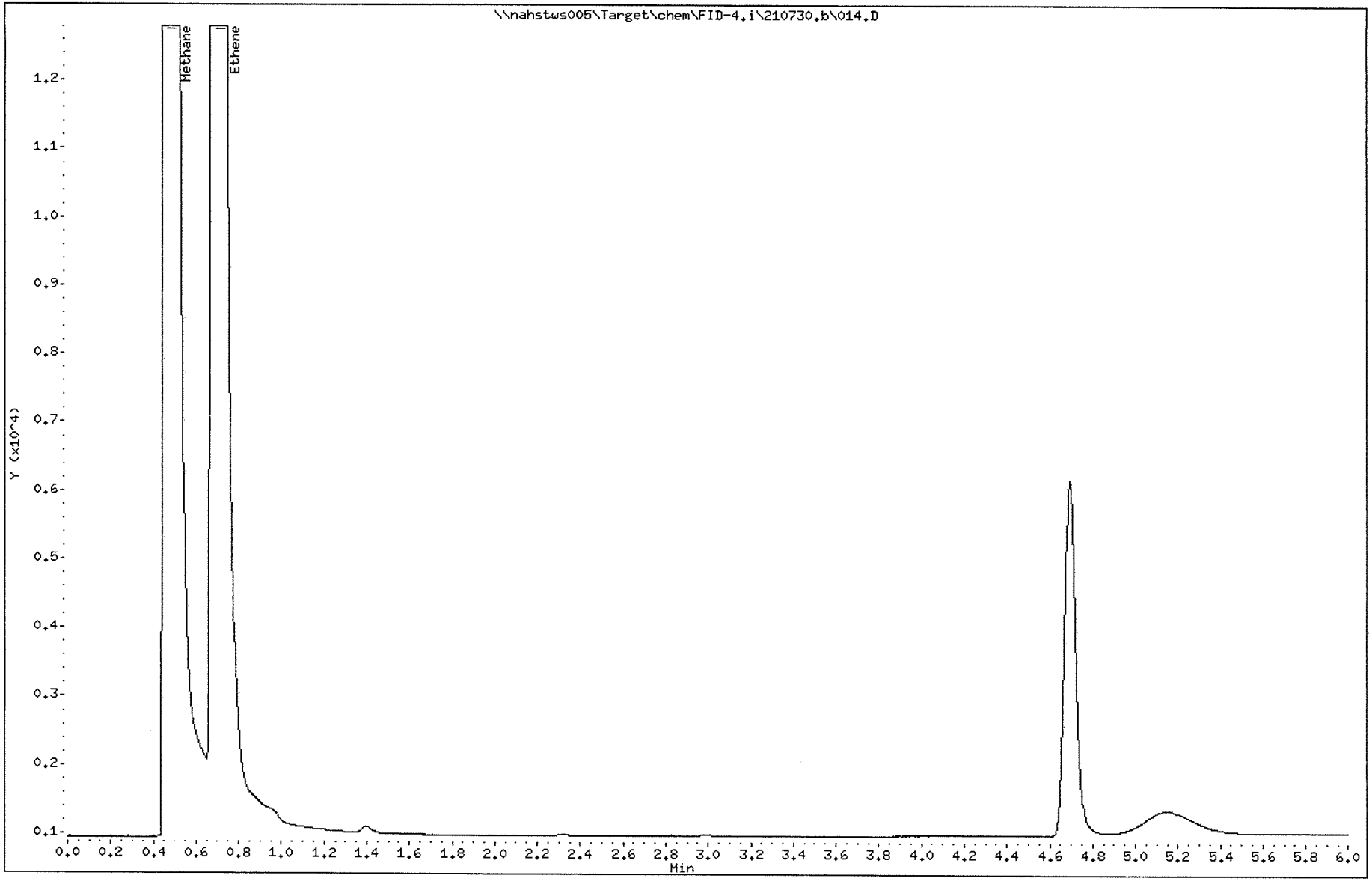
A - Target compound detected but, quantitated amount exceeded maximum amount.

Data File: \\nahstws005\Target\chem\FID-4.i\210730.b\014.D
Date : 30-JUL-2021 12:18
Client ID: HS21071204-01
Sample Info: HS21071204-01;HS21071204-01

Column phase: Rtx-PLOT

Instrument: FID-4.i

Operator: PL
Column diameter: 0.53



ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\nahstws005\Target\chem\FID-4.i\210730.b\Before\015.D
Lab Smp Id: HS21071204-02 Client Smp ID: HS21071204-02
Inj Date : 30-JUL-2021 12:28
Operator : PL Inst ID: FID-4.i
Smp Info : HS21071204-02;HS21071204-02
Misc Info : ;1;0;1
Comment :
Method : \\NAHSTWS005\Target\chem\FID-4.i\210730.b\RSKNI3.m
Meth Date : 12-Oct-2021 14:02 linh.pham Quant Type: ESTD
Cal Date : 24-JAN-2017 10:15 Cal File: 004.D
Als bottle: 15
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: RSK175.sub
Target Version: 4.14
Processing Host: ALSHSW7104

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)
1 Methane	0.460	0.463	-0.003	249395	255.792	255.791(A)

QC Flag Legend

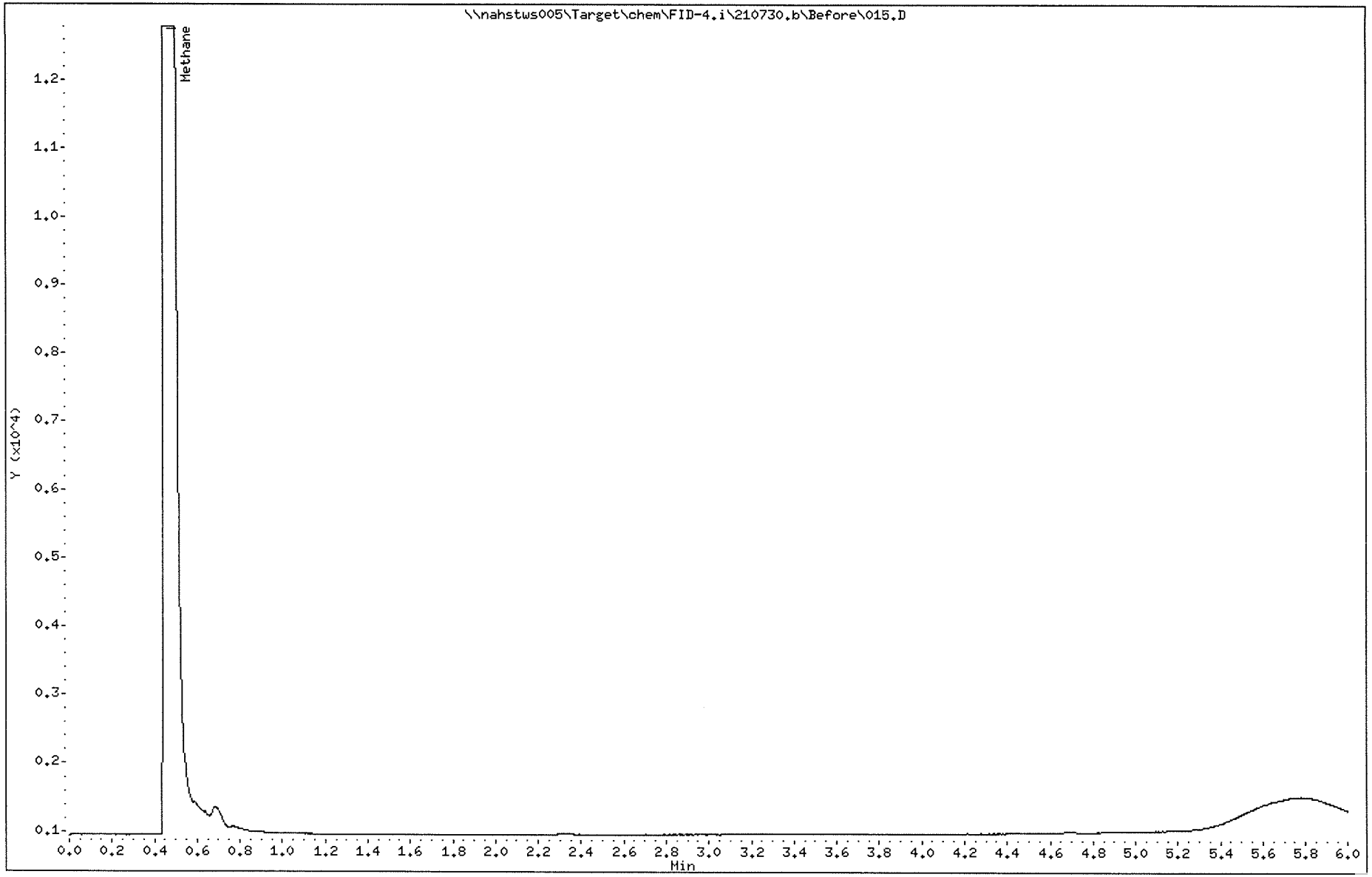
A - Target compound detected but, quantitated amount exceeded maximum amount.

Data File: \\nahstws005\Target\chem\FID-4.i\210730.b\Before\015.D
Date : 30-JUL-2021 12:28
Client ID: HS21071204-02
Sample Info: HS21071204-02;HS21071204-02

Column phase: Rtx-PLOT

Instrument: FID-4.i

Operator: PL
Column diameter: 0.53



Data File: \\nahstws005\Target\chem\FID-4.i\210730.b\015.D
Report Date: 12-Oct-2021 14:08

ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\nahstws005\Target\chem\FID-4.i\210730.b\015.D
Lab Smp Id: HS21071204-02 Client Smp ID: HS21071204-02
Inj Date : 30-JUL-2021 12:28
Operator : PL Inst ID: FID-4.i
Smp Info : HS21071204-02;HS21071204-02
Misc Info : ;1;0;1
Comment :
Method : \\NAHSTWS005\Target\chem\FID-4.i\210730.b\RSKNI3.m
Meth Date : 12-Oct-2021 14:02 linh.pham Quant Type: ESTD
Cal Date : 24-JAN-2017 10:15 Cal File: 004.D
Als bottle: 15
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: RSK175.sub
Target Version: 4.14
Processing Host: ALSHSW7104

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
1 Methane	0.460	0.463	-0.003	248555	254.930	254.930(AM)
2 Ethene	0.683	0.703	-0.020	1572	2.68369	2.683(M)

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.
M - Compound response manually integrated.

Data File: \\nahstws005\Target\chem\FID-4.i\210730.b\015.D

Page 2

Date : 30-JUL-2021 12:28

Client ID: HS21071204-02

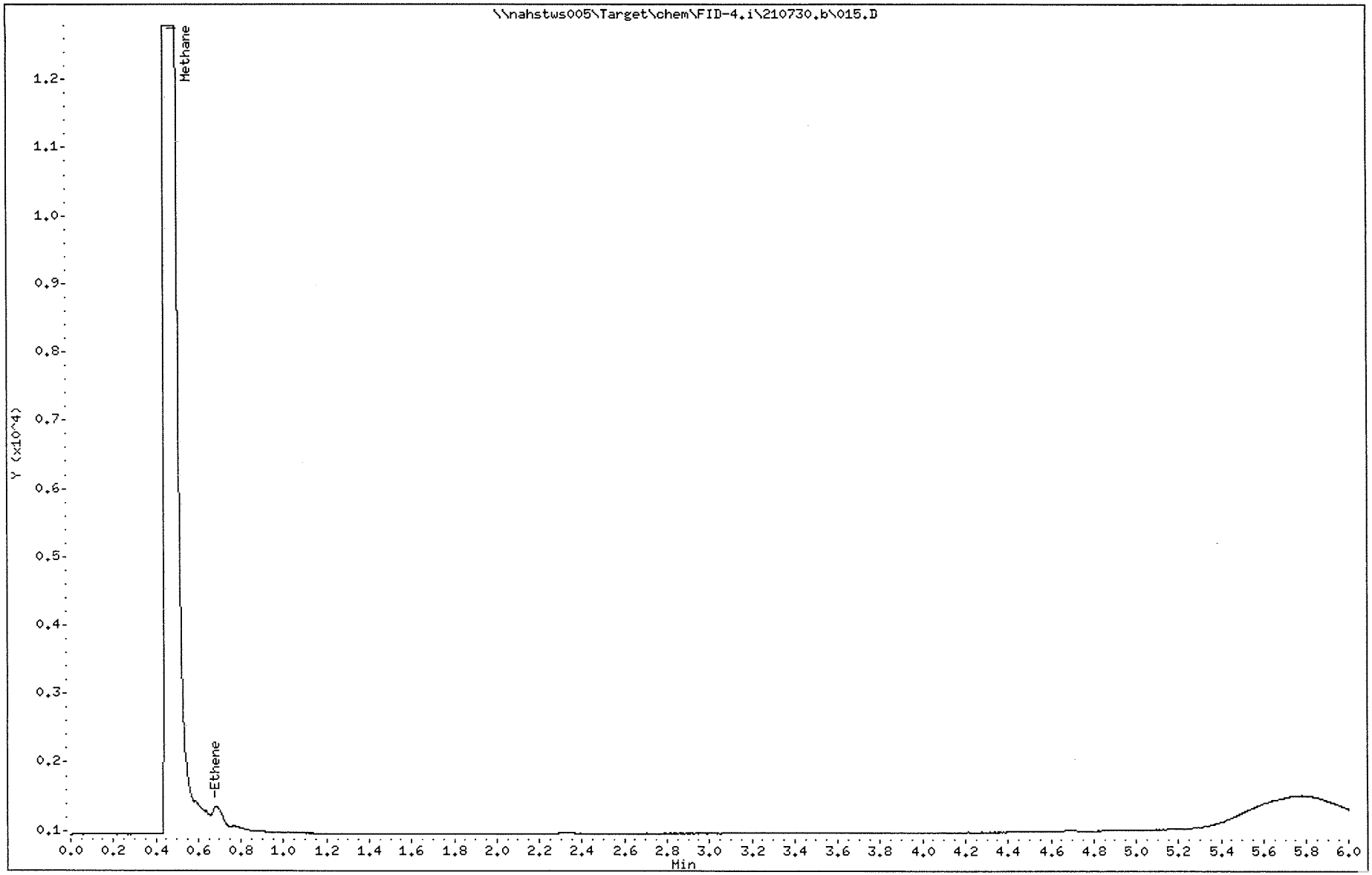
Instrument: FID-4.i

Sample Info: HS21071204-02;HS21071204-02

Operator: PL

Column phase: Rtx-PLOT

Column diameter: 0.53



ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\nahstws005\Target\chem\FID-4.i\210730.b\Before\016.D
Lab Smp Id: HS21071204-03 Client Smp ID: HS21071204-03
Inj Date : 30-JUL-2021 12:39
Operator : PL Inst ID: FID-4.i
Smp Info : HS21071204-03;HS21071204-03
Misc Info : ;1;0;1
Comment :
Method : \\NAHSTWS005\Target\chem\FID-4.i\210730.b\RSKNI3.m
Meth Date : 12-Oct-2021 14:02 linh.pham Quant Type: ESTD
Cal Date : 24-JAN-2017 10:15 Cal File: 004.D
Als bottle: 16
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: RSK175.sub
Target Version: 4.14
Processing Host: ALSHSW7104

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)
1 Methane	0.453	0.463	-0.010	2589991	2656.42	2656.421(A)
2 Ethene	0.686	0.703	-0.017	844404	1441.55	1441.551(A)

QC Flag Legend

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

Data File: \\nahstws005\Target\chem\FID-4.i\210730.b\Before\016.D

Date : 30-JUL-2021 12:39

Client ID: HS21071204-03

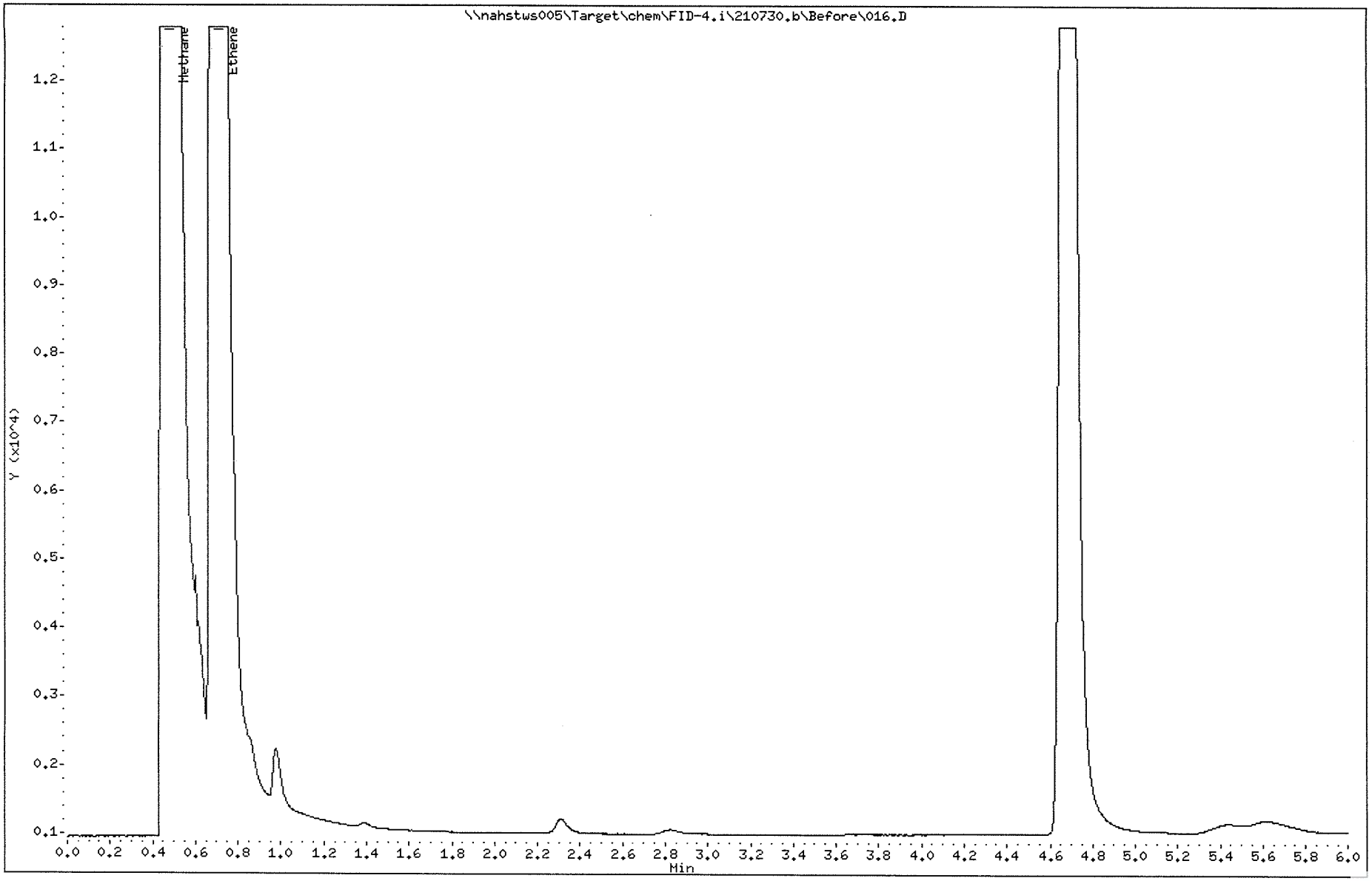
Sample Info: HS21071204-03;HS21071204-03

Column phase: Rtx-PLOT

Instrument: FID-4.i

Operator: PL

Column diameter: 0.53



Data File: \\nahstws005\Target\chem\FID-4.i\210730.b\016.D Page 1
Report Date: 12-Oct-2021 14:08

ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\nahstws005\Target\chem\FID-4.i\210730.b\016.D
Lab Smp Id: HS21071204-03 Client Smp ID: HS21071204-03
Inj Date : 30-JUL-2021 12:39
Operator : PL Inst ID: FID-4.i
Smp Info : HS21071204-03;HS21071204-03
Misc Info : ;1;0;1
Comment :
Method : \\NAHSTWS005\Target\chem\FID-4.i\210730.b\RSKNI3.m
Meth Date : 12-Oct-2021 14:02 linh.pham Quant Type: ESTD
Cal Date : 24-JAN-2017 10:15 Cal File: 004.D
Als bottle: 16
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: RSK175.sub
Target Version: 4.14
Processing Host: ALSHSW7104

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)
1 Methane	0.453	0.463	-0.010	2595792	2662.37	2662.371(A)
2 Ethene	0.686	0.703	-0.017	857067	1463.17	1463.169(A)

QC Flag Legend

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

Data File: \\nahstws005\Target\chem\FID-4.i\210730.b\016.D

Date : 30-JUL-2021 12:39

Client ID: HS21071204-03

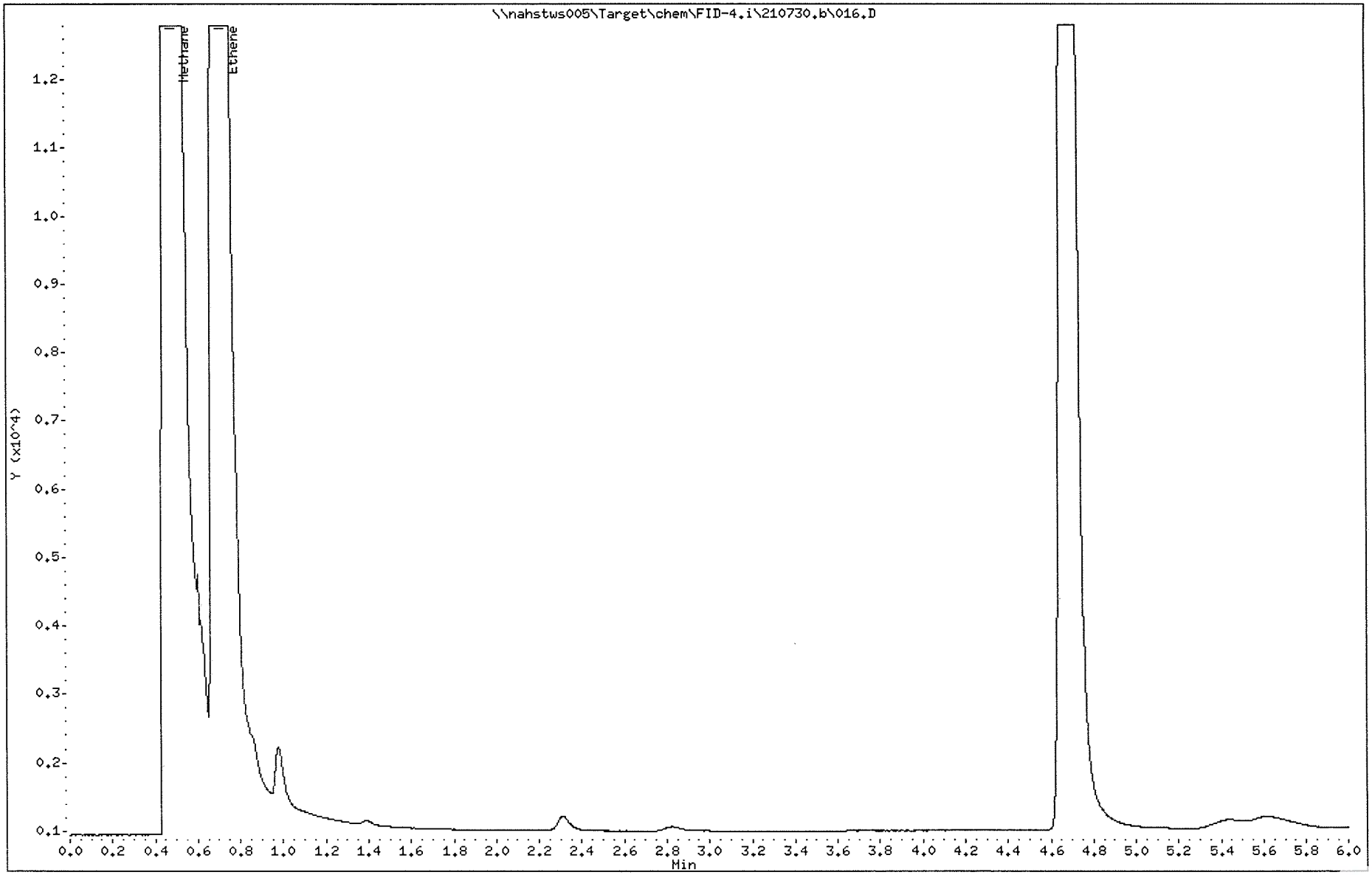
Instrument: FID-4.i

Sample Info: HS21071204-03;HS21071204-03

Operator: PL

Column phase: Rtx-PLOT

Column diameter: 0.53



ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\nahstws005\Target\chem\FID-4.i\210730.b\Before\017.D
Lab Smp Id: HS21071204-08 Client Smp ID: HS21071204-08
Inj Date : 30-JUL-2021 12:57
Operator : PL Inst ID: FID-4.i
Smp Info : HS21071204-08;HS21071204-08
Misc Info : ;1;0;1
Comment :
Method : \\NAHSTWS005\Target\chem\FID-4.i\210730.b\RSKNI3.m
Meth Date : 12-Oct-2021 14:02 linh.pham Quant Type: ESTD
Cal Date : 24-JAN-2017 10:15 Cal File: 004.D
Als bottle: 17
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: RSK175.sub
Target Version: 4.14
Processing Host: ALSHSW7104

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

					CONCENTRATIONS	
					ON-COLUMN	FINAL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/L)	(ug/L)
1 Methane	0.463	0.463	0.000	2633303	2700.84	2700.844(A)

QC Flag Legend

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

Data File: \\nahstws005\Target\chem\FID-4.i\210730.b\Before\017.D

Date : 30-JUL-2021 12:57

Client ID: HS21071204-08

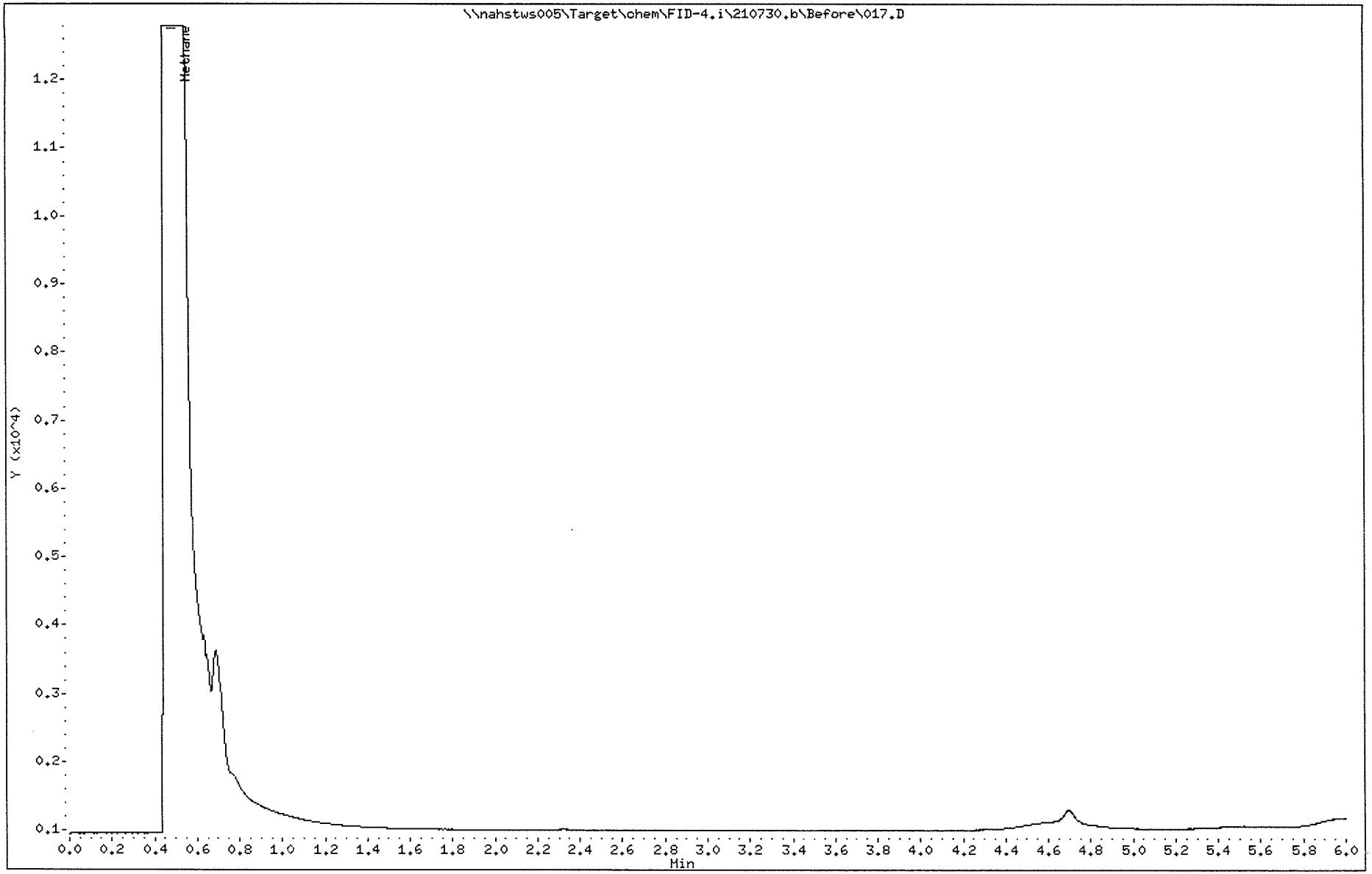
Instrument: FID-4.i

Sample Info: HS21071204-08;HS21071204-08

Operator: PL

Column phase: Rtx-PLOT

Column diameter: 0.53



Data File: \\nahstws005\Target\chem\FID-4.i\210730.b\017.D Page 1
Report Date: 12-Oct-2021 14:08

ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\nahstws005\Target\chem\FID-4.i\210730.b\017.D
Lab Smp Id: HS21071204-08 Client Smp ID: HS21071204-08
Inj Date : 30-JUL-2021 12:57
Operator : PL Inst ID: FID-4.i
Smp Info : HS21071204-08;HS21071204-08
Misc Info : ;1;0;1
Comment :
Method : \\NAHSTWS005\Target\chem\FID-4.i\210730.b\RSKNI3.m
Meth Date : 12-Oct-2021 14:02 linh.pham Quant Type: ESTD
Cal Date : 24-JAN-2017 10:15 Cal File: 004.D
Als bottle: 17
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: RSK175.sub
Target Version: 4.14
Processing Host: ALSHSW7104

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)
1 Methane	0.463	0.463	0.000	2626134	2693.49	2693.491(AM)
2 Ethene	0.690	0.703	-0.013	9368	15.9929	15.992(M)

QC Flag Legend

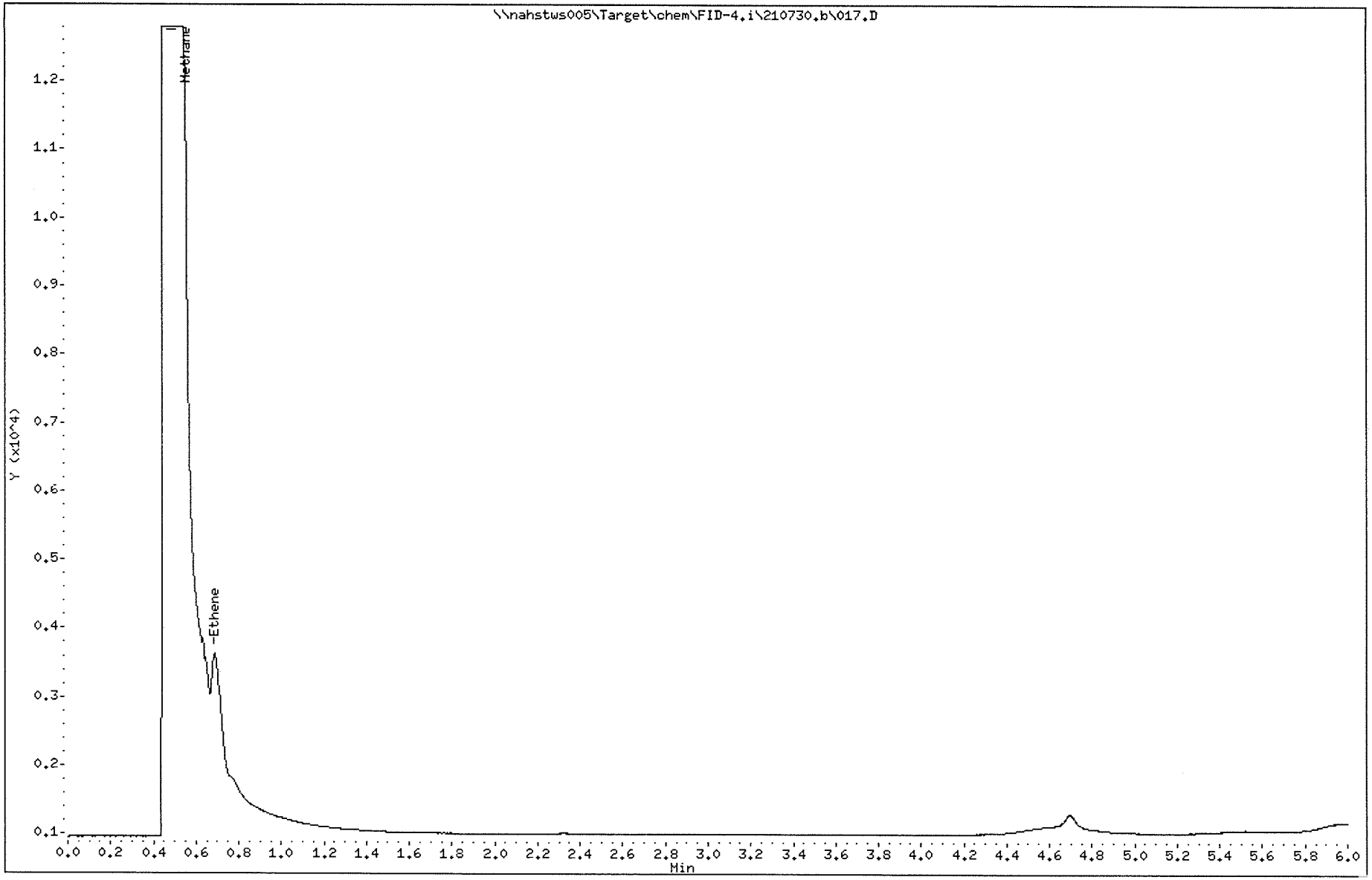
A - Target compound detected but, quantitated amount exceeded maximum amount.
M - Compound response manually integrated.

Data File: \\nahstws005\Target\chem\FID-4.i\210730.b\017.D
Date : 30-JUL-2021 12:57
Client ID: HS21071204-08
Sample Info: HS21071204-08;HS21071204-08

Column phase: Rtx-PLOT

Instrument: FID-4.i

Operator: PL
Column diameter: 0.53



ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\nahstws005\Target\chem\FID-4.i\210730.b\Before\019.D
Lab Smp Id: HS21071204-01 Client Smp ID: HS21071204-01
Inj Date : 30-JUL-2021 13:51
Operator : PL Inst ID: FID-4.i
Smp Info : HS21071204-01;HS21071204-01
Misc Info : ;1;0;100
Comment :
Method : \\NAHSTWS005\Target\chem\FID-4.i\210730.b\RSKNI3.m
Meth Date : 12-Oct-2021 14:02 linh.pham Quant Type: ESTD
Cal Date : 24-JAN-2017 10:15 Cal File: 004.D
Als bottle: 19
Dil Factor: 100.00000
Integrator: Falcon Compound Sublist: RSK175.sub
Target Version: 4.14
Processing Host: ALSHSW7104

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)
1 Methane	0.473	0.463	0.010	11021	11.3037	1130.367
2 Ethene	0.710	0.703	0.007	3984	6.80142	680.141

Data File: \\nahstws005\Target\chem\FID-4.i\210730.b\Before\019.D

Date : 30-JUL-2021 13:51

Client ID: HS21071204-01

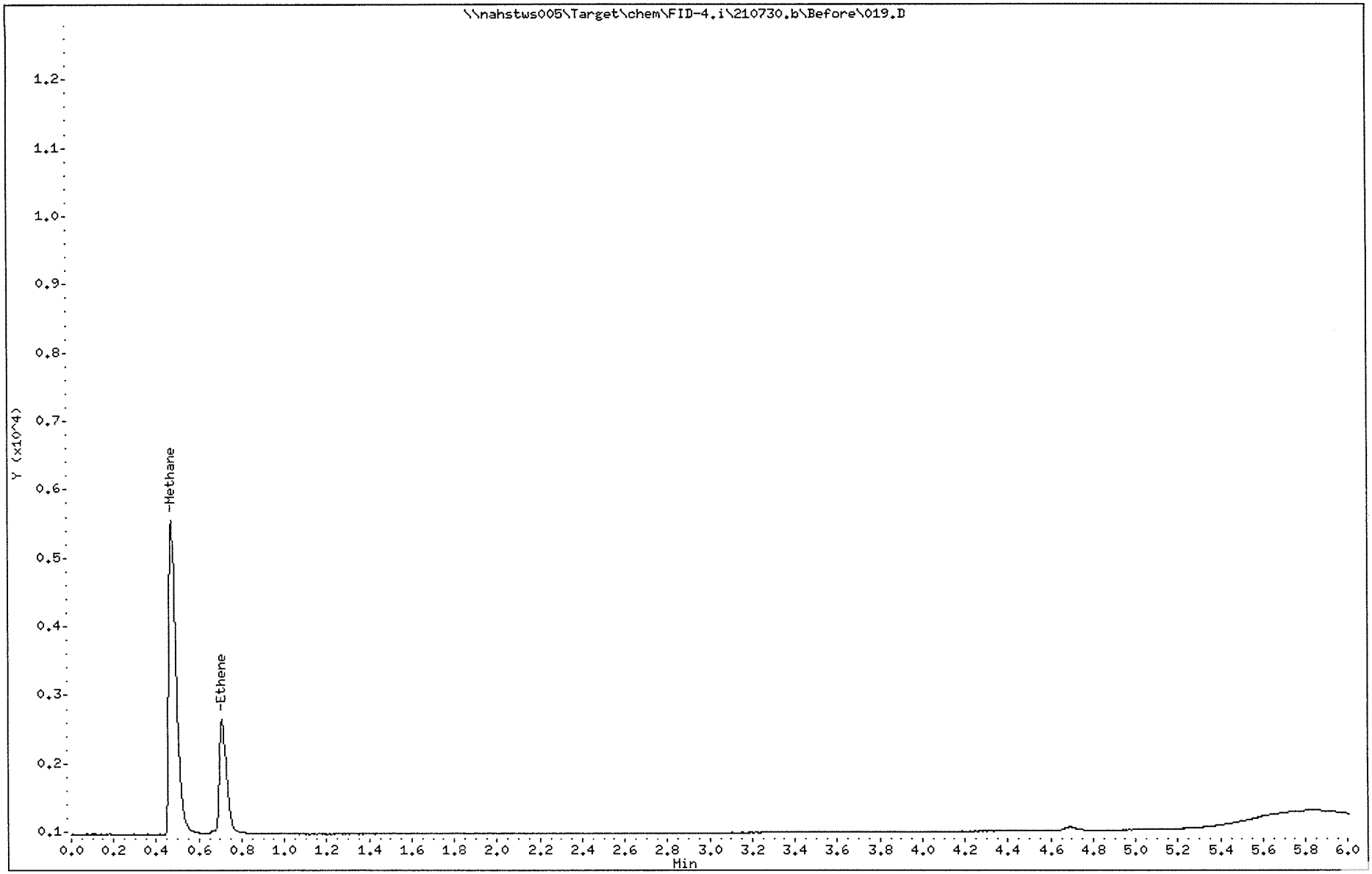
Instrument: FID-4.i

Sample Info: HS21071204-01;HS21071204-01

Operator: PL

Column phase: Rtx-PLOT

Column diameter: 0.53



ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\nahstws005\Target\chem\FID-4.i\210730.b\019.D
Lab Smp Id: HS21071204-01 Client Smp ID: HS21071204-01
Inj Date : 30-JUL-2021 13:51
Operator : PL Inst ID: FID-4.i
Smp Info : HS21071204-01;HS21071204-01
Misc Info : ;1;0;100
Comment :
Method : \\NAHSTWS005\Target\chem\FID-4.i\210730.b\RSKNI3.m
Meth Date : 12-Oct-2021 14:02 linh.pham Quant Type: ESTD
Cal Date : 24-JAN-2017 10:15 Cal File: 004.D
Als bottle: 19
Dil Factor: 100.00000
Integrator: Falcon Compound Sublist: RSK175.sub
Target Version: 4.14
Processing Host: ALSHSW7104

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

					CONCENTRATIONS	
					ON-COLUMN	FINAL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/L)	(ug/L)
1 Methane	0.473	0.463	0.010	11091	11.3755	1137.547
2 Ethene	0.710	0.703	0.007	4109	7.01481	701.481

Data File: \\nahstws005\Target\chem\FID-4.i\210730.b\019.D

Date : 30-JUL-2021 13:51

Client ID: HS21071204-01

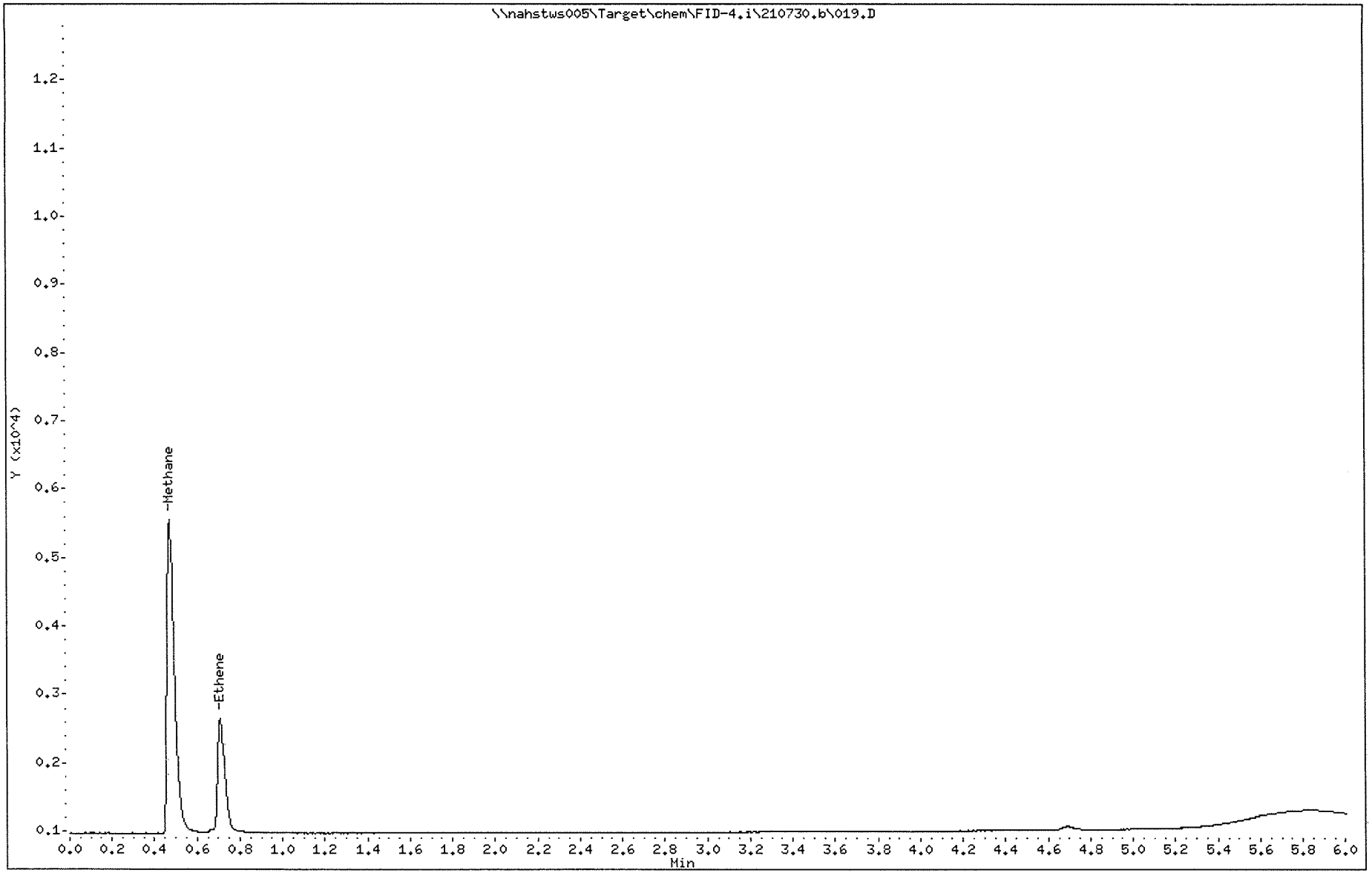
Instrument: FID-4.i

Sample Info: HS21071204-01;HS21071204-01

Operator: PL

Column phase: Rtx-PLOT

Column diameter: 0.53



ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\nahstws005\Target\chem\FID-4.i\210730.b\Before\020.D
Lab Smp Id: HS21071204-02 Client Smp ID: HS21071204-02
Inj Date : 30-JUL-2021 14:00
Operator : PL Inst ID: FID-4.i
Smp Info : HS21071204-02;HS21071204-02
Misc Info : ;1;0;10
Comment :
Method : \\NAHSTWS005\Target\chem\FID-4.i\210730.b\RSKNI3.m
Meth Date : 12-Oct-2021 14:02 linh.pham Quant Type: ESTD
Cal Date : 24-JAN-2017 10:15 Cal File: 004.D
Als bottle: 20
Dil Factor: 10.00000
Integrator: Falcon Compound Sublist: RSK175.sub
Target Version: 4.14
Processing Host: ALSHSW7104

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

					CONCENTRATIONS	
					ON-COLUMN	FINAL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/L)	(ug/L)
1 Methane	0.470	0.463	0.007	25067	25.7099	257.099
2 Ethene	0.726	0.703	0.023	405	0.69141	6.914

Data File: \\nahstws005\Target\chem\FID-4.i\210730.b\Before\020.D

Date : 30-JUL-2021 14:00

Client ID: HS21071204-02

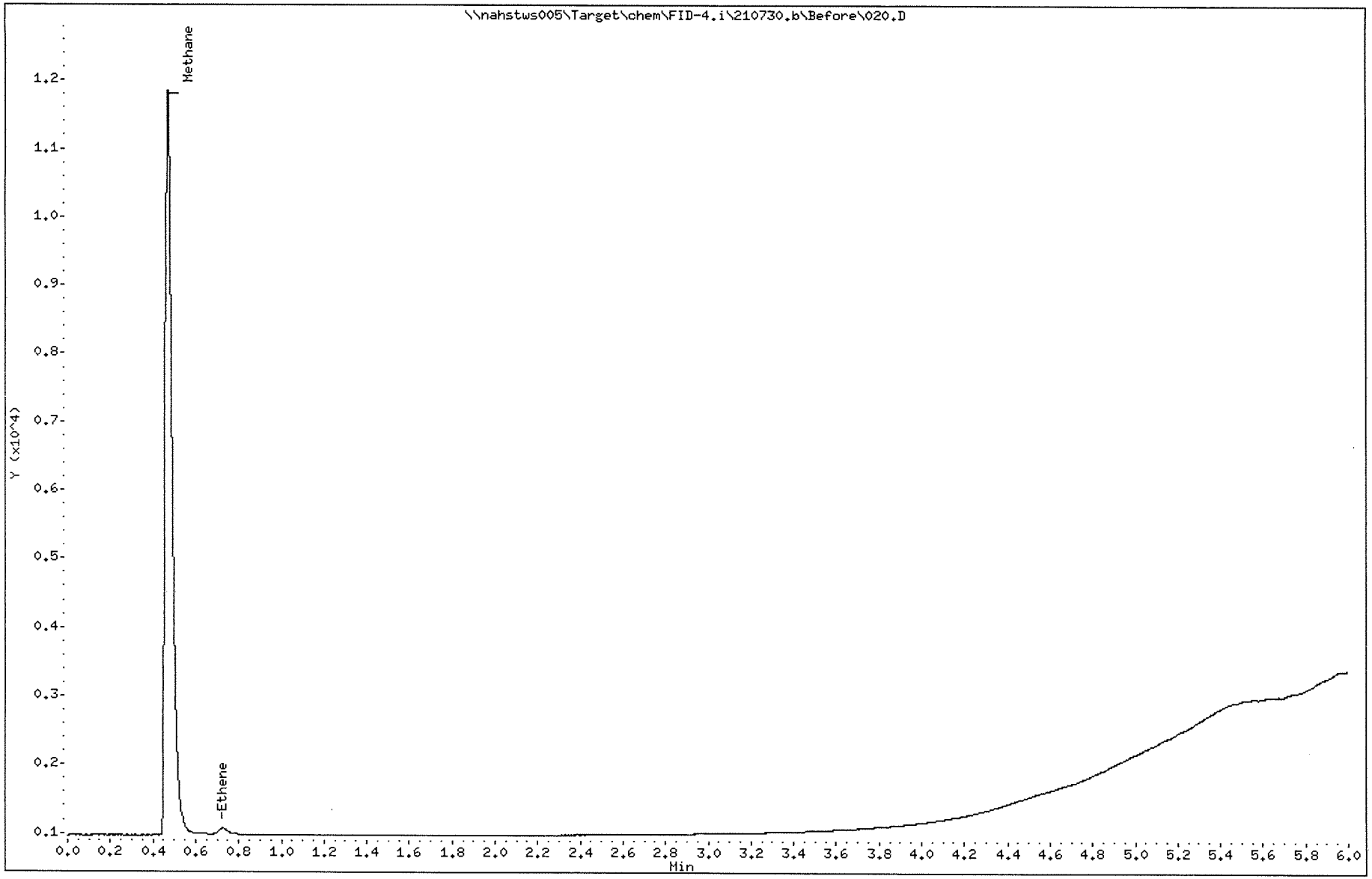
Instrument: FID-4.i

Sample Info: HS21071204-02;HS21071204-02

Operator: PL

Column phase: Rtx-PLOT

Column diameter: 0.53



Data File: \\nahstws005\Target\chem\FID-4.i\210730.b\020.D Page 1
Report Date: 12-Oct-2021 14:41

ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\nahstws005\Target\chem\FID-4.i\210730.b\020.D
Lab Smp Id: HS21071204-02 Client Smp ID: HS21071204-02
Inj Date : 30-JUL-2021 14:00
Operator : PL Inst ID: FID-4.i
Smp Info : HS21071204-02;HS21071204-02
Misc Info : ;1;0;10
Comment :
Method : \\NAHSTWS005\Target\chem\FID-4.i\210730.b\RSKNI3.m
Meth Date : 12-Oct-2021 14:02 linh.pham Quant Type: ESTD
Cal Date : 24-JAN-2017 10:15 Cal File: 004.D
Als bottle: 20
Dil Factor: 10.00000
Integrator: Falcon Compound Sublist: RSK175.sub
Target Version: 4.14
Processing Host: ALSHSW7104

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

					CONCENTRATIONS	
					ON-COLUMN	FINAL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/L)	(ug/L)
1 Methane	0.470	0.463	0.007	25097	25.7407	257.407

Data File: \\nahstws005\Target\chem\FID-4.i\210730.b\020.D

Date : 30-JUL-2021 14:00

Client ID: HS21071204-02

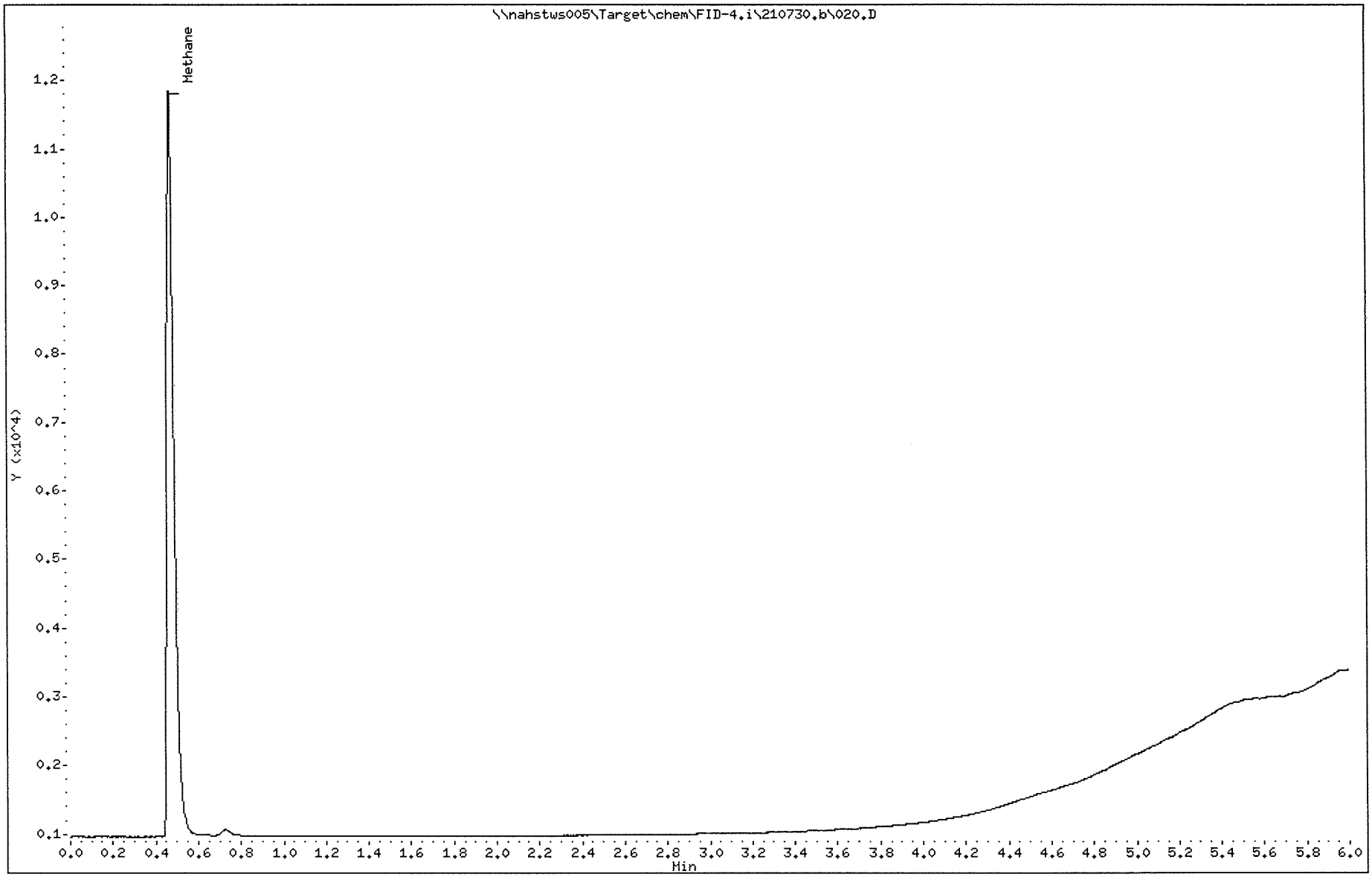
Instrument: FID-4.i

Sample Info: HS21071204-02;HS21071204-02

Operator: PL

Column phase: Rtx-PLOT

Column diameter: 0.53



ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\nahstws005\Target\chem\FID-4.i\210730.b\Before\021.D
Lab Smp Id: HS21071204-03 Client Smp ID: HS21071204-03
Inj Date : 30-JUL-2021 14:08
Operator : PL Inst ID: FID-4.i
Smp Info : HS21071204-03;HS21071204-03
Misc Info : ;1;0;100
Comment :
Method : \\NAHSTWS005\Target\chem\FID-4.i\210730.b\RSKNI3.m
Meth Date : 12-Oct-2021 14:02 linh.pham Quant Type: ESTD
Cal Date : 24-JAN-2017 10:15 Cal File: 004.D
Als bottle: 21
Dil Factor: 100.00000
Integrator: Falcon Compound Sublist: RSK175.sub
Target Version: 4.14
Processing Host: ALSHSW7104

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)
1 Methane	0.473	0.463	0.010	28455	29.1848	2918.484
2 Ethene	0.710	0.703	0.007	9440	16.1158	1611.580

Data File: \\nahstws005\Target\chem\FID-4.i\210730.b\Before\021.D

Date : 30-JUL-2021 14:08

Client ID: HS21071204-03

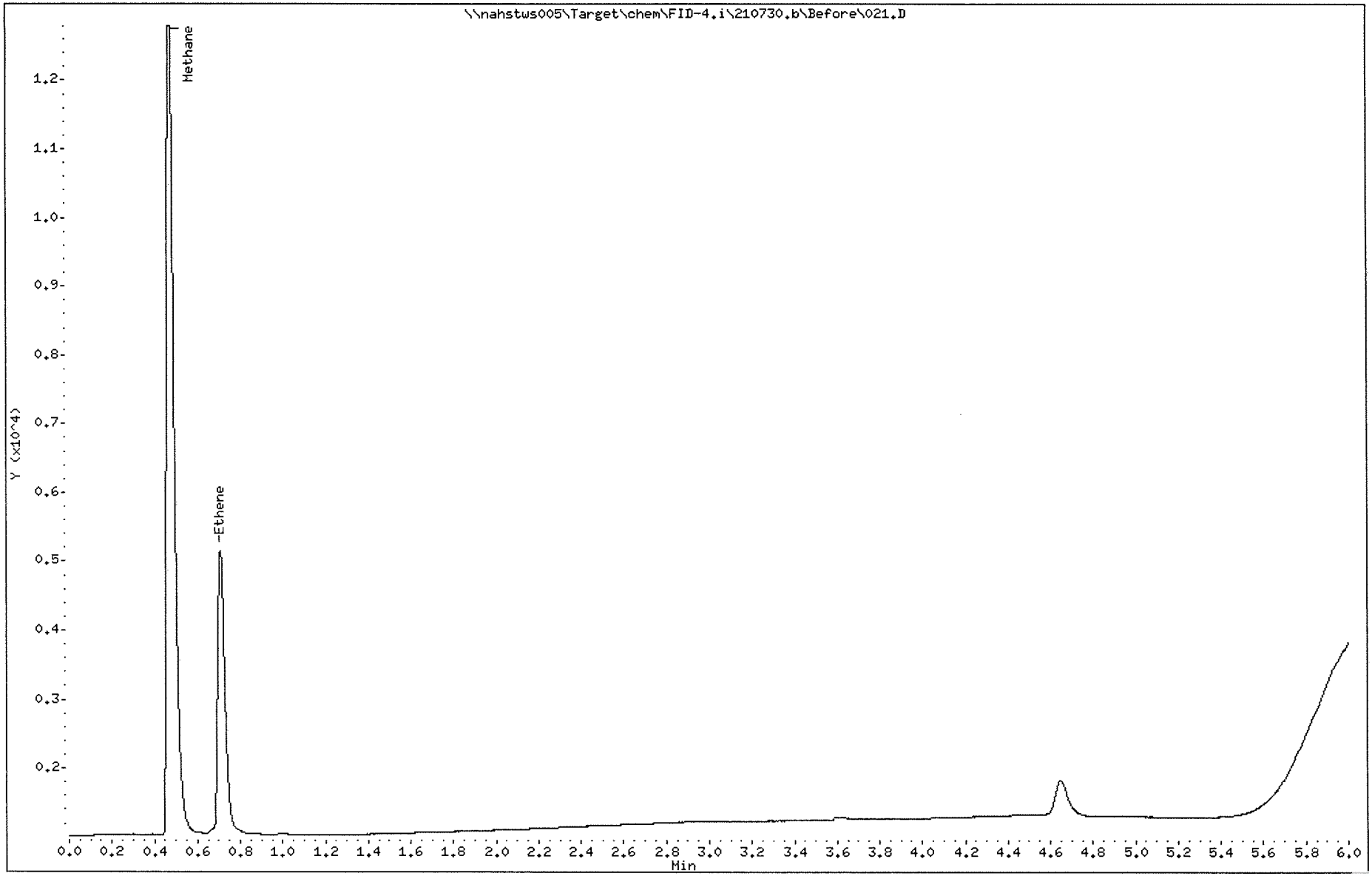
Instrument: FID-4.i

Sample Info: HS21071204-03;HS21071204-03

Operator: PL

Column phase: Rtx-PLOT

Column diameter: 0.53



ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\nahstws005\Target\chem\FID-4.i\210730.b\021.D
Lab Smp Id: HS21071204-03 Client Smp ID: HS21071204-03
Inj Date : 30-JUL-2021 14:08
Operator : PL Inst ID: FID-4.i
Smp Info : HS21071204-03;HS21071204-03
Misc Info : ;1;0;100
Comment :
Method : \\NAHSTWS005\Target\chem\FID-4.i\210730.b\RSKNI3.m
Meth Date : 12-Oct-2021 14:02 linh.pham Quant Type: ESTD
Cal Date : 24-JAN-2017 10:15 Cal File: 004.D
Als bottle: 21
Dil Factor: 100.00000
Integrator: Falcon Compound Sublist: RSK175.sub
Target Version: 4.14
Processing Host: ALSHSW7104

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

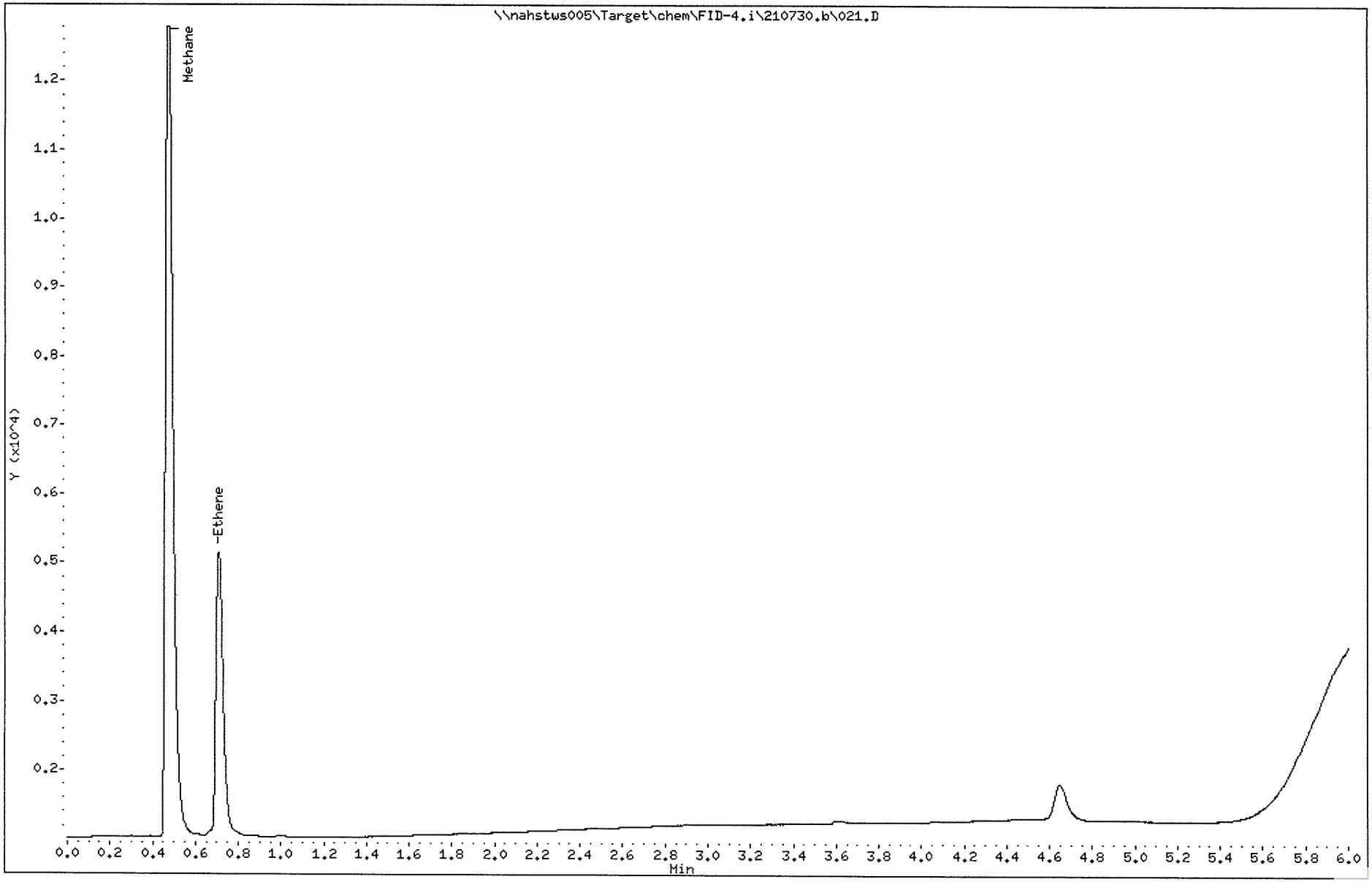
					CONCENTRATIONS	
					ON-COLUMN	FINAL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/L)	(ug/L)
1 Methane	0.473	0.463	0.010	28548	29.2802	2928.023
2 Ethene	0.710	0.703	0.007	9607	16.4009	1640.090

Data File: \\nahstws005\Target\chem\FID-4.i\210730.b\021.D
Date : 30-JUL-2021 14:08
Client ID: HS21071204-03
Sample Info: HS21071204-03;HS21071204-03

Column phase: Rtx-PLOT

Instrument: FID-4.i

Operator: PL
Column diameter: 0.53



ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\nahstws005\Target\chem\FID-4.i\210730.b\Before\022.D
Lab Smp Id: RSK-CCV Client Smp ID: RSK-CCV
Inj Date : 30-JUL-2021 14:30
Operator : PL Inst ID: FID-4.i
Smp Info : RSK-CCV;RSK-CCV;2;4
Misc Info : ;1;0;1
Comment   :
Method   : \\NAHSTWS005\Target\chem\FID-4.i\210730.b\RSKNI3.m
Meth Date : 12-Oct-2021 14:02 linh.pham Quant Type: ESTD
Cal Date : 24-JAN-2017 10:15 Cal File: 004.D
Als bottle: 22 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: RSK175.sub
Target Version: 4.14
Processing Host: ALSHSW7104

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

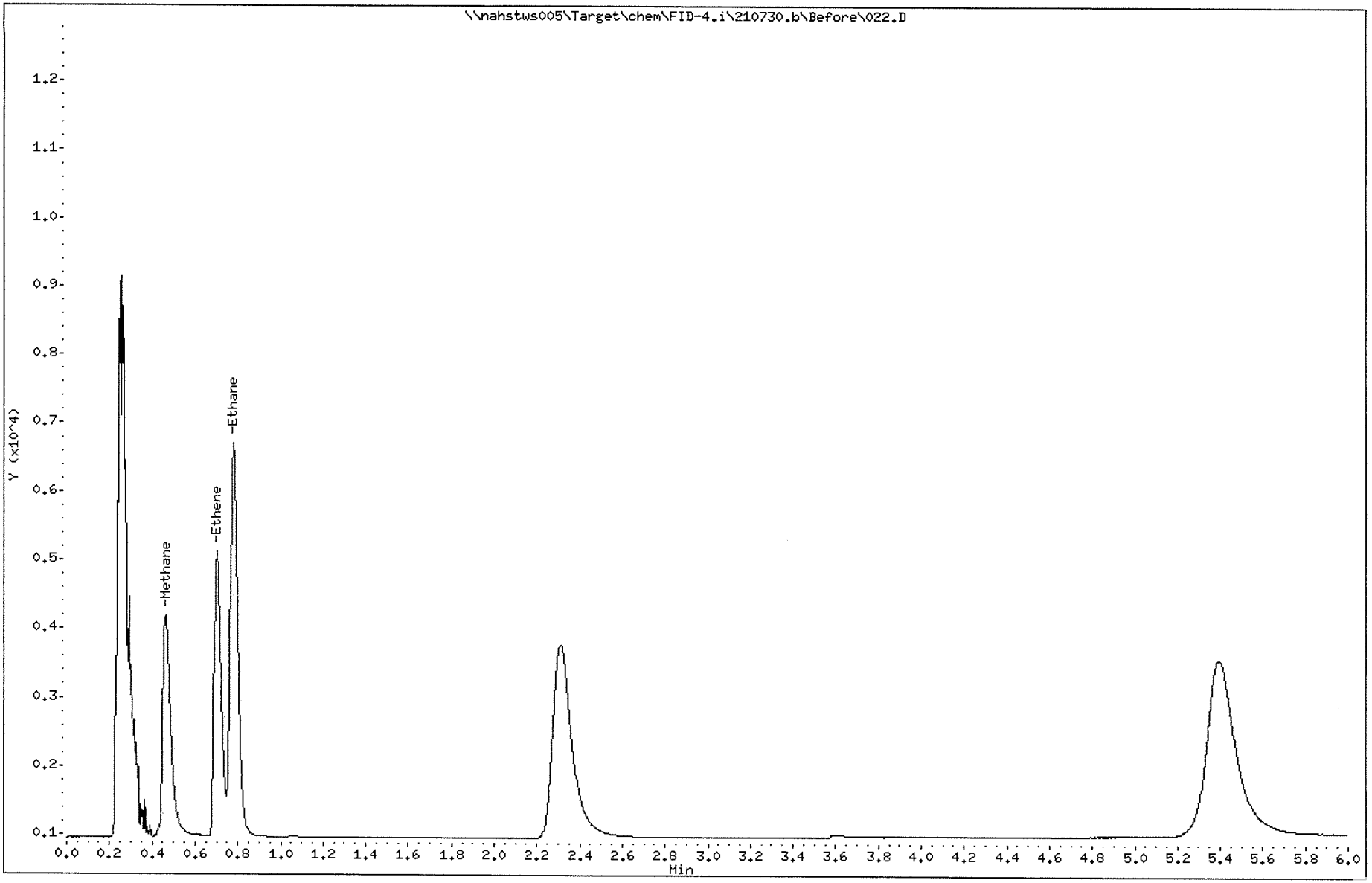
					AMOUNTS	
					CAL-AMT	ON-COL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/L)	(ug/L)
1 Methane	0.463	0.463	0.000	8466	9.64700	8.683
2 Ethene	0.700	0.703	-0.003	9375	16.8500	16.004
3 Ethane	0.780	0.780	0.000	14128	18.0430	19.636

Data File: \\nahstws005\Target\chem\FID-4.i\210730.b\Before\022.D
Date : 30-JUL-2021 14:30
Client ID: RSK-CCV
Sample Info: RSK-CCV;RSK-CCV;2;4

Column phase: Rtx-PLOT

Instrument: FID-4.i

Operator: PL
Column diameter: 0.53



Data File: \\nahstws005\Target\chem\FID-4.i\210730.b\022.D Page 1
Report Date: 12-Oct-2021 14:08

ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\nahstws005\Target\chem\FID-4.i\210730.b\022.D
Lab Smp Id: RSK-CCV Client Smp ID: RSK-CCV
Inj Date : 30-JUL-2021 14:30
Operator : PL Inst ID: FID-4.i
Smp Info : RSK-CCV;RSK-CCV;2;4
Misc Info : ;1;0;1
Comment :
Method : \\NAHSTWS005\Target\chem\FID-4.i\210730.b\RSKNI3.m
Meth Date : 12-Oct-2021 14:02 linh.pham Quant Type: ESTD
Cal Date : 24-JAN-2017 10:15 Cal File: 004.D
Als bottle: 22 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: RSK175.sub
Target Version: 4.14
Processing Host: ALSHSW7104

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

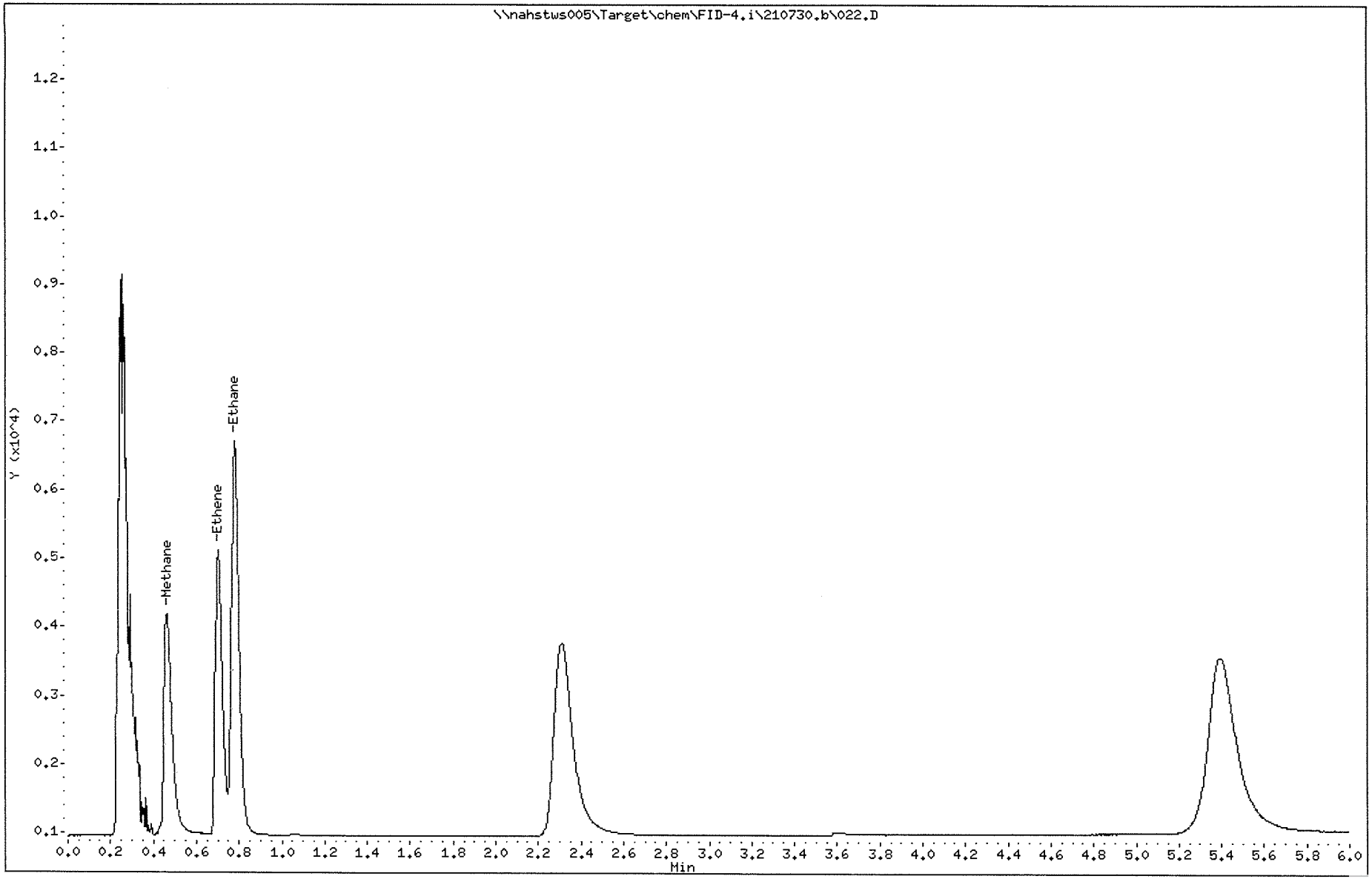
					AMOUNTS	
					CAL-AMT	ON-COL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/L)	(ug/L)
1 Methane	0.463	0.463	0.000	8577	9.64700	8.796
2 Ethene	0.700	0.703	-0.003	9516	16.8500	16.245
3 Ethane	0.780	0.780	0.000	14364	18.0430	19.964

Data File: \\nahstws005\Target\chem\FID-4.i\210730.b\022.D
Date : 30-JUL-2021 14:30
Client ID: RSK-CCV
Sample Info: RSK-CCV;RSK-CCV;2;4

Column phase: Rtx-PLOT

Instrument: FID-4.i

Operator: PL
Column diameter: 0.53



Data File: \\nahstws005\Target\chem\FID-4.i\210730.b\Before\023.D Page 1
Report Date: 12-Oct-2021 14:11

ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\nahstws005\Target\chem\FID-4.i\210730.b\Before\023.D
Lab Smp Id: HS21071204-08 Client Smp ID: HS21071204-08
Inj Date : 30-JUL-2021 14:38
Operator : PL Inst ID: FID-4.i
Smp Info : HS21071204-08;HS21071204-08
Misc Info : ;1;0;100
Comment :
Method : \\NAHSTWS005\Target\chem\FID-4.i\210730.b\RSKNI3.m
Meth Date : 12-Oct-2021 14:02 linh.pham Quant Type: ESTD
Cal Date : 24-JAN-2017 10:15 Cal File: 004.D
Als bottle: 23
Dil Factor: 100.00000
Integrator: Falcon Compound Sublist: RSK175.sub
Target Version: 4.14
Processing Host: ALSHSW7104

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

					CONCENTRATIONS	
					ON-COLUMN	FINAL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/L)	(ug/L)
1 Methane	0.470	0.463	0.007	21378	21.9263	2192.632

Data File: \\nahstws005\Target\chem\FID-4.i\210730.b\Before\023.D
Date : 30-JUL-2021 14:38
Client ID: HS21071204-08
Sample Info: HS21071204-08;HS21071204-08

Column phase: Rtx-PLOT

Instrument: FID-4.i

Operator: PL
Column diameter: 0.53



Data File: \\nahstws005\Target\chem\FID-4.i\210730.b\023.D Page 1
Report Date: 12-Oct-2021 14:08

ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\nahstws005\Target\chem\FID-4.i\210730.b\023.D
Lab Smp Id: HS21071204-08 Client Smp ID: HS21071204-08
Inj Date : 30-JUL-2021 14:38
Operator : PL Inst ID: FID-4.i
Smp Info : HS21071204-08;HS21071204-08
Misc Info : ;1;0;100
Comment :
Method : \\NAHSTWS005\Target\chem\FID-4.i\210730.b\RSKNI3.m
Meth Date : 12-Oct-2021 14:02 linh.pham Quant Type: ESTD
Cal Date : 24-JAN-2017 10:15 Cal File: 004.D
Als bottle: 23
Dil Factor: 100.00000
Integrator: Falcon Compound Sublist: RSK175.sub
Target Version: 4.14
Processing Host: ALSHSW7104

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

					CONCENTRATIONS	
					ON-COLUMN	FINAL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/L)	(ug/L)
1 Methane	0.470	0.463	0.007	21199	21.7427	2174.273 (M)

QC Flag Legend

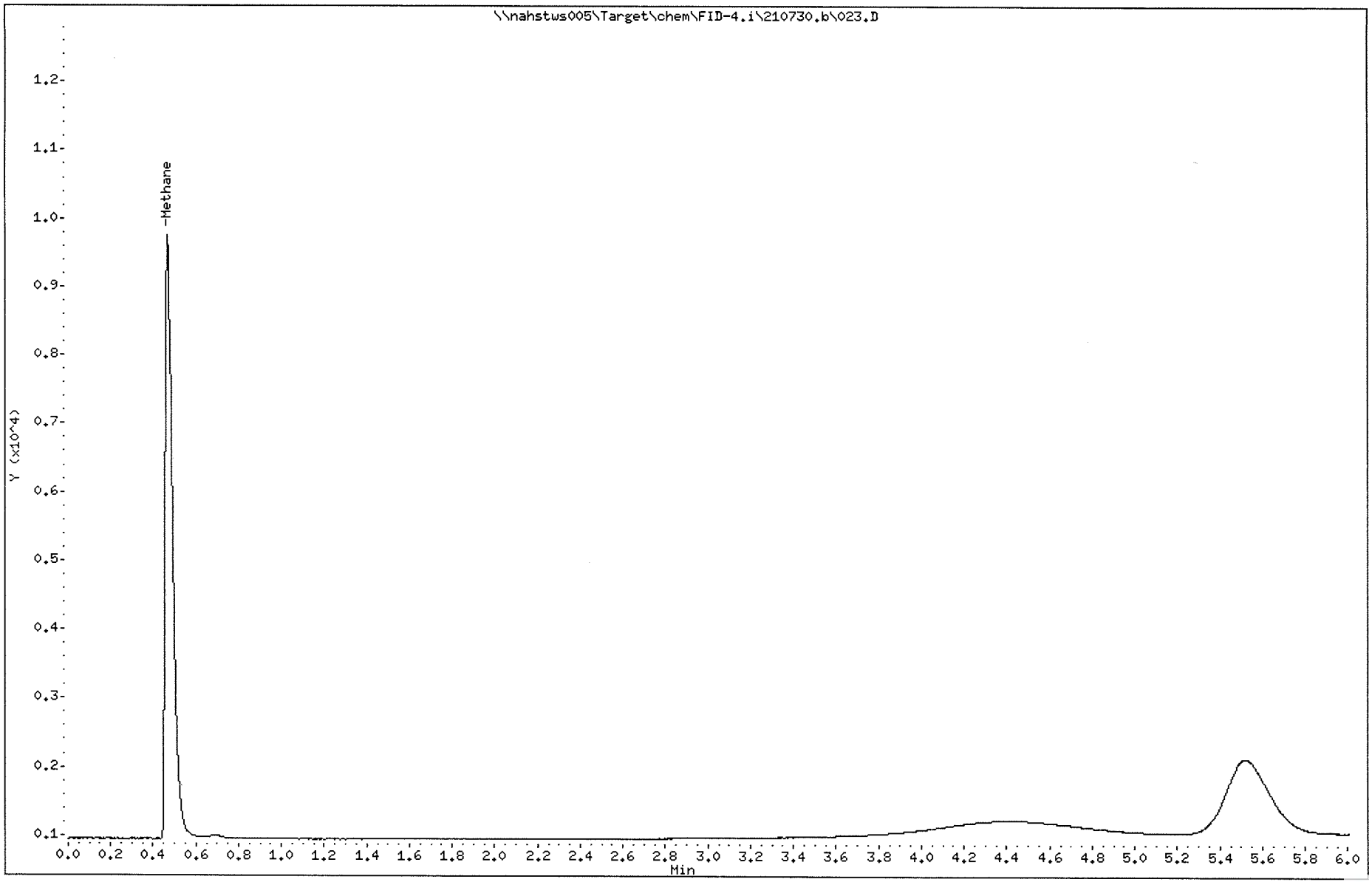
M - Compound response manually integrated.

Data File: \\nahstws005\Target\chem\FID-4.i\210730.b\023.D
Date : 30-JUL-2021 14:38
Client ID: HS21071204-08
Sample Info: HS21071204-08;HS21071204-08

Column phase: Rtx-PLOT

Instrument: FID-4.i

Operator: PL
Column diameter: 0.53



Data File: \\nahstws005\Target\chem\FID-4.i\210730.b\Before\024.D Page 1
Report Date: 12-Oct-2021 14:11

ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\nahstws005\Target\chem\FID-4.i\210730.b\Before\024.D
Lab Smp Id: HS21071204-02MS Client Smp ID: HS21071204-02MS
Inj Date : 30-JUL-2021 14:47
Operator : PL Inst ID: FID-4.i
Smp Info : HS21071204-02MS;HS21071204-02MS
Misc Info : ;1;0;1
Comment   :
Method   : \\NAHSTWS005\Target\chem\FID-4.i\210730.b\RSKNI3.m
Meth Date : 12-Oct-2021 14:02 linh.pham Quant Type: ESTD
Cal Date : 24-JAN-2017 10:15 Cal File: 004.D
Als bottle: 24 QC Sample: MS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: RSK175.sub
Target Version: 4.14
Processing Host: ALSHSW7104

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)
1 Methane	0.463	0.463	0.000	199929	205.057	205.056(AR)
2 Ethene	0.693	0.703	-0.010	6130	10.4650	10.465(R)
3 Ethane	0.773	0.780	-0.007	6915	9.61098	9.610(R)

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.
R - Spike/Surrogate failed recovery limits.

Data File: \\nahstws005\Target\chem\FID-4.i\210730.b\Before\024.D

Date : 30-JUL-2021 14:47

Client ID: HS21071204-02MS

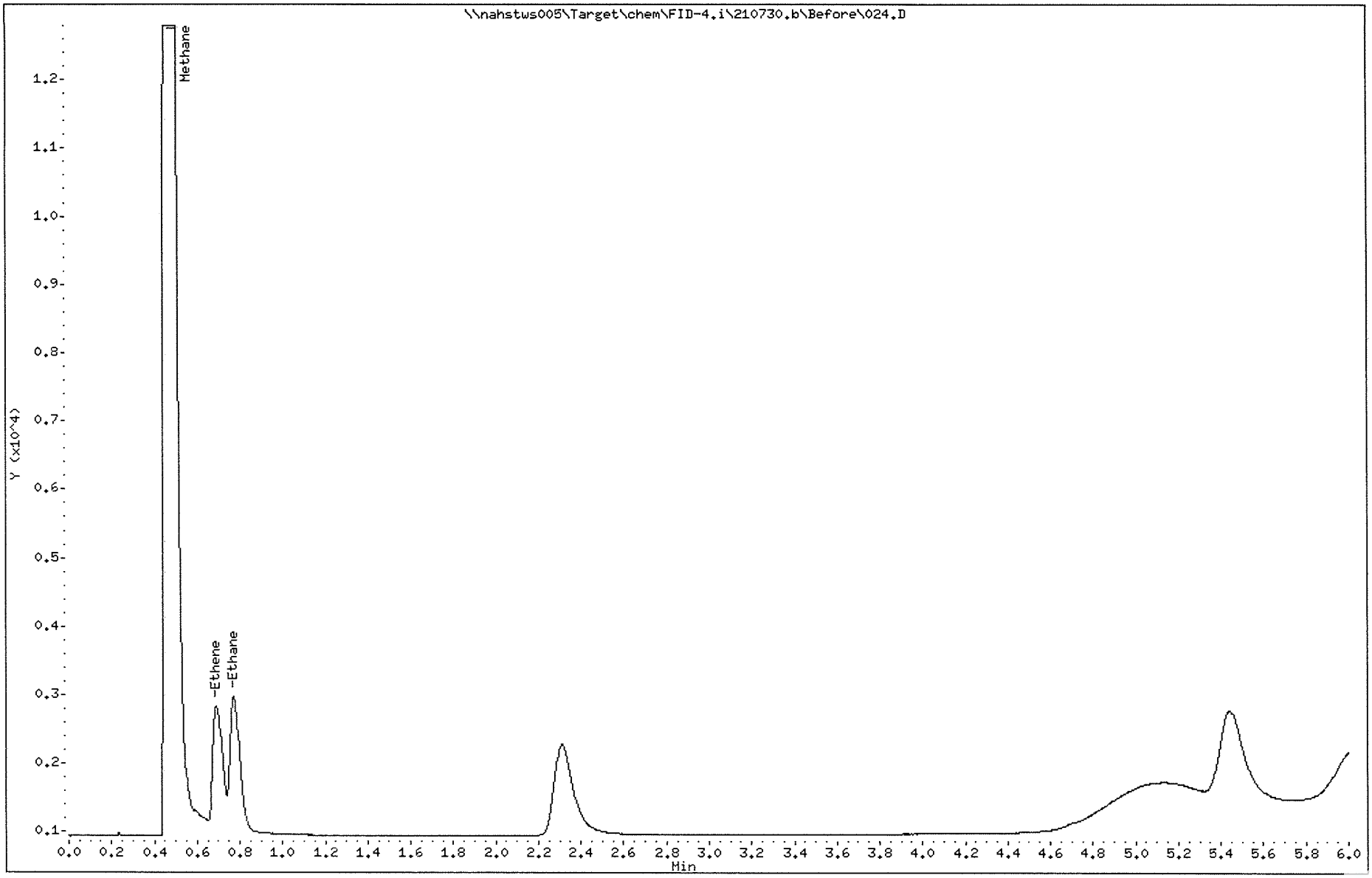
Instrument: FID-4.i

Sample Info: HS21071204-02MS;HS21071204-02MS

Operator: PL

Column phase: Rtx-PLOT

Column diameter: 0.53



ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\nahstws005\Target\chem\FID-4.i\210730.b\024.D
Lab Smp Id: HS21071204-02MS Client Smp ID: HS21071204-02MS
Inj Date : 30-JUL-2021 14:47
Operator : PL Inst ID: FID-4.i
Smp Info : HS21071204-02MS;HS21071204-02MS
Misc Info : ;1;0;1
Comment :
Method : \\NAHSTWS005\Target\chem\FID-4.i\210730.b\RSKNI3.m
Meth Date : 12-Oct-2021 14:02 linh.pham Quant Type: ESTD
Cal Date : 24-JAN-2017 10:15 Cal File: 004.D
Als bottle: 24 QC Sample: MS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: RSK175.sub
Target Version: 4.14
Processing Host: ALSHSW7104

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

					CONCENTRATIONS	
					ON-COLUMN	FINAL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/L)	(ug/L)
1 Methane	0.463	0.463	0.000	199929	205.057	205.056(AR)
2 Ethene	0.693	0.703	-0.010	6130	10.4650	10.465(R)
3 Ethane	0.773	0.780	-0.007	6915	9.61098	9.610(R)

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.
R - Spike/Surrogate failed recovery limits.

Data File: \\nahstws005\Target\chem\FID-4.i\210730.b\024.D

Date : 30-JUL-2021 14:47

Client ID: HS21071204-02MS

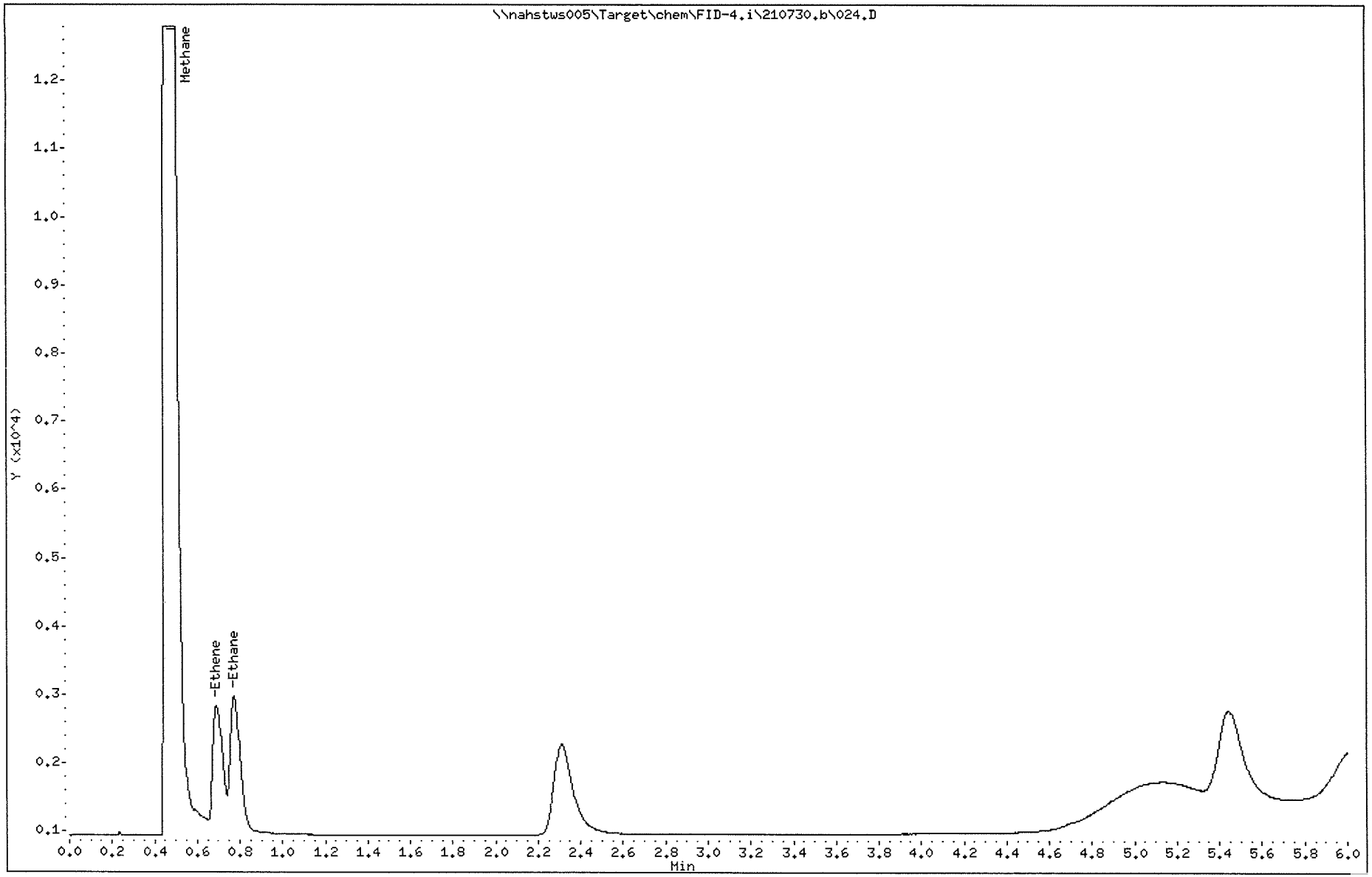
Sample Info: HS21071204-02MS;HS21071204-02MS

Column phase: Rtx-PLOT

Instrument: FID-4.i

Operator: PL

Column diameter: 0.53



ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\nahstws005\Target\chem\FID-4.i\210730.b\Before\025.D
Lab Smp Id: HS21071204-02MSD Client Smp ID: HS21071204-02MSD
Inj Date : 30-JUL-2021 14:56
Operator : PL Inst ID: FID-4.i
Smp Info : HS21071204-02MSD;MS;HS21071204-02MSD
Misc Info : ;1;0;1
Comment   :
Method   : \\NAHSTWS005\Target\chem\FID-4.i\210730.b\RSKNI3.m
Meth Date : 12-Oct-2021 14:02 linh.pham Quant Type: ESTD
Cal Date : 24-JAN-2017 10:15 Cal File: 004.D
Als bottle: 25 QC Sample: MSD
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: RSK175.sub
Target Version: 4.14
Processing Host: ALSHSW7104

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)
1 Methane	0.460	0.463	-0.003	200977	206.132	206.131(AR)
2 Ethene	0.693	0.703	-0.010	6306	10.7655	10.765(R)
3 Ethane	0.770	0.780	-0.010	6786	9.43168	9.431(R)

QC Flag Legend

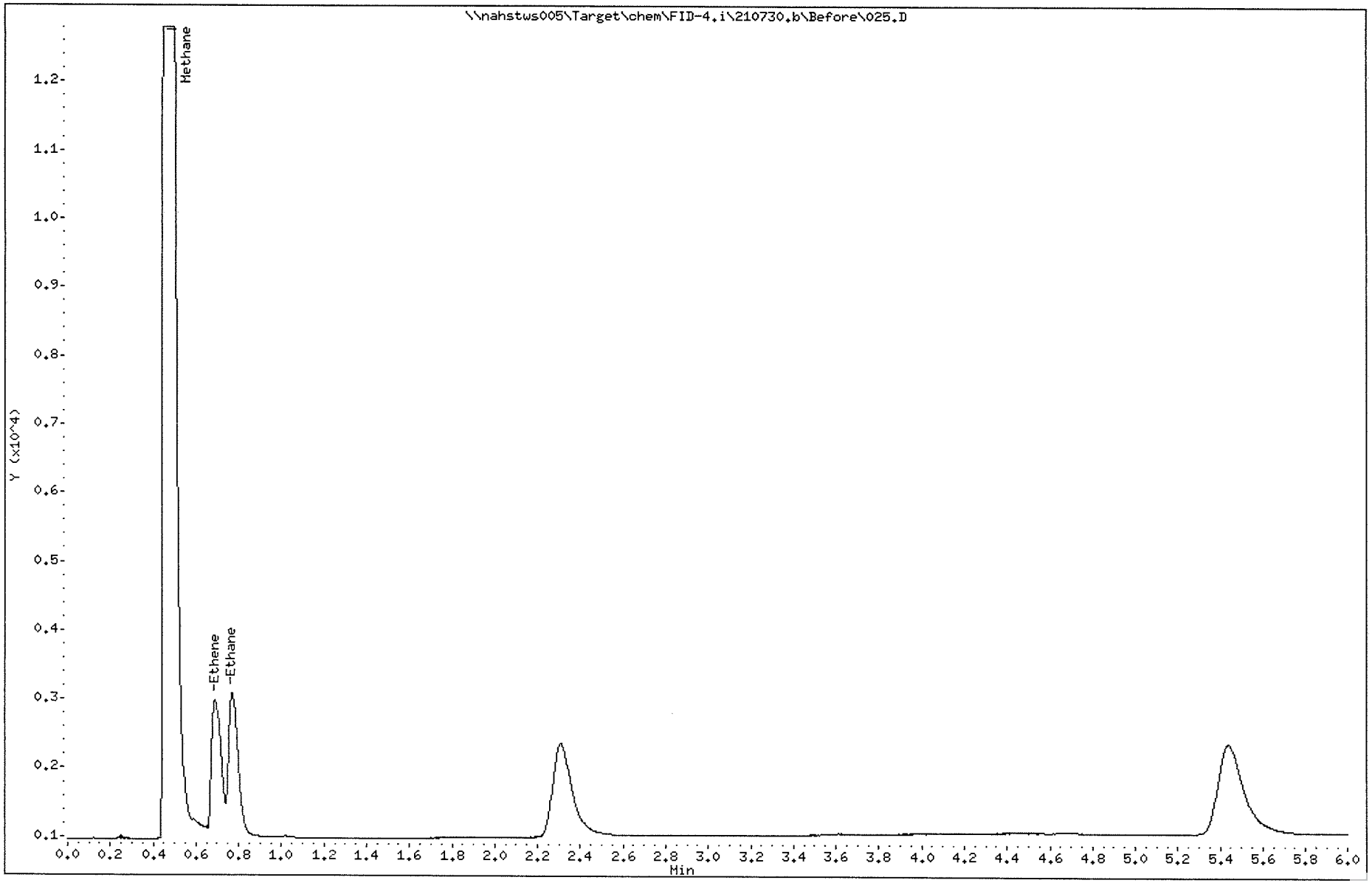
A - Target compound detected but, quantitated amount
    exceeded maximum amount.
R - Spike/Surrogate failed recovery limits.

Data File: \\nahstws005\Target\chem\FID-4.i\210730.b\Before\025.D
Date : 30-JUL-2021 14:56
Client ID: HS21071204-02MSD
Sample Info: HS21071204-02MSD;MS;HS21071204-02MSD

Column phase: Rtx-PLOT

Instrument: FID-4.i

Operator: PL
Column diameter: 0.53



Data File: \\nahstws005\Target\chem\FID-4.i\210730.b\025.D
Report Date: 12-Oct-2021 14:08

ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\nahstws005\Target\chem\FID-4.i\210730.b\025.D
Lab Smp Id: HS21071204-02MSD Client Smp ID: HS21071204-02MSD
Inj Date : 30-JUL-2021 14:56
Operator : PL Inst ID: FID-4.i
Smp Info : HS21071204-02MSD;MS;HS21071204-02MSD
Misc Info : ;1;0;1
Comment   :
Method   : \\NAHSTWS005\Target\chem\FID-4.i\210730.b\RSKNI3.m
Meth Date : 12-Oct-2021 14:02 linh.pham Quant Type: ESTD
Cal Date : 24-JAN-2017 10:15 Cal File: 004.D
Als bottle: 25 QC Sample: MSD
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: RSK175.sub
Target Version: 4.14
Processing Host: ALSHSW7104

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)
1 Methane	0.460	0.463	-0.003	200977	206.132	206.131(AR)
2 Ethene	0.693	0.703	-0.010	6306	10.7655	10.765(R)
3 Ethane	0.770	0.780	-0.010	6786	9.43168	9.431(R)

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.
R - Spike/Surrogate failed recovery limits.

Data File: \\nahstws005\Target\chem\FID-4.i\210730.b\025.D

Date : 30-JUL-2021 14:56

Client ID: HS21071204-02MSD

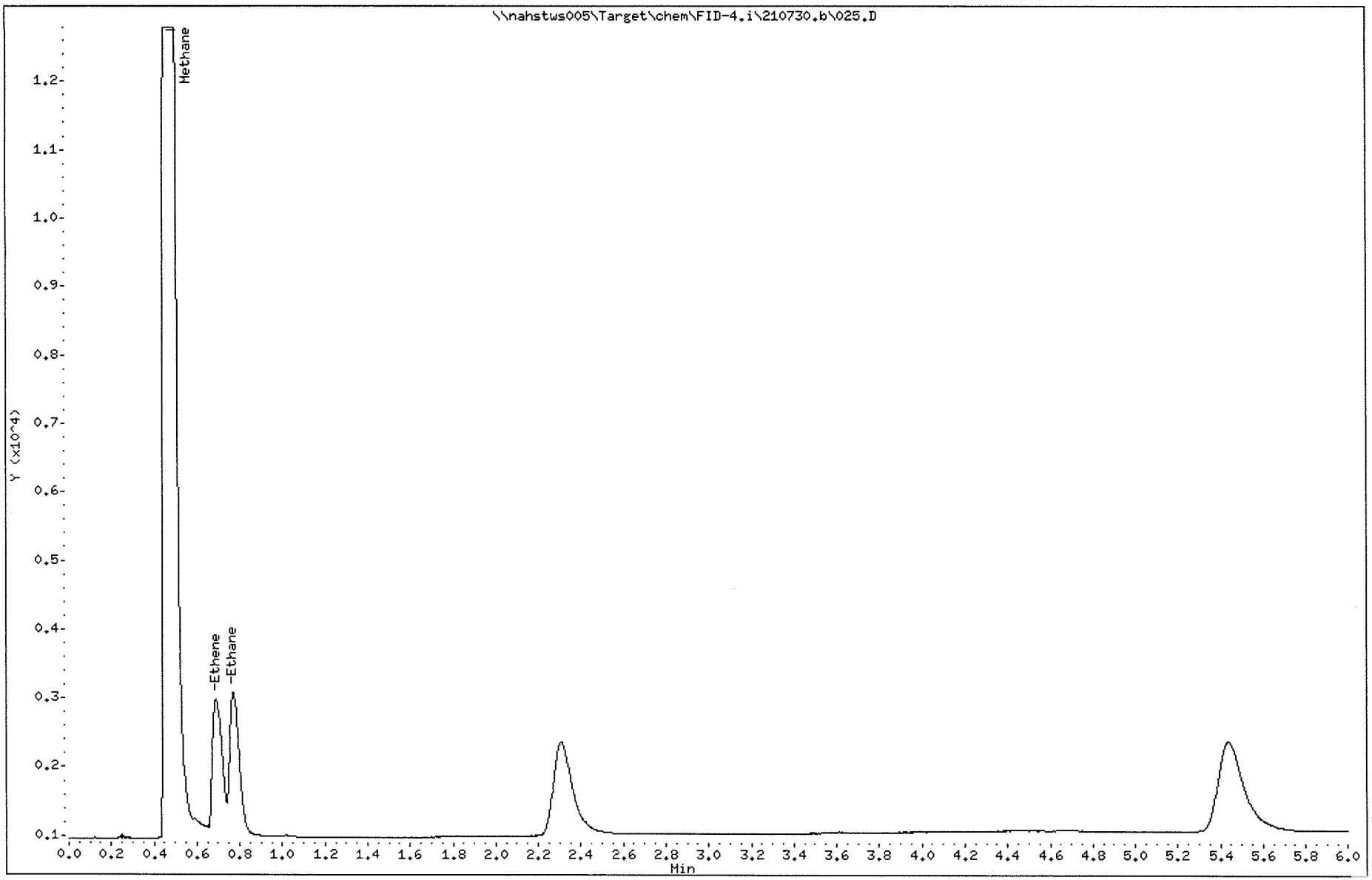
Instrument: FID-4.i

Sample Info: HS21071204-02MSD;MS;HS21071204-02MSD

Operator: PL

Column phase: Rtx-PLOT

Column diameter: 0.53



Data File: \\nahstws005\Target\chem\FID-4.i\210730.b\Before\030.D Page 1
Report Date: 12-Oct-2021 14:11

ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\nahstws005\Target\chem\FID-4.i\210730.b\Before\030.D
Lab Smp Id: RSK-CCV Client Smp ID: RSK-CCV
Inj Date : 30-JUL-2021 15:47
Operator : PL Inst ID: FID-4.i
Smp Info : RSK-CCV;RSK-CCV;2;4
Misc Info : ;1;0;1
Comment   :
Method   : \\NAHSTWS005\Target\chem\FID-4.i\210730.b\RSKNI3.m
Meth Date : 12-Oct-2021 14:02 linh.pham Quant Type: ESTD
Cal Date : 24-JAN-2017 10:15 Cal File: 004.D
Als bottle: 30 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: RSK175.sub
Target Version: 4.14
Processing Host: ALSHSW7104

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

					AMOUNTS	
					CAL-AMT	ON-COL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/L)	(ug/L)
1 Methane	0.463	0.463	0.000	8855	9.64700	9.082
2 Ethene	0.703	0.703	0.000	9325	16.8500	15.919
3 Ethane	0.780	0.780	0.000	13586	18.0430	18.882

Data File: \\nahstws005\Target\chem\FID-4.i\210730.b\Before\030.D

Date : 30-JUL-2021 15:47

Client ID: RSK-CCV

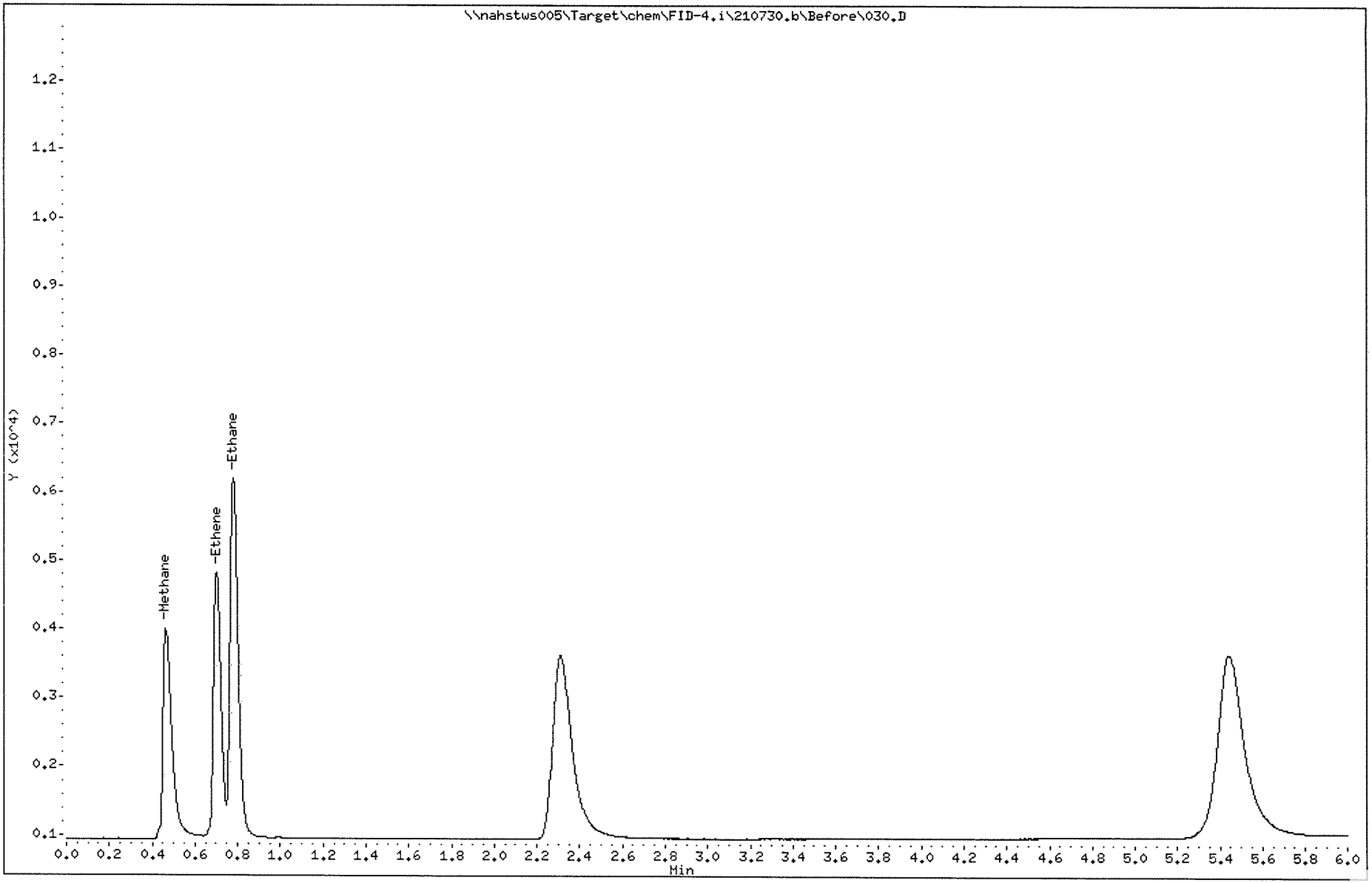
Instrument: FID-4.i

Sample Info: RSK-CCV;RSK-CCV;2;4

Operator: PL

Column phase: Rtx-PLOT

Column diameter: 0.53



Data File: \\nahstws005\Target\chem\FID-4.i\210730.b\030.D Page 1
Report Date: 12-Oct-2021 14:08

ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\nahstws005\Target\chem\FID-4.i\210730.b\030.D
Lab Smp Id: RSK-CCV Client Smp ID: RSK-CCV
Inj Date : 30-JUL-2021 15:47
Operator : PL Inst ID: FID-4.i
Smp Info : RSK-CCV;RSK-CCV;2;4
Misc Info : ;1;0;1
Comment :
Method : \\NAHSTWS005\Target\chem\FID-4.i\210730.b\RSKNI3.m
Meth Date : 12-Oct-2021 14:02 linh.pham Quant Type: ESTD
Cal Date : 24-JAN-2017 10:15 Cal File: 004.D
Als bottle: 30 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: RSK175.sub
Target Version: 4.14
Processing Host: ALSHSW7104

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

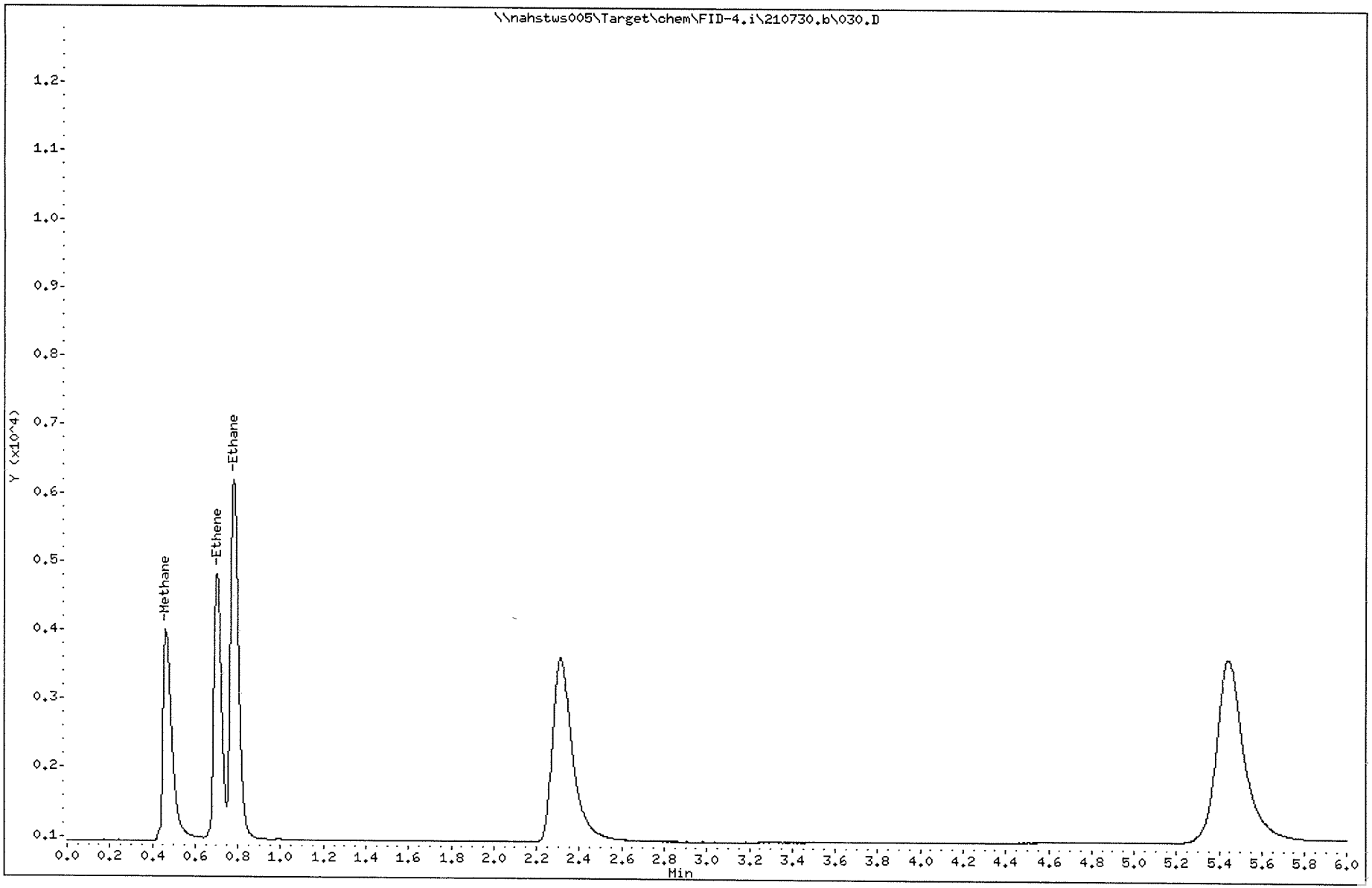
					AMOUNTS	
					CAL-AMT	ON-COL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/L)	(ug/L)
1 Methane	0.463	0.463	0.000	8927	9.64700	9.155
2 Ethene	0.703	0.703	0.000	9439	16.8500	16.114
3 Ethane	0.780	0.780	0.000	13752	18.0430	19.113

Data File: \\nahstws005\Target\chem\FID-4.i\210730.b\030.D
Date : 30-JUL-2021 15:47
Client ID: RSK-CCV
Sample Info: RSK-CCV;RSK-CCV;2;4

Column phase: Rtx-PLOT

Instrument: FID-4.i

Operator: PL
Column diameter: 0.53



HS21071204 - Sub Perch IV (E2100825)

ALS WO# HS21071204

August 05, 2021 Service Request No:E2100825

Ragen Giga
ALS Environmental - US
10450 Stancliff Rd Suite 210
Houston, TX 77099

Laboratory Results for: HS21071204

Dear Ragen,

Enclosed are the results of the sample(s) submitted to our laboratory July 23, 2021
For your reference, these analyses have been assigned our service request number **E2100825.**

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

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental



Corey Grandits
Project Manager

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

Certificate of Analysis

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

ALS Environmental

Client:	ALS Houston	**Service Request No.:**	E2100825
Project:	HS21071204	**Date Received:**	07/23/21
Sample Matrix:	W		

CASE NARRATIVE

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

Sample Receipt

Eight samples were received for analysis at ALS Environmental in Houston on 07/23/21.

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

Data Validation Notes and Discussion

Precision and Accuracy:

EQ2100458: Laboratory Control Spike/Duplicate Laboratory Control Spike (LCS/DLCS) samples were analyzed and reported in addition to a MS/MSD for this extraction batch. The LCS & DLCS recoveries are within QC limits. The MS and MSD (E2100825-002) recoveries were recovered above the upper control limit.

Multiple dilutions were attempted on SR E2100825 to reduce sample matrix interference with internal standard. Carbon cleanup was performed on the extraction and analyzed at a 10X dilution to obtain acceptable internal standard ranges.

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

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

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

Client: ALS Environmental - US **Service Request:**E2100825
Project: HS21071204

SAMPLE CROSS-REFERENCE

SAMPLE #	CLIENT SAMPLE ID	DATE	TIME
E2100825-001	16EW03-210722	7/22/2021	0715
E2100825-002	16IW10-210722	7/22/2021	0805
E2100825-003	16IW03-210722	7/22/2021	0905
E2100825-004	16PM09-210722	7/22/2021	1105
E2100825-005	16PM14-210722	7/22/2021	1150
E2100825-006	16RW11-210722	7/22/2021	1235
E2100825-007	16RW11-210722-FD	7/22/2021	1235
E2100825-008	16IW20-210722	7/22/2021	1315

Service Request Summary

Folder #: **E2100825**
Client Name: ALS Environmental - US
Project Name: HS21071204
Project Number:

Report To: Ragen Giga
ALS Environmental - US
10450 Stancliff Rd Suite 210
Houston, TX 77099
USA
Phone Number:
Cell Number:
Fax Number:
E-mail: ragenp.giga@alsglobal.com

Project Chemist: Corey Grandits
Originating Lab: HOUSTON
Logged By: CGRANDITS
Date Received: 07/23/21
Internal Due Date: 8/6/2021
QAP: LAB QAP
Qualifier Set: Lab Standard
Formset: Lab Standard
Merged?: Y
Report to MDL?: Y
P.O. Number: HS21071204
EDD: No EDD Specified

10 125 mL-Plastic Bottle Plastic
Location: EHRMS-AirArch 1
Pressure Gas:

Lab Samp No.	Client Samp No	Matrix	Collected	HOUSTON ClO4 DOD/6850
E2100825-001	16EW03-210722	Ground Water	07/22/21 0715	**IV**
E2100825-002	16IW10-210722	Ground Water	07/22/21 0805	**IV**
E2100825-003	16IW03-210722	Ground Water	07/22/21 0905	**IV**
E2100825-004	16PM09-210722	Ground Water	07/22/21 1105	**IV**
E2100825-005	16PM14-210722	Ground Water	07/22/21 1150	**IV**
E2100825-006	16RW11-210722	Ground Water	07/22/21 1235	**IV**
E2100825-007	16RW11-210722-FD	Ground Water	07/22/21 1235	**IV**
E2100825-008	16IW20-210722	Ground Water	07/22/21 1315	**IV**

Service Request Summary

Folder #: **E2100825**
Client Name: ALS Environmental - US
Project Name: HS21071204
Project Number:

Report To: Ragen Giga
ALS Environmental - US
10450 Stancliff Rd Suite 210
Houston, TX 77099
USA
Phone Number:
Cell Number:
Fax Number:
E-mail: ragenp.giga@alsglobal.com

Project Chemist: Corey Grandits
Originating Lab: HOUSTON
Logged By: CGRANDITS
Date Received: 07/23/21
Internal Due Date: 8/6/2021
QAP: LAB QAP
Qualifier Set: Lab Standard
Formset: Lab Standard
Merged?: Y
Report to MDL?: Y
P.O. Number: HS21071204
EDD: No EDD Specified

10 125 mL-Plastic Bottle Plastic
Location: EHRMS-AirArch 1
Pressure Gas:

Test Comments:

Group	Test/Method	Samples	Comments
Semivoa GCMS	ClO4 DOD/6850	7	Level IV due 8/13
Semivoa GCMS	ClO4 DOD/6850	1	MS/MSD

Data Qualifiers

Lab Standard

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

Data Qualifiers

Lab Standard

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

ALS Laboratory Group

Acronyms

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

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

ALS Environmental

State Certifications, Accreditations, and Licenses

Agency	Number	Expire Date
American Association for Laboratory Accreditation	2897.01 2020	11/30/2021
Arkansas Department of Environmental Quality	21-022-0	3/26/2022
Arkansas Department of Environmental Quality	19-028-0	6/30/2022
Department of Defense	A2LA 2897.01	11/30/2021
Florida Department of Health	E87611-33	6/30/2022
Hawaii Department of Health	2021-2022	4/30/2022
Kansas Department of Health and Environment	E-10352 2022	7/31/2022
Louisiana Department of Environmental Quality	03087-2021	6/30/2022
Louisiana Department of Health and Hospitals	LA028-2021	12/31/2021
Maine Department of Health and Human Services	2020016	6/5/2022
Minnesota Department of Health	2021671	12/31/2021
New Hampshire Environmental Laboratory Accreditation Program	209421	4/24/2022
Oklahoma Department of Environmental Quality	2020-123	8/31/2021
Pennsylvania Department of Environmental Protection	68-03441-015	6/30/2022
Tennessee Department of Environment and Concervation	04016-2021	4/30/2022
Texas Commision on Environmental Quality	T104704231-21-27	4/30/2022
United States Department of Agriculture	P330-19-00299	10/10/2022

Chain of Custody

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

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

Subcontract Chain of Custody

SAMPLING STATE: **Dept of Defense** **COC ID:** **16547**

SUBCONTRACT TO:

ALS Environmental
10450 Stancliff RoadSuite 210
Houston, TX 77084

Phone: +1 281 530 5656

CUSTOMER INFORMATION:

Company:	ALS Houston
Contact:	Ragen Giga
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Email:	RagenP.Giga@ALSGlobal.com
Alternate Contact:	
Email:	

INVOICE INFORMATION:

Company:	ALS Houston
Contact:	Accounts Payable
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Reference:	HS21071204
TSR:	Sonia West

	LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
	ANALYSIS REQUESTED			DUE DATE
1.	**HS21071204-01**	**16EW03-210722**	**GW**	**22 Jul 2021 07:15**
	Level II and Level IV reports on a seperate pdf. Send WOA to Vicki Graves.			06 Aug 2021
2.	**HS21071204-02**	**16IW10-210722**	**GW**	**22 Jul 2021 08:05**
	Level II and Level IV reports on a seperate pdf. Send WOA to Vicki Graves.			06 Aug 2021
3.	**HS21071204-03**	**16IW03-210722**	**GW**	**22 Jul 2021 09:05**
	Level II and Level IV reports on a seperate pdf. Send WOA to Vicki Graves.			06 Aug 2021
4.	**HS21071204-04**	**16PM09-210722**	**GW**	**22 Jul 2021 11:05**
	Level II and Level IV reports on a seperate pdf. Send WOA to Vicki Graves.			06 Aug 2021
5.	**HS21071204-05**	**16PM14-210722**	**GW**	**22 Jul 2021 11:50**
	Level II and Level IV reports on a seperate pdf. Send WOA to Vicki Graves.			06 Aug 2021
6.	**HS21071204-06**	**16RW11-210722**	**GW**	**22 Jul 2021 12:35**
	Level II and Level IV reports on a seperate pdf. Send WOA to Vicki Graves.			06 Aug 2021
7.	**HS21071204-07**	**16RW11-210722-FD**	**GW**	**22 Jul 2021 12:35**
	Level II and Level IV reports on a seperate pdf. Send WOA to Vicki Graves.			06 Aug 2021
8.	**HS21071204-08**	**16IW20-210722**	**GW**	**22 Jul 2021 13:15**

Subcontract Chain of Custody

SAMPLING STATE: **Dept of Defense** **COC ID: 16547**

LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
ANALYSIS REQUESTED			DUE DATE
	Level II and Level IV reports on a seperate pdf. Send WOA to Vicki Graves.		06 Aug 2021

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

QC Level: DOD IV (DoD Data Package)

Relinquished By: _____ Date/Time: 7/23/21 10:50

Received By: COREY G Date/Time: 7/23/21 10:50

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

ALS Environmental

Cooler Receipt Form

Project Chemist CG

Client/Project ALS-H

Thermometer ID 1231

Date/Time Received: 7/23/21 Initials: CG Date/Time Logged in: 7/23/21 Initials CG

1. Method of delivery: ○ US Mail ○ Fed Ex ○ UPS ○ DHL ✓ ALS Courier ○ Client
2. Samples received in: ✓ Cooler ○ Box ○ Envelope ○ Other
3. Were custody seals on coolers? ○ Yes ✓ No — If yes, how many and where?
   Were they intact? ○ Yes ○ No ✓ N/A
   Were they signed and dated? ○ Yes ○ No ✓ N/A
4. Packing Material: ○ Inserts ✓ Baggies ○ Bubble Wrap ○ Gel Packs ✓ Wet Ice ○ Sleeves ○ Other
5. Foreign or Regulated Soil? ○ Yes ○ No Location of Sampling:

Cooler Tracking Number	COC ID	Date Opened	Time Opened	Opened By	Temp. °C	Temp Blank?
NA		7/23/21	1050	CG	4.4	☑
						☐
						☐
						☐

6. Were custody papers properly filled out (ink, signed, dated, etc)? ☒ Yes ○ No
7. Did all bottles arrive in good condition (not broken, no signs of leakage)? ☒ Yes ○ No
8. Were all sample labels complete (i.e., sample ID, analysis, preservation, etc)? ☒ Yes ○ No
9. Were appropriate bottles/containers and volumes received for the requested tests? ☒ Yes ○ No
10. Did sample labels and tags agree with custody documents? ☒ Yes ○ No

Notes, Discrepancies, & Resolutions:

Service request Label:

HS-HRMSCoolerReceipt R1.0

ALS Environmental - Houston HRMS

10450 Stancliff Rd., Suite 210
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www.alsglobal.com

SAMPLE ACCEPTANCE POLICY

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

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

- ✓ Intact on outside of cooler, signed and dated

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

The following is required on each COC:

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

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

Sample Integrity (mandatory):

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

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

Temperature Requirement (varies by sample matrix):

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

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

Preparation Information Benchsheets

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

Preparation Information Benchsheet

Prep Run#: 383906 **Prep WorkFlow:** GenExt28Day **Status:** Prepped
Team: Semivoa GCMS/GRIVERA **Prep Method:** Method **Prep Date/Time:** 7/30/21 10:15

#	Lab Code	Client ID	B#	Method /Test	pH	Cl	Matrix	Amt. Ext.	Sample Description
1	E2100824-001	MOSA-21-231359	.01	6850/ClO4 DOD			Water	10mL	
2	E2100824-002	MOSA-21-231360	.01	6850/ClO4 DOD			Water	10mL	
3	E2100824-003	MOSA-21-231361	.01	6850/ClO4 DOD			Water	10mL	
4	E2100825-001	16EW03-210722	.01	6850/ClO4 DOD			Ground Water	10mL	
5	E2100825-002	16IW10-210722	.01	6850/ClO4 DOD			Ground Water	10mL	
6	E2100825-003	16IW03-210722	.01	6850/ClO4 DOD			Ground Water	10mL	
7	E2100825-004	16PM09-210722	.01	6850/ClO4 DOD			Ground Water	10mL	
8	E2100825-005	16PM14-210722	.01	6850/ClO4 DOD			Ground Water	10mL	
9	E2100825-006	16RW11-210722	.01	6850/ClO4 DOD			Ground Water	10mL	
10	E2100825-007	16RW11-210722-FD	.01	6850/ClO4 DOD			Ground Water	10mL	
11	E2100825-008	16IW20-210722	.01	6850/ClO4 DOD			Ground Water	10mL	
12	EQ2100458-01	MB		6850/ClO4 DOD			Liquid	10mL	
13	EQ2100458-02	LCS		6850/ClO4 DOD			Liquid	10mL	
14	EQ2100458-03	DLCS		6850/ClO4 DOD			Liquid	10mL	
15	EQ2100458-04	16IW10-210722 MS	.01	6850/ClO4 DOD			Liquid	10mL	
16	EQ2100458-05	16IW10-210722 DMS	.01	6850/ClO4 DOD			Liquid	10mL	

Spiking Solutions

Name: Sodium Perchlorate 1 ug/mL (IS) (18-O) as CLO4 Inventory ID 214765 Logbook Ref: Sodium Perchlorate Expires On: 12/11/2022

E2100824-001	100.00µL	E2100824-002	100.00µL	E2100824-003	100.00µL	E2100825-001	100.00µL	E2100825-002	100.00µL	E2100825-003	100.00µL
E2100825-004	100.00µL	E2100825-005	100.00µL	E2100825-006	100.00µL	E2100825-007	100.00µL	E2100825-008	100.00µL	EQ2100458-01	100.00µL
EQ2100458-02	100.00µL	EQ2100458-03	100.00µL	EQ2100458-04	100.00µL	EQ2100458-05	100.00µL				

Name: Perchlorate Intermediate Stock1 Inventory ID 217422 Logbook Ref: Perchlorate Expires On: 11/26/2021

EQ2100458-02	1.00µL	EQ2100458-03	1.00µL	EQ2100458-04	1.00µL	EQ2100458-05	1.00µL

Preparation Materials

Water HPLC Grade 07/01/2021 Water (217918) 537M Glass Culture Tubes 537M Glass Tubes (218064)

Preparation Steps

Step: Preparation
Started: 7/30/21 10:15
Finished: 7/30/21 11:15
By: GRIVERA
Comments

Preparation Information Benchsheet

Prep Run#: 383906
Team: Semivoa GCMS/GRIVERA

Prep WorkFlow: GenExt28Day
Prep Method: Method

Status: Prepped
Prep Date/Time: 7/30/21 10:15

Comments:

Reviewed By: GR Date: 7/30/21

Chain of Custody

Relinquished By: Date:

Received By: Date:

Extracts Examined
Yes No

Analytical Results

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ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100825
Project:	HS21071204	**Date Collected:**	7/22/21 0715
Sample Matrix:	Ground Water	**Date Received:**	7/23/21
Sample Name:	16EW03-210722	**Units:**	µg/L
Lab Code:	E2100825-001	**Basis:**	As Received

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

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	1.00	0.500	0.250	10	7/30/21	8/5/21 13:51	383906	733725	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100825
Project:	HS21071204	**Date Collected:**	7/22/21 0805
Sample Matrix:	Ground Water	**Date Received:**	7/23/21
Sample Name:	16IW10-210722	**Units:**	µg/L
Lab Code:	E2100825-002	**Basis:**	As Received

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

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	0.200	0.100	0.0500	2	7/30/21	8/5/21 12:12	383906	733725	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100825
Project:	HS21071204	**Date Collected:**	7/22/21 0905
Sample Matrix:	Ground Water	**Date Received:**	7/23/21
Sample Name:	16IW03-210722	**Units:**	µg/L
Lab Code:	E2100825-003	**Basis:**	As Received

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

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	1.00	0.500	0.250	10	7/30/21	8/5/21 14:35	383906	733725	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100825
Project:	HS21071204	**Date Collected:**	7/22/21 1105
Sample Matrix:	Ground Water	**Date Received:**	7/23/21
Sample Name:	16PM09-210722	**Units:**	µg/L
Lab Code:	E2100825-004	**Basis:**	As Received

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

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	0.100	0.0500	0.0250	1	7/30/21	8/2/21 22:07	383906	733464	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100825
Project:	HS21071204	**Date Collected:**	7/22/21 1150
Sample Matrix:	Ground Water	**Date Received:**	7/23/21
Sample Name:	16PM14-210722	**Units:**	µg/L
Lab Code:	E2100825-005	**Basis:**	As Received

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

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	1.00	0.500	0.250	10	7/30/21	8/5/21 14:00	383906	733725	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100825
Project:	HS21071204	**Date Collected:**	7/22/21 1235
Sample Matrix:	Ground Water	**Date Received:**	7/23/21
Sample Name:	16RW11-210722	**Units:**	µg/L
Lab Code:	E2100825-006	**Basis:**	As Received

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

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	1.00	0.500	0.250	10	7/30/21	8/5/21 13:11	383906	733725	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100825
Project:	HS21071204	**Date Collected:**	7/22/21 1235
Sample Matrix:	Ground Water	**Date Received:**	7/23/21
Sample Name:	16RW11-210722-FD	**Units:**	µg/L
Lab Code:	E2100825-007	**Basis:**	As Received

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

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	1.00	0.500	0.250	10	7/30/21	8/5/21 13:20	383906	733725	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100825
Project:	HS21071204	**Date Collected:**	7/22/21 1315
Sample Matrix:	Ground Water	**Date Received:**	7/23/21
Sample Name:	16IW20-210722	**Units:**	µg/L
Lab Code:	E2100825-008	**Basis:**	As Received

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

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	1.00	0.500	0.250	10	7/30/21	8/5/21 13:28	383906	733725	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100825
Project:	HS21071204	**Date Collected:**	NA
Sample Matrix:	Ground Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	EQ2100458-01	**Basis:**	As Received

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

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	0.100	0.0500	0.0250	1	7/30/21	8/2/21 20:25	383906	733464	

Accuracy & Precision

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ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2100825
Project:	HS21071204	**Date Analyzed:**	8/ 2/21
Sample Matrix:	Ground Water		

Lab Control Sample Summary

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

Analytical Method:	6850	**Units:**	µg/L
Prep Method:	Method	**Basis:**	As Received
		Extraction Lot:	383906

	Lab Control Sample EQ2100458-02			Duplicate Lab Control Sample EQ2100458-03					
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Perchlorate	0.118	0.100	118	0.119	0.100	119	84 - 119	<1	15

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

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

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100825
Project:	HS21071204	**Date Collected:**	NA
Sample Matrix:	Ground Water	**Date Received:**	NA
Sample Name:	Lab Control Sample	**Units:**	µg/L
Lab Code:	EQ2100458-02	**Basis:**	As Received

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

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.118**		0.100	0.0500	0.0250	1	7/30/21	8/2/21 20:34	383906	733464	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100825
Project:	HS21071204	**Date Collected:**	NA
Sample Matrix:	Ground Water	**Date Received:**	NA
Sample Name:	Duplicate Lab Control Sample	**Units:**	µg/L
Lab Code:	EQ2100458-03	**Basis:**	As Received

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

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.119**		0.100	0.0500	0.0250	1	7/30/21	8/2/21 20:42	383906	733464	

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2100825
Project:	HS21071204	**Date Collected:**	7/22/21
Sample Matrix:	Ground Water	**Date Received:**	7/23/21
		Date Analyzed:	8/ 5/21

Matrix Spike Summary

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

Sample Name:	16IW10-210722	**Units:**	µg/L
Lab Code:	E2100825-002	**Basis:**	As Received

Analytical Method: 6850
Prep Method: Method

		16IW10-210722MS				16IW10-210722DMS					
		Matrix Spike				**Duplicate Matrix Spike**					
		EQ2100458-04				EQ2100458-05					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**% Rec**		**Result**	**Spike Amount**	**% Rec**		**% Rec Limits**	**RPD**	**RPD Limit**
Perchlorate	ND	0.134	0.100	134	*	0.128	0.100	128	*	84 - 119	5	15

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

Results flagged with a pound (#) indicate the control criteria is not applicable.

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

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100825
Project:	HS21071204	**Date Collected:**	7/22/21 0805
Sample Matrix:	Ground Water	**Date Received:**	7/23/21
Sample Name:	16IW10-210722	**Units:**	µg/L
Lab Code:	EQ2100458-04	**Basis:**	As Received
Run Type:	Matrix Spike		

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

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.134**	J	0.200	0.100	0.0500	2	7/30/21	8/5/21 15:32	383906	733725	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100825
Project:	HS21071204	**Date Collected:**	7/22/21 0805
Sample Matrix:	Ground Water	**Date Received:**	7/23/21
Sample Name:	16IW10-210722	**Units:**	µg/L
Lab Code:	EQ2100458-05	**Basis:**	As Received
Run Type:	Duplicate Matrix Spike		

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

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.128**	J	0.200	0.100	0.0500	2	7/30/21	8/5/21 15:50	383906	733725	

Initial Calibration

ALS Environmental - Houston HRMS
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20210802

1st Review: Grivera
2nd Review: Kneir

Injection Log
LCMS01 -Shimadzu 8050

ICAL Date: 8/2/2021
Cal. Std. xp: 11/26/2021
ICAL ID: **EC2100056**

Mobile Phases **A:** 0.75% Formic Acid/Water 3100813-08 **B:** MeOH 216350

			File Name	Acquisition Method	Dilution	R	Comments	Date/Time
1	PERCHLORATE1		20210802_017	Perchlorate6850c.lcm	1x	☒	3100812-01	8/2/2021 16:41
2	PERCHLORATE2		20210802_007	Perchlorate6850c.lcm	1x	☒	3100812-02	8/2/2021 15:13
3	PERCHLORATE3		20210802_008	Perchlorate6850c.lcm	1x	☒	3100812-03	8/2/2021 15:24
4	PERCHLORATE4		20210802_009	Perchlorate6850c.lcm	1x	☒	3100812-04	8/2/2021 15:33
5	PERCHLORATE5		20210802_010	Perchlorate6850c.lcm	1x	☒	3100812-05	8/2/2021 15:41
6	PERCHLORATE6		20210802_011	Perchlorate6850c.lcm	1x	☒	3100812-06	8/2/2021 15:50
7	PERCHLORATE7		20210802_012	Perchlorate6850c.lcm	1x	☒	3100812-07	8/2/2021 15:58
8	PERCHLORATE8		20210802_013	Perchlorate6850c.lcm	1x	☒	3100812-08	8/2/2021 16:07
9	PERCHLORATE9		20210802_014	Perchlorate6850c.lcm	1x	☒	3100812-09	8/2/2021 16:15
10	PERCHLORATE10		20210802_015	Perchlorate6850c.lcm	1x	☒	3100813-01	8/2/2021 16:24
11	PERCHLORATEICV		20210802_018	Perchlorate6850c.lcm	1x	☒	3100811-06	8/2/2021 16:50
12	IB		20210802_019	Perchlorate6850c.lcm	1x	☒		8/2/2021 17:25
13	LODV		20210802_020	Perchlorate6850c.lcm	1x	☒		8/2/2021 17:33
14	PERCHLORATE7		20210802_021	Perchlorate6850c.lcm	1x	☒	3100812-07	8/2/2021 17:42
15	E2100813-001X20		20210802_022	Perchlorate6850c.lcm	20x	☒		8/2/2021 17:51
16	E2100813-004X20		20210802_023	Perchlorate6850c.lcm	20x	☒		8/2/2021 18:00
17	E2100814-001		20210802_024	Perchlorate6850c.lcm	1x	☒		8/2/2021 18:08
18	E2100814-002		20210802_025	Perchlorate6850c.lcm	1x	☒		8/2/2021 18:17
19	E2100814-003		20210802_026	Perchlorate6850c.lcm	1x	☒	INST out of range	8/2/2021 18:25
20	E2100814-004		20210802_027	Perchlorate6850c.lcm	1x	☒		8/2/2021 18:34
21	E2100814-005		20210802_028	Perchlorate6850c.lcm	1x	☒	INST out of range	8/2/2021 18:42
22	PERCHLORATE7		20210802_029	Perchlorate6850c.lcm	1x	☒	3100812-07	8/2/2021 18:51
23	EQ2100452-04		20210802_030	Perchlorate6850c.lcm	1x	☒		8/2/2021 19:00
24	EQ2100452-05		20210802_031	Perchlorate6850c.lcm	1x	☒		8/2/2021 19:08
25	E2100813-002		20210802_032	Perchlorate6850c.lcm	1x	☒		8/2/2021 19:17
26	E2100813-003		20210802_033	Perchlorate6850c.lcm	1x	☒		8/2/2021 19:25
27	E2100813-005		20210802_034	Perchlorate6850c.lcm	1x	☒	INST out of range	8/2/2021 19:34
28	E2100813-006		20210802_035	Perchlorate6850c.lcm	1x	☒	INST out of range	8/2/2021 19:42
29	E2100813-007		20210802_036	Perchlorate6850c.lcm	1x	☒	INST out of range	8/2/2021 19:51
30	E2100813-008		20210802_037	Perchlorate6850c.lcm	1x	☒		8/2/2021 19:59
31	PERCHLORATE7		20210802_038	Perchlorate6850c.lcm	1x	☒	3100812-07	8/2/2021 20:08
32	E2100813-009		20210802_039	Perchlorate6850c.lcm	1x	☒		8/2/2021 20:16
33	EQ2100458-01		20210802_040	Perchlorate6850c.lcm	1x	☒		8/2/2021 20:25
34	EQ2100458-02		20210802_041	Perchlorate6850c.lcm	1x	☒		8/2/2021 20:34
35	EQ2100458-03		20210802_042	Perchlorate6850c.lcm	1x	☒		8/2/2021 20:42
36	EQ2100458-04		20210802_043	Perchlorate6850c.lcm	1x	☒		8/2/2021 20:51
37	EQ2100458-05		20210802_044	Perchlorate6850c.lcm	1x	☒		8/2/2021 20:59
38	PERCHLORATE7		20210802_045	Perchlorate6850c.lcm	1x	☒	3100812-07	8/2/2021 21:08
39	E2100824-001		20210802_046	Perchlorate6850c.lcm	1x	☒	INST out of range	8/2/2021 21:16
40	E2100824-002		20210802_047	Perchlorate6850c.lcm	1x	☒	INST out of range	8/2/2021 21:25
41	E2100824-003		20210802_048	Perchlorate6850c.lcm	1x	☒	INST out of range	8/2/2021 21:33
42	E2100825-001		20210802_049	Perchlorate6850c.lcm	1x	☒	INST out of range	8/2/2021 21:42
43	E2100825-002		20210802_050	Perchlorate6850c.lcm	1x	☒	INST out of range	8/2/2021 21:50
44	E2100825-003		20210802_051	Perchlorate6850c.lcm	1x	☒	INST out of range	8/2/2021 21:59
45	E2100825-004		20210802_052	Perchlorate6850c.lcm	1x	☒		8/2/2021 22:07
46	E2100825-005		20210802_053	Perchlorate6850c.lcm	1x	☒	INST out of range	8/2/2021 22:16
47	E2100825-006		20210802_054	Perchlorate6850c.lcm	1x	☒	INST out of range	8/2/2021 22:24
48	E2100825-007		20210802_055	Perchlorate6850c.lcm	1x	☒	INST out of range	8/2/2021 22:33
49	PERCHLORATE7		20210802_056	Perchlorate6850c.lcm	1x	☒	3100812-07	8/2/2021 22:41
50	E2100825-008		20210802_057	Perchlorate6850c.lcm	1x	☒		8/2/2021 22:50
51	IB		20210802_058	Perchlorate6850c.lcm	1x	☒		8/2/2021 22:58
52	E2100831-001		20210802_059	Perchlorate6850c.lcm	1x	☒		8/2/2021 23:07
53	E2100831-002X2		20210802_060	Perchlorate6850c.lcm	2x	☒	INST out of range	8/2/2021 23:15
54	E2100856-001		20210802_061	Perchlorate6850c.lcm	1x	☒	INST out of range	8/2/2021 23:24
55	E2100856-002		20210802_062	Perchlorate6850c.lcm	1x	☒	INST out of range	8/2/2021 23:32
56	E2100856-003		20210802_063	Perchlorate6850c.lcm	1x	☒		8/2/2021 23:41
57	E2100856-004		20210802_064	Perchlorate6850c.lcm	1x	☒	INST out of range	8/2/2021 23:50
58	E2100856-005		20210802_065	Perchlorate6850c.lcm	1x	☒		8/2/2021 23:58
59	E2100837-001		20210802_066	Perchlorate6850c.lcm	1x	☒	INST out of range	8/3/2021 0:07
60	PERCHLORATE7		20210802_067	Perchlorate6850c.lcm	1x	☒	3100812-07	8/3/2021 0:15
61	E2100837-002		20210802_068	Perchlorate6850c.lcm	1x	☒	INST out of range	8/3/2021 0:24
62	E2100837-003		20210802_069	Perchlorate6850c.lcm	1x	☒		8/3/2021 0:32
63	E2100837-004		20210802_070	Perchlorate6850c.lcm	1x	☒	INST out of range	8/3/2021 0:41
64	E2100837-005		20210802_071	Perchlorate6850c.lcm	1x	☒	INST out of range	8/3/2021 0:49
65	E2100837-006		20210802_072	Perchlorate6850c.lcm	1x	☒		8/3/2021 0:58
66	E2100837-007		20210802_073	Perchlorate6850c.lcm	1x	☒	INST out of range	8/3/2021 1:06
67	E2100837-008		20210802_074	Perchlorate6850c.lcm	1x	☒		8/3/2021 1:15
68	E2100837-009		20210802_075	Perchlorate6850c.lcm	1x	☒		8/3/2021 1:23
69	E2100837-010		20210802_076	Perchlorate6850c.lcm	1x	☒		8/3/2021 1:32
70	E2100837-011		20210802_077	Perchlorate6850c.lcm	1x	☒		8/3/2021 1:40
71	E2100837-012		20210802_078	Perchlorate6850c.lcm	1x	☒		8/3/2021 1:49
72	PERCHLORATE7		20210802_079	Perchlorate6850c.lcm	1x	☒	3100812-07	8/3/2021 1:57
73	EQ2100476-01		20210802_080	Perchlorate6850c.lcm	1x	☒		8/3/2021 2:06

20210802

1st Review: Grivera
2nd Review: Kneir

Injection Log
LCMS01 -Shimadzu 8050

ICAL Date: 8/2/2021
Cal. Std. xp: 11/26/2021
ICAL ID: **EC2100056**

Mobile Phases **A:** 0.75% Formic Acid/Water 3100813-08 **B:** MeOH 216350

			File Name	Acquisition Method	Dilution	R	Comments	Date/Time
74	EQ2100476-02		20210802_081	Perchlorate6850c.lcm	1x	☒		8/3/2021 2:15
75	EQ2100476-03		20210802_082	Perchlorate6850c.lcm	1x	☒		8/3/2021 2:23
76	EQ2100476-04		20210802_083	Perchlorate6850c.lcm	1x	☒	INST out of range	8/3/2021 2:32
77	EQ2100476-05		20210802_084	Perchlorate6850c.lcm	1x	☒	INST out of range	8/3/2021 2:40
78	EQ2100476-06		20210802_085	Perchlorate6850c.lcm	1x	☒	INST out of range	8/3/2021 2:49
79	EQ2100476-07		20210802_086	Perchlorate6850c.lcm	1x	☒	INST out of range	8/3/2021 2:57
80	E2100843-001		20210802_087	Perchlorate6850c.lcm	1x	☒	INST out of range	8/3/2021 3:06
81	E2100843-002		20210802_088	Perchlorate6850c.lcm	1x	☒	INST out of range	8/3/2021 3:14
82	E2100843-003		20210802_089	Perchlorate6850c.lcm	1x	☒	INST out of range	8/3/2021 3:23
83	PERCHLORATE7		20210802_090	Perchlorate6850c.lcm	1x	☒	3100812-07	8/3/2021 3:32
84	E2100843-004		20210802_091	Perchlorate6850c.lcm	1x	☒	INST out of range	8/3/2021 3:40
85	E2100843-005		20210802_092	Perchlorate6850c.lcm	1x	☒	INST out of range	8/3/2021 3:49
86	E2100843-006		20210802_093	Perchlorate6850c.lcm	1x	☒	INST out of range	8/3/2021 3:57
87	E2100843-007		20210802_094	Perchlorate6850c.lcm	1x	☒	INST out of range	8/3/2021 4:06
88	E2100843-008		20210802_095	Perchlorate6850c.lcm	1x	☒		8/3/2021 4:14
89	E2100843-009		20210802_096	Perchlorate6850c.lcm	1x	☒	INST out of range	8/3/2021 4:23
90	E2100844-001		20210802_097	Perchlorate6850c.lcm	1x	☒	INST out of range	8/3/2021 4:31
91	E2100844-002		20210802_098	Perchlorate6850c.lcm	1x	☒	INST out of range	8/3/2021 4:40
92	E2100844-003		20210802_099	Perchlorate6850c.lcm	1x	☒	INST out of range	8/3/2021 4:48
93	E2100844-004		20210802_100	Perchlorate6850c.lcm	1x	☒	INST out of range	8/3/2021 4:57
94	PERCHLORATE7		20210802_101	Perchlorate6850c.lcm	1x	☒	3100812-07	8/3/2021 5:06
95	E2100844-005		20210802_102	Perchlorate6850c.lcm	1x	☒	INST out of range	8/3/2021 5:14
96	E2100844-006		20210802_103	Perchlorate6850c.lcm	1x	☒	INST out of range	8/3/2021 5:23
97	E2100844-007		20210802_104	Perchlorate6850c.lcm	1x	☒	INST out of range	8/3/2021 5:31
98	E2100844-008		20210802_105	Perchlorate6850c.lcm	1x	☒	INST out of range	8/3/2021 5:40
99	E2100844-009		20210802_106	Perchlorate6850c.lcm	1x	☒	INST out of range	8/3/2021 5:48
100	PERCHLORATE7		20210802_107	Perchlorate6850c.lcm	1x	☒	3100812-07	8/3/2021 5:57

Initial Calibration - Detailed Report

Calibration ID: EC2100056 **Instrument ID:** E-LCMS-01
Column Name: 1

#	Lab Code	Sample Name	File Location	Aquisition Date
02	EC2100056-02	PERCHLORATE2	20210802_007	08/02/2021 15:13
03	EC2100056-03	PERCHLORATE3	20210802_008	08/02/2021 15:24
04	EC2100056-04	PERCHLORATE4	20210802_009	08/02/2021 15:33
05	EC2100056-05	PERCHLORATE5	20210802_010	08/02/2021 15:41
06	EC2100056-06	PERCHLORATE6	20210802_011	08/02/2021 15:50
07	EC2100056-07	PERCHLORATE7	20210802_012	08/02/2021 15:58
08	EC2100056-08	PERCHLORATE8	20210802_013	08/02/2021 16:07
09	EC2100056-09	PERCHLORATE9	20210802_014	08/02/2021 16:15
10	EC2100056-10	PERCHLORATE10	20210802_015	08/02/2021 16:24
01	EC2100056-01	PERCHLORATE1	20210802_017	08/02/2021 16:41

Analyte **Curve Fit** **Weighting**

Perchlorate **Average RF** **RSD = 4.317** **Average RF = 0.1473**

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.1000	0.152	02	0.5000	0.1568	03	0.7000	0.1508	04	1.0000	0.1523
05	2.0000	0.1523	06	5.0000	0.1468	07	10.0000	0.1389	08	20.0000	0.1411
09	30.0000	0.1397	10	50.0000	0.1426						

Analyte

Perchlorate

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	0.1000	0.103	3.2	02	0.5000	0.532	6.4	03	0.7000	0.716	2.3
04	1.0000	1.03	3.4	05	2.0000	2.07	3.4	06	5.0000	4.98	-0.3
07	10.0000	9.43	-5.7	08	20.0000	19.2	-4.2	09	30.0000	28.4	-5.2
10	50.0000	48.4	-3.2								

Initial Calibration Verification Summary Report

Calibration ID:	EC2100056	**Instrument ID:**	E-LCMS-01
Datafile ID:	20210802_018	**Column Name:**	1

Analyte	Lab Code	Type	Curve Fit	True Value	Calc Conc	Units	Result	Criteria
Perchlorate	EC2100056-11	T	Average RF	10	9.871	ng/mL	-1.3	<= 15

Insight Report

Printed at 8/18/2021 10:37:32 AM

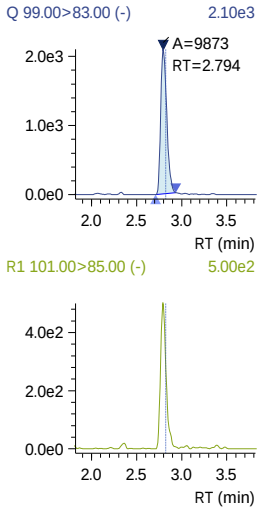
20210802_007

Sample ID: PERCHLORATE2
Date Acquired: 8/2/2021 3:13:26 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210802\20210802_007.lcd
Vial: 21 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.794	9873	125942	1	0.5321	ng/mL	0.5000	23.77
Sodium Perchlorate-18O4 _IS	Auto	2.793	1259 42	125942	1	1.0000	ng/mL	1.0000	----

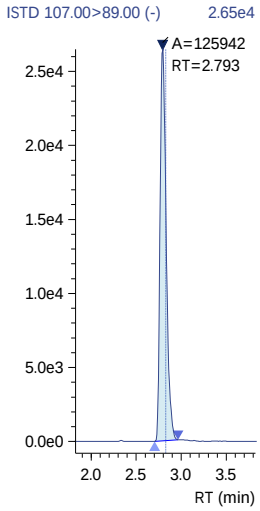
Perchlorate

Conc 0.5321
R#1 23.77 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.0000



Insight Report

Printed at 8/18/2021 10:42:57 AM

Method File: I:\LCMS01\DATA\20210802\20210726.lcm

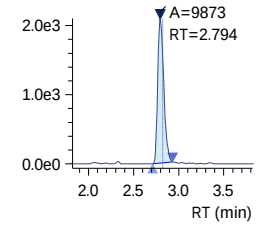
20210802_007

Sample ID: PERCHLORATE2
Date Acquired: 8/2/2021 3:13:26 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210802\Before\20210802_007.lcd
Vial: 21 | Inj. Volume: 25.0000uL | Tray: 1

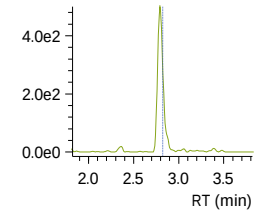
Perchlorate

Conc 0.4663
R#1 23.77 (0.00)

Q 99.00>83.00 (-) 2.10e3



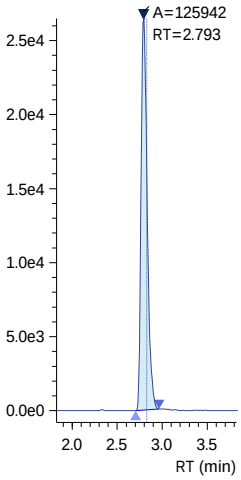
R1 101.00>85.00 (-) 5.00e2



Sodium Perchlorate -18O4_IS

Conc 1.0000

ISTD 107.00>89.00 (-) 2.65e4



Insight Report

Printed at 8/18/2021 10:37:32 AM

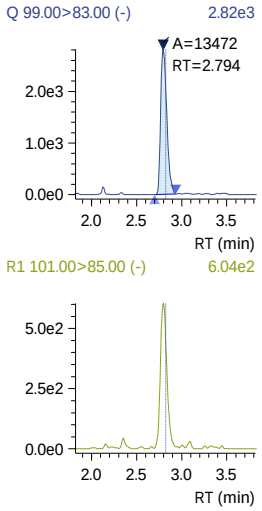
20210802_008

Sample ID: PERCHLORATE3
Date Acquired: 8/2/2021 3:24:30 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210802\20210802_008.lcd
Vial: 22 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.794	13472	127657	1	0.7164	ng/mL	0.7000	21.28
Sodium Perchlorate-18O4 _IS	Auto	2.793	1276 57	127657	1	1.0000	ng/mL	1.0000	----

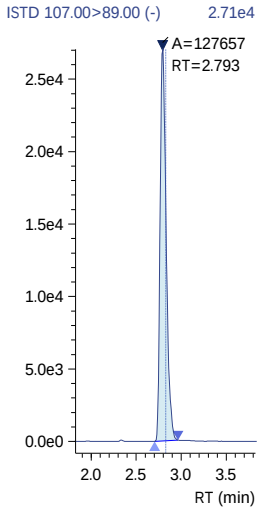
Perchlorate

Conc 0.7164
R#1 21.28 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.0000



Insight Report

Printed at 8/18/2021 10:42:57 AM

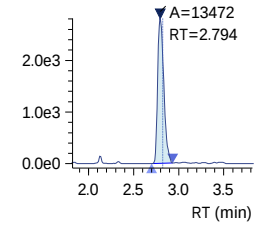
20210802_008

Sample ID: PERCHLORATE3
Date Acquired: 8/2/2021 3:24:30 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210802\Before\20210802_008.lcd
Vial: 22 | Inj. Volume: 25.0000uL | Tray: 1

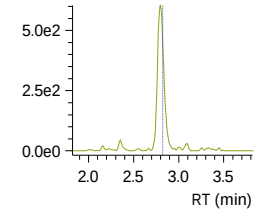
Perchlorate

Conc 0.6371
R#1 21.28 (0.00)

Q 99.00>83.00 (-) 2.82e3



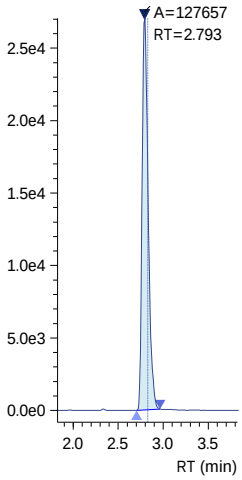
R1 101.00>85.00 (-) 6.04e2



Sodium Perchlorate -18O4_IS

Conc 1.0000

ISTD 107.00>89.00 (-) 2.71e4



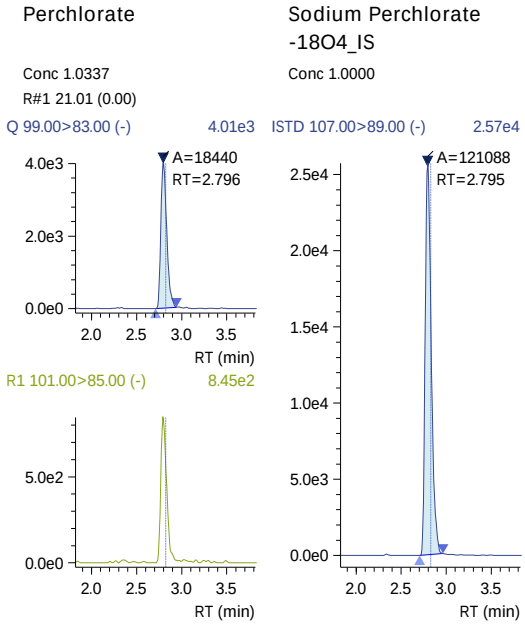
Insight Report

Printed at 8/18/2021 10:37:32 AM

20210802_009

Sample ID: PERCHLORATE4
Date Acquired: 8/2/2021 3:33:05 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210802\20210802_009.lcd
Vial: 23 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.796	18440	121088	1	1.0337	ng/mL	1.0000	21.01
Sodium Perchlorate-18O4 _IS	Auto	2.795	1210 88	121088	1	1.0000	ng/mL	1.0000	----



Insight Report

Printed at 8/18/2021 10:42:57 AM

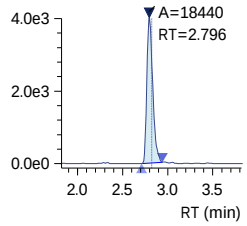
20210802_009

Sample ID: PERCHLORATE4
Date Acquired: 8/2/2021 3:33:05 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210802\Before\20210802_009.lcd
Vial: 23 | Inj. Volume: 25.0000uL | Tray: 1

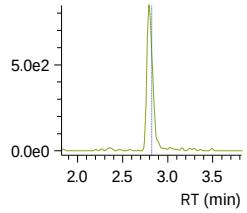
Perchlorate

Conc 0.9314
R#1 21.01 (0.00)

Q 99.00>83.00 (-) 4.01e3



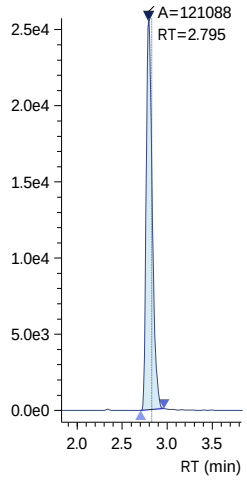
R1 101.00>85.00 (-) 8.45e2



Sodium Perchlorate -18O4_IS

Conc 1.0000

ISTD 107.00>89.00 (-) 2.57e4



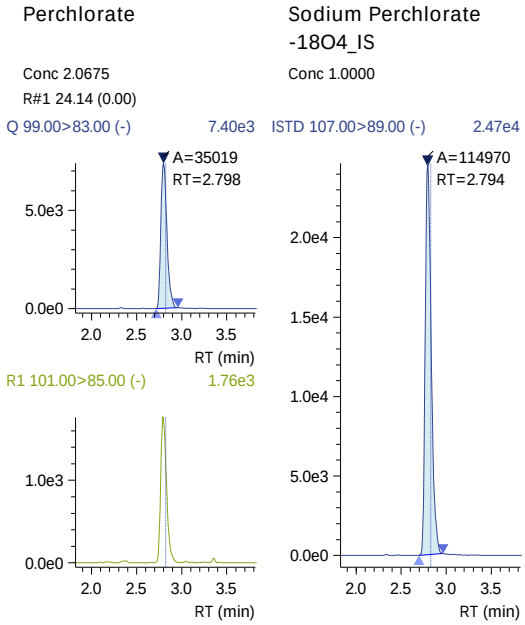
Insight Report

Printed at 8/18/2021 10:37:32 AM

20210802_010

Sample ID: PERCHLORATE5
Date Acquired: 8/2/2021 3:41:38 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210802\20210802_010.lcd
Vial: 24 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.798	35019	114970	1	2.0675	ng/mL	2.0000	24.14
Sodium Perchlorate-18O4 _IS	Auto	2.794	1149 70	114970	1	1.0000	ng/mL	1.0000	----



Insight Report

Printed at 8/18/2021 10:42:57 AM

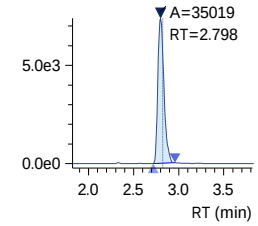
20210802_010

Sample ID: PERCHLORATE5
Date Acquired: 8/2/2021 3:41:38 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210802\Before\20210802_010.lcd
Vial: 24 | Inj. Volume: 25.0000uL | Tray: 1

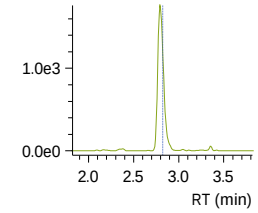
Perchlorate

Conc 1.8902
R#1 24.14 (0.00)

Q 99.00>83.00 (-) 7.40e3



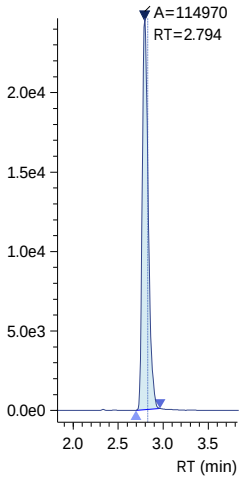
R1 101.00>85.00 (-) 1.76e3



Sodium Perchlorate -18O4_IS

Conc 1.0000

ISTD 107.00>89.00 (-) 2.47e4



Insight Report

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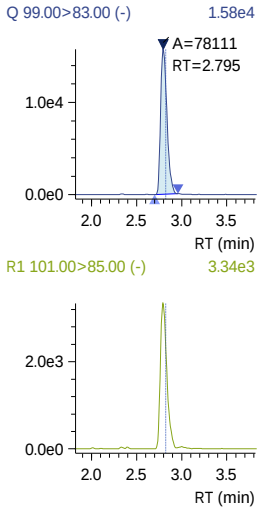
20210802_011

Sample ID: PERCHLORATE6
Date Acquired: 8/2/2021 3:50:11 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210802\20210802_011.lcd
Vial: 25 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.795	78111	106399	1	4.9832	ng/mL	5.0000	21.19
Sodium Perchlorate-18O4 _IS	Auto	2.794	1063 99	106399	1	1.0000	ng/mL	1.0000	----

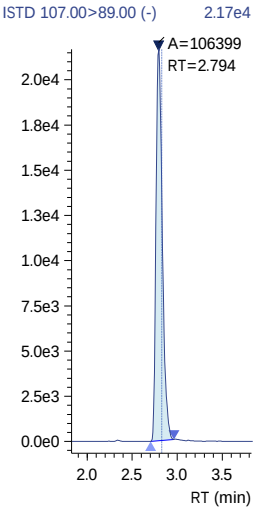
Perchlorate

Conc 4.9832
R#1 21.19 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.0000



Insight Report

Printed at 8/18/2021 10:42:57 AM

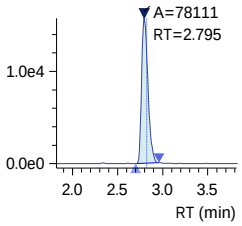
20210802_011

Sample ID: PERCHLORATE6
Date Acquired: 8/2/2021 3:50:11 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210802\Before\20210802_011.lcd
Vial: 25 | Inj. Volume: 25.0000uL | Tray: 1

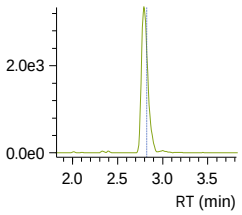
Perchlorate

Conc 4.5942
R#1 21.19 (0.00)

Q 99.00>83.00 (-) 1.58e4



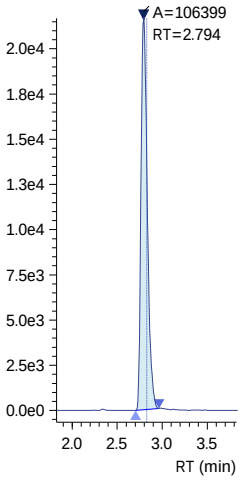
R1 101.00>85.00 (-) 3.34e3



Sodium Perchlorate -18O4_IS

Conc 1.0000

ISTD 107.00>89.00 (-) 2.17e4



Insight Report

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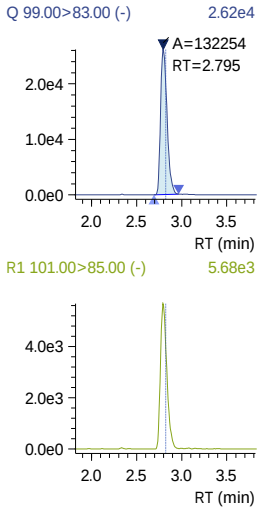
20210802_012

Sample ID: PERCHLORATE7
Date Acquired: 8/2/2021 3:58:47 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210802\20210802_012.lcd
Vial: 26 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.795	132254	95247	1	9.4253	ng/mL	10.0000	21.67
Sodium Perchlorate-18O4_IS	Auto	2.793	95247	95247	1	1.0000	ng/mL	1.0000	----

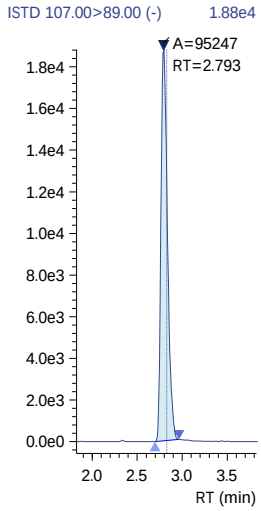
Perchlorate

Conc 9.4253
R#1 21.67 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.0000



Insight Report

Printed at 8/18/2021 10:42:57 AM

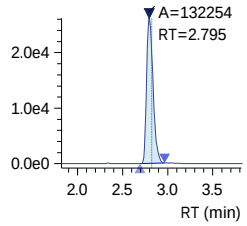
20210802_012

Sample ID: PERCHLORATE7
Date Acquired: 8/2/2021 3:58:47 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210802\Before\20210802_012.lcd
Vial: 26 | Inj. Volume: 25.0000uL | Tray: 1

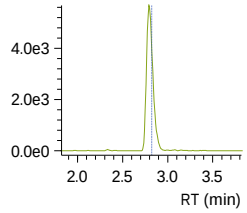
Perchlorate

Conc 8.7138
R#1 21.67 (0.00)

Q 99.00>83.00 (-) 2.62e4



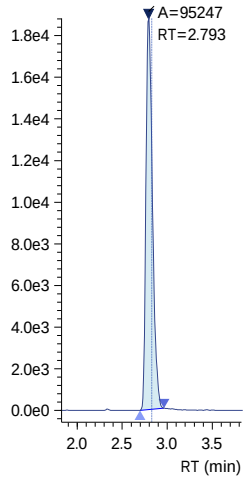
R1 101.00>85.00 (-) 5.68e3



Sodium Perchlorate -18O4_IS

Conc 1.0000

ISTD 107.00>89.00 (-) 1.88e4



Insight Report

Printed at 8/18/2021 10:37:32 AM

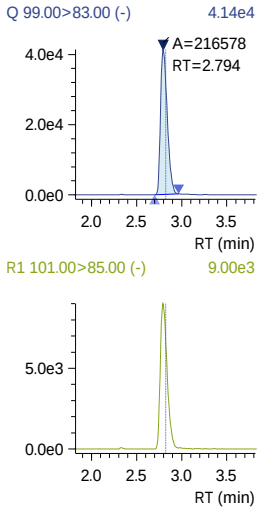
20210802_013

Sample ID: PERCHLORATE8
Date Acquired: 8/2/2021 4:07:19 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210802\20210802_013.lcd
Vial: 27 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.794	216578	76725	1	19.1606	ng/mL	20.0000	21.75
Sodium Perchlorate-18O4_IS	Auto	2.793	76725	76725	1	1.0000	ng/mL	1.0000	----

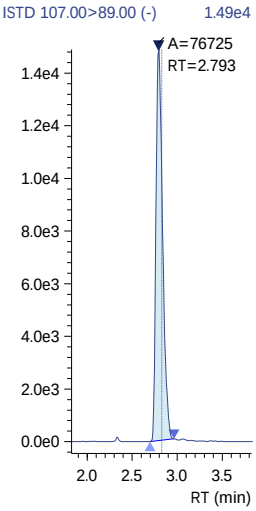
Perchlorate

Conc 19.1606
R#1 21.75 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.0000



Insight Report

Printed at 8/18/2021 10:42:57 AM

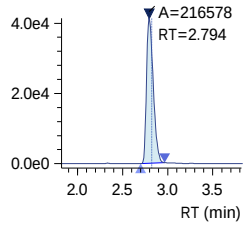
20210802_013

Sample ID: PERCHLORATE8
Date Acquired: 8/2/2021 4:07:19 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210802\Before\20210802_013.lcd
Vial: 27 | Inj. Volume: 25.0000uL | Tray: 1

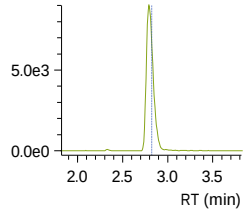
Perchlorate

Conc 17.7423
R#1 21.75 (0.00)

Q 99.00>83.00 (-) 4.14e4



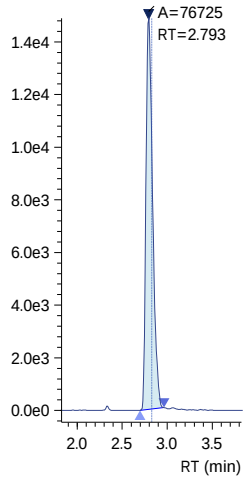
R1 101.00>85.00 (-) 9.00e3



Sodium Perchlorate -18O4_IS

Conc 1.0000

ISTD 107.00>89.00 (-) 1.49e4



Insight Report

Printed at 8/18/2021 10:37:32 AM

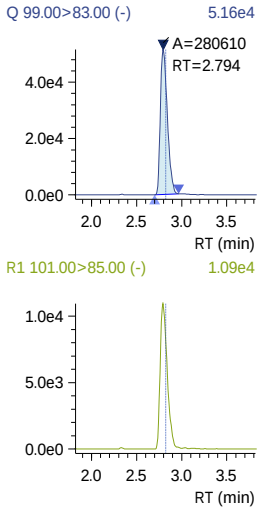
20210802_014

Sample ID: PERCHLORATE9
Date Acquired: 8/2/2021 4:15:50 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210802\20210802_014.lcd
Vial: 28 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.794	280610	66968	1	28.4426	ng/mL	30.0000	21.15
Sodium Perchlorate-18O4_IS	Auto	2.795	66968	66968	1	1.0000	ng/mL	1.0000	----

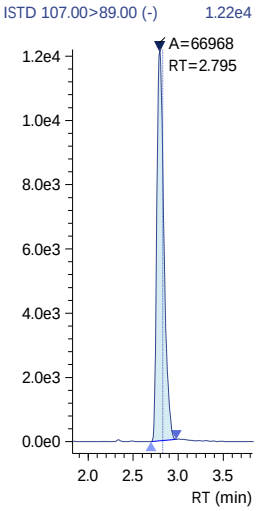
Perchlorate

Conc 28.4426
R#1 21.15 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.0000



Insight Report

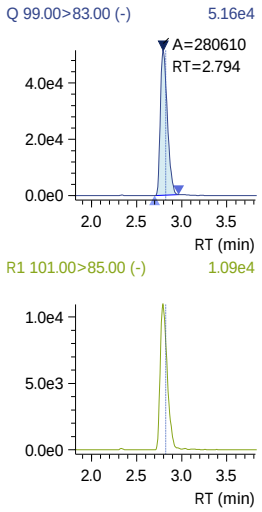
Printed at 8/18/2021 10:42:57 AM

20210802_014

Sample ID: PERCHLORATE9
Date Acquired: 8/2/2021 4:15:50 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210802\Before\20210802_014.lcd
Vial: 28 | Inj. Volume: 25.0000uL | Tray: 1

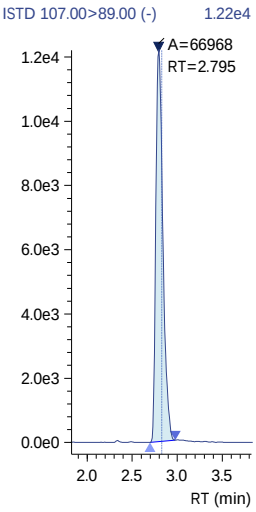
Perchlorate

Conc 26.3504
R#1 21.15 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.0000



Insight Report

Printed at 8/18/2021 10:37:32 AM

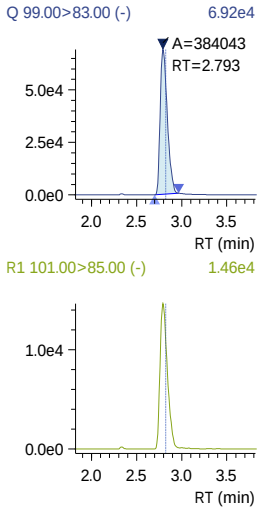
20210802_015

Sample ID: PERCHLORATE10
Date Acquired: 8/2/2021 4:24:21 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210802\20210802_015.lcd
Vial: 29 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.793	384043	53873	1	48.3887	ng/mL	50.0000	21.16
Sodium Perchlorate-18O4_IS	Auto	2.792	53873	53873	1	1.0000	ng/mL	1.0000	----

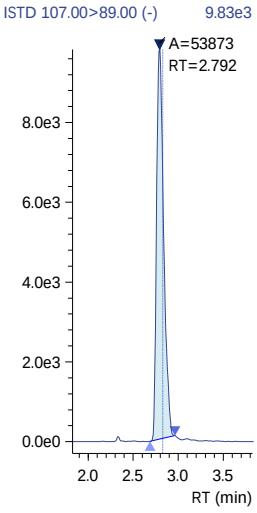
Perchlorate

Conc 48.3887
R#1 21.16 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.0000



Insight Report

Printed at 8/18/2021 10:42:57 AM

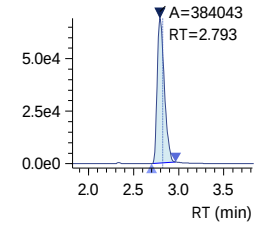
20210802_015

Sample ID: PERCHLORATE10
Date Acquired: 8/2/2021 4:24:21 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210802\Before\20210802_015.lcd
Vial: 29 | Inj. Volume: 25.0000uL | Tray: 1

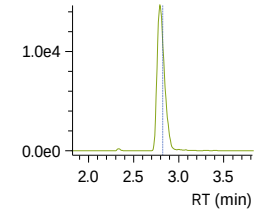
Perchlorate

Conc 44.8484
R#1 21.16 (0.00)

Q 99.00>83.00 (-) 6.92e4



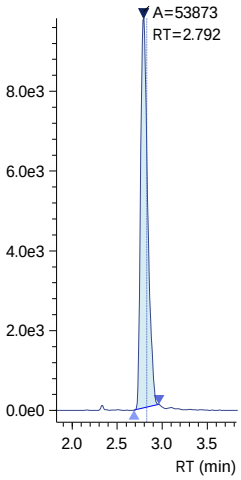
R1 101.00>85.00 (-) 1.46e4



Sodium Perchlorate -18O4_IS

Conc 1.0000

ISTD 107.00>89.00 (-) 9.83e3



Insight Report

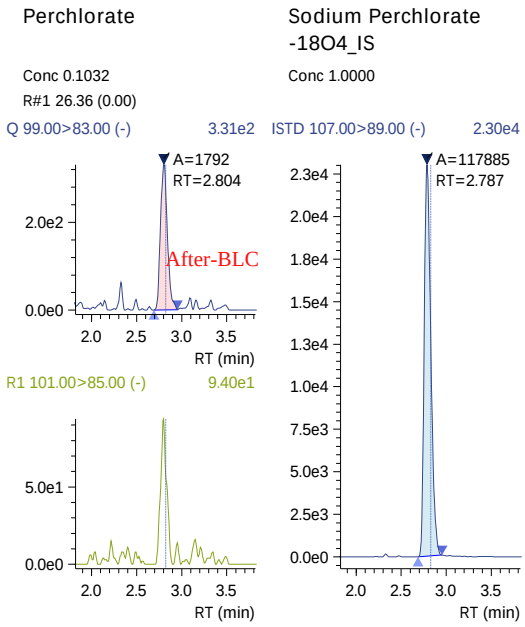
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Method File: I:\LCMS01\DATA\20210802\20210802.lcm
Project File: I:\LCMS01\DATA\20210802\20210802.damlp

20210802_017

Sample ID: PERCHLORATE1
Date Acquired: 8/2/2021 4:41:27 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210802\20210802_017.lcd
Vial: 20 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	M	2.804	1792	117885	1	0.1032	ng/mL	0.1000	26.36
Sodium Perchlorate-18O4 _IS	Auto	2.787	117885	117885	1	1.0000	ng/mL	1.0000	----



Insight Report

Printed at 8/18/2021 10:42:57 AM

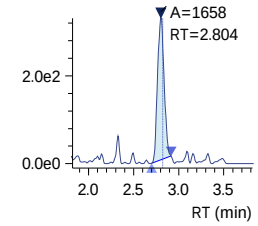
20210802_017

Sample ID: PERCHLORATE1
Date Acquired: 8/2/2021 4:41:27 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210802\Before\20210802_017.lcd
Vial: 20 | Inj. Volume: 25.0000uL | Tray: 1

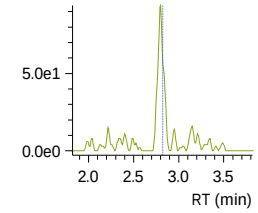
Perchlorate

Conc 0.0613
R#1 29.06 (0.00)

Q 99.00>83.00 (-) 3.31e2



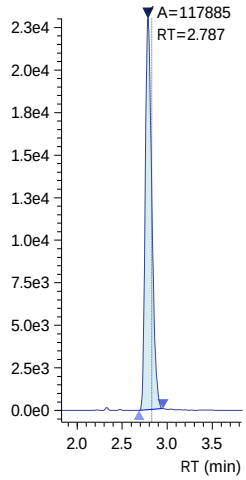
R1 101.00>85.00 (-) 9.40e1



Sodium Perchlorate -18O4_IS

Conc 1.0000

ISTD 107.00>89.00 (-) 2.30e4



Insight Report

Printed at 8/18/2021 10:37:32 AM

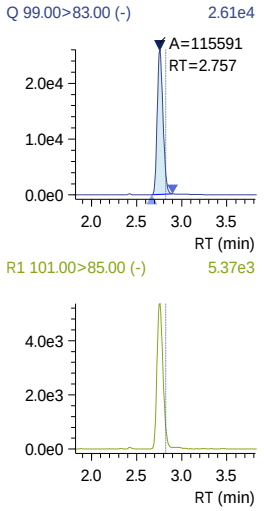
20210802_018

Sample ID: PERCHLORATEICV
Date Acquired: 8/2/2021 4:50:04 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210802\20210802_018.lcd
Vial: 30 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.757	115591	79484	1	9.8714	ng/mL	10.0000	20.98
Sodium Perchlorate-18O4_IS	Auto	2.754	79484	79484	1	1.0000	ng/mL	1.0000	----

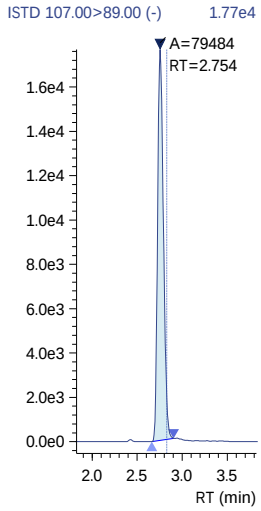
Perchlorate

Conc 9.8714
R#1 20.98 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.0000



Insight Report

Printed at 8/18/2021 10:42:57 AM

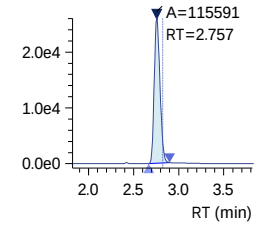
20210802_018

Sample ID: PERCHLORATEICV
Date Acquired: 8/2/2021 4:50:04 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210802\Before\20210802_018.lcd
Vial: 30 | Inj. Volume: 25.0000uL | Tray: 1

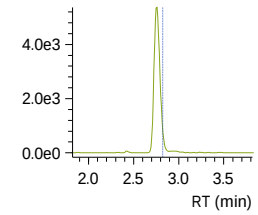
Perchlorate

Conc 9.1275
R#1 20.98 (0.00)

Q 99.00>83.00 (-) 2.61e4



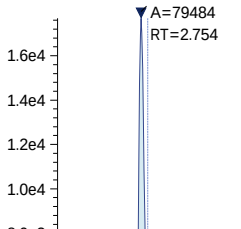
R1 101.00>85.00 (-) 5.37e3



Sodium Perchlorate -18O4_IS

Conc 1.0000

ISTD 107.00>89.00 (-) 1.77e4



20210804

1st Review: Grivera
2nd Review: Kneir

Injection Log
LCMS01 -Shimadzu 8050

ICAL Date: 8/4/2021
Cal. Std. xp: 11/26/2021
ICAL ID: **EC2100057**

Mobile Phases **A:** 0.75% Formic Acid/Water 3100813-08 **B:** MeOH 216350

			File Name	Acquisition Method	Dilution	R	Comments	Date/Time
1	PERCHLORATE1		20210804_014	Perchlorate6850c.lcm	1x	☒	3100812-01	8/4/2021 13:15
2	PERCHLORATE2		20210804_015	Perchlorate6850c.lcm	1x	☒	3100812-02	8/4/2021 13:24
3	PERCHLORATE3		20210804_016	Perchlorate6850c.lcm	1x	☒	3100812-03	8/4/2021 13:32
4	PERCHLORATE4		20210804_017	Perchlorate6850c.lcm	1x	☒	3100812-04	8/4/2021 13:41
5	PERCHLORATE5		20210804_018	Perchlorate6850c.lcm	1x	☒	3100812-05	8/4/2021 13:50
6	PERCHLORATE6		20210804_019	Perchlorate6850c.lcm	1x	☒	3100812-06	8/4/2021 13:58
7	PERCHLORATE7		20210804_020	Perchlorate6850c.lcm	1x	☒	3100812-07	8/4/2021 14:07
8	PERCHLORATE8		20210804_021	Perchlorate6850c.lcm	1x	☒	3100812-08	8/4/2021 14:15
9	PERCHLORATE9		20210804_022	Perchlorate6850c.lcm	1x	☒	3100812-09	8/4/2021 14:24
10	PERCHLORATE10		20210804_023	Perchlorate6850c.lcm	1x	☒	3100813-01	8/4/2021 14:32
11	PERCHLORATEICV		20210804_024	Perchlorate6850c.lcm	1x	☒	3100811-06	8/4/2021 14:41
12	LODV		20210804_025	Perchlorate6850c.lcm	1x	☒		8/4/2021 15:06
13	PERCHLORATE7		20210804_026	Perchlorate6850c.lcm	1x	☒	3100812-07	8/4/2021 15:15
14	E2100824-001X5		20210804_028	Perchlorate6850c.lcm	5x	☒		8/4/2021 15:33
15	E2100825-001X10		20210804_029	Perchlorate6850c.lcm	10x	☒	INST out of range	8/4/2021 15:42
16	E2100825-002X10		20210804_030	Perchlorate6850c.lcm	10x	☒	INST out of range	8/4/2021 15:51
17	E2100825-003X10		20210804_031	Perchlorate6850c.lcm	10x	☒	INST out of range	8/4/2021 15:59
18	E2100825-005X10		20210804_032	Perchlorate6850c.lcm	10x	☒	INST out of range	8/4/2021 16:08
19	E2100825-006X10		20210804_033	Perchlorate6850c.lcm	10x	☒	INST out of range	8/4/2021 16:16
20	E2100825-007X10		20210804_034	Perchlorate6850c.lcm	10x	☒	INST out of range	8/4/2021 16:25
21	E2100825-008X10		20210804_035	Perchlorate6850c.lcm	10x	☒	INST out of range	8/4/2021 16:33
22	E2100831-002X5		20210804_036	Perchlorate6850c.lcm	5x	☒		8/4/2021 16:42
23	PERCHLORATE7		20210804_037	Perchlorate6850c.lcm	1x	☒	3100812-07	8/4/2021 16:50
24	E2100856-001X10		20210804_039	Perchlorate6850c.lcm	10x	☒		8/4/2021 18:18
25	E2100856-002X5		20210804_040	Perchlorate6850c.lcm	5x	☒	INST out of range	8/4/2021 18:27
26	E2100856-004X5		20210804_041	Perchlorate6850c.lcm	5x	☒	INST out of range	8/4/2021 18:35
27	E2100825-001X20		20210804_042	Perchlorate6850c.lcm	20x	☒	INST out of range	8/4/2021 18:44
28	E2100825-002X20		20210804_043	Perchlorate6850c.lcm	20x	☒	INST out of range	8/4/2021 18:52
29	E2100825-003X20		20210804_044	Perchlorate6850c.lcm	20x	☒	INST out of range	8/4/2021 19:01
30	E2100825-006X20		20210804_045	Perchlorate6850c.lcm	20x	☒	No injection	8/4/2021 18:05
31	E2100825-005X20		20210804_045~1	Perchlorate6850c.lcm	20x	☒		8/4/2021 19:09
32	E2100825-006X20		20210804_046	Perchlorate6850c.lcm	20x	☒	INST out of range	8/4/2021 19:18
33	E2100825-007X20		20210804_047	Perchlorate6850c.lcm	20x	☒	INST out of range	8/4/2021 19:26
34	PERCHLORATE7		20210804_048	Perchlorate6850c.lcm	1x	☒	3100812-07	8/4/2021 19:35
35	E2100825-008X20		20210804_049	Perchlorate6850c.lcm	20x	☒	INST out of range	8/4/2021 19:43
36	E2100856-001X20		20210804_050	Perchlorate6850c.lcm	20x	☒		8/4/2021 19:52
37	E2100856-002X20		20210804_051	Perchlorate6850c.lcm	20x	☒	INST out of range	8/4/2021 20:00
38	E2100856-004X20		20210804_052	Perchlorate6850c.lcm	20x	☒	INST out of range	8/4/2021 20:09
39	E2100837-001X10		20210804_053	Perchlorate6850c.lcm	10x	☒		8/4/2021 20:18
40	E2100837-002X10		20210804_054	Perchlorate6850c.lcm	10x	☒		8/4/2021 20:26
41	E2100837-004X10		20210804_055	Perchlorate6850c.lcm	10x	☒		8/4/2021 20:35
42	E2100837-005X10		20210804_056	Perchlorate6850c.lcm	10x	☒		8/4/2021 20:43
43	E2100837-007X10		20210804_057	Perchlorate6850c.lcm	10x	☒		8/4/2021 20:52
44	PERCHLORATE7		20210804_058	Perchlorate6850c.lcm	1x	☒	3100812-07	8/4/2021 21:00
45	E2100841-008		20210804_059	Perchlorate6850c.lcm	1x	☒		8/4/2021 21:09
46	E2100841-009		20210804_060	Perchlorate6850c.lcm	1x	☒		8/4/2021 21:17
47	E2100842-001x2		20210804_061	Perchlorate6850c.lcm	2x	☒	3100812-07	8/4/2021 21:26
48	E2100842-002X10		20210804_062	Perchlorate6850c.lcm	10x	☒		8/4/2021 21:34
49	E2100842-003X10		20210804_063	Perchlorate6850c.lcm	10x	☒		8/4/2021 21:43
50	E2100842-004X10		20210804_064	Perchlorate6850c.lcm	10x	☒		8/4/2021 21:52
51	E2100842-005		20210804_065	Perchlorate6850c.lcm	1x	☒	INST out of range	8/4/2021 22:00
52	E2100842-006X10		20210804_066	Perchlorate6850c.lcm	10x	☒		8/4/2021 22:09
53	PERCHLORATE7		20210804_067	Perchlorate6850c.lcm	1x	☒	3100812-07	8/4/2021 22:17
54	E2100843-001		20210804_068	Perchlorate6850c.lcm	1x	☒	INST out of range	8/4/2021 22:26
55	E2100843-002		20210804_069	Perchlorate6850c.lcm	1x	☒	INST out of range	8/4/2021 22:34
56	E2100843-003		20210804_070	Perchlorate6850c.lcm	1x	☒	INST out of range	8/4/2021 22:43
57	PERCHLORATE7		20210804_071	Perchlorate6850c.lcm	1x	☒	3100812-07	8/4/2021 22:51
58	E2100843-004		20210804_072	Perchlorate6850c.lcm	1x	☒	INST out of range	8/4/2021 23:00
59	E2100843-005		20210804_073	Perchlorate6850c.lcm	1x	☒	INST out of range	8/4/2021 23:08
60	E2100843-006		20210804_074	Perchlorate6850c.lcm	1x	☒	INST out of range	8/4/2021 23:17
61	E2100843-007		20210804_075	Perchlorate6850c.lcm	1x	☒		8/4/2021 23:26
62	E2100843-008		20210804_076	Perchlorate6850c.lcm	1x	☒		8/4/2021 23:34
63	E2100843-009		20210804_077	Perchlorate6850c.lcm	1x	☒	INST out of range	8/4/2021 23:43
64	E2100844-001		20210804_078	Perchlorate6850c.lcm	1x	☒	INST out of range	8/4/2021 23:51
65	E2100844-002		20210804_079	Perchlorate6850c.lcm	1x	☒	INST out of range	8/5/2021 0:00
66	E2100844-003		20210804_080	Perchlorate6850c.lcm	1x	☒	INST out of range	8/5/2021 0:08

20210804

1st Review: Grivera
2nd Review: Kneir

Injection Log
LCMS01 -Shimadzu 8050

ICAL Date: 8/4/2021
Cal. Std. xp: 11/26/2021
ICAL ID: **EC2100057**

Mobile Phases **A:** 0.75% Formic Acid/Water 3100813-08 **B:** MeOH 216350

			File Name	Acquisition Method	Dilution	R	Comments	Date/Time
67	E2100844-004		20210804_081	Perchlorate6850c.lcm	1x	☒		8/5/2021 0:17
68	PERCHLORATE7		20210804_082	Perchlorate6850c.lcm	1x	☒	3100812-07	8/5/2021 0:25
69	E2100844-005		20210804_083	Perchlorate6850c.lcm	1x	☒	INST out of range	8/5/2021 0:34
70	E2100844-006		20210804_084	Perchlorate6850c.lcm	1x	☒	INST out of range	8/5/2021 0:42
71	E2100844-007		20210804_085	Perchlorate6850c.lcm	1x	☒	INST out of range	8/5/2021 0:51
72	E2100844-008		20210804_086	Perchlorate6850c.lcm	1x	☒	INST out of range	8/5/2021 1:00
73	E2100844-009		20210804_087	Perchlorate6850c.lcm	1x	☒	INST out of range	8/5/2021 1:08
74	PERCHLORATE7		20210804_088	Perchlorate6850c.lcm	1x	☒	3100812-07	8/5/2021 1:17

Initial Calibration - Detailed Report

Calibration ID: EC2100057 **Instrument ID:** E-LCMS-01
Column Name: 1

#	Lab Code	Sample Name	File Location	Aquisition Date
01	EC2100057-01	PERCHLORATE1	20210804_014	08/04/2021 13:15
02	EC2100057-02	PERCHLORATE2	20210804_015	08/04/2021 13:24
03	EC2100057-03	PERCHLORATE3	20210804_016	08/04/2021 13:32
04	EC2100057-04	PERCHLORATE4	20210804_017	08/04/2021 13:41
05	EC2100057-05	PERCHLORATE5	20210804_018	08/04/2021 13:50
06	EC2100057-06	PERCHLORATE6	20210804_019	08/04/2021 13:58
07	EC2100057-07	PERCHLORATE7	20210804_020	08/04/2021 14:07
08	EC2100057-08	PERCHLORATE8	20210804_021	08/04/2021 14:15
09	EC2100057-09	PERCHLORATE9	20210804_022	08/04/2021 14:24
10	EC2100057-10	PERCHLORATE10	20210804_023	08/04/2021 14:32

Analyte **Curve Fit** **Weighting**

Perchlorate **Average RF** **RSD = 6.011** **Average RF = 0.1426**

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.1000	0.1626	02	0.5000	0.1438	03	0.7000	0.1497	04	1.0000	0.1384
05	2.0000	0.1454	06	5.0000	0.1412	07	10.0000	0.1378	08	20.0000	0.138
09	30.0000	0.1329	10	50.0000	0.136						

Analyte

Perchlorate

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	0.1000	0.114	14.0	02	0.5000	0.504	0.9	03	0.7000	0.735	5.0
04	1.0000	0.971	-2.9	05	2.0000	2.04	2.0	06	5.0000	4.95	-1.0
07	10.0000	9.66	-3.4	08	20.0000	19.4	-3.2	09	30.0000	28.0	-6.8
10	50.0000	47.7	-4.6								

Initial Calibration Verification Summary Report

Calibration ID:	EC2100057	**Instrument ID:**	E-LCMS-01
Datafile ID:	20210804_024	**Column Name:**	1

Analyte	Lab Code	Type	Curve Fit	True Value	Calc Conc	Units	Result	Criteria
Perchlorate	EC2100057-11	T	Average RF	10	9.593	ng/mL	-4.1	<= 15

Insight Report

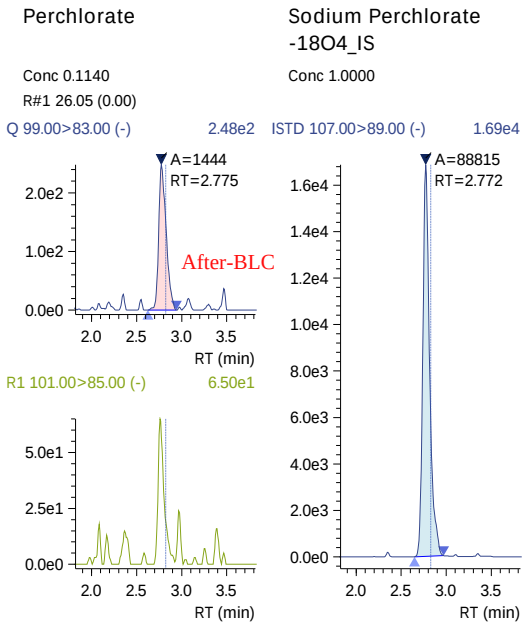
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Method File: I:\LCMS01\DATA\20210804\20210804.lcm
Project File: I:\LCMS01\DATA\20210804\20210804.damlp

20210804_014

Sample ID: PERCHLORATE1
Date Acquired: 8/4/2021 1:15:49 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210804\20210804_014.lcd
Vial: 20 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	M	2.775	1444	88815	1	0.1140	ng/mL	0.1000	26.05
Sodium Perchlorate-18O4 _IS	Auto	2.772	88815	88815	1	1.0000	ng/mL	1.0000	----



Insight Report

Printed at 8/19/2021 11:57:47 AM

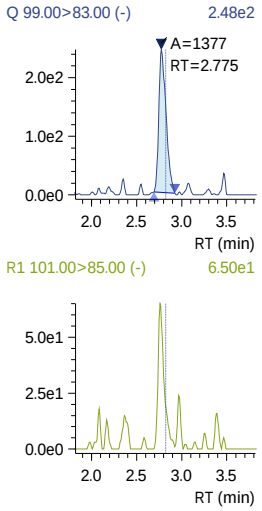
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20210804_014

Sample ID: PERCHLORATE1
Date Acquired: 8/4/2021 1:15:49 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210804\Before\20210804_014.lcd
Vial: 20 | Inj. Volume: 25.0000uL | Tray: 1

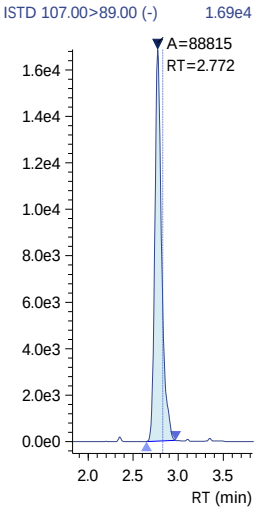
Perchlorate

Conc 0.1060
R#1 27.47 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.0000



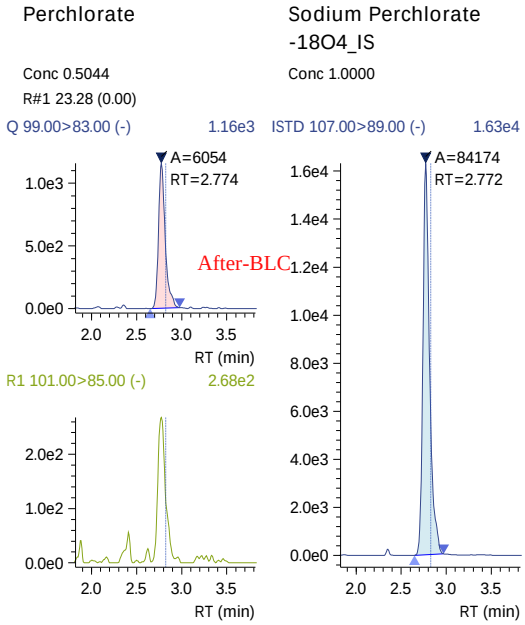
Insight Report

Printed at 8/19/2021 11:52:26 AM

20210804_015

Sample ID: PERCHLORATE2
Date Acquired: 8/4/2021 1:24:24 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210804\20210804_015.lcd
Vial: 21 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	M	2.774	6054	84174	1	0.5044	ng/mL	0.5000	23.28
Sodium Perchlorate-18O4 _IS	Auto	2.772	84174	84174	1	1.0000	ng/mL	1.0000	----



Insight Report

Printed at 8/19/2021 11:57:47 AM

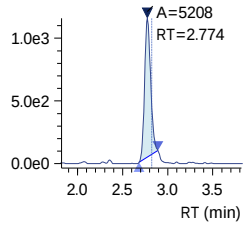
20210804_015

Sample ID: PERCHLORATE2
Date Acquired: 8/4/2021 1:24:24 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210804\Before\20210804_015.lcd
Vial: 21 | Inj. Volume: 25.0000uL | Tray: 1

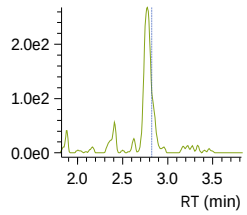
Perchlorate

Conc 0.4232
R#1 23.81 (0.00)

Q 99.00>83.00 (-) 1.16e3



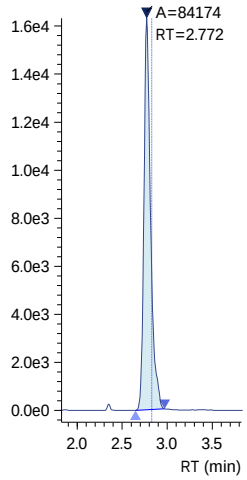
R1 101.00>85.00 (-) 2.68e2



Sodium Perchlorate -18O4_IS

Conc 1.0000

ISTD 107.00>89.00 (-) 1.63e4



Insight Report

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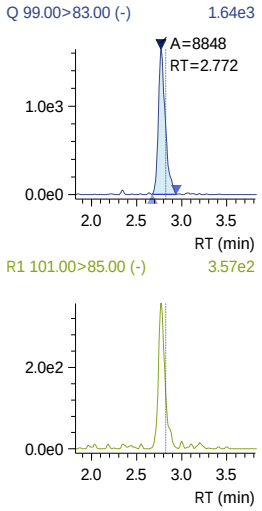
20210804_016

Sample ID: PERCHLORATE3
Date Acquired: 8/4/2021 1:32:57 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210804\20210804_016.lcd
Vial: 22 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.772	8848	84429	1	0.7350	ng/mL	0.7000	21.75
Sodium Perchlorate-18O4 _IS	Auto	2.772	84429	84429	1	1.0000	ng/mL	1.0000	----

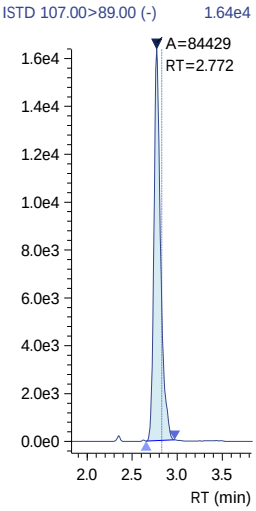
Perchlorate

Conc 0.7350
R#1 21.75 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.0000



Insight Report

Printed at 8/19/2021 11:57:47 AM

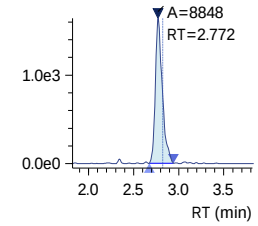
20210804_016

Sample ID: PERCHLORATE3
Date Acquired: 8/4/2021 1:32:57 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210804\Before\20210804_016.lcd
Vial: 22 | Inj. Volume: 25.0000uL | Tray: 1

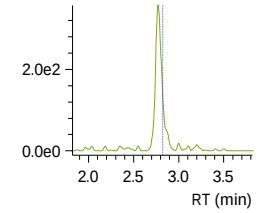
Perchlorate

Conc 0.7169
R#1 21.75 (0.00)

Q 99.00>83.00 (-) 1.64e3



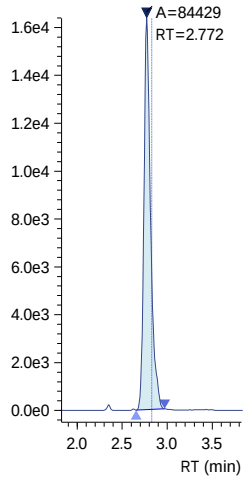
R1 101.00>85.00 (-) 3.57e2



Sodium Perchlorate -18O4_IS

Conc 1.0000

ISTD 107.00>89.00 (-) 1.64e4



Insight Report

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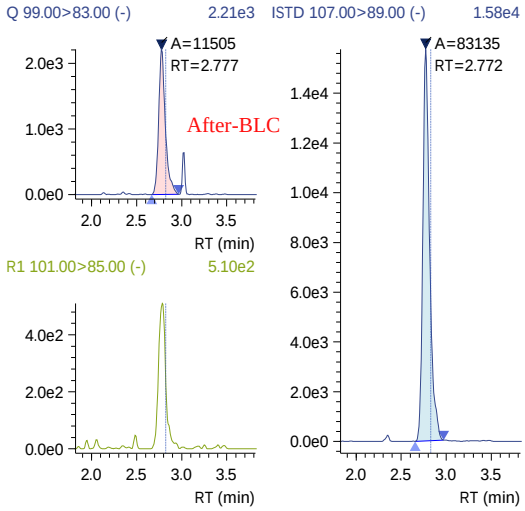
20210804_017

Sample ID: PERCHLORATE4
Date Acquired: 8/4/2021 1:41:28 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210804\20210804_017.lcd
Vial: 23 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	M	2.777	11505	83135	1	0.9706	ng/mL	1.0000	22.57
Sodium Perchlorate-18O4 _IS	Auto	2.772	83135	83135	1	1.0000	ng/mL	1.0000	----

Perchlorate

Conc 0.9706
R#1 22.57 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.0000

Insight Report

Printed at 8/19/2021 11:57:47 AM

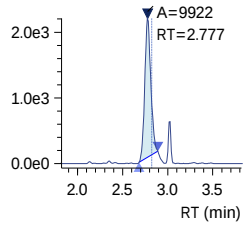
20210804_017

Sample ID: PERCHLORATE4
Date Acquired: 8/4/2021 1:41:28 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210804\Before\20210804_017.lcd
Vial: 23 | Inj. Volume: 25.0000uL | Tray: 1

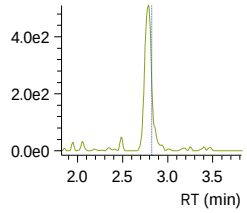
Perchlorate

Conc 0.8164
R#1 22.85 (0.00)

Q 99.00>83.00 (-) 2.21e3



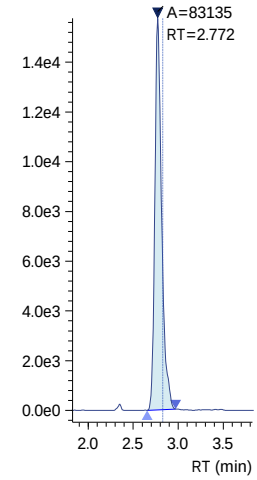
R1 101.00>85.00 (-) 5.10e2



Sodium Perchlorate -18O4_IS

Conc 1.0000

ISTD 107.00>89.00 (-) 1.58e4



Insight Report

Printed at 8/19/2021 11:52:26 AM

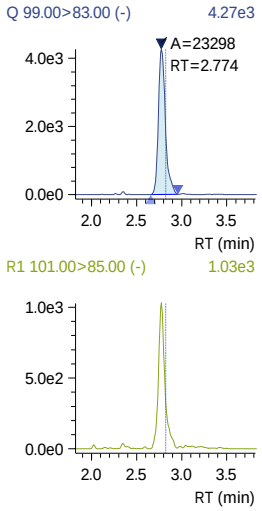
20210804_018

Sample ID: PERCHLORATE5
Date Acquired: 8/4/2021 1:50:00 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210804\20210804_018.lcd
Vial: 24 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.774	23298	80133	1	2.0391	ng/mL	2.0000	23.83
Sodium Perchlorate-18O4 _IS	Auto	2.773	80133	80133	1	1.0000	ng/mL	1.0000	----

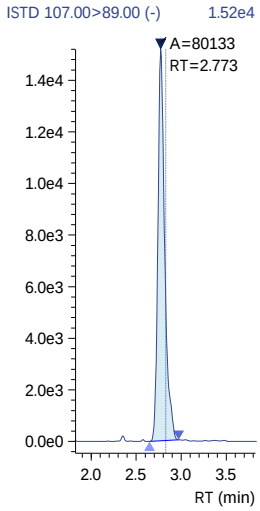
Perchlorate

Conc 2.0391
R#1 23.83 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.0000



Insight Report

Printed at 8/19/2021 11:57:47 AM

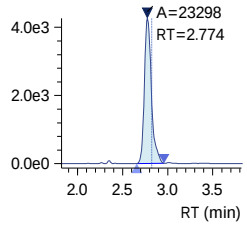
20210804_018

Sample ID: PERCHLORATE5
Date Acquired: 8/4/2021 1:50:00 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210804\Before\20210804_018.lcd
Vial: 24 | Inj. Volume: 25.0000uL | Tray: 1

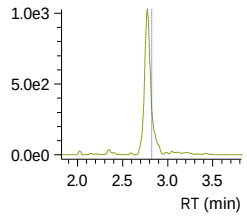
Perchlorate

Conc 1.9889
R#1 23.83 (0.00)

Q 99.00>83.00 (-) 4.27e3



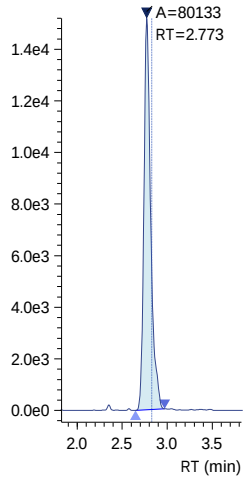
R1 101.00>85.00 (-) 1.03e3



Sodium Perchlorate -18O4_IS

Conc 1.0000

ISTD 107.00>89.00 (-) 1.52e4



Insight Report

Printed at 8/19/2021 11:52:26 AM

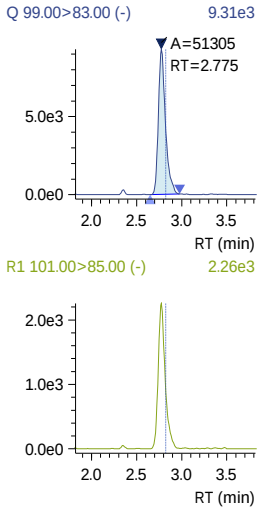
20210804_019

Sample ID: PERCHLORATE6
Date Acquired: 8/4/2021 1:58:34 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210804\20210804_019.lcd
Vial: 25 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.775	51305	72676	1	4.9512	ng/mL	5.0000	24.60
Sodium Perchlorate-18O4 _IS	Auto	2.773	72676	72676	1	1.0000	ng/mL	1.0000	----

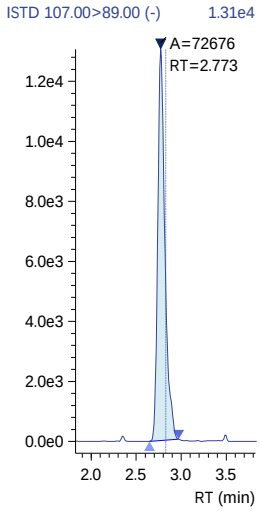
Perchlorate

Conc 4.9512
R#1 24.60 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.0000



Insight Report

Printed at 8/19/2021 11:57:47 AM

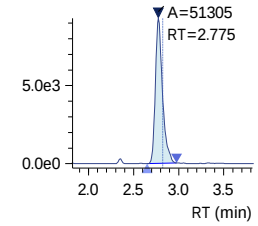
20210804_019

Sample ID: PERCHLORATE6
Date Acquired: 8/4/2021 1:58:34 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210804\Before\20210804_019.lcd
Vial: 25 | Inj. Volume: 25.0000uL | Tray: 1

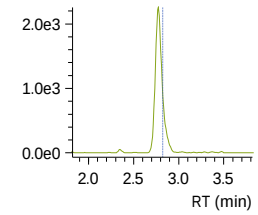
Perchlorate

Conc 4.8291
R#1 24.60 (0.00)

Q 99.00>83.00 (-) 9.31e3



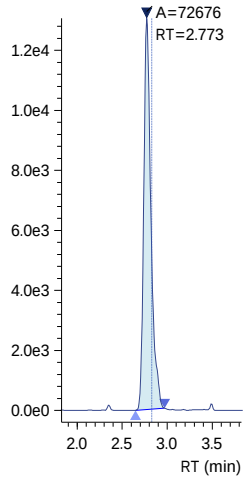
R1 101.00>85.00 (-) 2.26e3



Sodium Perchlorate -18O4_IS

Conc 1.0000

ISTD 107.00>89.00 (-) 1.31e4



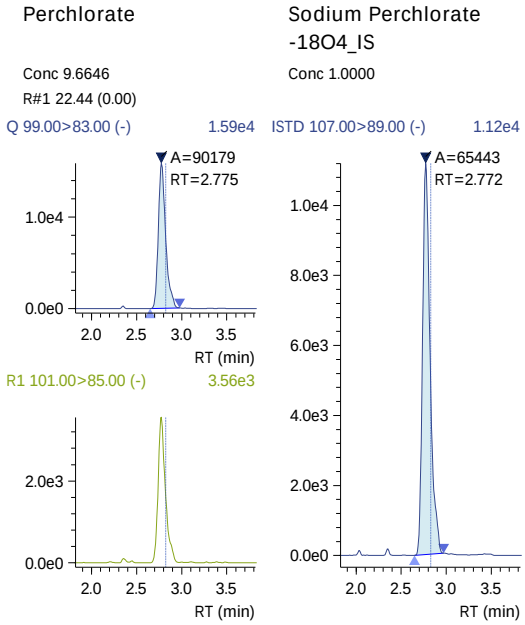
Insight Report

Printed at 8/19/2021 11:52:26 AM

20210804_020

Sample ID: PERCHLORATE7
Date Acquired: 8/4/2021 2:07:05 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210804\20210804_020.lcd
Vial: 26 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.775	90179	65443	1	9.6646	ng/mL	10.0000	22.44
Sodium Perchlorate-18O4_IS	Auto	2.772	65443	65443	1	1.0000	ng/mL	1.0000	----



Insight Report

Printed at 8/19/2021 11:57:47 AM

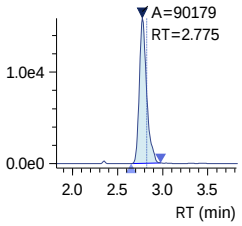
20210804_020

Sample ID: PERCHLORATE7
Date Acquired: 8/4/2021 2:07:05 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210804\Before\20210804_020.lcd
Vial: 26 | Inj. Volume: 25.0000uL | Tray: 1

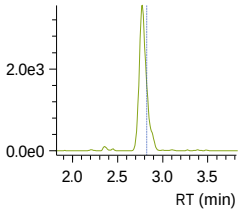
Perchlorate

Conc 9.4264
R#1 22.44 (0.00)

Q 99.00>83.00 (-) 1.59e4



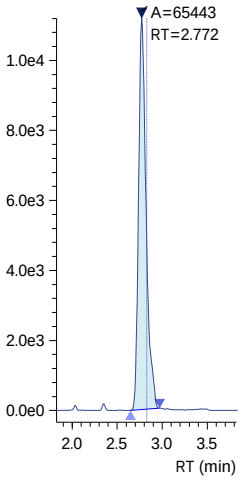
R1 101.00>85.00 (-) 3.56e3



Sodium Perchlorate -18O4_IS

Conc 1.0000

ISTD 107.00>89.00 (-) 1.12e4



Insight Report

Printed at 8/19/2021 11:52:26 AM

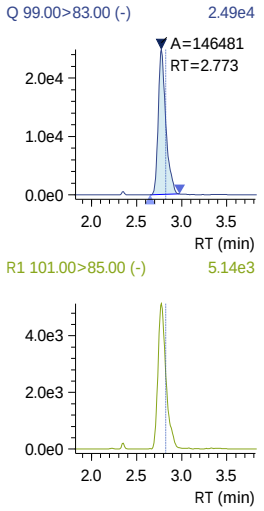
20210804_021

Sample ID: PERCHLORATE8
Date Acquired: 8/4/2021 2:15:40 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210804\20210804_021.lcd
Vial: 27 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.773	146481	53059	1	19.3627	ng/mL	20.0000	20.71
Sodium Perchlorate-18O4_IS	Auto	2.770	53059	53059	1	1.0000	ng/mL	1.0000	----

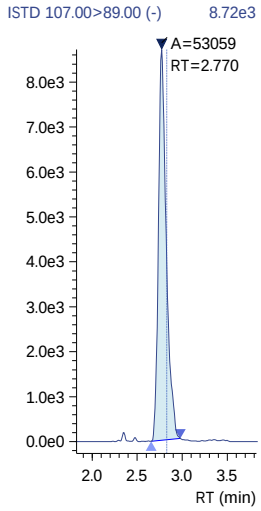
Perchlorate

Conc 19.3627
R#1 20.71 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.0000



Insight Report

Printed at 8/19/2021 11:57:47 AM

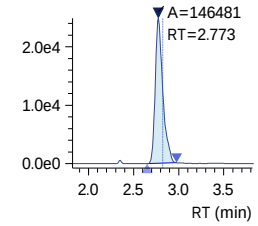
20210804_021

Sample ID: PERCHLORATE8
Date Acquired: 8/4/2021 2:15:40 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210804\Before\20210804_021.lcd
Vial: 27 | Inj. Volume: 25.0000uL | Tray: 1

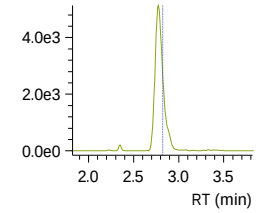
Perchlorate

Conc 18.8854
R#1 20.71 (0.00)

Q 99.00>83.00 (-) 2.49e4



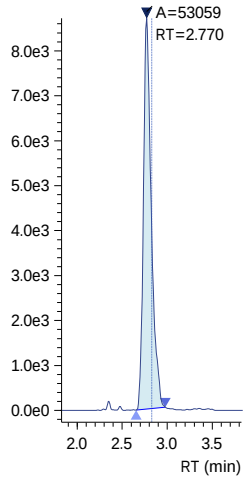
R1 101.00>85.00 (-) 5.14e3



Sodium Perchlorate -18O4_IS

Conc 1.0000

ISTD 107.00>89.00 (-) 8.72e3



Insight Report

Printed at 8/19/2021 11:52:26 AM

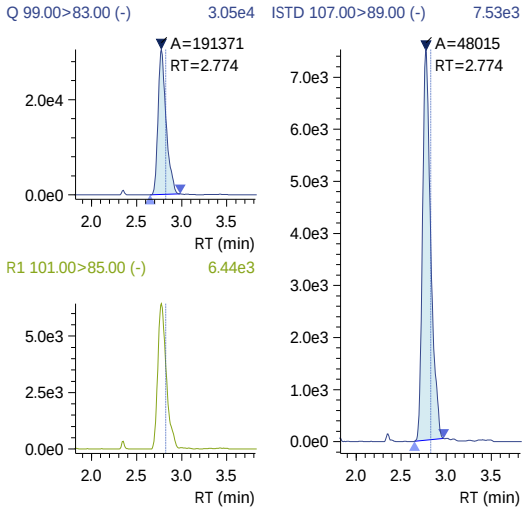
20210804_022

Sample ID: PERCHLORATE9
Date Acquired: 8/4/2021 2:24:11 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210804\20210804_022.lcd
Vial: 28 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.774	191371	48015	1	27.9541	ng/mL	30.0000	21.22
Sodium Perchlorate-18O4_IS	Auto	2.774	48015	48015	1	1.0000	ng/mL	1.0000	----

Perchlorate

Conc 27.9541
R#1 21.22 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.0000

Insight Report

Printed at 8/19/2021 11:57:47 AM

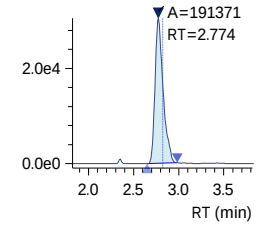
20210804_022

Sample ID: PERCHLORATE9
Date Acquired: 8/4/2021 2:24:11 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210804\Before\20210804_022.lcd
Vial: 28 | Inj. Volume: 25.0000uL | Tray: 1

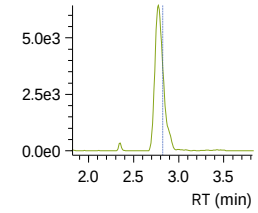
Perchlorate

Conc 27.2649
R#1 21.22 (0.00)

Q 99.00>83.00 (-) 3.05e4



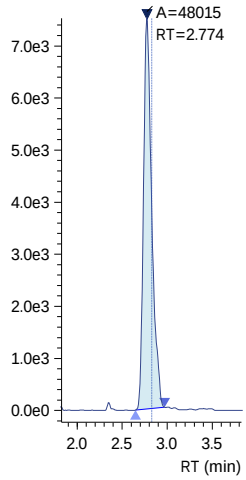
R1 101.00>85.00 (-) 6.44e3



Sodium Perchlorate -18O4_IS

Conc 1.0000

ISTD 107.00>89.00 (-) 7.53e3



Insight Report

Printed at 8/19/2021 11:52:26 AM

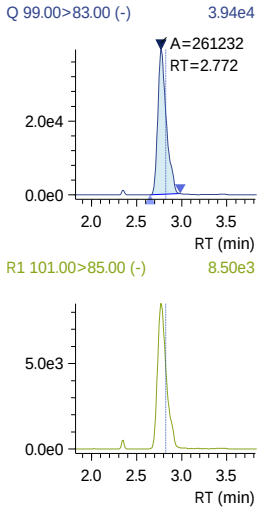
20210804_023

Sample ID: PERCHLORATE10
Date Acquired: 8/4/2021 2:32:42 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210804\20210804_023.lcd
Vial: 29 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.772	261232	38409	1	47.7026	ng/mL	50.0000	21.73
Sodium Perchlorate-18O4_IS	Auto	2.768	38409	38409	1	1.0000	ng/mL	1.0000	----

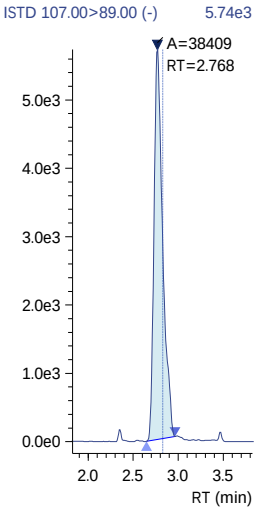
Perchlorate

Conc 47.7026
R#1 21.73 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.0000



Insight Report

Printed at 8/19/2021 11:57:47 AM

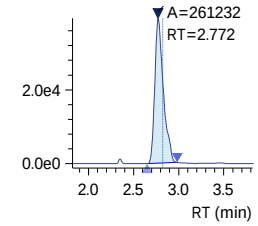
20210804_023

Sample ID: PERCHLORATE10
Date Acquired: 8/4/2021 2:32:42 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210804\Before\20210804_023.lcd
Vial: 29 | Inj. Volume: 25.0000uL | Tray: 1

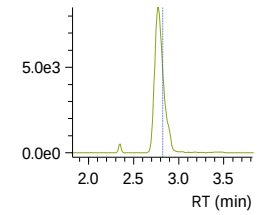
Perchlorate

Conc 46.5266
R#1 21.73 (0.00)

Q 99.00>83.00 (-) 3.94e4



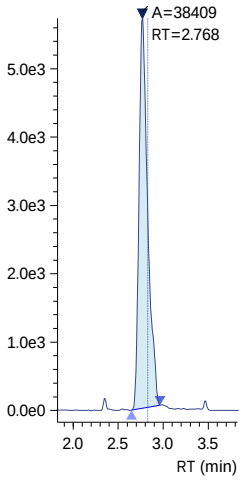
R1 101.00>85.00 (-) 8.50e3



Sodium Perchlorate -18O4_IS

Conc 1.0000

ISTD 107.00>89.00 (-) 5.74e3



Insight Report

Printed at 8/19/2021 11:52:26 AM

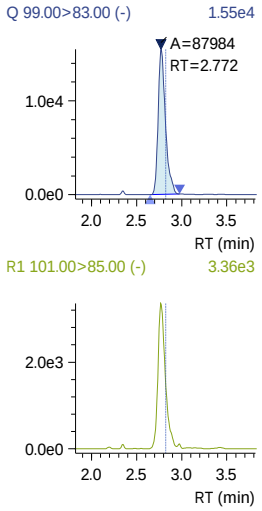
20210804_024

Sample ID: PERCHLORATEICV
Date Acquired: 8/4/2021 2:41:14 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210804\20210804_024.lcd
Vial: 30 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.772	87984	64329	1	9.5927	ng/mL	10.0000	21.51
Sodium Perchlorate-18O4 _IS	Auto	2.771	64329	64329	1	1.0000	ng/mL	1.0000	----

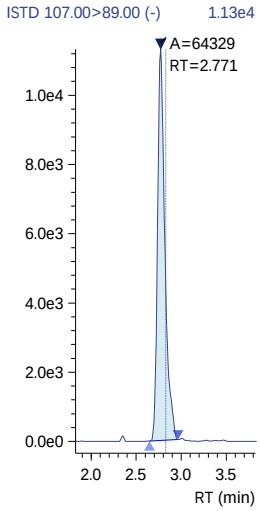
Perchlorate

Conc 9.5927
R#1 21.51 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.0000



Insight Report

Printed at 8/19/2021 11:57:47 AM

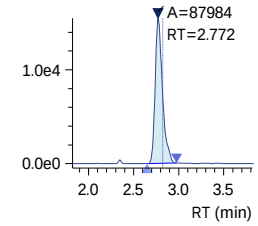
20210804_024

Sample ID: PERCHLORATEICV
Date Acquired: 8/4/2021 2:41:14 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210804\Before\20210804_024.lcd
Vial: 30 | Inj. Volume: 25.0000uL | Tray: 1

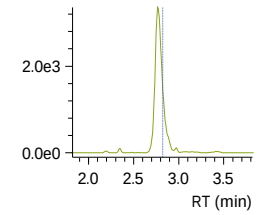
Perchlorate

Conc 9.3562
R#1 21.51 (0.00)

Q 99.00>83.00 (-) 1.55e4



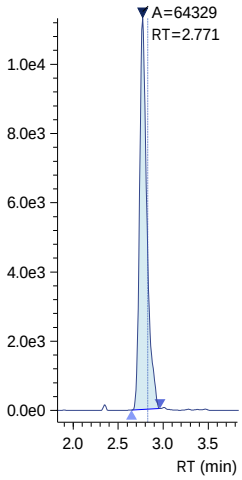
R1 101.00>85.00 (-) 3.36e3



Sodium Perchlorate -18O4_IS

Conc 1.0000

ISTD 107.00>89.00 (-) 1.13e4



Chromatograms and Selected Ion Monitoring

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 320, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

20210802

1st Review: Grivera
2nd Review: Kneir

ALS Environmental

Injection Log
LCMS01 -Shimadzu 8050

ICAL Date: 8/2/2021
Cal. Std. xp: 11/26/2021
ICAL ID: **EC2100056**

Mobile Phases **A:** 0.75% Formic Acid/Water 3100813-08 **B:** MeOH 216350

			File Name	Acquisition Method	Dilution	R	Comments	Date/Time
1	PERCHLORATE1		20210802_017	Perchlorate6850c.lcm	1x	☒	3100812-01	8/2/2021 16:41
2	PERCHLORATE2		20210802_007	Perchlorate6850c.lcm	1x	☒	3100812-02	8/2/2021 15:13
3	PERCHLORATE3		20210802_008	Perchlorate6850c.lcm	1x	☒	3100812-03	8/2/2021 15:24
4	PERCHLORATE4		20210802_009	Perchlorate6850c.lcm	1x	☒	3100812-04	8/2/2021 15:33
5	PERCHLORATE5		20210802_010	Perchlorate6850c.lcm	1x	☒	3100812-05	8/2/2021 15:41
6	PERCHLORATE6		20210802_011	Perchlorate6850c.lcm	1x	☒	3100812-06	8/2/2021 15:50
7	PERCHLORATE7		20210802_012	Perchlorate6850c.lcm	1x	☒	3100812-07	8/2/2021 15:58
8	PERCHLORATE8		20210802_013	Perchlorate6850c.lcm	1x	☒	3100812-08	8/2/2021 16:07
9	PERCHLORATE9		20210802_014	Perchlorate6850c.lcm	1x	☒	3100812-09	8/2/2021 16:15
10	PERCHLORATE10		20210802_015	Perchlorate6850c.lcm	1x	☒	3100813-01	8/2/2021 16:24
11	PERCHLORATEICV		20210802_018	Perchlorate6850c.lcm	1x	☒	3100811-06	8/2/2021 16:50
12	IB		20210802_019	Perchlorate6850c.lcm	1x	☒		8/2/2021 17:25
13	LODV		20210802_020	Perchlorate6850c.lcm	1x	☒		8/2/2021 17:33
14	PERCHLORATE7		20210802_021	Perchlorate6850c.lcm	1x	☒	3100812-07	8/2/2021 17:42
15	E2100813-001X20		20210802_022	Perchlorate6850c.lcm	20x	☒		8/2/2021 17:51
16	E2100813-004X20		20210802_023	Perchlorate6850c.lcm	20x	☒		8/2/2021 18:00
17	E2100814-001		20210802_024	Perchlorate6850c.lcm	1x	☒		8/2/2021 18:08
18	E2100814-002		20210802_025	Perchlorate6850c.lcm	1x	☒		8/2/2021 18:17
19	E2100814-003		20210802_026	Perchlorate6850c.lcm	1x	☒	INST out of range	8/2/2021 18:25
20	E2100814-004		20210802_027	Perchlorate6850c.lcm	1x	☒		8/2/2021 18:34
21	E2100814-005		20210802_028	Perchlorate6850c.lcm	1x	☒	INST out of range	8/2/2021 18:42
22	PERCHLORATE7		20210802_029	Perchlorate6850c.lcm	1x	☒	3100812-07	8/2/2021 18:51
23	EQ2100452-04		20210802_030	Perchlorate6850c.lcm	1x	☒		8/2/2021 19:00
24	EQ2100452-05		20210802_031	Perchlorate6850c.lcm	1x	☒		8/2/2021 19:08
25	E2100813-002		20210802_032	Perchlorate6850c.lcm	1x	☒		8/2/2021 19:17
26	E2100813-003		20210802_033	Perchlorate6850c.lcm	1x	☒		8/2/2021 19:25
27	E2100813-005		20210802_034	Perchlorate6850c.lcm	1x	☒	INST out of range	8/2/2021 19:34
28	E2100813-006		20210802_035	Perchlorate6850c.lcm	1x	☒	INST out of range	8/2/2021 19:42
29	E2100813-007		20210802_036	Perchlorate6850c.lcm	1x	☒	INST out of range	8/2/2021 19:51
30	E2100813-008		20210802_037	Perchlorate6850c.lcm	1x	☒		8/2/2021 19:59
31	PERCHLORATE7		20210802_038	Perchlorate6850c.lcm	1x	☒	3100812-07	8/2/2021 20:08
32	E2100813-009		20210802_039	Perchlorate6850c.lcm	1x	☒		8/2/2021 20:16
33	EQ2100458-01		20210802_040	Perchlorate6850c.lcm	1x	☒		8/2/2021 20:25
34	EQ2100458-02		20210802_041	Perchlorate6850c.lcm	1x	☒		8/2/2021 20:34
35	EQ2100458-03		20210802_042	Perchlorate6850c.lcm	1x	☒		8/2/2021 20:42
36	EQ2100458-04		20210802_043	Perchlorate6850c.lcm	1x	☒		8/2/2021 20:51
37	EQ2100458-05		20210802_044	Perchlorate6850c.lcm	1x	☒		8/2/2021 20:59
38	PERCHLORATE7		20210802_045	Perchlorate6850c.lcm	1x	☒	3100812-07	8/2/2021 21:08
39	E2100824-001		20210802_046	Perchlorate6850c.lcm	1x	☒	INST out of range	8/2/2021 21:16
40	E2100824-002		20210802_047	Perchlorate6850c.lcm	1x	☒	INST out of range	8/2/2021 21:25
41	E2100824-003		20210802_048	Perchlorate6850c.lcm	1x	☒	INST out of range	8/2/2021 21:33
42	E2100825-001		20210802_049	Perchlorate6850c.lcm	1x	☒	INST out of range	8/2/2021 21:42
43	E2100825-002		20210802_050	Perchlorate6850c.lcm	1x	☒	INST out of range	8/2/2021 21:50
44	E2100825-003		20210802_051	Perchlorate6850c.lcm	1x	☒	INST out of range	8/2/2021 21:59
45	E2100825-004		20210802_052	Perchlorate6850c.lcm	1x	☒		8/2/2021 22:07
46	E2100825-005		20210802_053	Perchlorate6850c.lcm	1x	☒	INST out of range	8/2/2021 22:16
47	E2100825-006		20210802_054	Perchlorate6850c.lcm	1x	☒	INST out of range	8/2/2021 22:24
48	E2100825-007		20210802_055	Perchlorate6850c.lcm	1x	☒	INST out of range	8/2/2021 22:33
49	PERCHLORATE7		20210802_056	Perchlorate6850c.lcm	1x	☒	3100812-07	8/2/2021 22:41
50	E2100825-008		20210802_057	Perchlorate6850c.lcm	1x	☒		8/2/2021 22:50
51	IB		20210802_058	Perchlorate6850c.lcm	1x	☒		8/2/2021 22:58
52	E2100831-001		20210802_059	Perchlorate6850c.lcm	1x	☒		8/2/2021 23:07
53	E2100831-002X2		20210802_060	Perchlorate6850c.lcm	2x	☒	INST out of range	8/2/2021 23:15
54	E2100856-001		20210802_061	Perchlorate6850c.lcm	1x	☒	INST out of range	8/2/2021 23:24
55	E2100856-002		20210802_062	Perchlorate6850c.lcm	1x	☒	INST out of range	8/2/2021 23:32
56	E2100856-003		20210802_063	Perchlorate6850c.lcm	1x	☒		8/2/2021 23:41
57	E2100856-004		20210802_064	Perchlorate6850c.lcm	1x	☒	INST out of range	8/2/2021 23:50
58	E2100856-005		20210802_065	Perchlorate6850c.lcm	1x	☒		8/2/2021 23:58
59	E2100837-001		20210802_066	Perchlorate6850c.lcm	1x	☒	INST out of range	8/3/2021 0:07
60	PERCHLORATE7		20210802_067	Perchlorate6850c.lcm	1x	☒	3100812-07	8/3/2021 0:15
61	E2100837-002		20210802_068	Perchlorate6850c.lcm	1x	☒	INST out of range	8/3/2021 0:24
62	E2100837-003		20210802_069	Perchlorate6850c.lcm	1x	☒		8/3/2021 0:32
63	E2100837-004		20210802_070	Perchlorate6850c.lcm	1x	☒	INST out of range	8/3/2021 0:41
64	E2100837-005		20210802_071	Perchlorate6850c.lcm	1x	☒	INST out of range	8/3/2021 0:49
65	E2100837-006		20210802_072	Perchlorate6850c.lcm	1x	☒		8/3/2021 0:58
66	E2100837-007		20210802_073	Perchlorate6850c.lcm	1x	☒	INST out of range	8/3/2021 1:06
67	E2100837-008		20210802_074	Perchlorate6850c.lcm	1x	☒		8/3/2021 1:15
68	E2100837-009		20210802_075	Perchlorate6850c.lcm	1x	☒		8/3/2021 1:23
69	E2100837-010		20210802_076	Perchlorate6850c.lcm	1x	☒		8/3/2021 1:32
70	E2100837-011		20210802_077	Perchlorate6850c.lcm	1x	☒		8/3/2021 1:40
71	E2100837-012		20210802_078	Perchlorate6850c.lcm	1x	☒		8/3/2021 1:49
72	PERCHLORATE7		20210802_079	Perchlorate6850c.lcm	1x	☒	3100812-07	8/3/2021 1:57
73	EQ2100476-01		20210802_080	Perchlorate6850c.lcm	1x	☒		8/3/2021 2:06

20210802

1st Review: Grivera
2nd Review: Kneir

Injection Log
LCMS01 -Shimadzu 8050

ICAL Date: 8/2/2021
Cal. Std. xp: 11/26/2021
ICAL ID: **EC2100056**

Mobile Phases **A:** 0.75% Formic Acid/Water 3100813-08 **B:** MeOH 216350

			File Name	Acquisition Method	Dilution	R	Comments	Date/Time
74	EQ2100476-02		20210802_081	Perchlorate6850c.lcm	1x	☒		8/3/2021 2:15
75	EQ2100476-03		20210802_082	Perchlorate6850c.lcm	1x	☒		8/3/2021 2:23
76	EQ2100476-04		20210802_083	Perchlorate6850c.lcm	1x	☒	INST out of range	8/3/2021 2:32
77	EQ2100476-05		20210802_084	Perchlorate6850c.lcm	1x	☒	INST out of range	8/3/2021 2:40
78	EQ2100476-06		20210802_085	Perchlorate6850c.lcm	1x	☒	INST out of range	8/3/2021 2:49
79	EQ2100476-07		20210802_086	Perchlorate6850c.lcm	1x	☒	INST out of range	8/3/2021 2:57
80	E2100843-001		20210802_087	Perchlorate6850c.lcm	1x	☒	INST out of range	8/3/2021 3:06
81	E2100843-002		20210802_088	Perchlorate6850c.lcm	1x	☒	INST out of range	8/3/2021 3:14
82	E2100843-003		20210802_089	Perchlorate6850c.lcm	1x	☒	INST out of range	8/3/2021 3:23
83	PERCHLORATE7		20210802_090	Perchlorate6850c.lcm	1x	☒	3100812-07	8/3/2021 3:32
84	E2100843-004		20210802_091	Perchlorate6850c.lcm	1x	☒	INST out of range	8/3/2021 3:40
85	E2100843-005		20210802_092	Perchlorate6850c.lcm	1x	☒	INST out of range	8/3/2021 3:49
86	E2100843-006		20210802_093	Perchlorate6850c.lcm	1x	☒	INST out of range	8/3/2021 3:57
87	E2100843-007		20210802_094	Perchlorate6850c.lcm	1x	☒	INST out of range	8/3/2021 4:06
88	E2100843-008		20210802_095	Perchlorate6850c.lcm	1x	☒		8/3/2021 4:14
89	E2100843-009		20210802_096	Perchlorate6850c.lcm	1x	☒	INST out of range	8/3/2021 4:23
90	E2100844-001		20210802_097	Perchlorate6850c.lcm	1x	☒	INST out of range	8/3/2021 4:31
91	E2100844-002		20210802_098	Perchlorate6850c.lcm	1x	☒	INST out of range	8/3/2021 4:40
92	E2100844-003		20210802_099	Perchlorate6850c.lcm	1x	☒	INST out of range	8/3/2021 4:48
93	E2100844-004		20210802_100	Perchlorate6850c.lcm	1x	☒	INST out of range	8/3/2021 4:57
94	PERCHLORATE7		20210802_101	Perchlorate6850c.lcm	1x	☒	3100812-07	8/3/2021 5:06
95	E2100844-005		20210802_102	Perchlorate6850c.lcm	1x	☒	INST out of range	8/3/2021 5:14
96	E2100844-006		20210802_103	Perchlorate6850c.lcm	1x	☒	INST out of range	8/3/2021 5:23
97	E2100844-007		20210802_104	Perchlorate6850c.lcm	1x	☒	INST out of range	8/3/2021 5:31
98	E2100844-008		20210802_105	Perchlorate6850c.lcm	1x	☒	INST out of range	8/3/2021 5:40
99	E2100844-009		20210802_106	Perchlorate6850c.lcm	1x	☒	INST out of range	8/3/2021 5:48
100	PERCHLORATE7		20210802_107	Perchlorate6850c.lcm	1x	☒	3100812-07	8/3/2021 5:57

20210805

1st Review: Grivera
2nd Review: Kneir

Injection Log
LCMS01 -Shimadzu 8050

ICAL Date: 8/4/2021
Cal. Std. xp: 11/26/2021
ICAL ID: **EC2100057**

Mobile Phases **A:** 0.75% Formic Acid/Water 3100813-08 **B:** MeOH 216350

			File Name	Acquisition Method	Dilution	R	Comments	Date/Time
1	null		20210805_001	Perchlorate6850c.lcm	1x	☒		8/5/2021 9:42
2	null		20210805_002	Perchlorate6850c.lcm	1x	☒		8/5/2021 9:47
3	IB		20210805_003	Perchlorate6850c.lcm	1x	☒		8/5/2021 9:53
4	IB		20210805_004	Perchlorate6850c.lcm	1x	☒		8/5/2021 10:02
5	PERCHLORATE7		20210805_006	Perchlorate6850c.lcm	1x	☒	3100812-07	8/5/2021 10:19
6	LODV		20210805_007	Perchlorate6850c.lcm	1x	☒		8/5/2021 10:27
7	E2100825-002X2		20210805_015	Perchlorate6850c.lcm	2x	☒	Used carbon cleanup	8/5/2021 12:12
8	PERCHLORATE7		20210805_017	Perchlorate6850c.lcm	1x	☒	3100812-07	8/5/2021 12:29
9	E2100825-006X10		20210805_022	Perchlorate6850c.lcm	10x	☒	Used carbon cleanup	8/5/2021 13:11
10	E2100825-007X10		20210805_023	Perchlorate6850c.lcm	10x	☒	Used carbon cleanup	8/5/2021 13:20
11	E2100825-008X10		20210805_024	Perchlorate6850c.lcm	10x	☒	Used carbon cleanup	8/5/2021 13:28
12	PERCHLORATE7		20210805_025	Perchlorate6850c.lcm	1x	☒	3100812-07	8/5/2021 13:38
13	E2100825-001X10		20210805_026	Perchlorate6850c.lcm	10x	☒	Used carbon cleanup	8/5/2021 13:51
14	E2100825-005X10		20210805_027	Perchlorate6850c.lcm	10x	☒	Used carbon cleanup	8/5/2021 14:00
15	EQ2100477-02		20210805_029	Perchlorate6850c.lcm	1x	☒		8/5/2021 14:17
16	E2100842-005X2		20210805_030	Perchlorate6850c.lcm	2x	☒		8/5/2021 14:26
17	E2100825-003X10		20210805_031	Perchlorate6850c.lcm	10x	☒	Used carbon cleanup	8/5/2021 14:35
18	E2100856-002X5		20210805_032	Perchlorate6850c.lcm	5x	☒		8/5/2021 14:43
19	E2100856-004X5		20210805_033	Perchlorate6850c.lcm	5x	☒		8/5/2021 14:52
20	EQ2100458-04X2		20210805_034	Perchlorate6850c.lcm	2x	☒	Used carbon cleanup	8/5/2021 15:32
21	EQ2100458-05X2		20210805_035	Perchlorate6850c.lcm	2x	☒	Used carbon cleanup	8/5/2021 15:50
22	PERCHLORATE7		20210805_036	Perchlorate6850c.lcm	1x	☒	3100812-07	8/5/2021 15:58
23								
24								
25								

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS21071204

Service Request: E2100825
Date Analyzed: 8/ 2/21

Continuing Calibration Verification Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
File ID: I:\LCMS01\DATA\20210802\20210802_021

Calibration Date: 8/2/21
Calibration ID: EC2100056
Analysis Lot: 733464
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	10.1	0.1473	0.1492	1.2	NA	± 15 %	Average RF

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS21071204

Service Request: E2100825
Date Analyzed: 8/ 2/21

Continuing Calibration Verification Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
File ID: I:\LCMS01\DATA\20210802\20210802_029

Calibration Date: 8/2/21
Calibration ID: EC2100056
Analysis Lot: 733464
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	10.2	0.1473	0.1504	2.1	NA	± 15 %	Average RF

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS21071204

Service Request: E2100825
Date Analyzed: 8/ 2/21

Continuing Calibration Verification Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
File ID: I:\LCMS01\DATA\20210802\20210802_038

Calibration Date: 8/2/21
Calibration ID: EC2100056
Analysis Lot: 733464
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	10.1	0.1473	0.1487	1.0	NA	± 15 %	Average RF

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS21071204

Service Request: E2100825
Date Analyzed: 8/ 2/21

Continuing Calibration Verification Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
File ID: I:\LCMS01\DATA\20210802\20210802_045

Calibration Date: 8/2/21
Calibration ID: EC2100056
Analysis Lot: 733464
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	9.90	0.1473	0.1459	-1.0	NA	± 15 %	Average RF

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS21071204

Service Request: E2100825
Date Analyzed: 8/ 2/21

Continuing Calibration Verification Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
File ID: I:\LCMS01\DATA\20210802\20210802_056

Calibration Date: 8/2/21
Calibration ID: EC2100056
Analysis Lot: 733464
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	9.80	0.1473	0.1444	-2.0	NA	± 15 %	Average RF

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS21071204

Service Request: E2100825
Date Analyzed: 8/ 3/21

Continuing Calibration Verification Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
File ID: I:\LCMS01\DATA\20210802\20210802_067

Calibration Date: 8/2/21
Calibration ID: EC2100056
Analysis Lot: 733464
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	9.84	0.1473	0.1449	-1.6	NA	± 15 %	Average RF

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS21071204

Service Request: E2100825
Date Analyzed: 8/ 3/21

Continuing Calibration Verification Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
File ID: I:\LCMS01\DATA\20210802\20210802_079

Calibration Date: 8/2/21
Calibration ID: EC2100056
Analysis Lot: 733464
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	9.89	0.1473	0.1456	-1.1	NA	± 15 %	Average RF

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS21071204

Service Request: E2100825
Date Analyzed: 8/ 3/21

Continuing Calibration Verification Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
File ID: I:\LCMS01\DATA\20210802\20210802_090

Calibration Date: 8/2/21
Calibration ID: EC2100056
Analysis Lot: 733464
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	9.96	0.1473	0.1468	-0.4	NA	± 15 %	Average RF

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS21071204

Service Request: E2100825
Date Analyzed: 8/ 3/21

Continuing Calibration Verification Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
File ID: I:\LCMS01\DATA\20210802\20210802_101

Calibration Date: 8/2/21
Calibration ID: EC2100056
Analysis Lot: 733464
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	9.67	0.1473	0.1425	-3.3	NA	± 15 %	Average RF

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS21071204

Service Request: E2100825
Date Analyzed: 8/ 3/21

Continuing Calibration Verification Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
File ID: I:\LCMS01\DATA\20210802\20210802_107

Calibration Date: 8/2/21
Calibration ID: EC2100056
Analysis Lot: 733464
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	9.79	0.1473	0.1442	-2.1	NA	± 15 %	Average RF

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS21071204

Service Request: E2100825
Date Analyzed: 8/ 5/21

Continuing Calibration Verification Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
File ID: I:\LCMS01\DATA\20210805\20210805_006

Calibration Date: 8/4/21
Calibration ID: EC2100057
Analysis Lot: 733725
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	9.68	0.1426	0.1381	-3.2	NA	± 15 %	Average RF

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS21071204

Service Request: E2100825
Date Analyzed: 8/ 5/21

Continuing Calibration Verification Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
File ID: I:\LCMS01\DATA\20210805\20210805_017

Calibration Date: 8/4/21
Calibration ID: EC2100057
Analysis Lot: 733725
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	9.69	0.1426	0.1381	-3.1	NA	± 15 %	Average RF

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS21071204

Service Request: E2100825
Date Analyzed: 8/ 5/21

Continuing Calibration Verification Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
File ID: I:\LCMS01\DATA\20210805\20210805_025

Calibration Date: 8/4/21
Calibration ID: EC2100057
Analysis Lot: 733725
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	9.36	0.1426	0.1334	-6.4	NA	± 15 %	Average RF

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS21071204

Service Request: E2100825
Date Analyzed: 8/ 5/21

Continuing Calibration Verification Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
File ID: I:\LCMS01\DATA\20210805\20210805_036

Calibration Date: 8/4/21
Calibration ID: EC2100057
Analysis Lot: 733725
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	9.54	0.1426	0.1360	-4.6	NA	± 15 %	Average RF

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2100825
Project:	HS21071204	**Date Analyzed:**	8/2/21 17:42

Internal Standard Area and RT Summary

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

File ID:	I:\LCMS01\DATA\20210802\20210802_021	**Lab Code:**	EQ2100479-01
Instrument ID:	E-LCMS-01	**Analysis Lot:**	733464
Analytical Method:	6850	**Signal ID:**	1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	100,675	2.79
	Upper Limit ==>	151,013	4.79
	Lower Limit ==>	50,338	0.79
Associated Analyses			
Continuing Calibration Verification	EQ2100479-01	84,210	2.79

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

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2100825
Project:	HS21071204	**Date Analyzed:**	8/2/21 18:51

Internal Standard Area and RT Summary

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

File ID:	I:\LCMS01\DATA\20210802\20210802_029	**Lab Code:**	EQ2100479-02
Instrument ID:	E-LCMS-01	**Analysis Lot:**	733464
Analytical Method:	6850	**Signal ID:**	1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	100,675	2.79
	Upper Limit ==>	151,013	4.79
	Lower Limit ==>	50,338	0.79
Associated Analyses			
Continuing Calibration Verification	EQ2100479-02	84,148	2.79

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

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2100825
Project:	HS21071204	**Date Analyzed:**	8/2/21 20:08

Internal Standard Area and RT Summary

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

File ID:	I:\LCMS01\DATA\20210802\20210802_038	**Lab Code:**	EQ2100479-03
Instrument ID:	E-LCMS-01	**Analysis Lot:**	733464
Analytical Method:	6850	**Signal ID:**	1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	100,675	2.79
	Upper Limit ==>	151,013	4.79
	Lower Limit ==>	50,338	0.79
Associated Analyses			
Continuing Calibration Verification	EQ2100479-03	91,252	2.79
Method Blank	EQ2100458-01	114,112	2.79
Lab Control Sample	EQ2100458-02	121,275	2.79
Duplicate Lab Control Sample	EQ2100458-03	122,247	2.79

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

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2100825
Project:	HS21071204	**Date Analyzed:**	8/2/21 21:08

Internal Standard Area and RT Summary

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

File ID:	I:\LCMS01\DATA\20210802\20210802_045	**Lab Code:**	EQ2100479-04
Instrument ID:	E-LCMS-01	**Analysis Lot:**	733464
Analytical Method:	6850	**Signal ID:**	1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	100,675	2.79
	Upper Limit ==>	151,013	4.79
	Lower Limit ==>	50,338	0.79
Associated Analyses			
Continuing Calibration Verification	EQ2100479-04	99,812	2.79
16PM09-210722	E2100825-004	89,371	2.78

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

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2100825
Project:	HS21071204	**Date Analyzed:**	8/2/21 22:41

Internal Standard Area and RT Summary

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

File ID:	I:\LCMS01\DATA\20210802\20210802_056	**Lab Code:**	EQ2100479-05
Instrument ID:	E-LCMS-01	**Analysis Lot:**	733464
Analytical Method:	6850	**Signal ID:**	1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	100,675	2.79
	Upper Limit ==>	151,013	4.79
	Lower Limit ==>	50,338	0.79
Associated Analyses			
Continuing Calibration Verification	EQ2100479-05	106,145	2.79

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

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2100825
Project:	HS21071204	**Date Analyzed:**	8/3/21 00:15

Internal Standard Area and RT Summary

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

File ID:	I:\LCMS01\DATA\20210802\20210802_067	**Lab Code:**	EQ2100479-06
Instrument ID:	E-LCMS-01	**Analysis Lot:**	733464
Analytical Method:	6850	**Signal ID:**	1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	100,675	2.79
	Upper Limit ==>	151,013	4.79
	Lower Limit ==>	50,338	0.79
Associated Analyses			
Continuing Calibration Verification	EQ2100479-06	97,407	2.79

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

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2100825
Project:	HS21071204	**Date Analyzed:**	8/3/21 01:57

Internal Standard Area and RT Summary

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

File ID:	I:\LCMS01\DATA\20210802\20210802_079	**Lab Code:**	EQ2100479-07
Instrument ID:	E-LCMS-01	**Analysis Lot:**	733464
Analytical Method:	6850	**Signal ID:**	1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	100,675	2.79
	Upper Limit ==>	151,013	4.79
	Lower Limit ==>	50,338	0.79
Associated Analyses			
Continuing Calibration Verification	EQ2100479-07	99,099	2.79

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

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2100825
Project:	HS21071204	**Date Analyzed:**	8/3/21 03:32

Internal Standard Area and RT Summary

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

File ID:	I:\LCMS01\DATA\20210802\20210802_090	**Lab Code:**	EQ2100479-08
Instrument ID:	E-LCMS-01	**Analysis Lot:**	733464
Analytical Method:	6850	**Signal ID:**	1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	100,675	2.79
	Upper Limit ==>	151,013	4.79
	Lower Limit ==>	50,338	0.79
Associated Analyses			
Continuing Calibration Verification	EQ2100479-08	91,777	2.78

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

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2100825
Project:	HS21071204	**Date Analyzed:**	8/3/21 05:06

Internal Standard Area and RT Summary

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

File ID:	I:\LCMS01\DATA\20210802\20210802_101	**Lab Code:**	EQ2100479-09
Instrument ID:	E-LCMS-01	**Analysis Lot:**	733464
Analytical Method:	6850	**Signal ID:**	1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	100,675	2.79
	Upper Limit ==>	151,013	4.79
	Lower Limit ==>	50,338	0.79
Associated Analyses			
Continuing Calibration Verification	EQ2100479-09	96,244	2.78

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

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2100825
Project:	HS21071204	**Date Analyzed:**	8/3/21 05:57

Internal Standard Area and RT Summary

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

File ID:	I:\LCMS01\DATA\20210802\20210802_107	**Lab Code:**	EQ2100479-10
Instrument ID:	E-LCMS-01	**Analysis Lot:**	733464
Analytical Method:	6850	**Signal ID:**	1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	100,675	2.79
	Upper Limit ==>	151,013	4.79
	Lower Limit ==>	50,338	0.79
Associated Analyses			
Continuing Calibration Verification	EQ2100479-10	96,420	2.78

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

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2100825
Project:	HS21071204	**Date Analyzed:**	8/5/21 10:19

Internal Standard Area and RT Summary

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

File ID:	I:\LCMS01\DATA\20210805\20210805_006	**Lab Code:**	EQ2100492-01
Instrument ID:	E-LCMS-01	**Analysis Lot:**	733725
Analytical Method:	6850	**Signal ID:**	1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	69,829	2.77
	Upper Limit ==>	104,744	4.77
	Lower Limit ==>	34,915	0.77
Associated Analyses			
Continuing Calibration Verification	EQ2100492-01	87,603	2.76
16IW10-210722	E2100825-002	41,233	2.67

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

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2100825
Project:	HS21071204	**Date Analyzed:**	8/5/21 12:29

Internal Standard Area and RT Summary

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

File ID:	I:\LCMS01\DATA\20210805\20210805_017	**Lab Code:**	EQ2100492-02
Instrument ID:	E-LCMS-01	**Analysis Lot:**	733725
Analytical Method:	6850	**Signal ID:**	1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	69,829	2.77
	Upper Limit ==>	104,744	4.77
	Lower Limit ==>	34,915	0.77
Associated Analyses			
Continuing Calibration Verification	EQ2100492-02	92,748	2.76
16RW11-210722	E2100825-006	35,005	2.75
16RW11-210722-FD	E2100825-007	35,737	2.76
16IW20-210722	E2100825-008	51,988	2.75

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

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2100825
Project:	HS21071204	**Date Analyzed:**	8/5/21 13:38

Internal Standard Area and RT Summary

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

File ID:	I:\LCMS01\DATA\20210805\20210805_025	**Lab Code:**	EQ2100492-03
Instrument ID:	E-LCMS-01	**Analysis Lot:**	733725
Analytical Method:	6850	**Signal ID:**	1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	69,829	2.77
	Upper Limit ==>	104,744	4.77
	Lower Limit ==>	34,915	0.77
Associated Analyses			
Continuing Calibration Verification	EQ2100492-03	53,228	2.66
16EW03-210722	E2100825-001	44,076	2.68
16PM14-210722	E2100825-005	51,330	2.76
16IW03-210722	E2100825-003	75,804	2.71
16IW10-210722MS	EQ2100458-04	39,328	2.67
16IW10-210722DMS	EQ2100458-05	39,786	2.69

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

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2100825
Project:	HS21071204	**Date Analyzed:**	8/5/21 15:58

Internal Standard Area and RT Summary

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

File ID:	I:\LCMS01\DATA\20210805\20210805_036	**Lab Code:**	EQ2100492-04
Instrument ID:	E-LCMS-01	**Analysis Lot:**	733725
Analytical Method:	6850	**Signal ID:**	1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	69,829	2.77
	Upper Limit ==>	104,744	4.77
	Lower Limit ==>	34,915	0.77
Associated Analyses			
Continuing Calibration Verification	EQ2100492-04	95,586	2.76

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

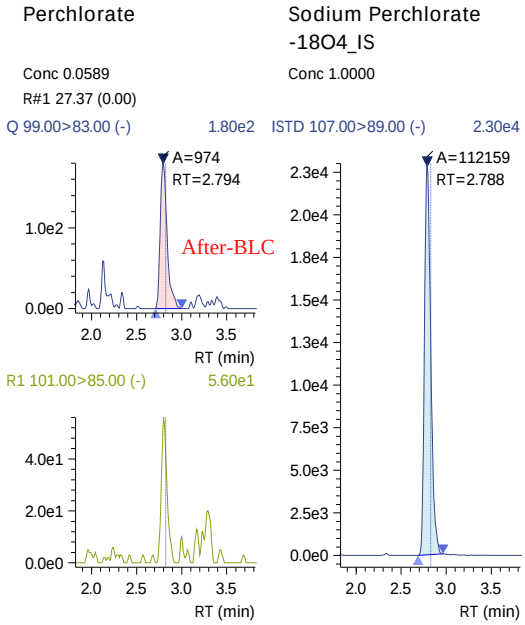
Insight Report

Printed at 8/18/2021 10:37:32 AM

20210802_020

Sample ID: LODV
Date Acquired: 8/2/2021 5:33:34 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210802\20210802_020.lcd
Vial: 31 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	M	2.794	974	112159	1	0.0589	ng/mL	----	27.37
Sodium Perchlorate-18O4 _IS	Auto	2.788	1121 59	112159	1	1.0000	ng/mL	----	----



Insight Report

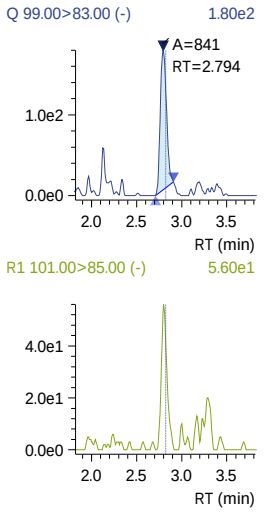
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20210802_020

Sample ID: LODV
Date Acquired: 8/2/2021 5:33:34 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210802\Before\20210802_020.lcd
Vial: 31 | Inj. Volume: 25.0000uL | Tray: 1

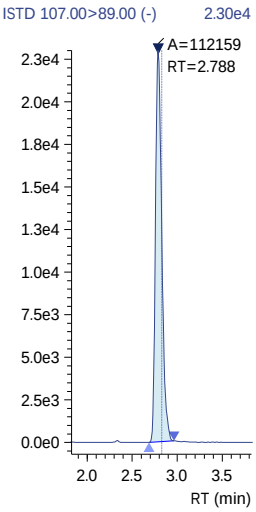
Perchlorate

Conc 0.0200
R#1 30.23 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.0000



Insight Report

Printed at 8/18/2021 10:37:32 AM

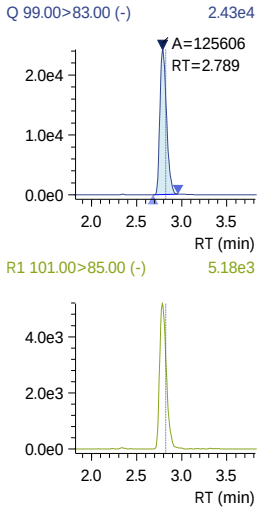
20210802_021

Sample ID: PERCHLORATE7
Date Acquired: 8/2/2021 5:42:08 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210802\20210802_021.lcd
Vial: 26 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.789	125606	84210	1	10.1247	ng/mL	10.0000	21.60
Sodium Perchlorate-18O4_IS	Auto	2.789	84210	84210	1	1.0000	ng/mL	1.0000	----

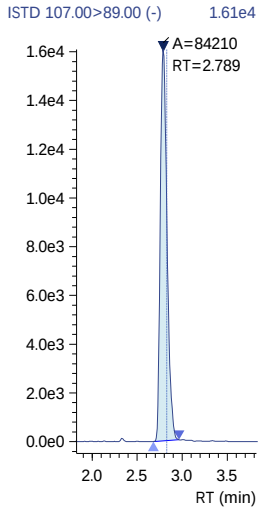
Perchlorate

Conc 10.1247
R#1 21.60 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.0000



Insight Report

Printed at 8/18/2021 10:42:57 AM

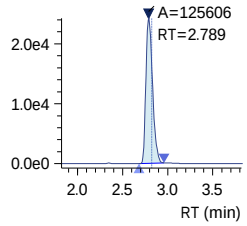
20210802_021

Sample ID: PERCHLORATE7
Date Acquired: 8/2/2021 5:42:08 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210802\Before\20210802_021.lcd
Vial: 26 | Inj. Volume: 25.0000uL | Tray: 1

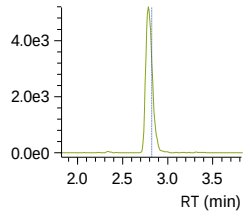
Perchlorate

Conc 9.3624
R#1 21.60 (0.00)

Q 99.00>83.00 (-) 2.43e4



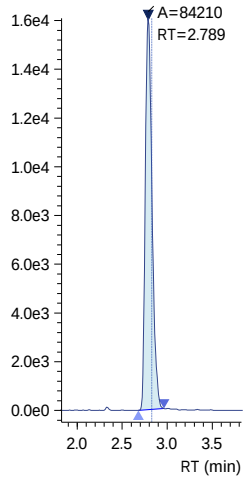
R1 101.00>85.00 (-) 5.18e3



Sodium Perchlorate -18O4_IS

Conc 1.0000

ISTD 107.00>89.00 (-) 1.61e4



Insight Report

Printed at 8/18/2021 10:37:32 AM

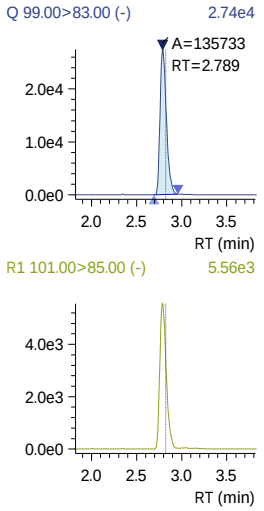
20210802_038

Sample ID: PERCHLORATE7
Date Acquired: 8/2/2021 8:08:19 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210802\20210802_038.lcd
Vial: 26 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.789	135733	91252	1	10.0967	ng/mL	10.0000	20.55
Sodium Perchlorate-18O4_IS	Auto	2.789	91252	91252	1	1.0000	ng/mL	1.0000	----

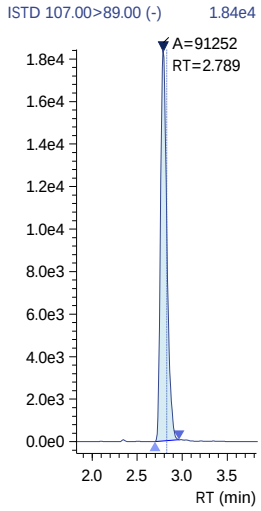
Perchlorate

Conc 10.0967
R#1 20.55 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.0000



Insight Report

Printed at 8/18/2021 10:42:57 AM

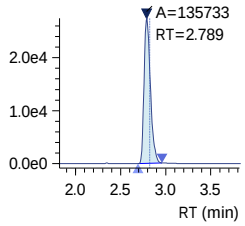
20210802_038

Sample ID: PERCHLORATE7
Date Acquired: 8/2/2021 8:08:19 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210802\Before\20210802_038.lcd
Vial: 26 | Inj. Volume: 25.0000uL | Tray: 1

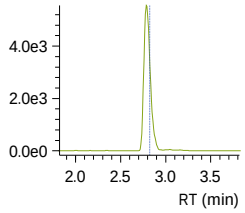
Perchlorate

Conc 9.3364
R#1 20.55 (0.00)

Q 99.00>83.00 (-) 2.74e4



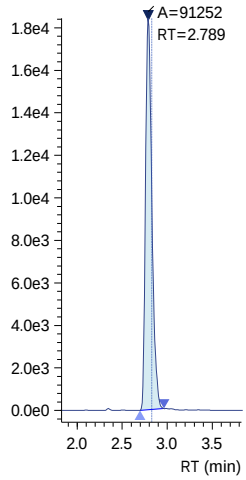
R1 101.00>85.00 (-) 5.56e3



Sodium Perchlorate -18O4_IS

Conc 1.0000

ISTD 107.00>89.00 (-) 1.84e4



Insight Report

Printed at 8/18/2021 10:37:32 AM

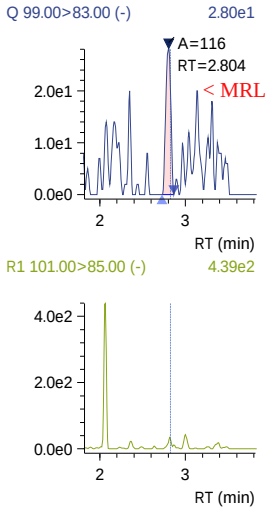
20210802_040

Sample ID: EQ2100458-01
Date Acquired: 8/2/2021 8:25:26 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210802\20210802_040.lcd
Vial: 31 | Inj. Volume: 25.0000uL | Tray: 5

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	M	2.804	116	114112	1	0.0069	ng/mL	----	44.83
Sodium Perchlorate-18O4 _IS	Auto	2.786	1141 12	114112	1	1.0000	ng/mL	----	----

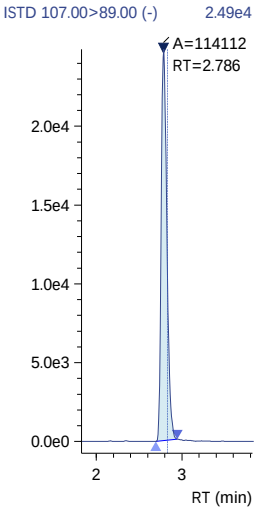
Perchlorate

Conc 0.0069
R#1 44.83 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.0000



Insight Report

Printed at 8/18/2021 10:42:57 AM

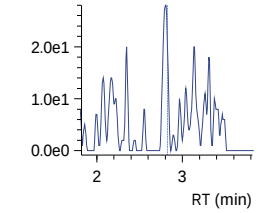
20210802_040

Sample ID: EQ2100458-01
Date Acquired: 8/2/2021 8:25:26 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210802\Before\20210802_040.lcd
Vial: 31 | Inj. Volume: 25.0000uL | Tray: 5

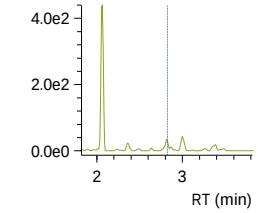
Perchlorate

Conc ----
R#1 ---- (0.00)

Q 99.00>83.00 (-) 2.80e1



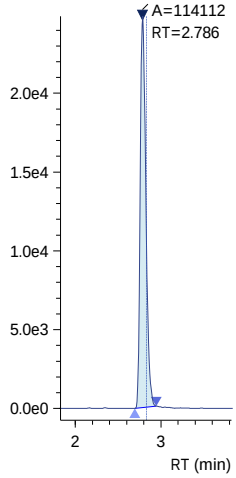
R1 101.00>85.00 (-) 4.39e2



Sodium Perchlorate -18O4_IS

Conc 1.0000

ISTD 107.00>89.00 (-) 2.49e4



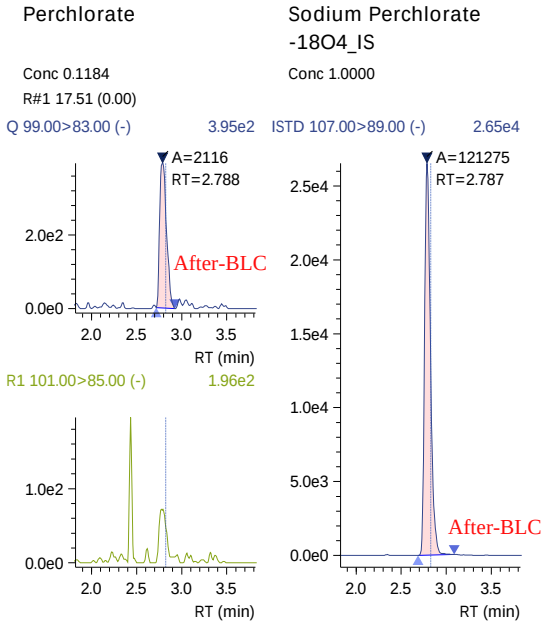
Insight Report

Printed at 8/18/2021 10:37:32 AM

20210802_041

Sample ID: EQ2100458-02
Date Acquired: 8/2/2021 8:34:00 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210802\20210802_041.lcd
Vial: 32 | Inj. Volume: 25.0000uL | Tray: 5

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	M	2.788	2116	121275	1	0.1184	ng/mL	----	17.51
Sodium Perchlorate-18O4 _IS	M	2.787	1212 75	121275	1	1.0000	ng/mL	----	----



Insight Report

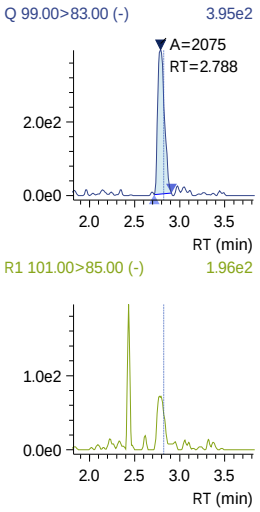
Printed at 8/18/2021 10:42:57 AM

20210802_041

Sample ID: EQ2100458-02
Date Acquired: 8/2/2021 8:34:00 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210802\Before\20210802_041.lcd
Vial: 32 | Inj. Volume: 25.0000uL | Tray: 5

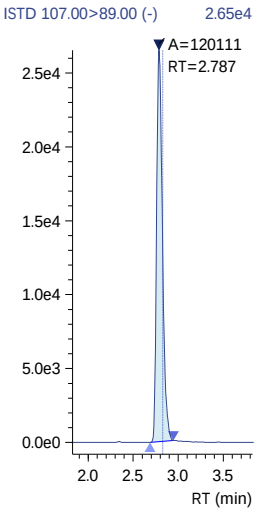
Perchlorate

Conc 0.0815
R#1 17.60 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.0000



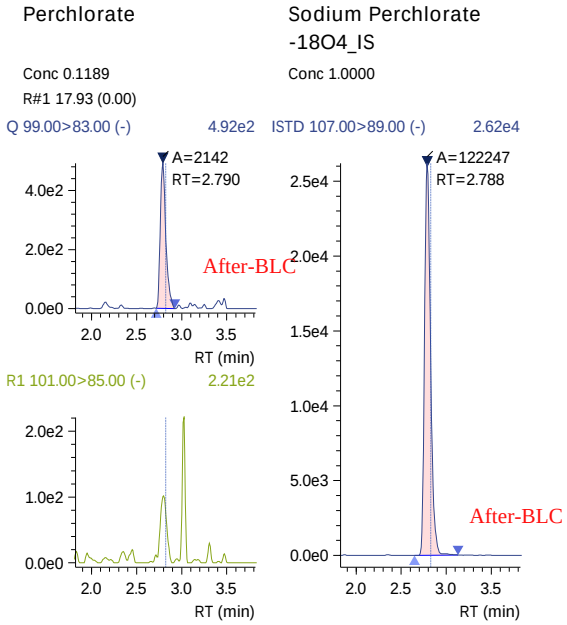
Insight Report

Printed at 8/18/2021 10:37:32 AM

20210802_042

Sample ID: EQ2100458-03
Date Acquired: 8/2/2021 8:42:31 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210802\20210802_042.lcd
Vial: 33 | Inj. Volume: 25.0000uL | Tray: 5

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	M	2.790	2142	122247	1	0.1189	ng/mL	----	17.93
Sodium Perchlorate-18O4 _IS	M	2.788	1222 47	122247	1	1.0000	ng/mL	----	----



Insight Report

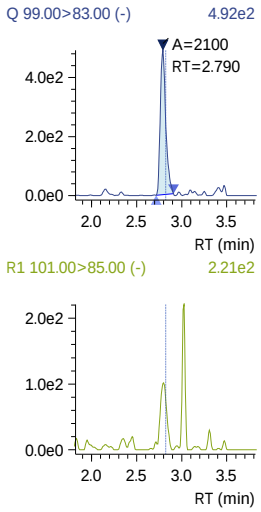
Printed at 8/18/2021 10:42:57 AM

20210802_042

Sample ID: EQ2100458-03
Date Acquired: 8/2/2021 8:42:31 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210802\Before\20210802_042.lcd
Vial: 33 | Inj. Volume: 25.0000uL | Tray: 5

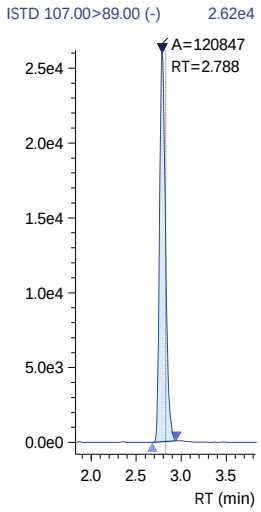
Perchlorate

Conc 0.0821
R#1 18.22 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.0000



Insight Report

Printed at 8/18/2021 10:37:32 AM

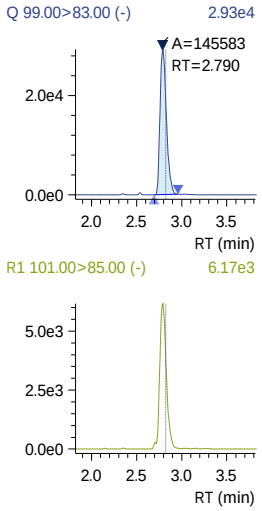
20210802_045

Sample ID: PERCHLORATE7
Date Acquired: 8/2/2021 9:08:10 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210802\20210802_045.lcd
Vial: 26 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.790	145583	99812	1	9.9006	ng/mL	10.0000	20.90
Sodium Perchlorate-18O4_IS	Auto	2.789	99812	99812	1	1.0000	ng/mL	1.0000	----

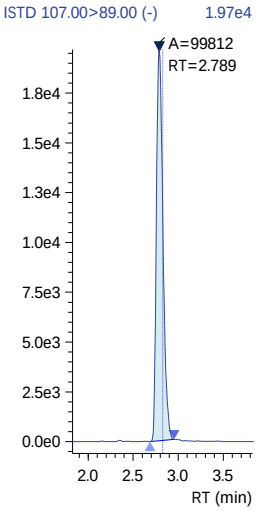
Perchlorate

Conc 9.9006
R#1 20.90 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.0000



Insight Report

Printed at 8/18/2021 10:42:57 AM

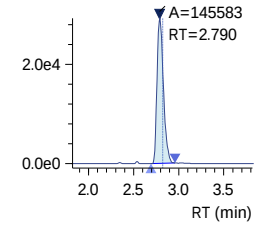
20210802_045

Sample ID: PERCHLORATE7
Date Acquired: 8/2/2021 9:08:10 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210802\Before\20210802_045.lcd
Vial: 26 | Inj. Volume: 25.0000uL | Tray: 1

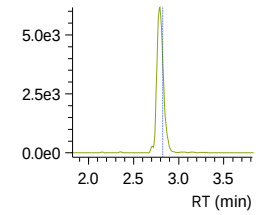
Perchlorate

Conc 9.1545
R#1 20.90 (0.00)

Q 99.00>83.00 (-) 2.93e4



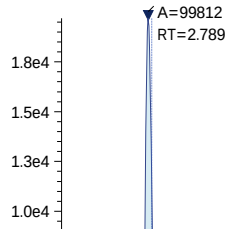
R1 101.00>85.00 (-) 6.17e3



Sodium Perchlorate -18O4_IS

Conc 1.0000

ISTD 107.00>89.00 (-) 1.97e4



Insight Report

Printed at 8/18/2021 10:37:32 AM

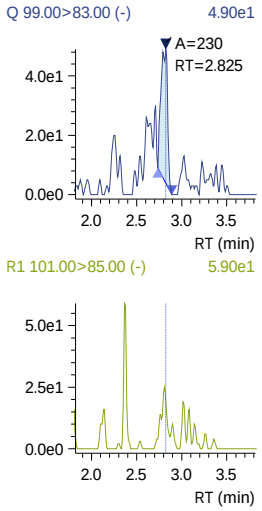
20210802_052

Sample ID: E2100825-004
Date Acquired: 8/2/2021 10:07:45 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210802\20210802_052.lcd
Vial: 42 | Inj. Volume: 25.0000uL | Tray: 5

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.825	230	89371	1	0.0175	ng/mL	----	26.67
Sodium Perchlorate-18O4 _IS	Auto	2.782	89371	89371	1	1.0000	ng/mL	----	----

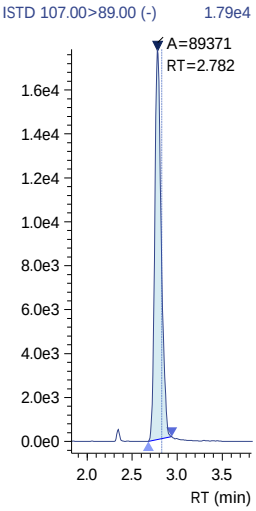
Perchlorate

Conc 0.0175
R#1 26.67 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.0000



Insight Report

Printed at 8/18/2021 10:42:57 AM

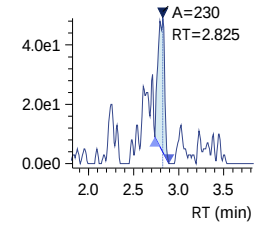
20210802_052

Sample ID: E2100825-004
Date Acquired: 8/2/2021 10:07:45 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210802\Before\20210802_052.lcd
Vial: 42 | Inj. Volume: 25.0000uL | Tray: 5

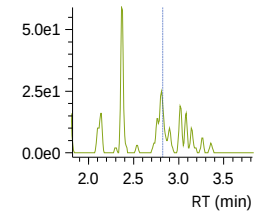
Perchlorate

Conc -0.0110
R#1 26.67 (0.00)

Q 99.00>83.00 (-) 4.90e1



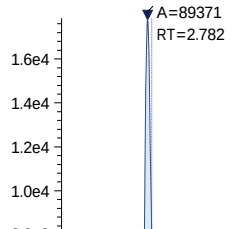
R1 101.00>85.00 (-) 5.90e1



Sodium Perchlorate -18O4_IS

Conc 1.0000

ISTD 107.00>89.00 (-) 1.79e4



Insight Report

Printed at 8/18/2021 10:37:32 AM

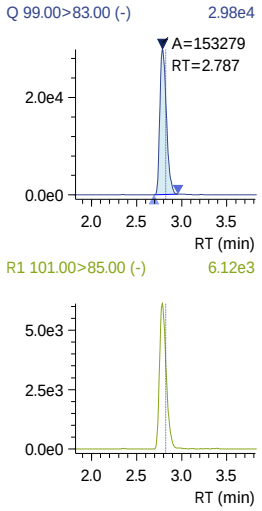
20210802_056

Sample ID: PERCHLORATE7
Date Acquired: 8/2/2021 10:41:51 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210802\20210802_056.lcd
Vial: 26 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.787	153279	106145	1	9.8021	ng/mL	10.0000	20.50
Sodium Perchlorate-18O4_IS	Auto	2.785	106145	106145	1	1.0000	ng/mL	1.0000	----

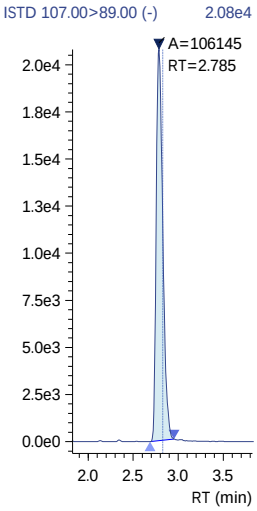
Perchlorate

Conc 9.8021
R#1 20.50 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.0000



Insight Report

Printed at 8/18/2021 10:42:57 AM

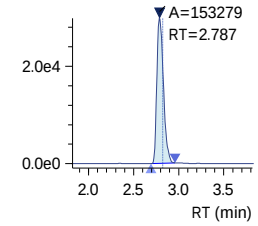
20210802_056

Sample ID: PERCHLORATE7
Date Acquired: 8/2/2021 10:41:51 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210802\Before\20210802_056.lcd
Vial: 26 | Inj. Volume: 25.0000uL | Tray: 1

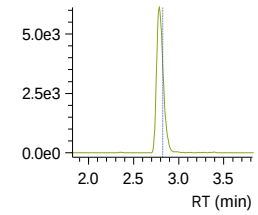
Perchlorate

Conc 9.0632
R#1 20.50 (0.00)

Q 99.00>83.00 (-) 2.98e4



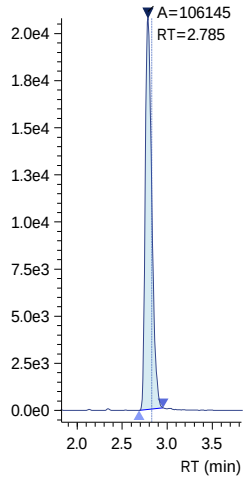
R1 101.00>85.00 (-) 6.12e3



Sodium Perchlorate -18O4_IS

Conc 1.0000

ISTD 107.00>89.00 (-) 2.08e4



Insight Report

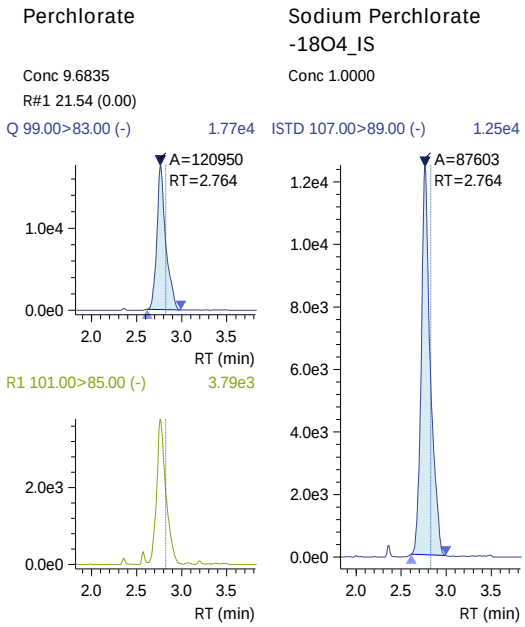
Printed at 8/19/2021 12:01:45 PM

Method File: I:\LCMS01\DATA\20210805\20210804.lcm
Project File: I:\LCMS01\DATA\20210805\20210805.damlp

20210805_006

Sample ID: PERCHLORATE7
Date Acquired: 8/5/2021 10:19:20 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210805\20210805_006.lcd
Vial: 26 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.764	120950	87603	1	9.6835	ng/mL	10.0000	21.54
Sodium Perchlorate-18O4_IS	Auto	2.764	87603	87603	1	1.0000	ng/mL	1.0000	----



Insight Report

Printed at 8/19/2021 12:04:03 PM

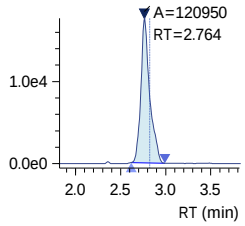
20210805_006

Sample ID: PERCHLORATE7
Date Acquired: 8/5/2021 10:19:20 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210805\Before\20210805_006.lcd
Vial: 26 | Inj. Volume: 25.0000uL | Tray: 1

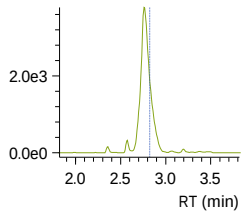
Perchlorate

Conc 10.0117
R#1 21.54 (0.00)

Q 99.00>83.00 (-) 1.77e4



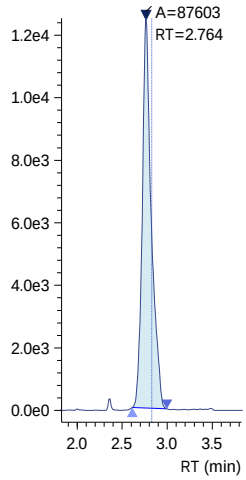
R1 101.00>85.00 (-) 3.79e3



Sodium Perchlorate -18O4_IS

Conc 1.0000

ISTD 107.00>89.00 (-) 1.25e4



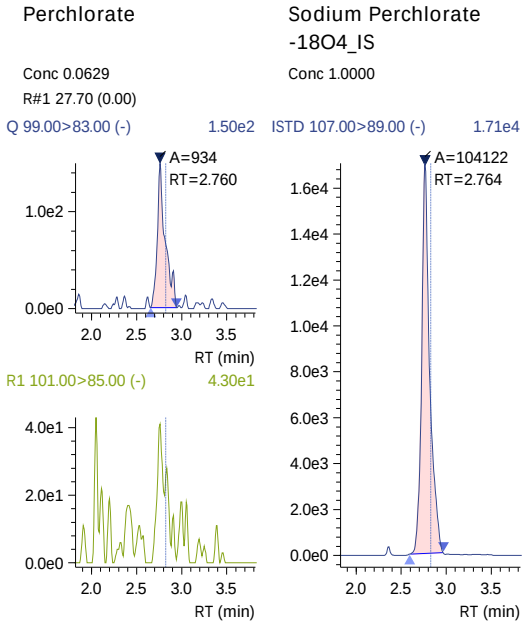
Insight Report

Printed at 8/19/2021 12:01:45 PM

20210805_007

Sample ID: LODV
Date Acquired: 8/5/2021 10:27:55 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210805\20210805_007.lcd
Vial: 31 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	M	2.760	934	104122	1	0.0629	ng/mL	----	27.70
Sodium Perchlorate-18O4 _IS	M	2.764	1041 22	104122	1	1.0000	ng/mL	----	----



Insight Report

Printed at 8/19/2021 12:04:03 PM

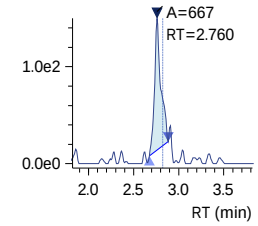
20210805_007

Sample ID: LODV
Date Acquired: 8/5/2021 10:27:55 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210805\Before\20210805_007.lcd
Vial: 31 | Inj. Volume: 25.0000uL | Tray: 1

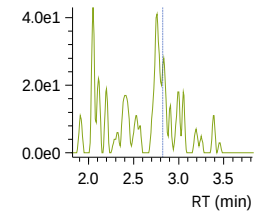
Perchlorate

Conc 0.0455
R#1 27.94 (0.00)

Q 99.00>83.00 (-) 1.50e2



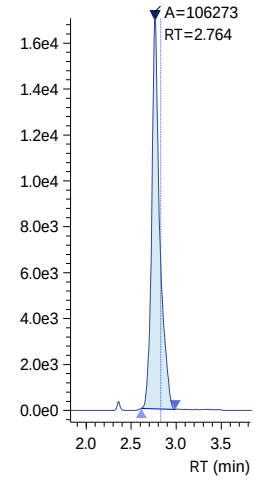
R1 101.00>85.00 (-) 4.30e1



Sodium Perchlorate -18O4_IS

Conc 1.0000

ISTD 107.00>89.00 (-) 1.71e4



Insight Report

Printed at 8/19/2021 12:01:45 PM

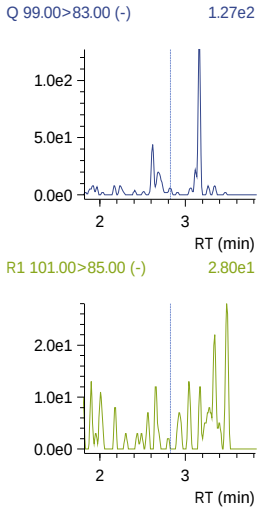
20210805_015

Sample ID: E2100825-002X2
Date Acquired: 8/5/2021 12:12:16 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210805\20210805_015.lcd
Vial: 40 | Inj. Volume: 25.0000uL | Tray: 5

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	ND(W/B)	----	----	41233	1	----	ng/mL	----	----
Sodium Perchlorate-18O4_IS	Auto	2.673	41233	41233	1	1.0000	ng/mL	----	----

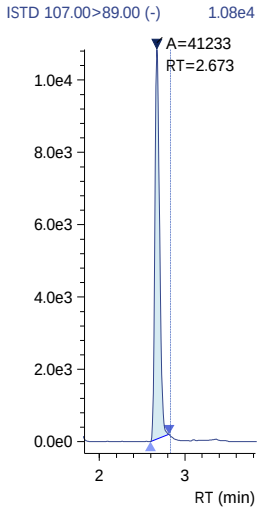
Perchlorate

Conc ----
R#1 ---- (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.0000



Insight Report

Printed at 8/19/2021 12:04:03 PM

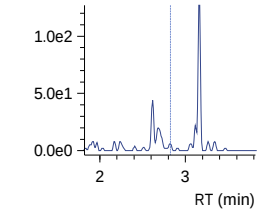
20210805_015

Sample ID: E2100825-002X2
Date Acquired: 8/5/2021 12:12:16 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210805\Before\20210805_015.lcd
Vial: 40 | Inj. Volume: 25.0000uL | Tray: 5

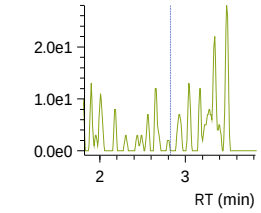
Perchlorate

Conc ----
R#1 ---- (0.00)

Q 99.00>83.00 (-) 1.27e2



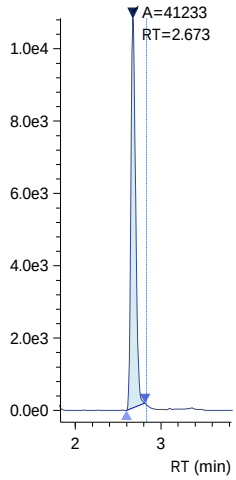
R1 101.00>85.00 (-) 2.80e1



Sodium Perchlorate -18O4_IS

Conc 1.0000

ISTD 107.00>89.00 (-) 1.08e4



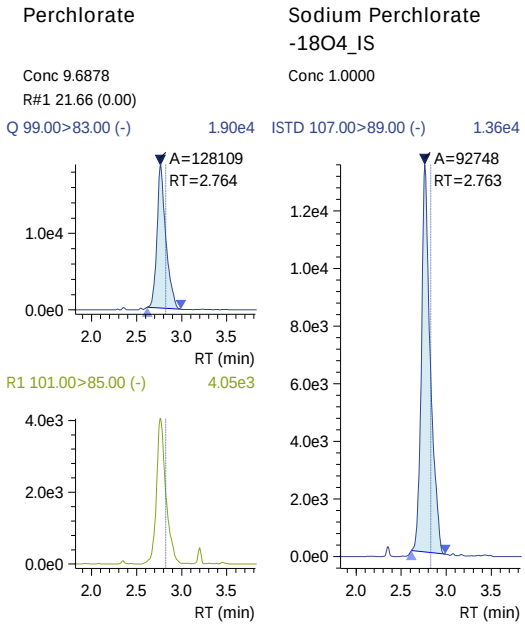
Insight Report

Printed at 8/19/2021 12:01:45 PM

20210805_017

Sample ID: PERCHLORATE7
Date Acquired: 8/5/2021 12:29:20 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210805\20210805_017.lcd
Vial: 26 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.764	128109	92748	1	9.6878	ng/mL	10.0000	21.66
Sodium Perchlorate-18O4_IS	Auto	2.763	92748	92748	1	1.0000	ng/mL	1.0000	----



Insight Report

Printed at 8/19/2021 12:04:03 PM

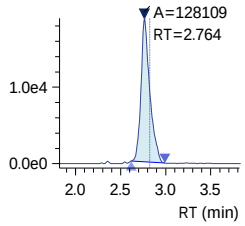
20210805_017

Sample ID: PERCHLORATE7
Date Acquired: 8/5/2021 12:29:20 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210805\Before\20210805_017.lcd
Vial: 26 | Inj. Volume: 25.0000uL | Tray: 1

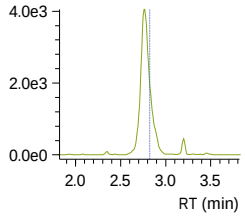
Perchlorate

Conc 10.0162
R#1 21.66 (0.00)

Q 99.00>83.00 (-) 1.90e4



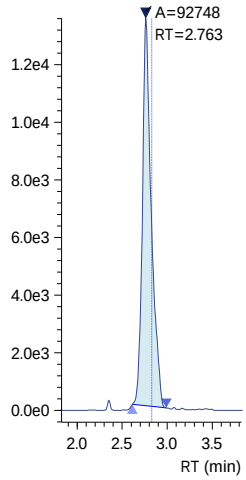
R1 101.00>85.00 (-) 4.05e3



Sodium Perchlorate -18O4_IS

Conc 1.0000

ISTD 107.00>89.00 (-) 1.36e4



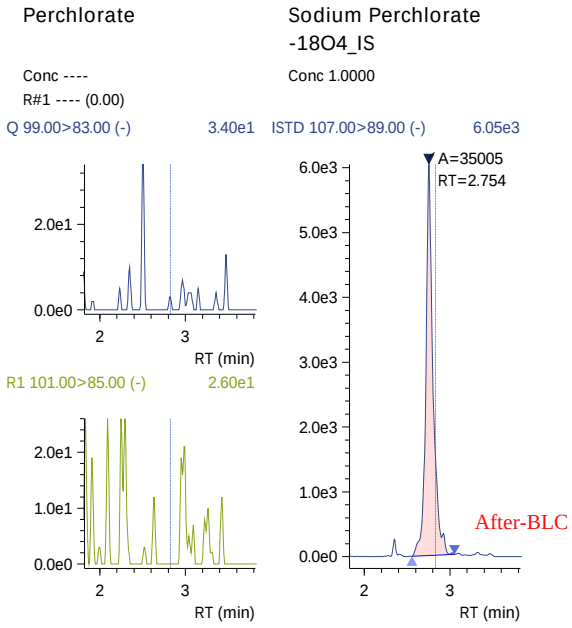
Insight Report

Printed at 8/19/2021 12:01:45 PM

20210805_022

Sample ID: E2100825-006X10
Date Acquired: 8/5/2021 1:11:58 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210805\20210805_022.lcd
Vial: 48 | Inj. Volume: 25.0000uL | Tray: 5

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	ND(W/B)	----	----	35005	1	----	ng/mL	----	----
Sodium Perchlorate-18O4_IS	M	2.754	35005	35005	1	1.0000	ng/mL	----	----

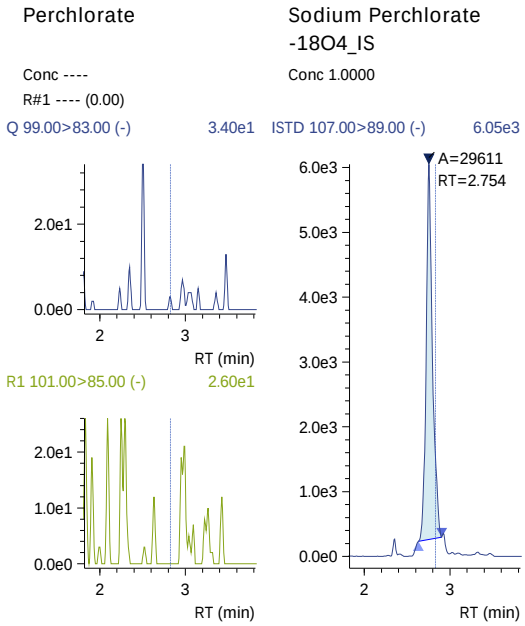


Insight Report

Printed at 8/19/2021 12:04:03 PM

20210805_022

Sample ID: E2100825-006X10
Date Acquired: 8/5/2021 1:11:58 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210805\Before\20210805_022.lcd
Vial: 48 | Inj. Volume: 25.0000uL | Tray: 5



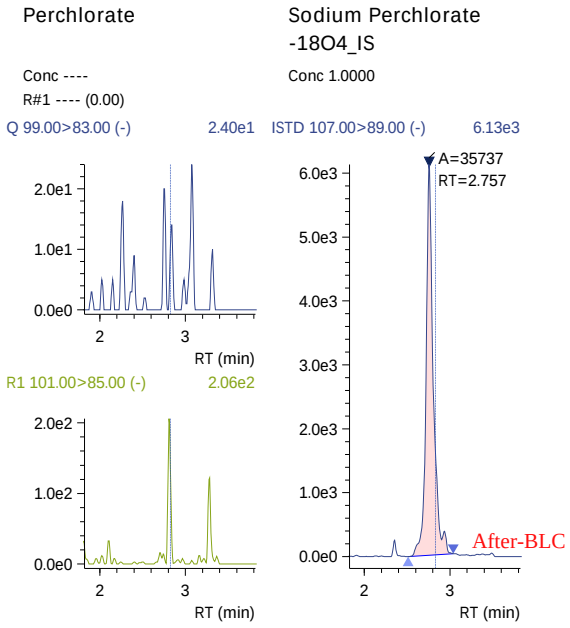
Insight Report

Printed at 8/19/2021 12:01:45 PM

20210805_023

Sample ID: E2100825-007X10
Date Acquired: 8/5/2021 1:20:27 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210805\20210805_023.lcd
Vial: 49 | Inj. Volume: 25.0000uL | Tray: 5

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	ND(W/B)	----	----	35737	1	----	ng/mL	----	----
Sodium Perchlorate-18O4_IS	M	2.757	35737	35737	1	1.0000	ng/mL	----	----

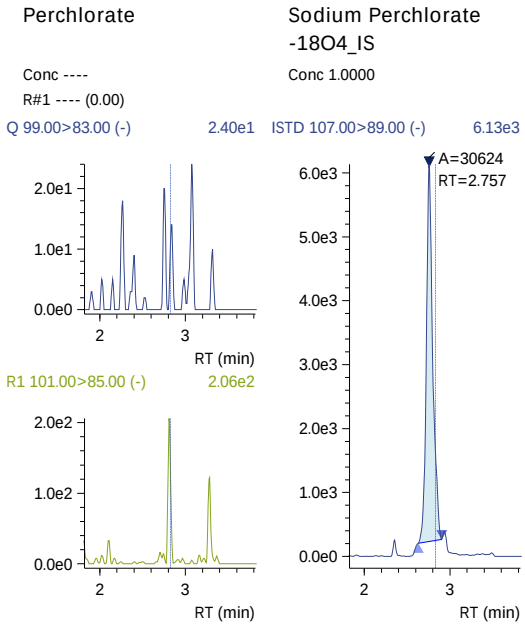


Insight Report

Printed at 8/19/2021 12:04:03 PM

20210805_023

Sample ID: E2100825-007X10
Date Acquired: 8/5/2021 1:20:27 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210805\Before\20210805_023.lcd
Vial: 49 | Inj. Volume: 25.0000uL | Tray: 5



Insight Report

Printed at 8/19/2021 12:01:45 PM

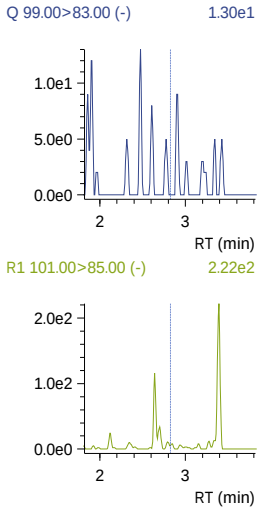
20210805_024

Sample ID: E2100825-008X10
Date Acquired: 8/5/2021 1:28:56 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210805\20210805_024.lcd
Vial: 50 | Inj. Volume: 25.0000uL | Tray: 5

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	ND(W/B)	----	----	51988	1	----	ng/mL	----	----
Sodium Perchlorate-18O4_IS	M	2.753	51988	51988	1	1.0000	ng/mL	----	----

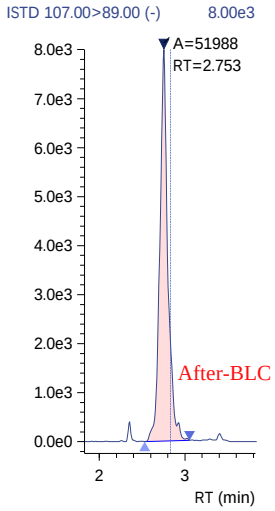
Perchlorate

Conc ----
R#1 ---- (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.0000



Insight Report

Printed at 8/19/2021 12:04:03 PM

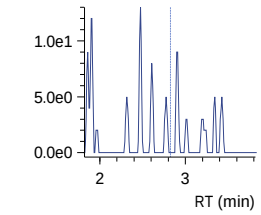
20210805_024

Sample ID: E2100825-008X10
Date Acquired: 8/5/2021 1:28:56 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210805\Before\20210805_024.lcd
Vial: 50 | Inj. Volume: 25.0000uL | Tray: 5

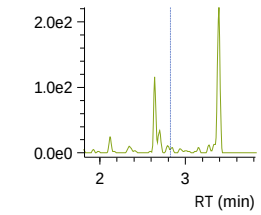
Perchlorate

Conc ----
R#1 ---- (0.00)

Q 99.00>83.00 (-) 1.30e1



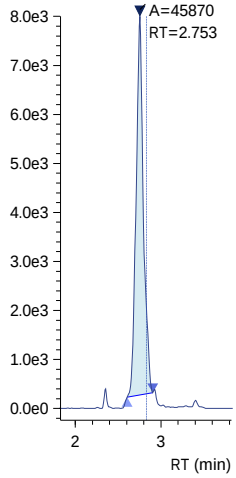
R1 101.00>85.00 (-) 2.22e2



Sodium Perchlorate -18O4_IS

Conc 1.0000

ISTD 107.00>89.00 (-) 8.00e3



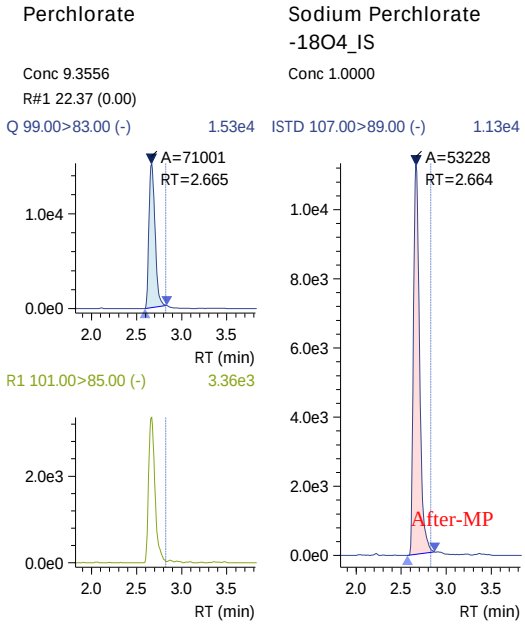
Insight Report

Printed at 8/19/2021 12:01:45 PM

20210805_025

Sample ID: PERCHLORATE7
Date Acquired: 8/5/2021 1:38:01 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210805\20210805_025.lcd
Vial: 26 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.665	71001	53228	1	9.3556	ng/mL	10.0000	22.37
Sodium Perchlorate-18O4 _IS	M	2.664	53228	53228	1	1.0000	ng/mL	1.0000	----



Insight Report

Printed at 8/19/2021 12:04:03 PM

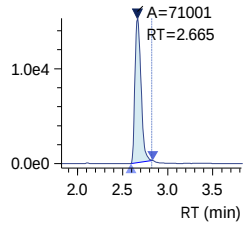
20210805_025

Sample ID: PERCHLORATE7
Date Acquired: 8/5/2021 1:38:01 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210805\Before\20210805_025.lcd
Vial: 26 | Inj. Volume: 25.0000uL | Tray: 1

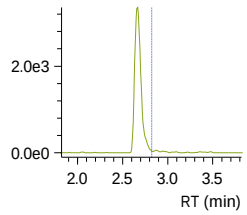
Perchlorate

Conc 0.0000
R#1 22.37 (0.00)

Q 99.00>83.00 (-) 1.53e4



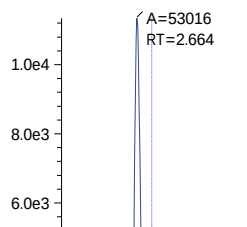
R1 101.00>85.00 (-) 3.36e3



Sodium Perchlorate -18O4_IS

Conc ----

ISTD 107.00>89.00 (-) 1.13e4



Insight Report

Printed at 8/19/2021 12:01:45 PM

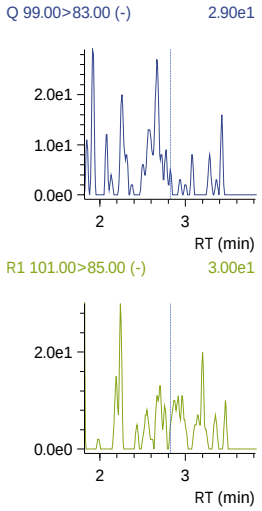
20210805_026

Sample ID: E2100825-001X10
Date Acquired: 8/5/2021 1:51:51 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210805\20210805_026.lcd
Vial: 51 | Inj. Volume: 25.0000uL | Tray: 5

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	ND(W/B)	----	----	44076	1	----	ng/mL	----	----
Sodium Perchlorate-18O4_IS	Auto	2.677	44076	44076	1	1.0000	ng/mL	----	----

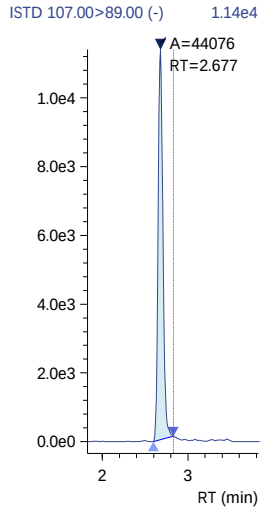
Perchlorate

Conc ----
R#1 ---- (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.0000

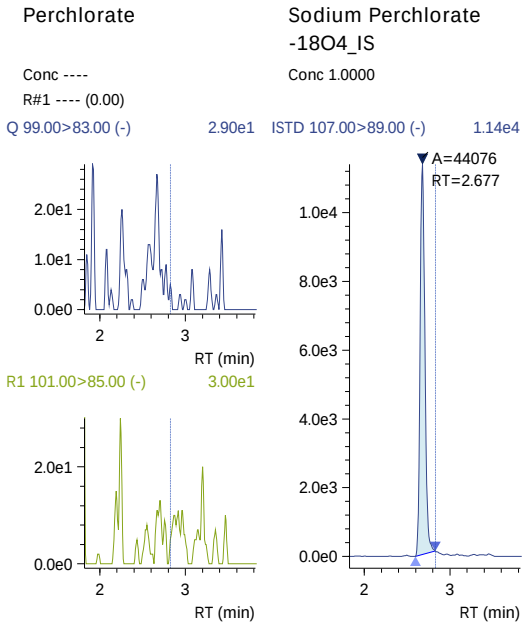


Insight Report

Printed at 8/19/2021 12:04:03 PM

20210805_026

Sample ID: E2100825-001X10
Date Acquired: 8/5/2021 1:51:51 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210805\Before\20210805_026.lcd
Vial: 51 | Inj. Volume: 25.0000uL | Tray: 5



Insight Report

Printed at 8/19/2021 12:01:45 PM

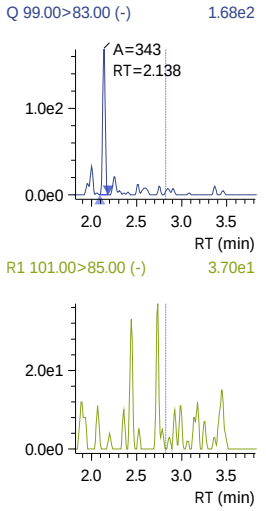
20210805_027

Sample ID: E2100825-005X10
Date Acquired: 8/5/2021 2:00:24 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210805\20210805_027.lcd
Vial: 52 | Inj. Volume: 25.0000uL | Tray: 5

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	ND(W/B)	----	----	51330	1	----	ng/mL	----	----
Sodium Perchlorate-18O4_IS	M	2.760	51330	51330	1	1.0000	ng/mL	----	----

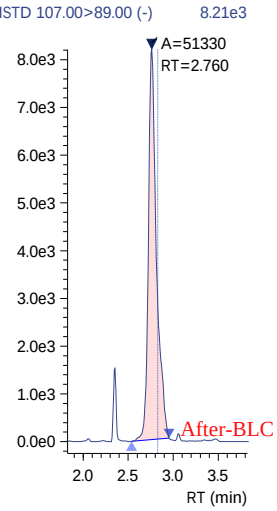
Perchlorate

Conc ----
R#1 ---- (0.00)



Sodium Perchlorate-18O4_IS

Conc 1.0000



Insight Report

Printed at 8/19/2021 12:04:03 PM

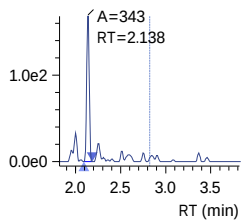
20210805_027

Sample ID: E2100825-005X10
Date Acquired: 8/5/2021 2:00:24 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210805\Before\20210805_027.lcd
Vial: 52 | Inj. Volume: 25.0000uL | Tray: 5

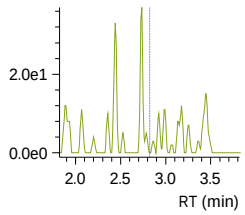
Perchlorate

Conc ----
R#1 ---- (0.00)

Q 99.00>83.00 (-) 1.68e2



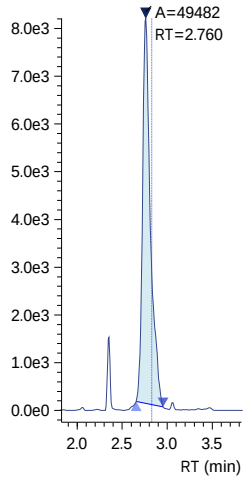
R1 101.00>85.00 (-) 3.70e1



Sodium Perchlorate -18O4_IS

Conc 1.0000

ISTD 107.00>89.00 (-) 8.21e3



Insight Report

Printed at 8/19/2021 12:01:45 PM

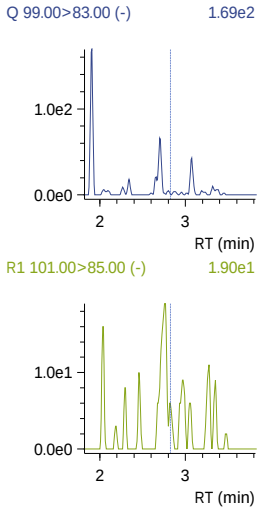
20210805_031

Sample ID: E2100825-003X10
Date Acquired: 8/5/2021 2:35:11 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210805\20210805_031.lcd
Vial: 54 | Inj. Volume: 25.0000uL | Tray: 5

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	ND(W/B)	----	----	75804	1	----	ng/mL	----	----
Sodium Perchlorate-18O4_IS	Auto	2.705	75804	75804	1	1.0000	ng/mL	----	----

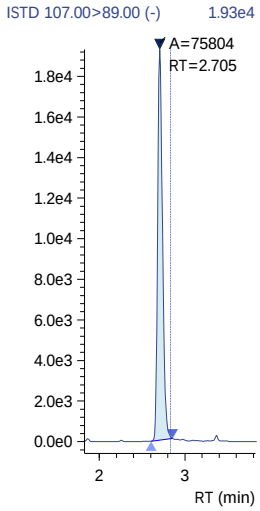
Perchlorate

Conc ----
R#1 ---- (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.0000



Insight Report

Printed at 8/19/2021 12:04:03 PM

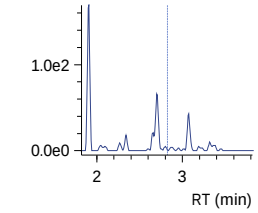
20210805_031

Sample ID: E2100825-003X10
Date Acquired: 8/5/2021 2:35:11 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210805\Before\20210805_031.lcd
Vial: 54 | Inj. Volume: 25.0000uL | Tray: 5

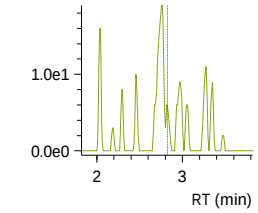
Perchlorate

Conc ----
R#1 ---- (0.00)

Q 99.00>83.00 (-) 1.69e2



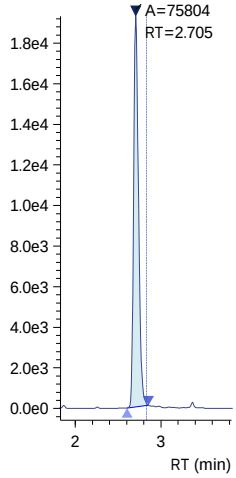
R1 101.00>85.00 (-) 1.90e1



Sodium Perchlorate -18O4_IS

Conc 1.0000

ISTD 107.00>89.00 (-) 1.93e4



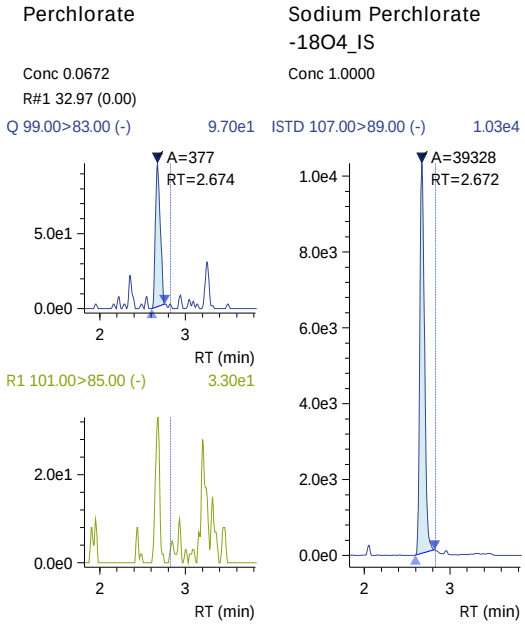
Insight Report

Printed at 8/19/2021 12:01:45 PM

20210805_034

Sample ID: EQ2100458-04X2
Date Acquired: 8/5/2021 3:32:52 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210805\20210805_034.lcd
Vial: 34 | Inj. Volume: 25.0000uL | Tray: 5

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.674	377	39328	1	0.0672	ng/mL	----	32.97
Sodium Perchlorate-18O4 _IS	Auto	2.672	39328	39328	1	1.0000	ng/mL	----	----



Insight Report

Printed at 8/19/2021 12:04:03 PM

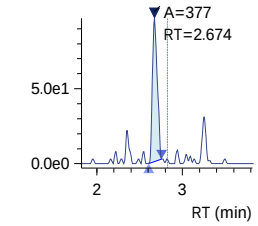
20210805_034

Sample ID: EQ2100458-04X2
Date Acquired: 8/5/2021 3:32:52 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210805\Before\20210805_034.lcd
Vial: 34 | Inj. Volume: 25.0000uL | Tray: 5

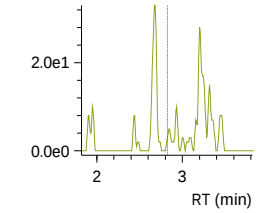
Perchlorate

Conc 0.0695
R#1 32.97 (0.00)

Q 99.00>83.00 (-) 9.70e1



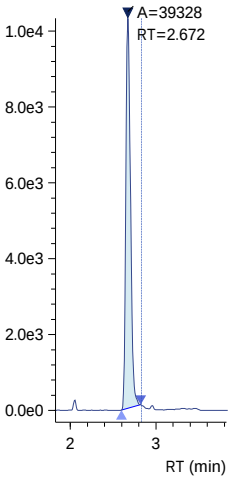
R1 101.00>85.00 (-) 3.30e1



Sodium Perchlorate -18O4_IS

Conc 1.0000

ISTD 107.00>89.00 (-) 1.03e4



Insight Report

Printed at 8/19/2021 12:01:45 PM

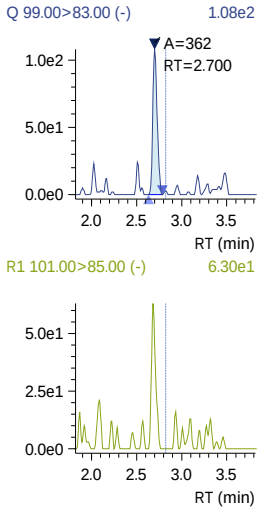
20210805_035

Sample ID: EQ2100458-05X2
Date Acquired: 8/5/2021 3:50:04 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210805\20210805_035.lcd
Vial: 35 | Inj. Volume: 25.0000uL | Tray: 5

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.700	362	39786	1	0.0638	ng/mL	----	42.06
Sodium Perchlorate-18O4 _IS	Auto	2.694	39786	39786	1	1.0000	ng/mL	----	----

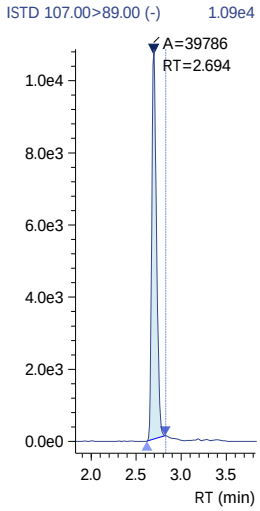
Perchlorate

Conc 0.0638
R#1 42.06 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.0000



Insight Report

Printed at 8/19/2021 12:04:03 PM

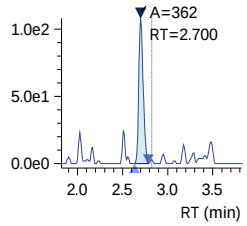
20210805_035

Sample ID: EQ2100458-05X2
Date Acquired: 8/5/2021 3:50:04 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210805\Before\20210805_035.lcd
Vial: 35 | Inj. Volume: 25.0000uL | Tray: 5

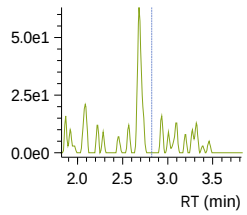
Perchlorate

Conc 0.0660
R#1 42.06 (0.00)

Q 99.00>83.00 (-) 1.08e2



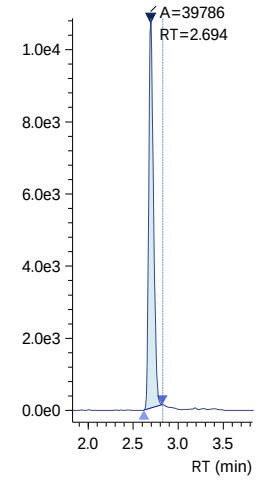
R1 101.00>85.00 (-) 6.30e1



Sodium Perchlorate -18O4_IS

Conc 1.0000

ISTD 107.00>89.00 (-) 1.09e4



Insight Report

Printed at 8/19/2021 12:01:45 PM

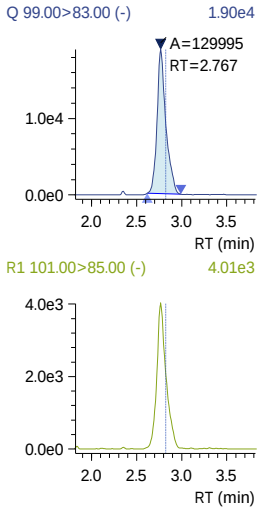
20210805_036

Sample ID: PERCHLORATE7
Date Acquired: 8/5/2021 3:58:39 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210805\20210805_036.lcd
Vial: 26 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.767	129995	95586	1	9.5385	ng/mL	10.0000	21.20
Sodium Perchlorate-18O4_IS	Auto	2.764	95586	95586	1	1.0000	ng/mL	1.0000	----

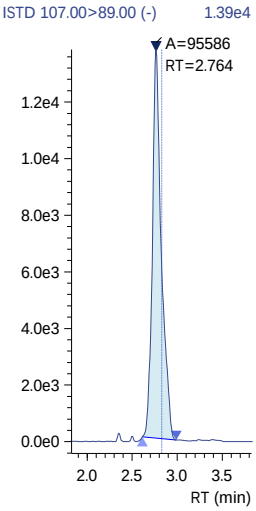
Perchlorate

Conc 9.5385
R#1 21.20 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.0000



Insight Report

Printed at 8/19/2021 12:04:03 PM

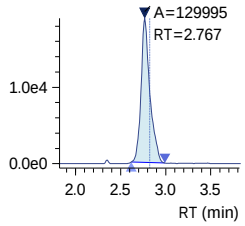
20210805_036

Sample ID: PERCHLORATE7
Date Acquired: 8/5/2021 3:58:39 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210805\Before\20210805_036.lcd
Vial: 26 | Inj. Volume: 25.0000uL | Tray: 1

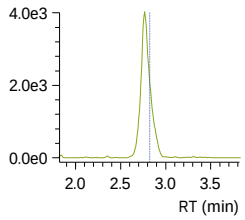
Perchlorate

Conc 9.8618
R#1 21.20 (0.00)

Q 99.00>83.00 (-) 1.90e4



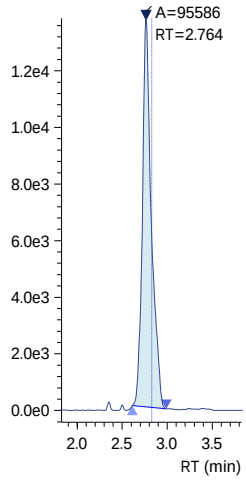
R1 101.00>85.00 (-) 4.01e3



Sodium Perchlorate -18O4_IS

Conc 1.0000

ISTD 107.00>89.00 (-) 1.39e4



HS21071204 TOCRaw Data

ALS WO# HS21071204

TOC-Control L Report

2021_05_10_002.tlx

Instr.Information

Instrument Options	TOC/ASI/IC Unit/
Catalyst	Regular Sensitivity

Cal. Curve

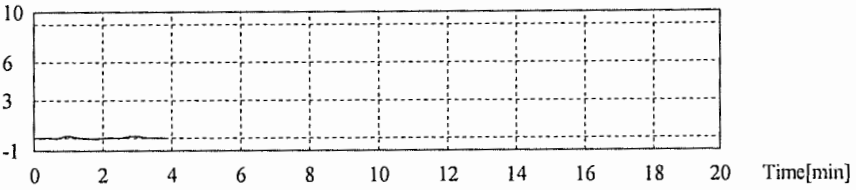
Sample Name:	CAL
Sample ID:	Untitled
Cal. Curve:	05_10_2021A_CAL.2021_05_10_17_37_49.cal
Status	Completed

Type	Anal.
Standard	NPOC

Conc: 0.000mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	0.4989	50uL	1.000	*******		5/10/2021 5:45:57 PM
2	0.3616	50uL	1.000	*******		5/10/2021 5:48:41 PM

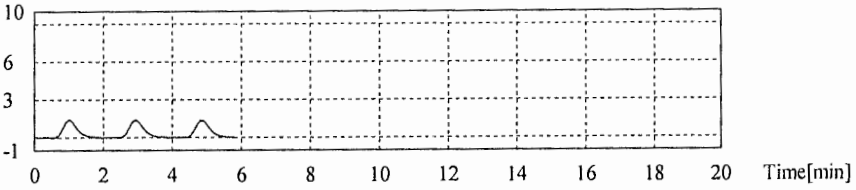
Acid Add.	1.500%
Sparge Gas Flow	80mL/min
Sp. Time	90.00sec
Mean Area	0.4303



Conc: 1.000mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	3.881	50uL	1.000	*******		5/10/2021 5:56:40 PM
2	4.044	50uL	1.000	*******	E	5/10/2021 5:59:24 PM
3	3.915	50uL	1.000	*******		5/10/2021 6:02:09 PM

Acid Add.	1.500%
Sparge Gas Flow	80mL/min
Sp. Time	90.00sec
Mean Area	3.898



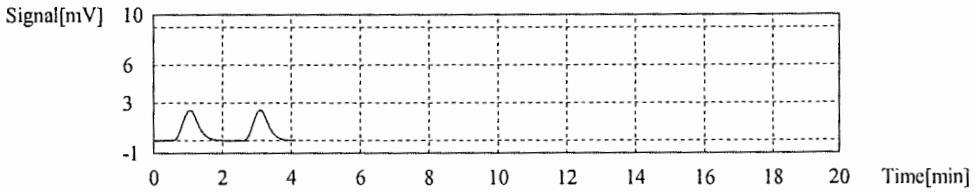
Conc: 2.000mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	7.481	50uL	1.000	*******		5/10/2021 6:10:31 PM
2	7.343	50uL	1.000	*******		5/10/2021 6:13:15 PM

TOC-Control L Report

2021_05_10_002.tlx

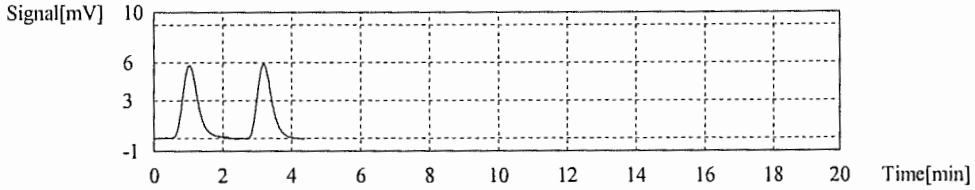
Acid Add. 1.500%
Sparge Gas Flow 80mL/min
Sp. Time 90.00sec
Mean Area 7.412



Conc: 5.000mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	17.39	50uL	1.000	*******		5/10/2021 6:21:29 PM
2	17.58	50uL	1.000	*******		5/10/2021 6:24:16 PM

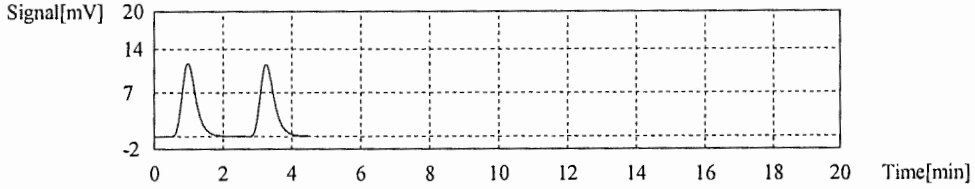
Acid Add. 1.500%
Sparge Gas Flow 80mL/min
Sp. Time 90.00sec
Mean Area 17.48



Conc: 10.00mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	33.69	50uL	1.000	*******		5/10/2021 6:32:55 PM
2	33.47	50uL	1.000	*******		5/10/2021 6:35:37 PM

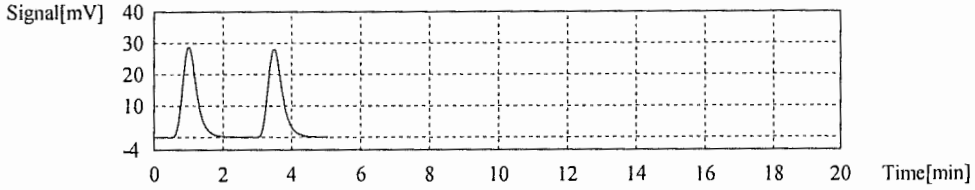
Acid Add. 1.500%
Sparge Gas Flow 80mL/min
Sp. Time 90.00sec
Mean Area 33.58



Conc: 25.00mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	83.30	50uL	1.000	*******		5/10/2021 6:44:29 PM
2	83.46	50uL	1.000	*******		5/10/2021 6:47:16 PM

Acid Add. 1.500%
Sparge Gas Flow 80mL/min
Sp. Time 90.00sec
Mean Area 83.38



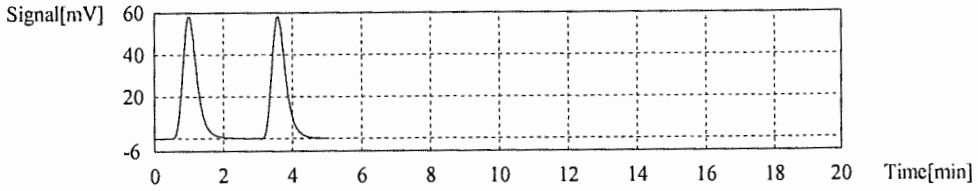
Conc: 50.00mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	167.7	50uL	1.000	*******		5/10/2021 6:56:07 PM
2	166.5	50uL	1.000	*******		5/10/2021 6:58:48 PM

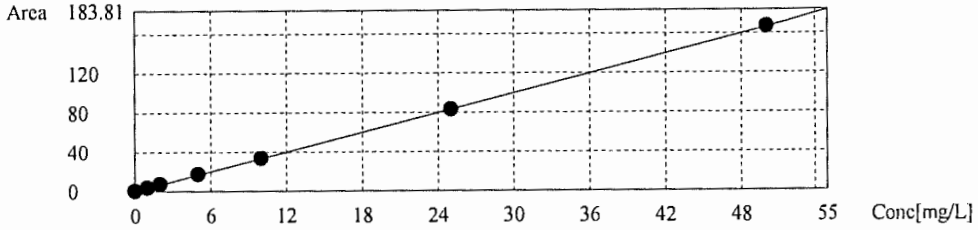
TOC-Control L Report

2021_05_10_002.tlx

Acid Add.	1.500%
Sparge Gas Flow	80mL/min
Sp. Time	90.00sec
Mean Area	167.1



Slope:	3.327
Intercept	0.000
r^2	1.0000
r	1.0000
RSE(%)	N/A
Zero Shift	Yes



C:\TOC-L\Data\2021_08_05_002.tlx

	Type	Analysis	Sample Name	Sample ID	Origin	Result	Notes	Status
1	Unknown	NPOC	CCV	317190113	05_10_2021	NPOC:25.91mg/L		Completed
2	Unknown	NPOC	CCB		05_10_2021	NPOC:0.5521mg/		Completed
3	Unknown	NPOC	MBLK-080521		05_10_2021	NPOC:0.1662mg/		Completed
4	Unknown	NPOC	LCS-08052021	3100603915	05_10_2021	NPOC:10.47mg/L		Completed
5	Unknown	NPOC	LCSD-08052021	3100603915	05_10_2021	NPOC:10.59mg/L		Completed
6	Unknown	NPOC	HS21071136-01		05_10_2021	NPOC:3.387mg/L		Completed
7	Unknown	NPOC	HS21071136-02		05_10_2021	NPOC:9.511mg/L		Completed
8	Unknown	NPOC	HS21080187-01		05_10_2021	NPOC:2.290mg/L		Completed
9	Unknown	NPOC	HS21071321-01		05_10_2021	NPOC:14.26mg/L		Completed
10	Unknown	NPOC	HS21071549-03		05_10_2021	NPOC:6.995mg/L		Completed
11	Unknown	NPOC	HS21071549-04		05_10_2021	NPOC:23.22mg/L		Completed
12	Unknown	NPOC	HS21071588-01		05_10_2021	NPOC:11.57mg/L		Completed
13	Unknown	NPOC	CCV	317190113	05_10_2021	NPOC:26.16mg/L		Completed
14	Unknown	NPOC	CCB		05_10_2021	NPOC:0.1342mg/		Completed
15	Unknown	NPOC	HS21071204-01		05_10_2021	NPOC:14.81mg/L		Completed
16	Unknown	NPOC	HS21071204-02		05_10_2021	NPOC:708.7mg/L		Completed
17	Unknown	NPOC	HS21071204-02MS		05_10_2021	NPOC:724.2mg/L		Completed
18	Unknown	NPOC	HS21071204-03		05_10_2021	NPOC:1974mg/L		Completed
19	Unknown	NPOC	CCV	317190113	05_10_2021	NPOC:27.24mg/L		Completed
20	Unknown	NPOC	CCB		05_10_2021	NPOC:0.6623mg/		Completed
21	Unknown	NPOC	MBLK-080521		05_10_2021	NPOC:0.3438mg/		Completed
22	Unknown	NPOC	LCS-08052021	3100603915	05_10_2021	NPOC:10.64mg/L		Completed
23	Unknown	NPOC	LCSD-08052021	3100603915	05_10_2021	NPOC:10.32mg/L		Completed
24	Unknown	NPOC	HS21071204-08		05_10_2021	NPOC:7.296mg/L		Completed
25	Unknown	NPOC	HS21071647-01		05_10_2021	NPOC:13.28mg/L		Completed
26	Unknown	NPOC	HS21071667-36		05_10_2021	NPOC:1.530mg/L		Completed
27	Unknown	NPOC	HS21071667-48		05_10_2021	NPOC:1.864mg/L		Completed
28	Unknown	NPOC	HS21071667-49		05_10_2021	NPOC:0.4483mg/		Completed
29	Unknown	NPOC	HS21071667-51		05_10_2021	NPOC:3.202mg/L		Completed
30	Unknown	NPOC	HS21071667-51MS		05_10_2021	NPOC:13.67mg/L		Completed
31	Unknown	NPOC	CCV	317190113	05_10_2021	NPOC:25.95mg/L		Completed
32	Unknown	NPOC	CCB		05_10_2021	NPOC:0.1246mg/		Completed
33	Unknown	NPOC	HS21071667-55		05_10_2021	NPOC:1.119mg/L		Completed
34	Unknown	NPOC	HS21071667-56		05_10_2021	NPOC:2.872mg/L		Completed
35	Unknown	NPOC	HS21071667-57		05_10_2021	NPOC:0.7197mg/		Completed
36	Unknown	NPOC	HS21071667-68		05_10_2021	NPOC:3.047mg/L		Completed
37	Unknown	NPOC	CCV	317190113	05_10_2021	NPOC:26.32mg/L		Completed
38	Unknown	NPOC	CCB		05_10_2021	NPOC:1.349mg/L		Completed
39	Unknown	NPOC	MBLK-080521		05_10_2021	NPOC:0.09750m		Completed
40	Unknown	NPOC	LCS-08052021	3100603915	05_10_2021	NPOC:10.49mg/L		Completed
41	Unknown	NPOC	LCSD-08052021	3100603915	05_10_2021	NPOC:10.33mg/L		Completed
42	Unknown	NPOC	HS21071667-69		05_10_2021	NPOC:3.399mg/L		Completed
43	Unknown	NPOC	HS21071667-71		05_10_2021	NPOC:0.4842mg/		Completed
44	Unknown	NPOC	HS21080066-01		05_10_2021	NPOC:0.5166mg/		Completed
45	Unknown	NPOC	HS21080070-01		05_10_2021	NPOC:0.1099mg/		Completed
46	Unknown	NPOC	HS21080212-02		05_10_2021	NPOC:9.738mg/L		Completed
47	Unknown	NPOC	HS21080212-06		05_10_2021	NPOC:22.17mg/L		Completed
48	Unknown	NPOC	HS21080212-08		05_10_2021	NPOC:9.269mg/L		Completed
49	Unknown	NPOC	CCV	317190113	05_10_2021	NPOC:25.89mg/L		Completed
50	Unknown	NPOC	CCB		05_10_2021	NPOC:0.1583mg/		Completed
51	Unknown	NPOC	HS21080212-11		05_10_2021	NPOC:6.175mg/L		Completed

C:\TOC-L\Data\2021_08_05_002.tlx

	Type	Analysis	Sample Name	Sample ID	Origin	Result	Notes	Status
52	Unknown	NPOC	HS21080212-12		05_10_2021	NPOC:44.13mg/L		Completed
53	Unknown	NPOC	HS21080212-14		05_10_2021	NPOC:7.410mg/L		Completed
54	Unknown	NPOC	HS21080212-14MS		05_10_2021	NPOC:16.89mg/L		Completed
55	Unknown	NPOC	CCV	317190113	05_10_2021	NPOC:25.15mg/L		Completed
56	Unknown	NPOC	CCB		05_10_2021	NPOC:0.6337mg/		Completed

	Date / Time	Vial
1	8/5/2021 7:0	1
2	8/5/2021 7:1	2
3	8/5/2021 7:2	3
4	8/5/2021 7:4	4
5	8/5/2021 7:5	5
6	8/5/2021 8:0	6
7	8/5/2021 8:2	7
8	8/5/2021 8:3	8
9	8/5/2021 8:4	9
10	8/5/2021 9:0	10
11	8/5/2021 9:1	11
12	8/5/2021 9:2	12
13	8/5/2021 9:4	1
14	8/5/2021 9:5	2
15	8/5/2021 10:	13
16	8/5/2021 10:	14
17	8/5/2021 10:	15
18	8/5/2021 10:	16
19	8/5/2021 11:	1
20	8/5/2021 11:	2
21	8/5/2021 11:	3
22	8/5/2021 11:	4
23	8/6/2021 12:	5
24	8/6/2021 12:	17
25	8/6/2021 12:	18
26	8/6/2021 12:	19
27	8/6/2021 1:0	20
28	8/6/2021 1:1	21
29	8/6/2021 1:3	22
30	8/6/2021 1:4	23
31	8/6/2021 1:5	24
32	8/6/2021 2:0	25
33	8/6/2021 2:2	26
34	8/6/2021 2:3	27
35	8/6/2021 2:4	28
36	8/6/2021 3:0	29
37	8/6/2021 3:2	24
38	8/6/2021 3:3	25
39	8/6/2021 3:4	3
40	8/6/2021 3:5	4
41	8/6/2021 4:1	5
42	8/6/2021 4:2	30
43	8/6/2021 4:3	31
44	8/6/2021 4:5	32
45	8/6/2021 5:0	33
46	8/6/2021 5:1	34
47	8/6/2021 5:2	35
48	8/6/2021 5:4	36
49	8/6/2021 5:5	24
50	8/6/2021 6:0	25
51	8/6/2021 6:2	37

C:\TOC-L\Data\2021_08_05_002.tlx

	Date / Time	Vial
52	8/6/2021 6:3	38
53	8/6/2021 6:4	39
54	8/6/2021 6:5	40
55	8/6/2021 7:0	24
56	8/6/2021 7:2	25

C:\TOC-L\Data\2021_08_06_001.tlx

	Type	Analysis	Sample Name	Sample ID	Origin	Result	Notes	Status
1	Unknown	NPOC	CCV	317190113	05_10_2021	NPOC:25.50mg		Completed
2	Unknown	NPOC	CCB		05_10_2021	NPOC:0.1009m		Completed
3	Unknown	NPOC	MBLK-080621		05_10_2021	NPOC:0.07739		Completed
4	Unknown	NPOC	LCS-08062021	3100603915	05_10_2021	NPOC:10.88mg		Completed
5	Unknown	NPOC	LCSD-08062021	3100603915	05_10_2021	NPOC:10.25mg		Completed
6	Unknown	NPOC	HS21071204-02DF20		05_10_2021	NPOC:31.50mg		Completed
7	Unknown	NPOC	HS21071204-02MSDF		05_10_2021	NPOC:39.97mg		Completed
8	Unknown	NPOC	HS21071204-03DF10		05_10_2021	NPOC:27.53mg		Completed
9	Unknown	NPOC	HS21071204-08		05_10_2021	NPOC:7.631mg		Completed
10	Unknown	NPOC	HS21071647-01		05_10_2021	NPOC:13.34mg		Completed
11	Unknown	NPOC	HS21071667-36		05_10_2021	NPOC:1.074mg		Completed
12	Unknown	NPOC	HS21071667-48		05_10_2021	NPOC:1.856mg		Completed
13	Unknown	NPOC	CCV	317190113	05_10_2021	NPOC:25.98mg		Completed
14	Unknown	NPOC	CCB		05_10_2021	NPOC:0.1387m		Completed
15	Unknown	NPOC	HS21071667-49		05_10_2021	NPOC:0.2393m		Completed
16	Unknown	NPOC	HS21071667-51		05_10_2021	NPOC:2.886mg		Completed
17	Unknown	NPOC	HS21071667-55		05_10_2021	NPOC:1.163mg		Completed
18	Unknown	NPOC	HS21071667-56		05_10_2021	NPOC:3.036mg		Completed
19	Unknown	NPOC	CCV	317190113	05_10_2021	NPOC:25.62mg		Completed
20	Unknown	NPOC	CCB		05_10_2021	NPOC:0.05308		Completed
21	Unknown	NPOC	MBLK-080621		05_10_2021	NPOC:0.05381		Completed
22	Unknown	NPOC	LCS-08062021	3100603915	05_10_2021	NPOC:10.79mg		Completed
23	Unknown	NPOC	LCSD-08062021	3100603915	05_10_2021	NPOC:10.34mg		Completed
24	Unknown	NPOC	HS21071667-57		05_10_2021	NPOC:0.6351m		Completed
25	Unknown	NPOC	HS21071667-68		05_10_2021	NPOC:2.735mg		Completed
26	Unknown	NPOC	HS21071667-68MS		05_10_2021	NPOC:13.04mg		Completed
27	Unknown	NPOC	HS21071667-69		05_10_2021	NPOC:3.437mg		Completed
28	Unknown	NPOC	HS21071667-71		05_10_2021	NPOC:0.3897m		Completed
29	Unknown	NPOC	CCV	317190113	05_10_2021	NPOC:25.02mg		Completed
30	Unknown	NPOC	CCB		05_10_2021	NPOC:0.3906m		Completed

C:\TOC-L\Data\2021_08_06_001.tlx

	Date / Time	Vial
1	8/6/2021 11:	1
2	8/6/2021 11:	2
3	8/6/2021 11:	3
4	8/6/2021 12:	4
5	8/6/2021 12:	5
6	8/6/2021 12:	6
7	8/6/2021 12:	7
8	8/6/2021 1:2	8
9	8/6/2021 1:4	9
10	8/6/2021 1:5	10
11	8/6/2021 2:1	11
12	8/6/2021 2:2	12
13	8/6/2021 2:4	1
14	8/6/2021 2:5	2
15	8/6/2021 3:0	13
16	8/6/2021 3:2	14
17	8/6/2021 3:3	15
18	8/6/2021 3:5	16
19	8/6/2021 4:0	17
20	8/6/2021 4:1	18
21	8/6/2021 4:2	3
22	8/6/2021 4:4	4
23	8/6/2021 4:5	5
24	8/6/2021 5:0	19
25	8/6/2021 5:2	20
26	8/6/2021 6:0	21
27	8/6/2021 6:2	22
28	8/6/2021 6:3	23
29	8/6/2021 6:4	17
30	8/6/2021 7:0	18

HS2107204

Report Date: 07/28/2021 : 7:13

PC-TitratION PLUS
Calibration Report

Calibration Record # 2385

Calibration Settings

Calibration ID	PH CAL 4-7-10	Date	07/28/2021
Channel	1	Time	7:13 PM
Probe Type	pH	Temperature	296.82 K 23.67 C
Probe ID	PH ELECTRODE	Analysis Type	Single Line Fit

Calibration Results

Slope	-58.408	CorrCoeff	0.9998
Intercept	0.043	Equation:	Y = (-58.408) X + (0.043)

Calibration Validity True Operator

	Result	Minimum	Maximum
Slope	-58.408	-65.00	-53.00
Intercept	0.043	-100.00	100.00
Correlation Coefficient	0.9998	0.99	1.00

Note: "True" means the calibration was within the specified ranges
"False" means the calibration was NOT within the specified ranges

Calibration Data	Standard	Reading
	4.00	177.24
	7.00	-3.90
	10.00	-173.21

#388430 (A)

#388431 (B)

#388433 (D)

BM 7/29/2021

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Report Date: 7/29/2021 : 7:18 AM

PC-TitratION PLUS
Water Analysis Report

Run Number 4144 **Order Number** 20210728-2

SampleID	RunDate	RunTime	Temp	cond (uS)	pH	palk-ppm	talk-ppm	bcarb-ppm	carb-ppm	hydr-ppm	mLs @ 8.3	mLs @ 4.5	mLs @ 4.2
ICV-PH	7/28/2021	8:15 PM	23.33	-1.00	6.07	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
TAP WATER	7/28/2021	8:21 PM	23.30	-1.00	7.80	.00	192.55	192.55	.00	.00	.00	1.83	1.83
WBLKW1-210728	7/28/2021	8:26 PM	23.36	-1.00	5.73	.00	1.03	1.03	.00	.00	.00	.02	.02
LCS1-210728	7/28/2021	8:34 PM	23.60	-1.00	10.85	521.17	1,025.28	.00	1,008.21	17.07	4.96	9.76	9.76
LCSD1-210728	7/28/2021	8:43 PM	23.51	-1.00	10.85	522.04	1,024.88	.00	1,005.67	19.20	4.97	9.76	9.76
HS21071204-02	7/28/2021	8:53 PM	23.30	-1.00	6.19	.00	1,054.82	1,054.82	.00	.00	.00	10.05	10.05
HS21071204-02DUP	7/28/2021	9:01 PM	23.39	-1.00	6.18	.00	1,019.25	1,019.25	.00	.00	.00	9.71	9.71
HS21071204-01	7/28/2021	9:11 PM	23.83	-1.00	6.96	.00	1,141.17	1,141.17	.00	.00	.00	10.87	10.87
HS21071204-03	7/28/2021	9:24 PM	23.73	-1.00	5.19	.00	1,575.39	1,575.39	.00	.00	.00	15.00	15.00
HS21071204-08	7/28/2021	9:30 PM	23.54	-1.00	6.46	.00	428.66	428.66	.00	.00	.00	4.08	4.08
HS21071271-01	7/28/2021	9:36 PM	23.56	-1.00	7.09	.00	169.95	169.95	.00	.00	.00	1.62	1.62
CCV-PH	7/28/2021	9:39 PM	23.75	-1.00	7.08	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
CCV-ALK	7/28/2021	9:47 PM	23.60	-1.00	10.80	514.69	1,021.02	.00	1,012.66	8.36	4.90	9.72	9.72
DI RINSE	7/28/2021	9:52 PM	23.54	-1.00	5.79	.00	.66	.66	.00	.00	.00	.02	.02
HS21071375-01	7/28/2021	9:57 PM	23.49	-1.00	5.44	.00	.40	.40	.00	.00	.00	.02	.02
HS21071271-02	7/28/2021	10:03 PM	23.54	-1.00	6.25	.00	16.64	16.64	.00	.00	.00	.18	.18
HS21071271-03	7/28/2021	10:10 PM	23.47	-1.00	7.57	.00	342.66	342.66	.00	.00	.00	3.26	3.26
HS21071271-04	7/28/2021	10:16 PM	23.46	-1.00	7.31	.00	230.02	230.02	.00	.00	.00	2.19	2.19
HS21071128-02	7/28/2021	10:23 PM	23.49	-1.00	7.62	.00	253.97	253.97	.00	.00	.00	2.42	2.42
HS21071128-03	7/28/2021	10:30 PM	23.52	-1.00	7.69	.00	511.17	511.17	.00	.00	.00	4.87	4.87
HS21071128-04	7/28/2021	10:37 PM	23.57	-1.00	8.04	.00	483.72	483.72	.00	.00	.00	4.61	4.61
HS21071128-05	7/28/2021	10:44 PM	23.44	-1.00	7.84	.00	499.20	499.20	.00	.00	.00	4.75	4.75
HS21071128-06	7/28/2021	10:51 PM	23.36	-1.00	7.79	.00	499.49	499.49	.00	.00	.00	4.76	4.76
CCV-PH	7/28/2021	10:54 PM	23.38	-1.00	7.08	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
CCV-ALK	7/28/2021	11:03 PM	23.33	-1.00	10.79	525.45	1,038.51	.00	1,026.11	12.40	5.00	9.89	9.89
DI RINSE	7/28/2021	11:08 PM	23.83	-1.00	5.91	.00	.99	.99	.00	.00	.00	.02	.02
HS21071128-07	7/28/2021	11:15 PM	23.94	-1.00	7.49	.00	267.92	267.92	.00	.00	.00	2.55	2.55

PC-TitratION PLUS by Man-Tech Associates, Inc.
GENERAL RESULTS REPORT.SRW
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Run Number 4144 **Order Number** 20210728-2

SampleID	RunDate	RunTime	Temp	cond (uS)	pH	palk-ppm	talk-ppm	bcarb-ppm	carb-ppm	hydr-ppm	mLs @ 8.3	mLs @ 4.5	mLs @ 4.2
HS21071128-08	7/28/2021	11:21 PM	23.81	-1.00	7.71	.00	531.64	531.64	.00	.00	.00	5.06	5.06
HS21071128-09	7/28/2021	11:28 PM	23.91	-1.00	7.31	.00	368.03	368.03	.00	.00	.00	3.51	3.51
HS21071213-01	7/28/2021	11:32 PM	23.92	-1.00	4.15	.00	.00	.00	.00	.00	.00	.00	.00
HS21071213-02	7/28/2021	11:37 PM	23.78	-1.00	5.92	.00	62.25	62.25	.00	.00	.00	.59	.59
HS21071212-01DF5	7/28/2021	11:46 PM	23.72	-1.00	10.63	88.68	205.90	28.53	177.37	.00	.84	1.96	1.96
WLCS2-210728	7/28/2021	11:56 PM	23.62	-1.00	11.15	541.42	1,057.57	.00	1,032.30	25.27	5.16	10.07	10.07
WLCSD2-210728	7/29/2021	12:06 AM	23.47	-1.00	11.01	515.53	1,028.88	.00	1,026.70	2.18	4.91	9.80	9.80
CCV-PH	7/29/2021	12:09 AM	23.49	-1.00	7.16	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
CCVALK	7/29/2021	12:18 AM	23.44	-1.00	10.92	516.74	1,051.02	17.55	1,033.48	.00	4.92	10.01	10.01
DI RINSE	7/29/2021	12:24 AM	23.62	-1.00	6.41	.00	.84	.84	.00	.00	.00	.04	.04
WBLKW2-210728	7/29/2021	12:30 AM	23.70	-1.00	5.85	.00	.47	.47	.00	.00	.00	.03	.03
HS21071049-17	7/29/2021	12:37 AM	23.60	-1.00	8.04	.00	55.33	55.33	.00	.00	.00	.53	.53
HS21071049-17DUP	7/29/2021	12:44 AM	23.56	-1.00	8.03	.00	54.08	54.08	.00	.00	.00	.52	.52
HS21071049-16	7/29/2021	12:51 AM	23.52	-1.00	8.02	.00	106.34	106.34	.00	.00	.00	1.01	1.01
HS21071049-18	7/29/2021	12:58 AM	23.91	-1.00	7.98	.00	481.71	481.71	.00	.00	.00	4.59	4.59
HS21071049-19	7/29/2021	1:05 AM	24.09	-1.00	7.82	.00	684.67	684.67	.00	.00	.00	6.52	6.52
HS21071049-20	7/29/2021	1:12 AM	23.91	-1.00	7.94	.00	243.41	243.41	.00	.00	.00	2.32	2.32
HS21071128-10	7/29/2021	1:18 AM	23.81	-1.00	8.15	.00	256.62	256.62	.00	.00	.00	2.44	2.44
HS21071128-11	7/29/2021	1:25 AM	23.92	-1.00	8.15	.00	245.48	245.48	.00	.00	.00	2.34	2.34
HS21071183-02	7/29/2021	1:33 AM	23.73	-1.00	7.77	.00	360.89	360.89	.00	.00	.00	3.44	3.44
CCV-PH	7/29/2021	1:36 AM	23.64	-1.00	7.09	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
CCV-ALK	7/29/2021	1:44 AM	23.51	-1.00	10.76	505.12	1,023.21	12.97	1,010.24	.00	4.81	9.74	9.74
DI RINSE	7/29/2021	1:50 AM	23.56	-1.00	6.00	.00	.94	.94	.00	.00	.00	.03	.03
HS21071183-08	7/29/2021	1:56 AM	23.46	-1.00	7.69	.00	449.72	449.72	.00	.00	.00	4.28	4.28
HS21071183-10	7/29/2021	2:03 AM	23.46	-1.00	7.28	.00	447.12	447.12	.00	.00	.00	4.26	4.26
HS21071183-12	7/29/2021	2:09 AM	23.88	-1.00	7.96	.00	250.83	250.83	.00	.00	.00	2.39	2.39
HS21071183-13	7/29/2021	2:17 AM	24.09	-1.00	7.82	.00	649.97	649.97	.00	.00	.00	6.19	6.19
HS21071183-14	7/29/2021	2:24 AM	24.02	-1.00	7.80	.00	416.24	416.24	.00	.00	.00	3.96	3.96
HS21071183-15	7/29/2021	2:31 AM	23.81	-1.00	7.52	.00	489.20	489.20	.00	.00	.00	4.66	4.66
HS21071183-16	7/29/2021	2:37 AM	23.65	-1.00	7.79	.00	481.87	481.87	.00	.00	.00	4.59	4.59

NSL TH 7-26

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Run Number 4144 **Order Number** 20210728-2

SampleID	RunDate	RunTime	Temp	cond (uS)	pH	palk-ppm	talk-ppm	bcarb-ppm	carb-ppm	hydr-ppm	mLs @ 8.3	mLs @ 4.5	mLs @ 4.2
HS21071240-02	7/29/2021	2:44 AM	23.54	-1.00	8.72	54.28	462.14	353.58	108.56	.00	52	4.40	4.40
HS21071240-03	7/29/2021	2:51 AM	23.39	-1.00	8.85	76.85	540.76	387.05	153.71	.00	73	5.15	5.15
CCV-PH	7/29/2021	2:54 AM	23.68	-1.00	7.08	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
CCV-ALK	7/29/2021	3:02 AM	23.73	-1.00	10.74	500.72	1,024.71	23.27	1,001.44	.00	4.77	9.76	9.76
DI RINSE	7/29/2021	3:08 AM	24.10	-1.00	5.99	.00	.95	.95	.00	.00	00	.03	.03
HS21071240-04	7/29/2021	3:15 AM	24.12	-1.00	8.34	2.09	216.16	211.98	4.18	.00	02	2.06	2.06
HS21071240-05	7/29/2021	3:21 AM	23.88	-1.00	7.76	.00	256.38	256.38	.00	.00	00	2.44	2.44
HS21071240-06	7/29/2021	3:29 AM	23.60	-1.00	8.27	.00	594.15	594.15	.00	.00	00	5.66	5.66
LCS3-210728	7/29/2021	3:38 AM	23.41	-1.00	10.79	524.13	1,045.65	.00	1,043.03	2.62	4.99	9.96	9.96
LCSD3-210728	7/29/2021	3:48 AM	23.88	-1.00	10.75	502.47	1,032.59	27.65	1,004.94	.00	4.79	9.83	9.83
HS21071240-01	7/29/2021	3:55 AM	24.09	-1.00	7.93	.00	460.33	460.33	.00	.00	00	4.38	4.38
HS21071240-01DUP	7/29/2021	4:02 AM	23.99	-1.00	7.93	.00	472.44	472.44	.00	.00	00	4.50	4.50
HS21071240-07	7/29/2021	4:10 AM	23.86	-1.00	8.24	.00	624.94	624.94	.00	.00	00	5.95	5.95
HS21071240-08	7/29/2021	4:17 AM	23.72	-1.00	8.15	.00	673.72	673.72	.00	.00	00	6.42	6.42
CCV-PH	7/29/2021	4:20 AM	23.70	-1.00	7.08	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
CCV-ALK	7/29/2021	4:29 AM	23.56	-1.00	10.72	495.83	1,022.28	30.61	991.67	.00	4.72	9.74	9.74
DI RINSE	7/29/2021	4:34 AM	23.56	-1.00	5.97	.00	1.00	1.00	.00	.00	00	.03	.03
WBLKW3-210728	7/29/2021	4:39 AM	23.81	-1.00	5.55	.00	.55	.55	.00	.00	00	.02	.02
HS21071240-09	7/29/2021	4:47 AM	23.99	-1.00	8.74	64.20	634.17	505.76	128.41	.00	61	6.04	6.04
HS21071240-10	7/29/2021	4:54 AM	24.19	-1.00	8.10	.00	576.20	576.20	.00	.00	00	5.49	5.49
HS21071240-11	7/29/2021	5:01 AM	23.96	-1.00	8.10	.00	537.22	537.22	.00	.00	00	5.12	5.12
HS21071240-12	7/29/2021	5:08 AM	23.75	-1.00	8.46	15.97	453.22	421.29	31.94	.00	15	4.32	4.32
HS21071240-13	7/29/2021	5:15 AM	23.89	-1.00	8.22	.00	405.04	405.04	.00	.00	00	3.86	3.86
HS21071240-14	7/29/2021	5:22 AM	23.59	-1.00	8.85	76.27	533.55	381.00	152.54	.00	73	5.08	5.08
HS21071240-15	7/29/2021	5:29 AM	23.75	-1.00	8.23	.00	406.33	406.33	.00	.00	00	3.87	3.87
HS21071240-16	7/29/2021	5:37 AM	23.97	-1.00	8.17	.00	443.56	443.56	.00	.00	00	4.22	4.22
CCV-PH	7/29/2021	5:40 AM	24.09	-1.00	7.09	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
CCV-ALK	7/29/2021	5:48 AM	24.09	-1.00	10.70	495.78	1,034.01	42.45	991.56	.00	4.72	9.85	9.85
DI RINSE	7/29/2021	5:53 AM	24.49	-1.00	5.94	.00	.87	.87	.00	.00	00	.03	.03
HS21071240-17	7/29/2021	6:01 AM	24.49	-1.00	8.21	.00	339.38	339.38	.00	.00	00	3.23	3.23

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Run Number 4144 **Order Number** 20210728-2

SampleID	RunDate	RunTime	Temp	cond (uS)	pH	palk-ppm	talk-ppm	bcarb-ppm	carb-ppm	hydr-ppm	mLs @ 8.3	mLs @ 4.5	mLs @ 4.2
HS21071240-18	7/29/2021	6:07 AM	24.64	-1.00	8.62	28.91	331.61	273.79	57.82	.00	.28	3.16	3.16
HS21071240-19	7/29/2021	6:22 AM	24.80	-1.00	7.07	.00	2,591.41	2,591.41	.00	.00	.00	24.68	24.68
HS21071240-20	7/29/2021	6:29 AM	25.11	-1.00	8.12	.00	389.07	389.07	.00	.00	.00	3.71	3.71
HS21071240-21	7/29/2021	6:36 AM	25.02	-1.00	9.26	73.13	305.83	159.57	146.26	.00	.70	2.91	2.91
HS21071240-22	7/29/2021	6:43 AM	25.07	-1.00	8.17	.00	567.36	567.36	.00	.00	.00	5.40	5.40
HS21071240-23	7/29/2021	6:51 AM	25.11	-1.00	8.16	.00	650.66	650.66	.00	.00	.00	6.20	6.20
HS21071240-24	7/29/2021	6:59 AM	25.18	-1.00	8.19	.00	610.42	610.42	.00	.00	.00	5.81	5.81
CCV-PH	7/29/2021	7:02 AM	25.13	-1.00	7.09	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
CCV-ALK	7/29/2021	7:11 AM	25.02	-1.00	10.65	484.85	1,026.35	56.66	969.69	.00	4.62	9.77	9.77
DI RINSE	7/29/2021	7:16 AM	25.60	-1.00	5.96	.00	1.30	1.30	.00	.00	.00	.03	.03

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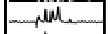
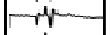
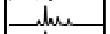
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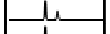
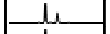
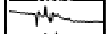
HS21071204 WETCHEM IC

ALS WO# HS21071204

Sequence: 072321-
Last Update Operator: alshs.nouser

CD	Name	Comment	Type	Position	Dilution	Level	Instrument Method	Processing Method
	STD1		Calibration	RE1	1.00	1	Anions Program ISO37mM 150mm short 0.4	Anions Processing Method ISO
	STD2		Calibration	RE2	1.00	2	Anions Program ISO37mM 150mm short 0.4	Anions Processing Method ISO
	STD3		Calibration	RE3	1.00	3	Anions Program ISO37mM 150mm short 0.4	Anions Processing Method ISO
	STD4		Calibration	RE4	1.00	4	Anions Program ISO37mM 150mm short 0.4	Anions Processing Method ISO
	STD5		Calibration	RE5	1.00	5	Anions Program ISO37mM 150mm short 0.4	Anions Processing Method ISO
	STD6		Calibration	RE6	1.00	6	Anions Program ISO37mM 150mm short 0.4	Anions Processing Method ISO
	ICV		Unknown	RE7	1.00		Anions Program ISO37mM 150mm short 0.4	Anions Processing Method ISO
	ICB		Unknown	RE8	1.00		Anions Program ISO37mM 150mm short 0.4	Anions Processing Method ISO
	CCV		Unknown	R2	1.00		Anions Program ISO37mM 150mm short 0.4	Anions Processing Method ISO
	CCB		Unknown	R4	1.00		Anions Program ISO37mM 150mm short 0.4	Anions Processing Method ISO
	MBLK		Unknown	R5	1.00		Anions Program ISO37mM 150mm short 0.4	Anions Processing Method ISO
	LCS		Unknown	R2	1.00		Anions Program ISO37mM 150mm short 0.4	Anions Processing Method ISO
	HS21071183-13		Unknown	GA5	1.00		Anions Program ISO37mM 150mm short 0.4	Anions Processing Method ISO
	HS21071183-13MS		Unknown	GA6	1.00		Anions Program ISO37mM 150mm short 0.4	Anions Processing Method ISO
	HS21071183-13MSD		Unknown	GA7	1.00		Anions Program ISO37mM 150mm short 0.4	Anions Processing Method ISO
	CCV1		Unknown	R3	1.00		Anions Program ISO37mM 150mm short 0.4	Anions Processing Method ISO
	CCB		Unknown	R6	1.00		Anions Program ISO37mM 150mm short 0.4	Anions Processing Method ISO
	HS21071204-01DF5		Unknown	GB3	5.00		Anions Program ISO37mM 150mm short 0.4	Anions Processing Method ISO
	HS21071204-02DF5		Unknown	GB4	5.00		Anions Program ISO37mM 150mm short 0.4	Anions Processing Method ISO
	HS21071204-02MSDF5		Unknown	GB5	5.00		Anions Program ISO37mM 150mm short 0.4	Anions Processing Method ISO
	HS21071204-02MSDDF5		Unknown	GB6	5.00		Anions Program ISO37mM 150mm short 0.4	Anions Processing Method ISO
	HS21071204-03DF5		Unknown	GB7	5.00		Anions Program ISO37mM 150mm short 0.4	Anions Processing Method ISO
	HS21071204-08DF5		Unknown	GB8	5.00		Anions Program ISO37mM 150mm short 0.4	Anions Processing Method ISO
	CCV		Unknown	R1	1.00		Anions Program ISO37mM 150mm short 0.4	Anions Processing Method ISO
	CCB		Unknown	R4	1.00		Anions Program ISO37mM 150mm short 0.4	Anions Processing Method ISO

Sequence: 072321-
Last Update Operator: alshs.nouser

CD	Name	Volume	Status	Inject Time
	STD1	5.0	Finished	6/26/2021 7:08:27 AM -05:00
	STD2	5.0	Finished	6/26/2021 7:15:51 AM -05:00
	STD3	5.0	Finished	6/26/2021 7:23:13 AM -05:00
	STD4	5.0	Finished	6/26/2021 7:30:36 AM -05:00
	STD5	5.0	Finished	6/26/2021 7:38:00 AM -05:00
	STD6	5.0	Finished	6/26/2021 7:45:22 AM -05:00
	ICV	5.0	Finished	6/26/2021 7:52:45 AM -05:00
	ICB	5.0	Finished	6/26/2021 8:07:30 AM -05:00
	CCV	5.0	Finished	7/23/2021 11:50:17 AM -05:00
	CCB	5.0	Finished	7/23/2021 11:57:41 AM -05:00
	MBLK	5.0	Finished	7/23/2021 12:05:05 PM -05:00
	LCS	5.0	Finished	7/23/2021 12:12:29 PM -05:00
	HS21071183-13	5.0	Finished	7/23/2021 1:02:10 PM -05:00
	HS21071183-13MS	5.0	Finished	7/23/2021 1:10:30 PM -05:00
	HS21071183-13MSD	5.0	Finished	7/23/2021 1:18:52 PM -05:00
	CCV1	5.0	Finished	7/23/2021 1:35:36 PM -05:00
	CCB	5.0	Finished	7/23/2021 1:43:55 PM -05:00
	HS21071204-01DF5	5.0	Finished	7/23/2021 2:08:03 PM -05:00
	HS21071204-02DF5	5.0	Finished	7/23/2021 2:15:31 PM -05:00
	HS21071204-02MSDF5	5.0	Finished	7/23/2021 2:22:58 PM -05:00
	HS21071204-02MSDDF5	5.0	Finished	7/23/2021 2:30:22 PM -05:00
	HS21071204-03DF5	5.0	Finished	7/23/2021 2:37:46 PM -05:00
	HS21071204-08DF5	5.0	Finished	7/23/2021 2:45:11 PM -05:00
	CCV	5.0	Finished	7/23/2021 3:00:01 PM -05:00
	CCB	5.0	Finished	7/23/2021 3:07:26 PM -05:00

Sequence: 072321-
Injection #6: STD6

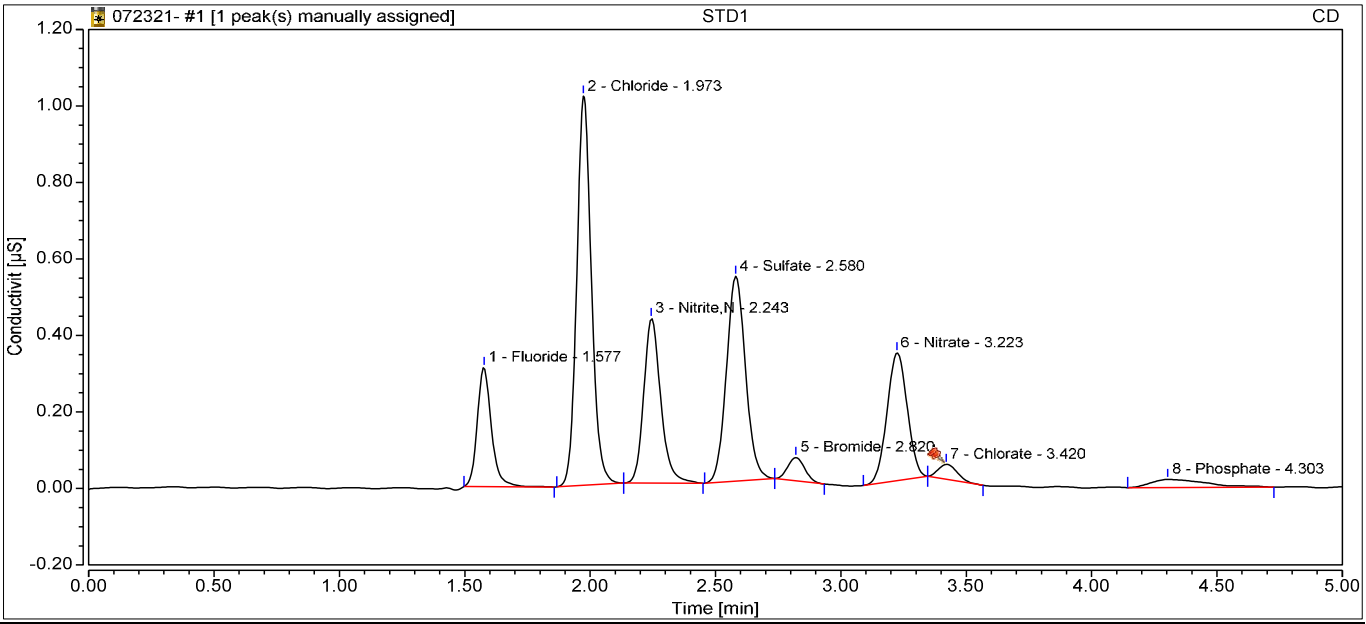
Calibration

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*	*20.2589*	*0.99769*	*0.0030*	*0.2038*	*0.0000*
2	Chloride	Lin, WithOffset, 1/	Area	6	3.8673	0.99992	0.0009	0.1330	0.0000
3	Nitrite,N	Quad, WithOffset,	Area	6	5.7709	0.99983	0.0054	0.2948	-0.0029
4	Sulfate	Lin, WithOffset, 1/	Area	6	4.1076	0.99991	-0.0020	0.0963	0.0000
5	Bromide	Lin, WithOffset, 1/	Area	6	10.7478	0.99944	-0.0010	0.0519	0.0000
6	Nitrate	Lin, WithOffset, 1/	Area	6	4.3880	0.99990	0.0007	0.3035	0.0000
7	Chlorate	Quad, WithOffset,	Area	6	4.0947	0.99992	-0.0001	0.0348	-0.0004
8	Phosphate	Lin, WithOffset, 1/	Area	6	27.9718	0.99729	-0.0098	0.1152	0.0000
Maximum					**27.9718**	0.99992			
Minimum					3.8673	**0.99729**			

1 STD1

Sample Name:	**STD1**	*Injection Volume:*	**5.00**
Vial Number:	**RE1**	*Channel:*	**CD**
Sample Type:	**Calibration Standard**	*Wavelength:*	**210**
Control Program:	**Anions Program ISO37mM 150mm short 0.4**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method ISO**	*Dilution Factor:*	**1.0000**
Recording Time:	**06/26/2021 07:08**	*Sample Weight:*	**1.0000**

Run Time:



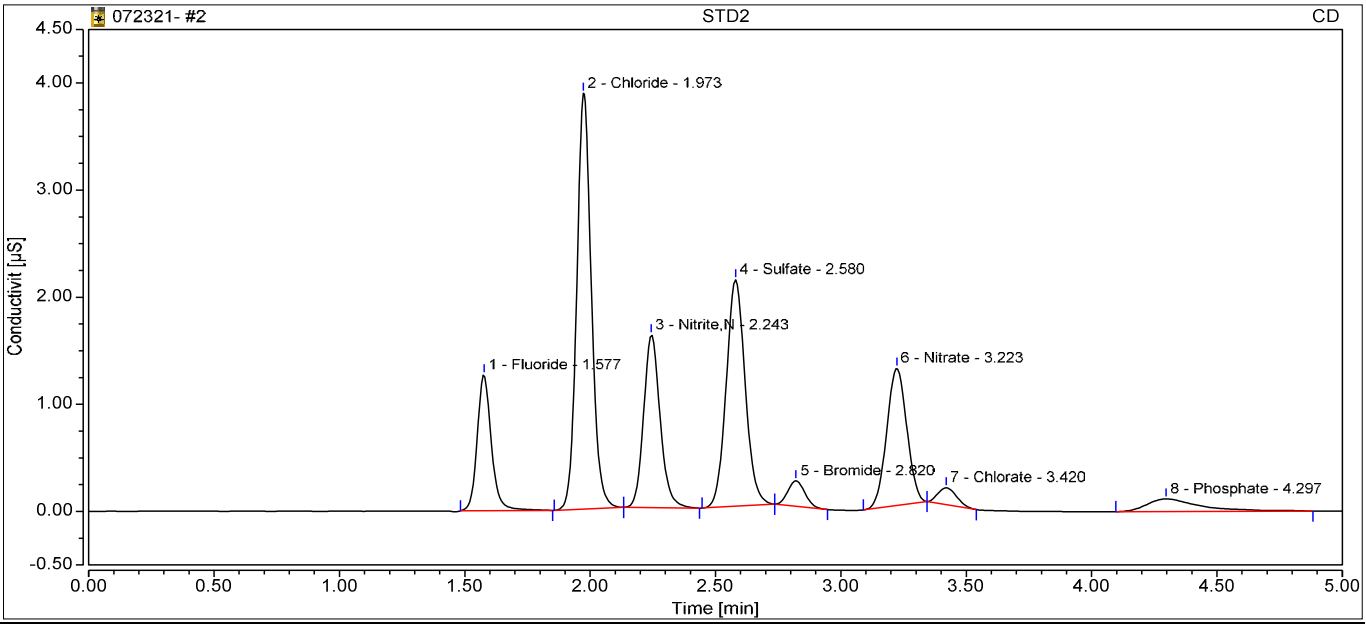
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	1.58	Fluoride	BMB	0.020	0.0853	0.0853	1.0000
2	1.97	Chloride	BMB	0.069	0.5112	0.5112	1.0000
3	2.24	Nitrite,N	BMB	0.034	0.0972	0.0972	1.0000
4	2.58	Sulfate	BMB	0.047	0.5123	0.5123	1.0000
5	2.82	Bromide	BMB	0.005	0.1111	0.1111	1.0000
6	3.22	Nitrate	BMB	0.031	0.1006	0.1006	1.0000
7	3.42	Chlorate	BMB^	0.003	0.1002	0.1002	1.0000
8	4.30	Phosphate	BMB	0.005	0.1325	0.1325	1.0000
Total:			**0.000**	**0.216**		**1.65**	

2 STD2

Sample Name:	**STD2**	*Injection Volume:*	**5.00**
Vial Number:	**RE2**	*Channel:*	**CD**
Sample Type:	**Calibration Standard**	*Wavelength:*	**210**
Control Program:	**Anions Program ISO37mM 150mm short 0.4**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method ISO**	*Dilution Factor:*	**1.0000**
Recording Time:	**06/26/2021 07:15**	*Sample Weight:*	**1.0000**

Run Time:



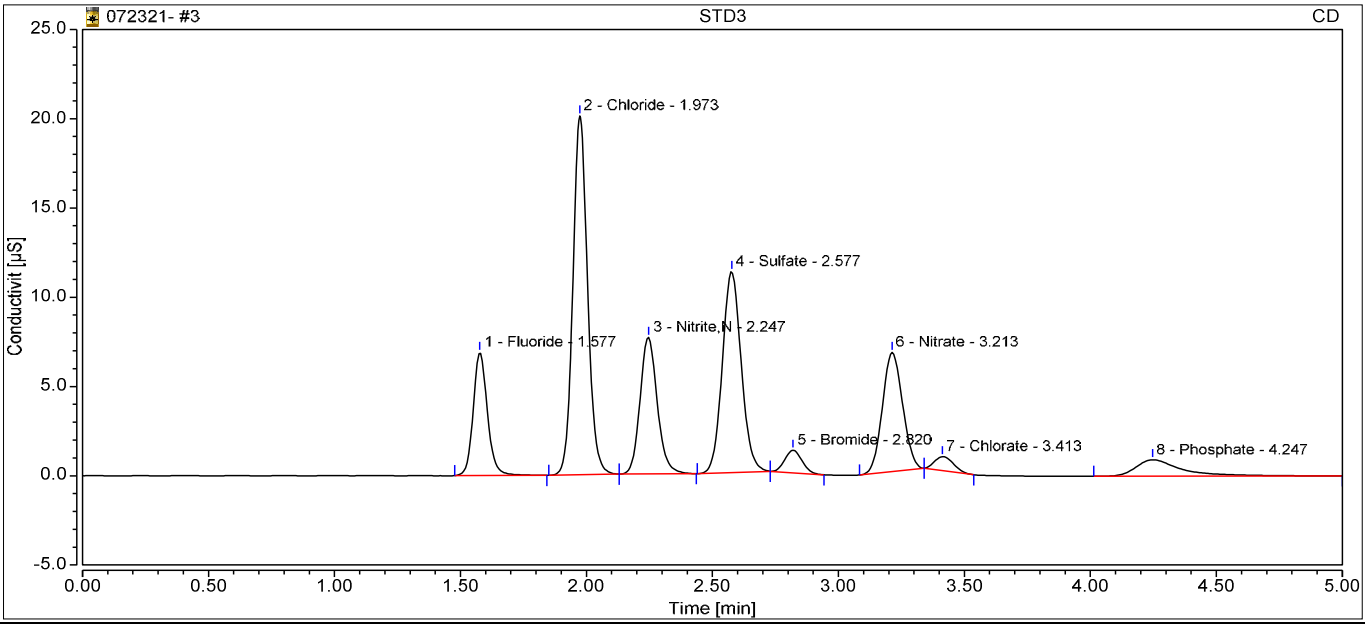
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	1.58	Fluoride	BMB	0.083	0.3949	0.3949	1.0000
2	1.97	Chloride	BMB	0.262	1.9605	1.9605	1.0000
3	2.24	Nitrite,N	BMB	0.123	0.4013	0.4013	1.0000
4	2.58	Sulfate	BMB	0.185	1.9450	1.9450	1.0000
5	2.82	Bromide	BMB	0.019	0.3820	0.3820	1.0000
6	3.22	Nitrate	BMB	0.119	0.3898	0.3898	1.0000
7	3.42	Chlorate	BMB	0.014	0.3985	0.3985	1.0000
8	4.30	Phosphate	BMB	0.029	0.3369	0.3369	1.0000
Total:			**0.000**	**0.834**		**6.21**	

3 STD3

Sample Name:	**STD3**	*Injection Volume:*	**5.00**
Vial Number:	**RE3**	*Channel:*	**CD**
Sample Type:	**Calibration Standard**	*Wavelength:*	**210**
Control Program:	**Anions Program ISO37mM 150mm short 0.4**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method ISO**	*Dilution Factor:*	**1.0000**
Recording Time:	**06/26/2021 07:23**	*Sample Weight:*	**1.0000**

Run Time:



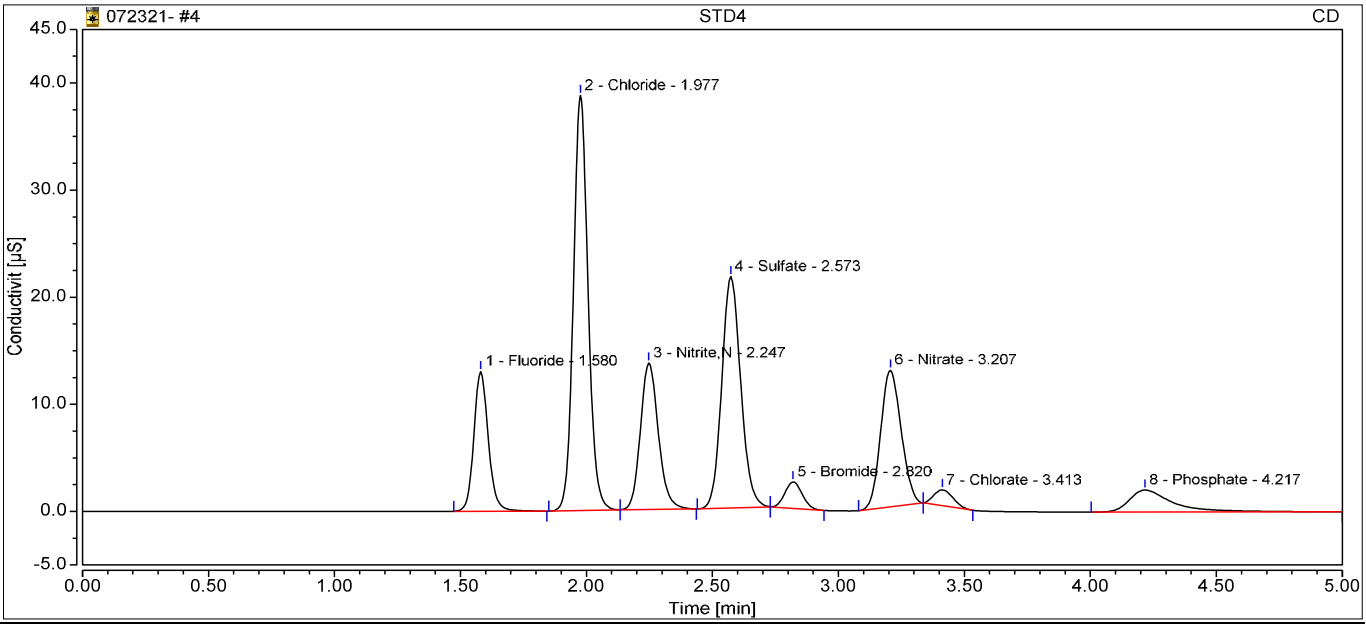
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	1.58	Fluoride	BMB	0.452	2.2036	2.2036	1.0000
2	1.97	Chloride	BMB	1.352	10.1565	10.1565	1.0000
3	2.25	Nitrite,N	BMB	0.607	2.0827	2.0827	1.0000
4	2.58	Sulfate	BMB	0.981	10.1974	10.1974	1.0000
5	2.82	Bromide	BMB	0.100	1.9471	1.9471	1.0000
6	3.21	Nitrate	BMB	0.622	2.0467	2.0467	1.0000
7	3.41	Chlorate	BMB	0.069	2.0284	2.0284	1.0000
8	4.25	Phosphate	BMB	0.195	1.7750	1.7750	1.0000
Total:			**0.000**	**4.377**		**32.44**	

4 STD4

Sample Name:	**STD4**	*Injection Volume:*	**5.00**
Vial Number:	**RE4**	*Channel:*	**CD**
Sample Type:	**Calibration Standard**	*Wavelength:*	**210**
Control Program:	**Anions Program ISO37mM 150mm short 0.4**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method ISO**	*Dilution Factor:*	**1.0000**
Recording Time:	**06/26/2021 07:30**	*Sample Weight:*	**1.0000**

Run Time:



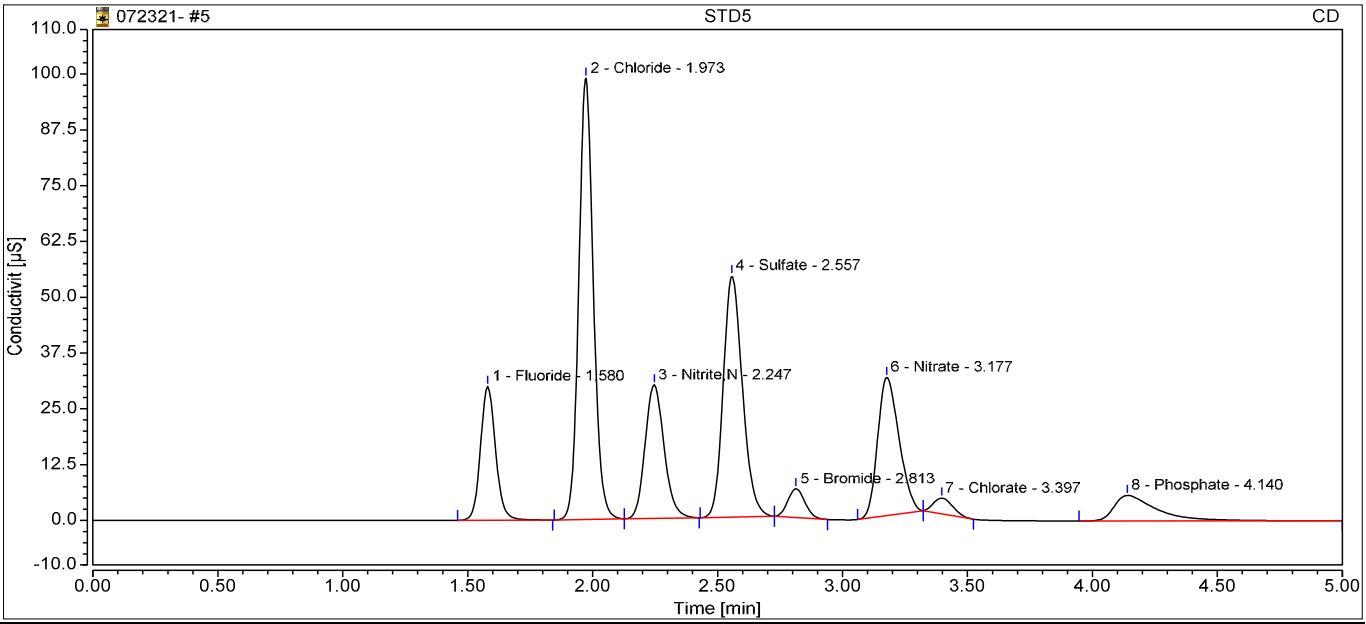
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	1.58	Fluoride	BMB	0.870	4.2518	4.2518	1.0000
2	1.98	Chloride	BMB	2.605	19.5725	19.5725	1.0000
3	2.25	Nitrite,N	BMB	1.127	3.9598	3.9598	1.0000
4	2.57	Sulfate	BMB	1.885	19.5851	19.5851	1.0000
5	2.82	Bromide	BMB	0.196	3.8021	3.8021	1.0000
6	3.21	Nitrate	BMB	1.203	3.9629	3.9629	1.0000
7	3.41	Chlorate	BMB	0.131	3.9255	3.9255	1.0000
8	4.22	Phosphate	BMB	0.412	3.6656	3.6656	1.0000
Total:			**0.000**	**8.430**		**62.73**	

5 STD5

Sample Name:	**STD5**	*Injection Volume:*	**5.00**
Vial Number:	**RE5**	*Channel:*	**CD**
Sample Type:	**Calibration Standard**	*Wavelength:*	**210**
Control Program:	**Anions Program ISO37mM 150mm short 0.4**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method ISO**	*Dilution Factor:*	**1.0000**
Recording Time:	**06/26/2021 07:38**	*Sample Weight:*	**1.0000**

Run Time:



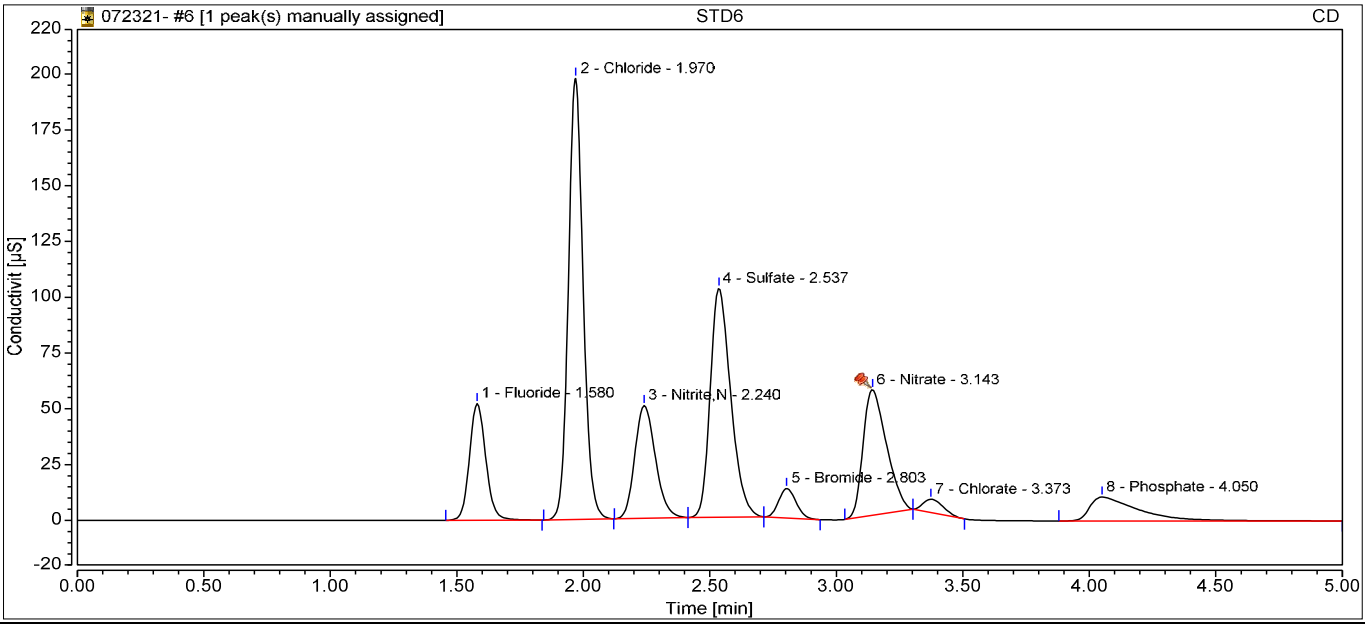
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	1.58	Fluoride	BMB	2.108	10.3258	10.3258	1.0000
2	1.97	Chloride	BMB	6.654	50.0065	50.0065	1.0000
3	2.25	Nitrite,N	BMB	2.641	9.8998	9.8998	1.0000
4	2.56	Sulfate	BMB	4.828	50.1320	50.1320	1.0000
5	2.81	Bromide	BMB	0.514	9.9325	9.9325	1.0000
6	3.18	Nitrate	BMB	3.068	10.1091	10.1091	1.0000
7	3.40	Chlorate	BMB	0.315	10.0792	10.0792	1.0000
8	4.14	Phosphate	BMB	1.140	9.9878	9.9878	1.0000
Total:			**0.000**	**21.269**		**160.47**	

6 STD6

Sample Name:	**STD6**	*Injection Volume:*	**5.00**
Vial Number:	**RE6**	*Channel:*	**CD**
Sample Type:	**Calibration Standard**	*Wavelength:*	**210**
Control Program:	**Anions Program ISO37mM 150mm short 0.4**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method ISO**	*Dilution Factor:*	**1.0000**
Recording Time:	**06/26/2021 07:45**	*Sample Weight:*	**1.0000**

Run Time:



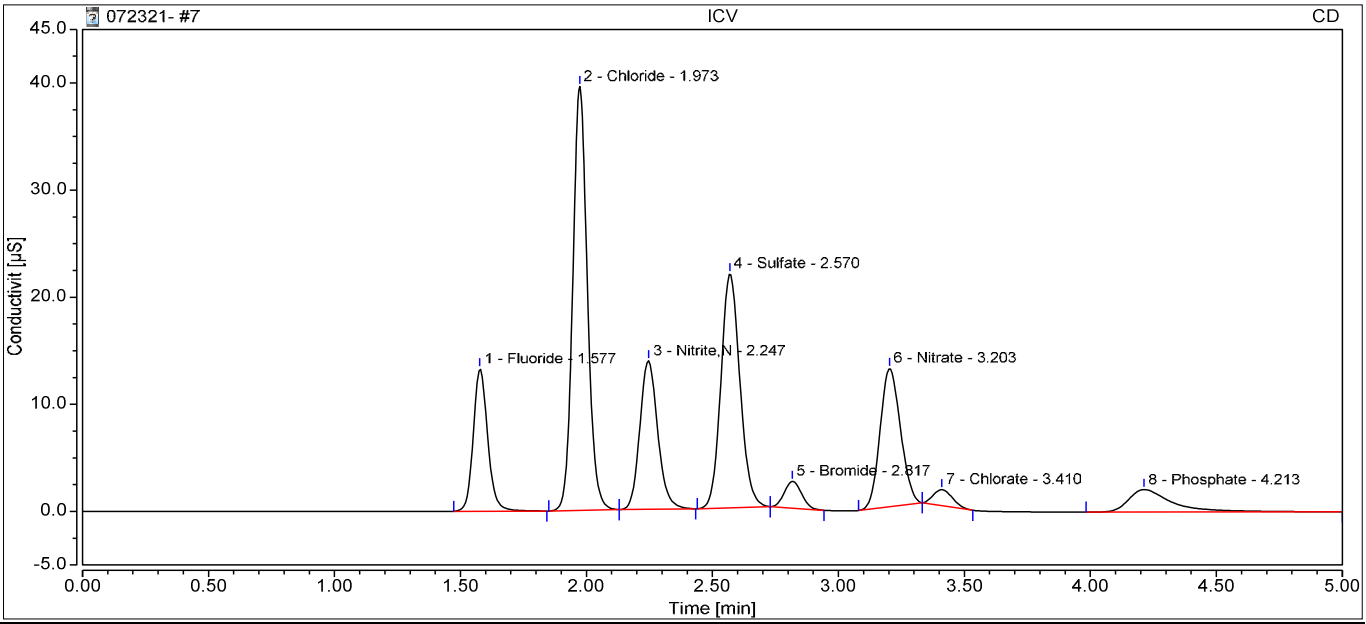
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	1.58	Fluoride	BMB	3.925	19.2385	19.2385	1.0000
2	1.97	Chloride	BMB	13.344	100.2928	100.2928	1.0000
3	2.24	Nitrite,N	BMB	4.761	20.0654	20.0654	1.0000
4	2.54	Sulfate	BMB	9.645	100.1282	100.1282	1.0000
5	2.80	Bromide	BMB	1.053	20.3252	20.3252	1.0000
6	3.14	Nitrate	BMB^	6.037	19.8909	19.8909	1.0000
7	3.37	Chlorate	BMB	0.554	19.9655	19.9655	1.0000
8	4.05	Phosphate	BMB	2.363	20.6022	20.6022	1.0000
Total:			**0.000**	**41.682**		**320.51**	

7 ICV

Sample Name:	**ICV**	*Injection Volume:*	**5.00**
Vial Number:	**RE7**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program ISO37mM 150mm short 0.4**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method ISO**	*Dilution Factor:*	**1.0000**
Recording Time:	**06/26/2021 07:52**	*Sample Weight:*	**1.0000**

Run Time:



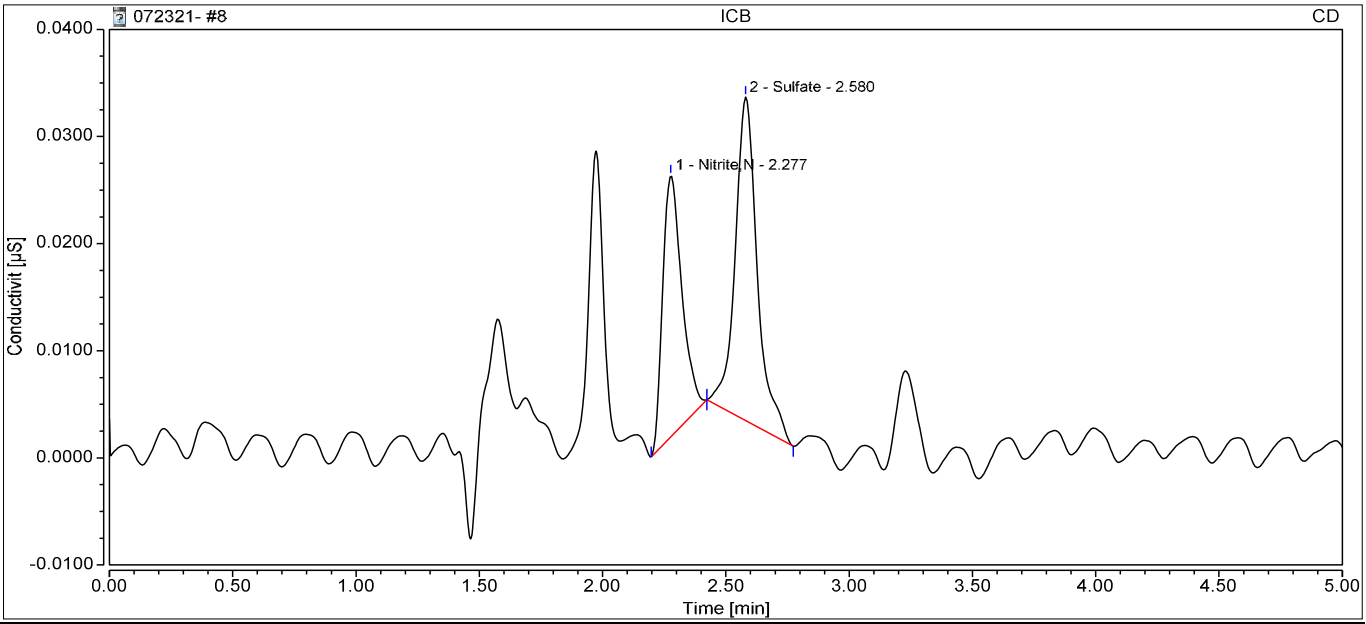
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	1.58	Fluoride	BMB	0.888	4.3392	4.3392	1.0000
2	1.97	Chloride	BMB	2.655	19.9475	19.9475	1.0000
3	2.25	Nitrite,N	BMB	1.144	4.0217	4.0217	1.0000
4	2.57	Sulfate	BMB	1.911	19.8594	19.8594	1.0000
5	2.82	Bromide	BMB	0.200	3.8693	3.8693	1.0000
6	3.20	Nitrate	BMB	1.214	3.9993	3.9993	1.0000
7	3.41	Chlorate	BMB	0.131	3.9285	3.9285	1.0000
8	4.21	Phosphate	BMB	0.422	3.7479	3.7479	1.0000
Total:			**0.000**	**8.565**		**63.71**	

8 ICB

Sample Name:	**ICB**	*Injection Volume:*	**5.00**
Vial Number:	**RE8**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program ISO37mM 150mm short 0.4**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method ISO**	*Dilution Factor:*	**1.0000**
Recording Time:	**06/26/2021 08:07**	*Sample Weight:*	**1.0000**

Run Time:



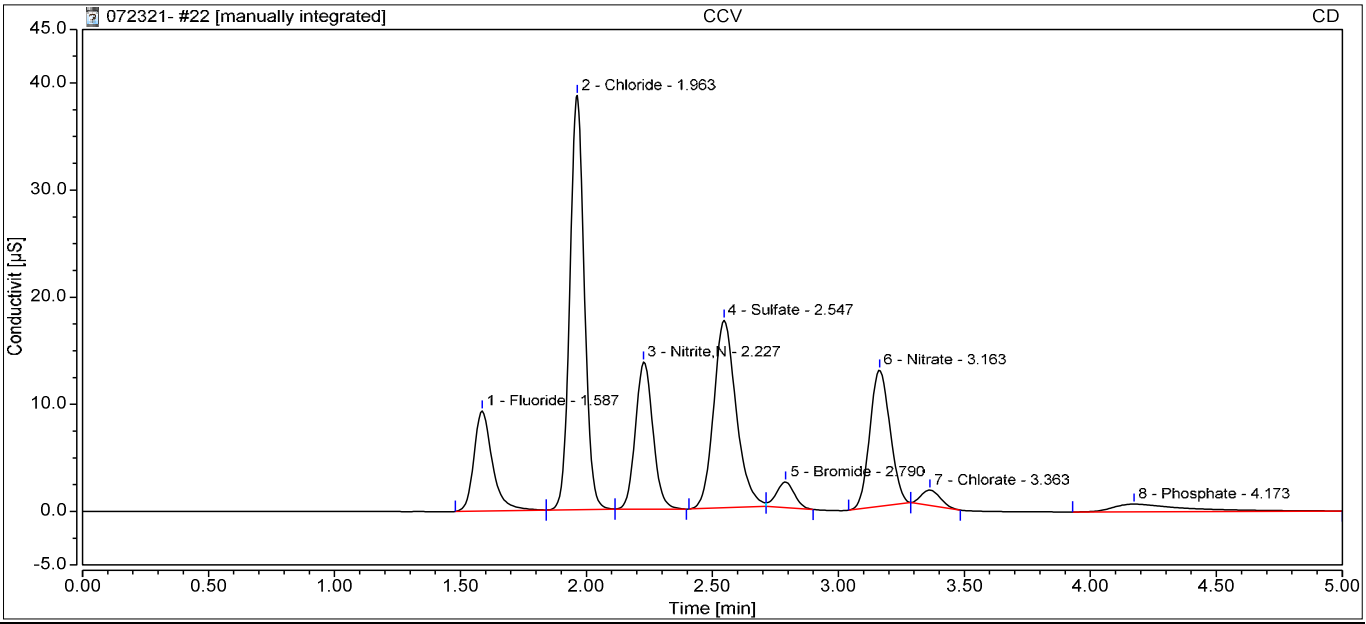
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Chloride	n.a.	n.a.	n.a.	n.a.	1.0000
1	2.28	Nitrite,N	BMB	0.002	n.a.	n.a.	1.0000
2	2.58	Sulfate	BMB	0.003	0.0531	0.0531	1.0000
n.a.	n.a.	Bromide	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**	**0.005**		**0.05**	

22 CCV

Sample Name:	**CCV**	*Injection Volume:*	**5.00**
Vial Number:	**R2**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program ISO37mM 150mm short 0.4**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method ISO**	*Dilution Factor:*	**1.0000**
Recording Time:	**07/23/2021 11:50**	*Sample Weight:*	**1.0000**

Run Time:



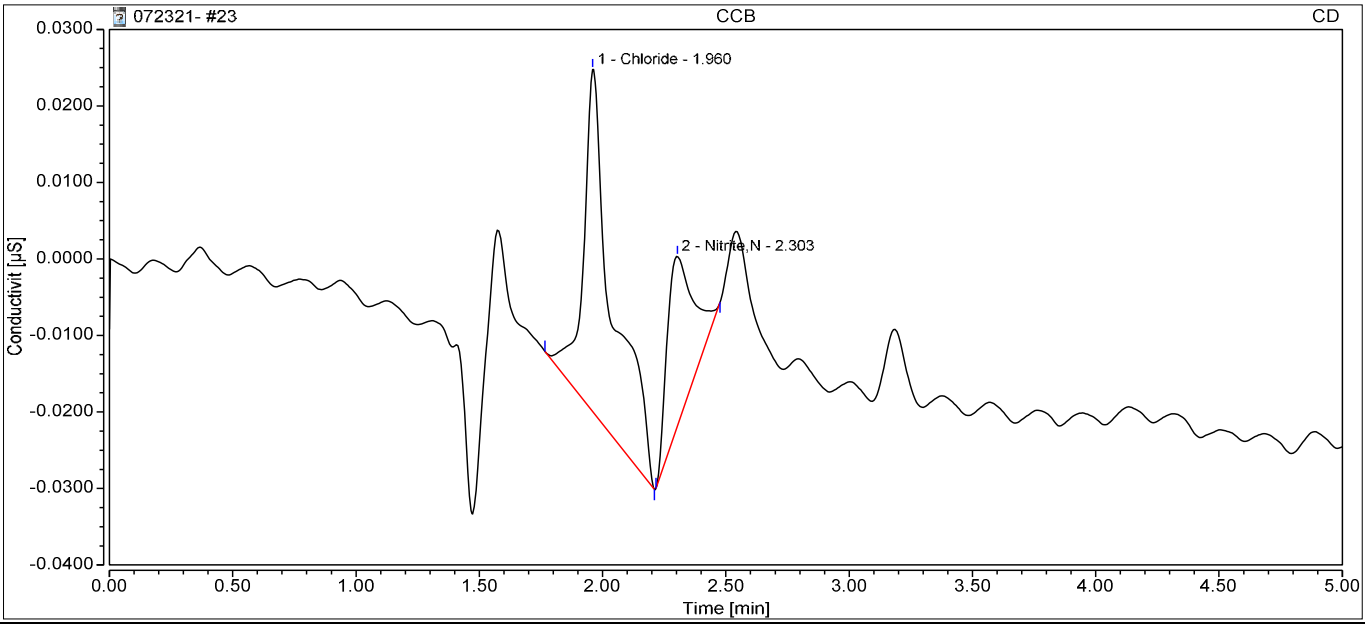
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	1.59	Fluoride	BMB	0.793	3.8774	3.8774	1.0000
2	1.96	Chloride	BMB	2.570	19.3101	19.3101	1.0000
3	2.23	Nitrite,N	BMB	1.105	3.8770	3.8770	1.0000
4	2.55	Sulfate	BM *	1.813	18.8380	18.8380	1.0000
5	2.79	Bromide	MB*	0.197	3.8162	3.8162	1.0000
6	3.16	Nitrate	BMB	1.187	3.9080	3.9080	1.0000
7	3.36	Chlorate	BMB	0.126	3.7674	3.7674	1.0000
8	4.17	Phosphate	BMB	0.238	2.1507	2.1507	1.0000
Total:			**0.000**	**8.029**		**59.54**	

23 CCB

Sample Name:	**CCB**	*Injection Volume:*	**5.00**
Vial Number:	**R4**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program ISO37mM 150mm short 0.4**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method ISO**	*Dilution Factor:*	**1.0000**
Recording Time:	**07/23/2021 11:57**	*Sample Weight:*	**1.0000**

Run Time:



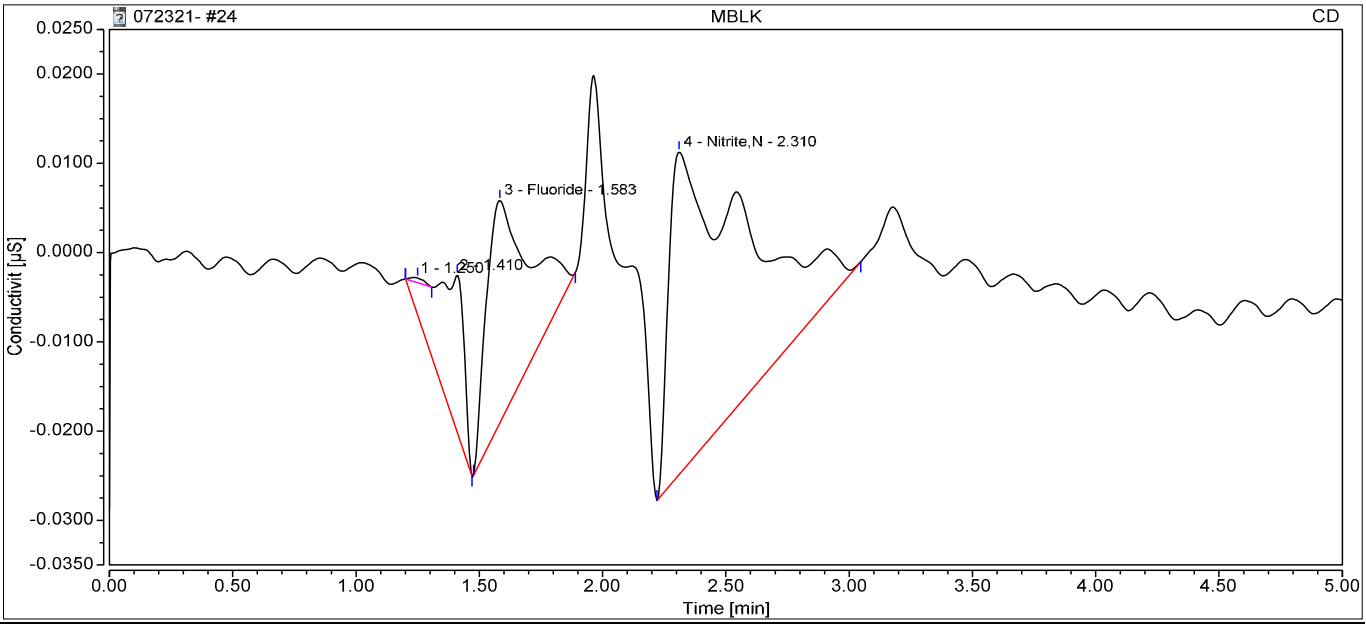
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	1.0000
1	1.96	Chloride	BMB	0.006	0.0388	0.0388	1.0000
2	2.30	Nitrite,N	BMB	0.003	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.	Bromide	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**	**0.009**		**0.04**	

24 MBLK

Sample Name:	**MBLK**	*Injection Volume:*	**5.00**
Vial Number:	**R5**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program ISO37mM 150mm short 0.4**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method ISO**	*Dilution Factor:*	**1.0000**
Recording Time:	**07/23/2021 12:05**	*Sample Weight:*	**1.0000**

Run Time:

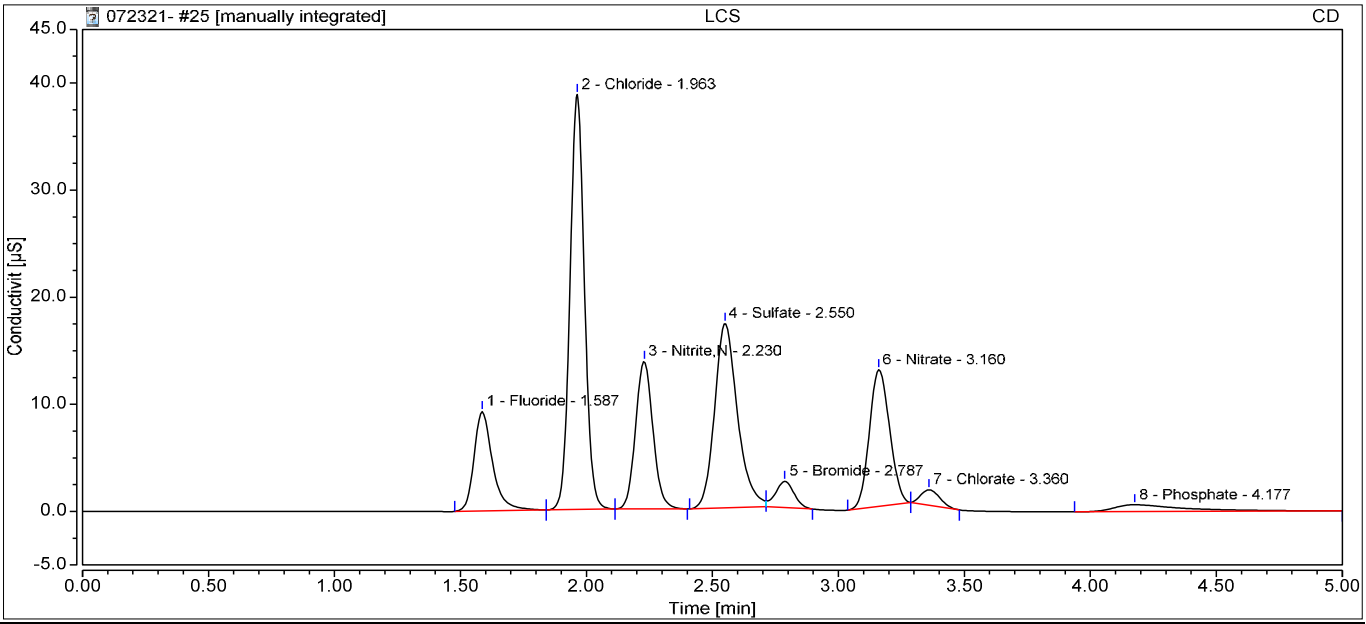


Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
3	1.58	Fluoride	BMB	0.005	0.0090	0.0090	1.0000
n.a.	n.a.	Chloride	n.a.	n.a.	n.a.	n.a.	1.0000
4	2.31	Nitrite,N	BMB	0.012	0.0241	0.0241	1.0000
n.a.	n.a.	Sulfate	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.	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**	**0.017**		**0.03**	

25 LCS			
Sample Name:	**LCS**	*Injection Volume:*	**5.00**
Vial Number:	**R2**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program ISO37mM 150mm short 0.4**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method ISO**	*Dilution Factor:*	**1.0000**
Recording Time:	**07/23/2021 12:12**	*Sample Weight:*	**1.0000**

Run Time:

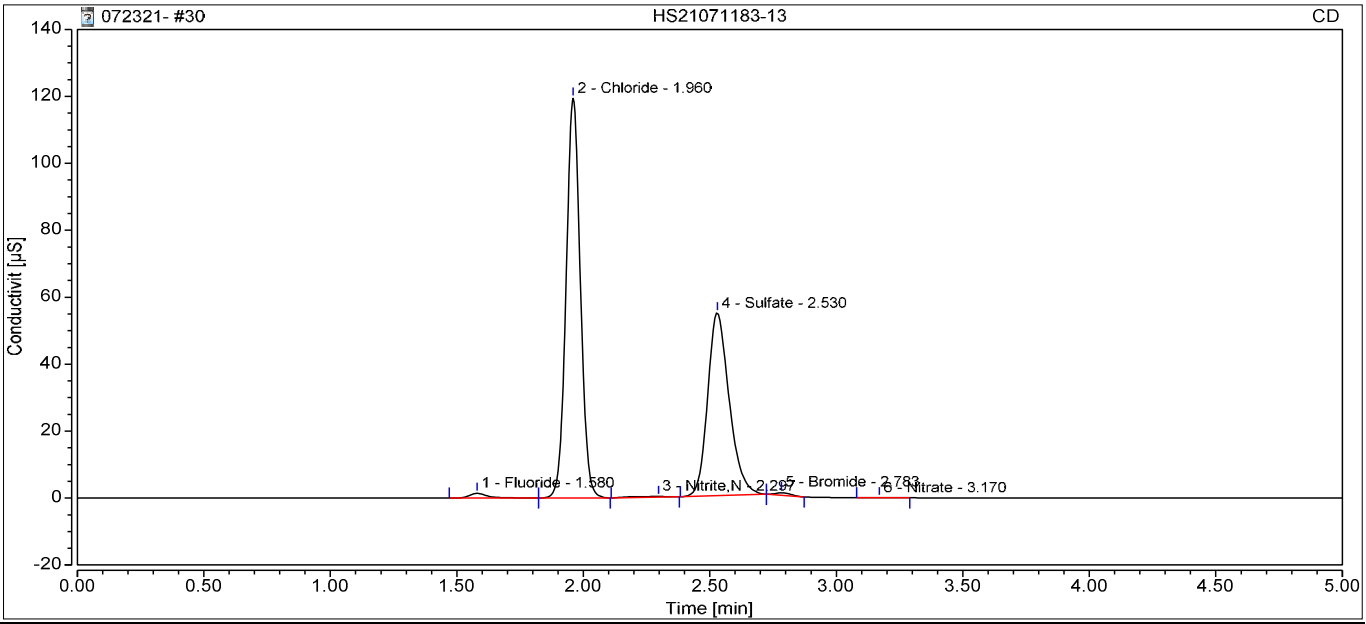


Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	1.59	Fluoride	BMB	0.793	3.8757	3.8757	1.0000
2	1.96	Chloride	BMB	2.576	19.3531	19.3531	1.0000
3	2.23	Nitrite,N	BMB	1.107	3.8843	3.8843	1.0000
4	2.55	Sulfate	BM *	1.809	18.7913	18.7913	1.0000
5	2.79	Bromide	MB*	0.210	4.0654	4.0654	1.0000
6	3.16	Nitrate	BMB	1.187	3.9098	3.9098	1.0000
7	3.36	Chlorate	BMB	0.126	3.7538	3.7538	1.0000
8	4.18	Phosphate	BMB	0.212	1.9282	1.9282	1.0000
Total:			**0.000**	**8.019**		**59.56**	

30	*HS21071183-13*		
Sample Name:	**HS21071183-13**	*Injection Volume:*	**5.00**
Vial Number:	**GA5**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program ISO37mM 150mm short 0.4**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method ISO**	*Dilution Factor:*	**1.0000**
Recording Time:	**07/23/2021 13:02**	*Sample Weight:*	**1.0000**

Run Time:

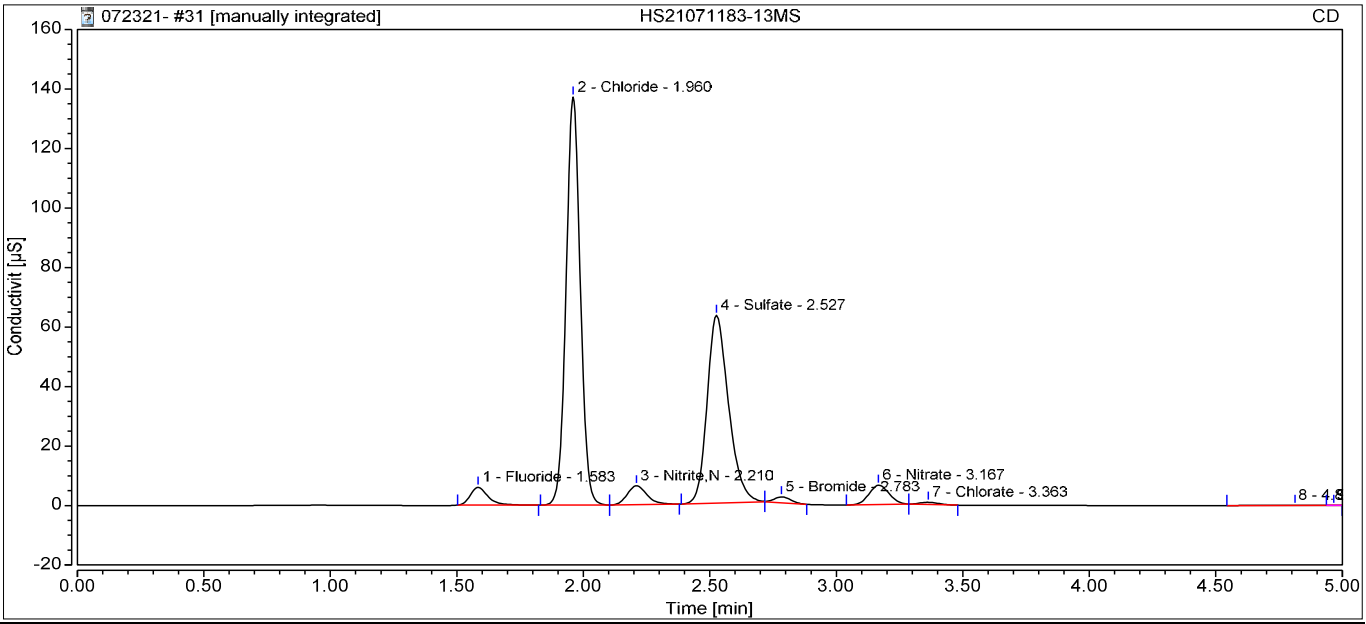


Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	1.58	Fluoride	BMB	0.118	0.5644	0.5644	1.0000
2	1.96	Chloride	BMB	7.785	58.5071	58.5071	1.0000
3	2.30	Nitrite,N	BMB	0.045	0.1343	0.1343	1.0000
4	2.53	Sulfate	BMB	5.395	56.0103	56.0103	1.0000
5	2.78	Bromide	BMB	0.054	1.0623	1.0623	1.0000
6	3.17	Nitrate	BMB	0.003	0.0084	0.0084	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**	**13.400**		**116.29**	

31	*HS21071183-13MS*		
Sample Name:	**HS21071183-13MS**	*Injection Volume:*	**5.00**
Vial Number:	**GA6**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program ISO37mM 150mm short 0.4**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method ISO**	*Dilution Factor:*	**1.0000**
Recording Time:	**07/23/2021 13:10**	*Sample Weight:*	**1.0000**

Run Time:

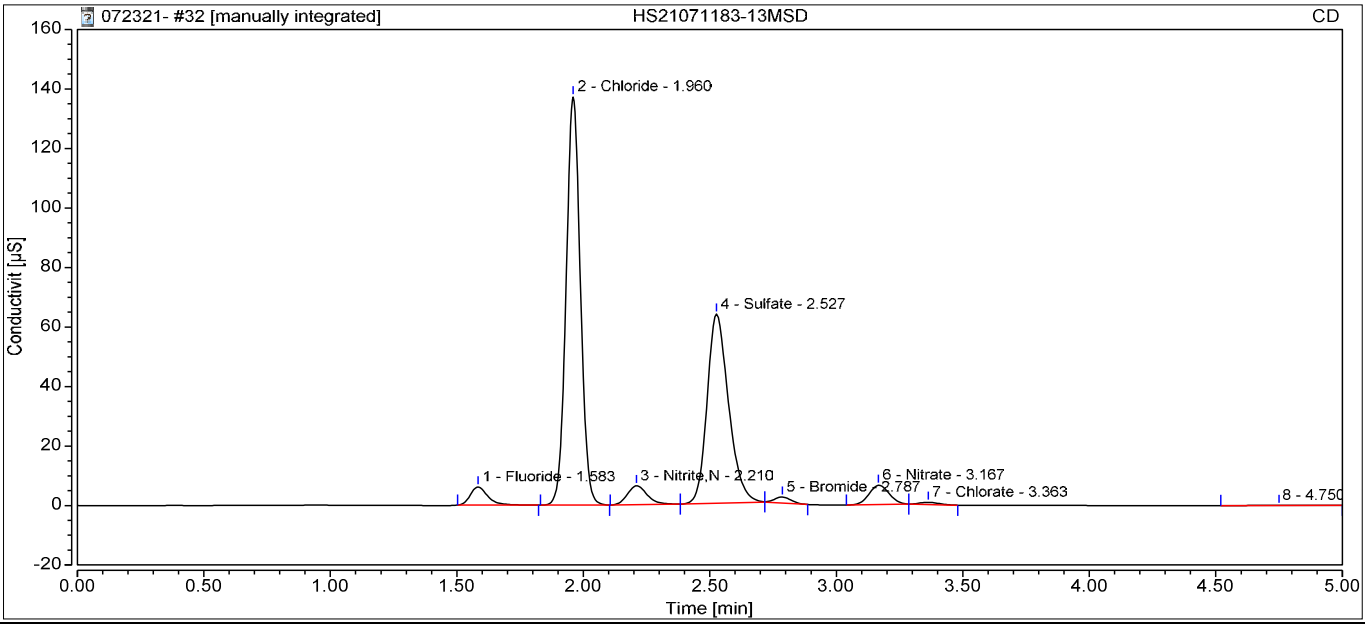


Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	1.58	Fluoride	BMB	0.488	2.3781	2.3781	1.0000
2	1.96	Chloride	BMB	8.927	67.0938	67.0938	1.0000
3	2.21	Nitrite,N	BMB	0.577	1.9781	1.9781	1.0000
4	2.53	Sulfate	BM *	6.215	64.5288	64.5288	1.0000
5	2.78	Bromide	MB*	0.155	3.0103	3.0103	1.0000
6	3.17	Nitrate	BMB	0.597	1.9656	1.9656	1.0000
7	3.36	Chlorate	BMB	0.064	1.8804	1.8804	1.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	1.0000
Total:			**0.000**	**17.024**		**142.84**	

32	*HS21071183-13MSD*		
Sample Name:	**HS21071183-13MSD**	*Injection Volume:*	**5.00**
Vial Number:	**GA7**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program ISO37mM 150mm short 0.4**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method ISO**	*Dilution Factor:*	**1.0000**
Recording Time:	**07/23/2021 13:18**	*Sample Weight:*	**1.0000**

Run Time:



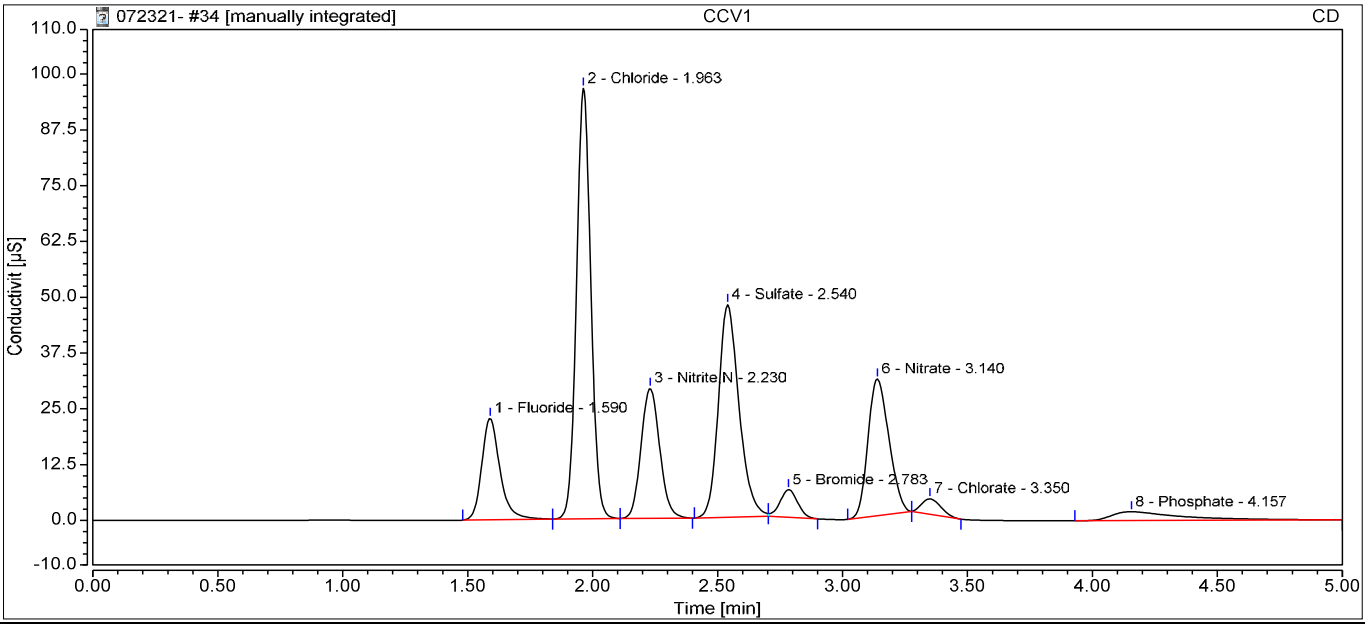
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	1.58	Fluoride	BMB	0.491	2.3941	2.3941	1.0000
2	1.96	Chloride	BMB	8.959	67.3324	67.3324	1.0000
3	2.21	Nitrite,N	BMB	0.578	1.9810	1.9810	1.0000
4	2.53	Sulfate	BM *	6.260	64.9959	64.9959	1.0000
5	2.79	Bromide	MB*	0.159	3.0749	3.0749	1.0000
6	3.17	Nitrate	BMB	0.597	1.9651	1.9651	1.0000
7	3.36	Chlorate	BMB	0.065	1.8914	1.8914	1.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	1.0000
Total:			**0.000**	**17.109**		**143.63**	

34 CCV1

Sample Name:	**CCV1**	*Injection Volume:*	**5.00**
Vial Number:	**R3**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program ISO37mM 150mm short 0.4**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method ISO**	*Dilution Factor:*	**1.0000**
Recording Time:	**07/23/2021 13:35**	*Sample Weight:*	**1.0000**

Run Time:



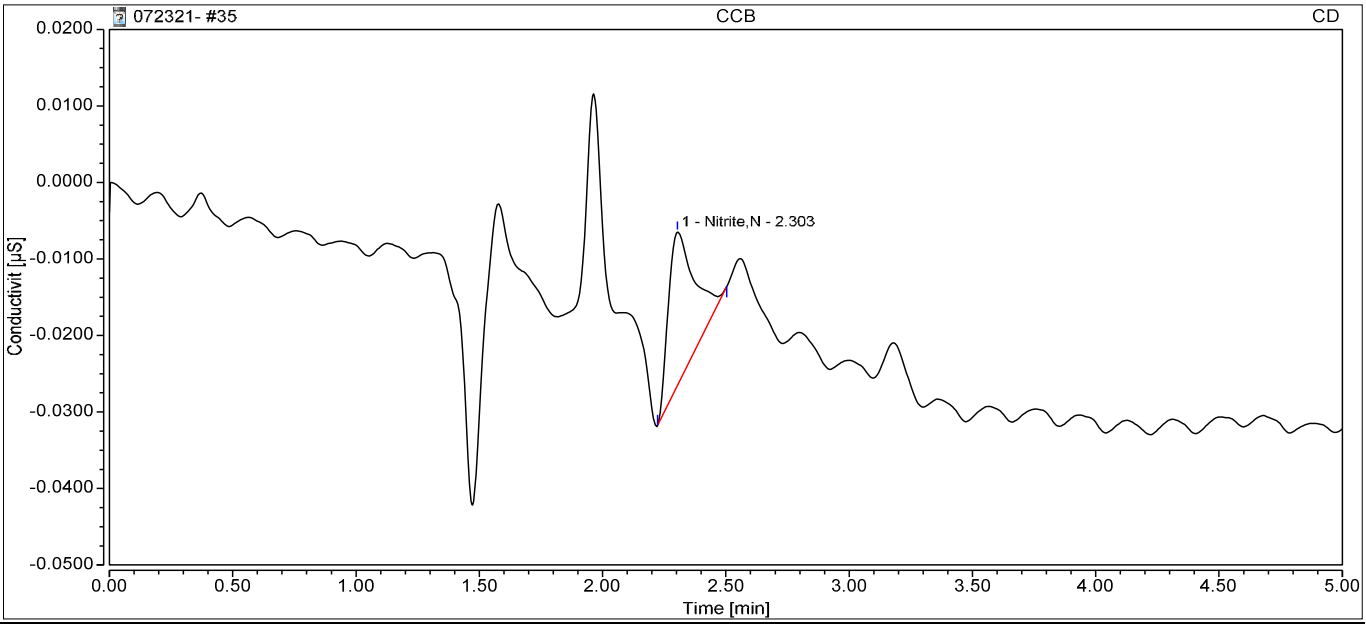
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	1.59	Fluoride	BMB	1.923	9.4169	9.4169	1.0000
2	1.96	Chloride	BMB	6.385	47.9861	47.9861	1.0000
3	2.23	Nitrite,N	BMB	2.518	9.3851	9.3851	1.0000
4	2.54	Sulfate	BM *	4.563	47.3803	47.3803	1.0000
5	2.78	Bromide	MB*	0.506	9.7675	9.7675	1.0000
6	3.14	Nitrate	BMB	2.968	9.7795	9.7795	1.0000
7	3.35	Chlorate	BMB	0.309	9.8561	9.8561	1.0000
8	4.16	Phosphate	BMB	0.657	5.7899	5.7899	1.0000
Total:			**0.000**	**19.829**		**149.36**	

35 CCB

Sample Name:	**CCB**	*Injection Volume:*	**5.00**
Vial Number:	**R6**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program ISO37mM 150mm short 0.4**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method ISO**	*Dilution Factor:*	**1.0000**
Recording Time:	**07/23/2021 13:43**	*Sample Weight:*	**1.0000**

Run Time:



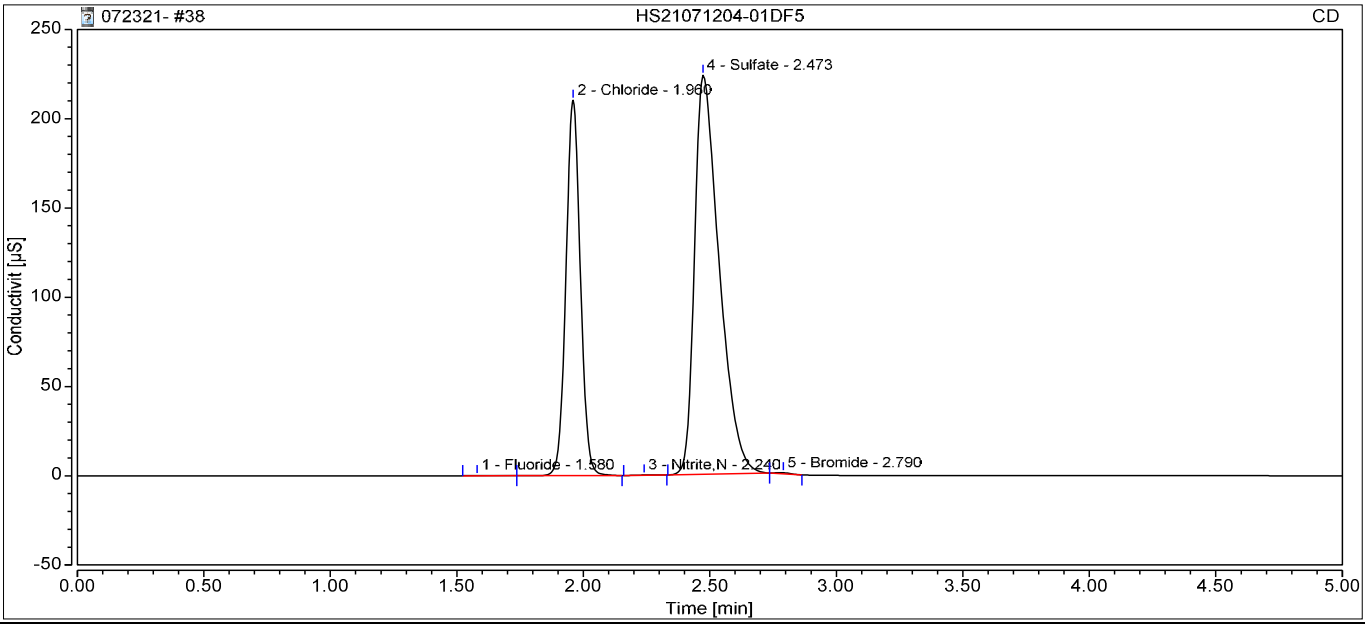
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Chloride	n.a.	n.a.	n.a.	n.a.	1.0000
1	2.30	Nitrite,N	BMB	0.002	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.	Bromide	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Nitrate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	1.0000
Total:			**0.000**	**0.002**		**0.00**	

38 HS21071204-01DF5

Sample Name:	**HS21071204-01DF5**	*Injection Volume:*	**5.00**
Vial Number:	**GB3**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program ISO37mM 150mm short 0.4**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method ISO**	*Dilution Factor:*	**5.0000**
Recording Time:	**07/23/2021 14:08**	*Sample Weight:*	**1.0000**

Run Time:



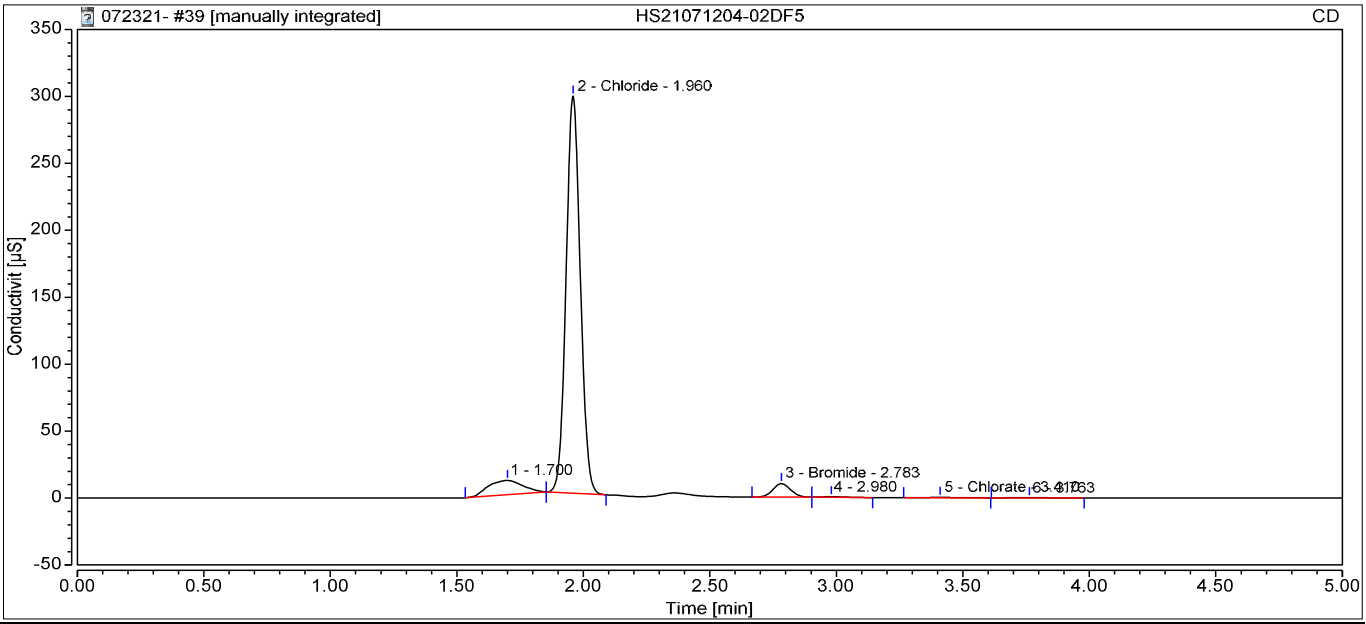
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	1.58	Fluoride	BMB	0.008	0.0259	0.1297	5.0000
2	1.96	Chloride	BMB	13.856	104.1357	520.6784	5.0000
3	2.24	Nitrite,N	BMB	0.014	0.0305	0.1527	5.0000
4	2.47	Sulfate	BMB	25.197	261.5382	1307.6910	5.0000
5	2.79	Bromide	BMB	0.037	0.7396	3.6979	5.0000
n.a.	n.a.	Nitrate	n.a.	n.a.	n.a.	n.a.	5.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	5.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	5.0000
Total:			**0.000**	**39.113**		**1832.35**	

39 HS21071204-02DF5

Sample Name:	**HS21071204-02DF5**	*Injection Volume:*	**5.00**
Vial Number:	**GB4**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program ISO37mM 150mm short 0.4**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method ISO**	*Dilution Factor:*	**5.0000**
Recording Time:	**07/23/2021 14:15**	*Sample Weight:*	**1.0000**

Run Time:



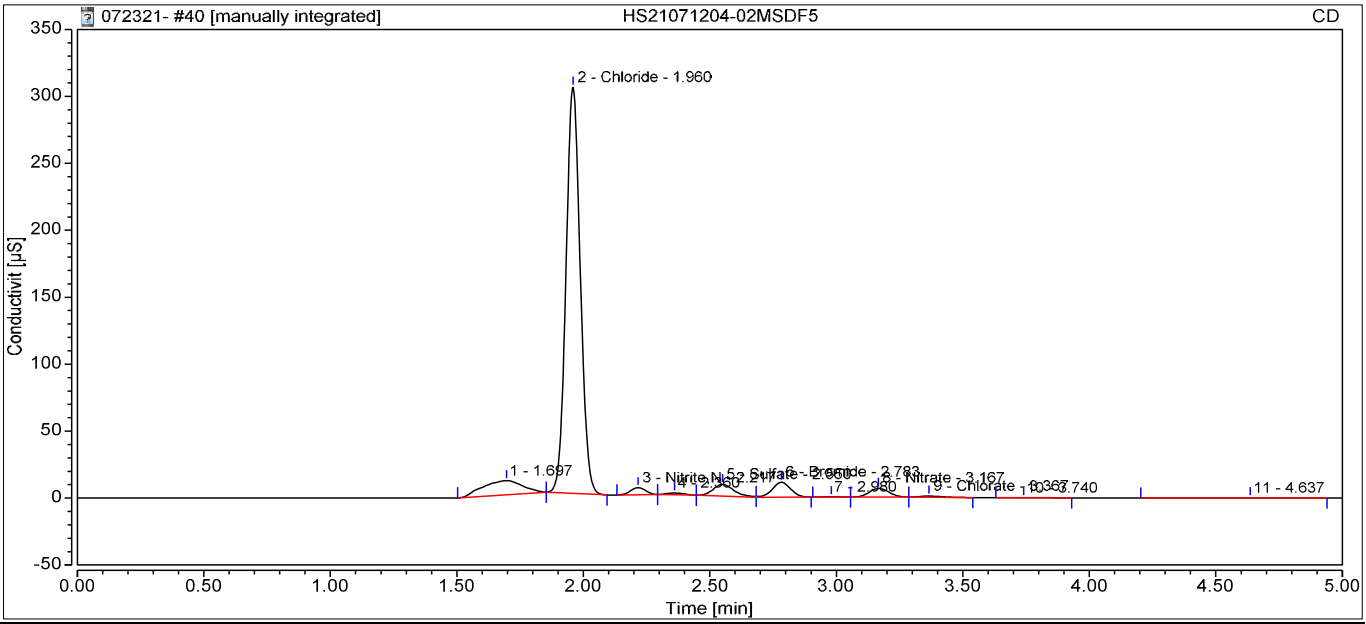
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	5.0000
2	1.96	Chloride	BMB	19.321	145.2183	726.0915	5.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	5.0000
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	5.0000
3	2.78	Bromide	BMB	0.820	15.8219	79.1097	5.0000
n.a.	n.a.	Nitrate	n.a.	n.a.	n.a.	n.a.	5.0000
5	3.41	Chlorate	BMB	0.035	1.0125	5.0626	5.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	5.0000
Total:			**0.000**	**20.176**		**810.26**	

40 HS21071204-02MSDF5

Sample Name:	**HS21071204-02MSDF5**	*Injection Volume:*	**5.00**
Vial Number:	**GB5**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program ISO37mM 150mm short 0.4**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method ISO**	*Dilution Factor:*	**5.0000**
Recording Time:	**07/23/2021 14:22**	*Sample Weight:*	**1.0000**

Run Time:



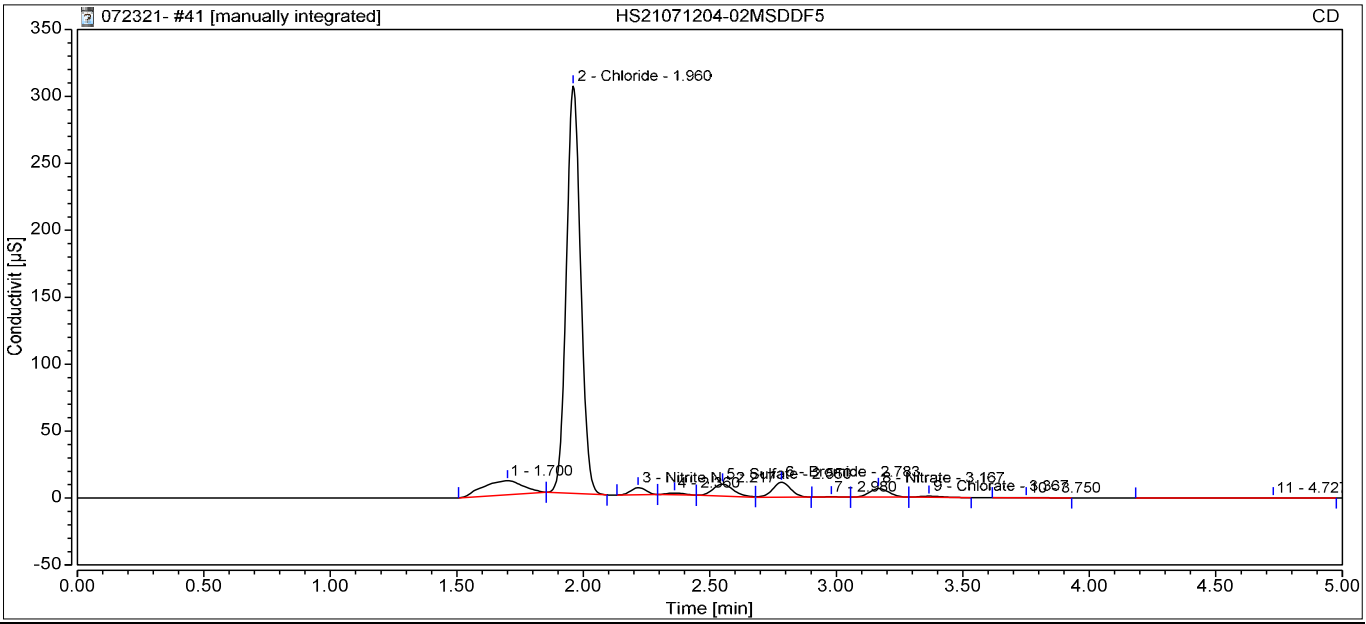
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	5.0000
2	1.96	Chloride	BMB	19.818	148.9510	744.7550	5.0000
3	2.22	Nitrite,N	BMB	0.363	1.2272	6.1359	5.0000
5	2.55	Sulfate	BM *	0.836	8.6922	43.4610	5.0000
6	2.78	Bromide	MB*	0.925	17.8582	89.2910	5.0000
8	3.17	Nitrate	BMB	0.581	1.9117	9.5586	5.0000
9	3.37	Chlorate	BMB	0.084	2.4678	12.3391	5.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	5.0000
Total:			**0.000**	**22.606**		**905.54**	

41 HS21071204-02MSDDF5

Sample Name:	**HS21071204-02MSDDF5**	*Injection Volume:*	**5.00**
Vial Number:	**GB6**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program ISO37mM 150mm short 0.4**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method ISO**	*Dilution Factor:*	**5.0000**
Recording Time:	**07/23/2021 14:30**	*Sample Weight:*	**1.0000**

Run Time:



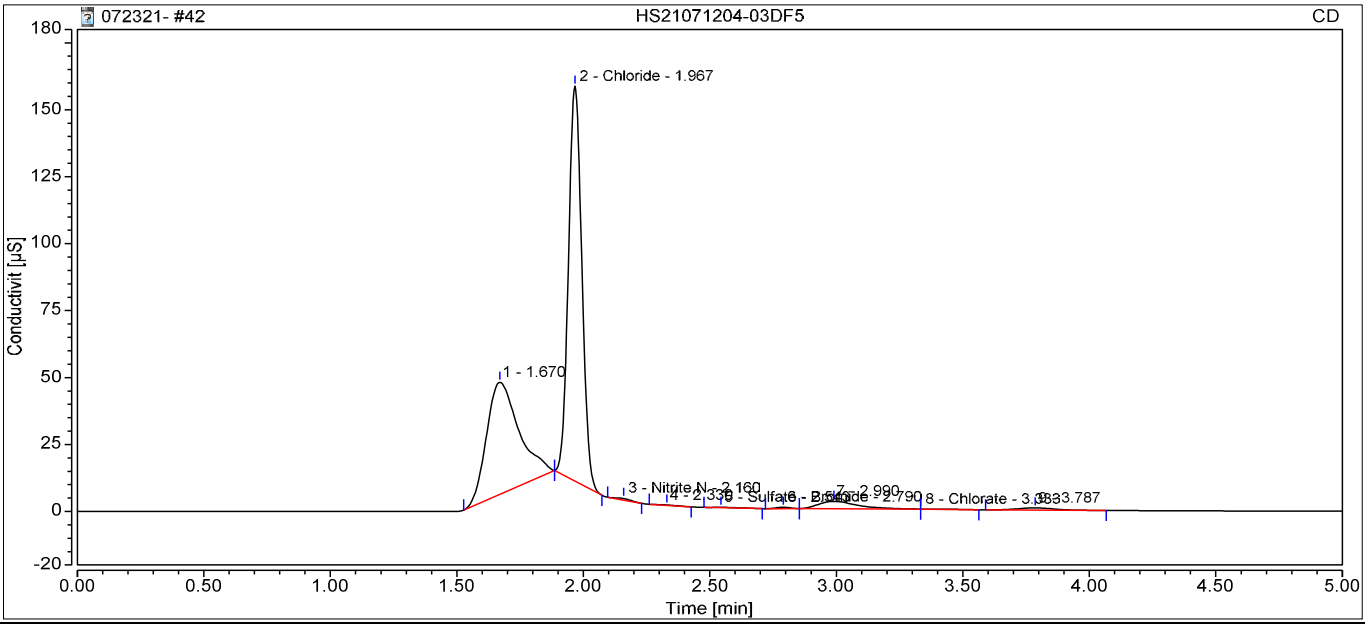
Integration Results

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.	5.0000
2	1.96	Chloride	BMB	19.872	149.3548	746.7742	5.0000
3	2.22	Nitrite,N	BMB	0.363	1.2278	6.1388	5.0000
5	2.55	Sulfate	bM *	0.850	8.8472	44.2359	5.0000
6	2.78	Bromide	MB*	0.929	17.9212	89.6058	5.0000
8	3.17	Nitrate	BMB	0.583	1.9200	9.6002	5.0000
9	3.37	Chlorate	BMB	0.084	2.4845	12.4227	5.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	5.0000
Total:			**0.000**	**22.681**		**908.78**	

42 HS21071204-03DF5

Sample Name:	**HS21071204-03DF5**	*Injection Volume:*	**5.00**
Vial Number:	**GB7**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program ISO37mM 150mm short 0.4**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method ISO**	*Dilution Factor:*	**5.0000**
Recording Time:	**07/23/2021 14:37**	*Sample Weight:*	**1.0000**

Run Time:



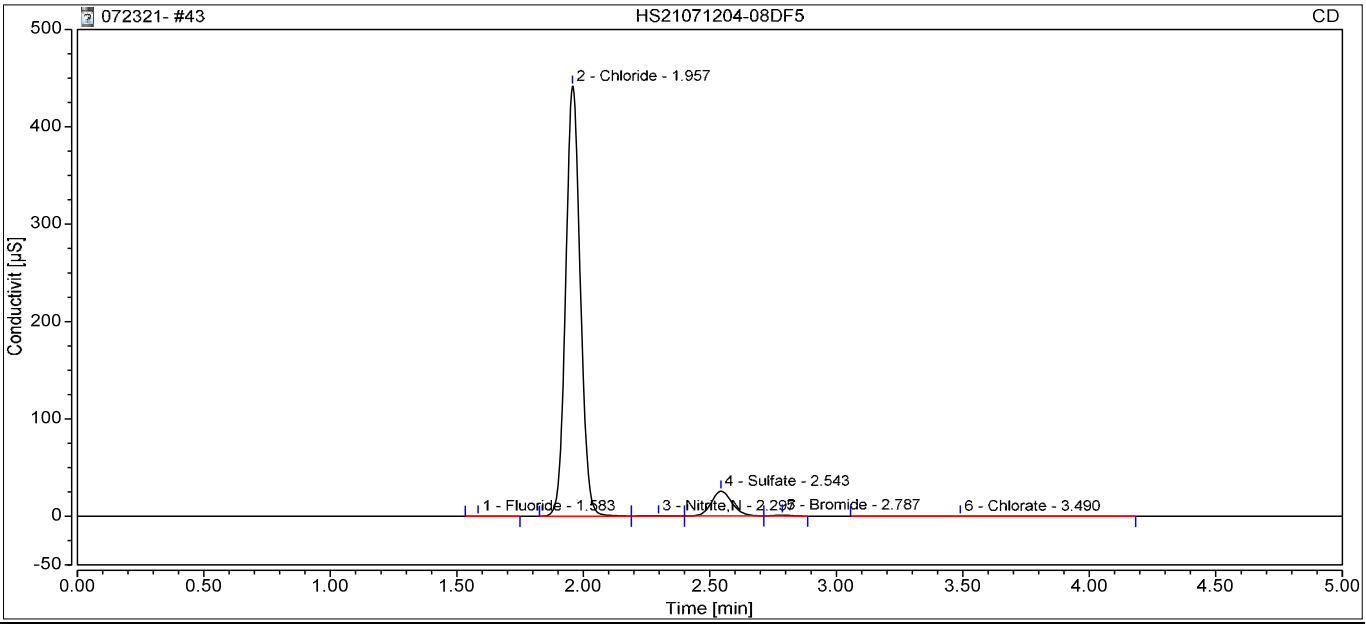
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	5.0000
2	1.97	Chloride	BMB	9.033	67.8897	339.4485	5.0000
3	2.16	Nitrite,N	BMB	0.041	0.1221	0.6105	5.0000
5	2.54	Sulfate	BMB	0.023	0.2604	1.3019	5.0000
6	2.79	Bromide	BMB	0.033	0.6592	3.2959	5.0000
n.a.	n.a.	Nitrate	n.a.	n.a.	n.a.	n.a.	5.0000
8	3.33	Chlorate	BMB	0.010	0.2774	1.3871	5.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	5.0000
Total:			**0.000**	**9.140**		**346.04**	

43 HS21071204-08DF5

Sample Name:	**HS21071204-08DF5**	*Injection Volume:*	**5.00**
Vial Number:	**GB8**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program ISO37mM 150mm short 0.4**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method ISO**	*Dilution Factor:*	**5.0000**
Recording Time:	**07/23/2021 14:45**	*Sample Weight:*	**1.0000**

Run Time:



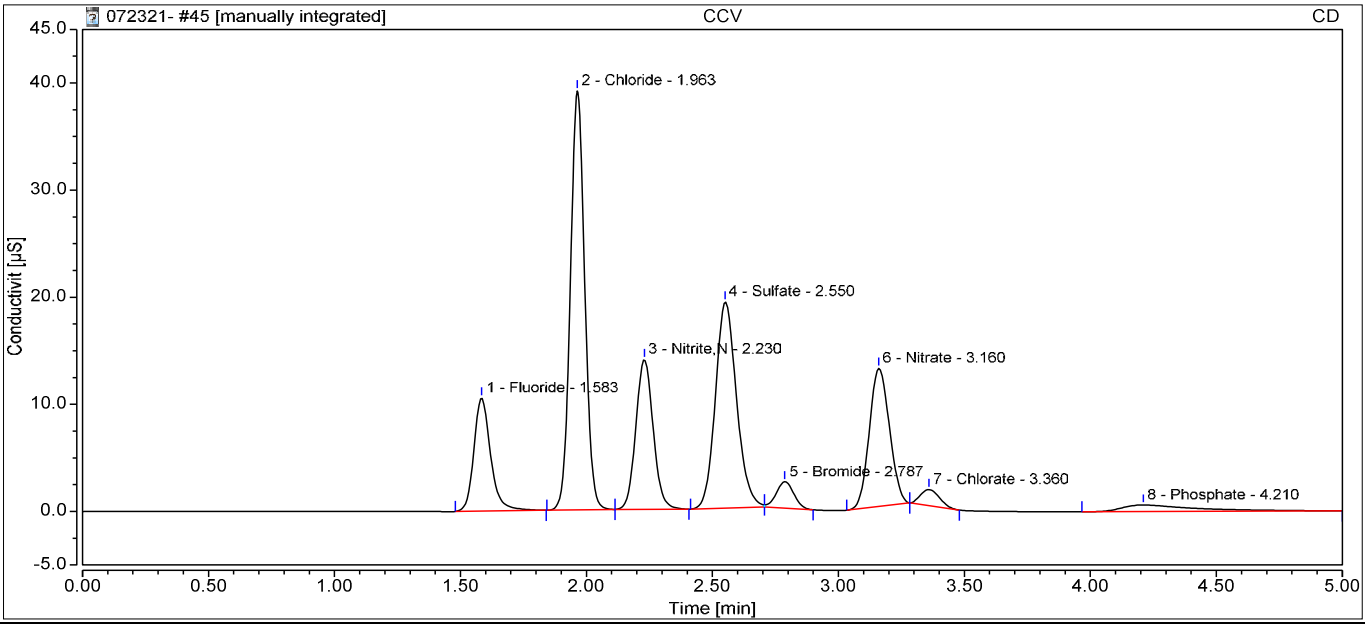
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	1.58	Fluoride	BMB	0.016	0.0625	0.3125	5.0000
2	1.96	Chloride	BMB	29.525	221.9093	1109.5466	5.0000
3	2.30	Nitrite,N	BMB	0.023	0.0586	0.2930	5.0000
4	2.54	Sulfate	BMB	2.410	25.0305	125.1525	5.0000
5	2.79	Bromide	BMB	0.066	1.2857	6.4284	5.0000
n.a.	n.a.	Nitrate	n.a.	n.a.	n.a.	n.a.	5.0000
6	3.49	Chlorate	BMB	0.084	2.4846	12.4228	5.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	5.0000
Total:			**0.000**	**32.123**		**1254.16**	

45 CCV

Sample Name:	**CCV**	*Injection Volume:*	**5.00**
Vial Number:	**R1**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program ISO37mM 150mm short 0.4**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method ISO**	*Dilution Factor:*	**1.0000**
Recording Time:	**07/23/2021 15:00**	*Sample Weight:*	**1.0000**

Run Time:



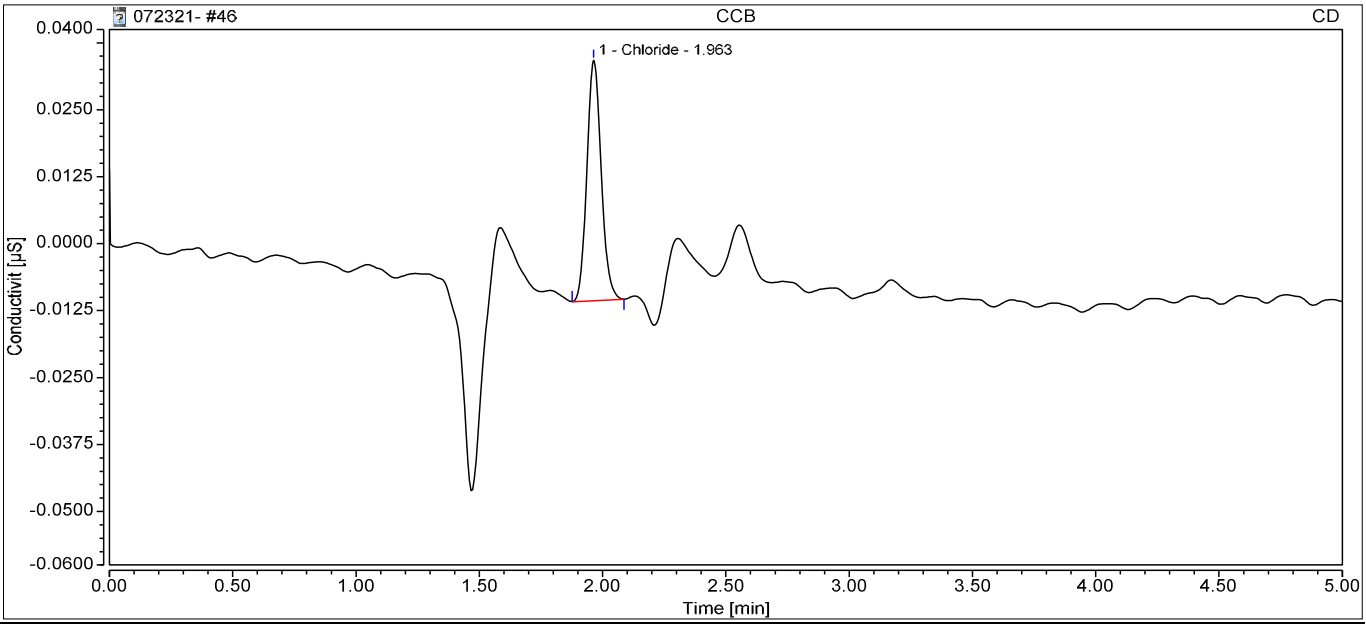
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	1.58	Fluoride	BMB	0.815	3.9859	3.9859	1.0000
2	1.96	Chloride	BMB	2.576	19.3521	19.3521	1.0000
3	2.23	Nitrite,N	BMB	1.116	3.9194	3.9194	1.0000
4	2.55	Sulfate	BM *	1.870	19.4283	19.4283	1.0000
5	2.79	Bromide	MB*	0.199	3.8645	3.8645	1.0000
6	3.16	Nitrate	BMB	1.197	3.9426	3.9426	1.0000
7	3.36	Chlorate	BMB	0.131	3.9364	3.9364	1.0000
8	4.21	Phosphate	BMB	0.212	1.9257	1.9257	1.0000
Total:			**0.000**	**8.117**		**60.35**	

46 CCB

Sample Name:	**CCB**	*Injection Volume:*	**5.00**
Vial Number:	**R4**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program ISO37mM 150mm short 0.4**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method ISO**	*Dilution Factor:*	**1.0000**
Recording Time:	**07/23/2021 15:07**	*Sample Weight:*	**1.0000**

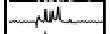
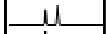
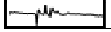
Run Time:



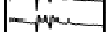
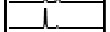
Integration Results

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	1.96	Chloride	BMB	0.003	0.0157	0.0157	1.0000
n.a.	n.a.	Nitrite,N	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.	Bromide	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Nitrate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	1.0000
Total:			**0.000**	**0.003**		**0.02**	

Sequence: 072621
Last Update Operator: alshs.nouser

CD	Name	Comment	Type	Position	Dilution	Level	Instrument Method	Processing Method
	STD1		Calibration	RE1	1.00	1	Anions Program ISO37mM 150mm short 0.4	Anions Processing Method ISO
	STD2		Calibration	RE2	1.00	2	Anions Program ISO37mM 150mm short 0.4	Anions Processing Method ISO
	STD3		Calibration	RE3	1.00	3	Anions Program ISO37mM 150mm short 0.4	Anions Processing Method ISO
	STD4		Calibration	RE4	1.00	4	Anions Program ISO37mM 150mm short 0.4	Anions Processing Method ISO
	STD5		Calibration	RE5	1.00	5	Anions Program ISO37mM 150mm short 0.4	Anions Processing Method ISO
	STD6		Calibration	RE6	1.00	6	Anions Program ISO37mM 150mm short 0.4	Anions Processing Method ISO
	ICV		Unknown	RE7	1.00		Anions Program ISO37mM 150mm short 0.4	Anions Processing Method ISO
	ICB		Unknown	RE8	1.00		Anions Program ISO37mM 150mm short 0.4	Anions Processing Method ISO
	CCV		Unknown	R1	1.00		Anions Program ISO37mM 150mm short 0.4	Anions Processing Method ISO
	CCB		Unknown	R4	1.00		Anions Program ISO37mM 150mm short 0.4	Anions Processing Method ISO
	MBLK		Unknown	R5	1.00		Anions Program ISO37mM 150mm short 0.4	Anions Processing Method ISO
	LCS		Unknown	R2	1.00		Anions Program ISO37mM 150mm short 0.4	Anions Processing Method ISO
	CCV1		Unknown	R3	1.00		Anions Program ISO37mM 150mm short 0.4	Anions Processing Method ISO
	CCB		Unknown	R6	1.00		Anions Program ISO37mM 150mm short 0.4	Anions Processing Method ISO
	HS21071204-01DF50		Unknown	RA8	50.00		Anions Program ISO37mM 150mm short 0.4	Anions Processing Method ISO
	HS21071096-01		Unknown	RB3	1.00		Anions Program ISO37mM 150mm short 0.4	Anions Processing Method ISO
	HS21071096-01MS		Unknown	RB4	1.00		Anions Program ISO37mM 150mm short 0.4	Anions Processing Method ISO
	HS21071096-01MSD		Unknown	RB5	1.00		Anions Program ISO37mM 150mm short 0.4	Anions Processing Method ISO
	CCV		Unknown	R1	1.00		Anions Program ISO37mM 150mm short 0.4	Anions Processing Method ISO
	CCB		Unknown	R4	1.00		Anions Program ISO37mM 150mm short 0.4	Anions Processing Method ISO

Sequence: 072621
Last Update Operator: alshs.nouser

CD	Name	Volume	Status	Inject Time
	STD1	5.0	Finished	6/26/2021 7:08:27 AM -05:00
	STD2	5.0	Finished	6/26/2021 7:15:51 AM -05:00
	STD3	5.0	Finished	6/26/2021 7:23:13 AM -05:00
	STD4	5.0	Finished	6/26/2021 7:30:36 AM -05:00
	STD5	5.0	Finished	6/26/2021 7:38:00 AM -05:00
	STD6	5.0	Finished	6/26/2021 7:45:22 AM -05:00
	ICV	5.0	Finished	6/26/2021 7:52:45 AM -05:00
	ICB	5.0	Finished	6/26/2021 8:07:30 AM -05:00
	CCV	5.0	Finished	7/26/2021 1:18:35 PM -05:00
	CCB	5.0	Finished	7/26/2021 1:25:59 PM -05:00
	MBLK	5.0	Finished	7/26/2021 1:48:10 PM -05:00
	LCS	5.0	Finished	7/26/2021 1:55:35 PM -05:00
	CCV1	5.0	Finished	7/26/2021 4:14:03 PM -05:00
	CCB	5.0	Finished	7/26/2021 4:21:28 PM -05:00
	HS21071204-01DF50	5.0	Finished	7/26/2021 5:05:05 PM -05:00
	HS21071096-01	5.0	Finished	7/26/2021 5:27:21 PM -05:00
	HS21071096-01MS	5.0	Finished	7/26/2021 5:34:45 PM -05:00
	HS21071096-01MSD	5.0	Finished	7/26/2021 5:42:11 PM -05:00
	CCV	5.0	Finished	7/26/2021 6:11:47 PM -05:00
	CCB	5.0	Finished	7/26/2021 6:19:10 PM -05:00

Sequence: 072321-
Injection #6: STD6

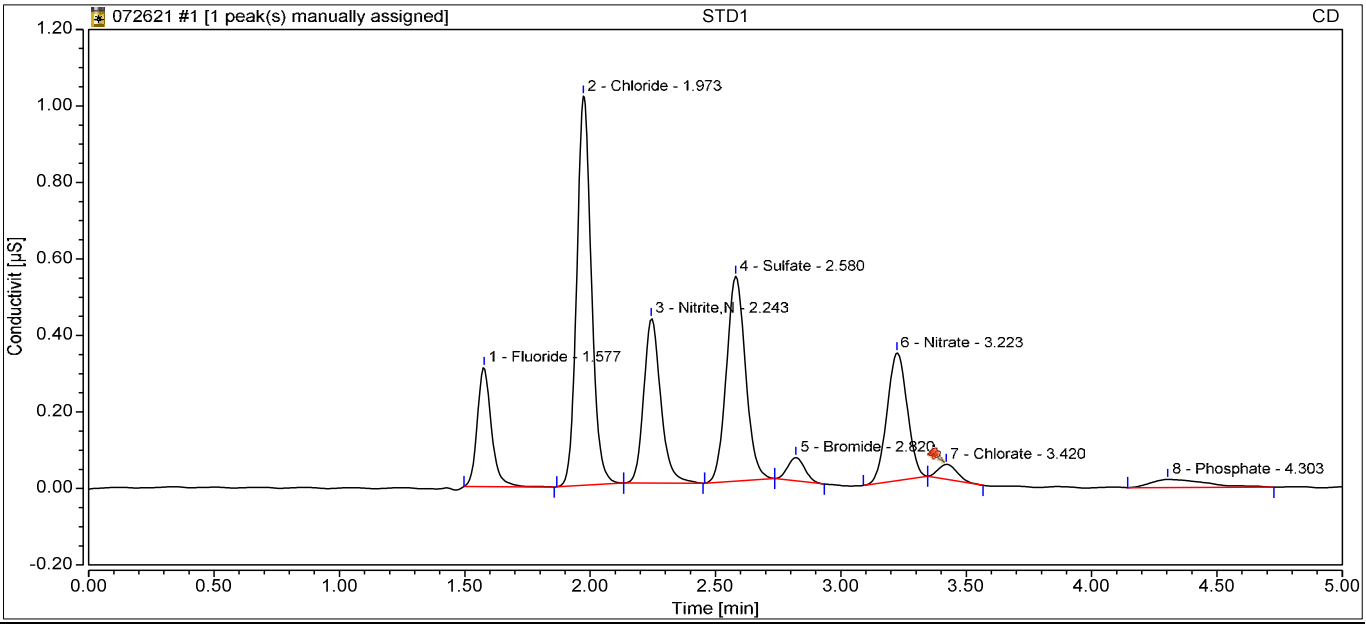
Calibration

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*	*20.2589*	*0.99769*	*0.0030*	*0.2038*	*0.0000*
2	Chloride	Lin, WithOffset, 1/	Area	6	3.8673	0.99992	0.0009	0.1330	0.0000
3	Nitrite,N	Quad, WithOffset,	Area	6	5.7709	0.99983	0.0054	0.2948	-0.0029
4	Sulfate	Lin, WithOffset, 1/	Area	6	4.1076	0.99991	-0.0020	0.0963	0.0000
5	Bromide	Lin, WithOffset, 1/	Area	6	10.7478	0.99944	-0.0010	0.0519	0.0000
6	Nitrate	Lin, WithOffset, 1/	Area	6	4.3880	0.99990	0.0007	0.3035	0.0000
7	Chlorate	Quad, WithOffset,	Area	6	4.0947	0.99992	-0.0001	0.0348	-0.0004
8	Phosphate	Lin, WithOffset, 1/	Area	6	27.9718	0.99729	-0.0098	0.1152	0.0000
Maximum					**27.9718**	0.99992			
Minimum					3.8673	**0.99729**			

1 STD1

Sample Name:	**STD1**	*Injection Volume:*	**5.00**
Vial Number:	**RE1**	*Channel:*	**CD**
Sample Type:	**Calibration Standard**	*Wavelength:*	**210**
Control Program:	**Anions Program ISO37mM 150mm short 0.4**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method ISO**	*Dilution Factor:*	**1.0000**
Recording Time:	**06/26/2021 07:08**	*Sample Weight:*	**1.0000**

Run Time:



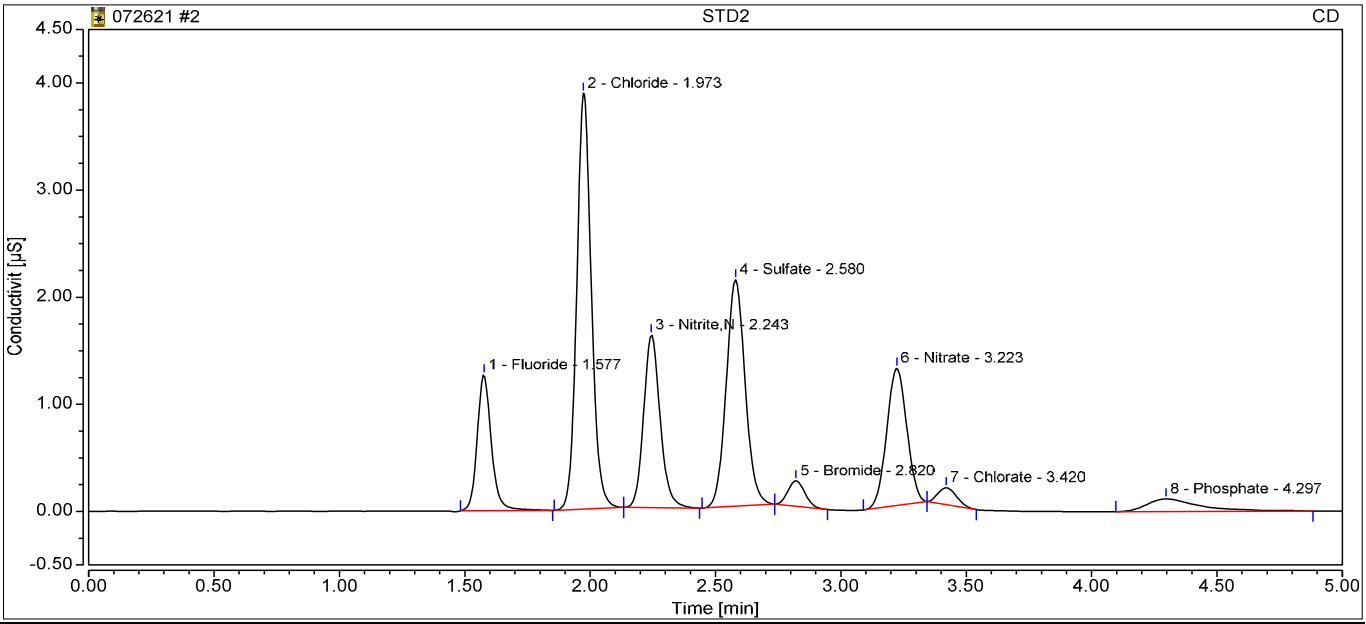
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	1.58	Fluoride	BMB	0.020	0.0853	0.0853	1.0000
2	1.97	Chloride	BMB	0.069	0.5112	0.5112	1.0000
3	2.24	Nitrite,N	BMB	0.034	0.0972	0.0972	1.0000
4	2.58	Sulfate	BMB	0.047	0.5123	0.5123	1.0000
5	2.82	Bromide	BMB	0.005	0.1111	0.1111	1.0000
6	3.22	Nitrate	BMB	0.031	0.1006	0.1006	1.0000
7	3.42	Chlorate	BMB^	0.003	0.1002	0.1002	1.0000
8	4.30	Phosphate	BMB	0.005	0.1325	0.1325	1.0000
Total:			**0.000**	**0.216**		**1.65**	

2 STD2

Sample Name:	**STD2**	*Injection Volume:*	**5.00**
Vial Number:	**RE2**	*Channel:*	**CD**
Sample Type:	**Calibration Standard**	*Wavelength:*	**210**
Control Program:	**Anions Program ISO37mM 150mm short 0.4**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method ISO**	*Dilution Factor:*	**1.0000**
Recording Time:	**06/26/2021 07:15**	*Sample Weight:*	**1.0000**

Run Time:



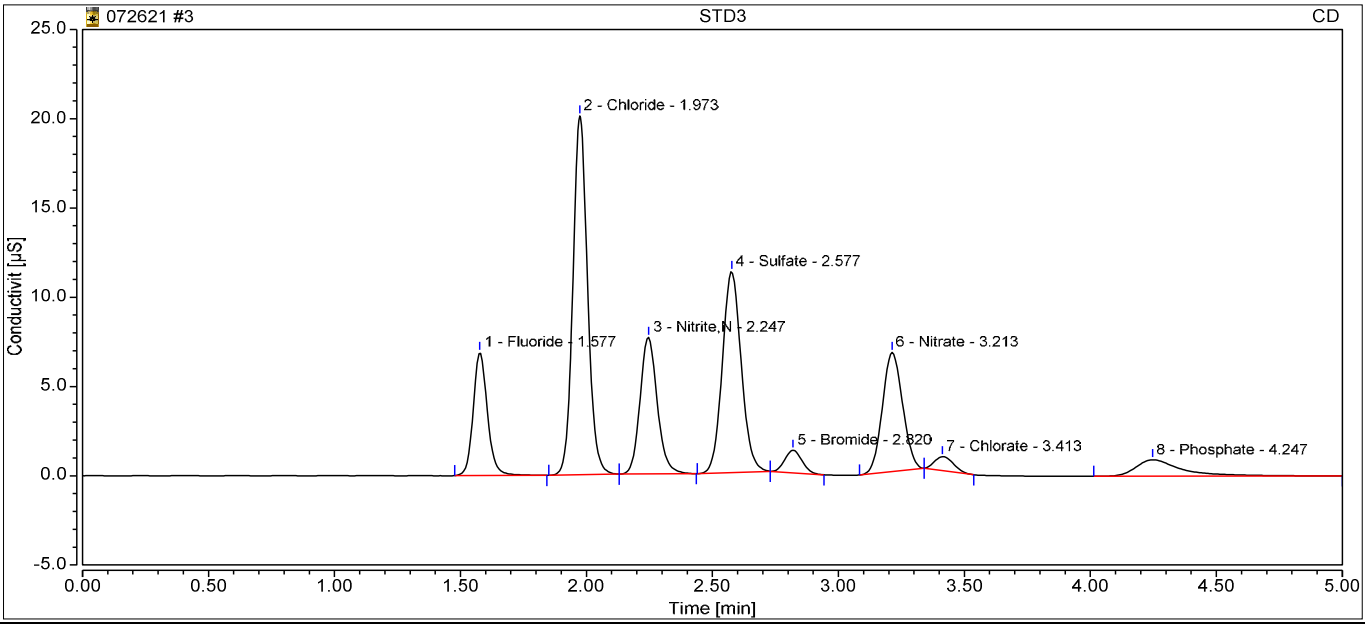
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	1.58	Fluoride	BMB	0.083	0.3949	0.3949	1.0000
2	1.97	Chloride	BMB	0.262	1.9605	1.9605	1.0000
3	2.24	Nitrite,N	BMB	0.123	0.4013	0.4013	1.0000
4	2.58	Sulfate	BMB	0.185	1.9450	1.9450	1.0000
5	2.82	Bromide	BMB	0.019	0.3820	0.3820	1.0000
6	3.22	Nitrate	BMB	0.119	0.3898	0.3898	1.0000
7	3.42	Chlorate	BMB	0.014	0.3985	0.3985	1.0000
8	4.30	Phosphate	BMB	0.029	0.3369	0.3369	1.0000
Total:			**0.000**	**0.834**		**6.21**	

3 STD3

Sample Name:	**STD3**	*Injection Volume:*	**5.00**
Vial Number:	**RE3**	*Channel:*	**CD**
Sample Type:	**Calibration Standard**	*Wavelength:*	**210**
Control Program:	**Anions Program ISO37mM 150mm short 0.4**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method ISO**	*Dilution Factor:*	**1.0000**
Recording Time:	**06/26/2021 07:23**	*Sample Weight:*	**1.0000**

Run Time:



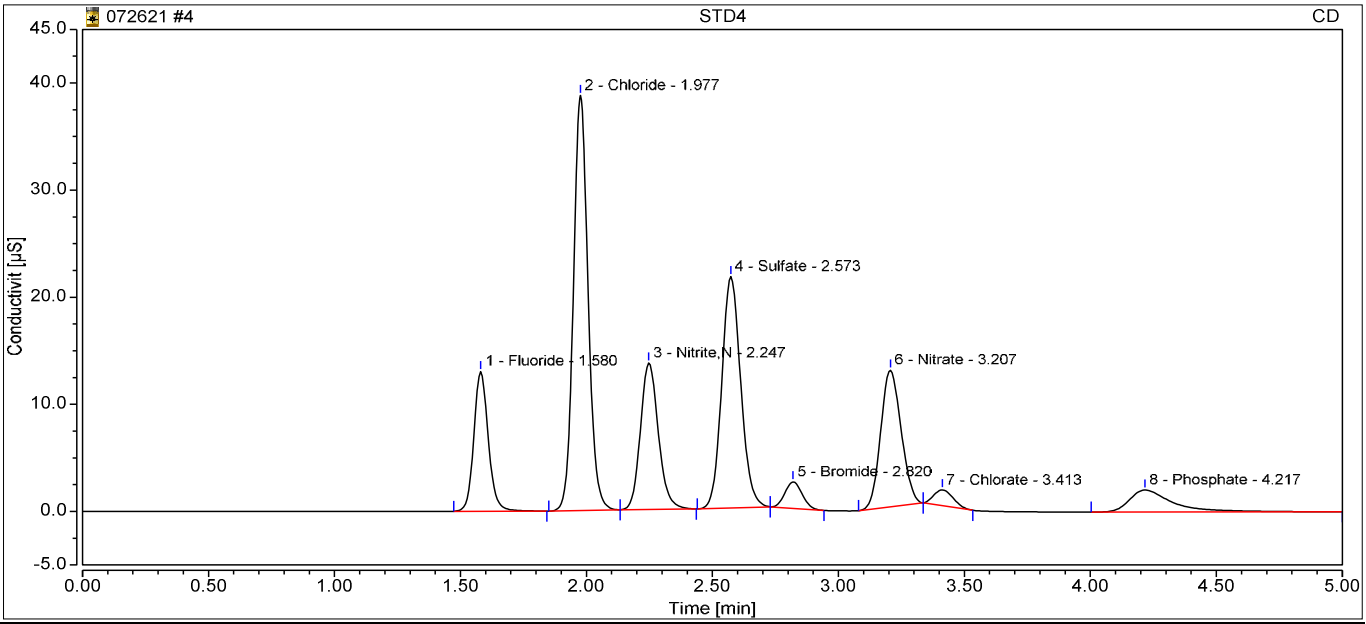
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	1.58	Fluoride	BMB	0.452	2.2036	2.2036	1.0000
2	1.97	Chloride	BMB	1.352	10.1565	10.1565	1.0000
3	2.25	Nitrite,N	BMB	0.607	2.0827	2.0827	1.0000
4	2.58	Sulfate	BMB	0.981	10.1974	10.1974	1.0000
5	2.82	Bromide	BMB	0.100	1.9471	1.9471	1.0000
6	3.21	Nitrate	BMB	0.622	2.0467	2.0467	1.0000
7	3.41	Chlorate	BMB	0.069	2.0284	2.0284	1.0000
8	4.25	Phosphate	BMB	0.195	1.7750	1.7750	1.0000
Total:			**0.000**	**4.377**		**32.44**	

4 STD4

Sample Name:	**STD4**	*Injection Volume:*	**5.00**
Vial Number:	**RE4**	*Channel:*	**CD**
Sample Type:	**Calibration Standard**	*Wavelength:*	**210**
Control Program:	**Anions Program ISO37mM 150mm short 0.4**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method ISO**	*Dilution Factor:*	**1.0000**
Recording Time:	**06/26/2021 07:30**	*Sample Weight:*	**1.0000**

Run Time:



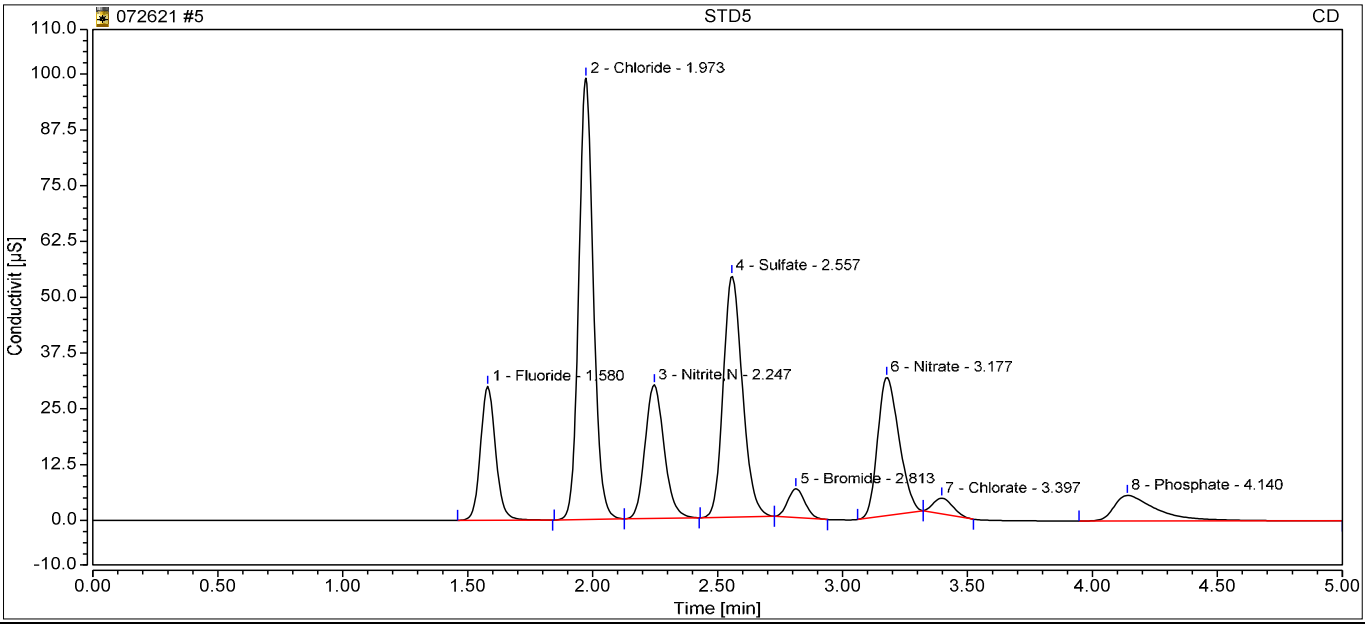
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	1.58	Fluoride	BMB	0.870	4.2518	4.2518	1.0000
2	1.98	Chloride	BMB	2.605	19.5725	19.5725	1.0000
3	2.25	Nitrite,N	BMB	1.127	3.9598	3.9598	1.0000
4	2.57	Sulfate	BMB	1.885	19.5851	19.5851	1.0000
5	2.82	Bromide	BMB	0.196	3.8021	3.8021	1.0000
6	3.21	Nitrate	BMB	1.203	3.9629	3.9629	1.0000
7	3.41	Chlorate	BMB	0.131	3.9255	3.9255	1.0000
8	4.22	Phosphate	BMB	0.412	3.6656	3.6656	1.0000
Total:			**0.000**	**8.430**		**62.73**	

5 STD5

Sample Name:	**STD5**	*Injection Volume:*	**5.00**
Vial Number:	**RE5**	*Channel:*	**CD**
Sample Type:	**Calibration Standard**	*Wavelength:*	**210**
Control Program:	**Anions Program ISO37mM 150mm short 0.4**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method ISO**	*Dilution Factor:*	**1.0000**
Recording Time:	**06/26/2021 07:38**	*Sample Weight:*	**1.0000**

Run Time:



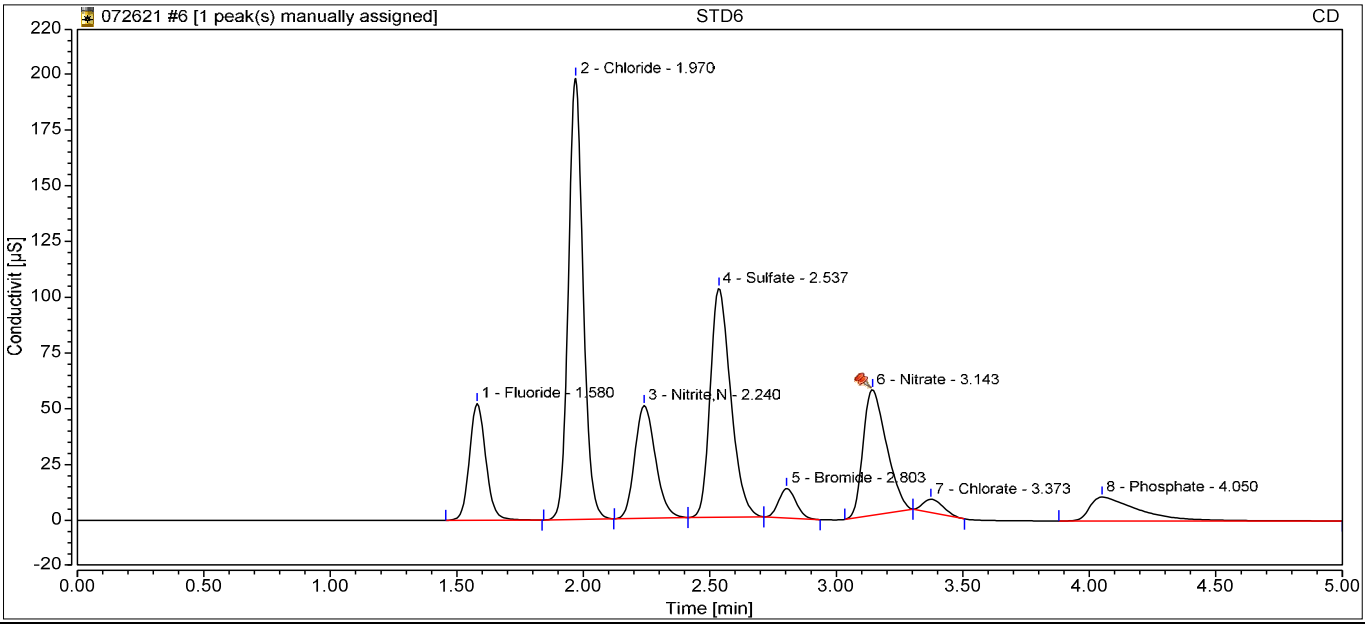
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	1.58	Fluoride	BMB	2.108	10.3258	10.3258	1.0000
2	1.97	Chloride	BMB	6.654	50.0065	50.0065	1.0000
3	2.25	Nitrite,N	BMB	2.641	9.8998	9.8998	1.0000
4	2.56	Sulfate	BMB	4.828	50.1320	50.1320	1.0000
5	2.81	Bromide	BMB	0.514	9.9325	9.9325	1.0000
6	3.18	Nitrate	BMB	3.068	10.1091	10.1091	1.0000
7	3.40	Chlorate	BMB	0.315	10.0792	10.0792	1.0000
8	4.14	Phosphate	BMB	1.140	9.9878	9.9878	1.0000
Total:			**0.000**	**21.269**		**160.47**	

6 STD6

Sample Name:	**STD6**	*Injection Volume:*	**5.00**
Vial Number:	**RE6**	*Channel:*	**CD**
Sample Type:	**Calibration Standard**	*Wavelength:*	**210**
Control Program:	**Anions Program ISO37mM 150mm short 0.4**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method ISO**	*Dilution Factor:*	**1.0000**
Recording Time:	**06/26/2021 07:45**	*Sample Weight:*	**1.0000**

Run Time:



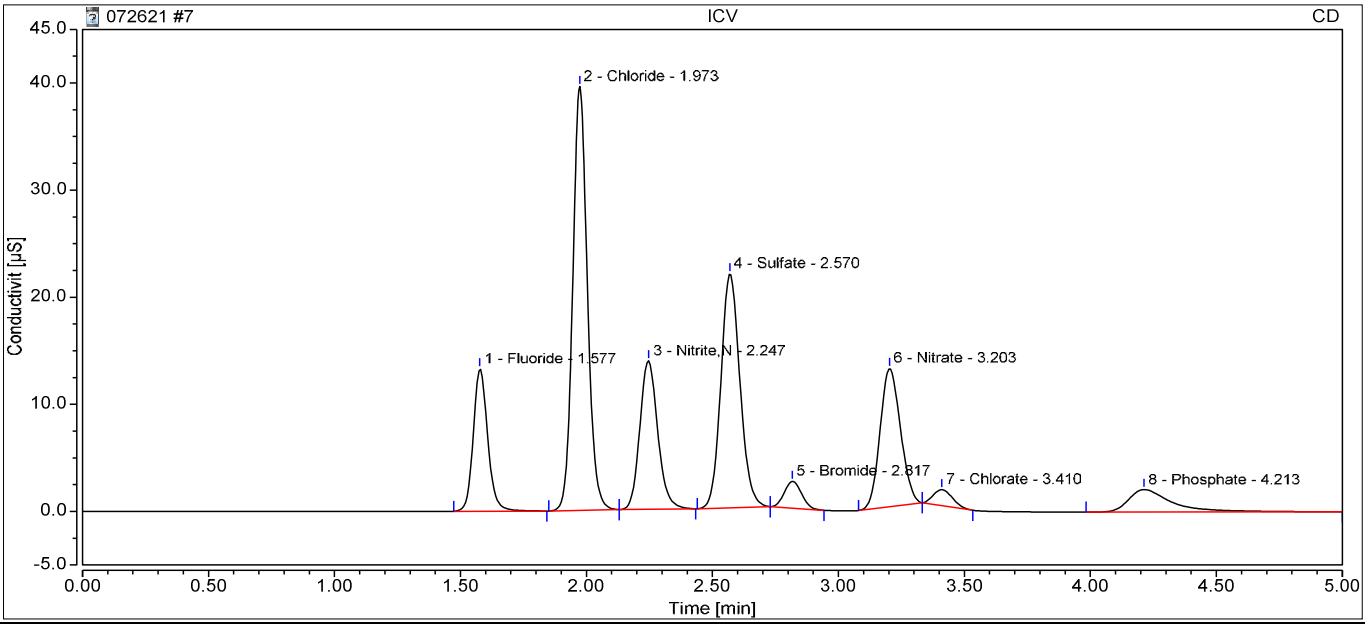
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	1.58	Fluoride	BMB	3.925	19.2385	19.2385	1.0000
2	1.97	Chloride	BMB	13.344	100.2928	100.2928	1.0000
3	2.24	Nitrite,N	BMB	4.761	20.0654	20.0654	1.0000
4	2.54	Sulfate	BMB	9.645	100.1282	100.1282	1.0000
5	2.80	Bromide	BMB	1.053	20.3252	20.3252	1.0000
6	3.14	Nitrate	BMB^	6.037	19.8909	19.8909	1.0000
7	3.37	Chlorate	BMB	0.554	19.9655	19.9655	1.0000
8	4.05	Phosphate	BMB	2.363	20.6022	20.6022	1.0000
Total:			**0.000**	**41.682**		**320.51**	

7 ICV

Sample Name:	**ICV**	*Injection Volume:*	**5.00**
Vial Number:	**RE7**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program ISO37mM 150mm short 0.4**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method ISO**	*Dilution Factor:*	**1.0000**
Recording Time:	**06/26/2021 07:52**	*Sample Weight:*	**1.0000**

Run Time:



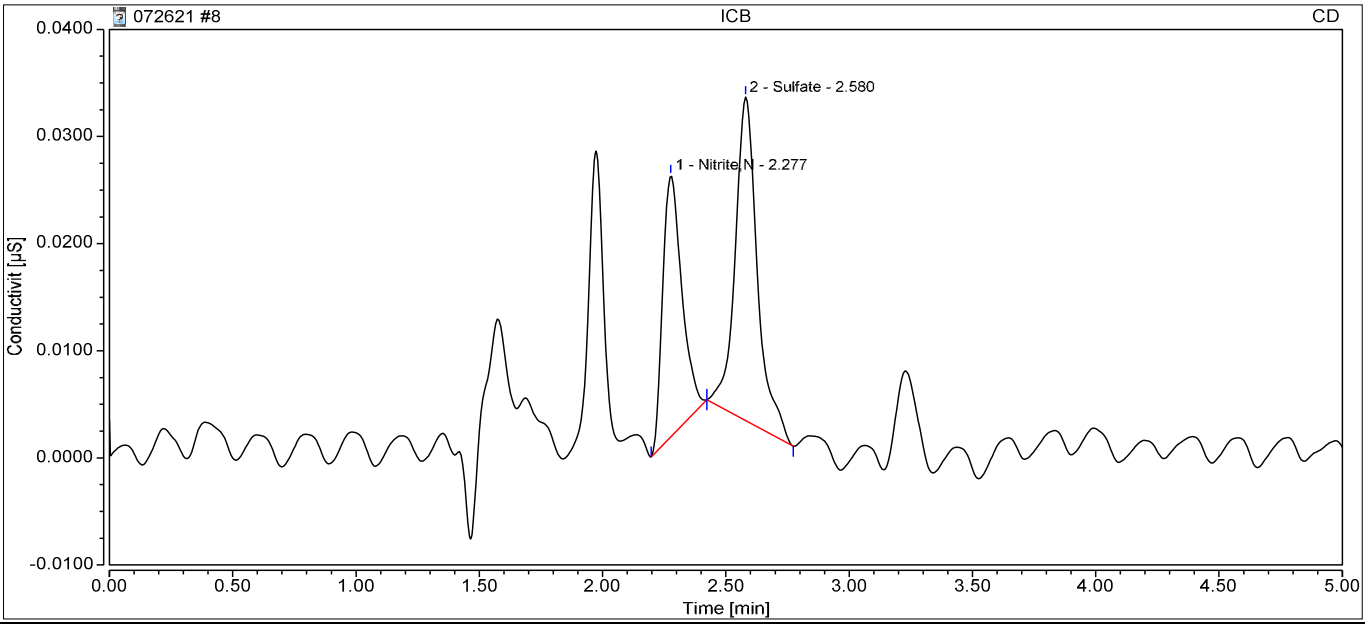
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	1.58	Fluoride	BMB	0.888	4.3392	4.3392	1.0000
2	1.97	Chloride	BMB	2.655	19.9475	19.9475	1.0000
3	2.25	Nitrite,N	BMB	1.144	4.0217	4.0217	1.0000
4	2.57	Sulfate	BMB	1.911	19.8594	19.8594	1.0000
5	2.82	Bromide	BMB	0.200	3.8693	3.8693	1.0000
6	3.20	Nitrate	BMB	1.214	3.9993	3.9993	1.0000
7	3.41	Chlorate	BMB	0.131	3.9285	3.9285	1.0000
8	4.21	Phosphate	BMB	0.422	3.7479	3.7479	1.0000
Total:			**0.000**	**8.565**		**63.71**	

8 ICB

Sample Name:	**ICB**	*Injection Volume:*	**5.00**
Vial Number:	**RE8**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program ISO37mM 150mm short 0.4**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method ISO**	*Dilution Factor:*	**1.0000**
Recording Time:	**06/26/2021 08:07**	*Sample Weight:*	**1.0000**

Run Time:



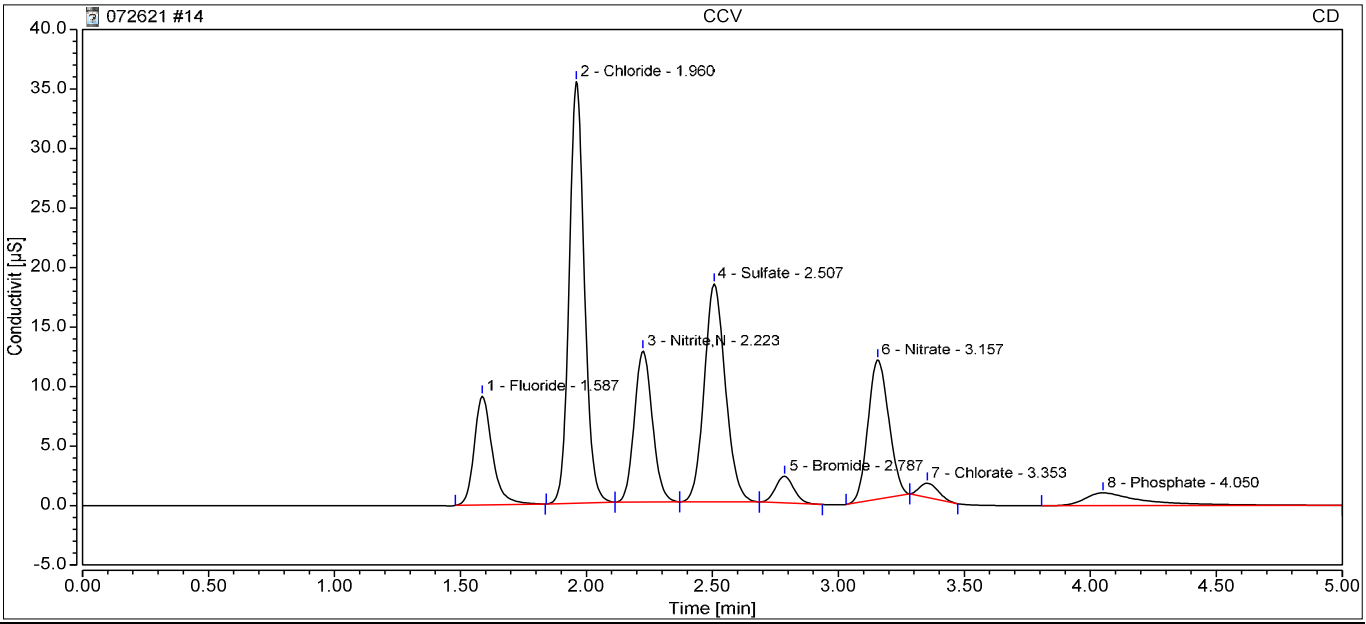
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Chloride	n.a.	n.a.	n.a.	n.a.	1.0000
1	2.28	Nitrite,N	BMB	0.002	n.a.	n.a.	1.0000
2	2.58	Sulfate	BMB	0.003	0.0531	0.0531	1.0000
n.a.	n.a.	Bromide	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**	**0.005**		**0.05**	

14 CCV

Sample Name:	**CCV**	*Injection Volume:*	**5.00**
Vial Number:	**R1**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program ISO37mM 150mm short 0.4**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method ISO**	*Dilution Factor:*	**1.0000**
Recording Time:	**07/26/2021 13:18**	*Sample Weight:*	**1.0000**

Run Time:



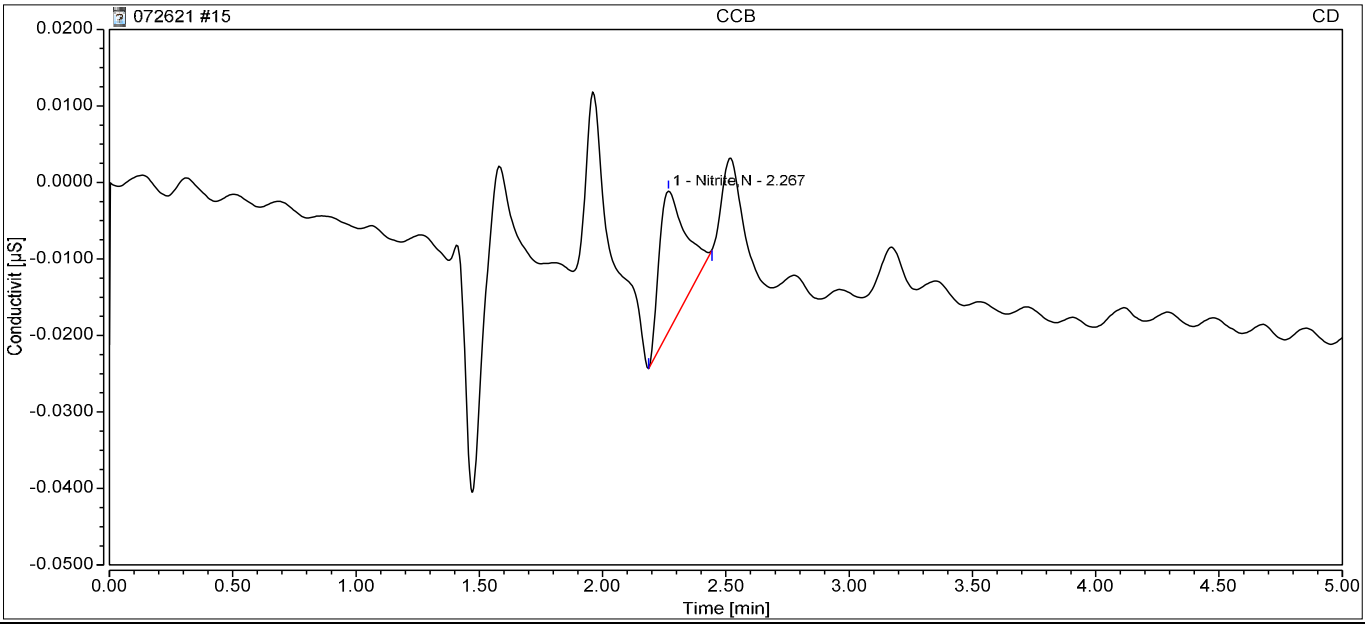
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	1.59	Fluoride	BMB	0.763	3.7264	3.7264	1.0000
2	1.96	Chloride	BMB	2.475	18.5947	18.5947	1.0000
3	2.22	Nitrite,N	BMB	1.054	3.6895	3.6895	1.0000
4	2.51	Sulfate	BMB	1.781	18.5032	18.5032	1.0000
5	2.79	Bromide	BMB	0.190	3.6801	3.6801	1.0000
6	3.16	Nitrate	BMB	1.118	3.6831	3.6831	1.0000
7	3.35	Chlorate	BMB	0.104	3.0923	3.0923	1.0000
8	4.05	Phosphate	BMB	0.295	2.6493	2.6493	1.0000
Total:			**0.000**	**7.780**		**57.62**	

15 CCB

Sample Name:	**CCB**	*Injection Volume:*	**5.00**
Vial Number:	**R4**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program ISO37mM 150mm short 0.4**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method ISO**	*Dilution Factor:*	**1.0000**
Recording Time:	**07/26/2021 13:25**	*Sample Weight:*	**1.0000**

Run Time:



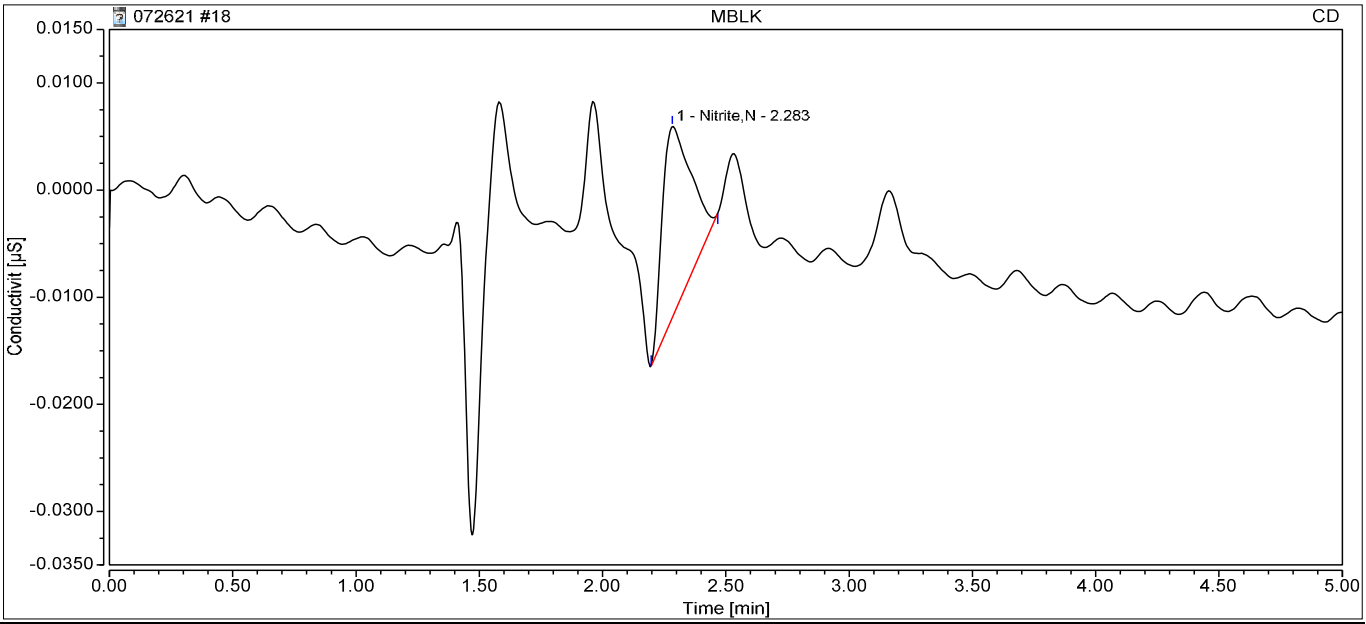
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Chloride	n.a.	n.a.	n.a.	n.a.	1.0000
1	2.27	Nitrite,N	BMB	0.002	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.	Bromide	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Nitrate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	1.0000
Total:			**0.000**	**0.002**		**0.00**	

18 MBLK

Sample Name:	**MBLK**	*Injection Volume:*	**5.00**
Vial Number:	**R5**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program ISO37mM 150mm short 0.4**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method ISO**	*Dilution Factor:*	**1.0000**
Recording Time:	**07/26/2021 13:48**	*Sample Weight:*	**1.0000**

Run Time:

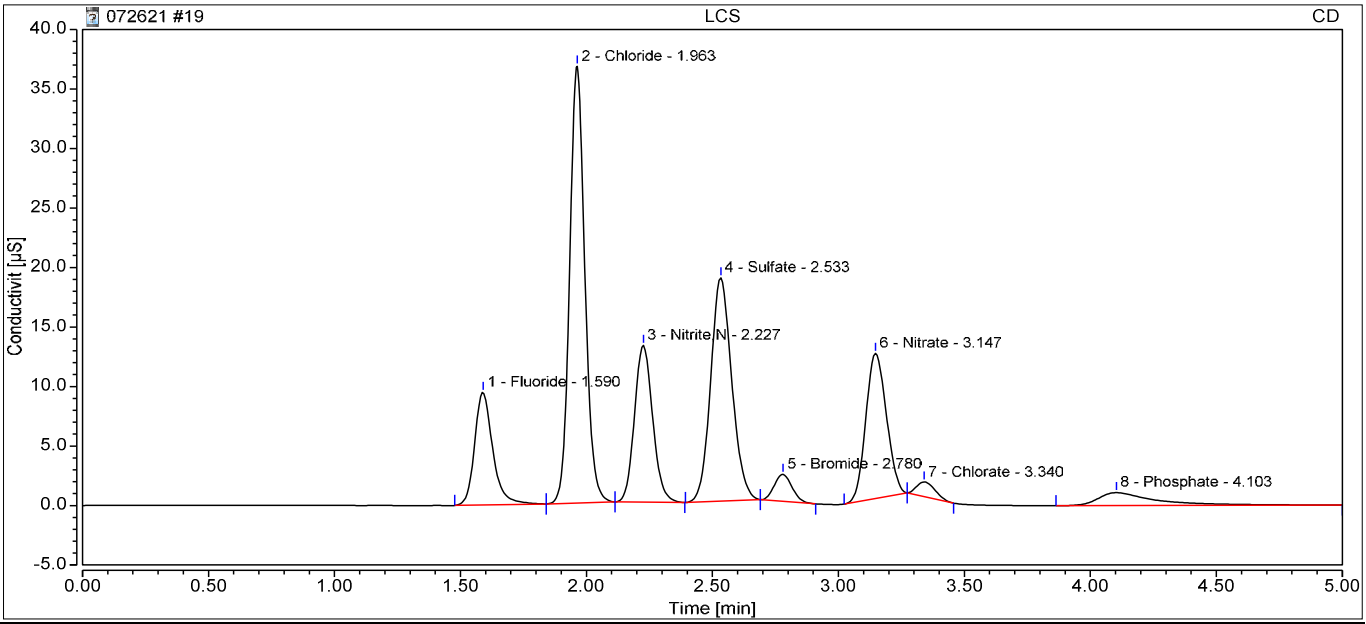


Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Chloride	n.a.	n.a.	n.a.	n.a.	1.0000
1	2.28	Nitrite,N	BMB	0.002	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.	Bromide	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Nitrate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	1.0000
Total:			**0.000**	**0.002**		**0.00**	

19 LCS			
Sample Name:	**LCS**	*Injection Volume:*	**5.00**
Vial Number:	**R2**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program ISO37mM 150mm short 0.4**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method ISO**	*Dilution Factor:*	**1.0000**
Recording Time:	**07/26/2021 13:55**	*Sample Weight:*	**1.0000**

Run Time:



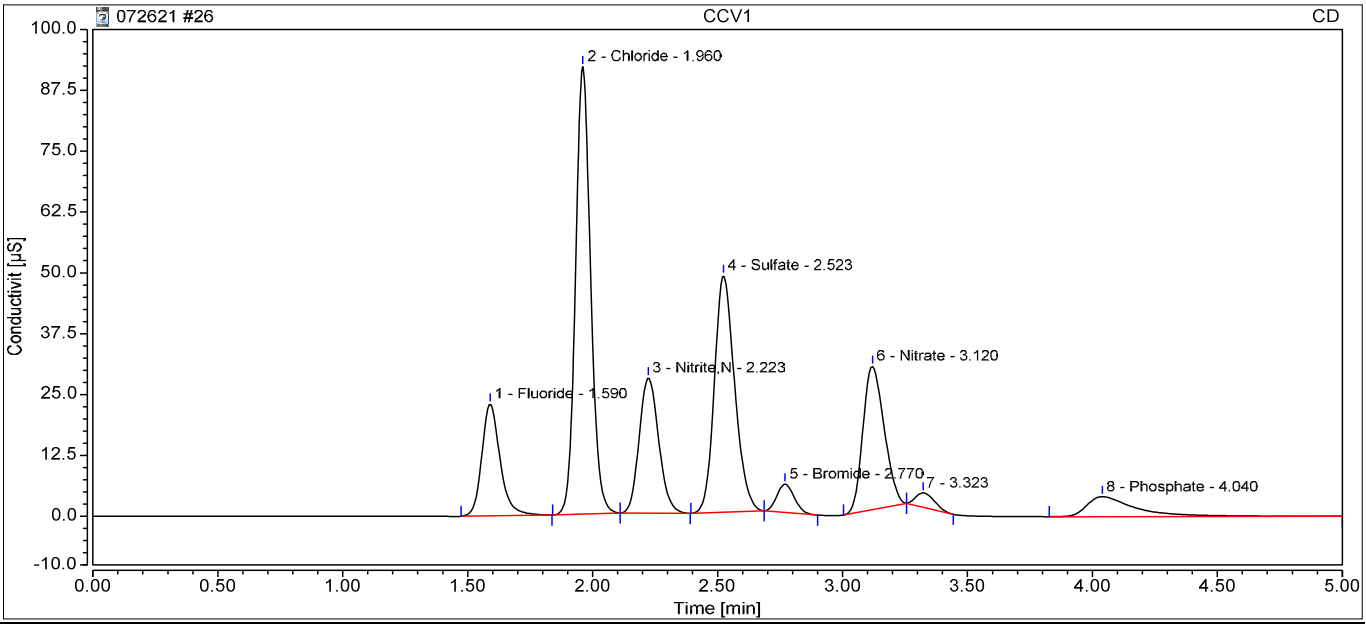
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	1.59	Fluoride	BMB	0.791	3.8680	3.8680	1.0000
2	1.96	Chloride	BMB	2.562	19.2507	19.2507	1.0000
3	2.23	Nitrite,N	BMB	1.102	3.8672	3.8672	1.0000
4	2.53	Sulfate	BMB	1.822	18.9299	18.9299	1.0000
5	2.78	Bromide	BMB	0.185	3.5822	3.5822	1.0000
6	3.15	Nitrate	BMB	1.159	3.8164	3.8164	1.0000
7	3.34	Chlorate	BMB	0.106	3.1447	3.1447	1.0000
8	4.10	Phosphate	BMB	0.291	2.6100	2.6100	1.0000
Total:			**0.000**	**8.018**		**59.07**	

26 CCV1

Sample Name:	**CCV1**	*Injection Volume:*	**5.00**
Vial Number:	**R3**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program ISO37mM 150mm short 0.4**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method ISO**	*Dilution Factor:*	**1.0000**
Recording Time:	**07/26/2021 16:14**	*Sample Weight:*	**1.0000**

Run Time:



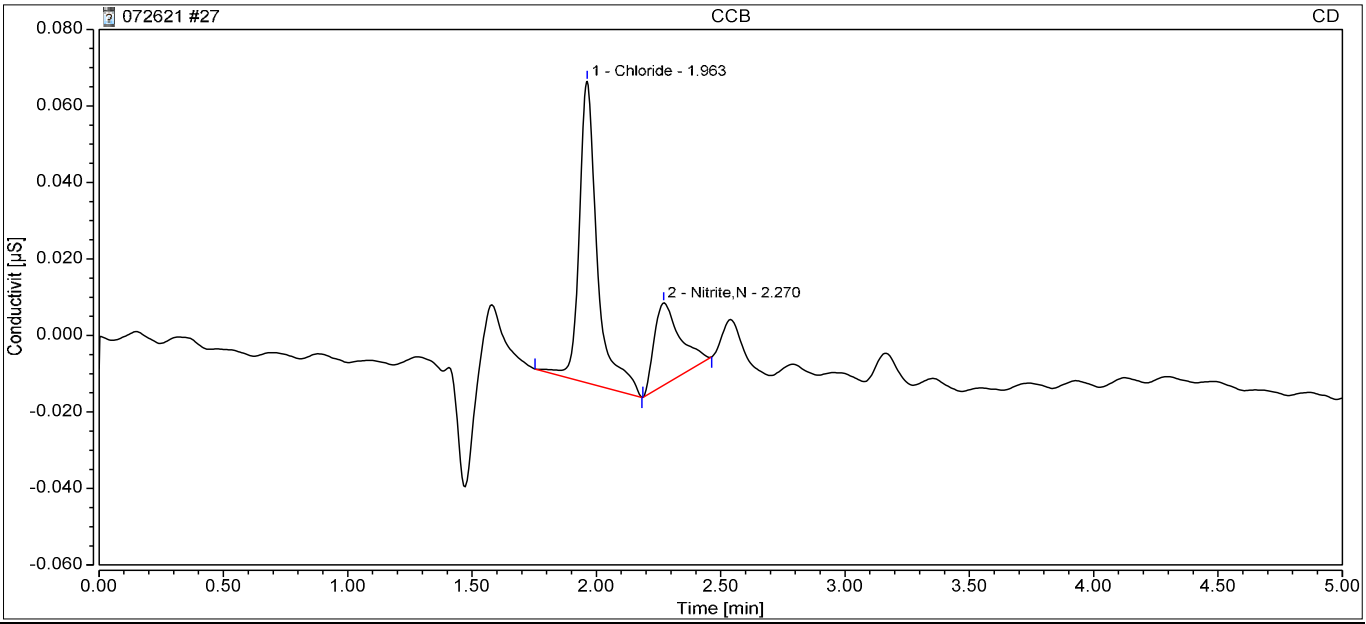
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	1.59	Fluoride	BMB	1.953	9.5648	9.5648	1.0000
2	1.96	Chloride	BMB	6.412	48.1894	48.1894	1.0000
3	2.22	Nitrite,N	BMB	2.512	9.3583	9.3583	1.0000
4	2.52	Sulfate	BMB	4.579	47.5464	47.5464	1.0000
5	2.77	Bromide	BMB	0.470	9.0859	9.0859	1.0000
6	3.12	Nitrate	BMB	2.899	9.5499	9.5499	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
8	4.04	Phosphate	BMB	0.938	8.2297	8.2297	1.0000
Total:			**0.000**	**19.763**		**141.52**	

27 CCB

Sample Name:	**CCB**	*Injection Volume:*	**5.00**
Vial Number:	**R6**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program ISO37mM 150mm short 0.4**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method ISO**	*Dilution Factor:*	**1.0000**
Recording Time:	**07/26/2021 16:21**	*Sample Weight:*	**1.0000**

Run Time:



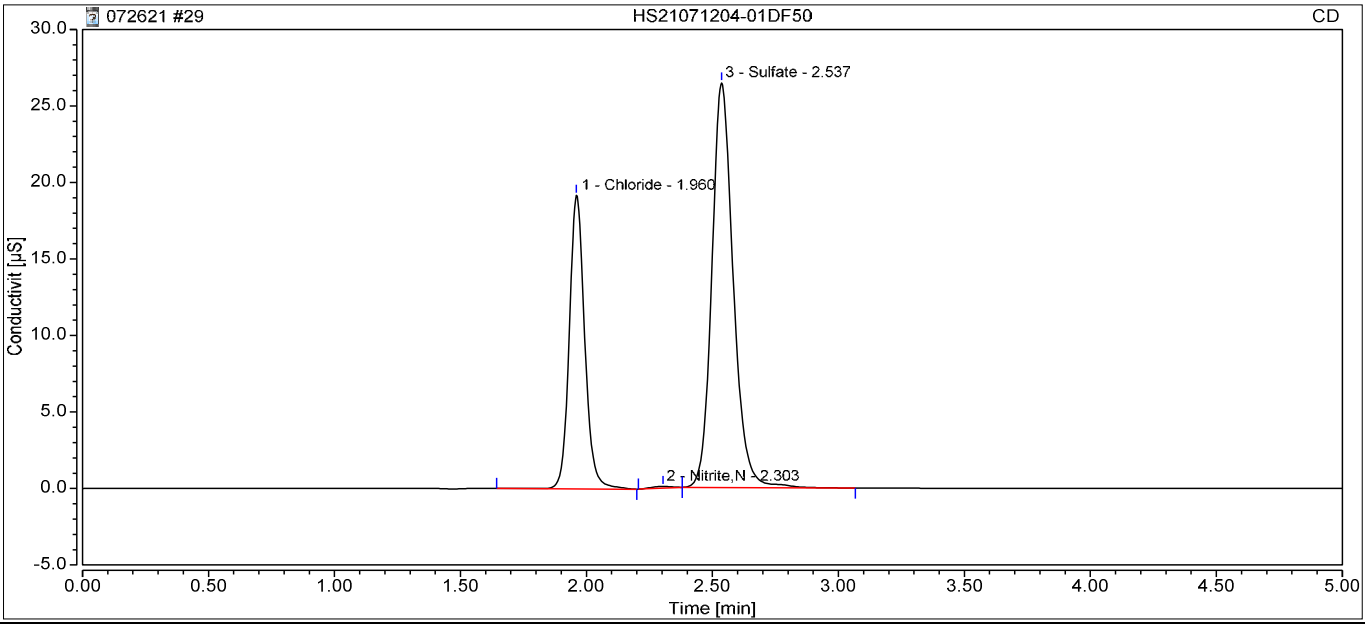
Integration Results

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	1.96	Chloride	BMB	0.007	0.0431	0.0431	1.0000
2	2.27	Nitrite,N	BMB	0.003	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.	Bromide	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**	**0.009**		**0.04**	

29 HS21071204-01DF50

Sample Name:	**HS21071204-01DF50**	*Injection Volume:*	**5.00**
Vial Number:	**RA8**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program ISO37mM 150mm short 0.4**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method ISO**	*Dilution Factor:*	**50.0000**
Recording Time:	**07/26/2021 17:05**	*Sample Weight:*	**1.0000**

Run Time:



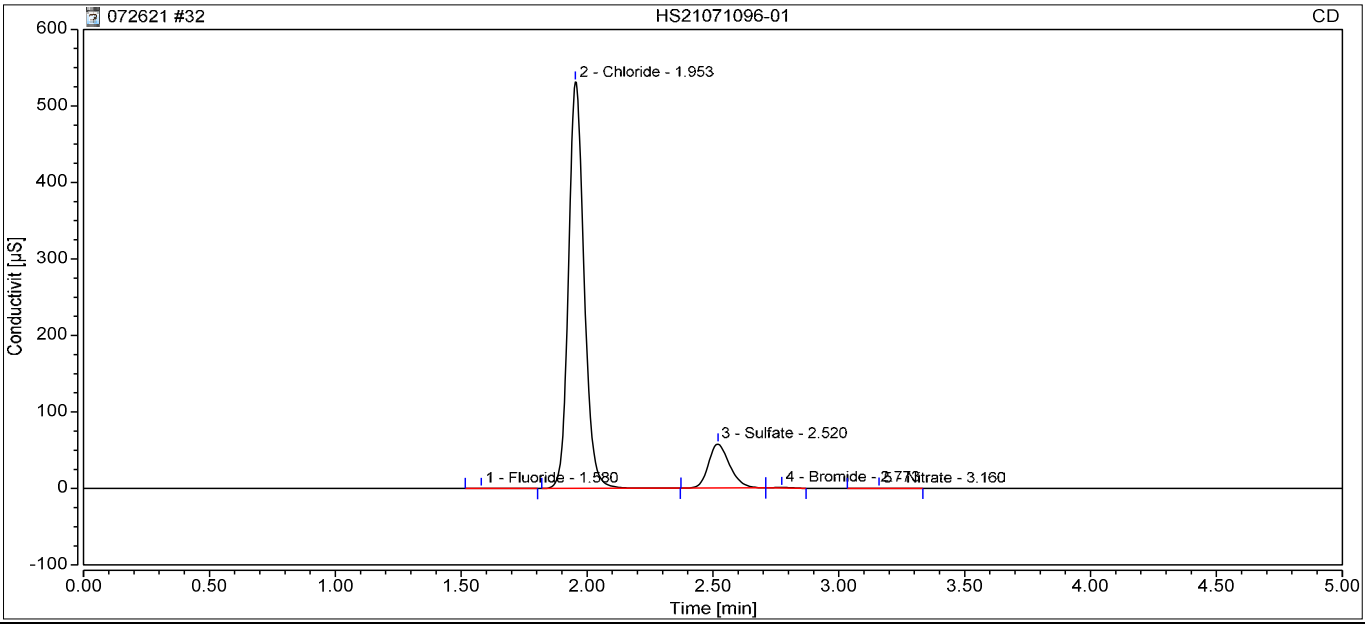
Integration Results

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.	50.0000
1	1.96	Chloride	BMB	1.361	10.2245	511.2246	50.0000
2	2.30	Nitrite,N	BMB	0.010	0.0171	0.8569	50.0000
3	2.54	Sulfate	BMB	2.604	27.0497	1352.4859	50.0000
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	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**	**3.976**		**1864.57**	

32 HS21071096-01

Sample Name:	**HS21071096-01**	*Injection Volume:*	**5.00**
Vial Number:	**RB3**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program ISO37mM 150mm short 0.4**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method ISO**	*Dilution Factor:*	**1.0000**
Recording Time:	**07/26/2021 17:27**	*Sample Weight:*	**1.0000**

Run Time:



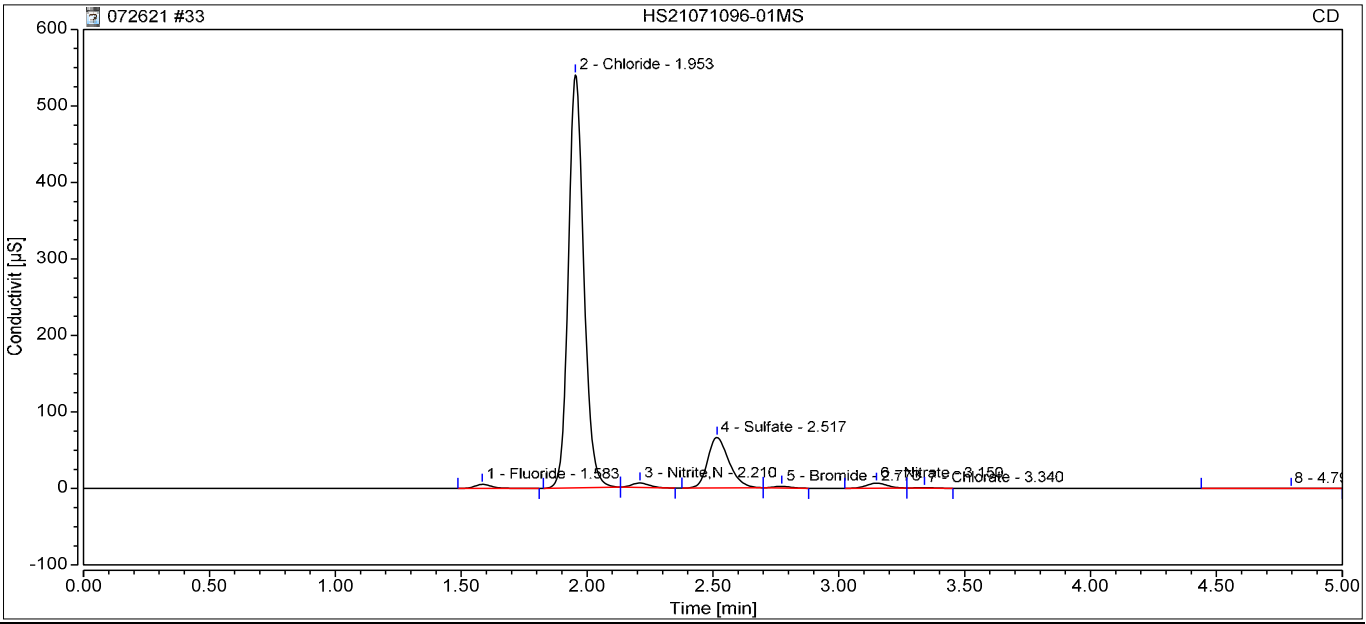
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	1.58	Fluoride	BMB	0.018	0.0720	0.0720	1.0000
2	1.95	Chloride	BMB	38.034	285.8650	285.8650	1.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	1.0000
3	2.52	Sulfate	BMB	5.611	58.2521	58.2521	1.0000
4	2.77	Bromide	BMB	0.063	1.2408	1.2408	1.0000
5	3.16	Nitrate	BMB	0.015	0.0475	0.0475	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**	**43.740**		**345.48**	

33 HS21071096-01MS

Sample Name:	**HS21071096-01MS**	*Injection Volume:*	**5.00**
Vial Number:	**RB4**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program ISO37mM 150mm short 0.4**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method ISO**	*Dilution Factor:*	**1.0000**
Recording Time:	**07/26/2021 17:34**	*Sample Weight:*	**1.0000**

Run Time:



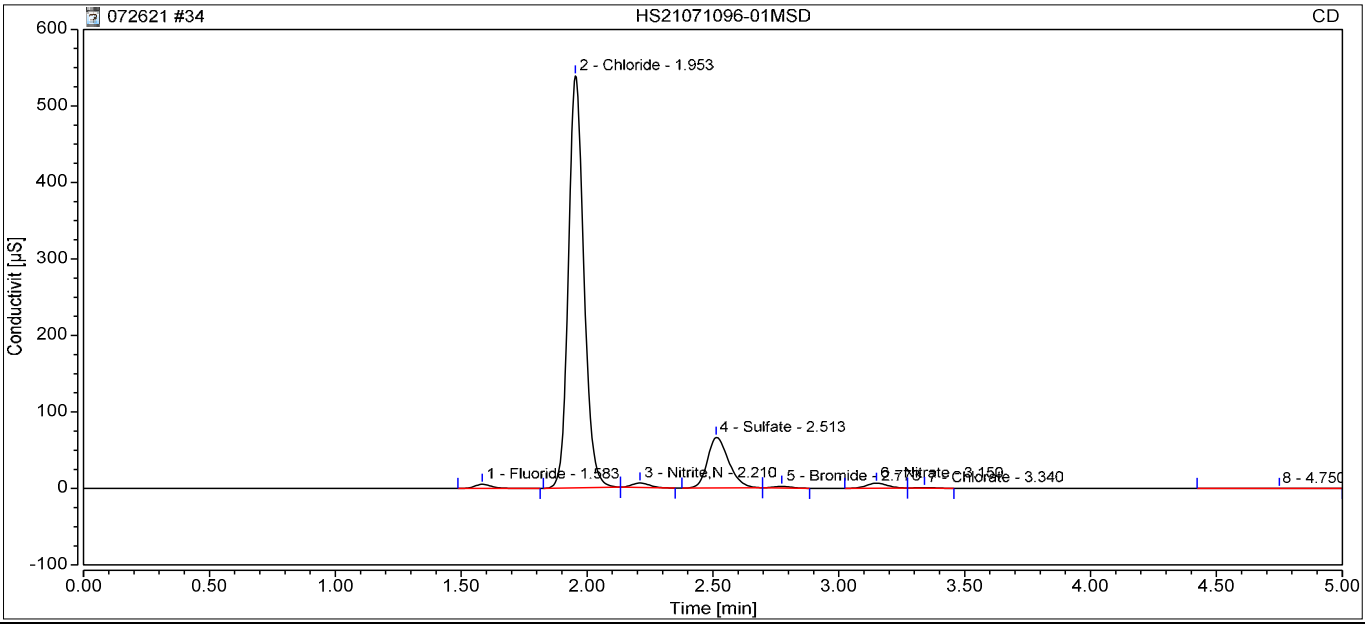
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	1.58	Fluoride	BMB	0.428	2.0863	2.0863	1.0000
2	1.95	Chloride	BMB	38.340	288.1648	288.1648	1.0000
3	2.21	Nitrite,N	BMB	0.475	1.6183	1.6183	1.0000
4	2.52	Sulfate	BMB	6.447	66.9300	66.9300	1.0000
5	2.77	Bromide	BMB	0.156	3.0185	3.0185	1.0000
6	3.15	Nitrate	BMB	0.613	2.0190	2.0190	1.0000
7	3.34	Chlorate	BMB	0.056	1.6353	1.6353	1.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	1.0000
Total:			**0.000**	**46.514**		**365.47**	

34 HS21071096-01MSD

Sample Name:	**HS21071096-01MSD**	*Injection Volume:*	**5.00**
Vial Number:	**RB5**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program ISO37mM 150mm short 0.4**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method ISO**	*Dilution Factor:*	**1.0000**
Recording Time:	**07/26/2021 17:42**	*Sample Weight:*	**1.0000**

Run Time:



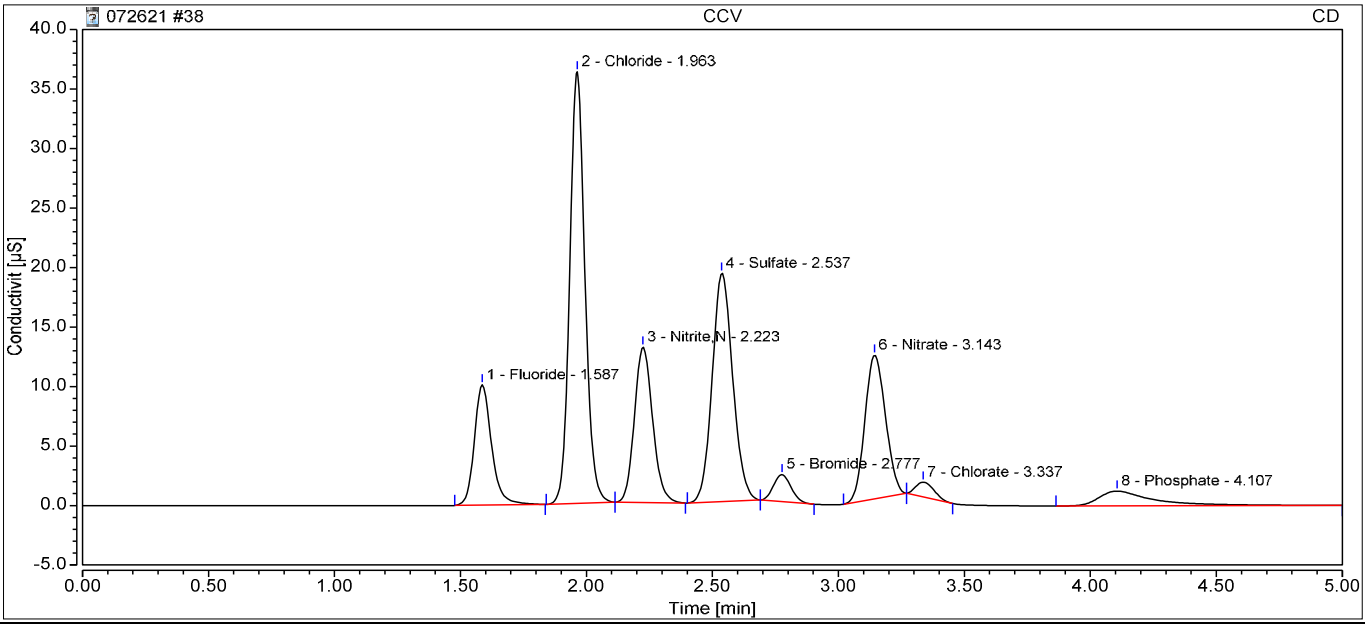
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	1.58	Fluoride	BMB	0.431	2.0990	2.0990	1.0000
2	1.95	Chloride	BMB	38.334	288.1209	288.1209	1.0000
3	2.21	Nitrite,N	BMB	0.478	1.6287	1.6287	1.0000
4	2.51	Sulfate	BMB	6.450	66.9620	66.9620	1.0000
5	2.77	Bromide	BMB	0.161	3.1267	3.1267	1.0000
6	3.15	Nitrate	BMB	0.615	2.0235	2.0235	1.0000
7	3.34	Chlorate	BMB	0.056	1.6241	1.6241	1.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	1.0000
Total:			**0.000**	**46.524**		**365.58**	

38 CCV

Sample Name:	**CCV**	*Injection Volume:*	**5.00**
Vial Number:	**R1**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program ISO37mM 150mm short 0.4**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method ISO**	*Dilution Factor:*	**1.0000**
Recording Time:	**07/26/2021 18:11**	*Sample Weight:*	**1.0000**

Run Time:



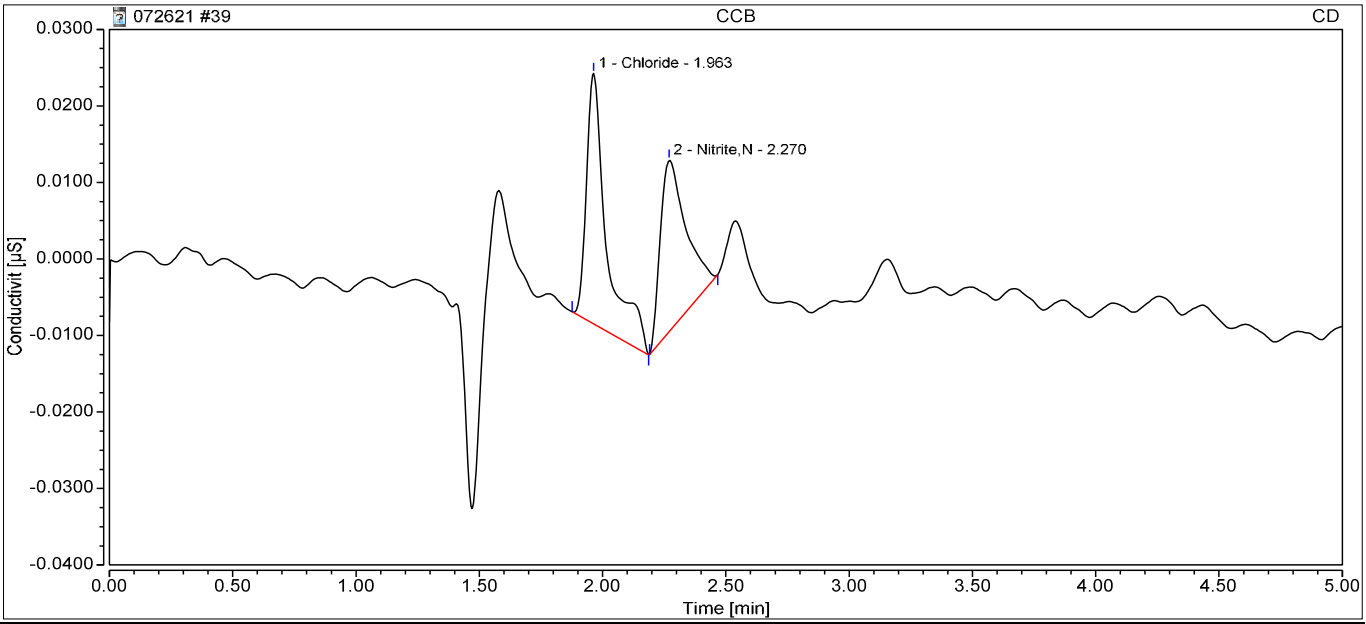
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	1.59	Fluoride	BMB	0.803	3.9244	3.9244	1.0000
2	1.96	Chloride	BMB	2.531	19.0180	19.0180	1.0000
3	2.22	Nitrite,N	BMB	1.095	3.8413	3.8413	1.0000
4	2.54	Sulfate	BMB	1.812	18.8297	18.8297	1.0000
5	2.78	Bromide	BMB	0.184	3.5622	3.5622	1.0000
6	3.14	Nitrate	BMB	1.145	3.7720	3.7720	1.0000
7	3.34	Chlorate	BMB	0.107	3.1811	3.1811	1.0000
8	4.11	Phosphate	BMB	0.315	2.8200	2.8200	1.0000
Total:			**0.000**	**7.993**		**58.95**	

39 CCB

Sample Name:	**CCB**	*Injection Volume:*	**5.00**
Vial Number:	**R4**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program ISO37mM 150mm short 0.4**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method ISO**	*Dilution Factor:*	**1.0000**
Recording Time:	**07/26/2021 18:19**	*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	1.96	Chloride	BMB	0.003	0.0163	0.0163	1.0000
2	2.27	Nitrite,N	BMB	0.003	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.	Bromide	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Nitrate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	1.0000
Total:			**0.000**	**0.006**		**0.02**	

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	Type	Analysis	Sample Name	Sample ID	Origin	Manual Dilut	Result
1	Standard	NPOC	CAL	Untitled	05_10_2021A_CAL.20	1.000	
2	Unknown	NPOC	ICV		05_10_2021A_CAL.ca	1.000	NPOC:9.685mg/
3	Unknown	NPOC	ICB		05_10_2021A_CAL.ca	1.000	NPOC:0.03898
4	Unknown	NPOC	CCV		02_25_2021_CAL.cal	1.000	NPOC:10.64mg/
5	Unknown	NPOC	CCB		02_25_2021_CAL.cal	1.000	NPOC:-0.1171m
6	Unknown	NPOC	MBLK-05102021	TOC_W 531	02_25_2021_CAL.cal	1.000	NPOC:-0.1201m
7	Unknown	NPOC	LCS-05102021		02_25_2021_CAL.cal	1.000	NPOC:11.49mg/
8	Unknown	NPOC	LCSD-05102021		02_25_2021_CAL.cal	1.000	NPOC:11.01mg/
9	Unknown	NPOC	HS21050104-01		02_25_2021_CAL.cal	1.000	NPOC:10.34mg/
10	Unknown	NPOC	HS21050104-01MS		02_25_2021_CAL.cal	1.000	NPOC:21.01mg/
11	Unknown	NPOC	HS21050104-02		02_25_2021_CAL.cal	1.000	NPOC:8.229mg/
12	Unknown	NPOC	HS21050104-03		02_25_2021_CAL.cal	1.000	NPOC:3.514mg/
13	Unknown	NPOC	HS21050104-04		02_25_2021_CAL.cal	1.000	NPOC:1.251mg/
14	Unknown	NPOC	HS21050123-01		02_25_2021_CAL.cal	1.000	NPOC:23.28mg/
15	Unknown	NPOC	HS21050155-01		02_25_2021_CAL.cal	1.000	NPOC:4.646mg/
16	Unknown	NPOC	CCV		02_25_2021_CAL.cal	1.000	NPOC:10.57mg/
17	Unknown	NPOC	CCB		02_25_2021_CAL.cal	1.000	NPOC:-0.04320
18	Unknown	NPOC	HS21050155-02		02_25_2021_CAL.cal	1.000	NPOC:17.96mg/
19	Unknown	NPOC	HS21050155-03DF10		02_25_2021_CAL.cal	1.000	NPOC:9.410mg/
20	Unknown	NPOC	HS21050155-04DF10		02_25_2021_CAL.cal	1.000	NPOC:3.459mg/
21	Unknown	NPOC	HS21050155-05DF50		02_25_2021_CAL.cal	1.000	NPOC:1.676mg/
22	Unknown	NPOC	CCV		02_25_2021_CAL.cal	1.000	NPOC:10.43mg/
23	Unknown	NPOC	CCB		02_25_2021_CAL.cal	1.000	NPOC:-0.1208m
24	Unknown	NPOC	MBLK2-05102021	TOC_W 531	02_25_2021_CAL.cal	1.000	NPOC:-0.04462
25	Unknown	NPOC	LCS2-05102021		02_25_2021_CAL.cal	1.000	NPOC:11.52mg/
26	Unknown	NPOC	LCSD2-05102021		02_25_2021_CAL.cal	1.000	NPOC:11.01mg/
27	Unknown	NPOC	HS21050155-06DF10		02_25_2021_CAL.cal	1.000	NPOC:0.9479m
28	Unknown	NPOC	HS21050155-07DF10		02_25_2021_CAL.cal	1.000	NPOC:293.0mg/
29	Unknown	NPOC	HS21041464-01		02_25_2021_CAL.cal	1.000	NPOC:10.74mg/
30	Unknown	NPOC	HS21041464-01MS		02_25_2021_CAL.cal	1.000	NPOC:22.09mg/
31	Unknown	NPOC	HS21041464-02.		02_25_2021_CAL.cal	1.000	NPOC:467.8mg/
32	Unknown	NPOC	HS21041464-03		02_25_2021_CAL.cal	1.000	NPOC:527.3mg/
33	Unknown	NPOC	HS21050168-01		02_25_2021_CAL.cal	1.000	NPOC:10.05mg/
34	Unknown	NPOC	CCV		02_25_2021_CAL.cal	1.000	NPOC:26.35mg/
35	Unknown	NPOC	CCB		02_25_2021_CAL.cal	1.000	NPOC:0.2054m
36	Unknown	NPOC	HS21050174-01		02_25_2021_CAL.cal	1.000	NPOC:15.67mg/
37	Unknown	NPOC	HS21050186-01		02_25_2021_CAL.cal	1.000	NPOC:10.17mg/
38	Unknown	NPOC	HS21050252-04		02_25_2021_CAL.cal	1.000	NPOC:3.521mg/
39	Unknown	NPOC	HS21050252-06		02_25_2021_CAL.cal	1.000	NPOC:11.77mg/
40	Unknown	NPOC	CCV		02_25_2021_CAL.cal	1.000	NPOC:25.77mg/
41	Unknown	NPOC	CCB		02_25_2021_CAL.cal	1.000	NPOC:0.00982

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	Notes	Status	Date / Time	Vial
1		Completed	5/10/2021 6:58:48 P	1, 2, 3, 4, 5,
2		Completed	5/10/2021 7:10:12 P	8
3		Completed	5/10/2021 7:24:10 P	9
4		Completed	5/10/2021 7:39:01 P	10
5		Completed	5/10/2021 7:54:13 P	11
6		Completed	5/10/2021 8:07:13 P	12
7		Completed	5/10/2021 8:21:22 P	13
8		Completed	5/10/2021 8:35:33 P	14
9		Completed	5/10/2021 8:49:54 P	15
10		Completed	5/10/2021 9:04:32 P	16
11		Completed	5/10/2021 9:18:50 P	17
12		Completed	5/10/2021 9:34:39 P	18
13		Completed	5/10/2021 9:49:51 P	19
14		Completed	5/10/2021 10:04:29	20
15		Completed	5/10/2021 10:21:10	21
16		Completed	5/10/2021 10:35:35	10
17		Completed	5/10/2021 10:51:04	11
18		Completed	5/10/2021 11:05:57	22
19		Completed	5/10/2021 11:22:43	23
20		Completed	5/10/2021 11:38:51	24
21		Completed	5/10/2021 11:54:17	25
22		Completed	5/11/2021 12:08:35	10
23		Completed	5/11/2021 12:21:37	11
24		Completed	5/11/2021 12:36:46	12
25		Completed	5/11/2021 12:51:01	13
26		Completed	5/11/2021 1:05:25 A	14
27		Completed	5/11/2021 1:20:49 A	26
28		Completed	5/11/2021 1:37:21 A	27
29		Completed	5/11/2021 1:52:06 A	28
30		Completed	5/11/2021 2:07:07 A	29
31		Completed	5/11/2021 2:23:17 A	30
32		Completed	5/11/2021 2:39:50 A	31
33		Completed	5/11/2021 2:54:11 A	32
34		Completed	5/11/2021 3:11:24 A	33
35		Completed	5/11/2021 3:26:29 A	34
36		Completed	5/11/2021 3:41:17 A	35
37		Completed	5/11/2021 3:55:38 A	36
38		Completed	5/11/2021 4:11:57 A	37
39		Completed	5/11/2021 4:26:31 A	38
40		Completed	5/11/2021 4:41:33 A	33
41		Completed	5/11/2021 4:54:36 A	34

TOC-Control L Report

2021_05_10_002.tlx

Instr.Information

Instrument Options	TOC/ASI/IC Unit/
Catalyst	Regular Sensitivity

Cal. Curve

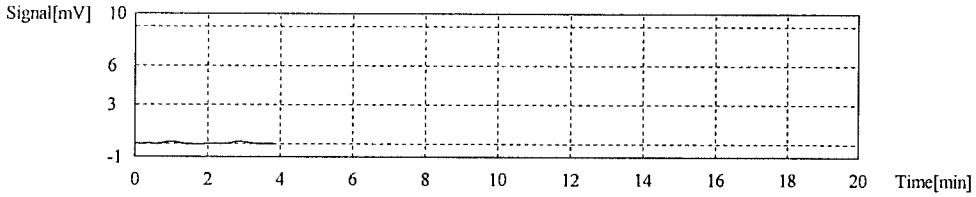
Sample Name:	CAL
Sample ID:	Untitled
Cal. Curve:	05_10_2021A_CAL.2021_05_10_17_37_49.cal
Status	Completed

Type	Anal.
Standard	NPOC

Conc: 0.000mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	0.4989	50uL	1.000	*******		5/10/2021 5:45:57 PM
2	0.3616	50uL	1.000	*******		5/10/2021 5:48:41 PM

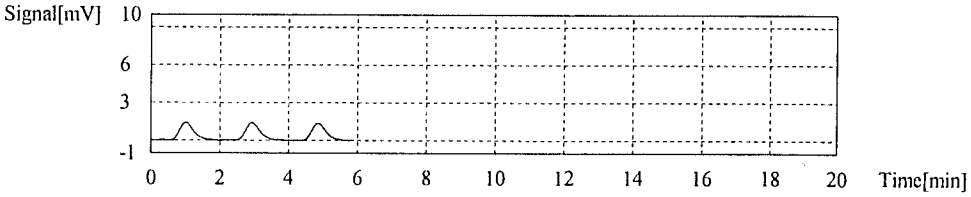
Acid Add.	1.500%
Sparge Gas Flow	80mL/min
Sp. Time	90.00sec
Mean Area	0.4303



Conc: 1.000mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	3.881	50uL	1.000	*******		5/10/2021 5:56:40 PM
2	4.044	50uL	1.000	*******	E	5/10/2021 5:59:24 PM
3	3.915	50uL	1.000	*******		5/10/2021 6:02:09 PM

Acid Add.	1.500%
Sparge Gas Flow	80mL/min
Sp. Time	90.00sec
Mean Area	3.898



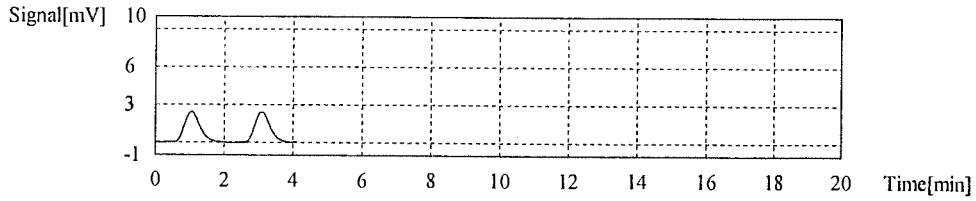
Conc: 2.000mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	7.481	50uL	1.000	*******		5/10/2021 6:10:31 PM
2	7.343	50uL	1.000	*******		5/10/2021 6:13:15 PM

TOC-Control L Report

2021_05_10_002.tlx

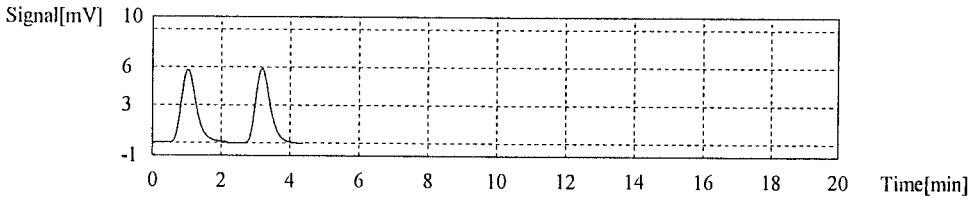
Acid Add.	1.500%
Sparge Gas Flow	80mL/min
Sp. Time	90.00sec
Mean Area	7.412



Conc: 5.000mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	17.39	50uL	1.000	*******		5/10/2021 6:21:29 PM
2	17.58	50uL	1.000	*******		5/10/2021 6:24:16 PM

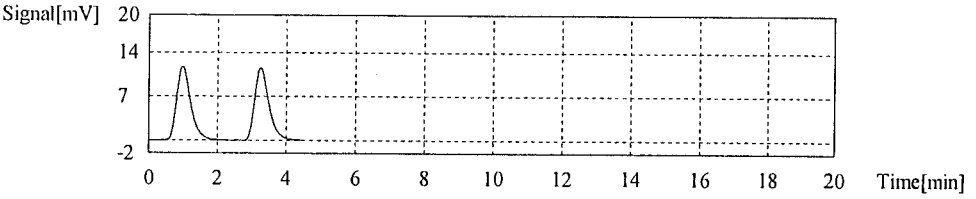
Acid Add.	1.500%
Sparge Gas Flow	80mL/min
Sp. Time	90.00sec
Mean Area	17.48



Conc: 10.00mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	33.69	50uL	1.000	*******		5/10/2021 6:32:55 PM
2	33.47	50uL	1.000	*******		5/10/2021 6:35:37 PM

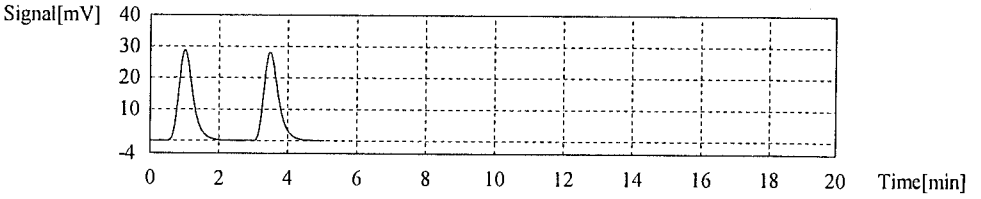
Acid Add.	1.500%
Sparge Gas Flow	80mL/min
Sp. Time	90.00sec
Mean Area	33.58



Conc: 25.00mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	83.30	50uL	1.000	*******		5/10/2021 6:44:29 PM
2	83.46	50uL	1.000	*******		5/10/2021 6:47:16 PM

Acid Add.	1.500%
Sparge Gas Flow	80mL/min
Sp. Time	90.00sec
Mean Area	83.38



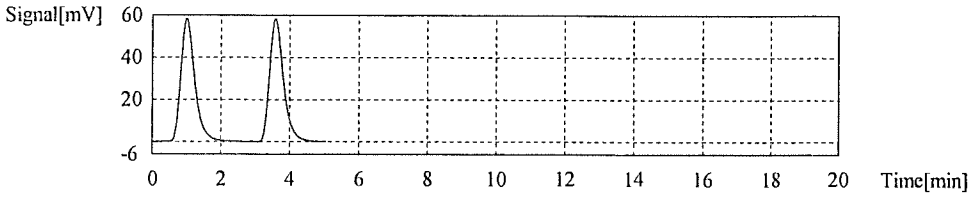
Conc: 50.00mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	167.7	50uL	1.000	*******		5/10/2021 6:56:07 PM
2	166.5	50uL	1.000	*******		5/10/2021 6:58:48 PM

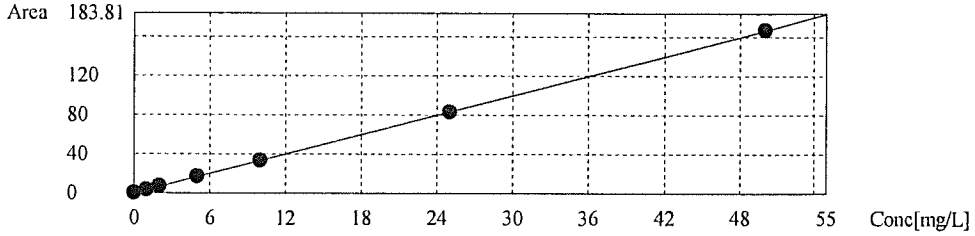
TOC-Control L Report

2021_05_10_002.tlx

Acid Add.	1.500%
Sparge Gas Flow	80mL/min
Sp. Time	90.00sec
Mean Area	167.1



Slope:	3.327
Intercept	0.000
r^2	1.0000
r	1.0000
RSE(%)	N/A
Zero Shift	Yes



Sample

Sample Name:	ICV
Sample ID:	
Origin:	05_10_2021A_CAL.cal
Status	Completed
Chk. Result	

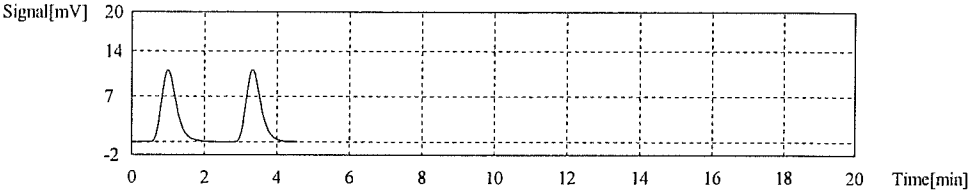
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:9.685mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	32.23	9.687mg/L	50uL	1.000		05_10_2021A_CAL.2021_05_10_17_37_49.cal	5/10/2021 7:07:17 PM
2	32.22	9.684mg/L	50uL	1.000		05_10_2021A_CAL.2021_05_10_17_37_49.cal	5/10/2021 7:10:12 PM

Mean Area	32.23
Mean Conc.	9.685mg/L



Sample

Sample Name:	ICB
Sample ID:	
Origin:	05_10_2021A_CAL.cal
Status	Completed
Chk. Result	

Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.03898mg/L

TOC-Control L Report

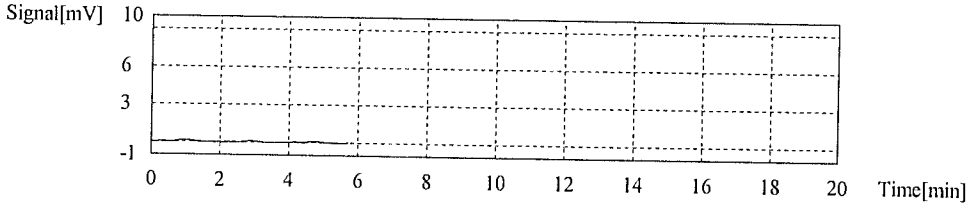
2021_05_10_002.tlx

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.4794	0.1441mg/L	50uL	1.000	E	05_10_2021A_CAL.2021_05_10_17_37_49.cal	5/10/2021 7:18:10 PM
2	0.08420	0.02531mg/L	50uL	1.000		05_10_2021A_CAL.2021_05_10_17_37_49.cal	5/10/2021 7:21:10 PM
3	0.1752	0.05266mg/L	50uL	1.000		05_10_2021A_CAL.2021_05_10_17_37_49.cal	5/10/2021 7:24:10 PM

Mean Area 0.1297
Mean Conc. 0.03898mg/L



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	Type	Analysis	Sample Name	Sample ID	Origin	Manual Dilut	Result
1	Unknown	NPOC	CCV	317190113	05_10_2021A_CAL.ca	1.000	NPOC:25.50mg/
2	Unknown	NPOC	CCB		05_10_2021A_CAL.ca	1.000	NPOC:0.1009m
3	Unknown	NPOC	MBLK-080621		05_10_2021A_CAL.ca	1.000	NPOC:0.07739
4	Unknown	NPOC	LCS-08062021	3100603915	05_10_2021A_CAL.ca	1.000	NPOC:10.88mg/
5	Unknown	NPOC	LCSD-08062021	3100603915	05_10_2021A_CAL.ca	1.000	NPOC:10.25mg/
6	Unknown	NPOC	HS21071204-02DF20		05_10_2021A_CAL.ca	1.000	NPOC:31.50mg/
7	Unknown	NPOC	HS21071204-02MSDF2		05_10_2021A_CAL.ca	1.000	NPOC:39.97mg/
8	Unknown	NPOC	HS21071204-03DF100		05_10_2021A_CAL.ca	1.000	NPOC:27.53mg/
9	Unknown	NPOC	HS21071204-08		05_10_2021A_CAL.ca	1.000	NPOC:7.631mg/
10	Unknown	NPOC	HS21071647-01		05_10_2021A_CAL.ca	1.000	NPOC:13.34mg/
11	Unknown	NPOC	HS21071667-36		05_10_2021A_CAL.ca	1.000	NPOC:1.074mg/
12	Unknown	NPOC	HS21071667-48		05_10_2021A_CAL.ca	1.000	NPOC:1.856mg/
13	Unknown	NPOC	CCV	317190113	05_10_2021A_CAL.ca	1.000	NPOC:25.98mg/
14	Unknown	NPOC	CCB		05_10_2021A_CAL.ca	1.000	NPOC:0.1387m
15	Unknown	NPOC	HS21071667-49		05_10_2021A_CAL.ca	1.000	NPOC:0.2393m
16	Unknown	NPOC	HS21071667-51		05_10_2021A_CAL.ca	1.000	NPOC:2.886mg/
17	Unknown	NPOC	HS21071667-55		05_10_2021A_CAL.ca	1.000	NPOC:1.163mg/
18	Unknown	NPOC	HS21071667-56		05_10_2021A_CAL.ca	1.000	NPOC:3.036mg/
19	Unknown	NPOC	CCV	317190113	05_10_2021A_CAL.ca	1.000	NPOC:25.62mg/
20	Unknown	NPOC	CCB		05_10_2021A_CAL.ca	1.000	NPOC:0.05308
21	Unknown	NPOC	MBLK-080621		05_10_2021A_CAL.ca	1.000	NPOC:0.05381
22	Unknown	NPOC	LCS-08062021	3100603915	05_10_2021A_CAL.ca	1.000	NPOC:10.79mg/
23	Unknown	NPOC	LCSD-08062021	3100603915	05_10_2021A_CAL.ca	1.000	NPOC:10.34mg/
24	Unknown	NPOC	HS21071667-57		05_10_2021A_CAL.ca	1.000	NPOC:0.6351m
25	Unknown	NPOC	HS21071667-68		05_10_2021A_CAL.ca	1.000	NPOC:2.735mg/
26	Unknown	NPOC	HS21071667-68MS		05_10_2021A_CAL.ca	1.000	NPOC:13.04mg/
27	Unknown	NPOC	HS21071667-69		05_10_2021A_CAL.ca	1.000	NPOC:3.437mg/
28	Unknown	NPOC	HS21071667-71		05_10_2021A_CAL.ca	1.000	NPOC:0.3897m
29	Unknown	NPOC	CCV	317190113	05_10_2021A_CAL.ca	1.000	NPOC:25.02mg/
30	Unknown	NPOC	CCB		05_10_2021A_CAL.ca	1.000	NPOC:0.3906m

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	Notes	Status	Date / Time	Vial
1		Completed	8/6/2021 11:22:50 A	1
2		Completed	8/6/2021 11:36:58 A	2
3		Completed	8/6/2021 11:51:10 A	3
4		Completed	8/6/2021 12:03:15 P	4
5		Completed	8/6/2021 12:15:08 P	5
6		Completed	8/6/2021 12:27:11 P	6
7		Completed	8/6/2021 12:39:23 P	7
8		Completed	8/6/2021 1:29:53 PM	8
9		Completed	8/6/2021 1:41:45 PM	9
10		Completed	8/6/2021 1:57:00 PM	10
11		Completed	8/6/2021 2:11:29 PM	11
12		Completed	8/6/2021 2:26:07 PM	12
13		Completed	8/6/2021 2:41:37 PM	1
14		Completed	8/6/2021 2:53:15 PM	2
15		Completed	8/6/2021 3:07:20 PM	13
16		Completed	8/6/2021 3:22:06 PM	14
17		Completed	8/6/2021 3:36:44 PM	15
18		Completed	8/6/2021 3:51:24 PM	16
19		Completed	8/6/2021 4:03:55 PM	17
20		Completed	8/6/2021 4:18:04 PM	18
21		Completed	8/6/2021 4:29:23 PM	3
22		Completed	8/6/2021 4:42:22 PM	4
23		Completed	8/6/2021 4:54:11 PM	5
24		Completed	8/6/2021 5:05:45 PM	19
25		Completed	8/6/2021 5:20:13 PM	20
26		Completed	8/6/2021 6:09:25 PM	21
27		Completed	8/6/2021 6:21:10 PM	22
28		Completed	8/6/2021 6:35:26 PM	23
29		Completed	8/6/2021 6:47:59 PM	17
30		Completed	8/6/2021 7:02:08 PM	18

TOC-Control L Report

2021_08_06_001.tlx

Instr.Information

Instrument Options: TOC/ASI/IC Unit/
Catalyst: Regular Sensitivity

Sample

Sample Name: CCV
Sample ID: 317190113
Origin: 05_10_2021A_CAL.cal
Status: Completed
Chk. Result:

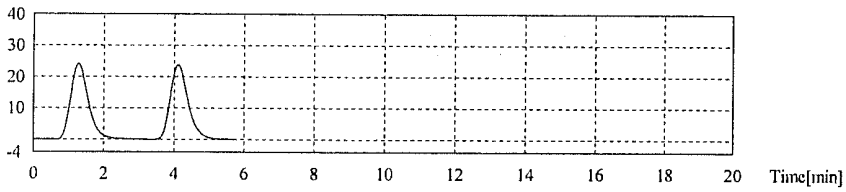
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:25.50mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	84.71	25.46mg/L	50uL	1.000		05_10_2021A_CAL.2021_05_10_17_37_49.cal	8/6/2021 11:19:43 AM
2	84.98	25.54mg/L	50uL	1.000		05_10_2021A_CAL.2021_05_10_17_37_49.cal	8/6/2021 11:22:50 AM

Mean Area: 84.84
Mean Conc.: 25.50mg/L



Sample

Sample Name: CCB
Sample ID:
Origin: 05_10_2021A_CAL.cal
Status: Completed
Chk. Result:

Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.1009mg/L

1. Det

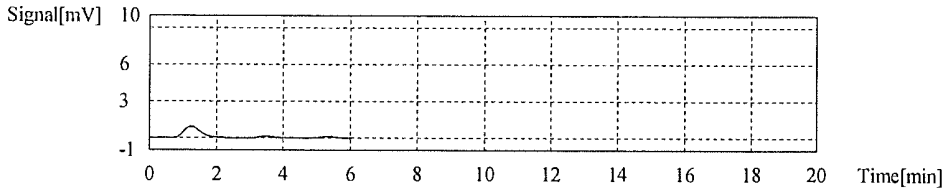
Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	3.091	0.9290mg/L	50uL	1.000	E	05_10_2021A_CAL.2021_05_10_17_37_49.cal	8/6/2021 11:31:18 AM
2	0.4130	0.1241mg/L	50uL	1.000		05_10_2021A_CAL.2021_05_10_17_37_49.cal	8/6/2021 11:33:58 AM
3	0.2587	0.07775mg/L	50uL	1.000		05_10_2021A_CAL.2021_05_10_17_37_49.cal	8/6/2021 11:36:58 AM

TOC-Control L Report

2021_08_06_001.tlx

Mean Area 0.3358
Mean Conc. 0.1009mg/L



Sample

Sample Name: MBLK-080621
Sample ID:
Origin: 05_10_2021A_CAL.cal
Status Completed
Chk. Result

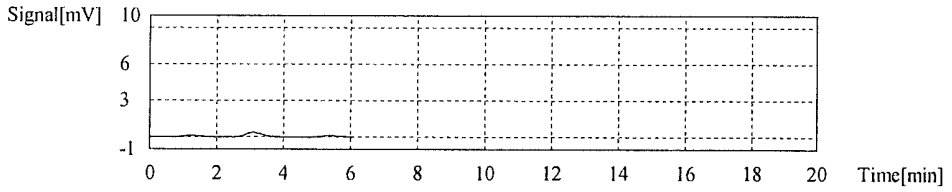
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.07739mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.2244	0.06744mg/L	50uL	1.000		05_10_2021A_CAL.2021_05_10_17_37_49.cal	8/6/2021 11:45:10 AM
2	1.177	0.3537mg/L	50uL	1.000	E	05_10_2021A_CAL.2021_05_10_17_37_49.cal	8/6/2021 11:48:31 AM
3	0.2906	0.08734mg/L	50uL	1.000		05_10_2021A_CAL.2021_05_10_17_37_49.cal	8/6/2021 11:51:10 AM

Mean Area 0.2575
Mean Conc. 0.07739mg/L



Sample

Sample Name: LCS-08062021
Sample ID: 3100603915
Origin: 05_10_2021A_CAL.cal
Status Completed
Chk. Result

Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:10.88mg/L

1. Det

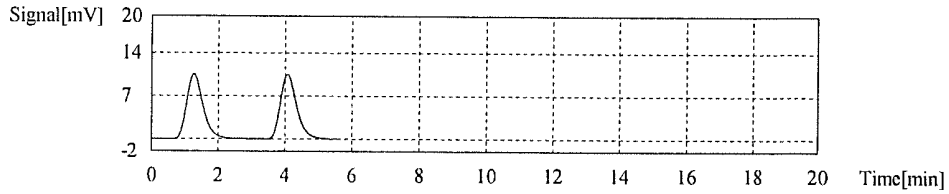
Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	36.32	10.92mg/L	50uL	1.000		05_10_2021A_CAL.2021_05_10_17_37_49.cal	8/6/2021 12:00:18 PM
2	36.08	10.84mg/L	50uL	1.000		05_10_2021A_CAL.2021_05_10_17_37_49.cal	8/6/2021 12:03:15 PM

TOC-Control L Report

2021_08_06_001.tlx

Mean Area 36.20
Mean Conc. 10.88mg/L



Sample

Sample Name: LCSD-08062021
Sample ID: 3100603915
Origin: 05_10_2021A_CAL.cal
Status Completed
Chk. Result

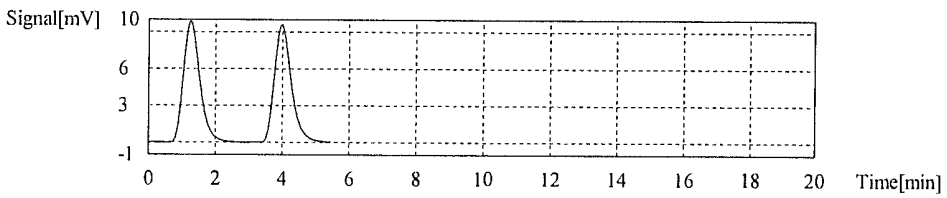
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:10.25mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	34.02	10.22mg/L	50uL	1.000		05_10_2021A_CAL.2021_05_10_17_37_49.cal	8/6/2021 12:12:09 PM
2	34.16	10.27mg/L	50uL	1.000		05_10_2021A_CAL.2021_05_10_17_37_49.cal	8/6/2021 12:15:08 PM

Mean Area 34.09
Mean Conc. 10.25mg/L



Sample

Sample Name: HS21071204-02DF20
Sample ID:
Origin: 05_10_2021A_CAL.cal
Status Completed
Chk. Result

Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:31.50mg/L

1. Det

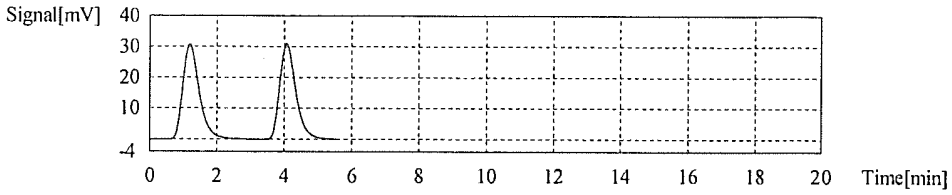
Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	105.1	31.59mg/L	50uL	1.000		05_10_2021A_CAL.2021_05_10_17_37_49.cal	8/6/2021 12:24:11 PM
2	104.5	31.41mg/L	50uL	1.000		05_10_2021A_CAL.2021_05_10_17_37_49.cal	8/6/2021 12:27:11 PM

TOC-Control L Report

2021_08_06_001.tlx

Mean Area 104.8
Mean Conc. 31.50mg/L



Sample

Sample Name: HS21071204-02MSDF20
Sample ID:
Origin: 05_10_2021A_CAL.cal
Status Completed
Chk. Result

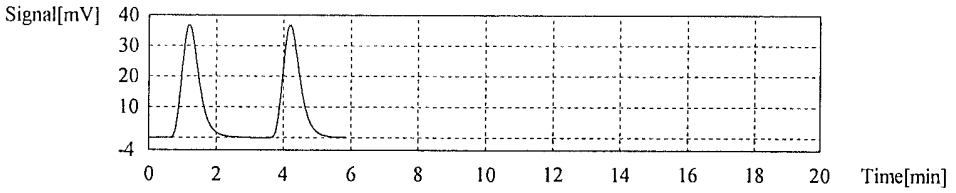
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:39.97mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	132.4	39.79mg/L	50uL	1.000		05_10_2021A_CAL.2021_05_10_17_37_49.cal	8/6/2021 12:36:18 PM
2	133.6	40.15mg/L	50uL	1.000		05_10_2021A_CAL.2021_05_10_17_37_49.cal	8/6/2021 12:39:23 PM

Mean Area 133.0
Mean Conc. 39.97mg/L



Sample

Sample Name: HS21071204-03DF100
Sample ID:
Origin: 05_10_2021A_CAL.cal
Status Completed
Chk. Result

Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:27.53mg/L

1. Det

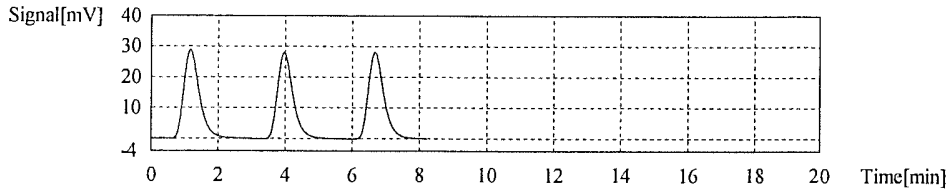
Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	94.05	28.27mg/L	50uL	1.000	E	05_10_2021A_CAL.2021_05_10_17_37_49.cal	8/6/2021 1:23:55 PM
2	91.00	27.35mg/L	50uL	1.000		05_10_2021A_CAL.2021_05_10_17_37_49.cal	8/6/2021 1:26:52 PM
3	92.22	27.72mg/L	50uL	1.000		05_10_2021A_CAL.2021_05_10_17_37_49.cal	8/6/2021 1:29:53 PM

TOC-Control L Report

2021_08_06_001.tlx

Mean Area 91.61
Mean Conc. 27.53mg/L



Sample

Sample Name: HS21071204-08
Sample ID:
Origin: 05_10_2021A_CAL.cal
Status Completed
Chk. Result

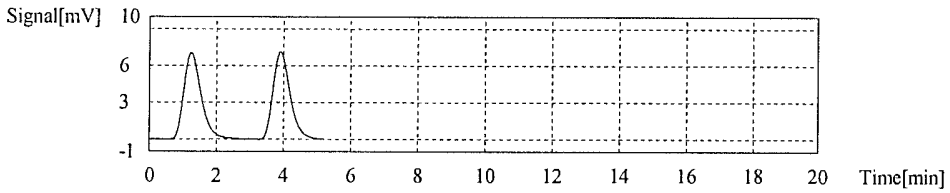
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:7.631mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	25.32	7.610mg/L	50uL	1.000		05_10_2021A_CAL.2021_05_10_17_37_49.cal	8/6/2021 1:38:51 PM
2	25.46	7.652mg/L	50uL	1.000		05_10_2021A_CAL.2021_05_10_17_37_49.cal	8/6/2021 1:41:45 PM

Mean Area 25.39
Mean Conc. 7.631mg/L



Sample

Sample Name: CCV
Sample ID: 317190113
Origin: 05_10_2021A_CAL.cal
Status Completed
Chk. Result

Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:25.98mg/L

1. Det

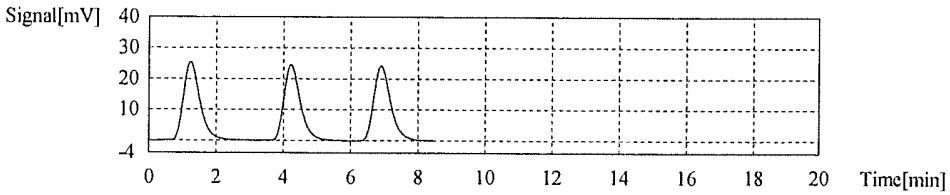
Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	87.23	26.22mg/L	50uL	1.000		05_10_2021A_CAL.2021_05_10_17_37_49.cal	8/6/2021 2:35:36 PM
2	83.71	25.16mg/L	50uL	1.000	E	05_10_2021A_CAL.2021_05_10_17_37_49.cal	8/6/2021 2:38:30 PM
3	85.66	25.74mg/L	50uL	1.000		05_10_2021A_CAL.2021_05_10_17_37_49.cal	8/6/2021 2:41:37 PM

TOC-Control L Report

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Mean Area 86.45
Mean Conc. 25.98mg/L



Sample

Sample Name: CCB
Sample ID:
Origin: 05_10_2021A_CAL.cal
Status Completed
Chk. Result

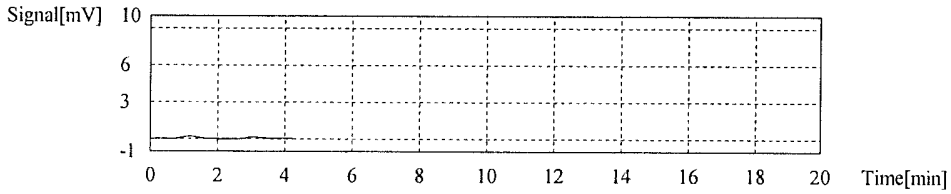
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.1387mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.4092	0.1230mg/L	50uL	1.000		05_10_2021A_CAL.2021_05_10_17_37_49.cal	8/6/2021 2:49:50 PM
2	0.5136	0.1544mg/L	50uL	1.000		05_10_2021A_CAL.2021_05_10_17_37_49.cal	8/6/2021 2:53:15 PM

Mean Area 0.4614
Mean Conc. 0.1387mg/L



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	Type	Analysis	Sample Name	Sample ID	Origin	Manual Dilut	Result
1	Unknown	NPOC	CCV	317190113	05_10_2021A_CAL.ca	1.000	NPOC:25.91mg/
2	Unknown	NPOC	CCB		05_10_2021A_CAL.ca	1.000	NPOC:0.5521m
3	Unknown	NPOC	MBLK-080521		05_10_2021A_CAL.ca	1.000	NPOC:0.1662m
4	Unknown	NPOC	LCS-08052021	3100603915	05_10_2021A_CAL.ca	1.000	NPOC:10.47mg/
5	Unknown	NPOC	LCSD-08052021	3100603915	05_10_2021A_CAL.ca	1.000	NPOC:10.59mg/
6	Unknown	NPOC	HS21071136-01		05_10_2021A_CAL.ca	1.000	NPOC:3.387mg/
7	Unknown	NPOC	HS21071136-02		05_10_2021A_CAL.ca	1.000	NPOC:9.511mg/
8	Unknown	NPOC	HS21080187-01		05_10_2021A_CAL.ca	1.000	NPOC:2.290mg/
9	Unknown	NPOC	HS21071321-01		05_10_2021A_CAL.ca	1.000	NPOC:14.26mg/
10	Unknown	NPOC	HS21071549-03		05_10_2021A_CAL.ca	1.000	NPOC:6.995mg/
11	Unknown	NPOC	HS21071549-04		05_10_2021A_CAL.ca	1.000	NPOC:23.22mg/
12	Unknown	NPOC	HS21071588-01		05_10_2021A_CAL.ca	1.000	NPOC:11.57mg/
13	Unknown	NPOC	CCV	317190113	05_10_2021A_CAL.ca	1.000	NPOC:26.16mg/
14	Unknown	NPOC	CCB		05_10_2021A_CAL.ca	1.000	NPOC:0.1342m
15	Unknown	NPOC	HS21071204-01		05_10_2021A_CAL.ca	1.000	NPOC:14.81mg/
16	Unknown	NPOC	HS21071204-02		05_10_2021A_CAL.ca	1.000	NPOC:708.7mg/
17	Unknown	NPOC	HS21071204-02MS		05_10_2021A_CAL.ca	1.000	NPOC:724.2mg/
18	Unknown	NPOC	HS21071204-03		05_10_2021A_CAL.ca	1.000	NPOC:1974mg/
19	Unknown	NPOC	CCV	317190113	05_10_2021A_CAL.ca	1.000	NPOC:27.24mg/
20	Unknown	NPOC	CCB		05_10_2021A_CAL.ca	1.000	NPOC:0.6623m
21	Unknown	NPOC	MBLK-080521		05_10_2021A_CAL.ca	1.000	NPOC:0.3438m
22	Unknown	NPOC	LCS-08052021	3100603915	05_10_2021A_CAL.ca	1.000	NPOC:10.64mg/
23	Unknown	NPOC	LCSD-08052021	3100603915	05_10_2021A_CAL.ca	1.000	NPOC:10.32mg/
24	Unknown	NPOC	HS21071204-08		05_10_2021A_CAL.ca	1.000	NPOC:7.296mg/
25	Unknown	NPOC	HS21071647-01		05_10_2021A_CAL.ca	1.000	NPOC:13.28mg/
26	Unknown	NPOC	HS21071667-36		05_10_2021A_CAL.ca	1.000	NPOC:1.530mg/
27	Unknown	NPOC	HS21071667-48		05_10_2021A_CAL.ca	1.000	NPOC:1.864mg/
28	Unknown	NPOC	HS21071667-49		05_10_2021A_CAL.ca	1.000	NPOC:0.4483m
29	Unknown	NPOC	HS21071667-51		05_10_2021A_CAL.ca	1.000	NPOC:3.202mg/
30	Unknown	NPOC	HS21071667-51MS		05_10_2021A_CAL.ca	1.000	NPOC:13.67mg/
31	Unknown	NPOC	CCV	317190113	05_10_2021A_CAL.ca	1.000	NPOC:25.95mg/
32	Unknown	NPOC	CCB		05_10_2021A_CAL.ca	1.000	NPOC:0.1246m
33	Unknown	NPOC	HS21071667-55		05_10_2021A_CAL.ca	1.000	NPOC:1.119mg/
34	Unknown	NPOC	HS21071667-56		05_10_2021A_CAL.ca	1.000	NPOC:2.872mg/
35	Unknown	NPOC	HS21071667-57		05_10_2021A_CAL.ca	1.000	NPOC:0.7197m
36	Unknown	NPOC	HS21071667-68		05_10_2021A_CAL.ca	1.000	NPOC:3.047mg/
37	Unknown	NPOC	CCV	317190113	05_10_2021A_CAL.ca	1.000	NPOC:26.32mg/
38	Unknown	NPOC	CCB		05_10_2021A_CAL.ca	1.000	NPOC:1.349mg/
39	Unknown	NPOC	MBLK-080521		05_10_2021A_CAL.ca	1.000	NPOC:0.09750
40	Unknown	NPOC	LCS-08052021	3100603915	05_10_2021A_CAL.ca	1.000	NPOC:10.49mg/
41	Unknown	NPOC	LCSD-08052021	3100603915	05_10_2021A_CAL.ca	1.000	NPOC:10.33mg/
42	Unknown	NPOC	HS21071667-69		05_10_2021A_CAL.ca	1.000	NPOC:3.399mg/
43	Unknown	NPOC	HS21071667-71		05_10_2021A_CAL.ca	1.000	NPOC:0.4842m
44	Unknown	NPOC	HS21080066-01		05_10_2021A_CAL.ca	1.000	NPOC:0.5166m
45	Unknown	NPOC	HS21080070-01		05_10_2021A_CAL.ca	1.000	NPOC:0.1099m
46	Unknown	NPOC	HS21080212-02		05_10_2021A_CAL.ca	1.000	NPOC:9.738mg/
47	Unknown	NPOC	HS21080212-06		05_10_2021A_CAL.ca	1.000	NPOC:22.17mg/
48	Unknown	NPOC	HS21080212-08		05_10_2021A_CAL.ca	1.000	NPOC:9.269mg/
49	Unknown	NPOC	CCV	317190113	05_10_2021A_CAL.ca	1.000	NPOC:25.89mg/
50	Unknown	NPOC	CCB		05_10_2021A_CAL.ca	1.000	NPOC:0.1583m
51	Unknown	NPOC	HS21080212-11		05_10_2021A_CAL.ca	1.000	NPOC:6.175mg/

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	Type	Analysis	Sample Name	Sample ID	Origin	Manual Dilut	Result
52	Unknown	NPOC	HS21080212-12		05_10_2021A_CAL.ca	1.000	NPOC:44.13mg/
53	Unknown	NPOC	HS21080212-14		05_10_2021A_CAL.ca	1.000	NPOC:7.410mg/
54	Unknown	NPOC	HS21080212-14MS		05_10_2021A_CAL.ca	1.000	NPOC:16.89mg/
55	Unknown	NPOC	CCV	317190113	05_10_2021A_CAL.ca	1.000	NPOC:25.15mg/
56	Unknown	NPOC	CCB		05_10_2021A_CAL.ca	1.000	NPOC:0.6337m

C:\TOC-L\Data\2021_08_05_002.tlx

	Notes	Status	Date / Time	Vial
1		Completed	8/5/2021 7:03:30 PM	1
2		Completed	8/5/2021 7:17:45 PM	2
3		Completed	8/5/2021 7:28:57 PM	3
4		Completed	8/5/2021 7:40:45 PM	4
5		Completed	8/5/2021 7:52:48 PM	5
6		Completed	8/5/2021 8:04:29 PM	6
7		Completed	8/5/2021 8:20:09 PM	7
8		Completed	8/5/2021 8:35:00 PM	8
9		Completed	8/5/2021 8:47:06 PM	9
10		Completed	8/5/2021 9:02:09 PM	10
11		Completed	8/5/2021 9:14:19 PM	11
12		Completed	8/5/2021 9:29:19 PM	12
13		Completed	8/5/2021 9:42:06 PM	1
14		Completed	8/5/2021 9:56:19 PM	2
15		Completed	8/5/2021 10:08:34 P	13
16		Completed	8/5/2021 10:21:36 P	14
17		Completed	8/5/2021 10:34:40 P	15
18		Completed	8/5/2021 10:54:17 P	16
19		Completed	8/5/2021 11:09:53 P	1
20		Completed	8/5/2021 11:24:20 P	2
21		Completed	8/5/2021 11:38:39 P	3
22		Completed	8/5/2021 11:53:38 P	4
23		Completed	8/6/2021 12:05:40 A	5
24		Completed	8/6/2021 12:20:35 A	17
25		Completed	8/6/2021 12:35:35 A	18
26		Completed	8/6/2021 12:50:06 A	19
27		Completed	8/6/2021 1:04:48 AM	20
28		Completed	8/6/2021 1:19:04 AM	21
29		Completed	8/6/2021 1:33:59 AM	22
30		Completed	8/6/2021 1:46:08 AM	23
31		Completed	8/6/2021 1:58:11 AM	24
32		Completed	8/6/2021 2:09:20 AM	25
33		Completed	8/6/2021 2:20:35 AM	26
34		Completed	8/6/2021 2:35:08 AM	27
35		Completed	8/6/2021 2:49:34 AM	28
36		Completed	8/6/2021 3:05:26 AM	29
37		Completed	8/6/2021 3:21:03 AM	24
38		Completed	8/6/2021 3:35:15 AM	25
39		Completed	8/6/2021 3:46:31 AM	3
40		Completed	8/6/2021 3:58:16 AM	4
41		Completed	8/6/2021 4:10:09 AM	5
42		Completed	8/6/2021 4:22:12 AM	30
43		Completed	8/6/2021 4:36:35 AM	31
44		Completed	8/6/2021 4:51:00 AM	32
45		Completed	8/6/2021 5:05:14 AM	33
46		Completed	8/6/2021 5:17:08 AM	34
47		Completed	8/6/2021 5:29:46 AM	35
48		Completed	8/6/2021 5:45:05 AM	36
49		Completed	8/6/2021 5:57:32 AM	24
50		Completed	8/6/2021 6:08:41 AM	25
51		Completed	8/6/2021 6:20:36 AM	37

C:\TOC-L\Data\2021_08_05_002.tlx

	Notes	Status	Date / Time	Vial
52		Completed	8/6/2021 6:32:53 AM	38
53		Completed	8/6/2021 6:44:43 AM	39
54		Completed	8/6/2021 6:56:52 AM	40
55		Completed	8/6/2021 7:09:00 AM	24
56		Completed	8/6/2021 7:23:01 AM	25

TOC-Control L Report

2021_08_05_002.tlx

Instr.Information

Instrument Options	TOC/ASI/IC Unit/
Catalyst	Regular Sensitivity

Sample

Sample Name:	CCV
Sample ID:	317190113
Origin:	05_10_2021A_CAL.cal
Status	Completed
Chk. Result	

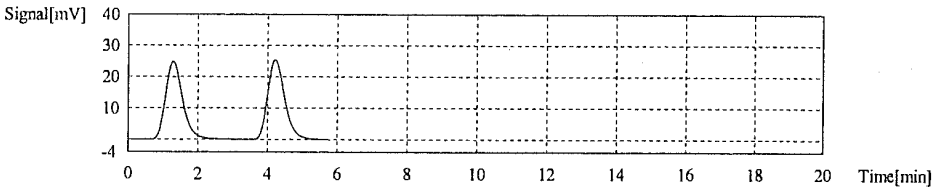
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:25.91mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	85.02	25.55mg/L	50uL	1.000		05_10_2021A_CAL.2021_05_10_17_37_49.cal	8/5/2021 7:00:24 PM
2	87.40	26.27mg/L	50uL	1.000		05_10_2021A_CAL.2021_05_10_17_37_49.cal	8/5/2021 7:03:30 PM

Mean Area	86.21
Mean Conc.	25.91mg/L



Sample

Sample Name:	CCB
Sample ID:	
Origin:	05_10_2021A_CAL.cal
Status	Completed
Chk. Result	

Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.5521mg/L

1. Det

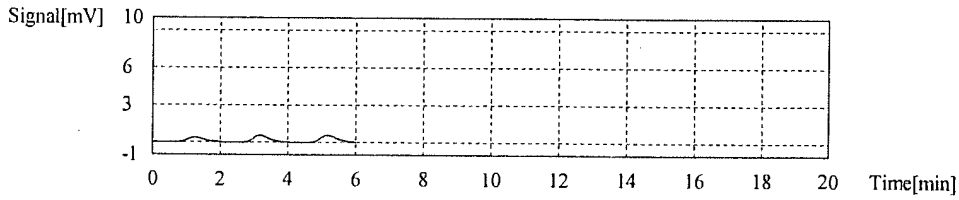
Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1.117	0.3357mg/L	50uL	1.000	E	05_10_2021A_CAL.2021_05_10_17_37_49.cal	8/5/2021 7:11:46 PM
2	1.802	0.5416mg/L	50uL	1.000		05_10_2021A_CAL.2021_05_10_17_37_49.cal	8/5/2021 7:14:43 PM
3	1.872	0.5626mg/L	50uL	1.000		05_10_2021A_CAL.2021_05_10_17_37_49.cal	8/5/2021 7:17:45 PM

TOC-Control L Report

2021_08_05_002.tlx

Mean Area 1.837
Mean Conc. 0.5521mg/L



Sample

Sample Name: MBLK-080521
Sample ID:
Origin: 05_10_2021A_CAL.cal
Status Completed
Chk. Result

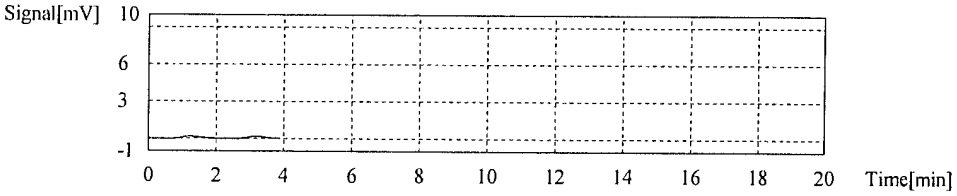
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.1662mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.5967	0.1793mg/L	50uL	1.000		05_10_2021A_CAL.2021_05_10_17_37_49.cal	8/5/2021 7:26:00 PM
2	0.5092	0.1530mg/L	50uL	1.000		05_10_2021A_CAL.2021_05_10_17_37_49.cal	8/5/2021 7:28:57 PM

Mean Area 0.5530
Mean Conc. 0.1662mg/L



Sample

Sample Name: LCS-08052021
Sample ID: 3100603915
Origin: 05_10_2021A_CAL.cal
Status Completed
Chk. Result

Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:10.47mg/L

1. Det

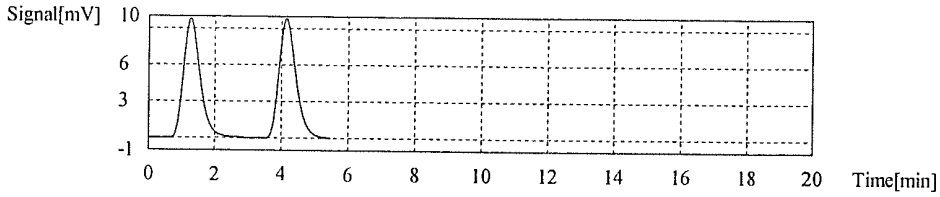
Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	34.46	10.36mg/L	50uL	1.000		05_10_2021A_CAL.2021_05_10_17_37_49.cal	8/5/2021 7:37:53 PM
2	35.23	10.59mg/L	50uL	1.000		05_10_2021A_CAL.2021_05_10_17_37_49.cal	8/5/2021 7:40:45 PM

TOC-Control L Report

2021_08_05_002.tlx

Mean Area 34.84
Mean Conc. 10.47mg/L



Sample

Sample Name: LCSD-08052021
Sample ID: 3100603915
Origin: 05_10_2021A_CAL.cal
Status Completed
Chk. Result

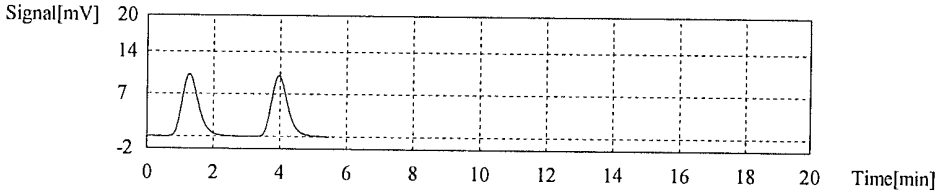
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:10.59mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	35.71	10.73mg/L	50uL	1.000		05_10_2021A_CAL.2021_05_10_17_37_49.cal	8/5/2021 7:49:41 PM
2	34.77	10.45mg/L	50uL	1.000		05_10_2021A_CAL.2021_05_10_17_37_49.cal	8/5/2021 7:52:48 PM

Mean Area 35.24
Mean Conc. 10.59mg/L



Sample

Sample Name: CCV
Sample ID: 317190113
Origin: 05_10_2021A_CAL.cal
Status Completed
Chk. Result

Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:26.16mg/L

1. Det

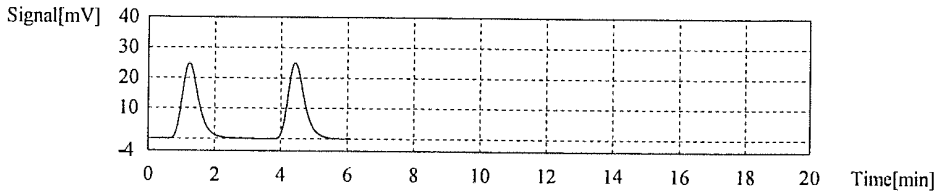
Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	86.86	26.11mg/L	50uL	1.000		05_10_2021A_CAL.2021_05_10_17_37_49.cal	8/5/2021 9:38:59 PM
2	87.25	26.22mg/L	50uL	1.000		05_10_2021A_CAL.2021_05_10_17_37_49.cal	8/5/2021 9:42:06 PM

TOC-Control L Report

2021_08_05_002.tlx

Mean Area 87.06
Mean Conc. 26.16mg/L



Sample

Sample Name: CCB
Sample ID:
Origin: 05_10_2021A_CAL.cal
Status Completed
Chk. Result

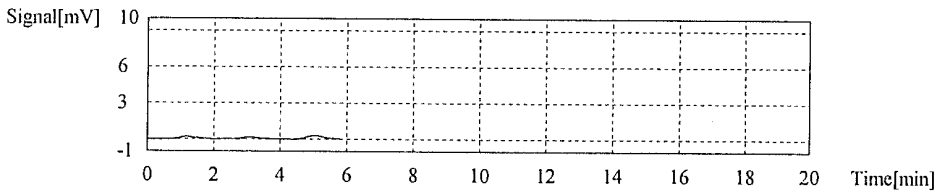
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.1342mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.5324	0.1600mg/L	50uL	1.000		05_10_2021A_CAL.2021_05_10_17_37_49.cal	8/5/2021 9:50:14 PM
2	0.3605	0.1083mg/L	50uL	1.000		05_10_2021A_CAL.2021_05_10_17_37_49.cal	8/5/2021 9:53:14 PM
3	1.043	0.3135mg/L	50uL	1.000	E	05_10_2021A_CAL.2021_05_10_17_37_49.cal	8/5/2021 9:56:19 PM

Mean Area 0.4465
Mean Conc. 0.1342mg/L



Sample

Sample Name: HS21071204-01
Sample ID:
Origin: 05_10_2021A_CAL.cal
Status Completed
Chk. Result

Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:14.81mg/L

1. Det

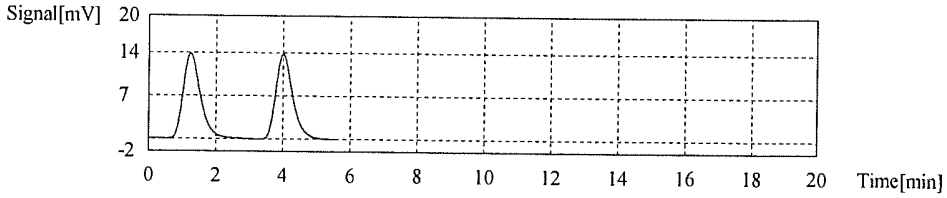
Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	49.07	14.75mg/L	50uL	1.000		05_10_2021A_CAL.2021_05_10_17_37_49.cal	8/5/2021 10:05:29 PM
2	49.49	14.87mg/L	50uL	1.000		05_10_2021A_CAL.2021_05_10_17_37_49.cal	8/5/2021 10:08:34 PM

TOC-Control L Report

2021_08_05_002.tlx

Mean Area 49.28
Mean Conc. 14.81mg/L



Sample

Sample Name: HS21071204-02
Sample ID:
Origin: 05_10_2021A_CAL.cal
Status Completed
Chk. Result

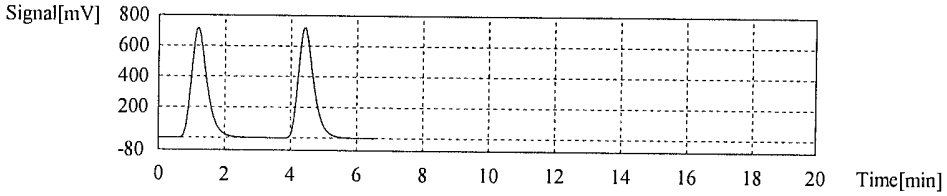
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:708.7mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	2354	707.5mg/L	50uL	1.000		05_10_2021A_CAL.2021_05_10_17_37_49.cal	8/5/2021 10:18:04 PM
2	2362	709.9mg/L	50uL	1.000		05_10_2021A_CAL.2021_05_10_17_37_49.cal	8/5/2021 10:21:36 PM

Mean Area 2358
Mean Conc. 708.7mg/L



Sample

Sample Name: HS21071204-02MS
Sample ID:
Origin: 05_10_2021A_CAL.cal
Status Completed
Chk. Result

Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:724.2mg/L

1. Det

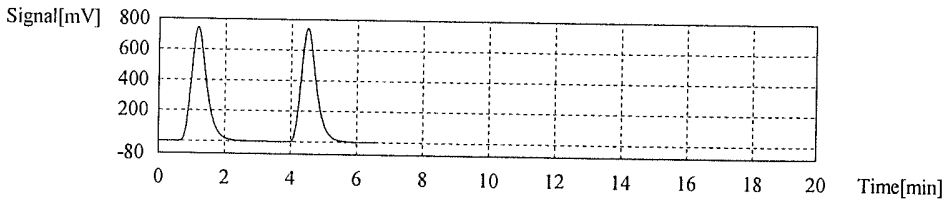
Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	2415	725.8mg/L	50uL	1.000		05_10_2021A_CAL.2021_05_10_17_37_49.cal	8/5/2021 10:31:10 PM
2	2404	722.5mg/L	50uL	1.000		05_10_2021A_CAL.2021_05_10_17_37_49.cal	8/5/2021 10:34:40 PM

TOC-Control L Report

2021_08_05_002.tlx

Mean Area 2410
Mean Conc. 724.2mg/L



Sample

Sample Name: HS21071204-03
Sample ID:
Origin: 05_10_2021A_CAL.cal
Status Completed
Chk. Result

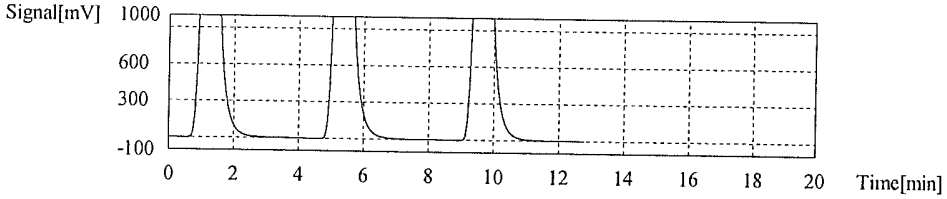
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:1974mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	6535	1964mg/L	50uL	1.000		05_10_2021A_CAL.2021_05_10_17_37_49.cal	8/5/2021 10:45:03 PM
2	6795	2042mg/L	50uL	1.000	E	05_10_2021A_CAL.2021_05_10_17_37_49.cal	8/5/2021 10:49:39 PM
3	6601	1984mg/L	50uL	1.000		05_10_2021A_CAL.2021_05_10_17_37_49.cal	8/5/2021 10:54:17 PM

Mean Area 6568
Mean Conc. 1974mg/L



Sample

Sample Name: CCV
Sample ID: 317190113
Origin: 05_10_2021A_CAL.cal
Status Completed
Chk. Result

Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:27.24mg/L

1. Det

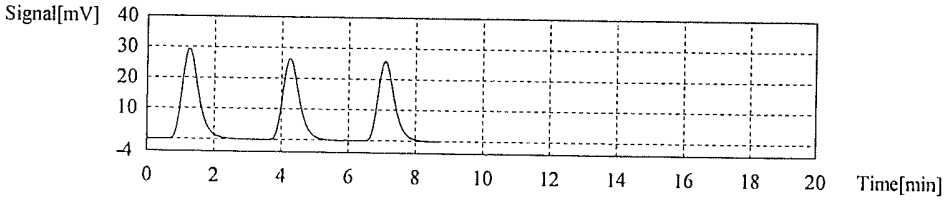
Anal.: NPOC

TOC-Control L Report

2021_08_05_002.tlx

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	102.4	30.78mg/L	50uL	1.000	E	05_10_2021A_CAL.2021_05_10_17_37_49.cal	8/5/2021 11:03:42 PM
2	92.57	27.82mg/L	50uL	1.000		05_10_2021A_CAL.2021_05_10_17_37_49.cal	8/5/2021 11:06:49 PM
3	88.73	26.67mg/L	50uL	1.000		05_10_2021A_CAL.2021_05_10_17_37_49.cal	8/5/2021 11:09:53 PM

Mean Area 90.65
Mean Conc. 27.24mg/L



Sample

Sample Name: CCB
Sample ID:
Origin: 05_10_2021A_CAL.cal
Status Completed
Chk. Result

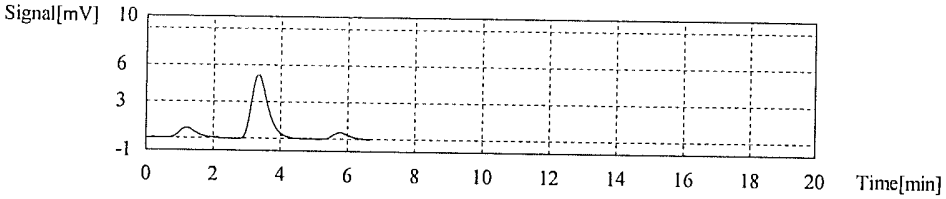
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.6623mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	2.628	0.7898mg/L	50uL	1.000		05_10_2021A_CAL.2021_05_10_17_37_49.cal	8/5/2021 11:18:21 PM
2	17.81	5.353mg/L	50uL	1.000	E	05_10_2021A_CAL.2021_05_10_17_37_49.cal	8/5/2021 11:21:39 PM
3	1.779	0.5347mg/L	50uL	1.000		05_10_2021A_CAL.2021_05_10_17_37_49.cal	8/5/2021 11:24:20 PM

Mean Area 2.204
Mean Conc. 0.6623mg/L



HS21071405 Longhorn Army Ammunition Plant
LHAAP 16 July 2021 Cover Page

ALS WO# HS21071405

ALS Environmental
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HS21071405 TOC Raw Data

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WorkOrder: HS21071405

Longhorn Army Ammunition Plant LHAAP 16 July 2021

Aptim Environmental & Infrastucture, Inc.

Vicki Graves
10333 Richmond Ave Ste 1030
Houston TX 77042

13-Oct-2021

HS21071405 Longhorn Army Ammunition Plant
LHAAP 16 July 2021 Final

ALS WO# HS21071405

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August 10, 2021

Vicki Graves
Aptim Environmental & Infrastucture, Inc.
10333 Richmond Ave
Ste 1030
Houston, TX 77042

Work Order: **HS21071405**

Laboratory Results for: **Longhorn Army Ammunition Plant LHAAP 16 July 2021**

Dear Vicki Graves ,

ALS Environmental received 13 sample(s) on Jul 27, 2021 for the analysis presented in the following report.

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

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

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

Sincerely,

Generated By: JUMOKE.LAWAL
Ragen Giga
Project Manager

ALS Houston, US Date: 10-Aug-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP 16 July 2021
Work Order: HS21071405

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS21071405-01	16EW02-210726	GW		26-Jul-2021 07:35	27-Jul-2021 09:15	☐
HS21071405-02	16EW04-210726	GW		26-Jul-2021 08:20	27-Jul-2021 09:15	☐
HS21071405-03	16EW08-210726	GW		26-Jul-2021 09:05	27-Jul-2021 09:15	☐
HS21071405-04	16RW04-210726	GW		26-Jul-2021 09:50	27-Jul-2021 09:15	☐
HS21071405-05	16RW01-210726	GW		26-Jul-2021 10:30	27-Jul-2021 09:15	☐
HS21071405-06	16RW02-210726	GW		26-Jul-2021 11:15	27-Jul-2021 09:15	☐
HS21071405-07	16WW13-210726	GW		26-Jul-2021 12:00	27-Jul-2021 09:15	☐
HS21071405-08	16WW42-210726	GW		26-Jul-2021 12:40	27-Jul-2021 09:15	☐
HS21071405-09	16SW01-210726	GW		26-Jul-2021 13:00	27-Jul-2021 09:15	☐
HS21071405-10	16SW01-210726-FD	GW		26-Jul-2021 13:00	27-Jul-2021 09:15	☐
HS21071405-11	16SW02-210726	GW		26-Jul-2021 13:20	27-Jul-2021 09:15	☐
HS21071405-12	16SW03-210726	GW		26-Jul-2021 13:50	27-Jul-2021 09:15	☐
HS21071405-13	Trip Blank-210726	Water	CG-061121-200	26-Jul-2021 00:00	27-Jul-2021 09:15	☐

ALS Houston, US Date: 19-Nov-21

Client: Aptim Environmental & Infrastucture, Inc. **CASE NARRATIVE**
Project: Longhorn Army Ammunition Plant LHAAP 16 July 2021
Work Order: HS21071405

Work Order Comments

- .Revision 1
  Data Package revised to include TOC Raw Data which was missing from the original package (Pages 728-740)

  The analysis for Perchlorate was subcontracted to ALS Houston Specialty Lab. Final report attached.

GC Semivolatiles by Method RSK-175

Batch ID: R388610

Sample ID: HS21071038-02MS

- MS and MSD are for an unrelated sample

Sample ID: HS21071204-02MS

- MS and MSD are for an unrelated sample

GCMS Volatiles by Method SW8260

Batch ID: R388821

Sample ID: HS21071731-01MS

- MS and MSD are for an unrelated sample

Batch ID: R388888

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

Metals by Method SW6020A

Batch ID: 168892

Sample ID: 16SW02-210726 (HS21071405-11MS)

- The MS and/or MSD recovery was outside of the control limits; however, the result in the parent sample is greater than 4x the spike amount. (Manganese)

Sample ID: 16SW02-210726 (HS21071405-11PDS)

- The PDS recovery was outside method control limits, however the result in the parent sample is greater than 4x the spike amount. (Manganese)

WetChemistry by Method SM5310B

Batch ID: R389176

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

ALS Houston, US Date: 10-Aug-21

Client: Aptim Environmental & Infrastucture, Inc. **ANALYTICAL REPORT**
Project: Longhorn Army Ammunition Plant LHAAP 16 July 2021 WorkOrder:HS21071405
Sample ID: 16EW02-210726 Lab ID:HS21071405-01
Collection Date: 26-Jul-2021 07:35 Matrix:GW

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
1,1,2-Trichloroethane	25	U	7.5	25	25	ug/L	25	03-Aug-2021 20:56
1,1-Dichloroethene	**58**		**5.0**	**12**	**25**	**ug/L**	25	03-Aug-2021 20:56
1,2-Dichloroethane	**29**		**5.0**	**12**	**25**	**ug/L**	25	03-Aug-2021 20:56
cis-1,2-Dichloroethene	**18,000**		**50**	**120**	**250**	**ug/L**	250	03-Aug-2021 21:17
Methylene chloride	25	U	10	25	50	ug/L	25	03-Aug-2021 20:56
Trichloroethene	**25,000**		**50**	**120**	**250**	**ug/L**	250	03-Aug-2021 21:17
Vinyl chloride	**42**		**5.0**	**12**	**25**	**ug/L**	25	03-Aug-2021 20:56
Surr: 1,2-Dichloroethane-d4	*91.4*			**0**	*81-118*	*%REC*	*25*	*03-Aug-2021 20:56*
Surr: 1,2-Dichloroethane-d4	*91.2*			**0**	*81-118*	*%REC*	*250*	*03-Aug-2021 21:17*
Surr: 4-Bromofluorobenzene	*97.8*			**0**	*85-114*	*%REC*	*25*	*03-Aug-2021 20:56*
Surr: 4-Bromofluorobenzene	*97.3*			**0**	*85-114*	*%REC*	*250*	*03-Aug-2021 21:17*
Surr: Dibromofluoromethane	*92.4*			**0**	*80-119*	*%REC*	*250*	*03-Aug-2021 21:17*
Surr: Dibromofluoromethane	*93.6*			**0**	*80-119*	*%REC*	*25*	*03-Aug-2021 20:56*
Surr: Toluene-d8	*103*			**0**	*89-112*	*%REC*	*25*	*03-Aug-2021 20:56*
Surr: Toluene-d8	*103*			**0**	*89-112*	*%REC*	*250*	*03-Aug-2021 21:17*
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: GR
Subcontract Analysis	See Attached		0	0		NA	1	05-Aug-2021 12:56

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

ALS Houston, US Date: 10-Aug-21

Client: Aptim Environmental & Infrastucture, Inc. **ANALYTICAL REPORT**
Project: Longhorn Army Ammunition Plant LHAAP 16 July 2021 WorkOrder:HS21071405
Sample ID: 16EW04-210726 Lab ID:HS21071405-02
Collection Date: 26-Jul-2021 08:20 Matrix:GW

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
1,1,2-Trichloroethane	5.0	U	1.5	5.0	5.0	ug/L	5	04-Aug-2021 18:48
1,1-Dichloroethene	**3.2**	J	**1.0**	**2.5**	**5.0**	**ug/L**	5	04-Aug-2021 18:48
1,2-Dichloroethane	2.5	U	1.0	2.5	5.0	ug/L	5	04-Aug-2021 18:48
cis-1,2-Dichloroethene	**640**		**1.0**	**2.5**	**5.0**	**ug/L**	5	04-Aug-2021 18:48
Methylene chloride	5.0	U	2.0	5.0	10	ug/L	5	04-Aug-2021 18:48
Trichloroethene	**3,100**		**5.0**	**12**	**25**	**ug/L**	25	04-Aug-2021 19:09
Vinyl chloride	**2.5**	J	**1.0**	**2.5**	**5.0**	**ug/L**	5	04-Aug-2021 18:48
Surr: 1,2-Dichloroethane-d4	*94.1*			**0**	*81-118*	*%REC*	*5*	*04-Aug-2021 18:48*
Surr: 1,2-Dichloroethane-d4	*96.8*			**0**	*81-118*	*%REC*	*25*	*04-Aug-2021 19:09*
Surr: 4-Bromofluorobenzene	*100*			**0**	*85-114*	*%REC*	*5*	*04-Aug-2021 18:48*
Surr: 4-Bromofluorobenzene	*96.2*			**0**	*85-114*	*%REC*	*25*	*04-Aug-2021 19:09*
Surr: Dibromofluoromethane	*96.2*			**0**	*80-119*	*%REC*	*25*	*04-Aug-2021 19:09*
Surr: Dibromofluoromethane	*92.1*			**0**	*80-119*	*%REC*	*5*	*04-Aug-2021 18:48*
Surr: Toluene-d8	*106*			**0**	*89-112*	*%REC*	*5*	*04-Aug-2021 18:48*
Surr: Toluene-d8	*104*			**0**	*89-112*	*%REC*	*25*	*04-Aug-2021 19:09*
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: GR
Subcontract Analysis	See Attached		0	0		NA	1	05-Aug-2021 12:56

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

ALS Houston, US Date: 10-Aug-21

Client: Aptim Environmental & Infrastucture, Inc. **ANALYTICAL REPORT**
Project: Longhorn Army Ammunition Plant LHAAP 16 July 2021 WorkOrder:HS21071405
Sample ID: 16EW08-210726 Lab ID:HS21071405-03
Collection Date: 26-Jul-2021 09:05 Matrix:GW

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
1,1,2-Trichloroethane	1.0	U	0.30	1.0	1.0	ug/L	1	03-Aug-2021 18:49
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	03-Aug-2021 18:49
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	03-Aug-2021 18:49
cis-1,2-Dichloroethene	**1.3**		**0.20**	**0.50**	**1.0**	**ug/L**	1	03-Aug-2021 18:49
Methylene chloride	1.0	U	0.40	1.0	2.0	ug/L	1	03-Aug-2021 18:49
Trichloroethene	**1.8**		**0.20**	**0.50**	**1.0**	**ug/L**	1	03-Aug-2021 18:49
Vinyl chloride	0.50	U	0.20	0.50	1.0	ug/L	1	03-Aug-2021 18:49
Surr: 1,2-Dichloroethane-d4	*89.8*			**0**	*81-118*	*%REC*	*1*	*03-Aug-2021 18:49*
Surr: 4-Bromofluorobenzene	*101*			**0**	*85-114*	*%REC*	*1*	*03-Aug-2021 18:49*
Surr: Dibromofluoromethane	*94.1*			**0**	*80-119*	*%REC*	*1*	*03-Aug-2021 18:49*
Surr: Toluene-d8	*105*			**0**	*89-112*	*%REC*	*1*	*03-Aug-2021 18:49*
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: GR
Subcontract Analysis	See Attached		0	0		NA	1	05-Aug-2021 12:56

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

ALS Houston, US Date: 10-Aug-21

Client: Aptim Environmental & Infrastucture, Inc. **ANALYTICAL REPORT**
Project: Longhorn Army Ammunition Plant LHAAP 16 July 2021 WorkOrder:HS21071405
Sample ID: 16RW04-210726 Lab ID:HS21071405-04
Collection Date: 26-Jul-2021 09:50 Matrix:GW

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
1,1,2-Trichloroethane	1.0	U	0.30	1.0	1.0	ug/L	1	04-Aug-2021 14:15
1,1-Dichloroethene	**1.1**		**0.20**	**0.50**	**1.0**	**ug/L**	1	04-Aug-2021 14:15
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	04-Aug-2021 14:15
cis-1,2-Dichloroethene	**80**		**0.20**	**0.50**	**1.0**	**ug/L**	1	04-Aug-2021 14:15
Methylene chloride	1.0	U	0.40	1.0	2.0	ug/L	1	04-Aug-2021 14:15
Trichloroethene	**1,200**		**5.0**	**12**	**25**	**ug/L**	25	04-Aug-2021 15:18
Vinyl chloride	**2.0**		**0.20**	**0.50**	**1.0**	**ug/L**	1	04-Aug-2021 14:15
Surr: 1,2-Dichloroethane-d4	*98.5*			**0**	*81-118*	*%REC*	*1*	*04-Aug-2021 14:15*
Surr: 1,2-Dichloroethane-d4	*95.1*			**0**	*81-118*	*%REC*	*25*	*04-Aug-2021 15:18*
Surr: 4-Bromofluorobenzene	*103*			**0**	*85-114*	*%REC*	*1*	*04-Aug-2021 14:15*
Surr: 4-Bromofluorobenzene	*101*			**0**	*85-114*	*%REC*	*25*	*04-Aug-2021 15:18*
Surr: Dibromofluoromethane	*95.6*			**0**	*80-119*	*%REC*	*1*	*04-Aug-2021 14:15*
Surr: Dibromofluoromethane	*95.3*			**0**	*80-119*	*%REC*	*25*	*04-Aug-2021 15:18*
Surr: Toluene-d8	*103*			**0**	*89-112*	*%REC*	*1*	*04-Aug-2021 14:15*
Surr: Toluene-d8	*105*			**0**	*89-112*	*%REC*	*25*	*04-Aug-2021 15:18*
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: GR
Subcontract Analysis	See Attached		0	0		NA	1	05-Aug-2021 12:56

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

ALS Houston, US Date: 10-Aug-21

Client: Aptim Environmental & Infrastucture, Inc. **ANALYTICAL REPORT**
Project: Longhorn Army Ammunition Plant LHAAP 16 July 2021 WorkOrder:HS21071405
Sample ID: 16RW01-210726 Lab ID:HS21071405-05
Collection Date: 26-Jul-2021 10:30 Matrix:GW

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
1,1,2-Trichloroethane	5.0	U	1.5	5.0	5.0	ug/L	5	04-Aug-2021 20:12
1,1-Dichloroethene	2.5	U	1.0	2.5	5.0	ug/L	5	04-Aug-2021 20:12
1,2-Dichloroethane	2.5	U	1.0	2.5	5.0	ug/L	5	04-Aug-2021 20:12
cis-1,2-Dichloroethene	**84**		**1.0**	**2.5**	**5.0**	**ug/L**	5	04-Aug-2021 20:12
Methylene chloride	5.0	U	2.0	5.0	10	ug/L	5	04-Aug-2021 20:12
Trichloroethene	**2,300**		**10**	**25**	**50**	**ug/L**	50	04-Aug-2021 20:34
Vinyl chloride	2.5	U	1.0	2.5	5.0	ug/L	5	04-Aug-2021 20:12
Surr: 1,2-Dichloroethane-d4	*95.0*			**0**	*81-118*	*%REC*	*5*	*04-Aug-2021 20:12*
Surr: 1,2-Dichloroethane-d4	*94.3*			**0**	*81-118*	*%REC*	*50*	*04-Aug-2021 20:34*
Surr: 4-Bromofluorobenzene	*100.0*			**0**	*85-114*	*%REC*	*5*	*04-Aug-2021 20:12*
Surr: 4-Bromofluorobenzene	*101*			**0**	*85-114*	*%REC*	*50*	*04-Aug-2021 20:34*
Surr: Dibromofluoromethane	*96.4*			**0**	*80-119*	*%REC*	*5*	*04-Aug-2021 20:12*
Surr: Dibromofluoromethane	*97.0*			**0**	*80-119*	*%REC*	*50*	*04-Aug-2021 20:34*
Surr: Toluene-d8	*105*			**0**	*89-112*	*%REC*	*5*	*04-Aug-2021 20:12*
Surr: Toluene-d8	*105*			**0**	*89-112*	*%REC*	*50*	*04-Aug-2021 20:34*
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: GR
Subcontract Analysis	See Attached		0	0		NA	1	05-Aug-2021 12:56

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

ALS Houston, US Date: 10-Aug-21

Client: Aptim Environmental & Infrastucture, Inc. **ANALYTICAL REPORT**
Project: Longhorn Army Ammunition Plant LHAAP 16 July 2021 WorkOrder:HS21071405
Sample ID: 16RW02-210726 Lab ID:HS21071405-06
Collection Date: 26-Jul-2021 11:15 Matrix:GW

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
1,1,2-Trichloroethane	1.0	U	0.30	1.0	1.0	ug/L	1	03-Aug-2021 19:10
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	03-Aug-2021 19:10
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	03-Aug-2021 19:10
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	03-Aug-2021 19:10
Methylene chloride	1.0	U	0.40	1.0	2.0	ug/L	1	03-Aug-2021 19:10
Trichloroethene	**2.1**		**0.20**	**0.50**	**1.0**	**ug/L**	1	03-Aug-2021 19:10
Vinyl chloride	0.50	U	0.20	0.50	1.0	ug/L	1	03-Aug-2021 19:10
Surr: 1,2-Dichloroethane-d4	*89.6*			**0**	*81-118*	*%REC*	*1*	*03-Aug-2021 19:10*
Surr: 4-Bromofluorobenzene	*101*			**0**	*85-114*	*%REC*	*1*	*03-Aug-2021 19:10*
Surr: Dibromofluoromethane	*93.1*			**0**	*80-119*	*%REC*	*1*	*03-Aug-2021 19:10*
Surr: Toluene-d8	*101*			**0**	*89-112*	*%REC*	*1*	*03-Aug-2021 19:10*
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: GR
Subcontract Analysis	See Attached		0	0		NA	1	05-Aug-2021 12:56

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

ALS Houston, US Date: 10-Aug-21

Client: Aptim Environmental & Infrastucture, Inc. **ANALYTICAL REPORT**
Project: Longhorn Army Ammunition Plant LHAAP 16 July 2021 WorkOrder:HS21071405
Sample ID: 16WW13-210726 Lab ID:HS21071405-07
Collection Date: 26-Jul-2021 12:00 Matrix:GW

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
1,1,2-Trichloroethane	5.0	U	1.5	5.0	5.0	ug/L	5	04-Aug-2021 19:30
1,1-Dichloroethene	2.5	U	1.0	2.5	5.0	ug/L	5	04-Aug-2021 19:30
1,2-Dichloroethane	2.5	U	1.0	2.5	5.0	ug/L	5	04-Aug-2021 19:30
cis-1,2-Dichloroethene	**560**		**1.0**	**2.5**	**5.0**	**ug/L**	5	04-Aug-2021 19:30
Methylene chloride	5.0	U	2.0	5.0	10	ug/L	5	04-Aug-2021 19:30
Trichloroethene	**1,500**		**5.0**	**12**	**25**	**ug/L**	25	04-Aug-2021 19:51
Vinyl chloride	**9.6**		**1.0**	**2.5**	**5.0**	**ug/L**	5	04-Aug-2021 19:30
Surr: 1,2-Dichloroethane-d4	*95.3*			**0**	*81-118*	*%REC*	*25*	*04-Aug-2021 19:51*
Surr: 1,2-Dichloroethane-d4	*94.3*			**0**	*81-118*	*%REC*	*5*	*04-Aug-2021 19:30*
Surr: 4-Bromofluorobenzene	*100*			**0**	*85-114*	*%REC*	*5*	*04-Aug-2021 19:30*
Surr: 4-Bromofluorobenzene	*98.6*			**0**	*85-114*	*%REC*	*25*	*04-Aug-2021 19:51*
Surr: Dibromofluoromethane	*93.5*			**0**	*80-119*	*%REC*	*25*	*04-Aug-2021 19:51*
Surr: Dibromofluoromethane	*95.2*			**0**	*80-119*	*%REC*	*5*	*04-Aug-2021 19:30*
Surr: Toluene-d8	*104*			**0**	*89-112*	*%REC*	*5*	*04-Aug-2021 19:30*
Surr: Toluene-d8	*107*			**0**	*89-112*	*%REC*	*25*	*04-Aug-2021 19:51*
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: GR
Subcontract Analysis	See Attached		0	0		NA	1	05-Aug-2021 12:56

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

ALS Houston, US Date: 10-Aug-21

Client: Aptim Environmental & Infrastucture, Inc. **ANALYTICAL REPORT**
Project: Longhorn Army Ammunition Plant LHAAP 16 July 2021 WorkOrder:HS21071405
Sample ID: 16WW42-210726 Lab ID:HS21071405-08
Collection Date: 26-Jul-2021 12:40 Matrix:GW

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
1,1,2-Trichloroethane	1.0	U	0.30	1.0	1.0	ug/L	1	03-Aug-2021 20:35
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	03-Aug-2021 20:35
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	03-Aug-2021 20:35
cis-1,2-Dichloroethene	**67**		**0.20**	**0.50**	**1.0**	**ug/L**	1	03-Aug-2021 20:35
Methylene chloride	1.0	U	0.40	1.0	2.0	ug/L	1	03-Aug-2021 20:35
Trichloroethene	**1.1**		**0.20**	**0.50**	**1.0**	**ug/L**	1	03-Aug-2021 20:35
Vinyl chloride	0.50	U	0.20	0.50	1.0	ug/L	1	03-Aug-2021 20:35
Surr: 1,2-Dichloroethane-d4	*93.1*			**0**	*81-118*	*%REC*	*1*	*03-Aug-2021 20:35*
Surr: 4-Bromofluorobenzene	*101*			**0**	*85-114*	*%REC*	*1*	*03-Aug-2021 20:35*
Surr: Dibromofluoromethane	*93.1*			**0**	*80-119*	*%REC*	*1*	*03-Aug-2021 20:35*
Surr: Toluene-d8	*103*			**0**	*89-112*	*%REC*	*1*	*03-Aug-2021 20:35*
DISSOLVED GASES BY RSK-175		**Method:RSK-175**						Analyst: PPM
Ethane	0.000250	U	0.000144	0.000250	0.00100	mg/L	1	30-Jul-2021 15:33
Ethene	**0.000830**	J	**0.000234**	**0.000500**	**0.00100**	**mg/L**	1	30-Jul-2021 15:33
Methane	**0.00517**		**0.000107**	**0.000250**	**0.000500**	**mg/L**	1	30-Jul-2021 15:33
TOTAL ORGANIC CARBON - SM5310B-2011		**Method:SM5310B**						Analyst: JAC
Organic Carbon, Total	**5.52**		**0.500**	**1.00**	**1.00**	**mg/L**	1	10-Aug-2021 12:23
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: GR
Subcontract Analysis	See Attached		0	0		NA	1	05-Aug-2021 12:56

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

ALS Houston, US Date: 10-Aug-21

Client: Aptim Environmental & Infrastucture, Inc. **ANALYTICAL REPORT**
Project: Longhorn Army Ammunition Plant LHAAP 16 July 2021 WorkOrder:HS21071405
Sample ID: 16SW01-210726 Lab ID:HS21071405-09
Collection Date: 26-Jul-2021 13:00 Matrix:GW

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
1,1,2-Trichloroethane	1.0	U	0.30	1.0	1.0	ug/L	1	03-Aug-2021 19:31
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	03-Aug-2021 19:31
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	03-Aug-2021 19:31
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	03-Aug-2021 19:31
Methylene chloride	1.0	U	0.40	1.0	2.0	ug/L	1	03-Aug-2021 19:31
Trichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	03-Aug-2021 19:31
Vinyl chloride	0.50	U	0.20	0.50	1.0	ug/L	1	03-Aug-2021 19:31
Surr: 1,2-Dichloroethane-d4	*90.3*			**0**	*81-118*	*%REC*	*1*	*03-Aug-2021 19:31*
Surr: 4-Bromofluorobenzene	*99.6*			**0**	*85-114*	*%REC*	*1*	*03-Aug-2021 19:31*
Surr: Dibromofluoromethane	*93.7*			**0**	*80-119*	*%REC*	*1*	*03-Aug-2021 19:31*
Surr: Toluene-d8	*103*			**0**	*89-112*	*%REC*	*1*	*03-Aug-2021 19:31*
METALS BY ICPMS BY SW6020A		**Method:SW6020A**				Prep:SW3010A / 09-Aug-2021		Analyst: JHD
Arsenic	**0.00140**	J	**0.000400**	**0.00100**	**0.00500**	**mg/L**	1	09-Aug-2021 19:28
Chromium	**0.00106**	J	**0.000400**	**0.00100**	**0.00500**	**mg/L**	1	09-Aug-2021 19:28
Manganese	**0.313**		**0.000700**	**0.00250**	**0.00500**	**mg/L**	1	09-Aug-2021 19:28
Nickel	**0.00236**	J	**0.000600**	**0.00100**	**0.00500**	**mg/L**	1	09-Aug-2021 19:28
Thallium	0.000500	U	0.000200	0.000500	0.00200	mg/L	1	09-Aug-2021 19:28
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: GR
Subcontract Analysis	See Attached		0	0		NA	1	05-Aug-2021 12:56

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

ALS Houston, US Date: 10-Aug-21

Client: Aptim Environmental & Infrastucture, Inc. **ANALYTICAL REPORT**
Project: Longhorn Army Ammunition Plant LHAAP 16 July 2021 WorkOrder:HS21071405
Sample ID: 16SW01-210726-FD Lab ID:HS21071405-10
Collection Date: 26-Jul-2021 13:00 Matrix:GW

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
1,1,2-Trichloroethane	1.0	U	0.30	1.0	1.0	ug/L	1	03-Aug-2021 19:52
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	03-Aug-2021 19:52
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	03-Aug-2021 19:52
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	03-Aug-2021 19:52
Methylene chloride	1.0	U	0.40	1.0	2.0	ug/L	1	03-Aug-2021 19:52
Trichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	03-Aug-2021 19:52
Vinyl chloride	0.50	U	0.20	0.50	1.0	ug/L	1	03-Aug-2021 19:52
Surr: 1,2-Dichloroethane-d4	*90.7*			**0**	*81-118*	*%REC*	*1*	*03-Aug-2021 19:52*
Surr: 4-Bromofluorobenzene	*97.5*			**0**	*85-114*	*%REC*	*1*	*03-Aug-2021 19:52*
Surr: Dibromofluoromethane	*92.4*			**0**	*80-119*	*%REC*	*1*	*03-Aug-2021 19:52*
Surr: Toluene-d8	*102*			**0**	*89-112*	*%REC*	*1*	*03-Aug-2021 19:52*
METALS BY ICPMS BY SW6020A		**Method:SW6020A**				Prep:SW3010A / 09-Aug-2021		Analyst: JHD
Arsenic	**0.00142**	J	**0.000400**	**0.00100**	**0.00500**	**mg/L**	1	09-Aug-2021 19:30
Chromium	**0.000898**	J	**0.000400**	**0.00100**	**0.00500**	**mg/L**	1	09-Aug-2021 19:30
Manganese	**0.335**		**0.000700**	**0.00250**	**0.00500**	**mg/L**	1	09-Aug-2021 19:30
Nickel	**0.00242**	J	**0.000600**	**0.00100**	**0.00500**	**mg/L**	1	09-Aug-2021 19:30
Thallium	0.000500	U	0.000200	0.000500	0.00200	mg/L	1	09-Aug-2021 19:30
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: GR
Subcontract Analysis	See Attached		0	0		NA	1	05-Aug-2021 12:56

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

ALS Houston, US Date: 10-Aug-21

Client: Aptim Environmental & Infrastucture, Inc. **ANALYTICAL REPORT**
Project: Longhorn Army Ammunition Plant LHAAP 16 July 2021 WorkOrder:HS21071405
Sample ID: 16SW02-210726 Lab ID:HS21071405-11
Collection Date: 26-Jul-2021 13:20 Matrix:GW

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
1,1,2-Trichloroethane	1.0	U	0.30	1.0	1.0	ug/L	1	04-Aug-2021 13:33
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	04-Aug-2021 13:33
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	04-Aug-2021 13:33
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	04-Aug-2021 13:33
Methylene chloride	1.0	U	0.40	1.0	2.0	ug/L	1	04-Aug-2021 13:33
Trichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	04-Aug-2021 13:33
Vinyl chloride	0.50	U	0.20	0.50	1.0	ug/L	1	04-Aug-2021 13:33
Surr: 1,2-Dichloroethane-d4	*87.8*			**0**	*81-118*	*%REC*	*1*	*04-Aug-2021 13:33*
Surr: 4-Bromofluorobenzene	*99.7*			**0**	*85-114*	*%REC*	*1*	*04-Aug-2021 13:33*
Surr: Dibromofluoromethane	*90.5*			**0**	*80-119*	*%REC*	*1*	*04-Aug-2021 13:33*
Surr: Toluene-d8	*105*			**0**	*89-112*	*%REC*	*1*	*04-Aug-2021 13:33*
METALS BY ICPMS BY SW6020A		**Method:SW6020A**				Prep:SW3010A / 09-Aug-2021		Analyst: JHD
Arsenic	**0.00180**	J	**0.000400**	**0.00100**	**0.00500**	**mg/L**	1	09-Aug-2021 19:15
Chromium	**0.00196**	J	**0.000400**	**0.00100**	**0.00500**	**mg/L**	1	09-Aug-2021 19:15
Manganese	**0.742**		**0.000700**	**0.00250**	**0.00500**	**mg/L**	1	09-Aug-2021 19:15
Nickel	**0.00373**	J	**0.000600**	**0.00100**	**0.00500**	**mg/L**	1	09-Aug-2021 19:15
Thallium	0.000500	U	0.000200	0.000500	0.00200	mg/L	1	09-Aug-2021 19:15
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: GR
Subcontract Analysis	See Attached		0	0		NA	1	05-Aug-2021 12:56

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

ALS Houston, US Date: 10-Aug-21

Client: Aptim Environmental & Infrastucture, Inc. **ANALYTICAL REPORT**
Project: Longhorn Army Ammunition Plant LHAAP 16 July 2021 WorkOrder:HS21071405
Sample ID: 16SW03-210726 Lab ID:HS21071405-12
Collection Date: 26-Jul-2021 13:50 Matrix:GW

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
1,1,2-Trichloroethane	1.0	U	0.30	1.0	1.0	ug/L	1	03-Aug-2021 20:14
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	03-Aug-2021 20:14
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	03-Aug-2021 20:14
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	03-Aug-2021 20:14
Methylene chloride	1.0	U	0.40	1.0	2.0	ug/L	1	03-Aug-2021 20:14
Trichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	03-Aug-2021 20:14
Vinyl chloride	0.50	U	0.20	0.50	1.0	ug/L	1	03-Aug-2021 20:14
Surr: 1,2-Dichloroethane-d4	*91.1*			**0**	*81-118*	*%REC*	*1*	*03-Aug-2021 20:14*
Surr: 4-Bromofluorobenzene	*99.2*			**0**	*85-114*	*%REC*	*1*	*03-Aug-2021 20:14*
Surr: Dibromofluoromethane	*91.8*			**0**	*80-119*	*%REC*	*1*	*03-Aug-2021 20:14*
Surr: Toluene-d8	*102*			**0**	*89-112*	*%REC*	*1*	*03-Aug-2021 20:14*
METALS BY ICPMS BY SW6020A		**Method:SW6020A**				Prep:SW3010A / 09-Aug-2021		Analyst: JHD
Arsenic	**0.00149**	J	**0.000400**	**0.00100**	**0.00500**	**mg/L**	1	09-Aug-2021 19:32
Chromium	**0.00243**	J	**0.000400**	**0.00100**	**0.00500**	**mg/L**	1	09-Aug-2021 19:32
Manganese	**0.380**		**0.000700**	**0.00250**	**0.00500**	**mg/L**	1	09-Aug-2021 19:32
Nickel	**0.00309**	J	**0.000600**	**0.00100**	**0.00500**	**mg/L**	1	09-Aug-2021 19:32
Thallium	0.000500	U	0.000200	0.000500	0.00200	mg/L	1	09-Aug-2021 19:32
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: GR
Subcontract Analysis	See Attached		0	0		NA	1	05-Aug-2021 12:56

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

ALS Houston, US Date: 10-Aug-21

Client: Aptim Environmental & Infrastucture, Inc. **ANALYTICAL REPORT**
Project: Longhorn Army Ammunition Plant LHAAP 16 July 2021 WorkOrder:HS21071405
Sample ID: Trip Blank-210726 Lab ID:HS21071405-13
Collection Date: 26-Jul-2021 00:00 Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,2-Trichloroethane	1.0	U	0.30	1.0	1.0	ug/L	1	03-Aug-2021 18:28
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	03-Aug-2021 18:28
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	03-Aug-2021 18:28
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	03-Aug-2021 18:28
Methylene chloride	1.0	U	0.40	1.0	2.0	ug/L	1	03-Aug-2021 18:28
Trichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	03-Aug-2021 18:28
Vinyl chloride	0.50	U	0.20	0.50	1.0	ug/L	1	03-Aug-2021 18:28
Surr: 1,2-Dichloroethane-d4	*92.8*			**0**	*81-118*	*%REC*	*1*	*03-Aug-2021 18:28*
Surr: 4-Bromofluorobenzene	*93.8*			**0**	*85-114*	*%REC*	*1*	*03-Aug-2021 18:28*
Surr: Dibromofluoromethane	*93.0*			**0**	*80-119*	*%REC*	*1*	*03-Aug-2021 18:28*
Surr: Toluene-d8	*104*			**0**	*89-112*	*%REC*	*1*	*03-Aug-2021 18:28*

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

ALS Houston, US Date: 10-Aug-21

Weight / Prep Log

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP 16 July 2021
WorkOrder: HS21071405

Batch ID: 168892 **Start Date:** 09 Aug 2021 09:30 **End Date:** 09 Aug 2021 13:30
Method: WATER - SW3010A **Prep Code:** 3010A

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor	
HS21071405-09		10 (mL)	10 (mL)	1	120 plastic HNO3
HS21071405-10		10 (mL)	10 (mL)	1	120 plastic HNO3
HS21071405-11		10 (mL)	10 (mL)	1	120 plastic HNO3
HS21071405-12		10 (mL)	10 (mL)	1	120 plastic HNO3

ALS Houston, US Date: 10-Aug-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP 16 July 2021
WorkOrder: HS21071405

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: 168892 (0)	**Test Name :** METALS BY ICPMS BY SW6020A				**Matrix:** GW	
HS21071405-09	16SW01-210726	26 Jul 2021 13:00		09 Aug 2021 13:30	09 Aug 2021 19:28	1
HS21071405-10	16SW01-210726-FD	26 Jul 2021 13:00		09 Aug 2021 13:30	09 Aug 2021 19:30	1
HS21071405-11	16SW02-210726	26 Jul 2021 13:20		09 Aug 2021 13:30	09 Aug 2021 19:15	1
HS21071405-12	16SW03-210726	26 Jul 2021 13:50		09 Aug 2021 13:30	09 Aug 2021 19:32	1
Batch ID: R388610 (0)	**Test Name :** DISSOLVED GASES BY RSK-175				**Matrix:** GW	
HS21071405-08	16WW42-210726	26 Jul 2021 12:40			30 Jul 2021 15:33	1
Batch ID: R388821 (0)	**Test Name :** VOLATILES ORGANICS BY METHOD 8260C				**Matrix:** Water	
HS21071405-13	Trip Blank-210726	26 Jul 2021 00:00			03 Aug 2021 18:28	1
Batch ID: R388821 (0)	**Test Name :** VOLATILES ORGANICS BY METHOD 8260C				**Matrix:** GW	
HS21071405-01	16EW02-210726	26 Jul 2021 07:35			03 Aug 2021 21:17	250
HS21071405-01	16EW02-210726	26 Jul 2021 07:35			03 Aug 2021 20:56	25
HS21071405-03	16EW08-210726	26 Jul 2021 09:05			03 Aug 2021 18:49	1
HS21071405-06	16RW02-210726	26 Jul 2021 11:15			03 Aug 2021 19:10	1
HS21071405-08	16WW42-210726	26 Jul 2021 12:40			03 Aug 2021 20:35	1
HS21071405-09	16SW01-210726	26 Jul 2021 13:00			03 Aug 2021 19:31	1
HS21071405-10	16SW01-210726-FD	26 Jul 2021 13:00			03 Aug 2021 19:52	1
HS21071405-12	16SW03-210726	26 Jul 2021 13:50			03 Aug 2021 20:14	1
Batch ID: R388888 (0)	**Test Name :** VOLATILES ORGANICS BY METHOD 8260C				**Matrix:** GW	
HS21071405-02	16EW04-210726	26 Jul 2021 08:20			04 Aug 2021 19:09	25
HS21071405-02	16EW04-210726	26 Jul 2021 08:20			04 Aug 2021 18:48	5
HS21071405-04	16RW04-210726	26 Jul 2021 09:50			04 Aug 2021 15:18	25
HS21071405-04	16RW04-210726	26 Jul 2021 09:50			04 Aug 2021 14:15	1
HS21071405-05	16RW01-210726	26 Jul 2021 10:30			04 Aug 2021 20:34	50
HS21071405-05	16RW01-210726	26 Jul 2021 10:30			04 Aug 2021 20:12	5
HS21071405-07	16WW13-210726	26 Jul 2021 12:00			04 Aug 2021 19:51	25
HS21071405-07	16WW13-210726	26 Jul 2021 12:00			04 Aug 2021 19:30	5
HS21071405-11	16SW02-210726	26 Jul 2021 13:20			04 Aug 2021 13:33	1

ALS Houston, US Date: 10-Aug-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP 16 July 2021
WorkOrder: HS21071405

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: R388904 (0)	**Test Name :** SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)				**Matrix:** GW	
HS21071405-01	16EW02-210726	26 Jul 2021 07:35			05 Aug 2021 12:56	1
HS21071405-02	16EW04-210726	26 Jul 2021 08:20			05 Aug 2021 12:56	1
HS21071405-03	16EW08-210726	26 Jul 2021 09:05			05 Aug 2021 12:56	1
HS21071405-04	16RW04-210726	26 Jul 2021 09:50			05 Aug 2021 12:56	1
HS21071405-05	16RW01-210726	26 Jul 2021 10:30			05 Aug 2021 12:56	1
HS21071405-06	16RW02-210726	26 Jul 2021 11:15			05 Aug 2021 12:56	1
HS21071405-07	16WW13-210726	26 Jul 2021 12:00			05 Aug 2021 12:56	1
HS21071405-08	16WW42-210726	26 Jul 2021 12:40			05 Aug 2021 12:56	1
HS21071405-09	16SW01-210726	26 Jul 2021 13:00			05 Aug 2021 12:56	1
HS21071405-10	16SW01-210726-FD	26 Jul 2021 13:00			05 Aug 2021 12:56	1
HS21071405-11	16SW02-210726	26 Jul 2021 13:20			05 Aug 2021 12:56	1
HS21071405-12	16SW03-210726	26 Jul 2021 13:50			05 Aug 2021 12:56	1
Batch ID: R389176 (0)	**Test Name :** TOTAL ORGANIC CARBON - SM5310B-2011				**Matrix:** GW	
HS21071405-08	16WW42-210726	26 Jul 2021 12:40			10 Aug 2021 12:23	1

ALS Houston, US Date: 10-Aug-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP 16 July 2021
WorkOrder: HS21071405

QC BATCH REPORT

Batch ID: R388610 (0) **Instrument: FID-4** **Method: DISSOLVED GASES BY RSK-175**

MBLK Sample ID: **MBLK-210730** Units: **mg/L** Analysis Date: **30-Jul-2021 09:55**
Client ID: Run ID: **FID-4_388610** SeqNo: **6208821** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ethane	0.000250	0.00100								U
Ethene	0.000500	0.00100								U
Methane	0.000250	0.000500								U

LCS Sample ID: **LCS-210730** Units: **mg/L** Analysis Date: **30-Jul-2021 10:05**
Client ID: Run ID: **FID-4_388610** SeqNo: **6208822** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ethane	0.0203	0.00100	0.01804	0	113	75 - 125				
Ethene	0.0175	0.00100	0.0168	0	104	75 - 125				
Methane	0.00983	0.000500	0.009647	0	102	75 - 125				

MS Sample ID: **HS21071204-02MS** Units: **mg/L** Analysis Date: **30-Jul-2021 14:47**
Client ID: Run ID: **FID-4_388610** SeqNo: **6208843** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ethane	0.00961	0.00100	0.01804	0	53.3	75 - 125				S
Ethene	0.0105	0.00100	0.0168	0.002684	46.3	75 - 125				S
Methane	0.205	0.000500	0.009647	0.2549	-517	75 - 125				SEO

MS Sample ID: **HS21071038-02MS** Units: **mg/L** Analysis Date: **30-Jul-2021 10:52**
Client ID: Run ID: **FID-4_388610** SeqNo: **6208826** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ethane	0.0166	0.00100	0.01804	0	92.2	75 - 125				
Ethene	0.0160	0.00100	0.0168	0.0007136	91.0	75 - 125				
Methane	0.00757	0.000500	0.009647	0.001677	61.0	75 - 125				S

ALS Houston, US Date: 10-Aug-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP 16 July 2021
WorkOrder: HS21071405

QC BATCH REPORT

Batch ID: R388610 (0) **Instrument:** FID-4 **Method:** DISSOLVED GASES BY RSK-175

MSD Sample ID: **HS21071204-02MSD** Units: **mg/L** Analysis Date: **30-Jul-2021 14:56**
Client ID: Run ID: **FID-4_388610** SeqNo: **6208844** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ethane	0.00943	0.00100	0.01804	0	52.3	75 - 125	0.009611	1.88	30	S
Ethene	0.0108	0.00100	0.0168	0.002684	48.1	75 - 125	0.01047	2.83	30	S
Methane	0.206	0.000500	0.009647	0.2549	-506	75 - 125	0.2051	0.523	30	SEO

MSD Sample ID: **HS21071038-02MSD** Units: **mg/L** Analysis Date: **30-Jul-2021 11:04**
Client ID: Run ID: **FID-4_388610** SeqNo: **6208827** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ethane	0.0166	0.00100	0.01804	0	91.8	75 - 125	0.01663	0.377	30	
Ethene	0.0161	0.00100	0.0168	0.0007136	91.8	75 - 125	0.01601	0.754	30	
Methane	0.00681	0.000500	0.009647	0.001677	53.2	75 - 125	0.007566	10.6	30	S

The following samples were analyzed in this batch: HS21071405-08

ALS Houston, US Date: 10-Aug-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP 16 July 2021
WorkOrder: HS21071405

QC BATCH REPORT

Batch ID: 168892 (0) **Instrument: ICPMS06** **Method: METALS BY ICPMS BY SW6020A**

MBLK Sample ID: **MBLK-168892** Units: **mg/L** Analysis Date: **09-Aug-2021 19:11**
Client ID: Run ID: **ICPMS06_389122** SeqNo: **6220762** PrepDate: **09-Aug-2021** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.00100	0.00500								U
Chromium	0.00100	0.00500								U
Manganese	0.00250	0.00500								U
Nickel	0.00100	0.00500								U
Thallium	0.000500	0.00200								U

LCS Sample ID: **LCS-168892** Units: **mg/L** Analysis Date: **09-Aug-2021 19:13**
Client ID: Run ID: **ICPMS06_389122** SeqNo: **6220763** PrepDate: **09-Aug-2021** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.05092	0.00500	0.05	0	102	84 - 116				
Chromium	0.04928	0.00500	0.05	0	98.6	85 - 116				
Manganese	0.0497	0.00500	0.05	0	99.4	87 - 115				
Nickel	0.0496	0.00500	0.05	0	99.2	85 - 117				
Thallium	0.05362	0.00200	0.05	0	107	82 - 116				

MS Sample ID: **HS21071405-11MS** Units: **mg/L** Analysis Date: **09-Aug-2021 19:19**
Client ID: **16SW02-210726** Run ID: **ICPMS06_389122** SeqNo: **6220766** PrepDate: **09-Aug-2021** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.05307	0.00500	0.05	0.001797	103	84 - 116				
Chromium	0.05053	0.00500	0.05	0.001964	97.1	85 - 116				
Manganese	0.7677	0.00500	0.05	0.7422	51.0	87 - 115				SO
Nickel	0.05293	0.00500	0.05	0.00373	98.4	85 - 117				
Thallium	0.05401	0.00200	0.05	0.000087	108	82 - 116				

ALS Houston, US Date: 10-Aug-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP 16 July 2021
WorkOrder: HS21071405

QC BATCH REPORT

Batch ID: 168892 (0) **Instrument:** ICPMS06 **Method:** METALS BY ICPMS BY SW6020A

MSD Sample ID: **HS21071405-11MSD** Units: **mg/L** Analysis Date: **09-Aug-2021 19:21**
Client ID: **16SW02-210726** Run ID: **ICPMS06_389122** SeqNo: **6220767** PrepDate: **09-Aug-2021** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.05298	0.00500	0.05	0.001797	102	84 - 116	0.05307	0.181	20	
Chromium	0.05035	0.00500	0.05	0.001964	96.8	85 - 116	0.05053	0.349	20	
Manganese	0.7509	0.00500	0.05	0.7422	17.4	87 - 115	0.7677	2.21	20	SO
Nickel	0.05238	0.00500	0.05	0.00373	97.3	85 - 117	0.05293	1.03	20	
Thallium	0.05369	0.00200	0.05	0.000087	107	82 - 116	0.05401	0.607	20	

PDS Sample ID: **HS21071405-11PDS** Units: **mg/L** Analysis Date: **09-Aug-2021 19:23**
Client ID: **16SW02-210726** Run ID: **ICPMS06_389122** SeqNo: **6220768** PrepDate: **09-Aug-2021** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Manganese	0.7977	0.00500	0.1	0.7422	55.5	80 - 120				SO

SD Sample ID: **HS21071405-11SD** Units: **mg/L** Analysis Date: **09-Aug-2021 19:17**
Client ID: **16SW02-210726** Run ID: **ICPMS06_389122** SeqNo: **6220765** PrepDate: **09-Aug-2021** DF: **5**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	%D Limit	Qual
Arsenic	0.004007	0.0250					0.001797	0	10	J
Chromium	0.003762	0.0250					0.001964	0	10	J
Manganese	0.8073	0.0250					0.7422	8.77	10	
Nickel	0.005607	0.0250					0.00373	0	10	J
Thallium	0.002066	0.0100					0.000087	0	10	J

The following samples were analyzed in this batch: HS21071405-09 HS21071405-10 HS21071405-11 HS21071405-12

ALS Houston, US Date: 10-Aug-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP 16 July 2021
WorkOrder: HS21071405

QC BATCH REPORT

Batch ID: R388821 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MBLK Sample ID: **VBLKW-210803** Units: **ug/L** Analysis Date: **03-Aug-2021 13:13**
Client ID: Run ID: **VOA6_388821** SeqNo: **6213698** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,2-Trichloroethane	1.0	1.0								U
1,1-Dichloroethene	0.50	1.0								U
1,2-Dichloroethane	0.50	1.0								U
cis-1,2-Dichloroethene	0.50	1.0								U
Methylene chloride	1.0	2.0								U
Trichloroethene	0.50	1.0								U
Vinyl chloride	0.50	1.0								U
Surr: 1,2-Dichloroethane-d4	*44.87*	*1.0*	*50*	*0*	*89.7*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*50.36*	*1.0*	*50*	*0*	*101*	*85 - 114*				
Surr: Dibromofluoromethane	*45.8*	*1.0*	*50*	*0*	*91.6*	*80 - 119*				
Surr: Toluene-d8	*51.62*	*1.0*	*50*	*0*	*103*	*89 - 112*				

LCS Sample ID: **VLCSW-210803** Units: **ug/L** Analysis Date: **03-Aug-2021 12:09**
Client ID: Run ID: **VOA6_388821** SeqNo: **6213697** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,2-Trichloroethane	19.59	1.0	20	0	98.0	80 - 119				
1,1-Dichloroethene	16.91	1.0	20	0	84.6	71 - 131				
1,2-Dichloroethane	19.08	1.0	20	0	95.4	73 - 128				
cis-1,2-Dichloroethene	18.06	1.0	20	0	90.3	78 - 123				
Methylene chloride	19.21	2.0	20	0	96.0	74 - 124				
Trichloroethene	19.42	1.0	20	0	97.1	79 - 123				
Vinyl chloride	17.1	1.0	20	0	85.5	58 - 137				
Surr: 1,2-Dichloroethane-d4	*48.43*	*1.0*	*50*	*0*	*96.9*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*49.29*	*1.0*	*50*	*0*	*98.6*	*85 - 114*				
Surr: Dibromofluoromethane	*47.57*	*1.0*	*50*	*0*	*95.1*	*80 - 119*				
Surr: Toluene-d8	*46.87*	*1.0*	*50*	*0*	*93.7*	*89 - 112*				

ALS Houston, US Date: 10-Aug-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP 16 July 2021
WorkOrder: HS21071405

QC BATCH REPORT

Batch ID: R388821 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MS Sample ID: **HS21071731-01MS** Units: **ug/L** Analysis Date: **03-Aug-2021 14:58**
Client ID: Run ID: **VOA6_388821** SeqNo: **6213703** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,2-Trichloroethane	17.57	1.0	20	0	87.8	80 - 119				
1,1-Dichloroethene	18.16	1.0	20	0	90.8	71 - 131				
1,2-Dichloroethane	17.5	1.0	20	0	87.5	73 - 128				
cis-1,2-Dichloroethene	39.67	1.0	20	20.07	98.0	78 - 123				
Methylene chloride	17.12	2.0	20	0	85.6	74 - 124				
Trichloroethene	117.6	1.0	20	105.6	60.1	79 - 123				SO
Vinyl chloride	80.97	1.0	20	63.6	86.9	58 - 137				
Surr: 1,2-Dichloroethane-d4	*45.05*	*1.0*	*50*	*0*	*90.1*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*49.19*	*1.0*	*50*	*0*	*98.4*	*85 - 114*				
Surr: Dibromofluoromethane	*45.9*	*1.0*	*50*	*0*	*91.8*	*80 - 119*				
Surr: Toluene-d8	*51.24*	*1.0*	*50*	*0*	*102*	*89 - 112*				

MSD Sample ID: **HS21071731-01MSD** Units: **ug/L** Analysis Date: **03-Aug-2021 15:19**
Client ID: Run ID: **VOA6_388821** SeqNo: **6213704** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,2-Trichloroethane	17.26	1.0	20	0	86.3	80 - 119	17.57	1.79	20	
1,1-Dichloroethene	16.14	1.0	20	0	80.7	71 - 131	18.16	11.8	20	
1,2-Dichloroethane	15.83	1.0	20	0	79.2	73 - 128	17.5	9.99	20	
cis-1,2-Dichloroethene	35.36	1.0	20	20.07	76.5	78 - 123	39.67	11.5	20	S
Methylene chloride	16.01	2.0	20	0	80.1	74 - 124	17.12	6.71	20	
Trichloroethene	108	1.0	20	105.6	12.1	79 - 123	117.6	8.53	20	SO
Vinyl chloride	74.74	1.0	20	63.6	55.7	58 - 137	80.97	8	20	S
Surr: 1,2-Dichloroethane-d4	*45.74*	*1.0*	*50*	*0*	*91.5*	*81 - 118*	*45.05*	*1.51*	*20*	
Surr: 4-Bromofluorobenzene	*50.19*	*1.0*	*50*	*0*	*100*	*85 - 114*	*49.19*	*2.03*	*20*	
Surr: Dibromofluoromethane	*45.96*	*1.0*	*50*	*0*	*91.9*	*80 - 119*	*45.9*	*0.132*	*20*	
Surr: Toluene-d8	*51.95*	*1.0*	*50*	*0*	*104*	*89 - 112*	*51.24*	*1.39*	*20*	

The following samples were analyzed in this batch:

HS21071405-01	HS21071405-03	HS21071405-06	HS21071405-08
HS21071405-09	HS21071405-10	HS21071405-12	HS21071405-13

ALS Houston, US Date: 10-Aug-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP 16 July 2021
WorkOrder: HS21071405

QC BATCH REPORT

Batch ID: R388888 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MBLK Sample ID: **VBLKW-210804** Units: **ug/L** Analysis Date: **04-Aug-2021 13:11**
Client ID: Run ID: **VOA6_388888** SeqNo: **6215041** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,2-Trichloroethane	1.0	1.0								U
1,1-Dichloroethene	0.50	1.0								U
1,2-Dichloroethane	0.50	1.0								U
cis-1,2-Dichloroethene	0.50	1.0								U
Methylene chloride	1.0	2.0								U
Trichloroethene	0.50	1.0								U
Vinyl chloride	0.50	1.0								U
Surr: 1,2-Dichloroethane-d4	*43.87*	*1.0*	*50*	*0*	*87.7*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*48.49*	*1.0*	*50*	*0*	*97.0*	*85 - 114*				
Surr: Dibromofluoromethane	*45.13*	*1.0*	*50*	*0*	*90.3*	*80 - 119*				
Surr: Toluene-d8	*51.3*	*1.0*	*50*	*0*	*103*	*89 - 112*				

LCS Sample ID: **VLCSW-210804** Units: **ug/L** Analysis Date: **04-Aug-2021 12:08**
Client ID: Run ID: **VOA6_388888** SeqNo: **6215040** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,2-Trichloroethane	19.02	1.0	20	0	95.1	80 - 119				
1,1-Dichloroethene	15.94	1.0	20	0	79.7	71 - 131				
1,2-Dichloroethane	18.08	1.0	20	0	90.4	73 - 128				
cis-1,2-Dichloroethene	17.85	1.0	20	0	89.3	78 - 123				
Methylene chloride	18.55	2.0	20	0	92.8	74 - 124				
Trichloroethene	18.57	1.0	20	0	92.8	79 - 123				
Vinyl chloride	16.17	1.0	20	0	80.9	58 - 137				
Surr: 1,2-Dichloroethane-d4	*48.01*	*1.0*	*50*	*0*	*96.0*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*49.81*	*1.0*	*50*	*0*	*99.6*	*85 - 114*				
Surr: Dibromofluoromethane	*47.26*	*1.0*	*50*	*0*	*94.5*	*80 - 119*				
Surr: Toluene-d8	*47.6*	*1.0*	*50*	*0*	*95.2*	*89 - 112*				

ALS Houston, US Date: 10-Aug-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP 16 July 2021
WorkOrder: HS21071405

QC BATCH REPORT

Batch ID: R388888 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MS Sample ID: **HS21071405-11MS** Units: **ug/L** Analysis Date: **04-Aug-2021 14:36**
Client ID: **16SW02-210726** Run ID: **VOA6_388888** SeqNo: **6215044** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,2-Trichloroethane	19.33	1.0	20	0	96.6	80 - 119				
1,1-Dichloroethene	19	1.0	20	0	95.0	71 - 131				
1,2-Dichloroethane	18.42	1.0	20	0	92.1	73 - 128				
cis-1,2-Dichloroethene	18.58	1.0	20	0	92.9	78 - 123				
Methylene chloride	18.84	2.0	20	0	94.2	74 - 124				
Trichloroethene	23.69	1.0	20	0	118	79 - 123				
Vinyl chloride	19.84	1.0	20	0	99.2	58 - 137				
Surr: 1,2-Dichloroethane-d4	*48.94*	*1.0*	*50*	*0*	*97.9*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*50.14*	*1.0*	*50*	*0*	*100*	*85 - 114*				
Surr: Dibromofluoromethane	*47*	*1.0*	*50*	*0*	*94.0*	*80 - 119*				
Surr: Toluene-d8	*51.3*	*1.0*	*50*	*0*	*103*	*89 - 112*				

MSD Sample ID: **HS21071405-11MSD** Units: **ug/L** Analysis Date: **04-Aug-2021 14:57**
Client ID: **16SW02-210726** Run ID: **VOA6_388888** SeqNo: **6215045** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,2-Trichloroethane	19.67	1.0	20	0	98.3	80 - 119	19.33	1.73	20	
1,1-Dichloroethene	18.52	1.0	20	0	92.6	71 - 131	19	2.53	20	
1,2-Dichloroethane	18.53	1.0	20	0	92.7	73 - 128	18.42	0.613	20	
cis-1,2-Dichloroethene	17.68	1.0	20	0	88.4	78 - 123	18.58	4.97	20	
Methylene chloride	18.4	2.0	20	0	92.0	74 - 124	18.84	2.4	20	
Trichloroethene	20.38	1.0	20	0	102	79 - 123	23.69	15	20	
Vinyl chloride	17.86	1.0	20	0	89.3	58 - 137	19.84	10.5	20	
Surr: 1,2-Dichloroethane-d4	*47.82*	*1.0*	*50*	*0*	*95.6*	*81 - 118*	*48.94*	*2.33*	*20*	
Surr: 4-Bromofluorobenzene	*48.89*	*1.0*	*50*	*0*	*97.8*	*85 - 114*	*50.14*	*2.52*	*20*	
Surr: Dibromofluoromethane	*46.96*	*1.0*	*50*	*0*	*93.9*	*80 - 119*	*47*	*0.099*	*20*	
Surr: Toluene-d8	*51.28*	*1.0*	*50*	*0*	*103*	*89 - 112*	*51.3*	*0.0581*	*20*	

The following samples were analyzed in this batch: HS21071405-02 HS21071405-04 HS21071405-05 HS21071405-07 HS21071405-11

ALS Houston, US Date: 10-Aug-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP 16 July 2021
WorkOrder: HS21071405

QC BATCH REPORT

Batch ID: R389176 (0) **Instrument:** TOC_04 **Method:** TOTAL ORGANIC CARBON - SM5310B-2011

MBLK Sample ID: **MBLK-080921** Units: **mg/L** Analysis Date: **10-Aug-2021 10:45**
Client ID: Run ID: **TOC_04_389176** SeqNo: **6221926** PrepDate: DF: **1**

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

LCS Sample ID: **LCS-08092021** Units: **mg/L** Analysis Date: **10-Aug-2021 10:57**
Client ID: Run ID: **TOC_04_389176** SeqNo: **6221927** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Organic Carbon, Total	10.12	1.00	10	0	101	85 - 115				

LCSD Sample ID: **LCSD-08092021** Units: **mg/L** Analysis Date: **10-Aug-2021 11:09**
Client ID: Run ID: **TOC_04_389176** SeqNo: **6221928** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Organic Carbon, Total	9.721	1.00	10	0	97.2	85 - 115	10.12	4.02	20	

MS Sample ID: **HS21071405-08MS** Units: **mg/L** Analysis Date: **10-Aug-2021 12:38**
Client ID: **16WW42-210726** Run ID: **TOC_04_389176** SeqNo: **6221934** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Organic Carbon, Total	16.98	1.00	10	5.518	115	80 - 120				

The following samples were analyzed in this batch: HS21071405-08

ALS Houston, US Date: 10-Aug-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP 16 July 2021
WorkOrder: **HS21071405**

QUALIFIERS, ACRONYMS, UNITS

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

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

Unit Reported	Description
mg/L	Milligrams per Liter

CERTIFICATIONS,ACCREDITATIONS & LICENSES

Agency	Number	Expire Date
Arkansas	21-022-0	26-Mar-2022
Dept of Defense	PJLA L20-507-R2	22-Dec-2021
Florida	E87611-33	30-Jun-2022
Illinois	2000322021-7	09-May-2022
Kansas	E-10352 2021-2022	31-Jul-2022
Kentucky	123043, 2021-2022	30-Apr-2022
Louisiana	03087, 2021-2022	30-Jun-2022
North Carolina	624-2021	31-Dec-2021
Oklahoma	2020-165	31-Aug-2021
Texas	T104704231-21-27	30-Apr-2022

ALS Houston, US Date: 10-Aug-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP 16 July 2021
Work Order: HS21071405

SAMPLE TRACKING

Lab Samp ID	Client Sample ID	Action	Date	Person	New Location
HS21071405-01	16EW02-210726	Login	7/27/2021 3:47:17 PM	PJM	Sub
HS21071405-01	16EW02-210726	Login	7/27/2021 3:47:17 PM	PJM	VOA020
HS21071405-02	16EW04-210726	Login	7/27/2021 3:47:17 PM	PJM	Sub
HS21071405-02	16EW04-210726	Login	7/27/2021 3:47:17 PM	PJM	VOA020
HS21071405-03	16EW08-210726	Login	7/27/2021 3:47:17 PM	PJM	Sub
HS21071405-03	16EW08-210726	Login	7/27/2021 3:47:17 PM	PJM	VOA020
HS21071405-13	Trip Blank-210726	Login	7/27/2021 3:47:17 PM	PJM	VOA020

ALS Houston, US Date: 10-Aug-21

Sample Receipt Checklist

Work Order ID: HS21071405 **Date/Time Received:** 27-Jul-2021 09:15

Client Name: CBI-Houston **Received by:** Paresh M. Giga

Completed By:	/S/ Pablo Marinez	27-Jul-2021 15:50	**Reviewed by:**	/S/ Ragen Giga	28-Jul-2021 18:27
	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 ☐	2 Page(s)	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	COC IDs:CLIENT	
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 UC/C	IR 31		
Cooler(s)/Kit(s):	45694			
Date/Time sample(s) sent to storage:	7/27/21 14:05			
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:

CHAIN OF CUSTODY

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

Page 1 of 1

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

Field Sample I.D.	Sample Matrix	Date / Time	MS / MSD	No. OF CONTAINERS	Analyses: VOC by SW 8260B	TOC by SM5310C	MEE by RSK 175	Anions (bromide, sulfate, nitrate) by SW9056 and Alkalinity by SM2320	Bromide by SW9056	Perchlorate by SW6850	Metals (arsenic, chromium, manganese, nickel, thallium) by SW6020	Remarks (Preservatives, etc.)	Lab I.D.#
16EW02-210726	WG	7/26/21/0735		4	X					X			
16EW04-210726	WG	7/26/21/0820		4	X					X			
16EW08-210726	WG	7/26/21/0905		4	X					X			
16RW04-210726	WG	7/26/21/0950		4	X					X			
16RW01-210726	WG	7/26/21/1030		4	X					X			
16RW02-210726	WG	7/26/21/1115		4	X					X			
16WW13-210726	WG	7/26/21/1200		4	X					X			
16WW42-210726	WG	7/26/21/1240		9	X	X	X			X			

HS21071405

Aptim Environmental & Infrastructure, Inc.

Longhorn Army Ammunition Plant LHAAP 16 July 20

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

Relinquished By:	Date	Time	Received By:	Date	Time	Relinquished By:	Date	Time	Received By:	Date	Time
Scott Beesinger	7/26/21	1430		7/27/2021	0915						

For Lab Use Only

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

Remarks: 4SGP4 0.6 1.3 #31 Cl: 3

CHAIN OF CUSTODY

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

HS21071405

Aptim Environmental & Infrastucture, Inc.
Longhorn Army Ammunition Plant LHAAP 16 July 20

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

Field Sample I.D.	Sample Matrix	Date / Time	MS / MSD	No. OF CONTAINERS	Analyses: VOC by SW 8260B	TOC by SM5310C	MEE by RSK 175	Anions (bromide, sulfate, nitrate) by SW9056 and Alkalinity by SM2320	Bromide by SW9056	Perchlorate by SW6850	Metals (arsenic, chromium, manganese, nickel, thallium) by SW6020				Remarks (Preservatives, etc.)	Lab I.D.#
16SW01-210726	WG	7/26/21/1300		5	X					X	X					
16SW01-210726-FD	WG	7/26/21/1300		5	X					X	X					
16SW02-210726	W	7/26/21/1320		5	X					X	X					
16SW02-210726-MS	W	7/26/21/1320		5	X					X	X					
16SW02-210726-MSD	W	7/26/21/1320		5	X					X	X					
16SW03-210726	W	7/26/21/1350		5	X					X	X					
TRIP BLANK-210726	W	7/26/21		2	X											

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

Relinquished By:	Date	Time	Received By:	Date	Time	Relinquished By:	Date	Time	Received By:	Date	Time
Scott Beesinger	7/26/21	1430		7/27/2021	9:15						

For Lab Use Only

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

Remarks:

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

45694

CUSTODY SEAL

Date: 7/26/21 Time: 1430
Name: Scott Beesinger
Company: BHATE

Seal Broken By: SM
Date: 07/27/21

45694 JUL 27 2021

45694

CRIGIN ID:SGRA (903) 930-6183
SCOTT BEESINGER
APTIM ENVIRONMENTAL & INFRASTRUCTURE
1209-B EAST GRAND AVE
PMB 202
MARSHALL, TX 75670
UNITED STATES US

SHIP DATE: 28JUN21
ACTWGT: 1.00 LB MAN
CAD: 0221247/CAFE3504
DIMS: 26x14x14 IN

TO SHIPPING DEPT
ALS LABORATORY GROUP
10450 STANCLIFF RD
SUITE 210
HOUSTON TX 77099
(281) 530-5656
REF: LHAAP-16-BO 79249-RG
RMA:

FedEx Express

FedEx
TRK# 0221 9473 0845 1302

TUE - 27 JUL 10:30A
PRIORITY OVERNIGHT

AB SGRA

77099
TX-US IAH

August 05, 2021 Service Request No:E2100837

Ragen Giga
ALS Environmental - US
10450 Stancliff Rd Suite 210
Houston, TX 77099

Laboratory Results for: HS21071405

Dear Ragen,

Enclosed are the results of the sample(s) submitted to our laboratory July 27, 2021
For your reference, these analyses have been assigned our service request number **E2100837.**

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

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Corey Grandits
Project Manager

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

Certificate of Analysis

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

ALS Environmental

Client:	ALS Houston	**Service Request No.:**	E2100837
Project:	HS21071405	**Date Received:**	07/27/21
Sample Matrix:	W		

CASE NARRATIVE

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

Sample Receipt

Twelve samples were received for analysis at ALS Environmental in Houston on 07/27/21.

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

Data Validation Notes and Discussion

Precision and Accuracy:

EQ2100470: Laboratory Control Spike/Duplicate Laboratory Control Spike (LCS/DLCS) samples were analyzed and reported in addition to a MS/MSD for this extraction batch. The LCS, DLCS, MS, & MSD recoveries are within QC limits.

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

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

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

Client: ALS Environmental - US **Service Request:**E2100837
Project: HS21071405

SAMPLE CROSS-REFERENCE

SAMPLE #	CLIENT SAMPLE ID	DATE	TIME
E2100837-001	16EW02-210726	7/26/2021	0735
E2100837-002	16EW04-210726	7/26/2021	0820
E2100837-003	16EW08-210726	7/26/2021	0905
E2100837-004	16RW04-210726	7/26/2021	0950
E2100837-005	16RW01-210726	7/26/2021	1030
E2100837-006	16RW02-210726	7/26/2021	1115
E2100837-007	16WW13-210726	7/26/2021	1200
E2100837-008	16WW42-210726	7/26/2021	1240
E2100837-009	16SW01-210726	7/26/2021	1300
E2100837-010	16SW01-210726-FD	7/26/2021	1300
E2100837-011	16SW02-210726	7/26/2021	1320
E2100837-012	16SW03-210726	7/26/2021	1350

Service Request Summary

Folder #: **E2100837**
Client Name: ALS Environmental - US
Project Name: HS21071405
Project Number:

Report To: Ragen Giga
ALS Environmental - US
10450 Stancliff Rd Suite 210
Houston, TX 77099
USA
Phone Number:
Cell Number:
Fax Number:
E-mail: ragenp.giga@alsglobal.com

Project Chemist: Corey Grandits
Originating Lab: HOUSTON
Logged By: CGRANDITS
Date Received: 07/27/21
Internal Due Date: 8/10/2021
QAP: LAB QAP
Qualifier Set: Lab Standard
Formset: Lab Standard
Merged?: Y
Report to MDL?: Y
P.O. Number: HS21071405
EDD: No EDD Specified

14 120 mL-Plastic Bottle Natural WM Unpreserved
Location: EHRMS-AirArch 1
Pressure Gas:
Rush

Lab Samp No.	Client Samp No	Matrix	Collected	HOUSTON ClO4 DOD/6850
E2100837-001	16EW02-210726	Ground Water	07/26/21 0735	**IV**
E2100837-002	16EW04-210726	Ground Water	07/26/21 0820	**IV**
E2100837-003	16EW08-210726	Ground Water	07/26/21 0905	**IV**
E2100837-004	16RW04-210726	Ground Water	07/26/21 0950	**IV**
E2100837-005	16RW01-210726	Ground Water	07/26/21 1030	**IV**
E2100837-006	16RW02-210726	Ground Water	07/26/21 1115	**IV**
E2100837-007	16WW13-210726	Ground Water	07/26/21 1200	**IV**
E2100837-008	16WW42-210726	Ground Water	07/26/21 1240	**IV**
E2100837-009	16SW01-210726	Ground Water	07/26/21 1300	**IV**
E2100837-010	16SW01-210726-FD	Ground Water	07/26/21 1300	**IV**
E2100837-011	16SW02-210726	Ground Water	07/26/21 1320	**IV**
E2100837-012	16SW03-210726	Ground Water	07/26/21 1350	**IV**

Service Request Summary

Folder #: **E2100837**
Client Name: ALS Environmental - US
Project Name: HS21071405
Project Number:

Report To: Ragen Giga
ALS Environmental - US
10450 Stancliff Rd Suite 210
Houston, TX 77099
USA
Phone Number:
Cell Number:
Fax Number:
E-mail: ragenp.giga@alsglobal.com

Project Chemist: Corey Grandits
Originating Lab: HOUSTON
Logged By: CGRANDITS
Date Received: 07/27/21
Internal Due Date: 8/10/2021
QAP: LAB QAP
Qualifier Set: Lab Standard
Formset: Lab Standard
Merged?: Y
Report to MDL?: Y
P.O. Number: HS21071405
EDD: No EDD Specified

14 120 mL-Plastic Bottle Natural WM Unpreserved
Location: EHRMS-AirArch 1
Pressure Gas:
Rush

Test Comments:

Group	Test/Method	Samples	Comments
Semivoa GCMS	ClO4 DOD/6850	11	IV due 8/17
Semivoa GCMS	ClO4 DOD/6850	1	MS/MSD

Data Qualifiers

Lab Standard

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

Data Qualifiers

Lab Standard

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

ALS Laboratory Group

Acronyms

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

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State Certifications, Accreditations, and Licenses

Agency	Number	Expire Date
American Association for Laboratory Accreditation	2897.01 2020	11/30/2021
Arkansas Department of Environmental Quality	21-022-0	3/26/2022
Arkansas Department of Environmental Quality	19-028-0	6/30/2022
Department of Defense	A2LA 2897.01	11/30/2021
Florida Department of Health	E87611-33	6/30/2022
Hawaii Department of Health	2021-2022	4/30/2022
Kansas Department of Health and Environment	E-10352 2022	7/31/2022
Louisiana Department of Environmental Quality	03087-2021	6/30/2022
Louisiana Department of Health and Hospitals	LA028-2021	12/31/2021
Maine Department of Health and Human Services	2020016	6/5/2022
Minnesota Department of Health	2021671	12/31/2021
New Hampshire Environmental Laboratory Accreditation Program	209421	4/24/2022
Oklahoma Department of Environmental Quality	2020-123	8/31/2021
Pennsylvania Department of Environmental Protection	68-03441-015	6/30/2022
Tennessee Department of Environment and Concervation	04016-2021	4/30/2022
Texas Commision on Environmental Quality	T104704231-21-27	4/30/2022
United States Department of Agriculture	P330-19-00299	10/10/2022

Chain of Custody

ALS Environmental - Houston HRMS
10450 Stancliff Rd, Suite 210, Houston TX 77099
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Subcontract Chain of Custody

SAMPLING STATE: **Dept of Defense** **COC ID:** **16566**

SUBCONTRACT TO:

ALS Environmental
10450 Stancliff RoadSuite 210
Houston, TX 77084

Phone: +1 281 530 5656

CUSTOMER INFORMATION:

Company:	ALS Houston
Contact:	Ragen Giga
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Email:	RagenP.Giga@ALSGlobal.com
Alternate Contact:	
Email:	

INVOICE INFORMATION:

Company:	ALS Houston
Contact:	Accounts Payable
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Reference:	HS21071405
TSR:	Sonia West

	LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
	ANALYSIS REQUESTED			DUE DATE
1.	**HS21071405-01**	**16EW02-210726**	**GW**	**26 Jul 2021 07:35**
	Level II and Level IV reports on a seperate pdf. Send WOA to Vicki Graves.			10 Aug 2021
2.	**HS21071405-02**	**16EW04-210726**	**GW**	**26 Jul 2021 08:20**
	Level II and Level IV reports on a seperate pdf. Send WOA to Vicki Graves.			10 Aug 2021
3.	**HS21071405-03**	**16EW08-210726**	**GW**	**26 Jul 2021 09:05**
	Level II and Level IV reports on a seperate pdf. Send WOA to Vicki Graves.			10 Aug 2021
4.	**HS21071405-04**	**16RW04-210726**	**GW**	**26 Jul 2021 09:50**
	Level II and Level IV reports on a seperate pdf. Send WOA to Vicki Graves.			10 Aug 2021
5.	**HS21071405-05**	**16RW01-210726**	**GW**	**26 Jul 2021 10:30**
	Level II and Level IV reports on a seperate pdf. Send WOA to Vicki Graves.			10 Aug 2021
6.	**HS21071405-06**	**16RW02-210726**	**GW**	**26 Jul 2021 11:15**
	Level II and Level IV reports on a seperate pdf. Send WOA to Vicki Graves.			10 Aug 2021
7.	**HS21071405-07**	**16WW13-210726**	**GW**	**26 Jul 2021 12:00**
	Level II and Level IV reports on a seperate pdf. Send WOA to Vicki Graves.			10 Aug 2021
8.	**HS21071405-08**	**16WW42-210726**	**GW**	**26 Jul 2021 12:40**

Subcontract Chain of Custody

SAMPLING STATE: **Dept of Defense** **COC ID: 16566**

	LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
	ANALYSIS REQUESTED			DUE DATE
	Level II and Level IV reports on a seperate pdf. Send WOA to Vicki Graves.			10 Aug 2021
9.	**HS21071405-09**	**16SW01-210726**	**GW**	**26 Jul 2021 13:00**
	Level II and Level IV reports on a seperate pdf. Send WOA to Vicki Graves.			10 Aug 2021
10.	**HS21071405-10**	**16SW01-210726-FD**	**GW**	**26 Jul 2021 13:00**
	Level II and Level IV reports on a seperate pdf. Send WOA to Vicki Graves.			10 Aug 2021
11.	**HS21071405-11**	**16SW02-210726**	**GW**	**26 Jul 2021 13:20**
	Level II and Level IV reports on a seperate pdf. Send WOA to Vicki Graves.			10 Aug 2021
12.	**HS21071405-12**	**16SW03-210726**	**GW**	**26 Jul 2021 13:50**
	Level II and Level IV reports on a seperate pdf. Send WOA to Vicki Graves.			10 Aug 2021

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

QC Level: DOD IV (DoD Data Package)

Relinquished By: _____ Date/Time: 7-27-21 16:07

Received By: _____ Date/Time: 7/27/21 16:07

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

ALS Environmental

Cooler Receipt Form

Project Chemist: IG

Client/Project: ALS-H

Thermometer ID: IR31

Date/Time Received: 7/27/21 Initials: IG

Date/Time Logged in: 7/27/21 Initials: IG

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

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

3. Were custody seals on coolers? ○ Yes ✓ No
   Were they intact? ○ Yes ○ No ✓ N/A
   Were they signed and dated? ○ Yes ○ No ✓ N/A
   If yes, how many and where?

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

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

Cooler Tracking Number	COC ID	Date Opened	Time Opened	Opened By	Temp. °C	Temp Blank?
NA		7/27/21	1687	IG	5.0	✓
						☐
						☐
						☐

6. Were custody papers properly filled out (ink, signed, dated, etc)? ✓ Yes ○ No
7. Did all bottles arrive in good condition (not broken, no signs of leakage)? ✓ Yes ○ No
8. Were all sample labels complete (i.e., sample ID, analysis, preservation, etc)? ✓ Yes ○ No
9. Were appropriate bottles/containers and volumes received for the requested tests? ✓ Yes ○ No
10. Did sample labels and tags agree with custody documents? ✓ Yes ○ No

Notes, Discrepancies, & Resolutions:

Service request Label:

HS-HRMSCoolerReceipt R1.0

ALS Environmental - Houston HRMS

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SAMPLE ACCEPTANCE POLICY

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

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

- ✓ Intact on outside of cooler, signed and dated

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

The following is required on each COC:

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

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

Sample Integrity (mandatory):

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

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

Temperature Requirement (varies by sample matrix):

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

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

Preparation Information Benchsheets

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

Preparation Information Benchsheet

Prep Run#: 384286 **Prep WorkFlow:** GenExt28Day **Status:** Prepped
Team: Semivoa GCMS/GRIVERA **Prep Method:** **Prep Date/Time:** 7/30/21 10:05

#	Lab Code	Client ID	B#	Method /Test	pH	Cl	Matrix	Amt. Ext.	Sample Description
1	E2100831-001	OBFOD-2R	.01	6850/ClO4 DOD			Water	10mL	
2	E2100831-002	OBFOD-3	.01	6850/ClO4 DOD			Water	10mL	
3	E2100836-001	LH18/24-SP650_072721_BIX	.01	6850/ClO4 DOD			Water	10mL	
4	E2100837-001	16EW02-210726	.01	6850/ClO4 DOD			Ground Water	10mL	
5	E2100837-002	16EW04-210726	.01	6850/ClO4 DOD			Ground Water	10mL	
6	E2100837-003	16EW08-210726	.01	6850/ClO4 DOD			Ground Water	10mL	
7	E2100837-004	16RW04-210726	.01	6850/ClO4 DOD			Ground Water	10mL	
8	E2100837-005	16RW01-210726	.01	6850/ClO4 DOD			Ground Water	10mL	
9	E2100837-006	16RW02-210726	.01	6850/ClO4 DOD			Ground Water	10mL	
10	E2100837-007	16WW13-210726	.01	6850/ClO4 DOD			Ground Water	10mL	
11	E2100837-008	16WW42-210726	.01	6850/ClO4 DOD			Ground Water	10mL	
12	E2100837-009	16SW01-210726	.01	6850/ClO4 DOD			Ground Water	10mL	
13	E2100837-010	16SW01-210726-FD	.01	6850/ClO4 DOD			Ground Water	10mL	
14	E2100837-011	16SW02-210726	.01	6850/ClO4 DOD			Ground Water	10mL	
15	E2100837-012	16SW03-210726	.01	6850/ClO4 DOD			Ground Water	10mL	
16	E2100856-001	16WW12-210728	.01	6850/ClO4 DOD			Ground Water	10mL	
17	E2100856-002	16WW39-210728	.01	6850/ClO4 DOD			Ground Water	10mL	
18	E2100856-003	16WW49-210728	.01	6850/ClO4 DOD			Ground Water	10mL	
19	E2100856-004	16WW27-210728	.01	6850/ClO4 DOD			Ground Water	10mL	
20	E2100856-005	16WW43-210728	.01	6850/ClO4 DOD			Ground Water	10mL	
21	EQ2100470-01	MB		6850/ClO4 DOD			Liquid	10mL	
22	EQ2100470-02	LCS		6850/ClO4 DOD			Liquid	10mL	
23	EQ2100470-03	DLCS		6850/ClO4 DOD			Liquid	10mL	
24	EQ2100470-04	16SW02-210726 MS	.01	6850/ClO4 DOD			Liquid	10mL	
25	EQ2100470-05	16SW02-210726 DMS	.01	6850/ClO4 DOD			Liquid	10mL	

Spiking Solutions

Name: Sodium Perchlorate 1 ug/mL (IS) (18-O) as CLO4 Inventory ID 214765 Logbook Ref: Sodium Perchlorate Expires On: 12/11/2022

E2100831-001	100.00µL	E2100831-002	100.00µL	E2100836-001	100.00µL	E2100837-001	100.00µL	E2100837-002	100.00µL	E2100837-003	100.00µL
E2100837-004	100.00µL	E2100837-005	100.00µL	E2100837-006	100.00µL	E2100837-007	100.00µL	E2100837-008	100.00µL	E2100837-009	100.00µL
E2100837-010	100.00µL	E2100837-011	100.00µL	E2100837-012	100.00µL	E2100856-001	100.00µL	E2100856-002	100.00µL	E2100856-003	100.00µL
E2100856-004	100.00µL	E2100856-005	100.00µL	EQ2100470-01	100.00µL	EQ2100470-02	100.00µL	EQ2100470-03	100.00µL	EQ2100470-04	100.00µL
EQ2100470-05	100.00µL										

Preparation Information Benchsheet

Prep Run#: 384286 **Prep WorkFlow:** GenExt28Day **Status:** Prepped
Team: Semivoa GCMS/GRIVERA **Prep Method:** **Prep Date/Time:** 7/30/21 10:05

Name:	Perchlorate Intermediate Stock1	Inventory ID	217422	Logbook Ref:	Perchlorate	Expires On:	11/26/2021

EQ2100470-02 1.00µL EQ2100470-03 1.00µL EQ2100470-04 1.00µL EQ2100470-05 1.00µL

Preparation Materials

Water HPLC Grade 07/01/2021 Water (217918) 537M Glass Culture Tubes 537M Glass Tubes (218064)

Preparation Steps

Step: Preparation
Started: 7/30/21 10:05
Finished: 7/30/21 11:00
By: GRIVERA
Comments

Comments: _____

Reviewed By: GR Date: 7/30/21

Chain of Custody

Relinquished By: _____ Date: _____ Extracts Examined

Received By: _____ Date: _____ Yes No

Analytical Results

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ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100837
Project:	HS21071405	**Date Collected:**	7/26/21 0735
Sample Matrix:	Ground Water	**Date Received:**	7/27/21
Sample Name:	16EW02-210726	**Units:**	µg/L
Lab Code:	E2100837-001	**Basis:**	NA

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

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.984**	J	1.00	0.500	0.250	10	7/30/21	8/4/21 20:18	384286	733747	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100837
Project:	HS21071405	**Date Collected:**	7/26/21 0820
Sample Matrix:	Ground Water	**Date Received:**	7/27/21
Sample Name:	16EW04-210726	**Units:**	µg/L
Lab Code:	E2100837-002	**Basis:**	NA

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

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	1.00	0.500	0.250	10	7/30/21	8/4/21 20:26	384286	733747	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100837
Project:	HS21071405	**Date Collected:**	7/26/21 0905
Sample Matrix:	Ground Water	**Date Received:**	7/27/21
Sample Name:	16EW08-210726	**Units:**	µg/L
Lab Code:	E2100837-003	**Basis:**	NA

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

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	0.100	0.0500	0.0250	1	7/30/21	8/3/21 00:32	384286	733464	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100837
Project:	HS21071405	**Date Collected:**	7/26/21 0950
Sample Matrix:	Ground Water	**Date Received:**	7/27/21
Sample Name:	16RW04-210726	**Units:**	µg/L
Lab Code:	E2100837-004	**Basis:**	NA

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

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	1.00	0.500	0.250	10	7/30/21	8/4/21 20:35	384286	733747	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100837
Project:	HS21071405	**Date Collected:**	7/26/21 1030
Sample Matrix:	Ground Water	**Date Received:**	7/27/21
Sample Name:	16RW01-210726	**Units:**	µg/L
Lab Code:	E2100837-005	**Basis:**	NA

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

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	1.00	0.500	0.250	10	7/30/21	8/4/21 20:43	384286	733747	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100837
Project:	HS21071405	**Date Collected:**	7/26/21 1115
Sample Matrix:	Ground Water	**Date Received:**	7/27/21
Sample Name:	16RW02-210726	**Units:**	µg/L
Lab Code:	E2100837-006	**Basis:**	NA

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

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.0255**	J	0.100	0.0500	0.0250	1	7/30/21	8/3/21 00:58	384286	733464	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100837
Project:	HS21071405	**Date Collected:**	7/26/21 1200
Sample Matrix:	Ground Water	**Date Received:**	7/27/21
Sample Name:	16WW13-210726	**Units:**	µg/L
Lab Code:	E2100837-007	**Basis:**	NA

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

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	1.00	0.500	0.250	10	7/30/21	8/4/21 20:52	384286	733747	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100837
Project:	HS21071405	**Date Collected:**	7/26/21 1240
Sample Matrix:	Ground Water	**Date Received:**	7/27/21
Sample Name:	16WW42-210726	**Units:**	µg/L
Lab Code:	E2100837-008	**Basis:**	NA

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

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	0.100	0.0500	0.0250	1	7/30/21	8/3/21 01:15	384286	733464	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100837
Project:	HS21071405	**Date Collected:**	7/26/21 1300
Sample Matrix:	Ground Water	**Date Received:**	7/27/21
Sample Name:	16SW01-210726	**Units:**	µg/L
Lab Code:	E2100837-009	**Basis:**	NA

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

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	0.100	0.0500	0.0250	1	7/30/21	8/3/21 01:23	384286	733464	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100837
Project:	HS21071405	**Date Collected:**	7/26/21 1300
Sample Matrix:	Ground Water	**Date Received:**	7/27/21
Sample Name:	16SW01-210726-FD	**Units:**	µg/L
Lab Code:	E2100837-010	**Basis:**	NA

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

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	0.100	0.0500	0.0250	1	7/30/21	8/3/21 01:32	384286	733464	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100837
Project:	HS21071405	**Date Collected:**	7/26/21 1320
Sample Matrix:	Ground Water	**Date Received:**	7/27/21
Sample Name:	16SW02-210726	**Units:**	µg/L
Lab Code:	E2100837-011	**Basis:**	NA

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

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	0.100	0.0500	0.0250	1	7/30/21	8/3/21 01:40	384286	733464	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100837
Project:	HS21071405	**Date Collected:**	7/26/21 1350
Sample Matrix:	Ground Water	**Date Received:**	7/27/21
Sample Name:	16SW03-210726	**Units:**	µg/L
Lab Code:	E2100837-012	**Basis:**	NA

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

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	0.100	0.0500	0.0250	1	7/30/21	8/3/21 01:49	384286	733464	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100837
Project:	HS21071405	**Date Collected:**	NA
Sample Matrix:	Ground Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	EQ2100470-01	**Basis:**	NA

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

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	0.100	0.0500	0.0250	1	7/30/21	7/30/21 11:24	384286	733225	

Accuracy & Precision

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

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS21071405
Sample Matrix: Ground Water

Service Request: E2100837
Date Analyzed: 7/30/21

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

Analytical Method: 6850
Prep Method: Method

Units: µg/L
Basis: NA

Extraction Lot: 384286

	Lab Control Sample EQ2100470-02			Duplicate Lab Control Sample EQ2100470-03					
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Perchlorate	0.0870	0.100	87	0.0884	0.100	88	84 - 119	2	15

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

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

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100837
Project:	HS21071405	**Date Collected:**	NA
Sample Matrix:	Ground Water	**Date Received:**	NA
Sample Name:	Lab Control Sample	**Units:**	µg/L
Lab Code:	EQ2100470-02	**Basis:**	NA

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

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.0870**	J	0.100	0.0500	0.0250	1	7/30/21	7/30/21 11:32	384286	733225	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100837
Project:	HS21071405	**Date Collected:**	NA
Sample Matrix:	Ground Water	**Date Received:**	NA
Sample Name:	Duplicate Lab Control Sample	**Units:**	µg/L
Lab Code:	EQ2100470-03	**Basis:**	NA

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

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.0884**	J	0.100	0.0500	0.0250	1	7/30/21	7/30/21 12:00	384286	733225	

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2100837
Project:	HS21071405	**Date Collected:**	7/26/21
Sample Matrix:	Ground Water	**Date Received:**	7/27/21
		Date Analyzed:	7/30/21

Matrix Spike Summary

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

Sample Name:	16SW02-210726	**Units:**	µg/L
Lab Code:	E2100837-011	**Basis:**	NA

Analytical Method: 6850
Prep Method: Method

		16SW02-210726MS				16SW02-210726DMS					
		Matrix Spike				**Duplicate Matrix Spike**					
		EQ2100470-04				EQ2100470-05					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**% Rec**		**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Perchlorate	ND	0.0892	0.100	89		0.0946	0.100	95	84 - 119	6	15

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

Results flagged with a pound (#) indicate the control criteria is not applicable.

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

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100837
Project:	HS21071405	**Date Collected:**	7/26/21 1320
Sample Matrix:	Ground Water	**Date Received:**	7/27/21
Sample Name:	16SW02-210726	**Units:**	µg/L
Lab Code:	EQ2100470-04	**Basis:**	NA
Run Type:	Matrix Spike		

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

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.0892**	J	0.100	0.0500	0.0250	1	7/30/21	7/30/21 12:09	384286	733225	*

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100837
Project:	HS21071405	**Date Collected:**	7/26/21 1320
Sample Matrix:	Ground Water	**Date Received:**	7/27/21
Sample Name:	16SW02-210726	**Units:**	µg/L
Lab Code:	EQ2100470-05	**Basis:**	NA
Run Type:	Duplicate Matrix Spike		

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

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.0946**	J	0.100	0.0500	0.0250	1	7/30/21	7/30/21 12:17	384286	733225	*

HS21071405 8260 Raw Data

ALS WO# HS21071405

MSVOA06 -Logbook

Batch: 45933
Date: 07-30-2021
Method: 8260_W
Comments:

Analyst: Presenta Cabascango
Reviewer:
Laboratory: Houston

#	Samp ID	Type	Analyzed	DF	Init Wt/Vol	Final Vol	File ID	Matrix	Status	p
1	BFB	TUNE	07-30-2021 11:08 am	1.00	50 mL	50 mL	X073001.D	Liquid	Y	N
2	VSTD000.25	ICAL1	07-30-2021 11:29 am	1.00	50 mL	50 mL	X073002.D	Liquid	Y	N
3	VSTD000.5	ICAL2	07-30-2021 11:50 am	1.00	50 mL	50 mL	X073003.D	Liquid	Y	N
4	VSTD001	ICAL3	07-30-2021 12:32 pm	1.00	50 mL	50 mL	X073004.D	Liquid	Y	N
5	VSTD002	ICAL4	07-30-2021 12:53 pm	1.00	50 mL	50 mL	X073005.D	Liquid	Y	N
6	VSTD005	ICAL5	07-30-2021 01:14 pm	1.00	50 mL	50 mL	X073006.D	Liquid	Y	N
7	VSTD020	ICAL6	07-30-2021 01:35 pm	1.00	50 mL	50 mL	X073007.D	Liquid	Y	N
8	VSTD050	ICAL7	07-30-2021 01:56 pm	1.00	50 mL	50 mL	X073008.D	Liquid	Y	N
9	VSTD100	ICAL8	07-30-2021 02:17 pm	1.00	50 mL	50 mL	X073009.D	Liquid	Y	N
10	VSTD150	ICAL9	07-30-2021 02:38 pm	1.00	50 mL	50 mL	X073010.D	Liquid	Y	N
11	VSTD200	ICAL	07-30-2021 02:59 pm	1.00	50 mL	50 mL	X073011.D	Liquid	Y	N
12	BLANK	SAMP	07-30-2021 03:20 pm	1.00	50 mL	50 mL	X073012.D	Liquid	Y	N
13	BLANK	CCV	07-30-2021 03:41 pm	1.00	50 mL	50 mL	X073013.D	Liquid	Y	N
14	CCV	CCV	07-30-2021 04:02 pm	1.00	50 mL	50 mL	X073014.D	Liquid	Y	N
15	CCB	SAMP	07-30-2021 04:23 pm	1.00	50 mL	50 mL	X073015.D	Liquid	Y	N
16	VLCSW-210730	LCS	07-30-2021 04:43 pm	1.00	50 mL	50 mL	X073016.D	Liquid	Y	N
17	BLANK	SAMP	07-30-2021 05:39 pm	1.00	50 mL	50 mL	X073017.D	Liquid	Y	N
18	VBLKW-210730	MBLK	07-30-2021 06:00 pm	1.00	50 mL	50 mL	X073018.D	Liquid	Y	N
19	HS21071537-05	SAMP	07-30-2021 06:21 pm	1.00	50 mL	50 mL	X073019.D	Liquid	Y	N
20	HS21071537-01	SAMP	07-30-2021 06:42 pm	1.00	50 mL	50 mL	X073020.D	Liquid	Y	N
21	HS21071537-02	SAMP	07-30-2021 07:03 pm	1.00	50 mL	50 mL	X073021.D	Liquid	Y	N
22	HS21071537-03	SAMP	07-30-2021 07:24 pm	1.00	50 mL	50 mL	X073022.D	Liquid	Y	N
23	HS21071537-04	SAMP	07-30-2021 07:45 pm	1.00	50 mL	50 mL	X073023.D	Liquid	Y	N
24	HS21071537-06	SAMP	07-30-2021 08:06 pm	1.00	50 mL	50 mL	X073024.D	Liquid	Y	N
25	HS21071537-07	SAMP	07-30-2021 08:27 pm	1.00	50 mL	50 mL	X073025.D	Liquid	Y	N
26	HS21071438-01	SAMP	07-30-2021 08:48 pm	1.00	50 mL	50 mL	X073026.D	Liquid	Y	N
27	HS21071536-01	SAMP	07-30-2021 09:09 pm	1.00	50 mL	50 mL	X073027.D	Liquid	Y	N
28	HS21071537-01MS	MS	07-30-2021 09:30 pm	1.00	50 mL	50 mL	X073028.D	Liquid	Y	N
29	HS21071537-01MSD	MSD	07-30-2021 09:51 pm	1.00	50 mL	50 mL	X073029.D	Liquid	Y	N
30	CCV-END	CCV	07-30-2021 10:12 pm	1.00	50 mL	50 mL	X073030.D	Liquid	Y	N
31	BFB	TUNE	07-30-2021 10:33 pm	1.00	50 mL	50 mL	Y073001.D	Liquid	Y	N
32	CCV	CCV	07-30-2021 10:54 pm	1.00	50 mL	50 mL	Y073002a.D	Liquid	Y	N
33	CCV	CCV	07-30-2021 11:15 pm	1.00	50 mL	50 mL	Y073003.D	Liquid	Y	N
34	CCB	SAMP	07-30-2021 11:36 pm	1.00	50 mL	50 mL	Y073004.D	Liquid	Y	N
35	VLCSW-210730	LCS	07-30-2021 11:57 pm	1.00	50 mL	50 mL	Y073005.D	Liquid	Y	N
36	BLANK	SAMP	07-31-2021 12:18 am	1.00	50 mL	50 mL	Y073006.D	Liquid	Y	N
37	BLANK	SAMP	07-31-2021 12:39 am	1.00	50 mL	50 mL	Y073007.D	Liquid	Y	N
38	VBLKW-210730	MBLK	07-31-2021 01:00 am	1.00	50 mL	50 mL	Y073008.D	Liquid	Y	N
39	HS21071586-05	SAMP	07-31-2021 01:21 am	1.00	50 mL	50 mL	Y073009.D	Liquid	Y	N
40	HS21071609-04	SAMP	07-31-2021 01:42 am	1.00	50 mL	50 mL	Y073010.D	Liquid	Y	N
41	HS21071610-04	SAMP	07-31-2021 02:03 am	1.00	50 mL	50 mL	Y073011.D	Liquid	Y	N

MSVOA06 -Logbook

#	Samp ID	Type	Analyzed	DF	Init Wt/Vol	Final Vol	File ID	Matrix	Status	p
42	HS21071610-02	SAMP	07-31-2021 02:24 am	1.00	50 mL	50 mL	Y073012.D	Liquid	Y	N
43	HS21071609-05	SAMP	07-31-2021 02:45 am	1.00	50 mL	50 mL	Y073013.D	Liquid	Y	N
44	HS21071586-03	SAMP	07-31-2021 03:06 am	1.00	50 mL	50 mL	Y073014.D	Liquid	Y	N
45	HS21071586-01	SAMP	07-31-2021 03:28 am	1.00	50 mL	50 mL	Y073015.D	Liquid	Y	N
46	HS21071586-02	SAMP	07-31-2021 03:49 am	1.00	50 mL	50 mL	Y073016.D	Liquid	Y	N
47	HS21071586-04	SAMP	07-31-2021 04:10 am	1.00	50 mL	50 mL	Y073017.D	Liquid	Y	N
48	HS21071609-02	SAMP	07-31-2021 04:31 am	1.00	50 mL	50 mL	Y073018.D	Liquid	Y	N
49	HS21071609-03	SAMP	07-31-2021 04:52 am	1.00	50 mL	50 mL	Y073019.D	Liquid	Y	N
50	HS21071611-01n/r	SAMP	07-31-2021 05:13 am	1.00	50 mL	50 mL	Y073020.D	Liquid	Y	N
51	HS21071611-02c/o	SAMP	07-31-2021 05:34 am	1.00	50 mL	50 mL	Y073021.D	Liquid	Y	N
52	HS21071611-03c/o	SAMP	07-31-2021 05:55 am	1.00	50 mL	50 mL	Y073022.D	Liquid	Y	N
53	HS21071611-04c/o	SAMP	07-31-2021 06:16 am	1.00	50 mL	50 mL	Y073023.D	Liquid	Y	N
54	HS21071611-05c/o	SAMP	07-31-2021 06:37 am	1.00	50 mL	50 mL	Y073024.D	Liquid	Y	N
55	HS21071611-06	SAMP	07-31-2021 06:58 am	1.00	50 mL	50 mL	Y073025.D	Liquid	Y	N
56	HS21071611-07	SAMP	07-31-2021 07:19 am	1.00	50 mL	50 mL	Y073026.D	Liquid	Y	N
57	HS21071610-01c/o	SAMP	07-31-2021 07:40 am	1.00	50 mL	50 mL	Y073027.D	Liquid	Y	N
58	HS21071609-01c/o	SAMP	07-31-2021 08:01 am	1.00	50 mL	50 mL	Y073028.D	Liquid	Y	N
59	HS21071586-03MS	MS	07-31-2021 08:23 am	1.00	50 mL	50 mL	Y073029.D	Liquid	Y	N
60	HS21071586-03MSD	MSD	07-31-2021 08:44 am	1.00	50 mL	50 mL	Y073030.D	Liquid	Y	N
61	CCV-END	CCV	07-31-2021 09:05 am	1.00	50 mL	50 mL	Y073031.D	Liquid	Y	N
62	BLANK	SAMP	07-31-2021 09:26 am	1.00	50 mL	50 mL	Y073032.D	Liquid	Y	N

FORM 3
WATER VOLATILE METHOD SPIKE RECOVERY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS21071405

Matrix Spike - Sample No.: ICV

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE AMOUNT ()	% REC #	QC. LIMITS REC.
cis-1,2-Dichloroethene	50.00	47.66	95	80-120
Vinyl Chloride	50.00	46.99	94	80-120
Methylene Chloride	50.00	48.45	97	80-120
1,1-Dichloroethene	50.00	46.20	92	80-120
1,2-Dichloroethane	50.00	46.66	93	80-120
Trichloroethene	50.00	48.42	97	80-120
1,1,2-Trichloroethane	50.00	48.48	97	80-120

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

* Values outside of QC limits

COMMENTS: _____

FORM 5
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS21071405

Lab File ID: X073001 BFB Injection Date: 07/30/21

Instrument ID: VOA6 BFB Injection Time: 1108

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

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	19.9
75	30.0 - 60.0% of mass 95	48.7
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.6
173	Less than 2.0% of mass 174	0.8 (1.1)1
174	Greater than 50.0% of mass 95	73.7
175	5.0 - 9.0% of mass 174	5.5 (7.5)1
176	95.0 - 101.0% of mass 174	73.6 (99.8)1
177	5.0 - 9.0% of mass 176	5.6 (7.7)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	X073002	07/30/21	1129
02	VSTD000.5	VSTD000.5	X073003	07/30/21	1150
03	VSTD001	VSTD001	X073004	07/30/21	1232
04	VSTD002	VSTD002	X073005	07/30/21	1253
05	VSTD005	VSTD005	X073006	07/30/21	1314
06	VSTD020	VSTD020	X073007	07/30/21	1335
07	VSTD050	VSTD050	X073008	07/30/21	1356
08	VSTD100	VSTD100	X073009	07/30/21	1417
09	VSTD150	VSTD150	X073010	07/30/21	1438
10	VSTD200	VSTD200	X073011	07/30/21	1459
11	ICV	ICV	X073014	07/30/21	1602
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.: HS21071405

Instrument ID: VOA6 Calibration Date(s): 07/30/21 07/30/21

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1129 1459

LAB FILE ID: RF0.25: X073002 RF0.5: X073003 RF1: X073004
RF2: X073005 RF5: X073006 RF20: X073007

COMPOUND	RF0.25	RF0.5	RF1	RF2	RF5	RF20
Vinyl Chloride		0.568	0.528	0.439	0.452	0.460
Methylene Chloride		5291	6903	11889	29963	118046
1,1-Dichloroethene		0.492	0.438	0.426	0.396	0.400
1,2-Dichloroethane		0.469	0.435	0.388	0.402	0.399
Trichloroethene		0.443	0.403	0.377	0.358	0.354
1,1,2-Trichloroethane		0.282	0.267	0.243	0.291	0.252
Dibromofluoromethane		4390	7282	12374	35273	130299
1,2-Dichloroethane-d4		4928	6013	12843	33565	126393
Toluene-d8		1.432	1.243	1.217	1.162	1.112
4-Bromofluorobenzene		6602	8523	15228	41359	158248

FORM VI VOA

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS2107140

Instrument ID: VOA6 Calibration Date(s): 07/30/21 07/30/21

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1129 1459

LAB FILE ID: RF50: X073008 RF100: X073009 RF150: X073010
RF200: X073011

COMPOUND	RF50	RF100	RF150	RF200
Vinyl Chloride	0.410	0.486	0.458	0.481
Methylene Chloride	288156	621769	906937	1282417
1,1-Dichloroethene	0.371	0.432	0.407	0.425
1,2-Dichloroethane	0.366	0.377	0.389	0.385
Trichloroethene	0.334	0.362	0.357	0.361
1,1,2-Trichloroethane	0.252	0.256	0.256	0.256
Dibromofluoromethane	340316	710330	1015199	1392587
1,2-Dichloroethane-d4	321239	661249	974560	1331240
Toluene-d8	1.106	1.125	1.078	1.079
4-Bromofluorobenzene	403767	846415	1227770	1706894

FORM VI VOA

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS2107140

Instrument ID: VOA6 Calibration Date(s): 07/30/21 07/30/21

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1129 1459

COMPOUND	CURVE	COEFFICENTS A0	COEFFICENTS A1	%RSD OR R^2	MAX %RSD OR R^2
Vinyl Chloride	AVRG		0.47594663	9.999	15.000
Methylene Chloride	LINR	-4.5e-003	2.39571341	0.9997444	0.9900000
1,1-Dichloroethene	AVRG		0.42072319	8.104	15.000
1,2-Dichloroethane	AVRG		0.40111335	7.960	15.000
Trichloroethene	AVRG		0.36538023	10.18[illegible]	15.000
1,1,2-Trichloroethane	AVRG		0.26158012	5.94[illegible]	15.000
Dibromofluoromethane	LINR	-2.05e-002	2.17633740	0.9991897	0.9900000
1,2-Dichloroethane-d4	LINR	-1.76e-002	2.28124803	0.9996604	0.9900000
Toluene-d8	AVRG		1.17277965	9.647	15.000
4-Bromofluorobenzene	LINR	-1.44e-002	2.41836939	0.9997995	0.9900000

FORM VI VOA

Data File: \\NAHSTWS005\target\chem\voa6.i\X210730.b\X073001.D

Date : 30-JUL-2021 11:08

Client ID: BFB

Instrument: voa6.i

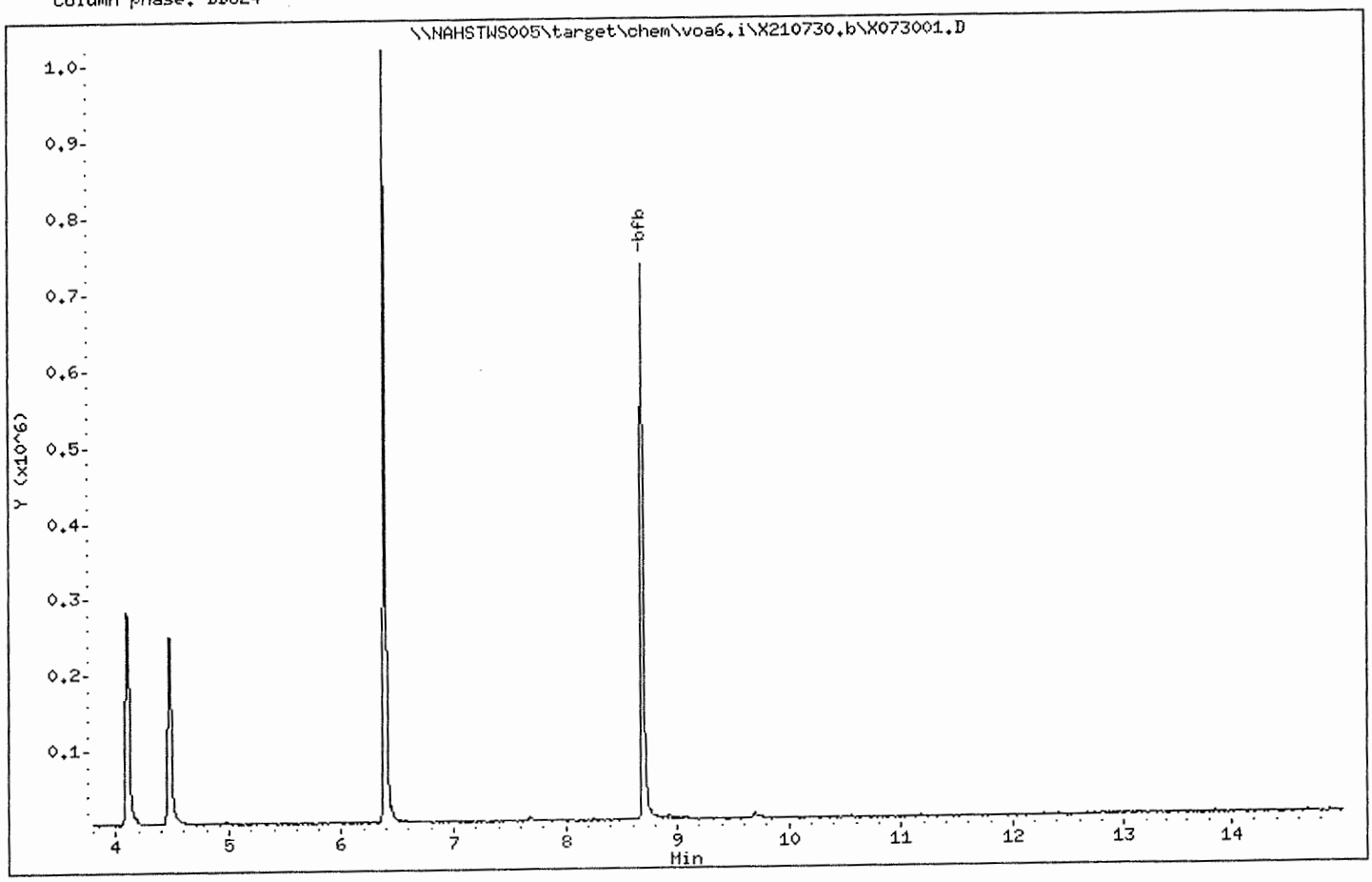
Sample Info: BFB;BFB;3;;BFB

Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

Column diameter: 0.25



Data File: \\NAHSTWS005\target\chem\voa6.i\X210730.b\X073001.D

Date : 30-JUL-2021 11:08

Client ID: BFB

Instrument: voa6.i

Sample Info: BFB;BFB;3;;BFB

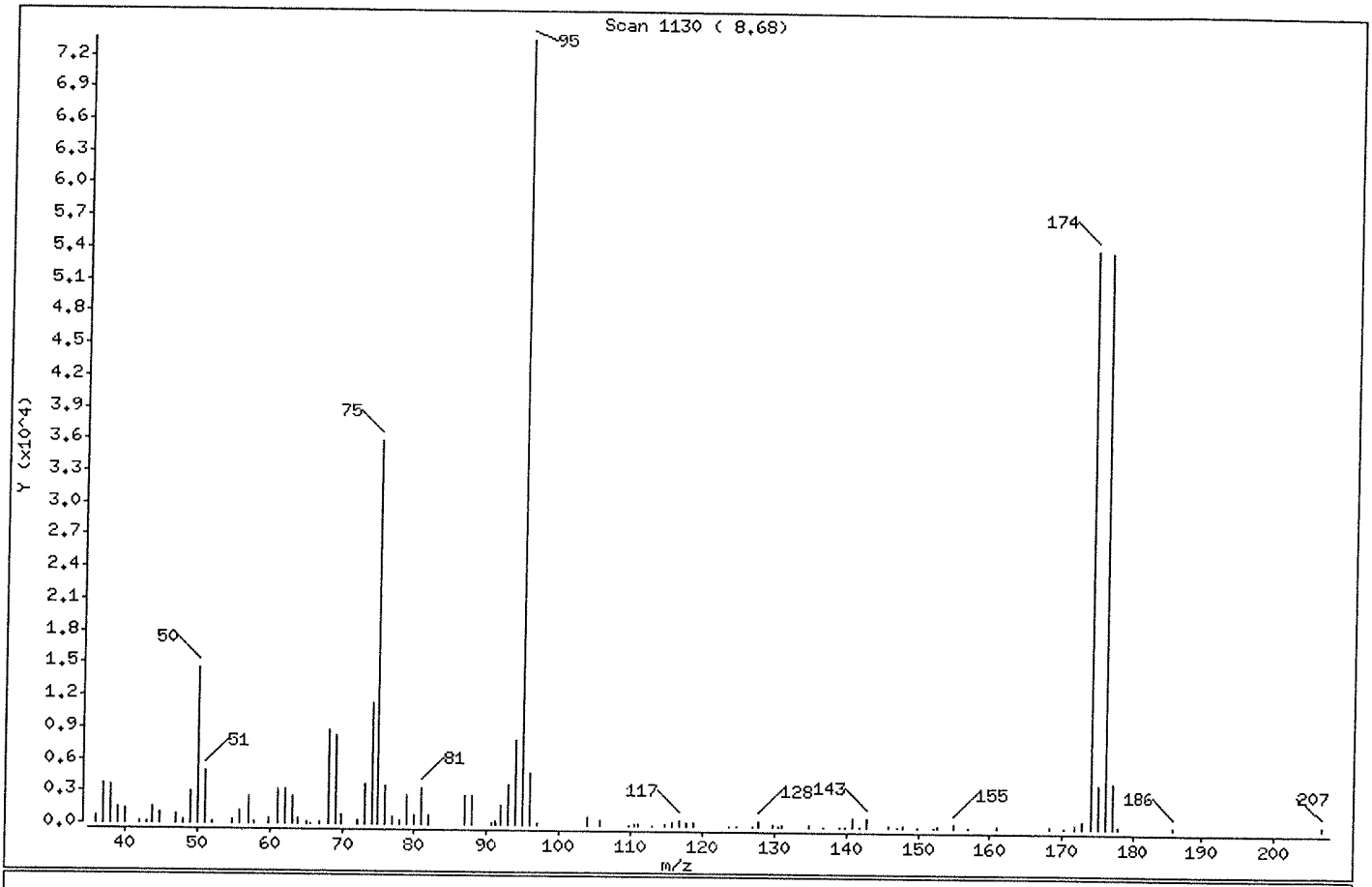
Volume Injected (uL): 2.0

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	19.86
75	30.00 - 60.00% of mass 95	48.66
96	5.00 - 9.00% of mass 95	6.61
173	Less than 2.00% of mass 174	0.83 (1.12)
174	Greater than 50.00% of mass 95	73.73
175	5.00 - 9.00% of mass 174	5.53 (7.50)
176	95.00 - 101.00% of mass 174	73.57 (99.78)
177	5.00 - 9.00% of mass 176	5.64 (7.66)

Data File: \\NAHSTWS005\target\chem\voa6.i\X210730.b\X073001.D

Date : 30-JUL-2021 11:08

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: X073001.D
Spectrum: Scan 1130 (8.68)
Location of Maximum: 95.00
Number of points: 96

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	656	65.70	78	97.00	176	142.80	903
37.00	3776	66.80	116	103.90	785	145.80	163
38.00	3488	68.00	8875	105.70	540	147.00	71
38.90	1543	69.00	8333	109.70	51	147.90	137
40.00	1298	69.90	855	110.50	170	149.90	78
41.90	90	72.00	412	110.90	131	152.00	69
43.00	106	73.00	3776	113.00	67	152.60	90
43.90	1582	74.00	11403	114.80	98	154.80	312
44.90	1059	75.00	35824	115.80	337	156.90	66
47.00	894	75.90	3616	116.80	507	161.00	201
48.10	334	77.00	677	117.80	326	168.20	209
49.00	3051	77.90	348	118.80	401	170.10	68
50.00	14621	78.90	2739	123.80	58	171.70	281
51.00	4991	80.00	777	124.80	70	172.70	608
52.00	99	80.90	3361	127.00	58	173.90	54280
54.90	333	81.80	793	127.80	431	174.90	4072
55.90	1185	87.00	2667	129.70	217	175.90	54160
57.00	2555	88.00	2726	130.50	50	176.90	4149
57.90	118	90.60	205	131.10	144	177.80	170
59.80	467	91.10	368	134.90	105	185.90	124
61.00	3224	91.90	1787	136.80	70	206.80	333
62.00	3226	92.90	3678	139.10	65		
63.00	2593	93.90	7906	139.80	70		
63.90	424	95.00	73616	140.80	849		
65.00	109	96.00	4863	141.80	76		

Data File: \\NAHSTWS005\target\chem\voa6.i\X210730.b\X073002.D Page 1
Report Date: 10-Sep-2021 14:09

ALS Laboratory Group

Data file : \\NAHSTWS005\target\chem\voa6.i\X210730.b\X073002.D
Lab Smp Id: VSTD000.25 Client Smp ID: VSTD000.25
Inj Date : 30-JUL-2021 11:29
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\X210730.b\8260W.m
Meth Date : 10-Sep-2021 14:09 voa6.i Quant Type: ISTD
Cal Date : 30-JUL-2021 14:59 Cal File: X073011.D
Als bottle: 2 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0474-dod.sub
Target Version: 4.14
Processing Host: NAHSTW7056

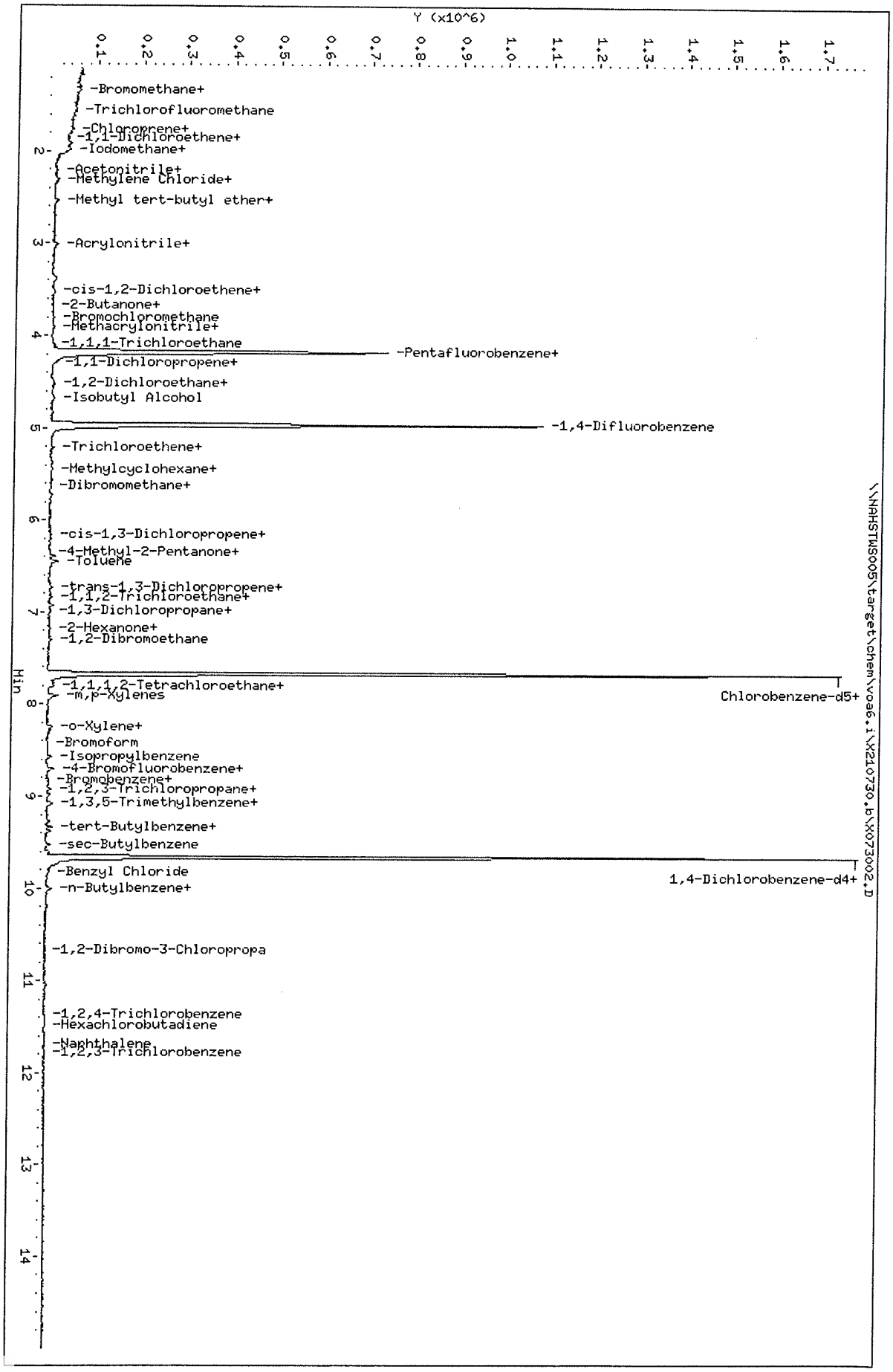
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

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)	666587	50.0000	
$ 30 Dibromofluoromethane	113	4.096	4.096	(0.979)	2125	0.25000	(a)
$ 35 1,2-Dichloroethane-d4	65	4.490	4.490	(1.074)	2961	0.25000	(Ta)
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	968612	50.0000	
* 47 Chlorobenzene-d5	117	7.670	7.670	(1.000)	883114	50.0000	
$ 48 Toluene-d8	98	6.395	6.395	(0.834)	8108	0.25000	0.39(a)
$ 69 4-Bromofluorobenzene	95	8.702	8.702	(1.134)	6221	0.25000	0.13(a)
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	450871	50.0000	

QC Flag Legend

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



Data File: \\NAHSTWS005\target\chem\voa6.i\X210730.b\X073002.D
Date : 30-JUL-2021 11:29
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\X210730.b\X073003.D Page 1
Report Date: 10-Sep-2021 14:09

ALS Laboratory Group

Data file : \\NAHSTWS005\target\chem\voa6.i\X210730.b\X073003.D
Lab Smp Id: VSTD000.5 Client Smp ID: VSTD000.5
Inj Date : 30-JUL-2021 11:50
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\X210730.b\8260W.m
Meth Date : 10-Sep-2021 14:09 voa6.i Quant Type: ISTD
Cal Date : 30-JUL-2021 11:29 Cal File: X073002.D
Als bottle: 3 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0474-dod.sub
Target Version: 4.14
Processing Host: NAHSTW7056

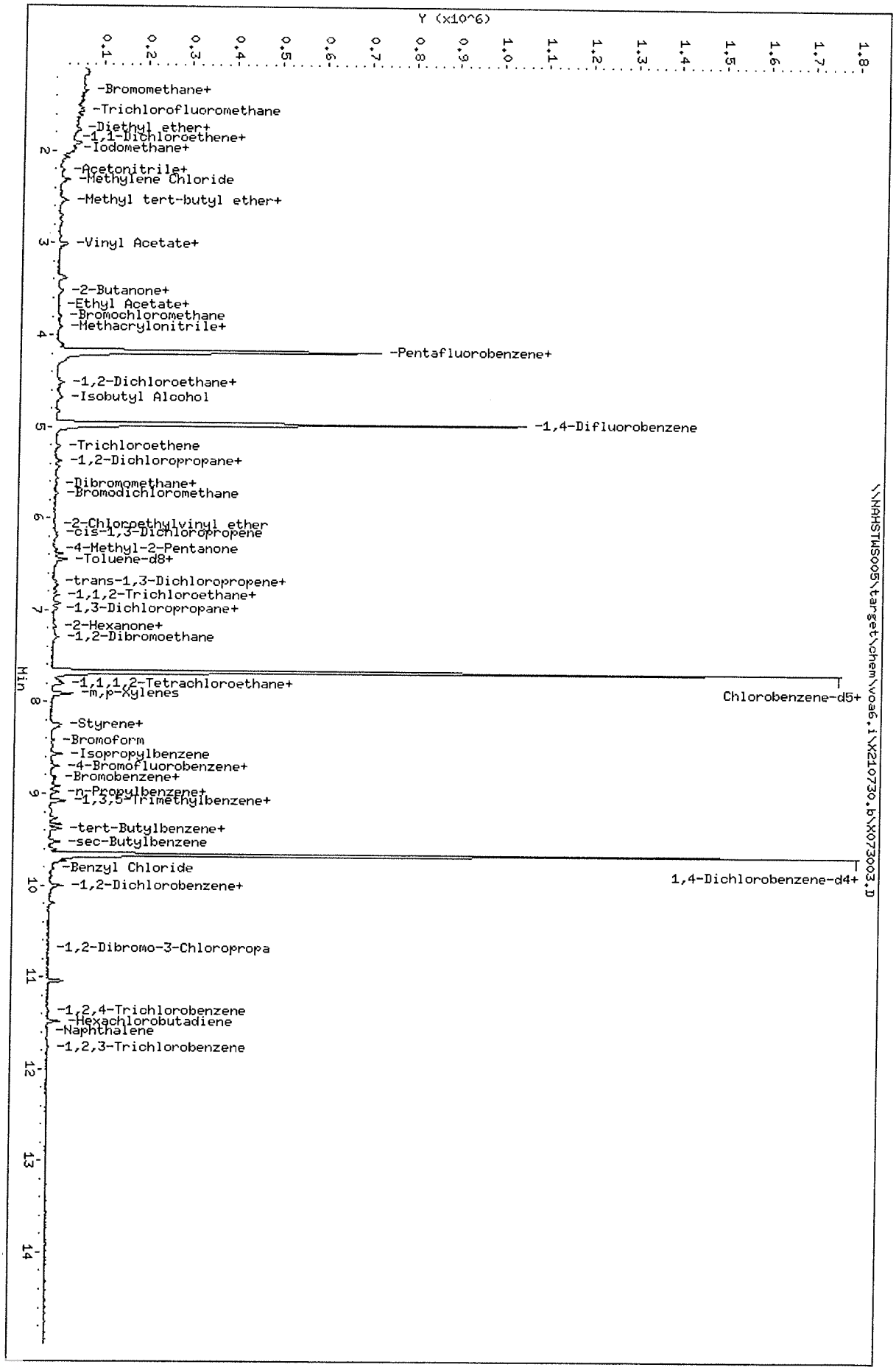
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

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)	655666	50.0000	
$ 30 Dibromofluoromethane	113	4.110	4.110	(0.983)	4390	0.50000	(a)
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	4928	0.50000	(aM)
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	942256	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	881159	50.0000	
$ 48 Toluene-d8	98	6.395	6.395	(0.834)	12620	0.50000	0.61(a)
$ 69 4-Bromofluorobenzene	95	8.702	8.702	(1.134)	6602	0.50000	0.18(a)
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	446795	50.0000	
5 Vinyl Chloride	62	1.145	1.145	(0.274)	3726	0.50000	0.59(aM)
11 1,1-Dichloroethene	96	1.911	1.911	(0.457)	3229	0.50000	0.58(a)
17 Methylene Chloride	84	2.305	2.305	(0.551)	5291	0.50000	0.74(a)
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	3929	0.50000	0.59(a)
33 1,2-Dichloroethane	62	4.562	4.562	(0.919)	4422	0.50000	0.58(a)
38 Trichloroethene	130	5.206	5.206	(1.049)	4176	0.50000	0.60(a)
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	2481	0.50000	0.53(a)

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\X210730.b\X073003.D
Date : 30-JUL-2021 11:50
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\X210730.b\X073004.D Page 1
Report Date: 10-Sep-2021 14:09

ALS Laboratory Group

Data file : \\NAHSTWS005\target\chem\voa6.i\X210730.b\X073004.D
Lab Smp Id: VSTD001 Client Smp ID: VSTD001
Inj Date : 30-JUL-2021 12:32
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\X210730.b\8260W.m
Meth Date : 10-Sep-2021 14:09 voa6.i Quant Type: ISTD
Cal Date : 30-JUL-2021 11:50 Cal File: X073003.D
Als bottle: 5 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0474-dod.sub
Target Version: 4.14
Processing Host: NAHSTW7056

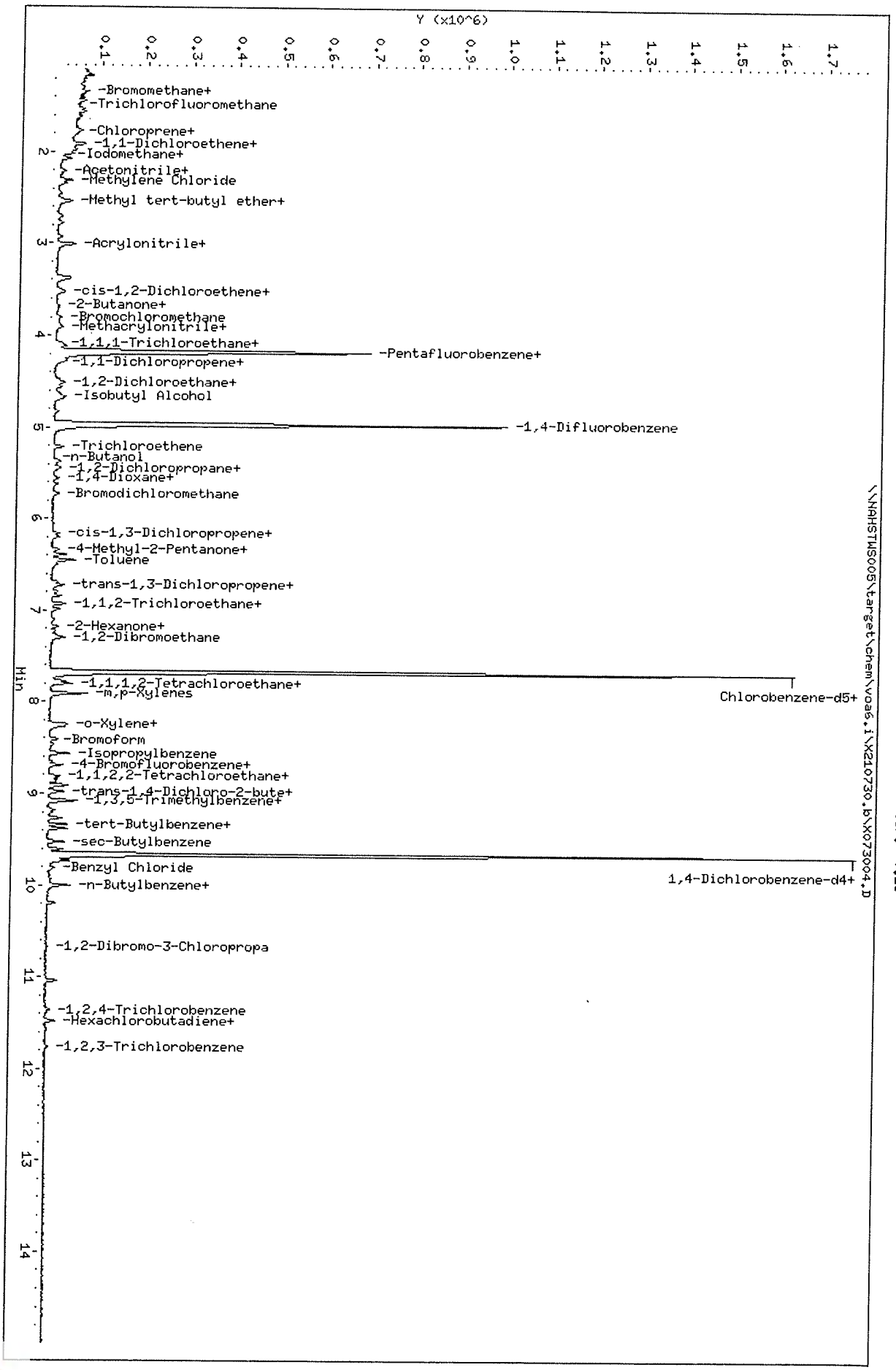
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

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)	623945	50.0000	
$ 30 Dibromofluoromethane	113	4.096	4.096	(0.979)	7282	1.00000	0.24(a)
$ 35 1,2-Dichloroethane-d4	65	4.483	4.483	(1.072)	6013	1.00000	0.21(a)
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	895498	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	839999	50.0000	
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	20880	1.00000	1.05(a)
$ 69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	8523	1.00000	0.50(a)
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	438693	50.0000	
5 Vinyl Chloride	62	1.138	1.138	(0.272)	6585	1.00000	1.10(a)
11 1,1-Dichloroethene	96	1.919	1.919	(0.459)	5463	1.00000	1.04(a)
17 Methylene Chloride	84	2.305	2.305	(0.551)	6903	1.00000	1.10(a)
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	6640	1.00000	1.06(a)
33 1,2-Dichloroethane	62	4.562	4.562	(0.918)	7784	1.00000	1.08(a)
38 Trichloroethene	130	5.206	5.206	(1.048)	7211	1.00000	1.10(a)
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	4492	1.00000	1.02(a)

QC Flag Legend

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



Data File: \\NAHSTWS005\target\chem\voa6.i\X210730.b\X073004.D
Date : 30-JUL-2021 12:32
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\X210730.b\X073005.D Page 1
Report Date: 10-Sep-2021 14:09

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Data file : \\NAHSTWS005\target\chem\voa6.i\X210730.b\X073005.D
Lab Smp Id: VSTD002 Client Smp ID: VSTD002
Inj Date : 30-JUL-2021 12:53
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\X210730.b\8260W.m
Meth Date : 10-Sep-2021 14:09 voa6.i Quant Type: ISTD
Cal Date : 30-JUL-2021 12:32 Cal File: X073004.D
Als bottle: 6 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0474-dod.sub
Target Version: 4.14
Processing Host: NAHSTW7056

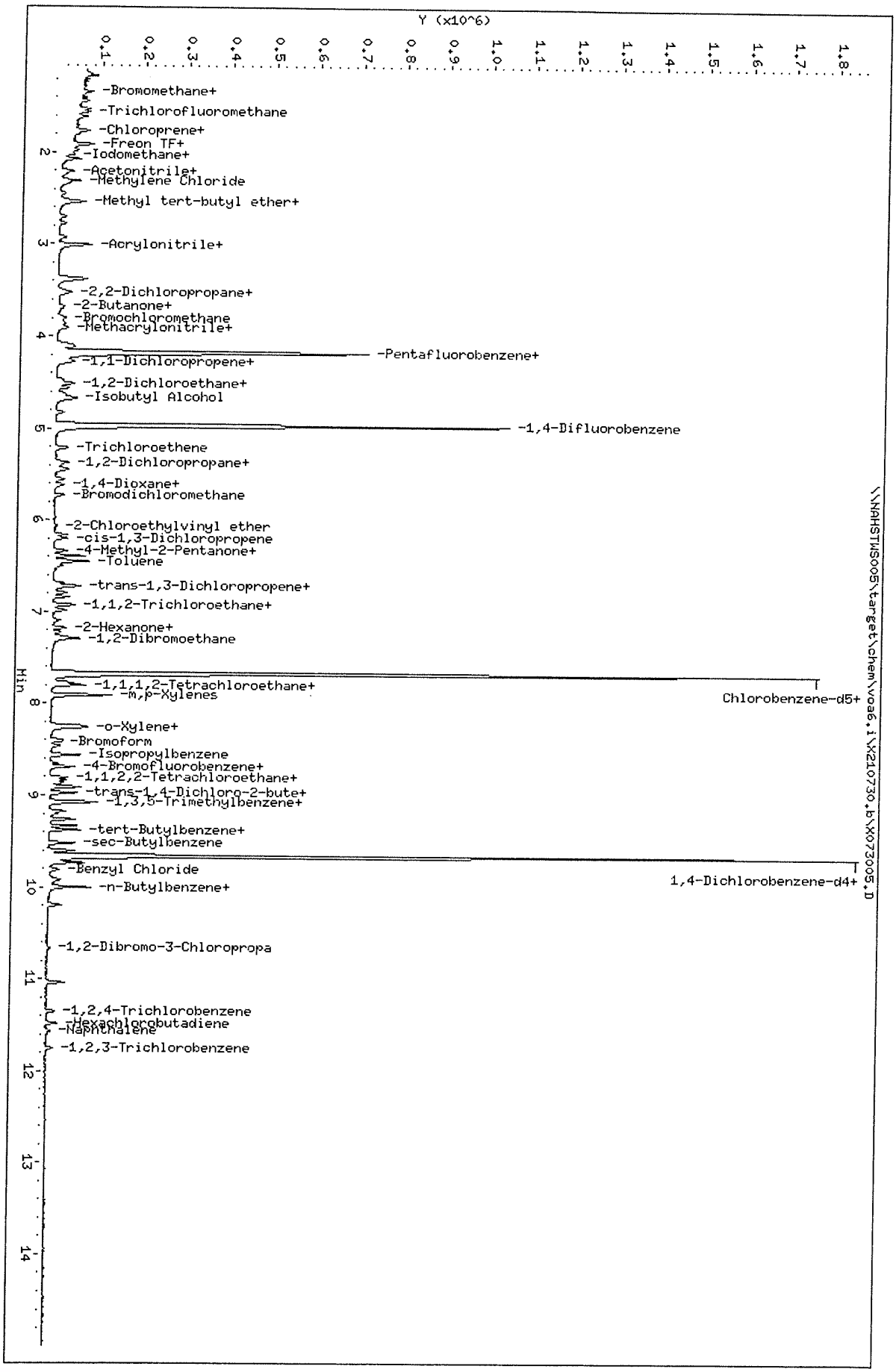
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

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)	644211	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	12374	2.00000	1.06(a)
$ 35 1,2-Dichloroethane-d4	65	4.483	4.483	(1.072)	12843	2.00000	1.39(a)
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	928585	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	870262	50.0000	
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	42373	2.00000	2.07(a)
$ 69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	15228	2.00000	1.39(a)
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	450600	50.0000	
5 Vinyl Chloride	62	1.145	1.145	(0.274)	11319	2.00000	1.84(a)
11 1,1-Dichloroethene	96	1.912	1.912	(0.457)	10979	2.00000	2.02(aM)
17 Methylene Chloride	84	2.306	2.306	(0.551)	11889	2.00000	1.98(a)
27 cis-1,2-Dichloroethene	96	3.538	3.538	(0.846)	11661	2.00000	1.80(a)
33 1,2-Dichloroethane	62	4.562	4.562	(0.919)	14406	2.00000	1.93(a)
38 Trichloroethene	130	5.214	5.214	(1.051)	11781	2.00000	1.73(a)
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	8460	2.00000	1.85(a)

QC Flag Legend

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


Y (x10^6)
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
1.1
1.2
1.3
1.4
1.5
1.6
1.7
1.8
-Bromomethane+
-Trichlorofluoromethane
-Chloroprene+
-Freon TF+
-Iodomethane+
-Acetonitrile+
-Methylene Chloride
-Methyl tert-butyl ether+
-Acrylonitrile+
-2,2-Dichloropropane+
-2-Butanone+
-Bromochloromethane
-Methacrylonitrile+
-Pentafluorobenzene+
-1,1-Dichloropropene+
-1,2-Dichloroethane+
-Isobutyl Alcohol
-1,4-Difluorobenzene
-Trichloroethene
-1,2-Dichloropropane+
-1,4-Dioxane+
-Bromodichloromethane
-2-Chloroethylvinyl ether
-cis-1,3-Dichloropropene
-4-Methyl-2-Pentanone+
-Toluene
-trans-1,3-Dichloropropene+
-1,1,2-Trichloroethane+
-2-Hexanone+
-1,2-Dibromoethane
-1,1,1,2-Tetrachloroethane+
-m,p-Xylenes
Chlorobenzene-d5+
-o-Xylene+
-Bromoform
-Isopropylbenzene
-4-Bromofluorobenzene+
-1,1,2,2-Tetrachloroethane+
-trans-1,4-Dichloro-2-bute+
-1,3,5-Trimethylbenzene+
-tert-Butylbenzene+
-sec-Butylbenzene
-Benzyl Chloride
-n-Butylbenzene+
1,4-Dichlorobenzene-d4+
-1,2-Dibromo-3-Chloropropa
-1,2,4-Trichlorobenzene
-Hexachlorobutadiene
-Naphthalene
-1,2,3-Trichlorobenzene
Min
1
2
3
4
5
6
7
8
9
10
11
12
13
14
\\NAHSTWS005\target\chem\voa6.i\X210730.b\X073005.D
Data File: \\NAHSTWS005\target\chem\voa6.i\X210730.b\X073005.D
Date : 30-JUL-2021 12:53
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
Page 2

Data File: \\NAHSTWS005\target\chem\voa6.i\X210730.b\X073006.D Page 1
Report Date: 10-Sep-2021 14:09

ALS Laboratory Group

Data file : \\NAHSTWS005\target\chem\voa6.i\X210730.b\X073006.D
Lab Smp Id: VSTD005 Client Smp ID: VSTD005
Inj Date : 30-JUL-2021 13:14
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\X210730.b\8260W.m
Meth Date : 10-Sep-2021 14:09 voa6.i Quant Type: ISTD
Cal Date : 30-JUL-2021 12:53 Cal File: X073005.D
Als bottle: 7 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0474-dod.sub
Target Version: 4.14
Processing Host: NAHSTW7056

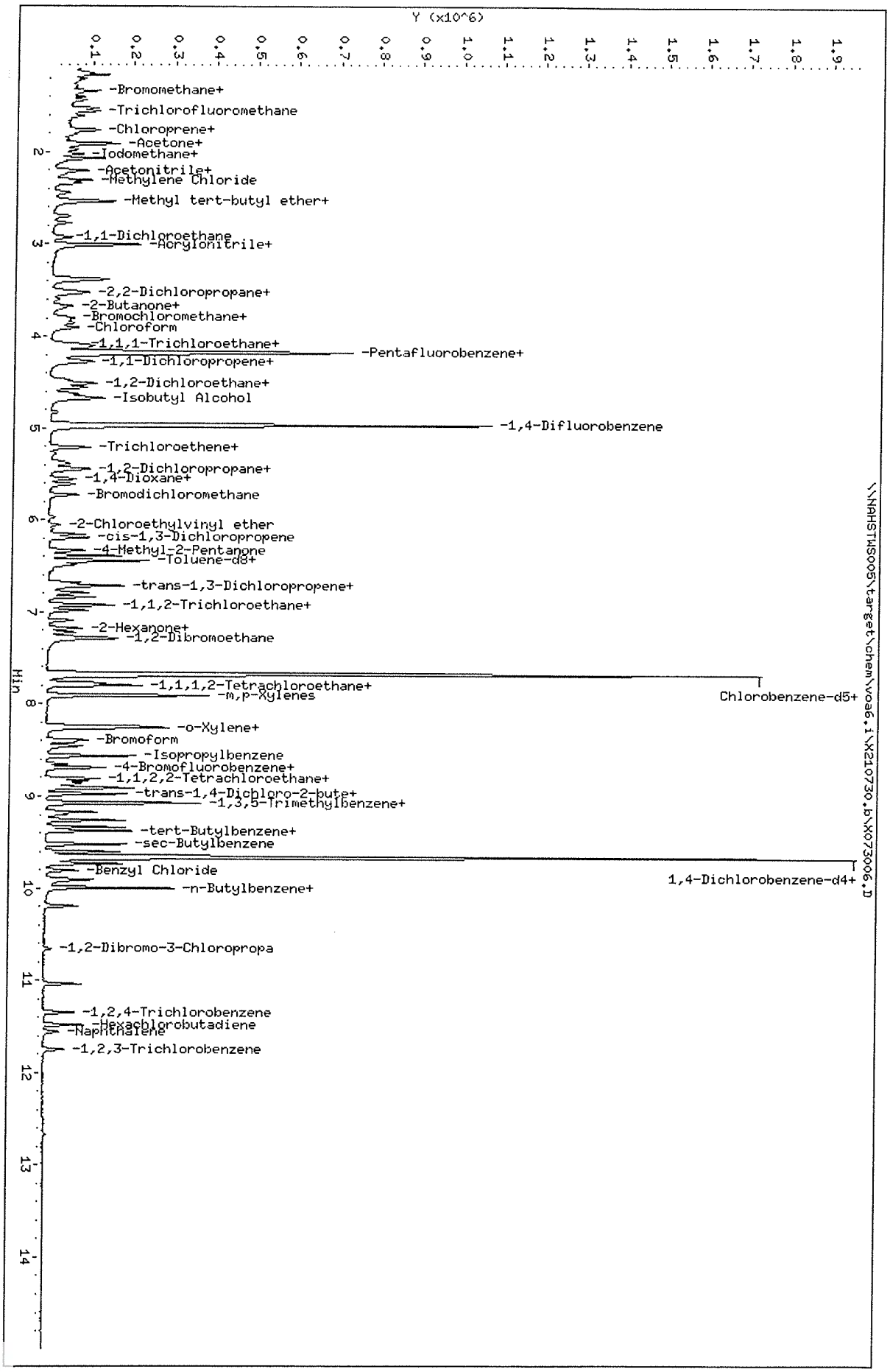
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

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)	655633	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	35273	5.00000	4.83(a)
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	33565	5.00000	4.95(a)
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	942260	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	874110	50.0000	
$ 48 Toluene-d8	98	6.389	6.389	(0.833)	101562	5.00000	4.95(a)
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	41359	5.00000	5.00
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	453975	50.0000	
5 Vinyl Chloride	62	1.138	1.138	(0.272)	29673	5.00000	4.75(a)
11 1,1-Dichloroethene	96	1.912	1.912	(0.457)	25956	5.00000	4.70(a)
17 Methylene Chloride	84	2.306	2.306	(0.551)	29963	5.00000	5.24
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	32078	5.00000	4.87(a)
33 1,2-Dichloroethane	62	4.562	4.562	(0.919)	37869	5.00000	5.00
38 Trichloroethene	130	5.207	5.207	(1.049)	33714	5.00000	4.89(a)
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	25438	5.00000	5.56

QC Flag Legend

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



Data File: \\NAHSTWS005\target\chem\voa6.i\X210730.b\X073006.D
Date : 30-JUL-2021 13:14
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\X210730.b\X073007.D Page 1
Report Date: 10-Sep-2021 14:09

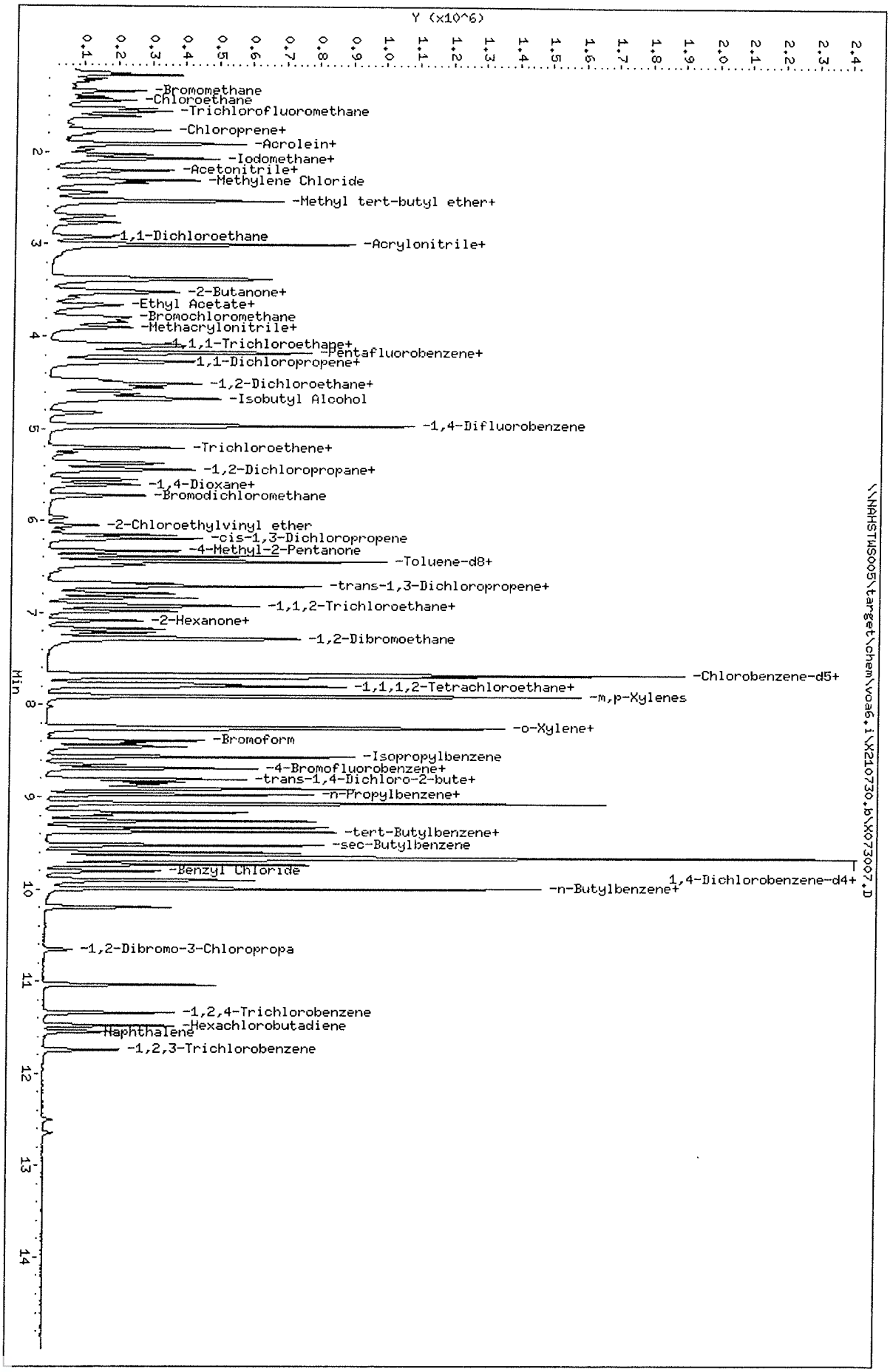
ALS Laboratory Group

Data file : \\NAHSTWS005\target\chem\voa6.i\X210730.b\X073007.D
Lab Smp Id: VSTD020 Client Smp ID: VSTD020
Inj Date : 30-JUL-2021 13:35
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\X210730.b\8260W.m
Meth Date : 10-Sep-2021 14:09 voa6.i Quant Type: ISTD
Cal Date : 30-JUL-2021 13:14 Cal File: X073006.D
Als bottle: 8 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0474-dod.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)	681402	50.0000	
$	30 Dibromofluoromethane	113	4.103	4.103	(0.981)	130299	20.0000	19.78
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	126393	20.0000	20.27
*	36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	970724	50.0000	
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	922153	50.0000	
$	48 Toluene-d8	98	6.388	6.388	(0.833)	410374	20.0000	18.97
$	69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	158248	20.0000	20.03
*	70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	500272	50.0000	
	5 Vinyl Chloride	62	1.138	1.138	(0.272)	125365	20.0000	19.32
	11 1,1-Dichloroethene	96	1.919	1.919	(0.459)	108984	20.0000	19.00
	17 Methylene Chloride	84	2.305	2.305	(0.551)	118046	20.0000	20.52
	27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	134779	20.0000	19.71
	33 1,2-Dichloroethane	62	4.555	4.555	(0.918)	154902	20.0000	19.89
	38 Trichloroethene	130	5.206	5.206	(1.049)	137306	20.0000	19.35
	53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	92956	20.0000	19.26



Data File: \\NAHSTWS005\target\chem\voa6.i\X210730.b\X073007.D
Date : 30-JUL-2021 13:35
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\X210730.b\X073008.D Page 1
Report Date: 10-Sep-2021 14:09

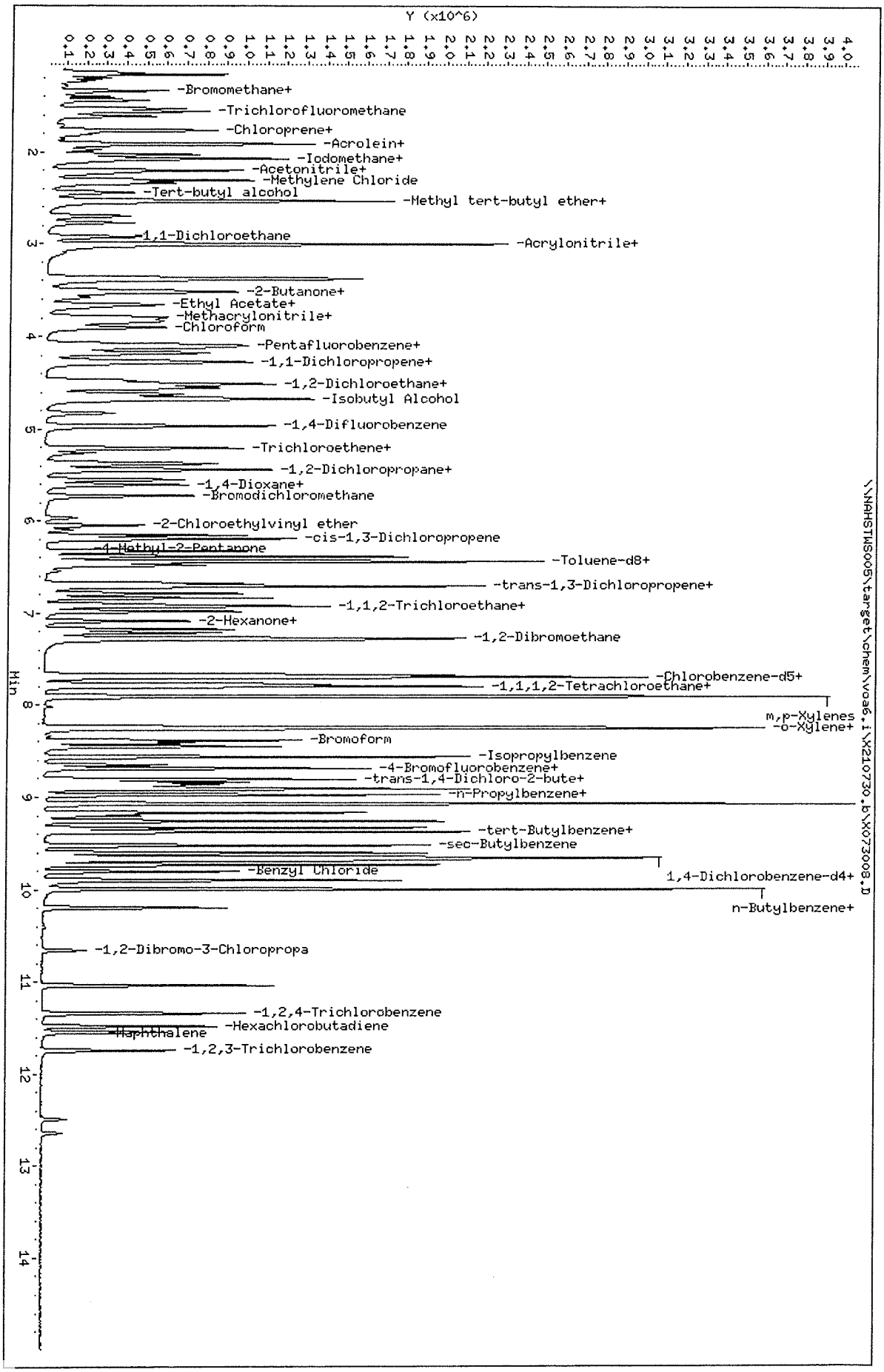
ALS Laboratory Group

Data file : \\NAHSTWS005\target\chem\voa6.i\X210730.b\X073008.D
Lab Smp Id: VSTD050 Client Smp ID: VSTD050
Inj Date : 30-JUL-2021 13:56
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\X210730.b\8260W.m
Meth Date : 10-Sep-2021 14:09 voa6.i Quant Type: ISTD
Cal Date : 30-JUL-2021 13:35 Cal File: X073007.D
Als bottle: 9 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0474-dod.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)	716996	50.0000	
$ 30 Dibromofluoromethane	113	4.096	4.096	(0.979)	340316	50.0000	50.62
$ 35 1,2-Dichloroethane-d4	65	4.469	4.469	(1.068)	321239	50.0000	50.22
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	1014752	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	957935	50.0000	
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	1059416	50.0000	47.15
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	403767	50.0000	50.24
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	509010	50.0000	
5 Vinyl Chloride	62	1.138	1.138	(0.272)	294222	50.0000	43.10
11 1,1-Dichloroethene	96	1.912	1.912	(0.457)	266229	50.0000	44.12
17 Methylene Chloride	84	2.306	2.306	(0.551)	288156	50.0000	47.91
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	336904	50.0000	46.84
33 1,2-Dichloroethane	62	4.555	4.555	(0.918)	371417	50.0000	45.62
38 Trichloroethene	130	5.207	5.207	(1.049)	338544	50.0000	45.65
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	241070	50.0000	48.10



Data File: \\NAHSTWS005\target\chem\voa6.i\X210730.b\X073008.D
Date : 30-JUL-2021 13:56
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\X210730.b\X073009.D Page 1
Report Date: 10-Sep-2021 14:09

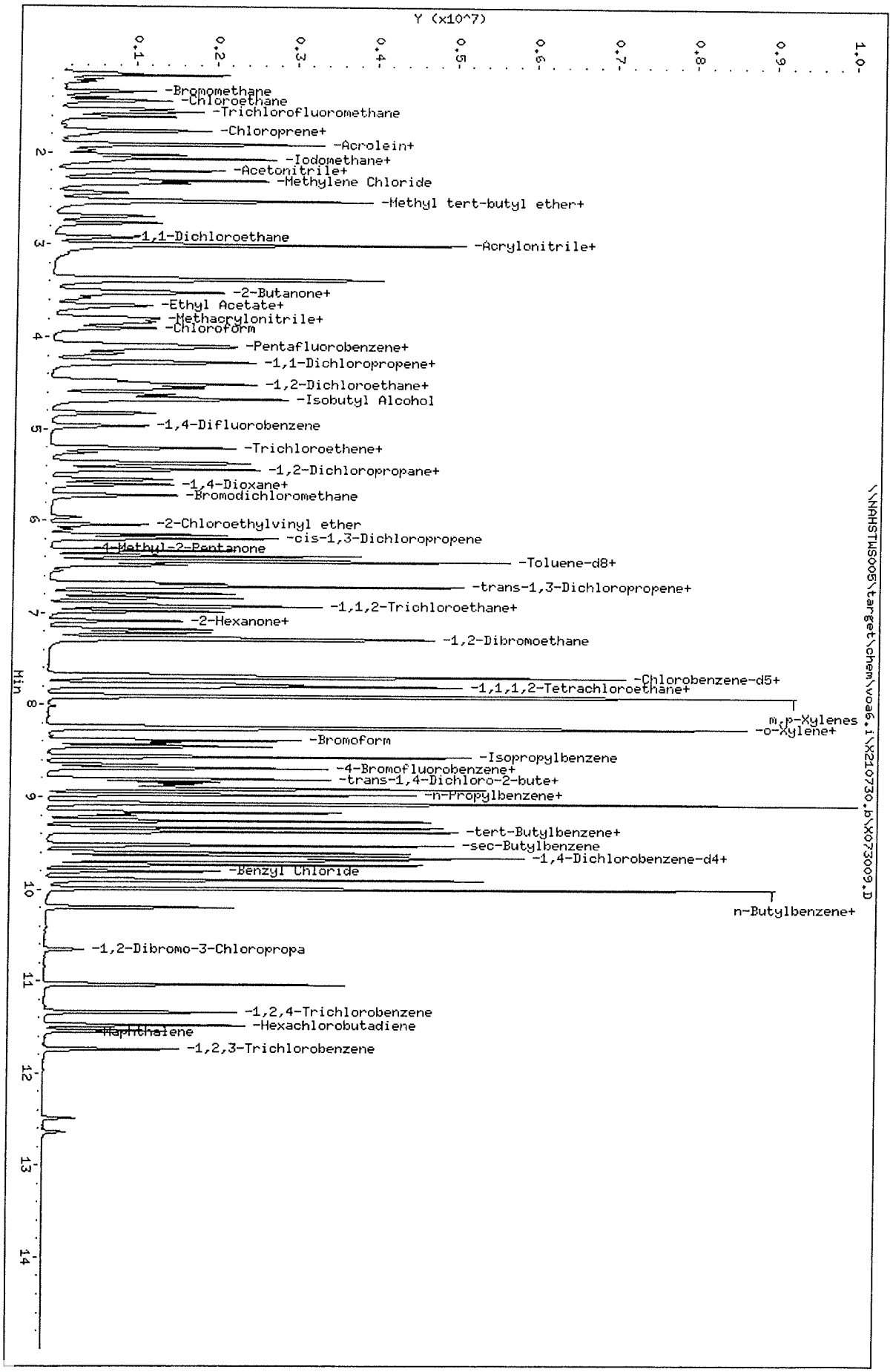
ALS Laboratory Group

Data file : \\NAHSTWS005\target\chem\voa6.i\X210730.b\X073009.D
Lab Smp Id: VSTD100 Client Smp ID: VSTD100
Inj Date : 30-JUL-2021 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\X210730.b\8260W.m
Meth Date : 10-Sep-2021 14:09 voa6.i Quant Type: ISTD
Cal Date : 30-JUL-2021 13:56 Cal File: X073008.D
Als bottle: 10 Calibration Sample, Level: 8
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0474-dod.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)	729025	50.0000	
$ 30 Dibromofluoromethane	113	4.096	4.096	(0.979)	710330	100.000	105.00
$ 35 1,2-Dichloroethane-d4	65	4.469	4.469	(1.069)	661249	100.000	102.57
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	1058066	50.0000	
* 47 Chlorobenzene-d5	117	7.670	7.670	(1.000)	990972	50.0000	
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	2229574	100.000	95.92
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	846415	100.000	102.55
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	547156	50.0000	
5 Vinyl Chloride	62	1.138	1.138	(0.272)	708979	100.000	102.16
11 1,1-Dichloroethene	96	1.911	1.911	(0.457)	629594	100.000	102.63
17 Methylene Chloride	84	2.305	2.305	(0.551)	621769	100.000	101.93
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	728210	100.000	99.58
33 1,2-Dichloroethane	62	4.555	4.555	(0.918)	798237	100.000	94.04
38 Trichloroethene	130	5.206	5.206	(1.049)	767161	100.000	99.21
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	506503	100.000	97.69



Data File: \\NAHSTWS005\target\chem\voa6.i\X210730.b\X073009.D
Date : 30-JUL-2021 14:17
Client ID: VSTD100
Sample Info: VSTD100;VSTD100;1;8;;
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\NAHSTWS005\target\chem\voa6.i\X210730.b\X073010.D Page 1
Report Date: 10-Sep-2021 14:09

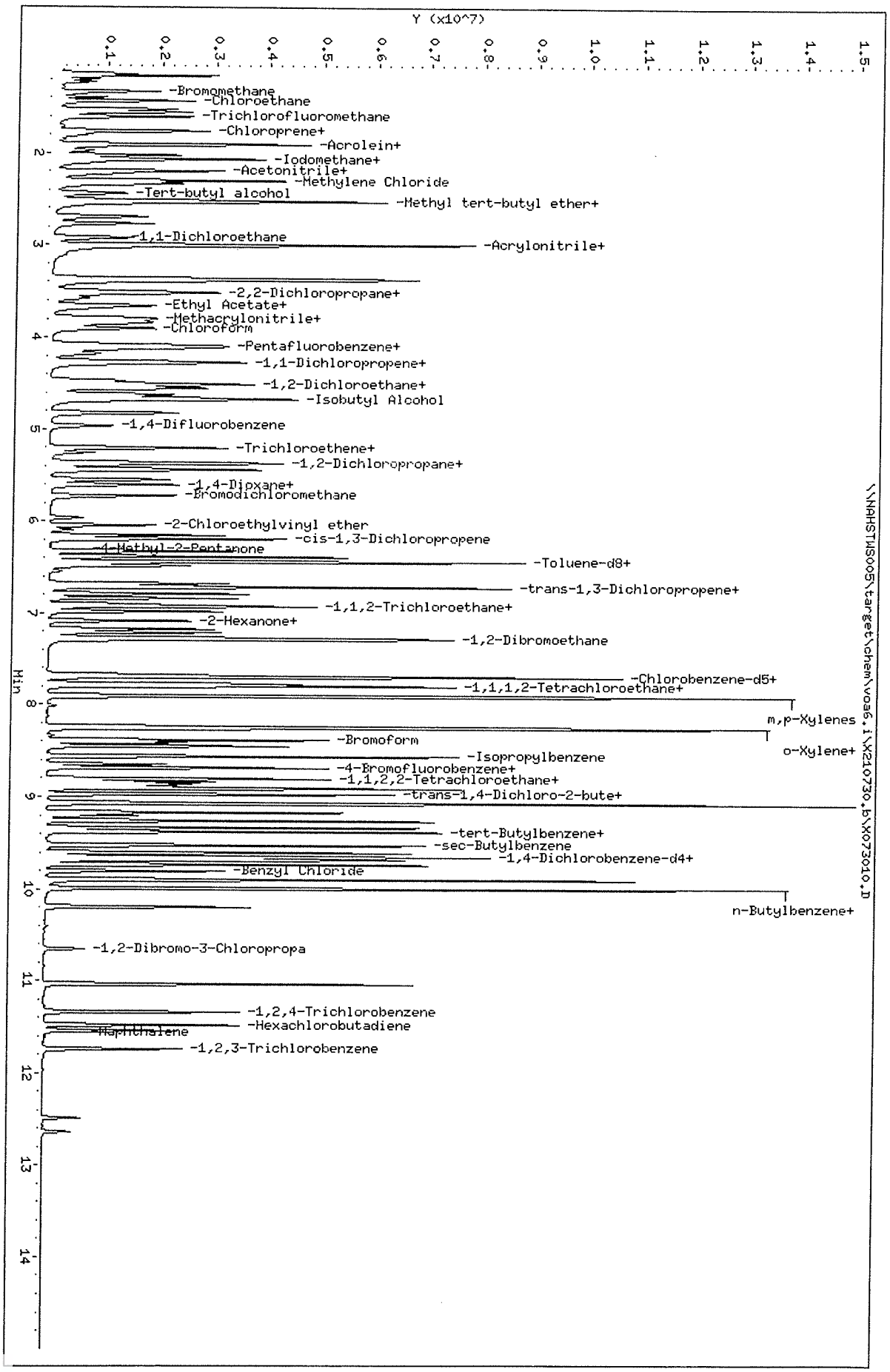
ALS Laboratory Group

Data file : \\NAHSTWS005\target\chem\voa6.i\X210730.b\X073010.D
Lab Smp Id: VSTD150 Client Smp ID: VSTD150
Inj Date : 30-JUL-2021 14:38
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\X210730.b\8260W.m
Meth Date : 10-Sep-2021 14:09 voa6.i Quant Type: ISTD
Cal Date : 30-JUL-2021 14:17 Cal File: X073009.D
Als bottle: 11 Calibration Sample, Level: 9
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0474-dod.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)	730810	50.0000	
$ 30 Dibromofluoromethane	113	4.096	4.096	(0.979)	1015199	150.000	150.13
$ 35 1,2-Dichloroethane-d4	65	4.469	4.469	(1.069)	974560	150.000	151.22
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	1028375	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	986169	50.0000	
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	3189794	150.000	137.90
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	1227770	150.000	149.82
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	541701	50.0000	
5 Vinyl Chloride	62	1.138	1.138	(0.272)	1003557	150.000	144.26
11 1,1-Dichloroethene	96	1.912	1.912	(0.457)	891494	150.000	144.97
17 Methylene Chloride	84	2.298	2.298	(0.550)	906937	150.000	148.42
27 cis-1,2-Dichloroethene	96	3.523	3.523	(0.842)	1068998	150.000	145.82
33 1,2-Dichloroethane	62	4.555	4.555	(0.918)	1199380	150.000	145.38
38 Trichloroethene	130	5.207	5.207	(1.049)	1100990	150.000	146.50
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	758675	150.000	147.05



Data File: \\NAHSTWS005\target\chem\voa6.i\X210730.b\X073010.D
Date : 30-JUL-2021 14:38
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\X210730.b\X073011.D Page 1
Report Date: 10-Sep-2021 14:09

ALS Laboratory Group

Data file : \\NAHSTWS005\target\chem\voa6.i\X210730.b\X073011.D
Lab Smp Id: VSTD200 Client Smp ID: VSTD200
Inj Date : 30-JUL-2021 14:59
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\X210730.b\8260W.m
Meth Date : 10-Sep-2021 14:09 voa6.i Quant Type: ISTD
Cal Date : 30-JUL-2021 14:38 Cal File: X073010.D
Als bottle: 12 Calibration Sample, Level: 10
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0474-dod.sub
Target Version: 4.14
Processing Host: NAHSTW7056

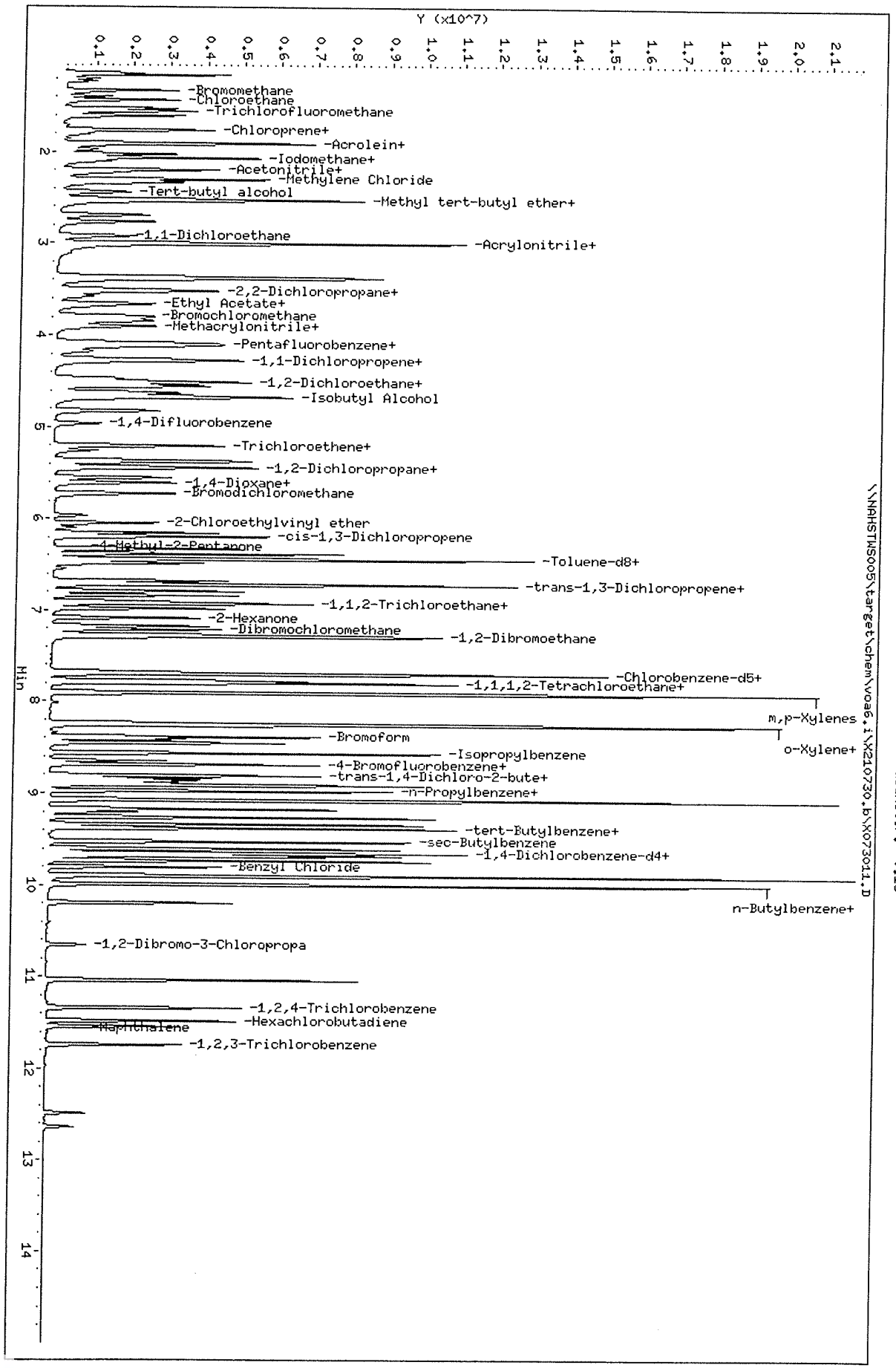
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

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)	764865	50.0000	
$ 30 Dibromofluoromethane	113	4.096	4.096	(0.979)	1392587	200.000	197.09
$ 35 1,2-Dichloroethane-d4	65	4.469	4.469	(1.069)	1331240	200.000	197.64
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	1080527	50.0000	
* 47 Chlorobenzene-d5	117	7.670	7.670	(1.000)	1034693	50.0000	
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	4466623	200.000	184.04
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	1706894	200.000	198.75
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	573296	50.0000	
5 Vinyl Chloride	62	1.138	1.138	(0.272)	1472864	200.000	202.29(A)
11 1,1-Dichloroethene	96	1.911	1.911	(0.457)	1299366	200.000	201.89(A)
17 Methylene Chloride	84	2.298	2.298	(0.550)	1282411	200.000	200.61(A)
27 cis-1,2-Dichloroethene	96	3.523	3.523	(0.842)	1497246	200.000	195.14
33 1,2-Dichloroethane	62	4.555	4.555	(0.918)	1665869	200.000	192.17
38 Trichloroethene	130	5.206	5.206	(1.049)	1560236	200.000	197.59
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	1057752	200.000	195.40

QC Flag Legend

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



Data File: \\NAHSTWS005\target\chem\voa6.i\X210730.b\X073011.D
Date : 30-JUL-2021 14:59
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\X210730.b\X073014.D Page 1
Report Date: 10-Sep-2021 14:09

ALS Laboratory Group

Data file : \\NAHSTWS005\target\chem\voa6.i\X210730.b\X073014.D
Lab Smp Id: ICV Client Smp ID: ICV
Inj Date : 30-JUL-2021 16:02
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\X210730.b\8260W.m
Meth Date : 10-Sep-2021 14:09 voa6.i Quant Type: ISTD
Cal Date : 30-JUL-2021 14:59 Cal File: X073011.D
Als bottle: 15 QC Sample: METHSPIKE
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0474-dod.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	4.182	(1.000)	757820	50.0000	
$ 30 Dibromofluoromethane	113	4.096	4.096	(0.979)	359808	50.6421	50.64
$ 35 1,2-Dichloroethane-d4	65	4.469	4.469	(1.069)	345746	51.1596	51.15
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	1064705	50.0000	
* 47 Chlorobenzene-d5	117	7.670	7.670	(1.000)	1011291	50.0000	
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	1121931	47.2981	47.29
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	428936	50.5668	50.56
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	558538	50.0000	
5 Vinyl Chloride	62	1.138	1.138	(0.272)	339009	46.9956	46.99
11 1,1-Dichloroethene	96	1.911	1.911	(0.457)	294640	46.2061	46.20
17 Methylene Chloride	84	2.305	2.298	(0.551)	307952	48.4518	48.45
27 cis-1,2-Dichloroethene	96	3.530	3.523	(0.844)	362320	47.6634	47.66
33 1,2-Dichloroethane	62	4.555	4.555	(0.918)	398621	46.6696	46.66
38 Trichloroethene	130	5.206	5.206	(1.049)	376752	48.4229	48.42
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	256542	48.4895	48.48

Data File: \\NAHSTWS005\target\chem\voa6.i\X210730.b\X073014.D Page 1
Report Date: 10-Sep-2021 14:09

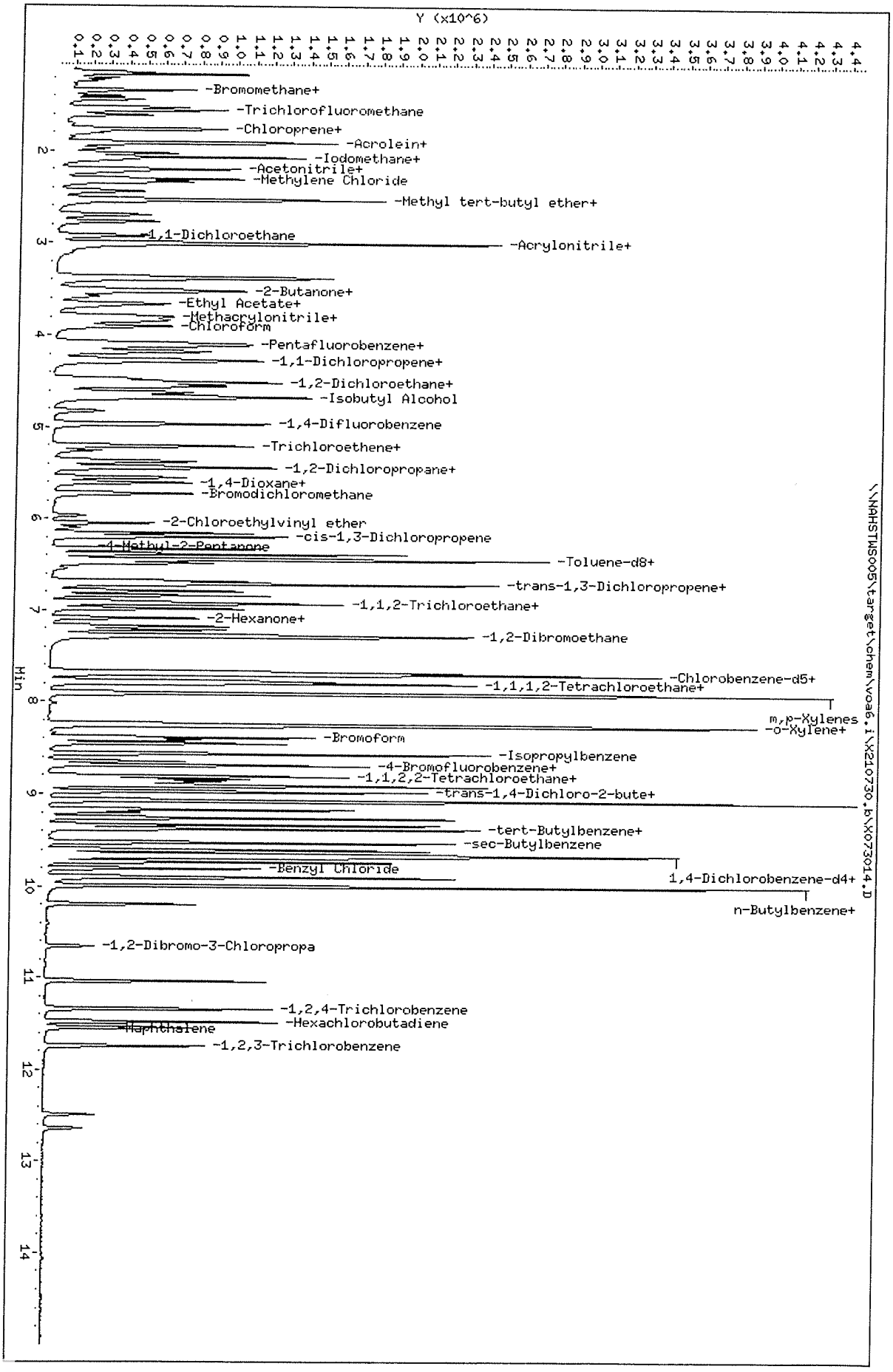
ALS Laboratory Group

Data file : \\NAHSTWS005\target\chem\voa6.i\X210730.b\X073014.D
Lab Smp Id: ICV Client Smp ID: ICV
Inj Date : 30-JUL-2021 16:02
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\X210730.b\8260W.m
Meth Date : 10-Sep-2021 14:09 voa6.i Quant Type: ISTD
Cal Date : 30-JUL-2021 14:59 Cal File: X073011.D
Als bottle: 15 QC Sample: METHSPIKE
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0474-dod.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	4.182	(1.000)	757820	50.0000	
$ 30 Dibromofluoromethane	113	4.096	4.096	(0.979)	359808	50.6421	50.64
$ 35 1,2-Dichloroethane-d4	65	4.469	4.469	(1.069)	345746	51.1596	51.15
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	1064705	50.0000	
* 47 Chlorobenzene-d5	117	7.670	7.670	(1.000)	1011291	50.0000	
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	1121931	47.2981	47.29
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	428936	50.5668	50.56
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	558538	50.0000	
5 Vinyl Chloride	62	1.138	1.138	(0.272)	339009	46.9956	46.99
11 1,1-Dichloroethene	96	1.911	1.911	(0.457)	294640	46.2061	46.20
17 Methylene Chloride	84	2.305	2.298	(0.551)	307952	48.4518	48.45
27 cis-1,2-Dichloroethene	96	3.530	3.523	(0.844)	362320	47.6634	47.66
33 1,2-Dichloroethane	62	4.555	4.555	(0.918)	398621	46.6696	46.66
38 Trichloroethene	130	5.206	5.206	(1.049)	376752	48.4229	48.42
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	256542	48.4895	48.48



Data File: \\NAHSTWS005\target\chem\voa6.i\X210730.b\X073014.D
Date : 30-JUL-2021 16:02
Client ID: ICV
Sample Info: CCV;CCV;2;;;ICV
Purge Volume: 5.0
Column phase: DB624

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

MSVOA06 -Logbook

Batch: 45952
Date: 08-03-2021
Method: 8260_W
Comments:

Analyst: Presenta Cabascango
Reviewer:
Laboratory: Houston

#	Samp ID	Type	Analyzed	DF	Init Wt/Vol	Final Vol	File ID	Matrix	Status	p
1	BFB	TUNE	08-03-2021 10:46 am	1.00	50 mL	50 mL	X080301.D	Liquid	Y	N
2	CCV	CCV	08-03-2021 11:06 am	1.00	50 mL	50 mL	X080302a.D	Liquid	Y	N
3	CCV	CCV	08-03-2021 11:27 am	1.00	50 mL	50 mL	X080303.D	Liquid	Y	N
4	CCB	SAMP	08-03-2021 11:49 am	1.00	50 mL	50 mL	X080304.D	Liquid	Y	N
5	VLCSW-210803	LCS	08-03-2021 12:09 pm	1.00	50 mL	50 mL	X080305.D	Liquid	Y	N
6	BLANK	SAMP	08-03-2021 12:31 pm	1.00	50 mL	50 mL	X080306.D	Liquid	Y	N
7	BLANK	SAMP	08-03-2021 12:52 pm	1.00	50 mL	50 mL	X080307.D	Liquid	Y	N
8	VBLKW-210803	MBLK	08-03-2021 01:13 pm	1.00	50 mL	50 mL	X080308.D	Liquid	Y	N
9	HS21071731-01	SAMP	08-03-2021 01:34 pm	1.00	50 mL	50 mL	X080309.D	Liquid	Y	N
10	HS21071711-01	SAMP	08-03-2021 01:55 pm	10.00	5 mL	50 mL	X080310.D	Liquid	Y	N
11	HS21071712-01	SAMP	08-03-2021 02:16 pm	50.00	1 mL	50 mL	X080311.D	Liquid	Y	N
12	HS21071204-05	SAMP	08-03-2021 02:37 pm	10.00	5 mL	50 mL	X080312.D	Liquid	Y	N
13	HS21071731-01MS	MS	08-03-2021 02:58 pm	1.00	50 mL	50 mL	X080313.D	Liquid	Y	N
14	HS21071731-01MSD	MSD	08-03-2021 03:19 pm	1.00	50 mL	50 mL	X080314.D	Liquid	Y	N
15	HS21071711-01	SAMP	08-03-2021 03:40 pm	100.0(	500 µL	50 mL	X080315.D	Liquid	Y	N
16	HS21071712-01	SAMP	08-03-2021 04:01 pm	2500.0	20 µL	50 mL	X080316.D	Liquid	Y	N
17	HS21071204-05	SAMP	08-03-2021 04:22 pm	100.0(	500 µL	50 mL	X080317.D	Liquid	Y	N
18	HS21071204-03	SAMP	08-03-2021 04:43 pm	100.0(	500 µL	50 mL	X080318.D	Liquid	Y	N
19	HS21071204-04	SAMP	08-03-2021 05:04 pm	5.00	10 mL	50 mL	X080319.D	Liquid	Y	N
20	BLANK	SAMP	08-03-2021 05:25 pm	1.00	50 mL	50 mL	X080320.D	Liquid	Y	N
21	HS21071481-02	SAMP	08-03-2021 05:46 pm	1.00	50 mL	50 mL	X080321.D	Liquid	Y	N
22	HS21071481-01	SAMP	08-03-2021 06:07 pm	1.00	50 mL	50 mL	X080322.D	Liquid	Y	N
23	HS21071405-13	SAMP	08-03-2021 06:28 pm	1.00	50 mL	50 mL	X080323.D	Liquid	Y	N
24	HS21071405-03	SAMP	08-03-2021 06:49 pm	1.00	50 mL	50 mL	X080324.D	Liquid	Y	N
25	HS21071405-06	SAMP	08-03-2021 07:10 pm	1.00	50 mL	50 mL	X080325.D	Liquid	Y	N
26	HS21071405-09	SAMP	08-03-2021 07:31 pm	1.00	50 mL	50 mL	X080326.D	Liquid	Y	N
27	HS21071405-10	SAMP	08-03-2021 07:52 pm	1.00	50 mL	50 mL	X080327.D	Liquid	Y	N
28	HS21071405-12	SAMP	08-03-2021 08:14 pm	1.00	50 mL	50 mL	X080328.D	Liquid	Y	N
29	HS21071405-08	SAMP	08-03-2021 08:35 pm	1.00	50 mL	50 mL	X080329.D	Liquid	Y	N
30	HS21071405-01	SAMP	08-03-2021 08:56 pm	25.00	2 mL	50 mL	X080330.D	Liquid	Y	N
31	HS21071405-01	SAMP	08-03-2021 09:17 pm	250.0(	200 µL	50 mL	X080331.D	Liquid	Y	N
32	CCV-END	CCV	08-03-2021 09:38 pm	1.00	50 mL	50 mL	X080332.D	Liquid	Y	N
33	BFB	TUNE	08-03-2021 09:59 pm	1.00	50 mL	50 mL	Y080301.D	Liquid	Y	N
34	CCV	CCV	08-03-2021 10:19 pm	1.00	50 mL	50 mL	Y080302a.D	Liquid	Y	N
35	CCV	CCV	08-03-2021 10:40 pm	1.00	50 mL	50 mL	Y080303.D	Liquid	Y	N
36	CCB	SAMP	08-03-2021 11:02 pm	1.00	50 mL	50 mL	Y080304.D	Liquid	Y	N
37	VLCSW-210803	LCS	08-03-2021 11:22 pm	1.00	50 mL	50 mL	Y080305.D	Liquid	Y	N
38	BLANK	SAMP	08-03-2021 11:44 pm	1.00	50 mL	50 mL	Y080306.D	Liquid	Y	N
39	VBLKW-210803	MBLK	08-04-2021 12:05 am	1.00	50 mL	50 mL	Y080307.D	Liquid	Y	N
40	HS21071524-01	SAMP	08-04-2021 12:26 am	1.00	50 mL	50 mL	Y080308.D	Liquid	Y	N
41	HS21071524-02	SAMP	08-04-2021 12:47 am	1.00	50 mL	50 mL	Y080309.D	Liquid	Y	N

MSVOA06 -Logbook

#	Samp ID	Type	Analyzed	DF	Init Wt/Vol	Final Vol	File ID	Matrix	Status	p
42	HS21071524-08	SAMP	08-04-2021 01:08 am	1.00	50 mL	50 mL	Y080310.D	Liquid	Y	N
43	HS21071524-06	SAMP	08-04-2021 01:29 am	1.00	50 mL	50 mL	Y080311.D	Liquid	Y	N
44	HS21071524-08MS	MS	08-04-2021 01:50 am	1.00	50 mL	50 mL	Y080312.D	Liquid	Y	N
45	HS21071524-08MSD	MSD	08-04-2021 02:11 am	1.00	50 mL	50 mL	Y080313.D	Liquid	Y	N
46	BLANK	SAMP	08-04-2021 02:32 am	1.00	50 mL	50 mL	Y080314.D	Liquid	Y	N
47	HS21071524-03	SAMP	08-04-2021 02:53 am	1.00	50 mL	50 mL	Y080315.D	Liquid	Y	N
48	HS21071524-04	SAMP	08-04-2021 03:14 am	1.00	50 mL	50 mL	Y080316.D	Liquid	Y	N
49	HS21071524-09	SAMP	08-04-2021 03:35 am	1.00	50 mL	50 mL	Y080317.D	Liquid	Y	N
50	HS21071524-10	SAMP	08-04-2021 03:56 am	1.00	50 mL	50 mL	Y080318.D	Liquid	Y	N
51	HS21071524-11	SAMP	08-04-2021 04:17 am	1.00	50 mL	50 mL	Y080319.D	Liquid	Y	N
52	HS21071524-12	SAMP	08-04-2021 04:38 am	1.00	50 mL	50 mL	Y080320.D	Liquid	Y	N
53	HS21071524-13	SAMP	08-04-2021 04:59 am	1.00	50 mL	50 mL	Y080321.D	Liquid	Y	N
54	HS21071524-14	SAMP	08-04-2021 05:21 am	1.00	50 mL	50 mL	Y080322.D	Liquid	Y	N
55	HS21071524-17	SAMP	08-04-2021 05:42 am	1.00	50 mL	50 mL	Y080323.D	Liquid	Y	N
56	HS21071524-18	SAMP	08-04-2021 06:03 am	1.00	50 mL	50 mL	Y080324.D	Liquid	Y	N
57	HS21071524-07	SAMP	08-04-2021 06:24 am	5.00	10 mL	50 mL	Y080325.D	Liquid	Y	N
58	HS21071524-07rr	SAMP	08-04-2021 06:45 am	50.00	1 mL	50 mL	Y080326.D	Liquid	Y	N
59	HS21071524-15	SAMP	08-04-2021 07:06 am	10.00	5 mL	50 mL	Y080327.D	Liquid	Y	N
60	HS21071524-15	SAMP	08-04-2021 07:27 am	100.0(	500 µL	50 mL	Y080328.D	Liquid	Y	N
61	HS21071524-05	SAMP	08-04-2021 07:48 am	25.00	2 mL	50 mL	Y080329.D	Liquid	Y	N
62	HS21071524-05	SAMP	08-04-2021 08:09 am	250.0(	200 µL	50 mL	Y080330.D	Liquid	Y	N
63	BLANK	SAMP	08-04-2021 08:30 am	1.00	50 mL	50 mL	Y080331.D	Liquid	Y	N

FORM 2
WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS21071405

	CLIENT SAMPLE NO.	SMC1 #	SMC2 (DCE)#	SMC3 (TOL)#	OTHER #	TOT OUT
01	VLCSW-210803	95	97	94	98	0
02	VBLKW-210803	92	90	103	101	0
03	HS21071405-13	93	93	104	94	0
04	HS21071405-03	94	90	105	101	0
05	HS21071405-06	93	90	101	101	0
06	HS21071405-09	94	90	103	100	0
07	HS21071405-10	92	91	102	97	0
08	HS21071405-12	92	91	102	99	0
09	HS21071405-08	93	93	103	101	0
10	HS21071405-01	94	91	103	98	0
11	HS21071405-01	92	91	103	97	0
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28						

		QC LIMITS
SMC1	= Dibromofluoromethane	(70-130)
SMC2 (DCE)	= 1,2-Dichloroethane-d4	(70-130)
SMC3 (TOL)	= Toluene-d8	(70-130)
OTHER	= 4-Bromofluorobenzene	(70-130)

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-210803

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS21071405

Lab File ID: X080308 Lab Sample ID: VBLKW-210803

Date Analyzed: 08/03/21 Time Analyzed: 1313

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-210803	VLCSW-210803	X080305	1209
02	HS21071731-01MS	HS21071731-01MS	X080313	1458
03	HS21071731-01MSD	HS21071731-01MSD	X080314	1519
04	HS21071405-13	HS21071405-13	X080323	1828
05	HS21071405-03	HS21071405-03	X080324	1849
06	HS21071405-06	HS21071405-06	X080325	1910
07	HS21071405-09	HS21071405-09	X080326	1931
08	HS21071405-10	HS21071405-10	X080327	1952
09	HS21071405-12	HS21071405-12	X080328	2014
10	HS21071405-08	HS21071405-08	X080329	2035
11	HS21071405-01	HS21071405-01	X080330	2056
12	HS21071405-01	HS21071405-01	X080331	2117
13				
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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.: HS21071405

Lab File ID: X080301 BFB Injection Date: 08/03/21

Instrument ID: VOA6 BFB Injection Time: 1046

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	15.9
75	30.0 - 60.0% of mass 95	43.0
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.5
173	Less than 2.0% of mass 174	1.1 (1.0)1
174	Greater than 50.0% of mass 95	103.5
175	5.0 - 9.0% of mass 174	7.1 (6.8)1
176	95.0 - 101.0% of mass 174	102.0 (98.5)1
177	5.0 - 9.0% of mass 176	7.3 (7.1)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	X080303	08/03/21	1127
02	VLCSW-210803	VLCSW-210803	X080305	08/03/21	1209
03	VBLKW-210803	VBLKW-210803	X080308	08/03/21	1313
04	HS21071731-01MS	HS21071731-01MS	X080313	08/03/21	1458
05	HS21071731-01MSD	HS21071731-01MSD	X080314	08/03/21	1519
06	HS21071405-13	HS21071405-13	X080323	08/03/21	1828
07	HS21071405-03	HS21071405-03	X080324	08/03/21	1849
08	HS21071405-06	HS21071405-06	X080325	08/03/21	1910
09	HS21071405-09	HS21071405-09	X080326	08/03/21	1931
10	HS21071405-10	HS21071405-10	X080327	08/03/21	1952
11	HS21071405-12	HS21071405-12	X080328	08/03/21	2014
12	HS21071405-08	HS21071405-08	X080329	08/03/21	2035
13	HS21071405-01	HS21071405-01	X080330	08/03/21	2056
14	HS21071405-01	HS21071405-01	X080331	08/03/21	2117
15	CCV-END	CCV-END	X080332	08/03/21	2138
16					
17					
18					
19					
20					
21					
22					

FORM V VOA

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS21071405

Instrument ID: VOA6 Calibration Date: 08/03/21 Time: 1127

Lab File ID: X080303 Init. Calib. Date(s): 07/30/21 07/30/21

Init. Calib. Times: 1129 1459

GC Column: DB624 ID: 0.18 (mm)

COMPOUND	RRF or AMOUNT	RRF50.000 or AMOUNT	CCAL RRF50.000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Vinyl Chloride	0.4760000	0.4251582	0.4251582	0.1	10.68	20.00	AVRG
Methylene Chloride	46.500906	50.000000	0.3900793	0.1	7.00	20.00	LINR
1,1-Dichloroethene	0.4210000	0.3715609	0.3715609	0.1	11.74	20.00	AVRG
1,2-Dichloroethane	0.4010000	0.3670231	0.3670231	0.1	8.47	20.00	AVRG
Trichloroethene	0.3650000	0.3625438	0.3625438	0.2	0.67	20.00	AVRG
1,1,2-Trichloroethane	0.2620000	0.2471294	0.2471294	0.1	5.68	20.00	AVRG
Dibromofluoromethane	47.060799	50.000000	0.4418825	0.1	5.88	20.00	LINR
1,2-Dichloroethane-d4	45.395017	50.000000	0.4056991	0.1	9.21	20.00	LINR
Toluene-d8	1.1730000	1.0749931	1.0749931	0.1	8.36	20.00	AVRG
4-Bromofluorobenzene	47.645212	50.000000	0.3999855	0.1	4.71	20.00	LINR

FORM VII VOA

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS21071405

Instrument ID: VOA6 Calibration Date: 08/03/21 Time: 2138

Lab File ID: X080332 Init. Calib. Date(s): 07/30/21 07/30/21

Init. Calib. Times: 1129 1459

GC Column: DB624 ID: 0.18 (mm)

COMPOUND	RRF or AMOUNT	RRF50.000 or AMOUNT	CCAL RRF50.000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Vinyl Chloride	0.4760000	0.4086157	0.4086157	0.1	14.16	50.00	AVRG
Methylene Chloride	48.665199	50.000000	0.4081474	0.1	2.67	50.00	LINR
1,1-Dichloroethene	0.4210000	0.3606129	0.3606129	0.1	14.34	50.00	AVRG
1,2-Dichloroethane	0.4010000	0.3665715	0.3665715	0.1	8.58	50.00	AVRG
Trichloroethene	0.3650000	0.3400958	0.3400958	0.2	6.82	50.00	AVRG
1,1,2-Trichloroethane	0.2620000	0.2453290	0.2453290	0.1	6.36	50.00	AVRG
Dibromofluoromethane	53.021999	50.000000	0.4966644	0.1	-6.04	50.00	LINR
1,2-Dichloroethane-d4	49.712657	50.000000	0.4435524	0.1	0.57	50.00	LINR
Toluene-d8	1.1730000	1.1272829	1.1272829	0.1	3.90	50.00	AVRG
4-Bromofluorobenzene	50.859671	50.000000	0.4265692	0.1	-1.72	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.: HS21071405

Lab File ID (Standard): X080303 Date Analyzed: 08/03/21

Instrument ID: VOA6 Time Analyzed: 1127

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

		IS1 AREA #	RT #	IS2(DFB) AREA #	RT #	IS3(CBZ) AREA #	RT #
	12 HOUR STD	756923	4.18	1013541	4.96	964515	7.67
	UPPER LIMIT	1513846	4.68	2027082	5.46	1929030	8.17
	LOWER LIMIT	378462	3.68	506771	4.46	482258	7.17
	CLIENT SAMPLE NO.						
01	VLCSW-210803	731926	4.18	978664	4.96	929141	7.67
02	VBLKW-210803	863601	4.18	1131563	4.96	1013297	7.67
03	HS21071731-01MS	878649	4.18	1149588	4.96	1040067	7.67
04	HS21071731-01MSD	924534	4.18	1219564	4.96	1086369	7.67
05	HS21071405-13	843099	4.18	1106995	4.96	975578	7.67
06	HS21071405-03	864070	4.18	1142351	4.96	998761	7.67
07	HS21071405-06	864352	4.18	1137116	4.96	1046472	7.67
08	HS21071405-09	861915	4.18	1140621	4.96	1017756	7.67
09	HS21071405-10	856791	4.18	1124587	4.96	1018940	7.67
10	HS21071405-12	850770	4.18	1130801	4.96	1014703	7.67
11	HS21071405-08	859059	4.18	1141386	4.96	1033813	7.67
12	HS21071405-01	857878	4.18	1140446	4.96	1022480	7.67
13	HS21071405-01	848465	4.18	1131999	4.96	987281	7.67
14							
15							
16							
17							
18							
19							
20							

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

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

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

FORM VIII VOA

FORM 8
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS21071405

Lab File ID (Standard): X080303 Date Analyzed: 08/03/21

Instrument ID: VOA6 Time Analyzed: 1127

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

		IS4 (DCB) AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	516981	9.66				
	UPPER LIMIT	1033962	10.16				
	LOWER LIMIT	258491	9.16				
	CLIENT SAMPLE NO.						
01	VLCSW-210803	507073	9.66				
02	VBLKW-210803	516708	9.66				
03	HS21071731-01MS	540074	9.66				
04	HS21071731-01MSD	572373	9.66				
05	HS21071405-13	472497	9.66				
06	HS21071405-03	531913	9.66				
07	HS21071405-06	532328	9.66				
08	HS21071405-09	542310	9.66				
09	HS21071405-10	497955	9.66				
10	HS21071405-12	516395	9.66				
11	HS21071405-08	542035	9.66				
12	HS21071405-01	522369	9.66				
13	HS21071405-01	479125	9.66				
14							
15							
16							
17							
18							
19							
20							

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

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

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

FORM VIII VOA

Data File: \\NAHSTWS005\target\chem\voa6.i\X210803.b\X080301.D

Date : 03-AUG-2021 10:46

Client ID: BFB

Instrument: voa6.i

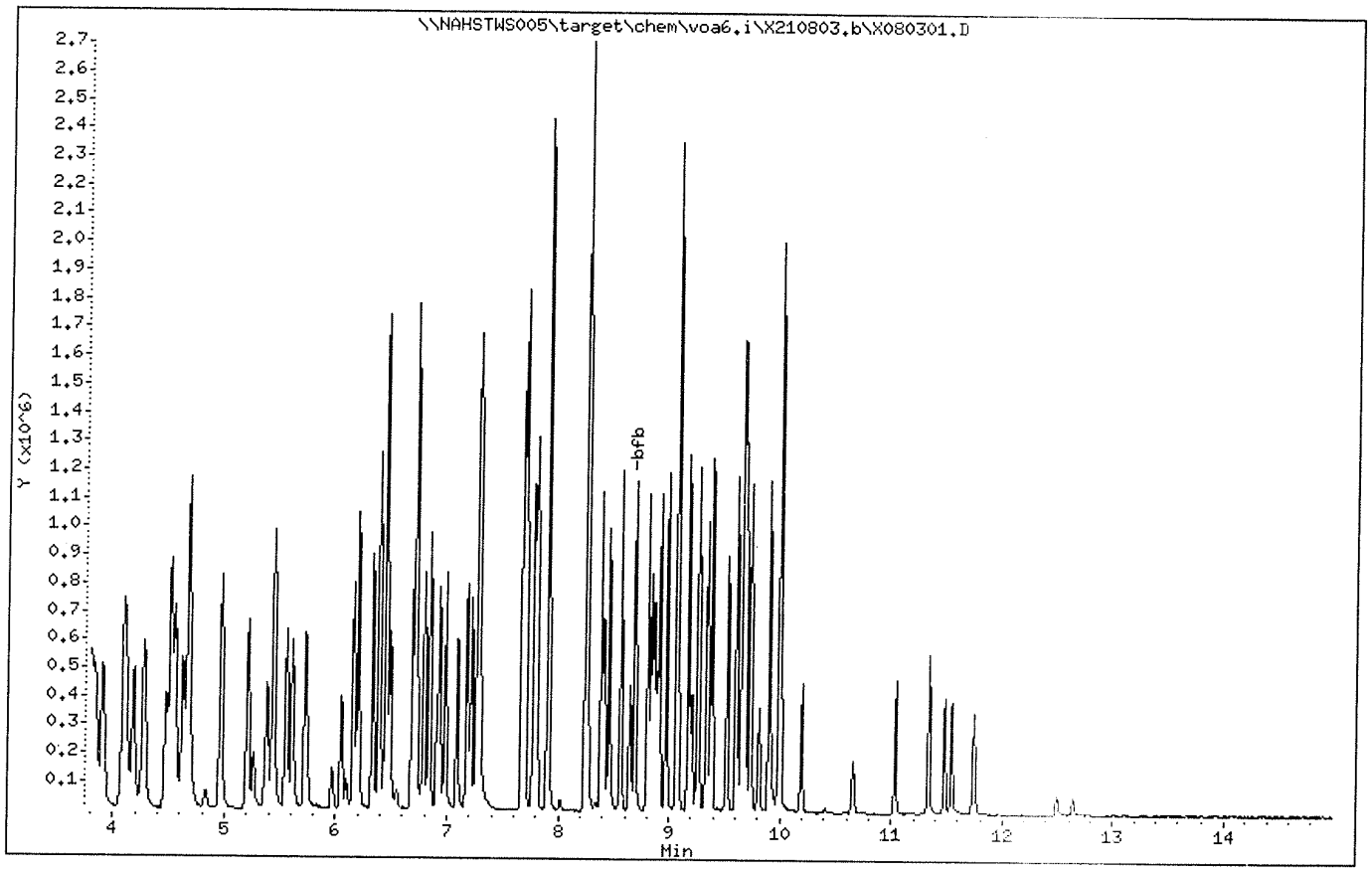
Sample Info: BFB;BFB;3;;BFB

Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

Column diameter: 0.25



Data File: \\NAHSTWS005\target\chem\voa6.i\X210803.b\X080301.D

Date : 03-AUG-2021 10:46

Client ID: BFB

Instrument: voa6.i

Sample Info: BFB;BFB;3;;BFB

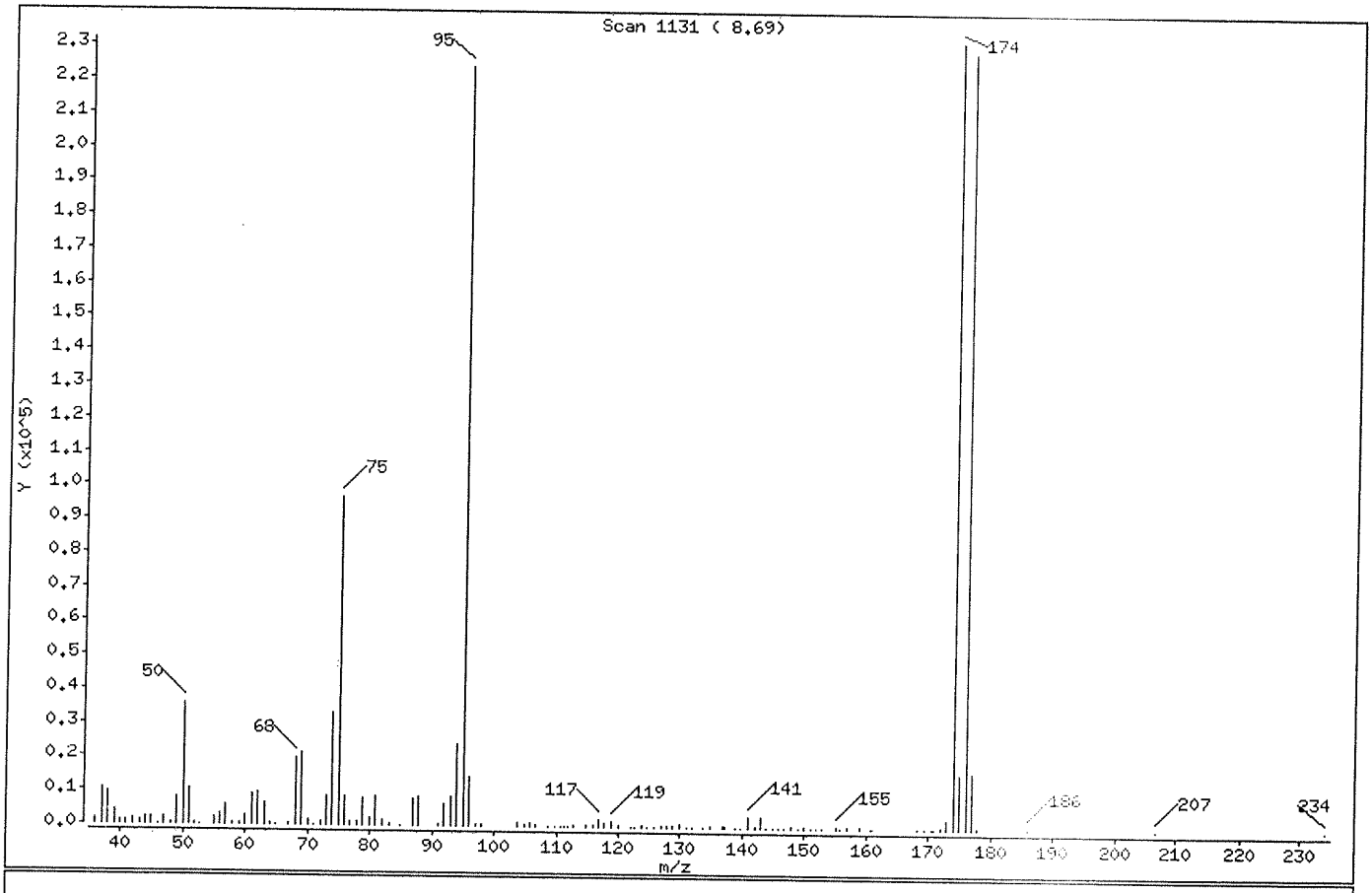
Volume Injected (uL): 2.0

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	15.88
75	30.00 - 60.00% of mass 95	42.96
96	5.00 - 9.00% of mass 95	6.48
173	Less than 2.00% of mass 174	1.08 (1.04)
174	Greater than 50.00% of mass 95	103.49
175	5.00 - 9.00% of mass 174	7.08 (6.84)
176	95.00 - 101.00% of mass 174	101.97 (98.54)
177	5.00 - 9.00% of mass 176	7.29 (7.14)

Data File: \\NAHSTWS005\target\chem\voa6.i\X210803.b\X080301.D

Date : 03-AUG-2021 10:46

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: X080301.D
Spectrum: Scan 1131 (8.69)
Location of Maximum: 173.90
Number of points: 123

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	1752	69.00	21184	109.80	162	143.90	185
37.00	10614	70.00	1462	110.60	56	144.90	141
38.00	9830	71.10	169	111.20	162	145.70	261
39.00	4256	72.00	1121	111.90	58	146.80	71
40.00	1028	73.00	8730	112.80	385	147.80	655
40.90	820	74.00	33168	114.90	482	149.10	203
42.10	1609	75.00	96208	115.90	720	149.90	285
43.00	876	76.00	8481	116.90	1881	151.00	94
44.00	2004	76.90	943	117.80	808	152.00	120
45.00	2292	77.80	988	118.80	1618	152.70	138
46.10	124	78.90	8084	120.00	380	155.00	777
47.00	2204	79.90	2267	122.00	80	155.70	233
48.00	795	80.90	8322	122.70	66	156.80	330
49.00	7751	81.90	1698	123.80	270	158.80	358
50.00	35568	83.10	330	124.70	170	160.60	110
51.00	10806	84.80	186	125.90	200	161.00	185
51.90	764	86.90	8078	127.00	276	168.20	115
52.80	180	87.90	8361	127.80	692	169.20	206
54.90	2267	90.90	609	128.80	510	170.50	243
56.00	3038	91.90	6564	129.90	985	170.80	248
56.90	5715	93.00	8781	130.90	232	171.80	499
57.90	553	94.00	23984	131.80	63	172.80	2417
59.00	571	95.00	223936	133.70	50	173.90	231744
59.90	2445	96.00	14507	134.80	640	174.90	15854
61.00	9285	97.10	438	136.70	334	175.90	228352
62.00	9768	97.90	551	137.00	348	176.90	16314
63.00	6342	103.90	1222	138.90	172	177.80	370
64.10	637	104.90	690	139.80	159	185.90	289
65.00	198	105.90	1043	140.90	3353	206.90	139
66.90	682	106.80	461	142.00	506	233.90	102
68.00	19608	108.70	51	142.90	2931		

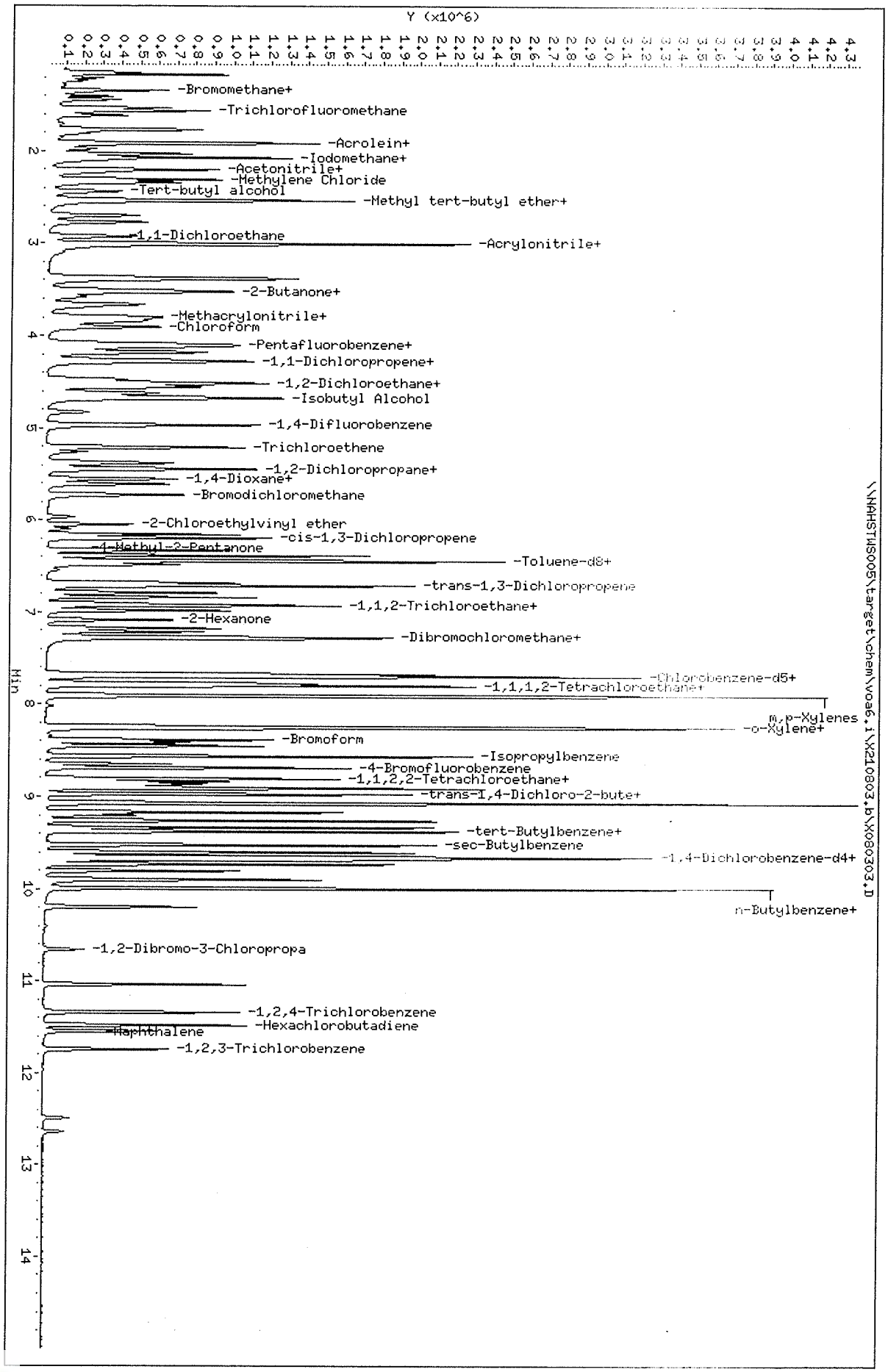
ALS Laboratory Group

Data file : \\NAHSTWS005\target\chem\voa6.i\X210803.b\X080303.D
Lab Smp Id: CCV Client Smp ID: CCV
Inj Date : 03-AUG-2021 11:27
Operator : PC Inst ID: voa6.i
Smp Info : CCV;CCV;2;;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\target\chem\voa6.i\X210803.b\8260W.m
Meth Date : 10-Sep-2021 13:45 voa6.i Quant Type: ISTD
Cal Date : 30-JUL-2021 13:56 Cal File: X073008.D
Als bottle: 3 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0474-dod.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	4.182	4.182	(1.000)	7e6923	50.0000	
$	30 Dibromofluoromethane	113	4.103	4.103	(0.981)	3364f5	50.0000	47.06
$	35 1,2-Dichloroethane-d4	65	4.469	4.469	(1.069)	307083	50.0000	45.39
*	36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	1013547	50.0000	
*	47 Chlorobenzene-d5	117	7.670	7.670	(1.000)	964515	50.0000	
$	48 Toluene-d8	98	6.388	6.388	(0.833)	1036847	50.0000	45.83
$	69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	385792	50.0000	47.64
*	70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	316987	50.0000	
	5 Vinyl Chloride	62	1.138	1.138	(0.272)	321859	50.0000	44.66
	11 1,1-Dichloroethene	96	1.911	1.911	(0.457)	281243	50.0000	44.15
	17 Methylene Chloride	84	2.305	2.305	(0.551)	295260	50.0000	46.50
	27 cis-1,2-Dichloroethene	96	3.523	3.523	(0.842)	334037	50.0000	43.99
	33 1,2-Dichloroethane	62	4.555	4.555	(0.918)	371993	50.0000	45.75
	38 Trichloroethene	130	5.206	5.206	(1.049)	367453	50.0000	49.61
	53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	238360	50.0000	47.23
	20 trans-1,2-Dichloroethene	96	2.527	2.527	(0.604)	279028	50.0000	46.40



Data File: \\NAHSTWS005\target\chem\voa6.i\X210803.b\X080303.D
Date : 03-AUG-2021 11:27
Client ID: CCV
Sample Info: CCV;CCV;2;;;
Purge Volume: 5.0
Column phase: DB624

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

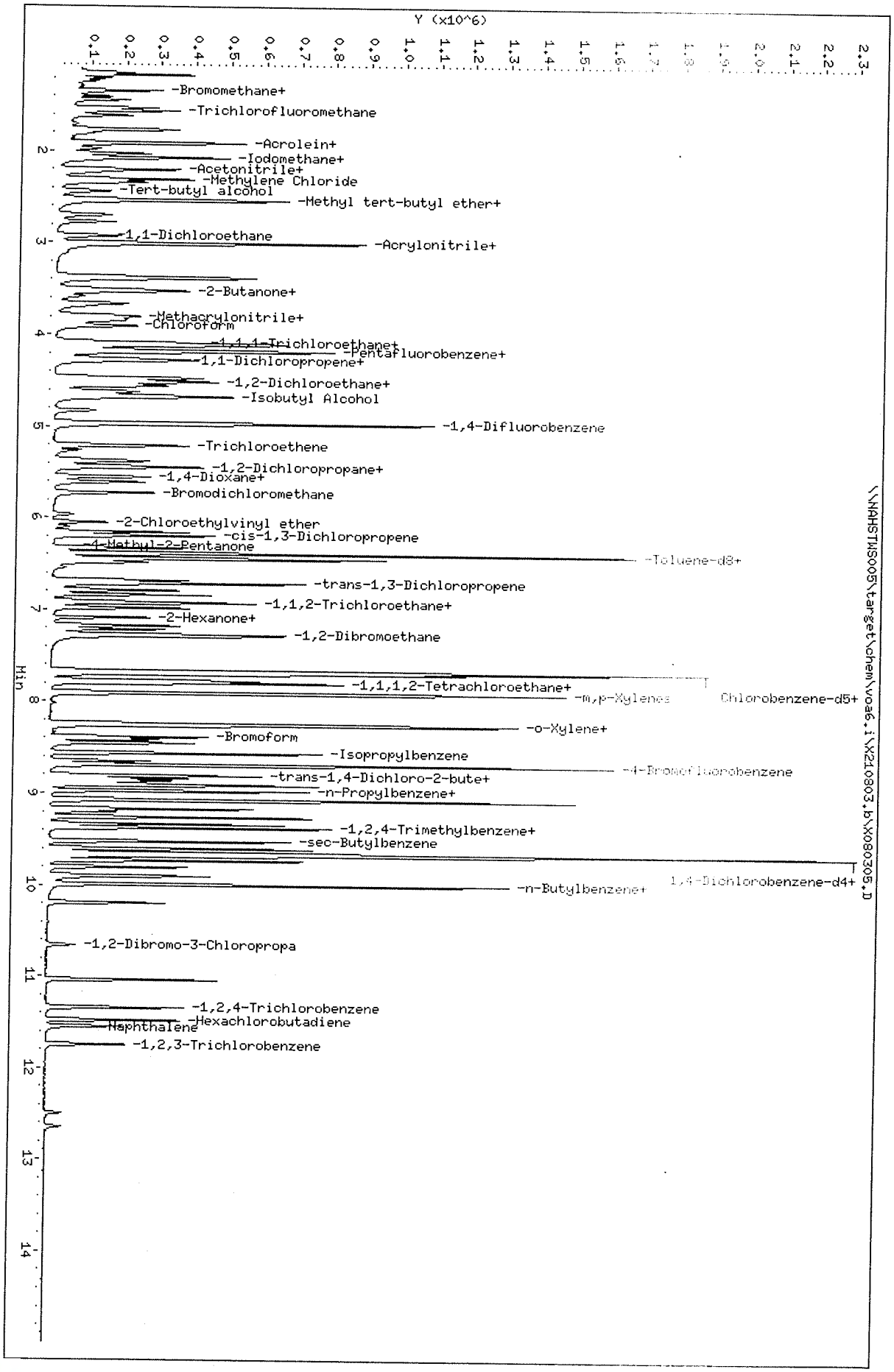
ALS Laboratory Group

Data file : \\NAHSTWS005\target\chem\voa6.i\X210803.b\X080305.D
Lab Smp Id: VLCSW-210803 Client Smp ID: VLCSW-210803
Inj Date : 03-AUG-2021 12:09
Operator : PC Inst ID: voa6.i
Smp Info : VLCSW-210803;VLCSW-210803;3;;LCS
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\target\chem\voa6.i\X210803.b\8260W.m
Meth Date : 10-Sep-2021 13:45 voa6.i Quant Type: ISTD
Cal Date : 30-JUL-2021 13:56 Cal File: X073008.D
Als bottle: 5 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0474-dod.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	4.182	(1.000)	[illegible]	50.0000	
$ 30 Dibromofluoromethane	113	4.096	4.103	(0.979)	[illegible]	47.5729	47.57
$ 35 1,2-Dichloroethane-d4	65	4.469	4.469	(1.069)	[illegible]	48.4334	48.43
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	[illegible]	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.670	(1.000)	[illegible]	50.0000	
$ 48 Toluene-d8	98	6.389	6.388	(0.833)	[illegible]	46.8652	46.86
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	[illegible]	49.2884	49.28
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	[illegible]	50.0000	
5 Vinyl Chloride	62	1.138	1.138	(0.272)	[illegible]	17.0997	17.09
11 1,1-Dichloroethene	96	1.912	1.911	(0.457)	[illegible]	16.9128	16.91
17 Methylene Chloride	84	2.306	2.305	(0.551)	[illegible]	19.2055	19.20
27 cis-1,2-Dichloroethene	96	3.530	3.523	(0.844)	[illegible]	18.0554	18.05
33 1,2-Dichloroethane	62	4.555	4.555	(0.918)	[illegible]	19.0836	19.08
38 Trichloroethene	130	5.207	5.206	(1.049)	[illegible]	19.4214	19.42
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	[illegible]	19.5937	19.59
20 trans-1,2-Dichloroethene	96	2.528	2.527	(0.604)	[illegible]	18.2051	18.20



Data File: \\NAHSTWS005\target\chem\voa6.i\X210803.b\X080305.D
Date : 03-AUG-2021 12:09
Client ID: VLCSW-210803
Sample Info: VLCSW-210803;VLCSW-210803;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\X210803.b\X080308.D Page 1
Report Date: 10-Sep-2021 13:45

ALS Laboratory Group

Data file : \\NAHSTWS005\target\chem\voa6.i\X210803.b\X080308.D
Lab Smp Id: VBLKW-210803 Client Smp ID: VBLKW-210803
Inj Date : 03-AUG-2021 13:13
Operator : PC Inst ID: voa6.i
Smp Info : VBLKW-210803;VBLKW-210803;3;;BLANK
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\target\chem\voa6.i\X210803.b\8260W.m
Meth Date : 10-Sep-2021 13:45 voa6.i Quant Type: ISTD
Cal Date : 30-JUL-2021 13:56 Cal File: X073008.D
Als bottle: 8 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0474-dod.sub
Target Version: 4.14
Processing Host: NAHSTW7056

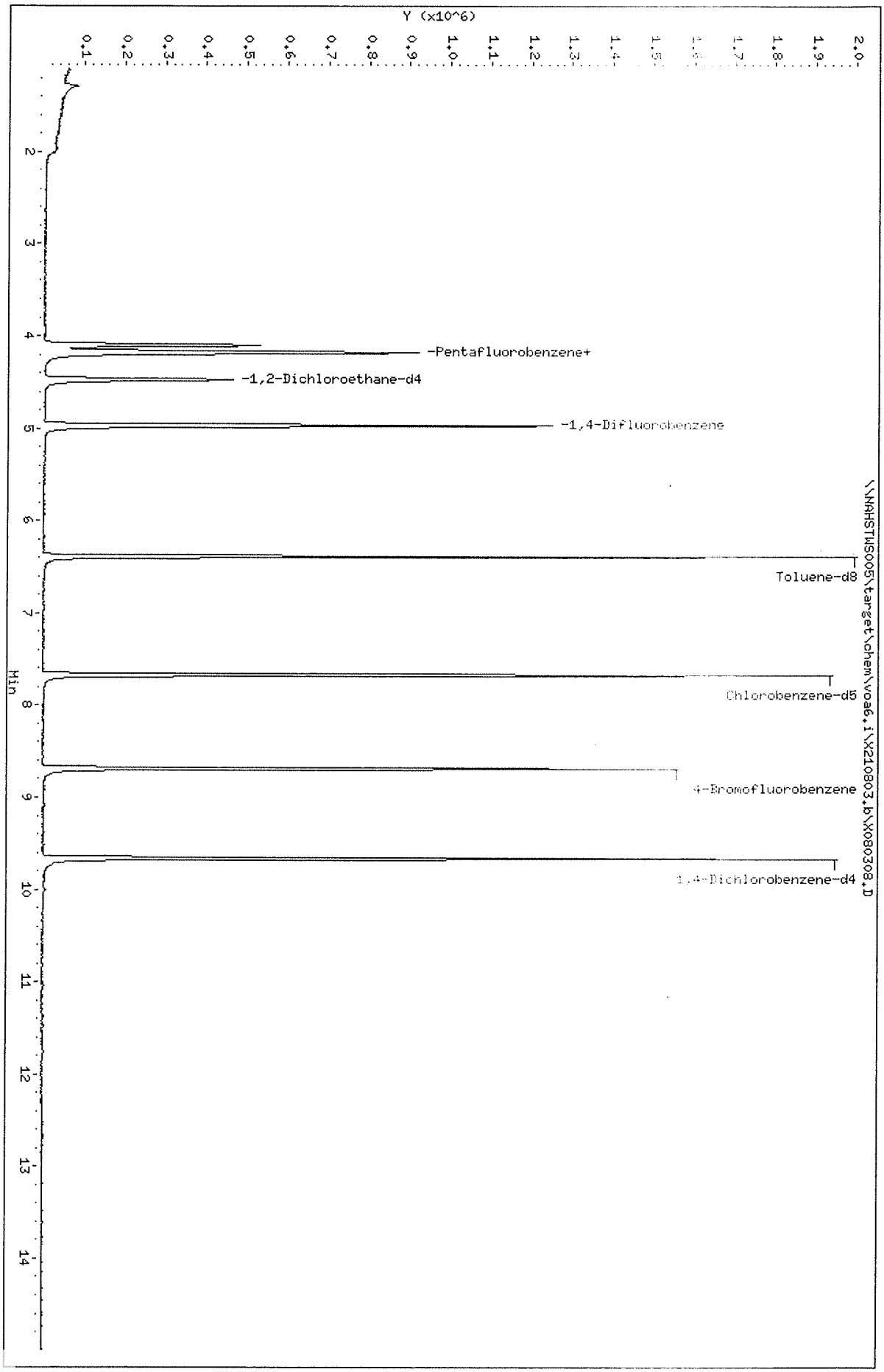
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

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	4.182	(1.000)	86360	50.0000	
$ 30 Dibromofluoromethane	113	4.096	4.103	(0.979)	371632	45.8035	45.80
$ 35 1,2-Dichloroethane-d4	65	4.469	4.469	(1.069)	346415	44.8737	44.87
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	[illegible]	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.670	(1.000)	101329	50.0000	
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	102584	51.6183	51.61
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	92804	50.3584	50.35
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	91708	50.0000	

Data File: \\NAHSTWS005\target\chem\voa6.i\X210803.b\X080308.D
Date : 03-AUG-2021 13:13
Client ID: VBLKW-210803
Sample Info: VBLKW-210803;VBLKW-210803;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\X210803.b\X080313.D Page 1
Report Date: 10-Sep-2021 13:45

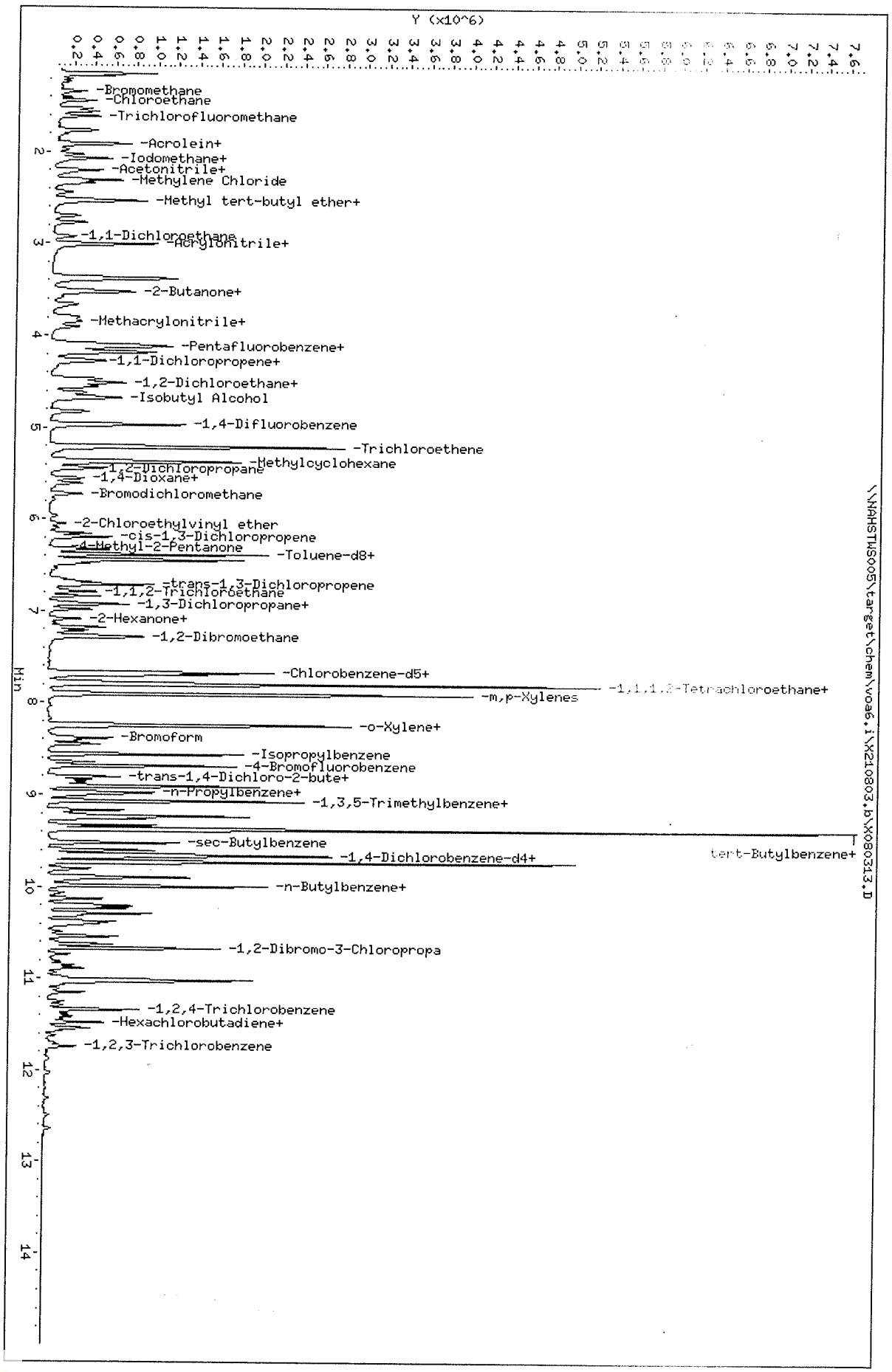
ALS Laboratory Group

Data file : \\NAHSTWS005\target\chem\voa6.i\X210803.b\X080313.D
Lab Smp Id: HS21071731-01MS Client Smp ID: HS21071731-01MS
Inj Date : 03-AUG-2021 14:58
Operator : PC Inst ID: voa6.i
Smp Info : HS21071731-01MS;HS21071731-01MS;3;;MS
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\target\chem\voa6.i\X210803.b\8260W.m
Meth Date : 10-Sep-2021 13:45 voa6.i Quant Type: ISTD
Cal Date : 30-JUL-2021 13:56 Cal File: X073008.D
Als bottle: 13 QC Sample: MS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0474-dod.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	4.182	(1.000)	878649	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	376879	45.8991	45.89
$ 35 1,2-Dichloroethane-d4	65	4.469	4.469	(1.069)	353823	45.0518	45.05
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	1149588	50.0000	
* 47 Chlorobenzene-d5	117	7.670	7.670	(1.000)	1040067	50.0000	
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	1249976	51.2382	51.23
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	429261	49.1856	49.18
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	540074	50.0000	
5 Vinyl Chloride	62	1.138	1.138	(0.272)	677226	80.9711	80.97
11 1,1-Dichloroethene	96	1.911	1.911	(0.457)	334239	18.1567	18.15
17 Methylene Chloride	84	2.305	2.305	(0.551)	327239	17.1214	17.12
27 cis-1,2-Dichloroethene	96	3.530	3.523	(0.844)	349638	39.6700	39.66
33 1,2-Dichloroethane	62	4.555	4.555	(0.918)	16374	17.4982	17.49
38 Trichloroethene	130	5.206	5.206	(1.049)	987794	117.584	117.58
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	75602	17.5700	17.56
20 trans-1,2-Dichloroethene	96	2.527	2.527	(0.604)	343581	19.1405	19.14



Data File: \\NAHSTWS005\target\chem\voa6,i\X210803,b\X080313.D
Date : 03-AUG-2021 14:58
Client ID: HS21071731-01MS
Sample Info: HS21071731-01MS;HS21071731-01MS;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\X210803.b\X080314.D Page 1
Report Date: 10-Sep-2021 13:45

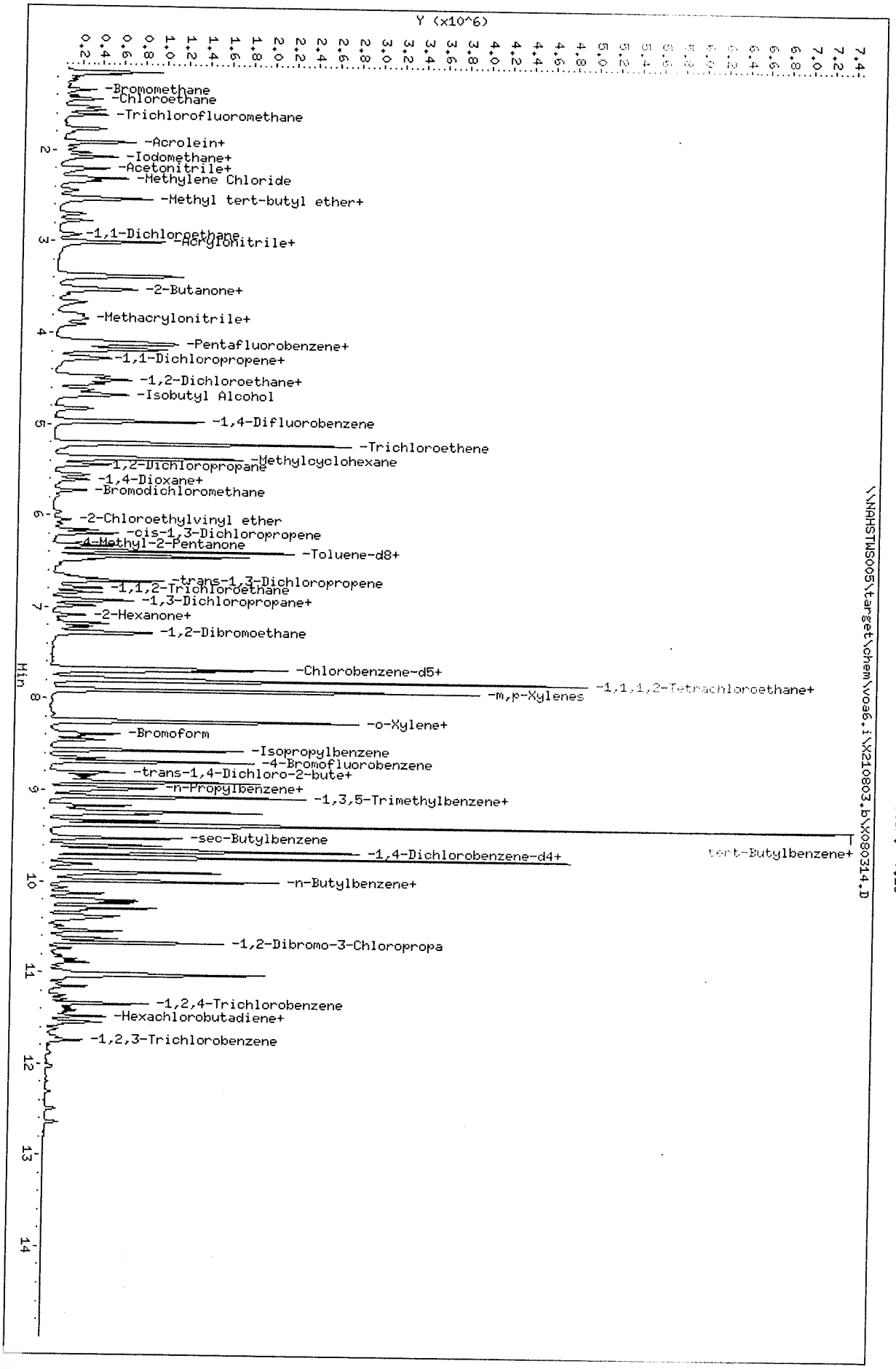
ALS Laboratory Group

Data file : \\NAHSTWS005\target\chem\voa6.i\X210803.b\X080314.D
Lab Smp Id: HS21071731-01MSD Client Smp ID: HS21071731-01MSD
Inj Date : 03-AUG-2021 15:19
Operator : PC Inst ID: voa6.i
Smp Info : HS21071731-01MSD;HS21071731-01MSD;3;;MSD
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\target\chem\voa6.i\X210803.b\8260W.m
Meth Date : 10-Sep-2021 13:45 voa6.i Quant Type: ISTD
Cal Date : 30-JUL-2021 13:56 Cal File: X073008.D
Als bottle: 13 QC Sample: MSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0474-dod.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	4.182	(1.000)	924834	50.0000	
$ 30 Dibromofluoromethane	113	4.096	4.103	(0.979)	399160	45.9597	45.95
$ 35 1,2-Dichloroethane-d4	65	4.469	4.469	(1.069)	377872	45.7391	45.73
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	1219564	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.670	(1.000)	1086369	50.0000	
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	1323886	51.9549	51.95
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	457423	50.1931	50.19
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	572373	50.0000	
5 Vinyl Chloride	62	1.138	1.138	(0.272)	657790	74.7440	74.74
11 1,1-Dichloroethene	96	1.912	1.911	(0.457)	325532	16.1363	16.13
17 Methylene Chloride	84	2.306	2.305	(0.551)	328308	16.0103	16.01
27 cis-1,2-Dichloroethene	96	3.523	3.523	(0.842)	827956	35.3635	35.36
33 1,2-Dichloroethane	62	4.555	4.555	(0.918)	396939	15.8337	15.83
38 Trichloroethene	130	5.207	5.206	(1.049)	962799	107.968	107.96
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	98086	17.2582	17.25
20 trans-1,2-Dichloroethene	96	2.528	2.527	(0.604)	449812	18.1436	18.14



Data File: \\NAHSTWS005\target\chem\voa6,i\X210803,b\X080314,D
Date : 03-AUG-2021 15:19
Client ID: HS21071731-01HSD
Sample Info: HS21071731-01HSD;HS21071731-01HSD;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\X210803.b\X080323.D Page 1
Report Date: 10-Sep-2021 13:43

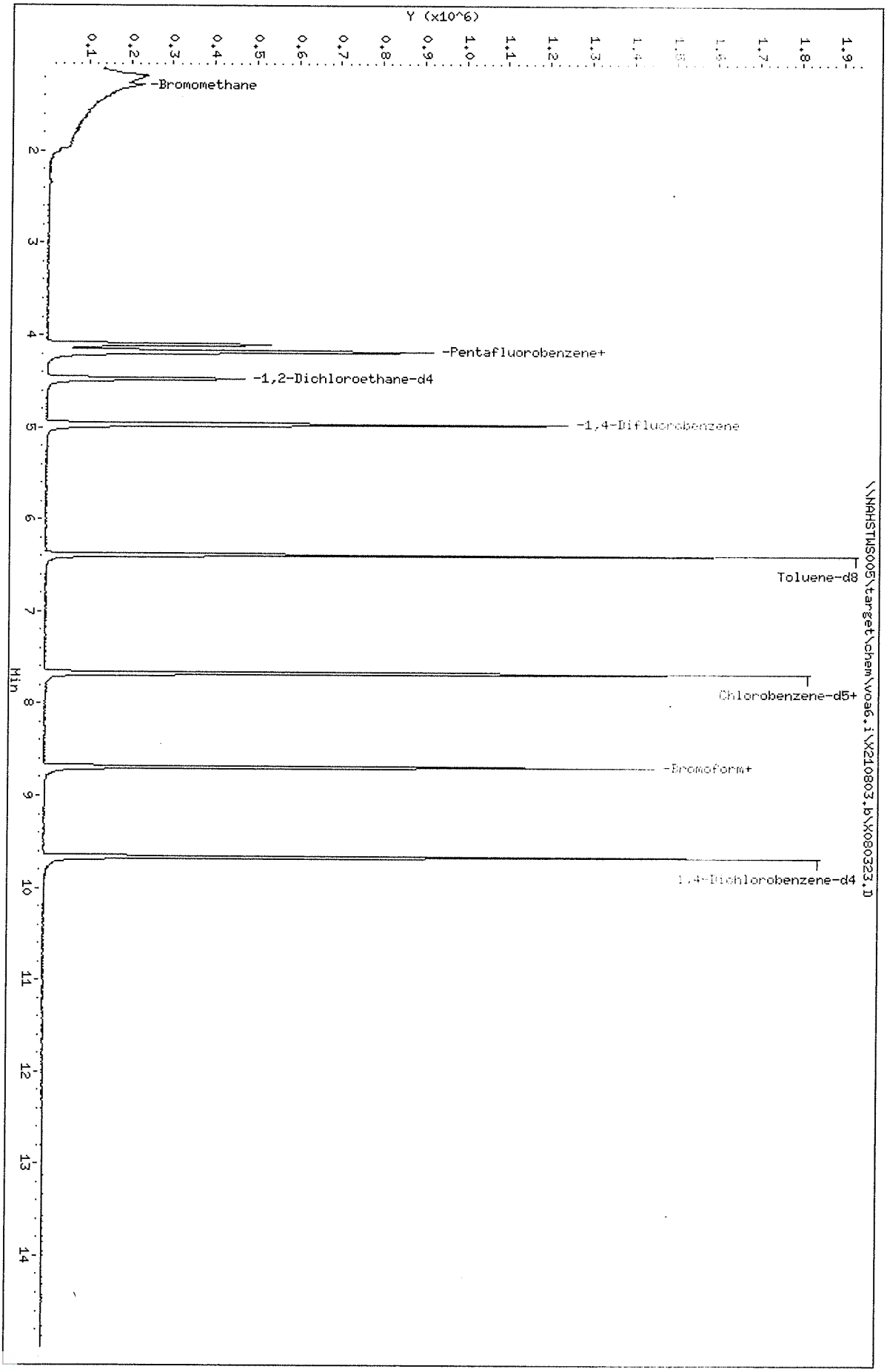
ALS Laboratory Group

Data file : \\NAHSTWS005\target\chem\voa6.i\X210803.b\X080323.D
Lab Smp Id: HS21071405-13 Client Smp ID: HS21071405-13
Inj Date : 03-AUG-2021 18:28
Operator : PC Inst ID: voa6.i
Smp Info : HS21071405-13;HS21071405-13;;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\target\chem\voa6.i\X210803.b\8260W.m
Meth Date : 10-Sep-2021 13:41 Genoveva.R Quant Type: ISTD
Cal Date : 30-JUL-2021 13:56 Cal File: X073008.D
Als bottle: 22
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0474-dod.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	4.182	(1.000)	843099	50.0000	
$ 30 Dibromofluoromethane	113	4.096	4.103	(0.979)	368151	46.4929	46.49
$ 35 1,2-Dichloroethane-d4	65	4.469	4.469	(1.069)	349306	46.3774	46.37
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	1106996	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	976579	50.0000	
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	1189722	51.9921	51.99
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	384398	46.9240	46.92
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	472497	50.0000	



Data File: \\NAHSTWS005\target\chem\voa6.i\X210803.b\X080323.D
Date : 03-AUG-2021 18:28
Client ID: HS21071405-13
Sample Info: HS21071405-13;HS21071405-13;;;
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\NAHSTWS005\target\chem\voa6.i\X210803.b\X080324.D Page 1
Report Date: 10-Sep-2021 13:43

ALS Laboratory Group

Data file : \\NAHSTWS005\target\chem\voa6.i\X210803.b\X080324.D
Lab Smp Id: HS21071405-03 Client Smp ID: HS21071405-03
Inj Date : 03-AUG-2021 18:49
Operator : PC Inst ID: voa6.i
Smp Info : HS21071405-03;HS21071405-03;;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\target\chem\voa6.i\X210803.b\8260W.m
Meth Date : 10-Sep-2021 13:41 Genoveva.R Quant Type: ISTD
Cal Date : 30-JUL-2021 13:56 Cal File: X073008.D
Als bottle: 23
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0474-dod.sub
Target Version: 4.14
Processing Host: NAHSTW7056

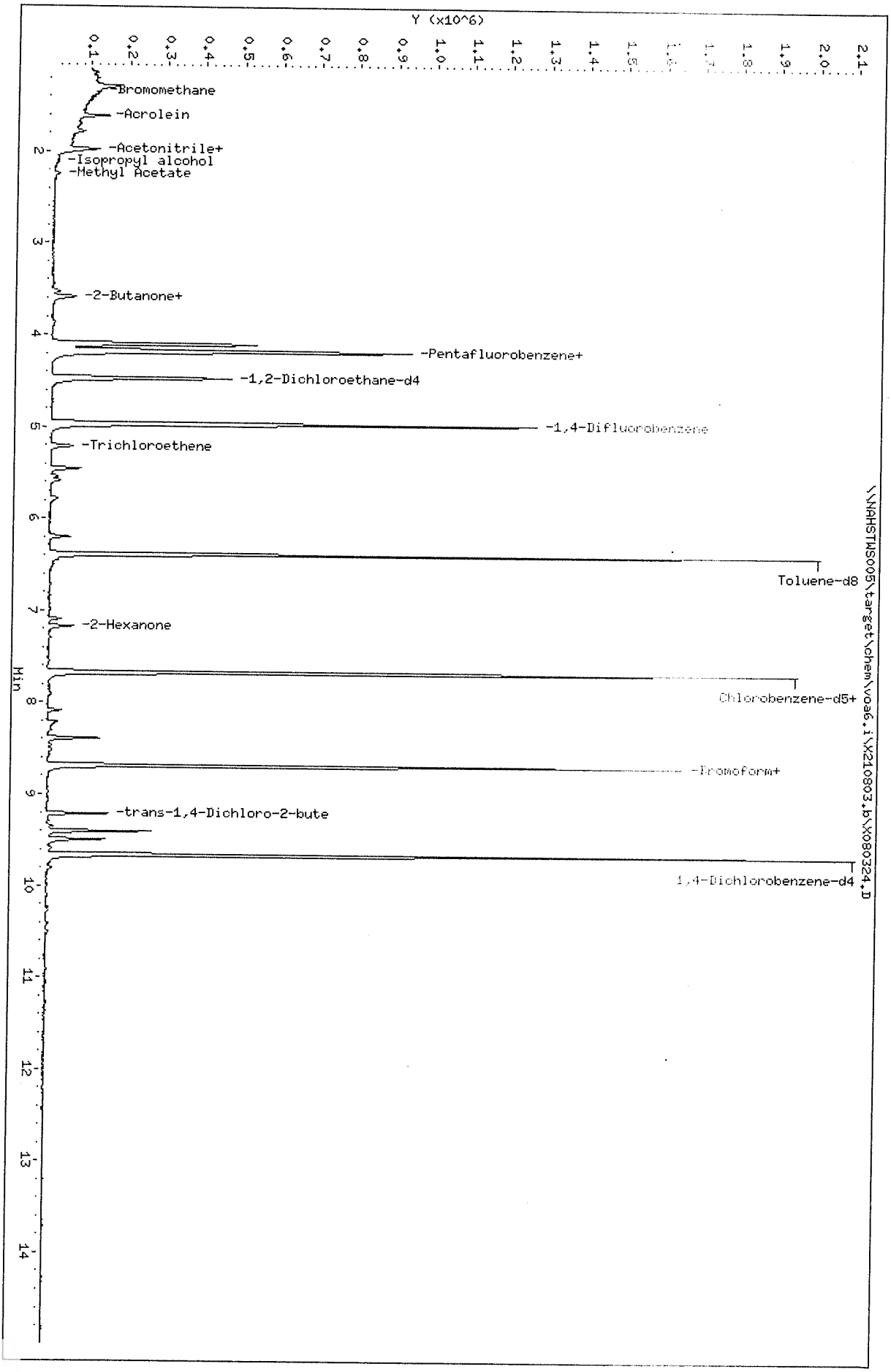
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

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	4.182	(1.000)	864070	50.0000	
$ 30 Dibromofluoromethane	113	4.096	4.103	(0.979)	383640	47.0385	47.03
$ 35 1,2-Dichloroethane-d4	65	4.469	4.469	(1.069)	346818	44.9020	44.90
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	1142365	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	998767	50.0000	
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	1225695	52.3208	52.32
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	424100	50.6247	50.62
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	883913	50.0000	
27 cis-1,2-Dichloroethene	96	3.530	3.523	(0.844)	11356	1.28712	1.28(a)
38 Trichloroethene	130	5.206	5.206	(1.049)	16241	1.82574	1.82(a)

QC Flag Legend

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



Data File: \\NAHSTWS005\target\chem\voa6.i\X210803.b\X080324.D
Date : 03-AUG-2021 18:49
Client ID: HS21071405-03
Sample Info: HS21071405-03;HS21071405-03;;;
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\NAHSTWS005\target\chem\voa6.i\X210803.b\X080324.D

Date : 03-AUG-2021 18:49

Client ID: HS21071405-03

Instrument: voa6.i

Sample Info: HS21071405-03;HS21071405-03;;;

Purge Volume: 5.0

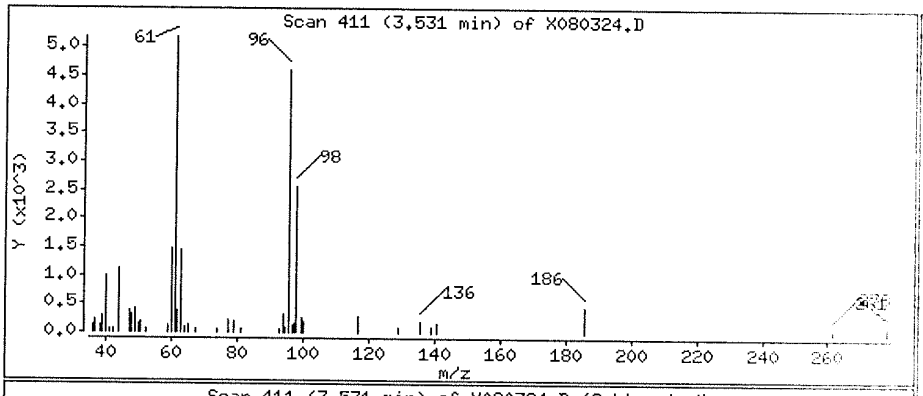
Operator: PC

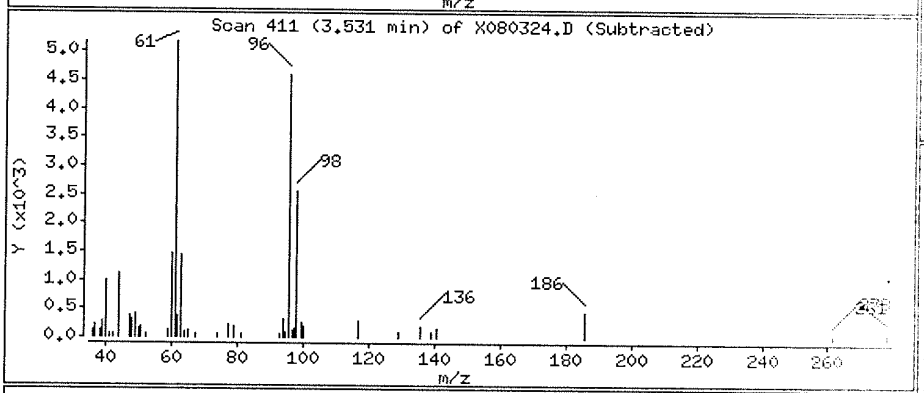
Column phase: DB624

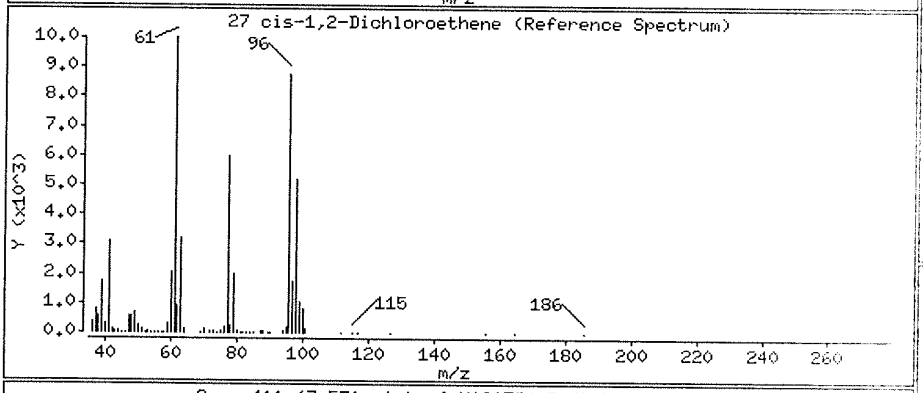
Column diameter: 0.18

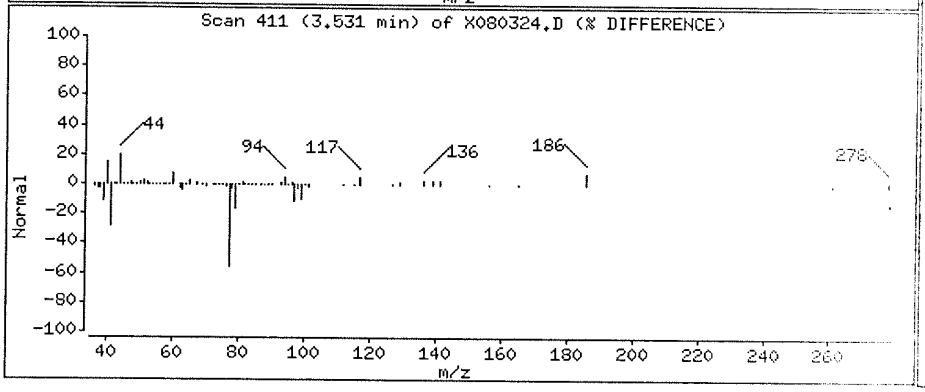
27 cis-1,2-Dichloroethene

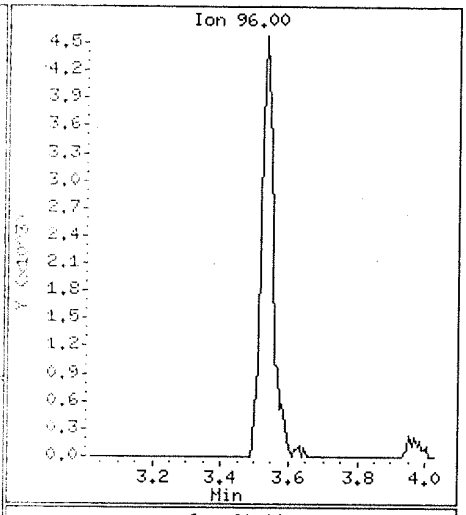
Concentration: 1.28 ug/l

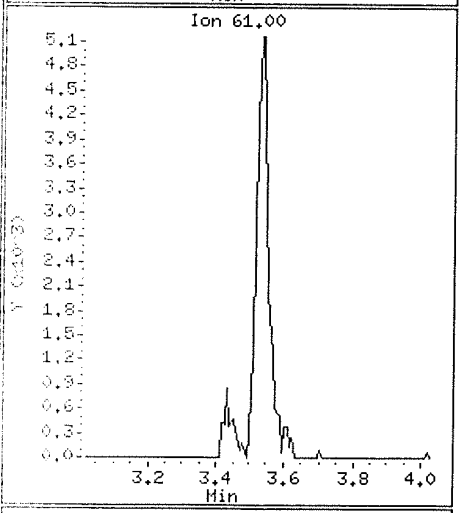


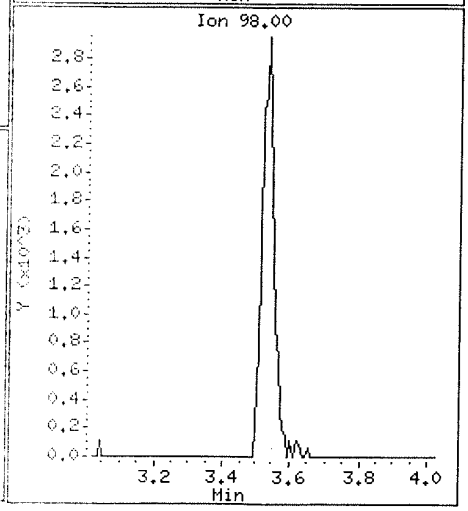












Data File: \\NAHSTWS005\target\chem\voa6.i\X210803.b\X080324.D

Date : 03-AUG-2021 18:49

Client ID: HS21071405-03

Instrument: voa6.i

Sample Info: HS21071405-03;HS21071405-03;;;

Purge Volume: 5.0

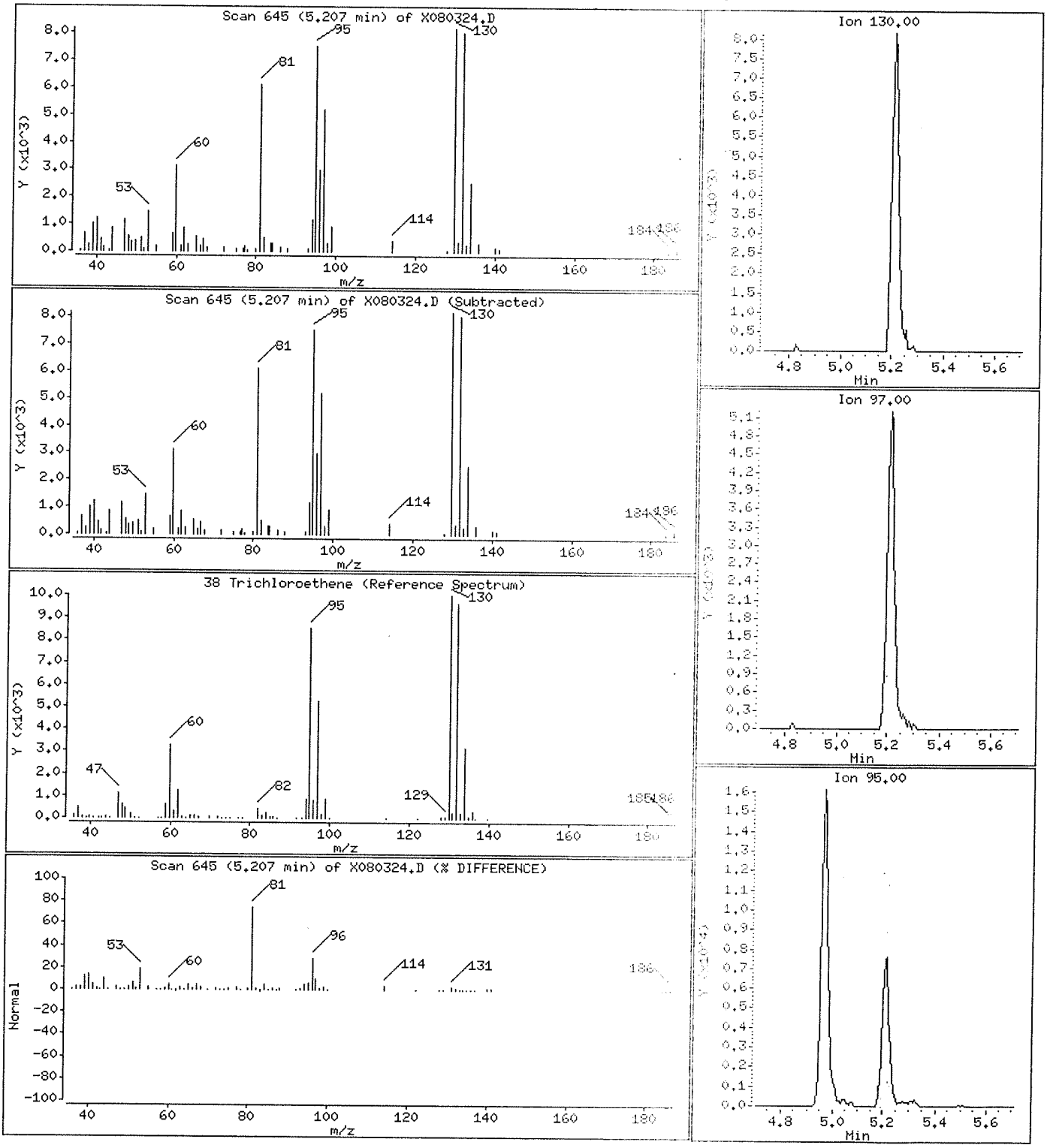
Operator: PC

Column phase: DB624

Column diameter: 0.18

38 Trichloroethene

Concentration: 1.82 ug/l



Data File: \\NAHSTWS005\target\chem\voa6.i\X210803.b\X080325.D Page 1
Report Date: 10-Sep-2021 13:43

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Data file : \\NAHSTWS005\target\chem\voa6.i\X210803.b\X080325.D
Lab Smp Id: HS21071405-06 Client Smp ID: HS21071405-06
Inj Date : 03-AUG-2021 19:10
Operator : PC Inst ID: voa6.i
Smp Info : HS21071405-06;HS21071405-06;;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\target\chem\voa6.i\X210803.b\8260W.m
Meth Date : 10-Sep-2021 13:41 Genoveva.R Quant Type: ISTD
Cal Date : 30-JUL-2021 13:56 Cal File: X073008.D
Als bottle: 24
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0474-dod.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

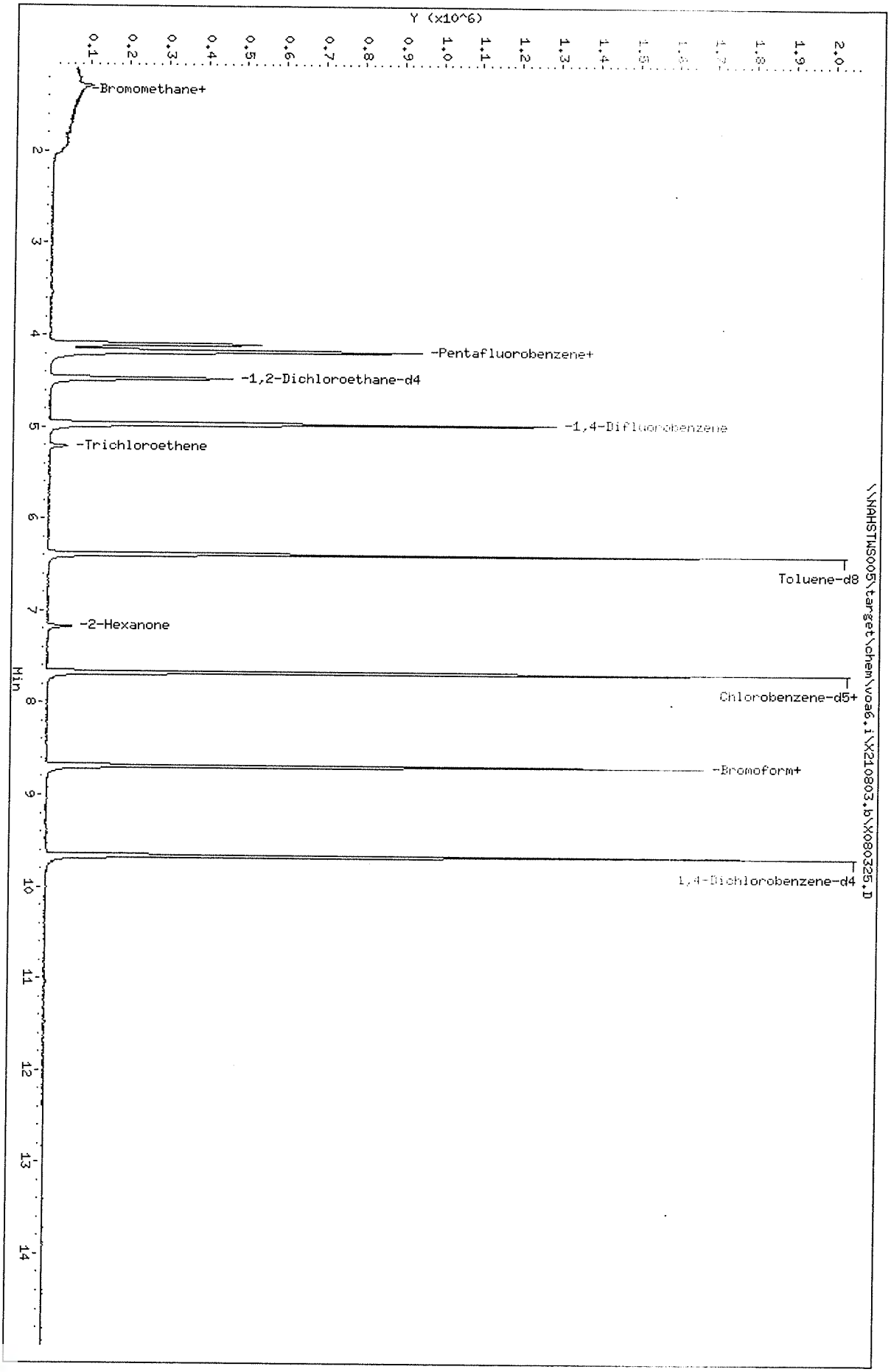
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	864362	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	378079	46.5669	46.56
$ 35 1,2-Dichloroethane-d4	65	4.476	4.469	(1.070)	346091	44.7912	44.79
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	1137116	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	1046472	50.0000	
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	1241192	50.5667	50.56
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	442615	50.4001	50.40
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	532328	50.0000	
38 Trichloroethene	130	5.214	5.206	(1.051)	17848	2.14788	2.14(a)

QC Flag Legend

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

Data File: \\NAHSTWS005\target\chem\voa6.i\X210803.b\X080325.D
Date : 03-AUG-2021 19:10
Client ID: HS21071405-06
Sample Info: HS21071405-06,HS21071405-06;;;
Purge Volume: 5.0
Column phase: DB624

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



Data File: \\NAHSTWS005\target\chem\voa6.i\X210803.b\X080325.D

Date : 03-AUG-2021 19:10

Client ID: HS21071405-06

Instrument: voa6.i

Sample Info: HS21071405-06;HS21071405-06;;;

Purge Volume: 5.0

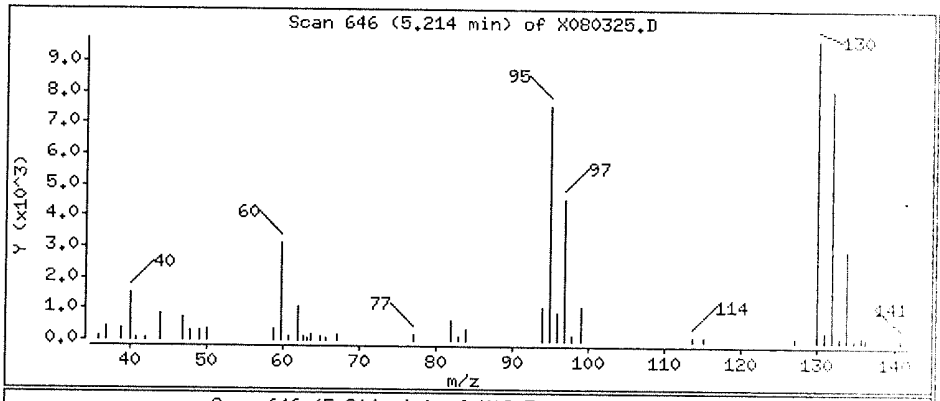
Operator: PC

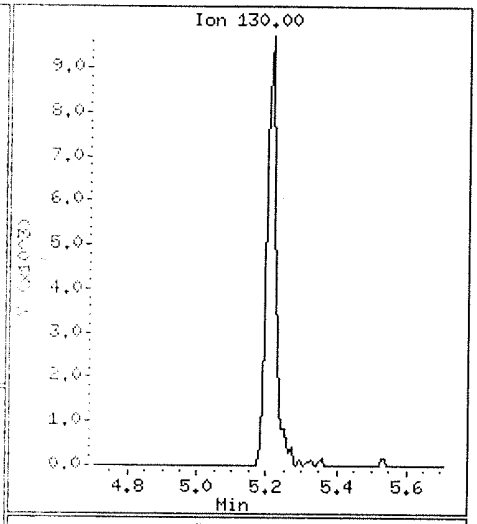
Column phase: DB624

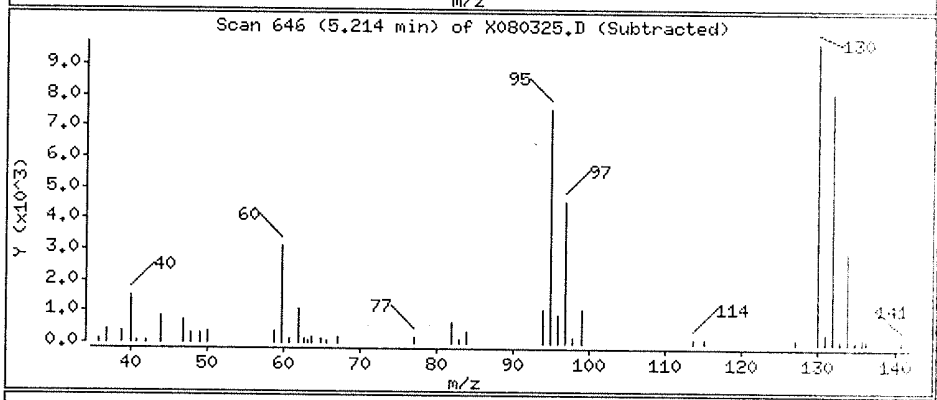
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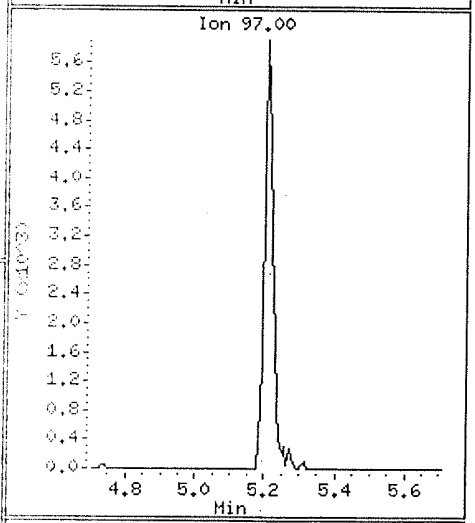
38 Trichloroethene

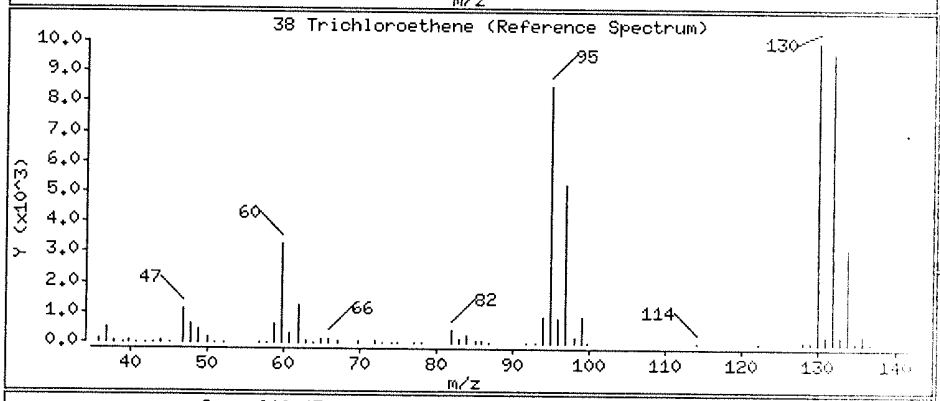
Concentration: 2.14 ug/l

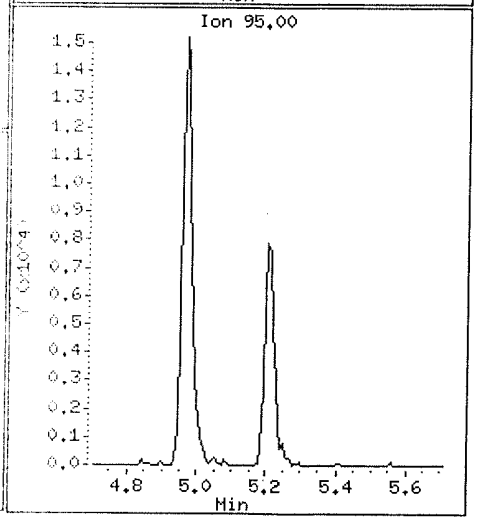


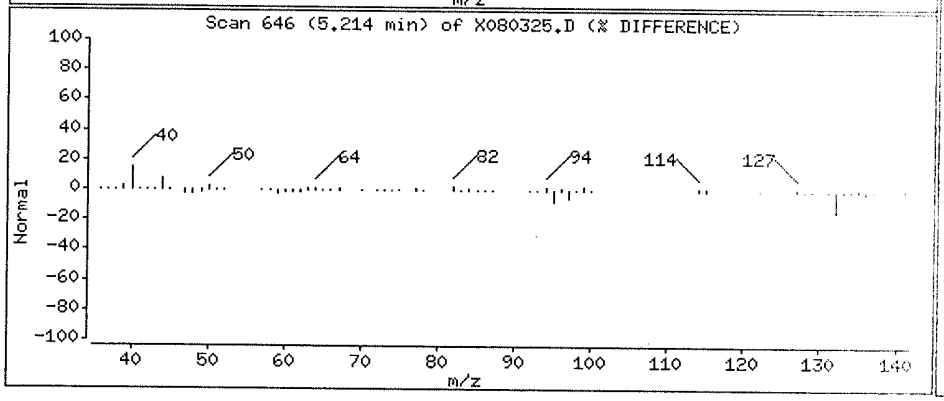












Data File: \\NAHSTWS005\target\chem\voa6.i\X210803.b\X080326.D Page 1
Report Date: 10-Sep-2021 13:43

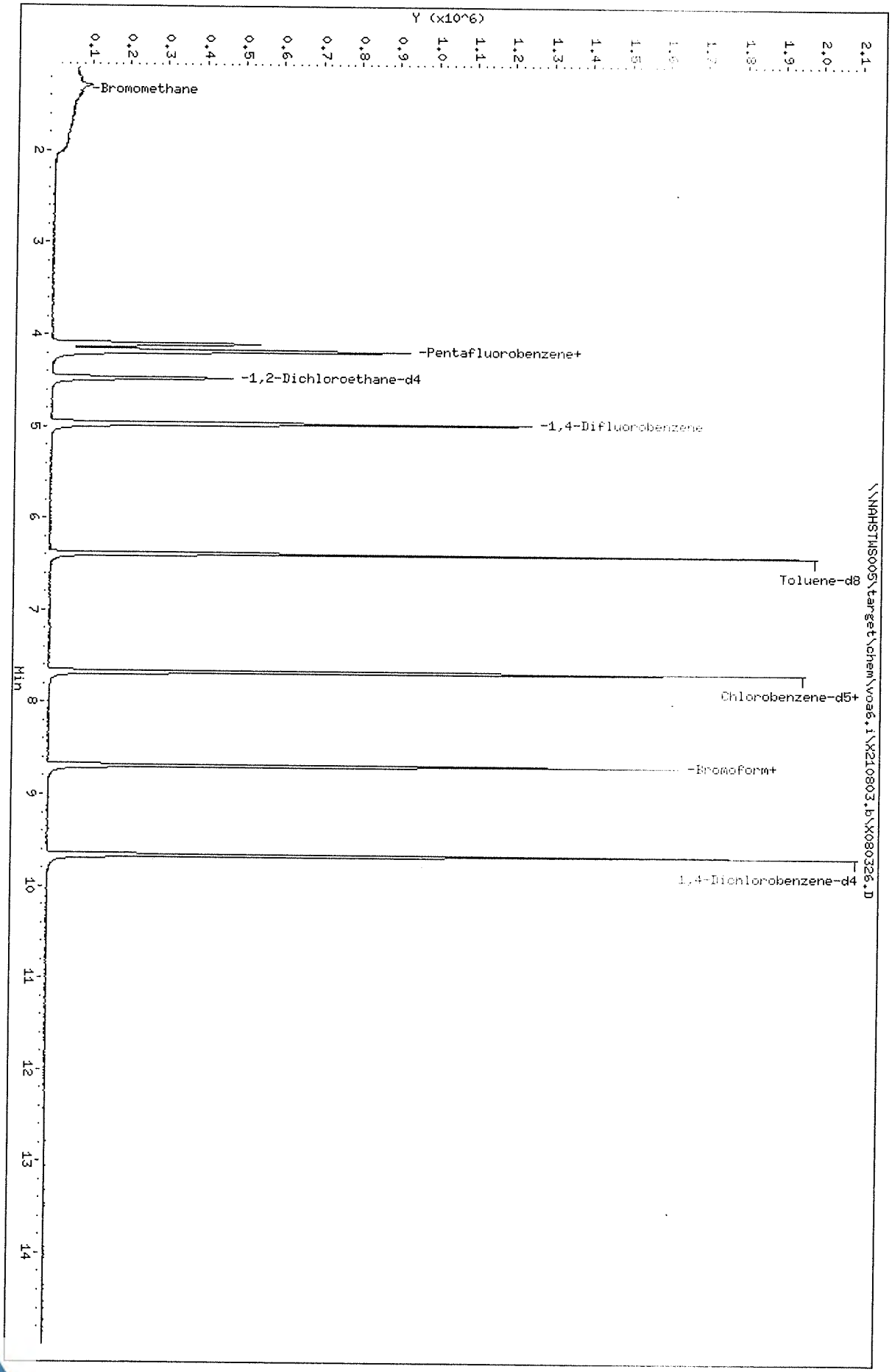
ALS Laboratory Group

Data file : \\NAHSTWS005\target\chem\voa6.i\X210803.b\X080326.D
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Inj Date : 03-AUG-2021 19:31
Operator : PC Inst ID: voa6.i
Smp Info : HS21071405-09;HS21071405-09;;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\target\chem\voa6.i\X210803.b\8260W.m
Meth Date : 10-Sep-2021 13:41 Genoveva.R Quant Type: ISTD
Cal Date : 30-JUL-2021 13:56 Cal File: X073008.D
Als bottle: 25
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0474-dod.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	4.182	(1.000)	861916	50.0000	
$ 30 Dibromofluoromethane	113	4.096	4.103	(0.979)	378382	46.8736	46.87
$ 35 1,2-Dichloroethane-d4	65	4.469	4.469	(1.069)	347718	45.1356	45.13
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	1748621	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	1617756	50.0000	
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	1233016	51.6510	51.65
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	425397	49.8205	49.82
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	542316	50.0000	



Data File: \\NAHSTWS005\target\chem\voa6.i\X210803.b\X080326.D
Date : 03-AUG-2021 19:31
Client ID: HS21071405-09
Sample Info: HS21071405-09;HS21071405-09;;;
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\NAHSTWS005\target\chem\voa6.i\X210803.b\X080327.D Page 1
Report Date: 10-Sep-2021 13:43

ALS Laboratory Group

Data file : \\NAHSTWS005\target\chem\voa6.i\X210803.b\X080327.D
Lab Smp Id: HS21071405-10 Client Smp ID: HS21071405-10
Inj Date : 03-AUG-2021 19:52
Operator : PC Inst ID: voa6.i
Smp Info : HS21071405-10;HS21071405-10;;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\target\chem\voa6.i\X210803.b\8260W.m
Meth Date : 10-Sep-2021 13:41 Genoveva.R Quant Type: ISTD
Cal Date : 30-JUL-2021 13:56 Cal File: X073008.D
Als bottle: 26
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0474-dod.sub
Target Version: 4.14
Processing Host: NAHSTW7056

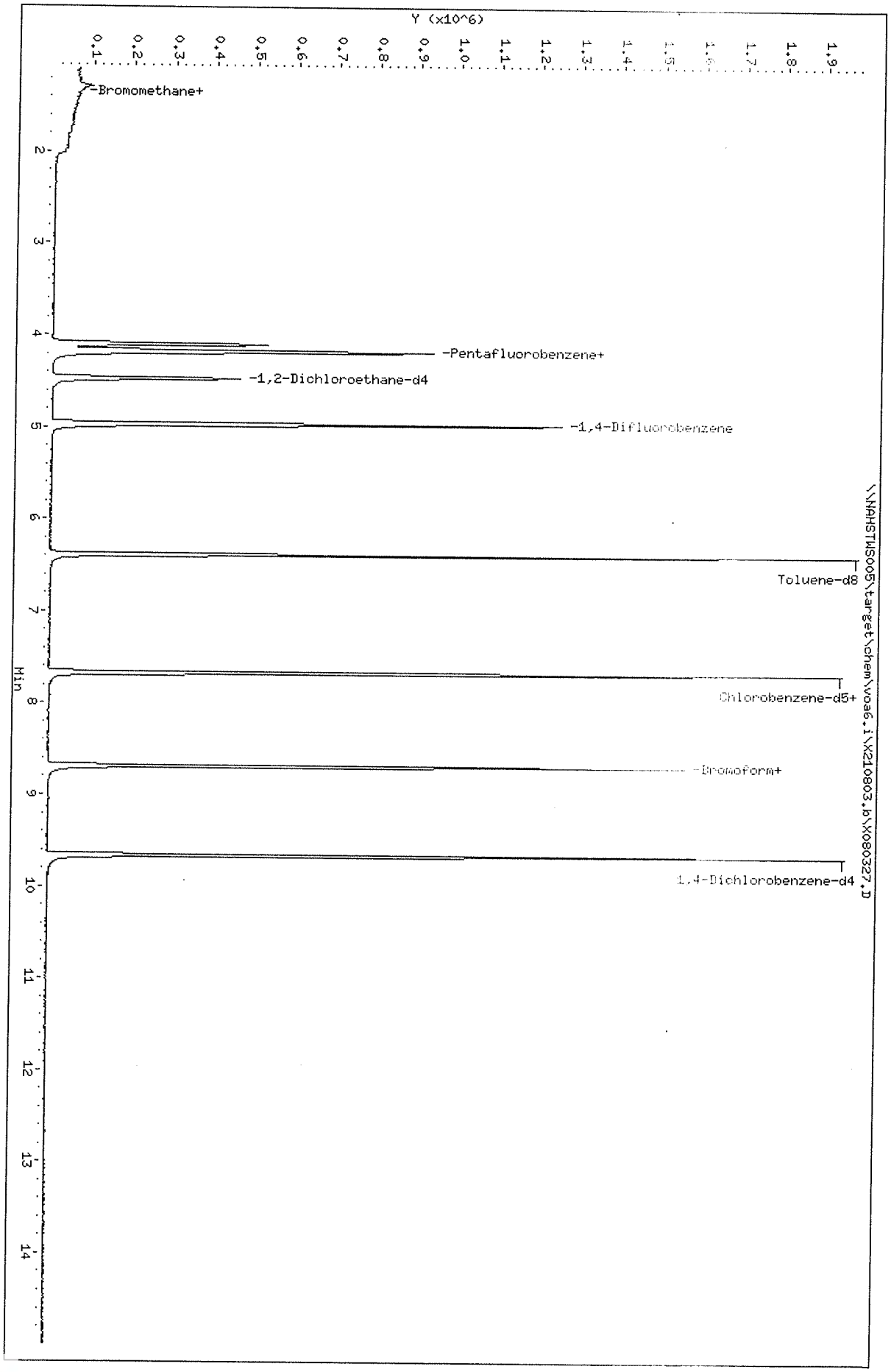
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

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	4.182	(1.000)	856791	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	371949	46.2160	46.21
$ 35 1,2-Dichloroethane-d4	65	4.469	4.469	(1.069)	347268	45.3509	45.35
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	1124587	50.0000	
* 47 Chlorobenzene-d5	117	7.670	7.671	(1.000)	1018940	50.0000	
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	1216802	50.9126	50.91
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	416797	48.7412	48.74
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	697355	50.0000	

Data File: \\NAHSTWS005\target\chem\voa6.i\X210803.b\X080327.D
Date : 03-AUG-2021 19:52
Client ID: HS21071405-10
Sample Info: HS21071405-10;HS21071405-10;;;
Purge Volume: 5.0
Column phase: DB624

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



Data File: \\NAHSTWS005\target\chem\voa6.i\X210803.b\X080328.D Page 1
Report Date: 10-Sep-2021 13:43

ALS Laboratory Group

Data file : \\NAHSTWS005\target\chem\voa6.i\X210803.b\X080328.D
Lab Smp Id: HS21071405-12 Client Smp ID: HS21071405-12
Inj Date : 03-AUG-2021 20:14
Operator : PC Inst ID: voa6.i
Smp Info : HS21071405-12;HS21071405-12;;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\target\chem\voa6.i\X210803.b\8260W.m
Meth Date : 10-Sep-2021 13:41 Genoveva.R Quant Type: ISTD
Cal Date : 30-JUL-2021 13:56 Cal File: X073008.D
Als bottle: 27
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0474-dod.sub
Target Version: 4.14
Processing Host: NAHSTW7056

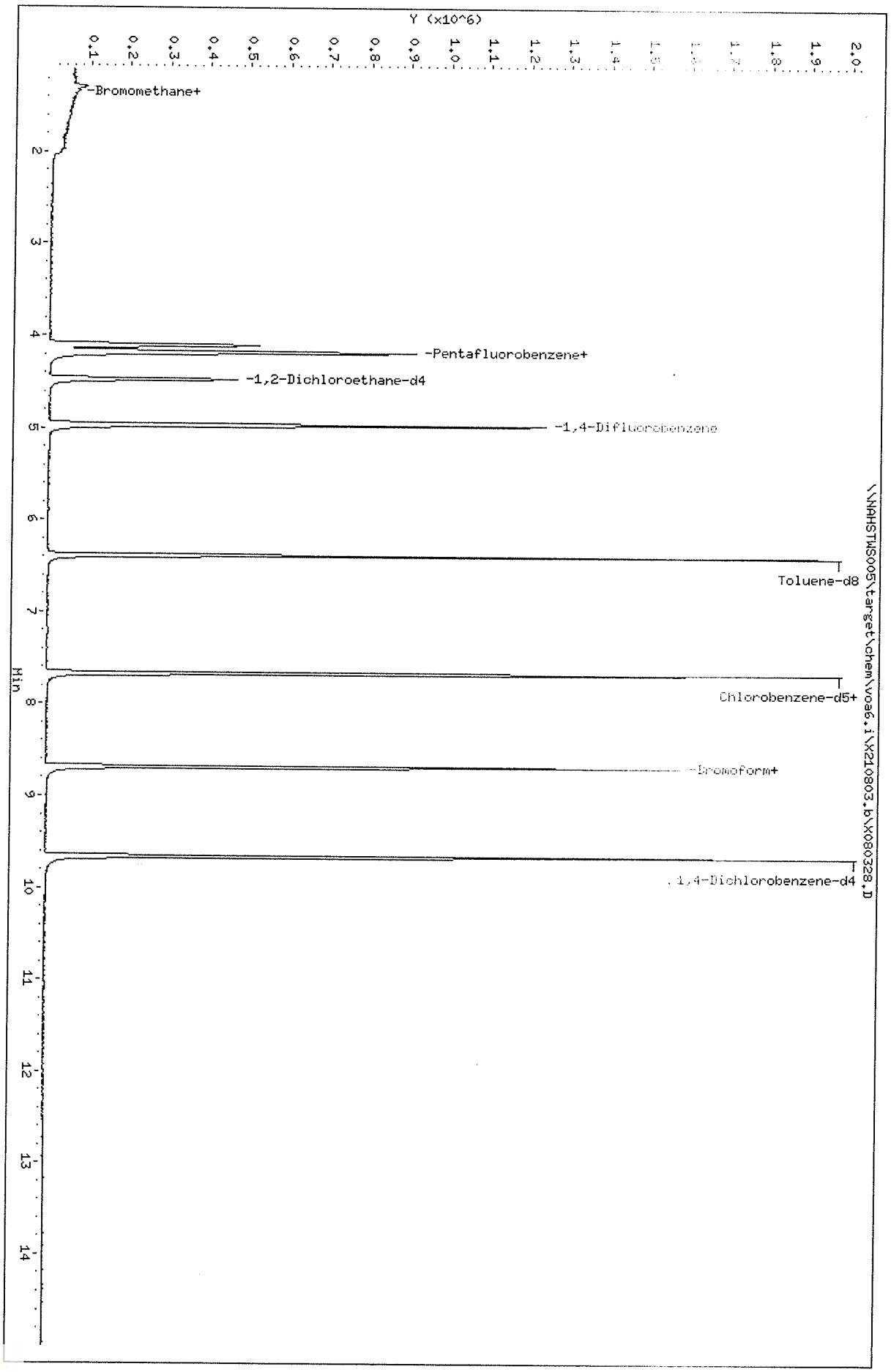
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

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	4.182	(1.000)	[illegible]	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	[illegible]	45.8921	45.89
$ 35 1,2-Dichloroethane-d4	65	4.476	4.469	(1.070)	[illegible]	45.5484	45.54
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	[illegible]	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	[illegible]	50.0000	
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	[illegible]	50.9551	50.95
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	[illegible]	49.5860	49.58
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	[illegible]	50.0000	

Data File: \\NAHSTWS005\target\chem\voa6.i\X210803.b\X080328.D
Date : 03-AUG-2021 20:14
Client ID: HS21071405-12
Sample Info: HS21071405-12;HS21071405-12;;;
Purge Volume: 5.0
Column phase: DB624

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



Data File: \\NAHSTWS005\target\chem\voa6.i\X210803.b\X080329.D Page 1
Report Date: 10-Sep-2021 13:43

ALS Laboratory Group

Data file : \\NAHSTWS005\target\chem\voa6.i\X210803.b\X080329.D
Lab Smp Id: HS21071405-08 Client Smp ID: HS21071405-08
Inj Date : 03-AUG-2021 20:35
Operator : PC Inst ID: voa6.i
Smp Info : HS21071405-08;HS21071405-08;;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\target\chem\voa6.i\X210803.b\8260W.m
Meth Date : 10-Sep-2021 13:41 Genoveva.R Quant Type: ISTD
Cal Date : 30-JUL-2021 13:56 Cal File: X073008.D
Als bottle: 28
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0474-dod.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

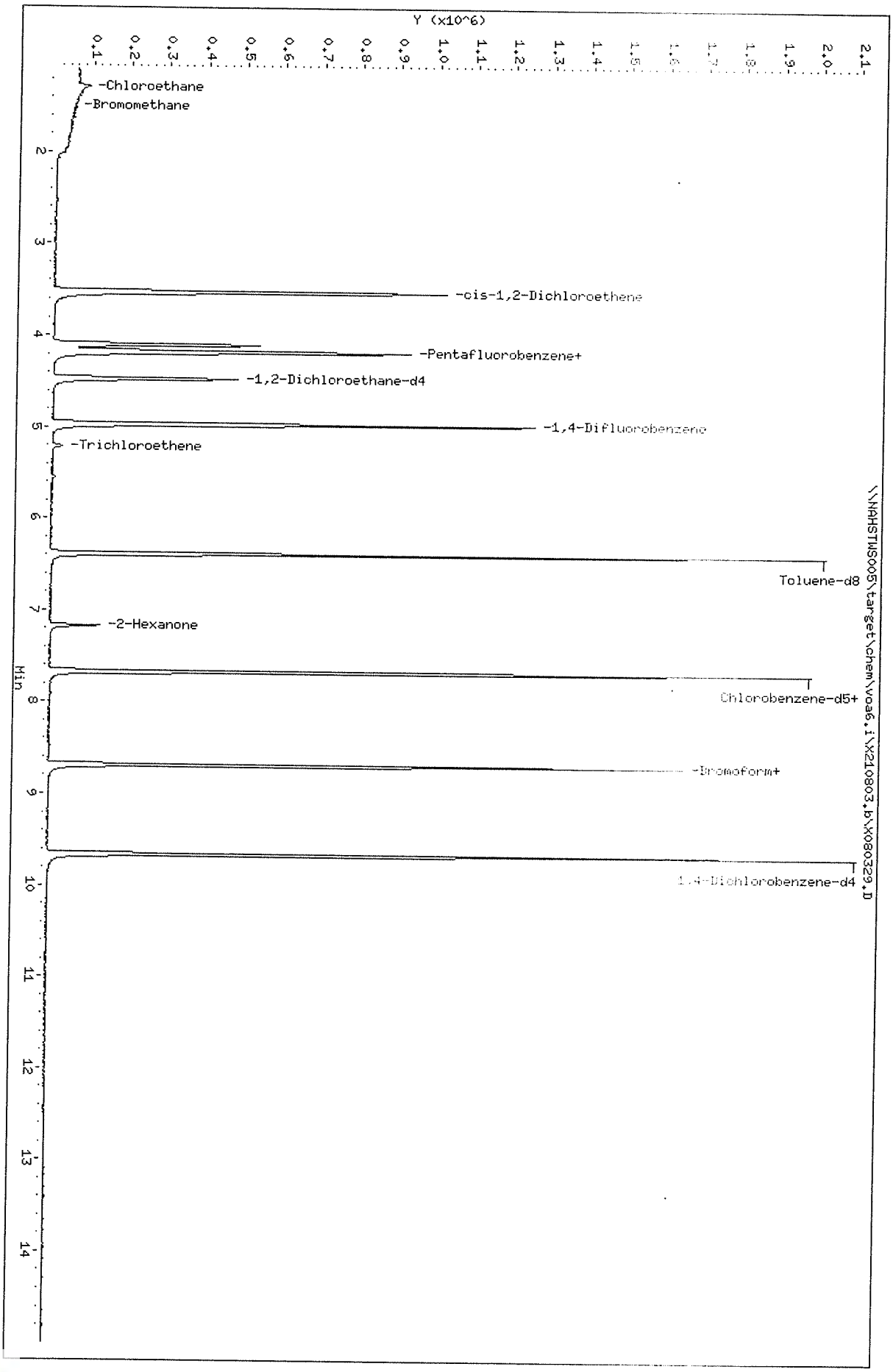
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	[illegible]	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	[illegible]	46.5578	46.55
$ 35 1,2-Dichloroethane-d4	65	4.469	4.469	(1.069)	[illegible]	46.5619	46.56
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	[illegible]	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	[illegible]	50.0000	
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	[illegible]	51.3885	51.38
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	[illegible]	50.4187	50.41
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	[illegible]	50.0000	
27 cis-1,2-Dichloroethene	96	3.530	3.523	(0.844)	[illegible]	66.9226	66.92
38 Trichloroethene	130	5.214	5.206	(1.051)	[illegible]	1.07771	1.07(a)

QC Flag Legend

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

Data File: \\NAHSTWS005\target\chem\voa6.i\X210803.b\X080329.D
Date : 03-AUG-2021 20:35
Client ID: HS21071405-08
Sample Info: HS21071405-08;HS21071405-08;;;
Purge Volume: 5.0
Column phase: DB624

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



Data File: \\NAHSTWS005\target\chem\voa6.i\X210803.b\X080329.D

Date : 03-AUG-2021 20:35

Client ID: HS21071405-08

Instrument: voa6.i

Sample Info: HS21071405-08;HS21071405-08;;;

Purge Volume: 5.0

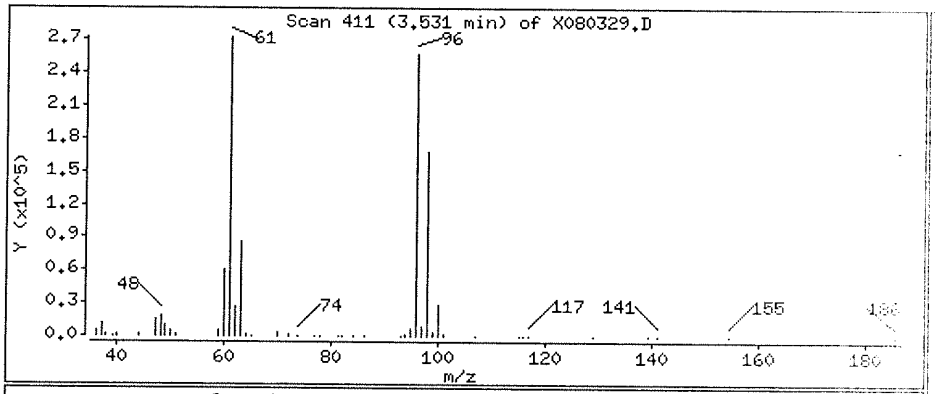
Operator: PC

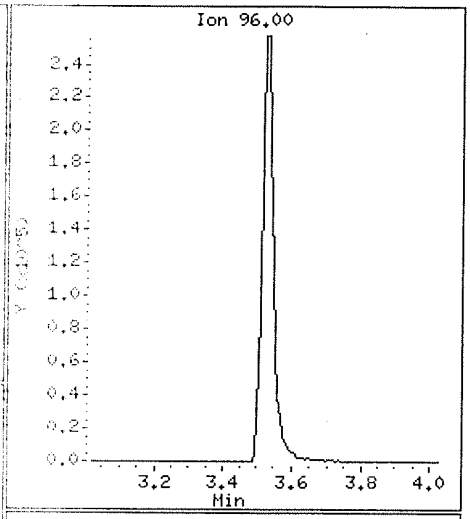
Column phase: DB624

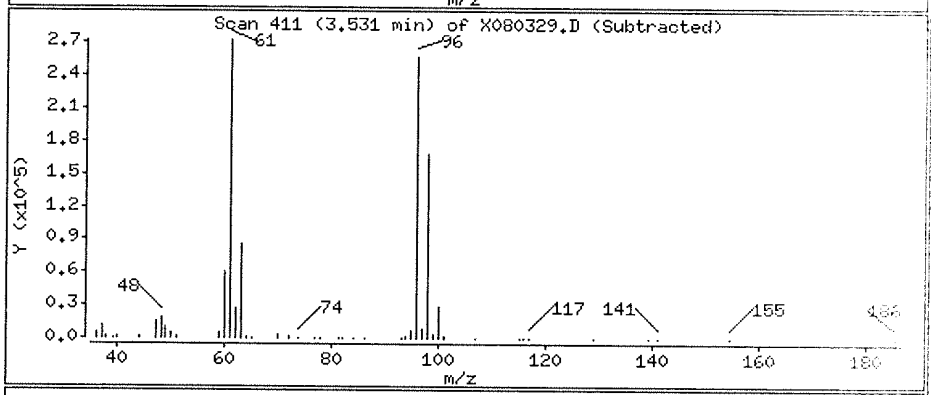
Column diameter: 0.18

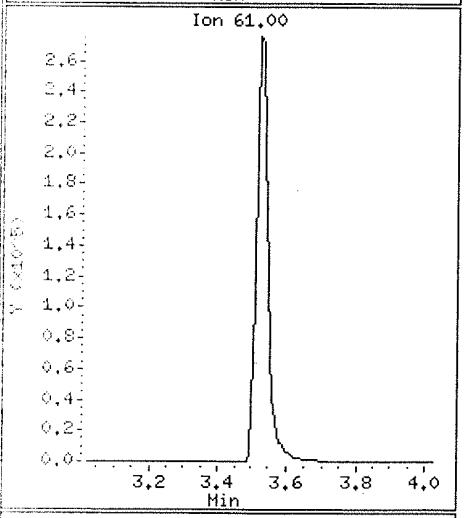
27 cis-1,2-Dichloroethene

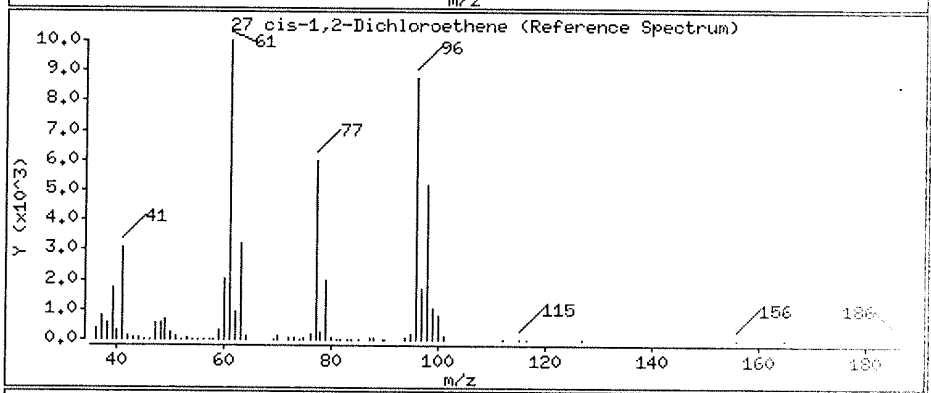
Concentration: 66.32 ug/l

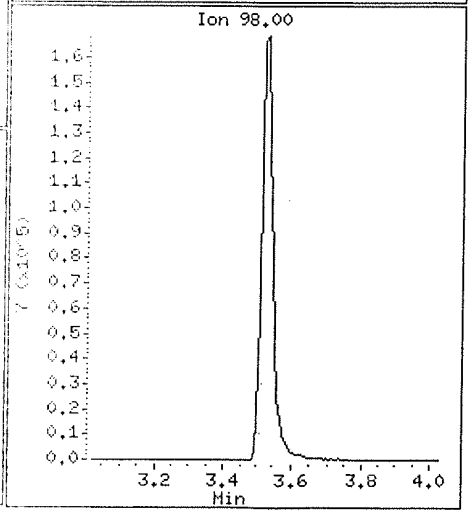


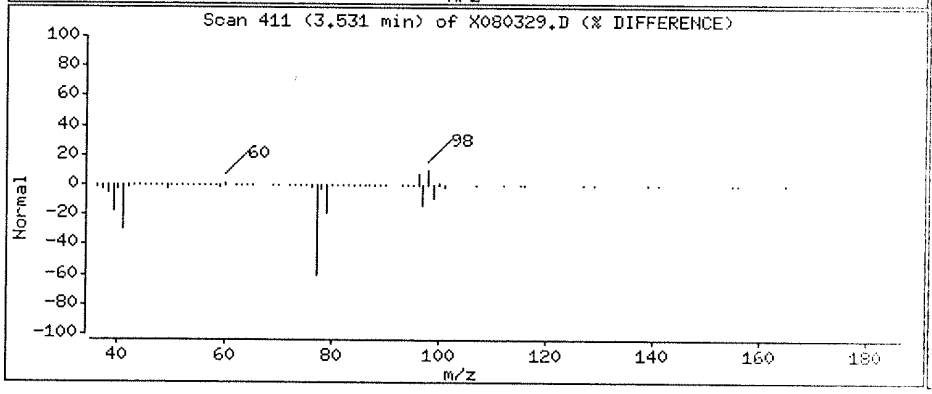












Data File: \\NAHSTWS005\target\chem\voa6.i\X210803.b\X080329.D

Date : 03-AUG-2021 20:35

Client ID: HS21071405-08

Instrument: voa6.i

Sample Info: HS21071405-08;HS21071405-08;;;

Purge Volume: 5.0

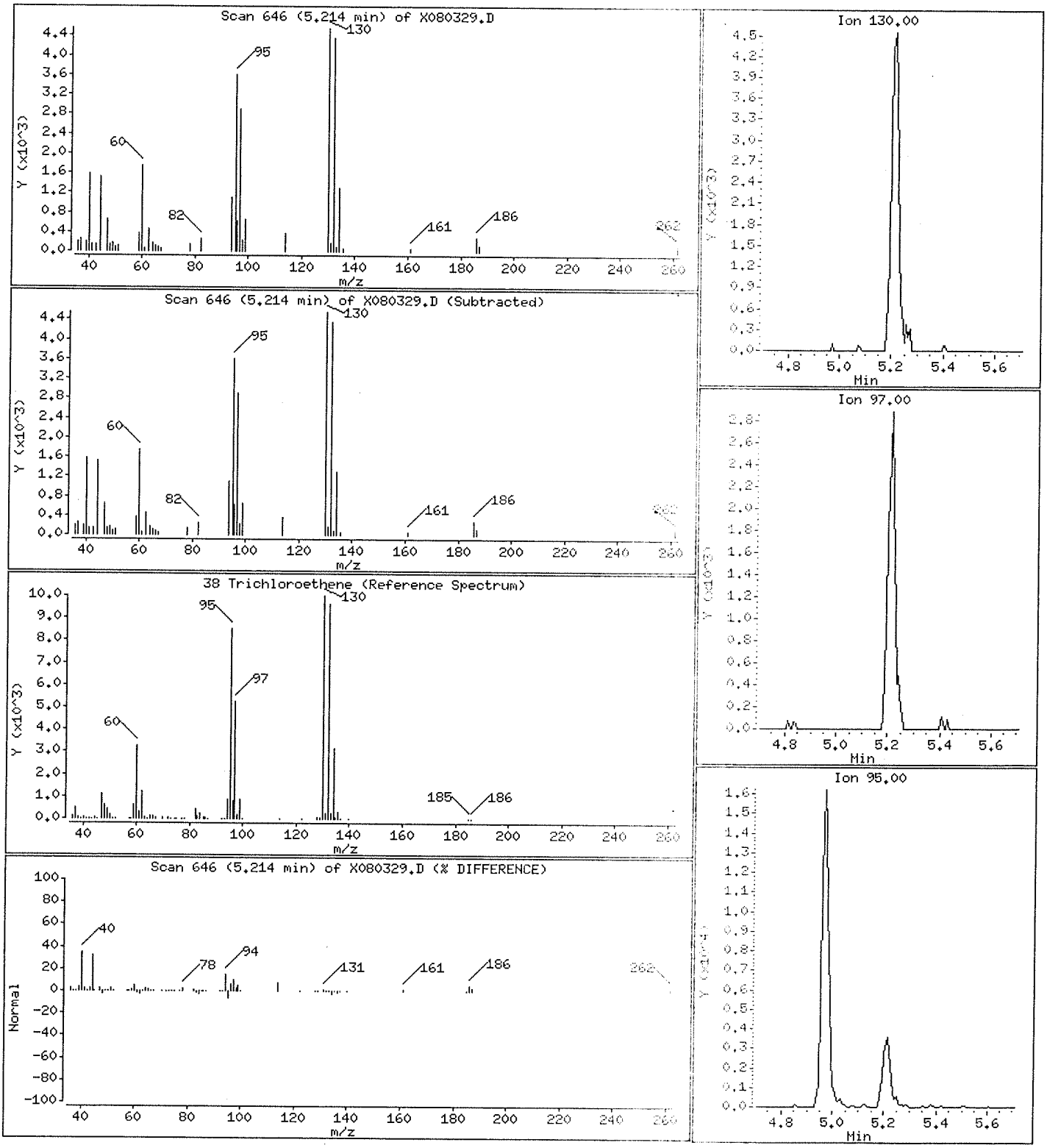
Operator: PC

Column phase: DB624

Column diameter: 0.18

38 Trichloroethene

Concentration: 1.07 ug/l



Data File: \\NAHSTWS005\target\chem\voa6.i\X210803.b\X080330.D Page 1
Report Date: 10-Sep-2021 13:43

ALS Laboratory Group

Data file : \\NAHSTWS005\target\chem\voa6.i\X210803.b\X080330.D
Lab Smp Id: HS21071405-01 Client Smp ID: HS21071405-01
Inj Date : 03-AUG-2021 20:56
Operator : PC Inst ID: voa6.i
Smp Info : HS21071405-01;HS21071405-01;;;
Misc Info : HS18090001;WATER;0;25;
Comment :
Method : \\NAHSTWS005\target\chem\voa6.i\X210803.b\8260W.m
Meth Date : 10-Sep-2021 13:41 Genoveva.R Quant Type: ISTD
Cal Date : 30-JUL-2021 13:56 Cal File: X073008.D
Als bottle: 29
Dil Factor: 25.00000
Integrator: HP RTE Compound Sublist: 0474-dod.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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

Name	Value	Description
DF	25.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

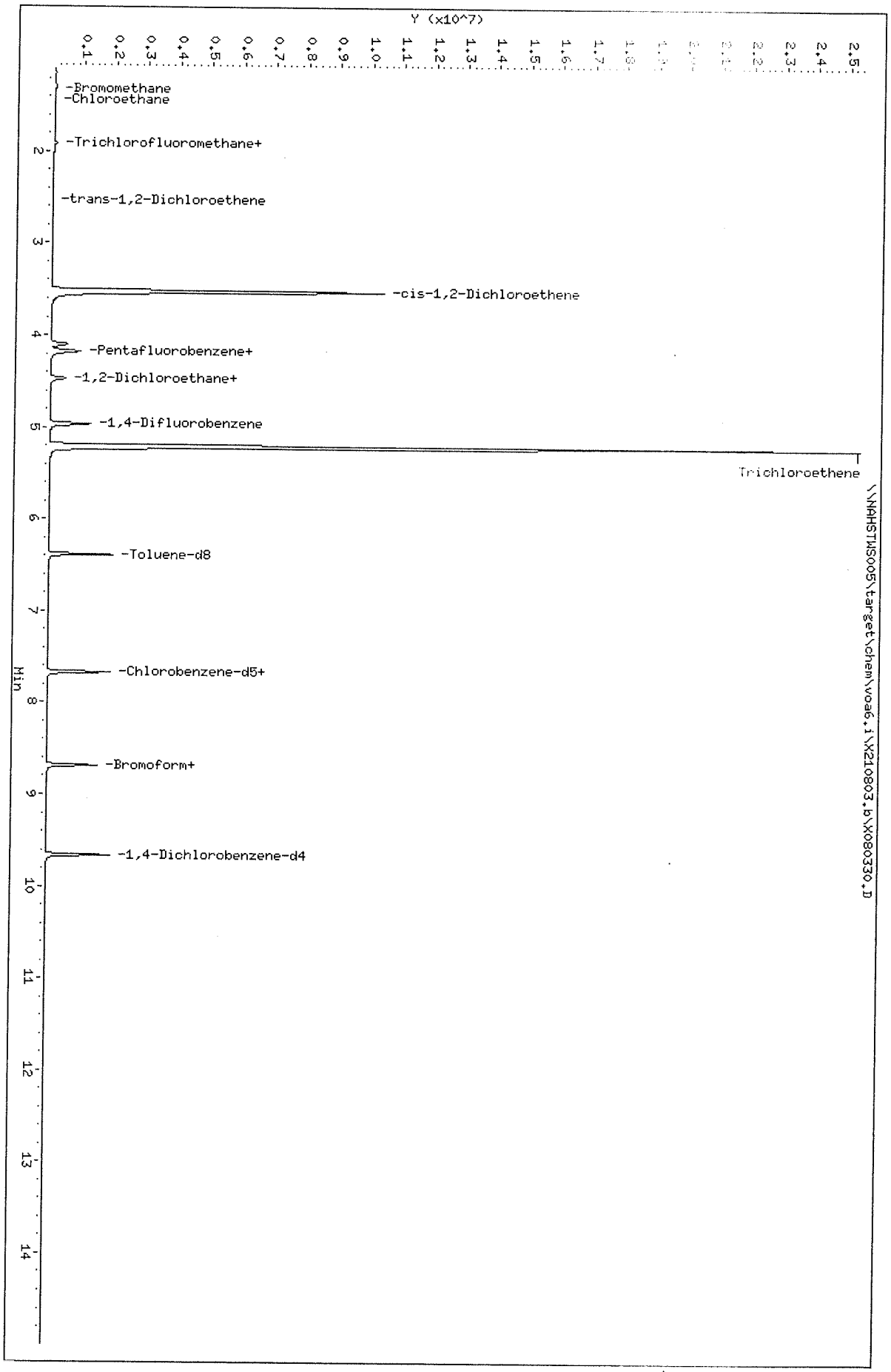
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	857876	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	477016	46.7987	46.79
$ 35 1,2-Dichloroethane-d4	65	4.469	4.469	(1.069)	568434	45.7133	45.71
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	1340446	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	1022480	50.0000	
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	1238841	51.5301	51.53
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	419458	48.8842	48.88
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	822369	50.0000	
5 Vinyl Chloride	62	1.138	1.138	(0.272)	13869	1.69837	42.45(a)
11 1,1-Dichloroethene	96	1.912	1.911	(0.457)	16685	2.31140	57.78(a)
27 cis-1,2-Dichloroethene	96	3.523	3.523	(0.842)	5645884	656.093	16402.32(A)
33 1,2-Dichloroethane	62	4.562	4.555	(0.919)	10523	1.15019	28.75(a)
38 Trichloroethene	130	5.207	5.206	(1.049)	8376774	1004.42	25110.52(A)
20 trans-1,2-Dichloroethene	96	2.535	2.527	(0.606)	8618	1.17995	29.49(a)

QC Flag Legend

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

Data File: \\NAHSTWS005\target\chem\voa6.i\X210803.b\X080330.D
Date : 03-AUG-2021 20:56
Client ID: HS21071405-01
Sample Info: HS21071405-01,HS21071405-01;;;
Purge Volume: 5.0
Column phase: DB624

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



Data File: \\NAHSTWS005\target\chem\voa6.i\X210803.b\X080330.D

Date : 03-AUG-2021 20:56

Client ID: HS21071405-01

Instrument: voa6.i

Sample Info: HS21071405-01;HS21071405-01;;;

Purge Volume: 5.0

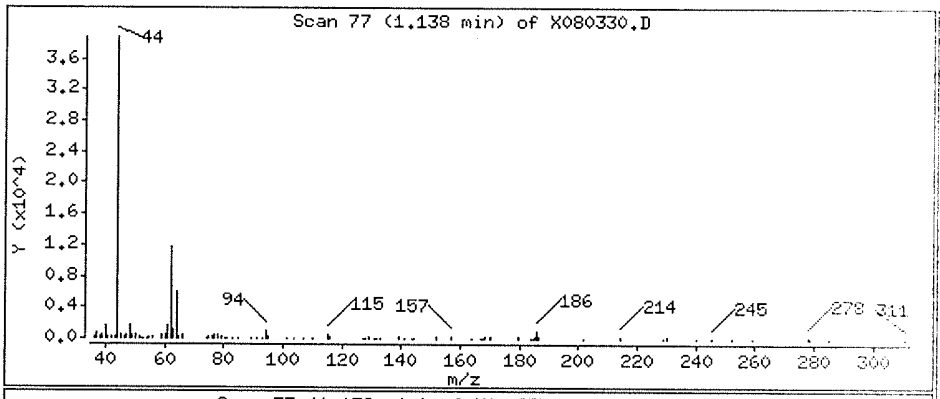
Operator: PC

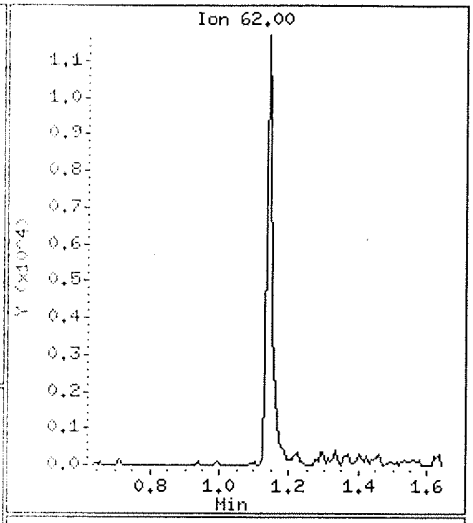
Column phase: DB624

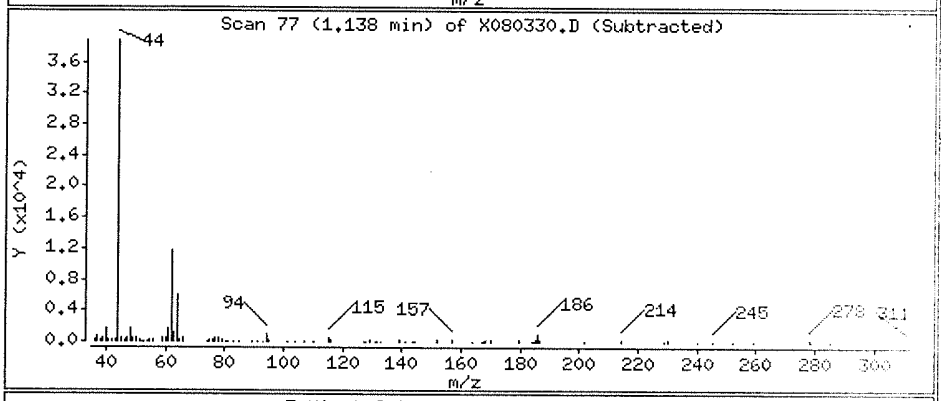
Column diameter: 0.18

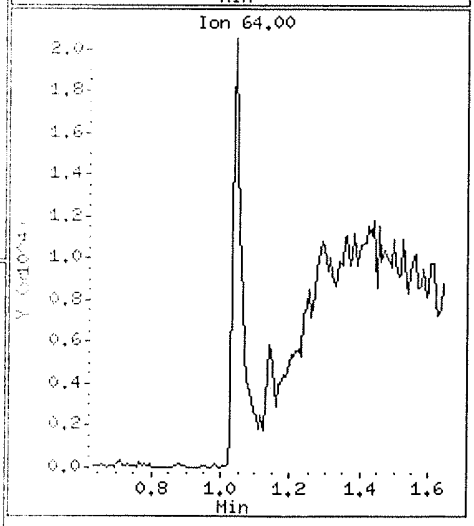
5 Vinyl Chloride

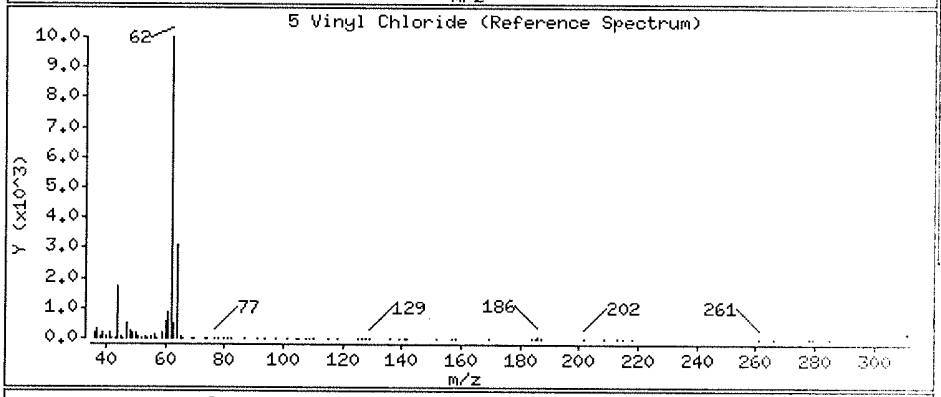
Concentration: 42.45 ug/l

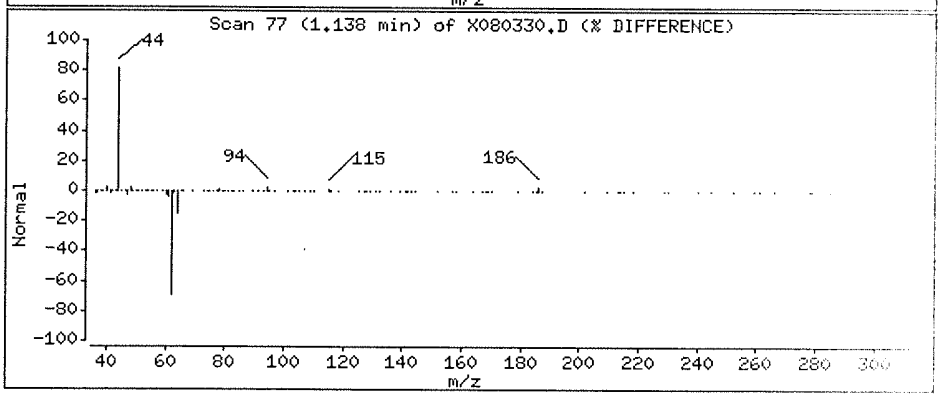












Data File: \\NAHSTWS005\target\chem\voa6.i\X210803.b\X080330.D

Date : 03-AUG-2021 20:56

Client ID: HS21071405-01

Instrument: voa6.i

Sample Info: HS21071405-01;HS21071405-01;;;

Purge Volume: 5.0

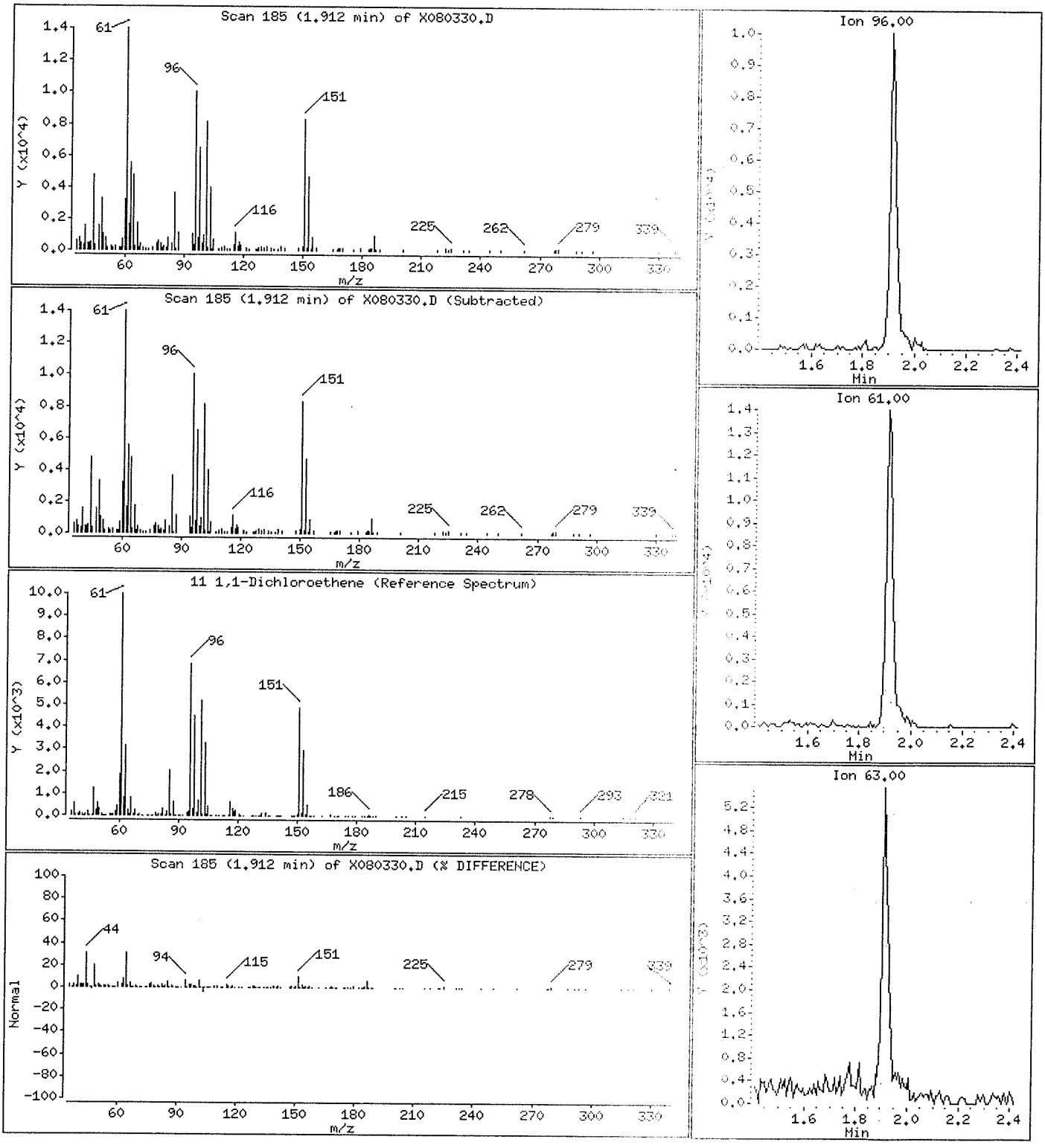
Operator: PC

Column phase: DB624

Column diameter: 0.18

11 1,1-Dichloroethene

Concentration: 57.78 ug/l



Data File: \\NAHSTWS005\target\chem\voa6.i\X210803.b\X080330.D

Date : 03-AUG-2021 20:56

Client ID: HS21071405-01

Instrument: voa6.i

Sample Info: HS21071405-01;HS21071405-01;;;

Purge Volume: 5.0

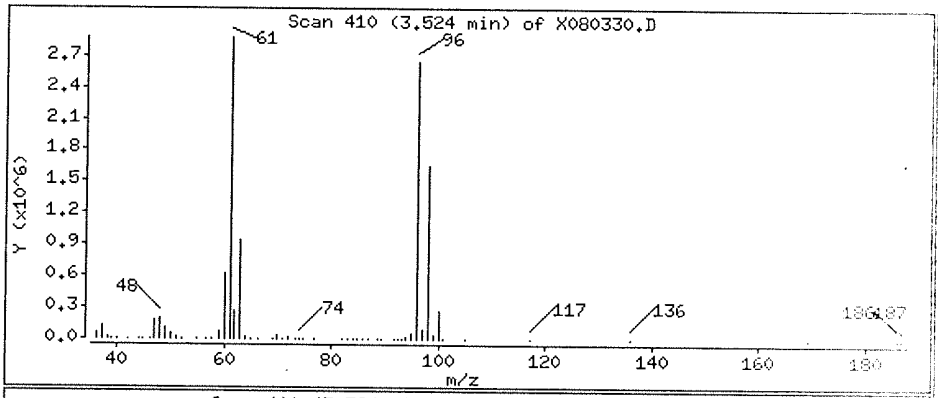
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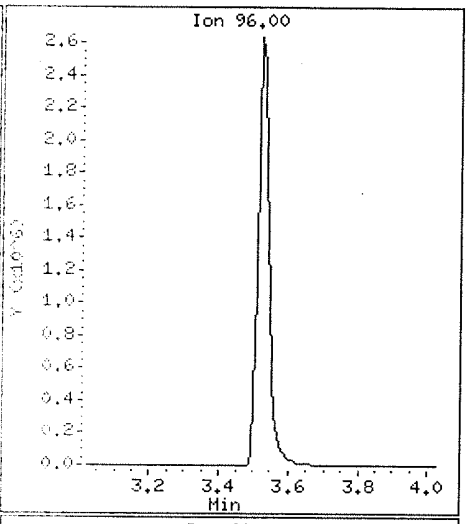
Column phase: DB624

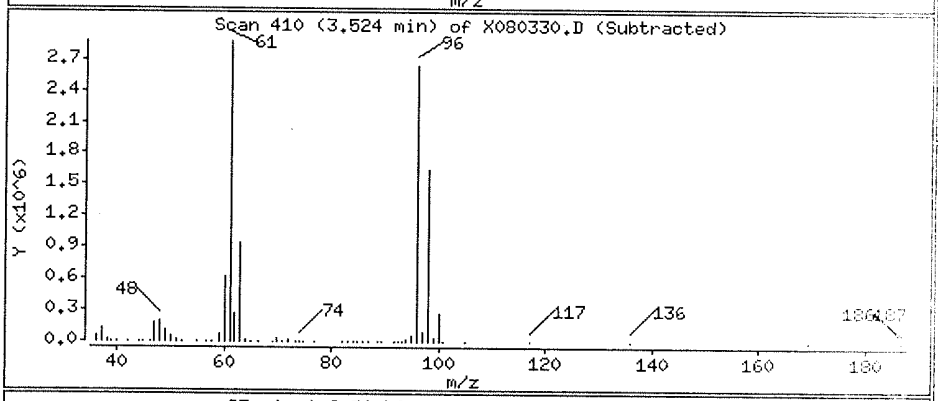
Column diameter: 0.18

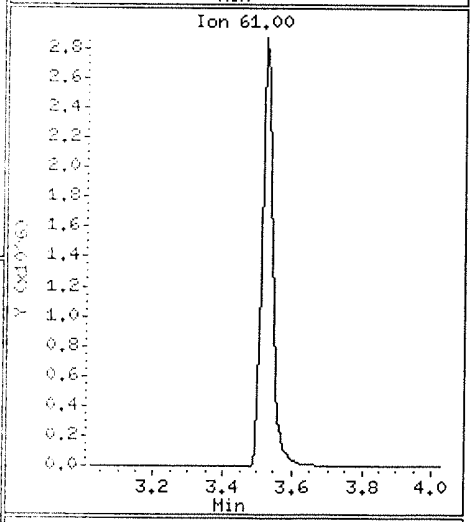
27 cis-1,2-Dichloroethene

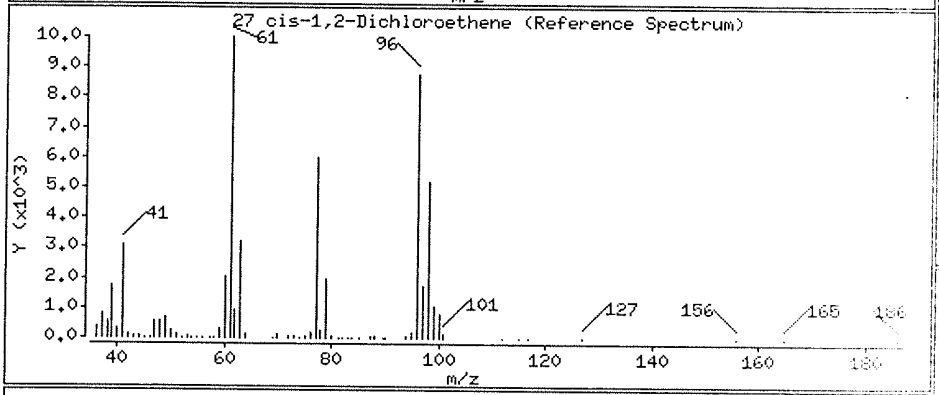
Concentration: 18402.32 ug/l

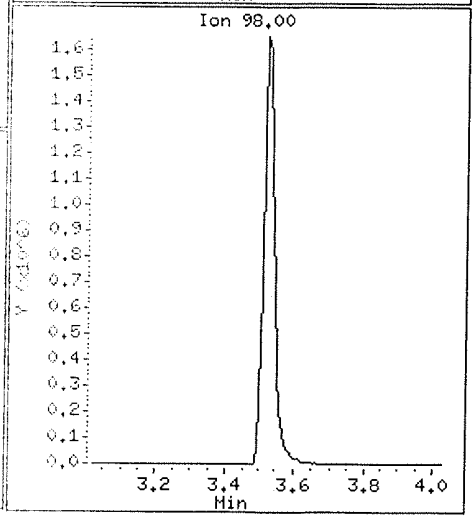


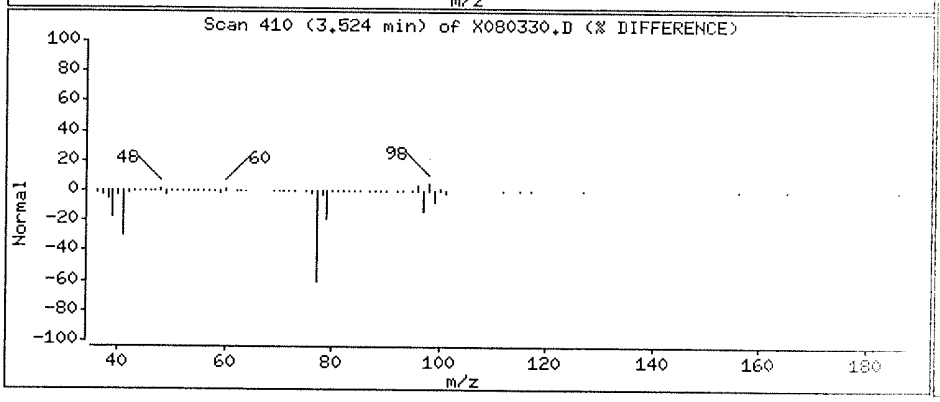












Data File: \\NAHSTWS005\target\chem\voa6.i\X210803.b\X080330.D

Date : 03-AUG-2021 20:56

Client ID: HS21071405-01

Instrument: voa6.i

Sample Info: HS21071405-01;HS21071405-01;;;

Purge Volume: 5.0

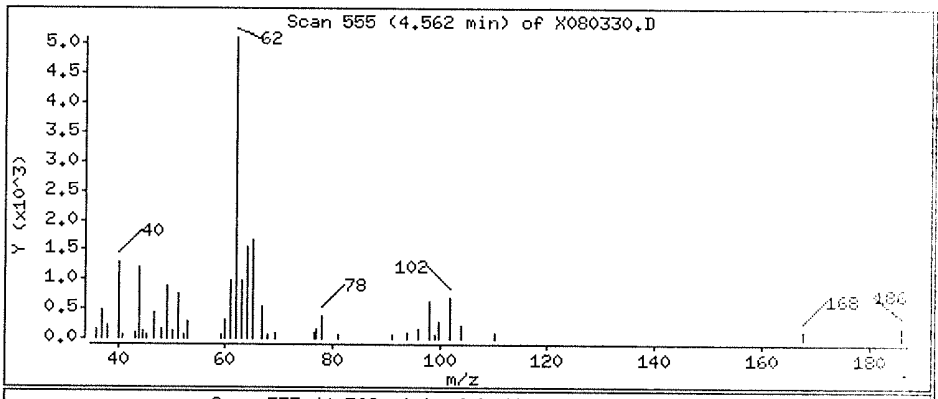
Operator: PC

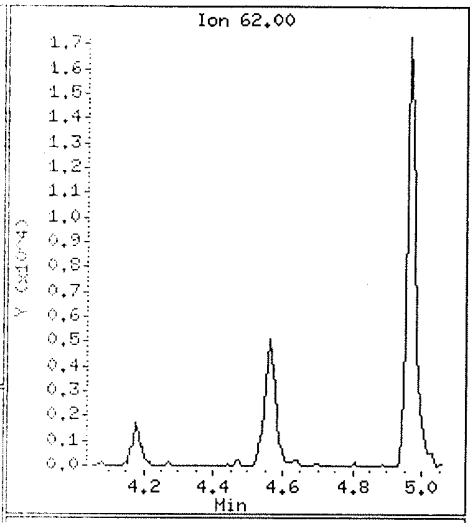
Column phase: DB624

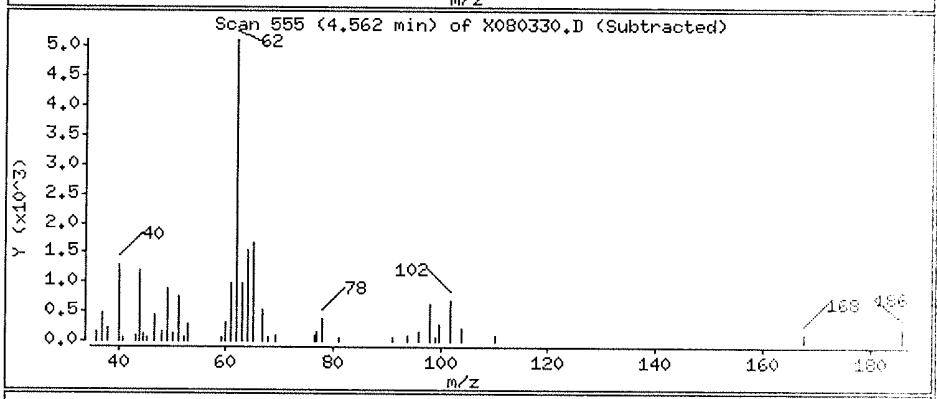
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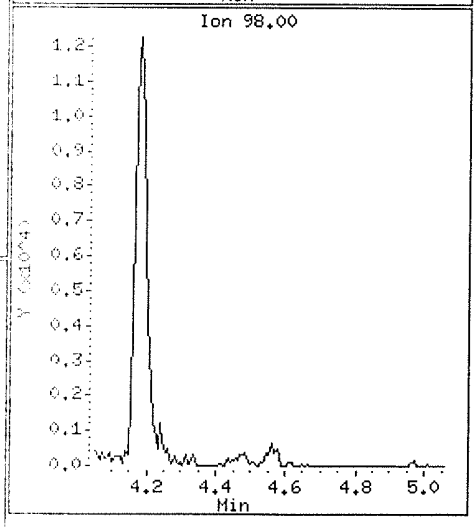
33 1,2-Dichloroethane

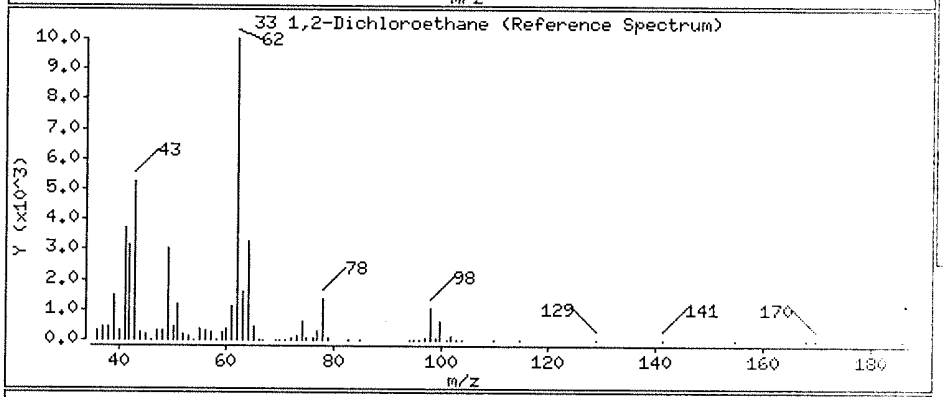
Concentration: 24.75 ug/l

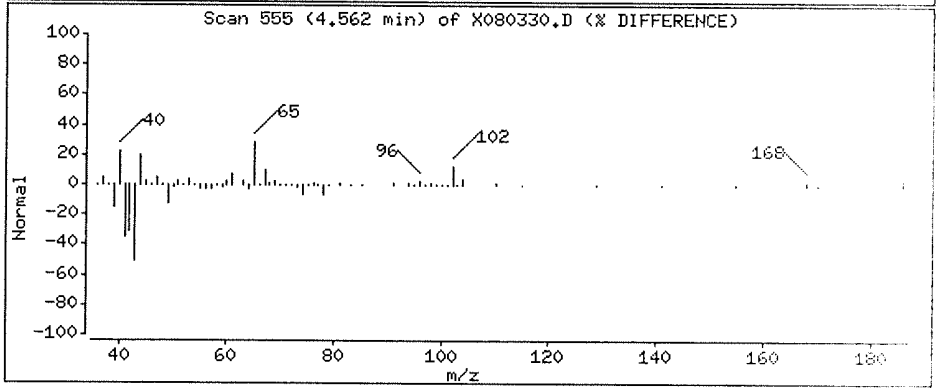












Data File: \\NAHSTWS005\target\chem\voa6.i\X210803.b\X080330.D

Date : 03-AUG-2021 20:56

Client ID: HS21071405-01

Instrument: voa6.i

Sample Info: HS21071405-01;HS21071405-01;;;

Purge Volume: 5.0

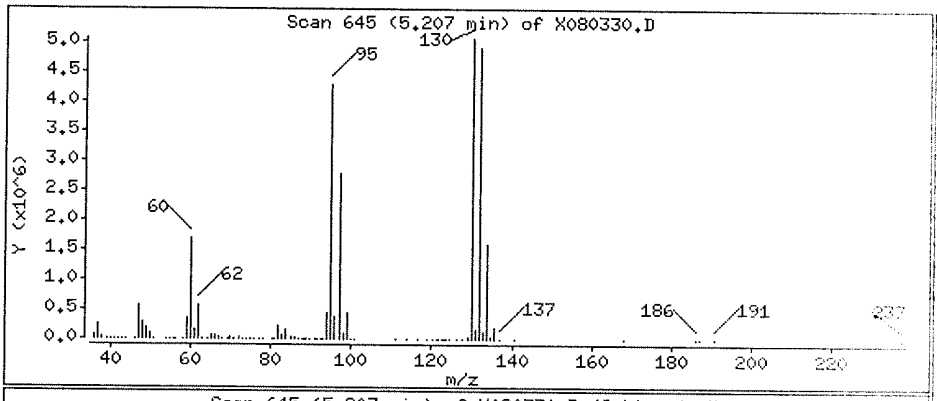
Operator: PC

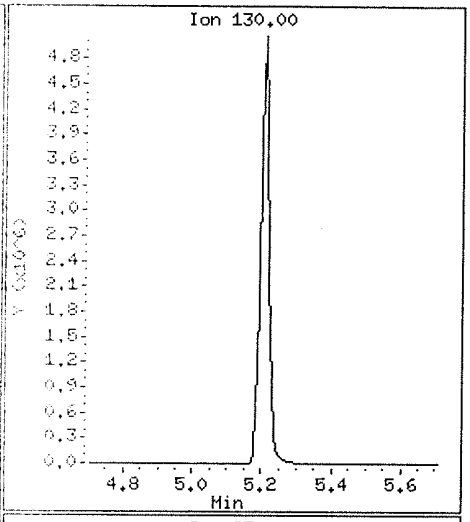
Column phase: DB624

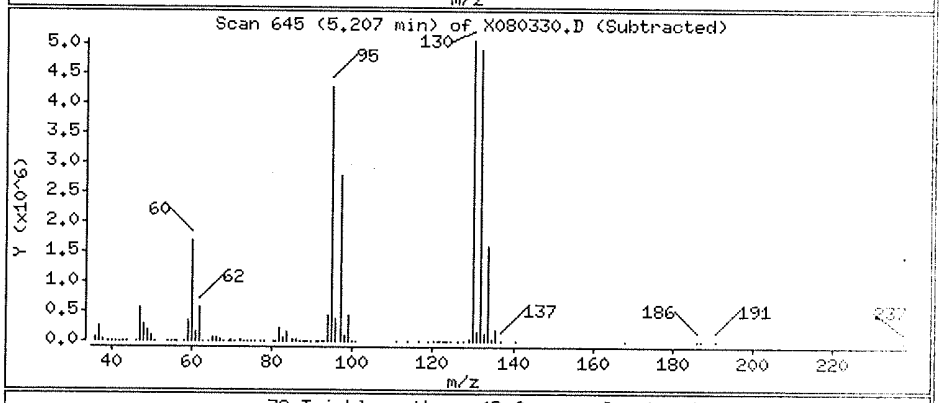
Column diameter: 0.18

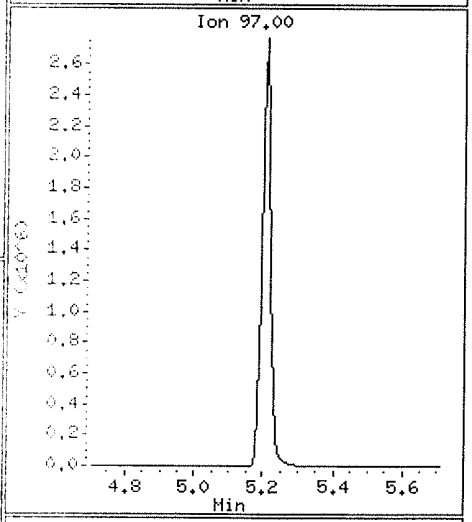
38 Trichloroethene

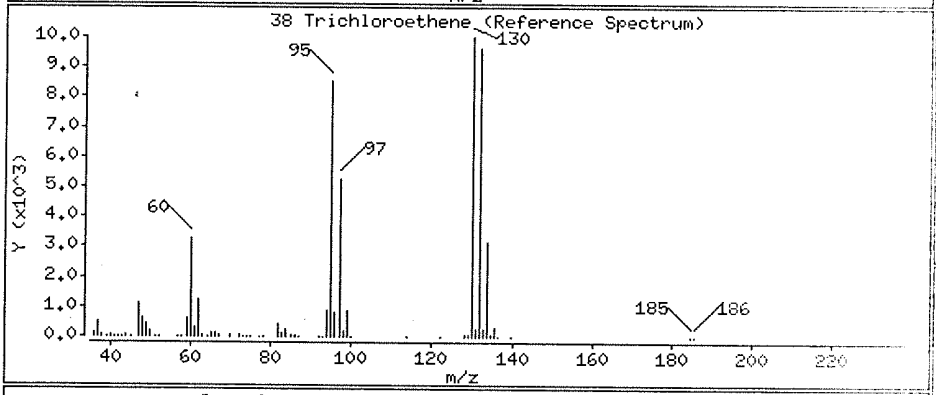
Concentration: 25110.52 ug/l

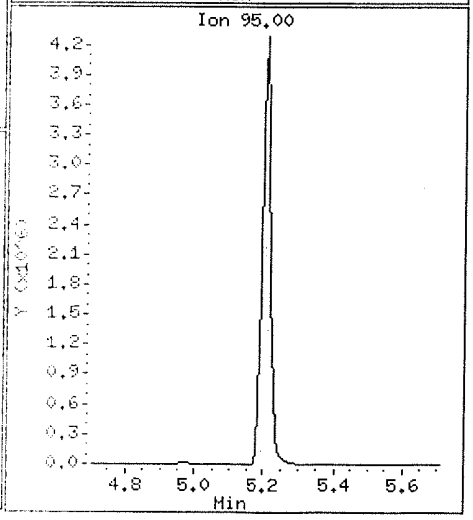


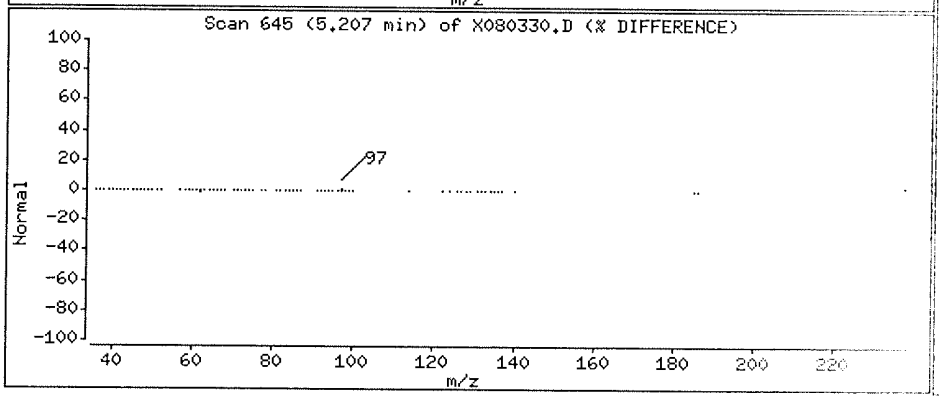












Data File: \\NAHSTWS005\target\chem\voa6.i\X210803.b\X080330.D

Date : 03-AUG-2021 20:56

Client ID: HS21071405-01

Instrument: voa6.i

Sample Info: HS21071405-01;HS21071405-01;;;

Purge Volume: 5.0

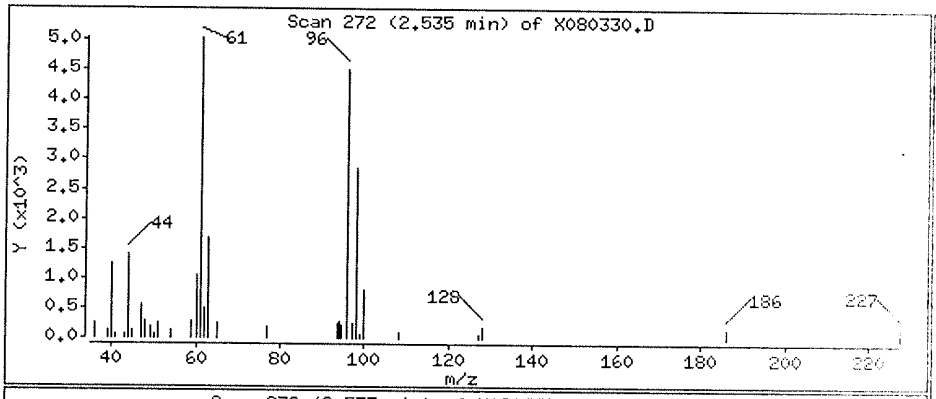
Operator: PC

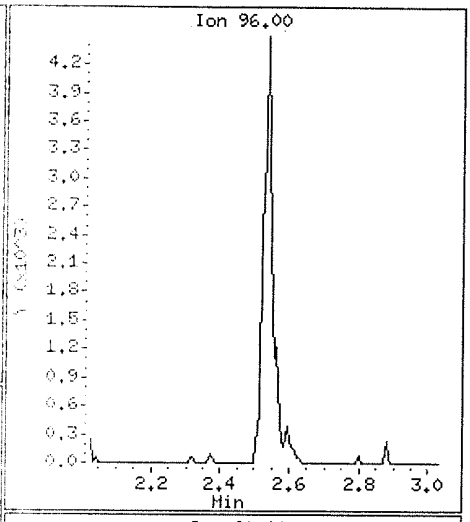
Column phase: DB624

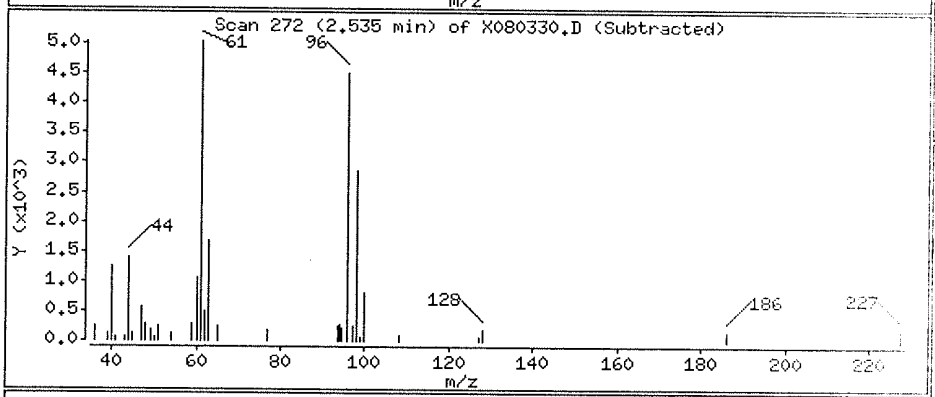
Column diameter: 0.18

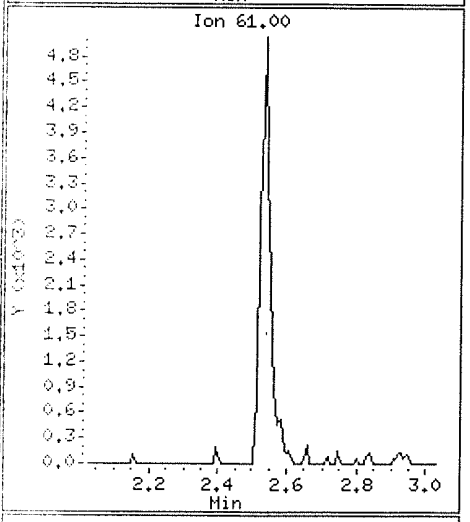
20 trans-1,2-Dichloroethene

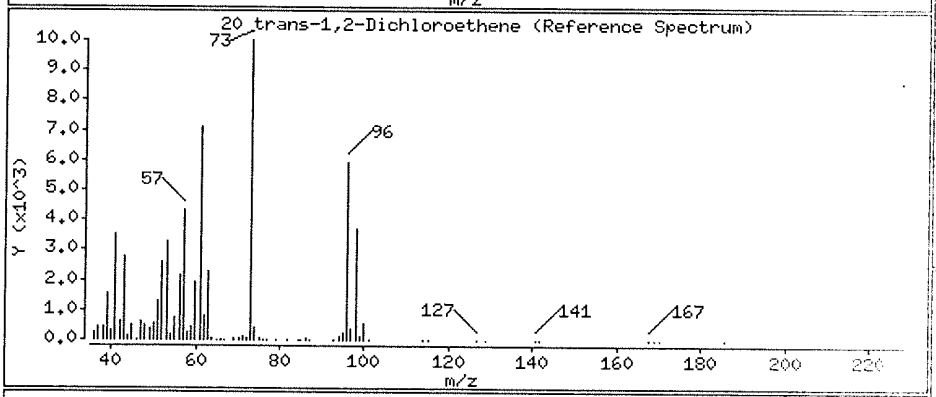
Concentration: 33.48 ug/l

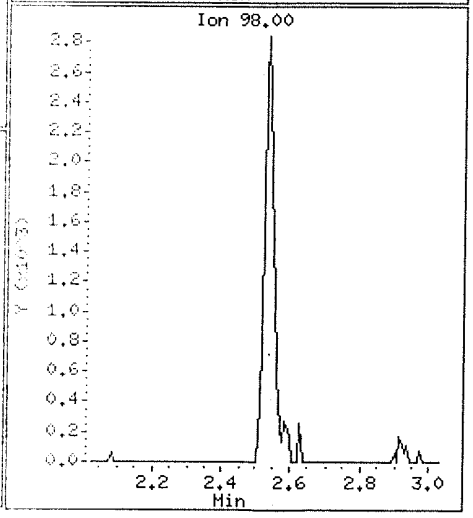


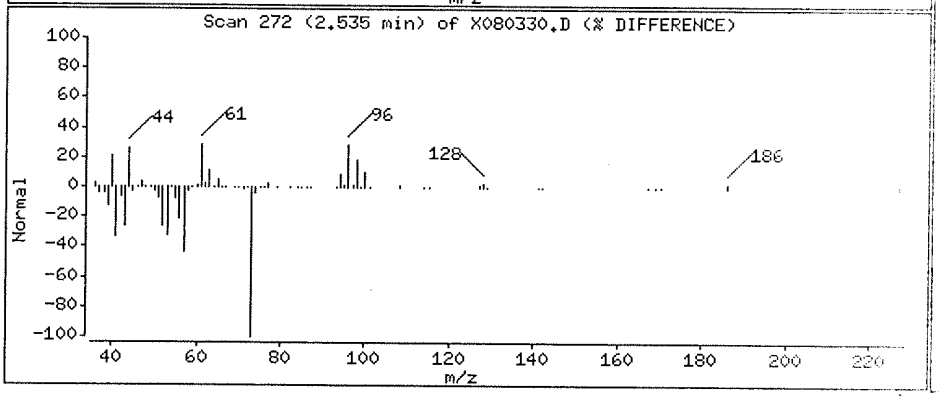












Data File: \\NAHSTWS005\target\chem\voa6.i\X210803.b\X080331.D Page 1
Report Date: 10-Sep-2021 13:43

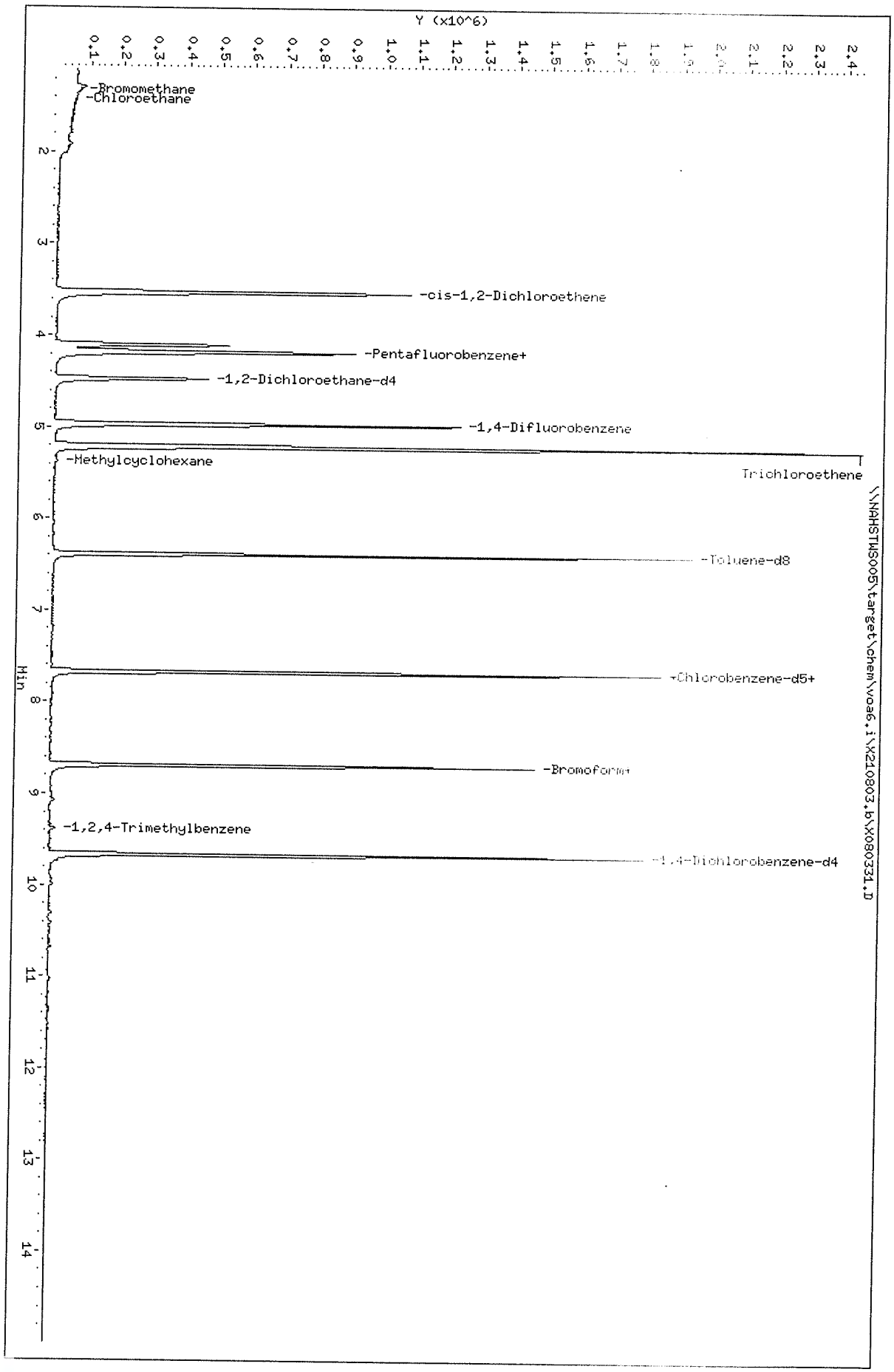
ALS Laboratory Group

Data file : \\NAHSTWS005\target\chem\voa6.i\X210803.b\X080331.D
Lab Smp Id: HS21071405-01 Client Smp ID: HS21071405-01
Inj Date : 03-AUG-2021 21:17
Operator : PC Inst ID: voa6.i
Smp Info : HS21071405-01;HS21071405-01;;;
Misc Info : HS18090001;WATER;0;250;
Comment :
Method : \\NAHSTWS005\target\chem\voa6.i\X210803.b\8260W.m
Meth Date : 10-Sep-2021 13:41 Genoveva.R Quant Type: ISTD
Cal Date : 30-JUL-2021 13:56 Cal File: X073008.D
Als bottle: 30
Dil Factor: 250.00000
Integrator: HP RTE Compound Sublist: 0474-dod.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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

Name	Value	Description
DF	250.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	848468	50.0000	
$ 30 Dibromofluoromethane	113	4.096	4.103	(0.979)	368432	46.1913	46.19
$ 35 1,2-Dichloroethane-d4	65	4.469	4.469	(1.069)	362856	45.6201	45.62
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	1131999	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	984281	50.0000	
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	1197338	51.7046	51.70
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	403084	48.6478	48.64
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	479128	50.0000	
27 cis-1,2-Dichloroethene	96	3.523	3.523	(0.842)	613391	72.0713	18017.82
38 Trichloroethene	130	5.206	5.206	(1.049)	837644	101.260	25315.02



Data File: \\NAHSTWS005\target\chem\voa6.i\X210803.b\X080331.D
Date : 03-AUG-2021 21:17
Client ID: HS21071405-01
Sample Info: HS21071405-01;HS21071405-01;;;
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\NAHSTWS005\target\chem\voa6.i\X210803.b\X080331.D

Date : 03-AUG-2021 21:17

Client ID: HS21071405-01

Instrument: voa6.i

Sample Info: HS21071405-01;HS21071405-01;;;

Purge Volume: 5.0

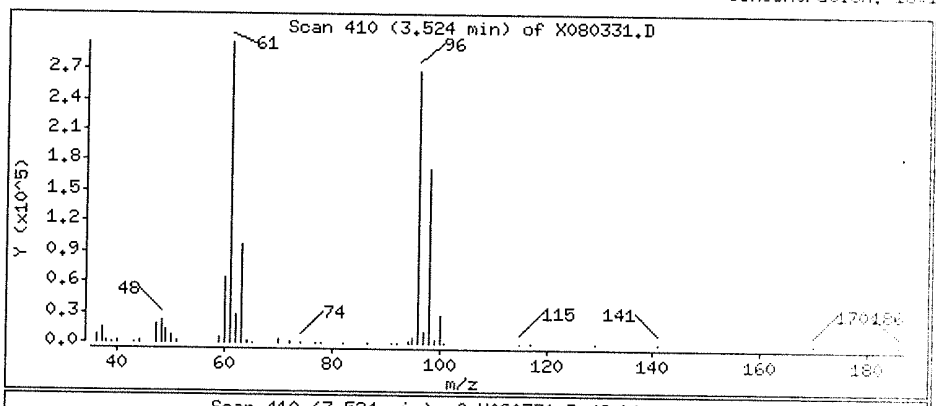
Operator: PC

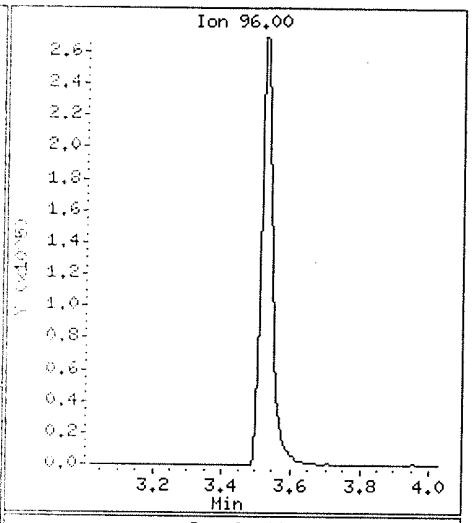
Column phase: DB624

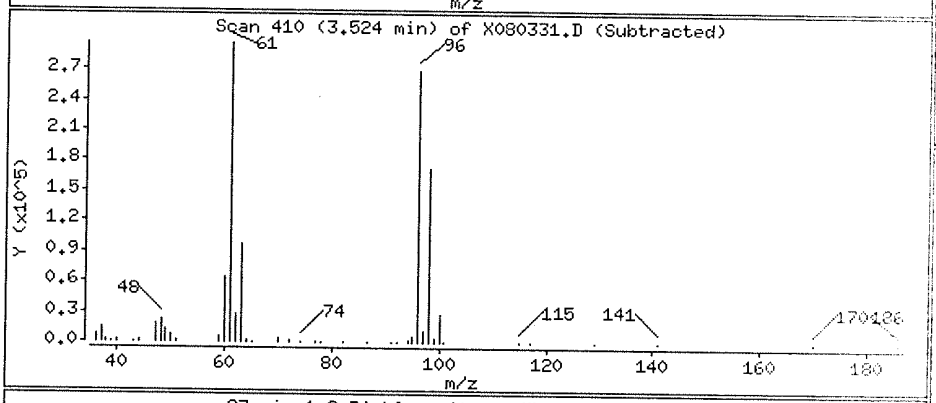
Column diameter: 0.18

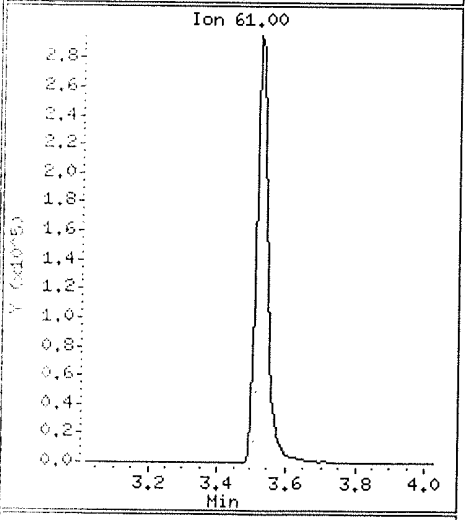
27 cis-1,2-Dichloroethene

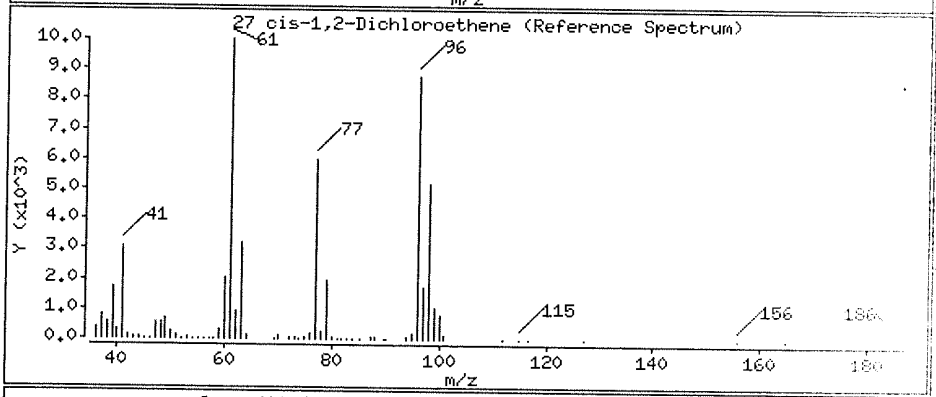
Concentration: 18017.82 ug/l

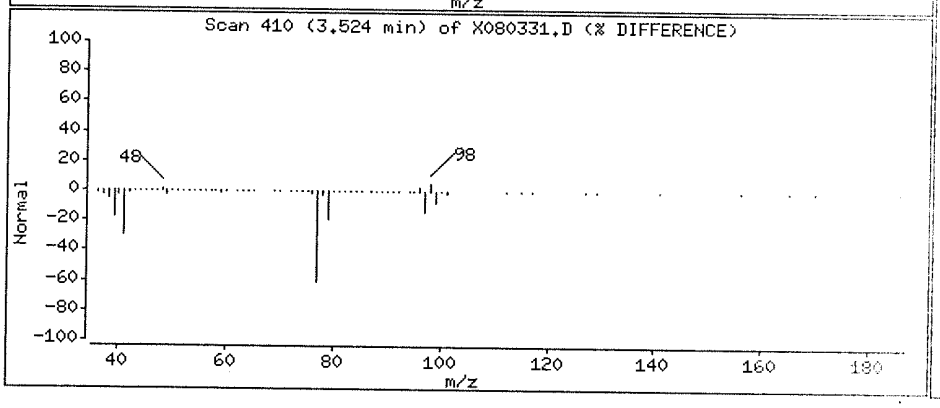


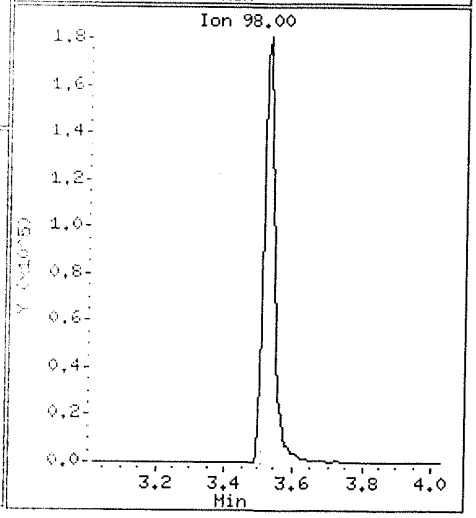












Data File: \\NAHSTWS005\target\chem\voa6.i\X210803.b\X080331.D

Date : 03-AUG-2021 21:17

Client ID: HS21071405-01

Instrument: voa6.i

Sample Info: HS21071405-01;HS21071405-01;;;

Purge Volume: 5.0

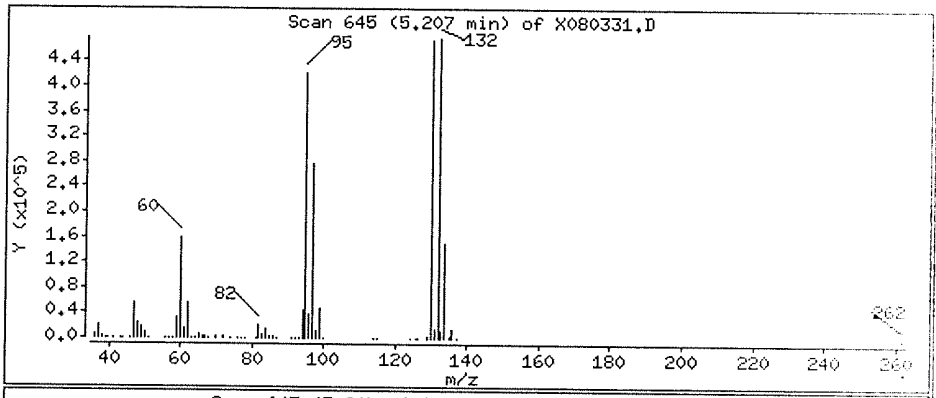
Operator: PC

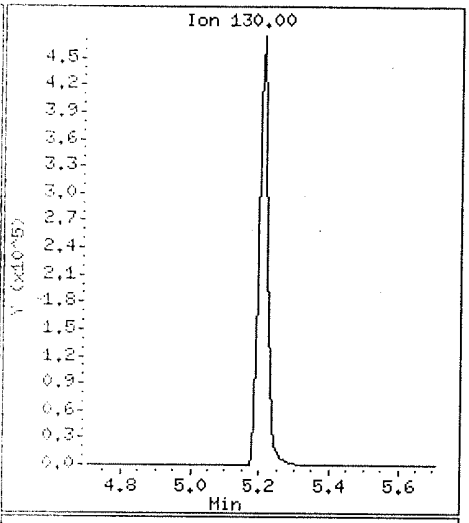
Column phase: DB624

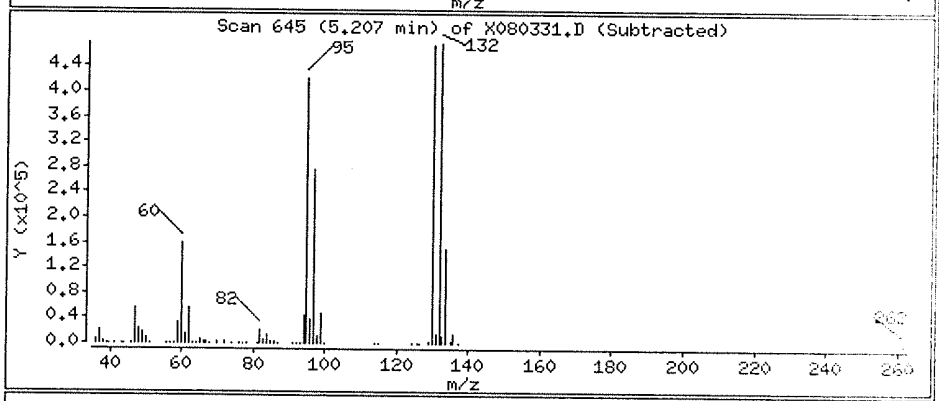
Column diameter: 0.18

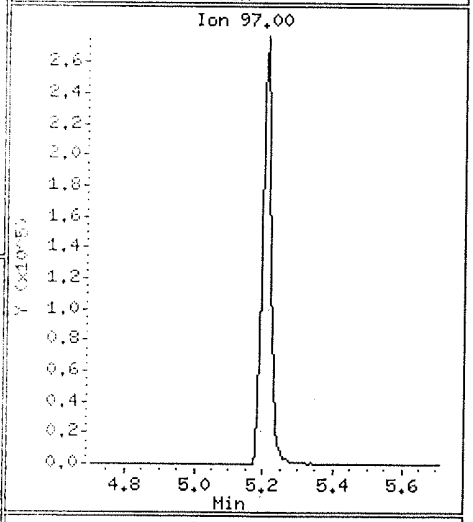
38 Trichloroethene

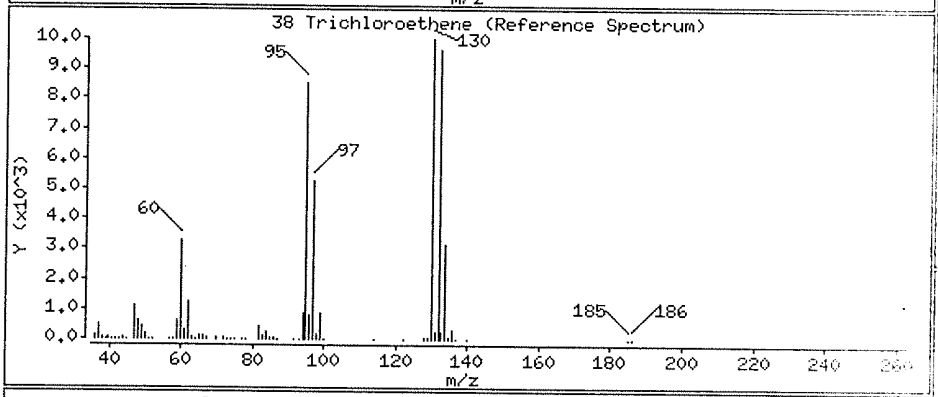
Concentration: 25315.02 ug/l

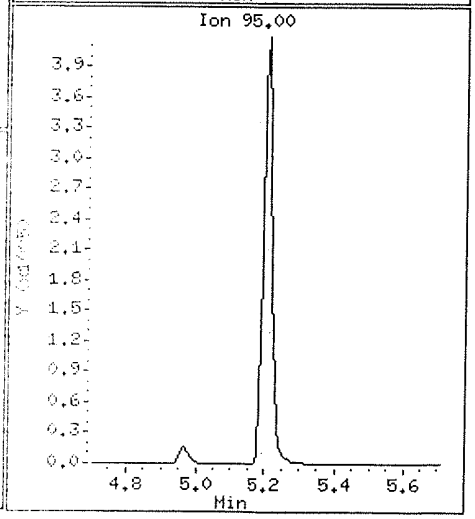


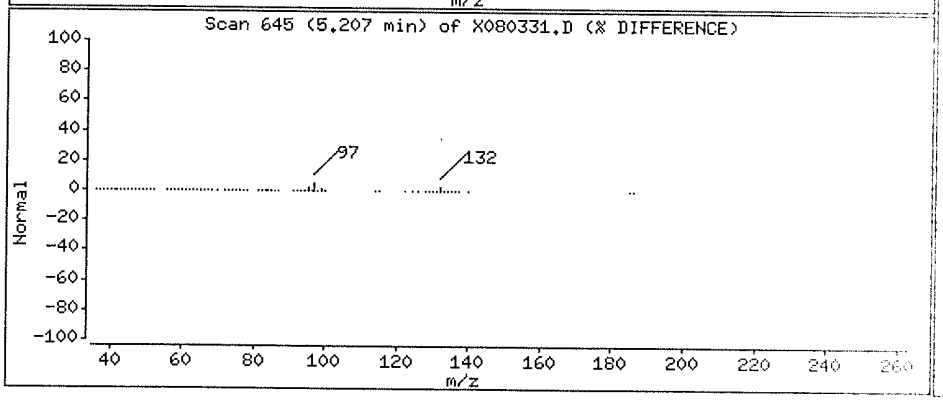












Data File: \\NAHSTWS005\target\chem\voa6.i\X210803.b\X080332.D Page 1
Report Date: 10-Sep-2021 13:45

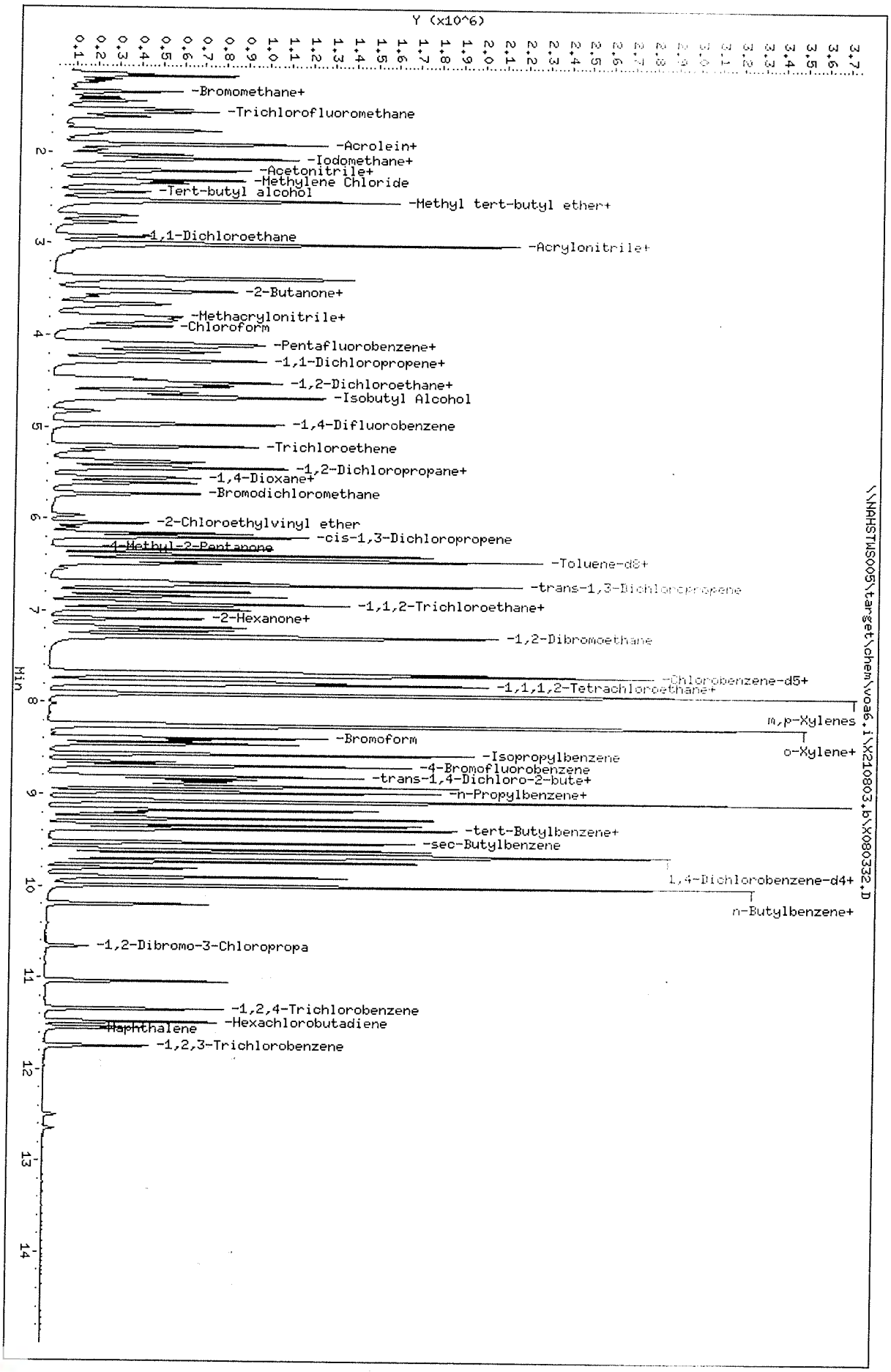
ALS Laboratory Group

Data file : \\NAHSTWS005\target\chem\voa6.i\X210803.b\X080332.D
Lab Smp Id: CCV-END Client Smp ID: CCV-END
Inj Date : 03-AUG-2021 21:38
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\X210803.b\8260W.m
Meth Date : 10-Sep-2021 13:45 voa6.i Quant Type: ISTD
Cal Date : 30-JUL-2021 13:56 Cal File: X073008.D
Als bottle: 31 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0474-dod.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	4.182	4.182	(1.000)	687660	50.0000	
$	30 Dibromofluoromethane	113	4.096	4.096	(0.979)	341499	50.0000	53.02
$	35 1,2-Dichloroethane-d4	65	4.469	4.469	(1.069)	304980	50.0000	49.71
*	36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	977010	50.0000	
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	551162	50.0000	
$	48 Toluene-d8	98	6.388	6.388	(0.833)	1049683	50.0000	48.06
$	69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	397205	50.0000	50.85
*	70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	504467	50.0000	
	5 Vinyl Chloride	62	1.138	1.138	(0.272)	280958	50.0000	42.92
	11 1,1-Dichloroethene	96	1.912	1.912	(0.457)	247963	50.0000	42.85
	17 Methylene Chloride	84	2.306	2.306	(0.551)	280636	50.0000	48.66
	27 cis-1,2-Dichloroethene	96	3.523	3.523	(0.842)	332966	50.0000	48.17
	33 1,2-Dichloroethane	62	4.555	4.555	(0.918)	308344	50.0000	45.69
	38 Trichloroethene	130	5.207	5.207	(1.049)	332277	50.0000	46.53
	53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	228441	50.0000	46.89
	20 trans-1,2-Dichloroethene	96	2.528	2.528	(0.604)	267387	50.0000	45.67



Data File: \\NAHSTWS005\target\chem\voa6.i\X210803.b\X080332.D
Date : 03-AUG-2021 21:38
Client ID: CCV-END
Sample Info: CCV-END;CCV-END;2;;;
Purge Volume: 5.0
Column phase: DB624

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

MSVOA06 -Logbook

Batch: 46071
Date: 08-04-2021
Method: 8260
Comments:

Analyst: Presenta Cabascango
Reviewer:
Laboratory: Houston

#	Samp ID	Type	Analyzed	DF	Init Wt/Vol	Final Vol	File ID	Matrix	Status	p
1	BFB	TUNE	08-04-2021 10:44 am	1.00	50 mL	50 mL	X080401.D	Liquid	Y	N
2	CCV	CCV	08-04-2021 11:05 am	1.00	50 mL	50 mL	X080402a.D	Liquid	Y	N
3	CCV	CCV	08-04-2021 11:26 am	1.00	50 mL	50 mL	X080403.D	Liquid	Y	N
4	CCB	SAMP	08-04-2021 11:47 am	1.00	50 mL	50 mL	X080404.D	Liquid	Y	N
5	VLCSW-210804	LCS	08-04-2021 12:08 pm	1.00	50 mL	50 mL	X080405.D	Liquid	Y	N
6	BLANK	SAMP	08-04-2021 12:29 pm	1.00	50 mL	50 mL	X080406.D	Liquid	Y	N
7	BLANK	SAMP	08-04-2021 12:50 pm	1.00	50 mL	50 mL	X080407.D	Liquid	Y	N
8	VBLKW-210804	MBLK	08-04-2021 01:11 pm	1.00	50 mL	50 mL	X080408.D	Liquid	Y	N
9	HS21071405-11	SAMP	08-04-2021 01:33 pm	1.00	50 mL	50 mL	X080409.D	Liquid	Y	N
10	HS21071440-01n/r	SAMP	08-04-2021 01:54 pm	1000.0	50 µL	50 mL	X080410.D	Liquid	Y	N
11	HS21071405-04	SAMP	08-04-2021 02:15 pm	1.00	50 mL	50 mL	X080411.D	Liquid	Y	N
12	HS21071405-11MS	MS	08-04-2021 02:36 pm	1.00	50 mL	50 mL	X080412.D	Liquid	Y	N
13	HS21071405-11MSD	MSD	08-04-2021 02:57 pm	1.00	50 mL	50 mL	X080413.D	Liquid	Y	N
14	HS21071405-04	SAMP	08-04-2021 03:18 pm	25.00	2 mL	50 mL	X080414.D	Liquid	Y	N
15	HS21071440-01	SAMP	08-04-2021 03:39 pm	10000.(	5 µL	50 mL	X080415.D	Liquid	Y	N
16	BLANK	SAMP	08-04-2021 04:00 pm	1.00	50 mL	50 mL	X080416.D	Liquid	Y	N
17	HS21071465-09	SAMP	08-04-2021 04:21 pm	1.00	50 mL	50 mL	X080417.D	Liquid	Y	N
18	HS21071592-06	SAMP	08-04-2021 04:42 pm	1.00	50 mL	50 mL	X080418.D	Liquid	Y	N
19	HS21071592-03	SAMP	08-04-2021 05:03 pm	1.00	50 mL	50 mL	X080419.D	Liquid	Y	N
20	HS21071592-04	SAMP	08-04-2021 05:24 pm	1.00	50 mL	50 mL	X080420.D	Liquid	Y	N
21	HS21071592-05	SAMP	08-04-2021 05:45 pm	1.00	50 mL	50 mL	X080421.D	Liquid	Y	N
22	HS21071465-06	SAMP	08-04-2021 06:06 pm	1.00	50 mL	50 mL	X080422.D	Liquid	Y	N
23	HS21071592-02	SAMP	08-04-2021 06:27 pm	1.00	50 mL	50 mL	X080423.D	Liquid	Y	N
24	HS21071405-02	SAMP	08-04-2021 06:48 pm	5.00	10 mL	50 mL	X080424.D	Liquid	Y	N
25	HS21071405-02	SAMP	08-04-2021 07:09 pm	25.00	2 mL	50 mL	X080425.D	Liquid	Y	N
26	HS21071405-07	SAMP	08-04-2021 07:30 pm	5.00	10 mL	50 mL	X080426.D	Liquid	Y	N
27	HS21071405-07	SAMP	08-04-2021 07:51 pm	25.00	2 mL	50 mL	X080427.D	Liquid	Y	N
28	HS21071405-05	SAMP	08-04-2021 08:12 pm	5.00	10 mL	50 mL	X080428.D	Liquid	Y	N
29	HS21071405-05	SAMP	08-04-2021 08:34 pm	50.00	1 mL	50 mL	X080429.D	Liquid	Y	N
30	HS21071592-01	SAMP	08-04-2021 08:55 pm	5.00	10 mL	50 mL	X080430.D	Liquid	Y	N
31	HS21071592-01	SAMP	08-04-2021 09:16 pm	25.00	2 mL	50 mL	X080431.D	Liquid	Y	N
32	HS21071465-01	SAMP	08-04-2021 09:37 pm	5.00	10 mL	50 mL	X080432.D	Liquid	Y	N
33	CCV-END	CCV	08-04-2021 09:58 pm	1.00	50 mL	50 mL	X080433.D	Liquid	Y	N
34	BFB	TUNE	08-04-2021 10:19 pm	1.00	50 mL	50 mL	Y080401.D	Liquid	Y	N
35	CCV	CCV	08-04-2021 10:40 pm	1.00	50 mL	50 mL	Y080402a.D	Liquid	Y	N
36	CCV	CCV	08-04-2021 11:00 pm	1.00	50 mL	50 mL	Y080403.D	Liquid	Y	N
37	CCB	SAMP	08-04-2021 11:21 pm	1.00	50 mL	50 mL	Y080404.D	Liquid	Y	N
38	VLCSW-210804	LCS	08-04-2021 11:42 pm	1.00	50 mL	50 mL	Y080405.D	Liquid	Y	N
39	BLANK	SAMP	08-05-2021 12:03 am	1.00	50 mL	50 mL	Y080406.D	Liquid	Y	N
40	VBLKW-210804	MBLK	08-05-2021 12:25 am	1.00	50 mL	50 mL	Y080407.D	Liquid	Y	N
41	HS21071531-24	SAMP	08-05-2021 12:46 am	1.00	50 mL	50 mL	Y080408.D	Liquid	Y	N

MSVOA06 -Logbook

#	Samp ID	Type	Analyzed	DF	Init Wt/Vol	Final Vol	File ID	Matrix	Status	p
42	HS21071531-22	SAMP	08-05-2021 01:07 am	1.00	50 mL	50 mL	Y080409.D	Liquid	Y	N
43	HS21071531-23	SAMP	08-05-2021 01:28 am	1.00	50 mL	50 mL	Y080410.D	Liquid	Y	N
44	HS21071531-05	SAMP	08-05-2021 01:49 am	1.00	50 mL	50 mL	Y080411.D	Liquid	Y	N
45	HS21071531-01	SAMP	08-05-2021 02:10 am	1.00	50 mL	50 mL	Y080412.D	Liquid	Y	N
46	HS21071524-16	SAMP	08-05-2021 02:31 am	10.00	5 mL	50 mL	Y080413.D	Liquid	Y	N
47	HS21071531-05MS	MS	08-05-2021 02:52 am	1.00	50 mL	50 mL	Y080414.D	Liquid	Y	N
48	HS21071531-05MSD	MSD	08-05-2021 03:13 am	1.00	50 mL	50 mL	Y080415.D	Liquid	Y	N
49	HS21071524-16	SAMP	08-05-2021 03:34 am	100.0(	500 µL	50 mL	Y080416.D	Liquid	Y	N
50	HS21071531-06	SAMP	08-05-2021 03:55 am	1.00	50 mL	50 mL	Y080417.D	Liquid	Y	N
51	HS21071531-08	SAMP	08-05-2021 04:16 am	1.00	50 mL	50 mL	Y080418.D	Liquid	Y	N
52	HS21071531-09	SAMP	08-05-2021 04:37 am	1.00	50 mL	50 mL	Y080419.D	Liquid	Y	N
53	HS21071531-07	SAMP	08-05-2021 04:58 am	10.00	5 mL	50 mL	Y080420.D	Liquid	Y	N
54	HS21071531-07n/r	SAMP	08-05-2021 05:19 am	50.00	1 mL	50 mL	Y080421.D	Liquid	Y	N
55	HS21071531-02	SAMP	08-05-2021 05:40 am	10.00	5 mL	50 mL	Y080422.D	Liquid	Y	N
56	HS21071531-02	SAMP	08-05-2021 06:02 am	100.0(	500 µL	50 mL	Y080423.D	Liquid	Y	N
57	HS21071531-03	SAMP	08-05-2021 06:23 am	10.00	5 mL	50 mL	Y080424.D	Liquid	Y	N
58	HS21071531-03n/r	SAMP	08-05-2021 06:44 am	100.0(	500 µL	50 mL	Y080425.D	Liquid	Y	N
59	HS21071531-12	SAMP	08-05-2021 07:05 am	10.00	5 mL	50 mL	Y080426.D	Liquid	Y	N
60	HS21071531-12	SAMP	08-05-2021 07:26 am	100.0(	500 µL	50 mL	Y080427.D	Liquid	Y	N
61	HS21071531-14	SAMP	08-05-2021 07:47 am	10.00	5 mL	50 mL	Y080428.D	Liquid	Y	N
62	HS21071531-14	SAMP	08-05-2021 08:08 am	100.0(	500 µL	50 mL	Y080429.D	Liquid	Y	N
63	BLANK	SAMP	08-05-2021 08:29 am	1.00	50 mL	50 mL	Y080430.D	Liquid	Y	N

FORM 2
WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS21071405

	CLIENT SAMPLE NO.	SMC1 #	SMC2 (DCE)#	SMC3 (TOL)#	OTHER #	TOT OUT
01	VLCSW-210804	94	96	95	100	0
02	VBLKW-210804	90	88	102	97	0
03	HS21071405-11	90	88	104	100	0
04	HS21071405-04	96	98	103	103	0
05	HS21071405-11MS	94	98	103	100	0
06	HS21071405-11MSD	94	96	102	98	0
07	HS21071405-04	95	95	105	101	0
08	HS21071405-02	92	94	106	100	0
09	HS21071405-02	96	97	104	96	0
10	HS21071405-07	95	94	104	100	0
11	HS21071405-07	94	95	107	98	0
12	HS21071405-05	96	95	105	100	0
13	HS21071405-05	97	94	105	101	0
14						
15						
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25						
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27						
28						

		QC LIMITS
SMC1	= Dibromofluoromethane	(70-130)
SMC2 (DCE)	= 1,2-Dichloroethane-d4	(70-130)
SMC3 (TOL)	= Toluene-d8	(70-130)
OTHER	= 4-Bromofluorobenzene	(70-130)

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-210804

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS21071405

Lab File ID: X080408 Lab Sample ID: VBLKW-210804

Date Analyzed: 08/04/21 Time Analyzed: 1311

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-210804	VLCSW-210804	X080405	1208
02	HS21071405-11	HS21071405-11	X080409	1333
03	HS21071405-04	HS21071405-04	X080411	1415
04	HS21071405-11MS	HS21071405-11MS	X080412	1436
05	HS21071405-11MSD	HS21071405-11MSD	X080413	1457
06	HS21071405-04	HS21071405-04	X080414	1518
07	HS21071405-02	HS21071405-02	X080424	1848
08	HS21071405-02	HS21071405-02	X080425	1909
09	HS21071405-07	HS21071405-07	X080426	1930
10	HS21071405-07	HS21071405-07	X080427	1951
11	HS21071405-05	HS21071405-05	X080428	2012
12	HS21071405-05	HS21071405-05	X080429	2034
13				
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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.: HS21071405

Lab File ID: X080401 BFB Injection Date: 08/04/21

Instrument ID: VOA6 BFB Injection Time: 1044

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	16.1
75	30.0 - 60.0% of mass 95	45.9
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	1.2 (1.1)1
174	Greater than 50.0% of mass 95	108.6
175	5.0 - 9.0% of mass 174	8.5 (7.8)1
176	95.0 - 101.0% of mass 174	106.4 (98.0)1
177	5.0 - 9.0% of mass 176	6.4 (6.0)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	X080403	08/04/21	1126
02	VLCSW-210804	VLCSW-210804	X080405	08/04/21	1208
03	VBLKW-210804	VBLKW-210804	X080408	08/04/21	1311
04	HS21071405-11	HS21071405-11	X080409	08/04/21	1333
05	HS21071405-04	HS21071405-04	X080411	08/04/21	1415
06	HS21071405-11MS	HS21071405-11MS	X080412	08/04/21	1436
07	HS21071405-11MSD	HS21071405-11MSD	X080413	08/04/21	1457
08	HS21071405-04	HS21071405-04	X080414	08/04/21	1518
09	HS21071405-02	HS21071405-02	X080424	08/04/21	1848
10	HS21071405-02	HS21071405-02	X080425	08/04/21	1909
11	HS21071405-07	HS21071405-07	X080426	08/04/21	1930
12	HS21071405-07	HS21071405-07	X080427	08/04/21	1951
13	HS21071405-05	HS21071405-05	X080428	08/04/21	2012
14	HS21071405-05	HS21071405-05	X080429	08/04/21	2034
15	CCV-END	CCV-END	X080433	08/04/21	2158
16					
17					
18					
19					
20					
21					
22					

FORM V VOA

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS21071405

Instrument ID: VOA6 Calibration Date: 08/04/21 Time: 1126

Lab File ID: X080403 Init. Calib. Date(s): 07/30/21 07/30/21

Init. Calib. Times: 1129 1459

GC Column: DB624 ID: 0.18 (mm)

COMPOUND	RRF or AMOUNT	RRF50.000 or AMOUNT	CCAL RRF50.000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Vinyl Chloride	0.4760000	0.4099709	0.4099709	0.1	13.87	20.00	AVRG
Methylene Chloride	46.714969	50.000000	0.3918664	0.1	6.57	20.00	LINR
1,1-Dichloroethene	0.4210000	0.3609110	0.3609110	0.1	14.27	20.00	AVRG
1,2-Dichloroethane	0.4010000	0.3654430	0.3654430	0.1	8.87	20.00	AVRG
Trichloroethene	0.3650000	0.3575997	0.3575997	0.2	2.03	20.00	AVRG
1,1,2-Trichloroethane	0.2620000	0.2532334	0.2532334	0.1	3.35	20.00	AVRG
Dibromofluoromethane	47.583104	50.000000	0.4466823	0.1	4.83	20.00	LINR
1,2-Dichloroethane-d4	45.165652	50.000000	0.4036882	0.1	9.67	20.00	LINR
Toluene-d8	1.1730000	1.1139234	1.1139234	0.1	5.04	20.00	AVRG
4-Bromofluorobenzene	49.243220	50.000000	0.4132011	0.1	7.61	20.00	LINR

FORM VII VOA

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS21071405

Instrument ID: VOA6 Calibration Date: 08/04/21 Time: 2158

Lab File ID: X080433 Init. Calib. Date(s): 07/30/21 07/30/21

Init. Calib. Times: 1129 1459

GC Column: DB624 ID: 0.18 (mm)

COMPOUND	RRF or AMOUNT	RRF50.000 or AMOUNT	CCAL RRF50.000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Vinyl Chloride	0.4760000	0.4271941	0.4271941	0.1	10.25	50.00	AVRG
Methylene Chloride	50.404171	50.000000	0.4226647	0.1	-0.81	50.00	LINR
1,1-Dichloroethene	0.4210000	0.3763405	0.3763405	0.1	10.61	50.00	AVRG
1,2-Dichloroethane	0.4010000	0.3716500	0.3716500	0.1	7.32	50.00	AVRG
Trichloroethene	0.3650000	0.3601680	0.3601680	0.2	1.32	50.00	AVRG
1,1,2-Trichloroethane	0.2620000	0.2539182	0.2539182	0.1	3.08	50.00	AVRG
Dibromofluoromethane	50.474215	50.000000	0.4732509	0.1	-0.95	50.00	LINR
1,2-Dichloroethane-d4	49.041075	50.000000	0.4376646	0.1	1.92	50.00	LINR
Toluene-d8	1.1730000	1.0932366	1.0932366	0.1	6.80	50.00	AVRG
4-Bromofluorobenzene	50.153249	50.000000	0.4207270	0.1	-0.31	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.: HS21071405

Lab File ID (Standard): X080403 Date Analyzed: 08/04/21

Instrument ID: VOA6 Time Analyzed: 1126

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

		IS1 AREA #	RT #	IS2(DFB) AREA #	RT #	IS3(CBZ) AREA #	RT #
	12 HOUR STD	742521	4.18	986192	4.96	930213	7.67
	UPPER LIMIT	1485042	4.68	1972384	5.46	1860426	8.17
	LOWER LIMIT	371261	3.68	493096	4.46	465107	7.17
	CLIENT SAMPLE NO.						
01	VLCSW-210804	738547	4.18	994476	4.96	931780	7.67
02	VBLKW-210804	869848	4.18	1135421	4.96	1008982	7.67
03	HS21071405-11	872283	4.18	1135566	4.96	1006671	7.67
04	HS21071405-04	829171	4.18	1140777	4.96	1022183	7.67
05	HS21071405-11MS	829615	4.18	1124747	4.96	1024586	7.67
06	HS21071405-11MSD	821880	4.18	1098703	4.96	1008306	7.67
07	HS21071405-04	812940	4.18	1093788	4.96	974480	7.67
08	HS21071405-02	776645	4.18	1049344	4.96	916912	7.67
09	HS21071405-02	742683	4.18	1001857	4.96	893037	7.67
10	HS21071405-07	762296	4.18	1033678	4.96	922899	7.67
11	HS21071405-07	770534	4.18	1036594	4.96	911980	7.67
12	HS21071405-05	763783	4.18	1032174	4.96	920819	7.67
13	HS21071405-05	751974	4.18	1016984	4.96	895065	7.67
14							
15							
16							
17							
18							
19							
20							

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

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

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

FORM VIII VOA

FORM 8
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS21071405

Lab File ID (Standard): X080403 Date Analyzed: 08/04/21

Instrument ID: VOA6 Time Analyzed: 1126

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

		IS4 (DCB) AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	514369	9.66				
	UPPER LIMIT	1028738	10.16				
	LOWER LIMIT	257185	9.16				
	CLIENT SAMPLE NO.						
01	VLCSW-210804	511935	9.66				
02	VBLKW-210804	504446	9.66				
03	HS21071405-11	531083	9.66				
04	HS21071405-04	530570	9.66				
05	HS21071405-11MS	537455	9.66				
06	HS21071405-11MSD	496946	9.66				
07	HS21071405-04	502104	9.66				
08	HS21071405-02	436267	9.66				
09	HS21071405-02	425881	9.66				
10	HS21071405-07	481376	9.66				
11	HS21071405-07	475950	9.66				
12	HS21071405-05	463882	9.66				
13	HS21071405-05	451180	9.66				
14							
15							
16							
17							
18							
19							
20							

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

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

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

FORM VIII VOA

Data File: \\NAHSTWS005\target\chem\voa6.i\X210804.b\X080401.D

Date : 04-AUG-2021 10:44

Client ID: BFB

Instrument: voa6.i

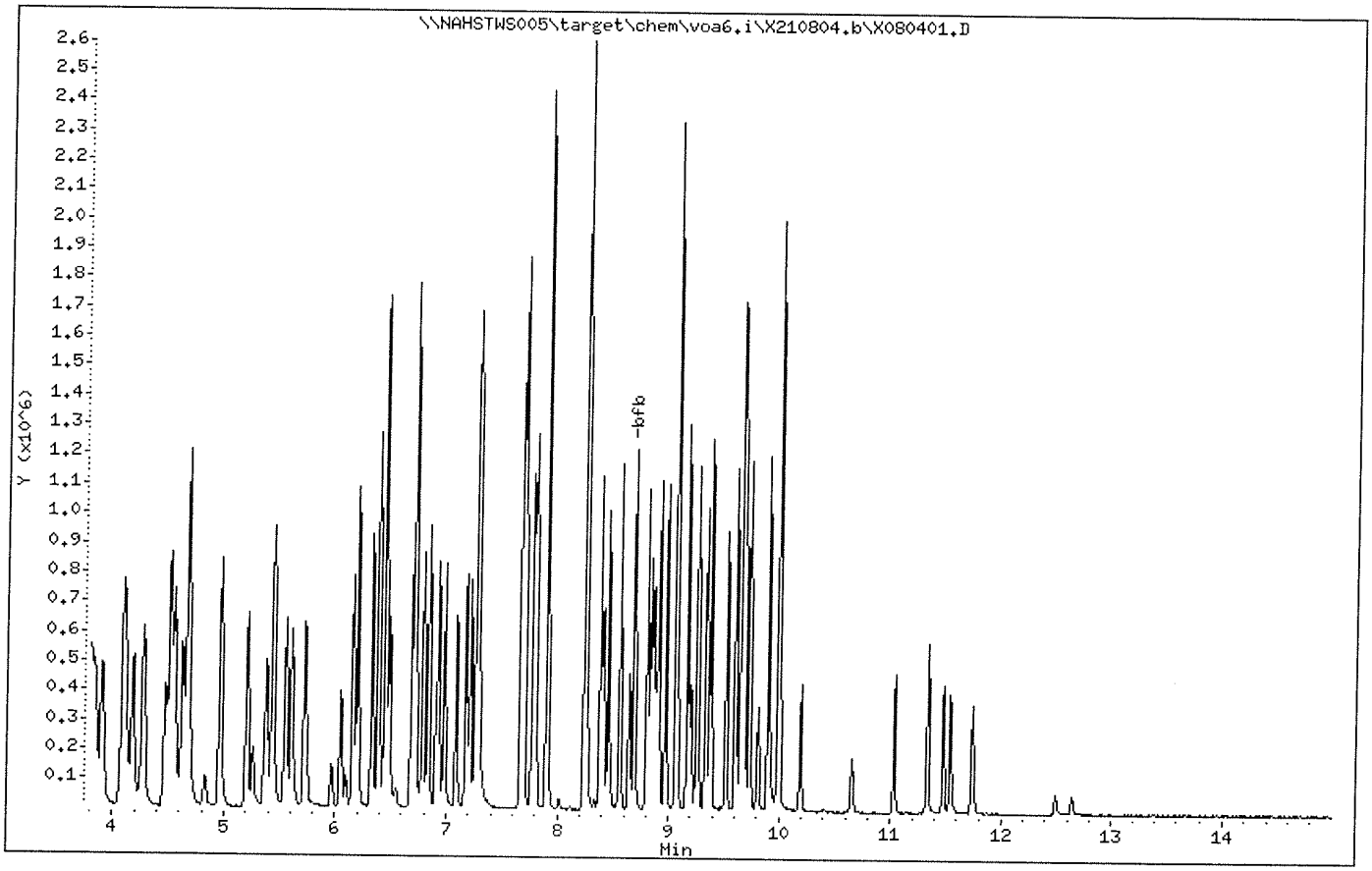
Sample Info: BFB;BFB;3;;BFB

Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

Column diameter: 0.25



Data File: \\NAHSTWS005\target\chem\voa6.i\X210804.b\X080401.D

Date : 04-AUG-2021 10:44

Client ID: BFB

Instrument: voa6.i

Sample Info: BFB;BFB;3;;BFB

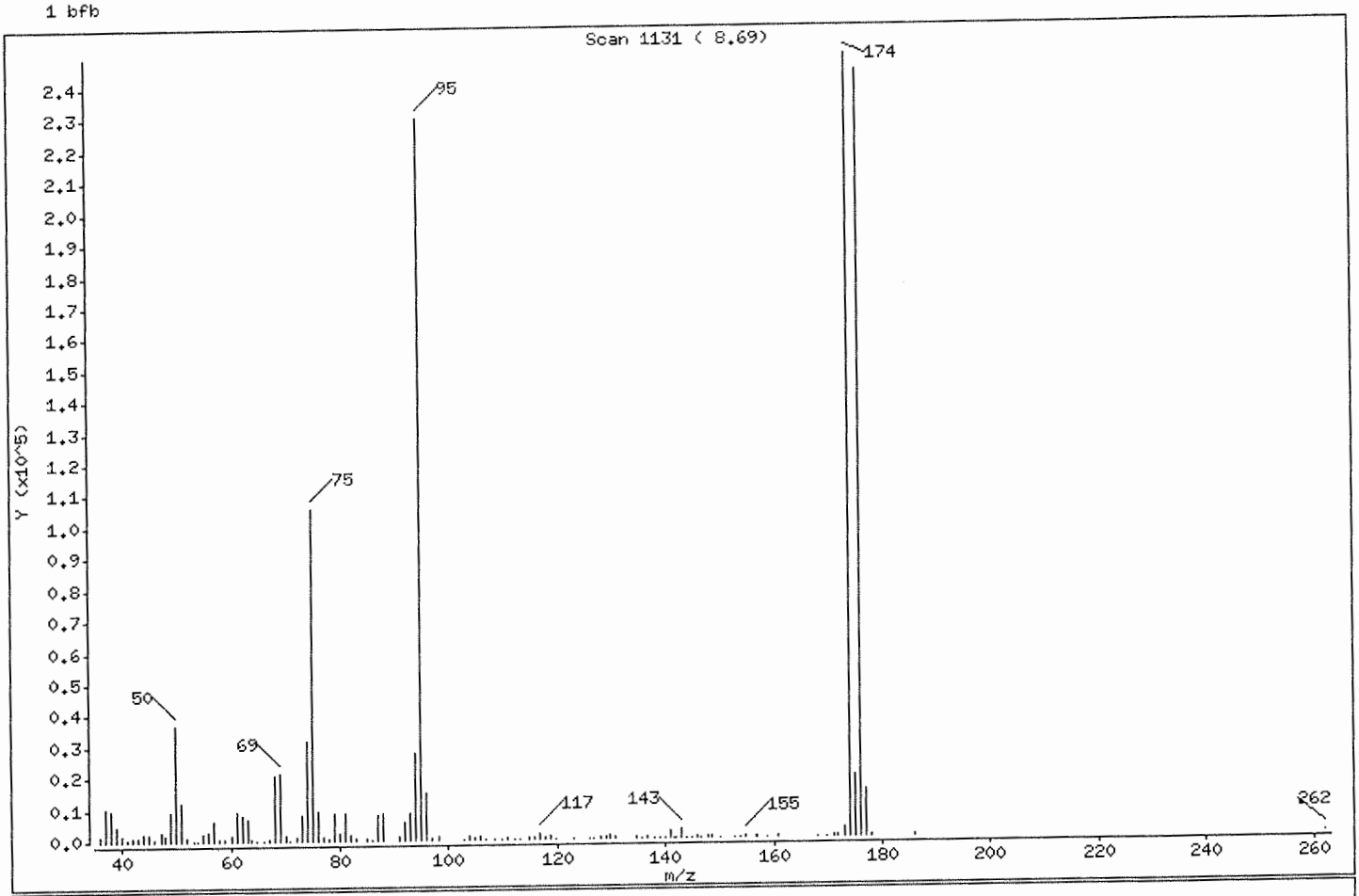
Operator: PC

Volume Injected (uL): 2.0

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	16.07
75	30.00 - 60.00% of mass 95	45.86
96	5.00 - 9.00% of mass 95	6.44
173	Less than 2.00% of mass 174	1.19 (1.09)
174	Greater than 50.00% of mass 95	108.57
175	5.00 - 9.00% of mass 174	8.50 (7.83)
176	95.00 - 101.00% of mass 174	106.37 (97.98)
177	5.00 - 9.00% of mass 176	6.39 (6.01)

Data File: \\NAHSTWS005\target\chem\voa6.i\X210804.b\X080401.D

Date : 04-AUG-2021 10:44

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: X080401.D
Spectrum: Scan 1131 (8.69)
Location of Maximum: 173.90
Number of points: 118

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	1492	66.00	201	102.80	143	141.60	270
37.00	10159	67.00	708	103.80	999	141.90	260
38.00	9602	68.00	20784	104.70	526	142.90	2630
39.00	4420	69.00	21008	105.90	1211	143.90	159
39.90	1460	70.00	1496	106.80	204	144.90	159
40.90	672	70.90	277	108.60	111	145.80	457
42.00	1219	72.00	1397	109.80	187	146.70	112
43.00	902	73.00	8244	110.80	289	148.00	418
43.90	2534	74.00	31848	112.20	148	148.70	327
45.00	2234	75.00	105504	113.00	206	150.10	255
45.90	416	76.00	9219	114.80	514	152.80	89
47.10	2955	77.00	1118	115.70	807	153.70	184
48.00	1461	78.10	738	116.90	1742	154.80	802
49.00	9022	78.90	8646	117.80	831	156.90	570
50.00	36976	79.90	2310	118.90	1156	158.90	209
51.00	12180	80.90	8584	119.60	154	160.80	335
52.00	889	81.90	1915	122.90	194	168.20	160
53.20	61	82.90	385	126.00	142	169.80	115
53.90	55	84.90	346	126.80	149	170.90	344
55.00	2087	85.90	278	127.90	715	171.60	460
56.00	2631	86.90	8256	128.90	479	172.90	2730
57.00	6297	87.90	8666	129.80	1050	173.90	249792
58.00	339	91.00	988	130.80	486	174.90	19568
59.00	768	92.00	5977	134.80	427	175.90	244736
60.00	1713	93.00	8512	135.80	114	176.90	14704
61.00	9008	94.00	27720	136.80	425	177.90	507
62.00	8303	95.00	230080	137.90	71	185.90	289
63.00	7169	96.00	14822	138.80	176	262.10	70
63.90	717	96.90	678	140.00	241		
64.90	246	98.10	1120	140.80	2371		

Data File: \\NAHSTWS005\target\chem\voa6.i\X210804.b\X080403.D Page 1
Report Date: 10-Sep-2021 14:36

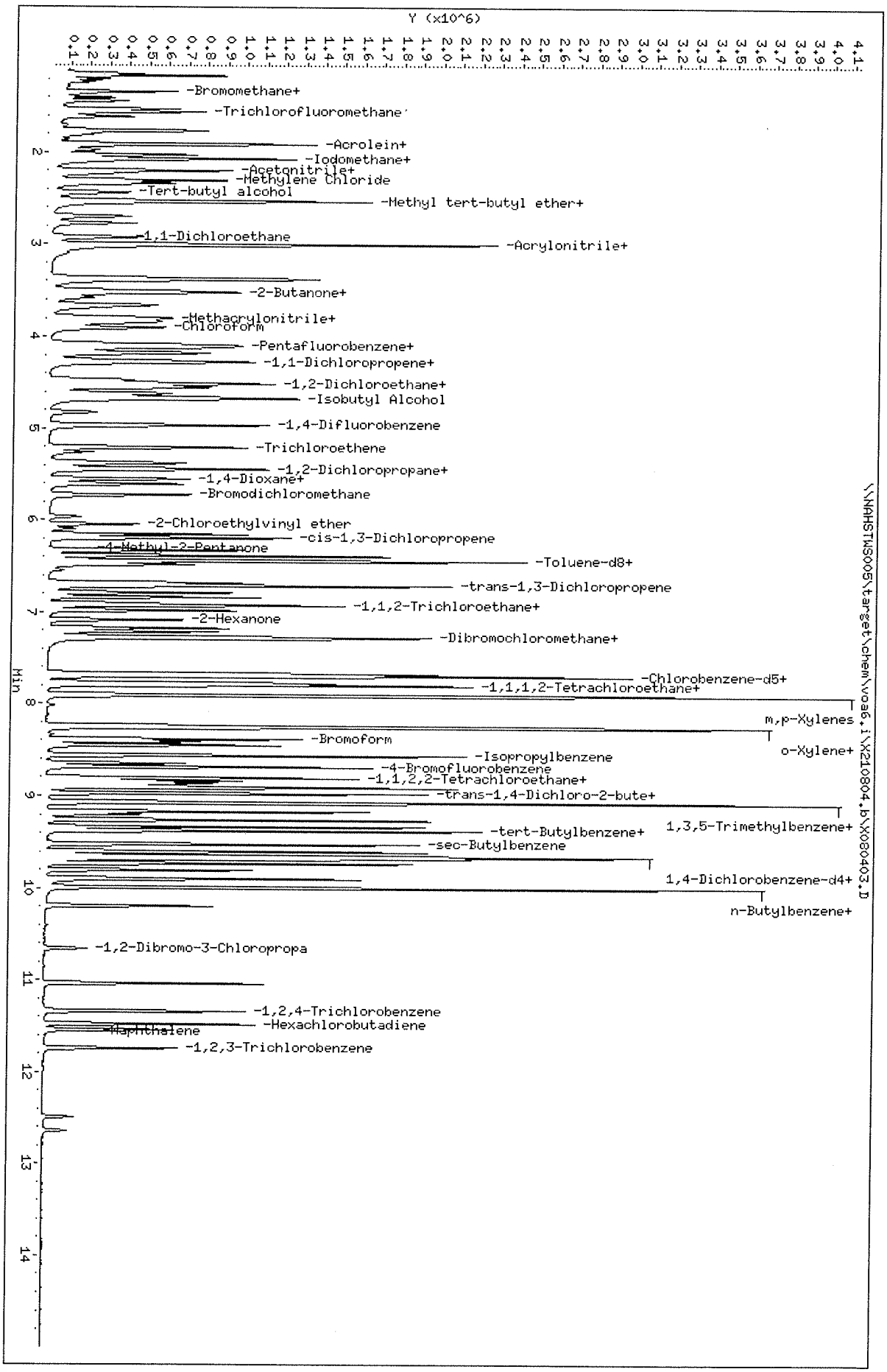
ALS Laboratory Group

Data file : \\NAHSTWS005\target\chem\voa6.i\X210804.b\X080403.D
Lab Smp Id: CCV Client Smp ID: CCV
Inj Date : 04-AUG-2021 11:26
Operator : PC Inst ID: voa6.i
Smp Info : CCV;CCV;2;;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\target\chem\voa6.i\X210804.b\8260W.m
Meth Date : 10-Sep-2021 14:36 voa6.i Quant Type: ISTD
Cal Date : 30-JUL-2021 13:56 Cal File: X073008.D
Als bottle: 3 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0474-dod.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)	742521	50.0000	
$	30 Dibromofluoromethane	113	4.096	4.096	(0.979)	331671	50.0000	47.58
$	35 1,2-Dichloroethane-d4	65	4.469	4.469	(1.068)	299747	50.0000	45.16
*	36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	986192	50.0000	
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	930213	50.0000	
$	48 Toluene-d8	98	6.388	6.388	(0.833)	1036186	50.0000	47.49
$	69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	384365	50.0000	49.24
*	70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	514369	50.0000	
	5 Vinyl Chloride	62	1.138	1.138	(0.272)	304412	50.0000	43.06
	11 1,1-Dichloroethene	96	1.912	1.912	(0.457)	267984	50.0000	42.89
	17 Methylene Chloride	84	2.298	2.298	(0.550)	290969	50.0000	46.71
	27 cis-1,2-Dichloroethene	96	3.523	3.523	(0.842)	333983	50.0000	44.84
	33 1,2-Dichloroethane	62	4.555	4.555	(0.918)	360397	50.0000	45.55
	38 Trichloroethene	130	5.207	5.207	(1.049)	352662	50.0000	48.93
	53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	235561	50.0000	48.40



Data File: \\NAHSTWS005\target\chem\voa6.i\X210804.b\X080403.D
Date : 04-AUG-2021 11:26
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\X210804.b\X080405.D Page 1
Report Date: 10-Sep-2021 14:36

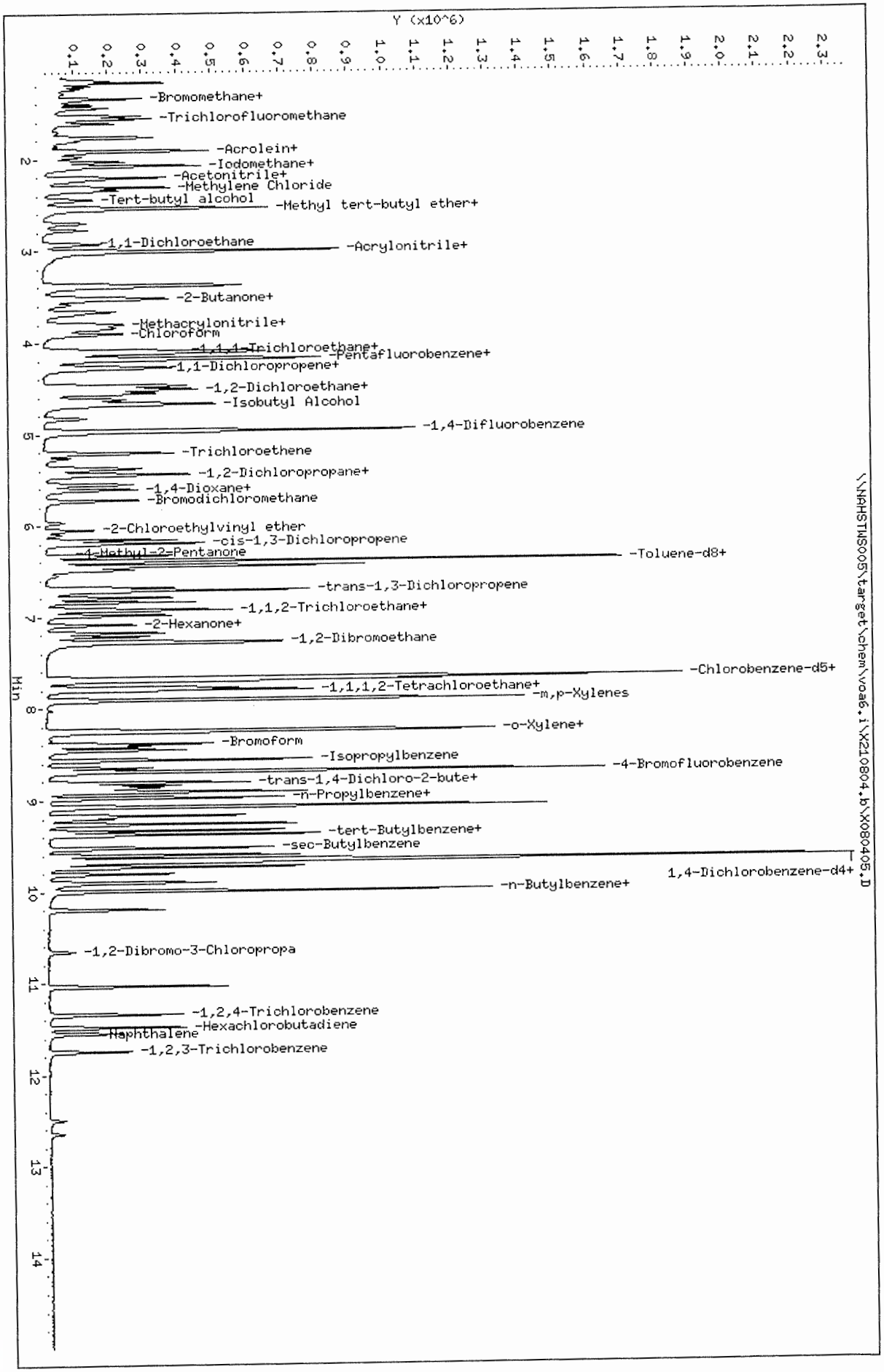
ALS Laboratory Group

Data file : \\NAHSTWS005\target\chem\voa6.i\X210804.b\X080405.D
Lab Smp Id: VLCSW-210804 Client Smp ID: VLCSW-210804
Inj Date : 04-AUG-2021 12:08
Operator : PC Inst ID: voa6.i
Smp Info : VLCSW-210804;VLCSW-210804;3;;LCS
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\target\chem\voa6.i\X210804.b\8260W.m
Meth Date : 10-Sep-2021 14:36 voa6.i Quant Type: ISTD
Cal Date : 30-JUL-2021 13:56 Cal File: X073008.D
Als bottle: 5 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0474-dod.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	4.182	(1.000)	738547	50.0000	
$	30 Dibromofluoromethane	113	4.103	4.096	(0.981)	327671	47.2553	47.25
$	35 1,2-Dichloroethane-d4	65	4.469	4.469	(1.068)	316541	48.0071	48.00
*	36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	994476	50.0000	
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	931780	50.0000	
$	48 Toluene-d8	98	6.388	6.388	(0.833)	1040289	47.5986	47.59
$	69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	389362	49.8077	49.80
*	70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	511935	50.0000	
	5 Vinyl Chloride	62	1.145	1.138	(0.274)	113703	16.1736	16.17
	11 1,1-Dichloroethene	96	1.919	1.912	(0.459)	99040	15.9370	15.93
	17 Methylene Chloride	84	2.306	2.298	(0.551)	115773	18.5523	18.55
	27 cis-1,2-Dichloroethene	96	3.530	3.523	(0.844)	132274	17.8548	17.85
	33 1,2-Dichloroethane	62	4.555	4.555	(0.918)	144257	18.0820	18.08
	38 Trichloroethene	130	5.207	5.207	(1.049)	134935	18.5676	18.56
	53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	92700	19.0165	19.01



Data File: \\NAHSTWS005\target\chem\voa6.i\X210804.b\X080405.D
Date : 04-AUG-2021 12:08
Client ID: VLCSW-210804
Sample Info: VLCSW-210804;VLCSW-210804;3;;LCS
Purge Volume: 5.0
Column phase: DB624

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

ALS Laboratory Group

Data file : \\NAHSTWS005\target\chem\voa6.i\X210804.b\X080408.D
Lab Smp Id: VBLKW-210804 Client Smp ID: VBLKW-210804
Inj Date : 04-AUG-2021 13:11
Operator : PC Inst ID: voa6.i
Smp Info : VBLKW-210804;VBLKW-210804;3;;BLANK
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\target\chem\voa6.i\X210804.b\8260W.m
Meth Date : 10-Sep-2021 14:36 voa6.i Quant Type: ISTD
Cal Date : 30-JUL-2021 13:56 Cal File: X073008.D
Als bottle: 8 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0474-dod.sub
Target Version: 4.14
Processing Host: NAHSTW7056

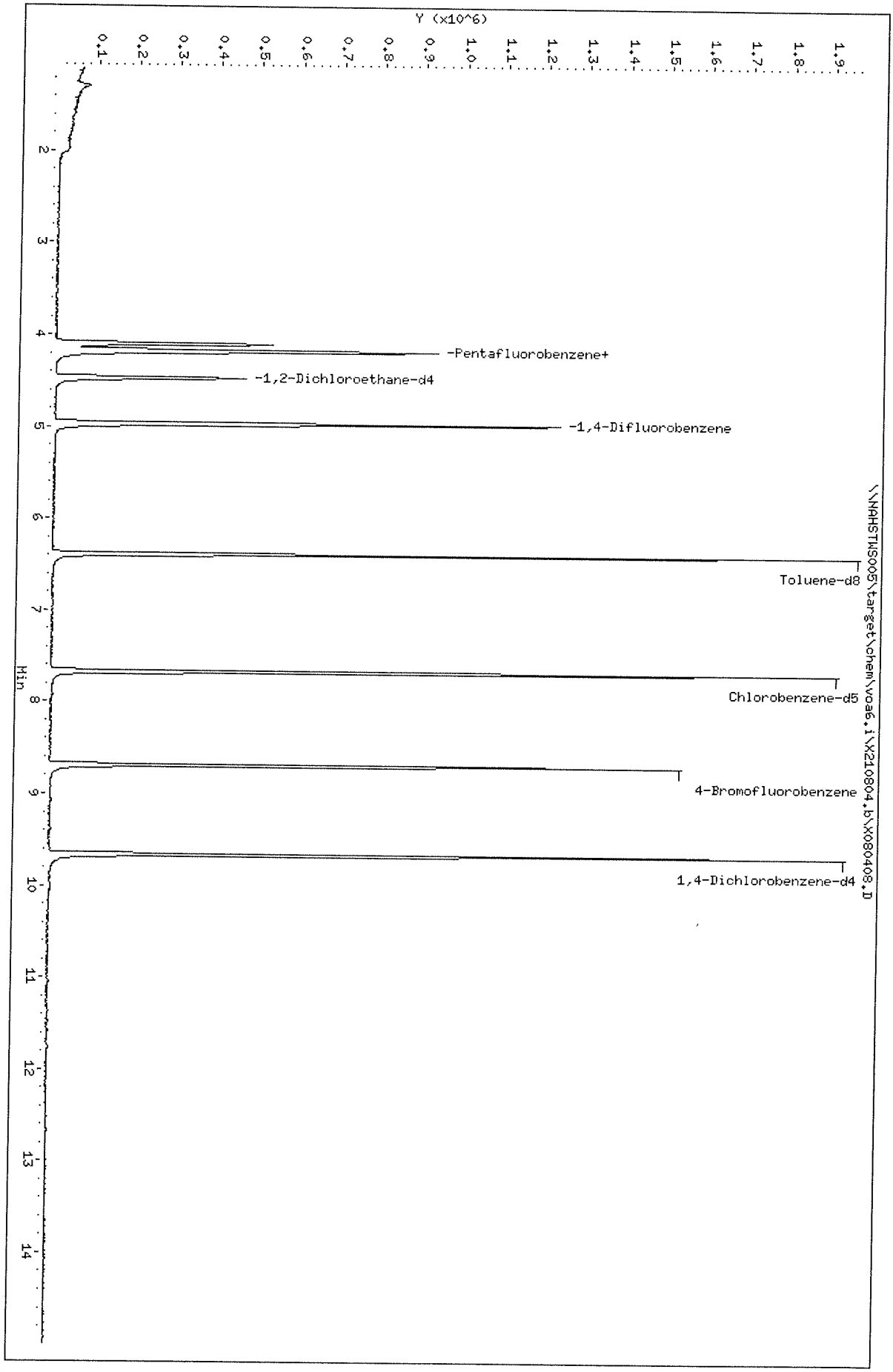
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

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	4.182	(1.000)	869848	50.0000	
$ 30 Dibromofluoromethane	113	4.096	4.096	(0.979)	368975	45.1348	45.13
$ 35 1,2-Dichloroethane-d4	65	4.469	4.469	(1.069)	341259	43.8690	43.86
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	1135421	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	1008982	50.0000	
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	1213978	51.2957	51.29
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	410620	48.4891	48.48
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	504446	50.0000	

Data File: \\NAHSTWS005\target\chem\voa6.i\X210804.b\X080408.D
Date : 04-AUG-2021 13:11
Client ID: VBLKW-210804
Sample Info: VBLKW-210804;VBLKW-210804;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\X210804.b\X080409.D Page 1
Report Date: 10-Sep-2021 14:34

ALS Laboratory Group

Data file : \\NAHSTWS005\target\chem\voa6.i\X210804.b\X080409.D
Lab Smp Id: HS21071405-11 Client Smp ID: HS21071405-11
Inj Date : 04-AUG-2021 13:33
Operator : PC Inst ID: voa6.i
Smp Info : HS21071405-11;HS21071405-11;;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\target\chem\voa6.i\X210804.b\8260W.m
Meth Date : 10-Sep-2021 14:30 Genoveva.R Quant Type: ISTD
Cal Date : 30-JUL-2021 13:56 Cal File: X073008.D
Als bottle: 9
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0474-dod.sub
Target Version: 4.14
Processing Host: NAHSTW7056

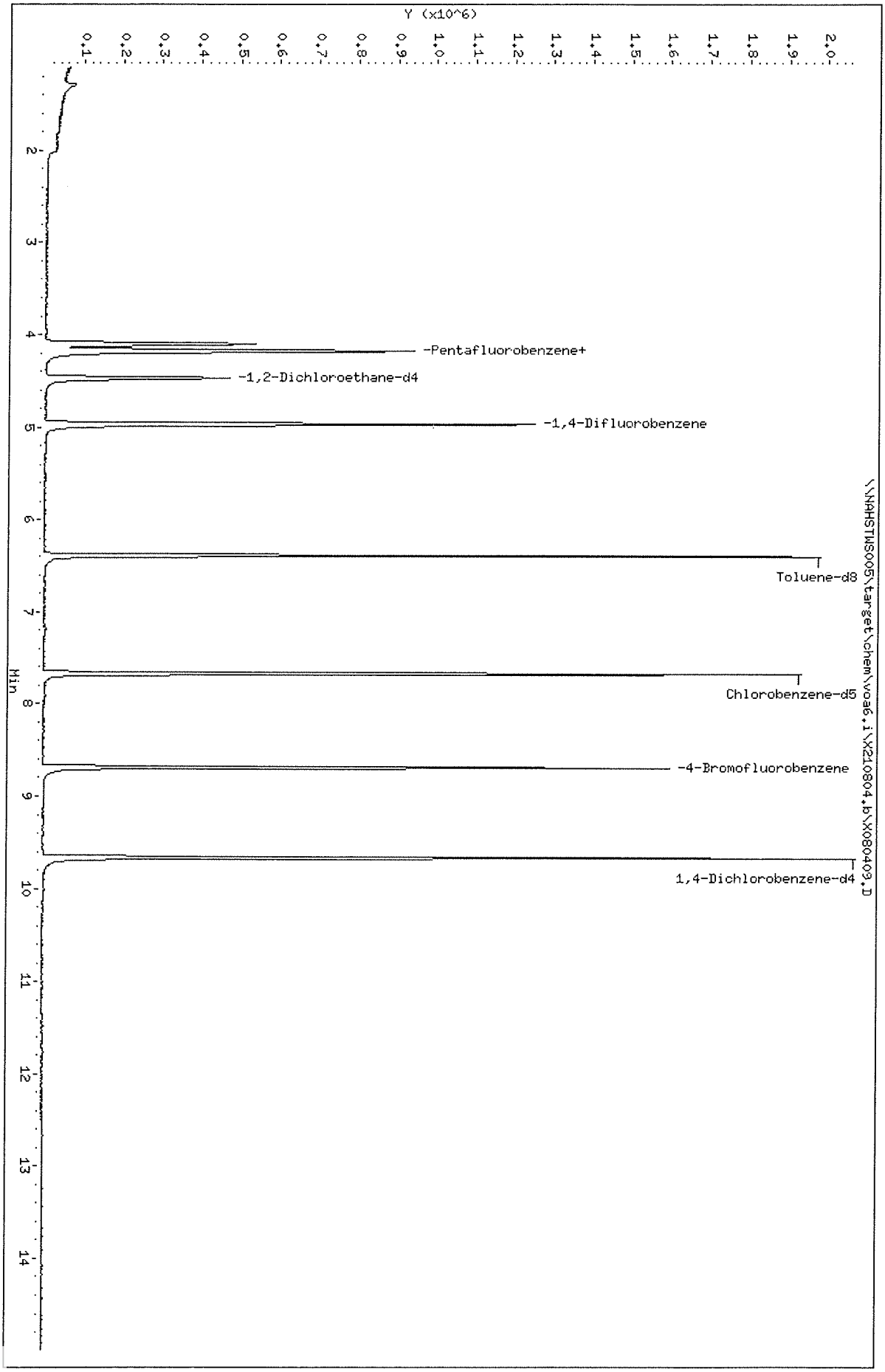
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

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	4.182	(1.000)	872283	50.0000	
$ 30 Dibromofluoromethane	113	4.096	4.103	(0.979)	370802	45.2339	45.23
$ 35 1,2-Dichloroethane-d4	65	4.469	4.476	(1.069)	342363	43.8884	43.88
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	1135566	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.670	(1.000)	1006671	50.0000	
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	1234387	52.2778	52.27
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	420894	49.8362	49.83
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	531083	50.0000	

Data File: \\NAHSTWS005\target\chem\voa6.i\X210804.b\X080409.D
Date : 04-AUG-2021 13:33
Client ID: HS21071405-11
Sample Info: HS21071405-11;HS21071405-11;;;
Purge Volume: 5.0
Column phase: DB624

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



Data File: \\NAHSTWS005\target\chem\voa6.i\X210804.b\X080411.D Page 1
Report Date: 10-Sep-2021 14:34

ALS Laboratory Group

Data file : \\NAHSTWS005\target\chem\voa6.i\X210804.b\X080411.D
Lab Smp Id: HS21071405-04 Client Smp ID: HS21071405-04
Inj Date : 04-AUG-2021 14:15
Operator : PC Inst ID: voa6.i
Smp Info : HS21071405-04;HS21071405-04;;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\target\chem\voa6.i\X210804.b\8260W.m
Meth Date : 10-Sep-2021 14:30 Genoveva.R Quant Type: ISTD
Cal Date : 30-JUL-2021 13:56 Cal File: X073008.D
Als bottle: 11
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0474-dod.sub
Target Version: 4.14
Processing Host: NAHSTW7056

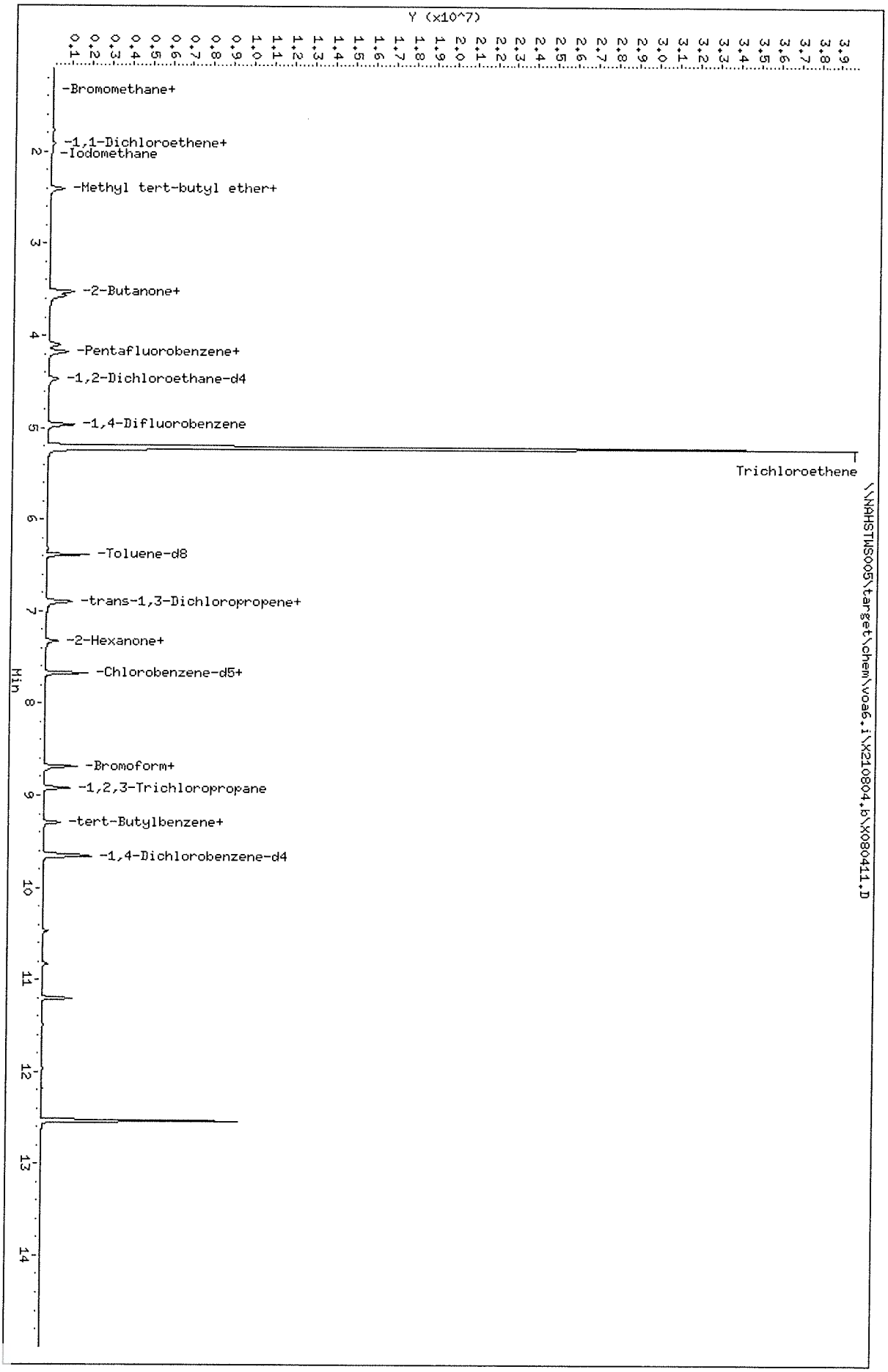
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

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	4.182	(1.000)	829171	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	372151	47.8160	47.81
$ 35 1,2-Dichloroethane-d4	65	4.469	4.476	(1.069)	364319	49.2364	49.23
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	1140777	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.670	(1.000)	1022183	50.0000	
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	1236646	51.5787	51.57
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	442748	51.6542	51.65
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	530570	50.0000	
5 Vinyl Chloride	62	1.138	1.138	(0.272)	15487	1.96216	1.96(a)
11 1,1-Dichloroethene	96	1.911	1.912	(0.457)	7441	1.06650	1.06(a)
27 cis-1,2-Dichloroethene	96	3.523	3.523	(0.842)	668917	80.4242	80.42
38 Trichloroethene	130	5.206	5.207	(1.049)	12903996	1547.92	1547.91(A)

QC Flag Legend

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



Data File: \\NAHSTWS005\target\chem\voa6.i\X210804.b\X080411.D
Date : 04-AUG-2021 14:15
Client ID: HS21071405-04
Sample Info: HS21071405-04;HS21071405-04;;;
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\NAHSTWS005\target\chem\voa6.i\X210804.b\X080411.D

Date : 04-AUG-2021 14:15

Client ID: HS21071405-04

Instrument: voa6.i

Sample Info: HS21071405-04;HS21071405-04;;;

Purge Volume: 5.0

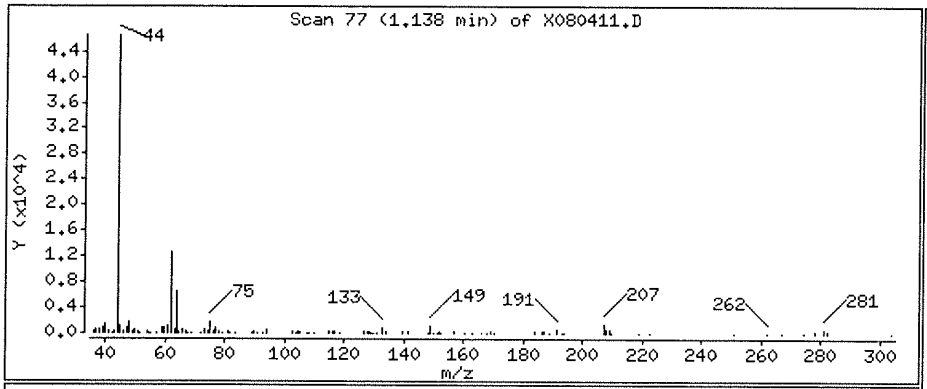
Operator: PC

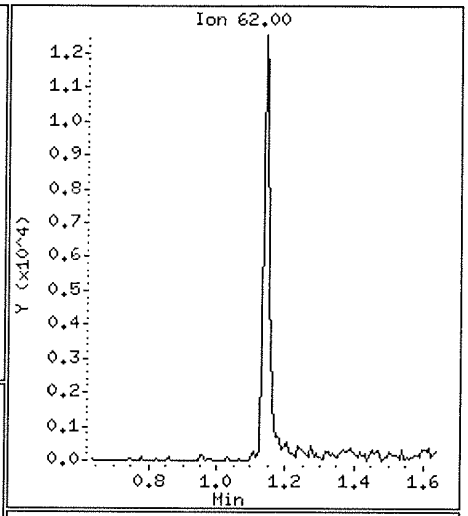
Column phase: DB624

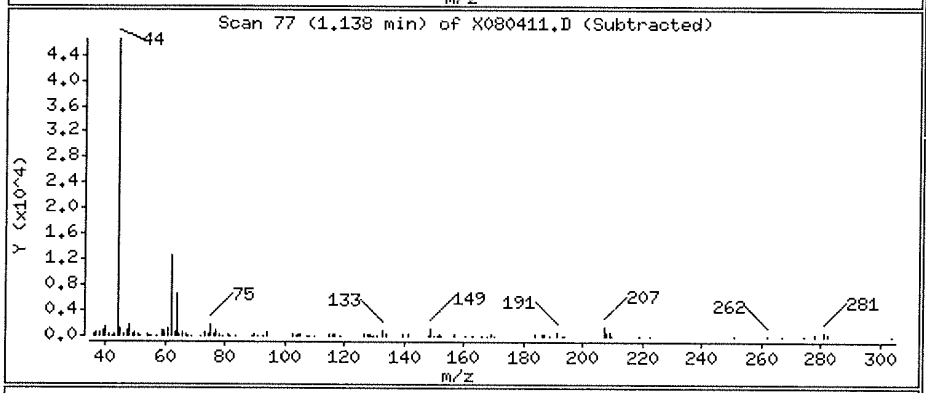
Column diameter: 0.18

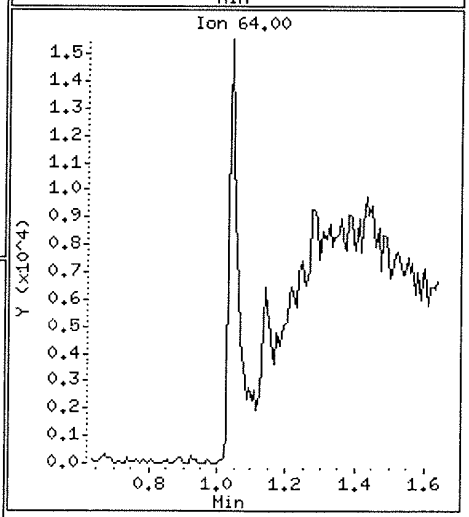
5 Vinyl Chloride

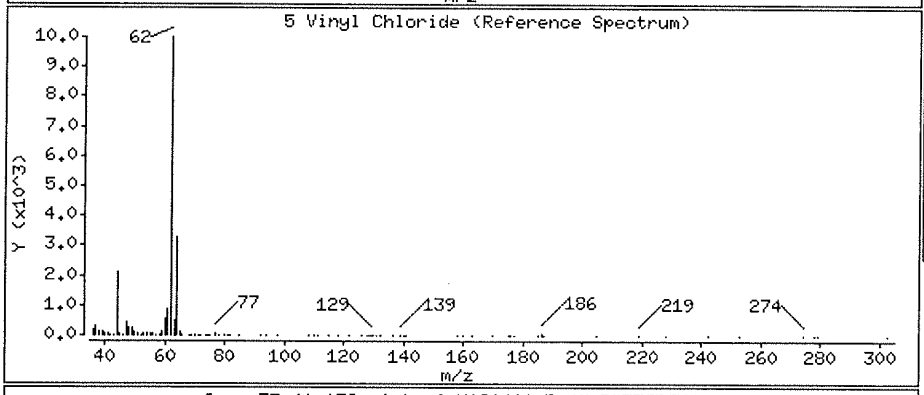
Concentration: 1.96 ug/l

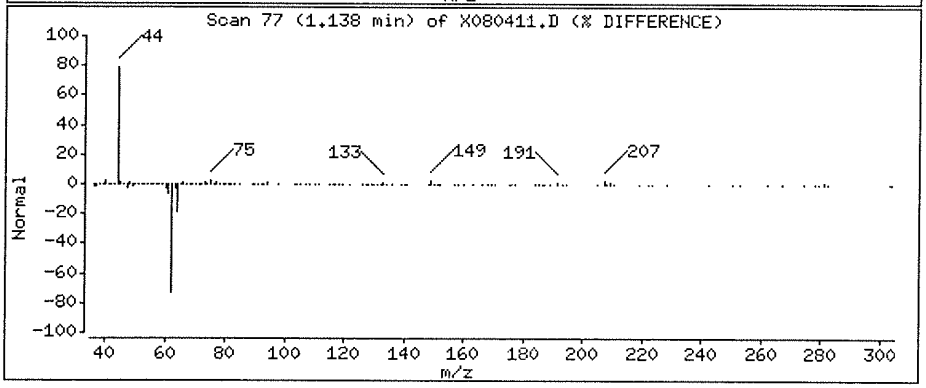












Data File: \\NAHSTWS005\target\chem\voa6.i\X210804.b\X080411.D

Date : 04-AUG-2021 14:15

Client ID: HS21071405-04

Instrument: voa6.i

Sample Info: HS21071405-04;HS21071405-04;;;

Purge Volume: 5.0

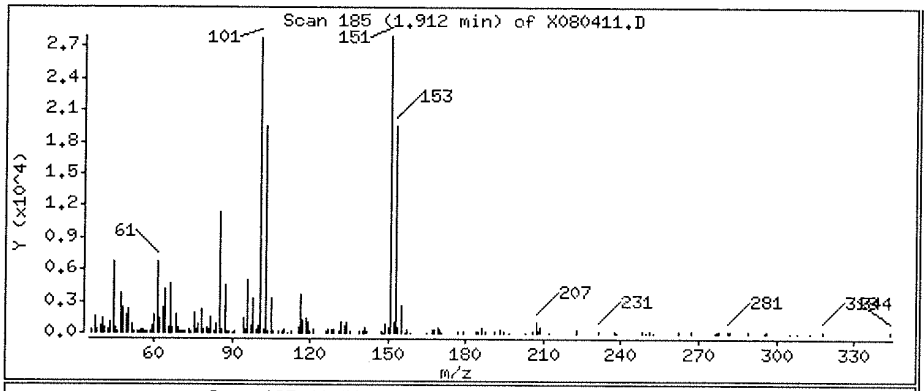
Operator: PC

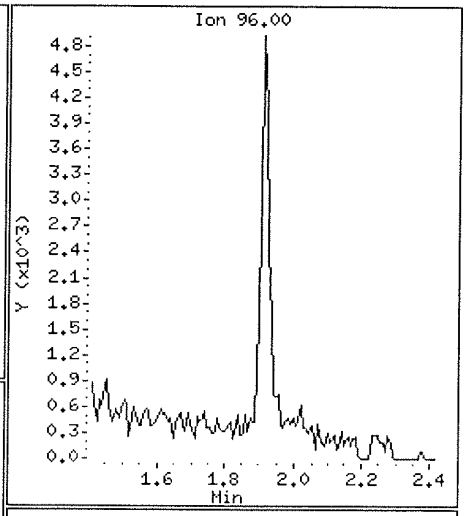
Column phase: DB624

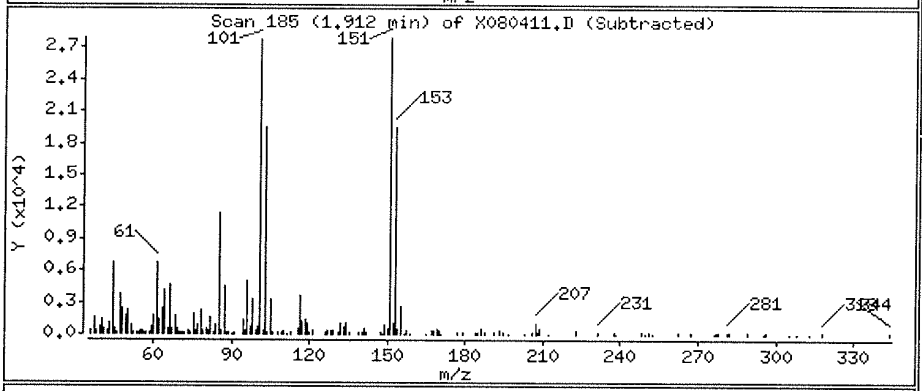
Column diameter: 0.18

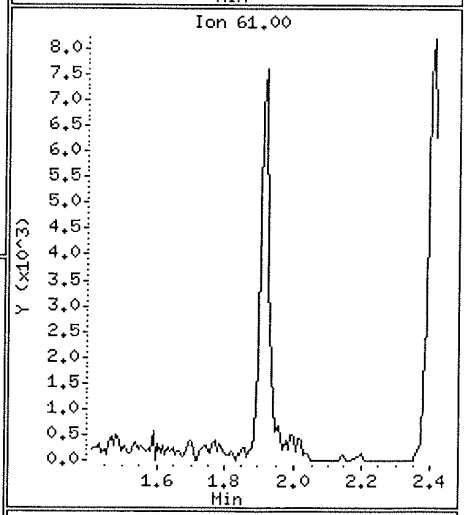
11 1,1-Dichloroethene

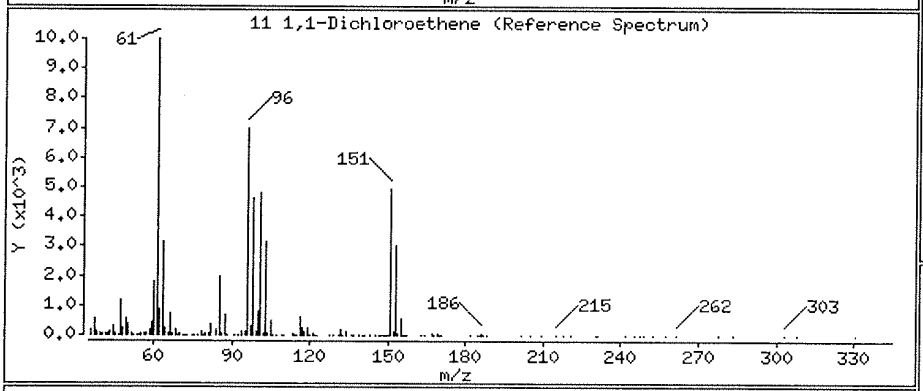
Concentration: 1.06 ug/l

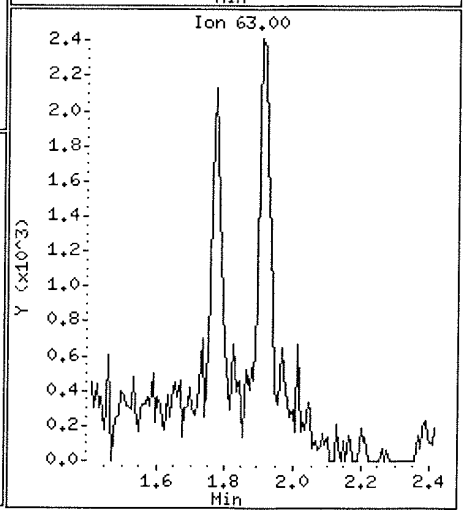


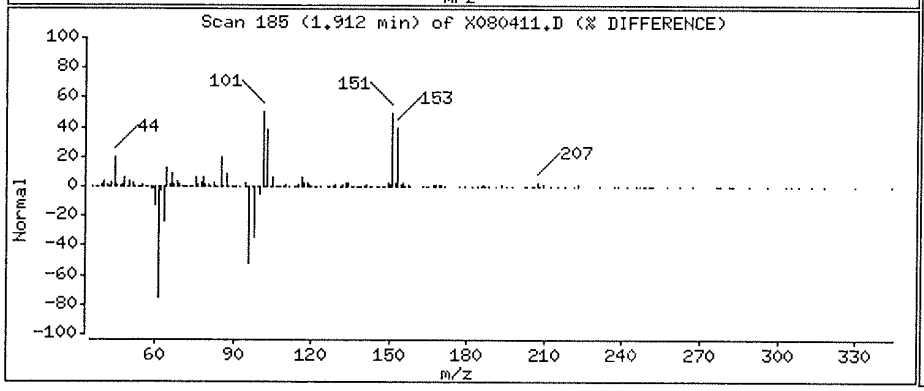












Data File: \\NAHSTWS005\target\chem\voa6.i\X210804.b\X080411.D

Date : 04-AUG-2021 14:15

Client ID: HS21071405-04

Instrument: voa6.i

Sample Info: HS21071405-04;HS21071405-04;;;

Purge Volume: 5.0

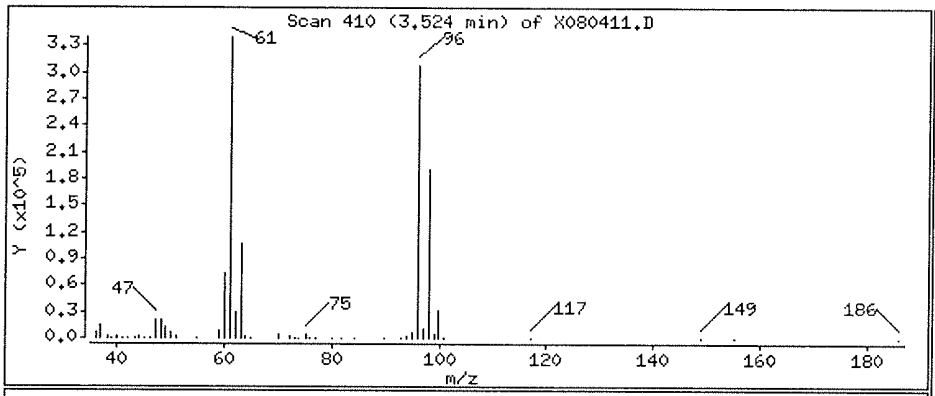
Operator: PC

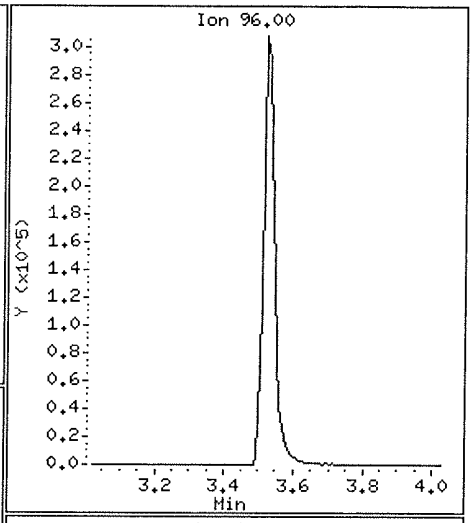
Column phase: DB624

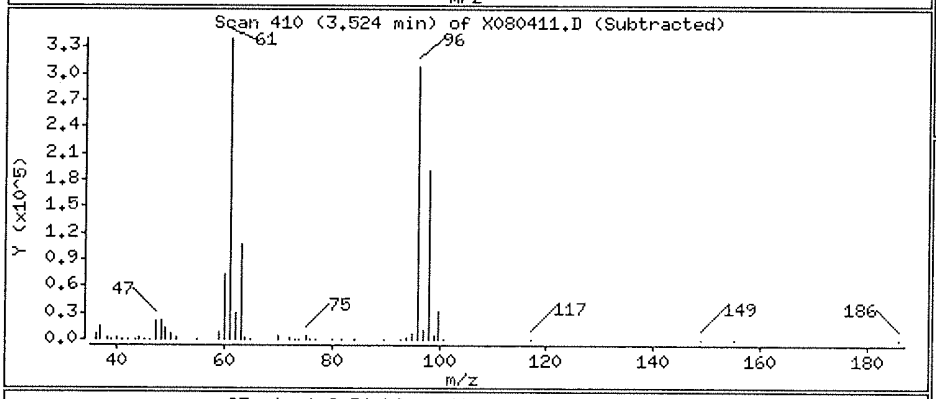
Column diameter: 0.18

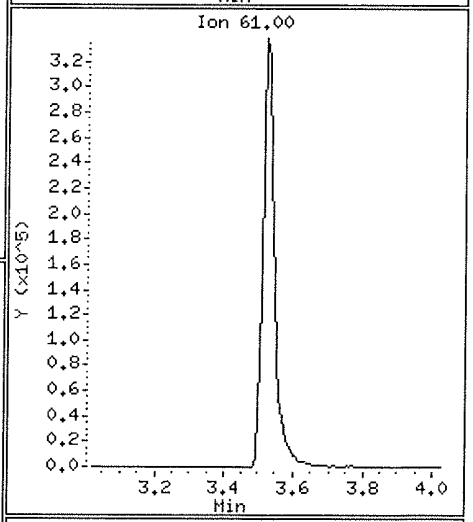
27 cis-1,2-Dichloroethene

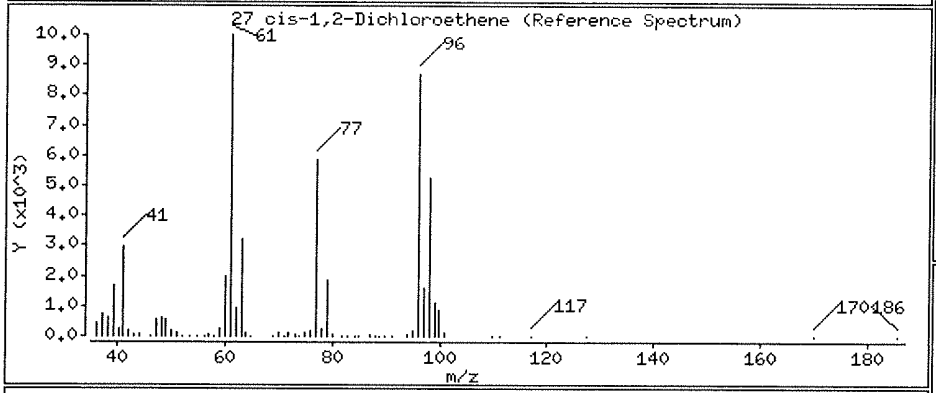
Concentration: 80.42 ug/l

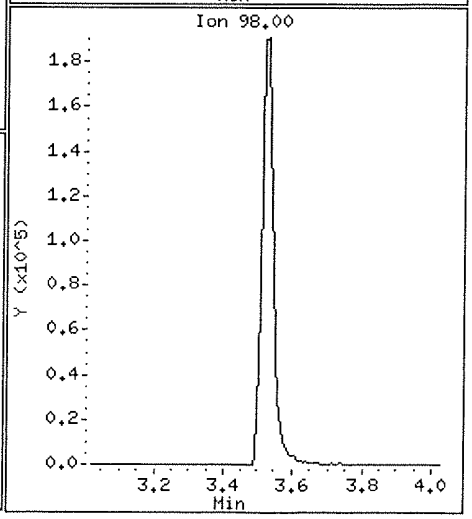


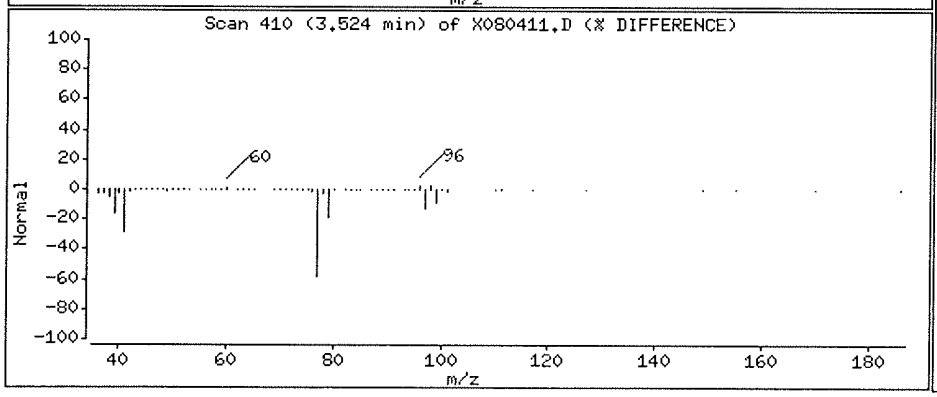












Data File: \\NAHSTWS005\target\chem\voa6.i\X210804.b\X080411.D

Date : 04-AUG-2021 14:15

Client ID: HS21071405-04

Instrument: voa6.i

Sample Info: HS21071405-04;HS21071405-04;;;

Purge Volume: 5.0

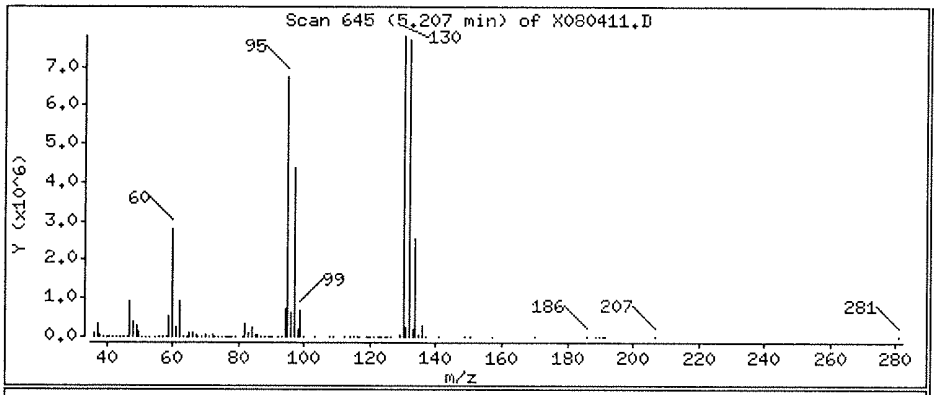
Operator: PC

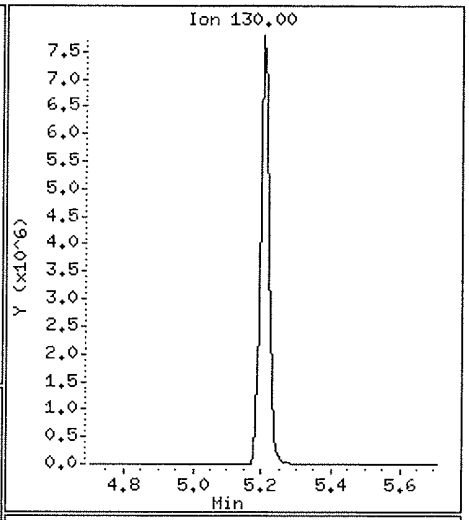
Column phase: DB624

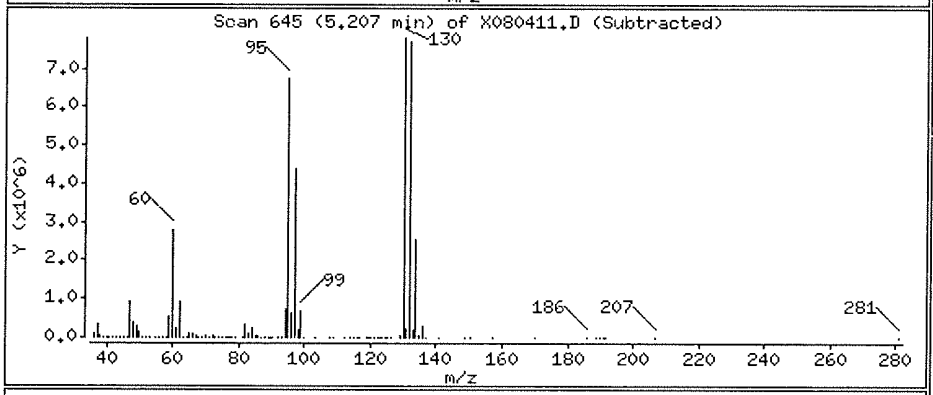
Column diameter: 0.18

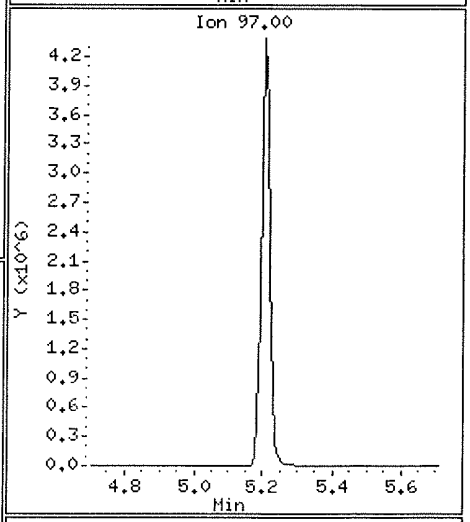
38 Trichloroethene

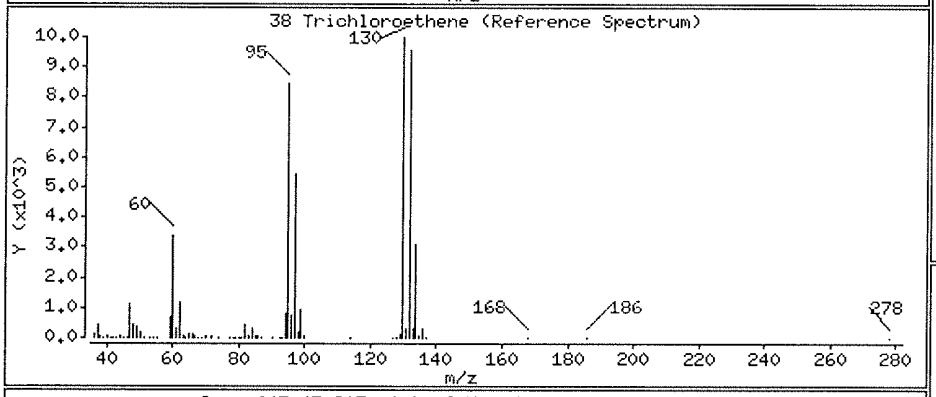
Concentration: 1547.91 ug/l

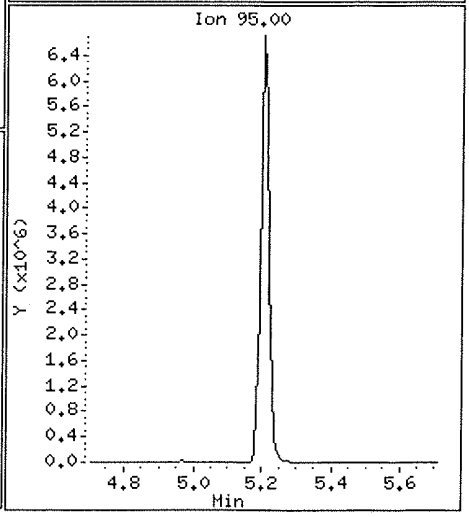


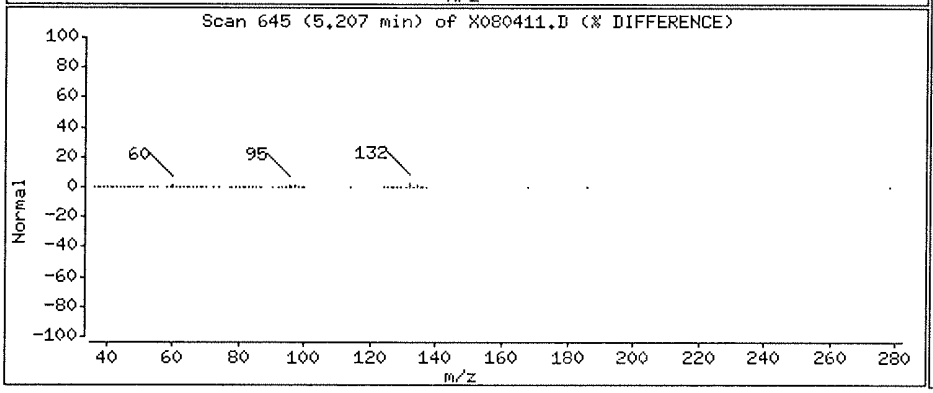












Data File: \\NAHSTWS005\target\chem\voa6.i\X210804.b\X080412.D Page 1
Report Date: 10-Sep-2021 14:36

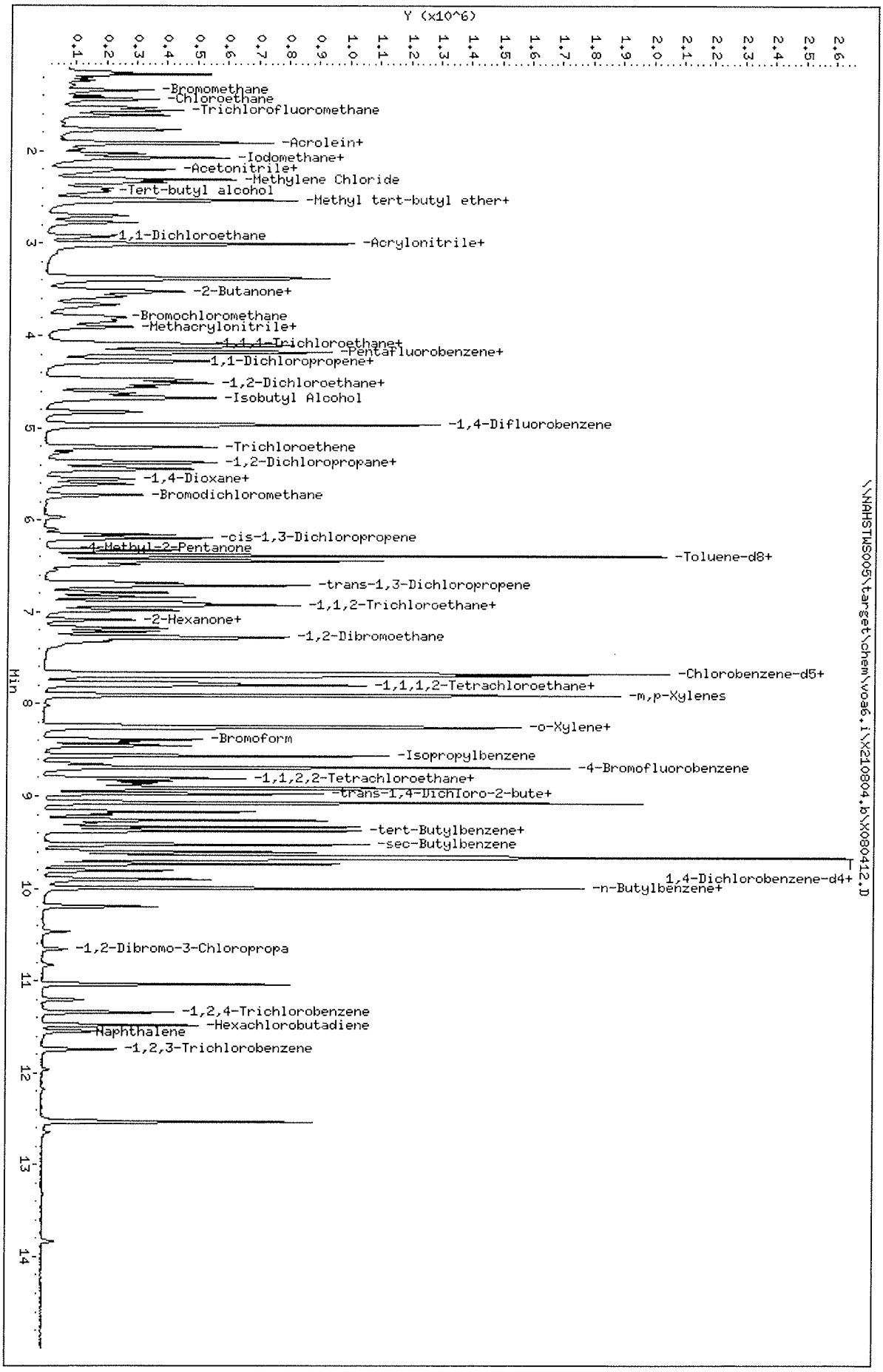
ALS Laboratory Group

Data file : \\NAHSTWS005\target\chem\voa6.i\X210804.b\X080412.D
Lab Smp Id: HS21071405-11MS Client Smp ID: HS21071405-11MS
Inj Date : 04-AUG-2021 14:36
Operator : PC Inst ID: voa6.i
Smp Info : HS21071405-11MS;HS21071405-11MS;3;;MS
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\target\chem\voa6.i\X210804.b\8260W.m
Meth Date : 10-Sep-2021 14:36 voa6.i Quant Type: ISTD
Cal Date : 30-JUL-2021 13:56 Cal File: X073008.D
Als bottle: 12 QC Sample: MS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0474-dod.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	4.182	(1.000)	829615	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.096	(0.981)	366152	47.0030	47.00
$ 35 1,2-Dichloroethane-d4	65	4.469	4.469	(1.068)	362366	48.9411	48.94
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	1124747	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	1024586	50.0000	
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	1232973	51.3049	51.30
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	430936	50.1373	50.13
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	537455	50.0000	
5 Vinyl Chloride	62	1.138	1.138	(0.272)	156702	19.8431	19.84
11 1,1-Dichloroethene	96	1.912	1.912	(0.457)	132608	18.9962	18.99
17 Methylene Chloride	84	2.306	2.298	(0.551)	132063	18.8432	18.84
27 cis-1,2-Dichloroethene	96	3.523	3.523	(0.842)	154606	18.5784	18.57
33 1,2-Dichloroethane	62	4.555	4.555	(0.918)	166189	18.4183	18.41
38 Trichloroethene	130	5.207	5.207	(1.049)	194687	23.6868	23.68
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	103612	19.3298	19.32



Data File: \\NAHSTWS005\target\chem\voa6.i\X210804.b\X080412.D
Date : 04-AUG-2021 14:36
Client ID: HS21071405-11MS
Sample Info: HS21071405-11MS;HS21071405-11MS;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\X210804.b\X080413.D Page 1
Report Date: 10-Sep-2021 14:36

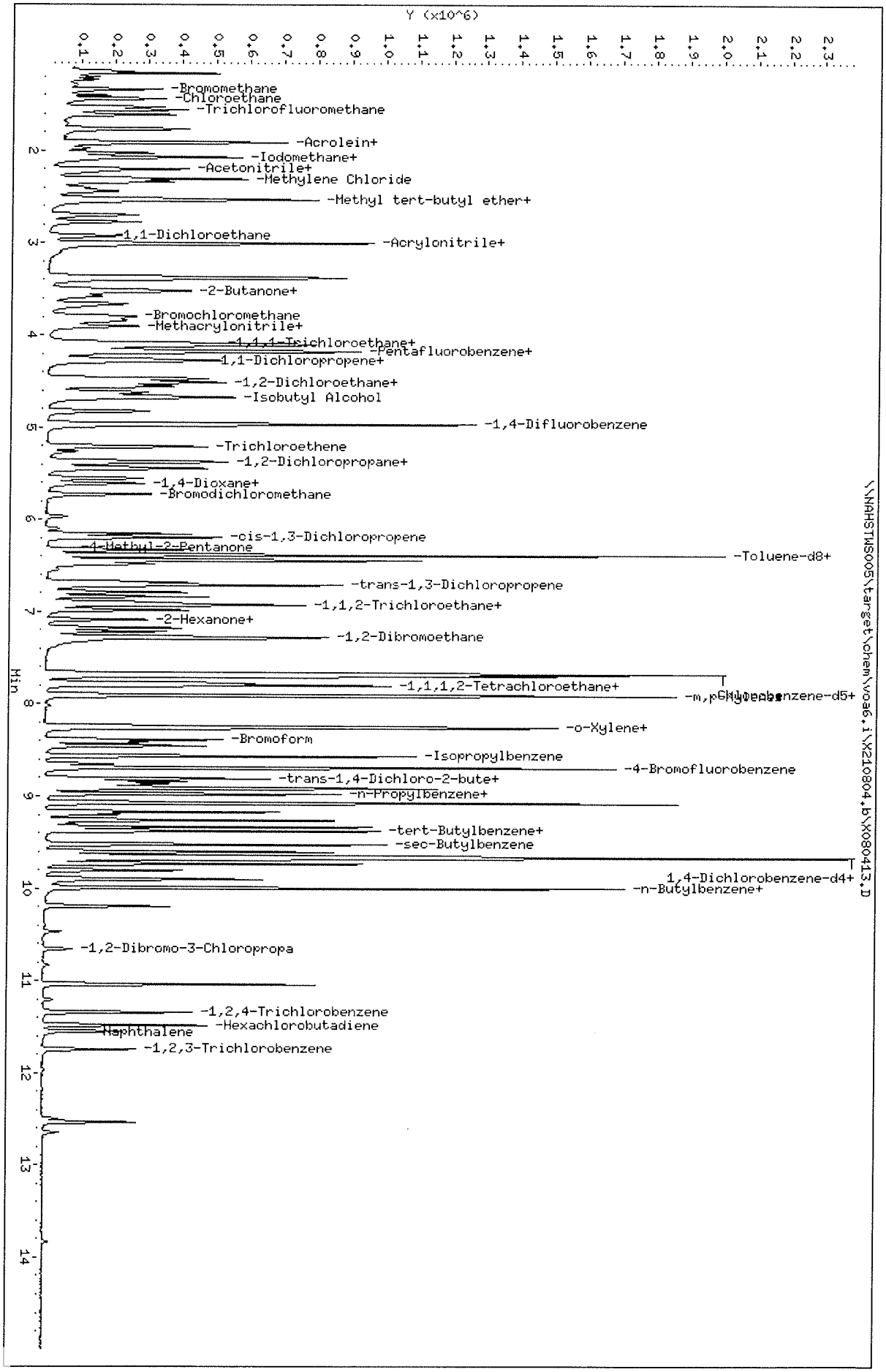
ALS Laboratory Group

Data file : \\NAHSTWS005\target\chem\voa6.i\X210804.b\X080413.D
Lab Smp Id: HS21071405-11MSD Client Smp ID: HS21071405-11MSD
Inj Date : 04-AUG-2021 14:57
Operator : PC Inst ID: voa6.i
Smp Info : HS21071405-11MSD;HS21071405-11MSD;3;;MSD
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\target\chem\voa6.i\X210804.b\8260W.m
Meth Date : 10-Sep-2021 14:36 voa6.i Quant Type: ISTD
Cal Date : 30-JUL-2021 13:56 Cal File: X073008.D
Als bottle: 12 QC Sample: MSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0474-dod.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	4.182	(1.000)	821880	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.096	(0.981)	362387	46.9566	46.95
$ 35 1,2-Dichloroethane-d4	65	4.469	4.469	(1.069)	350874	47.8151	47.81
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	1098703	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	1008306	50.0000	
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	1212677	51.2751	51.27
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	413687	48.8899	48.88
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	496946	50.0000	
5 Vinyl Chloride	62	1.138	1.138	(0.272)	139754	17.8635	17.86
11 1,1-Dichloroethene	96	1.911	1.912	(0.457)	128089	18.5215	18.52
17 Methylene Chloride	84	2.305	2.298	(0.551)	127761	18.3956	18.39
27 cis-1,2-Dichloroethene	96	3.530	3.523	(0.844)	145733	17.6770	17.67
33 1,2-Dichloroethane	62	4.555	4.555	(0.918)	163339	18.5316	18.53
38 Trichloroethene	130	5.206	5.207	(1.049)	163591	20.3753	20.37
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	103750	19.6680	19.66


Y (x10^6)
0.1 0.2 0.3 0.4 0.5 0.6 0.7 0.8 0.9 1.0 1.1 1.2 1.3 1.4 1.5 1.6 1.7 1.8 1.9 2.0 2.1 2.2 2.3
Min
2 3 4 5 6 7 8 9 10 11 12 13 14
-Bromomethane
-Chloroethane
-Trichlorofluoromethane
-Acrolein+
-Iodomethane+
-Acetonitrile+
-Methylene Chloride
-Methyl tert-butyl ether+
-1,1-Dichloroethane
-Acrylonitrile+
-2-Butanone+
-Bromochloromethane
-Methacrylonitrile+
-1,1,1-Trichloroethane+
-Pentafluorobenzene+
-1,1-Dichloropropene+
-1,2-Dichloroethane+
-Isobutyl Alcohol
-1,4-Difluorobenzene
-Trichloroethene
-1,2-Dichloropropane+
-1,4-Dioxane+
-Bromodichloromethane
-cis-1,3-Dichloropropene
-4-Methyl-2-Pentanone
-Toluene-d8+
-trans-1,3-Dichloropropene
-1,1,2-Trichloroethane+
-2-Hexanone+
-1,2-Dibromoethane
-1,1,1,2-Tetrachloroethane+
-m,p-Xylene
-Chlorobenzene-d5+
-o-Xylene+
-Bromoform
-Isopropylbenzene
-4-Bromofluorobenzene
-trans-1,4-Dichloro-2-bute+
-n-Propylbenzene+
-tert-Butylbenzene+
-sec-Butylbenzene
1,4-Dichlorobenzene-d4+
-n-Butylbenzene+
-1,2-Dibromo-3-Chloropropa
-1,2,4-Trichlorobenzene
-Hexachlorobutadiene
-Naphthalene
-1,2,3-Trichlorobenzene
\\NAHSTWS005\target\chem\voa6.i\X210804.b\X080413.D
Data File: \\NAHSTWS005\target\chem\voa6.i\X210804.b\X080413.D
Date : 04-AUG-2021 14:57
Client ID: HS21071405-11HSD
Sample Info: HS21071405-11HSD;HS21071405-11HSD;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\X210804.b\X080414.D Page 1
Report Date: 10-Sep-2021 14:34

ALS Laboratory Group

Data file : \\NAHSTWS005\target\chem\voa6.i\X210804.b\X080414.D
Lab Smp Id: HS21071405-04 Client Smp ID: HS21071405-04
Inj Date : 04-AUG-2021 15:18
Operator : PC Inst ID: voa6.i
Smp Info : HS21071405-04;HS21071405-04;;;
Misc Info : HS18090001;WATER;0;25;
Comment :
Method : \\NAHSTWS005\target\chem\voa6.i\X210804.b\8260W.m
Meth Date : 10-Sep-2021 14:30 Genoveva.R Quant Type: ISTD
Cal Date : 30-JUL-2021 13:56 Cal File: X073008.D
Als bottle: 13
Dil Factor: 25.00000
Integrator: HP RTE Compound Sublist: 0474-dod.sub
Target Version: 4.14
Processing Host: NAHSTW7056

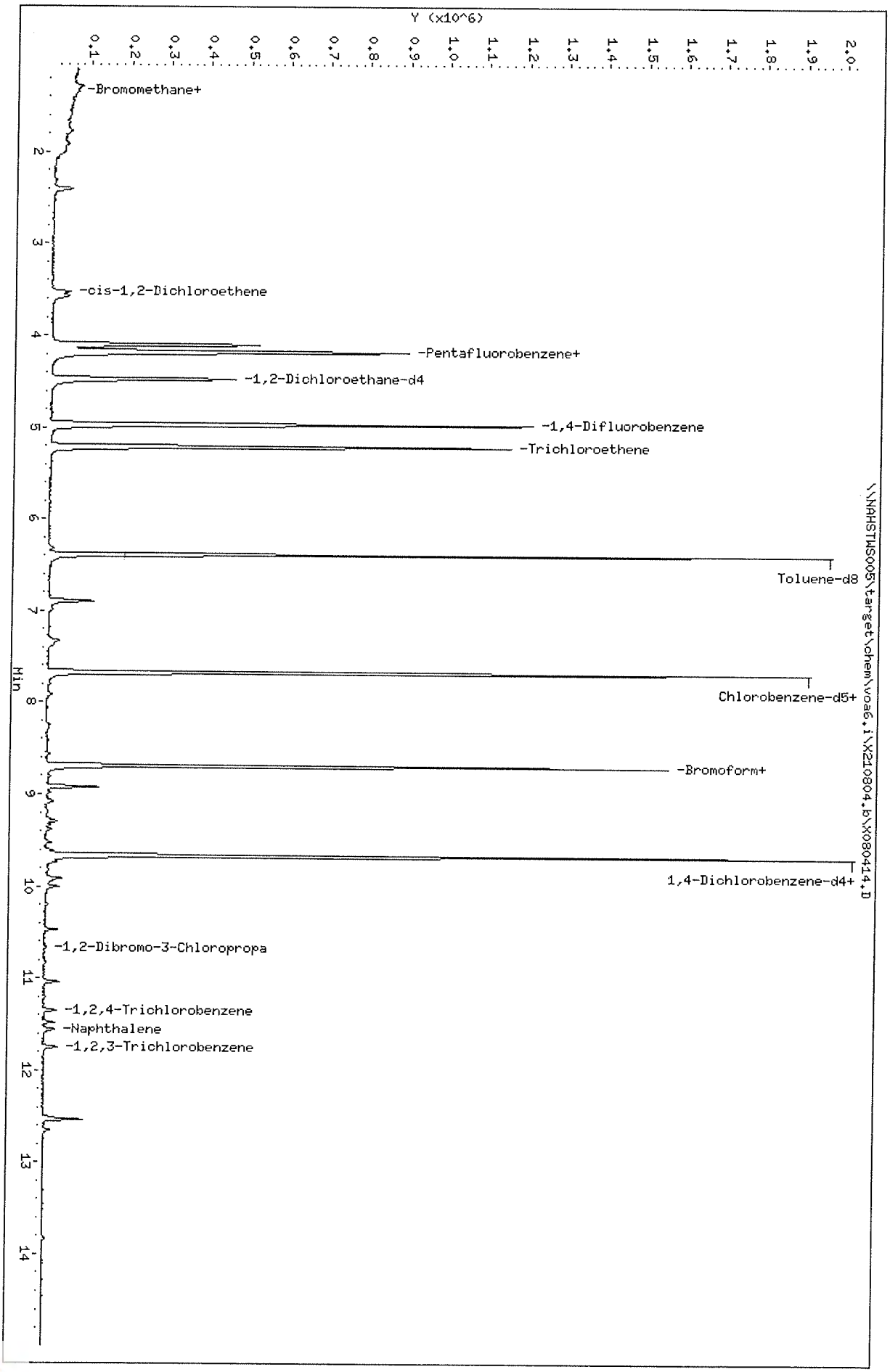
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	25.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	812940	50.0000	
$ 30 Dibromofluoromethane	113	4.096	4.103	(0.979)	363659	47.6545	47.65
$ 35 1,2-Dichloroethane-d4	65	4.469	4.476	(1.069)	345155	47.5482	47.54
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	1093788	50.0000	
* 47 Chlorobenzene-d5	117	7.670	7.670	(1.000)	974480	50.0000	
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	1200722	52.5319	52.53
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	413936	50.6429	50.64
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	502104	50.0000	
27 cis-1,2-Dichloroethene	96	3.530	3.523	(0.844)	24135	2.95970	73.99(a)
38 Trichloroethene	130	5.206	5.207	(1.049)	398884	49.9044	1247.60

QC Flag Legend

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



Data File: \\NAHSTWS005\target\chem\voa6.i\X210804.b\X080414.D
Date : 04-AUG-2021 15:18
Client ID: HS21071405-04
Sample Info: HS21071405-04;HS21071405-04;;;
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\NAHSTWS005\target\chem\voa6.i\X210804.b\X080414.D

Date : 04-AUG-2021 15:18

Client ID: HS21071405-04

Instrument: voa6.i

Sample Info: HS21071405-04;HS21071405-04;;;

Purge Volume: 5.0

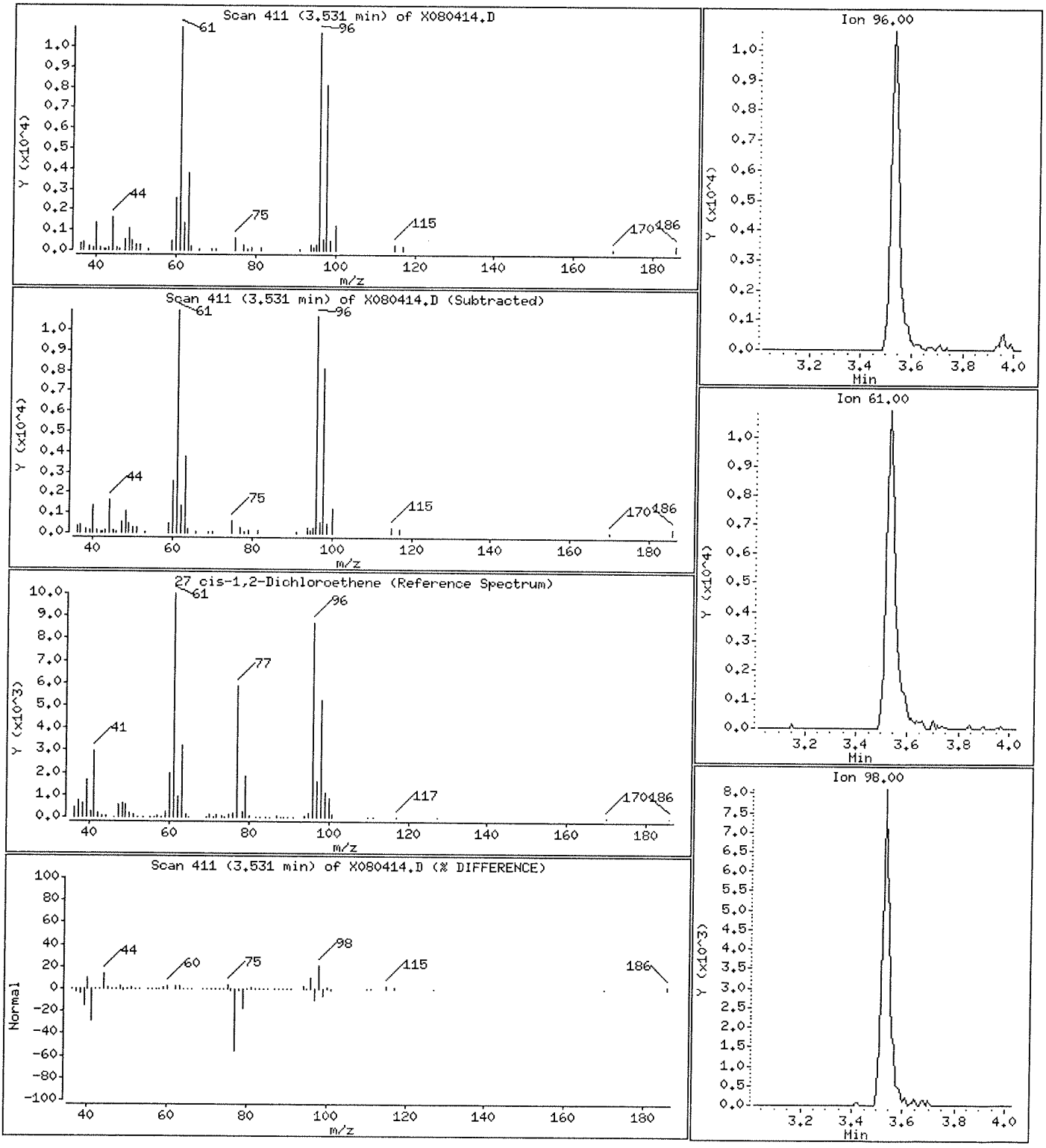
Operator: PC

Column phase: DB624

Column diameter: 0.18

27 cis-1,2-Dichloroethene

Concentration: 73.99 ug/l



Data File: \\NAHSTWS005\target\chem\voa6.i\X210804.b\X080414.D

Date : 04-AUG-2021 15:18

Client ID: HS21071405-04

Instrument: voa6.i

Sample Info: HS21071405-04;HS21071405-04;;;

Purge Volume: 5.0

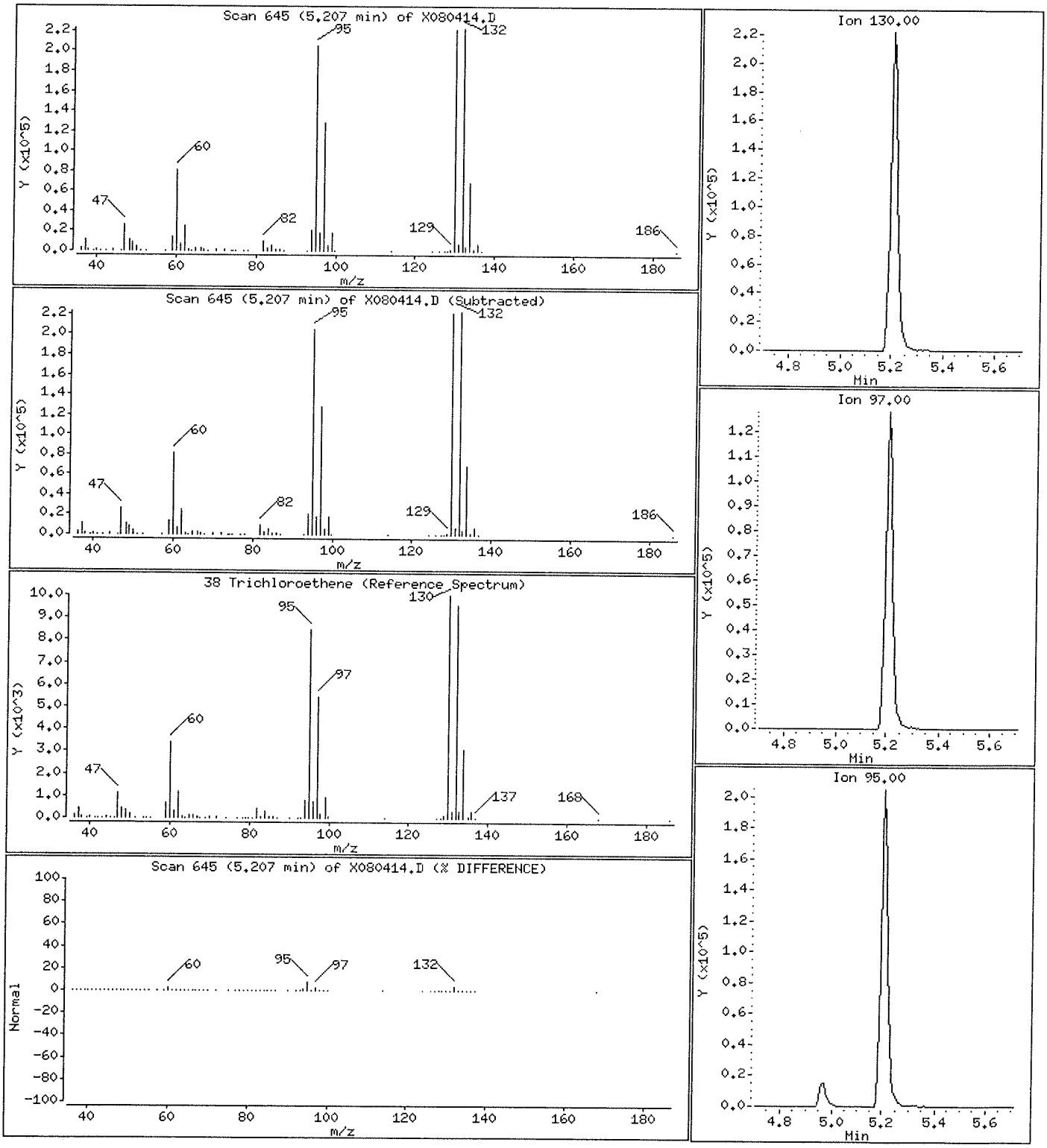
Operator: PC

Column phase: DB624

Column diameter: 0.18

38 Trichloroethene

Concentration: 1247.60 ug/l



Data File: \\NAHSTWS005\target\chem\voa6.i\X210804.b\X080424.D Page 1
Report Date: 10-Sep-2021 14:34

ALS Laboratory Group

Data file : \\NAHSTWS005\target\chem\voa6.i\X210804.b\X080424.D
Lab Smp Id: HS21071405-02 Client Smp ID: HS21071405-02
Inj Date : 04-AUG-2021 18:48
Operator : PC Inst ID: voa6.i
Smp Info : HS21071405-02;HS21071405-02;;;
Misc Info : HS18090001;WATER;0;5;
Comment :
Method : \\NAHSTWS005\target\chem\voa6.i\X210804.b\8260W.m
Meth Date : 10-Sep-2021 14:30 Genoveva.R Quant Type: ISTD
Cal Date : 30-JUL-2021 13:56 Cal File: X073008.D
Als bottle: 23
Dil Factor: 5.00000
Integrator: HP RTE Compound Sublist: 0474-dod.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	4.182	4.182	(1.000)	776645	50.0000	
$ 30 Dibromofluoromethane	113	4.096	4.103	(0.979)	336094	46.0672	46.06
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	326478	47.0684	47.06
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	1049344	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.670	(1.000)	916912	50.0000	
$ 48 Toluene-d8	98	6.389	6.388	(0.833)	1138923	52.9566	52.95
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	384644	50.0048	50.00
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	436267	50.0000	
5 Vinyl Chloride	62	1.138	1.138	(0.272)	3684	0.49832	2.49(a)
11 1,1-Dichloroethene	96	1.919	1.912	(0.459)	4122	0.63075	3.15(a)
27 cis-1,2-Dichloroethene	96	3.523	3.523	(0.842)	999296	128.272	641.35
38 Trichloroethene	130	5.207	5.207	(1.049)	4252005	554.499	2772.49(A)

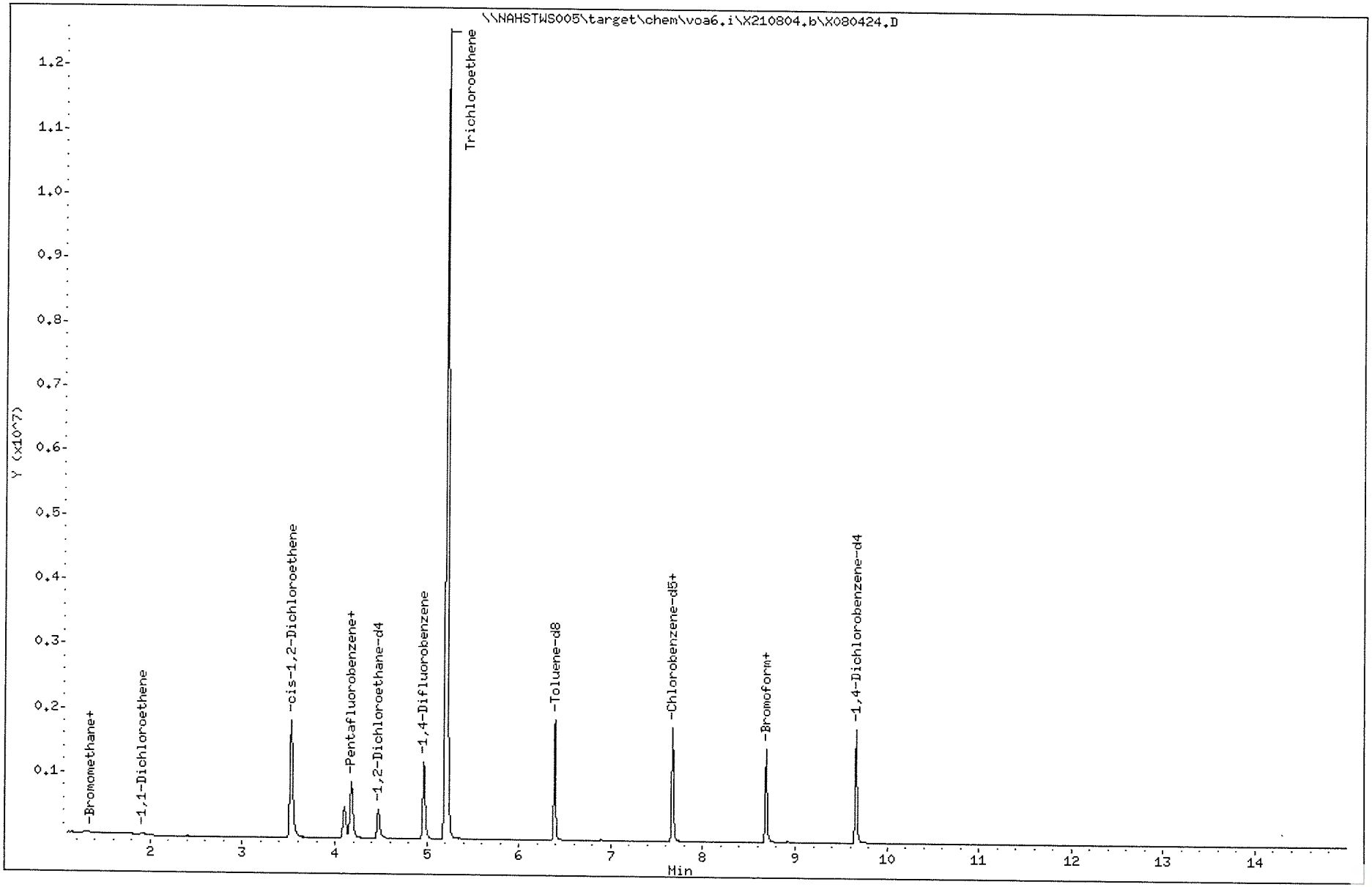
QC Flag Legend

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

Data File: \\NAHSTWS005\target\chem\voa6.i\X210804.b\X080424.D
Date : 04-AUG-2021 18:48
Client ID: HS21071405-02
Sample Info: HS21071405-02;HS21071405-02;;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i

Operator: PC
Column diameter: 0.18



Data File: \\NAHSTWS005\target\chem\voa6.i\X210804.b\X080424.D

Date : 04-AUG-2021 18:48

Client ID: HS21071405-02

Instrument: voa6.i

Sample Info: HS21071405-02;HS21071405-02;;;

Purge Volume: 5.0

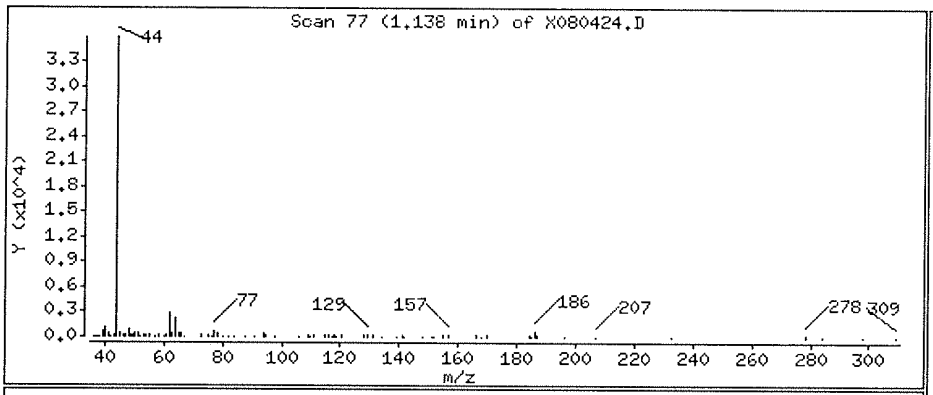
Operator: PC

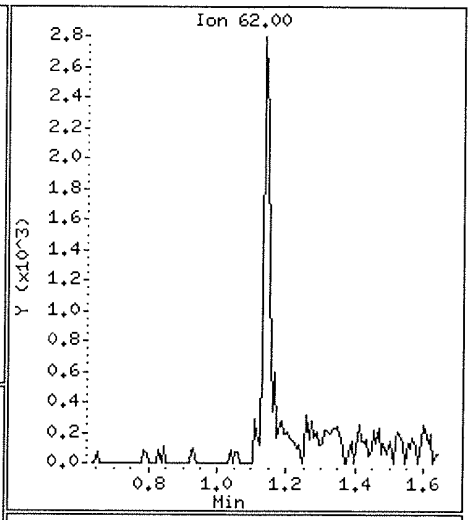
Column phase: DB624

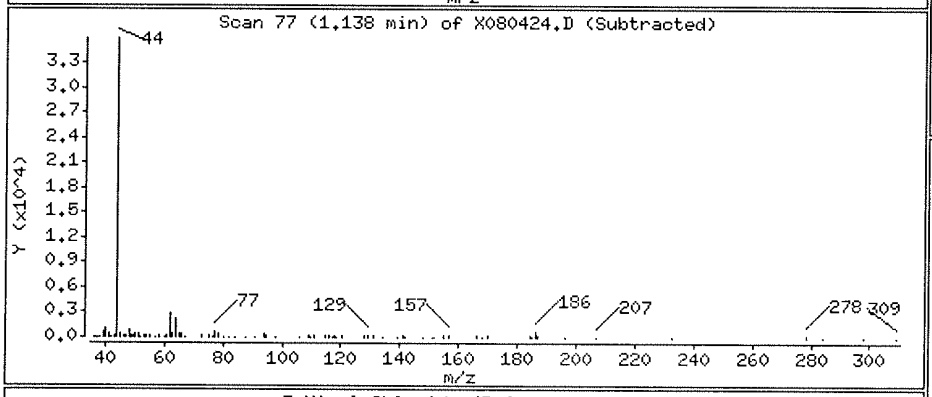
Column diameter: 0.18

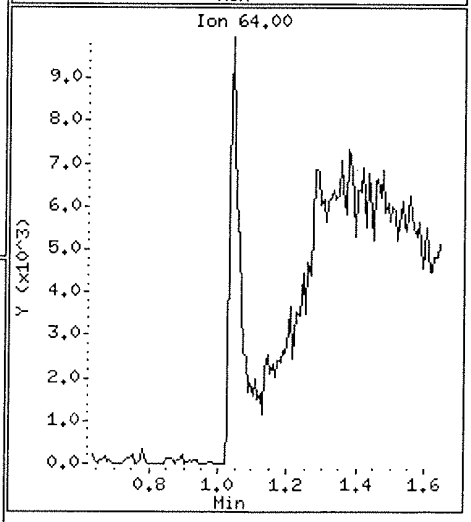
5 Vinyl Chloride

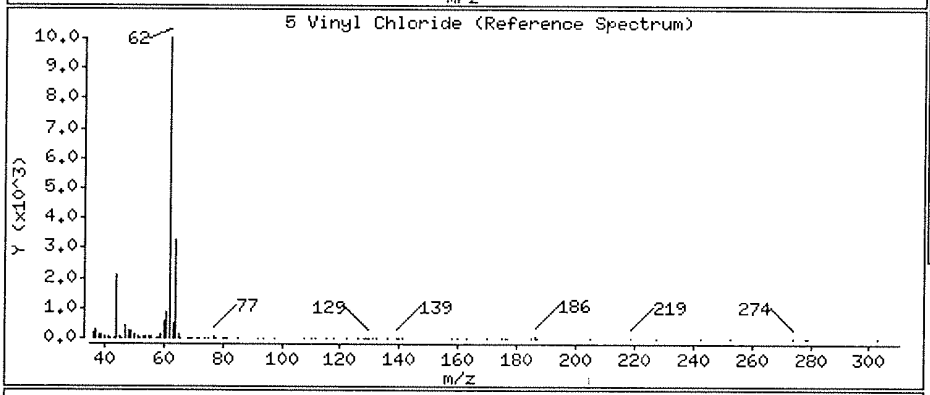
Concentration: 2.49 ug/l

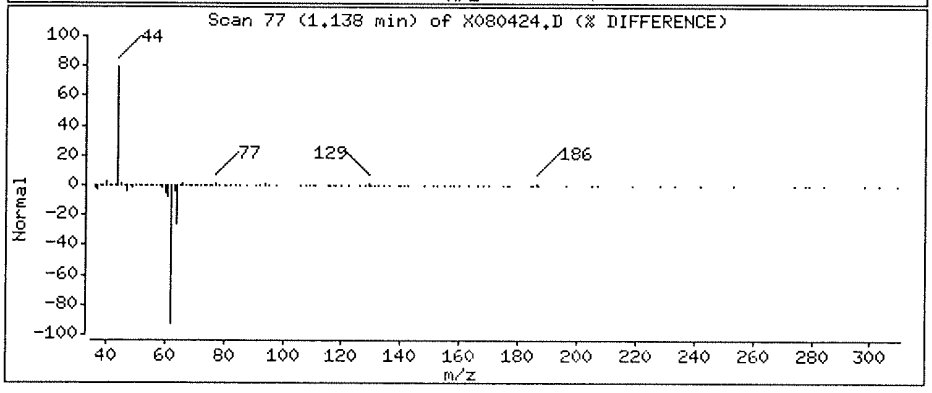












Data File: \\NAHSTWS005\target\chem\voa6.i\X210804.b\X080424.D

Date : 04-AUG-2021 18:48

Client ID: HS21071405-02

Instrument: voa6.i

Sample Info: HS21071405-02;HS21071405-02;;;

Purge Volume: 5.0

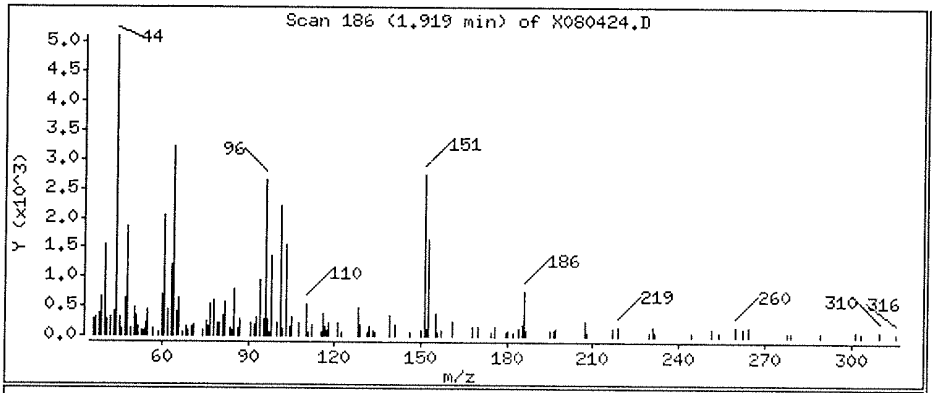
Operator: PC

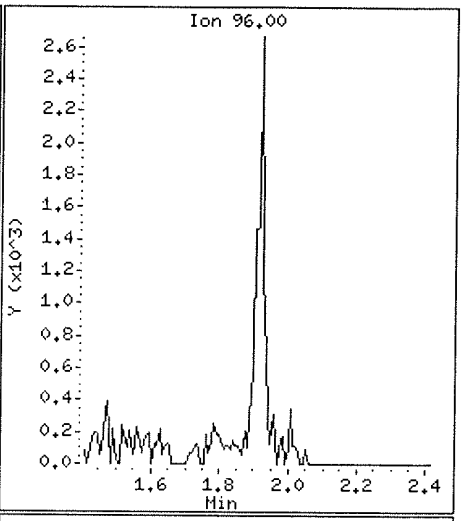
Column phase: DB624

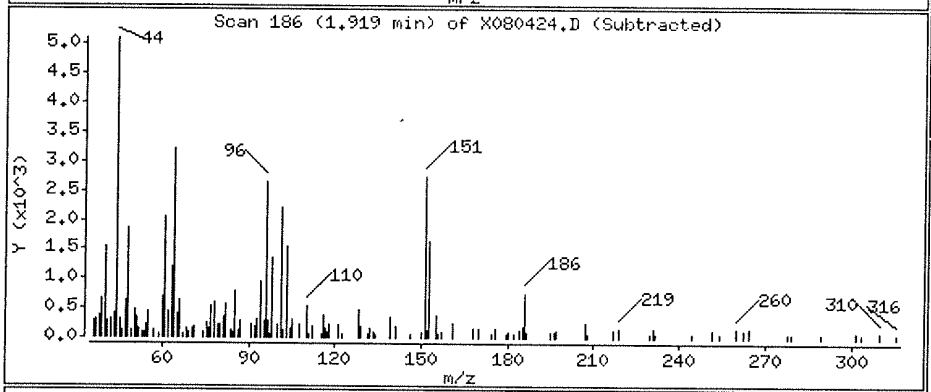
Column diameter: 0.18

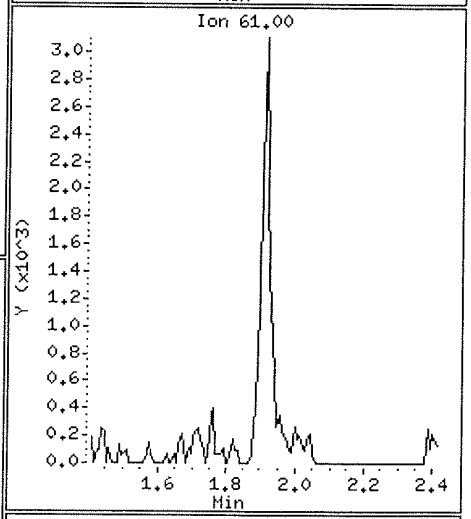
11 1,1-Dichloroethene

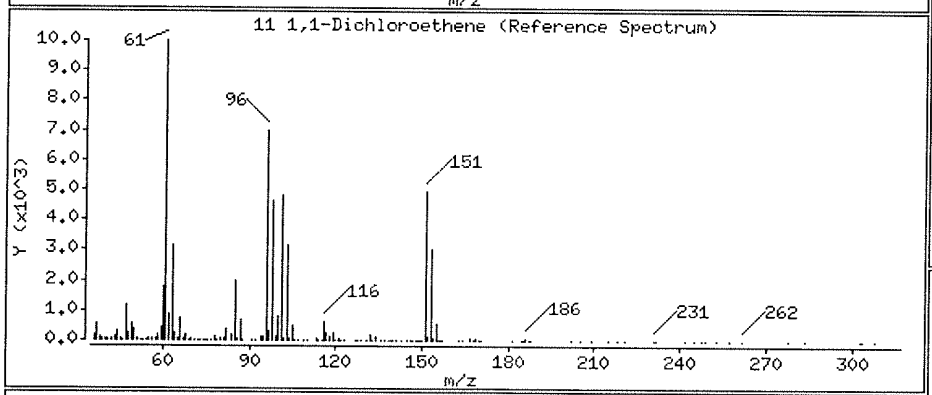
Concentration: 3.15 ug/l

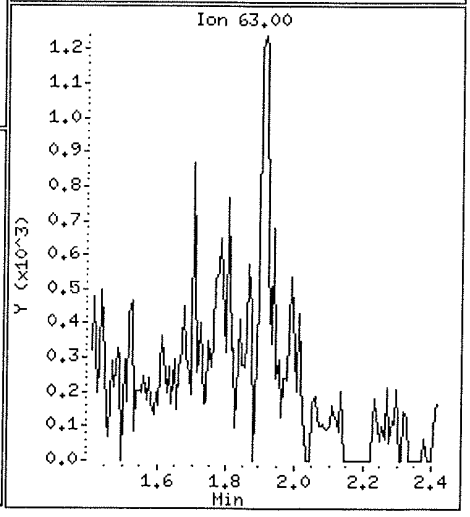


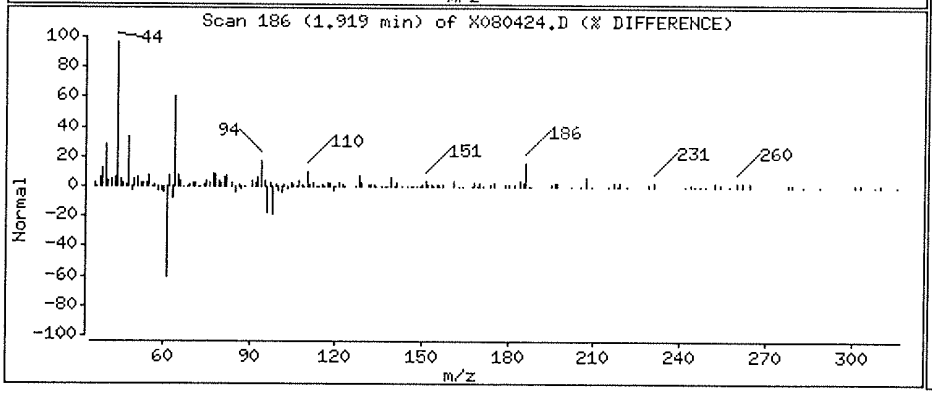












Data File: \\NAHSTWS005\target\chem\voa6.i\X210804.b\X080424.D

Date : 04-AUG-2021 18:48

Client ID: HS21071405-02

Instrument: voa6.i

Sample Info: HS21071405-02;HS21071405-02;;;

Purge Volume: 5.0

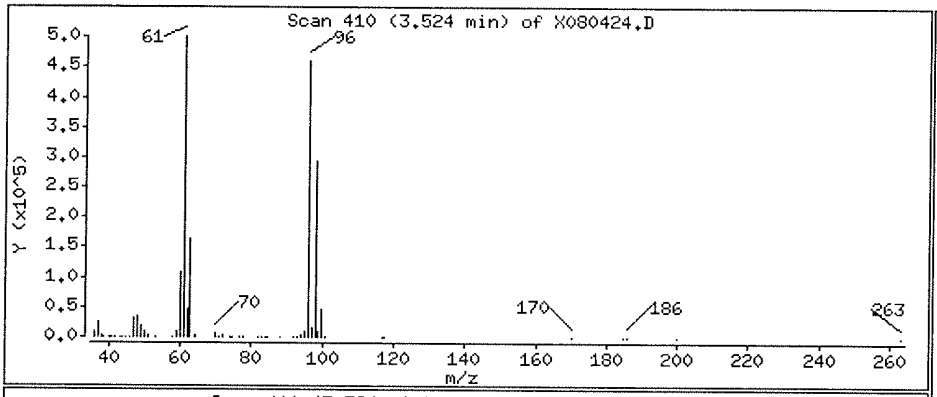
Operator: PC

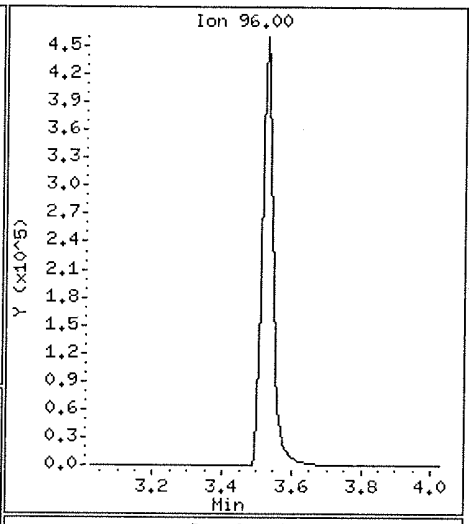
Column phase: DB624

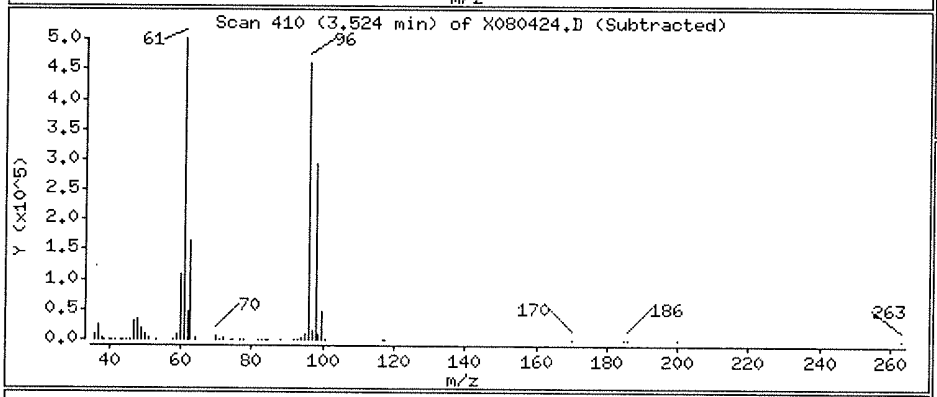
Column diameter: 0.18

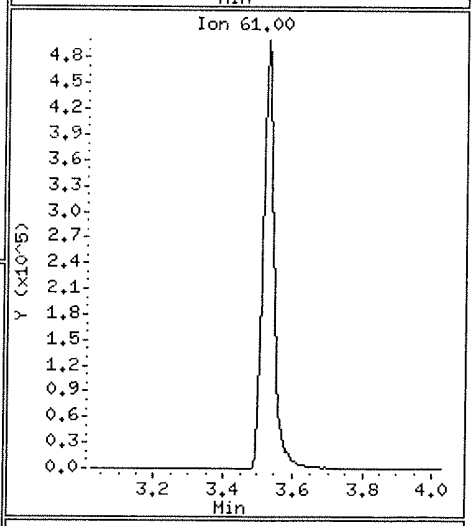
27 cis-1,2-Dichloroethene

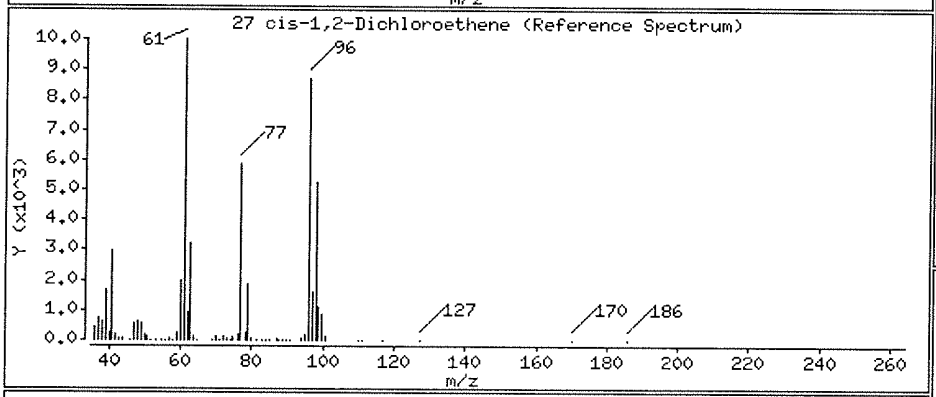
Concentration: 641.35 ug/l

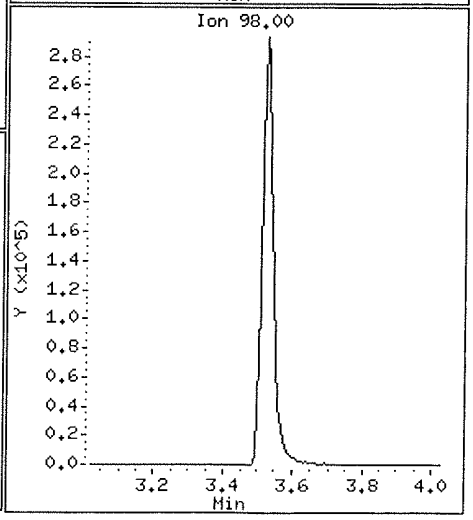


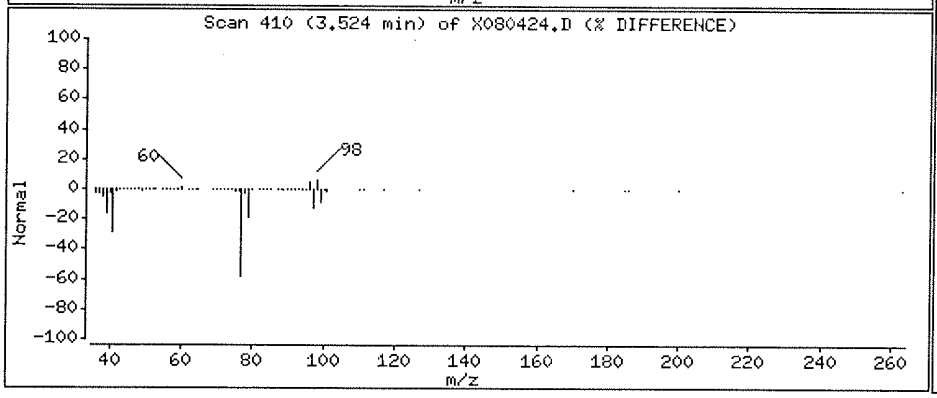












Data File: \\NAHSTWS005\target\chem\voa6.i\X210804.b\X080424.D

Date : 04-AUG-2021 18:48

Client ID: HS21071405-02

Instrument: voa6.i

Sample Info: HS21071405-02;HS21071405-02;;;

Purge Volume: 5.0

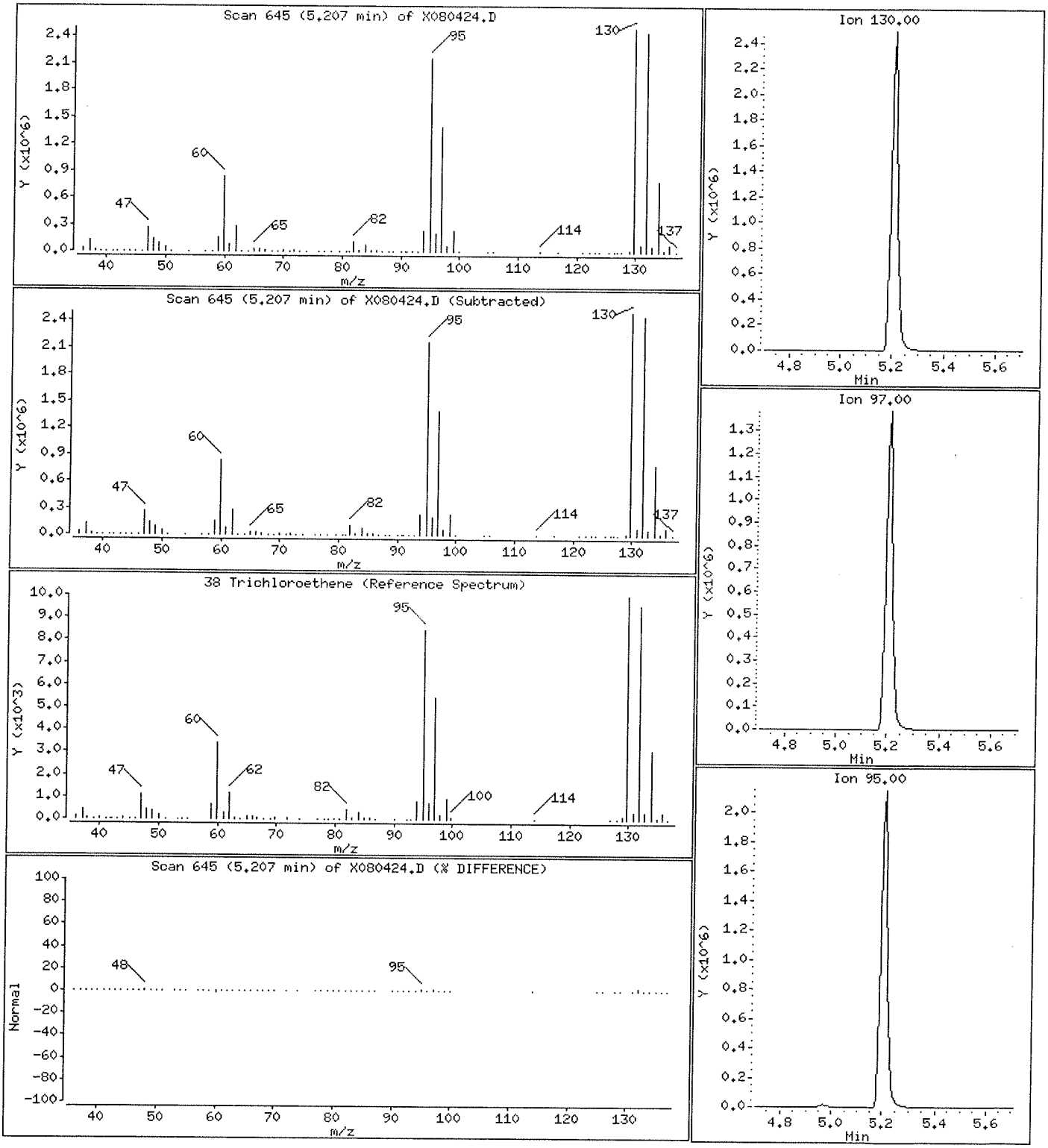
Operator: PC

Column phase: DB624

Column diameter: 0.18

38 Trichloroethene

Concentration: 2772.49 ug/l



Data File: \\NAHSTWS005\target\chem\voa6.i\X210804.b\X080425.D Page 1
Report Date: 10-Sep-2021 14:34

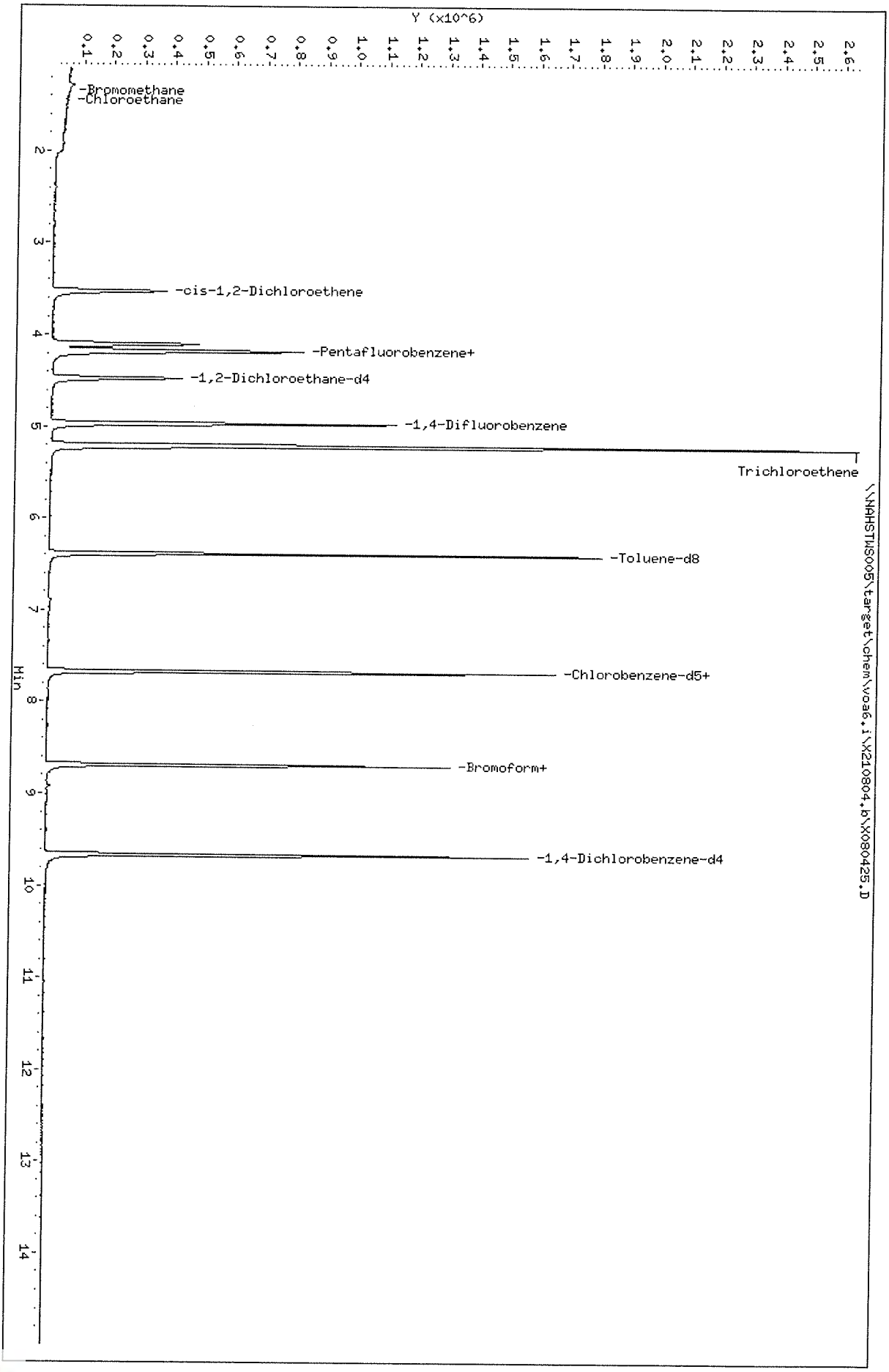
ALS Laboratory Group

Data file : \\NAHSTWS005\target\chem\voa6.i\X210804.b\X080425.D
Lab Smp Id: HS21071405-02 Client Smp ID: HS21071405-02
Inj Date : 04-AUG-2021 19:09
Operator : PC Inst ID: voa6.i
Smp Info : HS21071405-02;HS21071405-02;;;
Misc Info : HS18090001;WATER;0;25;
Comment :
Method : \\NAHSTWS005\target\chem\voa6.i\X210804.b\8260W.m
Meth Date : 10-Sep-2021 14:30 Genoveva.R Quant Type: ISTD
Cal Date : 30-JUL-2021 13:56 Cal File: X073008.D
Als bottle: 24
Dil Factor: 25.00000
Integrator: HP RTE Compound Sublist: 0474-dod.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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

Name	Value	Description
DF	25.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	742683	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	335226	48.0934	48.09
$ 35 1,2-Dichloroethane-d4	65	4.469	4.476	(1.068)	320881	48.4014	48.40
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	1001857	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.670	(1.000)	893037	50.0000	
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	1088183	51.9501	51.95
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	360664	48.1140	48.11
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	425881	50.0000	
27 cis-1,2-Dichloroethene	96	3.530	3.523	(0.844)	212760	28.5592	713.97
38 Trichloroethene	130	5.207	5.207	(1.049)	914228	124.874	3121.86



Data File: \\NAHSTWS005\target\chem\voa6.i\X210804.b\X080425.D
Date : 04-AUG-2021 19:09
Client ID: HS21071405-02
Sample Info: HS21071405-02;HS21071405-02;;;
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\NAHSTWS005\target\chem\voa6.i\X210804.b\X080425.D

Date : 04-AUG-2021 19:09

Client ID: HS21071405-02

Instrument: voa6.i

Sample Info: HS21071405-02;HS21071405-02;;;

Purge Volume: 5.0

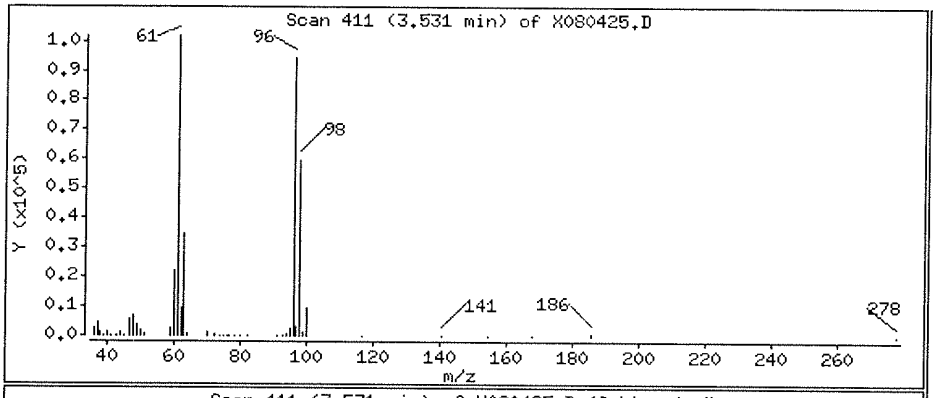
Operator: PC

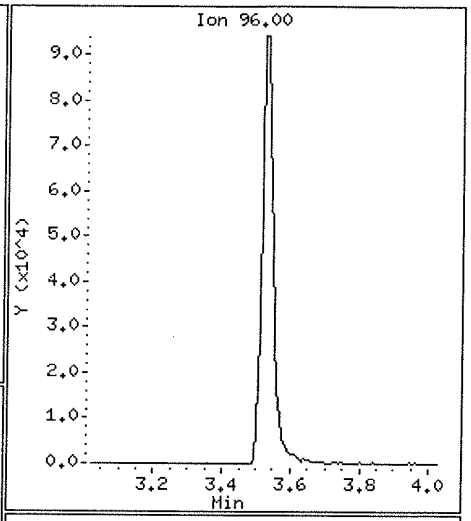
Column phase: DB624

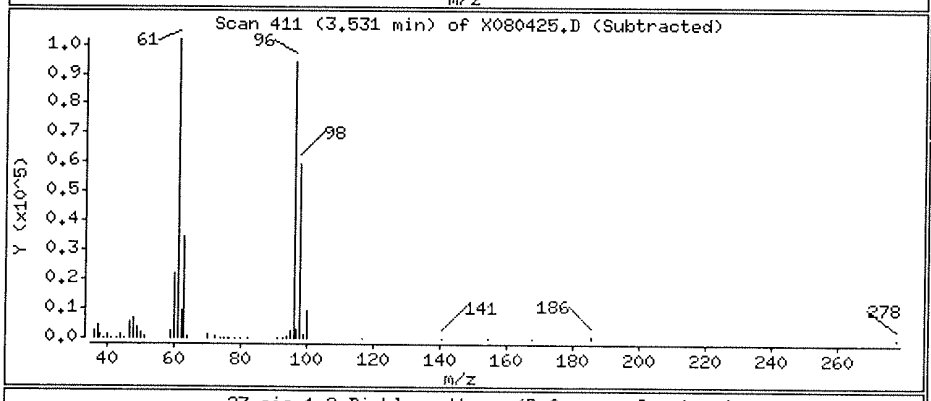
Column diameter: 0.18

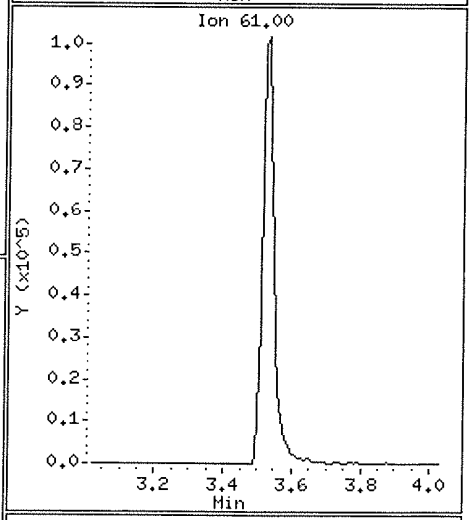
27 cis-1,2-Dichloroethene

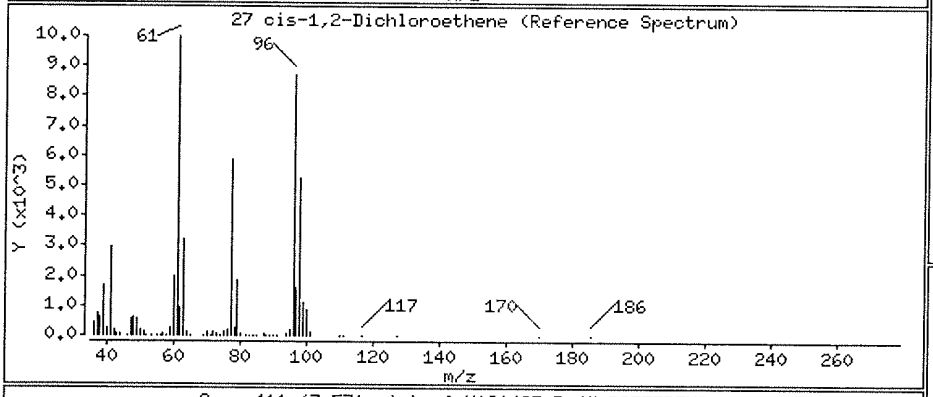
Concentration: 713.97 ug/l

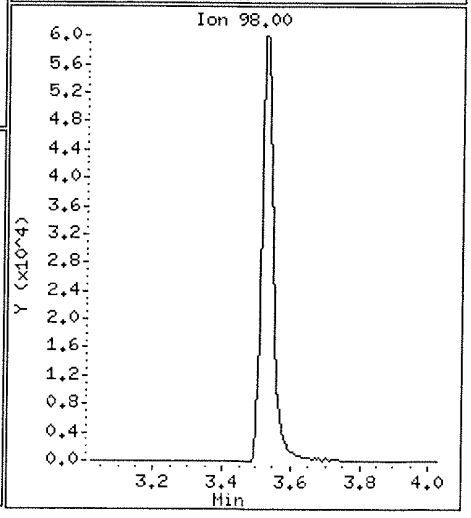


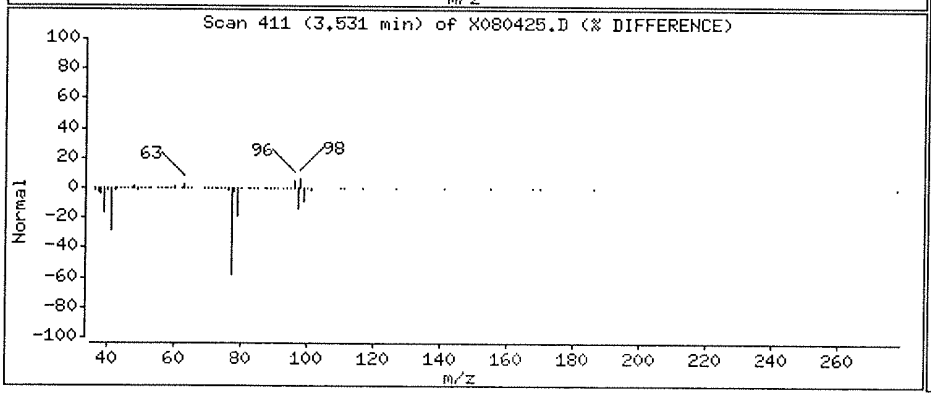












Data File: \\NAHSTWS005\target\chem\voa6.i\X210804.b\X080425.D

Date : 04-AUG-2021 19:09

Client ID: HS21071405-02

Instrument: voa6.i

Sample Info: HS21071405-02;HS21071405-02;;;

Purge Volume: 5.0

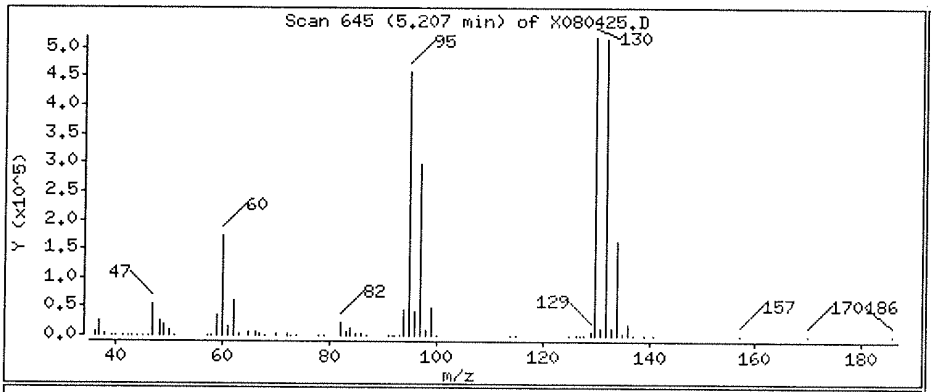
Operator: PC

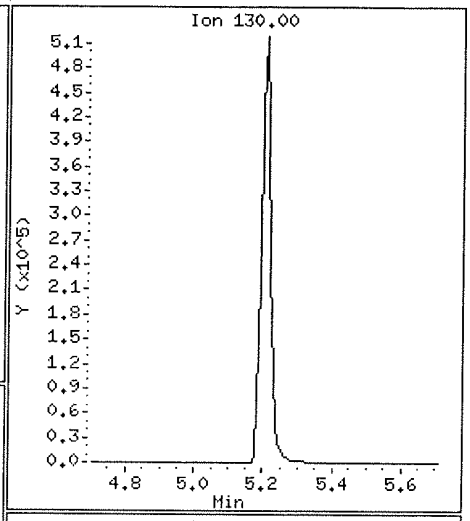
Column phase: DB624

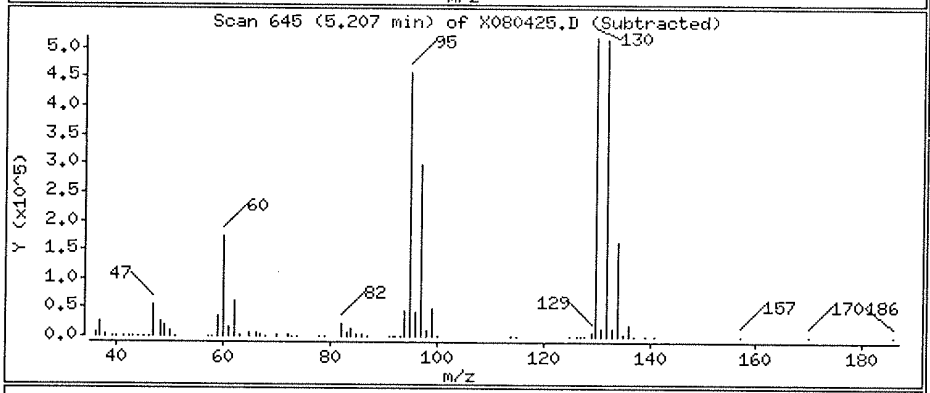
Column diameter: 0.18

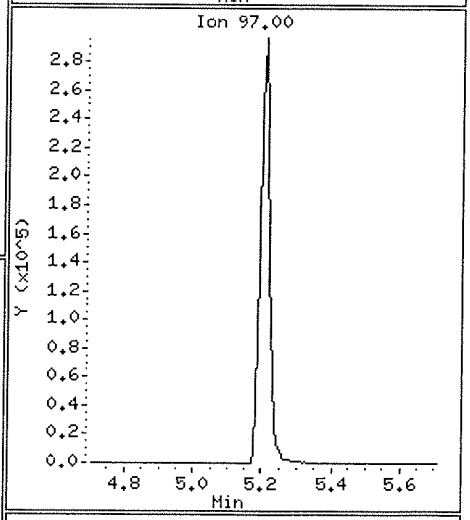
38 Trichloroethene

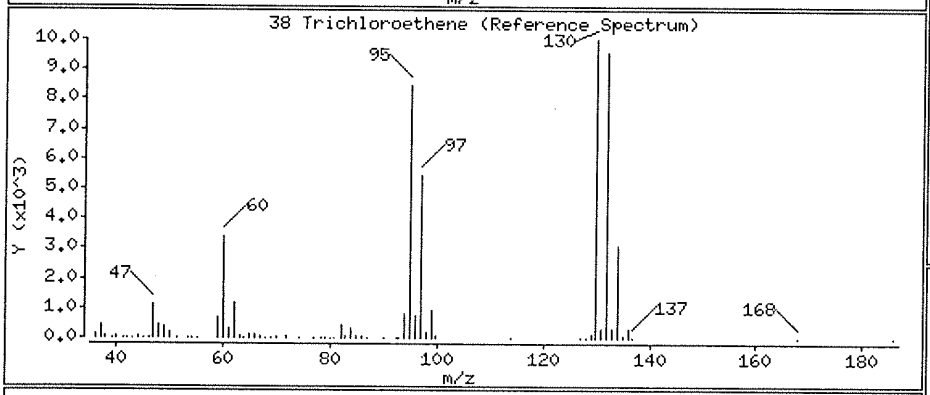
Concentration: 3121.86 ug/l

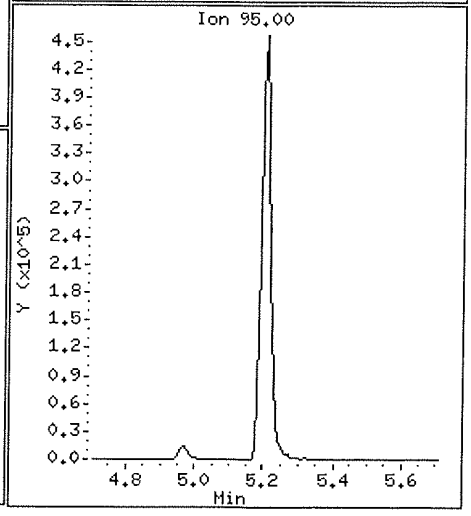


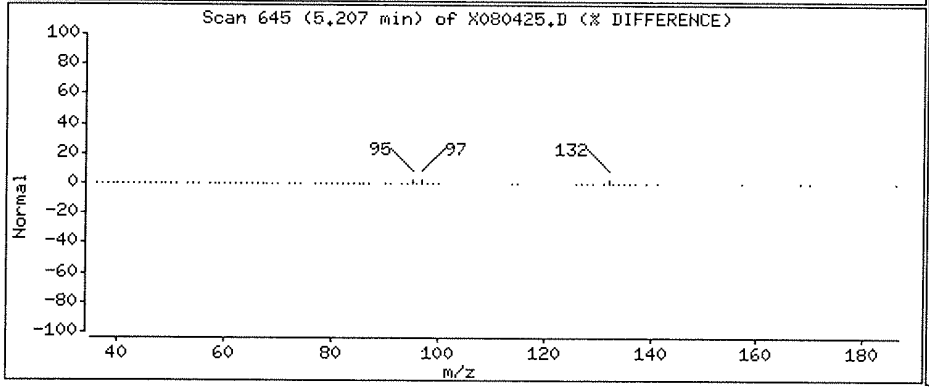












Data File: \\NAHSTWS005\target\chem\voa6.i\X210804.b\X080426.D Page 1
Report Date: 10-Sep-2021 14:34

ALS Laboratory Group

Data file : \\NAHSTWS005\target\chem\voa6.i\X210804.b\X080426.D
Lab Smp Id: HS21071405-07 Client Smp ID: HS21071405-07
Inj Date : 04-AUG-2021 19:30
Operator : PC Inst ID: voa6.i
Smp Info : HS21071405-07;HS21071405-07;;;
Misc Info : HS18090001;WATER;0;5;
Comment :
Method : \\NAHSTWS005\target\chem\voa6.i\X210804.b\8260W.m
Meth Date : 10-Sep-2021 14:30 Genoveva.R Quant Type: ISTD
Cal Date : 30-JUL-2021 13:56 Cal File: X073008.D
Als bottle: 25
Dil Factor: 5.00000
Integrator: HP RTE Compound Sublist: 0474-dod.sub
Target Version: 4.14
Processing Host: NAHSTW7056

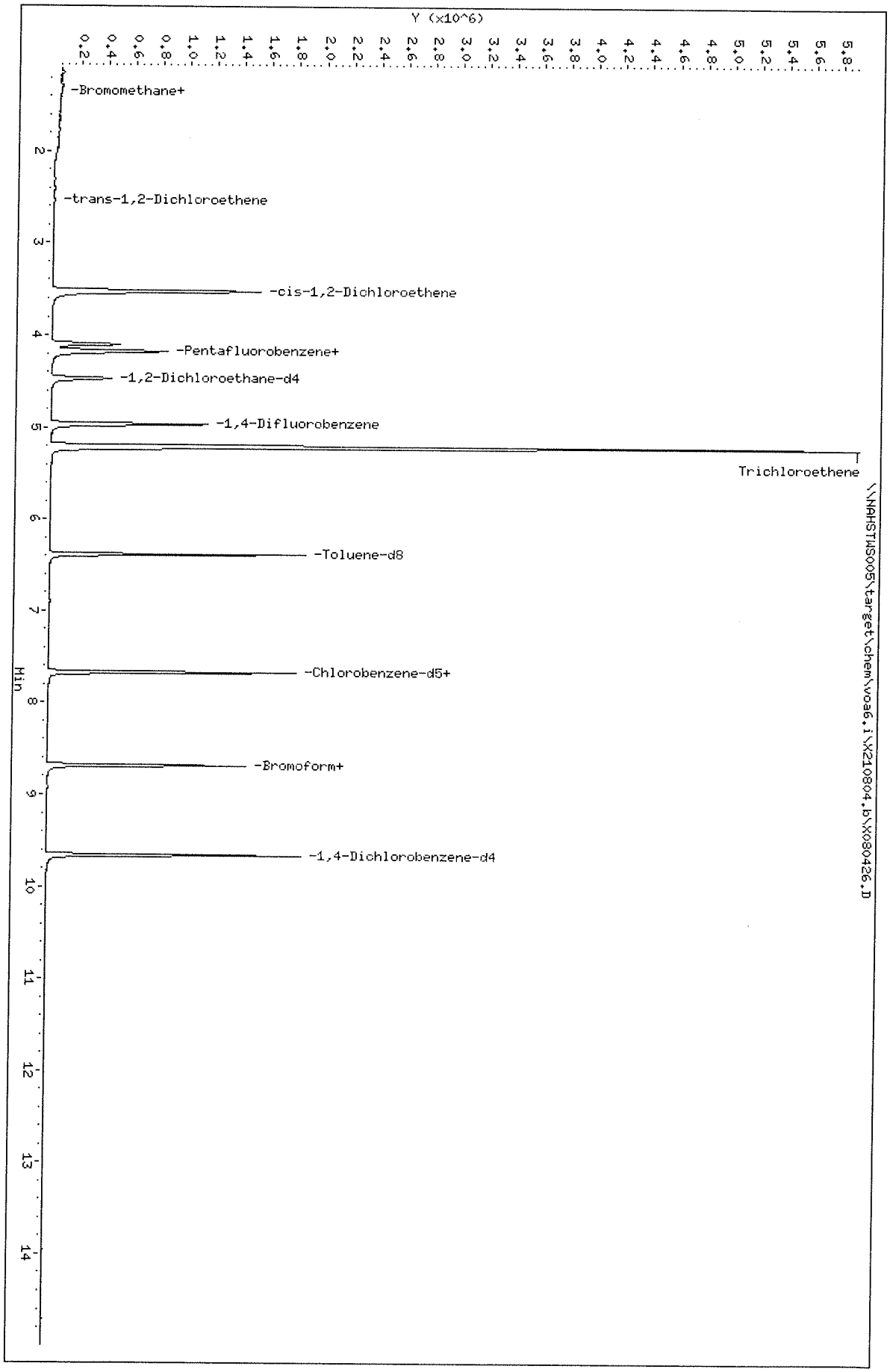
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

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	4.182	4.182	(1.000)	762296	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	340689	47.6095	47.60
$ 35 1,2-Dichloroethane-d4	65	4.469	4.476	(1.069)	320959	47.1451	47.14
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	1033678	50.0000	
* 47 Chlorobenzene-d5	117	7.670	7.670	(1.000)	922899	50.0000	
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	1127334	52.0777	52.07
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	387296	50.0232	50.02
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	481376	50.0000	
5 Vinyl Chloride	62	1.138	1.138	(0.272)	13915	1.91766	9.58(a)
27 cis-1,2-Dichloroethene	96	3.523	3.523	(0.842)	853583	111.630	558.15
38 Trichloroethene	130	5.206	5.207	(1.049)	2032214	269.035	1345.17(A)

QC Flag Legend

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



Data File: \\NAHSTWS005\target\chem\voa6.i\X210804.b\X080426.D
Date : 04-AUG-2021 19:30
Client ID: HS21071405-07
Sample Info: HS21071405-07;HS21071405-07;;;
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\NAHSTWS005\target\chem\voa6.i\X210804.b\X080426.D

Date : 04-AUG-2021 19:30

Client ID: HS21071405-07

Instrument: voa6.i

Sample Info: HS21071405-07;HS21071405-07;;;

Purge Volume: 5.0

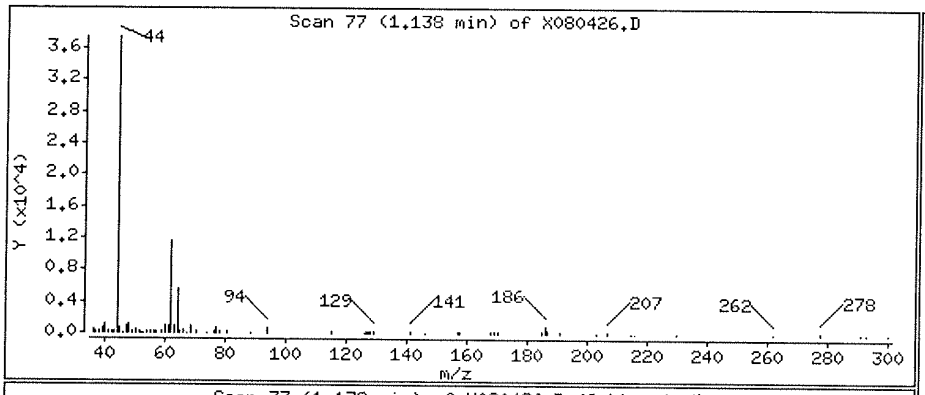
Operator: PC

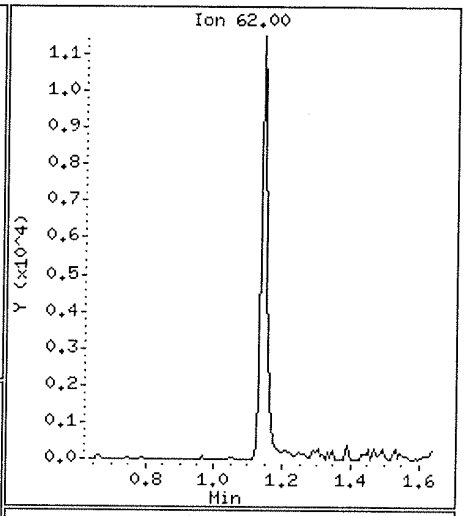
Column phase: DB624

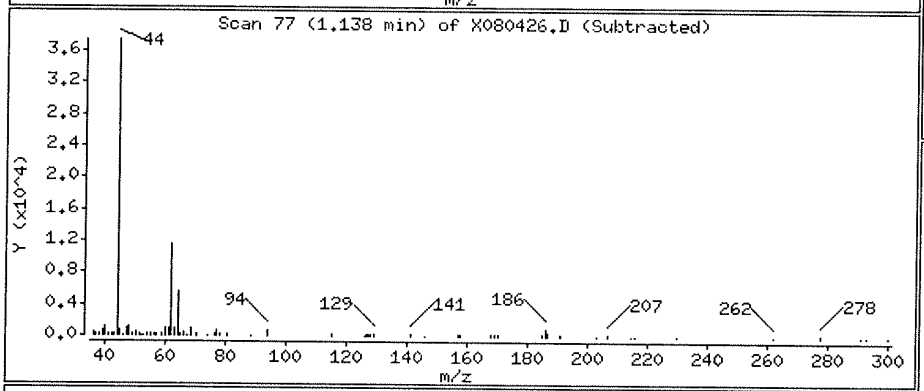
Column diameter: 0.18

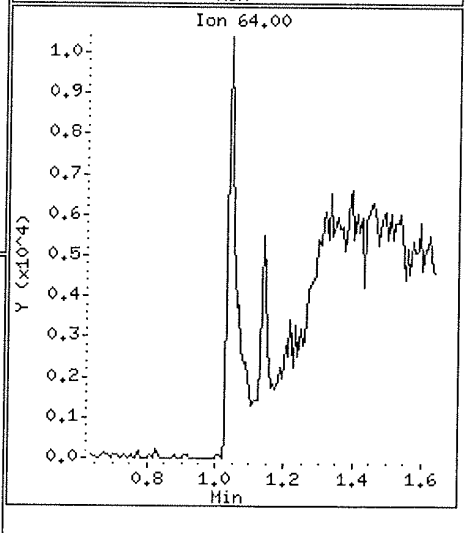
5 Vinyl Chloride

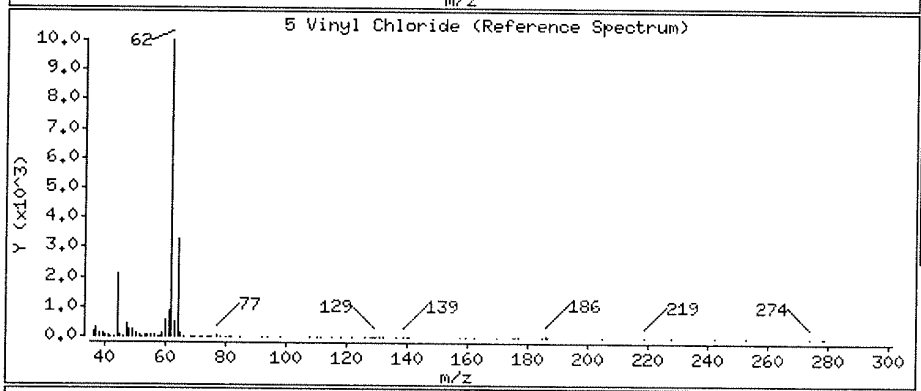
Concentration: 9.58 ug/l

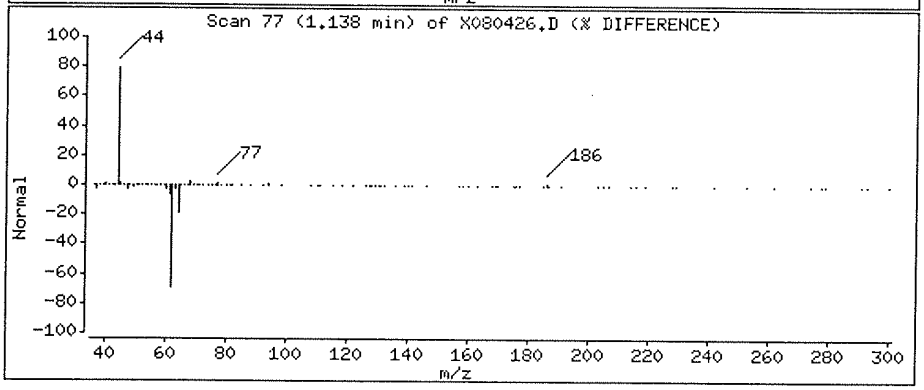












Data File: \\NAHSTWS005\target\chem\voa6.i\X210804.b\X080426.D

Date : 04-AUG-2021 19:30

Client ID: HS21071405-07

Instrument: voa6.i

Sample Info: HS21071405-07;HS21071405-07;;;

Purge Volume: 5.0

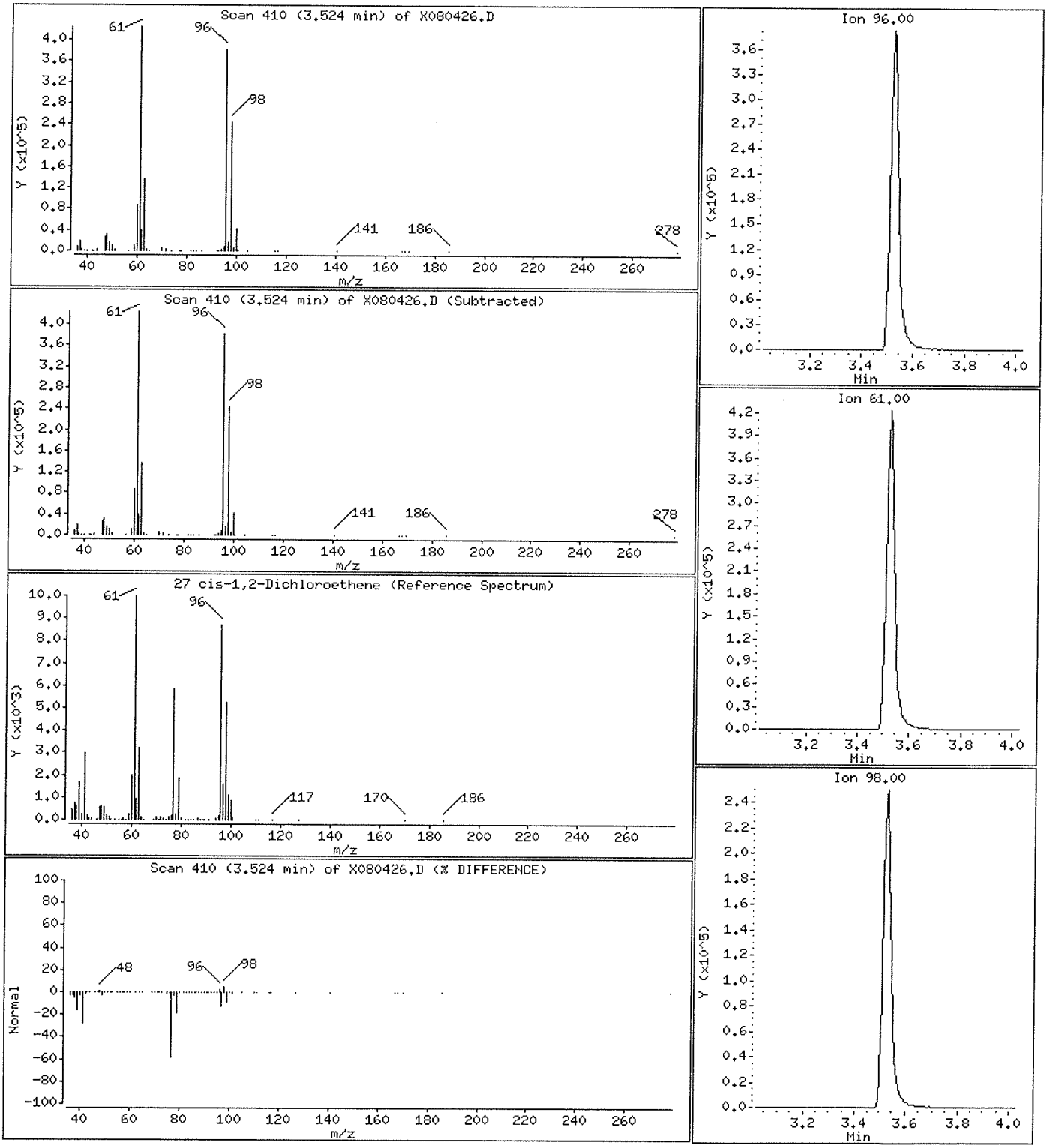
Operator: PC

Column phase: DB624

Column diameter: 0.18

27 cis-1,2-Dichloroethene

Concentration: 558.15 ug/l



Data File: \\NAHSTWS005\target\chem\voa6.i\X210804.b\X080426.D

Date : 04-AUG-2021 19:30

Client ID: HS21071405-07

Instrument: voa6.i

Sample Info: HS21071405-07;HS21071405-07;;;

Purge Volume: 5.0

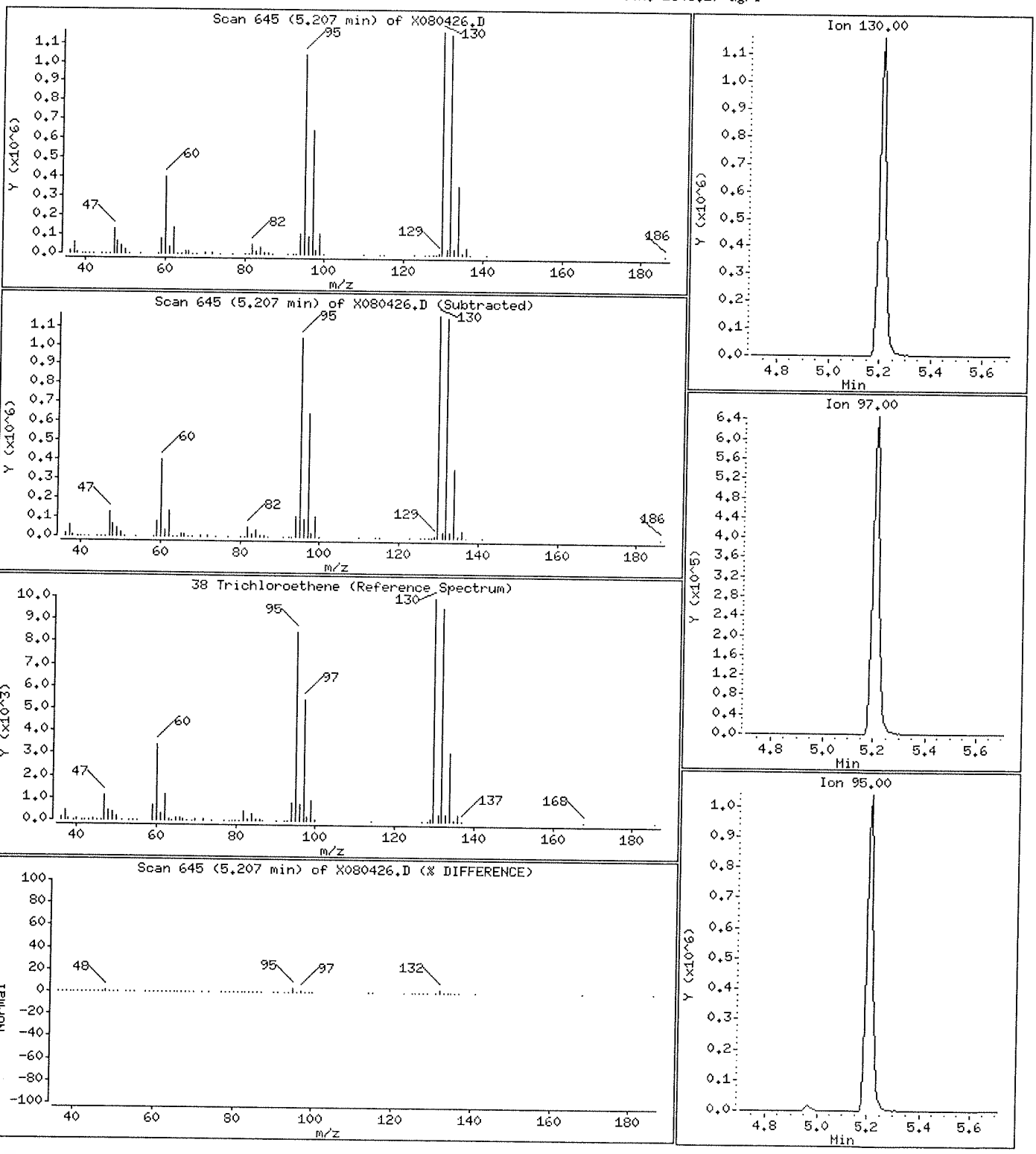
Operator: PC

Column phase: DB624

Column diameter: 0.18

38 Trichloroethene

Concentration: 1345.17 ug/l



Data File: \\NAHSTWS005\target\chem\voa6.i\X210804.b\X080427.D Page 1
Report Date: 10-Sep-2021 14:34

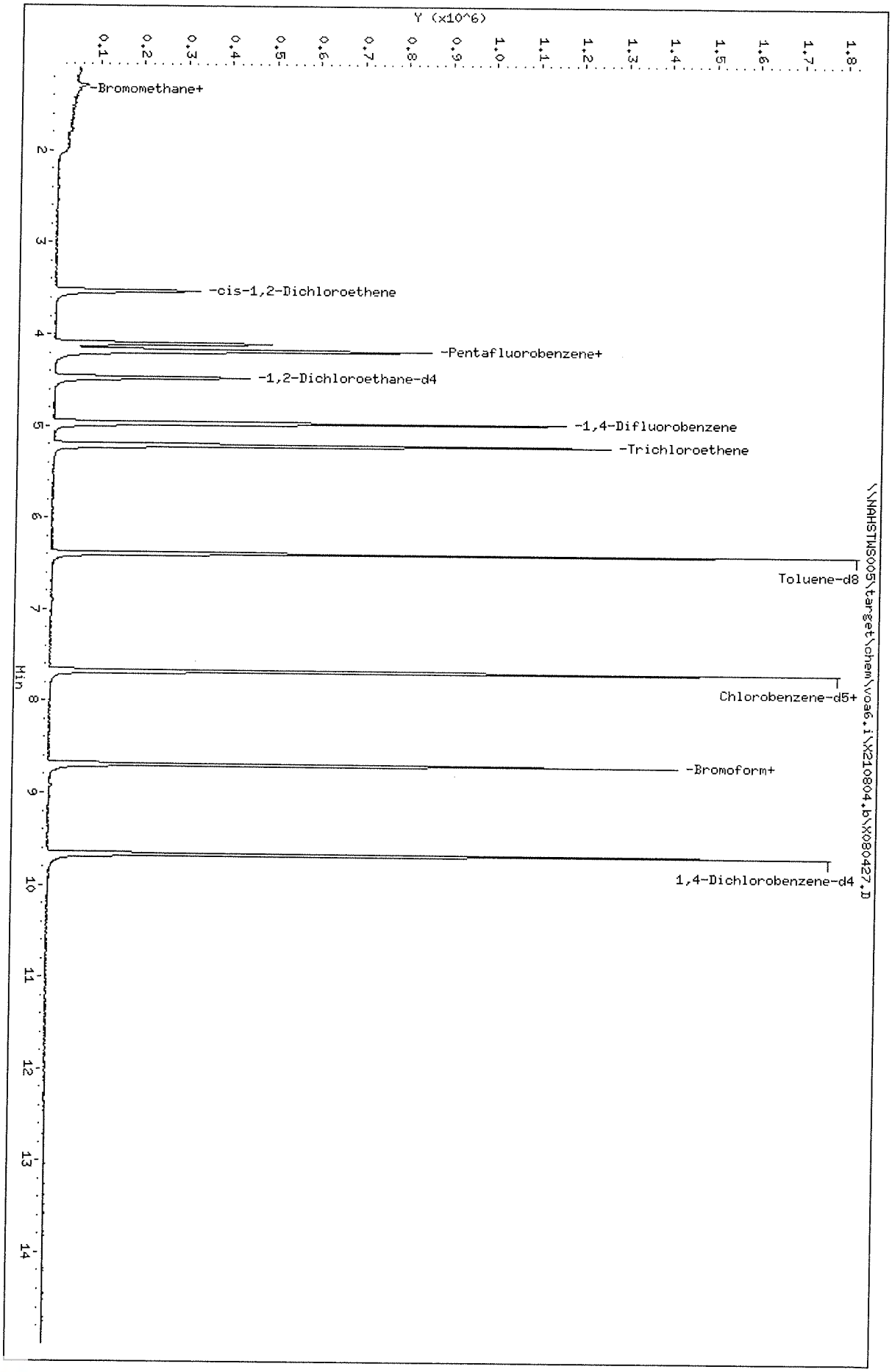
ALS Laboratory Group

Data file : \\NAHSTWS005\target\chem\voa6.i\X210804.b\X080427.D
Lab Smp Id: HS21071405-07 Client Smp ID: HS21071405-07
Inj Date : 04-AUG-2021 19:51
Operator : PC Inst ID: voa6.i
Smp Info : HS21071405-07;HS21071405-07;;;
Misc Info : HS18090001;WATER;0;25;
Comment :
Method : \\NAHSTWS005\target\chem\voa6.i\X210804.b\8260W.m
Meth Date : 10-Sep-2021 14:30 Genoveva.R Quant Type: ISTD
Cal Date : 30-JUL-2021 13:56 Cal File: X073008.D
Als bottle: 26
Dil Factor: 25.00000
Integrator: HP RTE Compound Sublist: 0474-dod.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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

Name	Value	Description
DF	25.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
*	1 Pentafluorobenzene	168	4.182	4.182	(1.000)	770534	50.0000	
$	30 Dibromofluoromethane	113	4.103	4.103	(0.981)	338415	46.7684	46.76
$	35 1,2-Dichloroethane-d4	65	4.469	4.476	(1.069)	327769	47.6398	47.63
*	36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	1036594	50.0000	
*	47 Chlorobenzene-d5	117	7.670	7.670	(1.000)	911980	50.0000	
$	48 Toluene-d8	98	6.388	6.388	(0.833)	1140819	53.3316	53.33
$	69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	377104	49.2794	49.27
*	70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	475950	50.0000	
	27 cis-1,2-Dichloroethene	96	3.530	3.523	(0.844)	188602	24.4013	610.03
	38 Trichloroethene	130	5.206	5.207	(1.049)	447316	59.0515	1476.28



Data File: \\NAHSTWS005\target\chem\voa6.i\X210804.b\X080427.D
Date : 04-AUG-2021 19:51
Client ID: HS21071405-07
Sample Info: HS21071405-07;HS21071405-07;;;
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\NAHSTWS005\target\chem\voa6.i\X210804.b\X080427.D

Date : 04-AUG-2021 19:51

Client ID: HS21071405-07

Instrument: voa6.i

Sample Info: HS21071405-07;HS21071405-07;;;

Purge Volume: 5.0

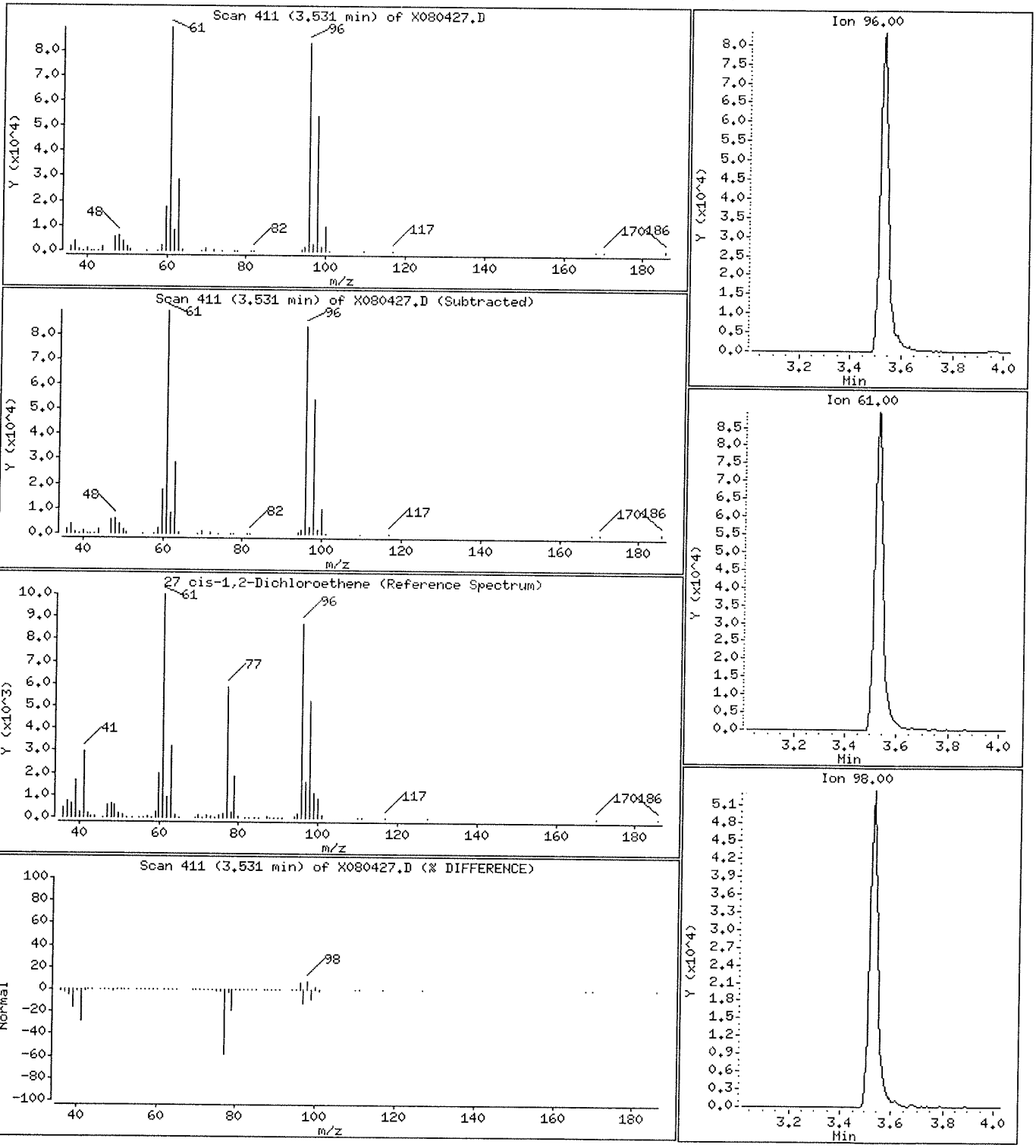
Operator: PC

Column phase: DB624

Column diameter: 0.18

27 cis-1,2-Dichloroethene

Concentration: 610.03 ug/l



Data File: \\NAHSTWS005\target\chem\voa6.i\X210804.b\X080427.D

Date : 04-AUG-2021 19:51

Client ID: HS21071405-07

Instrument: voa6.i

Sample Info: HS21071405-07;HS21071405-07;;;

Purge Volume: 5.0

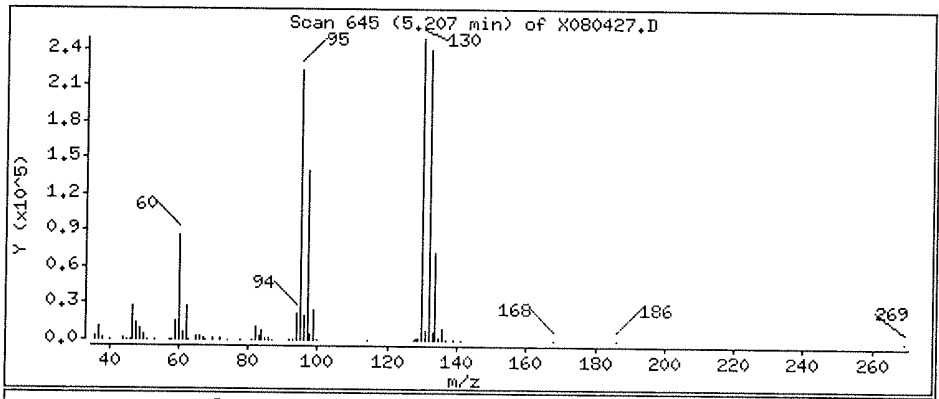
Operator: PC

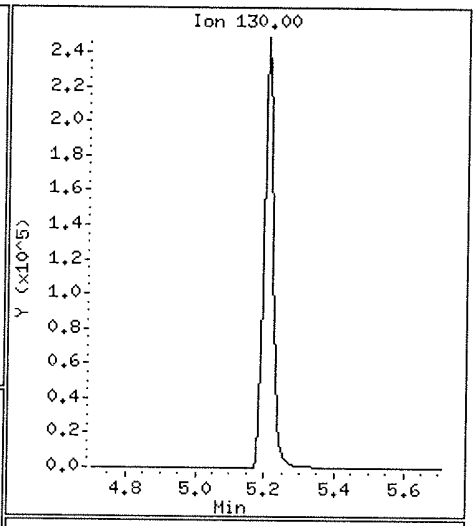
Column phase: DB624

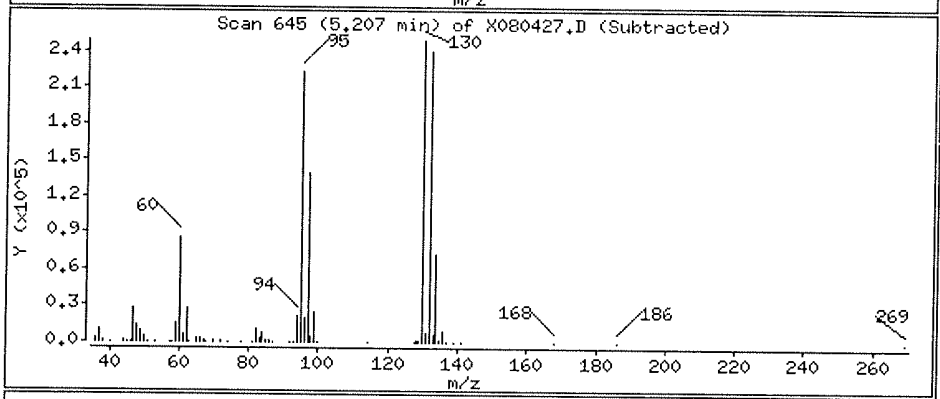
Column diameter: 0.18

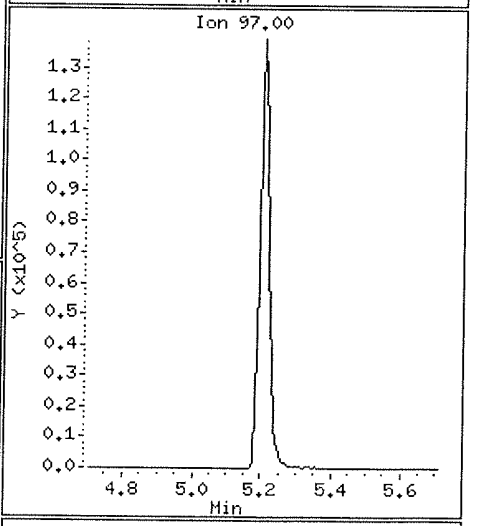
38 Trichloroethene

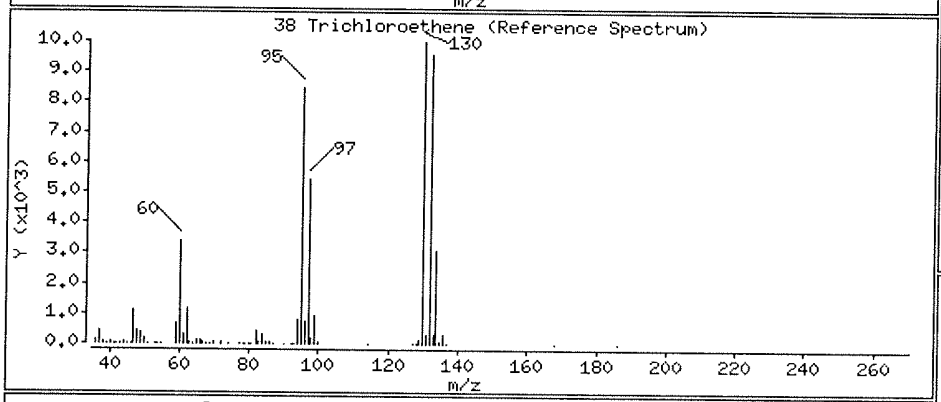
Concentration: 1476.28 ug/l

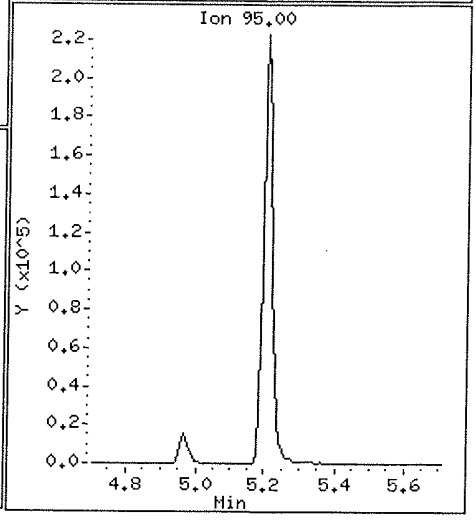


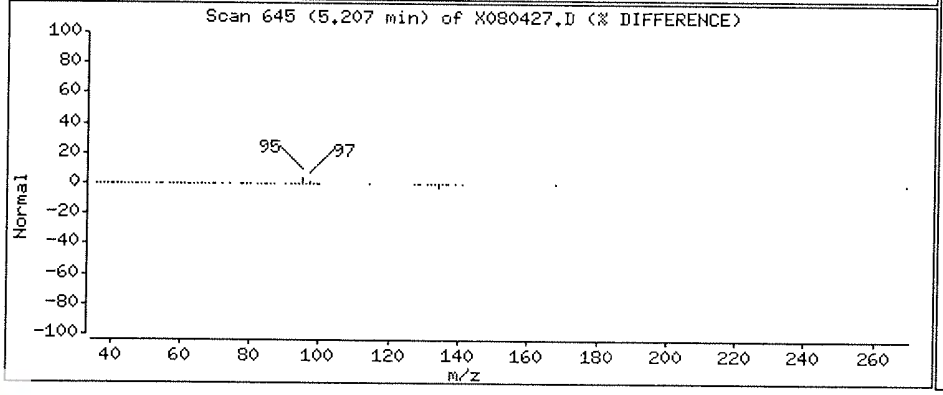












Data File: \\NAHSTWS005\target\chem\voa6.i\X210804.b\X080428.D Page 1
Report Date: 10-Sep-2021 14:34

ALS Laboratory Group

Data file : \\NAHSTWS005\target\chem\voa6.i\X210804.b\X080428.D
Lab Smp Id: HS21071405-05 Client Smp ID: HS21071405-05
Inj Date : 04-AUG-2021 20:12
Operator : PC Inst ID: voa6.i
Smp Info : HS21071405-05;HS21071405-05;;;
Misc Info : HS18090001;WATER;0;5;
Comment :
Method : \\NAHSTWS005\target\chem\voa6.i\X210804.b\8260W.m
Meth Date : 10-Sep-2021 14:30 Genoveva.R Quant Type: ISTD
Cal Date : 30-JUL-2021 13:56 Cal File: X073008.D
Als bottle: 27
Dil Factor: 5.00000
Integrator: HP RTE Compound Sublist: 0474-dod.sub
Target Version: 4.14
Processing Host: NAHSTW7056

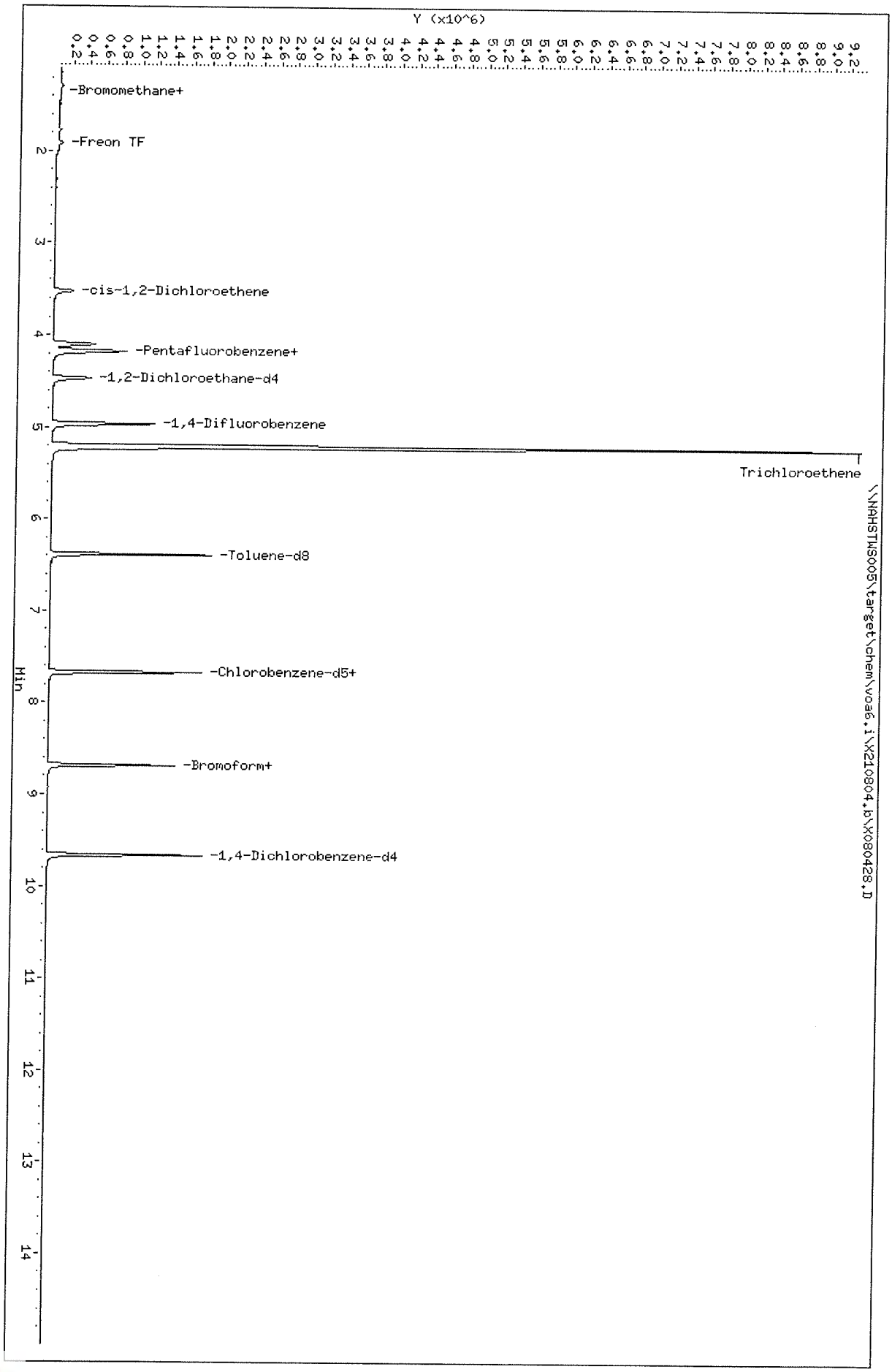
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

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)	CONCENTRATIONS FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	763783	50.0000	
$ 30 Dibromofluoromethane	113	4.096	4.103	(0.979)	345529	48.2044	48.20
$ 35 1,2-Dichloroethane-d4	65	4.469	4.476	(1.068)	323909	47.4922	47.49
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	1032174	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.670	(1.000)	920819	50.0000	
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	1131093	52.3694	52.36
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	386170	49.9900	49.98
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	463882	50.0000	
27 cis-1,2-Dichloroethene	96	3.530	3.523	(0.844)	128467	16.7680	83.83
38 Trichloroethene	130	5.207	5.207	(1.049)	3210427	425.633	2128.16(A)

QC Flag Legend

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



Data File: \\NAHSTWS005\target\chem\voa6.i\X210804.b\X080428.D
Date : 04-AUG-2021 20:12
Client ID: HS21071405-05
Sample Info: HS21071405-05;HS21071405-05;;;
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\NAHSTWS005\target\chem\voa6.i\X210804.b\X080428.D

Date : 04-AUG-2021 20:12

Client ID: HS21071405-05

Instrument: voa6.i

Sample Info: HS21071405-05;HS21071405-05;;;

Purge Volume: 5.0

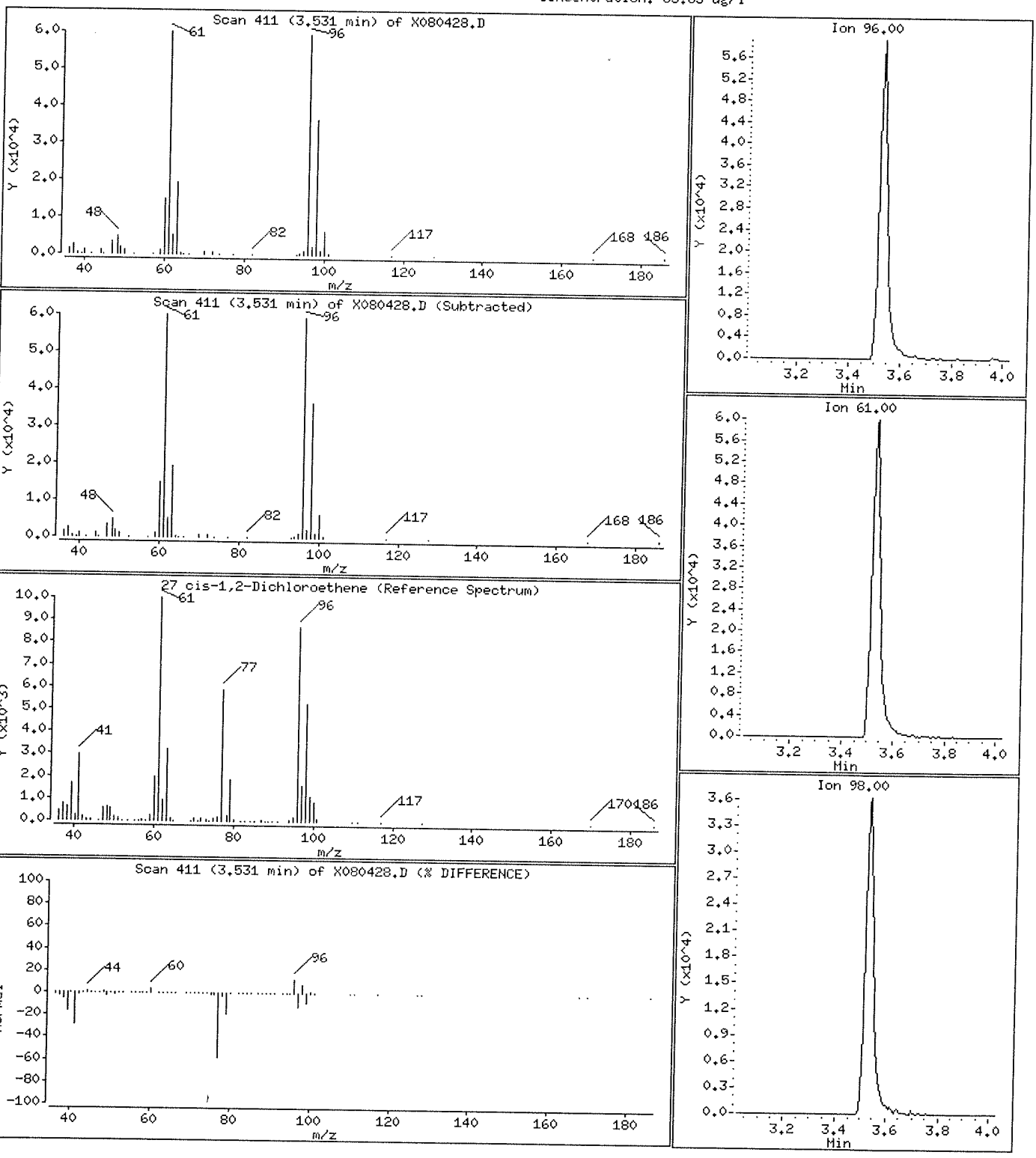
Operator: PC

Column phase: DB624

Column diameter: 0.18

27 cis-1,2-Dichloroethene

Concentration: 83.83 ug/l



Data File: \\NAHSTWS005\target\chem\voa6.i\X210804.b\X080428.D

Date : 04-AUG-2021 20:12

Client ID: HS21071405-05

Instrument: voa6.i

Sample Info: HS21071405-05;HS21071405-05;;;

Purge Volume: 5.0

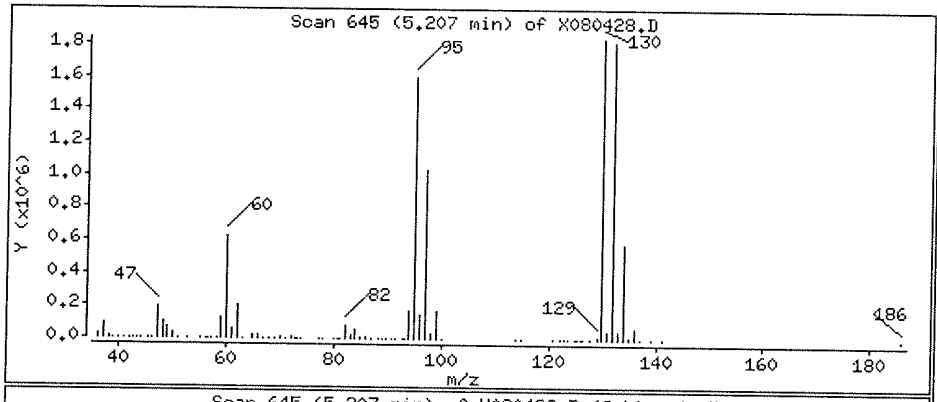
Operator: PC

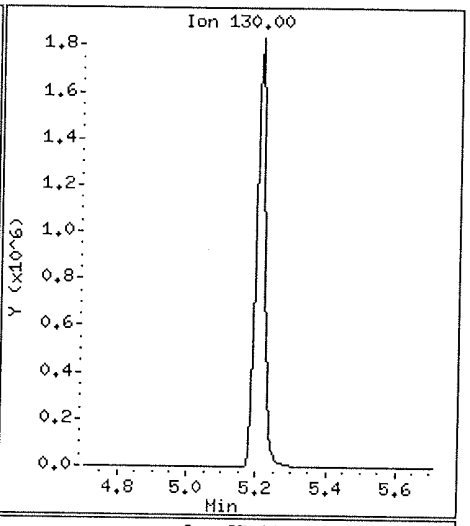
Column phase: DB624

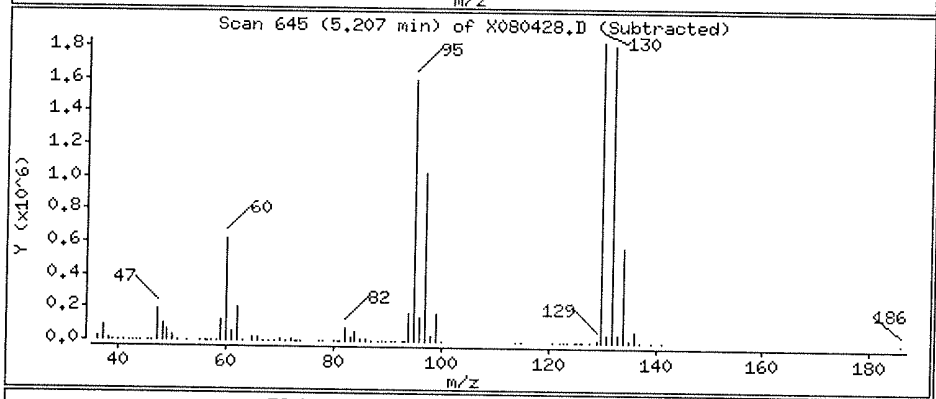
Column diameter: 0.18

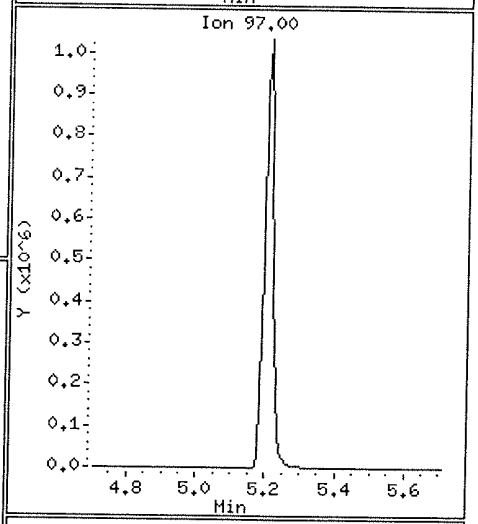
38 Trichloroethene

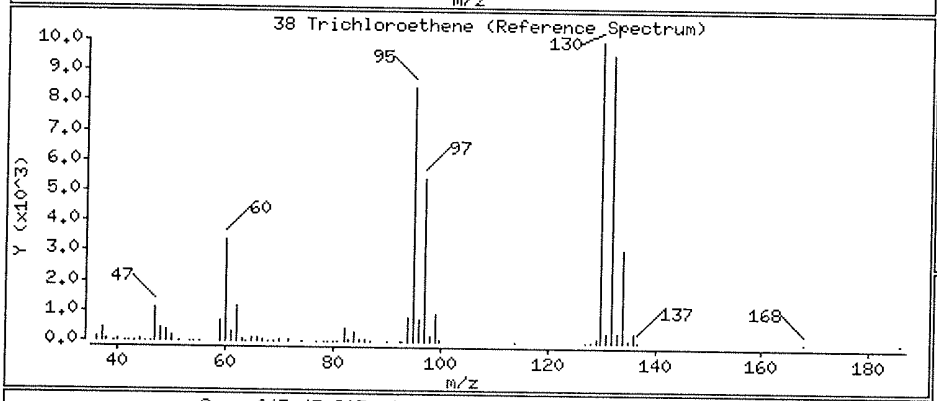
Concentration: 2128.16 ug/l

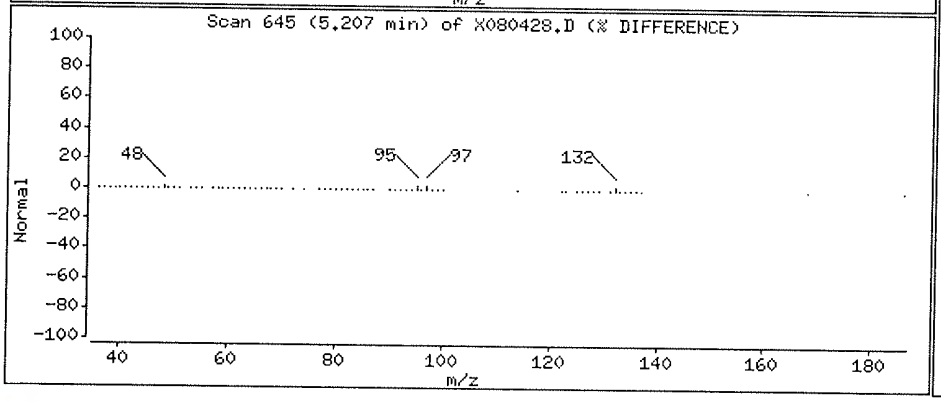


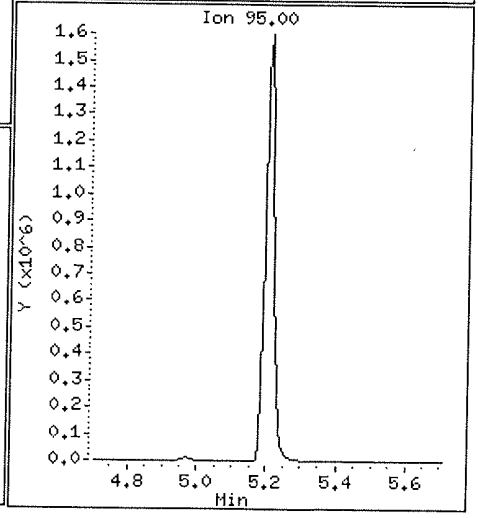












Data File: \\NAHSTWS005\target\chem\voa6.i\X210804.b\X080429.D Page 1
Report Date: 10-Sep-2021 14:34

ALS Laboratory Group

Data file : \\NAHSTWS005\target\chem\voa6.i\X210804.b\X080429.D
Lab Smp Id: HS21071405-05 Client Smp ID: HS21071405-05
Inj Date : 04-AUG-2021 20:34
Operator : PC Inst ID: voa6.i
Smp Info : HS21071405-05;HS21071405-05;;;
Misc Info : HS18090001;WATER;0;50;
Comment :
Method : \\NAHSTWS005\target\chem\voa6.i\X210804.b\8260W.m
Meth Date : 10-Sep-2021 14:30 Genoveva.R Quant Type: ISTD
Cal Date : 30-JUL-2021 13:56 Cal File: X073008.D
Als bottle: 28
Dil Factor: 50.00000
Integrator: HP RTE Compound Sublist: 0474-dod.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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

Name	Value	Description
DF	50.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

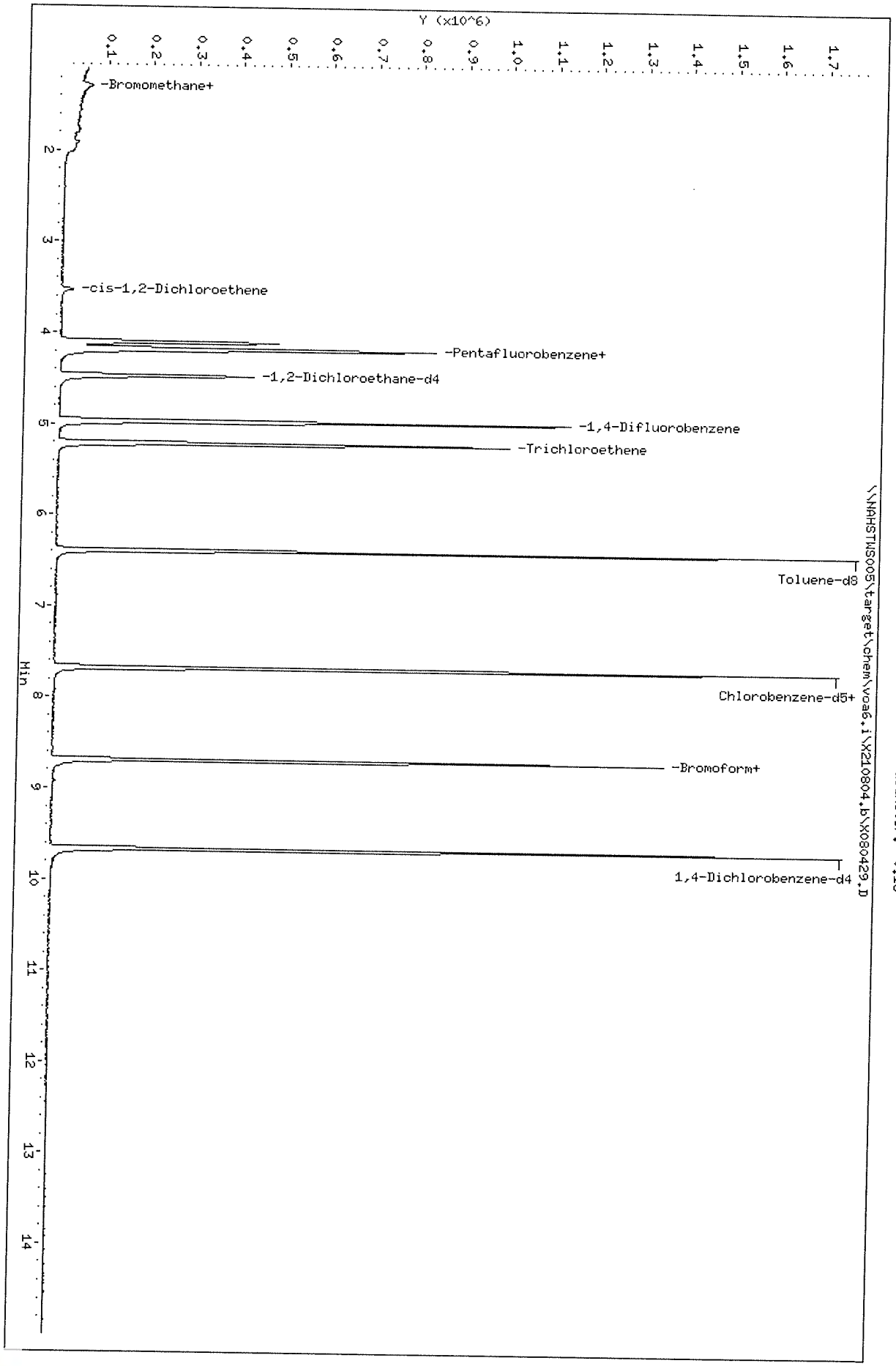
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	751974	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	342178	48.4925	48.49
$ 35 1,2-Dichloroethane-d4	65	4.469	4.476	(1.069)	316689	47.1566	47.15
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	1016984	50.0000	
* 47 Chlorobenzene-d5	117	7.670	7.670	(1.000)	895065	50.0000	
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	1102816	52.5294	52.52
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	378141	50.3644	50.36
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	451180	50.0000	
27 cis-1,2-Dichloroethene	96	3.530	3.523	(0.844)	14792	1.96102	98.05(a)
38 Trichloroethene	130	5.206	5.207	(1.049)	345006	46.4235	2321.17

QC Flag Legend

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

Data File: \\NAHSTWS005\target\chem\voa6.i\X210804.b\X080429.D
Date : 04-AUG-2021 20:34
Client ID: HS21071405-05
Sample Info: HS21071405-05;HS21071405-05;;;
Purge Volume: 5.0
Column phase: DB624

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



Data File: \\NAHSTWS005\target\chem\voa6.i\X210804.b\X080429.D

Date : 04-AUG-2021 20:34

Client ID: HS21071405-05

Instrument: voa6.i

Sample Info: HS21071405-05;HS21071405-05;;;

Purge Volume: 5.0

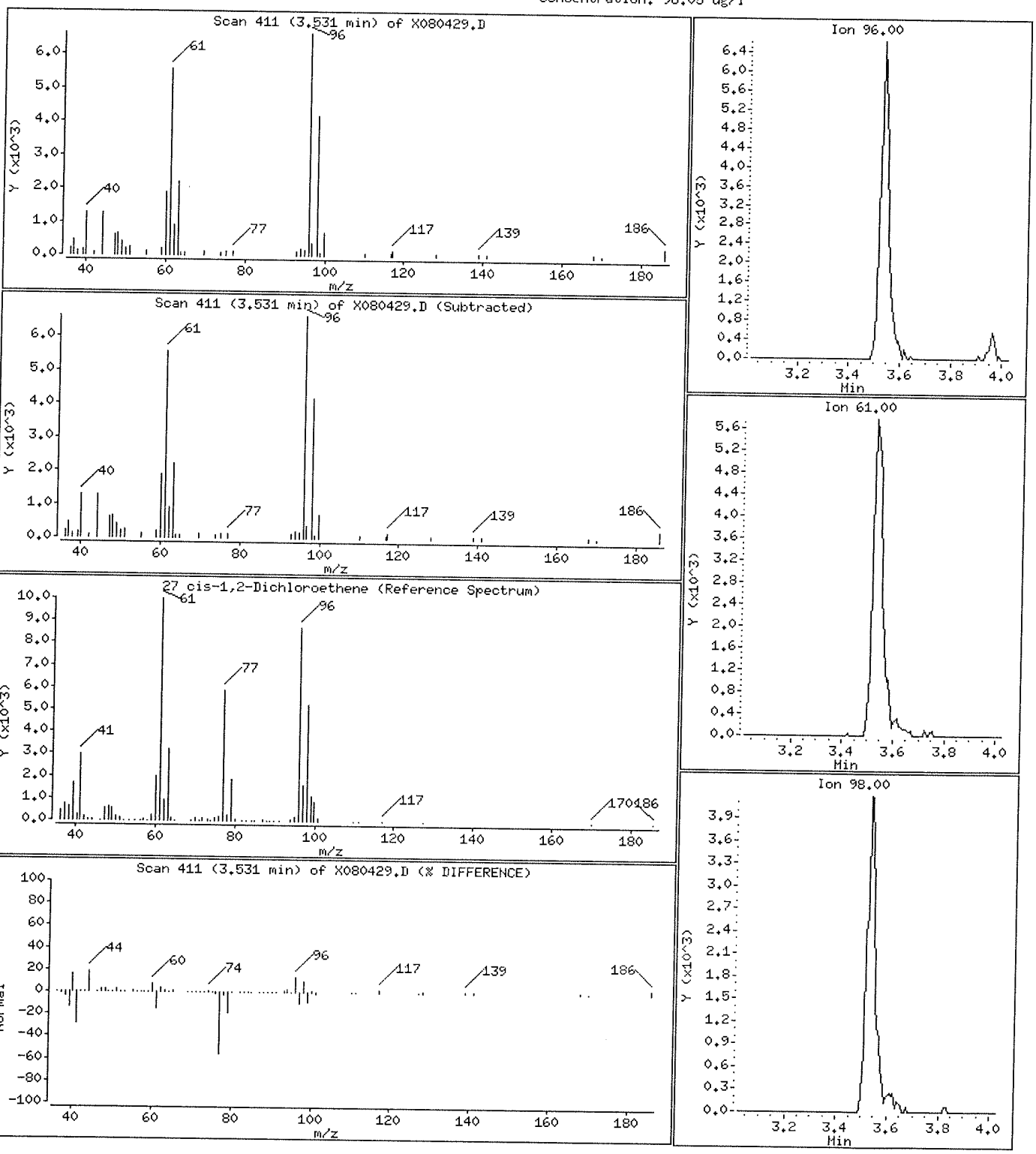
Operator: PC

Column phase: DB624

Column diameter: 0.18

27 cis-1,2-Dichloroethene

Concentration: 98.05 ug/l



Data File: \\NAHSTWS005\target\chem\voa6.i\X210804.b\X080429.D

Date : 04-AUG-2021 20:34

Client ID: HS21071405-05

Instrument: voa6.i

Sample Info: HS21071405-05;HS21071405-05;;;

Purge Volume: 5.0

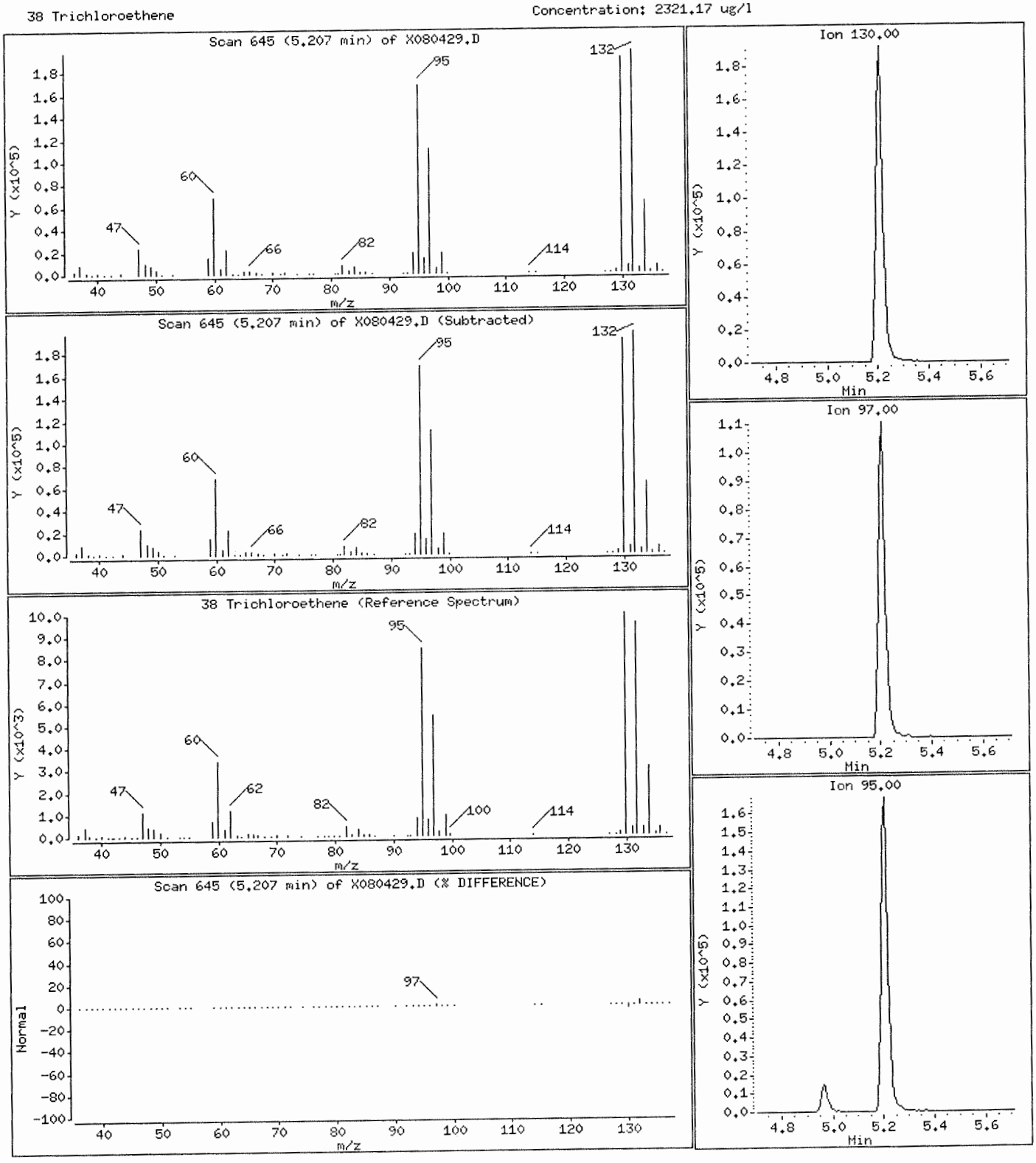
Operator: PC

Column phase: DB624

Column diameter: 0.18

38 Trichloroethene

Concentration: 2321.17 ug/l



Data File: \\NAHSTWS005\target\chem\voa6.i\X210804.b\X080433.D Page 1
Report Date: 10-Sep-2021 14:36

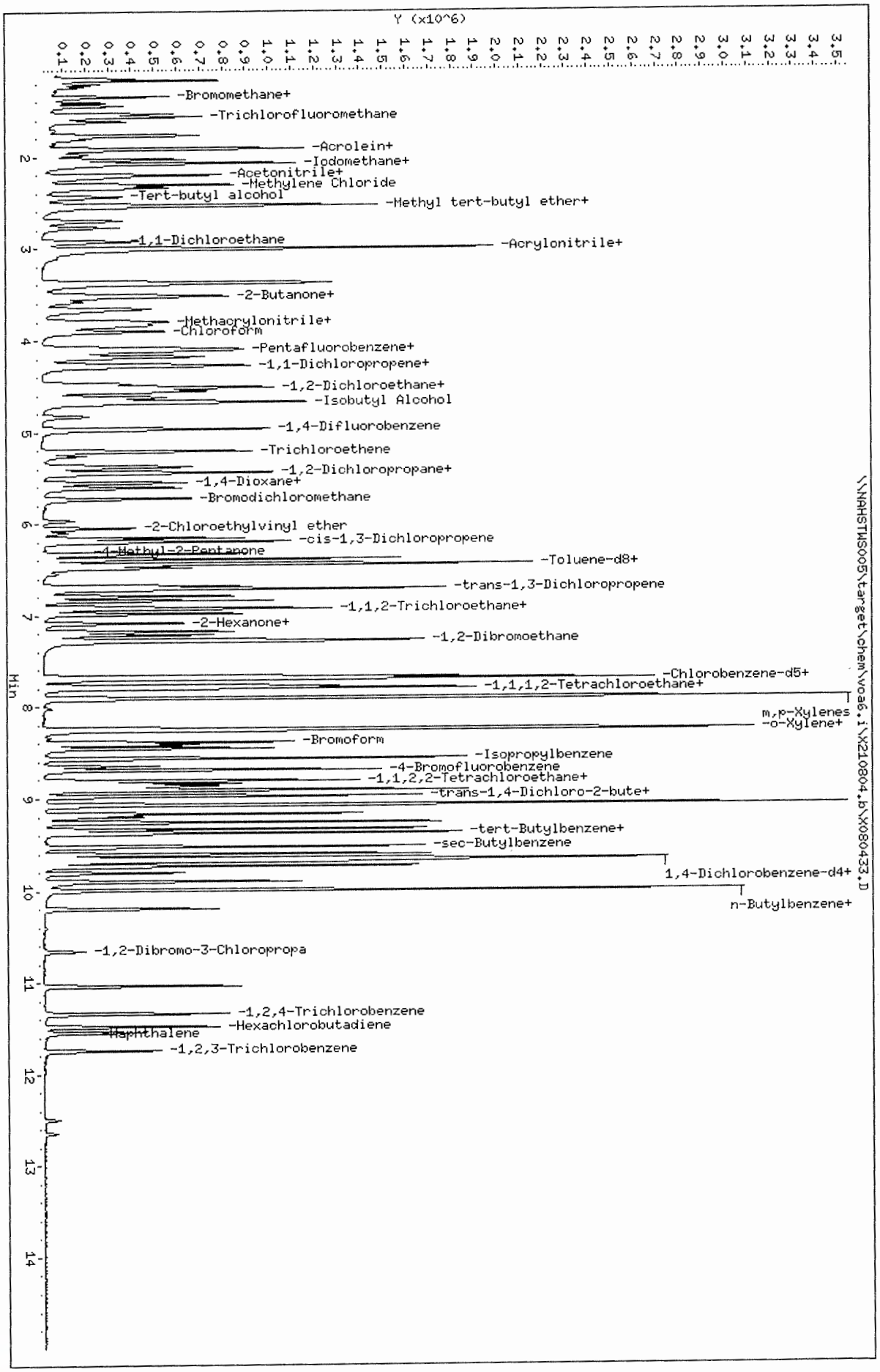
ALS Laboratory Group

Data file : \\NAHSTWS005\target\chem\voa6.i\X210804.b\X080433.D
Lab Smp Id: CCV-END Client Smp ID: CCV-END
Inj Date : 04-AUG-2021 21:58
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\X210804.b\8260W.m
Meth Date : 10-Sep-2021 14:36 voa6.i Quant Type: ISTD
Cal Date : 30-JUL-2021 13:56 Cal File: X073008.D
Als bottle: 32 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0474-dod.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)	631872	50.0000	
$ 30 Dibromofluoromethane	113	4.096	4.096	(0.979)	299034	50.0000	50.47
$ 35 1,2-Dichloroethane-d4	65	4.469	4.469	(1.069)	276548	50.0000	49.04
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	897398	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	846556	50.0000	
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	925486	50.0000	46.60
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	356169	50.0000	50.15
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	452914	50.0000	
5 Vinyl Chloride	62	1.138	1.138	(0.272)	269932	50.0000	44.87
11 1,1-Dichloroethene	96	1.912	1.912	(0.457)	237799	50.0000	44.72
17 Methylene Chloride	84	2.305	2.305	(0.551)	267070	50.0000	50.40
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	307753	50.0000	48.55
33 1,2-Dichloroethane	62	4.555	4.555	(0.918)	333518	50.0000	46.32
38 Trichloroethene	130	5.207	5.207	(1.049)	323214	50.0000	49.28
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	214956	50.0000	48.53



Data File: \\NAHSTWS005\target\chem\voa6.i\X210804.b\X080433.D
Date : 04-AUG-2021 21:58
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

HS21071405 RSK 175 Raw Data

ALS WO# HS21071405

FID04 -Logbook

Batch: 26730
Date: 01-24-2017
Method: RSK 175 ICAL
Comments: Target Sequence 170124

Analyst: Nosa Izekor
Reviewer:
Laboratory: Houston

#	Samp ID	Type	Analyzed	DF	Init Wt/Vol	Final Vol	File ID	Matrix	Status	p
1	ICAL1	CALIB_1	01-24-2017 09:06 am	1.00	0.00 mL	0.00 mL	001.D	Liquid	Y	N
2	ICAL2	CALIB_2	01-24-2017 09:30 am	1.00	0.00 mL	0.00 mL	002.D	Liquid	Y	N
3	ICAL3	CALIB_3	01-24-2017 09:59 am	1.00	0.00 mL	0.00 mL	003.D	Liquid	Y	N
4	ICAL4	CALIB_4	01-24-2017 10:15 am	1.00	0.00 mL	0.00 mL	004.D	Liquid	Y	N
5	ICAL5	CALIB_5	01-24-2017 10:39 am	1.00	0.00 mL	0.00 mL	005.D	Liquid	Y	N
6	ICAL6	CALIB_6	01-24-2017 10:57 am	1.00	0.00 mL	0.00 mL	006.D	Liquid	Y	N
7	ICAL7	CALIB_7	01-24-2017 11:13 am	1.00	0.00 mL	0.00 mL	007.D	Liquid	Y	N
8	ICV	METHSPIKI	01-24-2017 12:05 pm	1.00	0.00 mL	0.00 mL	008.D	Liquid	Y	N
9	LCS-170124	LCS	01-24-2017 12:24 pm	1.00	0.00 mL	0.00 mL	009.D	Liquid	Y	N
10	LCSD-170124	LCSD	01-24-2017 12:40 pm	1.00	0.00 mL	0.00 mL	010.D	Liquid	Y	N
11	MBLK-170124	MBLK	01-24-2017 12:57 pm	1.00	0.00 mL	0.00 mL	011.D	Liquid	Y	N
12	HS17010778-01	SAMP	01-24-2017 01:14 pm	1.00	0.00 mL	0.00 mL	012.D	Liquid	Y	N
13	HS17010779-01	SAMP	01-24-2017 01:31 pm	1.00	0.00 mL	0.00 mL	013.D	Liquid	Y	N
14	HS17010779-01DUP	SAMP	01-24-2017 01:47 pm	1.00	0.00 mL	0.00 mL	014.D	Liquid	Y	N
15	CCV	CCV	01-24-2017 02:01 pm	1.00	0.00 mL	0.00 mL	015.D	Liquid	Y	N

Chemical	Value
ICAL STD ID	30010700217
ICV STD ID	30010700610

FORM 3
WATER GASES METHOD SPIKE RECOVERY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS21071405

Matrix Spike - ENG SC Sample No.: ICV

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE AMOUNT ()	% REC #	QC. LIMITS REC.
Ethene	16.800	19.090	114	75-125
Methane	9.647	9.597	99	75-125
Ethane	18.043	19.657	109	75-125
Propane	26.463	27.238	103	75-125
N-Butane	34.955	36.010	103	75-125

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

COMMENTS: _____

FORM III GASES

FORM 6
GASES INITIAL CALIBRATION DATA

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS21071405

Instrument ID: FID-4 Calibration Date(s): 01/24/17 01/24/17

Column: RTX-PLOT ID: 0.53 (mm) Calibration Time(s): 0906 1113

LAB FILE ID: RF10: 001 RF25: 002 RF50: 003
RF100: 004 RF250: 005 RF500: 006

COMPOUND	RF10	RF25	RF50	RF100	RF250	RF500
Ethene	535.608	567.359	564.985	516.024	665.282	425.678
Methane	968.912	978.238	1019.699	880.798	960.713	930.704
Ethane	602.493	670.177	658.908	597.201	808.513	817.630
Propane	500	1279	2602	4785	18294	38286
N-Butane	438	936	2034	3864	18446	42817

FORM VI GASES

FORM 6
GASES INITIAL CALIBRATION DATA

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS2107140

Instrument ID: FID-4 Calibration Date(s): 01/24/17 01/24/17

Column: RTX-PLOT ID: 0.53 (mm) Calibration Time(s): 0906 1113

RF1000: 007

COMPOUND	RF1000	CURVE	COEFFICENTS A0	A1	A2	%RSD OR R^2	MA
Ethene	828.858	AVRG		586.256273		21.932	
Methane	1081.580	AVRG		974.377787		6.550	
Ethane	999.335	AVRG		736.322546		19.885	
Propane	96509	2ORDR	0.97987006	1.529e-003	-4.58e-009	0.9991365	0
N-Butane	114164	2ORDR	2.46870151	1.834e-003	5.54e-009	0.9980766	0

FORM VI GASES

Data File: \\nahstws005\Target\chem\FID-4.i\170124A.b\001.D
Report Date: 11-Oct-2021 10:43

ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\nahstws005\Target\chem\FID-4.i\170124A.b\001.D
Lab Smp Id: ICAL1 Client Smp ID: ICAL1
Inj Date : 24-JAN-2017 09:06
Operator : JA Inst ID: FID-4.i
Smp Info : ICAL1;ICAL1;;;
Misc Info :
Comment :
Method : \\nahstws005\Target\chem\FID-4.i\170124A.b\RSKNI2.m
Meth Date : 08-Oct-2021 14:58 linh.pham Quant Type: ESTD
Cal Date : 24-JAN-2017 09:06 Cal File: 001.D
Als bottle: 1 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: stdNIP2.sub
Target Version: 4.14

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
1 Methane	1.043	1.030	0.013	374	0.38600	0.383(a)
2 Ethene	1.553	1.556	-0.003	361	0.67400	0.615(a)
3 Ethane	1.716	1.723	-0.007	435	0.72200	0.590(a)
4 Propane	4.073	4.113	-0.040	500	1.05900	1.743
5 N-Butane	7.640	7.690	-0.050	438	1.39800	3.271

QC Flag Legend

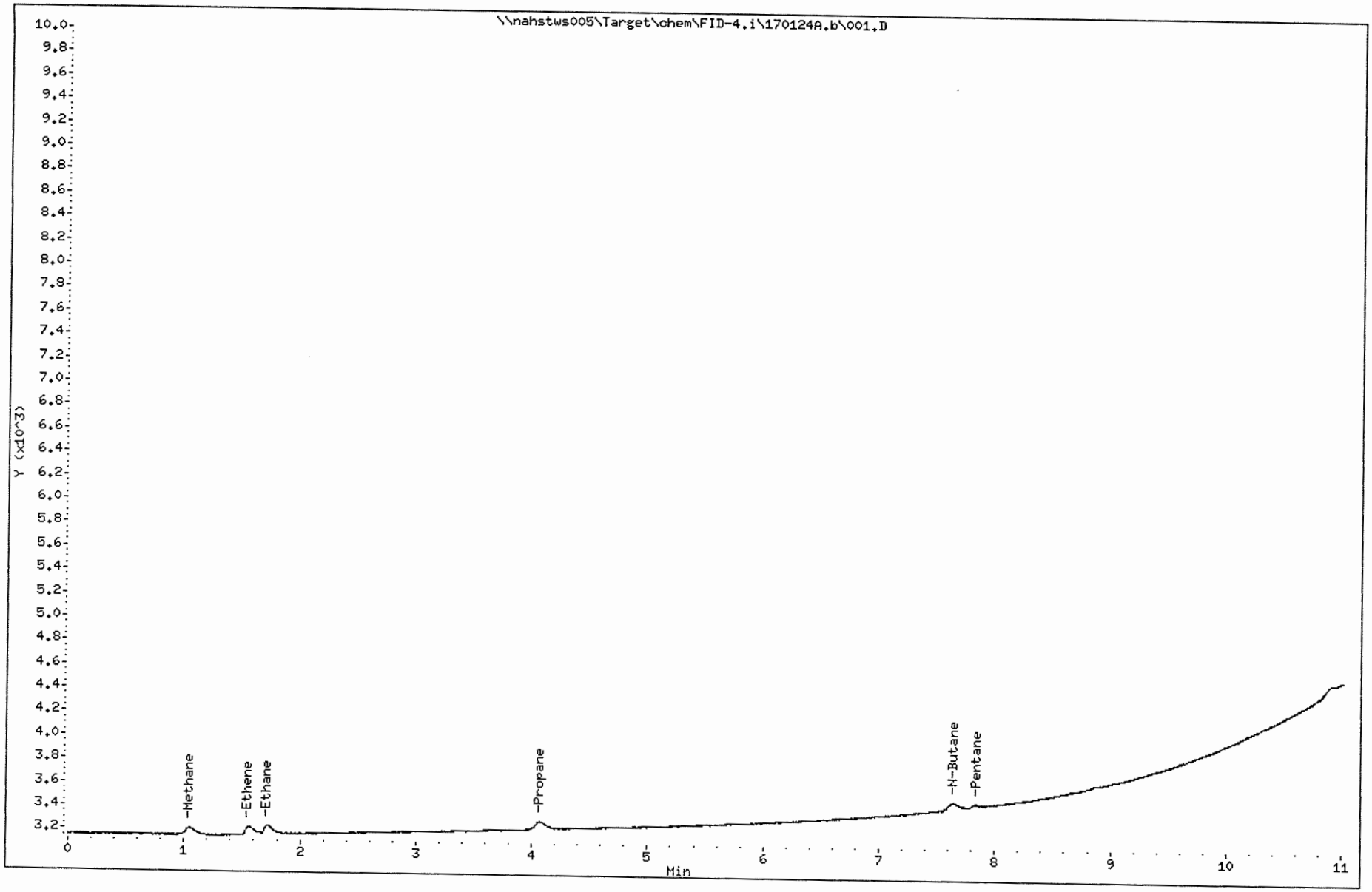
a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).

Data File: \\nahstws005\Target\chem\FID-4.i\170124A.b\001.D
Date : 24-JAN-2017 09:06
Client ID: ICAL1
Sample Info: ICAL1;ICAL1;;;

Column phase: Rtx-PLOT

Instrument: FID-4.i

Operator: JA
Column diameter: 0.53



Data File: \\nahstws005\Target\chem\FID-4.i\170124A.b\002.D
Report Date: 11-Oct-2021 10:43

ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\nahstws005\Target\chem\FID-4.i\170124A.b\002.D
Lab Smp Id: ICAL2 Client Smp ID: ICAL2
Inj Date : 24-JAN-2017 09:30
Operator : MA Inst ID: FID-4.i
Smp Info : ICAL2;ICAL2;;;
Misc Info : ;1;0;1
Comment :
Method : \\nahstws005\Target\chem\FID-4.i\170124A.b\RSKNI2.m
Meth Date : 08-Oct-2021 14:58 linh.pham Quant Type: ESTD
Cal Date : 24-JAN-2017 09:59 Cal File: 003.D
Als bottle: 2 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: stdNIP2.sub
Target Version: 4.14

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

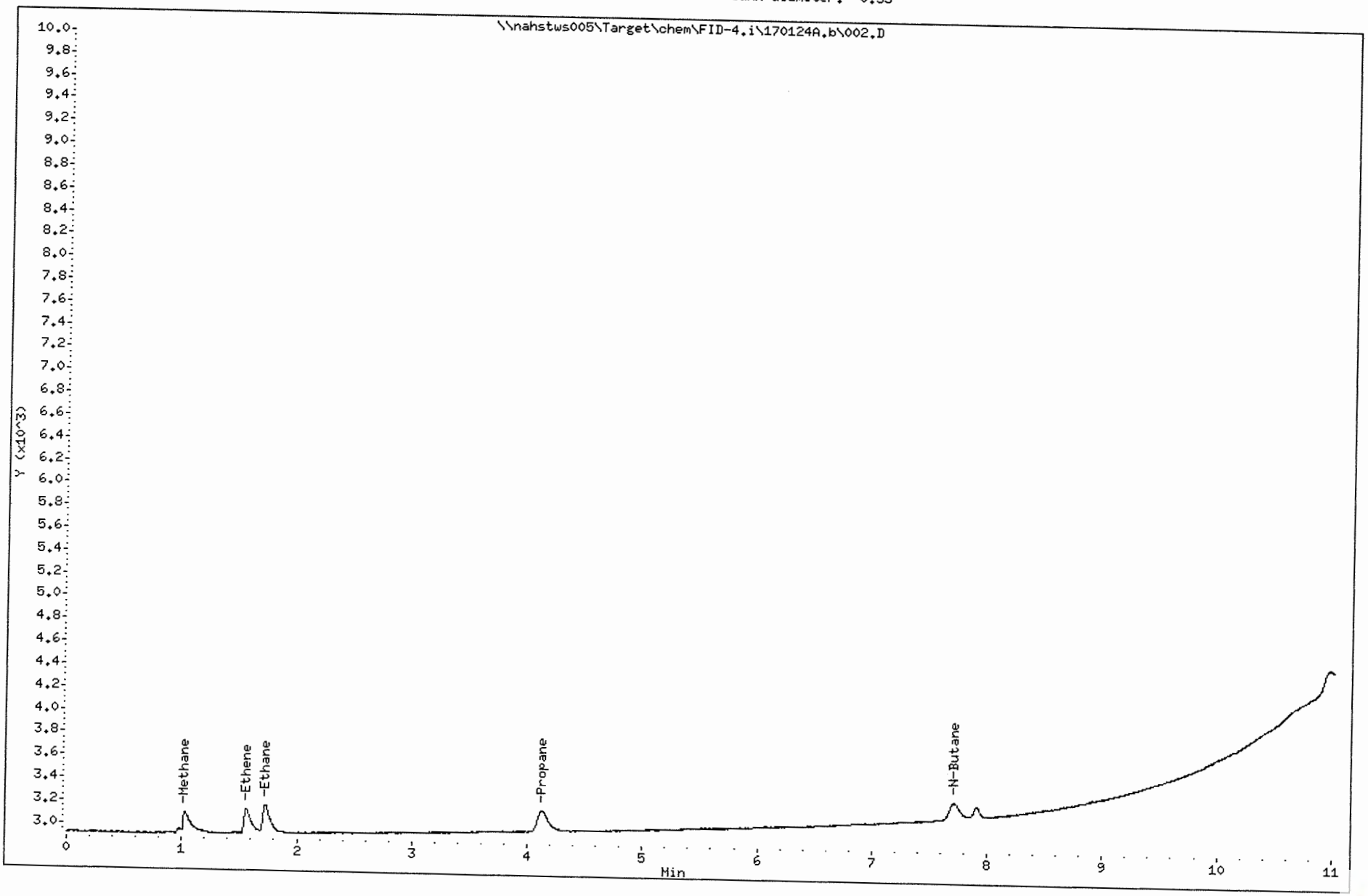
Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
1 Methane	1.023	1.030	-0.007	944	0.96500	0.968
2 Ethene	1.560	1.556	0.004	956	1.68500	1.630
3 Ethane	1.723	1.723	0.000	1209	1.80400	1.641
4 Propane	4.123	4.113	0.010	1279	2.64600	2.927
5 N-Butane	7.716	7.690	0.026	936	3.49600	4.180

Data File: \\nahstws005\Target\chem\FID-4.i\170124A.b\002.D
Date : 24-JAN-2017 09:30
Client ID: ICAL2
Sample Info: ICAL2;ICAL2;;;

Column phase: Rtx-PLOT

Instrument: FID-4.i

Operator: MA
Column diameter: 0.53



Data File: \\nahstws005\Target\chem\FID-4.i\170124A.b\003.D
Report Date: 11-Oct-2021 10:43

ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\nahstws005\Target\chem\FID-4.i\170124A.b\003.D
Lab Smp Id: ICAL3 Client Smp ID: ICAL3
Inj Date : 24-JAN-2017 09:59
Operator : MA Inst ID: FID-4.i
Smp Info : ICAL3;ICAL3;;;
Misc Info : ;1;0;1
Comment :
Method : \\nahstws005\Target\chem\FID-4.i\170124A.b\RSKNI2.m
Meth Date : 08-Oct-2021 14:58 linh.pham Quant Type: ESTD
Cal Date : 24-JAN-2017 11:13 Cal File: 007.D
Als bottle: 3 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: stdNIP2.sub
Target Version: 4.14

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
1 Methane	1.043	1.030	0.013	1967	1.92900	2.018
2 Ethene	1.570	1.556	0.014	1904	3.37000	3.247
3 Ethane	1.736	1.723	0.013	2378	3.60900	3.229
4 Propane	4.123	4.113	0.010	2602	5.29300	4.926
5 N-Butane	7.703	7.690	0.013	2034	6.99100	6.176

Data File: \\nahstws005\Target\chem\FID-4.i\170124A.b\003.D

Date : 24-JAN-2017 09:59

Client ID: ICAL3

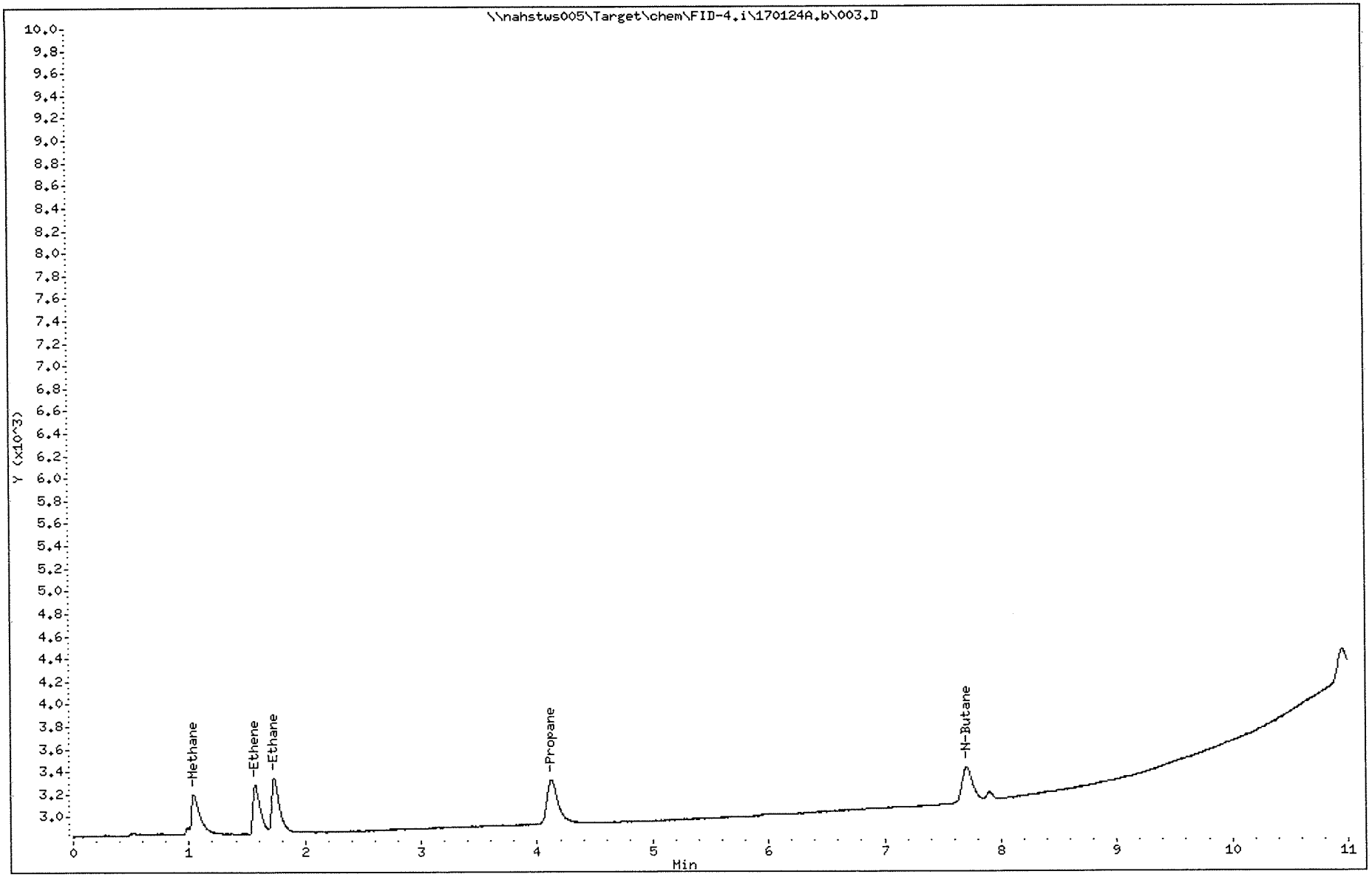
Instrument: FID-4.i

Sample Info: ICAL3;ICAL3;;;

Operator: MA

Column phase: Rtx-PLOT

Column diameter: 0.53



Data File: \\nahstws005\Target\chem\FID-4.i\170124A.b\004.D Page 1
Report Date: 11-Oct-2021 10:43

ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\nahstws005\Target\chem\FID-4.i\170124A.b\004.D
Lab Smp Id: ICAL4 Client Smp ID: ICAL4
Inj Date : 24-JAN-2017 10:15
Operator : MA Inst ID: FID-4.i
Smp Info : ICAL4;ICAL4;;;
Misc Info : ;1;0;1
Comment :
Method : \\nahstws005\Target\chem\FID-4.i\170124A.b\RSKNI2.m
Meth Date : 08-Oct-2021 14:58 linh.pham Quant Type: ESTD
Cal Date : 24-JAN-2017 09:30 Cal File: 002.D
Als bottle: 4 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: stdNIP2.sub
Target Version: 4.14

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
1 Methane	1.033	1.030	0.003	3399	3.85900	3.488
2 Ethene	1.563	1.556	0.007	3478	6.74000	5.932
3 Ethane	1.726	1.723	0.003	4310	7.21700	5.853
4 Propane	4.120	4.113	0.007	4785	10.5850	8.190
5 N-Butane	7.703	7.690	0.013	3864	13.9820	9.473 (M)

QC Flag Legend

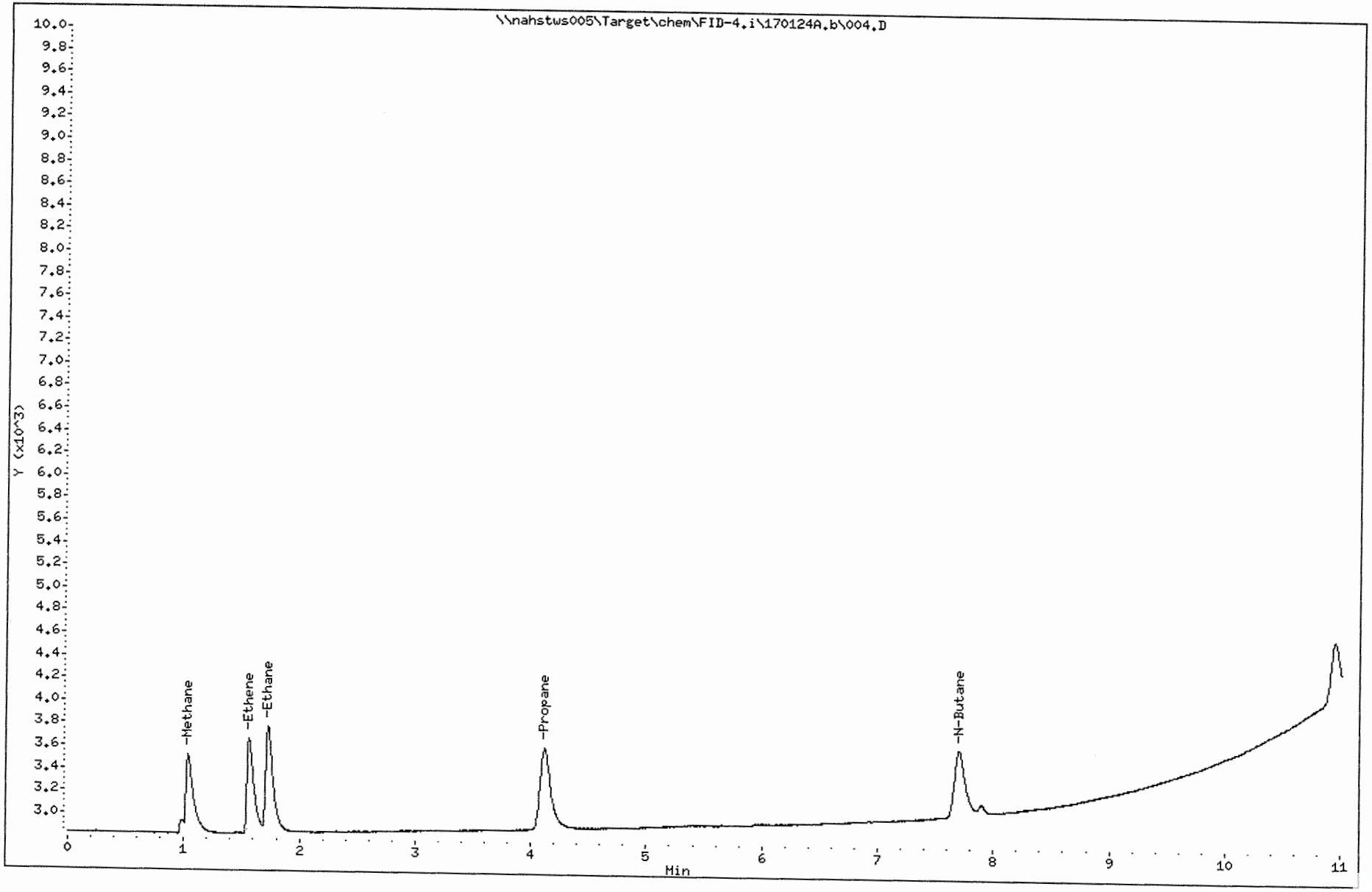
M - Compound response manually integrated.

Data File: \\nahstws005\Target\chem\FID-4.i\170124A.b\004.D
Date : 24-JAN-2017 10:15
Client ID: ICAL4
Sample Info: ICAL4;ICAL4;;;

Column phase: Rtx-PLOT

Instrument: FID-4.i

Operator: MA
Column diameter: 0.53



Data File: \\nahstws005\Target\chem\FID-4.i\170124A.b\005.D Page 1
Report Date: 11-Oct-2021 10:43

ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\nahstws005\Target\chem\FID-4.i\170124A.b\005.D
Lab Smp Id: ICAL5 Client Smp ID: ICAL5
Inj Date : 24-JAN-2017 10:39
Operator : MA Inst ID: FID-4.i
Smp Info : ICAL5;ICAL5;;;
Misc Info : ;1;0;1
Comment :
Method : \\nahstws005\Target\chem\FID-4.i\170124A.b\RSKNI2.m
Meth Date : 08-Oct-2021 14:58 linh.pham Quant Type: ESTD
Cal Date : 24-JAN-2017 10:39 Cal File: 005.D
Als bottle: 5 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: stdNIP2.sub
Target Version: 4.14

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
1 Methane	1.043	1.030	0.013	9268	9.64700	9.511
2 Ethene	1.570	1.556	0.014	11210	16.8500	19.121
3 Ethane	1.733	1.723	0.010	14588	18.0430	19.811
4 Propane	4.120	4.113	0.007	18294	26.4630	27.415
5 N-Butane	7.700	7.690	0.010	18446	34.9550	34.419(M)

QC Flag Legend

M - Compound response manually integrated.

Data File: \\nahstws005\Target\chem\FID-4.i\170124A.b\005.D

Date : 24-JAN-2017 10:39

Client ID: ICAL5

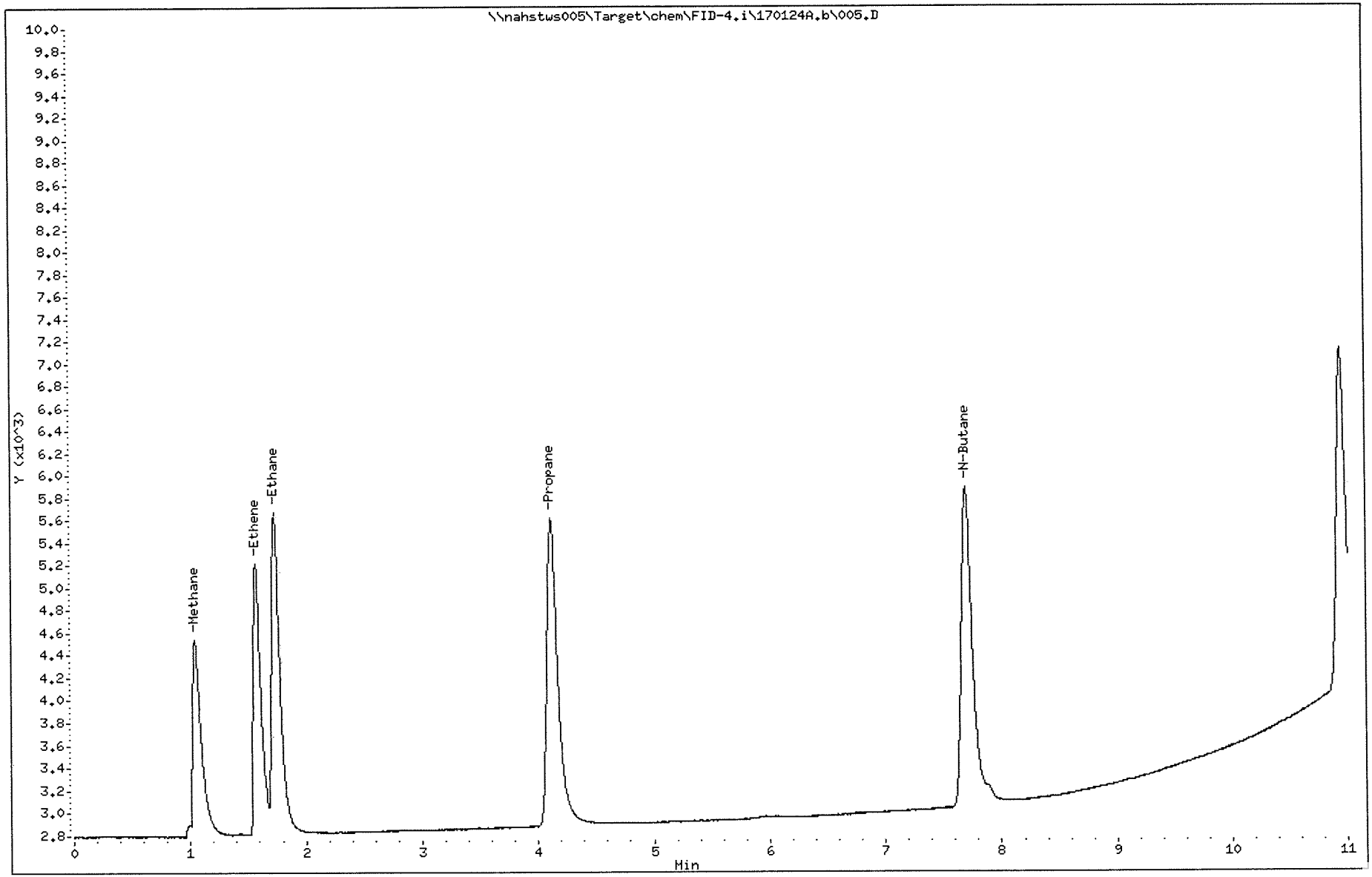
Instrument: FID-4.i

Sample Info: ICAL5;ICAL5;;;

Operator: MA

Column phase: Rtx-PLOT

Column diameter: 0.53



Data File: \\nahstws005\Target\chem\FID-4.i\170124A.b\006.D
Report Date: 11-Oct-2021 10:44

ALS Laboratory Group

Dissolved Gases Analysis

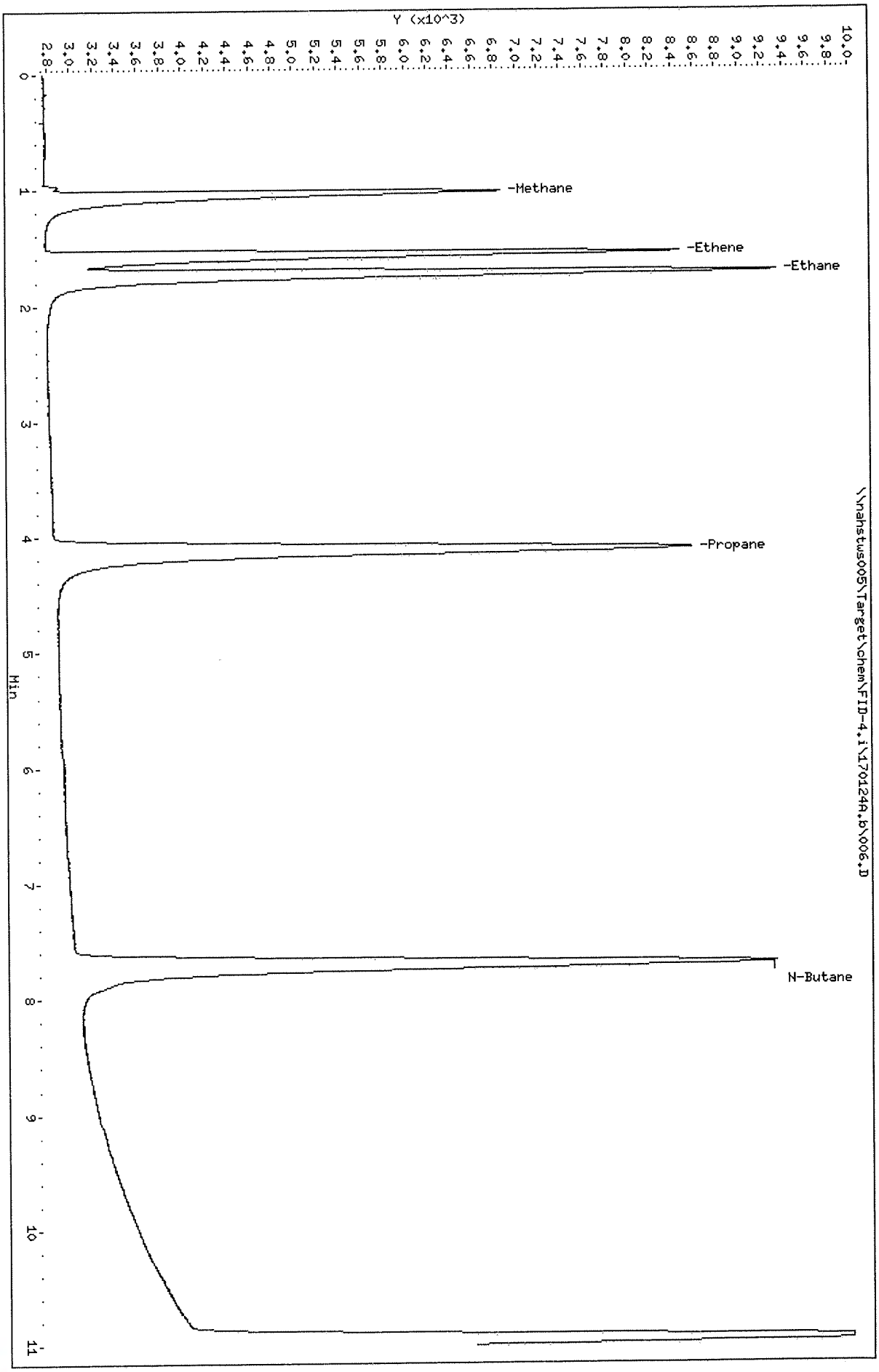
Data file : \\nahstws005\Target\chem\FID-4.i\170124A.b\006.D
Lab Smp Id: ICAL6 Client Smp ID: ICAL6
Inj Date : 24-JAN-2017 10:57
Operator : MA Inst ID: FID-4.i
Smp Info : ICAL6;ICAL6;;;
Misc Info : ;1;0;1
Comment :
Method : \\nahstws005\Target\chem\FID-4.i\170124A.b\RSKNI2.m
Meth Date : 08-Oct-2021 14:58 linh.pham Quant Type: ESTD
Cal Date : 24-JAN-2017 10:39 Cal File: 005.D
Als bottle: 6 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: stdNIP2.sub
Target Version: 4.14

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
1 Methane	1.023	1.030	-0.007	17957	19.2940	18.429
2 Ethene	1.550	1.556	-0.006	22910	53.8200	39.078
3 Ethane	1.716	1.723	-0.007	29505	36.0860	40.070
4 Propane	4.110	4.113	-0.003	38286	52.9260	52.796
5 N-Butane	7.696	7.690	0.006	42817	69.9110	70.855

Data File: \\nahstws005\Target\chem\FID-4.i\170124A.b\006.D
Date : 24-JAN-2017 10:57
Client ID: ICAL6
Sample Info: ICAL6;ICAL6;;;
Column phase: Rtx-PLOT

Instrument: FID-4.i
Operator: MA
Column diameter: 0.53



Data File: \\nahstws005\Target\chem\FID-4.i\170124A.b\007.D Page 1
Report Date: 11-Oct-2021 10:44

ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\nahstws005\Target\chem\FID-4.i\170124A.b\007.D
Lab Smp Id: ICAL7 Client Smp ID: ICAL7
Inj Date : 24-JAN-2017 11:13
Operator : MA Inst ID: FID-4.i
Smp Info : ICAL7;ICAL7;;;
Misc Info : ;1;0;1
Comment :
Method : \\nahstws005\Target\chem\FID-4.i\170124A.b\RSKNI2.m
Meth Date : 08-Oct-2021 14:58 linh.pham Quant Type: ESTD
Cal Date : 24-JAN-2017 10:57 Cal File: 006.D
Als bottle: 7 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: stdNIP2.sub
Target Version: 4.14

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

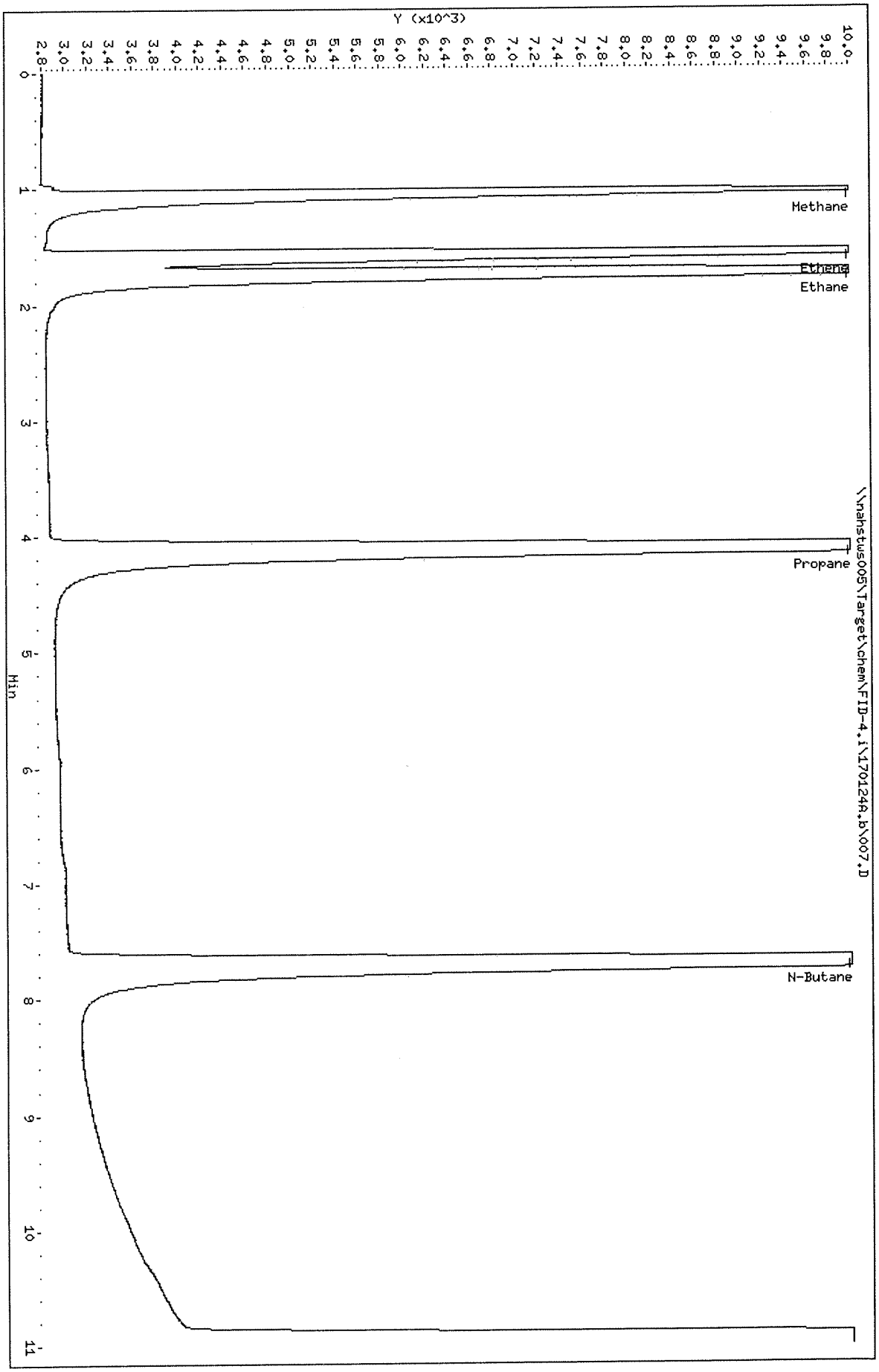
Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	ON-COL (ug/L)
1 Methane	1.030	1.030	0.000	41736	38.5880	42.833(A)
2 Ethene	1.556	1.556	0.000	55865	67.4000	95.291(A)
3 Ethane	1.723	1.723	0.000	72124	72.1720	97.951(A)
4 Propane	4.113	4.113	0.000	96509	105.852	105.844
5 N-Butane	7.690	7.690	0.000	114164	139.821	139.707

QC Flag Legend

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

Data File: \\nahstws005\Target\chem\FID-4.i\170124A.b\007.D
Date : 24-JAN-2017 11:13
Client ID: ICAL7
Sample Info: ICAL7;ICAL7;;;
Column phase: Rtx-PLOT

Instrument: FID-4.i
Operator: MA
Column diameter: 0.53



Data File: \\nahstws005\Target\chem\FID-4.i\170124A.b\008.D
Report Date: 11-Oct-2021 10:44

ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\nahstws005\Target\chem\FID-4.i\170124A.b\008.D
Lab Smp Id: ICV Client Smp ID: ICV
Inj Date : 24-JAN-2017 12:05
Operator : MA Inst ID: FID-4.i
Smp Info : ICV;ICV;;;
Misc Info : ;1;0;1
Comment :
Method : \\NAHSTWS005\Target\chem\FID-4.i\170124A.b\RSKNI2.m
Meth Date : 08-Oct-2021 14:58 linh.pham Quant Type: ESTD
Cal Date : 24-JAN-2017 11:13 Cal File: 007.D
Als bottle: 8 QC Sample: METHSPIKE
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: stdNIP2.sub
Target Version: 4.14

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

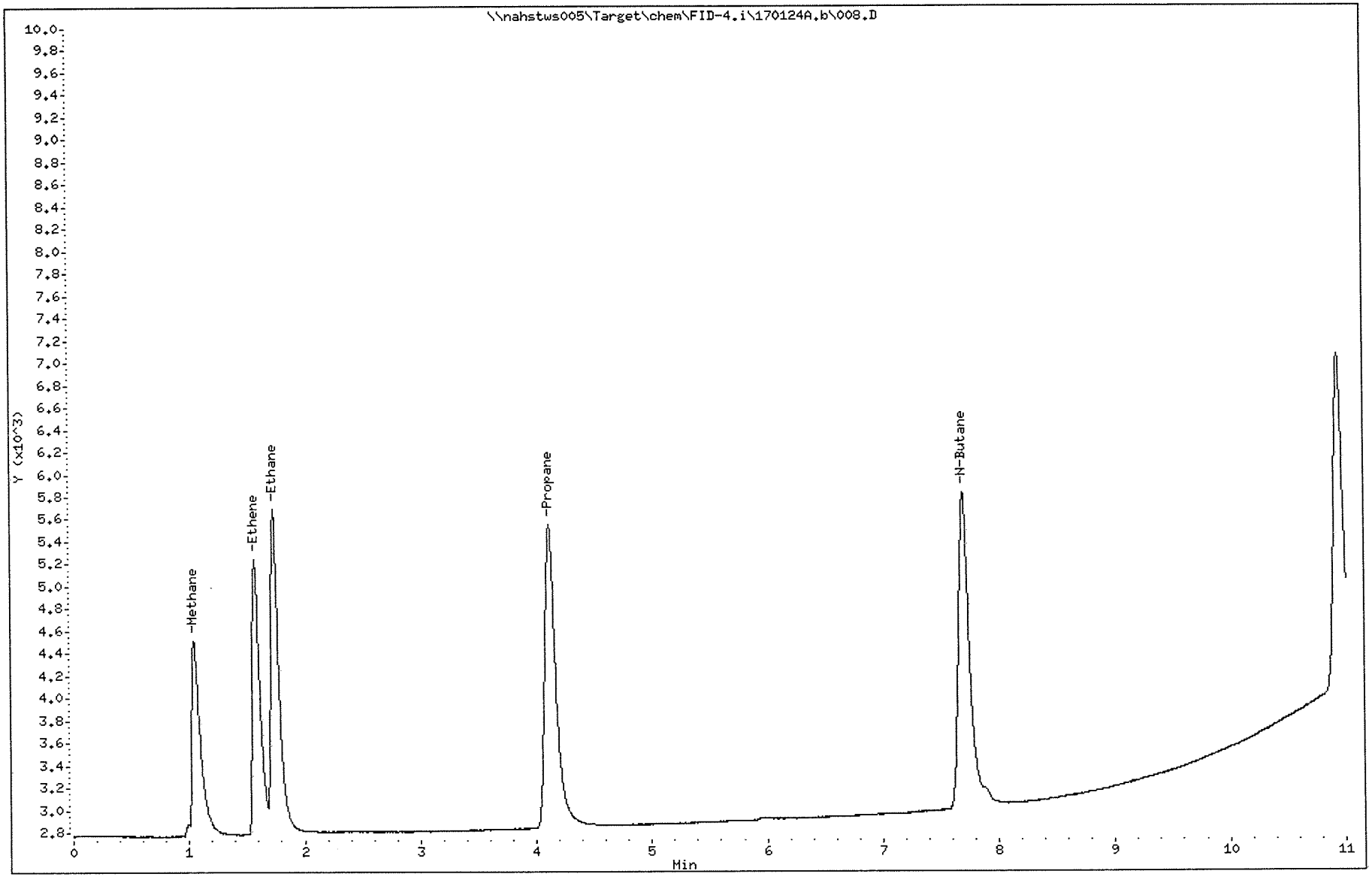
Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)
1 Methane	1.046	1.030	0.016	9352	9.59792	9.597
2 Ethene	1.573	1.556	0.017	11192	19.0906	19.090
3 Ethane	1.736	1.723	0.013	14474	19.6571	19.657
4 Propane	4.116	4.113	0.003	18164	27.2381	27.238
5 N-Butane	7.696	7.690	0.006	19425	36.0103	36.010

Data File: \\nahstws005\Target\chem\FID-4.i\170124A.b\008.D
Date : 24-JAN-2017 12:05
Client ID: ICV
Sample Info: ICV;ICV;;;

Column phase: Rtx-PLOT

Instrument: FID-4.i

Operator: MA
Column diameter: 0.53



FID04 -Logbook

Batch: 45913
Date: 07-30-2021
Method: RSK175
Comments:

Analyst: Purvi Lad
Reviewer:
Laboratory: Houston

#	Samp ID	Type	Analyzed	DF	Init Wt/Vol	Final Vol	File ID	Matrix	Status	p
1	RSK-CCV	CCV	07-30-2021 09:46 am	1.00	0.00 mL	0.00 mL	001.D	Liquid	Y	N
2	MBLK-210730	MBLK	07-30-2021 09:55 am	1.00	0.00 mL	0.00 mL	002.D	Liquid	Y	N
3	LCS-210730	LCS	07-30-2021 10:05 am	1.00	0.00 mL	0.00 mL	003.D	Liquid	Y	N
4	HS21071114-11	SAMP	07-30-2021 10:19 am	1.00	0.00 mL	0.00 mL	004.D	Liquid	Y	N
5	HS21071038-01	SAMP	07-30-2021 10:33 am	1.00	0.00 mL	0.00 mL	005.D	Liquid	Y	N
6	HS21071038-02	SAMP	07-30-2021 10:42 am	1.00	0.00 mL	0.00 mL	006.D	Liquid	Y	N
7	HS21071038-02MS	MS	07-30-2021 10:52 am	1.00	0.00 mL	0.00 mL	007.D	Liquid	Y	N
8	HS21071038-02MSD	MSD	07-30-2021 11:04 am	1.00	0.00 mL	0.00 mL	008.D	Liquid	Y	N
9	HS21071038-03	SAMP	07-30-2021 11:13 am	1.00	0.00 mL	0.00 mL	009.D	Liquid	Y	N
10	HS21071038-04	SAMP	07-30-2021 11:25 am	1.00	0.00 mL	0.00 mL	010.D	Liquid	Y	N
11	RSK-CCV	CCV	07-30-2021 11:33 am	1.00	0.00 mL	0.00 mL	011.D	Liquid	Y	N
12	HS21071038-06	SAMP	07-30-2021 11:41 am	1.00	0.00 mL	0.00 mL	012.D	Liquid	Y	N
13	HS21071038-07	SAMP	07-30-2021 12:06 pm	1.00	0.00 mL	0.00 mL	013.D	Liquid	Y	N
14	HS21071204-01	SAMP	07-30-2021 12:18 pm	1.00	0.00 mL	0.00 mL	014.D	Liquid	Y	N
15	HS21071204-02	SAMP	07-30-2021 12:28 pm	1.00	0.00 mL	0.00 mL	015.D	Liquid	Y	N
16	HS21071204-03	SAMP	07-30-2021 12:39 pm	1.00	0.00 mL	0.00 mL	016.D	Liquid	Y	N
17	HS21071204-08	SAMP	07-30-2021 12:57 pm	1.00	0.00 mL	0.00 mL	017.D	Liquid	Y	N
18	HS21071038-01	SAMP	07-30-2021 01:17 pm	25.00	0.00 mL	0.00 mL	018.D	Liquid	Y	N
19	HS21071204-01	SAMP	07-30-2021 01:51 pm	100.0(	0.00 mL	0.00 mL	019.D	Liquid	Y	N
20	HS21071204-02	SAMP	07-30-2021 02:00 pm	10.00	0.00 mL	0.00 mL	020.D	Liquid	Y	N
21	HS21071204-03	SAMP	07-30-2021 02:08 pm	100.0(	0.00 mL	0.00 mL	021.D	Liquid	Y	N
22	RSK-CCV	CCV	07-30-2021 02:30 pm	1.00	0.00 mL	0.00 mL	022.D	Liquid	Y	N
23	HS21071204-08	SAMP	07-30-2021 02:38 pm	100.0(	0.00 mL	0.00 mL	023.D	Liquid	Y	N
24	HS21071204-02MS	MS	07-30-2021 02:47 pm	1.00	0.00 mL	0.00 mL	024.D	Liquid	Y	N
25	HS21071204-02MSD	MSD	07-30-2021 02:56 pm	1.00	0.00 mL	0.00 mL	025.D	Liquid	Y	N
26	HS21071544-01	SAMP	07-30-2021 03:07 pm	1.00	0.00 mL	0.00 mL	026.D	Liquid	Y	N
27	HS21071402-01	SAMP	07-30-2021 03:15 pm	1.00	0.00 mL	0.00 mL	027.D	Liquid	Y	N
28	HS21071402-01	SAMP	07-30-2021 03:25 pm	50.00	0.00 mL	0.00 mL	028.D	Liquid	Y	N
29	HS21071405-08	SAMP	07-30-2021 03:33 pm	1.00	0.00 mL	0.00 mL	029.D	Liquid	Y	N
30	RSK-CCV	CCV	07-30-2021 03:47 pm	1.00	0.00 mL	0.00 mL	030.D	Liquid	Y	N

Chemical	Value
pH Paper	300107063-18
CCV/LC/LSD/MS/MSD	300107043-11

FORM 2
WATER GASES SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS21071405

	ENG SC SAMPLE NO.	SMC1 #	SMC2 #	SMC3 #	OTHER	TOT OUT
01	MBLK-210730					0
02	LCS-2107030					0
03	HS21071405-08					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

Column to be used to flag recovery values

* Values outside of contract required QC limits

D System Monitoring Compound diluted out

FORM 7B
GASES CALIBRATION VERIFICATION SUMMARY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS21071405

Instrument ID: FID-4 Calibration Date: 07/30/21 Time: 0946

Lab File ID: 001 Init. Calib. Date(s): 01/24/17 01/24/17

Init. Calib. Times: 0906 1113

GC Column: RTX-PLOT ID: 0.53 (mm)

COMPOUND	RRF OR AMOUNT	RRF250.00 OR AMOUNT	MIN RRF	%D OR %DRIFT	MAX %D OR %DRIFT	CURV TYPE
Ethane	719.48900	825.19537	0.01	-14.69	20.00	AVRG
Methane	974.99200	948.37773	0.01	2.73	20.00	AVRG
Ethene	585.76000	575.37092	0.01	1.77	20.00	AVRG

FORM VII GASES

FORM 7B
GASES CALIBRATION VERIFICATION SUMMARY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS21071405

Instrument ID: FID-4 Calibration Date: 07/30/21 Time: 1133

Lab File ID: 011 Init. Calib. Date(s): 01/24/17 01/24/17

Init. Calib. Times: 0906 1113

GC Column: RTX-PLOT ID: 0.53 (mm)

COMPOUND	RRF OR AMOUNT	RRF250.00 OR AMOUNT	MIN RRF	%D OR %DRIFT	MAX %D OR %DRIFT	CURV TYPE
Ethane	719.48900	802.52730	0.01	-11.54	20.00	AVRG
Methane	974.99200	887.42614	0.01	8.98	20.00	AVRG
Ethene	585.76000	584.92582	0.01	0.14	20.00	AVRG

FORM VII GASES

FORM 7B
GASES CALIBRATION VERIFICATION SUMMARY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS21071405

Instrument ID: FID-4 Calibration Date: 07/30/21 Time: 1430

Lab File ID: 022 Init. Calib. Date(s): 01/24/17 01/24/17

Init. Calib. Times: 0906 1113

GC Column: RTX-PLOT ID: 0.53 (mm)

COMPOUND	RRF OR AMOUNT	RRF250.00 OR AMOUNT	MIN RRF	%D OR %DRIFT	MAX %D OR %DRIFT	CURV TYPE
Ethane	719.48900	796.09821	0.01	-10.65	20.00	AVRG
Methane	974.99200	889.08469	0.01	8.81	20.00	AVRG
Ethene	585.76000	564.74777	0.01	3.59	20.00	AVRG

FORM VII GASES

FORM 7B
GASES CALIBRATION VERIFICATION SUMMARY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS21071405

Instrument ID: FID-4 Calibration Date: 07/30/21 Time: 1547

Lab File ID: 030 Init. Calib. Date(s): 01/24/17 01/24/17

Init. Calib. Times: 0906 1113

GC Column: RTX-PLOT ID: 0.53 (mm)

COMPOUND	RRF OR AMOUNT	RRF250.00 OR AMOUNT	MIN RRF	%D OR %DRIFT	MAX %D OR %DRIFT	CURV TYPE
Ethane	719.48900	762.17924	0.01	-5.93	20.00	AVRG
Methane	974.99200	925.36540	0.01	5.09	20.00	AVRG
Ethene	585.76000	560.17804	0.01	4.37	20.00	AVRG

FORM VII GASES

ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\nahstws005\Target\chem\FID-4.i\210730.b\Before\001.D
Lab Smp Id: RSK-CCV Client Smp ID: RSK-CCV
Inj Date : 30-JUL-2021 09:46
Operator : PL Inst ID: FID-4.i
Smp Info : RSK-CCV;RSK-CCV;2;4
Misc Info : ;1;0;1
Comment :
Method : \\NAHSTWS005\Target\chem\FID-4.i\210730.b\RSKNI3.m
Meth Date : 12-Oct-2021 14:02 linh.pham Quant Type: ESTD
Cal Date : 24-JAN-2017 10:15 Cal File: 004.D
Als bottle: 1 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: RSK175.sub
Target Version: 4.14
Processing Host: ALSHSW7104

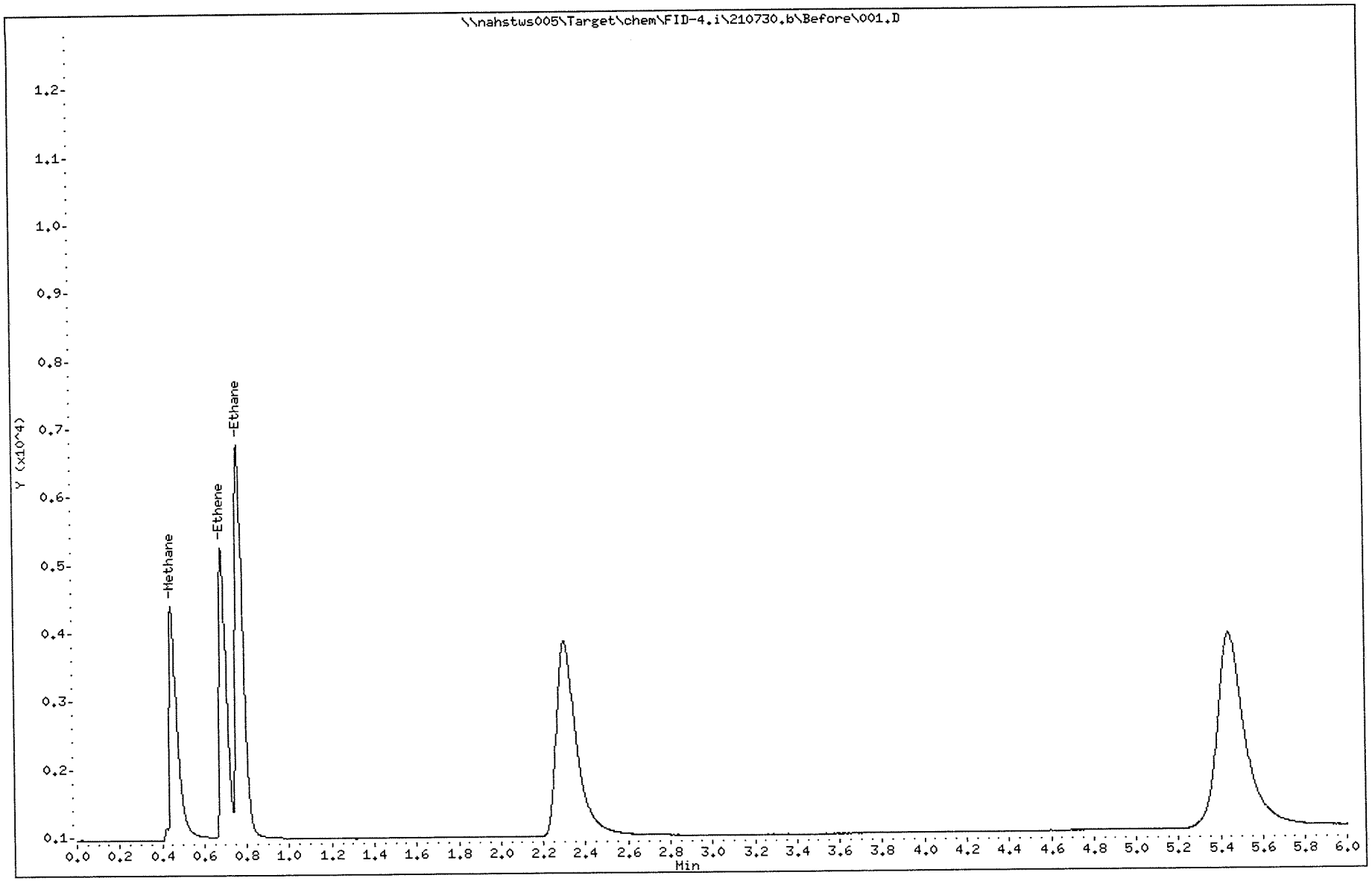
Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
1 Methane	0.446	0.463	-0.017	9011	9.64700	9.242
2 Ethene	0.686	0.703	-0.017	9583	16.8500	16.359
3 Ethane	0.766	0.780	-0.014	14659	18.0430	20.374

Data File: \\nahstws005\Target\chem\FID-4.i\210730.b\Before\001.D
Date : 30-JUL-2021 09:46
Client ID: RSK-CCV
Sample Info: RSK-CCV;RSK-CCV;2;4

Instrument: FID-4.i
Operator: PL
Column diameter: 0.53

Column phase: Rtx-PLOT



Data File: \\nahstws005\Target\chem\FID-4.i\210730.b\001.D Page 1
Report Date: 12-Oct-2021 14:10

ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\nahstws005\Target\chem\FID-4.i\210730.b\001.D
Lab Smp Id: RSK-CCV Client Smp ID: RSK-CCV
Inj Date : 30-JUL-2021 09:46
Operator : PL Inst ID: FID-4.i
Smp Info : RSK-CCV;RSK-CCV;2;4
Misc Info : ;1;0;1
Comment :
Method : \\NAHSTWS005\Target\chem\FID-4.i\210730.b\RSKNI3.m
Meth Date : 12-Oct-2021 14:02 linh.pham Quant Type: ESTD
Cal Date : 24-JAN-2017 10:15 Cal File: 004.D
Als bottle: 1 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: RSK175.sub
Target Version: 4.14
Processing Host: ALSHSW7104

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

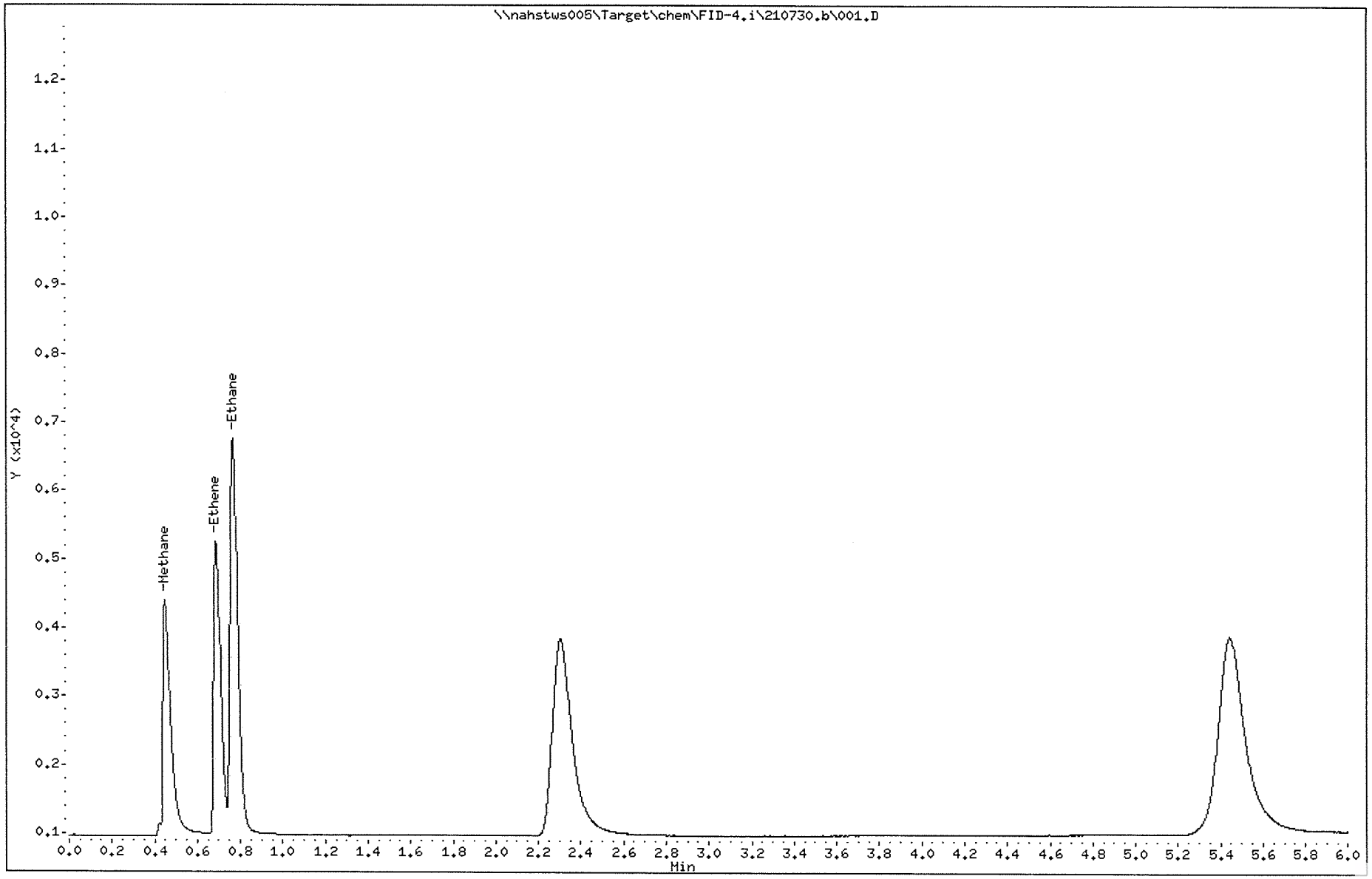
Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
1 Methane	0.446	0.463	-0.017	9149	9.64700	9.383
2 Ethene	0.686	0.703	-0.017	9695	16.8500	16.551
3 Ethane	0.766	0.780	-0.014	14889	18.0430	20.693

Data File: \\nahstws005\Target\chem\FID-4.i\210730.b\001.D
Date : 30-JUL-2021 09:46
Client ID: RSK-CCV
Sample Info: RSK-CCV;RSK-CCV;2;4

Column phase: Rtx-PLOT

Instrument: FID-4.i

Operator: PL
Column diameter: 0.53



ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\nahstws005\Target\chem\FID-4.i\210730.b\Before\002.D
Lab Smp Id: MBLK-210730 Client Smp ID: MBLK-210730
Inj Date : 30-JUL-2021 09:55
Operator : PL Inst ID: FID-4.i
Smp Info : MBLK-210730;MBLK-210730;3;;BLANK
Misc Info : ;1;0;1
Comment :
Method : \\NAHSTWS005\Target\chem\FID-4.i\210730.b\RSKNI3.m
Meth Date : 12-Oct-2021 14:02 linh.pham Quant Type: ESTD
Cal Date : 24-JAN-2017 10:15 Cal File: 004.D
Als bottle: 2 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: RSK175.sub
Target Version: 4.14
Processing Host: ALSHSW7104

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)

Data File: \\nahstws005\Target\chem\FID-4.i\210730.b\Before\002.D
Date : 30-JUL-2021 09:55
Client ID: MBLK-210730
Sample Info: MBLK-210730;MBLK-210730;3;;BLANK

Instrument: FID-4.i

Operator: PL
Column diameter: 0.53

Column phase: Rtx-PLOT



Data File: \\nahstws005\Target\chem\FID-4.i\210730.b\002.D Page 1
Report Date: 12-Oct-2021 14:10

ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\nahstws005\Target\chem\FID-4.i\210730.b\002.D
Lab Smp Id: MBLK-210730 Client Smp ID: MBLK-210730
Inj Date : 30-JUL-2021 09:55
Operator : PL Inst ID: FID-4.i
Smp Info : MBLK-210730;MBLK-210730;3;;BLANK
Misc Info : ;1;0;1
Comment :
Method : \\NAHSTWS005\Target\chem\FID-4.i\210730.b\RSKNI3.m
Meth Date : 12-Oct-2021 14:02 linh.pham Quant Type: ESTD
Cal Date : 24-JAN-2017 10:15 Cal File: 004.D
Als bottle: 2 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: RSK175.sub
Target Version: 4.14
Processing Host: ALSHSW7104

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)
==========	====	========	========	========	=======	=======

Data File: \\nahstws005\Target\chem\FID-4.i\210730.b\002.D

Date : 30-JUL-2021 09:55

Client ID: MBLK-210730

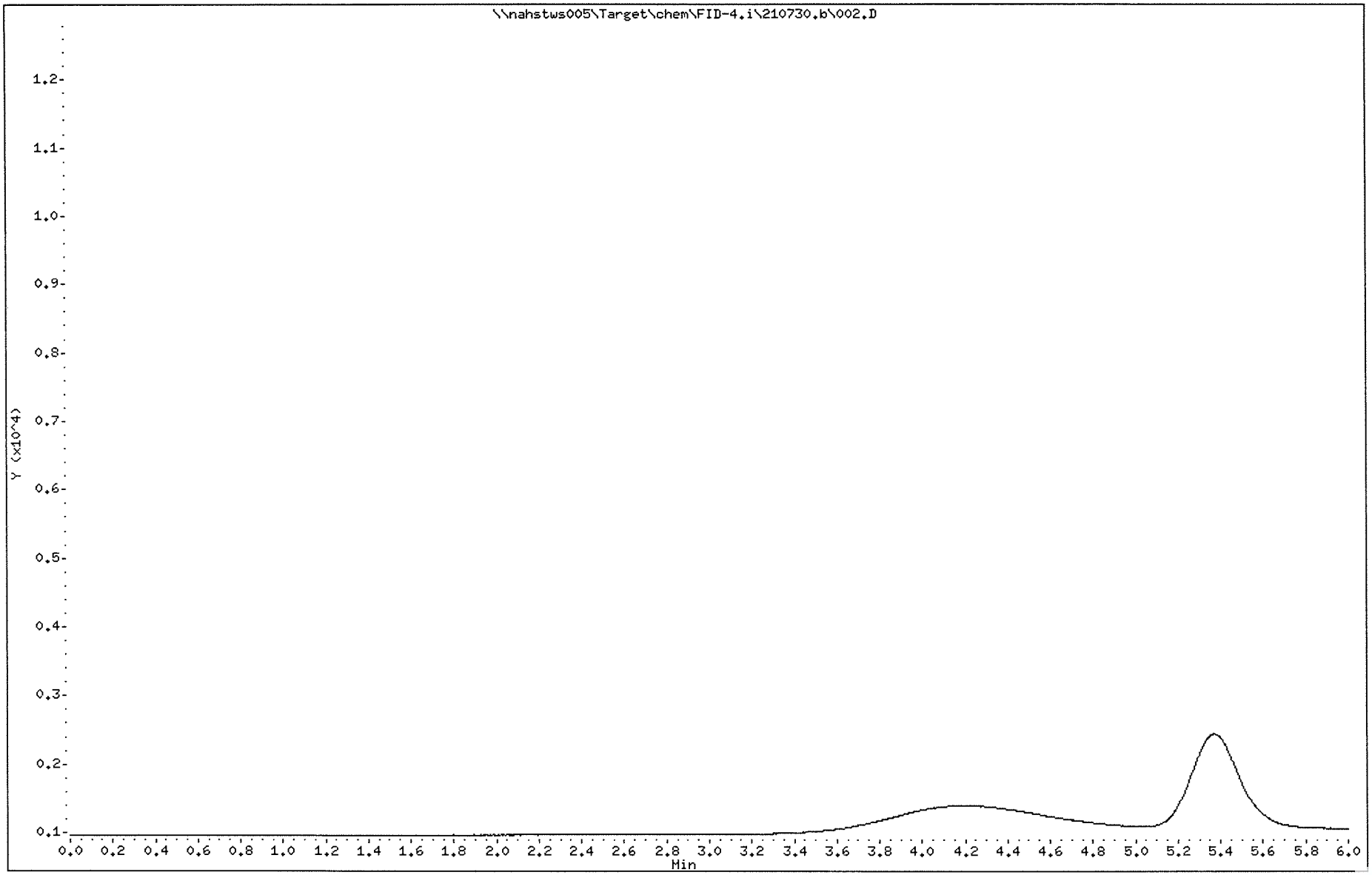
Instrument: FID-4.i

Sample Info: MBLK-210730;MBLK-210730;3;;BLANK

Operator: PL

Column phase: Rtx-PLOT

Column diameter: 0.53



ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\nahstws005\Target\chem\FID-4.i\210730.b\Before\003.D
Lab Smp Id: LCS-210730 Client Smp ID: LCS-2107030
Inj Date : 30-JUL-2021 10:05
Operator : PL Inst ID: FID-4.i
Smp Info : LCS-210730;LCS-2107030;3;;LCS
Misc Info : ;1;0;1
Comment :
Method : \\NAHSTWS005\Target\chem\FID-4.i\210730.b\RSKNI3.m
Meth Date : 12-Oct-2021 14:02 linh.pham Quant Type: ESTD
Cal Date : 24-JAN-2017 10:15 Cal File: 004.D
Als bottle: 3 QC Sample: LCS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: RSK175.sub
Target Version: 4.14
Processing Host: ALSHSW7104

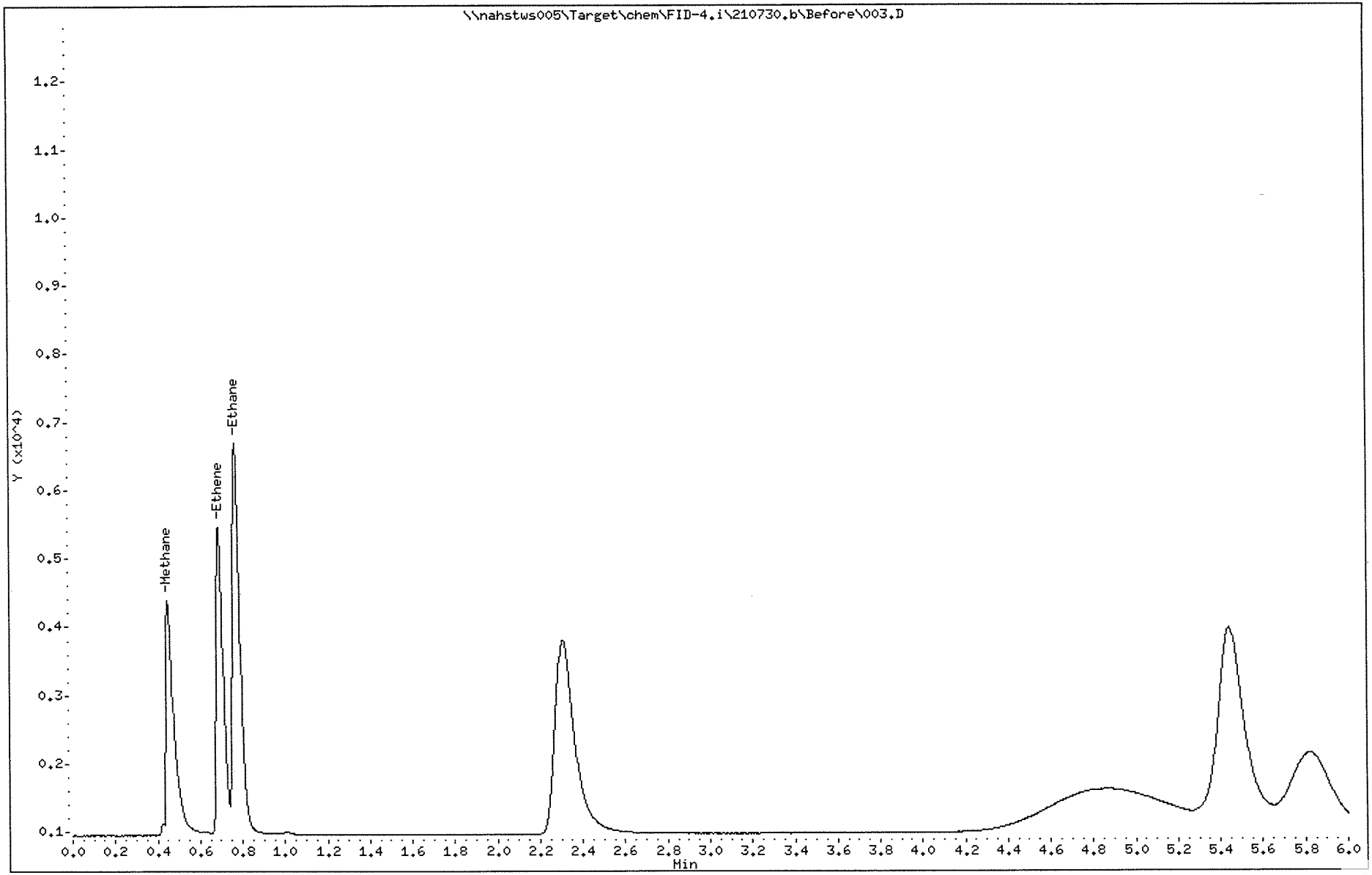
Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)
1 Methane	0.450	0.463	-0.013	9586	9.83187	9.831
2 Ethene	0.690	0.703	-0.013	10229	17.4628	17.462
3 Ethane	0.766	0.780	-0.014	14627	20.3297	20.329

Data File: \\nahstws005\Target\chem\FID-4.i\210730.b\Before\003.D
Date : 30-JUL-2021 10:05
Client ID: LCS-2107030
Sample Info: LCS-210730;LCS-2107030;3;;LCS

Instrument: FID-4.i
Operator: PL
Column diameter: 0.53

Column phase: Rtx-PLOT



Data File: \\nahstws005\Target\chem\FID-4.i\210730.b\003.D Page 1
Report Date: 12-Oct-2021 14:10

ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\nahstws005\Target\chem\FID-4.i\210730.b\003.D
Lab Smp Id: LCS-210730 Client Smp ID: LCS-2107030
Inj Date : 30-JUL-2021 10:05
Operator : PL Inst ID: FID-4.i
Smp Info : LCS-210730;LCS-2107030;3;;LCS
Misc Info : ;1;0;1
Comment :
Method : \\NAHSTWS005\Target\chem\FID-4.i\210730.b\RSKNI3.m
Meth Date : 12-Oct-2021 14:02 linh.pham Quant Type: ESTD
Cal Date : 24-JAN-2017 10:15 Cal File: 004.D
Als bottle: 3 QC Sample: LCS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: RSK175.sub
Target Version: 4.14
Processing Host: ALSHSW7104

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

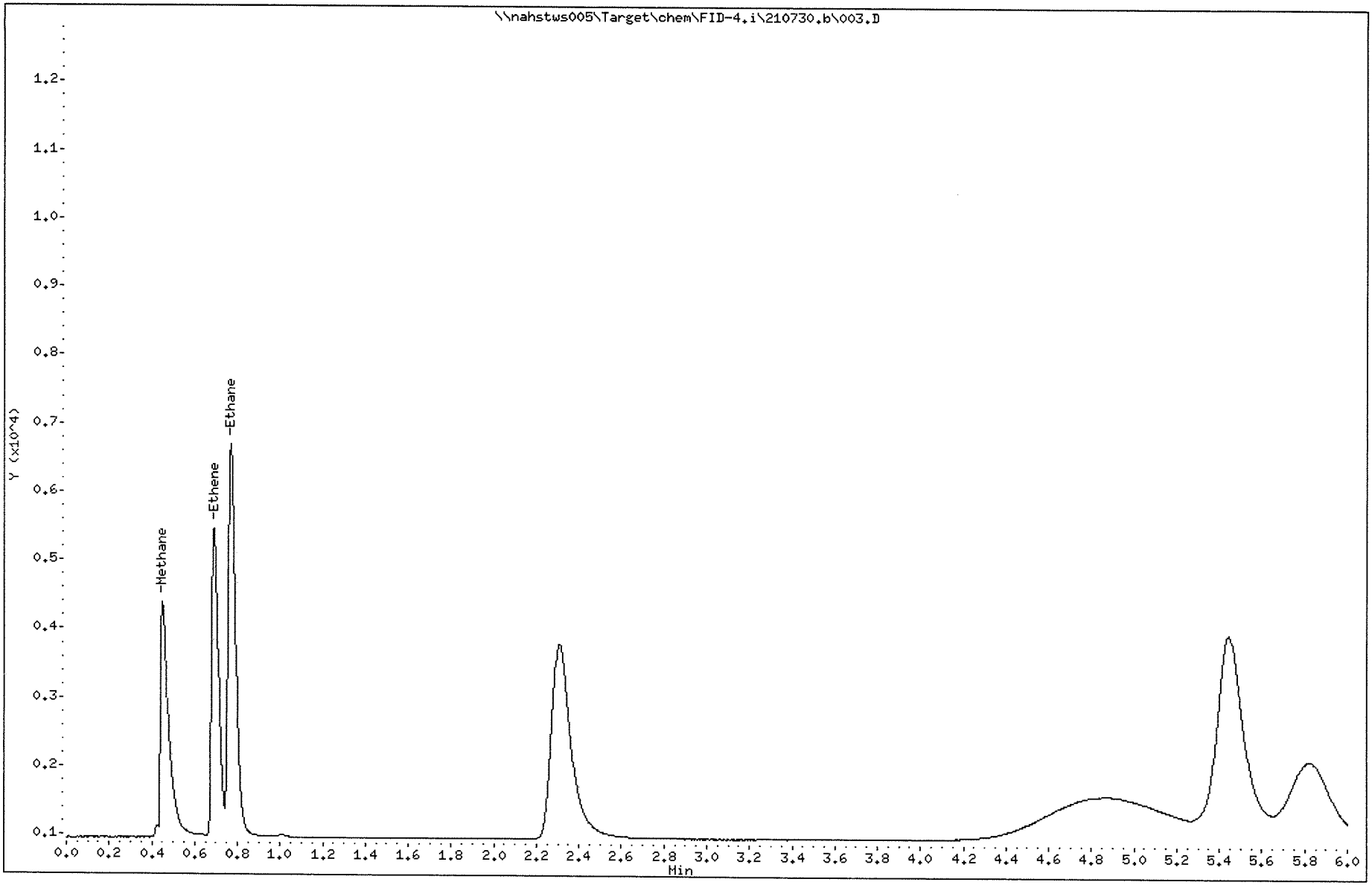
Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)
1 Methane	0.450	0.463	-0.013	9586	9.83187	9.831
2 Ethene	0.690	0.703	-0.013	10229	17.4628	17.462
3 Ethane	0.766	0.780	-0.014	14627	20.3297	20.329

Data File: \\nahstws005\Target\chem\FID-4.i\210730.b\003.D
Date : 30-JUL-2021 10:05
Client ID: LCS-2107030
Sample Info: LCS-210730;LCS-2107030;3;;LCS

Column phase: Rtx-PLOT

Instrument: FID-4.i

Operator: PL
Column diameter: 0.53



ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\nahstws005\Target\chem\FID-4.i\210730.b\Before\007.D
Lab Smp Id: HS21071038-02MS Client Smp ID: HS21071038-02MS
Inj Date : 30-JUL-2021 10:52
Operator : PL Inst ID: FID-4.i
Smp Info : HS21071038-02MS;HS21071038-02MS
Misc Info : ;1;0;1
Comment   :
Method   : \\NAHSTWS005\Target\chem\FID-4.i\210730.b\RSKNI3.m
Meth Date : 12-Oct-2021 14:02 linh.pham Quant Type: ESTD
Cal Date : 24-JAN-2017 10:15 Cal File: 004.D
Als bottle: 7 QC Sample: MS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: RSK175.sub
Target Version: 4.14
Processing Host: ALSHSW7104

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

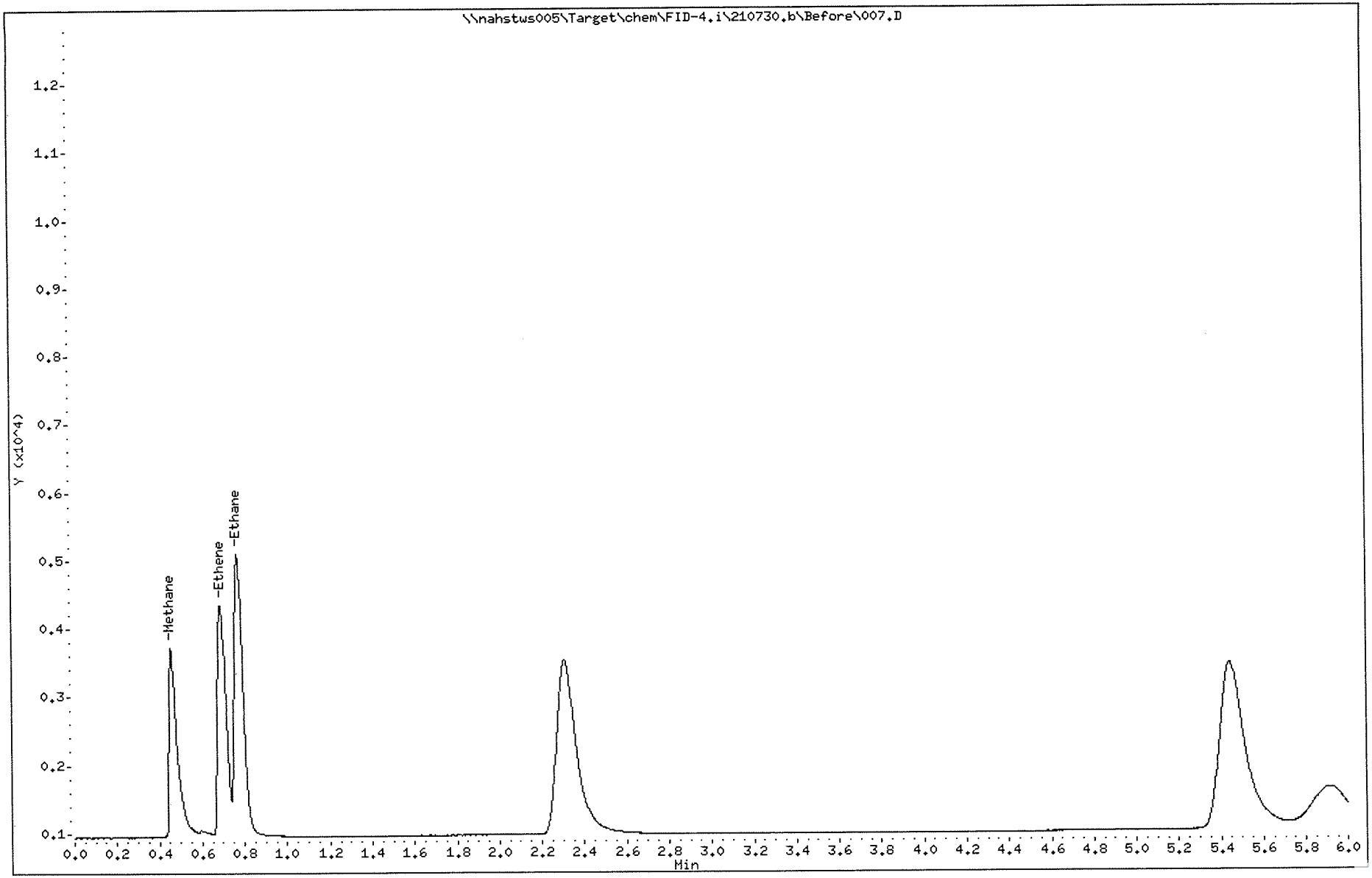
Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)
1 Methane	0.456	0.463	-0.007	7594	7.78878	7.788
2 Ethene	0.690	0.703	-0.013	9281	15.8444	15.844
3 Ethane	0.770	0.780	-0.010	11835	16.4492	16.449

Data File: \\nahstws005\Target\chem\FID-4.i\210730.b\Before\007.D
Date : 30-JUL-2021 10:52
Client ID: HS21071038-02MS
Sample Info: HS21071038-02MS;HS21071038-02MS

Instrument: FID-4.i

Operator: PL
Column diameter: 0.53

Column phase: Rtx-PLOT



Data File: \\nahstws005\Target\chem\FID-4.i\210730.b\007.D Page 1
Report Date: 12-Oct-2021 14:10

ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\nahstws005\Target\chem\FID-4.i\210730.b\007.D
Lab Smp Id: HS21071038-02MS Client Smp ID: HS21071038-02MS
Inj Date : 30-JUL-2021 10:52
Operator : PL Inst ID: FID-4.i
Smp Info : HS21071038-02MS;HS21071038-02MS
Misc Info : ;1;0;1
Comment :
Method : \\NAHSTWS005\Target\chem\FID-4.i\210730.b\RSKNI3.m
Meth Date : 12-Oct-2021 14:02 linh.pham Quant Type: ESTD
Cal Date : 24-JAN-2017 10:15 Cal File: 004.D
Als bottle: 7 QC Sample: MS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: RSK175.sub
Target Version: 4.14
Processing Host: ALSHSW7104

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)
1 Methane	0.456	0.463	-0.007	7377	7.56621	7.566 (M)
2 Ethene	0.690	0.703	-0.013	9376	16.0065	16.006
3 Ethane	0.770	0.780	-0.010	11967	16.6326	16.632

QC Flag Legend

M - Compound response manually integrated.

Data File: \\nahstws005\Target\chem\FID-4.i\210730.b\007.D

Date : 30-JUL-2021 10:52

Client ID: HS21071038-02MS

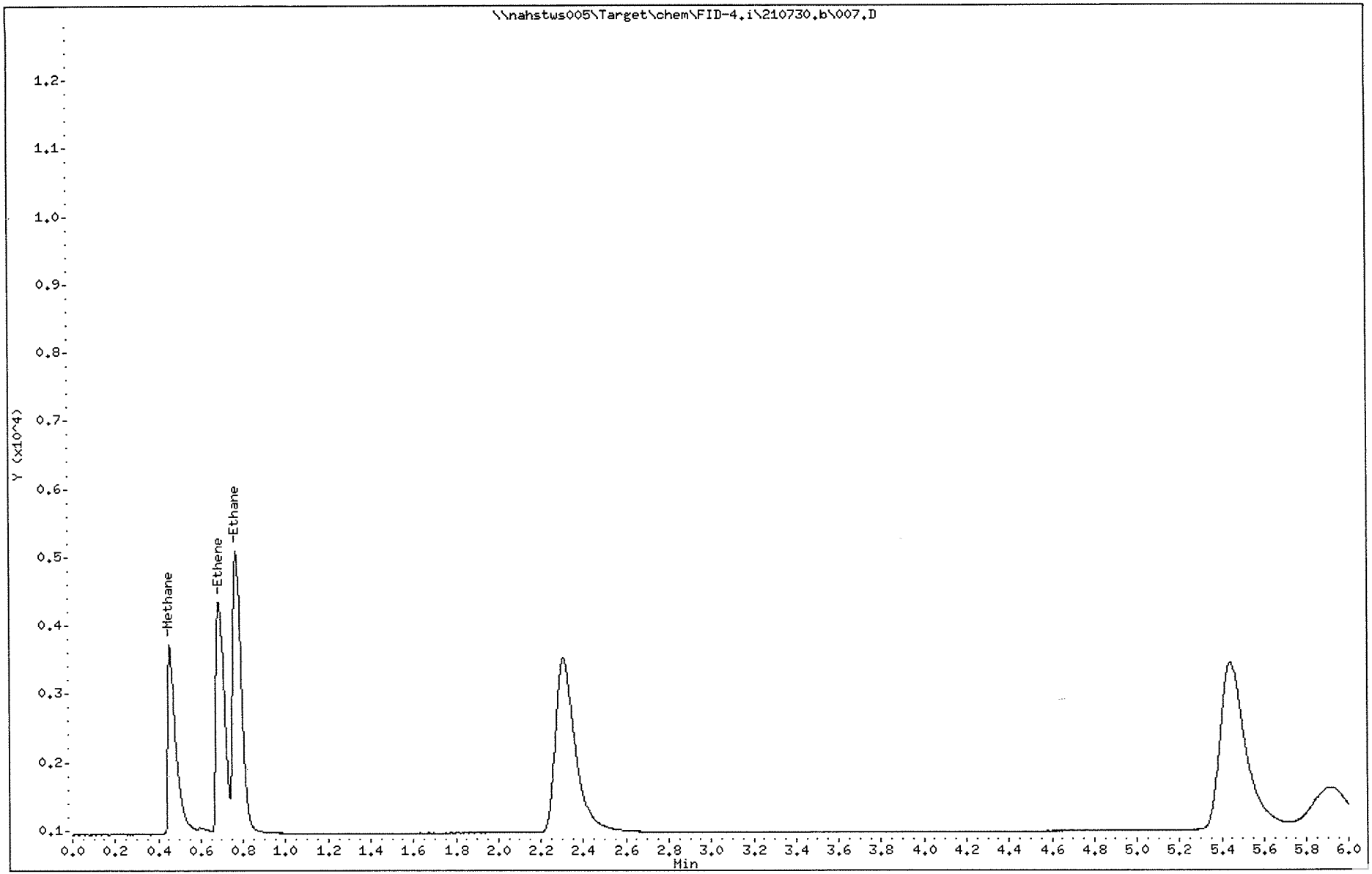
Instrument: FID-4.i

Sample Info: HS21071038-02MS;HS21071038-02MS

Operator: PL

Column phase: Rtx-PLOT

Column diameter: 0.53



ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\nahstws005\Target\chem\FID-4.i\210730.b\Before\008.D
Lab Smp Id: HS21071038-02MSD Client Smp ID: HS21071038-02MSD
Inj Date : 30-JUL-2021 11:04
Operator : PL Inst ID: FID-4.i
Smp Info : HS21071038-02MSD;HS21071038-02MSD
Misc Info : ;1;0;1
Comment :
Method : \\NAHSTWS005\Target\chem\FID-4.i\210730.b\RSKNI3.m
Meth Date : 12-Oct-2021 14:02 linh.pham Quant Type: ESTD
Cal Date : 24-JAN-2017 10:15 Cal File: 004.D
Als bottle: 8 QC Sample: MSD
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: RSK175.sub
Target Version: 4.14
Processing Host: ALSHSW7104

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)
1 Methane	0.460	0.463	-0.003	6821	6.99595	6.995
2 Ethene	0.693	0.703	-0.010	9348	15.9587	15.958
3 Ethane	0.773	0.780	-0.007	11782	16.3755	16.375

Data File: \\nahstws005\Target\chem\FID-4.i\210730.b\Before\008.D

Date : 30-JUL-2021 11:04

Client ID: HS21071038-02MSD

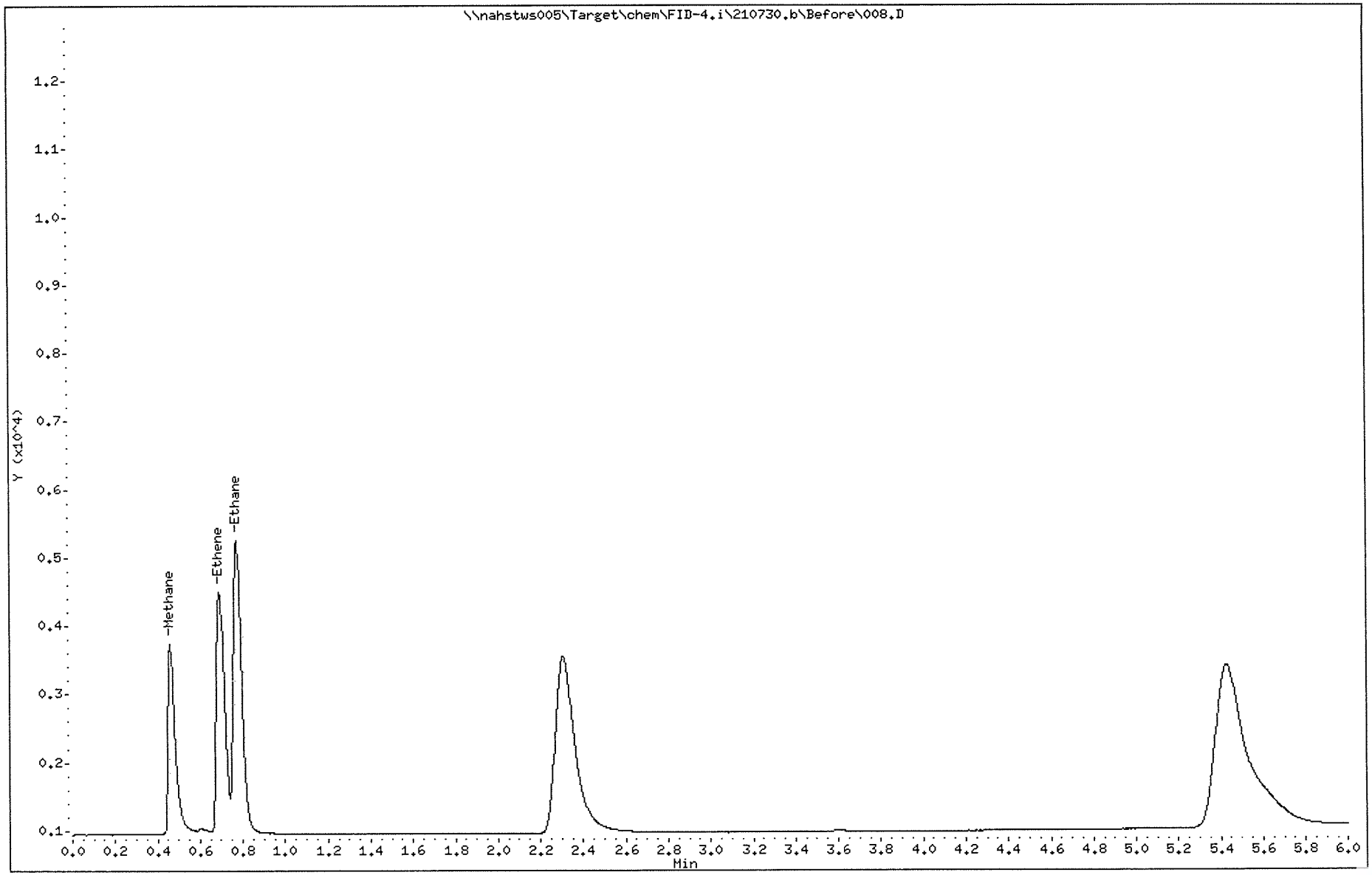
Instrument: FID-4.i

Sample Info: HS21071038-02MSD;HS21071038-02MSD

Operator: PL

Column phase: Rtx-PLOT

Column diameter: 0.53



Data File: \\nahstws005\Target\chem\FID-4.i\210730.b\008.D Page 1
Report Date: 12-Oct-2021 14:10

ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\nahstws005\Target\chem\FID-4.i\210730.b\008.D
Lab Smp Id: HS21071038-02MSD Client Smp ID: HS21071038-02MSD
Inj Date : 30-JUL-2021 11:04
Operator : PL Inst ID: FID-4.i
Smp Info : HS21071038-02MSD;HS21071038-02MSD
Misc Info : ;1;0;1
Comment :
Method : \\NAHSTWS005\Target\chem\FID-4.i\210730.b\RSKNI3.m
Meth Date : 12-Oct-2021 14:02 linh.pham Quant Type: ESTD
Cal Date : 24-JAN-2017 10:15 Cal File: 004.D
Als bottle: 8 QC Sample: MSD
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: RSK175.sub
Target Version: 4.14

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)
1 Methane	0.460	0.463	-0.003	6636	6.80621	6.806(RM)
2 Ethene	0.693	0.703	-0.010	9447	16.1278	16.127
3 Ethane	0.773	0.780	-0.007	11922	16.5701	16.570

QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

Data File: \\nahstws005\Target\chem\FID-4.i\210730.b\008.D

Date : 30-JUL-2021 11:04

Client ID: HS21071038-02MSD

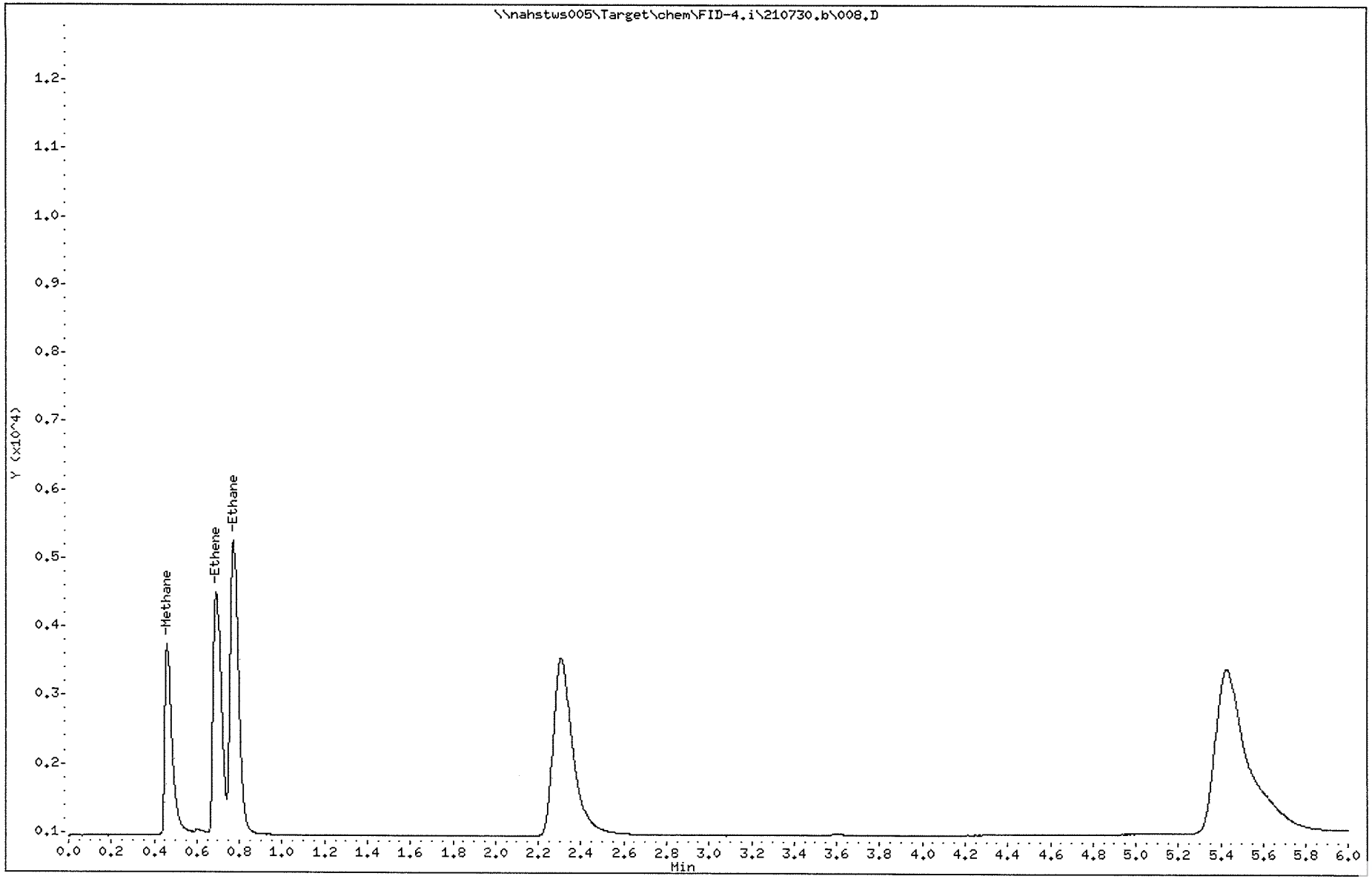
Sample Info: HS21071038-02MSD;HS21071038-02MSD

Column phase: Rtx-PLOT

Instrument: FID-4.i

Operator: PL

Column diameter: 0.53



ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\nahstws005\Target\chem\FID-4.i\210730.b\Before\011.D
Lab Smp Id: RSK-CCV Client Smp ID: RSK-CCV
Inj Date : 30-JUL-2021 11:33
Operator : PL Inst ID: FID-4.i
Smp Info : RSK-CCV;RSK-CCV;2;4
Misc Info : ;1;0;1
Comment :
Method : \\NAHSTWS005\Target\chem\FID-4.i\210730.b\RSKNI3.m
Meth Date : 12-Oct-2021 14:02 linh.pham Quant Type: ESTD
Cal Date : 24-JAN-2017 10:15 Cal File: 004.D
Als bottle: 11 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: RSK175.sub
Target Version: 4.14
Processing Host: ALSHSW7104

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

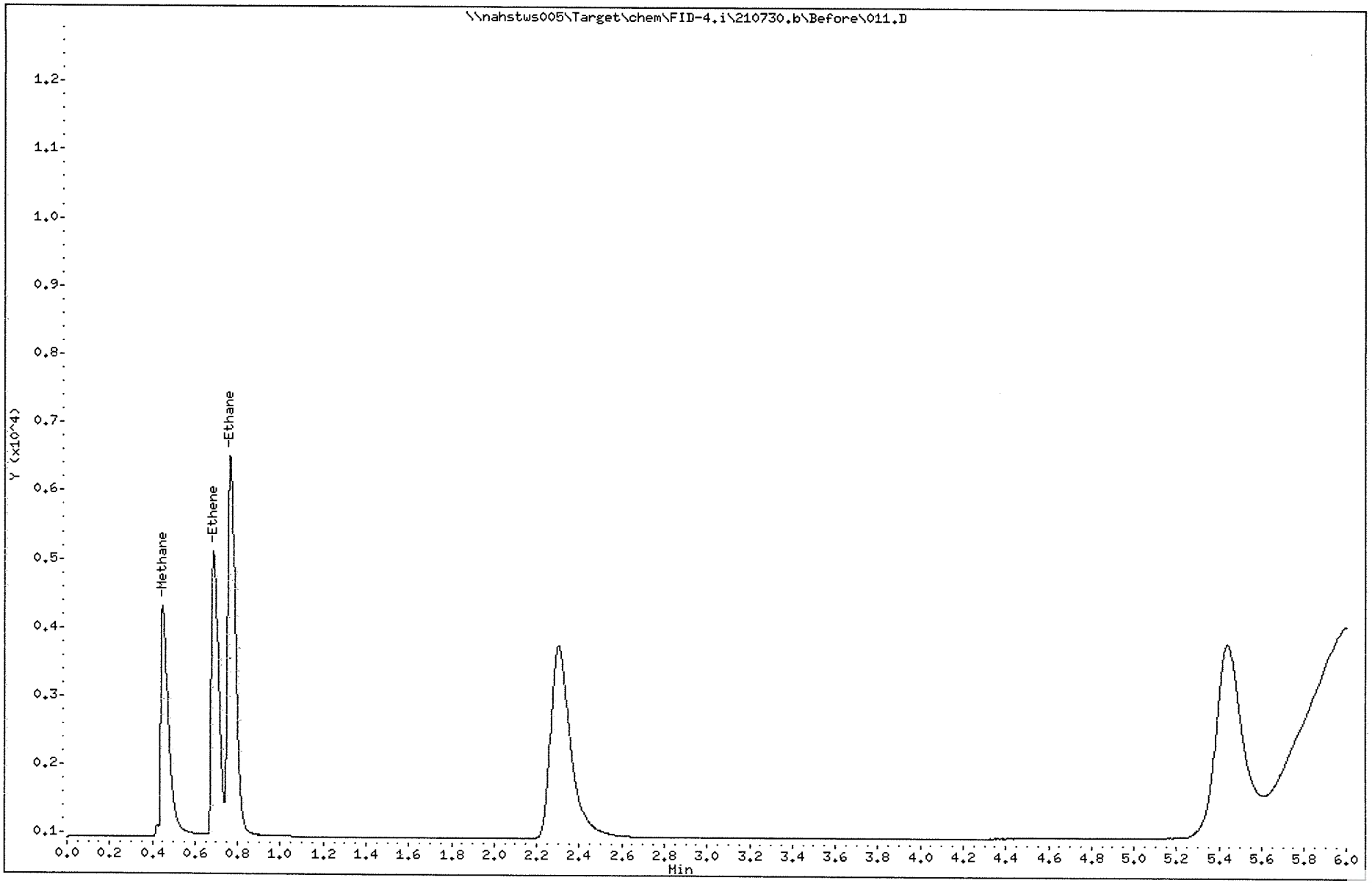
Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
1 Methane	0.446	0.463	-0.017	8342	9.64700	8.555
2 Ethene	0.686	0.703	-0.017	9654	16.8500	16.481
3 Ethane	0.763	0.780	-0.017	14185	18.0430	19.715

Data File: \\nahstws005\Target\chem\FID-4.i\210730.b\Before\011.D
Date : 30-JUL-2021 11:33
Client ID: RSK-CCV
Sample Info: RSK-CCV;RSK-CCV;2;4

Column phase: Rtx-PLOT

Instrument: FID-4.i

Operator: PL
Column diameter: 0.53



Data File: \\nahstws005\Target\chem\FID-4.i\210730.b\011.D Page 1
Report Date: 12-Oct-2021 14:10

ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\nahstws005\Target\chem\FID-4.i\210730.b\011.D
Lab Smp Id: RSK-CCV Client Smp ID: RSK-CCV
Inj Date : 30-JUL-2021 11:33
Operator : PL Inst ID: FID-4.i
Smp Info : RSK-CCV;RSK-CCV;2;4
Misc Info : ;1;0;1
Comment :
Method : \\NAHSTWS005\Target\chem\FID-4.i\210730.b\RSKNI3.m
Meth Date : 12-Oct-2021 14:02 linh.pham Quant Type: ESTD
Cal Date : 24-JAN-2017 10:15 Cal File: 004.D
Als bottle: 11 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: RSK175.sub
Target Version: 4.14
Processing Host: ALSHSW7104

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

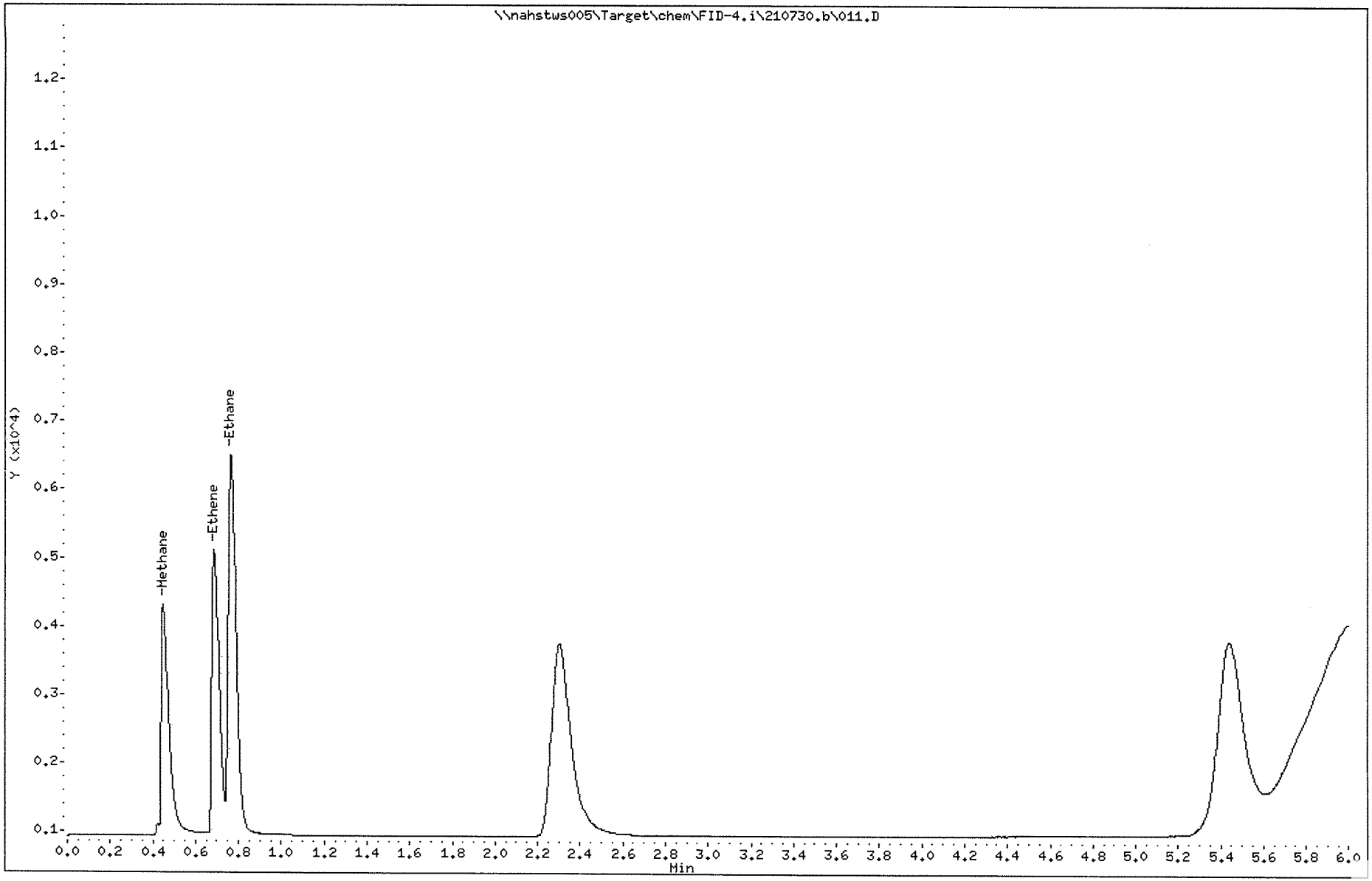
					AMOUNTS	
					CAL-AMT	ON-COL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/L)	(ug/L)
1 Methane	0.446	0.463	-0.017	8561	9.64700	8.780
2 Ethene	0.686	0.703	-0.017	9856	16.8500	16.825
3 Ethane	0.763	0.780	-0.017	14480	18.0430	20.125

Data File: \\nahstws005\Target\chem\FID-4.i\210730.b\011.D
Date : 30-JUL-2021 11:33
Client ID: RSK-CCV
Sample Info: RSK-CCV;RSK-CCV;2;4

Column phase: Rtx-PLOT

Instrument: FID-4.i

Operator: PL
Column diameter: 0.53



ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\nahstws005\Target\chem\FID-4.i\210730.b\Before\022.D
Lab Smp Id: RSK-CCV Client Smp ID: RSK-CCV
Inj Date : 30-JUL-2021 14:30
Operator : PL Inst ID: FID-4.i
Smp Info : RSK-CCV;RSK-CCV;2;4
Misc Info : ;1;0;1
Comment :
Method : \\NAHSTWS005\Target\chem\FID-4.i\210730.b\RSKNI3.m
Meth Date : 12-Oct-2021 14:02 linh.pham Quant Type: ESTD
Cal Date : 24-JAN-2017 10:15 Cal File: 004.D
Als bottle: 22 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: RSK175.sub
Target Version: 4.14
Processing Host: ALSHSW7104

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

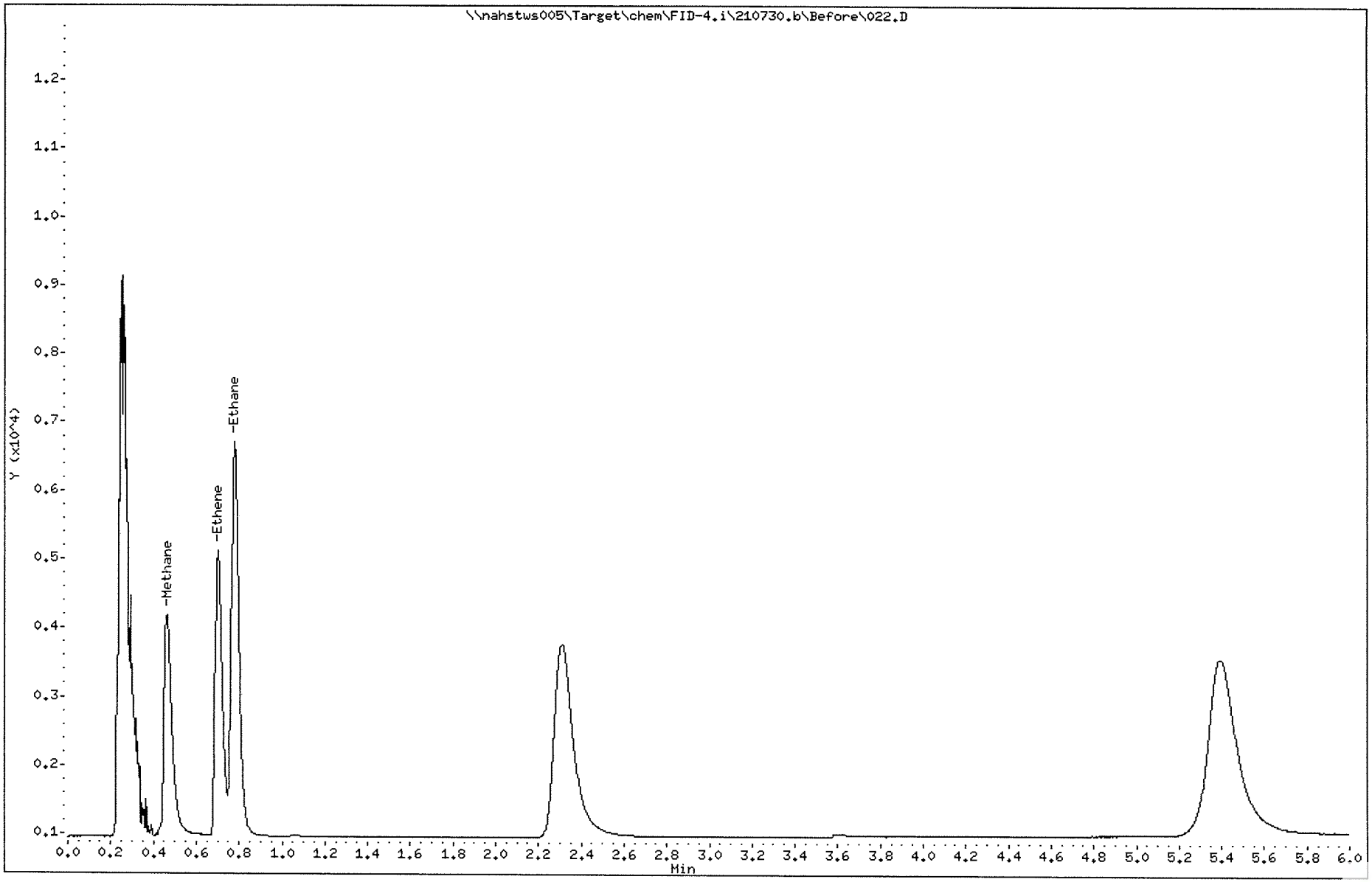
					AMOUNTS	
					CAL-AMT	ON-COL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/L)	(ug/L)
1 Methane	0.463	0.463	0.000	8466	9.64700	8.683
2 Ethene	0.700	0.703	-0.003	9375	16.8500	16.004
3 Ethane	0.780	0.780	0.000	14128	18.0430	19.636

Data File: \\nahstws005\Target\chem\FID-4.i\210730.b\Before\022.D
Date : 30-JUL-2021 14:30
Client ID: RSK-CCV
Sample Info: RSK-CCV;RSK-CCV;2;4

Column phase: Rtx-PLOT

Instrument: FID-4.i

Operator: PL
Column diameter: 0.53



Data File: \\nahstws005\Target\chem\FID-4.i\210730.b\022.D Page 1
Report Date: 12-Oct-2021 14:10

ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\nahstws005\Target\chem\FID-4.i\210730.b\022.D
Lab Smp Id: RSK-CCV Client Smp ID: RSK-CCV
Inj Date : 30-JUL-2021 14:30
Operator : PL Inst ID: FID-4.i
Smp Info : RSK-CCV;RSK-CCV;2;4
Misc Info : ;1;0;1
Comment :
Method : \\NAHSTWS005\Target\chem\FID-4.i\210730.b\RSKNI3.m
Meth Date : 12-Oct-2021 14:02 linh.pham Quant Type: ESTD
Cal Date : 24-JAN-2017 10:15 Cal File: 004.D
Als bottle: 22 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: RSK175.sub
Target Version: 4.14
Processing Host: ALSHSW7104

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

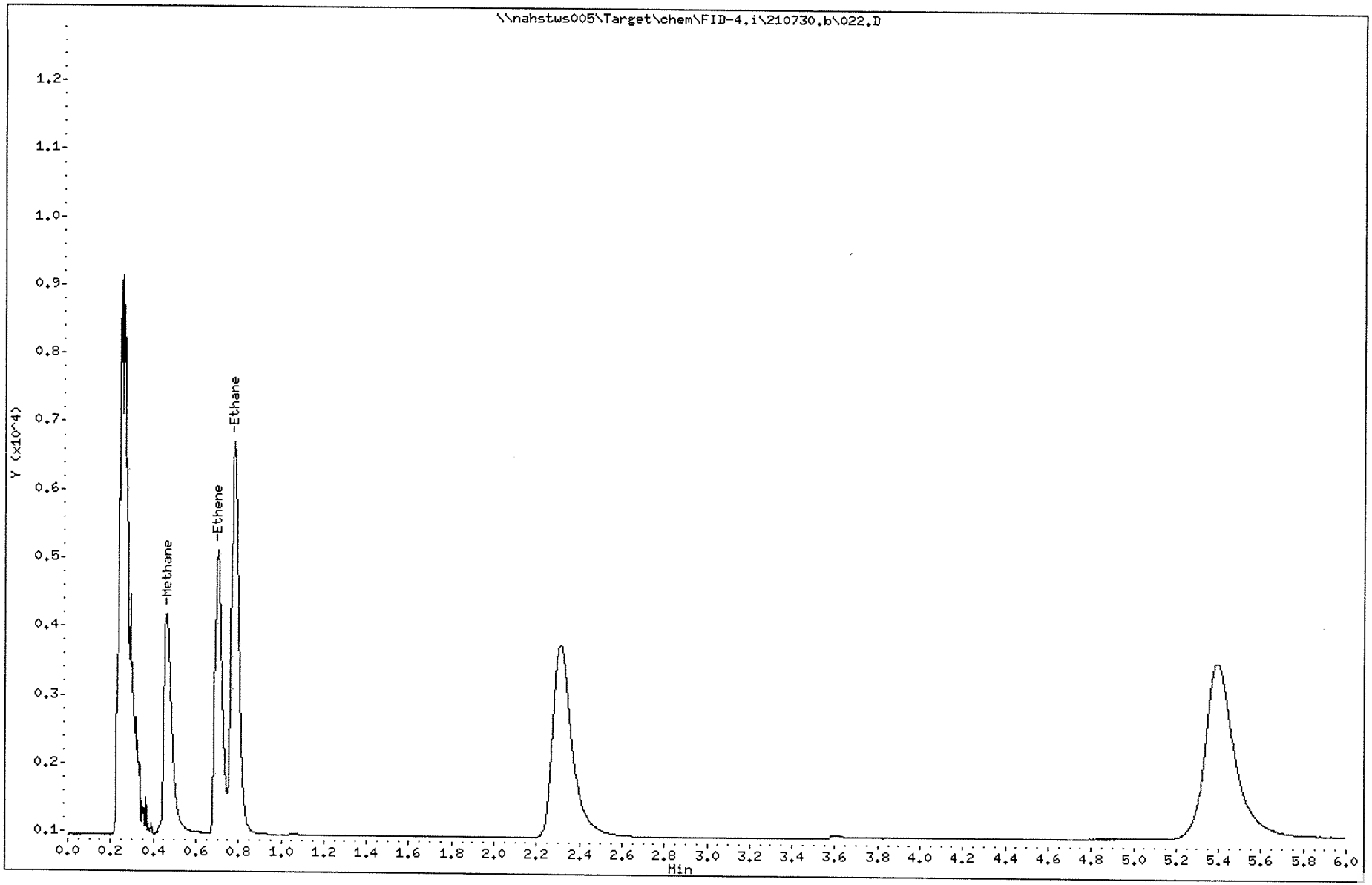
					AMOUNTS	
					CAL-AMT	ON-COL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/L)	(ug/L)
1 Methane	0.463	0.463	0.000	8577	9.64700	8.796
2 Ethene	0.700	0.703	-0.003	9516	16.8500	16.245
3 Ethane	0.780	0.780	0.000	14364	18.0430	19.964

Data File: \\nahstws005\Target\chem\FID-4.i\210730.b\022.D
Date : 30-JUL-2021 14:30
Client ID: RSK-CCV
Sample Info: RSK-CCV;RSK-CCV;2;4

Column phase: Rtx-PLOT

Instrument: FID-4.i

Operator: PL
Column diameter: 0.53



ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\nahstws005\Target\chem\FID-4.i\210730.b\Before\024.D
Lab Smp Id: HS21071204-02MS Client Smp ID: HS21071204-02MS
Inj Date : 30-JUL-2021 14:47
Operator : PL Inst ID: FID-4.i
Smp Info : HS21071204-02MS;HS21071204-02MS
Misc Info : ;1;0;1
Comment :
Method : \\NAHSTWS005\Target\chem\FID-4.i\210730.b\RSKNI3.m
Meth Date : 12-Oct-2021 14:02 linh.pham Quant Type: ESTD
Cal Date : 24-JAN-2017 10:15 Cal File: 004.D
Als bottle: 24 QC Sample: MS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: RSK175.sub
Target Version: 4.14
Processing Host: ALSHSW7104

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)
1 Methane	0.463	0.463	0.000	199929	205.057	205.056(AR)
2 Ethene	0.693	0.703	-0.010	6130	10.4650	10.465(R)
3 Ethane	0.773	0.780	-0.007	6915	9.61098	9.610(R)

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.
R - Spike/Surrogate failed recovery limits.

Data File: \\nahstws005\Target\chem\FID-4.i\210730.b\Before\024.D

Date : 30-JUL-2021 14:47

Client ID: HS21071204-02MS

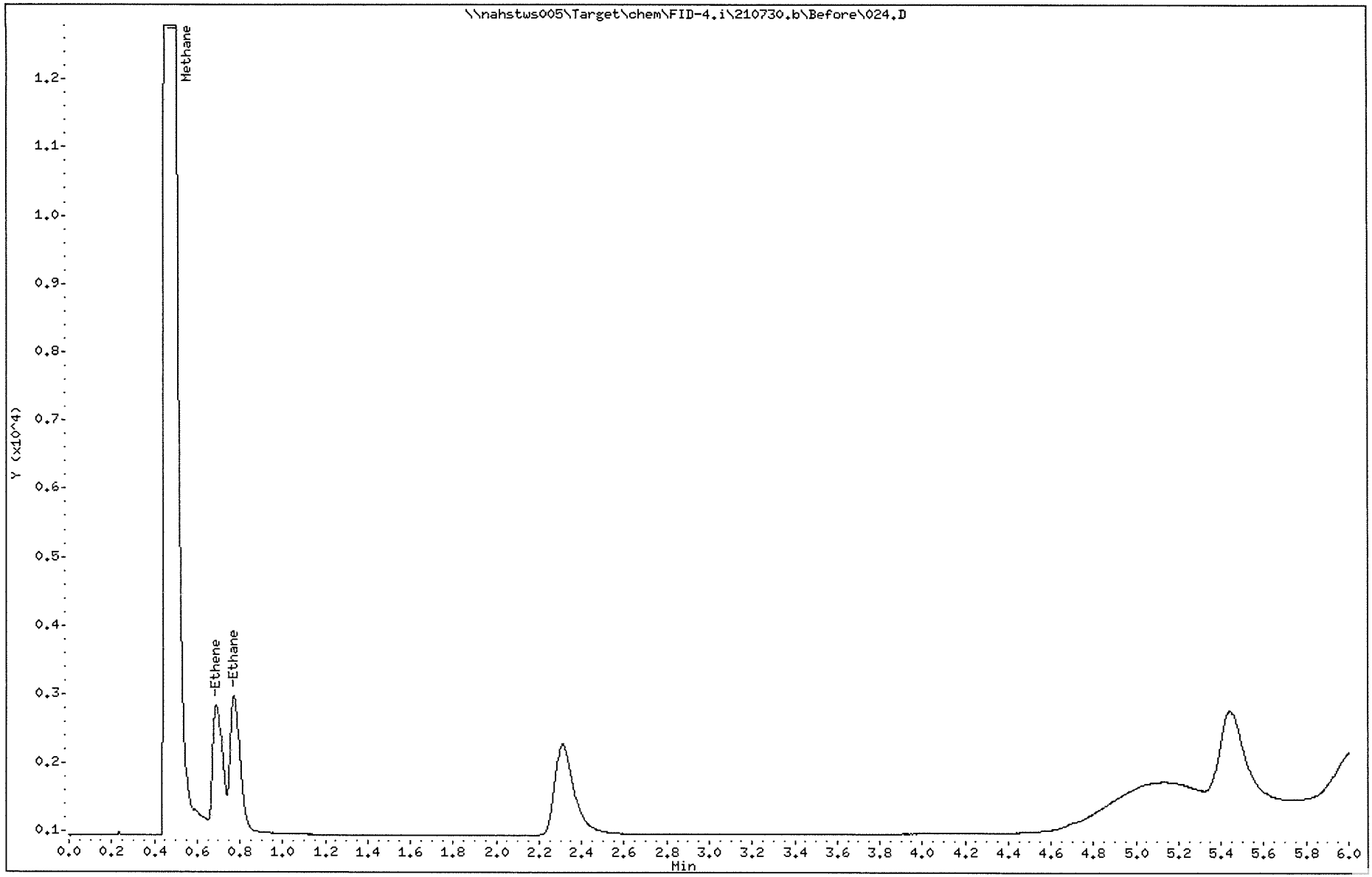
Instrument: FID-4.i

Sample Info: HS21071204-02MS;HS21071204-02MS

Operator: PL

Column phase: Rtx-PLOT

Column diameter: 0.53



Data File: \\nahstws005\Target\chem\FID-4.i\210730.b\024.D Page 1
Report Date: 12-Oct-2021 14:10

ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\nahstws005\Target\chem\FID-4.i\210730.b\024.D
Lab Smp Id: HS21071204-02MS Client Smp ID: HS21071204-02MS
Inj Date : 30-JUL-2021 14:47
Operator : PL Inst ID: FID-4.i
Smp Info : HS21071204-02MS;HS21071204-02MS
Misc Info : ;1;0;1
Comment :
Method : \\NAHSTWS005\Target\chem\FID-4.i\210730.b\RSKNI3.m
Meth Date : 12-Oct-2021 14:02 linh.pham Quant Type: ESTD
Cal Date : 24-JAN-2017 10:15 Cal File: 004.D
Als bottle: 24 QC Sample: MS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: RSK175.sub
Target Version: 4.14
Processing Host: ALSHSW7104

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

					CONCENTRATIONS	
					ON-COLUMN	FINAL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/L)	(ug/L)
1 Methane	0.463	0.463	0.000	199929	205.057	205.056(AR)
2 Ethene	0.693	0.703	-0.010	6130	10.4650	10.465(R)
3 Ethane	0.773	0.780	-0.007	6915	9.61098	9.610(R)

QC Flag Legend

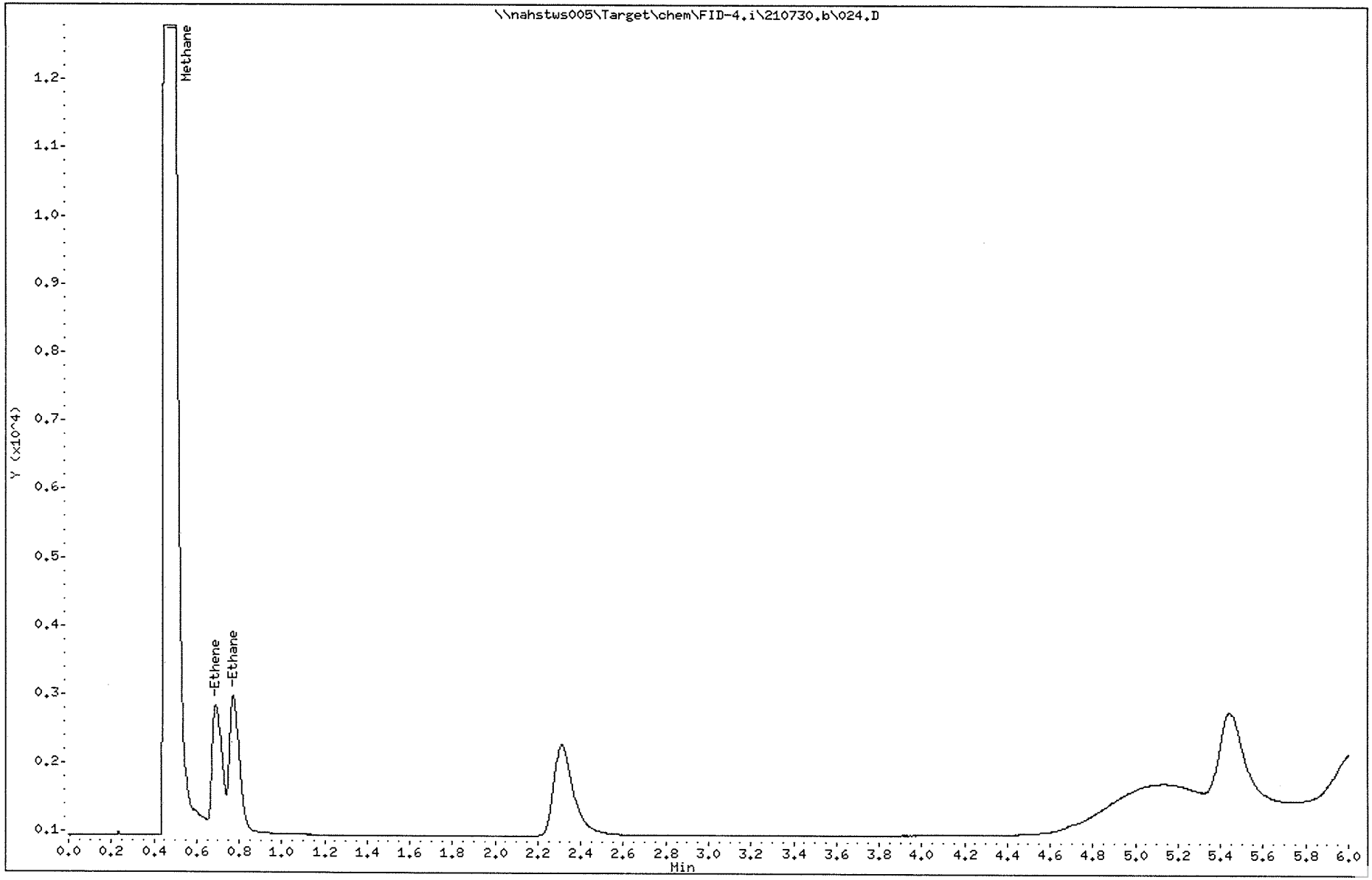
A - Target compound detected but, quantitated amount exceeded maximum amount.
R - Spike/Surrogate failed recovery limits.

Data File: \\nahstws005\Target\chem\FID-4.i\210730.b\024.D
Date : 30-JUL-2021 14:47
Client ID: HS21071204-02MS
Sample Info: HS21071204-02MS;HS21071204-02MS

Column phase: Rtx-PLOT

Instrument: FID-4.i

Operator: PL
Column diameter: 0.53



ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\nahstws005\Target\chem\FID-4.i\210730.b\Before\025.D
Lab Smp Id: HS21071204-02MSD Client Smp ID: HS21071204-02MSD
Inj Date : 30-JUL-2021 14:56
Operator : PL Inst ID: FID-4.i
Smp Info : HS21071204-02MSD;MS;HS21071204-02MSD
Misc Info : ;1;0;1
Comment   :
Method   : \\NAHSTWS005\Target\chem\FID-4.i\210730.b\RSKNI3.m
Meth Date : 12-Oct-2021 14:02 linh.pham Quant Type: ESTD
Cal Date : 24-JAN-2017 10:15 Cal File: 004.D
Als bottle: 25 QC Sample: MSD
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: RSK175.sub
Target Version: 4.14
Processing Host: ALSHSW7104

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)
1 Methane	0.460	0.463	-0.003	200977	206.132	206.131(AR)
2 Ethene	0.693	0.703	-0.010	6306	10.7655	10.765(R)
3 Ethane	0.770	0.780	-0.010	6786	9.43168	9.431(R)

QC Flag Legend

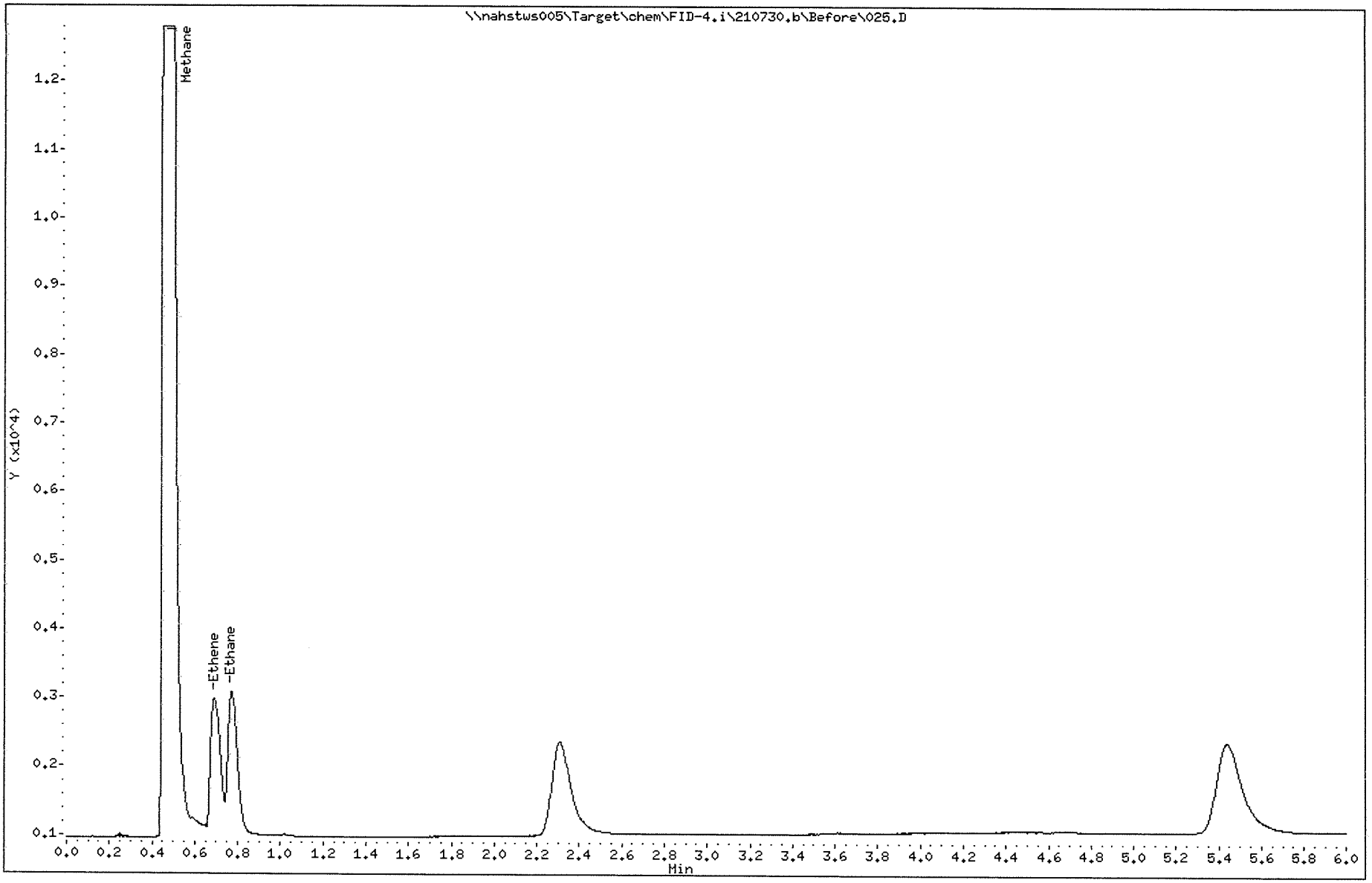
A - Target compound detected but, quantitated amount
    exceeded maximum amount.
R - Spike/Surrogate failed recovery limits.

Data File: \\nahstws005\Target\chem\FID-4.i\210730.b\Before\025.D
Date : 30-JUL-2021 14:56
Client ID: HS21071204-02MSD
Sample Info: HS21071204-02MSD;MS;HS21071204-02MSD

Column phase: Rtx-PLOT

Instrument: FID-4.i

Operator: PL
Column diameter: 0.53



Data File: \\nahstws005\Target\chem\FID-4.i\210730.b\025.D Page 1
Report Date: 12-Oct-2021 14:10

ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\nahstws005\Target\chem\FID-4.i\210730.b\025.D
Lab Smp Id: HS21071204-02MSD Client Smp ID: HS21071204-02MSD
Inj Date : 30-JUL-2021 14:56
Operator : PL Inst ID: FID-4.i
Smp Info : HS21071204-02MSD;MS;HS21071204-02MSD
Misc Info : ;1;0;1
Comment :
Method : \\NAHSTWS005\Target\chem\FID-4.i\210730.b\RSKNI3.m
Meth Date : 12-Oct-2021 14:02 linh.pham Quant Type: ESTD
Cal Date : 24-JAN-2017 10:15 Cal File: 004.D
Als bottle: 25 QC Sample: MSD
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: RSK175.sub
Target Version: 4.14
Processing Host: ALSHSW7104

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)
1 Methane	0.460	0.463	-0.003	200977	206.132	206.131(AR)
2 Ethene	0.693	0.703	-0.010	6306	10.7655	10.765(R)
3 Ethane	0.770	0.780	-0.010	6786	9.43168	9.431(R)

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.
R - Spike/Surrogate failed recovery limits.

Data File: \\nahstws005\Target\chem\FID-4.i\210730.b\025.D

Date : 30-JUL-2021 14:56

Client ID: HS21071204-02MSD

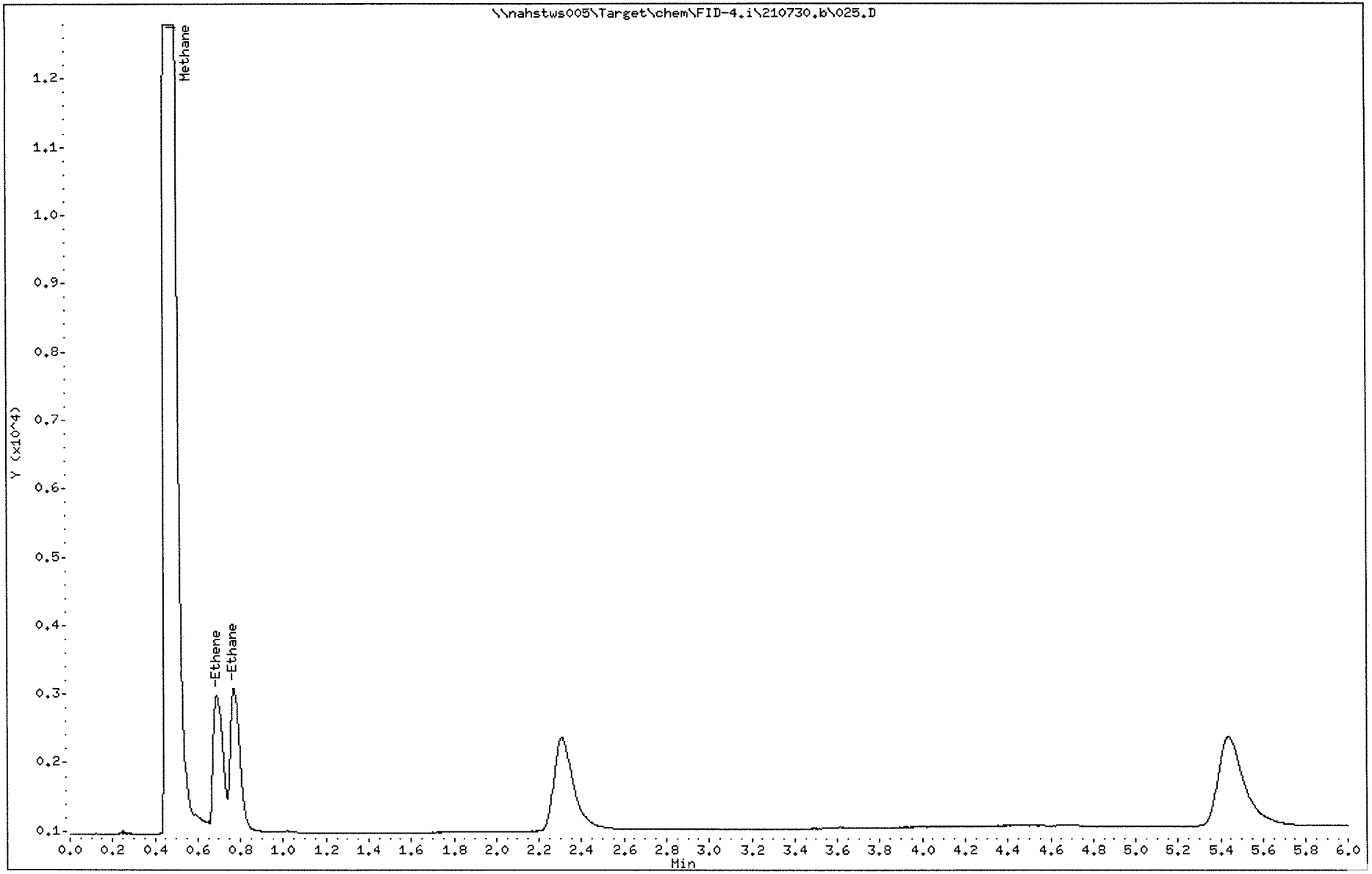
Instrument: FID-4.i

Sample Info: HS21071204-02MSD;MS;HS21071204-02MSD

Operator: PL

Column phase: Rtx-PLOT

Column diameter: 0.53



ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\nahstws005\Target\chem\FID-4.i\210730.b\Before\029.D
Lab Smp Id: HS21071405-08 Client Smp ID: HS21071405-08
Inj Date : 30-JUL-2021 15:33
Operator : PL Inst ID: FID-4.i
Smp Info : HS21071405-08;HS21071405-08
Misc Info : ;1;0;1
Comment :
Method : \\NAHSTWS005\Target\chem\FID-4.i\210730.b\RSKNI3.m
Meth Date : 12-Oct-2021 14:02 linh.pham Quant Type: ESTD
Cal Date : 24-JAN-2017 10:15 Cal File: 004.D
Als bottle: 29
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: RSK175.sub
Target Version: 4.14
Processing Host: ALSHSW7104

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

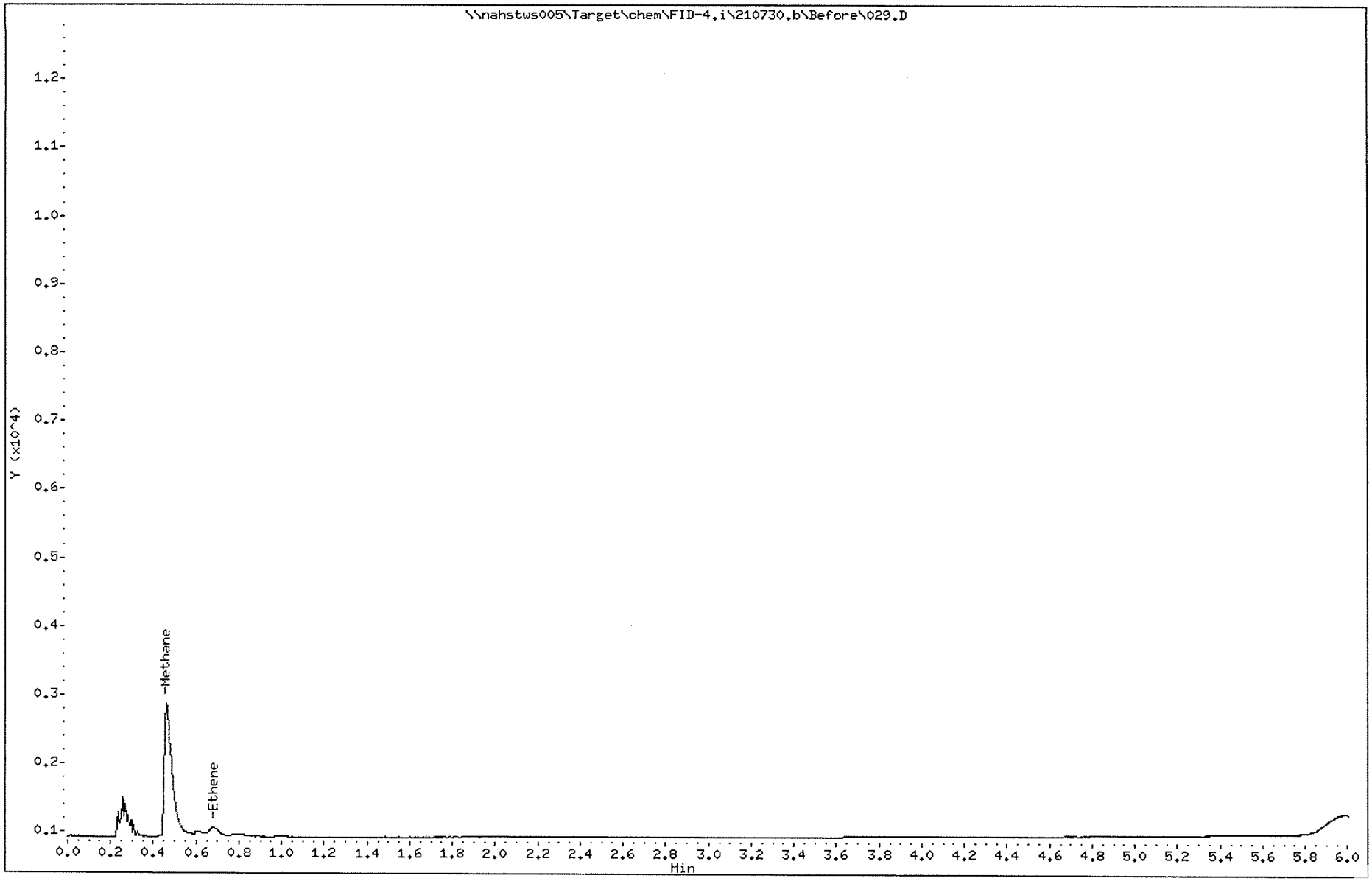
					CONCENTRATIONS	
					ON-COLUMN	FINAL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/L)	(ug/L)
1 Methane	0.463	0.463	0.000	5042	5.17132	5.171
2 Ethene	0.683	0.703	-0.020	810	1.38282	1.382

Data File: \\nahstws005\Target\chem\FID-4.i\210730.b\Before\029.D
Date : 30-JUL-2021 15:33
Client ID: HS21071405-08
Sample Info: HS21071405-08;HS21071405-08

Column phase: Rtx-PLOT

Instrument: FID-4.i

Operator: PL
Column diameter: 0.53



Data File: \\nahstws005\Target\chem\FID-4.i\210730.b\029.D Page 1
Report Date: 12-Oct-2021 14:10

ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\nahstws005\Target\chem\FID-4.i\210730.b\029.D
Lab Smp Id: HS21071405-08 Client Smp ID: HS21071405-08
Inj Date : 30-JUL-2021 15:33
Operator : PL Inst ID: FID-4.i
Smp Info : HS21071405-08;HS21071405-08
Misc Info : ;1;0;1
Comment :
Method : \\NAHSTWS005\Target\chem\FID-4.i\210730.b\RSKNI3.m
Meth Date : 12-Oct-2021 14:02 linh.pham Quant Type: ESTD
Cal Date : 24-JAN-2017 10:15 Cal File: 004.D
Als bottle: 29
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: RSK175.sub
Target Version: 4.14
Processing Host: ALSHSW7104

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)
1 Methane	0.463	0.463	0.000	5042	5.17132	5.171
2 Ethene	0.676	0.703	-0.027	486	0.82969	0.829(M)

QC Flag Legend

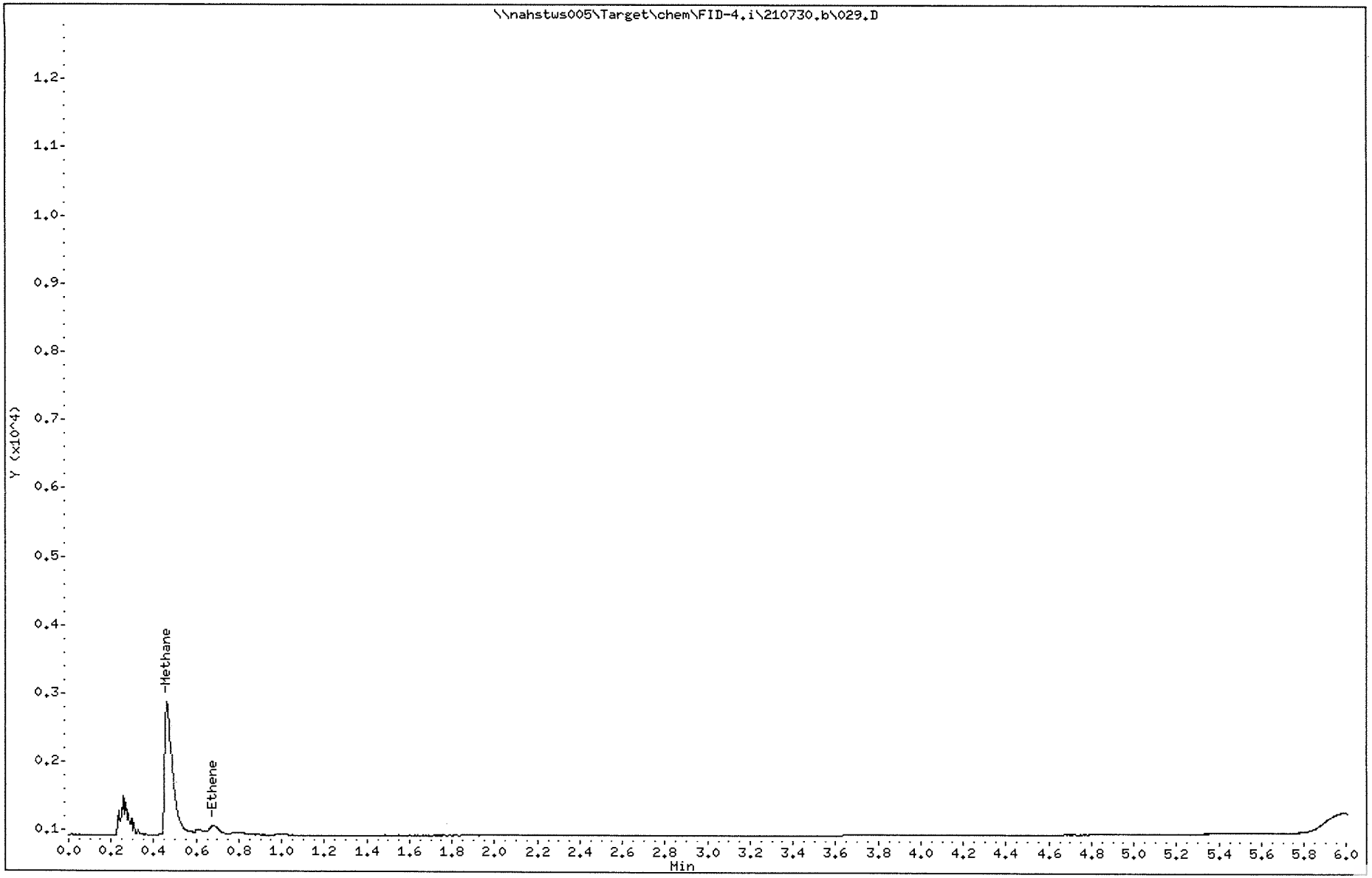
M - Compound response manually integrated.

Data File: \\nahstws005\Target\chem\FID-4.i\210730.b\029.D
Date : 30-JUL-2021 15:33
Client ID: HS21071405-08
Sample Info: HS21071405-08;HS21071405-08

Column phase: Rtx-PLOT

Instrument: FID-4.i

Operator: PL
Column diameter: 0.53



ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\nahstws005\Target\chem\FID-4.i\210730.b\Before\030.D
Lab Smp Id: RSK-CCV Client Smp ID: RSK-CCV
Inj Date : 30-JUL-2021 15:47
Operator : PL Inst ID: FID-4.i
Smp Info : RSK-CCV;RSK-CCV;2;4
Misc Info : ;1;0;1
Comment   :
Method   : \\NAHSTWS005\Target\chem\FID-4.i\210730.b\RSKNI3.m
Meth Date : 12-Oct-2021 14:02 linh.pham Quant Type: ESTD
Cal Date : 24-JAN-2017 10:15 Cal File: 004.D
Als bottle: 30 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: RSK175.sub
Target Version: 4.14
Processing Host: ALSHSW7104

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

					AMOUNTS	
					CAL-AMT	ON-COL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/L)	(ug/L)
1 Methane	0.463	0.463	0.000	8855	9.64700	9.082
2 Ethene	0.703	0.703	0.000	9325	16.8500	15.919
3 Ethane	0.780	0.780	0.000	13586	18.0430	18.882

Data File: \\nahstws005\Target\chem\FID-4.i\210730.b\Before\030.D

Date : 30-JUL-2021 15:47

Client ID: RSK-CCV

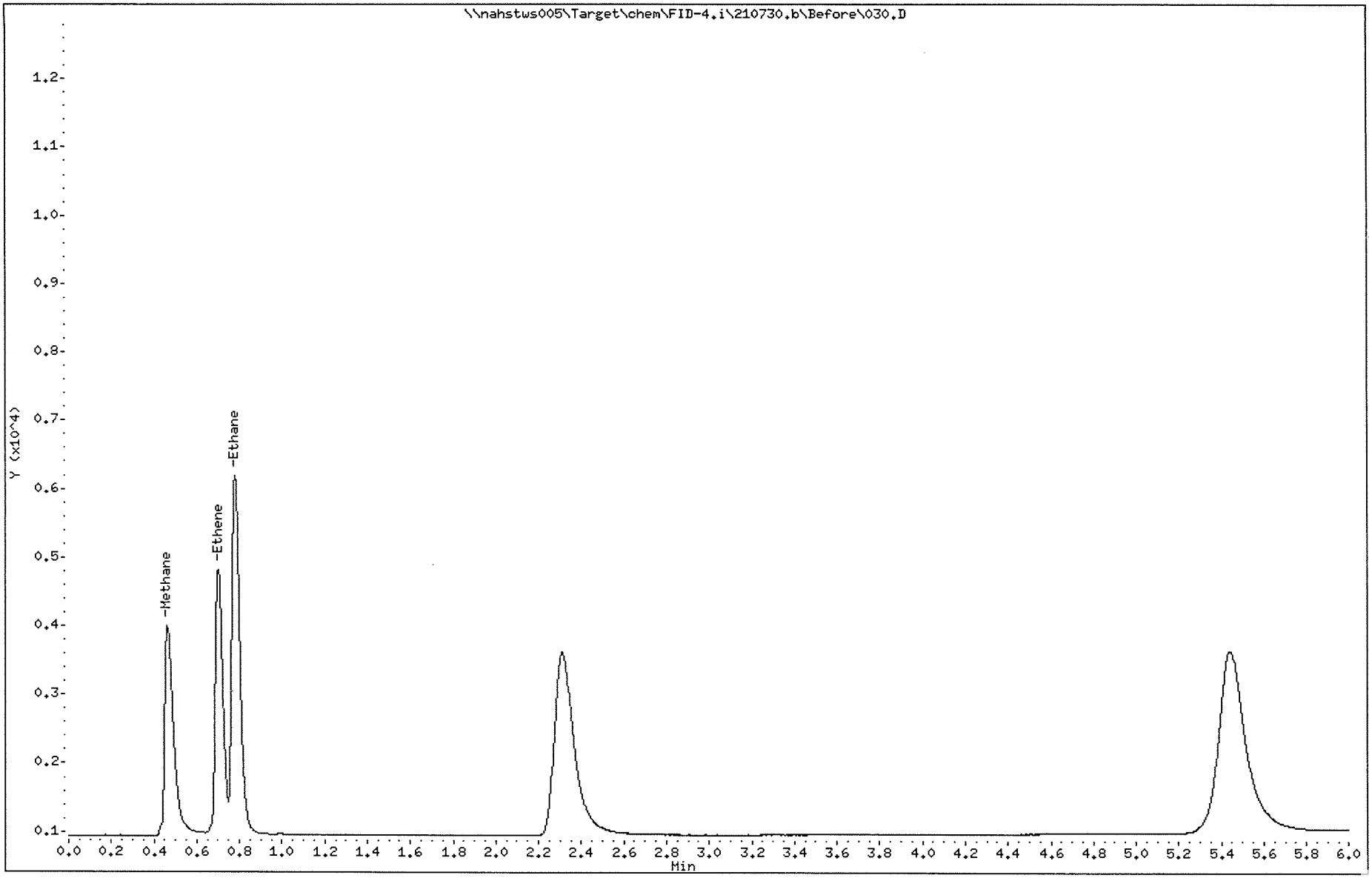
Instrument: FID-4.i

Sample Info: RSK-CCV;RSK-CCV;2;4

Operator: PL

Column phase: Rtx-PLOT

Column diameter: 0.53



Data File: \\nahstws005\Target\chem\FID-4.i\210730.b\030.D Page 1
Report Date: 12-Oct-2021 14:10

ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\nahstws005\Target\chem\FID-4.i\210730.b\030.D
Lab Smp Id: RSK-CCV Client Smp ID: RSK-CCV
Inj Date : 30-JUL-2021 15:47
Operator : PL Inst ID: FID-4.i
Smp Info : RSK-CCV;RSK-CCV;2;4
Misc Info : ;1;0;1
Comment :
Method : \\NAHSTWS005\Target\chem\FID-4.i\210730.b\RSKNI3.m
Meth Date : 12-Oct-2021 14:02 linh.pham Quant Type: ESTD
Cal Date : 24-JAN-2017 10:15 Cal File: 004.D
Als bottle: 30 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: RSK175.sub
Target Version: 4.14
Processing Host: ALSHSW7104

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

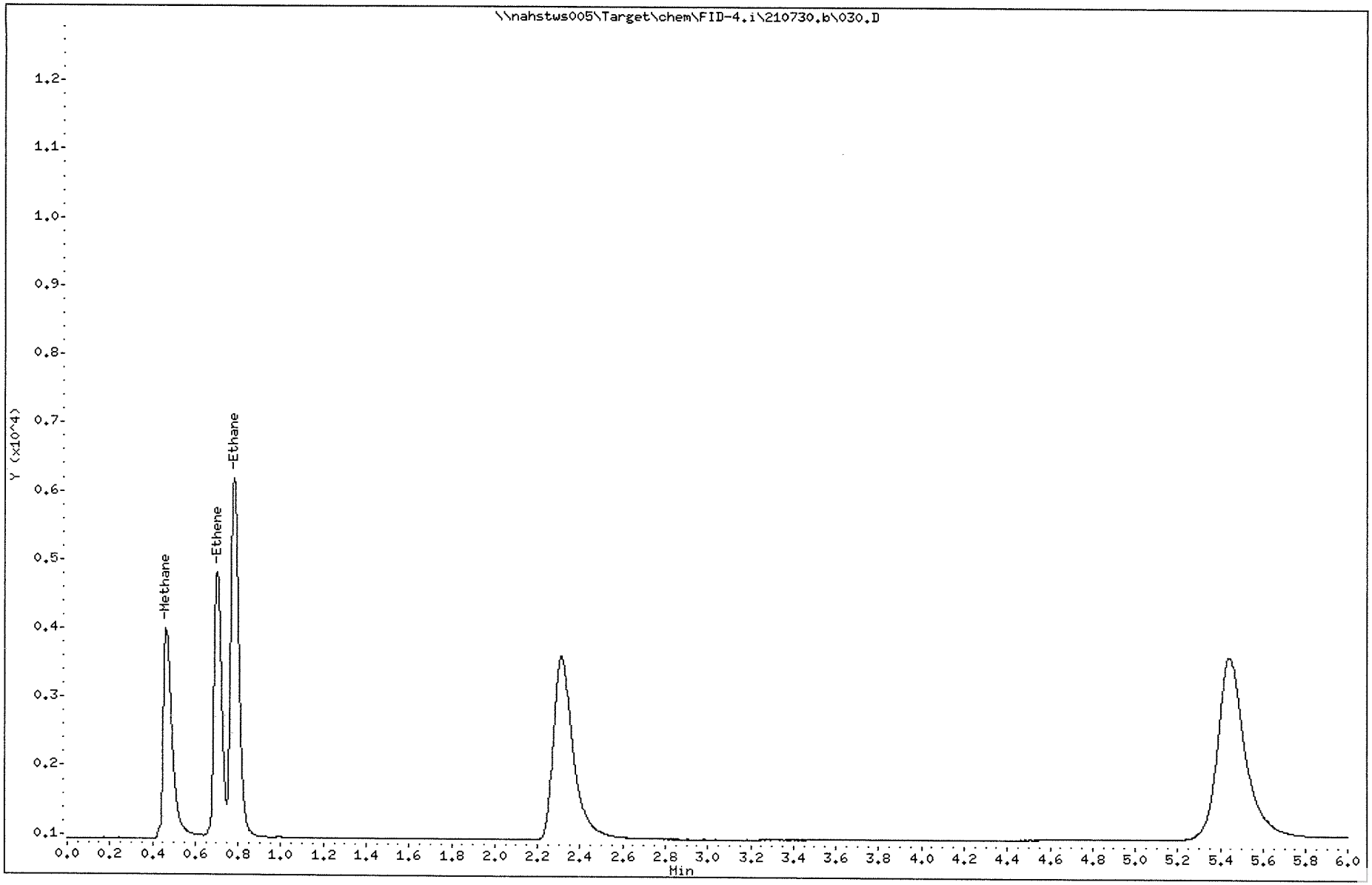
					AMOUNTS	
					CAL-AMT	ON-COL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/L)	(ug/L)
1 Methane	0.463	0.463	0.000	8927	9.64700	9.155
2 Ethene	0.703	0.703	0.000	9439	16.8500	16.114
3 Ethane	0.780	0.780	0.000	13752	18.0430	19.113

Data File: \\nahstws005\Target\chem\FID-4.i\210730.b\030.D
Date : 30-JUL-2021 15:47
Client ID: RSK-CCV
Sample Info: RSK-CCV;RSK-CCV;2;4

Column phase: Rtx-PLOT

Instrument: FID-4.i

Operator: PL
Column diameter: 0.53



HS21071405 - Sub Perch IV (E2100837)

ALS WO# HS21071405

August 05, 2021 Service Request No:E2100837

Ragen Giga
ALS Environmental - US
10450 Stancliff Rd Suite 210
Houston, TX 77099

Laboratory Results for: HS21071405

Dear Ragen,

Enclosed are the results of the sample(s) submitted to our laboratory July 27, 2021
For your reference, these analyses have been assigned our service request number **E2100837.**

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

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Corey Grandits
Project Manager

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

Certificate of Analysis

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

ALS Environmental

Client:	ALS Houston	**Service Request No.:**	E2100837
Project:	HS21071405	**Date Received:**	07/27/21
Sample Matrix:	W		

CASE NARRATIVE

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

Sample Receipt

Twelve samples were received for analysis at ALS Environmental in Houston on 07/27/21.

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

Data Validation Notes and Discussion

Precision and Accuracy:

EQ2100470: Laboratory Control Spike/Duplicate Laboratory Control Spike (LCS/DLCS) samples were analyzed and reported in addition to a MS/MSD for this extraction batch. The LCS, DLCS, MS, & MSD recoveries are within QC limits.

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

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

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

Client: ALS Environmental - US **Service Request:**E2100837
Project: HS21071405

SAMPLE CROSS-REFERENCE

SAMPLE #	CLIENT SAMPLE ID	DATE	TIME
E2100837-001	16EW02-210726	7/26/2021	0735
E2100837-002	16EW04-210726	7/26/2021	0820
E2100837-003	16EW08-210726	7/26/2021	0905
E2100837-004	16RW04-210726	7/26/2021	0950
E2100837-005	16RW01-210726	7/26/2021	1030
E2100837-006	16RW02-210726	7/26/2021	1115
E2100837-007	16WW13-210726	7/26/2021	1200
E2100837-008	16WW42-210726	7/26/2021	1240
E2100837-009	16SW01-210726	7/26/2021	1300
E2100837-010	16SW01-210726-FD	7/26/2021	1300
E2100837-011	16SW02-210726	7/26/2021	1320
E2100837-012	16SW03-210726	7/26/2021	1350

Service Request Summary

Folder #: **E2100837**
Client Name: ALS Environmental - US
Project Name: HS21071405
Project Number:

Report To: Ragen Giga
ALS Environmental - US
10450 Stancliff Rd Suite 210
Houston, TX 77099
USA
Phone Number:
Cell Number:
Fax Number:
E-mail: ragenp.giga@alsglobal.com

Project Chemist: Corey Grandits
Originating Lab: HOUSTON
Logged By: CGRANDITS
Date Received: 07/27/21
Internal Due Date: 8/10/2021
QAP: LAB QAP
Qualifier Set: Lab Standard
Formset: Lab Standard
Merged?: Y
Report to MDL?: Y
P.O. Number: HS21071405
EDD: No EDD Specified

14 120 mL-Plastic Bottle Natural WM Unpreserved
Location: EHRMS-AirArch 1
Pressure Gas:
Rush

Lab Samp No.	Client Samp No	Matrix	Collected	HOUSTON ClO4 DOD/6850
E2100837-001	16EW02-210726	Ground Water	07/26/21 0735	**IV**
E2100837-002	16EW04-210726	Ground Water	07/26/21 0820	**IV**
E2100837-003	16EW08-210726	Ground Water	07/26/21 0905	**IV**
E2100837-004	16RW04-210726	Ground Water	07/26/21 0950	**IV**
E2100837-005	16RW01-210726	Ground Water	07/26/21 1030	**IV**
E2100837-006	16RW02-210726	Ground Water	07/26/21 1115	**IV**
E2100837-007	16WW13-210726	Ground Water	07/26/21 1200	**IV**
E2100837-008	16WW42-210726	Ground Water	07/26/21 1240	**IV**
E2100837-009	16SW01-210726	Ground Water	07/26/21 1300	**IV**
E2100837-010	16SW01-210726-FD	Ground Water	07/26/21 1300	**IV**
E2100837-011	16SW02-210726	Ground Water	07/26/21 1320	**IV**
E2100837-012	16SW03-210726	Ground Water	07/26/21 1350	**IV**

Service Request Summary

Folder #: **E2100837**
Client Name: ALS Environmental - US
Project Name: HS21071405
Project Number:

Report To: Ragen Giga
ALS Environmental - US
10450 Stancliff Rd Suite 210
Houston, TX 77099
USA
Phone Number:
Cell Number:
Fax Number:
E-mail: ragenp.giga@alsglobal.com

Project Chemist: Corey Grandits
Originating Lab: HOUSTON
Logged By: CGRANDITS
Date Received: 07/27/21
Internal Due Date: 8/10/2021
QAP: LAB QAP
Qualifier Set: Lab Standard
Formset: Lab Standard
Merged?: Y
Report to MDL?: Y
P.O. Number: HS21071405
EDD: No EDD Specified

14 120 mL-Plastic Bottle Natural WM Unpreserved
Location: EHRMS-AirArch 1
Pressure Gas:
Rush

Test Comments:

Group	Test/Method	Samples	Comments
Semivoa GCMS	ClO4 DOD/6850	11	IV due 8/17
Semivoa GCMS	ClO4 DOD/6850	1	MS/MSD

Data Qualifiers

Lab Standard

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

Data Qualifiers

Lab Standard

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

ALS Laboratory Group

Acronyms

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

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ALS Environmental

State Certifications, Accreditations, and Licenses

Agency	Number	Expire Date
American Association for Laboratory Accreditation	2897.01 2020	11/30/2021
Arkansas Department of Environmental Quality	21-022-0	3/26/2022
Arkansas Department of Environmental Quality	19-028-0	6/30/2022
Department of Defense	A2LA 2897.01	11/30/2021
Florida Department of Health	E87611-33	6/30/2022
Hawaii Department of Health	2021-2022	4/30/2022
Kansas Department of Health and Environment	E-10352 2022	7/31/2022
Louisiana Department of Environmental Quality	03087-2021	6/30/2022
Louisiana Department of Health and Hospitals	LA028-2021	12/31/2021
Maine Department of Health and Human Services	2020016	6/5/2022
Minnesota Department of Health	2021671	12/31/2021
New Hampshire Environmental Laboratory Accreditation Program	209421	4/24/2022
Oklahoma Department of Environmental Quality	2020-123	8/31/2021
Pennsylvania Department of Environmental Protection	68-03441-015	6/30/2022
Tennessee Department of Environment and Concervation	04016-2021	4/30/2022
Texas Commision on Environmental Quality	T104704231-21-27	4/30/2022
United States Department of Agriculture	P330-19-00299	10/10/2022

Chain of Custody

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Subcontract Chain of Custody

SAMPLING STATE: **Dept of Defense** **COC ID:** **16566**

SUBCONTRACT TO:

ALS Environmental
10450 Stancliff RoadSuite 210
Houston, TX 77084

Phone: +1 281 530 5656

CUSTOMER INFORMATION:

Company:	ALS Houston
Contact:	Ragen Giga
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Email:	RagenP.Giga@ALSGlobal.com
Alternate Contact:	
Email:	

INVOICE INFORMATION:

Company:	ALS Houston
Contact:	Accounts Payable
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Reference:	HS21071405
TSR:	Sonia West

	LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
	ANALYSIS REQUESTED			DUE DATE
1.	**HS21071405-01**	**16EW02-210726**	**GW**	**26 Jul 2021 07:35**
	Level II and Level IV reports on a seperate pdf. Send WOA to Vicki Graves.			10 Aug 2021
2.	**HS21071405-02**	**16EW04-210726**	**GW**	**26 Jul 2021 08:20**
	Level II and Level IV reports on a seperate pdf. Send WOA to Vicki Graves.			10 Aug 2021
3.	**HS21071405-03**	**16EW08-210726**	**GW**	**26 Jul 2021 09:05**
	Level II and Level IV reports on a seperate pdf. Send WOA to Vicki Graves.			10 Aug 2021
4.	**HS21071405-04**	**16RW04-210726**	**GW**	**26 Jul 2021 09:50**
	Level II and Level IV reports on a seperate pdf. Send WOA to Vicki Graves.			10 Aug 2021
5.	**HS21071405-05**	**16RW01-210726**	**GW**	**26 Jul 2021 10:30**
	Level II and Level IV reports on a seperate pdf. Send WOA to Vicki Graves.			10 Aug 2021
6.	**HS21071405-06**	**16RW02-210726**	**GW**	**26 Jul 2021 11:15**
	Level II and Level IV reports on a seperate pdf. Send WOA to Vicki Graves.			10 Aug 2021
7.	**HS21071405-07**	**16WW13-210726**	**GW**	**26 Jul 2021 12:00**
	Level II and Level IV reports on a seperate pdf. Send WOA to Vicki Graves.			10 Aug 2021
8.	**HS21071405-08**	**16WW42-210726**	**GW**	**26 Jul 2021 12:40**

Subcontract Chain of Custody

SAMPLING STATE: **Dept of Defense** **COC ID: 16566**

	LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
	ANALYSIS REQUESTED			DUE DATE
	Level II and Level IV reports on a seperate pdf. Send WOA to Vicki Graves.			10 Aug 2021
9.	**HS21071405-09**	**16SW01-210726**	**GW**	**26 Jul 2021 13:00**
	Level II and Level IV reports on a seperate pdf. Send WOA to Vicki Graves.			10 Aug 2021
10.	**HS21071405-10**	**16SW01-210726-FD**	**GW**	**26 Jul 2021 13:00**
	Level II and Level IV reports on a seperate pdf. Send WOA to Vicki Graves.			10 Aug 2021
11.	**HS21071405-11**	**16SW02-210726**	**GW**	**26 Jul 2021 13:20**
	Level II and Level IV reports on a seperate pdf. Send WOA to Vicki Graves.			10 Aug 2021
12.	**HS21071405-12**	**16SW03-210726**	**GW**	**26 Jul 2021 13:50**
	Level II and Level IV reports on a seperate pdf. Send WOA to Vicki Graves.			10 Aug 2021

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

QC Level: DOD IV (DoD Data Package)

Relinquished By: _____ Date/Time: 7-27-21 16:07

Received By: _____ Date/Time: 7/27/21 16:07

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

ALS Environmental

Cooler Receipt Form

Project Chemist: CG

Client/Project: ALS-H

Thermometer ID: IR31

Date/Time Received: 7/27/21 Initials: CG

Date/Time Logged in: 7/27/21 Initials: CG

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

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

3. Were custody seals on coolers? ○ Yes ✓ No
   Were they intact? ○ Yes ○ No ✓ N/A
   Were they signed and dated? ○ Yes ○ No ✓ N/A
   If yes, how many and where?

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

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

Cooler Tracking Number	COC ID	Date Opened	Time Opened	Opened By	Temp. °C	Temp Blank?
NA		7/27/21	1607	CG	5.0	☑
						☐
						☐
						☐

6. Were custody papers properly filled out (ink, signed, dated, etc)? ✓ Yes ○ No
7. Did all bottles arrive in good condition (not broken, no signs of leakage)? ✓ Yes ○ No
8. Were all sample labels complete (i.e., sample ID, analysis, preservation, etc)? ✓ Yes ○ No
9. Were appropriate bottles/containers and volumes received for the requested tests? ✓ Yes ○ No
10. Did sample labels and tags agree with custody documents? ✓ Yes ○ No

Notes, Discrepancies, & Resolutions:

Service request Label:

HS-HRMSCoolerReceipt R1.0

ALS Environmental - Houston HRMS

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SAMPLE ACCEPTANCE POLICY

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

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

- ✓ Intact on outside of cooler, signed and dated

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

The following is required on each COC:

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

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

Sample Integrity (mandatory):

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

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

Temperature Requirement (varies by sample matrix):

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

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

Preparation Information Benchsheets

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Preparation Information Benchsheet

Prep Run#: 384286 **Prep WorkFlow:** GenExt28Day **Status:** Prepped
Team: Semivoa GCMS/GRIVERA **Prep Method:** **Prep Date/Time:** 7/30/21 10:05

#	Lab Code	Client ID	B#	Method /Test	pH	Cl	Matrix	Amt. Ext.	Sample Description
1	E2100831-001	OBFOD-2R	.01	6850/ClO4 DOD			Water	10mL	
2	E2100831-002	OBFOD-3	.01	6850/ClO4 DOD			Water	10mL	
3	E2100836-001	LH18/24-SP650_072721_BIX	.01	6850/ClO4 DOD			Water	10mL	
4	E2100837-001	16EW02-210726	.01	6850/ClO4 DOD			Ground Water	10mL	
5	E2100837-002	16EW04-210726	.01	6850/ClO4 DOD			Ground Water	10mL	
6	E2100837-003	16EW08-210726	.01	6850/ClO4 DOD			Ground Water	10mL	
7	E2100837-004	16RW04-210726	.01	6850/ClO4 DOD			Ground Water	10mL	
8	E2100837-005	16RW01-210726	.01	6850/ClO4 DOD			Ground Water	10mL	
9	E2100837-006	16RW02-210726	.01	6850/ClO4 DOD			Ground Water	10mL	
10	E2100837-007	16WW13-210726	.01	6850/ClO4 DOD			Ground Water	10mL	
11	E2100837-008	16WW42-210726	.01	6850/ClO4 DOD			Ground Water	10mL	
12	E2100837-009	16SW01-210726	.01	6850/ClO4 DOD			Ground Water	10mL	
13	E2100837-010	16SW01-210726-FD	.01	6850/ClO4 DOD			Ground Water	10mL	
14	E2100837-011	16SW02-210726	.01	6850/ClO4 DOD			Ground Water	10mL	
15	E2100837-012	16SW03-210726	.01	6850/ClO4 DOD			Ground Water	10mL	
16	E2100856-001	16WW12-210728	.01	6850/ClO4 DOD			Ground Water	10mL	
17	E2100856-002	16WW39-210728	.01	6850/ClO4 DOD			Ground Water	10mL	
18	E2100856-003	16WW49-210728	.01	6850/ClO4 DOD			Ground Water	10mL	
19	E2100856-004	16WW27-210728	.01	6850/ClO4 DOD			Ground Water	10mL	
20	E2100856-005	16WW43-210728	.01	6850/ClO4 DOD			Ground Water	10mL	
21	EQ2100470-01	MB		6850/ClO4 DOD			Liquid	10mL	
22	EQ2100470-02	LCS		6850/ClO4 DOD			Liquid	10mL	
23	EQ2100470-03	DLCS		6850/ClO4 DOD			Liquid	10mL	
24	EQ2100470-04	16SW02-210726 MS	.01	6850/ClO4 DOD			Liquid	10mL	
25	EQ2100470-05	16SW02-210726 DMS	.01	6850/ClO4 DOD			Liquid	10mL	

Spiking Solutions

Name: Sodium Perchlorate 1 ug/mL (IS) (18-O) as CLO4 Inventory ID 214765 Logbook Ref: Sodium Perchlorate Expires On: 12/11/2022

E2100831-001	100.00µL	E2100831-002	100.00µL	E2100836-001	100.00µL	E2100837-001	100.00µL	E2100837-002	100.00µL	E2100837-003	100.00µL
E2100837-004	100.00µL	E2100837-005	100.00µL	E2100837-006	100.00µL	E2100837-007	100.00µL	E2100837-008	100.00µL	E2100837-009	100.00µL
E2100837-010	100.00µL	E2100837-011	100.00µL	E2100837-012	100.00µL	E2100856-001	100.00µL	E2100856-002	100.00µL	E2100856-003	100.00µL
E2100856-004	100.00µL	E2100856-005	100.00µL	EQ2100470-01	100.00µL	EQ2100470-02	100.00µL	EQ2100470-03	100.00µL	EQ2100470-04	100.00µL
EQ2100470-05	100.00µL										

Preparation Information Benchsheet

Prep Run#: 384286 **Prep WorkFlow:** GenExt28Day **Status:** Prepped
Team: Semivoa GCMS/GRIVERA **Prep Method:** **Prep Date/Time:** 7/30/21 10:05

Name:	Perchlorate Intermediate Stock1	Inventory ID	217422	Logbook Ref:	Perchlorate	Expires On:	11/26/2021

EQ2100470-02 1.00µL EQ2100470-03 1.00µL EQ2100470-04 1.00µL EQ2100470-05 1.00µL

Preparation Materials

Water HPLC Grade 07/01/2021 Water (217918) 537M Glass Culture Tubes 537M Glass Tubes (218064)

Preparation Steps

Step: Preparation
Started: 7/30/21 10:05
Finished: 7/30/21 11:00
By: GRIVERA
Comments

Comments: _____

Reviewed By: GR Date: 7/30/21

Chain of Custody

Relinquished By: _____ Date: _____ Extracts Examined

Received By: _____ Date: _____ Yes No

Analytical Results

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ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100837
Project:	HS21071405	**Date Collected:**	7/26/21 0735
Sample Matrix:	Ground Water	**Date Received:**	7/27/21
Sample Name:	16EW02-210726	**Units:**	µg/L
Lab Code:	E2100837-001	**Basis:**	NA

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

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.984**	J	1.00	0.500	0.250	10	7/30/21	8/4/21 20:18	384286	733747	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100837
Project:	HS21071405	**Date Collected:**	7/26/21 0820
Sample Matrix:	Ground Water	**Date Received:**	7/27/21
Sample Name:	16EW04-210726	**Units:**	µg/L
Lab Code:	E2100837-002	**Basis:**	NA

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

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	1.00	0.500	0.250	10	7/30/21	8/4/21 20:26	384286	733747	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100837
Project:	HS21071405	**Date Collected:**	7/26/21 0905
Sample Matrix:	Ground Water	**Date Received:**	7/27/21
Sample Name:	16EW08-210726	**Units:**	µg/L
Lab Code:	E2100837-003	**Basis:**	NA

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

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	0.100	0.0500	0.0250	1	7/30/21	8/3/21 00:32	384286	733464	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100837
Project:	HS21071405	**Date Collected:**	7/26/21 0950
Sample Matrix:	Ground Water	**Date Received:**	7/27/21
Sample Name:	16RW04-210726	**Units:**	µg/L
Lab Code:	E2100837-004	**Basis:**	NA

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

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	1.00	0.500	0.250	10	7/30/21	8/4/21 20:35	384286	733747	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100837
Project:	HS21071405	**Date Collected:**	7/26/21 1030
Sample Matrix:	Ground Water	**Date Received:**	7/27/21
Sample Name:	16RW01-210726	**Units:**	µg/L
Lab Code:	E2100837-005	**Basis:**	NA

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

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	1.00	0.500	0.250	10	7/30/21	8/4/21 20:43	384286	733747	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100837
Project:	HS21071405	**Date Collected:**	7/26/21 1115
Sample Matrix:	Ground Water	**Date Received:**	7/27/21
Sample Name:	16RW02-210726	**Units:**	µg/L
Lab Code:	E2100837-006	**Basis:**	NA

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

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.0255**	J	0.100	0.0500	0.0250	1	7/30/21	8/3/21 00:58	384286	733464	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100837
Project:	HS21071405	**Date Collected:**	7/26/21 1200
Sample Matrix:	Ground Water	**Date Received:**	7/27/21
Sample Name:	16WW13-210726	**Units:**	µg/L
Lab Code:	E2100837-007	**Basis:**	NA

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

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	1.00	0.500	0.250	10	7/30/21	8/4/21 20:52	384286	733747	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100837
Project:	HS21071405	**Date Collected:**	7/26/21 1240
Sample Matrix:	Ground Water	**Date Received:**	7/27/21
Sample Name:	16WW42-210726	**Units:**	µg/L
Lab Code:	E2100837-008	**Basis:**	NA

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

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	0.100	0.0500	0.0250	1	7/30/21	8/3/21 01:15	384286	733464	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100837
Project:	HS21071405	**Date Collected:**	7/26/21 1300
Sample Matrix:	Ground Water	**Date Received:**	7/27/21
Sample Name:	16SW01-210726	**Units:**	µg/L
Lab Code:	E2100837-009	**Basis:**	NA

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

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	0.100	0.0500	0.0250	1	7/30/21	8/3/21 01:23	384286	733464	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100837
Project:	HS21071405	**Date Collected:**	7/26/21 1300
Sample Matrix:	Ground Water	**Date Received:**	7/27/21
Sample Name:	16SW01-210726-FD	**Units:**	µg/L
Lab Code:	E2100837-010	**Basis:**	NA

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

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	0.100	0.0500	0.0250	1	7/30/21	8/3/21 01:32	384286	733464	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100837
Project:	HS21071405	**Date Collected:**	7/26/21 1320
Sample Matrix:	Ground Water	**Date Received:**	7/27/21
Sample Name:	16SW02-210726	**Units:**	µg/L
Lab Code:	E2100837-011	**Basis:**	NA

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

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	0.100	0.0500	0.0250	1	7/30/21	8/3/21 01:40	384286	733464	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100837
Project:	HS21071405	**Date Collected:**	7/26/21 1350
Sample Matrix:	Ground Water	**Date Received:**	7/27/21
Sample Name:	16SW03-210726	**Units:**	µg/L
Lab Code:	E2100837-012	**Basis:**	NA

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

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	0.100	0.0500	0.0250	1	7/30/21	8/3/21 01:49	384286	733464	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100837
Project:	HS21071405	**Date Collected:**	NA
Sample Matrix:	Ground Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	EQ2100470-01	**Basis:**	NA

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

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	0.100	0.0500	0.0250	1	7/30/21	7/30/21 11:24	384286	733225	

Accuracy & Precision

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

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2100837
Project:	HS21071405	**Date Analyzed:**	7/30/21
Sample Matrix:	Ground Water		

Lab Control Sample Summary

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

Analytical Method:	6850	**Units:**	µg/L
Prep Method:	Method	**Basis:**	NA
		Extraction Lot:	384286

	Lab Control Sample EQ2100470-02			Duplicate Lab Control Sample EQ2100470-03					
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Perchlorate	0.0870	0.100	87	0.0884	0.100	88	84 - 119	2	15

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

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

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100837
Project:	HS21071405	**Date Collected:**	NA
Sample Matrix:	Ground Water	**Date Received:**	NA
Sample Name:	Lab Control Sample	**Units:**	µg/L
Lab Code:	EQ2100470-02	**Basis:**	NA

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

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.0870**	J	0.100	0.0500	0.0250	1	7/30/21	7/30/21 11:32	384286	733225	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100837
Project:	HS21071405	**Date Collected:**	NA
Sample Matrix:	Ground Water	**Date Received:**	NA
Sample Name:	Duplicate Lab Control Sample	**Units:**	µg/L
Lab Code:	EQ2100470-03	**Basis:**	NA

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

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.0884**	J	0.100	0.0500	0.0250	1	7/30/21	7/30/21 12:00	384286	733225	

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2100837
Project:	HS21071405	**Date Collected:**	7/26/21
Sample Matrix:	Ground Water	**Date Received:**	7/27/21
		Date Analyzed:	7/30/21

Matrix Spike Summary

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

Sample Name:	16SW02-210726	**Units:**	µg/L
Lab Code:	E2100837-011	**Basis:**	NA

Analytical Method: 6850
Prep Method: Method

		16SW02-210726MS				16SW02-210726DMS					
		Matrix Spike				**Duplicate Matrix Spike**					
		EQ2100470-04				EQ2100470-05					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**% Rec**		**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Perchlorate	ND	0.0892	0.100	89		0.0946	0.100	95	84 - 119	6	15

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

Results flagged with a pound (#) indicate the control criteria is not applicable.

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

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100837
Project:	HS21071405	**Date Collected:**	7/26/21 1320
Sample Matrix:	Ground Water	**Date Received:**	7/27/21
Sample Name:	16SW02-210726	**Units:**	µg/L
Lab Code:	EQ2100470-04	**Basis:**	NA
Run Type:	Matrix Spike		

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

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.0892**	J	0.100	0.0500	0.0250	1	7/30/21	7/30/21 12:09	384286	733225	*

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100837
Project:	HS21071405	**Date Collected:**	7/26/21 1320
Sample Matrix:	Ground Water	**Date Received:**	7/27/21
Sample Name:	16SW02-210726	**Units:**	µg/L
Lab Code:	EQ2100470-05	**Basis:**	NA
Run Type:	Duplicate Matrix Spike		

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

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.0946**	J	0.100	0.0500	0.0250	1	7/30/21	7/30/21 12:17	384286	733225	*

Initial Calibration

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

20210726

1st Review: Grivera
2nd Review: Kneir

Injection Log
LCMS01 -Shimadzu 8050

ICAL Date: 7/26/2021
Cal. Std. xp: 11/26/2021
ICAL ID: **EC2100054**

Mobile Phases **A:** 0.75% Formic Acid/Water 3100813-07 **B:** MeOH 216350

			File Name	Acquisition Method	Dilution	R	Comments	Date/Time
1	PERCHLORATE1		20210726_019	Perchlorate6850c.lcm	1x	☒	3100812-01	7/26/2021 14:43
2	PERCHLORATE2		20210726_020	Perchlorate6850c.lcm	1x	☒	3100812-02	7/26/2021 14:51
3	PERCHLORATE3		20210726_021	Perchlorate6850c.lcm	1x	☒	3100812-03	7/26/2021 15:00
4	PERCHLORATE4		20210726_022	Perchlorate6850c.lcm	1x	☒	3100812-04	7/26/2021 15:08
5	PERCHLORATE5		20210726_023	Perchlorate6850c.lcm	1x	☒	3100812-05	7/26/2021 15:17
6	PERCHLORATE6		20210726_024	Perchlorate6850c.lcm	1x	☒	3100812-06	7/26/2021 15:25
7	PERCHLORATE7		20210726_025	Perchlorate6850c.lcm	1x	☒	3100812-07	7/26/2021 15:34
8	PERCHLORATE8		20210726_026	Perchlorate6850c.lcm	1x	☒	3100812-08	7/26/2021 15:43
9	PERCHLORATE9		20210726_027	Perchlorate6850c.lcm	1x	☒	3100812-09	7/26/2021 15:51
10	PERCHLORATE10		20210726_028	Perchlorate6850c.lcm	1x	☒	3100813-01	7/26/2021 16:00
11	PERCHLORATEICV		20210726_029	Perchlorate6850c.lcm	1x	☒	3100811-06	7/26/2021 16:08
12								
13								
14								
15								
16								

Initial Calibration - Detailed Report

Calibration ID: EC2100054 **Instrument ID:** E-LCMS-01
Column Name: 1

#	Lab Code	Sample Name	File Location	Aquisition Date
01	EC2100054-01	PERCHLORATE1	20210726_019	07/26/2021 14:43
02	EC2100054-02	PERCHLORATE2	20210726_020	07/26/2021 14:51
03	EC2100054-03	PERCHLORATE3	20210726_021	07/26/2021 15:00
04	EC2100054-04	PERCHLORATE4	20210726_022	07/26/2021 15:08
05	EC2100054-05	PERCHLORATE5	20210726_023	07/26/2021 15:17
06	EC2100054-06	PERCHLORATE6	20210726_024	07/26/2021 15:25
07	EC2100054-07	PERCHLORATE7	20210726_025	07/26/2021 15:34
08	EC2100054-08	PERCHLORATE8	20210726_026	07/26/2021 15:43
09	EC2100054-09	PERCHLORATE9	20210726_027	07/26/2021 15:51
10	EC2100054-10	PERCHLORATE10	20210726_028	07/26/2021 16:00

Analyte	Curve Fit	Weighting		
Perchlorate	**Linear**	**1/X2**	**R2 = 0.9988734513909290**	**Y=0.1587 X+0.004555**

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.1000	0.2022	02	0.5000	0.1717	03	0.7000	0.1736	04	1.0000	0.1613
05	2.0000	0.1682	06	5.0000	0.1611	07	10.0000	0.1545	08	20.0000	0.1559
09	30.0000	0.1559	10	50.0000	0.1529						

Analyte

Perchlorate

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	0.1000	0.0987	-1.3	02	0.5000	0.512	2.4	03	0.7000	0.737	5.2
04	1.0000	0.987	-1.3	05	2.0000	2.09	4.5	06	5.0000	5.05	0.9
07	10.0000	9.70	-3.0	08	20.0000	19.6	-1.9	09	30.0000	29.4	-1.9
10	50.0000	48.1	-3.8								

Initial Calibration Verification Summary Report

Calibration ID:	EC2100054	**Instrument ID:**	E-LCMS-01
Datafile ID:	20210726_029	**Column Name:**	1

Analyte	Lab Code	Type	Curve Fit	True Value	Calc Conc	Units	Result	Criteria
Perchlorate	EC2100054-11	T	Linear	10	9.772	ng/mL	-2.3	<= 15

Insight Report

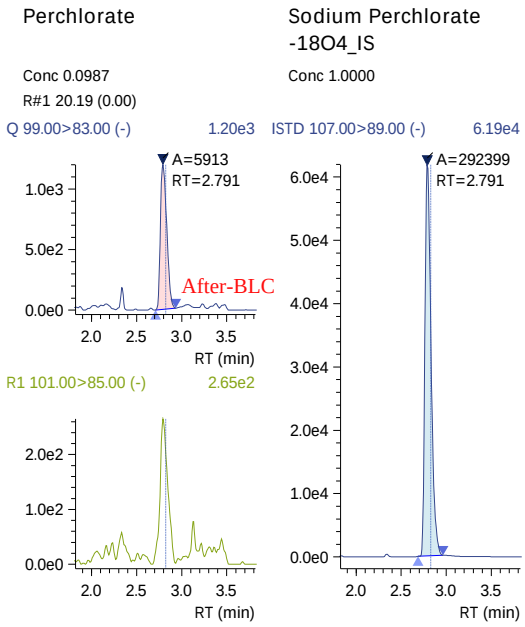
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Method File: I:\LCMS01\DATA\20210726\20210726.lcm
Project File: I:\LCMS01\DATA\20210726\20210726.damlp

20210726_019

Sample ID: PERCHLORATE1
Date Acquired: 7/26/2021 2:43:11 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210726\20210726_019.lcd
Vial: 20 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	M	2.791	5913	292399	1	0.0987	ng/mL	0.1000	20.19
Sodium Perchlorate-18O4 _IS	Auto	2.791	292399	292399	1	1.0000	ng/mL	1.0000	----



Insight Report

Printed at 8/17/2021 4:57:15 PM

Method File: I:\LCMS01\DATA\20210726\20210721.lcm

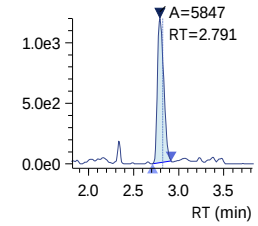
20210726_019

Sample ID: PERCHLORATE1
Date Acquired: 7/26/2021 2:43:11 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210726\Before\20210726_019.lcd
Vial: 20 | Inj. Volume: 25.0000uL | Tray: 1

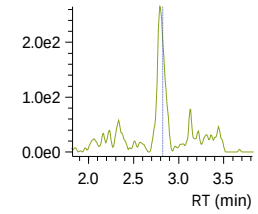
Perchlorate

Conc 0.1245
R#1 20.16 (0.00)

Q 99.00>83.00 (-) 1.20e3



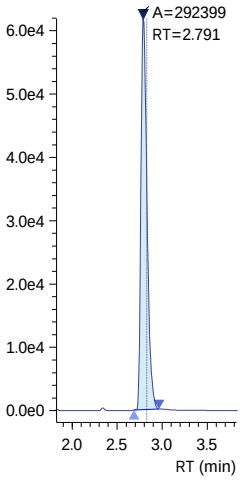
R1 101.00>85.00 (-) 2.65e2



Sodium Perchlorate -18O4_IS

Conc 1.0000

ISTD 107.00>89.00 (-) 6.19e4



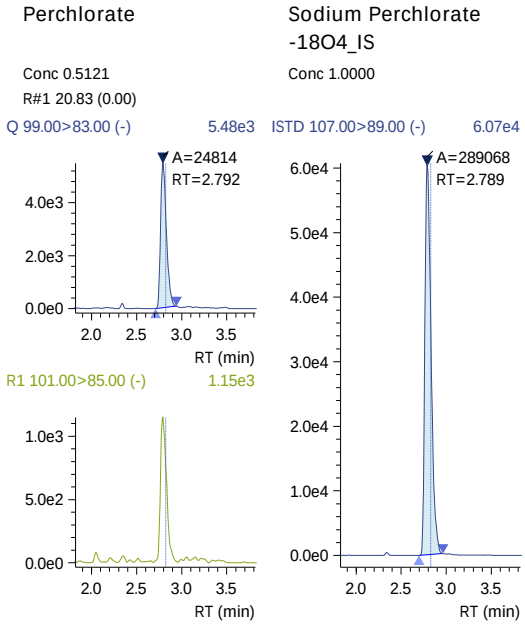
Insight Report

Printed at 8/17/2021 4:47:51 PM

20210726_020

Sample ID: PERCHLORATE2
Date Acquired: 7/26/2021 2:51:45 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210726\20210726_020.lcd
Vial: 21 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.792	24814	289068	1	0.5121	ng/mL	0.5000	20.83
Sodium Perchlorate-18O4 _IS	Auto	2.789	2890 68	289068	1	1.0000	ng/mL	1.0000	----



Insight Report

Printed at 8/17/2021 4:57:15 PM

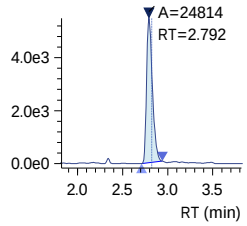
20210726_020

Sample ID: PERCHLORATE2
Date Acquired: 7/26/2021 2:51:45 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210726\Before\20210726_020.lcd
Vial: 21 | Inj. Volume: 25.0000uL | Tray: 1

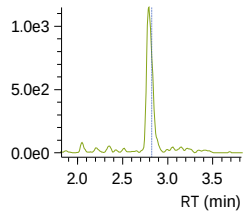
Perchlorate

Conc 0.6171
R#1 20.83 (0.00)

Q 99.00>83.00 (-) 5.48e3



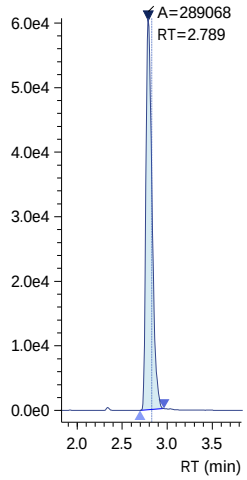
R1 101.00>85.00 (-) 1.15e3



Sodium Perchlorate -18O4_IS

Conc 1.0000

ISTD 107.00>89.00 (-) 6.07e4



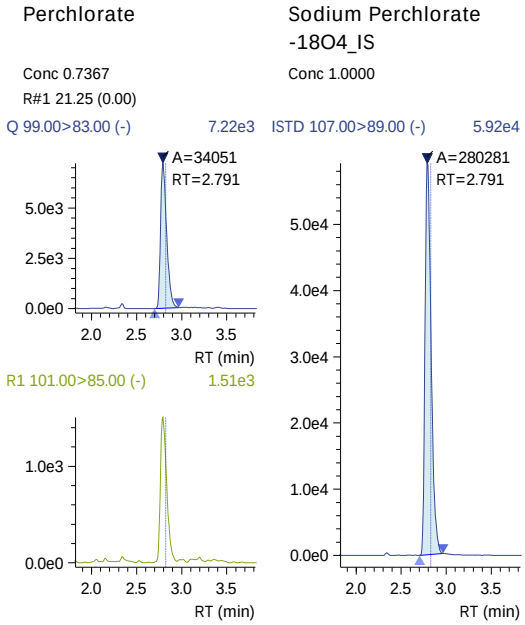
Insight Report

Printed at 8/17/2021 4:47:51 PM

20210726_021

Sample ID: PERCHLORATE3
Date Acquired: 7/26/2021 3:00:18 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210726\20210726_021.lcd
Vial: 22 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.791	34051	280281	1	0.7367	ng/mL	0.7000	21.25
Sodium Perchlorate-18O4 _IS	Auto	2.791	2802 81	280281	1	1.0000	ng/mL	1.0000	----



Insight Report

Printed at 8/17/2021 4:57:15 PM

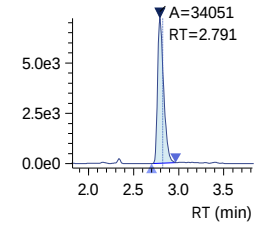
20210726_021

Sample ID: PERCHLORATE3
Date Acquired: 7/26/2021 3:00:18 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210726\Before\20210726_021.lcd
Vial: 22 | Inj. Volume: 25.0000uL | Tray: 1

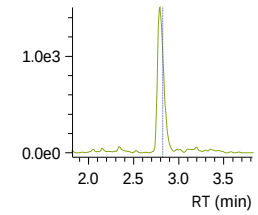
Perchlorate

Conc 0.8837
R#1 21.25 (0.00)

Q 99.00>83.00 (-) 7.22e3



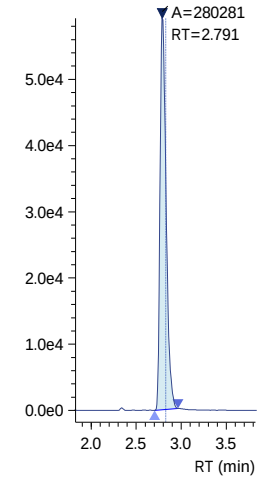
R1 101.00>85.00 (-) 1.51e3



Sodium Perchlorate -18O4_IS

Conc 1.0000

ISTD 107.00>89.00 (-) 5.92e4



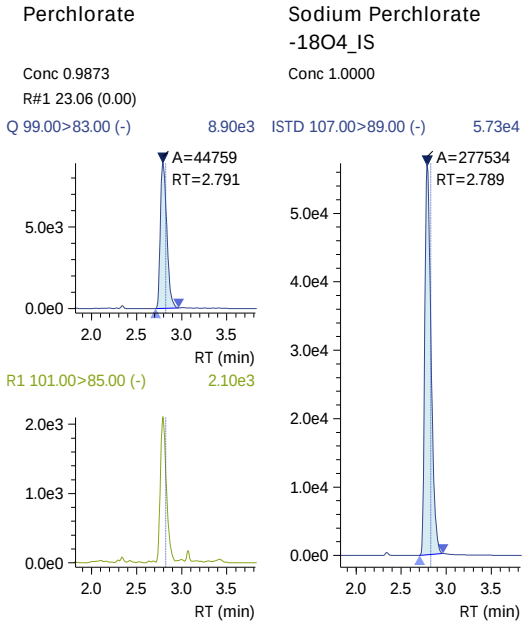
Insight Report

Printed at 8/17/2021 4:47:51 PM

20210726_022

Sample ID: PERCHLORATE4
Date Acquired: 7/26/2021 3:08:50 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210726\20210726_022.lcd
Vial: 23 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.791	44759	277534	1	0.9873	ng/mL	1.0000	23.06
Sodium Perchlorate-18O4 _IS	Auto	2.789	2775 34	277534	1	1.0000	ng/mL	1.0000	----



Insight Report

Printed at 8/17/2021 4:57:15 PM

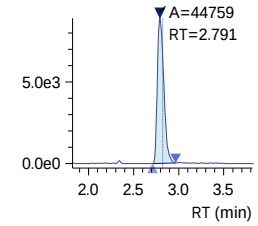
20210726_022

Sample ID: PERCHLORATE4
Date Acquired: 7/26/2021 3:08:50 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210726\Before\20210726_022.lcd
Vial: 23 | Inj. Volume: 25.0000uL | Tray: 1

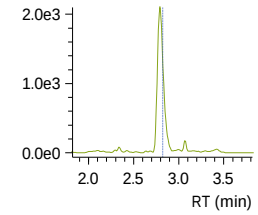
Perchlorate

Conc 1.1814
R#1 23.06 (0.00)

Q 99.00>83.00 (-) 8.90e3



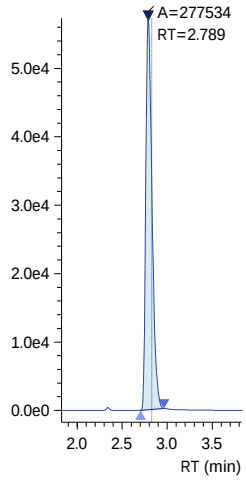
R1 101.00>85.00 (-) 2.10e3



Sodium Perchlorate -18O4_IS

Conc 1.0000

ISTD 107.00>89.00 (-) 5.73e4



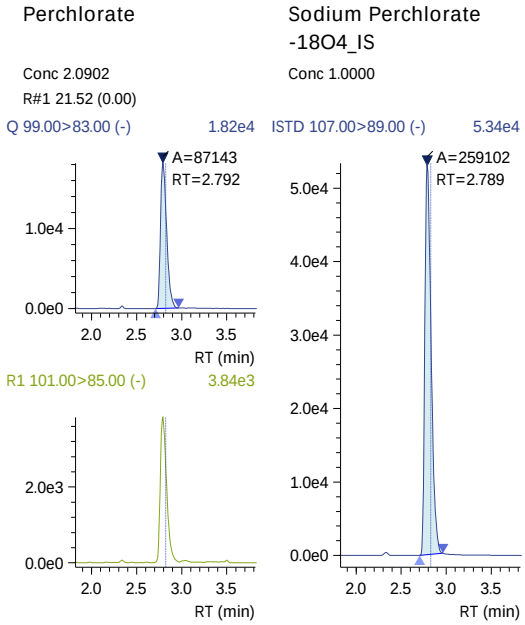
Insight Report

Printed at 8/17/2021 4:47:51 PM

20210726_023

Sample ID: PERCHLORATE5
Date Acquired: 7/26/2021 3:17:24 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210726\20210726_023.lcd
Vial: 24 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.792	87143	259102	1	2.0902	ng/mL	2.0000	21.52
Sodium Perchlorate-18O4 _IS	Auto	2.789	259102	259102	1	1.0000	ng/mL	1.0000	----



Insight Report

Printed at 8/17/2021 4:57:15 PM

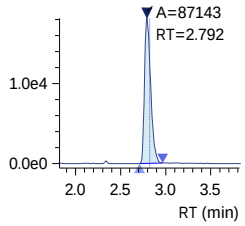
20210726_023

Sample ID: PERCHLORATE5
Date Acquired: 7/26/2021 3:17:24 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210726\Before\20210726_023.lcd
Vial: 24 | Inj. Volume: 25.0000uL | Tray: 1

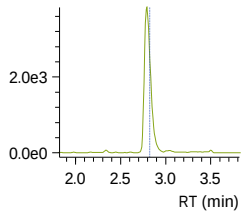
Perchlorate

Conc 2.4909
R#1 21.52 (0.00)

Q 99.00>83.00 (-) 1.82e4



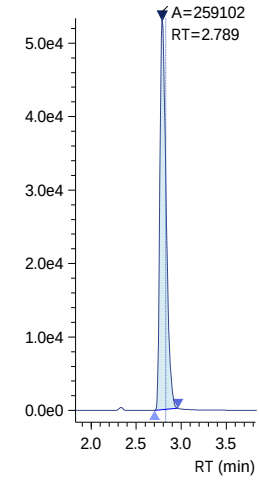
R1 101.00>85.00 (-) 3.84e3



Sodium Perchlorate -18O4_IS

Conc 1.0000

ISTD 107.00>89.00 (-) 5.34e4



Insight Report

Printed at 8/17/2021 4:47:51 PM

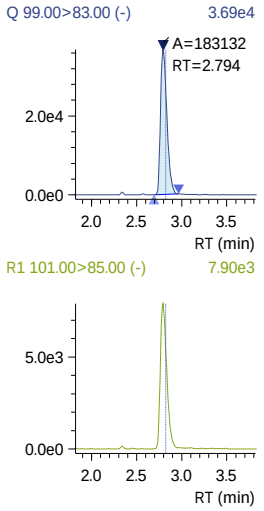
20210726_024

Sample ID: PERCHLORATE6
Date Acquired: 7/26/2021 3:25:56 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210726\20210726_024.lcd
Vial: 25 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.794	183132	227294	1	5.0473	ng/mL	5.0000	21.41
Sodium Perchlorate-18O4_IS	Auto	2.791	227294	227294	1	1.0000	ng/mL	1.0000	----

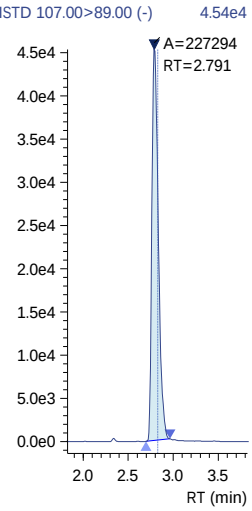
Perchlorate

Conc 5.0473
R#1 21.41 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.0000



Insight Report

Printed at 8/17/2021 4:57:15 PM

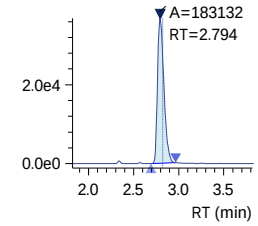
20210726_024

Sample ID: PERCHLORATE6
Date Acquired: 7/26/2021 3:25:56 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210726\Before\20210726_024.lcd
Vial: 25 | Inj. Volume: 25.0000uL | Tray: 1

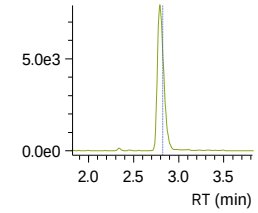
Perchlorate

Conc 6.0023
R#1 21.41 (0.00)

Q 99.00>83.00 (-) 3.69e4



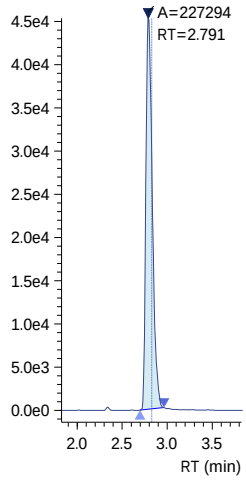
R1 101.00>85.00 (-) 7.90e3



Sodium Perchlorate -18O4_IS

Conc 1.0000

ISTD 107.00>89.00 (-) 4.54e4



Insight Report

Printed at 8/17/2021 4:47:51 PM

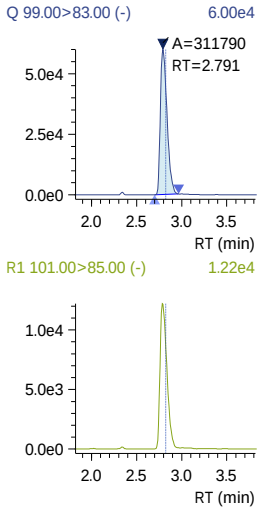
20210726_025

Sample ID: PERCHLORATE7
Date Acquired: 7/26/2021 3:34:27 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210726\20210726_025.lcd
Vial: 26 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.791	311790	201854	1	9.7025	ng/mL	10.0000	20.90
Sodium Perchlorate-18O4_IS	Auto	2.790	201854	201854	1	1.0000	ng/mL	1.0000	----

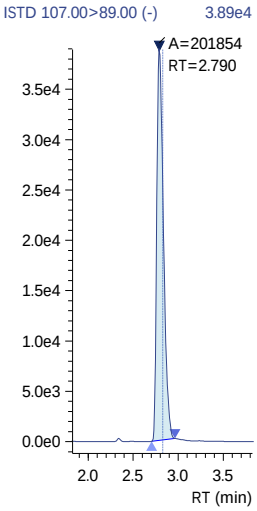
Perchlorate

Conc 9.7025
R#1 20.90 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.0000



Insight Report

Printed at 8/17/2021 4:57:15 PM

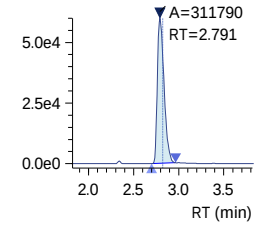
20210726_025

Sample ID: PERCHLORATE7
Date Acquired: 7/26/2021 3:34:27 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210726\Before\20210726_025.lcd
Vial: 26 | Inj. Volume: 25.0000uL | Tray: 1

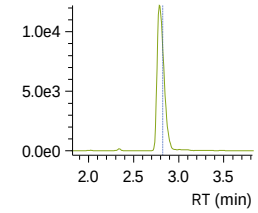
Perchlorate

Conc 11.5301
R#1 20.90 (0.00)

Q 99.00>83.00 (-) 6.00e4



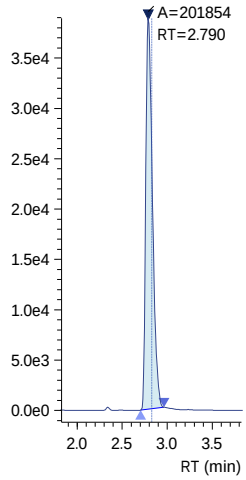
R1 101.00>85.00 (-) 1.22e4



Sodium Perchlorate -18O4_IS

Conc 1.0000

ISTD 107.00>89.00 (-) 3.89e4



Insight Report

Printed at 8/17/2021 4:47:51 PM

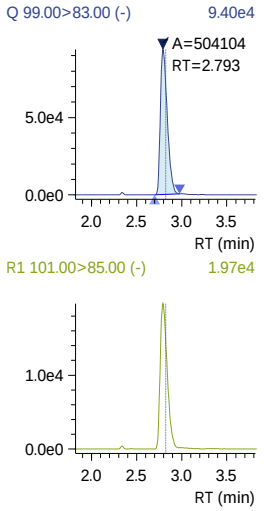
20210726_026

Sample ID: PERCHLORATE8
Date Acquired: 7/26/2021 3:43:01 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210726\20210726_026.lcd
Vial: 27 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.793	504104	161658	1	19.6169	ng/mL	20.0000	20.94
Sodium Perchlorate-18O4_IS	Auto	2.791	161658	161658	1	1.0000	ng/mL	1.0000	----

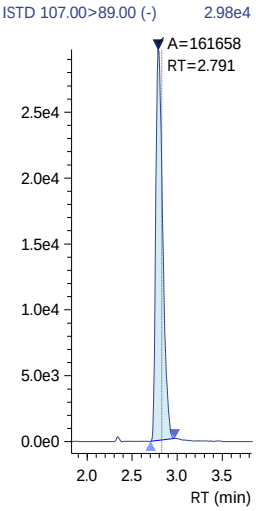
Perchlorate

Conc 19.6169
R#1 20.94 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.0000



Insight Report

Printed at 8/17/2021 4:57:15 PM

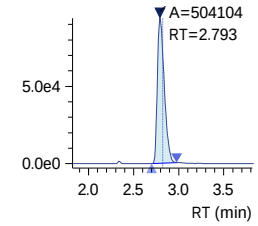
20210726_026

Sample ID: PERCHLORATE8
Date Acquired: 7/26/2021 3:43:01 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210726\Before\20210726_026.lcd
Vial: 27 | Inj. Volume: 25.0000uL | Tray: 1

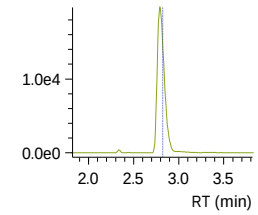
Perchlorate

Conc 23.3027
R#1 20.94 (0.00)

Q 99.00>83.00 (-) 9.40e4



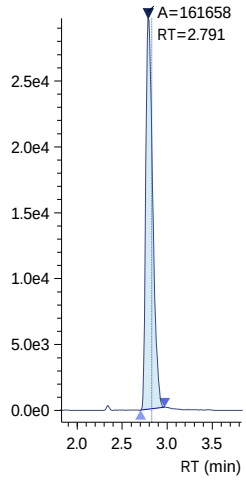
R1 101.00>85.00 (-) 1.97e4



Sodium Perchlorate -18O4_IS

Conc 1.0000

ISTD 107.00>89.00 (-) 2.98e4



Insight Report

Printed at 8/17/2021 4:47:51 PM

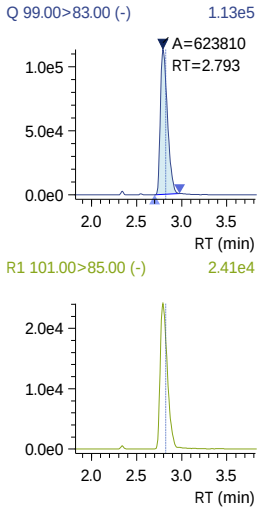
20210726_027

Sample ID: PERCHLORATE9
Date Acquired: 7/26/2021 3:51:36 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210726\20210726_027.lcd
Vial: 28 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.793	623810	133405	1	29.4306	ng/mL	30.0000	21.23
Sodium Perchlorate-18O4_IS	Auto	2.792	133405	133405	1	1.0000	ng/mL	1.0000	----

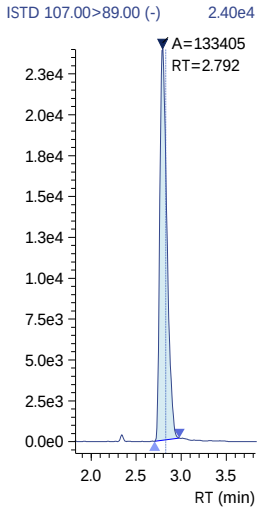
Perchlorate

Conc 29.4306
R#1 21.23 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.0000



Insight Report

Printed at 8/17/2021 4:57:15 PM

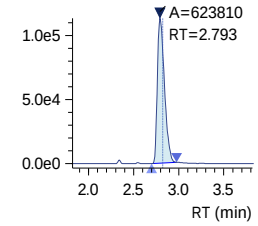
20210726_027

Sample ID: PERCHLORATE9
Date Acquired: 7/26/2021 3:51:36 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210726\Before\20210726_027.lcd
Vial: 28 | Inj. Volume: 25.0000uL | Tray: 1

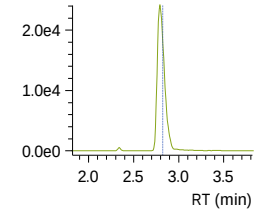
Perchlorate

Conc 34.9559
R#1 21.23 (0.00)

Q 99.00>83.00 (-) 1.13e5



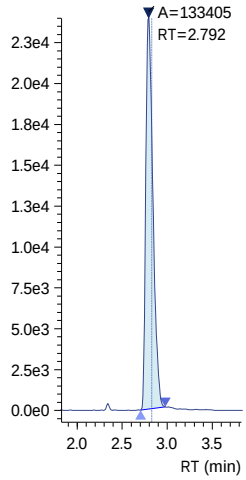
R1 101.00>85.00 (-) 2.41e4



Sodium Perchlorate -18O4_IS

Conc 1.0000

ISTD 107.00>89.00 (-) 2.40e4



Insight Report

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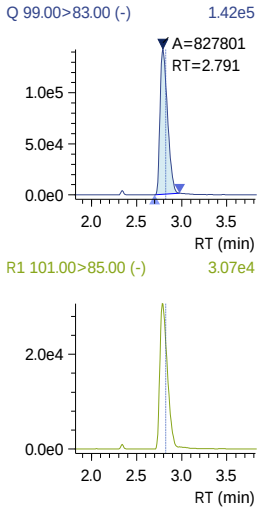
20210726_028

Sample ID: PERCHLORATE10
Date Acquired: 7/26/2021 4:00:10 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210726\20210726_028.lcd
Vial: 29 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.791	827801	108313	1	48.1204	ng/mL	50.0000	21.92
Sodium Perchlorate-18O4_IS	Auto	2.789	108313	108313	1	1.0000	ng/mL	1.0000	----

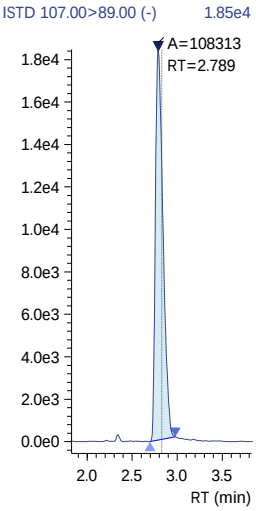
Perchlorate

Conc 48.1204
R#1 21.92 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.0000



Insight Report

Printed at 8/17/2021 4:57:15 PM

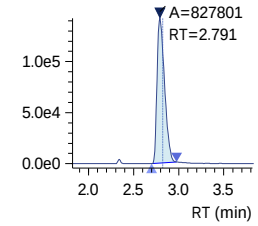
20210726_028

Sample ID: PERCHLORATE10
Date Acquired: 7/26/2021 4:00:10 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210726\Before\20210726_028.lcd
Vial: 29 | Inj. Volume: 25.0000uL | Tray: 1

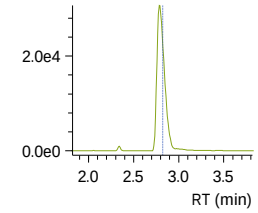
Perchlorate

Conc 57.1487
R#1 21.92 (0.00)

Q 99.00>83.00 (-) 1.42e5



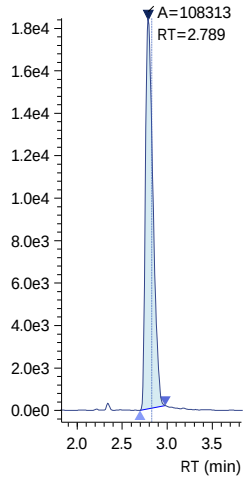
R1 101.00>85.00 (-) 3.07e4



Sodium Perchlorate -18O4_IS

Conc 1.0000

ISTD 107.00>89.00 (-) 1.85e4



Insight Report

Printed at 8/17/2021 4:47:51 PM

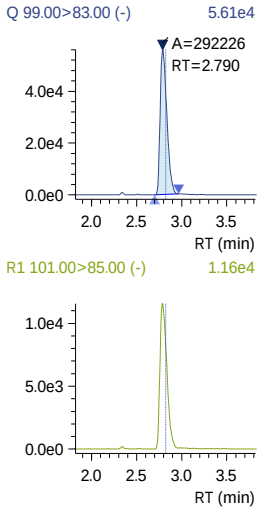
20210726_029

Sample ID: PERCHLORATEICV
Date Acquired: 7/26/2021 4:08:45 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210726\20210726_029.lcd
Vial: 30 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.790	292226	187855	1	9.7716	ng/mL	10.0000	20.92
Sodium Perchlorate-18O4_IS	Auto	2.789	187855	187855	1	1.0000	ng/mL	1.0000	----

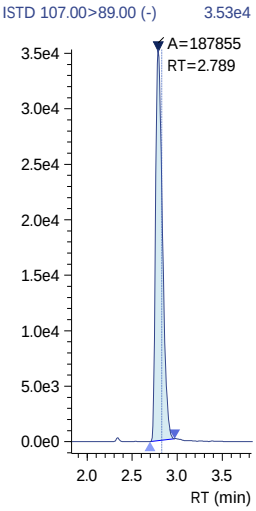
Perchlorate

Conc 9.7716
R#1 20.92 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.0000



Insight Report

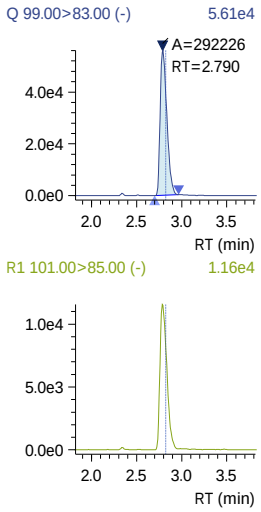
Printed at 8/17/2021 4:57:15 PM

20210726_029

Sample ID: PERCHLORATEICV
Date Acquired: 7/26/2021 4:08:45 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210726\Before\20210726_029.lcd
Vial: 30 | Inj. Volume: 25.0000uL | Tray: 1

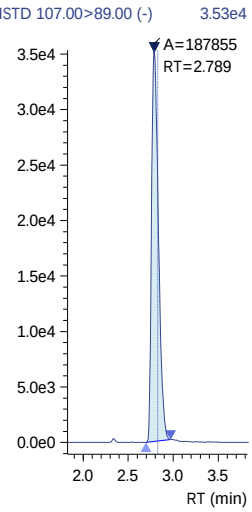
Perchlorate

Conc 11.6121
R#1 20.92 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.0000



20210802

1st Review: Grivera
2nd Review: Kneir

Injection Log
LCMS01 -Shimadzu 8050

ICAL Date: 8/2/2021
Cal. Std. xp: 11/26/2021
ICAL ID: **EC2100056**

Mobile Phases **A:** 0.75% Formic Acid/Water 3100813-08 **B:** MeOH 216350

			File Name	Acquisition Method	Dilution	R	Comments	Date/Time
1	PERCHLORATE1		20210802_017	Perchlorate6850c.lcm	1x	☒	3100812-01	8/2/2021 16:41
2	PERCHLORATE2		20210802_007	Perchlorate6850c.lcm	1x	☒	3100812-02	8/2/2021 15:13
3	PERCHLORATE3		20210802_008	Perchlorate6850c.lcm	1x	☒	3100812-03	8/2/2021 15:24
4	PERCHLORATE4		20210802_009	Perchlorate6850c.lcm	1x	☒	3100812-04	8/2/2021 15:33
5	PERCHLORATE5		20210802_010	Perchlorate6850c.lcm	1x	☒	3100812-05	8/2/2021 15:41
6	PERCHLORATE6		20210802_011	Perchlorate6850c.lcm	1x	☒	3100812-06	8/2/2021 15:50
7	PERCHLORATE7		20210802_012	Perchlorate6850c.lcm	1x	☒	3100812-07	8/2/2021 15:58
8	PERCHLORATE8		20210802_013	Perchlorate6850c.lcm	1x	☒	3100812-08	8/2/2021 16:07
9	PERCHLORATE9		20210802_014	Perchlorate6850c.lcm	1x	☒	3100812-09	8/2/2021 16:15
10	PERCHLORATE10		20210802_015	Perchlorate6850c.lcm	1x	☒	3100813-01	8/2/2021 16:24
11	PERCHLORATEICV		20210802_018	Perchlorate6850c.lcm	1x	☒	3100811-06	8/2/2021 16:50
12	IB		20210802_019	Perchlorate6850c.lcm	1x	☒		8/2/2021 17:25
13	LODV		20210802_020	Perchlorate6850c.lcm	1x	☒		8/2/2021 17:33
14	PERCHLORATE7		20210802_021	Perchlorate6850c.lcm	1x	☒	3100812-07	8/2/2021 17:42
15	E2100813-001X20		20210802_022	Perchlorate6850c.lcm	20x	☒		8/2/2021 17:51
16	E2100813-004X20		20210802_023	Perchlorate6850c.lcm	20x	☒		8/2/2021 18:00
17	E2100814-001		20210802_024	Perchlorate6850c.lcm	1x	☒		8/2/2021 18:08
18	E2100814-002		20210802_025	Perchlorate6850c.lcm	1x	☒		8/2/2021 18:17
19	E2100814-003		20210802_026	Perchlorate6850c.lcm	1x	☒	INST out of range	8/2/2021 18:25
20	E2100814-004		20210802_027	Perchlorate6850c.lcm	1x	☒		8/2/2021 18:34
21	E2100814-005		20210802_028	Perchlorate6850c.lcm	1x	☒	INST out of range	8/2/2021 18:42
22	PERCHLORATE7		20210802_029	Perchlorate6850c.lcm	1x	☒	3100812-07	8/2/2021 18:51
23	EQ2100452-04		20210802_030	Perchlorate6850c.lcm	1x	☒		8/2/2021 19:00
24	EQ2100452-05		20210802_031	Perchlorate6850c.lcm	1x	☒		8/2/2021 19:08
25	E2100813-002		20210802_032	Perchlorate6850c.lcm	1x	☒		8/2/2021 19:17
26	E2100813-003		20210802_033	Perchlorate6850c.lcm	1x	☒		8/2/2021 19:25
27	E2100813-005		20210802_034	Perchlorate6850c.lcm	1x	☒	INST out of range	8/2/2021 19:34
28	E2100813-006		20210802_035	Perchlorate6850c.lcm	1x	☒	INST out of range	8/2/2021 19:42
29	E2100813-007		20210802_036	Perchlorate6850c.lcm	1x	☒	INST out of range	8/2/2021 19:51
30	E2100813-008		20210802_037	Perchlorate6850c.lcm	1x	☒		8/2/2021 19:59
31	PERCHLORATE7		20210802_038	Perchlorate6850c.lcm	1x	☒	3100812-07	8/2/2021 20:08
32	E2100813-009		20210802_039	Perchlorate6850c.lcm	1x	☒		8/2/2021 20:16
33	EQ2100458-01		20210802_040	Perchlorate6850c.lcm	1x	☒		8/2/2021 20:25
34	EQ2100458-02		20210802_041	Perchlorate6850c.lcm	1x	☒		8/2/2021 20:34
35	EQ2100458-03		20210802_042	Perchlorate6850c.lcm	1x	☒		8/2/2021 20:42
36	EQ2100458-04		20210802_043	Perchlorate6850c.lcm	1x	☒		8/2/2021 20:51
37	EQ2100458-05		20210802_044	Perchlorate6850c.lcm	1x	☒		8/2/2021 20:59
38	PERCHLORATE7		20210802_045	Perchlorate6850c.lcm	1x	☒	3100812-07	8/2/2021 21:08
39	E2100824-001		20210802_046	Perchlorate6850c.lcm	1x	☒	INST out of range	8/2/2021 21:16
40	E2100824-002		20210802_047	Perchlorate6850c.lcm	1x	☒	INST out of range	8/2/2021 21:25
41	E2100824-003		20210802_048	Perchlorate6850c.lcm	1x	☒	INST out of range	8/2/2021 21:33
42	E2100825-001		20210802_049	Perchlorate6850c.lcm	1x	☒	INST out of range	8/2/2021 21:42
43	E2100825-002		20210802_050	Perchlorate6850c.lcm	1x	☒	INST out of range	8/2/2021 21:50
44	E2100825-003		20210802_051	Perchlorate6850c.lcm	1x	☒	INST out of range	8/2/2021 21:59
45	E2100825-004		20210802_052	Perchlorate6850c.lcm	1x	☒		8/2/2021 22:07
46	E2100825-005		20210802_053	Perchlorate6850c.lcm	1x	☒	INST out of range	8/2/2021 22:16
47	E2100825-006		20210802_054	Perchlorate6850c.lcm	1x	☒	INST out of range	8/2/2021 22:24
48	E2100825-007		20210802_055	Perchlorate6850c.lcm	1x	☒	INST out of range	8/2/2021 22:33
49	PERCHLORATE7		20210802_056	Perchlorate6850c.lcm	1x	☒	3100812-07	8/2/2021 22:41
50	E2100825-008		20210802_057	Perchlorate6850c.lcm	1x	☒		8/2/2021 22:50
51	IB		20210802_058	Perchlorate6850c.lcm	1x	☒		8/2/2021 22:58
52	E2100831-001		20210802_059	Perchlorate6850c.lcm	1x	☒		8/2/2021 23:07
53	E2100831-002X2		20210802_060	Perchlorate6850c.lcm	2x	☒	INST out of range	8/2/2021 23:15
54	E2100856-001		20210802_061	Perchlorate6850c.lcm	1x	☒	INST out of range	8/2/2021 23:24
55	E2100856-002		20210802_062	Perchlorate6850c.lcm	1x	☒	INST out of range	8/2/2021 23:32
56	E2100856-003		20210802_063	Perchlorate6850c.lcm	1x	☒		8/2/2021 23:41
57	E2100856-004		20210802_064	Perchlorate6850c.lcm	1x	☒	INST out of range	8/2/2021 23:50
58	E2100856-005		20210802_065	Perchlorate6850c.lcm	1x	☒		8/2/2021 23:58
59	E2100837-001		20210802_066	Perchlorate6850c.lcm	1x	☒	INST out of range	8/3/2021 0:07
60	PERCHLORATE7		20210802_067	Perchlorate6850c.lcm	1x	☒	3100812-07	8/3/2021 0:15
61	E2100837-002		20210802_068	Perchlorate6850c.lcm	1x	☒	INST out of range	8/3/2021 0:24
62	E2100837-003		20210802_069	Perchlorate6850c.lcm	1x	☒		8/3/2021 0:32
63	E2100837-004		20210802_070	Perchlorate6850c.lcm	1x	☒	INST out of range	8/3/2021 0:41
64	E2100837-005		20210802_071	Perchlorate6850c.lcm	1x	☒	INST out of range	8/3/2021 0:49
65	E2100837-006		20210802_072	Perchlorate6850c.lcm	1x	☒		8/3/2021 0:58
66	E2100837-007		20210802_073	Perchlorate6850c.lcm	1x	☒	INST out of range	8/3/2021 1:06
67	E2100837-008		20210802_074	Perchlorate6850c.lcm	1x	☒		8/3/2021 1:15
68	E2100837-009		20210802_075	Perchlorate6850c.lcm	1x	☒		8/3/2021 1:23
69	E2100837-010		20210802_076	Perchlorate6850c.lcm	1x	☒		8/3/2021 1:32
70	E2100837-011		20210802_077	Perchlorate6850c.lcm	1x	☒		8/3/2021 1:40
71	E2100837-012		20210802_078	Perchlorate6850c.lcm	1x	☒		8/3/2021 1:49
72	PERCHLORATE7		20210802_079	Perchlorate6850c.lcm	1x	☒	3100812-07	8/3/2021 1:57
73	EQ2100476-01		20210802_080	Perchlorate6850c.lcm	1x	☒		8/3/2021 2:06

20210802

1st Review: Grivera
2nd Review: Kneir

Injection Log
LCMS01 -Shimadzu 8050

ICAL Date: 8/2/2021
Cal. Std. xp: 11/26/2021
ICAL ID: **EC2100056**

Mobile Phases **A:** 0.75% Formic Acid/Water 3100813-08 **B:** MeOH 216350

			File Name	Acquisition Method	Dilution	R	Comments	Date/Time
74	EQ2100476-02		20210802_081	Perchlorate6850c.lcm	1x	☒		8/3/2021 2:15
75	EQ2100476-03		20210802_082	Perchlorate6850c.lcm	1x	☒		8/3/2021 2:23
76	EQ2100476-04		20210802_083	Perchlorate6850c.lcm	1x	☒	INST out of range	8/3/2021 2:32
77	EQ2100476-05		20210802_084	Perchlorate6850c.lcm	1x	☒	INST out of range	8/3/2021 2:40
78	EQ2100476-06		20210802_085	Perchlorate6850c.lcm	1x	☒	INST out of range	8/3/2021 2:49
79	EQ2100476-07		20210802_086	Perchlorate6850c.lcm	1x	☒	INST out of range	8/3/2021 2:57
80	E2100843-001		20210802_087	Perchlorate6850c.lcm	1x	☒	INST out of range	8/3/2021 3:06
81	E2100843-002		20210802_088	Perchlorate6850c.lcm	1x	☒	INST out of range	8/3/2021 3:14
82	E2100843-003		20210802_089	Perchlorate6850c.lcm	1x	☒	INST out of range	8/3/2021 3:23
83	PERCHLORATE7		20210802_090	Perchlorate6850c.lcm	1x	☒	3100812-07	8/3/2021 3:32
84	E2100843-004		20210802_091	Perchlorate6850c.lcm	1x	☒	INST out of range	8/3/2021 3:40
85	E2100843-005		20210802_092	Perchlorate6850c.lcm	1x	☒	INST out of range	8/3/2021 3:49
86	E2100843-006		20210802_093	Perchlorate6850c.lcm	1x	☒	INST out of range	8/3/2021 3:57
87	E2100843-007		20210802_094	Perchlorate6850c.lcm	1x	☒	INST out of range	8/3/2021 4:06
88	E2100843-008		20210802_095	Perchlorate6850c.lcm	1x	☒		8/3/2021 4:14
89	E2100843-009		20210802_096	Perchlorate6850c.lcm	1x	☒	INST out of range	8/3/2021 4:23
90	E2100844-001		20210802_097	Perchlorate6850c.lcm	1x	☒	INST out of range	8/3/2021 4:31
91	E2100844-002		20210802_098	Perchlorate6850c.lcm	1x	☒	INST out of range	8/3/2021 4:40
92	E2100844-003		20210802_099	Perchlorate6850c.lcm	1x	☒	INST out of range	8/3/2021 4:48
93	E2100844-004		20210802_100	Perchlorate6850c.lcm	1x	☒	INST out of range	8/3/2021 4:57
94	PERCHLORATE7		20210802_101	Perchlorate6850c.lcm	1x	☒	3100812-07	8/3/2021 5:06
95	E2100844-005		20210802_102	Perchlorate6850c.lcm	1x	☒	INST out of range	8/3/2021 5:14
96	E2100844-006		20210802_103	Perchlorate6850c.lcm	1x	☒	INST out of range	8/3/2021 5:23
97	E2100844-007		20210802_104	Perchlorate6850c.lcm	1x	☒	INST out of range	8/3/2021 5:31
98	E2100844-008		20210802_105	Perchlorate6850c.lcm	1x	☒	INST out of range	8/3/2021 5:40
99	E2100844-009		20210802_106	Perchlorate6850c.lcm	1x	☒	INST out of range	8/3/2021 5:48
100	PERCHLORATE7		20210802_107	Perchlorate6850c.lcm	1x	☒	3100812-07	8/3/2021 5:57

Initial Calibration - Detailed Report

Calibration ID: EC2100056 **Instrument ID:** E-LCMS-01
Column Name: 1

#	Lab Code	Sample Name	File Location	Aquisition Date
02	EC2100056-02	PERCHLORATE2	20210802_007	08/02/2021 15:13
03	EC2100056-03	PERCHLORATE3	20210802_008	08/02/2021 15:24
04	EC2100056-04	PERCHLORATE4	20210802_009	08/02/2021 15:33
05	EC2100056-05	PERCHLORATE5	20210802_010	08/02/2021 15:41
06	EC2100056-06	PERCHLORATE6	20210802_011	08/02/2021 15:50
07	EC2100056-07	PERCHLORATE7	20210802_012	08/02/2021 15:58
08	EC2100056-08	PERCHLORATE8	20210802_013	08/02/2021 16:07
09	EC2100056-09	PERCHLORATE9	20210802_014	08/02/2021 16:15
10	EC2100056-10	PERCHLORATE10	20210802_015	08/02/2021 16:24
01	EC2100056-01	PERCHLORATE1	20210802_017	08/02/2021 16:41

Analyte **Curve Fit** **Weighting**

Perchlorate **Average RF** **RSD = 4.317** **Average RF = 0.1473**

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.1000	0.152	02	0.5000	0.1568	03	0.7000	0.1508	04	1.0000	0.1523
05	2.0000	0.1523	06	5.0000	0.1468	07	10.0000	0.1389	08	20.0000	0.1411
09	30.0000	0.1397	10	50.0000	0.1426						

Analyte

Perchlorate

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	0.1000	0.103	3.2	02	0.5000	0.532	6.4	03	0.7000	0.716	2.3
04	1.0000	1.03	3.4	05	2.0000	2.07	3.4	06	5.0000	4.98	-0.3
07	10.0000	9.43	-5.7	08	20.0000	19.2	-4.2	09	30.0000	28.4	-5.2
10	50.0000	48.4	-3.2								

Initial Calibration Verification Summary Report

Calibration ID:	EC2100056	**Instrument ID:**	E-LCMS-01
Datafile ID:	20210802_018	**Column Name:**	1

Analyte	Lab Code	Type	Curve Fit	True Value	Calc Conc	Units	Result	Criteria
Perchlorate	EC2100056-11	T	Average RF	10	9.871	ng/mL	-1.3	<= 15

Insight Report

Printed at 8/18/2021 10:37:32 AM

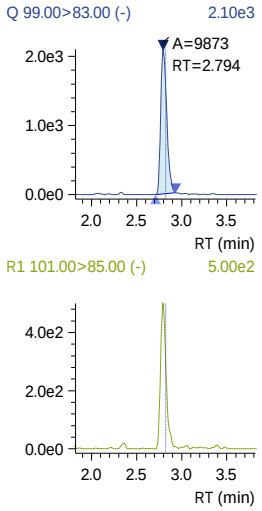
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Sample ID: PERCHLORATE2
Date Acquired: 8/2/2021 3:13:26 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210802\20210802_007.lcd
Vial: 21 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.794	9873	125942	1	0.5321	ng/mL	0.5000	23.77
Sodium Perchlorate-18O4 _IS	Auto	2.793	1259 42	125942	1	1.0000	ng/mL	1.0000	----

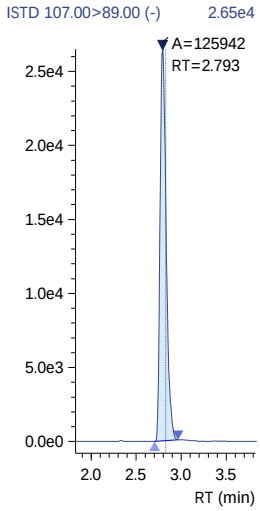
Perchlorate

Conc 0.5321
R#1 23.77 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.0000



Insight Report

Printed at 8/18/2021 10:42:57 AM

Method File: I:\LCMS01\DATA\20210802\20210726.lcm

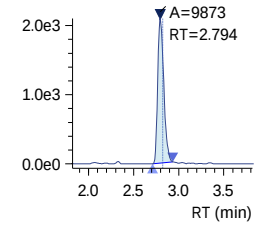
20210802_007

Sample ID: PERCHLORATE2
Date Acquired: 8/2/2021 3:13:26 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210802\Before\20210802_007.lcd
Vial: 21 | Inj. Volume: 25.0000uL | Tray: 1

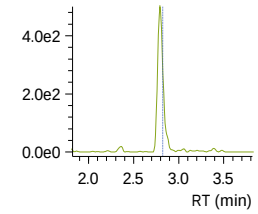
Perchlorate

Conc 0.4663
R#1 23.77 (0.00)

Q 99.00>83.00 (-) 2.10e3



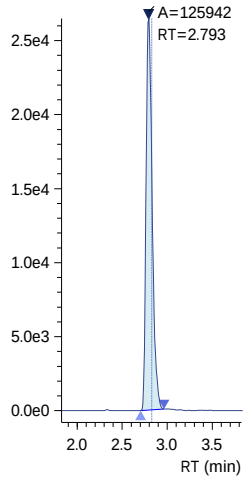
R1 101.00>85.00 (-) 5.00e2



Sodium Perchlorate -18O4_IS

Conc 1.0000

ISTD 107.00>89.00 (-) 2.65e4



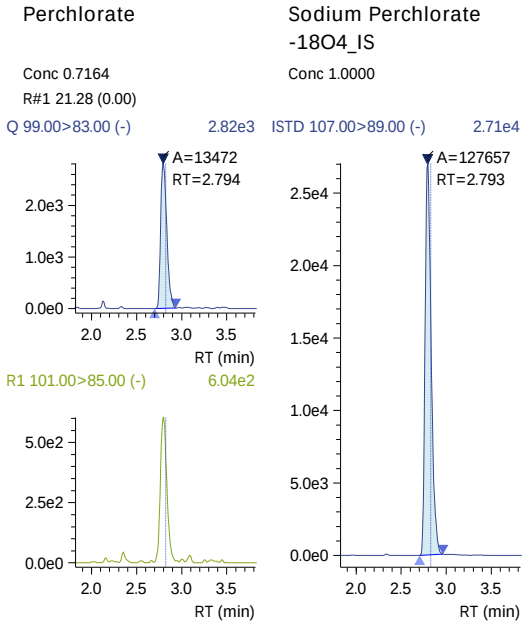
Insight Report

Printed at 8/18/2021 10:37:32 AM

20210802_008

Sample ID: PERCHLORATE3
Date Acquired: 8/2/2021 3:24:30 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210802\20210802_008.lcd
Vial: 22 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.794	13472	127657	1	0.7164	ng/mL	0.7000	21.28
Sodium Perchlorate-18O4 _IS	Auto	2.793	1276 57	127657	1	1.0000	ng/mL	1.0000	----



Insight Report

Printed at 8/18/2021 10:42:57 AM

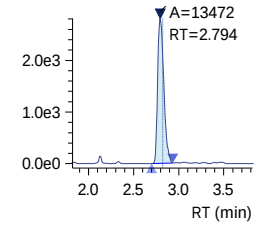
20210802_008

Sample ID: PERCHLORATE3
Date Acquired: 8/2/2021 3:24:30 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210802\Before\20210802_008.lcd
Vial: 22 | Inj. Volume: 25.0000uL | Tray: 1

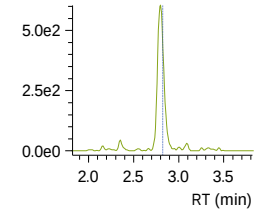
Perchlorate

Conc 0.6371
R#1 21.28 (0.00)

Q 99.00>83.00 (-) 2.82e3



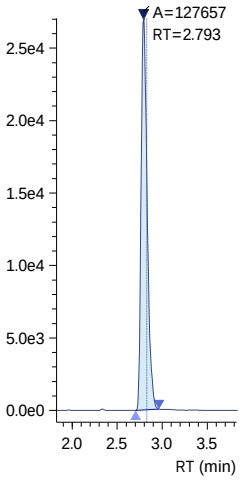
R1 101.00>85.00 (-) 6.04e2



Sodium Perchlorate -18O4_IS

Conc 1.0000

ISTD 107.00>89.00 (-) 2.71e4



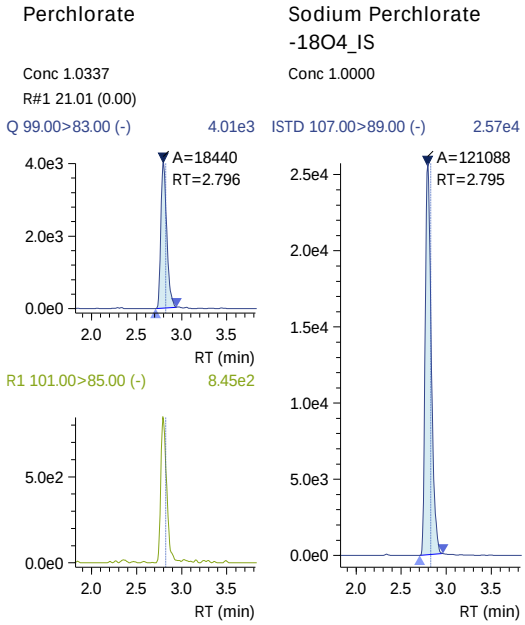
Insight Report

Printed at 8/18/2021 10:37:32 AM

20210802_009

Sample ID: PERCHLORATE4
Date Acquired: 8/2/2021 3:33:05 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210802\20210802_009.lcd
Vial: 23 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.796	18440	121088	1	1.0337	ng/mL	1.0000	21.01
Sodium Perchlorate-18O4 _IS	Auto	2.795	1210 88	121088	1	1.0000	ng/mL	1.0000	----



Insight Report

Printed at 8/18/2021 10:42:57 AM

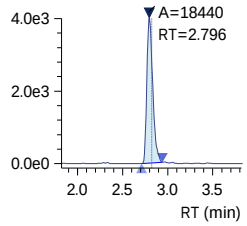
20210802_009

Sample ID: PERCHLORATE4
Date Acquired: 8/2/2021 3:33:05 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210802\Before\20210802_009.lcd
Vial: 23 | Inj. Volume: 25.0000uL | Tray: 1

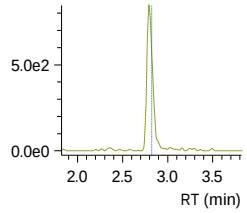
Perchlorate

Conc 0.9314
R#1 21.01 (0.00)

Q 99.00>83.00 (-) 4.01e3



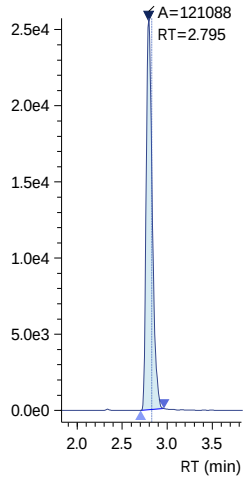
R1 101.00>85.00 (-) 8.45e2



Sodium Perchlorate -18O4_IS

Conc 1.0000

ISTD 107.00>89.00 (-) 2.57e4



Insight Report

Printed at 8/18/2021 10:37:32 AM

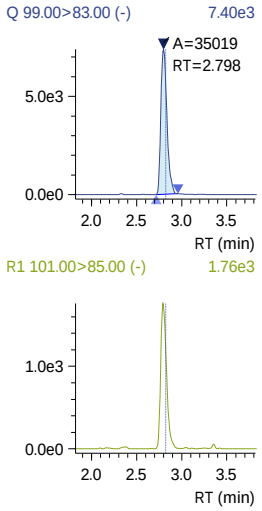
20210802_010

Sample ID: PERCHLORATE5
Date Acquired: 8/2/2021 3:41:38 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210802\20210802_010.lcd
Vial: 24 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.798	35019	114970	1	2.0675	ng/mL	2.0000	24.14
Sodium Perchlorate-18O4 _IS	Auto	2.794	1149 70	114970	1	1.0000	ng/mL	1.0000	----

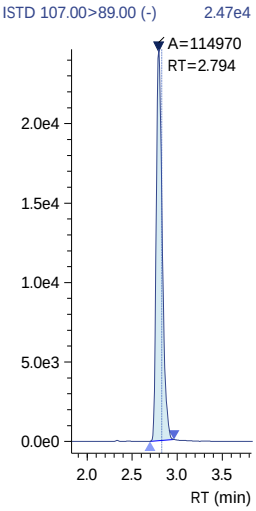
Perchlorate

Conc 2.0675
R#1 24.14 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.0000



Insight Report

Printed at 8/18/2021 10:42:57 AM

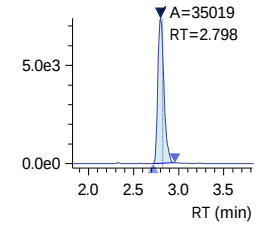
20210802_010

Sample ID: PERCHLORATE5
Date Acquired: 8/2/2021 3:41:38 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210802\Before\20210802_010.lcd
Vial: 24 | Inj. Volume: 25.0000uL | Tray: 1

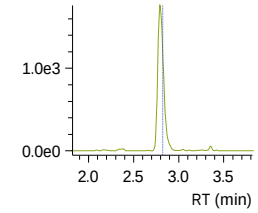
Perchlorate

Conc 1.8902
R#1 24.14 (0.00)

Q 99.00>83.00 (-) 7.40e3



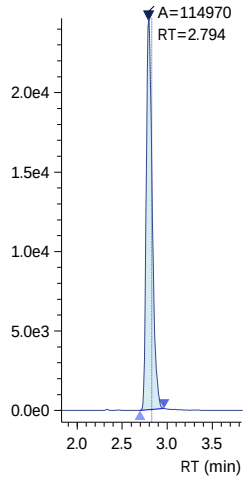
R1 101.00>85.00 (-) 1.76e3



Sodium Perchlorate -18O4_IS

Conc 1.0000

ISTD 107.00>89.00 (-) 2.47e4



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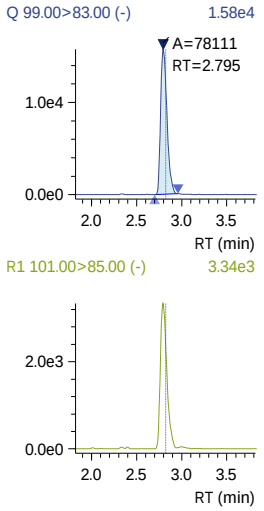
20210802_011

Sample ID: PERCHLORATE6
Date Acquired: 8/2/2021 3:50:11 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210802\20210802_011.lcd
Vial: 25 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.795	78111	106399	1	4.9832	ng/mL	5.0000	21.19
Sodium Perchlorate-18O4 _IS	Auto	2.794	1063 99	106399	1	1.0000	ng/mL	1.0000	----

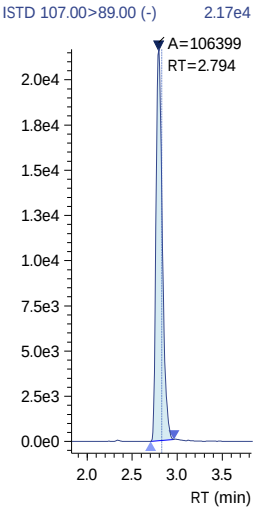
Perchlorate

Conc 4.9832
R#1 21.19 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.0000



Insight Report

Printed at 8/18/2021 10:42:57 AM

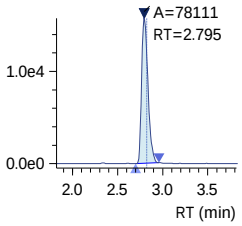
20210802_011

Sample ID: PERCHLORATE6
Date Acquired: 8/2/2021 3:50:11 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210802\Before\20210802_011.lcd
Vial: 25 | Inj. Volume: 25.0000uL | Tray: 1

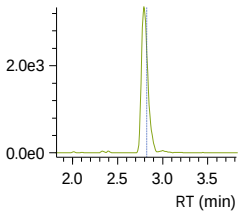
Perchlorate

Conc 4.5942
R#1 21.19 (0.00)

Q 99.00>83.00 (-) 1.58e4



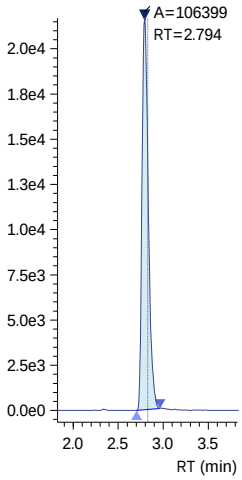
R1 101.00>85.00 (-) 3.34e3



Sodium Perchlorate -18O4_IS

Conc 1.0000

ISTD 107.00>89.00 (-) 2.17e4



Insight Report

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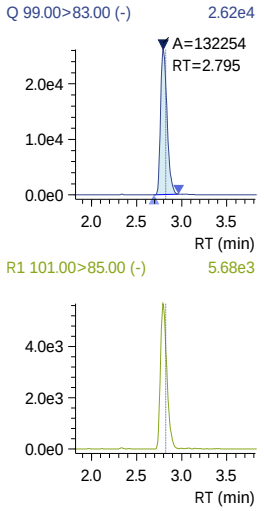
20210802_012

Sample ID: PERCHLORATE7
Date Acquired: 8/2/2021 3:58:47 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210802\20210802_012.lcd
Vial: 26 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.795	132254	95247	1	9.4253	ng/mL	10.0000	21.67
Sodium Perchlorate-18O4_IS	Auto	2.793	95247	95247	1	1.0000	ng/mL	1.0000	----

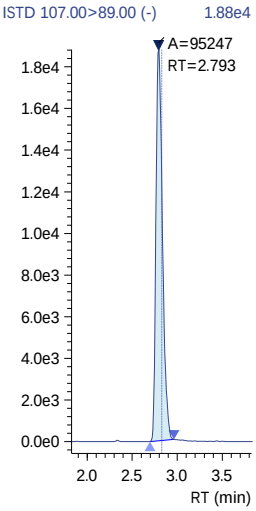
Perchlorate

Conc 9.4253
R#1 21.67 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.0000



Insight Report

Printed at 8/18/2021 10:42:57 AM

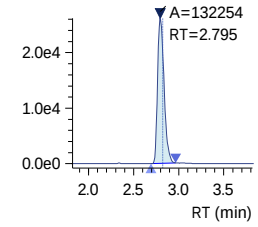
20210802_012

Sample ID: PERCHLORATE7
Date Acquired: 8/2/2021 3:58:47 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210802\Before\20210802_012.lcd
Vial: 26 | Inj. Volume: 25.0000uL | Tray: 1

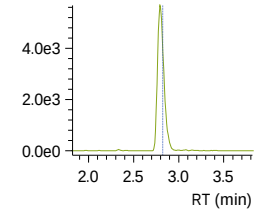
Perchlorate

Conc 8.7138
R#1 21.67 (0.00)

Q 99.00>83.00 (-) 2.62e4



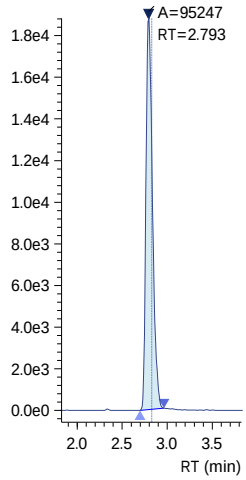
R1 101.00>85.00 (-) 5.68e3



Sodium Perchlorate -18O4_IS

Conc 1.0000

ISTD 107.00>89.00 (-) 1.88e4



Insight Report

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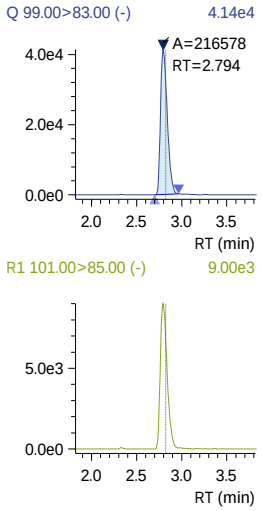
20210802_013

Sample ID: PERCHLORATE8
Date Acquired: 8/2/2021 4:07:19 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210802\20210802_013.lcd
Vial: 27 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.794	216578	76725	1	19.1606	ng/mL	20.0000	21.75
Sodium Perchlorate-18O4_IS	Auto	2.793	76725	76725	1	1.0000	ng/mL	1.0000	----

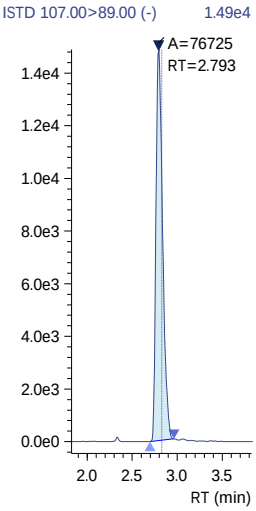
Perchlorate

Conc 19.1606
R#1 21.75 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.0000



Insight Report

Printed at 8/18/2021 10:42:57 AM

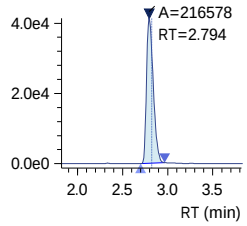
20210802_013

Sample ID: PERCHLORATE8
Date Acquired: 8/2/2021 4:07:19 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210802\Before\20210802_013.lcd
Vial: 27 | Inj. Volume: 25.0000uL | Tray: 1

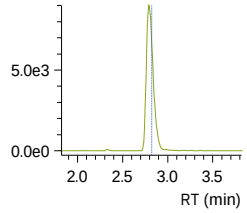
Perchlorate

Conc 17.7423
R#1 21.75 (0.00)

Q 99.00>83.00 (-) 4.14e4



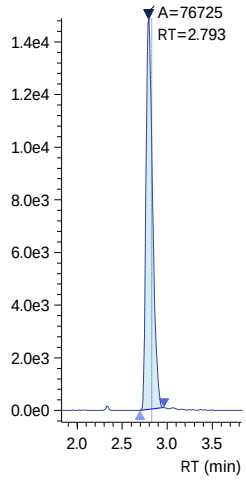
R1 101.00>85.00 (-) 9.00e3



Sodium Perchlorate -18O4_IS

Conc 1.0000

ISTD 107.00>89.00 (-) 1.49e4



Insight Report

Printed at 8/18/2021 10:37:32 AM

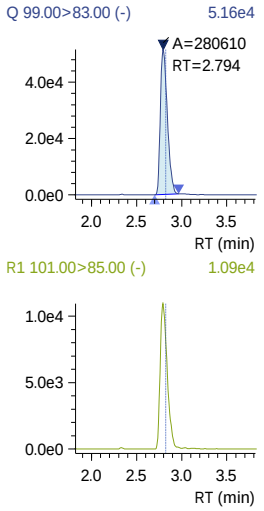
20210802_014

Sample ID: PERCHLORATE9
Date Acquired: 8/2/2021 4:15:50 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210802\20210802_014.lcd
Vial: 28 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.794	280610	66968	1	28.4426	ng/mL	30.0000	21.15
Sodium Perchlorate-18O4_IS	Auto	2.795	66968	66968	1	1.0000	ng/mL	1.0000	----

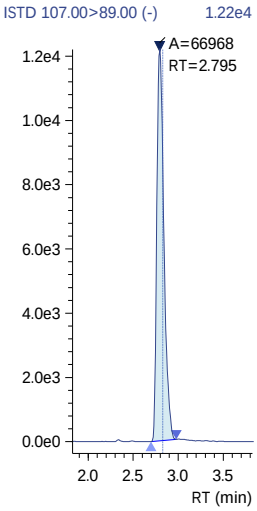
Perchlorate

Conc 28.4426
R#1 21.15 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.0000



Insight Report

Printed at 8/18/2021 10:42:57 AM

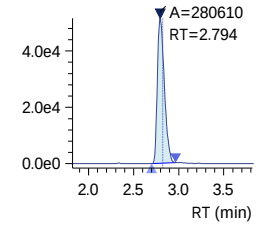
20210802_014

Sample ID: PERCHLORATE9
Date Acquired: 8/2/2021 4:15:50 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210802\Before\20210802_014.lcd
Vial: 28 | Inj. Volume: 25.0000uL | Tray: 1

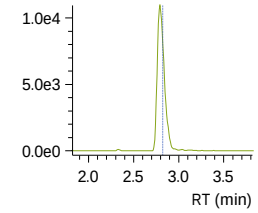
Perchlorate

Conc 26.3504
R#1 21.15 (0.00)

Q 99.00>83.00 (-) 5.16e4



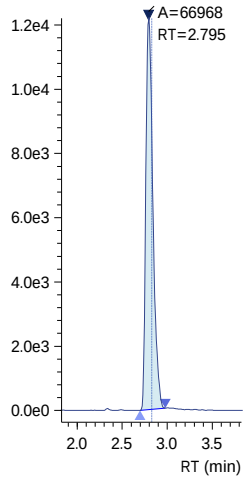
R1 101.00>85.00 (-) 1.09e4



Sodium Perchlorate -18O4_IS

Conc 1.0000

ISTD 107.00>89.00 (-) 1.22e4



Insight Report

Printed at 8/18/2021 10:37:32 AM

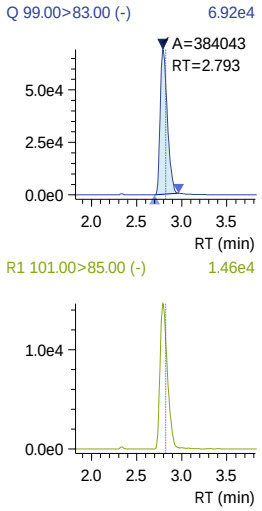
20210802_015

Sample ID: PERCHLORATE10
Date Acquired: 8/2/2021 4:24:21 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210802\20210802_015.lcd
Vial: 29 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.793	384043	53873	1	48.3887	ng/mL	50.0000	21.16
Sodium Perchlorate-18O4_IS	Auto	2.792	53873	53873	1	1.0000	ng/mL	1.0000	----

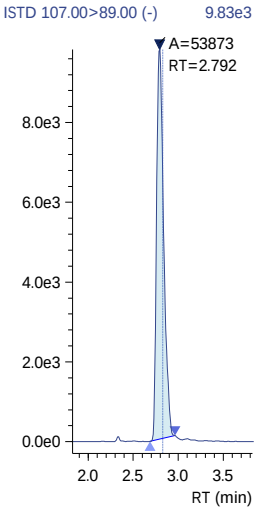
Perchlorate

Conc 48.3887
R#1 21.16 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.0000



Insight Report

Printed at 8/18/2021 10:42:57 AM

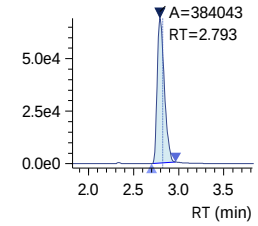
20210802_015

Sample ID: PERCHLORATE10
Date Acquired: 8/2/2021 4:24:21 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210802\Before\20210802_015.lcd
Vial: 29 | Inj. Volume: 25.0000uL | Tray: 1

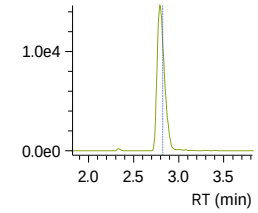
Perchlorate

Conc 44.8484
R#1 21.16 (0.00)

Q 99.00>83.00 (-) 6.92e4



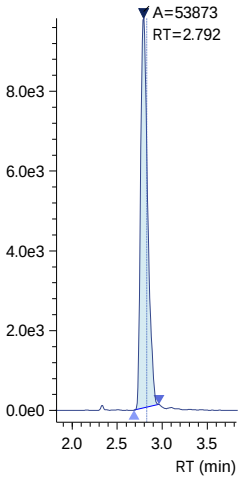
R1 101.00>85.00 (-) 1.46e4



Sodium Perchlorate -18O4_IS

Conc 1.0000

ISTD 107.00>89.00 (-) 9.83e3



Insight Report

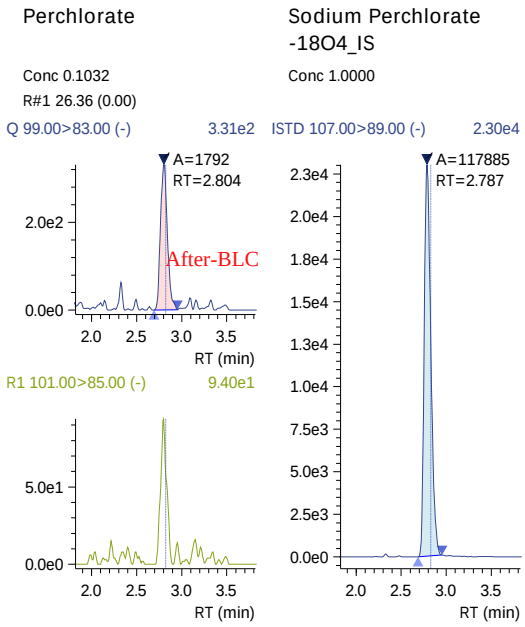
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Method File: I:\LCMS01\DATA\20210802\20210802.lcm
Project File: I:\LCMS01\DATA\20210802\20210802.damlp

20210802_017

Sample ID: PERCHLORATE1
Date Acquired: 8/2/2021 4:41:27 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210802\20210802_017.lcd
Vial: 20 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	M	2.804	1792	117885	1	0.1032	ng/mL	0.1000	26.36
Sodium Perchlorate-18O4 _IS	Auto	2.787	117885	117885	1	1.0000	ng/mL	1.0000	----



Insight Report

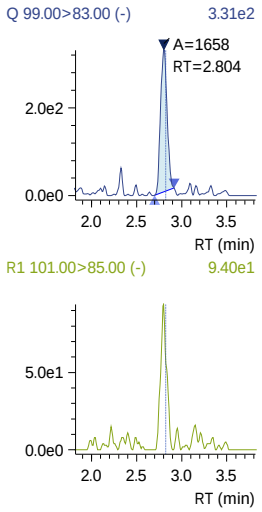
Printed at 8/18/2021 10:42:57 AM

20210802_017

Sample ID: PERCHLORATE1
Date Acquired: 8/2/2021 4:41:27 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210802\Before\20210802_017.lcd
Vial: 20 | Inj. Volume: 25.0000uL | Tray: 1

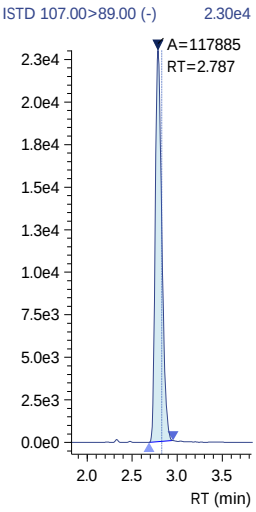
Perchlorate

Conc 0.0613
R#1 29.06 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.0000



Insight Report

Printed at 8/18/2021 10:37:32 AM

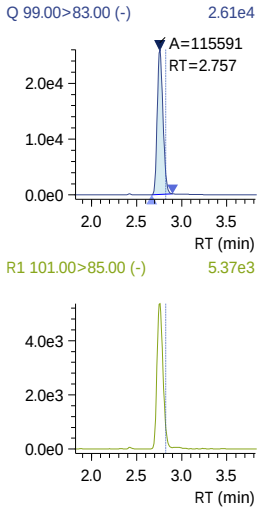
20210802_018

Sample ID: PERCHLORATEICV
Date Acquired: 8/2/2021 4:50:04 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210802\20210802_018.lcd
Vial: 30 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.757	115591	79484	1	9.8714	ng/mL	10.0000	20.98
Sodium Perchlorate-18O4_IS	Auto	2.754	79484	79484	1	1.0000	ng/mL	1.0000	----

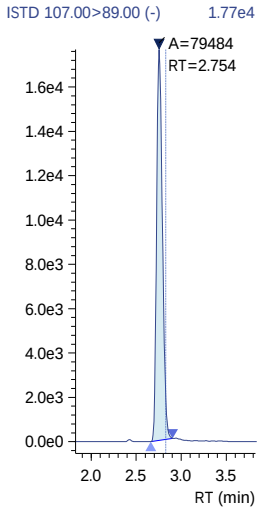
Perchlorate

Conc 9.8714
R#1 20.98 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.0000



Insight Report

Printed at 8/18/2021 10:42:57 AM

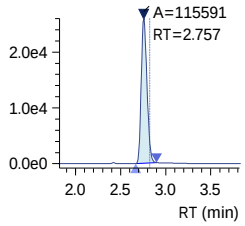
20210802_018

Sample ID: PERCHLORATEICV
Date Acquired: 8/2/2021 4:50:04 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210802\Before\20210802_018.lcd
Vial: 30 | Inj. Volume: 25.0000uL | Tray: 1

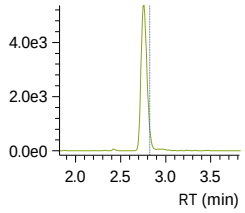
Perchlorate

Conc 9.1275
R#1 20.98 (0.00)

Q 99.00>83.00 (-) 2.61e4



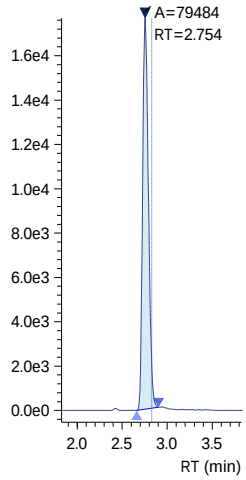
R1 101.00>85.00 (-) 5.37e3



Sodium Perchlorate -18O4_IS

Conc 1.0000

ISTD 107.00>89.00 (-) 1.77e4



20210804

1st Review: Grivera
2nd Review: Kneir

Injection Log
LCMS01 -Shimadzu 8050

ICAL Date: 8/4/2021
Cal. Std. xp: 11/26/2021
ICAL ID: **EC2100057**

Mobile Phases **A:** 0.75% Formic Acid/Water 3100813-08 **B:** MeOH 216350

			File Name	Acquisition Method	Dilution	R	Comments	Date/Time
1	PERCHLORATE1		20210804_014	Perchlorate6850c.lcm	1x	☒	3100812-01	8/4/2021 13:15
2	PERCHLORATE2		20210804_015	Perchlorate6850c.lcm	1x	☒	3100812-02	8/4/2021 13:24
3	PERCHLORATE3		20210804_016	Perchlorate6850c.lcm	1x	☒	3100812-03	8/4/2021 13:32
4	PERCHLORATE4		20210804_017	Perchlorate6850c.lcm	1x	☒	3100812-04	8/4/2021 13:41
5	PERCHLORATE5		20210804_018	Perchlorate6850c.lcm	1x	☒	3100812-05	8/4/2021 13:50
6	PERCHLORATE6		20210804_019	Perchlorate6850c.lcm	1x	☒	3100812-06	8/4/2021 13:58
7	PERCHLORATE7		20210804_020	Perchlorate6850c.lcm	1x	☒	3100812-07	8/4/2021 14:07
8	PERCHLORATE8		20210804_021	Perchlorate6850c.lcm	1x	☒	3100812-08	8/4/2021 14:15
9	PERCHLORATE9		20210804_022	Perchlorate6850c.lcm	1x	☒	3100812-09	8/4/2021 14:24
10	PERCHLORATE10		20210804_023	Perchlorate6850c.lcm	1x	☒	3100813-01	8/4/2021 14:32
11	PERCHLORATEICV		20210804_024	Perchlorate6850c.lcm	1x	☒	3100811-06	8/4/2021 14:41
12	LODV		20210804_025	Perchlorate6850c.lcm	1x	☒		8/4/2021 15:06
13	PERCHLORATE7		20210804_026	Perchlorate6850c.lcm	1x	☒	3100812-07	8/4/2021 15:15
14	E2100824-001X5		20210804_028	Perchlorate6850c.lcm	5x	☒		8/4/2021 15:33
15	E2100825-001X10		20210804_029	Perchlorate6850c.lcm	10x	☒	INST out of range	8/4/2021 15:42
16	E2100825-002X10		20210804_030	Perchlorate6850c.lcm	10x	☒	INST out of range	8/4/2021 15:51
17	E2100825-003X10		20210804_031	Perchlorate6850c.lcm	10x	☒	INST out of range	8/4/2021 15:59
18	E2100825-005X10		20210804_032	Perchlorate6850c.lcm	10x	☒	INST out of range	8/4/2021 16:08
19	E2100825-006X10		20210804_033	Perchlorate6850c.lcm	10x	☒	INST out of range	8/4/2021 16:16
20	E2100825-007X10		20210804_034	Perchlorate6850c.lcm	10x	☒	INST out of range	8/4/2021 16:25
21	E2100825-008X10		20210804_035	Perchlorate6850c.lcm	10x	☒	INST out of range	8/4/2021 16:33
22	E2100831-002X5		20210804_036	Perchlorate6850c.lcm	5x	☒		8/4/2021 16:42
23	PERCHLORATE7		20210804_037	Perchlorate6850c.lcm	1x	☒	3100812-07	8/4/2021 16:50
24	E2100856-001X10		20210804_039	Perchlorate6850c.lcm	10x	☒		8/4/2021 18:18
25	E2100856-002X5		20210804_040	Perchlorate6850c.lcm	5x	☒	INST out of range	8/4/2021 18:27
26	E2100856-004X5		20210804_041	Perchlorate6850c.lcm	5x	☒	INST out of range	8/4/2021 18:35
27	E2100825-001X20		20210804_042	Perchlorate6850c.lcm	20x	☒	INST out of range	8/4/2021 18:44
28	E2100825-002X20		20210804_043	Perchlorate6850c.lcm	20x	☒	INST out of range	8/4/2021 18:52
29	E2100825-003X20		20210804_044	Perchlorate6850c.lcm	20x	☒	INST out of range	8/4/2021 19:01
30	E2100825-006X20		20210804_045	Perchlorate6850c.lcm	20x	☒	No injection	8/4/2021 18:05
31	E2100825-005X20		20210804_045~1	Perchlorate6850c.lcm	20x	☒		8/4/2021 19:09
32	E2100825-006X20		20210804_046	Perchlorate6850c.lcm	20x	☒	INST out of range	8/4/2021 19:18
33	E2100825-007X20		20210804_047	Perchlorate6850c.lcm	20x	☒	INST out of range	8/4/2021 19:26
34	PERCHLORATE7		20210804_048	Perchlorate6850c.lcm	1x	☒	3100812-07	8/4/2021 19:35
35	E2100825-008X20		20210804_049	Perchlorate6850c.lcm	20x	☒	INST out of range	8/4/2021 19:43
36	E2100856-001X20		20210804_050	Perchlorate6850c.lcm	20x	☒		8/4/2021 19:52
37	E2100856-002X20		20210804_051	Perchlorate6850c.lcm	20x	☒	INST out of range	8/4/2021 20:00
38	E2100856-004X20		20210804_052	Perchlorate6850c.lcm	20x	☒	INST out of range	8/4/2021 20:09
39	E2100837-001X10		20210804_053	Perchlorate6850c.lcm	10x	☒		8/4/2021 20:18
40	E2100837-002X10		20210804_054	Perchlorate6850c.lcm	10x	☒		8/4/2021 20:26
41	E2100837-004X10		20210804_055	Perchlorate6850c.lcm	10x	☒		8/4/2021 20:35
42	E2100837-005X10		20210804_056	Perchlorate6850c.lcm	10x	☒		8/4/2021 20:43
43	E2100837-007X10		20210804_057	Perchlorate6850c.lcm	10x	☒		8/4/2021 20:52
44	PERCHLORATE7		20210804_058	Perchlorate6850c.lcm	1x	☒	3100812-07	8/4/2021 21:00
45	E2100841-008		20210804_059	Perchlorate6850c.lcm	1x	☒		8/4/2021 21:09
46	E2100841-009		20210804_060	Perchlorate6850c.lcm	1x	☒		8/4/2021 21:17
47	E2100842-001x2		20210804_061	Perchlorate6850c.lcm	2x	☒	3100812-07	8/4/2021 21:26
48	E2100842-002X10		20210804_062	Perchlorate6850c.lcm	10x	☒		8/4/2021 21:34
49	E2100842-003X10		20210804_063	Perchlorate6850c.lcm	10x	☒		8/4/2021 21:43
50	E2100842-004X10		20210804_064	Perchlorate6850c.lcm	10x	☒		8/4/2021 21:52
51	E2100842-005		20210804_065	Perchlorate6850c.lcm	1x	☒	INST out of range	8/4/2021 22:00
52	E2100842-006X10		20210804_066	Perchlorate6850c.lcm	10x	☒		8/4/2021 22:09
53	PERCHLORATE7		20210804_067	Perchlorate6850c.lcm	1x	☒	3100812-07	8/4/2021 22:17
54	E2100843-001		20210804_068	Perchlorate6850c.lcm	1x	☒	INST out of range	8/4/2021 22:26
55	E2100843-002		20210804_069	Perchlorate6850c.lcm	1x	☒	INST out of range	8/4/2021 22:34
56	E2100843-003		20210804_070	Perchlorate6850c.lcm	1x	☒	INST out of range	8/4/2021 22:43
57	PERCHLORATE7		20210804_071	Perchlorate6850c.lcm	1x	☒	3100812-07	8/4/2021 22:51
58	E2100843-004		20210804_072	Perchlorate6850c.lcm	1x	☒	INST out of range	8/4/2021 23:00
59	E2100843-005		20210804_073	Perchlorate6850c.lcm	1x	☒	INST out of range	8/4/2021 23:08
60	E2100843-006		20210804_074	Perchlorate6850c.lcm	1x	☒	INST out of range	8/4/2021 23:17
61	E2100843-007		20210804_075	Perchlorate6850c.lcm	1x	☒		8/4/2021 23:26
62	E2100843-008		20210804_076	Perchlorate6850c.lcm	1x	☒		8/4/2021 23:34
63	E2100843-009		20210804_077	Perchlorate6850c.lcm	1x	☒	INST out of range	8/4/2021 23:43
64	E2100844-001		20210804_078	Perchlorate6850c.lcm	1x	☒	INST out of range	8/4/2021 23:51
65	E2100844-002		20210804_079	Perchlorate6850c.lcm	1x	☒	INST out of range	8/5/2021 0:00
66	E2100844-003		20210804_080	Perchlorate6850c.lcm	1x	☒	INST out of range	8/5/2021 0:08

20210804

1st Review: Grivera
2nd Review: Kneir

Injection Log
LCMS01 -Shimadzu 8050

ICAL Date: 8/4/2021
Cal. Std. xp: 11/26/2021
ICAL ID: **EC2100057**

Mobile Phases **A:** 0.75% Formic Acid/Water 3100813-08 **B:** MeOH 216350

			File Name	Acquisition Method	Dilution	R	Comments	Date/Time
67	E2100844-004		20210804_081	Perchlorate6850c.lcm	1x	☒		8/5/2021 0:17
68	PERCHLORATE7		20210804_082	Perchlorate6850c.lcm	1x	☒	3100812-07	8/5/2021 0:25
69	E2100844-005		20210804_083	Perchlorate6850c.lcm	1x	☒	INST out of range	8/5/2021 0:34
70	E2100844-006		20210804_084	Perchlorate6850c.lcm	1x	☒	INST out of range	8/5/2021 0:42
71	E2100844-007		20210804_085	Perchlorate6850c.lcm	1x	☒	INST out of range	8/5/2021 0:51
72	E2100844-008		20210804_086	Perchlorate6850c.lcm	1x	☒	INST out of range	8/5/2021 1:00
73	E2100844-009		20210804_087	Perchlorate6850c.lcm	1x	☒	INST out of range	8/5/2021 1:08
74	PERCHLORATE7		20210804_088	Perchlorate6850c.lcm	1x	☒	3100812-07	8/5/2021 1:17

Initial Calibration - Detailed Report

Calibration ID: EC2100057 **Instrument ID:** E-LCMS-01
Column Name: 1

#	Lab Code	Sample Name	File Location	Aquisition Date
01	EC2100057-01	PERCHLORATE1	20210804_014	08/04/2021 13:15
02	EC2100057-02	PERCHLORATE2	20210804_015	08/04/2021 13:24
03	EC2100057-03	PERCHLORATE3	20210804_016	08/04/2021 13:32
04	EC2100057-04	PERCHLORATE4	20210804_017	08/04/2021 13:41
05	EC2100057-05	PERCHLORATE5	20210804_018	08/04/2021 13:50
06	EC2100057-06	PERCHLORATE6	20210804_019	08/04/2021 13:58
07	EC2100057-07	PERCHLORATE7	20210804_020	08/04/2021 14:07
08	EC2100057-08	PERCHLORATE8	20210804_021	08/04/2021 14:15
09	EC2100057-09	PERCHLORATE9	20210804_022	08/04/2021 14:24
10	EC2100057-10	PERCHLORATE10	20210804_023	08/04/2021 14:32

Analyte **Curve Fit** **Weighting**

Perchlorate **Average RF** **RSD = 6.011** **Average RF = 0.1426**

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.1000	0.1626	02	0.5000	0.1438	03	0.7000	0.1497	04	1.0000	0.1384
05	2.0000	0.1454	06	5.0000	0.1412	07	10.0000	0.1378	08	20.0000	0.138
09	30.0000	0.1329	10	50.0000	0.136						

Analyte

Perchlorate

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	0.1000	0.114	14.0	02	0.5000	0.504	0.9	03	0.7000	0.735	5.0
04	1.0000	0.971	-2.9	05	2.0000	2.04	2.0	06	5.0000	4.95	-1.0
07	10.0000	9.66	-3.4	08	20.0000	19.4	-3.2	09	30.0000	28.0	-6.8
10	50.0000	47.7	-4.6								

Initial Calibration Verification Summary Report

Calibration ID:	EC2100057	**Instrument ID:**	E-LCMS-01
Datafile ID:	20210804_024	**Column Name:**	1

Analyte	Lab Code	Type	Curve Fit	True Value	Calc Conc	Units	Result	Criteria
Perchlorate	EC2100057-11	T	Average RF	10	9.593	ng/mL	-4.1	<= 15

Insight Report

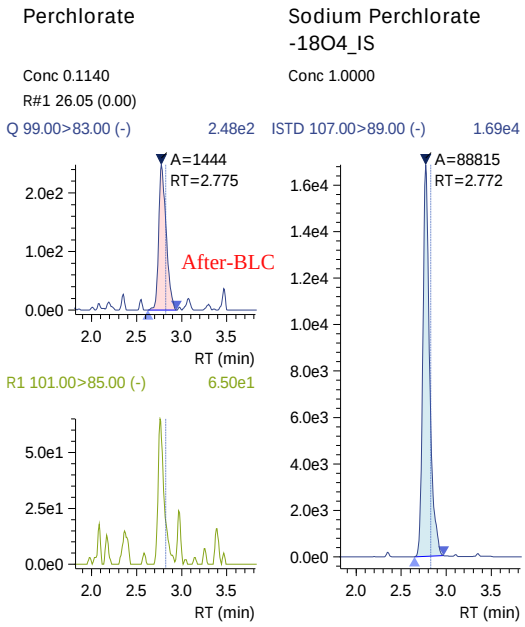
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Method File: I:\LCMS01\DATA\20210804\20210804.lcm
Project File: I:\LCMS01\DATA\20210804\20210804.damlp

20210804_014

Sample ID: PERCHLORATE1
Date Acquired: 8/4/2021 1:15:49 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210804\20210804_014.lcd
Vial: 20 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	M	2.775	1444	88815	1	0.1140	ng/mL	0.1000	26.05
Sodium Perchlorate-18O4 _IS	Auto	2.772	88815	88815	1	1.0000	ng/mL	1.0000	----



Insight Report

Printed at 8/19/2021 11:57:47 AM

Method File: I:\LCMS01\DATA\20210804\20210802.lcm

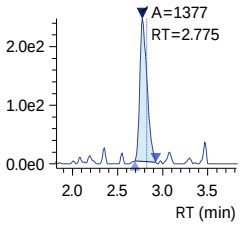
20210804_014

Sample ID: PERCHLORATE1
Date Acquired: 8/4/2021 1:15:49 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210804\Before\20210804_014.lcd
Vial: 20 | Inj. Volume: 25.0000uL | Tray: 1

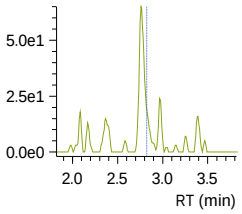
Perchlorate

Conc 0.1060
R#1 27.47 (0.00)

Q 99.00>83.00 (-) 2.48e2



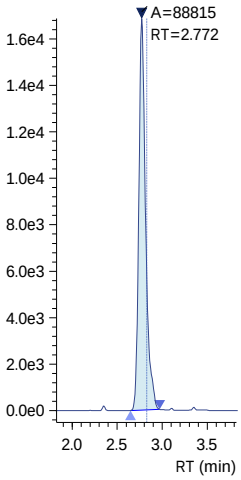
R1 101.00>85.00 (-) 6.50e1



Sodium Perchlorate -18O4_IS

Conc 1.0000

ISTD 107.00>89.00 (-) 1.69e4



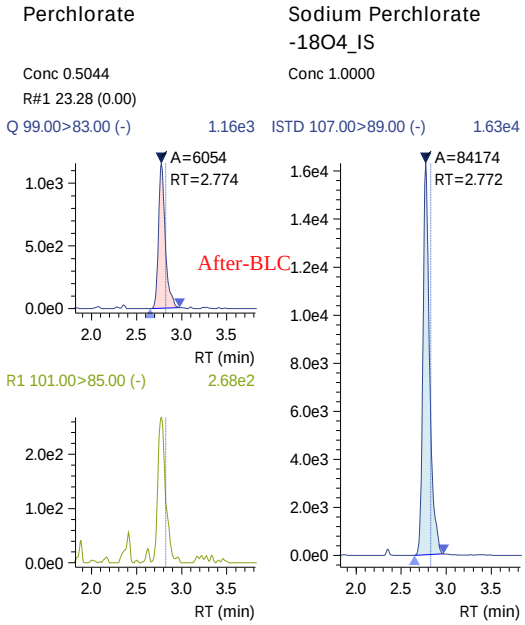
Insight Report

Printed at 8/19/2021 11:52:26 AM

20210804_015

Sample ID: PERCHLORATE2
Date Acquired: 8/4/2021 1:24:24 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210804\20210804_015.lcd
Vial: 21 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	M	2.774	6054	84174	1	0.5044	ng/mL	0.5000	23.28
Sodium Perchlorate-18O4 _IS	Auto	2.772	84174	84174	1	1.0000	ng/mL	1.0000	----



Insight Report

Printed at 8/19/2021 11:57:47 AM

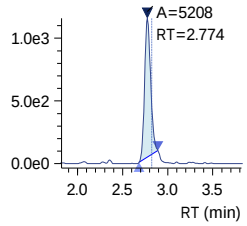
20210804_015

Sample ID: PERCHLORATE2
Date Acquired: 8/4/2021 1:24:24 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210804\Before\20210804_015.lcd
Vial: 21 | Inj. Volume: 25.0000uL | Tray: 1

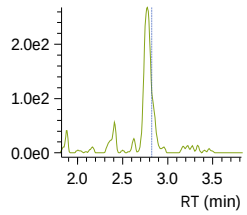
Perchlorate

Conc 0.4232
R#1 23.81 (0.00)

Q 99.00>83.00 (-) 1.16e3



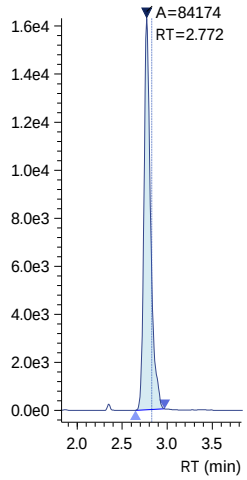
R1 101.00>85.00 (-) 2.68e2



Sodium Perchlorate -18O4_IS

Conc 1.0000

ISTD 107.00>89.00 (-) 1.63e4



Insight Report

Printed at 8/19/2021 11:52:26 AM

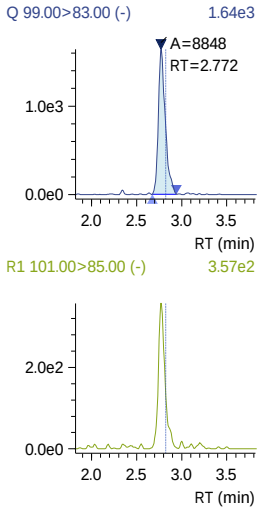
20210804_016

Sample ID: PERCHLORATE3
Date Acquired: 8/4/2021 1:32:57 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210804\20210804_016.lcd
Vial: 22 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.772	8848	84429	1	0.7350	ng/mL	0.7000	21.75
Sodium Perchlorate-18O4 _IS	Auto	2.772	84429	84429	1	1.0000	ng/mL	1.0000	----

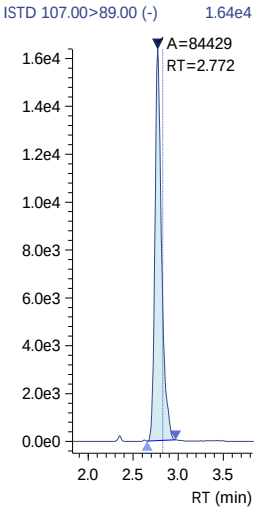
Perchlorate

Conc 0.7350
R#1 21.75 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.0000



Insight Report

Printed at 8/19/2021 11:57:47 AM

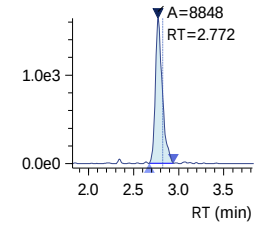
20210804_016

Sample ID: PERCHLORATE3
Date Acquired: 8/4/2021 1:32:57 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210804\Before\20210804_016.lcd
Vial: 22 | Inj. Volume: 25.0000uL | Tray: 1

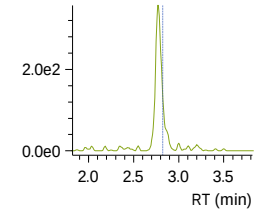
Perchlorate

Conc 0.7169
R#1 21.75 (0.00)

Q 99.00>83.00 (-) 1.64e3



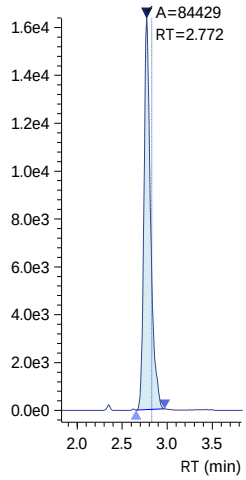
R1 101.00>85.00 (-) 3.57e2



Sodium Perchlorate -18O4_IS

Conc 1.0000

ISTD 107.00>89.00 (-) 1.64e4



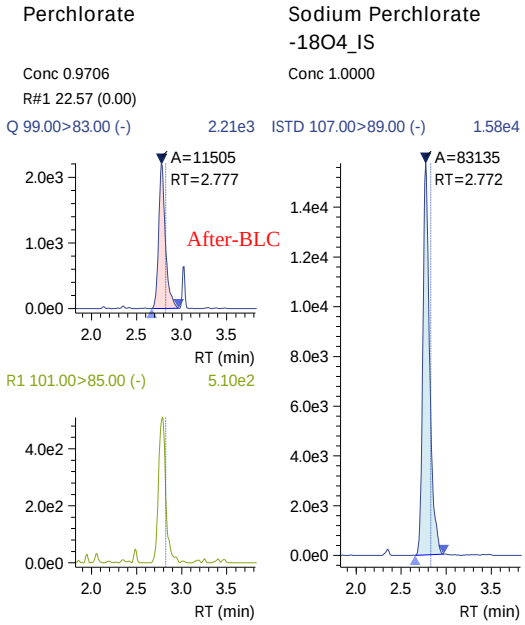
Insight Report

Printed at 8/19/2021 11:52:26 AM

20210804_017

Sample ID: PERCHLORATE4
Date Acquired: 8/4/2021 1:41:28 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210804\20210804_017.lcd
Vial: 23 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	M	2.777	11505	83135	1	0.9706	ng/mL	1.0000	22.57
Sodium Perchlorate-18O4 _IS	Auto	2.772	83135	83135	1	1.0000	ng/mL	1.0000	----



Insight Report

Printed at 8/19/2021 11:57:47 AM

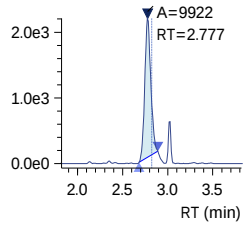
20210804_017

Sample ID: PERCHLORATE4
Date Acquired: 8/4/2021 1:41:28 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210804\Before\20210804_017.lcd
Vial: 23 | Inj. Volume: 25.0000uL | Tray: 1

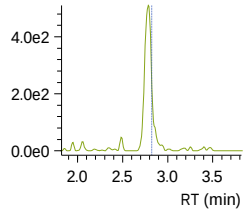
Perchlorate

Conc 0.8164
R#1 22.85 (0.00)

Q 99.00>83.00 (-) 2.21e3



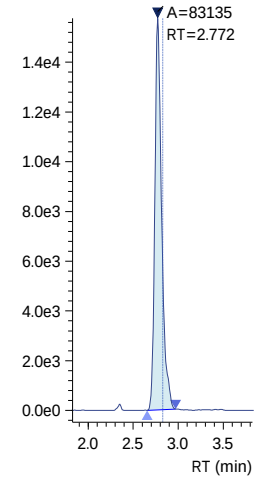
R1 101.00>85.00 (-) 5.10e2



Sodium Perchlorate -18O4_IS

Conc 1.0000

ISTD 107.00>89.00 (-) 1.58e4



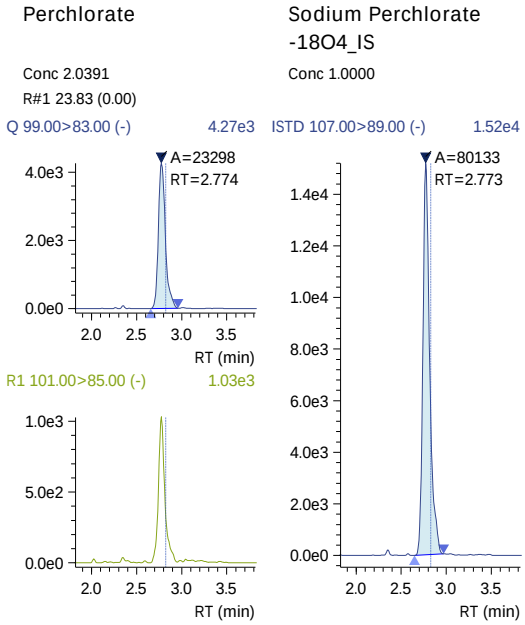
Insight Report

Printed at 8/19/2021 11:52:26 AM

20210804_018

Sample ID: PERCHLORATE5
Date Acquired: 8/4/2021 1:50:00 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210804\20210804_018.lcd
Vial: 24 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.774	23298	80133	1	2.0391	ng/mL	2.0000	23.83
Sodium Perchlorate-18O4 _IS	Auto	2.773	80133	80133	1	1.0000	ng/mL	1.0000	----



Insight Report

Printed at 8/19/2021 11:57:47 AM

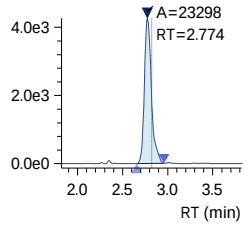
20210804_018

Sample ID: PERCHLORATE5
Date Acquired: 8/4/2021 1:50:00 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210804\Before\20210804_018.lcd
Vial: 24 | Inj. Volume: 25.0000uL | Tray: 1

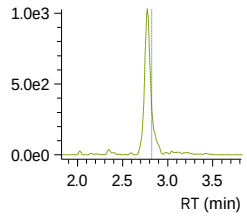
Perchlorate

Conc 1.9889
R#1 23.83 (0.00)

Q 99.00>83.00 (-) 4.27e3



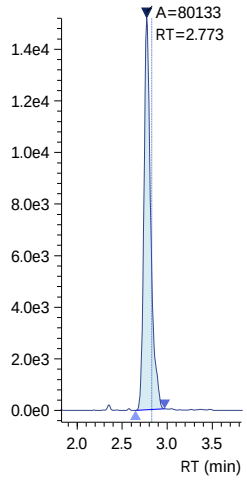
R1 101.00>85.00 (-) 1.03e3



Sodium Perchlorate -18O4_IS

Conc 1.0000

ISTD 107.00>89.00 (-) 1.52e4



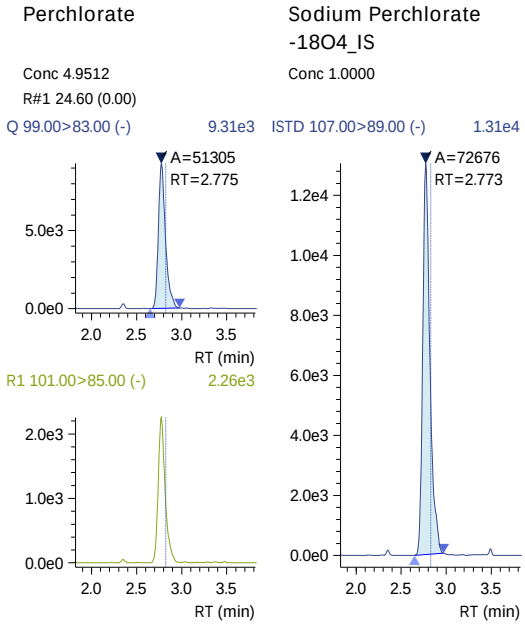
Insight Report

Printed at 8/19/2021 11:52:26 AM

20210804_019

Sample ID: PERCHLORATE6
Date Acquired: 8/4/2021 1:58:34 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210804\20210804_019.lcd
Vial: 25 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.775	51305	72676	1	4.9512	ng/mL	5.0000	24.60
Sodium Perchlorate-18O4 _IS	Auto	2.773	72676	72676	1	1.0000	ng/mL	1.0000	----



Insight Report

Printed at 8/19/2021 11:57:47 AM

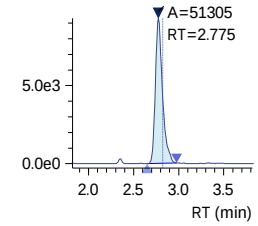
20210804_019

Sample ID: PERCHLORATE6
Date Acquired: 8/4/2021 1:58:34 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210804\Before\20210804_019.lcd
Vial: 25 | Inj. Volume: 25.0000uL | Tray: 1

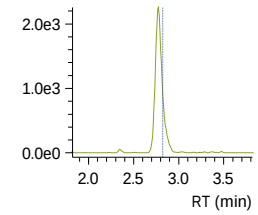
Perchlorate

Conc 4.8291
R#1 24.60 (0.00)

Q 99.00>83.00 (-) 9.31e3



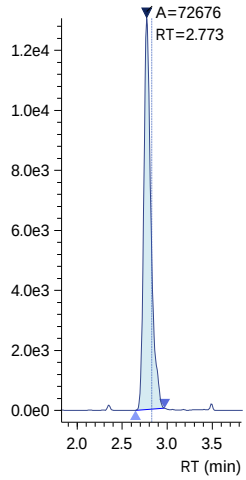
R1 101.00>85.00 (-) 2.26e3



Sodium Perchlorate -18O4_IS

Conc 1.0000

ISTD 107.00>89.00 (-) 1.31e4



Insight Report

Printed at 8/19/2021 11:52:26 AM

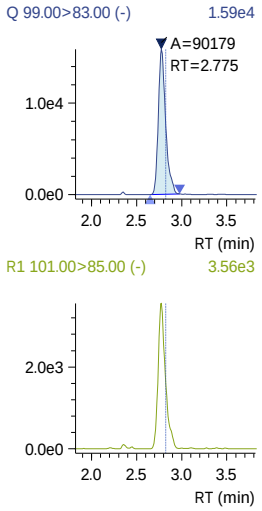
20210804_020

Sample ID: PERCHLORATE7
Date Acquired: 8/4/2021 2:07:05 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210804\20210804_020.lcd
Vial: 26 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.775	90179	65443	1	9.6646	ng/mL	10.0000	22.44
Sodium Perchlorate-18O4 _IS	Auto	2.772	65443	65443	1	1.0000	ng/mL	1.0000	----

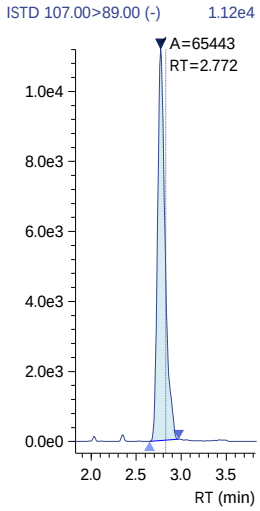
Perchlorate

Conc 9.6646
R#1 22.44 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.0000



Insight Report

Printed at 8/19/2021 11:57:47 AM

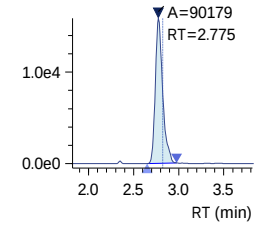
20210804_020

Sample ID: PERCHLORATE7
Date Acquired: 8/4/2021 2:07:05 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210804\Before\20210804_020.lcd
Vial: 26 | Inj. Volume: 25.0000uL | Tray: 1

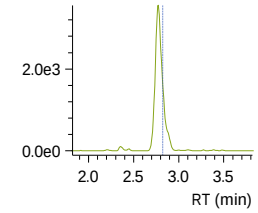
Perchlorate

Conc 9.4264
R#1 22.44 (0.00)

Q 99.00>83.00 (-) 1.59e4



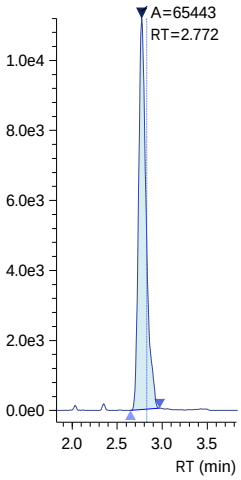
R1 101.00>85.00 (-) 3.56e3



Sodium Perchlorate -18O4_IS

Conc 1.0000

ISTD 107.00>89.00 (-) 1.12e4



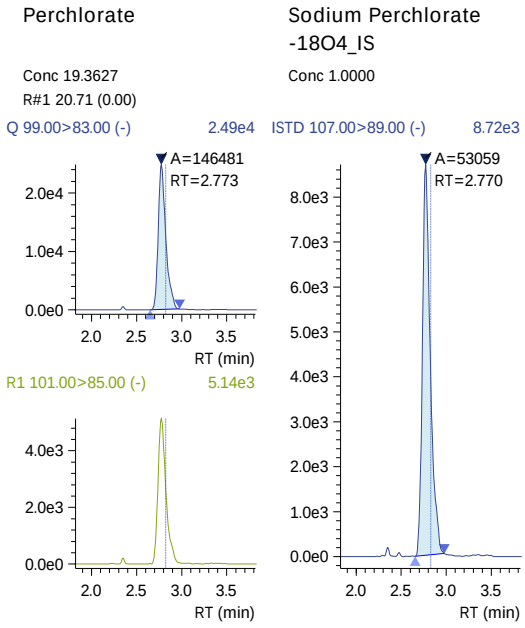
Insight Report

Printed at 8/19/2021 11:52:26 AM

20210804_021

Sample ID: PERCHLORATE8
Date Acquired: 8/4/2021 2:15:40 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210804\20210804_021.lcd
Vial: 27 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.773	146481	53059	1	19.3627	ng/mL	20.0000	20.71
Sodium Perchlorate-18O4_IS	Auto	2.770	53059	53059	1	1.0000	ng/mL	1.0000	----



Insight Report

Printed at 8/19/2021 11:57:47 AM

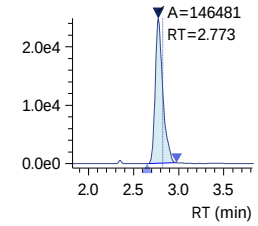
20210804_021

Sample ID: PERCHLORATE8
Date Acquired: 8/4/2021 2:15:40 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210804\Before\20210804_021.lcd
Vial: 27 | Inj. Volume: 25.0000uL | Tray: 1

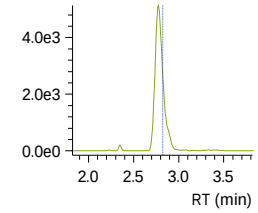
Perchlorate

Conc 18.8854
R#1 20.71 (0.00)

Q 99.00>83.00 (-) 2.49e4



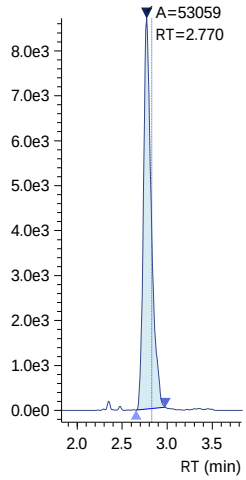
R1 101.00>85.00 (-) 5.14e3



Sodium Perchlorate -18O4_IS

Conc 1.0000

ISTD 107.00>89.00 (-) 8.72e3



Insight Report

Printed at 8/19/2021 11:52:26 AM

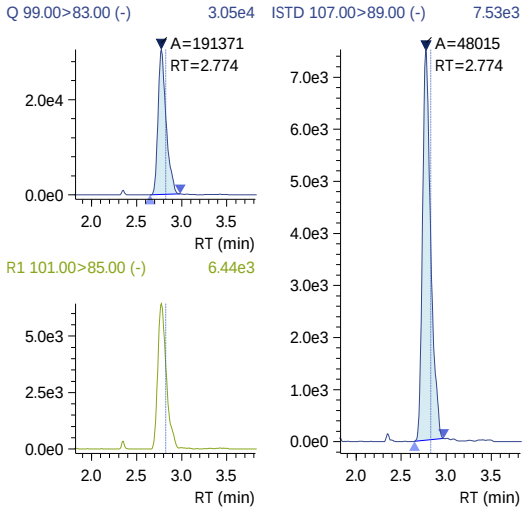
20210804_022

Sample ID: PERCHLORATE9
Date Acquired: 8/4/2021 2:24:11 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210804\20210804_022.lcd
Vial: 28 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.774	191371	48015	1	27.9541	ng/mL	30.0000	21.22
Sodium Perchlorate-18O4_IS	Auto	2.774	48015	48015	1	1.0000	ng/mL	1.0000	----

Perchlorate

Conc 27.9541
R#1 21.22 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.0000

Insight Report

Printed at 8/19/2021 11:57:47 AM

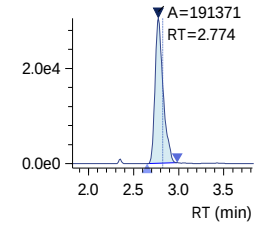
20210804_022

Sample ID: PERCHLORATE9
Date Acquired: 8/4/2021 2:24:11 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210804\Before\20210804_022.lcd
Vial: 28 | Inj. Volume: 25.0000uL | Tray: 1

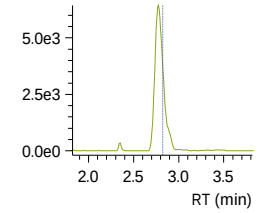
Perchlorate

Conc 27.2649
R#1 21.22 (0.00)

Q 99.00>83.00 (-) 3.05e4



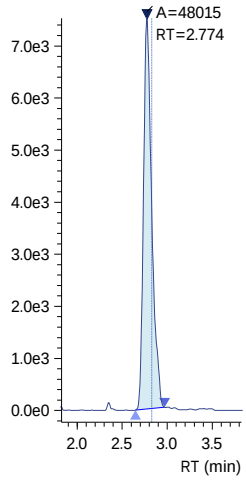
R1 101.00>85.00 (-) 6.44e3



Sodium Perchlorate -18O4_IS

Conc 1.0000

ISTD 107.00>89.00 (-) 7.53e3



Insight Report

Printed at 8/19/2021 11:52:26 AM

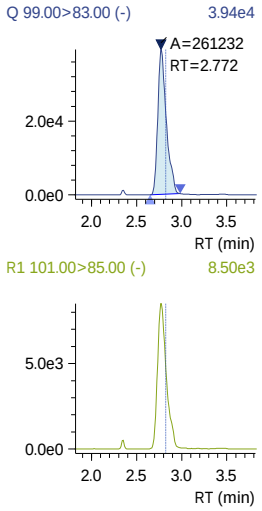
20210804_023

Sample ID: PERCHLORATE10
Date Acquired: 8/4/2021 2:32:42 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210804\20210804_023.lcd
Vial: 29 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.772	261232	38409	1	47.7026	ng/mL	50.0000	21.73
Sodium Perchlorate-18O4_IS	Auto	2.768	38409	38409	1	1.0000	ng/mL	1.0000	----

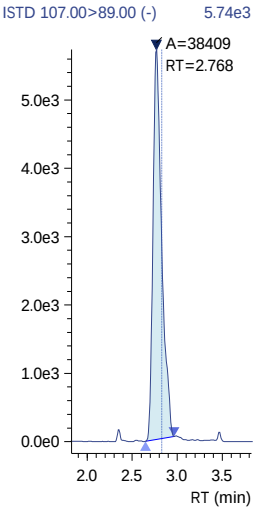
Perchlorate

Conc 47.7026
R#1 21.73 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.0000



Insight Report

Printed at 8/19/2021 11:57:47 AM

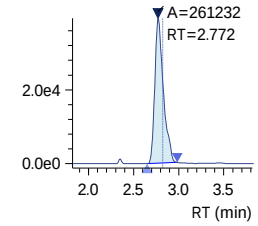
20210804_023

Sample ID: PERCHLORATE10
Date Acquired: 8/4/2021 2:32:42 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210804\Before\20210804_023.lcd
Vial: 29 | Inj. Volume: 25.0000uL | Tray: 1

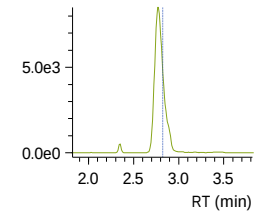
Perchlorate

Conc 46.5266
R#1 21.73 (0.00)

Q 99.00>83.00 (-) 3.94e4



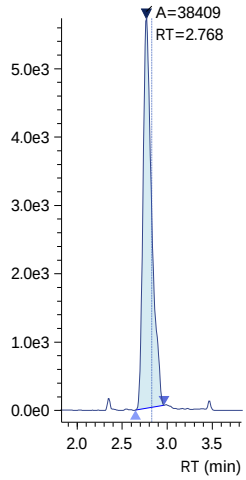
R1 101.00>85.00 (-) 8.50e3



Sodium Perchlorate -18O4_IS

Conc 1.0000

ISTD 107.00>89.00 (-) 5.74e3



Insight Report

Printed at 8/19/2021 11:52:26 AM

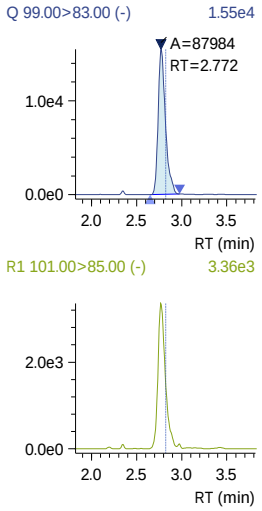
20210804_024

Sample ID: PERCHLORATEICV
Date Acquired: 8/4/2021 2:41:14 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210804\20210804_024.lcd
Vial: 30 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.772	87984	64329	1	9.5927	ng/mL	10.0000	21.51
Sodium Perchlorate-18O4 _IS	Auto	2.771	64329	64329	1	1.0000	ng/mL	1.0000	----

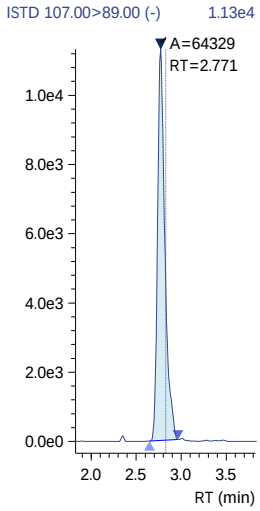
Perchlorate

Conc 9.5927
R#1 21.51 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.0000



Insight Report

Printed at 8/19/2021 11:57:47 AM

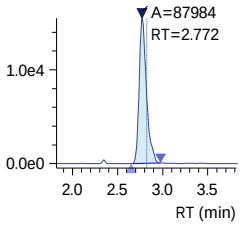
20210804_024

Sample ID: PERCHLORATEICV
Date Acquired: 8/4/2021 2:41:14 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210804\Before\20210804_024.lcd
Vial: 30 | Inj. Volume: 25.0000uL | Tray: 1

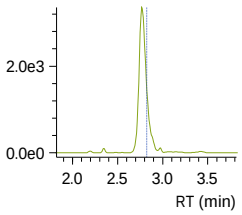
Perchlorate

Conc 9.3562
R#1 21.51 (0.00)

Q 99.00>83.00 (-) 1.55e4



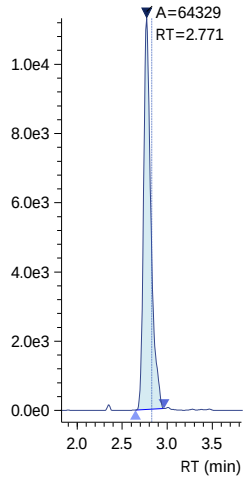
R1 101.00>85.00 (-) 3.36e3



Sodium Perchlorate -18O4_IS

Conc 1.0000

ISTD 107.00>89.00 (-) 1.13e4



Chromatograms and Selected Ion Monitoring

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 320, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

20210730

1st Review: Grivera
2nd Review: Kneir

Injection Log
LCMS01 -Shimadzu 8050

ICAL Date: 7/26/2021
Cal. Std. xp: 11/26/2021
ICAL ID: **EC2100054**

Mobile Phases **A:** 0.75% Formic Acid/Water 3100813-07 **B:** MeOH 216350

			File Name	Acquisition Method	Dilution	R	Comments	Date/Time
1	null		20210730_001	Perchlorate6850c.lcm	1x	☒		7/30/2021 9:30
2	null		20210730_002	Perchlorate6850c.lcm	1x	☒		7/30/2021 9:35
3	IB		20210730_003	Perchlorate6850c.lcm	1x	☒		7/30/2021 9:41
4	IB		20210730_004	Perchlorate6850c.lcm	1x	☒		7/30/2021 9:50
5	LODV		20210730_005	Perchlorate6850c.lcm	1x	☒		7/30/2021 9:58
6	PERCHLORATE7		20210730_006	Perchlorate6850c.lcm	1x	☒	3100812-07	7/30/2021 10:07
9	E2100794-004X20		20210730_007	Perchlorate6850c.lcm	20x	☒	INST out of range	7/30/2021 10:15
10	E2100794-007X20		20210730_008	Perchlorate6850c.lcm	20x	☒	INST out of range	7/30/2021 10:24
11	EQ2100470-01		20210730_009	Perchlorate6850c.lcm	1x	☒		7/30/2021 11:24
12	EQ2100470-02		20210730_010	Perchlorate6850c.lcm	1x	☒		7/30/2021 11:32
13	EQ2100470-03		20210730_011	Perchlorate6850c.lcm	1x	☒		7/30/2021 12:00
14	EQ2100470-04		20210730_012	Perchlorate6850c.lcm	1x	☒		7/30/2021 12:09
15	EQ2100470-05		20210730_013	Perchlorate6850c.lcm	1x	☒		7/30/2021 12:17
16	PERCHLORATE7		20210730_015	Perchlorate6850c.lcm	1x	☒	3100812-07	7/30/2021 12:34
17	E2100836-001		20210730_016	Perchlorate6850c.lcm	1x	☒		7/30/2021 12:43
21	PERCHLORATE7		20210730_017	Perchlorate6850c.lcm	1x	☒	3100812-07	7/30/2021 12:56
23	E2100831-001		20210730_018	Perchlorate6850c.lcm	1x	☒		7/30/2021 13:05
24	E2100831-002		20210730_019	Perchlorate6850c.lcm	1x	☒	INST out of range	7/30/2021 13:13
25	E2100856-001		20210730_020	Perchlorate6850c.lcm	1x	☒	INST out of range	7/30/2021 13:22
26	E2100856-002		20210730_021	Perchlorate6850c.lcm	1x	☒	INST out of range	7/30/2021 13:30
27	E2100856-003		20210730_022	Perchlorate6850c.lcm	1x	☒		7/30/2021 13:39
28	E2100856-004		20210730_023	Perchlorate6850c.lcm	1x	☒	INST out of range	7/30/2021 13:47
29	E2100856-005		20210730_024	Perchlorate6850c.lcm	1x	☒		7/30/2021 13:56
30	PERCHLORATE7		20210730_025	Perchlorate6850c.lcm	1x	☒	3100812-07	7/30/2021 14:04
31	E2100831-002		20210730_026	Perchlorate6850c.lcm	1x	☒		7/30/2021 14:13
32	EQ2100458-01		20210730_027	Perchlorate6850c.lcm	1x	☒		7/30/2021 14:21
33	EQ2100458-02		20210730_028	Perchlorate6850c.lcm	1x	☒		7/30/2021 14:30
34	EQ2100458-03		20210730_029	Perchlorate6850c.lcm	1x	☒		7/30/2021 14:38
35	E2100831-002X2		20210730_030	Perchlorate6850c.lcm	2x	☒		7/30/2021 14:47
36	E2100798-006X40		20210730_031	Perchlorate6850c.lcm	40x	☒		7/30/2021 15:21
37	E2100798-007X40		20210730_032	Perchlorate6850c.lcm	40x	☒		7/30/2021 16:06
38	PERCHLORATE7		20210730_033	Perchlorate6850c.lcm	1x	☒	3100812-07	7/30/2021 16:17
39								
40								

20210802

1st Review: Grivera
2nd Review: Kneir

Injection Log
LCMS01 -Shimadzu 8050

ICAL Date: 8/2/2021
Cal. Std. xp: 11/26/2021
ICAL ID: **EC2100056**

Mobile Phases **A:** 0.75% Formic Acid/Water 3100813-08 **B:** MeOH 216350

			File Name	Acquisition Method	Dilution	R	Comments	Date/Time
1	PERCHLORATE1		20210802_017	Perchlorate6850c.lcm	1x	☒	3100812-01	8/2/2021 16:41
2	PERCHLORATE2		20210802_007	Perchlorate6850c.lcm	1x	☒	3100812-02	8/2/2021 15:13
3	PERCHLORATE3		20210802_008	Perchlorate6850c.lcm	1x	☒	3100812-03	8/2/2021 15:24
4	PERCHLORATE4		20210802_009	Perchlorate6850c.lcm	1x	☒	3100812-04	8/2/2021 15:33
5	PERCHLORATE5		20210802_010	Perchlorate6850c.lcm	1x	☒	3100812-05	8/2/2021 15:41
6	PERCHLORATE6		20210802_011	Perchlorate6850c.lcm	1x	☒	3100812-06	8/2/2021 15:50
7	PERCHLORATE7		20210802_012	Perchlorate6850c.lcm	1x	☒	3100812-07	8/2/2021 15:58
8	PERCHLORATE8		20210802_013	Perchlorate6850c.lcm	1x	☒	3100812-08	8/2/2021 16:07
9	PERCHLORATE9		20210802_014	Perchlorate6850c.lcm	1x	☒	3100812-09	8/2/2021 16:15
10	PERCHLORATE10		20210802_015	Perchlorate6850c.lcm	1x	☒	3100813-01	8/2/2021 16:24
11	PERCHLORATEICV		20210802_018	Perchlorate6850c.lcm	1x	☒	3100811-06	8/2/2021 16:50
12	IB		20210802_019	Perchlorate6850c.lcm	1x	☒		8/2/2021 17:25
13	LODV		20210802_020	Perchlorate6850c.lcm	1x	☒		8/2/2021 17:33
14	PERCHLORATE7		20210802_021	Perchlorate6850c.lcm	1x	☒	3100812-07	8/2/2021 17:42
15	E2100813-001X20		20210802_022	Perchlorate6850c.lcm	20x	☒		8/2/2021 17:51
16	E2100813-004X20		20210802_023	Perchlorate6850c.lcm	20x	☒		8/2/2021 18:00
17	E2100814-001		20210802_024	Perchlorate6850c.lcm	1x	☒		8/2/2021 18:08
18	E2100814-002		20210802_025	Perchlorate6850c.lcm	1x	☒		8/2/2021 18:17
19	E2100814-003		20210802_026	Perchlorate6850c.lcm	1x	☒	INST out of range	8/2/2021 18:25
20	E2100814-004		20210802_027	Perchlorate6850c.lcm	1x	☒		8/2/2021 18:34
21	E2100814-005		20210802_028	Perchlorate6850c.lcm	1x	☒	INST out of range	8/2/2021 18:42
22	PERCHLORATE7		20210802_029	Perchlorate6850c.lcm	1x	☒	3100812-07	8/2/2021 18:51
23	EQ2100452-04		20210802_030	Perchlorate6850c.lcm	1x	☒		8/2/2021 19:00
24	EQ2100452-05		20210802_031	Perchlorate6850c.lcm	1x	☒		8/2/2021 19:08
25	E2100813-002		20210802_032	Perchlorate6850c.lcm	1x	☒		8/2/2021 19:17
26	E2100813-003		20210802_033	Perchlorate6850c.lcm	1x	☒		8/2/2021 19:25
27	E2100813-005		20210802_034	Perchlorate6850c.lcm	1x	☒	INST out of range	8/2/2021 19:34
28	E2100813-006		20210802_035	Perchlorate6850c.lcm	1x	☒	INST out of range	8/2/2021 19:42
29	E2100813-007		20210802_036	Perchlorate6850c.lcm	1x	☒	INST out of range	8/2/2021 19:51
30	E2100813-008		20210802_037	Perchlorate6850c.lcm	1x	☒		8/2/2021 19:59
31	PERCHLORATE7		20210802_038	Perchlorate6850c.lcm	1x	☒	3100812-07	8/2/2021 20:08
32	E2100813-009		20210802_039	Perchlorate6850c.lcm	1x	☒		8/2/2021 20:16
33	EQ2100458-01		20210802_040	Perchlorate6850c.lcm	1x	☒		8/2/2021 20:25
34	EQ2100458-02		20210802_041	Perchlorate6850c.lcm	1x	☒		8/2/2021 20:34
35	EQ2100458-03		20210802_042	Perchlorate6850c.lcm	1x	☒		8/2/2021 20:42
36	EQ2100458-04		20210802_043	Perchlorate6850c.lcm	1x	☒		8/2/2021 20:51
37	EQ2100458-05		20210802_044	Perchlorate6850c.lcm	1x	☒		8/2/2021 20:59
38	PERCHLORATE7		20210802_045	Perchlorate6850c.lcm	1x	☒	3100812-07	8/2/2021 21:08
39	E2100824-001		20210802_046	Perchlorate6850c.lcm	1x	☒	INST out of range	8/2/2021 21:16
40	E2100824-002		20210802_047	Perchlorate6850c.lcm	1x	☒	INST out of range	8/2/2021 21:25
41	E2100824-003		20210802_048	Perchlorate6850c.lcm	1x	☒	INST out of range	8/2/2021 21:33
42	E2100825-001		20210802_049	Perchlorate6850c.lcm	1x	☒	INST out of range	8/2/2021 21:42
43	E2100825-002		20210802_050	Perchlorate6850c.lcm	1x	☒	INST out of range	8/2/2021 21:50
44	E2100825-003		20210802_051	Perchlorate6850c.lcm	1x	☒	INST out of range	8/2/2021 21:59
45	E2100825-004		20210802_052	Perchlorate6850c.lcm	1x	☒		8/2/2021 22:07
46	E2100825-005		20210802_053	Perchlorate6850c.lcm	1x	☒	INST out of range	8/2/2021 22:16
47	E2100825-006		20210802_054	Perchlorate6850c.lcm	1x	☒	INST out of range	8/2/2021 22:24
48	E2100825-007		20210802_055	Perchlorate6850c.lcm	1x	☒	INST out of range	8/2/2021 22:33
49	PERCHLORATE7		20210802_056	Perchlorate6850c.lcm	1x	☒	3100812-07	8/2/2021 22:41
50	E2100825-008		20210802_057	Perchlorate6850c.lcm	1x	☒		8/2/2021 22:50
51	IB		20210802_058	Perchlorate6850c.lcm	1x	☒		8/2/2021 22:58
52	E2100831-001		20210802_059	Perchlorate6850c.lcm	1x	☒		8/2/2021 23:07
53	E2100831-002X2		20210802_060	Perchlorate6850c.lcm	2x	☒	INST out of range	8/2/2021 23:15
54	E2100856-001		20210802_061	Perchlorate6850c.lcm	1x	☒	INST out of range	8/2/2021 23:24
55	E2100856-002		20210802_062	Perchlorate6850c.lcm	1x	☒	INST out of range	8/2/2021 23:32
56	E2100856-003		20210802_063	Perchlorate6850c.lcm	1x	☒		8/2/2021 23:41
57	E2100856-004		20210802_064	Perchlorate6850c.lcm	1x	☒	INST out of range	8/2/2021 23:50
58	E2100856-005		20210802_065	Perchlorate6850c.lcm	1x	☒		8/2/2021 23:58
59	E2100837-001		20210802_066	Perchlorate6850c.lcm	1x	☒	INST out of range	8/3/2021 0:07
60	PERCHLORATE7		20210802_067	Perchlorate6850c.lcm	1x	☒	3100812-07	8/3/2021 0:15
61	E2100837-002		20210802_068	Perchlorate6850c.lcm	1x	☒	INST out of range	8/3/2021 0:24
62	E2100837-003		20210802_069	Perchlorate6850c.lcm	1x	☒		8/3/2021 0:32
63	E2100837-004		20210802_070	Perchlorate6850c.lcm	1x	☒	INST out of range	8/3/2021 0:41
64	E2100837-005		20210802_071	Perchlorate6850c.lcm	1x	☒	INST out of range	8/3/2021 0:49
65	E2100837-006		20210802_072	Perchlorate6850c.lcm	1x	☒		8/3/2021 0:58
66	E2100837-007		20210802_073	Perchlorate6850c.lcm	1x	☒	INST out of range	8/3/2021 1:06
67	E2100837-008		20210802_074	Perchlorate6850c.lcm	1x	☒		8/3/2021 1:15
68	E2100837-009		20210802_075	Perchlorate6850c.lcm	1x	☒		8/3/2021 1:23
69	E2100837-010		20210802_076	Perchlorate6850c.lcm	1x	☒		8/3/2021 1:32
70	E2100837-011		20210802_077	Perchlorate6850c.lcm	1x	☒		8/3/2021 1:40
71	E2100837-012		20210802_078	Perchlorate6850c.lcm	1x	☒		8/3/2021 1:49
72	PERCHLORATE7		20210802_079	Perchlorate6850c.lcm	1x	☒	3100812-07	8/3/2021 1:57
73	EQ2100476-01		20210802_080	Perchlorate6850c.lcm	1x	☒		8/3/2021 2:06

20210802

1st Review: Grivera
2nd Review: Kneir

Injection Log
LCMS01 -Shimadzu 8050

ICAL Date: 8/2/2021
Cal. Std. xp: 11/26/2021
ICAL ID: **EC2100056**

Mobile Phases **A:** 0.75% Formic Acid/Water 3100813-08 **B:** MeOH 216350

			File Name	Acquisition Method	Dilution	R	Comments	Date/Time
74	EQ2100476-02		20210802_081	Perchlorate6850c.lcm	1x	☒		8/3/2021 2:15
75	EQ2100476-03		20210802_082	Perchlorate6850c.lcm	1x	☒		8/3/2021 2:23
76	EQ2100476-04		20210802_083	Perchlorate6850c.lcm	1x	☒	INST out of range	8/3/2021 2:32
77	EQ2100476-05		20210802_084	Perchlorate6850c.lcm	1x	☒	INST out of range	8/3/2021 2:40
78	EQ2100476-06		20210802_085	Perchlorate6850c.lcm	1x	☒	INST out of range	8/3/2021 2:49
79	EQ2100476-07		20210802_086	Perchlorate6850c.lcm	1x	☒	INST out of range	8/3/2021 2:57
80	E2100843-001		20210802_087	Perchlorate6850c.lcm	1x	☒	INST out of range	8/3/2021 3:06
81	E2100843-002		20210802_088	Perchlorate6850c.lcm	1x	☒	INST out of range	8/3/2021 3:14
82	E2100843-003		20210802_089	Perchlorate6850c.lcm	1x	☒	INST out of range	8/3/2021 3:23
83	PERCHLORATE7		20210802_090	Perchlorate6850c.lcm	1x	☒	3100812-07	8/3/2021 3:32
84	E2100843-004		20210802_091	Perchlorate6850c.lcm	1x	☒	INST out of range	8/3/2021 3:40
85	E2100843-005		20210802_092	Perchlorate6850c.lcm	1x	☒	INST out of range	8/3/2021 3:49
86	E2100843-006		20210802_093	Perchlorate6850c.lcm	1x	☒	INST out of range	8/3/2021 3:57
87	E2100843-007		20210802_094	Perchlorate6850c.lcm	1x	☒	INST out of range	8/3/2021 4:06
88	E2100843-008		20210802_095	Perchlorate6850c.lcm	1x	☒		8/3/2021 4:14
89	E2100843-009		20210802_096	Perchlorate6850c.lcm	1x	☒	INST out of range	8/3/2021 4:23
90	E2100844-001		20210802_097	Perchlorate6850c.lcm	1x	☒	INST out of range	8/3/2021 4:31
91	E2100844-002		20210802_098	Perchlorate6850c.lcm	1x	☒	INST out of range	8/3/2021 4:40
92	E2100844-003		20210802_099	Perchlorate6850c.lcm	1x	☒	INST out of range	8/3/2021 4:48
93	E2100844-004		20210802_100	Perchlorate6850c.lcm	1x	☒	INST out of range	8/3/2021 4:57
94	PERCHLORATE7		20210802_101	Perchlorate6850c.lcm	1x	☒	3100812-07	8/3/2021 5:06
95	E2100844-005		20210802_102	Perchlorate6850c.lcm	1x	☒	INST out of range	8/3/2021 5:14
96	E2100844-006		20210802_103	Perchlorate6850c.lcm	1x	☒	INST out of range	8/3/2021 5:23
97	E2100844-007		20210802_104	Perchlorate6850c.lcm	1x	☒	INST out of range	8/3/2021 5:31
98	E2100844-008		20210802_105	Perchlorate6850c.lcm	1x	☒	INST out of range	8/3/2021 5:40
99	E2100844-009		20210802_106	Perchlorate6850c.lcm	1x	☒	INST out of range	8/3/2021 5:48
100	PERCHLORATE7		20210802_107	Perchlorate6850c.lcm	1x	☒	3100812-07	8/3/2021 5:57

20210804

1st Review: Grivera
2nd Review: Kneir

Injection Log
LCMS01 -Shimadzu 8050

ICAL Date: 8/4/2021
Cal. Std. xp: 11/26/2021
ICAL ID: **EC2100057**

Mobile Phases **A:** 0.75% Formic Acid/Water 3100813-08 **B:** MeOH 216350

			File Name	Acquisition Method	Dilution	R	Comments	Date/Time
1	PERCHLORATE1		20210804_014	Perchlorate6850c.lcm	1x	☒	3100812-01	8/4/2021 13:15
2	PERCHLORATE2		20210804_015	Perchlorate6850c.lcm	1x	☒	3100812-02	8/4/2021 13:24
3	PERCHLORATE3		20210804_016	Perchlorate6850c.lcm	1x	☒	3100812-03	8/4/2021 13:32
4	PERCHLORATE4		20210804_017	Perchlorate6850c.lcm	1x	☒	3100812-04	8/4/2021 13:41
5	PERCHLORATE5		20210804_018	Perchlorate6850c.lcm	1x	☒	3100812-05	8/4/2021 13:50
6	PERCHLORATE6		20210804_019	Perchlorate6850c.lcm	1x	☒	3100812-06	8/4/2021 13:58
7	PERCHLORATE7		20210804_020	Perchlorate6850c.lcm	1x	☒	3100812-07	8/4/2021 14:07
8	PERCHLORATE8		20210804_021	Perchlorate6850c.lcm	1x	☒	3100812-08	8/4/2021 14:15
9	PERCHLORATE9		20210804_022	Perchlorate6850c.lcm	1x	☒	3100812-09	8/4/2021 14:24
10	PERCHLORATE10		20210804_023	Perchlorate6850c.lcm	1x	☒	3100813-01	8/4/2021 14:32
11	PERCHLORATEICV		20210804_024	Perchlorate6850c.lcm	1x	☒	3100811-06	8/4/2021 14:41
12	LODV		20210804_025	Perchlorate6850c.lcm	1x	☒		8/4/2021 15:06
13	PERCHLORATE7		20210804_026	Perchlorate6850c.lcm	1x	☒	3100812-07	8/4/2021 15:15
14	E2100824-001X5		20210804_028	Perchlorate6850c.lcm	5x	☒		8/4/2021 15:33
15	E2100825-001X10		20210804_029	Perchlorate6850c.lcm	10x	☒	INST out of range	8/4/2021 15:42
16	E2100825-002X10		20210804_030	Perchlorate6850c.lcm	10x	☒	INST out of range	8/4/2021 15:51
17	E2100825-003X10		20210804_031	Perchlorate6850c.lcm	10x	☒	INST out of range	8/4/2021 15:59
18	E2100825-005X10		20210804_032	Perchlorate6850c.lcm	10x	☒	INST out of range	8/4/2021 16:08
19	E2100825-006X10		20210804_033	Perchlorate6850c.lcm	10x	☒	INST out of range	8/4/2021 16:16
20	E2100825-007X10		20210804_034	Perchlorate6850c.lcm	10x	☒	INST out of range	8/4/2021 16:25
21	E2100825-008X10		20210804_035	Perchlorate6850c.lcm	10x	☒	INST out of range	8/4/2021 16:33
22	E2100831-002X5		20210804_036	Perchlorate6850c.lcm	5x	☒		8/4/2021 16:42
23	PERCHLORATE7		20210804_037	Perchlorate6850c.lcm	1x	☒	3100812-07	8/4/2021 16:50
24	E2100856-001X10		20210804_039	Perchlorate6850c.lcm	10x	☒		8/4/2021 18:18
25	E2100856-002X5		20210804_040	Perchlorate6850c.lcm	5x	☒	INST out of range	8/4/2021 18:27
26	E2100856-004X5		20210804_041	Perchlorate6850c.lcm	5x	☒	INST out of range	8/4/2021 18:35
27	E2100825-001X20		20210804_042	Perchlorate6850c.lcm	20x	☒	INST out of range	8/4/2021 18:44
28	E2100825-002X20		20210804_043	Perchlorate6850c.lcm	20x	☒	INST out of range	8/4/2021 18:52
29	E2100825-003X20		20210804_044	Perchlorate6850c.lcm	20x	☒	INST out of range	8/4/2021 19:01
30	E2100825-006X20		20210804_045	Perchlorate6850c.lcm	20x	☒	No injection	8/4/2021 18:05
31	E2100825-005X20		20210804_045~1	Perchlorate6850c.lcm	20x	☒		8/4/2021 19:09
32	E2100825-006X20		20210804_046	Perchlorate6850c.lcm	20x	☒	INST out of range	8/4/2021 19:18
33	E2100825-007X20		20210804_047	Perchlorate6850c.lcm	20x	☒	INST out of range	8/4/2021 19:26
34	PERCHLORATE7		20210804_048	Perchlorate6850c.lcm	1x	☒	3100812-07	8/4/2021 19:35
35	E2100825-008X20		20210804_049	Perchlorate6850c.lcm	20x	☒	INST out of range	8/4/2021 19:43
36	E2100856-001X20		20210804_050	Perchlorate6850c.lcm	20x	☒		8/4/2021 19:52
37	E2100856-002X20		20210804_051	Perchlorate6850c.lcm	20x	☒	INST out of range	8/4/2021 20:00
38	E2100856-004X20		20210804_052	Perchlorate6850c.lcm	20x	☒	INST out of range	8/4/2021 20:09
39	E2100837-001X10		20210804_053	Perchlorate6850c.lcm	10x	☒		8/4/2021 20:18
40	E2100837-002X10		20210804_054	Perchlorate6850c.lcm	10x	☒		8/4/2021 20:26
41	E2100837-004X10		20210804_055	Perchlorate6850c.lcm	10x	☒		8/4/2021 20:35
42	E2100837-005X10		20210804_056	Perchlorate6850c.lcm	10x	☒		8/4/2021 20:43
43	E2100837-007X10		20210804_057	Perchlorate6850c.lcm	10x	☒		8/4/2021 20:52
44	PERCHLORATE7		20210804_058	Perchlorate6850c.lcm	1x	☒	3100812-07	8/4/2021 21:00
45	E2100841-008		20210804_059	Perchlorate6850c.lcm	1x	☒		8/4/2021 21:09
46	E2100841-009		20210804_060	Perchlorate6850c.lcm	1x	☒		8/4/2021 21:17
47	E2100842-001x2		20210804_061	Perchlorate6850c.lcm	2x	☒	3100812-07	8/4/2021 21:26
48	E2100842-002X10		20210804_062	Perchlorate6850c.lcm	10x	☒		8/4/2021 21:34
49	E2100842-003X10		20210804_063	Perchlorate6850c.lcm	10x	☒		8/4/2021 21:43
50	E2100842-004X10		20210804_064	Perchlorate6850c.lcm	10x	☒		8/4/2021 21:52
51	E2100842-005		20210804_065	Perchlorate6850c.lcm	1x	☒	INST out of range	8/4/2021 22:00
52	E2100842-006X10		20210804_066	Perchlorate6850c.lcm	10x	☒		8/4/2021 22:09
53	PERCHLORATE7		20210804_067	Perchlorate6850c.lcm	1x	☒	3100812-07	8/4/2021 22:17
54	E2100843-001		20210804_068	Perchlorate6850c.lcm	1x	☒	INST out of range	8/4/2021 22:26
55	E2100843-002		20210804_069	Perchlorate6850c.lcm	1x	☒	INST out of range	8/4/2021 22:34
56	E2100843-003		20210804_070	Perchlorate6850c.lcm	1x	☒	INST out of range	8/4/2021 22:43
57	PERCHLORATE7		20210804_071	Perchlorate6850c.lcm	1x	☒	3100812-07	8/4/2021 22:51
58	E2100843-004		20210804_072	Perchlorate6850c.lcm	1x	☒	INST out of range	8/4/2021 23:00
59	E2100843-005		20210804_073	Perchlorate6850c.lcm	1x	☒	INST out of range	8/4/2021 23:08
60	E2100843-006		20210804_074	Perchlorate6850c.lcm	1x	☒	INST out of range	8/4/2021 23:17
61	E2100843-007		20210804_075	Perchlorate6850c.lcm	1x	☒		8/4/2021 23:26
62	E2100843-008		20210804_076	Perchlorate6850c.lcm	1x	☒		8/4/2021 23:34
63	E2100843-009		20210804_077	Perchlorate6850c.lcm	1x	☒	INST out of range	8/4/2021 23:43
64	E2100844-001		20210804_078	Perchlorate6850c.lcm	1x	☒	INST out of range	8/4/2021 23:51
65	E2100844-002		20210804_079	Perchlorate6850c.lcm	1x	☒	INST out of range	8/5/2021 0:00
66	E2100844-003		20210804_080	Perchlorate6850c.lcm	1x	☒	INST out of range	8/5/2021 0:08

20210804

1st Review: Grivera
2nd Review: Kneir

Injection Log
LCMS01 -Shimadzu 8050

ICAL Date: 8/4/2021
Cal. Std. xp: 11/26/2021
ICAL ID: **EC2100057**

Mobile Phases **A:** 0.75% Formic Acid/Water 3100813-08 **B:** MeOH 216350

			File Name	Acquisition Method	Dilution	R	Comments	Date/Time
67	E2100844-004		20210804_081	Perchlorate6850c.lcm	1x	☒		8/5/2021 0:17
68	PERCHLORATE7		20210804_082	Perchlorate6850c.lcm	1x	☒	3100812-07	8/5/2021 0:25
69	E2100844-005		20210804_083	Perchlorate6850c.lcm	1x	☒	INST out of range	8/5/2021 0:34
70	E2100844-006		20210804_084	Perchlorate6850c.lcm	1x	☒	INST out of range	8/5/2021 0:42
71	E2100844-007		20210804_085	Perchlorate6850c.lcm	1x	☒	INST out of range	8/5/2021 0:51
72	E2100844-008		20210804_086	Perchlorate6850c.lcm	1x	☒	INST out of range	8/5/2021 1:00
73	E2100844-009		20210804_087	Perchlorate6850c.lcm	1x	☒	INST out of range	8/5/2021 1:08
74	PERCHLORATE7		20210804_088	Perchlorate6850c.lcm	1x	☒	3100812-07	8/5/2021 1:17

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS21071405

Service Request: E2100837
Date Analyzed: 7/30/21

Continuing Calibration Verification Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
File ID: I:\LCMS01\DATA\20210730\20210730_006

Calibration Date: 7/26/21
Calibration ID: EC2100054
Analysis Lot: 733225
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	8.91	NA	NA	NA	-10.9	± 15 %	Linear

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS21071405

Service Request: E2100837
Date Analyzed: 7/30/21

Continuing Calibration Verification Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
File ID: I:\LCMS01\DATA\20210730\20210730_015

Calibration Date: 7/26/21
Calibration ID: EC2100054
Analysis Lot: 733225
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	8.81	NA	NA	NA	-11.9	± 15 %	Linear

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS21071405

Service Request: E2100837
Date Analyzed: 7/30/21

Continuing Calibration Verification Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
File ID: I:\LCMS01\DATA\20210730\20210730_017

Calibration Date: 7/26/21
Calibration ID: EC2100054
Analysis Lot: 733225
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	9.01	NA	NA	NA	-9.9	± 15 %	Linear

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS21071405

Service Request: E2100837
Date Analyzed: 7/30/21

Continuing Calibration Verification Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
File ID: I:\LCMS01\DATA\20210730\20210730_025

Calibration Date: 7/26/21
Calibration ID: EC2100054
Analysis Lot: 733225
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	8.88	NA	NA	NA	-11.2	± 15 %	Linear

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS21071405

Service Request: E2100837
Date Analyzed: 8/ 2/21

Continuing Calibration Verification Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
File ID: I:\LCMS01\DATA\20210802\20210802_021

Calibration Date: 8/2/21
Calibration ID: EC2100056
Analysis Lot: 733464
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	10.1	0.1473	0.1492	1.2	NA	± 15 %	Average RF

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS21071405

Service Request: E2100837
Date Analyzed: 8/ 2/21

Continuing Calibration Verification Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
File ID: I:\LCMS01\DATA\20210802\20210802_029

Calibration Date: 8/2/21
Calibration ID: EC2100056
Analysis Lot: 733464
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	10.2	0.1473	0.1504	2.1	NA	± 15 %	Average RF

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS21071405

Service Request: E2100837
Date Analyzed: 8/ 2/21

Continuing Calibration Verification Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
File ID: I:\LCMS01\DATA\20210802\20210802_038

Calibration Date: 8/2/21
Calibration ID: EC2100056
Analysis Lot: 733464
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	10.1	0.1473	0.1487	1.0	NA	± 15 %	Average RF

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS21071405

Service Request: E2100837
Date Analyzed: 8/ 2/21

Continuing Calibration Verification Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
File ID: I:\LCMS01\DATA\20210802\20210802_045

Calibration Date: 8/2/21
Calibration ID: EC2100056
Analysis Lot: 733464
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	9.90	0.1473	0.1459	-1.0	NA	± 15 %	Average RF

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS21071405

Service Request: E2100837
Date Analyzed: 8/ 2/21

Continuing Calibration Verification Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
File ID: I:\LCMS01\DATA\20210802\20210802_056

Calibration Date: 8/2/21
Calibration ID: EC2100056
Analysis Lot: 733464
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	9.80	0.1473	0.1444	-2.0	NA	± 15 %	Average RF

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS21071405

Service Request: E2100837
Date Analyzed: 8/ 3/21

Continuing Calibration Verification Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
File ID: I:\LCMS01\DATA\20210802\20210802_067

Calibration Date: 8/2/21
Calibration ID: EC2100056
Analysis Lot: 733464
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	9.84	0.1473	0.1449	-1.6	NA	± 15 %	Average RF

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS21071405

Service Request: E2100837
Date Analyzed: 8/ 3/21

Continuing Calibration Verification Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
File ID: I:\LCMS01\DATA\20210802\20210802_079

Calibration Date: 8/2/21
Calibration ID: EC2100056
Analysis Lot: 733464
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	9.89	0.1473	0.1456	-1.1	NA	± 15 %	Average RF

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS21071405

Service Request: E2100837
Date Analyzed: 8/ 3/21

Continuing Calibration Verification Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
File ID: I:\LCMS01\DATA\20210802\20210802_090

Calibration Date: 8/2/21
Calibration ID: EC2100056
Analysis Lot: 733464
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	9.96	0.1473	0.1468	-0.4	NA	± 15 %	Average RF

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS21071405

Service Request: E2100837
Date Analyzed: 8/ 3/21

Continuing Calibration Verification Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
File ID: I:\LCMS01\DATA\20210802\20210802_101

Calibration Date: 8/2/21
Calibration ID: EC2100056
Analysis Lot: 733464
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	9.67	0.1473	0.1425	-3.3	NA	± 15 %	Average RF

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS21071405

Service Request: E2100837
Date Analyzed: 8/ 3/21

Continuing Calibration Verification Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
File ID: I:\LCMS01\DATA\20210802\20210802_107

Calibration Date: 8/2/21
Calibration ID: EC2100056
Analysis Lot: 733464
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	9.79	0.1473	0.1442	-2.1	NA	± 15 %	Average RF

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS21071405

Service Request: E2100837
Date Analyzed: 8/ 4/21

Continuing Calibration Verification Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
File ID: I:\LCMS01\DATA\20210804\20210804_026

Calibration Date: 8/4/21
Calibration ID: EC2100057
Analysis Lot: 733747
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	10.0	0.1426	0.1425	0.0	NA	± 15 %	Average RF

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS21071405

Service Request: E2100837
Date Analyzed: 8/ 4/21

Continuing Calibration Verification Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
File ID: I:\LCMS01\DATA\20210804\20210804_037

Calibration Date: 8/4/21
Calibration ID: EC2100057
Analysis Lot: 733747
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	9.79	0.1426	0.1395	-2.1	NA	± 15 %	Average RF

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS21071405

Service Request: E2100837
Date Analyzed: 8/ 4/21

Continuing Calibration Verification Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
File ID: I:\LCMS01\DATA\20210804\20210804_048

Calibration Date: 8/4/21
Calibration ID: EC2100057
Analysis Lot: 733747
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	9.74	0.1426	0.1388	-2.6	NA	± 15 %	Average RF

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS21071405

Service Request: E2100837
Date Analyzed: 8/ 4/21

Continuing Calibration Verification Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
File ID: I:\LCMS01\DATA\20210804\20210804_058

Calibration Date: 8/4/21
Calibration ID: EC2100057
Analysis Lot: 733747
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	9.70	0.1426	0.1384	-3.0	NA	± 15 %	Average RF

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS21071405

Service Request: E2100837
Date Analyzed: 8/ 4/21

Continuing Calibration Verification Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
File ID: I:\LCMS01\DATA\20210804\20210804_067

Calibration Date: 8/4/21
Calibration ID: EC2100057
Analysis Lot: 733747
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	9.51	0.1426	0.1356	-4.9	NA	± 15 %	Average RF

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS21071405

Service Request: E2100837
Date Analyzed: 8/ 4/21

Continuing Calibration Verification Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
File ID: I:\LCMS01\DATA\20210804\20210804_071

Calibration Date: 8/4/21
Calibration ID: EC2100057
Analysis Lot: 733747
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	9.67	0.1426	0.1378	-3.3	NA	± 15 %	Average RF

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS21071405

Service Request: E2100837
Date Analyzed: 8/ 5/21

Continuing Calibration Verification Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
File ID: I:\LCMS01\DATA\20210804\20210804_082

Calibration Date: 8/4/21
Calibration ID: EC2100057
Analysis Lot: 733747
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	9.56	0.1426	0.1364	-4.4	NA	± 15 %	Average RF

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS21071405

Service Request: E2100837
Date Analyzed: 8/ 5/21

Continuing Calibration Verification Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
File ID: I:\LCMS01\DATA\20210804\20210804_088

Calibration Date: 8/4/21
Calibration ID: EC2100057
Analysis Lot: 733747
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	9.48	0.1426	0.1352	-5.2	NA	± 15 %	Average RF

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2100837
Project:	HS21071405	**Date Analyzed:**	7/30/21 10:07

Internal Standard Area and RT Summary

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

File ID:	I:\LCMS01\DATA\20210730\20210730_006	**Lab Code:**	EQ2100474-01
Instrument ID:	E-LCMS-01	**Analysis Lot:**	733225
Analytical Method:	6850	**Signal ID:**	1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	223,091	2.79
	Upper Limit ==>	334,637	4.79
	Lower Limit ==>	111,546	0.79
Associated Analyses			
Continuing Calibration Verification	EQ2100474-01	134,823	2.79
Method Blank	EQ2100470-01	166,366	2.67
Lab Control Sample	EQ2100470-02	180,211	2.79
Duplicate Lab Control Sample	EQ2100470-03	140,968	2.67
16SW02-210726MS	EQ2100470-04	40,138*	2.79
16SW02-210726DMS	EQ2100470-05	41,404*	2.79

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

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2100837
Project:	HS21071405	**Date Analyzed:**	7/30/21 12:34

Internal Standard Area and RT Summary

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

File ID:	I:\LCMS01\DATA\20210730\20210730_015	**Lab Code:**	EQ2100474-02
Instrument ID:	E-LCMS-01	**Analysis Lot:**	733225
Analytical Method:	6850	**Signal ID:**	1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	223,091	2.79
	Upper Limit ==>	334,637	4.79
	Lower Limit ==>	111,546	0.79
Associated Analyses			
Continuing Calibration Verification	EQ2100474-02	138,213	2.79

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

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2100837
Project:	HS21071405	**Date Analyzed:**	7/30/21 12:56

Internal Standard Area and RT Summary

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

File ID:	I:\LCMS01\DATA\20210730\20210730_017	**Lab Code:**	EQ2100474-03
Instrument ID:	E-LCMS-01	**Analysis Lot:**	733225
Analytical Method:	6850	**Signal ID:**	1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	223,091	2.79
	Upper Limit ==>	334,637	4.79
	Lower Limit ==>	111,546	0.79
Associated Analyses			
Continuing Calibration Verification	EQ2100474-03	117,326	2.67

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

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2100837
Project:	HS21071405	**Date Analyzed:**	7/30/21 14:04

Internal Standard Area and RT Summary

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

File ID:	I:\LCMS01\DATA\20210730\20210730_025	**Lab Code:**	EQ2100474-04
Instrument ID:	E-LCMS-01	**Analysis Lot:**	733225
Analytical Method:	6850	**Signal ID:**	1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	223,091	2.79
	Upper Limit ==>	334,637	4.79
	Lower Limit ==>	111,546	0.79
Associated Analyses			
Continuing Calibration Verification	EQ2100474-04	134,292	2.79

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

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2100837
Project:	HS21071405	**Date Analyzed:**	8/2/21 17:42

Internal Standard Area and RT Summary

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

File ID:	I:\LCMS01\DATA\20210802\20210802_021	**Lab Code:**	EQ2100479-01
Instrument ID:	E-LCMS-01	**Analysis Lot:**	733464
Analytical Method:	6850	**Signal ID:**	1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	100,675	2.79
	Upper Limit ==>	151,013	4.79
	Lower Limit ==>	50,338	0.79
Associated Analyses			
Continuing Calibration Verification	EQ2100479-01	84,210	2.79

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

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2100837
Project:	HS21071405	**Date Analyzed:**	8/2/21 18:51

Internal Standard Area and RT Summary

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

File ID:	I:\LCMS01\DATA\20210802\20210802_029	**Lab Code:**	EQ2100479-02
Instrument ID:	E-LCMS-01	**Analysis Lot:**	733464
Analytical Method:	6850	**Signal ID:**	1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	100,675	2.79
	Upper Limit ==>	151,013	4.79
	Lower Limit ==>	50,338	0.79
Associated Analyses			
Continuing Calibration Verification	EQ2100479-02	84,148	2.79

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

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2100837
Project:	HS21071405	**Date Analyzed:**	8/2/21 20:08

Internal Standard Area and RT Summary

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

File ID:	I:\LCMS01\DATA\20210802\20210802_038	**Lab Code:**	EQ2100479-03
Instrument ID:	E-LCMS-01	**Analysis Lot:**	733464
Analytical Method:	6850	**Signal ID:**	1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	100,675	2.79
	Upper Limit ==>	151,013	4.79
	Lower Limit ==>	50,338	0.79
Associated Analyses			
Continuing Calibration Verification	EQ2100479-03	91,252	2.79

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

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2100837
Project:	HS21071405	**Date Analyzed:**	8/2/21 21:08

Internal Standard Area and RT Summary

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

File ID:	I:\LCMS01\DATA\20210802\20210802_045	**Lab Code:**	EQ2100479-04
Instrument ID:	E-LCMS-01	**Analysis Lot:**	733464
Analytical Method:	6850	**Signal ID:**	1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	100,675	2.79
	Upper Limit ==>	151,013	4.79
	Lower Limit ==>	50,338	0.79
Associated Analyses			
Continuing Calibration Verification	EQ2100479-04	99,812	2.79

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

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2100837
Project:	HS21071405	**Date Analyzed:**	8/2/21 22:41

Internal Standard Area and RT Summary

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

File ID:	I:\LCMS01\DATA\20210802\20210802_056	**Lab Code:**	EQ2100479-05
Instrument ID:	E-LCMS-01	**Analysis Lot:**	733464
Analytical Method:	6850	**Signal ID:**	1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	100,675	2.79
	Upper Limit ==>	151,013	4.79
	Lower Limit ==>	50,338	0.79
Associated Analyses			
Continuing Calibration Verification	EQ2100479-05	106,145	2.79

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

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2100837
Project:	HS21071405	**Date Analyzed:**	8/3/21 00:15

Internal Standard Area and RT Summary

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

File ID:	I:\LCMS01\DATA\20210802\20210802_067	**Lab Code:**	EQ2100479-06
Instrument ID:	E-LCMS-01	**Analysis Lot:**	733464
Analytical Method:	6850	**Signal ID:**	1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	100,675	2.79
	Upper Limit ==>	151,013	4.79
	Lower Limit ==>	50,338	0.79
Associated Analyses			
Continuing Calibration Verification	EQ2100479-06	97,407	2.79
16EW08-210726	E2100837-003	67,612	2.78
16RW02-210726	E2100837-006	88,316	2.79
16WW42-210726	E2100837-008	53,004	2.78
16SW01-210726	E2100837-009	55,788	2.79
16SW01-210726-FD	E2100837-010	59,179	2.79
16SW02-210726	E2100837-011	61,578	2.79
16SW03-210726	E2100837-012	55,108	2.78

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

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2100837
Project:	HS21071405	**Date Analyzed:**	8/3/21 01:57

Internal Standard Area and RT Summary

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

File ID:	I:\LCMS01\DATA\20210802\20210802_079	**Lab Code:**	EQ2100479-07
Instrument ID:	E-LCMS-01	**Analysis Lot:**	733464
Analytical Method:	6850	**Signal ID:**	1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	100,675	2.79
	Upper Limit ==>	151,013	4.79
	Lower Limit ==>	50,338	0.79
Associated Analyses			
Continuing Calibration Verification	EQ2100479-07	99,099	2.79

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

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2100837
Project:	HS21071405	**Date Analyzed:**	8/3/21 03:32

Internal Standard Area and RT Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

File ID:	I:\LCMS01\DATA\20210802\20210802_090	**Lab Code:**	EQ2100479-08
Instrument ID:	E-LCMS-01	**Analysis Lot:**	733464
Analytical Method:	6850	**Signal ID:**	1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	100,675	2.79
	Upper Limit ==>	151,013	4.79
	Lower Limit ==>	50,338	0.79
Associated Analyses			
Continuing Calibration Verification	EQ2100479-08	91,777	2.78

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

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2100837
Project:	HS21071405	**Date Analyzed:**	8/3/21 05:06

Internal Standard Area and RT Summary

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

File ID:	I:\LCMS01\DATA\20210802\20210802_101	**Lab Code:**	EQ2100479-09
Instrument ID:	E-LCMS-01	**Analysis Lot:**	733464
Analytical Method:	6850	**Signal ID:**	1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	100,675	2.79
	Upper Limit ==>	151,013	4.79
	Lower Limit ==>	50,338	0.79
Associated Analyses			
Continuing Calibration Verification	EQ2100479-09	96,244	2.78

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

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2100837
Project:	HS21071405	**Date Analyzed:**	8/3/21 05:57

Internal Standard Area and RT Summary

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

File ID:	I:\LCMS01\DATA\20210802\20210802_107	**Lab Code:**	EQ2100479-10
Instrument ID:	E-LCMS-01	**Analysis Lot:**	733464
Analytical Method:	6850	**Signal ID:**	1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	100,675	2.79
	Upper Limit ==>	151,013	4.79
	Lower Limit ==>	50,338	0.79
Associated Analyses			
Continuing Calibration Verification	EQ2100479-10	96,420	2.78

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

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2100837
Project:	HS21071405	**Date Analyzed:**	8/4/21 15:15

Internal Standard Area and RT Summary

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

File ID:	I:\LCMS01\DATA\20210804\20210804_026	**Lab Code:**	EQ2100490-01
Instrument ID:	E-LCMS-01	**Analysis Lot:**	733747
Analytical Method:	6850	**Signal ID:**	1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	69,829	2.77
	Upper Limit ==>	104,744	4.77
	Lower Limit ==>	34,915	0.77
Associated Analyses			
Continuing Calibration Verification	EQ2100490-01	64,019	2.77

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

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2100837
Project:	HS21071405	**Date Analyzed:**	8/4/21 16:50

Internal Standard Area and RT Summary

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

File ID:	I:\LCMS01\DATA\20210804\20210804_037	**Lab Code:**	EQ2100490-02
Instrument ID:	E-LCMS-01	**Analysis Lot:**	733747
Analytical Method:	6850	**Signal ID:**	1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	69,829	2.77
	Upper Limit ==>	104,744	4.77
	Lower Limit ==>	34,915	0.77
Associated Analyses			
Continuing Calibration Verification	EQ2100490-02	67,641	2.77

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

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2100837
Project:	HS21071405	**Date Analyzed:**	8/4/21 19:35

Internal Standard Area and RT Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

File ID:	I:\LCMS01\DATA\20210804\20210804_048	**Lab Code:**	EQ2100490-03
Instrument ID:	E-LCMS-01	**Analysis Lot:**	733747
Analytical Method:	6850	**Signal ID:**	1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	69,829	2.77
	Upper Limit ==>	104,744	4.77
	Lower Limit ==>	34,915	0.77
Associated Analyses			
Continuing Calibration Verification	EQ2100490-03	76,630	2.77
16EW02-210726	E2100837-001	35,397	2.77
16EW04-210726	E2100837-002	39,983	2.77
16RW04-210726	E2100837-004	39,002	2.77
16RW01-210726	E2100837-005	39,920	2.77
16WW13-210726	E2100837-007	38,495	2.77

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

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2100837
Project:	HS21071405	**Date Analyzed:**	8/4/21 21:00

Internal Standard Area and RT Summary

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

File ID:	I:\LCMS01\DATA\20210804\20210804_058	**Lab Code:**	EQ2100490-04
Instrument ID:	E-LCMS-01	**Analysis Lot:**	733747
Analytical Method:	6850	**Signal ID:**	1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	69,829	2.77
	Upper Limit ==>	104,744	4.77
	Lower Limit ==>	34,915	0.77
Associated Analyses			
Continuing Calibration Verification	EQ2100490-04	73,307	2.77

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

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2100837
Project:	HS21071405	**Date Analyzed:**	8/4/21 22:17

Internal Standard Area and RT Summary

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

File ID:	I:\LCMS01\DATA\20210804\20210804_067	**Lab Code:**	EQ2100490-05
Instrument ID:	E-LCMS-01	**Analysis Lot:**	733747
Analytical Method:	6850	**Signal ID:**	1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	69,829	2.77
	Upper Limit ==>	104,744	4.77
	Lower Limit ==>	34,915	0.77
Associated Analyses			
Continuing Calibration Verification	EQ2100490-05	79,149	2.77

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

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2100837
Project:	HS21071405	**Date Analyzed:**	8/4/21 22:51

Internal Standard Area and RT Summary

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

File ID:	I:\LCMS01\DATA\20210804\20210804_071	**Lab Code:**	EQ2100490-06
Instrument ID:	E-LCMS-01	**Analysis Lot:**	733747
Analytical Method:	6850	**Signal ID:**	1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	69,829	2.77
	Upper Limit ==>	104,744	4.77
	Lower Limit ==>	34,915	0.77
Associated Analyses			
Continuing Calibration Verification	EQ2100490-06	81,996	2.76

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

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2100837
Project:	HS21071405	**Date Analyzed:**	8/5/21 00:25

Internal Standard Area and RT Summary

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

File ID:	I:\LCMS01\DATA\20210804\20210804_082	**Lab Code:**	EQ2100490-07
Instrument ID:	E-LCMS-01	**Analysis Lot:**	733747
Analytical Method:	6850	**Signal ID:**	1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	69,829	2.77
	Upper Limit ==>	104,744	4.77
	Lower Limit ==>	34,915	0.77
Associated Analyses			
Continuing Calibration Verification	EQ2100490-07	88,370	2.76

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

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2100837
Project:	HS21071405	**Date Analyzed:**	8/5/21 01:17

Internal Standard Area and RT Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

File ID:	I:\LCMS01\DATA\20210804\20210804_088	**Lab Code:**	EQ2100490-08
Instrument ID:	E-LCMS-01	**Analysis Lot:**	733747
Analytical Method:	6850	**Signal ID:**	1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	69,829	2.77
	Upper Limit ==>	104,744	4.77
	Lower Limit ==>	34,915	0.77
Associated Analyses			
Continuing Calibration Verification	EQ2100490-08	90,603	2.76

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

Insight Report

Printed at 8/17/2021 5:09:59 PM

Method File: I:\LCMS01\DATA\20210730\20210726.lcm
Project File: I:\LCMS01\DATA\20210730\20210730.damlp

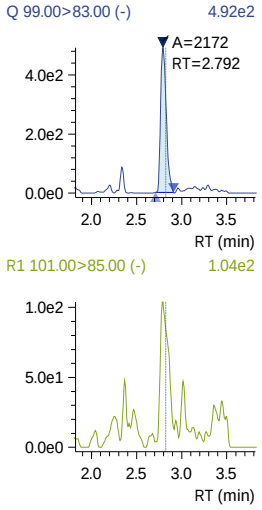
20210730_005

Sample ID: LODV
Date Acquired: 7/30/2021 9:58:31 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210730\20210730_005.lcd
Vial: 31 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.792	2172	171244	1	0.0512	ng/mL	----	19.75
Sodium Perchlorate-18O4 _IS	Auto	2.791	1712 44	171244	1	1.0000	ng/mL	----	----

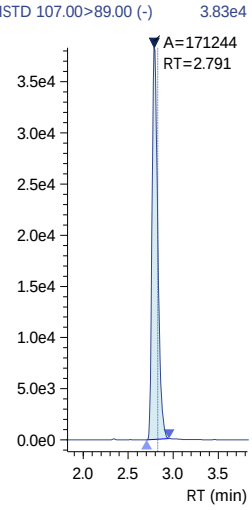
Perchlorate

Conc 0.0512
R#1 19.75 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.0000



Insight Report

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Method File: I:\LCMS01\DATA\20210730\20210726.lcm

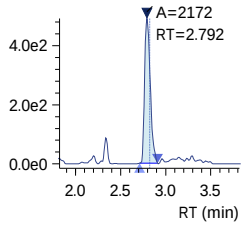
20210730_005

Sample ID: LODV
Date Acquired: 7/30/2021 9:58:31 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210730\Before\20210730_005.lcd
Vial: 31 | Inj. Volume: 25.0000uL | Tray: 1

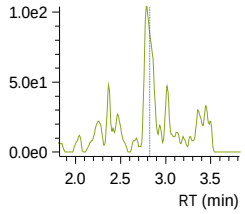
Perchlorate

Conc 0.0526
R#1 19.75 (0.00)

Q 99.00>83.00 (-) 4.92e2



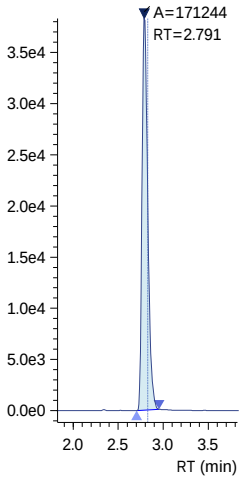
R1 101.00>85.00 (-) 1.04e2



Sodium Perchlorate -18O4_IS

Conc 1.0000

ISTD 107.00>89.00 (-) 3.83e4



Insight Report

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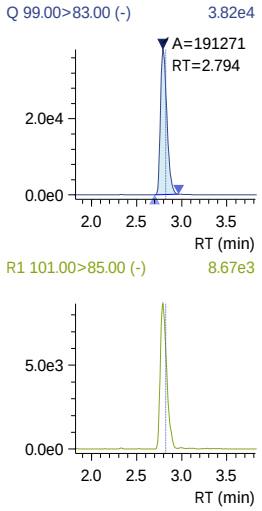
20210730_006

Sample ID: PERCHLORATE7
Date Acquired: 7/30/2021 10:07:05 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210730\20210730_006.lcd
Vial: 26 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.794	191271	134823	1	8.9091	ng/mL	10.0000	22.70
Sodium Perchlorate-18O4_IS	Auto	2.792	134823	134823	1	1.0000	ng/mL	1.0000	----

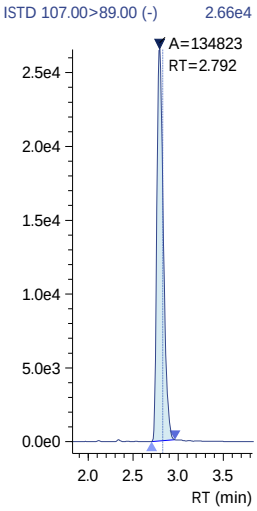
Perchlorate

Conc 8.9091
R#1 22.70 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.0000



Insight Report

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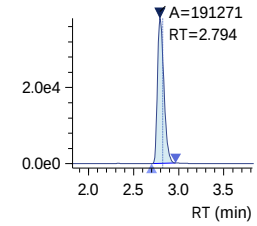
20210730_006

Sample ID: PERCHLORATE7
Date Acquired: 7/30/2021 10:07:05 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210730\Before\20210730_006.lcd
Vial: 26 | Inj. Volume: 25.0000uL | Tray: 1

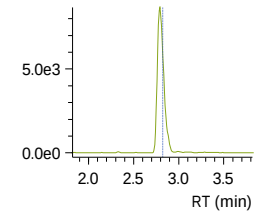
Perchlorate

Conc 8.9035
R#1 22.70 (0.00)

Q 99.00>83.00 (-) 3.82e4



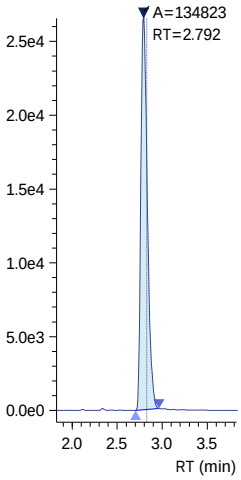
R1 101.00>85.00 (-) 8.67e3



Sodium Perchlorate -18O4_IS

Conc 1.0000

ISTD 107.00>89.00 (-) 2.66e4



Insight Report

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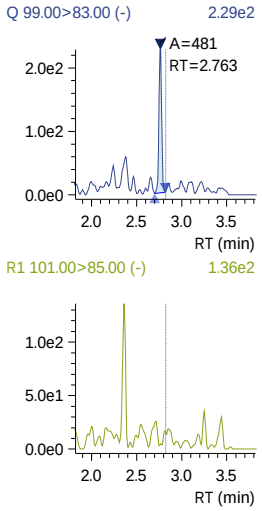
20210730_009

Sample ID: EQ2100470-01
Date Acquired: 7/30/2021 11:24:21 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210730\20210730_009.lcd
Vial: 6 | Inj. Volume: 25.0000uL | Tray: 5

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.763	481	166366	1	-0.0105	ng/mL	----	0.00
Sodium Perchlorate-18O4_IS	Auto	2.673	166366	166366	1	1.0000	ng/mL	----	----

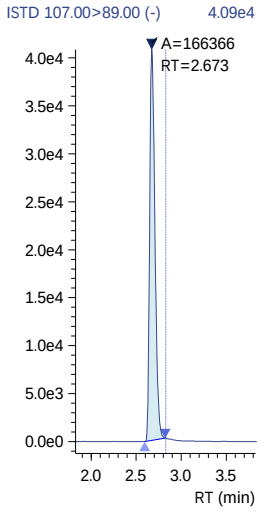
Perchlorate

Conc -0.0105
R#1 0.00 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.0000



Insight Report

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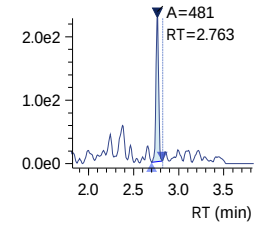
20210730_009

Sample ID: EQ2100470-01
Date Acquired: 7/30/2021 11:24:21 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210730\Before\20210730_009.lcd
Vial: 6 | Inj. Volume: 25.0000uL | Tray: 5

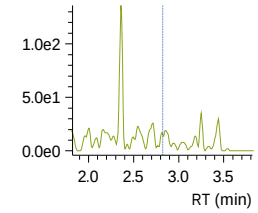
Perchlorate

Conc -0.0090
R#1 0.00 (0.00)

Q 99.00>83.00 (-) 2.29e2



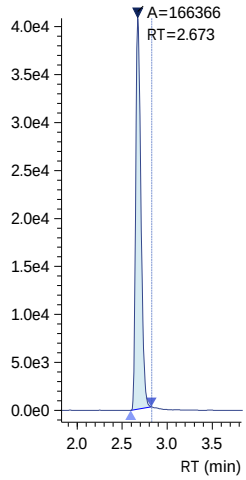
R1 101.00>85.00 (-) 1.36e2



Sodium Perchlorate -18O4_IS

Conc 1.0000

ISTD 107.00>89.00 (-) 4.09e4



Insight Report

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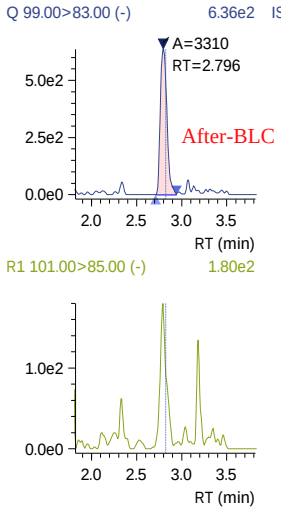
20210730_010

Sample ID: EQ2100470-02
Date Acquired: 7/30/2021 11:32:52 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210730\20210730_010.lcd
Vial: 7 | Inj. Volume: 25.0000uL | Tray: 5

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	M	2.796	3310	180211	1	0.0870	ng/mL	----	27.01
Sodium Perchlorate-18O4 _IS	Auto	2.789	1802 11	180211	1	1.0000	ng/mL	----	----

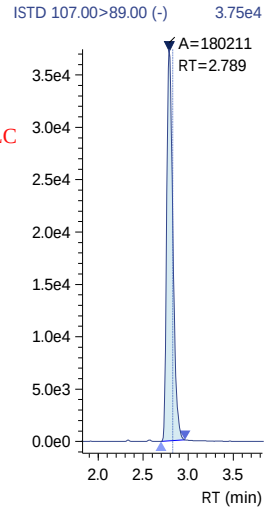
Perchlorate

Conc 0.0870
R#1 27.01 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.0000



Insight Report

Printed at 8/17/2021 5:16:39 PM

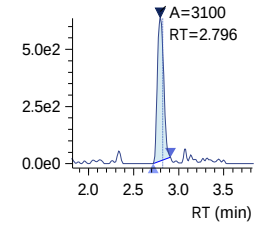
20210730_010

Sample ID: EQ2100470-02
Date Acquired: 7/30/2021 11:32:52 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210730\Before\20210730_010.lcd
Vial: 7 | Inj. Volume: 25.0000uL | Tray: 5

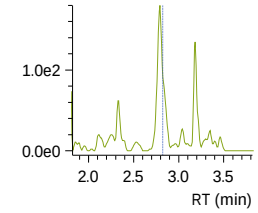
Perchlorate

Conc 0.0811
R#1 27.13 (0.00)

Q 99.00>83.00 (-) 6.36e2



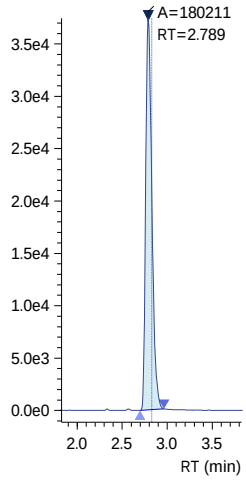
R1 101.00>85.00 (-) 1.80e2



Sodium Perchlorate -18O4_IS

Conc 1.0000

ISTD 107.00>89.00 (-) 3.75e4



Insight Report

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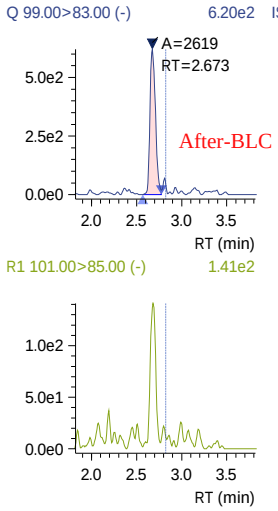
20210730_011

Sample ID: EQ2100470-03
Date Acquired: 7/30/2021 12:00:49 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210730\20210730_011.lcd
Vial: 8 | Inj. Volume: 25.0000uL | Tray: 5

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	M	2.673	2619	140968	1	0.0884	ng/mL	----	20.44
Sodium Perchlorate-18O4 _IS	Auto	2.673	1409 68	140968	1	1.0000	ng/mL	----	----

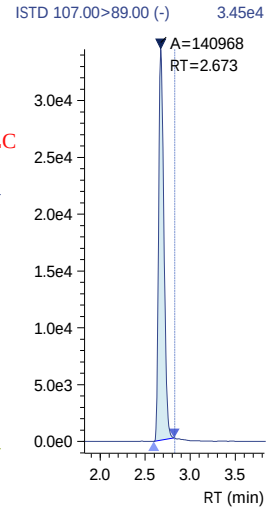
Perchlorate

Conc 0.0884
R#1 20.44 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.0000



Insight Report

Printed at 8/17/2021 5:16:39 PM

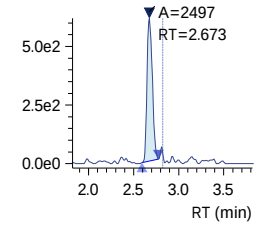
20210730_011

Sample ID: EQ2100470-03
Date Acquired: 7/30/2021 12:00:49 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210730\Before\20210730_011.lcd
Vial: 8 | Inj. Volume: 25.0000uL | Tray: 5

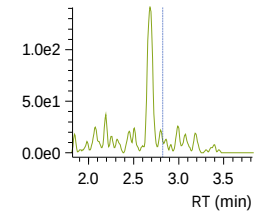
Perchlorate

Conc 0.0843
R#1 20.00 (0.00)

Q 99.00>83.00 (-) 6.20e2



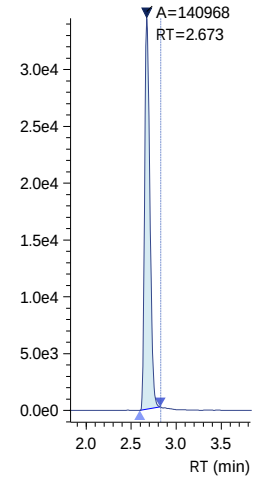
R1 101.00>85.00 (-) 1.41e2



Sodium Perchlorate -18O4_IS

Conc 1.0000

ISTD 107.00>89.00 (-) 3.45e4



Insight Report

Printed at 8/17/2021 5:09:59 PM

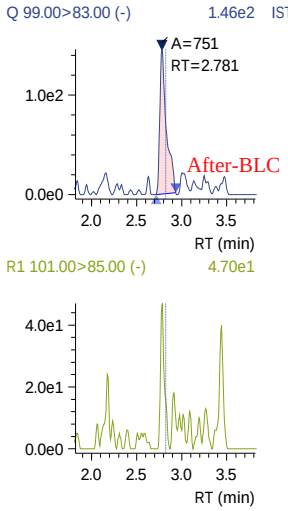
20210730_012

Sample ID: EQ2100470-04
Date Acquired: 7/30/2021 12:09:19 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210730\20210730_012.lcd
Vial: 9 | Inj. Volume: 25.0000uL | Tray: 5

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	M	2.781	751	40138	1	0.0892	ng/mL	----	28.57
Sodium Perchlorate-18O4 _IS	Auto	2.787	40138	40138	1	1.0000	ng/mL	----	----

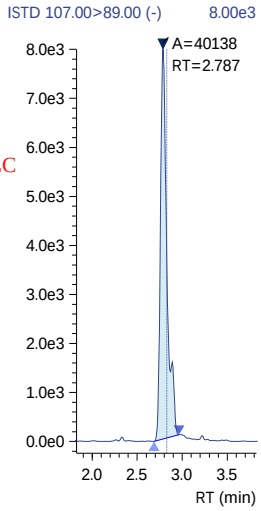
Perchlorate

Conc 0.0892
R#1 28.57 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.0000



Insight Report

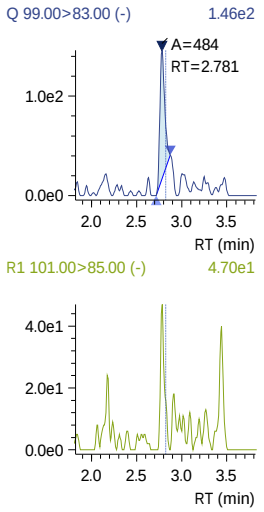
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20210730_012

Sample ID: EQ2100470-04
Date Acquired: 7/30/2021 12:09:19 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210730\Before\20210730_012.lcd
Vial: 9 | Inj. Volume: 25.0000uL | Tray: 5

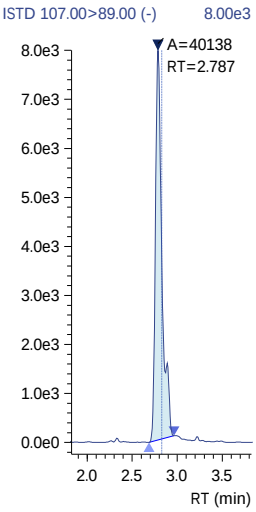
Perchlorate

Conc 0.0486
R#1 34.13 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.0000



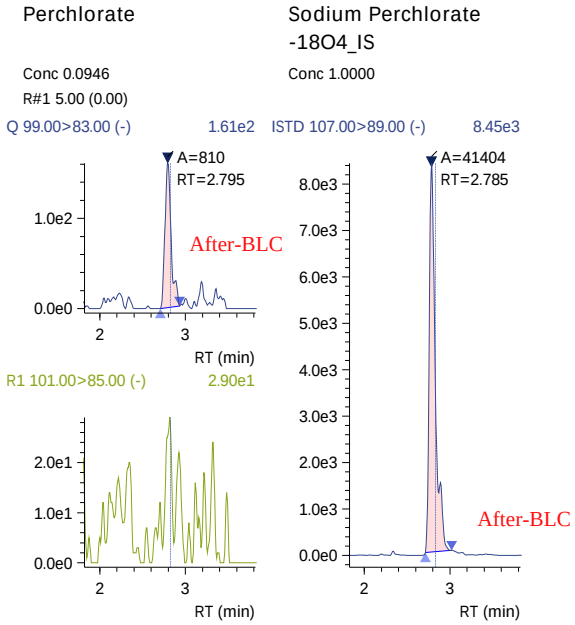
Insight Report

Printed at 8/17/2021 5:09:59 PM

20210730_013

Sample ID: EQ2100470-05
Date Acquired: 7/30/2021 12:17:50 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210730\20210730_013.lcd
Vial: 10 | Inj. Volume: 25.0000uL | Tray: 5

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	M	2.795	810	41404	1	0.0946	ng/mL	----	5.00
Sodium Perchlorate-18O4 _IS	M	2.785	41404	41404	1	1.0000	ng/mL	----	----



Insight Report

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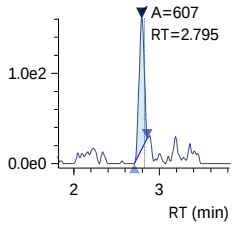
20210730_013

Sample ID: EQ2100470-05
Date Acquired: 7/30/2021 12:17:50 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210730\Before\20210730_013.lcd
Vial: 10 | Inj. Volume: 25.0000uL | Tray: 5

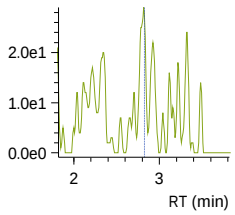
Perchlorate

Conc 0.0954
R#1 10.27 (0.00)

Q 99.00>83.00 (-) 1.61e2



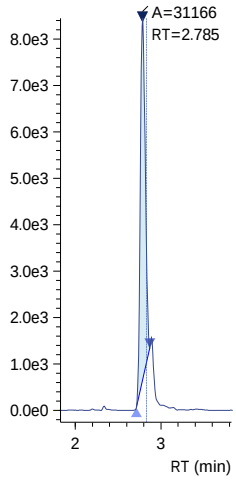
R1 101.00>85.00 (-) 2.90e1



Sodium Perchlorate -18O4_IS

Conc 1.0000

ISTD 107.00>89.00 (-) 8.45e3



Insight Report

Printed at 8/17/2021 5:09:59 PM

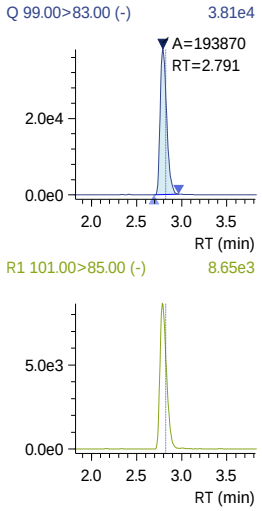
20210730_015

Sample ID: PERCHLORATE7
Date Acquired: 7/30/2021 12:34:53 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210730\20210730_015.lcd
Vial: 26 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.791	193870	138213	1	8.8083	ng/mL	10.0000	23.17
Sodium Perchlorate-18O4_IS	Auto	2.790	138213	138213	1	1.0000	ng/mL	1.0000	----

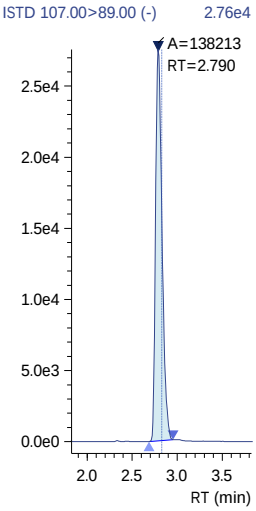
Perchlorate

Conc 8.8083
R#1 23.17 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.0000



Insight Report

Printed at 8/17/2021 5:16:39 PM

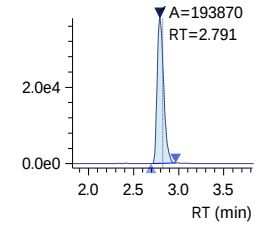
20210730_015

Sample ID: PERCHLORATE7
Date Acquired: 7/30/2021 12:34:53 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210730\Before\20210730_015.lcd
Vial: 26 | Inj. Volume: 25.0000uL | Tray: 1

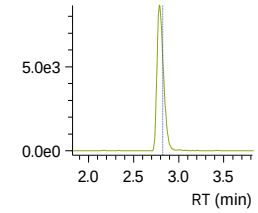
Perchlorate

Conc 8.8028
R#1 23.17 (0.00)

Q 99.00>83.00 (-) 3.81e4



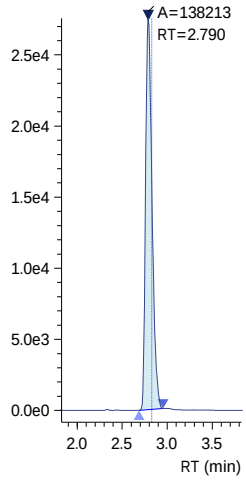
R1 101.00>85.00 (-) 8.65e3



Sodium Perchlorate -18O4_IS

Conc 1.0000

ISTD 107.00>89.00 (-) 2.76e4



Insight Report

Printed at 8/18/2021 10:37:32 AM

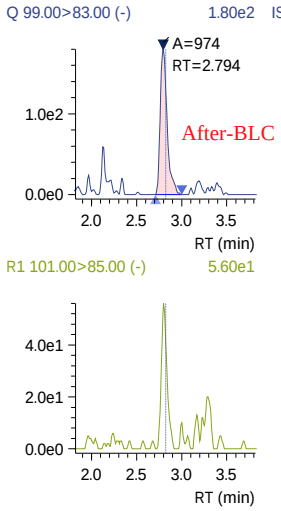
20210802_020

Sample ID: LODV
Date Acquired: 8/2/2021 5:33:34 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210802\20210802_020.lcd
Vial: 31 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	M	2.794	974	112159	1	0.0589	ng/mL	----	27.37
Sodium Perchlorate-18O4 _IS	Auto	2.788	1121 59	112159	1	1.0000	ng/mL	----	----

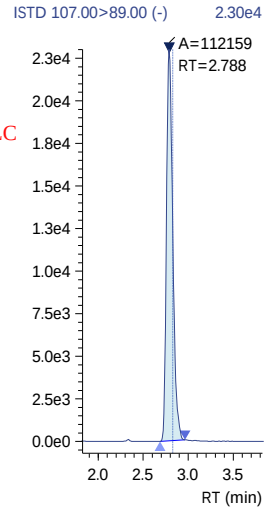
Perchlorate

Conc 0.0589
R#1 27.37 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.0000



Insight Report

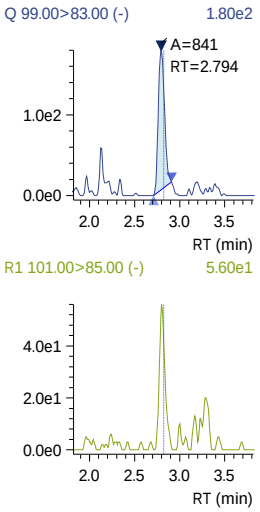
Printed at 8/18/2021 10:42:57 AM

20210802_020

Sample ID: LODV
Date Acquired: 8/2/2021 5:33:34 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210802\Before\20210802_020.lcd
Vial: 31 | Inj. Volume: 25.0000uL | Tray: 1

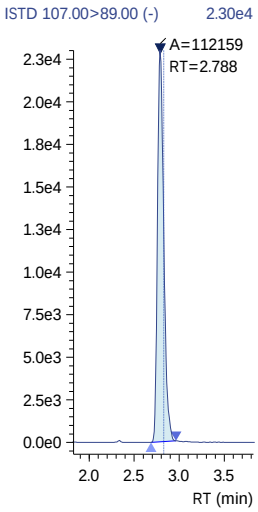
Perchlorate

Conc 0.0200
R#1 30.23 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.0000



Insight Report

Printed at 8/18/2021 10:37:32 AM

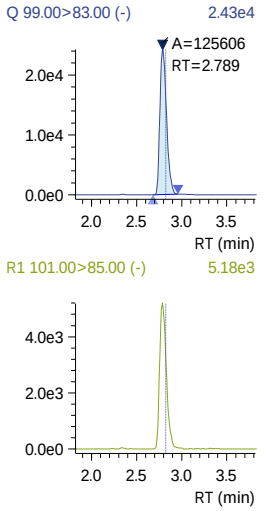
20210802_021

Sample ID: PERCHLORATE7
Date Acquired: 8/2/2021 5:42:08 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210802\20210802_021.lcd
Vial: 26 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.789	125606	84210	1	10.1247	ng/mL	10.0000	21.60
Sodium Perchlorate-18O4_IS	Auto	2.789	84210	84210	1	1.0000	ng/mL	1.0000	----

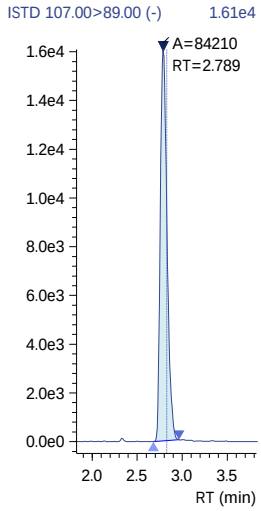
Perchlorate

Conc 10.1247
R#1 21.60 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.0000



Insight Report

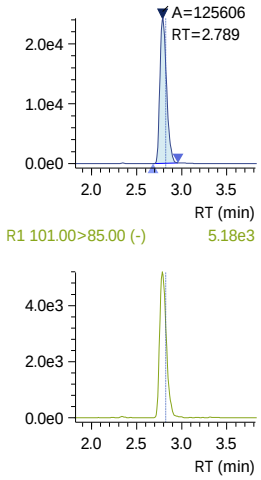
Printed at 8/18/2021 10:42:57 AM

20210802_021

Sample ID: PERCHLORATE7
Date Acquired: 8/2/2021 5:42:08 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210802\Before\20210802_021.lcd
Vial: 26 | Inj. Volume: 25.0000uL | Tray: 1

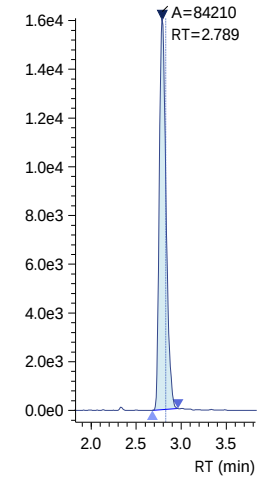
Perchlorate

Conc 9.3624
R#1 21.60 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.0000



Insight Report

Printed at 8/18/2021 10:37:32 AM

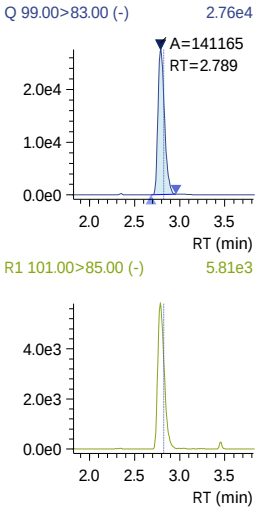
20210802_067

Sample ID: PERCHLORATE7
Date Acquired: 8/3/2021 12:15:36 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210802\20210802_067.lcd
Vial: 26 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.789	141165	97407	1	9.8372	ng/mL	10.0000	21.20
Sodium Perchlorate-18O4_IS	Auto	2.788	97407	97407	1	1.0000	ng/mL	1.0000	----

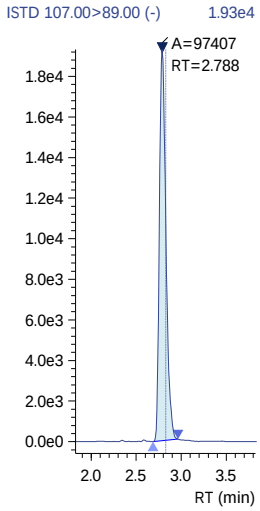
Perchlorate

Conc 9.8372
R#1 21.20 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.0000



Insight Report

Printed at 8/18/2021 10:42:57 AM

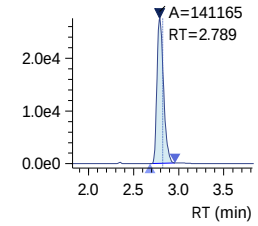
20210802_067

Sample ID: PERCHLORATE7
Date Acquired: 8/3/2021 12:15:36 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210802\Before\20210802_067.lcd
Vial: 26 | Inj. Volume: 25.0000uL | Tray: 1

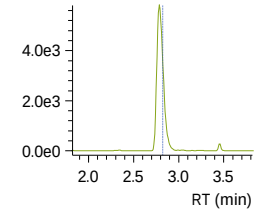
Perchlorate

Conc 9.0958
R#1 21.20 (0.00)

Q 99.00>83.00 (-) 2.76e4



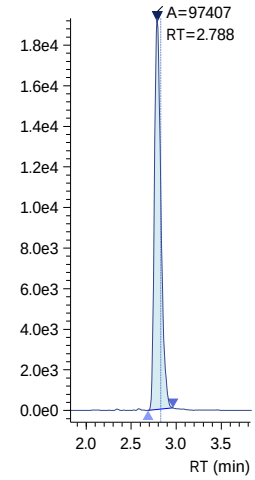
R1 101.00>85.00 (-) 5.81e3



Sodium Perchlorate -18O4_IS

Conc 1.0000

ISTD 107.00>89.00 (-) 1.93e4



Insight Report

Printed at 8/18/2021 10:37:32 AM

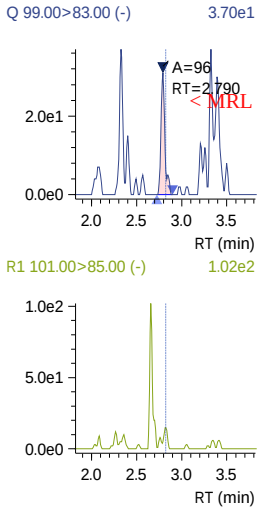
20210802_069

Sample ID: E2100837-003
Date Acquired: 8/3/2021 12:32:39 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210802\20210802_069.lcd
Vial: 16 | Inj. Volume: 25.0000uL | Tray: 5

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	M	2.790	96	67612	1	0.0096	ng/mL	----	17.24
Sodium Perchlorate-18O4 _IS	Auto	2.782	67612	67612	1	1.0000	ng/mL	----	----

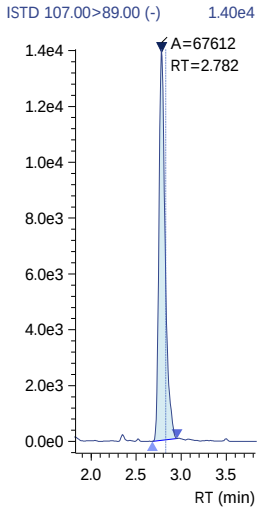
Perchlorate

Conc 0.0096
R#1 17.24 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.0000



Insight Report

Printed at 8/18/2021 10:42:57 AM

20210802_069

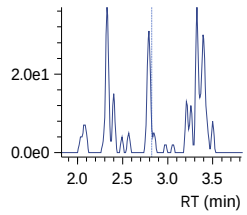
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Date Acquired: 8/3/2021 12:32:39 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210802\Before\20210802_069.lcd
Vial: 16 | Inj. Volume: 25.0000uL | Tray: 5

Perchlorate

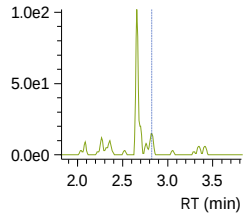
Conc ----

R#1 ---- (0.00)

Q 99.00>83.00 (-) 3.70e1



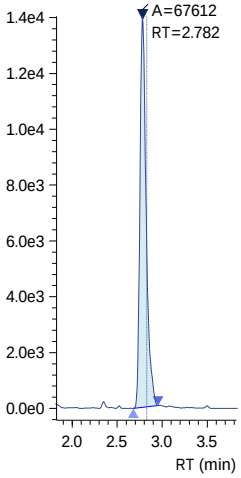
R1 101.00>85.00 (-) 1.02e2



Sodium Perchlorate -18O4_IS

Conc 1.0000

ISTD 107.00>89.00 (-) 1.40e4



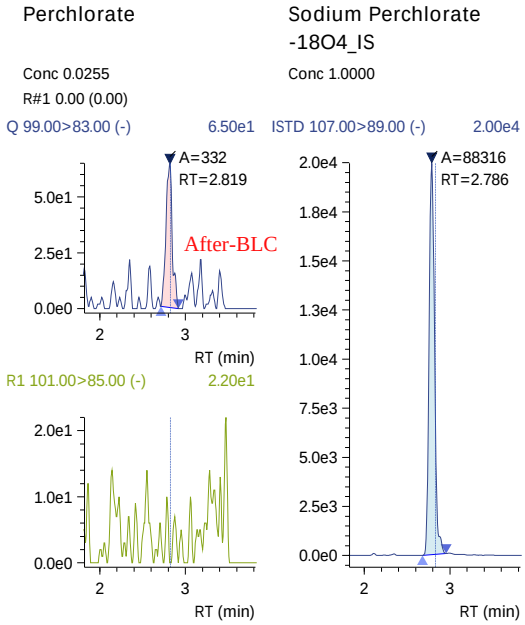
Insight Report

Printed at 8/18/2021 10:37:32 AM

20210802_072

Sample ID: E2100837-006
Date Acquired: 8/3/2021 12:58:14 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210802\20210802_072.lcd
Vial: 19 | Inj. Volume: 25.0000uL | Tray: 5

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	M	2.819	332	88316	1	0.0255	ng/mL	----	0.00
Sodium Perchlorate-18O4 _IS	Auto	2.786	88316	88316	1	1.0000	ng/mL	----	----



Insight Report

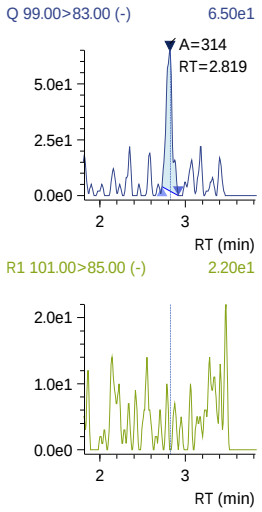
Printed at 8/18/2021 10:42:57 AM

20210802_072

Sample ID: E2100837-006
Date Acquired: 8/3/2021 12:58:14 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210802\Before\20210802_072.lcd
Vial: 19 | Inj. Volume: 25.0000uL | Tray: 5

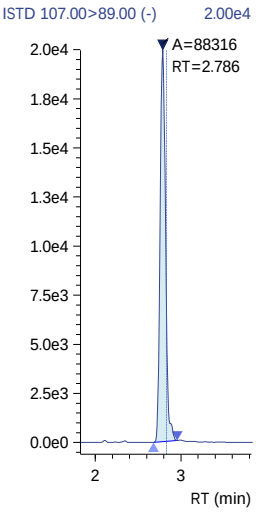
Perchlorate

Conc -0.0048
R#1 0.00 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.0000



Insight Report

Printed at 8/18/2021 10:37:32 AM

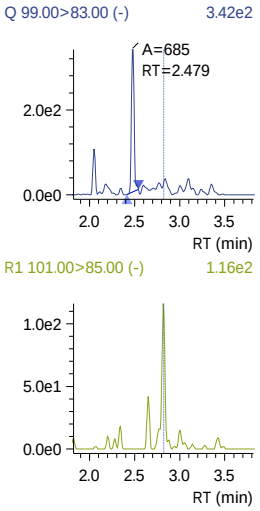
20210802_074

Sample ID: E2100837-008
Date Acquired: 8/3/2021 1:15:19 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210802\20210802_074.lcd
Vial: 21 | Inj. Volume: 25.0000uL | Tray: 5

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	ND(W/B)	----	----	53004	1	----	ng/mL	----	----
Sodium Perchlorate-18O4_IS	Auto	2.776	53004	53004	1	1.0000	ng/mL	----	----

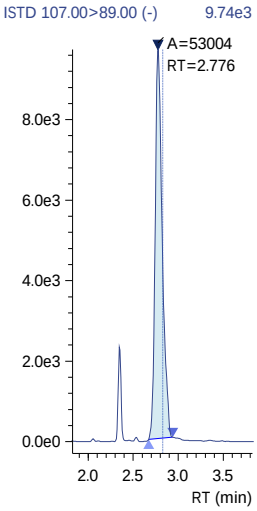
Perchlorate

Conc ----
R#1 ---- (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.0000



Insight Report

Printed at 8/18/2021 10:42:57 AM

20210802_074

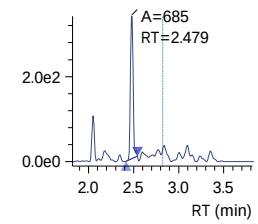
Sample ID: E2100837-008
Date Acquired: 8/3/2021 1:15:19 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210802\Before\20210802_074.lcd
Vial: 21 | Inj. Volume: 25.0000uL | Tray: 5

Perchlorate

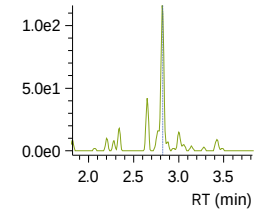
Conc ----

R#1 ---- (0.00)

Q 99.00>83.00 (-) 3.42e2



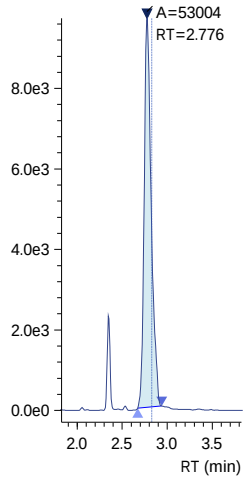
R1 101.00>85.00 (-) 1.16e2



Sodium Perchlorate -18O4_IS

Conc 1.0000

ISTD 107.00>89.00 (-) 9.74e3



Insight Report

Printed at 8/18/2021 10:37:32 AM

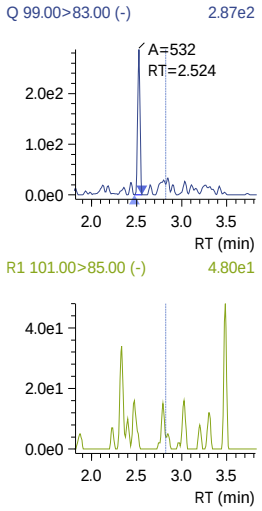
20210802_075

Sample ID: E2100837-009
Date Acquired: 8/3/2021 1:23:53 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210802\20210802_075.lcd
Vial: 22 | Inj. Volume: 25.0000uL | Tray: 5

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	ND(W/B)	----	----	55788	1	----	ng/mL	----	----
Sodium Perchlorate-18O4_IS	Auto	2.787	55788	55788	1	1.0000	ng/mL	----	----

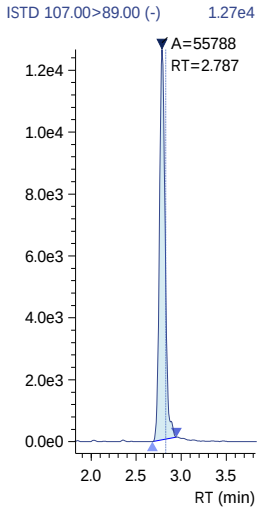
Perchlorate

Conc ----
R#1 ---- (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.0000



Insight Report

Printed at 8/18/2021 10:42:57 AM

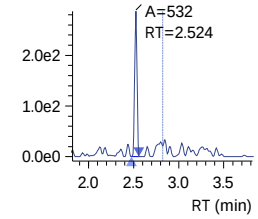
20210802_075

Sample ID: E2100837-009
Date Acquired: 8/3/2021 1:23:53 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210802\Before\20210802_075.lcd
Vial: 22 | Inj. Volume: 25.0000uL | Tray: 5

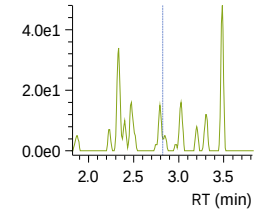
Perchlorate

Conc ----
R#1 ---- (0.00)

Q 99.00>83.00 (-) 2.87e2



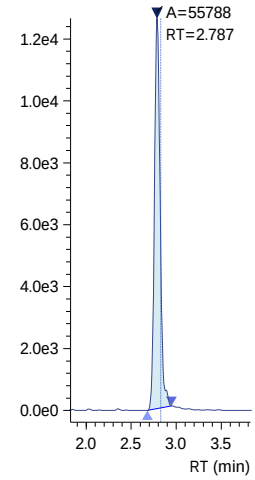
R1 101.00>85.00 (-) 4.80e1



Sodium Perchlorate -18O4_IS

Conc 1.0000

ISTD 107.00>89.00 (-) 1.27e4



Insight Report

Printed at 8/18/2021 10:37:32 AM

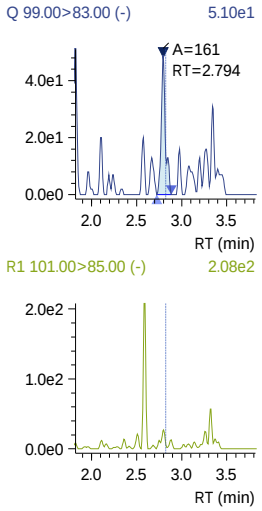
20210802_076

Sample ID: E2100837-010
Date Acquired: 8/3/2021 1:32:23 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210802\20210802_076.lcd
Vial: 23 | Inj. Volume: 25.0000uL | Tray: 5

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.794	161	59179	1	0.0184	ng/mL	----	37.50
Sodium Perchlorate-18O4 _IS	Auto	2.785	59179	59179	1	1.0000	ng/mL	----	----

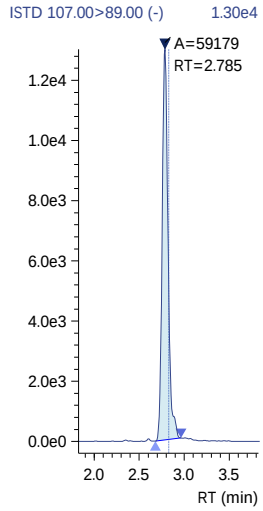
Perchlorate

Conc 0.0184
R#1 37.50 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.0000



Insight Report

Printed at 8/18/2021 10:42:57 AM

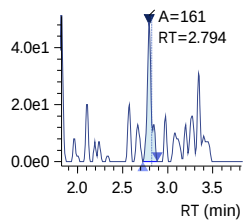
20210802_076

Sample ID: E2100837-010
Date Acquired: 8/3/2021 1:32:23 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210802\Before\20210802_076.lcd
Vial: 23 | Inj. Volume: 25.0000uL | Tray: 5

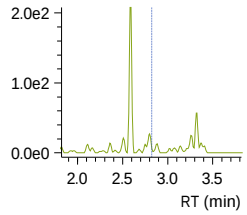
Perchlorate

Conc -0.0102
R#1 37.50 (0.00)

Q 99.00>83.00 (-) 5.10e1



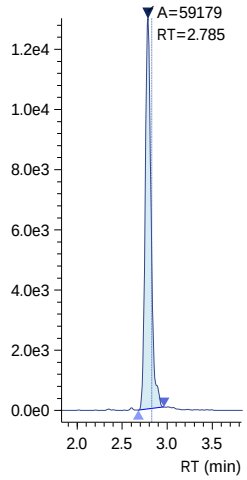
R1 101.00>85.00 (-) 2.08e2



Sodium Perchlorate -18O4_IS

Conc 1.0000

ISTD 107.00>89.00 (-) 1.30e4



Insight Report

Printed at 8/18/2021 10:37:32 AM

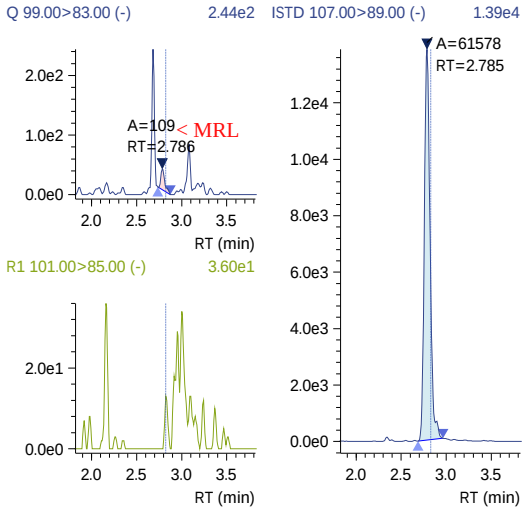
20210802_077

Sample ID: E2100837-011
Date Acquired: 8/3/2021 1:40:56 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210802\20210802_077.lcd
Vial: 24 | Inj. Volume: 25.0000uL | Tray: 5

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	M	2.786	109	61578	1	0.0120	ng/mL	----	0.00
Sodium Perchlorate-18O4 _IS	Auto	2.785	61578	61578	1	1.0000	ng/mL	----	----

Perchlorate

Conc 0.0120
R#1 0.00 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.0000

Insight Report

Printed at 8/18/2021 10:42:57 AM

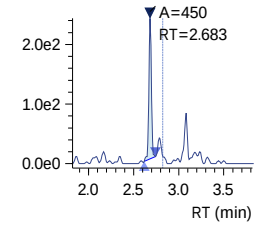
20210802_077

Sample ID: E2100837-011
Date Acquired: 8/3/2021 1:40:56 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210802\Before\20210802_077.lcd
Vial: 24 | Inj. Volume: 25.0000uL | Tray: 5

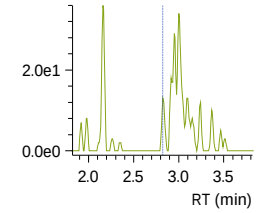
Perchlorate

Conc 0.0188
R#1 0.00 (0.00)

Q 99.00>83.00 (-) 2.44e2



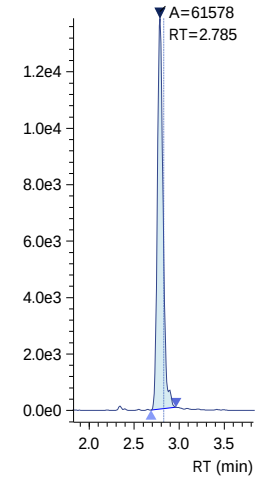
R1 101.00>85.00 (-) 3.60e1



Sodium Perchlorate -18O4_IS

Conc 1.0000

ISTD 107.00>89.00 (-) 1.39e4



Insight Report

Printed at 8/18/2021 10:37:32 AM

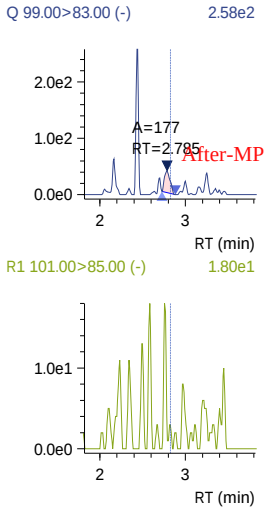
20210802_078

Sample ID: E2100837-012
Date Acquired: 8/3/2021 1:49:27 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210802\20210802_078.lcd
Vial: 25 | Inj. Volume: 25.0000uL | Tray: 5

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	M	2.785	177	55108	1	0.0218	ng/mL	----	10.53
Sodium Perchlorate-18O4 _IS	Auto	2.784	55108	55108	1	1.0000	ng/mL	----	----

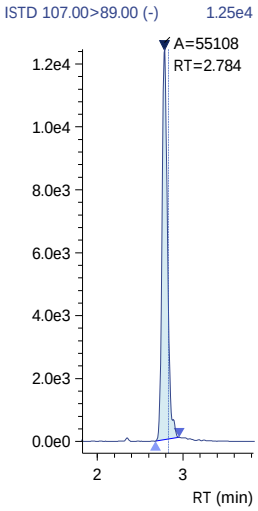
Perchlorate

Conc 0.0218
R#1 10.53 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.0000



Insight Report

Printed at 8/18/2021 10:42:57 AM

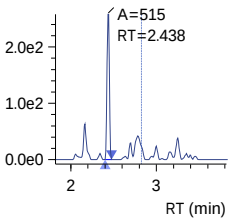
20210802_078

Sample ID: E2100837-012
Date Acquired: 8/3/2021 1:49:27 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210802\Before\20210802_078.lcd
Vial: 25 | Inj. Volume: 25.0000uL | Tray: 5

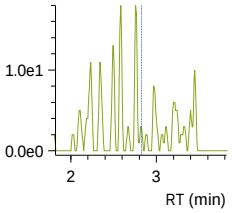
Perchlorate

Conc ----
R#1 ---- (0.00)

Q 99.00>83.00 (-) 2.58e2



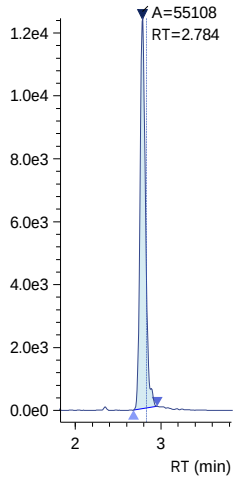
R1 101.00>85.00 (-) 1.80e1



Sodium Perchlorate -18O4_IS

Conc 1.0000

ISTD 107.00>89.00 (-) 1.25e4



Insight Report

Printed at 8/18/2021 10:37:32 AM

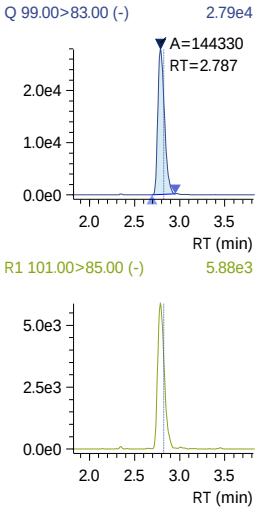
20210802_079

Sample ID: PERCHLORATE7
Date Acquired: 8/3/2021 1:57:59 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210802\20210802_079.lcd
Vial: 26 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.787	144330	99099	1	9.8860	ng/mL	10.0000	21.05
Sodium Perchlorate-18O4_IS	Auto	2.785	99099	99099	1	1.0000	ng/mL	1.0000	----

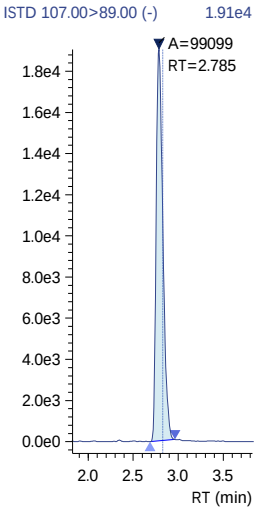
Perchlorate

Conc 9.8860
R#1 21.05 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.0000



Insight Report

Printed at 8/18/2021 10:42:57 AM

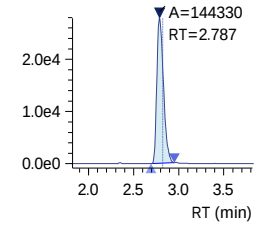
20210802_079

Sample ID: PERCHLORATE7
Date Acquired: 8/3/2021 1:57:59 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210802\Before\20210802_079.lcd
Vial: 26 | Inj. Volume: 25.0000uL | Tray: 1

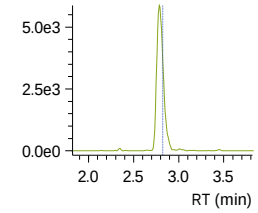
Perchlorate

Conc 9.1410
R#1 21.05 (0.00)

Q 99.00>83.00 (-) 2.79e4



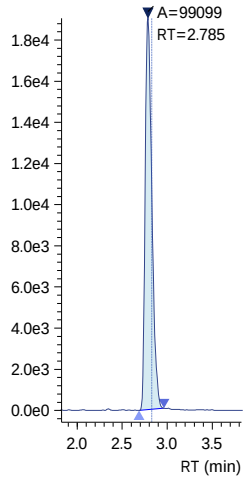
R1 101.00>85.00 (-) 5.88e3



Sodium Perchlorate -18O4_IS

Conc 1.0000

ISTD 107.00>89.00 (-) 1.91e4



Insight Report

Printed at 8/19/2021 11:52:26 AM

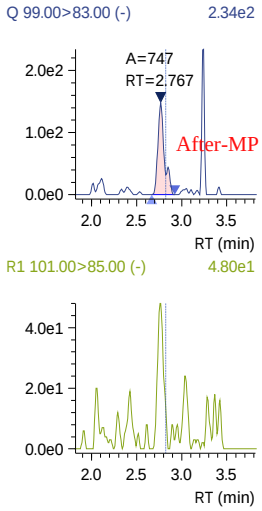
20210804_025

Sample ID: LODV
Date Acquired: 8/4/2021 3:06:55 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210804\20210804_025.lcd
Vial: 31 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	M	2.767	747	85934	1	0.0609	ng/mL	----	31.97
Sodium Perchlorate-18O4 _IS	Auto	2.770	85934	85934	1	1.0000	ng/mL	----	----

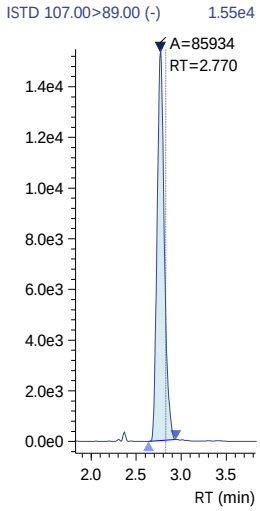
Perchlorate

Conc 0.0609
R#1 31.97 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.0000



Insight Report

Printed at 8/19/2021 11:57:47 AM

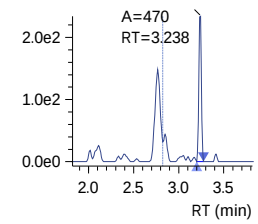
20210804_025

Sample ID: LODV
Date Acquired: 8/4/2021 3:06:55 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210804\Before\20210804_025.lcd
Vial: 31 | Inj. Volume: 25.0000uL | Tray: 1

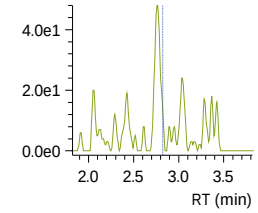
Perchlorate

Conc ----
R#1 ---- (0.00)

Q 99.00>83.00 (-) 2.34e2



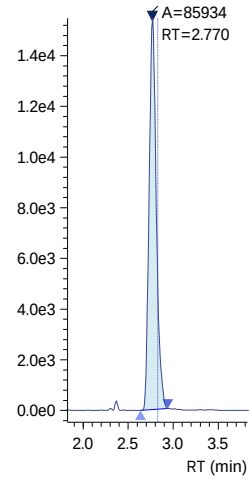
R1 101.00>85.00 (-) 4.80e1



Sodium Perchlorate -18O4_IS

Conc 1.0000

ISTD 107.00>89.00 (-) 1.55e4



Insight Report

Printed at 8/19/2021 11:52:26 AM

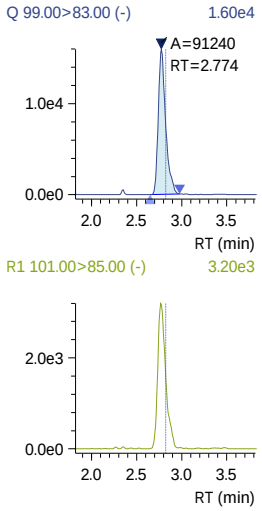
20210804_026

Sample ID: PERCHLORATE7
Date Acquired: 8/4/2021 3:15:30 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210804\20210804_026.lcd
Vial: 26 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.774	91240	64019	1	9.9959	ng/mL	10.0000	20.57
Sodium Perchlorate-18O4 _IS	Auto	2.772	64019	64019	1	1.0000	ng/mL	1.0000	----

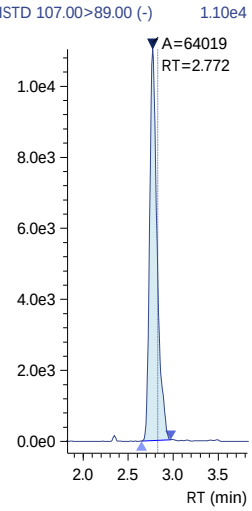
Perchlorate

Conc 9.9959
R#1 20.57 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.0000



Insight Report

Printed at 8/19/2021 11:57:47 AM

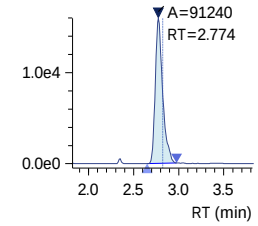
20210804_026

Sample ID: PERCHLORATE7
Date Acquired: 8/4/2021 3:15:30 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210804\Before\20210804_026.lcd
Vial: 26 | Inj. Volume: 25.0000uL | Tray: 1

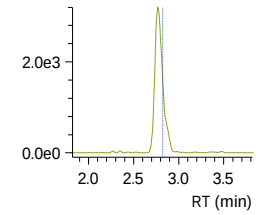
Perchlorate

Conc 9.7494
R#1 20.57 (0.00)

Q 99.00>83.00 (-) 1.60e4



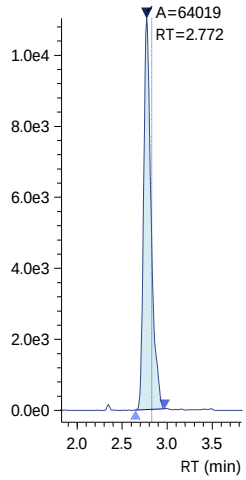
R1 101.00>85.00 (-) 3.20e3



Sodium Perchlorate -18O4_IS

Conc 1.0000

ISTD 107.00>89.00 (-) 1.10e4



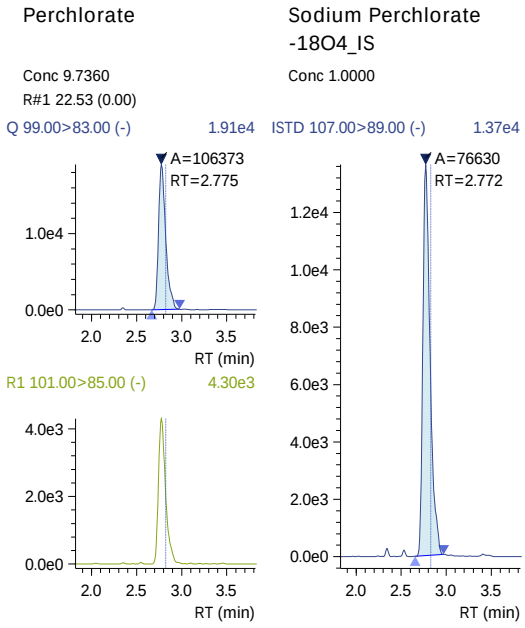
Insight Report

Printed at 8/19/2021 11:52:26 AM

20210804_048

Sample ID: PERCHLORATE7
Date Acquired: 8/4/2021 7:35:26 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210804\20210804_048.lcd
Vial: 26 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.775	106373	76630	1	9.7360	ng/mL	10.0000	22.53
Sodium Perchlorate-18O4_IS	Auto	2.772	76630	76630	1	1.0000	ng/mL	1.0000	----



Insight Report

Printed at 8/19/2021 11:57:47 AM

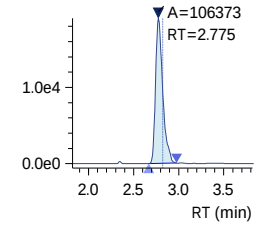
20210804_048

Sample ID: PERCHLORATE7
Date Acquired: 8/4/2021 7:35:26 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210804\Before\20210804_048.lcd
Vial: 26 | Inj. Volume: 25.0000uL | Tray: 1

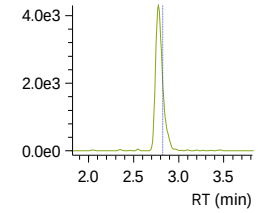
Perchlorate

Conc 9.4959
R#1 22.53 (0.00)

Q 99.00>83.00 (-) 1.91e4



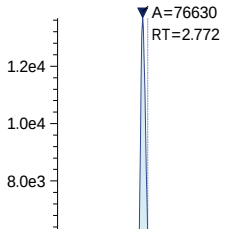
R1 101.00>85.00 (-) 4.30e3



Sodium Perchlorate -18O4_IS

Conc 1.0000

ISTD 107.00>89.00 (-) 1.37e4



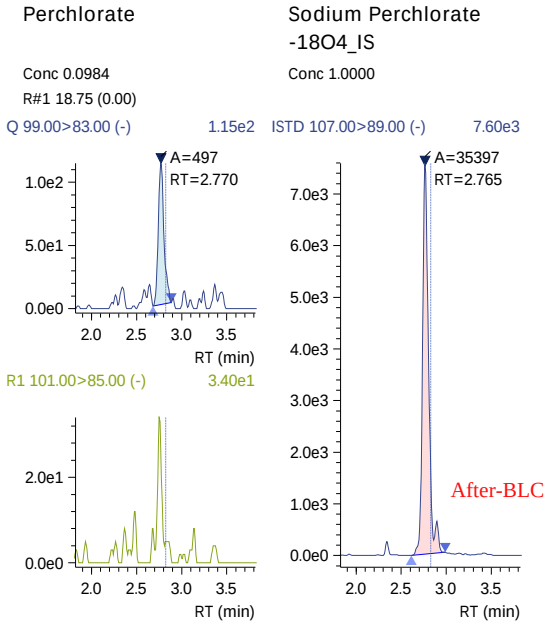
Insight Report

Printed at 8/19/2021 11:52:26 AM

20210804_053

Sample ID: E2100837-001X10
Date Acquired: 8/4/2021 8:18:03 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210804\20210804_053.lcd
Vial: 14 | Inj. Volume: 25.0000uL | Tray: 5

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.770	497	35397	1	0.0984	ng/mL	----	18.75
Sodium Perchlorate-18O4 _IS	M	2.765	35397	35397	1	1.0000	ng/mL	----	----



Insight Report

Printed at 8/19/2021 11:57:47 AM

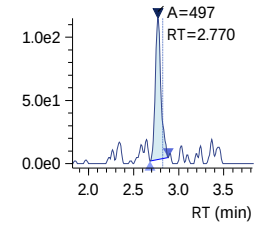
20210804_053

Sample ID: E2100837-001X10
Date Acquired: 8/4/2021 8:18:03 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210804\Before\20210804_053.lcd
Vial: 14 | Inj. Volume: 25.0000uL | Tray: 5

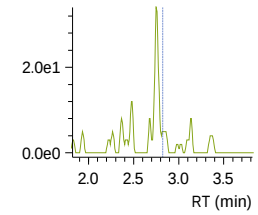
Perchlorate

Conc 0.1083
R#1 18.75 (0.00)

Q 99.00>83.00 (-) 1.15e2



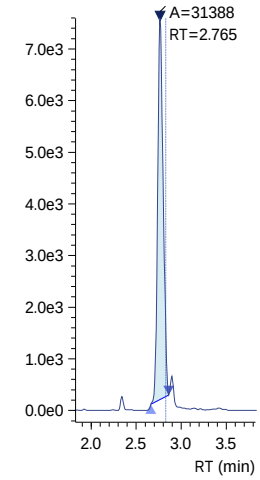
R1 101.00>85.00 (-) 3.40e1



Sodium Perchlorate -18O4_IS

Conc 1.0000

ISTD 107.00>89.00 (-) 7.60e3



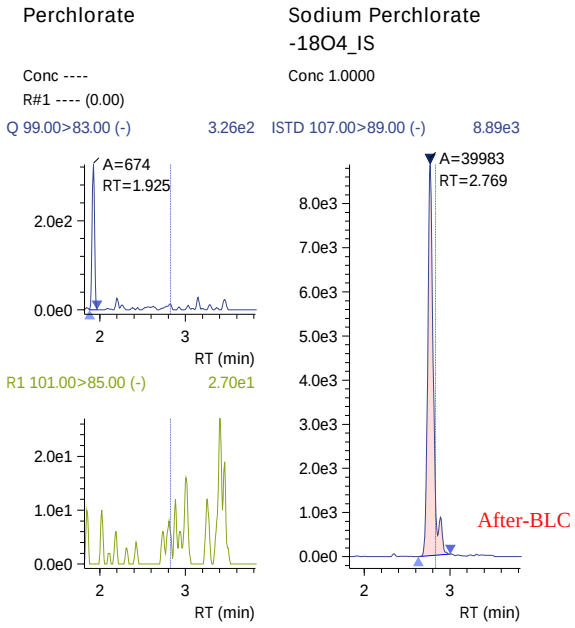
Insight Report

Printed at 8/19/2021 11:52:26 AM

20210804_054

Sample ID: E2100837-002X10
Date Acquired: 8/4/2021 8:26:37 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210804\20210804_054.lcd
Vial: 15 | Inj. Volume: 25.0000uL | Tray: 5

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	ND(W/B)	----	----	39983	1	----	ng/mL	----	----
Sodium Perchlorate-18O4_IS	M	2.769	39983	39983	1	1.0000	ng/mL	----	----



Insight Report

Printed at 8/19/2021 11:57:47 AM

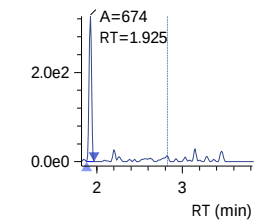
20210804_054

Sample ID: E2100837-002X10
Date Acquired: 8/4/2021 8:26:37 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210804\Before\20210804_054.lcd
Vial: 15 | Inj. Volume: 25.0000uL | Tray: 5

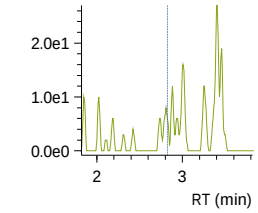
Perchlorate

Conc ----
R#1 ---- (0.00)

Q 99.00>83.00 (-) 3.26e2



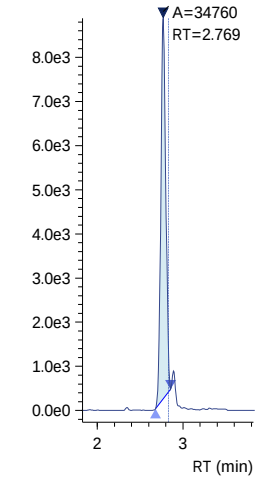
R1 101.00>85.00 (-) 2.70e1



Sodium Perchlorate -18O4_IS

Conc 1.0000

ISTD 107.00>89.00 (-) 8.89e3



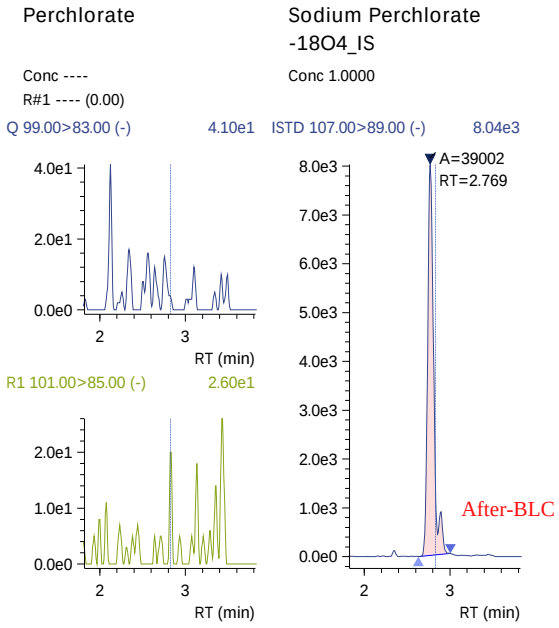
Insight Report

Printed at 8/19/2021 11:52:26 AM

20210804_055

Sample ID: E2100837-004X10
Date Acquired: 8/4/2021 8:35:06 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210804\20210804_055.lcd
Vial: 17 | Inj. Volume: 25.0000uL | Tray: 5

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	ND(W/B)	----	----	39002	1	----	ng/mL	----	----
Sodium Perchlorate-18O4_IS	M	2.769	39002	39002	1	1.0000	ng/mL	----	----



Insight Report

Printed at 8/19/2021 11:57:47 AM

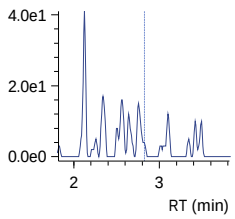
20210804_055

Sample ID: E2100837-004X10
Date Acquired: 8/4/2021 8:35:06 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210804\Before\20210804_055.lcd
Vial: 17 | Inj. Volume: 25.0000uL | Tray: 5

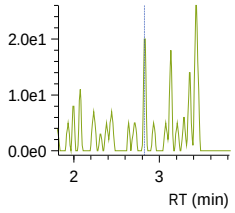
Perchlorate

Conc ----
R#1 ---- (0.00)

Q 99.00>83.00 (-) 4.10e1



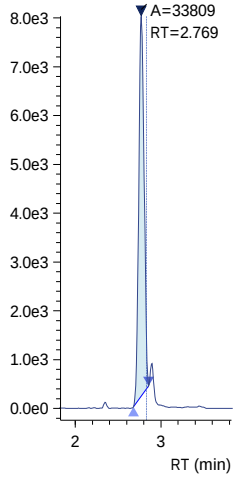
R1 101.00>85.00 (-) 2.60e1



Sodium Perchlorate -18O4_IS

Conc 1.0000

ISTD 107.00>89.00 (-) 8.04e3



Insight Report

Printed at 8/19/2021 11:52:26 AM

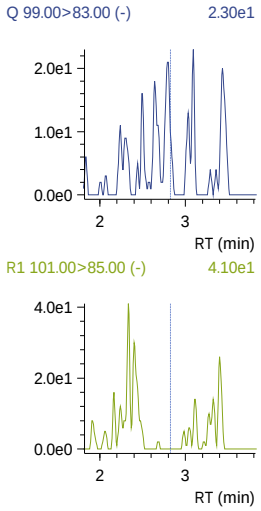
20210804_056

Sample ID: E2100837-005X10
Date Acquired: 8/4/2021 8:43:38 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210804\20210804_056.lcd
Vial: 18 | Inj. Volume: 25.0000uL | Tray: 5

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	ND(W/B)	----	----	39920	1	----	ng/mL	----	----
Sodium Perchlorate-18O4_IS	M	2.769	39920	39920	1	1.0000	ng/mL	----	----

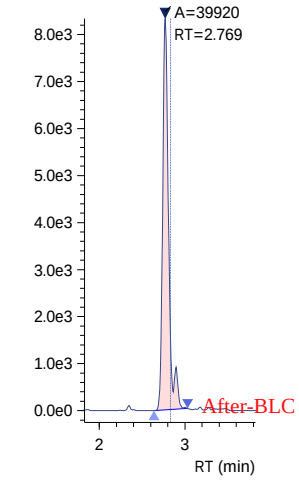
Perchlorate

Conc ----
R#1 ---- (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.0000



After-BLC

Insight Report

Printed at 8/19/2021 11:57:47 AM

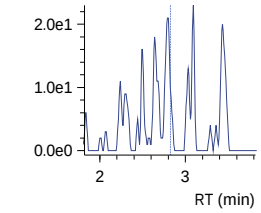
20210804_056

Sample ID: E2100837-005X10
Date Acquired: 8/4/2021 8:43:38 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210804\Before\20210804_056.lcd
Vial: 18 | Inj. Volume: 25.0000uL | Tray: 5

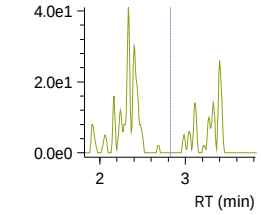
Perchlorate

Conc ----
R#1 ---- (0.00)

Q 99.00>83.00 (-) 2.30e1



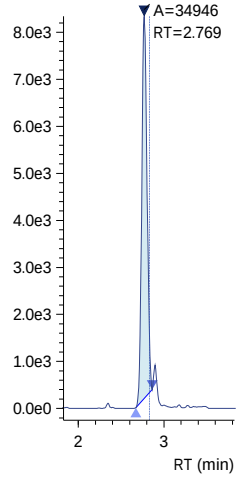
R1 101.00>85.00 (-) 4.10e1



Sodium Perchlorate -18O4_IS

Conc 1.0000

ISTD 107.00>89.00 (-) 8.34e3



Insight Report

Printed at 8/19/2021 11:52:26 AM

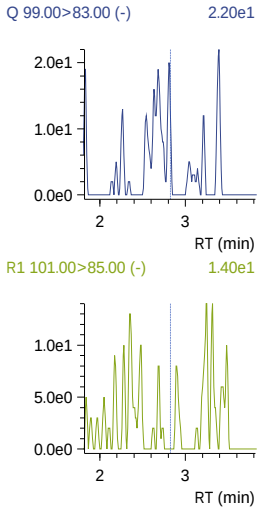
20210804_057

Sample ID: E2100837-007X10
Date Acquired: 8/4/2021 8:52:09 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210804\20210804_057.lcd
Vial: 20 | Inj. Volume: 25.0000uL | Tray: 5

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	ND(W/B)	----	----	38495	1	----	ng/mL	----	----
Sodium Perchlorate-18O4_IS	M	2.766	38495	38495	1	1.0000	ng/mL	----	----

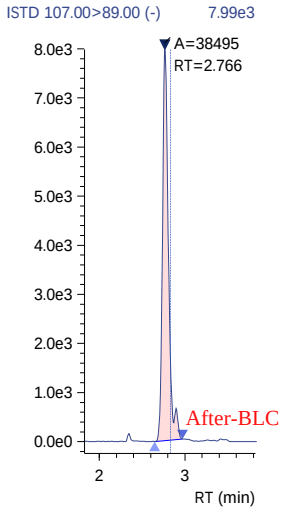
Perchlorate

Conc ----
R#1 ---- (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.0000



Insight Report

Printed at 8/19/2021 11:57:47 AM

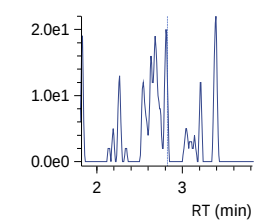
20210804_057

Sample ID: E2100837-007X10
Date Acquired: 8/4/2021 8:52:09 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210804\Before\20210804_057.lcd
Vial: 20 | Inj. Volume: 25.0000uL | Tray: 5

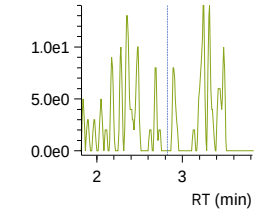
Perchlorate

Conc ----
R#1 ---- (0.00)

Q 99.00>83.00 (-) 2.20e1



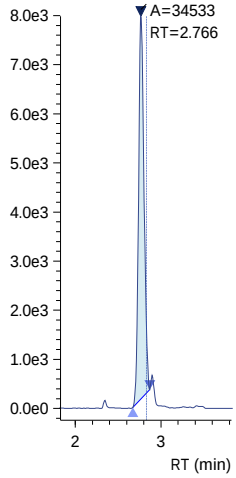
R1 101.00>85.00 (-) 1.40e1



Sodium Perchlorate -18O4_IS

Conc 1.0000

ISTD 107.00>89.00 (-) 7.99e3



Insight Report

Printed at 8/19/2021 11:52:26 AM

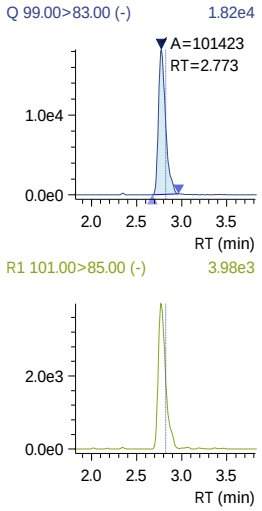
20210804_058

Sample ID: PERCHLORATE7
Date Acquired: 8/4/2021 9:00:44 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210804\20210804_058.lcd
Vial: 26 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.773	101423	73307	1	9.7037	ng/mL	10.0000	22.15
Sodium Perchlorate-18O4_IS	Auto	2.772	73307	73307	1	1.0000	ng/mL	1.0000	----

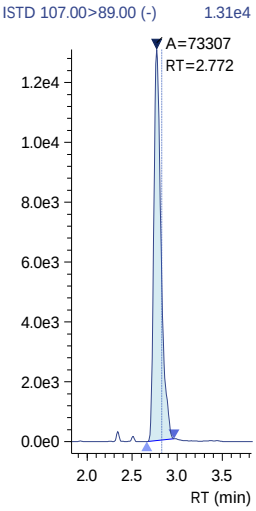
Perchlorate

Conc 9.7037
R#1 22.15 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.0000



Insight Report

Printed at 8/19/2021 11:57:47 AM

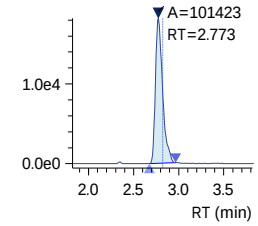
20210804_058

Sample ID: PERCHLORATE7
Date Acquired: 8/4/2021 9:00:44 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210804\Before\20210804_058.lcd
Vial: 26 | Inj. Volume: 25.0000uL | Tray: 1

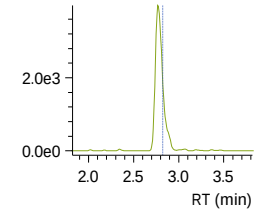
Perchlorate

Conc 9.4645
R#1 22.15 (0.00)

Q 99.00>83.00 (-) 1.82e4



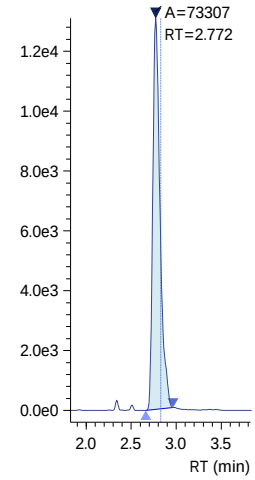
R1 101.00>85.00 (-) 3.98e3



Sodium Perchlorate -18O4_IS

Conc 1.0000

ISTD 107.00>89.00 (-) 1.31e4



HS21071405 - ME - ICP_W_DOD

ALS WO# HS21071405

ALS Houston, US Date: 24-Aug-21

Form 11 - INTERNAL STANDARD ASSOCIATION

Client: Aptim Environmental & Infrastucture, Inc. Instrument:ICPMS06
Project: Longhorn Army Ammunition Plant LHAAP 16 July 2021
WorkOrder: HS21071405

Mass	Analyte	Assoc Int Standard 1	Assoc Int Standard 2	Mode
9	Beryllium	Lithium		Ar
11	Boron	Lithium		Ar
23	Sodium	Germanium		ArHe
24	Magnesium	Germanium		ArHe
27	Aluminum	Germanium		ArHe
39	Potassium	Germanium		ArHe
44	Calcium	Germanium		Ar
47	Titanium	Germanium		Ar
51	Vanadium	Germanium		ArHe
52	Chromium	Germanium		ArHe
55	Manganese	Germanium		ArHe
56	Iron	Germanium		ArHe
59	Cobalt	Germanium		ArHe
60	Nickel	Germanium		ArHe
63	Copper	Germanium		ArHe
66	Zinc	Germanium		ArHe
75	Arsenic	Germanium		ArHe
82	Selenium	Germanium		Ar
88	Strontium	Indium		Ar
95	Molybdenum	Indium		Ar
105	Palladium	Germanium		Ar
107	Silver	Indium		Ar
114	Cadmium	Indium		Ar
118	Tin	Indium		Ar
121	Antimony	Germanium		ArHe
137	Barium	Indium		Ar
205	Thallium	Bismuth		Ar
208	Lead	Bismuth		Ar

ALS Houston, US Date: 24-Aug-21

FORM 12 - PREPARATION LOG

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP 16 July 2021
WorkOrder: HS21071405
Start Date: 09-Aug-2021 09:30 End Date: 09-Aug-2021 13:30

Batch ID: 168892
Prep Code: 3010A
Method: SW3010A
Technician:

SampID	ClientID	Matrix	Init Wt	Init Vol	FinalVol (mL)	PrepFac
HS21071405-09	16SW01-210726	GW		10	10	1
HS21071405-10	16SW01-210726-FD	GW		10	10	1
HS21071405-11	16SW02-210726	GW		10	10	1
HS21071405-11MS				10	10	1
HS21071405-11MSD				10	10	1
HS21071405-11PDS				10	10	1
HS21071405-11SD				10	10	1
HS21071405-12	16SW03-210726	GW		10	10	1
LCS-168892				10	10	1
MBLK-168892				10	10	1

ALS Houston, US Date: 24-Aug-21

FORM 13 - ANALYSIS RUN LOG

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP 16 July 2021
WorkOrder: HS21071405
Start Date: 09-Aug-2021 End Date: 09-Aug-2021

Run ID:ICPMS06_389122
Instrument:ICPMS06
Method:

Sample No.	D/F	Time	FileID	Analytes
ICPMS06_389122_Tune	1	09-Aug-2021 00:00	ICPMS06_389122_Tune_1	
CAL BLK	1	09-Aug-2021 14:41	014CALB.d_6220744	AS CR MN NI TL
2/10/200	1	09-Aug-2021 14:43	015CALS.d_6220745	AS CR MN NI TL
5/25/500	1	09-Aug-2021 14:45	016CALS.d_6220746	AS CR MN NI TL
10/50/100	1	09-Aug-2021 14:47	017CALS.d_6220747	AS CR MN NI TL
100/500/10K	1	09-Aug-2021 14:49	018CALS.d_6220748	AS CR MN NI TL
200/1000/20K	1	09-Aug-2021 14:50	019CALS.d_6220749	AS CR MN NI TL
ICV	1	09-Aug-2021 14:55	021_ICV.d_6220751	AS CR MN NI TL
ICB	1	09-Aug-2021 14:56	022_ICB.d_6220752	AS CR MN NI TL
LLICV2	1	09-Aug-2021 14:58	023LCV2.d_6220753	AS CR MN NI TL
LLICV5	1	09-Aug-2021 15:00	024LCV5.d_6220754	AS CR MN NI TL
ICSA	1	09-Aug-2021 15:04	026ICSA.d_6220756	AS CR MN NI TL
ICSAB	1	09-Aug-2021 15:06	027ICSB.d_6220757	AS CR MN NI TL
CCV 1	1	09-Aug-2021 19:07	113_CCV.d_6220760	AS CR MN NI TL
CCB 1	1	09-Aug-2021 19:09	114_CCB.d_6220761	AS CR MN NI TL
MBLK-168892	1	09-Aug-2021 19:11	115SMPL.d_6220762	AS CR MN NI TL
LCS-168892	1	09-Aug-2021 19:13	116SMPL.d_6220763	AS CR MN NI TL
16SW02-210726	1	09-Aug-2021 19:15	117SMPL.d_6220764	AS CR MN NI TL
16SW02-210726SD	5	09-Aug-2021 19:17	118SMPL.d_6220765	AS CR MN NI TL
16SW02-210726MS	1	09-Aug-2021 19:19	119SMPL.d_6220766	AS CR MN NI TL
16SW02-210726MSD	1	09-Aug-2021 19:21	120SMPL.d_6220767	AS CR MN NI TL
16SW02-210726PDS	1	09-Aug-2021 19:23	121SMPL.d_6220768	MN
CCV 2	1	09-Aug-2021 19:24	122_CCV.d_6220769	AS CR MN NI TL
CCB 2	1	09-Aug-2021 19:26	123_CCB.d_6220770	AS CR MN NI TL
16SW01-210726	1	09-Aug-2021 19:28	124SMPL.d_6220771	AS CR MN NI TL
16SW01-210726-FD	1	09-Aug-2021 19:30	125SMPL.d_6220772	AS CR MN NI TL
16SW03-210726	1	09-Aug-2021 19:32	126SMPL.d_6220773	AS CR MN NI TL
CCV 3	1	09-Aug-2021 19:38	129_CCV.d_6220776	AS CR MN NI TL
CCB 3	1	09-Aug-2021 19:40	130_CCB.d_6220777	AS CR MN NI TL
CAL BLK	1	09-Aug-2021 20:11	144CALB.d_6220779	AS CR MN NI TL
2/10/200	1	09-Aug-2021 20:13	145CALS.d_6220780	AS CR MN NI TL
5/25/500	1	09-Aug-2021 20:15	146CALS.d_6220781	AS CR MN NI TL
10/50/100	1	09-Aug-2021 20:17	147CALS.d_6220782	AS CR MN NI TL
100/500/10K	1	09-Aug-2021 20:19	148CALS.d_6220783	AS CR MN NI TL
200/1000/20K	1	09-Aug-2021 20:21	149CALS.d_6220784	AS CR MN NI TL
ICV	1	09-Aug-2021 20:25	151_ICV.d_6220786	AS CR MN NI TL
LLICCV5	1	09-Aug-2021 20:27	152LCV5.d_6220787	AS CR MN NI TL
LLICCV2	1	09-Aug-2021 20:29	153LCV2.d_6220788	AS CR MN NI TL
ICCB 4	1	09-Aug-2021 20:30	154_ICB.d_6220789	AS CR MN NI TL
CCV 4	1	09-Aug-2021 22:03	201_CCV.d_6220790	AS CR MN NI TL
CCB 5	1	09-Aug-2021 22:05	202_CCB.d_6220791	AS CR MN NI TL
LLCCV2	1	09-Aug-2021 22:11	205LCV2.d_6220793	AS CR MN NI TL
LLCCV5	1	09-Aug-2021 22:13	206LCV5.d_6220794	AS CR MN NI TL
ICSA	1	09-Aug-2021 22:15	207ICSA.d_6220795	AS CR MN NI TL
ICSAB	1	09-Aug-2021 22:17	208ICSB.d_6220796	AS CR MN NI TL

Form 2 - Initial and Continuing Calibration Verification

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP 16 July 2021
WorkOrder: HS21071405

Run ID: ICPMS06_389122
Instrument: ICPMS06
Method: SW6020A

ICV	Date: 09-Aug-2021 14:55		Seq: 6220751	ICV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Arsenic	100	105.395	105	90-110	
Chromium	100	102.598	103	90-110	
Manganese	100	102.815	103	90-110	
Nickel	100	103.29	103	90-110	
Thallium	100	106.046	106	90-110	

CCV1	Date: 09-Aug-2021 19:07		Seq: 6220760	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Arsenic	100	103.218	103	90-110	
Chromium	100	99.205	99	90-110	
Manganese	100	97.51	98	90-110	
Nickel	100	98.635	99	90-110	
Thallium	100	107.51	108	90-110	

CCV2	Date: 09-Aug-2021 19:24		Seq: 6220769	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Arsenic	100	103.731	104	90-110	
Chromium	100	99.504	100	90-110	
Manganese	100	97.774	98	90-110	
Nickel	100	98.474	99	90-110	
Thallium	100	107.066	107	90-110	

CCV3	Date: 09-Aug-2021 19:38		Seq: 6220776	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Arsenic	100	101.415	101	90-110	
Chromium	100	97.253	97	90-110	
Manganese	100	97.652	98	90-110	
Nickel	100	97.944	98	90-110	
Thallium	100	105.774	106	90-110	

ICV	Date: 09-Aug-2021 20:25		Seq: 6220786	ICV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Arsenic	100	100.985	101	90-110	
Chromium	100	102.606	103	90-110	
Manganese	100	100.417	100	90-110	
Nickel	100	102.835	103	90-110	
Thallium	100	102.106	102	90-110	

CCV4	Date: 09-Aug-2021 22:03		Seq: 6220790	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Arsenic	100	98.723	99	90-110	
Chromium	100	102.146	102	90-110	
Manganese	100	102.336	102	90-110	
Nickel	100	98.71	99	90-110	
Thallium	100	101.735	102	90-110	

Form 3 - BLANKS

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP 16 July 2021
WorkOrder: HS21071405

Run ID: ICPMS06_389122
Instrument: ICPMS06
Method: SW6020A

ICB	Date: 09-Aug-2021 14:56		Seq: 6220752	ICB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Arsenic	5	0.4	5	U	
Chromium	5	0.4	5	U	
Manganese	5	0.7	5	U	
Nickel	5	0.6	5	U	
Thallium	2	0.2	2	U	

CCB1	Date: 09-Aug-2021 19:09		Seq: 6220761	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Arsenic	2	0.4	2	U	
Chromium	4	0.4	4	U	
Manganese	5	0.7	5	U	
Nickel	2	0.6	2	U	
Thallium	2	0.2	2	U	

MBLK-168892	Date: 09-Aug-2021 19:11		Seq: 6220762	MBLK	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Arsenic	5	0.4	5	U	
Chromium	5	0.4	5	U	
Manganese	5	0.7	5	U	
Nickel	5	0.6	5	U	
Thallium	2	0.2	2	U	

CCB2	Date: 09-Aug-2021 19:26		Seq: 6220770	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Arsenic	2	0.4	2	U	
Chromium	4	0.4	4	U	
Manganese	5	0.7	5	U	
Nickel	2	0.6	2	U	
Thallium	2	0.2	2	U	

CCB3	Date: 09-Aug-2021 19:40		Seq: 6220777	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Arsenic	2	0.4	2	U	
Chromium	4	0.4	4	U	
Manganese	5	0.7	5	U	
Nickel	2	0.6	2	U	
Thallium	2	0.2	2	U	

ICCB4	Date: 09-Aug-2021 20:30		Seq: 6220789	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Arsenic	5	0.4	5	U	
Chromium	5	0.4	5	U	
Manganese	5	0.7	5	U	
Nickel	5	0.6	5	U	
Thallium	2	0.2	2	U	

CCB5	Date: 09-Aug-2021 22:05		Seq: 6220791	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Arsenic	2	0.4	2	U	
Chromium	4	0.4	4	U	
Manganese	5	0.7	5	U	
Nickel	2	0.6	2	U	
Thallium	2	0.2	2	U	

Form 4 - ICP Interference Check Sample

Client: Aptim Environmental & Infrastucture, Inc. Run ID:ICPMS06_389122

Project: Longhorn Army Ammunition Plant LHAAP 16 July 2021 Instrument:ICPMS06

WorkOrder: HS21071405 Method:SW6020A

ICSA	Date: 09-Aug-2021 15:04	Seq: 6220756	ICSA	Units: ug/L
Analyte	**True**	**Found**	**%R**	
Arsenic		0.046	0	
Chromium		1.963	0	
Manganese		0.458	0	
Nickel		0.165	0	
Thallium		0.007	0	
ICSAB	Date: 09-Aug-2021 15:06	Seq: 6220757	ICSAB	Units: ug/L
Analyte	**True**	**Found**	**%R**	
Arsenic	100	100.3	100	
Chromium	100	100.6	101	
Manganese	100	95	95.0	
Nickel	100	95.22	95.2	
Thallium	100	100.5	100	
ICSA	Date: 09-Aug-2021 22:15	Seq: 6220795	ICSA	Units: ug/L
Analyte	**True**	**Found**	**%R**	
Arsenic		0.063	0	
Chromium		1.929	0	
Manganese		0.391	0	
Nickel		0.176	0	
Thallium		0.006	0	
ICSAB	Date: 09-Aug-2021 22:17	Seq: 6220796	ICSAB	Units: ug/L
Analyte	**True**	**Found**	**%R**	
Arsenic	100	99.16	99.2	
Chromium	100	100.8	101	
Manganese	100	97.34	97.3	
Nickel	100	94.6	94.6	
Thallium	100	100.7	101	

ALS Houston, US

Date: 24-Aug-21

Form 5A - Matrix Spike/Matrix Spike Duplicate Recovery

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP 16 July 2021
WorkOrder: HS21071405

Date Analyzed: 09-Aug-2021 19:21
Date Extracted: 09-Aug-2021 13:30
Units: ug/L

Matrix Spike: HS21071405-11MS
Client Sample ID: 16SW02-210726

Analysis Method: SW6020A

Analyte	Sample Result	MS Result	Spike Amount	% Rec	MSD Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
Arsenic	1.797	53.08	50.00	103	52.98	50.00	102	84-116	0.181	20
Chromium	1.964	50.53	50.00	97.1	50.35	50.00	96.8	85-116	0.349	20
Manganese	742.2	767.7	50.00	51.0	750.9	50.00	17.4	87-115	2.21	20
Nickel	3.730	52.93	50.00	98.4	52.38	50.00	97.3	85-117	1.03	20
Thallium	2.000	54.01	50.00	108	53.69	50.00	107	82-116	0.607	20

ALS Houston, US Date: 24-Aug-21

Form 5B - Post Digest Sample Recovery

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP 16 July 2021
WorkOrder: HS21071405

Date Analyzed: 09-Aug-2021 19:23
Date Extracted: 09-Aug-2021 13:30
Units: ug/L

Lab Sample ID: HS21071405-11PDS
Client Sample ID: 16SW02-210726

Analysis Method: SW6020A

Analyte	Sample Result	PDS Result	Spike Amount	% Rec	% Rec Limits
Manganese	742.2	797.7	100	56	80-120

ALS Houston, US

Date: 24-Aug-21

Form 7 - Laboratory Control Sample

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP 16 July 2021
WorkOrder: HS21071405

Date Analyzed: 09-Aug-2021 19:13
Date Extracted: 09-Aug-2021 13:30
Units: ug/L

Lab Sample ID: LCS-168892
Analysis Method: SW6020A

Analyte	Spike Amount	LCS Result	% Rec	% Rec Limits
Arsenic	50	50.92	102	84-116
Chromium	50	49.28	99	85-116
Manganese	50	49.7	99	87-115
Nickel	50	49.6	99	85-117
Thallium	50	53.62	107	82-116

ALS Houston, US Date: 24-Aug-21

Form 8 - ICP Serial Dilutions

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP 16 July 2021
WorkOrder: HS21071405

Date Analyzed: 09-Aug-2021 19:17
Date Extracted: 09-Aug-2021 13:30
Units: ug/L

Lab Sample ID: HS21071405-11SD
Client Sample ID:16SW02-210726

Analysis Method: SW6020A

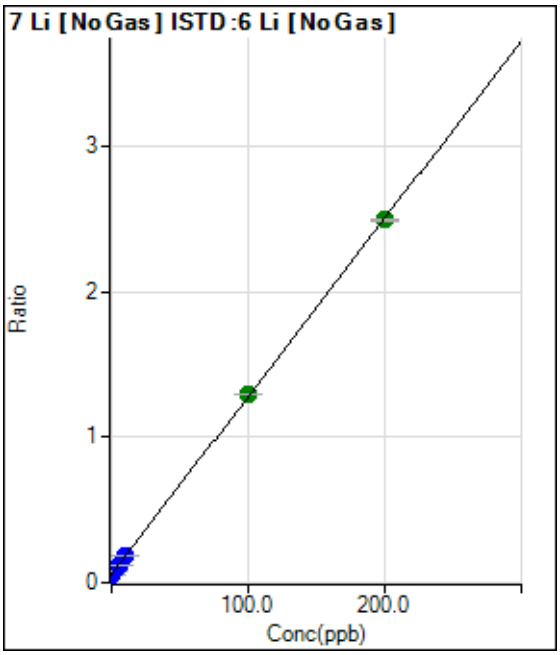
Analyte	Sample Result	C	SD Result	C	RPD	Q
Arsenic	1.797	J	4.007	J	123	
Chromium	1.964	J	3.762	J	92	
Manganese	742.2		807.3		9	
Nickel	3.73	J	5.607	J	50	
Thallium	0	U	2.066	J	2275	

Calibration for 151_ICV.d

Batch Folder: C:\Agilent\ICPMH\1\DATA\080921A.b\
Analysis File: 080921A.batch.bin
DA Date-Time: 8/9/2021 8:49:03 PM
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	144CALB.d	CAL BLK	8/9/2021 8:11:59 PM
2	145CALS.d	2/10/200	8/9/2021 8:13:56 PM
3	146CALS.d	5/25/500	8/9/2021 8:15:53 PM
4	147CALS.d	10/50/100	8/9/2021 8:17:49 PM
5	148CALS.d	100/500/10K	8/9/2021 8:19:45 PM
6	149CALS.d	200/1000/20K	8/9/2021 8:21:33 PM

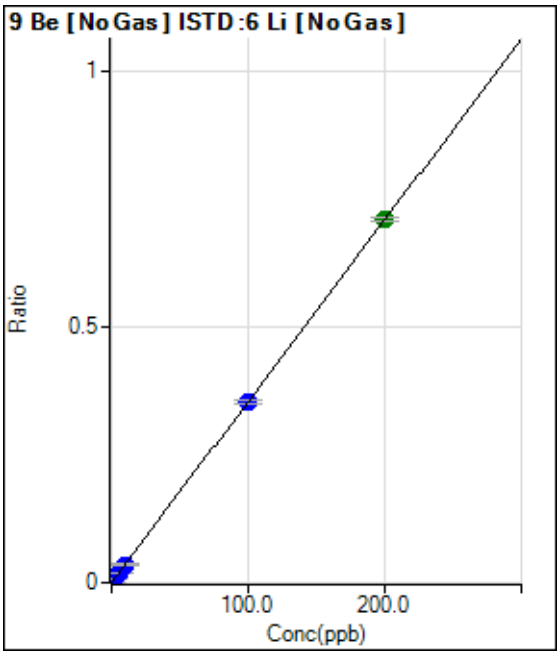
Calibration for 151_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	110700.28	0.0584	P	2.2
2	☐	2.000	1.844	156564.09	0.0809	P	2.0
3	☐	5.000	5.061	228691.48	0.1203	P	3.0
4	☐	10.000	10.372	351925.32	0.1853	P	2.7
5	☐	100.000	101.258	2413454.70	1.2975	A	0.6
6	☐	200.000	199.352	4492238.79	2.4980	A	0.6

y = 0.0122 * x + 0.0584
R = 1.0000
DL = 0.312
BEC = 4.768

Weight: <None>
Min Conc: <None>

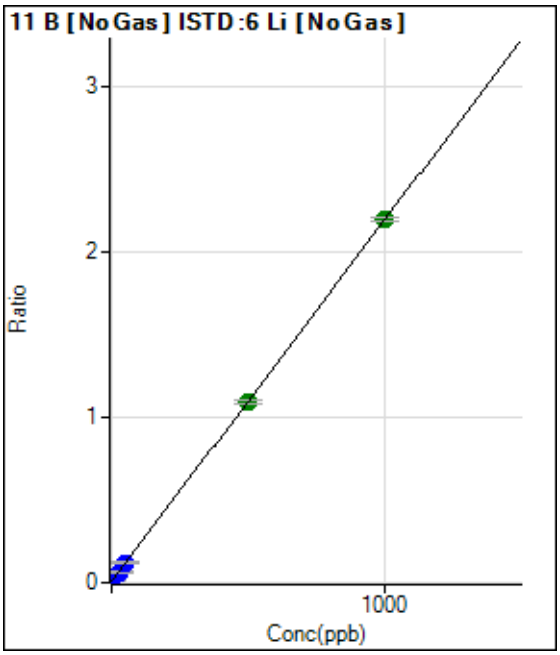


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	16.67	0.0000	P	19.0
2	☐	2.000	1.949	13396.48	0.0069	P	1.7
3	☐	5.000	5.026	33910.96	0.0178	P	3.7
4	☐	10.000	9.979	67246.61	0.0354	P	3.5
5	☐	100.000	99.610	657147.61	0.3534	P	2.1
6	☐	200.000	200.196	1277239.35	0.7102	A	0.9

y = 0.0035 * x + 8.8020E-006
R = 1.0000
DL = 0.001414
BEC = 0.002481

Weight: <None>
Min Conc: <None>

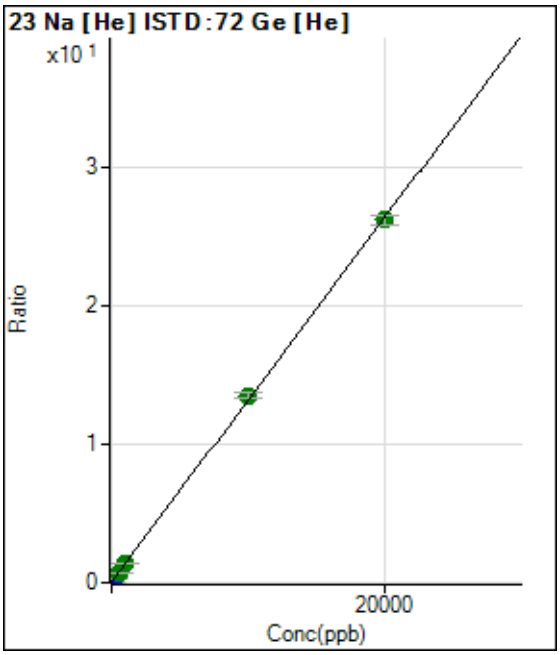
Calibration for 151_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	16339.57	0.0086	P	4.8
2	☐	10.000	9.530	56866.28	0.0294	P	1.9
3	☐	25.000	25.327	121331.90	0.0638	P	3.7
4	☐	50.000	50.650	225954.96	0.1190	P	5.1
5	☐	500.000	497.185	2031573.62	1.0925	A	2.1
6	☐	1000.000	1001.372	3940954.00	2.1916	A	1.0

y = 0.0022 * x + 0.0086
R = 1.0000
DL = 0.5685
BEC = 3.953

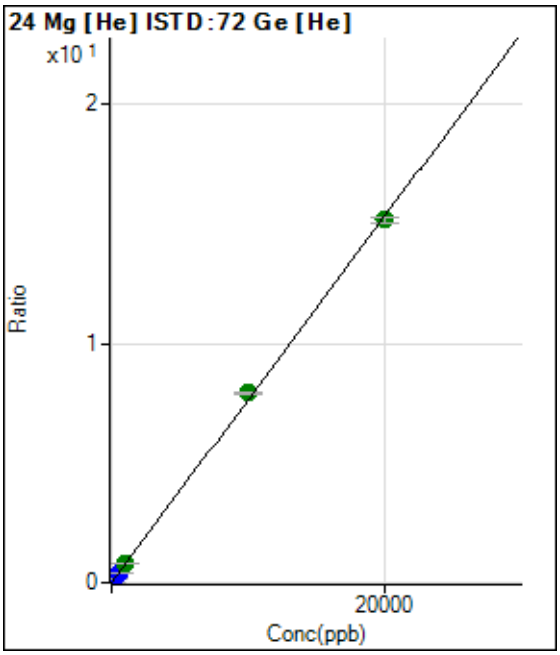
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	64987.96	0.0524	P	1.3
2	☐	200.000	209.929	412751.19	0.3283	P	1.8
3	☐	500.000	528.174	940012.36	0.7465	A	1.4
4	☐	1000.000	1050.006	1776293.31	1.4323	A	1.6
5	☐	10000.00	10215.48	16357166.42	13.4769	A	3.2
6	☐	20000.00	19888.95	31686187.86	26.1892	A	2.8

y = 0.0013 * x + 0.0524
R = 0.9999
DL = 1.6
BEC = 39.9

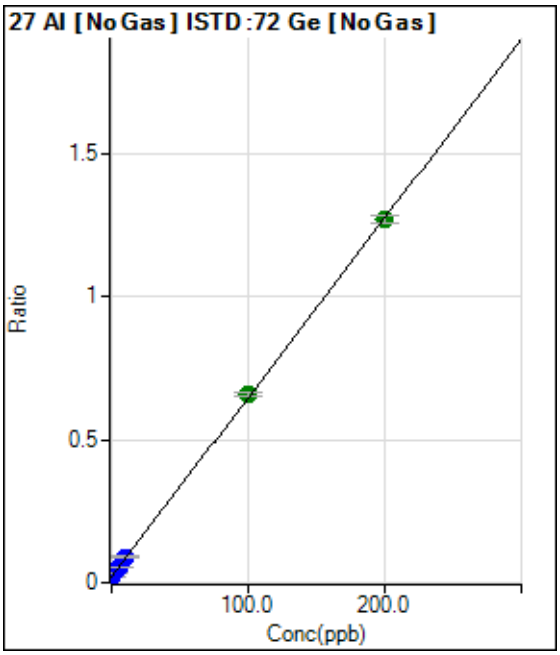
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	706.70	0.0006	P	16.1
2	☐	200.000	214.857	207361.52	0.1649	P	1.6
3	☐	500.000	538.244	519170.04	0.4123	P	1.6
4	☐	1000.000	1080.715	1025772.09	0.8273	A	2.6
5	☐	10000.00	10358.43	9620862.57	7.9246	A	1.6
6	☐	20000.00	19815.64	18343930.56	15.1593	A	1.4

y = 7.6499E-004 * x + 5.7040E-004
R = 0.9998
DL = 0.3594
BEC = 0.7456

Weight: <None>
Min Conc: <None>

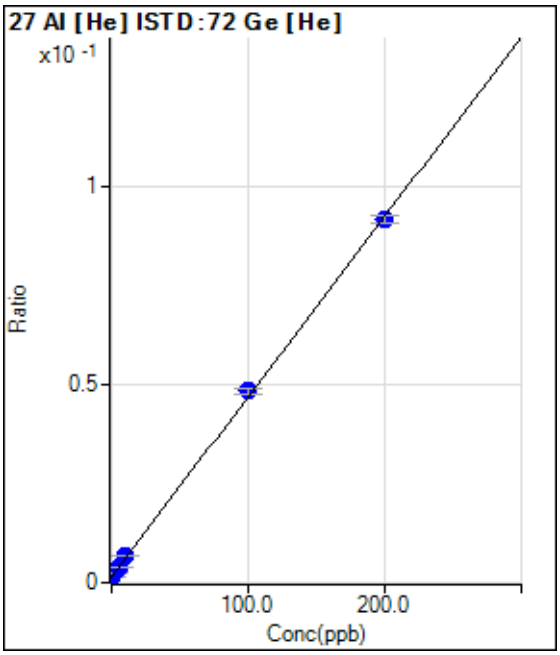


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	84218.11	0.0206	P	1.9
2	☐	2.000	2.191	141072.25	0.0343	P	0.3
3	☐	5.000	5.729	229492.98	0.0564	P	1.8
4	☐	10.000	11.195	367525.91	0.0906	P	0.6
5	☐	100.000	101.498	2623266.47	0.6558	A	2.2
6	☐	200.000	199.171	4924066.18	1.2671	A	2.2

y = 0.0063 * x + 0.0206
R = 1.0000
DL = 0.1824
BEC = 3.286

Weight: <None>
Min Conc: <None>

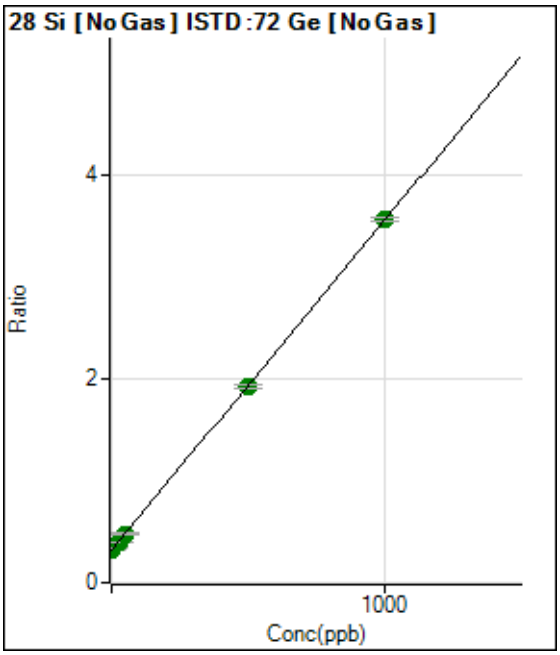
Calibration for 151_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1873.49	0.0015	P	6.2
2	☐	2.000	2.170	3137.08	0.0025	P	4.3
3	☐	5.000	4.974	4744.24	0.0038	P	2.6
4	☐	10.000	11.763	8496.09	0.0068	P	0.6
5	☐	100.000	103.140	58650.62	0.0483	P	2.4
6	☐	200.000	198.341	110733.27	0.0915	P	2.3

y = 4.5380E-004 * x + 0.0015
R = 0.9998
DL = 0.6229
BEC = 3.33

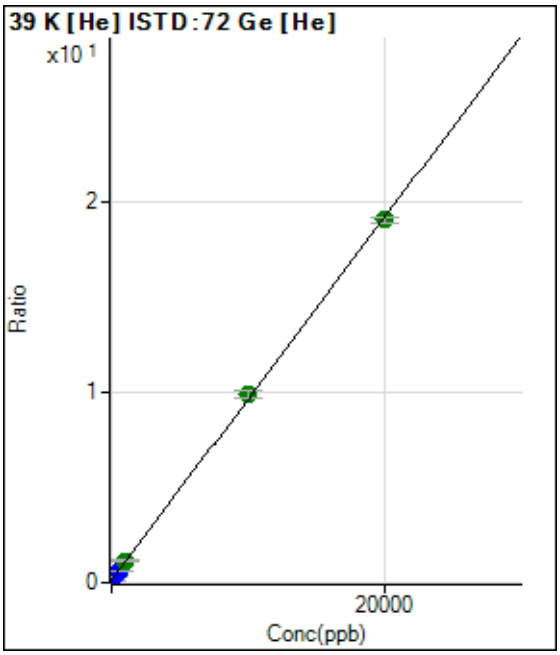
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1311882.69	0.3203	A	2.7
2	☐	10.000	8.818	1435319.72	0.3488	A	1.1
3	☐	25.000	25.026	1631859.35	0.4012	A	1.1
4	☐	50.000	48.249	1931047.42	0.4762	A	2.3
5	☐	500.000	497.027	7705729.89	1.9264	A	2.2
6	☐	1000.000	1001.585	13823292.71	3.5568	A	0.9

y = 0.0032 * x + 0.3203
R = 1.0000
DL = 7.914
BEC = 99.13

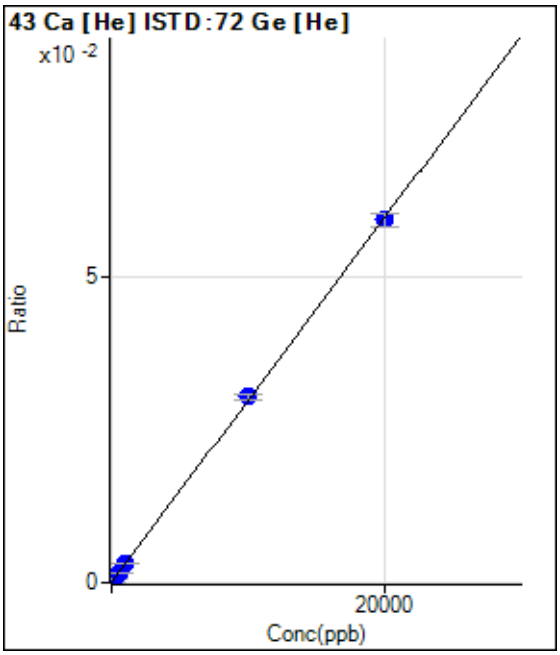
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	155912.05	0.1258	P	1.0
2	☐	200.000	207.647	406679.90	0.3235	P	2.2
3	☐	500.000	524.719	787448.42	0.6254	P	1.2
4	☐	1000.000	1076.186	1426113.62	1.1504	A	3.8
5	☐	10000.00	10262.92	12011908.15	9.8968	A	3.4
6	☐	20000.00	19864.03	23035817.99	19.0377	A	1.9

y = 9.5207E-004 * x + 0.1258
R = 0.9999
DL = 3.785
BEC = 132.1

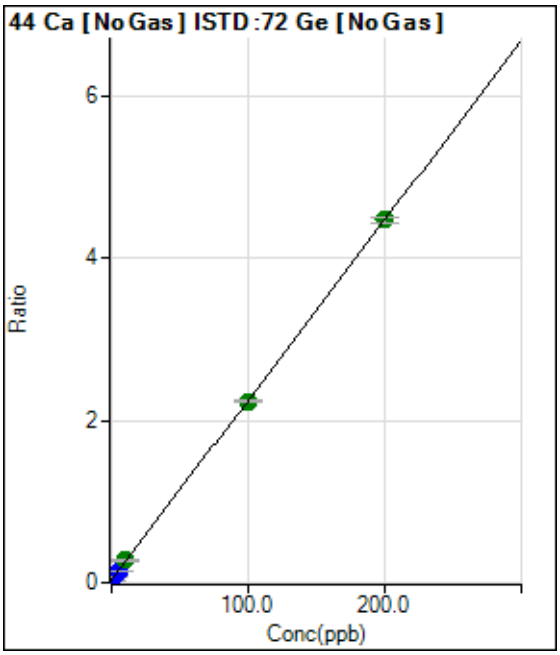
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	46.67	0.0000	P	33.3
2	☐	200.000	218.822	866.71	0.0007	P	7.6
3	☐	500.000	520.973	2000.18	0.0016	P	5.5
4	☐	1000.000	1058.952	3953.98	0.0032	P	2.7
5	☐	10000.00	10207.98	36916.62	0.0304	P	3.1
6	☐	20000.00	19892.34	71670.24	0.0592	P	3.8

y = 2.9759E-006 * x + 3.7703E-005
R = 0.9999
DL = 12.66
BEC = 12.67

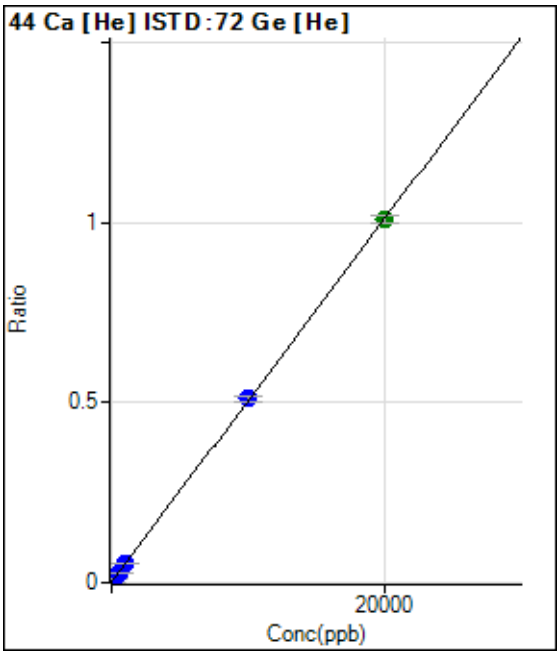
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	138448.00	0.0338	P	0.5
2	☐	2.000	2.021	323670.56	0.0787	P	0.8
3	☐	5.000	5.161	603273.41	0.1483	P	1.5
4	☐	10.000	10.834	1112041.57	0.2742	A	1.7
5	☐	100.000	99.385	8956850.91	2.2391	A	1.4
6	☐	200.000	200.261	17400895.16	4.4775	A	1.8

y = 0.0222 * x + 0.0338
R = 1.0000
DL = 0.02418
BEC = 1.524

Weight: <None>
Min Conc: <None>

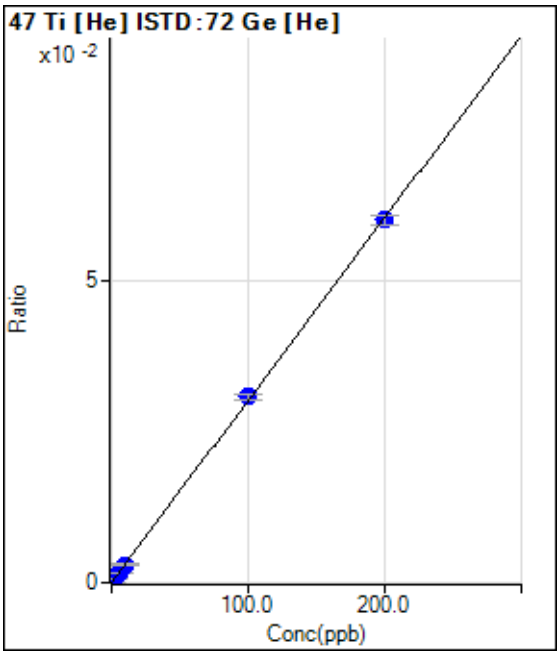


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1843.49	0.0015	P	10.6
2	☐	200.000	202.740	14728.12	0.0117	P	3.0
3	☐	500.000	500.582	33665.06	0.0267	P	4.6
4	☐	1000.000	1012.001	65141.23	0.0525	P	2.9
5	☐	10000.00	10096.07	619991.88	0.5108	P	2.9
6	☐	20000.00	19951.32	1219660.63	1.0079	A	2.2

y = 5.0446E-005 * x + 0.0015
R = 1.0000
DL = 9.418
BEC = 29.49

Weight: <None>
Min Conc: <None>

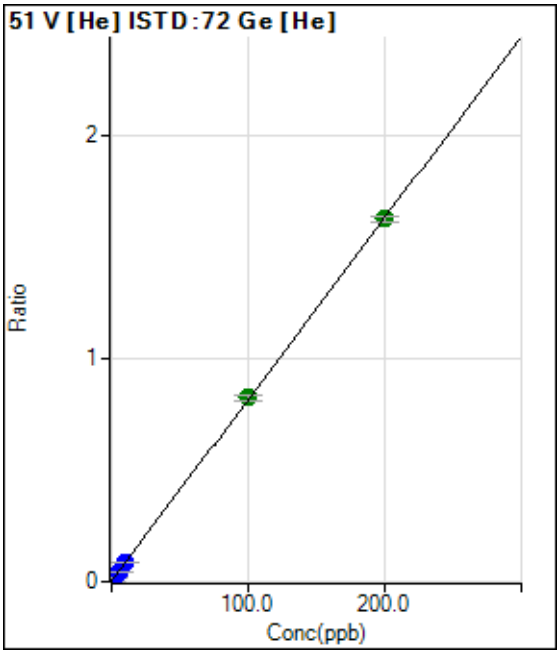
Calibration for 151_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	16.67	0.0000	P	173.2
2	☐	2.000	2.191	850.04	0.0007	P	12.0
3	☐	5.000	4.965	1906.84	0.0015	P	3.6
4	☐	10.000	9.917	3733.92	0.0030	P	2.8
5	☐	100.000	102.000	37444.59	0.0308	P	3.2
6	☐	200.000	199.003	72809.47	0.0602	P	2.4

y = 3.0231E-004 * x + 1.3542E-005
R = 0.9999
DL = 0.2328
BEC = 0.04479

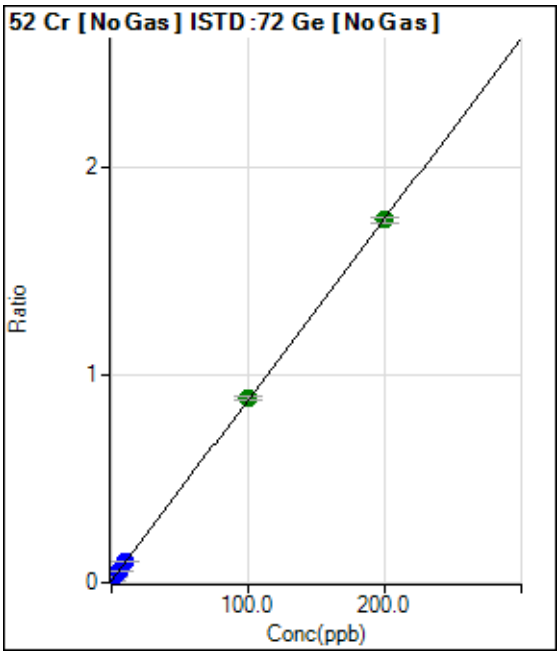
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3818.33	0.0031	P	3.2
2	☐	2.000	1.967	23976.55	0.0191	P	2.1
3	☐	5.000	4.893	53964.68	0.0429	P	1.0
4	☐	10.000	9.885	103439.73	0.0834	P	3.0
5	☐	100.000	100.864	998778.92	0.8229	A	3.8
6	☐	200.000	199.577	1966692.63	1.6253	A	1.6

y = 0.0081 * x + 0.0031
R = 1.0000
DL = 0.03686
BEC = 0.379

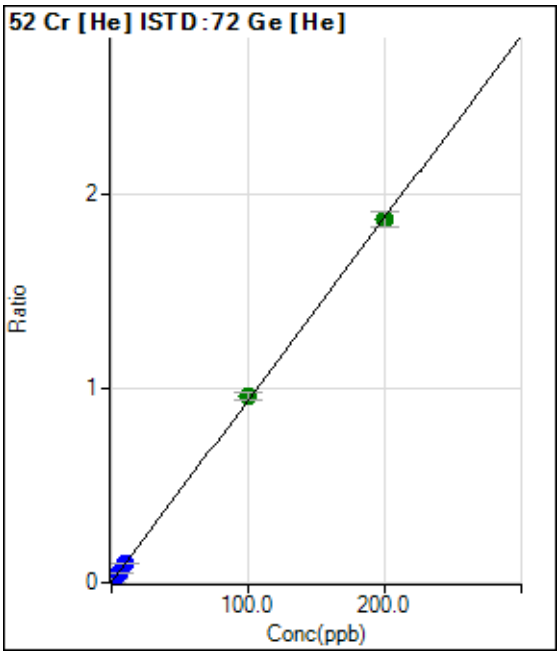
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	38728.46	0.0095	P	2.5
2	☐	2.000	2.039	112016.24	0.0272	P	1.4
3	☐	5.000	5.242	224215.28	0.0551	P	1.2
4	☐	10.000	10.555	411242.36	0.1014	P	0.4
5	☐	100.000	100.765	3549159.42	0.8873	A	1.7
6	☐	200.000	199.583	6794231.15	1.7481	A	1.3

y = 0.0087 * x + 0.0095
R = 1.0000
DL = 0.08173
BEC = 1.086

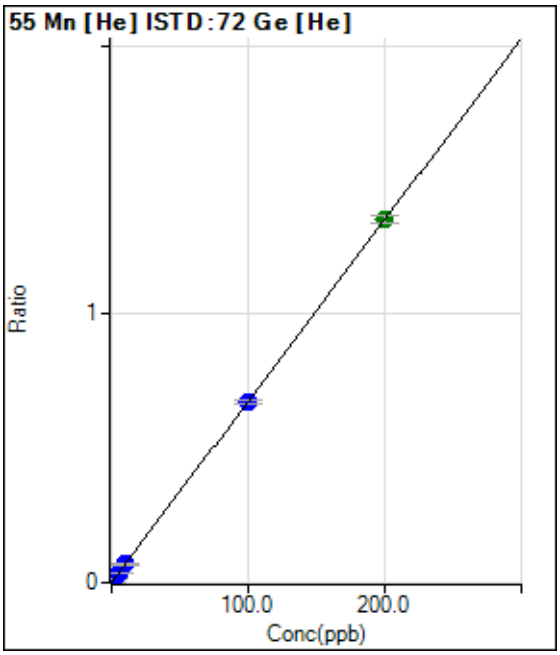
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2250.22	0.0018	P	2.8
2	☐	2.000	1.975	25637.65	0.0204	P	3.7
3	☐	5.000	5.055	62168.09	0.0494	P	1.2
4	☐	10.000	10.063	119594.18	0.0965	P	4.3
5	☐	100.000	102.285	1169947.56	0.9640	A	4.2
6	☐	200.000	198.853	2265387.94	1.8725	A	4.2

y = 0.0094 * x + 0.0018
R = 0.9999
DL = 0.0161
BEC = 0.193

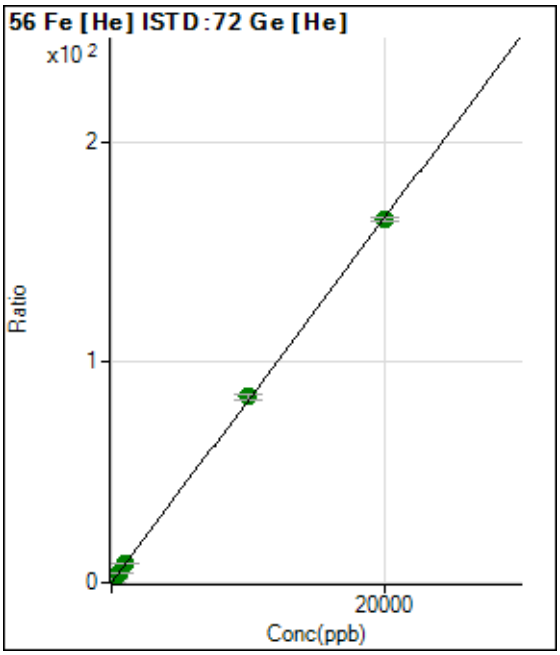
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	546.69	0.0004	P	0.5
2	☐	2.000	2.015	17668.32	0.0141	P	2.4
3	☐	5.000	5.004	43118.51	0.0342	P	1.8
4	☐	10.000	10.066	84839.20	0.0684	P	3.7
5	☐	100.000	99.847	819205.95	0.6749	P	2.5
6	☐	200.000	200.073	1635754.40	1.3519	A	2.0

y = 0.0068 * x + 4.4104E-004
R = 1.0000
DL = 0.001029
BEC = 0.06529

Weight: <None>
Min Conc: <None>

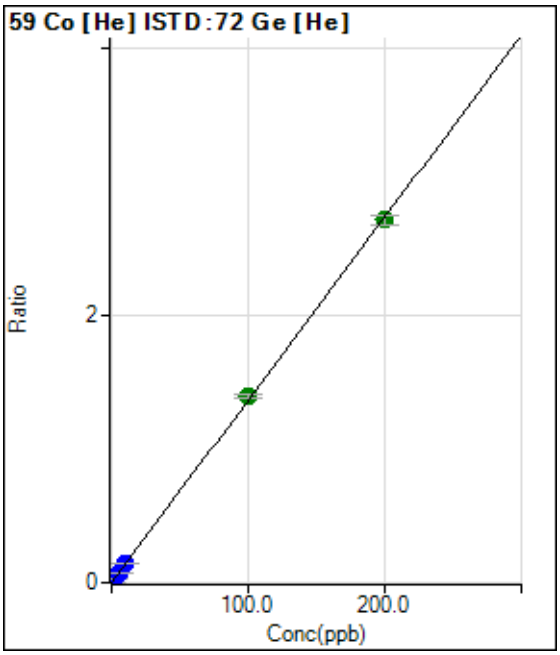


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	20645.90	0.0167	P	4.9
2	☐	200.000	209.019	2195402.05	1.7462	A	1.3
3	☐	500.000	509.738	5332258.46	4.2344	A	0.2
4	☐	1000.000	1036.158	10648040.26	8.5902	A	4.3
5	☐	10000.00	10200.91	102465531.8	84.4231	A	3.4
6	☐	20000.00	19897.40	199248830.3	164.655	A	1.2

y = 0.0083 * x + 0.0167
R = 0.9999
DL = 0.2976
BEC = 2.013

Weight: <None>
Min Conc: <None>

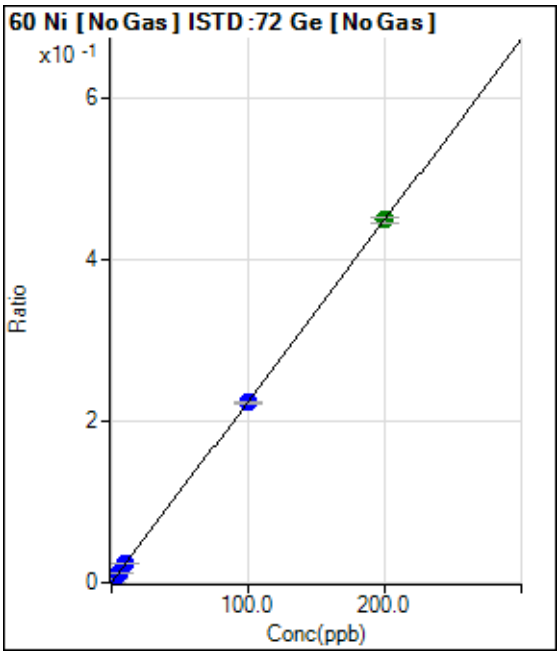
Calibration for 151_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	50.00	0.0000	P	39.6
2	☐	2.000	2.073	35610.32	0.0283	P	1.0
3	☐	5.000	5.144	88409.30	0.0702	P	0.6
4	☐	10.000	10.347	174996.83	0.1412	P	4.3
5	☐	100.000	102.458	1696541.28	1.3976	A	2.5
6	☐	200.000	198.749	3280256.20	2.7111	A	2.5

y = 0.0136 * x + 4.0309E-005
R = 0.9999
DL = 0.003512
BEC = 0.002955

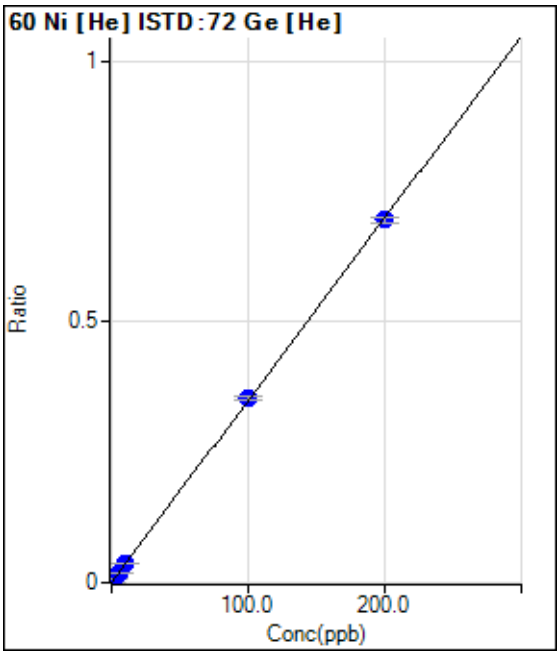
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1083.39	0.0003	P	2.8
2	☐	2.000	1.975	19347.37	0.0047	P	5.0
3	☐	5.000	5.151	48152.28	0.0118	P	1.2
4	☐	10.000	10.385	95691.55	0.0236	P	1.5
5	☐	100.000	99.572	896016.52	0.2240	P	1.3
6	☐	200.000	200.191	1749267.79	0.4501	A	1.9

y = 0.0022 * x + 2.6451E-004
R = 1.0000
DL = 0.009804
BEC = 0.1177

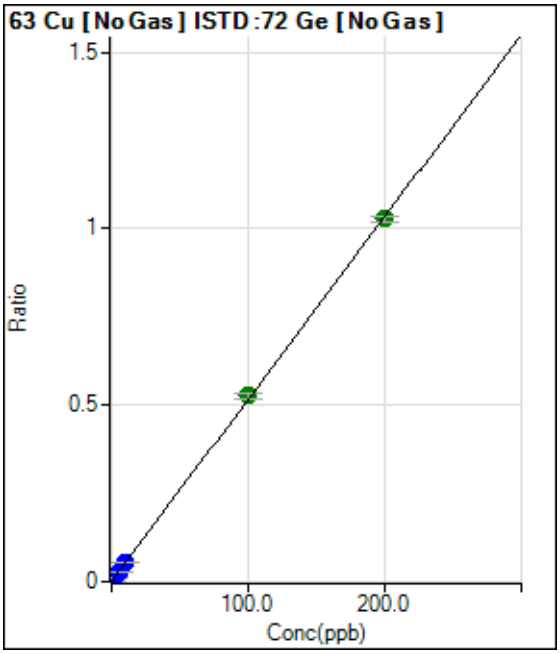
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	510.02	0.0004	P	12.2
2	☐	2.000	2.047	9506.81	0.0076	P	3.0
3	☐	5.000	5.155	23180.05	0.0184	P	3.1
4	☐	10.000	10.537	46128.40	0.0372	P	2.7
5	☐	100.000	101.648	431375.10	0.3553	P	1.8
6	☐	200.000	199.145	841912.15	0.6958	P	1.5

y = 0.0035 * x + 4.1160E-004
R = 1.0000
DL = 0.04316
BEC = 0.1179

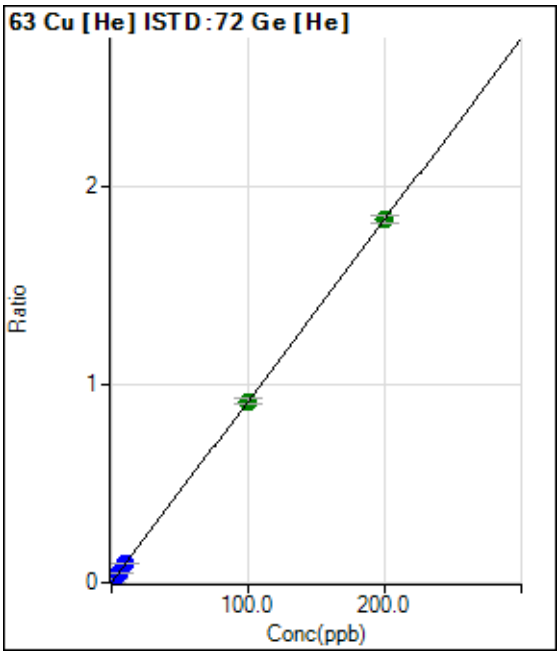
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2827.01	0.0007	P	4.6
2	☐	2.000	2.078	46954.66	0.0114	P	1.6
3	☐	5.000	5.206	112046.91	0.0275	P	2.9
4	☐	10.000	10.392	220198.33	0.0543	P	2.2
5	☐	100.000	101.912	2105623.72	0.5265	A	3.0
6	☐	200.000	199.018	3992980.98	1.0274	A	1.3

y = 0.0052 * x + 6.9042E-004
R = 0.9999
DL = 0.01853
BEC = 0.1338

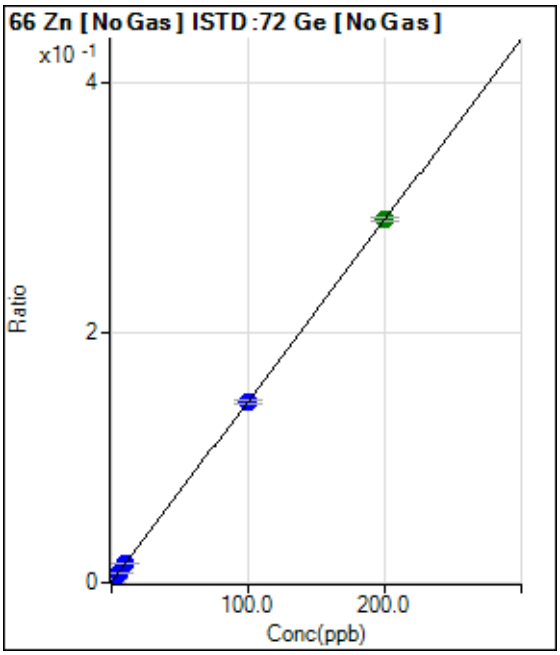
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1286.76	0.0010	P	5.1
2	☐	2.000	2.028	24599.20	0.0196	P	2.1
3	☐	5.000	5.057	59500.45	0.0472	P	1.8
4	☐	10.000	10.218	117068.26	0.0944	P	1.3
5	☐	100.000	100.050	1110944.25	0.9152	A	2.4
6	☐	200.000	199.963	2211966.17	1.8281	A	2.1

y = 0.0091 * x + 0.0010
R = 1.0000
DL = 0.01755
BEC = 0.1136

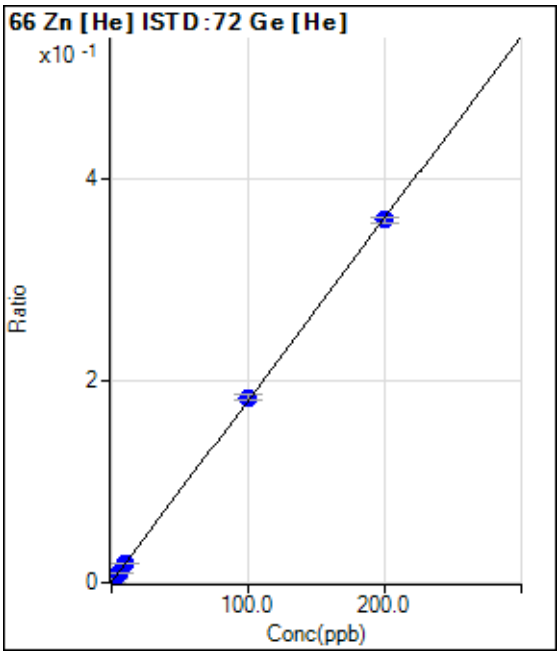
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1440.10	0.0004	P	7.5
2	☐	2.000	2.009	13436.82	0.0033	P	2.7
3	☐	5.000	5.152	31827.69	0.0078	P	1.3
4	☐	10.000	10.346	62270.00	0.0154	P	3.1
5	☐	100.000	99.793	580301.54	0.1451	P	2.7
6	☐	200.000	200.082	1129188.65	0.2905	A	1.1

y = 0.0015 * x + 3.5148E-004
R = 1.0000
DL = 0.05452
BEC = 0.2423

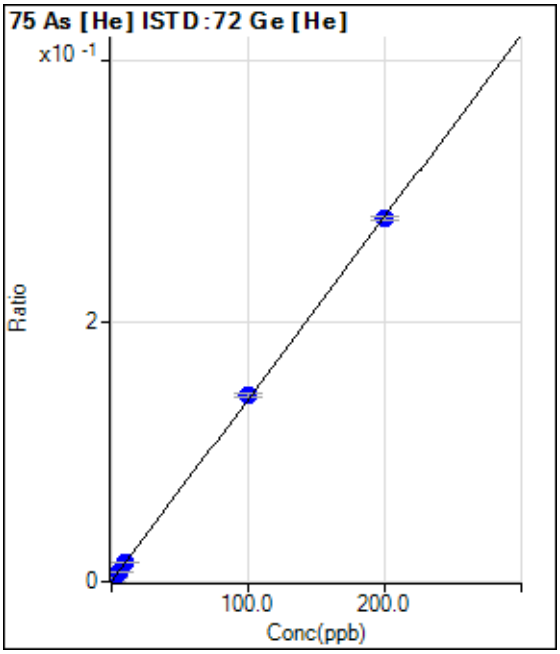
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	490.02	0.0004	P	13.1
2	☐	2.000	2.026	5094.38	0.0040	P	7.1
3	☐	5.000	4.997	11845.38	0.0094	P	0.2
4	☐	10.000	10.700	24415.67	0.0197	P	2.5
5	☐	100.000	101.696	223091.48	0.1838	P	2.8
6	☐	200.000	199.117	435007.26	0.3595	P	1.3

y = 0.0018 * x + 3.9522E-004
R = 0.9999
DL = 0.08621
BEC = 0.2192

Weight: <None>
Min Conc: <None>

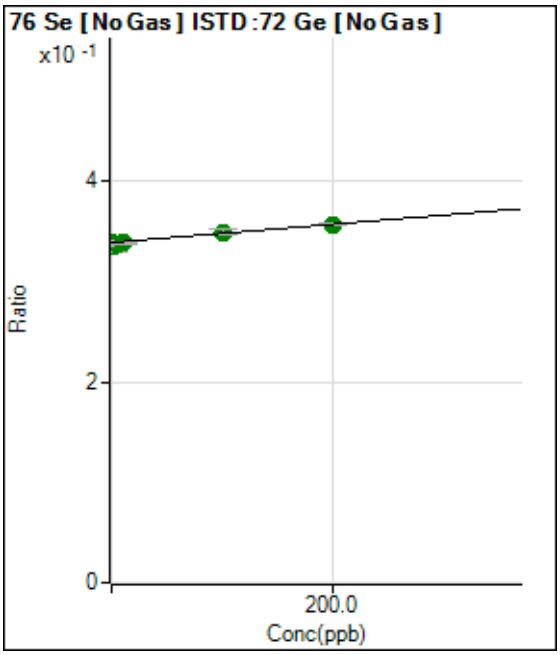


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	203.34	0.0002	P	16.4
2	☐	2.000	2.011	3748.32	0.0030	P	5.6
3	☐	5.000	4.974	8978.59	0.0071	P	2.2
4	☐	10.000	10.254	18009.86	0.0145	P	3.3
5	☐	100.000	102.122	173862.25	0.1432	P	1.8
6	☐	200.000	198.927	337395.84	0.2788	P	1.0

y = 0.0014 * x + 1.6402E-004
R = 0.9999
DL = 0.05775
BEC = 0.1171

Weight: <None>
Min Conc: <None>

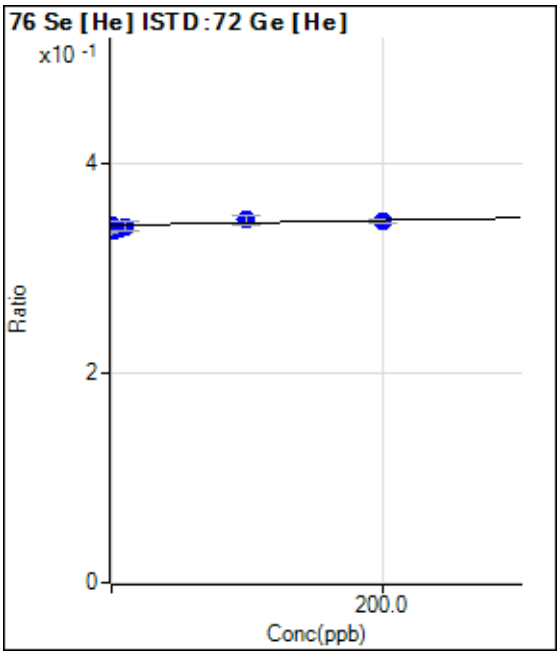
Calibration for 151_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1388456.13	0.3391	A	1.4
2	☐	2.000	-49.417	1376736.49	0.3346	A	2.6
3	☐	5.000	-13.488	1374042.95	0.3378	A	1.9
4	☐	10.000	-8.787	1371758.57	0.3383	A	0.9
5	☐	100.000	112.360	1397215.55	0.3493	A	1.4
6	☐	200.000	195.735	1387039.09	0.3569	A	0.5

y = 9.1081E-005 * x + 0.3391
R = 0.9785
DL = 157.3
BEC = 3723

Weight: <None>
Min Conc: <None>

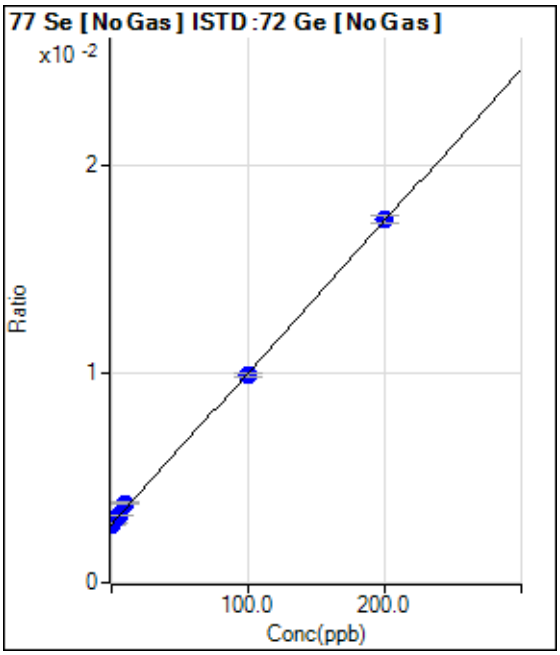


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	423475.69	0.3417	P	2.0
2	☐	2.000	-246.783	422411.73	0.3360	P	2.0
3	☐	5.000	-152.365	425799.80	0.3382	P	1.9
4	☐	10.000	-37.999	422514.87	0.3408	P	3.2
5	☐	100.000	216.563	420782.44	0.3467	P	2.7
6	☐	200.000	150.540	417647.71	0.3451	P	1.2

y = 2.3032E-005 * x + 0.3417
R = 0.7500
DL = 897
BEC = 1.483E+04

Weight: <None>
Min Conc: <None>

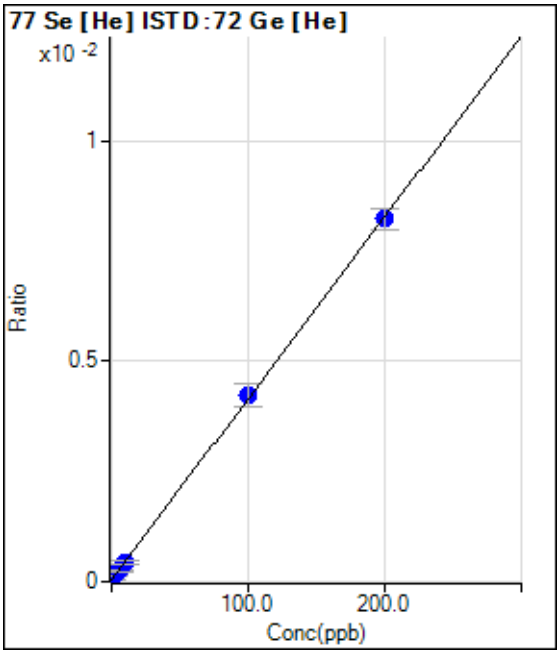
Calibration for 151_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	11431.70	0.0028	P	1.4
2	☐	2.000	2.034	12095.69	0.0029	P	4.6
3	☐	5.000	5.876	13086.59	0.0032	P	2.7
4	☐	10.000	13.726	15359.01	0.0038	P	3.1
5	☐	100.000	98.502	39769.11	0.0099	P	1.2
6	☐	200.000	200.540	67425.36	0.0173	P	2.1

y = 7.2592E-005 * x + 0.0028
R = 0.9998
DL = 1.575
BEC = 38.45

Weight: <None>
Min Conc: <None>

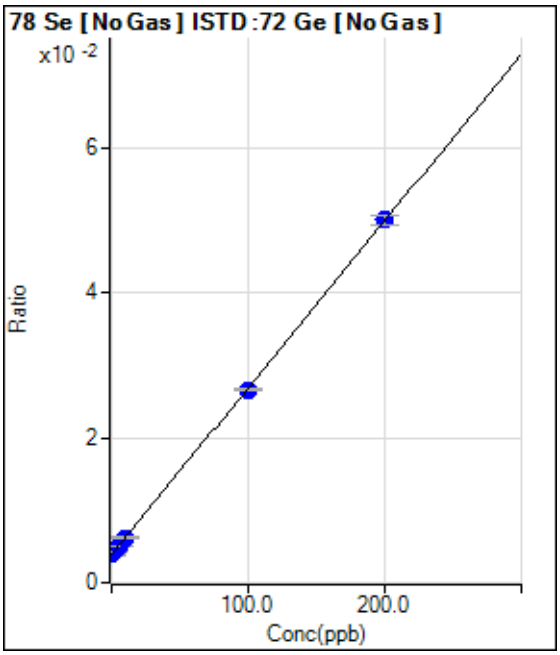


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	50.00	0.0000	P	19.7
2	☐	2.000	2.697	190.01	0.0002	P	27.3
3	☐	5.000	5.069	313.34	0.0002	P	11.2
4	☐	10.000	9.751	546.69	0.0004	P	14.6
5	☐	100.000	101.781	5127.74	0.0042	P	12.4
6	☐	200.000	199.113	9963.84	0.0082	P	5.8

y = 4.1168E-005 * x + 4.0324E-005
R = 0.9999
DL = 0.578
BEC = 0.9795

Weight: <None>
Min Conc: <None>

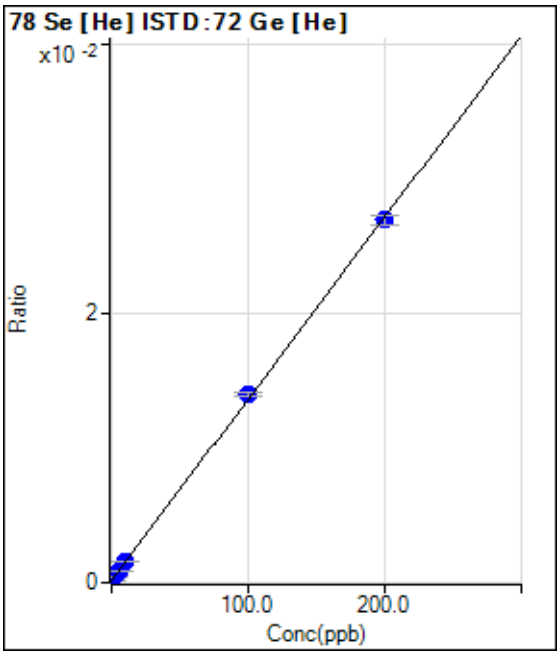
Calibration for 151_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	15939.63	0.0039	P	2.3
2	☐	2.000	1.761	17685.23	0.0043	P	3.9
3	☐	5.000	4.798	20325.61	0.0050	P	1.1
4	☐	10.000	9.925	25050.30	0.0062	P	3.0
5	☐	100.000	98.670	106452.71	0.0266	P	0.9
6	☐	200.000	200.676	194688.41	0.0501	P	2.3

y = 2.3025E-004 * x + 0.0039
R = 1.0000
DL = 1.155
BEC = 16.9

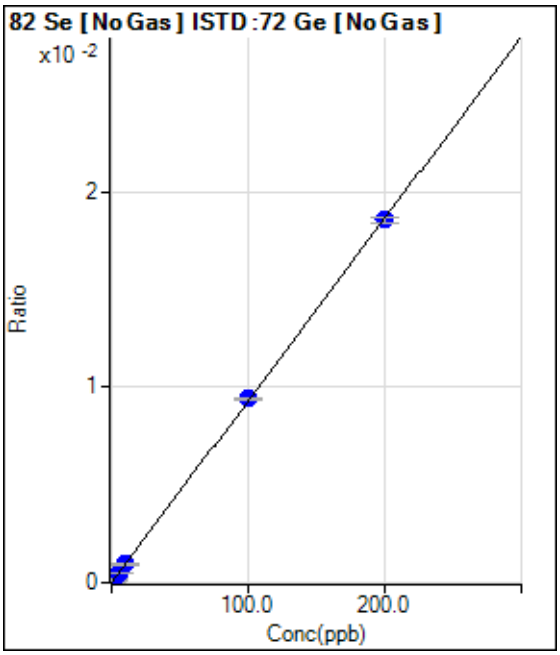
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	190.00	0.0002	P	10.5
2	☐	2.000	1.830	503.34	0.0004	P	3.4
3	☐	5.000	5.184	1074.05	0.0009	P	4.3
4	☐	10.000	10.592	1962.82	0.0016	P	3.2
5	☐	100.000	102.574	16994.72	0.0140	P	2.4
6	☐	200.000	198.680	32638.74	0.0270	P	2.4

y = 1.3499E-004 * x + 1.5330E-004
R = 0.9999
DL = 0.3566
BEC = 1.136

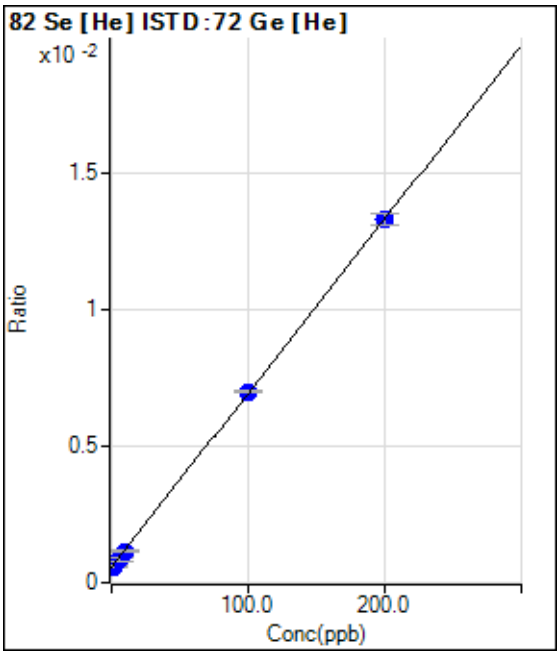
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	-44.46	0.0000	P	-289.4
2	☐	2.000	1.555	551.46	0.0001	P	8.4
3	☐	5.000	5.159	1912.67	0.0005	P	9.9
4	☐	10.000	10.128	3784.70	0.0009	P	5.5
5	☐	100.000	101.118	37677.06	0.0094	P	1.3
6	☐	200.000	199.435	72234.52	0.0186	P	1.9

y = 9.3254E-005 * x - 1.0967E-005
R = 1.0000
DL = 1.021
BEC = -0.1176

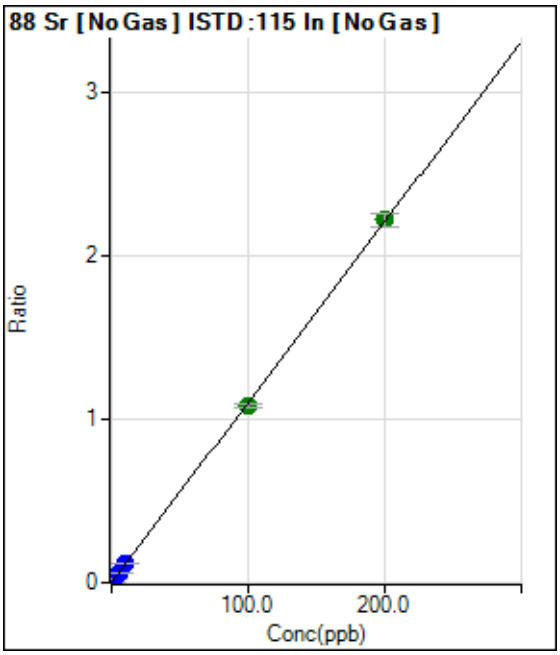
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	716.70	0.0006	P	5.3
2	☐	2.000	0.005	726.70	0.0006	P	13.0
3	☐	5.000	3.888	1040.06	0.0008	P	13.6
4	☐	10.000	9.023	1430.10	0.0012	P	3.1
5	☐	100.000	100.958	8519.48	0.0070	P	1.7
6	☐	200.000	199.618	16106.56	0.0133	P	3.1

y = 6.3770E-005 * x + 5.7810E-004
R = 0.9999
DL = 1.446
BEC = 9.065

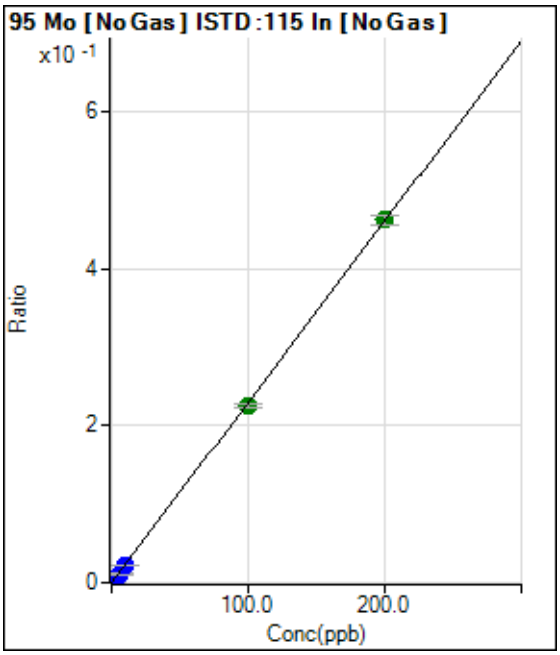
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3277.12	0.0007	P	3.1
2	☐	2.000	1.967	104995.32	0.0224	P	0.4
3	☐	5.000	4.946	261648.60	0.0553	P	2.7
4	☐	10.000	10.209	525574.59	0.1134	P	0.8
5	☐	100.000	97.764	4922668.47	1.0803	A	1.7
6	☐	200.000	201.109	9751059.65	2.2215	A	3.4

y = 0.0110 * x + 7.0270E-004
R = 0.9999
DL = 0.005963
BEC = 0.06363

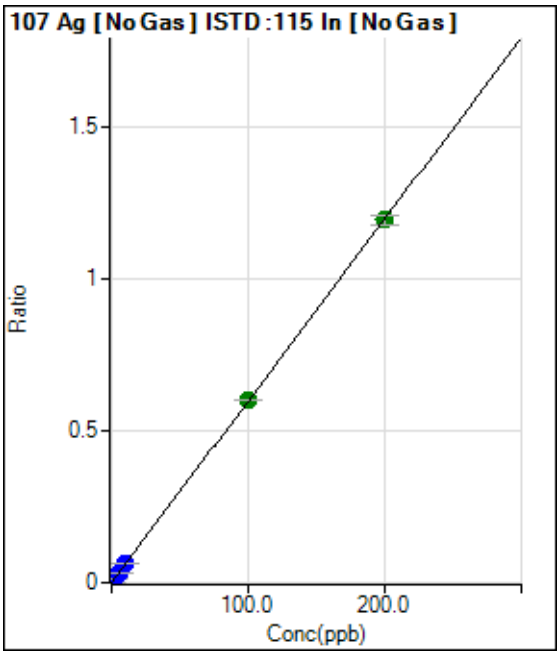
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	146.67	0.0000	P	14.7
2	☐	2.000	1.889	20499.51	0.0044	P	2.8
3	☐	5.000	4.766	52032.24	0.0110	P	2.1
4	☐	10.000	9.911	105812.95	0.0228	P	0.2
5	☐	100.000	98.192	1029772.77	0.2260	A	1.8
6	☐	200.000	200.916	2029866.79	0.4624	A	2.6

y = 0.0023 * x + 3.1467E-005
R = 0.9999
DL = 0.006046
BEC = 0.01367

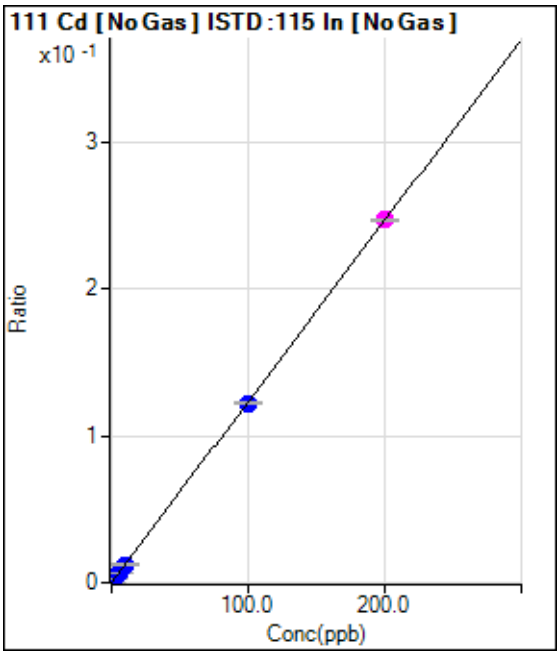
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	296.68	0.0001	P	19.1
2	☐	2.000	2.002	56370.34	0.0120	P	2.3
3	☐	5.000	4.988	141462.69	0.0299	P	0.4
4	☐	10.000	10.122	280798.24	0.0606	P	1.3
5	☐	100.000	100.573	2741979.86	0.6016	A	0.7
6	☐	200.000	199.708	5244584.92	1.1946	A	2.6

y = 0.0060 * x + 6.3653E-005
R = 1.0000
DL = 0.006084
BEC = 0.01064

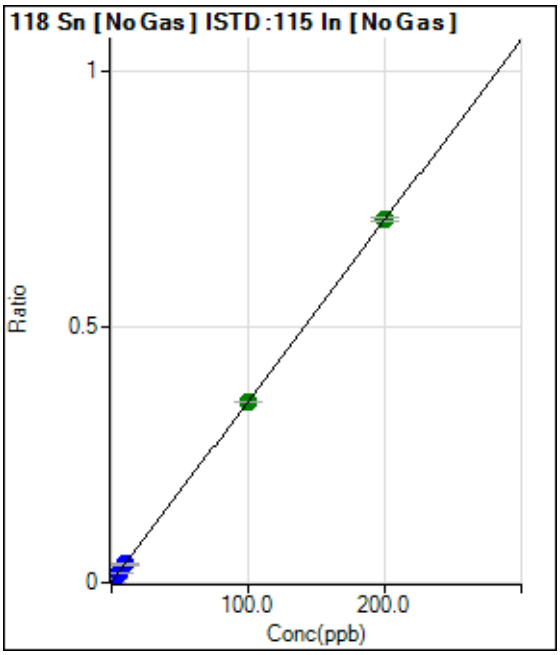
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	10.00	0.0000	P	173.2
2	☐	2.000	1.976	11421.78	0.0024	P	3.4
3	☐	5.000	4.909	28654.79	0.0061	P	0.7
4	☐	10.000	10.049	57448.74	0.0124	P	2.9
5	☐	100.000	99.084	556988.39	0.1222	P	1.1
6	☐	200.000	200.458	1085908.24	0.2473	M	0.6

y = 0.0012 * x + 2.1560E-006
R = 1.0000
DL = 0.009083
BEC = 0.001748

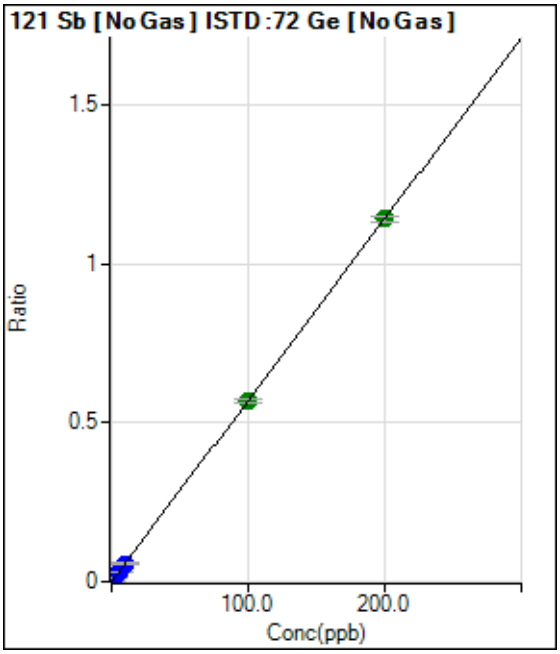
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	4354.13	0.0009	P	4.5
2	☐	2.000	1.809	34342.02	0.0073	P	2.0
3	☐	5.000	4.773	84306.64	0.0178	P	1.3
4	☐	10.000	9.851	165840.58	0.0358	P	0.9
5	☐	100.000	99.512	1609007.68	0.3531	A	0.3
6	☐	200.000	200.259	3115793.49	0.7096	A	1.0

y = 0.0035 * x + 9.3361E-004
R = 1.0000
DL = 0.03544
BEC = 0.2638

Weight: <None>
Min Conc: <None>

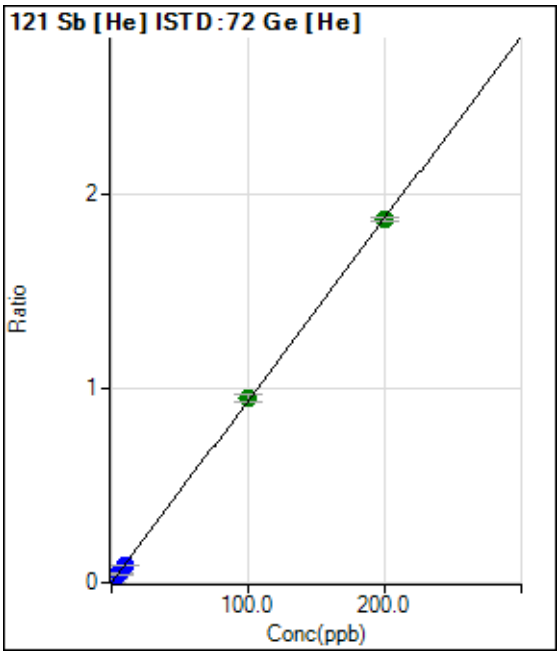


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	560.02	0.0001	P	4.0
2	☐	2.000	1.978	46974.42	0.0114	P	1.2
3	☐	5.000	4.983	116084.95	0.0285	P	2.6
4	☐	10.000	10.036	232538.97	0.0573	P	1.6
5	☐	100.000	99.746	2275073.30	0.5687	A	1.2
6	☐	200.000	200.126	4434584.21	1.1409	A	1.3

y = 0.0057 * x + 1.3672E-004
R = 1.0000
DL = 0.002903
BEC = 0.02398

Weight: <None>
Min Conc: <None>

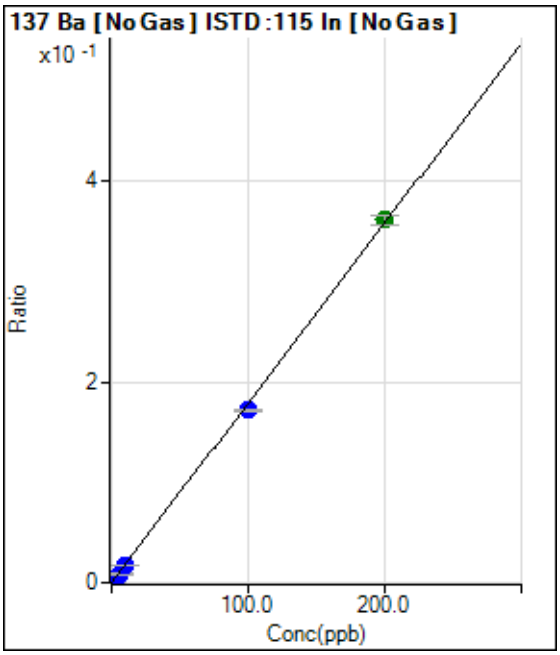
Calibration for 151_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	236.68	0.0002	P	11.0
2	☐	2.000	1.885	22419.57	0.0178	P	2.3
3	☐	5.000	4.769	56411.85	0.0448	P	2.1
4	☐	10.000	9.750	113331.08	0.0914	P	2.2
5	☐	100.000	101.610	1153808.00	0.9507	A	3.6
6	☐	200.000	199.214	2255481.16	1.8637	A	1.0

y = 0.0094 * x + 1.9099E-004
R = 1.0000
DL = 0.006708
BEC = 0.02042

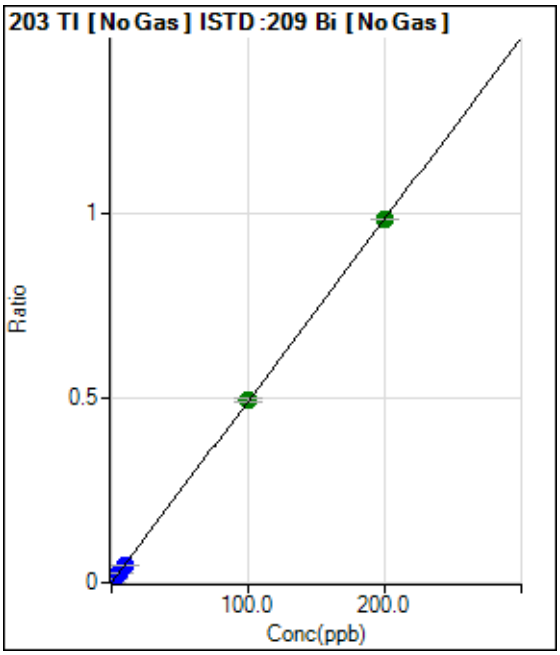
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	536.69	0.0001	P	15.0
2	☐	2.000	1.884	16307.16	0.0035	P	1.4
3	☐	5.000	4.752	40737.70	0.0086	P	1.2
4	☐	10.000	9.967	83088.68	0.0179	P	0.9
5	☐	100.000	96.063	783120.59	0.1719	P	1.3
6	☐	200.000	201.978	1585612.53	0.3612	A	2.9

y = 0.0018 * x + 1.1514E-004
R = 0.9997
DL = 0.02893
BEC = 0.06441

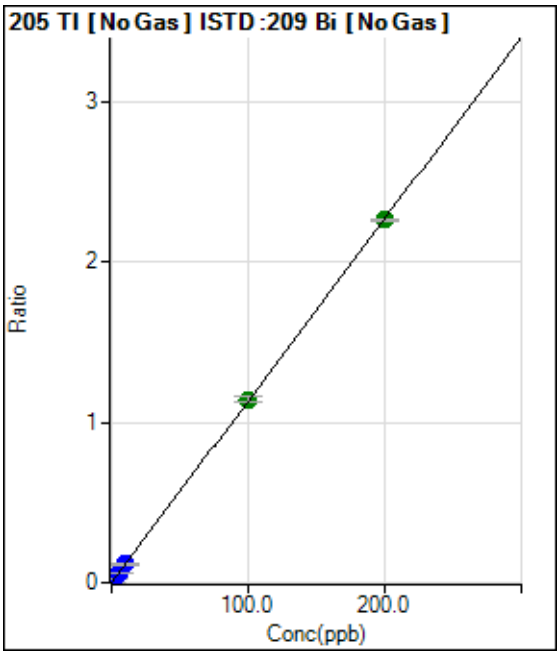
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	60.00	0.0000	P	54.6
2	☐	2.000	1.892	36543.76	0.0093	P	1.7
3	☐	5.000	4.859	93580.70	0.0239	P	3.2
4	☐	10.000	9.743	189692.31	0.0479	P	3.4
5	☐	100.000	100.630	1907527.52	0.4943	A	1.6
6	☐	200.000	199.703	3680406.92	0.9809	A	0.0

y = 0.0049 * x + 1.5456E-005
R = 1.0000
DL = 0.005158
BEC = 0.003147

Weight: <None>
Min Conc: <None>

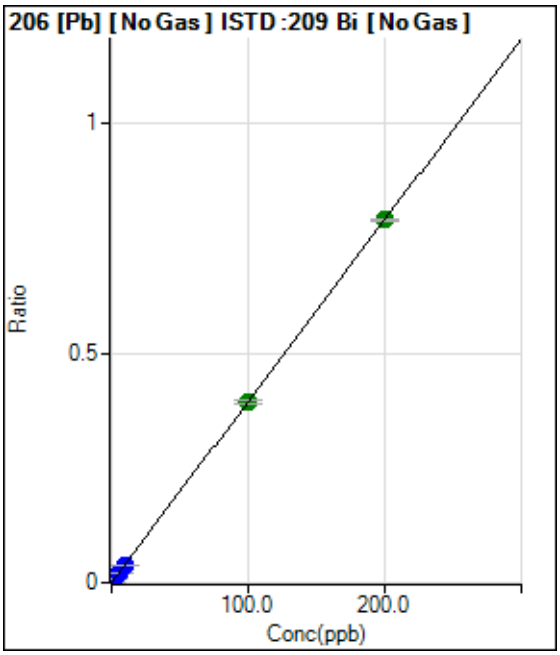


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	176.67	0.0000	P	11.2
2	☐	2.000	1.987	88554.59	0.0226	P	1.4
3	☐	5.000	4.993	221875.06	0.0566	P	0.9
4	☐	10.000	10.080	452756.19	0.1142	P	2.7
5	☐	100.000	100.805	4406965.25	1.1420	A	3.7
6	☐	200.000	199.594	8484628.83	2.2612	A	0.6

y = 0.0113 * x + 4.6066E-005
R = 1.0000
DL = 0.001361
BEC = 0.004066

Weight: <None>
Min Conc: <None>

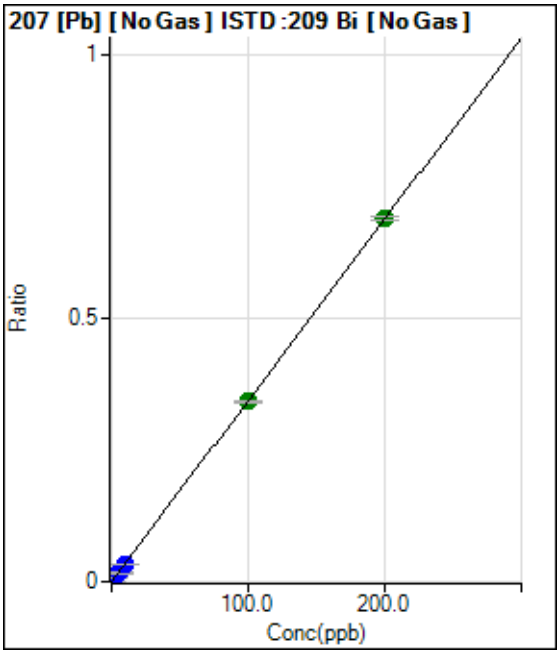
Calibration for 151_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	410.01	0.0001	P	22.9
2	☐	2.000	1.968	30895.34	0.0079	P	2.7
3	☐	5.000	4.914	76410.60	0.0195	P	1.5
4	☐	10.000	9.612	150695.19	0.0380	P	3.8
5	☐	100.000	99.729	1518812.17	0.3936	A	2.7
6	☐	200.000	200.157	2963481.83	0.7898	A	0.5

y = 0.0039 * x + 1.0687E-004
R = 1.0000
DL = 0.01858
BEC = 0.02709

Weight: <None>
Min Conc: <None>

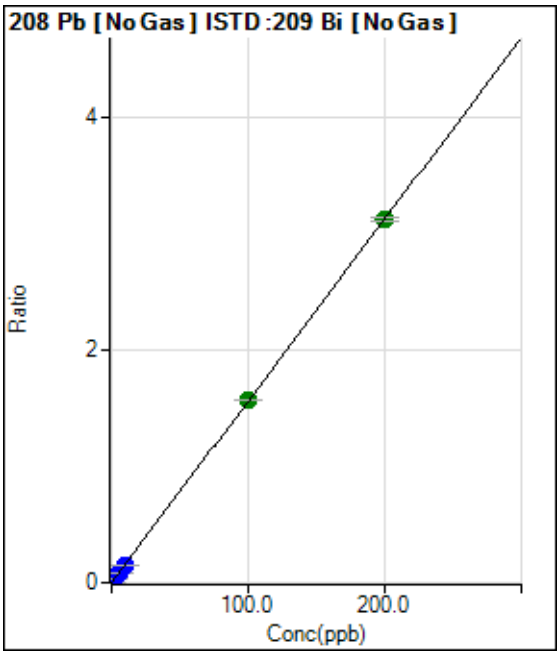


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	346.68	0.0001	P	3.0
2	☐	2.000	1.941	26495.30	0.0067	P	1.8
3	☐	5.000	4.799	64889.38	0.0166	P	2.4
4	☐	10.000	9.833	134065.33	0.0338	P	2.9
5	☐	100.000	99.405	1316649.88	0.3412	A	1.3
6	☐	200.000	200.312	2579154.23	0.6874	A	0.9

y = 0.0034 * x + 9.0205E-005
R = 1.0000
DL = 0.002337
BEC = 0.02629

Weight: <None>
Min Conc: <None>

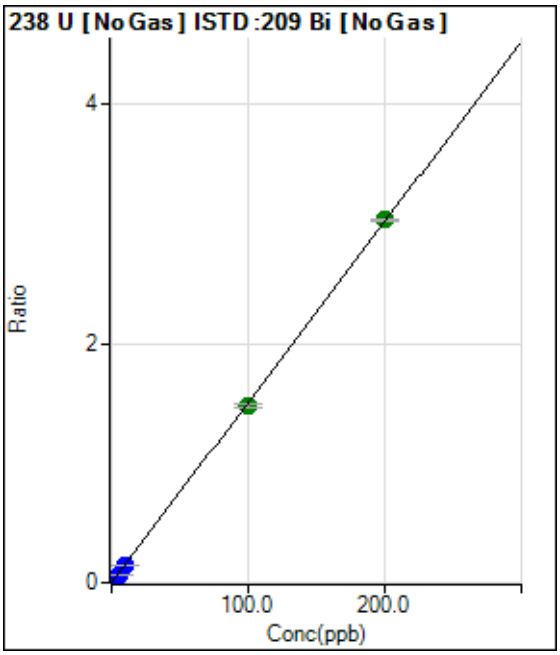
RIGHT SOLUTIONS | RIGHT PARTNER



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1543.40	0.0004	P	8.5
2	☐	2.000	1.970	122052.16	0.0311	P	2.6
3	☐	5.000	4.877	299353.27	0.0764	P	1.2
4	☐	10.000	9.719	601669.91	0.1518	P	2.7
5	☐	100.000	100.569	6048711.79	1.5673	A	0.8
6	☐	200.000	199.733	11676920.97	3.1123	A	1.1

y = 0.0156 * x + 4.0219E-004
R = 1.0000
DL = 0.006594
BEC = 0.02581

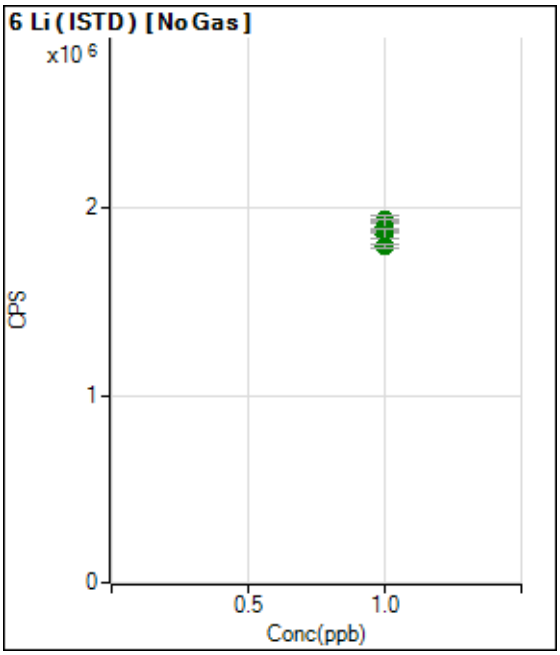
Weight: <None>
Min Conc: <None>



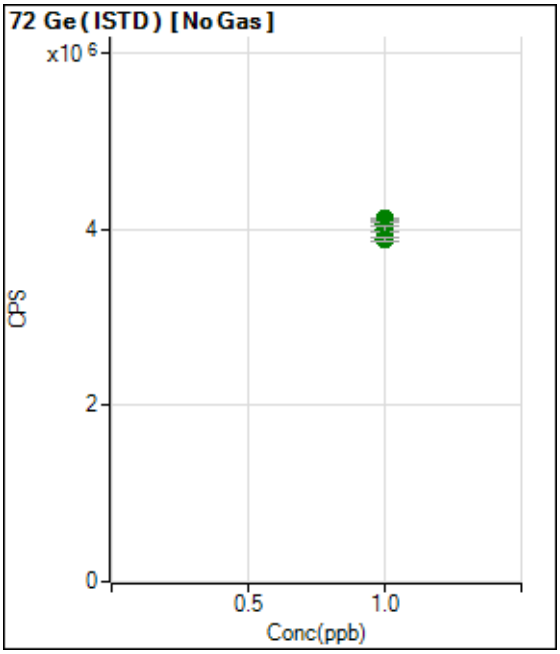
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	103.33	0.0000	P	26.4
2	☐	2.000	1.883	111520.01	0.0284	P	1.8
3	☐	5.000	4.763	281532.16	0.0718	P	0.5
4	☐	10.000	9.464	565562.70	0.1427	P	1.9
5	☐	100.000	97.752	5688429.92	1.4735	A	2.5
6	☐	200.000	201.158	11376675.25	3.0322	A	0.9

y = 0.0151 * x + 2.7001E-005
R = 0.9999
DL = 0.001419
BEC = 0.001791

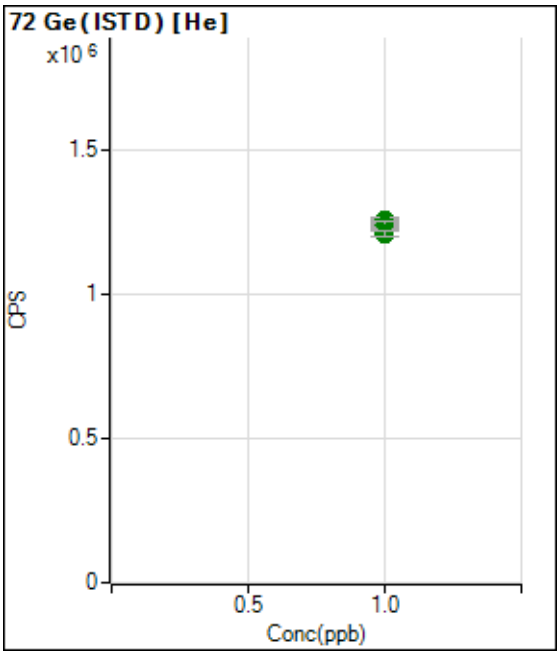
Weight: <None>
Min Conc: <None>



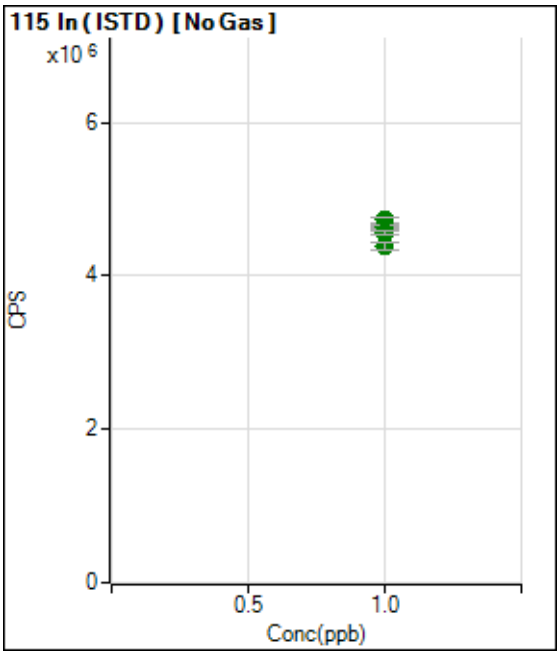
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1897370.46		A	2.1
2	☐	1.000		1935252.98		A	2.3
3	☐	1.000		1902329.70		A	3.1
4	☐	1.000		1900696.25		A	3.8
5	☐	1.000		1860165.90		A	2.6
6	☐	1.000		1798372.15		A	1.3



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		4095315.04		A	0.9
2	☐	1.000		4114990.98		A	0.6
3	☐	1.000		4067897.55		A	1.2
4	☐	1.000		4055229.63		A	0.7
5	☐	1.000		4000602.96		A	1.2
6	☐	1.000		3886631.40		A	0.8

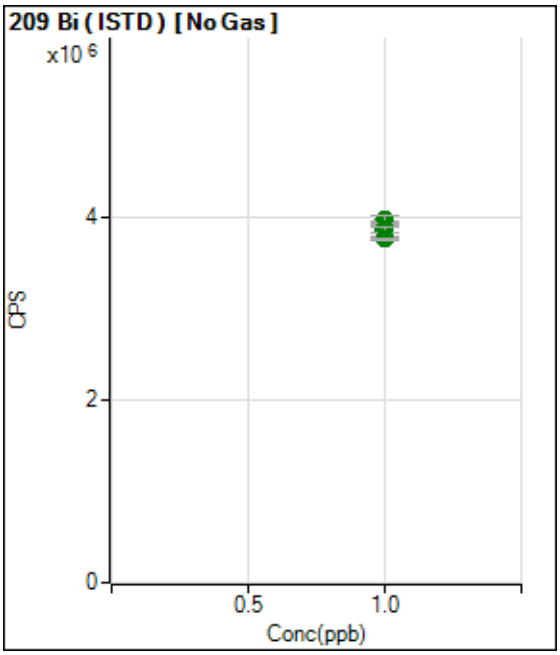


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1239534.20		A	0.7
2	☐	1.000		1257397.14		A	1.2
3	☐	1.000		1259256.18		A	0.9
4	☐	1.000		1240408.97		A	2.4
5	☐	1.000		1214361.44		A	2.5
6	☐	1.000		1210233.45		A	1.5



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		4663528.14		A	0.5
2	☐	1.000		4682089.24		A	0.6
3	☐	1.000		4731006.51		A	1.7
4	☐	1.000		4633144.00		A	0.8
5	☐	1.000		4557263.19		A	0.9
6	☐	1.000		4391888.93		A	2.5

Calibration for 151_ICV.d



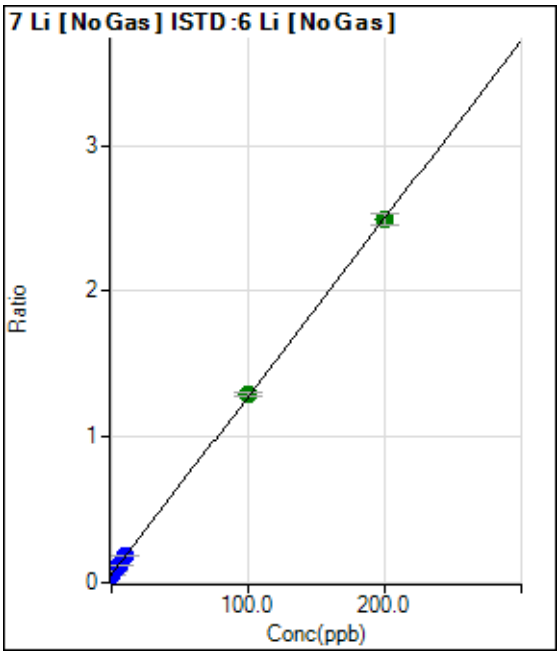
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		3842805.67		A	2.8
2	☐	1.000		3926139.94		A	1.1
3	☐	1.000		3919646.30		A	1.1
4	☐	1.000		3964688.69		A	2.2
5	☐	1.000		3859619.74		A	1.3
6	☐	1.000		3752096.30		A	1.0

Calibration for 021_ICV.d

Batch Folder: C:\Agilent\ICPMH\1\DATA\080921A.b\
Analysis File: 080921A.batch.bin
DA Date-Time: 8/9/2021 8:49:03 PM
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	014CALB.d	CAL BLK	8/9/2021 2:41:23 PM
2	015CALS.d	2/10/200	8/9/2021 2:43:21 PM
3	016CALS.d	5/25/500	8/9/2021 2:45:17 PM
4	017CALS.d	10/50/100	8/9/2021 2:47:13 PM
5	018CALS.d	100/500/10K	8/9/2021 2:49:09 PM
6	019CALS.d	200/1000/20K	8/9/2021 2:50:57 PM

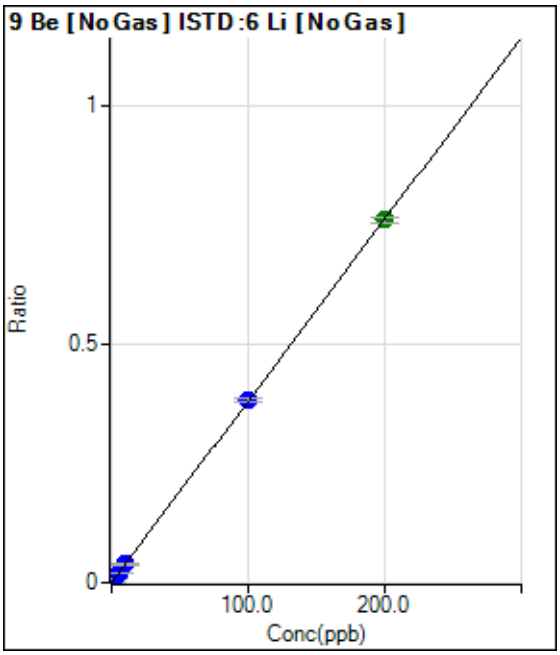
Calibration for 021_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	100913.39	0.0559	P	4.2
2	☐	2.000	2.115	146826.22	0.0817	P	3.9
3	☐	5.000	5.263	209787.62	0.1202	P	3.5
4	☐	10.000	10.635	325121.70	0.1858	P	1.7
5	☐	100.000	101.558	2235951.32	1.2967	A	1.7
6	☐	200.000	199.182	4254796.08	2.4895	A	3.1

y = 0.0122 * x + 0.0559
R = 1.0000
DL = 0.5741
BEC = 4.574

Weight: <None>
Min Conc: <None>

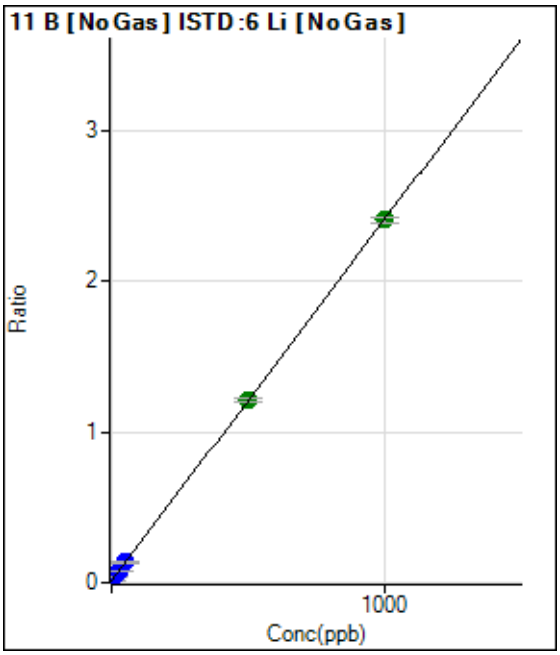


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	26.67	0.0000	P	31.9
2	☐	2.000	1.992	13673.40	0.0076	P	2.6
3	☐	5.000	4.993	33246.04	0.0190	P	1.4
4	☐	10.000	10.087	67286.76	0.0385	P	2.1
5	☐	100.000	100.503	660498.33	0.3831	P	1.7
6	☐	200.000	199.745	1301247.32	0.7613	A	1.8

y = 0.0038 * x + 1.4853E-005
R = 1.0000
DL = 0.003731
BEC = 0.003897

Weight: <None>
Min Conc: <None>

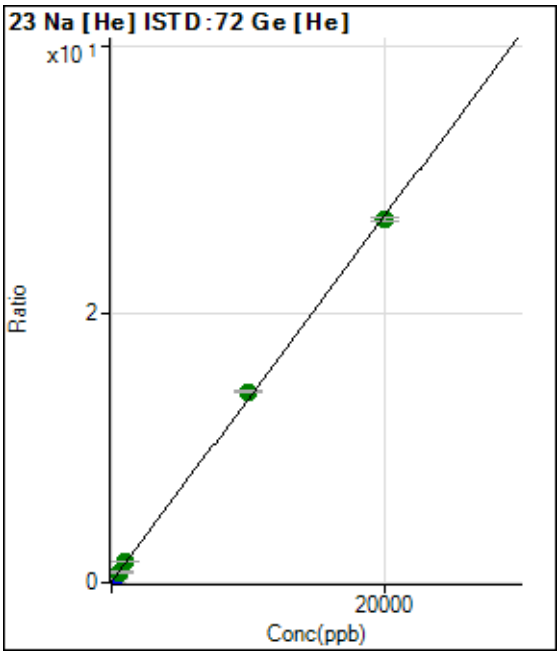
Calibration for 021_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	20802.14	0.0115	P	6.4
2	☐	10.000	9.992	63784.60	0.0355	P	4.7
3	☐	25.000	25.866	128509.89	0.0736	P	1.4
4	☐	50.000	51.251	235401.77	0.1345	P	2.0
5	☐	500.000	500.798	2092562.89	1.2136	A	1.7
6	☐	1000.000	999.517	4120661.71	2.4107	A	1.4

y = 0.0024 * x + 0.0115
R = 1.0000
DL = 0.9215
BEC = 4.801

Weight: <None>
Min Conc: <None>

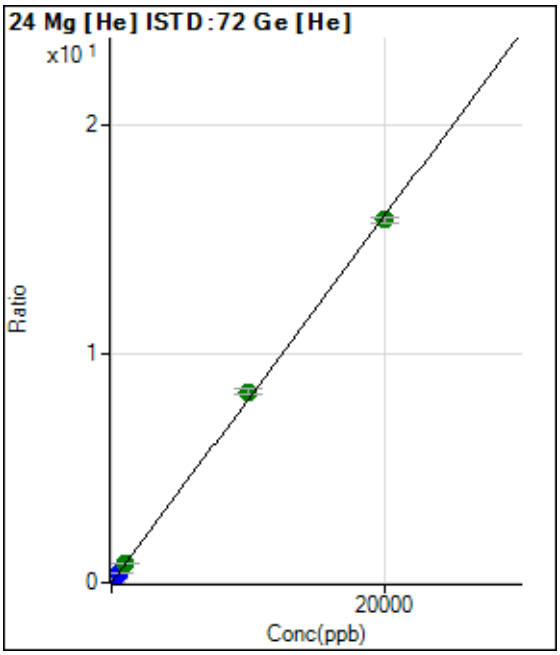


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	82640.32	0.0580	P	2.4
2	☐	200.000	219.022	501532.51	0.3566	P	2.1
3	☐	500.000	533.054	1113924.18	0.7847	A	1.8
4	☐	1000.000	1075.572	2188167.26	1.5243	A	1.3
5	☐	10000.00	10405.76	20084904.70	14.2440	A	0.5
6	☐	20000.00	19792.32	38216408.60	27.0405	A	1.0

y = 0.0014 * x + 0.0580
R = 0.9997
DL = 3.087
BEC = 42.56

Weight: <None>
Min Conc: <None>

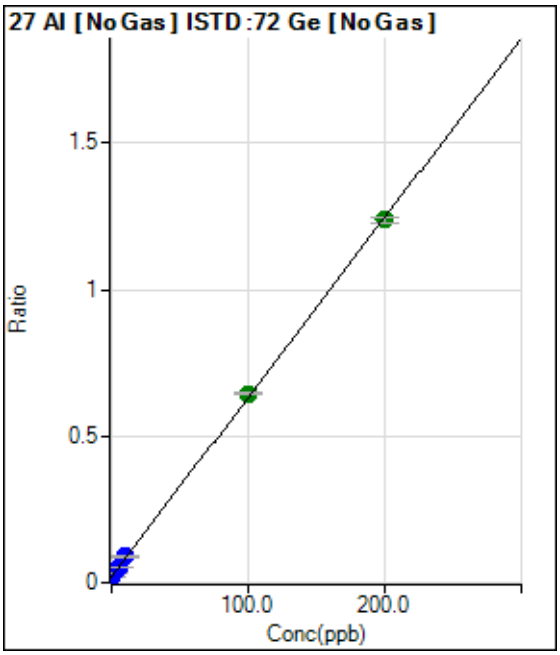
Calibration for 021_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	466.68	0.0003	P	13.9
2	☐	200.000	215.318	243158.24	0.1729	P	1.5
3	☐	500.000	538.857	613510.63	0.4322	P	0.6
4	☐	1000.000	1062.856	1223328.45	0.8521	A	2.0
5	☐	10000.00	10424.35	11779122.74	8.3545	A	2.5
6	☐	20000.00	19783.55	22405228.00	15.8550	A	1.9

y = 8.0141E-004 * x + 3.2786E-004
R = 0.9997
DL = 0.1707
BEC = 0.4091

Weight: <None>
Min Conc: <None>

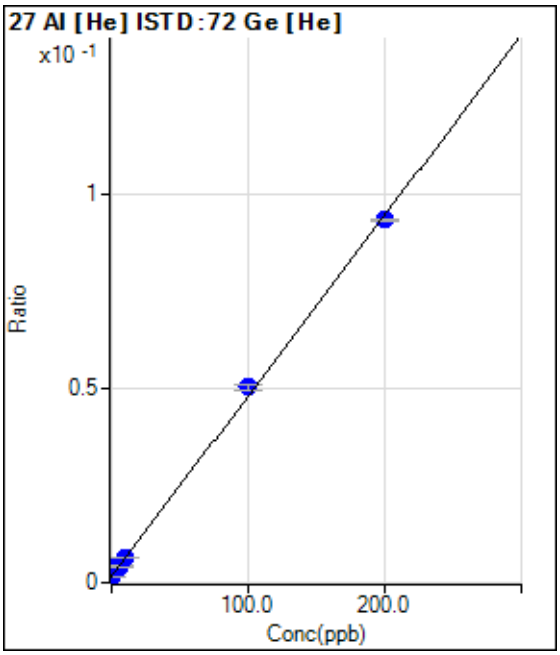


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	93658.72	0.0206	P	1.9
2	☐	2.000	2.107	152372.82	0.0335	P	1.6
3	☐	5.000	5.702	252032.00	0.0555	P	0.8
4	☐	10.000	11.126	404077.62	0.0887	P	0.9
5	☐	100.000	102.113	2904627.77	0.6454	A	1.5
6	☐	200.000	198.869	5478094.50	1.2375	A	1.4

y = 0.0061 * x + 0.0206
R = 0.9999
DL = 0.1923
BEC = 3.363

Weight: <None>
Min Conc: <None>

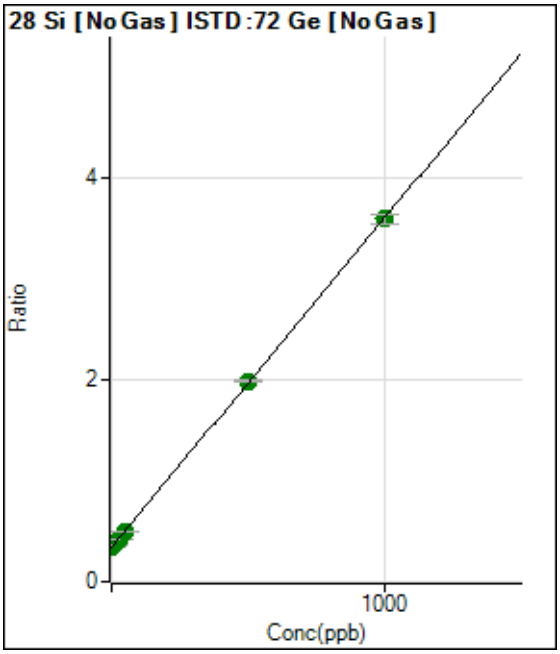
Calibration for 021_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2303.57	0.0016	P	5.8
2	☐	2.000	4.554	5255.46	0.0037	P	52.6
3	☐	5.000	5.354	5834.67	0.0041	P	7.2
4	☐	10.000	10.650	9436.67	0.0066	P	1.6
5	☐	100.000	104.847	71101.91	0.0504	P	3.5
6	☐	200.000	197.510	132197.19	0.0935	P	0.8

y = 4.6543E-004 * x + 0.0016
R = 0.9996
DL = 0.6057
BEC = 3.474

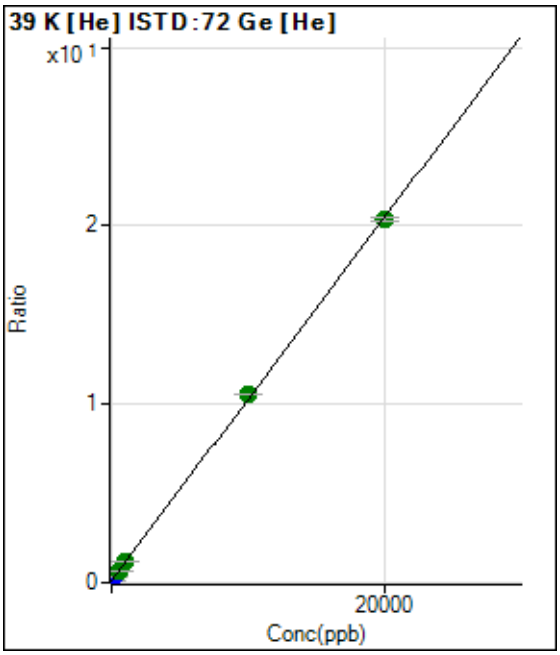
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1548209.51	0.3401	A	1.4
2	☐	10.000	7.273	1656435.60	0.3638	A	0.6
3	☐	25.000	23.263	1889691.17	0.4159	A	1.1
4	☐	50.000	47.553	2255827.21	0.4950	A	1.4
5	☐	500.000	505.625	8937580.91	1.9863	A	0.9
6	☐	1000.000	997.380	15876338.51	3.5873	A	2.9

y = 0.0033 * x + 0.3401
R = 1.0000
DL = 4.243
BEC = 104.5

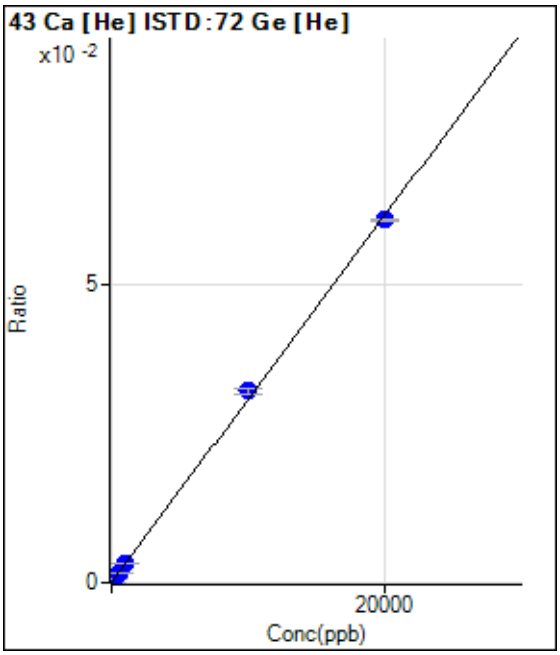
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	168352.13	0.1182	P	1.7
2	☐	200.000	210.746	467694.65	0.3325	P	1.7
3	☐	500.000	523.308	923479.78	0.6504	A	2.0
4	☐	1000.000	1050.023	1702723.51	1.1862	A	1.6
5	☐	10000.00	10262.59	14885235.19	10.5562	A	1.0
6	☐	20000.00	19865.51	28719506.24	20.3232	A	1.2

y = 0.0010 * x + 0.1182
R = 0.9999
DL = 6.029
BEC = 116.2

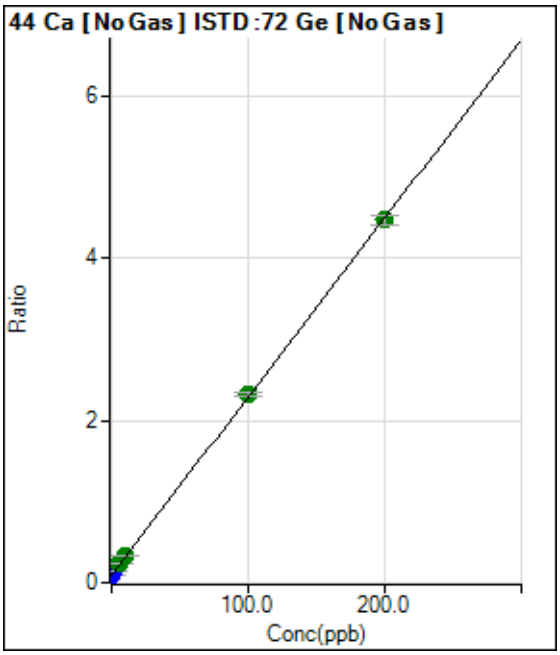
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	66.67	0.0000	P	47.5
2	☐	200.000	181.646	853.37	0.0006	P	3.0
3	☐	500.000	466.972	2110.20	0.0015	P	3.3
4	☐	1000.000	1073.104	4817.61	0.0034	P	1.4
5	☐	10000.00	10441.24	45455.50	0.0322	P	3.1
6	☐	20000.00	19776.73	86246.42	0.0610	P	0.5

y = 3.0836E-006 * x + 4.6624E-005
R = 0.9996
DL = 21.55
BEC = 15.12

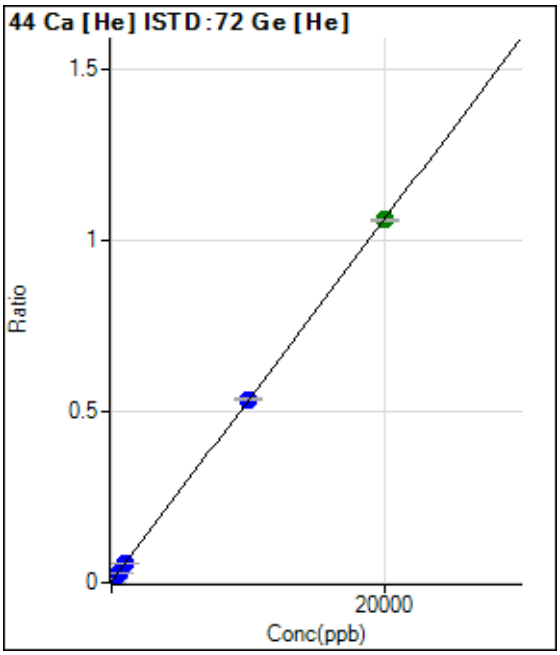
Weight: <None>
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	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	414713.34	0.0911	P	2.8
2	☐	2.000	2.010	616096.16	0.1353	P	0.4
3	☐	5.000	6.280	1041189.15	0.2292	A	1.9
4	☐	10.000	11.278	1544874.82	0.3390	A	2.2
5	☐	100.000	101.426	10438451.30	2.3202	A	2.3
6	☐	200.000	199.191	19781776.37	4.4688	A	2.3

y = 0.0220 * x + 0.0911
R = 0.9999
DL = 0.3498
BEC = 4.146

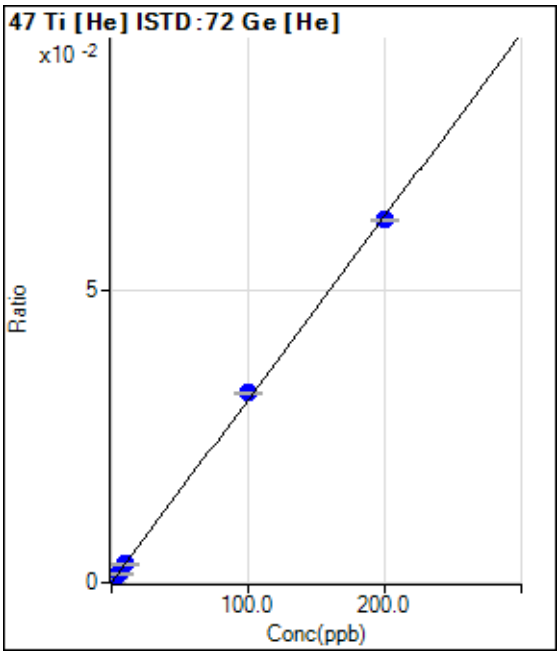
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3900.62	0.0027	P	1.9
2	☐	200.000	206.069	19210.36	0.0137	P	4.0
3	☐	500.000	507.132	42054.81	0.0296	P	4.3
4	☐	1000.000	990.540	79298.43	0.0552	P	0.3
5	☐	10000.00	10077.47	756943.82	0.5369	P	1.5
6	☐	20000.00	19961.49	1499047.58	1.0607	A	0.3

y = 5.3001E-005 * x + 0.0027
R = 1.0000
DL = 3.018
BEC = 51.66

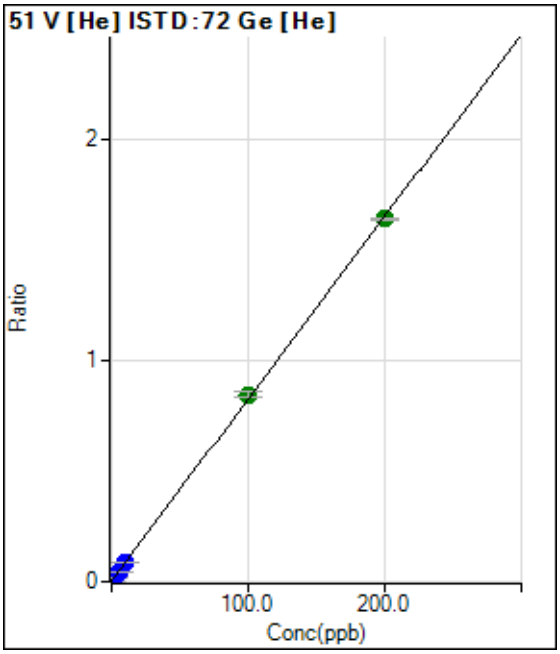
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	13.33	0.0000	P	42.4
2	☐	2.000	1.942	870.04	0.0006	P	18.3
3	☐	5.000	4.783	2143.54	0.0015	P	9.4
4	☐	10.000	10.005	4517.49	0.0031	P	7.9
5	☐	100.000	103.694	45883.74	0.0325	P	0.7
6	☐	200.000	198.159	87873.48	0.0622	P	0.9

y = 3.1373E-004 * x + 9.3377E-006
R = 0.9998
DL = 0.03785
BEC = 0.02976

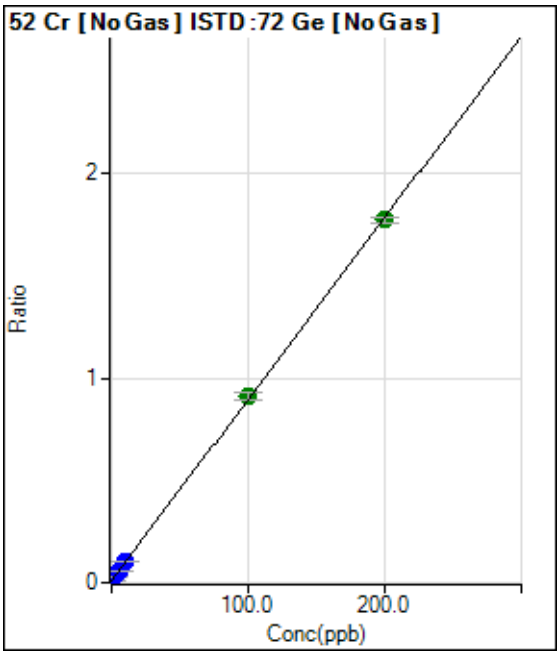
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	4533.00	0.0032	P	6.1
2	☐	2.000	1.988	27544.36	0.0196	P	2.9
3	☐	5.000	4.887	61762.87	0.0435	P	0.8
4	☐	10.000	9.845	121165.47	0.0844	P	1.6
5	☐	100.000	102.325	1194666.13	0.8474	A	3.1
6	☐	200.000	198.848	2323074.42	1.6438	A	0.8

y = 0.0083 * x + 0.0032
R = 0.9999
DL = 0.07073
BEC = 0.3858

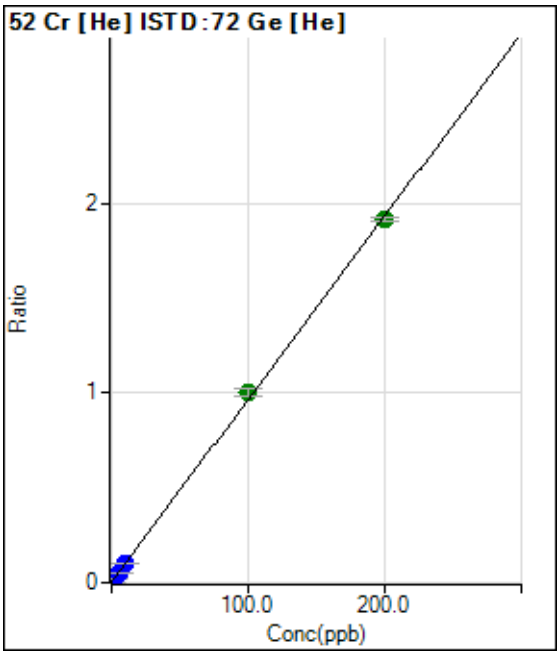
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	45007.83	0.0099	P	2.7
2	☐	2.000	2.006	126078.64	0.0277	P	0.8
3	☐	5.000	5.121	251435.77	0.0553	P	0.2
4	☐	10.000	10.319	462463.54	0.1015	P	1.1
5	☐	100.000	102.097	4119839.94	0.9159	A	4.2
6	☐	200.000	198.933	7858508.21	1.7753	A	1.4

y = 0.0089 * x + 0.0099
R = 0.9999
DL = 0.08897
BEC = 1.114

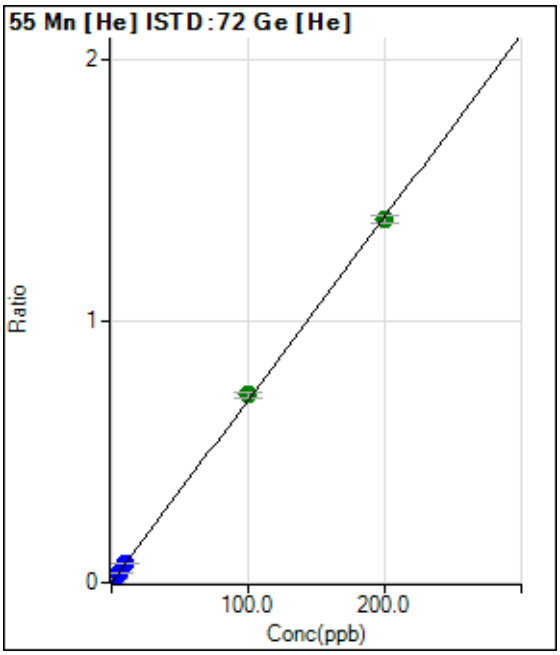
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3507.17	0.0025	P	4.0
2	☐	2.000	2.047	31239.25	0.0222	P	1.7
3	☐	5.000	5.104	73400.19	0.0517	P	1.4
4	☐	10.000	10.037	142523.66	0.0993	P	3.2
5	☐	100.000	103.801	1415452.74	1.0039	A	3.5
6	☐	200.000	198.095	2704377.04	1.9137	A	1.2

y = 0.0096 * x + 0.0025
R = 0.9997
DL = 0.0303
BEC = 0.2551

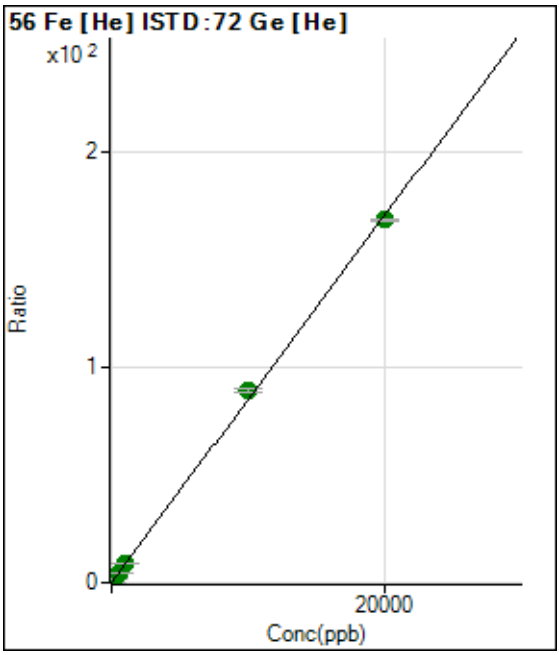
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Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	510.02	0.0004	P	10.9
2	☐	2.000	2.047	20599.18	0.0146	P	2.3
3	☐	5.000	5.127	51306.45	0.0361	P	0.6
4	☐	10.000	10.095	101646.80	0.0708	P	2.3
5	☐	100.000	102.856	1012469.99	0.7182	A	2.8
6	☐	200.000	198.564	1958841.38	1.3861	A	2.1

y = 0.0070 * x + 3.5829E-004
R = 0.9999
DL = 0.01685
BEC = 0.05134

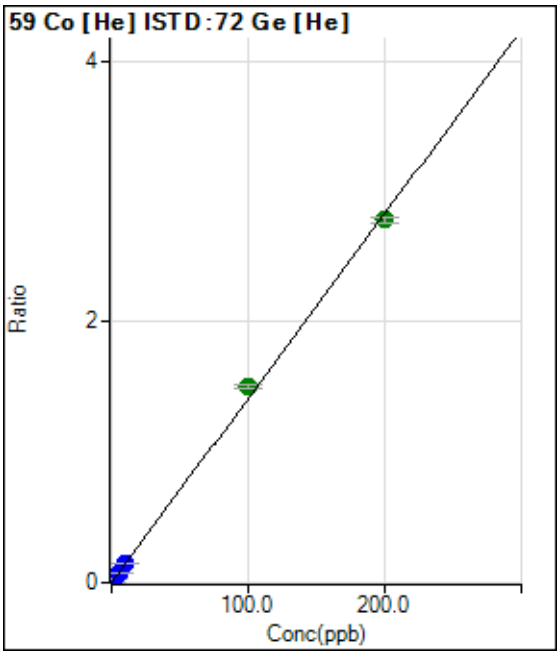
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	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	18859.96	0.0132	P	3.7
2	☐	200.000	213.204	2568198.45	1.8258	A	1.1
3	☐	500.000	528.967	6402984.07	4.5104	A	0.6
4	☐	1000.000	1038.547	12693626.89	8.8427	A	1.3
5	☐	10000.00	10448.30	125257961.4	88.8419	A	2.0
6	☐	20000.00	19773.06	237582683.1	168.118	A	0.6

y = 0.0085 * x + 0.0132
R = 0.9996
DL = 0.1709
BEC = 1.557

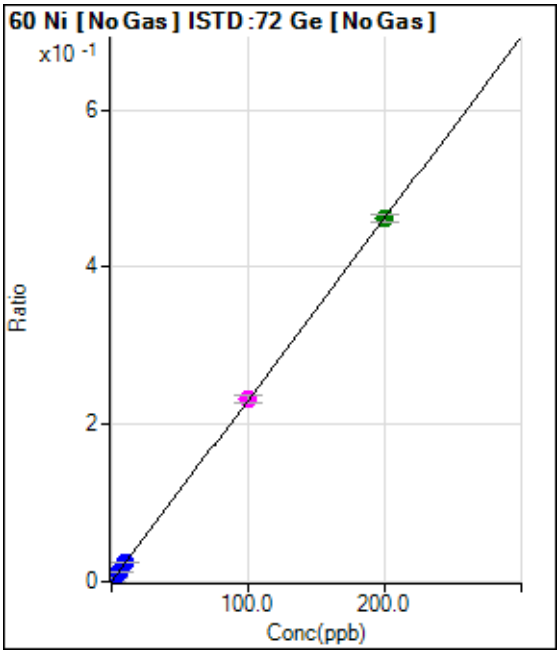
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	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	63.33	0.0000	P	23.6
2	☐	2.000	2.074	41276.11	0.0293	P	2.5
3	☐	5.000	5.162	103581.65	0.0730	P	1.3
4	☐	10.000	10.397	210914.39	0.1469	P	0.2
5	☐	100.000	106.215	2115395.80	1.5004	A	2.4
6	☐	200.000	196.868	3929902.02	2.7810	A	1.8

y = 0.0141 * x + 4.4411E-005
R = 0.9993
DL = 0.002222
BEC = 0.003144

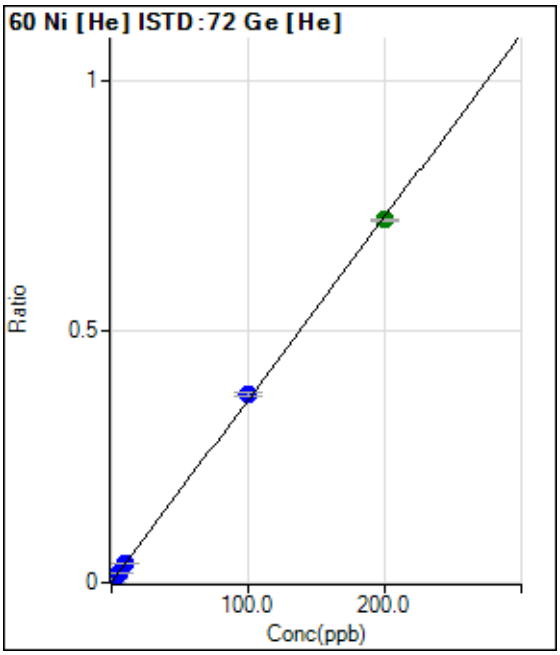
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Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1326.76	0.0003	P	12.1
2	☐	2.000	2.085	23246.83	0.0051	P	1.7
3	☐	5.000	5.174	55603.67	0.0122	P	1.6
4	☐	10.000	10.188	108530.28	0.0238	P	1.3
5	☐	100.000	100.530	1045192.20	0.2324	M	4.4
6	☐	200.000	199.721	2042050.75	0.4614	A	2.2

y = 0.0023 * x + 2.9129E-004
R = 1.0000
DL = 0.04597
BEC = 0.1262

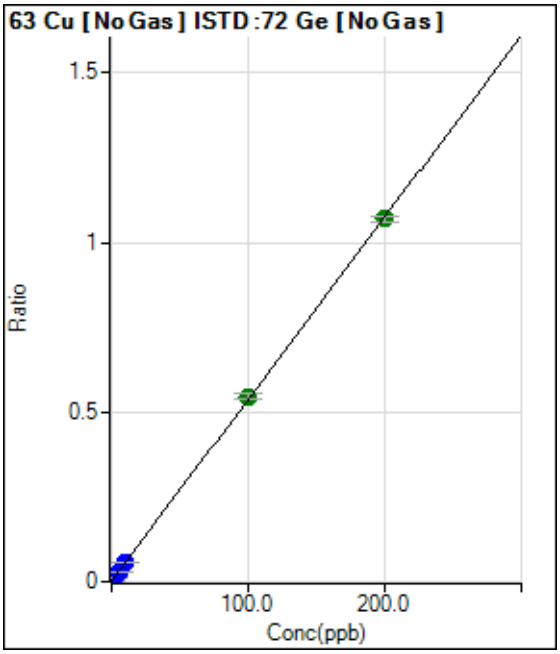
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	526.69	0.0004	P	21.6
2	☐	2.000	2.119	11361.63	0.0081	P	2.8
3	☐	5.000	5.218	27461.37	0.0193	P	1.6
4	☐	10.000	10.460	55131.76	0.0384	P	1.4
5	☐	100.000	103.152	529365.64	0.3755	P	2.1
6	☐	200.000	198.394	1020059.72	0.7218	A	0.3

y = 0.0036 * x + 3.6956E-004
R = 0.9998
DL = 0.06587
BEC = 0.1016

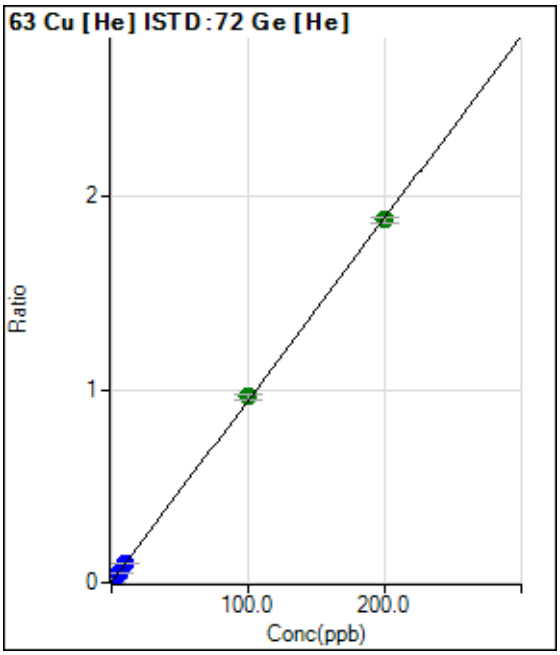
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Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	5661.28	0.0012	P	10.4
2	☐	2.000	2.095	56808.82	0.0125	P	1.2
3	☐	5.000	5.159	131303.54	0.0289	P	1.7
4	☐	10.000	10.184	254511.50	0.0558	P	1.3
5	☐	100.000	101.587	2455552.67	0.5458	A	2.7
6	☐	200.000	199.192	4732621.91	1.0691	A	1.3

y = 0.0054 * x + 0.0012
R = 1.0000
DL = 0.07237
BEC = 0.2321

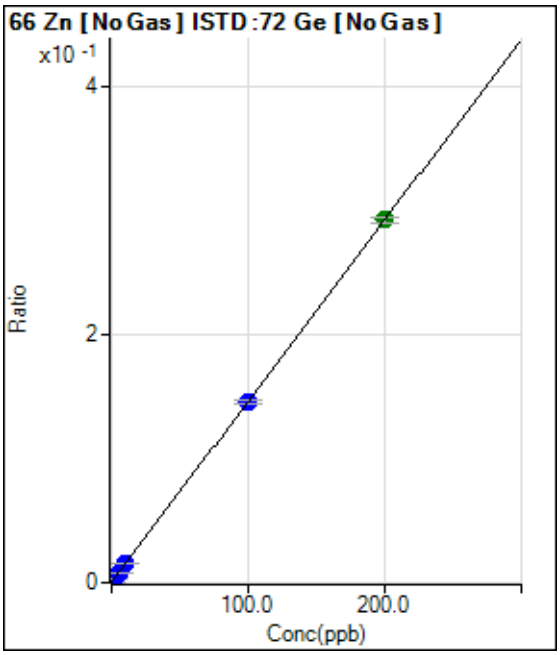
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Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2696.99	0.0019	P	6.5
2	☐	2.000	2.065	30043.57	0.0214	P	1.3
3	☐	5.000	5.200	72282.10	0.0509	P	2.2
4	☐	10.000	10.277	141824.48	0.0988	P	2.2
5	☐	100.000	101.787	1355557.90	0.9616	A	3.8
6	☐	200.000	199.087	2655241.42	1.8790	A	1.4

y = 0.0094 * x + 0.0019
R = 0.9999
DL = 0.03926
BEC = 0.2009

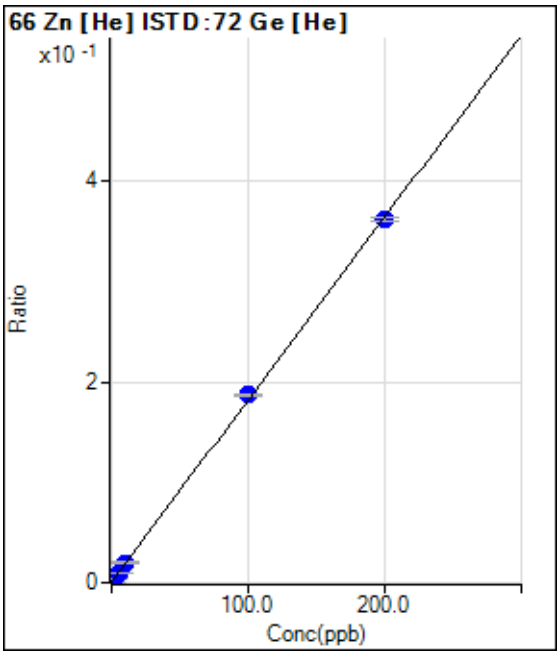
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Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1826.83	0.0004	P	3.1
2	☐	2.000	1.993	15072.00	0.0033	P	3.0
3	☐	5.000	4.976	34814.94	0.0077	P	3.1
4	☐	10.000	10.057	68723.83	0.0151	P	1.1
5	☐	100.000	99.414	654546.55	0.1455	P	1.7
6	☐	200.000	200.291	1295639.57	0.2927	A	1.3

y = 0.0015 * x + 4.0117E-004
R = 1.0000
DL = 0.02589
BEC = 0.2749

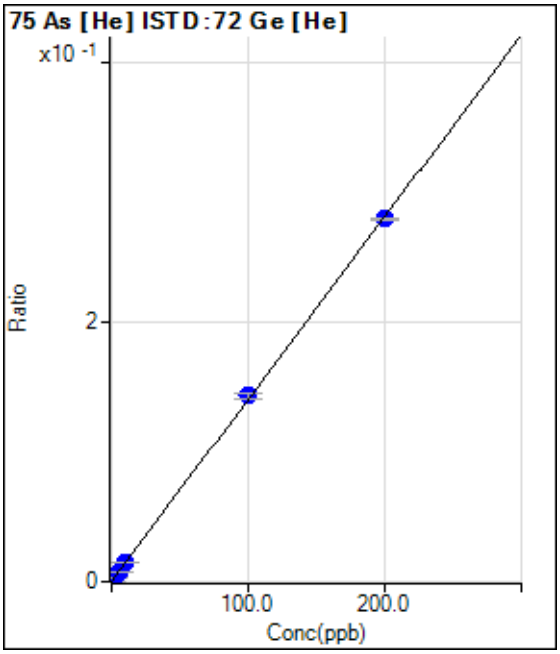
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	733.37	0.0005	P	6.0
2	☐	2.000	2.064	6001.43	0.0043	P	3.4
3	☐	5.000	5.131	13970.73	0.0098	P	4.7
4	☐	10.000	10.659	28540.34	0.0199	P	4.1
5	☐	100.000	102.686	263834.23	0.1871	P	1.0
6	☐	200.000	198.620	510792.19	0.3614	P	1.0

y = 0.0018 * x + 5.1456E-004
R = 0.9999
DL = 0.0509
BEC = 0.2832

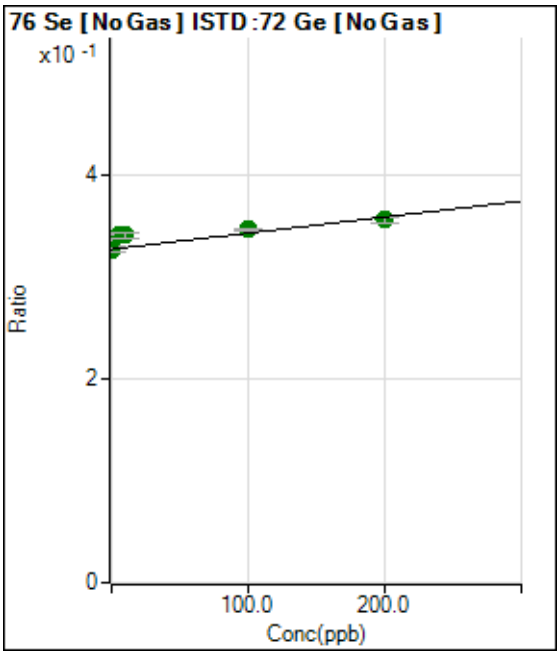
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Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	274.45	0.0002	P	15.2
2	☐	2.000	2.101	4425.19	0.0031	P	2.0
3	☐	5.000	5.083	10417.41	0.0073	P	0.3
4	☐	10.000	10.164	20788.26	0.0145	P	2.3
5	☐	100.000	101.892	202222.09	0.1434	P	2.5
6	☐	200.000	199.043	395717.19	0.2800	P	0.6

y = 0.0014 * x + 1.9283E-004
R = 0.9999
DL = 0.06268
BEC = 0.1372

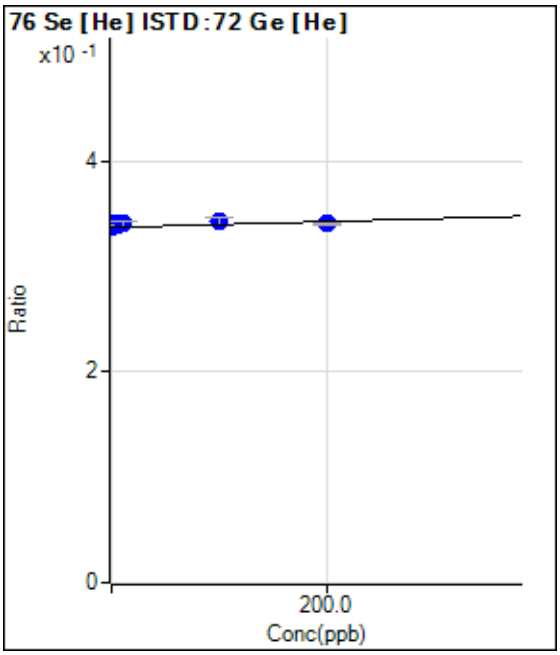
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1487347.84	0.3268	A	1.5
2	☐	2.000	60.291	1531125.19	0.3363	A	1.0
3	☐	5.000	93.330	1551705.40	0.3415	A	0.5
4	☐	10.000	86.483	1551429.82	0.3404	A	1.7
5	☐	100.000	123.487	1558031.54	0.3462	A	0.7
6	☐	200.000	181.641	1573230.55	0.3554	A	1.5

y = 1.5762E-004 * x + 0.3268
R = 0.8575
DL = 92.7
BEC = 2073

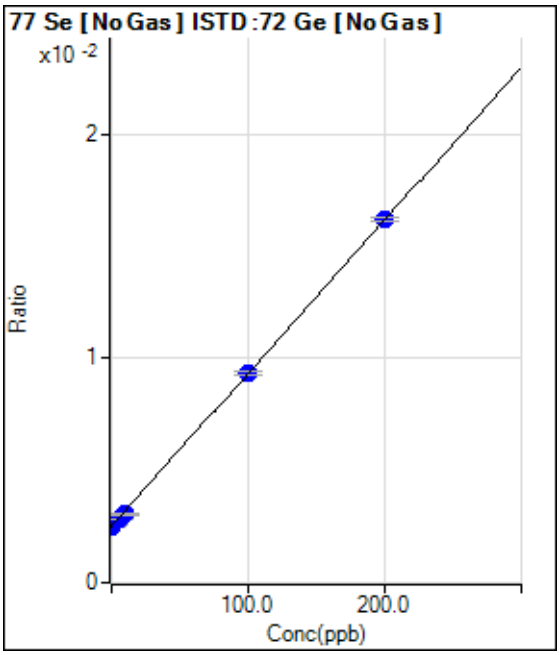
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	480184.03	0.3371	P	1.4
2	☐	2.000	128.367	479196.33	0.3407	P	1.2
3	☐	5.000	62.759	481051.14	0.3389	P	0.3
4	☐	10.000	138.493	489475.72	0.3410	P	1.5
5	☐	100.000	218.406	483918.89	0.3432	P	2.1
6	☐	200.000	131.665	481628.04	0.3408	P	0.5

y = 2.8168E-005 * x + 0.3371
R = 0.4681
DL = 490.3
BEC = 1.197E+04

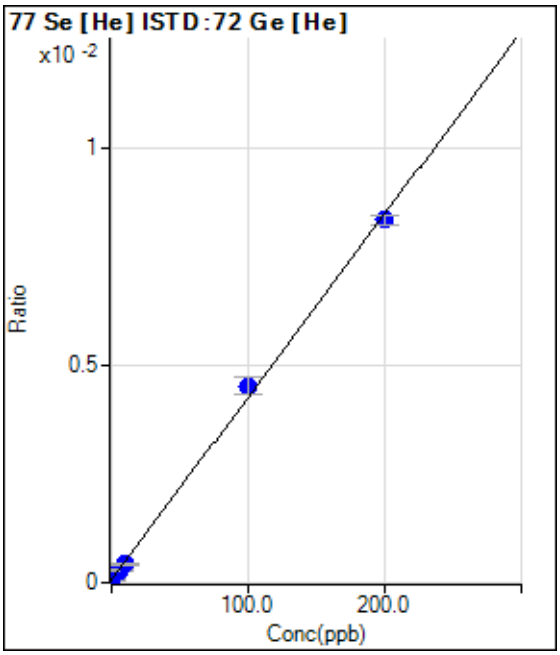
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	11478.41	0.0025	P	5.2
2	☐	2.000	1.506	11955.50	0.0026	P	2.4
3	☐	5.000	4.188	12762.89	0.0028	P	1.2
4	☐	10.000	7.775	13917.45	0.0031	P	4.1
5	☐	100.000	99.984	42032.48	0.0093	P	1.2
6	☐	200.000	200.145	71569.97	0.0162	P	1.1

y = 6.8172E-005 * x + 0.0025
R = 1.0000
DL = 5.775
BEC = 37.01

Weight: <None>
Min Conc: <None>

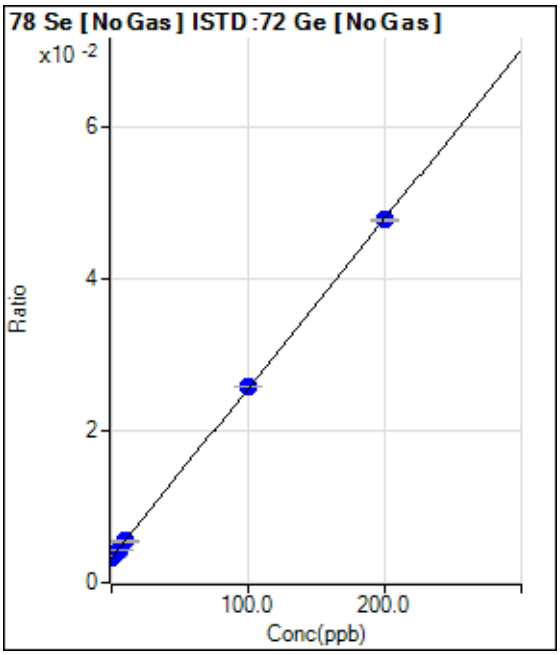


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	93.33	0.0001	P	41.3
2	☐	2.000	2.725	253.34	0.0002	P	24.5
3	☐	5.000	4.865	383.35	0.0003	P	13.0
4	☐	10.000	8.597	613.36	0.0004	P	8.0
5	☐	100.000	106.252	6388.30	0.0045	P	8.2
6	☐	200.000	196.940	11795.37	0.0083	P	2.7

y = 4.2045E-005 * x + 6.5681E-005
R = 0.9993
DL = 1.933
BEC = 1.562

Weight: <None>
Min Conc: <None>

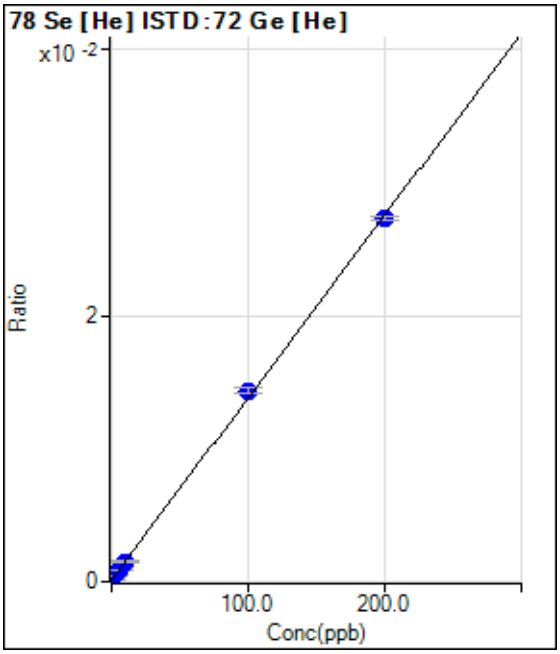
Calibration for 021_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	14871.81	0.0033	P	6.1
2	☐	2.000	1.663	16573.77	0.0036	P	1.8
3	☐	5.000	4.959	19881.67	0.0044	P	0.8
4	☐	10.000	9.959	25033.62	0.0055	P	2.8
5	☐	100.000	101.002	116080.93	0.0258	P	0.7
6	☐	200.000	199.505	211444.97	0.0478	P	0.6

y = 2.2302E-004 * x + 0.0033
R = 1.0000
DL = 2.704
BEC = 14.66

Weight: <None>
Min Conc: <None>

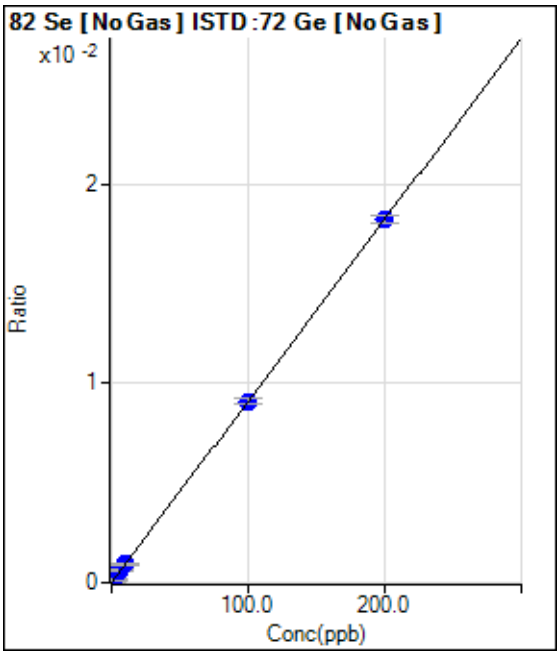


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	188.67	0.0001	P	3.8
2	☐	2.000	2.219	613.35	0.0004	P	3.0
3	☐	5.000	5.162	1190.72	0.0008	P	1.8
4	☐	10.000	9.994	2152.85	0.0015	P	3.0
5	☐	100.000	103.648	20180.45	0.0143	P	2.9
6	☐	200.000	198.170	38502.11	0.0272	P	1.1

y = 1.3682E-004 * x + 1.3247E-004
R = 0.9998
DL = 0.1113
BEC = 0.9682

Weight: <None>
Min Conc: <None>

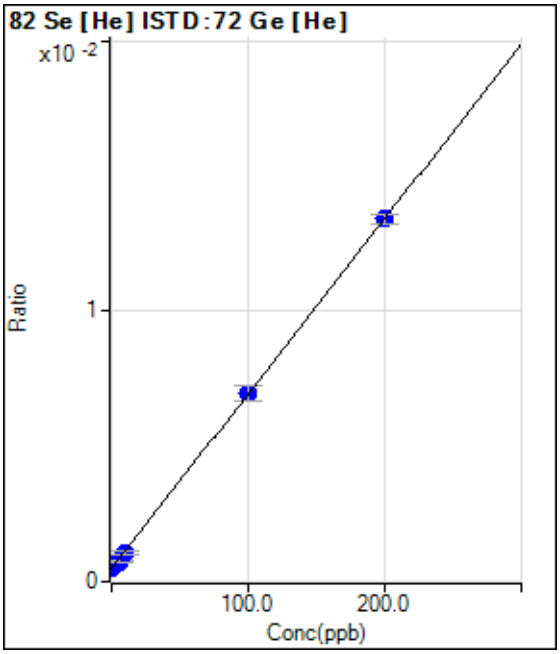
Calibration for 021_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	-143.13	0.0000	P	-115.3
2	☐	2.000	1.777	594.02	0.0001	P	85.2
3	☐	5.000	6.672	2627.36	0.0006	P	7.0
4	☐	10.000	10.101	4062.92	0.0009	P	9.1
5	☐	100.000	99.848	40939.02	0.0091	P	3.1
6	☐	200.000	200.031	80784.38	0.0183	P	1.9

y = 9.1399E-005 * x - 3.1410E-005
R = 1.0000
DL = 1.189
BEC = -0.3437

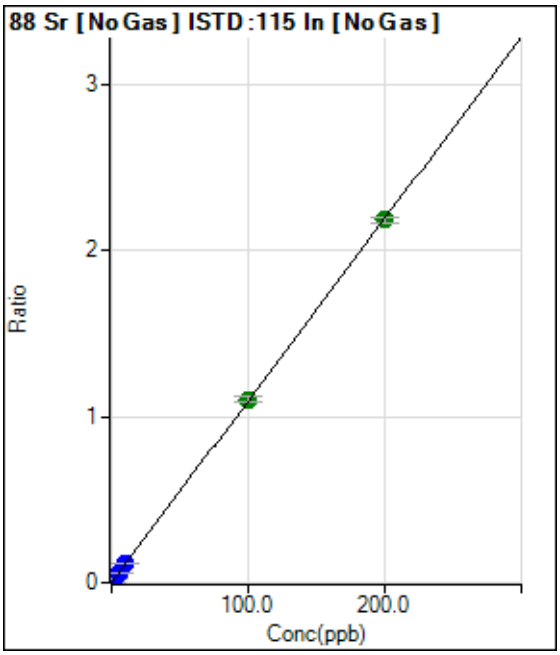
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	686.70	0.0005	P	7.7
2	☐	2.000	2.183	876.71	0.0006	P	12.6
3	☐	5.000	3.768	1030.06	0.0007	P	12.9
4	☐	10.000	9.215	1546.79	0.0011	P	10.0
5	☐	100.000	100.041	9797.08	0.0070	P	8.1
6	☐	200.000	200.048	18963.68	0.0134	P	2.6

y = 6.4673E-005 * x + 4.8194E-004
R = 1.0000
DL = 1.716
BEC = 7.452

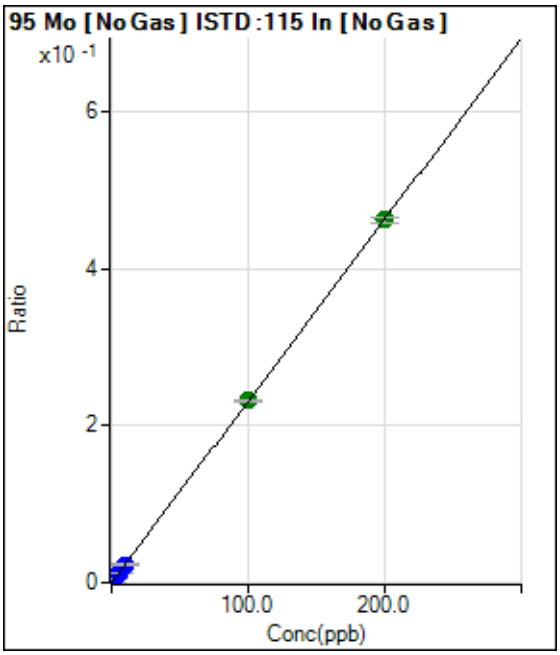
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3103.76	0.0006	P	3.6
2	☐	2.000	2.038	113721.87	0.0229	P	0.6
3	☐	5.000	5.085	279505.76	0.0562	P	1.1
4	☐	10.000	10.345	555321.88	0.1137	P	1.2
5	☐	100.000	100.930	5397614.71	1.1043	A	2.5
6	☐	200.000	199.515	10389620.68	2.1823	A	1.5

y = 0.0109 * x + 6.2295E-004
R = 1.0000
DL = 0.006207
BEC = 0.05697

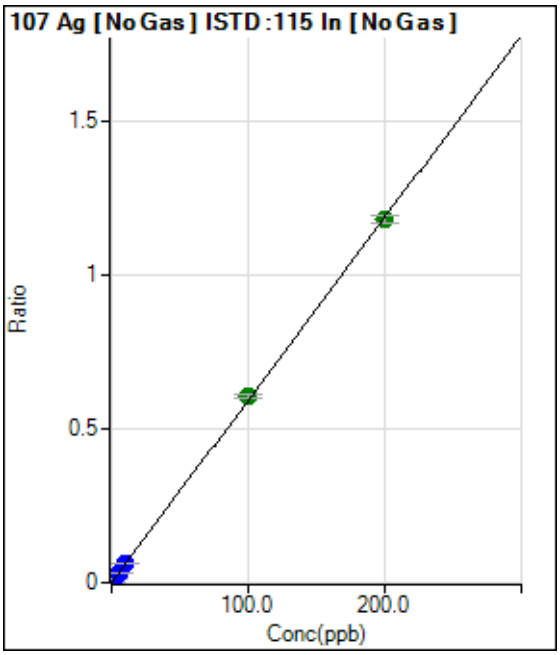
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	83.33	0.0000	P	36.2
2	☐	2.000	1.936	22278.98	0.0045	P	2.6
3	☐	5.000	4.924	56617.29	0.0114	P	0.9
4	☐	10.000	10.035	113253.55	0.0232	P	1.2
5	☐	100.000	100.166	1131052.02	0.2314	A	1.5
6	☐	200.000	199.918	2198375.75	0.4618	A	1.8

y = 0.0023 * x + 1.6701E-005
R = 1.0000
DL = 0.007854
BEC = 0.007231

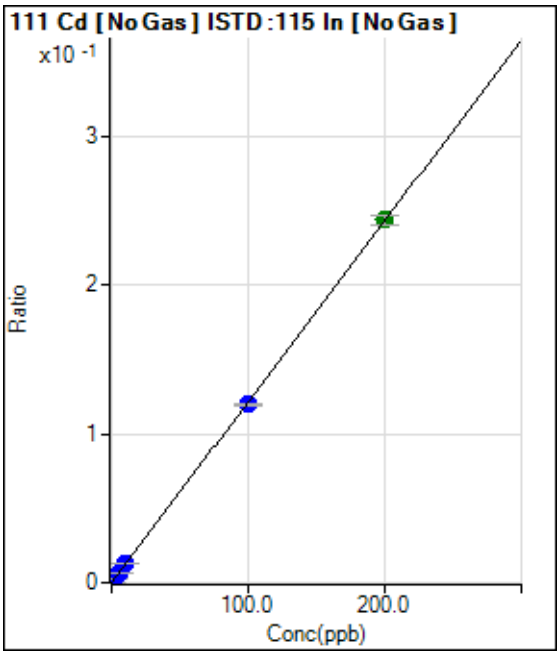
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	456.68	0.0001	P	15.9
2	☐	2.000	2.013	59782.05	0.0120	P	1.5
3	☐	5.000	5.112	151337.75	0.0304	P	1.2
4	☐	10.000	10.368	301037.45	0.0617	P	1.2
5	☐	100.000	102.159	2965671.31	0.6067	A	2.0
6	☐	200.000	198.899	5623197.83	1.1811	A	2.1

y = 0.0059 * x + 9.1595E-005
R = 0.9999
DL = 0.007337
BEC = 0.01543

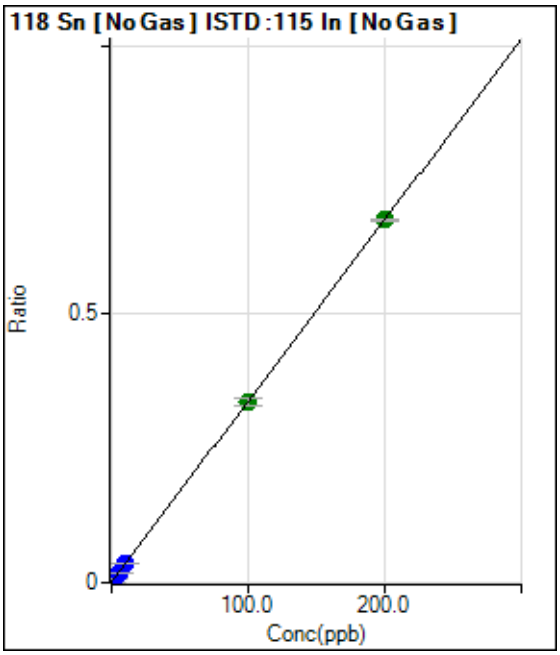
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	23.33	0.0000	P	24.5
2	☐	2.000	1.993	12049.06	0.0024	P	2.3
3	☐	5.000	5.094	30796.36	0.0062	P	3.3
4	☐	10.000	10.201	60559.06	0.0124	P	0.2
5	☐	100.000	98.603	585922.84	0.1199	P	1.0
6	☐	200.000	200.686	1161247.45	0.2439	A	2.7

y = 0.0012 * x + 4.6824E-006
R = 1.0000
DL = 0.002833
BEC = 0.003852

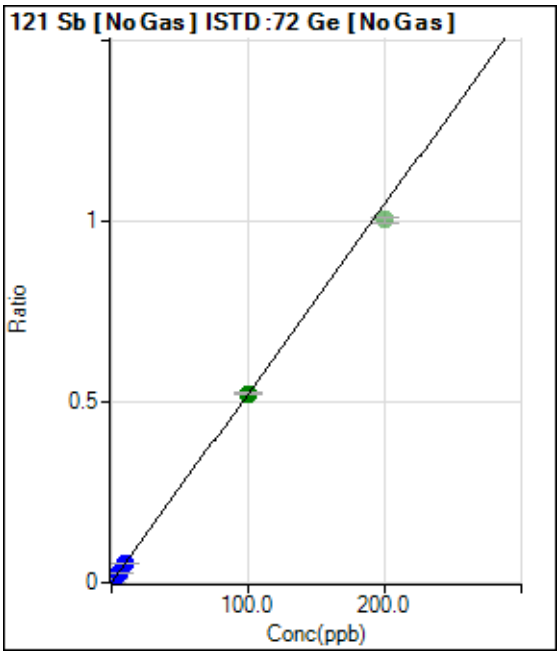
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Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	4304.09	0.0009	P	4.5
2	☐	2.000	1.867	35539.05	0.0072	P	2.9
3	☐	5.000	4.898	86390.07	0.0174	P	0.5
4	☐	10.000	10.046	169568.08	0.0347	P	1.2
5	☐	100.000	99.773	1648167.68	0.3372	A	3.7
6	☐	200.000	200.115	3216238.28	0.6755	A	0.7

y = 0.0034 * x + 8.6404E-004
R = 1.0000
DL = 0.03451
BEC = 0.2563

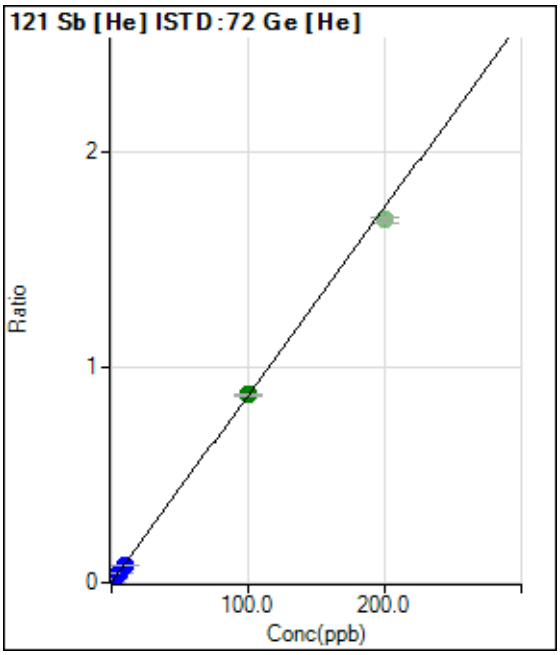
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	643.36	0.0001	P	6.6
2	☐	2.000	1.931	46616.67	0.0102	P	1.5
3	☐	5.000	4.890	116851.37	0.0257	P	0.4
4	☐	10.000	9.867	235848.48	0.0517	P	1.5
5	☐	100.000	100.020	2354473.51	0.5232	A	0.5
6	☑	200.000		4443004.62	1.0037	A	1.7

y = 0.0052 * x + 1.4145E-004
R = 1.0000
DL = 0.00539
BEC = 0.02705

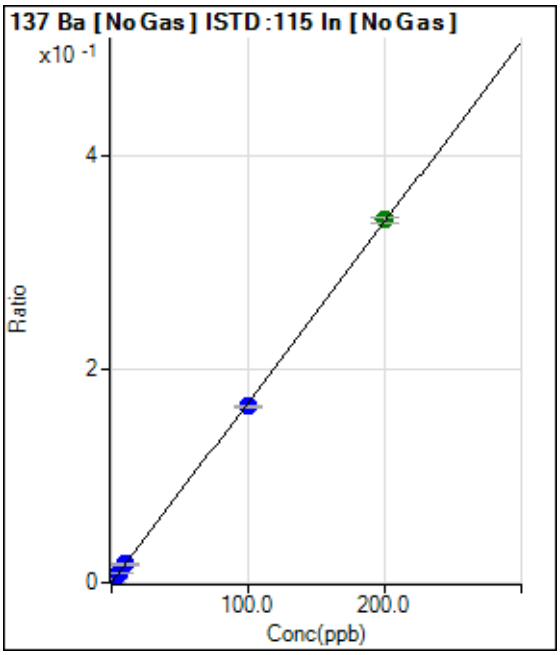
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	316.68	0.0002	P	15.1
2	☐	2.000	1.943	24152.59	0.0172	P	3.7
3	☐	5.000	4.750	59140.74	0.0417	P	1.1
4	☐	10.000	9.521	119554.48	0.0833	P	1.1
5	☐	100.000	100.062	1231074.46	0.8731	A	1.6
6	☑	200.000		2385789.65	1.6883	A	1.9

y = 0.0087 * x + 2.2247E-004
R = 1.0000
DL = 0.01155
BEC = 0.0255

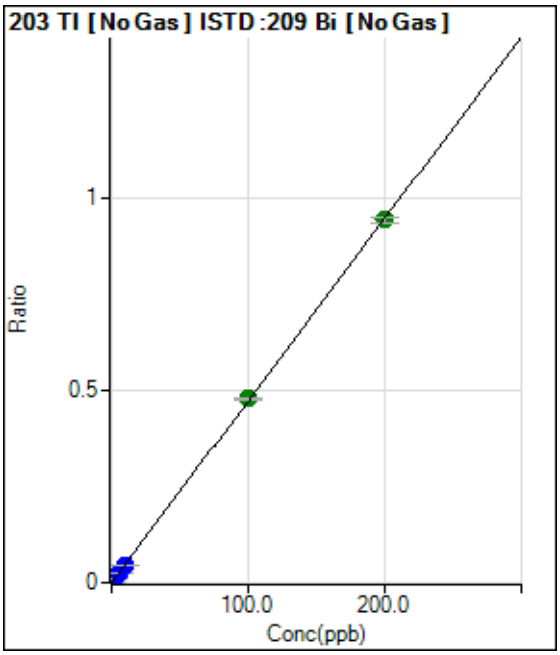
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	560.02	0.0001	P	15.8
2	☐	2.000	1.860	16123.61	0.0032	P	4.2
3	☐	5.000	4.824	40988.48	0.0082	P	2.7
4	☐	10.000	10.110	83786.31	0.0172	P	3.0
5	☐	100.000	97.875	807501.68	0.1652	P	0.9
6	☐	200.000	201.063	1614823.21	0.3392	A	1.8

y = 0.0017 * x + 1.1242E-004
R = 0.9999
DL = 0.03162
BEC = 0.06666

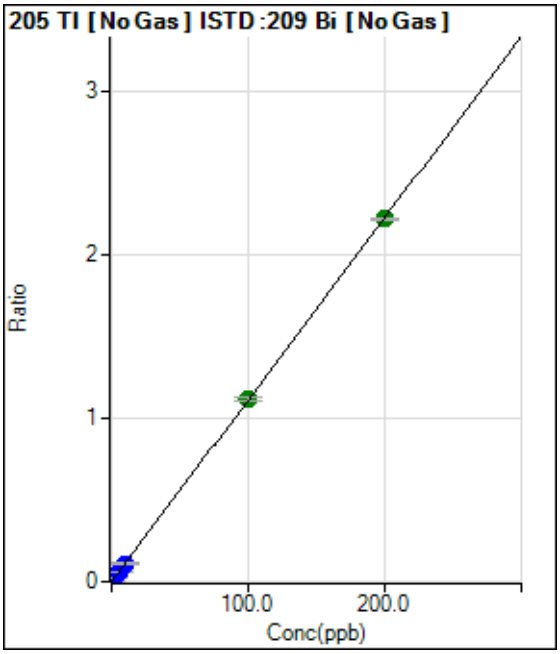
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	70.00	0.0000	P	36.7
2	☐	2.000	1.939	36012.51	0.0092	P	3.7
3	☐	5.000	4.961	91222.13	0.0235	P	0.8
4	☐	10.000	9.961	183347.84	0.0472	P	1.0
5	☐	100.000	101.067	1825528.41	0.4784	A	1.7
6	☐	200.000	199.470	3551058.28	0.9442	A	1.7

y = 0.0047 * x + 1.7894E-005
R = 1.0000
DL = 0.004158
BEC = 0.00378

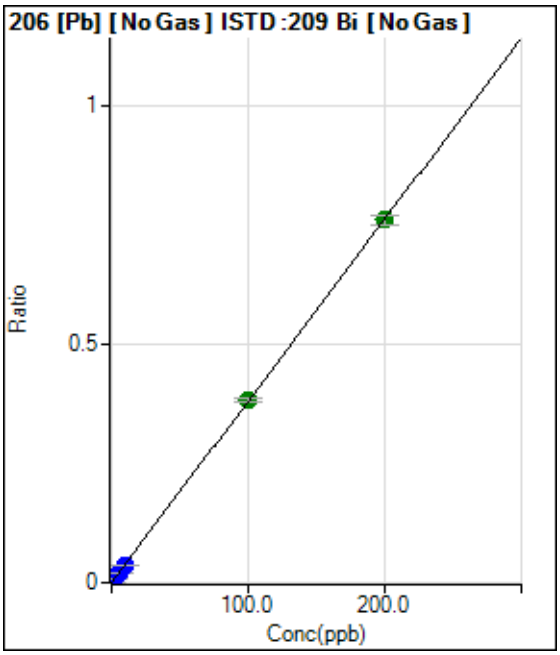
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Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	130.00	0.0000	P	49.5
2	☐	2.000	1.973	86110.06	0.0220	P	2.6
3	☐	5.000	5.008	216432.17	0.0558	P	1.7
4	☐	10.000	10.044	434631.31	0.1118	P	0.7
5	☐	100.000	100.765	4278627.65	1.1215	A	2.4
6	☐	200.000	199.616	8356727.58	2.2217	A	0.7

y = 0.0111 * x + 3.3439E-005
R = 1.0000
DL = 0.004458
BEC = 0.003004

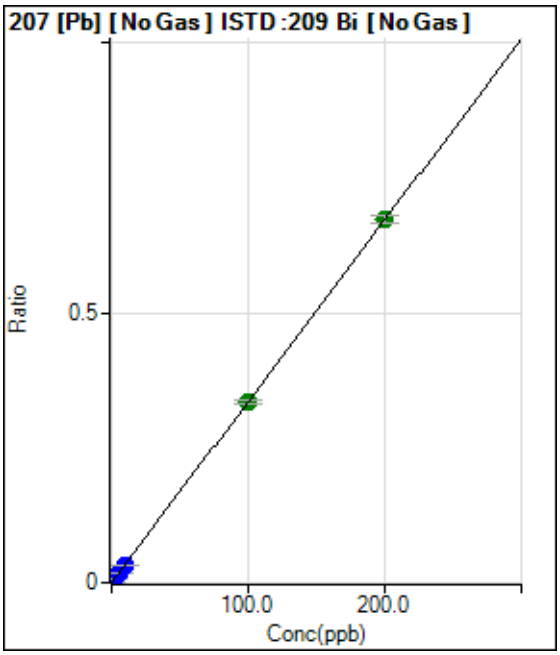
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	560.03	0.0001	P	8.1
2	☐	2.000	1.927	29318.14	0.0075	P	2.1
3	☐	5.000	5.080	75659.59	0.0195	P	1.7
4	☐	10.000	9.942	147782.94	0.0380	P	1.1
5	☐	100.000	100.308	1458362.53	0.3823	A	2.6
6	☐	200.000	199.848	2863423.60	0.7615	A	2.8

y = 0.0038 * x + 1.4337E-004
R = 1.0000
DL = 0.009128
BEC = 0.03763

Weight: <None>
Min Conc: <None>

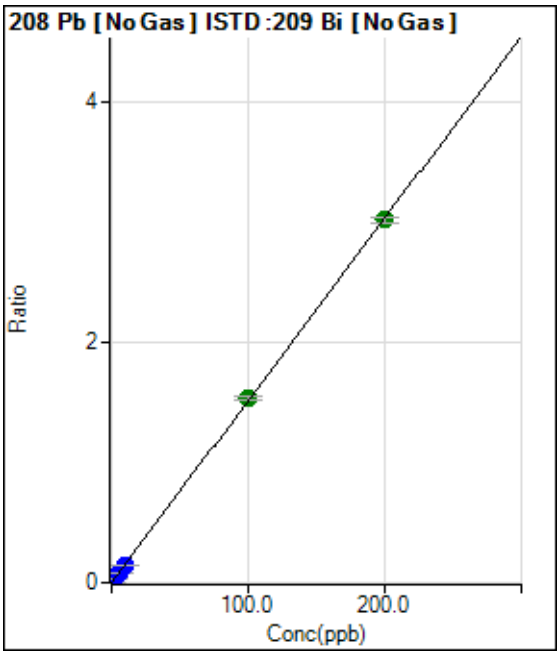


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	376.68	0.0001	P	19.7
2	☐	2.000	1.936	25810.44	0.0066	P	2.7
3	☐	5.000	4.945	64771.75	0.0167	P	0.6
4	☐	10.000	9.732	127293.15	0.0328	P	2.3
5	☐	100.000	99.490	1273864.46	0.3339	A	1.7
6	☐	200.000	200.270	2527459.70	0.6721	A	2.1

y = 0.0034 * x + 9.6425E-005
R = 1.0000
DL = 0.017
BEC = 0.02874

Weight: <None>
Min Conc: <None>

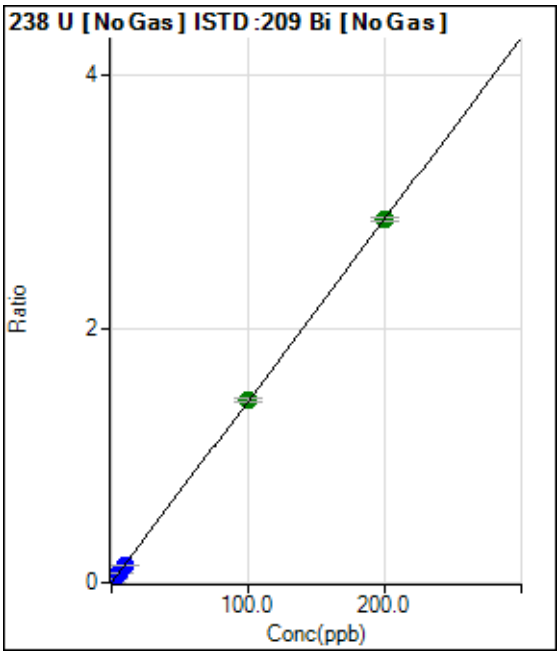
Calibration for 021_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1896.77	0.0005	P	2.0
2	☐	2.000	1.947	117267.21	0.0299	P	2.0
3	☐	5.000	5.033	297359.95	0.0766	P	1.4
4	☐	10.000	9.925	585413.61	0.1506	P	1.1
5	☐	100.000	101.398	5852213.19	1.5342	A	2.5
6	☐	200.000	199.305	11339909.05	3.0151	A	1.3

y = 0.0151 * x + 4.8588E-004
R = 1.0000
DL = 0.001927
BEC = 0.03212

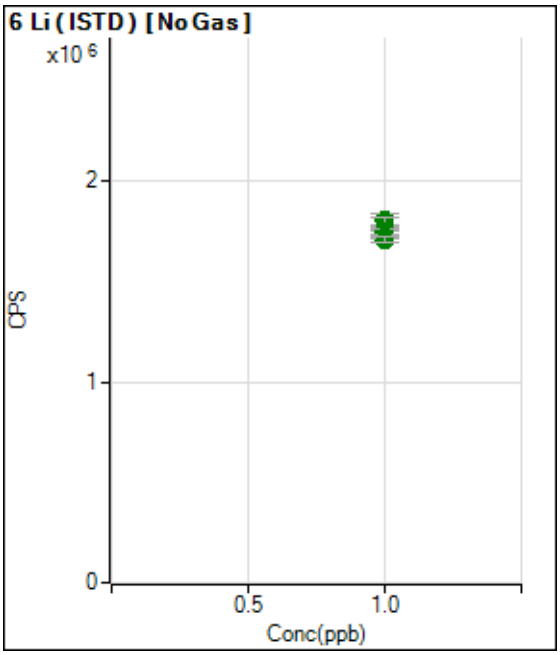
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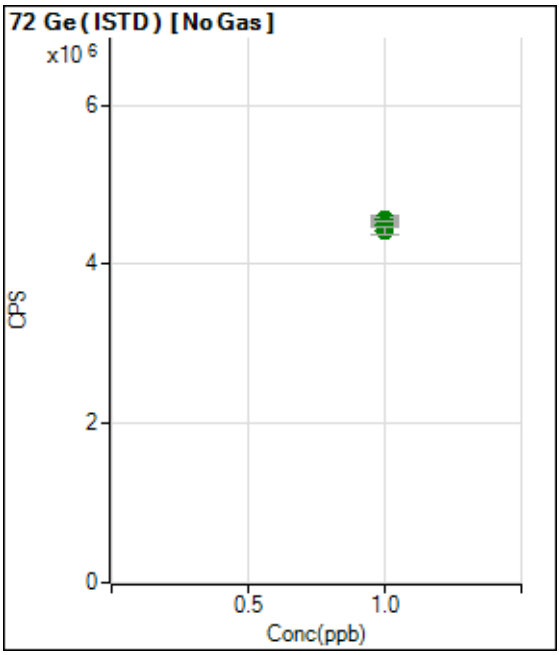
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	70.00	0.0000	P	30.0
2	☐	2.000	1.928	108237.90	0.0276	P	3.1
3	☐	5.000	4.881	271534.44	0.0700	P	0.9
4	☐	10.000	9.854	548920.79	0.1412	P	0.6
5	☐	100.000	100.536	5495300.96	1.4406	A	2.3
6	☐	200.000	199.743	10764805.67	2.8621	A	1.1

y = 0.0143 * x + 1.7985E-005
R = 1.0000
DL = 0.001128
BEC = 0.001255

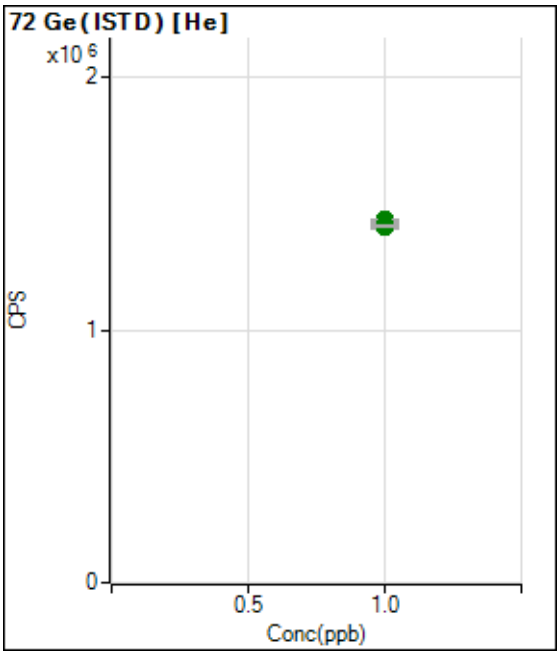
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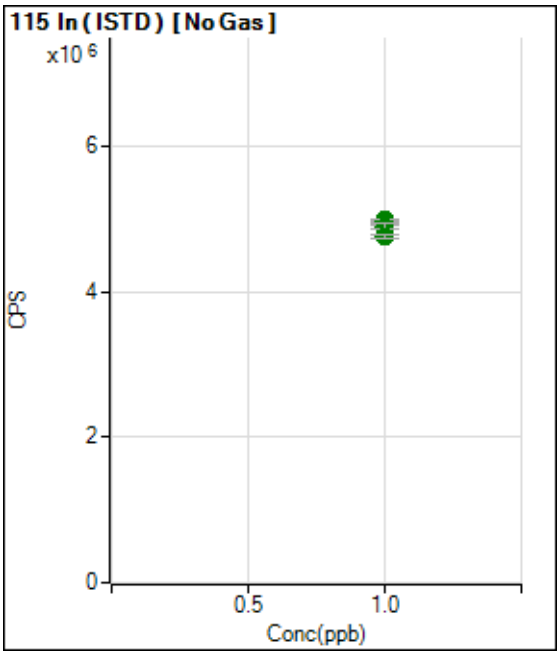
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1807448.27		A	3.1
2	☐	1.000		1798052.17		A	3.0
3	☐	1.000		1745974.81		A	1.2
4	☐	1.000		1750001.96		A	1.7
5	☐	1.000		1724471.35		A	1.3
6	☐	1.000		1709452.18		A	1.4



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		4552529.52		A	2.2
2	☐	1.000		4553154.10		A	0.9
3	☐	1.000		4544024.83		A	0.8
4	☐	1.000		4558268.79		A	1.4
5	☐	1.000		4500014.31		A	1.6
6	☐	1.000		4427367.02		A	2.0

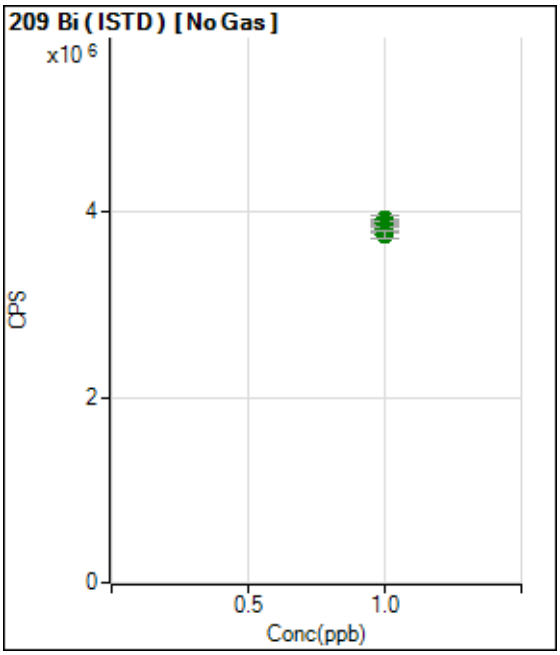


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1424674.15		A	1.2
2	☐	1.000		1406664.46		A	1.3
3	☐	1.000		1419643.16		A	0.8
4	☐	1.000		1435602.90		A	0.8
5	☐	1.000		1410099.09		A	1.1
6	☐	1.000		1413231.33		A	0.8



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		4981656.96		A	0.8
2	☐	1.000		4963758.63		A	1.0
3	☐	1.000		4971186.20		A	1.2
4	☐	1.000		4882590.45		A	0.9
5	☐	1.000		4889337.67		A	1.7
6	☐	1.000		4761405.30		A	1.1

Calibration for 021_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		3903311.92		A	1.4
2	☐	1.000		3918073.17		A	2.8
3	☐	1.000		3881354.32		A	1.5
4	☐	1.000		3887189.63		A	1.0
5	☐	1.000		3815749.11		A	1.9
6	☐	1.000		3761702.86		A	2.0

Calibration Standard Report

Sample Table

Sample Name	2/10/200
Data File Name	015CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\080921A.b
Acq Date Time	2021-08-09T14:43:21-05:00
Sample Type	CalStd
Level	2
Dilution	1
Comment	
ISTD Ref File Name	014CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	No Gas	13673	0.01
V	51	2	He	27544	0.01
Cr	52	2	He	31239	0.00
Fe	56	2	He	2568198	0.00
Se	78	2	He	613	0.56
As	75	2	He	4425	0.06
Ca	44	2	He	19210	0.02
Na	23	2	He	501533	0.00
Mg	24	2	He	243158	0.00
K	39	2	He	467695	0.00
Mn	55	2	He	20599	0.02
Co	59	2	He	41276	0.00
Ni	60	2	He	11362	0.03
Cu	63	2	He	30044	0.00
Zn	66	2	He	6001	0.07
Al	27	2	He	5255	1.00
B	11	1	No Gas	63785	0.00
Al	27	1	No Gas	152373	0.00
Si	28	1	No Gas	1656436	0.00
Ag	107	1	No Gas	59782	0.00
Cd	111	1	No Gas	12049	0.02
Sr	88	1	No Gas	113722	0.00
Mo	95	1	No Gas	22279	0.01
Sn	118	1	No Gas	35539	0.01
Sb	121	1	No Gas	46617	0.00
Ba	137	1	No Gas	16124	0.02
Tl	205	1	No Gas	86110	0.00
Tl	203	1	No Gas	36013	0.00
Pb	208	1	No Gas	117267	0.00
U	238	1	No Gas	108238	0.00
Ca	43	2	He	853	0.32
Sb	121	2	He	24153	0.01
Cu	63	1	No Gas	56809	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	1798052	3.00	1807448	99.48	70	120	
Ge	72	2	He	1406664	1.33	1424674	98.74	70	120	
Ge	72	1	No Gas	4553154	0.91	4552530	100.01	70	120	

Calibration Standard Report

In	115	1	No Gas	4963759	1.00	4981657	99.64	70	120	
Bi	209	1	No Gas	3918073	2.83	3903312	100.38	70	120	

Calibration Standard Report

Sample Table

Sample Name	5/25/500
Data File Name	016CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\080921A.b
Acq Date Time	2021-08-09T14:45:17-05:00
Sample Type	CalStd
Level	3
Dilution	1
Comment	
ISTD Ref File Name	014CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	No Gas	33246	0.00
V	51	2	He	61763	0.00
Cr	52	2	He	73400	0.00
Fe	56	2	He	6402984	0.00
Se	78	2	He	1191	0.21
As	75	2	He	10417	0.01
Ca	44	2	He	42055	0.01
Na	23	2	He	1113924	0.00
Mg	24	2	He	613511	0.00
K	39	2	He	923480	0.00
Mn	55	2	He	51306	0.00
Co	59	2	He	103582	0.00
Ni	60	2	He	27461	0.01
Cu	63	2	He	72282	0.00
Zn	66	2	He	13971	0.04
Al	27	2	He	5835	0.13
B	11	1	No Gas	128510	0.00
Al	27	1	No Gas	252032	0.00
Si	28	1	No Gas	1889691	0.00
Ag	107	1	No Gas	151338	0.00
Cd	111	1	No Gas	30796	0.01
Sr	88	1	No Gas	279506	0.00
Mo	95	1	No Gas	56617	0.00
Sn	118	1	No Gas	86390	0.00
Sb	121	1	No Gas	116851	0.00
Ba	137	1	No Gas	40988	0.00
Tl	205	1	No Gas	216432	0.00
Tl	203	1	No Gas	91222	0.00
Pb	208	1	No Gas	297360	0.00
U	238	1	No Gas	271534	0.00
Ca	43	2	He	2110	0.14
Sb	121	2	He	59141	0.00
Cu	63	1	No Gas	131304	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	1745975	1.21	1807448	96.60	70	120	
Ge	72	2	He	1419643	0.80	1424674	99.65	70	120	
Ge	72	1	No Gas	4544025	0.76	4552530	99.81	70	120	

Calibration Standard Report

In	115	1	No Gas	4971186	1.21	4981657	99.79	70	120	
Bi	209	1	No Gas	3881354	1.47	3903312	99.44	70	120	

Calibration Standard Report

Sample Table

Sample Name	10/50/100
Data File Name	017CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\080921A.b
Acq Date Time	2021-08-09T14:47:13-05:00
Sample Type	CalStd
Level	4
Dilution	1
Comment	
ISTD Ref File Name	014CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	No Gas	67287	0.00
V	51	2	He	121165	0.00
Cr	52	2	He	142524	0.00
Fe	56	2	He	12693627	0.00
Se	78	2	He	2153	0.11
As	75	2	He	20788	0.01
Ca	44	2	He	79298	0.00
Na	23	2	He	2188167	0.00
Mg	24	2	He	1223328	0.00
K	39	2	He	1702724	0.00
Mn	55	2	He	101647	0.00
Co	59	2	He	210914	0.00
Ni	60	2	He	55132	0.00
Cu	63	2	He	141824	0.00
Zn	66	2	He	28540	0.01
Al	27	2	He	9437	0.01
B	11	1	No Gas	235402	0.00
Al	27	1	No Gas	404078	0.00
Si	28	1	No Gas	2255827	0.00
Ag	107	1	No Gas	301037	0.00
Cd	111	1	No Gas	60559	0.00
Sr	88	1	No Gas	555322	0.00
Mo	95	1	No Gas	113254	0.00
Sn	118	1	No Gas	169568	0.00
Sb	121	1	No Gas	235848	0.00
Ba	137	1	No Gas	83786	0.00
Tl	205	1	No Gas	434631	0.00
Tl	203	1	No Gas	183348	0.00
Pb	208	1	No Gas	585414	0.00
U	238	1	No Gas	548921	0.00
Ca	43	2	He	4818	0.04
Sb	121	2	He	119554	0.00
Cu	63	1	No Gas	254511	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	1750002	1.67	1807448	96.82	70	120	
Ge	72	2	He	1435603	0.84	1424674	100.77	70	120	
Ge	72	1	No Gas	4558269	1.39	4552530	100.13	70	120	

Calibration Standard Report

In	115	1	No Gas	4882590	0.92	4981657	98.01	70	120	
Bi	209	1	No Gas	3887190	0.96	3903312	99.59	70	120	

Calibration Standard Report

Sample Table

Sample Name	100/500/10K
Data File Name	018CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\080921A.b
Acq Date Time	2021-08-09T14:49:09-05:00
Sample Type	CalStd
Level	5
Dilution	1
Comment	
ISTD Ref File Name	014CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	No Gas	660498	0.00
V	51	2	He	1194666	0.00
Cr	52	2	He	1415453	0.00
Fe	56	2	He	125257961	0.00
Se	78	2	He	20180	0.01
As	75	2	He	202222	0.00
Ca	44	2	He	756944	0.00
Na	23	2	He	20084905	0.00
Mg	24	2	He	11779123	0.00
K	39	2	He	14885235	0.00
Mn	55	2	He	1012470	0.00
Co	59	2	He	2115396	0.00
Ni	60	2	He	529366	0.00
Cu	63	2	He	1355558	0.00
Zn	66	2	He	263834	0.00
Al	27	2	He	71102	0.01
B	11	1	No Gas	2092563	0.00
Al	27	1	No Gas	2904628	0.00
Si	28	1	No Gas	8937581	0.00
Ag	107	1	No Gas	2965671	0.00
Cd	111	1	No Gas	585923	0.00
Sr	88	1	No Gas	5397615	0.00
Mo	95	1	No Gas	1131052	0.00
Sn	118	1	No Gas	1648168	0.00
Sb	121	1	No Gas	2354474	0.00
Ba	137	1	No Gas	807502	0.00
Tl	205	1	No Gas	4278628	0.00
Tl	203	1	No Gas	1825528	0.00
Pb	208	1	No Gas	5852213	0.00
U	238	1	No Gas	5495301	0.00
Ca	43	2	He	45455	0.00
Sb	121	2	He	1231074	0.00
Cu	63	1	No Gas	2455553	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	1724471	1.30	1807448	95.41	70	120	
Ge	72	2	He	1410099	1.10	1424674	98.98	70	120	
Ge	72	1	No Gas	4500014	1.61	4552530	98.85	70	120	

Calibration Standard Report

In	115	1	No Gas	4889338	1.68	4981657	98.15	70	120	
Bi	209	1	No Gas	3815749	1.91	3903312	97.76	70	120	

Calibration Standard Report

Sample Table

Sample Name	200/1000/20K
Data File Name	019CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\080921A.b
Acq Date Time	2021-08-09T14:50:57-05:00
Sample Type	CalStd
Level	6
Dilution	1
Comment	
ISTD Ref File Name	014CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	No Gas	1301247	0.00
V	51	2	He	2323074	0.00
Cr	52	2	He	2704377	0.00
Fe	56	2	He	237582683	0.00
Se	78	2	He	38502	0.00
As	75	2	He	395717	0.00
Ca	44	2	He	1499048	0.00
Na	23	2	He	38216409	0.00
Mg	24	2	He	22405228	0.00
K	39	2	He	28719506	0.00
Mn	55	2	He	1958841	0.00
Co	59	2	He	3929902	0.00
Ni	60	2	He	1020060	0.00
Cu	63	2	He	2655241	0.00
Zn	66	2	He	510792	0.00
Al	27	2	He	132197	0.00
B	11	1	No Gas	4120662	0.00
Al	27	1	No Gas	5478095	0.00
Si	28	1	No Gas	15876339	0.00
Ag	107	1	No Gas	5623198	0.00
Cd	111	1	No Gas	1161247	0.00
Sr	88	1	No Gas	10389621	0.00
Mo	95	1	No Gas	2198376	0.00
Sn	118	1	No Gas	3216238	0.00
Sb	121	1	No Gas	4443005	0.00
Ba	137	1	No Gas	1614823	0.00
Tl	205	1	No Gas	8356728	0.00
Tl	203	1	No Gas	3551058	0.00
Pb	208	1	No Gas	11339909	0.00
U	238	1	No Gas	10764806	0.00
Ca	43	2	He	86246	0.00
Sb	121	2	He	2385790	0.00
Cu	63	1	No Gas	4732622	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	1709452	1.40	1807448	94.58	70	120	
Ge	72	2	He	1413231	0.81	1424674	99.20	70	120	
Ge	72	1	No Gas	4427367	1.99	4552530	97.25	70	120	

Calibration Standard Report

In	115	1	No Gas	4761405	1.06	4981657	95.58	70	120	
Bi	209	1	No Gas	3761703	2.02	3903312	96.37	70	120	

Initial Calibration Verification (ICV) Report

Sample Table

Sample Name	ICV
Data File Name	021_ICV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\080921A.b
Acq Date Time	2021-08-09T14:55:05-05:00
Sample Type	ICV
Dilution	1
Comment	
ISTD Ref File Name	014CALB.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	102.006	5.769	2247097	2.88	100	102.0	90	110	
Be	9	1	No Gas	104.034	3.009	684530	0.20	100	104.0	90	110	
V	51	2	He	103.854	1.146	1218157	0.56	100	103.9	90	110	
Cr	52	2	He	102.598	0.889	1405719	1.73	100	102.6	90	110	
Fe	56	2	He	10344.283	0.561	124594988	1.34	10000	103.4	90	110	
Se	78	2	He	103.639	0.824	20273	1.22	100	103.6	90	110	
As	75	2	He	105.395	0.257	210153	1.19	100	105.4	90	110	
Ca	44	2	He	9894.609	1.852	746635	0.43	10000	98.9	90	110	
Na	23	2	He	10353.301	1.922	20072949	0.92	10000	103.5	90	110	
Mg	24	2	He	10243.731	1.812	11627795	0.87	10000	102.4	90	110	
K	39	2	He	10197.986	1.751	14858064	0.58	10000	102.0	90	110	
Mn	55	2	He	102.815	2.140	1016756	1.35	100	102.8	90	110	
Co	59	2	He	106.349	1.056	2128073	1.43	100	106.3	90	110	
Ni	60	2	He	103.290	0.650	532550	0.84	100	103.3	90	110	
Cu	63	2	He	102.526	2.760	1371712	1.72	100	102.5	90	110	
Zn	66	2	He	104.287	0.317	269176	1.12	100	104.3	90	110	
Al	27	2	He	106.304	1.977	72365	0.50	100	106.3	90	110	
B	11	1	No Gas	491.183	2.162	2055682	1.29	500	98.2	90	110	
Al	27	1	No Gas	103.738	2.956	2971925	2.08	100	103.7	90	110	
Si	28	1	No Gas	537.640	0.633	9481688	0.85	500	107.5	90	110	
Ag	107	1	No Gas	102.407	2.178	2916107	0.77	100	102.4	90	110	
Cd	111	1	No Gas	101.214	1.883	589912	0.74	100	101.2	90	110	
Sr	88	1	No Gas	102.378	1.735	5371449	1.65	100	102.4	90	110	
Mo	95	1	No Gas	96.620	2.581	1070104	1.46	100	96.6	90	110	
Sn	118	1	No Gas	100.787	0.749	1633784	2.18	100	100.8	90	110	
Sb	121	1	No Gas	104.041	1.163	2388603	0.29	100	104.0	90	110	
Ba	137	1	No Gas	100.895	1.724	816456	0.94	100	100.9	90	110	
Tl	205	1	No Gas	106.046	1.532	4437644	0.72	100	106.0	90	110	
Tl	203	1	No Gas	106.647	1.909	1898502	2.91	100	106.6	90	110	
Pb	208	1	No Gas	104.742	1.618	5958246	0.65	100	104.7	90	110	
U	238	1	No Gas	101.529	2.305	5469627	1.75	100	101.5	90	110	
Ca	43	2	He	10032.945	1.718	43883	0.30	10000	100.3	90	110	
Sb	121	2	He	105.230	0.635	1267075	2.01	100	105.2	90	110	
Ti	47	2	He	102.083	2.988	45369	1.74	100	102.1	90	110	
Cu	63	1	No Gas	103.372	0.983	2518914	0.13	100	103.4	90	110	
Se	82	1	No Gas	100.873	2.984	41681	3.86	100	100.9	90	110	

QC ISTD Table

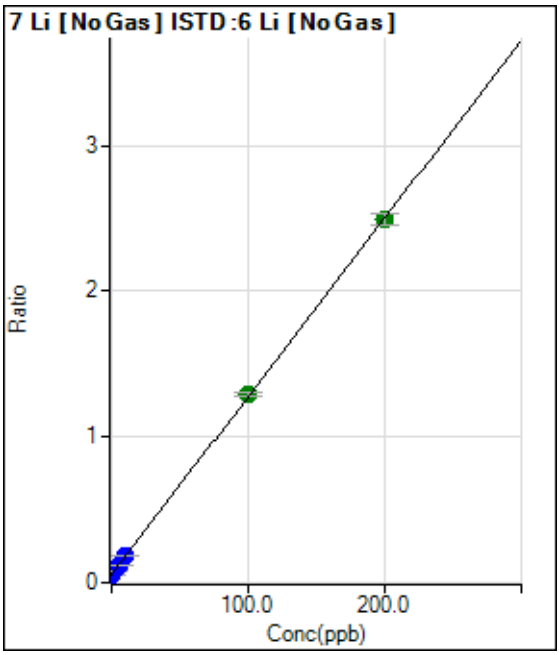
Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	1727352	2.81	1807448	95.57	70	120	
Ge	72	2	He	1416560	1.41	1424674	99.43	70	120	
Ge	72	1	No Gas	4535590	0.94	4552530	99.63	70	120	
In	115	1	No Gas	4796629	2.59	4981657	96.29	70	120	
Bi	209	1	No Gas	3760152	1.09	3903312	96.33	70	120	

Calibration for 021_ICV.d

Batch Folder: C:\Agilent\ICPMH\1\DATA\080921A.b\
Analysis File: 080921A.batch.bin
DA Date-Time: 8/9/2021 8:49:03 PM
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	014CALB.d	CAL BLK	8/9/2021 2:41:23 PM
2	015CALS.d	2/10/200	8/9/2021 2:43:21 PM
3	016CALS.d	5/25/500	8/9/2021 2:45:17 PM
4	017CALS.d	10/50/100	8/9/2021 2:47:13 PM
5	018CALS.d	100/500/10K	8/9/2021 2:49:09 PM
6	019CALS.d	200/1000/20K	8/9/2021 2:50:57 PM

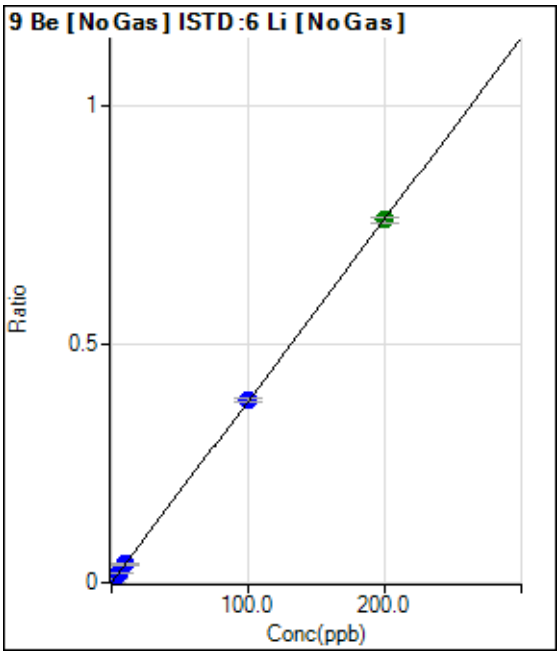
Calibration for 021_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	100913.39	0.0559	P	4.2
2	☐	2.000	2.115	146826.22	0.0817	P	3.9
3	☐	5.000	5.263	209787.62	0.1202	P	3.5
4	☐	10.000	10.635	325121.70	0.1858	P	1.7
5	☐	100.000	101.558	2235951.32	1.2967	A	1.7
6	☐	200.000	199.182	4254796.08	2.4895	A	3.1

y = 0.0122 * x + 0.0559
R = 1.0000
DL = 0.5741
BEC = 4.574

Weight: <None>
Min Conc: <None>

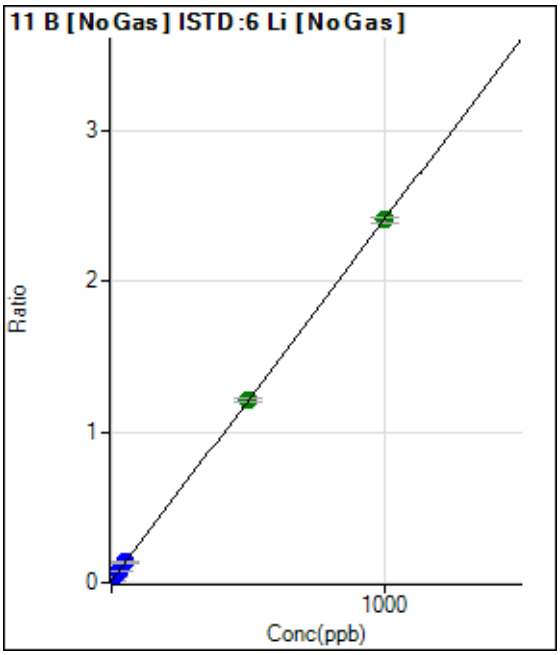


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	26.67	0.0000	P	31.9
2	☐	2.000	1.992	13673.40	0.0076	P	2.6
3	☐	5.000	4.993	33246.04	0.0190	P	1.4
4	☐	10.000	10.087	67286.76	0.0385	P	2.1
5	☐	100.000	100.503	660498.33	0.3831	P	1.7
6	☐	200.000	199.745	1301247.32	0.7613	A	1.8

y = 0.0038 * x + 1.4853E-005
R = 1.0000
DL = 0.003731
BEC = 0.003897

Weight: <None>
Min Conc: <None>

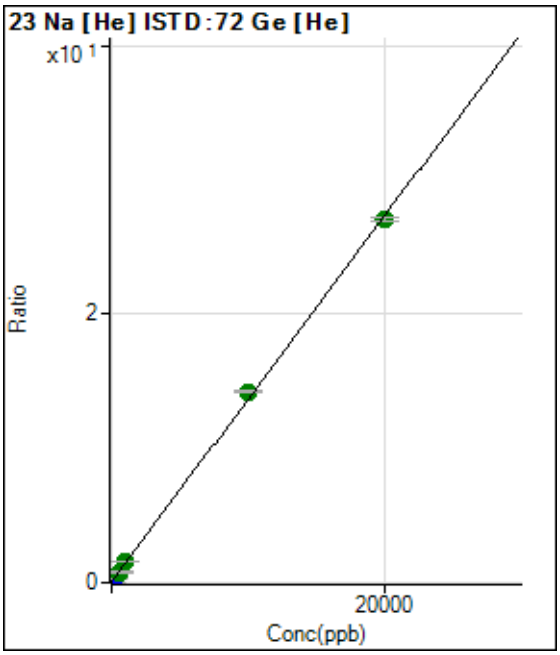
Calibration for 021_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	20802.14	0.0115	P	6.4
2	☐	10.000	9.992	63784.60	0.0355	P	4.7
3	☐	25.000	25.866	128509.89	0.0736	P	1.4
4	☐	50.000	51.251	235401.77	0.1345	P	2.0
5	☐	500.000	500.798	2092562.89	1.2136	A	1.7
6	☐	1000.000	999.517	4120661.71	2.4107	A	1.4

y = 0.0024 * x + 0.0115
R = 1.0000
DL = 0.9215
BEC = 4.801

Weight: <None>
Min Conc: <None>

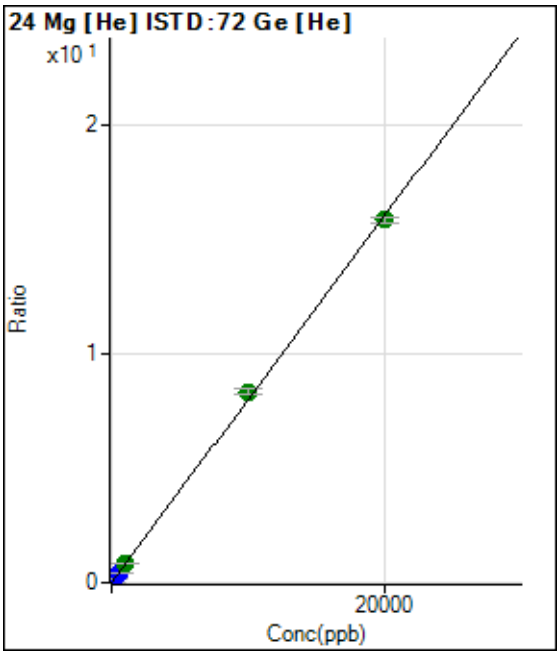


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	82640.32	0.0580	P	2.4
2	☐	200.000	219.022	501532.51	0.3566	P	2.1
3	☐	500.000	533.054	1113924.18	0.7847	A	1.8
4	☐	1000.000	1075.572	2188167.26	1.5243	A	1.3
5	☐	10000.00	10405.76	20084904.70	14.2440	A	0.5
6	☐	20000.00	19792.32	38216408.60	27.0405	A	1.0

y = 0.0014 * x + 0.0580
R = 0.9997
DL = 3.087
BEC = 42.56

Weight: <None>
Min Conc: <None>

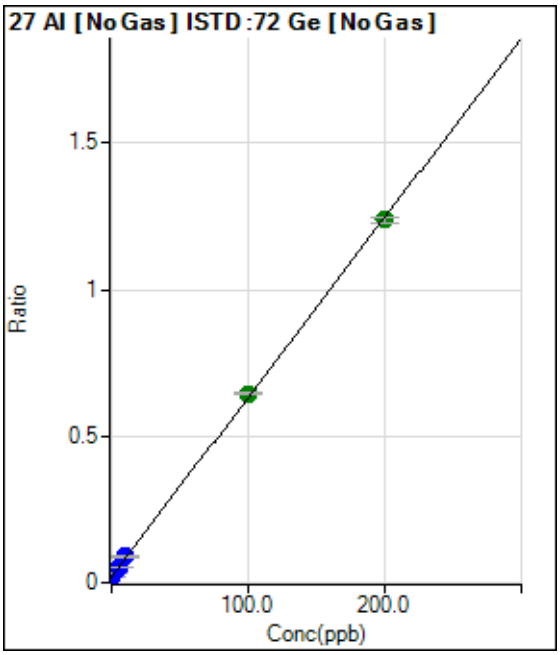
Calibration for 021_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	466.68	0.0003	P	13.9
2	☐	200.000	215.318	243158.24	0.1729	P	1.5
3	☐	500.000	538.857	613510.63	0.4322	P	0.6
4	☐	1000.000	1062.856	1223328.45	0.8521	A	2.0
5	☐	10000.00	10424.35	11779122.74	8.3545	A	2.5
6	☐	20000.00	19783.55	22405228.00	15.8550	A	1.9

y = 8.0141E-004 * x + 3.2786E-004
R = 0.9997
DL = 0.1707
BEC = 0.4091

Weight: <None>
Min Conc: <None>

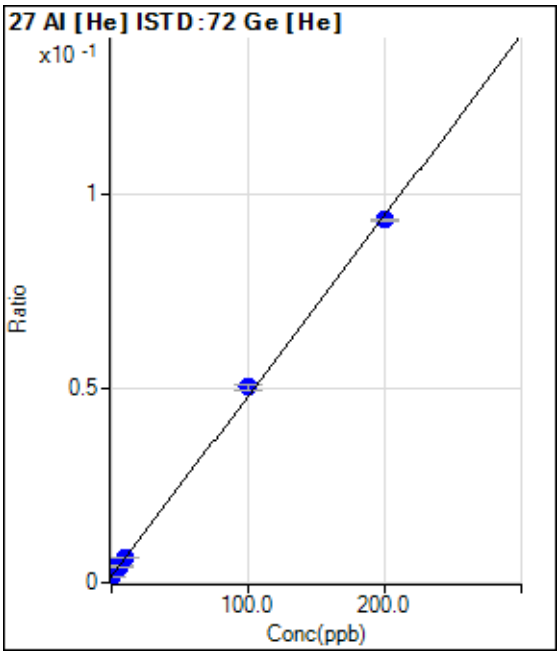


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	93658.72	0.0206	P	1.9
2	☐	2.000	2.107	152372.82	0.0335	P	1.6
3	☐	5.000	5.702	252032.00	0.0555	P	0.8
4	☐	10.000	11.126	404077.62	0.0887	P	0.9
5	☐	100.000	102.113	2904627.77	0.6454	A	1.5
6	☐	200.000	198.869	5478094.50	1.2375	A	1.4

y = 0.0061 * x + 0.0206
R = 0.9999
DL = 0.1923
BEC = 3.363

Weight: <None>
Min Conc: <None>

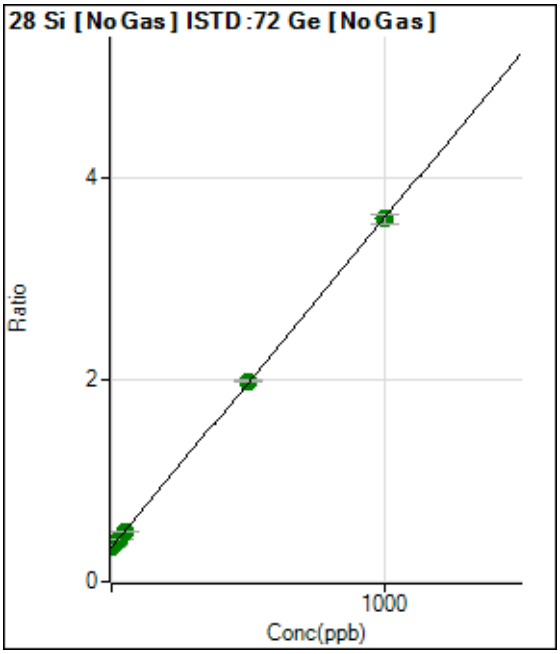
Calibration for 021_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2303.57	0.0016	P	5.8
2	☐	2.000	4.554	5255.46	0.0037	P	52.6
3	☐	5.000	5.354	5834.67	0.0041	P	7.2
4	☐	10.000	10.650	9436.67	0.0066	P	1.6
5	☐	100.000	104.847	71101.91	0.0504	P	3.5
6	☐	200.000	197.510	132197.19	0.0935	P	0.8

y = 4.6543E-004 * x + 0.0016
R = 0.9996
DL = 0.6057
BEC = 3.474

Weight: <None>
Min Conc: <None>

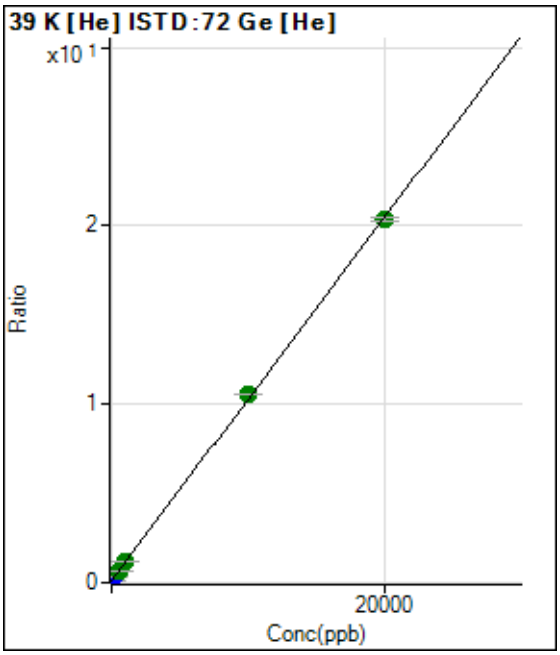


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1548209.51	0.3401	A	1.4
2	☐	10.000	7.273	1656435.60	0.3638	A	0.6
3	☐	25.000	23.263	1889691.17	0.4159	A	1.1
4	☐	50.000	47.553	2255827.21	0.4950	A	1.4
5	☐	500.000	505.625	8937580.91	1.9863	A	0.9
6	☐	1000.000	997.380	15876338.51	3.5873	A	2.9

y = 0.0033 * x + 0.3401
R = 1.0000
DL = 4.243
BEC = 104.5

Weight: <None>
Min Conc: <None>

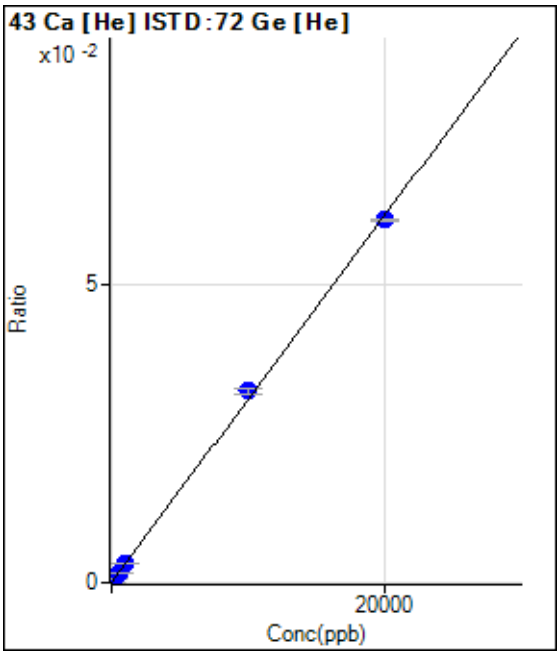
Calibration for 021_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	168352.13	0.1182	P	1.7
2	☐	200.000	210.746	467694.65	0.3325	P	1.7
3	☐	500.000	523.308	923479.78	0.6504	A	2.0
4	☐	1000.000	1050.023	1702723.51	1.1862	A	1.6
5	☐	10000.00	10262.59	14885235.19	10.5562	A	1.0
6	☐	20000.00	19865.51	28719506.24	20.3232	A	1.2

y = 0.0010 * x + 0.1182
R = 0.9999
DL = 6.029
BEC = 116.2

Weight: <None>
Min Conc: <None>

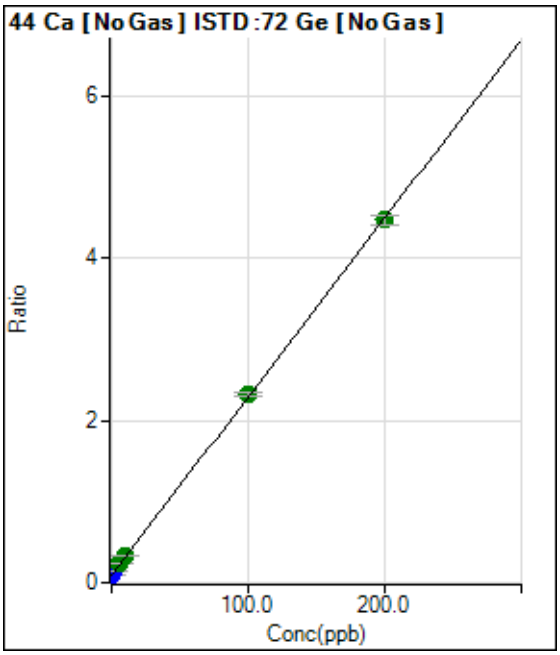


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	66.67	0.0000	P	47.5
2	☐	200.000	181.646	853.37	0.0006	P	3.0
3	☐	500.000	466.972	2110.20	0.0015	P	3.3
4	☐	1000.000	1073.104	4817.61	0.0034	P	1.4
5	☐	10000.00	10441.24	45455.50	0.0322	P	3.1
6	☐	20000.00	19776.73	86246.42	0.0610	P	0.5

y = 3.0836E-006 * x + 4.6624E-005
R = 0.9996
DL = 21.55
BEC = 15.12

Weight: <None>
Min Conc: <None>

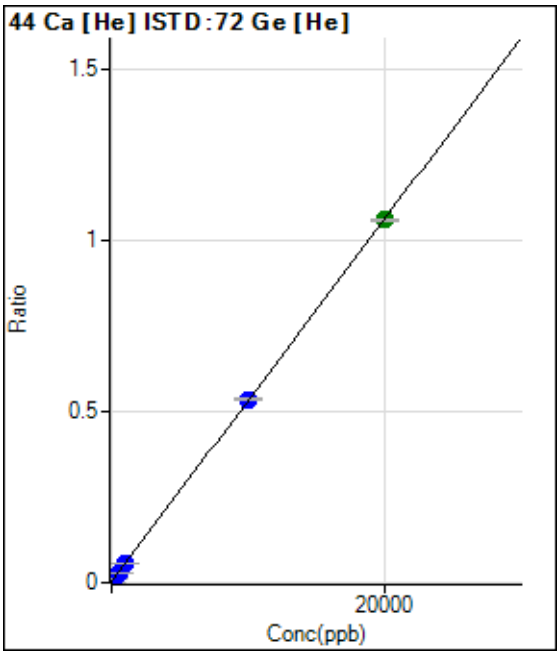
Calibration for 021_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	414713.34	0.0911	P	2.8
2	☐	2.000	2.010	616096.16	0.1353	P	0.4
3	☐	5.000	6.280	1041189.15	0.2292	A	1.9
4	☐	10.000	11.278	1544874.82	0.3390	A	2.2
5	☐	100.000	101.426	10438451.30	2.3202	A	2.3
6	☐	200.000	199.191	19781776.37	4.4688	A	2.3

y = 0.0220 * x + 0.0911
R = 0.9999
DL = 0.3498
BEC = 4.146

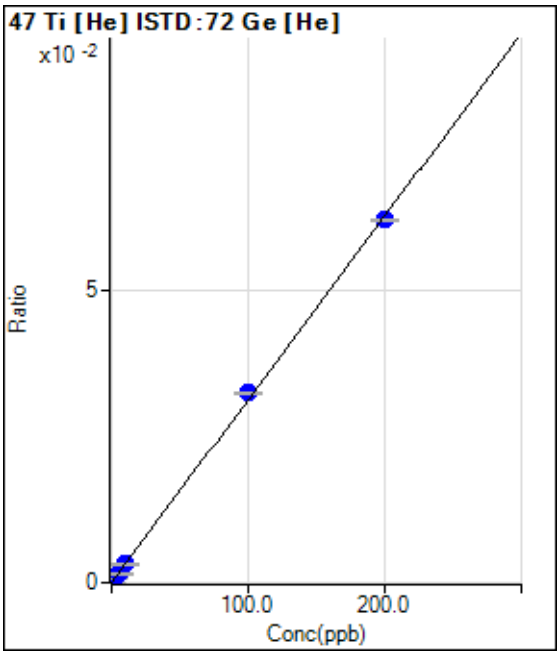
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3900.62	0.0027	P	1.9
2	☐	200.000	206.069	19210.36	0.0137	P	4.0
3	☐	500.000	507.132	42054.81	0.0296	P	4.3
4	☐	1000.000	990.540	79298.43	0.0552	P	0.3
5	☐	10000.00	10077.47	756943.82	0.5369	P	1.5
6	☐	20000.00	19961.49	1499047.58	1.0607	A	0.3

y = 5.3001E-005 * x + 0.0027
R = 1.0000
DL = 3.018
BEC = 51.66

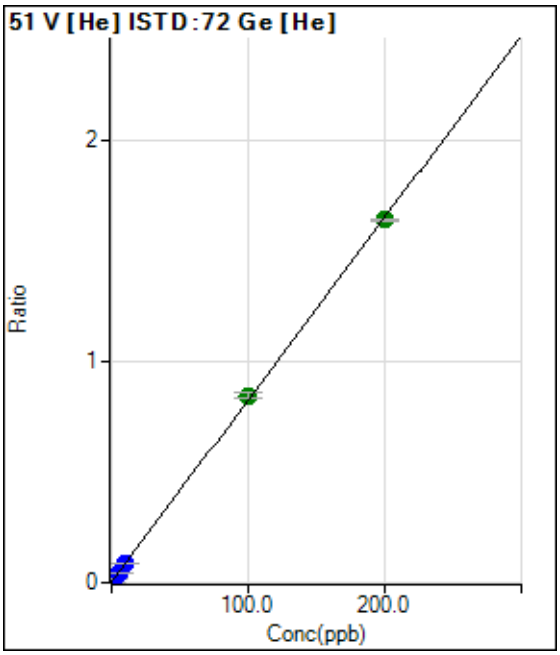
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	13.33	0.0000	P	42.4
2	☐	2.000	1.942	870.04	0.0006	P	18.3
3	☐	5.000	4.783	2143.54	0.0015	P	9.4
4	☐	10.000	10.005	4517.49	0.0031	P	7.9
5	☐	100.000	103.694	45883.74	0.0325	P	0.7
6	☐	200.000	198.159	87873.48	0.0622	P	0.9

y = 3.1373E-004 * x + 9.3377E-006
R = 0.9998
DL = 0.03785
BEC = 0.02976

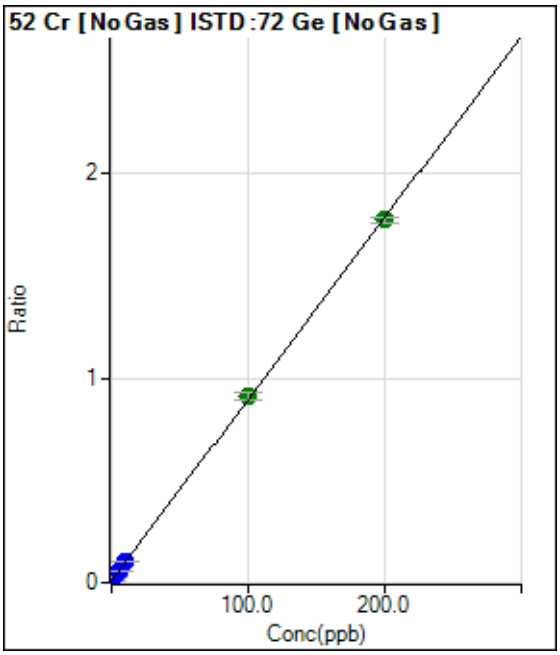
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	4533.00	0.0032	P	6.1
2	☐	2.000	1.988	27544.36	0.0196	P	2.9
3	☐	5.000	4.887	61762.87	0.0435	P	0.8
4	☐	10.000	9.845	121165.47	0.0844	P	1.6
5	☐	100.000	102.325	1194666.13	0.8474	A	3.1
6	☐	200.000	198.848	2323074.42	1.6438	A	0.8

y = 0.0083 * x + 0.0032
R = 0.9999
DL = 0.07073
BEC = 0.3858

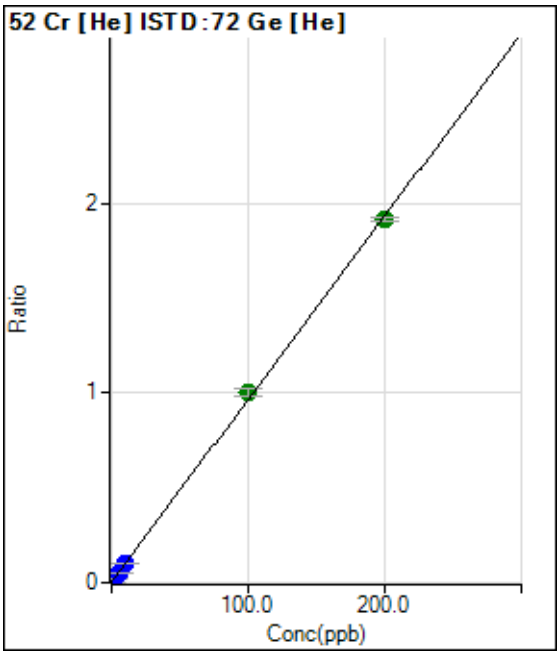
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	45007.83	0.0099	P	2.7
2	☐	2.000	2.006	126078.64	0.0277	P	0.8
3	☐	5.000	5.121	251435.77	0.0553	P	0.2
4	☐	10.000	10.319	462463.54	0.1015	P	1.1
5	☐	100.000	102.097	4119839.94	0.9159	A	4.2
6	☐	200.000	198.933	7858508.21	1.7753	A	1.4

y = 0.0089 * x + 0.0099
R = 0.9999
DL = 0.08897
BEC = 1.114

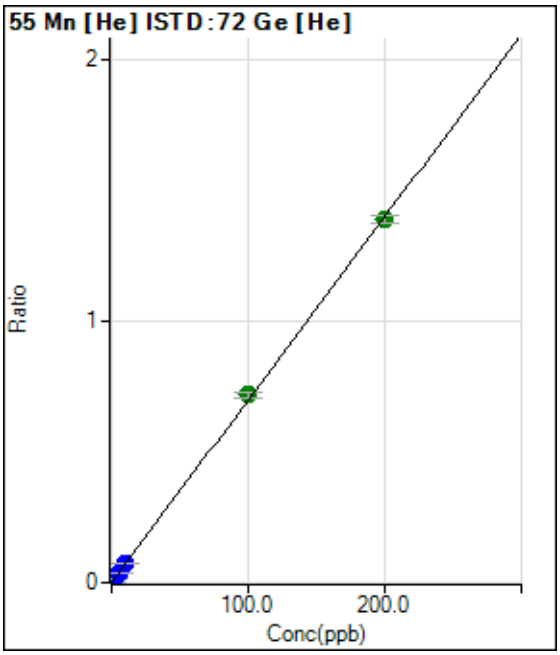
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3507.17	0.0025	P	4.0
2	☐	2.000	2.047	31239.25	0.0222	P	1.7
3	☐	5.000	5.104	73400.19	0.0517	P	1.4
4	☐	10.000	10.037	142523.66	0.0993	P	3.2
5	☐	100.000	103.801	1415452.74	1.0039	A	3.5
6	☐	200.000	198.095	2704377.04	1.9137	A	1.2

y = 0.0096 * x + 0.0025
R = 0.9997
DL = 0.0303
BEC = 0.2551

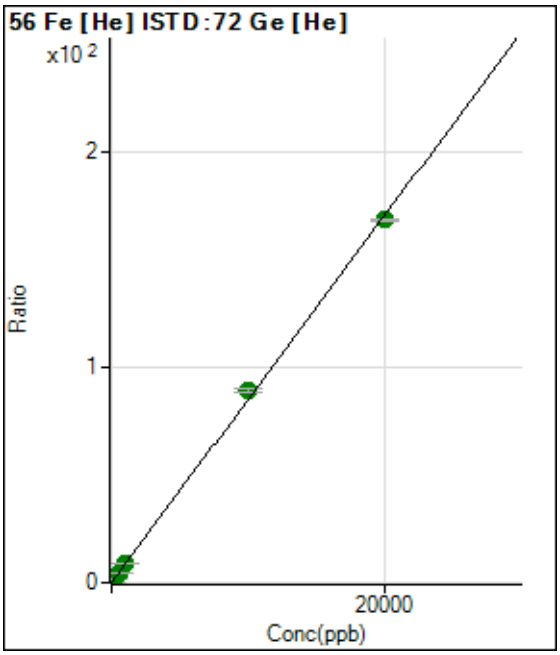
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	510.02	0.0004	P	10.9
2	☐	2.000	2.047	20599.18	0.0146	P	2.3
3	☐	5.000	5.127	51306.45	0.0361	P	0.6
4	☐	10.000	10.095	101646.80	0.0708	P	2.3
5	☐	100.000	102.856	1012469.99	0.7182	A	2.8
6	☐	200.000	198.564	1958841.38	1.3861	A	2.1

y = 0.0070 * x + 3.5829E-004
R = 0.9999
DL = 0.01685
BEC = 0.05134

Weight: <None>
Min Conc: <None>

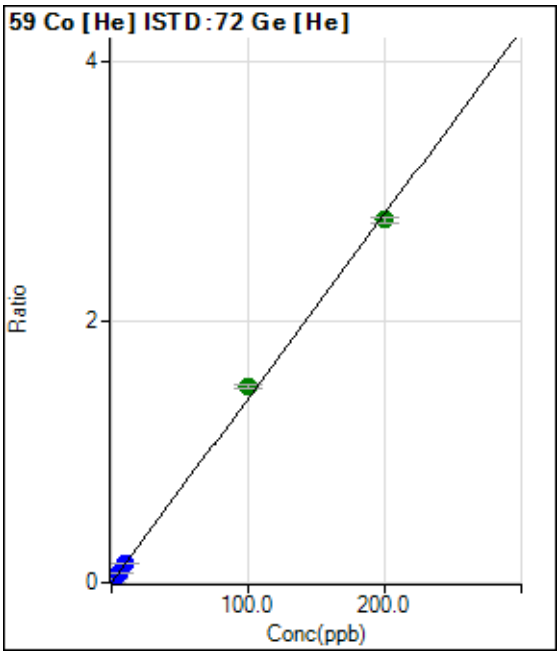


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	18859.96	0.0132	P	3.7
2	☐	200.000	213.204	2568198.45	1.8258	A	1.1
3	☐	500.000	528.967	6402984.07	4.5104	A	0.6
4	☐	1000.000	1038.547	12693626.89	8.8427	A	1.3
5	☐	10000.00	10448.30	125257961.4	88.8419	A	2.0
6	☐	20000.00	19773.06	237582683.1	168.118	A	0.6

y = 0.0085 * x + 0.0132
R = 0.9996
DL = 0.1709
BEC = 1.557

Weight: <None>
Min Conc: <None>

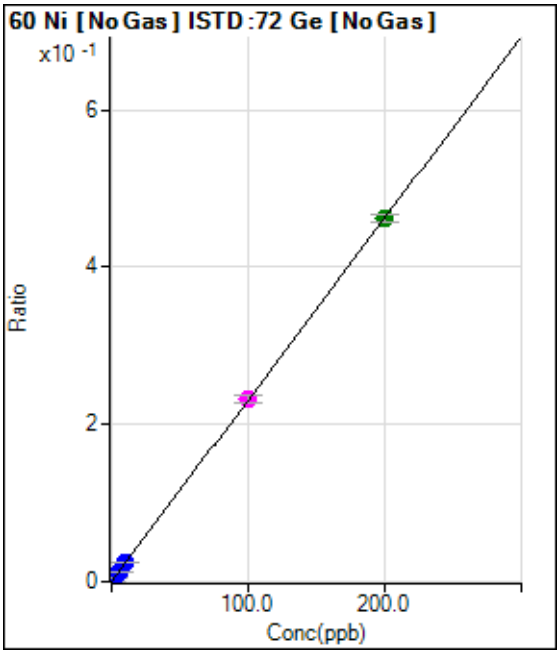
Calibration for 021_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	63.33	0.0000	P	23.6
2	☐	2.000	2.074	41276.11	0.0293	P	2.5
3	☐	5.000	5.162	103581.65	0.0730	P	1.3
4	☐	10.000	10.397	210914.39	0.1469	P	0.2
5	☐	100.000	106.215	2115395.80	1.5004	A	2.4
6	☐	200.000	196.868	3929902.02	2.7810	A	1.8

y = 0.0141 * x + 4.4411E-005
R = 0.9993
DL = 0.002222
BEC = 0.003144

Weight: <None>
Min Conc: <None>

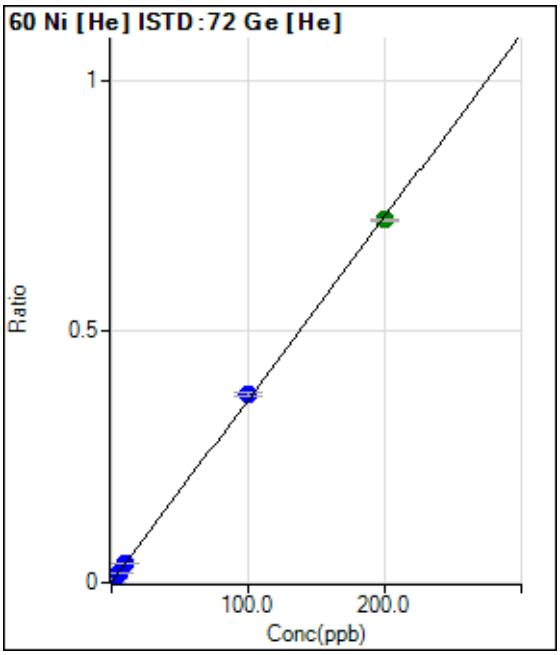


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1326.76	0.0003	P	12.1
2	☐	2.000	2.085	23246.83	0.0051	P	1.7
3	☐	5.000	5.174	55603.67	0.0122	P	1.6
4	☐	10.000	10.188	108530.28	0.0238	P	1.3
5	☐	100.000	100.530	1045192.20	0.2324	M	4.4
6	☐	200.000	199.721	2042050.75	0.4614	A	2.2

y = 0.0023 * x + 2.9129E-004
R = 1.0000
DL = 0.04597
BEC = 0.1262

Weight: <None>
Min Conc: <None>

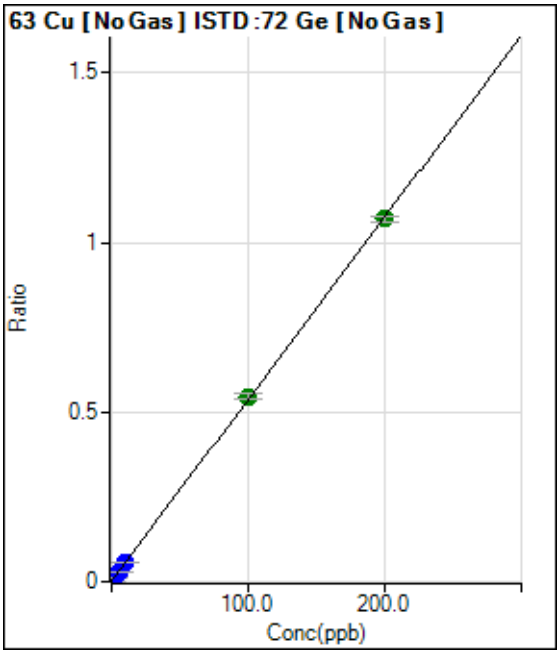
Calibration for 021_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	526.69	0.0004	P	21.6
2	☐	2.000	2.119	11361.63	0.0081	P	2.8
3	☐	5.000	5.218	27461.37	0.0193	P	1.6
4	☐	10.000	10.460	55131.76	0.0384	P	1.4
5	☐	100.000	103.152	529365.64	0.3755	P	2.1
6	☐	200.000	198.394	1020059.72	0.7218	A	0.3

y = 0.0036 * x + 3.6956E-004
R = 0.9998
DL = 0.06587
BEC = 0.1016

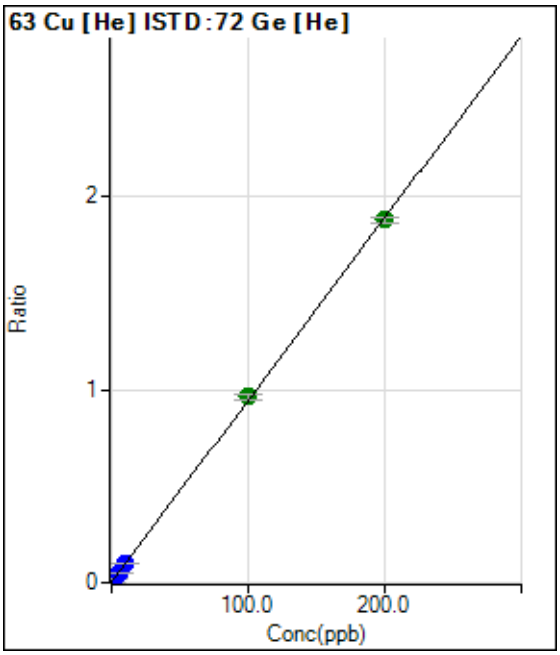
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	5661.28	0.0012	P	10.4
2	☐	2.000	2.095	56808.82	0.0125	P	1.2
3	☐	5.000	5.159	131303.54	0.0289	P	1.7
4	☐	10.000	10.184	254511.50	0.0558	P	1.3
5	☐	100.000	101.587	2455552.67	0.5458	A	2.7
6	☐	200.000	199.192	4732621.91	1.0691	A	1.3

y = 0.0054 * x + 0.0012
R = 1.0000
DL = 0.07237
BEC = 0.2321

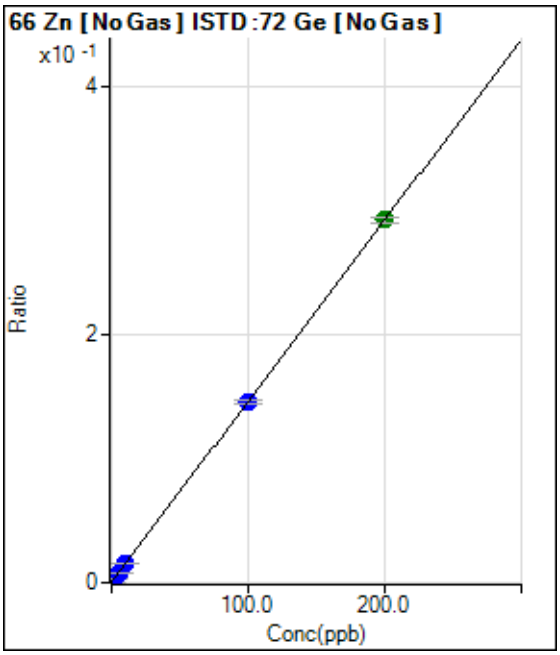
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2696.99	0.0019	P	6.5
2	☐	2.000	2.065	30043.57	0.0214	P	1.3
3	☐	5.000	5.200	72282.10	0.0509	P	2.2
4	☐	10.000	10.277	141824.48	0.0988	P	2.2
5	☐	100.000	101.787	1355557.90	0.9616	A	3.8
6	☐	200.000	199.087	2655241.42	1.8790	A	1.4

y = 0.0094 * x + 0.0019
R = 0.9999
DL = 0.03926
BEC = 0.2009

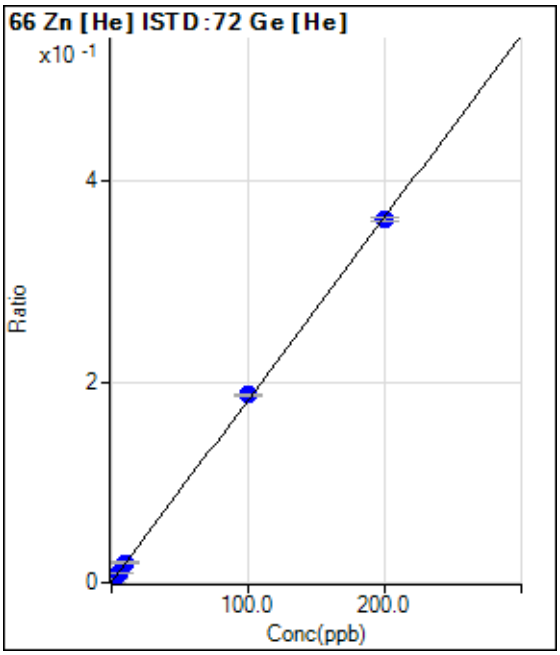
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1826.83	0.0004	P	3.1
2	☐	2.000	1.993	15072.00	0.0033	P	3.0
3	☐	5.000	4.976	34814.94	0.0077	P	3.1
4	☐	10.000	10.057	68723.83	0.0151	P	1.1
5	☐	100.000	99.414	654546.55	0.1455	P	1.7
6	☐	200.000	200.291	1295639.57	0.2927	A	1.3

y = 0.0015 * x + 4.0117E-004
R = 1.0000
DL = 0.02589
BEC = 0.2749

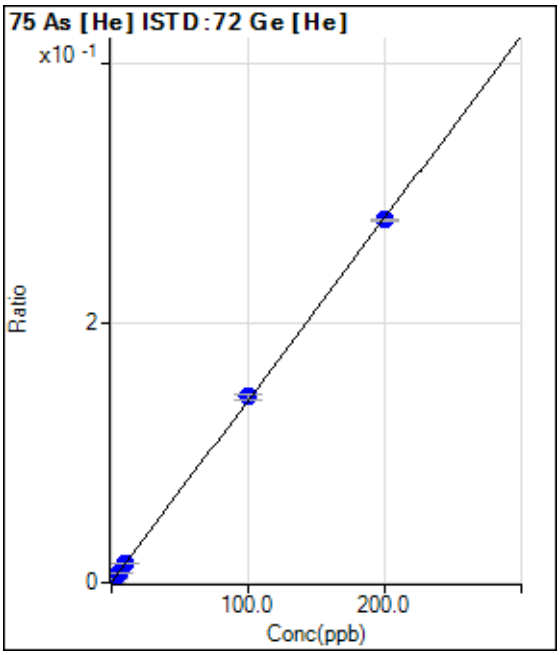
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	733.37	0.0005	P	6.0
2	☐	2.000	2.064	6001.43	0.0043	P	3.4
3	☐	5.000	5.131	13970.73	0.0098	P	4.7
4	☐	10.000	10.659	28540.34	0.0199	P	4.1
5	☐	100.000	102.686	263834.23	0.1871	P	1.0
6	☐	200.000	198.620	510792.19	0.3614	P	1.0

y = 0.0018 * x + 5.1456E-004
R = 0.9999
DL = 0.0509
BEC = 0.2832

Weight: <None>
Min Conc: <None>

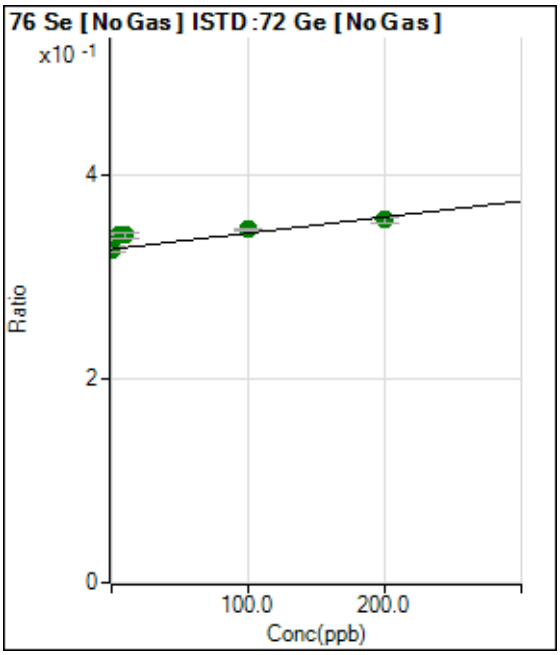


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	274.45	0.0002	P	15.2
2	☐	2.000	2.101	4425.19	0.0031	P	2.0
3	☐	5.000	5.083	10417.41	0.0073	P	0.3
4	☐	10.000	10.164	20788.26	0.0145	P	2.3
5	☐	100.000	101.892	202222.09	0.1434	P	2.5
6	☐	200.000	199.043	395717.19	0.2800	P	0.6

y = 0.0014 * x + 1.9283E-004
R = 0.9999
DL = 0.06268
BEC = 0.1372

Weight: <None>
Min Conc: <None>

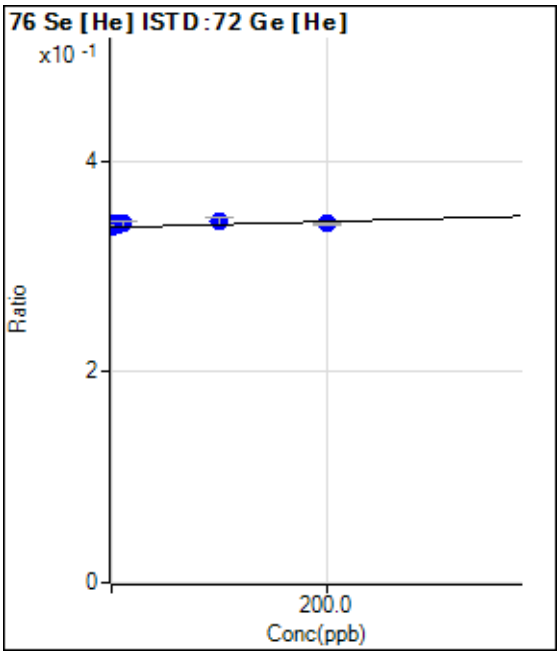
Calibration for 021_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1487347.84	0.3268	A	1.5
2	☐	2.000	60.291	1531125.19	0.3363	A	1.0
3	☐	5.000	93.330	1551705.40	0.3415	A	0.5
4	☐	10.000	86.483	1551429.82	0.3404	A	1.7
5	☐	100.000	123.487	1558031.54	0.3462	A	0.7
6	☐	200.000	181.641	1573230.55	0.3554	A	1.5

y = 1.5762E-004 * x + 0.3268
R = 0.8575
DL = 92.7
BEC = 2073

Weight: <None>
Min Conc: <None>

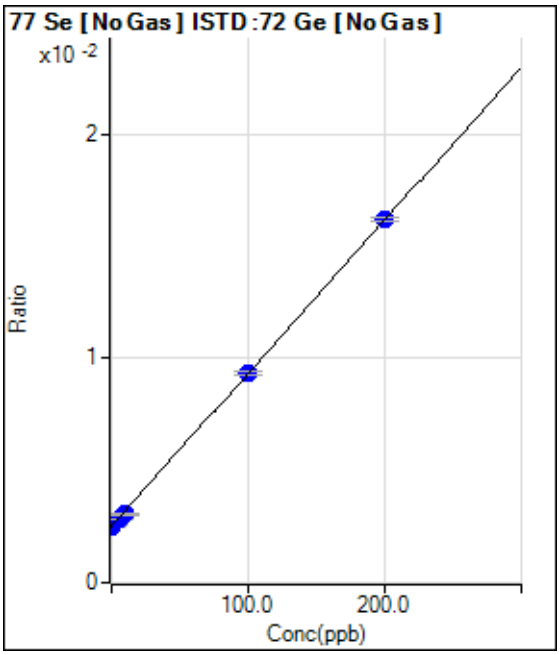


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	480184.03	0.3371	P	1.4
2	☐	2.000	128.367	479196.33	0.3407	P	1.2
3	☐	5.000	62.759	481051.14	0.3389	P	0.3
4	☐	10.000	138.493	489475.72	0.3410	P	1.5
5	☐	100.000	218.406	483918.89	0.3432	P	2.1
6	☐	200.000	131.665	481628.04	0.3408	P	0.5

y = 2.8168E-005 * x + 0.3371
R = 0.4681
DL = 490.3
BEC = 1.197E+04

Weight: <None>
Min Conc: <None>

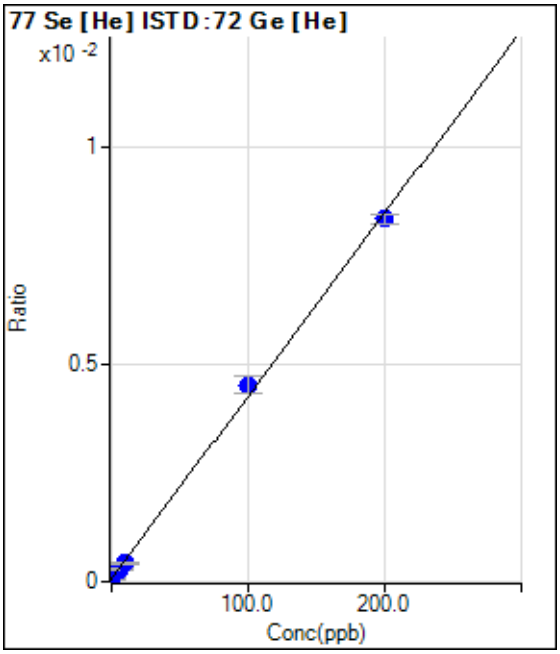
Calibration for 021_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	11478.41	0.0025	P	5.2
2	☐	2.000	1.506	11955.50	0.0026	P	2.4
3	☐	5.000	4.188	12762.89	0.0028	P	1.2
4	☐	10.000	7.775	13917.45	0.0031	P	4.1
5	☐	100.000	99.984	42032.48	0.0093	P	1.2
6	☐	200.000	200.145	71569.97	0.0162	P	1.1

y = 6.8172E-005 * x + 0.0025
R = 1.0000
DL = 5.775
BEC = 37.01

Weight: <None>
Min Conc: <None>

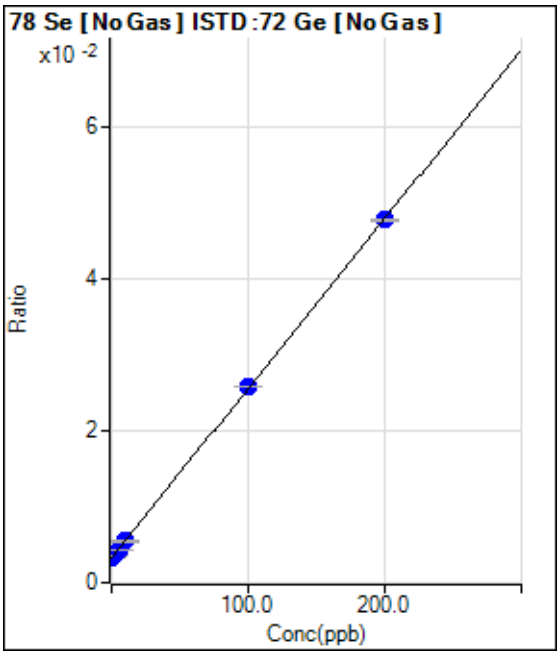


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	93.33	0.0001	P	41.3
2	☐	2.000	2.725	253.34	0.0002	P	24.5
3	☐	5.000	4.865	383.35	0.0003	P	13.0
4	☐	10.000	8.597	613.36	0.0004	P	8.0
5	☐	100.000	106.252	6388.30	0.0045	P	8.2
6	☐	200.000	196.940	11795.37	0.0083	P	2.7

y = 4.2045E-005 * x + 6.5681E-005
R = 0.9993
DL = 1.933
BEC = 1.562

Weight: <None>
Min Conc: <None>

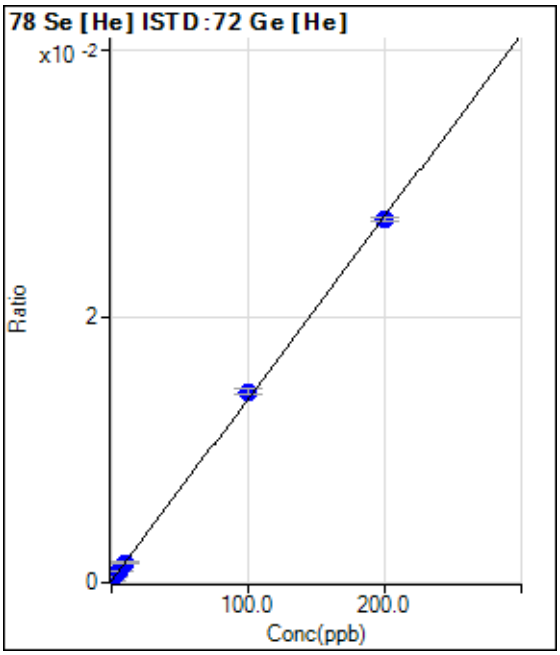
Calibration for 021_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	14871.81	0.0033	P	6.1
2	☐	2.000	1.663	16573.77	0.0036	P	1.8
3	☐	5.000	4.959	19881.67	0.0044	P	0.8
4	☐	10.000	9.959	25033.62	0.0055	P	2.8
5	☐	100.000	101.002	116080.93	0.0258	P	0.7
6	☐	200.000	199.505	211444.97	0.0478	P	0.6

y = 2.2302E-004 * x + 0.0033
R = 1.0000
DL = 2.704
BEC = 14.66

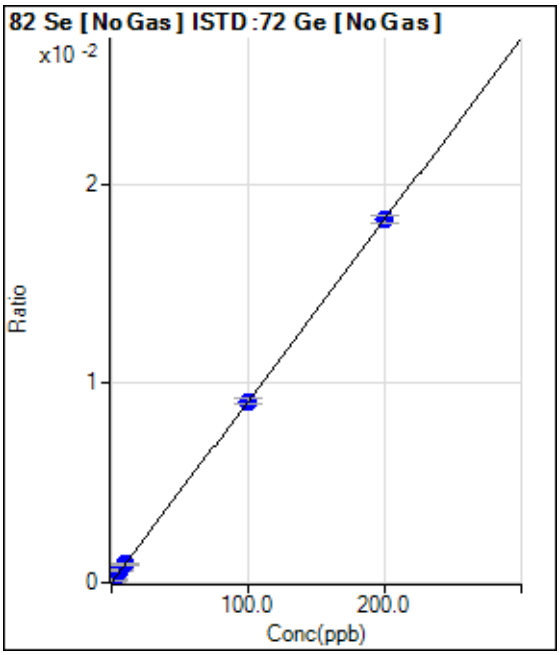
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	188.67	0.0001	P	3.8
2	☐	2.000	2.219	613.35	0.0004	P	3.0
3	☐	5.000	5.162	1190.72	0.0008	P	1.8
4	☐	10.000	9.994	2152.85	0.0015	P	3.0
5	☐	100.000	103.648	20180.45	0.0143	P	2.9
6	☐	200.000	198.170	38502.11	0.0272	P	1.1

y = 1.3682E-004 * x + 1.3247E-004
R = 0.9998
DL = 0.1113
BEC = 0.9682

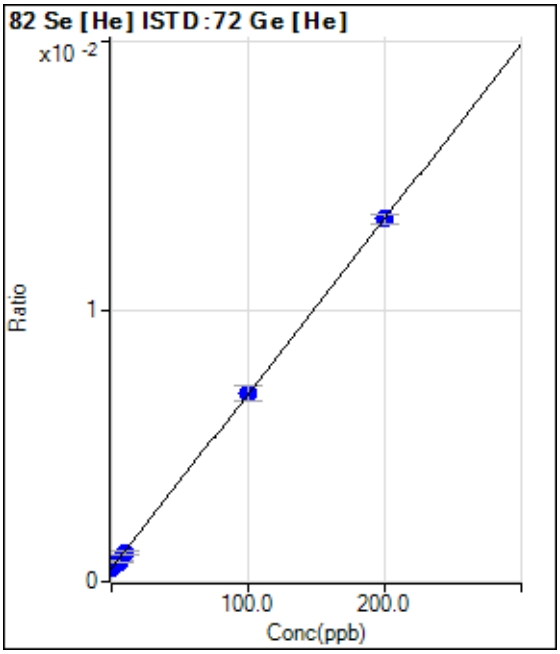
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	-143.13	0.0000	P	-115.3
2	☐	2.000	1.777	594.02	0.0001	P	85.2
3	☐	5.000	6.672	2627.36	0.0006	P	7.0
4	☐	10.000	10.101	4062.92	0.0009	P	9.1
5	☐	100.000	99.848	40939.02	0.0091	P	3.1
6	☐	200.000	200.031	80784.38	0.0183	P	1.9

y = 9.1399E-005 * x - 3.1410E-005
R = 1.0000
DL = 1.189
BEC = -0.3437

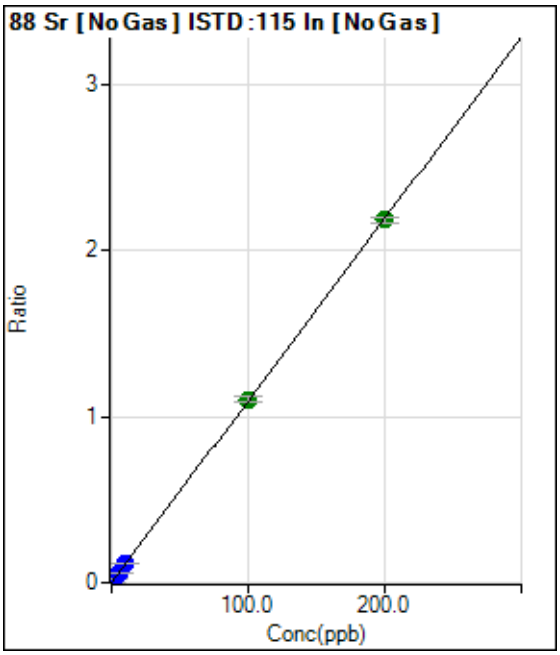
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	686.70	0.0005	P	7.7
2	☐	2.000	2.183	876.71	0.0006	P	12.6
3	☐	5.000	3.768	1030.06	0.0007	P	12.9
4	☐	10.000	9.215	1546.79	0.0011	P	10.0
5	☐	100.000	100.041	9797.08	0.0070	P	8.1
6	☐	200.000	200.048	18963.68	0.0134	P	2.6

y = 6.4673E-005 * x + 4.8194E-004
R = 1.0000
DL = 1.716
BEC = 7.452

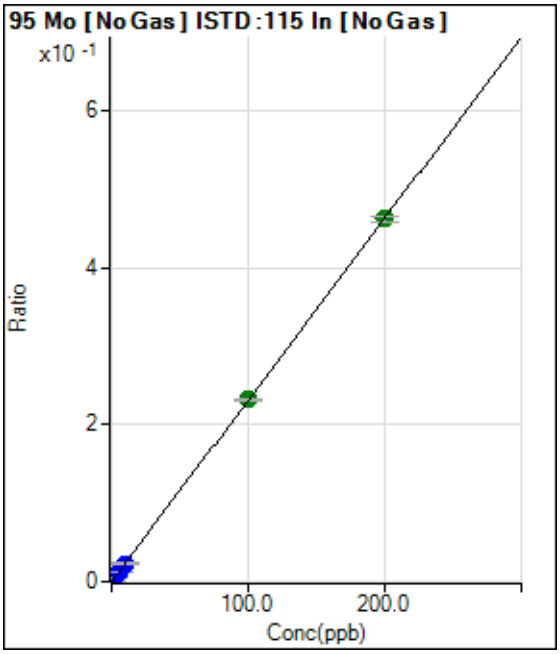
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3103.76	0.0006	P	3.6
2	☐	2.000	2.038	113721.87	0.0229	P	0.6
3	☐	5.000	5.085	279505.76	0.0562	P	1.1
4	☐	10.000	10.345	555321.88	0.1137	P	1.2
5	☐	100.000	100.930	5397614.71	1.1043	A	2.5
6	☐	200.000	199.515	10389620.68	2.1823	A	1.5

y = 0.0109 * x + 6.2295E-004
R = 1.0000
DL = 0.006207
BEC = 0.05697

Weight: <None>
Min Conc: <None>

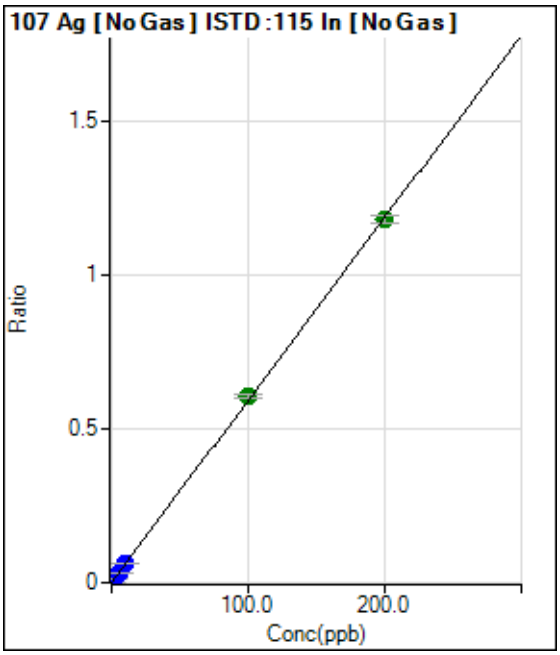


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	83.33	0.0000	P	36.2
2	☐	2.000	1.936	22278.98	0.0045	P	2.6
3	☐	5.000	4.924	56617.29	0.0114	P	0.9
4	☐	10.000	10.035	113253.55	0.0232	P	1.2
5	☐	100.000	100.166	1131052.02	0.2314	A	1.5
6	☐	200.000	199.918	2198375.75	0.4618	A	1.8

y = 0.0023 * x + 1.6701E-005
R = 1.0000
DL = 0.007854
BEC = 0.007231

Weight: <None>
Min Conc: <None>

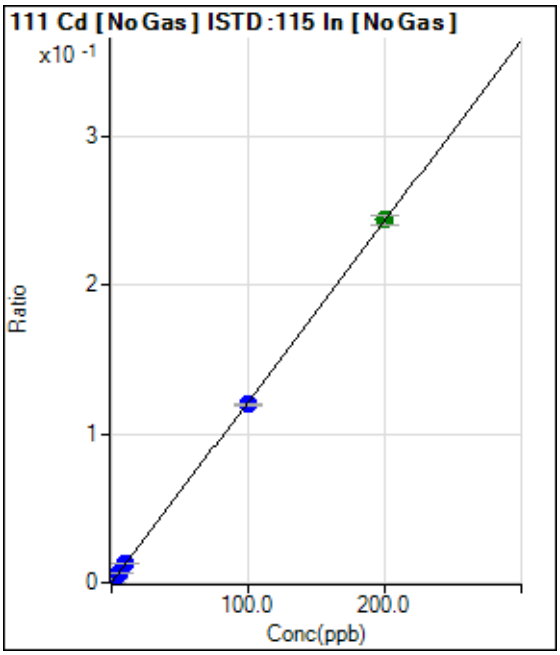
Calibration for 021_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	456.68	0.0001	P	15.9
2	☐	2.000	2.013	59782.05	0.0120	P	1.5
3	☐	5.000	5.112	151337.75	0.0304	P	1.2
4	☐	10.000	10.368	301037.45	0.0617	P	1.2
5	☐	100.000	102.159	2965671.31	0.6067	A	2.0
6	☐	200.000	198.899	5623197.83	1.1811	A	2.1

y = 0.0059 * x + 9.1595E-005
R = 0.9999
DL = 0.007337
BEC = 0.01543

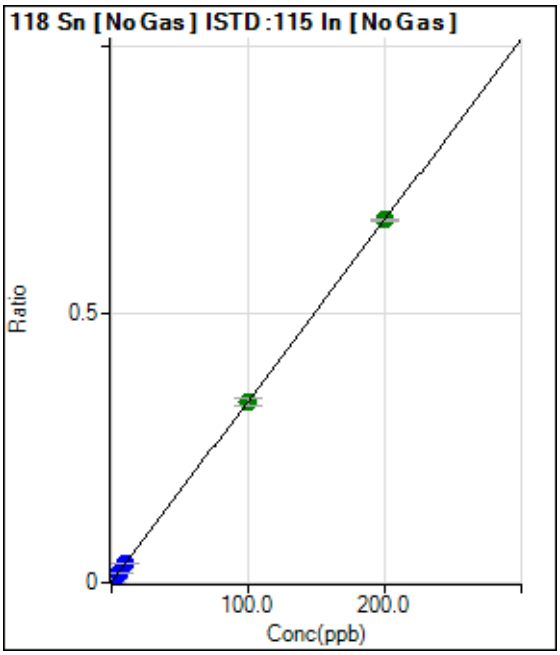
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	23.33	0.0000	P	24.5
2	☐	2.000	1.993	12049.06	0.0024	P	2.3
3	☐	5.000	5.094	30796.36	0.0062	P	3.3
4	☐	10.000	10.201	60559.06	0.0124	P	0.2
5	☐	100.000	98.603	585922.84	0.1199	P	1.0
6	☐	200.000	200.686	1161247.45	0.2439	A	2.7

y = 0.0012 * x + 4.6824E-006
R = 1.0000
DL = 0.002833
BEC = 0.003852

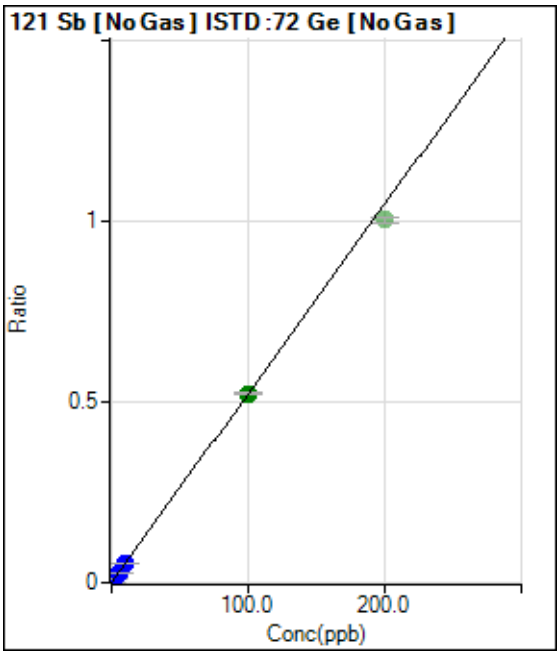
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	4304.09	0.0009	P	4.5
2	☐	2.000	1.867	35539.05	0.0072	P	2.9
3	☐	5.000	4.898	86390.07	0.0174	P	0.5
4	☐	10.000	10.046	169568.08	0.0347	P	1.2
5	☐	100.000	99.773	1648167.68	0.3372	A	3.7
6	☐	200.000	200.115	3216238.28	0.6755	A	0.7

y = 0.0034 * x + 8.6404E-004
R = 1.0000
DL = 0.03451
BEC = 0.2563

Weight: <None>
Min Conc: <None>

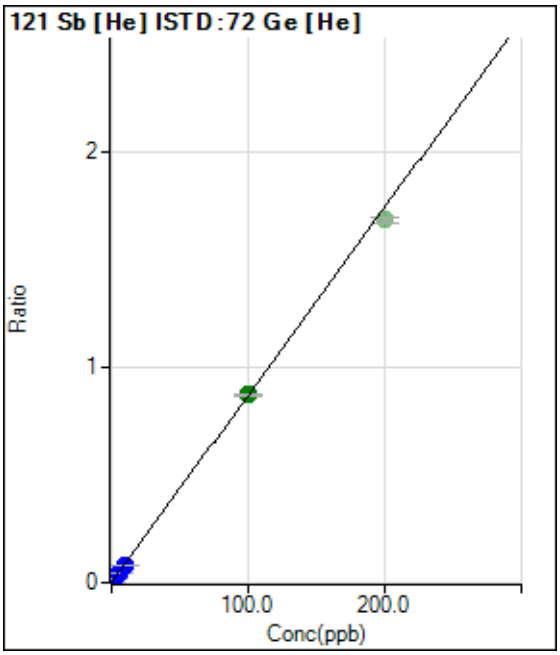


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	643.36	0.0001	P	6.6
2	☐	2.000	1.931	46616.67	0.0102	P	1.5
3	☐	5.000	4.890	116851.37	0.0257	P	0.4
4	☐	10.000	9.867	235848.48	0.0517	P	1.5
5	☐	100.000	100.020	2354473.51	0.5232	A	0.5
6	☑	200.000		4443004.62	1.0037	A	1.7

y = 0.0052 * x + 1.4145E-004
R = 1.0000
DL = 0.00539
BEC = 0.02705

Weight: <None>
Min Conc: <None>

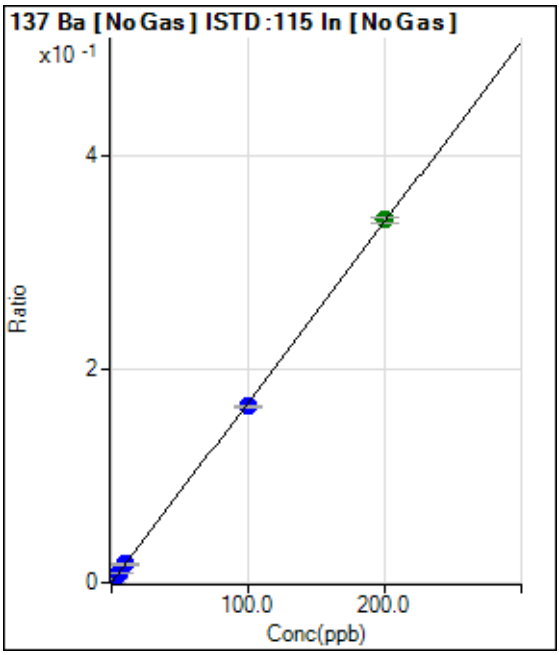
Calibration for 021_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	316.68	0.0002	P	15.1
2	☐	2.000	1.943	24152.59	0.0172	P	3.7
3	☐	5.000	4.750	59140.74	0.0417	P	1.1
4	☐	10.000	9.521	119554.48	0.0833	P	1.1
5	☐	100.000	100.062	1231074.46	0.8731	A	1.6
6	☑	200.000		2385789.65	1.6883	A	1.9

y = 0.0087 * x + 2.2247E-004
R = 1.0000
DL = 0.01155
BEC = 0.0255

Weight: <None>
Min Conc: <None>

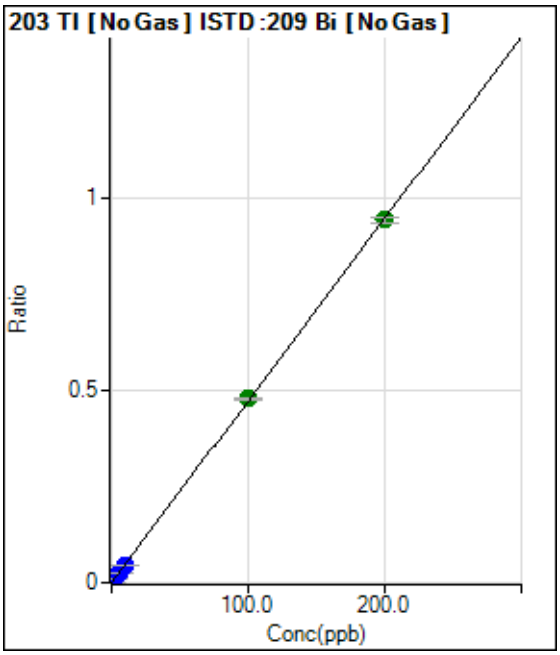


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	560.02	0.0001	P	15.8
2	☐	2.000	1.860	16123.61	0.0032	P	4.2
3	☐	5.000	4.824	40988.48	0.0082	P	2.7
4	☐	10.000	10.110	83786.31	0.0172	P	3.0
5	☐	100.000	97.875	807501.68	0.1652	P	0.9
6	☐	200.000	201.063	1614823.21	0.3392	A	1.8

y = 0.0017 * x + 1.1242E-004
R = 0.9999
DL = 0.03162
BEC = 0.06666

Weight: <None>
Min Conc: <None>

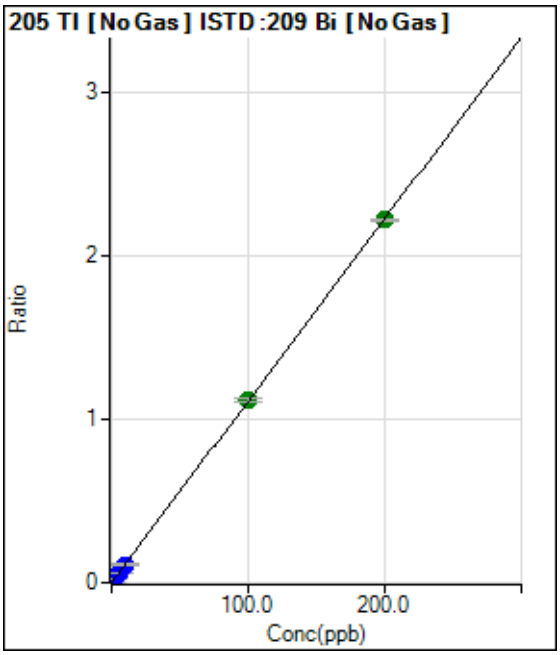
Calibration for 021_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	70.00	0.0000	P	36.7
2	☐	2.000	1.939	36012.51	0.0092	P	3.7
3	☐	5.000	4.961	91222.13	0.0235	P	0.8
4	☐	10.000	9.961	183347.84	0.0472	P	1.0
5	☐	100.000	101.067	1825528.41	0.4784	A	1.7
6	☐	200.000	199.470	3551058.28	0.9442	A	1.7

y = 0.0047 * x + 1.7894E-005
R = 1.0000
DL = 0.004158
BEC = 0.00378

Weight: <None>
Min Conc: <None>

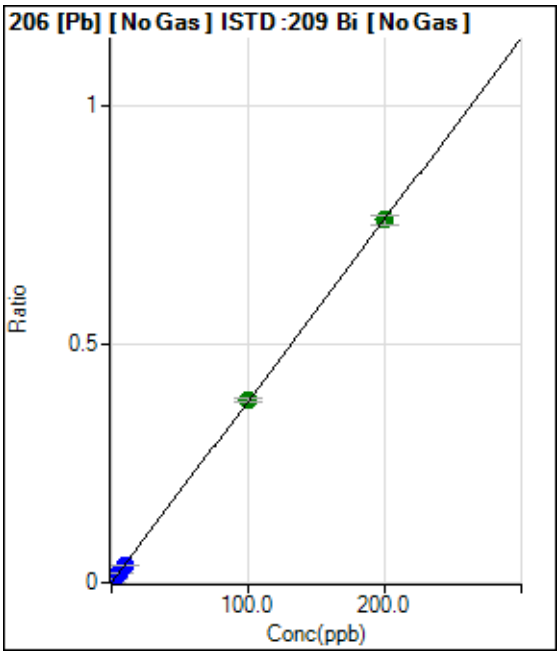


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	130.00	0.0000	P	49.5
2	☐	2.000	1.973	86110.06	0.0220	P	2.6
3	☐	5.000	5.008	216432.17	0.0558	P	1.7
4	☐	10.000	10.044	434631.31	0.1118	P	0.7
5	☐	100.000	100.765	4278627.65	1.1215	A	2.4
6	☐	200.000	199.616	8356727.58	2.2217	A	0.7

y = 0.0111 * x + 3.3439E-005
R = 1.0000
DL = 0.004458
BEC = 0.003004

Weight: <None>
Min Conc: <None>

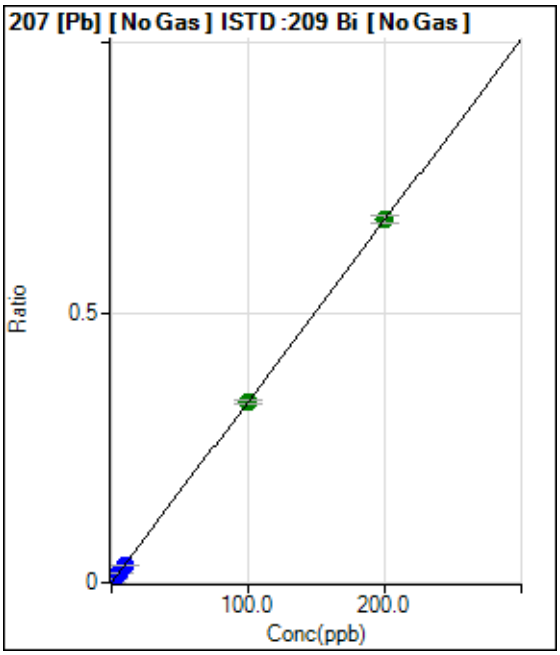
Calibration for 021_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	560.03	0.0001	P	8.1
2	☐	2.000	1.927	29318.14	0.0075	P	2.1
3	☐	5.000	5.080	75659.59	0.0195	P	1.7
4	☐	10.000	9.942	147782.94	0.0380	P	1.1
5	☐	100.000	100.308	1458362.53	0.3823	A	2.6
6	☐	200.000	199.848	2863423.60	0.7615	A	2.8

y = 0.0038 * x + 1.4337E-004
R = 1.0000
DL = 0.009128
BEC = 0.03763

Weight: <None>
Min Conc: <None>

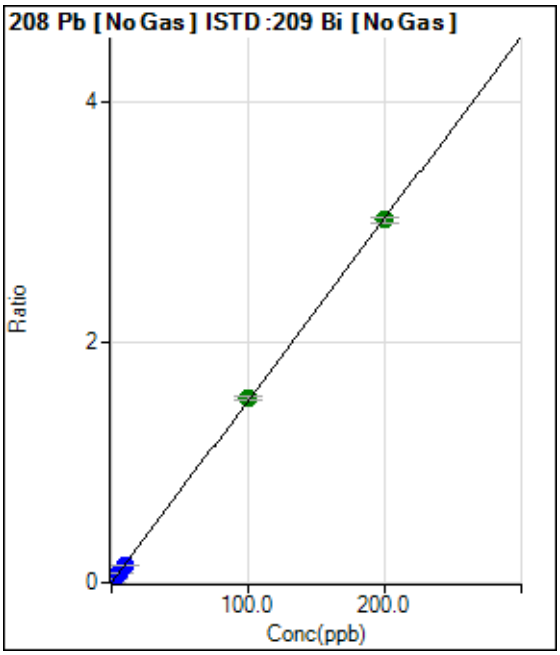


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	376.68	0.0001	P	19.7
2	☐	2.000	1.936	25810.44	0.0066	P	2.7
3	☐	5.000	4.945	64771.75	0.0167	P	0.6
4	☐	10.000	9.732	127293.15	0.0328	P	2.3
5	☐	100.000	99.490	1273864.46	0.3339	A	1.7
6	☐	200.000	200.270	2527459.70	0.6721	A	2.1

y = 0.0034 * x + 9.6425E-005
R = 1.0000
DL = 0.017
BEC = 0.02874

Weight: <None>
Min Conc: <None>

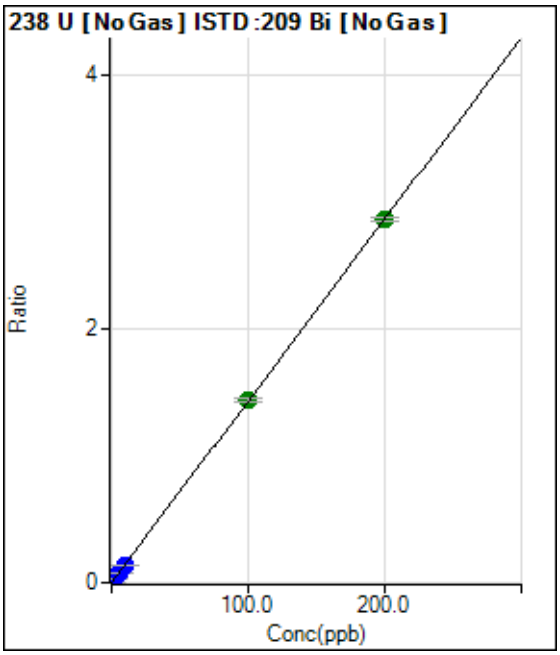
Calibration for 021_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1896.77	0.0005	P	2.0
2	☐	2.000	1.947	117267.21	0.0299	P	2.0
3	☐	5.000	5.033	297359.95	0.0766	P	1.4
4	☐	10.000	9.925	585413.61	0.1506	P	1.1
5	☐	100.000	101.398	5852213.19	1.5342	A	2.5
6	☐	200.000	199.305	11339909.05	3.0151	A	1.3

y = 0.0151 * x + 4.8588E-004
R = 1.0000
DL = 0.001927
BEC = 0.03212

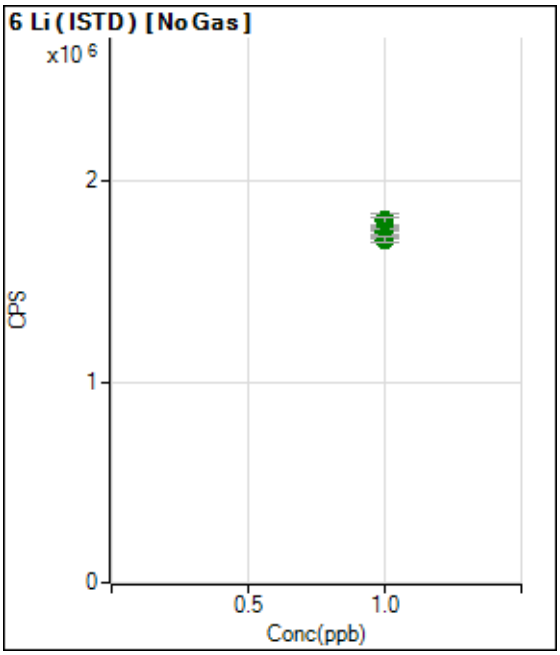
Weight: <None>
Min Conc: <None>



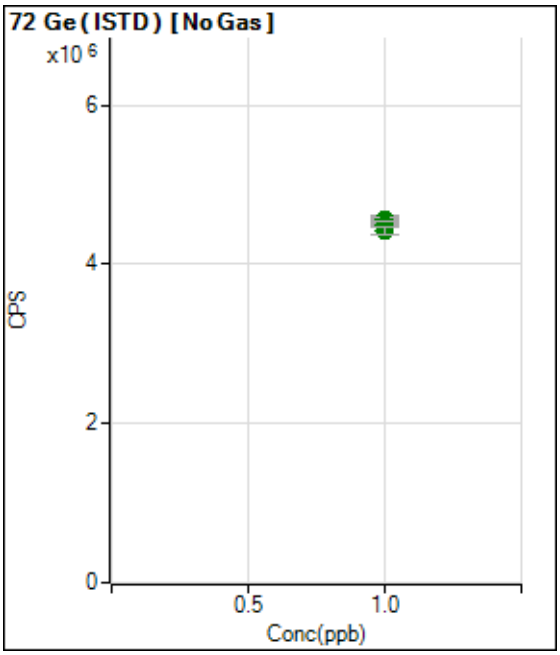
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	70.00	0.0000	P	30.0
2	☐	2.000	1.928	108237.90	0.0276	P	3.1
3	☐	5.000	4.881	271534.44	0.0700	P	0.9
4	☐	10.000	9.854	548920.79	0.1412	P	0.6
5	☐	100.000	100.536	5495300.96	1.4406	A	2.3
6	☐	200.000	199.743	10764805.67	2.8621	A	1.1

y = 0.0143 * x + 1.7985E-005
R = 1.0000
DL = 0.001128
BEC = 0.001255

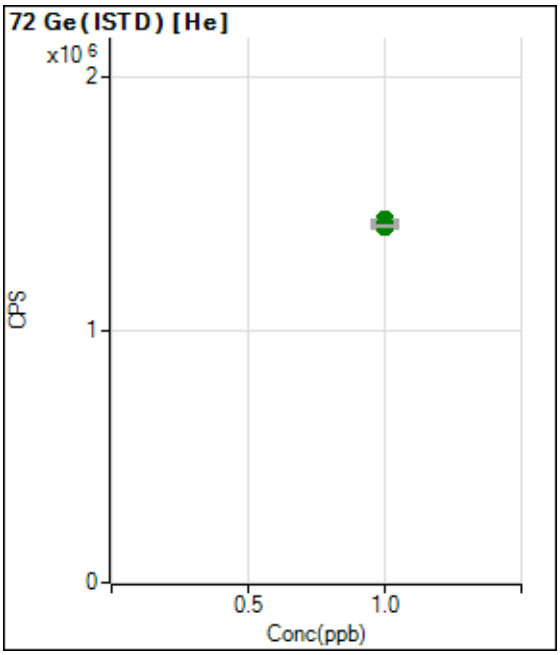
Weight: <None>
Min Conc: <None>



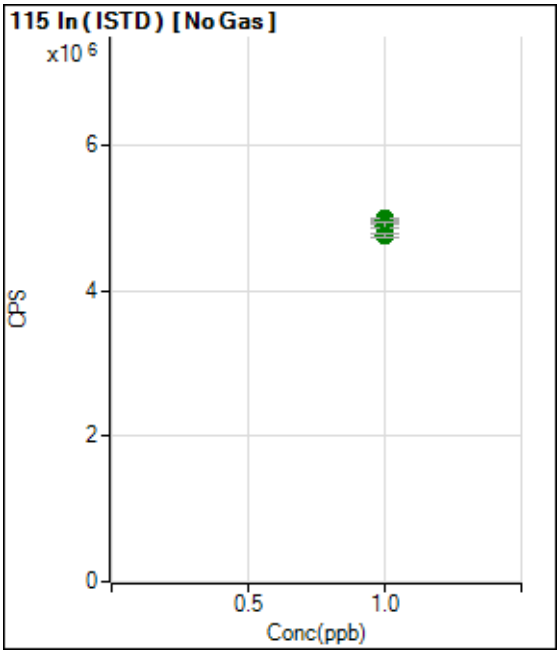
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1807448.27		A	3.1
2	☐	1.000		1798052.17		A	3.0
3	☐	1.000		1745974.81		A	1.2
4	☐	1.000		1750001.96		A	1.7
5	☐	1.000		1724471.35		A	1.3
6	☐	1.000		1709452.18		A	1.4



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		4552529.52		A	2.2
2	☐	1.000		4553154.10		A	0.9
3	☐	1.000		4544024.83		A	0.8
4	☐	1.000		4558268.79		A	1.4
5	☐	1.000		4500014.31		A	1.6
6	☐	1.000		4427367.02		A	2.0

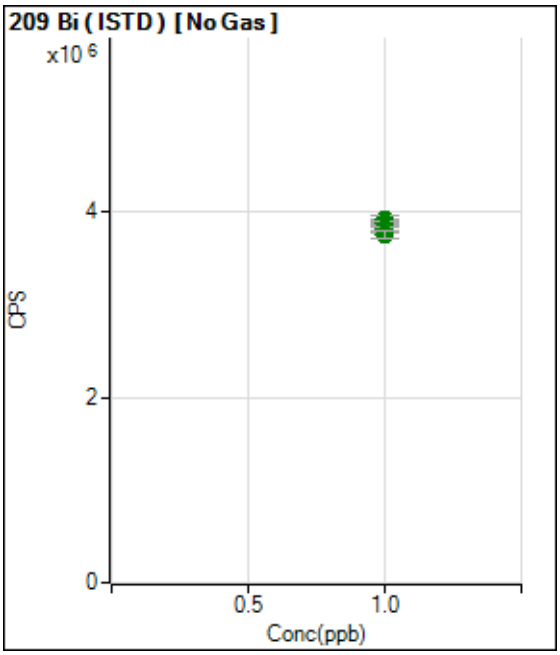


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1424674.15		A	1.2
2	☐	1.000		1406664.46		A	1.3
3	☐	1.000		1419643.16		A	0.8
4	☐	1.000		1435602.90		A	0.8
5	☐	1.000		1410099.09		A	1.1
6	☐	1.000		1413231.33		A	0.8



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		4981656.96		A	0.8
2	☐	1.000		4963758.63		A	1.0
3	☐	1.000		4971186.20		A	1.2
4	☐	1.000		4882590.45		A	0.9
5	☐	1.000		4889337.67		A	1.7
6	☐	1.000		4761405.30		A	1.1

Calibration for 021_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		3903311.92		A	1.4
2	☐	1.000		3918073.17		A	2.8
3	☐	1.000		3881354.32		A	1.5
4	☐	1.000		3887189.63		A	1.0
5	☐	1.000		3815749.11		A	1.9
6	☐	1.000		3761702.86		A	2.0

Initial Calibration Blank (ICB) Report

Sample Table

Sample Name	ICB
Data File Name	022_ICB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\080921A.b
Acq Date Time	2021-08-09T14:56:53-05:00
Sample Type	ICB
Dilution	1
Comment	
ISTD Ref File Name	014CALB.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	-0.003	-4519.2	102980	0.1	0.5	
Be	9	1	No Gas	0.003	118.5	50	52.9	0.5	
V	51	2	He	-0.069	-19.2	3701	2.9	2.5	
Cr	52	2	He	-0.009	-65.9	3370	3.7	2.5	
Fe	56	2	He	6.383	91.9	94901	71.9	100	
Se	78	2	He	0.035	233.0	195	8.7	1	
As	75	2	He	0.018	226.6	309	24.7	2.5	
Ca	44	2	He	-0.264	-1068.5	3861	3.9	100	
Na	23	2	He	-0.184	-612.5	81893	0.9	100	
Mg	24	2	He	0.290	24.4	793	9.1	100	
K	39	2	He	6.035	37.2	176264	0.1	100	
Mn	55	2	He	0.018	60.5	690	15.3	2.5	
Co	59	2	He	0.001	125.3	87	35.3	2.5	
Ni	60	2	He	0.010	245.7	577	22.1	2.5	
Cu	63	2	He	-0.001	-989.5	2670	4.0	1	
Zn	66	2	He	0.012	166.8	760	8.2	2.5	
Al	27	2	He	0.681	49.0	2740	6.4	5	
B	11	1	No Gas	4.309	14.2	40303	4.1	0.5	ICB Main CR1 Failed
Al	27	1	No Gas	0.841	5.9	117059	1.6	5	
Si	28	1	No Gas	-0.015	-13610.8	1547381	1.0	10	
Ag	107	1	No Gas	0.153	4.0	4978	3.6	2.5	
Cd	111	1	No Gas	0.002	151.8	33	45.8	1	
Sr	88	1	No Gas	0.020	20.3	4184	4.7	2.5	
Mo	95	1	No Gas	0.078	31.3	980	28.0	2.5	
Sn	118	1	No Gas	0.007	125.0	4404	3.3	5	
Sb	121	1	No Gas	0.172	5.6	4601	4.8	2.5	
Ba	137	1	No Gas	0.049	18.7	970	7.4	2.5	
Tl	205	1	No Gas	0.058	20.5	2604	19.5	1	
Tl	203	1	No Gas	0.059	14.7	1130	13.8	1	
Pb	208	1	No Gas	0.024	28.6	3254	12.4	2.5	
U	238	1	No Gas	0.032	19.4	1817	18.8	2.5	
Ca	43	2	He	2.446	152.7	77	19.9	100	
Sb	121	2	He	0.188	2.6	2577	3.2	2.5	
Ti	47	2	He	0.015	5.3	20	0.0	2.5	
Se	82	1	No Gas	-0.122	-774.5	-192	-205.2	1	

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	1845460	3.30	1807448	102.10	70	120	
Ge	72	2	He	1418104	1.78	1424674	99.54	70	120	
Ge	72	1	No Gas	4550626	1.03	4552530	99.96	70	120	
In	115	1	No Gas	4966158	0.73	4981657	99.69	70	120	
Bi	209	1	No Gas	3815414	0.07	3903312	97.75	70	120	

Sample Report

Sample Table

Sample Name	LLICV2
Data File Name	023LCV2.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\080921A.b
Acq Date Time	2021-08-09T14:58:50-05:00
Sample Type	LLCCV2
Dilution	1
Comment	
ISTD Ref FileName	014CALB.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	2.141	2.141	4.66	147415	0.00	2	
Be	9	1	No Gas	1.979	1.979	2.93	13578	0.01	2	
V	51	2	He	1.861	1.861	3.46	26650	0.01	2	
Cr	52	2	He	2.038	2.038	0.96	31811	0.01	2	
Fe	56	2	He	213.169	213.169	2.02	2623962	0.01	200	
Se	78	2	He	2.120	2.120	5.75	607	0.35	2	
As	75	2	He	1.985	1.985	2.11	4288	0.05	2	
Ca	44	2	He	198.172	198.172	3.40	19033	1.04	200	
Na	23	2	He	210.112	210.112	2.82	495097	0.04	200	
Mg	24	2	He	211.615	211.615	1.73	244237	0.09	200	
K	39	2	He	206.875	206.875	1.51	472345	0.04	200	
Mn	55	2	He	2.038	2.038	1.43	20960	0.01	2	
Co	59	2	He	2.028	2.028	0.95	41236	0.00	2	
Ni	60	2	He	2.017	2.017	3.70	11078	0.02	2	
Cu	63	2	He	2.001	2.001	3.29	29847	0.01	2	
Zn	66	2	He	1.954	1.954	3.87	5845	0.03	2	
Al	27	2	He	1.980	1.980	11.80	3651	0.05	2	
B	11	1	No Gas	12.105	12.105	2.45	72919	0.02	10	
Al	27	1	No Gas	2.151	2.151	3.19	152917	0.00	2	
Si	28	1	No Gas	7.920	7.920	23.25	1658490	0.00	10	
Ag	107	1	No Gas	2.053	2.053	2.03	60693	0.00	2	
Cd	111	1	No Gas	1.916	1.916	1.99	11529	0.02	2	
Sr	88	1	No Gas	2.040	2.040	1.95	113328	0.00	2	
Mo	95	1	No Gas	1.955	1.955	1.22	22399	0.01	2	
Sn	118	1	No Gas	1.928	1.928	1.18	36398	0.01	2	
Sb	121	1	No Gas	2.104	2.104	2.35	48908	0.00	2	
Ba	137	1	No Gas	1.945	1.945	1.30	16764	0.01	2	
Tl	205	1	No Gas	2.014	2.014	3.07	87009	0.00	2	
Tl	203	1	No Gas	1.975	1.975	2.91	36313	0.01	2	
Pb	208	1	No Gas	1.997	1.997	1.21	118970	0.00	2	
U	238	1	No Gas	1.920	1.920	2.25	106717	0.00	2	
Ca	43	2	He	198.477	198.477	2.97	947	20.96	200	
Sb	121	2	He	2.071	2.071	1.63	25612	0.01	2	
Ti	47	2	He	2.104	2.104	11.47	963	0.22	200	
Cu	63	1	No Gas	2.003	2.003	1.74	54312	0.00	2	
Se	82	1	No Gas	1.137	1.137	44.78	328	0.35	2	NewName Main CR1 Failed

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	1797172	1.55	1807448	99.43	70	120	
Ge	72	2	He	1437581	1.20	1424674	100.91	70	120	
Ge	72	1	No Gas	4533002	1.29	4552530	99.57	70	120	
In	115	1	No Gas	4942306	1.12	4981657	99.21	70	120	
Bi	209	1	No Gas	3877728	1.82	3903312	99.34	70	120	

Sample Report

Sample Table

Sample Name	LLICV5
Data File Name	024LCV5.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\080921A.b
Acq Date Time	2021-08-09T15:00:47-05:00
Sample Type	LLCCV5
Dilution	1
Comment	
ISTD Ref FileName	014CALB.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	5.330	5.330	3.39	213837	0.00	5	
Be	9	1	No Gas	4.962	4.962	1.52	33448	0.01	5	
V	51	2	He	4.860	4.860	1.96	61974	0.01	5	
Cr	52	2	He	5.049	5.049	3.56	73272	0.01	5	
Fe	56	2	He	518.807	518.807	2.27	6334766	0.01	500	
Se	78	2	He	5.072	5.072	2.66	1183	0.43	5	
As	75	2	He	5.057	5.057	4.55	10453	0.05	5	
Ca	44	2	He	490.763	490.763	1.67	41175	1.19	500	
Na	23	2	He	523.542	523.542	1.41	1105183	0.05	500	
Mg	24	2	He	528.628	528.628	1.38	607134	0.09	500	
K	39	2	He	531.674	531.674	1.26	943813	0.06	500	
Mn	55	2	He	4.971	4.971	1.74	50186	0.01	5	
Co	59	2	He	5.184	5.184	3.81	104922	0.00	5	
Ni	60	2	He	5.322	5.322	2.58	28243	0.02	5	
Cu	63	2	He	5.100	5.100	2.11	71569	0.01	5	
Zn	66	2	He	5.158	5.158	6.38	14161	0.04	5	
Al	27	2	He	5.646	5.646	4.95	6082	0.09	5	
B	11	1	No Gas	26.675	26.675	0.97	133536	0.02	25	
Al	27	1	No Gas	5.592	5.592	2.41	246920	0.00	5	
Si	28	1	No Gas	20.721	20.721	2.45	1836914	0.00	25	
Ag	107	1	No Gas	5.120	5.120	1.95	150717	0.00	5	
Cd	111	1	No Gas	4.936	4.936	0.89	29681	0.02	5	
Sr	88	1	No Gas	5.121	5.121	1.42	279808	0.00	5	
Mo	95	1	No Gas	4.959	4.959	1.06	56691	0.01	5	
Sn	118	1	No Gas	4.982	4.982	1.15	87280	0.01	5	
Sb	121	1	No Gas	5.238	5.238	2.55	120090	0.00	5	
Ba	137	1	No Gas	4.849	4.849	1.47	40982	0.01	5	
Tl	205	1	No Gas	5.077	5.077	0.17	219458	0.00	5	
Tl	203	1	No Gas	4.932	4.932	0.31	90695	0.01	5	
Pb	208	1	No Gas	5.015	5.015	0.53	296344	0.00	5	
U	238	1	No Gas	4.911	4.911	0.92	273199	0.00	5	
Ca	43	2	He	543.386	543.386	4.98	2467	22.03	500	
Sb	121	2	He	4.995	4.995	0.66	61109	0.01	5	
Ti	47	2	He	5.097	5.097	3.47	2304	0.22	5	
Cu	63	1	No Gas	5.173	5.173	1.31	130607	0.00	5	
Se	82	1	No Gas	4.728	4.728	16.17	1808	0.26	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	1767590	1.76	1807448	97.79	70	120	
Ge	72	2	He	1432224	1.64	1424674	100.53	70	120	
Ge	72	1	No Gas	4506844	0.83	4552530	99.00	70	120	

Sample Report

In	115	1	No Gas	4942913	2.23	4981657	99.22	70	120	
Bi	209	1	No Gas	3881678	0.08	3903312	99.45	70	120	

Interference Check Solution A (ICS-A) Report

Sample Table

Sample Name	ICSA
Data File Name	026ICSA.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\080921A.b
Acq Date Time	2021-08-09T15:04:45-05:00
Sample Type	ICSA
Dilution	1
Comment	
ISTD Ref File Name	014CALB.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	1.005	10.3	119038	2.0	0	
Be	9	1	No Gas	-0.002	-50.7	12	65.5	0	ICSA Main CR1 Failed
V	51	2	He	-0.088	-12.5	3388	4.2	0	ICSA Main CR1 Failed
Cr	52	2	He	1.963	2.4	29479	1.7	0	ICSA Main CR1 Failed
Fe	56	2	He	98249.098	1.4	1150413663	0.9	0	
Se	78	2	He	0.253	42.3	230	8.3	0	ICSA Main CR1 Failed
As	75	2	He	0.046	23.9	354	6.0	0	ICSA Main CR1 Failed
Ca	44	2	He	92169.234	0.9	6732235	1.3	0	
Na	23	2	He	100269.512	0.9	188355611	1.3	0	
Mg	24	2	He	97934.277	1.3	108094885	0.9	0	
K	39	2	He	97363.920	0.9	136554541	1.0	0	
Mn	55	2	He	0.458	3.4	4898	2.8	0	ICSA Main CR1 Failed
Co	59	2	He	0.092	5.9	1843	5.6	0	ICSA Main CR1 Failed
Ni	60	2	He	0.165	6.9	1333	3.8	0	ICSA Main CR1 Failed
Cu	63	2	He	0.403	6.6	7846	4.9	0	ICSA Main CR1 Failed
Zn	66	2	He	1.091	3.9	3440	3.5	0	ICSA Main CR1 Failed
Al	27	2	He	95971.993	1.9	61520799	1.4	0	
B	11	1	No Gas	0.922	13.2	23994	2.5	0	ICSA Main CR1 Failed
Al	27	1	No Gas	95266.039	1.0	2518764816	0.4	0	
Si	28	1	No Gas	19.754	3.8	1747515	0.7	0	ICSA Main CR1 Failed
Ag	107	1	No Gas	0.303	4.4	8426	2.9	0	ICSA Main CR1 Failed
Cd	111	1	No Gas	1.915	2.7	10388	3.9	0	ICSA Main CR1 Failed
Sr	88	1	No Gas	1.130	3.5	57778	1.9	0	ICSA Main CR1 Failed
Mo	95	1	No Gas	1916.780	2.1	19712258	0.6	0	
Sn	118	1	No Gas	-0.044	-52.3	3184	10.6	0	ICSA Main CR1 Failed
Sb	121	1	No Gas	0.108	6.2	2980	5.3	0	ICSA Main CR1 Failed
Ba	137	1	No Gas	0.361	8.9	3207	5.9	0	ICSA Main CR1 Failed
Tl	205	1	No Gas	0.007	13.8	377	10.1	0	ICSA Main CR1 Failed
Tl	203	1	No Gas	0.008	43.5	193	28.5	0	ICSA Main CR1 Failed
Pb	208	1	No Gas	0.077	2.4	5744	2.4	0	ICSA Main CR1 Failed
U	238	1	No Gas	0.002	38.4	170	25.6	0	ICSA Main CR1 Failed
Ca	43	2	He	93436.608	1.4	396875	0.9	0	
Sb	121	2	He	0.110	16.4	1597	12.8	0	ICSA Main CR1 Failed
Ti	47	2	He	1972.633	2.0	852439	2.5	0	
Se	82	1	No Gas	0.068	371.4	-109	-90.9	0	ICSA Main CR1 Failed

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	1747038	2.94	1807448	96.66	70	120	
Ge	72	2	He	1377310	0.49	1424674	96.68	70	120	
Ge	72	1	No Gas	4320820	0.52	4552530	94.91	70	120	
In	115	1	No Gas	4453560	1.59	4981657	89.40	70	120	
Bi	209	1	No Gas	3483070	2.10	3903312	89.23	70	120	

Interference Check Solution AB (ICS-AB) Report

Sample Table

Sample Name	ICSAB
Data File Name	027ICSB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\080921A.b
Acq Date Time	2021-08-09T15:06:50-05:00
Sample Type	ICSB
Dilution	1
Comment	
ISTD Ref File Name	014CALB.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	97.698	1.873	2218281	1.96	100	97.7	180	120	ICSB Main CR1 Failed
Be	9	1	No Gas	93.705	0.864	634013	0.75	100	93.7	80	120	
V	51	2	He	100.055	1.225	1112897	1.05	100	100.1	80	120	
Cr	52	2	He	100.576	0.194	1306507	0.50	100	100.6	80	120	
Fe	56	2	He	107275.288	1.140	1224817742	0.58	100	107275.3	80	120	
Se	78	2	He	103.161	1.175	19134	1.77	100	103.2	80	120	
As	75	2	He	100.330	0.972	189677	0.48	100	100.3	80	120	
Ca	44	2	He	102893.923	0.724	7327671	0.61	100	102893.9	80	120	
Na	23	2	He	109546.320	1.754	200630897	1.12	100	109546.3	80	120	
Mg	24	2	He	109021.233	0.671	117336042	0.23	100	109021.2	80	120	
K	39	2	He	108243.440	2.143	148007204	1.86	100	108243.4	80	120	
Mn	55	2	He	95.002	0.484	890871	0.26	100	95.0	80	120	
Co	59	2	He	98.432	1.637	1867405	1.61	100	98.4	80	120	
Ni	60	2	He	95.218	0.938	465502	1.03	100	95.2	80	120	
Cu	63	2	He	96.164	1.407	1220147	0.80	100	96.2	80	120	
Zn	66	2	He	99.641	1.440	243853	0.81	100	99.6	80	120	
Al	27	2	He	96293.262	2.256	60188851	1.86	100	96293.3	80	120	ICSB Main CR1 Failed
B	11	1	No Gas	461.003	0.647	1984900	1.27	100	461.0	80	120	
Al	27	1	No Gas	94085.932	1.149	2479939270	0.14	100	94085.9	80	120	ICSB Main CR1 Failed
Si	28	1	No Gas	513.644	3.037	8667602	1.59	100	513.6	80	120	
Ag	107	1	No Gas	97.339	2.103	2599696	1.80	100	97.3	80	120	
Cd	111	1	No Gas	98.957	1.251	540932	0.87	100	99.0	80	120	
Sr	88	1	No Gas	102.630	1.709	5049624	1.23	100	102.6	80	120	
Mo	95	1	No Gas	2017.604	2.561	20954820	1.55	100	2017.6	80	120	
Sn	118	1	No Gas	100.248	1.876	1523678	1.08	100	100.2	80	120	
Sb	121	1	No Gas	100.884	1.340	2199789	0.54	100	100.9	80	120	
Ba	137	1	No Gas	97.731	0.496	741744	0.61	100	97.7	80	120	
Tl	205	1	No Gas	100.469	1.219	3902146	1.09	100	100.5	80	120	
Tl	203	1	No Gas	100.471	0.845	1659724	1.26	100	100.5	80	120	
Pb	208	1	No Gas	100.759	1.224	5319966	1.28	100	100.8	80	120	
U	238	1	No Gas	104.963	1.398	5248255	0.97	100	105.0	80	120	
Ca	43	2	He	103646.193	0.746	429278	0.57	100	103646.2	80	120	
Sb	121	2	He	99.198	0.798	1132338	0.38	100	99.2	80	120	
Ti	47	2	He	2119.122	0.524	892875	0.74	100	2119.1	80	120	ICSB Main CR1 Failed
Cu	63	1	No Gas	95.813	2.211	2217874	2.10	100	95.8	80	120	
Se	82	1	No Gas	100.972	0.876	39621	1.73	100	101.0	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	1775253	0.66	1807448	98.22	70	120	
Ge	72	2	He	1343007	0.63	1424674	94.27	70	120	
Ge	72	1	No Gas	4307854	1.28	4552530	94.63	70	120	
In	115	1	No Gas	4497482	1.00	4981657	90.28	70	120	
Bi	209	1	No Gas	3489675	0.73	3903312	89.40	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	113_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\080921A.b
Acq Date Time	2021-08-09T19:07:42-05:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	014CALB.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	101.279	0.563	2465395	1.10	100	101.3	90	110	
Be	9	1	No Gas	94.895	1.243	689407	0.29	100	94.9	90	110	
V	51	2	He	99.994	3.330	999484	2.33	100	100.0	90	110	
Cr	52	2	He	99.205	2.256	1158283	2.11	100	99.2	90	110	
Fe	56	2	He	9915.130	1.908	101757912	0.98	10000	99.2	90	110	
Se	78	2	He	104.238	1.316	17374	0.52	100	104.2	90	110	
As	75	2	He	103.218	2.529	175366	1.72	100	103.2	90	110	
Ca	44	2	He	9659.063	1.732	621244	1.48	10000	96.6	90	110	
Na	23	2	He	9818.302	1.353	16225897	0.31	10000	98.2	90	110	
Mg	24	2	He	9834.748	1.244	9513701	0.56	10000	98.3	90	110	
K	39	2	He	9793.771	0.495	12166551	0.61	10000	97.9	90	110	
Mn	55	2	He	97.510	1.724	821787	1.04	100	97.5	90	110	
Co	59	2	He	102.388	2.267	1745783	1.82	100	102.4	90	110	
Ni	60	2	He	98.635	0.408	433393	0.71	100	98.6	90	110	
Cu	63	2	He	99.120	1.211	1130347	1.14	100	99.1	90	110	
Zn	66	2	He	103.179	0.562	226946	0.71	100	103.2	90	110	
Al	27	2	He	103.800	2.349	60261	1.24	100	103.8	90	110	
B	11	1	No Gas	435.002	2.054	2012255	1.86	500	87.0	90	110	CCV Main CR1-2 Failed
Al	27	1	No Gas	107.970	1.671	2728202	0.80	100	108.0	90	110	
Si	28	1	No Gas	506.022	2.596	7959531	1.35	5000	10.1	90	110	CCV Main CR1-2 Failed
Ag	107	1	No Gas	101.865	1.236	2710200	2.25	100	101.9	90	110	
Cd	111	1	No Gas	100.272	2.133	545989	2.49	100	100.3	90	110	
Sr	88	1	No Gas	100.372	0.518	4919775	1.88	100	100.4	90	110	
Mo	95	1	No Gas	95.050	0.307	983571	1.68	100	95.0	90	110	
Sn	118	1	No Gas	104.332	1.645	1579419	1.56	100	104.3	90	110	
Sb	121	1	No Gas	113.597	1.284	2302898	0.59	100	113.6	90	110	CCV Main CR1-2 Failed
Ba	137	1	No Gas	103.718	2.055	783940	0.96	100	103.7	90	110	
Tl	205	1	No Gas	107.510	2.556	4496943	1.12	100	107.5	90	110	
Tl	203	1	No Gas	107.973	1.370	1921444	2.45	100	108.0	90	110	
Pb	208	1	No Gas	107.115	3.980	6088683	1.07	100	107.1	90	110	
U	238	1	No Gas	104.537	3.228	5628408	0.51	100	104.5	90	110	
Ca	43	2	He	9846.646	3.518	36699	2.54	10000	98.5	90	110	
Sb	121	2	He	111.604	1.480	1144958	0.88	100	111.6	90	110	CCV Main CR1-2 Failed
Ti	47	2	He	95.999	2.240	36365	2.22	100	96.0	90	110	
Cu	63	1	No Gas	98.459	1.339	2118807	0.84	100	98.5	90	110	
Se	82	1	No Gas	102.546	1.213	37410	0.97	100	102.5	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	1906321	1.30	1807448	105.47	70	120	
Ge	72	2	He	1207118	1.04	1424674	84.73	70	120	
Ge	72	1	No Gas	4005073	0.88	4552530	87.97	70	120	
In	115	1	No Gas	4479800	1.40	4981657	89.93	70	120	
Bi	209	1	No Gas	3759884	2.95	3903312	96.33	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	114_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\080921A.b
Acq Date Time	2021-08-09T19:09:30-05:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	014CALB.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	Upper Limit	QC Flag
Li	7	1	No Gas	0.060	209.4	110792	0.4	0.5	
Be	9	1	No Gas	0.015	24.2	138	16.7	0.5	
V	51	2	He	0.059	11.7	4504	1.4	2.5	
Cr	52	2	He	0.021	45.3	3267	2.7	2.5	
Fe	56	2	He	11.848	34.7	139708	29.5	100	
Se	78	2	He	0.288	71.8	211	17.2	2	
As	75	2	He	0.084	17.6	381	6.3	2.5	
Ca	44	2	He	-1.956	-177.6	3237	7.8	100	
Na	23	2	He	-0.017	-3053.7	71231	0.5	100	
Mg	24	2	He	1.387	14.4	1767	10.1	100	
K	39	2	He	8.058	11.3	155235	0.7	100	
Mn	55	2	He	0.054	16.4	903	8.4	2.5	
Co	59	2	He	0.004	34.3	127	19.9	2.5	
Ni	60	2	He	0.084	34.3	827	14.9	2.5	
Cu	63	2	He	-0.023	-30.7	2064	3.1	2	
Zn	66	2	He	0.634	6.3	2047	5.3	2.5	
Al	27	2	He	2.557	8.6	3447	2.6	5	
B	11	1	No Gas	0.317	96.7	24029	4.1	0.5	
Al	27	1	No Gas	3.277	5.9	164963	2.3	5	
Si	28	1	No Gas	-15.085	-14.8	1181593	2.0	10	
Ag	107	1	No Gas	0.054	10.1	1894	7.9	2.5	
Cd	111	1	No Gas	0.003	100.6	37	41.7	1	
Sr	88	1	No Gas	0.069	9.1	6375	4.8	2.5	
Mo	95	1	No Gas	0.122	13.2	1373	13.0	2.5	
Sn	118	1	No Gas	0.126	13.0	5955	4.5	5	
Sb	121	1	No Gas	0.119	10.9	3010	8.8	2.5	
Ba	137	1	No Gas	0.077	38.3	1117	21.1	2.5	
Tl	205	1	No Gas	0.043	21.1	1957	18.8	1	
Tl	203	1	No Gas	0.040	14.0	800	11.9	1	
Pb	208	1	No Gas	0.024	12.8	3297	4.7	2.5	
U	238	1	No Gas	0.080	12.9	4468	11.8	2.5	
Ca	43	2	He	17.390	46.9	123	26.1	100	
Sb	121	2	He	0.098	15.9	1297	13.1	2.5	
Ti	47	2	He	0.100	24.6	50	20.0	2.5	
Cu	63	1	No Gas	-0.021	-37.5	4604	3.5	2.5	
Se	82	1	No Gas	-0.069	-418.0	-153	-69.7	2	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag

Continuing Calibration Blank (CCB) Report

Li	6	1	No Gas	1957719	2.59	1807448	108.31	70	120	
Ge	72	2	He	1228368	1.08	1424674	86.22	70	120	
Ge	72	1	No Gas	4060562	0.54	4552530	89.19	70	120	
In	115	1	No Gas	4616919	0.60	4981657	92.68	70	120	
Bi	209	1	No Gas	3862197	0.84	3903312	98.95	70	120	

Sample Report

Sample Table

Sample Name	MBLK-168892
Data File Name	115SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\080921A.b
Acq Date Time	2021-08-09T19:11:29-05:00
Sample Type	Sample
Dilution	1
Comment	DOD 168892
ISTD Ref FileName	014CALB.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	0.122	0.122	53.16	112660	0.00	2000	
Be	9	1	No Gas	-0.001	-0.001	-52.80	18	-0.01	2000	
V	51	2	He	-0.001	-0.001	-1374.84	3922	0.00	2000	
Cr	52	2	He	-0.073	-0.073	-26.31	2167	0.00	2000	
Fe	56	2	He	3.482	3.482	4.91	52926	0.01	200000	
Se	78	2	He	0.072	0.072	148.83	176	0.04	2000	
As	75	2	He	-0.005	-0.005	-148.61	230	0.00	2000	
Ca	44	2	He	-20.412	-20.412	-19.50	2047	-1.00	200000	
Na	23	2	He	-0.787	-0.787	-98.22	70354	0.00	200000	
Mg	24	2	He	9.032	9.032	3.61	9347	0.10	200000	
K	39	2	He	7.757	7.757	43.18	155754	0.00	200000	
Mn	55	2	He	0.040	0.040	4.49	787	0.01	2000	
Co	59	2	He	0.001	0.001	63.42	80	0.00	2000	
Ni	60	2	He	0.159	0.159	17.59	1170	0.01	2000	
Cu	63	2	He	-0.007	-0.007	-196.16	2260	0.00	2000	
Zn	66	2	He	0.401	0.401	5.38	1537	0.03	2000	
Al	27	2	He	3.577	3.577	14.11	4057	0.09	2000	
B	11	1	No Gas	-1.137	-1.137	-5.20	17276	-0.01	2000	
Al	27	1	No Gas	3.912	3.912	2.48	180220	0.00	2000	
Si	28	1	No Gas	21.157	21.157	12.41	1655670	0.00	2000	
Ag	107	1	No Gas	0.097	0.097	7.51	3074	0.00	2000	
Cd	111	1	No Gas	-0.001	-0.001	-67.09	13	-0.01	2000	
Sr	88	1	No Gas	0.016	0.016	25.13	3714	0.00	2000	
Mo	95	1	No Gas	0.017	0.017	14.85	260	0.01	2000	
Sn	118	1	No Gas	-0.042	-0.042	-21.65	3337	0.00	2000	
Sb	121	1	No Gas	0.043	0.043	5.60	1453	0.00	2000	
Ba	137	1	No Gas	0.032	0.032	11.48	773	0.00	2000	
Tl	205	1	No Gas	0.023	0.023	7.98	1153	0.00	2000	
Tl	203	1	No Gas	0.021	0.021	6.10	460	0.00	2000	
Pb	208	1	No Gas	0.012	0.012	13.50	2610	0.00	2000	
U	238	1	No Gas	0.010	0.010	0.98	650	0.00	2000	
Ca	43	2	He	9.339	9.339	55.79	93	10.01	200000	
Sb	121	2	He	0.055	0.055	17.07	850	0.01	2000	
Ti	47	2	He	0.030	0.030	275.09	23	0.13	2000	
Cu	63	1	No Gas	-0.015	-0.015	-33.11	4708	0.00	2000	
Zn	66	1	No Gas	0.350	0.350	10.97	3691	0.01	2000	
Se	82	1	No Gas	-0.208	-0.208	-200.35	-205	0.10	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	1964127	1.50	1807448	108.67	70	120	
Ge	72	2	He	1235735	1.69	1424674	86.74	70	120	
Ge	72	1	No Gas	4048995	1.80	4552530	88.94	70	120	
In	115	1	No Gas	4626330	1.11	4981657	92.87	70	120	

Sample Report

Bi	209	1	No Gas	3926106	0.88	3903312	100.58	70	120	

Sample Report

Sample Table

Sample Name	LCS-168892
Data File Name	116SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\080921A.b
Acq Date Time	2021-08-09T19:13:27-05:00
Sample Type	Sample
Dilution	1
Comment	DOD 168892
ISTD Ref FileName	014CALB.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	0.051	0.051	225.91	113629	0.00	2000	
Be	9	1	No Gas	46.482	46.482	1.79	356335	0.01	2000	
V	51	2	He	48.969	48.969	1.81	507807	0.01	2000	
Cr	52	2	He	49.282	49.282	1.83	596059	0.01	2000	
Fe	56	2	He	5071.793	5071.793	3.10	53777258	0.01	200000	
Se	78	2	He	53.211	53.211	2.24	9244	0.58	2000	
As	75	2	He	50.922	50.922	2.69	89500	0.06	2000	
Ca	44	2	He	4806.785	4806.785	2.44	321091	1.50	200000	
Na	23	2	He	5061.923	5061.923	3.06	8676594	0.06	200000	
Mg	24	2	He	5092.243	5092.243	3.04	5088680	0.10	200000	
K	39	2	He	5050.345	5050.345	2.14	6553228	0.08	200000	
Mn	55	2	He	49.696	49.696	2.00	432928	0.01	2000	
Co	59	2	He	50.135	50.135	2.64	883118	0.01	2000	
Ni	60	2	He	49.597	49.597	3.63	225305	0.02	2000	
Cu	63	2	He	49.749	49.749	2.82	587233	0.01	2000	
Zn	66	2	He	53.494	53.494	2.64	121854	0.04	2000	
Al	27	2	He	56.368	56.368	2.72	34730	0.16	2000	
B	11	1	No Gas	-1.661	-1.661	-6.58	15157	-0.01	2000	
Al	27	1	No Gas	58.231	58.231	4.17	1561486	0.00	2000	
Si	28	1	No Gas	70.796	70.796	3.79	2364678	0.00	2000	
Ag	107	1	No Gas	51.599	51.599	3.30	1440736	0.00	2000	
Cd	111	1	No Gas	50.673	50.673	2.94	289577	0.02	2000	
Sr	88	1	No Gas	0.037	0.037	17.13	4814	0.00	2000	
Mo	95	1	No Gas	47.876	47.876	2.50	519949	0.01	2000	
Sn	118	1	No Gas	-0.088	-0.088	-7.31	2667	0.00	2000	
Sb	121	1	No Gas	55.259	55.259	1.74	1159582	0.00	2000	
Ba	137	1	No Gas	50.537	50.537	1.53	401261	0.01	2000	
Tl	205	1	No Gas	53.617	53.617	2.14	2322865	0.00	2000	
Tl	203	1	No Gas	49.698	49.698	0.90	915665	0.01	2000	
Pb	208	1	No Gas	51.606	51.606	1.21	3039742	0.00	2000	
U	238	1	No Gas	0.000	0.000	-158.30	53	0.00	2000	
Ca	43	2	He	4859.896	4859.896	2.21	18750	25.92	200000	
Sb	121	2	He	52.662	52.662	2.72	558249	0.01	2000	
Ti	47	2	He	48.717	48.717	4.22	19067	0.26	2000	
Cu	63	1	No Gas	50.604	50.604	2.97	1129236	0.00	2000	
Zn	66	1	No Gas	51.802	51.802	1.26	314970	0.02	2000	
Se	82	1	No Gas	51.648	51.648	6.30	19424	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	2011878	2.70	1807448	111.31	70	120	
Ge	72	2	He	1247416	2.40	1424674	87.56	70	120	
Ge	72	1	No Gas	4144708	1.56	4552530	91.04	70	120	
In	115	1	No Gas	4702844	1.83	4981657	94.40	70	120	

Sample Report

Bi	209	1	No Gas	3892311	1.42	3903312	99.72	70	120	

Sample Report

Sample Table

Sample Name	HS21071405-11
Data File Name	117SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\080921A.b
Acq Date Time	2021-08-09T19:15:22-05:00
Sample Type	Sample
Dilution	1
Comment	DOD 168892
ISTD Ref FileName	014CALB.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	6.297	6.297	2.02	253479	0.00	2000	
Be	9	1	No Gas	0.137	0.137	7.93	1023	0.01	2000	
V	51	2	He	4.432	4.432	2.15	48661	0.01	2000	
Cr	52	2	He	1.964	1.964	7.26	26213	0.01	2000	
Fe	56	2	He	3439.660	3439.660	0.96	35816548	0.01	200000	
Se	78	2	He	0.627	0.627	5.27	267	0.23	2000	
As	75	2	He	1.797	1.797	4.46	3327	0.05	2000	
Ca	44	2	He	10194.276	10194.276	2.06	664746	1.53	200000	
Na	23	2	He	13766.292	13766.292	1.98	23044314	0.06	200000	
Mg	24	2	He	5284.594	5284.594	2.21	5184577	0.10	200000	
K	39	2	He	3050.700	3050.700	2.02	3942832	0.08	200000	
Mn	55	2	He	742.189	742.189	1.53	6341176	0.01	2000	
Co	59	2	He	1.959	1.959	2.55	33929	0.01	2000	
Ni	60	2	He	3.730	3.730	7.05	17048	0.02	2000	
Cu	63	2	He	2.017	2.017	2.92	25591	0.01	2000	
Zn	66	2	He	8.820	8.820	2.79	20249	0.04	2000	
Al	27	2	He	1875.060	1875.060	6.98	1069629	0.18	2000	>LDR
B	11	1	No Gas	17.940	17.940	2.04	104178	0.02	2000	
Al	27	1	No Gas	2116.910	2116.910	4.41	52462923	0.00	2000	>LDR
Si	28	1	No Gas	13042.339	13042.339	17.02	173183134	0.01	2000	>LDR
Ag	107	1	No Gas	0.009	0.009	22.02	660	0.00	2000	
Cd	111	1	No Gas	0.032	0.032	21.84	203	0.02	2000	
Sr	88	1	No Gas	195.654	195.654	1.13	9899248	0.00	2000	
Mo	95	1	No Gas	0.265	0.265	7.22	2910	0.01	2000	
Sn	118	1	No Gas	0.000	0.000	15231.74	3994	0.00	2000	
Sb	121	1	No Gas	0.201	0.201	7.51	4694	0.00	2000	
Ba	137	1	No Gas	132.176	132.176	1.97	1031531	0.01	2000	
Tl	205	1	No Gas	0.087	0.087	48.00	3921	0.00	2000	
Tl	203	1	No Gas	0.091	0.091	44.35	1747	0.01	2000	
Pb	208	1	No Gas	2.149	2.149	1.94	128419	0.00	2000	
U	238	1	No Gas	0.187	0.187	1.40	10488	0.00	2000	
Ca	43	2	He	10576.915	10576.915	1.08	39989	26.45	200000	
Sb	121	2	He	0.181	0.181	5.97	2157	0.01	2000	
Ti	47	2	He	43.742	43.742	12.21	16790	0.26	2000	
Cu	63	1	No Gas	2.168	2.168	2.93	52030	0.00	2000	
Zn	66	1	No Gas	8.897	8.897	1.60	54123	0.02	2000	
Se	82	1	No Gas	0.846	0.846	75.55	186	0.45	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	1908700	1.07	1807448	105.60	70	120	
Ge	72	2	He	1224373	1.76	1424674	85.94	70	120	
Ge	72	1	No Gas	4043662	0.58	4552530	88.82	70	120	
In	115	1	No Gas	4626352	1.93	4981657	92.87	70	120	

Sample Report

Bi	209	1	No Gas	3892322	1.09	3903312	99.72	70	120	

Sample Report

Sample Table

Sample Name	HS21071405-11SD
Data File Name	118SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\080921A.b
Acq Date Time	2021-08-09T19:17:20-05:00
Sample Type	Sample
Dilution	5
Comment	DOD 168892
ISTD Ref FileName	014CALB.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	1.347	6.737	9.10	139101	0.00	2000	
Be	9	1	No Gas	0.393	1.966	7.84	2912	0.01	2000	
V	51	2	He	1.362	6.809	4.89	18024	0.01	2000	
Cr	52	2	He	0.752	3.762	8.71	12156	0.01	2000	
Fe	56	2	He	748.921	3744.607	3.19	7977376	0.01	200000	
Se	78	2	He	0.700	3.498	6.18	285	0.25	2000	
As	75	2	He	0.801	4.007	9.84	1649	0.05	2000	
Ca	44	2	He	2141.218	10706.091	3.47	145299	1.47	200000	
Na	23	2	He	2904.468	14522.341	2.05	5023702	0.06	200000	
Mg	24	2	He	1188.957	5944.784	2.79	1191773	0.10	200000	
K	39	2	He	711.517	3557.584	0.84	1052862	0.07	200000	
Mn	55	2	He	161.455	807.275	1.47	1409456	0.01	2000	
Co	59	2	He	0.820	4.102	1.60	14548	0.01	2000	
Ni	60	2	He	1.121	5.607	2.98	5565	0.02	2000	
Cu	63	2	He	0.738	3.690	4.55	11071	0.01	2000	
Zn	66	2	He	2.197	10.986	6.74	5638	0.04	2000	
Al	27	2	He	383.077	1915.384	3.68	224912	0.17	2000	
B	11	1	No Gas	2.235	11.176	12.45	32466	0.01	2000	
Al	27	1	No Gas	435.949	2179.745	13.15	10902874	0.00	2000	
Si	28	1	No Gas	2301.488	11507.442	1.04	31759082	0.01	2000	>LDR
Ag	107	1	No Gas	0.406	2.028	0.29	11582	0.00	2000	
Cd	111	1	No Gas	0.402	2.012	6.89	2287	0.02	2000	
Sr	88	1	No Gas	43.492	217.460	0.66	2205870	0.00	2000	
Mo	95	1	No Gas	0.458	2.289	6.88	4974	0.01	2000	
Sn	118	1	No Gas	-0.119	-0.593	-4.05	2150	-0.01	2000	
Sb	121	1	No Gas	0.453	2.265	5.49	9864	0.00	2000	
Ba	137	1	No Gas	27.577	137.883	1.81	215939	0.01	2000	
Tl	205	1	No Gas	0.413	2.066	2.84	17866	0.00	2000	
Tl	203	1	No Gas	0.426	2.131	1.06	7849	0.01	2000	
Pb	208	1	No Gas	0.861	4.303	0.11	52086	0.00	2000	
U	238	1	No Gas	0.036	0.182	4.18	2077	0.00	2000	
Ca	43	2	He	2258.977	11294.883	4.62	8776	25.74	200000	
Sb	121	2	He	0.452	2.259	6.60	5074	0.01	2000	
Ti	47	2	He	8.382	41.911	19.27	3291	0.25	2000	
Cu	63	1	No Gas	0.829	4.146	6.23	23075	0.00	2000	
Zn	66	1	No Gas	2.233	11.165	5.58	14835	0.02	2000	
Se	82	1	No Gas	0.916	4.582	64.49	213	0.43	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	1923417	2.38	1807448	106.42	70	120	
Ge	72	2	He	1250778	2.36	1424674	87.79	70	120	
Ge	72	1	No Gas	4054516	0.97	4552530	89.06	70	120	
In	115	1	No Gas	4632311	0.50	4981657	92.99	70	120	

Sample Report

Bi	209	1	No Gas	3857344	1.19	3903312	98.82	70	120	

Sample Report

Sample Table

Sample Name	HS21071405-11MS
Data File Name	119SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\080921A.b
Acq Date Time	2021-08-09T19:19:16-05:00
Sample Type	Sample
Dilution	1
Comment	DOD 168892
ISTD Ref FileName	014CALB.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	6.365	6.365	3.57	252448	0.00	2000	
Be	9	1	No Gas	48.321	48.321	1.40	347930	0.01	2000	
V	51	2	He	52.761	52.761	0.47	537706	0.01	2000	
Cr	52	2	He	50.527	50.527	0.55	600809	0.01	2000	
Fe	56	2	He	8487.008	8487.008	1.22	88499695	0.01	200000	
Se	78	2	He	51.371	51.371	1.07	8782	0.58	2000	
As	75	2	He	53.075	53.075	0.94	91735	0.06	2000	
Ca	44	2	He	14710.322	14710.322	2.64	959398	1.53	200000	
Na	23	2	He	18528.040	18528.040	1.33	31044464	0.06	200000	
Mg	24	2	He	10238.979	10238.979	1.45	10063164	0.10	200000	
K	39	2	He	7889.238	7889.238	2.45	9984185	0.08	200000	
Mn	55	2	He	767.682	767.682	1.49	6569813	0.01	2000	
Co	59	2	He	51.678	51.678	1.62	895167	0.01	2000	
Ni	60	2	He	52.926	52.926	1.55	236439	0.02	2000	
Cu	63	2	He	51.097	51.097	1.10	593081	0.01	2000	
Zn	66	2	He	62.328	62.328	0.69	139529	0.04	2000	
Al	27	2	He	2488.341	2488.341	2.15	1422075	0.17	2000	>LDR
B	11	1	No Gas	17.450	17.450	1.74	100900	0.02	2000	
Al	27	1	No Gas	2310.058	2310.058	4.48	58226281	0.00	2000	>LDR
Si	28	1	No Gas	12121.755	12121.755	3.77	163809694	0.01	2000	>LDR
Ag	107	1	No Gas	49.600	49.600	1.15	1384016	0.00	2000	
Cd	111	1	No Gas	50.111	50.111	1.42	286136	0.02	2000	
Sr	88	1	No Gas	186.896	186.896	0.15	9603313	0.00	2000	
Mo	95	1	No Gas	46.894	46.894	0.65	508878	0.01	2000	
Sn	118	1	No Gas	-0.030	-0.030	-15.27	3587	0.00	2000	
Sb	121	1	No Gas	51.155	51.155	0.88	1101310	0.00	2000	
Ba	137	1	No Gas	181.230	181.230	0.83	1436261	0.01	2000	
Tl	205	1	No Gas	54.013	54.013	2.30	2308968	0.00	2000	
Tl	203	1	No Gas	50.691	50.691	1.91	921667	0.01	2000	
Pb	208	1	No Gas	55.213	55.213	0.58	3209685	0.00	2000	
U	238	1	No Gas	0.236	0.236	18.95	13073	0.00	2000	
Ca	43	2	He	14869.557	14869.557	1.58	56285	26.42	200000	
Sb	121	2	He	50.101	50.101	1.93	536193	0.01	2000	
Ti	47	2	He	127.002	127.002	21.04	48802	0.26	2000	
Cu	63	1	No Gas	52.329	52.329	1.36	1159385	0.00	2000	
Zn	66	1	No Gas	60.292	60.292	0.61	363638	0.02	2000	
Se	82	1	No Gas	53.062	53.062	2.64	19821	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	1889336	1.67	1807448	104.53	70	120	
Ge	72	2	He	1226310	1.04	1424674	86.08	70	120	
Ge	72	1	No Gas	4114337	0.94	4552530	90.37	70	120	
In	115	1	No Gas	4697658	0.26	4981657	94.30	70	120	

Sample Report

Bi	209	1	No Gas	3841121	0.76	3903312	98.41	70	120	

Sample Report

Sample Table

Sample Name	HS21071405-11MSD
Data File Name	120SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\080921A.b
Acq Date Time	2021-08-09T19:21:12-05:00
Sample Type	Sample
Dilution	1
Comment	DOD 168892
ISTD Ref FileName	014CALB.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	6.323	6.323	1.56	249593	0.00	2000	
Be	9	1	No Gas	48.627	48.627	0.84	347461	0.01	2000	
V	51	2	He	52.171	52.171	0.77	536495	0.01	2000	
Cr	52	2	He	50.351	50.351	0.77	604096	0.01	2000	
Fe	56	2	He	8278.919	8278.919	1.55	87096145	0.01	200000	
Se	78	2	He	51.848	51.848	2.78	8940	0.58	2000	
As	75	2	He	52.979	52.979	1.55	92385	0.06	2000	
Ca	44	2	He	14434.469	14434.469	0.26	949974	1.52	200000	
Na	23	2	He	18218.642	18218.642	1.28	30800575	0.06	200000	
Mg	24	2	He	9974.983	9974.983	1.61	9890675	0.10	200000	
K	39	2	He	7708.420	7708.420	2.04	9845996	0.08	200000	
Mn	55	2	He	750.906	750.906	2.07	6483899	0.01	2000	
Co	59	2	He	51.462	51.462	1.84	899413	0.01	2000	
Ni	60	2	He	52.384	52.384	0.53	236143	0.02	2000	
Cu	63	2	He	50.740	50.740	1.44	594252	0.01	2000	
Zn	66	2	He	61.557	61.557	0.86	139040	0.04	2000	
Al	27	2	He	2101.264	2101.264	5.59	1212456	0.17	2000	>LDR
B	11	1	No Gas	17.519	17.519	0.62	100445	0.02	2000	
Al	27	1	No Gas	2054.322	2054.322	4.26	52231513	0.00	2000	>LDR
Si	28	1	No Gas	11645.734	11645.734	9.51	158742454	0.01	2000	>LDR
Ag	107	1	No Gas	51.804	51.804	1.11	1404978	0.00	2000	
Cd	111	1	No Gas	51.293	51.293	0.86	284697	0.02	2000	
Sr	88	1	No Gas	195.312	195.312	1.03	9754669	0.00	2000	
Mo	95	1	No Gas	48.073	48.073	0.61	507135	0.01	2000	
Sn	118	1	No Gas	-0.034	-0.034	-41.70	3424	0.00	2000	
Sb	121	1	No Gas	50.417	50.417	1.90	1094627	0.00	2000	
Ba	137	1	No Gas	186.228	186.228	1.15	1434590	0.01	2000	
Tl	205	1	No Gas	53.686	53.686	3.54	2287144	0.00	2000	
Tl	203	1	No Gas	50.434	50.434	1.85	913926	0.01	2000	
Pb	208	1	No Gas	54.137	54.137	1.80	3136735	0.00	2000	
U	238	1	No Gas	0.201	0.201	11.01	11104	0.00	2000	
Ca	43	2	He	14738.725	14738.725	1.83	56285	26.19	200000	
Sb	121	2	He	48.935	48.935	1.90	528424	0.01	2000	
Ti	47	2	He	100.826	100.826	14.48	39125	0.26	2000	
Cu	63	1	No Gas	50.967	50.967	2.36	1138737	0.00	2000	
Zn	66	1	No Gas	59.104	59.104	1.18	359550	0.02	2000	
Se	82	1	No Gas	51.377	51.377	0.90	19356	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	1874810	1.02	1807448	103.73	70	120	
Ge	72	2	He	1237310	0.94	1424674	86.85	70	120	
Ge	72	1	No Gas	4149595	1.11	4552530	91.15	70	120	
In	115	1	No Gas	4566641	1.66	4981657	91.67	70	120	

Sample Report

Bi	209	1	No Gas	3828402	1.14	3903312	98.08	70	120	

Sample Report

Sample Table

Sample Name	HS21071405-11PDS
Data File Name	121SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\080921A.b
Acq Date Time	2021-08-09T19:23:07-05:00
Sample Type	Sample
Dilution	1
Comment	DOD 168892
ISTD Ref FileName	014CALB.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	6.744	6.744	0.84	261993	0.00	2000	
Be	9	1	No Gas	110.067	110.067	3.34	794523	0.01	2000	
V	51	2	He	118.772	118.772	3.71	1228130	0.01	2000	
Cr	52	2	He	115.697	115.697	2.84	1397841	0.01	2000	
Fe	56	2	He	14794.935	14794.935	4.95	157129628	0.01	200000	
Se	78	2	He	120.788	120.788	3.72	20811	0.58	2000	
As	75	2	He	118.544	118.544	3.11	208449	0.06	2000	
Ca	44	2	He	20813.776	20813.776	1.85	1382056	1.51	200000	
Na	23	2	He	23900.896	23900.896	2.70	40784355	0.06	200000	
Mg	24	2	He	16396.808	16396.808	2.42	16419623	0.10	200000	
K	39	2	He	13876.116	13876.116	3.06	17783028	0.08	200000	
Mn	55	2	He	797.733	797.733	4.93	6953899	0.01	2000	
Co	59	2	He	115.379	115.379	5.45	2035570	0.01	2000	
Ni	60	2	He	115.373	115.373	3.92	524549	0.02	2000	
Cu	63	2	He	117.149	117.149	3.88	1382183	0.01	2000	
Zn	66	2	He	129.034	129.034	3.18	293592	0.04	2000	
Al	27	2	He	3215.066	3215.066	7.52	1870671	0.17	2000	>LDR
B	11	1	No Gas	17.239	17.239	1.99	100221	0.02	2000	
Al	27	1	No Gas	3095.734	3095.734	4.38	77738221	0.00	2000	>LDR
Si	28	1	No Gas	13849.173	13849.173	10.20	186149971	0.01	2000	>LDR
Ag	107	1	No Gas	112.671	112.671	1.64	3051027	0.00	2000	
Cd	111	1	No Gas	117.634	117.634	1.58	651974	0.02	2000	
Sr	88	1	No Gas	189.043	189.043	3.77	9425743	0.00	2000	
Mo	95	1	No Gas	111.352	111.352	4.35	1172364	0.01	2000	
Sn	118	1	No Gas	0.017	0.017	67.47	4204	0.00	2000	
Sb	121	1	No Gas	123.248	123.248	0.90	2643562	0.00	2000	
Ba	137	1	No Gas	255.044	255.044	1.65	1962629	0.01	2000	
Tl	205	1	No Gas	119.594	119.594	2.02	4979112	0.00	2000	
Tl	203	1	No Gas	122.620	122.620	1.28	2171492	0.01	2000	
Pb	208	1	No Gas	125.132	125.132	2.78	7080821	0.00	2000	
U	238	1	No Gas	0.203	0.203	4.80	10935	0.00	2000	
Ca	43	2	He	20432.435	20432.435	3.83	78768	25.94	200000	
Sb	121	2	He	121.780	121.780	3.17	1327586	0.01	2000	
Ti	47	2	He	202.295	202.295	5.12	79375	0.25	2000	
Cu	63	1	No Gas	115.901	115.901	0.99	2552790	0.00	2000	
Zn	66	1	No Gas	126.371	126.371	0.41	757812	0.02	2000	
Se	82	1	No Gas	119.484	119.484	2.02	44649	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	1894681	2.02	1807448	104.83	70	120	
Ge	72	2	He	1250019	2.54	1424674	87.74	70	120	
Ge	72	1	No Gas	4100281	0.98	4552530	90.07	70	120	
In	115	1	No Gas	4560992	2.44	4981657	91.56	70	120	

Sample Report

Bi	209	1	No Gas	3741854	2.46	3903312	95.86	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	122_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\080921A.b
Acq Date Time	2021-08-09T19:24:59-05:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	014CALB.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	97.634	3.177	2338695	3.68	100	97.6	90	110	
Be	9	1	No Gas	93.957	1.998	670478	0.38	100	94.0	90	110	
V	51	2	He	99.455	2.327	1019049	1.91	100	99.5	90	110	
Cr	52	2	He	99.504	1.742	1190664	0.61	100	99.5	90	110	
Fe	56	2	He	9849.494	1.337	103611698	0.86	10000	98.5	90	110	
Se	78	2	He	103.142	2.105	17623	2.21	100	103.1	90	110	
As	75	2	He	103.731	1.553	180639	0.28	100	103.7	90	110	
Ca	44	2	He	9529.574	0.577	628276	0.87	10000	95.3	90	110	
Na	23	2	He	9643.333	1.638	16335854	1.20	10000	96.4	90	110	
Mg	24	2	He	9708.349	1.140	9626704	1.79	10000	97.1	90	110	
K	39	2	He	9637.743	1.943	12272956	1.41	10000	96.4	90	110	
Mn	55	2	He	97.774	1.375	844575	0.39	100	97.8	90	110	
Co	59	2	He	100.322	0.539	1753383	1.11	100	100.3	90	110	
Ni	60	2	He	98.474	1.326	443475	1.30	100	98.5	90	110	
Cu	63	2	He	97.145	1.054	1135492	0.82	100	97.1	90	110	
Zn	66	2	He	101.819	2.159	229521	0.95	100	101.8	90	110	
Al	27	2	He	108.210	5.103	64300	4.47	100	108.2	90	110	
B	11	1	No Gas	435.691	3.415	1979271	1.68	500	87.1	90	110	CCV Main CR1-2 Failed
Al	27	1	No Gas	106.341	0.591	2754228	1.43	100	106.3	90	110	
Si	28	1	No Gas	500.479	0.500	8080623	0.82	5000	10.0	90	110	CCV Main CR1-2 Failed
Ag	107	1	No Gas	99.938	2.201	2740813	1.23	100	99.9	90	110	
Cd	111	1	No Gas	99.496	0.681	558549	0.89	100	99.5	90	110	
Sr	88	1	No Gas	98.216	2.691	4962084	1.37	100	98.2	90	110	
Mo	95	1	No Gas	93.562	3.661	997889	2.46	100	93.6	90	110	
Sn	118	1	No Gas	103.688	0.655	1618647	2.21	100	103.7	90	110	
Sb	121	1	No Gas	110.452	1.966	2370898	2.87	100	110.5	90	110	CCV Main CR1-2 Failed
Ba	137	1	No Gas	102.225	0.991	796718	0.94	100	102.2	90	110	
Tl	205	1	No Gas	107.066	2.554	4561811	1.73	100	107.1	90	110	
Tl	203	1	No Gas	107.891	2.285	1955190	1.48	100	107.9	90	110	
Pb	208	1	No Gas	105.509	1.689	6111483	0.96	100	105.5	90	110	
U	238	1	No Gas	104.123	1.076	5711979	0.33	100	104.1	90	110	
Ca	43	2	He	9762.033	2.161	37297	1.81	10000	97.6	90	110	
Sb	121	2	He	109.267	2.115	1179488	1.31	100	109.3	90	110	
Ti	47	2	He	96.898	0.770	37625	1.93	100	96.9	90	110	
Cu	63	1	No Gas	98.228	2.876	2165257	2.19	100	98.2	90	110	
Se	82	1	No Gas	103.828	2.947	38798	1.87	100	103.8	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	1872701	1.69	1807448	103.61	70	120	
Ge	72	2	He	1237252	1.27	1424674	86.84	70	120	
Ge	72	1	No Gas	4102908	1.24	4552530	90.12	70	120	
In	115	1	No Gas	4618864	1.56	4981657	92.72	70	120	
Bi	209	1	No Gas	3828703	0.82	3903312	98.09	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	123_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\080921A.b
Acq Date Time	2021-08-09T19:26:48-05:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	014CALB.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	0.061	82.5	111083	0.4	0.5	
Be	9	1	No Gas	0.021	23.0	185	20.4	0.5	
V	51	2	He	0.039	49.1	4371	1.2	2.5	
Cr	52	2	He	0.016	141.4	3257	5.0	2.5	
Fe	56	2	He	9.967	5.2	122308	1.6	100	
Se	78	2	He	0.365	32.0	228	10.0	2	
As	75	2	He	0.085	23.6	390	6.8	2.5	
Ca	44	2	He	-1.100	-75.7	3347	1.6	100	
Na	23	2	He	-0.732	-81.2	71235	2.8	100	
Mg	24	2	He	1.553	5.4	1967	7.6	100	
K	39	2	He	7.225	51.4	156755	0.7	100	
Mn	55	2	He	0.063	10.4	997	9.1	2.5	
Co	59	2	He	0.003	6.6	110	0.0	2.5	
Ni	60	2	He	0.070	12.4	780	6.8	2.5	
Cu	63	2	He	-0.024	-31.3	2084	4.4	2	
Zn	66	2	He	0.758	10.9	2367	10.8	2.5	
Al	27	2	He	3.137	9.8	3844	4.8	5	
B	11	1	No Gas	0.592	46.1	25390	4.6	0.5	CCB Main CR1 Failed
Al	27	1	No Gas	3.354	7.1	169844	2.9	5	
Si	28	1	No Gas	-11.213	-15.7	1254818	1.5	10	
Ag	107	1	No Gas	0.053	14.4	1910	9.9	2.5	
Cd	111	1	No Gas	0.007	27.8	60	16.7	1	
Sr	88	1	No Gas	0.073	7.2	6672	4.0	2.5	
Mo	95	1	No Gas	0.153	16.6	1730	15.7	2.5	
Sn	118	1	No Gas	0.115	28.9	5868	8.1	5	
Sb	121	1	No Gas	0.244	12.2	5845	10.1	2.5	
Ba	137	1	No Gas	0.067	6.8	1060	4.7	2.5	
Tl	205	1	No Gas	0.050	33.1	2350	30.2	1	
Tl	203	1	No Gas	0.051	30.8	1033	27.7	1	
Pb	208	1	No Gas	0.021	35.9	3210	13.2	2.5	
U	238	1	No Gas	0.070	18.0	4074	16.7	2.5	
Ca	43	2	He	9.957	65.7	97	26.0	100	
Sb	121	2	He	0.223	11.2	2704	9.2	2.5	
Ti	47	2	He	0.106	26.0	53	21.7	2.5	
Cu	63	1	No Gas	-0.029	-43.4	4501	5.9	2.5	
Se	82	1	No Gas	-0.030	-2385.1	-139	-196.0	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	1961727	1.05	1807448	108.54	70	120	
Ge	72	2	He	1249530	3.32	1424674	87.71	70	120	
Ge	72	1	No Gas	4133140	1.07	4552530	90.79	70	120	
In	115	1	No Gas	4686922	1.40	4981657	94.08	70	120	
Bi	209	1	No Gas	3987795	1.12	3903312	102.16	70	120	

Sample Report

Sample Table

Sample Name	HS21071405-09
Data File Name	124SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\080921A.b
Acq Date Time	2021-08-09T19:28:46-05:00
Sample Type	Sample
Dilution	1
Comment	DOD 168892
ISTD Ref FileName	014CALB.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	4.971	4.971	3.10	231837	0.00	2000	
Be	9	1	No Gas	0.073	0.073	15.52	583	0.01	2000	
V	51	2	He	2.540	2.540	1.84	30568	0.01	2000	
Cr	52	2	He	1.058	1.058	11.37	16035	0.01	2000	
Fe	56	2	He	2192.549	2192.549	1.53	23621132	0.01	200000	
Se	78	2	He	0.564	0.564	28.35	265	0.21	2000	
As	75	2	He	1.403	1.403	4.95	2740	0.05	2000	
Ca	44	2	He	9114.604	9114.604	1.88	615122	1.48	200000	
Na	23	2	He	12630.360	12630.360	3.44	21872692	0.06	200000	
Mg	24	2	He	4725.274	4725.274	2.53	4794903	0.10	200000	
K	39	2	He	2667.003	2667.003	1.96	3584190	0.07	200000	
Mn	55	2	He	313.363	313.363	2.07	2769621	0.01	2000	
Co	59	2	He	0.733	0.733	2.41	13173	0.01	2000	
Ni	60	2	He	2.360	2.360	6.09	11332	0.02	2000	
Cu	63	2	He	1.318	1.318	5.44	18136	0.01	2000	
Zn	66	2	He	5.212	5.212	2.98	12646	0.04	2000	
Al	27	2	He	929.511	929.511	1.83	549810	0.17	2000	
B	11	1	No Gas	16.025	16.025	4.53	99354	0.02	2000	
Al	27	1	No Gas	966.849	966.849	6.10	24940393	0.00	2000	
Si	28	1	No Gas	8777.406	8777.406	0.44	121511208	0.01	2000	>LDR
Ag	107	1	No Gas	0.004	0.004	137.09	553	0.00	2000	
Cd	111	1	No Gas	0.017	0.017	13.49	123	0.01	2000	
Sr	88	1	No Gas	174.179	174.179	1.59	9149404	0.00	2000	
Mo	95	1	No Gas	0.196	0.196	10.14	2254	0.01	2000	
Sn	118	1	No Gas	0.003	0.003	628.66	4197	0.00	2000	
Sb	121	1	No Gas	0.185	0.185	3.62	4661	0.00	2000	
Ba	137	1	No Gas	92.636	92.636	2.62	750661	0.01	2000	
Tl	205	1	No Gas	0.016	0.016	19.21	850	0.00	2000	
Tl	203	1	No Gas	0.014	0.014	3.16	337	0.00	2000	
Pb	208	1	No Gas	1.090	1.090	2.58	68435	0.00	2000	
U	238	1	No Gas	0.101	0.101	0.85	5905	0.00	2000	
Ca	43	2	He	9464.838	9464.838	1.59	37013	25.57	200000	
Sb	121	2	He	0.196	0.196	9.12	2450	0.01	2000	
Ti	47	2	He	23.369	23.369	26.52	9309	0.25	2000	
Cu	63	1	No Gas	1.367	1.367	1.37	36018	0.00	2000	
Zn	66	1	No Gas	5.026	5.026	1.68	32506	0.02	2000	
Se	82	1	No Gas	0.150	0.150	618.83	-75	-0.20	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	1988328	1.72	1807448	110.01	70	120	
Ge	72	2	He	1266311	1.11	1424674	88.88	70	120	
Ge	72	1	No Gas	4202001	0.70	4552530	92.30	70	120	
In	115	1	No Gas	4803323	2.16	4981657	96.42	70	120	

Sample Report

Bi	209	1	No Gas	4032447	1.05	3903312	103.31	70	120	

Sample Report

Sample Table

Sample Name	HS21071405-10
Data File Name	125SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\080921A.b
Acq Date Time	2021-08-09T19:30:43-05:00
Sample Type	Sample
Dilution	1
Comment	DOD 168892
ISTD Ref FileName	014CALB.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	5.340	5.340	3.22	238517	0.00	2000	
Be	9	1	No Gas	0.075	0.075	4.43	590	0.01	2000	
V	51	2	He	2.417	2.417	3.37	29062	0.01	2000	
Cr	52	2	He	0.898	0.898	1.77	13987	0.01	2000	
Fe	56	2	He	2175.042	2175.042	1.00	23262039	0.01	200000	
Se	78	2	He	0.473	0.473	54.09	247	0.19	2000	
As	75	2	He	1.417	1.417	5.81	2746	0.05	2000	
Ca	44	2	He	9778.853	9778.853	1.51	654924	1.49	200000	
Na	23	2	He	13473.506	13473.506	1.80	23160345	0.06	200000	
Mg	24	2	He	5110.149	5110.149	1.03	5148496	0.10	200000	
K	39	2	He	2892.158	2892.158	3.04	3845458	0.08	200000	
Mn	55	2	He	334.589	334.589	1.51	2935502	0.01	2000	
Co	59	2	He	0.753	0.753	6.17	13420	0.01	2000	
Ni	60	2	He	2.417	2.417	6.05	11505	0.02	2000	
Cu	63	2	He	1.231	1.231	4.69	16974	0.01	2000	
Zn	66	2	He	4.660	4.660	2.08	11292	0.04	2000	
Al	27	2	He	739.485	739.485	3.51	434798	0.17	2000	
B	11	1	No Gas	17.139	17.139	2.42	103704	0.02	2000	
Al	27	1	No Gas	890.773	890.773	16.86	23393734	0.00	2000	
Si	28	1	No Gas	8759.411	8759.411	3.01	123328355	0.01	2000	>LDR
Ag	107	1	No Gas	0.001	0.001	87.92	473	0.00	2000	
Cd	111	1	No Gas	0.016	0.016	12.77	117	0.01	2000	
Sr	88	1	No Gas	186.432	186.432	2.13	9817838	0.00	2000	
Mo	95	1	No Gas	0.183	0.183	6.50	2114	0.01	2000	
Sn	118	1	No Gas	-0.021	-0.021	-25.60	3827	0.00	2000	
Sb	121	1	No Gas	0.214	0.214	9.11	5388	0.00	2000	
Ba	137	1	No Gas	96.827	96.827	1.80	786737	0.01	2000	
Tl	205	1	No Gas	0.011	0.011	12.73	627	0.00	2000	
Tl	203	1	No Gas	0.010	0.010	31.16	253	0.00	2000	
Pb	208	1	No Gas	1.119	1.119	0.46	70202	0.00	2000	
U	238	1	No Gas	0.101	0.101	5.02	5905	0.00	2000	
Ca	43	2	He	10267.626	10267.626	1.64	39861	25.76	200000	
Sb	121	2	He	0.208	0.208	5.79	2560	0.01	2000	
Ti	47	2	He	12.027	12.027	4.87	4758	0.25	2000	
Cu	63	1	No Gas	1.271	1.271	0.64	34434	0.00	2000	
Zn	66	1	No Gas	4.485	4.485	1.76	29693	0.02	2000	
Se	82	1	No Gas	0.249	0.249	227.07	-36	-0.70	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	1969421	0.90	1807448	108.96	70	120	
Ge	72	2	He	1257221	1.96	1424674	88.25	70	120	
Ge	72	1	No Gas	4274519	1.13	4552530	93.89	70	120	
In	115	1	No Gas	4815458	1.40	4981657	96.66	70	120	

Sample Report

Bi	209	1	No Gas	4030606	1.40	3903312	103.26	70	120	

Sample Report

Sample Table

Sample Name	HS21071405-12
Data File Name	126SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\080921A.b
Acq Date Time	2021-08-09T19:32:41-05:00
Sample Type	Sample
Dilution	1
Comment	DOD 168892
ISTD Ref FileName	014CALB.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	6.003	6.003	3.35	261990	0.00	2000	
Be	9	1	No Gas	0.111	0.111	9.06	887	0.01	2000	
V	51	2	He	4.733	4.733	1.72	53395	0.01	2000	
Cr	52	2	He	2.426	2.426	1.11	32697	0.01	2000	
Fe	56	2	He	2911.098	2911.098	3.57	31296538	0.01	200000	
Se	78	2	He	0.384	0.384	37.71	234	0.16	2000	
As	75	2	He	1.494	1.494	6.24	2898	0.05	2000	
Ca	44	2	He	8625.961	8625.961	0.04	581474	1.48	200000	
Na	23	2	He	11936.201	11936.201	0.71	20644920	0.06	200000	
Mg	24	2	He	4588.580	4588.580	3.14	4648188	0.10	200000	
K	39	2	He	2721.369	2721.369	2.30	3648965	0.07	200000	
Mn	55	2	He	379.708	379.708	1.89	3350033	0.01	2000	
Co	59	2	He	1.116	1.116	4.52	19985	0.01	2000	
Ni	60	2	He	3.091	3.091	2.39	14678	0.02	2000	
Cu	63	2	He	1.971	1.971	1.59	25885	0.01	2000	
Zn	66	2	He	33.382	33.382	1.34	77334	0.04	2000	
Al	27	2	He	2840.833	2840.833	7.32	1674240	0.17	2000	>LDR
B	11	1	No Gas	14.930	14.930	1.67	96020	0.02	2000	
Al	27	1	No Gas	2975.472	2975.472	6.34	77805299	0.00	2000	>LDR
Si	28	1	No Gas	12952.901	12952.901	6.95	181446791	0.01	2000	>LDR
Ag	107	1	No Gas	0.005	0.005	128.77	567	0.00	2000	
Cd	111	1	No Gas	0.024	0.024	40.31	160	0.01	2000	
Sr	88	1	No Gas	164.569	164.569	4.87	8625352	0.00	2000	
Mo	95	1	No Gas	0.247	0.247	4.62	2810	0.01	2000	
Sn	118	1	No Gas	0.032	0.032	57.85	4661	0.00	2000	
Sb	121	1	No Gas	0.137	0.137	5.72	3667	0.00	2000	
Ba	137	1	No Gas	102.573	102.573	2.45	829509	0.01	2000	
Tl	205	1	No Gas	0.027	0.027	12.44	1347	0.00	2000	
Tl	203	1	No Gas	0.026	0.026	22.75	573	0.00	2000	
Pb	208	1	No Gas	1.523	1.523	2.92	94786	0.00	2000	
U	238	1	No Gas	0.139	0.139	4.07	8083	0.00	2000	
Ca	43	2	He	8989.977	8989.977	0.66	35105	25.61	200000	
Sb	121	2	He	0.143	0.143	5.29	1864	0.01	2000	
Ti	47	2	He	81.162	81.162	16.04	32226	0.25	2000	
Cu	63	1	No Gas	2.088	2.088	1.58	53101	0.00	2000	
Zn	66	1	No Gas	32.347	32.347	0.31	203295	0.02	2000	
Se	82	1	No Gas	0.531	0.531	67.02	74	0.72	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	2027488	0.89	1807448	112.17	70	120	
Ge	72	2	He	1264279	1.43	1424674	88.74	70	120	
Ge	72	1	No Gas	4270436	1.15	4552530	93.80	70	120	
In	115	1	No Gas	4793604	1.73	4981657	96.23	70	120	

Sample Report

Bi	209	1	No Gas	4029223	1.27	3903312	103.23	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	129_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\080921A.b
Acq Date Time	2021-08-09T19:38:31-05:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	014CALB.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	98.601	2.283	2390696	1.36	100	98.6	90	110	
Be	9	1	No Gas	94.017	1.574	679604	0.44	100	94.0	90	110	
V	51	2	He	98.476	2.435	1012565	1.56	100	98.5	90	110	
Cr	52	2	He	97.253	2.710	1167861	1.80	100	97.3	90	110	
Fe	56	2	He	9912.007	2.016	104631782	1.16	10000	99.1	90	110	
Se	78	2	He	99.594	3.110	17079	2.18	100	99.6	90	110	
As	75	2	He	101.415	1.025	177248	0.93	100	101.4	90	110	
Ca	44	2	He	9325.406	1.419	617016	0.51	10000	93.3	90	110	
Na	23	2	He	9669.034	0.682	16437529	0.29	10000	96.7	90	110	
Mg	24	2	He	9761.878	0.777	9713265	0.51	10000	97.6	90	110	
K	39	2	He	9494.383	2.126	12134783	1.19	10000	94.9	90	110	
Mn	55	2	He	97.652	1.960	846501	1.40	100	97.7	90	110	
Co	59	2	He	101.363	1.817	1777630	0.92	100	101.4	90	110	
Ni	60	2	He	97.944	0.148	442657	0.82	100	97.9	90	110	
Cu	63	2	He	98.036	0.502	1149996	1.11	100	98.0	90	110	
Zn	66	2	He	101.792	0.951	230319	1.85	100	101.8	90	110	
Al	27	2	He	100.941	2.586	60331	1.81	100	100.9	90	110	
B	11	1	No Gas	431.652	2.356	1986826	1.68	500	86.3	90	110	CCV Main CR1-2 Failed
Al	27	1	No Gas	103.551	2.568	2649538	1.39	100	103.6	90	110	
Si	28	1	No Gas	614.086	0.654	9476860	1.72	5000	12.3	90	110	CCV Main CR1-2 Failed
Ag	107	1	No Gas	101.808	2.331	2806919	1.62	100	101.8	90	110	
Cd	111	1	No Gas	100.404	0.515	566624	0.62	100	100.4	90	110	
Sr	88	1	No Gas	99.508	2.460	5054488	2.01	100	99.5	90	110	
Mo	95	1	No Gas	94.206	2.660	1010254	2.33	100	94.2	90	110	
Sn	118	1	No Gas	102.604	0.532	1610038	0.95	100	102.6	90	110	
Sb	121	1	No Gas	110.004	1.585	2330744	0.42	100	110.0	90	110	CCV Main CR1-2 Failed
Ba	137	1	No Gas	101.741	1.545	797138	1.36	100	101.7	90	110	
Tl	205	1	No Gas	105.774	3.747	4597957	2.43	100	105.8	90	110	
Tl	203	1	No Gas	105.184	1.437	1945042	0.17	100	105.2	90	110	
Pb	208	1	No Gas	105.581	1.765	6240161	0.70	100	105.6	90	110	
U	238	1	No Gas	102.293	2.794	5725076	1.42	100	102.3	90	110	
Ca	43	2	He	9455.139	1.194	36255	0.39	10000	94.6	90	110	
Sb	121	2	He	108.535	1.505	1175767	0.83	100	108.5	90	110	
Ti	47	2	He	95.205	3.867	37087	2.98	100	95.2	90	110	
Cu	63	1	No Gas	99.242	2.287	2159666	0.72	100	99.2	90	110	
Se	82	1	No Gas	103.922	2.615	38339	0.79	100	103.9	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	1896777	1.17	1807448	104.94	70	120	
Ge	72	2	He	1241591	0.92	1424674	87.15	70	120	
Ge	72	1	No Gas	4051106	1.98	4552530	88.99	70	120	
In	115	1	No Gas	4643012	0.74	4981657	93.20	70	120	
Bi	209	1	No Gas	3906927	1.44	3903312	100.09	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	130_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\080921A.b
Acq Date Time	2021-08-09T19:40:19-05:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	014CALB.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	0.051	247.8	110056	2.1	0.5	
Be	9	1	No Gas	0.017	20.0	158	15.9	0.5	
V	51	2	He	0.063	20.4	4640	2.6	2.5	
Cr	52	2	He	0.024	106.0	3370	8.8	2.5	
Fe	56	2	He	9.408	1.2	116882	0.9	100	
Se	78	2	He	0.112	128.0	185	13.2	2	
As	75	2	He	0.046	14.9	323	3.7	2.5	
Ca	44	2	He	-4.348	-77.6	3144	7.0	100	
Na	23	2	He	-5.011	-8.0	64174	0.8	100	
Mg	24	2	He	1.363	26.8	1780	20.4	100	
K	39	2	He	4.474	9.3	153880	0.3	100	
Mn	55	2	He	0.072	4.4	1077	2.8	2.5	
Co	59	2	He	0.006	59.4	157	38.5	2.5	
Ni	60	2	He	0.080	31.2	827	14.0	2.5	
Cu	63	2	He	-0.028	-23.2	2047	4.0	2	
Zn	66	2	He	0.656	14.1	2140	10.1	2.5	
Al	27	2	He	2.713	10.3	3611	4.8	5	
B	11	1	No Gas	0.747	36.6	25941	4.7	0.5	CCB Main CR1 Failed
Al	27	1	No Gas	3.211	2.9	165653	2.0	5	
Si	28	1	No Gas	50.022	2.1	2071341	1.5	10	CCB Main CR1 Failed
Ag	107	1	No Gas	0.054	6.4	1957	5.1	2.5	
Cd	111	1	No Gas	0.001	131.6	30	33.3	1	
Sr	88	1	No Gas	0.069	10.5	6518	4.1	2.5	
Mo	95	1	No Gas	0.118	16.9	1373	14.6	2.5	
Sn	118	1	No Gas	0.105	18.0	5795	5.8	5	
Sb	121	1	No Gas	0.127	2.5	3327	3.3	2.5	
Ba	137	1	No Gas	0.065	29.7	1057	13.5	2.5	
Tl	205	1	No Gas	0.043	31.9	2074	28.9	1	
Tl	203	1	No Gas	0.044	25.0	910	22.1	1	
Pb	208	1	No Gas	0.025	22.3	3440	9.3	2.5	
U	238	1	No Gas	0.063	17.5	3701	16.2	2.5	
Ca	43	2	He	18.527	64.5	130	35.3	100	
Sb	121	2	He	0.100	2.9	1377	2.3	2.5	
Ti	47	2	He	0.046	54.4	30	33.3	2.5	
Cu	63	1	No Gas	-0.034	-30.3	4361	3.9	2.5	
Se	82	1	No Gas	0.466	228.9	46	864.2	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	1948239	1.70	1807448	107.79	70	120	
Ge	72	2	He	1253769	0.27	1424674	88.00	70	120	
Ge	72	1	No Gas	4118272	1.81	4552530	90.46	70	120	
In	115	1	No Gas	4753515	1.92	4981657	95.42	70	120	
Bi	209	1	No Gas	4016202	1.07	3903312	102.89	70	120	

Calibration Blank Report

Sample Table

Sample Name	CAL BLK
Data File Name	144CALB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\080921A.b
Acq Date Time	2021-08-09T20:11:59-05:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li	7	1	No Gas	110700	0.00
Be	9	1	No Gas	17	103.92
V	51	2	He	3818	0.09
Cr	52	2	He	2250	0.14
Fe	56	2	He	20646	0.02
Se	78	2	He	190	5.46
As	75	2	He	203	8.18
Ca	44	2	He	1843	0.55
Na	23	2	He	64988	0.00
Mg	24	2	He	707	2.21
K	39	2	He	155912	0.00
Mn	55	2	He	547	0.19
Co	59	2	He	50	80.00
Ni	60	2	He	510	2.31
Cu	63	2	He	1287	0.37
Zn	66	2	He	490	2.73
Al	27	2	He	1873	0.37
B	11	1	No Gas	16340	0.02
Al	27	1	No Gas	84218	0.00
Si	28	1	No Gas	1311883	0.00
Ag	107	1	No Gas	297	6.26
Cd	111	1	No Gas	10	1732.05
Sr	88	1	No Gas	3277	0.10
Mo	95	1	No Gas	147	9.68
Sn	118	1	No Gas	4354	0.11
Sb	121	1	No Gas	560	0.84
Ba	137	1	No Gas	537	2.70
Tl	205	1	No Gas	177	4.89
Tl	203	1	No Gas	60	96.23
Pb	208	1	No Gas	1543	0.41
U	238	1	No Gas	103	23.57
Ca	43	2	He	47	70.14
Sb	121	2	He	237	4.49
Ti	47	2	He	17	1039.23
Cu	63	1	No Gas	2827	0.15

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD

Calibration Blank Report

Li	6	1	No Gas	1897370	2.12
Ge	72	2	He	1239534	0.67
Ge	72	1	No Gas	4095315	0.94
In	115	1	No Gas	4663528	0.55

Calibration Blank Report

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Bi	209	1	No Gas	3842806	2.80

Calibration Standard Report

Sample Table

Sample Name	2/10/200
Data File Name	145CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\080921A.b
Acq Date Time	2021-08-09T20:13:56-05:00
Sample Type	CalStd
Level	2
Dilution	1
Comment	
ISTD Ref File Name	144CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	No Gas	13396	0.01
V	51	2	He	23977	0.00
Cr	52	2	He	25638	0.01
Fe	56	2	He	2195402	0.00
Se	78	2	He	503	0.71
As	75	2	He	3748	0.14
Ca	44	2	He	14728	0.02
Na	23	2	He	412751	0.00
Mg	24	2	He	207362	0.00
K	39	2	He	406680	0.00
Mn	55	2	He	17668	0.01
Co	59	2	He	35610	0.00
Ni	60	2	He	9507	0.04
Cu	63	2	He	24599	0.01
Zn	66	2	He	5094	0.16
Al	27	2	He	3137	0.10
B	11	1	No Gas	56866	0.00
Al	27	1	No Gas	141072	0.00
Si	28	1	No Gas	1435320	0.00
Ag	107	1	No Gas	56370	0.00
Cd	111	1	No Gas	11422	0.03
Sr	88	1	No Gas	104995	0.00
Mo	95	1	No Gas	20500	0.01
Sn	118	1	No Gas	34342	0.01
Sb	121	1	No Gas	46974	0.00
Ba	137	1	No Gas	16307	0.01
Tl	205	1	No Gas	88555	0.00
Tl	203	1	No Gas	36544	0.01
Pb	208	1	No Gas	122052	0.00
U	238	1	No Gas	111520	0.00
Ca	43	2	He	867	1.00
Sb	121	2	He	22420	0.01
Cu	63	1	No Gas	46955	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	1935253	2.29	1897370	102.00	70	120	
Ge	72	2	He	1257397	1.17	1239534	101.44	70	120	
Ge	72	1	No Gas	4114991	0.62	4095315	100.48	70	120	

Calibration Standard Report

In	115	1	No Gas	4682089	0.59	4663528	100.40	70	120	
Bi	209	1	No Gas	3926140	1.12	3842806	102.17	70	120	

Calibration Standard Report

Sample Table

Sample Name	5/25/500
Data File Name	146CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\080921A.b
Acq Date Time	2021-08-09T20:15:53-05:00
Sample Type	CalStd
Level	3
Dilution	1
Comment	
ISTD Ref File Name	144CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	No Gas	33911	0.00
V	51	2	He	53965	0.00
Cr	52	2	He	62168	0.00
Fe	56	2	He	5332258	0.00
Se	78	2	He	1074	0.35
As	75	2	He	8979	0.01
Ca	44	2	He	33665	0.01
Na	23	2	He	940012	0.00
Mg	24	2	He	519170	0.00
K	39	2	He	787448	0.00
Mn	55	2	He	43119	0.00
Co	59	2	He	88409	0.00
Ni	60	2	He	23180	0.01
Cu	63	2	He	59500	0.00
Zn	66	2	He	11845	0.01
Al	27	2	He	4744	0.04
B	11	1	No Gas	121332	0.00
Al	27	1	No Gas	229493	0.00
Si	28	1	No Gas	1631859	0.00
Ag	107	1	No Gas	141463	0.00
Cd	111	1	No Gas	28655	0.01
Sr	88	1	No Gas	261649	0.00
Mo	95	1	No Gas	52032	0.00
Sn	118	1	No Gas	84307	0.00
Sb	121	1	No Gas	116085	0.00
Ba	137	1	No Gas	40738	0.00
Tl	205	1	No Gas	221875	0.00
Tl	203	1	No Gas	93581	0.00
Pb	208	1	No Gas	299353	0.00
U	238	1	No Gas	281532	0.00
Ca	43	2	He	2000	0.31
Sb	121	2	He	56412	0.00
Cu	63	1	No Gas	112047	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	1902330	3.14	1897370	100.26	70	120	
Ge	72	2	He	1259256	0.91	1239534	101.59	70	120	
Ge	72	1	No Gas	4067898	1.24	4095315	99.33	70	120	

Calibration Standard Report

In	115	1	No Gas	4731007	1.72	4663528	101.45	70	120	
Bi	209	1	No Gas	3919646	1.13	3842806	102.00	70	120	

Calibration Standard Report

Sample Table

Sample Name	10/50/100
Data File Name	147CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\080921A.b
Acq Date Time	2021-08-09T20:17:49-05:00
Sample Type	CalStd
Level	4
Dilution	1
Comment	
ISTD Ref File Name	144CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	No Gas	67247	0.00
V	51	2	He	103440	0.00
Cr	52	2	He	119594	0.00
Fe	56	2	He	10648040	0.00
Se	78	2	He	1963	0.04
As	75	2	He	18010	0.01
Ca	44	2	He	65141	0.00
Na	23	2	He	1776293	0.00
Mg	24	2	He	1025772	0.00
K	39	2	He	1426114	0.00
Mn	55	2	He	84839	0.00
Co	59	2	He	174997	0.00
Ni	60	2	He	46128	0.00
Cu	63	2	He	117068	0.00
Zn	66	2	He	24416	0.00
Al	27	2	He	8496	0.03
B	11	1	No Gas	225955	0.00
Al	27	1	No Gas	367526	0.00
Si	28	1	No Gas	1931047	0.00
Ag	107	1	No Gas	280798	0.00
Cd	111	1	No Gas	57449	0.01
Sr	88	1	No Gas	525575	0.00
Mo	95	1	No Gas	105813	0.00
Sn	118	1	No Gas	165841	0.00
Sb	121	1	No Gas	232539	0.00
Ba	137	1	No Gas	83089	0.00
Tl	205	1	No Gas	452756	0.00
Tl	203	1	No Gas	189692	0.00
Pb	208	1	No Gas	601670	0.00
U	238	1	No Gas	565563	0.00
Ca	43	2	He	3954	0.01
Sb	121	2	He	113331	0.00
Cu	63	1	No Gas	220198	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	1900696	3.78	1897370	100.18	70	120	
Ge	72	2	He	1240409	2.41	1239534	100.07	70	120	
Ge	72	1	No Gas	4055230	0.68	4095315	99.02	70	120	

Calibration Standard Report

In	115	1	No Gas	4633144	0.84	4663528	99.35	70	120	
Bi	209	1	No Gas	3964689	2.20	3842806	103.17	70	120	

Calibration Standard Report

Sample Table

Sample Name	100/500/10K
Data File Name	148CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\080921A.b
Acq Date Time	2021-08-09T20:19:45-05:00
Sample Type	CalStd
Level	5
Dilution	1
Comment	
ISTD Ref File Name	144CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	No Gas	657148	0.00
V	51	2	He	998779	0.00
Cr	52	2	He	1169948	0.00
Fe	56	2	He	102465532	0.00
Se	78	2	He	16995	0.00
As	75	2	He	173862	0.00
Ca	44	2	He	619992	0.00
Na	23	2	He	16357166	0.00
Mg	24	2	He	9620863	0.00
K	39	2	He	12011908	0.00
Mn	55	2	He	819206	0.00
Co	59	2	He	1696541	0.00
Ni	60	2	He	431375	0.00
Cu	63	2	He	1110944	0.00
Zn	66	2	He	223091	0.00
Al	27	2	He	58651	0.00
B	11	1	No Gas	2031574	0.00
Al	27	1	No Gas	2623266	0.00
Si	28	1	No Gas	7705730	0.00
Ag	107	1	No Gas	2741980	0.00
Cd	111	1	No Gas	556988	0.00
Sr	88	1	No Gas	4922668	0.00
Mo	95	1	No Gas	1029773	0.00
Sn	118	1	No Gas	1609008	0.00
Sb	121	1	No Gas	2275073	0.00
Ba	137	1	No Gas	783121	0.00
Tl	205	1	No Gas	4406965	0.00
Tl	203	1	No Gas	1907528	0.00
Pb	208	1	No Gas	6048712	0.00
U	238	1	No Gas	5688430	0.00
Ca	43	2	He	36917	0.00
Sb	121	2	He	1153808	0.00
Cu	63	1	No Gas	2105624	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	1860166	2.55	1897370	98.04	70	120	
Ge	72	2	He	1214361	2.49	1239534	97.97	70	120	
Ge	72	1	No Gas	4000603	1.23	4095315	97.69	70	120	

Calibration Standard Report

In	115	1	No Gas	4557263	0.92	4663528	97.72	70	120	
Bi	209	1	No Gas	3859620	1.34	3842806	100.44	70	120	

Calibration Standard Report

Sample Table

Sample Name	200/1000/20K
Data File Name	149CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\080921A.b
Acq Date Time	2021-08-09T20:21:33-05:00
Sample Type	CalStd
Level	6
Dilution	1
Comment	
ISTD Ref File Name	144CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	No Gas	1277239	0.00
V	51	2	He	1966693	0.00
Cr	52	2	He	2265388	0.00
Fe	56	2	He	199248830	0.00
Se	78	2	He	32639	0.00
As	75	2	He	337396	0.00
Ca	44	2	He	1219661	0.00
Na	23	2	He	31686188	0.00
Mg	24	2	He	18343931	0.00
K	39	2	He	23035818	0.00
Mn	55	2	He	1635754	0.00
Co	59	2	He	3280256	0.00
Ni	60	2	He	841912	0.00
Cu	63	2	He	2211966	0.00
Zn	66	2	He	435007	0.00
Al	27	2	He	110733	0.00
B	11	1	No Gas	3940954	0.00
Al	27	1	No Gas	4924066	0.00
Si	28	1	No Gas	13823293	0.00
Ag	107	1	No Gas	5244585	0.00
Cd	111	1	No Gas	1085908	0.00
Sr	88	1	No Gas	9751060	0.00
Mo	95	1	No Gas	2029867	0.00
Sn	118	1	No Gas	3115793	0.00
Sb	121	1	No Gas	4434584	0.00
Ba	137	1	No Gas	1585613	0.00
Tl	205	1	No Gas	8484629	0.00
Tl	203	1	No Gas	3680407	0.00
Pb	208	1	No Gas	11676921	0.00
U	238	1	No Gas	11376675	0.00
Ca	43	2	He	71670	0.00
Sb	121	2	He	2255481	0.00
Cu	63	1	No Gas	3992981	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	1798372	1.32	1897370	94.78	70	120	
Ge	72	2	He	1210233	1.50	1239534	97.64	70	120	
Ge	72	1	No Gas	3886631	0.84	4095315	94.90	70	120	

Calibration Standard Report

In	115	1	No Gas	4391889	2.49	4663528	94.18	70	120	
Bi	209	1	No Gas	3752096	0.96	3842806	97.64	70	120	

Initial Calibration Verification (ICV) Report

Sample Table

Sample Name	ICCV
Data File Name	151_ICV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\080921A.b
Acq Date Time	2021-08-09T20:25:18-05:00
Sample Type	ICV
Dilution	1
Comment	
ISTD Ref File Name	144CALB.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	98.322	2.915	2374738	2.81	100	98.3	90	110	
Be	9	1	No Gas	97.431	1.192	650618	0.59	100	97.4	90	110	
V	51	2	He	101.796	2.026	1005797	1.23	100	101.8	90	110	
Cr	52	2	He	102.606	1.904	1171183	1.26	100	102.6	90	110	
Fe	56	2	He	10339.880	3.467	103611605	1.81	10000	103.4	90	110	
Se	78	2	He	103.069	3.367	17032	1.37	100	103.1	90	110	
As	75	2	He	100.985	1.134	171528	1.40	100	101.0	90	110	
Ca	44	2	He	10087.330	2.585	618038	1.71	10000	100.9	90	110	
Na	23	2	He	10128.520	3.394	16179110	1.42	10000	101.3	90	110	
Mg	24	2	He	10165.336	3.066	9416656	1.37	10000	101.7	90	110	
K	39	2	He	10145.213	1.493	11850231	0.83	10000	101.5	90	110	
Mn	55	2	He	100.417	2.616	821865	0.64	100	100.4	90	110	
Co	59	2	He	103.868	3.317	1715582	1.77	100	103.9	90	110	
Ni	60	2	He	102.835	1.592	435348	0.40	100	102.8	90	110	
Cu	63	2	He	100.236	1.271	1110563	1.70	100	100.2	90	110	
Zn	66	2	He	103.161	1.185	225806	1.19	100	103.2	90	110	
Al	27	2	He	109.526	1.011	62028	1.03	100	109.5	90	110	
B	11	1	No Gas	492.391	1.140	2036903	2.13	500	98.5	90	110	
Al	27	1	No Gas	111.403	2.449	2795436	1.71	100	111.4	90	110	ICV Main CR1 Failed
Si	28	1	No Gas	504.087	1.453	7592231	1.59	500	100.8	90	110	
Ag	107	1	No Gas	102.163	1.313	2716609	0.87	100	102.2	90	110	
Cd	111	1	No Gas	98.755	1.703	541438	0.31	100	98.8	90	110	
Sr	88	1	No Gas	101.869	0.894	5003706	1.30	100	101.9	90	110	
Mo	95	1	No Gas	98.606	0.872	1008786	1.10	100	98.6	90	110	
Sn	118	1	No Gas	100.036	1.929	1577487	0.42	100	100.0	90	110	
Sb	121	1	No Gas	101.884	1.487	2262641	1.57	100	101.9	90	110	
Ba	137	1	No Gas	97.162	1.292	772620	0.79	100	97.2	90	110	
Tl	205	1	No Gas	102.106	1.247	4384683	1.67	100	102.1	90	110	
Tl	203	1	No Gas	100.179	1.090	1865024	1.02	100	100.2	90	110	
Pb	208	1	No Gas	99.981	0.632	5905776	1.06	100	100.0	90	110	
U	238	1	No Gas	98.667	3.541	5637787	3.97	100	98.7	90	110	
Ca	43	2	He	10006.568	2.520	36104	0.55	10000	100.1	90	110	
Sb	121	2	He	98.233	2.782	1113067	2.27	100	98.2	90	110	
Ti	47	2	He	100.356	1.924	36756	0.11	100	100.4	90	110	
Cu	63	1	No Gas	104.540	0.898	2103240	0.44	100	104.5	90	110	
Se	82	1	No Gas	102.083	2.849	37031	2.20	100	102.1	90	110	

QC ISTD Table

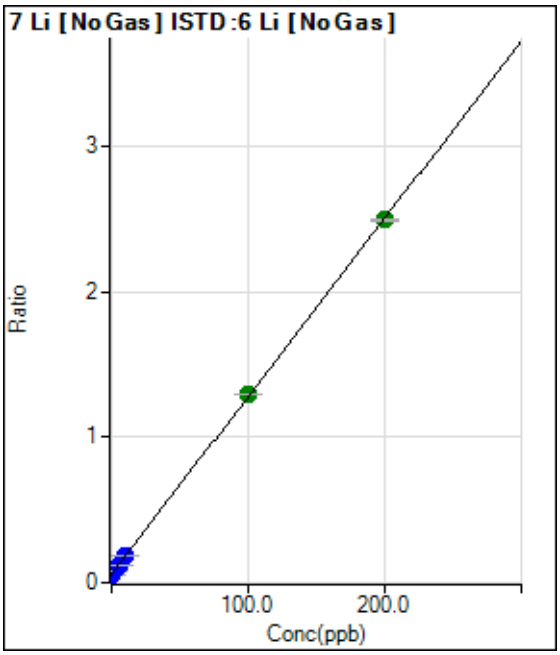
Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	1882445	1.60	1897370	99.21	70	120	
Ge	72	2	He	1211315	2.00	1239534	97.72	70	120	
Ge	72	1	No Gas	3894978	0.78	4095315	95.11	70	120	
In	115	1	No Gas	4445518	1.50	4663528	95.33	70	120	
Bi	209	1	No Gas	3790255	0.44	3842806	98.63	70	120	

Calibration for 151_ICV.d

Batch Folder: C:\Agilent\ICPMH\1\DATA\080921A.b\
Analysis File: 080921A.batch.bin
DA Date-Time: 8/9/2021 8:49:03 PM
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	144CALB.d	CAL BLK	8/9/2021 8:11:59 PM
2	145CALS.d	2/10/200	8/9/2021 8:13:56 PM
3	146CALS.d	5/25/500	8/9/2021 8:15:53 PM
4	147CALS.d	10/50/100	8/9/2021 8:17:49 PM
5	148CALS.d	100/500/10K	8/9/2021 8:19:45 PM
6	149CALS.d	200/1000/20K	8/9/2021 8:21:33 PM

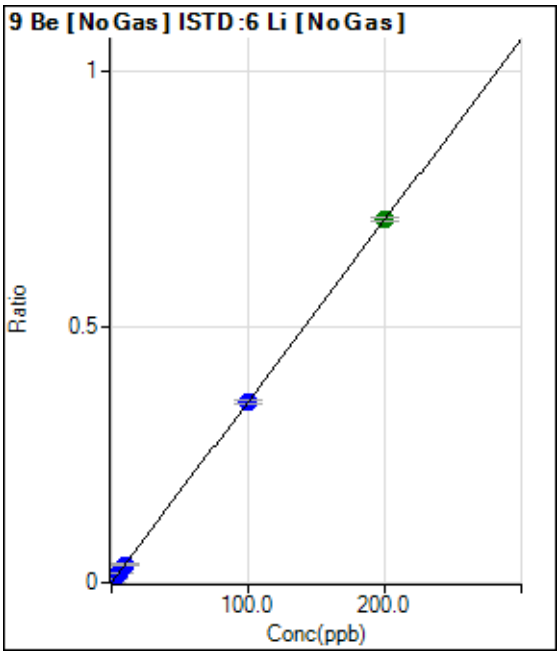
Calibration for 151_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	110700.28	0.0584	P	2.2
2	☐	2.000	1.844	156564.09	0.0809	P	2.0
3	☐	5.000	5.061	228691.48	0.1203	P	3.0
4	☐	10.000	10.372	351925.32	0.1853	P	2.7
5	☐	100.000	101.258	2413454.70	1.2975	A	0.6
6	☐	200.000	199.352	4492238.79	2.4980	A	0.6

y = 0.0122 * x + 0.0584
R = 1.0000
DL = 0.312
BEC = 4.768

Weight: <None>
Min Conc: <None>

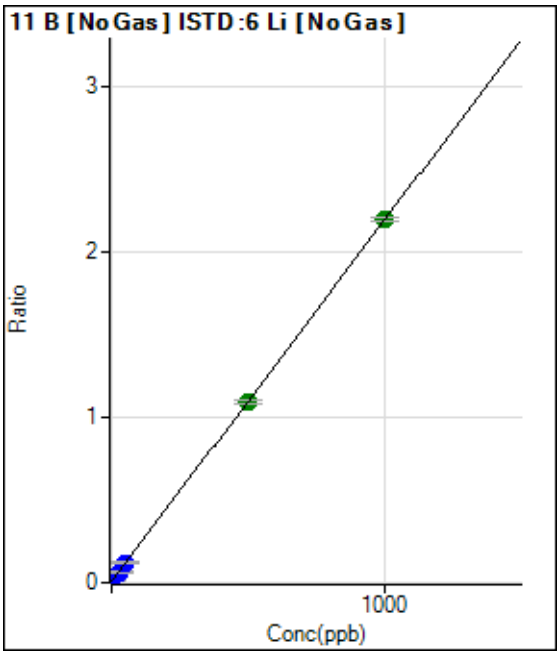


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	16.67	0.0000	P	19.0
2	☐	2.000	1.949	13396.48	0.0069	P	1.7
3	☐	5.000	5.026	33910.96	0.0178	P	3.7
4	☐	10.000	9.979	67246.61	0.0354	P	3.5
5	☐	100.000	99.610	657147.61	0.3534	P	2.1
6	☐	200.000	200.196	1277239.35	0.7102	A	0.9

y = 0.0035 * x + 8.8020E-006
R = 1.0000
DL = 0.001414
BEC = 0.002481

Weight: <None>
Min Conc: <None>

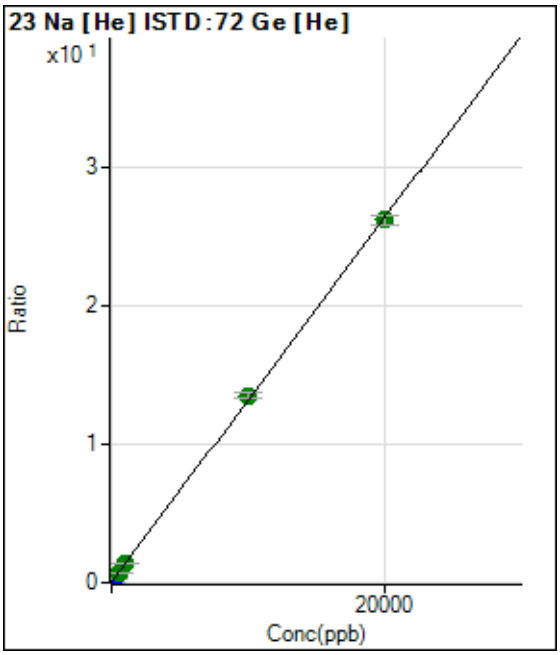
Calibration for 151_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	16339.57	0.0086	P	4.8
2	☐	10.000	9.530	56866.28	0.0294	P	1.9
3	☐	25.000	25.327	121331.90	0.0638	P	3.7
4	☐	50.000	50.650	225954.96	0.1190	P	5.1
5	☐	500.000	497.185	2031573.62	1.0925	A	2.1
6	☐	1000.000	1001.372	3940954.00	2.1916	A	1.0

y = 0.0022 * x + 0.0086
R = 1.0000
DL = 0.5685
BEC = 3.953

Weight: <None>
Min Conc: <None>

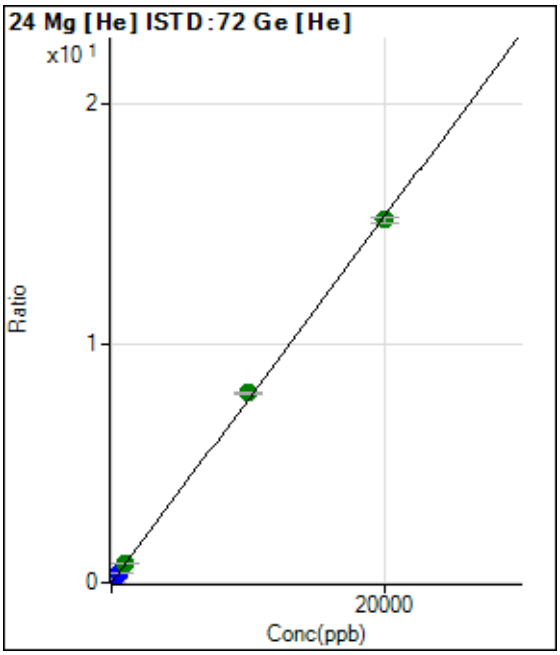


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	64987.96	0.0524	P	1.3
2	☐	200.000	209.929	412751.19	0.3283	P	1.8
3	☐	500.000	528.174	940012.36	0.7465	A	1.4
4	☐	1000.000	1050.006	1776293.31	1.4323	A	1.6
5	☐	10000.00	10215.48	16357166.42	13.4769	A	3.2
6	☐	20000.00	19888.95	31686187.86	26.1892	A	2.8

y = 0.0013 * x + 0.0524
R = 0.9999
DL = 1.6
BEC = 39.9

Weight: <None>
Min Conc: <None>

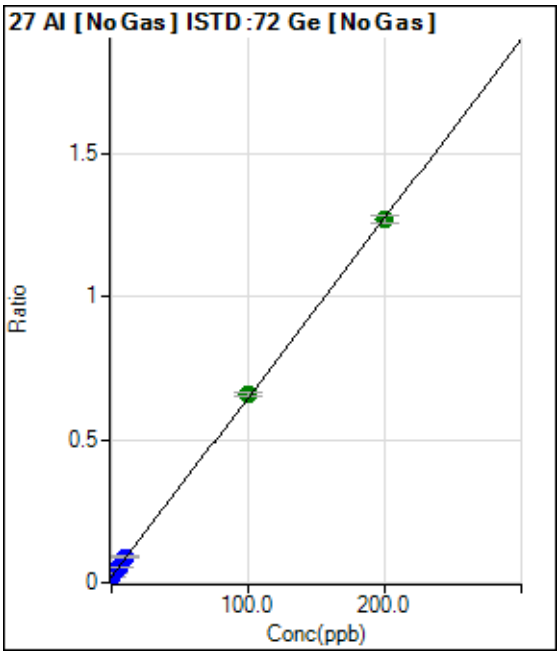
Calibration for 151_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	706.70	0.0006	P	16.1
2	☐	200.000	214.857	207361.52	0.1649	P	1.6
3	☐	500.000	538.244	519170.04	0.4123	P	1.6
4	☐	1000.000	1080.715	1025772.09	0.8273	A	2.6
5	☐	10000.00	10358.43	9620862.57	7.9246	A	1.6
6	☐	20000.00	19815.64	18343930.56	15.1593	A	1.4

y = 7.6499E-004 * x + 5.7040E-004
R = 0.9998
DL = 0.3594
BEC = 0.7456

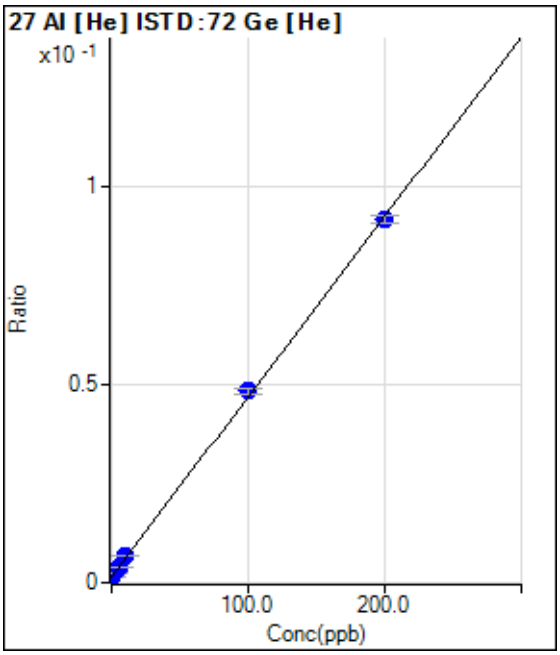
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	84218.11	0.0206	P	1.9
2	☐	2.000	2.191	141072.25	0.0343	P	0.3
3	☐	5.000	5.729	229492.98	0.0564	P	1.8
4	☐	10.000	11.195	367525.91	0.0906	P	0.6
5	☐	100.000	101.498	2623266.47	0.6558	A	2.2
6	☐	200.000	199.171	4924066.18	1.2671	A	2.2

y = 0.0063 * x + 0.0206
R = 1.0000
DL = 0.1824
BEC = 3.286

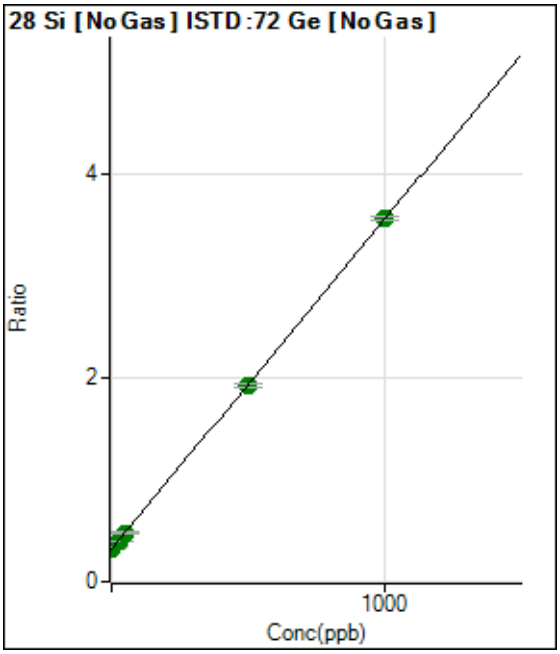
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1873.49	0.0015	P	6.2
2	☐	2.000	2.170	3137.08	0.0025	P	4.3
3	☐	5.000	4.974	4744.24	0.0038	P	2.6
4	☐	10.000	11.763	8496.09	0.0068	P	0.6
5	☐	100.000	103.140	58650.62	0.0483	P	2.4
6	☐	200.000	198.341	110733.27	0.0915	P	2.3

y = 4.5380E-004 * x + 0.0015
R = 0.9998
DL = 0.6229
BEC = 3.33

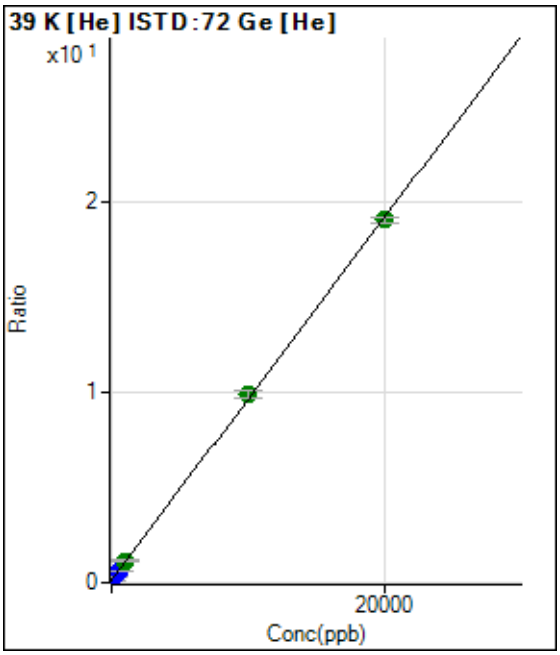
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1311882.69	0.3203	A	2.7
2	☐	10.000	8.818	1435319.72	0.3488	A	1.1
3	☐	25.000	25.026	1631859.35	0.4012	A	1.1
4	☐	50.000	48.249	1931047.42	0.4762	A	2.3
5	☐	500.000	497.027	7705729.89	1.9264	A	2.2
6	☐	1000.000	1001.585	13823292.71	3.5568	A	0.9

y = 0.0032 * x + 0.3203
R = 1.0000
DL = 7.914
BEC = 99.13

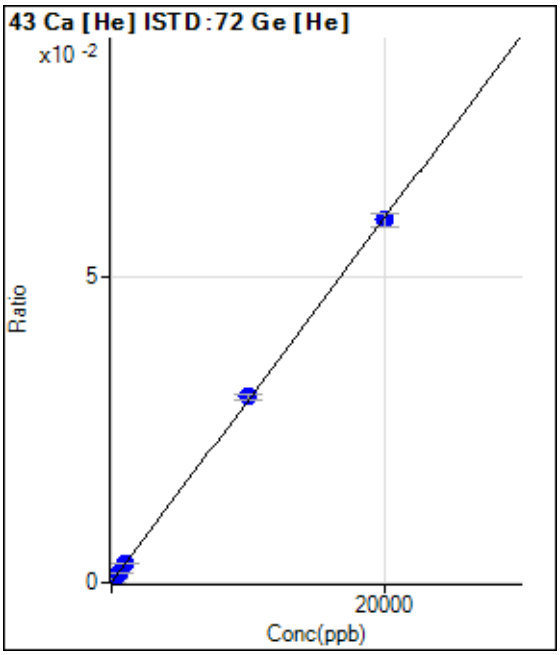
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	155912.05	0.1258	P	1.0
2	☐	200.000	207.647	406679.90	0.3235	P	2.2
3	☐	500.000	524.719	787448.42	0.6254	P	1.2
4	☐	1000.000	1076.186	1426113.62	1.1504	A	3.8
5	☐	10000.00	10262.92	12011908.15	9.8968	A	3.4
6	☐	20000.00	19864.03	23035817.99	19.0377	A	1.9

y = 9.5207E-004 * x + 0.1258
R = 0.9999
DL = 3.785
BEC = 132.1

Weight: <None>
Min Conc: <None>

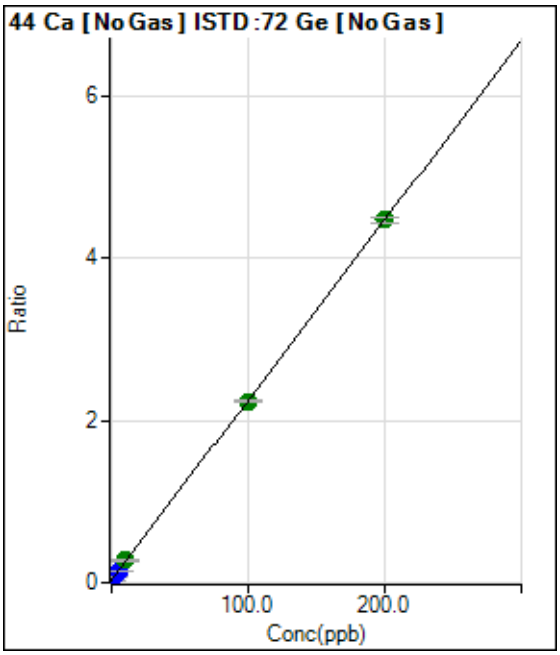


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	46.67	0.0000	P	33.3
2	☐	200.000	218.822	866.71	0.0007	P	7.6
3	☐	500.000	520.973	2000.18	0.0016	P	5.5
4	☐	1000.000	1058.952	3953.98	0.0032	P	2.7
5	☐	10000.00	10207.98	36916.62	0.0304	P	3.1
6	☐	20000.00	19892.34	71670.24	0.0592	P	3.8

y = 2.9759E-006 * x + 3.7703E-005
R = 0.9999
DL = 12.66
BEC = 12.67

Weight: <None>
Min Conc: <None>

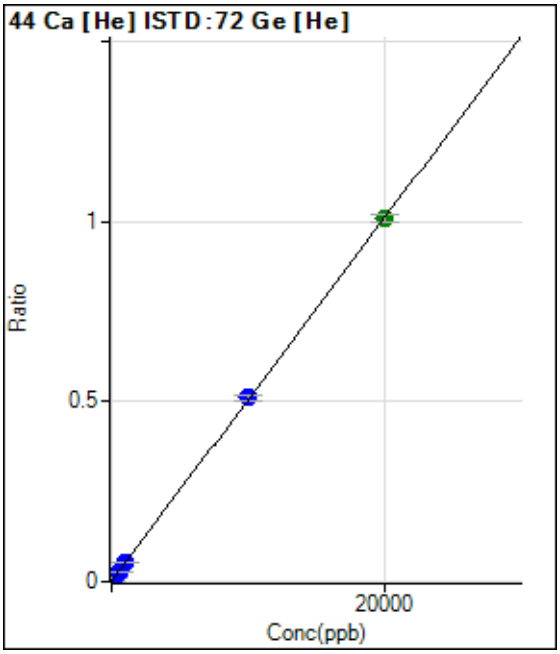
Calibration for 151_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	138448.00	0.0338	P	0.5
2	☐	2.000	2.021	323670.56	0.0787	P	0.8
3	☐	5.000	5.161	603273.41	0.1483	P	1.5
4	☐	10.000	10.834	1112041.57	0.2742	A	1.7
5	☐	100.000	99.385	8956850.91	2.2391	A	1.4
6	☐	200.000	200.261	17400895.16	4.4775	A	1.8

y = 0.0222 * x + 0.0338
R = 1.0000
DL = 0.02418
BEC = 1.524

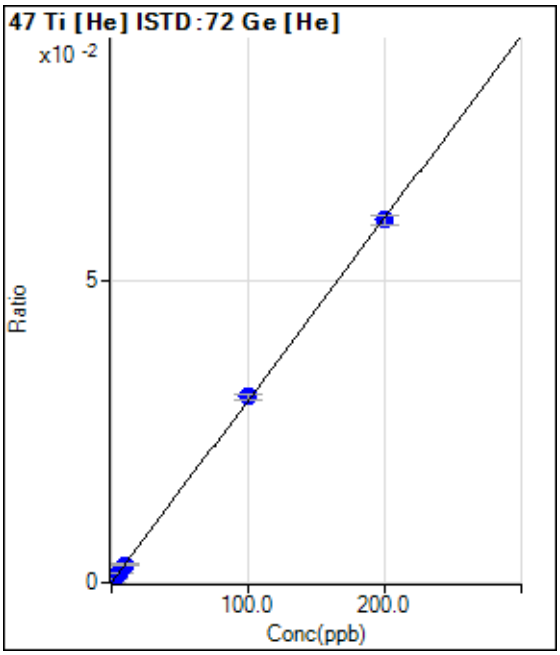
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Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1843.49	0.0015	P	10.6
2	☐	200.000	202.740	14728.12	0.0117	P	3.0
3	☐	500.000	500.582	33665.06	0.0267	P	4.6
4	☐	1000.000	1012.001	65141.23	0.0525	P	2.9
5	☐	10000.00	10096.07	619991.88	0.5108	P	2.9
6	☐	20000.00	19951.32	1219660.63	1.0079	A	2.2

y = 5.0446E-005 * x + 0.0015
R = 1.0000
DL = 9.418
BEC = 29.49

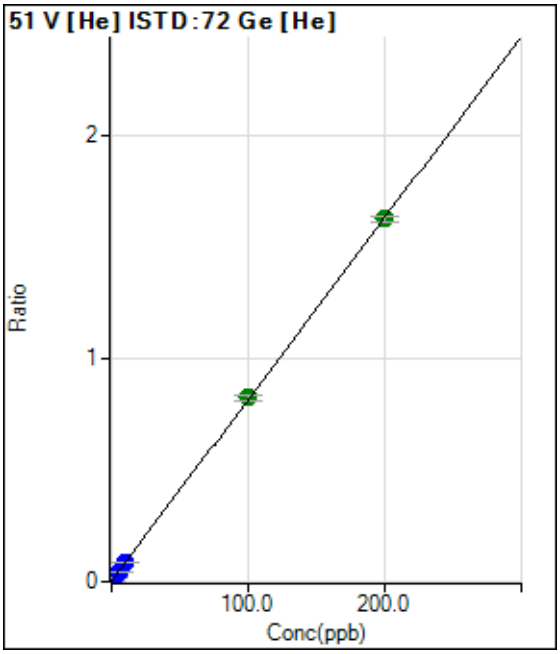
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	16.67	0.0000	P	173.2
2	☐	2.000	2.191	850.04	0.0007	P	12.0
3	☐	5.000	4.965	1906.84	0.0015	P	3.6
4	☐	10.000	9.917	3733.92	0.0030	P	2.8
5	☐	100.000	102.000	37444.59	0.0308	P	3.2
6	☐	200.000	199.003	72809.47	0.0602	P	2.4

y = 3.0231E-004 * x + 1.3542E-005
R = 0.9999
DL = 0.2328
BEC = 0.04479

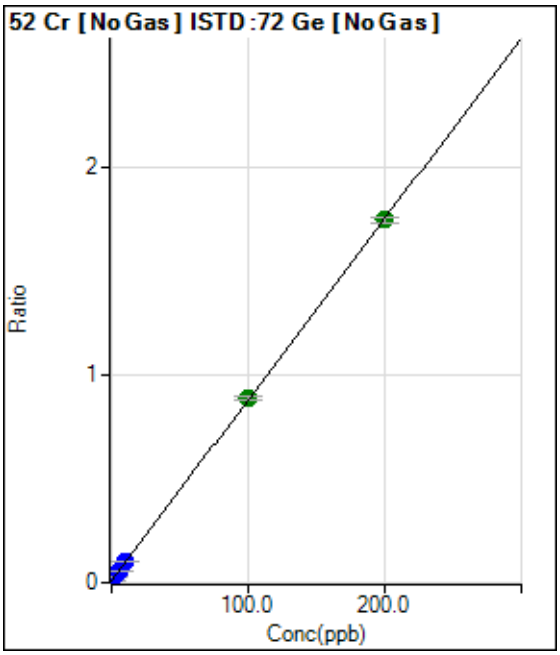
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3818.33	0.0031	P	3.2
2	☐	2.000	1.967	23976.55	0.0191	P	2.1
3	☐	5.000	4.893	53964.68	0.0429	P	1.0
4	☐	10.000	9.885	103439.73	0.0834	P	3.0
5	☐	100.000	100.864	998778.92	0.8229	A	3.8
6	☐	200.000	199.577	1966692.63	1.6253	A	1.6

y = 0.0081 * x + 0.0031
R = 1.0000
DL = 0.03686
BEC = 0.379

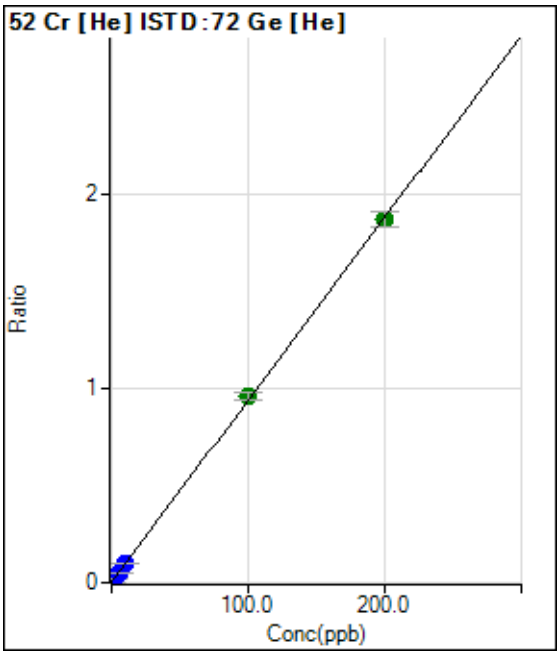
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Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	38728.46	0.0095	P	2.5
2	☐	2.000	2.039	112016.24	0.0272	P	1.4
3	☐	5.000	5.242	224215.28	0.0551	P	1.2
4	☐	10.000	10.555	411242.36	0.1014	P	0.4
5	☐	100.000	100.765	3549159.42	0.8873	A	1.7
6	☐	200.000	199.583	6794231.15	1.7481	A	1.3

y = 0.0087 * x + 0.0095
R = 1.0000
DL = 0.08173
BEC = 1.086

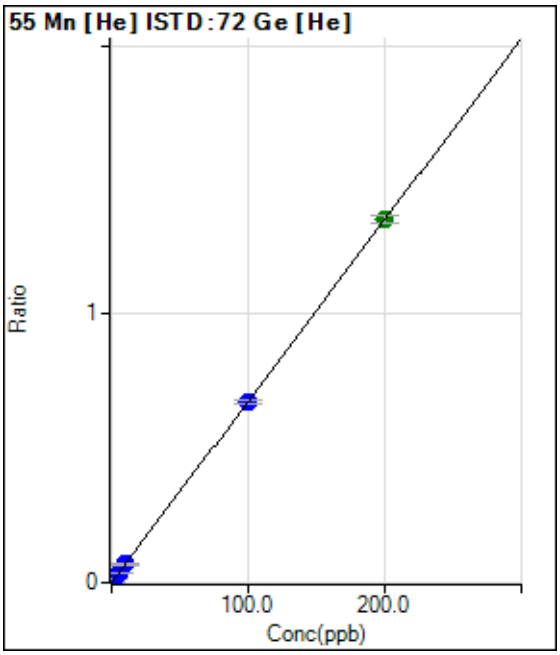
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2250.22	0.0018	P	2.8
2	☐	2.000	1.975	25637.65	0.0204	P	3.7
3	☐	5.000	5.055	62168.09	0.0494	P	1.2
4	☐	10.000	10.063	119594.18	0.0965	P	4.3
5	☐	100.000	102.285	1169947.56	0.9640	A	4.2
6	☐	200.000	198.853	2265387.94	1.8725	A	4.2

y = 0.0094 * x + 0.0018
R = 0.9999
DL = 0.0161
BEC = 0.193

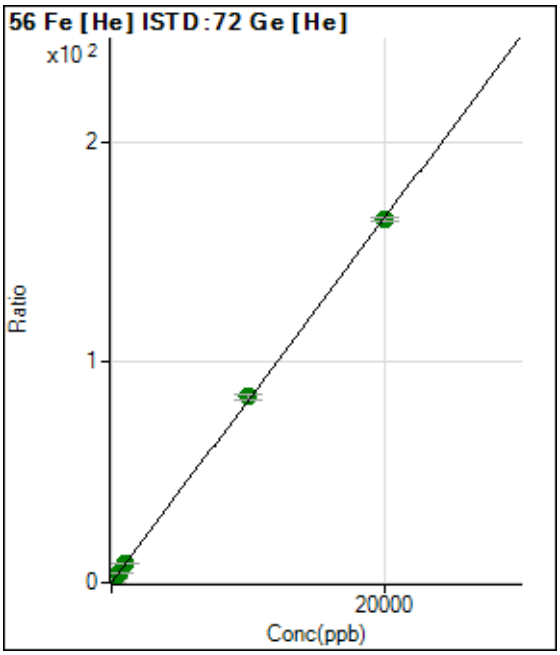
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	546.69	0.0004	P	0.5
2	☐	2.000	2.015	17668.32	0.0141	P	2.4
3	☐	5.000	5.004	43118.51	0.0342	P	1.8
4	☐	10.000	10.066	84839.20	0.0684	P	3.7
5	☐	100.000	99.847	819205.95	0.6749	P	2.5
6	☐	200.000	200.073	1635754.40	1.3519	A	2.0

y = 0.0068 * x + 4.4104E-004
R = 1.0000
DL = 0.001029
BEC = 0.06529

Weight: <None>
Min Conc: <None>

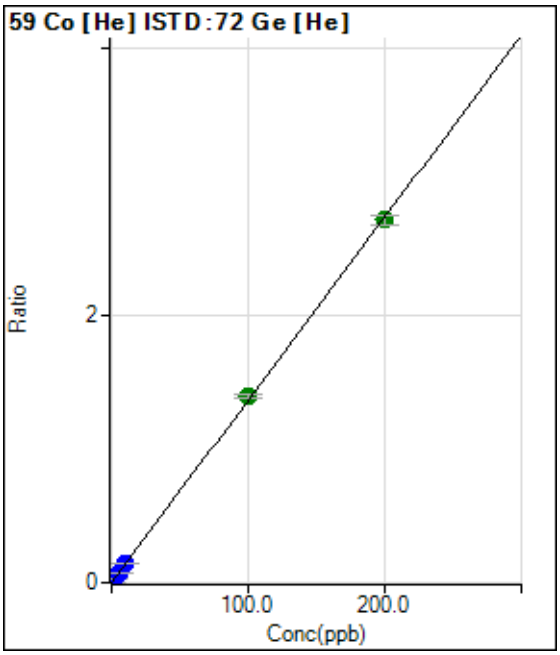


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	20645.90	0.0167	P	4.9
2	☐	200.000	209.019	2195402.05	1.7462	A	1.3
3	☐	500.000	509.738	5332258.46	4.2344	A	0.2
4	☐	1000.000	1036.158	10648040.26	8.5902	A	4.3
5	☐	10000.00	10200.91	102465531.8	84.4231	A	3.4
6	☐	20000.00	19897.40	199248830.3	164.655	A	1.2

y = 0.0083 * x + 0.0167
R = 0.9999
DL = 0.2976
BEC = 2.013

Weight: <None>
Min Conc: <None>

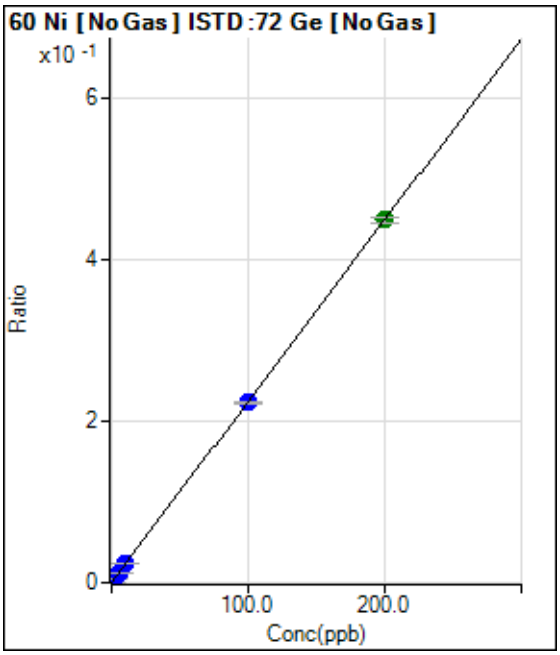
Calibration for 151_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	50.00	0.0000	P	39.6
2	☐	2.000	2.073	35610.32	0.0283	P	1.0
3	☐	5.000	5.144	88409.30	0.0702	P	0.6
4	☐	10.000	10.347	174996.83	0.1412	P	4.3
5	☐	100.000	102.458	1696541.28	1.3976	A	2.5
6	☐	200.000	198.749	3280256.20	2.7111	A	2.5

y = 0.0136 * x + 4.0309E-005
R = 0.9999
DL = 0.003512
BEC = 0.002955

Weight: <None>
Min Conc: <None>

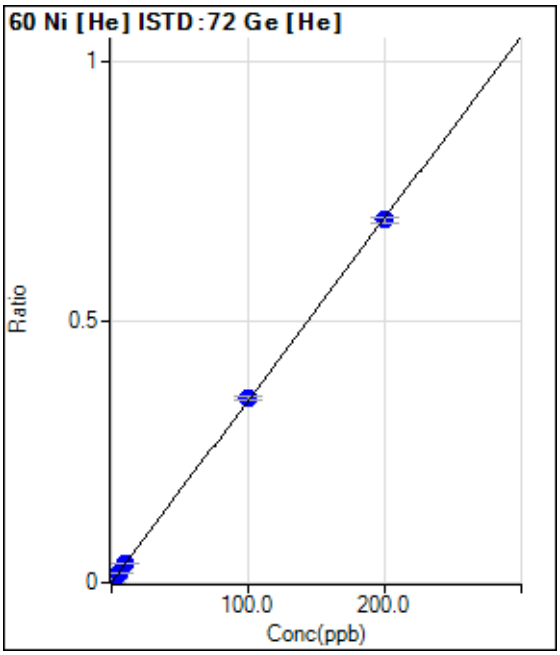


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1083.39	0.0003	P	2.8
2	☐	2.000	1.975	19347.37	0.0047	P	5.0
3	☐	5.000	5.151	48152.28	0.0118	P	1.2
4	☐	10.000	10.385	95691.55	0.0236	P	1.5
5	☐	100.000	99.572	896016.52	0.2240	P	1.3
6	☐	200.000	200.191	1749267.79	0.4501	A	1.9

y = 0.0022 * x + 2.6451E-004
R = 1.0000
DL = 0.009804
BEC = 0.1177

Weight: <None>
Min Conc: <None>

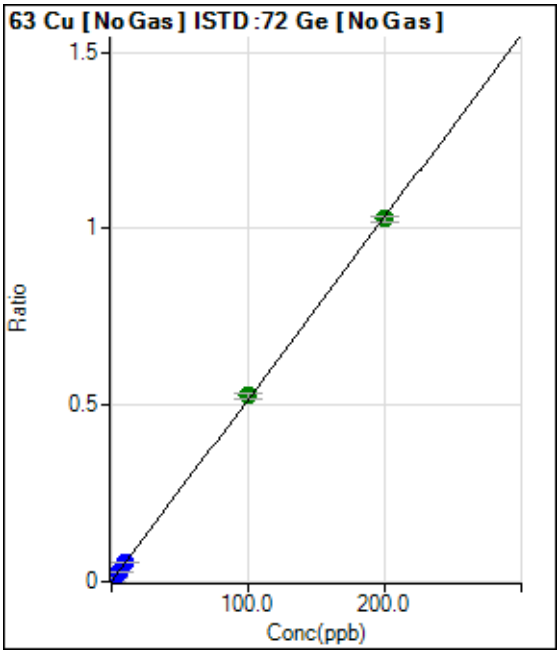
Calibration for 151_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	510.02	0.0004	P	12.2
2	☐	2.000	2.047	9506.81	0.0076	P	3.0
3	☐	5.000	5.155	23180.05	0.0184	P	3.1
4	☐	10.000	10.537	46128.40	0.0372	P	2.7
5	☐	100.000	101.648	431375.10	0.3553	P	1.8
6	☐	200.000	199.145	841912.15	0.6958	P	1.5

y = 0.0035 * x + 4.1160E-004
R = 1.0000
DL = 0.04316
BEC = 0.1179

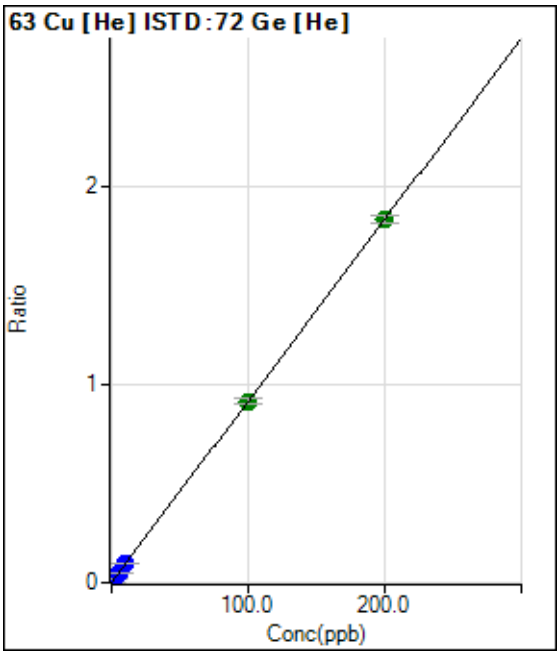
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2827.01	0.0007	P	4.6
2	☐	2.000	2.078	46954.66	0.0114	P	1.6
3	☐	5.000	5.206	112046.91	0.0275	P	2.9
4	☐	10.000	10.392	220198.33	0.0543	P	2.2
5	☐	100.000	101.912	2105623.72	0.5265	A	3.0
6	☐	200.000	199.018	3992980.98	1.0274	A	1.3

y = 0.0052 * x + 6.9042E-004
R = 0.9999
DL = 0.01853
BEC = 0.1338

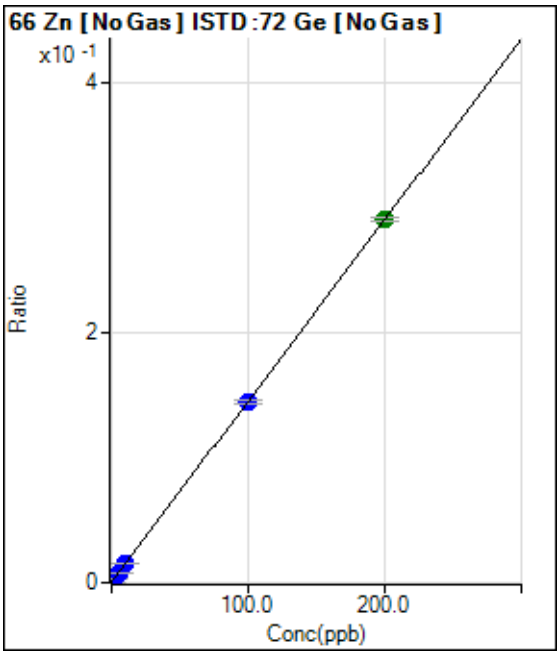
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1286.76	0.0010	P	5.1
2	☐	2.000	2.028	24599.20	0.0196	P	2.1
3	☐	5.000	5.057	59500.45	0.0472	P	1.8
4	☐	10.000	10.218	117068.26	0.0944	P	1.3
5	☐	100.000	100.050	1110944.25	0.9152	A	2.4
6	☐	200.000	199.963	2211966.17	1.8281	A	2.1

y = 0.0091 * x + 0.0010
R = 1.0000
DL = 0.01755
BEC = 0.1136

Weight: <None>
Min Conc: <None>

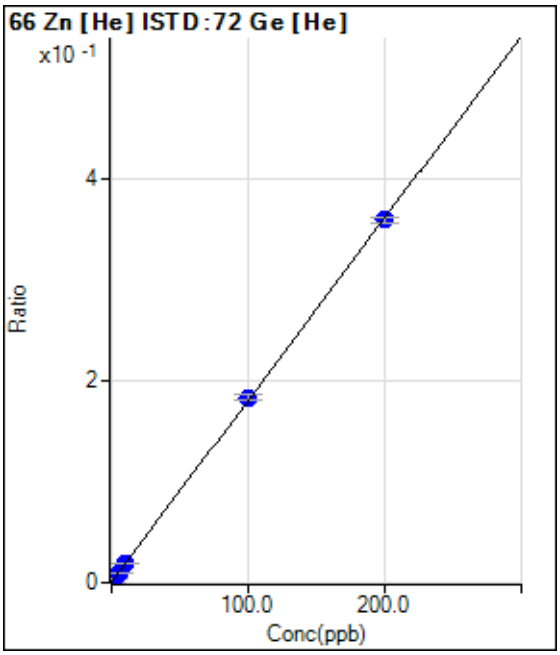


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1440.10	0.0004	P	7.5
2	☐	2.000	2.009	13436.82	0.0033	P	2.7
3	☐	5.000	5.152	31827.69	0.0078	P	1.3
4	☐	10.000	10.346	62270.00	0.0154	P	3.1
5	☐	100.000	99.793	580301.54	0.1451	P	2.7
6	☐	200.000	200.082	1129188.65	0.2905	A	1.1

y = 0.0015 * x + 3.5148E-004
R = 1.0000
DL = 0.05452
BEC = 0.2423

Weight: <None>
Min Conc: <None>

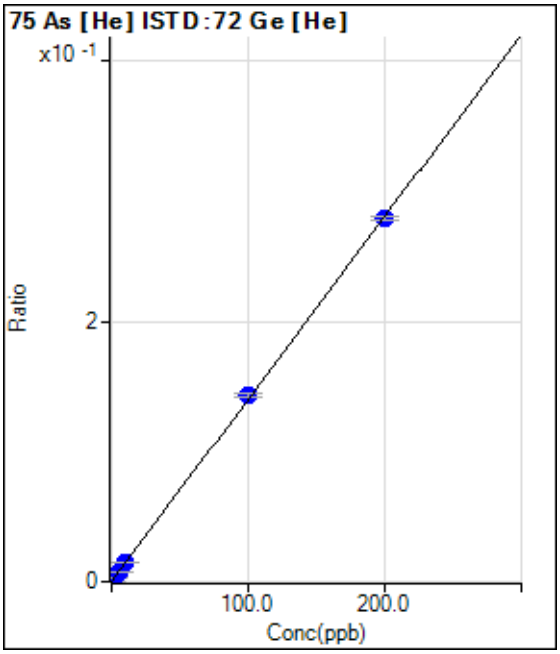
Calibration for 151_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	490.02	0.0004	P	13.1
2	☐	2.000	2.026	5094.38	0.0040	P	7.1
3	☐	5.000	4.997	11845.38	0.0094	P	0.2
4	☐	10.000	10.700	24415.67	0.0197	P	2.5
5	☐	100.000	101.696	223091.48	0.1838	P	2.8
6	☐	200.000	199.117	435007.26	0.3595	P	1.3

y = 0.0018 * x + 3.9522E-004
R = 0.9999
DL = 0.08621
BEC = 0.2192

Weight: <None>
Min Conc: <None>

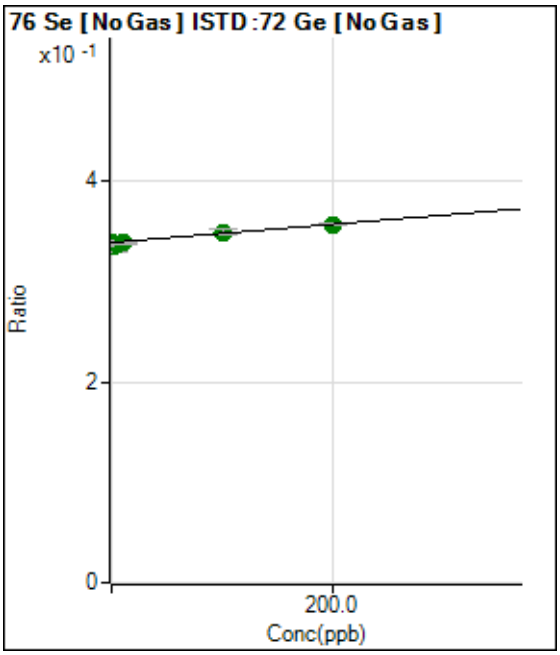


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	203.34	0.0002	P	16.4
2	☐	2.000	2.011	3748.32	0.0030	P	5.6
3	☐	5.000	4.974	8978.59	0.0071	P	2.2
4	☐	10.000	10.254	18009.86	0.0145	P	3.3
5	☐	100.000	102.122	173862.25	0.1432	P	1.8
6	☐	200.000	198.927	337395.84	0.2788	P	1.0

y = 0.0014 * x + 1.6402E-004
R = 0.9999
DL = 0.05775
BEC = 0.1171

Weight: <None>
Min Conc: <None>

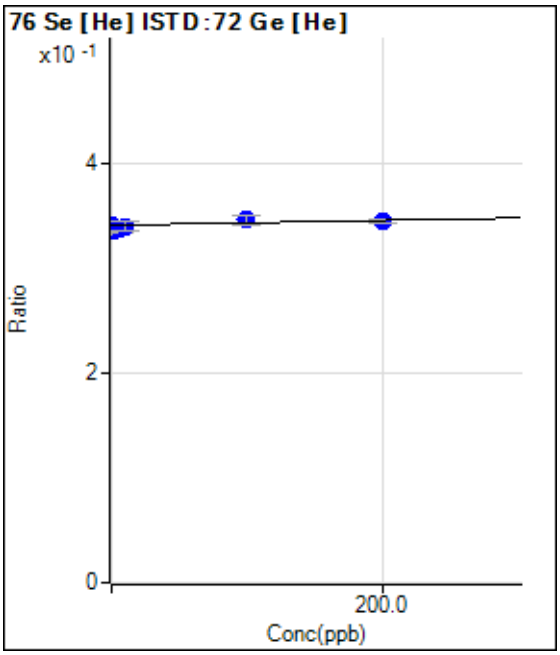
Calibration for 151_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1388456.13	0.3391	A	1.4
2	☐	2.000	-49.417	1376736.49	0.3346	A	2.6
3	☐	5.000	-13.488	1374042.95	0.3378	A	1.9
4	☐	10.000	-8.787	1371758.57	0.3383	A	0.9
5	☐	100.000	112.360	1397215.55	0.3493	A	1.4
6	☐	200.000	195.735	1387039.09	0.3569	A	0.5

y = 9.1081E-005 * x + 0.3391
R = 0.9785
DL = 157.3
BEC = 3723

Weight: <None>
Min Conc: <None>

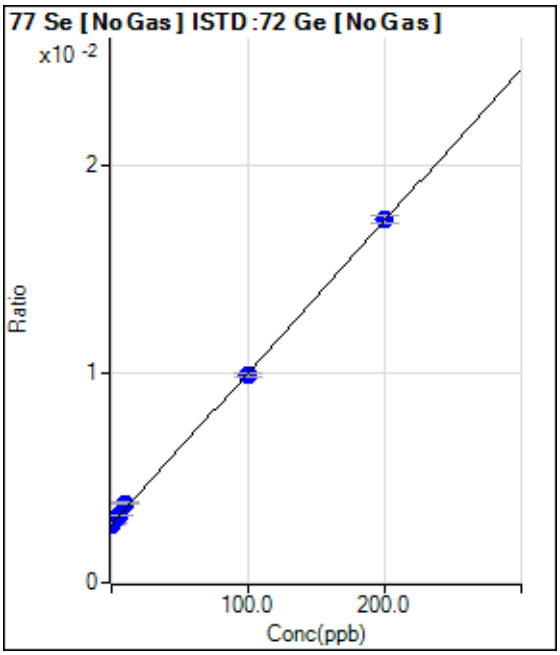


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	423475.69	0.3417	P	2.0
2	☐	2.000	-246.783	422411.73	0.3360	P	2.0
3	☐	5.000	-152.365	425799.80	0.3382	P	1.9
4	☐	10.000	-37.999	422514.87	0.3408	P	3.2
5	☐	100.000	216.563	420782.44	0.3467	P	2.7
6	☐	200.000	150.540	417647.71	0.3451	P	1.2

y = 2.3032E-005 * x + 0.3417
R = 0.7500
DL = 897
BEC = 1.483E+04

Weight: <None>
Min Conc: <None>

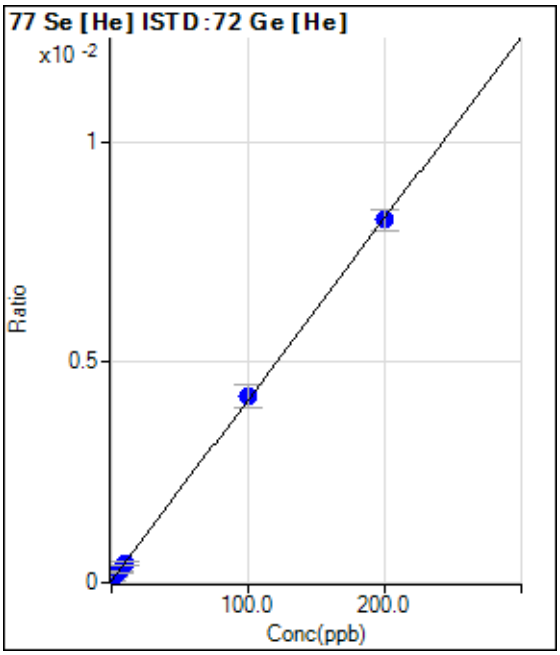
Calibration for 151_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	11431.70	0.0028	P	1.4
2	☐	2.000	2.034	12095.69	0.0029	P	4.6
3	☐	5.000	5.876	13086.59	0.0032	P	2.7
4	☐	10.000	13.726	15359.01	0.0038	P	3.1
5	☐	100.000	98.502	39769.11	0.0099	P	1.2
6	☐	200.000	200.540	67425.36	0.0173	P	2.1

y = 7.2592E-005 * x + 0.0028
R = 0.9998
DL = 1.575
BEC = 38.45

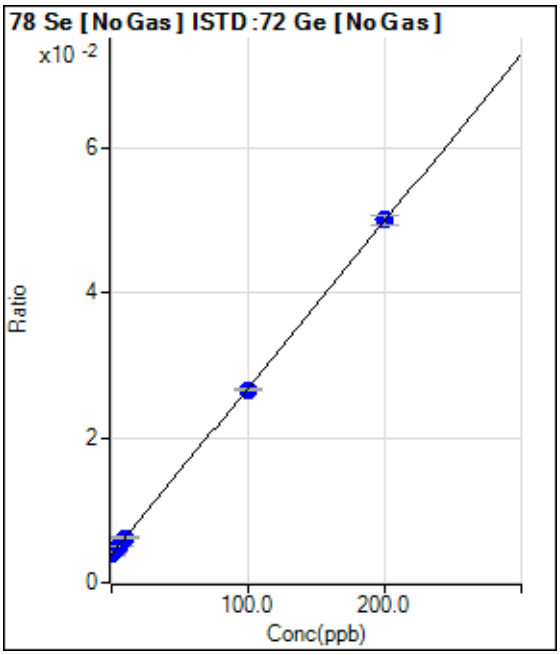
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	50.00	0.0000	P	19.7
2	☐	2.000	2.697	190.01	0.0002	P	27.3
3	☐	5.000	5.069	313.34	0.0002	P	11.2
4	☐	10.000	9.751	546.69	0.0004	P	14.6
5	☐	100.000	101.781	5127.74	0.0042	P	12.4
6	☐	200.000	199.113	9963.84	0.0082	P	5.8

y = 4.1168E-005 * x + 4.0324E-005
R = 0.9999
DL = 0.578
BEC = 0.9795

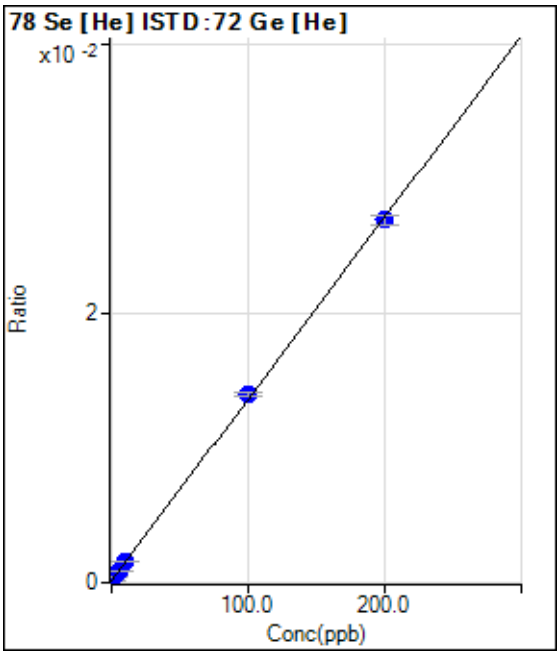
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	15939.63	0.0039	P	2.3
2	☐	2.000	1.761	17685.23	0.0043	P	3.9
3	☐	5.000	4.798	20325.61	0.0050	P	1.1
4	☐	10.000	9.925	25050.30	0.0062	P	3.0
5	☐	100.000	98.670	106452.71	0.0266	P	0.9
6	☐	200.000	200.676	194688.41	0.0501	P	2.3

y = 2.3025E-004 * x + 0.0039
R = 1.0000
DL = 1.155
BEC = 16.9

Weight: <None>
Min Conc: <None>

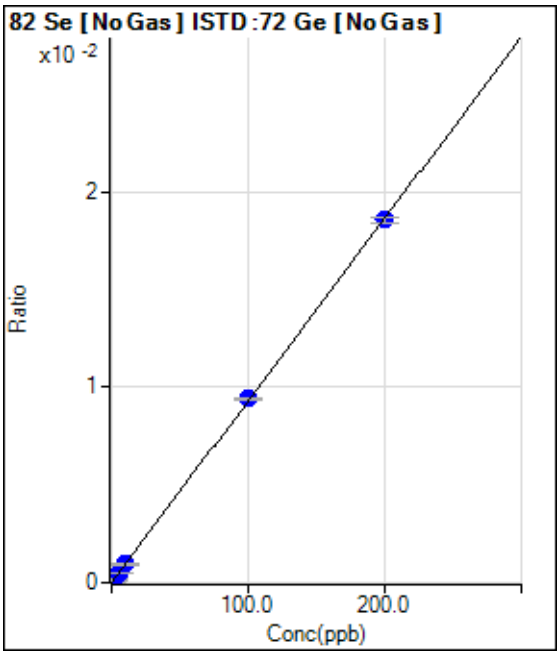


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	190.00	0.0002	P	10.5
2	☐	2.000	1.830	503.34	0.0004	P	3.4
3	☐	5.000	5.184	1074.05	0.0009	P	4.3
4	☐	10.000	10.592	1962.82	0.0016	P	3.2
5	☐	100.000	102.574	16994.72	0.0140	P	2.4
6	☐	200.000	198.680	32638.74	0.0270	P	2.4

y = 1.3499E-004 * x + 1.5330E-004
R = 0.9999
DL = 0.3566
BEC = 1.136

Weight: <None>
Min Conc: <None>

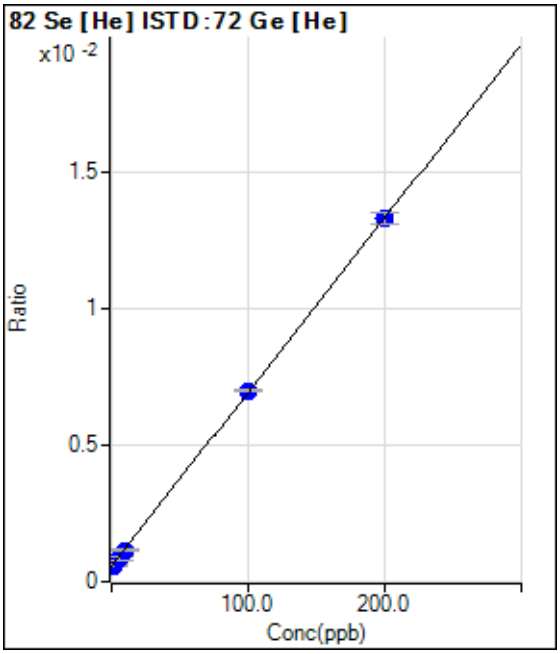
Calibration for 151_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	-44.46	0.0000	P	-289.4
2	☐	2.000	1.555	551.46	0.0001	P	8.4
3	☐	5.000	5.159	1912.67	0.0005	P	9.9
4	☐	10.000	10.128	3784.70	0.0009	P	5.5
5	☐	100.000	101.118	37677.06	0.0094	P	1.3
6	☐	200.000	199.435	72234.52	0.0186	P	1.9

y = 9.3254E-005 * x - 1.0967E-005
R = 1.0000
DL = 1.021
BEC = -0.1176

Weight: <None>
Min Conc: <None>

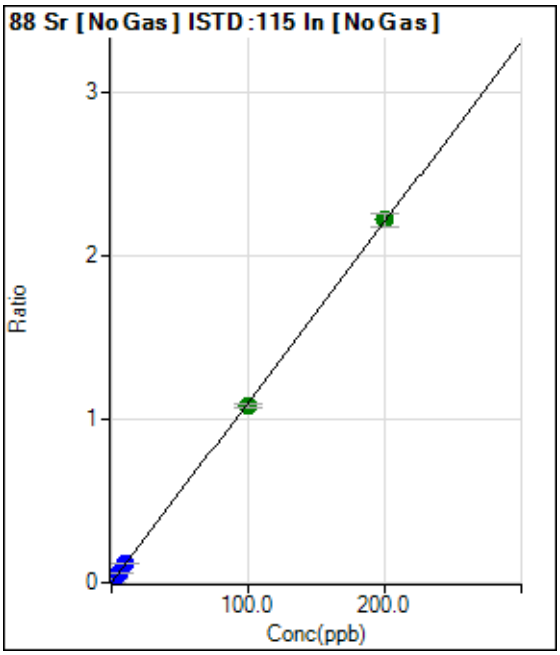


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	716.70	0.0006	P	5.3
2	☐	2.000	0.005	726.70	0.0006	P	13.0
3	☐	5.000	3.888	1040.06	0.0008	P	13.6
4	☐	10.000	9.023	1430.10	0.0012	P	3.1
5	☐	100.000	100.958	8519.48	0.0070	P	1.7
6	☐	200.000	199.618	16106.56	0.0133	P	3.1

y = 6.3770E-005 * x + 5.7810E-004
R = 0.9999
DL = 1.446
BEC = 9.065

Weight: <None>
Min Conc: <None>

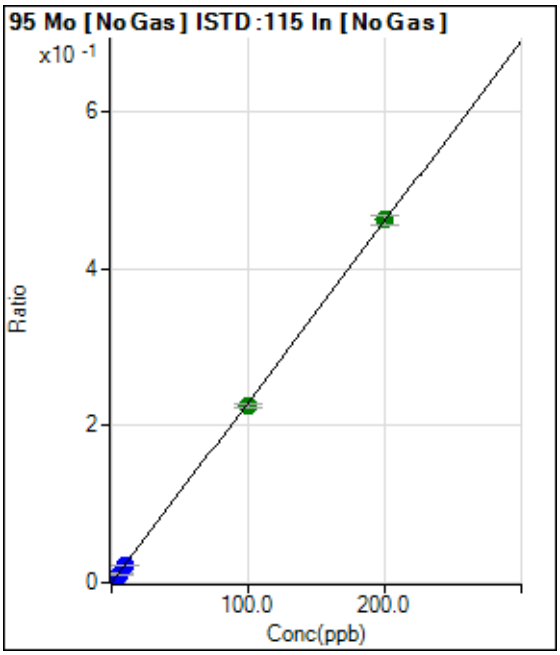
Calibration for 151_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3277.12	0.0007	P	3.1
2	☐	2.000	1.967	104995.32	0.0224	P	0.4
3	☐	5.000	4.946	261648.60	0.0553	P	2.7
4	☐	10.000	10.209	525574.59	0.1134	P	0.8
5	☐	100.000	97.764	4922668.47	1.0803	A	1.7
6	☐	200.000	201.109	9751059.65	2.2215	A	3.4

y = 0.0110 * x + 7.0270E-004
R = 0.9999
DL = 0.005963
BEC = 0.06363

Weight: <None>
Min Conc: <None>

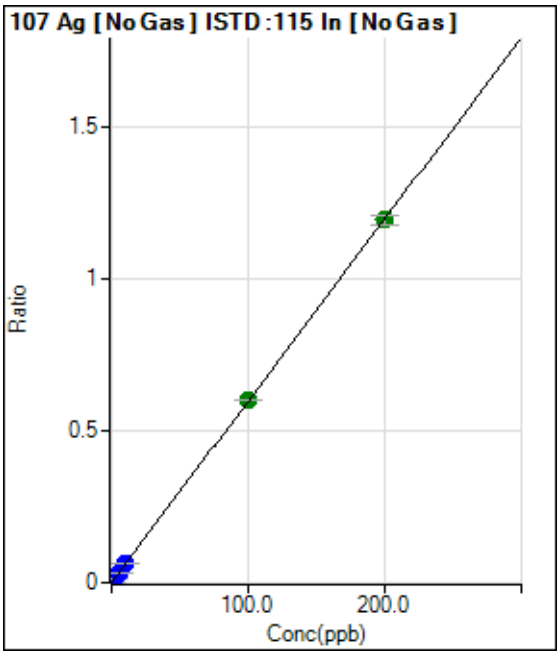


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	146.67	0.0000	P	14.7
2	☐	2.000	1.889	20499.51	0.0044	P	2.8
3	☐	5.000	4.766	52032.24	0.0110	P	2.1
4	☐	10.000	9.911	105812.95	0.0228	P	0.2
5	☐	100.000	98.192	1029772.77	0.2260	A	1.8
6	☐	200.000	200.916	2029866.79	0.4624	A	2.6

y = 0.0023 * x + 3.1467E-005
R = 0.9999
DL = 0.006046
BEC = 0.01367

Weight: <None>
Min Conc: <None>

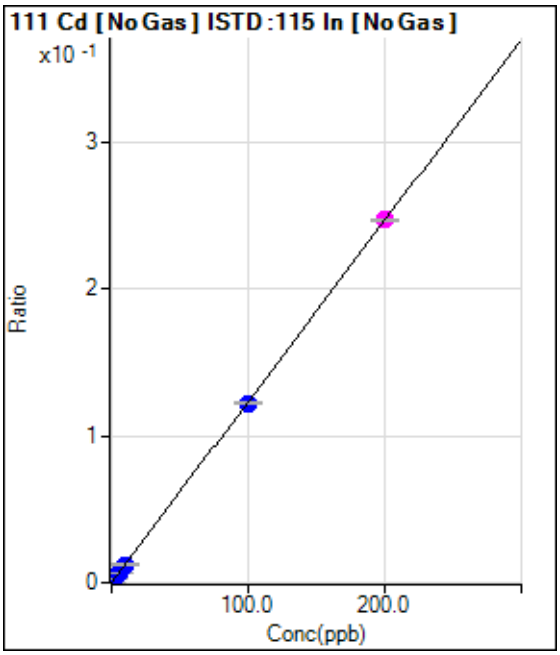
Calibration for 151_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	296.68	0.0001	P	19.1
2	☐	2.000	2.002	56370.34	0.0120	P	2.3
3	☐	5.000	4.988	141462.69	0.0299	P	0.4
4	☐	10.000	10.122	280798.24	0.0606	P	1.3
5	☐	100.000	100.573	2741979.86	0.6016	A	0.7
6	☐	200.000	199.708	5244584.92	1.1946	A	2.6

y = 0.0060 * x + 6.3653E-005
R = 1.0000
DL = 0.006084
BEC = 0.01064

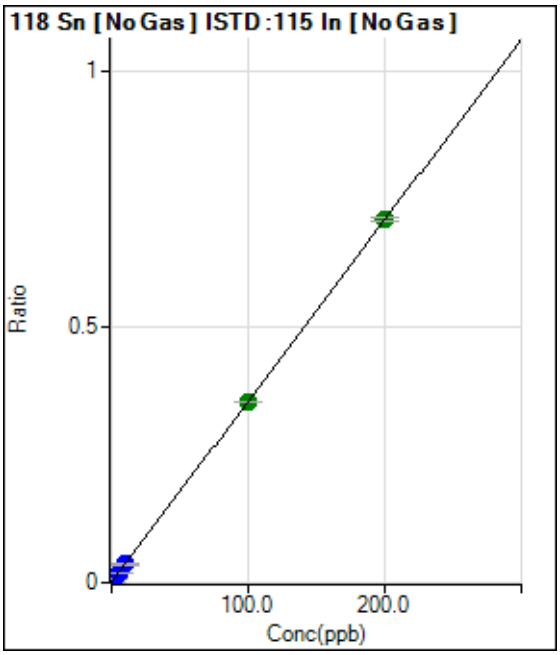
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	10.00	0.0000	P	173.2
2	☐	2.000	1.976	11421.78	0.0024	P	3.4
3	☐	5.000	4.909	28654.79	0.0061	P	0.7
4	☐	10.000	10.049	57448.74	0.0124	P	2.9
5	☐	100.000	99.084	556988.39	0.1222	P	1.1
6	☐	200.000	200.458	1085908.24	0.2473	M	0.6

y = 0.0012 * x + 2.1560E-006
R = 1.0000
DL = 0.009083
BEC = 0.001748

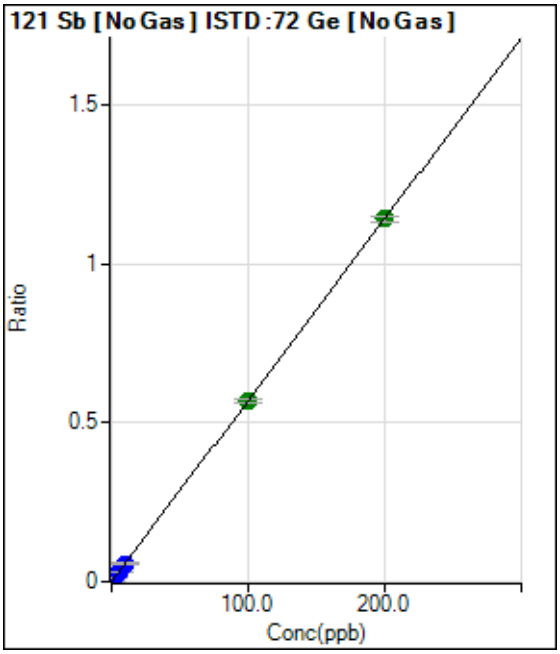
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	4354.13	0.0009	P	4.5
2	☐	2.000	1.809	34342.02	0.0073	P	2.0
3	☐	5.000	4.773	84306.64	0.0178	P	1.3
4	☐	10.000	9.851	165840.58	0.0358	P	0.9
5	☐	100.000	99.512	1609007.68	0.3531	A	0.3
6	☐	200.000	200.259	3115793.49	0.7096	A	1.0

y = 0.0035 * x + 9.3361E-004
R = 1.0000
DL = 0.03544
BEC = 0.2638

Weight: <None>
Min Conc: <None>

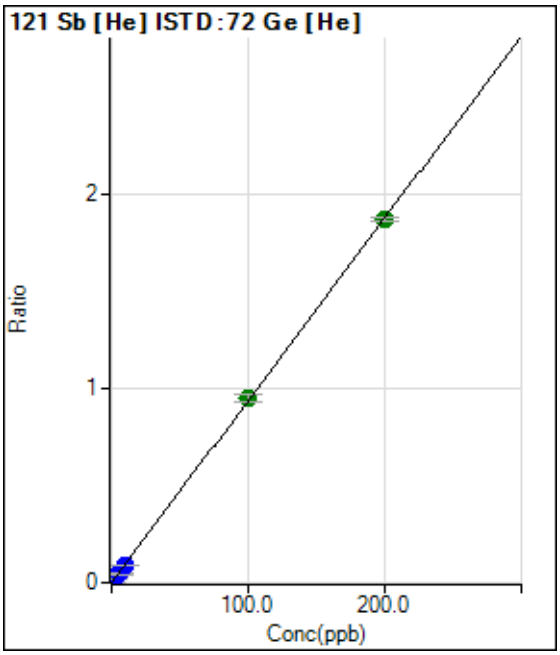


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	560.02	0.0001	P	4.0
2	☐	2.000	1.978	46974.42	0.0114	P	1.2
3	☐	5.000	4.983	116084.95	0.0285	P	2.6
4	☐	10.000	10.036	232538.97	0.0573	P	1.6
5	☐	100.000	99.746	2275073.30	0.5687	A	1.2
6	☐	200.000	200.126	4434584.21	1.1409	A	1.3

y = 0.0057 * x + 1.3672E-004
R = 1.0000
DL = 0.002903
BEC = 0.02398

Weight: <None>
Min Conc: <None>

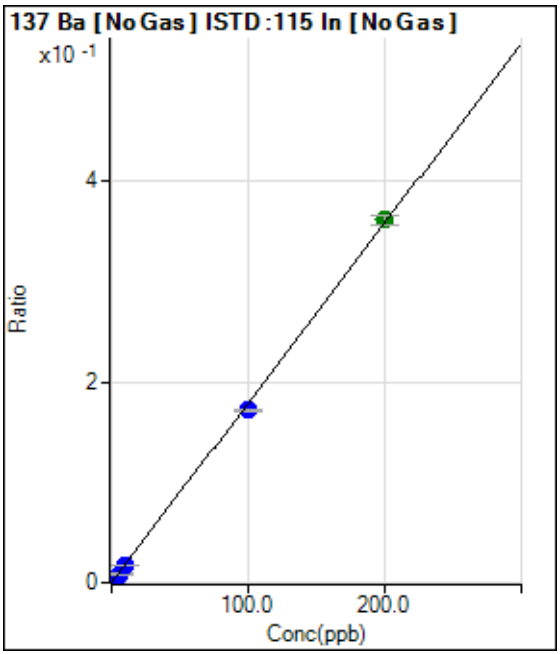
Calibration for 151_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	236.68	0.0002	P	11.0
2	☐	2.000	1.885	22419.57	0.0178	P	2.3
3	☐	5.000	4.769	56411.85	0.0448	P	2.1
4	☐	10.000	9.750	113331.08	0.0914	P	2.2
5	☐	100.000	101.610	1153808.00	0.9507	A	3.6
6	☐	200.000	199.214	2255481.16	1.8637	A	1.0

y = 0.0094 * x + 1.9099E-004
R = 1.0000
DL = 0.006708
BEC = 0.02042

Weight: <None>
Min Conc: <None>

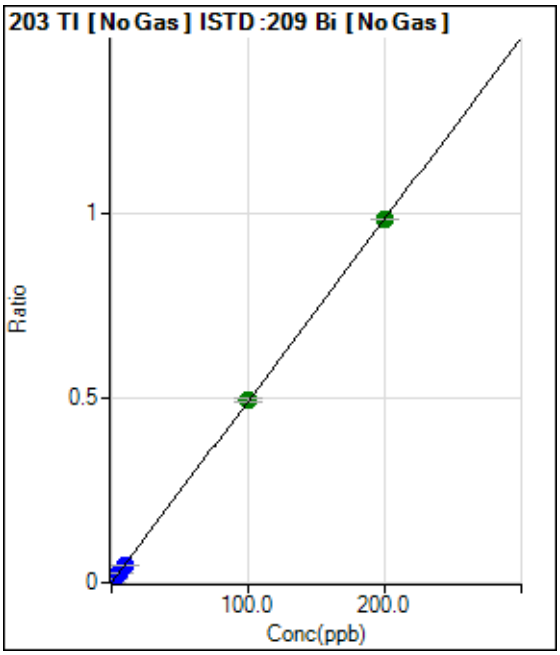


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	536.69	0.0001	P	15.0
2	☐	2.000	1.884	16307.16	0.0035	P	1.4
3	☐	5.000	4.752	40737.70	0.0086	P	1.2
4	☐	10.000	9.967	83088.68	0.0179	P	0.9
5	☐	100.000	96.063	783120.59	0.1719	P	1.3
6	☐	200.000	201.978	1585612.53	0.3612	A	2.9

y = 0.0018 * x + 1.1514E-004
R = 0.9997
DL = 0.02893
BEC = 0.06441

Weight: <None>
Min Conc: <None>

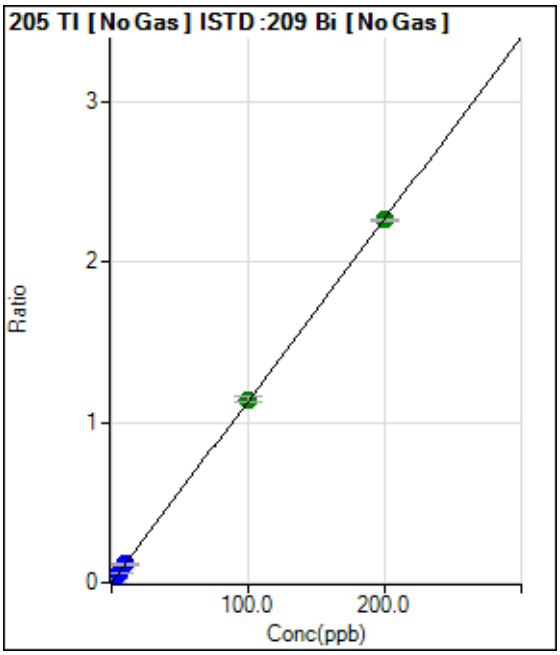
Calibration for 151_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	60.00	0.0000	P	54.6
2	☐	2.000	1.892	36543.76	0.0093	P	1.7
3	☐	5.000	4.859	93580.70	0.0239	P	3.2
4	☐	10.000	9.743	189692.31	0.0479	P	3.4
5	☐	100.000	100.630	1907527.52	0.4943	A	1.6
6	☐	200.000	199.703	3680406.92	0.9809	A	0.0

y = 0.0049 * x + 1.5456E-005
R = 1.0000
DL = 0.005158
BEC = 0.003147

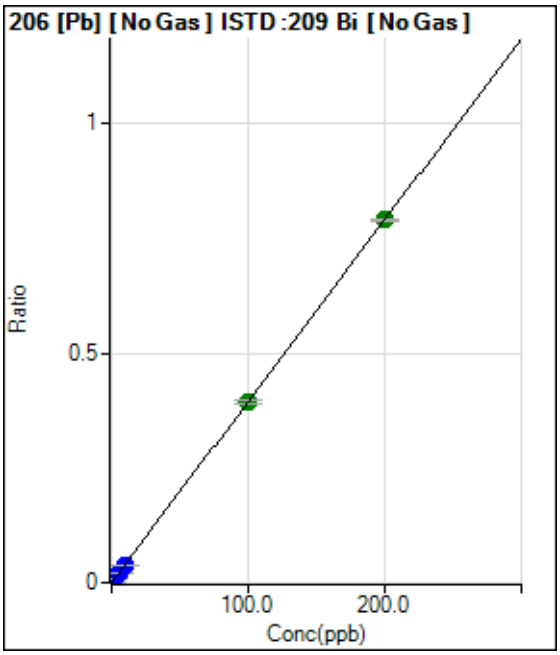
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	176.67	0.0000	P	11.2
2	☐	2.000	1.987	88554.59	0.0226	P	1.4
3	☐	5.000	4.993	221875.06	0.0566	P	0.9
4	☐	10.000	10.080	452756.19	0.1142	P	2.7
5	☐	100.000	100.805	4406965.25	1.1420	A	3.7
6	☐	200.000	199.594	8484628.83	2.2612	A	0.6

y = 0.0113 * x + 4.6066E-005
R = 1.0000
DL = 0.001361
BEC = 0.004066

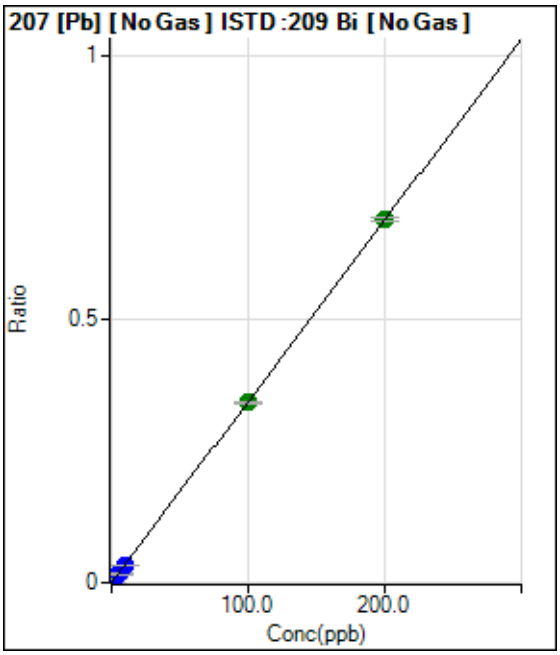
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	410.01	0.0001	P	22.9
2	☐	2.000	1.968	30895.34	0.0079	P	2.7
3	☐	5.000	4.914	76410.60	0.0195	P	1.5
4	☐	10.000	9.612	150695.19	0.0380	P	3.8
5	☐	100.000	99.729	1518812.17	0.3936	A	2.7
6	☐	200.000	200.157	2963481.83	0.7898	A	0.5

y = 0.0039 * x + 1.0687E-004
R = 1.0000
DL = 0.01858
BEC = 0.02709

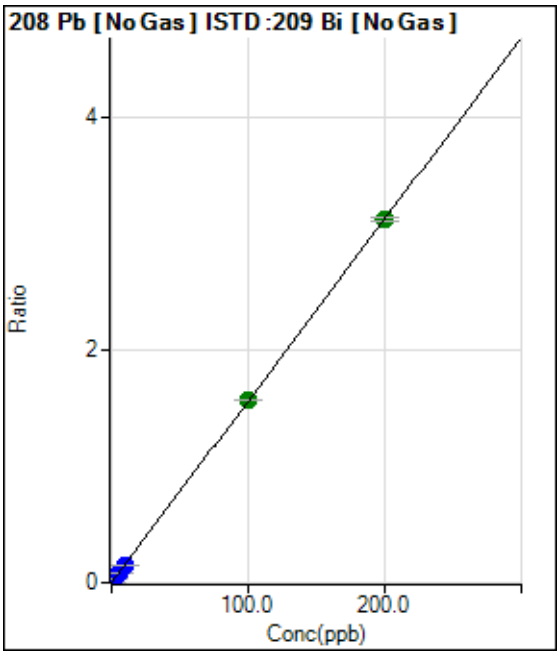
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	346.68	0.0001	P	3.0
2	☐	2.000	1.941	26495.30	0.0067	P	1.8
3	☐	5.000	4.799	64889.38	0.0166	P	2.4
4	☐	10.000	9.833	134065.33	0.0338	P	2.9
5	☐	100.000	99.405	1316649.88	0.3412	A	1.3
6	☐	200.000	200.312	2579154.23	0.6874	A	0.9

y = 0.0034 * x + 9.0205E-005
R = 1.0000
DL = 0.002337
BEC = 0.02629

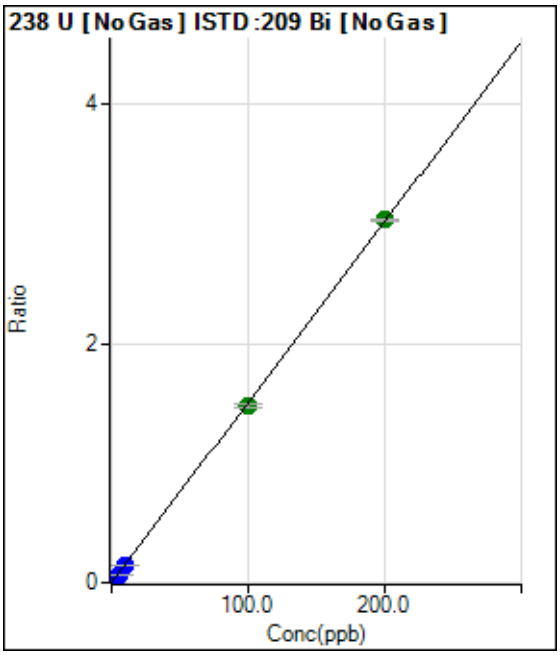
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1543.40	0.0004	P	8.5
2	☐	2.000	1.970	122052.16	0.0311	P	2.6
3	☐	5.000	4.877	299353.27	0.0764	P	1.2
4	☐	10.000	9.719	601669.91	0.1518	P	2.7
5	☐	100.000	100.569	6048711.79	1.5673	A	0.8
6	☐	200.000	199.733	11676920.97	3.1123	A	1.1

y = 0.0156 * x + 4.0219E-004
R = 1.0000
DL = 0.006594
BEC = 0.02581

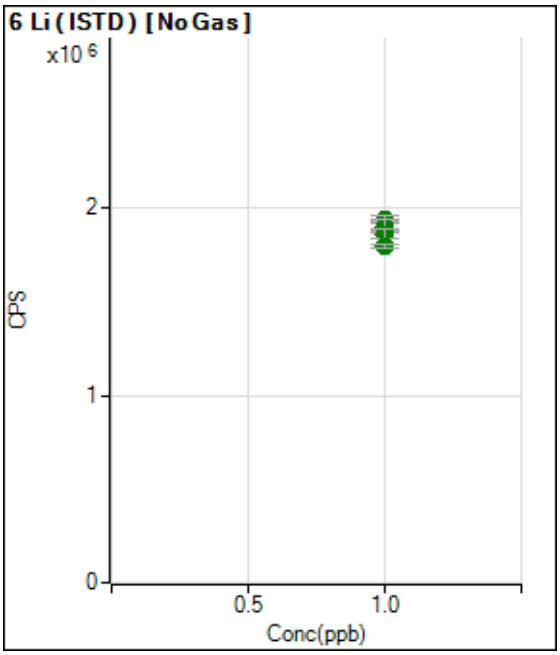
Weight: <None>
Min Conc: <None>



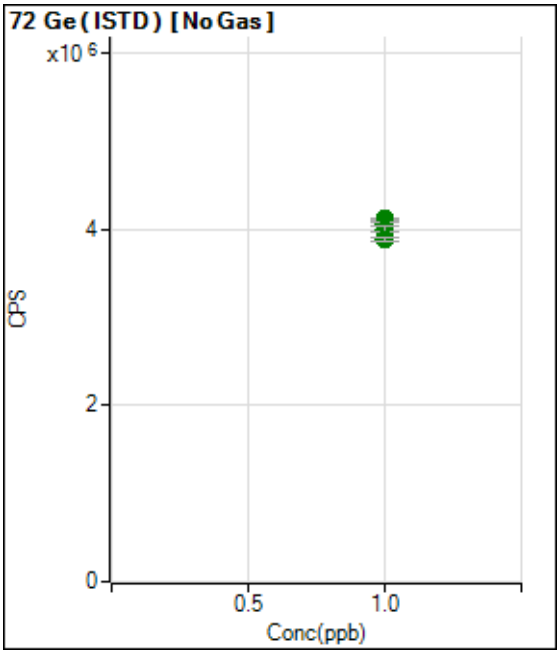
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	103.33	0.0000	P	26.4
2	☐	2.000	1.883	111520.01	0.0284	P	1.8
3	☐	5.000	4.763	281532.16	0.0718	P	0.5
4	☐	10.000	9.464	565562.70	0.1427	P	1.9
5	☐	100.000	97.752	5688429.92	1.4735	A	2.5
6	☐	200.000	201.158	11376675.25	3.0322	A	0.9

y = 0.0151 * x + 2.7001E-005
R = 0.9999
DL = 0.001419
BEC = 0.001791

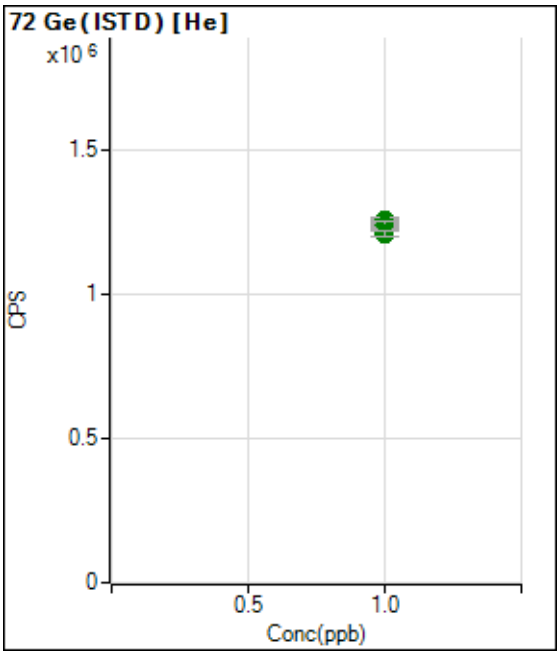
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Min Conc: <None>



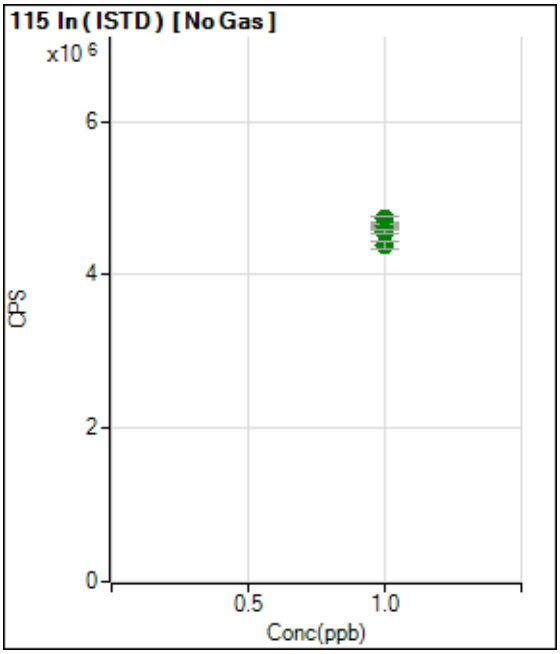
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1897370.46		A	2.1
2	☐	1.000		1935252.98		A	2.3
3	☐	1.000		1902329.70		A	3.1
4	☐	1.000		1900696.25		A	3.8
5	☐	1.000		1860165.90		A	2.6
6	☐	1.000		1798372.15		A	1.3



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		4095315.04		A	0.9
2	☐	1.000		4114990.98		A	0.6
3	☐	1.000		4067897.55		A	1.2
4	☐	1.000		4055229.63		A	0.7
5	☐	1.000		4000602.96		A	1.2
6	☐	1.000		3886631.40		A	0.8

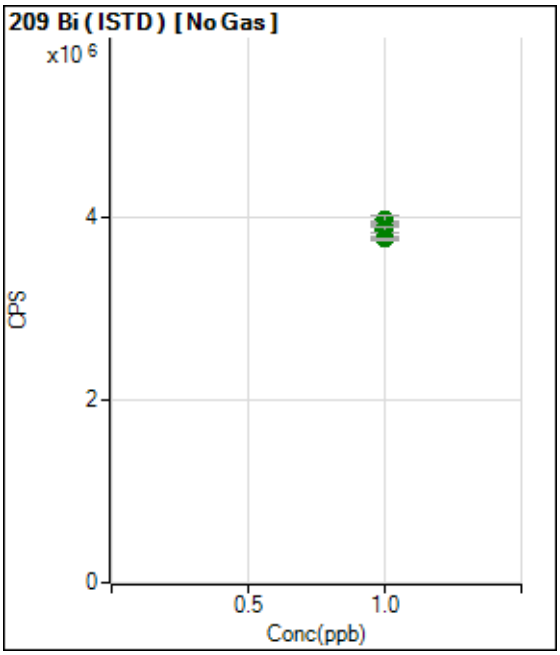


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1239534.20		A	0.7
2	☐	1.000		1257397.14		A	1.2
3	☐	1.000		1259256.18		A	0.9
4	☐	1.000		1240408.97		A	2.4
5	☐	1.000		1214361.44		A	2.5
6	☐	1.000		1210233.45		A	1.5



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		4663528.14		A	0.5
2	☐	1.000		4682089.24		A	0.6
3	☐	1.000		4731006.51		A	1.7
4	☐	1.000		4633144.00		A	0.8
5	☐	1.000		4557263.19		A	0.9
6	☐	1.000		4391888.93		A	2.5

Calibration for 151_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		3842805.67		A	2.8
2	☐	1.000		3926139.94		A	1.1
3	☐	1.000		3919646.30		A	1.1
4	☐	1.000		3964688.69		A	2.2
5	☐	1.000		3859619.74		A	1.3
6	☐	1.000		3752096.30		A	1.0

Sample Report

Sample Table

Sample Name	LLICCV5
Data File Name	152LCV5.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\080921A.b
Acq Date Time	2021-08-09T20:27:06-05:00
Sample Type	LLCCV5
Dilution	1
Comment	
ISTD Ref FileName	144CALB.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	4.988	4.988	0.53	230791	0.00	5	
Be	9	1	No Gas	4.914	4.914	2.04	33712	0.01	5	
V	51	2	He	4.853	4.853	2.50	53310	0.01	5	
Cr	52	2	He	4.959	4.959	2.09	60752	0.01	5	
Fe	56	2	He	517.955	517.955	1.92	5393015	0.01	500	
Se	78	2	He	5.110	5.110	3.83	1057	0.48	5	
As	75	2	He	5.109	5.109	4.34	9173	0.06	5	
Ca	44	2	He	516.814	516.814	2.39	34554	1.50	500	
Na	23	2	He	515.193	515.193	0.90	914538	0.06	500	
Mg	24	2	He	539.230	539.230	2.28	517783	0.10	500	
K	39	2	He	527.771	527.771	2.49	787527	0.07	500	
Mn	55	2	He	4.962	4.962	3.87	42560	0.01	5	
Co	59	2	He	5.132	5.132	2.21	87796	0.01	5	
Ni	60	2	He	5.168	5.168	4.15	23130	0.02	5	
Cu	63	2	He	5.065	5.065	0.99	59320	0.01	5	
Zn	66	2	He	5.123	5.123	2.32	12082	0.04	5	
Al	27	2	He	5.180	5.180	2.10	4841	0.11	5	
B	11	1	No Gas	27.469	27.469	0.92	132405	0.02	25	
Al	27	1	No Gas	5.517	5.517	4.11	227581	0.00	5	
Si	28	1	No Gas	20.286	20.286	15.55	1593808	0.00	25	
Ag	107	1	No Gas	4.995	4.995	0.23	140266	0.00	5	
Cd	111	1	No Gas	4.889	4.889	1.00	28257	0.02	5	
Sr	88	1	No Gas	5.007	5.007	0.45	262311	0.00	5	
Mo	95	1	No Gas	4.874	4.874	1.77	52678	0.01	5	
Sn	118	1	No Gas	4.924	4.924	0.74	85994	0.01	5	
Sb	121	1	No Gas	4.906	4.906	1.64	116092	0.00	5	
Ba	137	1	No Gas	4.737	4.737	1.45	40203	0.01	5	
Tl	205	1	No Gas	5.089	5.089	2.25	225459	0.00	5	
Tl	203	1	No Gas	4.857	4.857	0.88	93285	0.01	5	
Pb	208	1	No Gas	4.952	4.952	0.63	303106	0.00	5	
U	238	1	No Gas	4.821	4.821	0.77	284110	0.00	5	
Ca	43	2	He	506.691	506.691	6.85	1937	26.16	500	
Sb	121	2	He	4.793	4.793	0.99	56452	0.01	5	
Ti	47	2	He	5.396	5.396	8.83	2064	0.26	5	
Cu	63	1	No Gas	5.193	5.193	1.05	113522	0.00	5	
Se	82	1	No Gas	4.852	4.852	14.69	1822	0.27	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	1932914	0.19	1897370	101.87	70	120	
Ge	72	2	He	1253765	1.79	1239534	101.15	70	120	
Ge	72	1	No Gas	4130900	0.84	4095315	100.87	70	120	

Sample Report

In	115	1	No Gas	4684269	1.01	4663528	100.44	70	120	
Bi	209	1	No Gas	3908188	1.52	3842806	101.70	70	120	

Sample Report

Sample Table

Sample Name	LLICCV2
Data File Name	153LCV2.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\080921A.b
Acq Date Time	2021-08-09T20:29:02-05:00
Sample Type	LLCCV2
Dilution	1
Comment	
ISTD Ref FileName	144CALB.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	2.027	2.027	3.02	158138	0.00	2	
Be	9	1	No Gas	2.003	2.003	2.56	13527	0.01	2	
V	51	2	He	1.871	1.871	2.01	22943	0.01	2	
Cr	52	2	He	1.928	1.928	0.41	25033	0.01	2	
Fe	56	2	He	212.453	212.453	0.73	2226201	0.01	200	
Se	78	2	He	1.983	1.983	7.06	528	0.38	2	
As	75	2	He	2.026	2.026	1.66	3766	0.05	2	
Ca	44	2	He	200.976	200.976	3.05	14588	1.38	200	
Na	23	2	He	210.637	210.637	1.53	413012	0.05	200	
Mg	24	2	He	219.641	219.641	2.19	211484	0.10	200	
K	39	2	He	212.598	212.598	1.21	411740	0.05	200	
Mn	55	2	He	2.039	2.039	5.52	17829	0.01	2	
Co	59	2	He	2.083	2.083	1.69	35697	0.01	2	
Ni	60	2	He	2.049	2.049	3.72	9490	0.02	2	
Cu	63	2	He	2.108	2.108	2.05	25464	0.01	2	
Zn	66	2	He	1.977	1.977	5.67	4968	0.04	2	
Al	27	2	He	2.615	2.615	7.47	3384	0.08	2	NewName Main CR1 Failed
B	11	1	No Gas	11.170	11.170	1.07	62688	0.02	10	
Al	27	1	No Gas	2.079	2.079	2.47	141201	0.00	2	
Si	28	1	No Gas	4.503	4.503	29.92	1408252	0.00	10	NewName Main CR1 Failed
Ag	107	1	No Gas	1.987	1.987	0.48	56367	0.00	2	
Cd	111	1	No Gas	1.961	1.961	3.92	11422	0.02	2	
Sr	88	1	No Gas	1.976	1.976	1.77	106271	0.00	2	
Mo	95	1	No Gas	1.936	1.936	3.65	21164	0.01	2	
Sn	118	1	No Gas	1.822	1.822	3.48	34820	0.01	2	
Sb	121	1	No Gas	1.917	1.917	2.41	46533	0.00	2	
Ba	137	1	No Gas	1.879	1.879	3.19	16387	0.01	2	
Tl	205	1	No Gas	1.997	1.997	0.85	87947	0.00	2	
Tl	203	1	No Gas	1.928	1.928	0.82	36795	0.01	2	
Pb	208	1	No Gas	1.958	1.958	1.68	119860	0.00	2	
U	238	1	No Gas	1.896	1.896	1.51	110942	0.00	2	
Ca	43	2	He	208.901	208.901	18.73	827	25.27	200	
Sb	121	2	He	1.988	1.988	3.83	23568	0.01	2	
Ti	47	2	He	1.951	1.951	8.37	757	0.26	200	
Cu	63	1	No Gas	2.037	2.037	1.54	47095	0.00	2	
Se	82	1	No Gas	1.528	1.528	29.31	553	0.28	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	1901480	0.47	1897370	100.22	70	120	
Ge	72	2	He	1254550	0.90	1239534	101.21	70	120	
Ge	72	1	No Gas	4205411	0.24	4095315	102.69	70	120	
In	115	1	No Gas	4718113	0.51	4663528	101.17	70	120	
Bi	209	1	No Gas	3879045	0.88	3842806	100.94	70	120	

Initial Calibration Blank (ICB) Report

Sample Table

Sample Name	ICCB
Data File Name	154_ICB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\080921A.b
Acq Date Time	2021-08-09T20:30:59-05:00
Sample Type	ICB
Dilution	1
Comment	
ISTD Ref File Name	144CALB.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	-0.072	-80.1	108663	0.9	0.5	
Be	9	1	No Gas	0.003	94.9	38	54.3	0.5	
V	51	2	He	-0.032	-13.8	3537	1.4	2.5	
Cr	52	2	He	-0.015	-125.4	2094	11.0	2.5	
Fe	56	2	He	2.386	5.1	45627	2.7	100	
Se	78	2	He	0.070	88.7	204	5.1	1	
As	75	2	He	0.022	33.8	244	5.2	2.5	
Ca	44	2	He	1.667	91.0	1970	4.7	100	
Na	23	2	He	-3.678	-20.3	59658	1.9	100	
Mg	24	2	He	0.054	112.1	767	7.6	100	
K	39	2	He	0.572	215.1	158353	1.1	100	
Mn	55	2	He	0.003	78.0	580	3.4	2.5	
Co	59	2	He	0.000	819.0	53	43.3	2.5	
Ni	60	2	He	-0.015	-65.6	450	9.7	2.5	
Cu	63	2	He	0.011	93.2	1423	8.2	1	
Zn	66	2	He	0.033	146.2	570	19.0	2.5	
Al	27	2	He	0.855	12.9	2380	2.6	5	
B	11	1	No Gas	1.040	9.2	20578	0.2	0.5	ICB Main CR1 Failed
Al	27	1	No Gas	0.886	8.5	107444	1.0	5	
Si	28	1	No Gas	-4.824	-20.5	1253950	0.9	10	
Ag	107	1	No Gas	0.191	5.9	5638	5.3	2.5	
Cd	111	1	No Gas	0.000	-9175.1	10	100.0	1	
Sr	88	1	No Gas	0.016	31.1	4111	6.3	2.5	
Mo	95	1	No Gas	0.014	15.6	293	7.9	2.5	
Sn	118	1	No Gas	-0.064	-11.4	3304	4.0	5	
Sb	121	1	No Gas	0.049	18.9	1703	12.4	2.5	
Ba	137	1	No Gas	0.067	13.9	1100	7.4	2.5	
Tl	205	1	No Gas	0.039	12.6	1877	12.5	1	
Tl	203	1	No Gas	0.039	15.8	810	15.0	1	
Pb	208	1	No Gas	0.009	16.0	2097	4.3	2.5	
U	238	1	No Gas	0.015	15.1	990	14.3	2.5	
Ca	43	2	He	0.732	363.0	50	20.0	100	
Sb	121	2	He	0.040	6.0	713	4.0	2.5	
Ti	47	2	He	0.043	247.2	33	121.2	2.5	
Se	82	1	No Gas	0.098	632.6	-10	-2364.5	1	

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	1890983	1.80	1897370	99.66	70	120	
Ge	72	2	He	1253449	0.22	1239534	101.12	70	120	
Ge	72	1	No Gas	4115358	1.81	4095315	100.49	70	120	
In	115	1	No Gas	4679441	0.39	4663528	100.34	70	120	
Bi	209	1	No Gas	3886487	1.62	3842806	101.14	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	201_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\080921A.b
Acq Date Time	2021-08-09T22:03:50-05:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	144CALB.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	100.469	2.039	2223303	0.95	100	100.5	90	110	
Be	9	1	No Gas	104.820	3.017	641864	0.76	100	104.8	90	110	
V	51	2	He	102.956	1.396	1215543	1.12	100	103.0	90	110	
Cr	52	2	He	102.146	1.243	1393272	1.23	100	102.1	90	110	
Fe	56	2	He	10091.436	1.166	120863605	0.88	10000	100.9	90	110	
Se	78	2	He	97.852	1.431	19339	1.74	100	97.9	90	110	
As	75	2	He	98.723	0.341	200370	0.65	100	98.7	90	110	
Ca	44	2	He	10373.667	1.089	759499	1.35	10000	103.7	90	110	
Na	23	2	He	11245.966	1.150	21464199	1.47	10000	112.5	90	110	CCV Main CR1-2 Failed
Mg	24	2	He	10674.372	1.920	11818559	2.10	10000	106.7	90	110	
K	39	2	He	10721.857	0.895	14954786	0.66	10000	107.2	90	110	
Mn	55	2	He	102.336	3.044	1000975	2.89	100	102.3	90	110	
Co	59	2	He	102.623	1.652	2025845	1.34	100	102.6	90	110	
Ni	60	2	He	98.710	1.829	499374	1.53	100	98.7	90	110	
Cu	63	2	He	97.038	2.282	1284662	2.35	100	97.0	90	110	
Zn	66	2	He	99.755	1.368	260916	1.05	100	99.8	90	110	
Al	27	2	He	106.383	2.139	72054	2.21	100	106.4	90	110	
B	11	1	No Gas	533.728	4.124	2022828	2.02	500	106.7	90	110	
Al	27	1	No Gas	103.262	4.176	2900781	4.67	100	103.3	90	110	
Si	28	1	No Gas	516.888	1.601	8658157	1.94	5000	10.3	90	110	CCV Main CR1-2 Failed
Ag	107	1	No Gas	101.405	0.862	2799842	0.93	100	101.4	90	110	
Cd	111	1	No Gas	97.886	1.871	557255	1.44	100	97.9	90	110	
Sr	88	1	No Gas	103.316	1.449	5268816	1.08	100	103.3	90	110	
Mo	95	1	No Gas	98.839	2.330	1049734	1.00	100	98.8	90	110	
Sn	118	1	No Gas	99.016	3.034	1621156	1.89	100	99.0	90	110	
Sb	121	1	No Gas	91.791	0.391	2276355	0.28	100	91.8	90	110	
Ba	137	1	No Gas	94.138	2.276	777181	1.06	100	94.1	90	110	
Tl	205	1	No Gas	101.735	2.196	4061184	0.94	100	101.7	90	110	
Tl	203	1	No Gas	100.234	0.356	1735145	1.66	100	100.2	90	110	
Pb	208	1	No Gas	100.589	2.312	5523332	0.91	100	100.6	90	110	
U	238	1	No Gas	94.792	2.167	5034743	0.77	100	94.8	90	110	
Ca	43	2	He	10394.938	2.056	44823	2.23	10000	103.9	90	110	
Sb	121	2	He	91.654	2.090	1241098	2.42	100	91.7	90	110	
Ti	47	2	He	101.514	2.128	44432	2.17	100	101.5	90	110	
Cu	63	1	No Gas	107.087	2.973	2405941	3.24	100	107.1	90	110	
Se	82	1	No Gas	97.007	1.462	39297	1.42	100	97.0	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	1726790	2.30	1897370	91.01	70	120	
Ge	72	2	He	1447202	0.32	1239534	116.75	70	120	
Ge	72	1	No Gas	4349357	0.64	4095315	106.20	70	120	
In	115	1	No Gas	4615736	1.35	4663528	98.98	70	120	
Bi	209	1	No Gas	3524442	1.93	3842806	91.72	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	202_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\080921A.b
Acq Date Time	2021-08-09T22:05:39-05:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	144CALB.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	-0.042	-222.0	100940	0.8	0.5	
Be	9	1	No Gas	0.011	32.9	82	25.5	0.5	
V	51	2	He	-0.057	-11.3	3757	1.0	2.5	
Cr	52	2	He	0.061	28.9	3434	6.7	2.5	
Fe	56	2	He	4.103	4.0	72677	2.0	100	
Se	78	2	He	0.147	50.8	249	5.7	2	
As	75	2	He	0.026	71.6	289	13.9	2.5	
Ca	44	2	He	15.696	8.6	3274	2.6	100	
Na	23	2	He	619.887	2.5	1245112	1.3	100	CCB Main CR1 Failed
Mg	24	2	He	1.305	3.0	2254	2.4	100	
K	39	2	He	11.978	13.0	197030	0.1	100	
Mn	55	2	He	0.094	18.4	1550	11.9	2.5	
Co	59	2	He	0.004	74.5	127	40.5	2.5	
Ni	60	2	He	0.078	41.9	980	15.7	2.5	
Cu	63	2	He	0.016	8.0	1707	1.8	2	
Zn	66	2	He	0.897	11.7	2890	8.8	2.5	
Al	27	2	He	1.002	16.6	2824	4.7	5	
B	11	1	No Gas	1.506	19.8	20764	4.3	0.5	CCB Main CR1 Failed
Al	27	1	No Gas	0.975	8.0	117696	1.3	5	
Si	28	1	No Gas	3.061	42.0	1457193	0.7	10	
Ag	107	1	No Gas	0.024	8.8	977	4.8	2.5	
Cd	111	1	No Gas	0.002	200.1	20	100.0	1	
Sr	88	1	No Gas	0.026	19.9	4651	3.9	2.5	
Mo	95	1	No Gas	0.071	11.5	920	9.8	2.5	
Sn	118	1	No Gas	0.039	37.1	5038	3.3	5	
Sb	121	1	No Gas	0.048	10.3	1807	7.4	2.5	
Ba	137	1	No Gas	0.021	34.0	720	10.0	2.5	
Tl	205	1	No Gas	0.041	47.0	1817	42.7	1	
Tl	203	1	No Gas	0.040	47.1	753	43.4	1	
Pb	208	1	No Gas	0.018	11.0	2470	4.1	2.5	
U	238	1	No Gas	0.027	15.0	1537	13.7	2.5	
Ca	43	2	He	14.706	103.9	117	55.1	100	
Sb	121	2	He	0.037	30.2	777	18.6	2.5	
Ti	47	2	He	0.040	88.7	37	41.7	2.5	
Cu	63	1	No Gas	4.703	1.5	110116	0.9	2.5	CCB Main CR1 Failed
Se	82	1	No Gas	0.022	2127.1	-40	-473.9	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	1745458	1.23	1897370	91.99	70	120	
Ge	72	2	He	1436272	1.03	1239534	115.87	70	120	
Ge	72	1	No Gas	4413064	0.55	4095315	107.76	70	120	
In	115	1	No Gas	4700520	2.03	4663528	100.79	70	120	
Bi	209	1	No Gas	3588106	0.73	3842806	93.37	70	120	

Sample Report

Sample Table

Sample Name	LLCCV2
Data File Name	205LCV2.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\080921A.b
Acq Date Time	2021-08-09T22:11:20-05:00
Sample Type	LLCCV2
Dilution	1
Comment	
ISTD Ref FileName	144CALB.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	1.894	1.894	4.26	141829	0.00	2	
Be	9	1	No Gas	2.085	2.085	2.77	12883	0.02	2	
V	51	2	He	1.866	1.866	2.57	25789	0.01	2	
Cr	52	2	He	2.011	2.011	2.48	29305	0.01	2	
Fe	56	2	He	216.559	216.559	2.00	2556012	0.01	200	
Se	78	2	He	2.246	2.246	10.79	645	0.35	2	
As	75	2	He	1.993	1.993	3.36	4177	0.05	2	
Ca	44	2	He	215.484	215.484	5.82	17471	1.23	200	
Na	23	2	He	802.701	802.701	3.29	1564676	0.05	200	NewName Main CR1 Failed
Mg	24	2	He	229.830	229.830	1.58	249310	0.09	200	
K	39	2	He	235.828	235.828	2.13	495144	0.05	200	
Mn	55	2	He	2.057	2.057	2.06	20259	0.01	2	
Co	59	2	He	2.068	2.068	3.32	39919	0.01	2	
Ni	60	2	He	2.060	2.060	6.06	10744	0.02	2	
Cu	63	2	He	2.007	2.007	3.51	27381	0.01	2	
Zn	66	2	He	2.070	2.070	4.99	5835	0.04	2	
Al	27	2	He	2.692	2.692	23.49	3857	0.07	2	NewName Main CR1 Failed
B	11	1	No Gas	12.761	12.761	2.74	63378	0.02	10	
Al	27	1	No Gas	2.445	2.445	5.45	158971	0.00	2	
Si	28	1	No Gas	10.487	10.487	12.89	1569880	0.00	10	
Ag	107	1	No Gas	1.982	1.982	1.42	56936	0.00	2	
Cd	111	1	No Gas	1.908	1.908	1.57	11252	0.02	2	
Sr	88	1	No Gas	2.058	2.058	2.97	111890	0.00	2	
Mo	95	1	No Gas	1.971	1.971	2.59	21812	0.01	2	
Sn	118	1	No Gas	1.933	1.933	3.96	37123	0.01	2	
Sb	121	1	No Gas	1.778	1.778	0.93	45516	0.00	2	
Ba	137	1	No Gas	1.792	1.792	3.88	15850	0.01	2	
Tl	205	1	No Gas	1.991	1.991	1.27	81446	0.00	2	
Tl	203	1	No Gas	1.944	1.944	2.22	34475	0.01	2	
Pb	208	1	No Gas	1.968	1.968	2.14	111920	0.00	2	
U	238	1	No Gas	1.837	1.837	0.81	99901	0.00	2	
Ca	43	2	He	259.549	259.549	9.12	1147	22.63	200	
Sb	121	2	He	1.779	1.779	4.55	23785	0.01	2	
Ti	47	2	He	2.014	2.014	10.16	880	0.23	200	
Cu	63	1	No Gas	6.454	6.454	2.62	150654	0.00	2	NewName Main CR1 Failed
Se	82	1	No Gas	1.932	1.932	23.56	751	0.26	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	1739663	1.15	1897370	91.69	70	120	
Ge	72	2	He	1413718	2.29	1239534	114.05	70	120	
Ge	72	1	No Gas	4432174	0.57	4095315	108.23	70	120	
In	115	1	No Gas	4778127	2.22	4663528	102.46	70	120	
Bi	209	1	No Gas	3603848	1.69	3842806	93.78	70	120	

Sample Report

Sample Table

Sample Name	LLCCV5
Data File Name	206LCV5.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\080921A.b
Acq Date Time	2021-08-09T22:13:17-05:00
Sample Type	LLCCV5
Dilution	1
Comment	
ISTD Ref FileName	144CALB.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	4.995	4.995	4.68	209347	0.00	5	
Be	9	1	No Gas	5.187	5.187	1.30	32259	0.02	5	
V	51	2	He	4.955	4.955	1.42	60654	0.01	5	
Cr	52	2	He	5.173	5.173	3.78	70596	0.01	5	
Fe	56	2	He	527.117	527.117	1.13	6124933	0.01	500	
Se	78	2	He	5.628	5.628	5.41	1277	0.44	5	
As	75	2	He	5.119	5.119	4.11	10257	0.05	5	
Ca	44	2	He	542.751	542.751	2.36	40386	1.34	500	
Na	23	2	He	1135.011	1135.011	1.98	2159697	0.05	500	NewName2 Main CR1 Failed
Mg	24	2	He	572.979	572.979	1.60	613929	0.09	500	
K	39	2	He	600.720	600.720	3.61	975889	0.06	500	
Mn	55	2	He	5.230	5.230	1.44	50049	0.01	5	
Co	59	2	He	5.230	5.230	2.89	99845	0.01	5	
Ni	60	2	He	5.083	5.083	4.19	25394	0.02	5	
Cu	63	2	He	5.037	5.037	2.61	65830	0.01	5	
Zn	66	2	He	5.331	5.331	6.95	13994	0.04	5	
Al	27	2	He	5.967	5.967	3.45	5901	0.10	5	
B	11	1	No Gas	27.774	27.774	1.28	121183	0.02	25	
Al	27	1	No Gas	5.806	5.806	2.83	250424	0.00	5	
Si	28	1	No Gas	24.593	24.593	9.81	1759350	0.00	25	
Ag	107	1	No Gas	4.940	4.940	1.75	140635	0.00	5	
Cd	111	1	No Gas	4.881	4.881	1.33	28601	0.02	5	
Sr	88	1	No Gas	5.188	5.188	1.60	275408	0.00	5	
Mo	95	1	No Gas	4.896	4.896	2.96	53645	0.01	5	
Sn	118	1	No Gas	4.867	4.867	0.54	86223	0.01	5	
Sb	121	1	No Gas	4.549	4.549	2.75	114703	0.00	5	
Ba	137	1	No Gas	4.741	4.741	0.13	40798	0.01	5	
Tl	205	1	No Gas	4.935	4.935	1.46	199632	0.00	5	
Tl	203	1	No Gas	4.837	4.837	1.83	84819	0.01	5	
Pb	208	1	No Gas	4.890	4.890	1.65	273236	0.00	5	
U	238	1	No Gas	4.680	4.680	0.68	251812	0.00	5	
Ca	43	2	He	538.835	538.835	11.71	2294	23.49	500	
Sb	121	2	He	4.479	4.479	2.67	58869	0.01	5	
Ti	47	2	He	5.414	5.414	6.53	2310	0.23	5	
Cu	63	1	No Gas	9.514	9.514	4.47	218955	0.00	5	NewName2 Main CR1 Failed
Se	82	1	No Gas	5.062	5.062	5.66	2029	0.25	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	1752151	0.38	1897370	92.35	70	120	
Ge	72	2	He	1399061	1.65	1239534	112.87	70	120	
Ge	72	1	No Gas	4401912	2.30	4095315	107.49	70	120	
In	115	1	No Gas	4749021	0.98	4663528	101.83	70	120	
Bi	209	1	No Gas	3568290	1.67	3842806	92.86	70	120	

Interference Check Solution A (ICS-A) Report

Sample Table

Sample Name	ICSA
Data File Name	207ICSA.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\080921A.b
Acq Date Time	2021-08-09T22:15:14-05:00
Sample Type	ICSA
Dilution	1
Comment	
ISTD Ref File Name	144CALB.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	0.297	18.9	100113	0.7	0	ICSA Main CR1 Failed
Be	9	1	No Gas	0.004	52.3	38	32.8	0	ICSA Main CR1 Failed
V	51	2	He	-0.051	-18.6	3613	1.3	0	ICSA Main CR1 Failed
Cr	52	2	He	1.929	1.4	27027	1.0	0	ICSA Main CR1 Failed
Fe	56	2	He	98497.668	2.3	1103396197	2.0	0	
Se	78	2	He	0.360	8.8	273	1.5	0	ICSA Main CR1 Failed
As	75	2	He	0.063	21.7	342	8.4	0	ICSA Main CR1 Failed
Ca	44	2	He	98857.197	0.7	6754112	1.4	0	
Na	23	2	He	103440.862	3.3	184070064	2.0	0	
Mg	24	2	He	102574.585	1.1	106248308	2.0	0	
K	39	2	He	105415.469	0.4	136060925	1.6	0	
Mn	55	2	He	0.391	2.3	4171	3.1	0	ICSA Main CR1 Failed
Co	59	2	He	0.077	4.6	1470	5.9	0	ICSA Main CR1 Failed
Ni	60	2	He	0.176	9.8	1387	5.5	0	ICSA Main CR1 Failed
Cu	63	2	He	0.160	5.5	3384	2.3	0	ICSA Main CR1 Failed
Zn	66	2	He	1.174	1.7	3400	1.8	0	ICSA Main CR1 Failed
Al	27	2	He	98221.883	2.2	60354234	2.8	0	
B	11	1	No Gas	0.732	1.9	16493	0.3	0	ICSA Main CR1 Failed
Al	27	1	No Gas	96634.040	1.6	2478857936	1.2	0	
Si	28	1	No Gas	26.981	7.8	1670192	1.0	0	
Ag	107	1	No Gas	0.276	6.3	7396	4.0	0	ICSA Main CR1 Failed
Cd	111	1	No Gas	2.024	4.6	10785	6.2	0	
Sr	88	1	No Gas	1.170	3.3	58740	1.2	0	ICSA Main CR1 Failed
Mo	95	1	No Gas	1919.051	3.7	19045157	1.7	0	
Sn	118	1	No Gas	-0.026	-20.8	3637	4.4	0	ICSA Main CR1 Failed
Sb	121	1	No Gas	0.054	9.8	1834	8.0	0	ICSA Main CR1 Failed
Ba	137	1	No Gas	0.360	18.6	3267	13.8	0	ICSA Main CR1 Failed
Tl	205	1	No Gas	0.006	37.4	373	23.4	0	ICSA Main CR1 Failed
Tl	203	1	No Gas	0.007	38.5	167	28.4	0	ICSA Main CR1 Failed
Pb	208	1	No Gas	0.079	2.9	5274	2.7	0	ICSA Main CR1 Failed
U	238	1	No Gas	0.003	31.1	230	19.0	0	ICSA Main CR1 Failed
Ca	43	2	He	98477.341	3.0	396761	2.3	0	
Sb	121	2	He	0.049	34.2	873	22.9	0	ICSA Main CR1 Failed
Ti	47	2	He	2025.754	1.4	829189	1.9	0	
Se	82	1	No Gas	0.062	776.8	-20	-942.7	0	ICSA Main CR1 Failed

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	1615028	0.55	1897370	85.12	70	120	
Ge	72	2	He	1353996	1.55	1239534	109.23	70	120	
Ge	72	1	No Gas	4098963	1.19	4095315	100.09	70	120	
In	115	1	No Gas	4315028	2.25	4663528	92.53	70	120	
Bi	209	1	No Gas	3224710	1.78	3842806	83.92	70	120	

Interference Check Solution AB (ICS-AB) Report

Sample Table

Sample Name	ICSAB
Data File Name	208ICSB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\080921A.b
Acq Date Time	2021-08-09T22:17:19-05:00
Sample Type	ICSB
Dilution	1
Comment	
ISTD Ref File Name	144CALB.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	103.157	3.957	2070771	2.33	100	103.2	180	120	ICSB Main CR1 Failed
Be	9	1	No Gas	105.890	1.899	589119	0.96	100	105.9	80	120	
V	51	2	He	102.681	2.659	1116104	1.76	100	102.7	80	120	
Cr	52	2	He	100.831	1.041	1266335	0.66	100	100.8	80	120	
Fe	56	2	He	108099.278	1.384	1191823102	0.50	100	108099.3	80	120	
Se	78	2	He	99.685	1.063	18136	0.91	100	99.7	80	120	
As	75	2	He	99.157	1.586	185286	0.80	100	99.2	80	120	
Ca	44	2	He	109815.302	0.816	7383695	0.85	100	109815.3	80	120	
Na	23	2	He	114209.479	2.210	200045537	1.62	100	114209.5	80	120	
Mg	24	2	He	114101.433	0.825	116310118	0.89	100	114101.4	80	120	
K	39	2	He	116647.274	0.945	148146471	0.29	100	116647.3	80	120	
Mn	55	2	He	97.343	1.162	876700	0.41	100	97.3	80	120	
Co	59	2	He	98.158	2.044	1784012	1.15	100	98.2	80	120	
Ni	60	2	He	94.596	1.365	440650	0.58	100	94.6	80	120	
Cu	63	2	He	94.611	3.281	1153158	2.70	100	94.6	80	120	
Zn	66	2	He	98.361	1.729	236878	0.95	100	98.4	80	120	
Al	27	2	He	98957.381	0.385	59841169	0.64	100	98957.4	80	120	ICSB Main CR1 Failed
B	11	1	No Gas	543.332	1.090	1871107	1.09	100	543.3	80	120	
Al	27	1	No Gas	94122.648	2.442	2455084763	1.80	100	94122.6	80	120	ICSB Main CR1 Failed
Si	28	1	No Gas	519.889	1.955	8336408	0.41	100	519.9	80	120	
Ag	107	1	No Gas	94.796	1.874	2432137	1.92	100	94.8	80	120	
Cd	111	1	No Gas	98.027	0.903	518583	0.80	100	98.0	80	120	
Sr	88	1	No Gas	105.302	1.024	4990064	0.98	100	105.3	80	120	
Mo	95	1	No Gas	2031.988	1.111	20054583	1.49	100	2032.0	80	120	
Sn	118	1	No Gas	100.129	2.000	1523520	1.68	100	100.1	80	120	
Sb	121	1	No Gas	90.586	2.220	2152560	0.90	100	90.6	80	120	
Ba	137	1	No Gas	94.151	0.144	722379	0.64	100	94.2	80	120	
Tl	205	1	No Gas	100.742	1.535	3604194	2.08	100	100.7	80	120	
Tl	203	1	No Gas	100.798	1.985	1563596	2.89	100	100.8	80	120	
Pb	208	1	No Gas	100.100	0.880	4926164	1.65	100	100.1	80	120	
U	238	1	No Gas	101.059	1.611	4811820	3.53	100	101.1	80	120	
Ca	43	2	He	108641.674	1.534	430826	0.63	100	108641.7	80	120	
Sb	121	2	He	91.053	2.518	1135057	1.68	100	91.1	80	120	
Ti	47	2	He	2117.505	2.031	852929	1.16	100	2117.5	80	120	
Cu	63	1	No Gas	97.545	0.785	2100368	0.85	100	97.5	80	120	
Se	82	1	No Gas	95.238	1.435	36969	0.16	100	95.2	80	120	

QC ISTD Table

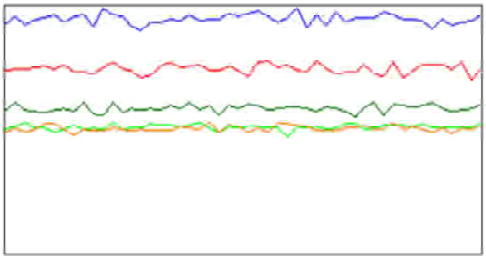
Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	1568430	1.57	1897370	82.66	70	120	
Ge	72	2	He	1332539	0.90	1239534	107.50	70	120	
Ge	72	1	No Gas	4168240	1.33	4095315	101.78	70	120	
In	115	1	No Gas	4288819	0.50	4663528	91.97	70	120	
Bi	209	1	No Gas	3158213	2.28	3842806	82.19	70	120	

Tune Check Report

Operator Name	ALSHS NoUser
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\080921A.b
Acq. Date-Time	8/9/2021 1:41:33 PM
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	7469	74693.77		
24	50000	25608	256076.19		
59	50000	47524	475239.18		
115	100000	50616	506158.86		
208	50000	29388	293879.86		

Mass	Resp Ratio	Resp Ratio (Required)	Resp Ratio (Flag)
9		-	
24		-	
59		-	
115		-	
208		-	

Mass	RSD%	RSD% (Required)	RSD% (Flag)
9	2.517	5.000	
24	2.106	5.000	
59	2.093	5.000	
115	2.361	5.000	
208	2.463	5.000	

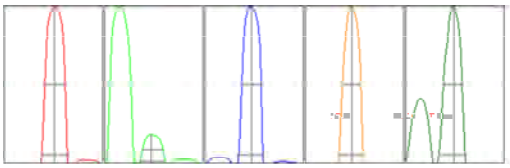
Mass	Background	Background (Required)	Background (Flag)
9	0.600		
24	0.500		
59	0.300		
115	1.000		
208	1.700		

Oxide/Doubly Charged Ratio

Oxide	156 / 140 1.154 %
Doubly Charged	70 / 140 1.036 %

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	7525.61	9.05	8.90 - 9.10	
24	25861.77	23.95	23.90 - 24.10	
59	47858.87	58.95	58.90 - 59.10	
115	51254.45	114.95	114.90 - 115.10	
208	29339.56	208.00	207.90 - 208.10	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (Flag)
9	0.63	0.780		
24	0.63	0.777		
59	0.60	0.734		
115	0.56	0.732		
208	0.58	0.790		

Tune Parameters

Plasma Parameters

Plasma Mode	---	Nebulizer Gas	0.47 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	14.0 V
Extract 2	-195.0 V	Cell Entrance	-30 V	Plate Bias	-45 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	200 V		

QP Parameters

Mass Gain	134	Axis Gain	1.0002	QP Bias	-3.0 V
Mass Offset	125	Axis Offset	0.12		

Hardware Settings

Torch

Torch H	1.3 mm	Torch V	-0.6 mm

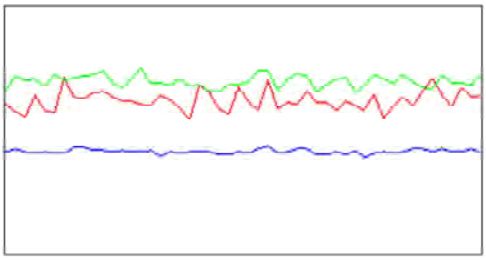
EM

Discriminator	4.4 mV	Analog HV	2549 V	Pulse HV	1310 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	309	3093.54		
24	2000	1394	13936.52		
59	50000	20656	206558.05		

Mass	Resp Ratio	Resp Ratio (Required)	Resp Ratio (Flag)
9		-	
24		-	
59		-	

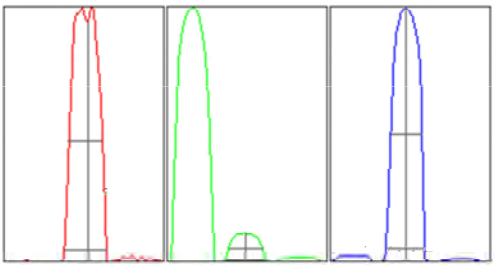
Mass	RSD%	RSD% (Required)	RSD% (Flag)
9	6.417	5.000	Fail
24	3.600	5.000	
59	2.271	5.000	

Mass	Background	Background (Required)	Background (Flag)
9	0.100		
24	0.100		
59	0.000		

Oxide/Doubly Charged Ratio

Oxide	156 / 140 0.665 %
Doubly Charged	70 / 140 1.173 %

Resolution/Axis



Integration Time [sec]	0.1
Acquisition Time [sec]	22.24
Y Axis	Linear

Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
9	273.04	9.10	8.90 - 9.10	
24	1417.78	24.00	23.90 - 24.10	
59	21073.20	58.95	58.90 - 59.10	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (Flag)
9	0.64	0.785		
24	0.62	0.774		

Tune Check Report

Mass	W-50%	W-5%	W-5% (Required)	W-5% (Flag)
59	0.59	0.732		

Tune Parameters

Plasma Parameters

Plasma Mode	---	Nebulizer Gas	0.47 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	0.2 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	4.1 mL/min	OctP Bias	-18.0 V		
H2 Flow	---	OctP RF	200 V		

QP Parameters

Mass Gain	134	Axis Gain	1.0002	QP Bias	-15.0 V
Mass Offset	125	Axis Offset	0.12		

Hardware Settings

Torch

Torch H	1.3 mm	Torch V	-0.6 mm

EM

Discriminator	4.4 mV	Analog HV	2549 V	Pulse HV	1310 V

HS21071405 TOC Raw Data

ALS WO# HS21071405

TOC-Control L Report

2021_05_10_002.tlx

Instr.Information

Instrument Options	TOC/ASI/IC Unit/
Catalyst	Regular Sensitivity

Cal. Curve

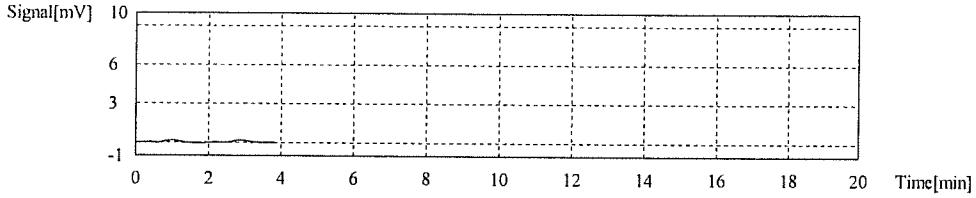
Sample Name:	CAL
Sample ID:	Untitled
Cal. Curve:	05_10_2021A_CAL.2021_05_10_17_37_49.cal
Status	Completed

Type	Anal.
Standard	NPOC

Conc: 0.000mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	0.4989	50uL	1.000	*******		5/10/2021 5:45:57 PM
2	0.3616	50uL	1.000	*******		5/10/2021 5:48:41 PM

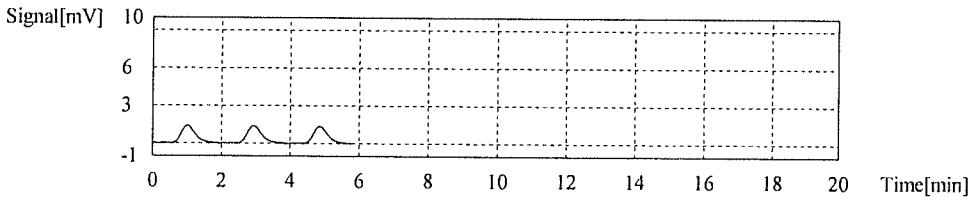
Acid Add.	1.500%
Sparge Gas Flow	80mL/min
Sp. Time	90.00sec
Mean Area	0.4303



Conc: 1.000mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	3.881	50uL	1.000	*******		5/10/2021 5:56:40 PM
2	4.044	50uL	1.000	*******	E	5/10/2021 5:59:24 PM
3	3.915	50uL	1.000	*******		5/10/2021 6:02:09 PM

Acid Add.	1.500%
Sparge Gas Flow	80mL/min
Sp. Time	90.00sec
Mean Area	3.898



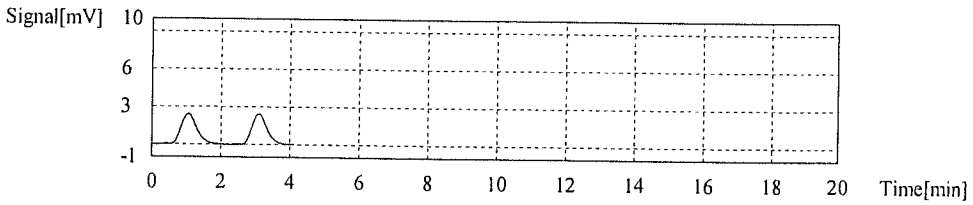
Conc: 2.000mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	7.481	50uL	1.000	*******		5/10/2021 6:10:31 PM
2	7.343	50uL	1.000	*******		5/10/2021 6:13:15 PM

TOC-Control L Report

2021_05_10_002.tlx

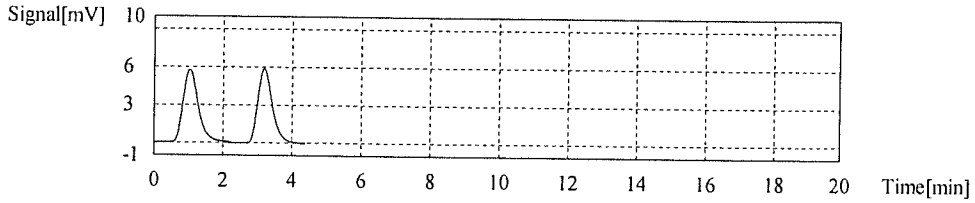
Acid Add.	1.500%
Sparge Gas Flow	80mL/min
Sp. Time	90.00sec
Mean Area	7.412



Conc: 5.000mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	17.39	50uL	1.000	*******		5/10/2021 6:21:29 PM
2	17.58	50uL	1.000	*******		5/10/2021 6:24:16 PM

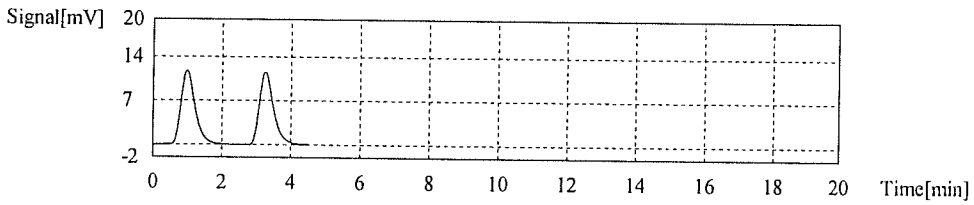
Acid Add.	1.500%
Sparge Gas Flow	80mL/min
Sp. Time	90.00sec
Mean Area	17.48



Conc: 10.00mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	33.69	50uL	1.000	*******		5/10/2021 6:32:55 PM
2	33.47	50uL	1.000	*******		5/10/2021 6:35:37 PM

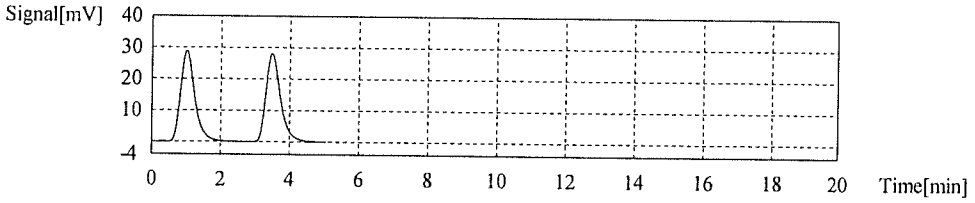
Acid Add.	1.500%
Sparge Gas Flow	80mL/min
Sp. Time	90.00sec
Mean Area	33.58



Conc: 25.00mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	83.30	50uL	1.000	*******		5/10/2021 6:44:29 PM
2	83.46	50uL	1.000	*******		5/10/2021 6:47:16 PM

Acid Add.	1.500%
Sparge Gas Flow	80mL/min
Sp. Time	90.00sec
Mean Area	83.38



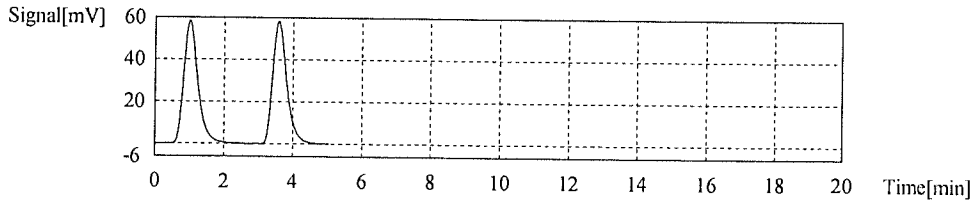
Conc: 50.00mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	167.7	50uL	1.000	*******		5/10/2021 6:56:07 PM
2	166.5	50uL	1.000	*******		5/10/2021 6:58:48 PM

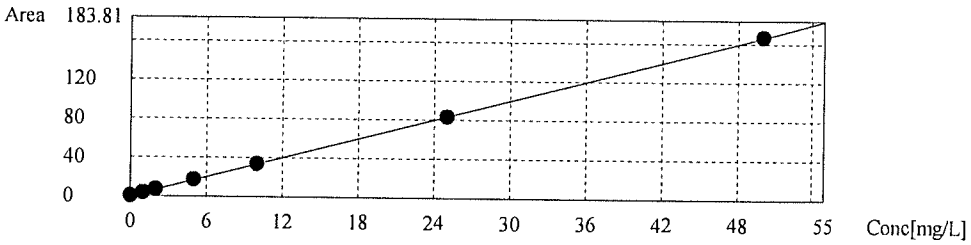
TOC-Control L Report

2021_05_10_002.tlx

Acid Add.	1.500%
Sparge Gas Flow	80mL/min
Sp. Time	90.00sec
Mean Area	167.1



Slope:	3.327
Intercept	0.000
r^2	1.0000
r	1.0000
RSE(%)	N/A
Zero Shift	Yes



C:\TOC-L\Data\2021_08_10_001.tlx

	Type	Analysis	Sample Name	Sample ID	Origin	Result	Notes	Status
1	Unknown	NPOC	CCV	317191009	05_10_2021	NPOC:26.04mg/		Completed
2	Unknown	NPOC	CCB		05_10_2021	NPOC:0.7502mg		Completed
3	Unknown	NPOC	MBLK-080921		05_10_2021	NPOC:0.09303m		Completed
4	Unknown	NPOC	LCS-08092021	3100603915	05_10_2021	NPOC:10.12mg/		Completed
5	Unknown	NPOC	LCSD-08092021	3100603915	05_10_2021	NPOC:9.721mg/		Completed
6	Unknown	NPOC	HS21071394-01		05_10_2021	NPOC:2.739mg/		Completed
7	Unknown	NPOC	HS21071394-02		05_10_2021	NPOC:137.5mg/		Completed
8	Unknown	NPOC	HS21071394-03		05_10_2021	NPOC:93.08mg/		Completed
9	Unknown	NPOC	HS21071402-01		05_10_2021	NPOC:11.94mg/		Completed
10	Unknown	NPOC	HS21071405-08		05_10_2021	NPOC:5.518mg/		Completed
11	Unknown	NPOC	HS21071405-08MS		05_10_2021	NPOC:16.98mg/		Completed
12	Unknown	NPOC	CCV	317191009	05_10_2021	NPOC:25.97mg/		Completed
13	Unknown	NPOC	CCB		05_10_2021	NPOC:0.1852mg		Completed

	Date / Time	Vial
1	8/10/2021 1	1
2	8/10/2021 1	2
3	8/10/2021 1	3
4	8/10/2021 1	4
5	8/10/2021 1	5
6	8/10/2021 1	6
7	8/10/2021 1	7
8	8/10/2021 1	8
9	8/10/2021 1	9
10	8/10/2021 1	10
11	8/10/2021 1	11
12	8/10/2021 1	1
13	8/10/2021 1:	2

C:\TOC-L\Data\2021_05_10_002.tlx

	Type	Analysis	Sample Name	Sample ID	Origin	Manual Dilut	Result
1	Standard	NPOC	CAL	Untitled	05_10_2021A_CAL.20	1.000	
2	Unknown	NPOC	ICV		05_10_2021A_CAL.ca	1.000	NPOC:9.685mg/
3	Unknown	NPOC	ICB		05_10_2021A_CAL.ca	1.000	NPOC:0.03898
4	Unknown	NPOC	CCV		02_25_2021_CAL.cal	1.000	NPOC:10.64mg/
5	Unknown	NPOC	CCB		02_25_2021_CAL.cal	1.000	NPOC:-0.1171m
6	Unknown	NPOC	MBLK-05102021	TOC_W 531	02_25_2021_CAL.cal	1.000	NPOC:-0.1201m
7	Unknown	NPOC	LCS-05102021		02_25_2021_CAL.cal	1.000	NPOC:11.49mg/
8	Unknown	NPOC	LCSD-05102021		02_25_2021_CAL.cal	1.000	NPOC:11.01mg/
9	Unknown	NPOC	HS21050104-01		02_25_2021_CAL.cal	1.000	NPOC:10.34mg/
10	Unknown	NPOC	HS21050104-01MS		02_25_2021_CAL.cal	1.000	NPOC:21.01mg/
11	Unknown	NPOC	HS21050104-02		02_25_2021_CAL.cal	1.000	NPOC:8.229mg/
12	Unknown	NPOC	HS21050104-03		02_25_2021_CAL.cal	1.000	NPOC:3.514mg/
13	Unknown	NPOC	HS21050104-04		02_25_2021_CAL.cal	1.000	NPOC:1.251mg/
14	Unknown	NPOC	HS21050123-01		02_25_2021_CAL.cal	1.000	NPOC:23.28mg/
15	Unknown	NPOC	HS21050155-01		02_25_2021_CAL.cal	1.000	NPOC:4.646mg/
16	Unknown	NPOC	CCV		02_25_2021_CAL.cal	1.000	NPOC:10.57mg/
17	Unknown	NPOC	CCB		02_25_2021_CAL.cal	1.000	NPOC:-0.04320
18	Unknown	NPOC	HS21050155-02		02_25_2021_CAL.cal	1.000	NPOC:17.96mg/
19	Unknown	NPOC	HS21050155-03DF10		02_25_2021_CAL.cal	1.000	NPOC:9.410mg/
20	Unknown	NPOC	HS21050155-04DF10		02_25_2021_CAL.cal	1.000	NPOC:3.459mg/
21	Unknown	NPOC	HS21050155-05DF50		02_25_2021_CAL.cal	1.000	NPOC:1.676mg/
22	Unknown	NPOC	CCV		02_25_2021_CAL.cal	1.000	NPOC:10.43mg/
23	Unknown	NPOC	CCB		02_25_2021_CAL.cal	1.000	NPOC:-0.1208m
24	Unknown	NPOC	MBLK2-05102021	TOC_W 531	02_25_2021_CAL.cal	1.000	NPOC:-0.04462
25	Unknown	NPOC	LCS2-05102021		02_25_2021_CAL.cal	1.000	NPOC:11.52mg/
26	Unknown	NPOC	LCSD2-05102021		02_25_2021_CAL.cal	1.000	NPOC:11.01mg/
27	Unknown	NPOC	HS21050155-06DF10		02_25_2021_CAL.cal	1.000	NPOC:0.9479m
28	Unknown	NPOC	HS21050155-07DF10		02_25_2021_CAL.cal	1.000	NPOC:293.0mg/
29	Unknown	NPOC	HS21041464-01		02_25_2021_CAL.cal	1.000	NPOC:10.74mg/
30	Unknown	NPOC	HS21041464-01MS		02_25_2021_CAL.cal	1.000	NPOC:22.09mg/
31	Unknown	NPOC	HS21041464-02.		02_25_2021_CAL.cal	1.000	NPOC:467.8mg/
32	Unknown	NPOC	HS21041464-03		02_25_2021_CAL.cal	1.000	NPOC:527.3mg/
33	Unknown	NPOC	HS21050168-01		02_25_2021_CAL.cal	1.000	NPOC:10.05mg/
34	Unknown	NPOC	CCV		02_25_2021_CAL.cal	1.000	NPOC:26.35mg/
35	Unknown	NPOC	CCB		02_25_2021_CAL.cal	1.000	NPOC:0.2054m
36	Unknown	NPOC	HS21050174-01		02_25_2021_CAL.cal	1.000	NPOC:15.67mg/
37	Unknown	NPOC	HS21050186-01		02_25_2021_CAL.cal	1.000	NPOC:10.17mg/
38	Unknown	NPOC	HS21050252-04		02_25_2021_CAL.cal	1.000	NPOC:3.521mg/
39	Unknown	NPOC	HS21050252-06		02_25_2021_CAL.cal	1.000	NPOC:11.77mg/
40	Unknown	NPOC	CCV		02_25_2021_CAL.cal	1.000	NPOC:25.77mg/
41	Unknown	NPOC	CCB		02_25_2021_CAL.cal	1.000	NPOC:0.00982

C:\TOC-L\Data\2021_05_10_002.tlx

	Notes	Status	Date / Time	Vial
1		Completed	5/10/2021 6:58:48 P	1, 2, 3, 4, 5,
2		Completed	5/10/2021 7:10:12 P	8
3		Completed	5/10/2021 7:24:10 P	9
4		Completed	5/10/2021 7:39:01 P	10
5		Completed	5/10/2021 7:54:13 P	11
6		Completed	5/10/2021 8:07:13 P	12
7		Completed	5/10/2021 8:21:22 P	13
8		Completed	5/10/2021 8:35:33 P	14
9		Completed	5/10/2021 8:49:54 P	15
10		Completed	5/10/2021 9:04:32 P	16
11		Completed	5/10/2021 9:18:50 P	17
12		Completed	5/10/2021 9:34:39 P	18
13		Completed	5/10/2021 9:49:51 P	19
14		Completed	5/10/2021 10:04:29	20
15		Completed	5/10/2021 10:21:10	21
16		Completed	5/10/2021 10:35:35	10
17		Completed	5/10/2021 10:51:04	11
18		Completed	5/10/2021 11:05:57	22
19		Completed	5/10/2021 11:22:43	23
20		Completed	5/10/2021 11:38:51	24
21		Completed	5/10/2021 11:54:17	25
22		Completed	5/11/2021 12:08:35	10
23		Completed	5/11/2021 12:21:37	11
24		Completed	5/11/2021 12:36:46	12
25		Completed	5/11/2021 12:51:01	13
26		Completed	5/11/2021 1:05:25 A	14
27		Completed	5/11/2021 1:20:49 A	26
28		Completed	5/11/2021 1:37:21 A	27
29		Completed	5/11/2021 1:52:06 A	28
30		Completed	5/11/2021 2:07:07 A	29
31		Completed	5/11/2021 2:23:17 A	30
32		Completed	5/11/2021 2:39:50 A	31
33		Completed	5/11/2021 2:54:11 A	32
34		Completed	5/11/2021 3:11:24 A	33
35		Completed	5/11/2021 3:26:29 A	34
36		Completed	5/11/2021 3:41:17 A	35
37		Completed	5/11/2021 3:55:38 A	36
38		Completed	5/11/2021 4:11:57 A	37
39		Completed	5/11/2021 4:26:31 A	38
40		Completed	5/11/2021 4:41:33 A	33
41		Completed	5/11/2021 4:54:36 A	34

TOC-Control L Report

2021_05_10_002.tlx

Instr.Information

Instrument Options	TOC/ASI/IC Unit/
Catalyst	Regular Sensitivity

Cal. Curve

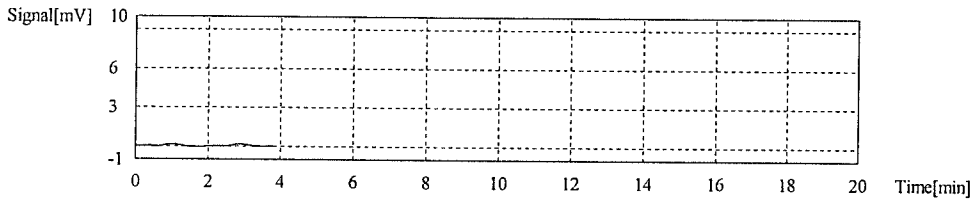
Sample Name:	CAL
Sample ID:	Untitled
Cal. Curve:	05_10_2021A_CAL.2021_05_10_17_37_49.cal
Status	Completed

Type	Anal.
Standard	NPOC

Conc: 0.000mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	0.4989	50uL	1.000	*******		5/10/2021 5:45:57 PM
2	0.3616	50uL	1.000	*******		5/10/2021 5:48:41 PM

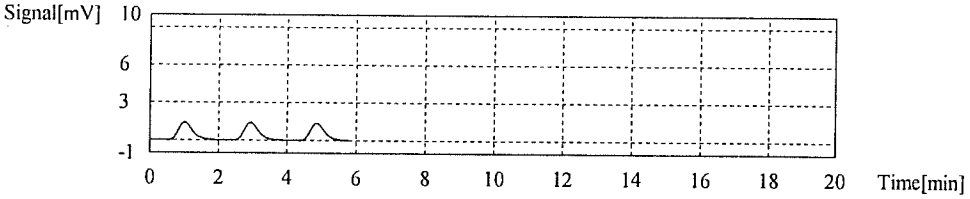
Acid Add.	1.500%
Sparge Gas Flow	80mL/min
Sp. Time	90.00sec
Mean Area	0.4303



Conc: 1.000mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	3.881	50uL	1.000	*******		5/10/2021 5:56:40 PM
2	4.044	50uL	1.000	*******	E	5/10/2021 5:59:24 PM
3	3.915	50uL	1.000	*******		5/10/2021 6:02:09 PM

Acid Add.	1.500%
Sparge Gas Flow	80mL/min
Sp. Time	90.00sec
Mean Area	3.898



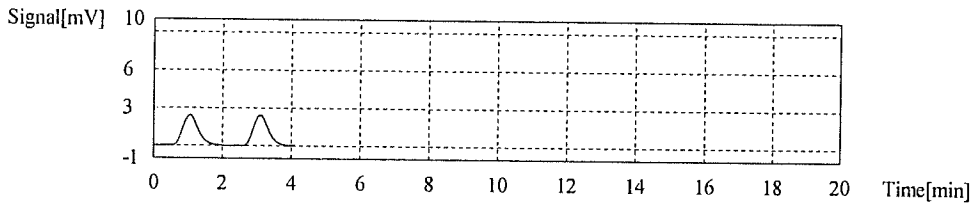
Conc: 2.000mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	7.481	50uL	1.000	*******		5/10/2021 6:10:31 PM
2	7.343	50uL	1.000	*******		5/10/2021 6:13:15 PM

TOC-Control L Report

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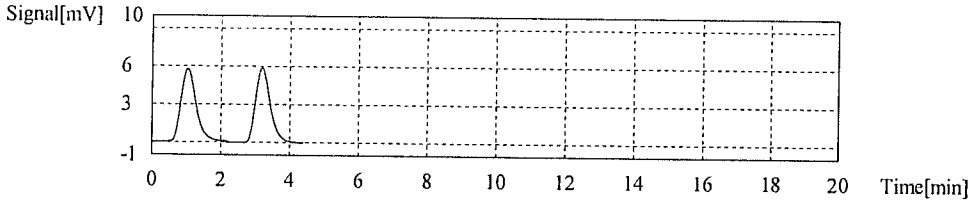
Acid Add.	1.500%
Sparge Gas Flow	80mL/min
Sp. Time	90.00sec
Mean Area	7.412



Conc: 5.000mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	17.39	50uL	1.000	*******		5/10/2021 6:21:29 PM
2	17.58	50uL	1.000	*******		5/10/2021 6:24:16 PM

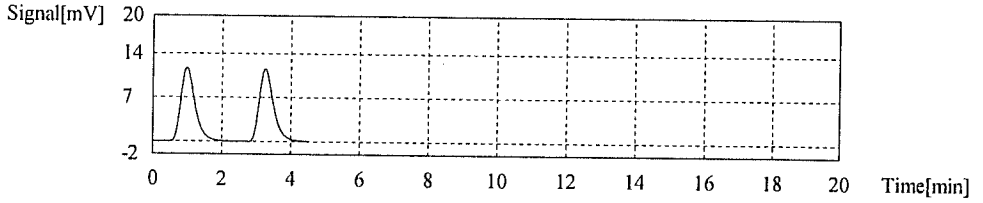
Acid Add.	1.500%
Sparge Gas Flow	80mL/min
Sp. Time	90.00sec
Mean Area	17.48



Conc: 10.00mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	33.69	50uL	1.000	*******		5/10/2021 6:32:55 PM
2	33.47	50uL	1.000	*******		5/10/2021 6:35:37 PM

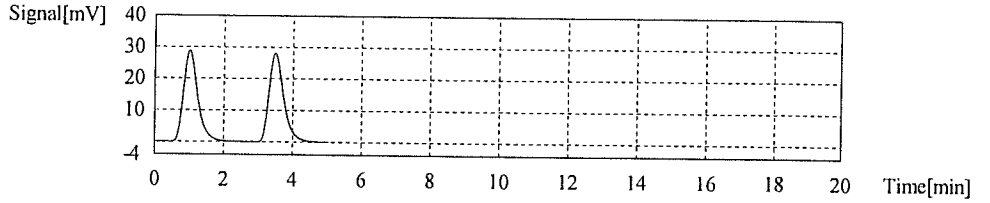
Acid Add.	1.500%
Sparge Gas Flow	80mL/min
Sp. Time	90.00sec
Mean Area	33.58



Conc: 25.00mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	83.30	50uL	1.000	*******		5/10/2021 6:44:29 PM
2	83.46	50uL	1.000	*******		5/10/2021 6:47:16 PM

Acid Add.	1.500%
Sparge Gas Flow	80mL/min
Sp. Time	90.00sec
Mean Area	83.38



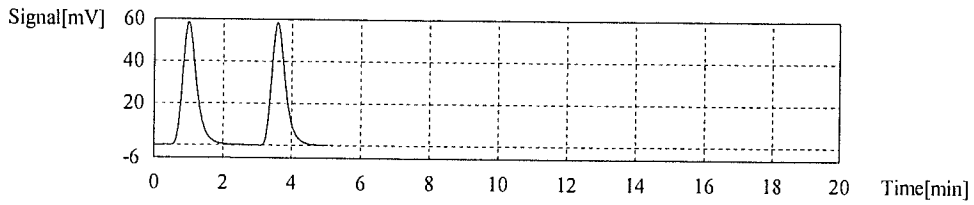
Conc: 50.00mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	167.7	50uL	1.000	*******		5/10/2021 6:56:07 PM
2	166.5	50uL	1.000	*******		5/10/2021 6:58:48 PM

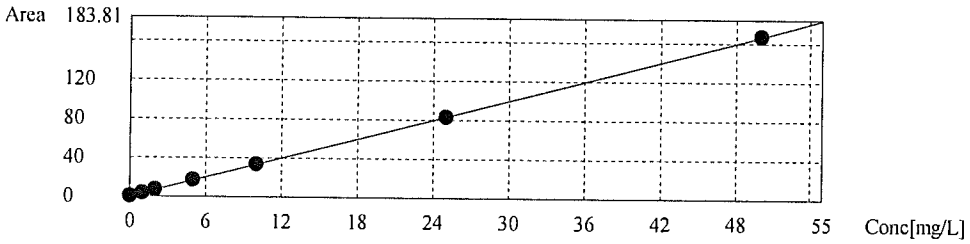
TOC-Control L Report

2021_05_10_002.tlx

Acid Add.	1.500%
Sparge Gas Flow	80mL/min
Sp. Time	90.00sec
Mean Area	167.1



Slope:	3.327
Intercept	0.000
r^2	1.0000
r	1.0000
RSE(%)	N/A
Zero Shift	Yes



Sample

Sample Name:	ICV
Sample ID:	
Origin:	05_10_2021A_CAL.cal
Status	Completed
Chk. Result	

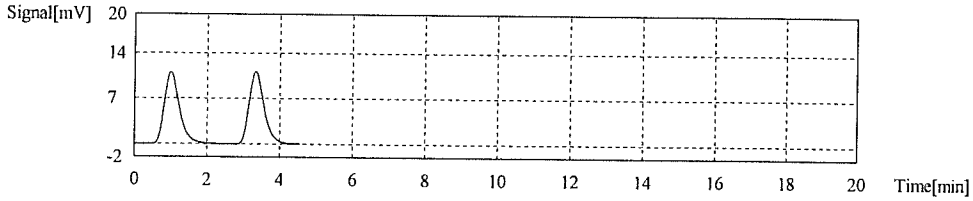
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:9.685mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	32.23	9.687mg/L	50uL	1.000		05_10_2021A_CAL.2021_05_10_17_37_49.cal	5/10/2021 7:07:17 PM
2	32.22	9.684mg/L	50uL	1.000		05_10_2021A_CAL.2021_05_10_17_37_49.cal	5/10/2021 7:10:12 PM

Mean Area	32.23
Mean Conc.	9.685mg/L



Sample

Sample Name:	ICB
Sample ID:	
Origin:	05_10_2021A_CAL.cal
Status	Completed
Chk. Result	

Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.03898mg/L

TOC-Control L Report

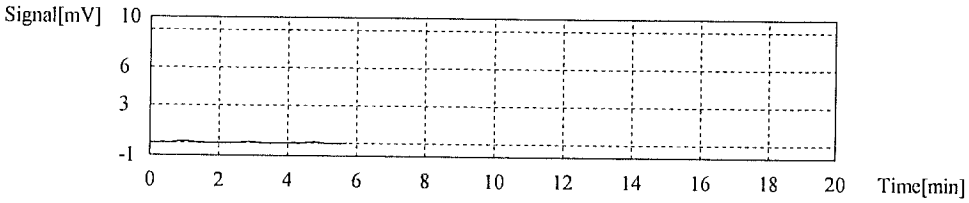
2021_05_10_002.tlx

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.4794	0.1441mg/L	50uL	1.000	E	05_10_2021A_CAL.2021_05_10_17_37_49.cal	5/10/2021 7:18:10 PM
2	0.08420	0.02531mg/L	50uL	1.000		05_10_2021A_CAL.2021_05_10_17_37_49.cal	5/10/2021 7:21:10 PM
3	0.1752	0.05266mg/L	50uL	1.000		05_10_2021A_CAL.2021_05_10_17_37_49.cal	5/10/2021 7:24:10 PM

Mean Area 0.1297
Mean Conc. 0.03898mg/L



C:\TOC-L\Data\2021_08_10_001.tlx

	Type	Analysis	Sample Name	Sample ID	Origin	Manual Dilut	Result
1	Unknown	NPOC	CCV	317191009	05_10_2021A_CAL.ca	1.000	NPOC:26.04mg/
2	Unknown	NPOC	CCB		05_10_2021A_CAL.ca	1.000	NPOC:0.7502m
3	Unknown	NPOC	MBLK-080921		05_10_2021A_CAL.ca	1.000	NPOC:0.09303
4	Unknown	NPOC	LCS-08092021	3100603915	05_10_2021A_CAL.ca	1.000	NPOC:10.12mg/
5	Unknown	NPOC	LCSD-08092021	3100603915	05_10_2021A_CAL.ca	1.000	NPOC:9.721mg/
6	Unknown	NPOC	HS21071394-01		05_10_2021A_CAL.ca	1.000	NPOC:2.739mg/
7	Unknown	NPOC	HS21071394-02		05_10_2021A_CAL.ca	1.000	NPOC:137.5mg/
8	Unknown	NPOC	HS21071394-03		05_10_2021A_CAL.ca	1.000	NPOC:93.08mg/
9	Unknown	NPOC	HS21071402-01		05_10_2021A_CAL.ca	1.000	NPOC:11.94mg/
10	Unknown	NPOC	HS21071405-08		05_10_2021A_CAL.ca	1.000	NPOC:5.518mg/
11	Unknown	NPOC	HS21071405-08MS		05_10_2021A_CAL.ca	1.000	NPOC:16.98mg/
12	Unknown	NPOC	CCV	317191009	05_10_2021A_CAL.ca	1.000	NPOC:25.97mg/
13	Unknown	NPOC	CCB		05_10_2021A_CAL.ca	1.000	NPOC:0.1852m

C:\TOC-L\Data\2021_08_10_001.tlx

	Notes	Status	Date / Time	Vial
1		Completed	8/10/2021 10:20:32	1
2		Completed	8/10/2021 10:34:43	2
3		Completed	8/10/2021 10:45:55	3
4		Completed	8/10/2021 10:57:36	4
5		Completed	8/10/2021 11:09:30	5
6		Completed	8/10/2021 11:24:04	6
7		Completed	8/10/2021 11:36:27	7
8		Completed	8/10/2021 11:56:07	8
9		Completed	8/10/2021 12:08:15	9
10		Completed	8/10/2021 12:23:12	10
11		Completed	8/10/2021 12:38:53	11
12		Completed	8/10/2021 12:54:35	1
13		Completed	8/10/2021 1:08:48 P	2

TOC-Control L Report

2021_08_10_001.tlx

Instr.Information

Instrument Options: TOC/ASI/IC Unit/
Catalyst: Regular Sensitivity

Sample

Sample Name: CCV
Sample ID: 317191009
Origin: 05_10_2021A_CAL.cal
Status: Completed
Chk. Result:

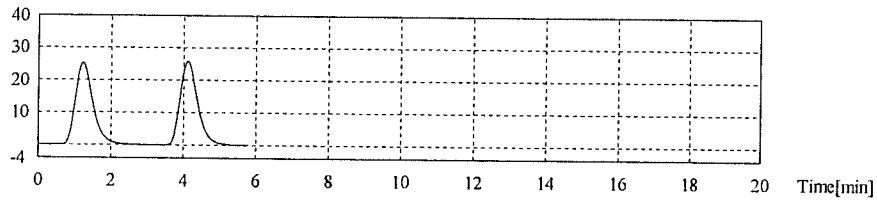
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:26.04mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	85.76	25.77mg/L	50uL	1.000		05_10_2021A_CAL.2021_05_10_17_37_49.cal	8/10/2021 10:17:29 AM
2	87.52	26.30mg/L	50uL	1.000		05_10_2021A_CAL.2021_05_10_17_37_49.cal	8/10/2021 10:20:32 AM

Mean Area: 86.64
Mean Conc.: 26.04mg/L



Sample

Sample Name: CCB
Sample ID:
Origin: 05_10_2021A_CAL.cal
Status: Completed
Chk. Result:

Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.7502mg/L

1. Det

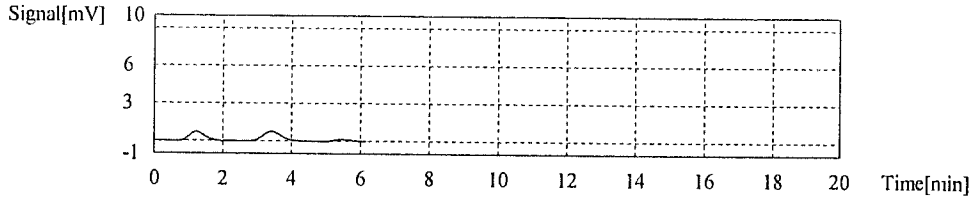
Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	2.363	0.7102mg/L	50uL	1.000		05_10_2021A_CAL.2021_05_10_17_37_49.cal	8/10/2021 10:28:50 AM
2	2.629	0.7901mg/L	50uL	1.000		05_10_2021A_CAL.2021_05_10_17_37_49.cal	8/10/2021 10:31:58 AM
3	0.5570	0.1674mg/L	50uL	1.000	E	05_10_2021A_CAL.2021_05_10_17_37_49.cal	8/10/2021 10:34:43 AM

TOC-Control L Report

2021_08_10_001.tlx

Mean Area 2.496
Mean Conc. 0.7502mg/L



Sample

Sample Name: MBLK-080921
Sample ID:
Origin: 05_10_2021A_CAL.cal
Status Completed
Chk. Result

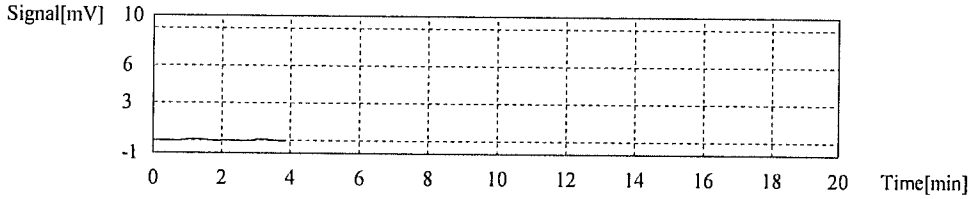
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.09303mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.3120	0.09377mg/L	50uL	1.000		05_10_2021A_CAL.2021_05_10_17_37_49.cal	8/10/2021 10:43:00 AM
2	0.3071	0.09230mg/L	50uL	1.000		05_10_2021A_CAL.2021_05_10_17_37_49.cal	8/10/2021 10:45:55 AM

Mean Area 0.3095
Mean Conc. 0.09303mg/L



Sample

Sample Name: LCS-08092021
Sample ID: 3100603915
Origin: 05_10_2021A_CAL.cal
Status Completed
Chk. Result

Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:10.12mg/L

1. Det

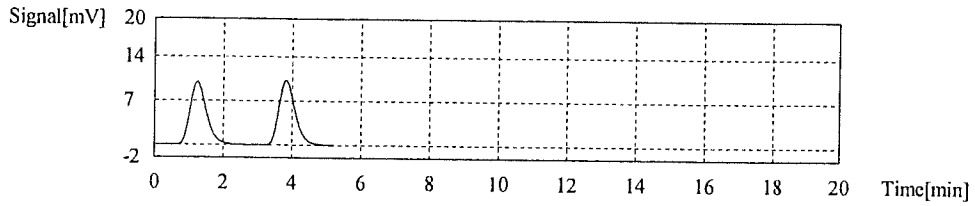
Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	33.29	10.01mg/L	50uL	1.000		05_10_2021A_CAL.2021_05_10_17_37_49.cal	8/10/2021 10:54:34 AM
2	34.04	10.23mg/L	50uL	1.000		05_10_2021A_CAL.2021_05_10_17_37_49.cal	8/10/2021 10:57:36 AM

TOC-Control L Report

2021_08_10_001.tlx

Mean Area 33.66
Mean Conc. 10.12mg/L



Sample

Sample Name: LCSD-08092021
Sample ID: 3100603915
Origin: 05_10_2021A_CAL.cal
Status Completed
Chk. Result

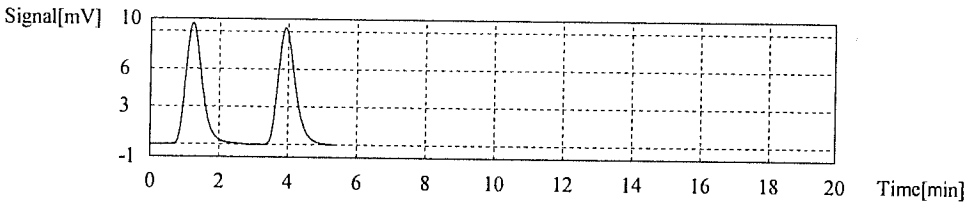
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:9.721mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	32.18	9.672mg/L	50uL	1.000		05_10_2021A_CAL.2021_05_10_17_37_49.cal	8/10/2021 11:06:33 AM
2	32.51	9.771mg/L	50uL	1.000		05_10_2021A_CAL.2021_05_10_17_37_49.cal	8/10/2021 11:09:30 AM

Mean Area 32.34
Mean Conc. 9.721mg/L



Sample

Sample Name: HS21071405-08
Sample ID:
Origin: 05_10_2021A_CAL.cal
Status Completed
Chk. Result

Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:5.518mg/L

1. Det

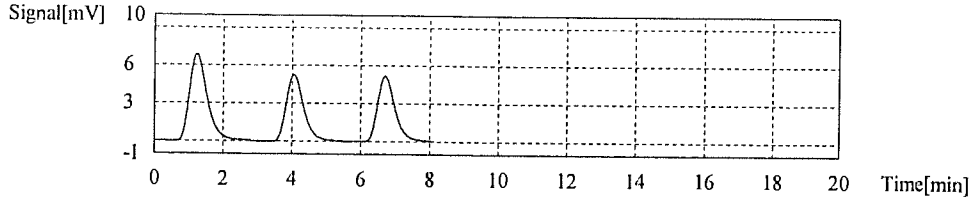
Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	24.42	7.339mg/L	50uL	1.000	E	05_10_2021A_CAL.2021_05_10_17_37_49.cal	8/10/2021 12:17:17 PM
2	18.66	5.608mg/L	50uL	1.000		05_10_2021A_CAL.2021_05_10_17_37_49.cal	8/10/2021 12:20:13 PM
3	18.06	5.428mg/L	50uL	1.000		05_10_2021A_CAL.2021_05_10_17_37_49.cal	8/10/2021 12:23:12 PM

TOC-Control L Report

2021_08_10_001.tlx

Mean Area 18.36
Mean Conc. 5.518mg/L



Sample

Sample Name: HS21071405-08MS
Sample ID:
Origin: 05_10_2021A_CAL.cal
Status Completed
Chk. Result

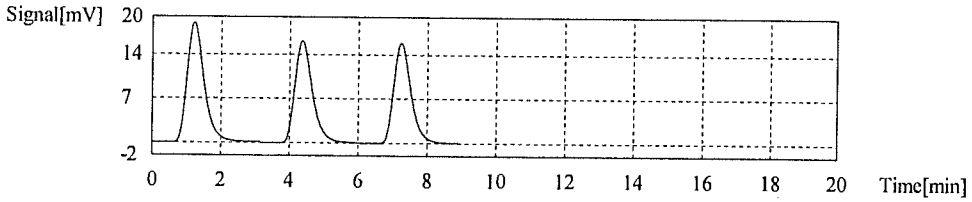
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:16.98mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	66.01	19.84mg/L	50uL	1.000	E	05_10_2021A_CAL.2021_05_10_17_37_49.cal	8/10/2021 12:32:38 PM
2	57.79	17.37mg/L	50uL	1.000		05_10_2021A_CAL.2021_05_10_17_37_49.cal	8/10/2021 12:35:45 PM
3	55.21	16.59mg/L	50uL	1.000		05_10_2021A_CAL.2021_05_10_17_37_49.cal	8/10/2021 12:38:53 PM

Mean Area 56.50
Mean Conc. 16.98mg/L



Sample

Sample Name: CCV
Sample ID: 317191009
Origin: 05_10_2021A_CAL.cal
Status Completed
Chk. Result

Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:25.97mg/L

1. Det

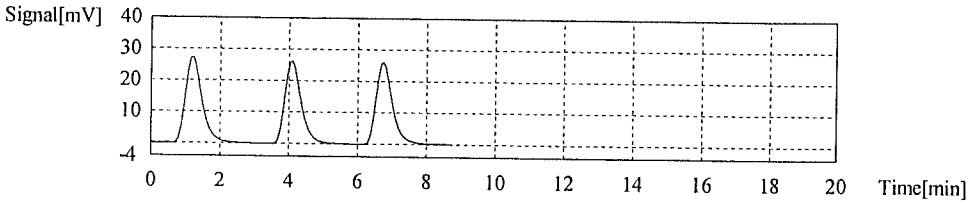
Anal.: NPOC

TOC-Control L Report

2021_08_10_001.tlx

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	91.28	27.43mg/L	50uL	1.000	E	05_10_2021A_CAL.2021_05_10_17_37_49.cal	8/10/2021 12:48:14 PM
2	86.75	26.07mg/L	50uL	1.000		05_10_2021A_CAL.2021_05_10_17_37_49.cal	8/10/2021 12:51:09 PM
3	86.06	25.86mg/L	50uL	1.000		05_10_2021A_CAL.2021_05_10_17_37_49.cal	8/10/2021 12:54:35 PM

Mean Area 86.41
Mean Conc. 25.97mg/L



Sample

Sample Name: CCB
Sample ID:
Origin: 05_10_2021A_CAL.cal
Status Completed
Chk. Result

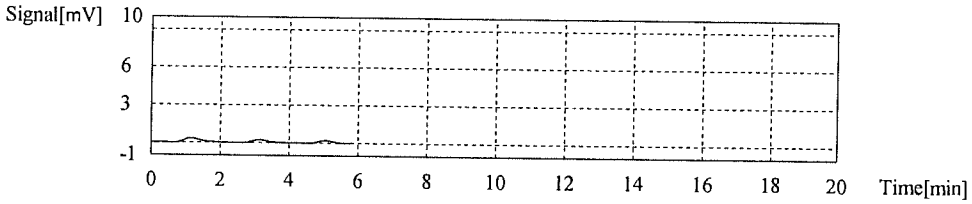
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.1852mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1.043	0.3135mg/L	50uL	1.000	E	05_10_2021A_CAL.2021_05_10_17_37_49.cal	8/10/2021 1:02:53 PM
2	0.6372	0.1915mg/L	50uL	1.000		05_10_2021A_CAL.2021_05_10_17_37_49.cal	8/10/2021 1:05:48 PM
3	0.5953	0.1789mg/L	50uL	1.000		05_10_2021A_CAL.2021_05_10_17_37_49.cal	8/10/2021 1:08:48 PM

Mean Area 0.6162
Mean Conc. 0.1852mg/L



HS21071465 Longhorn Army Ammunition Plant
LHAAP 16 July 2021 Cover Page

ALS WO# HS21071465

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HS21071465 TOC Raw Data

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WorkOrder: HS21071465

Longhorn Army Ammunition Plant LHAAP 16 July 2021

Aptim Environmental & Infrastucture, Inc.

Vicki Graves
10333 Richmond Ave Ste 1030
Houston TX 77042

13-Oct-2021

HS21071465 Longhorn Army Ammunition Plant LHAAP 16 July 2021 Final REV01

ALS WO# HS21071465

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November 23, 2021

Vicki Graves
Aptim Environmental & Infrastucture, Inc.
10333 Richmond Ave
Ste 1030
Houston, TX 77042

Work Order: **HS21071465**

Laboratory Results for: **Longhorn Army Ammunition Plant LHAAP 16 July 2021**

Dear Vicki Graves ,

ALS Environmental received 9 sample(s) on Jul 28, 2021 for the analysis presented in the following report.

This is a REVISED REPORT. Please see the Case Narrative for discussion concerning this revision.

Regards,



Generated By: JUMOKE.LAWAL
Ragen Giga
Project Manager

ALS Houston, US Date: 09-Sep-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP 16 July 2021
Work Order: HS21071465

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS21071465-01	16RW10-210727	GW		27-Jul-2021 07:15	28-Jul-2021 09:20	☐
HS21071465-02	16RW09-210727	GW		27-Jul-2021 08:00	28-Jul-2021 09:20	☐
HS21071465-03	16RW07-210727	GW		27-Jul-2021 08:50	28-Jul-2021 09:20	☐
HS21071465-04	16RW06-210727	GW		27-Jul-2021 09:35	28-Jul-2021 09:20	☐
HS21071465-05	16WW46-210727	GW		27-Jul-2021 10:20	28-Jul-2021 09:20	☐
HS21071465-06	16WW40-210727	GW		27-Jul-2021 11:05	28-Jul-2021 09:20	☐
HS21071465-07	16EW07-210727	GW		27-Jul-2021 11:50	28-Jul-2021 09:20	☐
HS21071465-08	16EW06-210727	Oil		27-Jul-2021 12:35	28-Jul-2021 09:20	☐
HS21071465-09	Trip Blank-210727	Water	CG-051121-37	27-Jul-2021 00:00	28-Jul-2021 09:20	☐

Revision:1

ALS Houston, US Date: 23-Nov-21

Client: Aptim Environmental & Infrastucture, Inc. **CASE NARRATIVE**
Project: Longhorn Army Ammunition Plant LHAAP 16 July 2021
Work Order: HS21071465

Work Order Comments

- .Revision 2
  Data Package revised to include TOC Raw Data which was missing from the original package. Pages 549 - 562

  Perchlorate Data analyzed by our Specialty Lab updated

  REV01: Report Revised on Sept 09 2021 to report LOD values for Volatile Organics Method SW8260 Soil) and Alkalinity on sample 16EW06-210727

  The analysis for Perchlorate was subcontracted to ALS Houston Specialty Lab. Final report attached.

Work Order Comments

- Matrix for sample ID 16EW06-210727 (HS21071465-08) is listed as water matrix on the COC, the sample is an Oil matrix, not miscible in water. Therefore we will not be in a position to run TOC/RSK analysis, We can do Alkalinity as soil but keep in mind it is an oil sample so we will be analyzing the water portion after mixing the sample, We will adjust test codes to run analyses accordingly where applicable

- 16EW07-210727 & 16EW06-210727 - All Vials contain >6mm headspace

GC Semivolatiles by Method RSK-175

Batch ID: R388774

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

Client: Aptim Environmental & Infrastucture, Inc. **CASE NARRATIVE**
Project: Longhorn Army Ammunition Plant LHAAP 16 July 2021
Work Order: HS21071465

GCMS Volatiles by Method SW8260

Batch ID: R388997

Sample ID: 16EW06-210727 (HS21071465-08)

- Lowest practical dilution performed due to matrix. Sample is oil.

Batch ID: R388996

Sample ID: 16EW07-210727 (HS21071465-07)

- Lowest practical dilution performed due to matrix.

Batch ID: R389546

Sample ID: 16RW06-210727 (HS21071465-04)

- Sample extracted outside of the holding time due to laboratory error. Sample results should be considered estimated.

Sample ID: 16RW07-210727 (HS21071465-03)

- Sample extracted outside of the holding time due to laboratory error. Sample results should be considered estimated.

Sample ID: 16WW46-210727 (HS21071465-05)

- Sample extracted outside of the holding time due to laboratory error. Sample results should be considered estimated.

Sample ID: HS21080560-02MS

- MS and MSD are for an unrelated sample

Batch ID: R388888

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

WetChemistry by Method SM5310B

Batch ID: R389291

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

WetChemistry by Method SM2320B

Batch ID: 168934

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

WetChemistry by Method SW9056

Batch ID: 168561

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

ALS Houston, US Date: 09-Sep-21

Client: Aptim Environmental & Infrastucture, Inc. **ANALYTICAL REPORT**
Project: Longhorn Army Ammunition Plant LHAAP 16 July 2021 WorkOrder:HS21071465
Sample ID: 16RW10-210727 Lab ID:HS21071465-01
Collection Date: 27-Jul-2021 07:15 Matrix:GW

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
1,1,2-Trichloroethane	5.0	U	1.5	5.0	5.0	ug/L	5	04-Aug-2021 21:37
1,1-Dichloroethene	**8.5**		**1.0**	**2.5**	**5.0**	**ug/L**	5	04-Aug-2021 21:37
1,2-Dichloroethane	**16**		**1.0**	**2.5**	**5.0**	**ug/L**	5	04-Aug-2021 21:37
cis-1,2-Dichloroethene	**670**		**1.0**	**2.5**	**5.0**	**ug/L**	5	04-Aug-2021 21:37
Methylene chloride	5.0	U	2.0	5.0	10	ug/L	5	04-Aug-2021 21:37
Trichloroethene	**2,000**		**5.0**	**12**	**25**	**ug/L**	25	05-Aug-2021 18:14
Vinyl chloride	**49**		**1.0**	**2.5**	**5.0**	**ug/L**	5	04-Aug-2021 21:37
Surr: 1,2-Dichloroethane-d4	*94.3*			**0**	*81-118*	*%REC*	*5*	*04-Aug-2021 21:37*
Surr: 1,2-Dichloroethane-d4	*89.2*			**0**	*81-118*	*%REC*	*25*	*05-Aug-2021 18:14*
Surr: 4-Bromofluorobenzene	*96.5*			**0**	*85-114*	*%REC*	*5*	*04-Aug-2021 21:37*
Surr: 4-Bromofluorobenzene	*98.9*			**0**	*85-114*	*%REC*	*25*	*05-Aug-2021 18:14*
Surr: Dibromofluoromethane	*94.9*			**0**	*80-119*	*%REC*	*5*	*04-Aug-2021 21:37*
Surr: Dibromofluoromethane	*90.1*			**0**	*80-119*	*%REC*	*25*	*05-Aug-2021 18:14*
Surr: Toluene-d8	*103*			**0**	*89-112*	*%REC*	*5*	*04-Aug-2021 21:37*
Surr: Toluene-d8	*103*			**0**	*89-112*	*%REC*	*25*	*05-Aug-2021 18:14*
DISSOLVED GASES BY RSK-175		**Method:RSK-175**						Analyst: PPM
Ethane	0.000250	U	0.000144	0.000250	0.00100	mg/L	1	03-Aug-2021 10:19
Ethene	**0.0104**		**0.000234**	**0.000500**	**0.00100**	**mg/L**	1	03-Aug-2021 10:19
Methane	**0.416**		**0.00268**	**0.00625**	**0.0125**	**mg/L**	25	03-Aug-2021 13:53
TOTAL ORGANIC CARBON - SM5310B-2011		**Method:SM5310B**						Analyst: JAC
Organic Carbon, Total	**5.15**		**0.500**	**1.00**	**1.00**	**mg/L**	1	11-Aug-2021 12:59
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: GR
Subcontract Analysis	See Attached		0	0		NA	1	18-Aug-2021 18:16

Note: See Qualifiers Page for a list of qualifiers and their explanation. **Revision:** 1

ALS Houston, US Date: 09-Sep-21

Client: Aptim Environmental & Infrastucture, Inc. **ANALYTICAL REPORT**
Project: Longhorn Army Ammunition Plant LHAAP 16 July 2021 WorkOrder:HS21071465
Sample ID: 16RW09-210727 Lab ID:HS21071465-02
Collection Date: 27-Jul-2021 08:00 Matrix:GW

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
1,1,2-Trichloroethane	5.0	U	1.5	5.0	5.0	ug/L	5	05-Aug-2021 18:56
1,1-Dichloroethene	**9.6**		**1.0**	**2.5**	**5.0**	**ug/L**	5	05-Aug-2021 18:56
1,2-Dichloroethane	2.5	U	1.0	2.5	5.0	ug/L	5	05-Aug-2021 18:56
cis-1,2-Dichloroethene	**180**		**1.0**	**2.5**	**5.0**	**ug/L**	5	05-Aug-2021 18:56
Methylene chloride	5.0	U	2.0	5.0	10	ug/L	5	05-Aug-2021 18:56
Trichloroethene	**1,400**		**5.0**	**12**	**25**	**ug/L**	25	05-Aug-2021 19:17
Vinyl chloride	**59**		**1.0**	**2.5**	**5.0**	**ug/L**	5	05-Aug-2021 18:56
Surr: 1,2-Dichloroethane-d4	*89.2*			**0**	*81-118*	*%REC*	*5*	*05-Aug-2021 18:56*
Surr: 1,2-Dichloroethane-d4	*89.2*			**0**	*81-118*	*%REC*	*25*	*05-Aug-2021 19:17*
Surr: 4-Bromofluorobenzene	*98.0*			**0**	*85-114*	*%REC*	*5*	*05-Aug-2021 18:56*
Surr: 4-Bromofluorobenzene	*96.5*			**0**	*85-114*	*%REC*	*25*	*05-Aug-2021 19:17*
Surr: Dibromofluoromethane	*91.0*			**0**	*80-119*	*%REC*	*5*	*05-Aug-2021 18:56*
Surr: Dibromofluoromethane	*92.3*			**0**	*80-119*	*%REC*	*25*	*05-Aug-2021 19:17*
Surr: Toluene-d8	*100*			**0**	*89-112*	*%REC*	*5*	*05-Aug-2021 18:56*
Surr: Toluene-d8	*102*			**0**	*89-112*	*%REC*	*25*	*05-Aug-2021 19:17*
DISSOLVED GASES BY RSK-175		**Method:RSK-175**						Analyst: PPM
Ethane	0.000250	U	0.000144	0.000250	0.00100	mg/L	1	03-Aug-2021 10:29
Ethene	**0.00125**		**0.000234**	**0.000500**	**0.00100**	**mg/L**	1	03-Aug-2021 10:29
Methane	**0.255**		**0.00268**	**0.00625**	**0.0125**	**mg/L**	25	03-Aug-2021 14:13
TOTAL ORGANIC CARBON - SM5310B-2011		**Method:SM5310B**						Analyst: JAC
Organic Carbon, Total	**2.52**		**0.500**	**1.00**	**1.00**	**mg/L**	1	11-Aug-2021 13:29
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: GR
Subcontract Analysis	See Attached		0	0		NA	1	18-Aug-2021 18:16

Note: See Qualifiers Page for a list of qualifiers and their explanation. **Revision:** 1

ALS Houston, US Date: 09-Sep-21

Client: Aptim Environmental & Infrastucture, Inc. **ANALYTICAL REPORT**
Project: Longhorn Army Ammunition Plant LHAAP 16 July 2021 WorkOrder:HS21071465
Sample ID: 16RW07-210727 Lab ID:HS21071465-03
Collection Date: 27-Jul-2021 08:50 Matrix:GW

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
1,1,2-Trichloroethane	1.0	HU	0.30	1.0	1.0	ug/L	1	13-Aug-2021 14:15
1,1-Dichloroethene	**4.1**	H	**0.20**	**0.50**	**1.0**	**ug/L**	1	13-Aug-2021 14:15
1,2-Dichloroethane	0.50	HU	0.20	0.50	1.0	ug/L	1	13-Aug-2021 14:15
cis-1,2-Dichloroethene	**35**	H	**0.20**	**0.50**	**1.0**	**ug/L**	1	13-Aug-2021 14:15
Methylene chloride	1.0	HU	0.40	1.0	2.0	ug/L	1	13-Aug-2021 14:15
Trichloroethene	**760**	H	**2.0**	**5.0**	**10**	**ug/L**	10	13-Aug-2021 15:39
Vinyl chloride	**15**	H	**0.20**	**0.50**	**1.0**	**ug/L**	1	13-Aug-2021 14:15
Surr: 1,2-Dichloroethane-d4	*81.8*			**0**	*81-118*	*%REC*	*1*	*13-Aug-2021 14:15*
Surr: 1,2-Dichloroethane-d4	*81.8*			**0**	*81-118*	*%REC*	*10*	*13-Aug-2021 15:39*
Surr: 4-Bromofluorobenzene	*98.3*			**0**	*85-114*	*%REC*	*1*	*13-Aug-2021 14:15*
Surr: 4-Bromofluorobenzene	*97.5*			**0**	*85-114*	*%REC*	*10*	*13-Aug-2021 15:39*
Surr: Dibromofluoromethane	*83.5*			**0**	*80-119*	*%REC*	*1*	*13-Aug-2021 14:15*
Surr: Dibromofluoromethane	*84.3*			**0**	*80-119*	*%REC*	*10*	*13-Aug-2021 15:39*
Surr: Toluene-d8	*99.7*			**0**	*89-112*	*%REC*	*1*	*13-Aug-2021 14:15*
Surr: Toluene-d8	*101*			**0**	*89-112*	*%REC*	*10*	*13-Aug-2021 15:39*
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: GR
Subcontract Analysis	See Attached		0	0		NA	1	18-Aug-2021 18:16

Note: See Qualifiers Page for a list of qualifiers and their explanation. **Revision:** 1

ALS Houston, US Date: 09-Sep-21

Client: Aptim Environmental & Infrastucture, Inc. **ANALYTICAL REPORT**
Project: Longhorn Army Ammunition Plant LHAAP 16 July 2021 WorkOrder:HS21071465
Sample ID: 16RW06-210727 Lab ID:HS21071465-04
Collection Date: 27-Jul-2021 09:35 Matrix:GW

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
1,1,2-Trichloroethane	1.0	HU	0.30	1.0	1.0	ug/L	1	13-Aug-2021 13:54
1,1-Dichloroethene	0.50	HU	0.20	0.50	1.0	ug/L	1	13-Aug-2021 13:54
1,2-Dichloroethane	0.50	HU	0.20	0.50	1.0	ug/L	1	13-Aug-2021 13:54
cis-1,2-Dichloroethene	**4.4**	H	**0.20**	**0.50**	**1.0**	**ug/L**	1	13-Aug-2021 13:54
Methylene chloride	1.0	HU	0.40	1.0	2.0	ug/L	1	13-Aug-2021 13:54
Trichloroethene	**64**	H	**0.20**	**0.50**	**1.0**	**ug/L**	1	13-Aug-2021 13:54
Vinyl chloride	0.50	HU	0.20	0.50	1.0	ug/L	1	13-Aug-2021 13:54
Surr: 1,2-Dichloroethane-d4	*81.9*			**0**	*81-118*	*%REC*	*1*	*13-Aug-2021 13:54*
Surr: 4-Bromofluorobenzene	*97.0*			**0**	*85-114*	*%REC*	*1*	*13-Aug-2021 13:54*
Surr: Dibromofluoromethane	*83.2*			**0**	*80-119*	*%REC*	*1*	*13-Aug-2021 13:54*
Surr: Toluene-d8	*100.0*			**0**	*89-112*	*%REC*	*1*	*13-Aug-2021 13:54*
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: GR
Subcontract Analysis	See Attached		0	0		NA	1	18-Aug-2021 18:16

Note: See Qualifiers Page for a list of qualifiers and their explanation. **Revision:** 1

ALS Houston, US Date: 09-Sep-21

Client: Aptim Environmental & Infrastucture, Inc. **ANALYTICAL REPORT**
Project: Longhorn Army Ammunition Plant LHAAP 16 July 2021 WorkOrder:HS21071465
Sample ID: 16WW46-210727 Lab ID:HS21071465-05
Collection Date: 27-Jul-2021 10:20 Matrix:GW

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
1,1,2-Trichloroethane	1.0	HU	0.30	1.0	1.0	ug/L	1	13-Aug-2021 16:00
1,1-Dichloroethene	0.50	HU	0.20	0.50	1.0	ug/L	1	13-Aug-2021 16:00
1,2-Dichloroethane	0.50	HU	0.20	0.50	1.0	ug/L	1	13-Aug-2021 16:00
cis-1,2-Dichloroethene	0.50	HU	0.20	0.50	1.0	ug/L	1	13-Aug-2021 16:00
Methylene chloride	1.0	HU	0.40	1.0	2.0	ug/L	1	13-Aug-2021 16:00
Trichloroethene	**0.63**	JH	**0.20**	**0.50**	**1.0**	**ug/L**	1	13-Aug-2021 16:00
Vinyl chloride	0.50	HU	0.20	0.50	1.0	ug/L	1	13-Aug-2021 16:00
Surr: 1,2-Dichloroethane-d4	*81.0*			**0**	*81-118*	*%REC*	*1*	*13-Aug-2021 16:00*
Surr: 4-Bromofluorobenzene	*96.7*			**0**	*85-114*	*%REC*	*1*	*13-Aug-2021 16:00*
Surr: Dibromofluoromethane	*83.8*			**0**	*80-119*	*%REC*	*1*	*13-Aug-2021 16:00*
Surr: Toluene-d8	*102*			**0**	*89-112*	*%REC*	*1*	*13-Aug-2021 16:00*
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: GR
Subcontract Analysis	See Attached		0	0		NA	1	18-Aug-2021 18:16

Note: See Qualifiers Page for a list of qualifiers and their explanation. **Revision:** 1

ALS Houston, US Date: 09-Sep-21

Client: Aptim Environmental & Infrastucture, Inc. **ANALYTICAL REPORT**
Project: Longhorn Army Ammunition Plant LHAAP 16 July 2021 WorkOrder:HS21071465
Sample ID: 16WW40-210727 Lab ID:HS21071465-06
Collection Date: 27-Jul-2021 11:05 Matrix:GW

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
1,1,2-Trichloroethane	1.0	U	0.30	1.0	1.0	ug/L	1	04-Aug-2021 18:06
1,1-Dichloroethene	**7.0**		**0.20**	**0.50**	**1.0**	**ug/L**	1	04-Aug-2021 18:06
1,2-Dichloroethane	**6.4**		**0.20**	**0.50**	**1.0**	**ug/L**	1	04-Aug-2021 18:06
cis-1,2-Dichloroethene	**190**		**5.0**	**12**	**25**	**ug/L**	25	05-Aug-2021 18:35
Methylene chloride	1.0	U	0.40	1.0	2.0	ug/L	1	04-Aug-2021 18:06
Trichloroethene	**1,900**		**5.0**	**12**	**25**	**ug/L**	25	05-Aug-2021 18:35
Vinyl chloride	**9.0**		**0.20**	**0.50**	**1.0**	**ug/L**	1	04-Aug-2021 18:06
Surr: 1,2-Dichloroethane-d4	*96.7*			**0**	*81-118*	*%REC*	*1*	*04-Aug-2021 18:06*
Surr: 1,2-Dichloroethane-d4	*88.9*			**0**	*81-118*	*%REC*	*25*	*05-Aug-2021 18:35*
Surr: 4-Bromofluorobenzene	*101*			**0**	*85-114*	*%REC*	*1*	*04-Aug-2021 18:06*
Surr: 4-Bromofluorobenzene	*96.2*			**0**	*85-114*	*%REC*	*25*	*05-Aug-2021 18:35*
Surr: Dibromofluoromethane	*93.5*			**0**	*80-119*	*%REC*	*1*	*04-Aug-2021 18:06*
Surr: Dibromofluoromethane	*93.2*			**0**	*80-119*	*%REC*	*25*	*05-Aug-2021 18:35*
Surr: Toluene-d8	*105*			**0**	*89-112*	*%REC*	*1*	*04-Aug-2021 18:06*
Surr: Toluene-d8	*101*			**0**	*89-112*	*%REC*	*25*	*05-Aug-2021 18:35*
DISSOLVED GASES BY RSK-175		**Method:RSK-175**						Analyst: PPM
Ethane	**0.000953**	J	**0.000144**	**0.000250**	**0.00100**	**mg/L**	1	03-Aug-2021 10:40
Ethene	**0.00160**		**0.000234**	**0.000500**	**0.00100**	**mg/L**	1	03-Aug-2021 10:40
Methane	**0.309**		**0.00268**	**0.00625**	**0.0125**	**mg/L**	25	03-Aug-2021 14:26
TOTAL ORGANIC CARBON - SM5310B-2011		**Method:SM5310B**						Analyst: JAC
Organic Carbon, Total	**10.1**		**0.500**	**1.00**	**1.00**	**mg/L**	1	11-Aug-2021 13:44
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: GR
Subcontract Analysis	See Attached		0	0		NA	1	18-Aug-2021 18:16

Note: See Qualifiers Page for a list of qualifiers and their explanation. **Revision:** 1

ALS Houston, US Date: 09-Sep-21

Client: Aptim Environmental & Infrastucture, Inc. **ANALYTICAL REPORT**
Project: Longhorn Army Ammunition Plant LHAAP 16 July 2021 WorkOrder:HS21071465
Sample ID: 16EW07-210727 Lab ID:HS21071465-07
Collection Date: 27-Jul-2021 11:50 Matrix:GW

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
1,1,2-Trichloroethane	1,000	U	300	1000	1000	ug/L	1000	05-Aug-2021 16:29
1,1-Dichloroethene	500	U	200	500	1000	ug/L	1000	05-Aug-2021 16:29
1,2-Dichloroethane	500	U	200	500	1000	ug/L	1000	05-Aug-2021 16:29
cis-1,2-Dichloroethene	500	U	200	500	1000	ug/L	1000	05-Aug-2021 16:29
Methylene chloride	1,000	U	400	1000	2000	ug/L	1000	05-Aug-2021 16:29
Trichloroethene	500	U	200	500	1000	ug/L	1000	05-Aug-2021 16:29
Vinyl chloride	500	U	200	500	1000	ug/L	1000	05-Aug-2021 16:29
Surr: 1,2-Dichloroethane-d4	*89.7*			**0**	*81-118*	*%REC*	*1000*	*05-Aug-2021 16:29*
Surr: 4-Bromofluorobenzene	*93.9*			**0**	*85-114*	*%REC*	*1000*	*05-Aug-2021 16:29*
Surr: Dibromofluoromethane	*91.0*			**0**	*80-119*	*%REC*	*1000*	*05-Aug-2021 16:29*
Surr: Toluene-d8	*99.6*			**0**	*89-112*	*%REC*	*1000*	*05-Aug-2021 16:29*
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: GR
Subcontract Analysis	See Attached		0	0		NA	1	18-Aug-2021 18:16

Note: See Qualifiers Page for a list of qualifiers and their explanation. **Revision:** 1

ALS Houston, US Date: 09-Sep-21

Client: Aptim Environmental & Infrastucture, Inc. **ANALYTICAL REPORT**
Project: Longhorn Army Ammunition Plant LHAAP 16 July 2021 WorkOrder:HS21071465
Sample ID: 16EW06-210727 Lab ID:HS21071465-08
Collection Date: 27-Jul-2021 12:35 Matrix:Oil

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY SW8260C		**Method:SW8260**						Analyst: PC
1,1,2-Trichloroethane	5,000	U	1200	5000	12000	ug/Kg	2500	05-Aug-2021 16:50
1,1-Dichloroethene	5,000	U	1200	5000	12000	ug/Kg	2500	05-Aug-2021 16:50
1,2-Dichloroethane	5,000	U	1500	5000	12000	ug/Kg	2500	05-Aug-2021 16:50
cis-1,2-Dichloroethene	5,000	U	2000	5000	12000	ug/Kg	2500	05-Aug-2021 16:50
Methylene chloride	5,000	U	2500	5000	25000	ug/Kg	2500	05-Aug-2021 16:50
Trichloroethene	5,000	U	1500	5000	12000	ug/Kg	2500	05-Aug-2021 16:50
Vinyl chloride	5,000	U	2000	5000	5000	ug/Kg	2500	05-Aug-2021 16:50
Surr: 1,2-Dichloroethane-d4	*89.5*			**0**	*71-136*	*%REC*	*2500*	*05-Aug-2021 16:50*
Surr: 4-Bromofluorobenzene	*100*			**0**	*79-119*	*%REC*	*2500*	*05-Aug-2021 16:50*
Surr: Dibromofluoromethane	*91.3*			**0**	*78-119*	*%REC*	*2500*	*05-Aug-2021 16:50*
Surr: Toluene-d8	*99.8*			**0**	*85-116*	*%REC*	*2500*	*05-Aug-2021 16:50*
ALKALINITY BY SM2320B MOD.		**Method:SM2320B**				Prep:ASTM Leachate / 10-Aug-2021		Analyst: TH
Alkalinity, Total (As CaCO3)	10.0	aU	10.0	10.0	10.0	mg/Kg	1	10-Aug-2021 22:20
ANIONS BY SW9056A		**Method:SW9056**				Prep:SW9056 / 28-Jul-2021		Analyst: YP
Bromide	0.991	U	0.297	0.991	0.991	mg/Kg	1	29-Jul-2021 06:55
Nitrogen, Nitrate (As N)	**0.619**	J	**0.297**	**0.991**	**0.991**	**mg/Kg**	1	29-Jul-2021 06:55
Sulfate	4.95	U	1.98	4.95	4.95	mg/Kg	1	29-Jul-2021 06:55
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: GR
Subcontract Analysis	See Attached		0	0		NA	1	18-Aug-2021 18:16

Note: See Qualifiers Page for a list of qualifiers and their explanation. **Revision:** 1

ALS Houston, US Date: 09-Sep-21

Client: Aptim Environmental & Infrastucture, Inc. **ANALYTICAL REPORT**
Project: Longhorn Army Ammunition Plant LHAAP 16 July 2021 WorkOrder:HS21071465
Sample ID: Trip Blank-210727 Lab ID:HS21071465-09
Collection Date: 27-Jul-2021 00:00 Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
1,1,2-Trichloroethane	1.0	U	0.30	1.0	1.0	ug/L	1	04-Aug-2021 16:21
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	04-Aug-2021 16:21
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	04-Aug-2021 16:21
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	04-Aug-2021 16:21
Methylene chloride	1.0	U	0.40	1.0	2.0	ug/L	1	04-Aug-2021 16:21
Trichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	04-Aug-2021 16:21
Vinyl chloride	0.50	U	0.20	0.50	1.0	ug/L	1	04-Aug-2021 16:21
Surr: 1,2-Dichloroethane-d4	*94.2*			**0**	*81-118*	*%REC*	*1*	*04-Aug-2021 16:21*
Surr: 4-Bromofluorobenzene	*99.5*			**0**	*85-114*	*%REC*	*1*	*04-Aug-2021 16:21*
Surr: Dibromofluoromethane	*96.6*			**0**	*80-119*	*%REC*	*1*	*04-Aug-2021 16:21*
Surr: Toluene-d8	*103*			**0**	*89-112*	*%REC*	*1*	*04-Aug-2021 16:21*

Note: See Qualifiers Page for a list of qualifiers and their explanation. **Revision:** 1

Weight / Prep Log

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP 16 July 2021
WorkOrder: HS21071465

Batch ID: 168561 **Start Date:** 28 Jul 2021 15:01 **End Date:** 28 Jul 2021 18:00
Method: 9056 ANIONS SOIL PREP **Prep Code:** 9056_S_PR

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor	
HS21071465-08		5.0473 (g)	50 (mL)	9.906	120 mL Plastic Neat

Batch ID: 168934 **Start Date:** 10 Aug 2021 10:08 **End Date:**
Method: ALK LEACH **Prep Code:** ALK LEACH PREP

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor	
HS21071465-08		5 (grams)	50 (mL)	10	120 mL Plastic Neat

Revision: 1

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP 16 July 2021
WorkOrder: HS21071465

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: 168561 (0)	**Test Name :** ANIONS BY SW9056A				**Matrix:** Oil	
HS21071465-08	16EW06-210727	27 Jul 2021 12:35		28 Jul 2021 15:01	29 Jul 2021 06:55	1
Batch ID: 168934 (0)	**Test Name :** ALKALINITY BY SM2320B MOD.				**Matrix:** Oil	
HS21071465-08	16EW06-210727	27 Jul 2021 12:35		10 Aug 2021 10:08	10 Aug 2021 22:20	1
Batch ID: R388774 (0)	**Test Name :** DISSOLVED GASES BY RSK-175				**Matrix:** GW	
HS21071465-01	16RW10-210727	27 Jul 2021 07:15			03 Aug 2021 13:53	25
HS21071465-01	16RW10-210727	27 Jul 2021 07:15			03 Aug 2021 10:19	1
HS21071465-02	16RW09-210727	27 Jul 2021 08:00			03 Aug 2021 14:13	25
HS21071465-02	16RW09-210727	27 Jul 2021 08:00			03 Aug 2021 10:29	1
HS21071465-06	16WW40-210727	27 Jul 2021 11:05			03 Aug 2021 14:26	25
HS21071465-06	16WW40-210727	27 Jul 2021 11:05			03 Aug 2021 10:40	1
Batch ID: R388888 (0)	**Test Name :** VOLATILES ORGANICS BY METHOD 8260C				**Matrix:** Water	
HS21071465-09	Trip Blank-210727	27 Jul 2021 00:00			04 Aug 2021 16:21	1
Batch ID: R388888 (0)	**Test Name :** VOLATILES ORGANICS BY METHOD 8260C				**Matrix:** GW	
HS21071465-01	16RW10-210727	27 Jul 2021 07:15			04 Aug 2021 21:37	5
HS21071465-06	16WW40-210727	27 Jul 2021 11:05			04 Aug 2021 18:06	1
Batch ID: R388996 (0)	**Test Name :** VOLATILES ORGANICS BY METHOD 8260C				**Matrix:** GW	
HS21071465-01	16RW10-210727	27 Jul 2021 07:15			05 Aug 2021 18:14	25
HS21071465-02	16RW09-210727	27 Jul 2021 08:00			05 Aug 2021 19:17	25
HS21071465-02	16RW09-210727	27 Jul 2021 08:00			05 Aug 2021 18:56	5
HS21071465-06	16WW40-210727	27 Jul 2021 11:05			05 Aug 2021 18:35	25
HS21071465-07	16EW07-210727	27 Jul 2021 11:50			05 Aug 2021 16:29	1000
Batch ID: R388997 (0)	**Test Name :** VOLATILES ORGANICS BY SW8260C				**Matrix:** Oil	
HS21071465-08	16EW06-210727	27 Jul 2021 12:35			05 Aug 2021 16:50	2500
Batch ID: R389291 (0)	**Test Name :** TOTAL ORGANIC CARBON - SM5310B-2011				**Matrix:** GW	
HS21071465-01	16RW10-210727	27 Jul 2021 07:15			11 Aug 2021 12:59	1
HS21071465-02	16RW09-210727	27 Jul 2021 08:00			11 Aug 2021 13:29	1
HS21071465-06	16WW40-210727	27 Jul 2021 11:05			11 Aug 2021 13:44	1
Batch ID: R389546 (0)	**Test Name :** VOLATILES ORGANICS BY METHOD 8260C				**Matrix:** GW	
HS21071465-03	16RW07-210727	27 Jul 2021 08:50			13 Aug 2021 15:39	10
HS21071465-03	16RW07-210727	27 Jul 2021 08:50			13 Aug 2021 14:15	1
HS21071465-04	16RW06-210727	27 Jul 2021 09:35			13 Aug 2021 13:54	1
HS21071465-05	16WW46-210727	27 Jul 2021 10:20			13 Aug 2021 16:00	1
Batch ID: R389775 (0)	**Test Name :** SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)				**Matrix:** Oil	
HS21071465-08	16EW06-210727	27 Jul 2021 12:35			18 Aug 2021 18:16	1

Revision: 1

ALS Houston, US Date: 09-Sep-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP 16 July 2021
WorkOrder: HS21071465

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: R389775 (0)	**Test Name :** SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)				**Matrix:** GW	
HS21071465-01	16RW10-210727	27 Jul 2021 07:15			18 Aug 2021 18:16	1
HS21071465-02	16RW09-210727	27 Jul 2021 08:00			18 Aug 2021 18:16	1
HS21071465-03	16RW07-210727	27 Jul 2021 08:50			18 Aug 2021 18:16	1
HS21071465-04	16RW06-210727	27 Jul 2021 09:35			18 Aug 2021 18:16	1
HS21071465-05	16WW46-210727	27 Jul 2021 10:20			18 Aug 2021 18:16	1
HS21071465-06	16WW40-210727	27 Jul 2021 11:05			18 Aug 2021 18:16	1
HS21071465-07	16EW07-210727	27 Jul 2021 11:50			18 Aug 2021 18:16	1

Revision: 1

ALS Houston, US Date: 09-Sep-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP 16 July 2021
WorkOrder: HS21071465

QC BATCH REPORT

Batch ID: R388774 (0) **Instrument:** FID-4 **Method:** DISSOLVED GASES BY RSK-175

MBLK Sample ID: **MBLK-210803** Units: **mg/L** Analysis Date: **03-Aug-2021 09:48**
Client ID: Run ID: **FID-4_388774** SeqNo: **6212659** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ethane	0.000250	0.00100								U
Ethene	0.000500	0.00100								U
Methane	0.000250	0.000500								U

LCS Sample ID: **LCS-210803** Units: **mg/L** Analysis Date: **03-Aug-2021 09:58**
Client ID: Run ID: **FID-4_388774** SeqNo: **6212660** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ethane	0.0184	0.00100	0.01804	0	102	75 - 125				
Ethene	0.0157	0.00100	0.0168	0	93.4	75 - 125				
Methane	0.00890	0.000500	0.009647	0	92.2	75 - 125				

LCSD Sample ID: **LCSD-210803** Units: **mg/L** Analysis Date: **03-Aug-2021 10:06**
Client ID: Run ID: **FID-4_388774** SeqNo: **6212661** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ethane	0.0188	0.00100	0.01804	0	104	75 - 125	0.01840	2.06	30	
Ethene	0.0160	0.00100	0.0168	0	95.1	75 - 125	0.01569	1.83	30	
Methane	0.00853	0.000500	0.009647	0	88.5	75 - 125	0.008899	4.18	30	

The following samples were analyzed in this batch: HS21071465-01 HS21071465-02 HS21071465-06

Revision: 1

ALS Houston, US Date: 09-Sep-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP 16 July 2021
WorkOrder: HS21071465

QC BATCH REPORT

Batch ID: R388888 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MBLK Sample ID: **VBLKW-210804** Units: **ug/L** Analysis Date: **04-Aug-2021 13:11**
Client ID: Run ID: **VOA6_388888** SeqNo: **6215041** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,2-Trichloroethane	1.0	1.0								U
1,1-Dichloroethene	0.50	1.0								U
1,2-Dichloroethane	0.50	1.0								U
cis-1,2-Dichloroethene	0.50	1.0								U
Methylene chloride	1.0	2.0								U
Trichloroethene	0.50	1.0								U
Vinyl chloride	0.50	1.0								U
Surr: 1,2-Dichloroethane-d4	*43.87*	*1.0*	*50*	*0*	*87.7*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*48.49*	*1.0*	*50*	*0*	*97.0*	*85 - 114*				
Surr: Dibromofluoromethane	*45.13*	*1.0*	*50*	*0*	*90.3*	*80 - 119*				
Surr: Toluene-d8	*51.3*	*1.0*	*50*	*0*	*103*	*89 - 112*				

LCS Sample ID: **VLCSW-210804** Units: **ug/L** Analysis Date: **04-Aug-2021 12:08**
Client ID: Run ID: **VOA6_388888** SeqNo: **6215040** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,2-Trichloroethane	19.02	1.0	20	0	95.1	80 - 119				
1,1-Dichloroethene	15.94	1.0	20	0	79.7	71 - 131				
1,2-Dichloroethane	18.08	1.0	20	0	90.4	73 - 128				
cis-1,2-Dichloroethene	17.85	1.0	20	0	89.3	78 - 123				
Methylene chloride	18.55	2.0	20	0	92.8	74 - 124				
Trichloroethene	18.57	1.0	20	0	92.8	79 - 123				
Vinyl chloride	16.17	1.0	20	0	80.9	58 - 137				
Surr: 1,2-Dichloroethane-d4	*48.01*	*1.0*	*50*	*0*	*96.0*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*49.81*	*1.0*	*50*	*0*	*99.6*	*85 - 114*				
Surr: Dibromofluoromethane	*47.26*	*1.0*	*50*	*0*	*94.5*	*80 - 119*				
Surr: Toluene-d8	*47.6*	*1.0*	*50*	*0*	*95.2*	*89 - 112*				

Revision: 1

ALS Houston, US Date: 09-Sep-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP 16 July 2021
WorkOrder: HS21071465

QC BATCH REPORT

Batch ID: R388888 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MS Sample ID: **HS21071405-11MS** Units: **ug/L** Analysis Date: **04-Aug-2021 14:36**
Client ID: Run ID: **VOA6_388888** SeqNo: **6215044** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,2-Trichloroethane	19.33	1.0	20	0	96.6	80 - 119				
1,1-Dichloroethene	19	1.0	20	0	95.0	71 - 131				
1,2-Dichloroethane	18.42	1.0	20	0	92.1	73 - 128				
cis-1,2-Dichloroethene	18.58	1.0	20	0	92.9	78 - 123				
Methylene chloride	18.84	2.0	20	0	94.2	74 - 124				
Trichloroethene	23.69	1.0	20	0	118	79 - 123				
Vinyl chloride	19.84	1.0	20	0	99.2	58 - 137				
Surr: 1,2-Dichloroethane-d4	*48.94*	*1.0*	*50*	*0*	*97.9*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*50.14*	*1.0*	*50*	*0*	*100*	*85 - 114*				
Surr: Dibromofluoromethane	*47*	*1.0*	*50*	*0*	*94.0*	*80 - 119*				
Surr: Toluene-d8	*51.3*	*1.0*	*50*	*0*	*103*	*89 - 112*				

MSD Sample ID: **HS21071405-11MSD** Units: **ug/L** Analysis Date: **04-Aug-2021 14:57**
Client ID: Run ID: **VOA6_388888** SeqNo: **6215045** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,2-Trichloroethane	19.67	1.0	20	0	98.3	80 - 119	19.33	1.73	20	
1,1-Dichloroethene	18.52	1.0	20	0	92.6	71 - 131	19	2.53	20	
1,2-Dichloroethane	18.53	1.0	20	0	92.7	73 - 128	18.42	0.613	20	
cis-1,2-Dichloroethene	17.68	1.0	20	0	88.4	78 - 123	18.58	4.97	20	
Methylene chloride	18.4	2.0	20	0	92.0	74 - 124	18.84	2.4	20	
Trichloroethene	20.38	1.0	20	0	102	79 - 123	23.69	15	20	
Vinyl chloride	17.86	1.0	20	0	89.3	58 - 137	19.84	10.5	20	
Surr: 1,2-Dichloroethane-d4	*47.82*	*1.0*	*50*	*0*	*95.6*	*81 - 118*	*48.94*	*2.33*	*20*	
Surr: 4-Bromofluorobenzene	*48.89*	*1.0*	*50*	*0*	*97.8*	*85 - 114*	*50.14*	*2.52*	*20*	
Surr: Dibromofluoromethane	*46.96*	*1.0*	*50*	*0*	*93.9*	*80 - 119*	*47*	*0.099*	*20*	
Surr: Toluene-d8	*51.28*	*1.0*	*50*	*0*	*103*	*89 - 112*	*51.3*	*0.0581*	*20*	

The following samples were analyzed in this batch: HS21071465-01 HS21071465-06 HS21071465-09

Revision: 1

ALS Houston, US Date: 09-Sep-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP 16 July 2021
WorkOrder: HS21071465

QC BATCH REPORT

Batch ID: R388996 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MBLK Sample ID: **VBLKW-210805** Units: **ug/L** Analysis Date: **05-Aug-2021 13:19**
Client ID: Run ID: **VOA6_388996** SeqNo: **6217526** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,2-Trichloroethane	1.0	1.0								U
1,1-Dichloroethene	0.50	1.0								U
1,2-Dichloroethane	0.50	1.0								U
cis-1,2-Dichloroethene	0.50	1.0								U
Methylene chloride	1.0	2.0								U
Trichloroethene	0.50	1.0								U
Vinyl chloride	0.50	1.0								U
Surr: 1,2-Dichloroethane-d4	*45.25*	*1.0*	*50*	*0*	*90.5*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*49.65*	*1.0*	*50*	*0*	*99.3*	*85 - 114*				
Surr: Dibromofluoromethane	*46.64*	*1.0*	*50*	*0*	*93.3*	*80 - 119*				
Surr: Toluene-d8	*52.98*	*1.0*	*50*	*0*	*106*	*89 - 112*				

LCS Sample ID: **VLCSW-210805** Units: **ug/L** Analysis Date: **05-Aug-2021 12:16**
Client ID: Run ID: **VOA6_388996** SeqNo: **6217525** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,2-Trichloroethane	20.06	1.0	20	0	100	80 - 119				
1,1-Dichloroethene	16.49	1.0	20	0	82.4	71 - 131				
1,2-Dichloroethane	18.97	1.0	20	0	94.8	73 - 128				
cis-1,2-Dichloroethene	18.67	1.0	20	0	93.4	78 - 123				
Methylene chloride	20.11	2.0	20	0	101	74 - 124				
Trichloroethene	19.16	1.0	20	0	95.8	79 - 123				
Vinyl chloride	16.28	1.0	20	0	81.4	58 - 137				
Surr: 1,2-Dichloroethane-d4	*44.28*	*1.0*	*50*	*0*	*88.6*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*48.93*	*1.0*	*50*	*0*	*97.9*	*85 - 114*				
Surr: Dibromofluoromethane	*45.44*	*1.0*	*50*	*0*	*90.9*	*80 - 119*				
Surr: Toluene-d8	*45.82*	*1.0*	*50*	*0*	*91.6*	*89 - 112*				

Revision: 1

ALS Houston, US Date: 09-Sep-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP 16 July 2021
WorkOrder: HS21071465

QC BATCH REPORT

Batch ID: R388996 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MS Sample ID: **HS21080176-03MS** Units: **ug/L** Analysis Date: **05-Aug-2021 17:11**
Client ID: Run ID: **VOA6_388996** SeqNo: **6217536** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,2-Trichloroethane	17.98	1.0	20	0	89.9	80 - 119				
1,1-Dichloroethene	17.33	1.0	20	0	86.6	71 - 131				
1,2-Dichloroethane	17.03	1.0	20	0	85.1	73 - 128				
cis-1,2-Dichloroethene	16.99	1.0	20	0	85.0	78 - 123				
Methylene chloride	16.95	2.0	20	0	84.8	74 - 124				
Trichloroethene	25.44	1.0	20	6.425	95.1	79 - 123				
Vinyl chloride	17.08	1.0	20	0	85.4	58 - 137				
Surr: 1,2-Dichloroethane-d4	*45.44*	*1.0*	*50*	*0*	*90.9*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*49.47*	*1.0*	*50*	*0*	*98.9*	*85 - 114*				
Surr: Dibromofluoromethane	*45.67*	*1.0*	*50*	*0*	*91.3*	*80 - 119*				
Surr: Toluene-d8	*50.35*	*1.0*	*50*	*0*	*101*	*89 - 112*				

MSD Sample ID: **HS21080176-03MSD** Units: **ug/L** Analysis Date: **05-Aug-2021 17:32**
Client ID: Run ID: **VOA6_388996** SeqNo: **6217537** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,2-Trichloroethane	16.96	1.0	20	0	84.8	80 - 119	17.98	5.87	20	
1,1-Dichloroethene	16.1	1.0	20	0	80.5	71 - 131	17.33	7.36	20	
1,2-Dichloroethane	16.86	1.0	20	0	84.3	73 - 128	17.03	0.984	20	
cis-1,2-Dichloroethene	15.78	1.0	20	0	78.9	78 - 123	16.99	7.39	20	
Methylene chloride	15.55	2.0	20	0	77.8	74 - 124	16.95	8.62	20	
Trichloroethene	23.55	1.0	20	6.425	85.6	79 - 123	25.44	7.72	20	
Vinyl chloride	15.13	1.0	20	0	75.6	58 - 137	17.08	12.1	20	
Surr: 1,2-Dichloroethane-d4	*43.82*	*1.0*	*50*	*0*	*87.6*	*81 - 118*	*45.44*	*3.63*	*20*	
Surr: 4-Bromofluorobenzene	*49.35*	*1.0*	*50*	*0*	*98.7*	*85 - 114*	*49.47*	*0.239*	*20*	
Surr: Dibromofluoromethane	*45.8*	*1.0*	*50*	*0*	*91.6*	*80 - 119*	*45.67*	*0.269*	*20*	
Surr: Toluene-d8	*50.52*	*1.0*	*50*	*0*	*101*	*89 - 112*	*50.35*	*0.341*	*20*	

The following samples were analyzed in this batch: HS21071465-01 HS21071465-02 HS21071465-06 HS21071465-07

Revision: 1

ALS Houston, US Date: 09-Sep-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP 16 July 2021
WorkOrder: HS21071465

QC BATCH REPORT

Batch ID: R388997 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY SW8260C

MBLK Sample ID: **VBLKM-210805** Units: **ug/Kg** Analysis Date: **05-Aug-2021 12:58**
Client ID: Run ID: **VOA6_388997** SeqNo: **6217552** PrepDate: DF: **50**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,2-Trichloroethane	100	250								U
1,1-Dichloroethene	100	250								U
1,2-Dichloroethane	100	250								U
cis-1,2-Dichloroethene	100	250								U
Methylene chloride	100	500								U
Trichloroethene	100	250								U
Vinyl chloride	100	100								U
Surr: Toluene-d8	*2585*	*250*	*2500*	*0*	*103*	*85 - 116*				
Surr: 1,2-Dichloroethane-d4	*2232*	*250*	*2500*	*0*	*89.3*	*71 - 136*				
Surr: 4-Bromofluorobenzene	*2389*	*250*	*2500*	*0*	*95.6*	*79 - 119*				
Surr: Dibromofluoromethane	*2302*	*250*	*2500*	*0*	*92.1*	*78 - 119*				

LCS Sample ID: **VLCSW-210805** Units: **ug/L** Analysis Date: **05-Aug-2021 12:16**
Client ID: Run ID: **VOA6_388997** SeqNo: **6217547** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,2-Trichloroethane	20.06	1.0	20	0	100	80 - 119				
1,1-Dichloroethene	16.49	1.0	20	0	82.4	71 - 131				
1,2-Dichloroethane	18.97	1.0	20	0	94.8	73 - 128				
cis-1,2-Dichloroethene	18.67	1.0	20	0	93.4	78 - 123				
Methylene chloride	20.11	2.0	20	0	101	74 - 124				
Trichloroethene	19.16	1.0	20	0	95.8	79 - 123				
Vinyl chloride	16.28	1.0	20	0	81.4	58 - 137				
Surr: 1,2-Dichloroethane-d4	*44.28*	*1.0*	*50*	*0*	*88.6*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*48.93*	*1.0*	*50*	*0*	*97.9*	*85 - 114*				
Surr: Dibromofluoromethane	*45.44*	*1.0*	*50*	*0*	*90.9*	*80 - 119*				
Surr: Toluene-d8	*45.82*	*1.0*	*50*	*0*	*91.6*	*89 - 112*				

Revision: 1

ALS Houston, US Date: 09-Sep-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP 16 July 2021
WorkOrder: HS21071465

QC BATCH REPORT

Batch ID: R388997 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY SW8260C

MS Sample ID: **HS21080176-03MS** Units: **ug/L** Analysis Date: **05-Aug-2021 17:11**
Client ID: Run ID: **VOA6_388997** SeqNo: **6217549** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,2-Trichloroethane	17.98	1.0	20	0	89.9	80 - 119				
1,1-Dichloroethene	17.33	1.0	20	0	86.6	71 - 131				
1,2-Dichloroethane	17.03	1.0	20	0	85.1	73 - 128				
cis-1,2-Dichloroethene	16.99	1.0	20	0	85.0	78 - 123				
Methylene chloride	16.95	2.0	20	0	84.8	74 - 124				
Trichloroethene	25.44	1.0	20	6.425	95.1	79 - 123				
Vinyl chloride	17.08	1.0	20	0	85.4	58 - 137				
Surr: 1,2-Dichloroethane-d4	*45.44*	*1.0*	*50*	*0*	*90.9*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*49.47*	*1.0*	*50*	*0*	*98.9*	*85 - 114*				
Surr: Dibromofluoromethane	*45.67*	*1.0*	*50*	*0*	*91.3*	*80 - 119*				
Surr: Toluene-d8	*50.35*	*1.0*	*50*	*0*	*101*	*89 - 112*				

MSD Sample ID: **HS21080176-03MSD** Units: **ug/L** Analysis Date: **05-Aug-2021 17:32**
Client ID: Run ID: **VOA6_388997** SeqNo: **6217550** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,2-Trichloroethane	16.96	1.0	20	0	84.8	80 - 119	17.98	5.87	20	
1,1-Dichloroethene	16.1	1.0	20	0	80.5	71 - 131	17.33	7.36	20	
1,2-Dichloroethane	16.86	1.0	20	0	84.3	73 - 128	17.03	0.984	20	
cis-1,2-Dichloroethene	15.78	1.0	20	0	78.9	78 - 123	16.99	7.39	20	
Methylene chloride	15.55	2.0	20	0	77.8	74 - 124	16.95	8.62	20	
Trichloroethene	23.55	1.0	20	6.425	85.6	79 - 123	25.44	7.72	20	
Vinyl chloride	15.13	1.0	20	0	75.6	58 - 137	17.08	12.1	20	
Surr: 1,2-Dichloroethane-d4	*43.82*	*1.0*	*50*	*0*	*87.6*	*81 - 118*	*45.44*	*3.63*	*20*	
Surr: 4-Bromofluorobenzene	*49.35*	*1.0*	*50*	*0*	*98.7*	*85 - 114*	*49.47*	*0.239*	*20*	
Surr: Dibromofluoromethane	*45.8*	*1.0*	*50*	*0*	*91.6*	*80 - 119*	*45.67*	*0.269*	*20*	
Surr: Toluene-d8	*50.52*	*1.0*	*50*	*0*	*101*	*89 - 112*	*50.35*	*0.341*	*20*	

The following samples were analyzed in this batch: HS21071465-08

Revision: 1

ALS Houston, US Date: 09-Sep-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP 16 July 2021
WorkOrder: HS21071465

QC BATCH REPORT

Batch ID: R389546 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MBLK Sample ID: **VBLKW-210813** Units: **ug/L** Analysis Date: **13-Aug-2021 13:12**
Client ID: Run ID: **VOA6_389546** SeqNo: **6230067** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,2-Trichloroethane	1.0	1.0								U
1,1-Dichloroethene	0.50	1.0								U
1,2-Dichloroethane	0.50	1.0								U
cis-1,2-Dichloroethene	0.50	1.0								U
Methylene chloride	1.0	2.0								U
Trichloroethene	0.50	1.0								U
Vinyl chloride	0.50	1.0								U
Surr: 1,2-Dichloroethane-d4	*40.71*	*1.0*	*50*	*0*	*81.4*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*48.74*	*1.0*	*50*	*0*	*97.5*	*85 - 114*				
Surr: Dibromofluoromethane	*41.25*	*1.0*	*50*	*0*	*82.5*	*80 - 119*				
Surr: Toluene-d8	*49.07*	*1.0*	*50*	*0*	*98.1*	*89 - 112*				

LCS Sample ID: **VLCSW-210813** Units: **ug/L** Analysis Date: **13-Aug-2021 12:09**
Client ID: Run ID: **VOA6_389546** SeqNo: **6230066** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,2-Trichloroethane	20.25	1.0	20	0	101	80 - 119				
1,1-Dichloroethene	17.81	1.0	20	0	89.1	71 - 131				
1,2-Dichloroethane	19.6	1.0	20	0	98.0	73 - 128				
cis-1,2-Dichloroethene	17.58	1.0	20	0	87.9	78 - 123				
Methylene chloride	17.89	2.0	20	0	89.5	74 - 124				
Trichloroethene	21.94	1.0	20	0	110	79 - 123				
Vinyl chloride	17.19	1.0	20	0	85.9	58 - 137				
Surr: 1,2-Dichloroethane-d4	*42.38*	*1.0*	*50*	*0*	*84.8*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*48.25*	*1.0*	*50*	*0*	*96.5*	*85 - 114*				
Surr: Dibromofluoromethane	*42.53*	*1.0*	*50*	*0*	*85.1*	*80 - 119*				
Surr: Toluene-d8	*45.07*	*1.0*	*50*	*0*	*90.1*	*89 - 112*				

Revision: 1

ALS Houston, US Date: 09-Sep-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP 16 July 2021
WorkOrder: HS21071465

QC BATCH REPORT

Batch ID: R389546 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MS Sample ID: **HS21080560-02MS** Units: **ug/L** Analysis Date: **13-Aug-2021 14:57**
Client ID: Run ID: **VOA6_389546** SeqNo: **6230071** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,2-Trichloroethane	18.14	1.0	20	0	90.7	80 - 119				
1,1-Dichloroethene	17.37	1.0	20	0	86.8	71 - 131				
1,2-Dichloroethane	17.47	1.0	20	0	87.3	73 - 128				
cis-1,2-Dichloroethene	15.54	1.0	20	0	77.7	78 - 123				S
Methylene chloride	15.97	2.0	20	0	79.9	74 - 124				
Trichloroethene	21.12	1.0	20	0	106	79 - 123				
Vinyl chloride	15.96	1.0	20	0	79.8	58 - 137				
Surr: 1,2-Dichloroethane-d4	*39.85*	*1.0*	*50*	*0*	*79.7*	*81 - 118*				S
Surr: 4-Bromofluorobenzene	*46.91*	*1.0*	*50*	*0*	*93.8*	*85 - 114*				
Surr: Dibromofluoromethane	*41.81*	*1.0*	*50*	*0*	*83.6*	*80 - 119*				
Surr: Toluene-d8	*48.88*	*1.0*	*50*	*0*	*97.8*	*89 - 112*				

MSD Sample ID: **HS21080560-02MSD** Units: **ug/L** Analysis Date: **13-Aug-2021 15:18**
Client ID: Run ID: **VOA6_389546** SeqNo: **6230072** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,2-Trichloroethane	17.92	1.0	20	0	89.6	80 - 119	18.14	1.23	20	
1,1-Dichloroethene	16.84	1.0	20	0	84.2	71 - 131	17.37	3.06	20	
1,2-Dichloroethane	17.56	1.0	20	0	87.8	73 - 128	17.47	0.537	20	
cis-1,2-Dichloroethene	15.09	1.0	20	0	75.5	78 - 123	15.54	2.96	20	S
Methylene chloride	15.66	2.0	20	0	78.3	74 - 124	15.97	2.01	20	
Trichloroethene	20.72	1.0	20	0	104	79 - 123	21.12	1.93	20	
Vinyl chloride	16.01	1.0	20	0	80.0	58 - 137	15.96	0.304	20	
Surr: 1,2-Dichloroethane-d4	*40.09*	*1.0*	*50*	*0*	*80.2*	*81 - 118*	*39.85*	*0.603*	*20*	S
Surr: 4-Bromofluorobenzene	*47.56*	*1.0*	*50*	*0*	*95.1*	*85 - 114*	*46.91*	*1.37*	*20*	
Surr: Dibromofluoromethane	*41.5*	*1.0*	*50*	*0*	*83.0*	*80 - 119*	*41.81*	*0.745*	*20*	
Surr: Toluene-d8	*48.75*	*1.0*	*50*	*0*	*97.5*	*89 - 112*	*48.88*	*0.272*	*20*	

The following samples were analyzed in this batch: HS21071465-03 HS21071465-04 HS21071465-05

Revision: 1

ALS Houston, US Date: 09-Sep-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP 16 July 2021
WorkOrder: HS21071465

QC BATCH REPORT

Batch ID: 168561 (0) **Instrument: ICS-Integrion** **Method: ANIONS BY SW9056A**

MBLK Sample ID: **MBLK-168561** Units: **mg/Kg** Analysis Date: **29-Jul-2021 06:10**
Client ID: Run ID: **ICS-Integrion_388493** SeqNo: **6206245** PrepDate: **28-Jul-2021** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Bromide	1.00	1.00								U
Nitrogen, Nitrate (As N)	1.00	1.00								U
Sulfate	5.00	5.00								U

LCS Sample ID: **LCS-168561** Units: **mg/Kg** Analysis Date: **29-Jul-2021 06:18**
Client ID: Run ID: **ICS-Integrion_388493** SeqNo: **6206246** PrepDate: **28-Jul-2021** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Bromide	38.36	1.00	40	0	95.9	80 - 120				
Nitrogen, Nitrate (As N)	39.27	1.00	40	0	98.2	80 - 120				
Sulfate	198.6	5.00	200	0	99.3	80 - 120				

MS Sample ID: **HS21071416-20MS** Units: **mg/Kg** Analysis Date: **29-Jul-2021 06:33**
Client ID: Run ID: **ICS-Integrion_388493** SeqNo: **6206248** PrepDate: **28-Jul-2021** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Bromide	17.95	0.995	19.9	0	90.2	80 - 120				
Nitrogen, Nitrate (As N)	21.08	0.995	19.9	0.4249	104	80 - 120				
Sulfate	527.4	4.98	99.5	447	80.8	80 - 120				O

MSD Sample ID: **HS21071416-20MSD** Units: **mg/Kg** Analysis Date: **29-Jul-2021 06:40**
Client ID: Run ID: **ICS-Integrion_388493** SeqNo: **6206249** PrepDate: **28-Jul-2021** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Bromide	18.03	0.995	19.9	0	90.6	80 - 120	17.95	0.416	20	
Nitrogen, Nitrate (As N)	21.12	0.995	19.9	0.4249	104	80 - 120	21.08	0.166	20	
Sulfate	527.3	4.97	99.5	447	80.7	80 - 120	527.4	0.0134	20	O

The following samples were analyzed in this batch: HS21071465-08

Revision: 1

ALS Houston, US Date: 09-Sep-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP 16 July 2021
WorkOrder: HS21071465

QC BATCH REPORT

Batch ID: 168934 (0) **Instrument: ManTech01** **Method: ALKALINITY BY SM2320B MOD.**

MBLK Sample ID: **MBLK-168934** Units: **mg/Kg** Analysis Date: **10-Aug-2021 21:42**
Client ID: Run ID: **ManTech01_389210** SeqNo: **6222871** PrepDate: **10-Aug-2021** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Alkalinity, Total (As CaCO3)	10.0	10.0								U

LCS Sample ID: **LCS-168934** Units: **mg/Kg** Analysis Date: **10-Aug-2021 21:51**
Client ID: Run ID: **ManTech01_389210** SeqNo: **6222872** PrepDate: **10-Aug-2021** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Alkalinity, Total (As CaCO3)	10410	10.0	10000	0	104	80 - 120				

LCSD Sample ID: **LCSD-168934** Units: **mg/Kg** Analysis Date: **10-Aug-2021 21:59**
Client ID: Run ID: **ManTech01_389210** SeqNo: **6222873** PrepDate: **10-Aug-2021** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Alkalinity, Total (As CaCO3)	10250	10.0	10000	0	102	80 - 120	10410	1.62	20	

DUP Sample ID: **HS21080162-01DUP** Units: **mg/Kg** Analysis Date: **10-Aug-2021 22:17**
Client ID: Run ID: **ManTech01_389210** SeqNo: **6222875** PrepDate: **10-Aug-2021** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Alkalinity, Total (As CaCO3)	255.1	10.0					265.9	4.15	20	

The following samples were analyzed in this batch: HS21071465-08

Revision: 1

ALS Houston, US Date: 09-Sep-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP 16 July 2021
WorkOrder: HS21071465

QC BATCH REPORT

Batch ID: R389291 (0) **Instrument:** TOC_04 **Method:** TOTAL ORGANIC CARBON - SM5310B-2011

MBLK Sample ID: **MBLK-081121** Units: **mg/L** Analysis Date: **11-Aug-2021 11:56**
Client ID: Run ID: **TOC_04_389291** SeqNo: **6224444** PrepDate: DF: **1**

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

LCS Sample ID: **LCS-08112021** Units: **mg/L** Analysis Date: **11-Aug-2021 12:08**
Client ID: Run ID: **TOC_04_389291** SeqNo: **6224445** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Organic Carbon, Total	10.27	1.00	10	0	103	85 - 115				

LCSD Sample ID: **LCSD-08011021** Units: **mg/L** Analysis Date: **11-Aug-2021 12:20**
Client ID: Run ID: **TOC_04_389291** SeqNo: **6224446** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Organic Carbon, Total	10.49	1.00	10	0	105	85 - 115	10.27	2.12	20	

MS Sample ID: **HS21071465-01MS** Units: **mg/L** Analysis Date: **11-Aug-2021 13:14**
Client ID: **16RW10-210727** Run ID: **TOC_04_389291** SeqNo: **6224450** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Organic Carbon, Total	16.35	1.00	10	5.15	112	80 - 120				

The following samples were analyzed in this batch: HS21071465-01 HS21071465-02 HS21071465-06

Revision: 1

ALS Houston, US Date: 09-Sep-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP 16 July 2021
WorkOrder: **HS21071465**

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
Date	
mg/Kg-dry	Milligrams per Kilogram- Dry weight corrected
mg/L	Milligrams per Liter

CERTIFICATIONS,ACCREDITATIONS & LICENSES

Agency	Number	Expire Date
Arkansas	21-022-0	26-Mar-2022
Dept of Defense	PJLA L20-507-R2	22-Dec-2021
Florida	E87611-33	30-Jun-2022
Illinois	2000322021-7	09-May-2022
Kansas	E-10352 2021-2022	31-Jul-2022
Kentucky	123043, 2021-2022	30-Apr-2022
Louisiana	03087, 2021-2022	30-Jun-2022
North Carolina	624-2021	31-Dec-2021
Texas	T104704231-21-28	30-Apr-2022

ALS Houston, US Date: 09-Sep-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant LHAAP 16 July 2021
Work Order: HS21071465

SAMPLE TRACKING

Lab Samp ID	Client Sample ID	Action	Date	Person	New Location
HS21071465-01	16RW10-210727	Login	7/28/2021 1:50:32 PM	PJM	WET293
HS21071465-01	16RW10-210727	Login	7/28/2021 1:50:32 PM	PJM	Sub
HS21071465-01	16RW10-210727	Login	7/28/2021 1:50:32 PM	PJM	VOA020
HS21071465-01	16RW10-210727	Login	7/28/2021 1:50:32 PM	PJM	RSK027
HS21071465-01	16RW10-210727	Login	7/28/2021 1:50:32 PM	PJM	WET214
HS21071465-02	16RW09-210727	Login	7/28/2021 1:50:32 PM	PJM	WET293
HS21071465-02	16RW09-210727	Login	7/28/2021 1:50:32 PM	PJM	Sub
HS21071465-02	16RW09-210727	Login	7/28/2021 1:50:32 PM	PJM	VOA020
HS21071465-02	16RW09-210727	Login	7/28/2021 1:50:32 PM	PJM	RSK027
HS21071465-02	16RW09-210727	Login	7/28/2021 1:50:32 PM	PJM	WET214
HS21071465-03	16RW07-210727	Login	7/28/2021 1:50:32 PM	PJM	WET293
HS21071465-03	16RW07-210727	Login	7/28/2021 1:50:32 PM	PJM	Sub
HS21071465-03	16RW07-210727	Login	7/28/2021 1:50:32 PM	PJM	VOA020
HS21071465-03	16RW07-210727	Login	7/28/2021 1:50:32 PM	PJM	RSK027
HS21071465-03	16RW07-210727	Login	7/28/2021 1:50:32 PM	PJM	WET214
HS21071465-04	16RW06-210727	Login	7/28/2021 1:50:32 PM	PJM	Sub
HS21071465-04	16RW06-210727	Login	7/28/2021 1:50:32 PM	PJM	VOA020
HS21071465-05	16WW46-210727	Login	7/28/2021 1:50:32 PM	PJM	Sub
HS21071465-05	16WW46-210727	Login	7/28/2021 1:50:32 PM	PJM	VOA020
HS21071465-06	16WW40-210727	Login	7/28/2021 1:50:32 PM	PJM	Sub
HS21071465-06	16WW40-210727	Login	7/28/2021 1:50:32 PM	PJM	VOA020
HS21071465-07	16EW07-210727	Login	7/28/2021 1:50:32 PM	PJM	Sub
HS21071465-07	16EW07-210727	Login	7/28/2021 1:50:32 PM	PJM	VOA020
HS21071465-08	16EW06-210727	Login	7/28/2021 1:50:32 PM	PJM	WET293
HS21071465-08	16EW06-210727	Login	7/28/2021 1:50:32 PM	PJM	Sub
HS21071465-08	16EW06-210727	Login	7/28/2021 1:50:32 PM	PJM	VOA020
HS21071465-08	16EW06-210727	Login	7/28/2021 1:50:32 PM	PJM	RSK027
HS21071465-08	16EW06-210727	Login	7/28/2021 1:50:32 PM	PJM	WET214
HS21071465-09	Trip Blank-210727	Login	7/28/2021 1:50:32 PM	PJM	VOA020

Revision:1

ALS Houston, US Date: 09-Sep-21

Sample Receipt Checklist

Work Order ID: HS21071465 **Date/Time Received:** **28-Jul-2021 09:20**

Client Name: CBI-Houston **Received by:** **Paresh M. Giga**

Completed By:	/S/ Pablo Marinez	28-Jul-2021 13:51	**Reviewed by:**	/S/ Ragen Giga	28-Jul-2021 19:01
	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 ☐	2 Page(s)
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	COC IDs:CLIENT
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):	1.5°C UC/C	IR 31
Cooler(s)/Kit(s):	47528	
Date/Time sample(s) sent to storage:	7/28/21 14:05	

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: 16EW07-210727 & 16EW06-210727 - All Vials contain >6mm headspace

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

Corrective Action:

CHAIN OF CUSTODY

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

Page 1 of 1

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

Field Sample I.D.	Sample Matrix	Date / Time	MS / MSD	No. OF CONTAINERS	Analyses: VOC by SW 8260B	TOC by SM5310C	MEE by RSK 175	Anions (bromide, sulfate, nitrate) by SW9056 and Alkalinity by SM2320	Bromide by SW9056	Perchlorate by SW6850	Metals (arsenic, chromium, manganese, nickel, thallium) by SW6020				Remarks (Preservatives, etc.)	Lab I.D.#
16RW10-210727	WG	7/27/21/0715		9	X	X	X			X						
16RW09-210727	WG	7/27/21/0800		9	X	X	X			X						
16RW07-210727	WG	7/27/21/0850		4	X					X						
16RW06-210727	WG	7/27/21/0935		4	X					X						
16WW46-210727	WG	7/27/21/1020		4	X					X						
16WW40-210727	WG	7/27/21/1105		9	X	X	X			X						
16EW07-210727	WG	7/27/21/1150		4	X					X						
16EW06-210727	WG	7/27/21/1235		10	X	X	X	X	X	X						

HS21071465

Aptim Environmental & Infrastucture, Inc.

Longhorn Army Ammunition Plant LHAAP 16 July 20

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

Relinquished By:	Date	Time	Received By:	Date	Time	Relinquished By:	Date	Time	Received By:	Date	Time
Scott Beesinger	7/27/21	1430									

For Lab Use Only

Received At Lab By:	Date	Time	Airbill No.	Opened By:	Date	Time	Temp of Container	Seal No.	Condition
P.G.	07/28/21	9:20							

Remarks:

47528 UIC 1.5 IR 51

CIF-0

CHAIN OF CUSTODY

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

Page 1 of 1

Project: APTIM LONGHORN ARMY AMMN. PLANT (LHAAP) GROUNDWATER TREATMENT PLANT (GWTP) KARNACK, TEXAS	Project No. 601032
Job: **LHAAP 16 July 2021**	
Prepared By: Scott Beesinger	P.O. Number

Field Sample I.D.	Sample Matrix	Date / Time	MS / MSD	No. OF CONTAINERS	VOC by SW 8260B	TOC by SM5310C	MEE by RSK 175	Anions (bromide, sulfate, nitrate) by SW9056 and Alkalinity by SM2320	Bromide by SW9056	Perchlorate by SW6850	Metals (arsenic, chromium, manganese, nickel, thallium) by SW6020				Remarks (Preservatives, etc.)	Lab I.D.#
TRip Blank-210727	W	7/27/21		2	X											

Analyses

HS21071465

Aptim Environmental & Infrastucture, Inc.
Longhorn Army Ammunition Plant LHAAP 16 July 2(

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

Relinquished By:	Date	Time	Received By:	Date	Time	Relinquished By:	Date	Time	Received By:	Date	Time
Scott Beesinger	7/27/21	1430									

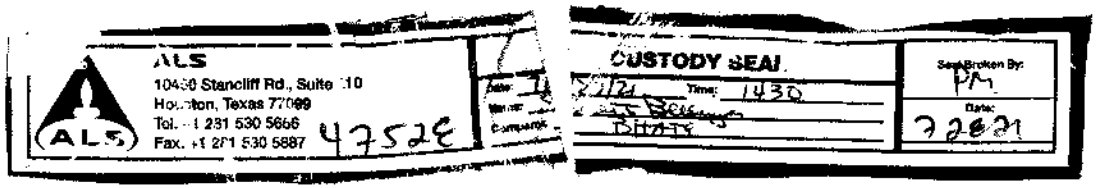
For Lab Use Only

Received At Lab By:	Date	Time	Airbill No.	Opened By:	Date	Time	Temp of Container	Seal No.	Condition
P.G.	07/28/21	9:20							

Remarks:

ulc 1.5 FA31
cf-0

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


ALS
10450 Stancliff Rd., Suite 210
Houston, Texas 77099
Tel. +1 281 530 5656
Fax. +1 281 530 5887
47528
CUSTODY SEAL
Time: 1430
Seal Broken By:
PM
Date:
7 28 21


FedEx
TRK# 0221 9473 0845 1390
WED - 28 JUL AA
PRIORITY OVERNIGHT
AB SGRA
47528
77099
TX-US
IAH

August 18, 2021 Service Request No:E2100891

Ragen Giga
ALS Environmental - US
10450 Stancliff Rd Suite 210
Houston, TX 77099

Laboratory Results for: HS21071465

Dear Ragen,

Enclosed are the results of the sample(s) submitted to our laboratory July 28, 2021
For your reference, these analyses have been assigned our service request number **E2100891.**

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

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental



Corey Grandits
Project Manager

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

Certificate of Analysis

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

ALS Environmental

Client:	ALS Houston	**Service Request No.:**	E2100891
Project:	HS21071465	**Date Received:**	07/28/21
Sample Matrix:	W		

CASE NARRATIVE

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

Sample Receipt

Eight samples were received for analysis at ALS Environmental in Houston on 7/28/21.

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

Data Validation Notes and Discussion

Precision and Accuracy:

EQ2100475 & EQ2100477: Laboratory Control Spike/Duplicate Laboratory Control Spike (LCS/DLCS) samples were analyzed and reported in addition to a MS/MSD for these extraction batches. The LCS and DLCS recoveries are within QC limits. MS/MSD were performed on unrelated samples.

Lowest practical dilution performed (matrix interference) for samples E2100891-002 through E2100891-006. Sample 16EW06-210727 the lab prep and analyze as a solid.

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

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

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

Client: ALS Environmental - US **Service Request:**E2100891
Project: HS21071465

SAMPLE CROSS-REFERENCE

SAMPLE #	CLIENT SAMPLE ID	DATE	TIME
E2100891-001	16RW10-210727	7/27/2021	0715
E2100891-002	16RW09-210727	7/27/2021	0800
E2100891-003	16RW07-210727	7/27/2021	0850
E2100891-004	16RW06-210727	7/27/2021	0935
E2100891-005	16WW46-210727	7/27/2021	1020
E2100891-006	16WW40-210727	7/27/2021	1105
E2100891-007	16EW07-210727	7/27/2021	1150
E2100891-008	16EW06-210727	7/27/2021	1235

Service Request Summary

Folder #: **E2100891**
Client Name: ALS Environmental - US
Project Name: HS21071465
Project Number:

Report To: Ragen Giga
ALS Environmental - US
10450 Stancliff Rd Suite 210
Houston, TX 77099
USA
Phone Number:
Cell Number:
Fax Number:
E-mail: ragenp.giga@alsglobal.com

Project Chemist: Corey Grandits
Originating Lab: HOUSTON
Logged By: CGRANDITS
Date Received: 07/28/21
Internal Due Date: 8/11/2021
QAP: LAB QAP
Qualifier Set: Lab Standard
Formset: Lab Standard
Merged?: Y
Report to MDL?: Y
P.O. Number: HS21071465
EDD: No EDD Specified

8 120 mL-Plastic Bottle Natural WM Unpreserved
Location: EHRMS-AirArch 1
Pressure Gas:

Lab Samp No.	Client Samp No	Matrix	Collected	HOUSTON ClO4 DOD/6850
E2100891-001	16RW10-210727	Ground Water	07/27/21 0715	**IV**
E2100891-002	16RW09-210727	Ground Water	07/27/21 0800	**IV**
E2100891-003	16RW07-210727	Ground Water	07/27/21 0850	**IV**
E2100891-004	16RW06-210727	Ground Water	07/27/21 0935	**IV**
E2100891-005	16WW46-210727	Ground Water	07/27/21 1020	**IV**
E2100891-006	16WW40-210727	Ground Water	07/27/21 1105	**IV**
E2100891-007	16EW07-210727	Liquid	07/27/21 1150	**IV**
E2100891-008	16EW06-210727	Liquid	07/27/21 1235	**IV**

Service Request Summary

Folder #: **E2100891**
Client Name: ALS Environmental - US
Project Name: HS21071465
Project Number:

Report To: Ragen Giga
ALS Environmental - US
10450 Stancliff Rd Suite 210
Houston, TX 77099
USA
Phone Number:
Cell Number:
Fax Number:
E-mail: ragenp.giga@alsglobal.com

Project Chemist: Corey Grandits
Originating Lab: HOUSTON
Logged By: CGRANDITS
Date Received: 07/28/21
Internal Due Date: 8/11/2021
QAP: LAB QAP
Qualifier Set: Lab Standard
Formset: Lab Standard
Merged?: Y
Report to MDL?: Y
P.O. Number: HS21071465
EDD: No EDD Specified

8 120 mL-Plastic Bottle Natural WM Unpreserved
Location: EHRMS-AirArch 1
Pressure Gas:

Test Comments:

Group	Test/Method	Samples	Comments
Semivoa GCMS	ClO4 DOD/6850	8	IV due 8/18

Data Qualifiers

Lab Standard

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

Data Qualifiers

Lab Standard

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

ALS Laboratory Group

Acronyms

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

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

ALS Environmental

State Certifications, Accreditations, and Licenses

Agency	Number	Expire Date
American Association for Laboratory Accreditation	2897.01 2020	11/30/2021
Arkansas Department of Environmental Quality	19-028-0	6/30/2022
Arkansas Department of Environmental Quality	21-022-0	3/26/2022
Department of Defense	A2LA 2897.01	11/30/2021
Florida Department of Health	E87611-33	6/30/2022
Hawaii Department of Health	2021-2022	4/30/2022
Kansas Department of Health and Environment	E-10352 2022	7/31/2022
Louisiana Department of Environmental Quality	03087-2021	6/30/2022
Louisiana Department of Health and Hospitals	LA028-2021	12/31/2021
Maine Department of Health and Human Services	2020016	6/5/2022
Minnesota Department of Health	2021671	12/31/2021
Nevada Department of Concervation and Natural Resources	TX026932022-1	7/31/2022
New Hampshire Environmental Laboratory Accreditation Program	209421	4/24/2022
Oklahoma Department of Environmental Quality	2020-123	8/31/2021
Pennsylvania Department of Environmental Protection	68-03441-015	6/30/2022
Tennessee Department of Environment and Concervation	04016-2021	4/30/2022
Texas Commision on Environmental Quality	T104704231-21-27	4/30/2022
United States Department of Agriculture	P330-19-00299	10/10/2022

Chain of Custody

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

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Houston, TX 77099
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F: +1 281 530 5887
www.alsglobal.com

Subcontract Chain of Custody

SAMPLING STATE: **Dept of Defense** **COC ID:** **16583**

SUBCONTRACT TO:

ALS Environmental
10450 Stancliff RoadSuite 210
Houston, TX 77084

Phone: +1 281 530 5656

CUSTOMER INFORMATION:

Company:	ALS Houston
Contact:	Ragen Giga
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Email:	RagenP.Giga@ALSGlobal.com
Alternate Contact:	
Email:	

INVOICE INFORMATION:

Company:	ALS Houston
Contact:	Accounts Payable
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Reference:	HS21071465
TSR:	Sonia West

	LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
	ANALYSIS REQUESTED			DUE DATE
1.	**HS21071465-01**	**16RW10-210727**	**GW**	**27 Jul 2021 07:15**
	Level II and Level IV reports on a seperate pdf. Send WOA to Vicki Graves.			11 Aug 2021
2.	**HS21071465-02**	**16RW09-210727**	**GW**	**27 Jul 2021 08:00**
	Level II and Level IV reports on a seperate pdf. Send WOA to Vicki Graves.			11 Aug 2021
3.	**HS21071465-03**	**16RW07-210727**	**GW**	**27 Jul 2021 08:50**
	Level II and Level IV reports on a seperate pdf. Send WOA to Vicki Graves.			11 Aug 2021
4.	**HS21071465-04**	**16RW06-210727**	**GW**	**27 Jul 2021 09:35**
	Level II and Level IV reports on a seperate pdf. Send WOA to Vicki Graves.			11 Aug 2021
5.	**HS21071465-05**	**16WW46-210727**	**GW**	**27 Jul 2021 10:20**
	Level II and Level IV reports on a seperate pdf. Send WOA to Vicki Graves.			11 Aug 2021
6.	**HS21071465-06**	**16WW40-210727**	**GW**	**27 Jul 2021 11:05**
	Level II and Level IV reports on a seperate pdf. Send WOA to Vicki Graves.			11 Aug 2021
7.	**HS21071465-07**	**16EW07-210727**	**GW**	**27 Jul 2021 11:50**
	Level II and Level IV reports on a seperate pdf. Send WOA to Vicki Graves.			11 Aug 2021
8.	**HS21071465-08**	**16EW06-210727**	**GW**	**27 Jul 2021 12:35**

Subcontract Chain of Custody

SAMPLING STATE: **Dept of Defense** **COC ID: 16583**

LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
ANALYSIS REQUESTED			DUE DATE
	Level II and Level IV reports on a seperate pdf. Send WOA to Vicki Graves.		11 Aug 2021

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

QC Level: DOD IV (DoD Data Package)

Relinquished By: _____ Date/Time: 7-28-21 14:25

Received By: COREY G Date/Time: 7/28/21 1425

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

ALS Environmental

Cooler Receipt Form

Project Chemist: CG

Client/Project: ALS-H

Thermometer ID: IR#1

Date/Time Received: 7/28/21 Initials: CG Date/Time Logged in: 7/28/21 Initials: CG

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

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

3. Were custody seals on coolers? ○ Yes ✓ No
   Were they intact? ○ Yes ○ No ✓ N/A
   Were they signed and dated? ○ Yes ○ No ✓ N/A
   If yes, how many and where?

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

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

Cooler Tracking Number	COC ID	Date Opened	Time Opened	Opened By	Temp. °C	Temp Blank?
NA		7/28/21	1425	CG	5.5	☑
						☐
						☐
						☐

6. Were custody papers properly filled out (ink, signed, dated, etc)? ✓ Yes ○ No
7. Did all bottles arrive in good condition (not broken, no signs of leakage)? ○ Yes ○ No
8. Were all sample labels complete (i.e., sample ID, analysis, preservation, etc)? ✓ Yes ○ No
9. Were appropriate bottles/containers and volumes received for the requested tests? ✓ Yes ○ No
10. Did sample labels and tags agree with custody documents? ✓ Yes ○ No

Notes, Discrepancies, & Resolutions:

Service request Label:

HS-HRMSCoolerReceipt R1.0

ALS Environmental - Houston HRMS

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

SAMPLE ACCEPTANCE POLICY

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

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

- ✓ Intact on outside of cooler, signed and dated

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

The following is required on each COC:

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

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

Sample Integrity (mandatory):

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

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

Temperature Requirement (varies by sample matrix):

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

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

Preparation Information Benchsheets

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

Preparation Information Benchsheet

Prep Run#: 384371 **Prep WorkFlow:** GenExt28Day **Status:** Prepped
Team: Semivoa GCMS/GRIVERA **Prep Method:** Method **Prep Date/Time:** 8/2/21 10:30

#	Lab Code	Client ID	B#	Method /Test	pH	Cl	Matrix	Amt. Ext.	Sample Description
1	E2100845-001	OBFOD-MW01	.01	6850/ClO4 DOD			Water	10mL	
2	E2100845-002	OBFOD-1	.01	6850/ClO4 DOD			Water	10mL	
3	E2100845-003	OBFOB-MW01	.01	6850/ClO4 DOD			Water	10mL	
4	E2100845-004	OBFOB-MW03	.01	6850/ClO4 DOD			Water	10mL	
5	E2100845-005	OBF-2	.01	6850/ClO4 DOD			Water	10mL	
6	E2100845-006	OBFOB-MW02	.01	6850/ClO4 DOD			Water	10mL	
7	E2100845-007	JOD-MW01	.01	6850/ClO4 DOD			Water	10mL	
8	E2100845-008	JOD-MW02	.01	6850/ClO4 DOD			Water	10mL	
9	E2100845-009	JOD-MW03	.01	6850/ClO4 DOD			Water	10mL	
10	E2100845-010	JOD-MW04	.01	6850/ClO4 DOD			Water	10mL	
11	E2100845-011	DUP-01	.01	6850/ClO4 DOD			Water	10mL	
12	E2100845-012	DUP-02	.01	6850/ClO4 DOD			Water	10mL	
13	E2100891-001	16RW10-210727	.01	6850/ClO4 DOD			Ground Water	10mL	
14	E2100891-002	16RW09-210727	.01	6850/ClO4 DOD			Ground Water	10mL	
15	E2100891-003	16RW07-210727	.01	6850/ClO4 DOD			Ground Water	10mL	
16	E2100891-004	16RW06-210727	.01	6850/ClO4 DOD			Ground Water	10mL	
17	E2100891-005	16WW46-210727	.01	6850/ClO4 DOD			Ground Water	10mL	
18	E2100891-006	16WW40-210727	.01	6850/ClO4 DOD			Ground Water	10mL	
19	EQ2100475-01	MB		6850/ClO4 DOD			Liquid	10mL	
20	EQ2100475-02	LCS		6850/ClO4 DOD			Liquid	10mL	
21	EQ2100475-03	DLCS		6850/ClO4 DOD			Liquid	10mL	
22	EQ2100475-04	JOD-MW01 MS	.01	6850/ClO4 DOD			Liquid	10mL	
23	EQ2100475-05	JOD-MW01 DMS	.01	6850/ClO4 DOD			Liquid	10mL	

Spiking Solutions

Name: Sodium Perchlorate 1 ug/mL (IS) (18-O) as CLO4 Inventory ID 214765 Logbook Ref: Sodium Perchlorate Expires On: 12/11/2022

E2100845-003 100.00µL EQ2100475-01 100.00µL EQ2100475-02 100.00µL EQ2100475-03 100.00µL EQ2100475-04 100.00µL EQ2100475-05 100.00µL

Name: Perchlorate Intermediate Stock1 Inventory ID 217422 Logbook Ref: Perchlorate Expires On: 11/26/2021

EQ2100475-02 1.00µL EQ2100475-03 1.00µL EQ2100475-04 1.00µL EQ2100475-05 1.00µL

Preparation Information Benchsheet

Prep Run#: 384371 **Prep WorkFlow:** GenExt28Day **Status:** Prepped
Team: Semivoa GCMS/GRIVERA **Prep Method:** Method **Prep Date/Time:** 8/2/21 10:30

Preparation Steps

Step: Preparation
Started: 8/2/21 10:30
Finished: 8/2/21 11:15
By: GRIVERA
Comments

Comments: _____

Reviewed By: GR Date: 8/2/21

Chain of Custody

Relinquished By: _____ Date: _____ Extracts Examined

Received By: _____ Date: _____ Yes No

Preparation Information Benchsheet

Prep Run#: 384372 **Prep WorkFlow:** Gen CLO4 **Status:** Prepped
Team: Semivoa GCMS/GRIVERA **Prep Method:** Method **Prep Date/Time:** 8/2/21 09:31

#	Lab Code	Client ID	B#	Method /Test	pH	Cl	Matrix	Amt. Ext.	Sample Description
1	E2100841-001	OB-1	.01	6850/ClO4 DOD			Soil	1.029g	wet sand brown
2	E2100841-002	OB-2	.01	6850/ClO4 DOD			Soil	1.036g	wet sand brown
3	E2100841-003	OB-3	.01	6850/ClO4 DOD			Soil	1.010g	wet sand brown
4	E2100841-004	OB-4	.01	6850/ClO4 DOD			Soil	1.072g	wet sand brown
5	E2100841-005	OB-5	.01	6850/ClO4 DOD			Soil	1.010g	wet sand brown
6	E2100841-006	OB-6	.01	6850/ClO4 DOD			Soil	1.004g	wet sand brown
7	E2100841-007	OB-7	.01	6850/ClO4 DOD			Soil	1.019g	wet sand brown
8	E2100841-008	OB-8	.01	6850/ClO4 DOD			Soil	1.109g	wet sand brown
9	E2100841-009	OB-9	.01	6850/ClO4 DOD			Soil	1.005g	wet sand brown
10	E2100842-001	OB-PAN-1	.01	6850/ClO4 DOD			Soil	0.992g	wet sand brown
11	E2100842-002	OB-PAN-2	.01	6850/ClO4 DOD			Soil	1.083g	wet sand brown
12	E2100842-003	OB-PAN-3	.01	6850/ClO4 DOD			Soil	1.053g	wet sand brown
13	E2100842-004	OB-PAN-4	.01	6850/ClO4 DOD			Soil	1.010g	wet sand brown
14	E2100842-005	OB-PAN-5	.01	6850/ClO4 DOD			Soil	1.029g	wet sand brown
15	E2100842-006	OB-PAN-6	.01	6850/ClO4 DOD			Soil	1.022g	wet sand brown
16	E2100891-007	16EW07-210727	.01	6850/ClO4 DOD			Liquid	1.00g	
17	E2100891-008	16EW06-210727	.01	6850/ClO4 DOD			Liquid	1.00g	
18	EQ2100477-01	MB		6850/ClO4 DOD			Solid	0.998g	
19	EQ2100477-02	LCS		6850/ClO4 DOD			Solid	1.046g	
20	EQ2100477-03	DLCS		6850/ClO4 DOD			Solid	1.080g	
21	EQ2100477-04	OB-9 MS	.01	6850/ClO4 DOD			Solid	1.009g	
22	EQ2100477-05	OB-9 DMS	.01	6850/ClO4 DOD			Solid	1.004g	
23	EQ2100477-06	OB-PAN-6 MS	.01	6850/ClO4 DOD			Solid	1.027g	
24	EQ2100477-07	OB-PAN-6 DMS	.01	6850/ClO4 DOD			Solid	1.048g	

Spiking Solutions

Name: Sodium Perchlorate 1 ug/mL (IS) (18-O) as CLO4 Inventory ID 214765 Logbook Ref: Sodium Perchlorate Expires On: 12/11/2022

E2100841-001	100.00µL	E2100841-002	100.00µL	E2100841-003	100.00µL	E2100841-004	100.00µL	E2100841-005	100.00µL	E2100841-006	100.00µL
E2100841-007	100.00µL	E2100841-008	100.00µL	E2100841-009	100.00µL	E2100842-001	100.00µL	E2100842-002	100.00µL	E2100842-003	100.00µL
E2100842-004	100.00µL	E2100842-005	100.00µL	E2100842-006	100.00µL	EQ2100477-01	100.00µL	EQ2100477-02	100.00µL	EQ2100477-03	100.00µL
EQ2100477-04	100.00µL	EQ2100477-05	100.00µL	EQ2100477-06	100.00µL	EQ2100477-07	100.00µL				

Name: Perchlorate Intermediate Stock1 Inventory ID 217422 Logbook Ref: Perchlorate Expires On: 11/26/2021

EQ2100477-02	100.00µL	EQ2100477-03	100.00µL	EQ2100477-04	100.00µL	EQ2100477-05	100.00µL	EQ2100477-06	100.00µL	EQ2100477-07	100.00µL

Preparation Information Benchsheet

Prep Run#: 384372 **Prep WorkFlow:** Gen CLO4 **Status:** Prepped
Team: Semivoa GCMS/GRIVERA **Prep Method:** Method **Prep Date/Time:** 8/2/21 09:31

Preparation Materials

Water HPLC Grade	07/01/2021 Water (217918)	537M Glass Culture Tubes	537M Glass Tubes (218064)

Preparation Steps

Step: Extraction
Started: 8/2/21 09:31
Finished: 8/2/21 15:02
By: GRIVERA
Comments

Comments: _____

Reviewed By: GR Date: 8/2/21

Chain of Custody

Relinquished By: _____ Date: _____ Extracts Examined

Received By: _____ Date: _____ Yes No

Analytical Results

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ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100891
Project:	HS21071465	**Date Collected:**	7/27/21 0715
Sample Matrix:	Ground Water	**Date Received:**	7/28/21
Sample Name:	16RW10-210727	**Units:**	µg/L
Lab Code:	E2100891-001	**Basis:**	As Received

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

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**18.7**		4.00	2.00	1.00	40	8/ 2/21	8/18/21 16:02	384371	735470	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100891
Project:	HS21071465	**Date Collected:**	7/27/21 0800
Sample Matrix:	Ground Water	**Date Received:**	7/28/21
Sample Name:	16RW09-210727	**Units:**	µg/L
Lab Code:	E2100891-002	**Basis:**	As Received

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

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	2.00	1.00	0.500	20	8/ 2/21	8/18/21 13:21	384371	735470	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100891
Project:	HS21071465	**Date Collected:**	7/27/21 0850
Sample Matrix:	Ground Water	**Date Received:**	7/28/21
Sample Name:	16RW07-210727	**Units:**	µg/L
Lab Code:	E2100891-003	**Basis:**	As Received

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

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	1.00	0.500	0.250	10	8/ 2/21	8/18/21 14:23	384371	735470	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100891
Project:	HS21071465	**Date Collected:**	7/27/21 0935
Sample Matrix:	Ground Water	**Date Received:**	7/28/21
Sample Name:	16RW06-210727	**Units:**	µg/L
Lab Code:	E2100891-004	**Basis:**	As Received

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

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	2.00	1.00	0.500	20	8/ 2/21	8/18/21 15:43	384371	735470	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100891
Project:	HS21071465	**Date Collected:**	7/27/21 1020
Sample Matrix:	Ground Water	**Date Received:**	7/28/21
Sample Name:	16WW46-210727	**Units:**	µg/L
Lab Code:	E2100891-005	**Basis:**	As Received

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

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	2.00	1.00	0.500	20	8/ 2/21	8/18/21 16:18	384371	735470	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100891
Project:	HS21071465	**Date Collected:**	7/27/21 1105
Sample Matrix:	Ground Water	**Date Received:**	7/28/21
Sample Name:	16WW40-210727	**Units:**	µg/L
Lab Code:	E2100891-006	**Basis:**	As Received

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

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.693**	J	1.00	0.500	0.250	10	8/ 2/21	8/18/21 12:55	384371	735470	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100891
Project:	HS21071465	**Date Collected:**	7/27/21 1150
Sample Matrix:	Liquid	**Date Received:**	7/28/21
Sample Name:	16EW07-210727	**Units:**	µg/Kg
Lab Code:	E2100891-007	**Basis:**	As Received

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

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	0.985	0.750	0.300	1	8/ 2/21	8/4/21 01:16	384372	733599	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100891
Project:	HS21071465	**Date Collected:**	7/27/21 1235
Sample Matrix:	Liquid	**Date Received:**	7/28/21
Sample Name:	16EW06-210727	**Units:**	µg/Kg
Lab Code:	E2100891-008	**Basis:**	As Received

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

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	0.916	0.750	0.300	1	8/ 2/21	8/4/21 01:25	384372	733599	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100891
Project:	HS21071465	**Date Collected:**	NA
Sample Matrix:	Ground Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	EQ2100475-01	**Basis:**	As Received

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

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	0.100	0.0500	0.0250	1	8/ 2/21	8/3/21 10:28	384371	733599	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100891
Project:	HS21071465	**Date Collected:**	NA
Sample Matrix:	Liquid	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	µg/Kg
Lab Code:	EQ2100477-01	**Basis:**	As Received

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

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	1.00	0.752	0.301	1	8/ 2/21	8/3/21 21:51	384372	733599	

Accuracy & Precision

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ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS21071465
Sample Matrix: Ground Water

Service Request: E2100891
Date Analyzed: 8/ 3/21

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

Analytical Method: 6850
Prep Method: Method

Units: µg/L
Basis: As Received

Extraction Lot: 384371

	Lab Control Sample EQ2100475-02			Duplicate Lab Control Sample EQ2100475-03					
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Perchlorate	0.110	0.100	110	0.114	0.100	114	84 - 119	4	15

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

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

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100891
Project:	HS21071465	**Date Collected:**	NA
Sample Matrix:	Ground Water	**Date Received:**	NA
Sample Name:	Lab Control Sample	**Units:**	µg/L
Lab Code:	EQ2100475-02	**Basis:**	As Received

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

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.110**		0.100	0.0500	0.0250	1	8/ 2/21	8/3/21 10:37	384371	733599	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100891
Project:	HS21071465	**Date Collected:**	NA
Sample Matrix:	Ground Water	**Date Received:**	NA
Sample Name:	Duplicate Lab Control Sample	**Units:**	µg/L
Lab Code:	EQ2100475-03	**Basis:**	As Received

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

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.114**		0.100	0.0500	0.0250	1	8/ 2/21	8/3/21 10:45	384371	733599	

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2100891
Project:	HS21071465	**Date Analyzed:**	8/ 5/21 - 8/ 5/21
Sample Matrix:	Liquid		

Lab Control Sample Summary

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

Analytical Method:	6850	**Units:**	µg/Kg
Prep Method:	Method	**Basis:**	As Received
		Extraction Lot:	384372

	Lab Control Sample EQ2100477-02			Duplicate Lab Control Sample EQ2100477-03					
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Perchlorate	91.0	95.6	95	89.2	92.6	96	84 - 121	2	15

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

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

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100891
Project:	HS21071465	**Date Collected:**	NA
Sample Matrix:	Liquid	**Date Received:**	NA
Sample Name:	Lab Control Sample	**Units:**	µg/Kg
Lab Code:	EQ2100477-02	**Basis:**	As Received

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

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**91.0**		0.956	0.750	0.300	1	8/ 2/21	8/5/21 14:17	384372	733725	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100891
Project:	HS21071465	**Date Collected:**	NA
Sample Matrix:	Liquid	**Date Received:**	NA
Sample Name:	Duplicate Lab Control Sample	**Units:**	µg/Kg
Lab Code:	EQ2100477-03	**Basis:**	As Received

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

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**89.2**		0.926	0.750	0.300	1	8/ 2/21	8/3/21 22:08	384372	733599	

HS21071465 8260 Raw Data

ALS WO# HS21071465

MSVOA06 -Logbook

Batch: 45933
Date: 07-30-2021
Method: 8260_W
Comments:

Analyst: Presenta Cabascango
Reviewer:
Laboratory: Houston

#	Samp ID	Type	Analyzed	DF		Init Wt/Vol	Final Vol	File ID	Matrix	Status	p
1	BFB	TUNE	07-30-2021 11:08 am		1.00	50 mL	50 mL	X073001.D	Liquid	Y	N
2	VSTD000.25	ICAL1	07-30-2021 11:29 am		1.00	50 mL	50 mL	X073002.D	Liquid	Y	N
3	VSTD000.5	ICAL2	07-30-2021 11:50 am		1.00	50 mL	50 mL	X073003.D	Liquid	Y	N
4	VSTD001	ICAL3	07-30-2021 12:32 pm		1.00	50 mL	50 mL	X073004.D	Liquid	Y	N
5	VSTD002	ICAL4	07-30-2021 12:53 pm		1.00	50 mL	50 mL	X073005.D	Liquid	Y	N
6	VSTD005	ICAL5	07-30-2021 01:14 pm		1.00	50 mL	50 mL	X073006.D	Liquid	Y	N
7	VSTD020	ICAL6	07-30-2021 01:35 pm		1.00	50 mL	50 mL	X073007.D	Liquid	Y	N
8	VSTD050	ICAL7	07-30-2021 01:56 pm		1.00	50 mL	50 mL	X073008.D	Liquid	Y	N
9	VSTD100	ICAL8	07-30-2021 02:17 pm		1.00	50 mL	50 mL	X073009.D	Liquid	Y	N
10	VSTD150	ICAL9	07-30-2021 02:38 pm		1.00	50 mL	50 mL	X073010.D	Liquid	Y	N
11	VSTD200	ICAL	07-30-2021 02:59 pm		1.00	50 mL	50 mL	X073011.D	Liquid	Y	N
12	BLANK	SAMP	07-30-2021 03:20 pm		1.00	50 mL	50 mL	X073012.D	Liquid	Y	N
13	BLANK	CCV	07-30-2021 03:41 pm		1.00	50 mL	50 mL	X073013.D	Liquid	Y	N
14	CCV	CCV	07-30-2021 04:02 pm		1.00	50 mL	50 mL	X073014.D	Liquid	Y	N
15	CCB	SAMP	07-30-2021 04:23 pm		1.00	50 mL	50 mL	X073015.D	Liquid	Y	N
16	VLCSW-210730	LCS	07-30-2021 04:43 pm		1.00	50 mL	50 mL	X073016.D	Liquid	Y	N
17	BLANK	SAMP	07-30-2021 05:39 pm		1.00	50 mL	50 mL	X073017.D	Liquid	Y	N
18	VBLKW-210730	MBLK	07-30-2021 06:00 pm		1.00	50 mL	50 mL	X073018.D	Liquid	Y	N
19	HS21071537-05	SAMP	07-30-2021 06:21 pm		1.00	50 mL	50 mL	X073019.D	Liquid	Y	N
20	HS21071537-01	SAMP	07-30-2021 06:42 pm		1.00	50 mL	50 mL	X073020.D	Liquid	Y	N
21	HS21071537-02	SAMP	07-30-2021 07:03 pm		1.00	50 mL	50 mL	X073021.D	Liquid	Y	N
22	HS21071537-03	SAMP	07-30-2021 07:24 pm		1.00	50 mL	50 mL	X073022.D	Liquid	Y	N
23	HS21071537-04	SAMP	07-30-2021 07:45 pm		1.00	50 mL	50 mL	X073023.D	Liquid	Y	N
24	HS21071537-06	SAMP	07-30-2021 08:06 pm		1.00	50 mL	50 mL	X073024.D	Liquid	Y	N
25	HS21071537-07	SAMP	07-30-2021 08:27 pm		1.00	50 mL	50 mL	X073025.D	Liquid	Y	N
26	HS21071438-01	SAMP	07-30-2021 08:48 pm		1.00	50 mL	50 mL	X073026.D	Liquid	Y	N
27	HS21071536-01	SAMP	07-30-2021 09:09 pm		1.00	50 mL	50 mL	X073027.D	Liquid	Y	N
28	HS21071537-01MS	MS	07-30-2021 09:30 pm		1.00	50 mL	50 mL	X073028.D	Liquid	Y	N
29	HS21071537-01MSD	MSD	07-30-2021 09:51 pm		1.00	50 mL	50 mL	X073029.D	Liquid	Y	N
30	CCV-END	CCV	07-30-2021 10:12 pm		1.00	50 mL	50 mL	X073030.D	Liquid	Y	N
31	BFB	TUNE	07-30-2021 10:33 pm		1.00	50 mL	50 mL	Y073001.D	Liquid	Y	N
32	CCV	CCV	07-30-2021 10:54 pm		1.00	50 mL	50 mL	Y073002a.D	Liquid	Y	N
33	CCV	CCV	07-30-2021 11:15 pm		1.00	50 mL	50 mL	Y073003.D	Liquid	Y	N
34	CCB	SAMP	07-30-2021 11:36 pm		1.00	50 mL	50 mL	Y073004.D	Liquid	Y	N
35	VLCSW-210730	LCS	07-30-2021 11:57 pm		1.00	50 mL	50 mL	Y073005.D	Liquid	Y	N
36	BLANK	SAMP	07-31-2021 12:18 am		1.00	50 mL	50 mL	Y073006.D	Liquid	Y	N
37	BLANK	SAMP	07-31-2021 12:39 am		1.00	50 mL	50 mL	Y073007.D	Liquid	Y	N
38	VBLKW-210730	MBLK	07-31-2021 01:00 am		1.00	50 mL	50 mL	Y073008.D	Liquid	Y	N
39	HS21071586-05	SAMP	07-31-2021 01:21 am		1.00	50 mL	50 mL	Y073009.D	Liquid	Y	N
40	HS21071609-04	SAMP	07-31-2021 01:42 am		1.00	50 mL	50 mL	Y073010.D	Liquid	Y	N
41	HS21071610-04	SAMP	07-31-2021 02:03 am		1.00	50 mL	50 mL	Y073011.D	Liquid	Y	N

MSVOA06 -Logbook

#	Samp ID	Type	Analyzed	DF	Init Wt/Vol	Final Vol	File ID	Matrix	Status	p
42	HS21071610-02	SAMP	07-31-2021 02:24 am	1.00	50 mL	50 mL	Y073012.D	Liquid	Y	N
43	HS21071609-05	SAMP	07-31-2021 02:45 am	1.00	50 mL	50 mL	Y073013.D	Liquid	Y	N
44	HS21071586-03	SAMP	07-31-2021 03:06 am	1.00	50 mL	50 mL	Y073014.D	Liquid	Y	N
45	HS21071586-01	SAMP	07-31-2021 03:28 am	1.00	50 mL	50 mL	Y073015.D	Liquid	Y	N
46	HS21071586-02	SAMP	07-31-2021 03:49 am	1.00	50 mL	50 mL	Y073016.D	Liquid	Y	N
47	HS21071586-04	SAMP	07-31-2021 04:10 am	1.00	50 mL	50 mL	Y073017.D	Liquid	Y	N
48	HS21071609-02	SAMP	07-31-2021 04:31 am	1.00	50 mL	50 mL	Y073018.D	Liquid	Y	N
49	HS21071609-03	SAMP	07-31-2021 04:52 am	1.00	50 mL	50 mL	Y073019.D	Liquid	Y	N
50	HS21071611-01n/r	SAMP	07-31-2021 05:13 am	1.00	50 mL	50 mL	Y073020.D	Liquid	Y	N
51	HS21071611-02c/o	SAMP	07-31-2021 05:34 am	1.00	50 mL	50 mL	Y073021.D	Liquid	Y	N
52	HS21071611-03c/o	SAMP	07-31-2021 05:55 am	1.00	50 mL	50 mL	Y073022.D	Liquid	Y	N
53	HS21071611-04c/o	SAMP	07-31-2021 06:16 am	1.00	50 mL	50 mL	Y073023.D	Liquid	Y	N
54	HS21071611-05c/o	SAMP	07-31-2021 06:37 am	1.00	50 mL	50 mL	Y073024.D	Liquid	Y	N
55	HS21071611-06	SAMP	07-31-2021 06:58 am	1.00	50 mL	50 mL	Y073025.D	Liquid	Y	N
56	HS21071611-07	SAMP	07-31-2021 07:19 am	1.00	50 mL	50 mL	Y073026.D	Liquid	Y	N
57	HS21071610-01c/o	SAMP	07-31-2021 07:40 am	1.00	50 mL	50 mL	Y073027.D	Liquid	Y	N
58	HS21071609-01c/o	SAMP	07-31-2021 08:01 am	1.00	50 mL	50 mL	Y073028.D	Liquid	Y	N
59	HS21071586-03MS	MS	07-31-2021 08:23 am	1.00	50 mL	50 mL	Y073029.D	Liquid	Y	N
60	HS21071586-03MSD	MSD	07-31-2021 08:44 am	1.00	50 mL	50 mL	Y073030.D	Liquid	Y	N
61	CCV-END	CCV	07-31-2021 09:05 am	1.00	50 mL	50 mL	Y073031.D	Liquid	Y	N
62	BLANK	SAMP	07-31-2021 09:26 am	1.00	50 mL	50 mL	Y073032.D	Liquid	Y	N

FORM 3
WATER VOLATILE METHOD SPIKE RECOVERY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS21071465

Matrix Spike - Sample No.: ICV

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE AMOUNT ()	% REC #	QC. LIMITS REC.
cis-1,2-Dichloroethene	50.00	47.66	95	80-120
Vinyl Chloride	50.00	46.99	94	80-120
Methylene Chloride	50.00	48.45	97	80-120
1,1-Dichloroethene	50.00	46.20	92	80-120
1,2-Dichloroethane	50.00	46.66	93	80-120
Trichloroethene	50.00	48.42	97	80-120
1,1,2-Trichloroethane	50.00	48.48	97	80-120

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

* Values outside of QC limits

COMMENTS: _____

FORM 5
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS21071465

Lab File ID: X073001 BFB Injection Date: 07/30/21

Instrument ID: VOA6 BFB Injection Time: 1108

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

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	19.9
75	30.0 - 60.0% of mass 95	48.7
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.6
173	Less than 2.0% of mass 174	0.8 (1.1)1
174	Greater than 50.0% of mass 95	73.7
175	5.0 - 9.0% of mass 174	5.5 (7.5)1
176	95.0 - 101.0% of mass 174	73.6 (99.8)1
177	5.0 - 9.0% of mass 176	5.6 (7.7)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	X073002	07/30/21	1129
02	VSTD000.5	VSTD000.5	X073003	07/30/21	1150
03	VSTD001	VSTD001	X073004	07/30/21	1232
04	VSTD002	VSTD002	X073005	07/30/21	1253
05	VSTD005	VSTD005	X073006	07/30/21	1314
06	VSTD020	VSTD020	X073007	07/30/21	1335
07	VSTD050	VSTD050	X073008	07/30/21	1356
08	VSTD100	VSTD100	X073009	07/30/21	1417
09	VSTD150	VSTD150	X073010	07/30/21	1438
10	VSTD200	VSTD200	X073011	07/30/21	1459
11	ICV	ICV	X073014	07/30/21	1602
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.: HS21071465

Instrument ID: VOA6 Calibration Date(s): 07/30/21 07/30/21

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1129 1459

LAB FILE ID: RF0.25: X073002 RF0.5: X073003 RF1: X073004
RF2: X073005 RF5: X073006 RF20: X073007

COMPOUND	RF0.25	RF0.5	RF1	RF2	RF5	RF20
Vinyl Chloride		0.568	0.528	0.439	0.452	0.460
Methylene Chloride		5291	6903	11889	29963	118046
1,1-Dichloroethene		0.492	0.438	0.426	0.396	0.400
1,2-Dichloroethane		0.469	0.435	0.388	0.402	0.399
Trichloroethene		0.443	0.403	0.377	0.358	0.354
1,1,2-Trichloroethane		0.282	0.267	0.243	0.291	0.252
Dibromofluoromethane		4390	7282	12374	35273	130299
1,2-Dichloroethane-d4		4928	6013	12843	33565	126393
Toluene-d8		1.432	1.243	1.217	1.162	1.112
4-Bromofluorobenzene		6602	8523	15228	41359	158248

FORM VI VOA

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS2107146

Instrument ID: VOA6 Calibration Date(s): 07/30/21 07/30/21

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1129 1459

LAB FILE ID: RF50: X073008 RF100: X073009 RF150: X073010
RF200: X073011

COMPOUND	RF50	RF100	RF150	RF200
Vinyl Chloride	0.410	0.486	0.458	0.481
Methylene Chloride	288156	621769	906937	1282411
1,1-Dichloroethene	0.371	0.432	0.407	0.425
1,2-Dichloroethane	0.366	0.377	0.389	0.385
Trichloroethene	0.334	0.362	0.357	0.361
1,1,2-Trichloroethane	0.252	0.256	0.256	0.256
Dibromofluoromethane	340316	710330	1015199	1392587
1,2-Dichloroethane-d4	321239	661249	974560	1331240
Toluene-d8	1.106	1.125	1.078	1.079
4-Bromofluorobenzene	403767	846415	1227770	1706894

FORM VI VOA

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS2107146

Instrument ID: VOA6 Calibration Date(s): 07/30/21 07/30/21

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1129 1459

COMPOUND	CURVE	COEFFICENTS A0	COEFFICENTS A1	%RSD OR R^2	MAX %RSD OR R^2
Vinyl Chloride	AVRG		0.47594663	9.999	15.000
Methylene Chloride	LINR	-4.5e-003	2.39571341	0.9997444	0.9900000
1,1-Dichloroethene	AVRG		0.42072319	8.104	15.000
1,2-Dichloroethane	AVRG		0.40111335	7.960	15.000
Trichloroethene	AVRG		0.36538023	10.181	15.000
1,1,2-Trichloroethane	AVRG		0.26158012	5.941	15.000
Dibromofluoromethane	LINR	-2.05e-002	2.17633740	0.9991893	0.9900000
1,2-Dichloroethane-d4	LINR	-1.76e-002	2.28124803	0.9996604	0.9900000
Toluene-d8	AVRG		1.17277965	9.647	15.000
4-Bromofluorobenzene	LINR	-1.44e-002	2.41836939	0.9997995	0.9900000

FORM VI VOA

Data File: \\NAHSTWS005\target\chem\voa6.i\X210730.b\X073001.D

Date : 30-JUL-2021 11:08

Client ID: BFB

Instrument: voa6.i

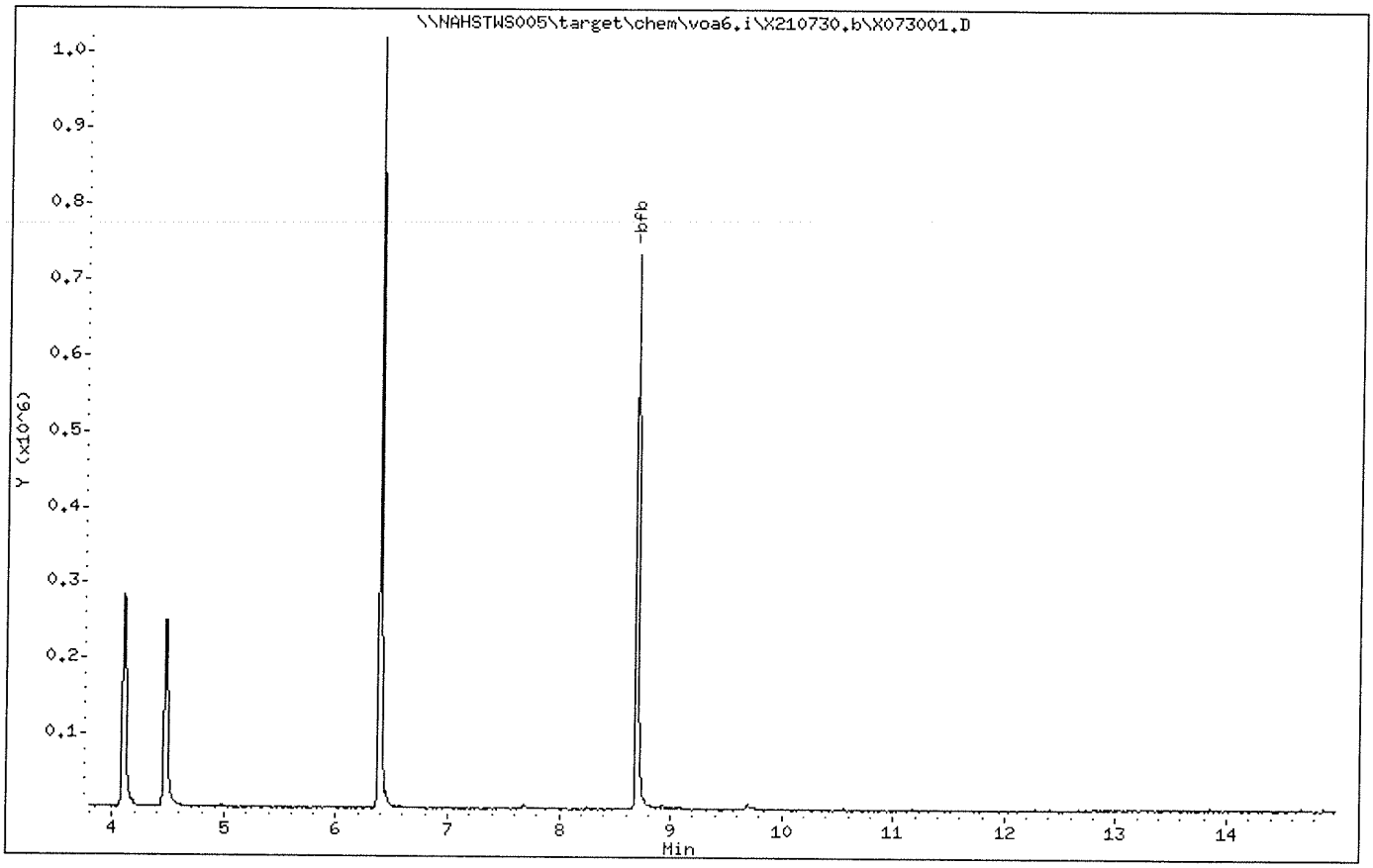
Sample Info: BFB;BFB;3;;BFB

Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

Column diameter: 0.25



Data File: \\NAHSTWS005\target\chem\voa6.i\X210730.b\X073001.D Page 2

Date : 30-JUL-2021 11:08

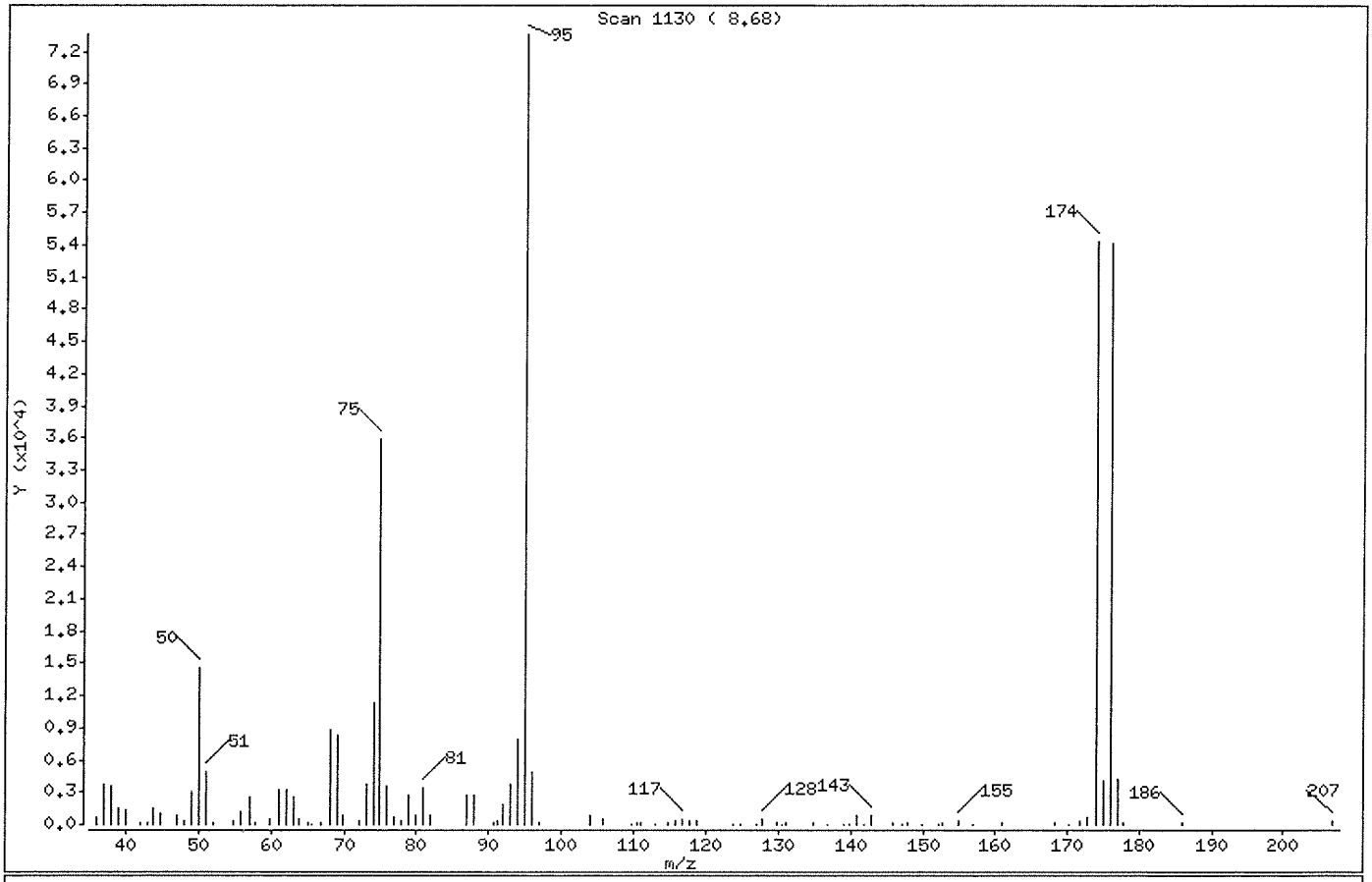
Client ID: BFB Instrument: voa6.i

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	19.86
75	30.00 - 60.00% of mass 95	48.66
96	5.00 - 9.00% of mass 95	6.61
173	Less than 2.00% of mass 174	0.83 (1.12)
174	Greater than 50.00% of mass 95	73.73
175	5.00 - 9.00% of mass 174	5.53 (7.50)
176	95.00 - 101.00% of mass 174	73.57 (99.78)
177	5.00 - 9.00% of mass 176	5.64 (7.66)

Data File: \\NAHSTWS005\target\chem\voa6.i\X210730.b\X073001.D Page 3

Date : 30-JUL-2021 11:08

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: X073001.D
Spectrum: Scan 1130 (8.68)
Location of Maximum: 95.00
Number of points: 96

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	656	65.70	78	97.00	176	142.80	903
37.00	3776	66.80	116	103.90	785	145.80	163
38.00	3488	68.00	8875	105.70	540	147.00	71
38.90	1543	69.00	8333	109.70	51	147.90	137
40.00	1298	69.90	855	110.50	170	149.90	78
41.90	90	72.00	412	110.90	131	152.00	69
43.00	106	73.00	3776	113.00	67	152.60	90
43.90	1582	74.00	11403	114.80	98	154.80	312
44.90	1059	75.00	35824	115.80	337	156.90	66
47.00	894	75.90	3616	116.80	507	161.00	201
48.10	334	77.00	677	117.80	326	168.20	209
49.00	3051	77.90	348	118.80	401	170.10	68
50.00	14621	78.90	2739	123.80	58	171.70	281
51.00	4991	80.00	777	124.80	70	172.70	608
52.00	99	80.90	3361	127.00	58	173.90	54280
54.90	333	81.80	793	127.80	431	174.90	4072
55.90	1185	87.00	2667	129.70	217	175.90	54160
57.00	2555	88.00	2726	130.50	50	176.90	4149
57.90	118	90.60	205	131.10	144	177.80	170
59.80	467	91.10	368	134.90	105	185.90	124
61.00	3224	91.90	1787	136.80	70	206.80	333
62.00	3226	92.90	3678	139.10	65		
63.00	2593	93.90	7906	139.80	70		
63.90	424	95.00	73616	140.80	849		
65.00	109	96.00	4863	141.80	76		

Data File: \\NAHSTWS005\target\chem\voa6.i\X210730.b\X073002.D Page 1
Report Date: 10-Sep-2021 14:09

ALS Laboratory Group

Data file : \\NAHSTWS005\target\chem\voa6.i\X210730.b\X073002.D
Lab Smp Id: VSTD000.25 Client Smp ID: VSTD000.25
Inj Date : 30-JUL-2021 11:29
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\X210730.b\8260W.m
Meth Date : 10-Sep-2021 14:09 voa6.i Quant Type: ISTD
Cal Date : 30-JUL-2021 14:59 Cal File: X073011.D
Als bottle: 2 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0474-dod.sub
Target Version: 4.14
Processing Host: NAHSTW7056

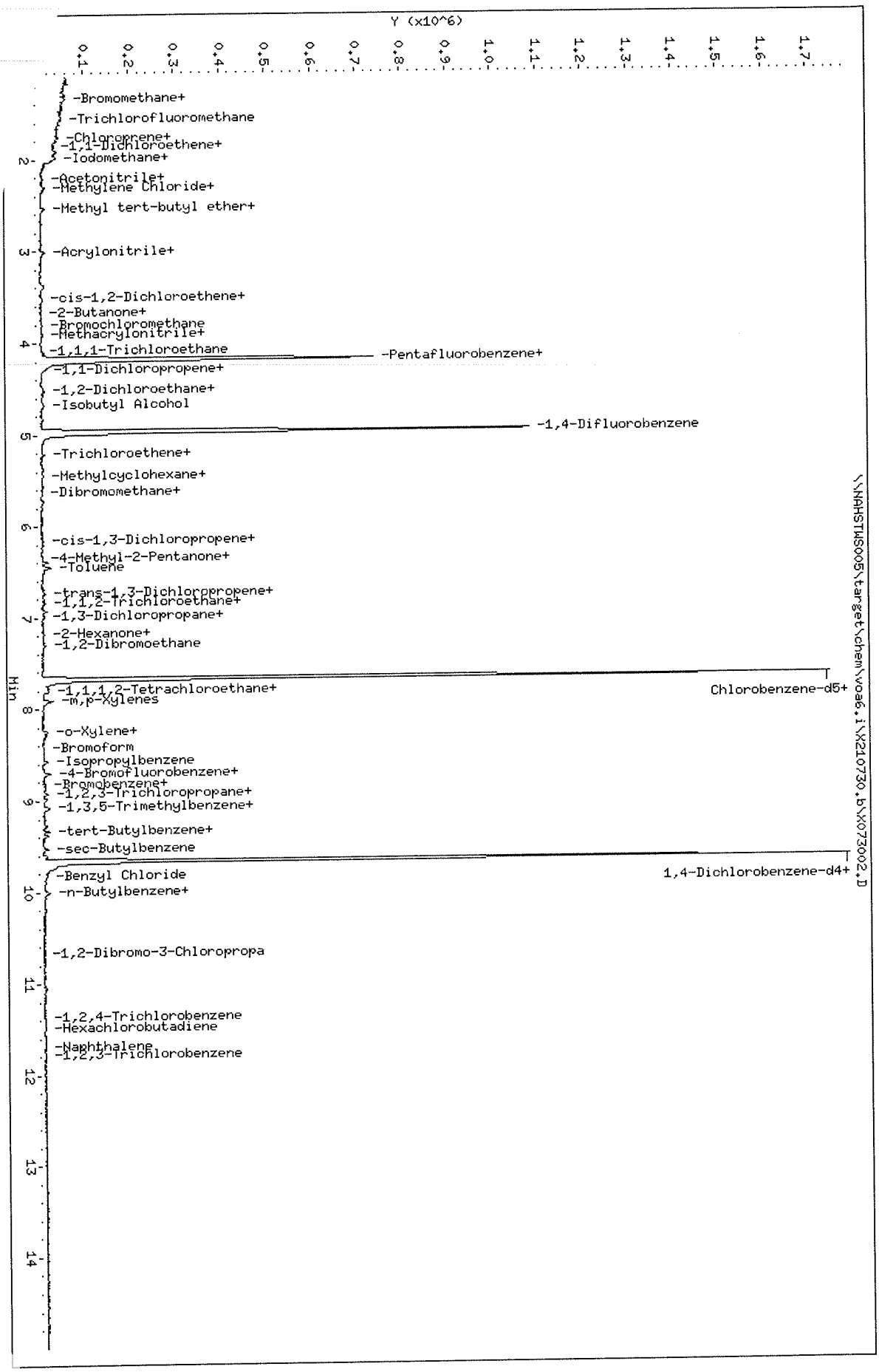
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

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)	666587	50.0000		
$ 30 Dibromofluoromethane	113	4.096	4.096	(0.979)	2125	0.25000		(a)
$ 35 1,2-Dichloroethane-d4	65	4.490	4.490	(1.074)	2961	0.25000		(Ta)
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	968612	50.0000		
* 47 Chlorobenzene-d5	117	7.670	7.670	(1.000)	883114	50.0000		
$ 48 Toluene-d8	98	6.395	6.395	(0.834)	8108	0.25000	0.39	(a)
$ 69 4-Bromofluorobenzene	95	8.702	8.702	(1.134)	6221	0.25000	0.13	(a)
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	450871	50.0000		

QC Flag Legend

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



Data File: \\NAHSTWS005\target\chem\voa6.i\X210730.b\X073002.D
Date : 30-JUL-2021 11:29
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\X210730.b\X073003.D
Lab Smp Id: VSTD000.5 Client Smp ID: VSTD000.5
Inj Date : 30-JUL-2021 11:50
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\X210730.b\8260W.m
Meth Date : 10-Sep-2021 14:09 voa6.i Quant Type: ISTD
Cal Date : 30-JUL-2021 11:29 Cal File: X073002.D
Als bottle: 3 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0474-dod.sub
Target Version: 4.14
Processing Host: NAHSTW7056

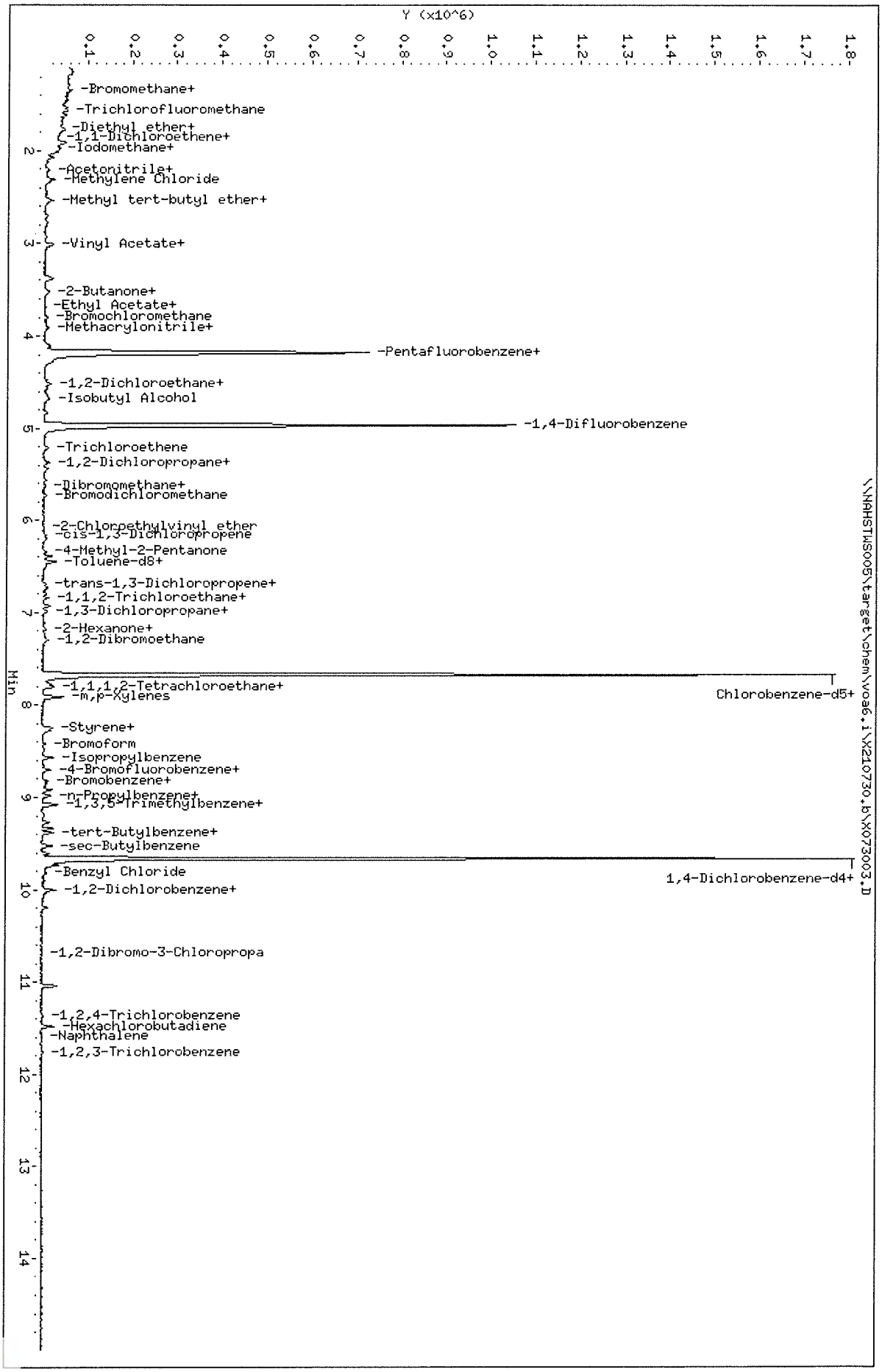
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

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	4.182	4.182	(1.000)	655666	50.0000		
$ 30 Dibromofluoromethane	113	4.110	4.110	(0.983)	4390	0.50000		(a)
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	4928	0.50000		(aM)
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	942256	50.0000		
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	881159	50.0000		
$ 48 Toluene-d8	98	6.395	6.395	(0.834)	12620	0.50000	0.61	(a)
$ 69 4-Bromofluorobenzene	95	8.702	8.702	(1.134)	6602	0.50000	0.18	(a)
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	446795	50.0000		
5 Vinyl Chloride	62	1.145	1.145	(0.274)	3726	0.50000	0.59	(aM)
11 1,1-Dichloroethene	96	1.911	1.911	(0.457)	3229	0.50000	0.58	(a)
17 Methylene Chloride	84	2.305	2.305	(0.551)	5291	0.50000	0.74	(a)
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	3929	0.50000	0.59	(a)
33 1,2-Dichloroethane	62	4.562	4.562	(0.919)	4422	0.50000	0.58	(a)
38 Trichloroethene	130	5.206	5.206	(1.049)	4176	0.50000	0.60	(a)
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	2481	0.50000	0.53	(a)

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\X210730.b\X073003.D
Date : 30-JUL-2021 11:50
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\X210730.b\X073004.D Page 1
Report Date: 10-Sep-2021 14:09

ALS Laboratory Group

Data file : \\NAHSTWS005\target\chem\voa6.i\X210730.b\X073004.D
Lab Smp Id: VSTD001 Client Smp ID: VSTD001
Inj Date : 30-JUL-2021 12:32
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\X210730.b\8260W.m
Meth Date : 10-Sep-2021 14:09 voa6.i Quant Type: ISTD
Cal Date : 30-JUL-2021 11:50 Cal File: X073003.D
Als bottle: 5 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0474-dod.sub
Target Version: 4.14
Processing Host: NAHSTW7056

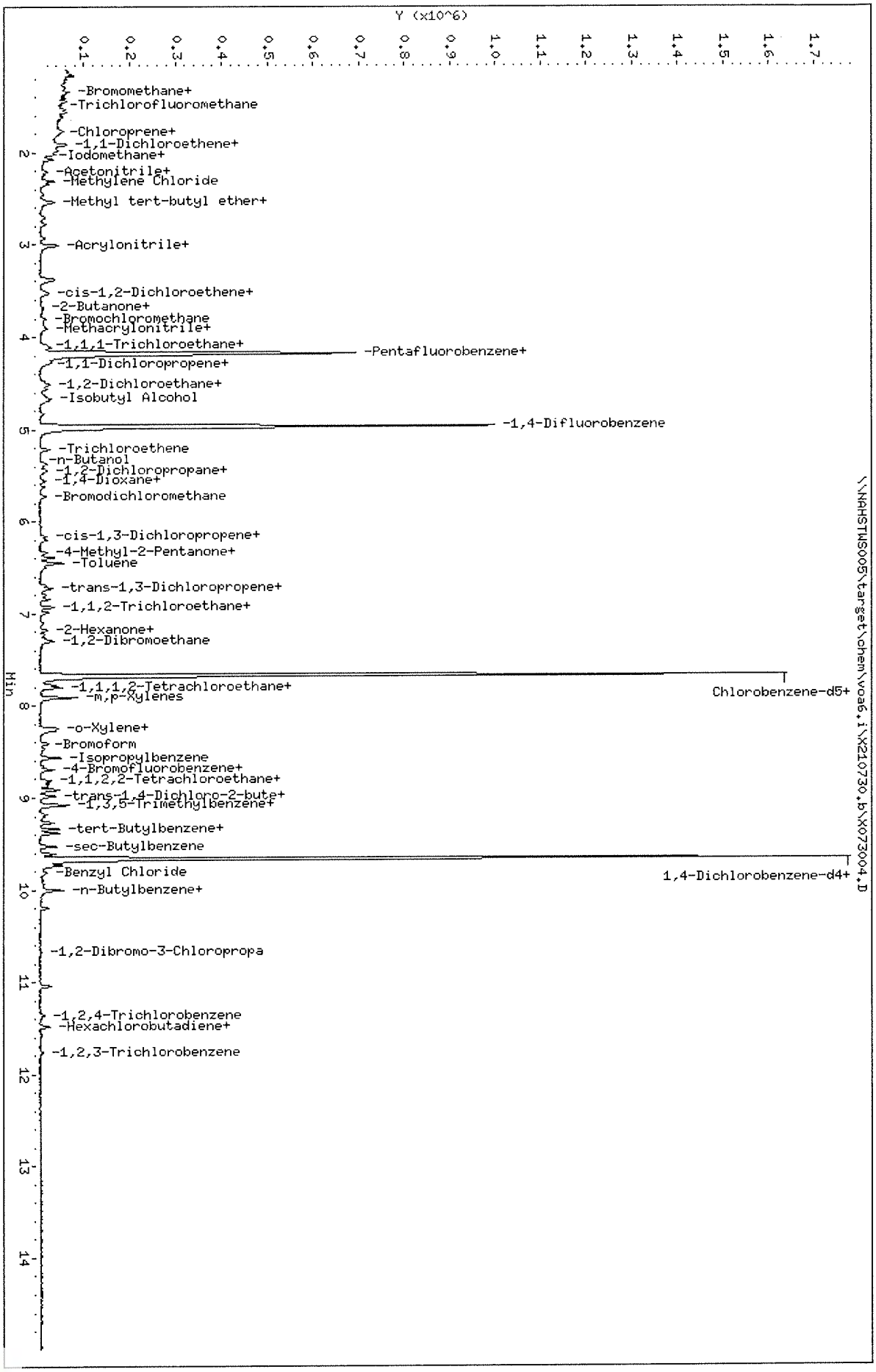
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

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)	623945	50.0000	
$ 30 Dibromofluoromethane	113	4.096	4.096	(0.979)	7282	1.00000	0.24(a)
$ 35 1,2-Dichloroethane-d4	65	4.483	4.483	(1.072)	6013	1.00000	0.21(a)
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	895498	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	839999	50.0000	
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	20880	1.00000	1.05(a)
$ 69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	8523	1.00000	0.50(a)
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	438693	50.0000	
5 Vinyl Chloride	62	1.138	1.138	(0.272)	6585	1.00000	1.10(a)
11 1,1-Dichloroethene	96	1.919	1.919	(0.459)	5463	1.00000	1.04(a)
17 Methylene Chloride	84	2.305	2.305	(0.551)	6903	1.00000	1.10(a)
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	6640	1.00000	1.06(a)
33 1,2-Dichloroethane	62	4.562	4.562	(0.918)	7784	1.00000	1.08(a)
38 Trichloroethene	130	5.206	5.206	(1.048)	7211	1.00000	1.10(a)
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	4492	1.00000	1.02(a)

QC Flag Legend

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



Data File: \\NAHSTWS005\target\chem\voa6.i\X210730.b\X073004.D
Date : 30-JUL-2021 12:32
Client ID: VSTD001
Sample Info: VSTD001;VSTD0011;3;;
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\NAHSTWS005\target\chem\voa6.i\X210730.b\X073005.D Page 1
Report Date: 10-Sep-2021 14:09

ALS Laboratory Group

Data file : \\NAHSTWS005\target\chem\voa6.i\X210730.b\X073005.D
Lab Smp Id: VSTD002 Client Smp ID: VSTD002
Inj Date : 30-JUL-2021 12:53
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\X210730.b\8260W.m
Meth Date : 10-Sep-2021 14:09 voa6.i Quant Type: ISTD
Cal Date : 30-JUL-2021 12:32 Cal File: X073004.D
Als bottle: 6 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0474-dod.sub
Target Version: 4.14
Processing Host: NAHSTW7056

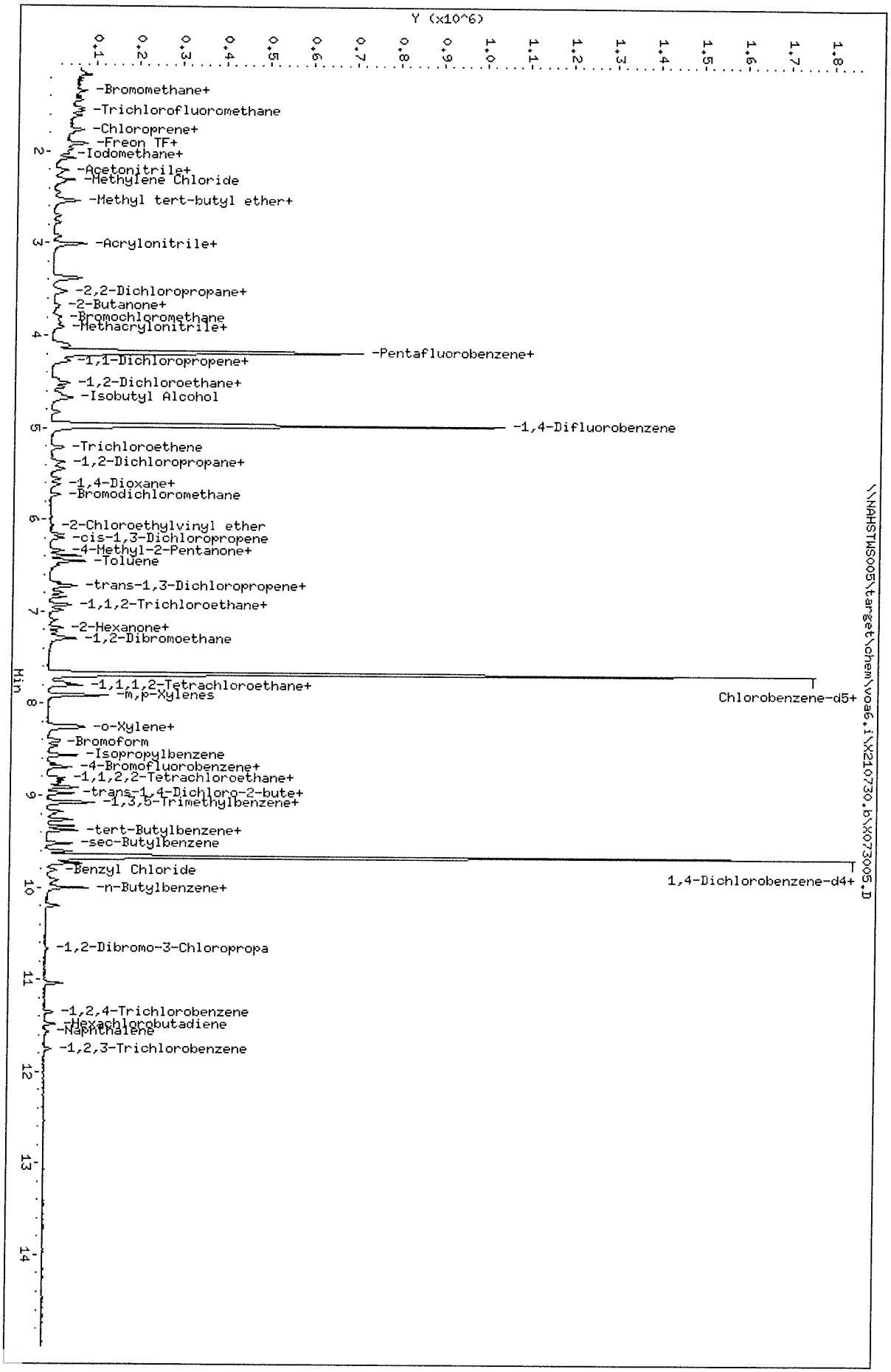
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

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)	644211	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	12374	2.00000	1.06(a)
$ 35 1,2-Dichloroethane-d4	65	4.483	4.483	(1.072)	12843	2.00000	1.39(a)
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	928585	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	870262	50.0000	
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	42373	2.00000	2.07(a)
$ 69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	15228	2.00000	1.39(a)
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	450600	50.0000	
5 Vinyl Chloride	62	1.145	1.145	(0.274)	11319	2.00000	1.84(a)
11 1,1-Dichloroethene	96	1.912	1.912	(0.457)	10979	2.00000	2.02(aM)
17 Methylene Chloride	84	2.306	2.306	(0.551)	11889	2.00000	1.98(a)
27 cis-1,2-Dichloroethene	96	3.538	3.538	(0.846)	11661	2.00000	1.80(a)
33 1,2-Dichloroethane	62	4.562	4.562	(0.919)	14406	2.00000	1.93(a)
38 Trichloroethene	130	5.214	5.214	(1.051)	11781	2.00000	1.73(a)
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	8460	2.00000	1.85(a)

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\X210730.b\X073005.D
Date : 30-JUL-2021 12:53
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\X210730.b\X073006.D Page 1
Report Date: 10-Sep-2021 14:09

ALS Laboratory Group

Data file : \\NAHSTWS005\target\chem\voa6.i\X210730.b\X073006.D
Lab Smp Id: VSTD005 Client Smp ID: VSTD005
Inj Date : 30-JUL-2021 13:14
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\X210730.b\8260W.m
Meth Date : 10-Sep-2021 14:09 voa6.i Quant Type: ISTD
Cal Date : 30-JUL-2021 12:53 Cal File: X073005.D
Als bottle: 7 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0474-dod.sub
Target Version: 4.14
Processing Host: NAHSTW7056

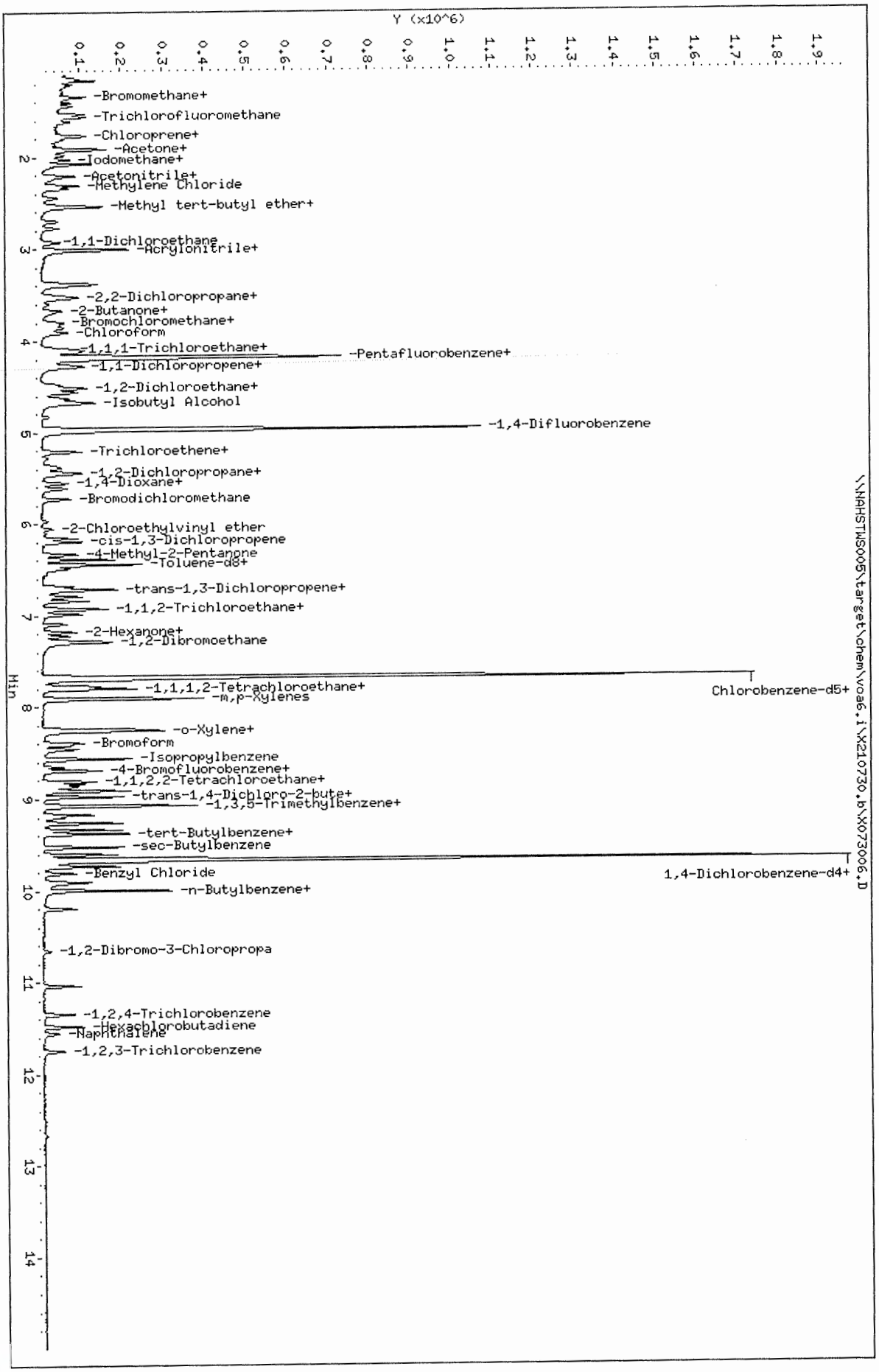
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

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	4.182	4.182	(1.000)	655633	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	35273	5.00000	4.83(a)
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	33565	5.00000	4.95(a)
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	942260	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	874110	50.0000	
$ 48 Toluene-d8	98	6.389	6.389	(0.833)	101562	5.00000	4.95(a)
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	41359	5.00000	5.00
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	453975	50.0000	
5 Vinyl Chloride	62	1.138	1.138	(0.272)	29673	5.00000	4.75(a)
11 1,1-Dichloroethene	96	1.912	1.912	(0.457)	25956	5.00000	4.70(a)
17 Methylene Chloride	84	2.306	2.306	(0.551)	29963	5.00000	5.24
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	32078	5.00000	4.87(a)
33 1,2-Dichloroethane	62	4.562	4.562	(0.919)	37869	5.00000	5.00
38 Trichloroethene	130	5.207	5.207	(1.049)	33714	5.00000	4.89(a)
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	25438	5.00000	5.56

QC Flag Legend

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



Data File: \\NAHSTWS005\target\chem\voa6.i\X210730.b\X073006.D
Date : 30-JUL-2021 13:14
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\X210730.b\X073007.D Page 1
Report Date: 10-Sep-2021 14:09

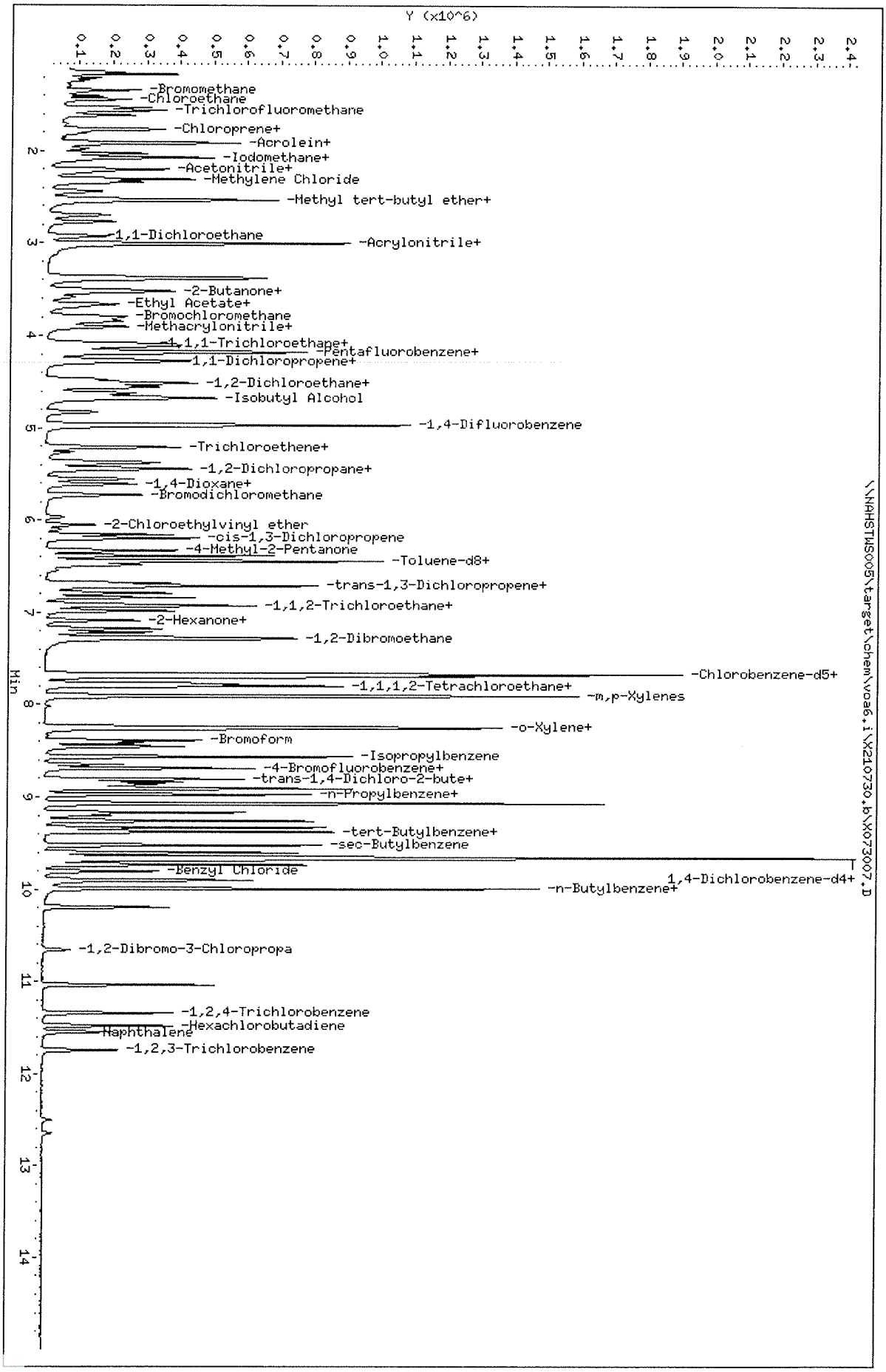
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Data file : \\NAHSTWS005\target\chem\voa6.i\X210730.b\X073007.D
Lab Smp Id: VSTD020 Client Smp ID: VSTD020
Inj Date : 30-JUL-2021 13:35
Operator : PC Inst ID: voa6.i
Smp Info : VSTD020;VSTD020;1;6;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\target\chem\voa6.i\X210730.b\8260W.m
Meth Date : 10-Sep-2021 14:09 voa6.i Quant Type: ISTD
Cal Date : 30-JUL-2021 13:14 Cal File: X073006.D
Als bottle: 8 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0474-dod.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)	681402	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	130299	20.0000	19.78
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	126393	20.0000	20.27
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	970724	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	922153	50.0000	
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	410374	20.0000	18.97
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	158248	20.0000	20.03
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	500272	50.0000	
5 Vinyl Chloride	62	1.138	1.138	(0.272)	125365	20.0000	19.32
11 1,1-Dichloroethene	96	1.919	1.919	(0.459)	108984	20.0000	19.00
17 Methylene Chloride	84	2.305	2.305	(0.551)	118046	20.0000	20.52
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	134779	20.0000	19.71
33 1,2-Dichloroethane	62	4.555	4.555	(0.918)	154902	20.0000	19.89
38 Trichloroethene	130	5.206	5.206	(1.049)	137306	20.0000	19.35
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	92956	20.0000	19.26



Data File: \\NAHSTWS005\target\chem\voa6.i\X210730.b\X073007.D
Date : 30-JUL-2021 13:35
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\X210730.b\X073008.D Page 1
Report Date: 10-Sep-2021 14:09

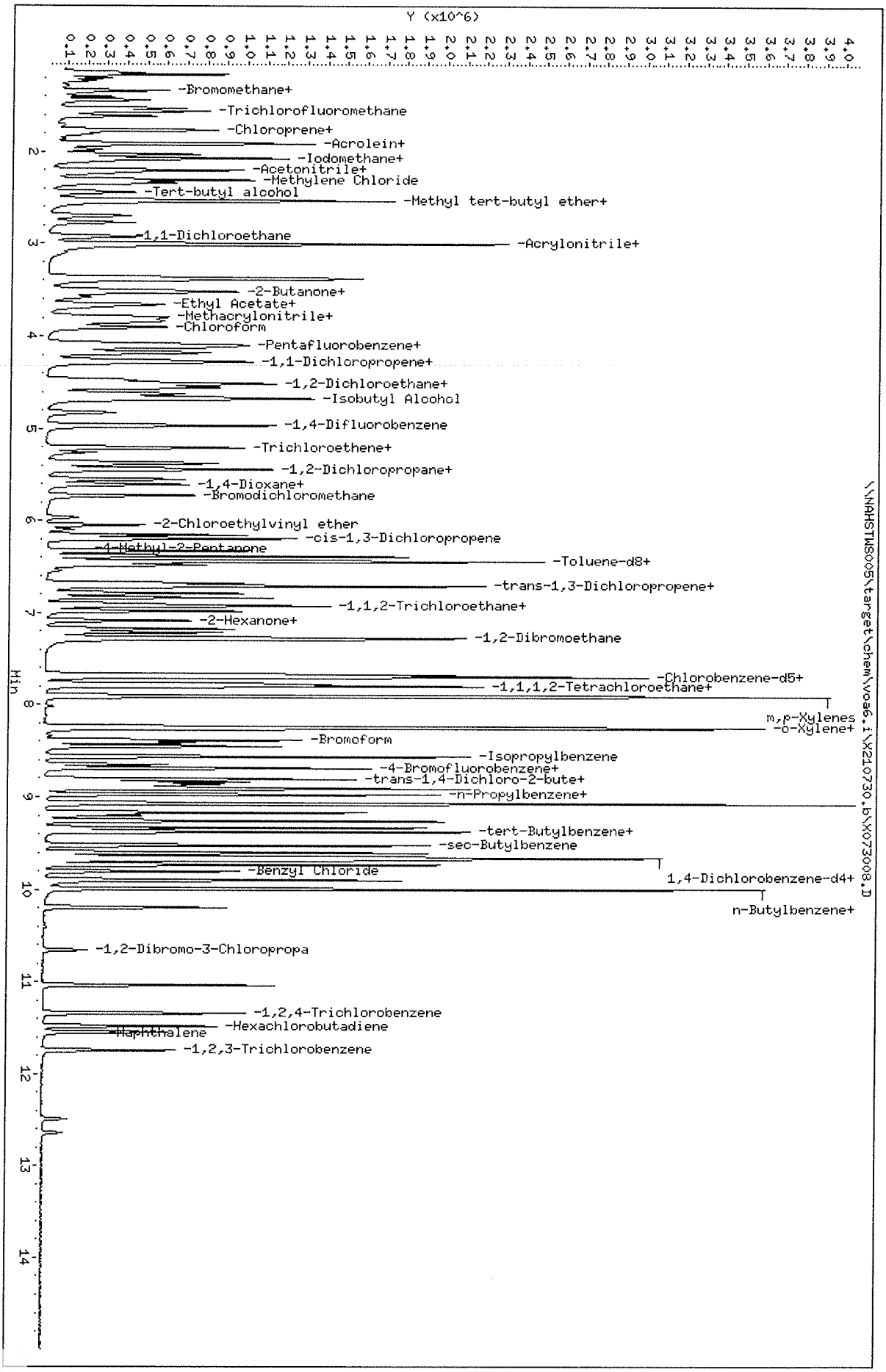
ALS Laboratory Group

Data file : \\NAHSTWS005\target\chem\voa6.i\X210730.b\X073008.D
Lab Smp Id: VSTD050 Client Smp ID: VSTD050
Inj Date : 30-JUL-2021 13:56
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\X210730.b\8260W.m
Meth Date : 10-Sep-2021 14:09 voa6.i Quant Type: ISTD
Cal Date : 30-JUL-2021 13:35 Cal File: X073007.D
Als bottle: 9 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0474-dod.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)	716996	50.0000	
$ 30 Dibromofluoromethane	113	4.096	4.096	(0.979)	340316	50.0000	50.62
$ 35 1,2-Dichloroethane-d4	65	4.469	4.469	(1.068)	321239	50.0000	50.22
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	1014752	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	957935	50.0000	
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	1059416	50.0000	47.15
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	403767	50.0000	50.24
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	509010	50.0000	
5 Vinyl Chloride	62	1.138	1.138	(0.272)	294222	50.0000	43.10
11 1,1-Dichloroethene	96	1.912	1.912	(0.457)	266229	50.0000	44.12
17 Methylene Chloride	84	2.306	2.306	(0.551)	288156	50.0000	47.91
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	336904	50.0000	46.84
33 1,2-Dichloroethane	62	4.555	4.555	(0.918)	371417	50.0000	45.62
38 Trichloroethene	130	5.207	5.207	(1.049)	338544	50.0000	45.65
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	241070	50.0000	48.10



Data File: \\NAHSTWS005\target\chem\voa6.i\X210730.b\X073008.D
Date : 30-JUL-2021 13:56
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\X210730.b\X073009.D Page 1
Report Date: 10-Sep-2021 14:09

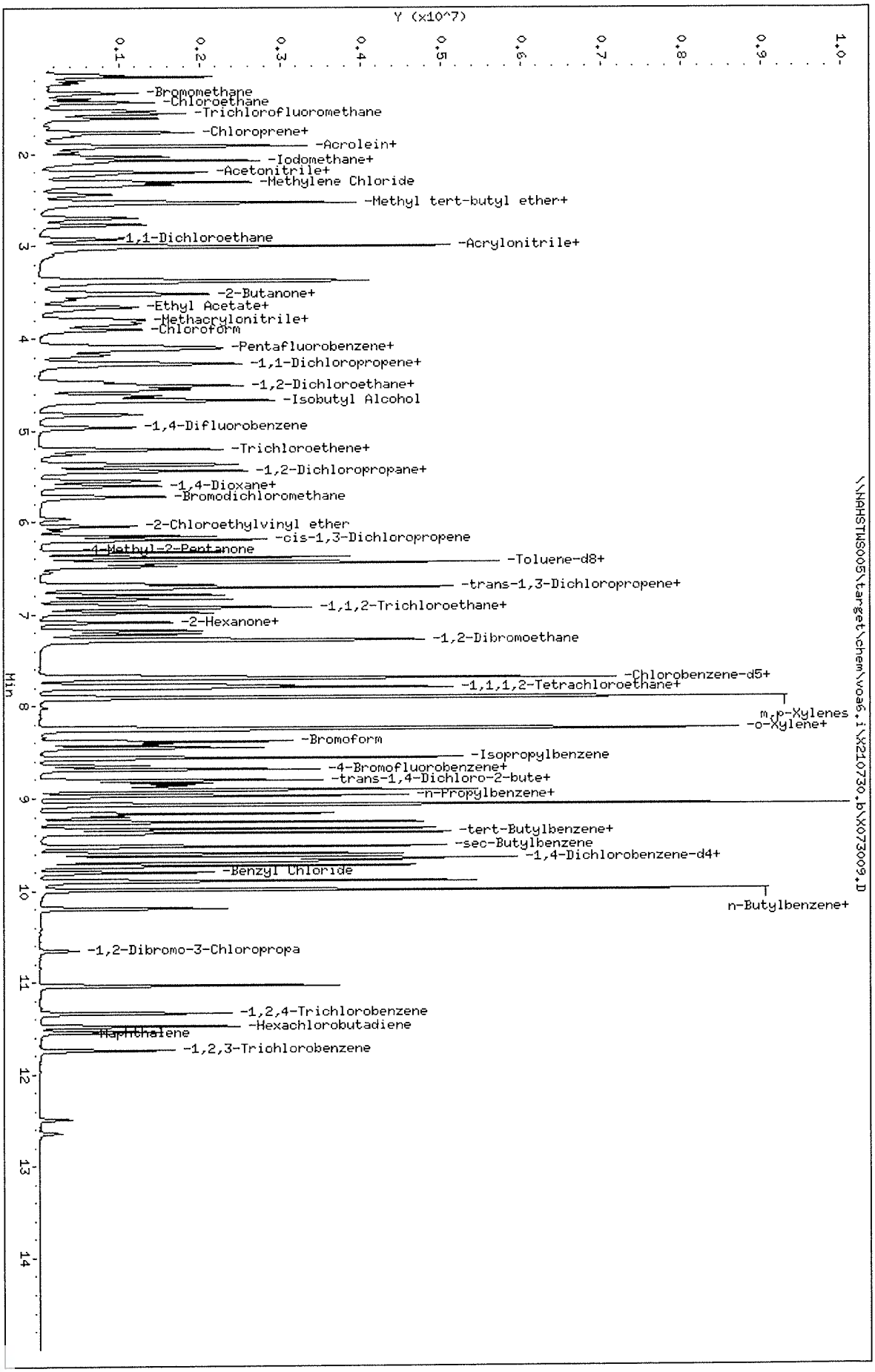
ALS Laboratory Group

Data file : \\NAHSTWS005\target\chem\voa6.i\X210730.b\X073009.D
Lab Smp Id: VSTD100 Client Smp ID: VSTD100
Inj Date : 30-JUL-2021 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\X210730.b\8260W.m
Meth Date : 10-Sep-2021 14:09 voa6.i Quant Type: ISTD
Cal Date : 30-JUL-2021 13:56 Cal File: X073008.D
Als bottle: 10 Calibration Sample, Level: 8
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0474-dod.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)	729025	50.0000	
$ 30 Dibromofluoromethane	113	4.096	4.096	(0.979)	710330	100.000	105.00
$ 35 1,2-Dichloroethane-d4	65	4.469	4.469	(1.069)	661249	100.000	102.57
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	1058066	50.0000	
* 47 Chlorobenzene-d5	117	7.670	7.670	(1.000)	990972	50.0000	
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	2229574	100.000	95.92
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	846415	100.000	102.55
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	547156	50.0000	
5 Vinyl Chloride	62	1.138	1.138	(0.272)	708979	100.000	102.16
11 1,1-Dichloroethene	96	1.911	1.911	(0.457)	629594	100.000	102.63
17 Methylene Chloride	84	2.305	2.305	(0.551)	621769	100.000	101.93
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	728210	100.000	99.58
33 1,2-Dichloroethane	62	4.555	4.555	(0.918)	798237	100.000	94.04
38 Trichloroethene	130	5.206	5.206	(1.049)	767161	100.000	99.21
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	506503	100.000	97.69



Data File: \\NAHSTWS005\target\chem\voa6.i\X210730.b\X073009.D
Date : 30-JUL-2021 14:17
Client ID: VSTD100
Sample Info: VSTD100;VSTD100;1;8;;
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\NAHSTWS005\target\chem\voa6.i\X210730.b\X073010.D Page 1
Report Date: 10-Sep-2021 14:09

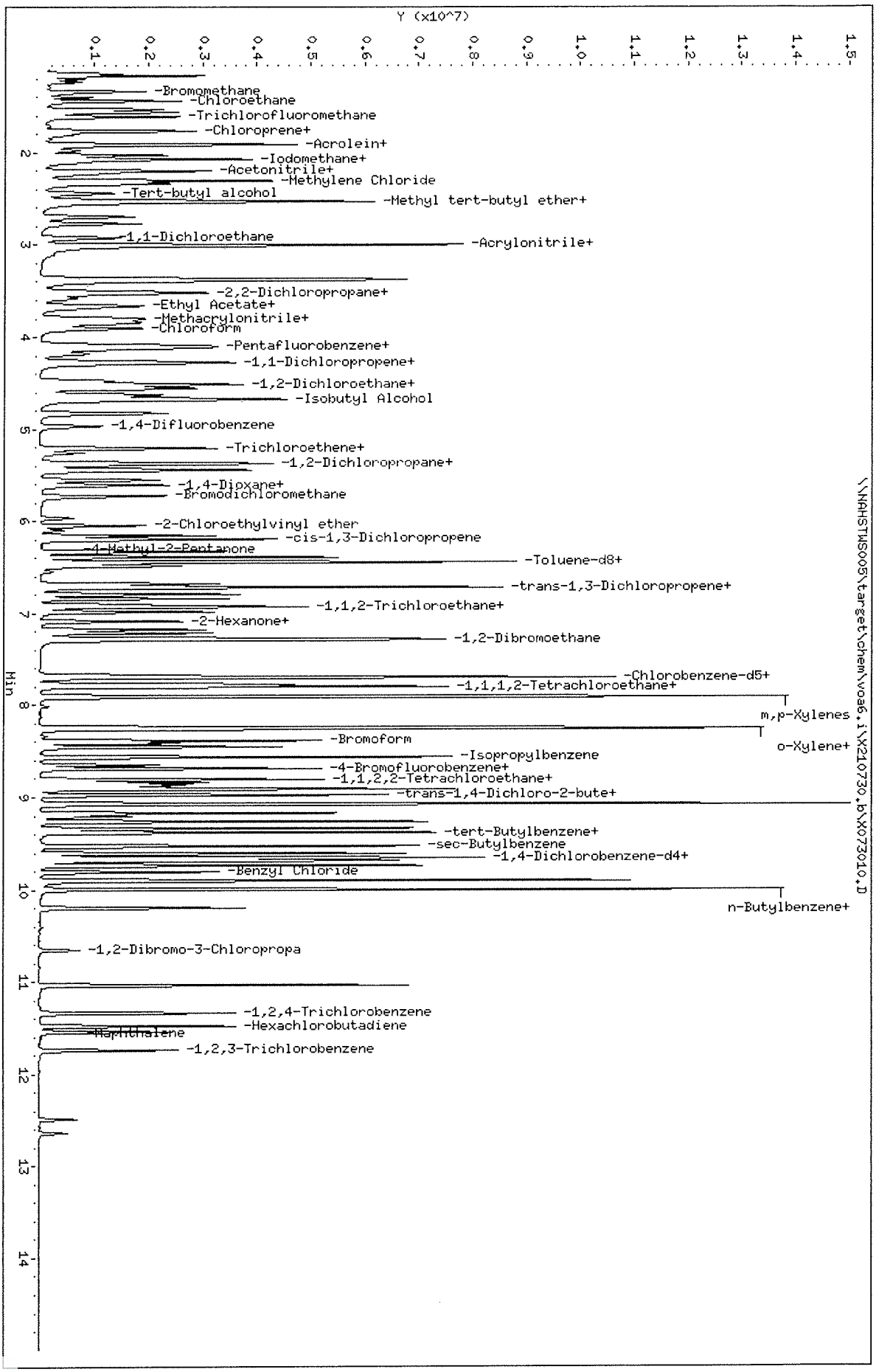
ALS Laboratory Group

Data file : \\NAHSTWS005\target\chem\voa6.i\X210730.b\X073010.D
Lab Smp Id: VSTD150 Client Smp ID: VSTD150
Inj Date : 30-JUL-2021 14:38
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\X210730.b\8260W.m
Meth Date : 10-Sep-2021 14:09 voa6.i Quant Type: ISTD
Cal Date : 30-JUL-2021 14:17 Cal File: X073009.D
Als bottle: 11 Calibration Sample, Level: 9
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0474-dod.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)	730810	50.0000	
$ 30 Dibromofluoromethane	113	4.096	4.096	(0.979)	1015199	150.000	150.13
$ 35 1,2-Dichloroethane-d4	65	4.469	4.469	(1.069)	974560	150.000	151.22
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	1028375	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	986169	50.0000	
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	3189794	150.000	137.90
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	1227770	150.000	149.82
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	541701	50.0000	
5 Vinyl Chloride	62	1.138	1.138	(0.272)	1003557	150.000	144.26
11 1,1-Dichloroethene	96	1.912	1.912	(0.457)	891494	150.000	144.97
17 Methylene Chloride	84	2.298	2.298	(0.550)	906937	150.000	148.42
27 cis-1,2-Dichloroethene	96	3.523	3.523	(0.842)	1068998	150.000	145.82
33 1,2-Dichloroethane	62	4.555	4.555	(0.918)	1199380	150.000	145.38
38 Trichloroethene	130	5.207	5.207	(1.049)	1100990	150.000	146.50
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	758675	150.000	147.05



Data File: \\NAHSTWS005\target\chem\voa6.i\X210730.b\X073010.D
Date : 30-JUL-2021 14:38
Client ID: VSTD150
Sample Info: VSTD150;VSTD150;1;9;;
Purge Volume: 5.0
Column phase: DB624

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

ALS Laboratory Group

Data file : \\NAHSTWS005\target\chem\voa6.i\X210730.b\X073011.D
Lab Smp Id: VSTD200 Client Smp ID: VSTD200
Inj Date : 30-JUL-2021 14:59
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\X210730.b\8260W.m
Meth Date : 10-Sep-2021 14:09 voa6.i Quant Type: ISTD
Cal Date : 30-JUL-2021 14:38 Cal File: X073010.D
Als bottle: 12 Calibration Sample, Level: 10
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0474-dod.sub
Target Version: 4.14
Processing Host: NAHSTW7056

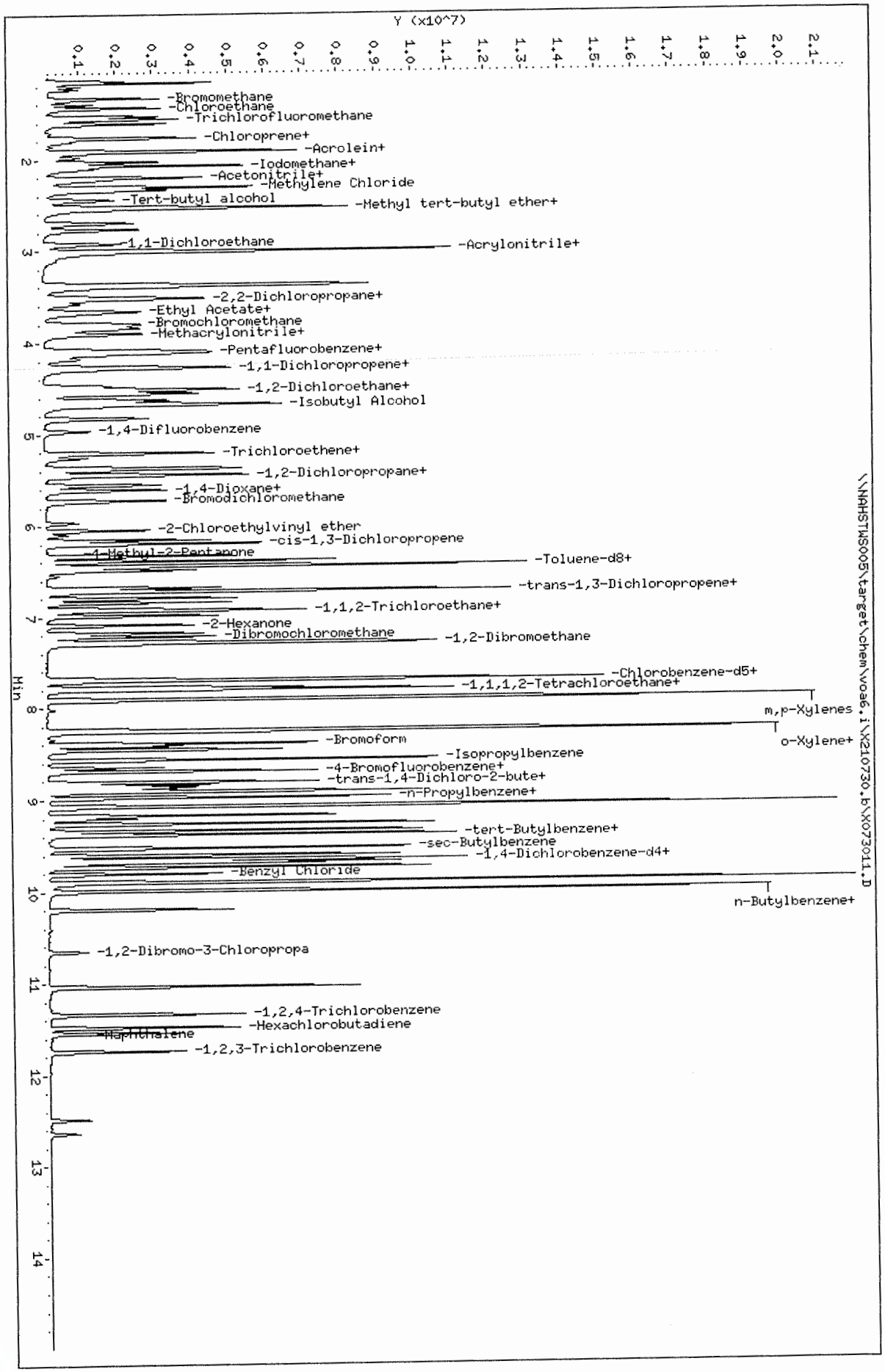
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

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)	764865	50.0000	
$ 30 Dibromofluoromethane	113	4.096	4.096	(0.979)	1392587	200.000	197.09
$ 35 1,2-Dichloroethane-d4	65	4.469	4.469	(1.069)	1331240	200.000	197.64
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	1080527	50.0000	
* 47 Chlorobenzene-d5	117	7.670	7.670	(1.000)	1034693	50.0000	
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	4466623	200.000	184.04
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	1706894	200.000	198.75
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	573296	50.0000	
5 Vinyl Chloride	62	1.138	1.138	(0.272)	1472864	200.000	202.29(A)
11 1,1-Dichloroethene	96	1.911	1.911	(0.457)	1299366	200.000	201.89(A)
17 Methylene Chloride	84	2.298	2.298	(0.550)	1282411	200.000	200.61(A)
27 cis-1,2-Dichloroethene	96	3.523	3.523	(0.842)	1497246	200.000	195.14
33 1,2-Dichloroethane	62	4.555	4.555	(0.918)	1665869	200.000	192.17
38 Trichloroethene	130	5.206	5.206	(1.049)	1560236	200.000	197.59
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	1057752	200.000	195.40

QC Flag Legend

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



Data File: \\NAHSTWS005\target\chem\voa6.i\X210730.b\X073011.D
Date : 30-JUL-2021 14:59
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\X210730.b\X073014.D Page 1
Report Date: 10-Sep-2021 14:09

ALS Laboratory Group

Data file : \\NAHSTWS005\target\chem\voa6.i\X210730.b\X073014.D
Lab Smp Id: ICV Client Smp ID: ICV
Inj Date : 30-JUL-2021 16:02
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\X210730.b\8260W.m
Meth Date : 10-Sep-2021 14:09 voa6.i Quant Type: ISTD
Cal Date : 30-JUL-2021 14:59 Cal File: X073011.D
Als bottle: 15 QC Sample: METHSPIKE
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0474-dod.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	4.182	(1.000)	757820	50.0000	
$ 30 Dibromofluoromethane	113	4.096	4.096	(0.979)	359808	50.6421	50.64
$ 35 1,2-Dichloroethane-d4	65	4.469	4.469	(1.069)	345746	51.1596	51.15
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	1064705	50.0000	
* 47 Chlorobenzene-d5	117	7.670	7.670	(1.000)	1011291	50.0000	
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	1121931	47.2981	47.29
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	428936	50.5668	50.56
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	558538	50.0000	
5 Vinyl Chloride	62	1.138	1.138	(0.272)	339009	46.9956	46.99
11 1,1-Dichloroethene	96	1.911	1.911	(0.457)	294640	46.2061	46.20
17 Methylene Chloride	84	2.305	2.298	(0.551)	307952	48.4518	48.45
27 cis-1,2-Dichloroethene	96	3.530	3.523	(0.844)	362320	47.6634	47.66
33 1,2-Dichloroethane	62	4.555	4.555	(0.918)	398621	46.6696	46.66
38 Trichloroethene	130	5.206	5.206	(1.049)	376752	48.4229	48.42
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	256542	48.4895	48.48

Data File: \\NAHSTWS005\target\chem\voa6.i\X210730.b\X073014.D Page 1
Report Date: 10-Sep-2021 14:09

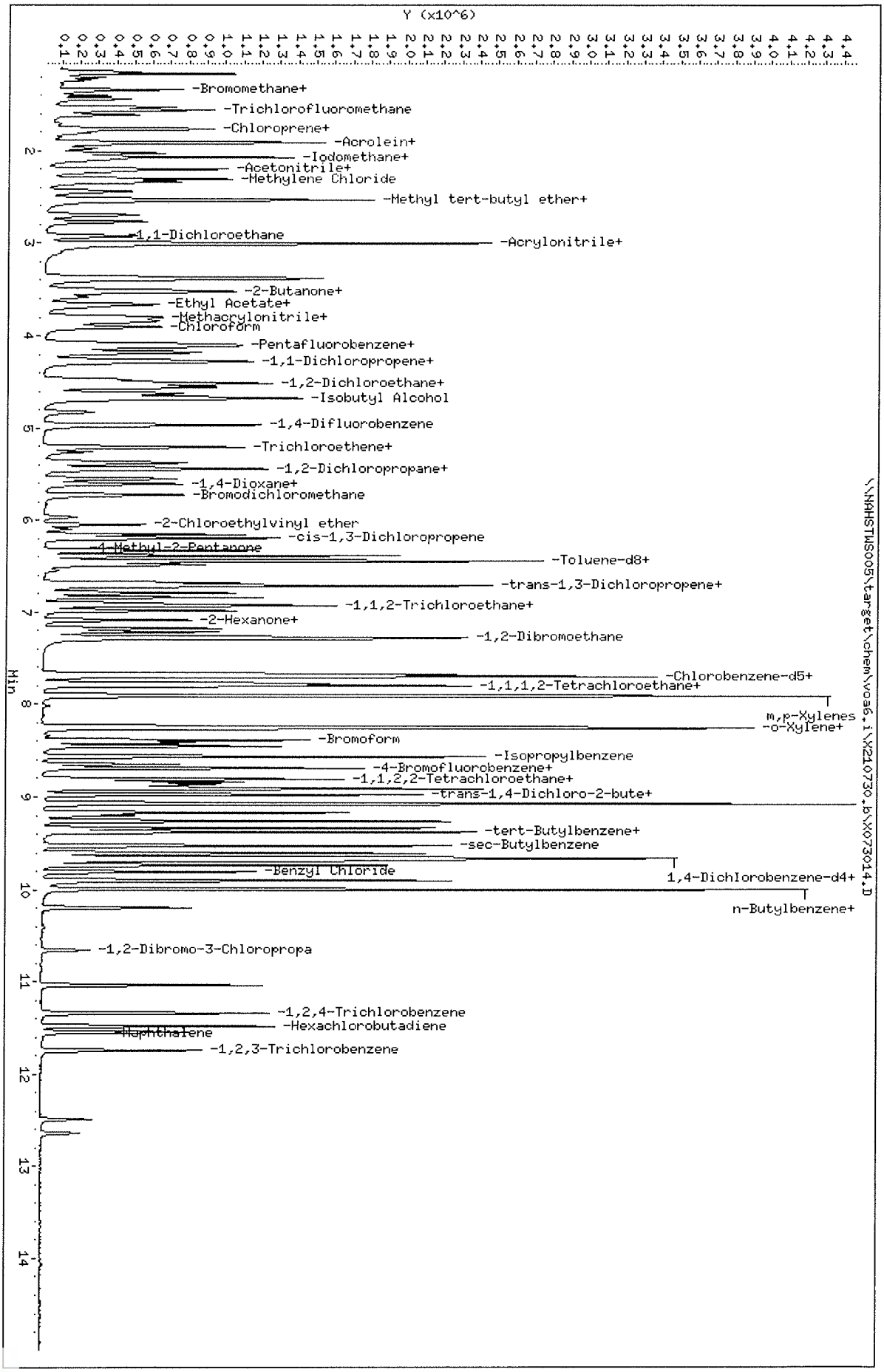
ALS Laboratory Group

Data file : \\NAHSTWS005\target\chem\voa6.i\X210730.b\X073014.D
Lab Smp Id: ICV Client Smp ID: ICV
Inj Date : 30-JUL-2021 16:02
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\X210730.b\8260W.m
Meth Date : 10-Sep-2021 14:09 voa6.i Quant Type: ISTD
Cal Date : 30-JUL-2021 14:59 Cal File: X073011.D
Als bottle: 15 QC Sample: METHSPIKE
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0474-dod.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	4.182	(1.000)	757820	50.0000	
$ 30 Dibromofluoromethane	113	4.096	4.096	(0.979)	359808	50.6421	50.64
$ 35 1,2-Dichloroethane-d4	65	4.469	4.469	(1.069)	345746	51.1596	51.15
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	1064705	50.0000	
* 47 Chlorobenzene-d5	117	7.670	7.670	(1.000)	1011291	50.0000	
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	1121931	47.2981	47.29
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	428936	50.5668	50.56
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	558538	50.0000	
5 Vinyl Chloride	62	1.138	1.138	(0.272)	339009	46.9956	46.99
11 1,1-Dichloroethene	96	1.911	1.911	(0.457)	294640	46.2061	46.20
17 Methylene Chloride	84	2.305	2.298	(0.551)	307952	48.4518	48.45
27 cis-1,2-Dichloroethene	96	3.530	3.523	(0.844)	362320	47.6634	47.66
33 1,2-Dichloroethane	62	4.555	4.555	(0.918)	398621	46.6696	46.66
38 Trichloroethene	130	5.206	5.206	(1.049)	376752	48.4229	48.42
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	256542	48.4895	48.48



Data File: \\NAHSTWS005\target\chem\voa6.i\X210730.b\X073014.D
Date : 30-JUL-2021 16:02
Client ID: ICV
Sample Info: CCV;CCV;2;;;ICV
Purge Volume: 5.0
Column phase: DB624

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

MSVOA06 -Logbook

Batch: 46071
Date: 08-04-2021
Method: 8260
Comments:

Analyst: Presenta Cabascango
Reviewer:
Laboratory: Houston

#	Samp ID	Type	Analyzed	DF	Init Wt/Vol	Final Vol	File ID	Matrix	Status	g
1	BFB	TUNE	08-04-2021 10:44 am	1.00	50 mL	50 mL	X080401.D	Liquid	Y	N
2	CCV	CCV	08-04-2021 11:05 am	1.00	50 mL	50 mL	X080402a.D	Liquid	Y	N
3	CCV	CCV	08-04-2021 11:26 am	1.00	50 mL	50 mL	X080403.D	Liquid	Y	N
4	CCB	SAMP	08-04-2021 11:47 am	1.00	50 mL	50 mL	X080404.D	Liquid	Y	N
5	VLCSW-210804	LCS	08-04-2021 12:08 pm	1.00	50 mL	50 mL	X080405.D	Liquid	Y	N
6	BLANK	SAMP	08-04-2021 12:29 pm	1.00	50 mL	50 mL	X080406.D	Liquid	Y	N
7	BLANK	SAMP	08-04-2021 12:50 pm	1.00	50 mL	50 mL	X080407.D	Liquid	Y	N
8	VBLKW-210804	MBLK	08-04-2021 01:11 pm	1.00	50 mL	50 mL	X080408.D	Liquid	Y	N
9	HS21071405-11	SAMP	08-04-2021 01:33 pm	1.00	50 mL	50 mL	X080409.D	Liquid	Y	N
10	HS21071440-01n/r	SAMP	08-04-2021 01:54 pm	1000.0	50 µL	50 mL	X080410.D	Liquid	Y	N
11	HS21071405-04	SAMP	08-04-2021 02:15 pm	1.00	50 mL	50 mL	X080411.D	Liquid	Y	N
12	HS21071405-11MS	MS	08-04-2021 02:36 pm	1.00	50 mL	50 mL	X080412.D	Liquid	Y	N
13	HS21071405-11MSD	MSD	08-04-2021 02:57 pm	1.00	50 mL	50 mL	X080413.D	Liquid	Y	N
14	HS21071405-04	SAMP	08-04-2021 03:18 pm	25.00	2 mL	50 mL	X080414.D	Liquid	Y	N
15	HS21071440-01	SAMP	08-04-2021 03:39 pm	10000.(	5 µL	50 mL	X080415.D	Liquid	Y	N
16	BLANK	SAMP	08-04-2021 04:00 pm	1.00	50 mL	50 mL	X080416.D	Liquid	Y	N
17	HS21071465-09	SAMP	08-04-2021 04:21 pm	1.00	50 mL	50 mL	X080417.D	Liquid	Y	N
18	HS21071592-06	SAMP	08-04-2021 04:42 pm	1.00	50 mL	50 mL	X080418.D	Liquid	Y	N
19	HS21071592-03	SAMP	08-04-2021 05:03 pm	1.00	50 mL	50 mL	X080419.D	Liquid	Y	N
20	HS21071592-04	SAMP	08-04-2021 05:24 pm	1.00	50 mL	50 mL	X080420.D	Liquid	Y	N
21	HS21071592-05	SAMP	08-04-2021 05:45 pm	1.00	50 mL	50 mL	X080421.D	Liquid	Y	N
22	HS21071465-06	SAMP	08-04-2021 06:06 pm	1.00	50 mL	50 mL	X080422.D	Liquid	Y	N
23	HS21071592-02	SAMP	08-04-2021 06:27 pm	1.00	50 mL	50 mL	X080423.D	Liquid	Y	N
24	HS21071405-02	SAMP	08-04-2021 06:48 pm	5.00	10 mL	50 mL	X080424.D	Liquid	Y	N
25	HS21071405-02	SAMP	08-04-2021 07:09 pm	25.00	2 mL	50 mL	X080425.D	Liquid	Y	N
26	HS21071405-07	SAMP	08-04-2021 07:30 pm	5.00	10 mL	50 mL	X080426.D	Liquid	Y	N
27	HS21071405-07	SAMP	08-04-2021 07:51 pm	25.00	2 mL	50 mL	X080427.D	Liquid	Y	N
28	HS21071405-05	SAMP	08-04-2021 08:12 pm	5.00	10 mL	50 mL	X080428.D	Liquid	Y	N
29	HS21071405-05	SAMP	08-04-2021 08:34 pm	50.00	1 mL	50 mL	X080429.D	Liquid	Y	N
30	HS21071592-01	SAMP	08-04-2021 08:55 pm	5.00	10 mL	50 mL	X080430.D	Liquid	Y	N
31	HS21071592-01	SAMP	08-04-2021 09:16 pm	25.00	2 mL	50 mL	X080431.D	Liquid	Y	N
32	HS21071465-01	SAMP	08-04-2021 09:37 pm	5.00	10 mL	50 mL	X080432.D	Liquid	Y	N
33	CCV-END	CCV	08-04-2021 09:58 pm	1.00	50 mL	50 mL	X080433.D	Liquid	Y	N
34	BFB	TUNE	08-04-2021 10:19 pm	1.00	50 mL	50 mL	Y080401.D	Liquid	Y	N
35	CCV	CCV	08-04-2021 10:40 pm	1.00	50 mL	50 mL	Y080402a.D	Liquid	Y	N
36	CCV	CCV	08-04-2021 11:00 pm	1.00	50 mL	50 mL	Y080403.D	Liquid	Y	N
37	CCB	SAMP	08-04-2021 11:21 pm	1.00	50 mL	50 mL	Y080404.D	Liquid	Y	N
38	VLCSW-210804	LCS	08-04-2021 11:42 pm	1.00	50 mL	50 mL	Y080405.D	Liquid	Y	N
39	BLANK	SAMP	08-05-2021 12:03 am	1.00	50 mL	50 mL	Y080406.D	Liquid	Y	N
40	VBLKW-210804	MBLK	08-05-2021 12:25 am	1.00	50 mL	50 mL	Y080407.D	Liquid	Y	N
41	HS21071531-24	SAMP	08-05-2021 12:46 am	1.00	50 mL	50 mL	Y080408.D	Liquid	Y	N

MSVOA06 -Logbook

#	Samp ID	Type	Analyzed	DF	Init Wt/Vol	Final Vol	File ID	Matrix	Status	p
42	HS21071531-22	SAMP	08-05-2021 01:07 am	1.00	50 mL	50 mL	Y080409.D	Liquid	Y	N
43	HS21071531-23	SAMP	08-05-2021 01:28 am	1.00	50 mL	50 mL	Y080410.D	Liquid	Y	N
44	HS21071531-05	SAMP	08-05-2021 01:49 am	1.00	50 mL	50 mL	Y080411.D	Liquid	Y	N
45	HS21071531-01	SAMP	08-05-2021 02:10 am	1.00	50 mL	50 mL	Y080412.D	Liquid	Y	N
46	HS21071524-16	SAMP	08-05-2021 02:31 am	10.00	5 mL	50 mL	Y080413.D	Liquid	Y	N
47	HS21071531-05MS	MS	08-05-2021 02:52 am	1.00	50 mL	50 mL	Y080414.D	Liquid	Y	N
48	HS21071531-05MSD	MSD	08-05-2021 03:13 am	1.00	50 mL	50 mL	Y080415.D	Liquid	Y	N
49	HS21071524-16	SAMP	08-05-2021 03:34 am	100.0(	500 µL	50 mL	Y080416.D	Liquid	Y	N
50	HS21071531-06	SAMP	08-05-2021 03:55 am	1.00	50 mL	50 mL	Y080417.D	Liquid	Y	N
51	HS21071531-08	SAMP	08-05-2021 04:16 am	1.00	50 mL	50 mL	Y080418.D	Liquid	Y	N
52	HS21071531-09	SAMP	08-05-2021 04:37 am	1.00	50 mL	50 mL	Y080419.D	Liquid	Y	N
53	HS21071531-07	SAMP	08-05-2021 04:58 am	10.00	5 mL	50 mL	Y080420.D	Liquid	Y	N
54	HS21071531-07n/r	SAMP	08-05-2021 05:19 am	50.00	1 mL	50 mL	Y080421.D	Liquid	Y	N
55	HS21071531-02	SAMP	08-05-2021 05:40 am	10.00	5 mL	50 mL	Y080422.D	Liquid	Y	N
56	HS21071531-02	SAMP	08-05-2021 06:02 am	100.0(	500 µL	50 mL	Y080423.D	Liquid	Y	N
57	HS21071531-03	SAMP	08-05-2021 06:23 am	10.00	5 mL	50 mL	Y080424.D	Liquid	Y	N
58	HS21071531-03n/r	SAMP	08-05-2021 06:44 am	100.0(	500 µL	50 mL	Y080425.D	Liquid	Y	N
59	HS21071531-12	SAMP	08-05-2021 07:05 am	10.00	5 mL	50 mL	Y080426.D	Liquid	Y	N
60	HS21071531-12	SAMP	08-05-2021 07:26 am	100.0(	500 µL	50 mL	Y080427.D	Liquid	Y	N
61	HS21071531-14	SAMP	08-05-2021 07:47 am	10.00	5 mL	50 mL	Y080428.D	Liquid	Y	N
62	HS21071531-14	SAMP	08-05-2021 08:08 am	100.0(	500 µL	50 mL	Y080429.D	Liquid	Y	N
63	BLANK	SAMP	08-05-2021 08:29 am	1.00	50 mL	50 mL	Y080430.D	Liquid	Y	N

FORM 2
WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS21071465

	CLIENT SAMPLE NO.	SMC1 #	SMC2 (DCE)#	SMC3 (TOL)#	OTHER #	TOT OUT
01	VLCSW-210804	94	96	95	100	0
02	VBLKW-210804	90	88	102	97	0
03	HS21071465-09	96	94	103	100	0
04	HS21071465-06	93	97	105	101	0
05	HS21071465-01	95	94	103	96	0
06						
07						
08						
09						
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11						
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16						
17						
18						
19						
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21						
22						
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25						
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27						
28						

		QC LIMITS
SMC1	= Dibromofluoromethane	(70-130)
SMC2 (DCE)	= 1,2-Dichloroethane-d4	(70-130)
SMC3 (TOL)	= Toluene-d8	(70-130)
OTHER	= 4-Bromofluorobenzene	(70-130)

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-210804

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS21071465

Lab File ID: X080408 Lab Sample ID: VBLKW-210804

Date Analyzed: 08/04/21 Time Analyzed: 1311

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-210804	VLCSW-210804	X080405	1208
02	HS21071405-11MS	HS21071405-11MS	X080412	1436
03	HS21071405-11MSD	HS21071405-11MSD	X080413	1457
04	HS21071465-09	HS21071465-09	X080417	1621
05	HS21071465-06	HS21071465-06	X080422	1806
06	HS21071465-01	HS21071465-01	X080432	2137
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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.: HS21071465

Lab File ID: X080401 BFB Injection Date: 08/04/21

Instrument ID: VOA6 BFB Injection Time: 1044

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	16.1
75	30.0 - 60.0% of mass 95	45.9
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	1.2 (1.1)1
174	Greater than 50.0% of mass 95	108.6
175	5.0 - 9.0% of mass 174	8.5 (7.8)1
176	95.0 - 101.0% of mass 174	106.4 (98.0)1
177	5.0 - 9.0% of mass 176	6.4 (6.0)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	X080403	08/04/21	1126
02	VLCSW-210804	VLCSW-210804	X080405	08/04/21	1208
03	VBLKW-210804	VBLKW-210804	X080408	08/04/21	1311
04	HS21071405-11MS	HS21071405-11MS	X080412	08/04/21	1436
05	HS21071405-11MSD	HS21071405-11MSD	X080413	08/04/21	1457
06	HS21071465-09	HS21071465-09	X080417	08/04/21	1621
07	HS21071465-06	HS21071465-06	X080422	08/04/21	1806
08	HS21071465-01	HS21071465-01	X080432	08/04/21	2137
09	CCV-END	CCV-END	X080433	08/04/21	2158
10					
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21					
22					

page 1 of 1

FORM V VOA

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS21071465

Instrument ID: VOA6 Calibration Date: 08/04/21 Time: 1126

Lab File ID: X080403 Init. Calib. Date(s): 07/30/21 07/30/21

Init. Calib. Times: 1129 1459

GC Column: DB624 ID: 0.18 (mm)

COMPOUND	RRF or AMOUNT	RRF50.000 or AMOUNT	CCAL RRF50.000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Vinyl Chloride	0.4760000	0.4099709	0.4099709	0.1	13.87	20.00	AVRG
Methylene Chloride	46.714969	50.000000	0.3918664	0.1	6.57	20.00	LINR
1,1-Dichloroethene	0.4210000	0.3609110	0.3609110	0.1	14.27	20.00	AVRG
1,2-Dichloroethane	0.4010000	0.3654430	0.3654430	0.1	8.87	20.00	AVRG
Trichloroethene	0.3650000	0.3575997	0.3575997	0.2	2.03	20.00	AVRG
1,1,2-Trichloroethane	0.2620000	0.2532334	0.2532334	0.1	3.35	20.00	AVRG
Dibromofluoromethane	47.583104	50.000000	0.4466823	0.1	4.83	20.00	LINR
1,2-Dichloroethane-d4	45.165652	50.000000	0.4036882	0.1	9.67	20.00	LINR
Toluene-d8	1.1730000	1.1139234	1.1139234	0.1	5.04	20.00	AVRG
4-Bromofluorobenzene	49.243220	50.000000	0.4132011	0.1	1.51	20.00	LINR

FORM VII VOA

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS21071465

Instrument ID: VOA6 Calibration Date: 08/04/21 Time: 2158

Lab File ID: X080433 Init. Calib. Date(s): 07/30/21 07/30/21

Init. Calib. Times: 1129 1459

GC Column: DB624 ID: 0.18 (mm)

COMPOUND	RRF or AMOUNT	RRF50.000 or AMOUNT	CCAL RRF50.000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Vinyl Chloride	0.4760000	0.4271941	0.4271941	0.1	10.25	50.00	AVRG
Methylene Chloride	50.404171	50.000000	0.4226647	0.1	-0.81	50.00	LINR
1,1-Dichloroethene	0.4210000	0.3763405	0.3763405	0.1	10.61	50.00	AVRG
1,2-Dichloroethane	0.4010000	0.3716500	0.3716500	0.1	7.32	50.00	AVRG
Trichloroethene	0.3650000	0.3601680	0.3601680	0.2	1.32	50.00	AVRG
1,1,2-Trichloroethane	0.2620000	0.2539182	0.2539182	0.1	3.08	50.00	AVRG
Dibromofluoromethane	50.474215	50.000000	0.4732509	0.1	-0.95	50.00	LINR
1,2-Dichloroethane-d4	49.041075	50.000000	0.4376646	0.1	1.92	50.00	LINR
Toluene-d8	1.1730000	1.0932366	1.0932366	0.1	6.80	50.00	AVRG
4-Bromofluorobenzene	50.153249	50.000000	0.4207270	0.1	0.31	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.: HS21071465

Lab File ID (Standard): X080403 Date Analyzed: 08/04/21

Instrument ID: VOA6 Time Analyzed: 1126

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

		IS1 AREA #	RT #	IS2(DFB) AREA #	RT #	IS3(CBZ) AREA #	RT #
	12 HOUR STD	742521	4.18	986192	4.96	930213	7.67
	UPPER LIMIT	1485042	4.68	1972384	5.46	1860426	8.17
	LOWER LIMIT	371261	3.68	493096	4.46	465107	7.17
	CLIENT SAMPLE NO.						
01	VLCSW-210804	738547	4.18	994476	4.96	931780	7.67
02	VBLKW-210804	869848	4.18	1135421	4.96	1008982	7.67
03	HS21071405-11MS	829615	4.18	1124747	4.96	1024586	7.67
04	HS21071405-11MSD	821880	4.18	1098703	4.96	1008306	7.67
05	HS21071465-09	786463	4.18	1068604	4.96	958375	7.67
06	HS21071465-06	775871	4.18	1041330	4.96	918945	7.67
07	HS21071465-01	760357	4.18	1021091	4.96	915024	7.67
08							
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18							
19							
20							

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

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

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

FORM 8
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS21071465

Lab File ID (Standard): X080403 Date Analyzed: 08/04/21

Instrument ID: VOA6 Time Analyzed: 1126

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

		IS4 (DCB) AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	514369	9.66				
	UPPER LIMIT	1028738	10.16				
	LOWER LIMIT	257185	9.16				
	CLIENT SAMPLE NO.						
01	VLCSW-210804	511935	9.66				
02	VBLKW-210804	504446	9.66				
03	HS21071405-11MS	537455	9.66				
04	HS21071405-11MSD	496946	9.66				
05	HS21071465-09	485030	9.66				
06	HS21071465-06	465123	9.66				
07	HS21071465-01	435077	9.66				
08							
09							
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17							
18							
19							
20							

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

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

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

Data File: \\NAHSTWS005\target\chem\voa6.i\X210804.b\X080401.D

Date : 04-AUG-2021 10:44

Client ID: BFB

Instrument: voa6.i

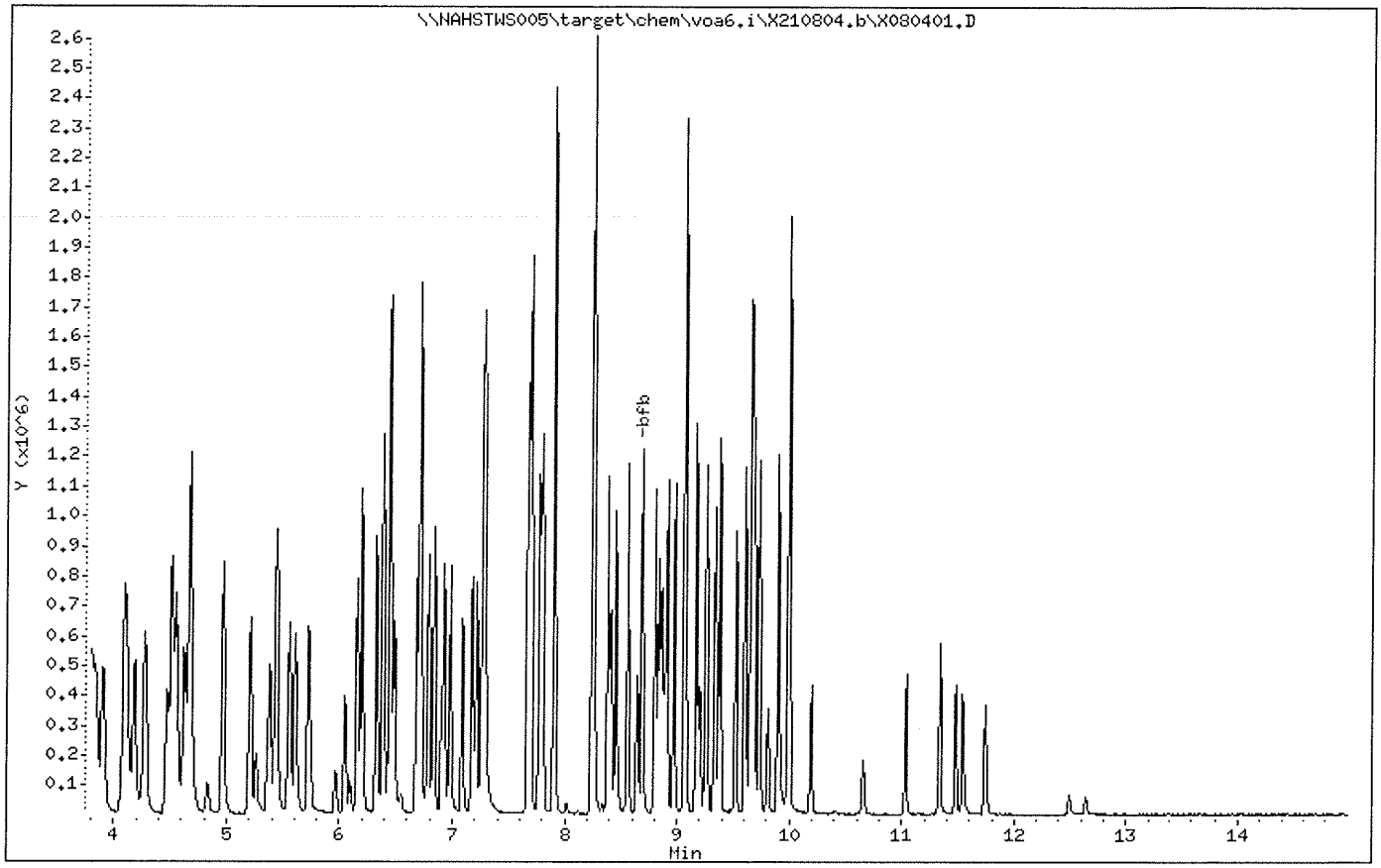
Sample Info: BFB;BFB;3;;BFB

Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

Column diameter: 0.25



Data File: \\NAHSTWS005\target\chem\voa6.i\X210804.b\X080401.D Page 2

Date : 04-AUG-2021 10:44

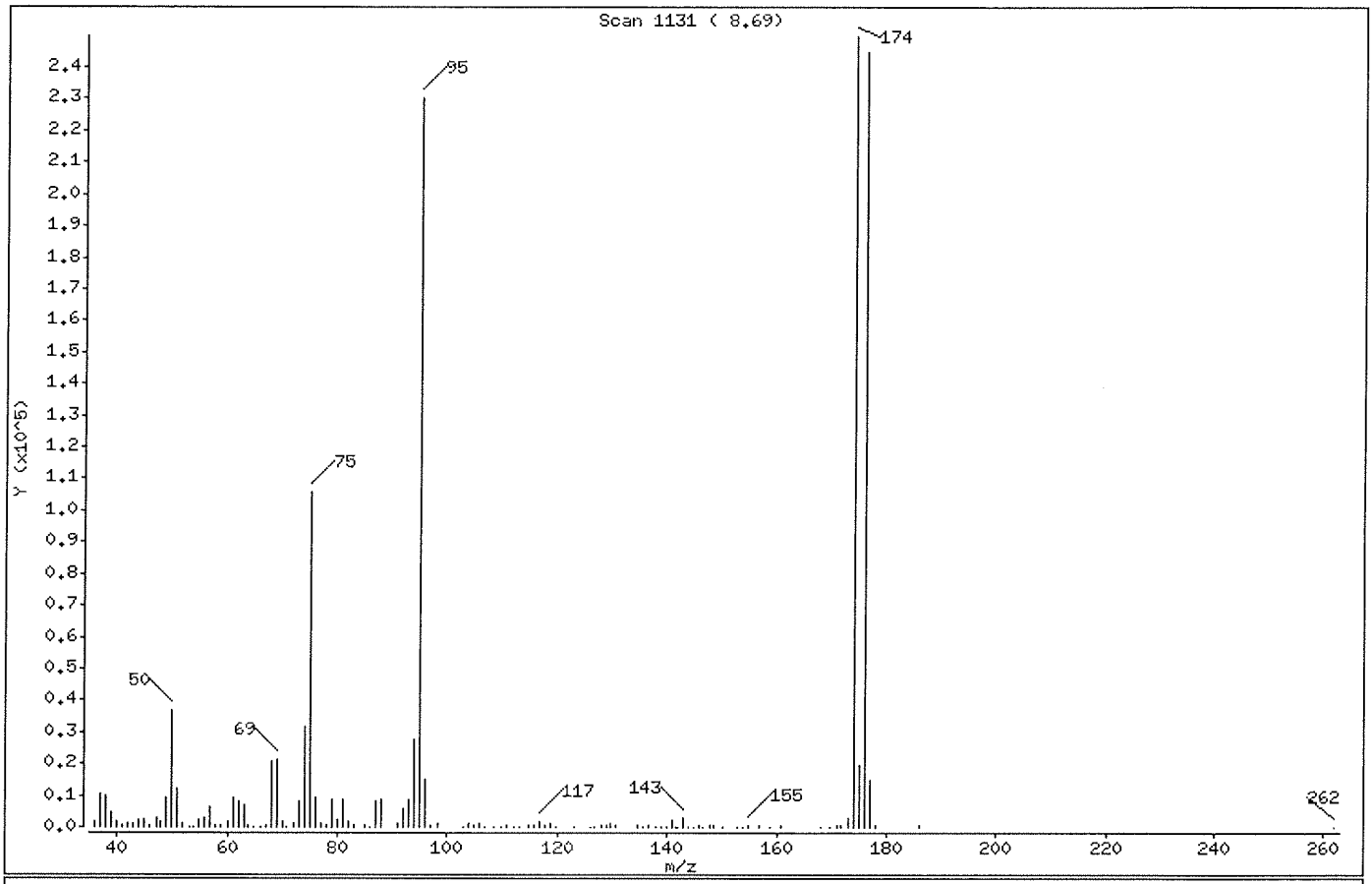
Client ID: BFB Instrument: voa6.i

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	16.07
75	30.00 - 60.00% of mass 95	45.86
96	5.00 - 9.00% of mass 95	6.44
173	Less than 2.00% of mass 174	1.19 (1.09)
174	Greater than 50.00% of mass 95	108.57
175	5.00 - 9.00% of mass 174	8.50 (7.83)
176	95.00 - 101.00% of mass 174	106.37 (97.98)
177	5.00 - 9.00% of mass 176	6.39 (6.01)

Data File: \\NAHSTWS005\target\chem\voa6.i\X210804.b\X080401.D

Date : 04-AUG-2021 10:44

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: X080401.D
Spectrum: Scan 1131 (8.69)
Location of Maximum: 173.90
Number of points: 118

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	1492	66.00	201	102.80	143	141.60	270
37.00	10159	67.00	708	103.80	999	141.90	260
38.00	9602	68.00	20784	104.70	526	142.90	2630
39.00	4420	69.00	21008	105.90	1211	143.90	159
39.90	1460	70.00	1496	106.80	204	144.90	159
40.90	672	70.90	277	108.60	111	145.80	457
42.00	1219	72.00	1397	109.80	187	146.70	112
43.00	902	73.00	8244	110.80	289	148.00	418
43.90	2534	74.00	31848	112.20	148	148.70	327
45.00	2234	75.00	105504	113.00	206	150.10	255
45.90	416	76.00	9219	114.80	514	152.80	89
47.10	2955	77.00	1118	115.70	807	153.70	184
48.00	1461	78.10	738	116.90	1742	154.80	802
49.00	9022	78.90	8646	117.80	831	156.90	570
50.00	36976	79.90	2310	118.90	1156	158.90	209
51.00	12180	80.90	8584	119.60	154	160.80	335
52.00	889	81.90	1915	122.90	194	168.20	160
53.20	61	82.90	385	126.00	142	169.80	115
53.90	55	84.90	346	126.80	149	170.90	344
55.00	2087	85.90	278	127.90	715	171.60	460
56.00	2631	86.90	8256	128.90	479	172.90	2730
57.00	6297	87.90	8666	129.80	1050	173.90	249792
58.00	339	91.00	988	130.80	486	174.90	19568
59.00	768	92.00	5977	134.80	427	175.90	244736
60.00	1713	93.00	8512	135.80	114	176.90	14704
61.00	9008	94.00	27720	136.80	425	177.90	507
62.00	8303	95.00	230080	137.90	71	185.90	289
63.00	7169	96.00	14822	138.80	176	262.10	70
63.90	717	96.90	678	140.00	241		
64.90	246	98.10	1120	140.80	2371		

Data File: \\NAHSTWS005\target\chem\voa6.i\X210804.b\X080403.D Page 1
Report Date: 10-Sep-2021 14:36

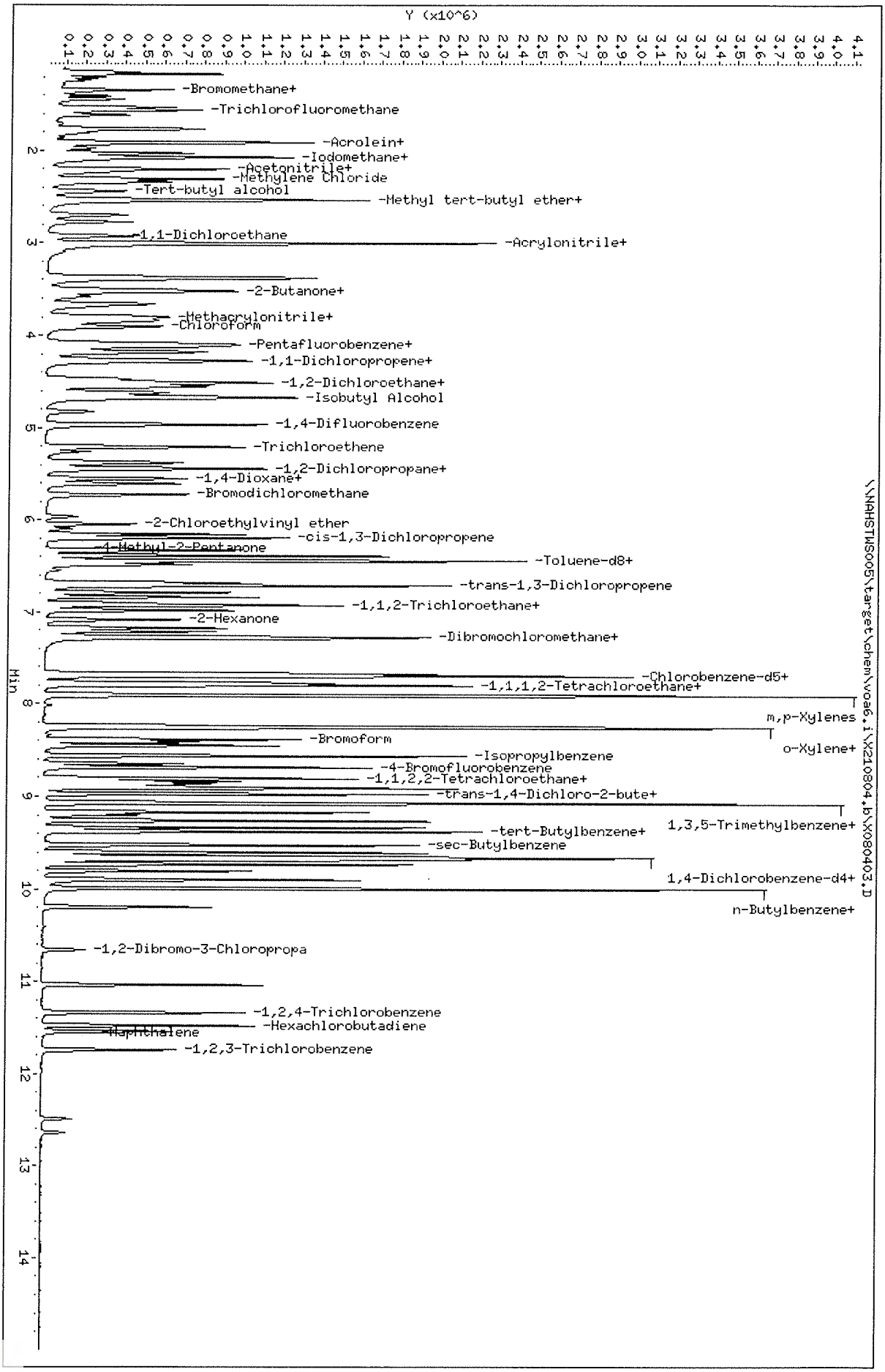
ALS Laboratory Group

Data file : \\NAHSTWS005\target\chem\voa6.i\X210804.b\X080403.D
Lab Smp Id: CCV Client Smp ID: CCV
Inj Date : 04-AUG-2021 11:26
Operator : PC Inst ID: voa6.i
Smp Info : CCV;CCV;2;;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\target\chem\voa6.i\X210804.b\8260W.m
Meth Date : 10-Sep-2021 14:36 voa6.i Quant Type: ISTD
Cal Date : 30-JUL-2021 13:56 Cal File: X073008.D
Als bottle: 3 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0474-dod.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)	742521	50.0000	
$ 30 Dibromofluoromethane	113	4.096	4.096	(0.979)	331671	50.0000	47.58
$ 35 1,2-Dichloroethane-d4	65	4.469	4.469	(1.068)	299747	50.0000	45.16
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	986192	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	930213	50.0000	
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	1036186	50.0000	47.49
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	384365	50.0000	49.24
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	514369	50.0000	
5 Vinyl Chloride	62	1.138	1.138	(0.272)	304412	50.0000	43.06
11 1,1-Dichloroethene	96	1.912	1.912	(0.457)	267984	50.0000	42.89
17 Methylene Chloride	84	2.298	2.298	(0.550)	290969	50.0000	46.71
27 cis-1,2-Dichloroethene	96	3.523	3.523	(0.842)	333983	50.0000	44.84
33 1,2-Dichloroethane	62	4.555	4.555	(0.918)	360397	50.0000	45.55
38 Trichloroethene	130	5.207	5.207	(1.049)	352662	50.0000	48.93
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	235561	50.0000	48.40



Data File: \\NAHSTWS005\target\chem\voa6.i\X210804.b\X080403.D
Date : 04-AUG-2021 11:26
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\X210804.b\X080405.D Page 1
Report Date: 10-Sep-2021 14:36

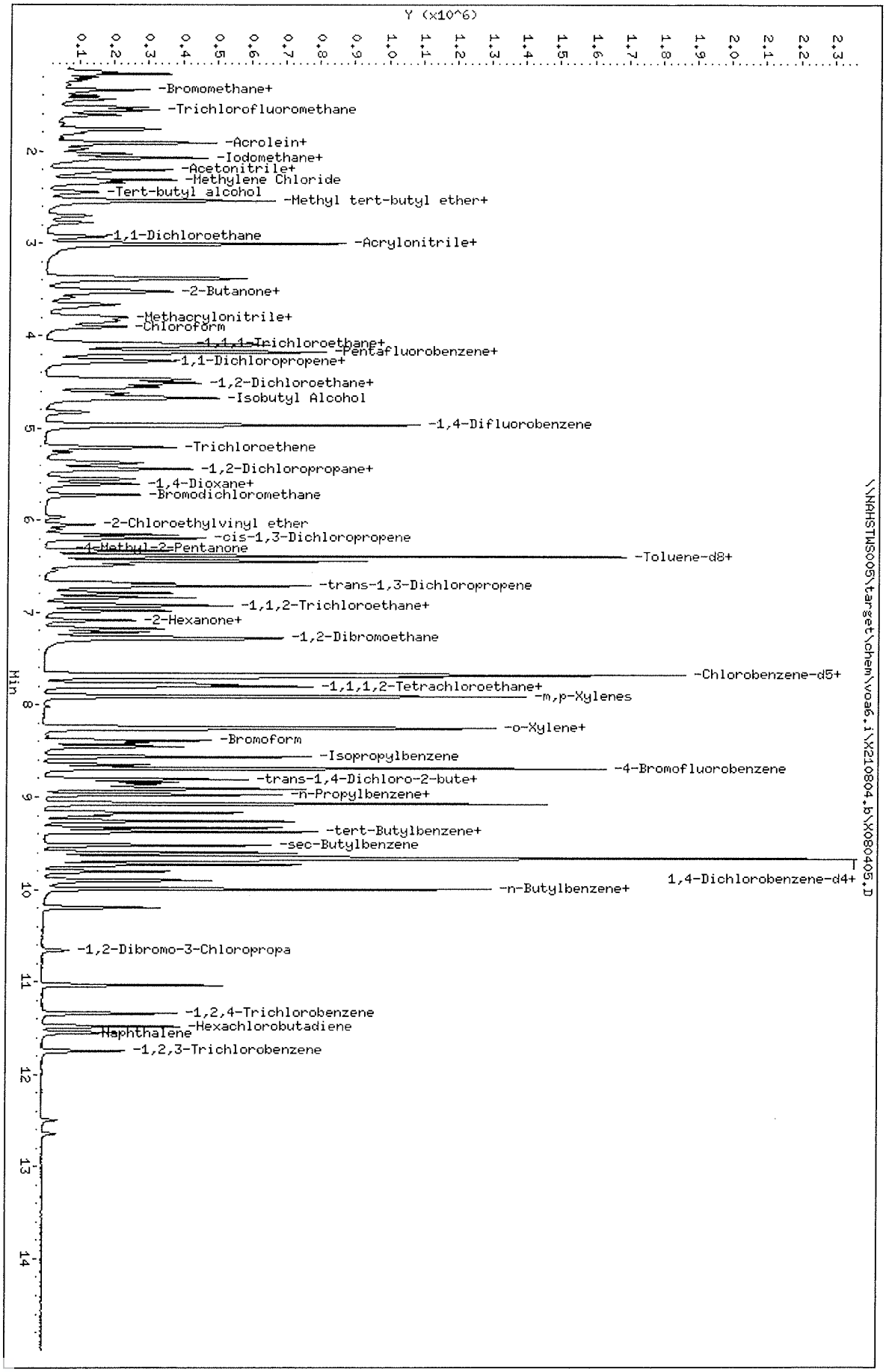
ALS Laboratory Group

Data file : \\NAHSTWS005\target\chem\voa6.i\X210804.b\X080405.D
Lab Smp Id: VLCSW-210804 Client Smp ID: VLCSW-210804
Inj Date : 04-AUG-2021 12:08
Operator : PC Inst ID: voa6.i
Smp Info : VLCSW-210804;VLCSW-210804;3;;LCS
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\target\chem\voa6.i\X210804.b\8260W.m
Meth Date : 10-Sep-2021 14:36 voa6.i Quant Type: ISTD
Cal Date : 30-JUL-2021 13:56 Cal File: X073008.D
Als bottle: 5 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0474-dod.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	4.182	(1.000)	738547	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.096	(0.981)	327671	47.2553	47.25
$ 35 1,2-Dichloroethane-d4	65	4.469	4.469	(1.068)	316541	48.0071	48.00
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	994476	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	931780	50.0000	
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	1040289	47.5986	47.59
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	389362	49.8077	49.80
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	511935	50.0000	
5 Vinyl Chloride	62	1.145	1.138	(0.274)	113703	16.1736	16.17
11 1,1-Dichloroethene	96	1.919	1.912	(0.459)	99040	15.9370	15.93
17 Methylene Chloride	84	2.306	2.298	(0.551)	115773	18.5523	18.55
27 cis-1,2-Dichloroethene	96	3.530	3.523	(0.844)	132274	17.8548	17.85
33 1,2-Dichloroethane	62	4.555	4.555	(0.918)	144257	18.0820	18.08
38 Trichloroethene	130	5.207	5.207	(1.049)	134935	18.5676	18.56
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	92700	19.0165	19.01



Data File: \\NAHSTWS005\target\chem\voa6.i\X210804.b\X080405.D
Date : 04-AUG-2021 12:08
Client ID: VLCSW-210804
Sample Info: VLCSW-210804;VLCSW-210804;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\X210804.b\X080408.D Page 1
Report Date: 10-Sep-2021 14:36

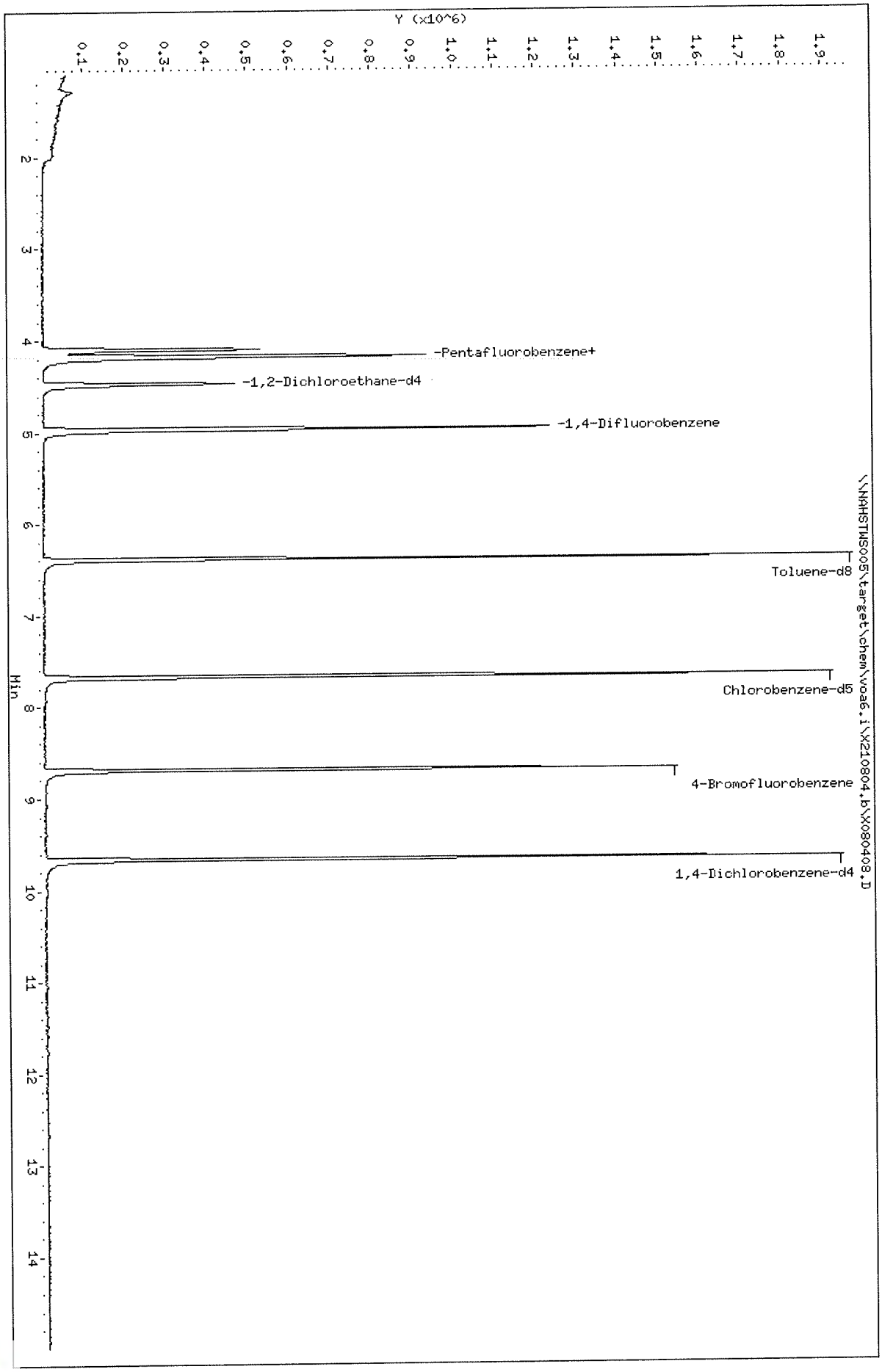
ALS Laboratory Group

Data file : \\NAHSTWS005\target\chem\voa6.i\X210804.b\X080408.D
Lab Smp Id: VBLKW-210804 Client Smp ID: VBLKW-210804
Inj Date : 04-AUG-2021 13:11
Operator : PC Inst ID: voa6.i
Smp Info : VBLKW-210804;VBLKW-210804;3;;BLANK
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\target\chem\voa6.i\X210804.b\8260W.m
Meth Date : 10-Sep-2021 14:36 voa6.i Quant Type: ISTD
Cal Date : 30-JUL-2021 13:56 Cal File: X073008.D
Als bottle: 8 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0474-dod.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	4.182	(1.000)	869848	50.0000	
$ 30 Dibromofluoromethane	113	4.096	4.096	(0.979)	368975	45.1348	45.13
$ 35 1,2-Dichloroethane-d4	65	4.469	4.469	(1.069)	341259	43.8690	43.86
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	1135421	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	1008982	50.0000	
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	1213978	51.2957	51.29
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	410620	48.4891	48.48
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	504446	50.0000	



Data File: \\NAHSTWS005\target\chem\voa6.i\X210804.b\X080408.D
Date : 04-AUG-2021 13:11
Client ID: VBLKW-210804
Sample Info: VBLKW-210804;VBLKW-210804;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\X210804.b\X080412.D Page 1
Report Date: 10-Sep-2021 14:36

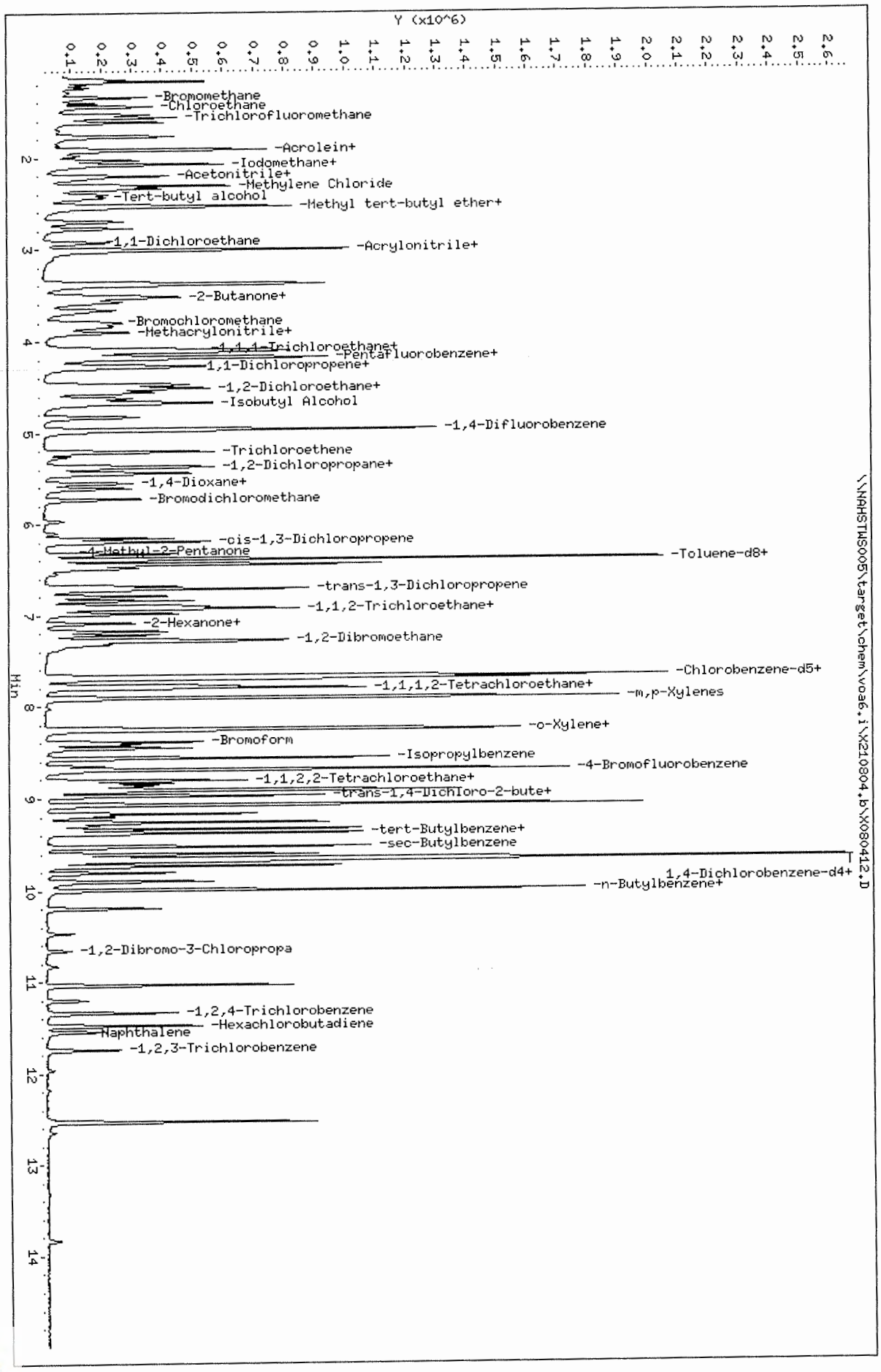
ALS Laboratory Group

Data file : \\NAHSTWS005\target\chem\voa6.i\X210804.b\X080412.D
Lab Smp Id: HS21071405-11MS Client Smp ID: HS21071405-11MS
Inj Date : 04-AUG-2021 14:36
Operator : PC Inst ID: voa6.i
Smp Info : HS21071405-11MS;HS21071405-11MS;3;;MS
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\target\chem\voa6.i\X210804.b\8260W.m
Meth Date : 10-Sep-2021 14:36 voa6.i Quant Type: ISTD
Cal Date : 30-JUL-2021 13:56 Cal File: X073008.D
Als bottle: 12 QC Sample: MS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0474-dod.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	4.182	(1.000)	829615	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.096	(0.981)	366152	47.0030	47.00
$ 35 1,2-Dichloroethane-d4	65	4.469	4.469	(1.068)	362366	48.9411	48.94
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	1124747	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	1024586	50.0000	
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	1232973	51.3049	51.30
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	430936	50.1373	50.13
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	537455	50.0000	
5 Vinyl Chloride	62	1.138	1.138	(0.272)	156702	19.8431	19.84
11 1,1-Dichloroethene	96	1.912	1.912	(0.457)	132608	18.9962	18.99
17 Methylene Chloride	84	2.306	2.298	(0.551)	132063	18.8432	18.84
27 cis-1,2-Dichloroethene	96	3.523	3.523	(0.842)	154606	18.5784	18.57
33 1,2-Dichloroethane	62	4.555	4.555	(0.918)	166189	18.4183	18.41
38 Trichloroethene	130	5.207	5.207	(1.049)	194687	23.6868	23.68
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	103612	19.3298	19.32



Data File: \\NAHSTWS005\target\chem\voa6.i\X210804.b\X080412.D
Date : 04-AUG-2021 14:36
Client ID: HS21071405-11MS
Sample Info: HS21071405-11MS;HS21071405-11MS;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\X210804.b\X080413.D Page 1
Report Date: 10-Sep-2021 14:36

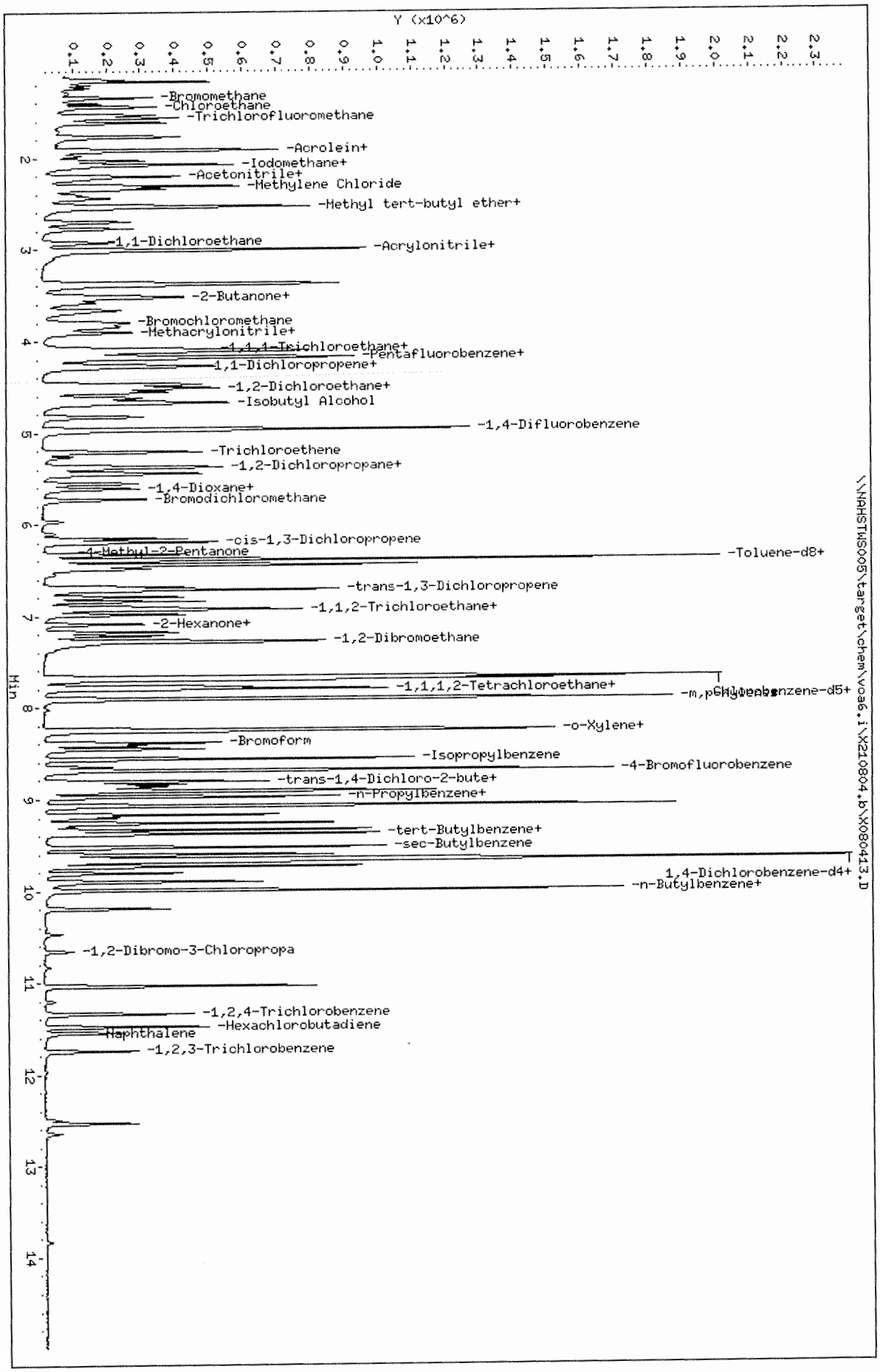
ALS Laboratory Group

Data file : \\NAHSTWS005\target\chem\voa6.i\X210804.b\X080413.D
Lab Smp Id: HS21071405-11MSD Client Smp ID: HS21071405-11MSD
Inj Date : 04-AUG-2021 14:57
Operator : PC Inst ID: voa6.i
Smp Info : HS21071405-11MSD;HS21071405-11MSD;3;;MSD
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\target\chem\voa6.i\X210804.b\8260W.m
Meth Date : 10-Sep-2021 14:36 voa6.i Quant Type: ISTD
Cal Date : 30-JUL-2021 13:56 Cal File: X073008.D
Als bottle: 12 QC Sample: MSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0474-dod.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	4.182	(1.000)	821880	50.0000	
$	30 Dibromofluoromethane	113	4.103	4.096	(0.981)	362387	46.9566	46.95
$	35 1,2-Dichloroethane-d4	65	4.469	4.469	(1.069)	350874	47.8151	47.81
*	36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	1098703	50.0000	
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	1008306	50.0000	
$	48 Toluene-d8	98	6.388	6.388	(0.833)	1212677	51.2751	51.27
$	69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	413687	48.8899	48.88
*	70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	496946	50.0000	
	5 Vinyl Chloride	62	1.138	1.138	(0.272)	139754	17.8635	17.86
	11 1,1-Dichloroethene	96	1.911	1.912	(0.457)	128089	18.5215	18.52
	17 Methylene Chloride	84	2.305	2.298	(0.551)	127761	18.3956	18.39
	27 cis-1,2-Dichloroethene	96	3.530	3.523	(0.844)	145733	17.6770	17.67
	33 1,2-Dichloroethane	62	4.555	4.555	(0.918)	163339	18.5316	18.53
	38 Trichloroethene	130	5.206	5.207	(1.049)	163591	20.3753	20.37
	53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	103750	19.6680	19.66



Data File: \\NAHSTWS005\target\chem\voa6.i\X210804.b\X080413.D
Date : 04-AUG-2021 14:57
Client ID: HS21071405-11HSD
Sample Info: HS21071405-11HSD;HS21071405-11HSD;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\X210804.b\X080417.D Page 1
Report Date: 10-Sep-2021 14:34

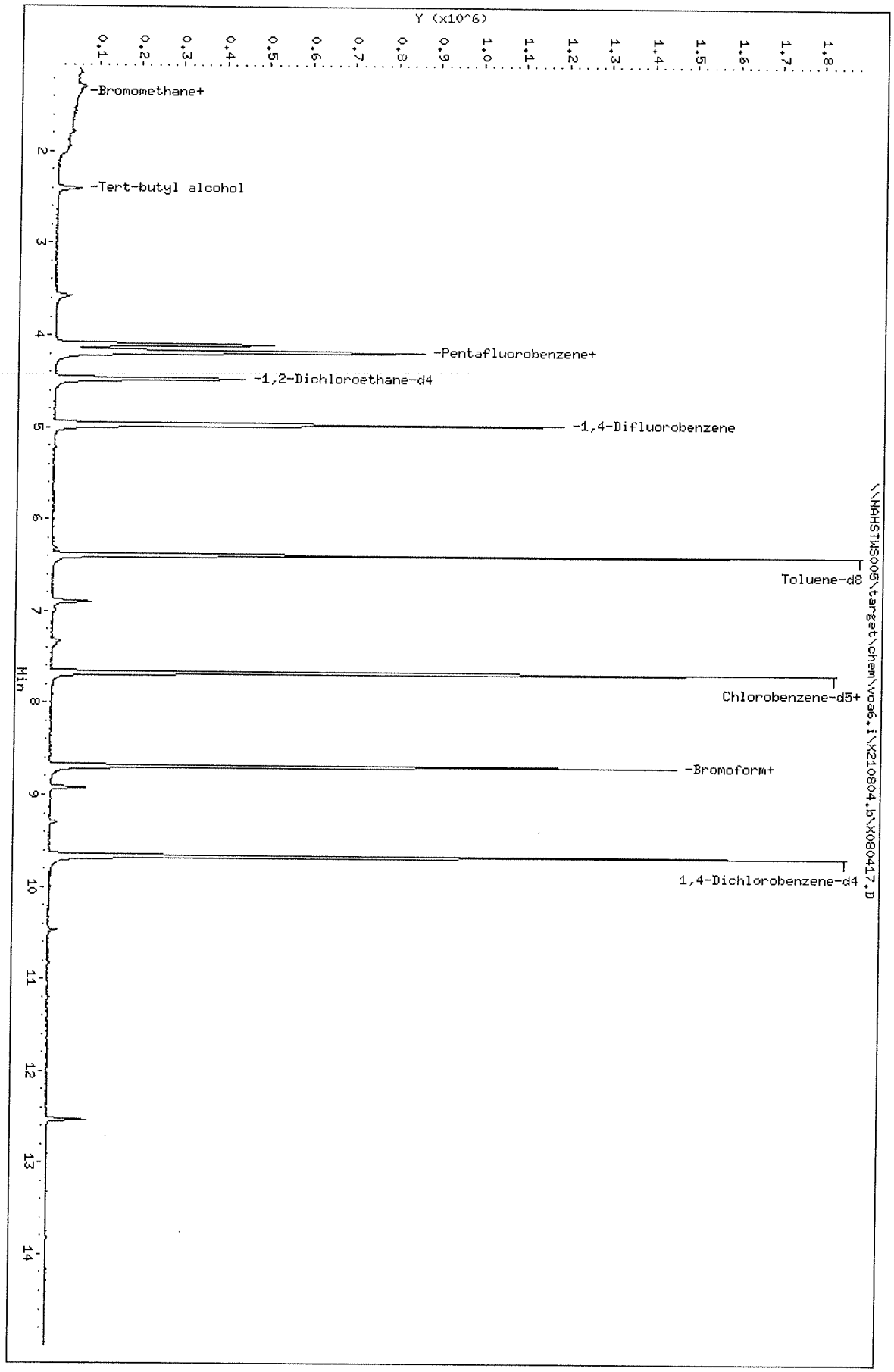
ALS Laboratory Group

Data file : \\NAHSTWS005\target\chem\voa6.i\X210804.b\X080417.D
Lab Smp Id: HS21071465-09 Client Smp ID: HS21071465-09
Inj Date : 04-AUG-2021 16:21
Operator : PC Inst ID: voa6.i
Smp Info : HS21071465-09;HS21071465-09;;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\target\chem\voa6.i\X210804.b\8260W.m
Meth Date : 10-Sep-2021 14:30 Genoveva.R Quant Type: ISTD
Cal Date : 30-JUL-2021 13:56 Cal File: X073008.D
Als bottle: 16
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0474-dod.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	4.182	(1.000)	786463	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	356349	48.2818	48.28
$ 35 1,2-Dichloroethane-d4	65	4.469	4.476	(1.069)	330860	47.1053	47.10
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	1068604	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.670	(1.000)	958375	50.0000	
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	1156681	51.4555	51.45
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	400036	49.7522	49.75
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	485030	50.0000	



Data File: \\NAHSTWS005\target\chem\voa6.i\X210804.b\X080417.D
Date : 04-AUG-2021 16:21
Client ID: HS21071465-09
Sample Info: HS21071465-09;HS21071465-09;;;
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\NAHSTWS005\target\chem\voa6.i\X210804.b\X080422.D Page 1
Report Date: 10-Sep-2021 14:34

ALS Laboratory Group

Data file : \\NAHSTWS005\target\chem\voa6.i\X210804.b\X080422.D
Lab Smp Id: HS21071465-06 Client Smp ID: HS21071465-06
Inj Date : 04-AUG-2021 18:06
Operator : PC Inst ID: voa6.i
Smp Info : HS21071465-06;HS21071465-06;;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\target\chem\voa6.i\X210804.b\8260W.m
Meth Date : 10-Sep-2021 14:30 Genoveva.R Quant Type: ISTD
Cal Date : 30-JUL-2021 13:56 Cal File: X073008.D
Als bottle: 21
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0474-dod.sub
Target Version: 4.14
Processing Host: NAHSTW7056

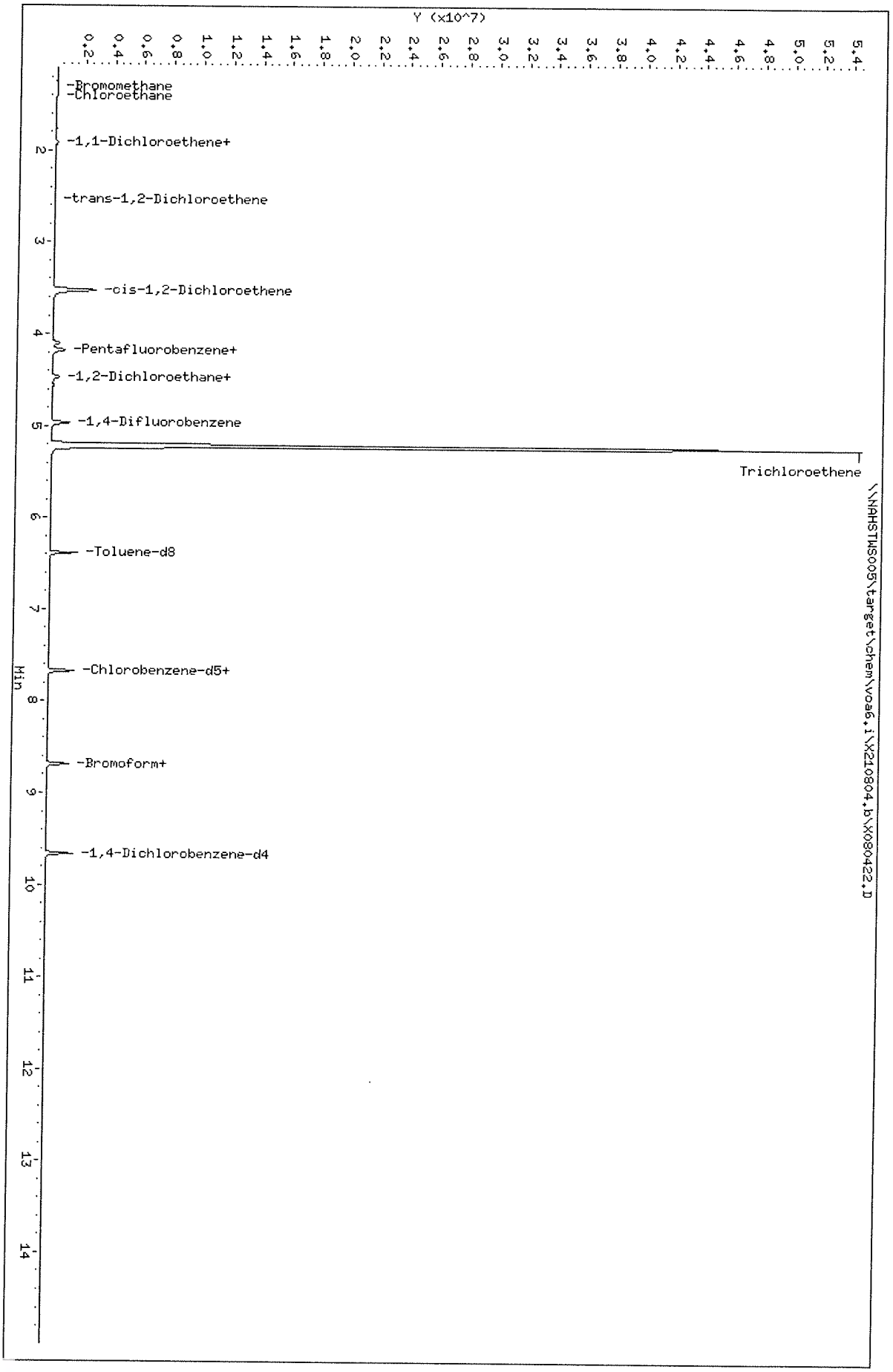
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

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	4.182	(1.000)	775871	50.0000	
$	30 Dibromofluoromethane	113	4.103	4.103	(0.981)	340485	46.7300	46.72
$	35 1,2-Dichloroethane-d4	65	4.469	4.476	(1.069)	335023	48.3724	48.37
*	36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	1041330	50.0000	
*	47 Chlorobenzene-d5	117	7.671	7.670	(1.000)	918945	50.0000	
$	48 Toluene-d8	98	6.388	6.388	(0.833)	1135530	52.6821	52.68
$	69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	390365	50.6454	50.64
*	70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	465123	50.0000	
	5 Vinyl Chloride	62	1.145	1.138	(0.274)	66567	9.01325	9.01
	11 1,1-Dichloroethene	96	1.911	1.912	(0.457)	45753	7.00815	7.00
	27 cis-1,2-Dichloroethene	96	3.523	3.523	(0.842)	1613163	207.275	207.27(A)
	33 1,2-Dichloroethane	62	4.562	4.555	(0.919)	53530	6.40784	6.40
	38 Trichloroethene	130	5.206	5.207	(1.049)	16278744	2139.23	2139.22(A)

QC Flag Legend

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



Data File: \\NAHSTWS005\target\chem\voa6.i\X210804.b\X080422.D
Date : 04-AUG-2021 18:06
Client ID: HS21071465-06
Sample Info: HS21071465-06;HS21071465-06;;;
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\NAHSTWS005\target\chem\voa6.i\X210804.b\X080422.D Page 3

Date : 04-AUG-2021 18:06

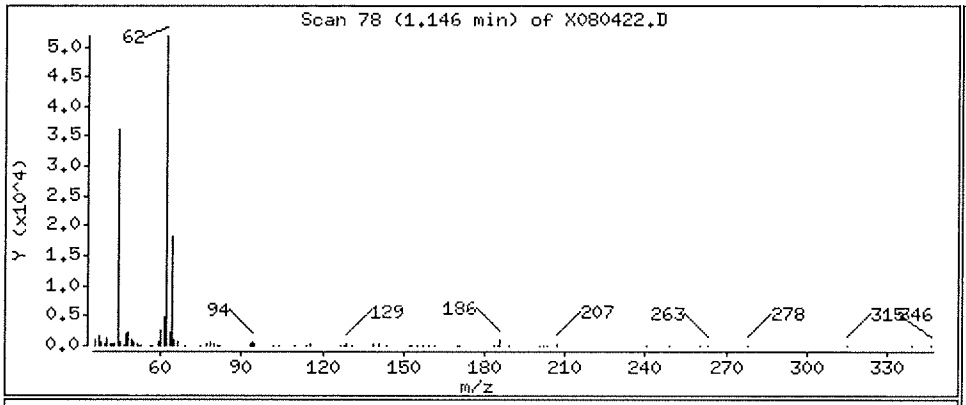
Client ID: HS21071465-06 Instrument: voa6.i

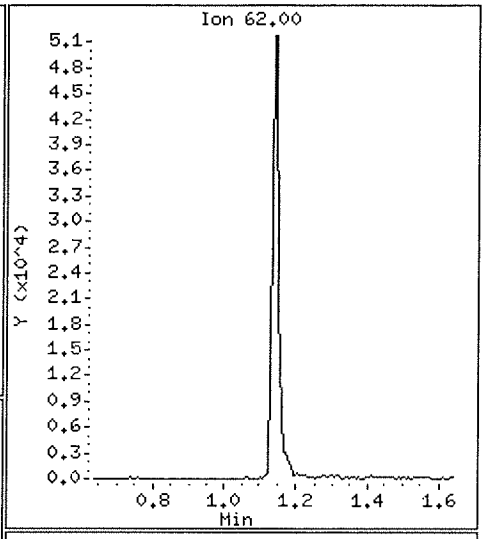
Sample Info: HS21071465-06;HS21071465-06;;;

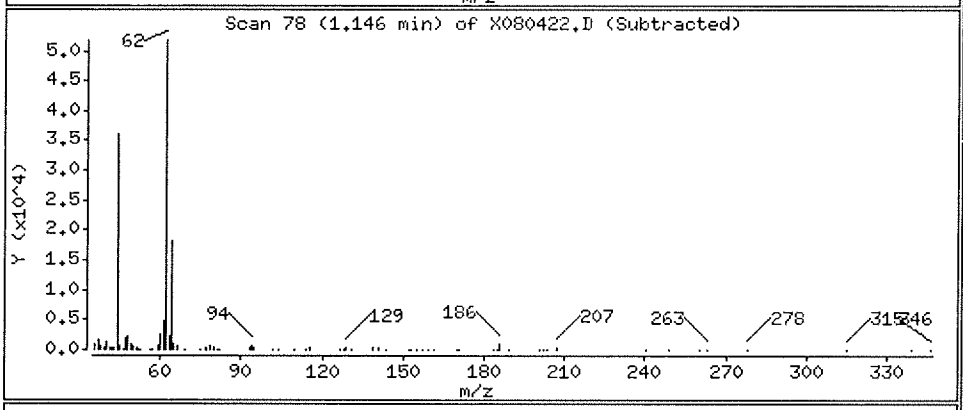
Purge Volume: 5.0 Operator: PC

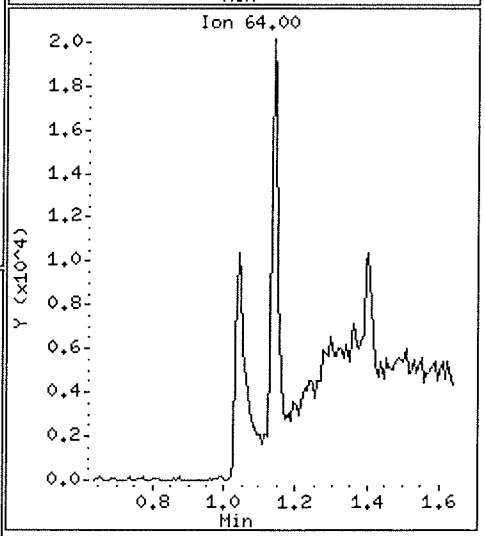
Column phase: DB624 Column diameter: 0.18

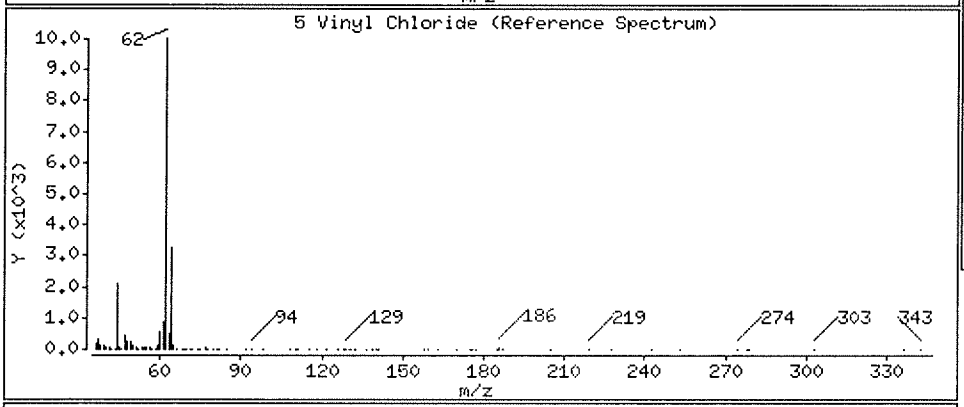
5 Vinyl Chloride Concentration: 9.01 ug/l

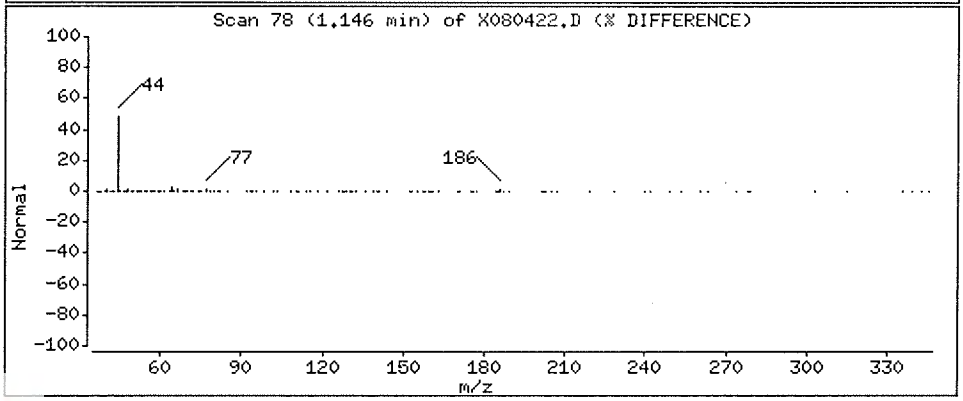












Data File: \\NAHSTWS005\target\chem\voa6.i\X210804.b\X080422.D

Date : 04-AUG-2021 18:06

Client ID: HS21071465-06

Instrument: voa6.i

Sample Info: HS21071465-06;HS21071465-06;;;

Purge Volume: 5.0

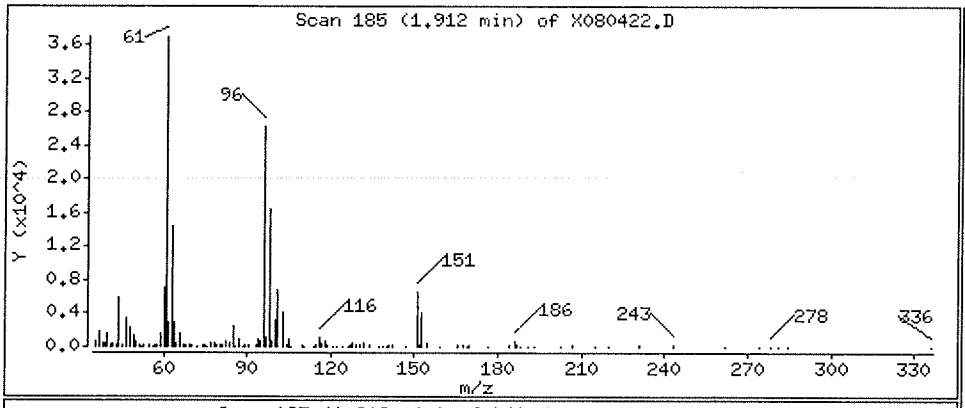
Operator: PC

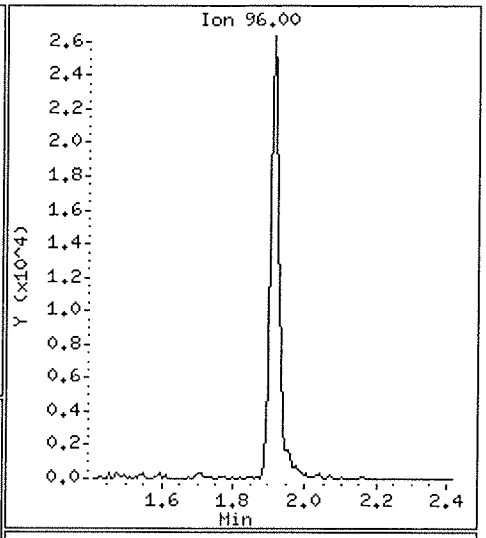
Column phase: DB624

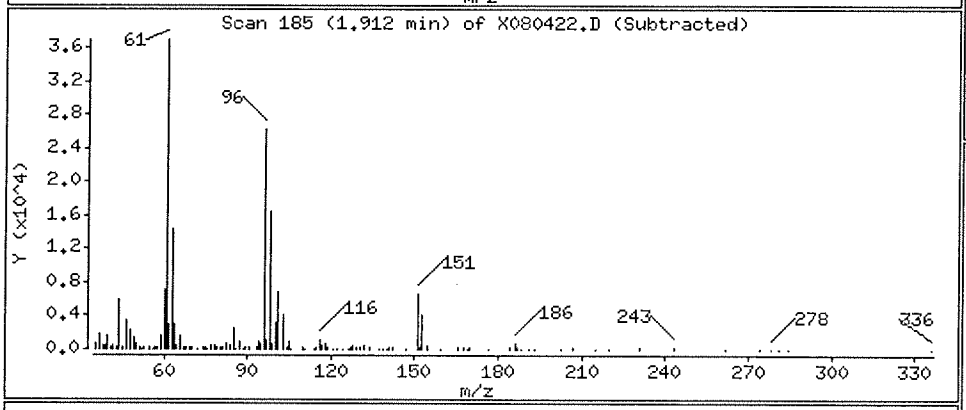
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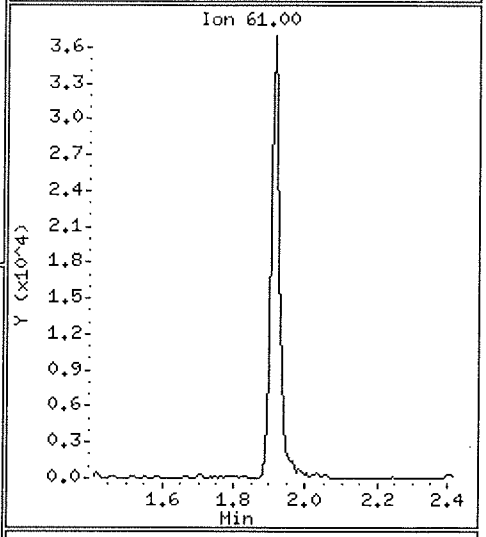
11 1,1-Dichloroethene

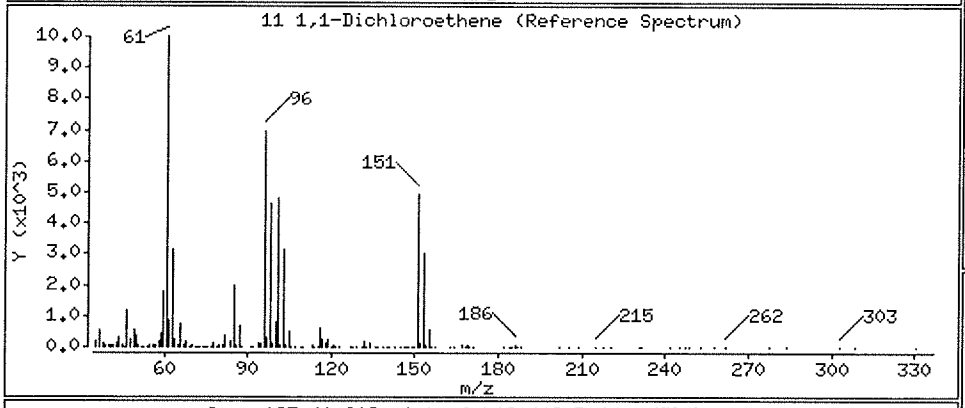
Concentration: 7.00 ug/l

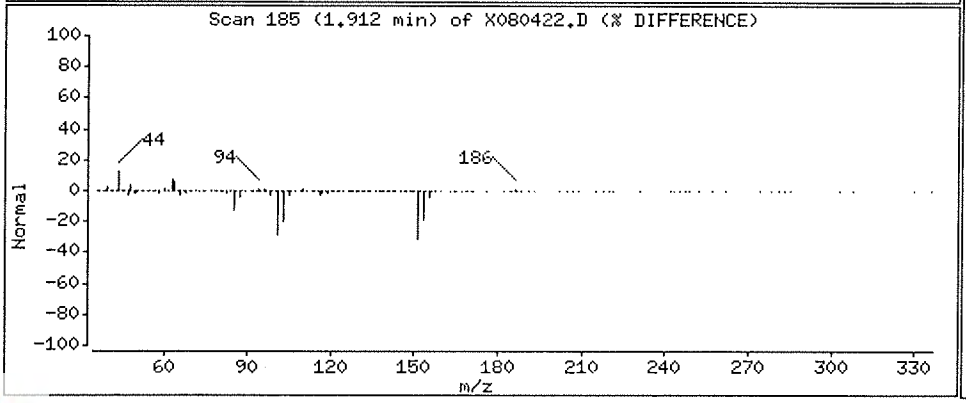


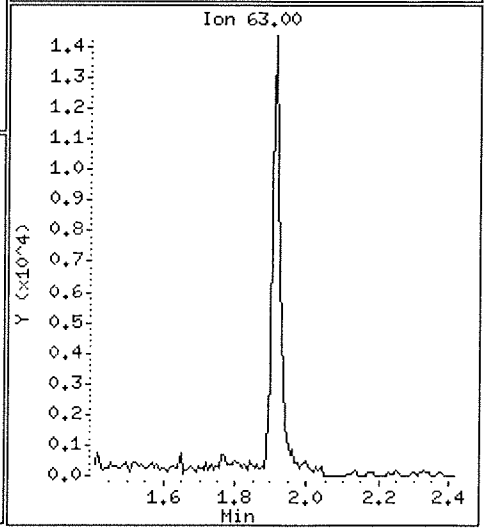












Data File: \\NAHSTWS005\target\chem\voa6.i\X210804.b\X080422.D

Date : 04-AUG-2021 18:06

Client ID: HS21071465-06

Instrument: voa6.i

Sample Info: HS21071465-06;HS21071465-06;;;

Purge Volume: 5.0

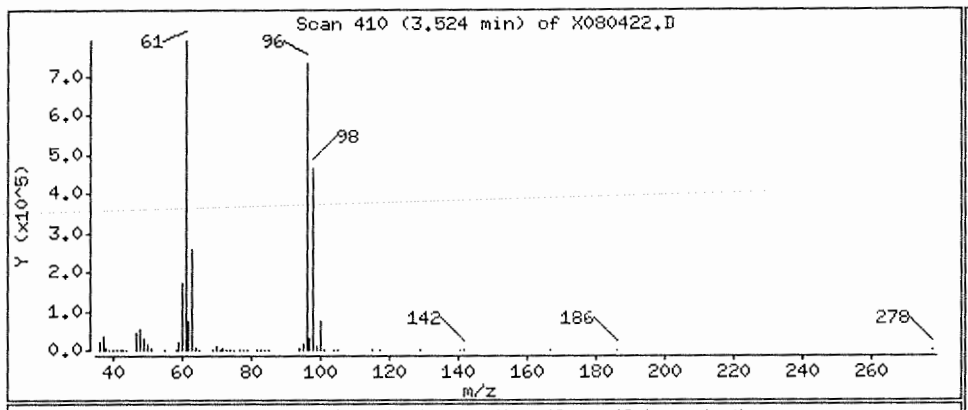
Operator: PC

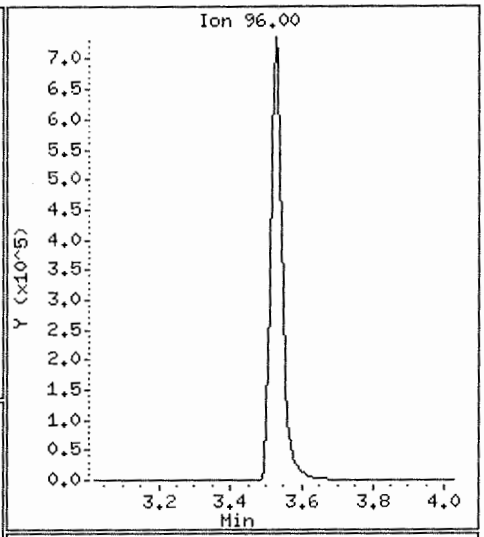
Column phase: DB624

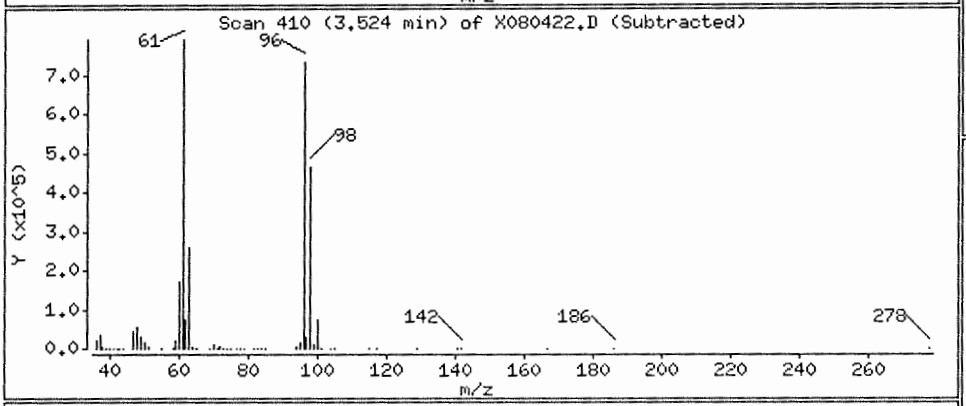
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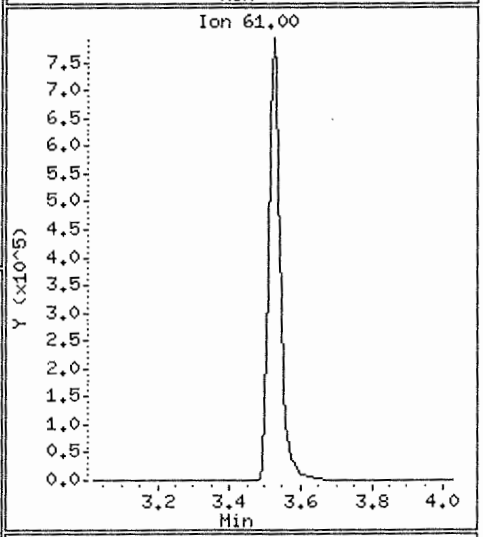
27 cis-1,2-Dichloroethene

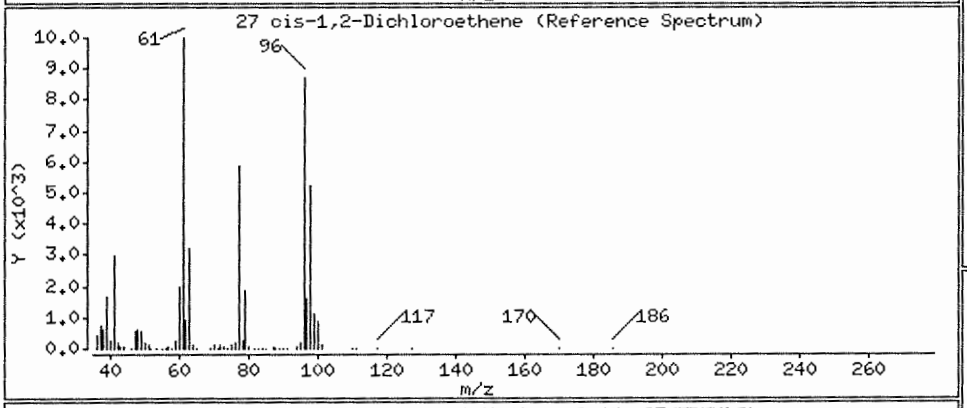
Concentration: 207.27 ug/l

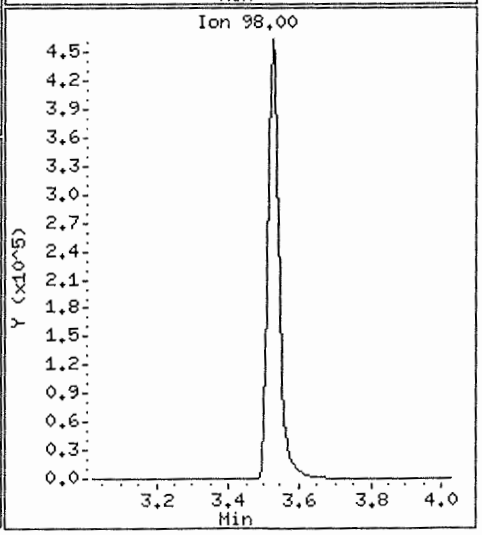


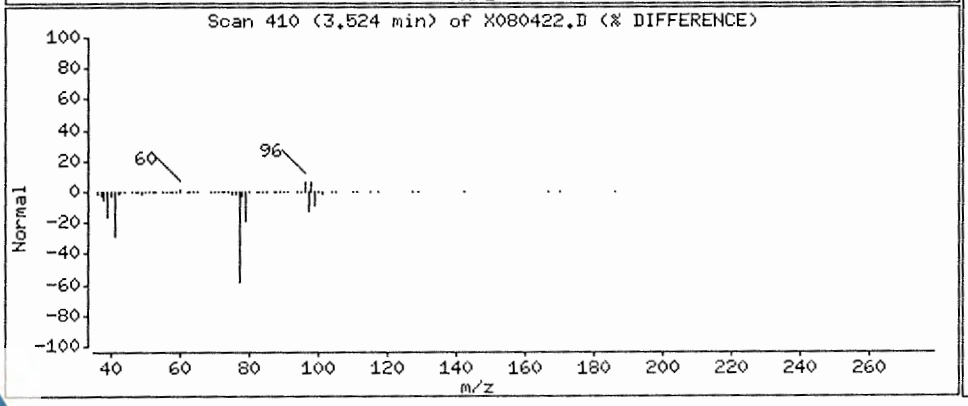












Data File: \\NAHSTWS005\target\chem\voa6.i\X210804.b\X080422.D

Date : 04-AUG-2021 18:06

Client ID: HS21071465-06

Instrument: voa6.i

Sample Info: HS21071465-06;HS21071465-06;;;

Purge Volume: 5.0

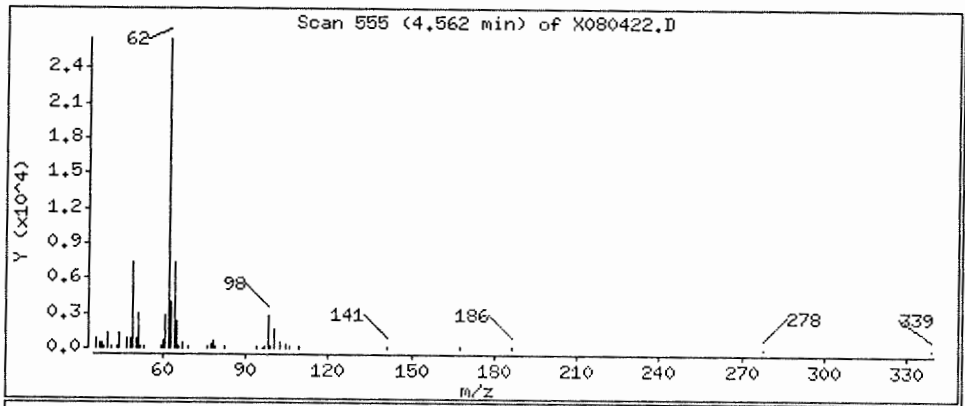
Operator: PC

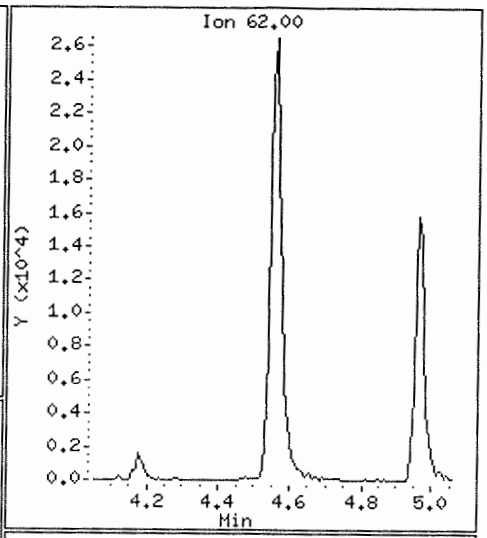
Column phase: DB624

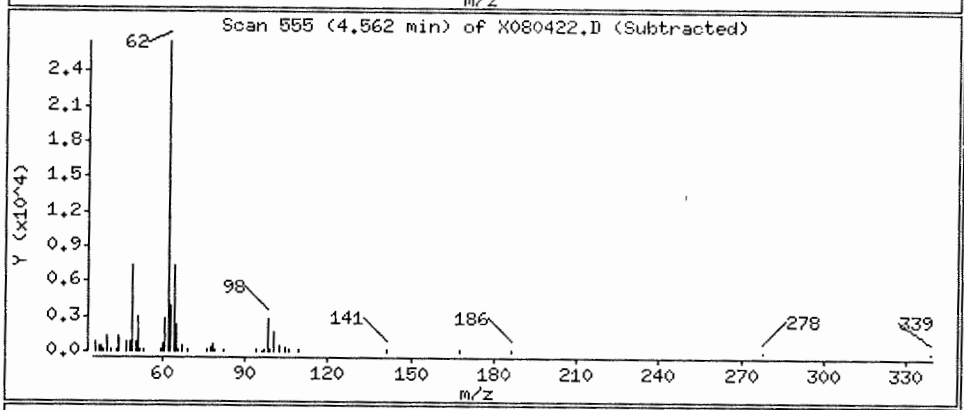
Column diameter: 0.18

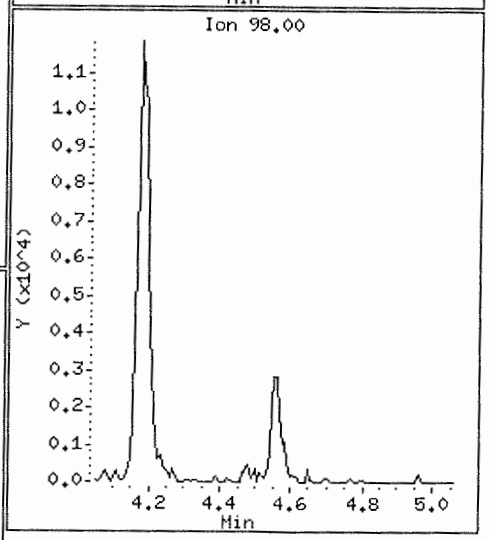
33 1,2-Dichloroethane

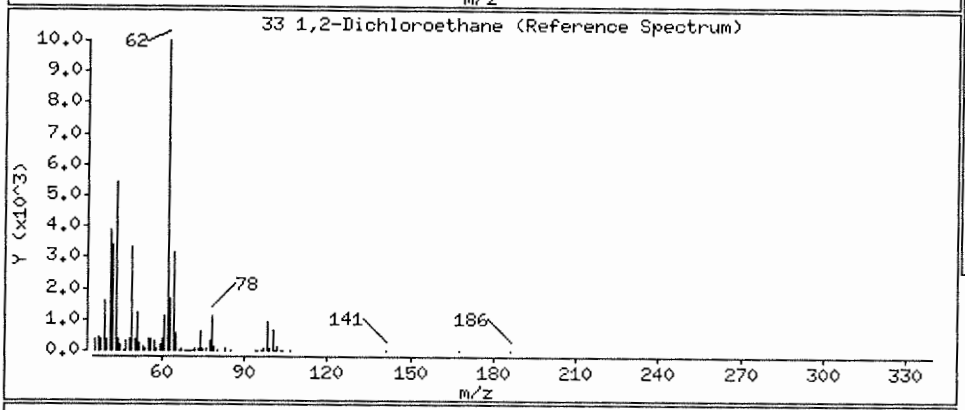
Concentration: 6.40 ug/l

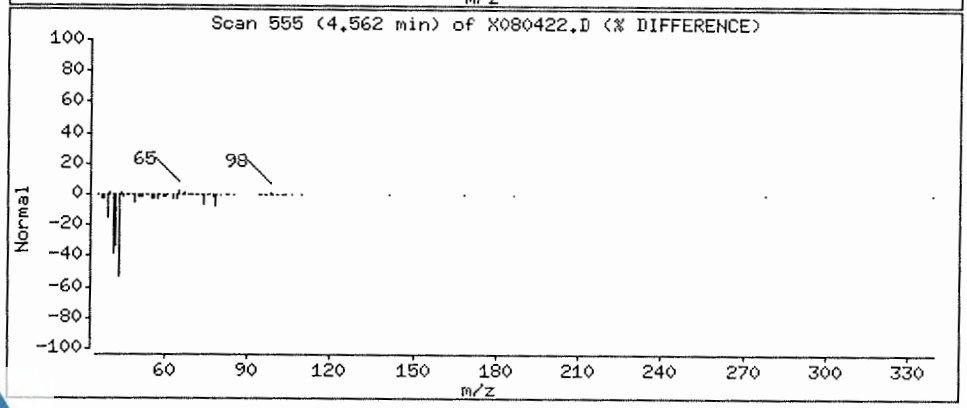












Data File: \\NAHSTWS005\target\chem\voa6.i\X210804.b\X080422.D

Date : 04-AUG-2021 18:06

Client ID: HS21071465-06

Instrument: voa6.i

Sample Info: HS21071465-06;HS21071465-06;;;

Purge Volume: 5.0

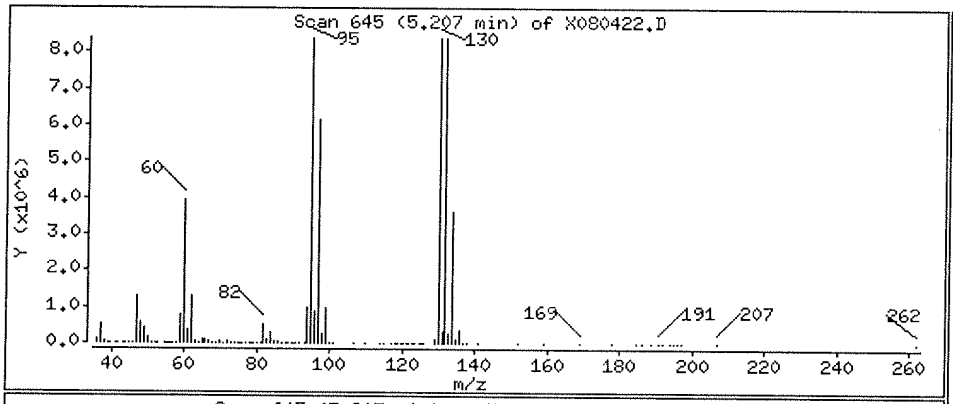
Operator: PC

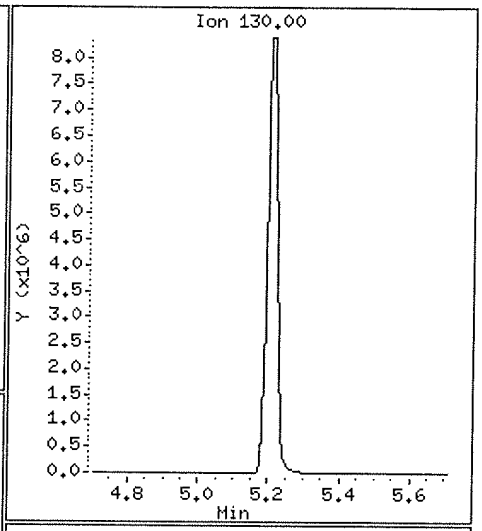
Column phase: DB624

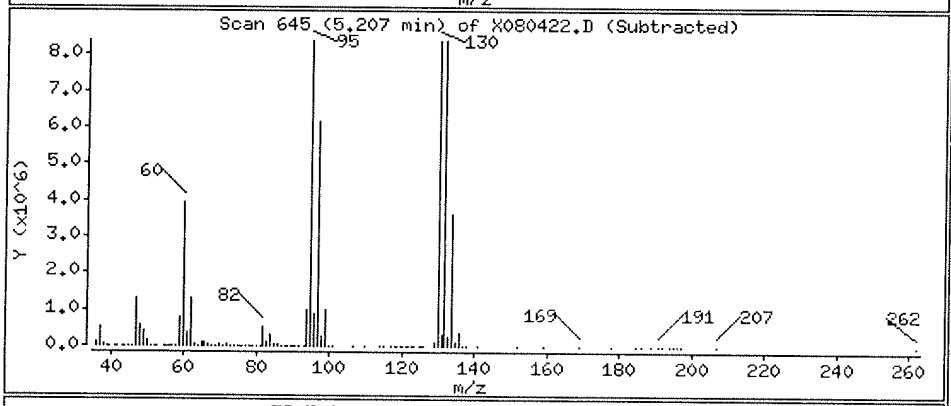
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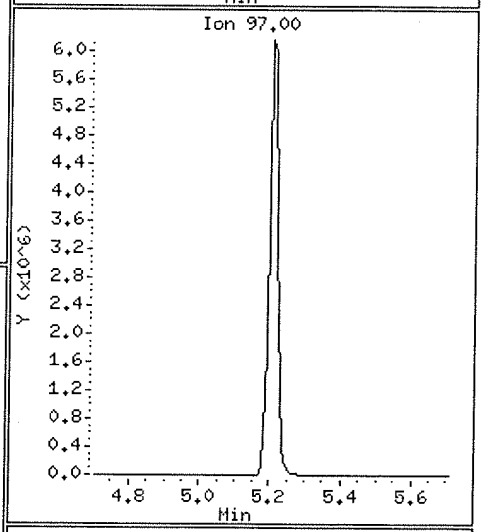
38 Trichloroethene

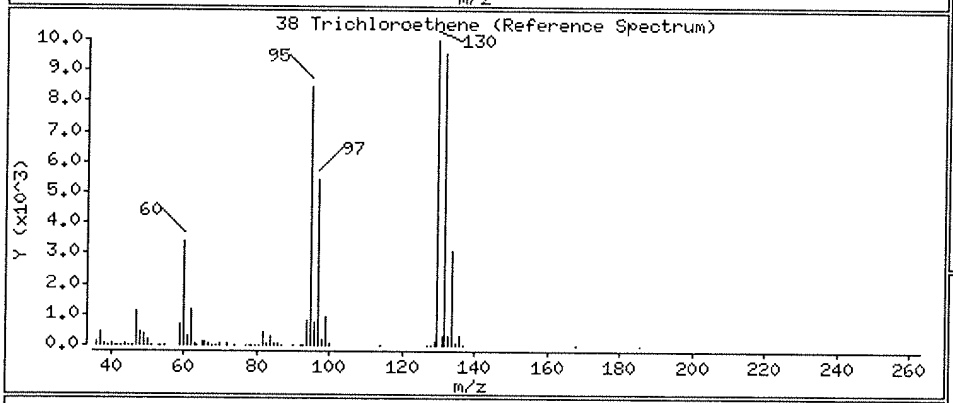
Concentration: 2139.22 ug/l

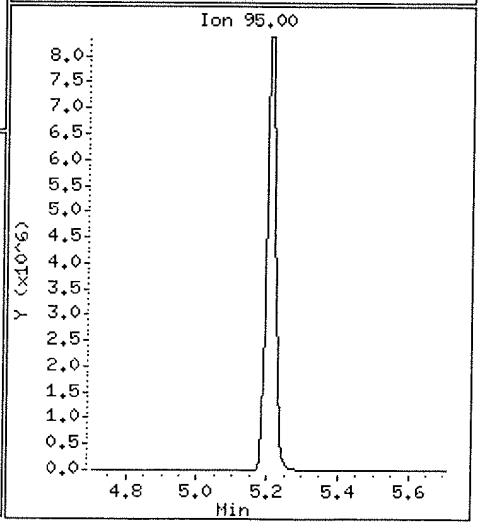


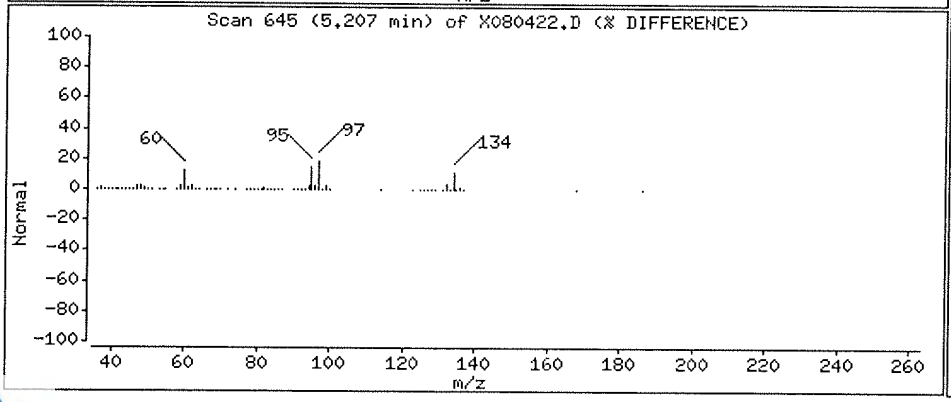












Data File: \\NAHSTWS005\target\chem\voa6.i\X210804.b\X080432.D Page 1
Report Date: 10-Sep-2021 14:34

ALS Laboratory Group

Data file : \\NAHSTWS005\target\chem\voa6.i\X210804.b\X080432.D
Lab Smp Id: HS21071465-01 Client Smp ID: HS21071465-01
Inj Date : 04-AUG-2021 21:37
Operator : PC Inst ID: voa6.i
Smp Info : HS21071465-01;HS21071465-01;;;
Misc Info : HS18090001;WATER;0;5;
Comment :
Method : \\NAHSTWS005\target\chem\voa6.i\X210804.b\8260W.m
Meth Date : 10-Sep-2021 14:30 Genoveva.R Quant Type: ISTD
Cal Date : 30-JUL-2021 13:56 Cal File: X073008.D
Als bottle: 31
Dil Factor: 5.00000
Integrator: HP RTE Compound Sublist: 0474-dod.sub
Target Version: 4.14
Processing Host: NAHSTW7056

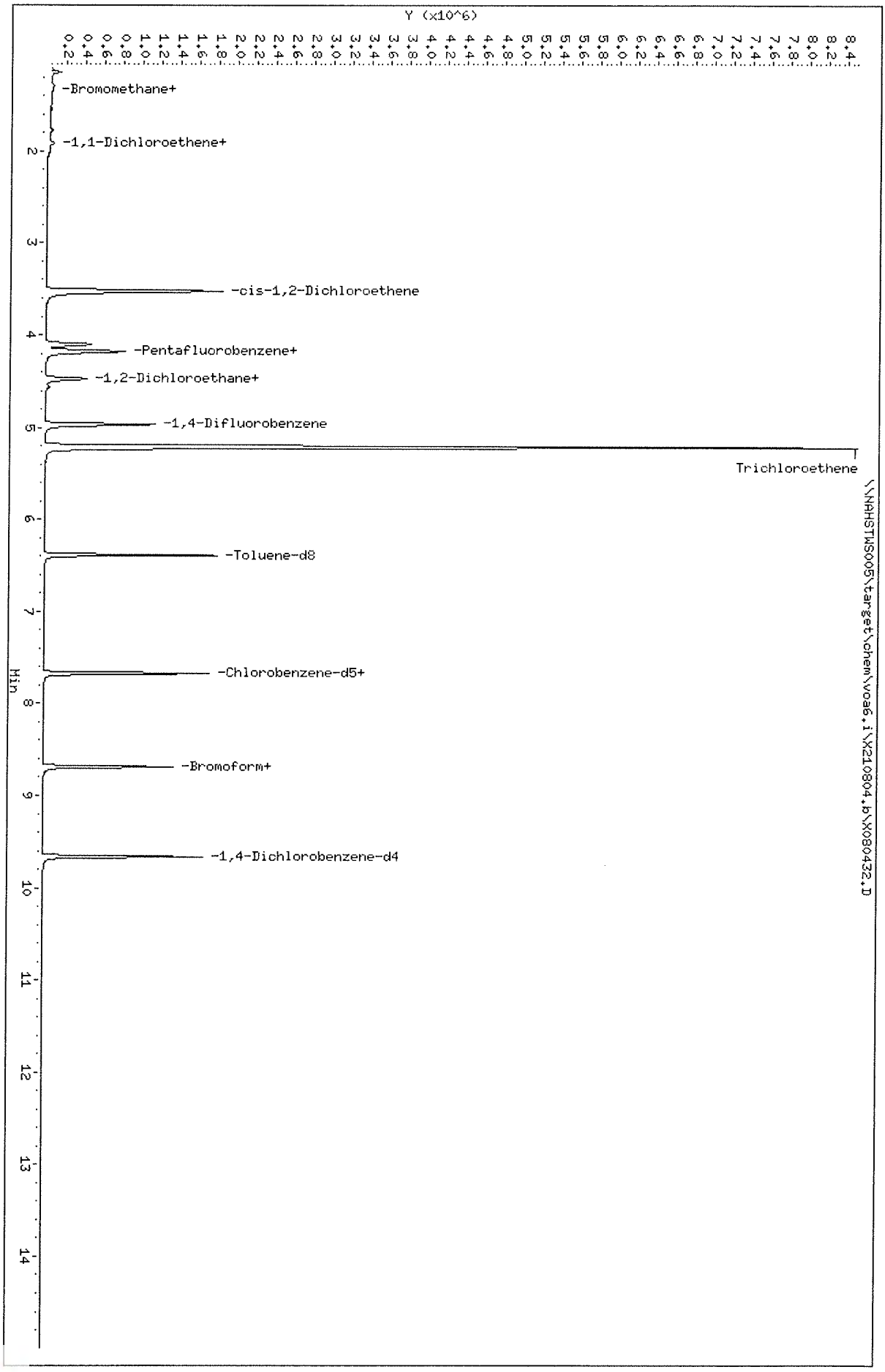
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

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	4.182	4.182	(1.000)	760357	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	338747	47.4556	47.45
$ 35 1,2-Dichloroethane-d4	65	4.469	4.476	(1.069)	320170	47.1492	47.14
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	1021091	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.670	(1.000)	915024	50.0000	
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	1110087	51.7223	51.72
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	370687	48.2651	48.26
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	435077	50.0000	
5 Vinyl Chloride	62	1.138	1.138	(0.272)	70785	9.77992	48.89
11 1,1-Dichloroethene	96	1.912	1.912	(0.457)	10813	1.69006	8.45(a)
27 cis-1,2-Dichloroethene	96	3.523	3.523	(0.842)	1014961	133.073	665.36
33 1,2-Dichloroethane	62	4.555	4.555	(0.918)	26905	3.28452	16.42(a)
38 Trichloroethene	130	5.207	5.207	(1.049)	2881849	386.217	1931.08(A)

QC Flag Legend

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



Data File: \\NAHSTWS005\target\chem\voa6.i\X210804.b\X080432.D
Date : 04-AUG-2021 21:37
Client ID: HS21071465-01
Sample Info: HS21071465-01;HS21071465-01;;;
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\NAHSTWS005\target\chem\voa6.i\X210804.b\X080432.D

Date : 04-AUG-2021 21:37

Client ID: HS21071465-01

Instrument: voa6.i

Sample Info: HS21071465-01;HS21071465-01;;;

Purge Volume: 5.0

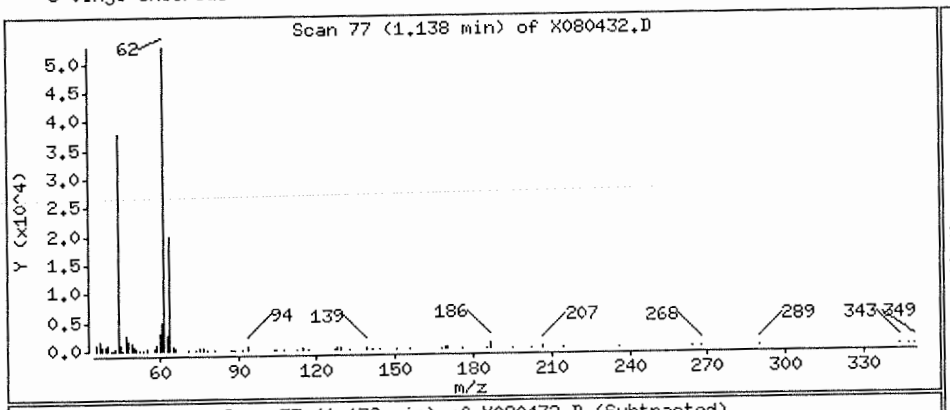
Operator: PC

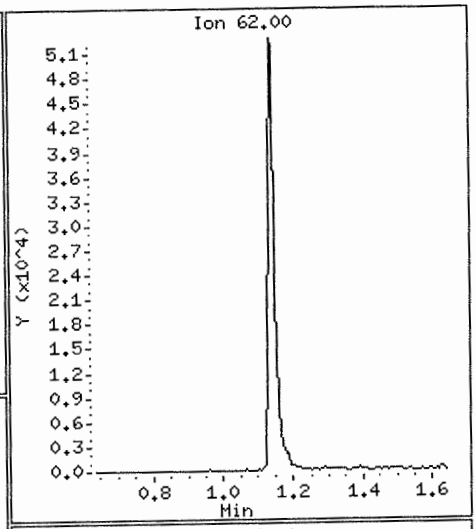
Column phase: DB624

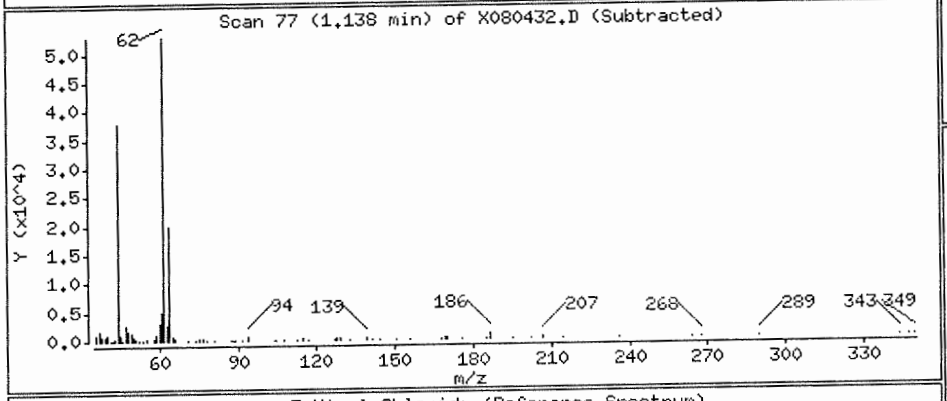
Column diameter: 0.18

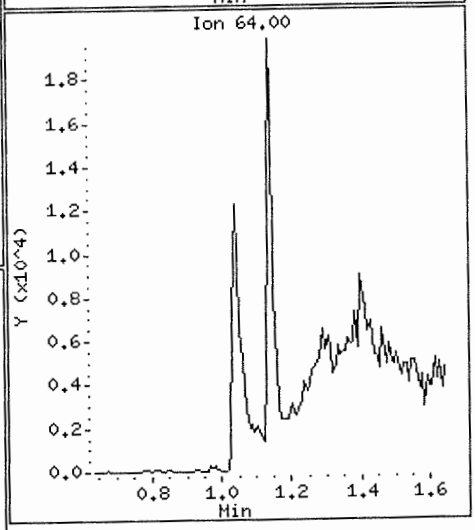
5 Vinyl Chloride

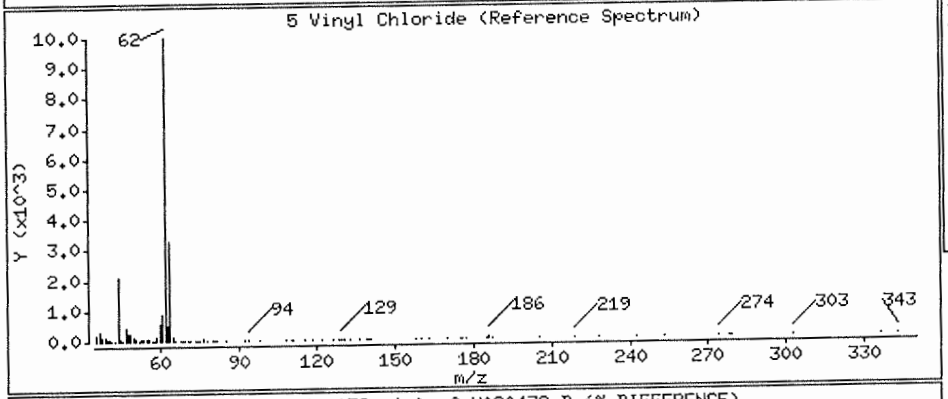
Concentration: 48.89 ug/l

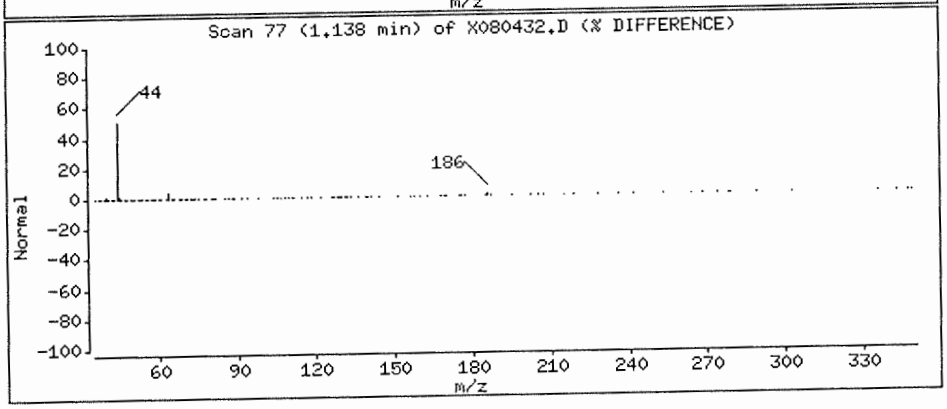












Data File: \\NAHSTWS005\target\chem\voa6.i\X210804.b\X080432.D

Date : 04-AUG-2021 21:37

Client ID: HS21071465-01

Instrument: voa6.i

Sample Info: HS21071465-01;HS21071465-01;;;

Purge Volume: 5.0

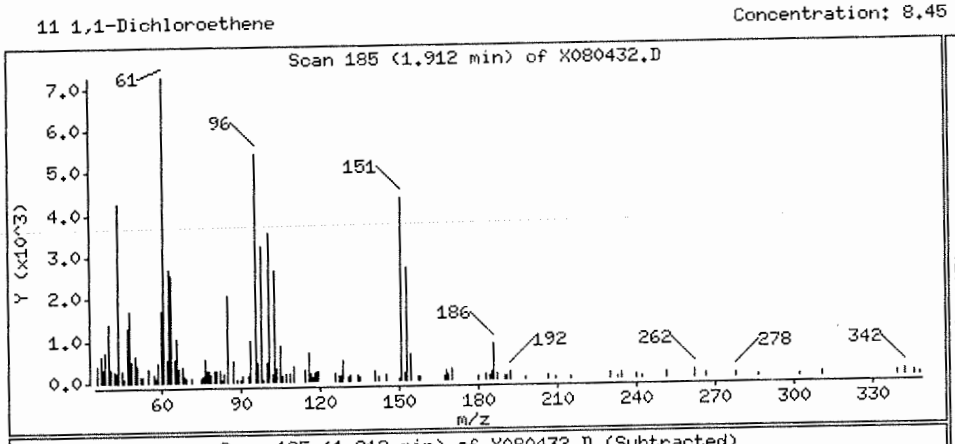
Operator: PC

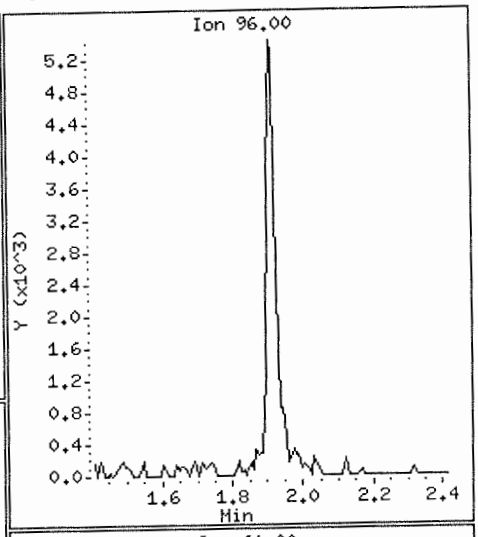
Column phase: DB624

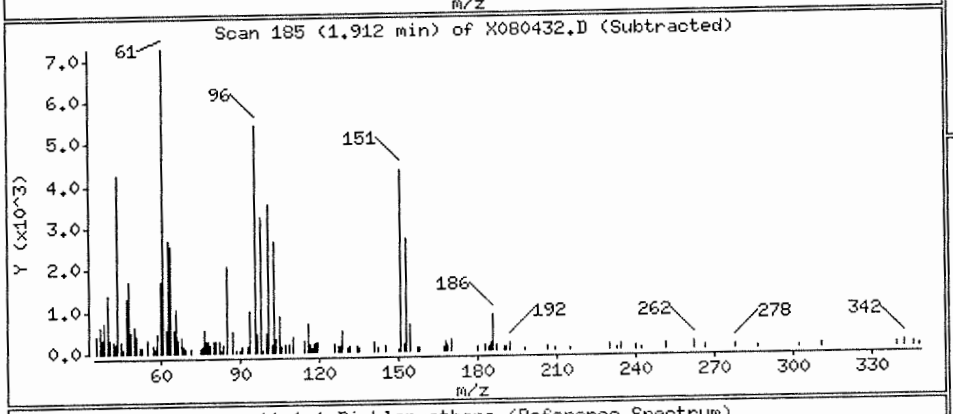
Column diameter: 0.18

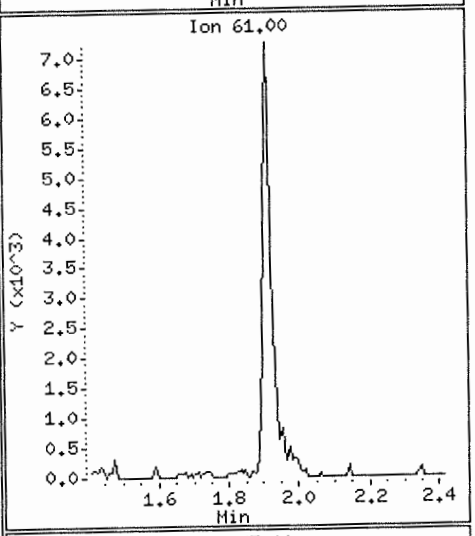
11 1,1-Dichloroethene

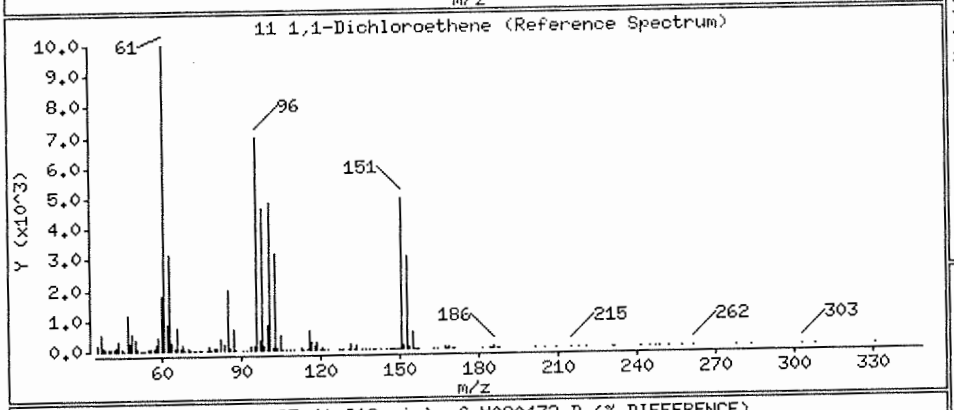
Concentration: 8.45 ug/l

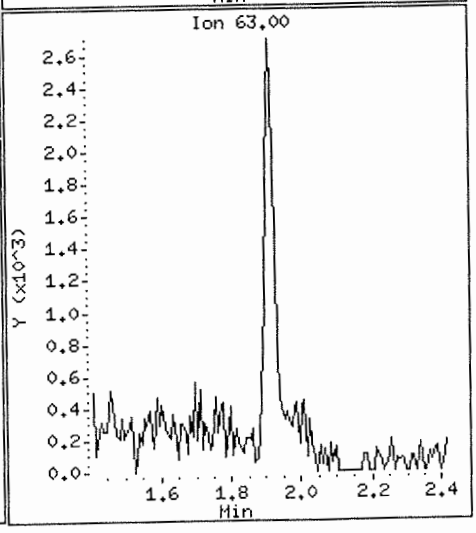


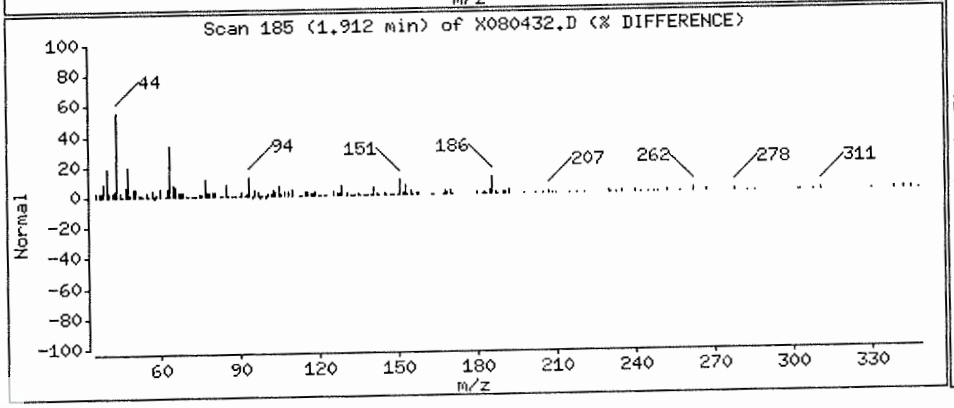












Data File: \\NAHSTWS005\target\chem\voa6.i\X210804.b\X080432.D Page 5

Date : 04-AUG-2021 21:37

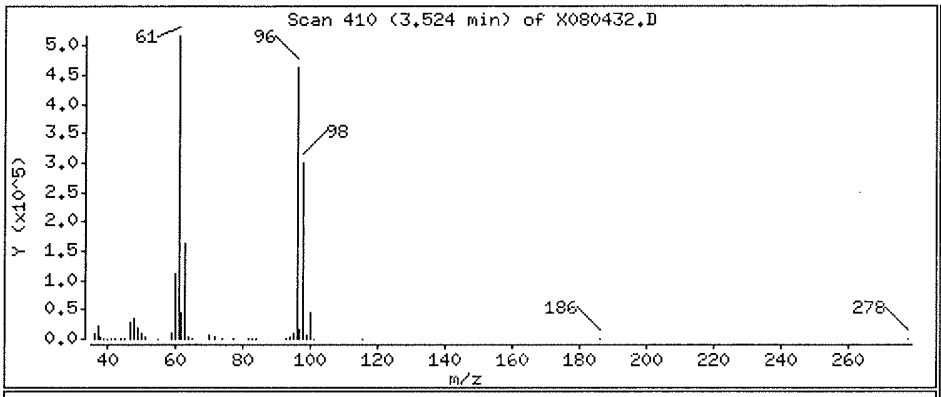
Client ID: HS21071465-01 Instrument: voa6.i

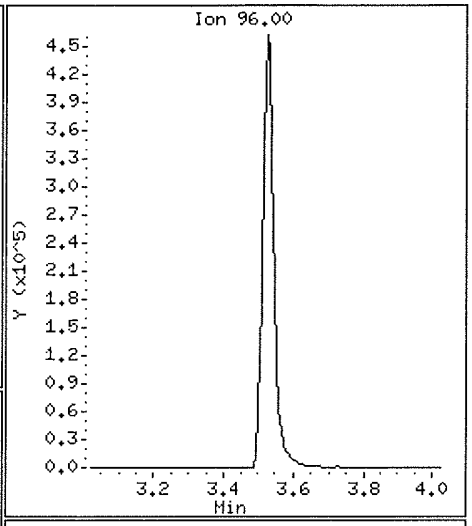
Sample Info: HS21071465-01;HS21071465-01;;;

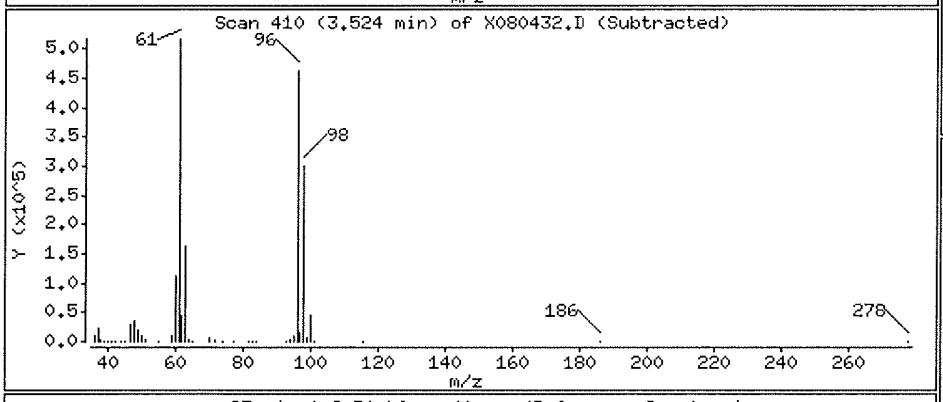
Purge Volume: 5.0 Operator: PC

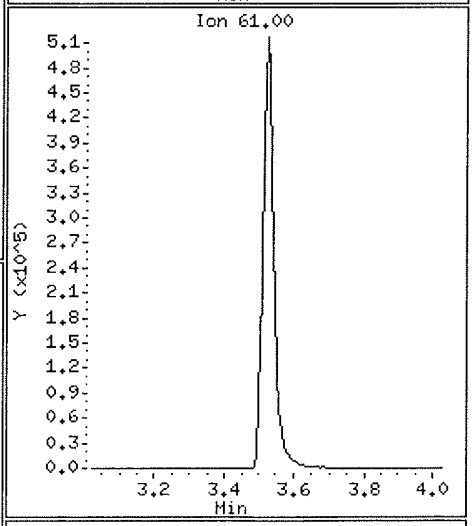
Column phase: DB624 Column diameter: 0.18

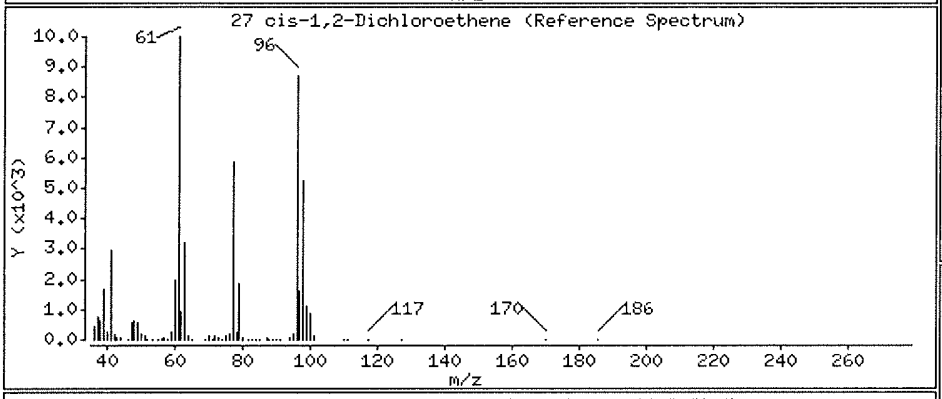
27 cis-1,2-Dichloroethene Concentration: 665.36 ug/l

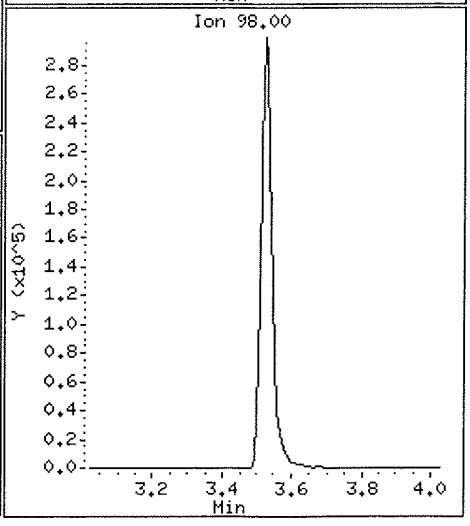


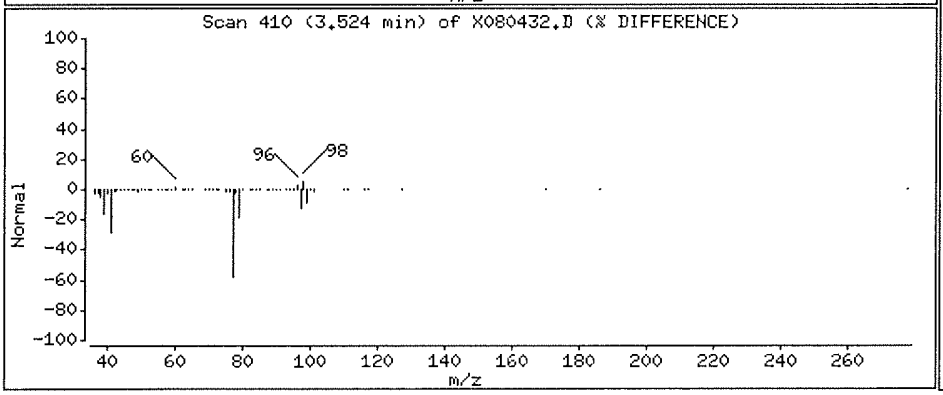












Data File: \\NAHSTWS005\target\chem\voa6.i\X210804.b\X080432.D

Date : 04-AUG-2021 21:37

Client ID: HS21071465-01

Instrument: voa6.i

Sample Info: HS21071465-01;HS21071465-01;;;

Purge Volume: 5.0

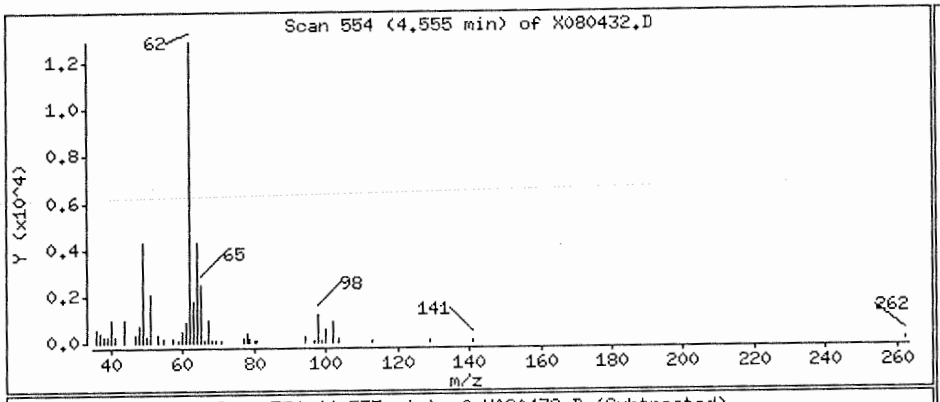
Operator: PC

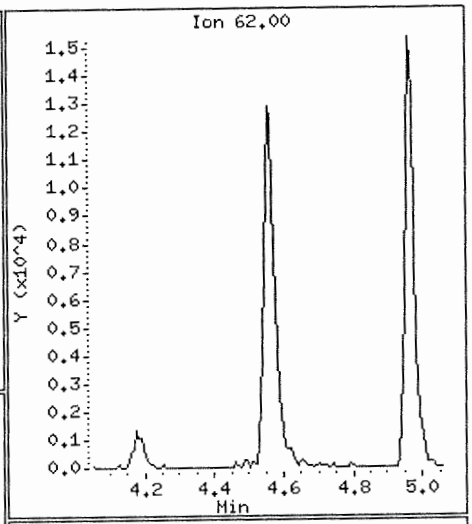
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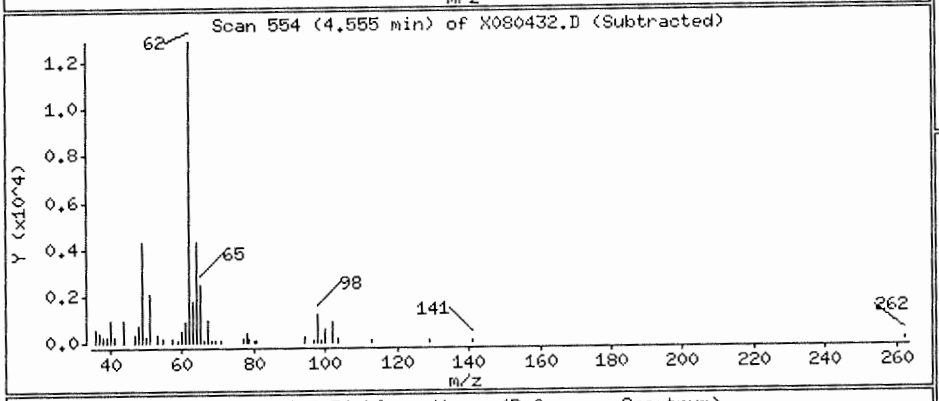
Column diameter: 0.18

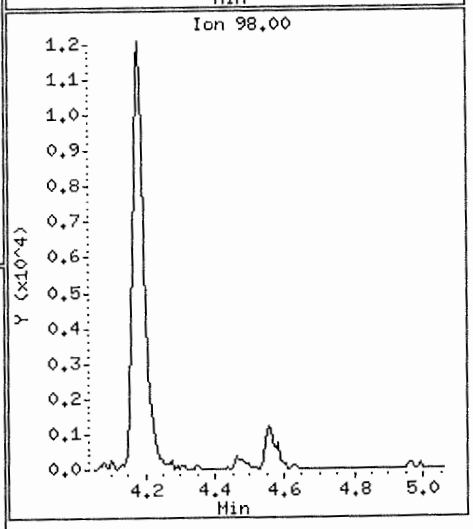
33 1,2-Dichloroethane

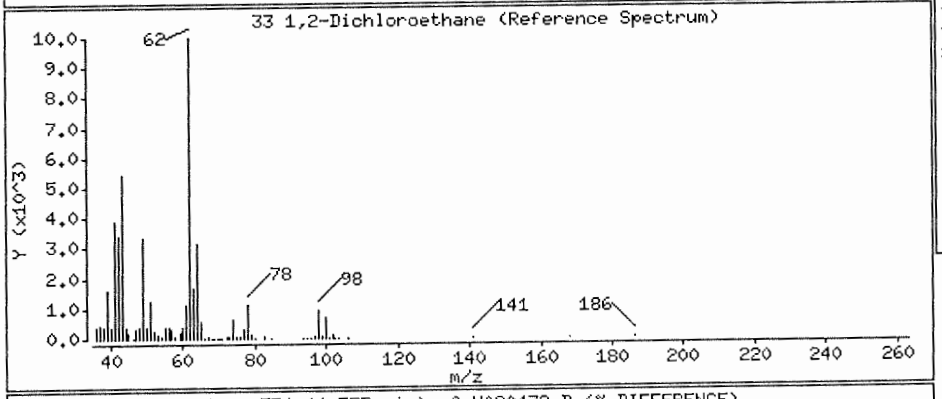
Concentration: 16.42 ug/l

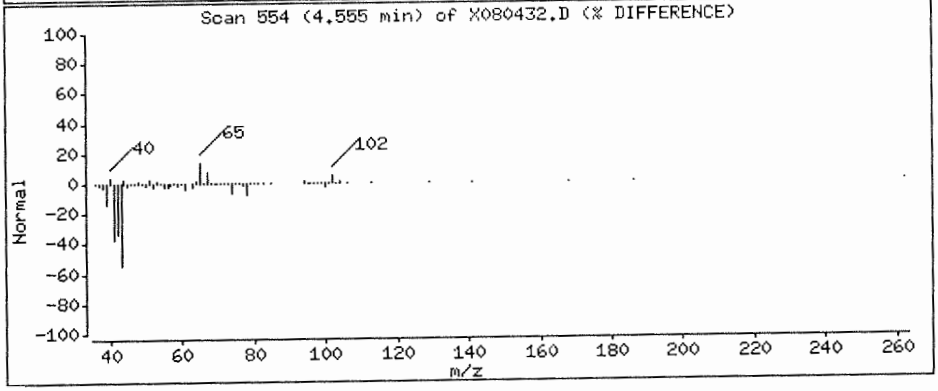












Data File: \\NAHSTWS005\target\chem\voa6.i\X210804.b\X080432.D

Date : 04-AUG-2021 21:37

Client ID: HS21071465-01

Instrument: voa6.i

Sample Info: HS21071465-01;HS21071465-01;;;

Purge Volume: 5.0

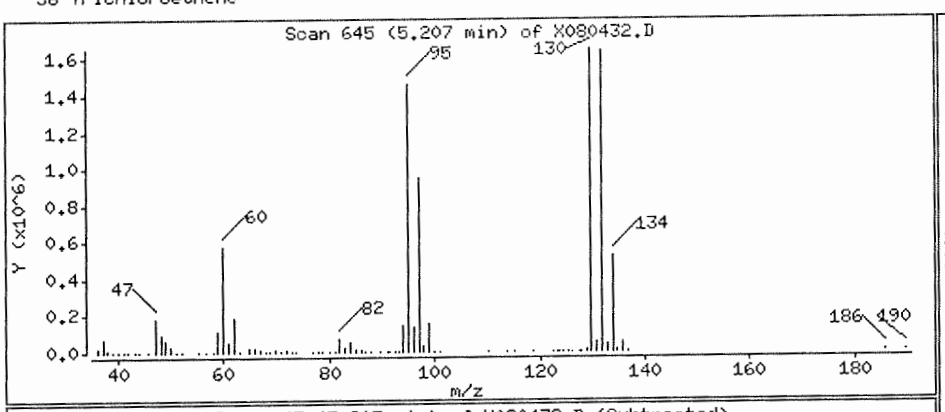
Operator: PC

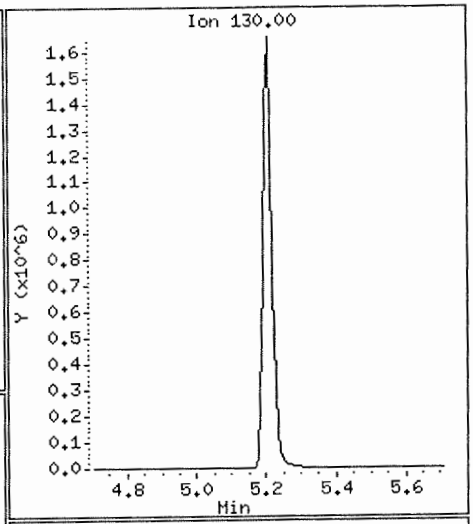
Column phase: DB624

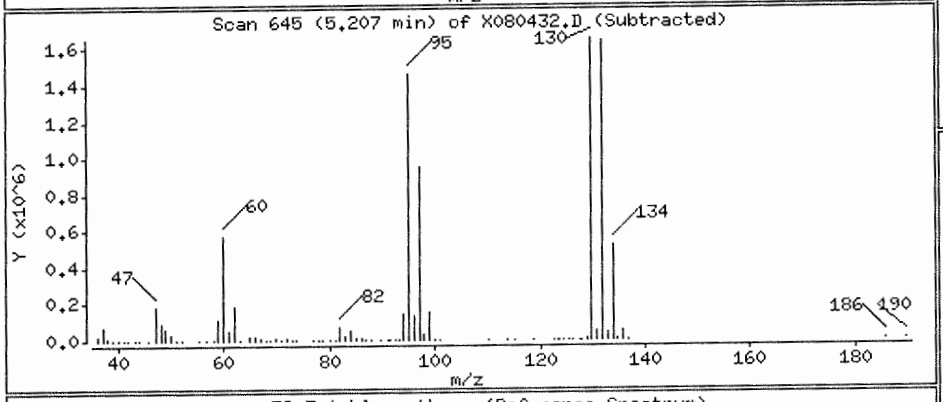
Column diameter: 0.18

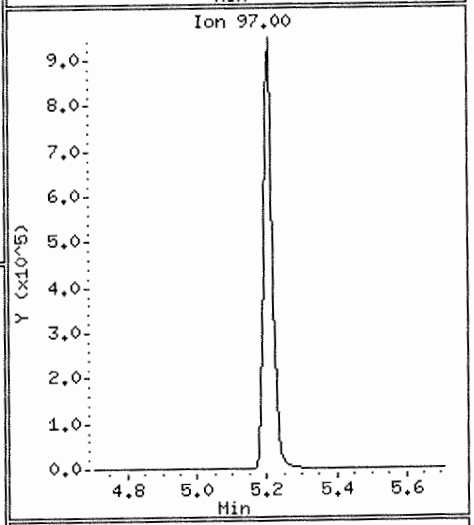
38 Trichloroethene

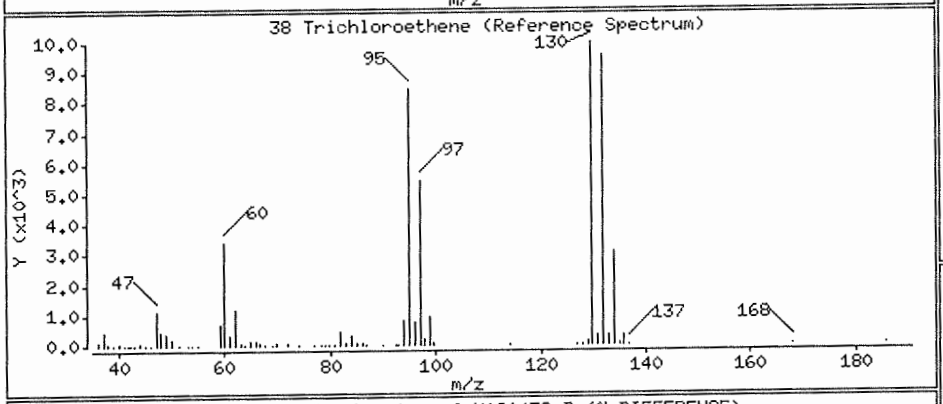
Concentration: 1931.08 ug/l

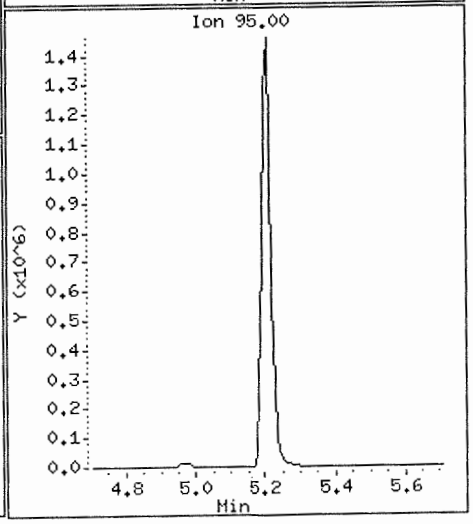


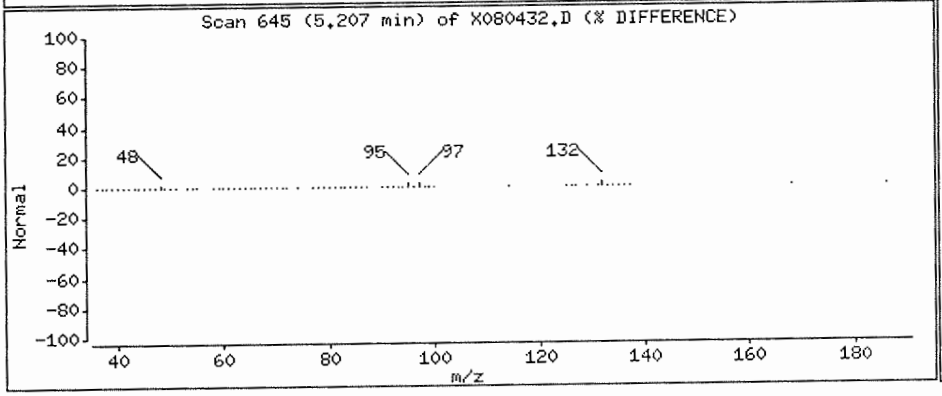












Data File: \\NAHSTWS005\target\chem\voa6.i\X210804.b\X080433.D Page 1
Report Date: 10-Sep-2021 14:36

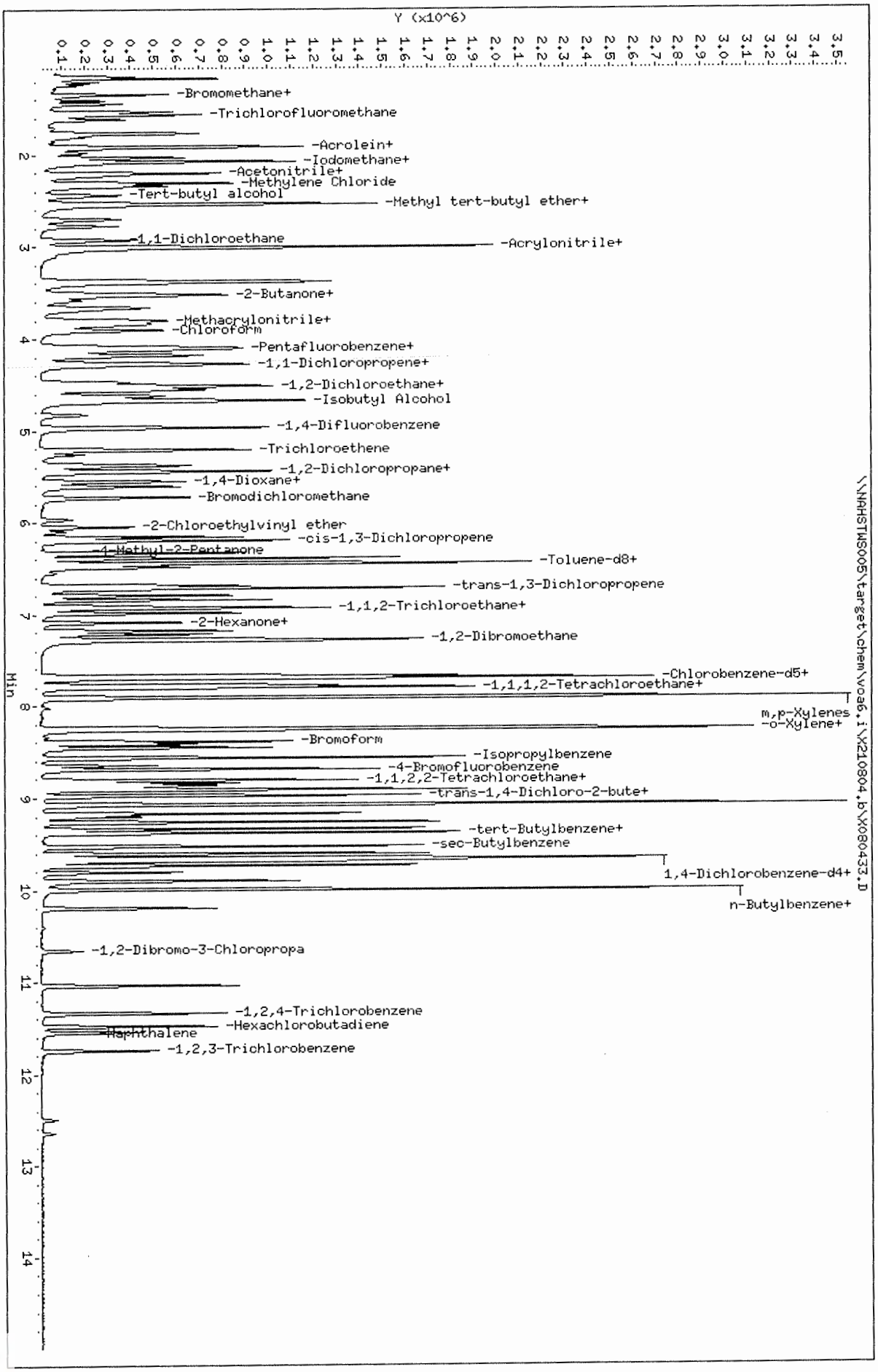
ALS Laboratory Group

Data file : \\NAHSTWS005\target\chem\voa6.i\X210804.b\X080433.D
Lab Smp Id: CCV-END Client Smp ID: CCV-END
Inj Date : 04-AUG-2021 21:58
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\X210804.b\8260W.m
Meth Date : 10-Sep-2021 14:36 voa6.i Quant Type: ISTD
Cal Date : 30-JUL-2021 13:56 Cal File: X073008.D
Als bottle: 32 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0474-dod.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)	631872	50.0000	
$ 30 Dibromofluoromethane	113	4.096	4.096	(0.979)	299034	50.0000	50.47
$ 35 1,2-Dichloroethane-d4	65	4.469	4.469	(1.069)	276548	50.0000	49.04
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	897398	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	846556	50.0000	
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	925486	50.0000	46.60
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	356169	50.0000	50.15
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	452914	50.0000	
5 Vinyl Chloride	62	1.138	1.138	(0.272)	269932	50.0000	44.87
11 1,1-Dichloroethene	96	1.912	1.912	(0.457)	237799	50.0000	44.72
17 Methylene Chloride	84	2.305	2.305	(0.551)	267070	50.0000	50.40
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	307753	50.0000	48.55
33 1,2-Dichloroethane	62	4.555	4.555	(0.918)	333518	50.0000	46.32
38 Trichloroethene	130	5.207	5.207	(1.049)	323214	50.0000	49.28
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	214956	50.0000	48.53



Data File: \\NAHSTWS005\target\chem\voa6.i\X210804.b\X080433.D
Date : 04-AUG-2021 21:58
Client ID: CCV-END
Sample Info: CCV-END;CCV-END;2;;;
Purge Volume: 5.0
Column phase: DB624

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

MSVOA06 -Logbook

Batch: 46072
Date: 08-05-2021
Method: 8260
Comments:

Analyst: Presenta Cabascango
Reviewer:
Laboratory: Houston

#	Samp ID	Type	Analyzed	DF	Init Wt/Vol	Final Vol	File ID	Matrix	Status	p
1	BFB	TUNE	08-05-2021 10:52 am	1.00	50 mL	50 mL	X080501.D	Liquid	Y	N
2	CCV	CCV	08-05-2021 11:13 am	1.00	50 mL	50 mL	X080502a.D	Liquid	Y	N
3	CCV	CCV	08-05-2021 11:34 am	1.00	50 mL	50 mL	X080503.D	Liquid	Y	N
4	CCB	SAMP	08-05-2021 11:55 am	1.00	50 mL	50 mL	X080504.D	Liquid	Y	N
5	VLCSW-210805	LCS	08-05-2021 12:16 pm	1.00	50 mL	50 mL	X080505.D	Liquid	Y	N
6	BLANK	SAMP	08-05-2021 12:37 pm	1.00	50 mL	50 mL	X080506.D	Liquid	Y	N
7	VBLKM-210805	MBLK	08-05-2021 12:58 pm	50.00	1 mL	50 mL	X080507.D	Liquid	Y	N
8	VBLKW-210805	MBLK	08-05-2021 01:19 pm	1.00	50 mL	50 mL	X080508.D	Liquid	Y	N
9	HS21080176-01	SAMP	08-05-2021 01:40 pm	1.00	50 mL	50 mL	X080509.D	Liquid	Y	N
10	HS21080176-02	SAMP	08-05-2021 02:01 pm	1.00	50 mL	50 mL	X080510.D	Liquid	Y	N
11	HS21080176-03	SAMP	08-05-2021 02:22 pm	1.00	50 mL	50 mL	X080511.D	Liquid	Y	N
12	HS21080176-04	SAMP	08-05-2021 02:43 pm	1.00	50 mL	50 mL	X080512.D	Liquid	Y	N
13	HS21080176-05	SAMP	08-05-2021 03:04 pm	1.00	50 mL	50 mL	X080513.D	Liquid	Y	N
14	HS21080176-06	SAMP	08-05-2021 03:25 pm	1.00	50 mL	50 mL	X080514.D	Liquid	Y	N
15	HS21080185-03	SAMP	08-05-2021 03:46 pm	1.00	50 mL	50 mL	X080515.D	Liquid	Y	N
16	HS21080185-01	SAMP	08-05-2021 04:08 pm	1.00	50 mL	50 mL	X080516.D	Liquid	Y	N
17	HS21071465-07	SAMP	08-05-2021 04:29 pm	1000.0	50 µL	50 mL	X080517.D	Liquid	Y	N
18	HS21071465-08	SAMP	08-05-2021 04:50 pm	2500.0	20 µL	50 mL	X080518.D	Liquid	Y	N
19	HS21080176-03MS	MS	08-05-2021 05:11 pm	1.00	50 mL	50 mL	X080519.D	Liquid	Y	N
20	HS21080176-03MSD	MSD	08-05-2021 05:32 pm	1.00	50 mL	50 mL	X080520.D	Liquid	Y	N
21	HS21071592-02	SAMP	08-05-2021 05:53 pm	5.00	10 mL	50 mL	X080521.D	Liquid	Y	N
22	HS21071465-01	SAMP	08-05-2021 06:14 pm	25.00	2 mL	50 mL	X080522.D	Liquid	Y	N
23	HS21071465-06	SAMP	08-05-2021 06:35 pm	25.00	2 mL	50 mL	X080523.D	Liquid	Y	N
24	HS21071465-02	SAMP	08-05-2021 06:56 pm	5.00	10 mL	50 mL	X080524.D	Liquid	Y	N
25	HS21071465-02	SAMP	08-05-2021 07:17 pm	25.00	2 mL	50 mL	X080525.D	Liquid	Y	N
26	CCV-END	CCV	08-05-2021 07:38 pm	1.00	50 mL	50 mL	X080526.D	Liquid	Y	N
27	HS21080102-02	SAMP	08-05-2021 07:59 pm	1.00	50 mL	50 mL	X080527.D	Liquid	Y	N
28	HS21080102-03	SAMP	08-05-2021 08:20 pm	1.00	50 mL	50 mL	X080528.D	Liquid	Y	N
29	HS21080093-01	SAMP	08-05-2021 08:41 pm	1.00	50 mL	50 mL	X080529.D	Liquid	Y	N
30	HS21080029-10	SAMP	08-05-2021 09:02 pm	1.00	50 mL	50 mL	X080530.D	Liquid	Y	N
31	HS21071613-10	SAMP	08-05-2021 09:23 pm	1.00	50 mL	50 mL	X080531.D	Liquid	Y	N
32	BLASNK	SAMP	08-05-2021 09:44 pm	1.00	50 mL	50 mL	X080532.D	Liquid	Y	N

FORM 2
WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS21071465

	CLIENT SAMPLE NO.	SMC1 #	SMC2 (DCE) #	SMC3 (TOL) #	OTHER #	TOT OUT
01	VLCSW-210805	91	88	92	98	0
02	VBLKM-210805	92	89	103	96	0
03	HS21071465-08	91	89	100	100	0
04						
05						
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28						

		QC LIMITS
SMC1	= Dibromofluoromethane	(70-130)
SMC2 (DCE)	= 1,2-Dichloroethane-d4	(70-130)
SMC3 (TOL)	= Toluene-d8	(70-130)
OTHER	= 4-Bromofluorobenzene	(70-130)

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.
VBLKM-210805

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS21071465

Lab File ID: X080507 Lab Sample ID: VBLKM-210805

Date Analyzed: 08/05/21 Time Analyzed: 1258

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-210805	VLCSW-210805	X080505	1216
02	HS21071465-08	HS21071465-08	X080518	1650
03	HS21080176-03MS	HS21080176-03MS	X080519	1711
04	HS21080176-03MSD	HS21080176-03MSD	X080520	1732
05				
06				
07				
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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.: HS21071465

Lab File ID: X080501 BFB Injection Date: 08/05/21

Instrument ID: VOA6 BFB Injection Time: 1052

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	15.6
75	30.0 - 60.0% of mass 95	44.2
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	1.2 (1.1)1
174	Greater than 50.0% of mass 95	108.5
175	5.0 - 9.0% of mass 174	8.2 (7.6)1
176	95.0 - 101.0% of mass 174	104.9 (96.7)1
177	5.0 - 9.0% of mass 176	6.5 (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	X080503	08/05/21	1134
02	VLCSW-210805	VLCSW-210805	X080505	08/05/21	1216
03	VBLKM-210805	VBLKM-210805	X080507	08/05/21	1258
04	HS21071465-08	HS21071465-08	X080518	08/05/21	1650
05	HS21080176-03MS	HS21080176-03MS	X080519	08/05/21	1711
06	HS21080176-03MSD	HS21080176-03MSD	X080520	08/05/21	1732
07	CCV-END	CCV-END	X080526	08/05/21	1938
08					
09					
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15					
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17					
18					
19					
20					
21					
22					

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS21071465

Instrument ID: VOA6 Calibration Date: 08/05/21 Time: 1134

Lab File ID: X080503 Init. Calib. Date(s): 07/30/21 07/30/21

Init. Calib. Times: 1129 1459

GC Column: DB624 ID: 0.18 (mm)

COMPOUND	RRF or AMOUNT	RRF50.000 or AMOUNT	CCAL RRF50.000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Vinyl Chloride	0.4760000	0.4330899	0.4330899	0.1	9.01	20.00	AVRG
Methylene Chloride	47.052753	50.000000	0.3946863	0.1	5.89	20.00	LINR
1,1-Dichloroethene	0.4210000	0.3827622	0.3827622	0.1	9.08	20.00	AVRG
1,2-Dichloroethane	0.4010000	0.3825683	0.3825683	0.1	4.60	20.00	AVRG
Trichloroethene	0.3650000	0.3788078	0.3788078	0.2	-3.78	20.00	AVRG
1,1,2-Trichloroethane	0.2620000	0.2494302	0.2494302	0.1	4.80	20.00	AVRG
Dibromofluoromethane	47.877352	50.000000	0.4493864	0.1	4.24	20.00	LINR
1,2-Dichloroethane-d4	46.020286	50.000000	0.4111809	0.1	7.96	20.00	LINR
Toluene-d8	1.1730000	1.1042961	1.1042961	0.1	5.86	20.00	AVRG
4-Bromofluorobenzene	49.040626	50.000000	0.4115256	0.1	7.92	20.00	LINR

FORM VII VOA

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS21071465

Instrument ID: VOA6 Calibration Date: 08/05/21 Time: 1938

Lab File ID: X080526 Init. Calib. Date(s): 07/30/21 07/30/21

Init. Calib. Times: 1129 1459

GC Column: DB624 ID: 0.18 (mm)

COMPOUND	RRF or AMOUNT	RRF50.000 or AMOUNT	CCAL RRF50.000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Vinyl Chloride	0.4760000	0.4104056	0.4104056	0.1	13.78	50.00	AVRG
Methylene Chloride	48.580885	50.000000	0.4074435	0.1	2.84	50.00	LINR
1,1-Dichloroethene	0.4210000	0.3745860	0.3745860	0.1	11.02	50.00	AVRG
1,2-Dichloroethane	0.4010000	0.3679710	0.3679710	0.1	8.24	50.00	AVRG
Trichloroethene	0.3650000	0.3661654	0.3661654	0.2	-0.32	50.00	AVRG
1,1,2-Trichloroethane	0.2620000	0.2512709	0.2512709	0.1	4.10	50.00	AVRG
Dibromofluoromethane	47.419773	50.000000	0.4451814	0.1	5.16	50.00	LINR
1,2-Dichloroethane-d4	46.898656	50.000000	0.4188817	0.1	6.20	50.00	LINR
Toluene-d8	1.1730000	1.1058212	1.1058212	0.1	5.73	50.00	AVRG
4-Bromofluorobenzene	49.493658	50.000000	0.4152722	0.1	1.01	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.: HS21071465

Lab File ID (Standard): X080503 Date Analyzed: 08/05/21

Instrument ID: VOA6 Time Analyzed: 1134

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

		IS1 AREA #	RT #	IS2(DFB) AREA #	RT #	IS3(CBZ) AREA #	RT #
	12 HOUR STD	706470	4.18	935229	4.96	892795	7.67
	UPPER LIMIT	1412940	4.68	1870458	5.46	1785590	8.17
	LOWER LIMIT	353235	3.68	467615	4.46	446398	7.17
	CLIENT SAMPLE NO.						
01	VLCSW-210805	688241	4.18	917740	4.96	863741	7.67
02	VBLKM-210805	810732	4.18	1066009	4.96	941426	7.67
03	HS21071465-08	798620	4.18	1048413	4.96	958311	7.67
04	HS21080176-03MS	816507	4.18	1055848	4.96	969069	7.67
05	HS21080176-03MSD	860879	4.18	1111798	4.96	1012865	7.67
06							
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18							
19							
20							

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

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

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

FORM VIII VOA

FORM 8
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS21071465

Lab File ID (Standard): X080503 Date Analyzed: 08/05/21

Instrument ID: VOA6 Time Analyzed: 1134

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

		IS4 (DCB) AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	496341	9.66				
	UPPER LIMIT	992682	10.16				
	LOWER LIMIT	248171	9.16				
	CLIENT SAMPLE NO.						
01	VLCSW-210805	472971	9.66				
02	VBLKM-210805	477277	9.66				
03	HS21071465-08	497668	9.66				
04	HS21080176-03MS	514635	9.66				
05	HS21080176-03MSD	525915	9.66				
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19							
20							

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

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

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

FORM VIII VOA

Data File: \\NAHSTWS005\target\chem\voa6.i\X210805.b\X080501.D

Date : 05-AUG-2021 10:52

Client ID: BFB

Instrument: voa6.i

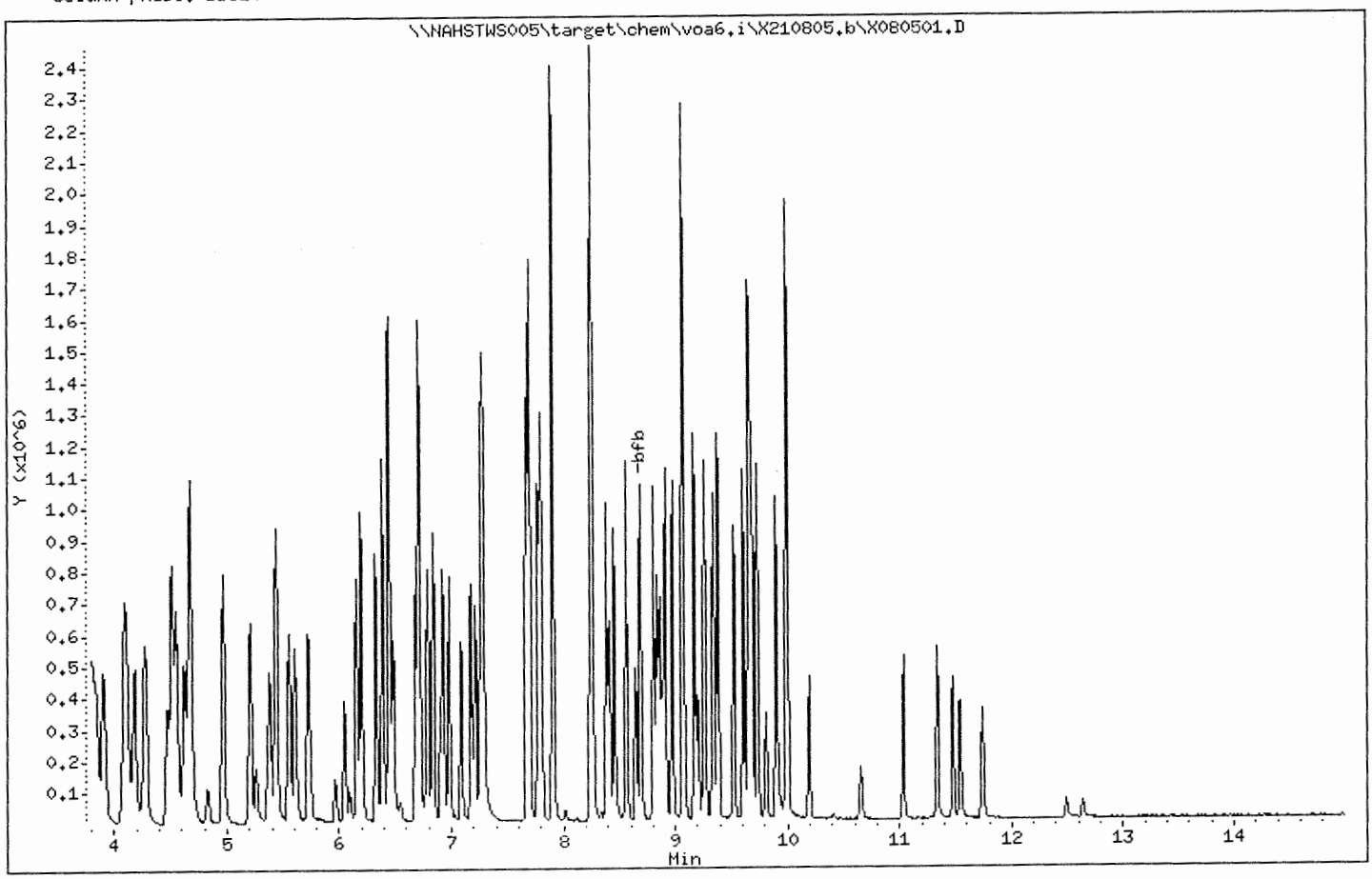
Sample Info: BFB;BFB;3;;BFB

Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

Column diameter: 0.25



Data File: \\NAHSTWS005\target\chem\voa6.i\X210805.b\X080501.D

Date : 05-AUG-2021 10:52

Client ID: BFB

Instrument: voa6.i

Sample Info: BFB;BFB;3;;BFB

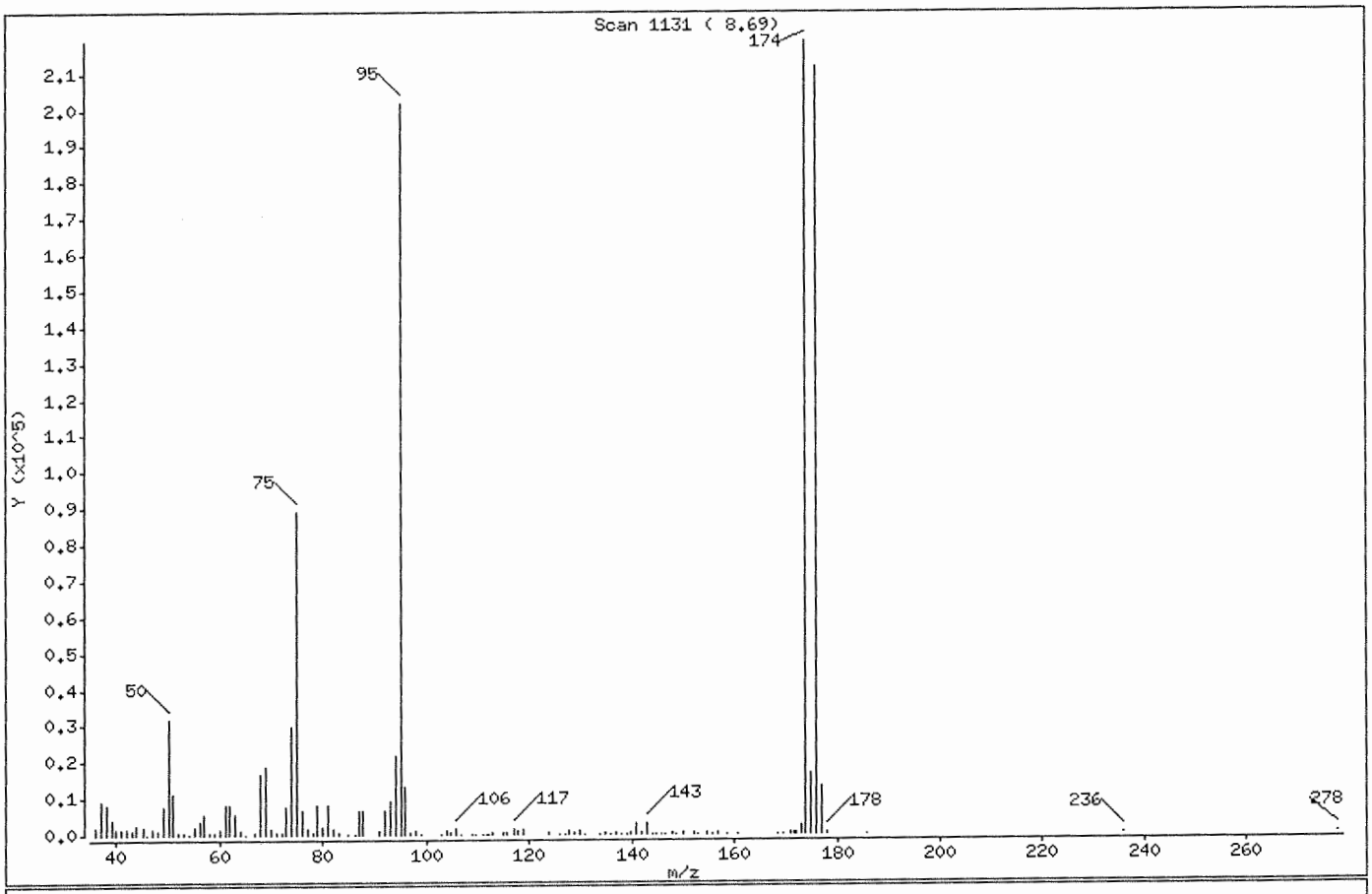
Volume Injected (uL): 2.0

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	15.61
75	30.00 - 60.00% of mass 95	44.21
96	5.00 - 9.00% of mass 95	6.44
173	Less than 2.00% of mass 174	1.16 (1.07)
174	Greater than 50.00% of mass 95	108.50
175	5.00 - 9.00% of mass 174	8.21 (7.57)
176	95.00 - 101.00% of mass 174	104.92 (96.70)
177	5.00 - 9.00% of mass 176	6.46 (6.16)

Data File: \\NAHSTWS005\target\chem\voa6.i\X210805.b\X080501.D

Date : 05-AUG-2021 10:52

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: X080501.D
Spectrum: Scan 1131 (8.69)
Location of Maximum: 173.90
Number of points: 121

m/z	Y	m/z	Y	m/z	Y	m/z	Y
35.90	1856	68.00	16464	104.80	401	144.00	126
37.00	8872	69.00	18472	105.90	1404	144.90	245
38.10	8080	70.10	1716	106.80	211	145.90	122
39.00	3829	71.10	293	108.80	106	146.60	83
40.00	1368	72.00	705	109.70	229	147.80	290
41.00	1334	72.90	7726	111.00	199	148.70	232
42.10	1334	74.00	29760	111.70	209	149.90	323
42.90	1118	75.00	89184	112.10	73	152.00	315
43.90	2463	76.00	6419	113.00	290	152.70	222
45.00	1942	77.00	1319	114.90	420	154.80	620
46.00	160	78.10	496	115.80	687	155.70	142
47.00	1525	78.90	8028	117.00	1642	156.80	334
47.90	808	79.90	1935	117.80	821	158.70	202
49.00	7597	80.90	7897	118.80	1339	160.80	192
50.00	31496	81.90	1571	123.80	254	168.40	170
51.00	11195	83.00	578	125.90	67	169.50	57
51.90	388	85.00	85	126.90	89	171.00	262
52.90	416	86.10	163	127.80	954	171.60	429
53.90	228	86.90	6386	128.80	673	172.00	598
55.00	2217	87.80	6399	129.70	948	173.00	2332
56.00	3432	90.80	1193	130.90	185	173.90	218880
57.00	5520	92.00	6389	133.90	92	174.90	16560
57.80	443	92.90	8890	134.80	316	175.90	211648
59.00	738	94.00	21640	135.90	72	176.90	13028
59.90	1567	95.00	201728	136.80	577	178.00	590
61.00	8253	96.00	12995	137.90	88	186.00	201
62.00	8235	97.00	558	138.90	100	235.70	81
62.90	5487	98.10	846	139.80	297	278.00	61
63.90	819	99.00	82	140.90	2849		
64.90	70	102.80	169	141.90	534		
66.90	434	103.90	1256	142.80	2928		

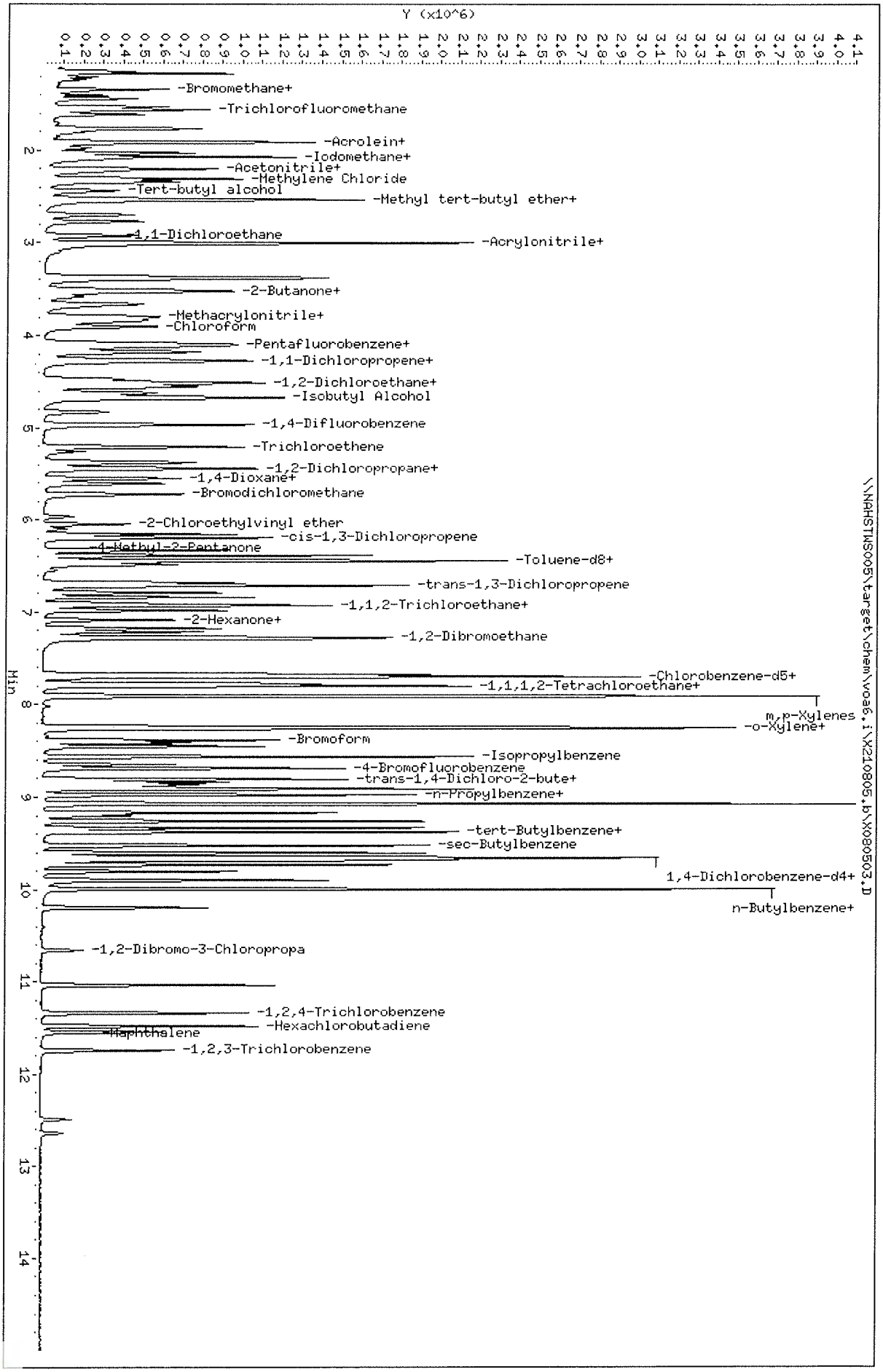
ALS Laboratory Group

Data file : \\NAHSTWS005\target\chem\voa6.i\X210805.b\X080503.D
Lab Smp Id: CCV Client Smp ID: CCV
Inj Date : 05-AUG-2021 11:34
Operator : PC Inst ID: voa6.i
Smp Info : CCV;CCV;2;;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\target\chem\voa6.i\X210805.b\8260W.m
Meth Date : 10-Sep-2021 16:21 voa6.i Quant Type: ISTD
Cal Date : 30-JUL-2021 13:56 Cal File: X073008.D
Als bottle: 3 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0474-dod.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)	706470	50.0000	
$ 30 Dibromofluoromethane	113	4.096	4.096	(0.979)	317478	50.0000	47.87
$ 35 1,2-Dichloroethane-d4	65	4.469	4.469	(1.069)	290487	50.0000	46.02
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	935229	50.0000	
* 47 Chlorobenzene-d5	117	7.670	7.670	(1.000)	892795	50.0000	
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	985910	50.0000	47.08
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	367408	50.0000	49.04
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	496341	50.0000	
5 Vinyl Chloride	62	1.145	1.145	(0.274)	305965	50.0000	45.49
11 1,1-Dichloroethene	96	1.911	1.911	(0.457)	270410	50.0000	45.48
17 Methylene Chloride	84	2.305	2.305	(0.551)	278834	50.0000	47.05
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	328375	50.0000	46.33
33 1,2-Dichloroethane	62	4.555	4.555	(0.918)	357789	50.0000	47.68
38 Trichloroethene	130	5.206	5.206	(1.049)	354272	50.0000	51.83
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	222690	50.0000	47.67



Data File: \\NAHSTWS005\target\chem\voa6.i\X210805.b\X080503.D
Date : 05-AUG-2021 11:34
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\X210805.b\X080505.D Page 1
Report Date: 10-Sep-2021 16:21

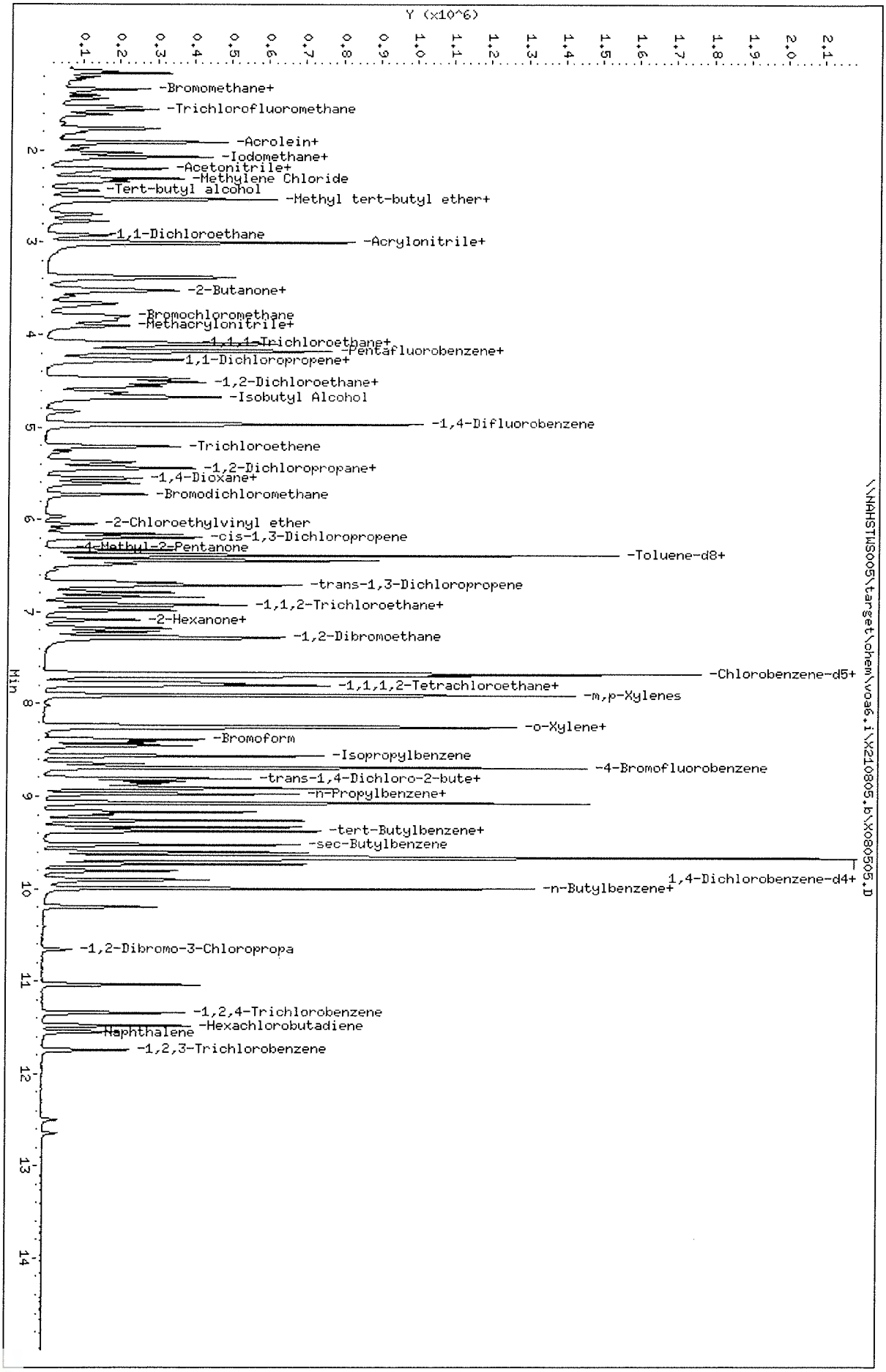
ALS Laboratory Group

Data file : \\NAHSTWS005\target\chem\voa6.i\X210805.b\X080505.D
Lab Smp Id: VLCSW-210805 Client Smp ID: VLCSW-210805
Inj Date : 05-AUG-2021 12:16
Operator : PC Inst ID: voa6.i
Smp Info : VLCSW-210805;VLCSW-210805;3;;LCS
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\target\chem\voa6.i\X210805.b\8260W.m
Meth Date : 10-Sep-2021 16:21 voa6.i Quant Type: ISTD
Cal Date : 30-JUL-2021 13:56 Cal File: X073008.D
Als bottle: 5 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0474-dod.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	4.182	(1.000)	688241	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.096	(0.981)	293857	45.4379	45.43
$ 35 1,2-Dichloroethane-d4	65	4.469	4.469	(1.069)	272499	44.2813	44.28
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	917740	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.670	(1.000)	863741	50.0000	
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	928299	45.8203	45.82
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	354638	48.9267	48.92
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	472971	50.0000	
5 Vinyl Chloride	62	1.145	1.145	(0.274)	106686	16.2847	16.28
11 1,1-Dichloroethene	96	1.911	1.911	(0.457)	95486	16.4882	16.48
17 Methylene Chloride	84	2.305	2.305	(0.551)	116838	20.1102	20.11
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	128894	18.6703	18.67
33 1,2-Dichloroethane	62	4.555	4.555	(0.918)	139657	18.9691	18.96
38 Trichloroethene	130	5.206	5.206	(1.049)	128522	19.1639	19.16
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	90666	20.0644	20.06



Data File: \\NAHSTWS005\target\chem\voa6.i\X210805.b\X080505.D
Date : 05-AUG-2021 12:16
Client ID: VLCSW-210805
Sample Info: VLCSW-210805;VLCSW-210805;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\X210805.b\X080507.D Page 1
Report Date: 10-Sep-2021 16:21

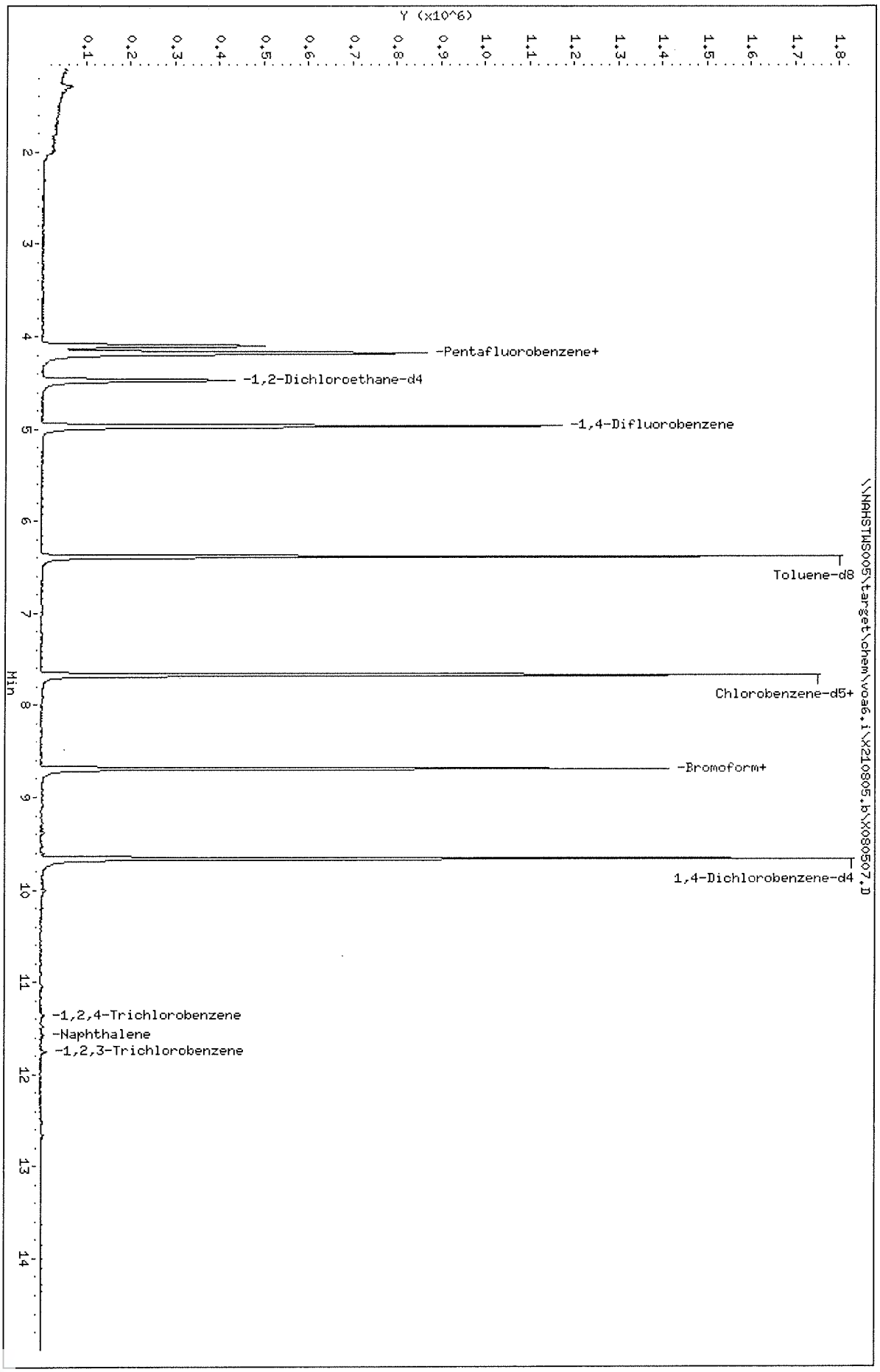
ALS Laboratory Group

Data file : \\NAHSTWS005\target\chem\voa6.i\X210805.b\X080507.D
Lab Smp Id: VBLKM-210805 Client Smp ID: VBLKM-210805
Inj Date : 05-AUG-2021 12:58
Operator : PC Inst ID: voa6.i
Smp Info : VBLKM-210805;VBLKM-210805;3;;BLANK
Misc Info : HS18090001;WATER;0;50;
Comment :
Method : \\NAHSTWS005\target\chem\voa6.i\X210805.b\8260W.m
Meth Date : 10-Sep-2021 16:21 voa6.i Quant Type: ISTD
Cal Date : 30-JUL-2021 13:56 Cal File: X073008.D
Als bottle: 7 QC Sample: BLANK
Dil Factor: 50.00000
Integrator: HP RTE Compound Sublist: 0474-dod.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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

Name	Value	Description
DF	50.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	810732	50.0000	
$ 30 Dibromofluoromethane	113	4.096	4.096	(0.979)	350647	46.0406	46.04
$ 35 1,2-Dichloroethane-d4	65	4.476	4.469	(1.070)	323491	44.6322	44.63
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	1066009	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.670	(1.000)	941426	50.0000	
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	1141522	51.6954	51.69
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	377607	47.7801	47.78
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	477277	50.0000	



Data File: \\NAHSTWS005\target\chem\voa6.i\X210805.b\X080507.D
Date : 05-AUG-2021 12:58
Client ID: VBLKH-210805
Sample Info: VBLKH-210805;VBLKH-210805;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\X210805.b\X080518.D Page 1
Report Date: 10-Sep-2021 16:19

ALS Laboratory Group

Data file : \\NAHSTWS005\target\chem\voa6.i\X210805.b\X080518.D
Lab Smp Id: HS21071465-08 Client Smp ID: HS21071465-08
Inj Date : 05-AUG-2021 16:50
Operator : PC Inst ID: voa6.i
Smp Info : HS21071465-08;HS21071465-08;;;
Misc Info : HS18090001;WATER;0;2500;
Comment :
Method : \\NAHSTWS005\target\chem\voa6.i\X210805.b\8260W.m
Meth Date : 10-Sep-2021 16:17 Genoveva.R Quant Type: ISTD
Cal Date : 30-JUL-2021 13:56 Cal File: X073008.D
Als bottle: 18
Dil Factor: 2500.00000
Integrator: HP RTE Compound Sublist: 0474-dod.sub
Target Version: 4.14
Processing Host: NAHSTW7056

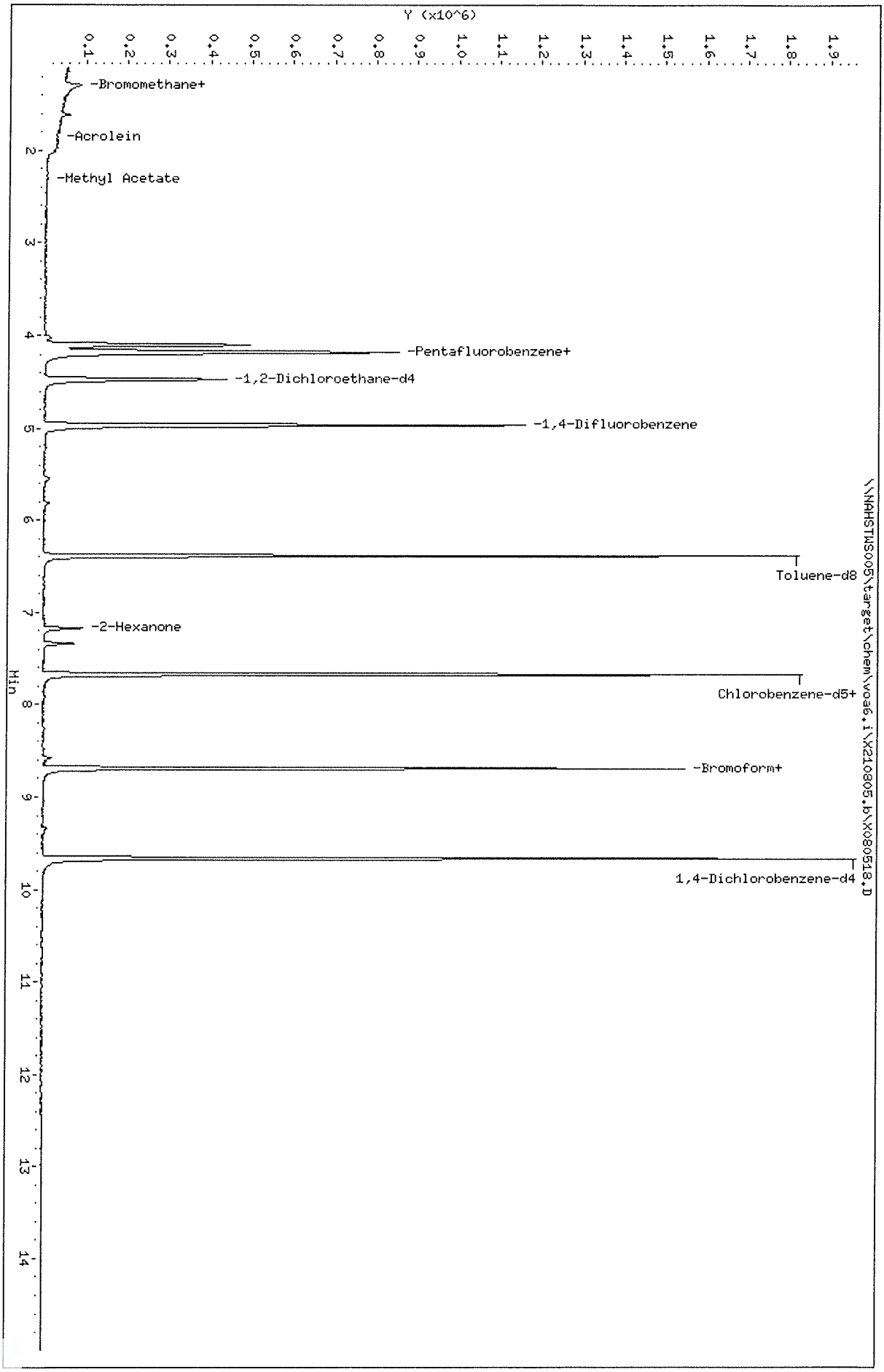
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	2500.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	798620	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	342527	45.6479	45.64
$ 35 1,2-Dichloroethane-d4	65	4.469	4.469	(1.069)	319459	44.7465	44.74
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	1048413	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	958311	50.0000	
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	1121648	49.9004	49.90
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	403689	50.2165	50.21
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	497668	50.0000	

Data File: \\NAHSTWS005\target\chem\voa6.i\X210805.b\X080518.D
Date : 05-AUG-2021 16:50
Client ID: HS21071465-08
Sample Info: HS21071465-08;HS21071465-08;;;
Purge Volume: 5.0
Column phase: DB624

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



Data File: \\NAHSTWS005\target\chem\voa6.i\X210805.b\X080519.D Page 1
Report Date: 10-Sep-2021 16:21

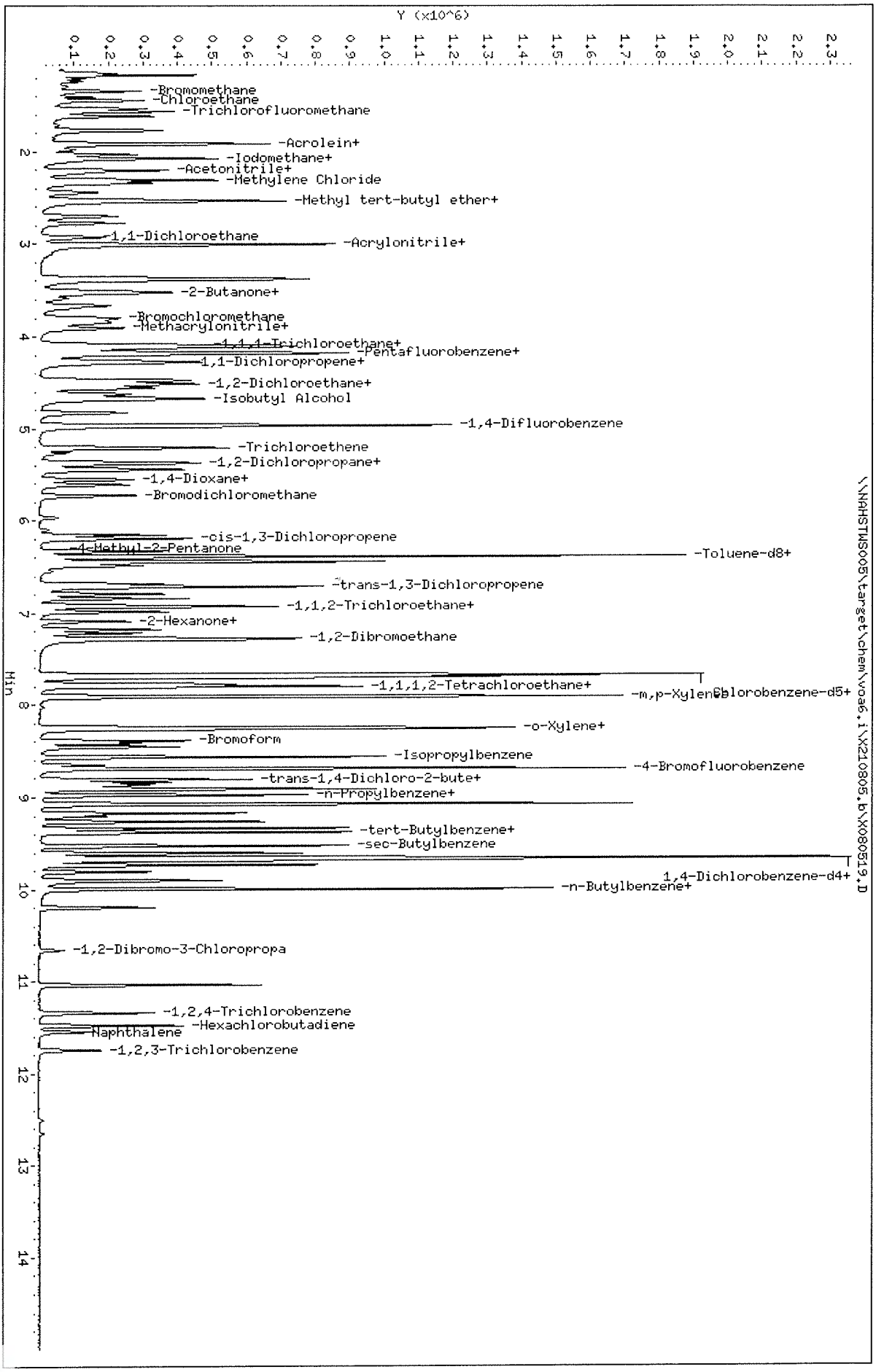
ALS Laboratory Group

Data file : \\NAHSTWS005\target\chem\voa6.i\X210805.b\X080519.D
Lab Smp Id: HS21080176-03MS Client Smp ID: HS21080176-03MS
Inj Date : 05-AUG-2021 17:11
Operator : PC Inst ID: voa6.i
Smp Info : HS21080176-03MS;HS21080176-03MS;3;;MS
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\target\chem\voa6.i\X210805.b\8260W.m
Meth Date : 10-Sep-2021 16:21 voa6.i Quant Type: ISTD
Cal Date : 30-JUL-2021 13:56 Cal File: X073008.D
Als bottle: 19 QC Sample: MS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0474-dod.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	4.182	(1.000)	816507	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.096	(0.981)	350400	45.6748	45.67
$ 35 1,2-Dichloroethane-d4	65	4.469	4.469	(1.069)	331612	45.4447	45.44
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	1055848	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.670	(1.000)	969069	50.0000	
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	1144504	50.3519	50.35
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	402198	49.4650	49.46
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	514635	50.0000	
5 Vinyl Chloride	62	1.138	1.145	(0.272)	132765	17.0819	17.08
11 1,1-Dichloroethene	96	1.912	1.911	(0.457)	119052	17.3281	17.32
17 Methylene Chloride	84	2.305	2.305	(0.551)	117103	16.9546	16.95
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	139189	16.9943	16.99
33 1,2-Dichloroethane	62	4.555	4.555	(0.918)	144220	17.0266	17.02
38 Trichloroethene	130	5.207	5.206	(1.049)	196283	25.4394	25.43
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	91172	17.9834	17.98



Data File: \\NAHSTWS005\target\chem\voa6.i\X210805.b\X080519.D
Date : 05-AUG-2021 17:11
Client ID: HS21080176-03MS
Sample Info: HS21080176-03MS;HS21080176-03MS;3;;MS
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\NAHSTWS005\target\chem\voa6.i\X210805.b\X080520.D Page 1
Report Date: 10-Sep-2021 16:21

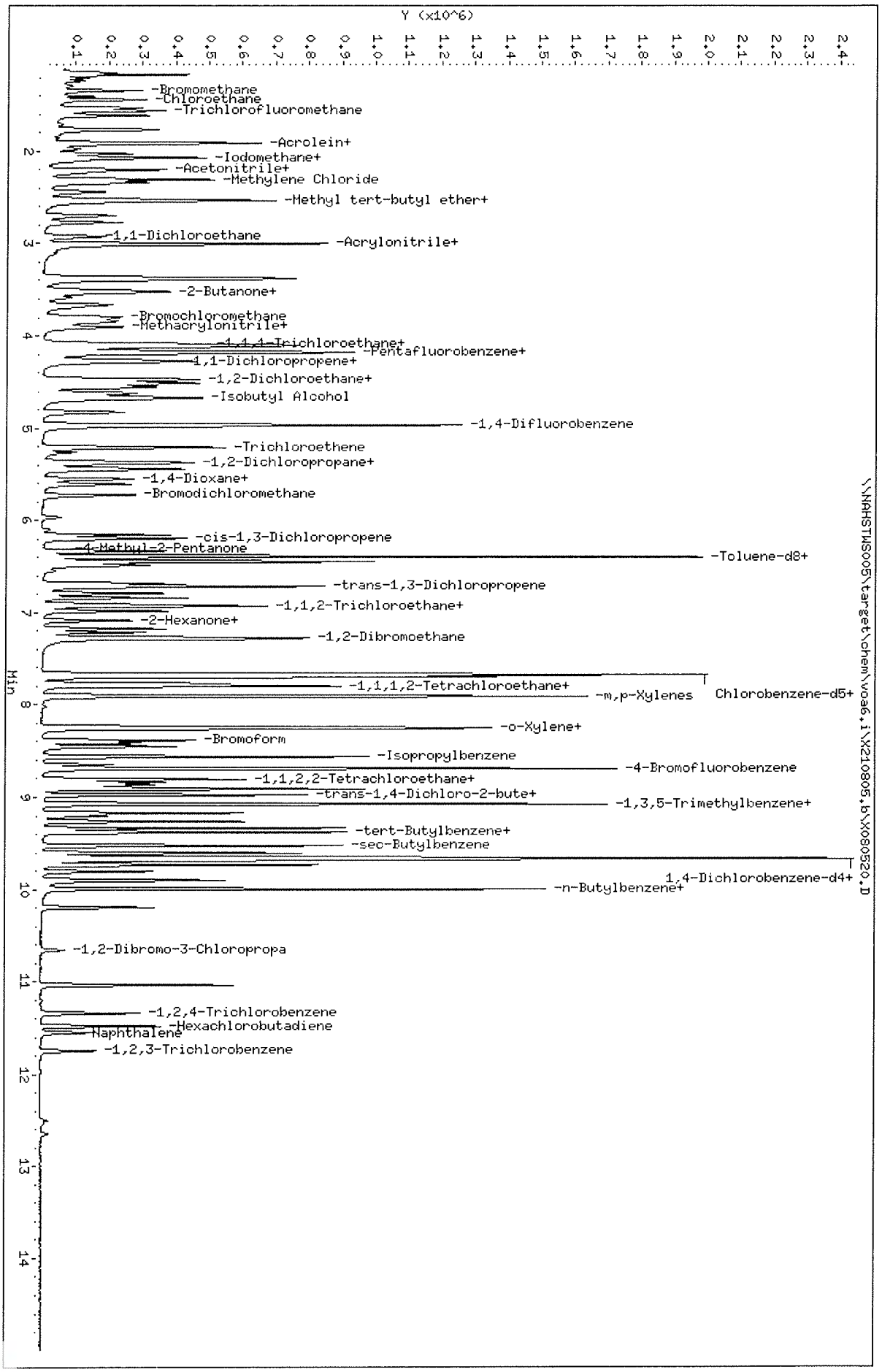
ALS Laboratory Group

Data file : \\NAHSTWS005\target\chem\voa6.i\X210805.b\X080520.D
Lab Smp Id: HS21080176-03MSD Client Smp ID: HS21080176-03MSD
Inj Date : 05-AUG-2021 17:32
Operator : PC Inst ID: voa6.i
Smp Info : HS21080176-03MSD;HS21080176-03MSD;3;;MSD
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\target\chem\voa6.i\X210805.b\8260W.m
Meth Date : 10-Sep-2021 16:21 voa6.i Quant Type: ISTD
Cal Date : 30-JUL-2021 13:56 Cal File: X073008.D
Als bottle: 19 QC Sample: MSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0474-dod.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	4.182	(1.000)	860879	50.0000	
$ 30 Dibromofluoromethane	113	4.096	4.096	(0.979)	370417	45.7980	45.79
$ 35 1,2-Dichloroethane-d4	65	4.469	4.469	(1.068)	337388	43.8223	43.82
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	1111798	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.670	(1.000)	1012865	50.0000	
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	1200317	50.5240	50.52
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	419385	49.3469	49.34
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	525915	50.0000	
5 Vinyl Chloride	62	1.138	1.145	(0.272)	123947	15.1254	15.12
11 1,1-Dichloroethene	96	1.912	1.911	(0.457)	116609	16.0977	16.09
17 Methylene Chloride	84	2.306	2.305	(0.551)	113397	15.5534	15.55
27 cis-1,2-Dichloroethene	96	3.523	3.530	(0.842)	136295	15.7833	15.78
33 1,2-Dichloroethane	62	4.555	4.555	(0.918)	150376	16.8599	16.85
38 Trichloroethene	130	5.207	5.206	(1.049)	191312	23.5473	23.54
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	89861	16.9584	16.95



Data File: \\NAHSTWS005\target\chem\voa6.i\X210805.b\X080520.D
Date : 05-AUG-2021 17:32
Client ID: HS2108017G-03HSD
Sample Info: HS2108017G-03HSD;HS2108017G-03HSD;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\X210805.b\X080526.D Page 1
Report Date: 10-Sep-2021 16:21

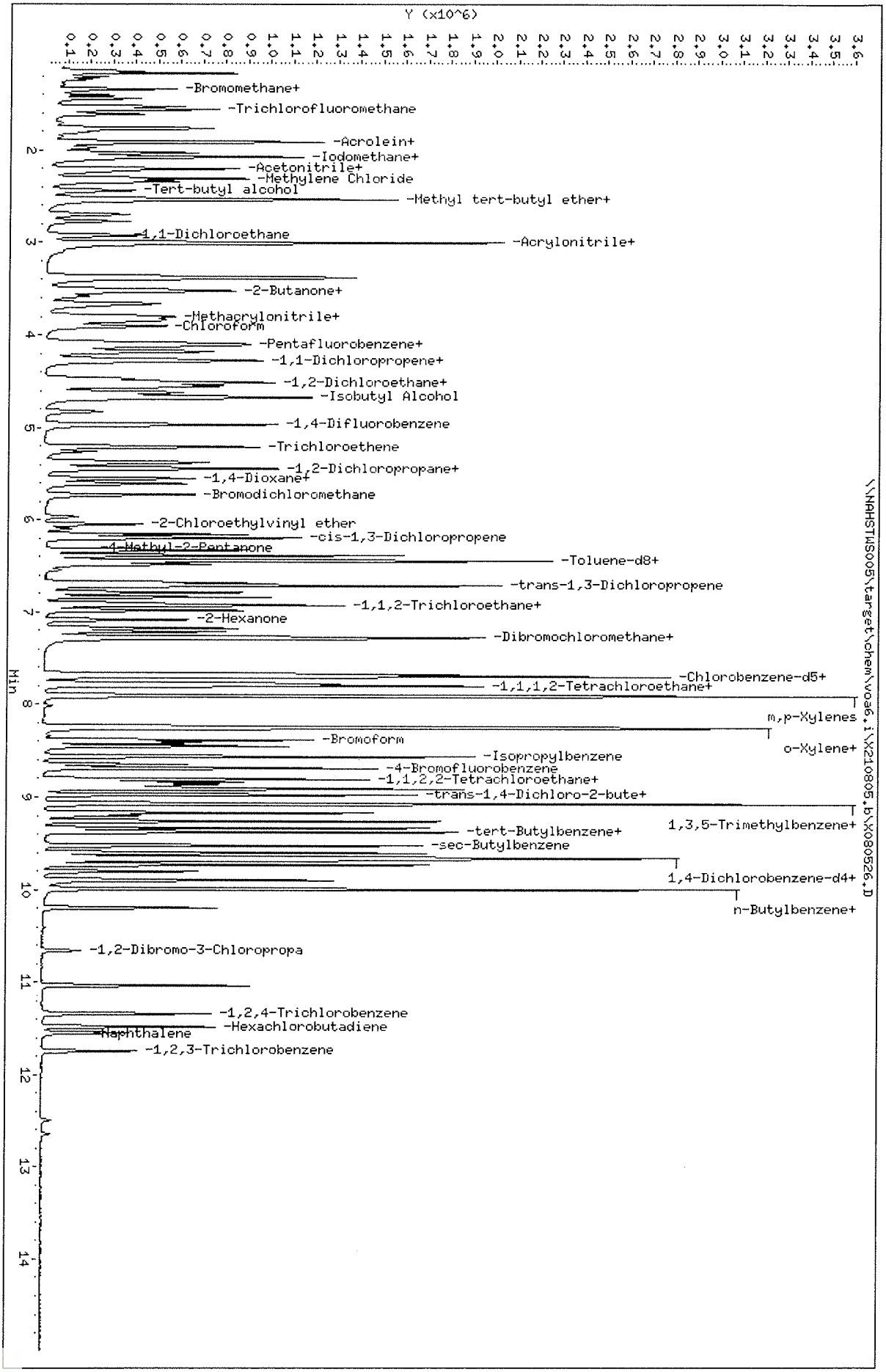
ALS Laboratory Group

Data file : \\NAHSTWS005\target\chem\voa6.i\X210805.b\X080526.D
Lab Smp Id: CCV-END Client Smp ID: CCV-END
Inj Date : 05-AUG-2021 19:38
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\X210805.b\8260W.m
Meth Date : 10-Sep-2021 16:21 voa6.i Quant Type: ISTD
Cal Date : 30-JUL-2021 13:56 Cal File: X073008.D
Als bottle: 25 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0474-dod.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)	672481	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	299376	50.0000	47.41
$ 35 1,2-Dichloroethane-d4	65	4.469	4.469	(1.069)	281690	50.0000	46.89
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	912716	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	865743	50.0000	
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	957357	50.0000	47.14
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	359519	50.0000	49.49
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	465321	50.0000	
5 Vinyl Chloride	62	1.138	1.138	(0.272)	275990	50.0000	43.11
11 1,1-Dichloroethene	96	1.912	1.912	(0.457)	251902	50.0000	44.51
17 Methylene Chloride	84	2.305	2.305	(0.551)	273998	50.0000	48.58
27 cis-1,2-Dichloroethene	96	3.523	3.523	(0.842)	312274	50.0000	46.29
33 1,2-Dichloroethane	62	4.555	4.555	(0.918)	335853	50.0000	45.86
38 Trichloroethene	130	5.207	5.207	(1.049)	334205	50.0000	50.10
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	217536	50.0000	48.02



Data File: \\NAHSTWS005\target\chem\voa6.i\X210805.b\X080526.D
Date : 05-AUG-2021 19:38
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

FORM 2
WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS21071465

	CLIENT SAMPLE NO.	SMC1 #	SMC2 (DCE)#	SMC3 (TOL)#	OTHER #	TOT OUT
01	VLCSW-210805	91	88	92	98	0
02	VBLKW-210805	93	90	106	99	0
03	HS21071465-07	91	90	100	94	0
04	HS21071465-01	90	89	103	99	0
05	HS21071465-06	93	89	101	96	0
06	HS21071465-02	91	89	100	98	0
07	HS21071465-02	92	89	102	96	0
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27						
28						

		QC LIMITS
SMC1	= Dibromofluoromethane	(70-130)
SMC2 (DCE)	= 1,2-Dichloroethane-d4	(70-130)
SMC3 (TOL)	= Toluene-d8	(70-130)
OTHER	= 4-Bromofluorobenzene	(70-130)

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-210805

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS21071465

Lab File ID: X080508 Lab Sample ID: VBLKW-210805

Date Analyzed: 08/05/21 Time Analyzed: 1319

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-210805	VLCSW-210805	X080505	1216
02	HS21071465-07	HS21071465-07	X080517	1629
03	HS21080176-03MS	HS21080176-03MS	X080519	1711
04	HS21080176-03MSD	HS21080176-03MSD	X080520	1732
05	HS21071465-01	HS21071465-01	X080522	1814
06	HS21071465-06	HS21071465-06	X080523	1835
07	HS21071465-02	HS21071465-02	X080524	1856
08	HS21071465-02	HS21071465-02	X080525	1917
09				
10				
11				
12				
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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.: HS21071465

Lab File ID: X080501 BFB Injection Date: 08/05/21

Instrument ID: VOA6 BFB Injection Time: 1052

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	15.6
75	30.0 - 60.0% of mass 95	44.2
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	1.2 (1.1)1
174	Greater than 50.0% of mass 95	108.5
175	5.0 - 9.0% of mass 174	8.2 (7.6)1
176	95.0 - 101.0% of mass 174	104.9 (96.7)1
177	5.0 - 9.0% of mass 176	6.5 (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	X080503	08/05/21	1134
02	VLCSW-210805	VLCSW-210805	X080505	08/05/21	1216
03	VBLKW-210805	VBLKW-210805	X080508	08/05/21	1319
04	HS21071465-07	HS21071465-07	X080517	08/05/21	1629
05	HS21080176-03MS	HS21080176-03MS	X080519	08/05/21	1711
06	HS21080176-03MSD	HS21080176-03MSD	X080520	08/05/21	1732
07	HS21071465-01	HS21071465-01	X080522	08/05/21	1814
08	HS21071465-06	HS21071465-06	X080523	08/05/21	1835
09	HS21071465-02	HS21071465-02	X080524	08/05/21	1856
10	HS21071465-02	HS21071465-02	X080525	08/05/21	1917
11	CCV-END	CCV-END	X080526	08/05/21	1938
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.: HS21071465

Instrument ID: VOA6 Calibration Date: 08/05/21 Time: 1134

Lab File ID: X080503 Init. Calib. Date(s): 07/30/21 07/30/21

Init. Calib. Times: 1129 1459

GC Column: DB624 ID: 0.18 (mm)

COMPOUND	RRF or AMOUNT	RRF50.000 or AMOUNT	CCAL RRF50.000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Vinyl Chloride	0.4760000	0.4330899	0.4330899	0.1	9.01	20.00	AVRG
Methylene Chloride	47.052753	50.000000	0.3946863	0.1	5.89	20.00	LINR
1,1-Dichloroethene	0.4210000	0.3827622	0.3827622	0.1	9.08	20.00	AVRG
1,2-Dichloroethane	0.4010000	0.3825683	0.3825683	0.1	4.60	20.00	AVRG
Trichloroethene	0.3650000	0.3788078	0.3788078	0.2	-3.78	20.00	AVRG
1,1,2-Trichloroethane	0.2620000	0.2494302	0.2494302	0.1	4.80	20.00	AVRG
Dibromofluoromethane	47.877352	50.000000	0.4493864	0.1	4.24	20.00	LINR
1,2-Dichloroethane-d4	46.020286	50.000000	0.4111809	0.1	7.96	20.00	LINR
Toluene-d8	1.1730000	1.1042961	1.1042961	0.1	5.86	20.00	AVRG
4-Bromofluorobenzene	49.040626	50.000000	0.4115256	0.1	1.92	20.00	LINR

FORM VII VOA

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS21071465

Instrument ID: VOA6 Calibration Date: 08/05/21 Time: 1938

Lab File ID: X080526 Init. Calib. Date(s): 07/30/21 07/30/21

Init. Calib. Times: 1129 1459

GC Column: DB624 ID: 0.18 (mm)

COMPOUND	RRF or AMOUNT	RRF50.000 or AMOUNT	CCAL RRF50.000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Vinyl Chloride	0.4760000	0.4104056	0.4104056	0.1	13.78	50.00	AVRG
Methylene Chloride	48.580885	50.000000	0.4074435	0.1	2.84	50.00	LINR
1,1-Dichloroethene	0.4210000	0.3745860	0.3745860	0.1	11.02	50.00	AVRG
1,2-Dichloroethane	0.4010000	0.3679710	0.3679710	0.1	8.24	50.00	AVRG
Trichloroethene	0.3650000	0.3661654	0.3661654	0.2	-0.32	50.00	AVRG
1,1,2-Trichloroethane	0.2620000	0.2512709	0.2512709	0.1	4.10	50.00	AVRG
Dibromofluoromethane	47.419773	50.000000	0.4451814	0.1	5.16	50.00	LINR
1,2-Dichloroethane-d4	46.898656	50.000000	0.4188817	0.1	6.20	50.00	LINR
Toluene-d8	1.1730000	1.1058212	1.1058212	0.1	5.73	50.00	AVRG
4-Bromofluorobenzene	49.493658	50.000000	0.4152722	0.1	1.01	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.: HS21071465

Lab File ID (Standard): X080503 Date Analyzed: 08/05/21

Instrument ID: VOA6 Time Analyzed: 1134

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

		IS1 AREA #	RT #	IS2(DFB) AREA #	RT #	IS3(CBZ) AREA #	RT #
	12 HOUR STD	706470	4.18	935229	4.96	892795	7.67
	UPPER LIMIT	1412940	4.68	1870458	5.46	1785590	8.17
	LOWER LIMIT	353235	3.68	467615	4.46	446398	7.17
	CLIENT SAMPLE NO.						
01	VLCSW-210805	688241	4.18	917740	4.96	863741	7.67
02	VBLKW-210805	797810	4.18	1045304	4.96	911281	7.67
03	HS21071465-07	808114	4.18	1064491	4.96	974935	7.67
04	HS21080176-03MS	816507	4.18	1055848	4.96	969069	7.67
05	HS21080176-03MSD	860879	4.18	1111798	4.96	1012865	7.67
06	HS21071465-01	817131	4.18	1060481	4.96	954961	7.67
07	HS21071465-06	794523	4.18	1048423	4.96	947792	7.67
08	HS21071465-02	806425	4.18	1061404	4.96	963673	7.67
09	HS21071465-02	805313	4.18	1052209	4.96	947190	7.67
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							

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

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

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

FORM 8
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS21071465

Lab File ID (Standard): X080503 Date Analyzed: 08/05/21

Instrument ID: VOA6 Time Analyzed: 1134

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

		IS4 (DCB) AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	496341	9.66				
	UPPER LIMIT	992682	10.16				
	LOWER LIMIT	248171	9.16				
	CLIENT SAMPLE NO.						
01	VLCSW-210805	472971	9.66				
02	VBLKW-210805	450863	9.66				
03	HS21071465-07	483255	9.66				
04	HS21080176-03MS	514635	9.66				
05	HS21080176-03MSD	525915	9.66				
06	HS21071465-01	490422	9.66				
07	HS21071465-06	476521	9.66				
08	HS21071465-02	498466	9.66				
09	HS21071465-02	492717	9.66				
10							
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20							

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

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

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

FORM VIII VOA

Data File: \\NAHSTWS005\target\chem\voa6.i\X210805.b\X080503.D Page 1
Report Date: 10-Sep-2021 16:22

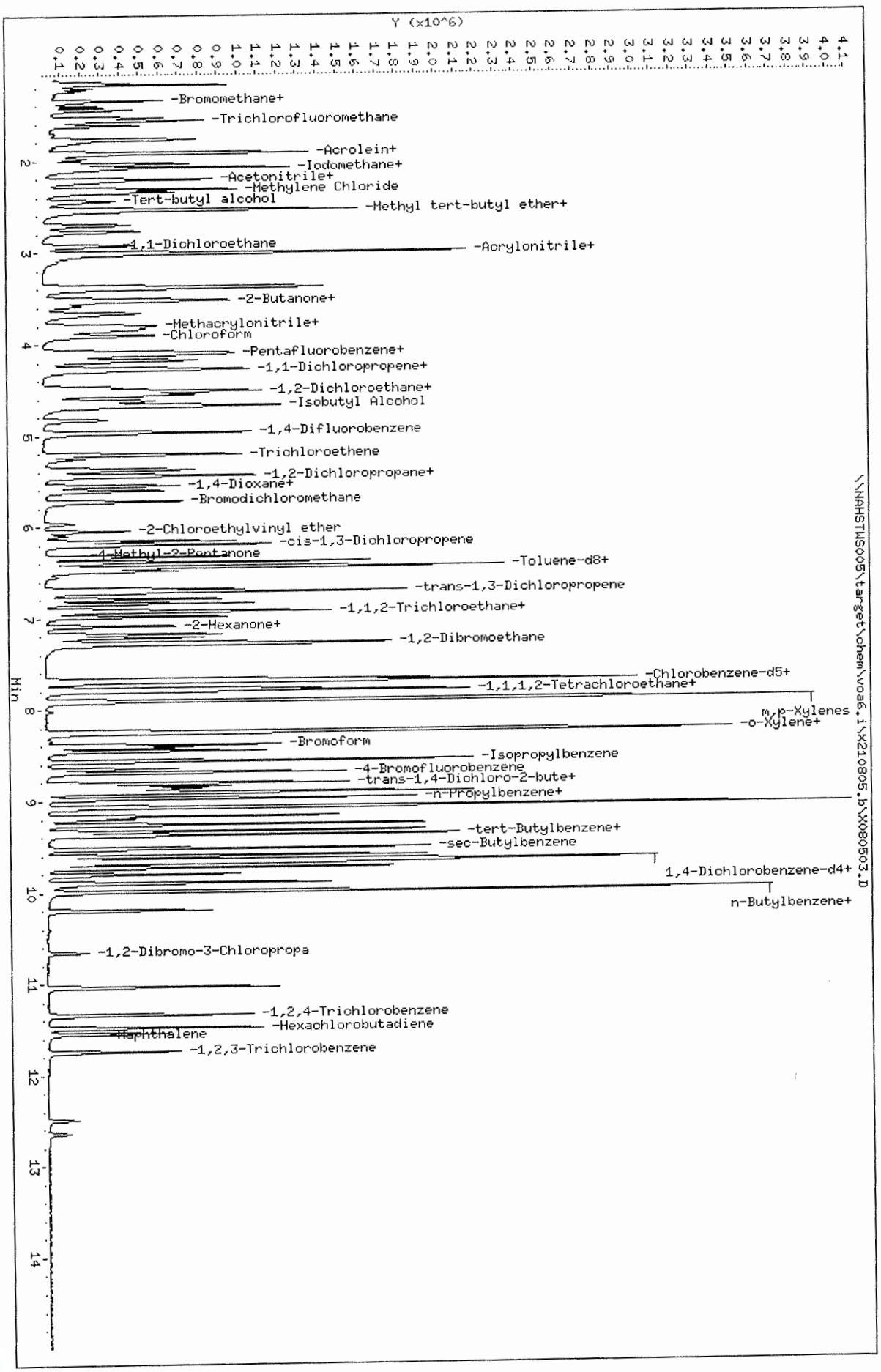
ALS Laboratory Group

Data file : \\NAHSTWS005\target\chem\voa6.i\X210805.b\X080503.D
Lab Smp Id: CCV Client Smp ID: CCV
Inj Date : 05-AUG-2021 11:34
Operator : PC Inst ID: voa6.i
Smp Info : CCV;CCV;2;;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\target\chem\voa6.i\X210805.b\8260W.m
Meth Date : 10-Sep-2021 16:22 voa6.i Quant Type: ISTD
Cal Date : 30-JUL-2021 13:56 Cal File: X073008.D
Als bottle: 3 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0474-dod.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)	706470	50.0000	
$ 30 Dibromofluoromethane	113	4.096	4.096	(0.979)	317478	50.0000	47.87
$ 35 1,2-Dichloroethane-d4	65	4.469	4.469	(1.069)	290487	50.0000	46.02
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	935229	50.0000	
* 47 Chlorobenzene-d5	117	7.670	7.670	(1.000)	892795	50.0000	
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	985910	50.0000	47.08
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	367408	50.0000	49.04
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	496341	50.0000	
5 Vinyl Chloride	62	1.145	1.145	(0.274)	305965	50.0000	45.49
11 1,1-Dichloroethene	96	1.911	1.911	(0.457)	270410	50.0000	45.48
17 Methylene Chloride	84	2.305	2.305	(0.551)	278834	50.0000	47.05
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	328375	50.0000	46.33
33 1,2-Dichloroethane	62	4.555	4.555	(0.918)	357789	50.0000	47.68
38 Trichloroethene	130	5.206	5.206	(1.049)	354272	50.0000	51.83
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	222690	50.0000	47.67



Data File: \\NAHSTWS005\target\chem\voa6.i\X210805.b\X080503.D
Date : 05-AUG-2021 11:34
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\X210805.b\X080505.D Page 1
Report Date: 10-Sep-2021 16:22

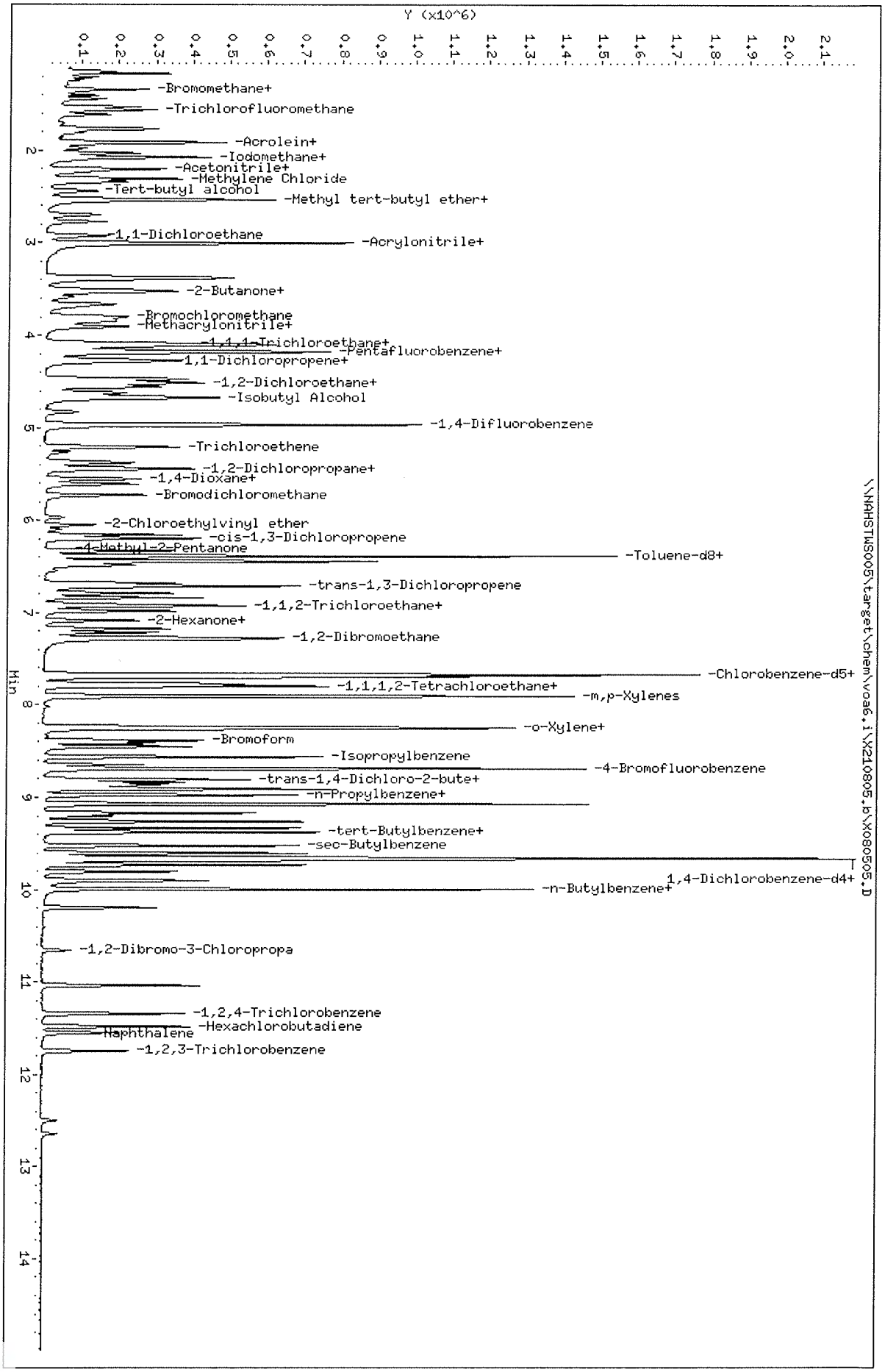
ALS Laboratory Group

Data file : \\NAHSTWS005\target\chem\voa6.i\X210805.b\X080505.D
Lab Smp Id: VLCSW-210805 Client Smp ID: VLCSW-210805
Inj Date : 05-AUG-2021 12:16
Operator : PC Inst ID: voa6.i
Smp Info : VLCSW-210805;VLCSW-210805;3;;LCS
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\target\chem\voa6.i\X210805.b\8260W.m
Meth Date : 10-Sep-2021 16:22 voa6.i Quant Type: ISTD
Cal Date : 30-JUL-2021 13:56 Cal File: X073008.D
Als bottle: 5 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0474-dod.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	4.182	(1.000)	688241	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.096	(0.981)	293857	45.4379	45.43
$ 35 1,2-Dichloroethane-d4	65	4.469	4.469	(1.069)	272499	44.2813	44.28
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	917740	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.670	(1.000)	863741	50.0000	
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	928299	45.8203	45.82
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	354638	48.9267	48.92
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	472971	50.0000	
5 Vinyl Chloride	62	1.145	1.145	(0.274)	106686	16.2847	16.28
11 1,1-Dichloroethene	96	1.911	1.911	(0.457)	95486	16.4882	16.48
17 Methylene Chloride	84	2.305	2.305	(0.551)	116838	20.1102	20.11
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	128894	18.6703	18.67
33 1,2-Dichloroethane	62	4.555	4.555	(0.918)	139657	18.9691	18.96
38 Trichloroethene	130	5.206	5.206	(1.049)	128522	19.1639	19.16
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	90666	20.0644	20.06



Data File: \\NAHSTWS005\target\chem\voa6.i\X210805.b\X080505.D
Date : 05-AUG-2021 12:16
Client ID: VLCSW-210805
Sample Info: VLCSW-210805;VLCSW-210805;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\X210805.b\X080508.D Page 1
Report Date: 10-Sep-2021 16:22

ALS Laboratory Group

Data file : \\NAHSTWS005\target\chem\voa6.i\X210805.b\X080508.D
Lab Smp Id: VBLKW-210805 Client Smp ID: VBLKW-210805
Inj Date : 05-AUG-2021 13:19
Operator : PC Inst ID: voa6.i
Smp Info : VBLKW-210805;VBLKW-210805;3;;BLANK
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\target\chem\voa6.i\X210805.b\8260W.m
Meth Date : 10-Sep-2021 16:22 voa6.i Quant Type: ISTD
Cal Date : 30-JUL-2021 13:56 Cal File: X073008.D
Als bottle: 8 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0474-dod.sub
Target Version: 4.14
Processing Host: NAHSTW7056

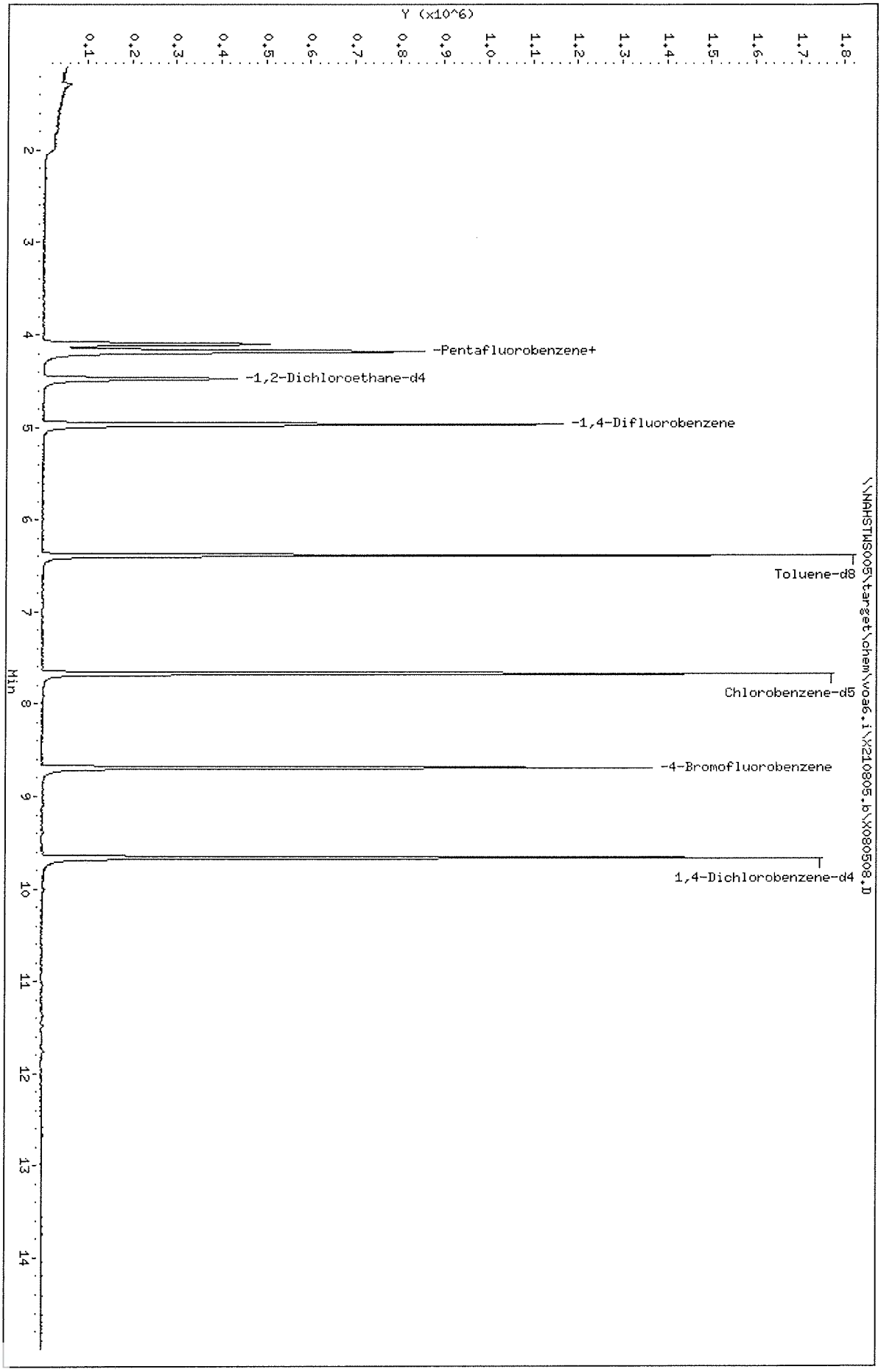
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

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	4.182	(1.000)	797810	50.0000	
$ 30 Dibromofluoromethane	113	4.096	4.096	(0.979)	349489	46.6449	46.64
$ 35 1,2-Dichloroethane-d4	65	4.476	4.469	(1.070)	322665	45.2512	45.25
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	1045304	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.670	(1.000)	911281	50.0000	
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	1132330	52.9754	52.97
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	379591	49.6478	49.64
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	450863	50.0000	

Data File: \\NAHSTWS005\target\chem\voa6.i\X210805.b\X080508.D
Date : 05-AUG-2021 13:19
Client ID: VBLKW-210805
Sample Info: VBLKW-210805;VBLKW-210805;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\X210805.b\X080517.D Page 1
Report Date: 10-Sep-2021 16:19

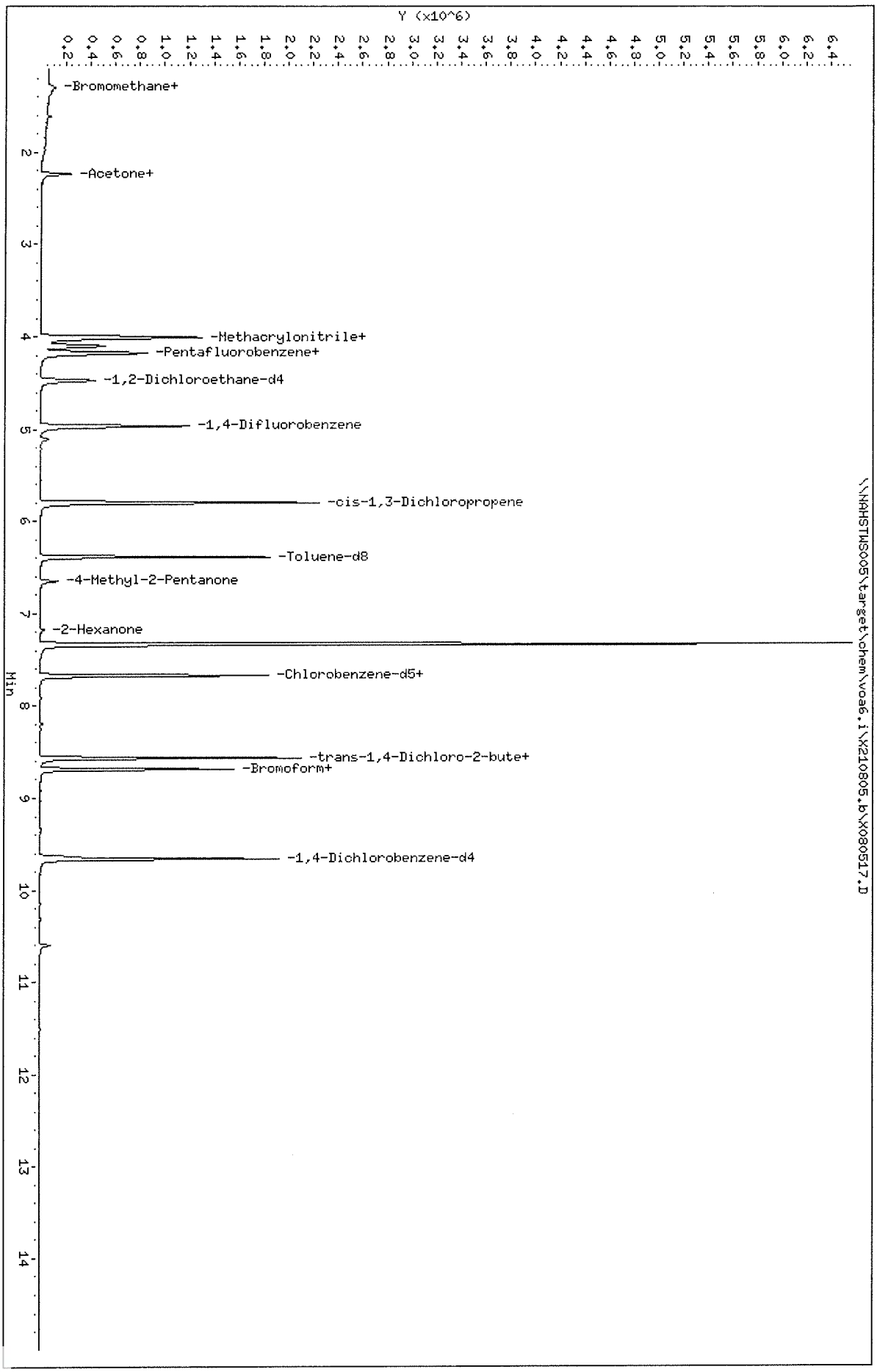
ALS Laboratory Group

Data file : \\NAHSTWS005\target\chem\voa6.i\X210805.b\X080517.D
Lab Smp Id: HS21071465-07 Client Smp ID: HS21071465-07
Inj Date : 05-AUG-2021 16:29
Operator : PC Inst ID: voa6.i
Smp Info : HS21071465-07;HS21071465-07;;;
Misc Info : HS18090001;WATER;0;1000;
Comment :
Method : \\NAHSTWS005\target\chem\voa6.i\X210805.b\8260W.m
Meth Date : 10-Sep-2021 16:17 Genoveva.R Quant Type: ISTD
Cal Date : 30-JUL-2021 13:56 Cal File: X073008.D
Als bottle: 17
Dil Factor: 1000.00000
Integrator: HP RTE Compound Sublist: 0474-dod.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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

Name	Value	Description
DF	1000.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	808114	50.0000	
$ 30 Dibromofluoromethane	113	4.096	4.103	(0.979)	345550	45.5067	45.50
$ 35 1,2-Dichloroethane-d4	65	4.469	4.469	(1.068)	323885	44.8352	44.83
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	1064491	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	974935	50.0000	
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	1139310	49.8218	49.82
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	384270	46.9395	46.93
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	483255	50.0000	



Data File: \\NAHSTWS005\target\chem\voa6.i\X210805.b\X080517.D
Date : 05-AUG-2021 16:29
Client ID: HS21071465-07
Sample Info: HS21071465-07;HS21071465-07;;;
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\NAHSTWS005\target\chem\voa6.i\X210805.b\X080519.D Page 1
Report Date: 10-Sep-2021 16:22

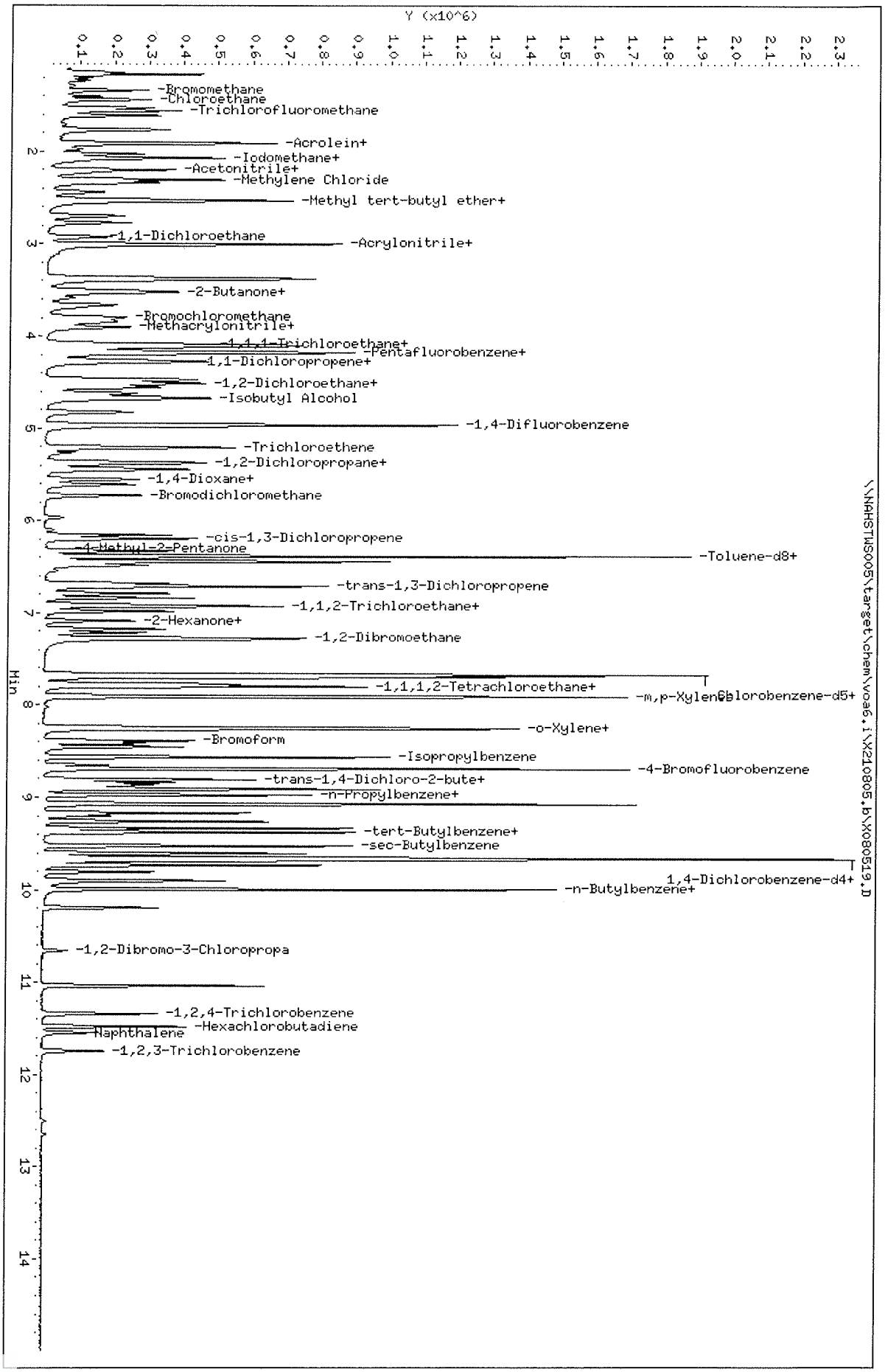
ALS Laboratory Group

Data file : \\NAHSTWS005\target\chem\voa6.i\X210805.b\X080519.D
Lab Smp Id: HS21080176-03MS Client Smp ID: HS21080176-03MS
Inj Date : 05-AUG-2021 17:11
Operator : PC Inst ID: voa6.i
Smp Info : HS21080176-03MS;HS21080176-03MS;3;;MS
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\target\chem\voa6.i\X210805.b\8260W.m
Meth Date : 10-Sep-2021 16:22 voa6.i Quant Type: ISTD
Cal Date : 30-JUL-2021 13:56 Cal File: X073008.D
Als bottle: 19 QC Sample: MS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0474-dod.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	4.182	(1.000)	816507	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.096	(0.981)	350400	45.6748	45.67
$ 35 1,2-Dichloroethane-d4	65	4.469	4.469	(1.069)	331612	45.4447	45.44
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	1055848	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.670	(1.000)	969069	50.0000	
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	1144504	50.3519	50.35
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	402198	49.4650	49.46
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	514635	50.0000	
5 Vinyl Chloride	62	1.138	1.145	(0.272)	132765	17.0819	17.08
11 1,1-Dichloroethene	96	1.912	1.911	(0.457)	119052	17.3281	17.32
17 Methylene Chloride	84	2.305	2.305	(0.551)	117103	16.9546	16.95
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	139189	16.9943	16.99
33 1,2-Dichloroethane	62	4.555	4.555	(0.918)	144220	17.0266	17.02
38 Trichloroethene	130	5.207	5.206	(1.049)	196283	25.4394	25.43
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	91172	17.9834	17.98



Data File: \\NAHSTWS005\target\chem\voa6.i\X210805.b\X080519.D
Date : 05-AUG-2021 17:11
Client ID: HS21080176-03MS
Sample Info: HS21080176-03MS;HS21080176-03MS;3;;MS
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\NAHSTWS005\target\chem\voa6.i\X210805.b\X080520.D Page 1
Report Date: 10-Sep-2021 16:22

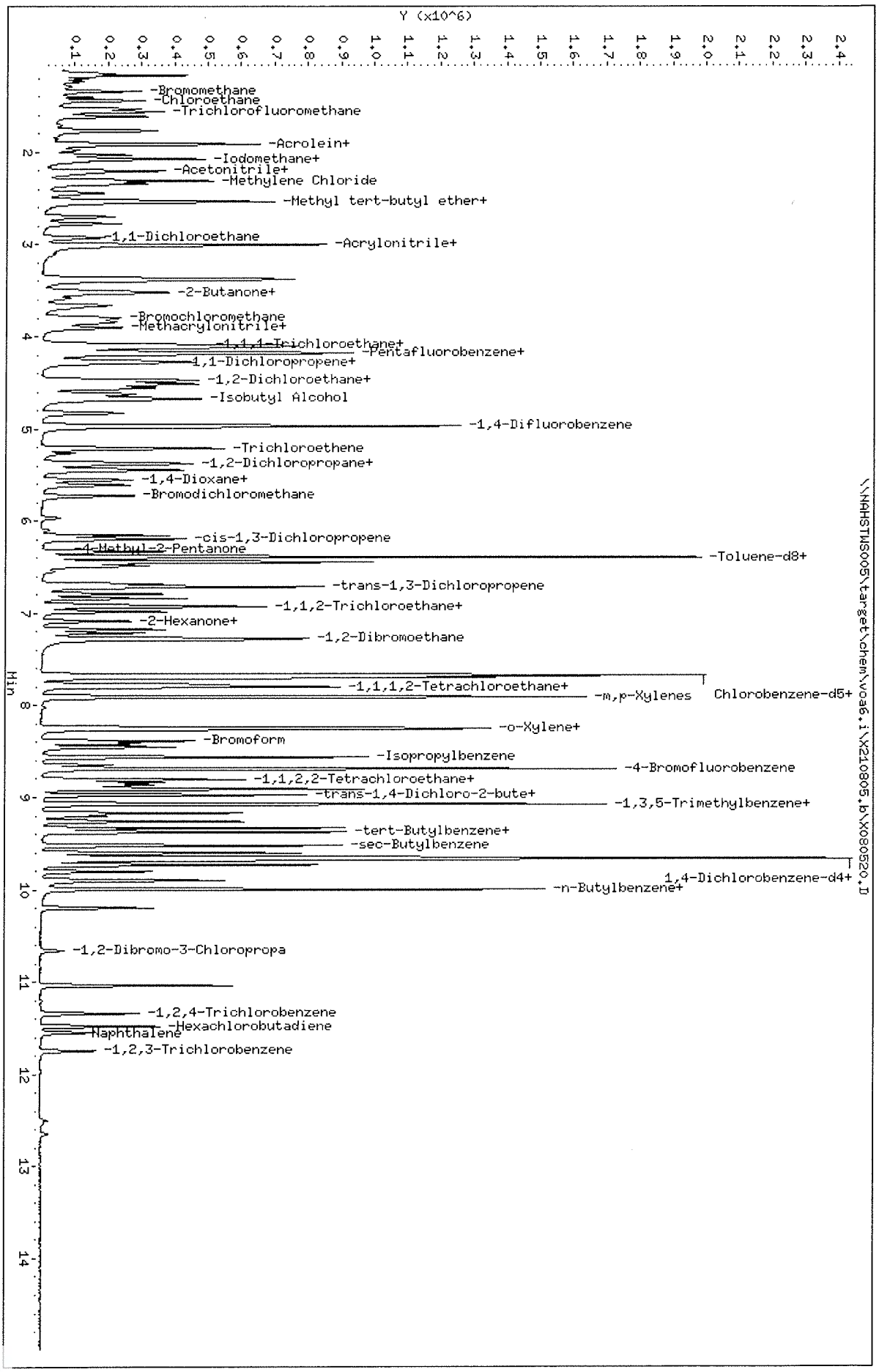
ALS Laboratory Group

Data file : \\NAHSTWS005\target\chem\voa6.i\X210805.b\X080520.D
Lab Smp Id: HS21080176-03MSD Client Smp ID: HS21080176-03MSD
Inj Date : 05-AUG-2021 17:32
Operator : PC Inst ID: voa6.i
Smp Info : HS21080176-03MSD;HS21080176-03MSD;3;;MSD
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\target\chem\voa6.i\X210805.b\8260W.m
Meth Date : 10-Sep-2021 16:22 voa6.i Quant Type: ISTD
Cal Date : 30-JUL-2021 13:56 Cal File: X073008.D
Als bottle: 19 QC Sample: MSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0474-dod.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	4.182	(1.000)	860879	50.0000	
$ 30 Dibromofluoromethane	113	4.096	4.096	(0.979)	370417	45.7980	45.79
$ 35 1,2-Dichloroethane-d4	65	4.469	4.469	(1.068)	337388	43.8223	43.82
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	1111798	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.670	(1.000)	1012865	50.0000	
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	1200317	50.5240	50.52
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	419385	49.3469	49.34
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	525915	50.0000	
5 Vinyl Chloride	62	1.138	1.145	(0.272)	123947	15.1254	15.12
11 1,1-Dichloroethene	96	1.912	1.911	(0.457)	116609	16.0977	16.09
17 Methylene Chloride	84	2.306	2.305	(0.551)	113397	15.5534	15.55
27 cis-1,2-Dichloroethene	96	3.523	3.530	(0.842)	136295	15.7833	15.78
33 1,2-Dichloroethane	62	4.555	4.555	(0.918)	150376	16.8599	16.85
38 Trichloroethene	130	5.207	5.206	(1.049)	191312	23.5473	23.54
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	89861	16.9584	16.95



Data File: \\NAHSTWS005\target\chem\voa6.i\X210805.b\X080520.D
Date : 05-AUG-2021 17:32
Client ID: HS21080176-03HSD
Sample Info: HS21080176-03HSD;HS21080176-03HSD;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\X210805.b\X080522.D Page 1
Report Date: 10-Sep-2021 16:19

ALS Laboratory Group

Data file : \\NAHSTWS005\target\chem\voa6.i\X210805.b\X080522.D
Lab Smp Id: HS21071465-01 Client Smp ID: HS21071465-01
Inj Date : 05-AUG-2021 18:14
Operator : PC Inst ID: voa6.i
Smp Info : HS21071465-01;HS21071465-01;;;
Misc Info : HS18090001;WATER;0;25;
Comment :
Method : \\NAHSTWS005\target\chem\voa6.i\X210805.b\8260W.m
Meth Date : 10-Sep-2021 16:17 Genoveva.R Quant Type: ISTD
Cal Date : 30-JUL-2021 13:56 Cal File: X073008.D
Als bottle: 21
Dil Factor: 25.00000
Integrator: HP RTE Compound Sublist: 0474-dod.sub
Target Version: 4.14
Processing Host: NAHSTW7056

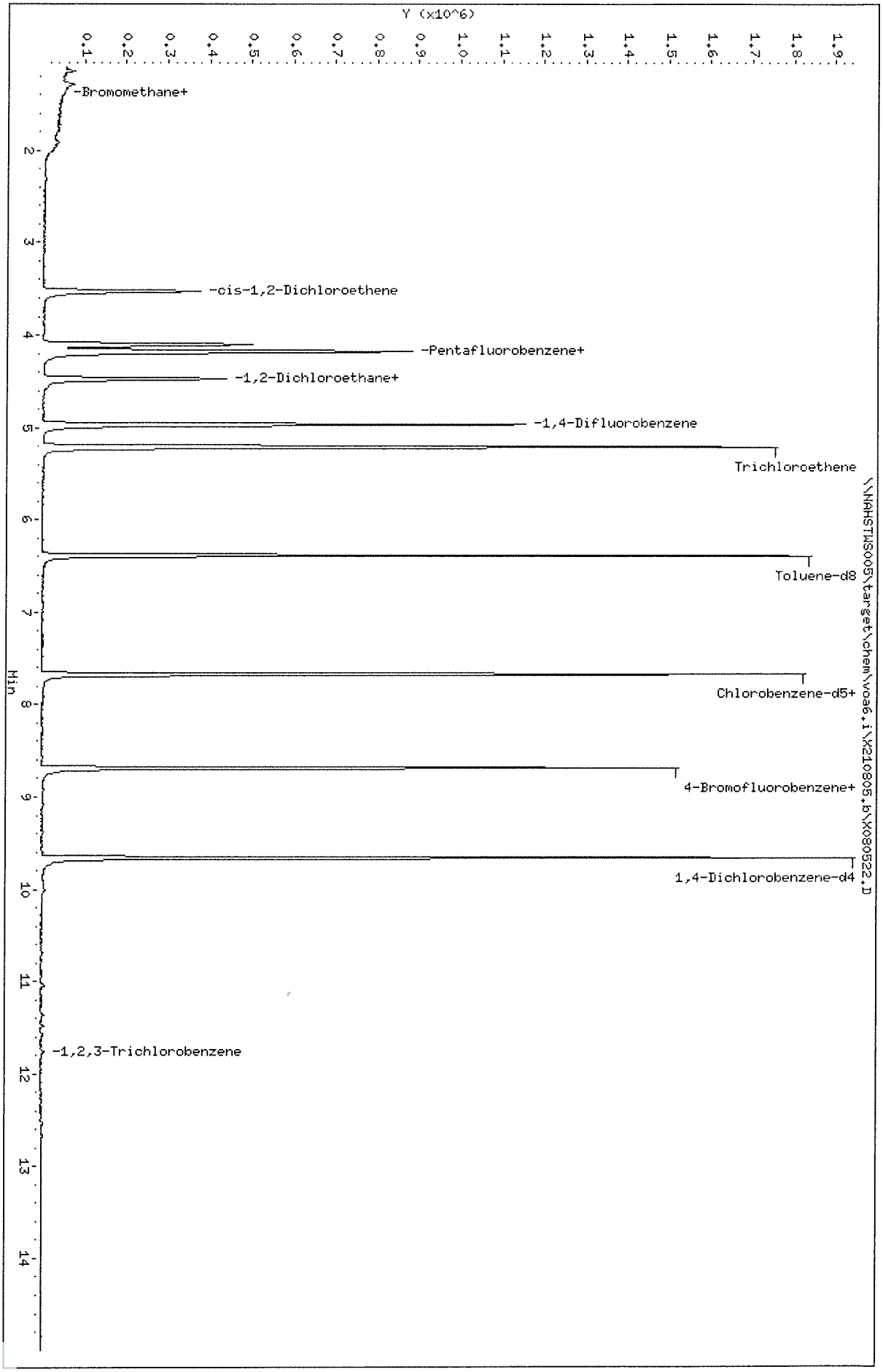
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	25.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
*	1 Pentafluorobenzene	168	4.182	4.182	(1.000)	817131	50.0000	
$	30 Dibromofluoromethane	113	4.103	4.103	(0.981)	346088	45.0649	45.06
$	35 1,2-Dichloroethane-d4	65	4.469	4.469	(1.069)	325755	44.5918	44.59
*	36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	1060481	50.0000	
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	954961	50.0000	
$	48 Toluene-d8	98	6.388	6.388	(0.833)	1151648	51.4147	51.41
$	69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	396093	49.4334	49.43
*	70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	490422	50.0000	
	5 Vinyl Chloride	62	1.145	1.138	(0.274)	14679	1.88719	47.17(a)
	27 cis-1,2-Dichloroethene	96	3.530	3.523	(0.844)	215242	26.2600	656.49
	33 1,2-Dichloroethane	62	4.562	4.555	(0.919)	6892	0.81011	20.25(a)
	38 Trichloroethene	130	5.207	5.207	(1.049)	610535	78.7830	1969.57

QC Flag Legend

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



Data File: \\NAHSTWS005\target\chem\voa6.i\X210805.b\X080522.D
Date : 05-AUG-2021 18:14
Client ID: HS21071465-01
Sample Info: HS21071465-01;HS21071465-01;;;
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\NAHSTWS005\target\chem\voa6.i\X210805.b\X080522.D Page 3

Date : 05-AUG-2021 18:14

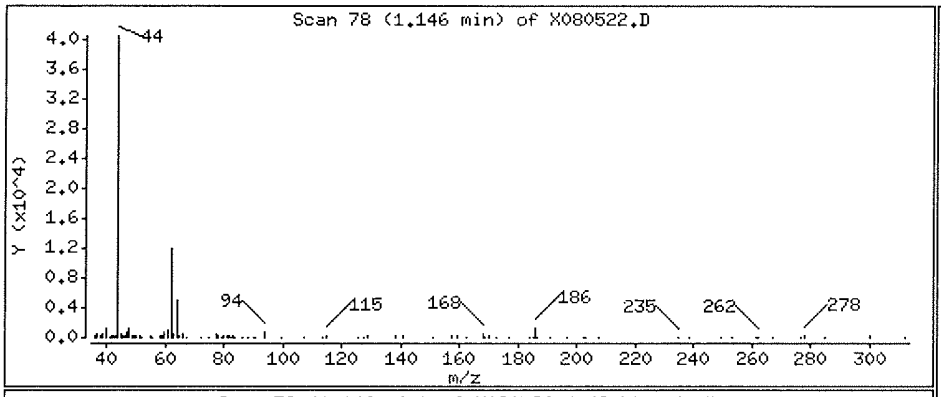
Client ID: HS21071465-01 Instrument: voa6.i

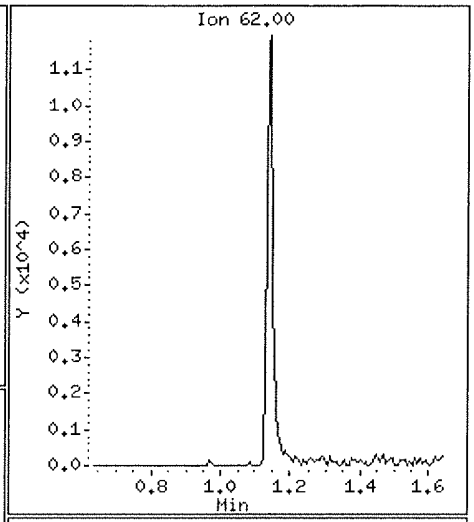
Sample Info: HS21071465-01;HS21071465-01;;;

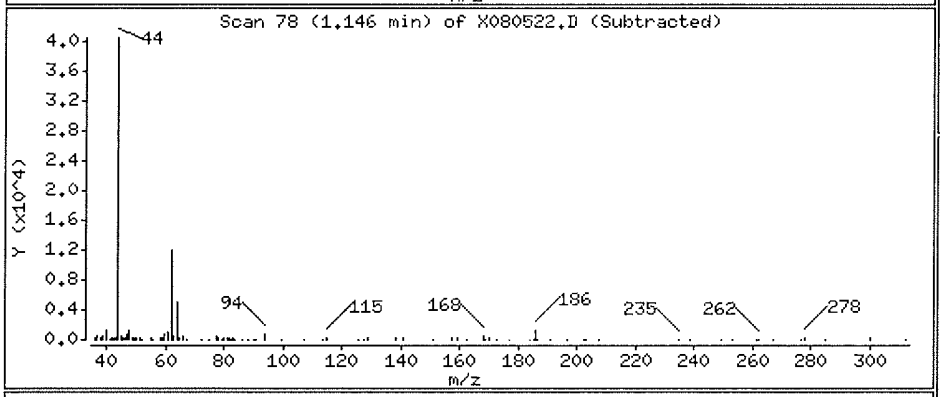
Purge Volume: 5.0 Operator: PC

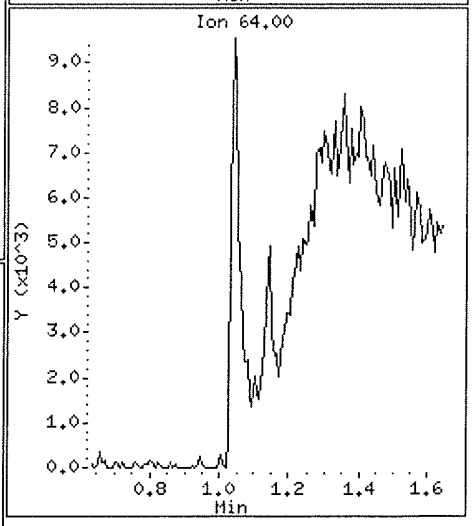
Column phase: DB624 Column diameter: 0.18

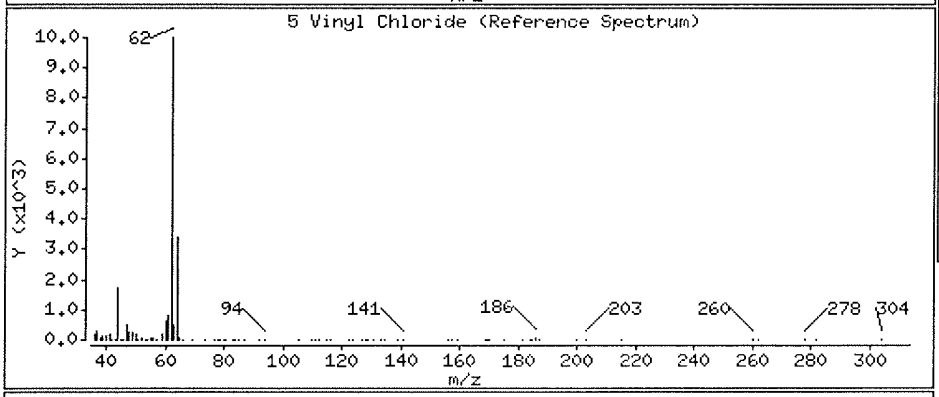
5 Vinyl Chloride Concentration: 47.17 ug/l

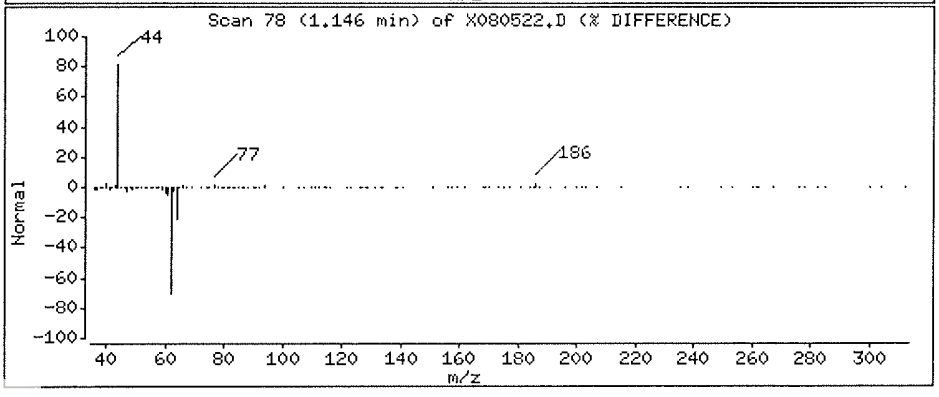












Data File: \\NAHSTWS005\target\chem\voa6.i\X210805.b\X080522.D

Date : 05-AUG-2021 18:14

Client ID: HS21071465-01

Instrument: voa6.i

Sample Info: HS21071465-01;HS21071465-01;;;

Purge Volume: 5.0

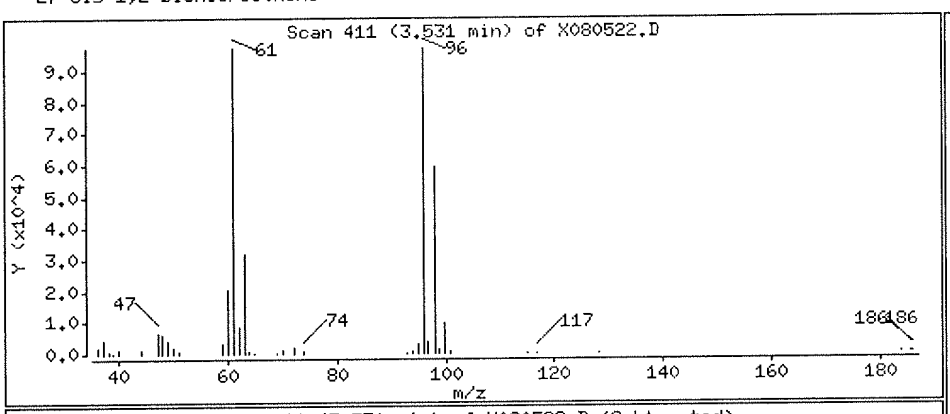
Operator: PC

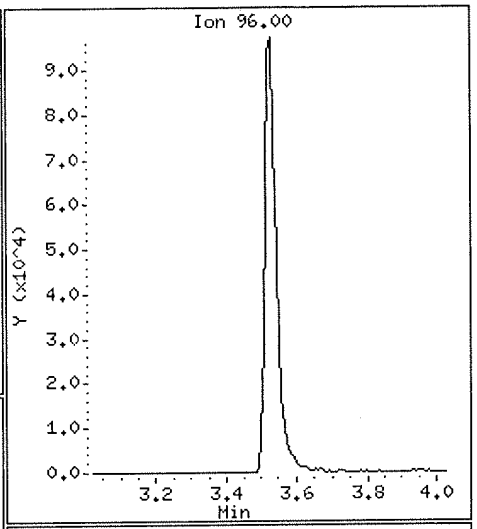
Column phase: DB624

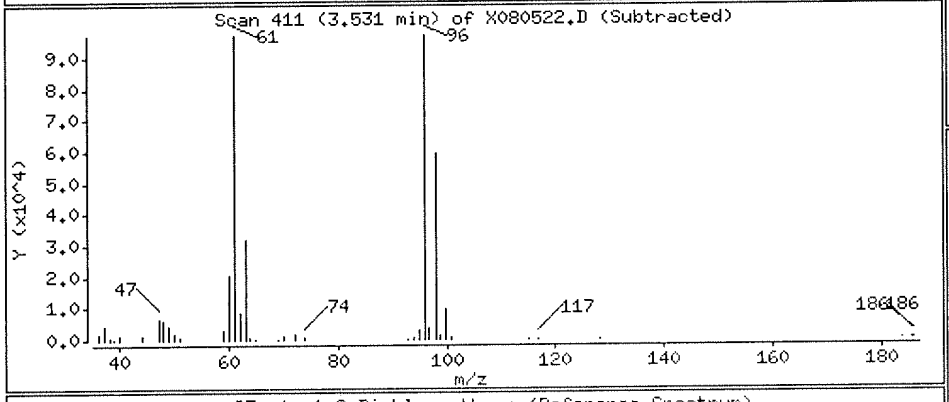
Column diameter: 0.18

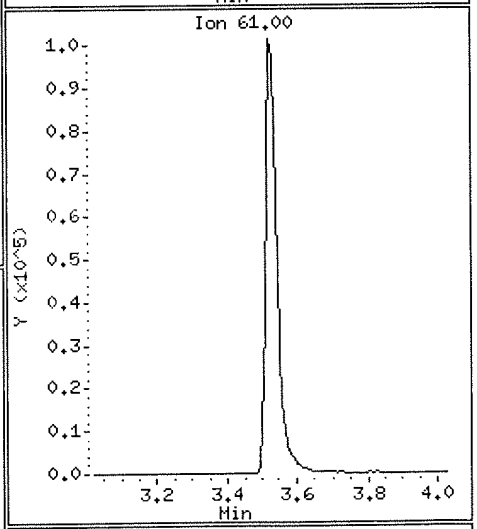
27 cis-1,2-Dichloroethene

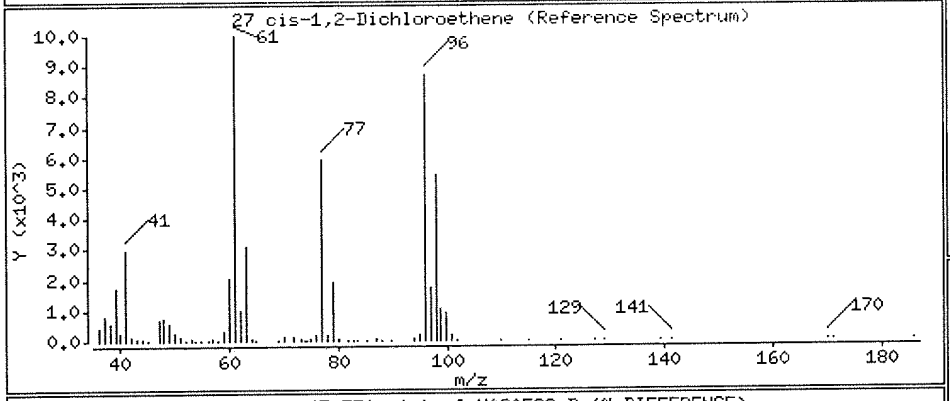
Concentration: 656.49 ug/l

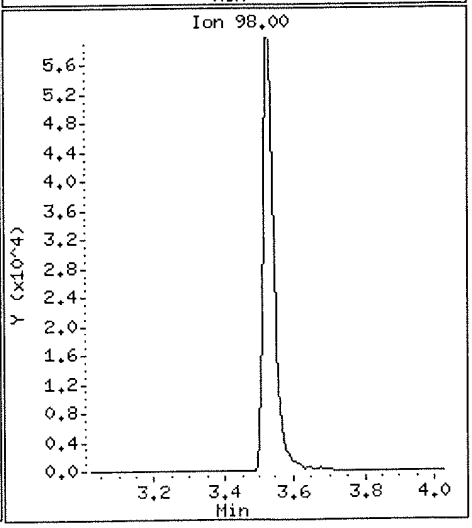


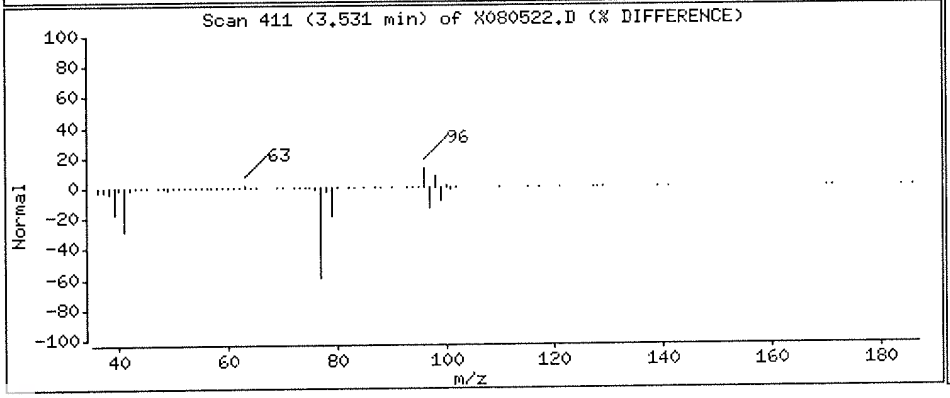












Data File: \\NAHSTWS005\target\chem\voa6.i\X210805.b\X080522.D Page 5

Date : 05-AUG-2021 18:14

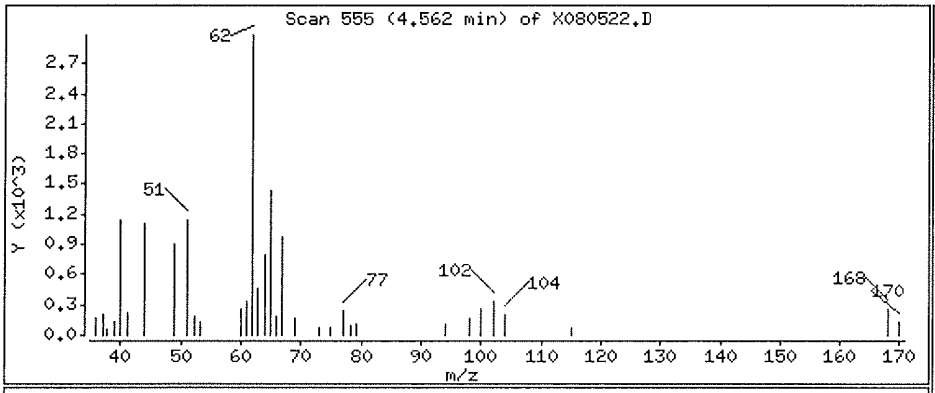
Client ID: HS21071465-01 Instrument: voa6.i

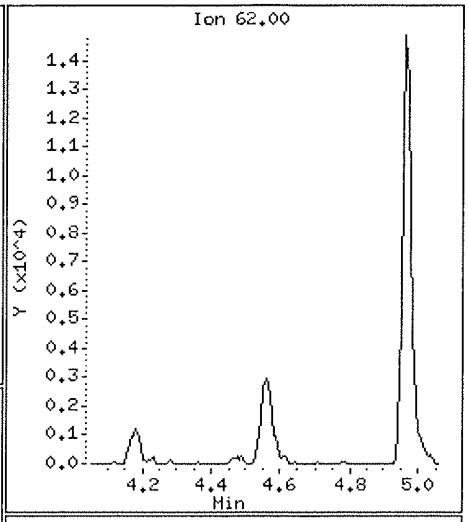
Sample Info: HS21071465-01;HS21071465-01;;;

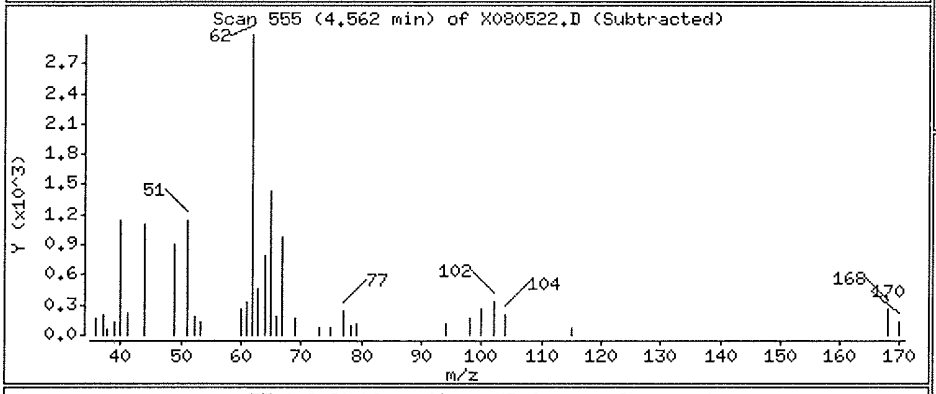
Purge Volume: 5.0 Operator: PC

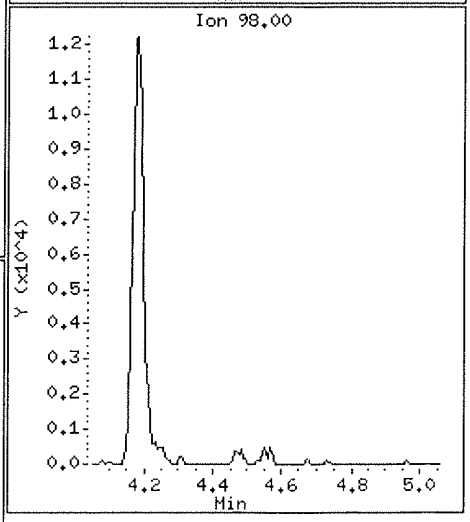
Column phase: DB624 Column diameter: 0.18

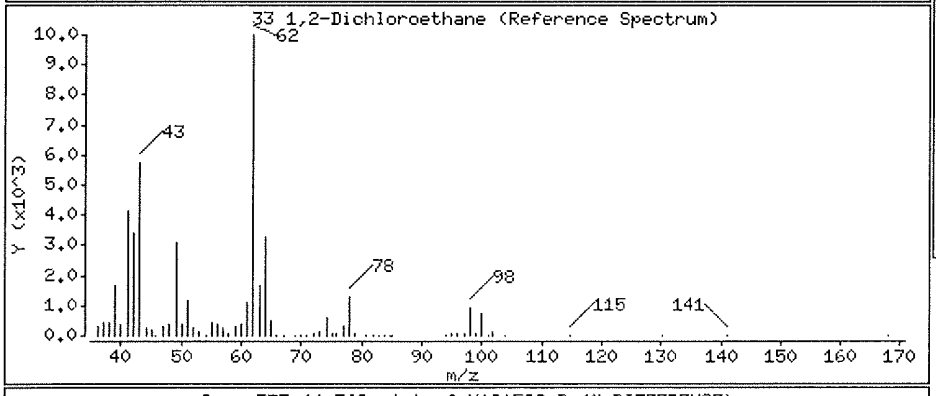
33 1,2-Dichloroethane Concentration: 20.25 ug/l

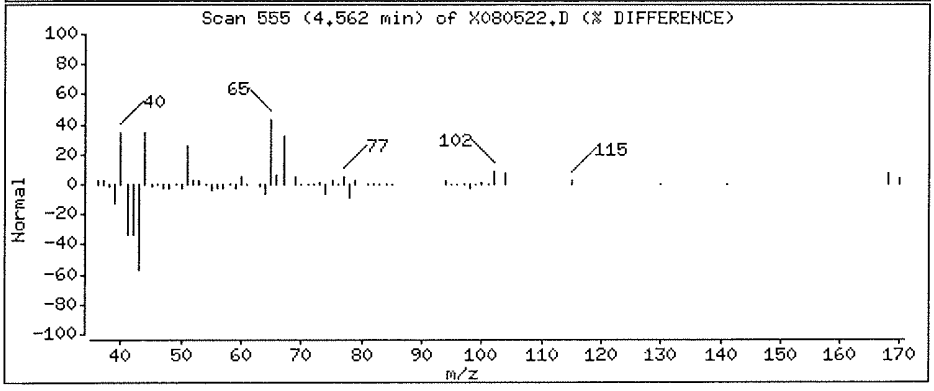












Data File: \\NAHSTWS005\target\chem\voa6.i\X210805.b\X080522.D

Date : 05-AUG-2021 18:14

Client ID: HS21071465-01

Instrument: voa6.i

Sample Info: HS21071465-01;HS21071465-01;;;

Purge Volume: 5.0

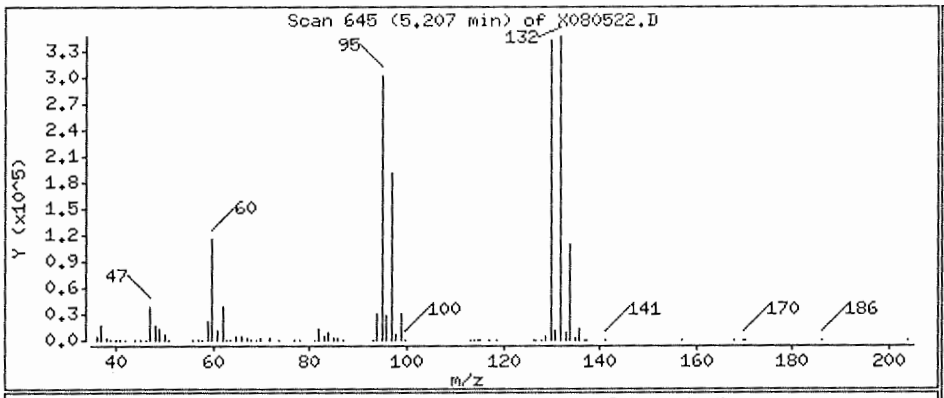
Operator: PC

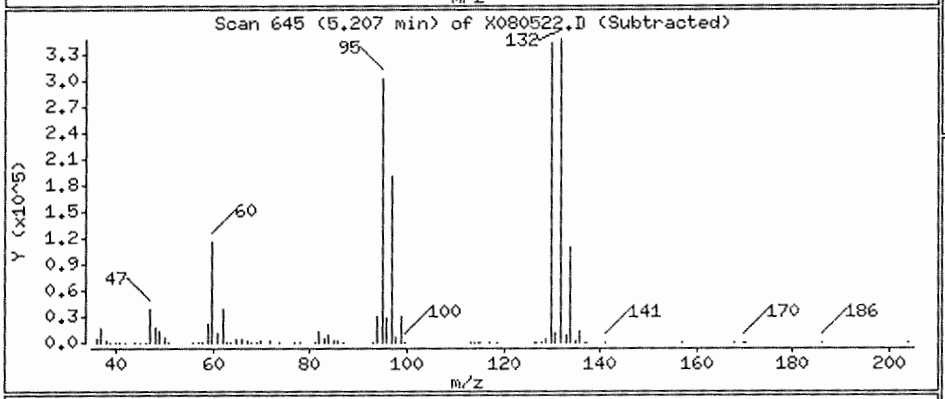
Column phase: DB624

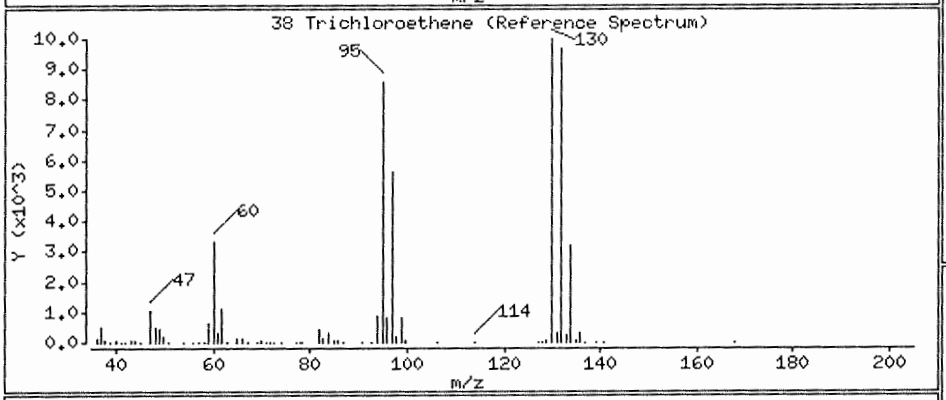
Column diameter: 0.18

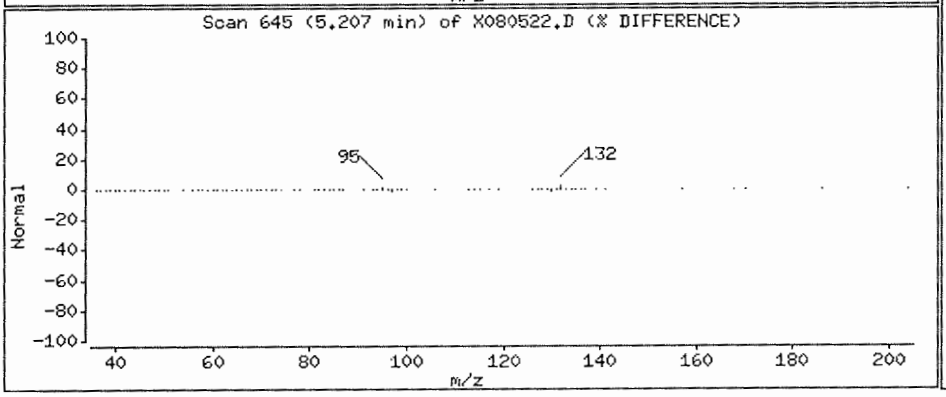
38 Trichloroethene

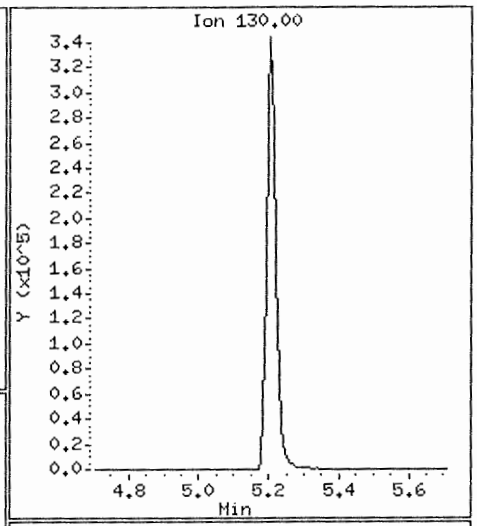
Concentration: 1969.57 ug/l

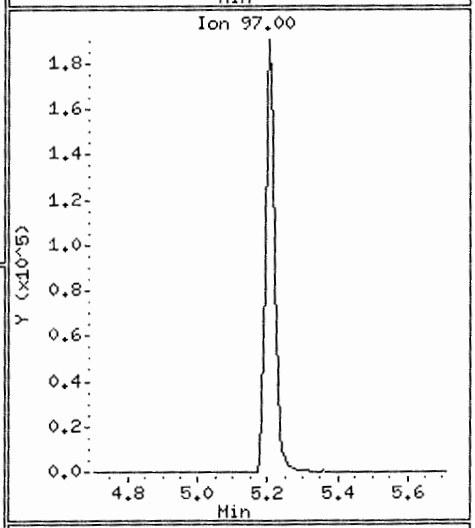


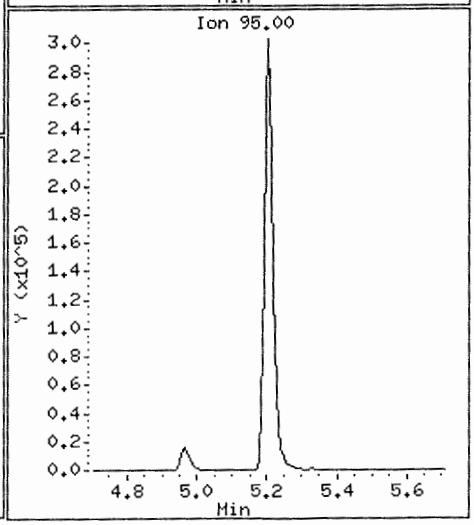












Data File: \\NAHSTWS005\target\chem\voa6.i\X210805.b\X080523.D Page 1
Report Date: 10-Sep-2021 16:19

ALS Laboratory Group

Data file : \\NAHSTWS005\target\chem\voa6.i\X210805.b\X080523.D
Lab Smp Id: HS21071465-06 Client Smp ID: HS21071465-06
Inj Date : 05-AUG-2021 18:35
Operator : PC Inst ID: voa6.i
Smp Info : HS21071465-06;HS21071465-06;;;
Misc Info : HS18090001;WATER;0;25;
Comment :
Method : \\NAHSTWS005\target\chem\voa6.i\X210805.b\8260W.m
Meth Date : 10-Sep-2021 16:17 Genoveva.R Quant Type: ISTD
Cal Date : 30-JUL-2021 13:56 Cal File: X073008.D
Als bottle: 22
Dil Factor: 25.00000
Integrator: HP RTE Compound Sublist: 0474-dod.sub
Target Version: 4.14
Processing Host: NAHSTW7056

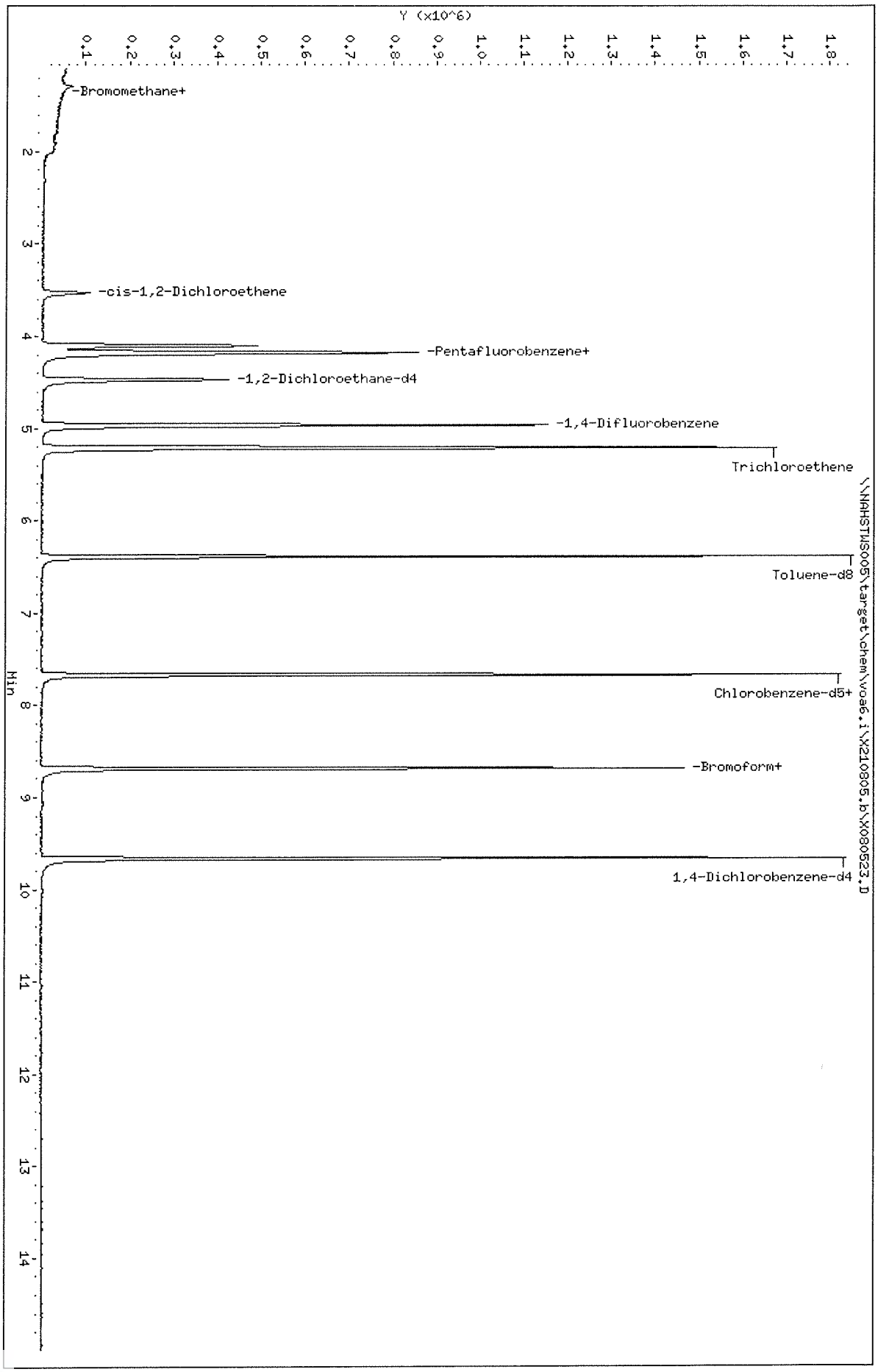
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	25.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	794523	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	347671	46.5931	46.59
$ 35 1,2-Dichloroethane-d4	65	4.468	4.469	(1.069)	315684	44.4399	44.43
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	1048423	50.0000	
* 47 Chlorobenzene-d5	117	7.670	7.671	(1.000)	947792	50.0000	
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	1121453	50.4454	50.44
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	382622	48.0942	48.09
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	476521	50.0000	
5 Vinyl Chloride	62	1.145	1.138	(0.274)	3051	0.40341	10.08(a)
27 cis-1,2-Dichloroethene	96	3.530	3.523	(0.844)	59135	7.41988	185.49
38 Trichloroethene	130	5.206	5.207	(1.049)	583765	76.1950	1904.87

QC Flag Legend

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



Data File: \\NAHSTWS005\target\chem\voa6.i\X210805.b\X080523.D
Date : 05-AUG-2021 18:35
Client ID: HS21071465-06
Sample Info: HS21071465-06;HS21071465-06;;;
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\NAHSTWS005\target\chem\voa6.i\X210805.b\X080523.D

Date : 05-AUG-2021 18:35

Client ID: HS21071465-06

Instrument: voa6.i

Sample Info: HS21071465-06;HS21071465-06;;;

Purge Volume: 5.0

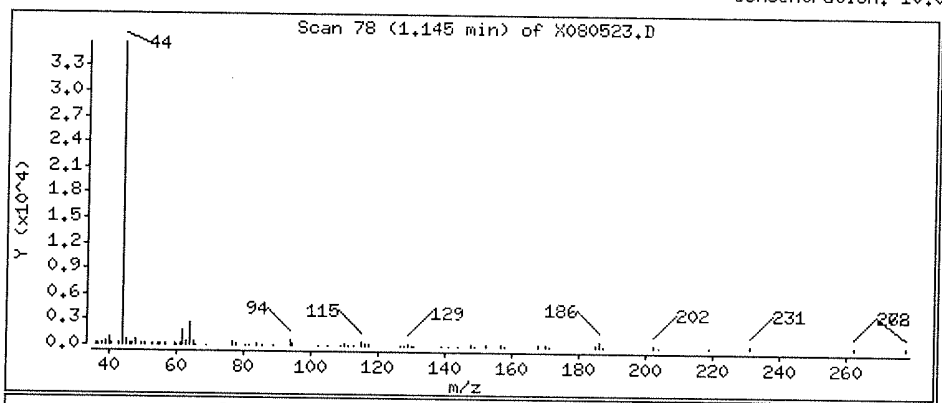
Operator: PC

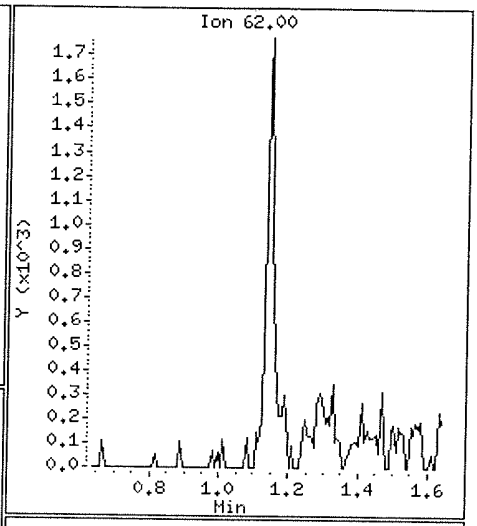
Column phase: DB624

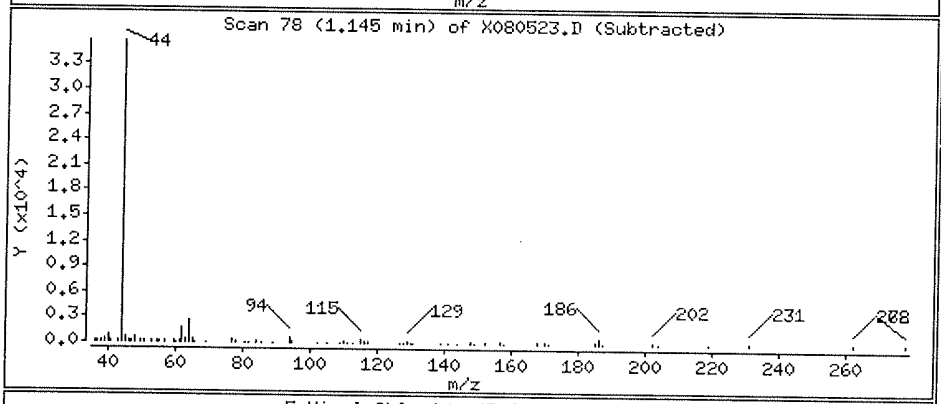
Column diameter: 0.18

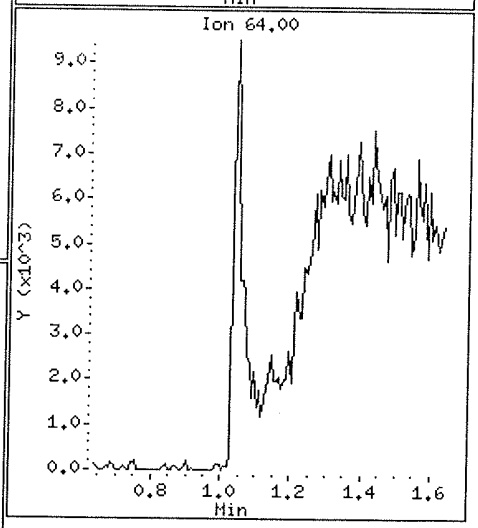
5 Vinyl Chloride

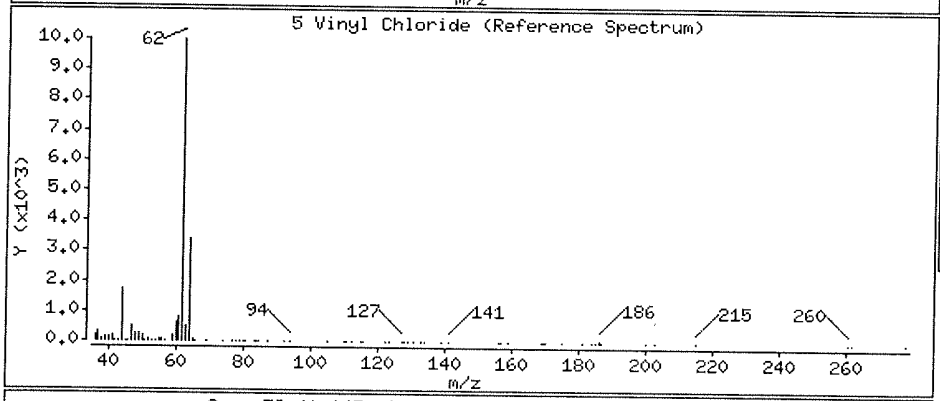
Concentration: 10.08 ug/l

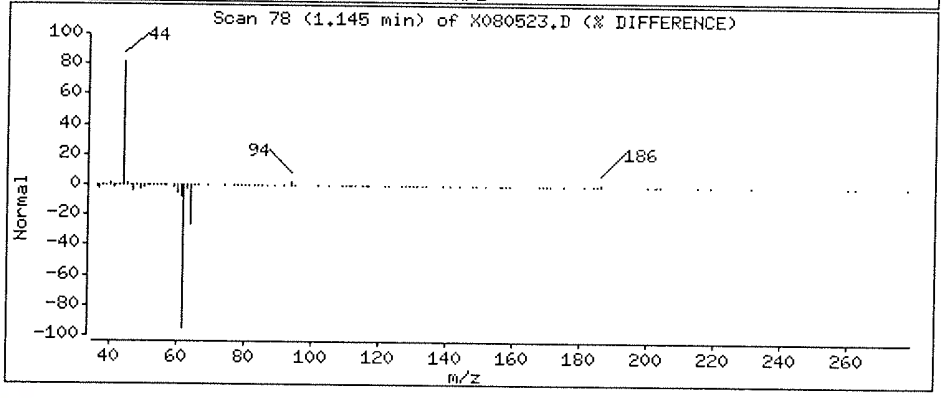












Data File: \\NAHSTWS005\target\chem\voa6.i\X210805.b\X080523.D

Date : 05-AUG-2021 18:35

Client ID: HS21071465-06

Instrument: voa6.i

Sample Info: HS21071465-06;HS21071465-06;;;

Purge Volume: 5.0

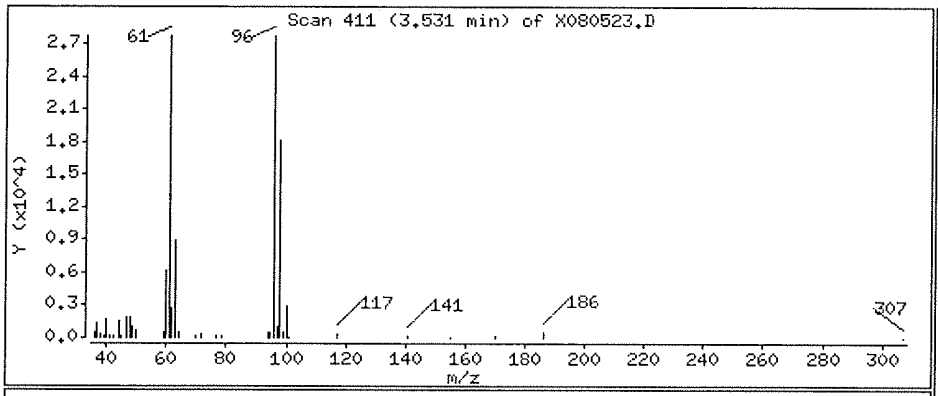
Operator: PC

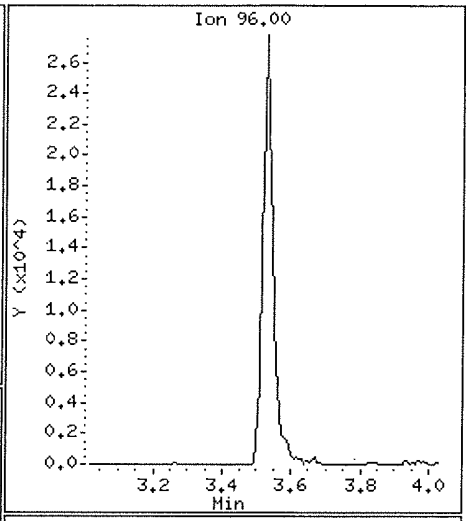
Column phase: DB624

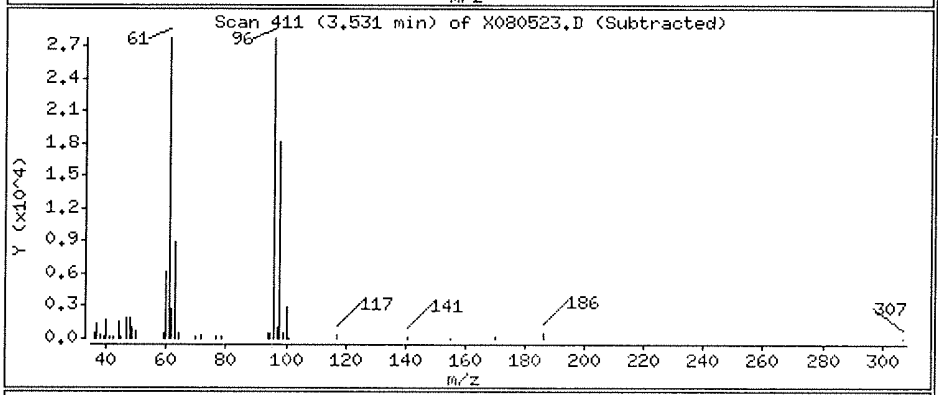
Column diameter: 0.18

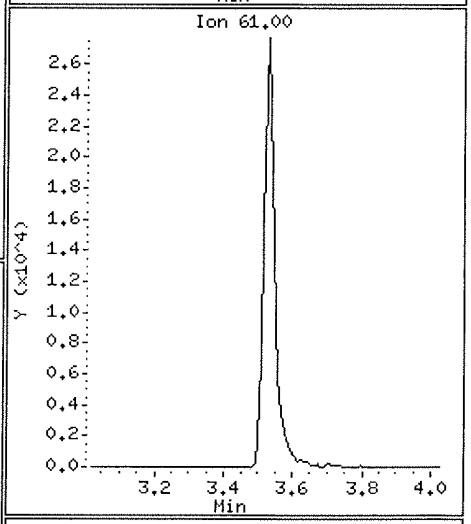
27 cis-1,2-Dichloroethene

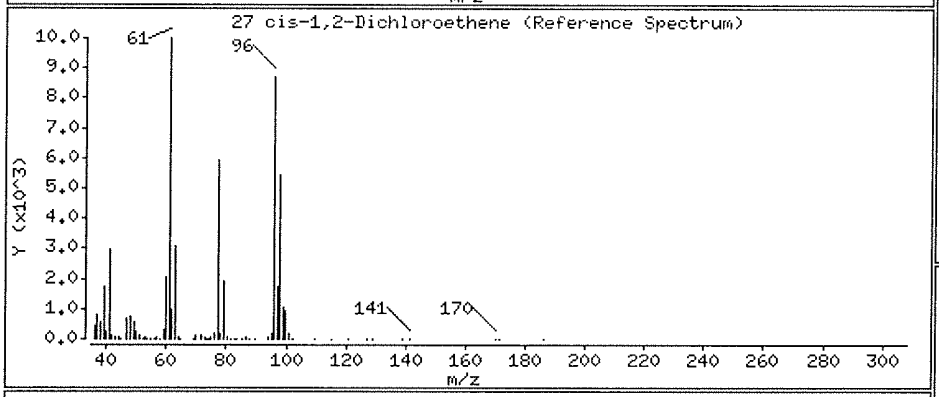
Concentration: 185.49 ug/l

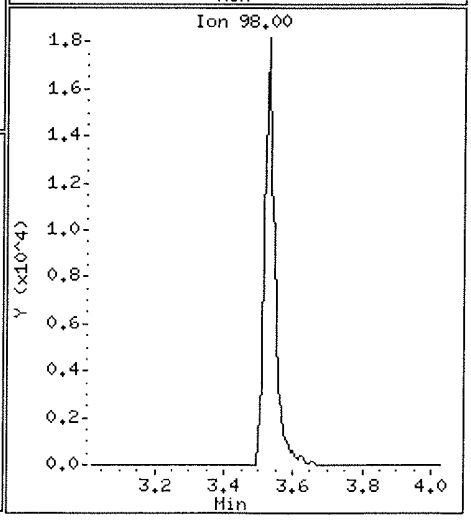


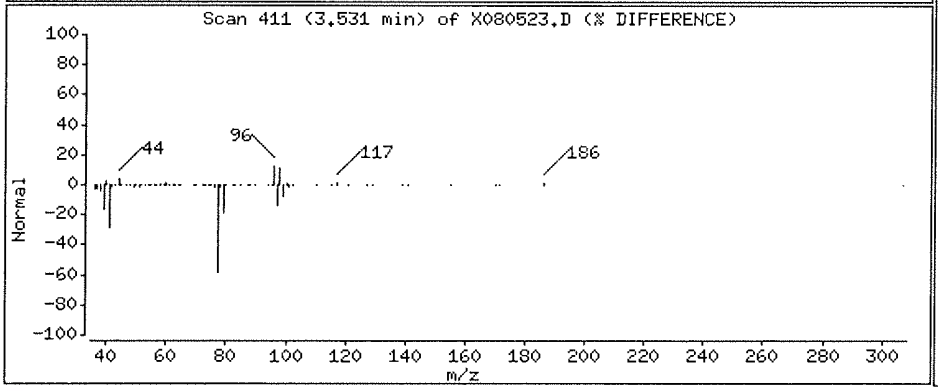












Data File: \\NAHSTWS005\target\chem\voa6.i\X210805.b\X080523.D

Date : 05-AUG-2021 18:35

Client ID: HS21071465-06

Instrument: voa6.i

Sample Info: HS21071465-06;HS21071465-06;;;

Purge Volume: 5.0

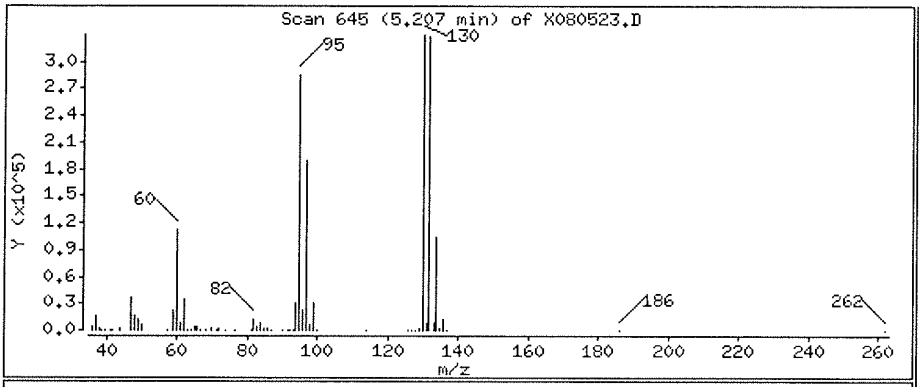
Operator: PC

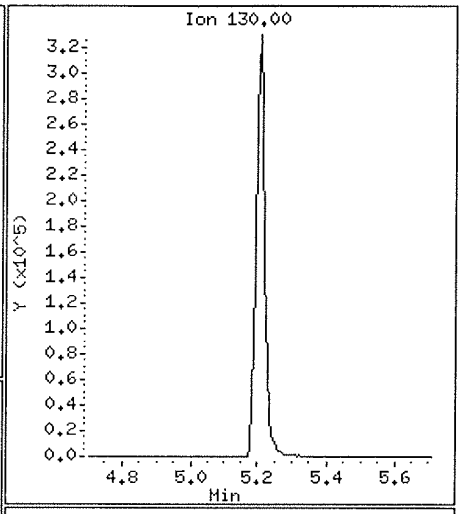
Column phase: DB624

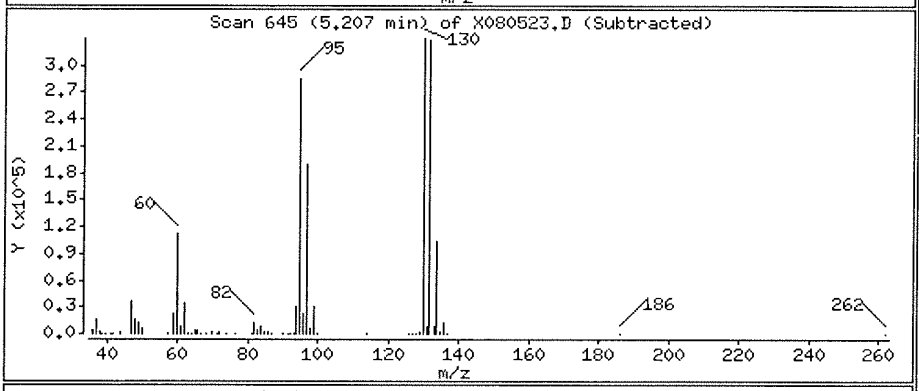
Column diameter: 0.18

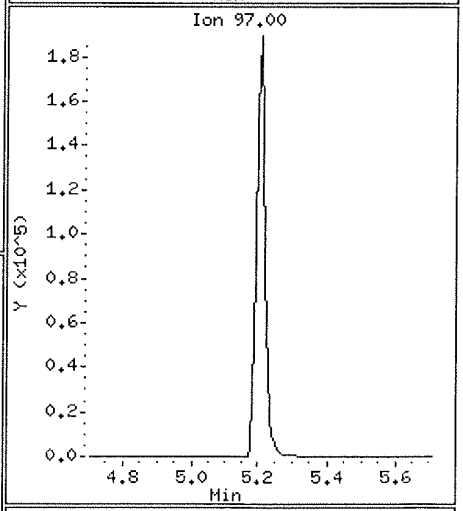
38 Trichloroethene

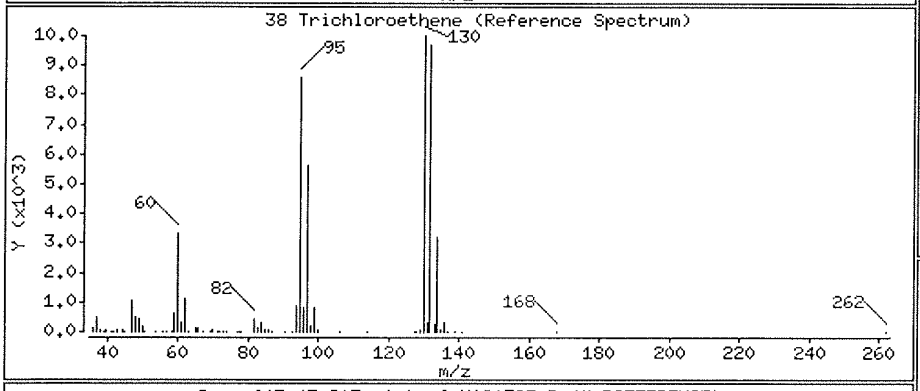
Concentration: 1904.87 ug/l

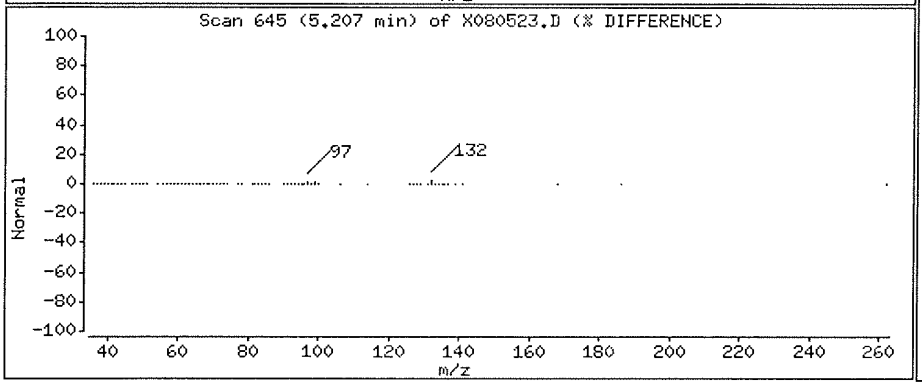


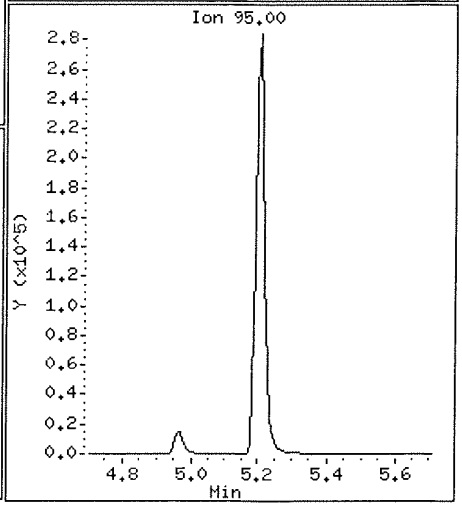












Data File: \\NAHSTWS005\target\chem\voa6.i\X210805.b\X080524.D Page 1
Report Date: 10-Sep-2021 16:19

ALS Laboratory Group

Data file : \\NAHSTWS005\target\chem\voa6.i\X210805.b\X080524.D
Lab Smp Id: HS21071465-02 Client Smp ID: HS21071465-02
Inj Date : 05-AUG-2021 18:56
Operator : PC Inst ID: voa6.i
Smp Info : HS21071465-02;HS21071465-02;;;
Misc Info : HS18090001;WATER;0;5;
Comment :
Method : \\NAHSTWS005\target\chem\voa6.i\X210805.b\8260W.m
Meth Date : 10-Sep-2021 16:17 Genoveva.R Quant Type: ISTD
Cal Date : 30-JUL-2021 13:56 Cal File: X073008.D
Als bottle: 23
Dil Factor: 5.00000
Integrator: HP RTE Compound Sublist: 0474-dod.sub
Target Version: 4.14
Processing Host: NAHSTW7056

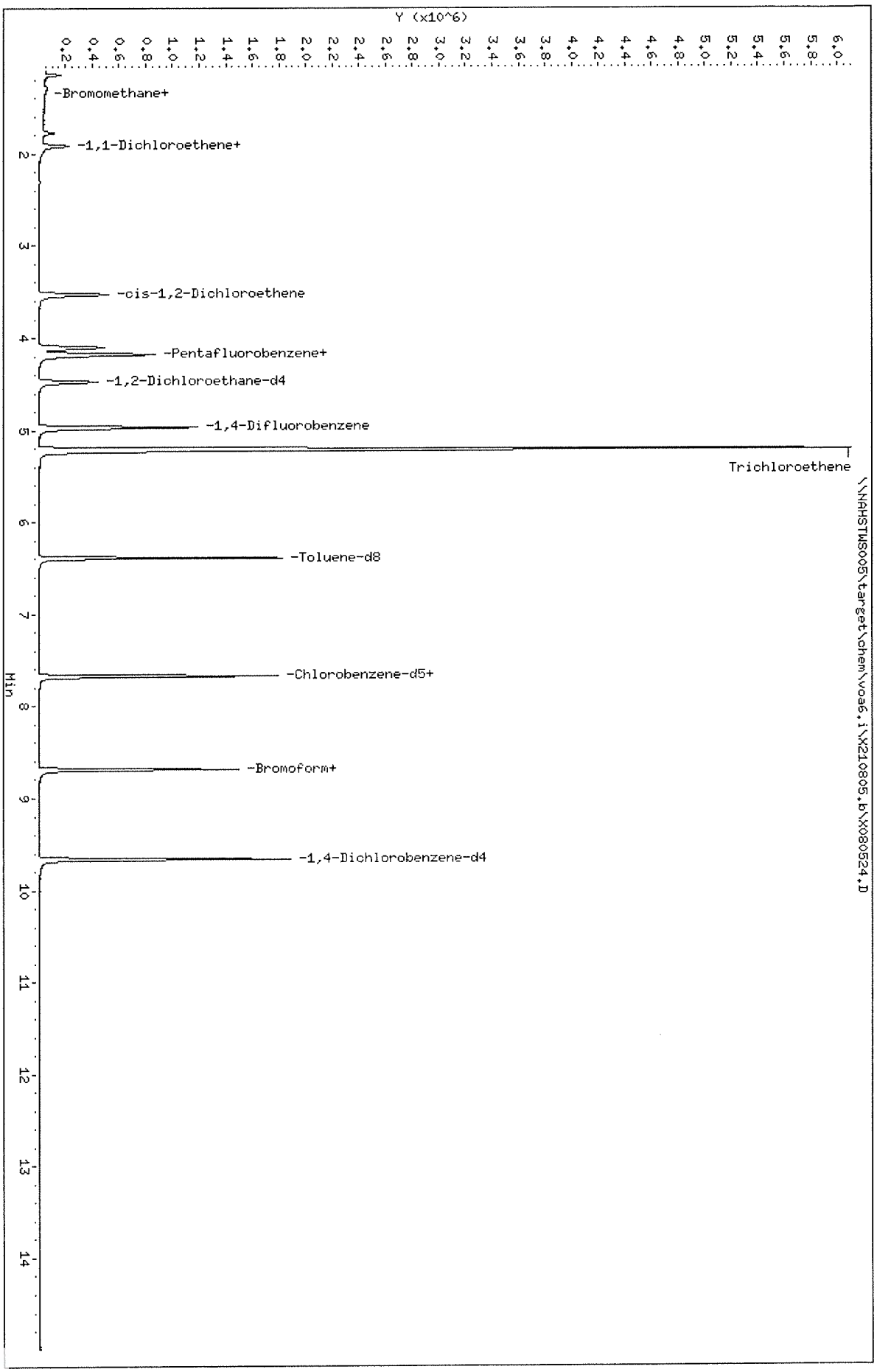
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

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)	CONCENTRATIONS FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	806425	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	344728	45.4932	45.49
$ 35 1,2-Dichloroethane-d4	65	4.469	4.469	(1.069)	321499	44.5935	44.59
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	1061404	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	963673	50.0000	
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	1131990	50.0802	50.08
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	396321	49.0086	49.00
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	498466	50.0000	
5 Vinyl Chloride	62	1.145	1.138	(0.274)	90217	11.7527	58.76
11 1,1-Dichloroethene	96	1.912	1.911	(0.457)	13011	1.91743	9.58(a)
27 cis-1,2-Dichloroethene	96	3.523	3.523	(0.842)	297084	36.7260	183.63
38 Trichloroethene	130	5.207	5.207	(1.049)	2117044	272.944	1364.72(A)

QC Flag Legend

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



Data File: \\NAHSTWS005\target\chem\voa6.i\X210805.b\X080524.D
Date : 05-AUG-2021 18:56
Client ID: HS21071465-02
Sample Info: HS21071465-02;HS21071465-02;;;
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\NAHSTWS005\target\chem\voa6.i\X210805.b\X080524.D

Date : 05-AUG-2021 18:56

Client ID: HS21071465-02

Instrument: voa6.i

Sample Info: HS21071465-02;HS21071465-02;;;

Purge Volume: 5.0

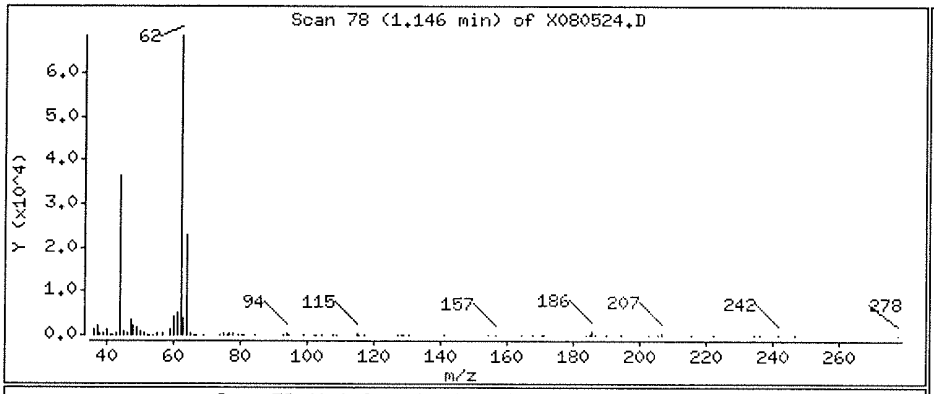
Operator: PC

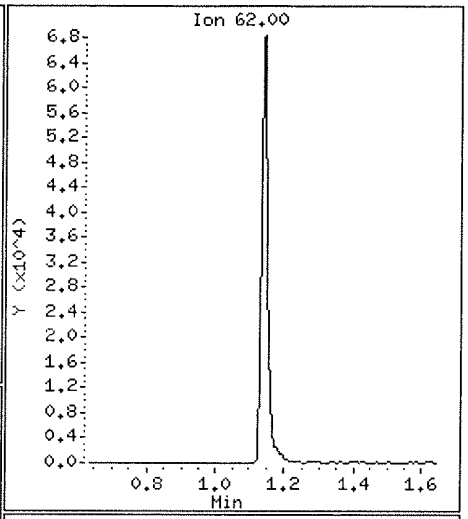
Column phase: DB624

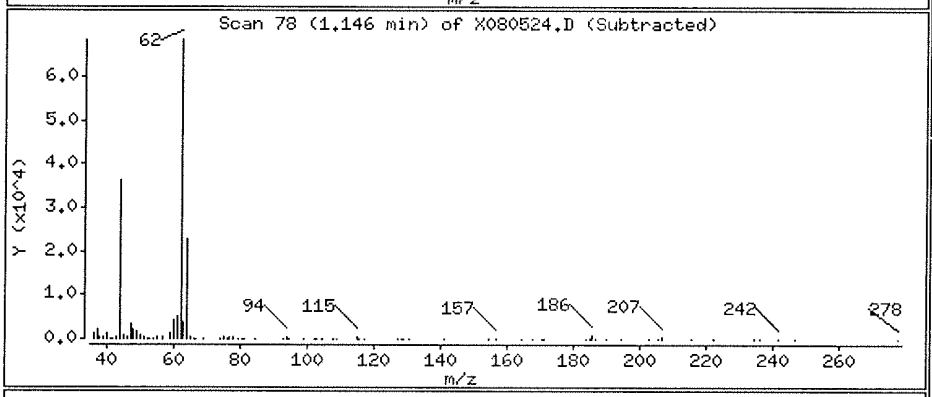
Column diameter: 0.18

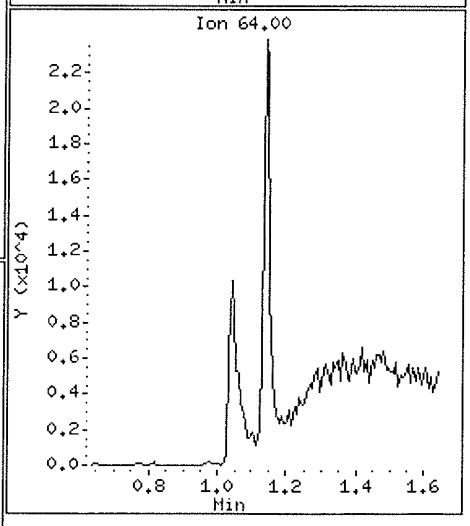
5 Vinyl Chloride

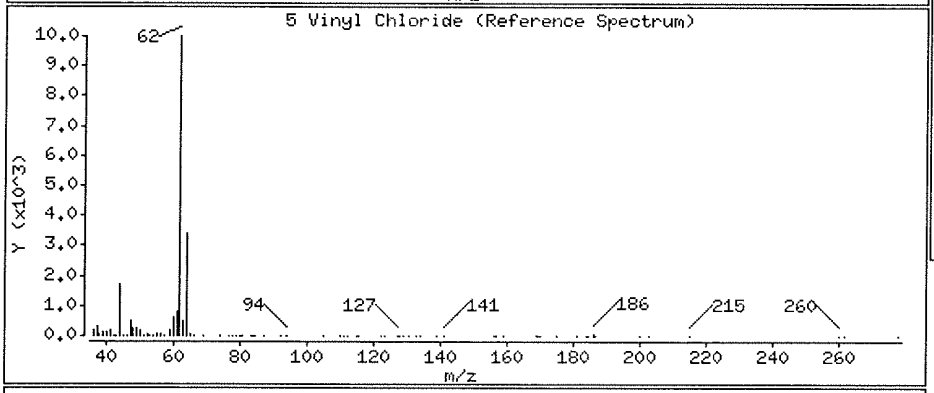
Concentration: 58.76 ug/l

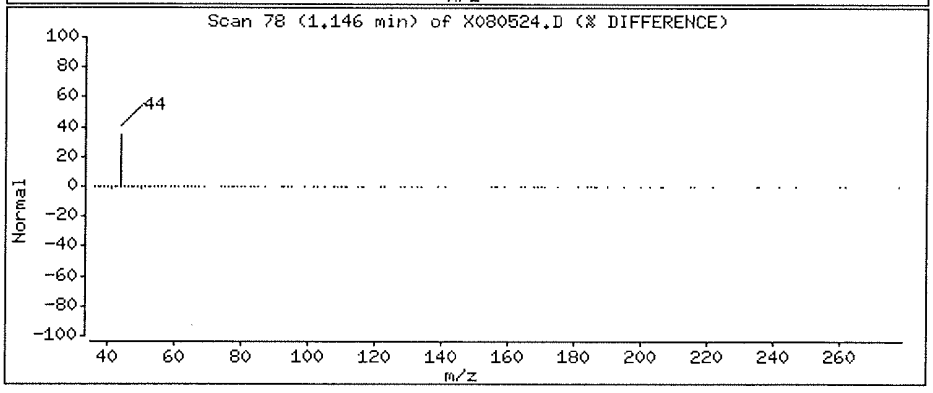












Data File: \\NAHSTWS005\target\chem\voa6.i\X210805.b\X080524.D

Date : 05-AUG-2021 18:56

Client ID: HS21071465-02

Instrument: voa6.i

Sample Info: HS21071465-02;HS21071465-02;;;

Purge Volume: 5.0

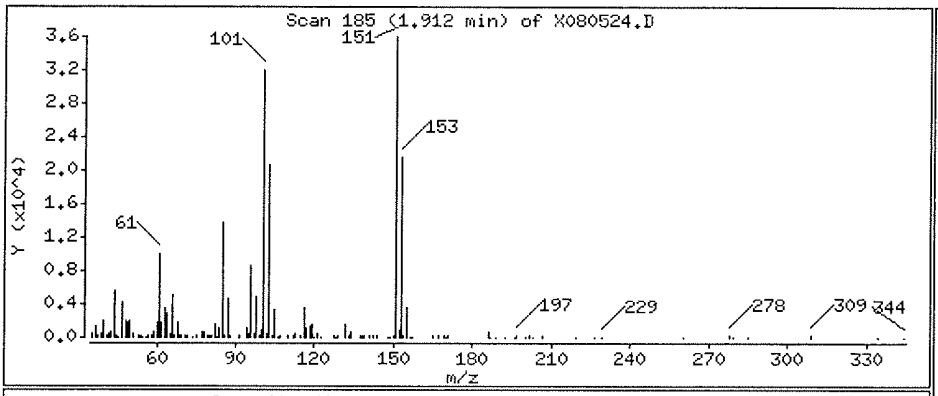
Operator: PC

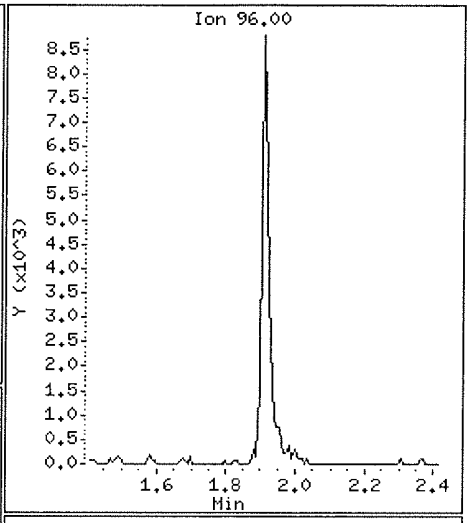
Column phase: DB624

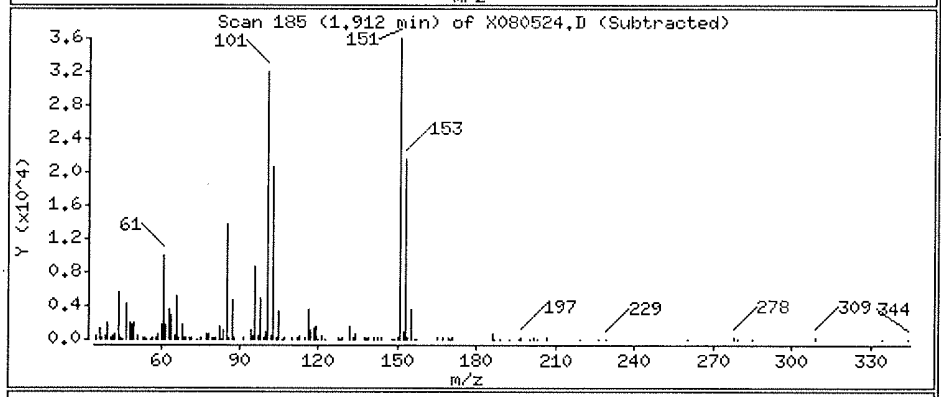
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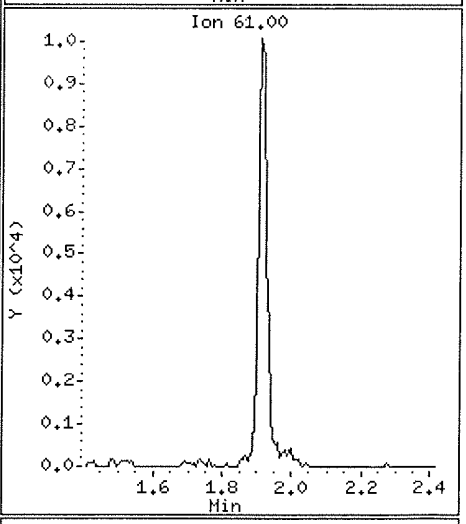
11 1,1-Dichloroethene

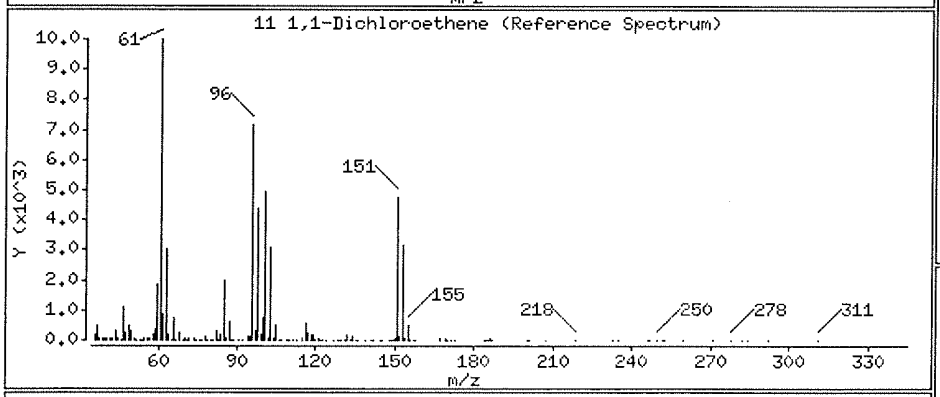
Concentration: 9.58 ug/l

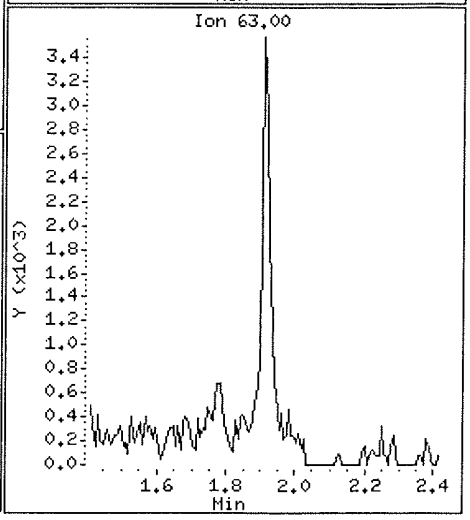


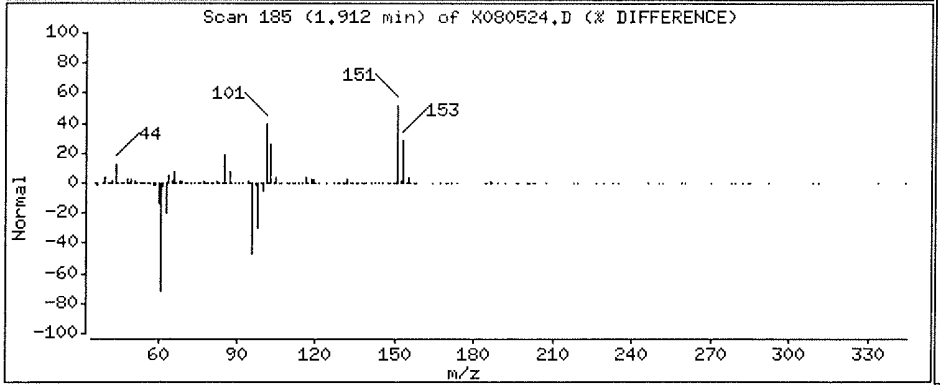












Data File: \\NAHSTWS005\target\chem\voa6.i\X210805.b\X080524.D

Date : 05-AUG-2021 18:56

Client ID: HS21071465-02

Instrument: voa6.i

Sample Info: HS21071465-02;HS21071465-02;;;

Purge Volume: 5.0

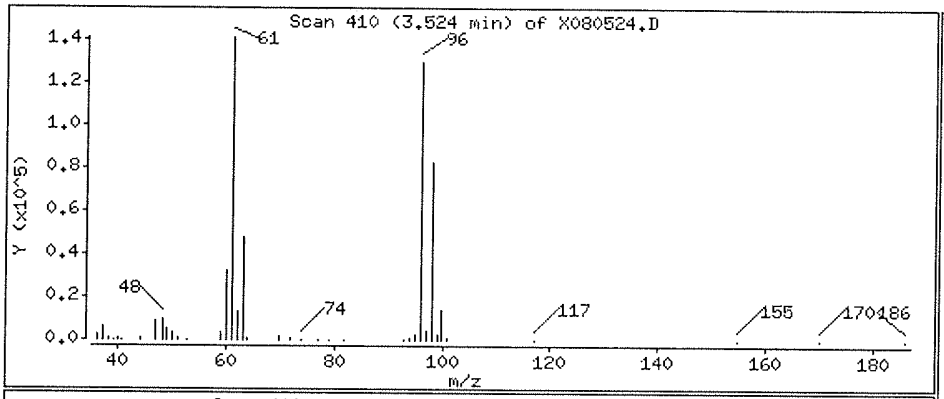
Operator: PC

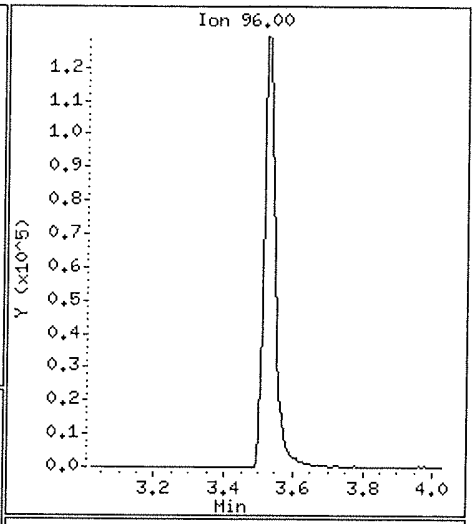
Column phase: DB624

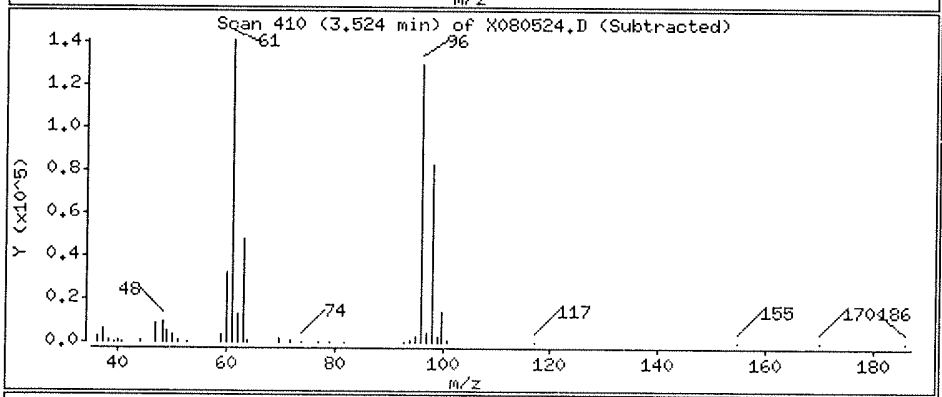
Column diameter: 0.18

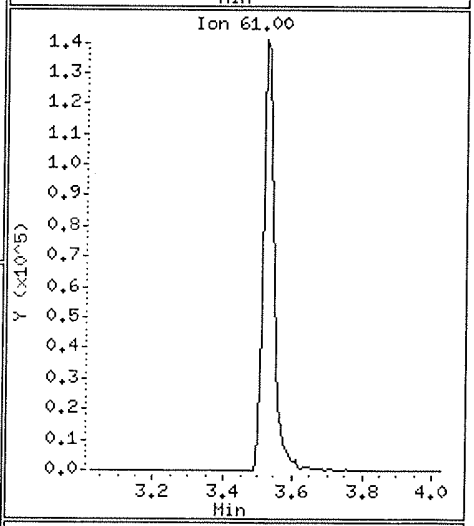
27 cis-1,2-Dichloroethene

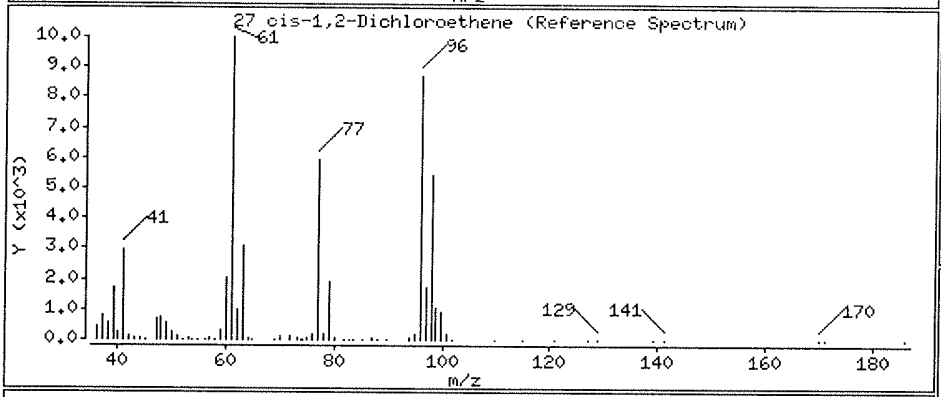
Concentration: 183.63 ug/l

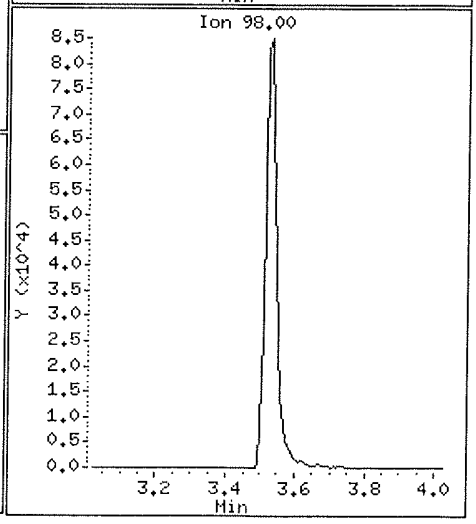


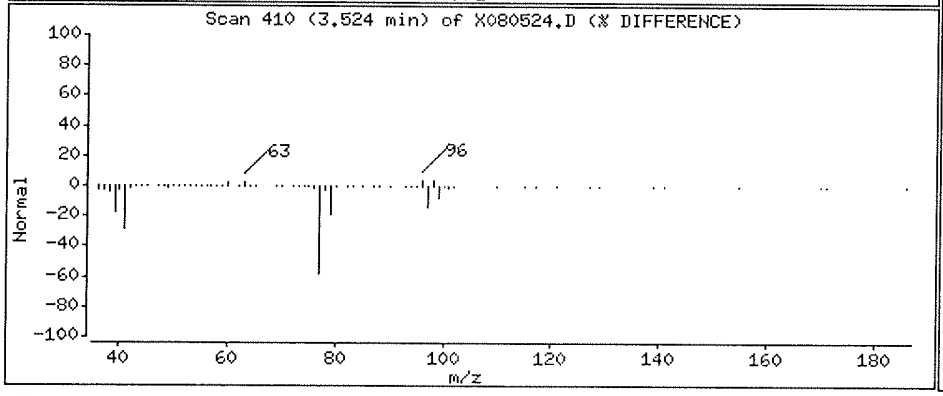












Data File: \\NAHSTWS005\target\chem\voa6.i\X210805.b\X080524.D

Date : 05-AUG-2021 18:56

Client ID: HS21071465-02

Instrument: voa6.i

Sample Info: HS21071465-02;HS21071465-02;;;

Purge Volume: 5.0

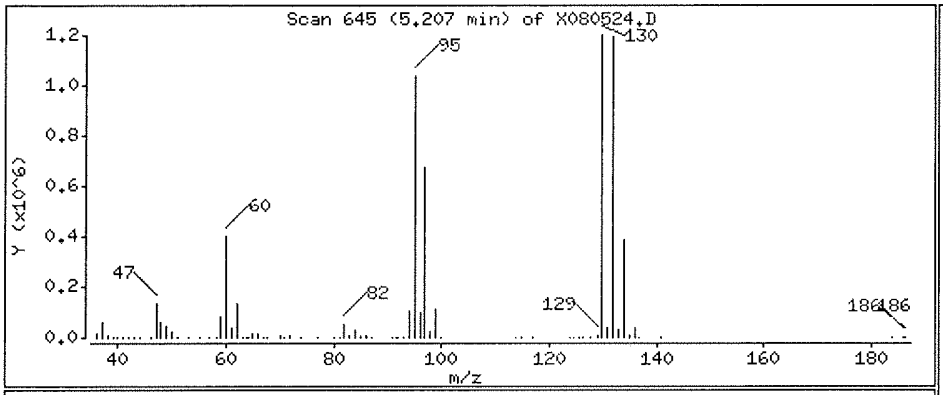
Operator: PC

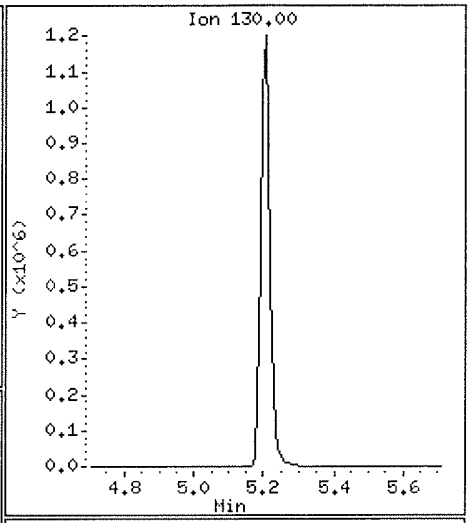
Column phase: DB624

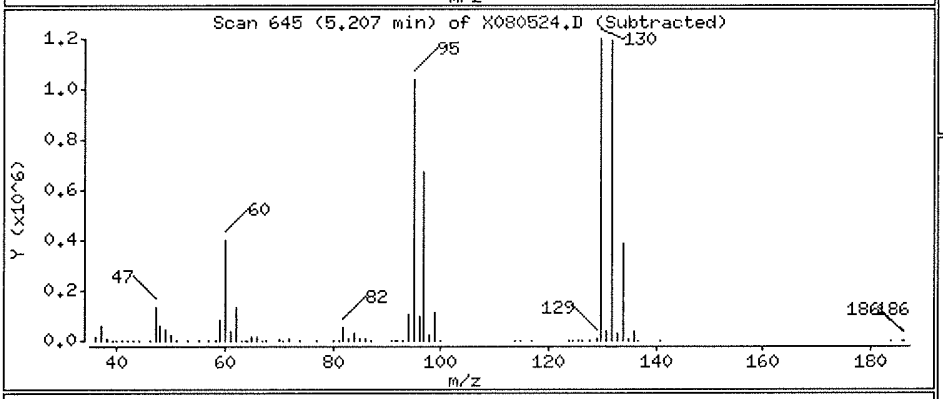
Column diameter: 0.18

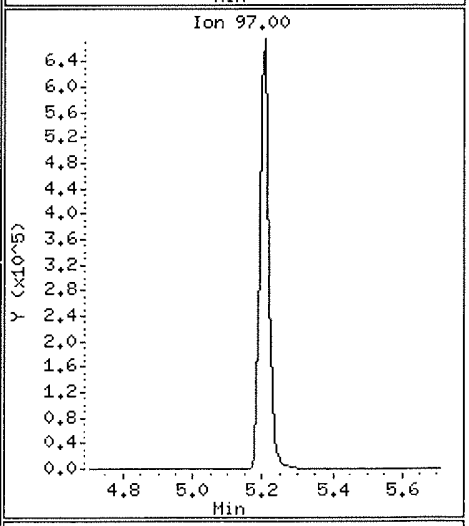
38 Trichloroethene

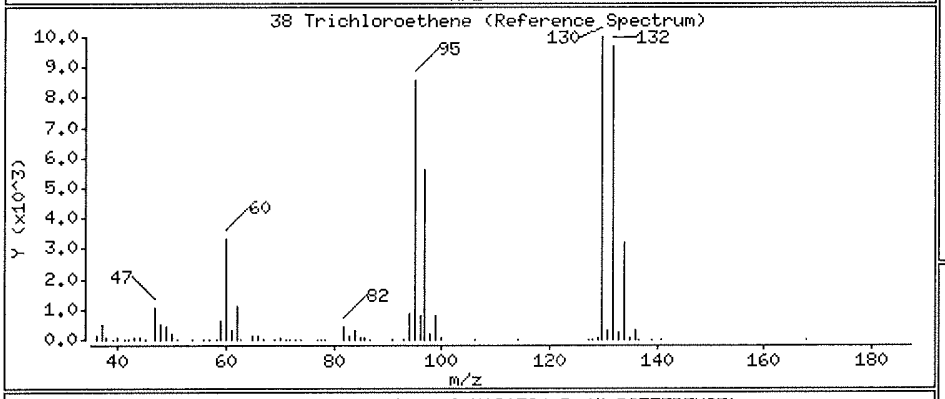
Concentration: 1364.72 ug/l

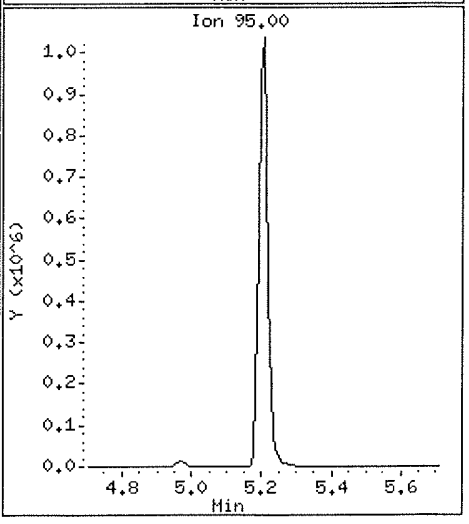


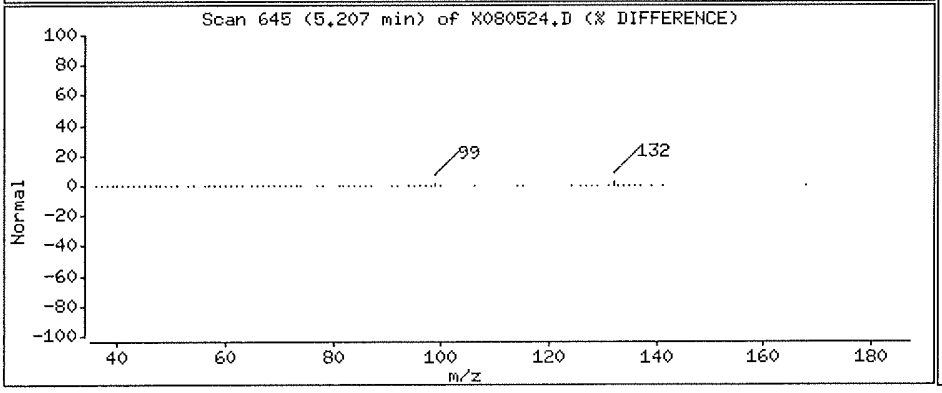












Data File: \\NAHSTWS005\target\chem\voa6.i\X210805.b\X080525.D Page 1
Report Date: 10-Sep-2021 16:19

ALS Laboratory Group

Data file : \\NAHSTWS005\target\chem\voa6.i\X210805.b\X080525.D
Lab Smp Id: HS21071465-02 Client Smp ID: HS21071465-02
Inj Date : 05-AUG-2021 19:17
Operator : PC Inst ID: voa6.i
Smp Info : HS21071465-02;HS21071465-02;;;
Misc Info : HS18090001;WATER;0;25;
Comment :
Method : \\NAHSTWS005\target\chem\voa6.i\X210805.b\8260W.m
Meth Date : 10-Sep-2021 16:17 Genoveva.R Quant Type: ISTD
Cal Date : 30-JUL-2021 13:56 Cal File: X073008.D
Als bottle: 24
Dil Factor: 25.00000
Integrator: HP RTE Compound Sublist: 0474-dod.sub
Target Version: 4.14
Processing Host: NAHSTW7056

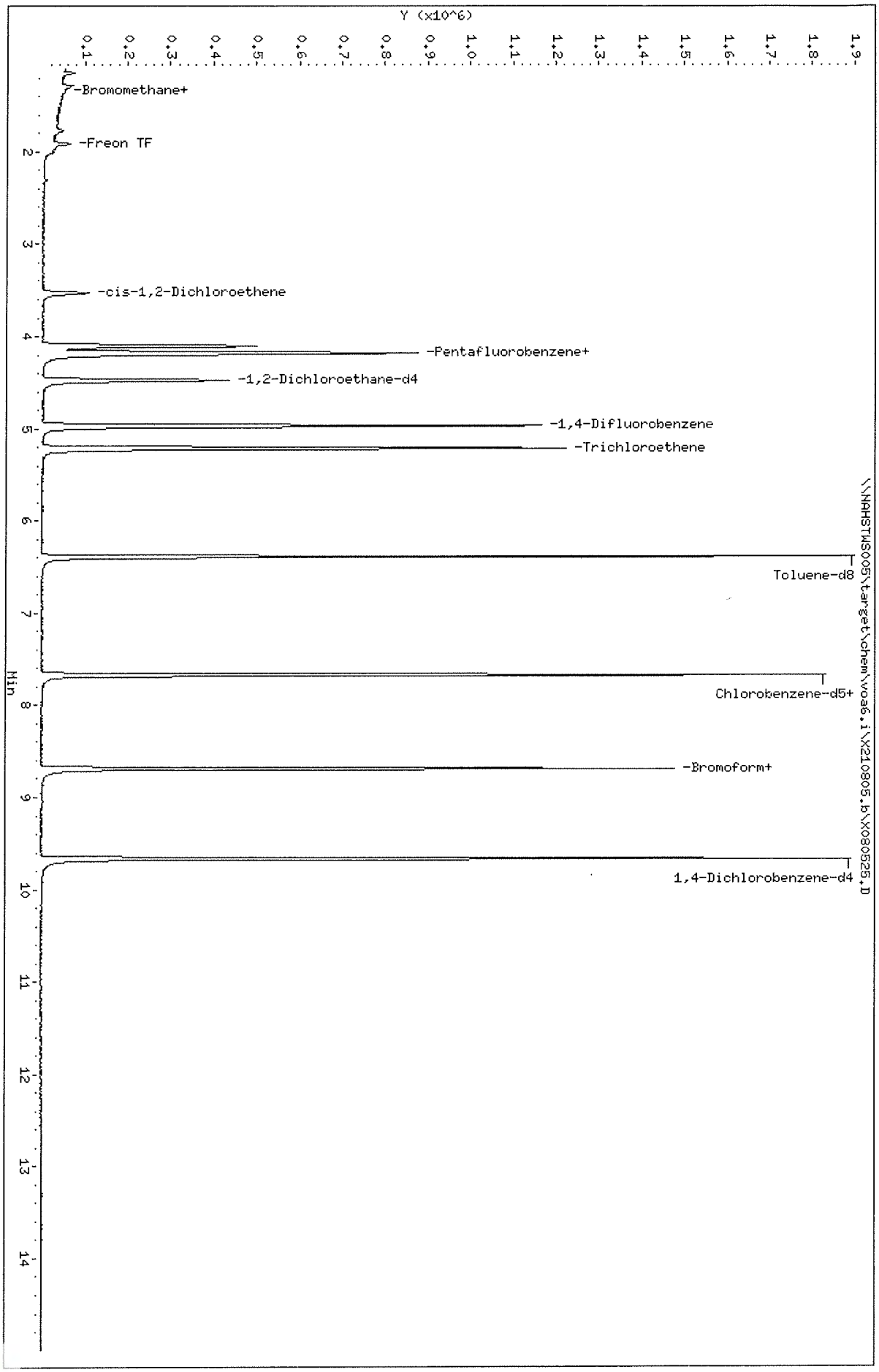
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	25.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	805313	50.0000	
$ 30 Dibromofluoromethane	113	4.096	4.103	(0.979)	349107	46.1492	46.14
$ 35 1,2-Dichloroethane-d4	65	4.469	4.469	(1.069)	321111	44.6013	44.60
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	1052209	50.0000	
* 47 Chlorobenzene-d5	117	7.670	7.671	(1.000)	947190	50.0000	
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	1135414	51.1059	51.10
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	383612	48.2516	48.25
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	492717	50.0000	
5 Vinyl Chloride	62	1.145	1.138	(0.274)	18324	2.39038	59.75(a)
27 cis-1,2-Dichloroethene	96	3.530	3.523	(0.844)	61124	7.56669	189.16
38 Trichloroethene	130	5.206	5.207	(1.049)	435634	56.6558	1416.39

QC Flag Legend

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



Data File: \\NAHSTWS005\target\chem\voa6.i\X210805.b\X080525.D
Date : 05-AUG-2021 19:17
Client ID: HS21071465-02
Sample Info: HS21071465-02;HS21071465-02;;;
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\NAHSTWS005\target\chem\voa6.i\X210805.b\X080525.D

Date : 05-AUG-2021 19:17

Client ID: HS21071465-02

Instrument: voa6.i

Sample Info: HS21071465-02;HS21071465-02;;;

Purge Volume: 5.0

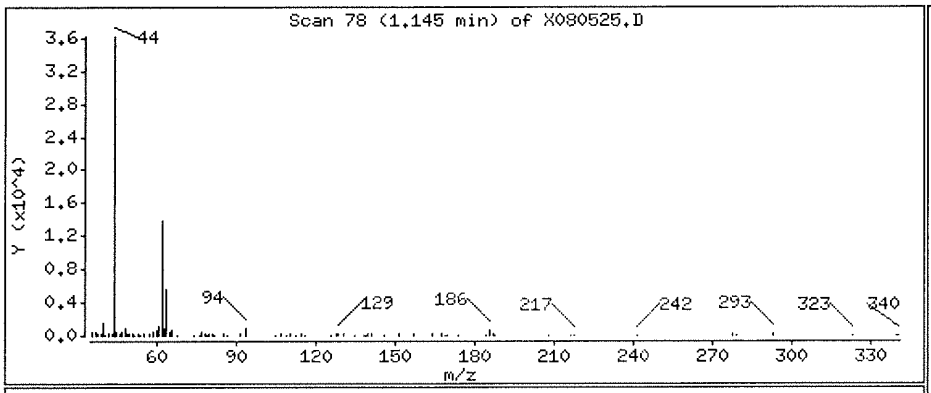
Operator: PC

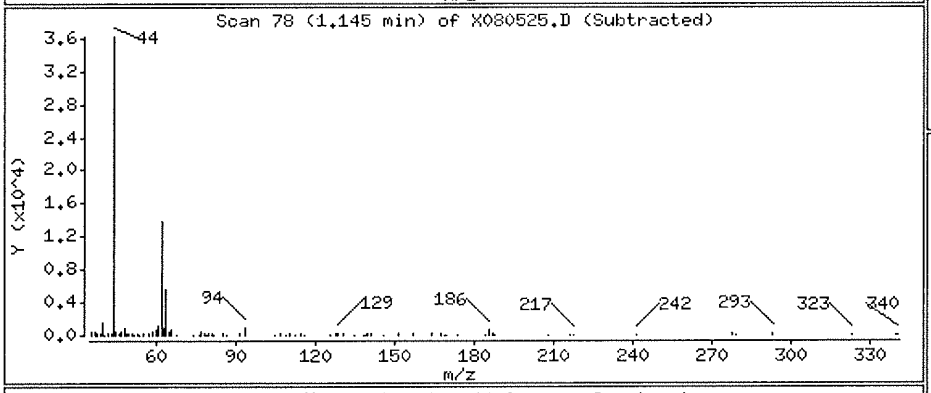
Column phase: DB624

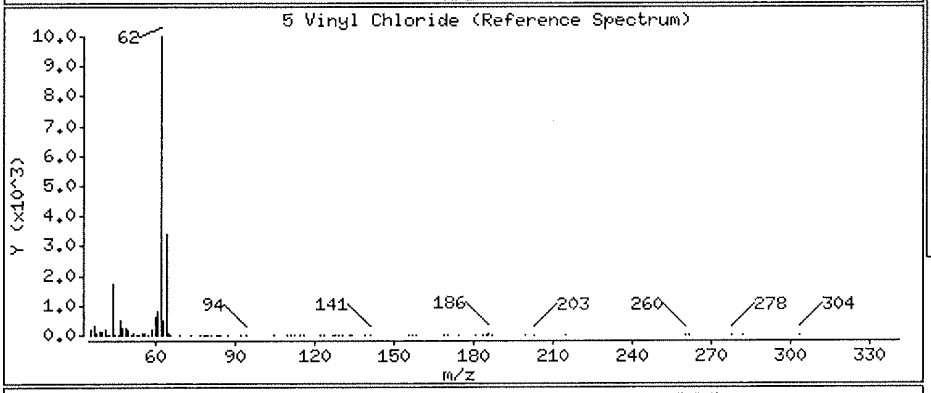
Column diameter: 0.18

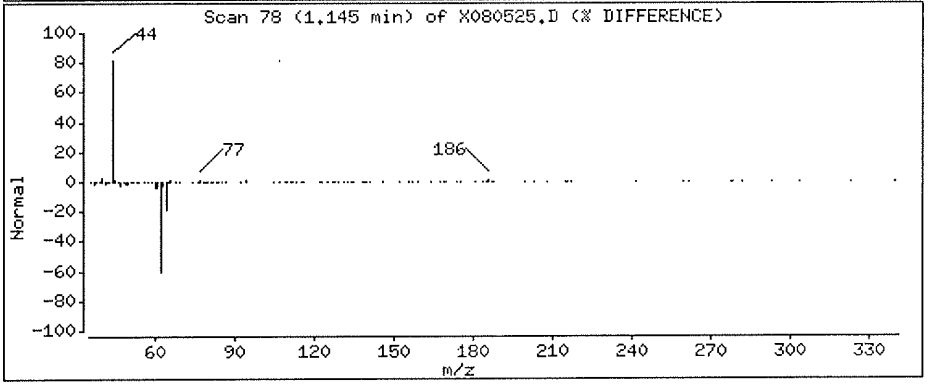
5 Vinyl Chloride

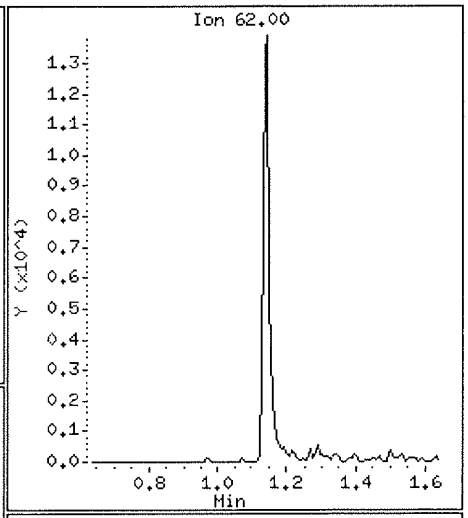
Concentration: 59.75 ug/l

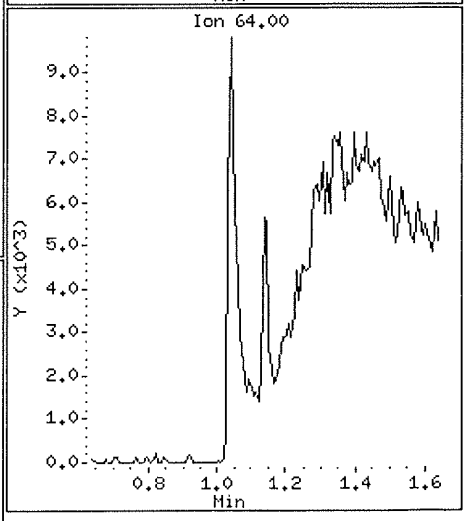












Data File: \\NAHSTWS005\target\chem\voa6.i\X210805.b\X080525.D

Date : 05-AUG-2021 19:17

Client ID: HS21071465-02

Instrument: voa6.i

Sample Info: HS21071465-02;HS21071465-02;;;

Purge Volume: 5.0

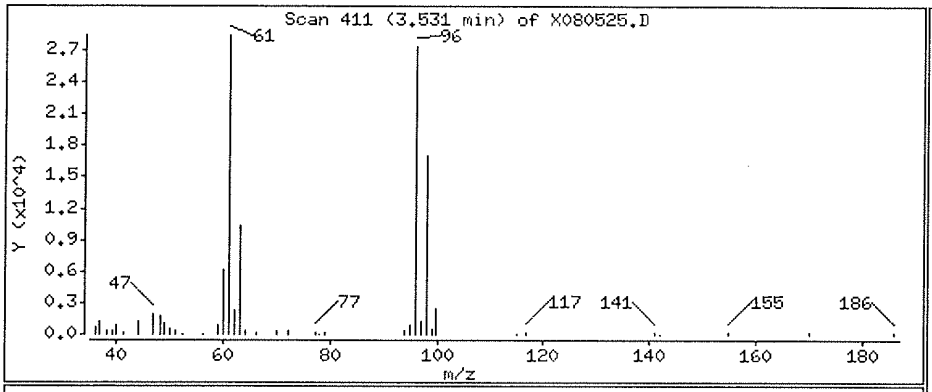
Operator: PC

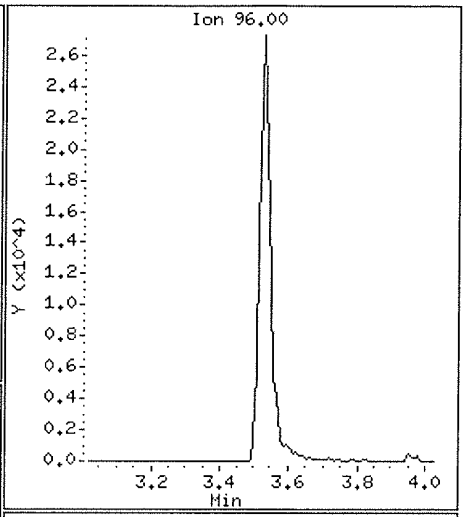
Column phase: DB624

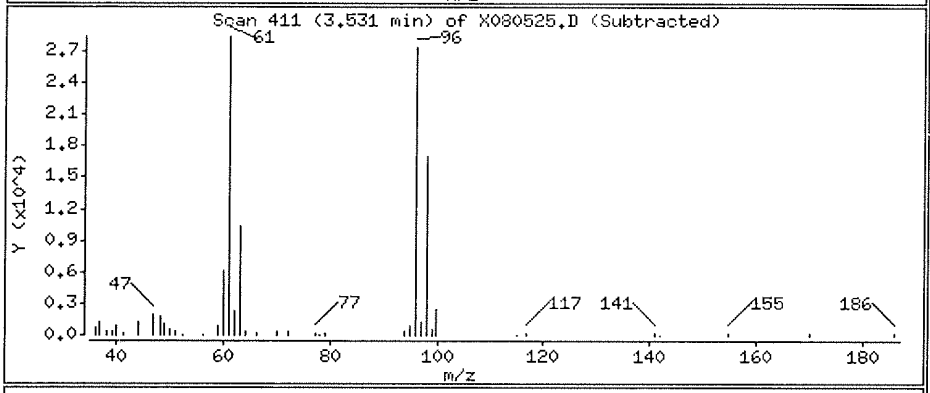
Column diameter: 0.18

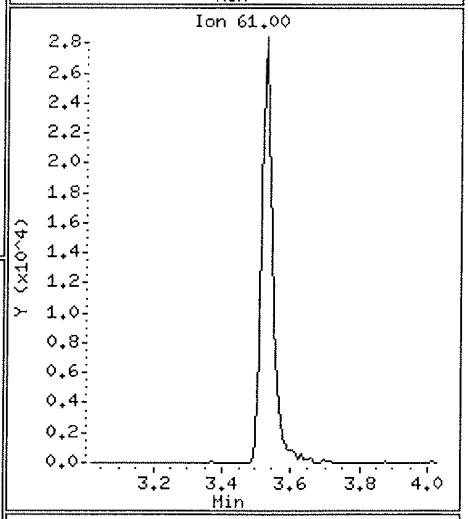
27 cis-1,2-Dichloroethene

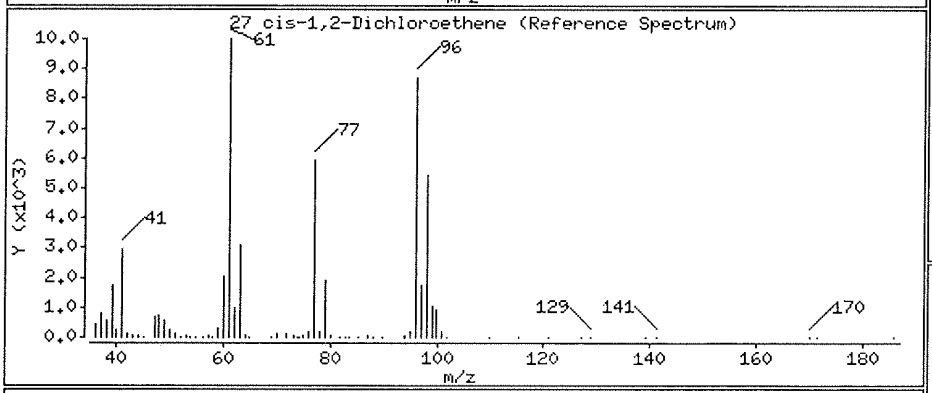
Concentration: 189.16 ug/l

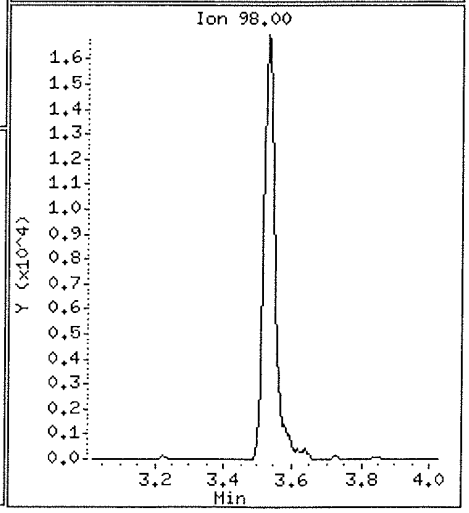


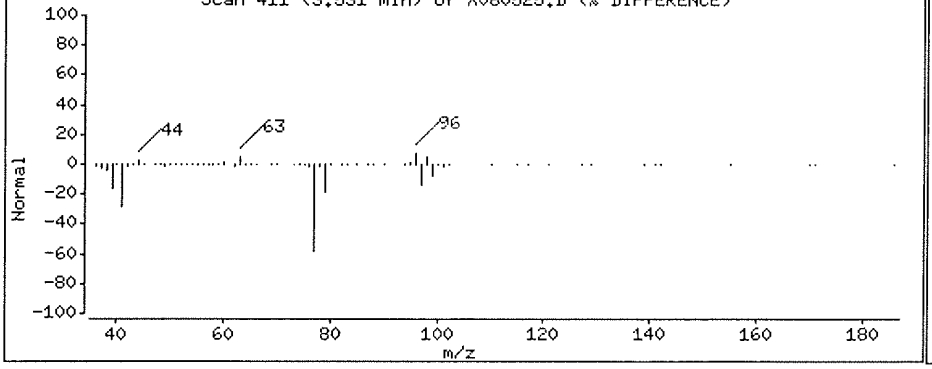












Data File: \\NAHSTWS005\target\chem\voa6.i\X210805.b\X080525.D

Date : 05-AUG-2021 19:17

Client ID: HS21071465-02

Instrument: voa6.i

Sample Info: HS21071465-02;HS21071465-02;;;

Purge Volume: 5.0

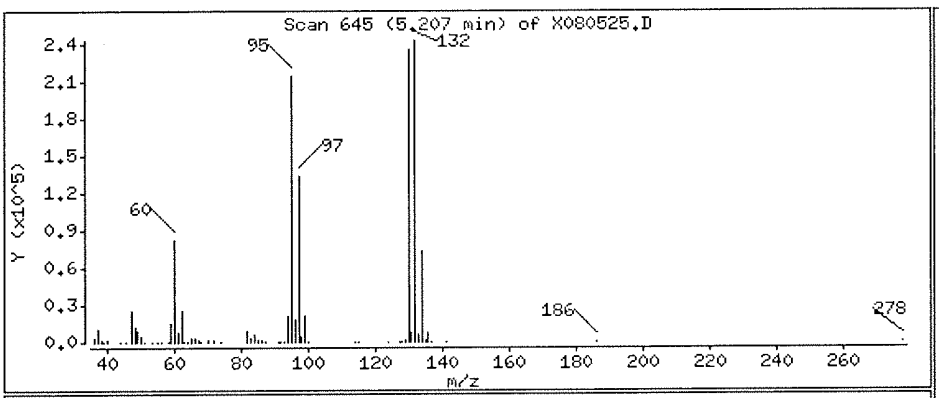
Operator: PC

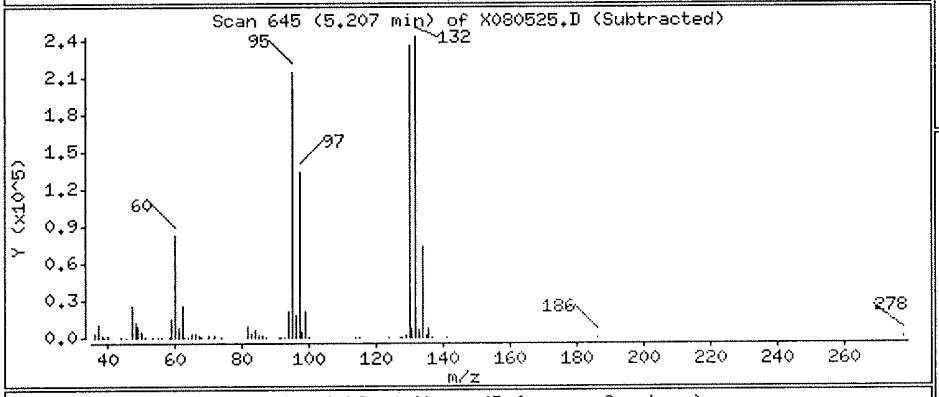
Column phase: DB624

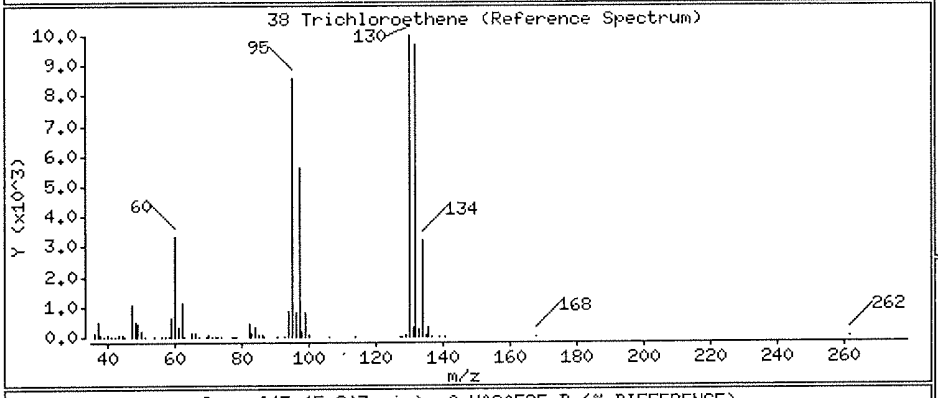
Column diameter: 0.18

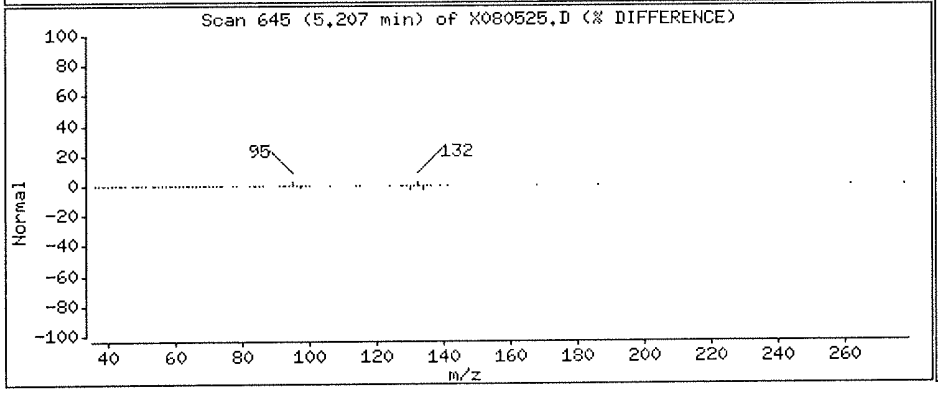
38 Trichloroethene

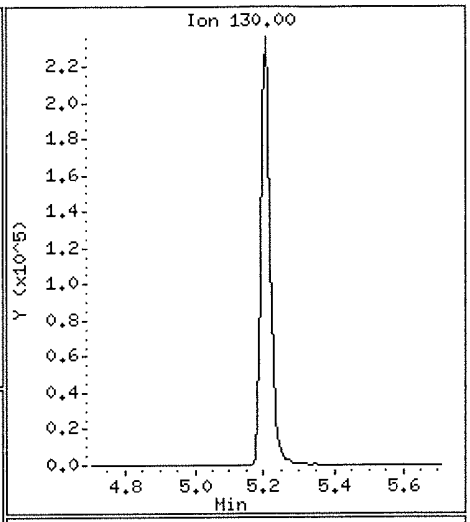
Concentration: 1416.39 ug/l

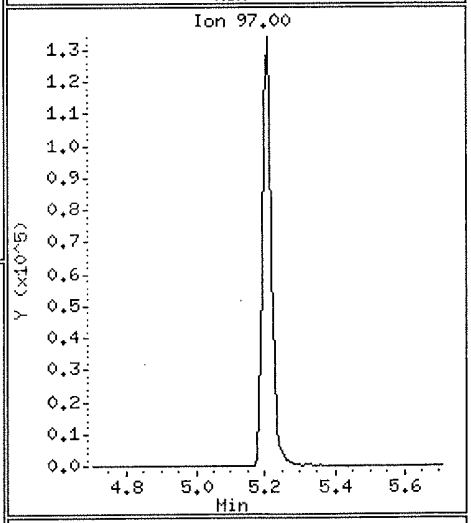


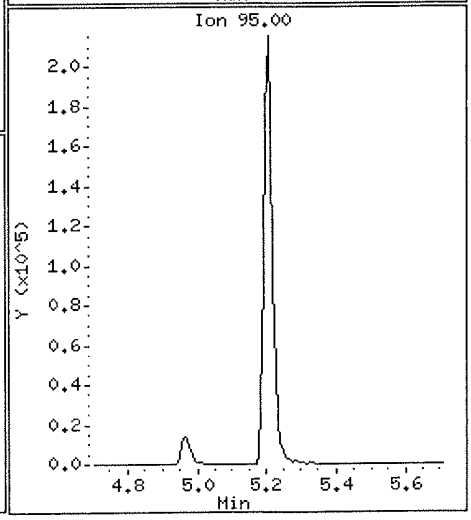












Data File: \\NAHSTWS005\target\chem\voa6.i\X210805.b\X080526.D Page 1
Report Date: 10-Sep-2021 16:22

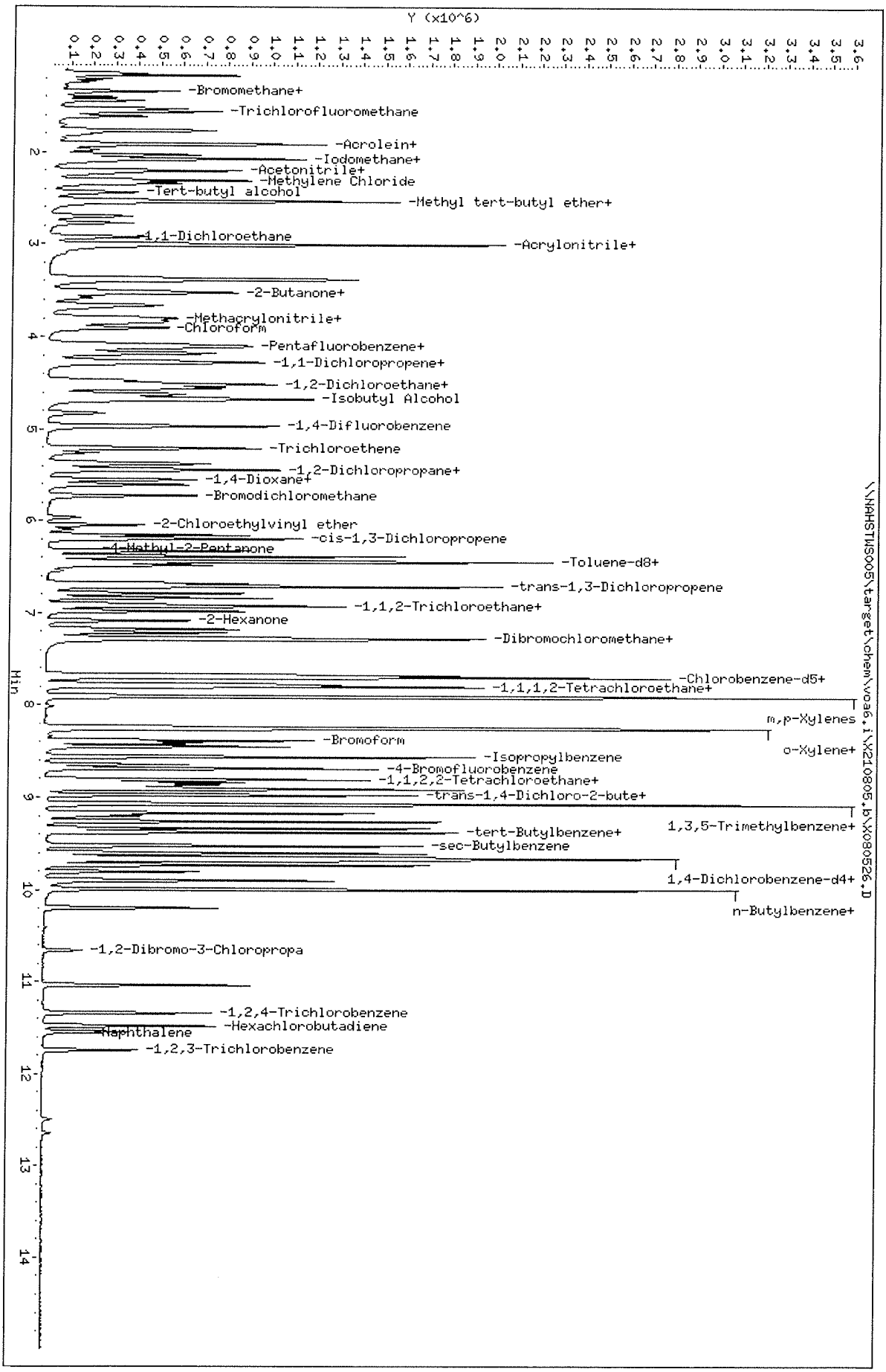
ALS Laboratory Group

Data file : \\NAHSTWS005\target\chem\voa6.i\X210805.b\X080526.D
Lab Smp Id: CCV-END Client Smp ID: CCV-END
Inj Date : 05-AUG-2021 19:38
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\X210805.b\8260W.m
Meth Date : 10-Sep-2021 16:22 voa6.i Quant Type: ISTD
Cal Date : 30-JUL-2021 13:56 Cal File: X073008.D
Als bottle: 25 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0474-dod.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)	672481	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	299376	50.0000	47.41
$ 35 1,2-Dichloroethane-d4	65	4.469	4.469	(1.069)	281690	50.0000	46.89
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	912716	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	865743	50.0000	
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	957357	50.0000	47.14
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	359519	50.0000	49.49
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	465321	50.0000	
5 Vinyl Chloride	62	1.138	1.138	(0.272)	275990	50.0000	43.11
11 1,1-Dichloroethene	96	1.912	1.912	(0.457)	251902	50.0000	44.51
17 Methylene Chloride	84	2.305	2.305	(0.551)	273998	50.0000	48.58
27 cis-1,2-Dichloroethene	96	3.523	3.523	(0.842)	312274	50.0000	46.29
33 1,2-Dichloroethane	62	4.555	4.555	(0.918)	335853	50.0000	45.86
38 Trichloroethene	130	5.207	5.207	(1.049)	334205	50.0000	50.10
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	217536	50.0000	48.02



Data File: \\NAHSTWS005\target\chem\voa6.i\X210805.b\X080526.D
Date : 05-AUG-2021 19:38
Client ID: CCV-END
Sample Info: CCV-END;CCV-END;2;;;
Purge Volume: 5.0
Column phase: DB624

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

MSVOA06 -Logbook

Batch: 46079
Date: 08-13-2021
Method: 8260
Comments:

Analyst: Presenta Cabascango
Reviewer:
Laboratory: Houston

#	Samp ID	Type	Analyzed	DF	Init Wt/Vol	Final Vol	File ID	Matrix	Status	p
1	BFB	TUNE	08-13-2021 10:38 am	1.00	50 mL	50 mL	X081301a.D	Liquid	Y	N
2	BFB	TUNE	08-13-2021 11:06 am	1.00	50 mL	50 mL	X081302.D	Liquid	Y	N
3	CCV	CCV	08-13-2021 11:27 am	1.00	50 mL	50 mL	X081303.D	Liquid	Y	N
4	CCB	SAMP	08-13-2021 11:48 am	1.00	50 mL	50 mL	X081304.D	Liquid	Y	N
5	VLCSW-210813	LCS	08-13-2021 12:09 pm	1.00	50 mL	50 mL	X081305.D	Liquid	Y	N
6	BLANK	SAMP	08-13-2021 12:30 pm	1.00	50 mL	50 mL	X081306.D	Liquid	Y	N
7	BLANK	SAMP	08-13-2021 12:51 pm	1.00	50 mL	50 mL	X081307.D	Liquid	Y	N
8	VBLKW-210813	MBLK	08-13-2021 01:12 pm	1.00	50 mL	50 mL	X081308.D	Liquid	Y	N
9	HS21080560-02	SAMP	08-13-2021 01:33 pm	1.00	50 mL	50 mL	X081309.D	Liquid	Y	N
10	HS21071465-04	SAMP	08-13-2021 01:54 pm	1.00	50 mL	50 mL	X081310.D	Liquid	Y	N
11	HS21071465-03	SAMP	08-13-2021 02:15 pm	1.00	50 mL	50 mL	X081311.D	Liquid	Y	N
12	HS21071465-05n/r	SAMP	08-13-2021 02:36 pm	5.00	10 mL	50 mL	X081312.D	Liquid	Y	N
13	HS21080560-02MS	MS	08-13-2021 02:57 pm	1.00	50 mL	50 mL	X081313.D	Liquid	Y	N
14	HS21080560-02MSD	MSD	08-13-2021 03:18 pm	1.00	50 mL	50 mL	X081314.D	Liquid	Y	N
15	HS21071465-03	SAMP	08-13-2021 03:39 pm	10.00	5 mL	50 mL	X081315.D	Liquid	Y	N
16	HS21071465-05	SAMP	08-13-2021 04:00 pm	1.00	50 mL	50 mL	X081316.D	Liquid	Y	N
17	CCV-END	CCV	08-13-2021 04:21 pm	1.00	50 mL	50 mL	X081317.D	Liquid	Y	N
18	HS21080536-07	SAMP	08-13-2021 04:42 pm	1.00	50 mL	50 mL	X081318.D	Liquid	Y	N
19	HS21080537-03	SAMP	08-13-2021 05:03 pm	1.00	50 mL	50 mL	X081319.D	Liquid	Y	N
20	HS21080485-01	SAMP	08-13-2021 05:24 pm	1.00	50 mL	50 mL	X081320.D	Liquid	Y	N
21	HS21080485-11	SAMP	08-13-2021 05:45 pm	1.00	50 mL	50 mL	X081321.D	Liquid	Y	N
22	MBLK-168965	MBLK	08-13-2021 06:07 pm	20.00	2.5 mL	50 mL	X081322.D	Liquid	Y	N
23	HS21080401-01	SAMP	08-13-2021 06:28 pm	20.00	2.5 mL	50 mL	X081323.D	Liquid	Y	N
24	MBLK-169062	MBLK	08-13-2021 06:49 pm	20.00	2.5 mL	50 mL	X081324.D	Liquid	Y	N
25	HS21080511-01	SAMP	08-13-2021 07:10 pm	20.00	2.5 mL	50 mL	X081325.D	Liquid	Y	N
26	HS21080522-01	SAMP	08-13-2021 07:31 pm	20.00	2.5 mL	50 mL	X081326.D	Liquid	Y	N
27	HS21080532-01	SAMP	08-13-2021 07:52 pm	20.00	2.5 mL	50 mL	X081327.D	Liquid	Y	N
28	MBLK-169061	MBLK	08-13-2021 08:13 pm	20.00	2.5 mL	50 mL	X081328.D	Liquid	Y	N
29	HS21080520-01	SAMP	08-13-2021 08:34 pm	20.00	2.5 mL	50 mL	X081329.D	Liquid	Y	N
30	HS21080520-02	SAMP	08-13-2021 08:55 pm	20.00	2.5 mL	50 mL	X081330.D	Liquid	Y	N
31	HS21080520-03	SAMP	08-13-2021 09:16 pm	20.00	2.5 mL	50 mL	X081331.D	Liquid	Y	N
32	HS21080520-04	SAMP	08-13-2021 09:37 pm	20.00	2.5 mL	50 mL	X081332.D	Liquid	Y	N
33	HS21080533-01	SAMP	08-13-2021 09:58 pm	20.00	2.5 mL	50 mL	X081333.D	Liquid	Y	N
34	HS21080585-01	SAMP	08-13-2021 10:19 pm	50.00	1 mL	50 mL	X081334.D	Liquid	Y	N

FORM 2
WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS21071465

	CLIENT SAMPLE NO.	SMC1 #	SMC2 (DCE)#	SMC3 (TOL)#	OTHER #	TOT OUT
01	VLCSW-210813	85	85	90	96	0
02	VBLKW-210813	82	81	98	97	0
03	HS21071465-04	83	82	100	97	0
04	HS21071465-03	84	82	100	98	0
05	HS21071465-03	84	82	101	97	0
06	HS21071465-05	84	81	102	97	0
07						
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		QC LIMITS
SMC1	= Dibromofluoromethane	(70-130)
SMC2 (DCE)	= 1,2-Dichloroethane-d4	(70-130)
SMC3 (TOL)	= Toluene-d8	(70-130)
OTHER	= 4-Bromofluorobenzene	(70-130)

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-210813

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS21071465

Lab File ID: X081308 Lab Sample ID: VBLKW-210813

Date Analyzed: 08/13/21 Time Analyzed: 1312

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-210813	VLCSW-210813	X081305	1209
02	HS21071465-04	HS21071465-04	X081310	1354
03	HS21071465-03	HS21071465-03	X081311	1415
04	HS21080560-02MS	HS21080560-02MS	X081313	1457
05	HS21080560-02MSD	HS21080560-02MSD	X081314	1518
06	HS21071465-03	HS21071465-03	X081315	1539
07	HS21071465-05	HS21071465-05	X081316	1600
08				
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.: HS21071465

Lab File ID: X081302 BFB Injection Date: 08/13/21

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	23.5
75	30.0 - 60.0% of mass 95	55.0
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	7.6
173	Less than 2.0% of mass 174	1.1 (1.2)1
174	Greater than 50.0% of mass 95	90.1
175	5.0 - 9.0% of mass 174	7.3 (8.1)1
176	95.0 - 101.0% of mass 174	86.4 (96.0)1
177	5.0 - 9.0% of mass 176	6.5 (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	X081303	08/13/21	1127
02	VLCSW-210813	VLCSW-210813	X081305	08/13/21	1209
03	VBLKW-210813	VBLKW-210813	X081308	08/13/21	1312
04	HS21071465-04	HS21071465-04	X081310	08/13/21	1354
05	HS21071465-03	HS21071465-03	X081311	08/13/21	1415
06	HS21080560-02MS	HS21080560-02MS	X081313	08/13/21	1457
07	HS21080560-02MSD	HS21080560-02MSD	X081314	08/13/21	1518
08	HS21071465-03	HS21071465-03	X081315	08/13/21	1539
09	HS21071465-05	HS21071465-05	X081316	08/13/21	1600
10	CCV-END	CCV-END	X081317	08/13/21	1621
11					
12					
13					
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17					
18					
19					
20					
21					
22					

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS21071465

Instrument ID: VOA6 Calibration Date: 08/13/21 Time: 1127

Lab File ID: X081303 Init. Calib. Date(s): 07/30/21 07/30/21

Init. Calib. Times: 1129 1459

GC Column: DB624 ID: 0.18 (mm)

COMPOUND	RRF or AMOUNT	RRF50.000 or AMOUNT	CCAL RRF50.000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Vinyl Chloride	0.4760000	0.4185920	0.4185920	0.1	12.06	20.00	AVRG
Methylene Chloride	44.645652	50.000000	0.3745912	0.1	10.71	20.00	LINR
1,1-Dichloroethene	0.4210000	0.3751850	0.3751850	0.1	10.88	20.00	AVRG
1,2-Dichloroethane	0.4010000	0.4101195	0.4101195	0.1	2.27	20.00	AVRG
Trichloroethene	0.3650000	0.3906553	0.3906553	0.2	7.03	20.00	AVRG
1,1,2-Trichloroethane	0.2620000	0.2583450	0.2583450	0.1	1.40	20.00	AVRG
Dibromofluoromethane	41.583705	50.000000	0.3915493	0.1	16.83	20.00	LINR
1,2-Dichloroethane-d4	40.585274	50.000000	0.3635315	0.1	18.83	20.00	LINR
Toluene-d8	1.1730000	1.0318527	1.0318527	0.1	12.03	20.00	AVRG
4-Bromofluorobenzene	47.632670	50.000000	0.3998818	0.1	4.73	20.00	LINR

FORM VII VOA

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS21071465

Instrument ID: VOA6 Calibration Date: 08/13/21 Time: 1621

Lab File ID: X081317 Init. Calib. Date(s): 07/30/21 07/30/21

Init. Calib. Times: 1129 1459

GC Column: DB624 ID: 0.18 (mm)

COMPOUND	RRF or AMOUNT	RRF50.000 or AMOUNT	CCAL RRF50.000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Vinyl Chloride	0.4760000	0.3873887	0.3873887	0.1	18.62	50.00	AVRG
Methylene Chloride	44.355758	50.000000	0.3721711	0.1	11.29	50.00	LINR
1,1-Dichloroethene	0.4210000	0.3507440	0.3507440	0.1	16.69	50.00	AVRG
1,2-Dichloroethane	0.4010000	0.3813292	0.3813292	0.1	4.90	50.00	AVRG
Trichloroethene	0.3650000	0.3705678	0.3705678	0.2	-1.52	50.00	AVRG
1,1,2-Trichloroethane	0.2620000	0.2449075	0.2449075	0.1	6.52	50.00	AVRG
Dibromofluoromethane	44.117132	50.000000	0.4148309	0.1	11.76	50.00	LINR
1,2-Dichloroethane-d4	41.326527	50.000000	0.3700301	0.1	17.35	50.00	LINR
Toluene-d8	1.1730000	1.0574136	1.0574136	0.1	9.85	50.00	AVRG
4-Bromofluorobenzene	47.980877	50.000000	0.4027614	0.1	4.04	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.: HS21071465

Lab File ID (Standard): X081303 Date Analyzed: 08/13/21

Instrument ID: VOA6 Time Analyzed: 1127

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

		IS1 AREA #	RT #	IS2 (DFB) AREA #	RT #	IS3 (CBZ) AREA #	RT #
	12 HOUR STD	739350	4.18	903761	4.96	872798	7.67
	UPPER LIMIT	1478700	4.68	1807522	5.46	1745596	8.17
	LOWER LIMIT	369675	3.68	451881	4.46	436399	7.17
	CLIENT SAMPLE NO.						
01	VLCSW-210813	702555	4.18	859283	4.96	812388	7.67
02	VBLKW-210813	865419	4.18	1043454	4.96	954000	7.67
03	HS21071465-04	852034	4.18	1031549	4.96	924347	7.67
04	HS21071465-03	841549	4.18	1021206	4.96	920148	7.67
05	HS21080560-02MS	861481	4.18	1041153	4.96	951485	7.67
06	HS21080560-02MSD	858225	4.18	1032464	4.96	942995	7.67
07	HS21071465-03	853485	4.18	1023078	4.96	918751	7.67
08	HS21071465-05	848861	4.18	1018655	4.96	903136	7.67
09							
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IS1 = Pentafluorobenzene
IS2 (DFB) = 1,4-Difluorobenzene
IS3 (CBZ) = Chlorobenzene-d5

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

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

FORM 8
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS21071465

Lab File ID (Standard): X081303 Date Analyzed: 08/13/21

Instrument ID: VOA6 Time Analyzed: 1127

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

		IS4 (DCB) AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	515713	9.66				
	UPPER LIMIT	1031426	10.16				
	LOWER LIMIT	257857	9.16				
	CLIENT SAMPLE NO.						
01	VLCSW-210813	470244	9.66				
02	VBLKW-210813	530576	9.66				
03	HS21071465-04	506599	9.66				
04	HS21071465-03	507501	9.66				
05	HS21080560-02MS	522930	9.66				
06	HS21080560-02MSD	516654	9.66				
07	HS21071465-03	505710	9.66				
08	HS21071465-05	502308	9.66				
09							
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IS4 (DCB) = 1,4-Dichlorobenzene-d4

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

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

FORM VIII VOA

Data File: \\NAHSTWS005\target\chem\voa6.i\X210813.b\X081302.D

Page 1

Date : 13-AUG-2021 11:06

Client ID: BFB

Instrument: voa6.i

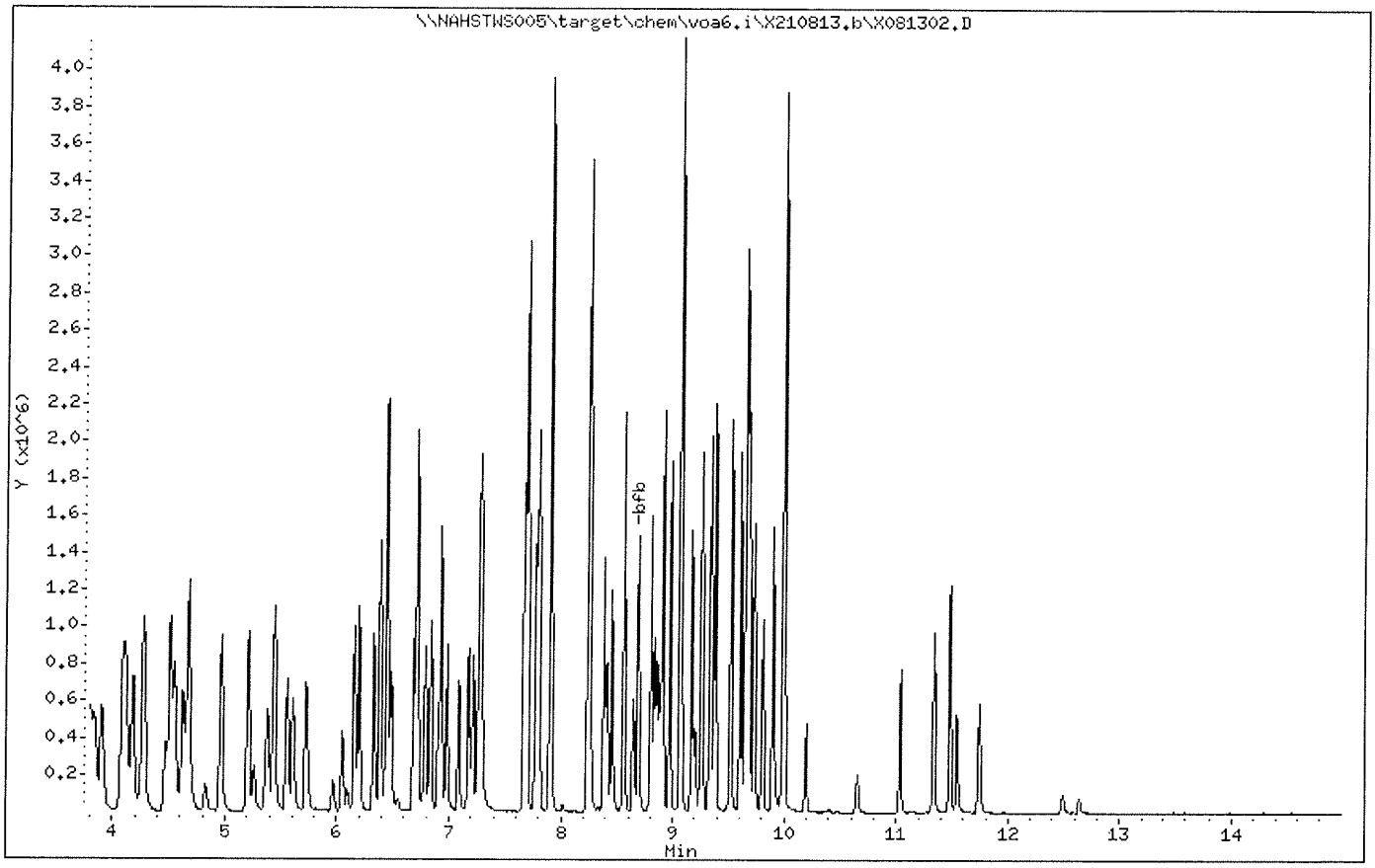
Sample Info: BFB;BFB;3;;BFB

Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

Column diameter: 0.25



Data File: \\NAHSTWS005\target\chem\voa6.i\X210813.b\X081302.D

Date : 13-AUG-2021 11:06

Client ID: BFB

Instrument: voa6.i

Sample Info: BFB;BFB;3;;BFB

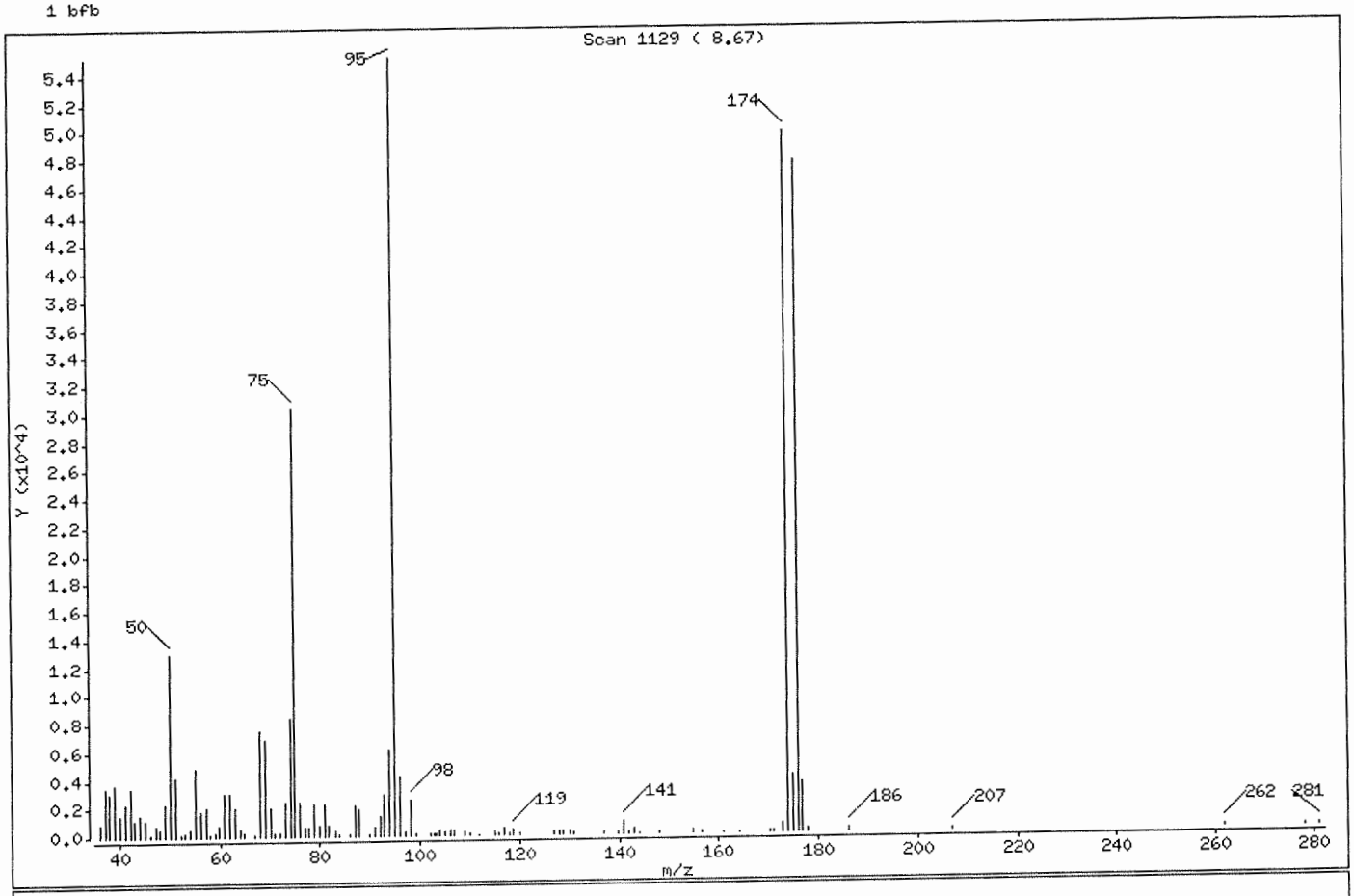
Volume Injected (uL): 2.0

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	23.48
75	30.00 - 60.00% of mass 95	55.00
96	5.00 - 9.00% of mass 95	7.57
173	Less than 2.00% of mass 174	1.06 (1.18)
174	Greater than 50.00% of mass 95	90.07
175	5.00 - 9.00% of mass 174	7.31 (8.12)
176	95.00 - 101.00% of mass 174	86.43 (95.96)
177	5.00 - 9.00% of mass 176	6.55 (7.58)

Data File: \\NAHSTWS005\target\chem\voa6.i\X210813.b\X081302.D

Date : 13-AUG-2021 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: X081302.D
Spectrum: Scan 1129 (8.67)
Location of Maximum: 95.00
Number of points: 106

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	889	63.00	2022	92.90	2931	130.90	143
37.00	3421	64.10	455	94.00	6071	136.80	84
38.00	2996	64.90	200	95.00	55248	139.60	122
39.00	3648	67.10	142	96.00	4181	140.80	886
40.00	1537	68.00	7513	97.10	267	141.80	109
41.10	2337	69.00	6907	98.10	2498	143.00	435
42.00	3467	70.00	2072	99.10	142	143.90	53
43.00	1117	70.90	297	102.00	177	148.00	144
44.00	1490	71.90	197	102.70	76	154.80	216
45.00	1131	73.00	2361	103.10	119	156.80	113
46.20	108	74.00	8370	103.80	380	160.90	54
47.10	789	75.00	30384	105.00	296	164.10	61
48.00	478	76.00	2450	105.90	377	170.10	65
49.00	2252	77.00	651	106.90	412	171.00	149
50.00	12970	77.80	663	108.90	283	172.90	585
51.00	4176	78.90	2258	110.10	72	173.80	49760
52.20	186	79.80	721	111.90	61	174.90	4040
52.90	229	80.90	2242	115.00	203	175.90	47752
54.10	495	81.80	771	115.80	160	176.80	3618
55.00	4846	83.10	385	116.80	487	177.90	247
56.10	1789	83.80	84	117.80	165	185.90	267
57.10	2006	85.80	70	118.70	348	207.00	125
58.00	127	87.00	2153	120.00	132	261.90	119
59.00	207	87.90	1906	126.80	195	278.30	72
59.80	721	89.90	130	128.10	279	281.20	142
60.90	3082	91.00	641	128.70	250		
62.00	3036	92.00	1360	129.90	224		

Data File: \\NAHSTWS005\target\chem\voa6.i\X210813.b\X081303.D Page 1
Report Date: 10-Sep-2021 16:59

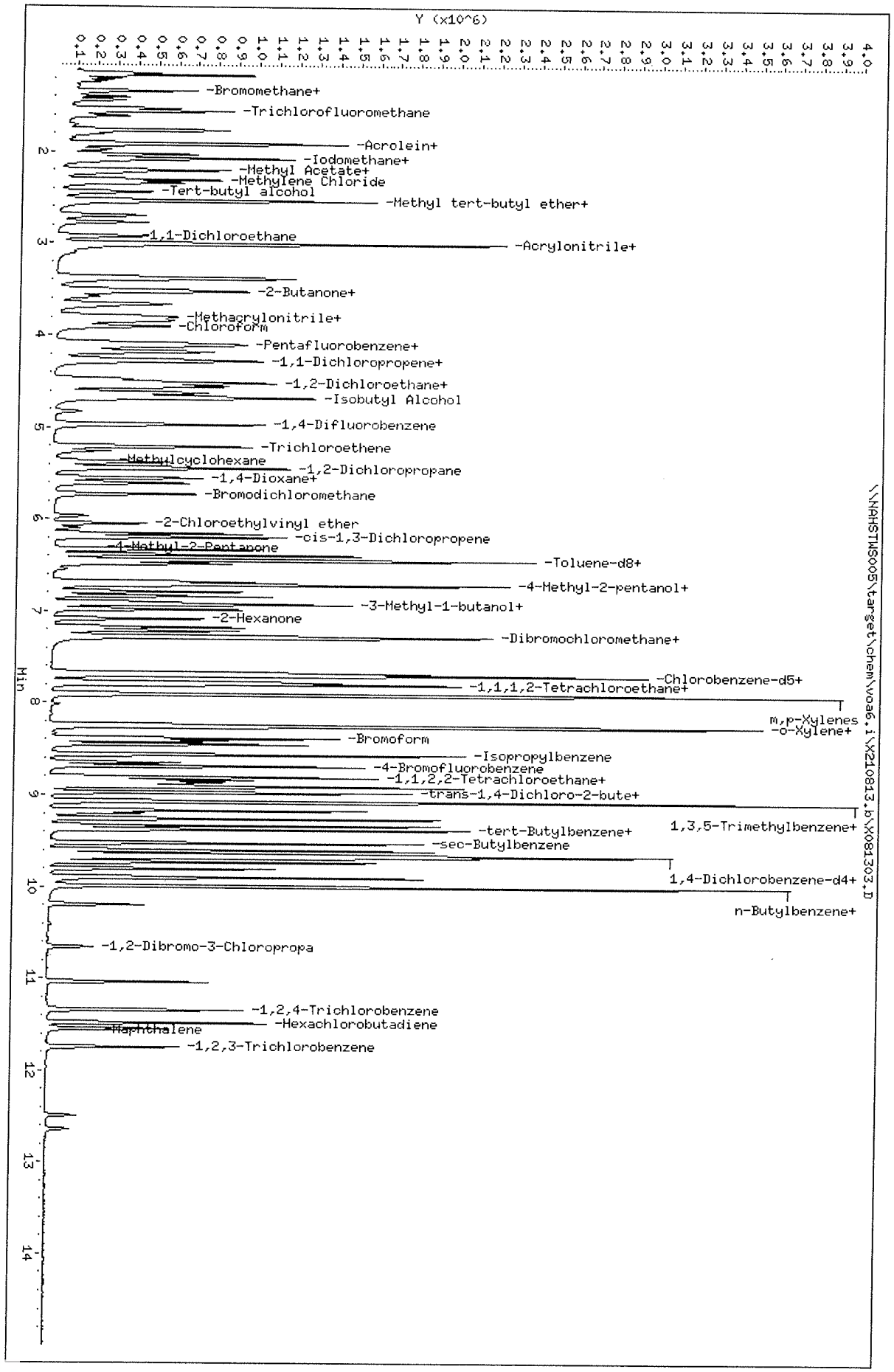
ALS Laboratory Group

Data file : \\NAHSTWS005\target\chem\voa6.i\X210813.b\X081303.D
Lab Smp Id: CCV Client Smp ID: CCV
Inj Date : 13-AUG-2021 11:27
Operator : PC Inst ID: voa6.i
Smp Info : CCV;CCV;2;;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\target\chem\voa6.i\X210813.b\8260W.m
Meth Date : 10-Sep-2021 16:59 voa6.i Quant Type: ISTD
Cal Date : 30-JUL-2021 13:56 Cal File: X073008.D
Als bottle: 3 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0474-dod.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)	739350	50.0000	
$ 30 Dibromofluoromethane	113	4.096	4.096	(0.979)	289492	50.0000	41.58
$ 35 1,2-Dichloroethane-d4	65	4.469	4.469	(1.069)	268777	50.0000	40.58
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	903761	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	872798	50.0000	
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	900599	50.0000	43.99
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	349016	50.0000	47.63
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	515713	50.0000	
5 Vinyl Chloride	62	1.138	1.138	(0.272)	309486	50.0000	43.97
11 1,1-Dichloroethene	96	1.912	1.912	(0.457)	277393	50.0000	44.58
17 Methylene Chloride	84	2.306	2.306	(0.551)	276954	50.0000	44.64
27 cis-1,2-Dichloroethene	96	3.523	3.523	(0.842)	320886	50.0000	43.26
33 1,2-Dichloroethane	62	4.555	4.555	(0.918)	370650	50.0000	51.12
38 Trichloroethene	130	5.207	5.207	(1.049)	353059	50.0000	53.45
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	225483	50.0000	49.38



Data File: \\NAHSTWS005\target\chem\voa6.i\X210813.b\X081303.D
Date : 13-AUG-2021 11:27
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\X210813.b\X081305.D Page 1
Report Date: 10-Sep-2021 16:59

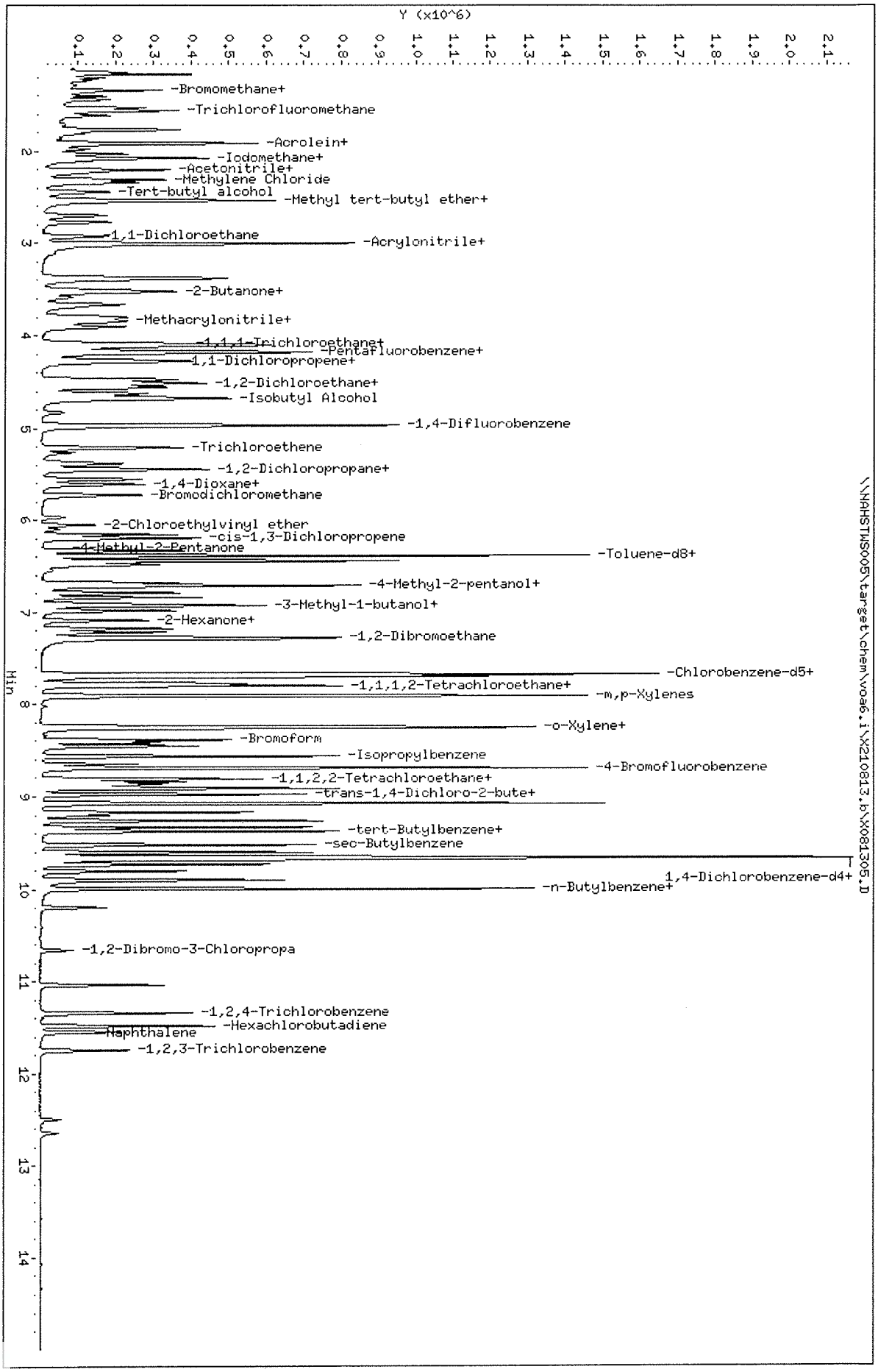
ALS Laboratory Group

Data file : \\NAHSTWS005\target\chem\voa6.i\X210813.b\X081305.D
Lab Smp Id: VLCSW-210813 Client Smp ID: VLCSW-210813
Inj Date : 13-AUG-2021 12:09
Operator : PC Inst ID: voa6.i
Smp Info : VLCSW-210813;VLCSW-210813;3;;LCS
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\target\chem\voa6.i\X210813.b\8260W.m
Meth Date : 10-Sep-2021 16:59 voa6.i Quant Type: ISTD
Cal Date : 30-JUL-2021 13:56 Cal File: X073008.D
Als bottle: 5 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0474-dod.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	4.182	(1.000)	702555	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.096	(0.981)	281171	42.5264	42.52
$ 35 1,2-Dichloroethane-d4	65	4.469	4.469	(1.069)	266476	42.3834	42.38
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	859283	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	812388	50.0000	
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	858849	45.0720	45.07
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	329040	48.2550	48.25
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	470244	50.0000	
5 Vinyl Chloride	62	1.138	1.138	(0.272)	114959	17.1899	17.18
11 1,1-Dichloroethene	96	1.911	1.912	(0.457)	105300	17.8124	17.81
17 Methylene Chloride	84	2.305	2.306	(0.551)	106249	17.8905	17.89
27 cis-1,2-Dichloroethene	96	3.523	3.523	(0.842)	123893	17.5803	17.58
33 1,2-Dichloroethane	62	4.555	4.555	(0.918)	135109	19.5998	19.59
38 Trichloroethene	130	5.206	5.207	(1.049)	137760	21.9387	21.93
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	86065	20.2502	20.25



Data File: \\NAHSTWS005\target\chem\voa6.i\X210813.b\X081305.D
Date : 13-AUG-2021 12:09
Client ID: VLCSW-210813
Sample Info: VLCSW-210813;VLCSW-210813;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\X210813.b\X081308.D Page 1
Report Date: 10-Sep-2021 16:59

ALS Laboratory Group

Data file : \\NAHSTWS005\target\chem\voa6.i\X210813.b\X081308.D
Lab Smp Id: VBLKW-210813 Client Smp ID: VBLKW-210813
Inj Date : 13-AUG-2021 13:12
Operator : PC Inst ID: voa6.i
Smp Info : VBLKW-210813;VBLKW-210813;3;;BLANK
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\target\chem\voa6.i\X210813.b\8260W.m
Meth Date : 10-Sep-2021 16:59 voa6.i Quant Type: ISTD
Cal Date : 30-JUL-2021 13:56 Cal File: X073008.D
Als bottle: 8 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0474-dod.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

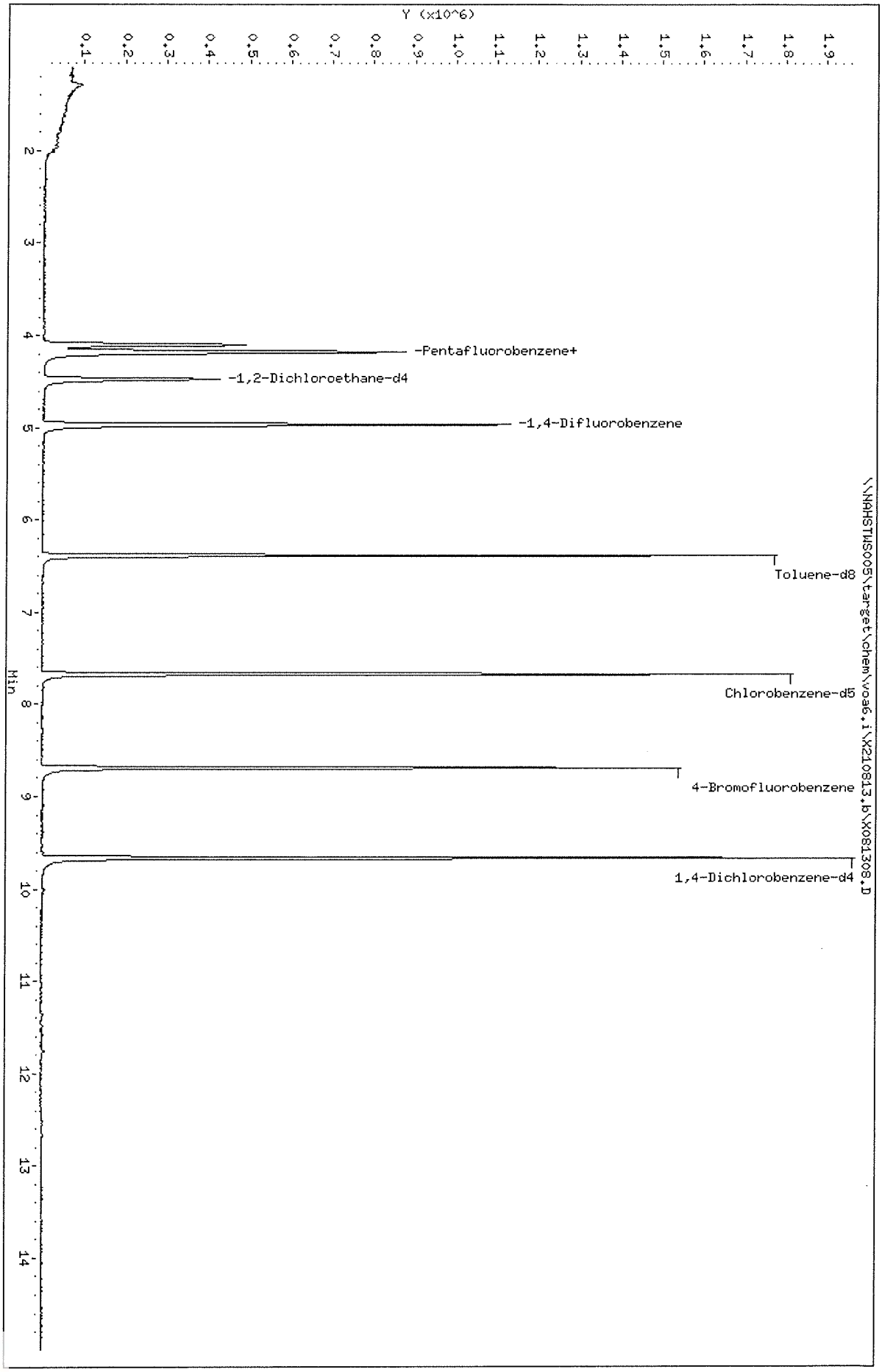
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	865419	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.096	(0.981)	336207	41.2508	41.25
$ 35 1,2-Dichloroethane-d4	65	4.469	4.469	(1.069)	315540	40.7082	40.70(M)
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	1043454	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	954000	50.0000	
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	1098047	49.0711	49.07
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	390254	48.7439	48.74
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	530576	50.0000	

QC Flag Legend

M - Compound response manually integrated.

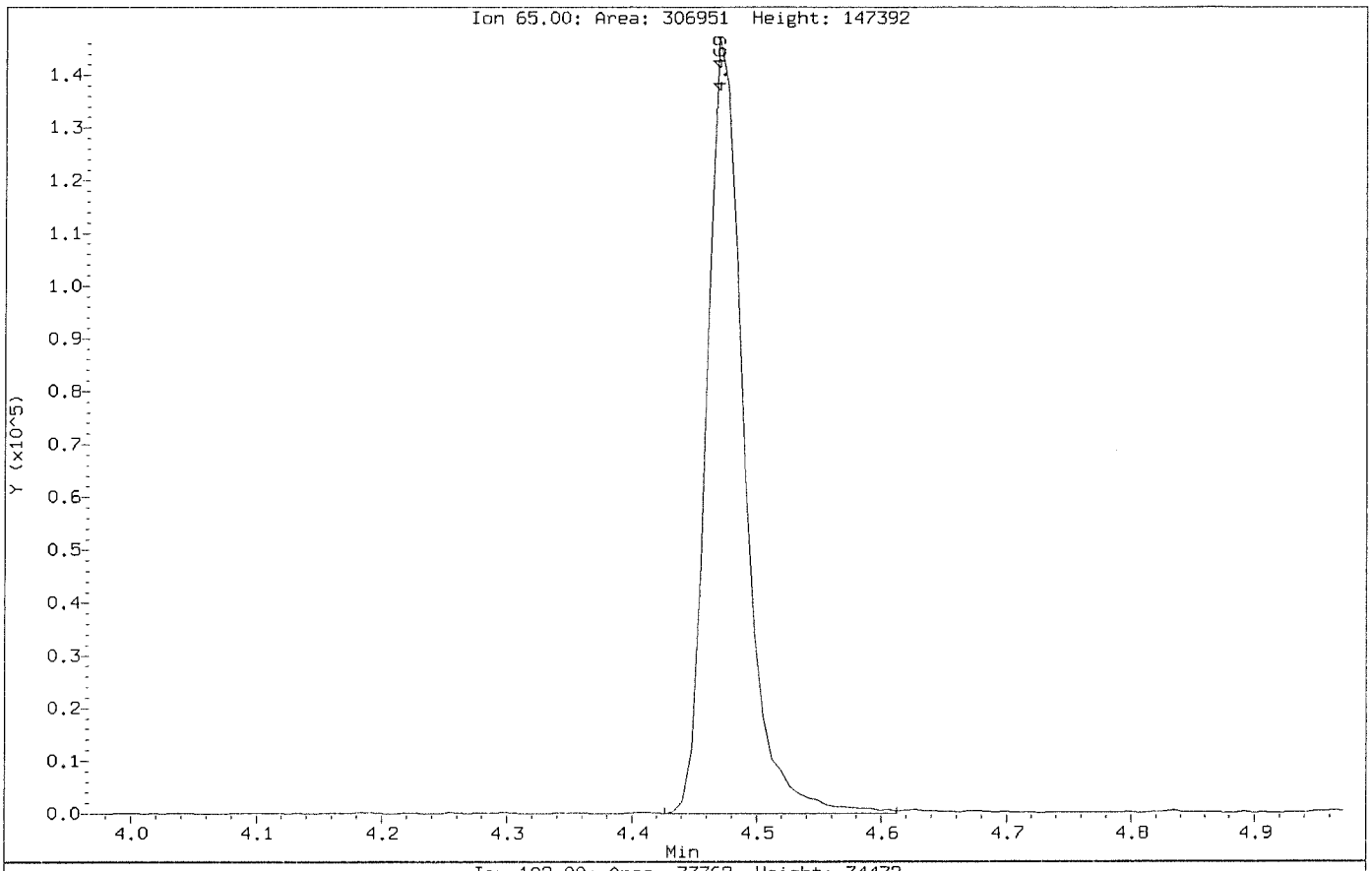
Data File: \\NAHSTWS005\target\chem\voa6.i\X210813.b\X081308.D
Date : 13-AUG-2021 13:12
Client ID: VBLKW-210813
Sample Info: VBLKW-210813;VBLKW-210813;3;;BLANK
Purge Volume: 5.0
Column phase: DB624

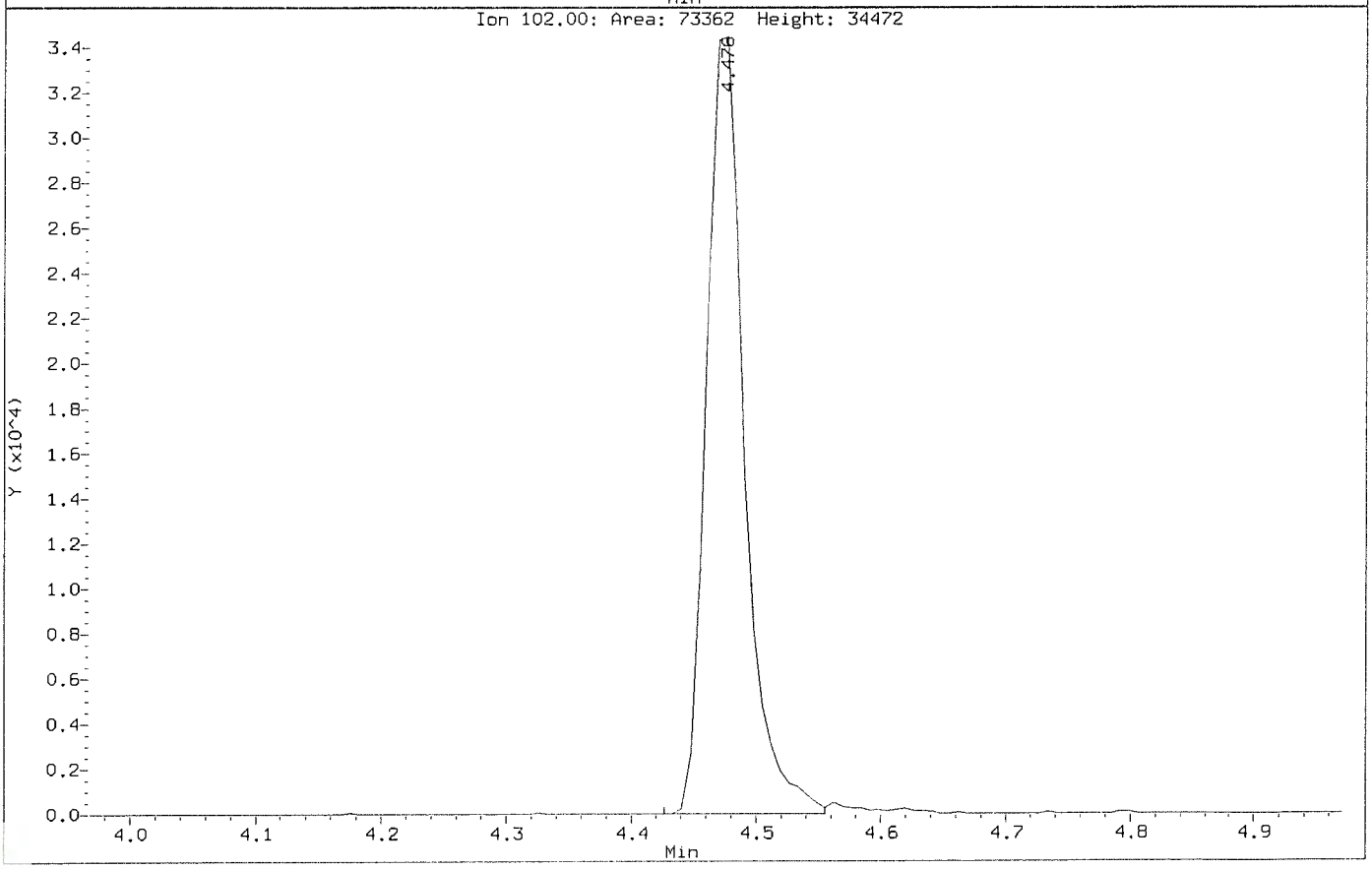
Instrument: voa6.i
Operator: PC
Column diameter: 0.18



Data File: \\NAHSTWS005\target\chem\voa6.i\X210813.b\Before\X081308.D
Injection Date: 13-AUG-2021 13:12
Instrument: voa6.i
Client Sample ID: VBLKW-210813

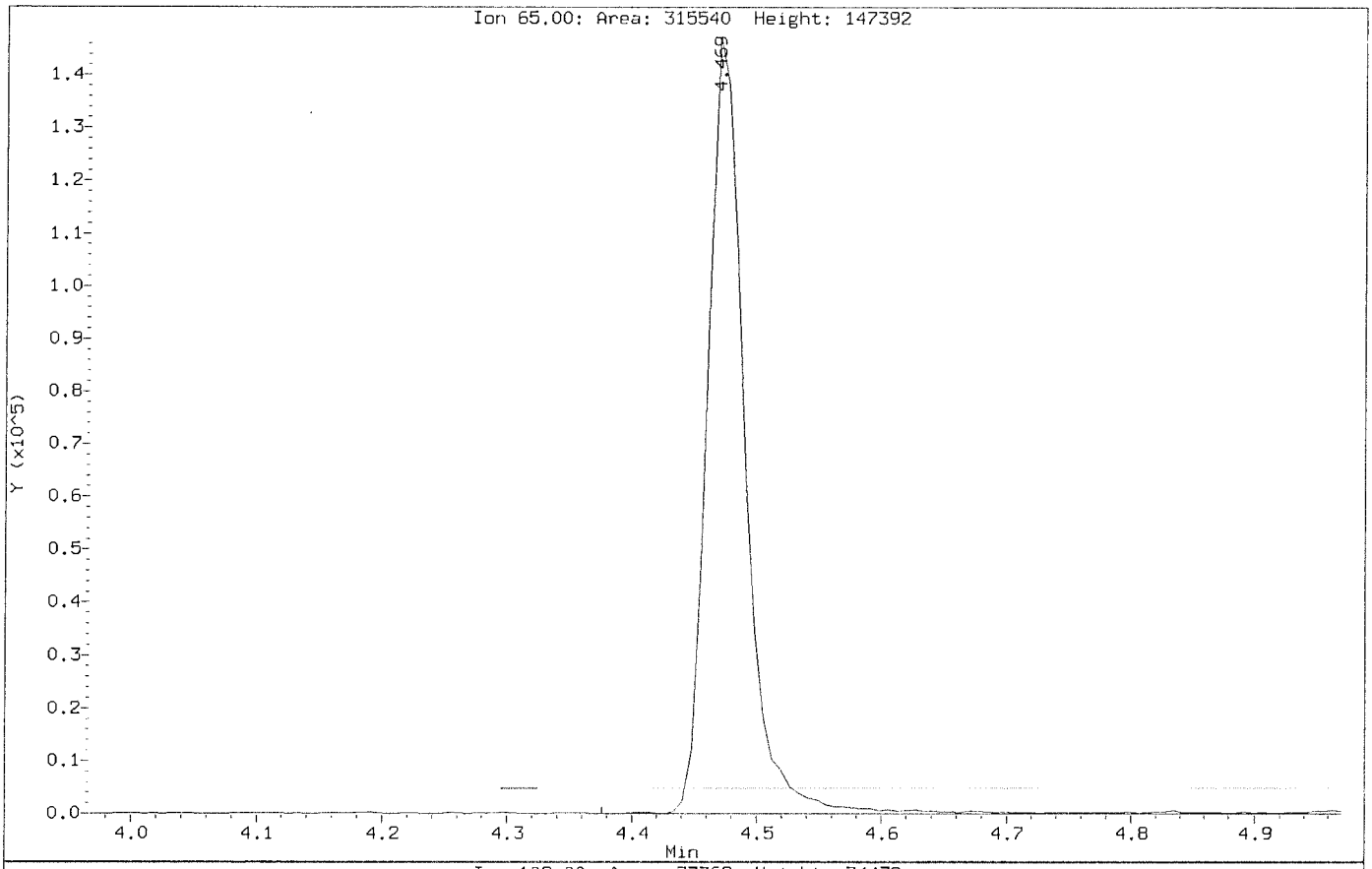
Compound: 1,2-Dichloroethane-d4
CAS Number: 17060-07-0

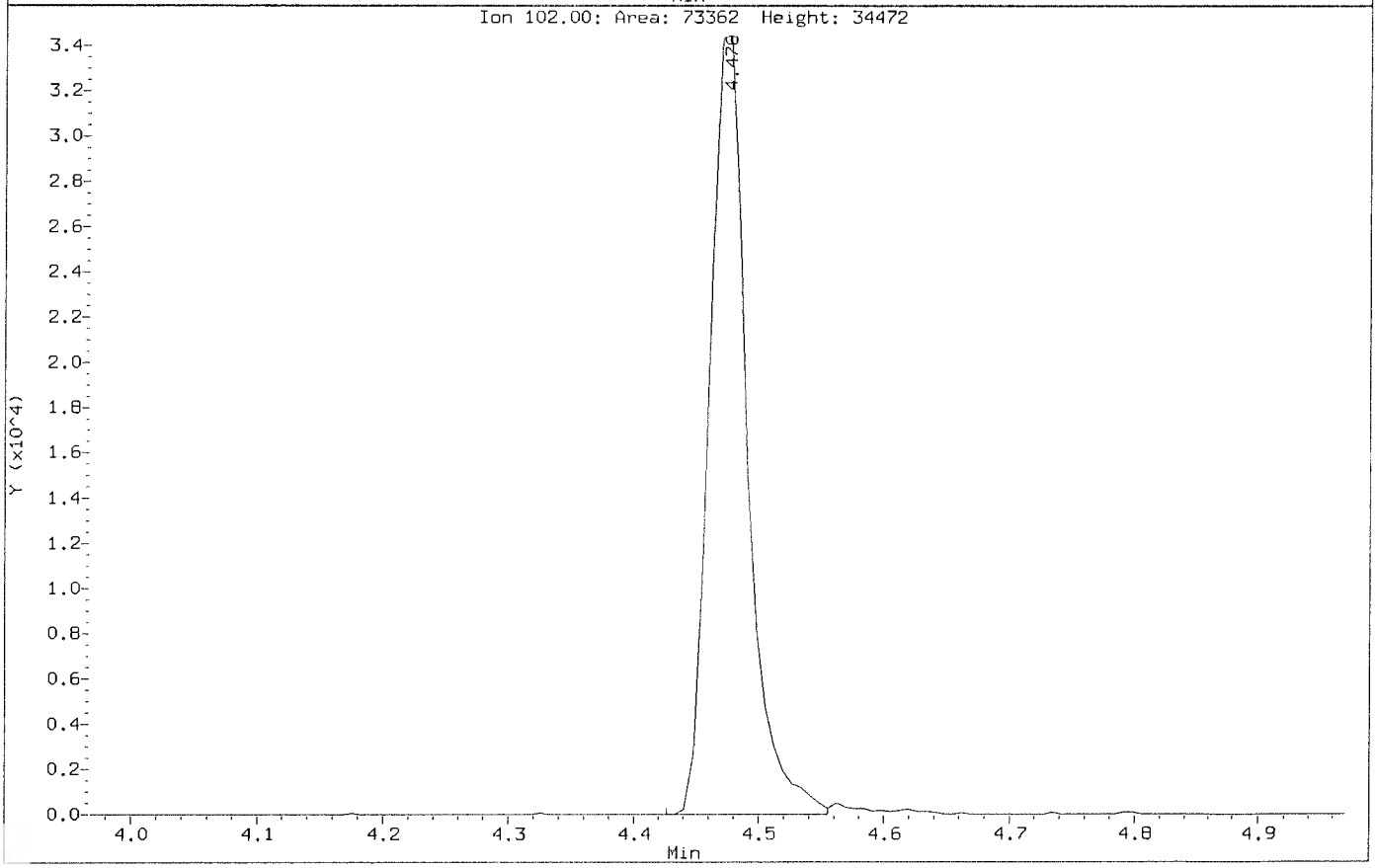




Data File: \\NAHSTWS005\target\chem\voa6.i\X210813.b\X081308.D
Injection Date: 13-AUG-2021 13:12
Instrument: voa6.i
Client Sample ID: VBLKW-210813

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





Data File: \\NAHSTWS005\target\chem\voa6.i\X210813.b\X081310.D Page 1
Report Date: 10-Sep-2021 16:55

ALS Laboratory Group

Data file : \\NAHSTWS005\target\chem\voa6.i\X210813.b\X081310.D
Lab Smp Id: HS21071465-04 Client Smp ID: HS21071465-04
Inj Date : 13-AUG-2021 13:54
Operator : PC Inst ID: voa6.i
Smp Info : HS21071465-04;HS21071465-04;;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\target\chem\voa6.i\X210813.b\8260W.m
Meth Date : 10-Sep-2021 16:54 Genoveva.R Quant Type: ISTD
Cal Date : 30-JUL-2021 13:56 Cal File: X073008.D
Als bottle: 10
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0474-dod.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

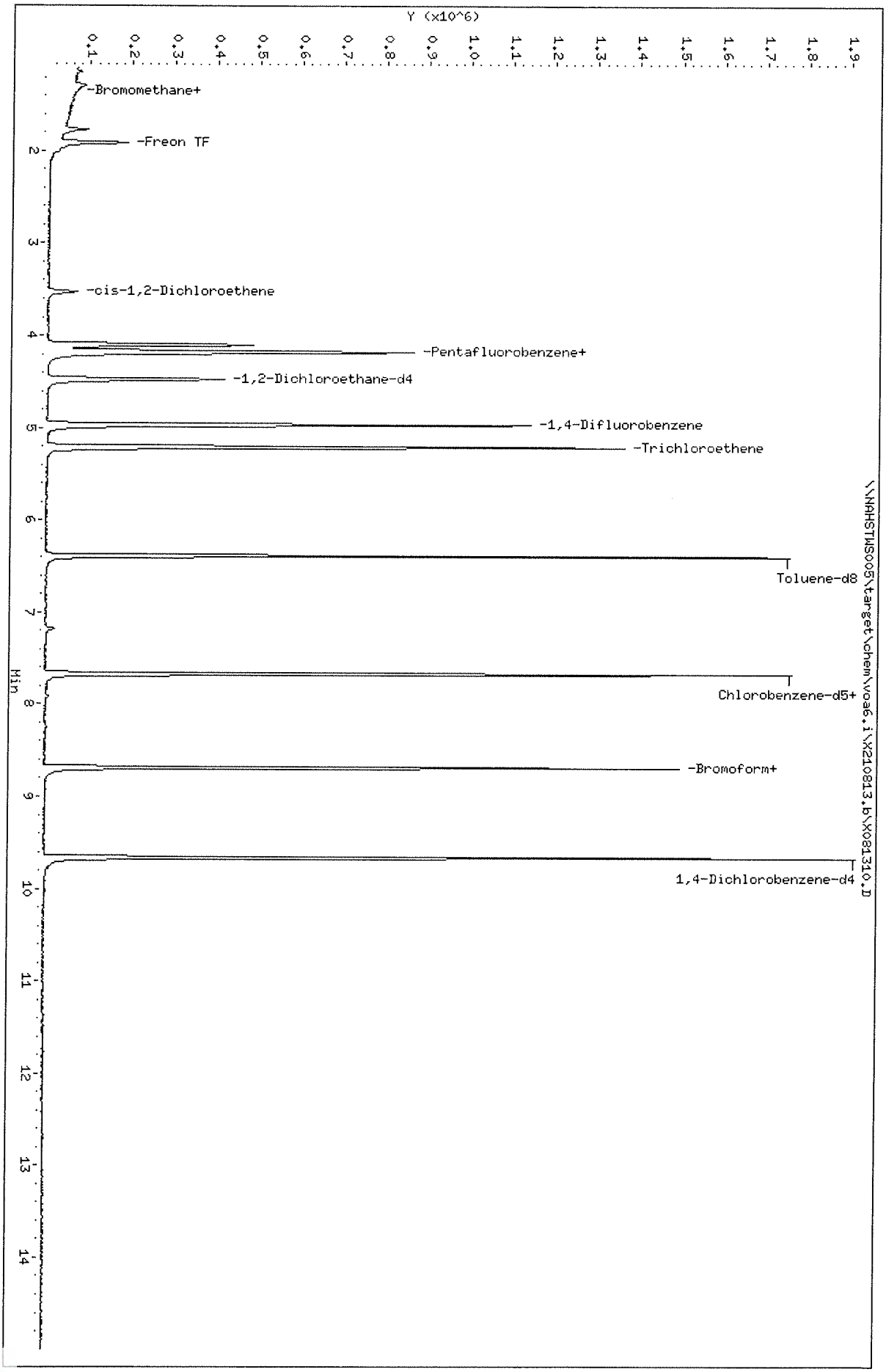
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
*	1 Pentafluorobenzene	168	4.182	4.182	(1.000)	852034	50.0000	
$	30 Dibromofluoromethane	113	4.096	4.103	(0.979)	333776	41.6045	41.60
$	35 1,2-Dichloroethane-d4	65	4.476	4.469	(1.070)	312573	40.9644	40.96
*	36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	1031549	50.0000	
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	924347	50.0000	
$	48 Toluene-d8	98	6.388	6.388	(0.833)	1083799	49.9882	49.98
$	69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	376431	48.5224	48.52
*	70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	506599	50.0000	
	27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	37794	4.42206	4.42(a)
	38 Trichloroethene	130	5.207	5.206	(1.049)	486093	64.4844	64.48

QC Flag Legend

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

Data File: \\NAHSTWS005\target\chem\voa6.i\X210813.b\X081310.D
Date : 13-AUG-2021 13:54
Client ID: HS21071465-04
Sample Info: HS21071465-04;HS21071465-04;;;
Purge Volume: 5.0
Column phase: DB624

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



Data File: \\NAHSTWS005\target\chem\voa6.i\X210813.b\X081310.D Page 3

Date : 13-AUG-2021 13:54

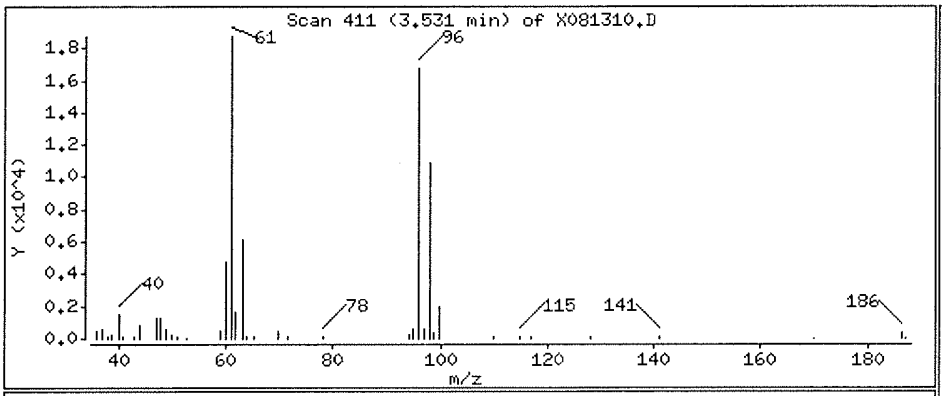
Client ID: HS21071465-04 Instrument: voa6.i

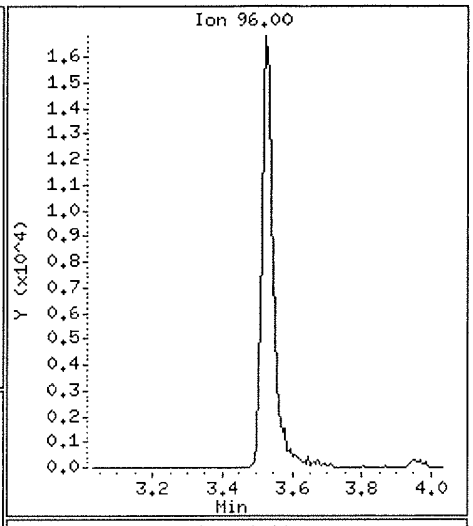
Sample Info: HS21071465-04;HS21071465-04;;;

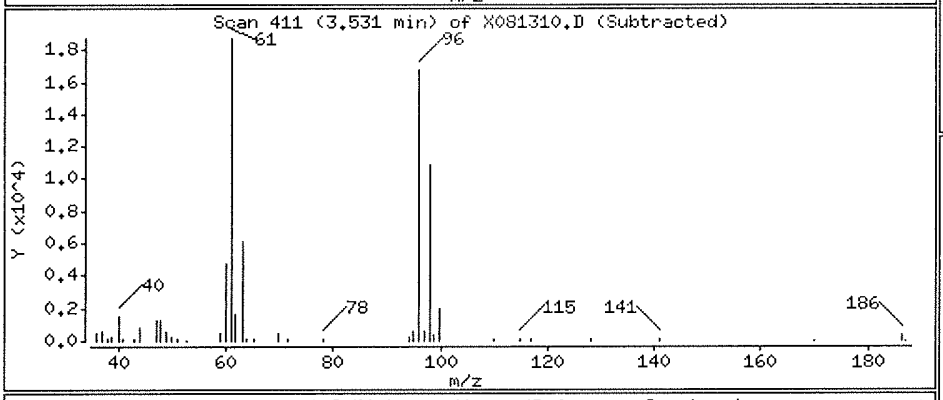
Purge Volume: 5.0 Operator: PC

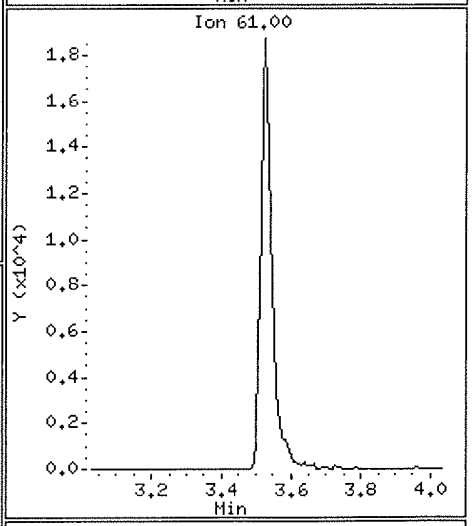
Column phase: DB624 Column diameter: 0.18

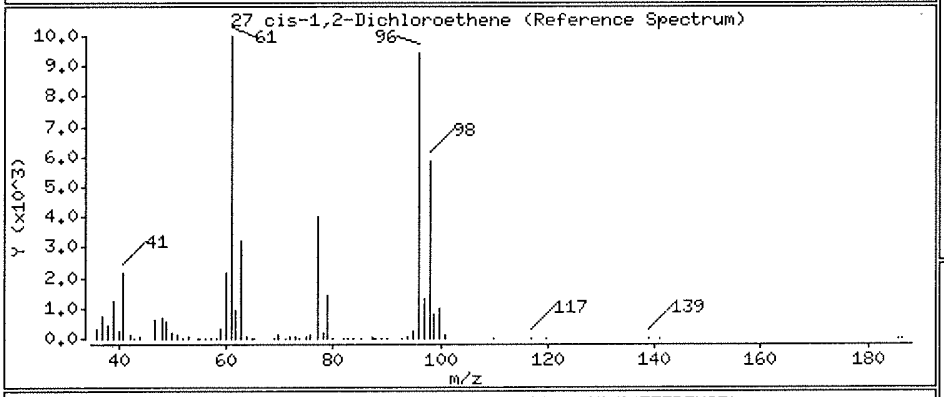
27 cis-1,2-Dichloroethene Concentration: 4.42 ug/l

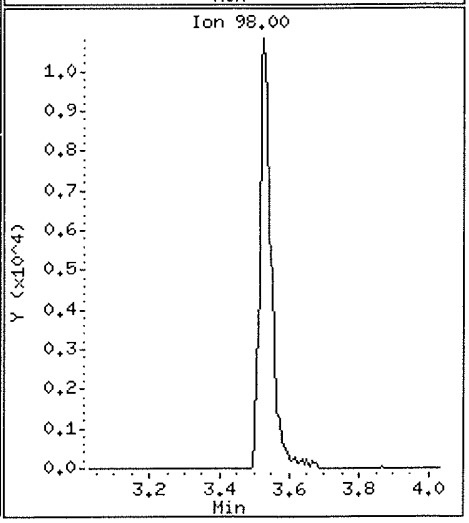


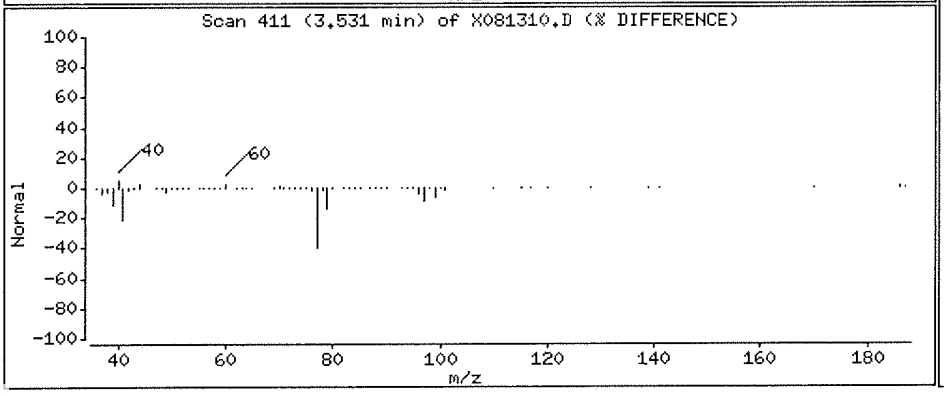












Data File: \\NAHSTWS005\target\chem\voa6.i\X210813.b\X081310.D

Date : 13-AUG-2021 13:54

Client ID: HS21071465-04

Instrument: voa6.i

Sample Info: HS21071465-04;HS21071465-04;;;

Purge Volume: 5.0

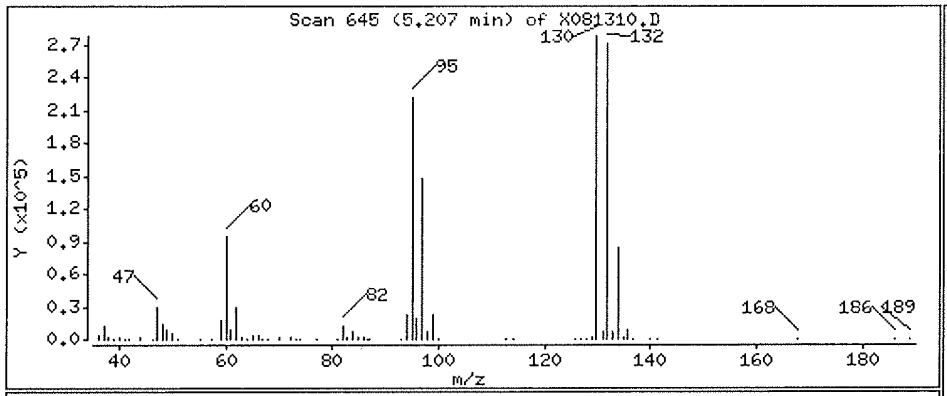
Operator: PC

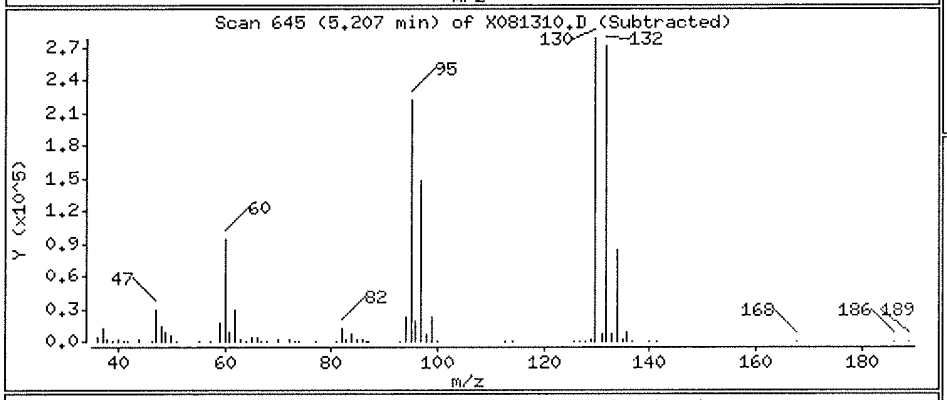
Column phase: DB624

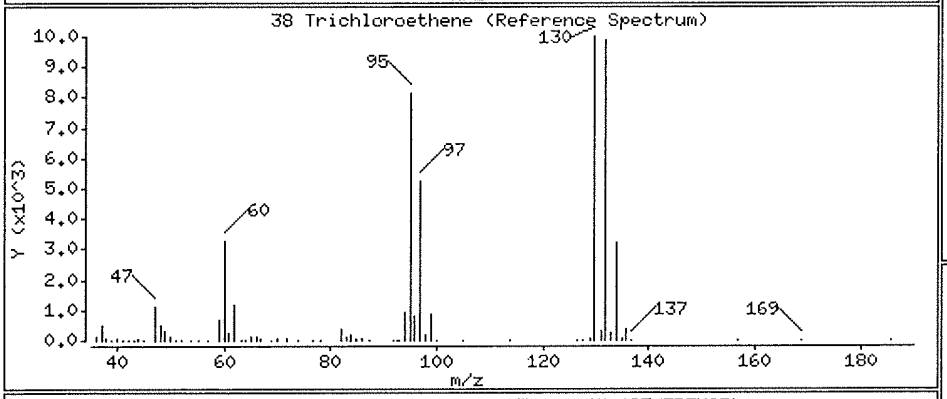
Column diameter: 0.18

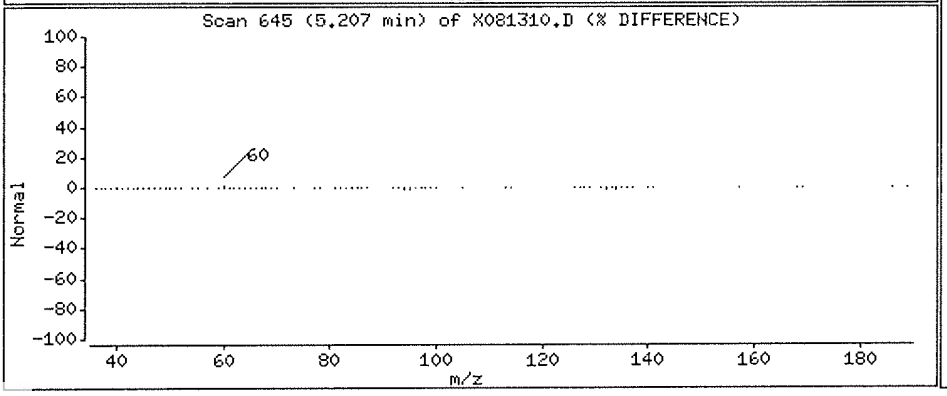
38 Trichloroethene

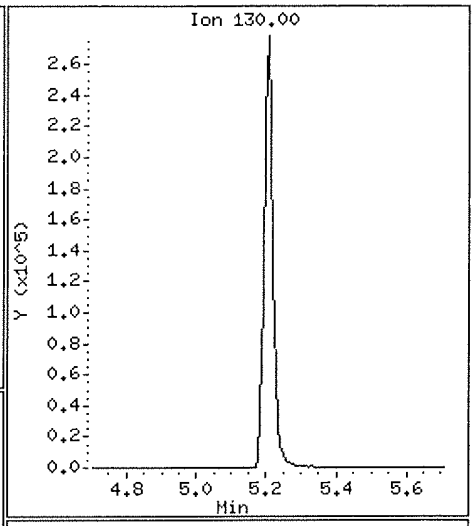
Concentration: 64.48 ug/l

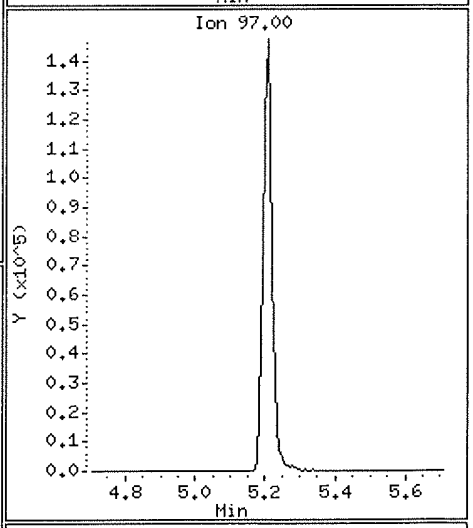


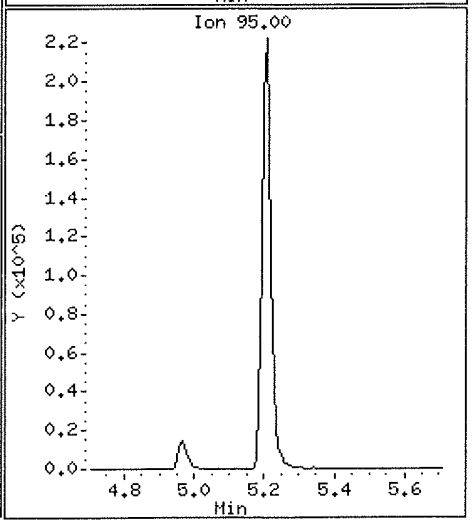












Data File: \\NAHSTWS005\target\chem\voa6.i\X210813.b\X081311.D Page 1
Report Date: 10-Sep-2021 16:55

ALS Laboratory Group

Data file : \\NAHSTWS005\target\chem\voa6.i\X210813.b\X081311.D
Lab Smp Id: HS21071465-03 Client Smp ID: HS21071465-03
Inj Date : 13-AUG-2021 14:15
Operator : PC Inst ID: voa6.i
Smp Info : HS21071465-03;HS21071465-03;;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\target\chem\voa6.i\X210813.b\8260W.m
Meth Date : 10-Sep-2021 16:54 Genoveva.R Quant Type: ISTD
Cal Date : 30-JUL-2021 13:56 Cal File: X073008.D
Als bottle: 11
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0474-dod.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

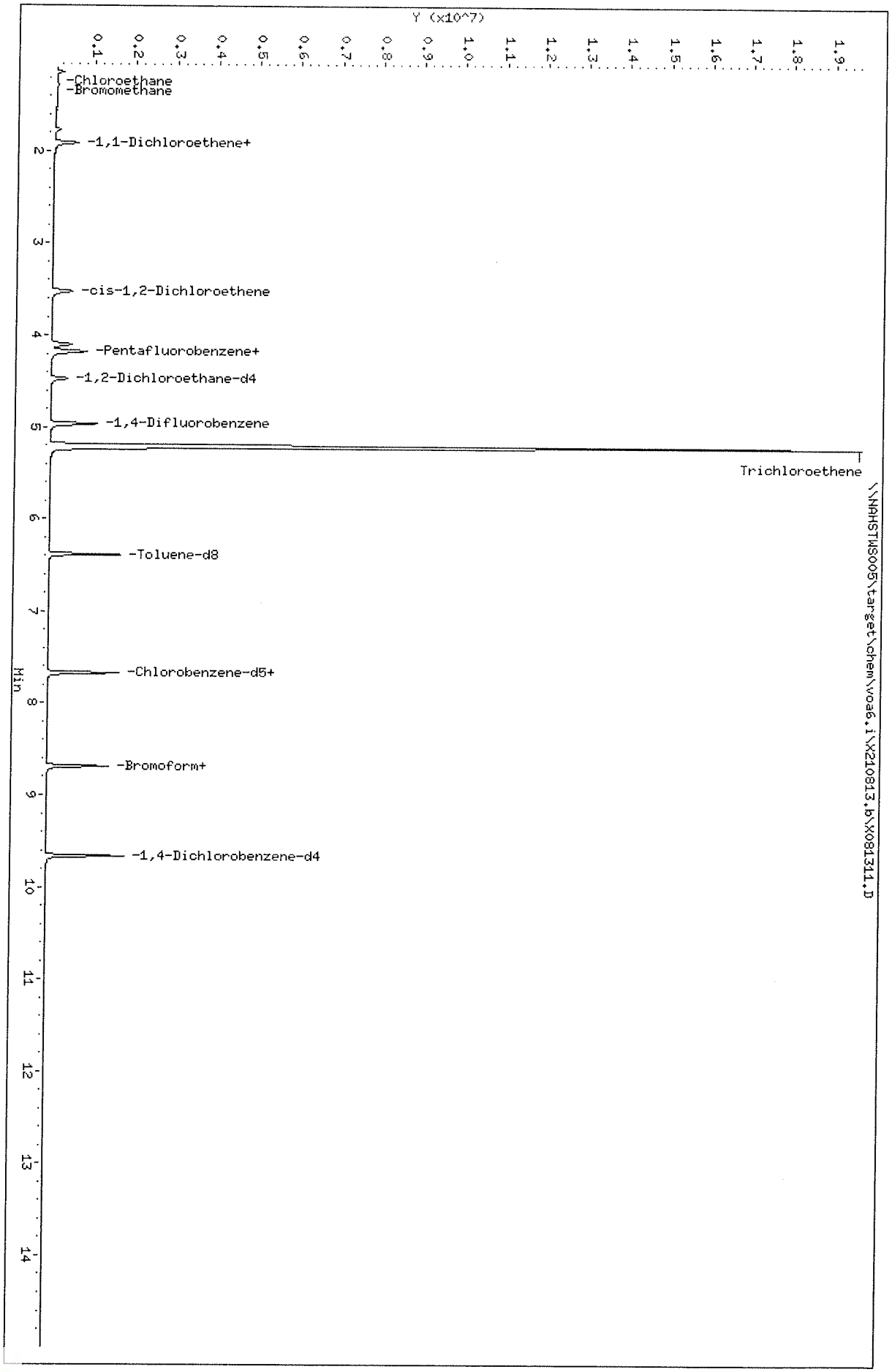
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	841549	50.0000	
$ 30 Dibromofluoromethane	113	4.096	4.103	(0.979)	330847	41.7569	41.75
$ 35 1,2-Dichloroethane-d4	65	4.469	4.469	(1.068)	308285	40.9045	40.90(M)
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	1021206	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	920148	50.0000	
$ 48 Toluene-d8	98	6.389	6.388	(0.833)	1075779	49.8447	49.84
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	379590	49.1623	49.16
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	507501	50.0000	
5 Vinyl Chloride	62	1.138	1.145	(0.272)	121026	15.1081	15.10
11 1,1-Dichloroethene	96	1.912	1.911	(0.457)	28944	4.08745	4.08(a)
27 cis-1,2-Dichloroethene	96	3.523	3.530	(0.842)	294810	34.9238	34.92
38 Trichloroethene	130	5.207	5.206	(1.049)	6815869	913.341	913.34(A)

QC Flag Legend

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

Data File: \\NAHSTWS005\target\chem\voa6.i\X210813.b\X081311.D
Date : 13-AUG-2021 14:15
Client ID: HS21071465-03
Sample Info: HS21071465-03;HS21071465-03;;;
Purge Volume: 5.0
Column phase: DB624

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



Data File: \\NAHSTWS005\target\chem\voa6.i\X210813.b\X081311.D Page 3

Date : 13-AUG-2021 14:15

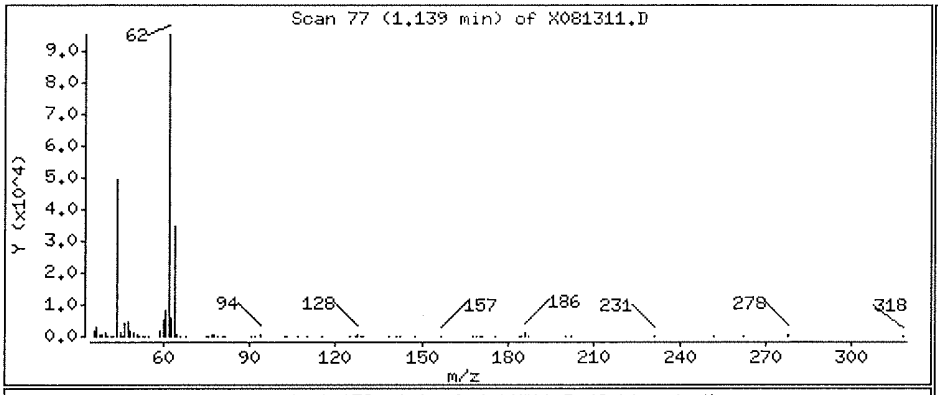
Client ID: HS21071465-03 Instrument: voa6.i

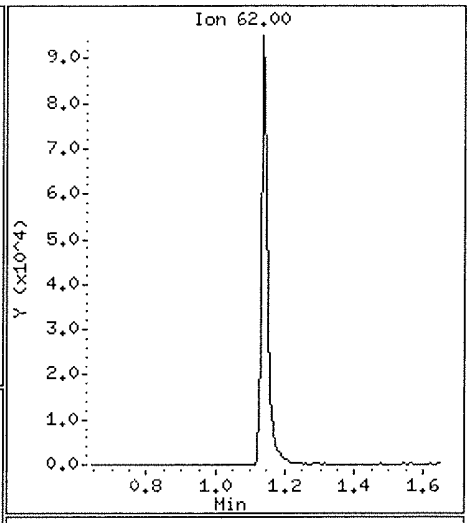
Sample Info: HS21071465-03;HS21071465-03;;;

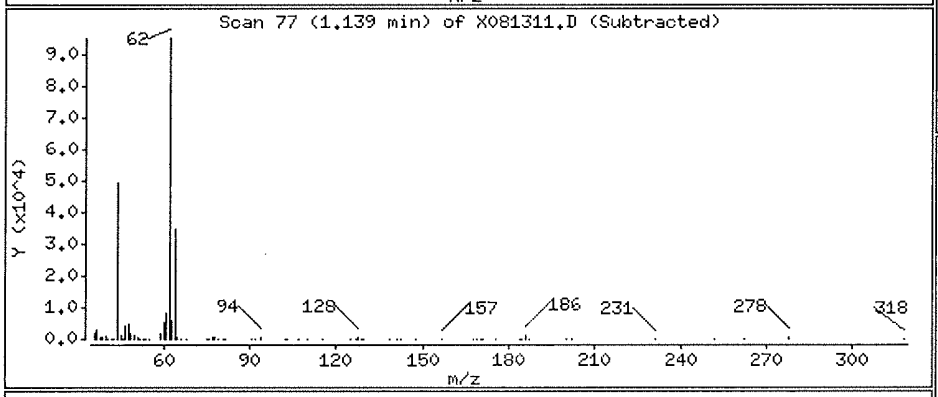
Purge Volume: 5.0 Operator: PC

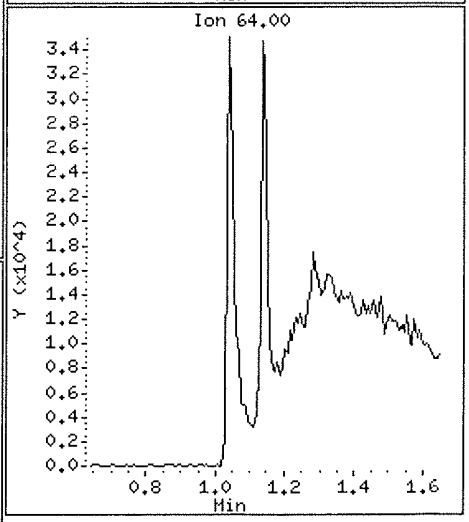
Column phase: DB624 Column diameter: 0.18

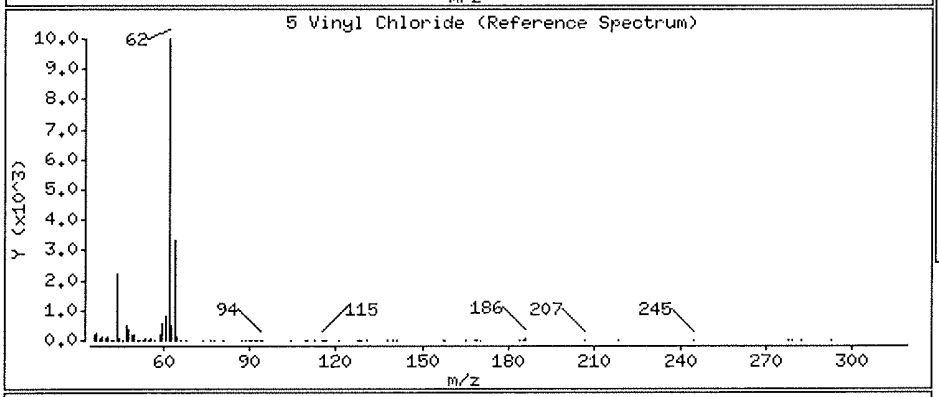
5 Vinyl Chloride Concentration: 15.10 ug/l

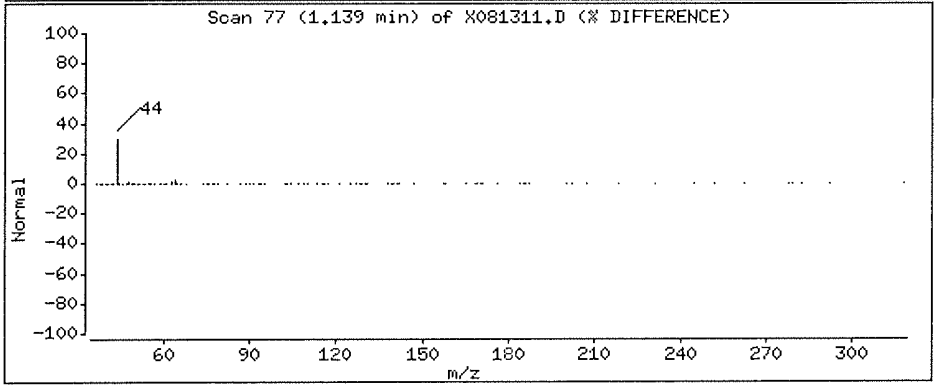












Data File: \\NAHSTWS005\target\chem\voa6.i\X210813.b\X081311.D Page 4

Date : 13-AUG-2021 14:15

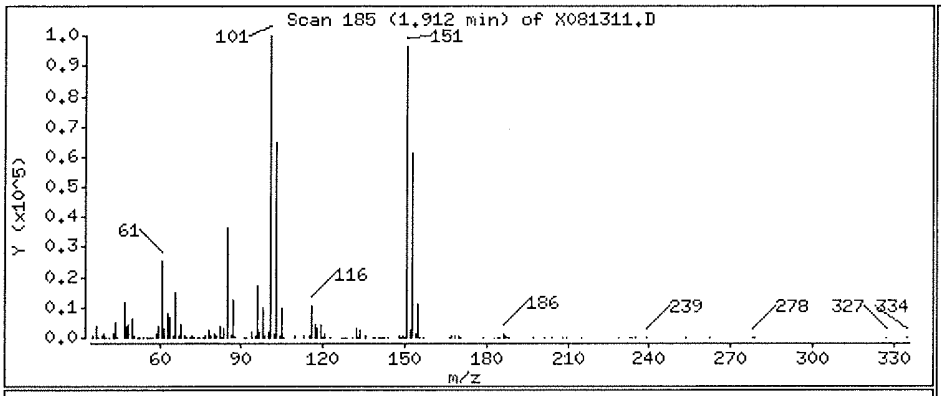
Client ID: HS21071465-03 Instrument: voa6.i

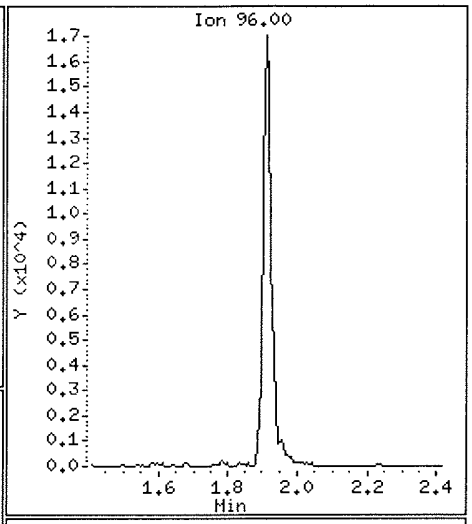
Sample Info: HS21071465-03;HS21071465-03;;;

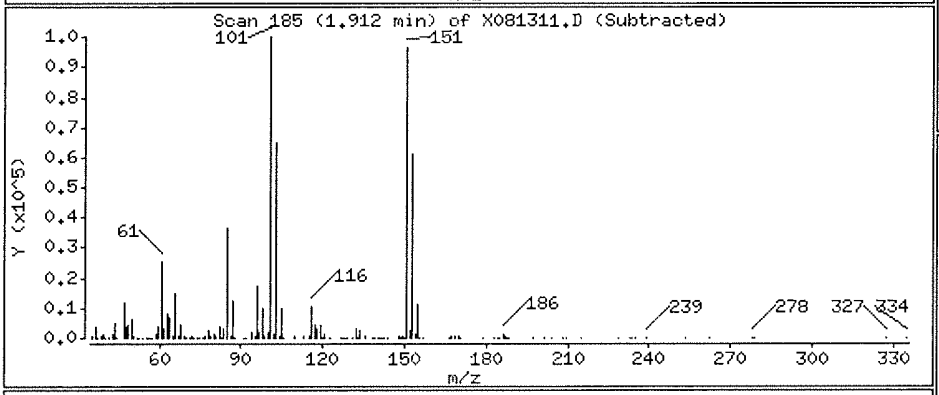
Purge Volume: 5.0 Operator: PC

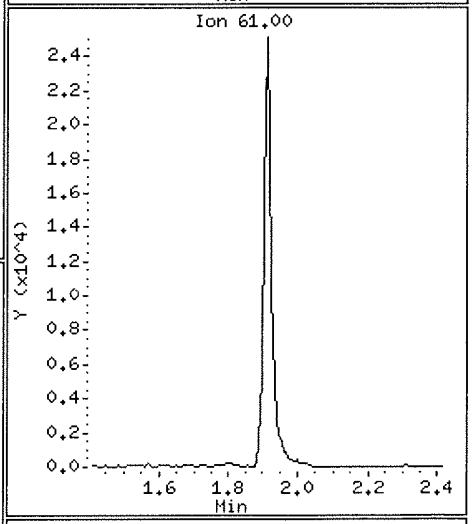
Column phase: DB624 Column diameter: 0.18

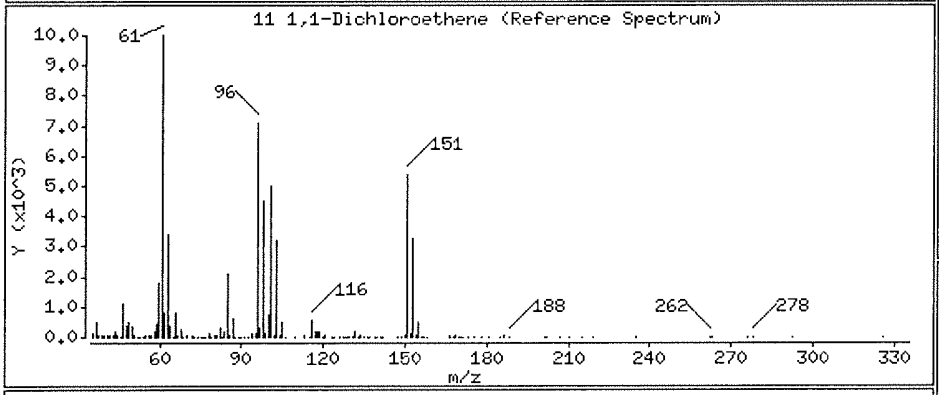
11 1,1-Dichloroethene Concentration: 4.08 ug/l

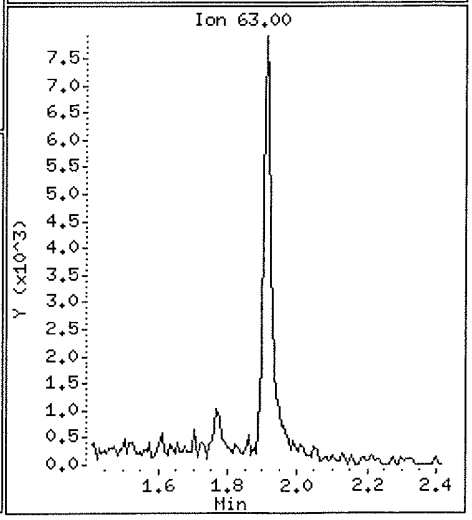


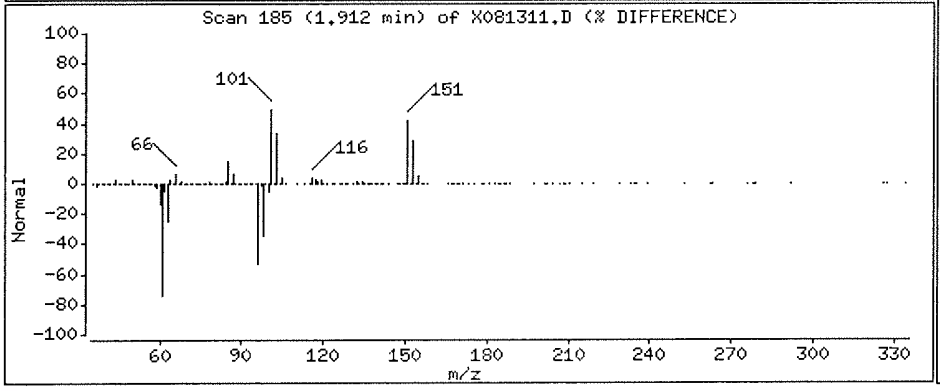












Data File: \\NAHSTWS005\target\chem\voa6.i\X210813.b\X081311.D Page 5

Date : 13-AUG-2021 14:15

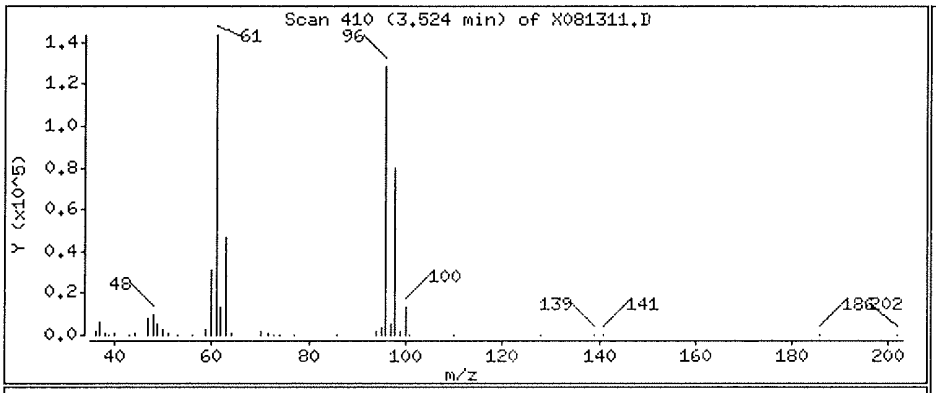
Client ID: HS21071465-03 Instrument: voa6.i

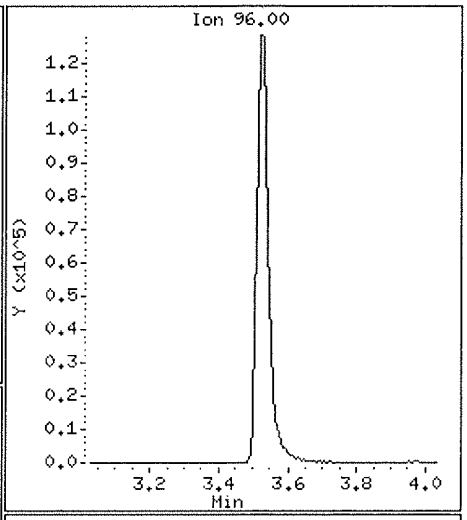
Sample Info: HS21071465-03;HS21071465-03;;;

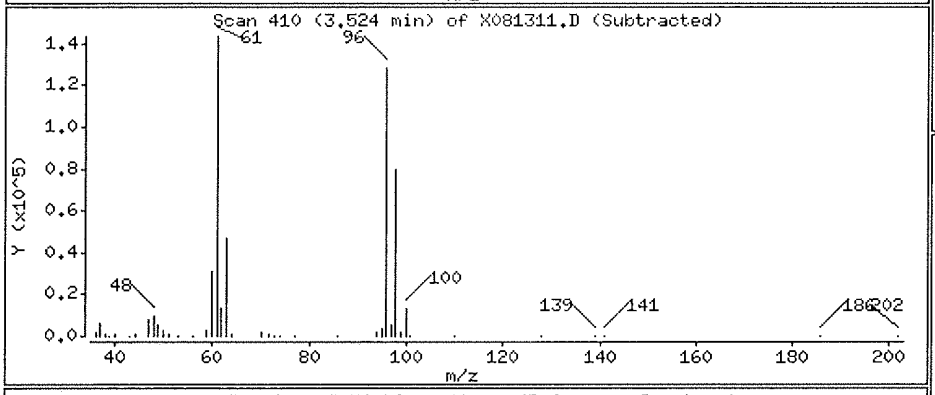
Purge Volume: 5.0 Operator: PC

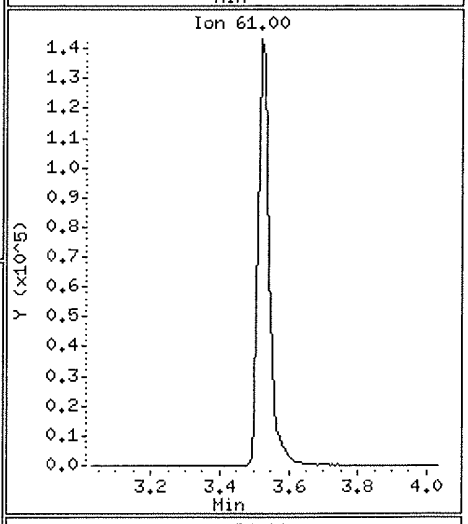
Column phase: DB624 Column diameter: 0.18

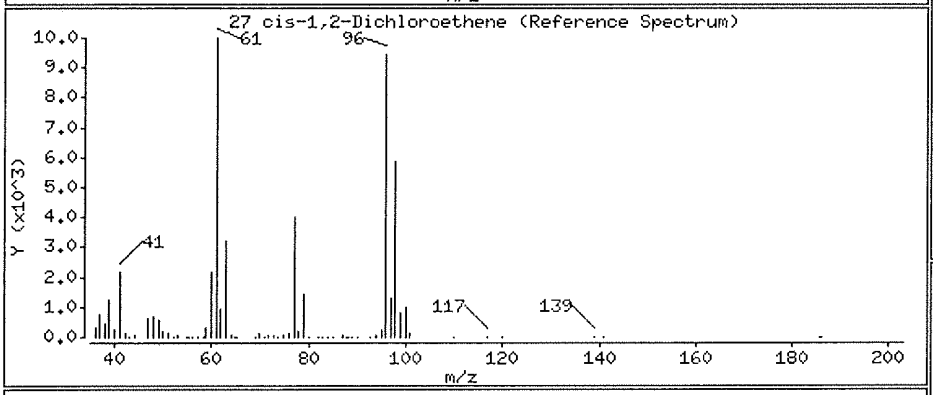
27 cis-1,2-Dichloroethene Concentration: 34.92 ug/l

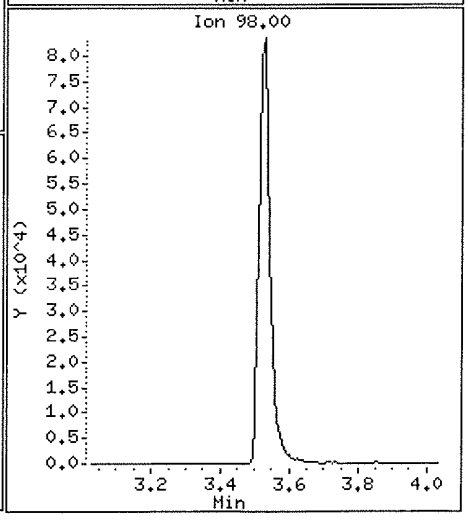


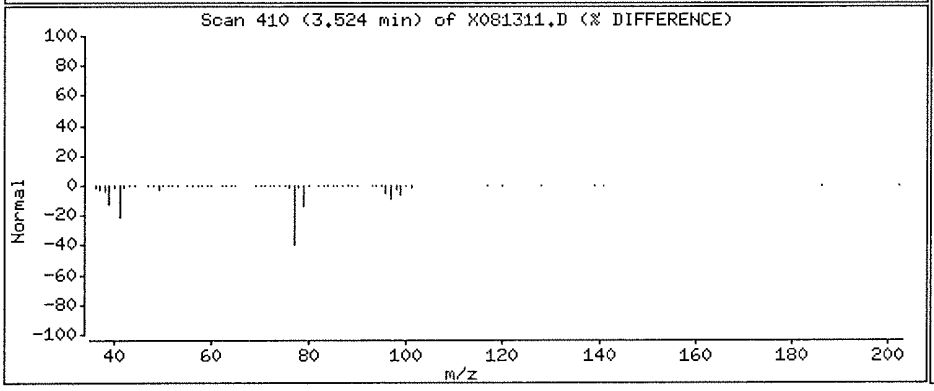












Data File: \\NAHSTWS005\target\chem\voa6.i\X210813.b\X081311.D

Date : 13-AUG-2021 14:15

Client ID: HS21071465-03

Instrument: voa6.i

Sample Info: HS21071465-03;HS21071465-03;;;

Purge Volume: 5.0

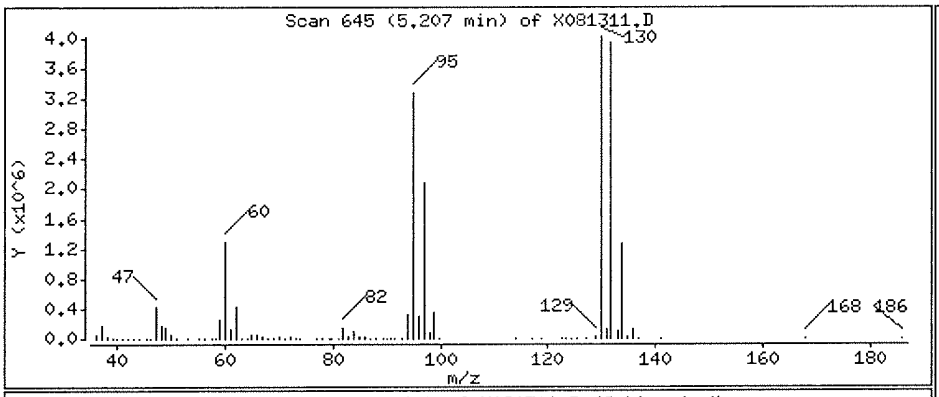
Operator: PC

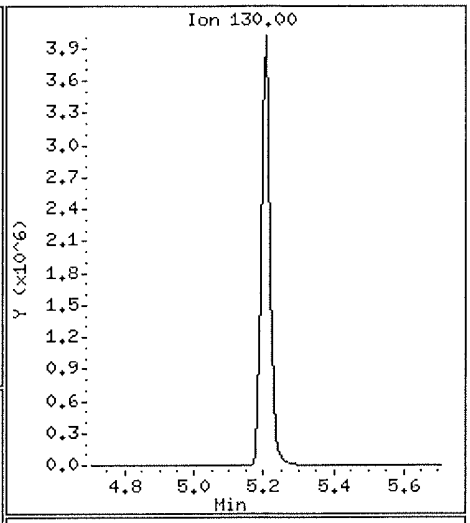
Column phase: DB624

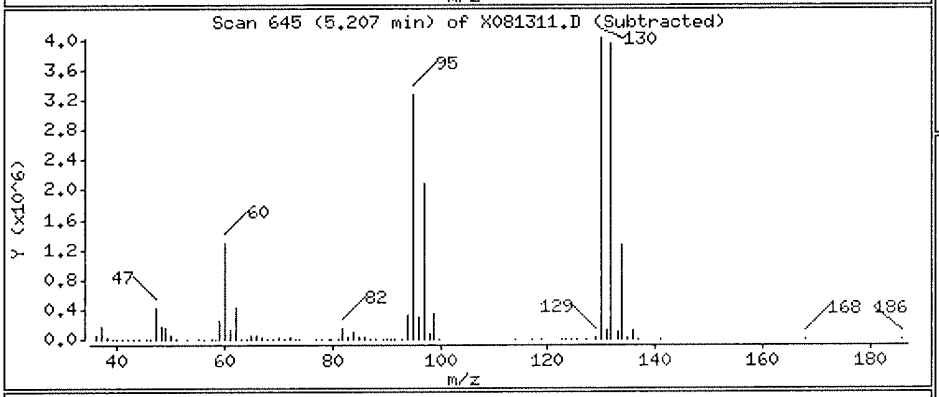
Column diameter: 0.18

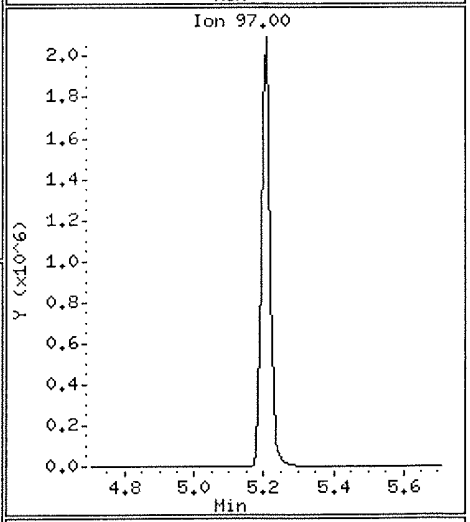
38 Trichloroethene

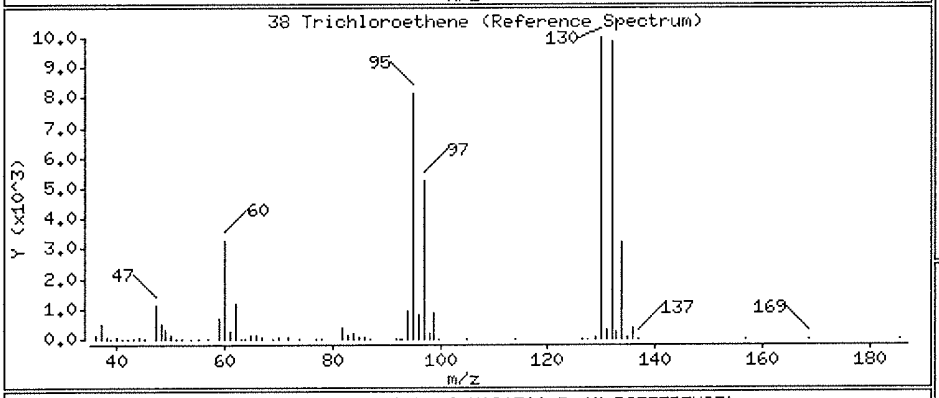
Concentration: 913.34 ug/l

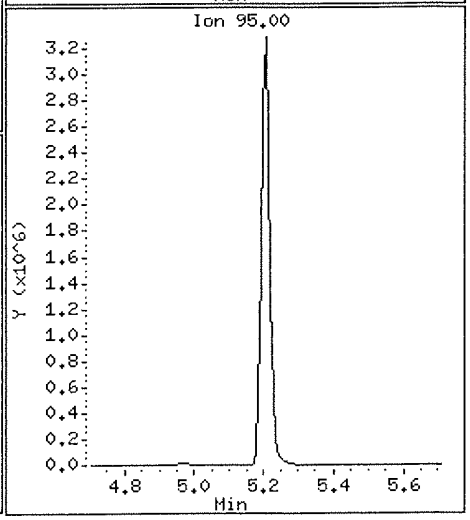


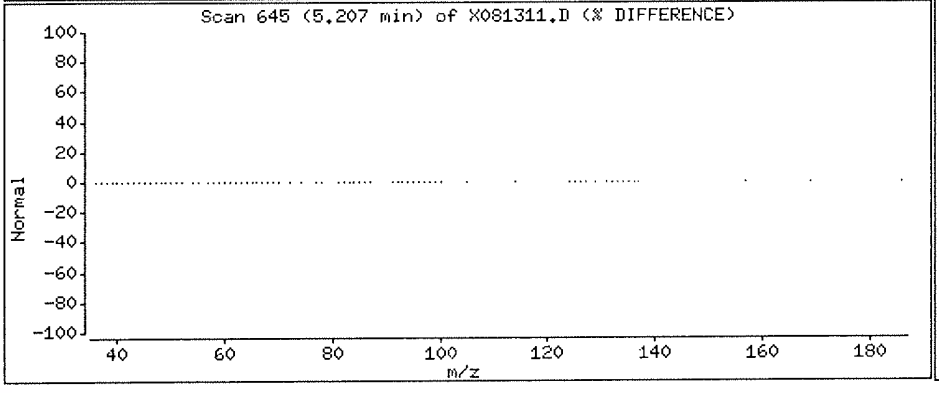






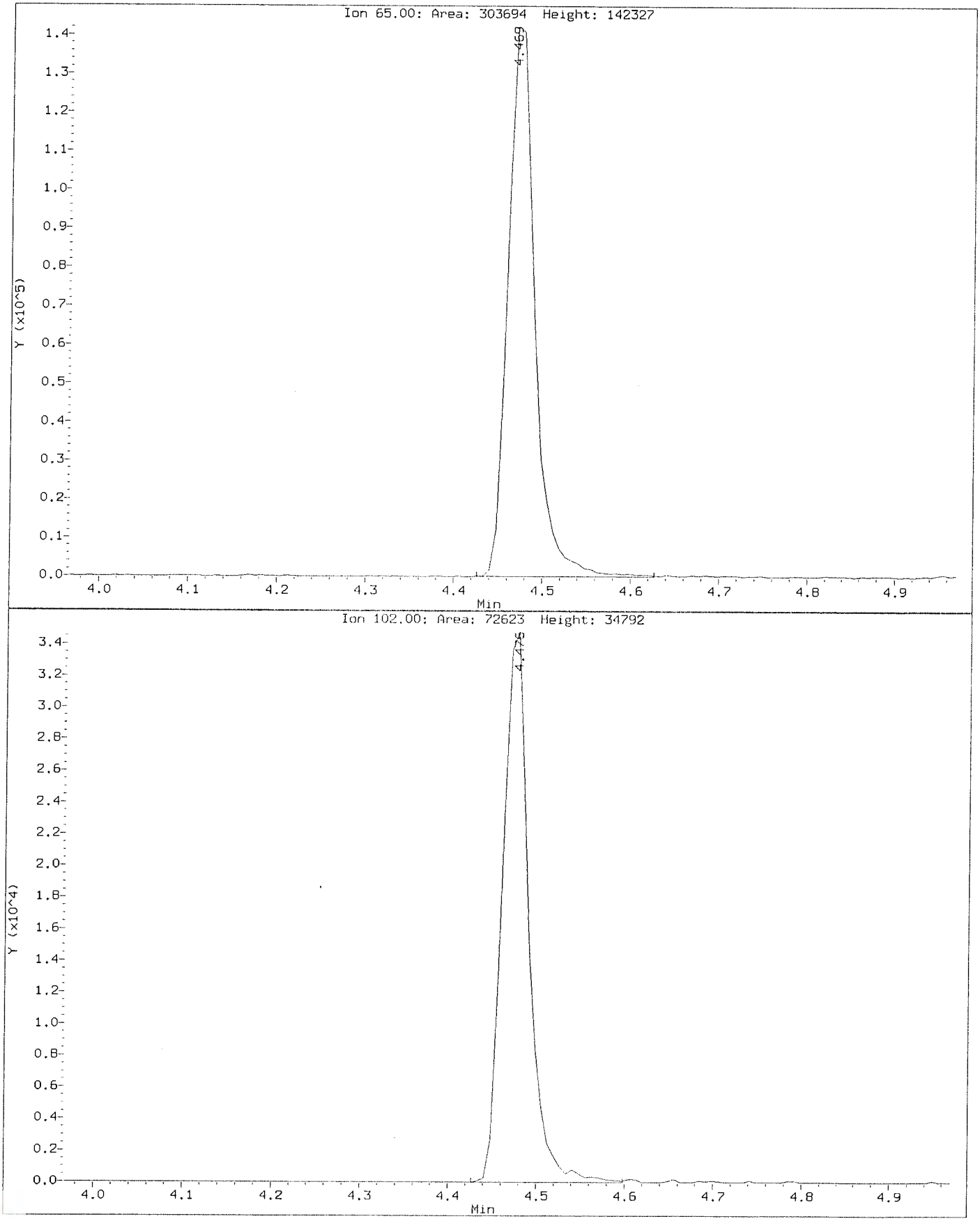






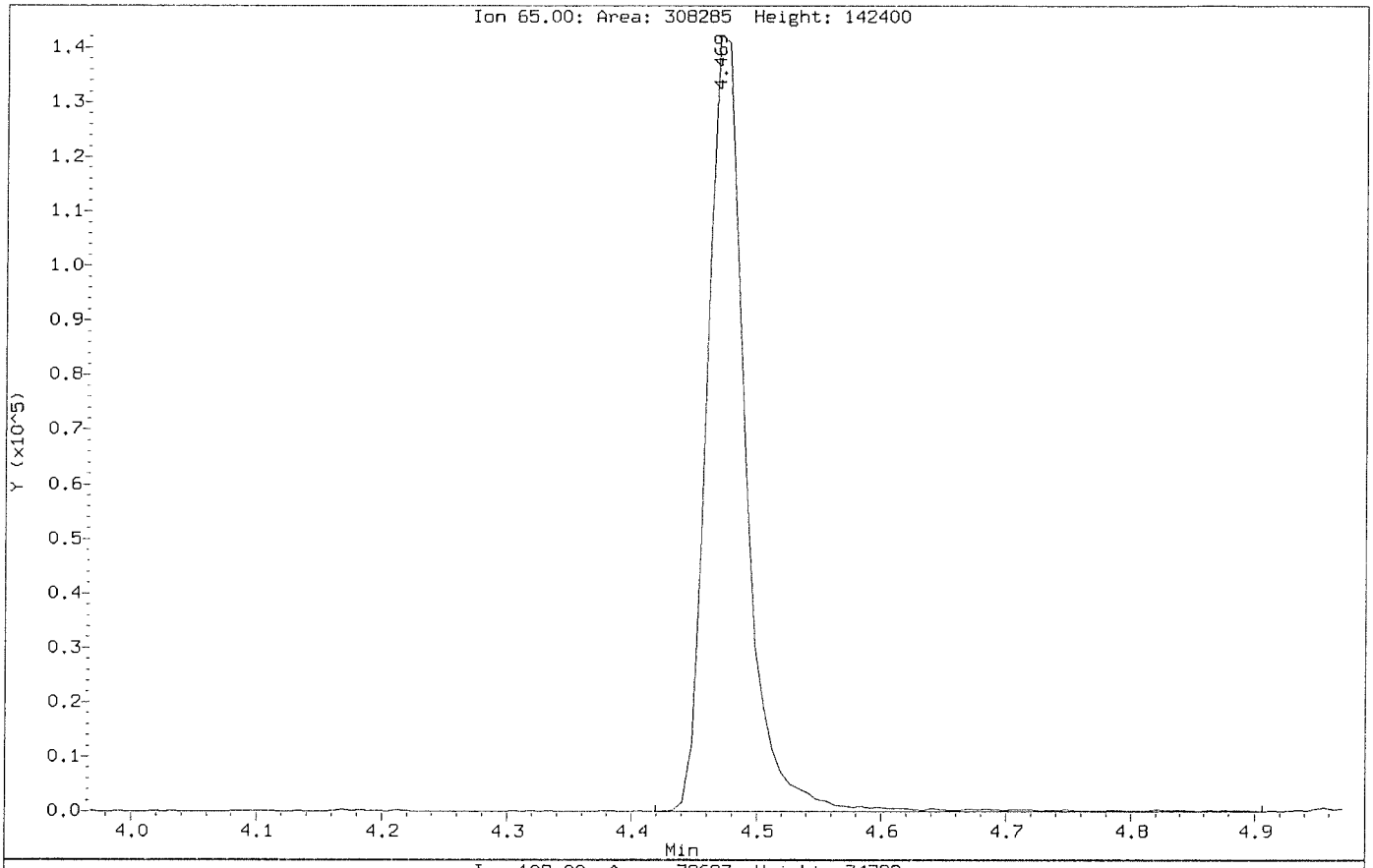
Data File: \\NAHSTWS005\target\chem\voa6.i\X210813.b\Before\X081311.D
Injection Date: 13-AUG-2021 14:15
Instrument: voa6.i
Client Sample ID: HS21071465-03

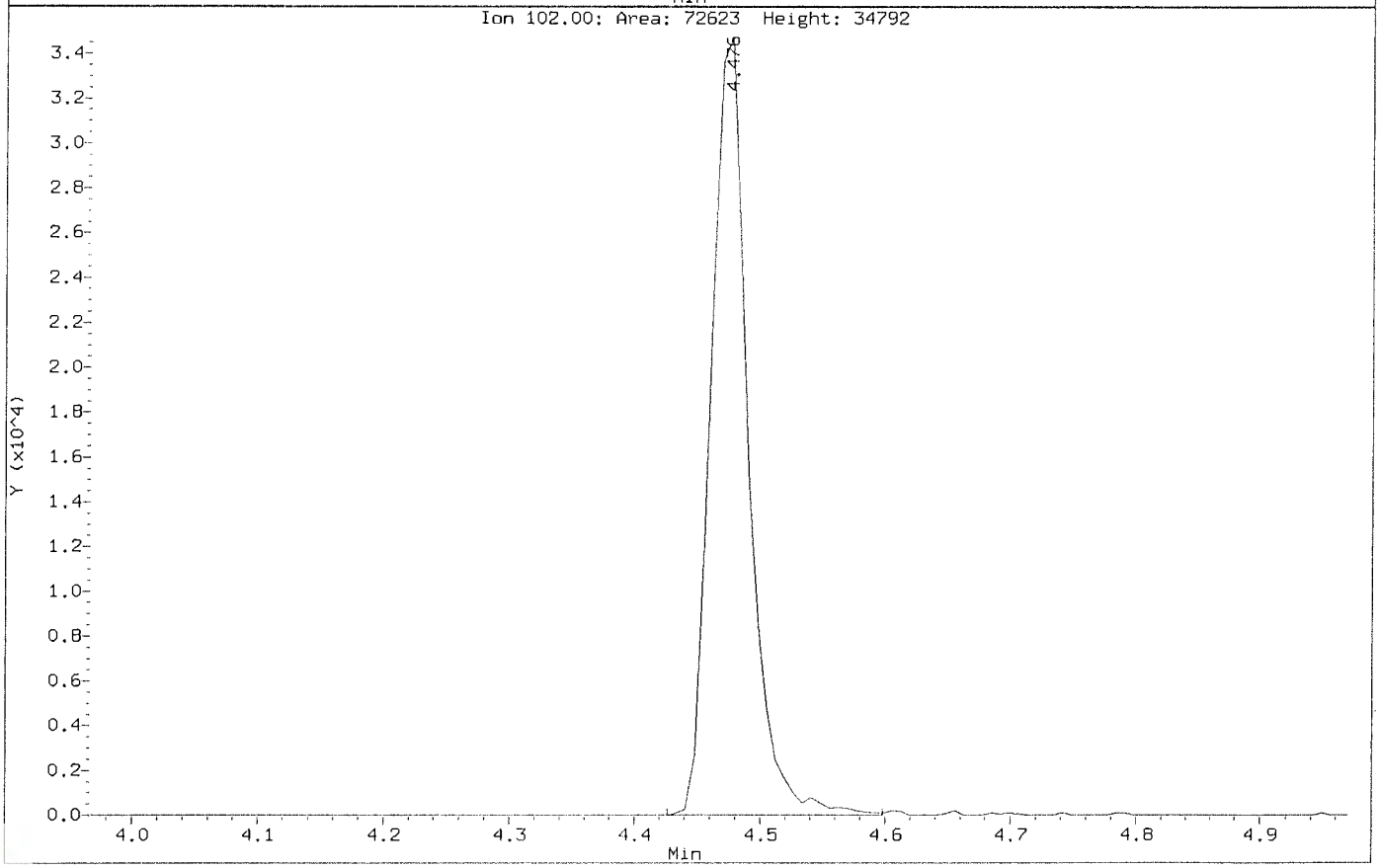
Compound: 1,2-Dichloroethane-d4
CAS Number: 17060-07-0



Data File: \\NAHSTWS005\target\chem\voa6.i\X210813.b\X081311.D
Injection Date: 13-AUG-2021 14:15
Instrument: voa6.i
Client Sample ID: HS21071465-03

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





Data File: \\NAHSTWS005\target\chem\voa6.i\X210813.b\X081313.D Page 1
Report Date: 10-Sep-2021 17:00

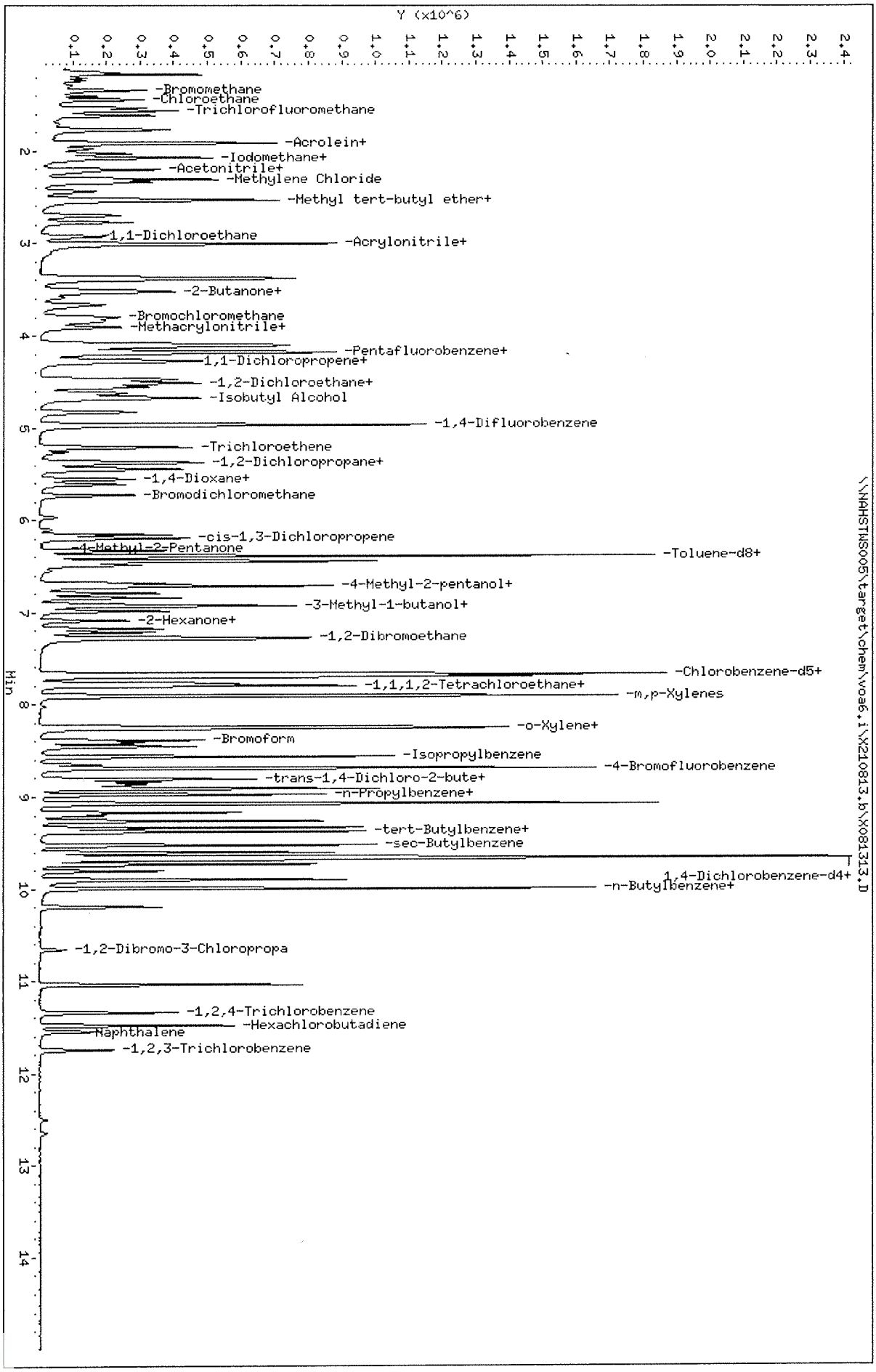
ALS Laboratory Group

Data file : \\NAHSTWS005\target\chem\voa6.i\X210813.b\X081313.D
Lab Smp Id: HS21080560-02MS Client Smp ID: HS21080560-02MS
Inj Date : 13-AUG-2021 14:57
Operator : PC Inst ID: voa6.i
Smp Info : HS21080560-02MS;HS21080560-02MS;3;;MS
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\target\chem\voa6.i\X210813.b\8260W.m
Meth Date : 10-Sep-2021 16:59 voa6.i Quant Type: ISTD
Cal Date : 30-JUL-2021 13:56 Cal File: X073008.D
Als bottle: 13 QC Sample: MS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0474-dod.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	4.182	(1.000)	861481	50.0000	
$ 30 Dibromofluoromethane	113	4.096	4.096	(0.979)	339139	41.8144	41.81
$ 35 1,2-Dichloroethane-d4	65	4.469	4.469	(1.069)	307612	39.8487	39.84
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	1041153	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	951485	50.0000	
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	1090960	48.8833	48.88
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	374784	46.9086	46.90
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	522930	50.0000	
5 Vinyl Chloride	62	1.138	1.138	(0.272)	130867	15.9587	15.95
11 1,1-Dichloroethene	96	1.911	1.912	(0.457)	125892	17.3670	17.36
17 Methylene Chloride	84	2.305	2.306	(0.551)	116505	15.9746	15.97
27 cis-1,2-Dichloroethene	96	3.523	3.523	(0.842)	134326	15.5444	15.54
33 1,2-Dichloroethane	62	4.555	4.555	(0.918)	145910	17.4692	17.46
38 Trichloroethene	130	5.206	5.207	(1.049)	160694	21.1208	21.12
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	90320	18.1446	18.14



Data File: \\MAHSTWS005\target\chem\voa6.i\X210813.b\X081313.D
Date : 13-AUG-2021 14:57
Client ID: HS21080560-02MS
Sample Info: HS21080560-02MS;HS21080560-02MS;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\X210813.b\X081314.D Page 1
Report Date: 10-Sep-2021 17:00

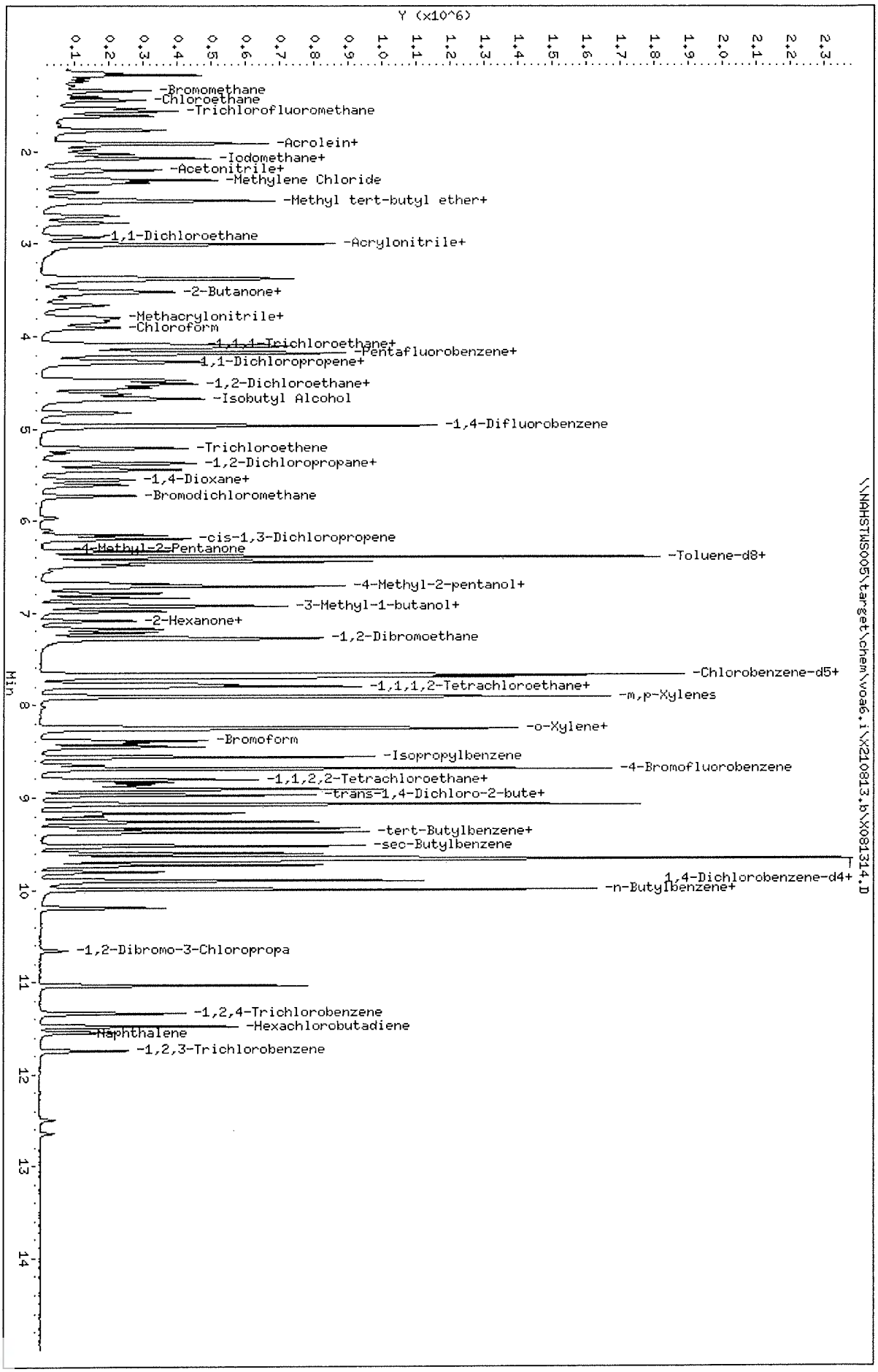
ALS Laboratory Group

Data file : \\NAHSTWS005\target\chem\voa6.i\X210813.b\X081314.D
Lab Smp Id: HS21080560-02MSD Client Smp ID: HS21080560-02MSD
Inj Date : 13-AUG-2021 15:18
Operator : PC Inst ID: voa6.i
Smp Info : HS21080560-02MSD;HS21080560-02MSD;3;;MSD
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\target\chem\voa6.i\X210813.b\8260W.m
Meth Date : 10-Sep-2021 16:59 voa6.i Quant Type: ISTD
Cal Date : 30-JUL-2021 13:56 Cal File: X073008.D
Als bottle: 13 QC Sample: MSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0474-dod.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	4.182	(1.000)	858225	50.0000	
$ 30 Dibromofluoromethane	113	4.096	4.096	(0.979)	335409	41.5040	41.50
$ 35 1,2-Dichloroethane-d4	65	4.469	4.469	(1.068)	308263	40.0897	40.08
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	1032464	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	942995	50.0000	
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	1078287	48.7504	48.75
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	376498	47.5572	47.55
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	516654	50.0000	
5 Vinyl Chloride	62	1.138	1.138	(0.272)	130769	16.0072	16.00
11 1,1-Dichloroethene	96	1.912	1.912	(0.457)	121631	16.8429	16.84
17 Methylene Chloride	84	2.306	2.306	(0.551)	113785	15.6564	15.65
27 cis-1,2-Dichloroethene	96	3.523	3.523	(0.842)	129914	15.0908	15.09
33 1,2-Dichloroethane	62	4.555	4.555	(0.918)	145472	17.5634	17.56
38 Trichloroethene	130	5.207	5.207	(1.049)	156307	20.7171	20.71
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	88423	17.9234	17.92



Data File: \\NAHSTWS005\target\chem\voa6.i\X210813.b\X081314.D
Date : 13-AUG-2021 15:18
Client ID: HS21080560-02HSD
Sample Info: HS21080560-02HSD;HS21080560-02HSD;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\X210813.b\X081315.D Page 1
Report Date: 10-Sep-2021 16:55

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Data file : \\NAHSTWS005\target\chem\voa6.i\X210813.b\X081315.D
Lab Smp Id: HS21071465-03 Client Smp ID: HS21071465-03
Inj Date : 13-AUG-2021 15:39
Operator : PC Inst ID: voa6.i
Smp Info : HS21071465-03;HS21071465-03;;;
Misc Info : HS18090001;WATER;0;10;
Comment :
Method : \\NAHSTWS005\target\chem\voa6.i\X210813.b\8260W.m
Meth Date : 10-Sep-2021 16:54 Genoveva.R Quant Type: ISTD
Cal Date : 30-JUL-2021 13:56 Cal File: X073008.D
Als bottle: 14
Dil Factor: 10.00000
Integrator: HP RTE Compound Sublist: 0474-dod.sub
Target Version: 4.14
Processing Host: NAHSTW7056

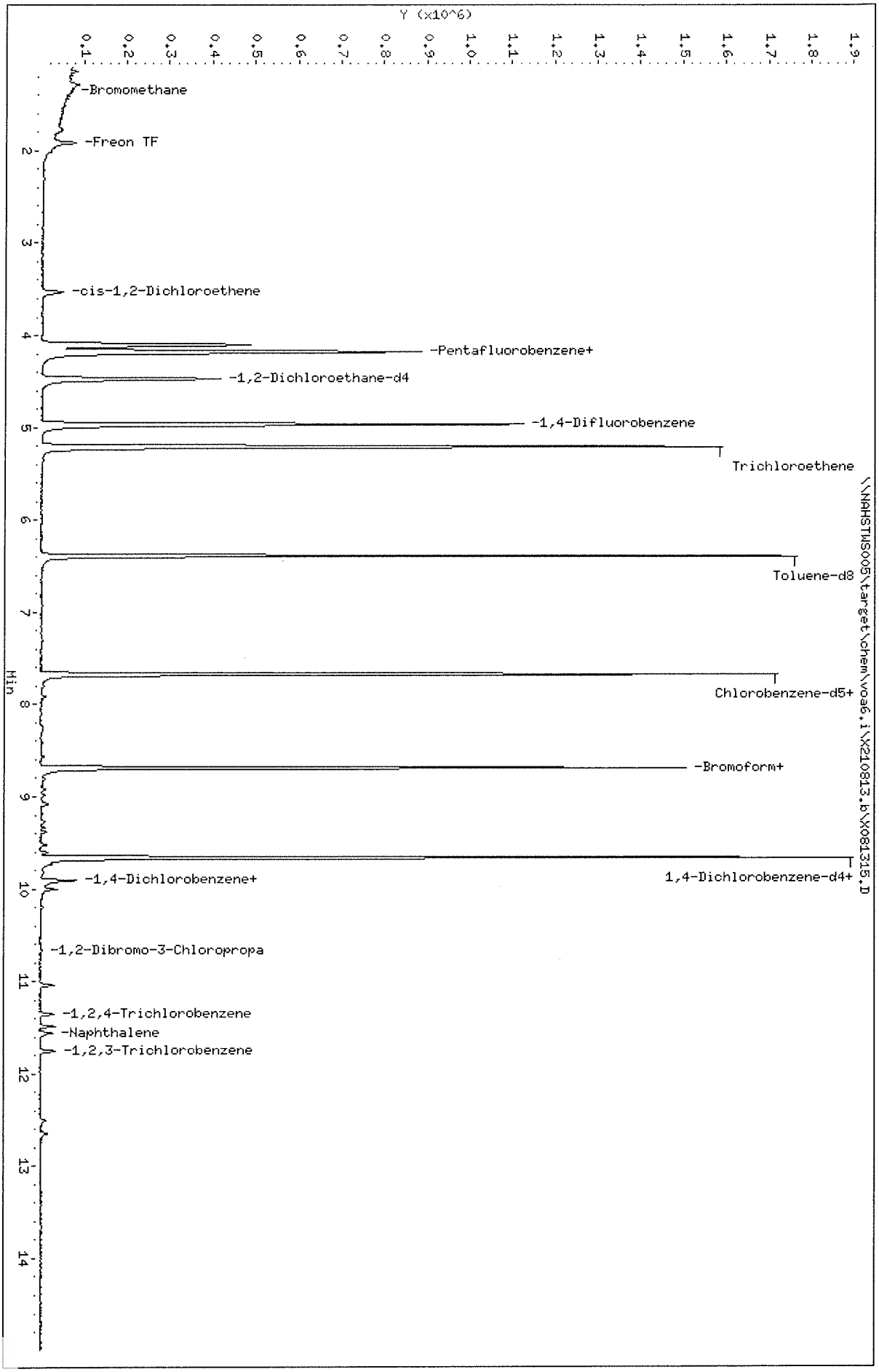
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	10.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	853485	50.0000	
$ 30 Dibromofluoromethane	113	4.096	4.103	(0.979)	338600	42.1471	42.14
$ 35 1,2-Dichloroethane-d4	65	4.476	4.469	(1.070)	312582	40.8944	40.89(M)
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	1023078	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	918751	50.0000	
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	1086311	50.4092	50.40
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	375816	48.7414	48.74
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	505710	50.0000	
27 cis-1,2-Dichloroethene	96	3.538	3.530	(0.846)	26364	3.07946	30.79(a)
38 Trichloroethene	130	5.207	5.206	(1.049)	564877	75.5562	755.56

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\X210813.b\X081315.D
Date : 13-AUG-2021 15:39
Client ID: HS21071465-03
Sample Info: HS21071465-03;HS21071465-03;;;
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\NAHSTWS005\target\chem\voa6.i\X210813.b\X081315.D

Date : 13-AUG-2021 15:39

Client ID: HS21071465-03

Instrument: voa6.i

Sample Info: HS21071465-03;HS21071465-03;;;

Purge Volume: 5.0

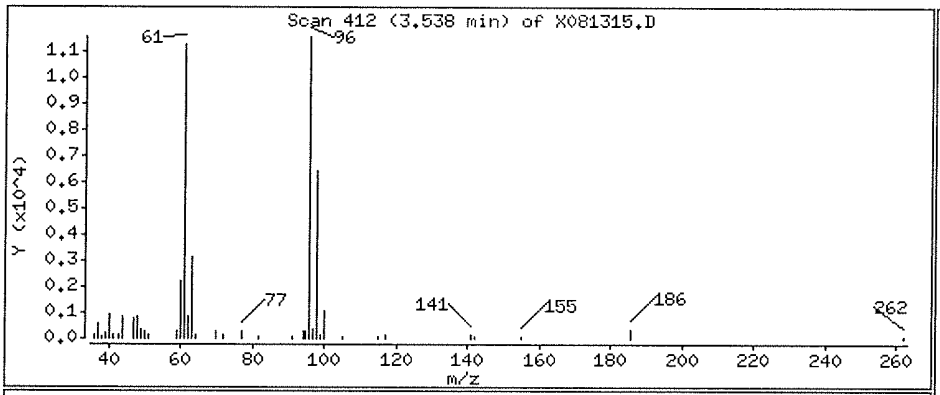
Operator: PC

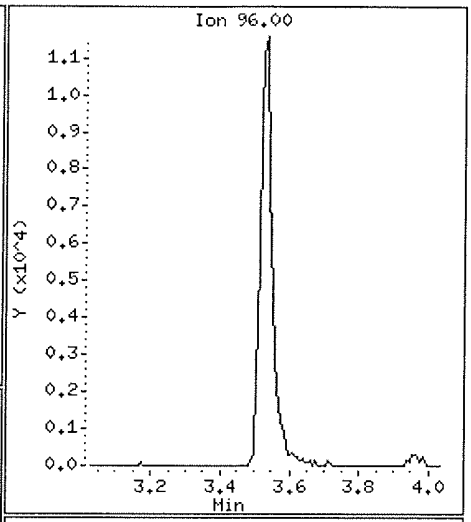
Column phase: DB624

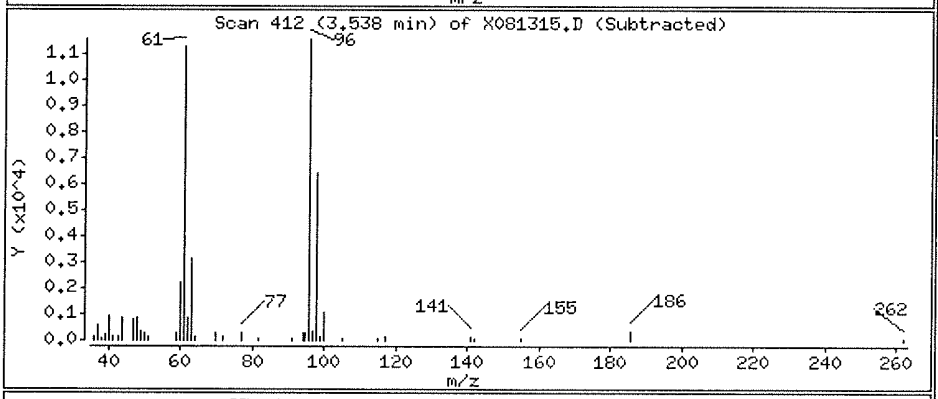
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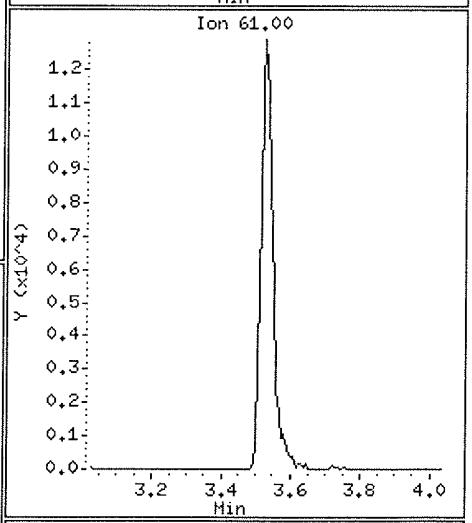
27 cis-1,2-Dichloroethene

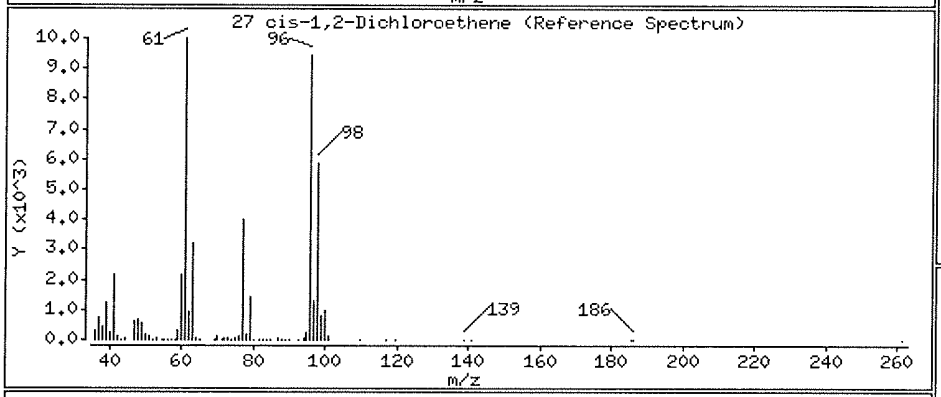
Concentration: 30.79 ug/l

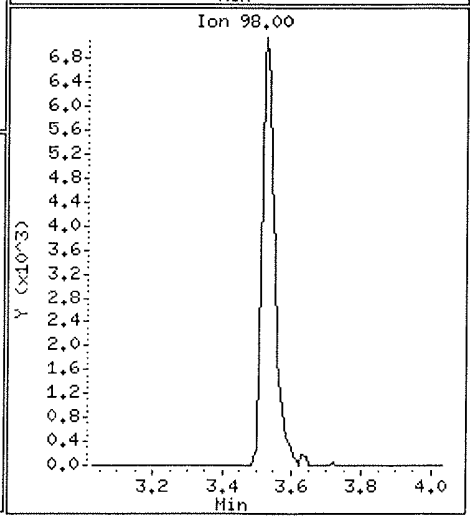


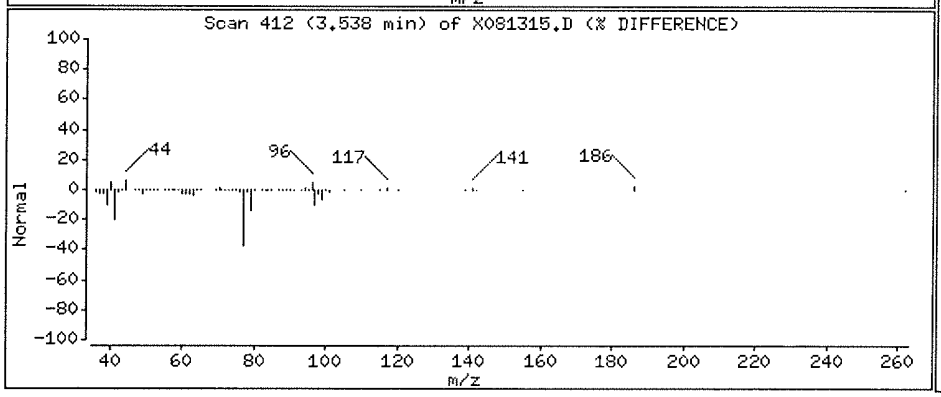












Data File: \\NAHSTWS005\target\chem\voa6.i\X210813.b\X081315.D

Date : 13-AUG-2021 15:39

Client ID: HS21071465-03

Instrument: voa6.i

Sample Info: HS21071465-03;HS21071465-03;;;

Purge Volume: 5.0

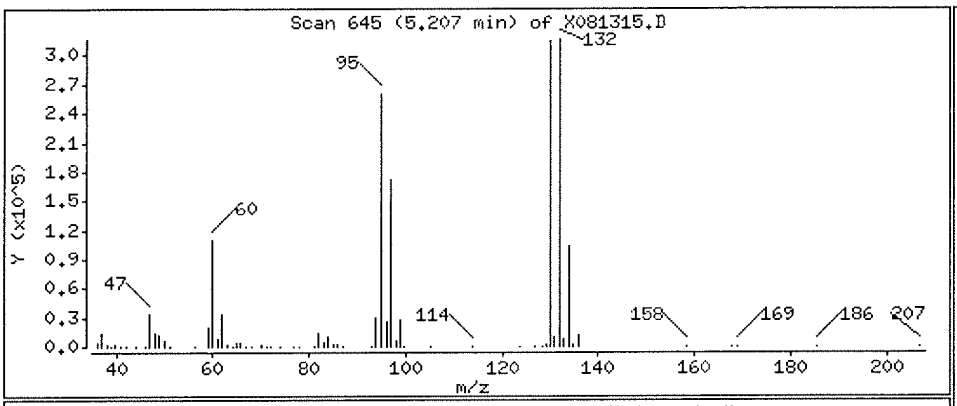
Operator: PC

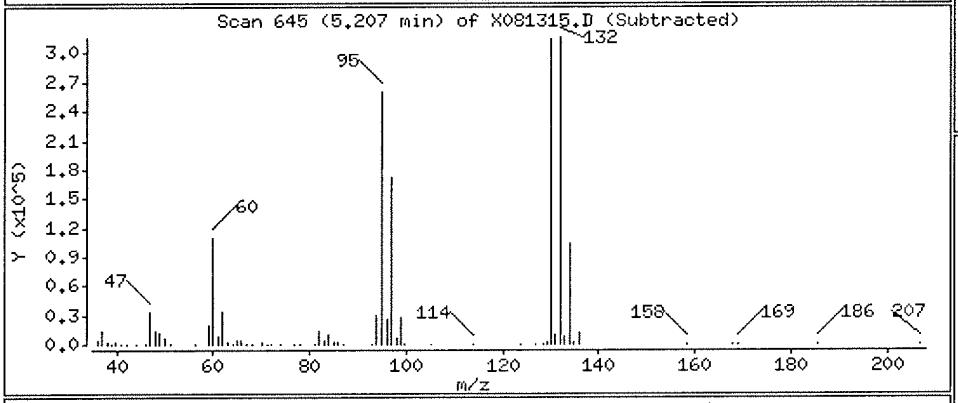
Column phase: DB624

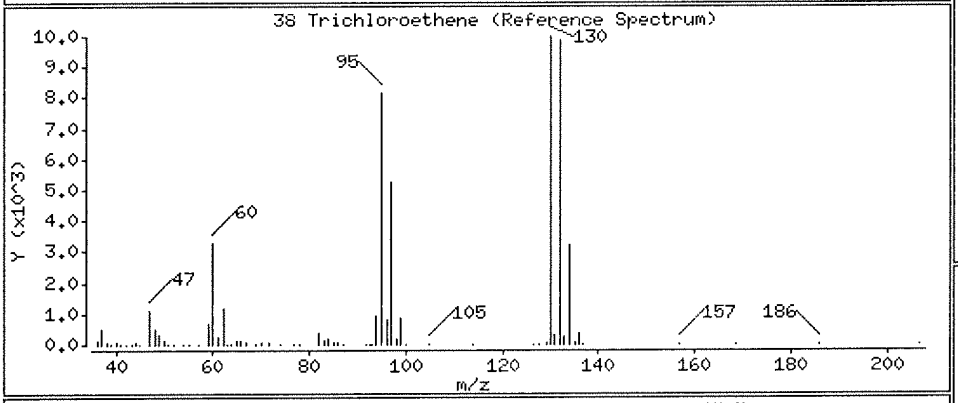
Column diameter: 0.18

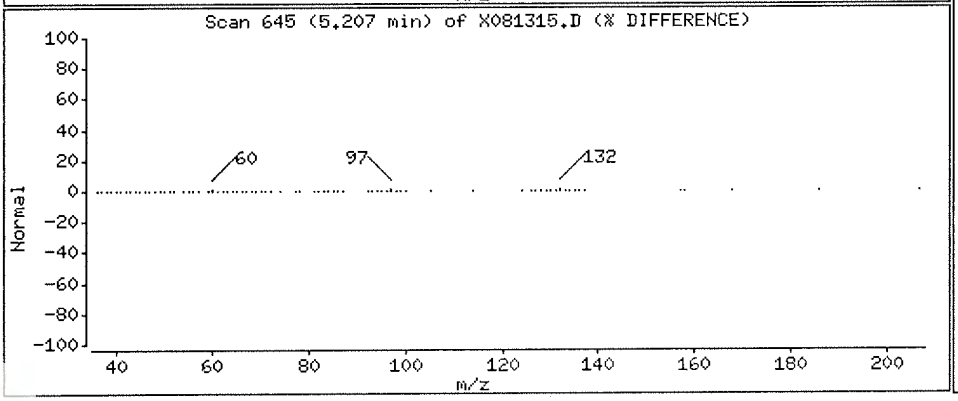
38 Trichloroethene

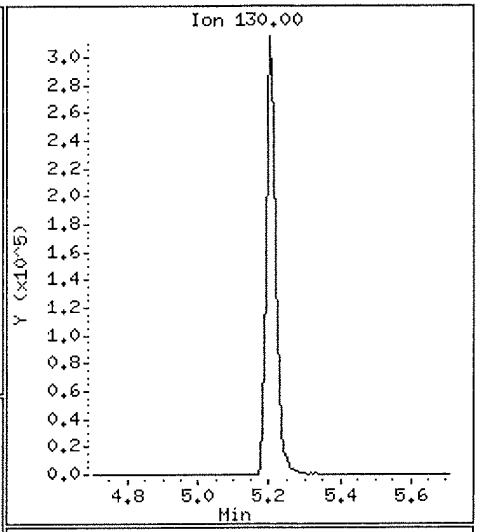
Concentration: 755.56 ug/l

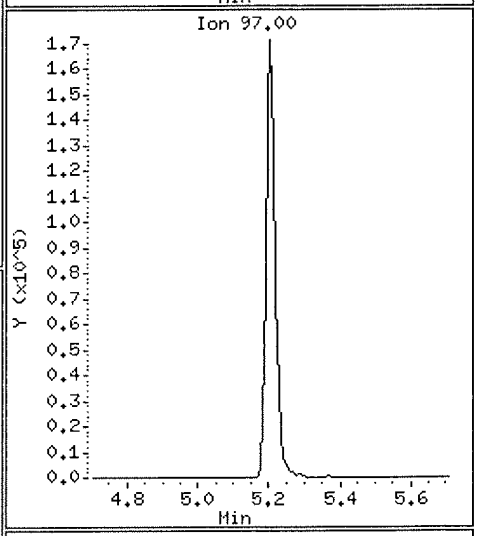


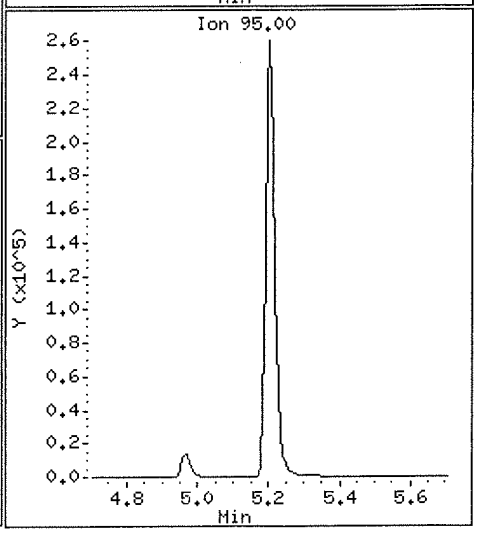






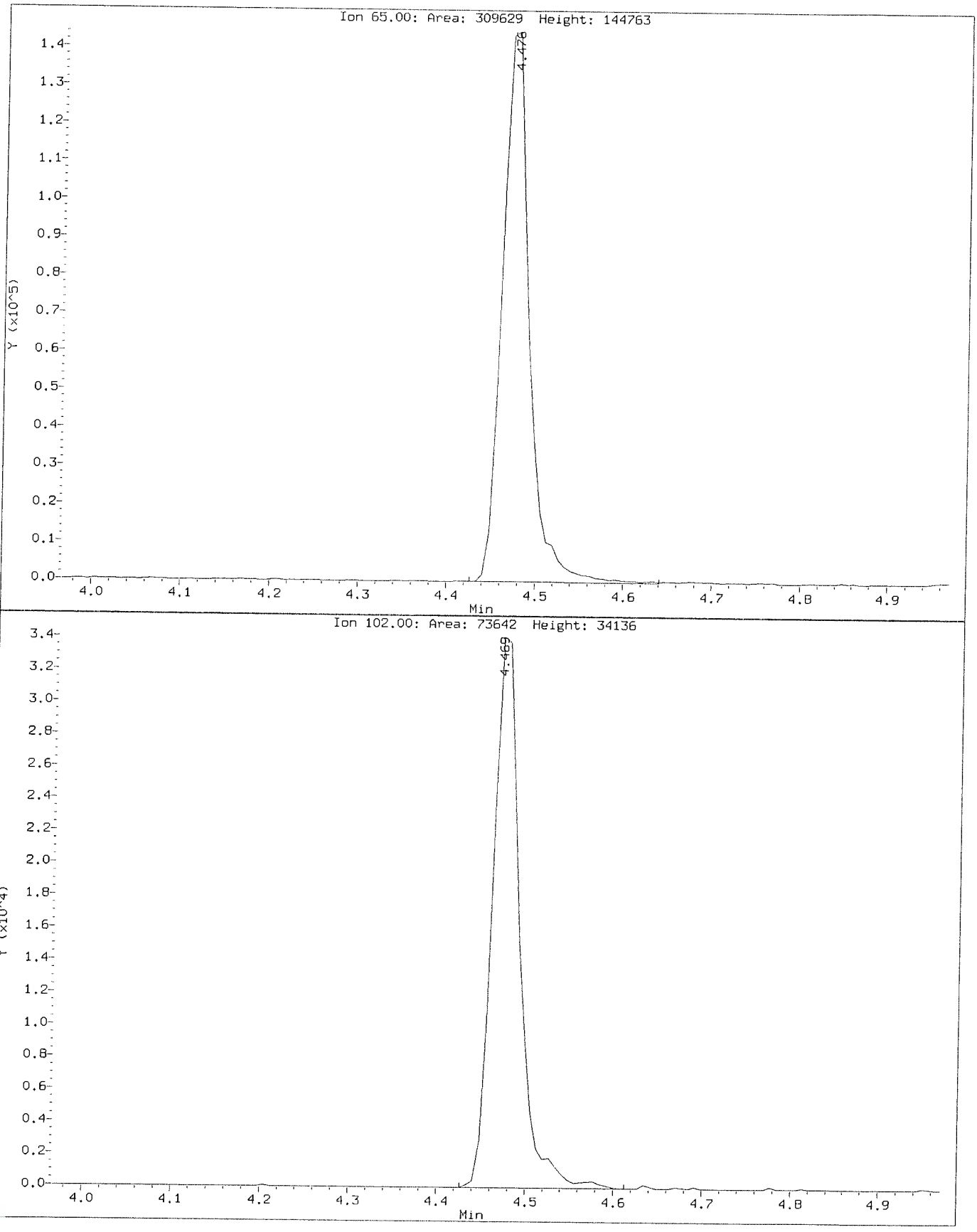






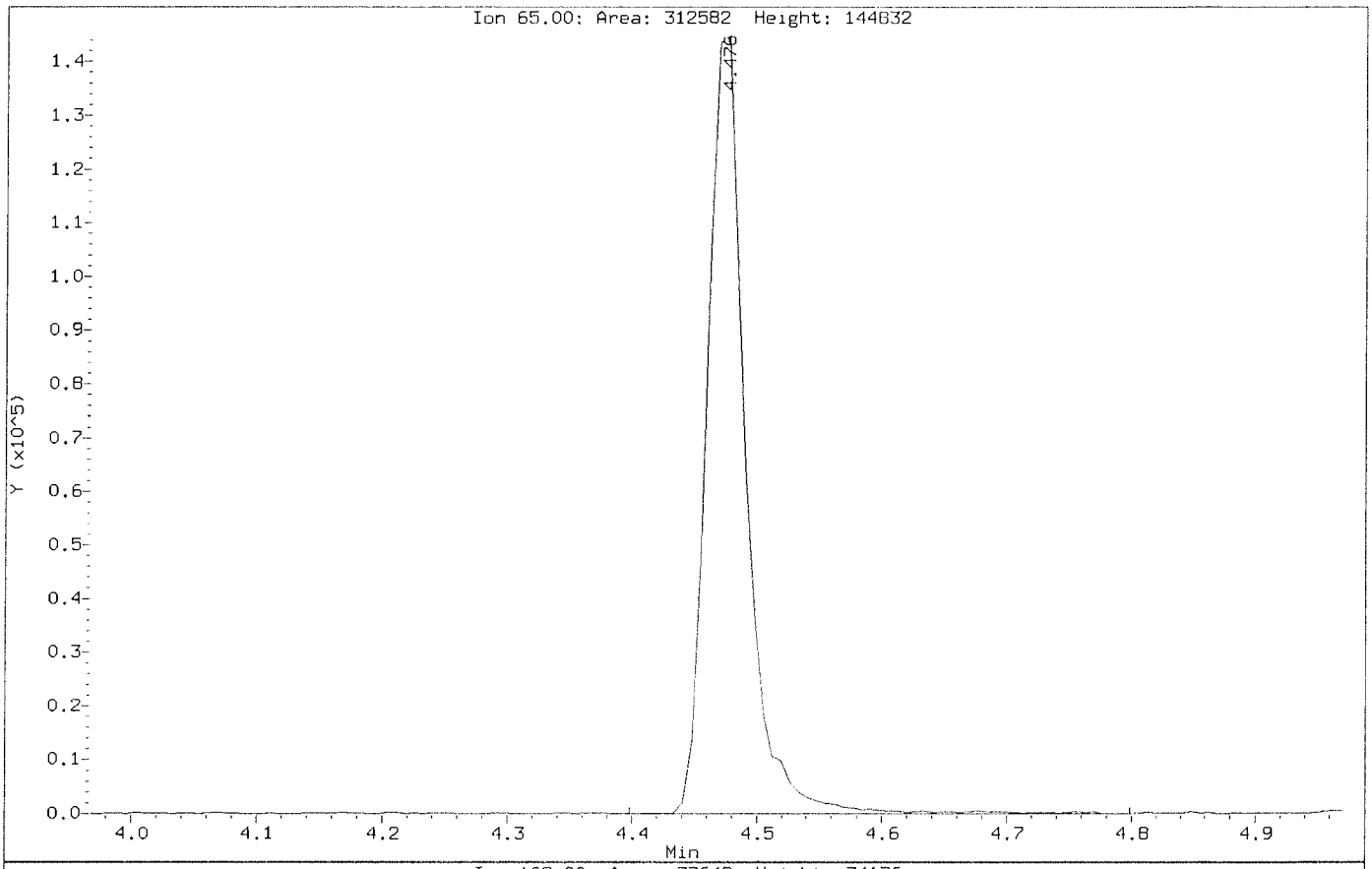
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Injection Date: 13-AUG-2021 15:39
Instrument: voa6.i
Client Sample ID: HS21071465-03

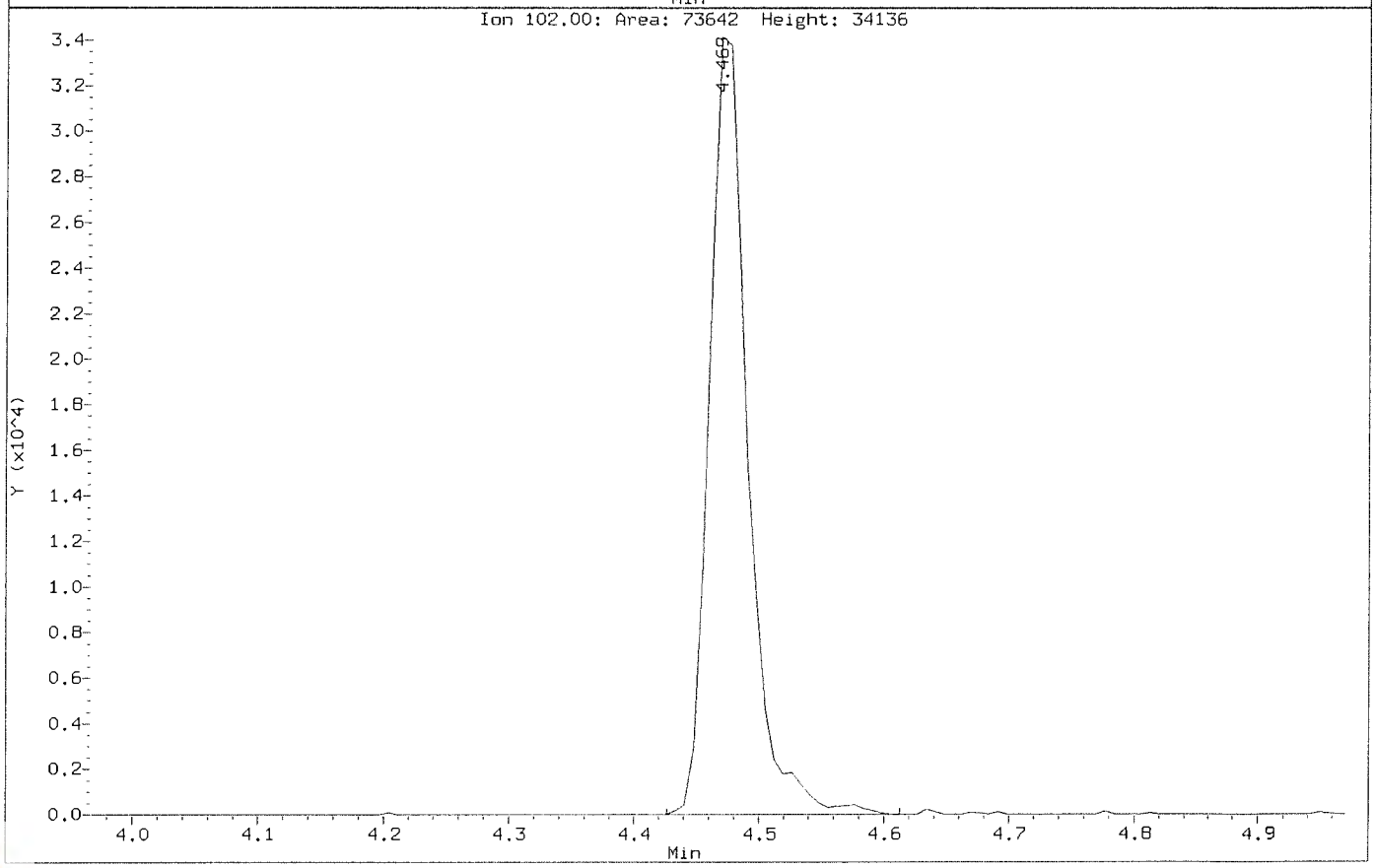
Compound: 1,2-Dichloroethane-d4
CAS Number: 17060-07-0



Data File: \\NAHSTWS005\target\chem\voa6.i\X210813.b\X081315.D
Injection Date: 13-AUG-2021 15:39
Instrument: voa6.i
Client Sample ID: HS21071465-03

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





Data File: \\NAHSTWS005\target\chem\voa6.i\X210813.b\X081316.D Page 1
Report Date: 10-Sep-2021 16:55

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Data file : \\NAHSTWS005\target\chem\voa6.i\X210813.b\X081316.D
Lab Smp Id: HS21071465-05 Client Smp ID: HS21071465-05
Inj Date : 13-AUG-2021 16:00
Operator : PC Inst ID: voa6.i
Smp Info : HS21071465-05;HS21071465-05;;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\target\chem\voa6.i\X210813.b\8260W.m
Meth Date : 10-Sep-2021 16:54 Genoveva.R Quant Type: ISTD
Cal Date : 30-JUL-2021 13:56 Cal File: X073008.D
Als bottle: 15
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0474-dod.sub
Target Version: 4.14
Processing Host: NAHSTW7056

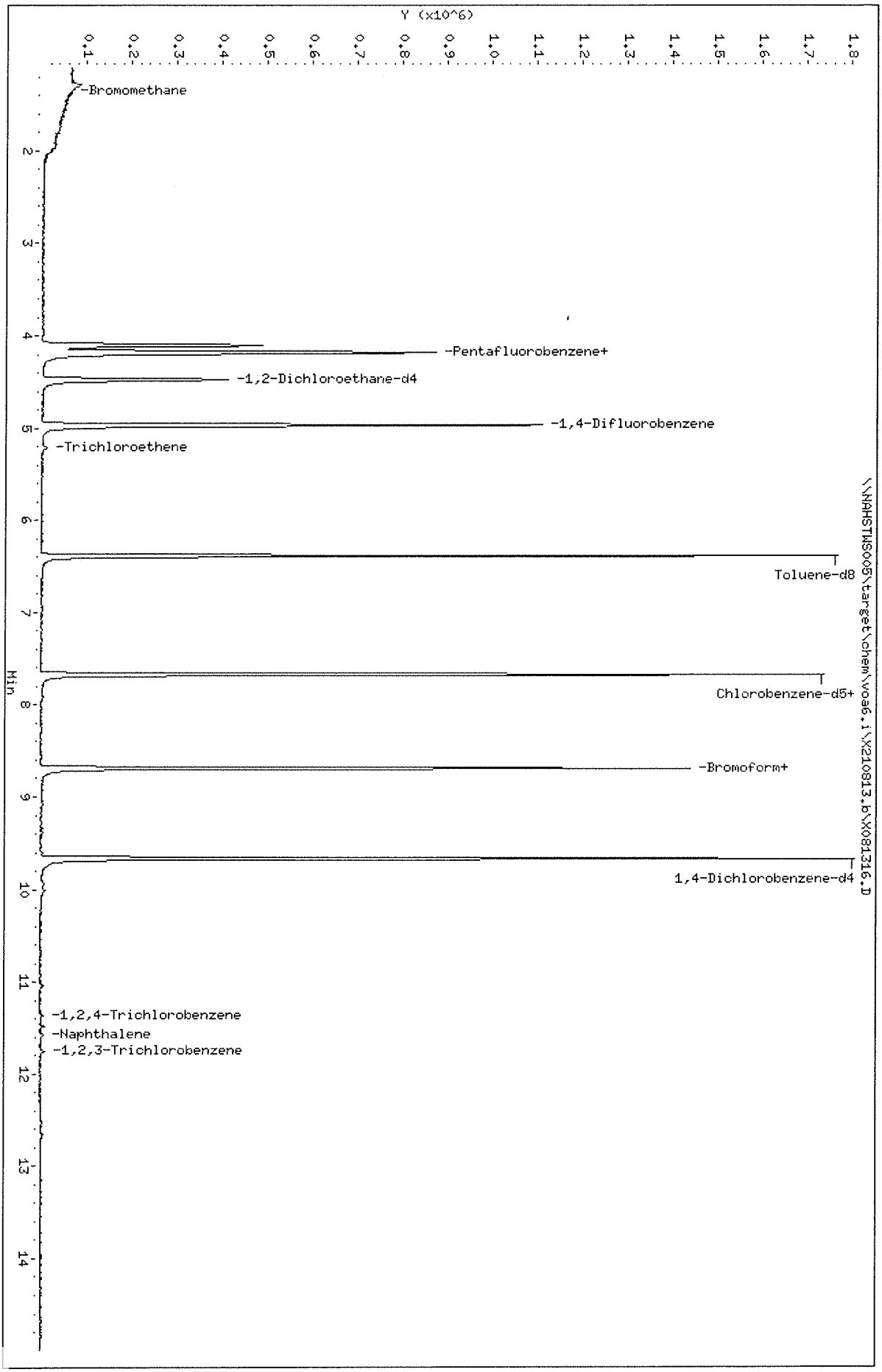
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

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	4.182	(1.000)	848861	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	334854	41.9020	41.90
$ 35 1,2-Dichloroethane-d4	65	4.469	4.469	(1.069)	307986	40.5044	40.50(M)
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	1018655	50.0000	
* 47 Chlorobenzene-d5	117	7.670	7.671	(1.000)	903136	50.0000	
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	1083418	51.1442	51.14
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	366438	48.3410	48.34
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	502308	50.0000	
38 Trichloroethene	130	5.213	5.206	(1.051)	4698	0.63112	0.63(a)

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\X210813.b\X081316.D
Date : 13-AUG-2021 16:00
Client ID: HS21071465-05
Sample Info: HS21071465-05;HS21071465-05;;;
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\NAHSTWS005\target\chem\voa6.i\X210813.b\X081316.D

Date : 13-AUG-2021 16:00

Client ID: HS21071465-05

Instrument: voa6.i

Sample Info: HS21071465-05;HS21071465-05;;;

Purge Volume: 5.0

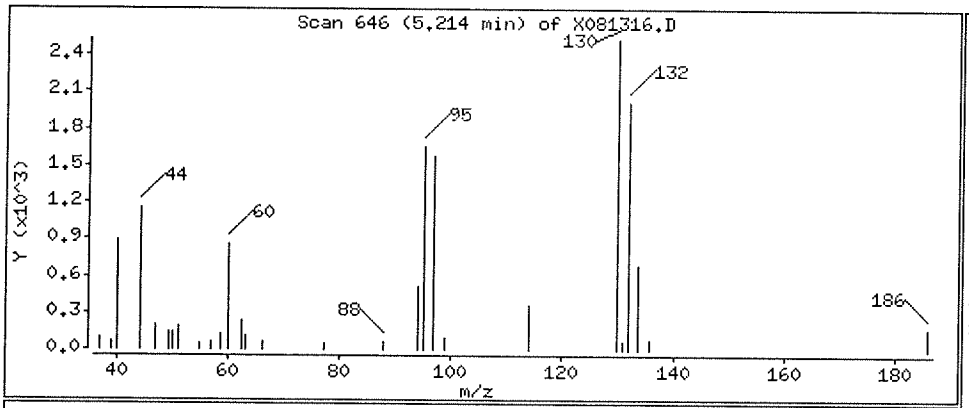
Operator: PC

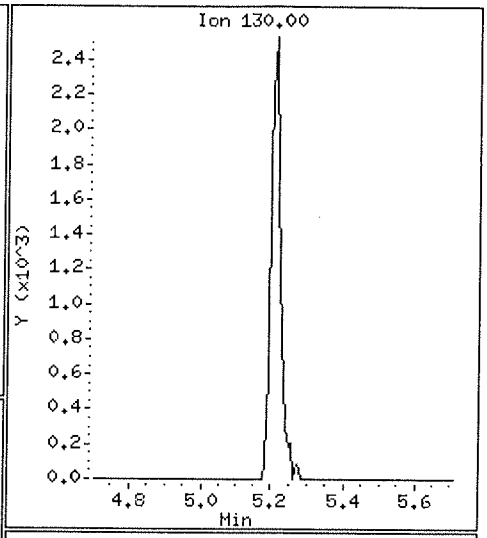
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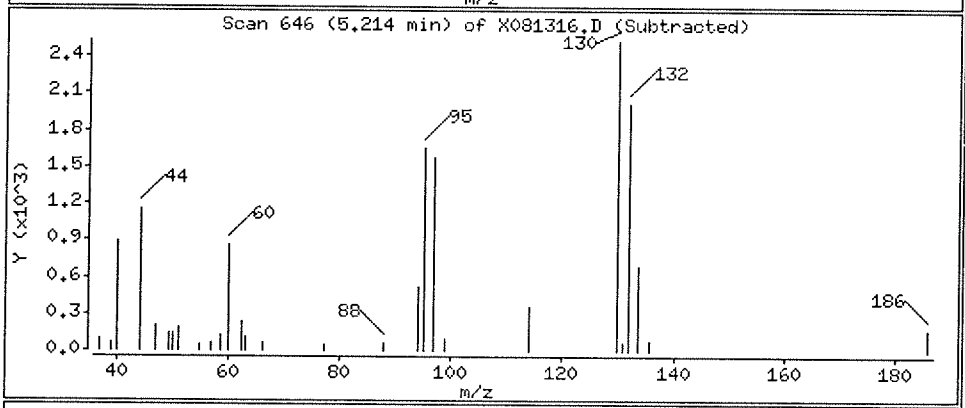
Column diameter: 0.18

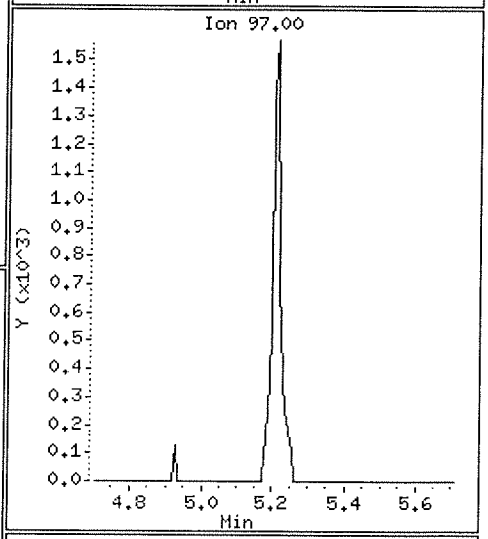
38 Trichloroethene

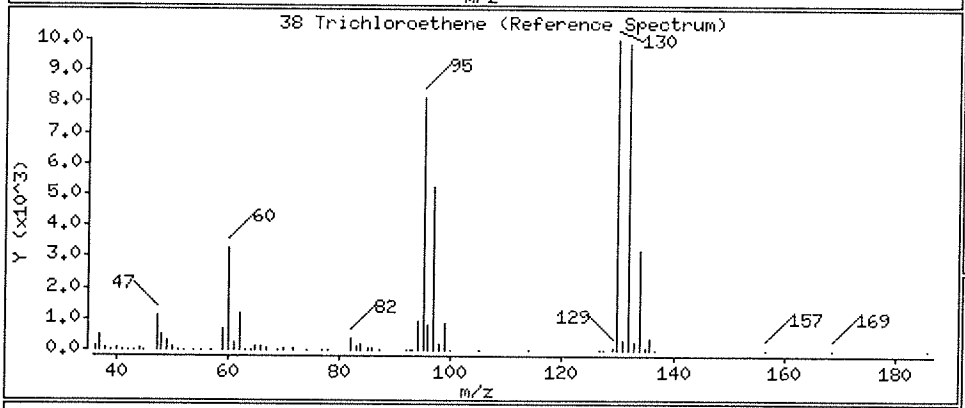
Concentration: 0.63 ug/l

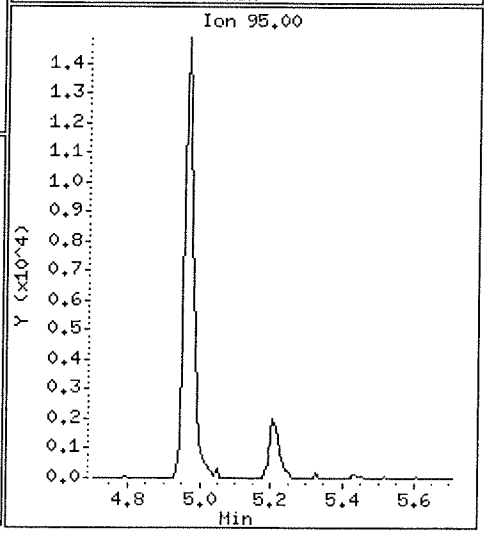


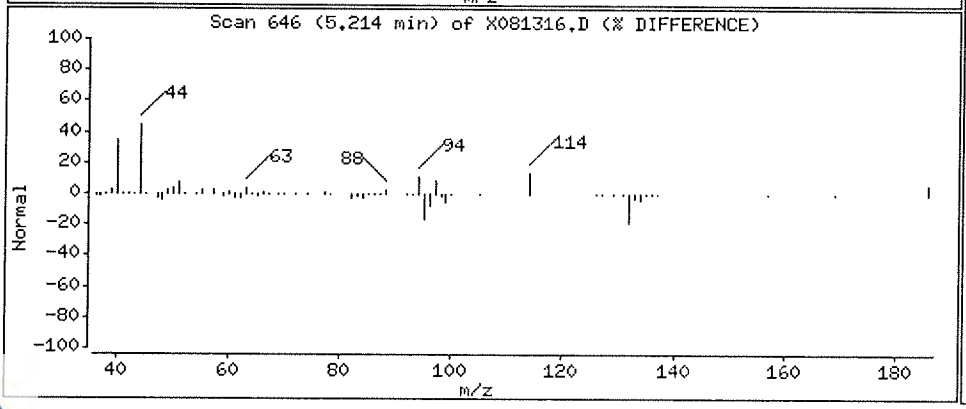






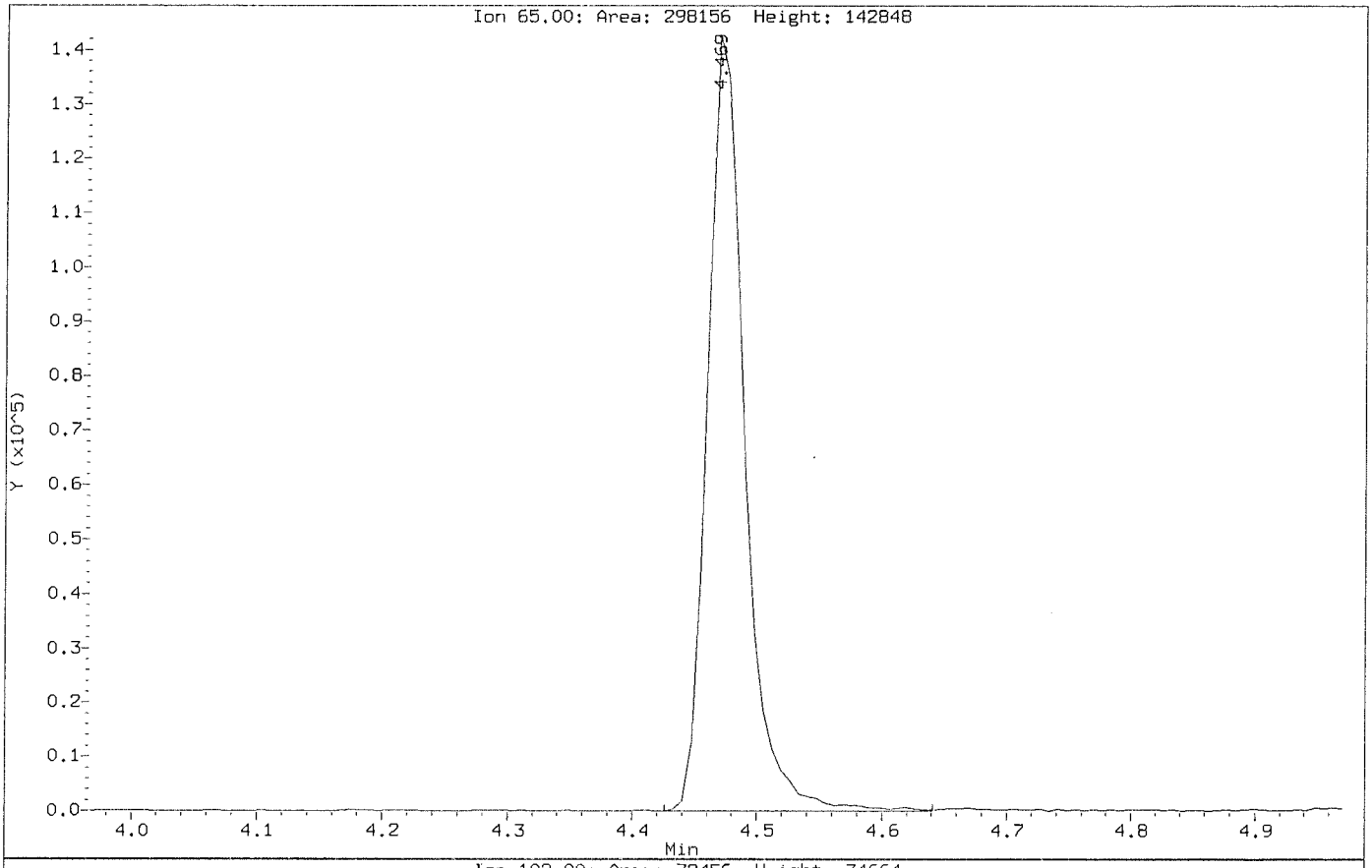


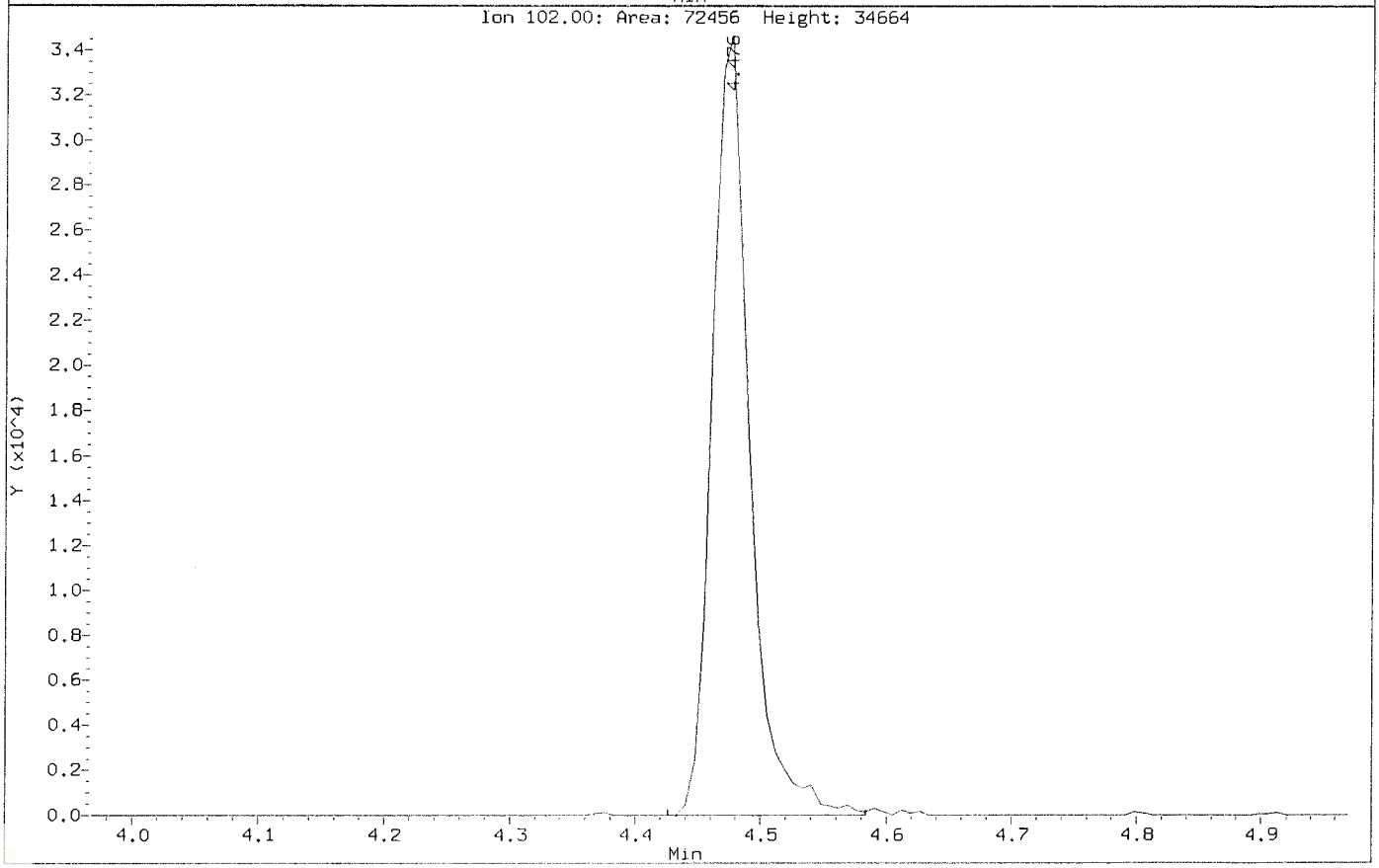




Data File: \\NAHSTWS005\target\chem\voa6.i\X210813.b\Before\X081316.D
Injection Date: 13-AUG-2021 16:00
Instrument: voa6.i
Client Sample ID: HS21071465-05

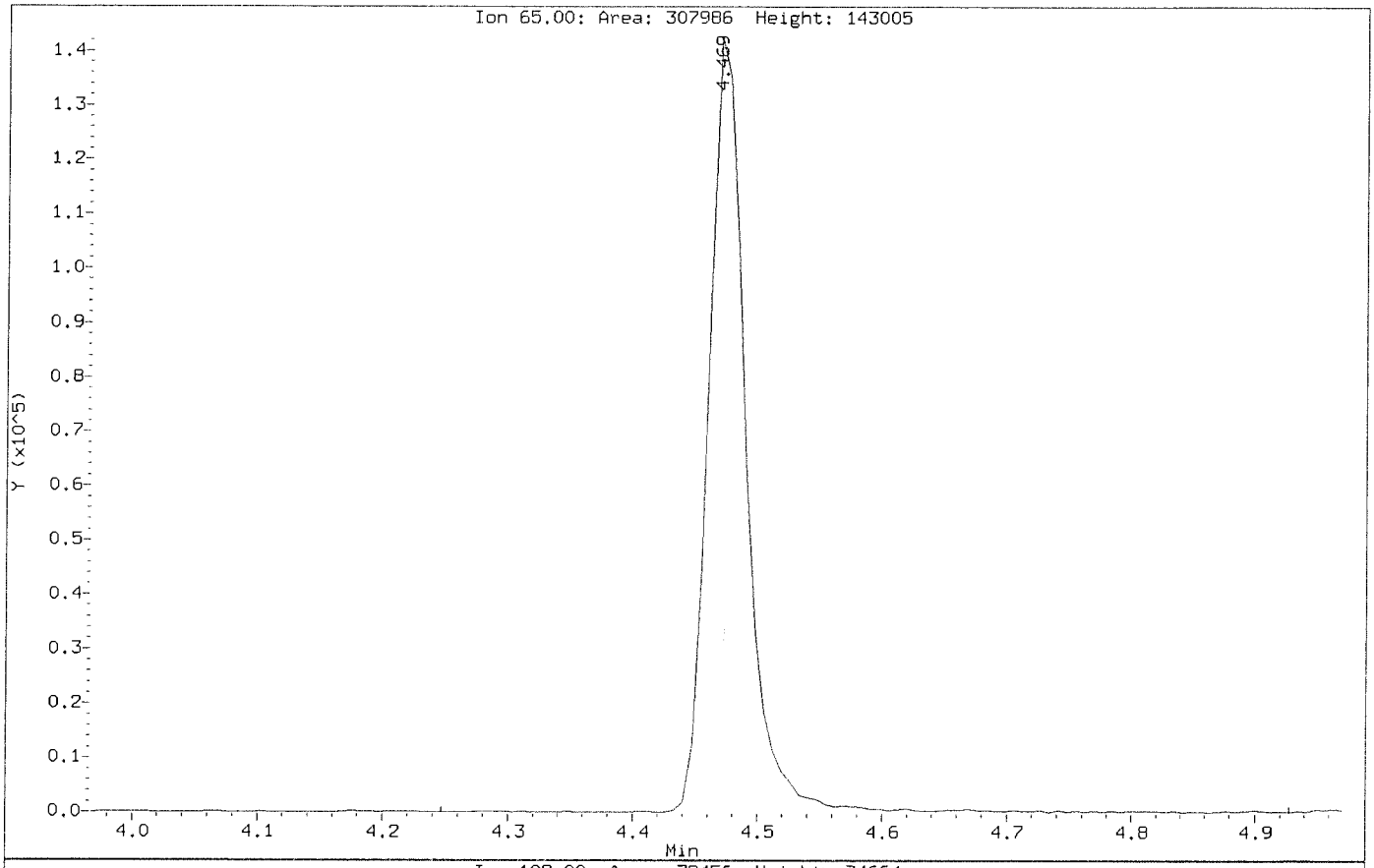
Compound: 1,2-Dichloroethane-d4
CAS Number: 17060-07-0

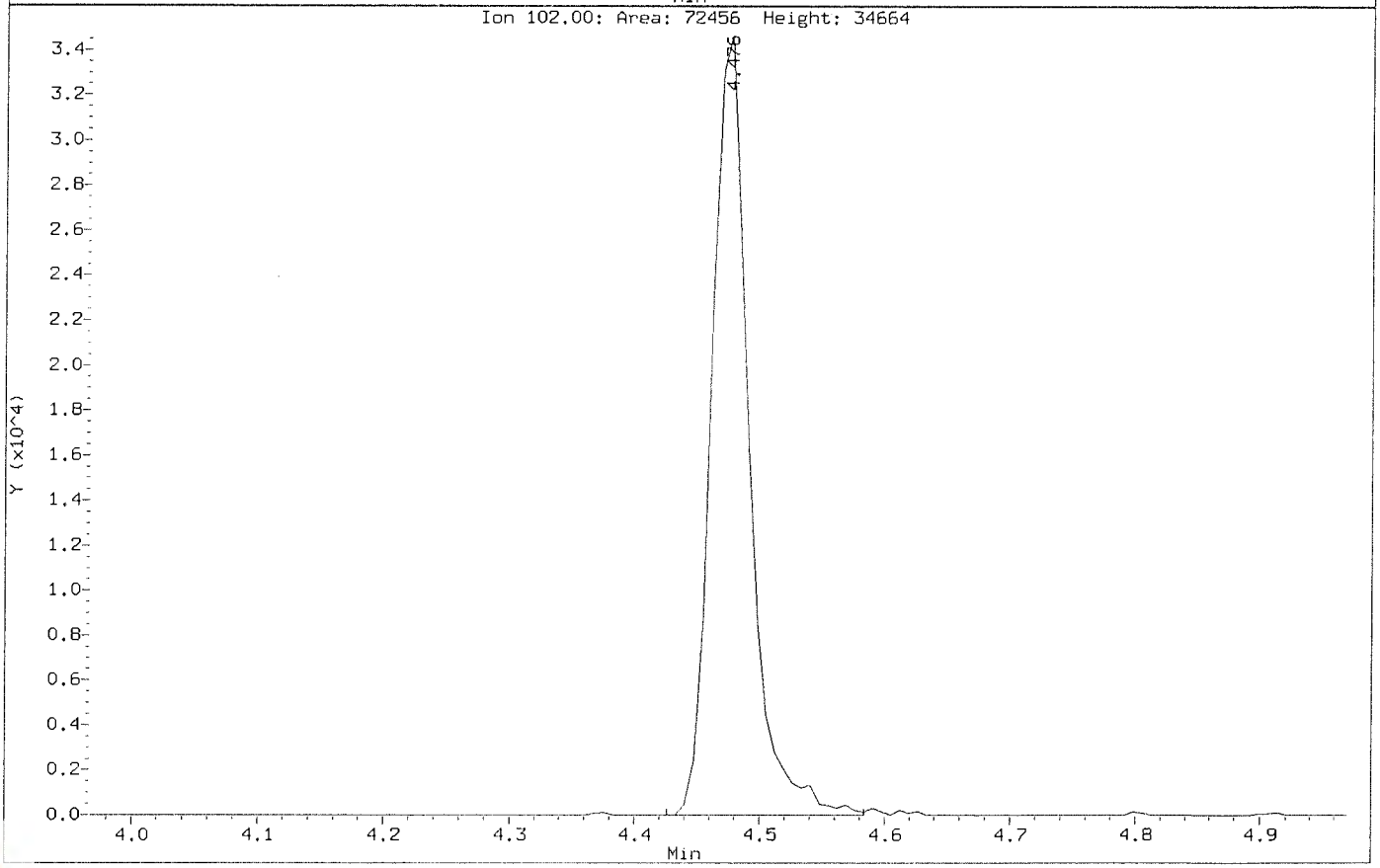




Data File: \\NAHSTWS005\target\chem\voa6.i\X210813.b\X081316.D
Injection Date: 13-AUG-2021 16:00
Instrument: voa6.i
Client Sample ID: HS21071465-05

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





Data File: \\NAHSTWS005\target\chem\voa6.i\X210813.b\X081317.D Page 1
Report Date: 10-Sep-2021 17:00

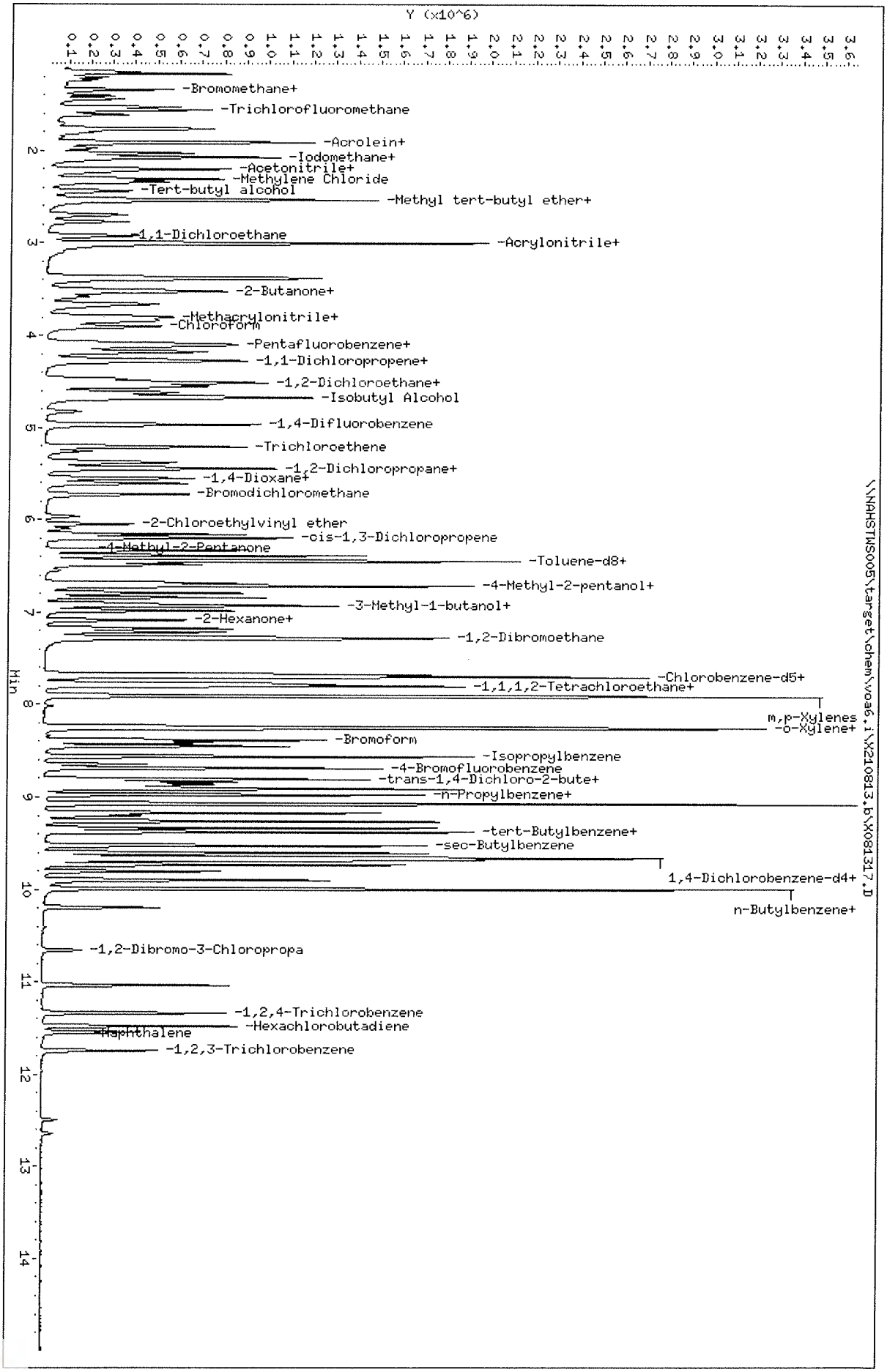
ALS Laboratory Group

Data file : \\NAHSTWS005\target\chem\voa6.i\X210813.b\X081317.D
Lab Smp Id: CCV-END Client Smp ID: CCV-END
Inj Date : 13-AUG-2021 16:21
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\X210813.b\8260W.m
Meth Date : 10-Sep-2021 17:00 voa6.i Quant Type: ISTD
Cal Date : 30-JUL-2021 13:56 Cal File: X073008.D
Als bottle: 16 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0474-dod.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)	684274	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	283858	50.0000	44.11
$ 35 1,2-Dichloroethane-d4	65	4.469	4.469	(1.069)	253202	50.0000	41.32
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	856761	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	822976	50.0000	
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	870226	50.0000	45.08
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	331463	50.0000	47.98
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	478559	50.0000	
5 Vinyl Chloride	62	1.145	1.145	(0.274)	265080	50.0000	40.69
11 1,1-Dichloroethene	96	1.911	1.911	(0.457)	240005	50.0000	41.68
17 Methylene Chloride	84	2.305	2.305	(0.551)	254667	50.0000	44.35
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	291830	50.0000	42.51
33 1,2-Dichloroethane	62	4.555	4.555	(0.918)	326708	50.0000	47.53
38 Trichloroethene	130	5.206	5.206	(1.049)	317488	50.0000	50.70
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	201553	50.0000	46.81



Data File: \\NAHSTWS005\target\chem\voa6.i\X210813.b\X081317.D
Date : 13-AUG-2021 16:21
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

HS21071465 RSK 175 Raw Data

ALS WO# HS21071465

FID04 -Logbook

Batch: 26730
Date: 01-24-2017
Method: RSK 175 ICAL
Comments: Target Sequence 170124

Analyst: Nosa Izekor
Reviewer:
Laboratory: Houston

#	Samp ID	Type	Analyzed	DF	Init Wt/Vol	Final Vol	File ID	Matrix	Status	p
1	ICAL1	CALIB_1	01-24-2017 09:06 am	1.00	0.00 mL	0.00 mL	001.D	Liquid	Y	N
2	ICAL2	CALIB_2	01-24-2017 09:30 am	1.00	0.00 mL	0.00 mL	002.D	Liquid	Y	N
3	ICAL3	CALIB_3	01-24-2017 09:59 am	1.00	0.00 mL	0.00 mL	003.D	Liquid	Y	N
4	ICAL4	CALIB_4	01-24-2017 10:15 am	1.00	0.00 mL	0.00 mL	004.D	Liquid	Y	N
5	ICAL5	CALIB_5	01-24-2017 10:39 am	1.00	0.00 mL	0.00 mL	005.D	Liquid	Y	N
6	ICAL6	CALIB_6	01-24-2017 10:57 am	1.00	0.00 mL	0.00 mL	006.D	Liquid	Y	N
7	ICAL7	CALIB_7	01-24-2017 11:13 am	1.00	0.00 mL	0.00 mL	007.D	Liquid	Y	N
8	ICV	METHSPIKI	01-24-2017 12:05 pm	1.00	0.00 mL	0.00 mL	008.D	Liquid	Y	N
9	LCS-170124	LCS	01-24-2017 12:24 pm	1.00	0.00 mL	0.00 mL	009.D	Liquid	Y	N
10	LCSD-170124	LCSD	01-24-2017 12:40 pm	1.00	0.00 mL	0.00 mL	010.D	Liquid	Y	N
11	MBLK-170124	MBLK	01-24-2017 12:57 pm	1.00	0.00 mL	0.00 mL	011.D	Liquid	Y	N
12	HS17010778-01	SAMP	01-24-2017 01:14 pm	1.00	0.00 mL	0.00 mL	012.D	Liquid	Y	N
13	HS17010779-01	SAMP	01-24-2017 01:31 pm	1.00	0.00 mL	0.00 mL	013.D	Liquid	Y	N
14	HS17010779-01DUP	SAMP	01-24-2017 01:47 pm	1.00	0.00 mL	0.00 mL	014.D	Liquid	Y	N
15	CCV	CCV	01-24-2017 02:01 pm	1.00	0.00 mL	0.00 mL	015.D	Liquid	Y	N

Chemical	Value
ICAL STD ID	30010700217
ICV STD ID	30010700610

FORM 3
WATER GASES METHOD SPIKE RECOVERY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS21071465

Matrix Spike - ENG SC Sample No.: ICV

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE AMOUNT ()	% REC #	QC. LIMITS REC.
Ethene	16.800	19.090	114	75-125
Methane	9.647	9.597	99	75-125
Ethane	18.043	19.657	109	75-125
Propane	26.463	27.238	103	75-125
N-Butane	34.955	36.010	103	75-125

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

COMMENTS: _____

_____

FORM III GASES

FORM 6
GASES INITIAL CALIBRATION DATA

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS21071465

Instrument ID: FID-4 Calibration Date(s): 01/24/17 01/24/17

Column: RTX-PLOT ID: 0.53 (mm) Calibration Time(s): 0906 1113

LAB FILE ID: RF10: 001 RF25: 002 RF50: 003
RF100: 004 RF250: 005 RF500: 006

COMPOUND	RF10	RF25	RF50	RF100	RF250	RF500
Ethene	535.608	567.359	564.985	516.024	665.282	425.678
Methane	968.912	978.238	1019.699	880.798	960.713	930.704
Ethane	602.493	670.177	658.908	597.201	808.513	817.630
Propane	500	1279	2602	4785	18294	38286
N-Butane	438	936	2034	3864	18446	42817

FORM VI GASES

FORM 6
GASES INITIAL CALIBRATION DATA

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS2107146

Instrument ID: FID-4 Calibration Date(s): 01/24/17 01/24/17

Column: RTX-PLOT ID: 0.53 (mm) Calibration Time(s): 0906 1113

RF1000: 007

COMPOUND	RF1000	CURVE	COEFFICENTS A0	A1	A2	%RSD OR R^2	MA
Ethene	828.858	AVRG		586.256273		21.932	
Methane	1081.580	AVRG		974.377787		6.550	
Ethane	999.335	AVRG		736.322546		19.885	
Propane	96509	2ORDR	0.97987006	1.529e-003	-4.58e-009	0.9991365	0
N-Butane	114164	2ORDR	2.46870151	1.834e-003	-5.54e-009	0.9980766	0

FORM VI GASES

Data File: \\nahstws005\Target\chem\FID-4.i\170124A.b\001.D Page 1
Report Date: 11-Oct-2021 10:43

ALS Laboratory Group

Dissolved Gases Analysis

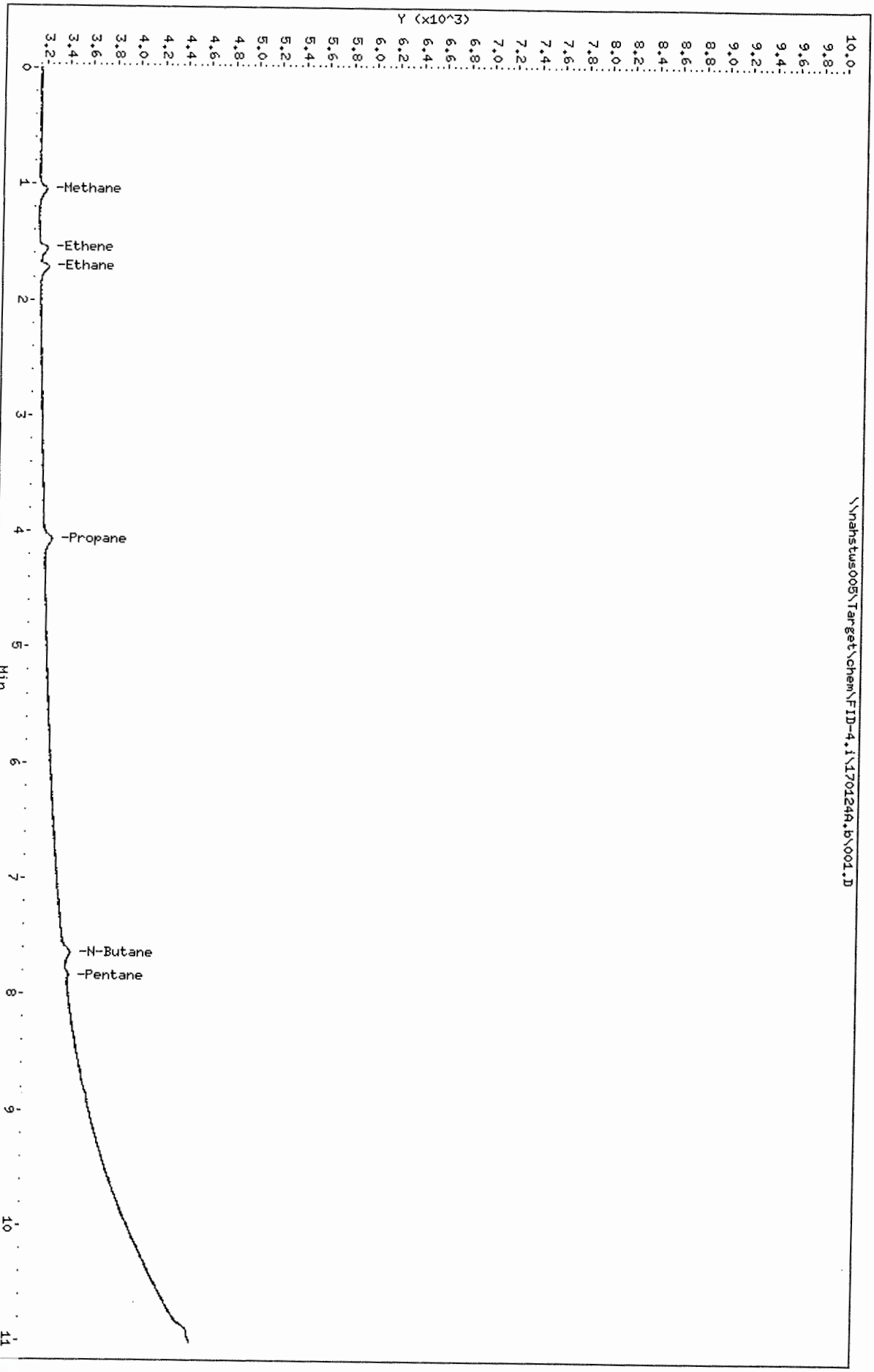
Data file : \\nahstws005\Target\chem\FID-4.i\170124A.b\001.D
Lab Smp Id: ICAL1 Client Smp ID: ICAL1
Inj Date : 24-JAN-2017 09:06
Operator : JA Inst ID: FID-4.i
Smp Info : ICAL1;ICAL1;;;
Misc Info :
Comment :
Method : \\nahstws005\Target\chem\FID-4.i\170124A.b\RSKNI2.m
Meth Date : 08-Oct-2021 14:58 linh.pham Quant Type: ESTD
Cal Date : 24-JAN-2017 09:06 Cal File: 001.D
Als bottle: 1 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: stdNIP2.sub
Target Version: 4.14

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
1 Methane	1.043	1.030	0.013	374	0.38600	0.383(a)
2 Ethene	1.553	1.556	-0.003	361	0.67400	0.615(a)
3 Ethane	1.716	1.723	-0.007	435	0.72200	0.590(a)
4 Propane	4.073	4.113	-0.040	500	1.05900	1.743
5 N-Butane	7.640	7.690	-0.050	438	1.39800	3.271

QC Flag Legend

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


Data File: \\nahstws005\Target\chem\FID-4.i\170124A.b\001.D
Date : 24-JAN-2017 09:06
Client ID: ICAL1
Sample Info: ICAL1;ICAL1;;;
Column phase: Rtx-PLOT
Instrument: FID-4.i
Operator: JA
Column diameter: 0.53
Page 2
Y (x10^3)
-Methane
-Ethene
-Ethane
-Propane
-N-Butane
-Pentane
Min
\\nahstws005\Target\chem\FID-4.i\170124A.b\001.D

Data File: \\nahstws005\Target\chem\FID-4.i\170124A.b\002.D Page 1
Report Date: 11-Oct-2021 10:43

ALS Laboratory Group

Dissolved Gases Analysis

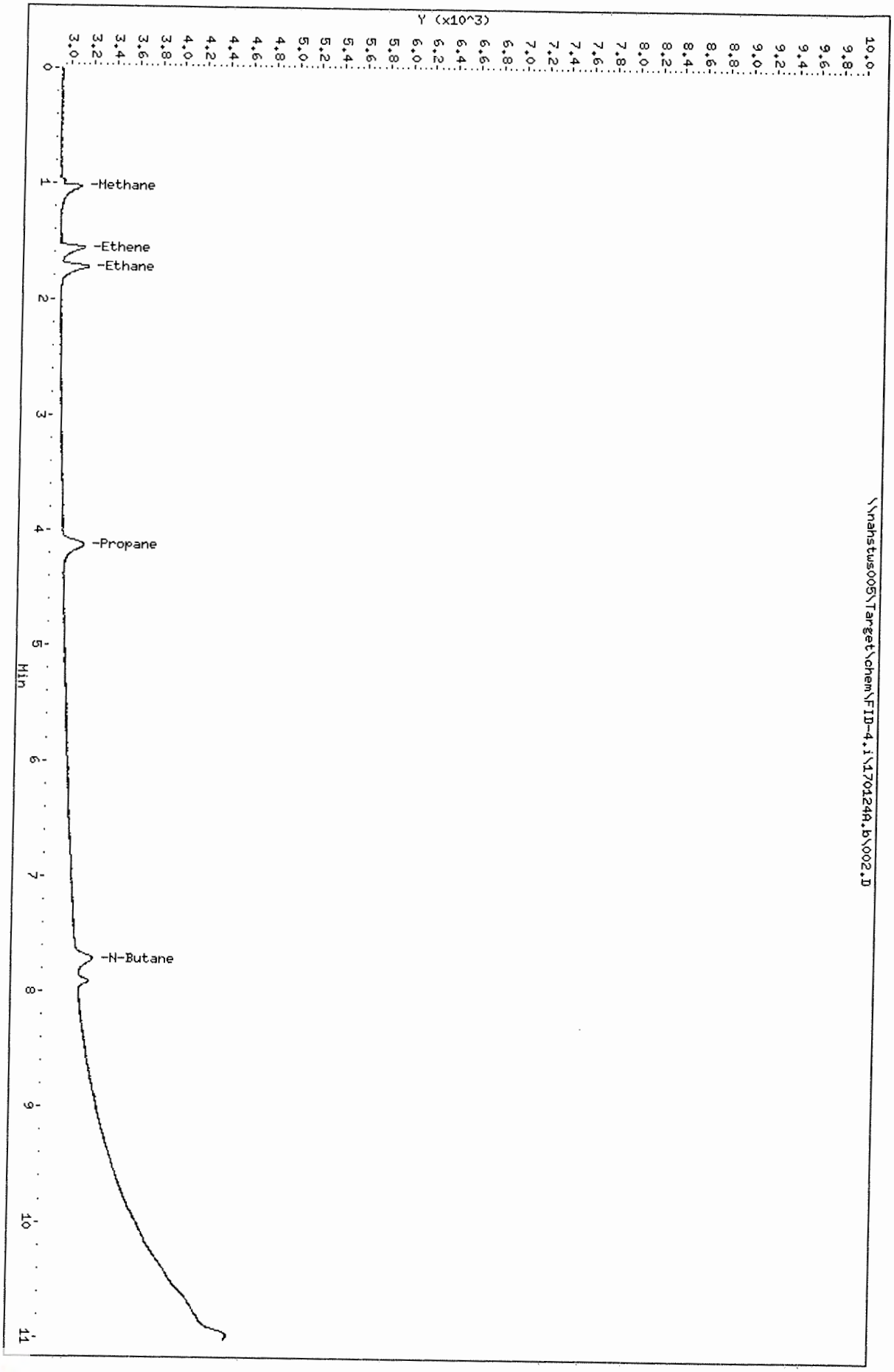
Data file : \\nahstws005\Target\chem\FID-4.i\170124A.b\002.D
Lab Smp Id: ICAL2 Client Smp ID: ICAL2
Inj Date : 24-JAN-2017 09:30
Operator : MA Inst ID: FID-4.i
Smp Info : ICAL2;ICAL2;;;
Misc Info : ;1;0;1
Comment :
Method : \\nahstws005\Target\chem\FID-4.i\170124A.b\RSKNI2.m
Meth Date : 08-Oct-2021 14:58 linh.pham Quant Type: ESTD
Cal Date : 24-JAN-2017 09:59 Cal File: 003.D
Als bottle: 2 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: stdNIP2.sub
Target Version: 4.14

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
1 Methane	1.023	1.030	-0.007	944	0.96500	0.968
2 Ethene	1.560	1.556	0.004	956	1.68500	1.630
3 Ethane	1.723	1.723	0.000	1209	1.80400	1.641
4 Propane	4.123	4.113	0.010	1279	2.64600	2.927
5 N-Butane	7.716	7.690	0.026	936	3.49600	4.180

Data File: \\nahstus005\Target\chem\FID-4.i\170124A.b\002.D
Date : 24-JAN-2017 09:30
Client ID: ICAL2
Sample Info: ICAL2;ICAL2;;;
Column phase: Rtx-PLOT

Instrument: FID-4.i
Operator: MA
Column diameter: 0.53



Data File: \\nahstws005\Target\chem\FID-4.i\170124A.b\003.D Page 1
Report Date: 11-Oct-2021 10:43

ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\nahstws005\Target\chem\FID-4.i\170124A.b\003.D
Lab Smp Id: ICAL3 Client Smp ID: ICAL3
Inj Date : 24-JAN-2017 09:59
Operator : MA Inst ID: FID-4.i
Smp Info : ICAL3;ICAL3;;;
Misc Info : ;1;0;1
Comment :
Method : \\nahstws005\Target\chem\FID-4.i\170124A.b\RSKNI2.m
Meth Date : 08-Oct-2021 14:58 linh.pham Quant Type: ESTD
Cal Date : 24-JAN-2017 11:13 Cal File: 007.D
Als bottle: 3 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: stdNIP2.sub
Target Version: 4.14

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

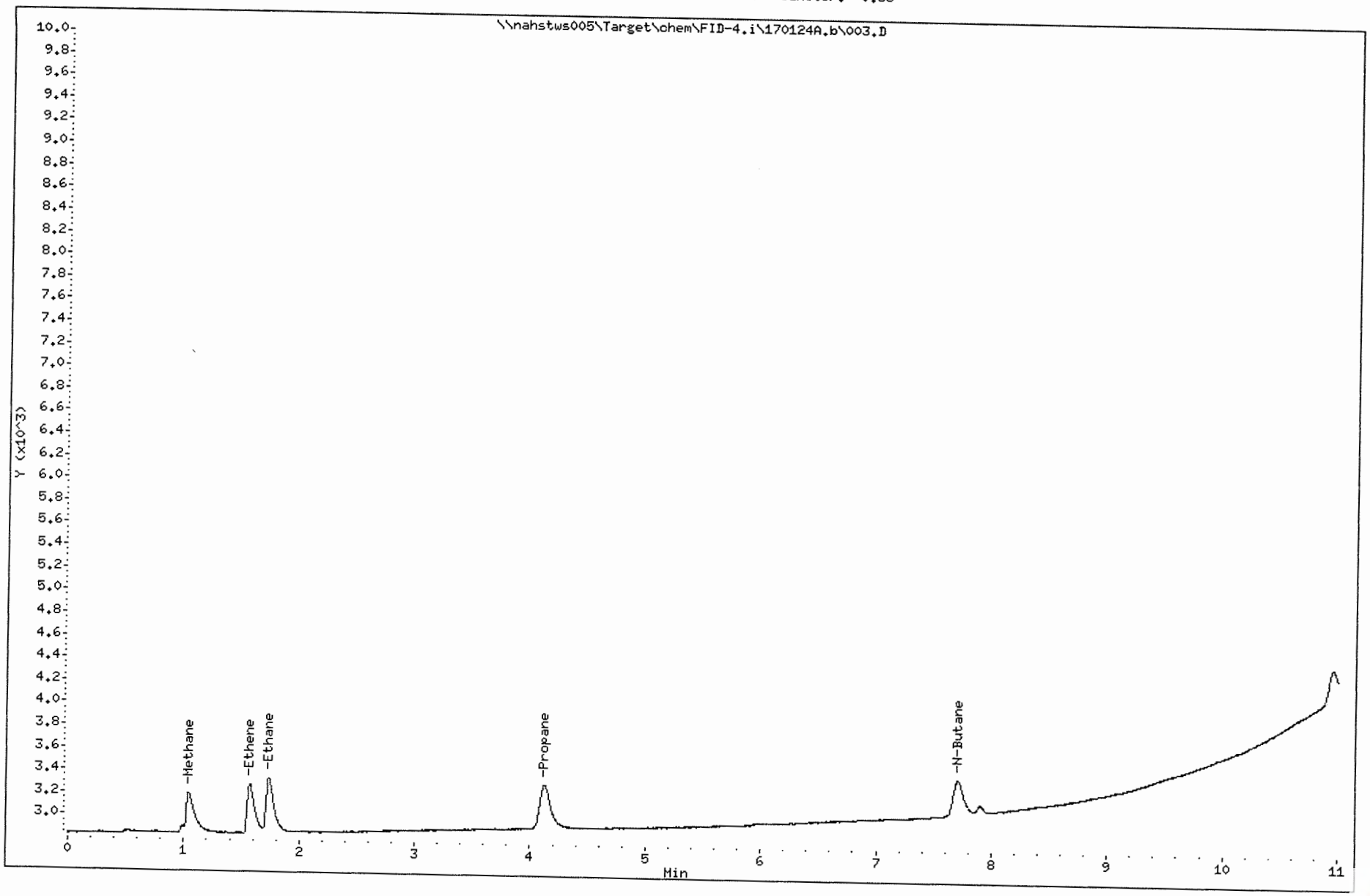
Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
1 Methane	1.043	1.030	0.013	1967	1.92900	2.018
2 Ethene	1.570	1.556	0.014	1904	3.37000	3.247
3 Ethane	1.736	1.723	0.013	2378	3.60900	3.229
4 Propane	4.123	4.113	0.010	2602	5.29300	4.926
5 N-Butane	7.703	7.690	0.013	2034	6.99100	6.176

Data File: \\nahstws005\Target\chem\FID-4.i\170124A.b\003.D
Date : 24-JAN-2017 09:59
Client ID: ICAL3
Sample Info: ICAL3;ICAL3;;;

Column phase: Rtx-PLOT

Instrument: FID-4.i

Operator: MA
Column diameter: 0.53



Data File: \\nahstws005\Target\chem\FID-4.i\170124A.b\004.D
Report Date: 11-Oct-2021 10:43

ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\nahstws005\Target\chem\FID-4.i\170124A.b\004.D
Lab Smp Id: ICAL4 Client Smp ID: ICAL4
Inj Date : 24-JAN-2017 10:15
Operator : MA Inst ID: FID-4.i
Smp Info : ICAL4;ICAL4;;;
Misc Info : ;1;0;1
Comment :
Method : \\nahstws005\Target\chem\FID-4.i\170124A.b\RSKNI2.m
Meth Date : 08-Oct-2021 14:58 linh.pham Quant Type: ESTD
Cal Date : 24-JAN-2017 09:30 Cal File: 002.D
Als bottle: 4 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: stdNIP2.sub
Target Version: 4.14

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
1 Methane	1.033	1.030	0.003	3399	3.85900	3.488
2 Ethene	1.563	1.556	0.007	3478	6.74000	5.932
3 Ethane	1.726	1.723	0.003	4310	7.21700	5.853
4 Propane	4.120	4.113	0.007	4785	10.5850	8.190
5 N-Butane	7.703	7.690	0.013	3864	13.9820	9.473 (M)

QC Flag Legend

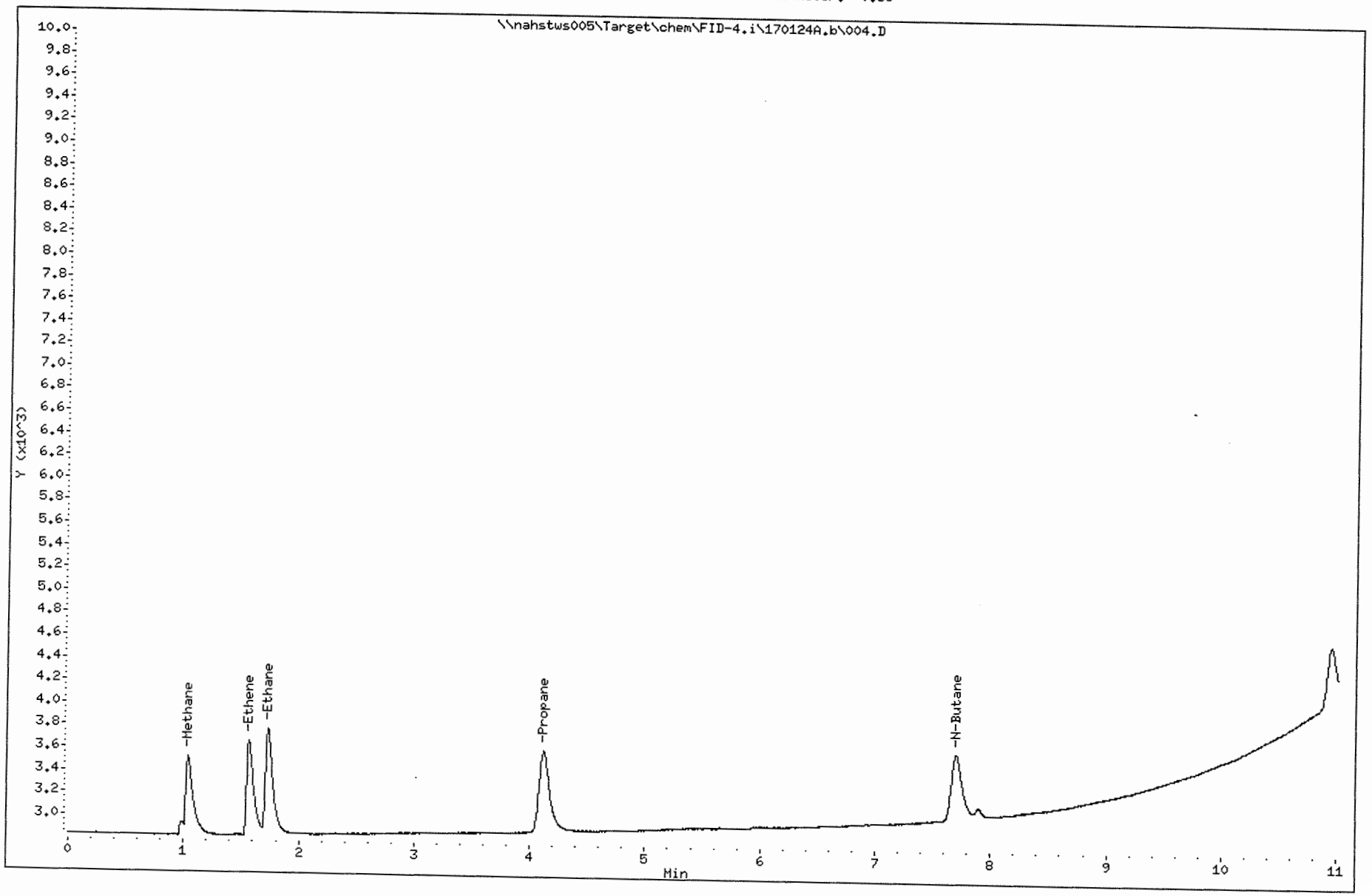
M - Compound response manually integrated.

Data File: \\nahstws005\Target\chem\FID-4.i\170124A.b\004.D
Date : 24-JAN-2017 10:15
Client ID: ICAL4
Sample Info: ICAL4;ICAL4;;;

Column phase: Rtx-PLOT

Instrument: FID-4.i

Operator: MA
Column diameter: 0.53



Data File: \\nahstws005\Target\chem\FID-4.i\170124A.b\005.D
Report Date: 11-Oct-2021 10:43

ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\nahstws005\Target\chem\FID-4.i\170124A.b\005.D
Lab Smp Id: ICAL5 Client Smp ID: ICAL5
Inj Date : 24-JAN-2017 10:39
Operator : MA Inst ID: FID-4.i
Smp Info : ICAL5;ICAL5;;;
Misc Info : ;1;0;1
Comment :
Method : \\nahstws005\Target\chem\FID-4.i\170124A.b\RSKNI2.m
Meth Date : 08-Oct-2021 14:58 linh.pham Quant Type: ESTD
Cal Date : 24-JAN-2017 10:39 Cal File: 005.D
Als bottle: 5 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: stdNIP2.sub
Target Version: 4.14

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

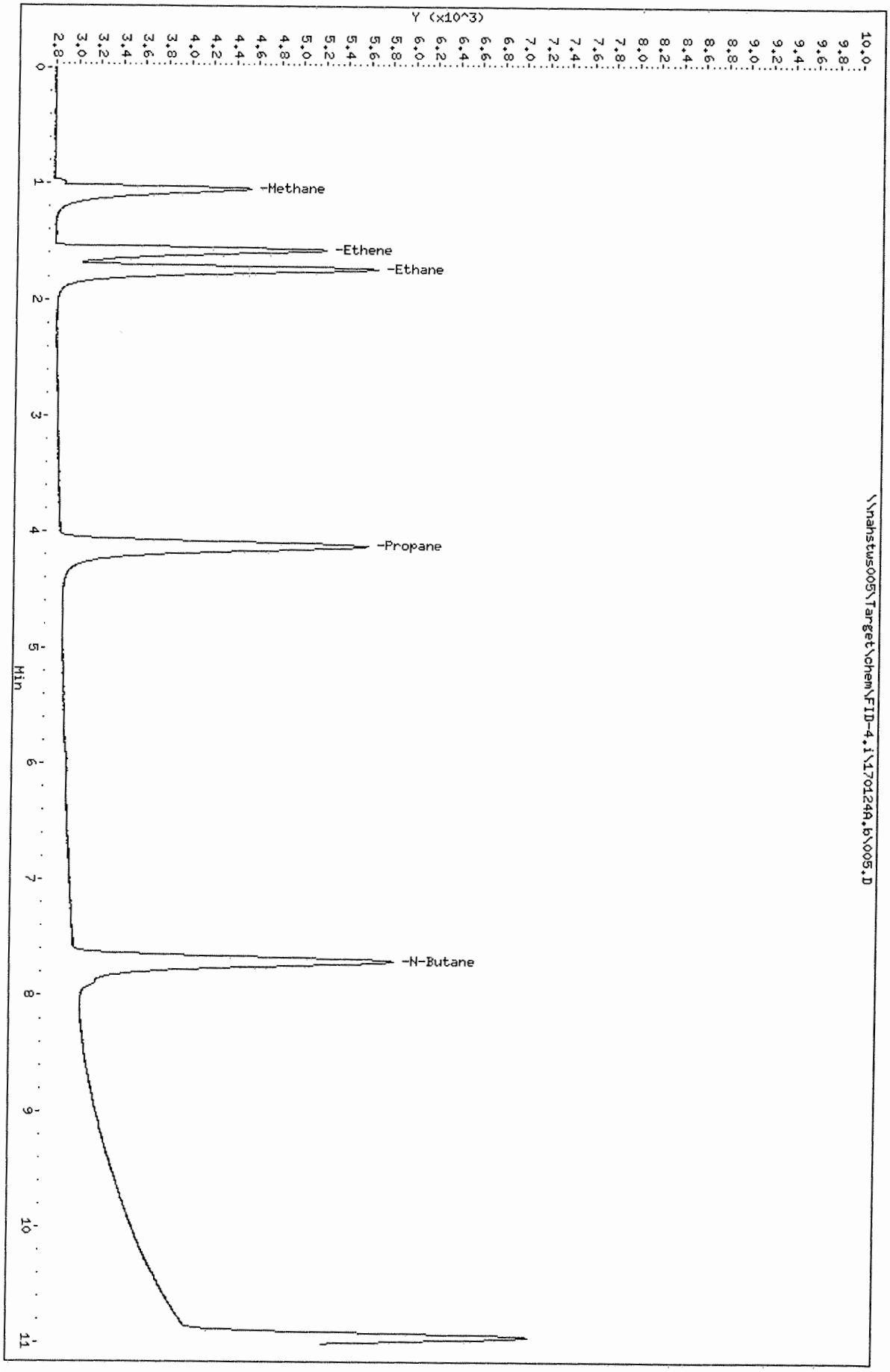
Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
1 Methane	1.043	1.030	0.013	9268	9.64700	9.511
2 Ethene	1.570	1.556	0.014	11210	16.8500	19.121
3 Ethane	1.733	1.723	0.010	14588	18.0430	19.811
4 Propane	4.120	4.113	0.007	18294	26.4630	27.415
5 N-Butane	7.700	7.690	0.010	18446	34.9550	34.419(M)

QC Flag Legend

M - Compound response manually integrated.

Data File: \\nahstws005\Target\chem\FID-4.i\17q124A.b\005.D
Date : 24-JAN-2017 10:39
Client ID: ICAL5
Sample Info: ICAL5;ICAL5;;;
Column phase: Rtx-PLOT

Instrument: FID-4.i
Operator: MA
Column diameter: 0.53



Data File: \\nahstws005\Target\chem\FID-4.i\170124A.b\006.D
Report Date: 11-Oct-2021 10:43

ALS Laboratory Group

Dissolved Gases Analysis

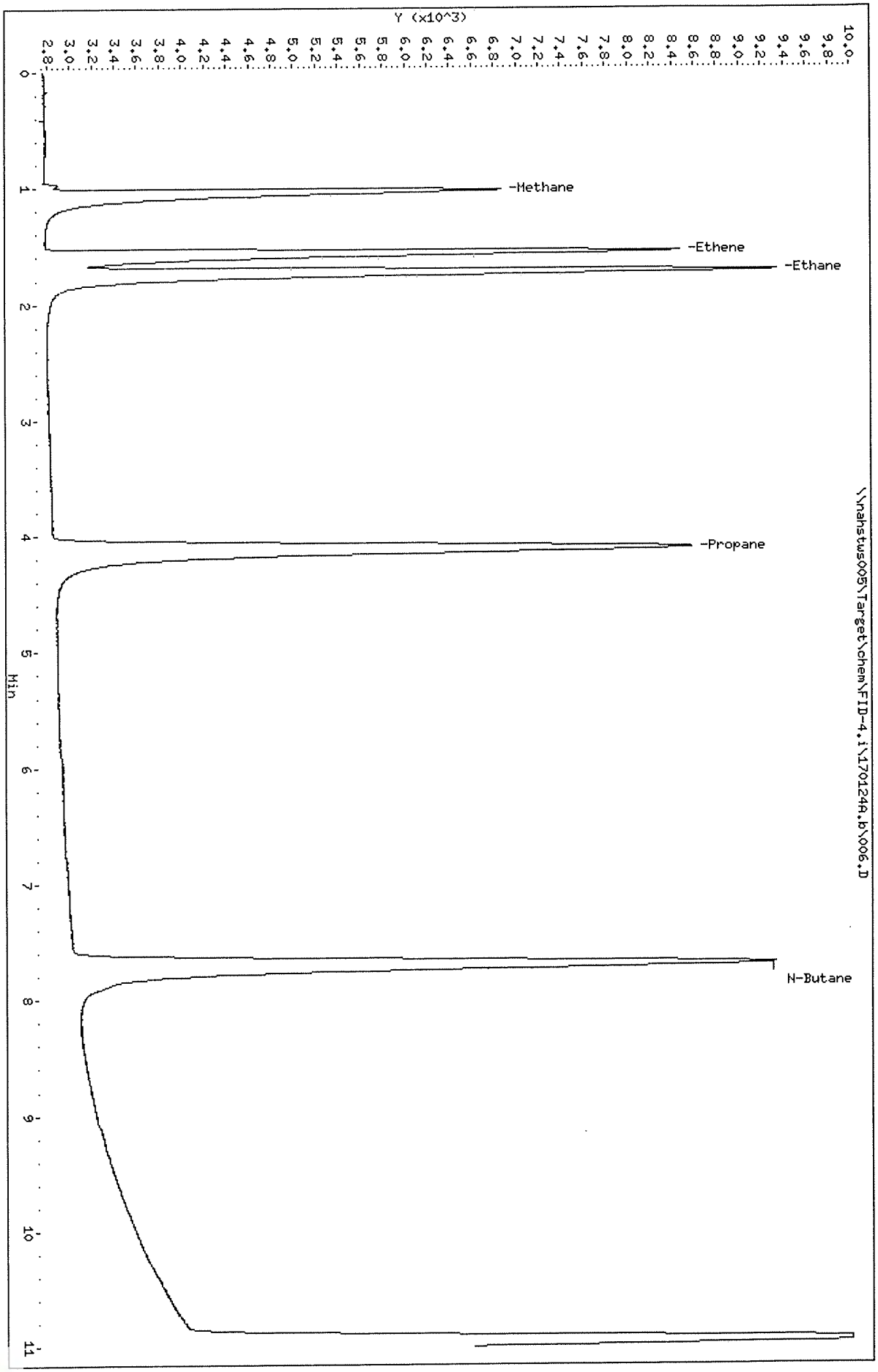
Data file : \\nahstws005\Target\chem\FID-4.i\170124A.b\006.D
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Inj Date : 24-JAN-2017 10:57
Operator : MA Inst ID: FID-4.i
Smp Info : ICAL6;ICAL6;;;
Misc Info : ;1;0;1
Comment :
Method : \\nahstws005\Target\chem\FID-4.i\170124A.b\RSKNI2.m
Meth Date : 08-Oct-2021 14:58 linh.pham Quant Type: ESTD
Cal Date : 24-JAN-2017 10:39 Cal File: 005.D
Als bottle: 6 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: stdNIP2.sub
Target Version: 4.14

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
1 Methane	1.023	1.030	-0.007	17957	19.2940	18.429
2 Ethene	1.550	1.556	-0.006	22910	53.8200	39.078
3 Ethane	1.716	1.723	-0.007	29505	36.0860	40.070
4 Propane	4.110	4.113	-0.003	38286	52.9260	52.796
5 N-Butane	7.696	7.690	0.006	42817	69.9110	70.855

Data File: \\nahstws005\Target\chem\FID-4.i\170124A.b\006.D
Date : 24-JAN-2017 10:57
Client ID: ICAL6
Sample Info: ICAL6;ICAL6;;;
Column phase: Rtx-PLOT

Instrument: FID-4.i
Operator: MA
Column diameter: 0.53



Data File: \\nahstws005\Target\chem\FID-4.i\170124A.b\007.D Page 1
Report Date: 11-Oct-2021 10:43

ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\nahstws005\Target\chem\FID-4.i\170124A.b\007.D
Lab Smp Id: ICAL7 Client Smp ID: ICAL7
Inj Date : 24-JAN-2017 11:13
Operator : MA Inst ID: FID-4.i
Smp Info : ICAL7;ICAL7;;;
Misc Info : ;1;0;1
Comment :
Method : \\nahstws005\Target\chem\FID-4.i\170124A.b\RSKNI2.m
Meth Date : 08-Oct-2021 14:58 linh.pham Quant Type: ESTD
Cal Date : 24-JAN-2017 10:57 Cal File: 006.D
Als bottle: 7 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: stdNIP2.sub
Target Version: 4.14

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	ON-COL (ug/L)
1 Methane	1.030	1.030	0.000	41736	38.5880	42.833(A)
2 Ethene	1.556	1.556	0.000	55865	67.4000	95.291(A)
3 Ethane	1.723	1.723	0.000	72124	72.1720	97.951(A)
4 Propane	4.113	4.113	0.000	96509	105.852	105.844
5 N-Butane	7.690	7.690	0.000	114164	139.821	139.707

QC Flag Legend

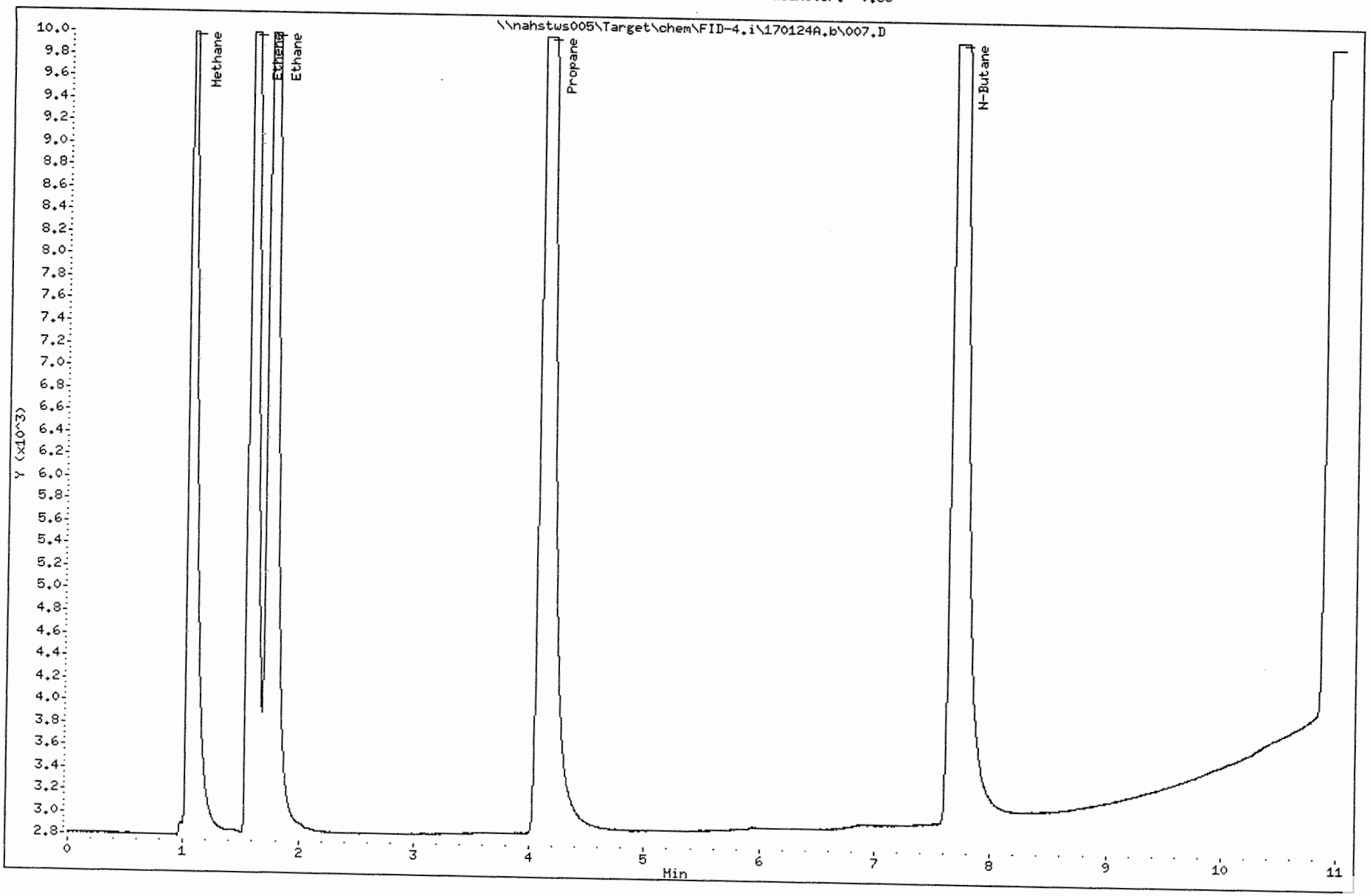
A - Target compound detected but, quantitated amount exceeded maximum amount.

Data File: \\nahstws005\Target\chem\FID-4.i\170124A.b\007.D
Date : 24-JAN-2017 11:13
Client ID: ICAL7
Sample Info: ICAL7;ICAL7;;;

Column phase: Rtx-PLOT

Instrument: FID-4.i

Operator: MA
Column diameter: 0.53



Data File: \\nahstws005\Target\chem\FID-4.i\170124A.b\008.D Page 1
Report Date: 11-Oct-2021 10:43

ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\nahstws005\Target\chem\FID-4.i\170124A.b\008.D
Lab Smp Id: ICV Client Smp ID: ICV
Inj Date : 24-JAN-2017 12:05
Operator : MA Inst ID: FID-4.i
Smp Info : ICV;ICV;;;
Misc Info : ;1;0;1
Comment :
Method : \\NAHSTWS005\Target\chem\FID-4.i\170124A.b\RSKNI2.m
Meth Date : 08-Oct-2021 14:58 linh.pham Quant Type: ESTD
Cal Date : 24-JAN-2017 11:13 Cal File: 007.D
Als bottle: 8 QC Sample: METHSPIKE
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: stdNIP2.sub
Target Version: 4.14

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)
1 Methane	1.046	1.030	0.016	9352	9.59792	9.597
2 Ethene	1.573	1.556	0.017	11192	19.0906	19.090
3 Ethane	1.736	1.723	0.013	14474	19.6571	19.657
4 Propane	4.116	4.113	0.003	18164	27.2381	27.238
5 N-Butane	7.696	7.690	0.006	19425	36.0103	36.010

Data File: \\nahstws005\Target\chem\FID-4.i\170124A.b\008.D

Date : 24-JAN-2017 12:05

Client ID: ICV

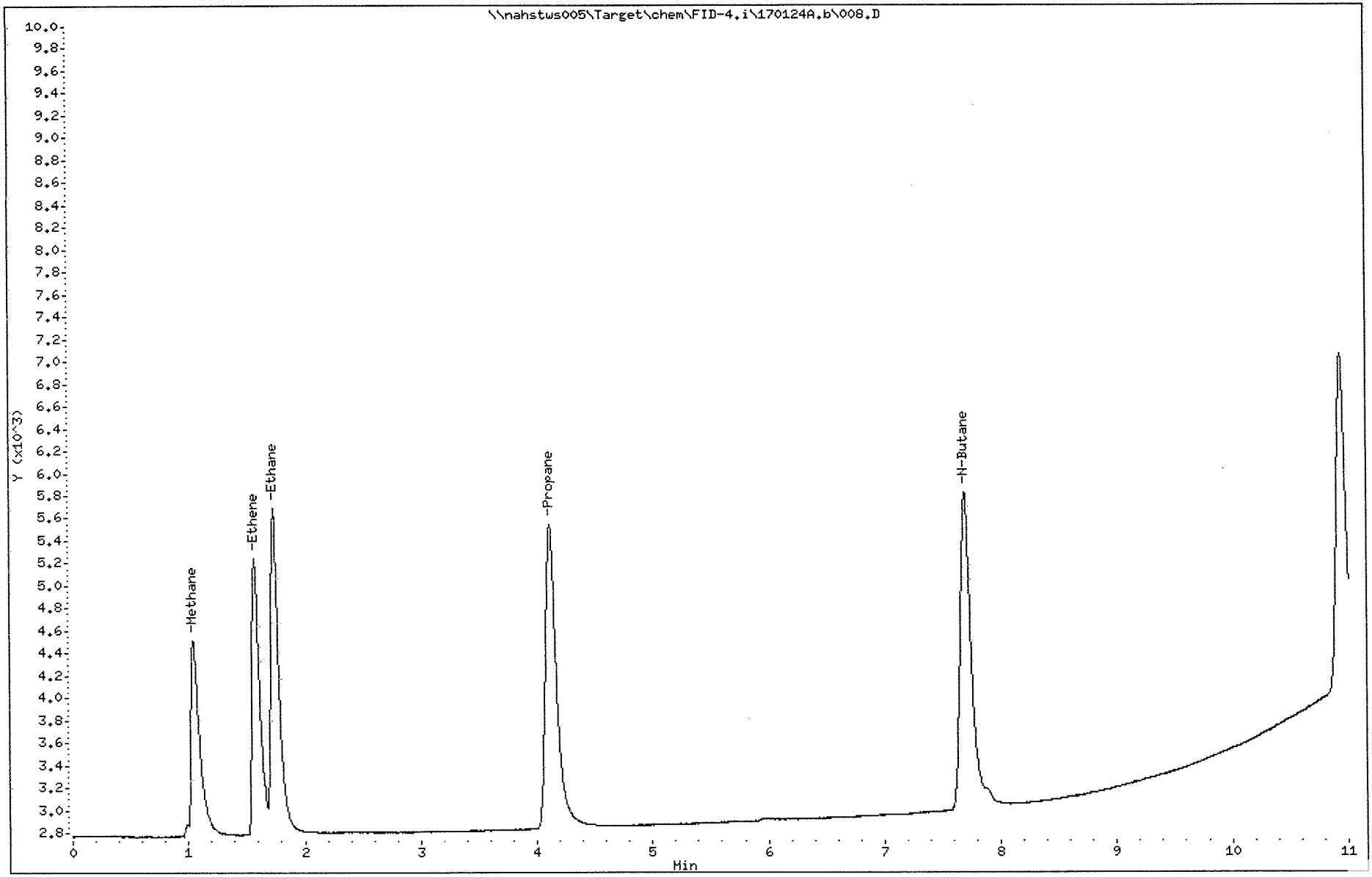
Sample Info: ICV;ICV;;;

Column phase: Rtx-PLOT

Instrument: FID-4.i

Operator: MA

Column diameter: 0.53



FID04 -Logbook

Batch: 45965
Date: 08-03-2021
Method: RSK175
Comments:

Analyst: Purvi Lad
Reviewer:
Laboratory: Houston

#	Samp ID	Type	Analyzed	DF	Init Wt/Vol	Final Vol	File ID	Matrix	Status	p
1	RSK-CCV	CCV	08-03-2021 09:36 am	1.00	0.00 mL	0.00 mL	001.D	Liquid	Y	N
2	MBLK-210803	MBLK	08-03-2021 09:48 am	1.00	0.00 mL	0.00 mL	002.D	Liquid	Y	N
3	LCS-210803	LCS	08-03-2021 09:58 am	1.00	0.00 mL	0.00 mL	003.D	Liquid	Y	N
4	LCSD-210803	LCSD	08-03-2021 10:06 am	1.00	0.00 mL	0.00 mL	004.D	Liquid	Y	N
5	HS21071465-01	SAMP	08-03-2021 10:19 am	1.00	0.00 mL	33.18	005.D	Liquid	Y	<
6	HS21071465-02	SAMP	08-03-2021 10:29 am	1.00	0.00 mL	31.46	006.D	Liquid	Y	<
7	HS21071465-06	SAMP	08-03-2021 10:40 am	1.00	0.00 mL	32.07	007.D	Liquid	Y	<
8	HS21071465-08	SAMP	08-03-2021 10:47 am	1.00	0.00 mL	27.79	008.D	Liquid	Y	>
	Sample canceled due to matrix									
9	HS21071586-02	SAMP	08-03-2021 10:55 am	1.00	0.00 mL	31.38	009.D	Liquid	Y	<
10	HS21071586-04	SAMP	08-03-2021 11:05 am	1.00	0.00 mL	31.60	010.D	Liquid	Y	<
11	RSK-CCV	CCV	08-03-2021 11:19 am	1.00	0.00 mL	0.00 mL	011.D	Liquid	Y	N
12	HS21071609-03	SAMP	08-03-2021 11:27 am	1.00	0.00 mL	32.28	012.D	Liquid	Y	<
13	HS21071610-01	SAMP	08-03-2021 11:43 am	1.00	0.00 mL	31.48	013.D	Liquid	Y	<
14	HS21071610-03	SAMP	08-03-2021 11:59 am	1.00	0.00 mL	32.09	014.D	Liquid	Y	<
15	HS21071611-06	SAMP	08-03-2021 12:07 pm	1.00	0.00 mL	32.59	015.D	Liquid	Y	<
16	HS21071652-01	SAMP	08-03-2021 12:21 pm	1.00	0.00 mL	31.78	016.D	Liquid	Y	<
17	HS21071652-02	SAMP	08-03-2021 12:48 pm	1.00	0.00 mL	31.19	017.D	Liquid	Y	<
18	HS21071700-01	SAMP	08-03-2021 01:01 pm	1.00	0.00 mL	31.46	018.D	Liquid	Y	<
19	HS21071712-01	SAMP	08-03-2021 01:10 pm	1.00	0.00 mL	32.34	019.D	Liquid	Y	<
20	HS21071714-01	SAMP	08-03-2021 01:18 pm	1.00	0.00 mL	31.87	020.D	Liquid	Y	<
21	HS21071730-01	SAMP	08-03-2021 01:26 pm	1.00	0.00 mL	33.33	021.D	Liquid	Y	<
22	RSK-CCV	CCV	08-03-2021 01:35 pm	1.00	0.00 mL	0.00 mL	022.D	Liquid	Y	N
23	HS21071731-01	SAMP	08-03-2021 01:44 pm	1.00	0.00 mL	32.47	023.D	Liquid	Y	<
24	HS21071465-01	SAMP	08-03-2021 01:53 pm	25.00	0.00 mL	0.00 mL	024.D	Liquid	Y	N
25	HS21071465-02	SAMP	08-03-2021 02:13 pm	25.00	0.00 mL	0.00 mL	025.D	Liquid	Y	N
26	HS21071465-06	SAMP	08-03-2021 02:26 pm	25.00	0.00 mL	0.00 mL	026.D	Liquid	Y	N
27	HS21071586-02	SAMP	08-03-2021 02:58 pm	100.0(	0.00 mL	0.00 mL	028.D	Liquid	Y	N
28	HS21071465-08	SAMP	08-03-2021 03:07 pm	1000.0	0.00 mL	0.00 mL	027b.D	Liquid	Y	N
29	HS21071465-08	SAMP	08-03-2021 03:16 pm	50.00	0.00 mL	0.00 mL	027.D	Liquid	Y	N
30	HS21071586-04	SAMP	08-03-2021 03:30 pm	100.0(	0.00 mL	0.00 mL	029.D	Liquid	Y	N
31	HS21071609-03	SAMP	08-03-2021 03:45 pm	500.0(	0.00 mL	0.00 mL	030.D	Liquid	Y	N
32	RSK-CCV	CCV	08-03-2021 04:01 pm	1.00	0.00 mL	0.00 mL	031.D	Liquid	Y	N
33	HS21071610-01	SAMP	08-03-2021 04:12 pm	500.0(	0.00 mL	0.00 mL	032.D	Liquid	Y	N
34	HS21071610-03	SAMP	08-03-2021 04:20 pm	500.0(	0.00 mL	0.00 mL	033.D	Liquid	Y	N
35	HS21071611-06	SAMP	08-03-2021 04:28 pm	100.0(	0.00 mL	0.00 mL	034.D	Liquid	Y	N
36	HS21071652-01	SAMP	08-03-2021 04:38 pm	400.0(	0.00 mL	0.00 mL	035.D	Liquid	Y	N
37	HS21071652-02	SAMP	08-03-2021 04:46 pm	10.00	0.00 mL	0.00 mL	036.D	Liquid	Y	N
38	HS21071700-01	SAMP	08-03-2021 04:54 pm	100.0(	0.00 mL	0.00 mL	037.D	Liquid	Y	N
39	HS21071712-01	SAMP	08-03-2021 05:02 pm	10.00	0.00 mL	0.00 mL	038.D	Liquid	Y	N
40	HS21071714-01	SAMP	08-03-2021 05:21 pm	100.0(	0.00 mL	0.00 mL	039.D	Liquid	Y	N
41	HS21071731-01	SAMP	08-03-2021 05:30 pm	200.0(	0.00 mL	0.00 mL	040.D	Liquid	Y	N

FID04 -Logbook

#	Samp ID	Type	Analyzed	DF	Init Wt/Vol	Final Vol	File ID	Matrix	Status	p
42	HS21071731-01	SAMP	08-03-2021 05:40 pm	10.00	0.00 mL	0.00 mL	041.D	Liquid	Y	N
43	RSK-CCV	CCV	08-03-2021 05:49 pm	1.00	0.00 mL	0.00 mL	042.D	Liquid	Y	N
44	HS21071730-01DUP	SAMP	08-03-2021 05:58 pm	1.00	0.00 mL	0.00 mL	043.D	Liquid	Y	N
45	RSK-CCV	CCV	08-03-2021 06:07 pm	1.00	0.00 mL	0.00 mL	044.D	Liquid	Y	N

Chemical	Value
pH Paper	300107063-18
CCV/LC/LSD/MS/MSD	300107043-11

FORM 2
WATER GASES SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS21071465

	ENG SC SAMPLE NO.	SMC1 #	SMC2 #	SMC3 #	OTHER	TOT OUT
01	MBLK-210803					0
02	LCS-210803					0
03	LCSD-210803					0
04	HS21071465-01					0
05	HS21071465-02					0
06	HS21071465-06					0
07	HS21071465-01					0
08	HS21071465-02					0
09	HS21071465-06					0
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						
28						

QC LIMITS

Column to be used to flag recovery values

* Values outside of contract required QC limits

D System Monitoring Compound diluted out

FORM 7B
GASES CALIBRATION VERIFICATION SUMMARY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS21071465

Instrument ID: FID-4 Calibration Date: 08/03/21 Time: 0936

Lab File ID: 001 Init. Calib. Date(s): 01/24/17 01/24/17

Init. Calib. Times: 0906 1113

GC Column: RTX-PLOT ID: 0.53 (mm)

COMPOUND	RRF OR AMOUNT	RRF250.00 OR AMOUNT	MIN RRF	%D OR %DRIFT	MAX %D OR %DRIFT	CURV TYPE
Ethane	719.48900	728.37111	0.01	-1.23	20.00	AVRG
Methane	974.99200	837.46242	0.01	14.10	20.00	AVRG
Ethene	585.76000	547.24036	0.01	6.58	20.00	AVRG

FORM VII GASES

FORM 7B
GASES CALIBRATION VERIFICATION SUMMARY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS21071465

Instrument ID: FID-4 Calibration Date: 08/03/21 Time: 1119

Lab File ID: 011 Init. Calib. Date(s): 01/24/17 01/24/17

Init. Calib. Times: 0906 1113

GC Column: RTX-PLOT ID: 0.53 (mm)

COMPOUND	RRF OR AMOUNT	RRF250.00 OR AMOUNT	MIN RRF	%D OR %DRIFT	MAX %D OR %DRIFT	CURV TYPE
Ethane	719.48900	742.39317	0.01	-3.18	20.00	AVRG
Methane	974.99200	792.99264	0.01	18.67	20.00	AVRG
Ethene	585.76000	549.55490	0.01	6.18	20.00	AVRG

FORM VII GASES

FORM 7B
GASES CALIBRATION VERIFICATION SUMMARY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS21071465

Instrument ID: FID-4 Calibration Date: 08/03/21 Time: 1335

Lab File ID: 022 Init. Calib. Date(s): 01/24/17 01/24/17

Init. Calib. Times: 0906 1113

GC Column: RTX-PLOT ID: 0.53 (mm)

COMPOUND	RRF OR AMOUNT	RRF250.00 OR AMOUNT	MIN RRF	%D OR %DRIFT	MAX %D OR %DRIFT	CURV TYPE
Ethane	719.48900	790.33420	0.01	-9.85	20.00	AVRG
Methane	974.99200	852.49300	0.01	12.56	20.00	AVRG
Ethene	585.76000	588.84273	0.01	-0.53	20.00	AVRG

FORM VII GASES

FORM 7B
GASES CALIBRATION VERIFICATION SUMMARY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS21071465

Instrument ID: FID-4 Calibration Date: 08/03/21 Time: 1601

Lab File ID: 031 Init. Calib. Date(s): 01/24/17 01/24/17

Init. Calib. Times: 0906 1113

GC Column: RTX-PLOT ID: 0.53 (mm)

COMPOUND	RRF OR AMOUNT	RRF250.00 OR AMOUNT	MIN RRF	%D OR %DRIFT	MAX %D OR %DRIFT	CURV TYPE
Ethane	719.48900	774.37233	0.01	-7.63	20.00	AVRG
Methane	974.99200	799.83415	0.01	17.96	20.00	AVRG
Ethene	585.76000	570.02967	0.01	2.68	20.00	AVRG

FORM VII GASES

ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\nahstws005\Target\chem\FID-4.i\210803.b\Before\001.D
Lab Smp Id: RSK-CCV Client Smp ID: RSK-CCV
Inj Date : 03-AUG-2021 09:36
Operator : PL Inst ID: FID-4.i
Smp Info : RSK-CCV;RSK-CCV;2;4
Misc Info : ;1;0;1
Comment :
Method : \\NAHSTWS005\Target\chem\FID-4.i\210803.b\RSKNI3.m
Meth Date : 12-Oct-2021 14:12 linh.pham Quant Type: ESTD
Cal Date : 24-JAN-2017 10:15 Cal File: 004.D
Als bottle: 1 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: RSK175.sub
Target Version: 4.14
Processing Host: ALSHSW7104

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

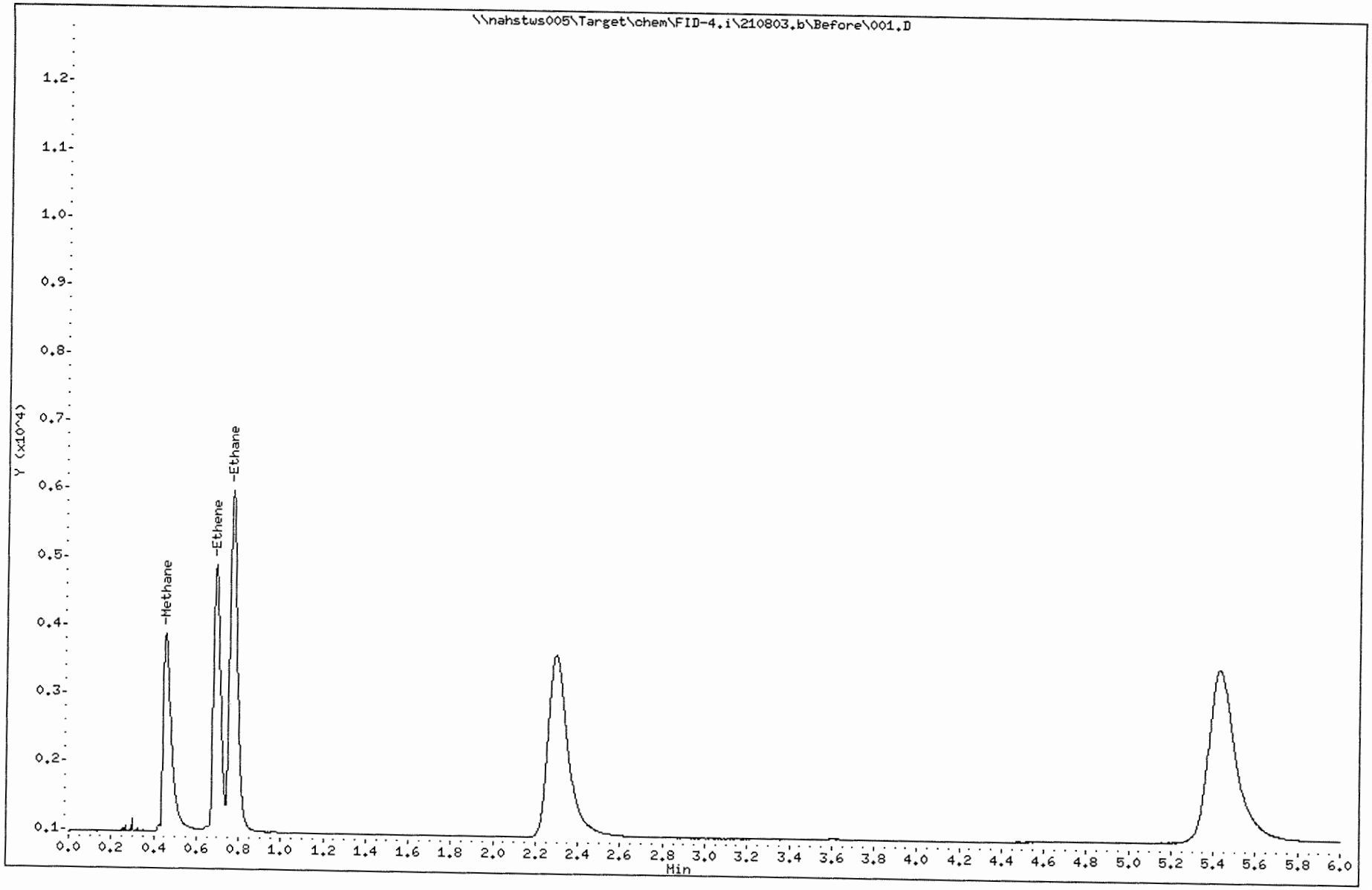
Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
1 Methane	0.453	0.463	-0.010	8060	9.64700	8.266
2 Ethene	0.690	0.700	-0.010	9162	16.8500	15.641
3 Ethane	0.766	0.777	-0.011	13063	18.0430	18.155

Data File: \\nahstws005\Target\chem\FID-4.i\210803.b\Before\001.D
Date : 03-AUG-2021 09:36
Client ID: RSK-CCV
Sample Info: RSK-CCV;RSK-CCV;2;4

Column phase: Rtx-PLOT

Instrument: FID-4.i

Operator: PL
Column diameter: 0.53



Data File: \\nahstws005\Target\chem\FID-4.i\210803.b\001.D
Report Date: 12-Oct-2021 14:14

ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\nahstws005\Target\chem\FID-4.i\210803.b\001.D
Lab Smp Id: RSK-CCV Client Smp ID: RSK-CCV
Inj Date : 03-AUG-2021 09:36
Operator : PL Inst ID: FID-4.i
Smp Info : RSK-CCV;RSK-CCV;2;4
Misc Info : ;1;0;1
Comment :
Method : \\NAHSTWS005\Target\chem\FID-4.i\210803.b\RSKNI3.m
Meth Date : 12-Oct-2021 14:12 linh.pham Quant Type: ESTD
Cal Date : 24-JAN-2017 10:15 Cal File: 004.D
Als bottle: 1 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: RSK175.sub
Target Version: 4.14
Processing Host: ALSHSW7104

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

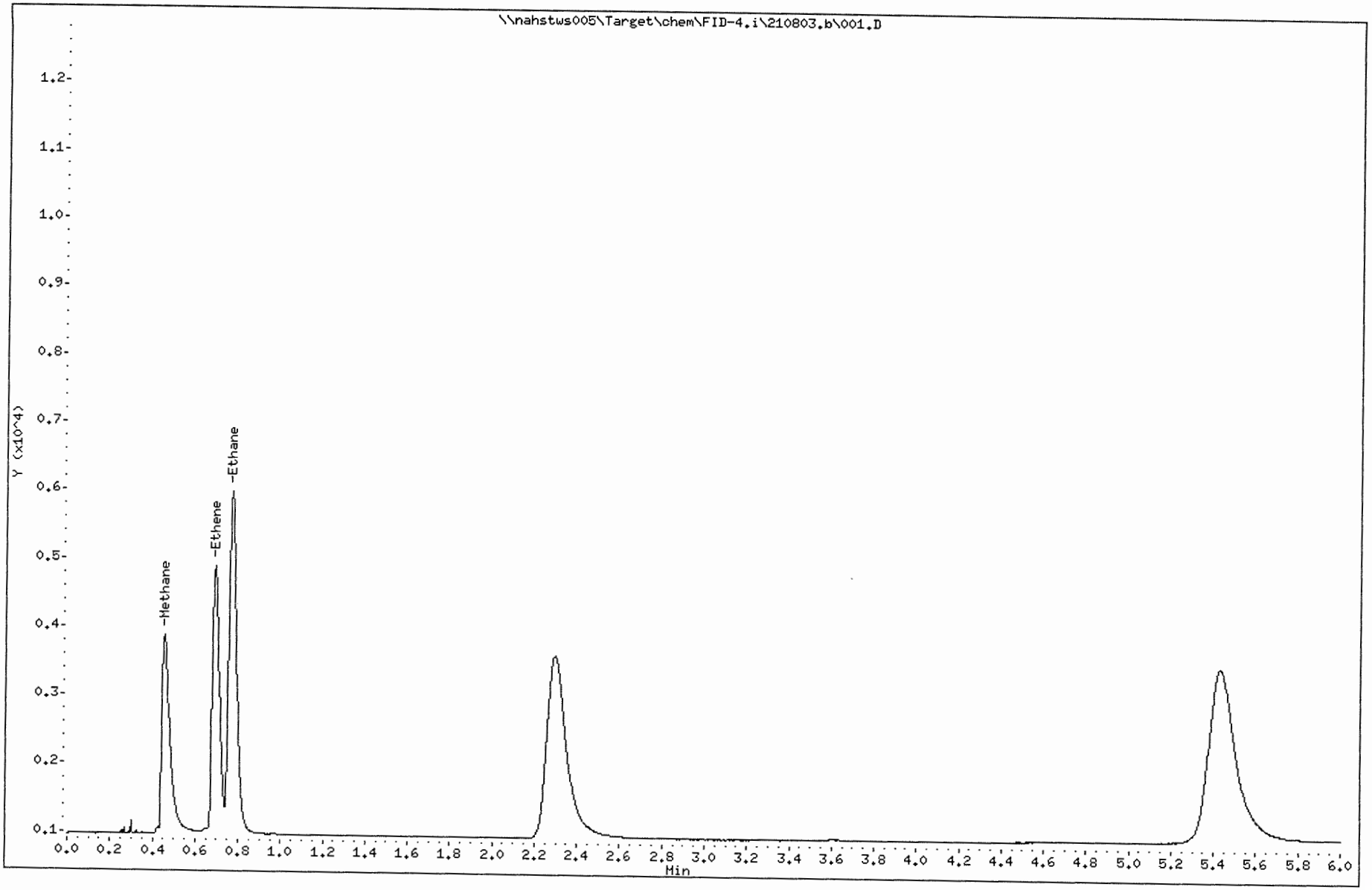
Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
1 Methane	0.453	0.463	-0.010	8079	9.64700	8.286
2 Ethene	0.690	0.700	-0.010	9221	16.8500	15.741
3 Ethane	0.766	0.777	-0.011	13142	18.0430	18.265

Data File: \\nahstws005\Target\chem\FID-4.i\210803.b\001.D
Date : 03-AUG-2021 09:36
Client ID: RSK-CCV
Sample Info: RSK-CCV;RSK-CCV;2;4

Column phase: Rtx-PLOT

Instrument: FID-4.i

Operator: PL
Column diameter: 0.53



ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\nahstws005\Target\chem\FID-4.i\210803.b\Before\002.D
Lab Smp Id: MBLK-210803 Client Smp ID: MBLK-210803
Inj Date : 03-AUG-2021 09:48
Operator : PL Inst ID: FID-4.i
Smp Info : MBLK-210803;MBLK-210803;3;;BLANK
Misc Info : ;1;0;1
Comment :
Method : \\NAHSTWS005\Target\chem\FID-4.i\210803.b\RSKNI3.m
Meth Date : 12-Oct-2021 14:12 linh.pham Quant Type: ESTD
Cal Date : 24-JAN-2017 10:15 Cal File: 004.D
Als bottle: 2 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: RSK175.sub
Target Version: 4.14
Processing Host: ALSHSW7104

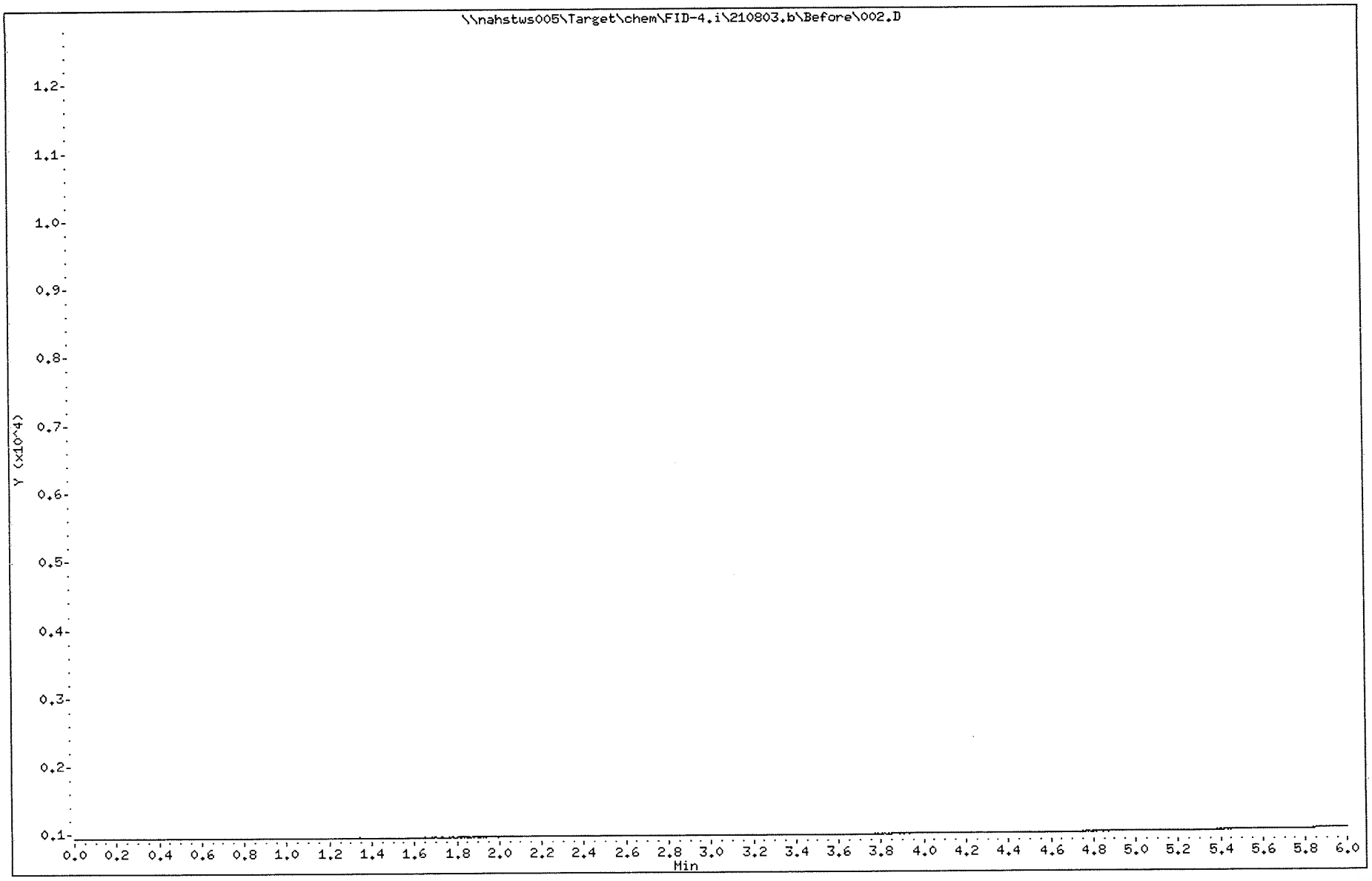
Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)

Data File: \\nahstws005\Target\chem\FID-4.i\210803.b\Before\002.D
Date : 03-AUG-2021 09:48
Client ID: MBLK-210803
Sample Info: MBLK-210803;MBLK-210803;3;;BLANK

Instrument: FID-4.i
Operator: PL
Column diameter: 0.53

Column phase: Rtx-PLOT



Data File: \\nahstws005\Target\chem\FID-4.i\210803.b\002.D
Report Date: 12-Oct-2021 14:14

ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\nahstws005\Target\chem\FID-4.i\210803.b\002.D
Lab Smp Id: MBLK-210803 Client Smp ID: MBLK-210803
Inj Date : 03-AUG-2021 09:48
Operator : PL Inst ID: FID-4.i
Smp Info : MBLK-210803;MBLK-210803;3;;BLANK
Misc Info : ;1;0;1
Comment :
Method : \\NAHSTWS005\Target\chem\FID-4.i\210803.b\RSKNI3.m
Meth Date : 12-Oct-2021 14:12 linh.pham Quant Type: ESTD
Cal Date : 24-JAN-2017 10:15 Cal File: 004.D
Als bottle: 2 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: RSK175.sub
Target Version: 4.14
Processing Host: ALSHSW7104

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

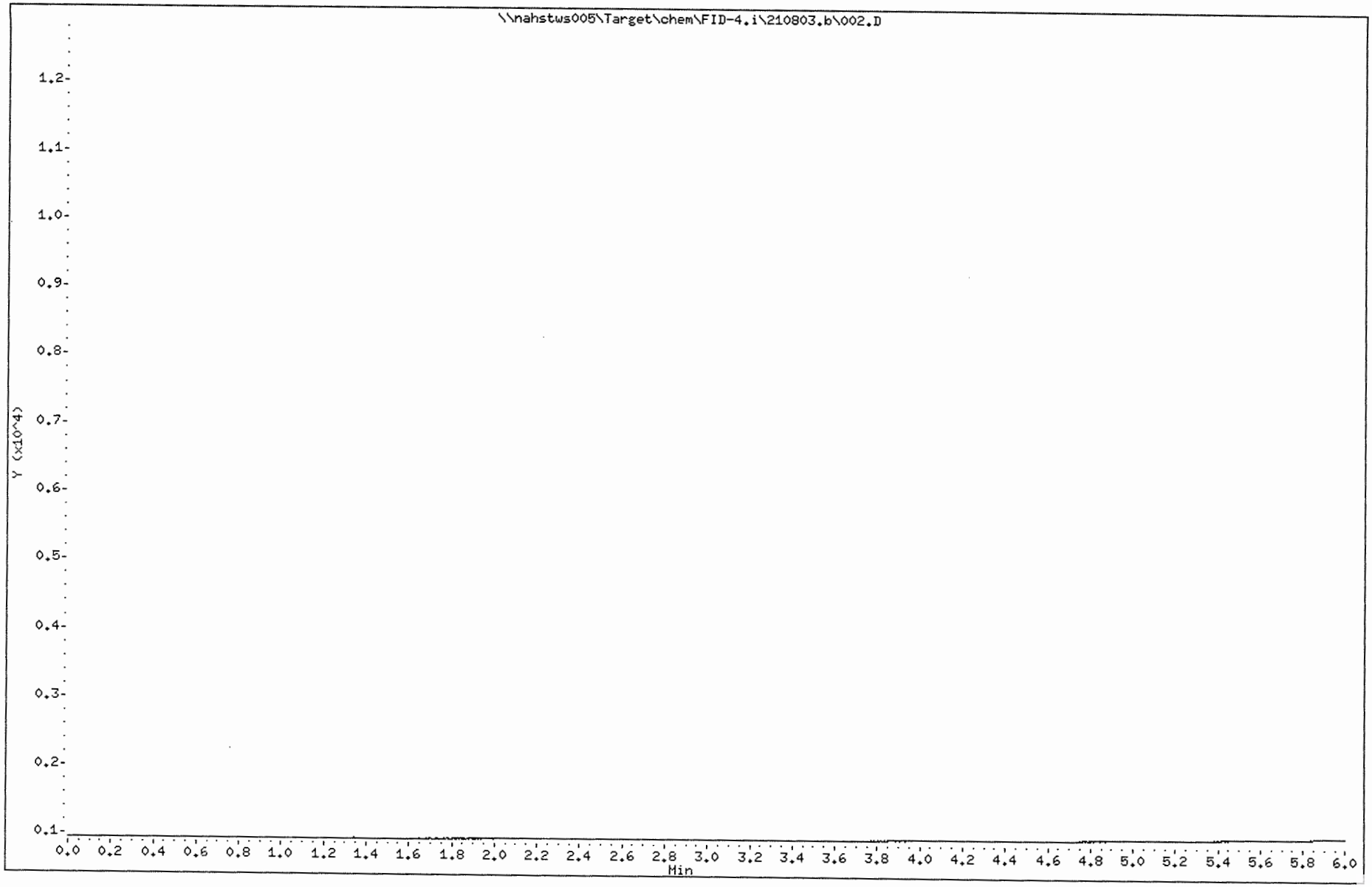
Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)

Data File: \\nahstws005\Target\chem\FID-4.i\210803.b\002.D
Date : 03-AUG-2021 09:48
Client ID: MBLK-210803
Sample Info: MBLK-210803;MBLK-210803;3;;BLANK

Column phase: Rtx-PLOT

Instrument: FID-4.i

Operator: PL
Column diameter: 0.53



ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\nahstws005\Target\chem\FID-4.i\210803.b\Before\003.D
Lab Smp Id: LCS-210803 Client Smp ID: LCS-210803
Inj Date : 03-AUG-2021 09:58
Operator : PL Inst ID: FID-4.i
Smp Info : LCS-210803;LCS-210803;3;;LCS
Misc Info : ;1;0;1
Comment :
Method : \\NAHSTWS005\Target\chem\FID-4.i\210803.b\RSKNI3.m
Meth Date : 12-Oct-2021 14:12 linh.pham Quant Type: ESTD
Cal Date : 24-JAN-2017 10:15 Cal File: 004.D
Als bottle: 3 QC Sample: LCS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: RSK175.sub
Target Version: 4.14
Processing Host: ALSHSW7104

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

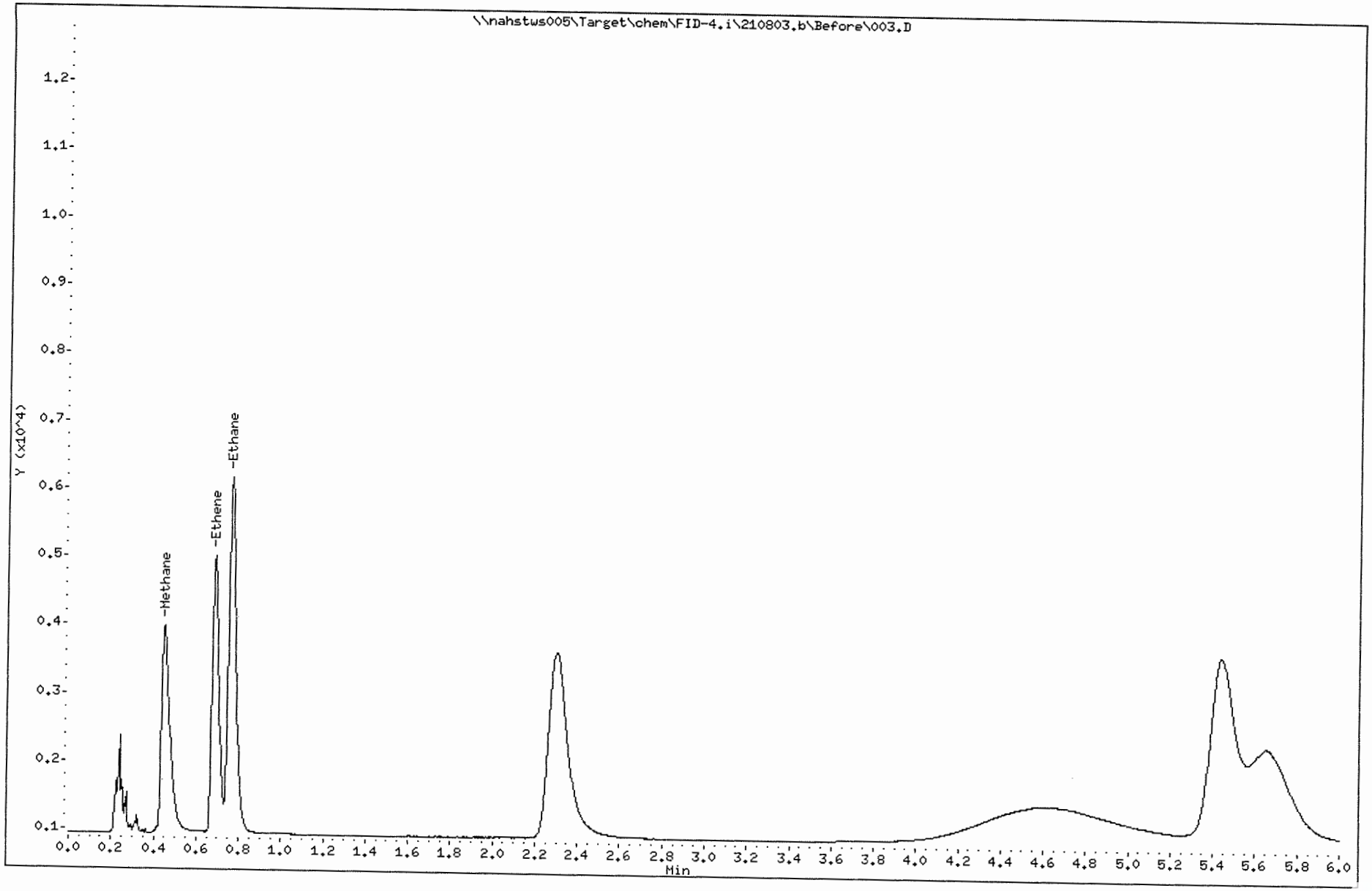
Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
1 Methane	0.446	0.463	-0.017	8562	8.78161	8.781
2 Ethene	0.683	0.700	-0.017	9064	15.4739	15.473
3 Ethane	0.760	0.777	-0.017	13038	18.1212	18.121

Data File: \\nahstws005\Target\chem\FID-4.i\210803.b\Before\003.D
Date : 03-AUG-2021 09:58
Client ID: LCS-210803
Sample Info: LCS-210803;LCS-210803;3;;LCS

Column phase: Rtx-PLOT

Instrument: FID-4.i

Operator: PL
Column diameter: 0.53



Data File: \\nahstws005\Target\chem\FID-4.i\210803.b\003.D
Report Date: 12-Oct-2021 14:14

ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\nahstws005\Target\chem\FID-4.i\210803.b\003.D
Lab Smp Id: LCS-210803 Client Smp ID: LCS-210803
Inj Date : 03-AUG-2021 09:58
Operator : PL Inst ID: FID-4.i
Smp Info : LCS-210803;LCS-210803;3;;LCS
Misc Info : ;1;0;1
Comment :
Method : \\NAHSTWS005\Target\chem\FID-4.i\210803.b\RSKNI3.m
Meth Date : 12-Oct-2021 14:12 linh.pham Quant Type: ESTD
Cal Date : 24-JAN-2017 10:15 Cal File: 004.D
Als bottle: 3 QC Sample: LCS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: RSK175.sub
Target Version: 4.14
Processing Host: ALSHSW7104

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

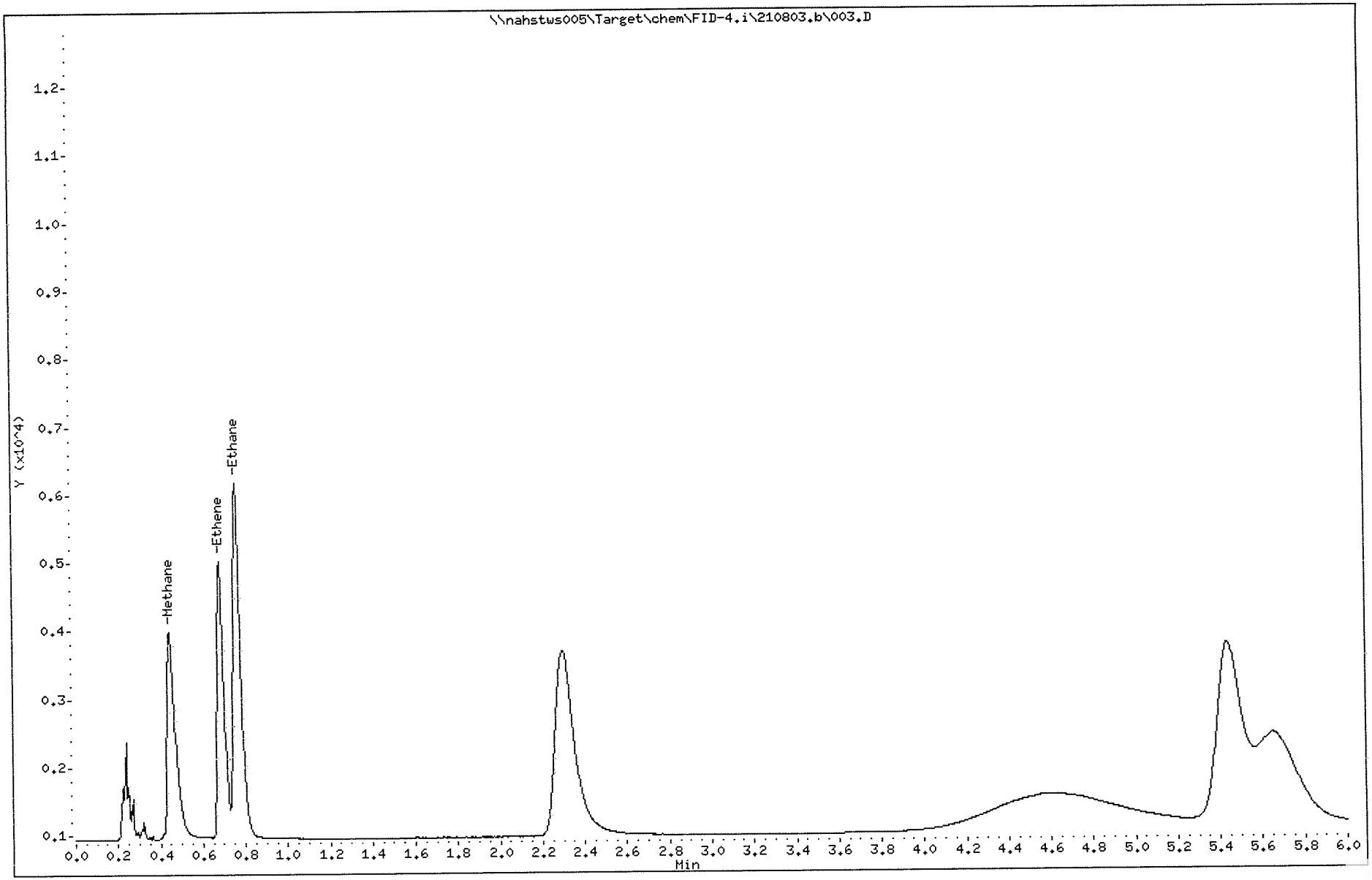
Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)
1 Methane	0.446	0.463	-0.017	8676	8.89853	8.898
2 Ethene	0.683	0.700	-0.017	9191	15.6907	15.690
3 Ethane	0.760	0.777	-0.017	13241	18.4033	18.403

Data File: \\nahstws005\Target\chem\FID-4.i\210803.b\003.D
Date : 03-AUG-2021 09:58
Client ID: LCS-210803
Sample Info: LCS-210803;LCS-210803;3;;LCS

Instrument: FID-4.i

Operator: PL
Column diameter: 0.53

Column phase: Rtx-PLOT



ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\nahstws005\Target\chem\FID-4.i\210803.b\Before\004.D
Lab Smp Id: LCSD-210803 Client Smp ID: LCSD-210803
Inj Date : 03-AUG-2021 10:06
Operator : PL Inst ID: FID-4.i
Smp Info : LCSD-210803;LCSD-210803;3;;LCSD
Misc Info : ;1;0;1
Comment :
Method : \\NAHSTWS005\Target\chem\FID-4.i\210803.b\RSKNI3.m
Meth Date : 12-Oct-2021 14:12 linh.pham Quant Type: ESTD
Cal Date : 24-JAN-2017 10:15 Cal File: 004.D
Als bottle: 4 QC Sample: LCSD
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: RSK175.sub
Target Version: 4.14
Processing Host: ALSHSW7104

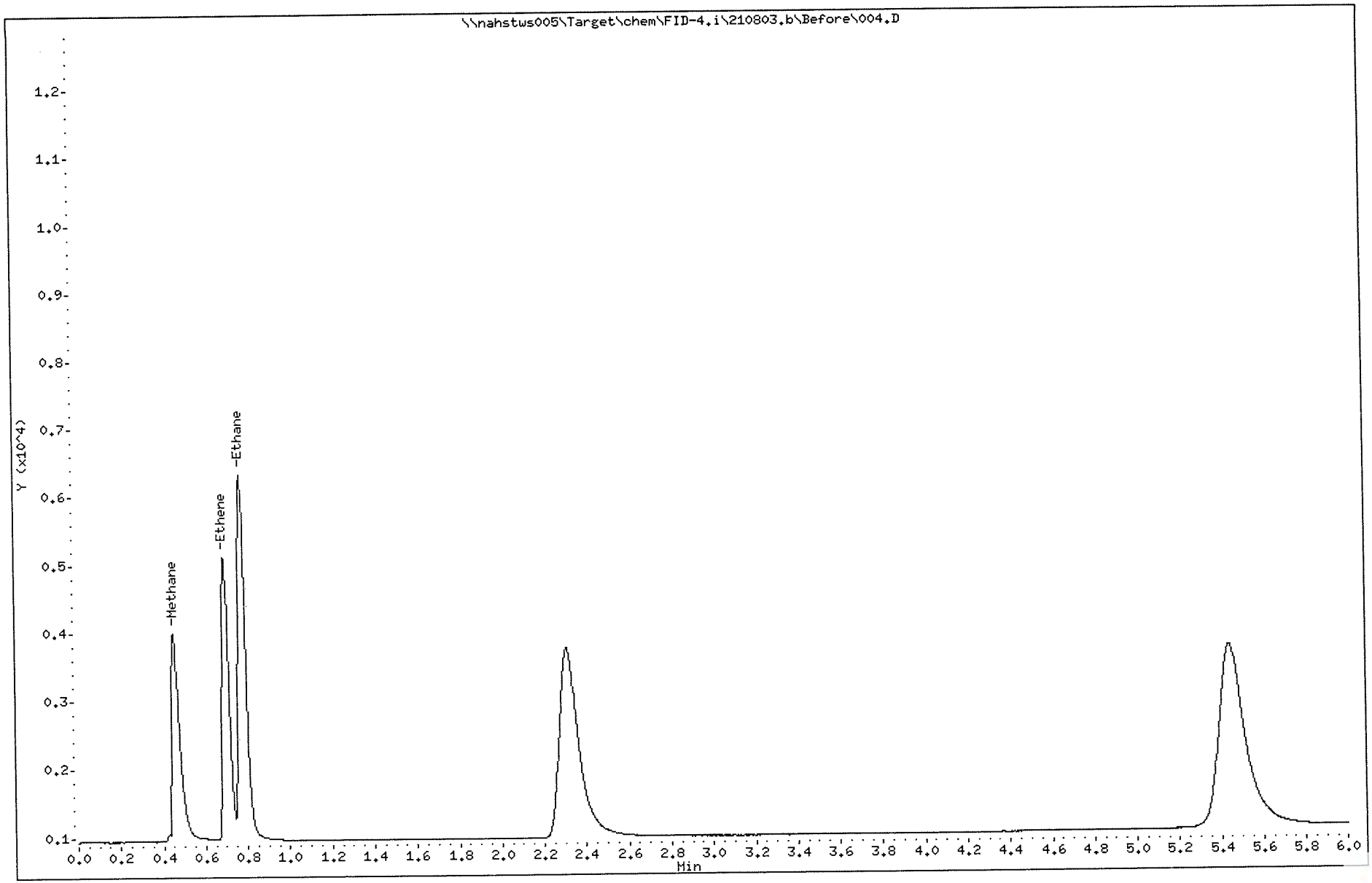
Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)
1 Methane	0.453	0.463	-0.010	8214	8.42468	8.424
2 Ethene	0.693	0.700	-0.007	9259	15.8068	15.806
3 Ethane	0.773	0.777	-0.004	13328	18.5242	18.524

Data File: \\nahstws005\Target\chem\FID-4.i\210803.b\Before\004.D
Date : 03-AUG-2021 10:06
Client ID: LCSD-210803
Sample Info: LCSD-210803;LCSD-210803;3;;LCSD

Instrument: FID-4.i
Operator: PL
Column diameter: 0.53

Column phase: Rtx-PLOT



Data File: \\nahstws005\Target\chem\FID-4.i\210803.b\004.D
Report Date: 12-Oct-2021 14:14

ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\nahstws005\Target\chem\FID-4.i\210803.b\004.D
Lab Smp Id: LCSD-210803 Client Smp ID: LCSD-210803
Inj Date : 03-AUG-2021 10:06
Operator : PL Inst ID: FID-4.i
Smp Info : LCSD-210803;LCSD-210803;3;;LCSD
Misc Info : ;1;0;1
Comment :
Method : \\NAHSTWS005\Target\chem\FID-4.i\210803.b\RSKNI3.m
Meth Date : 12-Oct-2021 14:12 linh.pham Quant Type: ESTD
Cal Date : 24-JAN-2017 10:15 Cal File: 004.D
Als bottle: 4 QC Sample: LCSD
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: RSK175.sub
Target Version: 4.14
Processing Host: ALSHSW7104

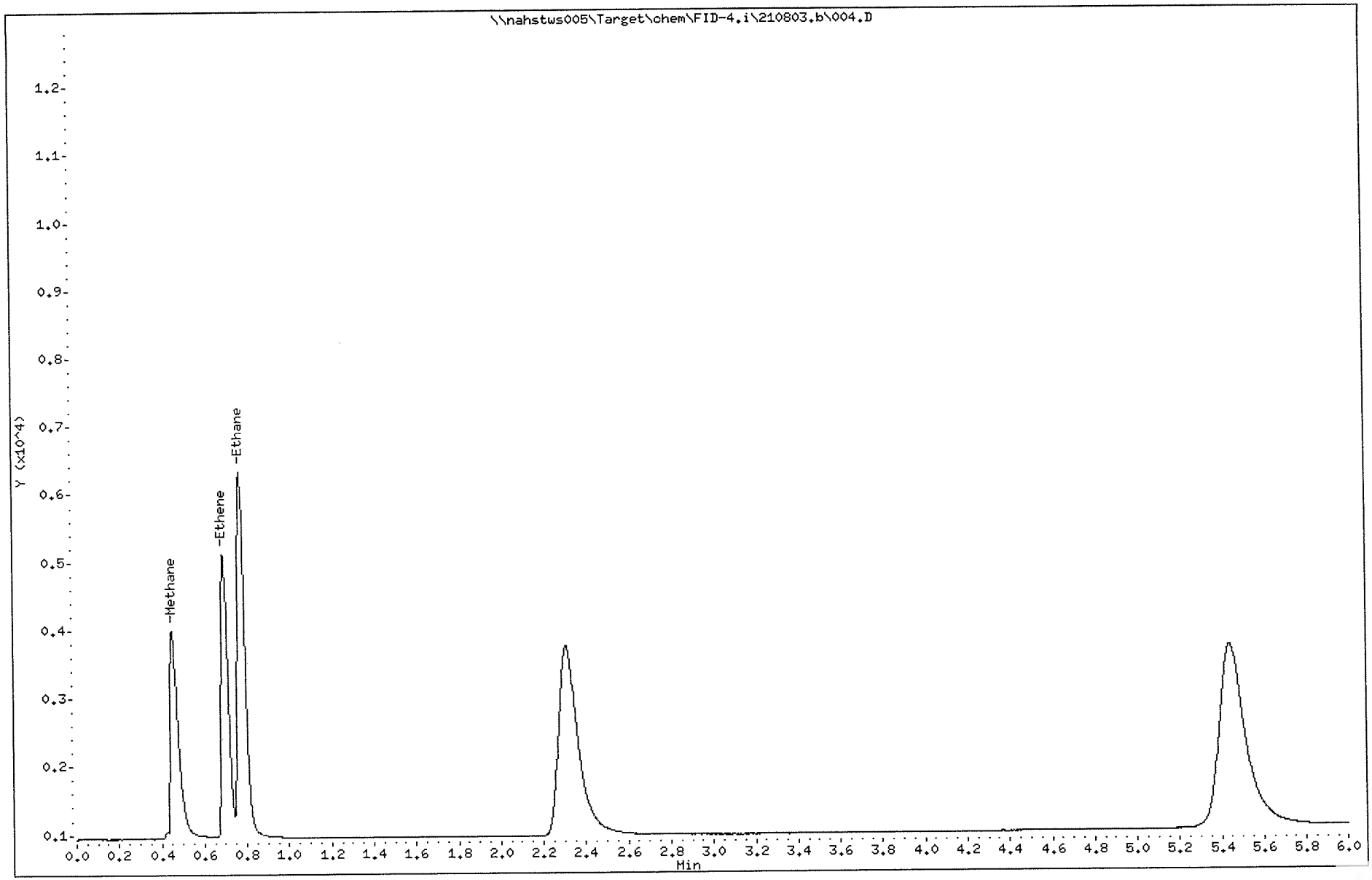
Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)
1 Methane	0.453	0.463	-0.010	8321	8.53443	8.534
2 Ethene	0.693	0.700	-0.007	9361	15.9809	15.980
3 Ethane	0.773	0.777	-0.004	13516	18.7855	18.785

Data File: \\nahstws005\Target\chem\FID-4.i\210803.b\004.D
Date : 03-AUG-2021 10:06
Client ID: LCSD-210803
Sample Info: LCSD-210803;LCSD-210803;3;;LCSD

Instrument: FID-4.i
Operator: PL
Column diameter: 0.53

Column phase: Rtx-PLOT



Data File: \\nahstws005\Target\chem\FID-4.i\210803.b\Before\005.D Page 1
Report Date: 12-Oct-2021 14:15

ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\nahstws005\Target\chem\FID-4.i\210803.b\Before\005.D
Lab Smp Id: HS21071465-01 Client Smp ID: HS21071465-01
Inj Date : 03-AUG-2021 10:19
Operator : PL Inst ID: FID-4.i
Smp Info : HS21071465-01;HS21071465-01
Misc Info : ;1;0;1
Comment :
Method : \\NAHSTWS005\Target\chem\FID-4.i\210803.b\RSKNI3.m
Meth Date : 12-Oct-2021 14:12 linh.pham Quant Type: ESTD
Cal Date : 24-JAN-2017 10:15 Cal File: 004.D
Als bottle: 5
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: RSK175.sub
Target Version: 4.14
Processing Host: ALSHSW7104

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

					CONCENTRATIONS	
					ON-COLUMN	FINAL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/L)	(ug/L)
1 Methane	0.456	0.463	-0.007	371642	381.174	381.174(A)
2 Ethene	0.683	0.700	-0.017	7074	12.0766	12.076

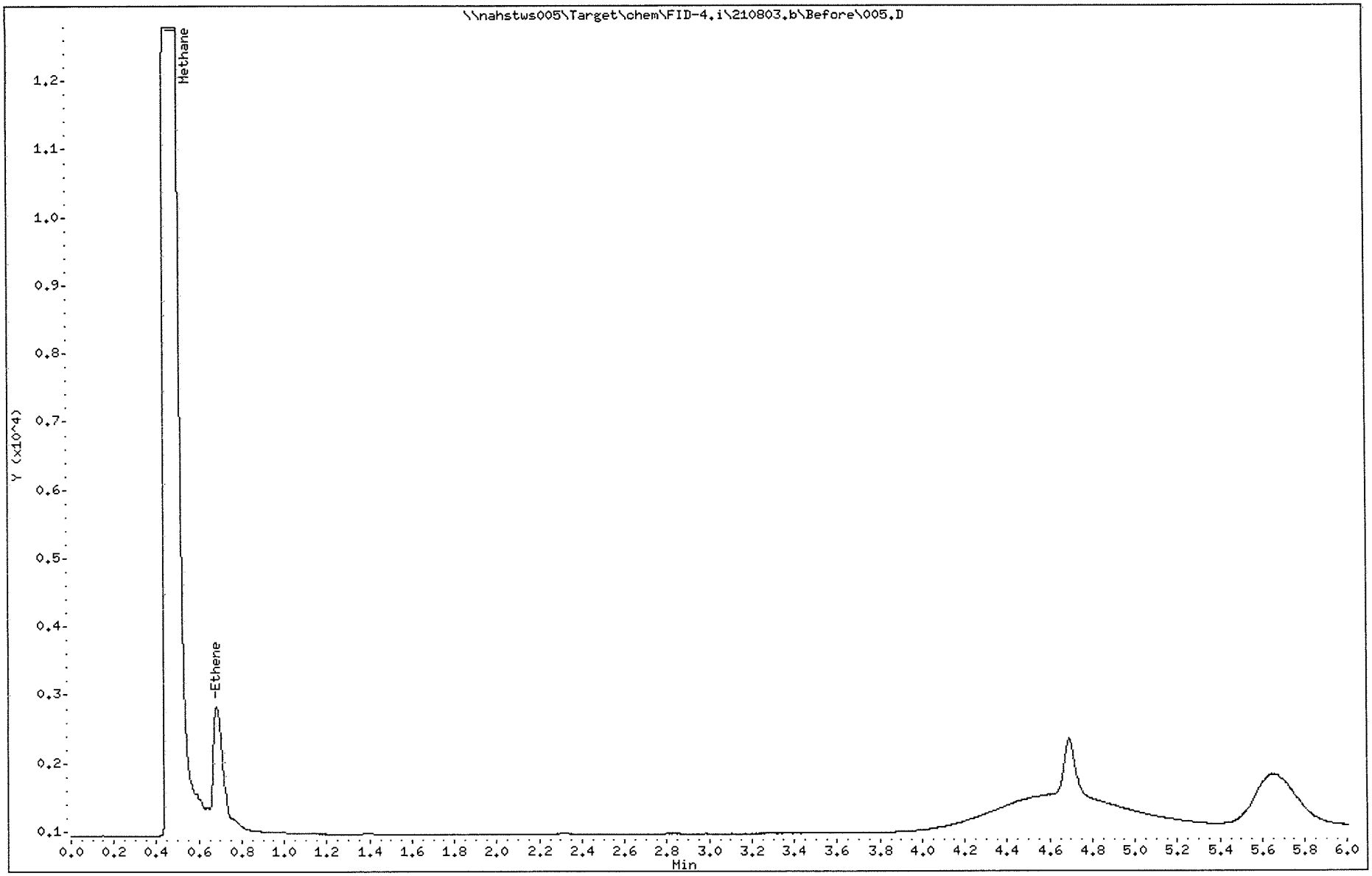
QC Flag Legend

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

Data File: \\nahstws005\Target\chem\FID-4.i\210803.b\Before\005.D
Date : 03-AUG-2021 10:19
Client ID: HS21071465-01
Sample Info: HS21071465-01;HS21071465-01

Instrument: FID-4.i
Operator: PL
Column diameter: 0.53

Column phase: Rtx-PLOT



Data File: \\nahstws005\Target\chem\FID-4.i\210803.b\005.D Page 1
Report Date: 12-Oct-2021 14:14

ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\nahstws005\Target\chem\FID-4.i\210803.b\005.D
Lab Smp Id: HS21071465-01 Client Smp ID: HS21071465-01
Inj Date : 03-AUG-2021 10:19
Operator : PL Inst ID: FID-4.i
Smp Info : HS21071465-01;HS21071465-01
Misc Info : ;1;0;1
Comment :
Method : \\NAHSTWS005\Target\chem\FID-4.i\210803.b\RSKNI3.m
Meth Date : 12-Oct-2021 14:12 linh.pham Quant Type: ESTD
Cal Date : 24-JAN-2017 10:15 Cal File: 004.D
Als bottle: 5
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: RSK175.sub
Target Version: 4.14
Processing Host: ALSHSW7104

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)
1 Methane	0.456	0.463	-0.007	371642	381.174	381.174(A)
2 Ethene	0.683	0.700	-0.017	6081	10.3814	10.381(M)

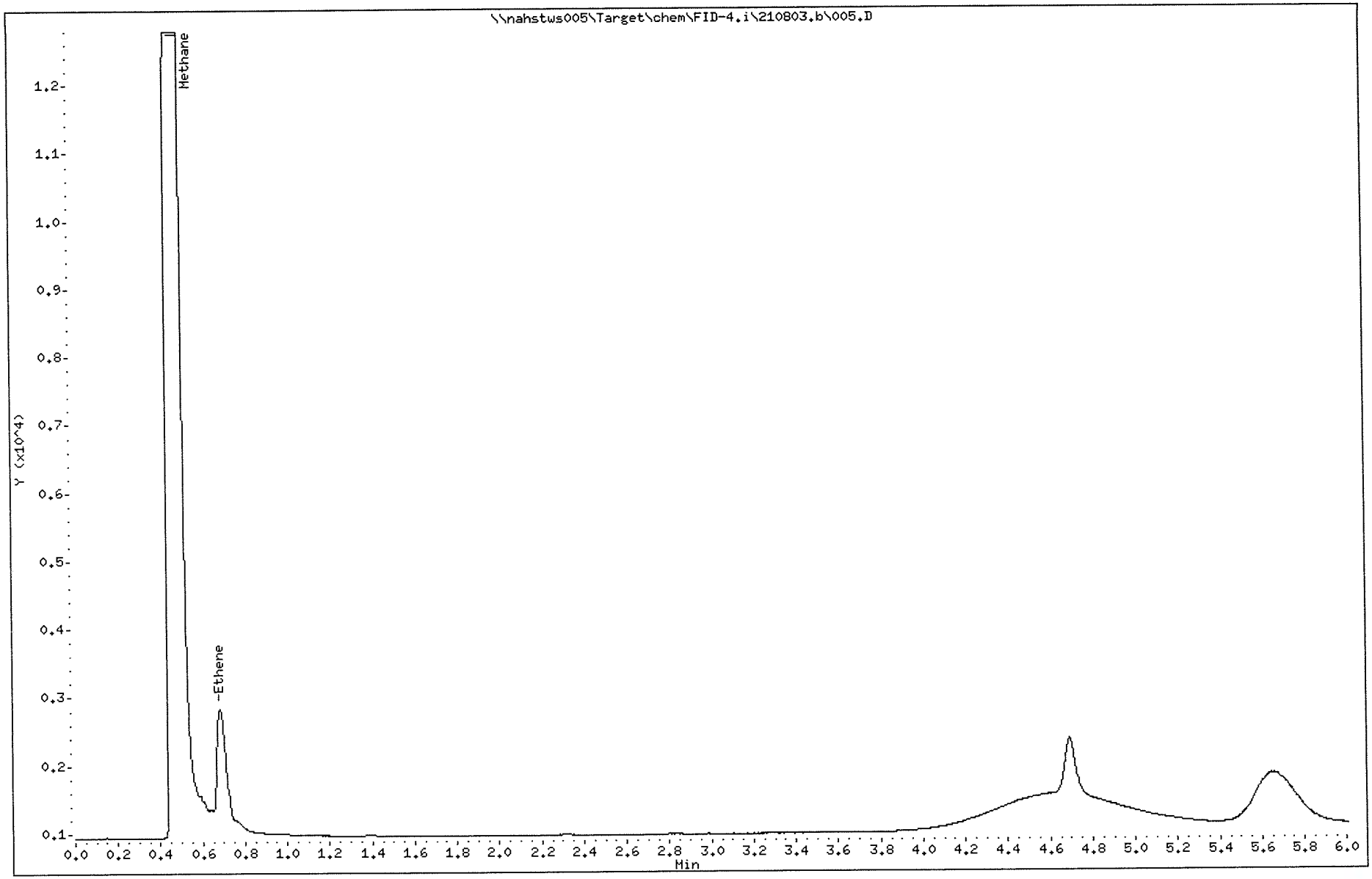
QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.
M - Compound response manually integrated.

Data File: \\nahstws005\Target\chem\FID-4.i\210803.b\005.D
Date : 03-AUG-2021 10:19
Client ID: HS21071465-01
Sample Info: HS21071465-01;HS21071465-01

Instrument: FID-4.i
Operator: PL
Column diameter: 0.53

Column phase: Rtx-PLOT



ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\nahstws005\Target\chem\FID-4.i\210803.b\Before\006.D
Lab Smp Id: HS21071465-02 Client Smp ID: HS21071465-02
Inj Date : 03-AUG-2021 10:29
Operator : PL Inst ID: FID-4.i
Smp Info : HS21071465-02;HS21071465-02
Misc Info : ;1;0;1
Comment :
Method : \\NAHSTWS005\Target\chem\FID-4.i\210803.b\RSKNI3.m
Meth Date : 12-Oct-2021 14:12 linh.pham Quant Type: ESTD
Cal Date : 24-JAN-2017 10:15 Cal File: 004.D
Als bottle: 6
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: RSK175.sub
Target Version: 4.14
Processing Host: ALSHSW7104

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)
1 Methane	0.446	0.463	-0.017	86204	88.4151	88.415(A)
3 Ethane	0.766	0.777	-0.011	321	0.44615	0.446(a)

QC Flag Legend

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

Data File: \\nahstws005\Target\chem\FID-4.i\210803.b\Before\006.D

Date : 03-AUG-2021 10:29

Client ID: HS21071465-02

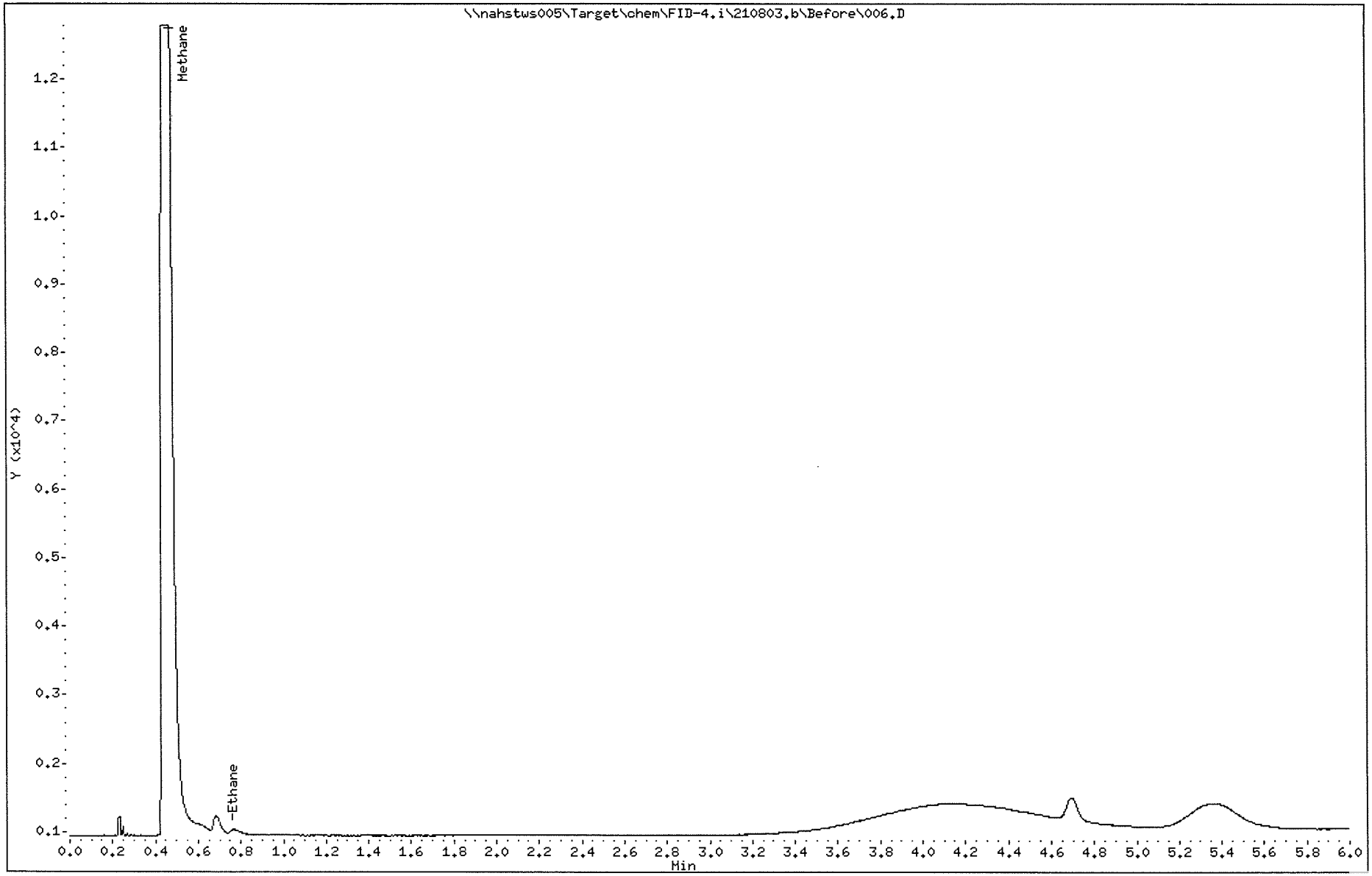
Instrument: FID-4.i

Sample Info: HS21071465-02;HS21071465-02

Operator: PL

Column phase: Rtx-PLOT

Column diameter: 0.53



Data File: \\nahstws005\Target\chem\FID-4.i\210803.b\006.D Page 1
Report Date: 12-Oct-2021 14:14

ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\nahstws005\Target\chem\FID-4.i\210803.b\006.D
Lab Smp Id: HS21071465-02 Client Smp ID: HS21071465-02
Inj Date : 03-AUG-2021 10:29
Operator : PL Inst ID: FID-4.i
Smp Info : HS21071465-02;HS21071465-02
Misc Info : ;1;0;1
Comment :
Method : \\NAHSTWS005\Target\chem\FID-4.i\210803.b\RSKNI3.m
Meth Date : 12-Oct-2021 14:12 linh.pham Quant Type: ESTD
Cal Date : 24-JAN-2017 10:15 Cal File: 004.D
Als bottle: 6
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: RSK175.sub
Target Version: 4.14
Processing Host: ALSHSW7104

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

					CONCENTRATIONS	
					ON-COLUMN	FINAL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/L)	(ug/L)
1 Methane	0.446	0.463	-0.017	85541	87.7350	87.735(AM)
2 Ethene	0.683	0.700	-0.017	730	1.24624	1.246(M)

QC Flag Legend

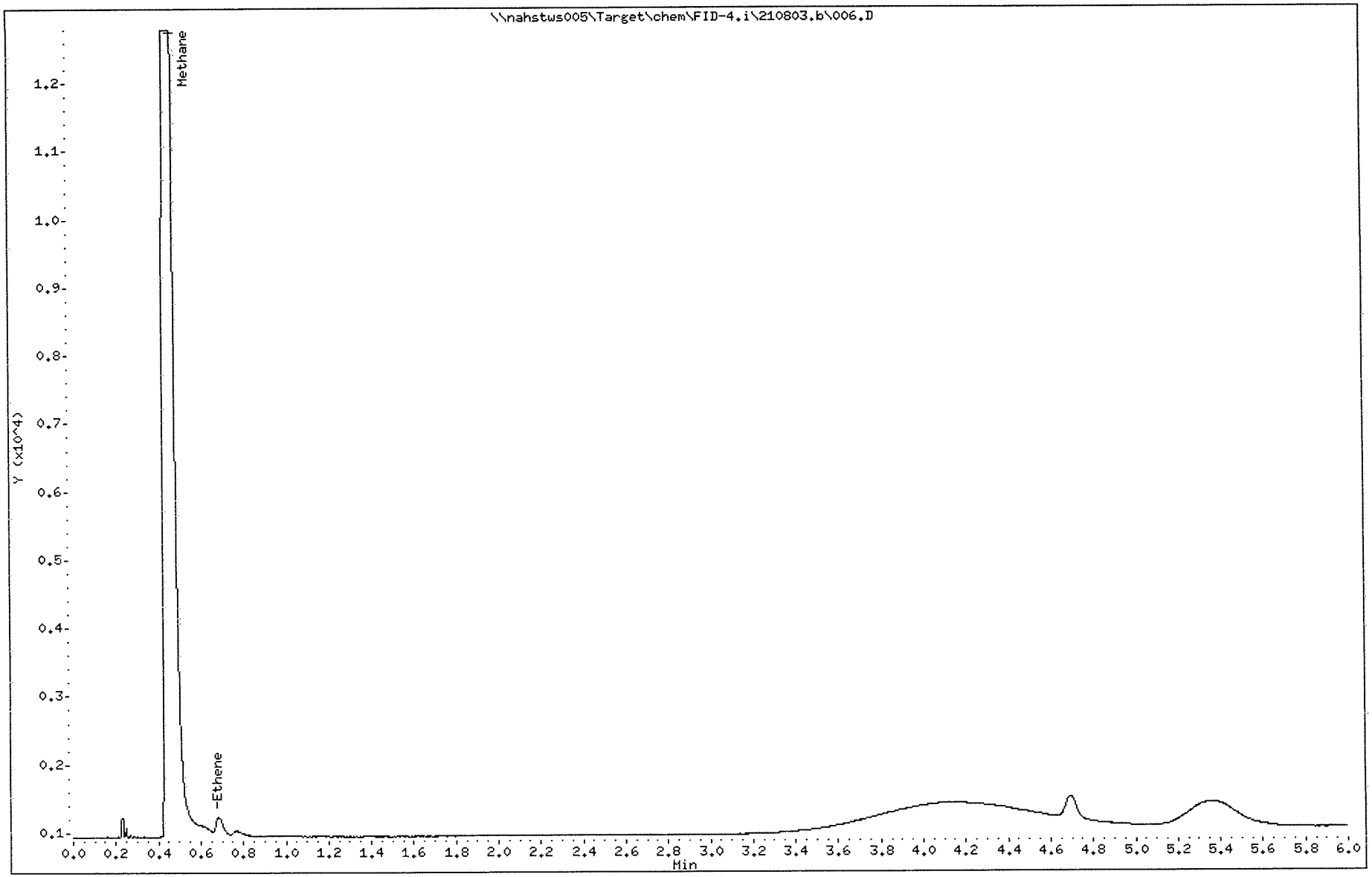
A - Target compound detected but, quantitated amount exceeded maximum amount.
M - Compound response manually integrated.

Data File: \\nahstws005\Target\chem\FID-4.i\210803.b\006.D
Date : 03-AUG-2021 10:29
Client ID: HS21071465-02
Sample Info: HS21071465-02;HS21071465-02

Instrument: FID-4.i

Operator: PL
Column diameter: 0.53

Column phase: Rtx-PLOT



Data File: \\nahstws005\Target\chem\FID-4.i\210803.b\Before\007.D Page 1
Report Date: 12-Oct-2021 14:15

ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\nahstws005\Target\chem\FID-4.i\210803.b\Before\007.D
Lab Smp Id: HS21071465-06 Client Smp ID: HS21071465-06
Inj Date : 03-AUG-2021 10:40
Operator : PL Inst ID: FID-4.i
Smp Info : HS21071465-06;HS21071465-06
Misc Info : ;1;0;1
Comment :
Method : \\NAHSTWS005\Target\chem\FID-4.i\210803.b\RSKNI3.m
Meth Date : 12-Oct-2021 14:12 linh.pham Quant Type: ESTD
Cal Date : 24-JAN-2017 10:15 Cal File: 004.D
Als bottle: 7
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: RSK175.sub
Target Version: 4.14
Processing Host: ALSHSW7104

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)
1 Methane	0.460	0.463	-0.003	340152	348.877	348.876(A)
3 Ethane	0.776	0.777	-0.001	775	1.07715	1.077

QC Flag Legend

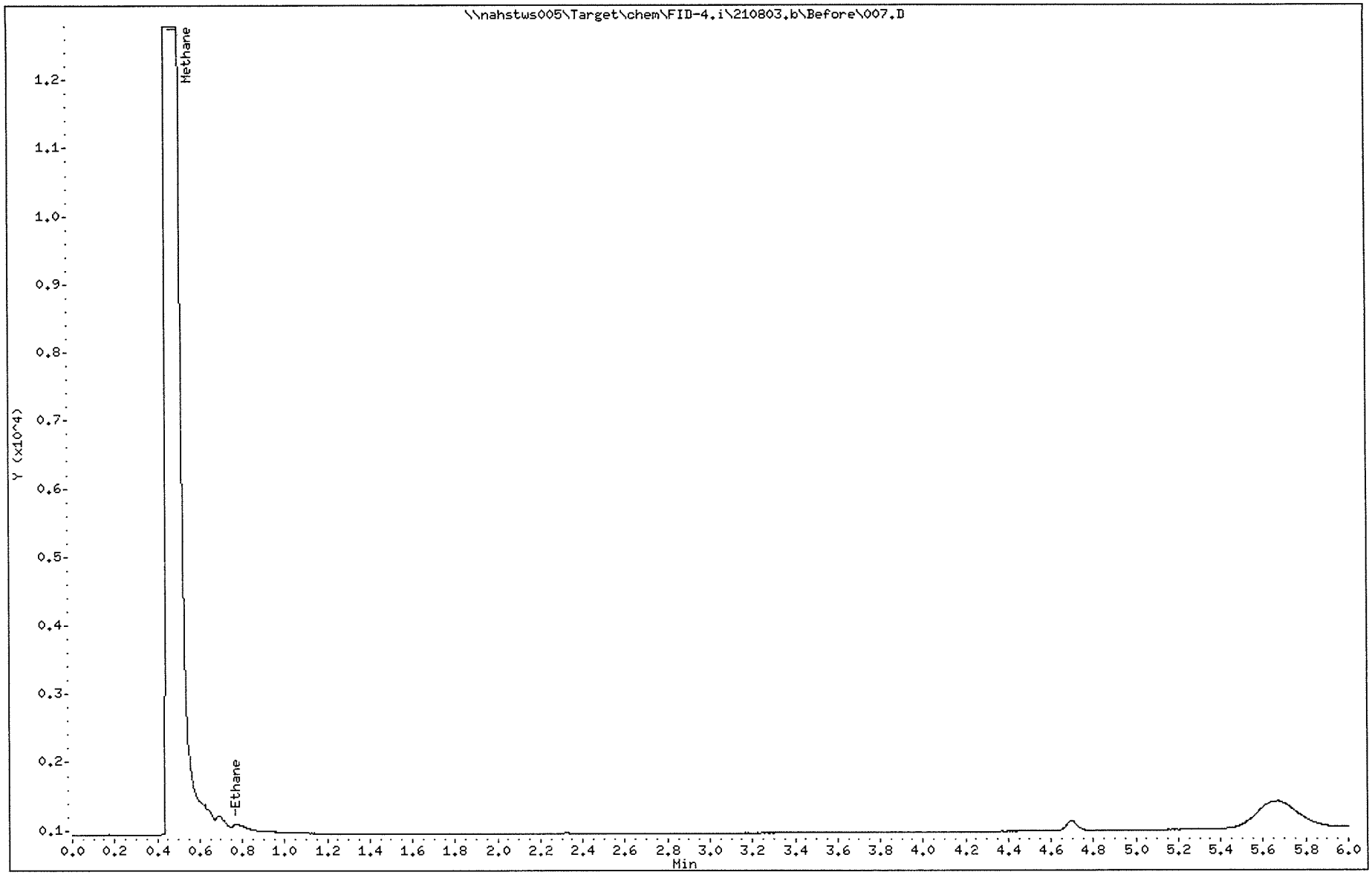
A - Target compound detected but, quantitated amount exceeded maximum amount.

Data File: \\nahstws005\Target\chem\FID-4.i\210803.b\Before\007.D
Date : 03-AUG-2021 10:40
Client ID: HS21071465-06
Sample Info: HS21071465-06;HS21071465-06

Instrument: FID-4.i

Operator: PL
Column diameter: 0.53

Column phase: Rtx-PLOT



Data File: \\nahstws005\Target\chem\FID-4.i\210803.b\007.D
Report Date: 12-Oct-2021 14:14

ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\nahstws005\Target\chem\FID-4.i\210803.b\007.D
Lab Smp Id: HS21071465-06 Client Smp ID: HS21071465-06
Inj Date : 03-AUG-2021 10:40
Operator : PL Inst ID: FID-4.i
Smp Info : HS21071465-06;HS21071465-06
Misc Info : ;1;0;1
Comment :
Method : \\NAHSTWS005\Target\chem\FID-4.i\210803.b\RSKNI3.m
Meth Date : 12-Oct-2021 14:12 linh.pham Quant Type: ESTD
Cal Date : 24-JAN-2017 10:15 Cal File: 004.D
Als bottle: 7
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: RSK175.sub
Target Version: 4.14
Processing Host: ALSHSW7104

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)
1 Methane	0.460	0.463	-0.003	339531	348.240	348.239(AM)
2 Ethene	0.690	0.700	-0.010	940	1.60475	1.604(M)
3 Ethane	0.773	0.777	-0.004	686	0.95345	0.953(aM)

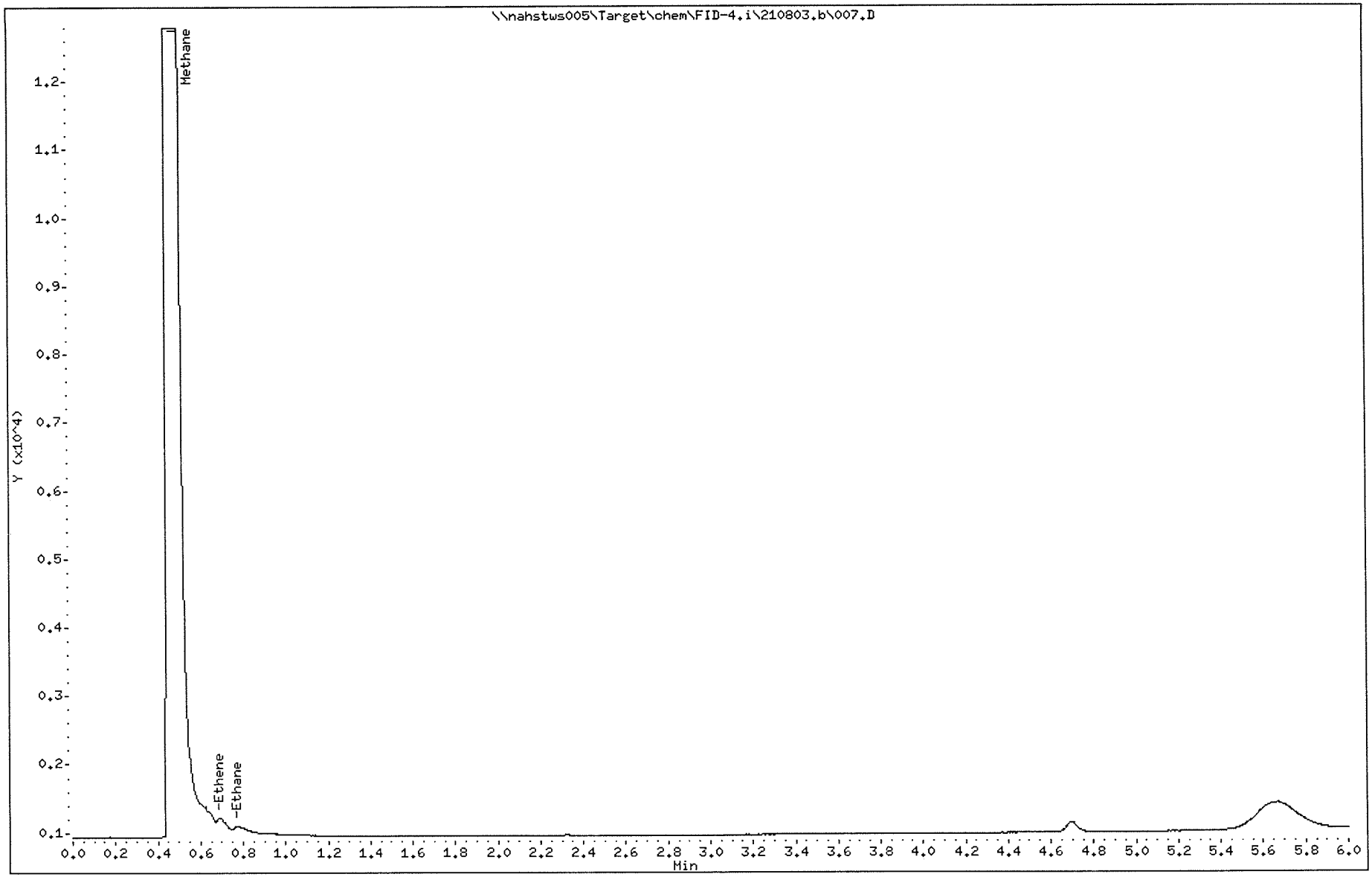
QC Flag Legend

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

Data File: \\nahstws005\Target\chem\FID-4.i\210803.b\007.D
Date : 03-AUG-2021 10:40
Client ID: HS21071465-06
Sample Info: HS21071465-06;HS21071465-06

Instrument: FID-4.i
Operator: PL
Column diameter: 0.53

Column phase: Rtx-PLOT



Data File: \\nahstws005\Target\chem\FID-4.i\210803.b\Before\011.D Page 1
Report Date: 12-Oct-2021 14:15

ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\nahstws005\Target\chem\FID-4.i\210803.b\Before\011.D
Lab Smp Id: RSK-CCV Client Smp ID: RSK-CCV
Inj Date : 03-AUG-2021 11:19
Operator : PL Inst ID: FID-4.i
Smp Info : RSK-CCV;RSK-CCV;2;4
Misc Info : ;1;0;1
Comment :
Method : \\NAHSTWS005\Target\chem\FID-4.i\210803.b\RSKNI3.m
Meth Date : 12-Oct-2021 14:12 linh.pham Quant Type: ESTD
Cal Date : 24-JAN-2017 10:15 Cal File: 004.D
Als bottle: 11 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: RSK175.sub
Target Version: 4.14
Processing Host: ALSHSW7104

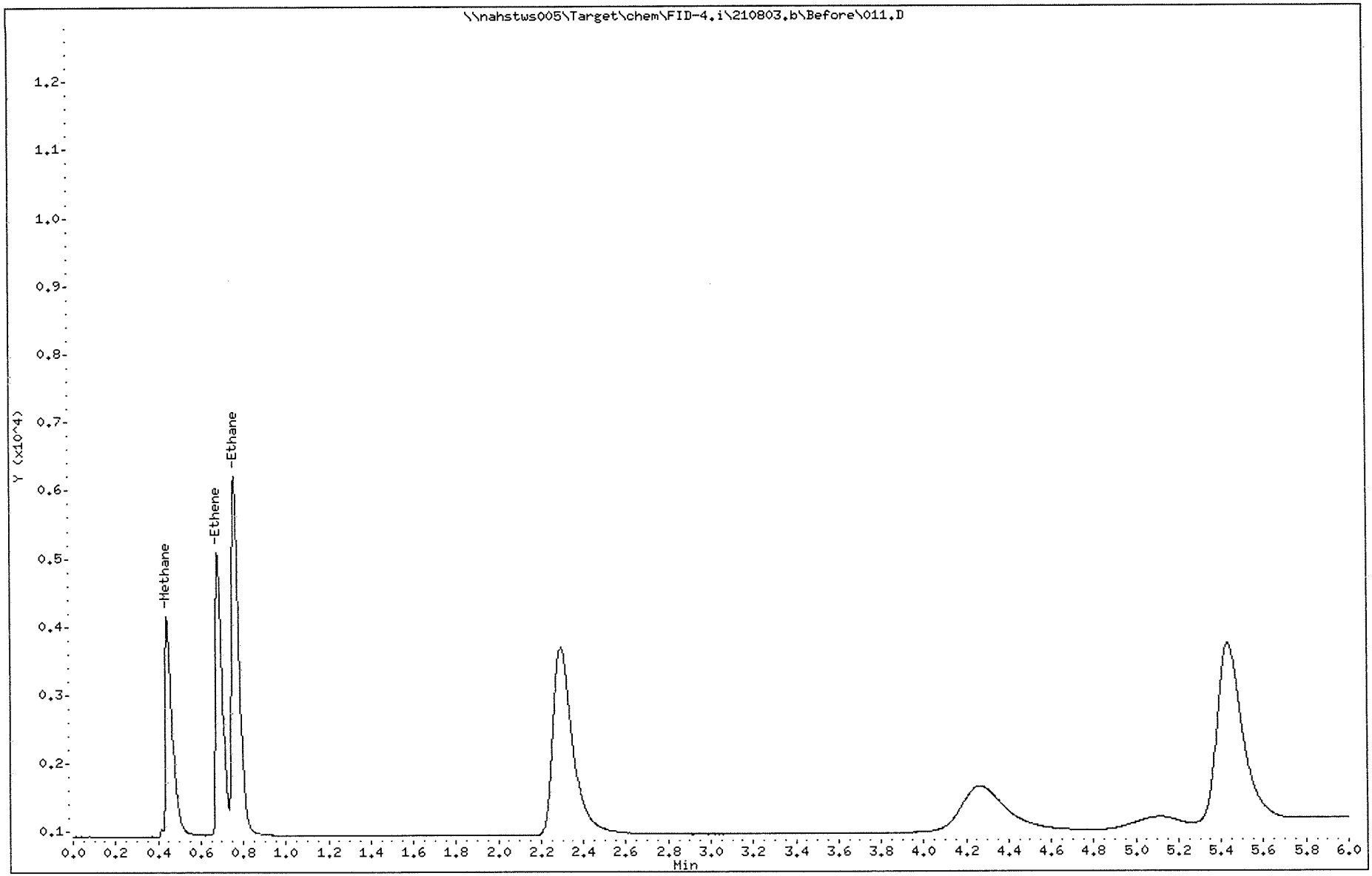
Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

					AMOUNTS	
					CAL-AMT	ON-COL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/L)	(ug/L)
1 Methane	0.443	0.463	-0.020	7497	9.64700	7.689
2 Ethene	0.680	0.700	-0.020	9097	16.8500	15.530
3 Ethane	0.760	0.777	-0.017	13137	18.0430	18.258

Data File: \\nahstws005\Target\chem\FID-4.i\210803.b\Before\011.D
Date : 03-AUG-2021 11:19
Client ID: RSK-CCV
Sample Info: RSK-CCV;RSK-CCV;2;4

Instrument: FID-4.i
Operator: PL
Column diameter: 0.53

Column phase: Rtx-PLOT



Data File: \\nahstws005\Target\chem\FID-4.i\210803.b\011.D
Report Date: 12-Oct-2021 14:14

ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\nahstws005\Target\chem\FID-4.i\210803.b\011.D
Lab Smp Id: RSK-CCV Client Smp ID: RSK-CCV
Inj Date : 03-AUG-2021 11:19
Operator : PL Inst ID: FID-4.i
Smp Info : RSK-CCV;RSK-CCV;2;4
Misc Info : ;1;0;1
Comment :
Method : \\NAHSTWS005\Target\chem\FID-4.i\210803.b\RSKNI3.m
Meth Date : 12-Oct-2021 14:12 linh.pham Quant Type: ESTD
Cal Date : 24-JAN-2017 10:15 Cal File: 004.D
Als bottle: 11 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: RSK175.sub
Target Version: 4.14
Processing Host: ALSHSW7104

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
1 Methane	0.443	0.463	-0.020	7650	9.64700	7.846
2 Ethene	0.680	0.700	-0.020	9260	16.8500	15.808
3 Ethane	0.760	0.777	-0.017	13395	18.0430	18.617

Data File: \\nahstws005\Target\chem\FID-4.i\210803.b\011.D

Date : 03-AUG-2021 11:19

Client ID: RSK-CCV

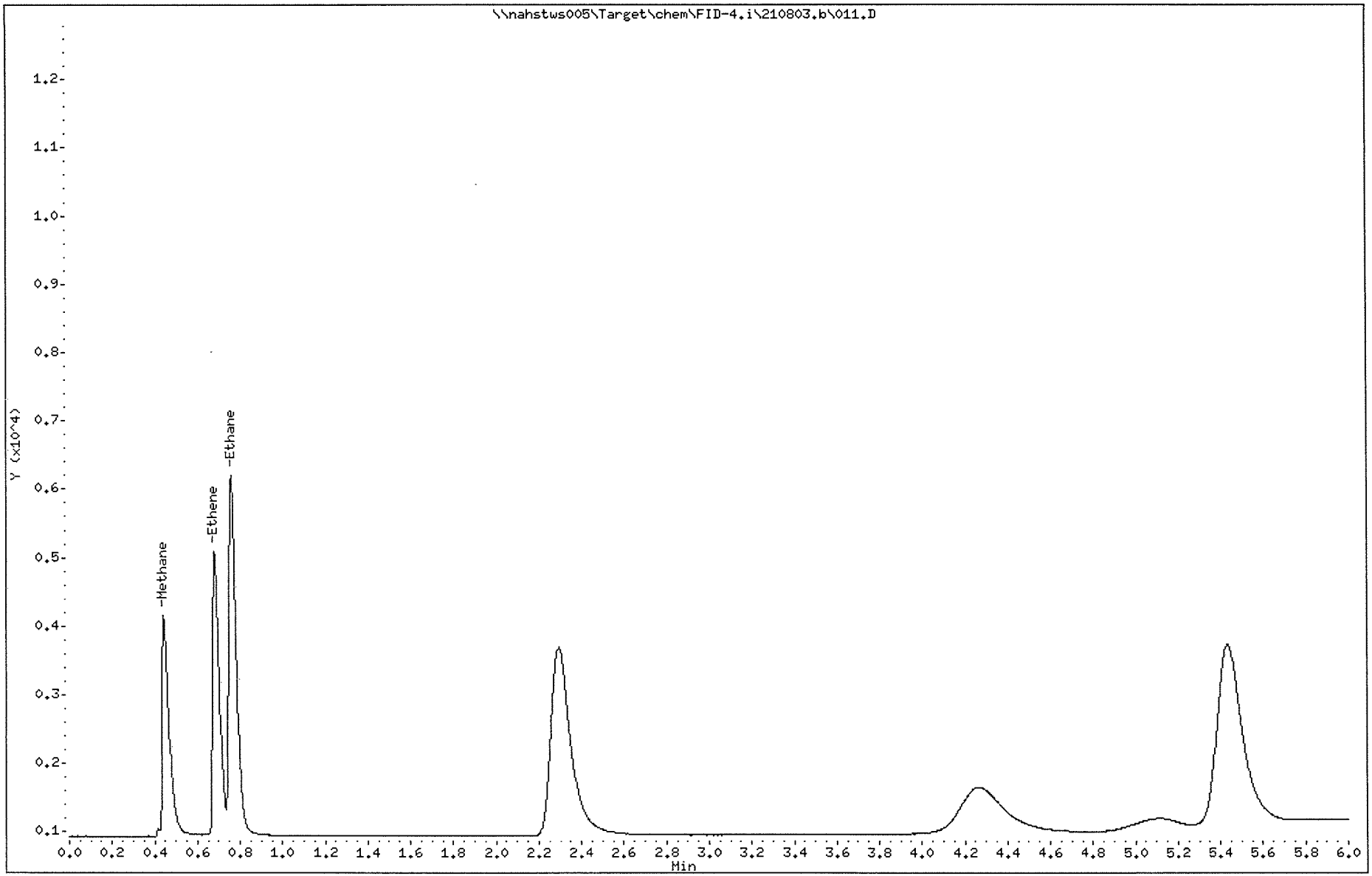
Instrument: FID-4.i

Sample Info: RSK-CCV;RSK-CCV;2;4

Operator: PL

Column phase: Rtx-PLOT

Column diameter: 0.53



ALS Laboratory Group

Dissolved Gases Analysis

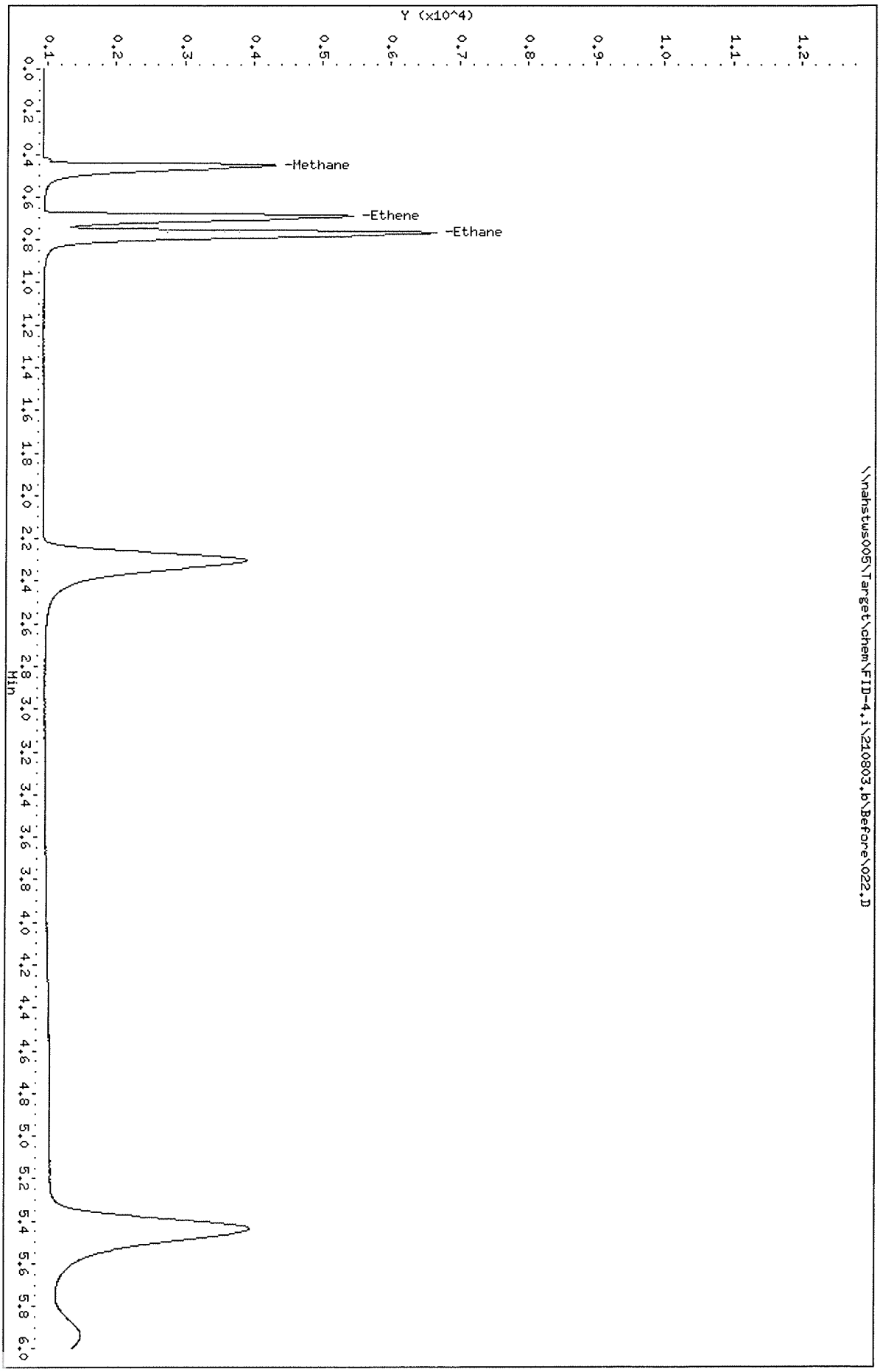
Data file : \\nahstws005\Target\chem\FID-4.i\210803.b\Before\022.D
Lab Smp Id: RSK-CCV Client Smp ID: RSK-CCV
Inj Date : 03-AUG-2021 13:35
Operator : PL Inst ID: FID-4.i
Smp Info : RSK-CCV;RSK-CCV;2;4
Misc Info : ;1;0;1
Comment   :
Method   : \\NAHSTWS005\Target\chem\FID-4.i\210803.b\RSKNI3.m
Meth Date : 12-Oct-2021 14:12 linh.pham Quant Type: ESTD
Cal Date : 24-JAN-2017 10:15 Cal File: 004.D
Als bottle: 22 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: RSK175.sub
Target Version: 4.14
Processing Host: ALSHSW7104

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

					AMOUNTS	
					CAL-AMT	ON-COL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/L)	(ug/L)
1 Methane	0.453	0.463	-0.010	8106	9.64700	8.313
2 Ethene	0.690	0.700	-0.010	9810	16.8500	16.747
3 Ethane	0.770	0.777	-0.007	14046	18.0430	19.522

Data File: \\nahstws005\Target\chem\FID-4.i\210803.b\Before\022.D
Date : 03-AUG-2021 13:35
Client ID: RSK-CCV
Sample Info: RSK-CCV;RSK-CCV;2;4
Column phase: Rtx-PLOT

Instrument: FID-4.i
Operator: PL
Column diameter: 0.53



Data File: \\nahstws005\Target\chem\FID-4.i\210803.b\022.D Page 1
Report Date: 12-Oct-2021 14:14

ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\nahstws005\Target\chem\FID-4.i\210803.b\022.D
Lab Smp Id: RSK-CCV Client Smp ID: RSK-CCV
Inj Date : 03-AUG-2021 13:35
Operator : PL Inst ID: FID-4.i
Smp Info : RSK-CCV;RSK-CCV;2;4
Misc Info : ;1;0;1
Comment :
Method : \\NAHSTWS005\Target\chem\FID-4.i\210803.b\RSKNI3.m
Meth Date : 12-Oct-2021 14:12 linh.pham Quant Type: ESTD
Cal Date : 24-JAN-2017 10:15 Cal File: 004.D
Als bottle: 22 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: RSK175.sub
Target Version: 4.14
Processing Host: ALSHSW7104

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

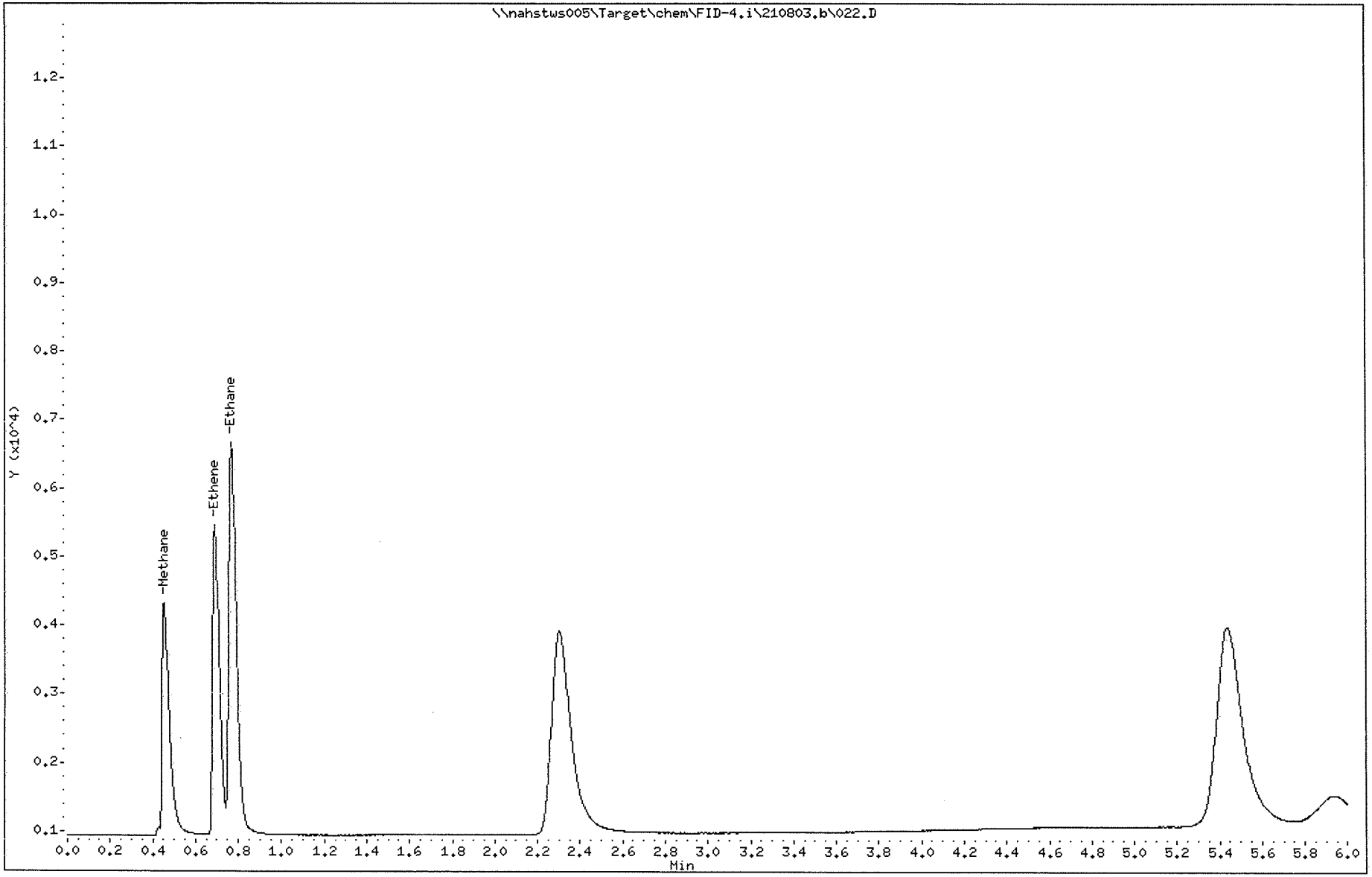
					AMOUNTS	
					CAL-AMT	ON-COL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/L)	(ug/L)
1 Methane	0.453	0.463	-0.010	8224	9.64700	8.434
2 Ethene	0.690	0.700	-0.010	9922	16.8500	16.938
3 Ethane	0.770	0.777	-0.007	14260	18.0430	19.819

Data File: \\nahstws005\Target\chem\FID-4.i\210803.b\022.D
Date : 03-AUG-2021 13:35
Client ID: RSK-CCV
Sample Info: RSK-CCV;RSK-CCV;2;4

Column phase: Rtx-PLOT

Instrument: FID-4.i

Operator: PL
Column diameter: 0.53



ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\nahstws005\Target\chem\FID-4.i\210803.b\Before\024.D
Lab Smp Id: HS21071465-01 Client Smp ID: HS21071465-01
Inj Date : 03-AUG-2021 13:53
Operator : PL Inst ID: FID-4.i
Smp Info : HS21071465-01;HS21071465-01
Misc Info : ;1;0;25
Comment :
Method : \\NAHSTWS005\Target\chem\FID-4.i\210803.b\RSKNI3.m
Meth Date : 12-Oct-2021 14:12 linh.pham Quant Type: ESTD
Cal Date : 24-JAN-2017 10:15 Cal File: 004.D
Als bottle: 24
Dil Factor: 25.00000
Integrator: Falcon Compound Sublist: RSK175.sub
Target Version: 4.14

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

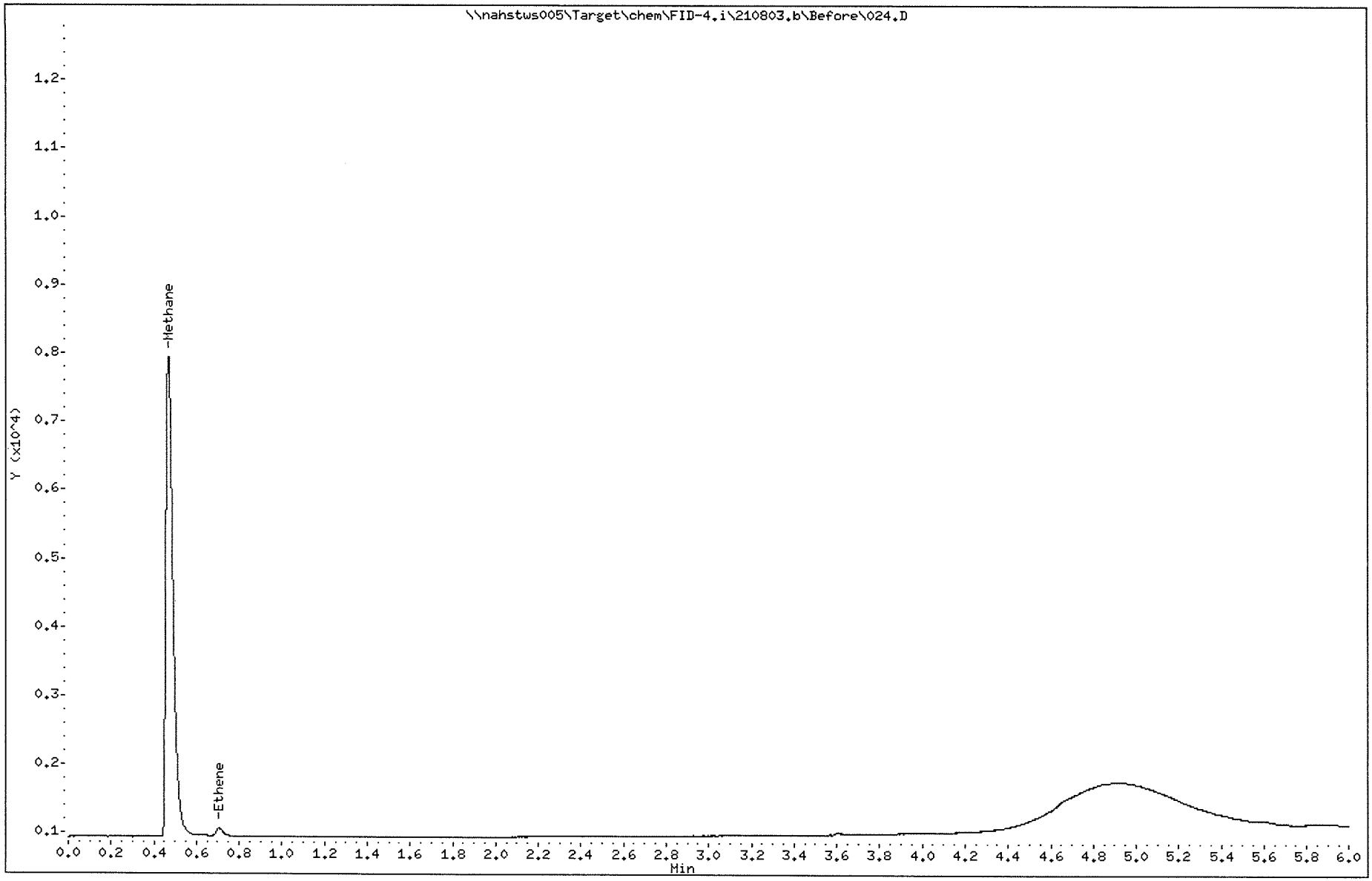
Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)
1 Methane	0.470	0.463	0.007	16189	16.6042	415.105
2 Ethene	0.706	0.700	0.006	289	0.49338	12.334

Data File: \\nahstws005\Target\chem\FID-4.i\210803.b\Before\024.D
Date : 03-AUG-2021 13:53
Client ID: HS21071465-01
Sample Info: HS21071465-01;HS21071465-01

Column phase: Rtx-PLOT

Instrument: FID-4.i

Operator: PL
Column diameter: 0.53



Data File: \\nahstws005\Target\chem\FID-4.i\210803.b\024.D Page 1
Report Date: 12-Oct-2021 14:15

ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\nahstws005\Target\chem\FID-4.i\210803.b\024.D
Lab Smp Id: HS21071465-01 Client Smp ID: HS21071465-01
Inj Date : 03-AUG-2021 13:53
Operator : PL Inst ID: FID-4.i
Smp Info : HS21071465-01;HS21071465-01
Misc Info : ;1;0;25
Comment :
Method : \\NAHSTWS005\Target\chem\FID-4.i\210803.b\RSKNI3.m
Meth Date : 12-Oct-2021 14:12 linh.pham Quant Type: ESTD
Cal Date : 24-JAN-2017 10:15 Cal File: 004.D
Als bottle: 24
Dil Factor: 25.00000
Integrator: Falcon Compound Sublist: RSK175.sub
Target Version: 4.14

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)
1 Methane	0.470	0.463	0.007	16237	16.6535	416.336

Data File: \\nahstws005\Target\chem\FID-4.i\210803.b\024.D

Date : 03-AUG-2021 13:53

Client ID: HS21071465-01

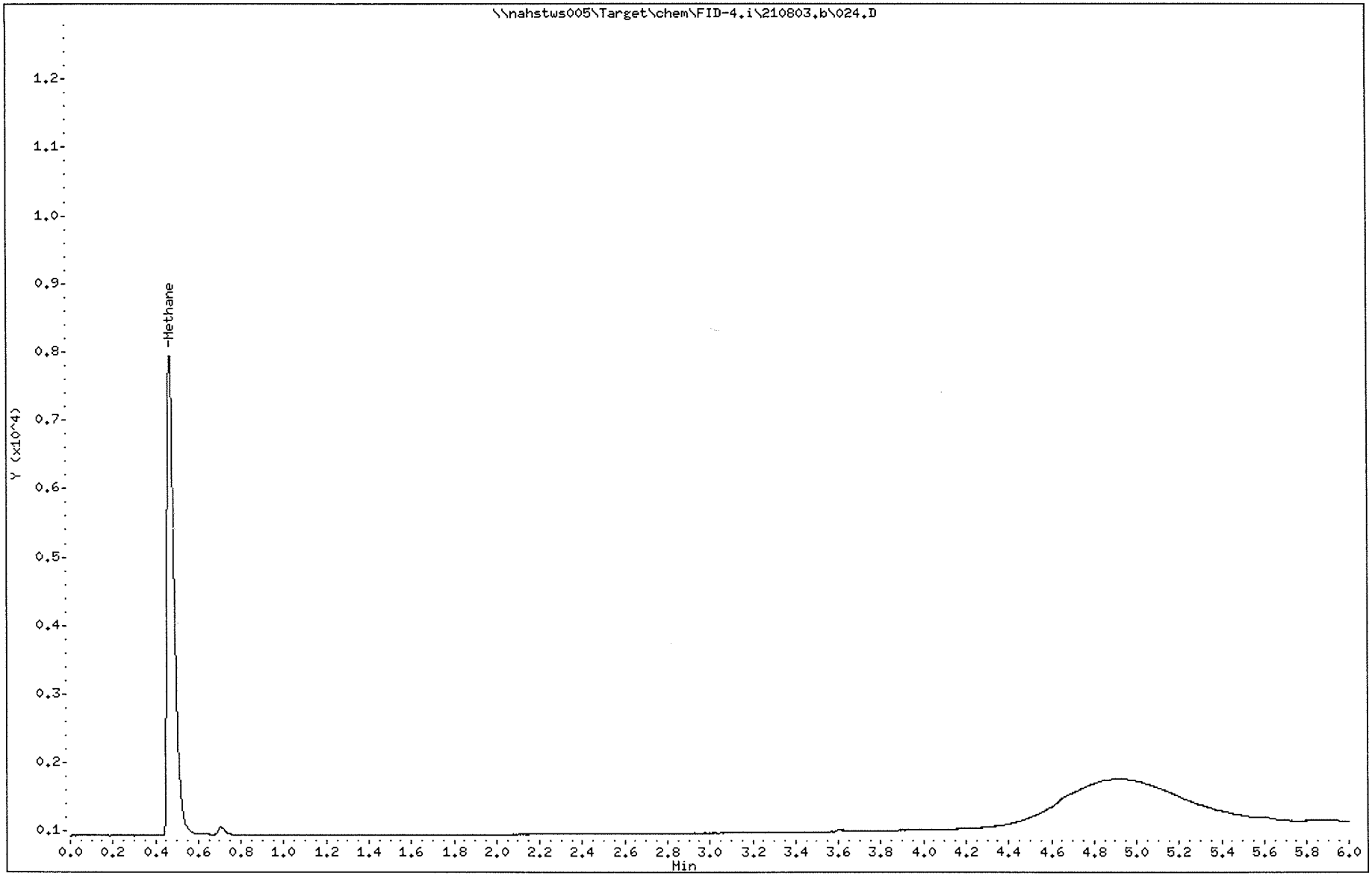
Instrument: FID-4.i

Sample Info: HS21071465-01;HS21071465-01

Operator: PL

Column phase: Rtx-PLOT

Column diameter: 0.53



ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\nahstws005\Target\chem\FID-4.i\210803.b\Before\025.D
Lab Smp Id: HS21071465-02 Client Smp ID: HS21071465-02
Inj Date : 03-AUG-2021 14:13
Operator : PL Inst ID: FID-4.i
Smp Info : HS21071465-02;HS21071465-02
Misc Info : ;1;0;25
Comment :
Method : \\NAHSTWS005\Target\chem\FID-4.i\210803.b\RSKNI3.m
Meth Date : 12-Oct-2021 14:12 linh.pham Quant Type: ESTD
Cal Date : 24-JAN-2017 10:15 Cal File: 004.D
Als bottle: 25
Dil Factor: 25.00000
Integrator: Falcon Compound Sublist: RSK175.sub
Target Version: 4.14
Processing Host: ALSHSW7104

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

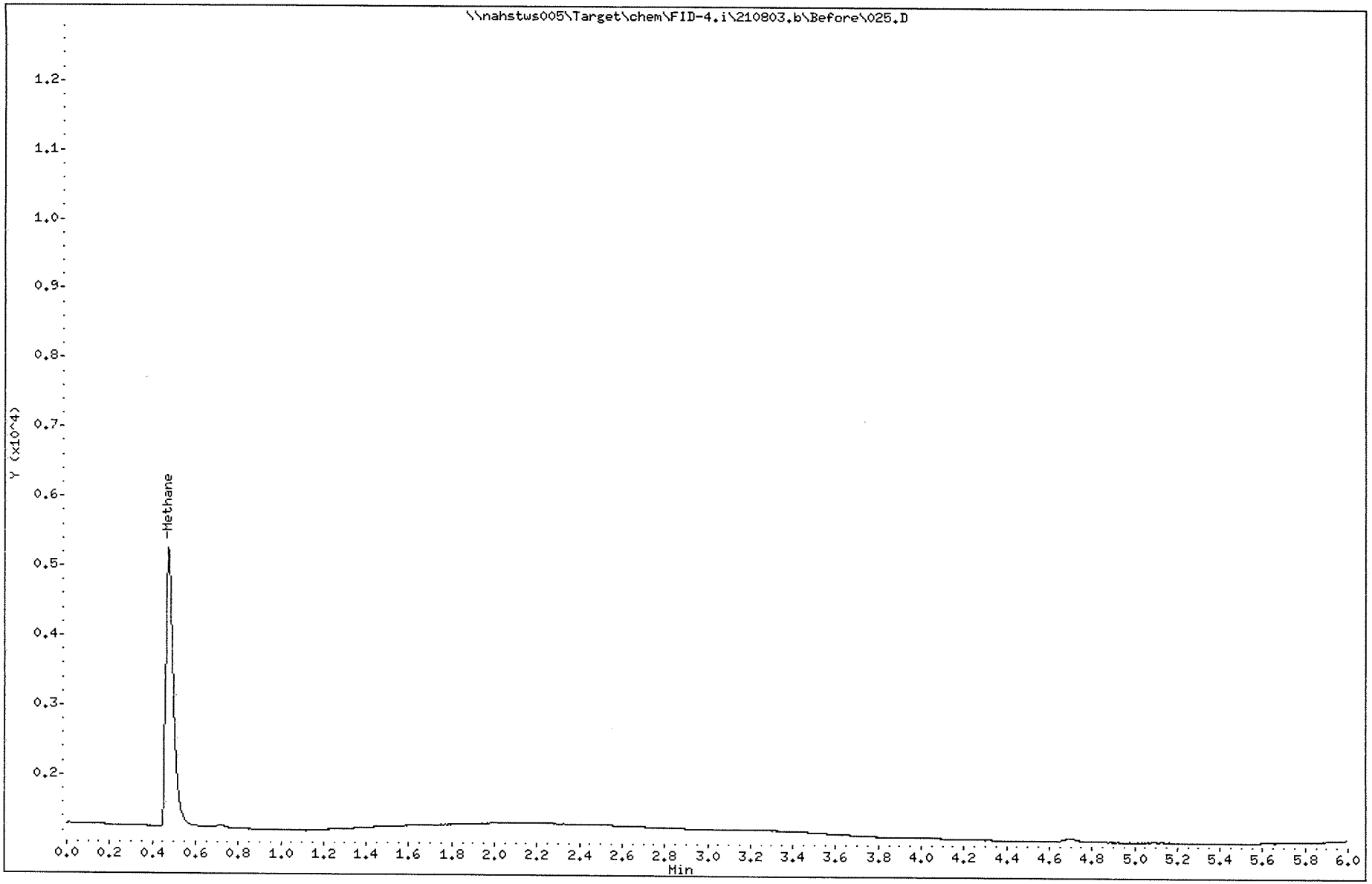
Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)
1 Methane	0.473	0.463	0.010	9887	10.1406	253.514

Data File: \\nahstws005\Target\chem\FID-4.i\210803.b\Before\025.D
Date : 03-AUG-2021 14:13
Client ID: HS21071465-02
Sample Info: HS21071465-02;HS21071465-02

Column phase: Rtx-PLOT

Instrument: FID-4.i

Operator: PL
Column diameter: 0.53



Data File: \\nahstws005\Target\chem\FID-4.i\210803.b\025.D Page 1
Report Date: 12-Oct-2021 14:15

ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\nahstws005\Target\chem\FID-4.i\210803.b\025.D
Lab Smp Id: HS21071465-02 Client Smp ID: HS21071465-02
Inj Date : 03-AUG-2021 14:13
Operator : PL Inst ID: FID-4.i
Smp Info : HS21071465-02;HS21071465-02
Misc Info : ;1;0;25
Comment :
Method : \\NAHSTWS005\Target\chem\FID-4.i\210803.b\RSKNI3.m
Meth Date : 12-Oct-2021 14:12 linh.pham Quant Type: ESTD
Cal Date : 24-JAN-2017 10:15 Cal File: 004.D
Als bottle: 25
Dil Factor: 25.00000
Integrator: Falcon Compound Sublist: RSK175.sub
Target Version: 4.14
Processing Host: ALSHSW7104

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

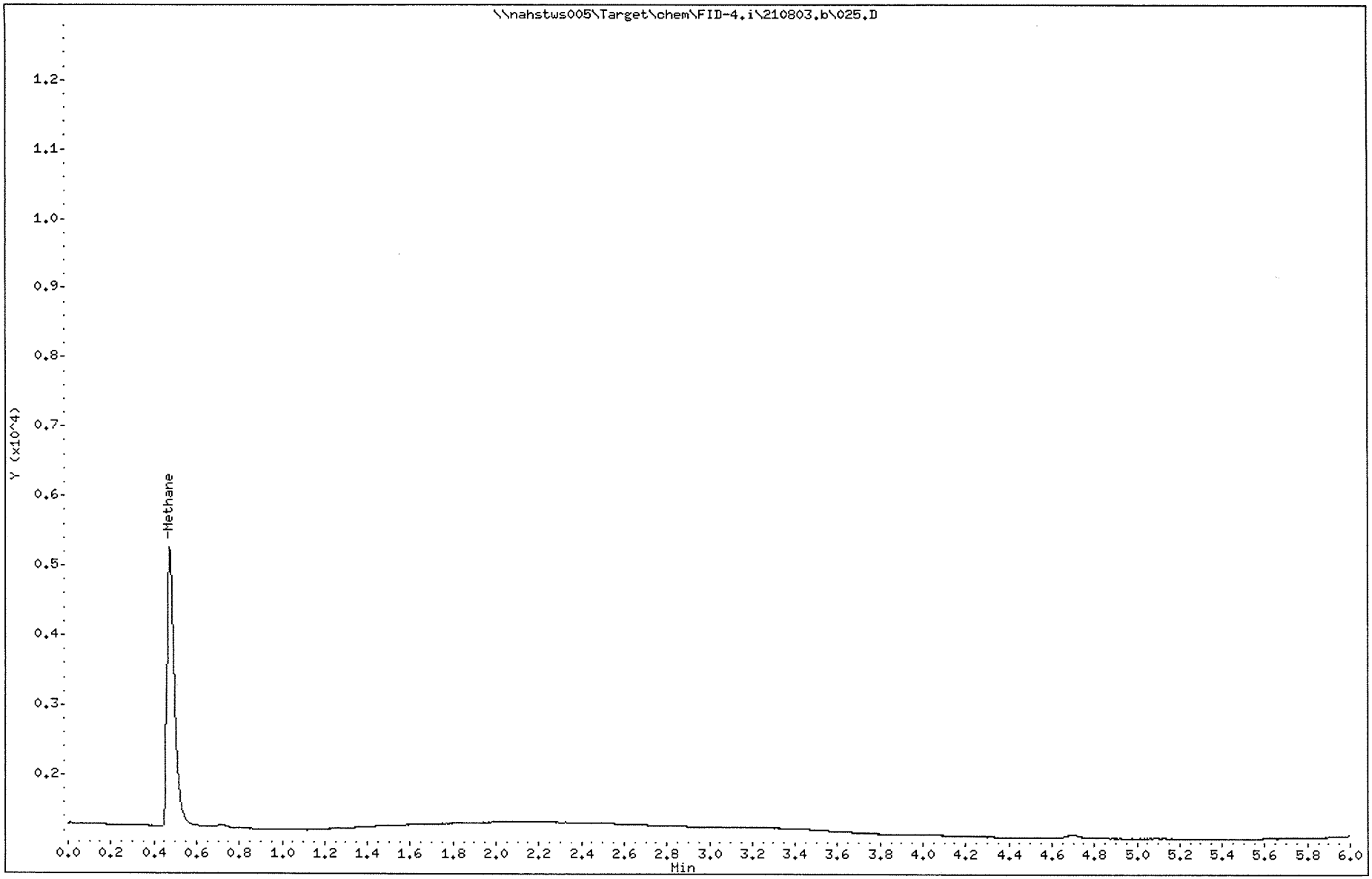
					CONCENTRATIONS	
					ON-COLUMN	FINAL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/L)	(ug/L)
1 Methane	0.473	0.463	0.010	9937	10.1919	254.796

Data File: \\nahstws005\Target\chem\FID-4.i\210803.b\025.D
Date : 03-AUG-2021 14:13
Client ID: HS21071465-02
Sample Info: HS21071465-02;HS21071465-02

Column phase: Rtx-PLOT

Instrument: FID-4.i

Operator: PL
Column diameter: 0.53



ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\nahstws005\Target\chem\FID-4.i\210803.b\Before\026.D
Lab Smp Id: HS21071465-06 Client Smp ID: HS21071465-06
Inj Date : 03-AUG-2021 14:26
Operator : PL Inst ID: FID-4.i
Smp Info : HS21071465-06;HS21071465-06
Misc Info : ;1;0;25
Comment :
Method : \\NAHSTWS005\Target\chem\FID-4.i\210803.b\RSKNI3.m
Meth Date : 12-Oct-2021 14:12 linh.pham Quant Type: ESTD
Cal Date : 24-JAN-2017 10:15 Cal File: 004.D
Als bottle: 26
Dil Factor: 25.00000
Integrator: Falcon Compound Sublist: RSK175.sub
Target Version: 4.14
Processing Host: ALSHSW7104

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

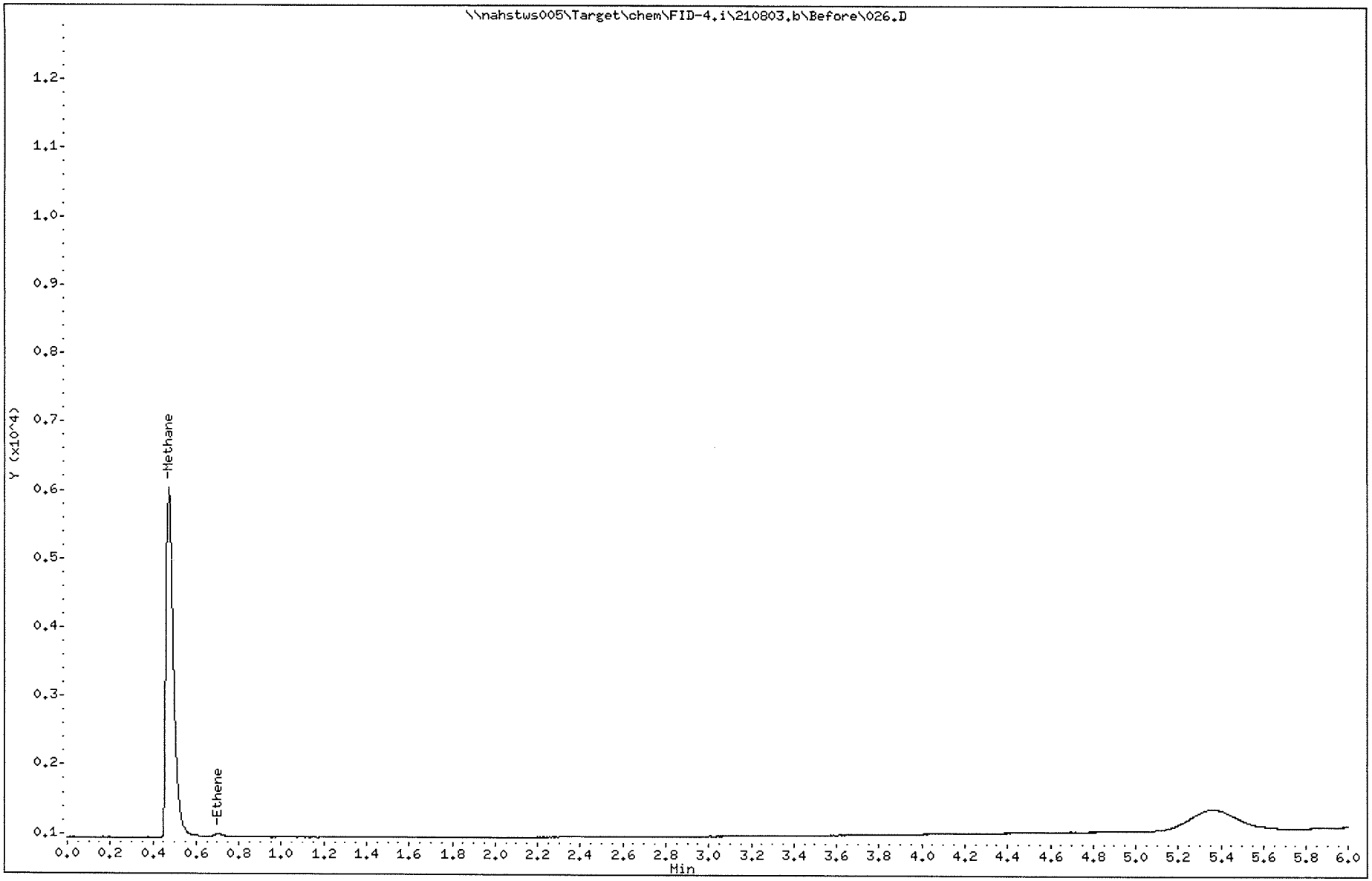
					CONCENTRATIONS	
					ON-COLUMN	FINAL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/L)	(ug/L)
1 Methane	0.473	0.463	0.010	12054	12.3632	309.079
2 Ethene	0.703	0.700	0.003	231	0.39436	9.858

Data File: \\nahstws005\Target\chem\FID-4.i\210803.b\Before\026.D
Date : 03-AUG-2021 14:26
Client ID: HS21071465-06
Sample Info: HS21071465-06;HS21071465-06

Column phase: Rtx-PLOT

Instrument: FID-4.i

Operator: PL
Column diameter: 0.53



ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\nahstws005\Target\chem\FID-4.i\210803.b\026.D
Lab Smp Id: HS21071465-06 Client Smp ID: HS21071465-06
Inj Date : 03-AUG-2021 14:26
Operator : PL Inst ID: FID-4.i
Smp Info : HS21071465-06;HS21071465-06
Misc Info : ;1;0;25
Comment :
Method : \\NAHSTWS005\Target\chem\FID-4.i\210803.b\RSKNI3.m
Meth Date : 12-Oct-2021 14:12 linh.pham Quant Type: ESTD
Cal Date : 24-JAN-2017 10:15 Cal File: 004.D
Als bottle: 26
Dil Factor: 25.00000
Integrator: Falcon Compound Sublist: RSK175.sub
Target Version: 4.14
Processing Host: ALSHSW7104

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)
1 Methane	0.473	0.463	0.010	12054	12.3632	309.079

Data File: \\nahstws005\Target\chem\FID-4.i\210803.b\026.D

Date : 03-AUG-2021 14:26

Client ID: HS21071465-06

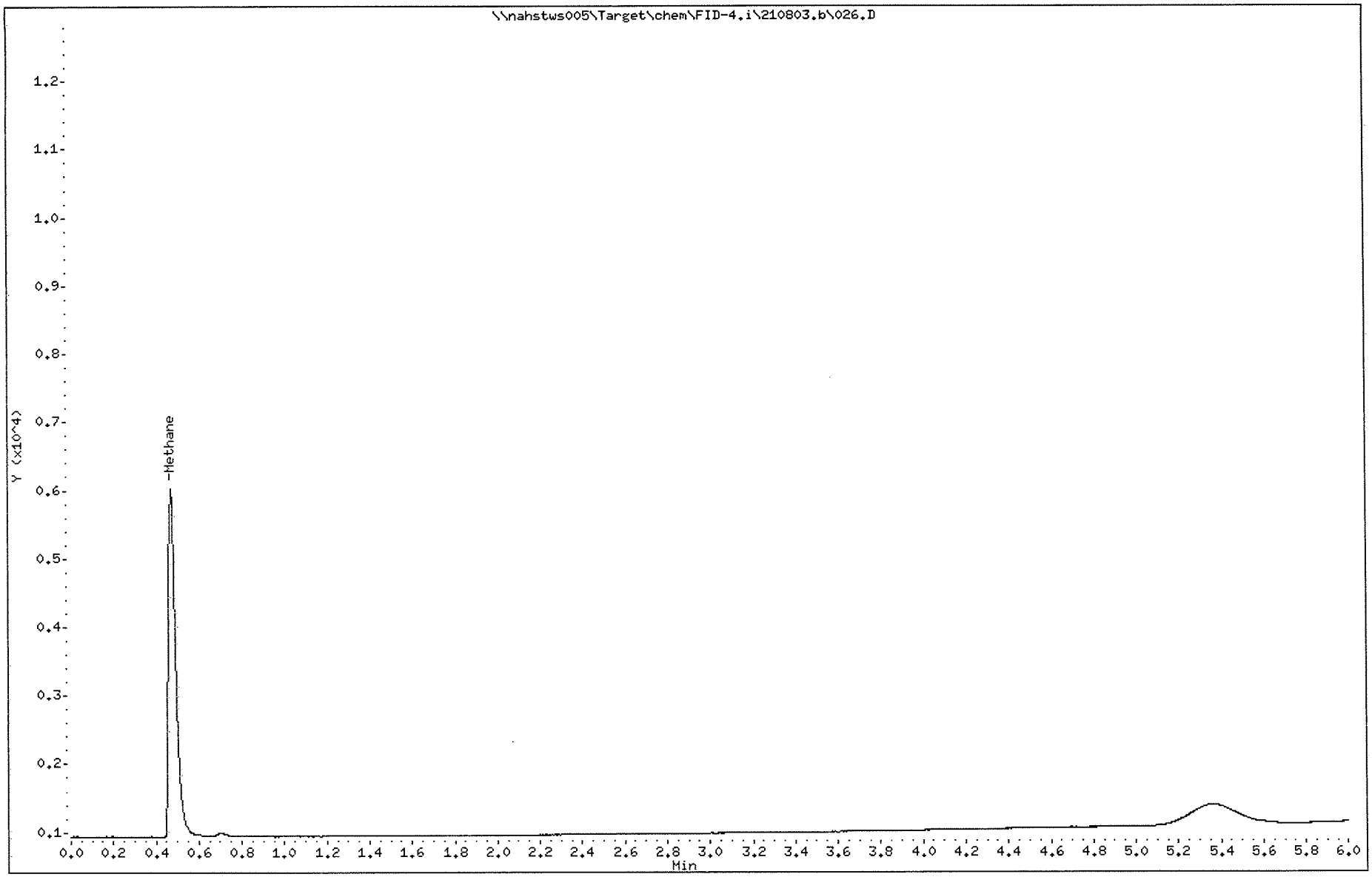
Instrument: FID-4.i

Sample Info: HS21071465-06;HS21071465-06

Operator: PL

Column phase: Rtx-PLOT

Column diameter: 0.53



ALS Laboratory Group

Dissolved Gases Analysis

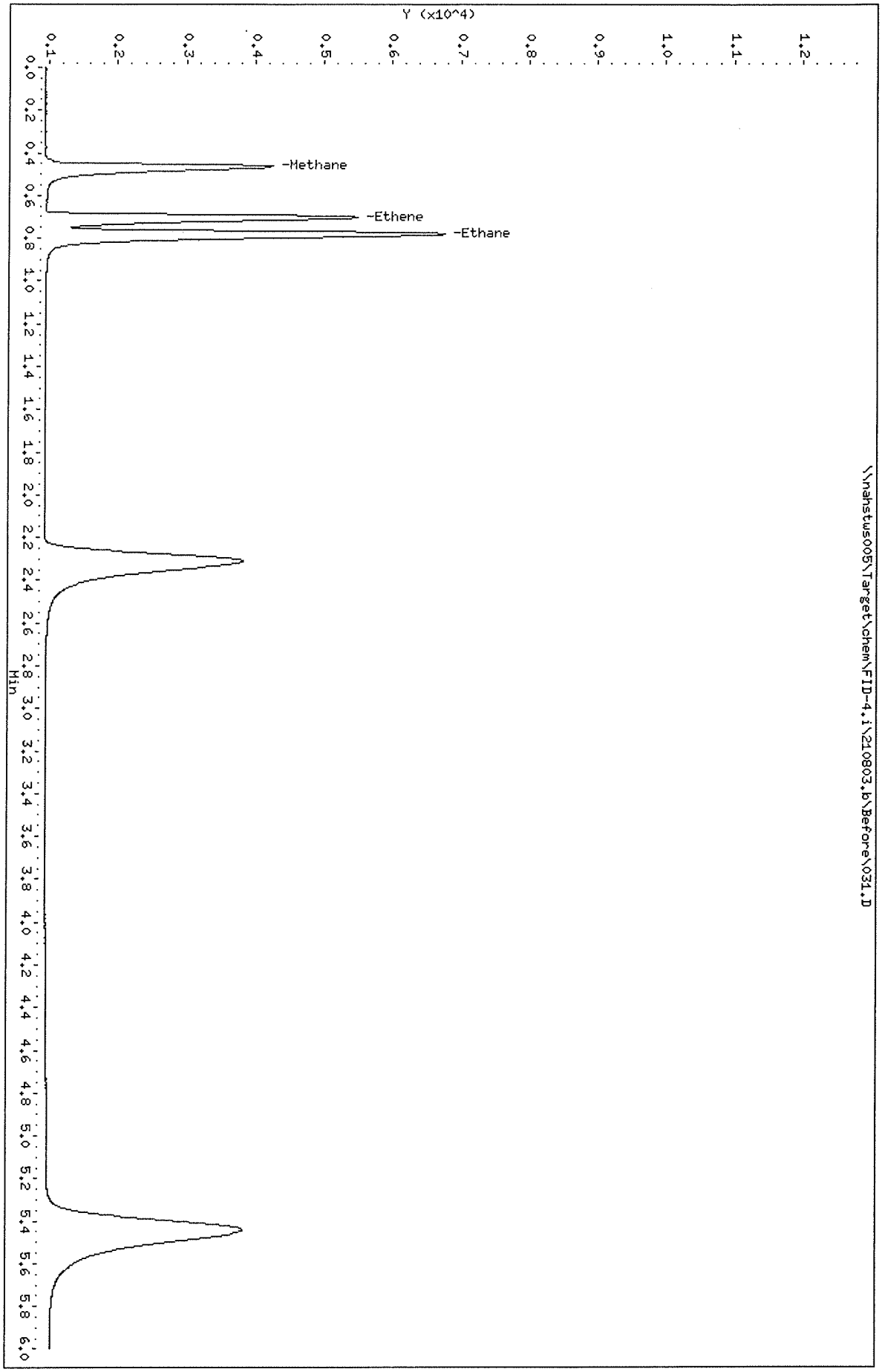
Data file : \\nahstws005\Target\chem\FID-4.i\210803.b\Before\031.D
Lab Smp Id: RSK-CCV Client Smp ID: RSK-CCV
Inj Date : 03-AUG-2021 16:01
Operator : PL Inst ID: FID-4.i
Smp Info : RSK-CCV;RSK-CCV;2;4
Misc Info : ;1;0;1
Comment :
Method : \\NAHSTWS005\Target\chem\FID-4.i\210803.b\RSKNI3.m
Meth Date : 12-Oct-2021 14:12 linh.pham Quant Type: ESTD
Cal Date : 24-JAN-2017 10:15 Cal File: 004.D
Als bottle: 31 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: RSK175.sub
Target Version: 4.14
Processing Host: ALSHSW7104

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
1 Methane	0.463	0.463	0.000	7641	9.64700	7.836
2 Ethene	0.703	0.700	0.003	9523	16.8500	16.257
3 Ethane	0.780	0.777	0.003	13817	18.0430	19.203

Data File: \\nahstws005\Target\chem\FID-4.i\210803.b\Before\031.D
Date : 03-AUG-2021 16:01
Client ID: RSK-CCV
Sample Info: RSK-CCV;RSK-CCV;2;4
Column phase: Rtx-PLOT

Instrument: FID-4.i
Operator: PL
Column diameter: 0.53



Data File: \\nahstws005\Target\chem\FID-4.i\210803.b\031.D Page 1
Report Date: 12-Oct-2021 14:15

ALS Laboratory Group

Dissolved Gases Analysis

Data file : \\nahstws005\Target\chem\FID-4.i\210803.b\031.D
Lab Smp Id: RSK-CCV Client Smp ID: RSK-CCV
Inj Date : 03-AUG-2021 16:01
Operator : PL Inst ID: FID-4.i
Smp Info : RSK-CCV;RSK-CCV;2;4
Misc Info : ;1;0;1
Comment :
Method : \\NAHSTWS005\Target\chem\FID-4.i\210803.b\RSKNI3.m
Meth Date : 12-Oct-2021 14:12 linh.pham Quant Type: ESTD
Cal Date : 24-JAN-2017 10:15 Cal File: 004.D
Als bottle: 31 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: RSK175.sub
Target Version: 4.14
Processing Host: ALSHSW7104

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

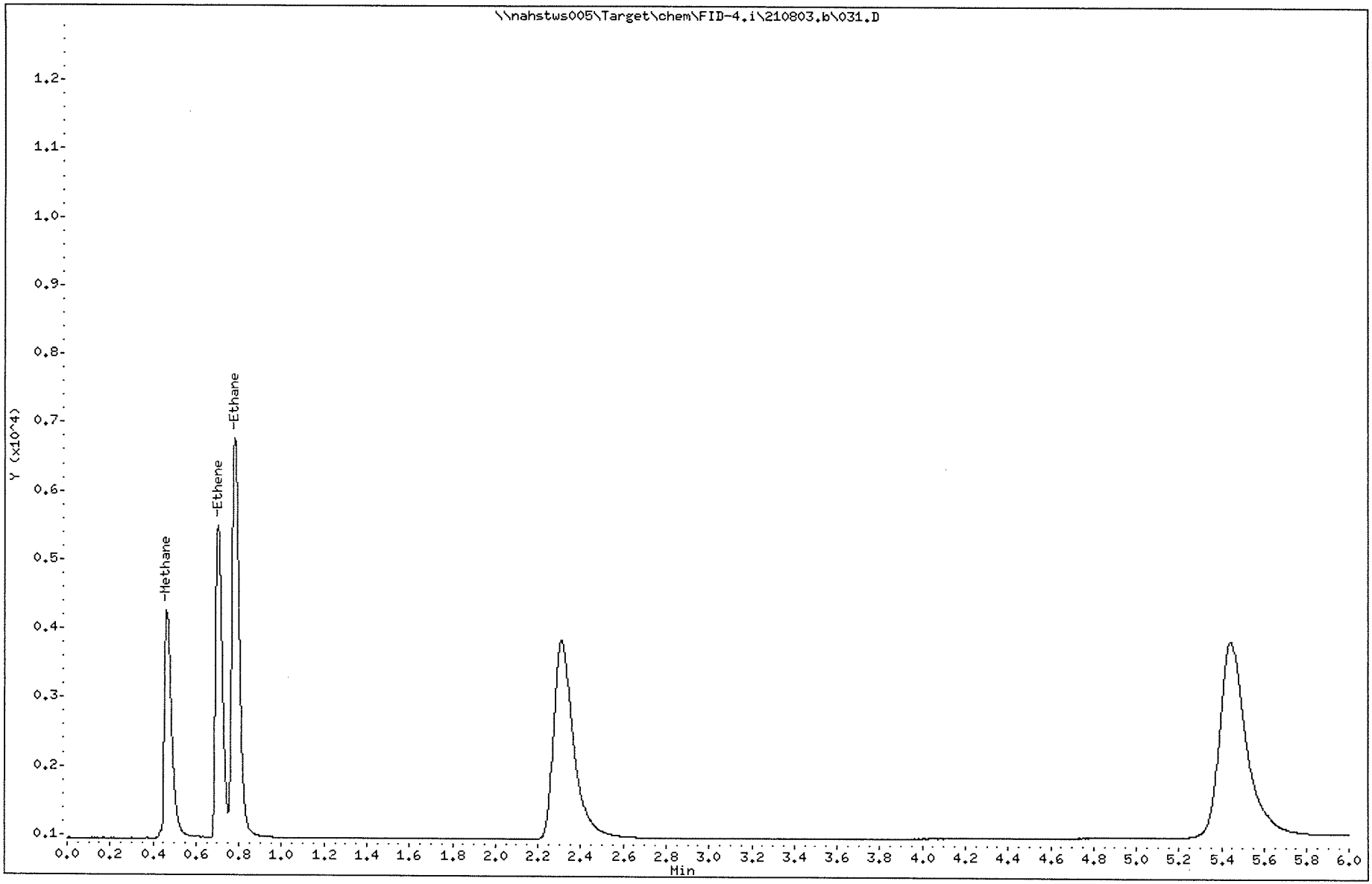
					AMOUNTS	
					CAL-AMT	ON-COL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/L)	(ug/L)
1 Methane	0.463	0.463	0.000	7716	9.64700	7.913
2 Ethene	0.703	0.700	0.003	9605	16.8500	16.397
3 Ethane	0.780	0.777	0.003	13972	18.0430	19.419

Data File: \\nahstws005\Target\chem\FID-4.i\210803.b\031.D
Date : 03-AUG-2021 16:01
Client ID: RSK-CCV
Sample Info: RSK-CCV;RSK-CCV;2;4

Column phase: Rtx-PLOT

Instrument: FID-4.i

Operator: PL
Column diameter: 0.53



HS21071465 - Sub Perch IV (E2100891)

ALS WO# HS21071465

November 23, 2021 Service Request No:E2100891

Ragen Giga
ALS Environmental - US
10450 Stancliff Rd Suite 210
Houston, TX 77099

Laboratory Results for: HS21071465

Dear Ragen,

Enclosed are the results of the sample(s) submitted to our laboratory July 28, 2021
For your reference, these analyses have been assigned our service request number **E2100891.**

Revision I - This report was revised on 11/23/21. Missing CCV, IS forms for 8/3 and 8/5 were included. CCV Forms (20210818_008 and 20210818_019) were corrected. Raw data for these 2 files show 8.5231 and 8.5067 in both the original data package and this revised data package. The raw data for the other CCVs and the samples reported in these brackets were reviewed and match both data packages and raw instrument files The calculated result for the samples reported in these brackets match the raw data files. The issue was isolated to these 2 CCV forms only.

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

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Corey Grandits
Project Manager

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

Certificate of Analysis

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

ALS Environmental

Client:	ALS Houston	**Service Request No.:**	E2100891
Project:	HS21071465	**Date Received:**	07/28/21
Sample Matrix:	W		

CASE NARRATIVE

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

Sample Receipt

Eight samples were received for analysis at ALS Environmental in Houston on 7/28/21.

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

Data Validation Notes and Discussion

Precision and Accuracy:

EQ2100475 & EQ2100477: Laboratory Control Spike/Duplicate Laboratory Control Spike (LCS/DLCS) samples were analyzed and reported in addition to a MS/MSD for these extraction batches. The LCS and DLCS recoveries are within QC limits. MS/MSD were performed on unrelated samples.

Lowest practical dilution performed (matrix interference) for samples E2100891-002 through E2100891-006. Sample 16EW06-210727 the lab prep and analyze as a solid.

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

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

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

Client: ALS Environmental - US **Service Request:**E2100891
Project: HS21071465

SAMPLE CROSS-REFERENCE

SAMPLE #	CLIENT SAMPLE ID	DATE	TIME
E2100891-001	16RW10-210727	7/27/2021	0715
E2100891-002	16RW09-210727	7/27/2021	0800
E2100891-003	16RW07-210727	7/27/2021	0850
E2100891-004	16RW06-210727	7/27/2021	0935
E2100891-005	16WW46-210727	7/27/2021	1020
E2100891-006	16WW40-210727	7/27/2021	1105
E2100891-007	16EW07-210727	7/27/2021	1150
E2100891-008	16EW06-210727	7/27/2021	1235

Service Request Summary

Folder #: **E2100891**
Client Name: ALS Environmental - US
Project Name: HS21071465
Project Number:

Report To: Ragen Giga
ALS Environmental - US
10450 Stancliff Rd Suite 210
Houston, TX 77099
USA
Phone Number:
Cell Number:
Fax Number:
E-mail: ragenp.giga@alsglobal.com

Project Chemist: Corey Grandits
Originating Lab: HOUSTON
Logged By: CGRANDITS
Date Received: 07/28/21
Internal Due Date: 8/11/2021
QAP: LAB QAP
Qualifier Set: Lab Standard
Formset: Lab Standard
Merged?: Y
Report to MDL?: Y
P.O. Number: HS21071465
EDD: No EDD Specified

8 120 mL-Plastic Bottle Natural WM Unpreserved
Location: EHRMS-AirArch 1
Pressure Gas:

Lab Samp No.	Client Samp No	Matrix	Collected	HOUSTON ClO4 DOD/6850
E2100891-001	16RW10-210727	Ground Water	07/27/21 0715	**IV**
E2100891-002	16RW09-210727	Ground Water	07/27/21 0800	**IV**
E2100891-003	16RW07-210727	Ground Water	07/27/21 0850	**IV**
E2100891-004	16RW06-210727	Ground Water	07/27/21 0935	**IV**
E2100891-005	16WW46-210727	Ground Water	07/27/21 1020	**IV**
E2100891-006	16WW40-210727	Ground Water	07/27/21 1105	**IV**
E2100891-007	16EW07-210727	Liquid	07/27/21 1150	**IV**
E2100891-008	16EW06-210727	Liquid	07/27/21 1235	**IV**

Service Request Summary

Folder #: **E2100891**
Client Name: ALS Environmental - US
Project Name: HS21071465
Project Number:

Report To: Ragen Giga
ALS Environmental - US
10450 Stancliff Rd Suite 210
Houston, TX 77099
USA
Phone Number:
Cell Number:
Fax Number:
E-mail: ragenp.giga@alsglobal.com

Project Chemist: Corey Grandits
Originating Lab: HOUSTON
Logged By: CGRANDITS
Date Received: 07/28/21
Internal Due Date: 8/11/2021
QAP: LAB QAP
Qualifier Set: Lab Standard
Formset: Lab Standard
Merged?: Y
Report to MDL?: Y
P.O. Number: HS21071465
EDD: No EDD Specified

8 120 mL-Plastic Bottle Natural WM Unpreserved
Location: EHRMS-AirArch 1
Pressure Gas:

Test Comments:

Group	Test/Method	Samples	Comments
Semivoa GCMS	ClO4 DOD/6850	8	IV due 8/18

Data Qualifiers

Lab Standard

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

Data Qualifiers

Lab Standard

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

ALS Laboratory Group

Acronyms

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

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ALS Environmental

State Certifications, Accreditations, and Licenses

Agency	Number	Expire Date
American Association for Laboratory Accreditation	2897.01 2020	11/30/2021
Arkansas Department of Environmental Quality	19-028-0	6/30/2022
Arkansas Department of Environmental Quality	21-022-0	3/26/2022
Department of Defense	A2LA 2897.01	11/30/2021
Florida Department of Health	E87611-33	6/30/2022
Hawaii Department of Health	2021-2022	4/30/2022
Kansas Department of Health and Environment	E-10352 2022	7/31/2022
Louisiana Department of Environmental Quality	03087-2021	6/30/2022
Louisiana Department of Health and Hospitals	LA028-2021	12/31/2021
Maine Department of Health and Human Services	2020016	6/5/2022
Minnesota Department of Health	2021671	12/31/2021
Nevada Department of Concervation and Natural Resources	TX026932022-1	7/31/2022
New Hampshire Environmental Laboratory Accreditation Program	209421	4/24/2022
Oklahoma Department of Environmental Quality	2020-123	8/31/2021
Pennsylvania Department of Environmental Protection	68-03441-015	6/30/2022
Tennessee Department of Environment and Concervation	04016-2021	4/30/2022
Texas Commision on Environmental Quality	T104704231-21-27	4/30/2022
United States Department of Agriculture	P330-19-00299	10/10/2022

Chain of Custody

ALS Environmental - Houston HRMS
10450 Stancliff Rd, Suite 210, Houston TX 77099
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Subcontract Chain of Custody

SAMPLING STATE: **Dept of Defense** **COC ID:** **16583**

SUBCONTRACT TO:

ALS Environmental
10450 Stancliff RoadSuite 210
Houston, TX 77084

Phone: +1 281 530 5656

CUSTOMER INFORMATION:

Company:	ALS Houston
Contact:	Ragen Giga
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Email:	RagenP.Giga@ALSGlobal.com
Alternate Contact:	
Email:	

INVOICE INFORMATION:

Company:	ALS Houston
Contact:	Accounts Payable
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Reference:	HS21071465
TSR:	Sonia West

	LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
	ANALYSIS REQUESTED			DUE DATE
1.	**HS21071465-01**	**16RW10-210727**	**GW**	**27 Jul 2021 07:15**
	Level II and Level IV reports on a seperate pdf. Send WOA to Vicki Graves.			11 Aug 2021
2.	**HS21071465-02**	**16RW09-210727**	**GW**	**27 Jul 2021 08:00**
	Level II and Level IV reports on a seperate pdf. Send WOA to Vicki Graves.			11 Aug 2021
3.	**HS21071465-03**	**16RW07-210727**	**GW**	**27 Jul 2021 08:50**
	Level II and Level IV reports on a seperate pdf. Send WOA to Vicki Graves.			11 Aug 2021
4.	**HS21071465-04**	**16RW06-210727**	**GW**	**27 Jul 2021 09:35**
	Level II and Level IV reports on a seperate pdf. Send WOA to Vicki Graves.			11 Aug 2021
5.	**HS21071465-05**	**16WW46-210727**	**GW**	**27 Jul 2021 10:20**
	Level II and Level IV reports on a seperate pdf. Send WOA to Vicki Graves.			11 Aug 2021
6.	**HS21071465-06**	**16WW40-210727**	**GW**	**27 Jul 2021 11:05**
	Level II and Level IV reports on a seperate pdf. Send WOA to Vicki Graves.			11 Aug 2021
7.	**HS21071465-07**	**16EW07-210727**	**GW**	**27 Jul 2021 11:50**
	Level II and Level IV reports on a seperate pdf. Send WOA to Vicki Graves.			11 Aug 2021
8.	**HS21071465-08**	**16EW06-210727**	**GW**	**27 Jul 2021 12:35**

Subcontract Chain of Custody

SAMPLING STATE: **Dept of Defense** **COC ID: 16583**

LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
ANALYSIS REQUESTED			DUE DATE
	Level II and Level IV reports on a seperate pdf. Send WOA to Vicki Graves.		11 Aug 2021

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

QC Level: DOD IV (DoD Data Package)

Relinquished By: _____ Date/Time: 7-28-21 14:25

Received By: COREY G Date/Time: 7/28/21 1425

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

ALS Environmental

Cooler Receipt Form

Project Chemist: CA

Client/Project: ALS-H

Thermometer ID: IR11

Date/Time Received: 7/28/21 Initials: CA

Date/Time Logged in: 7/28/21 Initials: CA

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

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

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

Were they intact? ○ Yes ○ No ◉ N/A

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

If yes, how many and where?

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

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

Cooler Tracking Number	COC ID	Date Opened	Time Opened	Opened By	Temp. °C	Temp Blank?
NA		7/28/21	1425	CA	5.5	☑
						☐
						☐
						☐

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

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

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

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

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

Notes, Discrepancies, & Resolutions:

Service request Label:

HS-HRMSCoolerReceipt R1.0

ALS Environmental - Houston HRMS

10450 Stancliff Rd., Suite 210
Houston, TX 77099
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SAMPLE ACCEPTANCE POLICY

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

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

- ✓ Intact on outside of cooler, signed and dated

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

The following is required on each COC:

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

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

Sample Integrity (mandatory):

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

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

Temperature Requirement (varies by sample matrix):

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

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

Preparation Information Benchsheets

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

Preparation Information Benchsheet

Prep Run#: 384371 **Prep WorkFlow:** GenExt28Day **Status:** Prepped
Team: Semivoa GCMS/GRIVERA **Prep Method:** Method **Prep Date/Time:** 8/2/21 10:30

#	Lab Code	Client ID	B#	Method /Test	pH	Cl	Matrix	Amt. Ext.	Sample Description
1	E2100845-001	OBFOD-MW01	.01	6850/ClO4 DOD			Water	10mL	
2	E2100845-002	OBFOD-1	.01	6850/ClO4 DOD			Water	10mL	
3	E2100845-003	OBFOB-MW01	.01	6850/ClO4 DOD			Water	10mL	
4	E2100845-004	OBFOB-MW03	.01	6850/ClO4 DOD			Water	10mL	
5	E2100845-005	OBF-2	.01	6850/ClO4 DOD			Water	10mL	
6	E2100845-006	OBFOB-MW02	.01	6850/ClO4 DOD			Water	10mL	
7	E2100845-007	JOD-MW01	.01	6850/ClO4 DOD			Water	10mL	
8	E2100845-008	JOD-MW02	.01	6850/ClO4 DOD			Water	10mL	
9	E2100845-009	JOD-MW03	.01	6850/ClO4 DOD			Water	10mL	
10	E2100845-010	JOD-MW04	.01	6850/ClO4 DOD			Water	10mL	
11	E2100845-011	DUP-01	.01	6850/ClO4 DOD			Water	10mL	
12	E2100845-012	DUP-02	.01	6850/ClO4 DOD			Water	10mL	
13	E2100891-001	16RW10-210727	.01	6850/ClO4 DOD			Ground Water	10mL	
14	E2100891-002	16RW09-210727	.01	6850/ClO4 DOD			Ground Water	10mL	
15	E2100891-003	16RW07-210727	.01	6850/ClO4 DOD			Ground Water	10mL	
16	E2100891-004	16RW06-210727	.01	6850/ClO4 DOD			Ground Water	10mL	
17	E2100891-005	16WW46-210727	.01	6850/ClO4 DOD			Ground Water	10mL	
18	E2100891-006	16WW40-210727	.01	6850/ClO4 DOD			Ground Water	10mL	
19	EQ2100475-01	MB		6850/ClO4 DOD			Liquid	10mL	
20	EQ2100475-02	LCS		6850/ClO4 DOD			Liquid	10mL	
21	EQ2100475-03	DLCS		6850/ClO4 DOD			Liquid	10mL	
22	EQ2100475-04	JOD-MW01 MS	.01	6850/ClO4 DOD			Liquid	10mL	
23	EQ2100475-05	JOD-MW01 DMS	.01	6850/ClO4 DOD			Liquid	10mL	

Spiking Solutions

Name: Sodium Perchlorate 1 ug/mL (IS) (18-O) as CLO4 Inventory ID 214765 Logbook Ref: Sodium Perchlorate Expires On: 12/11/2022

E2100845-003 100.00µL EQ2100475-01 100.00µL EQ2100475-02 100.00µL EQ2100475-03 100.00µL EQ2100475-04 100.00µL EQ2100475-05 100.00µL

Name: Perchlorate Intermediate Stock1 Inventory ID 217422 Logbook Ref: Perchlorate Expires On: 11/26/2021

EQ2100475-02 1.00µL EQ2100475-03 1.00µL EQ2100475-04 1.00µL EQ2100475-05 1.00µL

Preparation Information Benchsheet

Prep Run#: 384371 **Prep WorkFlow:** GenExt28Day **Status:** Prepped
Team: Semivoa GCMS/GRIVERA **Prep Method:** Method **Prep Date/Time:** 8/2/21 10:30

Preparation Steps

Step: Preparation
Started: 8/2/21 10:30
Finished: 8/2/21 11:15
By: GRIVERA
Comments

Comments: _____

Reviewed By: GR Date: 8/2/21

Chain of Custody

Relinquished By:		Date:		Extracts Examined
Received By:		Date:		Yes No

Preparation Information Benchsheet

Prep Run#: 384372 **Prep WorkFlow:** Gen CLO4 **Status:** Prepped
Team: Semivoa GCMS/GRIVERA **Prep Method:** Method **Prep Date/Time:** 8/2/21 09:31

#	Lab Code	Client ID	B#	Method /Test	pH	Cl	Matrix	Amt. Ext.	Sample Description
1	E2100841-001	OB-1	.01	6850/ClO4 DOD			Soil	1.029g	wet sand brown
2	E2100841-002	OB-2	.01	6850/ClO4 DOD			Soil	1.036g	wet sand brown
3	E2100841-003	OB-3	.01	6850/ClO4 DOD			Soil	1.010g	wet sand brown
4	E2100841-004	OB-4	.01	6850/ClO4 DOD			Soil	1.072g	wet sand brown
5	E2100841-005	OB-5	.01	6850/ClO4 DOD			Soil	1.010g	wet sand brown
6	E2100841-006	OB-6	.01	6850/ClO4 DOD			Soil	1.004g	wet sand brown
7	E2100841-007	OB-7	.01	6850/ClO4 DOD			Soil	1.019g	wet sand brown
8	E2100841-008	OB-8	.01	6850/ClO4 DOD			Soil	1.109g	wet sand brown
9	E2100841-009	OB-9	.01	6850/ClO4 DOD			Soil	1.005g	wet sand brown
10	E2100842-001	OB-PAN-1	.01	6850/ClO4 DOD			Soil	0.992g	wet sand brown
11	E2100842-002	OB-PAN-2	.01	6850/ClO4 DOD			Soil	1.083g	wet sand brown
12	E2100842-003	OB-PAN-3	.01	6850/ClO4 DOD			Soil	1.053g	wet sand brown
13	E2100842-004	OB-PAN-4	.01	6850/ClO4 DOD			Soil	1.010g	wet sand brown
14	E2100842-005	OB-PAN-5	.01	6850/ClO4 DOD			Soil	1.029g	wet sand brown
15	E2100842-006	OB-PAN-6	.01	6850/ClO4 DOD			Soil	1.022g	wet sand brown
16	E2100891-007	16EW07-210727	.01	6850/ClO4 DOD			Liquid	1.00g	
17	E2100891-008	16EW06-210727	.01	6850/ClO4 DOD			Liquid	1.00g	
18	EQ2100477-01	MB		6850/ClO4 DOD			Solid	0.998g	
19	EQ2100477-02	LCS		6850/ClO4 DOD			Solid	1.046g	
20	EQ2100477-03	DLCS		6850/ClO4 DOD			Solid	1.080g	
21	EQ2100477-04	OB-9 MS	.01	6850/ClO4 DOD			Solid	1.009g	
22	EQ2100477-05	OB-9 DMS	.01	6850/ClO4 DOD			Solid	1.004g	
23	EQ2100477-06	OB-PAN-6 MS	.01	6850/ClO4 DOD			Solid	1.027g	
24	EQ2100477-07	OB-PAN-6 DMS	.01	6850/ClO4 DOD			Solid	1.048g	

Spiking Solutions

Name: Sodium Perchlorate 1 ug/mL (IS) (18-O) as CLO4 Inventory ID 214765 Logbook Ref: Sodium Perchlorate Expires On: 12/11/2022

E2100841-001	100.00µL	E2100841-002	100.00µL	E2100841-003	100.00µL	E2100841-004	100.00µL	E2100841-005	100.00µL	E2100841-006	100.00µL
E2100841-007	100.00µL	E2100841-008	100.00µL	E2100841-009	100.00µL	E2100842-001	100.00µL	E2100842-002	100.00µL	E2100842-003	100.00µL
E2100842-004	100.00µL	E2100842-005	100.00µL	E2100842-006	100.00µL	EQ2100477-01	100.00µL	EQ2100477-02	100.00µL	EQ2100477-03	100.00µL
EQ2100477-04	100.00µL	EQ2100477-05	100.00µL	EQ2100477-06	100.00µL	EQ2100477-07	100.00µL				

Name: Perchlorate Intermediate Stock1 Inventory ID 217422 Logbook Ref: Perchlorate Expires On: 11/26/2021

EQ2100477-02	100.00µL	EQ2100477-03	100.00µL	EQ2100477-04	100.00µL	EQ2100477-05	100.00µL	EQ2100477-06	100.00µL	EQ2100477-07	100.00µL

Preparation Information Benchsheet

Prep Run#: 384372 **Prep WorkFlow:** Gen CLO4 **Status:** Prepped
Team: Semivoa GCMS/GRIVERA **Prep Method:** Method **Prep Date/Time:** 8/2/21 09:31

Preparation Materials

Water HPLC Grade	07/01/2021 Water (217918)	537M Glass Culture Tubes	537M Glass Tubes (218064)

Preparation Steps

Step: Extraction
Started: 8/2/21 09:31
Finished: 8/2/21 15:02
By: GRIVERA
Comments

Comments: _____

Reviewed By: GR Date: 8/2/21

Chain of Custody

Relinquished By: _____ Date: _____ Extracts Examined

Received By: _____ Date: _____ Yes No

Analytical Results

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

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100891
Project:	HS21071465	**Date Collected:**	7/27/21 0715
Sample Matrix:	Ground Water	**Date Received:**	7/28/21
Sample Name:	16RW10-210727	**Units:**	µg/L
Lab Code:	E2100891-001	**Basis:**	As Received

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

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**18.7**		4.00	2.00	1.00	40	8/ 2/21	8/18/21 16:02	384371	735470	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100891
Project:	HS21071465	**Date Collected:**	7/27/21 0800
Sample Matrix:	Ground Water	**Date Received:**	7/28/21
Sample Name:	16RW09-210727	**Units:**	µg/L
Lab Code:	E2100891-002	**Basis:**	As Received

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

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	2.00	1.00	0.500	20	8/ 2/21	8/18/21 13:21	384371	735470	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100891
Project:	HS21071465	**Date Collected:**	7/27/21 0850
Sample Matrix:	Ground Water	**Date Received:**	7/28/21
Sample Name:	16RW07-210727	**Units:**	µg/L
Lab Code:	E2100891-003	**Basis:**	As Received

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

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	1.00	0.500	0.250	10	8/ 2/21	8/18/21 14:23	384371	735470	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100891
Project:	HS21071465	**Date Collected:**	7/27/21 0935
Sample Matrix:	Ground Water	**Date Received:**	7/28/21
Sample Name:	16RW06-210727	**Units:**	µg/L
Lab Code:	E2100891-004	**Basis:**	As Received

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

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	2.00	1.00	0.500	20	8/ 2/21	8/18/21 15:47	384371	735470	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100891
Project:	HS21071465	**Date Collected:**	7/27/21 1020
Sample Matrix:	Ground Water	**Date Received:**	7/28/21
Sample Name:	16WW46-210727	**Units:**	µg/L
Lab Code:	E2100891-005	**Basis:**	As Received

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

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	2.00	1.00	0.500	20	8/ 2/21	8/18/21 16:18	384371	735470	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100891
Project:	HS21071465	**Date Collected:**	7/27/21 1105
Sample Matrix:	Ground Water	**Date Received:**	7/28/21
Sample Name:	16WW40-210727	**Units:**	µg/L
Lab Code:	E2100891-006	**Basis:**	As Received

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

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.693**	J	1.00	0.500	0.250	10	8/ 2/21	8/18/21 12:55	384371	735470	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100891
Project:	HS21071465	**Date Collected:**	7/27/21 1150
Sample Matrix:	Liquid	**Date Received:**	7/28/21
Sample Name:	16EW07-210727	**Units:**	µg/Kg
Lab Code:	E2100891-007	**Basis:**	As Received

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

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	0.985	0.750	0.300	1	8/ 2/21	8/4/21 01:16	384372	733599	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100891
Project:	HS21071465	**Date Collected:**	7/27/21 1235
Sample Matrix:	Liquid	**Date Received:**	7/28/21
Sample Name:	16EW06-210727	**Units:**	µg/Kg
Lab Code:	E2100891-008	**Basis:**	As Received

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

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	0.916	0.750	0.300	1	8/ 2/21	8/4/21 01:25	384372	733599	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100891
Project:	HS21071465	**Date Collected:**	NA
Sample Matrix:	Ground Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	EQ2100475-01	**Basis:**	As Received

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

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	0.100	0.0500	0.0250	1	8/ 2/21	8/3/21 10:28	384371	733599	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100891
Project:	HS21071465	**Date Collected:**	NA
Sample Matrix:	Liquid	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	µg/Kg
Lab Code:	EQ2100477-01	**Basis:**	As Received

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

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	1.00	0.752	0.301	1	8/ 2/21	8/3/21 21:51	384372	733599	

Accuracy & Precision

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

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2100891
Project:	HS21071465	**Date Analyzed:**	8/ 3/21
Sample Matrix:	Ground Water		

Lab Control Sample Summary

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

Analytical Method:	6850	**Units:**	µg/L
Prep Method:	Method	**Basis:**	As Received
		Extraction Lot:	384371

	Lab Control Sample EQ2100475-02			Duplicate Lab Control Sample EQ2100475-03					
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Perchlorate	0.110	0.100	110	0.114	0.100	114	84 - 119	4	15

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

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

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100891
Project:	HS21071465	**Date Collected:**	NA
Sample Matrix:	Ground Water	**Date Received:**	NA
Sample Name:	Lab Control Sample	**Units:**	µg/L
Lab Code:	EQ2100475-02	**Basis:**	As Received

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

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.110**		0.100	0.0500	0.0250	1	8/ 2/21	8/3/21 10:37	384371	733599	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100891
Project:	HS21071465	**Date Collected:**	NA
Sample Matrix:	Ground Water	**Date Received:**	NA
Sample Name:	Duplicate Lab Control Sample	**Units:**	µg/L
Lab Code:	EQ2100475-03	**Basis:**	As Received

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

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.114**		0.100	0.0500	0.0250	1	8/ 2/21	8/3/21 10:45	384371	733599	

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2100891
Project:	HS21071465	**Date Analyzed:**	8/ 5/21 - 8/ 5/21
Sample Matrix:	Liquid		

Lab Control Sample Summary

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

Analytical Method:	6850	**Units:**	µg/Kg
Prep Method:	Method	**Basis:**	As Received
		Extraction Lot:	384372

	Lab Control Sample EQ2100477-02			Duplicate Lab Control Sample EQ2100477-03					
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Perchlorate	91.0	95.6	95	89.2	92.6	96	84 - 121	2	15

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

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

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100891
Project:	HS21071465	**Date Collected:**	NA
Sample Matrix:	Liquid	**Date Received:**	NA
Sample Name:	Lab Control Sample	**Units:**	µg/Kg
Lab Code:	EQ2100477-02	**Basis:**	As Received

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

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**91.0**		0.956	0.750	0.300	1	8/ 2/21	8/5/21 14:17	384372	733725	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2100891
Project:	HS21071465	**Date Collected:**	NA
Sample Matrix:	Liquid	**Date Received:**	NA
Sample Name:	Duplicate Lab Control Sample	**Units:**	µg/Kg
Lab Code:	EQ2100477-03	**Basis:**	As Received

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

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**89.2**		0.926	0.750	0.300	1	8/ 2/21	8/3/21 22:08	384372	733599	

Initial Calibration

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

20210802

1st Review: Grivera
2nd Review: Kneir

Injection Log
LCMS01 -Shimadzu 8050

ICAL Date: 8/2/2021
Cal. Std. xp: 11/26/2021
ICAL ID: **EC2100056**

Mobile Phases **A:** 0.75% Formic Acid/Water 3100813-08 **B:** MeOH 216350

			File Name	Acquisition Method	Dilution	R	Comments	Date/Time
1	PERCHLORATE1		20210802_017	Perchlorate6850c.lcm	1x	☒	3100812-01	8/2/2021 16:41
2	PERCHLORATE2		20210802_007	Perchlorate6850c.lcm	1x	☒	3100812-02	8/2/2021 15:13
3	PERCHLORATE3		20210802_008	Perchlorate6850c.lcm	1x	☒	3100812-03	8/2/2021 15:24
4	PERCHLORATE4		20210802_009	Perchlorate6850c.lcm	1x	☒	3100812-04	8/2/2021 15:33
5	PERCHLORATE5		20210802_010	Perchlorate6850c.lcm	1x	☒	3100812-05	8/2/2021 15:41
6	PERCHLORATE6		20210802_011	Perchlorate6850c.lcm	1x	☒	3100812-06	8/2/2021 15:50
7	PERCHLORATE7		20210802_012	Perchlorate6850c.lcm	1x	☒	3100812-07	8/2/2021 15:58
8	PERCHLORATE8		20210802_013	Perchlorate6850c.lcm	1x	☒	3100812-08	8/2/2021 16:07
9	PERCHLORATE9		20210802_014	Perchlorate6850c.lcm	1x	☒	3100812-09	8/2/2021 16:15
10	PERCHLORATE10		20210802_015	Perchlorate6850c.lcm	1x	☒	3100813-01	8/2/2021 16:24
11	PERCHLORATEICV		20210802_018	Perchlorate6850c.lcm	1x	☒	3100811-06	8/2/2021 16:50
12	IB		20210802_019	Perchlorate6850c.lcm	1x	☒		8/2/2021 17:25
13	LODV		20210802_020	Perchlorate6850c.lcm	1x	☒		8/2/2021 17:33
14	PERCHLORATE7		20210802_021	Perchlorate6850c.lcm	1x	☒	3100812-07	8/2/2021 17:42
15	E2100813-001X20		20210802_022	Perchlorate6850c.lcm	20x	☒		8/2/2021 17:51
16	E2100813-004X20		20210802_023	Perchlorate6850c.lcm	20x	☒		8/2/2021 18:00
17	E2100814-001		20210802_024	Perchlorate6850c.lcm	1x	☒		8/2/2021 18:08
18	E2100814-002		20210802_025	Perchlorate6850c.lcm	1x	☒		8/2/2021 18:17
19	E2100814-003		20210802_026	Perchlorate6850c.lcm	1x	☒	INST out of range	8/2/2021 18:25
20	E2100814-004		20210802_027	Perchlorate6850c.lcm	1x	☒		8/2/2021 18:34
21	E2100814-005		20210802_028	Perchlorate6850c.lcm	1x	☒	INST out of range	8/2/2021 18:42
22	PERCHLORATE7		20210802_029	Perchlorate6850c.lcm	1x	☒	3100812-07	8/2/2021 18:51
23	EQ2100452-04		20210802_030	Perchlorate6850c.lcm	1x	☒		8/2/2021 19:00
24	EQ2100452-05		20210802_031	Perchlorate6850c.lcm	1x	☒		8/2/2021 19:08
25	E2100813-002		20210802_032	Perchlorate6850c.lcm	1x	☒		8/2/2021 19:17
26	E2100813-003		20210802_033	Perchlorate6850c.lcm	1x	☒		8/2/2021 19:25
27	E2100813-005		20210802_034	Perchlorate6850c.lcm	1x	☒	INST out of range	8/2/2021 19:34
28	E2100813-006		20210802_035	Perchlorate6850c.lcm	1x	☒	INST out of range	8/2/2021 19:42
29	E2100813-007		20210802_036	Perchlorate6850c.lcm	1x	☒	INST out of range	8/2/2021 19:51
30	E2100813-008		20210802_037	Perchlorate6850c.lcm	1x	☒		8/2/2021 19:59
31	PERCHLORATE7		20210802_038	Perchlorate6850c.lcm	1x	☒	3100812-07	8/2/2021 20:08
32	E2100813-009		20210802_039	Perchlorate6850c.lcm	1x	☒		8/2/2021 20:16
33	EQ2100458-01		20210802_040	Perchlorate6850c.lcm	1x	☒		8/2/2021 20:25
34	EQ2100458-02		20210802_041	Perchlorate6850c.lcm	1x	☒		8/2/2021 20:34
35	EQ2100458-03		20210802_042	Perchlorate6850c.lcm	1x	☒		8/2/2021 20:42
36	EQ2100458-04		20210802_043	Perchlorate6850c.lcm	1x	☒		8/2/2021 20:51
37	EQ2100458-05		20210802_044	Perchlorate6850c.lcm	1x	☒		8/2/2021 20:59
38	PERCHLORATE7		20210802_045	Perchlorate6850c.lcm	1x	☒	3100812-07	8/2/2021 21:08
39	E2100824-001		20210802_046	Perchlorate6850c.lcm	1x	☒	INST out of range	8/2/2021 21:16
40	E2100824-002		20210802_047	Perchlorate6850c.lcm	1x	☒	INST out of range	8/2/2021 21:25
41	E2100824-003		20210802_048	Perchlorate6850c.lcm	1x	☒	INST out of range	8/2/2021 21:33
42	E2100825-001		20210802_049	Perchlorate6850c.lcm	1x	☒	INST out of range	8/2/2021 21:42
43	E2100825-002		20210802_050	Perchlorate6850c.lcm	1x	☒	INST out of range	8/2/2021 21:50
44	E2100825-003		20210802_051	Perchlorate6850c.lcm	1x	☒	INST out of range	8/2/2021 21:59
45	E2100825-004		20210802_052	Perchlorate6850c.lcm	1x	☒		8/2/2021 22:07
46	E2100825-005		20210802_053	Perchlorate6850c.lcm	1x	☒	INST out of range	8/2/2021 22:16
47	E2100825-006		20210802_054	Perchlorate6850c.lcm	1x	☒	INST out of range	8/2/2021 22:24
48	E2100825-007		20210802_055	Perchlorate6850c.lcm	1x	☒	INST out of range	8/2/2021 22:33
49	PERCHLORATE7		20210802_056	Perchlorate6850c.lcm	1x	☒	3100812-07	8/2/2021 22:41
50	E2100825-008		20210802_057	Perchlorate6850c.lcm	1x	☒		8/2/2021 22:50
51	IB		20210802_058	Perchlorate6850c.lcm	1x	☒		8/2/2021 22:58
52	E2100831-001		20210802_059	Perchlorate6850c.lcm	1x	☒		8/2/2021 23:07
53	E2100831-002X2		20210802_060	Perchlorate6850c.lcm	2x	☒	INST out of range	8/2/2021 23:15
54	E2100856-001		20210802_061	Perchlorate6850c.lcm	1x	☒	INST out of range	8/2/2021 23:24
55	E2100856-002		20210802_062	Perchlorate6850c.lcm	1x	☒	INST out of range	8/2/2021 23:32
56	E2100856-003		20210802_063	Perchlorate6850c.lcm	1x	☒		8/2/2021 23:41
57	E2100856-004		20210802_064	Perchlorate6850c.lcm	1x	☒	INST out of range	8/2/2021 23:50
58	E2100856-005		20210802_065	Perchlorate6850c.lcm	1x	☒		8/2/2021 23:58
59	E2100837-001		20210802_066	Perchlorate6850c.lcm	1x	☒	INST out of range	8/3/2021 0:07
60	PERCHLORATE7		20210802_067	Perchlorate6850c.lcm	1x	☒	3100812-07	8/3/2021 0:15
61	E2100837-002		20210802_068	Perchlorate6850c.lcm	1x	☒	INST out of range	8/3/2021 0:24
62	E2100837-003		20210802_069	Perchlorate6850c.lcm	1x	☒		8/3/2021 0:32
63	E2100837-004		20210802_070	Perchlorate6850c.lcm	1x	☒	INST out of range	8/3/2021 0:41
64	E2100837-005		20210802_071	Perchlorate6850c.lcm	1x	☒	INST out of range	8/3/2021 0:49
65	E2100837-006		20210802_072	Perchlorate6850c.lcm	1x	☒		8/3/2021 0:58
66	E2100837-007		20210802_073	Perchlorate6850c.lcm	1x	☒	INST out of range	8/3/2021 1:06
67	E2100837-008		20210802_074	Perchlorate6850c.lcm	1x	☒		8/3/2021 1:15
68	E2100837-009		20210802_075	Perchlorate6850c.lcm	1x	☒		8/3/2021 1:23
69	E2100837-010		20210802_076	Perchlorate6850c.lcm	1x	☒		8/3/2021 1:32
70	E2100837-011		20210802_077	Perchlorate6850c.lcm	1x	☒		8/3/2021 1:40
71	E2100837-012		20210802_078	Perchlorate6850c.lcm	1x	☒		8/3/2021 1:49
72	PERCHLORATE7		20210802_079	Perchlorate6850c.lcm	1x	☒	3100812-07	8/3/2021 1:57
73	EQ2100476-01		20210802_080	Perchlorate6850c.lcm	1x	☒		8/3/2021 2:06

20210802

1st Review: Grivera
2nd Review: Kneir

Injection Log
LCMS01 -Shimadzu 8050

ICAL Date: 8/2/2021
Cal. Std. xp: 11/26/2021
ICAL ID: **EC2100056**

Mobile Phases **A:** 0.75% Formic Acid/Water 3100813-08 **B:** MeOH 216350

			File Name	Acquisition Method	Dilution	R	Comments	Date/Time
74	EQ2100476-02		20210802_081	Perchlorate6850c.lcm	1x	☒		8/3/2021 2:15
75	EQ2100476-03		20210802_082	Perchlorate6850c.lcm	1x	☒		8/3/2021 2:23
76	EQ2100476-04		20210802_083	Perchlorate6850c.lcm	1x	☒	INST out of range	8/3/2021 2:32
77	EQ2100476-05		20210802_084	Perchlorate6850c.lcm	1x	☒	INST out of range	8/3/2021 2:40
78	EQ2100476-06		20210802_085	Perchlorate6850c.lcm	1x	☒	INST out of range	8/3/2021 2:49
79	EQ2100476-07		20210802_086	Perchlorate6850c.lcm	1x	☒	INST out of range	8/3/2021 2:57
80	E2100843-001		20210802_087	Perchlorate6850c.lcm	1x	☒	INST out of range	8/3/2021 3:06
81	E2100843-002		20210802_088	Perchlorate6850c.lcm	1x	☒	INST out of range	8/3/2021 3:14
82	E2100843-003		20210802_089	Perchlorate6850c.lcm	1x	☒	INST out of range	8/3/2021 3:23
83	PERCHLORATE7		20210802_090	Perchlorate6850c.lcm	1x	☒	3100812-07	8/3/2021 3:32
84	E2100843-004		20210802_091	Perchlorate6850c.lcm	1x	☒	INST out of range	8/3/2021 3:40
85	E2100843-005		20210802_092	Perchlorate6850c.lcm	1x	☒	INST out of range	8/3/2021 3:49
86	E2100843-006		20210802_093	Perchlorate6850c.lcm	1x	☒	INST out of range	8/3/2021 3:57
87	E2100843-007		20210802_094	Perchlorate6850c.lcm	1x	☒	INST out of range	8/3/2021 4:06
88	E2100843-008		20210802_095	Perchlorate6850c.lcm	1x	☒		8/3/2021 4:14
89	E2100843-009		20210802_096	Perchlorate6850c.lcm	1x	☒	INST out of range	8/3/2021 4:23
90	E2100844-001		20210802_097	Perchlorate6850c.lcm	1x	☒	INST out of range	8/3/2021 4:31
91	E2100844-002		20210802_098	Perchlorate6850c.lcm	1x	☒	INST out of range	8/3/2021 4:40
92	E2100844-003		20210802_099	Perchlorate6850c.lcm	1x	☒	INST out of range	8/3/2021 4:48
93	E2100844-004		20210802_100	Perchlorate6850c.lcm	1x	☒	INST out of range	8/3/2021 4:57
94	PERCHLORATE7		20210802_101	Perchlorate6850c.lcm	1x	☒	3100812-07	8/3/2021 5:06
95	E2100844-005		20210802_102	Perchlorate6850c.lcm	1x	☒	INST out of range	8/3/2021 5:14
96	E2100844-006		20210802_103	Perchlorate6850c.lcm	1x	☒	INST out of range	8/3/2021 5:23
97	E2100844-007		20210802_104	Perchlorate6850c.lcm	1x	☒	INST out of range	8/3/2021 5:31
98	E2100844-008		20210802_105	Perchlorate6850c.lcm	1x	☒	INST out of range	8/3/2021 5:40
99	E2100844-009		20210802_106	Perchlorate6850c.lcm	1x	☒	INST out of range	8/3/2021 5:48
100	PERCHLORATE7		20210802_107	Perchlorate6850c.lcm	1x	☒	3100812-07	8/3/2021 5:57

Initial Calibration - Detailed Report

Calibration ID: EC2100056 **Instrument ID:** E-LCMS-01
Column Name: 1

#	Lab Code	Sample Name	File Location	Aquisition Date
02	EC2100056-02	PERCHLORATE2	20210802_007	08/02/2021 15:13
03	EC2100056-03	PERCHLORATE3	20210802_008	08/02/2021 15:24
04	EC2100056-04	PERCHLORATE4	20210802_009	08/02/2021 15:33
05	EC2100056-05	PERCHLORATE5	20210802_010	08/02/2021 15:41
06	EC2100056-06	PERCHLORATE6	20210802_011	08/02/2021 15:50
07	EC2100056-07	PERCHLORATE7	20210802_012	08/02/2021 15:58
08	EC2100056-08	PERCHLORATE8	20210802_013	08/02/2021 16:07
09	EC2100056-09	PERCHLORATE9	20210802_014	08/02/2021 16:15
10	EC2100056-10	PERCHLORATE10	20210802_015	08/02/2021 16:24
01	EC2100056-01	PERCHLORATE1	20210802_017	08/02/2021 16:41

Analyte **Curve Fit** **Weighting**

Perchlorate **Average RF** **RSD = 4.317** **Average RF = 0.1473**

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.1000	0.152	02	0.5000	0.1568	03	0.7000	0.1508	04	1.0000	0.1523
05	2.0000	0.1523	06	5.0000	0.1468	07	10.0000	0.1389	08	20.0000	0.1411
09	30.0000	0.1397	10	50.0000	0.1426						

Analyte

Perchlorate

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	0.1000	0.103	3.2	02	0.5000	0.532	6.4	03	0.7000	0.716	2.3
04	1.0000	1.03	3.4	05	2.0000	2.07	3.4	06	5.0000	4.98	-0.3
07	10.0000	9.43	-5.7	08	20.0000	19.2	-4.2	09	30.0000	28.4	-5.2
10	50.0000	48.4	-3.2								

Initial Calibration Verification Summary Report

Calibration ID:	EC2100056	**Instrument ID:**	E-LCMS-01
Datafile ID:	20210802_018	**Column Name:**	1

Analyte	Lab Code	Type	Curve Fit	True Value	Calc Conc	Units	Result	Criteria
Perchlorate	EC2100056-11	T	Average RF	10	9.871	ng/mL	-1.3	<= 15

Insight Report

Printed at 8/18/2021 10:37:32 AM

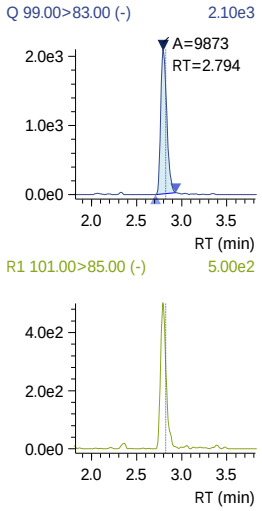
20210802_007

Sample ID: PERCHLORATE2
Date Acquired: 8/2/2021 3:13:26 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210802\20210802_007.lcd
Vial: 21 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.794	9873	125942	1	0.5321	ng/mL	0.5000	23.77
Sodium Perchlorate-18O4 _IS	Auto	2.793	1259 42	125942	1	1.0000	ng/mL	1.0000	----

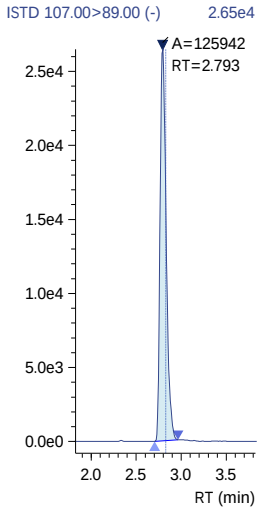
Perchlorate

Conc 0.5321
R#1 23.77 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.0000



Insight Report

Printed at 8/18/2021 10:42:57 AM

Method File: I:\LCMS01\DATA\20210802\20210726.lcm

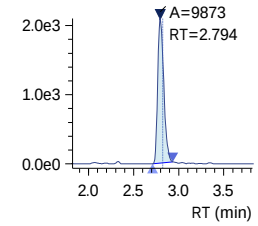
20210802_007

Sample ID: PERCHLORATE2
Date Acquired: 8/2/2021 3:13:26 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210802\Before\20210802_007.lcd
Vial: 21 | Inj. Volume: 25.0000uL | Tray: 1

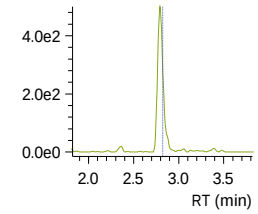
Perchlorate

Conc 0.4663
R#1 23.77 (0.00)

Q 99.00>83.00 (-) 2.10e3



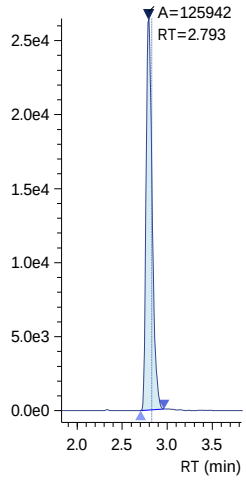
R1 101.00>85.00 (-) 5.00e2



Sodium Perchlorate -18O4_IS

Conc 1.0000

ISTD 107.00>89.00 (-) 2.65e4



Insight Report

Printed at 8/18/2021 10:37:32 AM

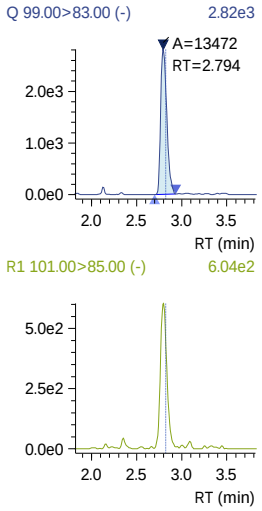
20210802_008

Sample ID: PERCHLORATE3
Date Acquired: 8/2/2021 3:24:30 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210802\20210802_008.lcd
Vial: 22 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.794	13472	127657	1	0.7164	ng/mL	0.7000	21.28
Sodium Perchlorate-18O4 _IS	Auto	2.793	1276 57	127657	1	1.0000	ng/mL	1.0000	----

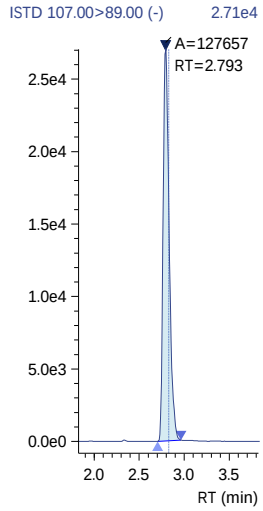
Perchlorate

Conc 0.7164
R#1 21.28 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.0000



Insight Report

Printed at 8/18/2021 10:42:57 AM

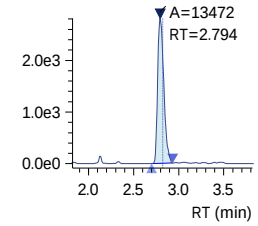
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Sample ID: PERCHLORATE3
Date Acquired: 8/2/2021 3:24:30 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210802\Before\20210802_008.lcd
Vial: 22 | Inj. Volume: 25.0000uL | Tray: 1

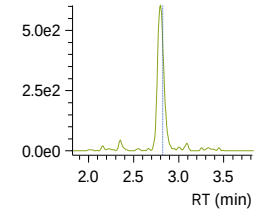
Perchlorate

Conc 0.6371
R#1 21.28 (0.00)

Q 99.00>83.00 (-) 2.82e3



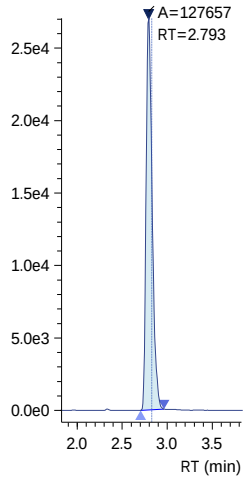
R1 101.00>85.00 (-) 6.04e2



Sodium Perchlorate -18O4_IS

Conc 1.0000

ISTD 107.00>89.00 (-) 2.71e4



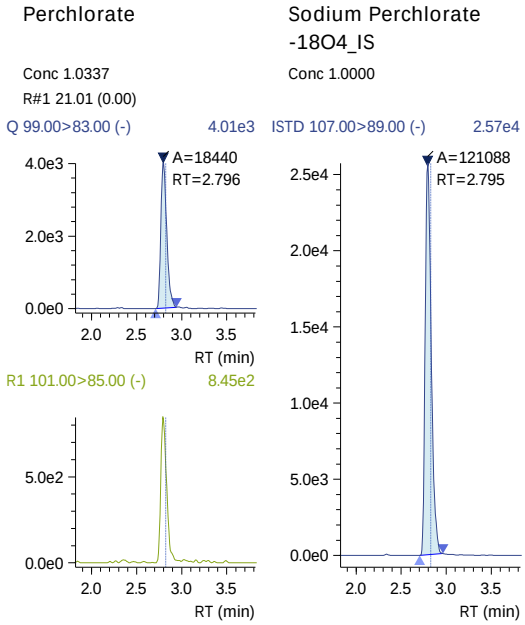
Insight Report

Printed at 8/18/2021 10:37:32 AM

20210802_009

Sample ID: PERCHLORATE4
Date Acquired: 8/2/2021 3:33:05 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210802\20210802_009.lcd
Vial: 23 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.796	18440	121088	1	1.0337	ng/mL	1.0000	21.01
Sodium Perchlorate-18O4 _IS	Auto	2.795	1210 88	121088	1	1.0000	ng/mL	1.0000	----



Insight Report

Printed at 8/18/2021 10:42:57 AM

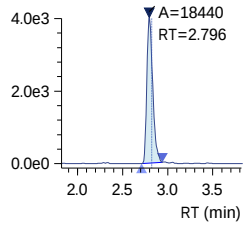
20210802_009

Sample ID: PERCHLORATE4
Date Acquired: 8/2/2021 3:33:05 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210802\Before\20210802_009.lcd
Vial: 23 | Inj. Volume: 25.0000uL | Tray: 1

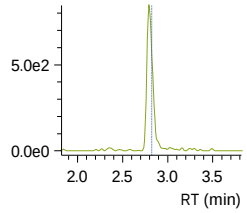
Perchlorate

Conc 0.9314
R#1 21.01 (0.00)

Q 99.00>83.00 (-) 4.01e3



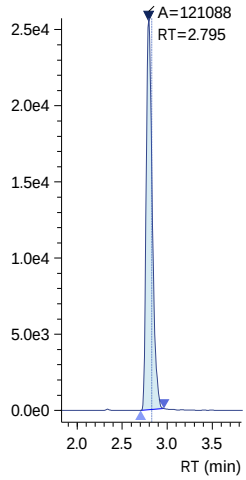
R1 101.00>85.00 (-) 8.45e2



Sodium Perchlorate -18O4_IS

Conc 1.0000

ISTD 107.00>89.00 (-) 2.57e4



Insight Report

Printed at 8/18/2021 10:37:32 AM

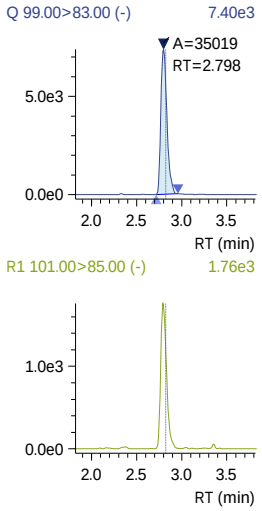
20210802_010

Sample ID: PERCHLORATE5
Date Acquired: 8/2/2021 3:41:38 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210802\20210802_010.lcd
Vial: 24 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.798	35019	114970	1	2.0675	ng/mL	2.0000	24.14
Sodium Perchlorate-18O4 _IS	Auto	2.794	1149 70	114970	1	1.0000	ng/mL	1.0000	----

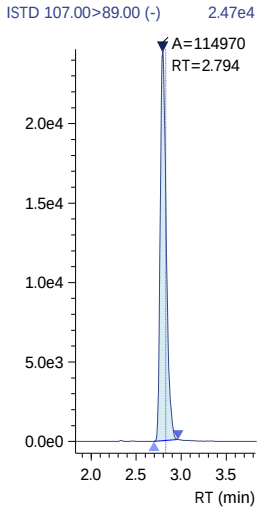
Perchlorate

Conc 2.0675
R#1 24.14 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.0000



Insight Report

Printed at 8/18/2021 10:42:57 AM

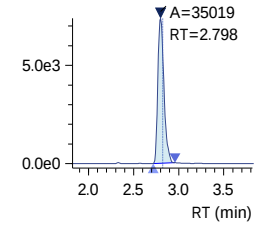
20210802_010

Sample ID: PERCHLORATE5
Date Acquired: 8/2/2021 3:41:38 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210802\Before\20210802_010.lcd
Vial: 24 | Inj. Volume: 25.0000uL | Tray: 1

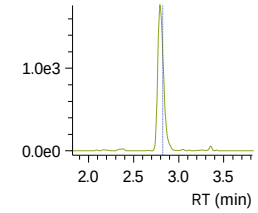
Perchlorate

Conc 1.8902
R#1 24.14 (0.00)

Q 99.00>83.00 (-) 7.40e3



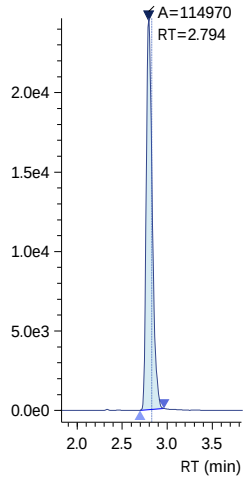
R1 101.00>85.00 (-) 1.76e3



Sodium Perchlorate -18O4_IS

Conc 1.0000

ISTD 107.00>89.00 (-) 2.47e4



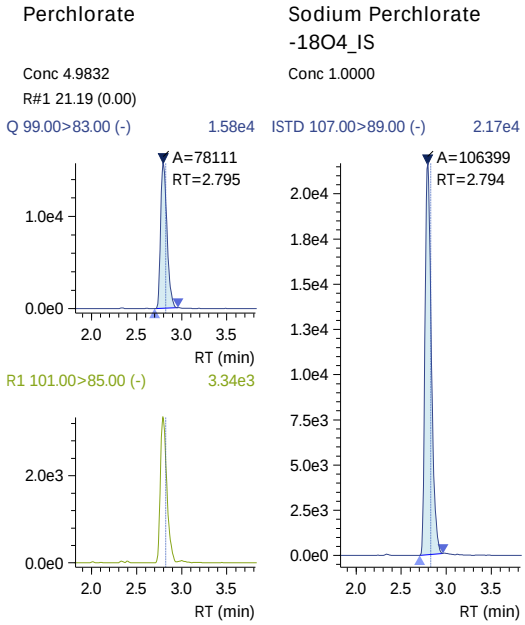
Insight Report

Printed at 8/18/2021 10:37:32 AM

20210802_011

Sample ID: PERCHLORATE6
Date Acquired: 8/2/2021 3:50:11 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210802\20210802_011.lcd
Vial: 25 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.795	78111	106399	1	4.9832	ng/mL	5.0000	21.19
Sodium Perchlorate-18O4 _IS	Auto	2.794	1063 99	106399	1	1.0000	ng/mL	1.0000	----



Insight Report

Printed at 8/18/2021 10:42:57 AM

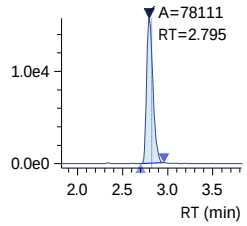
20210802_011

Sample ID: PERCHLORATE6
Date Acquired: 8/2/2021 3:50:11 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210802\Before\20210802_011.lcd
Vial: 25 | Inj. Volume: 25.0000uL | Tray: 1

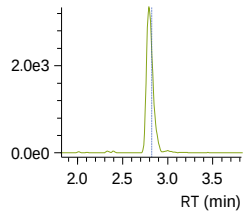
Perchlorate

Conc 4.5942
R#1 21.19 (0.00)

Q 99.00>83.00 (-) 1.58e4



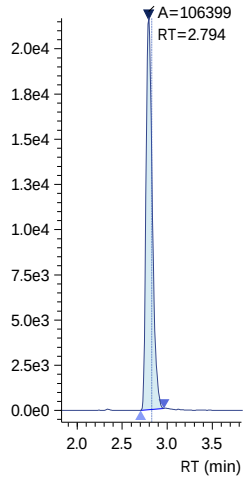
R1 101.00>85.00 (-) 3.34e3



Sodium Perchlorate -18O4_IS

Conc 1.0000

ISTD 107.00>89.00 (-) 2.17e4



Insight Report

Printed at 8/18/2021 10:37:32 AM

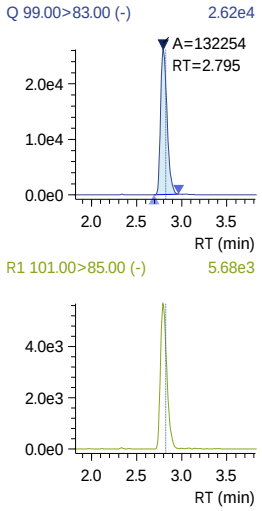
20210802_012

Sample ID: PERCHLORATE7
Date Acquired: 8/2/2021 3:58:47 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210802\20210802_012.lcd
Vial: 26 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.795	132254	95247	1	9.4253	ng/mL	10.0000	21.67
Sodium Perchlorate-18O4_IS	Auto	2.793	95247	95247	1	1.0000	ng/mL	1.0000	----

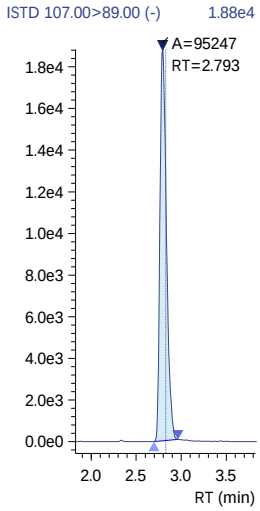
Perchlorate

Conc 9.4253
R#1 21.67 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.0000



Insight Report

Printed at 8/18/2021 10:42:57 AM

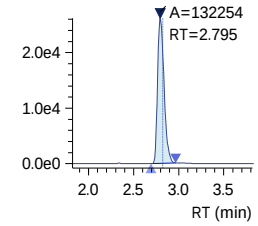
20210802_012

Sample ID: PERCHLORATE7
Date Acquired: 8/2/2021 3:58:47 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210802\Before\20210802_012.lcd
Vial: 26 | Inj. Volume: 25.0000uL | Tray: 1

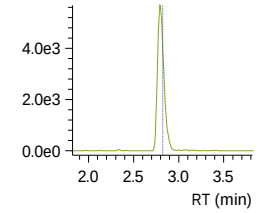
Perchlorate

Conc 8.7138
R#1 21.67 (0.00)

Q 99.00>83.00 (-) 2.62e4



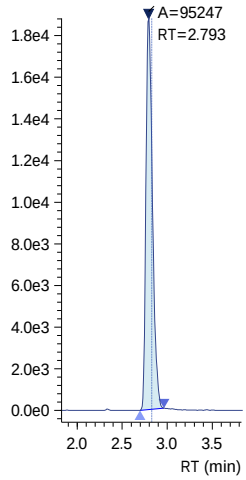
R1 101.00>85.00 (-) 5.68e3



Sodium Perchlorate -18O4_IS

Conc 1.0000

ISTD 107.00>89.00 (-) 1.88e4



Insight Report

Printed at 8/18/2021 10:37:32 AM

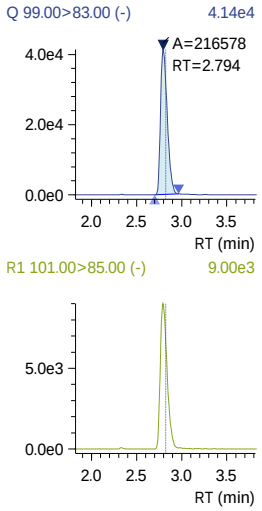
20210802_013

Sample ID: PERCHLORATE8
Date Acquired: 8/2/2021 4:07:19 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210802\20210802_013.lcd
Vial: 27 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.794	216578	76725	1	19.1606	ng/mL	20.0000	21.75
Sodium Perchlorate-18O4_IS	Auto	2.793	76725	76725	1	1.0000	ng/mL	1.0000	----

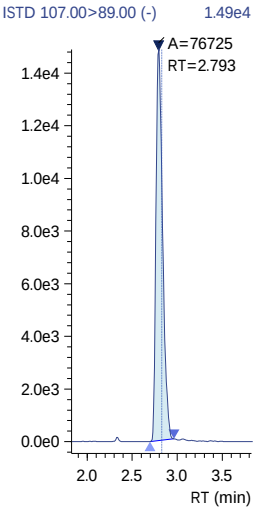
Perchlorate

Conc 19.1606
R#1 21.75 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.0000



Insight Report

Printed at 8/18/2021 10:42:57 AM

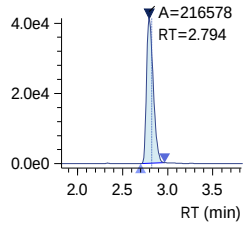
20210802_013

Sample ID: PERCHLORATE8
Date Acquired: 8/2/2021 4:07:19 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210802\Before\20210802_013.lcd
Vial: 27 | Inj. Volume: 25.0000uL | Tray: 1

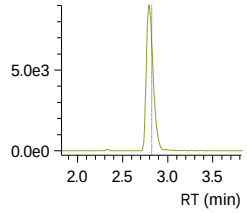
Perchlorate

Conc 17.7423
R#1 21.75 (0.00)

Q 99.00>83.00 (-) 4.14e4



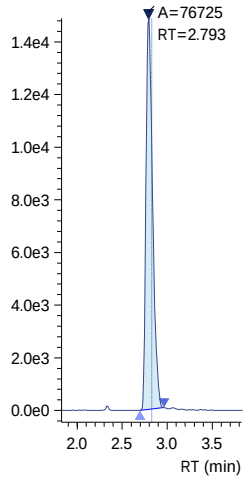
R1 101.00>85.00 (-) 9.00e3



Sodium Perchlorate -18O4_IS

Conc 1.0000

ISTD 107.00>89.00 (-) 1.49e4



Insight Report

Printed at 8/18/2021 10:37:32 AM

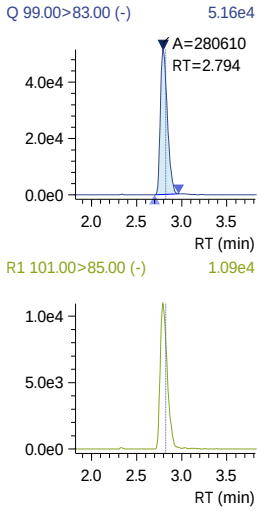
20210802_014

Sample ID: PERCHLORATE9
Date Acquired: 8/2/2021 4:15:50 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210802\20210802_014.lcd
Vial: 28 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.794	280610	66968	1	28.4426	ng/mL	30.0000	21.15
Sodium Perchlorate-18O4_IS	Auto	2.795	66968	66968	1	1.0000	ng/mL	1.0000	----

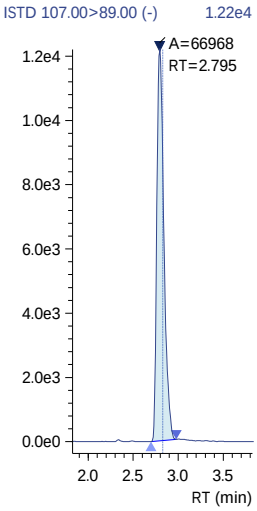
Perchlorate

Conc 28.4426
R#1 21.15 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.0000



Insight Report

Printed at 8/18/2021 10:42:57 AM

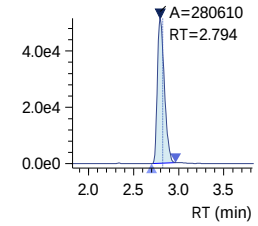
20210802_014

Sample ID: PERCHLORATE9
Date Acquired: 8/2/2021 4:15:50 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210802\Before\20210802_014.lcd
Vial: 28 | Inj. Volume: 25.0000uL | Tray: 1

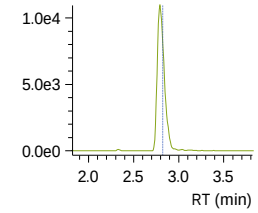
Perchlorate

Conc 26.3504
R#1 21.15 (0.00)

Q 99.00>83.00 (-) 5.16e4



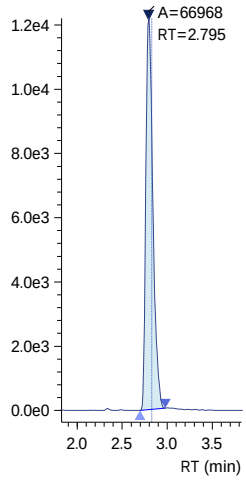
R1 101.00>85.00 (-) 1.09e4



Sodium Perchlorate -18O4_IS

Conc 1.0000

ISTD 107.00>89.00 (-) 1.22e4



Insight Report

Printed at 8/18/2021 10:37:32 AM

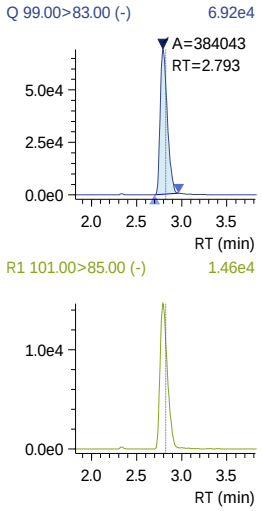
20210802_015

Sample ID: PERCHLORATE10
Date Acquired: 8/2/2021 4:24:21 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210802\20210802_015.lcd
Vial: 29 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.793	384043	53873	1	48.3887	ng/mL	50.0000	21.16
Sodium Perchlorate-18O4_IS	Auto	2.792	53873	53873	1	1.0000	ng/mL	1.0000	----

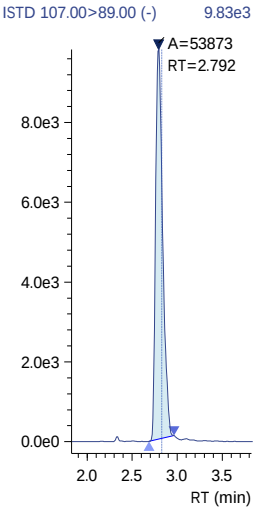
Perchlorate

Conc 48.3887
R#1 21.16 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.0000



Insight Report

Printed at 8/18/2021 10:42:57 AM

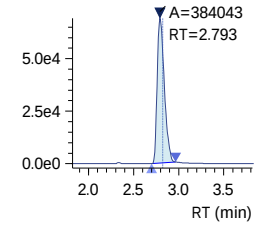
20210802_015

Sample ID: PERCHLORATE10
Date Acquired: 8/2/2021 4:24:21 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210802\Before\20210802_015.lcd
Vial: 29 | Inj. Volume: 25.0000uL | Tray: 1

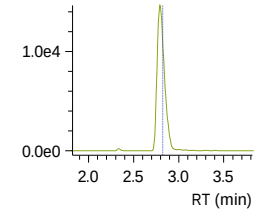
Perchlorate

Conc 44.8484
R#1 21.16 (0.00)

Q 99.00>83.00 (-) 6.92e4



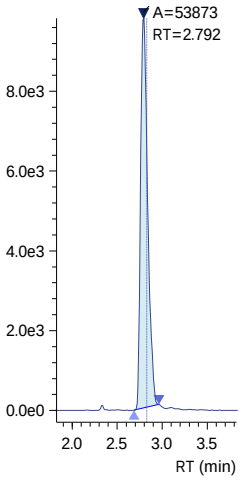
R1 101.00>85.00 (-) 1.46e4



Sodium Perchlorate -18O4_IS

Conc 1.0000

ISTD 107.00>89.00 (-) 9.83e3



Insight Report

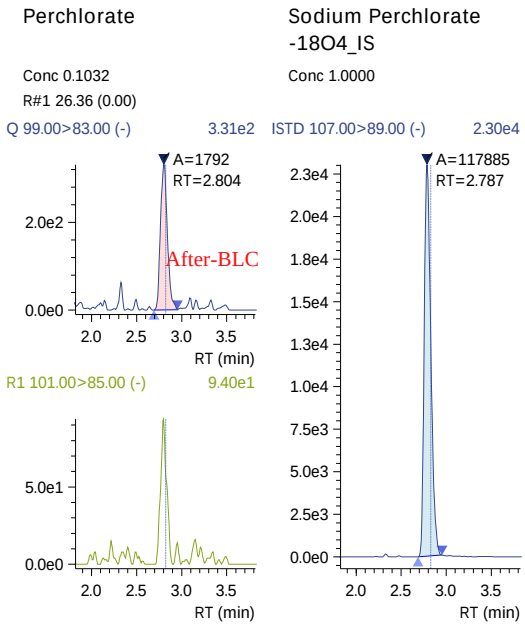
Printed at 8/18/2021 10:37:32 AM

Method File: I:\LCMS01\DATA\20210802\20210802.lcm
Project File: I:\LCMS01\DATA\20210802\20210802.damlp

20210802_017

Sample ID: PERCHLORATE1
Date Acquired: 8/2/2021 4:41:27 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210802\20210802_017.lcd
Vial: 20 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	M	2.804	1792	117885	1	0.1032	ng/mL	0.1000	26.36
Sodium Perchlorate-18O4 _IS	Auto	2.787	117885	117885	1	1.0000	ng/mL	1.0000	----



Insight Report

Printed at 8/18/2021 10:42:57 AM

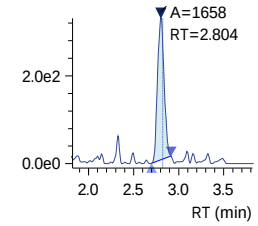
20210802_017

Sample ID: PERCHLORATE1
Date Acquired: 8/2/2021 4:41:27 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210802\Before\20210802_017.lcd
Vial: 20 | Inj. Volume: 25.0000uL | Tray: 1

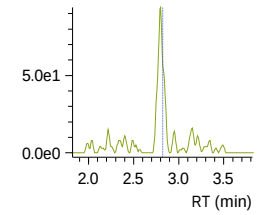
Perchlorate

Conc 0.0613
R#1 29.06 (0.00)

Q 99.00>83.00 (-) 3.31e2



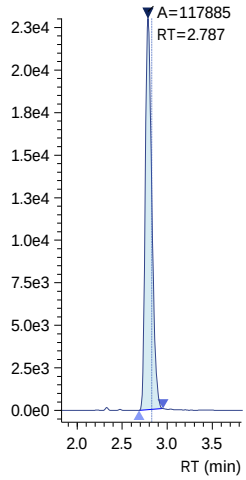
R1 101.00>85.00 (-) 9.40e1



Sodium Perchlorate -18O4_IS

Conc 1.0000

ISTD 107.00>89.00 (-) 2.30e4



Insight Report

Printed at 8/18/2021 10:37:32 AM

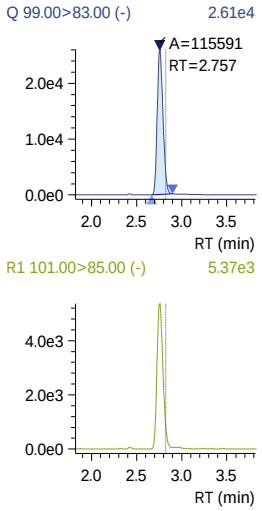
20210802_018

Sample ID: PERCHLORATEICV
Date Acquired: 8/2/2021 4:50:04 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210802\20210802_018.lcd
Vial: 30 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.757	115591	79484	1	9.8714	ng/mL	10.0000	20.98
Sodium Perchlorate-18O4_IS	Auto	2.754	79484	79484	1	1.0000	ng/mL	1.0000	----

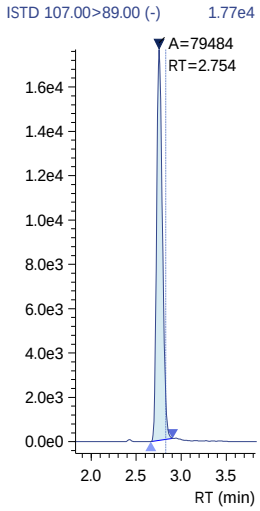
Perchlorate

Conc 9.8714
R#1 20.98 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.0000



Insight Report

Printed at 8/18/2021 10:42:57 AM

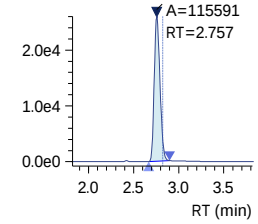
20210802_018

Sample ID: PERCHLORATEICV
Date Acquired: 8/2/2021 4:50:04 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210802\Before\20210802_018.lcd
Vial: 30 | Inj. Volume: 25.0000uL | Tray: 1

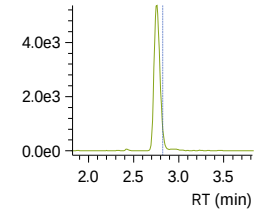
Perchlorate

Conc 9.1275
R#1 20.98 (0.00)

Q 99.00>83.00 (-) 2.61e4



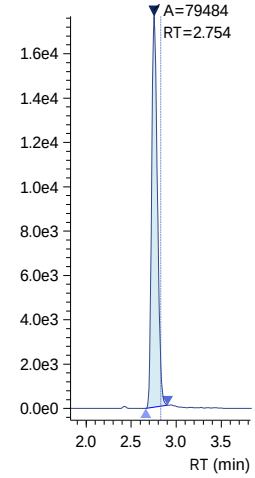
R1 101.00>85.00 (-) 5.37e3



Sodium Perchlorate -18O4_IS

Conc 1.0000

ISTD 107.00>89.00 (-) 1.77e4



20210804

1st Review: Grivera
2nd Review: Kneir

Injection Log
LCMS01 -Shimadzu 8050

ICAL Date: 8/4/2021
Cal. Std. xp: 11/26/2021
ICAL ID: **EC2100057**

Mobile Phases **A:** 0.75% Formic Acid/Water 3100813-08 **B:** MeOH 216350

			File Name	Acquisition Method	Dilution	R	Comments	Date/Time
1	PERCHLORATE1		20210804_014	Perchlorate6850c.lcm	1x	☒	3100812-01	8/4/2021 13:15
2	PERCHLORATE2		20210804_015	Perchlorate6850c.lcm	1x	☒	3100812-02	8/4/2021 13:24
3	PERCHLORATE3		20210804_016	Perchlorate6850c.lcm	1x	☒	3100812-03	8/4/2021 13:32
4	PERCHLORATE4		20210804_017	Perchlorate6850c.lcm	1x	☒	3100812-04	8/4/2021 13:41
5	PERCHLORATE5		20210804_018	Perchlorate6850c.lcm	1x	☒	3100812-05	8/4/2021 13:50
6	PERCHLORATE6		20210804_019	Perchlorate6850c.lcm	1x	☒	3100812-06	8/4/2021 13:58
7	PERCHLORATE7		20210804_020	Perchlorate6850c.lcm	1x	☒	3100812-07	8/4/2021 14:07
8	PERCHLORATE8		20210804_021	Perchlorate6850c.lcm	1x	☒	3100812-08	8/4/2021 14:15
9	PERCHLORATE9		20210804_022	Perchlorate6850c.lcm	1x	☒	3100812-09	8/4/2021 14:24
10	PERCHLORATE10		20210804_023	Perchlorate6850c.lcm	1x	☒	3100813-01	8/4/2021 14:32
11	PERCHLORATEICV		20210804_024	Perchlorate6850c.lcm	1x	☒	3100811-06	8/4/2021 14:41
12	LODV		20210804_025	Perchlorate6850c.lcm	1x	☒		8/4/2021 15:06
13	PERCHLORATE7		20210804_026	Perchlorate6850c.lcm	1x	☒	3100812-07	8/4/2021 15:15
14	E2100824-001X5		20210804_028	Perchlorate6850c.lcm	5x	☒		8/4/2021 15:33
15	E2100825-001X10		20210804_029	Perchlorate6850c.lcm	10x	☒	INST out of range	8/4/2021 15:42
16	E2100825-002X10		20210804_030	Perchlorate6850c.lcm	10x	☒	INST out of range	8/4/2021 15:51
17	E2100825-003X10		20210804_031	Perchlorate6850c.lcm	10x	☒	INST out of range	8/4/2021 15:59
18	E2100825-005X10		20210804_032	Perchlorate6850c.lcm	10x	☒	INST out of range	8/4/2021 16:08
19	E2100825-006X10		20210804_033	Perchlorate6850c.lcm	10x	☒	INST out of range	8/4/2021 16:16
20	E2100825-007X10		20210804_034	Perchlorate6850c.lcm	10x	☒	INST out of range	8/4/2021 16:25
21	E2100825-008X10		20210804_035	Perchlorate6850c.lcm	10x	☒	INST out of range	8/4/2021 16:33
22	E2100831-002X5		20210804_036	Perchlorate6850c.lcm	5x	☒		8/4/2021 16:42
23	PERCHLORATE7		20210804_037	Perchlorate6850c.lcm	1x	☒	3100812-07	8/4/2021 16:50
24	E2100856-001X10		20210804_039	Perchlorate6850c.lcm	10x	☒		8/4/2021 18:18
25	E2100856-002X5		20210804_040	Perchlorate6850c.lcm	5x	☒	INST out of range	8/4/2021 18:27
26	E2100856-004X5		20210804_041	Perchlorate6850c.lcm	5x	☒	INST out of range	8/4/2021 18:35
27	E2100825-001X20		20210804_042	Perchlorate6850c.lcm	20x	☒	INST out of range	8/4/2021 18:44
28	E2100825-002X20		20210804_043	Perchlorate6850c.lcm	20x	☒	INST out of range	8/4/2021 18:52
29	E2100825-003X20		20210804_044	Perchlorate6850c.lcm	20x	☒	INST out of range	8/4/2021 19:01
30	E2100825-006X20		20210804_045	Perchlorate6850c.lcm	20x	☒	No injection	8/4/2021 18:05
31	E2100825-005X20		20210804_045~1	Perchlorate6850c.lcm	20x	☒		8/4/2021 19:09
32	E2100825-006X20		20210804_046	Perchlorate6850c.lcm	20x	☒	INST out of range	8/4/2021 19:18
33	E2100825-007X20		20210804_047	Perchlorate6850c.lcm	20x	☒	INST out of range	8/4/2021 19:26
34	PERCHLORATE7		20210804_048	Perchlorate6850c.lcm	1x	☒	3100812-07	8/4/2021 19:35
35	E2100825-008X20		20210804_049	Perchlorate6850c.lcm	20x	☒	INST out of range	8/4/2021 19:43
37	E2100856-002X20		20210804_051	Perchlorate6850c.lcm	20x	☒	INST out of range	8/4/2021 20:00
38	E2100856-004X20		20210804_052	Perchlorate6850c.lcm	20x	☒	INST out of range	8/4/2021 20:09
39	E2100837-001X10		20210804_053	Perchlorate6850c.lcm	10x	☒		8/4/2021 20:18
40	E2100837-002X10		20210804_054	Perchlorate6850c.lcm	10x	☒		8/4/2021 20:26
41	E2100837-004X10		20210804_055	Perchlorate6850c.lcm	10x	☒		8/4/2021 20:35
42	E2100837-005X10		20210804_056	Perchlorate6850c.lcm	10x	☒		8/4/2021 20:43
43	E2100837-007X10		20210804_057	Perchlorate6850c.lcm	10x	☒		8/4/2021 20:52
44	PERCHLORATE7		20210804_058	Perchlorate6850c.lcm	1x	☒	3100812-07	8/4/2021 21:00
45	E2100841-008		20210804_059	Perchlorate6850c.lcm	1x	☒		8/4/2021 21:09
46	E2100841-009		20210804_060	Perchlorate6850c.lcm	1x	☒		8/4/2021 21:17
47	E2100842-001x2		20210804_061	Perchlorate6850c.lcm	2x	☒	3100812-07	8/4/2021 21:26
48	E2100842-002X10		20210804_062	Perchlorate6850c.lcm	10x	☒		8/4/2021 21:34
49	E2100842-003X10		20210804_063	Perchlorate6850c.lcm	10x	☒		8/4/2021 21:43
50	E2100842-004X10		20210804_064	Perchlorate6850c.lcm	10x	☒		8/4/2021 21:52
51	E2100842-005		20210804_065	Perchlorate6850c.lcm	1x	☒	INST out of range	8/4/2021 22:00
52	E2100842-006X10		20210804_066	Perchlorate6850c.lcm	10x	☒		8/4/2021 22:09
53	PERCHLORATE7		20210804_067	Perchlorate6850c.lcm	1x	☒	3100812-07	8/4/2021 22:17
54	E2100843-001		20210804_068	Perchlorate6850c.lcm	1x	☒	INST out of range	8/4/2021 22:26
55	E2100843-002		20210804_069	Perchlorate6850c.lcm	1x	☒	INST out of range	8/4/2021 22:34
56	E2100843-003		20210804_070	Perchlorate6850c.lcm	1x	☒	INST out of range	8/4/2021 22:43
57	PERCHLORATE7		20210804_071	Perchlorate6850c.lcm	1x	☒	3100812-07	8/4/2021 22:51
58	E2100843-004		20210804_072	Perchlorate6850c.lcm	1x	☒	INST out of range	8/4/2021 23:00
59	E2100843-005		20210804_073	Perchlorate6850c.lcm	1x	☒	INST out of range	8/4/2021 23:08
60	E2100843-006		20210804_074	Perchlorate6850c.lcm	1x	☒	INST out of range	8/4/2021 23:17
61	E2100843-007		20210804_075	Perchlorate6850c.lcm	1x	☒		8/4/2021 23:26
62	E2100843-008		20210804_076	Perchlorate6850c.lcm	1x	☒		8/4/2021 23:34
63	E2100843-009		20210804_077	Perchlorate6850c.lcm	1x	☒	INST out of range	8/4/2021 23:43
64	E2100844-001		20210804_078	Perchlorate6850c.lcm	1x	☒	INST out of range	8/4/2021 23:51
65	E2100844-002		20210804_079	Perchlorate6850c.lcm	1x	☒	INST out of range	8/5/2021 0:00
66	E2100844-003		20210804_080	Perchlorate6850c.lcm	1x	☒	INST out of range	8/5/2021 0:08
67	E2100844-004		20210804_081	Perchlorate6850c.lcm	1x	☒		8/5/2021 0:17

20210804

1st Review: Grivera
2nd Review: Kneir

Injection Log
LCMS01 -Shimadzu 8050

ICAL Date: 8/4/2021
Cal. Std. xp: 11/26/2021
ICAL ID: **EC2100057**

Mobile Phases **A:** 0.75% Formic Acid/Water 3100813-08 **B:** MeOH 216350

			File Name	Acquisition Method	Dilution	R	Comments	Date/Time
68	PERCHLORATE7		20210804_082	Perchlorate6850c.lcm	1x	☒	3100812-07	8/5/2021 0:25
69	E2100844-005		20210804_083	Perchlorate6850c.lcm	1x	☒	INST out of range	8/5/2021 0:34
70	E2100844-006		20210804_084	Perchlorate6850c.lcm	1x	☒	INST out of range	8/5/2021 0:42
71	E2100844-007		20210804_085	Perchlorate6850c.lcm	1x	☒	INST out of range	8/5/2021 0:51
72	E2100844-008		20210804_086	Perchlorate6850c.lcm	1x	☒	INST out of range	8/5/2021 1:00
73	E2100844-009		20210804_087	Perchlorate6850c.lcm	1x	☒	INST out of range	8/5/2021 1:08
74	PERCHLORATE7		20210804_088	Perchlorate6850c.lcm	1x	☒	3100812-07	8/5/2021 1:17

Initial Calibration - Detailed Report

Calibration ID: EC2100057 **Instrument ID:** E-LCMS-01
Column Name: 1

#	Lab Code	Sample Name	File Location	Aquisition Date
01	EC2100057-01	PERCHLORATE1	20210804_014	08/04/2021 13:15
02	EC2100057-02	PERCHLORATE2	20210804_015	08/04/2021 13:24
03	EC2100057-03	PERCHLORATE3	20210804_016	08/04/2021 13:32
04	EC2100057-04	PERCHLORATE4	20210804_017	08/04/2021 13:41
05	EC2100057-05	PERCHLORATE5	20210804_018	08/04/2021 13:50
06	EC2100057-06	PERCHLORATE6	20210804_019	08/04/2021 13:58
07	EC2100057-07	PERCHLORATE7	20210804_020	08/04/2021 14:07
08	EC2100057-08	PERCHLORATE8	20210804_021	08/04/2021 14:15
09	EC2100057-09	PERCHLORATE9	20210804_022	08/04/2021 14:24
10	EC2100057-10	PERCHLORATE10	20210804_023	08/04/2021 14:32

Analyte **Curve Fit** **Weighting**

Perchlorate **Average RF** **RSD = 6.011** **Average RF = 0.1426**

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.1000	0.1626	02	0.5000	0.1438	03	0.7000	0.1497	04	1.0000	0.1384
05	2.0000	0.1454	06	5.0000	0.1412	07	10.0000	0.1378	08	20.0000	0.138
09	30.0000	0.1329	10	50.0000	0.136						

Analyte

Perchlorate

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	0.1000	0.114	14.0	02	0.5000	0.504	0.9	03	0.7000	0.735	5.0
04	1.0000	0.971	-2.9	05	2.0000	2.04	2.0	06	5.0000	4.95	-1.0
07	10.0000	9.66	-3.4	08	20.0000	19.4	-3.2	09	30.0000	28.0	-6.8
10	50.0000	47.7	-4.6								

Initial Calibration Verification Summary Report

Calibration ID:	EC2100057	**Instrument ID:**	E-LCMS-01
Datafile ID:	20210804_024	**Column Name:**	1

Analyte	Lab Code	Type	Curve Fit	True Value	Calc Conc	Units	Result	Criteria
Perchlorate	EC2100057-11	T	Average RF	10	9.593	ng/mL	-4.1	<= 15

Insight Report

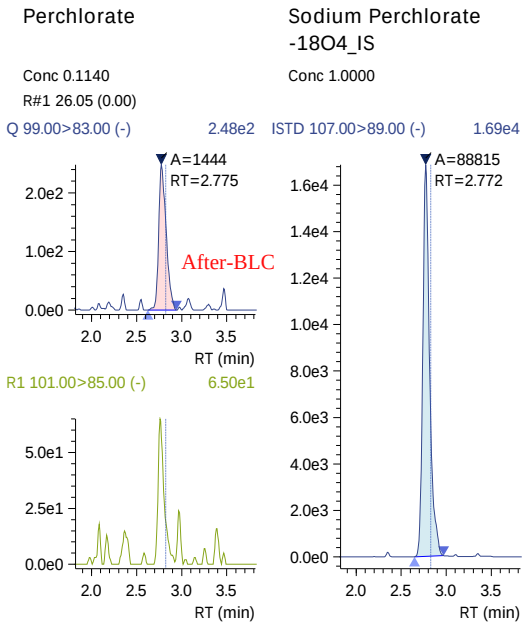
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Method File: I:\LCMS01\DATA\20210804\20210804.lcm
Project File: I:\LCMS01\DATA\20210804\20210804.damlp

20210804_014

Sample ID: PERCHLORATE1
Date Acquired: 8/4/2021 1:15:49 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210804\20210804_014.lcd
Vial: 20 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	M	2.775	1444	88815	1	0.1140	ng/mL	0.1000	26.05
Sodium Perchlorate-18O4 _IS	Auto	2.772	88815	88815	1	1.0000	ng/mL	1.0000	----



Insight Report

Printed at 8/19/2021 11:57:47 AM

Method File: I:\LCMS01\DATA\20210804\20210802.lcm

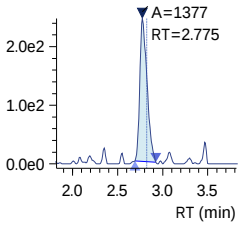
20210804_014

Sample ID: PERCHLORATE1
Date Acquired: 8/4/2021 1:15:49 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210804\Before\20210804_014.lcd
Vial: 20 | Inj. Volume: 25.0000uL | Tray: 1

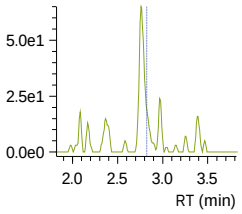
Perchlorate

Conc 0.1060
R#1 27.47 (0.00)

Q 99.00>83.00 (-) 2.48e2



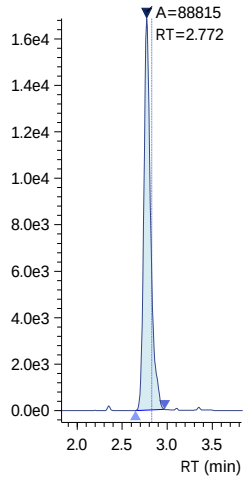
R1 101.00>85.00 (-) 6.50e1



Sodium Perchlorate -18O4_IS

Conc 1.0000

ISTD 107.00>89.00 (-) 1.69e4



Insight Report

Printed at 8/19/2021 11:52:26 AM

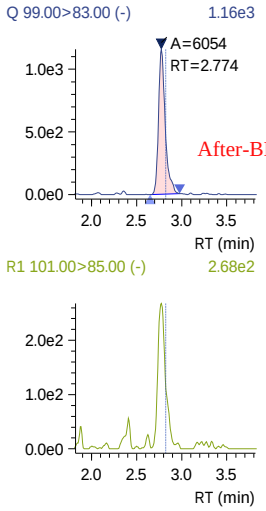
20210804_015

Sample ID: PERCHLORATE2
Date Acquired: 8/4/2021 1:24:24 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210804\20210804_015.lcd
Vial: 21 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	M	2.774	6054	84174	1	0.5044	ng/mL	0.5000	23.28
Sodium Perchlorate-18O4 _IS	Auto	2.772	84174	84174	1	1.0000	ng/mL	1.0000	----

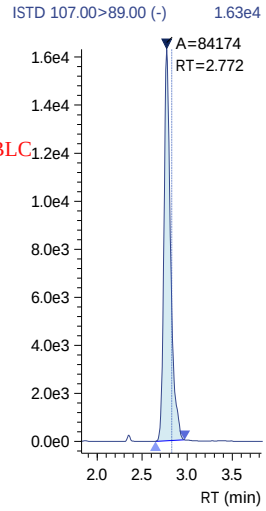
Perchlorate

Conc 0.5044
R#1 23.28 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.0000



Insight Report

Printed at 8/19/2021 11:57:47 AM

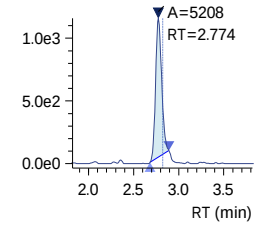
20210804_015

Sample ID: PERCHLORATE2
Date Acquired: 8/4/2021 1:24:24 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210804\Before\20210804_015.lcd
Vial: 21 | Inj. Volume: 25.0000uL | Tray: 1

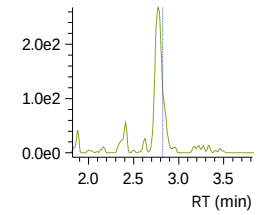
Perchlorate

Conc 0.4232
R#1 23.81 (0.00)

Q 99.00>83.00 (-) 1.16e3



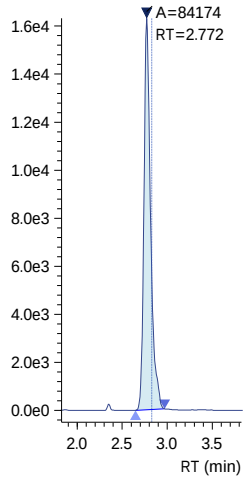
R1 101.00>85.00 (-) 2.68e2



Sodium Perchlorate -18O4_IS

Conc 1.0000

ISTD 107.00>89.00 (-) 1.63e4



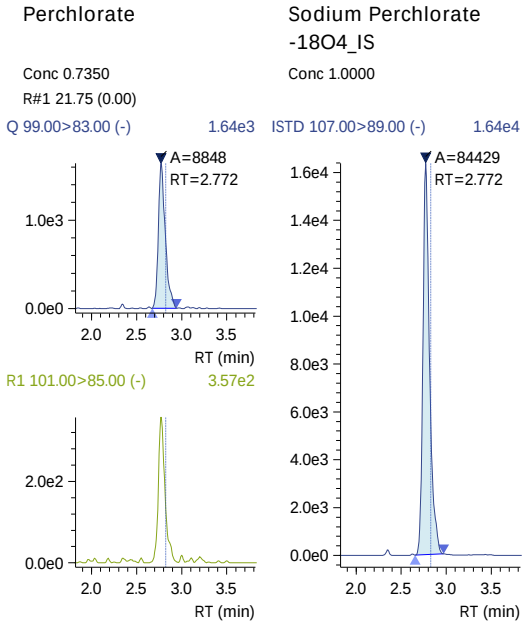
Insight Report

Printed at 8/19/2021 11:52:26 AM

20210804_016

Sample ID: PERCHLORATE3
Date Acquired: 8/4/2021 1:32:57 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210804\20210804_016.lcd
Vial: 22 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.772	8848	84429	1	0.7350	ng/mL	0.7000	21.75
Sodium Perchlorate-18O4 _IS	Auto	2.772	84429	84429	1	1.0000	ng/mL	1.0000	----



Insight Report

Printed at 8/19/2021 11:57:47 AM

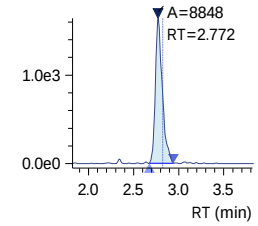
20210804_016

Sample ID: PERCHLORATE3
Date Acquired: 8/4/2021 1:32:57 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210804\Before\20210804_016.lcd
Vial: 22 | Inj. Volume: 25.0000uL | Tray: 1

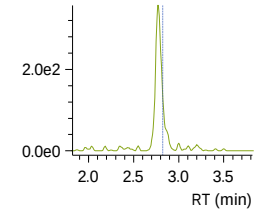
Perchlorate

Conc 0.7169
R#1 21.75 (0.00)

Q 99.00>83.00 (-) 1.64e3



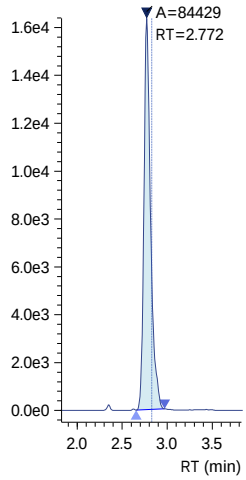
R1 101.00>85.00 (-) 3.57e2



Sodium Perchlorate -18O4_IS

Conc 1.0000

ISTD 107.00>89.00 (-) 1.64e4



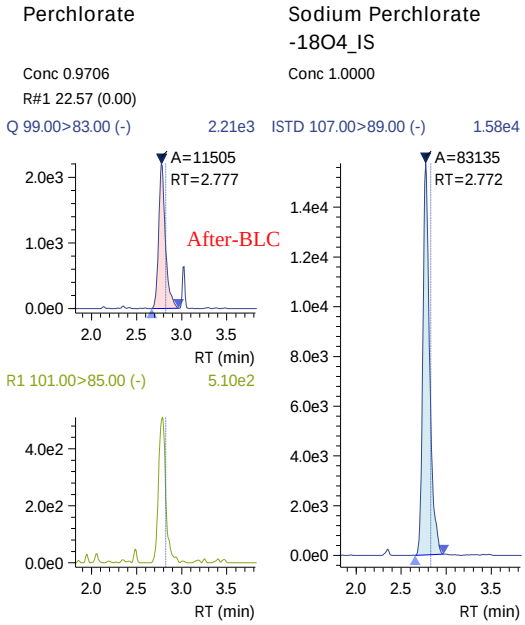
Insight Report

Printed at 8/19/2021 11:52:26 AM

20210804_017

Sample ID: PERCHLORATE4
Date Acquired: 8/4/2021 1:41:28 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210804\20210804_017.lcd
Vial: 23 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	M	2.777	11505	83135	1	0.9706	ng/mL	1.0000	22.57
Sodium Perchlorate-18O4 _IS	Auto	2.772	83135	83135	1	1.0000	ng/mL	1.0000	----



Insight Report

Printed at 8/19/2021 11:57:47 AM

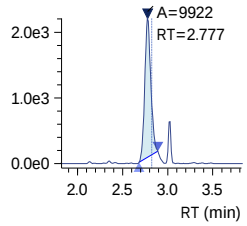
20210804_017

Sample ID: PERCHLORATE4
Date Acquired: 8/4/2021 1:41:28 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210804\Before\20210804_017.lcd
Vial: 23 | Inj. Volume: 25.0000uL | Tray: 1

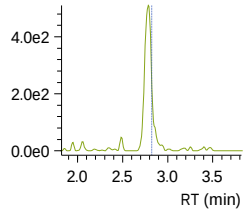
Perchlorate

Conc 0.8164
R#1 22.85 (0.00)

Q 99.00>83.00 (-) 2.21e3



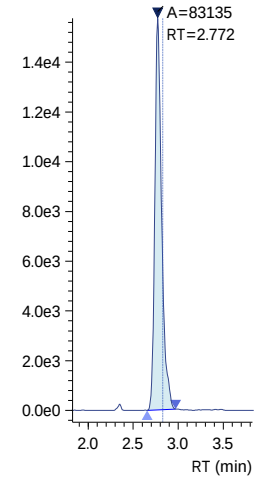
R1 101.00>85.00 (-) 5.10e2



Sodium Perchlorate -18O4_IS

Conc 1.0000

ISTD 107.00>89.00 (-) 1.58e4



Insight Report

Printed at 8/19/2021 11:52:26 AM

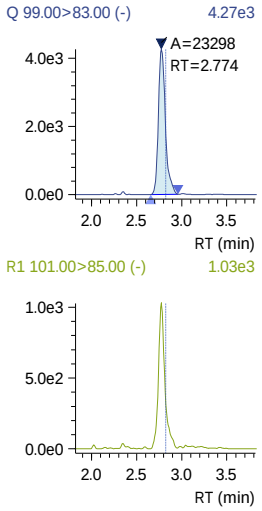
20210804_018

Sample ID: PERCHLORATE5
Date Acquired: 8/4/2021 1:50:00 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210804\20210804_018.lcd
Vial: 24 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.774	23298	80133	1	2.0391	ng/mL	2.0000	23.83
Sodium Perchlorate-18O4 _IS	Auto	2.773	80133	80133	1	1.0000	ng/mL	1.0000	----

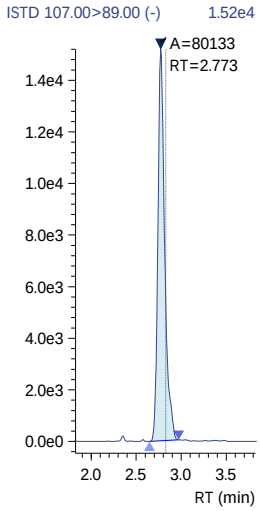
Perchlorate

Conc 2.0391
R#1 23.83 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.0000



Insight Report

Printed at 8/19/2021 11:57:47 AM

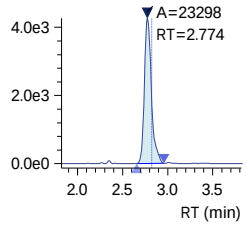
20210804_018

Sample ID: PERCHLORATE5
Date Acquired: 8/4/2021 1:50:00 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210804\Before\20210804_018.lcd
Vial: 24 | Inj. Volume: 25.0000uL | Tray: 1

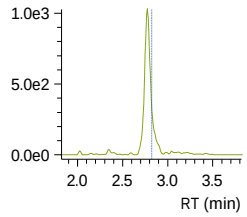
Perchlorate

Conc 1.9889
R#1 23.83 (0.00)

Q 99.00>83.00 (-) 4.27e3



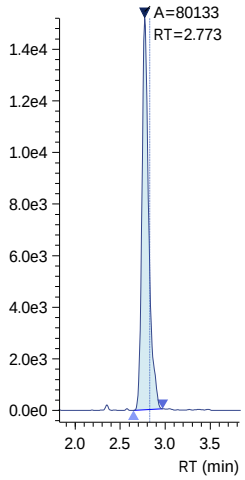
R1 101.00>85.00 (-) 1.03e3



Sodium Perchlorate -18O4_IS

Conc 1.0000

ISTD 107.00>89.00 (-) 1.52e4



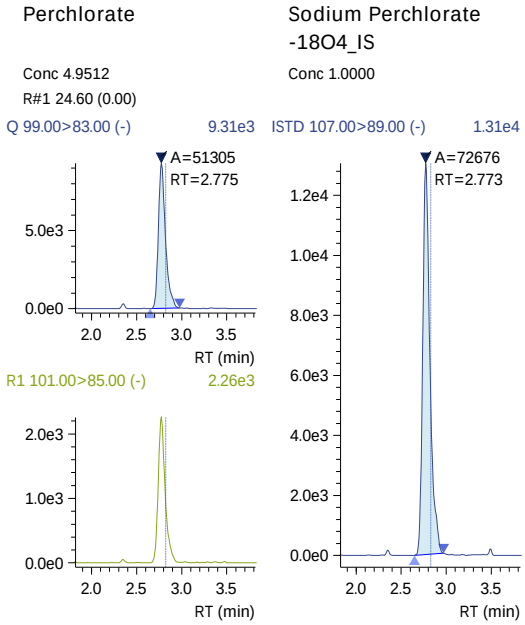
Insight Report

Printed at 8/19/2021 11:52:26 AM

20210804_019

Sample ID: PERCHLORATE6
Date Acquired: 8/4/2021 1:58:34 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210804\20210804_019.lcd
Vial: 25 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.775	51305	72676	1	4.9512	ng/mL	5.0000	24.60
Sodium Perchlorate-18O4 _IS	Auto	2.773	72676	72676	1	1.0000	ng/mL	1.0000	----



Insight Report

Printed at 8/19/2021 11:57:47 AM

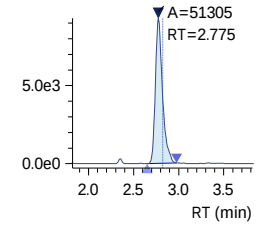
20210804_019

Sample ID: PERCHLORATE6
Date Acquired: 8/4/2021 1:58:34 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210804\Before\20210804_019.lcd
Vial: 25 | Inj. Volume: 25.0000uL | Tray: 1

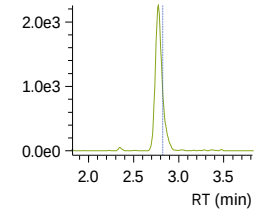
Perchlorate

Conc 4.8291
R#1 24.60 (0.00)

Q 99.00>83.00 (-) 9.31e3



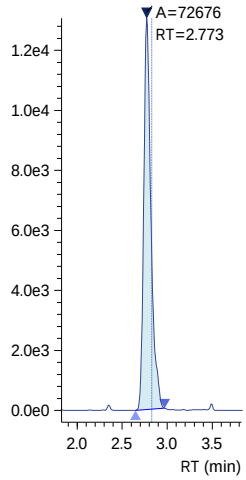
R1 101.00>85.00 (-) 2.26e3



Sodium Perchlorate -18O4_IS

Conc 1.0000

ISTD 107.00>89.00 (-) 1.31e4



Insight Report

Printed at 8/19/2021 11:52:26 AM

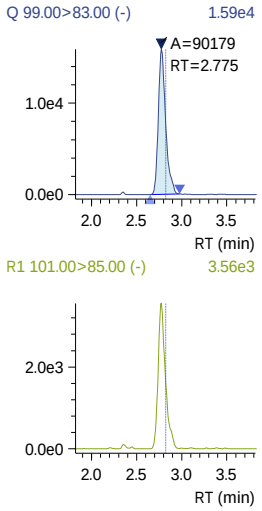
20210804_020

Sample ID: PERCHLORATE7
Date Acquired: 8/4/2021 2:07:05 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210804\20210804_020.lcd
Vial: 26 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.775	90179	65443	1	9.6646	ng/mL	10.0000	22.44
Sodium Perchlorate-18O4 _IS	Auto	2.772	65443	65443	1	1.0000	ng/mL	1.0000	----

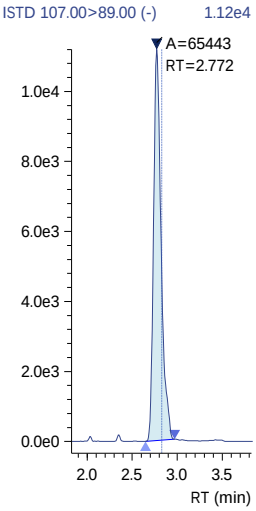
Perchlorate

Conc 9.6646
R#1 22.44 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.0000



Insight Report

Printed at 8/19/2021 11:57:47 AM

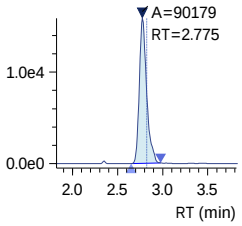
20210804_020

Sample ID: PERCHLORATE7
Date Acquired: 8/4/2021 2:07:05 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210804\Before\20210804_020.lcd
Vial: 26 | Inj. Volume: 25.0000uL | Tray: 1

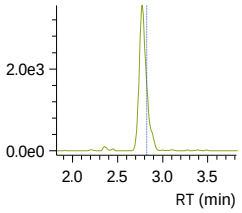
Perchlorate

Conc 9.4264
R#1 22.44 (0.00)

Q 99.00>83.00 (-) 1.59e4



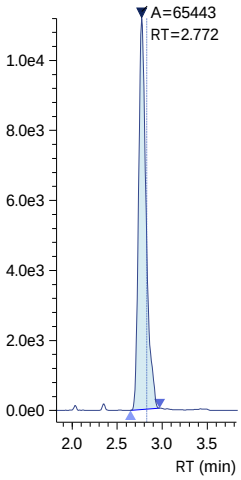
R1 101.00>85.00 (-) 3.56e3



Sodium Perchlorate -18O4_IS

Conc 1.0000

ISTD 107.00>89.00 (-) 1.12e4



Insight Report

Printed at 8/19/2021 11:52:26 AM

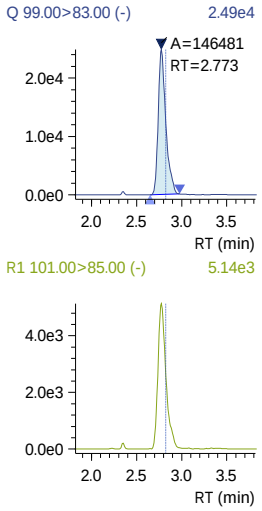
20210804_021

Sample ID: PERCHLORATE8
Date Acquired: 8/4/2021 2:15:40 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210804\20210804_021.lcd
Vial: 27 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.773	146481	53059	1	19.3627	ng/mL	20.0000	20.71
Sodium Perchlorate-18O4_IS	Auto	2.770	53059	53059	1	1.0000	ng/mL	1.0000	----

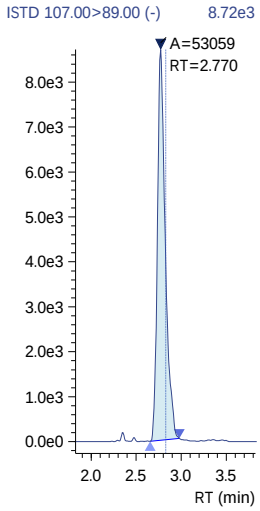
Perchlorate

Conc 19.3627
R#1 20.71 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.0000



Insight Report

Printed at 8/19/2021 11:57:47 AM

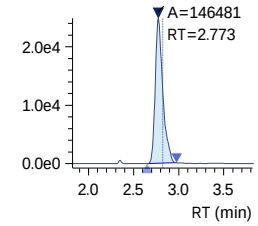
20210804_021

Sample ID: PERCHLORATE8
Date Acquired: 8/4/2021 2:15:40 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210804\Before\20210804_021.lcd
Vial: 27 | Inj. Volume: 25.0000uL | Tray: 1

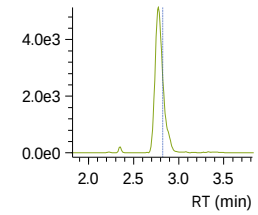
Perchlorate

Conc 18.8854
R#1 20.71 (0.00)

Q 99.00>83.00 (-) 2.49e4



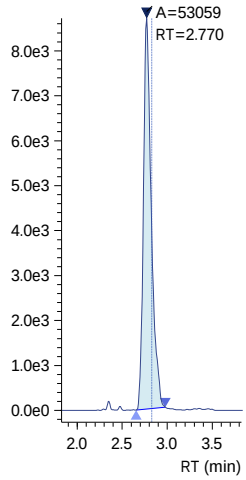
R1 101.00>85.00 (-) 5.14e3



Sodium Perchlorate -18O4_IS

Conc 1.0000

ISTD 107.00>89.00 (-) 8.72e3



Insight Report

Printed at 8/19/2021 11:52:26 AM

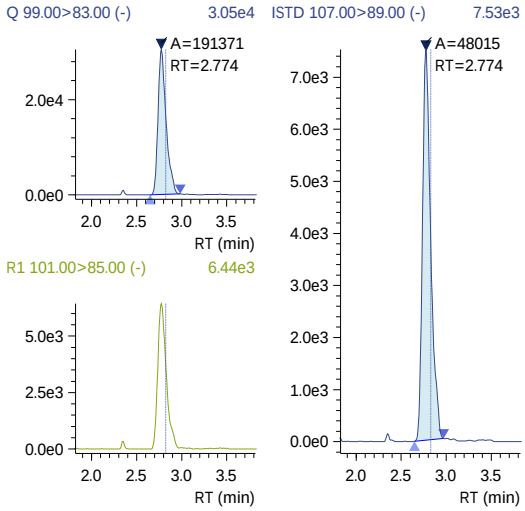
20210804_022

Sample ID: PERCHLORATE9
Date Acquired: 8/4/2021 2:24:11 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210804\20210804_022.lcd
Vial: 28 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.774	191371	48015	1	27.9541	ng/mL	30.0000	21.22
Sodium Perchlorate-18O4_IS	Auto	2.774	48015	48015	1	1.0000	ng/mL	1.0000	----

Perchlorate

Conc 27.9541
R#1 21.22 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.0000

Insight Report

Printed at 8/19/2021 11:57:47 AM

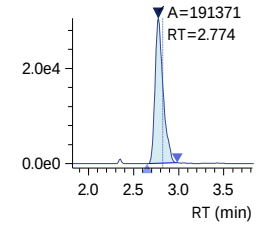
20210804_022

Sample ID: PERCHLORATE9
Date Acquired: 8/4/2021 2:24:11 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210804\Before\20210804_022.lcd
Vial: 28 | Inj. Volume: 25.0000uL | Tray: 1

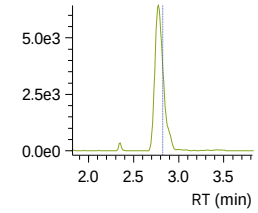
Perchlorate

Conc 27.2649
R#1 21.22 (0.00)

Q 99.00>83.00 (-) 3.05e4



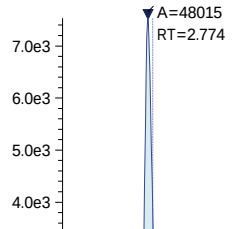
R1 101.00>85.00 (-) 6.44e3



Sodium Perchlorate -18O4_IS

Conc 1.0000

ISTD 107.00>89.00 (-) 7.53e3



Insight Report

Printed at 8/19/2021 11:52:26 AM

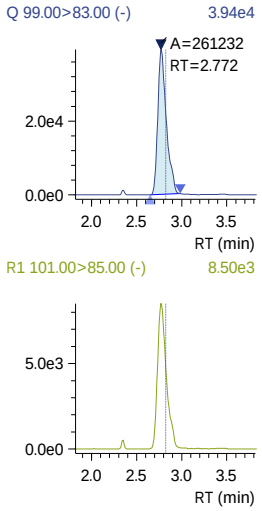
20210804_023

Sample ID: PERCHLORATE10
Date Acquired: 8/4/2021 2:32:42 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210804\20210804_023.lcd
Vial: 29 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.772	261232	38409	1	47.7026	ng/mL	50.0000	21.73
Sodium Perchlorate-18O4_IS	Auto	2.768	38409	38409	1	1.0000	ng/mL	1.0000	----

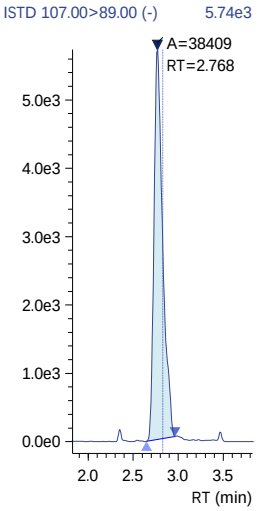
Perchlorate

Conc 47.7026
R#1 21.73 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.0000



Insight Report

Printed at 8/19/2021 11:57:47 AM

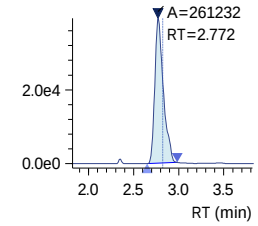
20210804_023

Sample ID: PERCHLORATE10
Date Acquired: 8/4/2021 2:32:42 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210804\Before\20210804_023.lcd
Vial: 29 | Inj. Volume: 25.0000uL | Tray: 1

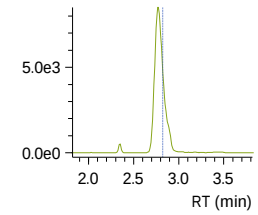
Perchlorate

Conc 46.5266
R#1 21.73 (0.00)

Q 99.00>83.00 (-) 3.94e4



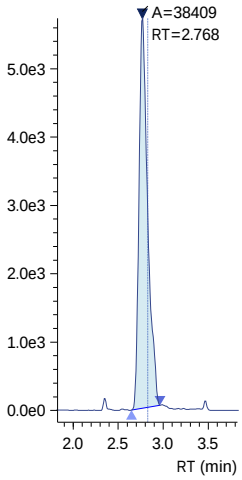
R1 101.00>85.00 (-) 8.50e3



Sodium Perchlorate -18O4_IS

Conc 1.0000

ISTD 107.00>89.00 (-) 5.74e3



Insight Report

Printed at 8/19/2021 11:52:26 AM

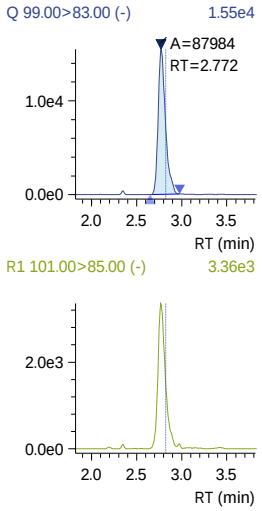
20210804_024

Sample ID: PERCHLORATEICV
Date Acquired: 8/4/2021 2:41:14 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210804\20210804_024.lcd
Vial: 30 | Inj. Volume: 25.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.	Ref 1 Actual Ratio
Perchlorate	Auto	2.772	87984	64329	1	9.5927	ng/mL	10.0000	21.51
Sodium Perchlorate-18O4 _IS	Auto	2.771	64329	64329	1	1.0000	ng/mL	1.0000	----

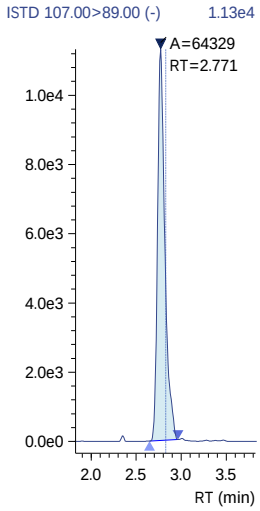
Perchlorate

Conc 9.5927
R#1 21.51 (0.00)



Sodium Perchlorate -18O4_IS

Conc 1.0000



Insight Report

Printed at 8/19/2021 11:57:47 AM

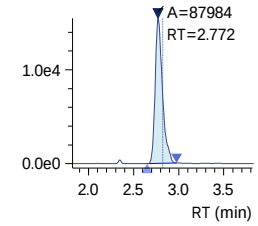
20210804_024

Sample ID: PERCHLORATEICV
Date Acquired: 8/4/2021 2:41:14 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20210804\Before\20210804_024.lcd
Vial: 30 | Inj. Volume: 25.0000uL | Tray: 1

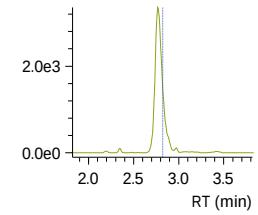
Perchlorate

Conc 9.3562
R#1 21.51 (0.00)

Q 99.00>83.00 (-) 1.55e4



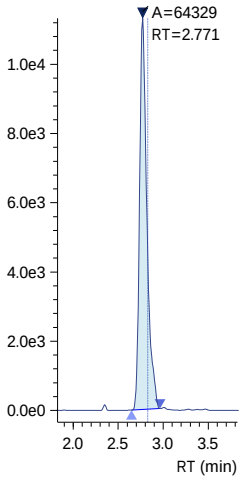
R1 101.00>85.00 (-) 3.36e3



Sodium Perchlorate -18O4_IS

Conc 1.0000

ISTD 107.00>89.00 (-) 1.13e4



Chromatograms and Selected Ion Monitoring

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 320, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

20210803

1st Review: Grivera
2nd Review: Kneir

Injection Log
LCMS01 -Shimadzu 8050

ICAL Date: 8/2/2021
Cal. Std. xp: 11/26/2021
ICAL ID: **EC2100056**

Mobile Phases **A:** 0.75% Formic Acid/Water 3100813-08 **B:** MeOH 216350

			File Name	Acquisition Method	Dilution	R	Comments	Date/Time
1	null		20210803_001	Perchlorate6850c.lcm	1x	☒		8/3/2021 9:26
2	null		20210803_002	Perchlorate6850c.lcm	1x	☒		8/3/2021 9:31
3	IB		20210803_003	Perchlorate6850c.lcm	1x	☒		8/3/2021 9:37
4	IB		20210803_004	Perchlorate6850c.lcm	1x	☒		8/3/2021 9:46
5	IB		20210803_005	Perchlorate6850c.lcm	1x	☒		8/3/2021 9:54
6	IB		20210803_006	Perchlorate6850c.lcm	1x	☒		8/3/2021 10:03
7	LODV		20210803_007	Perchlorate6850c.lcm	1x	☒		8/3/2021 10:11
8	PERCHLORATE7		20210803_008	Perchlorate6850c.lcm	1x	☒	3100812-07	8/3/2021 10:20
9	EQ2100475-01		20210803_009	Perchlorate6850c.lcm	1x	☒		8/3/2021 10:28
10	EQ2100475-02		20210803_010	Perchlorate6850c.lcm	1x	☒		8/3/2021 10:37
11	EQ2100475-03		20210803_011	Perchlorate6850c.lcm	1x	☒		8/3/2021 10:45
12	EQ2100475-04		20210803_012	Perchlorate6850c.lcm	1x	☒		8/3/2021 10:54
13	EQ2100475-05		20210803_013	Perchlorate6850c.lcm	1x	☒		8/3/2021 11:03
14	E2100838-001DNU-INST		20210803_014	Perchlorate6850c.lcm	1x	☒	INST out of range	8/3/2021 11:11
15	E2100838-002DNU-INST		20210803_015	Perchlorate6850c.lcm	1x	☒	INST out of range	8/3/2021 11:20
16	E2100838-003DNU-INST		20210803_016	Perchlorate6850c.lcm	1x	☒	INST out of range	8/3/2021 11:28
17	E2100838-004DNU-INST		20210803_017	Perchlorate6850c.lcm	1x	☒	INST out of range	8/3/2021 11:37
18	E2100838-005DNU-INST		20210803_018	Perchlorate6850c.lcm	1x	☒	INST out of range	8/3/2021 11:45
19	PERCHLORATE7		20210803_019	Perchlorate6850c.lcm	1x	☒	3100812-07	8/3/2021 11:54
23	E2100813-006X5		20210803_023	Perchlorate6850c.lcm	5x	☒		8/3/2021 12:28
24	E2100813-007X5		20210803_024	Perchlorate6850c.lcm	5x	☒		8/3/2021 12:36
25	PERCHLORATE7		20210803_025	Perchlorate6850c.lcm	1x	☒	3100812-07	8/3/2021 14:29
26	E2100814-003X2		20210803_026	Perchlorate6850c.lcm	2x	☒		8/3/2021 14:38
27	E2100814-005X2DNU-INST		20210803_027	Perchlorate6850c.lcm	2x	☒	INST out of range	8/3/2021 14:47
28	E2100813-005X2DNU-INST		20210803_028	Perchlorate6850c.lcm	2x	☒	INST out of range	8/3/2021 14:55
29	IB		20210803_029	Perchlorate6850c.lcm	1x	☒		8/3/2021 15:04
31	E2100838-006DNU-INST		20210803_031	Perchlorate6850c.lcm	1x	☒	INST out of range	8/3/2021 15:21
32	E2100845-001DNU-INST		20210803_032	Perchlorate6850c.lcm	1x	☒	INST out of range	8/3/2021 15:29
33	E2100845-002DNU-INST		20210803_033	Perchlorate6850c.lcm	1x	☒	INST out of range	8/3/2021 15:38
34	E2100814-005X5		20210803_034	Perchlorate6850c.lcm	5x	☒		8/3/2021 15:47
35	PERCHLORATE7		20210803_035	Perchlorate6850c.lcm	1x	☒	3100812-07	8/3/2021 15:55
36	E2100845-003		20210803_036	Perchlorate6850c.lcm	1x	☒		8/3/2021 16:04
37	E2100845-004DNU-INST		20210803_037	Perchlorate6850c.lcm	1x	☒	INST out of range	8/3/2021 16:12
38	PERCHLORATE7		20210803_038	Perchlorate6850c.lcm	1x	☒	3100812-07	8/3/2021 16:21
39	E2100845-005DNU-INST		20210803_039	Perchlorate6850c.lcm	1x	☒	INST out of range	8/3/2021 16:29
40	E2100845-006DNU-INST		20210803_040	Perchlorate6850c.lcm	1x	☒	INST out of range	8/3/2021 16:38
41	E2100845-007DNU-INST		20210803_041	Perchlorate6850c.lcm	1x	☒	INST out of range	8/3/2021 16:47
42	E2100813-005X5DNU-INST		20210803_042	Perchlorate6850c.lcm	5x	☒	INST out of range	8/3/2021 16:55
43	E2100845-008DNU-INST		20210803_043	Perchlorate6850c.lcm	1x	☒	INST out of range	8/3/2021 17:04
44	E2100845-009DNU-INST		20210803_044	Perchlorate6850c.lcm	1x	☒	INST out of range	8/3/2021 17:12
45	E2100845-010DNU-INST		20210803_045	Perchlorate6850c.lcm	1x	☒		8/3/2021 17:21
46	IB		20210803_046	Perchlorate6850c.lcm	1x	☒		8/3/2021 18:00
47	PERCHLORATE7		20210803_047	Perchlorate6850c.lcm	1x	☒	3100812-07	8/3/2021 18:09
48	E2100813-005X10		20210803_048	Perchlorate6850c.lcm	10x	☒		8/3/2021 18:17
49	E2100824-001X5DNU-INST		20210803_049	Perchlorate6850c.lcm	5x	☒	INST out of range	8/3/2021 18:26
50	E2100824-002X5		20210803_050	Perchlorate6850c.lcm	5x	☒		8/3/2021 18:34
51	E2100824-003X10		20210803_051	Perchlorate6850c.lcm	10x	☒		8/3/2021 18:43
52	E2100825-001X10DNU-INST		20210803_052	Perchlorate6850c.lcm	10x	☒	INST out of range	8/3/2021 18:52
53	E2100825-002X10DNU-INST		20210803_053	Perchlorate6850c.lcm	10x	☒	INST out of range	8/3/2021 19:00
54	E2100825-003X10DNU-INST		20210803_054	Perchlorate6850c.lcm	10x	☒	INST out of range	8/3/2021 19:09
55	E2100825-005X10DNU-INST		20210803_055	Perchlorate6850c.lcm	10x	☒	INST out of range	8/3/2021 19:17
56	E2100825-006X10DNU-INST		20210803_056	Perchlorate6850c.lcm	10x	☒	INST out of range	8/3/2021 19:26
57	E2100825-007X10DNU-INST		20210803_057	Perchlorate6850c.lcm	10x	☒	INST out of range	8/3/2021 19:34
58	PERCHLORATE7		20210803_058	Perchlorate6850c.lcm	1x	☒	3100812-07	8/3/2021 19:43
59	E2100825-008X10DNU-INST		20210803_059	Perchlorate6850c.lcm	10x	☒	INST out of range	8/3/2021 19:51
60	E2100831-002X5DNU-INST		20210803_060	Perchlorate6850c.lcm	5x	☒	INST out of range	8/3/2021 20:00
61	E2100856-001X10DNU-INST		20210803_061	Perchlorate6850c.lcm	10x	☒	INST out of range	8/3/2021 20:08
62	E2100856-002X5DNU-INST		20210803_062	Perchlorate6850c.lcm	5x	☒	INST out of range	8/3/2021 20:17
63	E2100856-004X5DNU-INST		20210803_063	Perchlorate6850c.lcm	5x	☒	INST out of range	8/3/2021 20:25
64	E2100837-001X5DNU-INST		20210803_064	Perchlorate6850c.lcm	5x	☒	INST out of range	8/3/2021 20:34
65	E2100837-002X2DNU-INST		20210803_065	Perchlorate6850c.lcm	2x	☒	INST out of range	8/3/2021 20:43
66	E2100837-004X2DNU-INST		20210803_066	Perchlorate6850c.lcm	2x	☒	INST out of range	8/3/2021 20:51
67	E2100837-005X2DNU-INST		20210803_067	Perchlorate6850c.lcm	2x	☒	INST out of range	8/3/2021 21:00
68	E2100837-007X5DNU-INST		20210803_068	Perchlorate6850c.lcm	5x	☒	INST out of range	8/3/2021 21:08
69	PERCHLORATE7		20210803_069	Perchlorate6850c.lcm	1x	☒	3100812-07	8/3/2021 21:17
70	E2100845-011DNU-INST		20210803_070	Perchlorate6850c.lcm	1x	☒	INST out of range	8/3/2021 21:25
71	E2100845-012DNU-INST		20210803_071	Perchlorate6850c.lcm	1x	☒	INST out of range	8/3/2021 21:34
72	PERCHLORATE7		20210803_072	Perchlorate6850c.lcm	1x	☒	3100812-07	8/3/2021 21:42
73	EQ2100477-01		20210803_073	Perchlorate6850c.lcm	1x	☒		8/3/2021 21:51
74	EQ2100477-02DNU-INST		20210803_074	Perchlorate6850c.lcm	1x	☒	INST out of range	8/3/2021 22:00
75	EQ2100477-03		20210803_075	Perchlorate6850c.lcm	1x	☒		8/3/2021 22:08
76	EQ2100477-04		20210803_076	Perchlorate6850c.lcm	1x	☒		8/3/2021 22:17
77	EQ2100477-05		20210803_077	Perchlorate6850c.lcm	1x	☒		8/3/2021 22:25

20210803

1st Review: Grivera
2nd Review: Kneir

Injection Log
LCMS01 -Shimadzu 8050

ICAL Date: 8/2/2021
Cal. Std. xp: 11/26/2021
ICAL ID: **EC2100056**

Mobile Phases **A:** 0.75% Formic Acid/Water 3100813-08 **B:** MeOH 216350

			File Name	Acquisition Method	Dilution	R	Comments	Date/Time
78	EQ2100477-06		20210803_078	Perchlorate6850c.lcm	1x	☒		8/3/2021 22:34
79	EQ2100477-07		20210803_079	Perchlorate6850c.lcm	1x	☒		8/3/2021 22:42
80	E2100841-001		20210803_080	Perchlorate6850c.lcm	1x	☒		8/3/2021 22:51
81	E2100841-002		20210803_081	Perchlorate6850c.lcm	1x	☒		8/3/2021 23:00
82	E2100841-003		20210803_082	Perchlorate6850c.lcm	1x	☒		8/3/2021 23:08
83	PERCHLORATE7		20210803_083	Perchlorate6850c.lcm	1x	☒	3100812-07	8/3/2021 23:17
84	E2100841-004		20210803_084	Perchlorate6850c.lcm	1x	☒		8/3/2021 23:25
85	E2100841-005		20210803_085	Perchlorate6850c.lcm	1x	☒		8/3/2021 23:34
86	E2100841-006		20210803_086	Perchlorate6850c.lcm	1x	☒		8/3/2021 23:42
87	E2100841-007		20210803_087	Perchlorate6850c.lcm	1x	☒		8/3/2021 23:51
88	E2100841-008DNU-INST		20210803_088	Perchlorate6850c.lcm	1x	☒	INST out of range	8/3/2021 23:59
89	E2100841-009DNU-INST		20210803_089	Perchlorate6850c.lcm	1x	☒	INST out of range	8/4/2021 0:08
90	E2100842-001DNU-INST		20210803_090	Perchlorate6850c.lcm	1x	☒	INST out of range	8/4/2021 0:17
91	E2100842-002DNU-INST		20210803_091	Perchlorate6850c.lcm	1x	☒	INST out of range	8/4/2021 0:25
92	E2100842-003DNU-INST		20210803_092	Perchlorate6850c.lcm	1x	☒	INST out of range	8/4/2021 0:34
93	PERCHLORATE7		20210803_093	Perchlorate6850c.lcm	1x	☒	3100812-07	8/4/2021 0:42
94	E2100842-004DNU-INST		20210803_094	Perchlorate6850c.lcm	1x	☒	INST out of range	8/4/2021 0:51
95	E2100842-005DNU-INST		20210803_095	Perchlorate6850c.lcm	1x	☒	INST out of range	8/4/2021 0:59
96	E2100842-006DNU-INST		20210803_096	Perchlorate6850c.lcm	1x	☒	INST out of range	8/4/2021 1:08
97	E2100891-007		20210803_097	Perchlorate6850c.lcm	1x	☒		8/4/2021 1:16
98	E2100891-008		20210803_098	Perchlorate6850c.lcm	1x	☒		8/4/2021 1:25
99	PERCHLORATE7		20210803_099	Perchlorate6850c.lcm	1x	☒	3100812-07	8/4/2021 1:34

20210805

1st Review: Grivera
2nd Review: Kneir

Injection Log
LCMS01 -Shimadzu 8050

ICAL Date: 8/4/2021
Cal. Std. xp: 11/26/2021
ICAL ID: **EC2100057**

Mobile Phases **A:** 0.75% Formic Acid/Water 3100813-08 **B:** MeOH 216350

			File Name	Acquisition Method	Dilution	R	Comments	Date/Time
1	null		20210805_001	Perchlorate6850c.lcm	1x	☒		8/5/2021 9:42
2	null		20210805_002	Perchlorate6850c.lcm	1x	☒		8/5/2021 9:47
3	IB		20210805_003	Perchlorate6850c.lcm	1x	☒		8/5/2021 9:53
4	IB		20210805_004	Perchlorate6850c.lcm	1x	☒		8/5/2021 10:02
5	PERCHLORATE7		20210805_006	Perchlorate6850c.lcm	1x	☒	3100812-07	8/5/2021 10:19
6	LODV		20210805_007	Perchlorate6850c.lcm	1x	☒		8/5/2021 10:27
7	E2100825-002X2		20210805_015	Perchlorate6850c.lcm	2x	☒	Used carbon cleanup	8/5/2021 12:12
8	PERCHLORATE7		20210805_017	Perchlorate6850c.lcm	1x	☒	3100812-07	8/5/2021 12:29
9	E2100825-006X10		20210805_022	Perchlorate6850c.lcm	10x	☒	Used carbon cleanup	8/5/2021 13:11
10	E2100825-007X10		20210805_023	Perchlorate6850c.lcm	10x	☒	Used carbon cleanup	8/5/2021 13:20
11	E2100825-008X10		20210805_024	Perchlorate6850c.lcm	10x	☒	Used carbon cleanup	8/5/2021 13:28
12	PERCHLORATE7		20210805_025	Perchlorate6850c.lcm	1x	☒	3100812-07	8/5/2021 13:38
13	E2100825-001X10		20210805_026	Perchlorate6850c.lcm	10x	☒	Used carbon cleanup	8/5/2021 13:51
14	E2100825-005X10		20210805_027	Perchlorate6850c.lcm	10x	☒	Used carbon cleanup	8/5/2021 14:00
15	EQ2100477-02		20210805_029	Perchlorate6850c.lcm	1x	☒		8/5/2021 14:17
16	E2100842-005X2		20210805_030	Perchlorate6850c.lcm	2x	☒		8/5/2021 14:26
17	E2100825-003X10		20210805_031	Perchlorate6850c.lcm	10x	☒	Used carbon cleanup	8/5/2021 14:35
18	E2100856-002X5		20210805_032	Perchlorate6850c.lcm	5x	☒	Noticed settled sediment -reanalyzed sample	8/5/2021 14:43
19	E2100856-004X5		20210805_033	Perchlorate6850c.lcm	5x	☒	Noticed settled sediment -reanalyzed sample	8/5/2021 14:52
20	EQ2100458-04X2		20210805_034	Perchlorate6850c.lcm	2x	☒	Used carbon cleanup	8/5/2021 15:32
21	EQ2100458-05X2		20210805_035	Perchlorate6850c.lcm	2x	☒	Used carbon cleanup	8/5/2021 15:50
22	PERCHLORATE7		20210805_036	Perchlorate6850c.lcm	1x	☒	3100812-07	8/5/2021 15:58
23								

20210818

1st Review: Grivera
2nd Review: Kneir

Injection Log
LCMS01 -Shimadzu 8050

ICAL Date: 8/4/2021
Cal. Std. xp: 11/26/2021
ICAL ID: **EC2100057**

Mobile Phases **A:** 0.75% Formic Acid/Water 3100814-01 **B:** MeOH 216350

			File Name	Acquisition Method	Dilution	R	Comments	Date/Time
1	null		20210818_001	Perchlorate6850c.lcm	1x	☒		8/18/2021 9:12
2	null		20210818_002	Perchlorate6850c.lcm	1x	☒		8/18/2021 9:20
3	IB		20210818_003	Perchlorate6850c.lcm	1x	☒		8/18/2021 9:26
4	IB		20210818_004	Perchlorate6850c.lcm	1x	☒		8/18/2021 9:34
5	IB		20210818_005	Perchlorate6850c.lcm	1x	☒		8/18/2021 9:43
6	ICS		20210818_006	Perchlorate6850c.lcm	1x	☒		8/18/2021 9:51
7	LODV		20210818_007	Perchlorate6850c.lcm	1x	☒		8/18/2021 10:00
8	PERCHLORATE7		20210818_008	Perchlorate6850c.lcm	1x	☒	3100812-07	8/18/2021 10:26
9	E2100887-003X10		20210818_014	Perchlorate6850c.lcm	10x	☒		8/18/2021 11:21
10	PERCHLORATE7		20210818_019	Perchlorate6850c.lcm	1x	☒	3100812-07	8/18/2021 12:04
11	E2100891-006X10		20210818_025	Perchlorate6850c.lcm	10x	☒		8/18/2021 12:55
12	E2100891-002X20		20210818_028	Perchlorate6850c.lcm	20x	☒		8/18/2021 13:21
13	PERCHLORATE7		20210818_030	Perchlorate6850c.lcm	1x	☒	3100812-07	8/18/2021 13:38
14	E2100891-003X10		20210818_035	Perchlorate6850c.lcm	10x	☒		8/18/2021 14:23
15	PERCHLORATE7		20210818_041	Perchlorate6850c.lcm	1x	☒	3100812-07	8/18/2021 15:26
16	E2100891-004x20		20210818_042	Perchlorate6850c.lcm	20x	☒		8/18/2021 15:43
17	E2100891-001X40		20210818_043	Perchlorate6850c.lcm	40x	☒		8/18/2021 16:02
18	E2100891-005x20		20210818_044	Perchlorate6850c.lcm	20x	☒		8/18/2021 16:18
19	E2100887-005X20		20210818_045	Perchlorate6850c.lcm	20x	☒		8/18/2021 17:00
20	PERCHLORATE7		20210818_046	Perchlorate6850c.lcm	1x	☒	3100812-07	8/18/2021 17:08
21	EQ2100525-01		20210818_047	Perchlorate6850c.lcm	1x	☒		8/18/2021 17:17
22	EQ2100525-02		20210818_048	Perchlorate6850c.lcm	1x	☒		8/18/2021 17:25
23	EQ2100525-03		20210818_049	Perchlorate6850c.lcm	1x	☒		8/18/2021 17:34
24	E2100915-001		20210818_050	Perchlorate6850c.lcm	1x	☒	INST out of range	8/18/2021 17:43
25	PERCHLORATE7		20210818_051	Perchlorate6850c.lcm	1x	☒	3100812-07	8/18/2021 17:51
26	E2100915-001X20		20210818_052	Perchlorate6850c.lcm	20x	☒		8/18/2021 18:12
27	PERCHLORATE7		20210818_053	Perchlorate6850c.lcm	1x	☒	3100812-07	8/18/2021 18:20
28								
29								
30								

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS21071465

Service Request: E2100891
Date Analyzed: 8/ 3/21

Continuing Calibration Verification Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
File ID: I:\LCMS01\DATA\20210803\20210803_008

Calibration Date: 8/2/21
Calibration ID: EC2100056
Analysis Lot: 733599
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	9.45	0.1473	0.1392	-5.5	NA	± 15 %	Average RF

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS21071465

Service Request: E2100891
Date Analyzed: 8/ 3/21

Continuing Calibration Verification Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
File ID: I:\LCMS01\DATA\20210803\20210803_019

Calibration Date: 8/2/21
Calibration ID: EC2100056
Analysis Lot: 733599
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	9.60	0.1473	0.1415	-4.0	NA	± 15 %	Average RF

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS21071465

Service Request: E2100891
Date Analyzed: 8/ 3/21

Continuing Calibration Verification Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
File ID: I:\LCMS01\DATA\20210803\20210803_072

Calibration Date: 8/2/21
Calibration ID: EC2100056
Analysis Lot: 733599
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	9.74	0.1473	0.1435	-2.6	NA	± 15 %	Average RF

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS21071465

Service Request: E2100891
Date Analyzed: 8/ 3/21

Continuing Calibration Verification Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
File ID: I:\LCMS01\DATA\20210803\20210803_083

Calibration Date: 8/2/21
Calibration ID: EC2100056
Analysis Lot: 733599
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	9.76	0.1473	0.1438	-2.4	NA	± 15 %	Average RF

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS21071465

Service Request: E2100891
Date Analyzed: 8/ 4/21

Continuing Calibration Verification Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
File ID: I:\LCMS01\DATA\20210803\20210803_093

Calibration Date: 8/2/21
Calibration ID: EC2100056
Analysis Lot: 733599
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	9.58	0.1473	0.1411	-4.2	NA	± 15 %	Average RF

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS21071465

Service Request: E2100891
Date Analyzed: 8/ 4/21

Continuing Calibration Verification Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
File ID: I:\LCMS01\DATA\20210803\20210803_099

Calibration Date: 8/2/21
Calibration ID: EC2100056
Analysis Lot: 733599
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	9.65	0.1473	0.1422	-3.5	NA	± 15 %	Average RF

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS21071465

Service Request: E2100891
Date Analyzed: 8/ 5/21

Continuing Calibration Verification Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
File ID: I:\LCMS01\DATA\20210805\20210805_025

Calibration Date: 8/4/21
Calibration ID: EC2100057
Analysis Lot: 733725
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	9.36	0.1426	0.1334	-6.4	NA	± 15 %	Average RF

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS21071465

Service Request: E2100891
Date Analyzed: 8/ 5/21

Continuing Calibration Verification Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
File ID: I:\LCMS01\DATA\20210805\20210805_036

Calibration Date: 8/4/21
Calibration ID: EC2100057
Analysis Lot: 733725
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	9.54	0.1426	0.1360	-4.6	NA	± 15 %	Average RF

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2100891
Project:	HS21071465	**Date Analyzed:**	8/18/21

Continuing Calibration Verification Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method:	6850	**Calibration Date:**	8/4/21
File ID:	I:\LCMS01\DATA\20210818\20210818_008	**Calibration ID:**	EC2100057
		Analysis Lot:	735470
		Units:	ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	8.52	0.1426	0.1215	-14.8	NA	± 15 %	Average RF

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS21071465

Service Request: E2100891
Date Analyzed: 8/18/21

Continuing Calibration Verification Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
File ID: I:\LCMS01\DATA\20210818\20210818_019

Calibration Date: 8/4/21
Calibration ID: EC2100057
Analysis Lot: 735470
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	8.51	0.1426	0.1213	-14.9	NA	± 15 %	Average RF

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2100891
Project:	HS21071465	**Date Analyzed:**	8/18/21

Continuing Calibration Verification Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method:	6850	**Calibration Date:**	8/4/21
File ID:	I:\LCMS01\DATA\20210818\20210818_030	**Calibration ID:**	EC2100057
		Analysis Lot:	735470
		Units:	ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	8.57	0.1426	0.1222	-14.3	NA	± 15 %	Average RF

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS21071465

Service Request: E2100891
Date Analyzed: 8/18/21

Continuing Calibration Verification Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
File ID: I:\LCMS01\DATA\20210818\20210818_041

Calibration Date: 8/4/21
Calibration ID: EC2100057
Analysis Lot: 735470
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	8.97	0.1426	0.1279	-10.3	NA	± 15 %	Average RF

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS21071465

Service Request: E2100891
Date Analyzed: 8/18/21

Continuing Calibration Verification Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
File ID: I:\LCMS01\DATA\20210818\20210818_046

Calibration Date: 8/4/21
Calibration ID: EC2100057
Analysis Lot: 735470
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	8.52	0.1426	0.1214	-14.8	NA	± 15 %	Average RF